5ESS® Switch

TG-5

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The following wording, from our attorney, must appear on the legal page (back of the title page) of all documents. "Lucent Technologies is the successor to the business and assets of AT&T Network Systems business unit."

II. Section 1 of Software Release Inclusive or updated Software Release specific (if any) documents

As a result of the AT&T divestiture, the AT&T Network Systems division becomes Lucent Technologies, a separate and independent corporation. The 5ESS Switch, and many other network and transmission products become products of Lucent Technologies. The marketing, sales, engineering, delivery, installation, support, and future development of these products will be provided by Lucent Technologies.

Therefore, the corporate name and logo on this document are being changed from the AT&T brand to the new Lucent Technologies brand. The AT&T name is being removed from the cover, spine, title page, content (where appropriate) as well as the 9-digit document order number.

All pages of this document are not being reissued to make these changes. Instead, the pages will be reissued over a period of time as technical and other changes are required. Customers on standing order for this document, as of this publication, will see references to the AT&T name on previous-issue pages. Customers receiving new orders for this document will see the references changed to the Lucent Technologies name throughout the document as appropriate. Exceptions may exist in software-driven elements such as Input/Output messages, recent change screens, master control center (MCC) screens, etc.. These elements will not be changed in this document until such time as they are changed in the software code

II. Section 1 of New Software Release specific documents (5E11)

As a result of the AT&T divestiture, the AT&T Network Systems division becomes Lucent Technologies, a separate and independent corporation. The 5ESS Switch, and many other network and transmission products become products of Lucent Technologies. The marketing, sales, engineering, delivery, installation, support, and future development of these products will be provided by Lucent Technologies.

Therefore, the corporate name and logo throughout this document reflect the new Lucent Technologies brand instead of the AT&T brand. Exceptions may exist in software-driven elements such as Input/Output messages, recent change screens, master control center (MCC) screens, etc.. When these elements are shown, there may be references to the AT&T name until such time as they are changed in the software code.

1. INTRODUCTION

The 5ESS Switch Translation Guide (TG-5) provides complete documentation of the software interface (translations) between:

1. The customer assignment (equipment) requirements for lines, trunks, routing, charging, measurements, etc.

2. The Lucent Technologies Office Data Administration (ODA) data entry requirements.

The TG-5 details the relationship of these data requirements to the actual feature, option or machine action desired, and the effect of the computer processes on the customer's administrative records maintained for the office.

1.1 PURPOSE

The purpose of the 5ESS SwitchTranslation Guide is to enable the user to correctly populate ODD (Office Dependent Data). ODD is initiated and maintained by the ODA (Office Data Administration) system. In the ODA environment, the term "translations" refers to the office dependent data which supports the 5ESS Switch and its software. In addition to many other capabilities, this data provides the 5ESS Switch with the capability to analyze the dialed digits, route the call, and charge the subscriber.

1.2 UPDATE INFORMATION

The TG-5 is updated monthly, by section, with new and /or modified information. The shaded areas (or material marked with an "|") indicate that the section has been updated. Refer to Division 1, Section 3, Introduction to the TG-5, for more information describing the content of this document.

1.2.1 REASON FOR UPDATE

The TG-5 is updated monthly. Changes for each new update are listed in Division 20 contained in the update package. The changes for a particular month are located in the Section number of Divison 20 that representas that month. For example, Division 20, Section 5 will contain the changes for the update for

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May.

1.2.2 SUPPORTED SOFTWARE RELEASES

In accordance with the 5ESS Switch Software Support Plan, the 5E13 software release is rated Discontinued Availability (DA) as of January 31, 2002. The information supporting 5E13 and earlier is being removed over time, instead of concurrently, from all documentation.

If you are supporting offices that use a software release prior to 5E13 and you have a need for the information that is being removed, retain the associated pages as they are removed from the paper documents, or retain the earlier copy of the CD-ROM.

1.2.3 TERMINOLOGY

1.2.3.1 Lucent Electronic Delivery

The Lucent Electronic Delivery system is replacing the Software Change Administration and Notification System (SCANS) as the system used to download software changes to Lucent products. During the transition, both systems will be supported. When products no longer require SCANS, Lucent Technologies will notify any customers still using SCANS of the plans for completing the migration to Lucent Electronic Delivery. The OneLink Manager ASM User's Guide, 235-200-145, describes the Lucent Electronic Delivery System. Documentation currently referencing SCANS will be changed over time, as other technical changes are required.

1.2.3.2 Communication Module Name Change

The term Communication Module (CM) has been changed to the Global Messaging Server (GMS), representing the new portfolio name of this particular module. The current names of the specific types of the GMS (the CM2 and CM3) have not been changed. Where the CM name has been used in a generic way within this information product, the name will be changed to GMS. Where the specific version of GMS (CM2 or CM3) is being described or mentioned, the name will not be changed. However, the GMS name may be added to the description in certain places as a reminder of the change, and that the particular version is a part of the overall portfolio. The following list provides some examples of how you may see these names used together:

- Global Messaging Server (formerly Communication Module)
- GMS (formerly CM)
- Global Messaging Server-CM2
- GMS-CM2
- Global Messaging Server-CM3
- GMS-CM3.

These name changes will be made over time as other technical changes are required. Also these changes may not be reflected in all software interfaces (input and output messages, master control center screens, and recent change and verify screens). Where the information product references these areas, the names are used as they are within the software interface.

1.2.3.3 Bellcore / Telcordia Technologies Name Changes:

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Bellcore to Telcordia Technologies Name Change - Software Release Inclusive Documents and Updated Software Release Specific Documents:

As of March 18, 1999, Bellcore officially changed its name to Telcordia Technologies. Not all pages of this document are being reissued to reflect this change; instead, the pages will be reissued over time, as technical and other changes are required. Customers on standing order for this document may see that, on previous-issue pages, the Bellcore name is still exclusively used.

Customers receiving new orders for this document will see the Telcordia Technologies name used as appropriate throughout the document, and the Bellcore name used only to identify items that were produced under the Bellcore name. Exceptions may exist in software-influenced elements such as input/output messages, master control center screens, and recent change/verify screens. These elements will not be changed in this document until such time as they are changed in the software code. Document updates will not be made specifically to remove historical references to Bellcore.

Bellcore to Telcordia Technologies Name Change - New Software Release Specific Documents:

As of March 18, 1999, Bellcore officially changed its name to Telcordia Technologies. In this document, the Bellcore name is used only to identify items that were produced under the Bellcore name. Exceptions may exist in software-influenced elements such as input/output messages, master control center screens, and recent change/verify screens. Where these elements are shown, there may be references to the Bellcore name until such time as they are changed in the software code.

1.2.3.4 5ESS®-2000 Switch Name Change

This 5ESS Switch document may contain references to the 5ESS Switch, the 5ESS-2000 Switch, and the 5ESS AnyMedia Switch. The official name of the product has been changed back to the 5ESS Switch. The documentation will not be totally reissued to change these references. Instead, the changes will be made over time, as technical changes to the document are required. In the interim, assume that any reference to the 5ESS-2000 Switch or the 5ESS AnyMedia Switch is also applicable to the 5ESS Switch. It should be noted that this name change may not have been carried forward into software-influenced items such as input and output messages, master control center screens, and recent change/verify screens.

1.3 ORGANIZATION

The 5ESS Switch Translation Guide is organized by divisions, sections and subsections. Each division may contain multiple tables of contents within a division. The first is a table of contents of the division (always Section 0), followed by a separate table of contents for the sections within that division, numbered consecutively. The following paragraphs provide a brief description of each of the divisions.

A. Division 0 - Table of Contents Division 0 provides the Table of Contents for the 5ESS Switch Translation Guide in addition to cross reference information. It is divided into the following sections:

1. Section 0 - Table of Contents for all Divisions of the 5ESS SwitchTranslation Guide.
2. Section 1 - ODA Form Name Cross Reference
3. Section 2 - ODA Forms vs Recent Change Views Cross Reference
4. Section 3 - Recent Change Views vs ODA Forms Cross Reference
5. Section 4 - Office Record Number vs ODA Forms / Recent Change Views

B. Division 1 - General Information This division provides an introduction to the 5ESS Switch and the 5ESS Switch Translation Guide. It is divided into the following sections:

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1. Section O - Table of Contents for Division 1.

2. Section 1 - Ordering Information. This section outlines how to order the 5ESS Switch Translation Guide.

3. Section 2 - Translation Inquiries. This section explains how to submit questions and comments relating to 5ESS Switch translations and the 5ESS Switch Translation Guide. The Translation Inquiry (Record 5000) form is included in this section.

4. Section 3 - Introduction to the 5ESS Switch Translation Guide. This section covers the function, purpose and arrangement of this guide.

5. Section 6 - Glossary of Terms. This section contains an alphabetical listing of terms associated with the 5ESS Switch. Each term is defined within the context of its use in the system. The glossary includes terms associated with ODA and Recent Change.

6. Section 7 - 5ESS Switch Office Data Administration (ODA) User's Guide. This section provides detailed information on how to use the ODA system to input ODD.

7. Section 8 - Establishing an Office Data File (5001). This section describes how to set up the identification, accounting and tracking information that is needed to set up the data base for each 5ESS Switch.

8. Section 9 - ODA Batch Load Interface. This section provides information on how to merge batch data from existing mechanized systems with the appropriate ODA data.

9. Section 10 - Routing and Charging. This section provides an overview of routing and charging.

10. Section 11 - 5ECONV User's Manual. This section describes the process that converts 1ESS Switch and 1A ESS Switch office subscriber data to ODA data.

11. Sections 12 and 13 - Growth and Retrofit Plans These sections describe the ODA off-line large terminal growth and retrofit plans.

C. Division 2 - Features This division provides a high-level description of each translation feature. The explanation is followed by the translation requirements that are necessary to implement the feature.

1. Section 1 - General Features

2. Section 2 - Maintenance and Testing Feature Requirements

3. Section 3 - Operator Services Position Systems Features

4. Section 4 - Special Features including Secured and Transparency Features

5. Section 5 - Data Services Features

6. Section 6 - ISDN PRI (Primary Rate Interface) Features

7. Section 7 - Equipment Features

8. Section 8 - Wireless Features

9. Section 9 - SM-2000 Features

D. Division 3 - Translation Administration. This division describes office Records and ODA input forms used by the switch owner for general telephone service (i.e., POTS). Division 3 is divided into the

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following sections:

1. Section 0 - Index for Division 3.
2. Section 1 - Line Forms.
3. Section 2 - Trunk Forms.
4. Section 3 - Routing and Charging Forms.
5. Section 4 - Operator Services Position System (OSPS) (5E4(2) and later Software Releases).
6. Section 5 - Miscellaneous Forms.
7. Section 6 - Secured Features.

E. Division 4 - BRCS (Business and Residence Custom Services). This division contains instructions for BRCS Office Records and ODA input forms (see Division 6 for ISDN BRCS).

F. Division 5 - ISDN (Integrated Services Digital Network). Line and Packet Switching

1. Section 1 - ISDN Lines.
2. Section 3 - Packet Switching.
3. Section 5 - ISDN Miscellaneous Forms.

G. Division 6 - ISDN BRCS. This division contains instructions for the Office Records and ODA input forms to build ISDN BRCS features.

H. Division 7 - Digital Cellular Switching. This division contains the instructions for the Office Records and ODA input forms to build Digital Cellular switching on a 5ESS Switch.

I. Division 8 - Engineering Assignments. This division contains instructions for all ODA input forms used to install and maintain a 5ESS Switch.

J. Division 9 - CCS (Common Channel Signaling). This division contains information needed to implement CNI (Common Network Interface) translations via Recent Change input views.

K. Division 19 - Reproducible Records. This division contains a listing of all Office Records available for the 5ESS Switch. Section 1 contains the alphabetical listing of all Office Records with the record number, form designation and the division and section that provide the instructions for that Office Record.

L. Division 20 - Monthly Update Summary of Changes. This division provides a summary of the changes for each monthly update of the 5ESS Switch Translation Guide.

The index which follows contains the listing of TG-5 Divisions and Sections. The listing provides Divisions and Sections in numerical order along with the corresponding Title and the Last Changed date.

1.4 USER FEEDBACK

Your feedback is important to us. The TI (Translation Inquiry) form (5000 Record) is provided for your convenience to give feedback relating to the 5ESS Switch Translation Guide. This inquiry may deal with problems in using translation forms or difficulties in interpreting translation information in the 5ESS Switch

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Translation Guide. The translation inquiry may also be used for suggestions and proposals relating to Translation Guide contents or arrangement.

- ***NOTE:*** Forwarding translations for review is not an appropriate use of the feedback form. In addition, requests for feature or option development should not be submitted as an inquiry. This type of correspondence should be directed to Lucent Technologies through your normal channels. A feedback form is provided in Division 1, Section 2.

Please FAX the completed TI to:

- J. Broyles FAX number 630-224-1314

Or, mail the completed TI to:

- J. Broyles - 10081303
- Lucent Technologies
- 1960 Lucent Lane
- Naperville, IL 60566-7217

Or, email your comments to:

- jannbroyles@lucent.com

When the TI (Translation Inquiry) form is received by the 5ESS Switch Translation Guide group, an inquiry number is assigned to that TI and the TI is assigned to a 5ESS Switch Translation Guide writer. The writer will contact the originator of the TI, usually within ten working days . When the research on the inquiry has been completed, the writer will answer the inquiry and notify the originator of the schedule for publication of the information in the 5ESS Switch Translation Guide.

The TI is divided into two basic areas (see Figure 1). Block A is for basic reference information, Block B is for problem description or proposal.

1. Block A: Reference Information - Enter the division, section number, and the publication date that appears in the heading of the 5ESS Switch Translation Guide section. If the inquiry relates to a specific Software Release, for example 5E10, please enter the Software Release number.
2. Block B: Problem or Proposal Description - This block is used to fully describe the problem or proposal. Please reference the division, section, if different from Block A, and the paragraph or figure number. The reverse side of the form may be used if additional space is required.

Please include your name, company affiliation, address, and telephone number.

1.5 DISTRIBUTION

- **Ordering Information**

  This IP is distributed by the Lucent Technologies Customer Information Center in Indianapolis, Indiana. The order number for this IP is 235-080-100.

  To order from outside the continental United States, call:

  - 1-888-LUCENT8 (1-888-582-3688)

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or fax to:

- 1-800-566-9568

To order from outside the continental United States, call:

- 1-317-322-6847

or fax to:

- 1-317-322-6699

- **Electronic Media Documentation**

  The 5ESS Switch Translation Guide is also available on CD-ROM and on-line documentation. If you wish to receive electronic media or electronic dial-up service, call the CIC.

- **How To Cancel An Order**

  To cancel or change your order, contact your technical information resource manager or technical documentation coordinator, or call the CIC. It will help the CIC service representative to expedite the changes if you know your original purchase order number.

1.6 TECHNICAL ASSISTANCE

Support Telephone Numbers

Information Product Support Number:To report errors or ask nontechnical questions about this or other IPs produced by Lucent Technologies, call 1-888-LTINFO6 (1-888-584-6366).

Technical Support Numbers:

For initial technical assistance, call the Regional Technical Assistance Center (RTAC) at 1-800-225-RTAC (1-800-225-7822). For further assistance, call the Customer Technical Assistance Management Center (CTAM) at 1-800-225-4672 (Customers inside continental United States). For Customers outside continental United States, call 1-630-224-4672. The CTAM line is staffed 24 hours a day, 7 days a week.

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DIV. 0: TABLE OF CONTENTS

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SEC. 1: 5ESS Switch Form - Text Cross Reference

1. GENERAL

This section contains the latest listing of 5ESS Switch ODA Forms. The listing is presented in alphabetical order by ODA Form Name. The Listing provides the corresponding Title, Office Record Number and TG-5 Division and Section.

Also, Division 0, Section 2 and 3 provide a cross reference for the corresponding Recent Change Views. Section 4 provides a cross reference for ODA Office Records. An alphabetic listing by title is included under Figure 1 in Division 19, Section 1.

2. ODA FORM NAME INDEX TABLE

Form Name	Title	Record Number	Division / Section
acblpa	AUTOMATIC CALL-BACK LINE (TN) PARAMETERS FORM	5616-2	Div. 4 Sec. 17B
acbmpa	AUTOMATIC CALL-BACK LINE (MLHG/TERM) PARAMETER FORM	5616-3	Div. 4 Sec. 17C
accst	OSPS ACCS SPECIAL TREATMENT TABLE FORM	5428	Div. 3 Sec. 4AC
acctfd	ACCOUNT CODE FEATURE DEFINITION FORM	5623-1	Div. 4 Sec. 24A
acctgp	ACCOUNT CODE GROUP DEFINITION FORM	5623-2	Div. 4 Sec. 24B
acctlpa	ACCOUNT CODE LINE PARAMETER FORM	5623-4	Div. 4 Sec. 24D
acctmpa	ACCOUNT CODE LINE (MLHG/TERM) PARAMETER FORM	5623-5	Div. 4 Sec. 24E
acctrtp	ACCOUNT CODE ASSOCIATED CODE TABLE PARAMETERS FORM	5623-3	Div. 4 Sec. 24C
accttpa	ACCOUNT CODE TRUNK (TGN/MEMB) PARAMETER FORM	5623-6	Div. 4 Sec. 24F
acdbparm	ACD/BRCS OFFICE PARAMETERS	5645	Div. 4 Sec. 32K
acdctp	OSPS ACD CALLTYPE FORM	5412-A/D	Div. 3 Sec. 4M
acdcvtn	ACD CALL VECTORING DESTINATION TN FORM	5644	Div. 4 Sec. 32I
acdtn	ACD/BRCS AND DAA TN ASSIGNMENT FORM	5631-1	Div. 4 Sec. 32A
acdvct	ACD CALL VECTORS FORM	5643	Div. 4 Sec. 32H
acofrf	ISDN ATTENDANT CONTROL OF FACILITIES FEATURE ATTRIBUTES FORM	5968	Div. 6 Sec. 11A
acqs	AUTOMATIC CHARGE QUOTATION SERVICE FORM	5425	Div. 3 Sec. 4Z
acsrfd	ISDN ACSR FEATURE DEFINITION FORM	5959-1	Div. 6 Sec. 2A
acsrgp	ISDN ACSR GROUP PARAMETERS FORM	5959-2	Div. 6 Sec. 2B
acsrlpa	ISDN ACSR LINE PARAMETERS FORM	5959-3	Div. 6 Sec. 2C
acvtfd	ISDN ATTENDANT CONTROL OF VOICE TERMINALS FEATURE DEFINITION FORM	5967-1	Div. 6 Sec. 10A
acvtgp	ISDN ATTENDANT CONTROL OF VOICE TERMINALS GROUP PARAMETERS FORM	5967-2	Div. 6 Sec. 10B
acvtlpa	ISDN ATTENDANT CONTROL OF VOICE TERMINALS TN PARAMETERS	5967-3	Div. 6 Sec. 10C
acvtmpa	ISDN ATTENDANT CONTROL OF VOICE TERMINALS MLHG PARAMETERS FORM	5967-4	Div. 6 Sec. 10D
agntid	ACD AGENT ID ASSIGNMENT	5639	Div. 4 Sec. 32D
aiscls	OSPS INTERCEPT DESTINATION INDICES	5469	Div. 3 Sec. 4BV
alrmlvls	THRESHOLD ALARM LEVEL FORM	5769	Div. 3 Sec. 5CD
amact	AMA CALL TYPE FORM	5506	Div. 3 Sec. 5F
amlbdsl	OSPS DSL PACKET SWITCHING ASSIGNMENTS FORM	5447	Div. 3 Sec. 4AV
animod	AUTOMATIC NUMBER IDENTIFICATION SWITCHING MODULE FORM	5560	Div. 3 Sec. 5BD
anitable	AUTOMATIC NUMBER IDENTIFICATION TABLE	5561	Div. 3 Sec. 5BP
anitbl	AUTOMATIC NUMBER IDENTIFICATION TABLE	5561	Div. 3 Sec. 5BE
annapl	ANNOUNCEMENT APPLICATION SM LIST FORM	5529	Div. 3 Sec. 5AC
anndg	ANNOUNCEMENT DIGIT INFLECTION SCHEME FORM	5532	Div. 3 Sec. 5AF
annhd	ANNOUNCEMENT HEADER PHRASE LIST FORM	5531	Div. 3 Sec. 5AE

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anntr	ANNOUNCEMENT TRAILER PHRASE LIST FORM	5533	Div. 3 Sec. 5AG
aowner	OSPS DA CUSTOM BRANDING BY ACCOUNT OWNER	6446	Div. 3 Sec. 4ES
apca	APPLICATION PROCESSOR CUSTOMER ASSIGNMENT FORM	5620-1	Div. 4 Sec. 21A
apcomm	IOP APPLICATION PROCESSOR COMMUNICATION FORM	5507	Div. 3 Sec. 5G
apfma	APPLICATION PROCESSOR FACILITIES MANAGEMENT ASSIGNMENT FORM	5620-3	Div. 4 Sec. 21C
apgfp	APPLICATION PROCESSOR GROUP/FACILITY PARAMETER FORM	5620-2	Div. 4 Sec. 21B
aphss	100 SECOND SCAN (HSS) ACTIVATION FORM	5620-4	Div. 4 Sec. 21D
apxannc	ECP ANNOUNCEMENT ROUTE INDEX FORM	5051	Div. 7 Sec. 1B
apxparm	DIGITAL CELLULAR SWITCH PARAMETERS FORM	5050	Div. 7 Sec. 1A
arsfd	AUTOMATIC ROUTE SELECTION FEATURE DEFINITION FORM	5608-1	Div. 4 Sec. 9A
arsfrl	AUTOMATIC ROUTE SELECTION ALTERNATE FACILITY RESTRICTION LEVELS FORM - ARSFRL	5608-7	Div. 4 Sec. 9G
arsgpa	AUTOMATIC ROUTE SELECTION GROUP PARAMETER FORM	5608-2	Div. 4 Sec. 9B
arslpa	AUTOMATIC ROUTE SELECTION LINE (TN) PARAMETER FORM	5608-3	Div. 4 Sec. 9C
arsmpa	AUTOMATIC ROUTE SELECTION LINE (MLHG/TERM) PARAMETER FORM	5608-4	Div. 4 Sec. 9D
arsscrn	AUTOMATIC ROUTE SELECTION GROUP SCREENING FORM	5608-6	Div. 4 Sec. 9F
arssig	AUTOMATIC ROUTE SELECTION SEGMENTED SIGNALING FORM	5608-9	Div. 4 Sec. 9I
arstcm	AUTOMATIC ROUTE SELECTION TRAVELING CLASS MARK CONVERSION TABLE FORM	5608-8	Div. 4 Sec. 9H
arstpa	AUTOMATIC ROUTE SELECTION TRUNK (TGN/MEMB) PARAMETER FORM	5608-5	Div. 4 Sec. 9E
asifd	ADVANCED SERVICE INTERFACE FEATURE DEFINITION FORM	5630-1	Div. 4 Sec. 30A
asigp	ADVANCED SERVICE INTERFACE GROUP DEFINITION FORM	5630-4	Div. 4 Sec. 30D
asilpa	ADVANCED SERVICE INTERFACE LINE (TN) PARAMETER FORM	5630-2	Div. 4 Sec. 30B
asimpa	ADVANCED SERVICE INTERFACE LINE (MLHG/TERM) PARAMETER FORM	5630-3	Div. 4 Sec. 30C
aspdp	ADVANCED SERVICES PLATFORM FEATURE DEFAULT PARAMETERS FORM	5632-5	Div. 4 Sec. 31E
aspfd	ADVANCED SERVICES PLATFORM FEATURE DEFINITION FORM	5632-1	Div. 4 Sec. 31A
asplpa	ADVANCED SERVICES PLATFORM (TN) PARAMETERS FORM	5632-2	Div. 4 Sec. 31B
aspmpa	ADVANCED SERVICES PLATFROM (MLHG/TERM) PARAMETERS FORM	5632-3	Div. 4 Sec. 31C
aspopt	ADVANCED SERVICES PLATFORM OPTIONS	5670	Div. 4 Sec. 31G
asprp	ADVANCED SERVICES PLATFORM NESS GROUP SCREENING LIST FORM	5634	Div. 4 Sec. 31F
asptpa	ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS FORM	5632-4	Div. 4 Sec. 31D
asscparm	SCTP ASSOCIATION PARAMETER SET	5887	Div. 5 Sec. 3AI
assocset	ASSOCIATION SET	5890	Div. 5 Sec. 3AL
atc	NXX RESTRICTION FOR MEET-ME/ADD-ON ALLIANCE TELECONFERENCING FORM	5446	Div. 3 Sec. 4AT
athac	AUTHORIZATION CODE DEFINITION FORM	5619-3	Div. 4 Sec. 20C
athfcos	AUTHORIZATION CODE FEATURE CLASS OF SERVICE PARAMETER FORM	5619-4	Div. 4 Sec. 20D
athfd	AUTHORIZATION CODE FEATURE DEFINITION FORM	5619-1	Div. 4 Sec. 20A
athgp	AUTHORIZATION CODE GROUP DEFINITION FORM	5619-2	Div. 4 Sec. 20B

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athlpa	AUTHORIZATION CODE LINE PARAMETER FORM	5619-5	Div. 4 Sec. 20E
athmpa	AUTHORIZATION CODE LINE (MLHG/TERM) PARAMETER FORM	5619-6	Div. 4 Sec. 20F
athtpa	AUTHORIZATION CODE TRUNK (TGN/MEMB) PARAMETER FORM	5619-7	Div. 4 Sec. 20G
atmlnk	ATM LINK ASSIGNMENT	5592	Div. 5 Sec. 5P
atsdata	ATTS TEST SESSION SCHEDULE DATA FORM	5052	Div. 7 Sec. 1C
atsparm	ATTS TEST SESSION SCHEDULE PARAMETERS FORM	5053	Div. 7 Sec. 1D
auto	AUTOMATIC TRUNK TEST TABLE FORM	5505-1/2	Div. 3 Sec. 5E
bclidfd	BULK CALLING LINE IDENTIFICATION FEATURE DEFINITION FORM	5629-1	Div. 4 Sec. 29A
bclidgp	BULK LINE CALLING IDENTIFICATION GROUP PARAMETERS FORM	5629-2	Div. 4 Sec. 29B
bclidlpa	BULK CALLING LINE IDENTIFICATION LINE PARAMETER FORM	5629-3	Div. 4 Sec. 29C
bclidmpa	BULK CALLING LINE IDENTIFICATION MULTI-LINE HUNT GROUP PARAMETERS FORM	5629-4	Div. 4 Sec. 29D
bearernet	BEARERNET	5935	Div. 5 Sec. 3AM
bfg	BFG (BRCS FEATURE GROUPING) CONSTRUCTION FORM	5625	Div. 4 Sec. 26A
bfg	BFG (BRCS FEATURE GROUPING) SUMMARY REPORT	5626	Div. 4 Sec. 26B
blk900	OSPS BLOCKING 900 CALLS FOR LEC CARDS FORM	5482A	Div. 3 Sec. 4CH
blvex	BUSY LINE VERIFICATION LINE EXCLUSIONS FORM	5442	Div. 3 Sec. 4AQ
blvnpa	BUSY LINE VERIFICATION NPA FORM	5441	Div. 3 Sec. 4AP
cacdparm	OSPS COMMERCIAL ACD PARAMETERS	5458	Div. 3 Sec. 4BF
caicom	ISDN CALL APPEARANCE INTERCOM FORM	5984	Div. 6 Sec. 3D
carscr	CARRIER LINE SCREENING FORM	5551	Div. 3 Sec. 6B
cascon	OSPS CAS CONTRACT STATUS FORM	5455-A/B	Div. 3 Sec. 4BD
casicon	OSPS CAS INVERSE CONTRACT STATUS FORM	5456-A/B	Div. 3 Sec. 4BE
cc7pr	LEVEL 3 TIMER PARAMETER FORM	6001-1/2	Div. 9 Sec. 10A
cccopt	CREDIT CARD CALLING OPTIONS FORM	5432	Div. 3 Sec. 4AG
ccgsm	CCITT7 GLOBAL SM FORM	6008	Div. 9 Sec. 10H
cclnk	SIGNALING LINK SET FORM	6004-1/2	Div. 9 Sec. 10D
ccname	OSPS COUNTRY CODE TO COUNTRY NAME MAPPING FORM	5463	Div. 3 Sec. 4BP
ccnet	SCCP NETWORK DEFINITION FORM	6010	Div. 9 Sec. 10K
ccpbd	SCCP PRIMARY/BACKUP DESTINATION FORM	6012	Div. 9 Sec. 10M
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mlhg	MULTI-LINE HUNT GROUP FORM	5110	Div. 3 Sec. 1J
mlhlnfa	FEATURE ASSIGNMENT MULTI-LINE HUNT GROUP AND TERMINAL NUMBER FORM	5113	Div. 3 Sec. 1M
mlhln	MULTI-LINE HUNT GROUP TERMINAL FORM	5111	Div. 3 Sec. 1K
mreg	MESSAGE REGISTER TIME AND CHARGE RECORD	5302-5	Div. 3 Sec. 3M
msccnt	MESSAGE SERVICE CENTERS MEASUREMENTS FORM	5962-6	Div. 6 Sec. 5F
mscnt	MESSAGE SERVICE MEASUREMENTS FORM	5962-5	Div. 6 Sec. 5E
msfd	MESSAGE SERVICE SYSTEM FEATURE DEFINITION FORM	5962-1	Div. 6 Sec. 5A
msgp	MESSAGE SERVICE SYSTEM GROUP PARAMETERS FORM	5962-2	Div. 6 Sec. 5B
mslpa	MESSAGE SERVICE PARAMETER FORM	5962-3	Div. 6 Sec. 5C
msmpa	MESSAGE SERVICE SYSTEM LINE (MLHG/TERM NBR) PARAMETER FORM	5962-4	Div. 6 Sec. 5D
msusp	MSU/MMSU SCAN POINT ASSIGNMENT FORM	5530	Div. 3 Sec. 5AD
mtbcomp	METALLIC COMPENSATION VALUES	5557	Div. 3 Sec. 5BC
mtndr	MULTIPLE TN'S WITH DISTINCTIVE RINGING	5550	Div. 3 Sec. 6A
multitn	MULTIPLE TNs FOR MULTILINE HUNT GROUPS FORM	5114	Div. 3 Sec. 1N
muphkey	MULTIPOSITION HUNT BUSY KEY FORM	5612	Div. 4 Sec. 13A
mwfd	MULTI-WAY FEATURE DEFINITION FORM	5602-1/2	Div. 4 Sec. 3A
mwlpa	MULTIWAY CALLING LINE (TN) PARAMETER FORM	5602-3	Div. 4 Sec. 3B
mwmpa	5602-4 MULTIWAY CALLING LINE (MLHG/TERM) PARAMETER FORM	5602-4	Div. 4 Sec. 3C
mwtpa	5602-5 MULTIWAY CALLING TRUNK PARAMETER FORM	5602-5	Div. 4 Sec. 3D
NA	EXCEPTION (VIEW 15.6)	5016	Div. 9 Sec. 2F
NA	GLOBAL TITLE TRANSLATION (VIEW 15.11)	5021	Div. 9 Sec. 2K
NA	NETWORK ROUTING DATA (VIEW 15.12)	5022	Div. 9 Sec. 2L
NA	PROTOCOL LINK SET THRESHOLDS (VIEW 15.16)	5026	Div. 9 Sec. 2P
NA	PROTOCOL LINK SET TIMERS (VIEW 15.15)	5025	Div. 9 Sec. 2O
NA	PROTOCOL OFFICE TIMERS (VIEW 15.14)	5024	Div. 9 Sec. 2N
nailup	NAIL-UP AND HAIRPIN SPECIFICATION	5207	Div. 3 Sec. 2F
NA	SUBSYSTEM INFORMATION (VIEW 15.10)	5020	Div. 9 Sec. 2J
NA	CCS OFFICE PARAMETERS (VIEW 8.15)	NA	Div. 9 Sec. 3A
NA	CLUSTER ROUTING DATA (VIEW 15.9)	5019	Div. 9 Sec. 2I
NA	CNI IMPLEMENTATION ON THE 5ESS-2000 SWITCH	NA	Div. 9 Sec. 1A
NA	CONTROL, DATA AND FACILITY PORT ASSIGNMENT FORM	5843	Div. 8 Sec. 45
NA	CRITICAL EVENTS VIEW 15.4	5014	Div. 9 Sec. 2D
N/A	DISTRIBUTE POINT NUMBER ASSIGNEMENT FORM	5841	Div. 8 Sec. 43
N/A	EQUIPMENT ASSIGNMENT	N/A	Div. 8 Sec. 1
NA	HISTORY FILE DESCRIPTOR (VIEW 15.7)	5017	Div. 9 Sec. 2G
NA	LINK INFORMATION (VIEW 15.2)	5012-1/2	Div. 9 Sec. 2B
NA	LOGICAL TO PHYSICAL (VIEW 15.3)	5013	Div. 9 Sec. 2C
NA	MEMBER ROUTING DATA (VIEW 15.18)	5028	Div. 9 Sec. 2R
N/A	METALLIC TEST BUS ASSIGNMENT FORM	5842	Div. 8 Sec. 44
NA	OFFICE IDENTIFICATION (VIEW 15.1)	5011	Div. 9 Sec. 2A
NA	PROTOCOL LINK PARAMETERS (VIEW 15.17)	5027	Div. 9 Sec. 2Q
N/A	SCAN POINT NUMBER ASSIGNMENT FORM	5840	Div. 8 Sec. 42

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NA	SCHEDULE REPORTING (VIEW 15.8)	5018	Div. 9 Sec. 2H
NA	SMALL NETWORK CLUSTER AND MEMBER TABLE (VIEW 15.13) RC_SMNID	5023	Div. 9 Sec. 2M
NA	USERS VIEW DESCRIPTORS (VIEW 15.5)	5015	Div. 9 Sec. 2E
nclkref	NETWORK CLOCK 2 REFERENCE FORM	5525	Div. 3 Sec. 5Y
nid	NETWORK ROUTING	6019	Div. 9 Sec. 10S
noc	NORMALIZED OFFICE CODE ASSIGNMENT FORM	5501	Div. 3 Sec. 5A
nonusa	NPA NXXS OUTSIDE THE UNITED STATES	5477-1	Div. 3 Sec. 4CC
npamap	NPA-NXX SM ASSIGNMENT AND LATA EXCEPTIONS FORM	5414	Div. 3 Sec. 4O
npasplit	LASS NPA SPLIT RESOLUTION FORM	5546	Div. 3 Sec. 5AV
npool	NUMBER POOLING FORM	5177	Div. 3 Sec. 1AF
nstrig	NETWORK SERVICES TRIGGER DEFINITION FORM	5324	Div. 3 Sec. 3AK
nttu	NO TEST TRUNK (NTT) UNIT	5590	Div. 3 Sec. 5BW
nxxzn	NXX OUTSIDE OF MAJORITY TIME ZONE FORM	5427	Div. 3 Sec. 4AB
obsts	OSPS BASIC SERVICES TERMINAL SEIZURE FORM	5408	Div. 3 Sec. 4I
ocntwk	CARRIER FOR OPERATOR SPECIAL DIALED CODES FORM	5420	Div. 3 Sec. 4U
octa	OSPS CALL TYPE ASSIGNMENT FORM	5406	Div. 3 Sec. 4G
odaop	ODA OPTIONS	5524	Div. 3 Sec. 5W
odbctur	ODB CUT THROUGH TS ALLOCATION	5915	Div. 5 Sec. 1N
odbres	ODB ISCN RESERVATION	5906	Div. 5 Sec. 1G
odbts	ODB ISLU(2) IDCU TS ALLOCATION	5905	Div. 5 Sec. 1F
ofcopt	OFFICE OPTIONS FORM	5509	Div. 3 Sec. 5I
oiupm	OIU PERFORMANCE MONITORING - THRESHOLD GROUP FORM	5767	Div. 3 Sec. 5CC
olnpu	OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY	6411	Div. 3 Sec. 4DJ
onpa	ORIGINATING NUMBERING PLAN AREA FORM	5312	Div. 3 Sec. 3Y
oparm	OSPS ADMINISTRATIVE OFFICE PARAMETERS FORM	5400-1/2	Div. 3 Sec. 4A
opcto	OSPS CALL TYPE FOR TRUNK ORIGINATIONS FORM	5407	Div. 3 Sec. 4H
opdbparm	OPERATOR DATA BASE PARAMETERS FORM	5434	Div. 3 Sec. 4AI
opeisdb	OSPS OPERATOR TO EIS AND DATA BASE MAPPING	5462-2	Div. 3 Sec. 4BN
oprtk	ACCESS TANDEM INCOMING TRUNK GROUPS FORM	5417	Div. 3 Sec. 4R
orar	OSPS RATE AND ROUTE FORM	5405	Div. 3 Sec. 4F
osdc	OPERATOR SPECIAL DIALED CODES FORM	5439	Div. 3 Sec. 4AN
ospsct	OSPS CALL TYPE PARAMETERS FORM	5404	Div. 3 Sec. 4E
ospsdsl	OSPS DIGITAL SUBSCRIBER LINE FORM	5411	Div. 3 Sec. 4L
ospsoa	OSPS OPERATOR ASSIGNMENT FORM	5403	Div. 3 Sec. 4D
ospsop	OSPS OPERATOR POSITION FORM	5401	Div. 3 Sec. 4B
ospsopt	OSPS OPTIONS FORM	5424	Div. 3 Sec. 4Y
ospssminf	OSPS SM INFORMATION	5476	Div. 3 Sec. 4CB
otrvld	OSPS OPERATOR TROUBLE REPORT FORM	5410	Div. 3 Sec. 4K
pbgrp	PACKET BUSINESS GROUP FORM	5931	Div. 5 Sec. 3L
pbxid	PBX ID ASSIGNMENT FORM	5213	Div. 3 Sec. 2O
pcc	PAIRED COUNTRY CODE (PCC)/COUNTRY CODE (CC)	5318	Div. 3 Sec. 3AE
pcfopt	PCF OFFICE PARAMETERS	5996	Div. 5 Sec. 3T
pcfpdsn	PCF PDSN IP ASSIGNMENT	5996-2	Div. 5 Sec. 3U
pc	SIGNALING POINT CODE FORM	6006	Div. 9 Sec. 10F
pcrgrp	PROCESSOR GROUP	5883	Div. 5 Sec. 3AE
pdit	PREFIX/FEATURE DIGIT INTERPRETER FORM	5300-2	Div. 3 Sec. 3B
pdsncnfg	PDSN CONFIGURATION	5997	Div. 5 Sec. 3V
pfafd	PRIVATE FACILITY ACCESS FEATURE DEFINITION FORM	5609-1	Div. 4 Sec. 10A
pfagpa	PRIVATE FACILITY ACCESS GROUP FORM	5609-5	Div. 4 Sec. 10E
pfainwt	INWATS SIMULATED FACILITY TN FORM	5609-4	Div. 4 Sec. 10D
pfalpa	PRIVATE FACILITY ACCESS LINE (TN) PARAMETER FORM	5609-6	Div. 4 Sec. 10F
pfampa	PRIVATE FACILITY ACCESS LINE (MLHG/TERM) PARAMETER FORM	5609-7	Div. 4 Sec. 10G
pfasfg	SIMULATED FACILITY GROUP FORM	5609-3	Div. 4 Sec. 10C
pfatg	PFA TERMINAL GROUP FORM	5609-2	Div. 4 Sec. 10B

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pfatpa	PRIVATE FACILITY ACCESS TRUNK (TGN/MEMB) PARAMETER FORM	5609-8	Div. 4 Sec. 10H
pgtc	PAIR GAIN TEST CONTROLLER FORM	5503	Div. 3 Sec. 5C
phrase	ANNOUNCEMENT PHRASE LIST FORM	5534	Div. 3 Sec. 5AH
phrlang	ENGLISH PHRASE ID TO NON-ENGLISH PHRASE ID MAPPING	5483-2	Div. 3 Sec. 4CJ
pidef	PERSONAL IDENTIFICATION DEFINITION FORM	5117	Div. 3 Sec. 1Q
pktgrp	PACKET GROUP DEFINITION	5219	Div. 5 Sec. 3Z
pmthresh	PERFORMANCE MONITORING	5948	Div. 5 Sec. 5I
pndp	PRIVATE NETWORK DIALING PLAN FORM	5608-10/11	Div. 4 Sec. 9J
pninfo	PRIVATE NETWORK INFORMATION FORM	5608-12	Div. 4 Sec. 9K
pnoffon	PRIVATE NETWORK OFF NETWORK NUMBER CONVERSION FORM	5608-13	Div. 4 Sec. 9L
pnonoff	PRIVATE NETWORK ON NETWORK NUMBER CONVERSION FORM-PNONOFF	5608-14	Div. 4 Sec. 9M
ppcoi	PRECEDENCE AND PREEMPTION COMMUNITY OF INTEREST FORM	5618-6	Div. 4 Sec. 19F
ppfd	PRECEDENCE & PREEMPTION FEATURE DEFINITION FORM - PPFD	5618-1	Div. 4 Sec. 19A
pplpa	PRECEDENCE AND PREEMPTION LINE (TN) PARAMETER FORM	5618-3	Div. 4 Sec. 19C
ppmpa	PRECEDENCE AND PREEMPTION LINE (MLHG/TERM) PARAMETER FORM	5618-4	Div. 4 Sec. 19D
pppoly	PRECEDENCE & PREEMPTION POLYGRID ROUTING FORM	5618-7	Div. 4 Sec. 19G
ppscrn	PRECEDENCE AND PREEMPTION SCREENING FORM	5618-2	Div. 4 Sec. 19B
pptpa	PRECEDENCE AND PREEMPTION TRUNK PARAMETER FORM	5618-5	Div. 4 Sec. 19E
prigrp	PRIMARY RATE INTERFACE GROUP ASSIGNMENT FORM	5211	Div. 3 Sec. 2M
pronxx	TRUE TRUNK GROUP NPA FORM	5413	Div. 3 Sec. 4N
propbid	PROPORTIONATE BIDDING FORM	5325	Div. 3 Sec. 3AL
pscomp	PACKET SWITCH COMPONENT		Div. 5 Sec. 3R
pscug	S PACKET SWITCHING CLOSED USER GROUP ASSIGNMENT FORM	5924/5924A	Div. 5 Sec. 3E
psdnicri	PACKET SWITCHING DNIC TO RI ASSIGNMENT FORM	5921	Div. 5 Sec. 3B
psism	PACKET SWITCHING INTER SM NAIL-UP FORM	5920	Div. 5 Sec. 3A
psmtn	PACKET SWITCHING ISDN MODEM TN TO DSL ASSIGNMENT FORM	5925/5925A	Div. 5 Sec. 3F
pspvc	PACKET SWITCHING PERMANENT VIRTUAL CIRCUIT ASSIGNMENT FORM	5923	Div. 5 Sec. 3D
psrate	PACKET SWITCHING BILLING RATE PERIODS FORM	5922	Div. 5 Sec. 3C
psugp	PACKET SWITCHING UNIT LOGICAL GROUP FORM	5949	Div. 5 Sec. 3J
psugw	PSUGW	5991	Div. 5 Sec. 3Q
psulnk	PSU LINK ASSIGNMENT	5057	Div. 7 Sec. 2A
psupipe	PSU Pipe	5990	Div. 5 Sec. 5O
psupm	PSUPM	5998	Div. 5 Sec. 3AA
pugd	CALL PICKUP TERMINATING GROUP DATA FORM	5605-4	Div. 4 Sec. 6E
pulpa	CALL PICKUP LINE (TN) PARAMETER FORM	5605-3	Div. 4 Sec. 6C
pumpa	CALL PICKUP LINE (MLHG/TERM) PARAMETER FORM	5605-4	Div. 4 Sec. 6D
puofd	CALL PICKUP ORIGINATING FEATURE DEFINITION FORM	5605-1	Div. 4 Sec. 6A
putfd	ALL PICK-UP TERMINATING FEATURE DEFINITION RECORD	5605-2	Div. 4 Sec. 6B
qgcon	QGCON	5829	Div. 8 Sec. 91
qphpipe	QPH PIPE ASSIGNMENT FORM	5828	Div. 8 Sec. 70
qtuv	QTUV	na	Div. 8 Sec. 92
qufd	MODULAR QUEUING FEATURE DEFINITION FORM	5617-1/2	Div. 4 Sec. 18A
qugpa	MODULAR QUEUING GROUP PARAMETER FORM	5617-3/4	Div. 4 Sec. 18B
raf	RECORDED ANNOUNCEMENT FUNCTION	5271-4	Div. 3 Sec. 2Q
ralm	REMOTE ALARM ASSIGNMENT FORM	5516	Div. 3 Sec. 5P

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rar	RATE AND ROUTE FORM	5301	Div. 3 Sec. 3F
rasrti	REMOTE ACCESS SERVICE RTI DEFINITION FORM	5538	Div. 3 Sec. 5AL
rate	MESSAGE REGISTER RATE RECORD	5302-3	Div. 3 Sec. 3K
rbvrti	REMOTE BUSY VERIFY ROUTING FORM	5950	Div. 5 Sec. 5K
rclkref	REMOTE CLOCK REFERENCE FORM	5519	Div. 3 Sec. 5S
rdit	REMAINING DIGIT INTERPRETATION FORM	5300-7/8	Div. 3 Sec. 3H
rdtaport	REMOTE DIGITAL TEST ACCESS PORT/TN ASSIGNMENT FORM	5911A/B	Div. 5 Sec. 1L
rdtatn	REMOTE DIGITAL TEST ACCESS TELEPHONE NUMBER	5910A/B	Div. 5 Sec. 1M
resxdl	OSPS RESTRICTED EXTERNAL DIALING FORM	5409	Div. 3 Sec. 4J
retinfo	RETROFIT INFORMATION FORM	5845	Div. 8 Sec. 47
ribmsc	RISLU REMOTE ALARM SECTION BUILDING/MISCELLANEOUS ALARM SCAN POINT FORM	5944	Div. 5 Sec. 5E
risite	REMOTE PERIPHERAL ALARMS - RISITE	5940	Div. 5 Sec. 5A
rndfd	REDIRECTING NUMBER DELIVERY FORM	5983	Div. 6 Sec. 26A
rorlst	REROUTE ON RELEASE CAUSE LIST	5570	Div. 3 Sec. 5BK
rotl	REMOTE OFFICE TEST LINE FORM	5512	Div. 3 Sec. 5L
rpma	REMOTE PERIPHERAL SITE MISCELLANEOUS ALARMS	5957	Div. 5 Sec. 5N
rsmcar	OSPS RSM/CARRIER DATA FORM	5421	Div. 3 Sec. 4V
rsmlnk	RSM LINK ASSIGNMENT FORM	5517	Div. 3 Sec. 5Q
rterm	REMOTE TERMINAL (TR303/TR008)	5174-1/2/3/4	Div. 3 Sec. 1S
rtidx	ROUTE INDEX FORM	5303	Div. 3 Sec. 3P
rtlist	ROUTE INDEX LIST FORM	5574	Div. 3 Sec. 5BO
rxschd	ROUTINE EXERCISE SCHEDULE FORM	5515	Div. 3 Sec. 5O
saalhsl	SAAL HIGH SPEED SS7 LINK - SAALHSL	6016	Div. 9 Sec. 10V
saalprm	SAAL Link Parameter Set	6017	Div. 9 Sec. 10W
sacscr	SCD SCREENED SERVICE ACCESS CODES FORM	5552	Div. 3 Sec. 6C
scfam	STRUCTURE CODE FAMILY FORM	5536	Div. 3 Sec. 5AJ
scfd	SPEED CALLING FEATURE DEFINITION FORM	5627-1	Div. 4 Sec. 27A
sclist	SPEED CALLING LIST FORM	5627-5	Div. 4 Sec. 27E
sclpa	SPEED CALLING LINE PARAMETER FORM	5627-2	Div. 4 Sec. 27B
scmpa	SPEED CALLING MLHG/TERM LINE PARAMETER FORM	5627-3	Div. 4 Sec. 27C
scridxpa	SCREENING INDEX PARAMETER ASSIGNMENT	5543	Div. 3 Sec. 5AQ
scrncode	SCREEN CODE TABLE FORM	5415	Div. 3 Sec. 4P
scrnrng	CALLING PARTY NUMBER SCREENING RANGES FORM	5212	Div. 3 Sec. 2N
scroar	OSPS BACK NUMBER ALTERNATE ROUTING	5481	Div. 3 Sec. 4CG
sctpa	SPEED CALLING TRUNK PARAMETER FORM	5627-4	Div. 4 Sec. 27D
sctpassc	SCTP ASSOCIATION	5889	Div. 5 Sec. 3AK
sctpfepd	SCTP FAR ENDPOINT DEFINITION	5888	Div. 5 Sec. 3AJ
sctpnepd	SCTP NEAR ENDPOINT DEFINITION	5886	Div. 5 Sec. 3AH
sctpparm	SCTPPARM	5885	Div. 5 Sec. 3AG
seqrest	OSPS ACCS RESTRICTED SEQUENCE TN FORM	5429	Div. 3 Sec. 4AD
servdata	OSPS SERVICE DATA FOR LISTING SERVICES CALLS	5466	Div. 3 Sec. 4BS
servdest	OSPS DESTINATION DATA FOR LISTING SERVICES CALLS	5467	Div. 3 Sec. 4BT
setid	OSPS IMPROVED THIRD NUMBER ACCEPTANCE TIME SET FORM	5461-2	Div. 3 Sec. 4BJ
sfsys	SECURED FEATURE SYSTEM ASSIGNMENT FORM	5713-1	Div. 3 Sec. 5AR
shtn	PRIMARY OR SECONDARY ONLY KEY SYSTEM FORM	5902	Div. 5 Sec. 1C
sipgsm	SIP-T GLOBAL SM	5880	Div. 5 Sec. 3AB
siptparm	SIP-T PARAMETERS DEFINITION	5882	Div. 5 Sec. 3AD
siptsms	SIP-T CALL PROCESSING SMS	5881	Div. 5 Sec. 3AC
slcalm	SLC-96 ALARM TYPE ASSIGNMENT FORM	5105	Div. 3 Sec. 1E
slccu	SLC-96 CHANNEL UNIT FORM	5107	Div. 3 Sec. 1G
slcrt	SLC-96 REMOTE TERMINAL FORM	5106	Div. 3 Sec. 1F
sljob	SLIM TEST JOB	5555	Div. 3 Sec. 5BA
sllen	SLIM OE LIST	5548	Div. 3 Sec. 5AX
slsess	SLIM TEST SESSION	5556	Div. 3 Sec. 5BB

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slthrs	SLIM THRESHOLD LIST	5554-1/2	Div. 3 Sec. 5AZ
sltset	SLIM TEST SET	5549	Div. 3 Sec. 5AY
smldit	LDIT AND ASSOCIATED SM LIST	5315	Div. 3 Sec. 3AB
spabs	SPECIAL ACCESS BAND SCREENING FORM	5319	Div. 3 Sec. 3AF
spaenxx	SPECIAL ACCESS EXEMPT NXXs FORM	5320	Div. 3 Sec. 3AG
specl	OSPS IMPROVED THIRD NUMBER ACCEPTANCE SPECIAL AREA CODE FORM	5461-3	Div. 3 Sec. 4BK
srdn	SIMULTANEOUS RINGING MDN LIST	5651	Div. 4 Sec. 31J
sreincr	SRE INCREMENTAL GLOBAL PARAMETERS	5547	Div. 3 Sec. 5AW
srfd	SIMULTANEOUS RINGING FEATURE DEFINITION	5650	Div. 4 Sec. 31I
srvcdesc	ATS FEATURE BUTTON SERVICE DESCRIPTION FORM	5985	Div. 6 Sec. 27A
srvdesig	OSPS SERVICE DESIGNATION FOR 1+800 AATOS/SDN NRA OR AATLSOS CALLS - SRVDESIG	5474	Div. 3 Sec. 4BZ
sspann	NETWORK ANNOUNCEMENTS FORM	5535	Div. 3 Sec. 5AI
stinfo	OSPS SERVING TEAM INFORMATION FORM	5402	Div. 3 Sec. 4C
stparm	ACD SERVING TEAM PARAMETERS	5638	Div. 4 Sec. 32C
sxdisp	ACD SEIZURE DISPLAY	5641	Div. 4 Sec. 32F
tccattr	OSPS TELEPHONE CREDIT CARD (TCR) ATTRIBUTES	5473	Div. 3 Sec. 4BY
tccid	OSPS TELEPHONE CREDIT CARD ISSUER IDENTIFICATION	5454	Div. 3 Sec. 4BC
tcitg	OSPS CAMA TRANSFER TRUNKS FORM	5422	Div. 3 Sec. 4W
tcscc	TERMINATING CODE SCREENING AND PCC FOR COUNTRY CODE FORM	5438	Div. 3 Sec. 4AM
tcsnpa	TERMINATING CODE SCREENING FOR NPA-NXX FORM	5437	Div. 3 Sec. 4AL
tcstext	TERMINATING CODE SCREENING TEXT AND RESTRICTIONS FORM	5436	Div. 3 Sec. 4AK
tdmaopt	TDMA OFFICE OPTIONS	5572	Div. 3 Sec. 5BM
tdr	TIME DEPENDENT ROUTING	5571	Div. 3 Sec. 5BL
telmon	TSM MONITORING TO MONITORED FORM	5932-1/2/3/4	Div. 5 Sec. 3M
tgattd	TERMINAL GROUP ATTENDANT FORM	5611	Div. 4 Sec. 12A
tgnlec	TGN TO LEC INDEX FORM	5443	Div. 3 Sec. 4AR
tgntnsc	LDP TRUNK TERMINATING NSC	5569	Div. 3 Sec. 5BJ
tgsrfd	TERMINAL GROUP AND STATION RESTRICTION	5607-1/2	Div. 4 Sec. 8A
tgsrlpa	TERMINAL GROUP AND STATION RESTRICTION LINE (TN) PARAMETER FORM	5607-3	Div. 4 Sec. 8B
tgsrmpa	TERMINAL GROUP AND STATION RESTRICTION LINE (MLHG/TERM) PARAMETER FORM	5607-4	Div. 4 Sec. 8C
tgsrtpa	TERMINAL GROUP AND STATION RESTRICTION TRUNK PARAMETER FORM	5607-5	Div. 4 Sec. 8D
timing	DIGIT ANALYSIS TIMING FORM	5520	Div. 3 Sec. 5T
tkblkcd	BLOCKED TRUNK GROUP ASP FCD CODES	5275	Div. 3 Sec. 2X
tkedsld	EDSL CALL-BY-CALL FEATURES FORM	5209	Div. 3 Sec. 2K
tkgrpfa	FEATURE ASSIGNMENT TRUNK GROUP FORM	5206	Div. 3 Sec. 2E
tkgrp	TRUNK GROUP FORM	5202	Div. 3 Sec. 2A
tlws	TRUNK AND LINE WORK STATION FORM	5511	Div. 3 Sec. 5K
tmzn	NPA TIME ZONES FORM	5426	Div. 3 Sec. 4AA
tniclist	TRANSIT NETWORK IDENTIFICATION CODE FORM	5928	Div. 5 Sec. 3I
tntyp	TONE TIME FORM	5504	Div. 3 Sec. 5D
todcl	TIME OF DAY CODE LIST DEFINITION FORM	5610-2	Div. 4 Sec. 11B
todfd	TIME OF DAY FEATURE DEFINITION FORM	5610-1	Div. 4 Sec. 11A
todlpa	TIME OF DAY LINE PARAMETER FORM	5610-3	Div. 4 Sec. 11C
todmpa	TIME OF DAY MLHG TERMINAL PARAMETER FORM	5610-4	Div. 4 Sec. 11D
todtpa	TIME OF DAY TRUNK (TGN/MEMB) PARAMETER FORM	5610-5	Div. 4 Sec. 11E
tprcc	OSPS INTERNATIONAL TERMINATING RESTRICTIONS	5464	Div. 3 Sec. 4BQ
tprnpa	OSPS TERMINATING NPA NXX RESTRICTIONS FORM	5465	Div. 3 Sec. 4BR
treat	OSPS IMPROVED THIRD NUMBER ACCEPTANCE CALL TREATMENT FORM	5461-4	Div. 3 Sec. 4BL

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trfsep	TRAFFIC SEPARATIONS CELL GROUPING FORM	5308	Div. 3 Sec. 3U
trkcl	TRUNK TRANSMISSION CLASS FORM	5203	Div. 3 Sec. 2B
trunkfa	FEATURE ASSIGNMENT TRUNK GROUP MEMBER NUMBER FORM	5205	Div. 3 Sec. 2D
trunk	TRUNK FEATURES AND ASSIGNMENTS FORM	5204	Div. 3 Sec. 2C
uttkgrp	UTILITY TELEMETRY TRUNK GROUP FORM	5215	Div. 3 Sec. 2R
valoffc	OSPS NXX LIST FOR BILLING NUMBER ON ONI/ANIF CALLS FORM	5423	Div. 3 Sec. 4X
vdchn	VOICE AND DATA CHANNELS	5918	Div. 5 Sec. 3W
x75cug	X75 CLOSED USER GROUP FORM	5930	Div. 5 Sec. 3K
x75pvc	TRUNK PACKET SWITCHING PVC LCN ASSIGNMENT FORM	5926	Div. 5 Sec. 3G
xat	X.25 PACKET SWITCHING CHANNEL ASSIGNMENT FORM	5909-1/2/3	Div. 5 Sec. 1J

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SEC. 2: ODA Form Name Versus Recent Change Cross Reference

1. GENERAL

This section contains the latest listing of 5ESS Switch ODA Translation Forms and corresponding 5ESS Switch Recent Change Translation Forms.

The list is presented in alphabetical order by the 5ESS Switch ODA Form mnemonics.

The associated 5ESS Switch ODA Record Number is identified along with the corresponding Recent Change View Number, TG-5 Division and Section, and Software Release. The Software Release indicates when the ODA form is available.

2. ODA FORM CROSS-REFERENCE TABLE

ODA Form Name	Office Record	RC View Number	Division / Section	Software Release
acblpa	5616-2	1.20	Div. 4 Sec. 17B	ALL
acbmpa	5616-3	1.20	Div. 4 Sec. 17C	ALL
accst	5428	26.40	Div. 3 Sec. 4AC	5E4(2) and later
acctfd	5623-1	12.42	Div. 4 Sec. 24A	ALL
acctgp	5623-2	4.21	Div. 4 Sec. 24B	ALL
acctlpa	5623-4	1.42	Div. 4 Sec. 24D	ALL
acctmpa	5623-5	1.42	Div. 4 Sec. 24E	ALL
acctrtp	5623-3	4.22	Div. 4 Sec. 24C	ALL
accttpa	5623-6	5.42	Div. 4 Sec. 24F	ALL
acdbparm	5645	6.9	Div. 4 Sec. 32K	5E11 and Later
acdctp	5412-A/D	26.9	Div. 3 Sec. 4M	5E4(2) and later
acdcvtn	5644	6.8	Div. 4 Sec. 32I	5E11 and later
acdtn	5631-1	4.15	Div. 4 Sec. 32A	5E9(1) - 5E10
acdvct	5643	6.7	Div. 4 Sec. 32H	5E11 and later
acofrf	5968	12.6	Div. 6 Sec. 11A	5E4(2) and later
acqs	5425	26.11	Div. 3 Sec. 4Z	5E4(2) and later
acsrfd	5959-1	12.50	Div. 6 Sec. 2A	5E5 and later
acsrgp	5959-2	4.47	Div. 6 Sec. 2B	5E5 and later
acsrlpa	5959-3	1.49	Div. 6 Sec. 2C	5E5 and later
acvtfd	5967-1	12.46	Div. 6 Sec. 10A	5E4(2) and later
acvtgp	5967-2	4.46	Div. 6 Sec. 10B	5E4(2) and later
acvtlpa	5967-3	1.46	Div. 6 Sec. 10C	5E4(2) and later
acvtmpa	5967-4	3.46 (5E4(2) to 5E6) 1.46 (5E7 and later)	Div. 6 Sec. 10D	5E4(2) and later
agntid	5639	6.3	Div. 4 Sec. 32D	5E11 and later
aiscls	5469	21.57	Div. 3 Sec. 4BV	5E6(2) and later
alrmlvls	5769	8.29	Div. 3 Sec. 5CD	ALL
amact	5506	10.12	Div. 3 Sec. 5F	ALL
amlbdsl	5447	21.34	Div. 3 Sec. 4AV	ALL
animod	5560	8.50	Div. 3 Sec. 5BD	5E10 and later
anitable	5561	8.51	Div. 3 Sec. 5BP	5E10 and later
anitbl	5561	8.51	Div. 3 Sec. 5BE	5E10 and later
annapl	5529	8.64	Div. 3 Sec. 5AC	5E4(2) and later
anndg	5532	8.60	Div. 3 Sec. 5AF	ALL
annhd	5531	8.61	Div. 3 Sec. 5AE	ALL
anntr	5533	8.62	Div. 3 Sec. 5AG	ALL
aowner	6446	21.28	Div. 3 Sec. 4ES	5E13 and later
apca	5620-1	24.3	Div. 4 Sec. 21A	ALL
apcomm	5507	24.1	Div. 3 Sec. 5G	ALL
apfma	5620-3	24.5	Div. 4 Sec. 21C	ALL
apgfp	5620-2	24.4	Div. 4 Sec. 21B	ALL
aphss	5620-4	24.12	Div. 4 Sec. 21D	5E4(2) and later
apxannc	5051	10.38	Div. 7 Sec. 1B	5E9(1) and later
apxparm	5050	8.28	Div. 7 Sec. 1A	5E9(1) and later
arsfd	5608-1	12.11	Div. 4 Sec. 9A	ALL
arsfrl	5608-7	10.8	Div. 4 Sec. 9G	ALL
arsgpa	5608-2	10.5	Div. 4 Sec. 9B	ALL
arslpa	5608-3	1.21	Div. 4 Sec. 9C	ALL
arsmpa	5608-4	1.21	Div. 4 Sec. 9D	ALL
arsscrn	5608-6	10.6	Div. 4 Sec. 9F	ALL
arssig	5608-9	10.7	Div. 4 Sec. 9I	ALL
arstcm	5608-8	10.9	Div. 4 Sec. 9H	ALL
arstpa	5608-5	5.21	Div. 4 Sec. 9E	ALL

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asifd	5630-1	12.61	Div. 4 Sec. 30A	5E8 and later
asigp	5630-4	4.61	Div. 4 Sec. 30D	5E8 and later
asilpa	5630-2	1.61	Div. 4 Sec. 30B	5E8 and later
asimpa	5630-3	1.61	Div. 4 Sec. 30C	5E8 and later
aspdp	5632-5	12.64	Div. 4 Sec. 31E	5E9(1) and later
aspfd	5632-1	12.64	Div. 4 Sec. 31A	5E9(1) and later
asplpa	5632-2	1.64	Div. 4 Sec. 31B	5E9(1) and later
aspmpa	5632-3	1.64	Div. 4 Sec. 31C	5E9(1) and later
aspopt	5670	8.49	Div. 4 Sec. 31G	5E12 and later
asprp	5634	4.64	Div. 4 Sec. 31F	5E9(2) and later
asptpa	5632-4	5.64	Div. 4 Sec. 31D	5E9(1) and later
asscparm	5887	33.20	Div. 5 Sec. 3AI	ALL
assocset	5890	33.23	Div. 5 Sec. 3AL	ALL
atc	5446	27.40	Div. 3 Sec. 4AT	5E4(2) and later
athac	5619-3	4.18	Div. 4 Sec. 20C	ALL
athfcos	5619-4	4.19	Div. 4 Sec. 20D	ALL
athfd	5619-1	12.41	Div. 4 Sec. 20A	ALL
athgp	5619-2	4.17	Div. 4 Sec. 20B	ALL
athlpa	5619-5	1.41	Div. 4 Sec. 20E	ALL
athmpa	5619-6	1.41	Div. 4 Sec. 20F	ALL
athtpa	5619-7	5.41	Div. 4 Sec. 20G	ALL
atmlnk	5592	22.27	Div. 5 Sec. 5P	5E17(1) FR 1 and later
atsdata	5052	14.9	Div. 7 Sec. 1C	5E9(1) and later
atsparm	5053	14.10	Div. 7 Sec. 1D	5E9(1) and later
auto	5505-1/2	14.1	Div. 3 Sec. 5E	ALL
bclidfd	5629-1	12.62	Div. 4 Sec. 29A	5E8 and later
bclidgp	5629-2	4.62	Div. 4 Sec. 29B	5E8 and later
bclidlpa	5629-3	1.62	Div. 4 Sec. 29C	5E8 and later
bclidmpa	5629-4	1.62	Div. 4 Sec. 29D	5E8 and later
bearernet	5935	33.15	Div. 5 Sec. 3AM	ALL
bfg	5625	12.9	Div. 4 Sec. 26A	5E4(2) and later
bfg	5626	12.9	Div. 4 Sec. 26B	5E4(2) and later
blk900	5482A	26.59	Div. 3 Sec. 4CH	5E8 and later
blvex	5442	27.11	Div. 3 Sec. 4AQ	5E4(2) and later
blvnpa	5441	27.10	Div. 3 Sec. 4AP	5E4(2) and later
cacdparm	5458	8.30	Div. 3 Sec. 4BF	5E6 and later
caicom	5984	23.23	Div. 6 Sec. 3D	5E9(1) and later
carscr	5551	1.60	Div. 3 Sec. 6B	5E5 and later
cascon	5455-A/B	27.53	Div. 3 Sec. 4BD	5E5 and later
casicon	5456-A/B	27.54	Div. 3 Sec. 4BE	5E5 and later
cc7pr	6001-1/2	16.2	Div. 9 Sec. 10A	5E11 and later
cccopt	5432	21.99	Div. 3 Sec. 4AG	5E4(2)and later
ccgsm	6008	16.1	Div. 9 Sec. 10H	5E11 and later
cclnk	6004-1/2	16.6	Div. 9 Sec. 10D	5E11 and later
ccname	5463	27.81	Div. 3 Sec. 4BP	5E6 and later
ccnet	6010	16.20	Div. 9 Sec. 10K	5E11 and later
ccpbd	6012	16.22	Div. 9 Sec. 10M	5E11 and later
ccpdl	6002	16.3	Div. 9 Sec. 10B	5E11 and later
ccp	5316	9.16	Div. 3 Sec. 3AC	5E5 and later
ccsgt	6015	16.25	Div. 9 Sec. 10N	5E11 and later
ccspr	6011	16.21	Div. 9 Sec. 10L	5E11 and later
ccsrti	5313	10.26	Div. 3 Sec. 3Z	ALL
ccstcap	5567	8.42	Div. 3 Sec. 5BH	5E12 and later
cctgm	6013	16.23	Div. 9 Sec. 10P	5E11 and later
cctt	6014	16.24	Div. 9 Sec. 10O	5E11 and later
cdim	5300-6	9.7	Div. 3 Sec. 3E	ALL
cdmaopt	5599	8.75	Div. 8 Sec. 80	5E15 and later
cfggrp	5964	12.5	Div. 6 Sec. 7A	5E4(2) and later
cfl	5712	12.1	Div. 8 Sec. 11	ALL
cfwfd	5614-1/2	12.12	Div. 4 Sec. 15A	ALL
cfwlpa	5614-3	1.22	Div. 4 Sec. 15B	ALL
cfwmpa	5614-4	1.22	Div. 4 Sec. 15C	ALL
cgasp	5514	8.10	Div. 3 Sec. 5N	ALL
cgatime	5766	20.33	Div. 3 Sec. 5CB	ALL
cgidx	5302-1	10.11	Div. 3 Sec. 3I	ALL
chbcpt	6406	27.61	Div. 3 Sec. 4DE	5E10 and later
cicdef	5218	5.72	Div. 3 Sec. 2U	5E15 and later
cicdist	5217	5.70	Div. 3 Sec. 2T	5E15 and later
cicphr	5498	27.66	Div. 3 Sec. 4CX	5E3 and later
cktcode	5311	10.23	Div. 3 Sec. 3X	5E6 and later
clkset	6005	16.7	Div. 9 Sec. 10E	5E11 and later
clli	5521	na	Div. 3 Sec. 5U	5E4(2) and later
clu	6020	16.9	Div. 9 Sec. 10T	5E14 and later
clustr	5600	12.2	Div. 4 Sec. 1A	ALL
cmpcrd	5480	27.45	Div. 3 Sec. 4CF	5E8 and later

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cmtmh	6021	16.16	Div. 9 Sec. 10U	5E15 and later
cnam	5986	4.65	Div. 6 Sec. 28A	5E13 and later
cnchg	5302-4	10.13	Div. 3 Sec. 3L	ALL
conv	5300-4	9.4	Div. 3 Sec. 3D	ALL
coth	5513	11.2	Div. 3 Sec. 5M	ALL
cpnbnfd	5982	12.52	Div. 6 Sec. 25A	5E6 and later
cqparm	5640	6.4	Div. 4 Sec. 32E	5E11 and later
csrattr	5475	27.58	Div. 3 Sec. 4CA	5E7 and later
cttu	5518	14.4	Div. 3 Sec. 5R	ALL
cvdsttn	5459	21.42	Div. 3 Sec. 4BG	5E6 and later
cvect	5460	21.41	Div. 3 Sec. 4BH	5E6 and later
cwtfd	5603-1A/1B	12.15	Div. 4 Sec. 4A	ALL
cwtlpa	5603-2	1.24	Div. 4 Sec. 4B	ALL
cwtmpa	5603-3	3.24	Div. 4 Sec. 4C	ALL
cwttpa	5603-4	5.24	Div. 4 Sec. 4D	5E5 and later
dacctrt	6412	27.88	Div. 3 Sec. 4DK	5E10 and later
das	5300-1	9.1	Div. 3 Sec. 3A	ALL
dcpsp	5477-2	27.82	Div. 3 Sec. 4CK	5E8 and later
dcpsss	5433	27.86	Div. 3 Sec. 4AH	5E9(1) and later
dcsdt	5054	14.11	Div. 7 Sec. 1E	5E9(1) and later
dcstt	5055	14.12	Div. 7 Sec. 1F	5E9(1) and later
dehnp	5431	27.85	Div. 3 Sec. 4AF	5E9(1) and later
dehocsm	5496	27.84	Div. 3 Sec. 4CW	5E9(1) and later
dfltsrv	5974	23.15	Div. 6 Sec. 17A	5E7 and later
diopr	5418	26.25	Div. 3 Sec. 4S	5E4(2) and later
diorsd	5484	27.9	Div. 3 Sec. 4CL	5E8 and later
diserv	5321	9.30	Div. 3 Sec. 3AH	5E6 and later
dispfd	5965	12.43	Div. 6 Sec. 8A	5E4(2) and later
dispmsg	5980	8.65	Div. 6 Sec. 23A	5E6 and later
dnntwk	5419	26.20	Div. 3 Sec. 4T	5E4(2) and later
dnra	6400	27.87	Div. 3 Sec. 4CZ	5E9(2) and Later
dnu2eec	5861	19.22	Div. 8 Sec. 68	5E13 and later
dnupm	5951-1/2	20.25	Div. 5 Sec. 5L	5E9(2) and later
drfd	5606-1	12.16	Div. 4 Sec. 7A	ALL
drlpa	5606-2	1.25	Div. 4 Sec. 7B	ALL
drmpa	5606-3	3.25	Div. 4 Sec. 7C	ALL
dsapp	5537	8.17	Div. 3 Sec. 5AK	ALL
dslap	5963	24.7	Div. 6 Sec. 6A	ALL
dsl	5907	23.2, 23.8	Div. 5 Sec. 1H	5E5 and later
dslqmon	5904	23.17	Div. 5 Sec. 1E	5E6 and later
dslusr	5908	23.2, 23.8	Div. 5 Sec. 1I	5E5 and later
dsnco	5618-8	10.36	Div. 4 Sec. 19H	ALL
dtrtx	5314	10.2	Div. 3 Sec. 3AA	ALL
easid	5317	9.17	Div. 3 Sec. 3AD	ALL
ecdopt	5706	na	Div. 8 Sec. 8	ALL
edscnt	5961-5	24.9	Div. 6 Sec. 4E	ALL
edsfd	5961-1	12.38	Div. 6 Sec. 4A	5E4(2) and later
edsgp	5961-2	4.38	Div. 6 Sec. 4B	5E4(2) and later
edslpa	5961-3	1.38	Div. 6 Sec. 4C	5E4(2) and later
edsmpa	5961-4	3.38 (5E4(2) to 5E6) 1.38 (5E7 and later)	Div. 6 Sec. 4D	5E4(2) and later
eisdata	5462-1	21.51	Div. 3 Sec. 4BM	ALL
eissm	5462-3	21.52	Div. 3 Sec. 4BO	ALL
emrnm	5108	4.9	Div. 3 Sec. 1H	ALL
emrofc	5116	4.9	Div. 3 Sec. 1P	ALL
enetlink	5827-1/2	19.21	Div. 8 Sec. 67	5E12 and later
enetpipe	5826-1/2	19.20	Div. 8 Sec. 66	5E12 and later
enhblv	6435	27.12	Div. 3 Sec. 4EH	5E11 and later
eqaip	5765	19.27	Div. 8 Sec. 90	ALL
eqaiu	5745	19.16	Div. 8 Sec. 64	5E11 and later
eqaiup	5746	20.8	Div. 8 Sec. 65	5E11 and later
eqapcx	5831	8.18	Div. 8 Sec. 83	ALL
eqci	5848		Div. 8 Sec. 50	5E9(2) and later
eqcm3	5867	n/a	Div. 8 Sec. 71	5E15 and later
eqcmtrcu	5812	17.5, 17.18	Div. 8 Sec. 32	ALL
eqcore	5701	17.16	Div. 8 Sec. 3	ALL
eqdclu eqdclp	5810	19.6	Div. 8 Sec. 30	ALL
eqdctu	5751	19.9	Div. 8 Sec. 26	ALL
eqdi	5849	18.3	Div. 8 Sec. 51	5E9(2) and later
eqdnus	5855-1/2/3	19.14	Div. 8 Sec. 57	5E9(2) and later
eqdpn	5820	8.7	Div. 8 Sec. 34	ALL
eqds eqdsp eqds2p	5740	19.5	Div. 8 Sec. 21	ALL
eqdsc3	5852	19.18	Div. 8 Sec. 54	5E9(2) and later
eqdsx	5721	na	Div. 8 Sec. 14	5E4(2) and later
eqdu,eqdup	5730	19.4	Div. 8 Sec. 17	ALL

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eqecsu	5743	19.15	Div. 8 Sec. 62	5E10 and later
eqfiu	5753	20.4	Div. 8 Sec. 28	ALL
eqgdsc3	5860	19.19	Div. 8 Sec. 63	5E10 and later
eqhvc	5763	20.30	Div. 8 Sec. 88	ALL
eqidcu	5846-1/2	19.12	Div. 8 Sec. 48	5E8 and later
eqifac	5847	20.23	Div. 8 Sec. 49	5E8 and later
eqim	5700-1/2	18.1	Div. 8 Sec. 2	ALL
eqisap	5824	22.8	Div. 8 Sec. 24	ALL
eqislu	5731	22.5	Div. 8 Sec. 18	ALL
eqistf	5823	19.11	Div. 8 Sec. 37	ALL
EQIWG	5874	19.26	Div. 8 Sec. 82	5E15 and later
eqlgc	5733	22.6	Div. 8 Sec. 20	ALL
eqlu	5710	19.1	Div. 8 Sec. 9	ALL
eqlup	5711	20.1	Div. 8 Sec. 10	ALL
eqlvc	5764	20.31	Div. 8 Sec. 89	ALL
eqmh	5856	19.13	Div. 8 Sec. 58	5E9(2) and later
eqmsu eqmsp eqmmsp eqmtib	5750	19.7	Div. 8 Sec. 25	ALL
eqncref	5702	17.4	Div. 8 Sec. 4	ALL
eqnli	5853	18.16	Div. 8 Sec. 55	5E9(2) and later
eqoiu	5760	19.28	Div. 8 Sec. 85	ALL
eqoiup	5761	20.28	Div. 8 Sec. 86	ALL
eqormlink	5813	18.1	Div. 8 Sec. 33	ALL
eqoste	5762	20.29	Div. 8 Sec. 87	ALL
eqpc	5703	17.2	Div. 8 Sec. 5	ALL
eqpctp	5870	20.17	Div. 8 Sec. 74	5E15 and later
eqpctt	5871	20.27	Div. 8 Sec. 75	5E15 and later
eqpdxu	5868	19.23	Div. 8 Sec. 72	5E14 and later
eqpipe	5544	17.20	Div. 3 Sec. 5AT	5E9(2) and later
eqpipe	5544	17.20	Div. 8 Sec. 78	5E9(2) and later
eqpltu	5869	19.24	Div. 8 Sec. 73	5E15 and later
eqpmu	5752-1/2	20.9	Div. 8 Sec. 27	ALL
eqpsu	5741	22.2	Div. 8 Sec. 22	ALL
eqpsuph	5742	22.3	Div. 8 Sec. 23	ALL
eqqlps	5854	17.19	Div. 8 Sec. 56	5E9(2) and later
eqra	5821	19.10	Div. 8 Sec. 35	ALL
eqrap	5822	20.10, 20.22	Div. 8 Sec. 36	ALL
eqrau	5705	18.1, 18.14	Div. 8 Sec. 7	ALL
eqrclk	5723-1/2	8.11, 20.11	Div. 8 Sec. 16	ALL
eqrislu	5732	22.9	Div. 8 Sec. 19	ALL
eqsasp	5859	20.26	Div. 8 Sec. 61	5E9(2) and later
eqsite	5722	18.8	Div. 8 Sec. 15	ALL
eqste	5857	20.12	Div. 8 Sec. 59	5E9(2) and later
eqtbcu	5811	18.12	Div. 8 Sec. 31	ALL
eqtms	5866	17.11	Div. 8 Sec. 69	5E15 and later
eqtmslink	5851	17.12	Div. 8 Sec. 53	eqtrcupth, 5814-1/2/3, 17.23, 8, 38, 5E12 and later
eqtrcupth	5814-1/2/3	17.23	Div. 8 Sec. 38	ALL
eqtsi	5850	18.17	Div. 8 Sec. 52	5E9(2) and later
eqtu eqtup	5720	19.2	Div. 8 Sec. 13	ALL
eqvt	5858	20.24	Div. 8 Sec. 60	5E9(2) and later
eqxcdu	5832	18.19	Div. 8 Sec. 84	ALL
esco	5541	9.41	Div. 3 Sec. 5AO	5E7 and later
esn	5540	9.40	Div. 3 Sec. 5AN	5E7 and later
espinfo	5472	27.65	Div. 3 Sec. 4BX	5E7 and later
ethip	5995	33.4	Div. 5 Sec. 3S	5E16(1) and later
excpt	5461-1	26.32	Div. 3 Sec. 4BI	5E6 and later
exmap	5440	26.4	Div. 3 Sec. 4AO	5E4(2) and later
fac2eec	5873	19.27	Div. 8 Sec. 81	5E14 and later
fixrt	5301-1	10.1	Div. 3 Sec. 3G	ALL
fixrtraf	5058	8.68	Div. 7 Sec. 1H	5E13 and later
flexacd	6434	26.8	Div. 3 Sec. 4EG	5E13 and later
flexani	5323	8.23	Div. 3 Sec. 3AJ	5E6 and later
fosys	5713-2	8.31	Div. 3 Sec. 5AS	5E5 and later
ftparm	6424	8.41	Div. 3 Sec. 4DY	5E10 and later
ftrkey	5613	4.3	Div. 4 Sec. 14A	ALL
ftscc	5485	27.78	Div. 3 Sec. 4CM	5E8 and later
ftsnanp	5486	27.77	Div. 3 Sec. 4CN	5E8 and later
ftsnxx	5487	27.75	Div. 3 Sec. 4CO	5E8 and later
ftsrn	5488	27.76	Div. 3 Sec. 4CP	5E8 and later
hgrpas	5115	4.14	Div. 3 Sec. 1O	ALL
hifd	5628	12.53	Div. 4 Sec. 28A	5E6 and later
ibmrngs	5471	21.58	Div. 3 Sec. 4BW	5E6(2) and later

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iccvdb	5478	27.60	Div. 3 Sec. 4CD	5E9(1) and later
icf	5305	10.3	Div. 3 Sec. 3R	ALL
icipf	5903	3.43	Div. 5 Sec. 1D	5E4(2) and later
icmfd	5960-1	12.45	Div. 6 Sec. 3A	5E4(2) and later
icmgp	5960-2	4.24	Div. 6 Sec. 3B	5E4(2) and later
icmlpa	5960-3	1.45	Div. 6 Sec. 3C	5E4(2) and later
iddd	5307	9.6	Div. 3 Sec. 3T	ALL
idfd	5601	12.17	Div. 4 Sec. 2A	ALL
idpdca	5601-1/2	9.13	Div. 4 Sec. 2B	ALL
idpgp	5601-4	9.10	Div. 4 Sec. 2D	ALL
idpicm	5601-5	9.12	Div. 4 Sec. 2E	ALL
idplpa	5601-6	1.26	Div. 4 Sec. 2F	ALL
idpmpa	5601-7	3.26	Div. 4 Sec. 2G	ALL
idprdca	5601-11	9.27	Div. 4 Sec. 2K	5E5 and later
idpricm	5601-12	9.26	Div. 4 Sec. 2L	5E5 and later
idptpa	5601-8	5.26	Div. 4 Sec. 2H	ALL
iminfo	5510	18.1, 11.1	Div. 3 Sec. 5J	ALL
imtrk	5210	5.46	Div. 3 Sec. 2L	5E5 and later
indit	5309	9.5	Div. 3 Sec. 3V	ALL
infldest	5448	21.27	Div. 3 Sec. 4AW	5E5 and later
infltadp	5452	27.52	Div. 3 Sec. 4BA	5E5 and later
infltap	5451	27.51	Div. 3 Sec. 4AZ	5E5 and later
infltrid	5453	27.50	Div. 3 Sec. 4BB	5E5 and later
interpsu	5993	22.30	Div. 5 Sec. 3Y	5E17(1) FR 1 and later
intrapsu	5992	22.29	Div. 5 Sec. 3X	5E17(1) FR 1 and later
inwatsnpa	5586	8.22	Div. 3 Sec. 5CA	5E15 and later
inwnpa	6404	27.72	Div. 3 Sec. 4DD	5E10 and Later
ipfdca	5969	12.7	Div. 6 Sec. 12A	5E4(2) and later
ipintf	5988	33.2	Div. 5 Sec. 3O	5e14 and later
ipping	5884	33.17	Div. 5 Sec. 3AF	ALL
ipproc	5987	33.1	Div. 5 Sec. 3N	5e14 and later
iprout	5989	33.3	Div. 5 Sec. 3P	5e14 and later
iscn	5844	na	Div. 8 Sec. 46	5E4(2) and later
isdnopt	5941	8.1	Div. 5 Sec. 5B	ALL
islulb	5952	22.21	Div. 5 Sec. 5M	5E10 and later
islulc	5942	22.7	Div. 5 Sec. 5C	ALL
			Div. 3 Sec. 1D	
langtbl	5483-1	8.66	Div. 3 Sec. 4CI	5E9(1) and later
lassck	5946	8.19	Div. 5 Sec. 5G	5E5 and later
lassfa	5973	8.18	Div. 6 Sec. 16A	5E5 and later
lassop	5945	8.21	Div. 5 Sec. 5F	5E5 and later
lasspfx	5947	8.20	Div. 5 Sec. 5H	5E5 and later
lcc	5306	4.1	Div. 3 Sec. 3S	ALL
ldit	5300-3 AB/5	9.3	Div. 3 Sec. 3C	ALL
ldpctbl	5562	8.52	Div. 3 Sec. 5BF	5E12 and later
ldpindex	5576	8.59	Div. 3 Sec. 5BQ	5E13 and later
ldptnsc	5568	8.53	Div. 3 Sec. 5BI	5E12 and later
lectext	5444	27.20	Div. 3 Sec. 4AS	5E4(2) and later
lidblnq	5449	27.32, 27.33	Div. 3 Sec. 4AX	5E5 and later
lidfd	5966	12.44	Div. 6 Sec. 9A	5E4(2) and later
linefa	5112	1.8, 1.11, 1.12	Div. 3 Sec. 1L	ALL
line	5109-1/2/3	1.6	Div. 3 Sec. 1I	ALL
linescrn	5416	26.2	Div. 3 Sec. 4Q	5E4(2) and later
lnarsgd	5214	10.27	Div. 3 Sec. 2P	5E6 and later
lnblkcod	5649	4.40	Div. 4 Sec. 31H	5E15 and later
lnkset	6003	16.5	Div. 9 Sec. 10C	5E11 and later
lnnodem	5542	10.28	Div. 3 Sec. 5AP	5E7 and later
lnrout	5322	10.22	Div. 3 Sec. 3AI	5E6 and later
locscrn	5545	8.26	Div. 3 Sec. 5AU	5E8 and later
lrnindex	5328	9.36	Div. 3 Sec. 3AM	5E11 and later
lsacfd	5970-1	12.47	Div. 6 Sec. 13A	5E5 and later
lsaclpa	5970-2	1.47	Div. 6 Sec. 13B	5E5 and later
lsacmpa	5970-3	3.47 (5E5 and 5E6) 1.47 (5E7 and later)	Div. 6 Sec. 13C	5E5 and later
lsarfd	5971-1	12.48	Div. 6 Sec. 14A	5E5 and later
lsarlpa	5971-2	1.48	Div. 6 Sec. 14B	5E5 and later
lsarmpa	5971-3	3.48 (5E5 and 5E6) 1.48 (5E7 and later)	Div. 6 Sec. 14C	5E5 and later
lscafd	5975	12.55	Div. 6 Sec. 18A	5E6 and later
lscarfd	5979	12.54	Div. 6 Sec. 22A	5E6 and later
lscffd	5976	12.56	Div. 6 Sec. 19A	5E6 and later
lscotfd	5972	12.49	Div. 6 Sec. 15A	5E5 and later
lscrfd	5977	12.57	Div. 6 Sec. 20A	5E6 and later
lsdafd	5978	12.58	Div. 6 Sec. 21A	5E6 and later

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lssle	5981	4.48	Div. 6 Sec. 24A	5E6 and later
ltgcadn	5222	5.76	Div. 3 Sec. 2Z	5E15 and later
ltgpci	5221	5.75	Div. 3 Sec. 2Y	5E15 and later
mbg	5633	4.12	Div. 4 Sec. 22A	5E9(2) and later
mcrtidx	5304	10.4	Div. 3 Sec. 3Q	ALL
mdfta	5502	14.6	Div. 3 Sec. 5B	ALL
mdlnk	6009	16.17	Div. 9 Sec. 10J	5E11 and later
mdrcnt	5624-3	24.2	Div. 4 Sec. 25C	ALL
mdrfd	5624-1	12.33	Div. 4 Sec. 25A	ALL
mdrgp	5624-2	24.33	Div. 4 Sec. 25B	ALL
mdrlpa	5624-4	1.33	Div. 4 Sec. 25D	ALL
mdrmpa	5624-5	1.33	Div. 4 Sec. 25E	ALL
mdrtpa	5624-6	5.33	Div. 4 Sec. 25F	ALL
measdsig	5499	27.71	Div. 3 Sec. 4CY	5E9(2) and later
measlu	5539	13.6	Div. 3 Sec. 5AM	5E7 and later
measpdf	5615	13.3	Div. 4 Sec. 16A	ALL
meassum	5563	13.9	Div. 3 Sec. 5BG	5E11 and later
mgpcomp	6921	50.2	Div. 5 Sec. 4B	5E16 and later
mgpgrowth	6920	50.1	Div. 5 Sec. 4A	5E16 and later
mgpline	6922	50.3	Div. 5 Sec. 4C	5E16 and later
mgptrunk	6923	50.4	Div. 5 Sec. 4D	5E16 and later
mislink	5637	23.19	Div. 4 Sec. 32B	5E9(1) - 5E10
mkbctt	5119	3.9	Div. 3 Sec. 1AC	5E6 and later
mlhgfd	5604	12.18	Div. 4 Sec. 5A	ALL
mlhg	5110	3.5	Div. 3 Sec. 1J	ALL
mlhlnfa	5113	1.8, 1.11, 1.12	Div. 3 Sec. 1M	ALL
mlhln	5111	1.6	Div. 3 Sec. 1K	ALL
mreg	5302-5	10.14	Div. 3 Sec. 3M	ALL
msccnt	5962-6	24.10	Div. 6 Sec. 5F	5E4(2) and later
mscnt	5962-5	24.11	Div. 6 Sec. 5E	5E4(2) and later
msfd	5962-1	12.37	Div. 6 Sec. 5A	5E4(2) and later
msgp	5962-2	4.37	Div. 6 Sec. 5B	5E4(2) and later
mslpa	5962-3	1.37	Div. 6 Sec. 5C	5E4(2) and later
msmpa	5962-4	3.37 (5E4(2) to 5E6) 1.37 (5E7 and later)	Div. 6 Sec. 5D	5E4(2) and later
msusp	5530	8.13	Div. 3 Sec. 5AD	ALL
mtbcomp	5557	na	Div. 3 Sec. 5BC	5E10 and later
mtndr	5550	1.9	Div. 3 Sec. 6A	5E4(2) and later
multitn	5114	3.3	Div. 3 Sec. 1N	ALL
muphkey	5612	3.6	Div. 4 Sec. 13A	ALL
mwfd	5602-1/2	12.19	Div. 4 Sec. 3A	ALL
mwlpa	5602-3	1.27	Div. 4 Sec. 3B	ALL
mwmpa	5602-4	3.27	Div. 4 Sec. 3C	ALL
mwtpa	5602-5	5.27	Div. 4 Sec. 3D	ALL
nailup	5207	7.11	Div. 3 Sec. 2F	ALL
NA	5011	15.1 RC_CNIOFF	Div. 9 Sec. 2A	NA
NA	5012-1/2	15.2 RC_LCDT	Div. 9 Sec. 2B	NA
NA	5013	15.3 RC_PHYS	Div. 9 Sec. 2C	NA
NA	5014	15.4 RC_CET	Div. 9 Sec. 2D	NA
NA	5015	15.5 RC_UVDT	Div. 9 Sec. 2E	NA
NA	5016	15.6 RC_EXCP	Div. 9 Sec. 2F	NA
NA	5017	15.7 RC_HFDT	Div. 9 Sec. 2G	NA
NA	5018	15.8 RC_SCHD	Div. 9 Sec. 2H	NA
NA	5019	15.9 RC_CLUST	Div. 9 Sec. 2I	NA
NA	5020	15.10 RC_SST	Div. 9 Sec. 2J	NA
NA	5021	15.11 RC_CNIGTT	Div. 9 Sec. 2K	NA
NA	5022	15.12 RC_NLNIDS	Div. 9 Sec. 2L	NA
NA	5023	15.13 RC_SMNID	Div. 9 Sec. 2M	NA
NA	5024	15.14 RCNIOFTIM	Div. 9 Sec. 2N	NA
NA	5025	15.15 RCNILSTIM	Div. 9 Sec. 2O	NA
NA	5026	15.16 RCNILSTHR	Div. 9 Sec. 2P	NA
NA	5027	15.17 RCNILKPRM	Div. 9 Sec. 2Q	NA
NA	5028	15.18 RCNIMEM	Div. 9 Sec. 2R	NA
N/A	5840	NA	Div. 8 Sec. 42	ALL
N/A	5841	N/A	Div. 8 Sec. 43	ALL
N/A	5842	NA	Div. 8 Sec. 44	ALL
NA	5843	NA	Div. 8 Sec. 45	ALL
NA	NA	8.15 RC_CPARM	Div. 9 Sec. 3A	NA
N/A	N/A	N/A	Div. 8 Sec. 1	N/A
NA	NA	NA	Div. 9 Sec. 1A	5E9(1) and later
nclkref	5525	17.16	Div. 3 Sec. 5Y	ALL
nid	6019	16.8	Div. 9 Sec. 10S	5E14 and later
noc	5501	8.2	Div. 3 Sec. 5A	ALL
nonusa	5477-1	26.6	Div. 3 Sec. 4CC	5E8 and later
npamap	5414	26.1	Div. 3 Sec. 4O	5E4(2) and later

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npasplit	5546	8.25	Div. 3 Sec. 5AV	5E8 and later
npool	5177	1.7	Div. 3 Sec. 1AF	5E14 and later
nstrig	5324	9.35	Div. 3 Sec. 3AK	5E8 and later
nttu	5590	14.24	Div. 3 Sec. 5BW	5E15 and later
nxxzn	5427	26.12	Div. 3 Sec. 4AB	5E4(2) and later
obsts	5408	21.26	Div. 3 Sec. 4I	ALL
ocntwk	5420	26.21	Div. 3 Sec. 4U	5E4(2) and later
octa	5406	21.25	Div. 3 Sec. 4G	ALL
odaop	5524	na	Div. 3 Sec. 5W	ALL
odbctur	5915	23.19	Div. 5 Sec. 1N	5E12 and later
odbres	5906	23.14	Div. 5 Sec. 1G	5E5 and later
odbts	5905	23.13	Div. 5 Sec. 1F	5E5 and later
ofcopt	5509	8.1, 8.15	Div. 3 Sec. 5I	ALL
oiupm	5767	20.32	Div. 3 Sec. 5CC	ALL
olnpu	6411	27.34, 27.35	Div. 3 Sec. 4DJ	5E11 and later
onpa	5312	8.8	Div. 3 Sec. 3Y	ALL
oparm	5400-1/2	21.1	Div. 3 Sec. 4A	ALL
opcto	5407	21.23	Div. 3 Sec. 4H	ALL
opdbparm	5434	27.30	Div. 3 Sec. 4AI	5E4(2) and later
opeisdb	5462-2	21.55	Div. 3 Sec. 4BN	5E6 and later opextdb
oprtk	5417	26.26	Div. 3 Sec. 4R	5E4(2) and later
orar	5405	21.24	Div. 3 Sec. 4F	ALL
osdc	5439	27.4	Div. 3 Sec. 4AN	5E4(2) and later
ospsct	5404	21.22	Div. 3 Sec. 4E	ALL
ospsdsl	5411	21.30	Div. 3 Sec. 4L	ALL
ospsoa	5403	21.4	Div. 3 Sec. 4D	ALL
ospsop	5401	21.32	Div. 3 Sec. 4B	ALL
ospsopt	5424	8.9	Div. 3 Sec. 4Y	5E4(2) and later
ospssminf	5476	na	Div. 3 Sec. 4CB	5E9(2) and later
otrvld	5410	21.6	Div. 3 Sec. 4K	ALL
pbgrp	5931	23.16	Div. 5 Sec. 3L	5E8 and later
pbxid	5213	5.1	Div. 3 Sec. 2O	ALL
pcc	5318	9.18	Div. 3 Sec. 3AE	5E5 and later
pcfopt	5996	34.1	Div. 5 Sec. 3T	5E16(1) and later
pcfpdsn	5996-2	34.2	Div. 5 Sec. 3U	5E16(1) and later
pc	6006	16.10	Div. 9 Sec. 10F	5E11 and later
pcrgrp	5883	33.16	Div. 5 Sec. 3AE	ALL
pdit	5300-2	9.2	Div. 3 Sec. 3B	ALL
pdsncnfg	5997	34.3	Div. 5 Sec. 3V	5E16(1) and later
pfafd	5609-1	12.20	Div. 4 Sec. 10A	ALL
pfagpa	5609-5	7.1	Div. 4 Sec. 10E	ALL
pfainwt	5609-4	7.4	Div. 4 Sec. 10D	ALL
pfalpa	5609-6	1.28	Div. 4 Sec. 10F	ALL
pfampa	5609-7	3.28	Div. 4 Sec. 10G	ALL
pfasfg	5609-3	7.3	Div. 4 Sec. 10C	ALL
pfatg	5609-2	7.2	Div. 4 Sec. 10B	ALL
pfatpa	5609-8	5.28	Div. 4 Sec. 10H	ALL
pgtc	5503	14.7	Div. 3 Sec. 5C	ALL
phrase	5534	8.63	Div. 3 Sec. 5AH	ALL
phrlang	5483-2	8.67	Div. 3 Sec. 4CJ	5E9(1) and later
pidef	5117	4.39	Div. 3 Sec. 1Q	5E5 and later
pktgrp	5219	5.71	Div. 5 Sec. 3Z	5E16(2) and later
pmthresh	5948	22.15	Div. 5 Sec. 5I	5E6 and later
pndp	5608-10/11	9.21	Div. 4 Sec. 9J	ALL
pninfo	5608-12	9.20	Div. 4 Sec. 9K	ALL
pnoffon	5608-13	9.22	Div. 4 Sec. 9L	ALL
pnonoff	5608-14	9.23	Div. 4 Sec. 9M	ALL
ppcoi	5618-6	10.33	Div. 4 Sec. 19F	ALL
ppfd	5618-1	12.31	Div. 4 Sec. 19A	ALL
pplpa	5618-3	1.31	Div. 4 Sec. 19C	ALL
ppmpa	5618-4	1.31	Div. 4 Sec. 19D	ALL
pppoly	5618-7	10.34	Div. 4 Sec. 19G	ALL
ppscrn	5618-2	10.31	Div. 4 Sec. 19B	ALL
pptpa	5618-5	5.31	Div. 4 Sec. 19E	ALL
prigrp	5211	5.2	Div. 3 Sec. 2M	5E9(1) and later
pronxx	5413	26.13	Div. 3 Sec. 4N	5E4(2) and later
propbid	5325	10.37	Div. 3 Sec. 3AL	5E8 and later
pscomp		na	Div. 5 Sec. 3R	5E16 and later
pscug	5924/5924A	23.10	Div. 5 Sec. 3E	ALL
psdnicri	5921	10.35	Div. 5 Sec. 3B	ALL
psism	5920	22.13	Div. 5 Sec. 3A	ALL
psmtn	5925/5925A	23.12	Div. 5 Sec. 3F	ALL
pspvc	5923	23.11	Div. 5 Sec. 3D	ALL
psrate	5922	8.16	Div. 5 Sec. 3C	ALL
psugp	5949	22.16	Div. 5 Sec. 3J	ALL

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psugw	5991	5.1	Div. 5 Sec. 3Q	ALL
psulnk	5057	22.22	Div. 7 Sec. 2A	5E10 and later
psupipe	5990	22.25	Div. 5 Sec. 5O	5E16(2) FR 1 and later
psupm	5998	22.31	Div. 5 Sec. 3AA	ALL
pugd	5605-4		Div. 4 Sec. 6E	ALL
pulpa	5605-3	1.23	Div. 4 Sec. 6C	ALL
pumpa	5605-4	1.23	Div. 4 Sec. 6D	ALL
puofd	5605-1	12.13	Div. 4 Sec. 6A	ALL
putfd	5605-2	12.14	Div. 4 Sec. 6B	ALL
qgcon	5829	17.27	Div. 8 Sec. 91	ALL
qphpipe	5828	17.24	Div. 8 Sec. 70	5E14 and later
qtuv	na	na	Div. 8 Sec. 92	ALL
qufd	5617-1/2	12.40	Div. 4 Sec. 18A	ALL
qugpa	5617-3/4	3.40, 7.12	Div. 4 Sec. 18B	ALL
raf	5271-4		Div. 3 Sec. 2Q	5E64(2) and later
ralm	5516	8.11, 8.12	Div. 3 Sec. 5P	ALL
rar	5301	10.10	Div. 3 Sec. 3F	ALL
rasrti	5538	10.19	Div. 3 Sec. 5AL	5E5 and later
rate	5302-3	10.15	Div. 3 Sec. 3K	ALL
rbvrti	5950	4.63	Div. 5 Sec. 5K	5E8 and later
rclkref	5519	20.11	Div. 3 Sec. 5S	ALL
rdit	5300-7/8	9.9	Div. 3 Sec. 3H	5E8 and later
rdtaport	5911A/B	22.17	Div. 5 Sec. 1L	5E7 and later
rdtatn	5910A/B	22.18	Div. 5 Sec. 1M	5E7 and later
resxdl	5409	21.5	Div. 3 Sec. 4J	ALL
retinfo	5845	na	Div. 8 Sec. 47	5E3 and later
ribmsc	5944	26.15	Div. 5 Sec. 5E	5E4(2) and later
risite	5940	22.11	Div. 5 Sec. 5A	ALL
rndfd	5983	12.59	Div. 6 Sec. 26A	5E8 and later
rorlst	5570	8.55	Div. 3 Sec. 5BK	5E12 and later
rotl	5512	14.2	Div. 3 Sec. 5L	ALL
rpma	5957	22.24	Div. 5 Sec. 5N	5E12
rsmcar	5421	26.22	Div. 3 Sec. 4V	5E4(2) and later
rsmlnk	5517	18.5, 18.9	Div. 3 Sec. 5Q	ALL
rterm	5174-1/2/3/4	18.15	Div. 3 Sec. 1S	5E8 and later
rtidx	5303	10.2	Div. 3 Sec. 3P	ALL
rtlist	5574	10.40	Div. 3 Sec. 5BO	5E13 and later
rxschd	5515	8.3	Div. 3 Sec. 5O	ALL
saalhsl	6016	16.26	Div. 9 Sec. 10V	5E16 and later
saalprm	6017	16.27	Div. 9 Sec. 10W	5E16(2) FR1 and later
sacscr	5552	9.8	Div. 3 Sec. 6C	ALL
scfam	5536	10.18	Div. 3 Sec. 5AJ	5E4(2) and later
scfd	5627-1	12.51	Div. 4 Sec. 27A	5E6 and later
sclist	5627-5	4.2	Div. 4 Sec. 27E	5E6 and later
sclpa	5627-2	1.51	Div. 4 Sec. 27B	5E6 and later
scmpa	5627-3	3.51 (5E6 Only) 1.51 (5E7 and later)	Div. 4 Sec. 27C	5E6 and later
scridxpa	5543	8.24	Div. 3 Sec. 5AQ	5E6 and later
scrncode	5415	26.3	Div. 3 Sec. 4P	5E4(2) and later
scrnrng	5212	7.5	Div. 3 Sec. 2N	5E6 and later
scroar	5481	26.5	Div. 3 Sec. 4CG	5E7 and later
sctpa	5627-4	5.51	Div. 4 Sec. 27D	5E6 and later
sctpassc	5889	33.22	Div. 5 Sec. 3AK	ALL
sctpfepd	5888	33.21	Div. 5 Sec. 3AJ	ALL
sctpnepd	5886	33.19	Div. 5 Sec. 3AH	ALL
sctpparm	5885	33.18	Div. 5 Sec. 3AG	ALL
seqrest	5429	26.41	Div. 3 Sec. 4AD	5E4(2) and later
servdata	5466	21.54	Div. 3 Sec. 4BS	5E6 and later
servdest	5467	21.53	Div. 3 Sec. 4BT	5E6 and later
setid	5461-2	26.30	Div. 3 Sec. 4BJ	5E6 and later
sfsys	5713-1	8.22	Div. 3 Sec. 5AR	5E5 and later
shtn	5902	23.20	Div. 5 Sec. 1C	5E4(2) and later
sipgsm	5880	5.80	Div. 5 Sec. 3AB	ALL
siptparm	5882	5.82	Div. 5 Sec. 3AD	ALL
siptsms	5881	5.81	Div. 5 Sec. 3AC	ALL
slcalm	5105	18.14	Div. 3 Sec. 1E	5E5 and later
slccu	5107	18.11	Div. 3 Sec. 1G	ALL
slcrt	5106	18.10	Div. 3 Sec. 1F	ALL
sljob	5555	14.16	Div. 3 Sec. 5BA	5E10 and later
sllen	5548	14.13	Div. 3 Sec. 5AX	5E10 and later
slsess	5556	14.17	Div. 3 Sec. 5BB	5E10 and later
slthrs	5554-1/2	14.15	Div. 3 Sec. 5AZ	5E10 and later
sltset	5549	14.14	Div. 3 Sec. 5AY	5E10 and later
smldit	5315	9.25	Div. 3 Sec. 3AB	5E5 and later
spabs	5319	10.20	Div. 3 Sec. 3AF	5E5 and later

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spaenxx	5320	10.21	Div. 3 Sec. 3AG	5E5 and later
specl	5461-3	26.31	Div. 3 Sec. 4BK	5E6 and later
srdn	5651	1.65	Div. 4 Sec. 31J	5E16 and later
sreincr	5547	8.40	Div. 3 Sec. 5AW	5E9(2) and later
srfd	5650	12.65	Div. 4 Sec. 31I	5E16 and later
srvcdesc	5985	8.32	Div. 6 Sec. 27A	5E9(1) and later
srvdesig	5474	27.70	Div. 3 Sec. 4BZ	5E7 and later
sspann	5535	10.17	Div. 3 Sec. 5AI	5E4(2) and later
stinfo	5402	21.2	Div. 3 Sec. 4C	ALL
stparm	5638	6.1	Div. 4 Sec. 32C	5E11 and Later
sxdisp	5641	6.5	Div. 4 Sec. 32F	5E11 and later
tccattr	5473	27.56	Div. 3 Sec. 4BY	5E7 and later
tccid	5454	27.55	Div. 3 Sec. 4BC	5E5 and later
tcitg	5422	26.23	Div. 3 Sec. 4W	5E4(2) and later
tcscc	5438	27.3	Div. 3 Sec. 4AM	5E4(2) and later
tcsnpa	5437	27.2	Div. 3 Sec. 4AL	5E4(2) and later
tcstext	5436	27.1	Div. 3 Sec. 4AK	5E4(2) and later
tdmaopt	5572	8.56	Div. 3 Sec. 5BM	5E12
tdr	5571	10.39	Div. 3 Sec. 5BL	5E12 and later
telmon	5932-1/2/3/4	23.24	Div. 5 Sec. 3M	5E12 and later
tgattd	5611	4.4	Div. 4 Sec. 12A	ALL
tgnlec	5443	27.21	Div. 3 Sec. 4AR	5E4(2) and later
tgntnsc	5569	8.54	Div. 3 Sec. 5BJ	5E12 and later
tgsrfd	5607-1/2	12.21	Div. 4 Sec. 8A	ALL
tgsrlpa	5607-3	1.29	Div. 4 Sec. 8B	ALL
tgsrmpa	5607-4	1.29	Div. 4 Sec. 8C	ALL
tgsrtpa	5607-5	5.29	Div. 4 Sec. 8D	ALL
timing	5520	8.5	Div. 3 Sec. 5T	ALL
tkblkcd	5275	5.65	Div. 3 Sec. 2X	5E15 and later
tkedsld	5209	5.34	Div. 3 Sec. 2K	5E4(2) and later
tkgrp	5202	5.1	Div. 3 Sec. 2A	ALL
tkgrpfa	5206	5.4	Div. 3 Sec. 2E	ALL
tlws	5511	14.3	Div. 3 Sec. 5K	ALL
tmzn	5426	26.14	Div. 3 Sec. 4AA	5E4(2) and later
tniclist	5928	5.15	Div. 5 Sec. 3I	5E8 and later
tntyp	5504	8.6	Div. 3 Sec. 5D	ALL
todcl	5610-2	4.5	Div. 4 Sec. 11B	ALL
todfd	5610-1	12.22	Div. 4 Sec. 11A	ALL
todlpa	5610-3	1.30	Div. 4 Sec. 11C	ALL
todmpa	5610-4	1.30	Div. 4 Sec. 11D	ALL
todtpa	5610-5	5.30	Div. 4 Sec. 11E	ALL
tprcc	5464	27.6	Div. 3 Sec. 4BQ	5E6 - 5E9(1)
tprnpa	5465	27.5	Div. 3 Sec. 4BR	5E6 and later
treat	5461-4	26.33	Div. 3 Sec. 4BL	5E6 and later
trfsep	5308	8.4	Div. 3 Sec. 3U	ALL
trkcl	5203	5.3	Div. 3 Sec. 2B	ALL
trunkfa	5205	5.11	Div. 3 Sec. 2D	ALL
trunk	5204	5.5	Div. 3 Sec. 2C	ALL
uttkgrp	5215	5.16	Div. 3 Sec. 2R	5E9(2) and later
valoffc	5423	26.24	Div. 3 Sec. 4X	5E4(2) and later
vdchn	5918	22.32	Div. 5 Sec. 3W	5E16(2) and later
x75cug	5930	5.14	Div. 5 Sec. 3K	5E8 and later
x75pvc	5926	5.13	Div. 5 Sec. 3G	5E5 and later
xat	5909-1/2/3	23.40	Div. 5 Sec. 1J	5E6 and later

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SEC. 3: Recent Change View Number Versus ODA Form Name

1. GENERAL

This section contains the listing of Recent Change Views and corresponding ODA form names. Division 0, Section 2 has a similar table, however, it is sorted alphabetically by ODA form name. This section is sorted numerically by Recent Change View number. This cross reference provides the RC Views and their corresponding ODA/TG-5 information (i.e., ODA Form Name, Record Number, and TG-5 Division and Section). Also, the Software Release column indicates when the RC View was released.

1.1 Software Release

The Software Release date after the form name indicates that the recent change view only corresponds to that form for those Software Releases.

2. RECENT CHANGE VIEW CROSS-REFERENCE TABLE

RC View Number	ODA Form Name	Record Number	Division / Section
na	retinfo	5845	Div. 8 Sec. 47
na	qtuv	na	Div. 8 Sec. 92
na	pscomp		Div. 5 Sec. 3R
na	ospssminf	5476	Div. 3 Sec. 4CB
na	odaop	5524	Div. 3 Sec. 5W
NA	NA	5843	Div. 8 Sec. 45
NA	NA	NA	Div. 9 Sec. 1A
NA	N/A	5842	Div. 8 Sec. 44
na	mtbcomp	5557	Div. 3 Sec. 5BC
na	iscn	5844	Div. 8 Sec. 46
na	eqdsx	5721	Div. 8 Sec. 14
na	ecdopt	5706	Div. 8 Sec. 8
na	clli	5521	Div. 3 Sec. 5U
NA	N/A	5840	Div. 8 Sec. 42
N/A	N/A	N/A	Div. 8 Sec. 1
N/A	N/A	5841	Div. 8 Sec. 43
n/a	eqcm3	5867	Div. 8 Sec. 71
	raf	5271-4	Div. 3 Sec. 2Q
	pugd	5605-4	Div. 4 Sec. 6E
	eqci	5848	Div. 8 Sec. 50
			Div. 3 Sec. 1D
1.6	mlhln	5111	Div. 3 Sec. 1K
1.6	line	5109-1/2/3	Div. 3 Sec. 1I
1.7	npool	5177	Div. 3 Sec. 1AF
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26.14	tmzn	5426	Div. 3 Sec. 4AA
26.15	ribmsc	5944	Div. 5 Sec. 5E
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26.22	rsmcar	5421	Div. 3 Sec. 4V
26.23	tcitg	5422	Div. 3 Sec. 4W
26.24	valoffc	5423	Div. 3 Sec. 4X
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26.26	oprtk	5417	Div. 3 Sec. 4R
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26.31	specl	5461-3	Div. 3 Sec. 4BK
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27.51	inflta p	5451	Div. 3 Sec. 4AZ
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27.55	tccid	5454	Div. 3 Sec. 4BC
27.56	tccattr	5473	Div. 3 Sec. 4BY
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27.65	espinfo	5472	Div. 3 Sec. 4BX
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27.71	measdsig	5499	Div. 3 Sec. 4CY
27.72	inwnpa	6404	Div. 3 Sec. 4DD
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27.76	ftsrn	5488	Div. 3 Sec. 4CP
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27.85	dehnp	5431	Div. 3 Sec. 4AF
27.86	dcpsss	5433	Div. 3 Sec. 4AH
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33.2	ipintf	5988	Div. 5 Sec. 3O
33.3	iprout	5989	Div. 5 Sec. 3P
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33.17	ipping	5884	Div. 5 Sec. 3AF
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33.22	sctpassc	5889	Div. 5 Sec. 3AK
33.23	assocset	5890	Div. 5 Sec. 3AL
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34.2	pcfpdsn	5996-2	Div. 5 Sec. 3U
34.3	pdsncnfg	5997	Div. 5 Sec. 3V
50.1	mgpgrowth	6920	Div. 5 Sec. 4A
50.2	mgpcomp	6921	Div. 5 Sec. 4B
50.3	mgpline	6922	Div. 5 Sec. 4C
50.4	mgptrunk	6923	Div. 5 Sec. 4D

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SEC. 4: Office Record Number Versus ODA Form Name and Recent Change View

1. GENERAL

This section contains the listing of ODA office records and corresponding RC view numbers. Division 0, Section 2 has a similar table, however, it is sorted alphabetically by ODA form name. This section is sorted numerically by ODA office record number. This cross reference provides the office records and their corresponding ODA/TG-5 information (i.e., RC View Number, ODA Form Name, and TG-5 Division and Section).

This section contains the latest listing of 5ESS Switch ODA office records with corresponding ODA form names and Recent Change view numbers. The list is presented in numerical order by the ODA record number.

2. RECORD NUMBER INDEX TABLE

Record Number	RC View Number	ODA Form Name	Division / Section
5011	15.1 RC_CNIOFF	NA	Div. 9 Sec. 2A
5012-1/2	15.2 RC_LCDT	NA	Div. 9 Sec. 2B
5013	15.3 RC_PHYS	NA	Div. 9 Sec. 2C
5014	15.4 RC_CET	NA	Div. 9 Sec. 2D
5015	15.5 RC_UVDT	NA	Div. 9 Sec. 2E
5016	15.6 RC_EXCP	NA	Div. 9 Sec. 2F
5017	15.7 RC_HFDT	NA	Div. 9 Sec. 2G
5018	15.8 RC_SCHD	NA	Div. 9 Sec. 2H
5019	15.9 RC_CLUST	NA	Div. 9 Sec. 2I
5020	15.10 RC_SST	NA	Div. 9 Sec. 2J
5021	15.11 RC_CNIGTT	NA	Div. 9 Sec. 2K
5022	15.12 RC_NLNIDS	NA	Div. 9 Sec. 2L
5023	15.13 RC_SMNID	NA	Div. 9 Sec. 2M
5024	15.14 RCNIOFTIM	NA	Div. 9 Sec. 2N
5025	15.15 RCNILSTIM	NA	Div. 9 Sec. 2O
5026	15.16 RCNILSTHR	NA	Div. 9 Sec. 2P
5027	15.17 RCNILKPRM	NA	Div. 9 Sec. 2Q
5028	15.18 RCNIMEM	NA	Div. 9 Sec. 2R
5050	8.28	apxparm	Div. 7 Sec. 1A
5051	10.38	apxannc	Div. 7 Sec. 1B
5052	14.9	atsdata	Div. 7 Sec. 1C
5053	14.10	atsparm	Div. 7 Sec. 1D
5054	14.11	dcsdt	Div. 7 Sec. 1E
5055	14.12	dcstt	Div. 7 Sec. 1F
5057	22.22	psulnk	Div. 7 Sec. 2A
5058	8.68	fixrtraf	Div. 7 Sec. 1H
5105	18.14	slcalm	Div. 3 Sec. 1E
5106	18.10	slcrt	Div. 3 Sec. 1F
5107	18.11	slccu	Div. 3 Sec. 1G
5108	4.9	emrnm	Div. 3 Sec. 1H
5109-1/2/3	1.6	line	Div. 3 Sec. 1I
5110	3.5	mlhg	Div. 3 Sec. 1J
5111	1.6	mlhln	Div. 3 Sec. 1K
5112	1.8, 1.11, 1.12	linefa	Div. 3 Sec. 1L
5113	1.8, 1.11, 1.12	mlhlnfa	Div. 3 Sec. 1M
5114	3.3	multitn	Div. 3 Sec. 1N
5115	4.14	hgrpas	Div. 3 Sec. 1O
5116	4.9	emrofc	Div. 3 Sec. 1P
5117	4.39	pidef	Div. 3 Sec. 1Q
5119	3.9	mkbctt	Div. 3 Sec. 1AC
5174-1/2/3/4	18.15	rterm	Div. 3 Sec. 1S
5177	1.7	npool	Div. 3 Sec. 1AF
5202	5.1	tkgrp	Div. 3 Sec. 2A
5203	5.3	trkcl	Div. 3 Sec. 2B
5204	5.5	trunk	Div. 3 Sec. 2C
5205	5.11	trunkfa	Div. 3 Sec. 2D
5206	5.4	tkgrpfa	Div. 3 Sec. 2E
5207	7.11	nailup	Div. 3 Sec. 2F
5209	5.34	tkedsld	Div. 3 Sec. 2K
5210	5.46	imtrk	Div. 3 Sec. 2L
5211	5.2	prigrp	Div. 3 Sec. 2M
5212	7.5	scrnrng	Div. 3 Sec. 2N

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5213	5.1	pbxid	Div. 3 Sec. 2O
5214	10.27	lnarsgd	Div. 3 Sec. 2P
5215	5.16	uttkgrp	Div. 3 Sec. 2R
5217	5.70	cicdist	Div. 3 Sec. 2T
5218	5.72	cicdef	Div. 3 Sec. 2U
5219	5.71	pktgrp	Div. 5 Sec. 3Z
5221	5.75	ltgpci	Div. 3 Sec. 2Y
5222	5.76	ltgcadn	Div. 3 Sec. 2Z
5271-4		raf	Div. 3 Sec. 2Q
5275	5.65	tkblkcd	Div. 3 Sec. 2X
5300-1	9.1	das	Div. 3 Sec. 3A
5300-2	9.2	pdit	Div. 3 Sec. 3B
5300-3 AB/5	9.3	ldit	Div. 3 Sec. 3C
5300-4	9.4	conv	Div. 3 Sec. 3D
5300-6	9.7	cdim	Div. 3 Sec. 3E
5300-7/8	9.9	rdit	Div. 3 Sec. 3H
5301-1	10.1	fixrt	Div. 3 Sec. 3G
5301	10.10	rar	Div. 3 Sec. 3F
5302-1	10.11	cgidx	Div. 3 Sec. 3I
5302-3	10.15	rate	Div. 3 Sec. 3K
5302-4	10.13	cnchg	Div. 3 Sec. 3L
5302-5	10.14	mreg	Div. 3 Sec. 3M
5303	10.2	rtidx	Div. 3 Sec. 3P
5304	10.4	mcrtidx	Div. 3 Sec. 3Q
5305	10.3	icf	Div. 3 Sec. 3R
5306	4.1	lcc	Div. 3 Sec. 3S
5307	9.6	iddd	Div. 3 Sec. 3T
5308	8.4	trfsep	Div. 3 Sec. 3U
5309	9.5	indit	Div. 3 Sec. 3V
5311	10.23	cktcode	Div. 3 Sec. 3X
5312	8.8	onpa	Div. 3 Sec. 3Y
5313	10.26	ccsrti	Div. 3 Sec. 3Z
5314	10.2	dtrtx	Div. 3 Sec. 3AA
5315	9.25	smldit	Div. 3 Sec. 3AB
5316	9.16	ccp	Div. 3 Sec. 3AC
5317	9.17	easid	Div. 3 Sec. 3AD
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5322	10.22	lnrout	Div. 3 Sec. 3AI
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5325	10.37	propbid	Div. 3 Sec. 3AL
5328	9.36	lrnindex	Div. 3 Sec. 3AM
5400-1/2	21.1	oparm	Div. 3 Sec. 4A
5401	21.32	ospsop	Div. 3 Sec. 4B
5402	21.2	stinfo	Div. 3 Sec. 4C
5403	21.4	ospsoa	Div. 3 Sec. 4D
5404	21.22	ospsct	Div. 3 Sec. 4E
5405	21.24	orar	Div. 3 Sec. 4F
5406	21.25	octa	Div. 3 Sec. 4G
5407	21.23	opcto	Div. 3 Sec. 4H
5408	21.26	obsts	Div. 3 Sec. 4I
5409	21.5	resxdl	Div. 3 Sec. 4J
5410	21.6	otrvld	Div. 3 Sec. 4K
5411	21.30	ospsdsl	Div. 3 Sec. 4L
5412-A/D	26.9	acdctp	Div. 3 Sec. 4M
5413	26.13	pronxx	Div. 3 Sec. 4N
5414	26.1	npamap	Div. 3 Sec. 4O
5415	26.3	scrncode	Div. 3 Sec. 4P
5416	26.2	linescrn	Div. 3 Sec. 4Q
5417	26.26	oprtk	Div. 3 Sec. 4R
5418	26.25	diopr	Div. 3 Sec. 4S
5419	26.20	dnntwk	Div. 3 Sec. 4T
5420	26.21	ocntwk	Div. 3 Sec. 4U
5421	26.22	rsmcar	Div. 3 Sec. 4V
5422	26.23	tcitg	Div. 3 Sec. 4W
5423	26.24	valoffc	Div. 3 Sec. 4X
5424	8.9	ospsopt	Div. 3 Sec. 4Y
5425	26.11	acqs	Div. 3 Sec. 4Z
5426	26.14	tmzn	Div. 3 Sec. 4AA
5427	26.12	nxxzn	Div. 3 Sec. 4AB
5428	26.40	accst	Div. 3 Sec. 4AC
5429	26.41	seqrest	Div. 3 Sec. 4AD

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5431	27.85	dehnp	Div. 3 Sec. 4AF
5432	21.99	cccopt	Div. 3 Sec. 4AG
5433	27.86	dcpsss	Div. 3 Sec. 4AH
5434	27.30	opdbparm	Div. 3 Sec. 4AI
5436	27.1	tcstext	Div. 3 Sec. 4AK
5437	27.2	tcsnpa	Div. 3 Sec. 4AL
5438	27.3	tcscc	Div. 3 Sec. 4AM
5439	27.4	osdc	Div. 3 Sec. 4AN
5440	26.4	exmap	Div. 3 Sec. 4AO
5441	27.10	blvnpa	Div. 3 Sec. 4AP
5442	27.11	blvex	Div. 3 Sec. 4AQ
5443	27.21	tgnlec	Div. 3 Sec. 4AR
5444	27.20	lectext	Div. 3 Sec. 4AS
5446	27.40	atc	Div. 3 Sec. 4AT
5447	21.34	amlbdsl	Div. 3 Sec. 4AV
5448	21.27	infldest	Div. 3 Sec. 4AW
5449	27.32, 27.33	lidblnq	Div. 3 Sec. 4AX
5451	27.51	infltap	Div. 3 Sec. 4AZ
5452	27.52	infltadp	Div. 3 Sec. 4BA
5453	27.50	infltrid	Div. 3 Sec. 4BB
5454	27.55	tccid	Div. 3 Sec. 4BC
5455-A/B	27.53	cascon	Div. 3 Sec. 4BD
5456-A/B	27.54	casicon	Div. 3 Sec. 4BE
5458	8.30	cacdparm	Div. 3 Sec. 4BF
5459	21.42	cvdsttn	Div. 3 Sec. 4BG
5460	21.41	cvect	Div. 3 Sec. 4BH
5461-1	26.32	excpt	Div. 3 Sec. 4BI
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5461-3	26.31	specl	Div. 3 Sec. 4BK
5461-4	26.33	treat	Div. 3 Sec. 4BL
5462-1	21.51	eisdata	Div. 3 Sec. 4BM
5462-2	21.55	opeisdb	Div. 3 Sec. 4BN
5462-3	21.52	eissm	Div. 3 Sec. 4BO
5463	27.81	ccname	Div. 3 Sec. 4BP
5464	27.6	tprcc	Div. 3 Sec. 4BQ
5465	27.5	tprnpa	Div. 3 Sec. 4BR
5466	21.54	servdata	Div. 3 Sec. 4BS
5467	21.53	servdest	Div. 3 Sec. 4BT
5469	21.57	aiscls	Div. 3 Sec. 4BV
5471	21.58	ibmrngs	Div. 3 Sec. 4BW
5472	27.65	espinfo	Div. 3 Sec. 4BX
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5971-2	1.48	lsarlpa	Div. 6 Sec. 14B
5971-3	3.48 (5E5 and 5E6) 1.48 (5E7 and later)	lsarmpa	Div. 6 Sec. 14C
5972	12.49	lscotfd	Div. 6 Sec. 15A
5973	8.18	lassfa	Div. 6 Sec. 16A
5974	23.15	dfltsrv	Div. 6 Sec. 17A
5975	12.55	lscafd	Div. 6 Sec. 18A
5976	12.56	lscffd	Div. 6 Sec. 19A
5977	12.57	lscrfd	Div. 6 Sec. 20A
5978	12.58	lsdafd	Div. 6 Sec. 21A
5979	12.54	lscarfd	Div. 6 Sec. 22A
5980	8.65	dispmsg	Div. 6 Sec. 23A
5981	4.48	lssle	Div. 6 Sec. 24A
5982	12.52	cpnbnfd	Div. 6 Sec. 25A
5983	12.59	rndfd	Div. 6 Sec. 26A
5984	23.23	caicom	Div. 6 Sec. 3D
5985	8.32	srvcdesc	Div. 6 Sec. 27A
5986	4.65	cnam	Div. 6 Sec. 28A
5987	33.1	ipproc	Div. 5 Sec. 3N
5988	33.2	ipintf	Div. 5 Sec. 3O
5989	33.3	iprout	Div. 5 Sec. 3P
5990	22.25	psupipe	Div. 5 Sec. 5O
5991	5.1	psugw	Div. 5 Sec. 3Q

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5992	22.29	intrapsu	Div. 5 Sec. 3X
5993	22.30	interpsu	Div. 5 Sec. 3Y
5995	33.4	ethip	Div. 5 Sec. 3S
5996-2	34.2	pcfpdsn	Div. 5 Sec. 3U
5996	34.1	pcfopt	Div. 5 Sec. 3T
5997	34.3	pdsncnfg	Div. 5 Sec. 3V
5998	22.31	psupm	Div. 5 Sec. 3AA
6001-1/2	16.2	cc7pr	Div. 9 Sec. 10A
6002	16.3	ccpdl	Div. 9 Sec. 10B
6003	16.5	lnkset	Div. 9 Sec. 10C
6004-1/2	16.6	cclnk	Div. 9 Sec. 10D
6005	16.7	clkset	Div. 9 Sec. 10E
6006	16.10	pc	Div. 9 Sec. 10F
6008	16.1	ccgsm	Div. 9 Sec. 10H
6009	16.17	mdlnk	Div. 9 Sec. 10J
6010	16.20	ccnet	Div. 9 Sec. 10K
6011	16.21	ccspr	Div. 9 Sec. 10L
6012	16.22	ccpbd	Div. 9 Sec. 10M
6013	16.23	cctgm	Div. 9 Sec. 10P
6014	16.24	cctt	Div. 9 Sec. 10O
6015	16.25	ccsgt	Div. 9 Sec. 10N
6016	16.26	saalhsl	Div. 9 Sec. 10V
6017	16.27	saalprm	Div. 9 Sec. 10W
6019	16.8	nid	Div. 9 Sec. 10S
6020	16.9	clu	Div. 9 Sec. 10T
6021	16.16	cmtmh	Div. 9 Sec. 10U
6400	27.87	dnra	Div. 3 Sec. 4CZ
6404	27.72	inwnpa	Div. 3 Sec. 4DD
6406	27.61	chbcpt	Div. 3 Sec. 4DE
6411	27.34, 27.35	olnpu	Div. 3 Sec. 4DJ
6412	27.88	dacctrt	Div. 3 Sec. 4DK
6424	8.41	ftparm	Div. 3 Sec. 4DY
6434	26.8	flexacd	Div. 3 Sec. 4EG
6435	27.12	enhblv	Div. 3 Sec. 4EH
6446	21.28	aowner	Div. 3 Sec. 4ES
6920	50.1	mgpgrowth	Div. 5 Sec. 4A
6921	50.2	mgpcomp	Div. 5 Sec. 4B
6922	50.3	mgpline	Div. 5 Sec. 4C
6923	50.4	mgptrunk	Div. 5 Sec. 4D
			Div. 3 Sec. 1D
	na	pscomp	Div. 5 Sec. 3R
NA	8.15 RC_CPARM	NA	Div. 9 Sec. 3A
NA	NA	NA	Div. 9 Sec. 1A
N/A	N/A	N/A	Div. 8 Sec. 1
na	na	qtuv	Div. 8 Sec. 92

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SEC. 5: 5ESS SWITCH DEFINED LIMITS

1. GENERAL

This section contains the 5ESS Switch defined limits for the 5E14 and 5E15 Software Releases.

The list is presented in alphabetical order by the field mnemonics.

NAME	5E14	5E15	RC VIEW NUMBER	ODA FORM NAME	DESCRIPTION
ARS GROUPS	200	200	12.11	ARSFD	1023 Physical Groups allowed. 200 per GROUP TYPE allowed. If SFID 218 is "Y": 400 ARS GROUP NAMES per office allowed with: 200 CSD (Data) Groups 200 VOICE Groups.
BFG	4095	4095	12.9	BFG	BRCS Feature Grouping. Business or Residential BFG = 4095. Unique name + Suffix of 1 - 9
CC	999	999	9.6	IDDD	Country Code
CDI	4095	4095	10.10	RAR	Destination/Code Index.
CHG IDX	2047	2047	10.11	CGIDX	Destination/Code Index.
CIC (local)	9999	9999	10.3	CIC	Local CIC (Carrier Identification Code). Only 500 can have measurements assigned on RC View 10.3 at any time.
CIC (LDP)	128/64	128/64	8.52	LDPCTBL	LDP (Long Distance Platform) CIC (Carrier Identification Code). 128 table entries in the CIC table. This is keyed by CIC and the pre-subscription indicator, therefore 64 CICs with both values.
DAS	99	254	9.1	DAS	Digit Analysis Selector to determine digit interpreter tables (i.e., office dialing plan).
FAT	800	800	9.25	SMLDIT	Foreign Area Translator.
IDP GROUP	65535	65535	1.26 5.26	IDPLPA IDPMPA	Individual Dialing Plan. Enter from 1 to 8 characters.
INDIT	999	999	9.5	INDIT	Incoming Digit Interpreter Table number. DAS is the limiting factor.
LCC	46656	46656	4.1	LCC	Line Class Code. Indicates class of service including originating and terminating treatment. Valid values are 3 alpha-numeric characters. The maximum number of LCC is 36*36*36=46656, but are limited by the CMP available memory.
LDIT	999	999	9.3	LDIT	Local Digit Interpreter Table number. DAS is the limiting factor.
MCRTI	16382	16382	7.4	PFAINWT	Modular Construction Route Index.
NOC	8190	8190	8.2	NOC	Normalized office codes. Note: The NOC cannot exceed 250 when the NPA-NXX Growth feature has not been purchased. SFID 198 has been reserved for the NPA-NXX Growth feature, it may be purchased then activated by using the Secured Feature Upgrade View (8.22).
OFFCOD	999	999	8.2	ANITBL	Local NXX office code. -999, for each NPA (999*799=798201)
PDIT	999	999	9.2	PDIT	Primary Digit Interpreter Table number. DAS is the limiting factor.
PFA	65535	65535	1.28 5.28	PFALPA	Private Facility Group (Combination of PFA Group and Dial

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GROUP				PFAMPA	Code). Enter from 1 to 8 characters.
RAX	99	999	4.1	LCC	Rate Center
RDIT	999	999	9.9	RDIT	Remaining Digit Interpreter Table number.
RTI	16382	16382	10.2	ARSSIG	Route Index.
SCRN IDX	4095	4095	10.10	RAR	Screening Index. Enter 0-4095. 0 indicates no data.
SFG	2000	2000	7.3	PFASFG	Simulated Facility Group.
TGID	65535	65535	1.29	TGSRLPA TGSRMPA	Terminal Group ID.
TGN	2000 *4000	2000 *4000	5.1	TKGRP	Specifies the number of trunk groups being defined. Enter 1-4000. □ Maximum number of trunk groups assigned per SM is 120. □ Maximum number of trunk groups with TRK CLASS of PACKET is 16. □ Maximum number of trunk groups with TRK CLASS of "X75" or "X75P" is 255. □ Maximum number of trunk groups assigned per SM-2000 without QLPS is 120. □ Maximum number of trunk groups assigned per SM-2000 with QLPS is 2000. □ Maximum number of trunk groups assigned per SM-2000 with QLPS is 4000 when using the Increased Number of Trunk Groups (SFID 172) secured feature that has been purchased using the Secured Feature Upgrade View (8.22). *RESTRICTED USAGE: Not supported by EADAS. WARNING: Your OS (Operation System) may not support this feature resulting in a loss of Traffic 30 Measurements. This feature was intended for independent LECs only.
TGN MEMB	95 (small) 1951 (large)	95 (small) 1951 (large)	5.5	TRUNK	Specifies a trunk member number of a trunk group. Enter a number from 0-95 for small trunk group and 0-1951 for large trunk group. For trunk members in a packet-switched Internal Protocol trunk group with TRK CLASS of PACKET, the maximum number of trunk members allowed is 32. For trunk members in a trunk group with the TRK CLASS of X75P or X75 the maximum is 24 members.
Note: While these are the software defined limits, the switch owner is cautioned that performance, routing and other negative affects may occur should the switch be loaded to the limits defined above.					

Figure 1 5ESS SWITCH DEFINED LIMITS

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DIV. 1: GENERAL INFORMATION

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SEC. 1: ORDERING INFORMATION

1. HOW TO ORDER THE TG-5

The TG-5 (5ESS Switch Translation Guide; 235-080-100) can be ordered either through your technical information resource manager or technical documentation coordinator, or by calling the Lucent Technologies CIC (Customer Information Center) at 1-888-LUCENT-8 (1-888-582-3688) in Indianapolis, Indiana. One contact number is used to access all 5ESS Switch product information. You will be prompted to the appropriate option. You may also access product information using the Internet: www.cic.lucent.com.

The CIC service representative taking the order will request the following information:

- The type of order. The type of order can be a standing order or a one-time order. A one-time order means you will receive the current TG-5. A standing order means you will receive the current TG-5 and the monthly updates to the TG-5. If you choose a standing order, then you will keep your TG-5 current.
- A purchase order number or a credit card number. (Lucent Technologies employees should use their department number.) A purchase order number can be obtained from your purchasing organization. If you keep a record of your purchase order number and use it to make changes to your order or cancel your order, it will help the CIC service representative make these changes quickly and easily.
- An address where you want to receive the TG-5 and the TG-5 monthly update shipments.
- A contact person whom the CIC service representative can contact about the order.

1.1 HOW TO ORDER NEW BINDERS

If you need to replace worn TG-5 binders, you can order new binders for the TG-5 through your CIC regional service representative, or by calling the CIC service representative.

1.2 ELECTRONIC MEDIA DOCUMENTATION

The TG-5 is also available on CD-ROM and on-line documentation. If you wish to receive electronic media or electronic dial-up service, call the CIC.

2. HOW TO CANCEL OR CHANGE AN ORDER

To cancel or change your order, contact your technical information resource manager or technical documentation coordinator, or call the CIC. It will help the CIC service representative to expedite the changes if you know your original purchase order number.

3. HOW TO SCHEDULE TRAINING FOR TRANSLATIONS

Lucent Technologies offers courses in 5ESS Switch translations. To obtain information on these courses or to schedule a course, call the CIC.

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SEC. 2: 5000 RECORD TRANSLATION INQUIRY

1. GENERAL

Your feedback is important to us. The TI (Translation Inquiry) form (5000 Record) is provided for your convenience to give feedback relating to the TG-5 (5ESS Switch Translation Guide). This inquiry may deal with problems in using translation forms or difficulties in interpreting translation information in the TG-5. The translation inquiry may also be used for suggestions and proposals relating to Translation Guide contents or arrangement.

NOTE: Forwarding translations for review is not an appropriate use of the feedback form. In addition, requests for feature or option development should not be submitted as an inquiry. This type of correspondence should be directed to Lucent Technologies through your normal channels.

2. THE TRANSLATION INQUIRY

A reproducible copy of the TI is located in Division 19 of this Guide. This master should be reproduced locally to provide feedback forms for TG-5 questions and proposals.

Please FAX the completed TI to:
- J. Broyles
- FAX number 630-224-1314

Or, mail the completed TI to:
- J. Broyles - Room 7G-318
- Lucent Technologies
- 1960 Lucent Lane
- Naperville, IL 60566-7217

Or, email your comments to:
- jannbroyles@lucent.com

When the TI (Translation Inquiry) form is received by the TG-5 group, an inquiry number is assigned to that TI and the TI is assigned to a TG-5 writer. The writer will contact the originator of the TI, usually within ten working days. When the research on the inquiry has been completed, the writer will answer the inquiry and notify the originator of the schedule for publication for this information in the TG-5.

The TI is divided into two basic areas (see Figure 1). Block A is for basic reference information, Block B is for problem description or proposal.

Block A: Reference Information - Enter the division, section number, and the publication date that appears in the heading of the TG-5 section. If the inquiry relates to a specific Software Release, for example 5E10, please enter the Software Release number.

Block B: Problem or Proposal Description - This block is used to fully describe the problem or proposal. Please reference the division and section, if different from Block A, and the paragraph or figure number. The reverse side of the form may be used if additional space is required.

Please include your name, company affiliation, address, and telephone number.

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5000 (1/2000) RECORD

TRANSLATION INQUIRY

5ESS SWITCH

- ☐ INQUIRY NUMBER _____
- ☐ (LUCENT USE ONLY) Office

☐ A. REFERENCE INFORMATION

☐ Division___ Section_____

☐ TG-5 Publication Date_____

☐ Name_____

Title_____

Telephone Co._____

Telephone Number (____)_____

Address_____

City_____ State_____

ZIP Code_____

☐ B. PROBLEM PROPOSAL DESCRIPTION

☐ Enter the problem or proposal description and example as appropriate. Use reverse side of this sheet if necessary. Please give detailed description including date, page, paragraph, or figure referenced.

☐ FAX TI to J. Broyles

FAX Number: 630-713-4613

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Or send completed copy to:

J. Broyles

Lucent Technologies

1960 Lucent Lane

Naperville, IL 60566-7217

Or, email your comments to:

jannbroyles@lucent.com

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SEC. 3: INTRODUCTION TO THE TG-5

1. GENERAL

The purpose of the TG-5 (5ESS Switch Translation Guide) is to enable the user to correctly populate ODD (Office Dependent Data). Office Dependent Data is initiated and maintained by the 5ODA (5ESS Switch Office Data Administration) system. In the 5ODA environment, the term "translations" refers to the office dependent data which supports the 5ESS Switch and its software. In addition to many other capabilities, this data provides the 5ESS Switch with the capability to analyze the dialed digits, route the call, and charge the subscriber.

The contents of the TG-5 are designed to help you use 5ODA to populate ODD and to help you ensure an error-free database. The information presented in the TG-5 is organized into chapters and subchapters called Divisions and Sections. The following is a high-level overview of the current Divisions and Sections.

- DIVISION 0 - Provides a table of contents and cross-reference information including identification of all input forms, records, Recent Change Views, and references as to where this information can befound in the TG-5.
- DIVISION 1 - Provides general information on the 5ESS Switch and related software tools, glossary of terms, and instructions for using the TG-5.
- DIVISION 2 - Provides a discussion of how to provision the 5ESS Switch features including Maintenance and Testing Feature Requirements, Operator Services Position System Features, Special Features including Secured and Transparency features, Data Services features, Equipment features, Wireless features, and SM-2000 features.
- DIVISIONS 3, 4, 5, 6, 7, 8 - Provide a detailed discussion of ODA forms including field descriptions, data requirements, and associated integrity checks. Also included are SAMPLE RECORDS for specifying translation data and SAMPLE FORMS providing instructions for data entry into 5ODA.
- DIVISION 9 - Provides a detailed discussion for provisioning CNI (Common Network Interface) Recent Change views.
- DIVISION 11 - Provides a high-level overview of the data difference between 5ESS Switch Software Releases.
- DIVISION 19 - Provides a full set of 5ODA REPRODUCIBLE RECORDS. The reproducible records are blank sample records which are provided to facilitate data entry.
- DIVISION 20 - Provides an overview of the changes in the TG-5 for each monthly update.

A more detailed discussion of the contents of each Division and Section is presented below in paragraph 4 - ORGANIZATION OF THIS GUIDE.

1.1 5ODA and Recent Change

The TG-5 is written as a support document for the 5ODA. Thus, the TG-5 is designed to provide information necessary to accomplish

1. the establishment of a new 5ESS Switch,
2. an in-service 5ESS Switch undergoing a retrofit procedure,
3. or an in-service 5ESS Switch undergoing a large terminal growth procedure.

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These events are distinguished from the Recent Change function. However, because of the extensive information maintained by the TG-5, it is an excellent reference to support Recent Change activities. Nonetheless, the Recent Change Manual should be used as the dominant source for Recent Change information.

1.2 TG-5 Updates

Much of the information in the TG-5 is subject to change. Update packages that contain additional information or changes to the TG-5 are issued monthly. If you are on standing order for the TG-5 (see Division 1, Section 1 on how to order the TG-5), you will receive the paper update package or the electronic media update package.

1.3 Change Indications

The latest changes to a TG-5 section are indicated by shaded text (or by a " | " in the right margin for earlier releases of the documentation). The date a section has been changed is listed in the heading for each section.

1.4 Your Feedback

We want your feedback. In using the TG-5, you may occasionally uncover aspects of data entry that are not covered in the documentation. The Translation Inquiry (Division 1, Section 2) describes the procedure for forwarding questions, requests and other comments regarding discrepancies between translation processes and the TG-5. The Translation Inquiry is a valuable tool for obtaining a quick response to requests for clarification of translations information.

2. 5ODA FORM PREPARATION/DATA ENTRY

The 5ODA (5ESS Switch Office Data Administration) system is the set of software tools that initiates the office dependent database for a 5ESS Switch. The 5ODA system provides the following:

- Both interactive data and bulk data entry capabilities for entering and correcting 5ESS Switch translations data.
- A data verification capability for checking errors in the 5ESS Switch translations data.
- The capability to generate Office Records (output reports) from the 5ESS Switch translations data.
- The capability to map the 5ESS Switch translation data into the data structures that are subsequently loaded into the 5ESS Switch.

The 5ODA form is composed of many data items known as fields. The first field(s) on a form is always a "key" field(s). The "key" field uniquely identifies each form and its associated data. The "key" field is designated on each form and in the text with an asterisk (*) and must always be defined.

A data item may be specified as a "rollover" field. That is, whatever value was entered in the field on the previous form will be automatically repeated on all subsequent forms until the rollover is cancelled.

A required field is a field that must have a value entered on the form. Required fields are designated by a "#", unless it has a default value.

Each 5ODA form has predefined values entered in some fields - these are known as "default" values. Default values are listed in the text after each field. If the "default" value is not the desired entry, you may change it.

All fields are numbered and appear on the form in ascending, but not always consecutive, order.

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The above information is provided in Divisions 3, 4, 5, 6, 7, 8, and 9 of this guide. Each section begins with a short general description of the corresponding 5ODA input form. In addition, the general section lists any peculiarities of the form and any possible hazards in using the form. In the "FORM ENTRIES" subsection, each field on the form is discussed in a specific paragraph. The field definition and its valid entries are included.

An example of a 5ODA input form is shown as a figure at the end of each division's section. An example of an Office Record is similarly provided.

REPRODUCIBLE RECORDS are provided in Division 19.

3. HOW TO READ THIS GUIDE

If this is your first introduction to the TG-5, you will want to read Division 1 to familiarize yourself with the contents of the TG-5 and how to use 5ODA. Refer to the Index at the front of Division 1 to find the sections containing the information that you need.

If you are already familiar with the TG-5, but need to find where the information you desire is located within the guide, refer to the following:

- Division 0, Section 0, which contains the Table of Contents for each division of the TG.
- Division 0, Section 1 which contains the 5ESS Switch Form versus Text Cross Reference Table.
- Division 0, Section 2, which gives the ODA form vs Recent Change view cross reference.
- Division 0, Section 3, which gives the Recent Change view vs the ODA form.
- Division 0, Section 4, which gives the Office Record number vs ODA form and Recent Change view.
- In addition, each division has an index at the beginning of the division and sections.

4. ORGANIZATION OF THIS GUIDE

The TG-5 is organized by divisions, sections and subsections. Each division may contain multiple tables of contents within a division. The first is a table of contents of the division (always Section 0), followed by a separate table of contents for the sections within that division, numbered consecutively.

The following paragraphs provide a brief description of each of the divisions.

4.1 Division 0 - Table of Contents

Division 0 provides the Table of Contents for the TG-5 in addition to cross reference information. It is divided into the following sections:

Section 0 - Table of Contents for all Divisions of the TG-5.

Section 1 - 5ODA Form Name Cross Reference

Section 2 - ODA Forms vs Recent Change Views Cross Reference

Section 3 - Recent Change Views vs ODA Forms Cross Reference

Section 4 - Office Record Number vs ODA Forms / Recent Change Views

4.2 Division 1 - General Information

This division provides an introduction to the 5ESS Switch and the TG-5. It is divided into the following

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sections:

Section O - Table of Contents for Division 1.

Section 1 - Ordering Information.

This section outlines how to order the TG-5.

Section 2 - Translation Inquiries.

This section explains how to submit questions and comments relating to 5ESS Switch translations and the TG-5. A reproducible copy of the Translation Inquiry (Record 5000) is included in Division 19.

Section 3 - Introduction to the TG-5.

This section covers the function, purpose and arrangement of this guide.

Section 6 - Glossary of Terms.

This section contains an alphabetical listing of terms associated with the 5ESS Switch. Each term is defined within the context of its use in the system. The glossary includes terms associated with 5ODA and Recent Change.

Section 7 - 5ESS Switch Office Data Administration (5ODA) User's Guide.

This section provides detailed information on how to use the 5ODA system to input ODD.

Section 8 - Establishing an Office Data File (5001).

This section describes how to set up the identification, accounting and tracking information that is needed to set up the data base for each 5ESS Switch.

Section 9 - 5ODA Batch Load Interface.

This section provides information on how to merge batch data from existing mechanized systems with the appropriate 5ODA data.

Section 10 - Routing and Charging.

This section provides an overview of routing and charging.

Section 11 - 5ECONV User's Manual.

This section describes the process that converts 1ESS Switch and 1A ESS Switch office subscriber data to 5ODA data.

Sections 12 and 13 - Growth and Retrofit Plans

These sections describe the 5ODA off-line large terminal growth and retrofit plans.

4.3 Division 2 - Features

This division provides a high-level description of each translation feature. The explanation is followed by the translation requirements that are necessary to implement the feature.

Section 1 - General Features

Section 2 - Maintenance and Testing Feature Requirements

Section 3 - Operator Services Position Systems Features

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Section 4 - Special Features including Secured and Transparency Features

Section 5 - Data Services Features

Section 6 - ISDN PRI (Primary Rate Interface) Features

Section 7 - Equipment Features

Section 8 - Wireless Features

Section 9 - SM-2000 Features

4.4 Division 3 - Translation Administration

This division describes office Records and 5ODA input forms used by the switch owner for general telephone service (i.e., POTS). Division 3 is divided into the following sections:

Section 0 - Index for Division 3.

Section 1 - Line Forms.

Section 2 - Trunk Forms.

Section 3 - Routing and Charging Forms.

Section 4 - Operator Services Position System (OSPS) (5E4(2) and later Software Releases).

Section 5 - Miscellaneous Forms.

Section 6 - Secured Features.

4.5 Division 4 - BRCS (Business and Residence Custom Services)

This division contains instructions for BRCS Office Records and 5ODA input forms (see Division 6 for ISDN BRCS).

4.6 Division 5 - ISDN (Integrated Services Digital Network) Line and Packet Switching

Section 1 - ISDN Lines.

Section 3 - Packet Switching

Section 5 - ISDN Miscellaneous Forms.

4.7 Division 6 - ISDN BRCS

This division contains instructions for the Office Records and 5ODA input forms to build ISDN BRCS features.

4.8 Division 7 - Digital Cellular Switching

This division contains the instructions for the Office Records and 5ODA input forms to build Digital Cellular switching on a 5ESS Switch.

4.9 Division 8 - Engineering Assignments

This division contains instructions for all 5ODA input forms used to install and maintain a 5ESS Switch.

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4.10 Division 9 - CCS (Common Channel Signaling)

This division contains information needed to implement CNI (Common Network Interface) translations via Recent Change input views.

4.11 Division 11 - Software Differences

This division provides an overview of the data differences between various combinations of 5ESS Switch Software Releases. The information in this section is intended to be high-level reference to new features in a specific Software Release. The differences are described from an ODA point of view.

4.12 Division 19 - Reproducible Records

This division contains a master copy to reproduce all Office Records available for the 5ESS Switch.

Section 1 contains the alphabetical listing of all Office Records with the record number, form designation and the division and section that provide the instructions for that Office Record.

4.13 Division 20 - Monthly Update Summary of Changes

This division provides a summary of the changes for each monthly update of the TG-5.

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SEC. 6: GLOSSARY OF TERMS

1. GENERAL

This section has been included to assist the user in interpreting words, acronyms, and abbreviations commonly used throughout the Translation Guide.

2. ALPHANUMERIC LISTING OF TERMS

Term	Definition
2500 SET	A non-ADSI (Analog Service Display Interface) compatible analog telephone set, capable of manually signaling a flash and signaling DTMF (Dual Tone Multifrequency) digits. It is a standard analog residential set. It may have the ability to display the name and/or number of the calling party in the on-hook mode, but does not have the ability to display the name and/or number of the calling party in the off-hook mode.
5ECONV	5ECONV is a system that provides a mechanized process to convert 1A ESS Switch and 1ESS Switch office subscriber data to the appropriate 5ODA input.
ADSI SET	An analog telephone set capable of recognizing the CAS (CPE (Customer Premise Equipment) Alterting Signal) which is a special dual tone. Reception of a CAS signal activates a program in the set's firmware which provides a multi-page menu of call management options that the subscriber may use at various states of the call. The subscriber chooses the action desired via soft keys assigned to the displayed options. The action associated with the soft keys changes as the menu page changes. The ADSI set is also capable of displaying the name and/or number of the calling party.
ALTERNATE ROUTING	Available for each PSAP, Alternate Routing is used to route calls to a predesignated location for a traffic busy PSAP, a PSAP on night duty or a PSAP experiencing a power failure.
ANALOG INTERFACE UNIT (AIU)	Any of the various Interface units interfacing analog facilities. These include the Line Unit (LU), and the Trunk Unit (TU).
AUTOMATIC IDENTIFIED OUTWARD DIALING (AIOD)	A trunk group that connects a Centrex-CU to a switching machine to identify outward dialed calls by the line number of the originating station.
AUTOMATIC LINE INSULATION TEST (ALIT)	An automatic test system which checks for foreign EMF and leakage on a customer loop.
AUTOMATIC MESSAGE ACCOUNTING RECORDING CENTER (AMARC)	A centralized system which keeps a record of all billing and Automatic Message Accounting messages for ESS offices.
BUSINESS AND RESIDENCE CUSTOM SERVICES (BRCS)	BRCS are a large set of business and residence service features that are typically called "centrex". BRCS allows substantial flexibility in the way the features are constructed. BRCS feature packages can be preconstructed, customized, or clustered.
CAC	Carrier Access Code is the 5-digit prefix 10XXX where XXX is the 3-digit CIC (Carrier Identification Code). A new CIC expansion feature was introduced in 5E9(1) that increased the CAC to 7-digit prefix (i.e. 101XXXX) with 4-digit carrier codes.
CAMA PSAP	A PSAP that has CPE (Customer Premises Equipment) which can provide the attendant with the caller's ANI via CAMA-like signaling. The CAMA PSAP allows the attendant to use Enhanced 911 features such as Selective Transfer.
CAMA-LIKE SIGNALING	Analog trunks with MF signaling using CAMA ANI format. This is the signaling used between the E911 serving office and a CAMA PSAP. This signaling is one-way, from the 5ESS Switch to the CAMA PSAP.
CAMA SIGNALING	Centralized Automatic Message Accounting Signaling. A signaling scheme normally used to transmit ANI (Automatic Number Identification) information from a local switch not equipped for AMA recording to another switch capable of AMA recording. This type of signaling is commonly used between the end office and the E911 tandem office, although CCS7-ISUP trunks and direct seizure trunks may also be used. CAMA signaling has been adapted for E911 use to forward the caller's directory number to the PSAP.
CAS	CAS (CPE Alterting Signal) is a dual tone sent to the ADSI CPE to "wake it up" that an ADSI call is coming in. Currently implemented by CIDCW (Calling Identity

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	Delivery With Call Waiting) and also used with CWD (call Waiting Deluxe).
CENTRALIZED AUTOMATIC MESSAGE ACCOUNTING (CAMA)	A trunk group which carries customer dialed 7- or 10- digit toll calls to Centralized Automatic Message Accounting equipment where recording and timing of a connection are done automatically in addition to the switching function.
CENTRALIZED AUTOMATIC REPORTING ON TRUNKS (CAROT)	CAROT is a minicomputer based system that controls transmission and operational trunk tests for all exchanges in a particular area that are equipped with compatible Remote Office Test Lines (ROTL) and responders.
CENTRAL PROCESSOR (CP)	The Centralized processor of 5ESS which performs the part of call processing, administration, and maintenance which cannot be economically distributed to the Switching Modules.
COMMON CHANNEL INTEROFFICE SIGNALING (CCIS)	An interoffice signaling scheme in which address and supervision signaling for trunks is carried over a data network rather than over the associated trunk facility.
DATA BASE MANAGER (DBM)	A software subsystem which is responsible for the access and updating of all translation data.
DEFAULT ROUTING	Automatically routes a 911 call to a predesignated PSAP when the primary PSAP cannot be determined. The 5ESS Switch uses this data for non-ESA routing.
DIRECT SEIZURE TRUNK	A trunk which does not send dialed digits to the E911 serving office. ANI may or may not be received after the trunk is seized at the incoming end. Also called a Direct Connect Trunk.
DIGITAL FACILITY INTERFACE (DFI)	Circuitry in a Digital Line/Trunk Unit that terminates a single Digital Facility.
DIGITAL LINE/TRUNK UNIT (DLTU)	The equipment unit which interfaces digital (T1) trunks and digital loop carrier/concentrator systems.
DIGITAL SERVICE UNIT (DSU)	The equipment unit which performs the functions of Tone Decoding, Tone Generation, conferencing, and certain AC tests.
DIGROUP	The 24 channels in a digital carrier system.
DIRECTLY CONNECTED TEST UNIT (DCTU)	This unit is accessible by every Line and Trunk Unit and provides a number of facility tests which require metallic access to lines and trunks.
DUAL LINK INTERFACE (DLI)	The DLI provides a two-way interface between each switching module and the Time Multiplexed Switch.
ENGINEERING AND ADMINISTRATIVE DATA ACQUISITION SYSTEM (EADAS)	A traffic data collection system which provides the interface between an ESS office and the Total Network Data System.
ESA	E911 Service Adjunct. A processor, attached to the switch via a DSL link, that provides ANI to ESN translation for E911 Service.
ESN	Emergency Service Number. The emergency service number is a number that defines the set of emergency services, e.g., police, fire, hospital, within a particular district or zone.
ESCO	Emergency Service Central Office. A number to identify the originating office or calling area of the 911 caller. An ESCO may be assigned to trunk groups and to the dialing plans for local lines. It translates to a selective routing indicator, a default ESN, and an NPD.
FEATURE CONTROL (FC)	A software subsystem which sequences call processing actions at a hardware independent level.
FEDERAL CARD	A calling card issued to FTS 2000 customers.
FIXED TRANSFER	Allows a PSAP attendant to transfer a 911 call to a particular PSAP location by operating one key.
FOREIGN EXCHANGE LINES (FX)	Special customer-access lines permitting a phone physically located in an area served by one Central Office to have a Telephone Number that includes a different Central Office Code.
FTS ROUTING NUMBER	The number returned in the CAS card validation reply message and matches an OSPS internally stored FTS routing number. This number is used to route calls to the FTS private network.
GATED DIODE CROSSPOINT (GDX)	An analog crosspoint capable of withstanding the high voltage signals present on customer lines.
GSM	Global SMs are those SM/SM-2000 equipped with a SS7 PSU and terminating SS7 signaling links . A VCDX only sm-2k, or up to 16 SM/SM-2Ks may be GSMs.
HIGH LEVEL SERVICE CIRCUIT (HLSC)	A generalized service circuit in the Line Units used to perform ringing and coin control functions.
HUNT-BUSY	A condition where the switch will not offer a call to a particular hunt terminal because the terminal is a busy, a switch-maintained limit on that terminal's capacity for handling calls would be exceeded, or the terminal is deemed unavailable for hunting even though the ISDN interface serving the hunt terminal may not be busy.
IC	Inter-LATA Carrier handles Inter-LATA calls dialed via the North American Numbering Plan, and may be allowed to handle Intra-LATA toll calls through the

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	Intra-LATA PIC capability, or Intra-LATA local calls dialed with a CAC.
ICLATA	Inter-LATA Carrier's Intra-LATA Capability, also same as Intra-LATA PIC.
INPUT/OUTPUT PROCESSOR (IOP)	Provides interfaces to CRT, to hard copy printers, to magnetic tape drives, and a Master Control Center.
INTEGRATED SERVICES DIGITAL NETWORK (ISDN)	ISDN service gives the capability of switching both voice and data over the same line.
INTRA-LATA LOCAL CALLS	All Intra-LATA calls that are not defined to be Intra-LATA PIC/Intra-LATA Toll calls are referred to as Intra-LATA Local calls. These calls are carried by the LEC unless dialed with a CAC (Carrier Access Code) for an IC (Inter-LATA Carrier) with approval to carry Intra-LATA calls.
INTRA-LATA PIC	Inter-LATA Carrier's Intra-LATA Capability. Also, used synonymously with ICLATA and Intra-LATA toll.
INTRA-LATA PIC/Intra-LATA TOLL/TOLL Calls	Intra-LATA PIC or Intra-LATA Toll Calls are any Intra-LATA calls which are open to competition. Usually such calls are inter-switch and are not defined by the tariff as a Local Calling Area call or an EAS (Extended Area Service) call. The LEC defines which calls are Intra-LATA PIC/Intra-LATA Toll calls.
LATA	Local Access and Transport Area is a defined non-overlapping geographical area where an EAEO (Equal Access End Office) and/or AT (Access Tandem) can provide a carrier access to the local exchange.
LEC	Local Exchange Carrier, the Local Telephone Company that owns the switch, provides the local loop, and serves as the default carrier for Intra-LATA calls.
LINE UNIT (LU)	The part of the Switching Module which provides terminations for lines that are concentrated onto 64 Time Slots.
MAIN DISTRIBUTING FRAME (MDF)	A connection system that interfaces cable pairs and switching equipment.
MANUAL DIAL TRANSFER	Allows the PSAP attendant to manually dial the directory number of the destination.
MASTER CONTROL CENTER (MCC)	Provides the human-machine control interface for the 5ESS. It consists of a video display terminal with keyboard telephone set. The Trunk and Line Work Station is also part of the MCC.
MESSAGE SWITCH (MSGS)	The unit that provides for the transfer of call processing and administrative messages between the Switching Modules and the administrative processor, and between any two Switching Modules. The MSGS also contains the Message Switching and Clock Unit.
METALLIC SERVICE UNIT (MSU)	Provides metallic access, miscellaneous scanning and distributing functions, ALIT capabilities, and Gated Gated Diode Crosspoint composition in 5ESS.
MH	The MH (Message Handler) resides in an SM-2000 and provides for message transfer between an SM-2000 and the QLPS hardware.
MODULE CONTROLLER (MC)	An equipment grouping common to all Switching Modules. It consists of the Module Processor, the Signal Processor, the Time Slot Interchanger, and the Control Interface.
MODULE PROCESSOR (MP)	Part of the Module Controller, it consists of a microprocessor and its associated memory.
NCT	An NCT (Network Control and Timing) link has 256 time slots and runs at a rate of 32.768 Mb/s. The number of NCT links required can vary from two to four in groups of two (00 - 03).
NCT2	An NCT2 link has 512 time slots and runs at a rate of 65.536 Mb/s. The number of NCT2 links required can vary from two to twenty-four in groups of two (00 - 23).
NETWORK CONTROL AND TIMING (NCT) LINK	Connects an Switching Module to the Time Multiplexed Switch, provides Time Slot paths for network connections, carries a control Time Slot to the modules, and distributes timing to the module.
NLI	The NLI (Network Link Interface) manages the interfaces between an SM-2000 and the NCT2 links. They are optionally equipped in groups of two, from two to eight for Release 1. Each NLI provides for one NCT2 link connection.
NON-HUNT DN	A telephone number for a specific terminal within the hunt group. If a user calls the non-hunt DN, hunting is bypassed, and the call is offered only to the called terminal.
NPD	Numbering Plan Digit. First digit of ANI outpulsed to a CAMA PSAP; it represents the originating NPA of the call.
OFFICE DATA ADMINISTRATION (5ODA)	A Lucent Technologies program that builds the 5ESS Office Data Base.
ONTC	Office Network and Timing Complex, also known as the TMS.
OPERATIONAL SUPPORT SYSTEM (OSS)	Common support systems outside an ESS office developed by the BELL SYSTEM to assist the Operating Companies (e.g., AMARC, COSMOS, RMAS).
OPERATIONAL TEST	The ability to test the signaling capabilities of a trunk.
OPERATOR SERVICES POSITION	OSPS is a feature of the 5ESS Switch that provides operator services, such as,

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SYSTEM (OSPS)	Directory Assistance (DA) and Toll and Assistance (T&A).
ORIGINATING CMC CALL/RECORD	A CMC Originating call is one that originates in or is received by the LEC network and is routed TO a CMC. CMC AMA records are made in the switch directly connected to the CMC Type 2A or Type 2B interface. Such CMC AMA records are called "Originating CMC" records but have Structure Codes (653/654) commonly associated with "Terminating IC" calls. This definition is based on Bellcore requirements GR-1504-CORE.
ORIGINATING WSP CALL/RECORD	A WSP originating call is one that originates in or is received by the LEC network and is routed to a WSP. WSP AMA records are in the switch directly connected to the WSP Type 1 interface. Such WSP AMA records are called "Originating WSP" records but have a Structure Code (653) commonly associated with "Terminating IC" calls.
PERIPHERAL CONTROL (PC)	A software subsystem which manages and controls the switching peripherals.
PERIPHERAL INTERFACE CONTROL BUS (PICB)	A duplex set of wires carrying control between the Module Controller and a Peripheral Unit of an Interface Module.
PERIPHERAL INTERFACE DATA BUS (PIDB)	A duplex set of wires carrying 32 time slots of data between the Module Controller and a Peripheral Unit of an Switching Module.
PIC	Presubscribed Inter-LATA Carrier, an IC which handles Inter-LATA calls dialed without a CAC. A PIC can be associated with a line and IDP (Individualized Dialing Plan) group or with the entire office.
PIPE	A pipe is a high bandwidth path for message transport between a QLPS QTMSLINK and a given QLPS endpoint (an MH in an SM-2000). It is a physical path capable of sustaining HDLC traffic from the QLPS, through the TMS, the NLI, the TSI and the APC, to the MH.
PSAP	Public Safety Answering Point. Location, or equipment at the location, where emergency attendants receive "911" call.
PTC	Presubscribed Intra-LATA Toll Carrier, an IC (or LEC) which handles Intra-LATA toll calls dialed without a CAC. A PTC can be associated with a line and IDP (Individualized Dialing Plan) group (CENTREX) or with the entire office.
QGL	
QGP	The QGP is an MSGS (Message Switch) subdevice that provides for message transport between the MSCU (Message Switch Control Unit) and QLPS hardware. None, one, or two QGPs may be equipped per MSGS, depending on office traffic characteristics.
QLI2	The QLI2 (Quad-Link Interface Model 2) circuit pack plugs into the CM2 (Communications Module Model 2) and provides the NCT2 interface between the CM2 and SM-2000. QLI2s plug into any existing QLI slot in the TMS except for the FLI (Foundation Link Interface) slot. CM2s equipped with QLI2s support both Single Fabric and Dual Fabric configurations.
QTMSLNK	A port connection on the QLPS board of the TMS. Each QLPS board has four QTMSLNKs.
REMOTE MEMORY ADMINISTRATION SYSTEM (RMAS)	RMAS is a multimicroprocessor system that increases the efficiency of centralized data base administration for all types of ESS's. It significantly reduces the time required to enter Recent Changes and to retrieve data, automates the production of office records, and provides reports that assist in managing both the data base and the personnel performing this work.
REMOTE SWITCHING MODULE (RSM)	Provides the capability of having a 5ESS Switching Module remotely located from the host 5ESS and its Administrative Module, and extends the ESS features and services to a remote group of customers outside the normal area of the 5ESS Central Office.
ROLLOVER FIELD	A data item on a form may be specified as a "Rollover" field, that is, whatever value was entered in the field on the previous form will be automatically repeated on all subsequent forms.
RSM STAND-ALONE CALL PROCESSING (SA)	Provides the capability for an RSM to continue limited call processing while in the Stand-Alone state.
SECURED FEATURES	The optional service features that require enabling the feature before it is operational.
SECURED FEATURE ADMINISTRATOR (SFA)	The person designated by the operating telephone company to perform the enabling of secured features.
SELECTIVE ROUTING	An E911 feature that selectively routes a 911 call to the primary PSAP associated with the originating station.

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SELECTIVE TRANSFER	Allows a PSAP attendant to transfer a 911 call to the correct secondary PSAP for the caller's emergency service zone. The call is transferred based on the code sent by the PSAP and the telephone number stored in the ESN form.
SIGNAL PROCESSOR (SP)	The circuitry in the Switching Modules that detects signal changes on the channels.
SUBSCRIBER LOOP CARRIER - 96 (SLC-96)	The SLC System is a digital loop carrier pair gain system designed as a supplement or replacement for cable, and serves up to 96 subscribers at the remote site.
SWITCHING CONTROL CENTER SYSTEM (SCCS)	Provides facilities needed for efficient centralized maintenance of all types of Stored Program Control Electronic Switching Systems.
SWITCHING MODULE (SM)	The equipment grouping which provides line and trunk terminations, service circuits call processing functions and Time Division Switching.
TERMINATING CMC CALL/RECORD	A CMC Terminating call is one incoming FROM a CMC Type 2A or Type 2B interface, for completion in or via the LEC network. Such CMC AMA records are called "Terminating CMC" records but have Structure Codes (626/627) commonly associated with "Originating IC" calls. This definition is based on Bellcore requirements GR-1504-CORE.
TERMINATING WSP CALL/RECORD	A WSP Terminating call is one incoming from a WSP Type 1, for completion in or via the LEC network. Such WSP AMA records are called "Terminating WSP" records but have a Structure Code (625) commonly associated with "Originating IC" calls.
TIME DIVISION NETWORK (TDN)	The central network of the 5ESS. It includes the Time Slot Interchange, network Control and Timing Links, and the Time Multiplexed Switch.
TIME MULTIPLEXED SWITCH (TMS)	The Time Multiplexed Space Switch which connects NCT links together during specified Time Slots.
TIME SLOT (TS)	A unit of time during which a single sample of communication is sent throughout the 5ESS Network.
TIME SLOT INTERCHANGE (TSI)	The circuitry in the Switching Module which multiplexes the peripheral channel data to different Time Slots on the NCT links.
TRANSMISSION TEST FACILITY (TTF)	A service circuit which performs all voice-frequency transmission tests, (e.g., ROTL, 100 series test lines).
TRUNK AND LINE WORK STATION (TLWS)	Provides maintenance Personnel access to lines and an interface administration and supports portable testing equipment such as voltmeters and transmission measuring sets.
TRUNK UNIT (TU)	An analog interface unit which terminates loop and 4-wire trunks.
TYPE 1 INTER CONNECTION	Connection to a telephone company end office. It provides connections only to and from terminals served by that end office including lines, private trunks and other WSPs having terminations within the switch itself. These restrictions are provided only through digit analysis data in the switch, since the specific restrictions would be difficult to determine for every case.
TYPE 2A INTER-CONNECTION	Connectoins to a land based tandem switch, LT (Local Tandem) or AT (Access Tandem). Type 2A interconnections also provide connections to and from co-located lines in the tandem, inter-LATA carriers, and other CMCs having terminations within the LATA. This feature does NOT provide AMA billing support for the connections between CMC and a Local Tandem Switch.
TYPE 2B INTER-CONNECTION	Connectoins to a telephone company end office. It provides connections only to and from terminals served by that end office, including lines, private trunks and other CMCs having terminations within the switch itself.
UNIVERSAL SERVICE ORDER CODE (USOC)	The line class code defined in Office Record 5306, Line Class Code.
WSP	Wireless Service Provider, previously known as a CMS (Cellular Mobile Carrier).

3. ACRONYM DEFINITIONS

Acronym	Definition
12NC	Numeric 12-Digit Product Code
13A	Bubble Memory Recorded Announcement System
1AEB	1A Event Buffer
1PSS	No. 1 Packet Switching System
2B1Q	2 Binary 1 Quaternary
2STPE	No. 2 Signal Transfer Point Emulator
2W	Two-Wire
2W/4W	2 Wire To 4 Wire
2WE&M	2 Wire Ear And Mouth

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3B20	Bell Super-Mini Computer
3B20D	3B20 Duplex
3B5	Small System Processor Control Unit
3BCC	3B Processors Central Control
3BCU	3B Control Unit
3BEB	3B Event Buffer
3BI	3B (Computer) Interface
3BPCF	Modified 3B Processor Peripheral Control Frame
3BSCSD	3b Scanner/Signal Distributor
3BTAC	3B Terminal Access Controller
3BTAC	3b Terminal Access Controller
3CL	A Type Of Toll Switch Board
4B3T	4 Binary 3 Ternary
4W	Four Wire
5-FTS	5ESS Field Test Set
5E2	5ESS Switch Second Domestic Generic
5E3	5ESS Switch Third Domestic Generic
5E4	5ESS Switch Fourth Domestic Generic
5E5	5ESS Switch Fifth Domestic Generic
5ESE	5ESS Switch Small Exchange
5SDH	5ESS Switch Subdevice Handler
5SDHMM	5SDH Multimod
5SDHSM	5SDH Small Office
100 TEST LINE	Measures far to near end loss and near end noise.
102 TEST LINE	Measures far to near end loss.
105 TEST LINE	Measures two-way loss and noise.

3.1 A

Acronym	Definition
A&DCU	Alarm And Digroup Control Unit
A&M	Administration And Maintenance
A/D	Analog To Digital Conversion
A/L	A-Law To Linear
AABS-AP	Automated Alternate Billing Services - Automated Position
AAP	Automated Access Prompting
AAS	Application Administration Subsystem
AATLSOS	Alternate Access to Language Specific Operator Services
AATOS	OSPS Alternate Access to Operator Systems
AAU	Alarm Adaptor Unit
AAU	Audible Alarm Unit
AB	Access Barred
AB	Alarm Battery Alarm
ABC	Automatic Bill Calling
ABD	Average Business Day
ABLKD	Abnormally Blocked
ABS	Absent Subscriber Service
ABSBH	Average Busy Season Busy Hour
AC	Action Complete
AC	Alternating Current
AC	Analog Access
AC	Attendant Conference
AC	Audit Control
AC	Authorization Codes
AC	Automatic Callback
ACA	Automatic Circuit Assurance
ACBC	Automatic Callback Calling
ACC	Access Code
ACC	Administrative Control Center (An OSPS Office Head)
ACC	Alarm Conversion Circuit
ACCB	Access Bus
ACCS	Automated Calling Card Service
ACCSQ	Automed Calling Card Sequence
ACCT	Account Code
ACD	Automatic Call Distribution
ACD	Automated Call Directory
ACD	Automatic Call Distributor/Distribution
ACDF	Automatic Call Distribution Features
ACE	Automated Cable Expertise
ACE	Automatic Calling Equipment
ACG	Automatic Call Gapping
ACHI	Application Channel Interface
ACK	Acknowledge
ACL	Alternate Component List

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ACM	Address Complete Message
ACM	Apparatus Coded Module
ACMOS	Automatic Customer Message Out-putting System
ACO	Additional Call Offering
ACOF	Attendant Control Of Facilities
ACP	Action Point
ACP	All-Call Privacy
ACP	Advanced Communications Package
ACQS	Automatic Charge Quotation Service
ACRG	Access Code Restriction Group
ACS	Alarm Call Service
ACS	Audible Call Screening
ACS	Automatic Call Simulator
ACSI	Automatic Calling Station Identification (BRCS/ISDN Feature)
ACSR	Automatic Customer Station Rearrangement
ACT	Active
ACT	Alternative Code Treatment
ACTB	All Concentrator Trunks Busy or ATB
ACTR	Automatic Call Type Recognition
ACTS	Automated Coin Toll Service
ACU	Automatic Calling Unit
ACVT	Attendant Control of Voice Terminals
AD	Abbreviated Dialing
ADDR	Address
ADE	Adaptive Design Engineering
ADLM	Advanced Distribution And Location Model
ADM	Adaptive Delta Modulation
ADOB	Alternate Destination On Busy
ADP	Automatic Diagnostic Process
ADPCM	Adaptive Differential Pulse Code Modulation
ADR	Alternate Data RAM
ADS	Architecture Development Specification
ADSI	Analog Service Display Interface
ADU	Audio & Display Unit
AEC	Audit, Edit And Check
AEMIS	ACD-ESS Management Information System
AFR	Automatic Flexible Routing
AGA	Automatic Gain Adjust
AGC	Auto Gain Control
AI	Access Interface
AI	Address Incomplete
AI	Assignment Request Indicator
AIC	Agent Intercom Call
AIC	Automated Initial Calls
AIC	Automatic Intercept Centers
AILS	Automated Inward Line Screening
AIM	Analog Interface Module
AIM	Application Integrity Monitor
AIN	Advanced Intelligent Network
AIOD	Auto Identified Outward Dialing
AIOD	Auto Input/Output Dialing
AIS	Alarm Indication Signal
AIS	Automatic Intercept System
AIU	Analog Interface Unit
AIU	Application Interface Unit
ALCB	Access Line Control Block
ALI	Automatic Location Identification
ALIT	Automatic Line Insulation Testing
ALM	Alarm
ALPX	Administration Of Lines In A Power Cross State
ALT	Automatic Link Transfer
ALU	Analog Line Unit
ALU	Arithmetic Logic Unit
ALV	Automatic Line Verifier
ALW	Allow
AM	Administrative Module
AM	Area Manager
AM-RTA	AM-Regional Technical Assistance
AMA	Automatic Message Accounting
AMAC	Automatic Message Accounting Collection System
AMACS	Automatic Message Accounting Collection System
AMAKP	Automatic Message Accounting Kernel Process
AMARC	Automatic Message Accounting Recording Center
AMARS	Automatic Message Accounting Recording System
AMASE	Automatic Message Accounting Standard Entries

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AMAT	AMA Teleprocessing
AMATAN	Automatic Message Accounting Tape Analyzer
AMATP	Automatic Message Accounting Teleprocessing
AMATPS	Automatic Message Accounting Teleprocessing
AMDC	AMA OSDS System Process
AMGR	Audit Manager Program
AMI	Alternate Mark Inversion
AML	Automatic Maintenance Limit
AMLC	Automatic Maintenance Limit Count
AMPS	Advanced Mobile Phone Service (Now AUTOPLEX)
ANC	All Number Calling
ANI	Automatic Number Identification
ANIF	Automatic Number Identification Failure
ANM	Answer Message
AO	Add-On
AO&M	Administration, Operation And Maintenance
AOSTT	Automatic Out-Of-Service Trunk Test Dispatcher
AP	Address Parity
AP	Administrative Printer
AP	Administrative Processor
AP	Applications Processor
AP	Argument Pointer
AP	Attached Processor
AP	Automated Position
APB	Attached Process Block
APC	Adjacent Point Code
APC	Auxiliary Power Card
APDAN	Auxiliary Processor Data Available
APECS	Advanced Programmable Electronic Call Simulator
APF	All PINs Fail
APH	Application Protocol Handler
API	Access Provider Identifier
API	Action Point Identifier
APID	Applications Processor Identification
APLS	Auxiliary Program Library System
APMH	Attached Processor Message Handler
APPRC	5ESS Switch Application Recent Change
APREQ	Auxiliary Processor Request
APS	Apparatus Product Schematic
APS	Attached Processor System
APS	Automated Position System
APSM	Apparatus Product Schematic For Manufacture
APT	Automatic Progression Testing
AQ	Auto Quote
AQTP	Autoquote Terminal Process
AR	Assert Range
AR	Automatic Recall
AR/AC	Auto Recall/Auto Call Back
ARDY	Asynchronous Ready
ARGC	Argument Counter
ARGP	Argument Pointer
ARS	Automatic Route Selection
ARSB	Automated Repair Service Bureaus
ARU	Audio/Audible Response Unit
ARU/TP	Audible Response Unit - Terminal Process
ARUC	Audible Response Unit Controller
AS	Administrative Services Subsystem
AS	Analysis System
AS	Administrative Services
ASB	Assistance Service Board
ASB	Attendant Source Billing
ASC	Alarm Service Unit
ASC	Alarm Status Circuit
ASC	Announcement Storage Circuit
ASCII	American Standard Code For Information Interchange
ASF	Attribute Specification File
ASM	Administrative Status Monitor
ASM	Automated Switching Module = PSM Or SM
ASMDR	Advanced Station Message Detail Recording (Switch)
ASP	Advanced Services Platform
ASP	Alarm Status Panel
ASP	Application Specific Package
ASP	Assignment Source Point
ASP	Auxiliary Services Position
ASAP	Automated Service Access Prompting

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ASAP R2	Automated Service Access Prompting Release 2
ASR	Automatic Send And Receive
ASR	Automatic Speech Recognition/Recognizer
ASSDL	Automatic Allocation Of Signaling Data Links
ASSERT	Assert Subsystem (For Making Assertions)
ASST	Assisting
AST	Acknowledge Seizure Timeout
ASW	All Seems Well
AT	Access Tandem
AT	Action Time
AT	Administrative Terminal
ATA	Asynchronous Terminal Adapter
ATB	Address Translation Buffer
ATCAF	Automated Test Calling Facility
ATCO	Automation of TCS/CPS Override
ATD	Attendant Through Dialing
ATD	Automatic Test Dispatcher
ATH	Authorization Code
ATIME	Absolute Time
ATLAS	Automatic Testing And Load Analysis System
ATME	Automatic Transmission Measuring Equipment
ATM	Asynchronous Transfer Mode
ATMS	Automatic Transmission Measuring System
ATOMICS	Advanced Traffic Observation And Management Information Collection System
ATOS	Automated Toll Operator Services
ATP	Access Transport Parameter
ATP	Advanced Telemetry Processor
ATP	Alarm Terminal Process
ATP	All Tests Passed
ATP	Announcement Terminal Process
ATP	Automated Terminal Process
ATP	SS7 Access Transport Parameter
ATS	Automatic Terminal Setup
ATSC	Auto Termination Of Signaling Irregularity Calls
ATT	Attendant
ATTS	Automatic Trunk Test Scheduler
ATTT	Automatic Trunk Test Table
ATU	Analog Trunk Unit
AU	Audit Subsystem
AUDIT	A Sanity Communication Command
AUTISS	Automatic Time Slot Switching
AUTO	Automatic Unit Testing Tool
AUTOVON	Automatic Voice Network
AUTRAX	Automatic Traffic Recording And Analysis Complex
AVCDA	Automatic Voice Charge And Duration Advice
AVD	Alternate Voice/Data
AVRT	Avoidance Routing
AVT	Access Via Tandem
AWT	Average Work Time
AXP	Auxiliary Processor Cabinet
AXPIC	Auxiliary Processor Initialization & Operation Capability
AXPU	Auxiliary Processor Unit

3.2 B

Acronym	Definition
B8ZS	Bitwise 8 Zero Suppression Code
B911	Basic 911 Service
BACH	Basic ACD And Call Handling
BANCS	Bell Administration Network Communication System
BBG	Basic Business Group
BBHC	Billing Busy Hour Capacity
BCAC	Business Customer Administration And Control
BCID	Business Customer Identification Number
BCLID	Bulk Calling Line Identification
BCON	Battery Connect
BCR	Bell Communication Research
BCR	Bus Control Register
BDEVTAB	Block Device Table
BDU	Bus Display Unit
BER	Bit Error Rate
BFOR	Battery Forward
BGB	Bidirectional Gating Bus
BGNEX	Begin Execution

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BGR	Buffered Bidirectional Gating Register
BGSP	Background System Process
BHC	Block Hardware Check
BHC	Busy Hour Calls
BIB	Backward Indicator Bit
BIC	Bus Interface Controller
BITS	Basic Interexchange Telephone Service
BL/NA	Busy/No Answer
BLA	Blocking-Acknowledgement
BLDG	Building
BLF	Busy Lamp Field
BLS	Basic Local Service
BLV	Busy Line Verification
BLX.25	Communications Protocol - See X.25
BMF	Backup Management Facility
BMI	Batch Mode Immediate (RC)
BMR	Batch Mode Release
BND	Billing Number Delivery
BNS	Billed Number Screening
BOC	Bell Operating Companies
BOC	Build-Out Capacitor
BOS	Bit-Oriented Signaling
BOS	Business Office Supervisor
BOSS/PT	Business Office Support System/Programmers Terminal
BPIDB	Bypass Peripheral Interface Data Bus
BPS	Bits Per Second
BPSS	Basic Packet Switching Service
BPT	Breakpoint Trap
BQPN	Block Queries for Private Numbers
BRCS	Business And Residential Customer Services
BRCSDB	BRCS Data Block
BREV	Battery Reverse
BRG	Bridge/Bridging
BRI	Basic Rate Interface
BRIV	Basic Rate Interface Vertification
BSC	Business Services Center
BSI	Bearer Service Identification
BSN	Backward Sequence Number
BST	Basic Services Terminal
BT	Buffer Threshold
BTSR	Bootstrapper Board
BUCP	Backup Control Process
BUD	Back Update Database
BUF	Buffer
BVA	Billing Validation Application
BVF	Billing Validation File
BWM	Broadcast Warning Message
BX.25	A CCITT Communications Protocol - See X.25
BY	Busy

3.3 C

Acronym	Definition
C	Connect
C&D	Control And Display
C&FC	Coin & Fee Check
C/D	Control Display
C/E	Cause And Effect
CA	Cache Address Bus
CA	Call Accepted
CA	Call Appearance
CA	Circuit Administrator
CA	Community Address
CA	Connect Acknowledge
CA	Coverage Analyzer
CAC	Cache Controller
CAC	Carrier Access Code
CAC	Common Administrative Capability
CAC	Country Access Code
CAC	Customer Administration and Control
CACS	Customer Administration Center System
CAD	Computer Aided Design
CADN	Circuit Administration
CADV	Combined Alternate Data Voice

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CAG	Centralized Administrative Group
CAI	Call Assembly Index
CAI	Computer Aided Instruction
CAI-ICOM	Call Appearance Intercom
CACH EKTS CA	Call Appearance
CALL	Computer Assisted Lesson Library
CAM	Cache Memory
CAM	Computer Aided Manufacturing
CAMA	Centralized Automatic Message Accounting
CAN	Cancel
CAP	Capability
CAP	Communications Audit Process
CAP	Competitive Access Provider
CAPFIT	CAPacity Fit
CAPFORMS	Capability Forms System
CAPMGR	Capability Manager
CAR	Customer Access Restriction
CAROT	Centralized Automatic Reporting On Trunks
CAS	CPE Alerting Signal
CAS	Customer Account Services
CAS NCP	Customer Account Services Network Control Point
CATL	Code Answer Test Line
CATLAS	Centralized Automatic Trouble Location And Analysis System
CATP	Conditional All Tests Pass
CB	Change Back
CB	Control Block
CB	Control Bus
CC	Call Completion
CC	Call Connected
CC	Call Coordinator
CC	Common Control
CC	Central/Common Control
CC	Common Channel Signaling
CC	Conference Circuit
CC	Control Console
CC	Country Code
CC	Common Control
CCA	CMOS Cell Array
CCA	Code Coverage Analyzer
CCB	Channel Control Block
CCB	Communications Control Buffer
CCBCOM	Channel Control Block Communication Region
CCC	Custom Calling Coordinator
CCCA	Central Coordinator Circuit Administration
CCD	Common Capabilities Document
CCF	Call Confirmation Message
CCF	Corporate Component File
CCI	Call Characteristic Index
CCI	Computer Consoles Incorporated
CCIF	Call Coordinator Interflow
CCIOB	Central Control Input Output Bus
CCIS	Common Channel Interoffice Signaling
CCIS6	Common Channel Signaling System No. 6 Domestic
CCISPCH	CCIS PC Handler
CCITS	Common Control Integrated Test System
CCITT	International Telegraph And Telephone Consultative Committee
CCITT6	CCITT Common Channel Signaling System Number 6
CCITT7	CCITT Common Channel Signaling System Number 7
CCITT7-PSIU	PSIU Containing The CCITT7 Signaling Terminals
CCITT7-SM	SM Containing The CCITT7-PSIU
CCM	Call Connect Message
CCM	Call Control Modules
CCMA	Common Channel Maintenance Administration
CCOP	Call Coordinator - Operator
CCOT	Call Coordinator - Originating Treatment
CCPUMP	Business And Residential Custom Services
CCQS	Centralized Charge Quotation Service
CCRD	Calling Card
CCS	Centrum Call Seconds
CCS	Common Channel Signaling
CCS	Common Communication Subsystem
CCS	Hundred Call Seconds
CCS7	Common Channel Signaling, CCITT Version 7
CCSA	Common Control Switching Arrangement
CCTT	Call Coordinator - Terminating Treatment

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CCU	Combined Channel Unit
CCV	Call Charge Verification
CCW	Cancel Call Waiting
CD	Cache Data Bus
CD	Charge Delay
CD	Circuit Description Document
CD	Common Data
CD	Common Data Pack (Of The ISLU)
CD	Control Distribution Frame
CDA	Call Data Accumulator
CDA	Carrier Detect (RS-232)
CDA	Charge And Duration Advice
CDA	Configuration Status Audit
CDAC	Control & Diagnostic Access Circuit
CDAL	Control And Diagnostic Access Link
CDAR	Customer Dialed Account Recording
CDB	Circuit Data Block
CDBCOM	Circuit Data Block Communication Region
CDC	Call Directing Code
CDC	Central Data Collection
CDC	Control Distributor Controller
CDC	Control/Data Circuit
CDC	Country Destination Code
CDCU	Control Distribution Controller Unit
CDEVTAB	Block Device Table
CDF	Common Design File
CDI	Code Index
CDI	Control And Data Interface
CDL	Call Distribution/Description Language
CDIM	Carrier Destination Mapping
CDMA	Code Division Multiple Access
CDMPU	Control Distribution Message Processor Unit
CDNCU	Control Distribution Network Clock
CDO	Community Dial Office
CDOS	Customer-Dialed Operator-Serviced
CDP	Custom Dialing Plan
CDPR	Customer Dial Pulse Receiver
CDR	Call Detail Record
CDR	Channel Data Register
CDSDREAD	A Command To Read Data From An FPC Subdevice
CDSDWRITE	A Command To Send Data To An FPC Subdevice
CDT	Communications Display Terminal
CDT	Communications Display Terminal/Trunk
CDX	Compact Digital Exchange
CE	Cause-Effect
CENTREX	Central Office PBX
CERDIP	Ceramic Dual In Line Package
CF	Call Forwarding
CF	Coin First
CF	Control Fanout
CF	Control Frame
CFA	
CFA	Carrier Failure Alarm
CFB	Call Forwarding Busy
CFBL	Call Forwarding Busy Line
CFDA	Call Forwarding Don't Answer
CFDA/CW	Call Forwarding Don't Answer after Call Waiting
CFF	Central Firmware File
CFH	Call Failure Handling
CFN	Call Forwarding Because No Answer
CFNS	Call Forwarding Night Service
CFPF	Call Forwarding Over Private Facilities
CFR	Centralized Flexible Rating
CFR	Coin Flexible Rate
CFUS	Call Forwarding Unrestricted Source
CFV	Call Forwarding Variable
CG	Concentrator Group
CGA	Carrier Group Alarm
CGID	Calling Party Identification
CgPS	Calling Party Subaddress
CH	Call Hold
CH	Core Hardware
CHAN	Channel
CHANNEL	Peripheral-Side TSI Time Slot
CHCKT	Channel Circuit

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CHCT	Channel Circuit
CHD	Call Hold
CHDB	Channel Data Block
CHILL	CCITT High Level language
CI	Call Identify
CI	Carrier Interconnect
CI	Control Interface
CI	Craft Interface
CI	Critical Information
CIA	Critical Indicator Administrator
CIB	Centralized Intercept Bureau
CIB	Control Interface Bus
CIC	Carrier Identification Code
CIC	Circuit Identification Code
CIC	Controller Interface Circuit
CIC	Customer Information Center
CID	Call Identifier
CID	Conditionally Initializable Data
CIDB	Control Interface Data Bus
CIDCW	Calling Identity Delivery on Call Waiting
CIID	Customer Identification Card
CIM	Clear Indication Message
CIM	Cluster Interface Module
CIMA	Computer Integrated Manufacturing Architecture
CINT	Command Interrupt
CIP	Carrier Identification Parameter
CIP	Critical Indicator Panel
CIR	Customer Information Release
CK	Check Bits
CK	Conflicting Key
CKT	Circuit
CKTDATA	Circuit Data Audit
CL	Communication Line
CLC	Clear Confirmation
CLCI	Common Language Trunk Identifier
CLEI	Common Language Equipment Identification
CLFR	Communication Link Fault Recovery
CLI	Called/Calling Line Identification
CLI	Circuit Level Indicator
CLI	Clear Indication
CLK-CNT	Clock-Control
CLLI	Common Language Location Identifier
CLM	Communication Link Monitor
CLM	Core Linkage Module
CLMP	Communication Link Maintenance Process
CLR	Clear
CLR	Clear Request
CLRC	Circuit Layout Record Card
CLRER	Clear Channel Error
CLRT	Control Link Receiver/Transmitter
CLV	Calling Line Verification
CLWC	Cancel Leave Word Calling
CM	Communication Module
CM	Communication Package Subsystem
CM	Coverage Monitor
CM	Interprocessor Communication System
CM1	Communications Module 1
CM2	Communications Module 2
CMAC	Centralized Machine Administration Center
CMC	Cellular Mobile Carrier
CMD	Command
CMDF	Combined Main Distributing Frame
CMDR	Centralized Message Detail Recorder
CMGA	Craft Message Generator Analyzer
CMI	Control Mode Idle
CMISE	Common Management Information Service Element
CMKP	Communications Kernel Process
CMOC	Centralized Maintenance and Operation Center
CMON	Craft Interface Integrity Monitor
CMOS	Complementary Metal Oxide Semiconductor
CMP	Communication Module Processor
CMS	Circuit Maintenance System
CMSP	Central Manager System Process
CMSS	Customer Message Service System
CN	Change Notice

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CN	Charge Number
CN	Conference Notes
CN	Control And Network Frame
CN	Customer Networking
CNA	Customer Name And Address Records
CNAC	CCIS Network Administration Center
CNAM	Calling Party Name
CNCC	Customer Network Control Center
CND	Calling Number Delivery
CNDTF	Coin Dial Tone First
CNGI	Calling Number Identification Services Intragroup Delivery Only
CNGI	CNIS Intra-group Only Delivery
CNI	Change Number Intercept
CNI	Common Network Interface
CNI/IMS	Common Network Interface/Interprocess Message Switch
CNIGI	Calling Number Intragroup ICLID
CNIGI	CNIS Intra-Group Delivery Option
CNIS	ISDN Calling Number Identification Services
CO	Central Office
CO	Change Order
CO	Change Over
CO	Cutover
COAN	Common Operator Access To Network
COC	Class Of Charge
COCOTS	Customer Owned, Coin Operated Telephones
CODEC	Coder-Decoder
COEES	Central Office Equipment Estimation System
COER	Central Office Equipment Report
COFF	Common Object File Format
COH	Consultation Hold
COM	Computer Output Microfilming
COMCNTRL	Common Control
COMDAC	Common Data And Control Circuit
COMDATA	Common Data
COMIC	Community Interface Control
CON	Congestion
CONC	Concentrator
CONCSCAN	Concentrator And Scanner Circuit
CONF	Conference
CONFIG	Configuration Control
CONT	Controller
COP	Common Optional Package
CORC	Customer Originated Recent Change
COS	Class Of Service
COSMOS	Computer System For Main Frame Operations
COT	Central Office Technician
COT	Central Office Terminal
COT	Common Optical Termination
COT	Customer Originated Trace
COV	Changeover Signal
COWG	Central Office Work Group
CP	Call Processing
CP	Central Processor
CP	Circuit Pack
CP-REXS	Central Processor Routine Exercise Scheduler
CPA	Commercial Power Alarm
CPB	Controller Peripheral Bus
CPBP	Central Processor Backup Process
CPC	Card Protection Center
CPC	Circuit Provisioning Center
CPD	Central Pulse Distributor
CPD	Circuit Pack Design
CPDL	Call Processing Data Link
CPE	Customer Premises Equipment
CPH	Calls Per Hour
CPH	Communication Protocol Handler
CPI	Central Processor Intervention
CPID	Linecard Register Containing Circuit Pack Identifier
CPLR	Coupler Data Block
CPN	Calling Party Number
CPN/BN	Calling Party Number/Billing Number
CPNP	Calling Party Number Presentation
CPOS	Call Processing Operating System
CPPCBLA	Central Processor Process Control Block Link Area
CPS	Circuit Pack Schematic

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CPS	Country Pair Screening
CPS	Customer Premises Systems
CPSM	Circuit Pack Schematic For Manufacture
CPT	Controlled Product Test
CPTR	Circuit Pack Test Requirements
CPU	Call Pickup
CQB	Circuit Queuing Blocks
CR	Call Record
CR	Call Record Assembler
CR	Call Request
CR	Critical Alarm
CRA	Call Record Assembler
CRA	Call Record Assembler
CRC	Cyclic Redundancy Check/Code
CREG	Concentrated Range Extension With Gain
CRI	Circuit Revision Instruction (Teletype)
CRLU	Cost Reduced Line Unit
CRM	Circuit Reservation Message
CRM	Clear Request Message
CRM	Commands And Reports Manual
CRO	Cancel Rerouted Overflow
CRR	Centralized Rate And Route
CRR	Controlled Rerouting
CRS	Centralized Results System
CRSAB	Centralized Repair Service Attendant Bureau
CRT	Cathode Ray Terminal
CRTSI	Cost Reduced Time Slot Interchanger
CRTX	Common Real Time Executive Operating System
CRUCC	Cost Reduced Universal Conference Circuit
CRUTD	Cost Reduced Universal Tone Decoder
CRUTG	Cost Reduced Universal Tone Generator
CRV	Call Reference Value
CS	Call Sent
CS	Call Store
CS	Cell Site
CSA	Carrier Serving Area
CSA	Configuration Status Audit
CSADB	Centralized Service Assessment Display Board
CSAR	Centralized System For Analysis And Reporting
CSC	Customer Service Center
CSD	Circuit Switch Data
CSD LIMIT	Call Reference Busy Limit
CSD NBLIMIT	Call Notification Busy Limit
CSDC	Circuit Switched Digital Capability
CSE	Carrier Selection Enforcement
CSINT	Concentrator And Scanner Interface Circuitry
CSMDRS	Centralized Station Message Detail Recording System
CSO	Central Services Organization
CSOP	Complex Service Order Process
CSOP	Coordinator Of Spooler Output Processes
CSP	Control Switching Point
CSP	Controller Subordinate Process
CSPDN	Circuit Switched Public Data Network
CSR	Customer Station Rearrangements
CSRID	Customer Station Rearrangement Identification
CSS	Centralized Special Services
CSS	Computer Subsystem
CST	Central Standard Time
CST	Combined Services Terminal
CSU	Cache Store Unit
CSU	Combined Service Unit
CSU	Channel Service Unit
CSV	Circuit Switched Voice
CSV LIMIT	Call Reference Busy Limit
CSV NBLIMIT	Call Notification Busy Limit
CT	Call Type
CT	Central Trunk Test Unit
CT	Congestion Tone
CTA	Call Transfer Attendant
CTIAC	Call Transfer Individual All Calls
CTIIO	Call Transfer Individual Incoming Only
CTIO	Call Transfer Internal Only
CTS	Common Test System
CTS	Control Time Slot
CTSP	Control Time Slot Pump Process

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CTTU	Centralized Trunk Test Unit
CTTU/RTTU	Centralized Trunk Test Unit/Remote Trunk Test Unit
CTU	Cell Translation Update
CTX	CENTREX
CU	Control Unit
CU	Converter Unit
CU/TK	Common Update/Trunking
CUD	Central Update Database
CUP	Control Unit Power
CUP	Customer Programmability
CUT	Circuit Under Test
CVT	Circuit Validation Test
CW	Call Waiting
CWI	Call Waiting Indication
CWC1	Call Waiting with Cancel 1
CWC1DT1	Call Waiting with Cancel 1 with Distinctive Tone 1
CWC1DT2	Call Waiting with Cancel 1 with Distinctive Tone 2
CWC2	Call Waiting with Cancel 2
CWC2DT	Call Waiting with Cancel 2 with Distinctive Tone
CWD	Call Waiting Deluxe
CWDC1	Call Waiting Deluxe with Cancel 1
CWDC2	Call Waiting Deluxe with Cancel 2
CWDC2DT	Call Waiting Deluxe with Cancel 2 with Distinctive Tones
CWDCDT1	Call Waiting Deluxe with Cancel 1 with Distinctive Tone 1
CWDCDT2	Call Waiting Deluxe with Cancel 1 with Distinctive Tone 2
CWDIO	Call Waiting Deluxe Incoming Only
CWDIODT	Call Waiting Deluxe Incoming Only with Distinctive Tones
CWDT	Call Waiting Deluxe Terminating
CWDTDT1	Call Waiting Deluxe Terminating with Distinctive Tone 1
CWDTDT2	Call Waiting Deluxe Terminating with Distinctive Tone 2
CWIO	Call Waiting Incoming Only
CWIODT	Call Waiting Incoming Only with Distinctive Tones
CWL	Call Waiting Lamps
CWO	Camp-on (BRCS Feature)
CWO	Call Waiting Originating
CWT	Call Waiting Terminating
CWTDT1	Call Waiting Terminating with Distinctive Tone 1
CWTDT2	Call Waiting Terminating with Distinctive Tone 2
CWTFD	Call Waiting Feature Definition
CXR	Carrier

3.4 D

Acronym	Definition
D	Disconnect
D+AR	Data Rate And Adaptation Method
D/A	Digital To Analog Conversion
D/A	Digital/Analog
D2SBS	Duplex Dual Serial Bus Selector
D4	A Type Of Channel Bank
DA	Data
DA	Destination Address
DA	Digit Analysis
DA	Directory Assistance
DA	Dynamic Access Subsystem
DAA	Direct Agent Access
DAA	Design Automation Assistant
DAB	Directory Assistance Bureau
DAC	Directory Assistance - Charging
DACS	Digital Access And Cross Connect System
DACS IV-2000	Digital Access and Cross Connect System IV-2000
DACTSR	Data, Control And Service Circuitry
DACU	Device Attachment Control Unit
DALB	D Channel Application Linkage Block
DAM	Data Access Model
DAM	Dual Access Memory
DAP	Display Administration Process
DARAM	Dual Access Random Access Memory
DART	Debugger For A Remote Target
DAS	Data Auxiliary Set
DAS	
DASC	Directory Assistance System Computer
DASS	Digital Access Signaling System
DATA	DATA Subsystem

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DB	Database Subsystem
DB	Decibel
DB	Display Buffer
DBA	Data Base Administrator
DBAS	Data Base Administration System
DBM	Data Base Manager
DBMS	Data Base Management System
DBS	Duplex Bus Selector
DBTG	Data Base Task Group
DBU	Dial Backup Unit
DC	Device Control (Set Of IA5 Characters)
DC	Direct Current
DC	Directly Connected Test Unit
DC	Do Not Care
DCA	Dynamic Channel Assignment
DCB	Device/Diagnostic Control Block
DCCB	D-channel control block
DCD	Data Collection Device
DCD	Digital Call Distribution
DCDB	Digit Collection Data Block
DCDB	D-Channel Data Block
DCE	Data Circuit-Terminating Equipment
DCE	Data Communications Equipment
DCEC	Database Change And Evaluation Committee
DCF	Defensive Check Failure
DCF	Digital Carrier Facilities
DCLU	Digital Carrier Line Unit
DCO	Digital Central Office
DCO	Digital Controlled Oscillator
DCP	Data Communications Protocol
DCP	Distributed Call Processing
DCR	Directory Charge Recording
DCRGS	Data Collection And Report Generation Of Resource Usage Information System
DCS	Diagnostic Control Structure
DCS	Digital Conference System
DCS	Digital Cellular Switch
DCT	Digital Carrier Terminal
DCT	Digital Carrier Terminal/Trunk
DCT	Direct Connect Trunks
DCT	Dispatcher Control Table
DCTN	Defense Commercial Telecommunications Network
DCTU	Directly Connected Test Unit
DCW	Dial Call Waiting
DCWT	Distinctive Call Waiting Tone
DD	Data Delivery
DD	Delay Dial
DDA	Directory Database Administration
DDAS	Dynamic Data Access Subsystem
DDCC	Design And Documentation Coordination Committee
DDD	Direct Distance Dialing
DDI	Direct Dialing In
DDL	Data Definition Language
DDL	Derived Data Links
DDM-2000	Dual Digital Multiplexer - 2000
DDP	Data Definition Process
DDS	Digital Data Service/System
DDSBS	Duplex Dual Serial Bus Selector
DDSN	Digital Derived Services Network
DEACT	Deactivate
DEMUX	Demultiplexer
DEN	Digital Equipment Number
DEP	Data Entry Procedure
DESEP	Destination Separation Class
DESS	Digital Electronic Switching System
DEV	Device
DEVID	Device Identification
DF	Data Fanout
DF	Disk File Unit
DF	Distributing Frame
DF	Duplex Failure
DFC	Disk File Controller
DFD	Data Flow Diagram
DFF	Digital Facilities Frame
DFI	Digital Facility Interface
DFI-H	RISLU Host DFI

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DFI-H1	RISLU Host DFI Type 1(Remotes A PICB And A PIDB To Remote Site)
DFI-H2	RISLU Host DFI Type 2(Remotes A PIDB To Remote Site)
DFI-R	RISLU Remote DFI
DFI-R1	RISLU Remote DFI Type 1(Remotes A PICB And A PIDB To Remote Site)
DFI-R2	RISLU Remote DFI Type 2(Remotes A PIDB To Remote Site)
DFTAC	Distributing Frame Test Access Circuit
DFU	Digital Facilities Unit
DFU	Disk File Unit
DG	Digroup
DG	Diagnostic Control Subsystem
DG	Diagnostics Supervisor
DGEN	Data Generation
DGN	Diagnose/Diagnostic
DGT	Digit Analysis
DI	Data Interface
DI	Destination Index
DI	Dielectric Isolation
DIAG	Diagnose
DIAGC	Diagnostic Control Program
DIAMON	Diagnostic Monitor Program
DID	Direct Inward Dialing
DIF	Digital Interface Frame
DIM	Digital Interface Module
DIO	DMA I/O Bus
DIOB	Director Memory Access I/O Bus
DIOR	Direct International Originations
DIP	Dual Inline Package
DIS	Disconnect
DISC	Disconnect
DISPDB	Display Data Block
DIST	Distribute
DIT	Display Information Table
DIVA	Digital Input-Voice Answer-back
DKDRV	Disk Driver
DKI	Disc/Disc Inverter
DL	Data Link
DLC	Digital Loop Carrier
DLDSL	Data Link Digital Subscriber Line
DLI	Dual Link Interface (Part Of SM)
DLICON	Dual Link Interface Configuration
DLIT	Demand Line Insulation Test
DLM	Digital Link Module
DLN	Direct Link Node
DLP	Decode Level Point
DLRU	Data Link Receiving Unit
DLT	Data Link Terminal
DLT	Digital Link Trunk Frame
DLT	Digital Link Trunk Port
DLTU	Digital Line And Trunk Unit
DLTU-RH	RISLU Host DLTU
DLTU-RR	RISLU Remote DLTU
DLTU/LU	Digital Line Trunk Unit/Line Unit
DLU	Data Link Unit
DM	Disconnected Mode
DM	Domain
DMA	Direct Memory Access
DMA/IO	Direct Memory Access/IO Unit
DMAC	Direct Memory Access Controller
DMAM	Deferred Maintenance Administrator And Monitor
DMAS	Dedicated Maintenance And Administrative Services
DMCH	DMA Channels
DMD	Dot Mapped Display
DMERT	Duplex Multi-Environment Real-Time Operating System
DMG	Digital Master Group
DMI	Digital Multiplexed Interface
DML	Data Manipulation Language
DMODE	Linecard Register For Controlling The D-Channel Mode
DMON	Diagnostic Monitor Process
DMU	Data Manipulation Unit
DMW	Digital Milliwatt
DN	Diagnostics-SM Subsystem
DN	Directory Number
DNA	Data Network Address
DNA	DN Appearance
DNCP	Diagnostics-CP Subsystem

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DND	Do Not Disturb Service
DNET	Defer Non-Essential Tasks
DNHR	Dynamic Non-Hierarchical Routing
DNIC	Data Network Identification Code
DNS	Data Networking Services
DNT	Dialed Number Trigger
DOC	Dynamic Overload Control
DOD	Direct Outward Dialing
DOMSCR	Dominant Screening
DOPS	Digital Ordering And Planning System
DOR	Division Of Revenue
DOTS	Digital Office Timing Supply
DP	Destination Point
DP	Dial Pulse/Pulsing
DP	Duplex Processor
DPAT	Dialing Plan Access Treatment
DPB	D-Channel Port Block
DPB	Data Port Board
DPBX	Digital Private Branch Exchange
DPC	Data Port Circuit
DPC	Destination Point Code
DPCM	Differential Pulse Code Modulation (TV Signal Compression)
DPH	Data Priority High
DPIDB	Directly Connected Peripheral Interface Data Bus
DPKT	D-channel Packet
DPL	Data Priority Low
DPLL	Digital Phase Lock Loop
DPN	Directed Pickup Nonbarge-In
DPN	Distribute Point Number
DPNSS	Digital Private Network Signaling System
DPT	Diagnostic Phase Table
DPU	Directed Pickup With Barge-In
DQD	Directory Query Display
DR	Distinctive Ring
DRE	Directional Reservation Equipment
DRS	Digital Reference Sequence
DS	Digital Signal
DS0	64-Kilobit-per-Second PCM Transport Facility
DS0	Digital Signal Level 0
DS1	1.544 Mega-baud Data Channel
DS1S	Digital Signal Level 1 SONET
DSA	Dial Service Assistance
DSBLD	Disabled
DSC	Data Set Cabinet
DSC	Digital Services Circuit
DSC	Dual Serial Channel
DSCCOM	Digital Service Circuit Common
DSCH	Dual Serial Channel
DSCP	Digital Service Circuit Pack/Port
DSCU	Digital Service Circuit Unit
DSD	Direct Services Dialing
DSD-NSC	Direct Services Dialing - Network Services Center
DSDC	Direct Services Dialing Capability
DSE	Direct Signaling Event
DSI	Data Subscriber Interface
DSIOS	Data Subscriber Interface Operating System
DSL	Digital Subscriber Line; also called a BRI Basic Rate Interface
DSLC	Digital Subscriber Line Concentrator
DSLINIT	DSL Initialization
DSM	Direct Signaling Message
DSN	Defense Switched Network
DSO	One 64 Kilobit Per Second Channel of A T1 Line
DSP	Digital Signal Processor
DSS	Digital Switching System
DSS	Direct Station Selection
DSS	Display Station Set
DSSC	Dual Serial Data Channel
DST	Destination Bus
DSTC	Digital Serving Test Center
DSTT	Direct Signaling Translation Test
DSU	Digital Service Unit
DSU1-CONF	Digital Service Unit 1 - Conference Circuits
DSU2	Digital Service Unit Model 2
DSUCOM	Digital Service Circuit Unit - Common
DSUG	Digital Service Circuit Unit (With Global Functions)

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DSUL	Digital Service Circuit Unit (With Local Functions)
DSX	Digital Cross-Connect (Frame)
DT	Basic Digital Terminal
DT	Destination Type
DT	Data Transport
DTA	Dial Through Announcement
DTD	Dial Tone Delay
DTDA	Dial Tone Delay Alarm
DTE	Data Terminating Equipment
DTF	Dial Tone First
DTF	Digital Transmission Facility
DTGS	Direct Trunk Group Selection
DTMF	Dual Tone Multifrequency
DTO	Decentralized Toll Office
DTP	DAS/C Terminal Process
DTQ	Delay Treatment For Queuing
DTR	Data Terminal Ready
DTSA	Linecard Register That Assigns GIDB Time Slot To D-Channel
DTT	Digital Transmission Terminals
DTTTL	Dial Transfer To Tandem Tie Line
DTU	Digital Trunk Unit
DU	Design Unit
DUC	Dual Access Utility Circuit
DUE	Detection of Unauthorized Equipment
DUIC	Direct User Interface Controller
DUP	Data User Part
DVO	Data Voice Office
DXD	Digit By Digit Analysis

3.5 E

Acronym	Definition
E&M	Ear And Mouth
EA	Emergency Action
EA	Equal Access
EA	Error Analysis
EA	Exchange Access
EA	Extended Address Bit
EACK	Channel Error Acknowledge
EADAS	Engineering And Administrative Data Acquisition System
EADAS/NM	Engineering and Administrative Data Acquisition System For Network Administration
EADAS/NORGEN	EADAS/Network Operations Report Generator
EAEO	Equal Access End Offices
EAI	Emergency Action Interface
EAMF	Equal Access Multifrequency
EAN	Equipment Access Network
EAP	Elevated Audit Process
EARN	Equipment Access Relay Network
EARN	Equipment Action Interface
EAS	Exchange Access Signaling
EAS	Extended Area Service
EB	Event Buffer
EC	Electronic Console
EC	External Data Link Communication Package
ECA	Exchange Carrier Association
ECB	Echo Cancellation Boards
ECD	Equipment Configuration Database
ECD/SG	Equipment Configuration Data (Or Database) / Service Groups
ECDGEN	Equipment Configuration Data Generation Program
ECDMAN	Equipment Configuration Data Manager
ECH	Echo Canceled Hybrid
ECIS	Embedded CCIS Protocol
ECIS6	Embedded Common Channel Office Signaling
ECO	Emergency Change Over
ECP	Engineering Change Procedures
ECP	Executive Control Processor
ECR	Emergency Call Record
ECT	Equipment Configuration Table
ECTD	Expanded Call Type Determination
ECTP	Evaluation Control Terminal Process
ECU	Echo Cancellation Unit
EDAC	Enhanced Digit Analysis And Collection
EDBMH	External Data Base Message Handler

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EDLCP	External Data Link Communication Package
EDS	EPSCS Data Switch
EDS CND	
EDSL	Extended Digital Subscriber Line
EE	Execution Environment
EF&I	Engineered, Furnished And Installed
EFS	Error Free Second
EIC	Exchange Identification Code
EIH	Error Interrupt Handler
EIRS	Expanded In-Band Ringback Signal Generation
EIS	Expanded Inband Signaling
EIS	External Information Systems
EKTS	Electronic Key Telephone Service
ELI	Electric Line Interface
ELIGI	Enhanced Limited Intragroup ICLID
ELP	Encode Level Point
ELS	Electronic Loop Segregation
ELT	Emergency Load Transfer
EM	Electromechanical
EMB	Engineering Methods Bulletin
EMC	Electromagnetic Compatibility
EMI	Electro-Magnetic Interference
EML	Expected Measured Loss
EMM	Expanded Main Memory
EMMP	Enhances Message Module Processor
EMP	Electro-Magnetic Pulse
EMS	Effective Mass Filter
EMSP	Enhanced Modular Signal Processor
EMTR	Equipment Manufacturing Testing Requirements
EN	Equipment Number
ENFIA	Exchange Network Facilities For Interexchange/Interstate Access
EO	End Office
EOATA	End Office Access Trunk Arrangement
EOC	End Of Call
EOS	Extended Operating System
EOT	End Of Tape/Transfer
EPH	Enhanced Protocol Handler
EPIC	Engineering Purchased Integrated Circuits
EPLS	Emergency Priority Line Service
EPO	Enhanced Professional Office
EPROM	Erasable Programmable Read Only Memory
EPS	Equipment Product Schematic
EPSCS	Enhanced Private Switched Communication Service
EPSM	Equipment Product Schematic For Manufacture
EQL	Equipment Location Number
EQSTAT	Equipage State Field In RC View
ER	Equipment Report
ER	Error Register/Request
ERA	Error Analysis Register
ERL	Echo Return Loss
ERROR	Linecard Register That Signals GIDB Errors
ES	Errored Seconds
ESA	E911 Service Adjunct
ESAC	Electronic Switching Assistance Center
ESB	Emergency Service Bureau
ESC	Enhanced Services Complex
ESCO	Emergency Service Central Office
ESD	Electrostatic Discharge
ESN	Emergency Service Number
ESP	Engineering Specification Practices
ESP	Enhanced Services Provider
ESP	Essential Service Protection
ESP	External Security Password
ESPOTS	Extended Super Plain Old Telephone Service
ESR	Error Source Register
ESSX	Private facilities feature which emulates a PBX in the 5ESS-2000 Switch
EST	Equipment Status Table
ET	Exchange Terminator/Termination
ETN	Electronic Tandem Network
ETS	Electronic Tandem Switching
ETS/ETN	Electronic Tandem Switch/Electronic Tandem Network
EUO	???
EWD	End With Disconnect
EV	Administrative Event Reporting
EX	Exercise

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EXC	Execute
EXT	Extension
EXT	External
E_BIT	Busy/Idle Bit In A Time Slot

3.6 F

Acronym	Definition
FA	Fault Recovery
FA	Firmware Administration
FAs	Feature Activators
FAC	Facility Administration And Control
FAC	Feature Assignment And Construction
FACCS	Facility Associated Common Channel Signaling
FACMS	Firmware Administration Change Management System
FACS	Facility Assignment Control System
FADS	Feature Access During Speech
FAP	Feature Activation Point
FARPID	Far Process Identification
FAS	Facility Associated Signaling
FBDB	Free Buffer Descriptor Blocks
FBI	Feature Button Inspect
FB-ICOM	Feature Button Intercom
FCD	Feature Code Dialing
FCG	False Cross And Ground
FCOS	Far Class Of Service
FCS	Frame Check Sequence
FCT	Firmware Coordination Team
FCU	Format Control Unit
FDB	Feature Data Base
FDM	Frequency Division Multiplexing
FDMA	Frequency Division Multiple Access
FDS	Feature Design Specification
FDX	Full Duplex
FEDT	Far-End Data Tone
FEM	Front End Menu
FENPA	Far End Numbering Plan Area (Far End Area Code)
FEV	Far End Voice
FFU	Fuse Filter Unit
FG	Failure Group
FG	Foreground (Peripheral Control)
FGB	Feature Group B
FGBOL	Feature Group B Originating LATA
FGC	Feature Group C
FGD	Feature Group D
FGDOL	Feature Group D Originating LATA
FI	Facilities Interface
FI	
FIB	Find Indicator Bit
FIC	Film Integrated Circuit
FICU	Fault Insertion Control Unit
FID	Feature Identifiers
FIDB	Facilities Interface Data Bus
FIFO	First-In First-Out
FIM	Fiber Interface Module
FIP	File Inquiry Processor
FIPS	Facility Interface Processors
FIRM	Firmware Subsystem
FISU	Fill-In Signal Unit
FIT	Failure In Time (Typically 10E9 Device Hours)
FIT	Fully-Initializing Terminal
FIU	Facilities Interface Unit
FLT	Fault
FLT	Fault Locating Terminal
FLTRCV	Fault Recover
FLZ	Find Low Zero
FM	Feature Model
FM	File Management/Manager
FMC	Force Management Centers
FNSI	Forward Number Specific Information
FONL	Force On Line
FP	Fast Pump
FP	Feature Processor
FP	Frame Pointer

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FP	Fuse Panel
FPC	Foundation Peripheral Controller (Part Of MSGS)
FPCCON	Foundation Peripheral Controller Configuration
FPCH	Foundation Peripheral Controller Handler
FPFH	Fast Pump Facility Handler
FPI	Full Process Initialization
FPID	Far Process Identification
FPS	Forms Processor System
FPSP	Fast Pump System Process
FPT	Functional Pack Test
FPTP	Fast Pump Terminal Process
FPU	Fuse Panel Unit
FR	Fault Recovery
FRCD	Forced Active
FRL	Facility Restriction Level
FRMR	Frame Reject Response
FRP	Fault Recovery Program
FRPH	Frame Relay Protocol Handler
FRS	Feature Requirements Specification
FRS	Flexible Route Selection
FSK	Frequency Shift Keying
FSM	Finite State Machine
FSN	Forward Sequence Number
FSR	Frequency Select Ringing
FSTT	Finite State Transition Table
FTAM	Form Translation And Mapping
FTB	Facility Test Bus
FTP	Feature Terminal Process
FTS	Federal Telecommunication System
FTS	Field Test Set
FTS/NRA	Federal Telecommunications/Number Remote Access
FU	Fan Unit
FW	Firmware
FWA	Full Wave Average
FWCLI	Firmware Change Level Indicator
FX	Foreign Exchange
FX-ROTL	Foreign Exchange Lines For The Remote Office Test Line

3.7 G

Acronym	Definition
GD	Global D Channel
GDA	Global Data Area
GDATA	Global Data
GDB	General Deactivation Procedure
GDS	Gated Diode Switch
GDSF	Global Digital Services Facility
GDSU	Global Digital Service Unit
GDU	Global Design Unit
GDX	Gated Diode Crosspoints
GDXAXS	GDX Access
GDXC	Gated Diode Crosspoint Compensator Pack
GDXCTRL	Gated Diode Crosspoint Access
GEN	General Registers
GFAS	General Feature Access Scheme
GFH	Global Fault Handler
GFM	Global Function Module
GIDB	Group Interface Data Bus (For ISLU)
GL	Global Symbol
GLAU	High Level Access Unit
GLG	General Line Group
GLIB	Generic Library
GLS	Generalized Line Signaling
GLU	General Line Unit
GMOS	Group Manager Operator Services
GNP	General Numbering Plan
GNPO/T	General Numbering Plan Originating/Toll
GNPSNI	General Numbering Plan Singular Number Identification
GOP	Global Overload Process
GPD	Group Partitioned Data
GPDB	General Purpose Buffer Descriptors
GPIC	Group Primary Carrier
GPIM	Global Position Interface Module
GPITS	General Purpose Integrated Test System

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GPIU	General Purpose Interface Unit
GPORT	Global Port
GRASP	Generic Access Program (Or Package)
GRASPIM	Generic Access Program For The Interface Module
GRCV	Growth Recent Change Verify
GREP	Global Regular Expression Print
GROW	GROWth Equipage State
GRSP	Global Routing System Process
GSDB	Grid Summary Scan Data Block
GSL	Gas Surge Limiter
GSM	Global Service Module
GSS	Global System Status
GTEI	Group Terminal Endpoint Identifier
GTG	General Trunk Group
GTG	Generalized Tone Generation
GTT	Global Title Translation
GTU	General Trunk Unit

3.8 H

Acronym	Definition
H/M	Hotel/Motel
HBIS	Hotel Billing Information System
HCC	Hardware Change Committee
HCISLU	High Capacity Integrated Services Line Unit
HCMICU	High Capacity Message Interface And Clock Unit
HCMSGS	High Capacity MSGS
HD	High Day
HDBH	High Day Busy Hour
HDFI	Host Digital Facilities Interface
HDLC	High Level Data Link Control
HEX	High Energy Crosspoint
HG	Half Group
HIC	Hybrid Integrated Circuit
HILO	High-Low Technique
HILVL	High Level
HINIT	Hardware Initialization
HLAU	High Level Access Unit
HLDA	Hold Acknowledge
HLL	High Level Language
HLSC	High Level Service Circuit
HM	Hotel Motel
HMIRA	Human Machine Input Request Administration
HMKP	Human Machine Kernel Process
HMSIP	Human Machine Spooler Input Process
HNPA	Home Numbering Plan Area
HOBIC	Hotel Billing Information Center
HOBIS	Hotel Billing Information System
HOC	Host Collector
HP	Hard Pulse
HP	Hi Priority
HSC	High Level Service Unit
HSM	Host Switching Module
HSR	Hardware Status Register
HSSDS	High Speed Switched Digital Service
HST	Hashsum Tables
HSU	High Level Service Circuit Unit
HTE	Hardware Test And Evaluation
HTLU	High Traffic Line Unit
HTP	Host Interface Module Terminal Process
HTR	Hard to Reach
HTT	Hardware Troubleshooting Tools
HTU	High Level Test Unit
HU	Hardware Units
HW	Hardware
HZ	Hertz Cycles Per Second

3.9 I

Acronym	Definition
I	Information
I.110	CCITT Reference: General Structure Of I Recommendations
I.120	CCITT Reference: Integrated Services Digital Networks

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I.320	CCITT ISDN Protocol Reference Model Description
I.411	CCITT ISDN User-Network Interfaces Reference
I.430	CCITT ISDN Layer 1 (Physical Layer) Specification
I.431	CCITT Primary Rate Layer 1 (Physical Layer) Specification
IA	Ineffective Attempt
IA	Intraexchange
IAD	Integrated Access Distributor
IAM	Initial Address Message
IAN	Integrated Analog Network
IAPXITS	Integrated Test System INTEL Processors
IAR	Immediate Access Random Access Memory
IB	Instruction Buffer
IBDN	Individual Billing Directory Number
IBHC	Input Buffer Head Cell
IBNS - R2	International Billed Number Screening - Release 2
IC	InterLATA Carrier
IC	Incoming Call
IC	Integrated Circuit
IC	Interexchange Carrier
IC	Interorganization Coordination Team
ICAD	Initialization And Configuration Administration
ICAI	Idle Call Appearance Inspect
ICAN	Individual Circuit Analysis
ICB	Incoming Calls Barred
ICF	Inter-LATA Carrier Form
ICI	Incoming Call Identification
ICI	ISDN Call Identification
ICL	Inserted Connection Loss
ICL	Inter Cluster Link
ICLID	Incoming Call Line Identification
I-CNAM	ISDN Calling Name for BRI
I-CNIS	ISDN Calling Number Identification Services
ICON	Initialization Control
ICS	Inmate Calling Services
ICT	Incoming Trunk
ICVC	International Card Vertification Center ID
ID	Immediate Dial
ID	Individualized Dialing
IDAS	Integrated Routing Assignment System
IDB	INWATS Database
IDC	Integrated Digital Capability
IDCU	Integrated Digital Carrier Unit
IDDD	International Direct Distance Dialing
IDE	Initial Development Environment
IDEAS	Integrated Digital Extension For Analog Switches
IDL	Interoffice Data Link
IDLC	Integrated Digital Loop Carrier
IDN	Integrated Digital Network
IDP	Individualized Dialing Plan
IDPI	Internal Data Path Identifier
IDS	Interconnection Design System
IDS	Interprocessor Data Synchronization
IDT	Integrated Display Terminal
IE	Information Element
IE	Input Equipment
IE	Interexchange
IEC	Interexchange Carrier
IEDS	ISDN Electronic Directory Service
IFMH	Interflow Message Handler
IGC	Inter-Gateway Circuits
IH	Interrupt Mask
IHA	Incremental Hardware Addition
IIA	Interrupt Inhibit Administrator
IIGW	Inter-ISM Gateway
IITS	Interactive Integrated Test System (Formerly STS)
IM	Immediate Mode (RC)
IM	Input Message
IM	Integrity Monitor
IM	Interface Module (now SM)
IM	Interrupt Mask
IM-OM	Input And Output Message Manuals
IM-REXS	Interface Module Routine Exercise Scheduler
IM/OM	Input Manual/Output Manual
IMBP	Interface Module Backup Process
IMC	Interface Module Cabinet

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IMC	Interface Module Control Cabinet
IMLT	Integrated Mechanized Loop Testing
IMP	Improved Module Processor
IMP	Interface Module Processor
IMPU	Interface Module Processor Unit
IMR	Initial Modification Request
IMS	Interprocess Message Switch
IMST	Interface Module System Test
IMT	Inter-Module Trunk
IN	Initialization
INA	Integrated Network Arrangement
INADS	Initialization And Administration System
INC	International Carriers
IND	Indication
INETS	Interim NETS
INFORM	Information
INH	I/O Inhibit
INIT	Initialization
INIT	Initiate
INOP	Inward Operator
INPA	Interchangeable NPA
INSEP	Incoming Separation Class
INV	Direct-To-Alternating Current Inverter
INV	Inverter (Disk)
INVTR	Inverter
INWATS	Inward Wide Area Telecommunications Service
IOC	International Operator Center
IODRV	Input/Output Driver
IOMI	Input/Output Microprocessor Interface
IOMM	Input/Output Message
IOP	Input/Output Processor
IOPC	Input/Output Peripheral Controller
IORN	I/O Read (Active Low)
IOS	Improved Outpulsing Service
IOWN	I/O Write (Active Low)
IP	ISDN Interworking Unit Port
IP	Improved Pump
IP	In Progress
IP	Intelligent Peripheral
IP	Initialization Processor
IPC	Inter-Process Communication
IPL	Initialization Processor Load
IPM	Interruptions Per Minute
IPS	Interrupts Per Second
IPWS	Interactive Planning Work Station
IR	Interrupt Request
IREG	Integrated Range Extension With Gain
IRN	Integrated Ring Node
IRQ	Invalid Request For Supplementary Service
IS	Information Separator
IS	Interrupt Set Register
IS	Interrupt Source
ISAT	ISDN Attendant
ISC	Intelligent Serial Controller
ISC	International Switching Center
ISCN	Integrated Services Channel Number
ISD	International Subscriber Dials
ISDN	Integrated Services Digital Network
ISDN-UP	Integrated Services Digital Network User Part (Of CCITT7)
ISDNBASE	ISDN Base Code Loadable Package.
ISDNBRCS	ISDN BRCS Code Loadable Package
ISDRT	Integrated Services Digital Remote Terminal
ISDS	Incremental Software Development System
ISLC	Integrated Subscriber Loop Carrier
ISLU	Integrated Services Line Unit
ISLU2	Integrated Services Line Unit - 2
ISLUBASE	ISLU Base Code Loadable Package
ISM	Integrated Services Module (outdated acronym)
ISN	Integrated Services Network
ISP	Intermediate Switching Point
ISPA	Integrated Services Port Administrator
ISPF	Interactive Session Productivity Facility
ISSN	Integrated Special Services Network
ISTF	Integrated Services Test Facility
ISU	Identification Service Unit

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ISU	Initial Signal Unit
ISUP	Integrated Services - User Part
IT	Intertoll
ITE	Installation Test Equipment
ITIME	OSDS Time Relative To OSDS Init
ITLH	(2 Wire) Incoming Trunk Loop, Hook
ITLM	(2 Wire) Incoming Trunk Loop, Metering
ITP	Interaction Test Plan
ITS	Integrated Test System
IU	Interface Unit
IUB	Interface-Unit Bus
IUI	Integrated User Interface
IXC	Inter-Exchange Carrier

3.10 J

Acronym	Definition
JF	Junctor Frame

3.11 K

Acronym	Definition
KA	Knowledge Access
KAM	Knowledge Access Model
KB	Knowledge Base
KB/S	Kilobits Per Second
KBPS	Kilobits Per Second
KCS	Key Control Service
KDB	Kernel Debugger
KHZ	Kilohertz
KM	Kilometer
KP	Key Pulse
KPCB	Kernel Process Control Block
KSR	Keyboard Send/Receive
KSU	Key Service Unit
KTTP	Keying Trunk Terminal Process
KW	Key Word

3.12 L

Acronym	Definition
LABS	LATA-Wide Business Service
LAC	Loop Assignment Center
LACT	Local Customer Administration Terminal
LADT	Local Area Data Transport
LAMA	Local Automatic Message Accounting
LAN	Local Area Network
LAP	Link Access Protocol
LAPB	Link Access Protocol B
LAPD	Link Access Protocol D
LASS	Local Area Signaling Services
LATA	Local Access And Transport Area
LAU	Link Adapter Unit (Was AAU)
LBRA	Line Battery Reversal On Answer
LC	Last Call
LC	Line Card Of The ISLU
LC	Line Controller
LC	Loop Closure
LCAMOS	Loop Cable Administrative And Maintenance Operations System
LCAS	Local Customer Administration System
LCC	Line Class Code
LCCB	Logical Channel Control Block
LCEN	Line Card Equipment Number
LCI	Local Call Intercept
LCIE	Lightguide Cable Interconnect Equipment
LCP	Linked Call Processing
LCR	Least Cost Routing
LCSN	Lower Chip Select
LCU	Link Controller Unit
LD	Long Duration (Call)
LD	Loop Disconnect
LDC	Long Duration Call

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LDFT	Load Disk From Tape
LDG	Logical Device Group
LDI	Logical Device Identification
LDIN	Logical Device Identification Number
LDIT	Local Digit Interpreter Table
LDMC	Loop Data Maintenance Center
LDN	Listed Directory Number
LDS	Lesson Development System
LDSU	Local/Logical Digital Service Unit
LDSUB	Local Digital Service Unit Bus
LDSUF	Local Digital Service Unit Feature
LE	Link Establishment (Message)
LEC	Local Exchange Carrier
LED	Light Emitting Diode
LEN	Line Equipment Number
LF	Line Forwarding
LG	Line Group
LGC	Line Group Controller
LGP	Line Group Power Board
LHT	Long Holding Time
LI	Link Interface
LIB	Link Interface Bus
LIC	Line Interface Circuit
LICON	Link Interface Configuration
LIDB	Line Interface Data Bus
LIDB	Line information data base
LIGI	Limited Intra-group ICLID
LIM	Link/Local Interface Module
LIT	Line Insulation Test
LIU	Line Interface Unit
LL	Logical Link
LLA	Low Level Access
LLCB	Logical Link Control Block
LLID	Logical Link Identifier
LLM	Logical Link Map
LLN	Line-Link Network
LLP	Line Link Pulsing
LLSC	Low Level Service Circuits (AC)
LLSCU	Low Level Service Circuit Unit
LM	Link Map
LMDRS	Local Message Detail Recording System
LML	Line Maintenance Lists
LMOS	Loop Maintenance Operations System
LMR	Load Modification Request
LN	Link Node
LNI	Line Interface (Cabinet Or Frame)
LO	Local Office
LONAL	Local Off-Network Access Line
LOS	Loss Of Signal
LOSL	Line Out Of Service List
LOT	Loader Option Tape
LOTS	Load Originating Test System
LP	Logical Port
LP	Logical Processors
LP	Loopback
LPCDF	Low Profile Conventional Distributing Frame
LPE	Logical Procedure Error
LPIC	Line Primary Carrier
LPID	Logical Port ID
LPR	Last Party Release (An MFC Signal)
LPT	Load Process Team
LRSP	Local Routing System Process
LS	Link Set
LS	Listing Services
LSI	Loop Side Interface
LSI	Loop Supervision Incoming
LSM	Local Switching Module
LSO	Loop Start Outgoing
LSO	Loop Supervision Outgoing
LSOS	Language Specific Operator Services
LSR	Line Signaling Repeater
LSSU	Link Status Signal Unit
LSU	Local Storage Unit
LSU	Lone Signal Units
LSV	Line Status Verifier

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LT	Line Termination
LT	Line Trunk Frame
LTA	Load Transfer Acknowledgement
LTATA	Local Tandem Access Trunk Arrangement
LTD	Local Test Desk
LTD	Local Traffic Diversion
LTOSL	Line Temporary Out Of Service List
LTP	Line Test Position
LTP	Line Trunk Peripheral Cabinet
LTP	Local Test Position
LTP	Logical Test Port
LTR	Load Transfer Request
LTS	Loop Test Start
LTSB	Line Time Slot Bridging
LTT	Long Term Tone
LU	Line Unit
LU-81	1981 Line Unit
LU-83	1983 Line Unit
LUC	Line Utilization Check
LUCHAN	Line Unit Channel Circuit
LUT	Line Under Test
LUTS	Locked-Up Trunk Scan
LV1ERR	Level 1 Error
LV2ERR	Level 2 Error
LV3ERR	Level 3 Error
LVL1ERR	Level 1 Error
LVL2ERR	Level 2 Error
LVL3ERR	Level 3 Error
LW	Leave Word
LWC	Leave Word Calling
LWC-IO	Leave Word Calling - Incoming/Outgoing
LWC-O	Leave Word Calling - Outgoing

3.13 M

Acronym	Definition
M	Mandatory
M	Miscellaneous Cabinet
MA	Main Store Array
MA	Milli-Ampers
MAAP	Maintenance And Administration Panel
MAC	Memory Administration Center (See RMAC)
MAC-4	BELLMAC-4 Microcomputer
MAC-OSS	Machine Administration Center - Operation Support System
MAJ	Metallic Access Junctors
MALU	Miscellaneous Analog Line Unit (Now MLU)
MAN	Manual
MAN	Metallic Access Network
MAR	Microstore Address Register
MAS	Main Store
MAS	Module Alarm System
MASA	Main Store Array
MASB	Main Store Bus
MASC	Main Store Controller
MASDU	Metallic Access Scan Distribution Unit
MASK	Linecard Register For Masking Out Errors Noted By ERROR Register
MASM	Main Store Module
MASU	Main Store Update
MASUB	Main Store Update Bus
MATT	Matcher And Transfer Tracer
MAU	Metallic Access Unit
MAUUI	Message Associated User-to-user Information
MAX	Metallic Access
MBKS	Multibutton Key System
MBPS	Megabits Per Second
MC	Maintenance Circuit
MC	Master Control
MC	Microcode Number For Firmware Products
MC	Modular Communications
MC	Module Controller
MC68000	Micro Computer Type 68000
MCA	Misrouted Centralized Automatic Message Accounting
MCA	Module Circuit Administrator
MCA	Multiple Call Appearances

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MCB	Maintenance/Message Control Block
MCB	Module Control Bus
MCBA	MCB Array
MCBI	MCB Index
MCC	Maintenance (Master) Control Center
MCC	Master Control Center
MCC/ROP	Master Control Center Receive Only Printer
MCH	Maintenance Channel
MCO	Manual Changeover
MCR	Modular Capability Request
MCRT	Master/Maintenance Cathode Ray Tube/Terminal
MCS	Memory Chip Select
MCS	Message Command System
MCS	Microcontrol Store
MCS	Microprocessor Call Simulator
MCS	Module Conversion Specification
MCT	Malicious Call Trace
MCTF	Malicious Call Trace On Flash
MCTSI	Module Controller/Time Slot Interchange
MCTSIU	Module Control And Time Slot Interchanger Unit
MCTU	Module Controller And TSI Unit
MCTUFR	Module Controller and TSI Unit Fault Recovery
MCU	Module Control Unit
MCW	Memory Card Writer
MD	Message Delivery
MD	Module Declaration (File)
MD-PH	Message Delivery Protocol Handler
MDB	Message Buffer Data Blocks
MDCT	Logical Device Record
MDCT	Minor Device Chain Table
MDF	Main Distributing Frame
MDII	Machine Detected Interoffice Irregularities
MDL	Management Data Link
MDL	Message Definition Language
MDL	Message Delivery Data Link
MDM	Modular Data Module
MDM	Modular Digital Modem
MDR	Message Detail Recording
MDR-CP	Message Detail Recording To Customer's Premises
MDSL	Multiplexed Digital Subscriber Line
MEAS	Measurements
MEAU	Module Elevated Audits (Process)
MECCA	Mechanized Evaluation Of Call Completion Anomalies
MECH	More Efficient Call Handling
MEM	Memory
MEMB	Multi-Line Hunt Group Member
MES	Message
MET	Multibutton Electronic Telephone
MEU	Memory Expansion Unit
MF	Memorandum For File
MF	Message Forwarder
MF	Multi-Frequency
MFC	Modular Feature Construction/Customization
MFC	Multifrequency Code/Compiler
MFKP	Multifrequency Key Pulsing
MFOS	Multifunction Operations System
MFOSS	Multifunctional Operations Support System
MFRI	Multifrequency Ringing Interface
MFT	Metallic Facility Terminal
MH	Manual Hold
MH	Message Handler
MH2	Metro Hub 2
MH3B	3B Message Handler
MHD	Moving Head Disk
MHDC	Moving Head Disk Control
MHDD	Moving Head Disk Drive
MHDD/C	Moving Head Disk Data Clock
MHDI	Moving Head Disk Interface
MHZ	Mega-Hertz
MI	Maskable Interrupt
MI	Message Interface
MIB	Message Interface Bus
MIC	Message Insertion Circuit
MICO	Module Integrity Control
MICO	Module Integrity Controller

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MICON	Message Interface Configuration
MICU	Message Interface Clock Unit
MICU	Message Interface Control Unit
MICU/TMS	Message Interface Clock Unit/Time Multiplexed Switch
MICU2	Message Interface/Clock Unit, Model 2
MID	Module Identifier
MIM	Miscellaneous Interface Module
MIP	Maintenance In Progress
MIP	Micro Interface Program
MIPTG	Multiple internal protocol trunk groups
MIR	Microinstruction Register
MIS	Management Information System
MIS	Microstore
MIS	Module Interface Specification
MISC	Miscellaneous Frame
MJ	Major Alarm
MKDSK	Make Disk Process
MLG	MTSO Load Generation Software
MLG	Miscellaneous Line Group
MLG	Multi Line Group
MLHG	Multi-Line Hunt Group
MLHGMN	Multi-Line Hunt Group Member Number
MLI	Message Link Interface
MLOS	Multi-Lingual Operator Services
MLPP	Multi-Level Precedence Preemption
MLT	Mechanized Loop Test System
MLT-2	Mechanized Loop Testing System Generation 2
MLTS	Micro Level Test Set
MLTS/MIP	Micro Level Test Set/Interface Program
MLTSI	Micro Level Test Set Interface
MLU	Miscellaneous Line Unit
MM	Multi Metering
MM	Multi-Module
MM-REXC	Multi Module Routine Exercise Controller
MMGR	Memory Manager
MMJ	Major Alarm
MML	CCITT Human-Machine Language Used For 5ESS - Operator Interaction
MMP	Module Message Processor (Part Of SM And MSGS)
MMPCON	Module Message Processor Configuration
MMPH	Module Message Processor Handler
MMRSM	Multi-Module Remote Switching Module
MMST	Multi-Module System Test
MMSU	Modular Metallic Service/Switch Unit
MMT/C	Meet Me Teleconferencing
MMU	Multimessage Unit
MN	Minor Alarm
MNTACC	Maintenance Acknowledge Command
MNU	Message Not Understood
MOD	Module
MOD-CONT	Module Controller
MODCONT	Modular Controller
MOFI	Module Only Full Initialization
MOJ	Metering Over Junction
MOR	Manual Over Ride
MOS	Metal Oxidized Silicone
MOS	Module Operation System
MOSI	Module Only Selective Initialization
MOUT	Microprocessor Data (T-Interface Output)
MP	Modem Pool
MP	Module Processor
MPC	Message Peripheral Controller
MPCI	Message Peripheral Controller Interface
MPDAV	Module Processor Data Available
MPI	Module Processor Interface
MPI	Multiple Protocol Handler Images
MPOTP	Modem Pool Originating Terminal Process
MPREQ	Module Processor Request
MPSC	Multi-Protocol Serial Controller
MPTP	Modem Pool Terminal Process
MPTP	Monitoring Position Terminal Process
MPTTP	Modem Pool Terminating Terminal Process
MPU	Module/Message Processor Unit
MPUP	Module Packet Unloading Process
MRAU	Module Routine Audits (Process)
MRD	Message Retrieval Display

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MRF	Maintenance Reset Function
MS	Measurements
MS	Message Switch
MS	Mobile Stations
MSA	Microstore Address Bus
MSB	Message Sampling Board
MSC	Message Service Center
MSC	Message Switch Controller
MSC	Mobil Switching Centers
MSCU	Message Switch Control Unit
MSCU2	Message Switch Control Unit - Model 2
MSCUCON	Message Switch Control Unit Configuration
MSD	Message Sequence Diagram
MSD	Microstore Data Bus
MSDRV	Message Switch Driver
MSG	Message
MSG	Message Switch
MSG2	Message Switch, Model 2
MSI	Message Service Indicator
MSKP	Message Switch Kernel Process
MSL	Mapping Specification Language
MSL	Mode Select Logic
MSM	Message Switch Maintenance
MSPC	Message Switch Peripheral Controller
MSPP	Message Switch Peripheral Processor
MSPU	Message Switch Peripheral Unit
MSS	Message Service System
MSU	Master Scanner Unit
MSU	Message Signal Unit
MSU	Metallic Service Unit
MT	Magnetic Tape Unit
MTB	Manual Toll Board
MTB	Metallic Test Bus
MTC	Magnetic Tape Controller
MTCB	MTC Bus
MTCE	Maintenance
MTG	Miscellaneous Trunk Group
MTI	Maintenance Interface
MTI	Message Transport Interface
MTIB	Metallic Test Interconnect Bus
MTP	Message Transfer Part
MTP	Metallic Test Pair
MTP	Monitor Terminal Process
MTS	Message Telephone Service
MTS	Message Time Slot
MTSO	Mobile Telephone Switching Office
MTTF	Manual Test Trunk Function
MTTP	Manual Trunk Test Panel
MTTR	Mean Time To Restore
MTTST	Manual Transmission Testing
MTTY	Maintenance Teletypewriter
MTTY PC	Maintenance Teletype Peripheral Controller
MTTYC	MTTY Controller
MTTYPC	Maintenance Terminal Peripheral Controller
MTU	Metallic Test Unit
MTU	Miscellaneous Trunk Unit
MU	Master Unit
MUCSO	Multi-Channel Software Oscilloscope
MUM	Multi Unit Message
MUPH	Multiple Position Hunt
MUPHQ	Multiple Position Hunt With Queuing
MUX	Multiplexer
MVDT	Maintenance VDT
MVP	Multiline Variety Package
MW	Multiway Calling
MWC	Multiway Calling Modular
MWI	Message Waiting Indicator

3.14 N

Acronym	Definition
NAC	Network Access Control
NAC	Network Administration Center
NAC	Normalized Area Code

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NAIL-UP	Assign Time Slots Permanently Connected
NAIU	Network Access Interface Unit
NAL	Network Access Lines
NAM	Number Acknowledge Message
NANP	North American Numbering Plan
NAP	Name Private
NAQ	Network Autoquote
NC	Network Clock
NC	Network Control Sub-Subsystem
NC	No Circuit
NCA	Network Control Analysis
NCAI	Non-Idle Call Appearance Inspect
NCCON	Network Clock Configuration
NCD	Network Call Denial
NCEO	Non-Conforming End Office
NCLK	Network Clock
NCMU	Network Clock And Message Unit (Now MICU)
NCP	Network Control Point
NCPE	Network Control Point Emulator
NCSP	Network Control System Process
NCT	Network Control And Timing
NCT	Network Control And Timing Link
NCTE	Network Channel Terminating Equipment
NCU	Network Clock Unit
NEL	Next Event List
NED	Network Entity Discriminator
NEMOS	Network Management Operations Support System
NEN	
NESS	Network Element Services Signaling
NETCOM	Network Committee On Operations And Maintenance
NETS	Nationwide Emergency Telecommunications System
NETSTAR	Network Subscriber Transaction Administrative And Recording System
NG	No Good
NHCMS	Nonhost CMS
NI	National ISDN or Network Interconnect
NI-2	National ISDN-2
NI-3	National ISDN-3
NIM	Network Indication Message
NISDN	National (or Standard) ISDN
NIT	Non-Initializing Terminal
NITS	Non-Interfering Integrated Test System
NLI	Network Link Interface
NM	Network Management
NMA	Network Management Administration
NMC	Network Management Center
NME	Non-Correctable Memory Error
NMI	Nonmaskable Interrupt
NN	National Number
NNDA	Name Number Display Allowed
NNP	Name Number Private
NOC	Normalized Office Code
NP	Node Processor
NPA	Numbering Plan Area
NPD	Numbering Plan Digit
NPM	N-Channel Performance Monitor
NR	Number Received
NRA	Network Remote Access
NRAI	Network Remote Access International
NRM	Network Resource Module
NRP	Network Routing Processor
NRZ	Nonreturn To Zero
NS	Number Services
NSEP	Network Switching Engineering Practice
NSP	Number Services Position
NT	Network Terminal
NT-1	Network Termination Type 1
NT1	Common Carrier Side Network Terminal (Interface)
NT2	Subscriber Side Network Terminal (Interface)
NTC	Network Control And Timing Link
NTP	Non Test Procedures
NTR	No Tests Run
NTS	Network Time Slot
NTTMP	Network Trunk Transmission Measurement Plan
NTU	Notification To Use
NU	Noninterfering Unit

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NU	Number Unobtainable
NUI	Network User Identification
NUTS	Nonusage Trunk Scan
NXX	Office Code (Part Of Dialed Number)

3.15 O

Acronym	Definition
O&M	Operations And Maintenances
OA	Operator Actions
OA&M	Operations, Administration, And Maintenance
OAC	Operator Speed Of Answer Consistency
OAMSSR	Operations, Administration, And Maintenance Switching System Requirements
OAP	OSPS Administrative Processor
OAS	Operator Assignment Schedule
OAT	Operator Assignment Tables
OAU	Office Alarm Unit
OC	Overload Control
OCB	Outgoing Calls Barred
OCDN	Original Called Directory Number
OCF	Outward Calling Features
OCL	Operator Communications Link
OCM	Originating Call Model
OCN	SS7 Original Called Number parameter
ODA	Office Data Administration System
ODA	Office Data Assembler
ODB	Office Data Base
ODB	On Demand B-channel
ODBE	Office Data Base Editor
ODD	Office Dependent Data
ODID	Operator Dialing Identifier Digit
ODIN	On Line Data Integrity System
ODL	Optical Data Link
ODL-50	A Pair Of 45Mb/s Optical Data Links
ODP	Office Dialing Plan
OECC	Operator Entered Class Of Charge
OEN	Originating Equipment Number
OF	Office Records
OFC	Office Code
OFIDs	Optioned Feature System IDs
OFL	Off Line
OFR	Office Records
OFS	Optioned Feature System
OGT	Outgoing Trunk
OHD	Off-Hook Delay
OHI	Off-Hook Immediate
OID	Operator Login Identification
OIL	Open Items List
OILD	Overwrite Incremental Loader
OIM	Originating Interface Module
OIT	Operator Interrupt Time
OIU	Office Interface Unit
OKP	Operational Kernel Process
OKTR	Operator Keyed Trouble Report
OLI	Originating Line Identity
OLP	Overlap Outpulsing
OLS	Originating Line Screening
OM	Output Message
OMC	Outgoing Manual Call
OMS5E	Office Monitoring System For The 5ESS Switch
OMUP	Operation And Maintenance Part (Of Signaling System 7)
ONAL	Off-Network Access Line
ONI	Operator Number Identification
ONL	On Line
ONPA	Originating Numbering Plan Area
ONTC	Office Network And Timing Complex
OOAMSSR	Operations Administration And Maintenance Switch System Requirements
OOB	Out Of Band
OOC	Overlap Originating Controller
OOF	Out Of Frame
OOS	Out Of Service
OOSF	Out Of Service Family Of Equipment
OOSFE	Out Of Service Family Of Equipment
OP	Operate Abstract Device

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OP	Operation
OP	Originating Point
OP	Output
OPC	Office Point Code
OPC	Operator Position Circuit/Controller
OPC	Origination Point Code
OPER	OPERational Equipage State
OPIC	Operator Position Interface Circuit
OPOR	Output Port
OPR	Off-Line Printer
OPS	Operator Position Subsystem
OPSP	Off-line Pump System Process
OPT	Operator Position Terminal
OPTP	Off-line Pump Terminal Process
OPTP	Operator's Position Terminal Process
OPVC	Operator Position Voice Circuit
ORB	Office Repeater Bay
ORIG	Originating
ORIG-TP	Originating Terminal Process
ORM	Optically Remote Module (outdated acronym)
OROP	Originating Operator
ORS	Operator Response Simulator
ORTA	Operator Routing And Terminal Allocation
OS	Operator Service
OS	Operating System
OS	Origination Scanner
OSAC	Operator Speed Of Answer Consistency
OSC	Operator Service Center
OSC	Operator Services Capability
OSC	Origination Scan Control
OSCS	Operator Services Class Selector
OSDC	Operator Special Dialed Codes
OSDD	Operations Systems Deliverable Documentation
OSDS	Operating System For Distributed Switching
OSDS-C	Operating System For Distributed Switching - Central Processor
OSDS-M	Operating System For Distributed Switching - Interface Module
OSDS-P	Operating System For Distributed Systems - Protocol Handler
OSM	Originating Switch Module
OSN	Operations Support Network
OSO	Operator Services Office
OSO	Originating Screening Office
OSPID	Operating System Process Identification
OSPS	Operator Services Position System
OSS	Off-Line Support Systems
OSS	Operational Support System
OSSIM	Operational Support System Simulator
OST	Operating System Trap
OST	Originating Station Treatment
OSU	Operator Services Unit
OT	Originating Treatment
OTDX	Originating Toll Digital Exchange
OTLH	(2 Wire) Outgoing Trunk Loop, Hook
OTLM	(2 Wire) Outgoing Trunk Loop, Metering
OTP	Originating Terminal Process
OTRP	Operator Trouble Report Printer
OTTS	Outgoing Trunk Transmission System
OUTWATS	Outward Wide Area Telecommunications Service
OV	Overload Subsystem
OVFL	Overflow
OVR	Overflow
OW	Order Wire
OWS	One Week Schedule
OWT	Operator Work Time

3.16 P

Acronym	Definition
P/AR	Peak To Average Ratio
P48	Parallel Bus With 48 Leads
PA	Program Address
PA	Program Application
PABX	Private Automatic Branch Exchange
PAD	Packet Assembler/Disassembler
PAD	Physical Address

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PADL	Page Descriptor Language
PAGS	Paging Supervisor
PAL	Programmed Arrays Of Logic
PAM	Process Administration Module
PAM	Pulse Amplitude Modulation
PAR	Program Address Register
PAS	Protected Application Segment
PAT	Position Acknowledge Timeout
PAT	Position Assignment Table
PAU	Power And Alarm Unit
PB	Packet Bus
PBHC	Peak Busy Hour Calls
PBI	Peripheral Bus Interface
PBP	Packet Bus Port
PBU	Peripheral Bus Unit
PBX	Private Branch Exchange
PC	Peripheral Controller Subsystem
PC	Port Control
PC	Position Controller
PC	Primary Center
PC	Procedures (Capability Unit)
PC	Program Change
PC-BGS	Peripheral Control - Background Scheduler
PC-FGS	Peripheral Control - Foreground Scheduler
PCADB	Peripheral Control And Data Buses
PCB	Printed Circuit Board
PCB	Process Control Block
PCBI	Process Control Block Index
PCBLA	Process Control Block Link Area
PCC	Circuit Switch Data Capability Control Center
PCC	Paired Country Code
PCC	Peripheral Control Channel
PCC	Peripheral Controller Cabinet
PCC	Portable C Compiler
PCCA	Power Control Cabinet 'A'
PCD	Peripheral Control Data
PCF	Peripheral Control Frame/Facility
PCFD	Power Distribution Cabinet
PCFH	Per Call Fault Handler
PCI	Panel Call Indicator
PCI	Panel Control Indicator
PCITS	Peripheral Controller Integrated Test System
PCM	Pulse Code Modulation
PCO	Plant Control Office
PCOP	Port Camp-on Process
PCP	Process Control Process
PCP	Per Call Privacy
PCPEIH	Error Interrupt Handler
PCPMD	Process Maintenance Driver
PCRID	Processor ID
PCS0	Peripheral Chip Selects 0 To 5
PCS	Personal Communications Services
PCSD	Peripheral Controller Subdevices
PCT	Peripheral Configuration Table
PCTF	Per Call Test Failure
PCU	Position Controller Unit
PD	Path Descriptor
PD	Peripheral Device
PD	Power Distribution
PDB	Private Data Block
PDB	Process Data Block
PDD	Post Dialing Delay
PDDB	Path Data Block
PDF	Page Descriptor File/Filter
PDL	Peripheral Diagnostic Language
PDL/5	Peripheral Diagnostic Language
PDM	Pulse Duration Modulation
PDN	Packet/Public Data Network
PDR	Power Down Request
PDS	Page Descriptor Shell
PDUs	Protocol Data Units
PEATS	Program Evaluation And Test Simulator
PECCA	Palletized Equipment Cabling And Cooling Assembly
PECS	Programmable Electronic Call Simulator
PEH	Peripheral Error Handler

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PERFR	Peripheral Fault Recovery
PESA	Peripheral Error Source Analysis
PEX	Public Exchange
PF	Packet Fanout
PF	Power Feeder
PF	Printout Follows
PF	Private Facility
PFA	Private Facilities Access
PFAT	Partial Feature Access Tandem
PFEO	Partial Feature End Office
PFI	Physical Fault Insertion
PFR	Peripheral Fault Recovery
PFT	Power Failure Transfer
PFX	Prefix Index
PG	Pair Gain
PGS	Pair Gain System
PGTC	Pair Gain Test Controller
PGV	Pair Gain Vehicle
PH	Parity High
PH	Path
PH	Physical Layer
PH	Protocol/Packet Handler
PHA	Protocol Handler for Asynchronous Transfer Mode
PH4	Protocol Handler 4
PHDB	Path Data Block
PHDB	Protocol Handler Data Bus
PHPCP	Protocol Handler Pump Control Process
PHPUMP	Protocol Handler Pump Software In Protocol Handler
PHV	Protocol Handlers for Voice
PI	Central Processor Intervention
PI	Packet Interface
PI	Peripheral Interface
PI	Program Index
PI	Protocol Interpreter
PI	Packet Interface
PIB	Packet Interconnect Bus
PIC	Peripheral Interface Controller
PIC	Polyethylene Insulated Conductor (Wire Cable)
PIC	Primary Carrier
PIC	Priority Interrupt Controller
PIC2	Presubscribed Intra-LATA PIC/Intra-LATA Toll Carrier.
PICB	Peripheral Interface Control Block
PICB	Peripheral Interface Control Bus
PICOM	Packaging And Interconnection Committee
PICRT	Peripheral Interface Controller Routing Table
PICS	Plug-In Inventory Control System
PICS/DCPR	Plug-In Inventory Control System/Detailed Continuing Property Record
PID	Process Identification
PIDB	Peripheral Interface Data Block
PIDB	Peripheral Interface Data Bus
PIDENT	Program Identification
PIM	Position Interface Module (outdated acronym)
PIN	Personal Identification Number
PINIT	Processor Initialization
PIO	Peripheral I/O Sub-Subsystem
PIP	Plug-In Processor
PIPUMP	Pump Software For Packet Interface
PIR	Program Interrupt Request
PISO	Parallel In Serial Out
PIT	Page Information Table
PK	Program Supplementary Information
PL	Parity Low
PL	Purchase Limit
PLBQ	Purchase Limits Balance Quotation
PLI	Peripheral Link Interface
PLIT	Prohibit Line Insulation Test
PLL	Phase Locked Loop
PLOCK	Process Lock
PM	Path Map
PMJ	Power Major Alarm
PMMP	Pumped Module Message Processor
PMP	Path Movement Protocol
PMS	Picturephone Meeting Service
PMT	Path Map Table
PMU	Precision Measurement Unit

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PNDP	Private Network Dialing Plan
PNGW	Packet Network Gateways
PNI	Private Network Interface
PNS	Private Network Services
POC	Peripheral Object Conversion
POCSI	Plain Old Circuit-Switched ISDN Call (Also Known As PODS)
PODS	ISDN Equivalent Of POTS (Also Known As POCSI)
POP	Point Of Presence
POPS	Plain Old Position Seizure
PORTLA	Port Linkage Area
POTS	Plain Old Telephone Service
PP	Port Processor
PPB	Permanent Packet B Channel Packet Switching
PPC	Pump Peripheral Controller
PPCCON	Pump Peripheral Controller Configuration
PPM	Periodic Pulse Metering
PPMCOM	PPM Common Circuit
PPMDB	Periodic Pulse Metering Data Block
PPMU	Periodic Pulse Metering Unit
PPR	Pulse Point Register
PPS	Pulse Per Second
PPSDN	Public Packet Switched Data Network
PPSN	Public Packet Switch Network (Formerly LADT)
PRAM	Protected Random Access Memory
PRC	Primary Rate Carrier
PRE	Protectional Reservation Equipment
PRI	Primary Rate Interface
PRI	Private Rate Interface
PRM	Primitive
PRM	Process Recovery Message
PROC	Processing
PROCALL	Programmable Call Simulator
PROCNO	Process Number
PROCOL	Programmable Call Generator
PROM	Programmable Read Only Memory
PROMUS	Prompt Remotely Operated Memory Updating System
PRR	Post Recovery Report
PRR	Previously Rerouted
PRR	Processor Replacement Retrofit
PRT	Path Record Table
PRX	Processor Controlled Exchange
PS	Packet Services
PS	Protocol Subsystem
PSA	Project Standard Attribute (File)
PSAP	Public Safety Answering Point
PSBR	Primary Segment Base Register
PSD	Position Status Display
PSD	Processor Scanner And Signal Distributor
PSDI	Parallel Serial Data Interface
PSDN	Packet Switched Data Network
PSDP	Circuit Switch Digital Capability Data Port
PSDS	Public Switched Digital Services
PSE	Program Store Enable
PSIU	Packet Switch Interface Unit
PSK	Phase Shift Keying
PSM	Position Switching Module
PSM	Power Switch Monitor
PSN	Private Switch Network
PSN	Public Switch Network
PSPD	Partial Signal/Partial Dial
PSPD	Permanent Signal Partial Dial
PSPDN	Packet Switched Public Data Network
PSPP	PSIU Pump Process
PSS	Packet Switching Service
PSTN	Public Switched Telephone Network
PSU	Packet Switch Unit
PSU-2	Packet Switch Unit - 2
PSUCOM	Packet Switch Unit Common Controller
PSW	Program Status Word
PT	Program Timer
PTC	Port Control Sub-Subsystem
PTP	Position Terminal Process
PTRDB	Pointer Data Block
PTS	Per Trunk Signaling
PTSB	PIDB Time Slot Block

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PU	Peripheral Units
PU	Pick Up
PU	Power Unit
PU	Program Update
PUC	Peripheral Unit Controller
PUCDL	Peripheral Unit Controller Data Link
PUCR	Pump Control
PUMPCON	Peripheral Pump Control Software
PUT	Port Under Test
PVC	Permanent Virtual Call/Circuit
PWB	Printed Wiring Boards
PWE	Present Worth Of Expenditure
PWP	Parity/Write Protect
PWR	Power
PWRCONV	Power Converter
PX	Power Cross

3.17 Q

Acronym	Definition
Q	Internal Register
QGP	Quad-Link Gateway Processor
QID	Query Identification
QLI2	Quad-Link Interface Model 2
QOB	Queue On Busy
QPC	Quick Patch Compiler
QRYDB	Query Data Block
QTL	Queuing For Trunk And Lines
QLPS	Quad-Link Packet Switch
QTMS	QLPS TMS
QUANTUM	Easy Reach 700 Calls

3.18 R

Acronym	Definition
R	Release
R	Ring Lead (Of Two Wire Pair)
R-DFI	RSM-Digital Facility Interface
RA	Random Access
RA	Rate Adapt
RA	Recorded Announcement
RA	Release Acknowledge
RA	Remote Access
RA	Resource Allocator
RAC	Rate Center
RADN	Remote Access Directory Number
RAF	Recorded Announcement Frame/Function
RAI	Recorded Announcement Interface
RALU	RAM Arithmetic Logic Unit
RAM	Random Access Memory
RAO	Revenue Accounting Office
RAQ	Rerouted Autoquotes
RAR	Return Address Register
RARAM	Rapid Access RAM
RARAM	Rapid Access Ram
RAS	Remote Alarm Section(Of LAU)
RASB	RISLU Alarm Simulator Box
RASC	Residence Accounting Service Center
RASTP	Remote Alarm Section Terminal Process
RAU	Recorded Announcement Unit
RAU	Remote Alarm Unit
RB	Reverse Battery
RBD	Receive Buffer Descriptor
RBLK	A Read Block Command
RC	Recent Change Subsystem
RC	Remote Concentrator
RC&V	Recent Change And Verify
RC/V	Recent Change And Verify
RC/VFY	Recent-Change And Verify (Subsystem)
RCF	Remote Call Forwarding
RCF	Ringer Continuity Failures
RCI	Routing Control Indicator
RCLK	Receive Clock

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RCLK	Remote Clock
RCMAC	Recent Change Memory Administration Center
RCMAS	Recent Change Memory Administration System
RCMAWG	Recent Change Memory Administration Work Group
RCR	Recent Change Report
RCS	Routing Control Service
RCV	Receive
RCV	Recent Change And Verify
RCYC	Ringing Cycles
RD	Read Channel Data Buffer
RDN	Redirecting Directory Number
RDFI	Remote Digital Facility Interface
RDT	Recall Dial Tone
RDT	Remote Digital Terminal
REG	Range Extender With Gain
REJ	Reject
REL	Release
REPT	Report
REQ	Request
REX	Routine Exerciser
RFA	Receive Frame Area
RFD	Receive Frame Descriptor
RG	Register
RG	Ringing Generator (ISLU)
RI	Ring Interface
RI	Route Index
RIAR	Reduce Input Acceptance Rate
RIM	Remote Interface Module (Now RSM)
RIMPCH	RIM PC Handler
RINT	Read Channel Interrupt State
RISLU	Remote Integrated Services Line Unit
RL	Release Link
RL	Repeat Later
RLA	Remote Link Administration
RLI	Remote Link Interface
RLT	Release Link Trunk
RLTCS	Release Link Transfer With Call Splitting
RLTD	Routine Line Test Dispatcher
RM	Feature Remoting Subsystem
RM	Recall Message
RMAC	Remote Memory Administration Center
RMAP	Remote Memory Administration Position
RMAP/ST	Remote Memory Administration Position/Smart Terminal
RMAS	Recent Change Memory Administration System
RMAS	Remote Memory Access System
RMC	Remote Maintenance Console
RMP	Remote Maintenance Processor
RMS	Remote Monitoring System
RMS-D	Remote Measurement System (Digital)
RMT	Remote Maintenance Terminals
RMU	Rotate Mask Unit
RMU	Remote Measurement Unit
RMV	Remove
RN	Redirecting Number
RND	Redirecting Number Delivery
RNDIS	Receive Disable (Active Low)
RNPCM	Receive Pulse Code Modulation
RNR	Receiver Not Ready
RO	Residential Origination
ROH	Receiver Off Hook
ROM	Read Only Memory
ROP	Receive/Read Only Printer
ROPC	Remote Operator Position Controller
ROS	Request Out Of Service
ROSE	Remote Operations Service Element
ROTL	Remote Office Test Line
ROTS	Rotary Out Trunks Selector
RP	Resistor Panel
RP	Radio Port
RPA	Remote Protocol Access
RPAM	Receive Pulse Amplitude Modulation
RPC	Ring Peripheral Controller
RPCM	Read Block Of Peripheral Controller RAM
RPCU	Radio Port Control Unit
RPE	Remote Procedure Error

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RPI	Return To Point Of Interrupt
RPLY	Reply
RPM	Remote Packet Module
RPN	Relative Path Number
RPOA	Registered Private Operating Agency
RPSM	Remote Position Switching Module
RPTERR	Report Handler
RQIP	Request In Progress
RR	Receiver Ready
RR	Reroute
RR	Route Relay
RRM	Recall Rejection Message
RRM	Routing Request Message
RRP	Rate And Route Pattern
RRR	Reduce Route Request
RS	Receive Synchronizer
RS	Ring To Silent
RSD	Route Status Display
RSM	Remote Switching Module
RSR	Read Channel Service Request
RSS	Receive Signal State Bits
RSS	Remote Switching System
RST	Channel Status Register
RST	Restore To Service
RSTN	Reset Input To 80188
RSU	Remote Switching Unit
RT	Remote Terminal
RT	Residential Termination
RT	Routing And Terminal Allocation
RTA	Remote Trunk Arrangement
RTA	Routing And Terminal Allocation Subsystem
RTAC	Regional Technical Assistance Center
RTC	Real Time Clock/Counter
RTD	Remote Traffic Diversion
RTD	Round Trip Delay
RTI	Return From Interrupt
RTI	Route Index
RTIME	OSDS Time Relative To Switch Init
RTKD	Respond To Key Data
RTRE	Real-Time Rating External
RTRS	Real Time Rating System
RTS	Real Time Status Report
RTS	Remote Test System
RTS	Request To Send (RS232 Lead)
RTSP	Real Time Status Process
RTTD	Routine Trunk Test Dispatcher
RTTU	Remote Trunk Test Unit
RTU	Right to Use
RU	Receive Unit
RVB	Reverse Battery
RVPT	Revertive Pulsing Transceiver
RVT	Revertive (Signaling)
RWC	Remote Wire Center
RX	Remote Exchange
RXO	Remote Exchange Office
RY	Recovery

3.19 S

Acronym	Definition
S	Setup
S/N	Signal To Noise Ratio
SA	Service Area
SA	Service Assistant
SA	Setup Acknowledge
SA	System Administrator
SAB	Subaccount Billing
SABM	Set Asynchronous Balance Mode
SABM	Stand-Alone Billing Memory
SABME	Set Asynchronous Balance Mode Extended
SABMR	Set Asynchronous Balance Mode Restricted
SAC	Scan Applique Circuit
SAC	Service Access Codes
SAC	Special Area Code

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SAC	Store Address Control
SAIS	Semi-Automatic Intercept System
SAP	Service Access Point
SAP	System Alarm Process
SAPI	Service Access Point Identifier
SAR	Store Address Register
SARD	Systems And Requirements Data Base
SARTS	Switch Access Remote Test System
SAS	SAS (Subscriber Alerting Signal) is standard call waiting tone
SAS	Service Announcement System
SAS	Stop And Switch
SASS	Switching Administration Support System
SAT	Store Address Translation
SAU	Secure Access Unit
SBAC	Station Billing Of Attendant Handled Calls
SBC	Single Board Computer
SBR	Segment Base Register
SBR	Standby-Ready
SC	Sectional Center
SC	Series Completion
SC	Service Code
SC	Speed Call
SC	Stable Clear
SC/A	Signal Converter/Allotter
SC/SD	Scanner And Signal Distributor
SC/SDA	Scan And Distribute Administrator
SCA	Shared Call Appearance
SCAD	Subscriber Changeable Abbreviated Dialing
SCANS	Software Change Administration And Notification System
SCB	Stack Control Block
SCBI	SCB Index
SCC	Specialized Common Carriers
SCC	Switching Control Center
SCCOF	Selective Customer Control Of Facilities
SCCP	Signaling Connection Control Part
SCCS	Source Code Control System
SCCS	Switching Control Center System
SCD	System Capability Description
SCF	Selective Call Forwarding
SCH	Serial Channel
SCN	Service Circuit Node
SCNR	Scanner Ring
SCNT	Scanner Tip
SCO	Switch Cut Off
SCOCS	Selected Class of Call Screening
SCOP	System Campon Process
SCOPS	Small Centralized Operator Position System
SCOTS	Surveillance And Control Of Transmission Systems
SCP	Service Control Point SCPN
SCR	Selective Call Rejection
SCR	Store Control Register
SCR	System Capability Recommendation
SCSD	Scanner And Signal Distributor
SCT	Special Confirmation Tone
SCT	Subscriber Call Termination
SCT	Subscriber Carrier Terminal
SCU	Signal Conversion Unit
SCU	System Control Signal
SD	Schematic Drawing
SD	Service Description
SD	Signal Distributor
SDA	Selective Distinctive Alert
SDC	Store Data Control
SDE	Segment Descriptor Entry
SDH	Subdevice Handler
SDHMM	Subdevice Handler Multi Mod
SDHSM	Subdevice Handler Small Office
SDL	Signaling Data Link
SDL	Specification And Description Language
SDL	Synchronous Data Links
SDL-SM	Signaling Data Link Switching Module
SDL/GR	Specification And Description Language/Graphic Language
SDL/PR	Specification And Description Language/Program Language
SDLC	Synchronous Data Link Controller
SDLT	Supplementary Digital Line-Trunk Frame

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SDM	Space Division Module
SDN	Software Defined Network
SDN	Switched Digital Network
SND/NRA	Software Defined Network/Number Remote Access
SDOC	Selective Dynamic Overload Control
SDP	Software Demand Paging
SDP	Software Development Process
SDR	Store Data Register
SDRBLK	A Subdevice Read Block Command
SDS	Shared Data Segment
SDSC	Synchronous Data Set Controller
SDSI	SLC-96 Digital Facility Interface
SDST	Software Development System Test
SDT	Special Dial Tone
SDU	Scan And Distribution Unit
SDWBLK	A Subdevice Write Block Command
SE	Service Evaluation
SE	System Engineering
SEC	Service Evaluation Center
SECM	Subscriber Expensive Call Monitoring
SECPT	Security Printer Terminal
SEED	Self Electro-Optic Effect Devices
SEP	Signaling End Point
SEQ	Sequence Data
SETID	Set Identifier
SF	Single Frequency
SF	Status Field
SFG	Simulated Facility Group
SFI	STSX-1 Facility Interface
SFID	Secured Feature ID
SG	System Generation Database
SGD	Semi Global Data Area
SGD	System Generation Database
SGDB	Service Group Data Block
SGEN	System Boot Image Builder For DMERT
SGRO	Special GROwth Equipage State
SGS	Software Generation System
SH	Start Hunt
SHDN	Shared DN
SHT	Short Holding Time
SI	Screening Index
SI	Screening Interface
SI	Shelf Interface
SI	Software/System Integrity Subsystem
SI	Subscriber Incompatible
SI	System Initialization
SI	System Integration
SI	System Integrity Subsystem
SI0	Sequenced Information Zero Frames
SI1	Sequenced Information One Frames
SIB	Subunit Interface Bus
SIC	STS Interface Circuit
SIC	Service Indicator Code
SICO	Switch/System Integrity Controller
SICO	System Integrity Control
SIF	Signaling Information Field
SIGI	Signaling Irregularities
SILC	Selective Incoming Overload Control
SIM	Switch/System Integrity Monitor
SIO	Signaling Information Octet
SIOC	Selective Incoming Overload Control
SIP	Single In-Line Package
SIP	Spooler Input Register
SIPO	Serial In Parallel Out
SIPS	System Integrity For Packet Switching
SIR	Store Instruction Register
SISO	System Integrity Control
SIT	Shared Interoffice Trunk
SIT	Special Information Tones
SIU	Synchronous Interface Unit
SL	Signaling Links
SLA	Signaling Link Available
SLA-EP	Signaling Link Available Emergency Proved
SLA-NP	Signaling Link Available Normally Proved
SLATS	Selected Lines And Trunks System

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SLATTS	Selected Line And Trunk Translations
SLC	Signaling Link Code
SLC	Subscriber Loop Carrier/Concentrator
SLC-96	Subscriber Loop Carrier
SLC-RT	Subscriber Loop Carrier Remote Terminal
SLD	Special Long Distance
SLEN	SLC-96 Line Equipment Number
SLG	Standard Line Group
SLIC	Subscriber Line Interface Circuit
SLI	STS-1 Link Interface
SLIM	Subscriber Line Instrument Measuring Circuit
SLIM	Subscriber Loop Instrument Measurements
SLIM	Subscriber Loop Interface Module
SLIM2	Subscriber Line Interface Measurement 2
SLINE	Supplementary Line Frame
SLM	Signaling Link Management
SLM	Synchronous Line Module
SLMC	Signaling Link Management Control
SLP	Single (Physical) Link Procedures
SLPC	Synchronous Link Peripheral Controller
SLS	Signaling Link Selection field
SLT	Signaling Link Terminal
SLT	Supplementary Line Trunk Frame
SLU	Signaling Link Unavailable
SLU	Standard Line Unit
SM	Swap Message
SM	Switch Maintenance (Subsystem)
SM	Switching Module
SM2K	Switching Module 2000
SMARS	Switch Maintenance Analysis And Recovery Strategies
SMAS	Switch Maintenance Access System
SMC	Switch Maintenance Control
SMCT	Standing Malicious Call Trace
SMDR	Station Message Detail Recording
SMER	Switch Maintenance Error Recognition
SMEST	Switch Maintenance Equipment Status Table
SMETDS	Standard MSG Trunk Design System
SMFC	Semi-Compelled Multifrequency Signaling
SMH	Signaling Message Handler
SMICO	Switch Maintenance Integrity Controller
SMIM	Switch Maintenance For The Switching Module
SMKP	Switch Maintenance Kernel Process
SMMP	Service Module Message Processor (Part Of MSGS)
SMMS	Switch Maintenance For The Message Switch
SMP	Switching Module Processor
SMPU	Switching Module Processor Unit
SMS	Service Management System
SMS	Station Management System
SMS	Switch Maintenance Subsystem
SMS	Symbol Management System
SMSI	Simplified Message Service Interface
SMST	SM System Test
SND	Single Number Dialer
SNM	Signaling Network Management
SNU	Signal Not Understood
SO	Service Observing
SOC	Service Observing Circuit
SOCG	Service Order Control Group
SOEC	Service Order Entry Center
SONDS	Small Office Network Data System
SOP	Service Observation Position
SOP	Service Order Processor
SOP	Spooler Output Process
SOS	Subscriber Out Of Service
SOST	Special Operator Service Traffic
SP	Signal Processor
SP	Signaling Point
SPB	Supplementary Protocol Block
SPC	Signaling Point Code (CCITT7)
SPC	Stored Program Control
SPCL	Special
SPCS	Stored Program Control System
SPH	Session Protocol Handler
SPID	Service Profile Identifier
SPL	Sound Pressure Level

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SPM	Subscriber Private meter
SPN	Scan Point Number
SPO	Special Overlay Register
SPO	System Process Operations
SPOOL	Simultaneous Peripheral Operations On-Line
SPOTS	Super Plain Old Telephone Service
SPP	Single Process Purge
SPSU	Signal Processor And Switch Unit
SPYDER	Synchronous/Asynchronous Protocol Data Formatter
SQAP	System Quality Assurance Plan
SQD	Supplemental Query Data Query
SR	Silent To Ring
SR	Station Restriction
SRA	Standby-Ready Acknowledgement
SRA	Switching Resource Allocator
SRAM	Static Random Access Memory
SRAT	Stability Run Analysis Team
SRC	Processor Source Bus
SRC	Software Recovery Control
SRDY	Synchronous Ready
SREG	Special Register
SRG	Sleeve Ring Ground
SRL	Singing Return Loss
SRM	Shared Resource Monitor
SRM	Signaling Route Management
SROD	Service Restriction in the Outgoing Direction
SS	Special Screening
SS	Sub System
SS7	Signaling System 7
SSAP	Session Service Access Point
SSB	Special Service Board
SSBR	Secondary Source Base Register
SSC	Special Service Center
SSC	Subsystem Coordinator
SSD	Software Subsystem Description
SSN	Subsystem Number
SSP	Service Switching Point
SSP	Small System Processor
SSP800	Service Switching Point For Basic 800 Service
SSR	System Status Register
SSU	Special Service Unit
SSU	Subsequent Signal Unit
ST	Serving Team
ST	Signaling Terminal
ST	Start
ST-PH	Signaling Terminal Protocol Handler
STA	Synchronous Terminal Adapter
STAT	Status
STAT MUX	Statistical Multiplexing
STBY	Standby
STC	Serving Test Center
STD	Subscriber Toll Dialing
STE	SONET Termination Equipment
STEP	Signaling Transfer and End Point
STF	Some Tests Fail
STFU	Switching Transmission Facility Unit
STG	Standard Trunk Group
STGR	Structural Growth Rate
STIU	Switching Transmission Interface Unit
STLWS	Supplementary Trunk And Line Work Station
STM	Signaling Traffic Management
STMS	Supplementary Time Multiplexed Switch
STORM	Standard Transmission Rate for Optically Integrated Remote Switching Module
STP	Signal Transfer Point
STP	Stop
STPC	Signaling Transfer Point Code
STPH	Signaling Terminal Protocol Handler
STQDB	Serving Team Queue Data Block
STR	Selective Trunk Reservation
STR	Send to Resource
STRM	Signaling Traffic And Route Management
STRM_SP	STRM System Process
STS	Software Test System (Presently IITS)
STS	Subscriber Test Station
STS-1	Synchronous Transport Signal

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STSX-1	STS-1 Electrical Interface
STSY	SDL/PR Translation System
STU	Standard Trunk Unit
SU	Service Unavailable
SU	Signal Unit
SU	Slave Unit
SU	Software Update
SU	System Update/Generic Retrofit
SUIB	Subunit Interface Bus (Connects SMP & TSIU)
SUPLN	Supplementary Line
SUPR	System Update Procedure
SUSN	Signal Unit Sequence Number
SUT	Switch Under Test
SVI	Service Intercept
SW	Software
SW	Switch
SW	Switch Maintenance
SWC	Six Way Calling
SWEST	Switch Maintenance Equipment Status Table
SXS	Step-By-Step (Switching System)
SYS	System
SYU	Synchronization Signal Unit

3.20 T

Acronym	Definition
T	Terminal
T	Tip Lead (Of Two Wire Pair)
T&A	Toll And Assistance
T&C	Time & Charge
T&M	Talk And Monitor
T&R	Tip And Ring (The Two Local Telephone Wires)
T-LINK	Test Bus (Metallic Link)
T1	24-Channel Digital Carrier
T1FAC	T1 Facility
TA	Telecommunication Administrations
TA	Terminal Adaptor
TA	Test And Access
TA	Toll And Assistance
TAA	Transfer Allowed Acknowledgement
TAC	Test Access Circuit
TAF	Test Analysis Filter
TAMA	Message Detail Recording On Tie Trunks
TAP	Terminal Allocation Process
TAP	Toll & Assistance Position
TAP	Transaction Amount Parameter
TAPE	Tape Drive
TAS	Test Access Slot
TAT	Termination Attempt Trigger
TAU	Test Access Unit
TB/IS	Transaction Block/Integrity System
TBCU	Test Bus Control Unit
TBCU	Trunk Bus Control Unit
TBD	Transmit Buffer Descriptor
TBN	True Billing Number
TC	Teleconferencing
TC	Terminal Controller
TC	Time And Charges
TC	Toll Center
TC	Transaction Capability (CCITT No. 7)
TC	Transient Clear
TC/SC	Transient Or Stable Clear
TCA	Telephone Company Administration
TCAP	Transaction Capabilities Application Part
TCAP	Translation Capabilities Application Protocol
TCB	Timer Control Block
TCBC	To Change
TCBH	Time Consistent Busy Hour
TCBU	Test Bus Control Unit
TCF	Test Call Facility
TCM	Terminating Call Model
TCM	Time Compression Multiplexing
TCM	Traveling Class Mark
TCOC	Traffic Change-Over Control

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TCP	Test Control Process
TCS	Terminating Code Screening
TCS	Test Control System
TCT	Toll Connecting Trunks
TCU	Tape Control Unit
TDAS	Traffic Data Administration System
TDATA	Transmit Data
TDB	Task Data Block
TDCLK	Transmit Data Clock
TDCU	Traffic Data Collection Unit
TDM	Time Division Multiplex
TDMA	Time Division Multiple Access
TDN	Time Division Network
TDS	Traffic Data System
TDTP	Traffic Diversion Terminal Process
TDVS	TCM Data Voice Subscriber
TDX	Toll Digital Exchange
TE	Terminal Equipment
TE1	Terminal Equipment Type 1 (ISDN)
TE2	Terminal Equipment Type 2 (Non-ISDN)
TEC	Test Equipment Control Terminal Process
TECTP	Test Equipment Control Terminal Processes
TEI	Terminal Endpoint Identifier
TEMP	Temporary Register
TEN	Terminal Equipment Number
TEN	Trunk Equipment Number
TERA	Trunk Error Report Analysis
TF	Transmitter Formatter (PIDB Interface)
TFA	Transfer Allowed
TFC	Toll Fraud Control
TFC	Transmission Fault Control
TFIU	Transmission Facility Interface Unit
TFOS	Transparency Feature Optioning System
TFP	Transfer Prohibited (SS7 Signal)
TFS	Trunk Forecasting System
TFU	Treated Facilities Unit
TG	Terminal Group
TG	Translation Guide
TG	Trunk Group
TGBL	Trunk Group Busy Lamps
TGI	Terminal Group Identifier
TGN	Trunk Group Number
TGSR	Terminal Group and Station Restrictions
TI	Timer
TIC	Termination Of Interexchange Calls
TIC	Translation Integrity Check
TICB	T Interface Core Breadboard
TID	Tuple Identifier
TIDB	Transmission Interface Data Buses
TIE	Time Interval Error
TIM	Terminating Interface Module
TIM	Treated Interface Module
TIRKS	Trunks Integrated Records Keeping System
TITAN	Transmission Impairment Testing and Analysis
TIU	Treated Interface Unit
TKG	Trunk Group
TKO	Trunk Offering (Service)
TKS	Terminal Key System
TL	Test Logic
TLA	Tuple Level Access
TLDI	Toll Digit Translation Index
TLI	Tool Location Independence
TLM	Trouble Locating Manual
TLM	Trunk And Line Maintenance
TLN	Trunk Link Network
TLP	Transmission Level Point
TLP	Trouble Locating Procedure
TLPR	Trouble Locating Process
TLTP	Trunk And Line Test Position
TLWS	Trunk And Line Work Station
TLWS/MT	Trunk And Line Work Station Metallic Test
TM	Task Manager
TM	Terminal Maintenance
TMCU	Time Multiplexed Control Unit
TMDF	Trunk Main Distributing Frame

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TMEH	Terminal Maintenance Exception Handler
TTMS	Time Multiplexed Switch
TMS2	Time Multiplexed Switch Model 2
TMSC	Time Multiplexed Switch Control
TMSCON	Time Multiplexed Switch Configuration
TMSCU	Time Multiplexed Switch Control Unit
TMSGU	TMS Growth Unit
TMSLNK	TMS NCT L-Link
TMSMC	TMS Maintenance Control
TMSP	TMS Processor
TMSU	Time Multiplexed Switch Unit
TMT	Traffic Management
TMTP	Terminal Maintenance Terminal Process
TMUX	Transmission Multiplexer
TN	Telephone Number
TN	Telephone/Terminating Number
TNDS	Total Network Data System
TNEN	Transmit Enable (Active Low)
TNET	Transport Network
TNOP	Total Network Operations Plan
TNS	Transit Network Selection
TOAD	Tools Access Data Base
TOD	Time Of Day
TOLD	Toll Diversion To Attendant
TORC	Time Of Day Originated Recent Change
TOS	Trunk Out Of Service
TOSL	Trunks Out Of Service List
TP	Task Processor
TP	Terminal Process
TP	Test Positions
TP	Toll Point
TP	Trunk Processor
TPAM	Transmit Pulse Amplitude Modulation
TPC	Teleprocessing Controller
TPDF	Tie Pair Distribution Frame
TPT	Test Progress Tone
TPR	Terminating Point Restriction
TPRE	Terminating Point Restrictions Expansion
TR	Technical Reference
TR	Trunk Reservation
TRA	Terminal Resource Allocator
TRBL	Trouble
TRCC	T-Carrier Restoration Control Center
TRCLSI	Translation Routine Class Of Service Information
TRD	Timed Release Disconnect
TRF	Traffic
TRMT	Transmit
TRR	Tip Ring Reversal
TRS	Telecommunications Relay Service
TRXS	TCM Remote Exchange Subscriber
TS	Time Slot
TS16	Time Slot 16
TSA	Time Slot Assign
TSAP	Transport Service Access Point
TSDB	Time Slot Data Blocks
TSI	Time Slot Interchange
TSI	Traffic Service Index
TSIU	Time Slot Interchange Unit
TSM	Time Slot Multiplexer
TSO	Toll Switch Operator
TSP	Traffic Service Position
TSPS	Traffic Service Position System
TSS	Time Sharing System
TSS	Time Slot Set
TSS	Trunk Servicing System
TSSR	Toll Switch System Requirement
TSSS	Toll Switching System Specification
TST	Time - Space - Time
TSTK	Test Trunk
TT	Telephony/Telegraphy
TT	Terminating Treatment
TT	Touch-Tone
TT	Transmission Test Unit
TT	Trunk Termination
TTC	Test Trunk Circuit

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TTC	Timed Talk Cut-Off
TTF	Transmission Test Facility/Function
TTIM	Treated Trunk Interface Module
TTL	Transistor To Transistor Logic
TTMC	Transmission Test And Measurement Control
TTP	Terminating Terminal Process
TTP	Transmission Treatment Process
TTP	Trunk Test Panel
TTR	Trunk Trouble Report
TTS	Test Tone Source
TTTP	Talking Trunk Terminal Process
TTU	Transmission/Trunk Test Unit
TTY	Teletypewriter
TTYC	Teletypewriter Controller
TTYMSG	Teletype Message
TU	Tape Unit
TU	Trunk Unit
TUP	Telephone User Part (Of CCITT7)
TUR	Traffic Usage Recorder
TUS	Test Utility System
TV	Transfer Vector
TWC	Three Way Calling
TWX	Teletypewriter Exchange
TYMSG	TTY Message Subsystem

3.21 U

Acronym	Definition
UA	Unnumbered Acknowledge
UAC	Utility Access Circuit
UALU	Universal Analog Line Unit (See LU)
UART	Universal Asynchronous Receiver Transmitter
UATU	Universal Analog Trunk Unit (See TU)
UAV	Unavailable
UBA	Unblocking-Acknowledgement
UBL	Unblocking
UBM	Unsuccessful Backward Failure Message
UC	Utility Circuit
UCA	Unauthorized Centralized Automatic Message Accounting
UCB	Unit Control Block
UCC	Universal Conference Circuit
UCD	Uniform Call Distribution
UCI	Unified Control Interface Of The ISLU
UCONF	Universal Conference Circuit
UCS	User Control String
UCSN	Upper Chip Select (MCS Signal)
UCT	Utility Call Trace
UDT	Universal Tone Detector
UEQP	Unequipped
UI	Unnumbered Information
UI	User Interface
UID	Utility Identification
ULARP	User Level Automatic Restart Process
ULG	Universal Line Group
UNASN	Unassigned
UNAV	Unavailable
UNEQ	UNEQuipped Equipage State
UNEQUIP	Unequipped
UNICAD	Uniform Computer Aided Design
UNIQ	Uniqueness Field - OSDS
UNR	Uncontrolled Not Ready
UPB	Update Bus
UPNNP	Uniform Private Network Numbering Plan
USART	Universal Synchronous/Asynchronous Receiver/Transmitter
USB	Usage Sensitive Billing
USC	Universal Service Circuit
USEC	Universal Services Echo Canceler
USER	User Side Equipment
USOC	Universal Service Order Code
USS	User Support System
USTWC	Usage Sensitive Three Way Calling
UT	Generic Utility (Subsystem)
UTC	Unified Trunk/Telephone Circuit
UTD	Universal Tone Detector/Decoder

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UTG	Universal Tone Generator
UTG	Universal Trunk Group
UTP	Unit Test Plan
UTS	Umbilical Time Slot
UUD	User To User Data Message
UUMD	User-To-User Message Data
UXS	Unexpected Stop Dial

3.22 V

Acronym	Definition
V.110	CCITT Recommendation: V-Interface DTE Support By An ISDN
VAD	Virtual Address
VALNPA	Valid Numbering Plan Area
VALNXX	Valid Office Code
VAR	Variable
VAT	Valid Answer Timing
VAX	Digital Equipment Corporation Super-Mini Computer
VBSC	Variable Broadband Switching Capability
VC	Virtual Call/Circuit
VCDX	Very Compact Digial Exchange
VCO	Voltage Controlled Oscillator
VCOX	Voltage Controlled Oscillator
VCS	Virtual Circuit Switched
VDS	Voice Data Set; Provides Basic ISDN (2B+D) Access
VDT	Video Display Terminal
VDU	Video Display Unit
VER	Verify
VF	Voice Frequency
VFD	Vacuum Fluorescent Display
VFL	Voice Frequency Link
VIOS	Visually Impaired Operator System
VIRGOS	Video Interactive Regional Ordering Specification
VIT	Visible Instruction Table
VLA	View Level Access
VLMM	Very Large Main Memory
VLSI	Very Large Scale Integration
VMS	Voice Messaging System
VMWI	Visual Message Waiting Indicator
VN	Virtual Network (Model)
VNL	Via Net Loss
VPA	Voice Path Assurance
VPATH	View Path
VPN	Virtual Private Network
VQ	Voice Quoted
VRCP	Voice Recognition Call Processing
VSA	Voice Switched Attenuator
VSF	Voice Store And Forward
VSS	Voice Storage System
VT	Virtual Terminal
VT	Virtual Tributary

3.23 W

Acronym	Definition
WATS	Wide Area Telephone Service
WBLK	A Write Block Command
WCA	Write Channel Control/Address Register
WD	Write Channel Data Buffer
WMS	Writable Microstore
WP	Write Protect
WPN	Work Program Number
WS	Wink Start
WSC	Window Status Timer
WSN	Work Station Number

3.24 X

Acronym	Definition
X.21	Circuit-Switched Data Control Protocol For Terminal To Network
X.25	Communications Protocol Used Between MSGS And SM
X.31	CCITT ISDN Packet Mode Terminal Equipment Support Rec.

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X.71	X.21 Related Protocol Used Between Circuit-Data Networks
X.75	X.25 Related Protocol Used Between Packet Data Networks
X86	C Compiler For The 8086
XBAR	Crossbar (Switching System)
XID	Exchange Identifier
XIM	Extended Interface Module
XMDR	Expanded Message Detail Recording
XMT	Transmit
XST	Stop Dial Timeout

3.25 Y

Acronym	Definition
YACC	Yet Another Compiler Compiler

3.26 Z

Acronym	Definition
ZCS	Zero Code Suppression
ZS	Zero Suppression

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SEC. 7: 5ODA
(5ESS SWITCH-2000 OFFICE DATA ADMINISTRATION)
USERS GUIDE

1. GENERAL

The 5ODA (5ESS-2000 Switch Office Data Administration) System, is software developed by Lucent Technologies to generate the office dependent database for the 5ESS-2000 Switch machine. The steps required in building a 5ESS-2000 Switch database are:

1. Before any processing of office input data can begin, the System Equipment Engineer (the line engineer) must first register the office (Section 5.1 "Office Registration").

2. After the office has been registered, the Operating Company personnel and the line engineer can begin to enter and/or correct the office input data interactively (Section 4.8 "The DE Command"). Through a separate set of procedures, data can be entered in a bulk mode.

3. The database is verified for errors both during and after the data entry process (Section 6.4 "The CROSSCHECK Command").

4. The System Equipment Engineer determines when the MMST (Multi-Module System Test) and SMST (Switching Module System Test) processes need equipment related data, and transmits this data to a support processor at the Oklahoma City Works (Section 6.9 "The SENDIMST Command").

5. Office records are produced both during and after the data entry process (Section 4.14 "The RECORDS Command").

6. Mapping of the office input data into the base relations occurs after data entry is completed and verified (Section 6.6 "The MAPPING Command")

7. Generation of the fully populated Office Dependent Data for the 5ESS-2000 Switch (Section 6.7 "The DBGEN Command").

Certain of the above responsibilities are performed by the Operating Company personnel and some by the Lucent Technologies Line Engineer. For the sake of clarity, the User's Guide addresses each group separately:

- Telephone Company Commands are used by the appropriate Operating Telephone Company organizations, e.g. the line administrator and the trunk administrator.

- Lucent Technologies Commands are used by the Lucent Technologies SEE (Systems Equipment Engineering) organization (the line engineer).

This user distinction is necessary because a number of 5ODA commands are not for general use. They are intended for use only by the Lucent Technologies Line Engineer who has the overall responsibility for the correct generation of the 5ESS-2000 Switch database via the 5ODA system.

2. GENERAL REQUIREMENTS OF THE 5ODA WORK STATION

The 5ODA user connects from his particular work station to the 5ODA computer via the switched telephone network. The 5ODA work station must consist of the following hardware:

2.1 CRT Terminal

ASCII compatible; full duplex; asynchronous; minimum 80 column by 24 line display; direct cursor

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addressing; from 1200 bps (bits per second) up to 28,800 bps operation, with a clear line and compression 115,000 bps is possible; upper and lower case keyboard; EIA cable interface; interface to and control of an attached hard-copy line printer. Some currently Supported Terminals (attached printer interface):

- VT100 - Digital Equipment
- TT4425 - Teletype

Some currently Supported Terminals (no printer interface):

- VT52 - Digital Equipment
- HP2621 - Hewlett Packard

2.2 Line Printer

Required Configuration: attached to and controlled by ASCII terminal; 132 column print line; tractor feed; 1200 bps (bits per second) operation; EIA cable interface; flow control compatible with controlling terminal.

2.3 Data Set and Phone

Required Configuration: either 1200 bps or up to 28,800 bps operation; modulation and signaling compatible with any of the following specifications: ITU-T, V.34, V.32bis, V.32, V.23, V.22bis, V.22, V.21, Bell212A, Bell103J.

2.4 Cables

EIA cables must be provided to connect the CRT terminal, line printer, data set and phone. The length of the cables and the type of connectors (male/female) depend on the equipment selected.

2.5 Terminal and Modem Configuration

The terminal and modem must be configured to communicate with host using ASCII code, no parity, 10 bits per character (1 start bit, 8 data bits, 1 stop bit).

Please refer to the documentation provided with your terminal and printer for your equipment's set-up options.

A complete list of terminal types compatible with the 5ODA system is not contained in this document due to the fact that this list grows weekly. However, a complete list may be obtained when logging onto the 5ODA system. The introductory login session asks the user to enter terminal type. If the carriage return is typed in response to this question, a complete list of all valid CRT terminals will print.

3. ACCESSING THE 5ODA SYSTEM

Before any user may access the 5ODA system, the operating company office must be registered by the Lucent Technologies Line Engineer. This registration procedure is discussed in detail in the Lucent Technologies Systems Equipment Engineer section of this manual (Section 5.1 "Office Registration").

Once the office is registered, the 5ODA user may connect with the 5ODA system currently at Lucent Technologies located at the Network Software Center 5ODA Production Facility in Lisle, Illinois. The user interacts with this system from a remote work station via 1200 up to 28,800 bps lines using the toll free number:

For the odutsc machine located at the Network Software Center:

1-800-358-3497

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The user can also connect to the remote processor through the Datakit® address:

il/cu/odutsc (U.S. Market)

3.1 Logging On To The 5ODA System

If dialing into a processor, the user will be prompted *Enter username>>*.The user types in the login assigned to him by the Lucent Technologies Line Engineer followed by **<return>**. This login consists of a two letter group ID and a six alphanumeric base and control number. The line administration login consists of li+base and control (e.g., li1234d0). The trunk administration login consists of tr+base and control (e.g., tr1234d0). The Lucent Technologies Line Engineer's login consists of we+base and control (e.g., we1234d0). The read only login used by support personnel consists of re+base and control (e.g., re1234d0).

The next step in logging-on is to enter the password. This password should be obtained from the Regional Line Engineer. After logging on to the system, it is advised that the user execute the *password* command to change the password to one of his/her choice.

CAUTION: Password administration varies from machine to machine and each user is responsible for keeping track of his/her own password in a secure place. The password must be used every time the user logs on. The 5ODA administrator does not know the user's password.

Thereafter, every 8 weeks, the password expires and the user will have to choose a new one. This procedure is followed for security purposes. When the password expires, the user will log in and the system will respond *Your password has expired. Choose a new one. New Password:*. The user should then type in a password of his/her choice, at least six characters long. The password does not appear on the CRT screen as it is typed in. The user is asked to type in the password a second time for verification.

The next time and every time thereafter the user logs on, the system prompts with: *Password:* (if the user is connecting to the remote processor through Datakit). If the user has dialed into the system and logged on, the system prompts with: *Enter user password>>.* The password does not appear on the screen as the user types it in for security purposes. If the user makes a typographical mistake during this log-on procedure, the system prompts with: *Login incorrect. login:* (if the user is connected to the remote processor through Datakit), and the user should try again. If the user is logging in through dialup of the 800 number and makes a typographical mistake while typing in the password, the system prompts with: *Enter user password>>* and the user should try again.

NOTE: Care must be taken when entering your login and password to be sure you enter both with all lower case letters. Using upper case letters will cause problems later on during the log on session.

Once the user has correctly entered both login and password, the system prompts: *Enter your initials (first, middle, last):*. These initials are required during the log-on process because they are used in the generation of printable output. This is explained in detail in paragraph Section 4.18 , "The LISTF Command", of this section.

After the user has correctly entered his initials, the system prompts with: *Enter terminal type or hit return*:. Pressing the carriage return produces a list of all valid CRT terminal types. The user then identifies the terminal type and enters it.

It is possible that a particular office may have more than one Lucent Technologies order processing at a particular time. For example, an office may start to process a growth ODA while the initial order is still processing. There even may be more than one order for a particular office type, for example G (FITTS Growth). However, using the same login, the user may access either the growth ODA or the initial ODA and specifically the desired order number.

If the above situation exists, the system lists the available databases by the office-type, the Lucent Technologies order-number, and the description of the office-type; it then prompts the user for the ODA

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number associated with the desired order. If only one office database exists for the desired office-type, the user may enter the correct key letter for the type of office database. Possible valid key letters are:

- G - FITTS Factory Growth Database
- I - Initial Database
- R - Retrofit Database
- M - Off-line Growth Databases
- N - New Non-equipment Off-line Database

When login, password, initials, and terminal type have all been entered correctly, the system prints on the user's CRT screen, information regarding that particular office, such as the office name and type, software release issue, ODA issue and WECO order number. After these messages print, the user has entered the 5ODA system and can begin the job of assembling office data via the 5ODA system commands.

3.2 System Control Characters

When the system is waiting for a command from the user, it prompts the user with *Enter command:*. At this point, the user can enter any valid 5ODA command. (See Figure 1 : "5ODA User Command Summary".)

Certain control characters are available to modify the interaction between the CRT terminal and the 5ODA system. They are:

<return>
- a carriage return is required after every line the user types in.

<CTRL-s>
- suspends the flow of output to the screen. Depress the control key while typing in the letter "s".

<CTRL-q>
- resumes the flow of output to the screen. Depress the control key while typing in the letter "q".

<CTRL-h>
- erases the previous character. Depress the control key while typing in the letter "h". On some terminals, this erase character may be a key labeled "back space".

@
- erases the whole line.

<DELETE> or **<BREAK>**
- stops execution of a command. Delete or break returns the user to the command level prompt (*Enter command:*). On some terminals, this key may be labeled "rub out".

3.3 Logging Off the 5ODA System

When the user wishes to log off the 5ODA system, he/she responds to the *Enter Command:* prompt by typing in a

3.3.1 <CTRL-d>

This is done by depressing the control key and typing in the letter "d".

This ends the session with the 5ODA system, however the user must still physically hang up the phone.

4. TELEPHONE COMPANY COMMANDS

NOTE: If greated by a menu, proceed to Section 7 ,

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The Operating Telephone Company Line and Trunk Administrations have responsibility for the great majority of the office input data and, therefore, have access to the majority of the 5ODA commands. This section of the User's Guide is devoted to these commands. The Lucent Technologies Line Engineer can also execute these commands; however, there are a few additional commands which are restricted and only the Lucent Technologies Line Engineer can execute them. These restricted commands are referred to as Lucent Technologies Company commands and are addressed in Section 6 , "LUCENT TECHNOLOGIES COMMANDS").

The main responsibility of the Telephone Company personnel is data entry. Before the data entry command **de** is explained, discussion of the **helpenv, password, manual, news** and **letter** commands will be helpful.

4.1 The "HELPENV" Command

The help command, **helpenv**, displays on the user's CRT screen useful information about a specified topic. Whenever *Enter command:* is displayed, the user can enter the **helpenv** command using the following format (where | indicates "or").

helpenv [*commands* | *office* | *forms* | *records* | *offloc*]

The following types of information are available:

commands - all 5ODA user commands and brief description of each.

office - current office information (e.g., base and control, software release issue, etc.).

forms - all form types (see Figure 9).

records - all record types (see Figure 10).

Examples of a valid **helpenv** command are:

helpenv
- generates a list of all the types of information available.

helpenv commands
- generates a list of all valid 5ODA commands.

4.2 The "PASSWORD" Command

The 5ODA system allows the user to change his password at any time using the **password** command. After the user enters the command

4.2.1 password

the system prompts the user for both the existing password and a new password. Since neither the old password nor the new password appears on the screen as the user types it in, the user is asked to type in the new password twice to insure that it is not mistyped.

The new password must be at least six alphanumeric characters. Only the first eight characters of the password are significant (i.e., the computer system reads only the first eight characters). The password must contain at least one non-alpha character. The user must use the new password the next time he/she logs on.

- **CAUTION:** Because there is no way for the system administrator to determine a user's password, the user is responsible for remembering his/her own password and recording the password in a secure place.

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4.3 The "MANUAL" Command

The **manual** command prints reference information and instructions on the execution of the specified 5ODA command. Manual pages are designed to be concise descriptions of user commands and can provide the user with a quick and immediate on-line reference. The manual pages print on the user's attached line printer unless the **-s** option is used to divert the output to the user's CRT screen. Manual pages can be printed to regional data centers by using the **prtoreg** command.

Commands executable only by the Lucent Technologies Line Engineer are referred to as Lucent Technologies commands. This status is indicated by a "W" beside the section number which accompanies the manual page command name (e.g., CROSSCHECK(1W)).

Manual pages are based on standard format sections:

NAME
- gives the name and the purpose of the command.

SYNOPSIS
- summarizes the format of the command. Anything listed between square brackets (e.g., [-s]) is optional.

OPTIONS
- lists all of the available options and their descriptions.

DESCRIPTION
- describes the command in detail.

EXAMPLES
- gives examples of usage.

SEE ALSO
- directs the user to other documents and/or manual pages.

WARNINGS
- points out areas of concern and potential problems where applicable.

The command format follows:

manual *[-s] [manual-pages(s)] [every]* ***[userguide]***

The options are:

-s - Prints the specified output on the user's CRT screen. When the *-s* option is omitted, the output prints to the user's attached printer.

manual-page(s) - Prints the manual page(s) for the specified command.

every - Prints all available manual pages.

userguide - Prints out the *5ODA User's Guide*

Examples of a valid **manual** command are:

manual
- prints a list of all manual pages available since no command is specified.

manual de
- prints the **de** manual page on the user's attached printer.

manual records -s

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- prints the **records** manual page on the user's CRT screen.

manual userguide
- prints the 5ODA User's Guide on the user's attached printer.

manual every
- prints all available manual pages on the user's attached line printer.

4.4 The "NEWS" Command

The **news** command is used to keep the user informed of current computer system news. For example, when a user logs into the system he/she may see the following line of text on the screen

news: Xmas phones commands

indicating system news that may be of interest to the user. To find out what this news is, execute the **news** command along with the item you want to see. For the above example, type

news Xmas

and the system news regarding the computer access schedule during the Christmas holidays will be displayed. Because news items are written to all users on that particular machine, some news items may not pertain to 5ODA users. If, after reading the news item, it does not apply, merely ignore it. By typing in **news** without any items, a list of news items available prints on the user's CRT screen.

4.5 The "LETTER" Command

The **letter** command prints messages from the Lucent Technologies Line Engineer or the 5ODA System Administrator. It also informs the user when some 5ODA commands have completed processing (**records, crosscheck**). If, immediately after logging on, the user sees the message *You have mail*, he/she can type in

letter

and the messages will print on the user's CRT screen followed by a question mark. The user must then either remove the message file by typing **d** and **<return>** or save the message file by pressing the **<return>** key. If the user does not have any messages, the system responds with *no mail*.

The **letter** command can also be used to send messages. By using the format (where | indicates "or"):

letter *line* | *trunk* | *weco*

the user can specify the person receiving the message. The *line, trunk* or **weco** options can be used to send messages to the specified person with the same base and control. The user can then type in the message with as many lines as necessary. When the message is complete, enter **<CTRL-d>** on a line all by itself to end the message, send it to specified person, and exit the **letter** command. The *Enter command* prompt is then displayed.

4.6 The "SUGGEST" Command

The **suggest** command is a means for the user of the 5ODA process to suggest enhancements to 5ODA user interface commands. Such suggestions might include: improvements on how existing 5ODA commands work, new commands to aid 5ODA processing, new options to existing commands, or new processing features or services related to 5ODA production.

Please note that this command is not a replacement for current methods of communication regarding day-to-day processing of offices. Do not use the **suggest** to document problems with an office's data, nor any problems that require immediate attention. Neither should this command be used for informational

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questions, scheduling concerns, or administrative concerns.

The **suggest status** command allows the user to review the status of previously proposed suggestions.

4.7 The "ONLINE" Command

The **online** command tells the user who is logged on with the same base and control. The command lists the login name, the terminal number and the login time for each current user.

4.8 The "DE" Command

The **de** command is the 5ODA interactive data entry command which allows the user to enter, change, review or delete data in the database. The 5ODA system uses the general purpose ODIN system to perform these interactive data entry capabilities.

In the data entry command, select a form and then enter or change the data associated with a single form instance on the specified form (e.g., customer telephone number 5551313). Figure 9 is a list of examples of the forms associated with a User Group (line, trunk, or weco). In the example above, customer TN (Telephone Number) 555-1313 is a form instance on the line form. The user can obtain a list of the forms associated with the line or trunk logins via the **<help>** command within **de** command.

Information is error checked as it is entered with error messages displayed at the bottom of the user's CRT screen. **de** performs two levels of data checking:

Level 1 checks are range and syntax checks of a single field and

Level 2 checks are error checks performed between items within the same instance of a logical form.

While in the **de** command, the user can request that the current form instance displayed on the CRT screen be saved in a file for later printing on an attached printer. Any number of form instances can be queued for printing by responding to *Enter Review, Change-insert or Print* with a **p**. After execution of the **de** command, the user must then execute the **listf** command to produce a hard-copy **de** printout (see Section 4.18 , "The "LISTF" Command").

The **de** command is executed by typing

de*[form name[operation]]*

The command prompts for form name and database operation unless these parameters are passed in from the command line. The next section explains the prompts in detail.

Form selection

When the **de** command displays the form selection prompt *Enter name of form:*, the user can make one of three valid responses:

- a valid form name followed by **<return>** (e.g., mlhg)
- enter **<help>** followed by **<return>** to produce a list of all the forms and database operation permissions that the user is allowed to access (see Figure 4)

NOTE: This "help" command must be entered with angle brackets on either side: **<help>**

- or press **<return>** to exit the **de** command and return to the *Enter command:* prompt.

If the user specifies a valid form name , the **de** command verifies that the user is allowed access to that form type (line, trunk, or weco) and proceeds to the database operation prompt. If access to the specified

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form type is denied, **de** displays

You are not allowed access to this form.

Enter name of form:

The user must then use one of the three options described above. If the user incorrectly enters a form name, **de** displays

Invalid form specified: lne. Try again.

Enter name of form:

If the user responds with **<help>**, **de** displays all the form names the user is allowed to access, along with the database operation permissions that he has been granted for each form. Figure Figure 4 shows a sample of **<help>** message in the **de** command. In that example, the user is allowed to access 11 different forms, and "review" (read only) seven of the forms (indicated by the "r" preceding the form type), but the user can "insert", "review", "update" and "delete" only four of the forms (indicated by the "irud" preceding the form name). Using this **<help>** list, the user can then choose a valid form name. When the user includes the form name on the command line, the user bypasses the form selection prompt and is given the database operation selection prompt. With this option the user can only operate on that form during the **de** session.

4.8.1 Database Operation Selection

After the user has selected a form, a database operation must be specified. When the **de** command displays the database operation prompt *Enter Data Base Operation Code:*, the user enters one of the following four valid database operations- **i, r, u** or **d** - followed by **<return>**.

i
- to insert a new form instance in the database.

r
- to review without changing an existing form instance in the database.

u
- to update an existing form instance in the database.

d
- to delete an existing form instance from the database.

The database operation prompt displays only those database operations that the user is permitted to use for the selected form (seeFigure 5). If the user is allowed only one of the four operations (usually "review"), **de** does not display the prompt since the user has no choice, but moves directly to a full-screen display of a "blank" form instance of the selected form (seeFigure 6 and Figure 7).

The command line also accepts an operation (**r, i, u, d**) when the form type is entered on the command line. The user is placed into that operation for that form, bypassing the form selection and database operation prompt. If the user is not allowed to make that operation, a message is printed telling the user that he/she will be placed into review mode. With this option the user can only execute that operation on the given form for that **de** session.

Database Operation Restrictions

In some cases update and delete operations may be restricted for a single form instance rather than for an entire form. These restrictions would most likely be applied for retrofit or off-line growth offices. The restrictions would probably be applied to data that has been dumped from an existing 5ESS-2000 Switch.

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In addition to form and database type, the restrictions are based on a particular data field found on each form instance. It will be located in different areas on the form, but is generally on the last (or only) page in the top right corner. The legal values are:

E - data dumped from an existing 5ESS-2000 Switch.

C - data from an existing switch that has been changed.

N - new data that has been added to existing data.

The field may also be blank.

The user is not restricted from choosing the update or delete operation. However, before the actual update or delete is performed, a check is executed to determine if the operation is allowed. If the chosen operation is restricted, the user receives one of the following messages, depending on the operation chosen:

Deletes are not allowed on data of type _ on form type _____.

Updates are not allowed on data of type _ on form type _____.

The user is not allowed to perform the requested operation.

An exception to the update restriction is that certain forms may allow non-critical data fields to be updated, overriding the update restriction. On these forms, the user can only position their terminal cursor on those special fields to update. The rest of the fields are shown in a no-change display mode. Depending on the user's terminal type, the no-change fields are displayed at half screen intensity.

The **restrict** command reports on the forms that have database operation restrictions and the forms with special field update privileges.

Data Entry Session

If the user chooses the insert or update modes, he/she has the facility for changing data values via the change/substitute mode.

Change mode is entered by responding with a "c" to a form operation prompt. The field to be changed is identified by entering the field number in response to the Change field prompt. When the user enters the new data, it is subjected to new error checking. Entering **<return>**, back tab, or abort in response to the Change field prompt, serves to exit change mode and the cursor moves to the form operation prompt. If the user enters a field number that is not on the current screen (multi-screen forms), then the appropriate screen is displayed automatically and processing continues.

Substitute mode is a facility for changing data values in a form. Substitute mode differs from change mode in that it allows substitution of strings within a field rather than forcing the user to re-enter the entire data value when it is necessary to change a field. A field to be changed is identified by entering a field number in response to the Substitute field prompt. In addition to the field number, the operator must respond to the *From string:* and *To string:* prompts which identify the existing string and the replacement string within the field, respectively. Normal data checking is then performed on the new field. Care must be observed when using the substitute mode to uniquely identify the string of data within the field to be changed.

If the use enters a field number that is not on the current screen (multi-screen forms), then the appropriate screen is displayed automatically and processing continues. Entering **<return>**, backtab or abort in response to the Substitute field prompt serves to exit substitute mode and the cursor moves to the form operation prompt.

Once a database operation has been specified, a "blank" form (or the first screen of a multi-screen form) is displayed. If the backtab (<) control character is entered in the first field of a form, the system will

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terminate the current database operation and return the operator to the form type selection prompt. If the backup (^) control character is entered in the first field of the form, the system will terminate the current database operation and return the user to the database operation prompt. The screen is not cleared before displaying this prompt, making operation switches on the same form type a quick process. The operator may respond with a database operation code (i, r, u or d) or a control character as described above. (See FigureFigure 2 at the back of this manual, or use the **manual** command to see the manual page for **navigate**.)

To exit from the **de** command, the user responds to the form selection prompt *Enter name of form:* with **<return>**.

The user is provided with a complete set of data entry control characters which conserve keystrokes and allow navigation through the form displayed on his CRT screen (see "Figure 2 : "5ODA Data Entry Control Characters"). Navigational control characters may also be attained by entering a "?" during data entry.

Once the user has entered **de**, depending on his database permissions, he can insert a new form instance; review, update or delete an existing form instance; or request that the current form instance be printed. The **listf** command must be executed to receive a hard copy printout of the **de** command. (See Section 4.18 "The LISTF Command".)

4.9 The "DBSTATUS" Command

The **dbstatus** command is an informative command that tells the user the state of the forms database, either "frozen" (locked) or "thawed" (unlocked). When the crosscheck command is executed by the Lucent Technologies Line Engineer, the forms database is marked as "frozen". This means the database is locked and no data entry is allowed. In order to unlock the database, the Line Engineer must execute the **thaw** command.

The following format

dbstatus

tells the user whether data entry is allowed at this time.

4.10 The "RESTRICT" Command

The **restrict** command reports on forms that have database operation restrictions for particular database operations (insert, delete, update). Database operation restrictions are placed on data that has been dumped from an existing 5ESS-2000 Switch for Retrofit and Large Terminal Growth offices.

A report displays the form, the data type and the restrictions associated with that form's data type. Also, forms that allow special field updates on restricted data are indicated by an asterisk following the form name.

By using the following format

restrict

the user will be told what database forms have database operation restriction.

4.11 The "ALLFORMS" Command

The **allforms** command reads the database (see Figure 3) and produces all form instances of one, or more, or every form type present in the database in CRT screen image.

Using the following format

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allforms *[form name(s)* | *user group* | *every]*

the user requests that the specified form(s) be processed.

form name(s) - individually or as a list of one or more valid form names separated by blanks (e.g., "mlhg" or "mlhg lcc ldit trunk").

user group - all the forms associated with a user group (e.g., "lines", "trunks" or "weco"), where "lines" is the group of all customer line forms, "trunks" is the group of all trunking and routing/charging forms, and "weco" is all equipment forms. Figure 9 lists examples of forms that are associated with each user group.

every = every or all forms.

When the **allforms** command is submitted, it is processed as a background process, and the user is notified via the **letter** command when it has finished. When **allforms** command has completed, the user must then execute the **listf** command to produce a hard-copy **allforms** printout. (See Section 4.18 "The LISTF Command".)

The following are examples of valid **allforms** command lines:

allforms tkgrp
- generates all form instances of the tkgrp form.

allforms lcc rar tkgrp
- generates all form instances of the lcc, rar and tkgrp forms.

allforms weco
- generates all form instances of every form in the group "weco".

allforms deficient
- generates all form instances for forms defined as "deficient". (Deficient forms are those whose data may not be valid.)

allforms every
- generates all form instances of every form type.

CAUTION: Executing **allforms every** takes extremely long to run and generates a lot of output. Use of this command is discouraged since the records command effectively gives the same output in a more condensed format, and is much faster. (See Section 4.14 "The RECORDS Command".)

allforms
- no forms are specified so the **allforms** command prompts the user with *Enter form type(s)*. The user must then respond with a form type or form type category as described above.

4.12 The "ERRFORMS" Command

The **errforms** command reads the database (see Figure 3) and produces in CRT screen image only those form instances of specified form types present in the database that contain errors and/or warnings.

Using the following format

errforms*[form names* | *user group* | *every][-nf]*

the user requests that the specified forms be processed.

form name(s) - an individual form name or as a list of one or more valid form names separated by blanks (e.g., "line lcc ldit").

user group -an entire user group of forms (e.g., lines, trunks or weco), where "lines" is the group of all

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customer line forms, "trunks" is the group of all trunking and routing/charging forms, and "weco" is all equipment forms. Figure 9 lists examples of some of the default forms associated with each user group.

every - all forms

-nf - no-forms option, **errforms** suppresses mask images, while displaying form key information along with Level 1 and Level 2 error and warning information. This option greatly reduces the output of the attached printer.

When the **errforms** command is submitted, it is processed as a background process and the user is notified via the **letter** command when it has finished. When **errforms** command has completed, the user must then execute the **listf** command to produce a hard-copy **errforms** printout (see Section 4.18 "The LISTF Command").

Examples of a valid **errforms** command lines are:

errforms tkgrp
- generates those form instances of the tkgrp form that contain errors and/or warnings.

errforms lcc rar tkgrp
- generates those form instances of the lcc, rar, and tkgrp forms that contain errors and/or warnings.

errforms wecoR
- generates those form instances of every form in the user group "weco" that contain errors and/or warnings (see Figure 9).

errforms tkgrp -nf
- generates those form keys of the tkgrp form that contain errors and/or warnings.

errforms deficient
- generates those form instances of every form type that are defined as "deficient". (Deficient forms are those forms which may have invalid data).

errforms every
- generates those form instances of every form that contain errors and/or warnings.

errforms
- since no forms are specified, the **errforms** command prompts the user with *Enter form type(s)*. The user must then respond with a form name or a user group category as described above.

This command is very useful after bulk data has been loaded into the system.

4.13 The "SUMMARY" Command

The **summary** command reads the database (see Figure 3) to produce a hard-copy summary of the form types requested. **summary** produces a count of how many form instances are in the specific forms, the number of forms with errors, and the number of forms with warnings (see Figure 8). This command error checks every record and may take a considerable amount of time to process, so it should be run with this in mind. When **summary** is executed, it processes as a background process and the user is notified when it has completed via the **letter** command.

The **summary** has the following format:

summary *[form(s)* | *user group* | *every]*

It requests that the specified form(s) be processed.

form(s) - one or more valid form names separated by blanks (e.g., "mlhg" or "mlhg lcc ldit trunk").

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user group - the forms associated with a user group (e.g., "lines", "trunks" or "weco"), where "lines" is the group of all customer line forms, "trunks" is the group of all trunking and routing/charging forms, and "weco" is all equipment forms Figure 9 lists examples of forms associated with each user group.

every - every or all forms.

Having executed the **summary** command, the user must then execute the **listf** command to produce the hard-copy **summary** printout (see Section 4.18 "The LISTF Command").

Examples of a valid **summary** command are:

summary tkgrp
- generates a summary of the tkgrp forms.

summary lcc rar tkgrp
- generates a summary of the lcc, rar and tkgrp forms.

summary weco
- generates a summary of all forms in the user group "weco" (see Figure 9).

summary deficient
- generates a summary of every form type that is defined as deficient (deficient forms are those whose data may not be valid).

summary every
- generates a summary of all forms.

summary
- This example has no form(s) specified, so the **summary** command prompts the user with *Enter form type(s)*. The user must then respond with a form(s) or user group category as described above.

4.14 The "RECORDS" Command

The **records** command reads the database to produce office records (see Figure 3). The output of a **records** command is a tabular printout that closely resembles the 5ESS-2000 switch office record formats.

Using the following format

records *[record(s)* | *user group* | *every]*

the user specifies which office records to generate.

record(s) - one or more valid records separated by blanks (e.g., "5101-1 5202 5303").

user group - records in a user group (e.g., "lines", "trunks", "weco" or "brcs") where "lines" is the group of all customer line office records and "trunks" is the group of all trunks and routing/charging office records and "weco" is the group of all equipment office records, and "brcs" is the group of Business and Residence Custom Services office records.Figure 10 lists examples of office records associated with each user group.

every - every or all office records.

Having executed the **records** command, the user must then execute the **listf** command to produce a hard-copy printout (see Section Section 4.18 "The LISTF Command"). When using the **listf** command, the user may print all of the output from the **records** command, or merely parts of it. For example, after executing **records lines** (which produces office records for all the line forms), the user can list all of that output by requesting **listf records**, or list only one office record (e.g., 5104) from the output by requesting **listf 5104**. The **listf** command with the "-changed" option can be used to display only those records which

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have changed since a given date and time.

For off-line growth processing, form instances that are deleted from existing data are saved in a special data area. When the **records** command is executed, the office records are automatically generated for the deleted form instances. The deleted records can be viewed via the "deletes" option on the **listf** command (see Section Section 4.18 "The LISTF command".)

Examples of a valid **records** command are:

records 5202
- generates the 5202 office record.

records 5100-1 5202 5203 5204 5209 5509 5511
- generates the 5100-1, 5202, 5203, 5204, 5209, 5509 and 5511 office records.

records lines
- generates all office records in the lines user group (seeFigure 10).

records every
- generates all office records.

records
- the "records" command without any record numbers specified prompts the user with *Enter record types(s)*. The user must then respond with a record number or record user group category as described above.

The **records** command is submitted to the jobs queue and will be run when system resources will allow. The status of the job (either queued or running) may be checked via the **jobs** command. Upon completion the user who submitted the job is notified via the **letter** command.

4.15 The "SCAN" Command

scan is an interactive command which allows the user to examine an office's input form or base relation data. The files are viewed over consecutive screen images with one column per attribute. By executing

scan *[file_name] [-d] [-old]*

the user may view input form data.

file name - input forms should be specified in lower case letters. The base relation file name should be specified in all upper case letters. If the file name is not known, the user may enter **scan** followed by a **<return>** to display valid input form and/or base relation file names.

-d option provides review access for large terminal growth (non-hardware) delete databases exclusively. Simultaneous examination of input and base relation data is not permitted via the *-d* option.

-old - access the previous software release and/or ODA issue database, which includes input forms and base relation files. No other options can be specified with the "-old" option. The user is given review permission only.

The **scan** command also supports record substitution (global updates) to input forms for Initial offices, however, only the Lucent Technologies SEEs (System Equipment Engineers) can perform this feature. The Line and Trunk engineers are restricted from doing global updates to the data. The SEE sets "Selection Criteria" and global substitutions are made according to the selection criteria the SEE has set. Once the SEE is satisfied with the changes the file must be inserted (updated) back into the original file. Updates are only allowed during the data entry time frame on options available through the editor command.

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Key attributes are underlined and repeated on each screen image. "Scan" assumes all attributes are to be viewed. When the screen size is too small then attributes are divided over multiple consecutive screens. For convenience the screen images can be reformatted and customized to view only attributes and data of interest. This is accomplished with the **cut** and **add** commands used interactively within the **scan** command. Records can be scanned in a forward or backward direction in a continuous or single page mode.

Screen width and length can also be modified using the **page size** commands within the **scan**.

Execute the **manual scan** command to obtain information on scan's interval commands to perform any of the features mentioned above.

To exit from the **scan** command, type in the letter "q" (for quit) in response to the prompt (:).

4.16 The "JOBS" Command

The **jobs** command is an informative command which tells the user what jobs are still in the jobs queue.

Four commands, the **records** command, the **crosscheck** command, the **mapping** command, and the **dbgen** command, take longer to run than most other 5ODA commands and could slow down the performance of the computer system if many were submitted at one time. Therefore, these commands are placed in a temporary area where they are executed when computer resources allow.

The format for the **jobs** command is

jobs *[-all] [-f]*

To find out the status of a command that you entered, execute

jobs

All jobs whose status is either "queued" or "running" will print on the CRT screen. When a job begins processing its status changes from "queued" to "running".

-all - gives the status of all commands in the jobs queue. All jobs for all users will print on the CRT screen.

-f - gives the disk file system for every job, as well as an approximate "percent done" calculation for each running job.

4.17 The "KILLJOB" Command

If a user wishes to cancel a job that is still in the jobs queue and has not yet started running, the **killjob** command can be used to remove that job. This command can be used to cancel **records, crosscheck, mapping** and **dbgen** commands whose status is "queued". By using the following format (where | indicates "or")

killjob *records* | *crosscheck* | *mapping* |*dbgen*

the user can cancel any one of these commands. However, selectively kill a job cannot be selectively killed if more than one of that type is in the queue. For example, if a user submitted 5 **records** jobs, and executed **killjob records**, all 5 jobs are removed from the queue.

To find out what jobs are still in the jobs queue, execute the **jobs** or the **jobs -all** command.

4.18 The "LISTF" Command

The **listf** command is a general purpose command used to print output previously produced by: **allforms**, **de**, **errforms**, **records**, **scan**, and **summary**. Refer to the appropriate section in this manual for each of

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these commands. (The output from **crosscheck** command is printed using the **listxk** described in the next section.)

The output of any 5ODA command is placed into a file when the command is executed. The output file name is generated using the name of the executed command with the user's initials (entered when the user logs in) appended as a suffix. For example, if a user logs into the system with initials "abc" and executes the command **errforms**, the output file is labeled "errforms.abc". This file "errforms.abc" remains in storage until the very next time the user with initials "abc" executes **errforms** again, in other words, the new output of **errforms** overwrites the old output, or until the user removes the file (see Section 4.21 , "The REMOVE command").

A user may print the output of any command-name he has executed without specifying his initials as a suffix (e.g., **listf summary**) since the **listf** command searches for the output of the command with the user's initials first. If a user wants to print out only his own file(s), no initials are needed, e.g., **listf de**. But, if a user wants to print out a file generated by someone else, then that user's initials must be specified with the command name (e.g., **listf de.mlh**).

In listing the output of the **records** command, the user may request all of his/her output or individual records. For example, if after executing the command **records every** (which produces all office records), the user wanted to look at the output of one office record, 5104, he/she could specify **listf 5104**. In the case of off-line growth offices, all the deleted records may be listed using the *deletes* option. Also, any user can print the output of the records command, no matter who generated it.

The **listf** command has the following format:

listf] *[-u] [-s] [-cN] [-r] [-n] [-errors] [-summary] [-number][command-name[.initials][-changed]*

The options can be specified in any order.

-u - prints the output created through the editor command.

-s - prints output on the user's CRT screen. If omitted, the output is printed on the user's attached hard-copy line printer.

-cN - requests multiple copies of the output where "N" is the number of copies desired. If omitted, one copy is printed.

-r - removes the requested file from the system immediately after printing, thus saving disk space and disk charges. The output of a command remains in storage until (1) the next time the file owner runs the command-name; (2) until the "listf" command is executed with "-r"; or (3) until the user removes the files using the remove command. Only the owner of a file (whose initials are the file suffix) can remove the file.

-n - numbers each line of output.

errors - prints only the crosscheck error messages, without the specific instances of the errors.

-summary - this option is to be used only when printing **errforms** output. This option prints **errforms** output in a summarized format. For example, if a given form had the same Level 1 error for every tuple in the form, the error is listed once with a count of the number of tuples in the form that had that error. Use of this option greatly reduces the size of the **errforms** output.

-number - skips the first specified number of lines of output.

command-name - prints the desired output file(s). This may include deletes, which is data deleted during the offline growth process (specify **listf deletes**)

-changed - lists only those records which have changed since a given time. This option is only valid when

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used to obtain records output. The user is shown the list of time when the records every and prtoreg listf records commands were run for this office. The user may select any of those times.

Examples of a valid **listf** command are:

listf
- lists the names of all available files along with the dates they were created.

listf de errforms
- prints on the line printer the output of those **de** and **errforms** commands with the user's initials.

listf errforms.mlh
- prints on the line printer that output of **errforms** executed by user "mlh".

listf records
- prints all of the output of the records command.

listf 5505
- prints only office record 5505.

listf -c2 summary -s -r
- prints two copies of the user's **summary** output (since no initials are stated) on the CRT screen, and removes the file immediately after printing.

listf -u editfile
- prints the output of the file "editfile", which was previously created through the editor command.

listf -errors errform.xyz
- prints the output of **errforms executed by user "xyz" without the warning and in a summarized format.**

listf -n 5505
- prints only the office record 5505 with line number in the first column of each line of the output.

listf myfile.xyz
- prints the "myfile.xyz" file which was created by user "xyz" with the write option of scan.

listf -s records -changed
- displays a list of times and asks the user to select one. All records which have changed since the selected time are displayed on the user's terminal.

4.19 The "LISTXK" Command

The **listxk** command prints output previously produced by the **crosscheck** command. See the appropriate section for instructions on the execution of the **crosscheck** command.

Two types of listings can be generated. The first report prints any Level I, II and III checks found by the **crosscheck** command. The user may use several options to tailor the output of the checks. The default is for all errors and warnings messages to be printed. The user may choose to print a reduced format of Level I and II checks or not print them at all.

The user can also specify Level III error or warning messages only and limit the number of data lines printed after each error or warning message found. The number of data lines skipped will be printed. The last option allows the user to select packages to run the report on. Packages are discussed in the next paragraph and the default is to report on all the packages.

The second listing option generates a summary of all Level III errors. The report consists of header and four fields separated by tabs. The first field, "Type", tells if the check was an E (Error) or W (Warning).

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The second field, "Count", gives the number of error conditions for that error. "Package" is the third field. It is the name of the package group where the error occurred. These names can be used in the first report to print only those errors or warnings associated with those packages. The last field, "Name and Number", is the name associated with the error.

The format for the **listxk** command is as follows:

listxk *[-cN] [-number] [-s] [-summary]\[[-nf | -l1l2]*
[-llimit] [errors] [warnings] [package ...]]
-cN - request multiple copies of the output, where N is the number of copies desired. The -c option may be omitted if only one copy is desired.

-number - skip the first specified *number* of lines of output.

-s - display output on user's CRT screen. If the -s option is omitted, the output is printed on the user's attached line printer.

-summary - print summary listing. The following options are ignored if this option appears on the command line.

-nf - (no forms) suppress CRT input form images, generate key field information along with errors and/or warnings for Level I and II checks.

-rl1l2 - suppress the printing of Level I and II checks.

-llimit - Option to limit the number of lines associated with an error or warning message. If this is omitted, all lines are printed. Level III messages only.

errors - print only the crosscheck error messages, level III messages only.

warnings - print only the crosscheck warning messages, level III messages only.

package - print only messages from the given package. More than one package can be specified, however, only level III messages are printed.

For convenience, options may be specified in any order except that package names must be at the end of the command line.

Examples of valid "listxk" command are:

listxk
- prints the output of the crosscheck command executed by the SEE (System Equipment Engineer).

listxk -summary
- prints a summary report on the number of errors and warnings messages and the number of instances for each message.

listxk -s -l10
- prints output of the crosscheck command to the screen limiting the number of output data lines per Level III checks to 10.

listxk -c2 errors RC TRUNK LINES
- prints 2 copies of the output from the crosscheck command to the line printer for Level III error messages from the "RC", "TRUNK" and "LINE" packages.

4.20 The "RUNXCHECK" Command

The runxcheck command is executed by telephone company users to submit a crosscheck job which the SEE has set up previously via the **crosscheck -sleep** command. For more details, see the crosscheck

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command under the section "Lucent Technologies Commands".

4.21 The "REMOVE" Command

For efficient utilization of the 5ODA computer, it is recommended that each user of the 5ODA system periodically check the 5ODA file storage area and remove unwanted files. By executing

remove

without any file names, the **remove** command lists all the files in storage which the user is allowed to delete along with the dates that they were created.

A file in storage is the output of a command. The name of this file is the command name with the user's initials appended to the end. For example, if a user with initials "abc" logged into the 5ODA system and executed the command **errforms**, the name of the output file would be "errforms.abc". This file remains in storage until:

- the same user executes **errforms** again (i.e., the new output overwrites the old output).
- the same user executes the **listf** command with the -r option, which will remove the file immediately after printing.
- the user executes the **remove** command. To remove a file, execute

remove *filename*

The Lucent Technologies Line Engineer can remove anyone's files, and only he can remove the output of the **crosscheck** command.

Examples of a valid **remove** command are:

remove
- print all files in storage the user is allowed to delete with the dates they were created.

remove errforms
- removes the output of **errforms**.

remove errforms.abc de.map summary.dje crosscheck
- this command can only be executed by the Lucent Technologies Line Engineer because it is removing the output of commands executed by different people and because it is removing the output of the **crosscheck** command.

4.22 The "TLOCK" Command

The command **tlock** gives a level of security to the restricted user so that he/she may leave a terminal unattended. This also saves the users from having to log off and on when they desire to leave the terminal.

After entering the command, the user is prompted with the office's password. The user can now leave the terminal unattended. To resume the session, enter the office password.

To execute **tlock**, enter:

tlock

The prompt will look like this:

Enter password for <office base and control>:

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To resume the session, enter the password.

If the user does not know the office password, **tlock** should not be used because the user will be locked out of the session.

4.23 The "PRSPEED" Command

This command regulates the speed of output from a host machine to a terminal or PC. The command is useful when using a printer attached to a PC running DOS or similar operating system, which does not have flow control to regulate the output to the printer. The above setup sometimes generates garbled output when jobs are sent to the printer, especially when it is a flow printer.

The **prspeed** command slows down the output rate to a level that can be handled by the printer.

The format of the command is:

prspeed *(low* | *med* | *hi)*

The command has three settings for output rate, low, medium, and high. The *hi* setting corresponds to the normal speed. Any one of the options must be specified.

Users having difficulty with their printers may run this command with the *low* or *med* option before running any other command which sends output to the attached printer. The choice of low or medium depends on the performance of the individual printer. If medium does not suffice, then low should be used.

However, once the printing is done, if the user should return control to the screen. **prspeed** should be run again with the *hi* option to resume the output rate to normal. Otherwise, any subsequent interaction on the video screen may be sluggish. If the user wants to run more than one print command in succession, then the user needs to run **prspeed** only once before and once after the print jobs.

The following is an example showing how to use **prspeed** when running two print jobs in succession:

prspeed low
listf records
manual listxk
prspeed hi

The printing times may be slightly extended when **prspeed** to slow down the output rate.

5. THE LUCENT TECHNOLOGIES SYSTEMS EQUIPMENT ENGINEER

This section of the manual addresses the Lucent Technologies Line Engineers who have the overall responsibility for the correct generation of the base relations required by the 5ESS-2000 Switch. The 5ODA commands in this section can only be executed by the Lucent Technologies Line Engineer and are therefore referred to as restricted or WECO commands. The Line Engineer's responsibility in building an office's database can be described in these steps:

- Office registration (Section 5.1 "Office Registration")
- Equipment data entry (Section 4.8 "The DE Command")
- Database validation (Section 6.4 "The CROSSCHECK Command")
- Transmission of the equipment input related data for MMST (Multi-Module System Test) and SMST (Switching Module System Test) (Section 6.9 "The SENDIMST Command").
- Mapping the data into base relations (Section 6.6 "The MAPPING Command").

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- Generation of the machine loadable Office Dependent Database (Section 6.7 "The DBGEN Command").

Each of these areas is discussed in detail in this section of the 5ODA User's Guide, except for data entry which is discussed in "Telephone Company Commands" (Section 4).

5.1 Office Registration

Before any processing can be done for a particular office, that office must first be registered by the Lucent Technologies Line Engineer. For this registration process, the Line Engineer must dial up a 1200 bps (bits per second) line or 2400 bps line on the toll free number:

5.1.1 1-800-551-5748

When the system prompts for class, the following must be entered:

lcutsa

The line engineer can also connect to the remote processor through the Datakit® address:

il/cu/lcutsa

The login name and password are:

Login name: 5odareg
password: XXXXXXX

After entering the SEEs special login and password, the Lucent Technologies Line Engineer continues the log-on process as described in Section 3.1 , "Logging on to the 5ODA System". Once the SEE has completed the log-on procedure, the system prompts him/her for the type of operation to be executed: register a new office or update an existing office (see next section "Office Updating"). If the register option is selected, the system prompts for the type of office to be registered: initial growth, retrofit, large terminal growth, or customer service, and then displays a blank registration form on the CRT screen. The engineer proceeds to enter all the requested information. When the form has been completed, the engineer should request the "insert operation" and this information is submitted for processing to the 5ODA Database Management Organization. After the form is finished and inserted, the engineer is asked if he/she would like to register another new office, update an existing office or exit from the system. Within a few days, the office should be registered, its database initialized and ready for input data entry.

5.2 Updating An Office In The PSS (Production Scheduling System)

Once an office has been registered by the SEE in PSS, it is possible that the data has changed from the time that it was registered it. To update registration data, the SEE should access the system exactly as is outlined in the previous section. The same login is used (5odareg) as well as the same password.

The SEE should select the update option when prompted and then select the type of office that needs updated. Again, exactly as above, the SEE is placed into update mode on a blank form. Once the base and control and weco order number for the office to be updated have been entered, the rest of the existing data is populated on the form. There is a subset of the fields on the form which the SEE may update at this time. Any of the information about the SEE for the specific office (name, phone number, department number), the remarks field and all of the modified date fields have update permission granted to the SEE.

If drastic changes are made to any of the dates, the SEE must be sure to notify the Database Managers either via the telephone (SDN or commercial 708-224-6269) or via a facsimile with the requested change. An example of the above condition would be, the FULLS data for an office is scheduled to be shipped at a time at least a week in the future and the SEE wants to change the PSS dates so that the data is to be shipped on the next day. The Database Management group must be contacted about the change in

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schedule. Database Management receives listings of the offices which have been modified during the past seven days once a week every Monday. For this reason, any time that the dates are modified so that events will now be occurring during the week in which the change was made, the Database Managers must be contacted via telephone to notify them of the change.

- **WARNING:** The other information which was entered during office registration is critical to the processing of the office. If any of this other information is found to be incorrect, the Database Management group should be contacted immediately to ensure the integrity of the ODD (Office Dependent Data).

When all the desired fields have been updated, the engineer should request the "update operation". Once the form has been updated, the engineer has the opportunity to either update another office, register a new office or exit the system.

6. LUCENT TECHNOLOGIES COMMANDS

6.1 The "HISTORY" Command

The **history** command is a privileged command that can be used only by the Lucent Technologies Line Engineer. When executed, the **history** command lists the date and time that successfully completed **crosscheck**, **mapping**, and **dbgen** commands were initiated for a particular office. The list is summarized with the total number of executions for each type of command.

This command may be helpful to the System Equipment Engineer if there are any questions on the offices data processing. The history command can be used to obtain a complete processing history for a particular office/Lucent Technologies order number.

6.2 The "GROUPINGS" Command

One of the most important aspects of any data processing system is the method it uses to exercise control over its activities. The 5ODA system uses the **groupings** command to exercise control over who can access a given form and what database access permissions a user may have.

The **groupings** command is a restricted command that can only be executed by the Lucent Technologies Line Engineer.

Initial groups (lines, trunks and weco) are created when the 5ODA administrator initializes an office. See Figures Figure 9 and Figure 10 for examples of these default groups. The group a form or record is in, determine who has what Database permissions (insert, review, update or delete) for a form or record depend on the user group of which the form or record is a member. In other words, if the form "amact" is in the group "lines", then the line administration data entry people have insert, review, update and delete permissions on form "amact". The Lucent Technologies Line Engineer has all four permissions on all three groups (lines, trunks, weco). These permissions may be further restricted (see Section 4.8 "The DE Command").

Using the following format

groupings *forms* | *records*

the T Line Engineer specifies the type of group files to be modified, either forms or records. Once in the **groupings** command, the user is asked to *Enter form (or record) name and group(s):*. The user enters the name of the form or record to be moved and the group(s) into which it should be moved. Specify all groups in which a form or record is to be included. A form or record is removed from a group by not including it in the new specification. Forms or records which are not changed remain in their original groups.

To get the current status of the three groups, respond to the *Enter form (or record) and group(s):* prompt

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with **list lines** or **list trunks** or **list weco**.

A groupings session may be aborted at any time by pressing the break key. If no more changes are desired and the changes should be made permanent, enter <ctl-d> to exit from the **groupings** command.

6.3 The "DEFICIENT" Command

The **deficient** command is restricted, meaning only the Lucent Technologies Line Engineer may execute it.

When data is loaded into an office database via batch mode (e.g., COSMOS, VIRGOS, etc.) or when an office is evolved from one ODA issue to another, those forms that have errors are set to "deficient", indicating the data is not valid. Later, during the **crosscheck** run, if a deficient form passes all Level I (range and syntax) error checks and Level II (items within the same instance of a logical form) error checks, it is then marked as "valid". When a form is defined as "valid", it implies that the data in that form is good and that data with errors may not be entered into it. When a form is marked as "deficient" it implies that the data in that form may not be good, and bad or incomplete data may be entered into it by using the *ignore" option in the data entry command* **de**.

The **deficient** command is an informative command which tells the Lucent Technologies Line Engineer which forms are currently defined as "deficient". When the command is executed in the following format

deficient

a list of all deficient forms prints on the user's CRT screen.

6.4 The "CROSSCHECK" Command

The **crosscheck** command is restricted, therefore only the Lucent Technologies Line Engineer can execute it. **Crosscheck** reads the database (see Figure 3) and performs database validity and consistency error checks (also called "cross-form error checks") to verify that no crosscheck errors exist from interactive or bulk data entry on any form instances in the database. If any errors are found, the **crosscheck** command produces error/warning messages that inform the line engineer of this condition. These errors must be corrected prior to the execution of the **mapping** command to insure the correct generation of base relations. Mapping assumes good input. If the input is bad, **mapping** could silently generate incorrect base relations.

Although the **crosscheck** command is restricted, the output of the command (i.e., error/warning messages) is available to all users. The output file is generated without any initials appended. In order to receive a printout of the output, the **listxk** command or the **prtoreg** command can be used (see Section 4.19 "The LISTXK command" and Section 6.12 "The PRTOREG command"). The **prtoreg** command can only be executed by the SEE. Through the **prtoreg** command, the hard-copy printout can be sent to any of the 4 region's data centers (e.g., Eastern Region data center), Indian Hill or the NSC. To receive a copy of the output without calling **listxk** or **prtoreg** after crosscheck completes, submit crosscheck with the **-print** option. When this option is used, a hard-copy listing of the output of **listxk -summary** will be sent to the location specified by the user. The user will be prompted for this location when crosscheck is submitted. The available locations are the same as those listed above for the **prtoreg** command.

During the execution of the **crosscheck** command no data entry (**de**) is permitted. If data entry is in progress when **crosscheck** is executed, the **crosscheck** command terminates and indicates who is currently doing data entry. The only exception is if the "weco" option is being used. In such a case, if a telephone company user is in data entry, the person who submitted **crosscheck weco** is informed of the data entry user and asked if he/she wants to continue. If the SEE does not want to proceed, processing is terminated; otherwise, processing continues normally.

At this time, the database is locked to prevent any new personnel from entering data entry in update mode. However, the SEE must wait until any current data entry personnel have exited data entry before the

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crosscheck will run.

The **crosscheck** command locks the database to prevent any data entry. Both Level I data checks (range and syntax checks) and Level II data checks (items within the same instance of a logical form) are performed on deficient forms, i.e., those which allow for input of non-standard data. The **crosscheck** command will fail if Level 1 or 2 errors exist. If all data is valid, then **crosscheck** performs Level III data checks (checks for consistency between forms). Any deficient forms are set to valid if they are error free. The database remains locked when the **crosscheck** command is finished processing. If the line engineer wishes to allow more data entry or data corrections, he/she must execute the **thaw** command to unlock the database (Section 6.5 , "The THAW Command"). The line engineer can avoid having to execute **thaw** after the **crosscheck** command has completed by using the **-thaw** option on the **crosscheck** command line.

Using the following format,

crosscheck

the Lucent Technologies Line Engineer initiates database verification. Level 1 and Level 2 error checks are performed on all forms defined as deficient.

Using the following format,

crosscheck weco

the Lucent Technologies Line Engineer initiates data verification on "weco" or equipment forms only. By using the "weco" option on the crosscheck command, level 1, level 2 and cross form checks (level 3) are only performed on equipment forms. Execution of **crosscheck weco** must be done in preparation for MMST and SMST processing. But, because this is not full database verification, mapping will not be allowed after a **crosscheck weco** run.

- ***NOTE:*** Processing will not be terminated if a telephone company user is in data entry. In this case, the person who submitted **crosscheck weco** is informed of the data entry user and asked if he/she wants to continue. If the SEE does not want to continue, the processing will be terminated; otherwise, processing will continue normally.

If a particular form is defined as "deficient" and cannot pass the level 1 and level 2 error checks during a **crosscheck** run, and 5ODA development engineering determines that the level 1 or level 2 data checks should be bypassed on that particular form, and have marked that form as being an "exception" to the crosscheck process, the Lucent Technologies Line Engineer may execute

crosscheck anyway

which will not perform level 1 or level 2 checks on that form. This option can be used by the regional engineers on the first crosscheck run for each dump of a retrofit or the dump or merge side of a large terminal growth only. They may not use the *anyway* option for initial, hardware growth, new-side large terminal growth, or special service offices.

The **crosscheck** command produces both "error" and "warning ..." type message output. Because warning messages are often informational and require no further action, they may be optionally executed under certain circumstances.

Using the following format,

crosscheck -errors
only the crosscheck error messages will be produced. This option is valid for retrofit and initial orders for 5E6 and later. The *-errors* option may only be used if both error and warning messages have been executed on a previous run. If warnng message are not exectued, the warning message output from the previous run is retained and may be viewed via the listxk command.

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Using the following format,

crosscheck -print

a hard-copy of Level 3 error checks will be sent to a specified location after **crosscheck** completes. The **crosscheck** command prompts the user for the location when the *-print* option is specified.

Using the following format,

crosscheck -thaw

the database is automatically thawed after **crosscheck** completes with data errors.

Using the *-sleep* option as follows,

crosscheck -sleep

an SEE can set up a "sleeping" crosscheck job. A sleeping crosscheck is one which is not submitted to the queue (i.e., it sleeps), until the telephone company user indicates that it should be queued. A sleeping crosscheck retains the options requested by the SEE, including all printing requests (e.g., the region to which printouts are to be sent, the bin, etc.)

This feature is particularly useful if the SEE wants to run **crosscheck** immediately after a telephone company user completes data entry. Instead of the telephone company user having to call the SEE when he/she is done, potentially late at night or during the weekend, the SEE can submit a sleeping crosscheck. When the telephone company user completes data entry, instead of calling the SEE, he/she can put the crosscheck job in the queue via the **runxcheck** command.

After a sleeping crosscheck has been set up, if anyone runs **crosscheck**, the sleeping crosscheck is removed. This prevents confusion about who should be submitting **crosscheck** and when it should be done. Similarly, once a sleeping job has been submitted to the queue via **runxcheck**, it is removed and cannot be resubmitted.

If the telephone company user enters **runxcheck** and the crosscheck job fails to go to the queue, all error messages are sent to the WECO login for this office. The telephone company user does not see the error messages, as they are not able to correct them. The only exception is if someone is in **de**. The telephone company user is told that someone is in **de** so that he/she can try again later when the person is out of data entry.

Using the following format,

crosscheck -status

the user can see if there is a sleeping crosscheck job for this office. If there is, **crosscheck** tells the user what options were requested for the crosscheck run and when it was submitted.

Using the following format,

crosscheck -remove

the SEE can remove a sleeping crosscheck job. If **crosscheck** is run with the *-remove* option, the user is shown the status of the sleeping crosscheck and asked to verify that he/she really wants to remove it.

The **crosscheck** command is submitted to the jobs queue and is run when system resources allow. Upon completion, the user is notified via the **letter** command. Its status (either queued or running) may be checked via the **jobs** command.

NOTE: If the database is **thawed**, **crosscheck** must be rerun before mapping is allowed to run.

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6.5 The "THAW" Command

The **thaw** command unlocks the database (see Figure 3) once it has been locked by the **crosscheck** command. When the database is locked, all users have only review permission on all input forms. Once **thaw** has been executed, the user again has the same database privileges in the **de** command ("Insert", "Review", "Update" and "Delete") that were allowed prior to the database lock.

thaw, executed simply as

thaw

is a restricted command that can be executed only by the Lucent Technologies Line Engineer.

- ***NOTE: If the final crosscheck output or mapping output is good, do not thaw the database.***

6.6 The "MAPPING" Command

The **mapping** command creates the 5ESS-2000 Switch data structures (base relations) from the input forms database (see Figure 3). It is executed after all of the office data has been entered, using the **de** command, and verified using the **crosscheck** command.

mapping is a restricted command that can only be executed by the Lucent Technologies Line Engineer after a crosscheck run has been made. It is the responsibility of the line engineer to ensure that the database is complete and error-free before executing the **mapping** command.

The following progression of commands is recommended for the **mapping** procedure:

1. Enter "crosscheck" to error check the database and automatically lock the database.
2. If there are level 3 errors, then issue the **thaw** command, which unlocks the database and allows database updates. Correct errors, and re-execute the **crosscheck** command.

- ***NOTE:*** If the database has been thawed, **crosscheck** must be re-run before mapping can be run.

1. Enter **mapping** to create the base relations.

The format of the **mapping** command is

mapping

If the line engineer wishes to produce the machine bootable database immediately following the mapping process, he may execute

mapping dbgen

which submits the **dbgen** command to the jobs queue. These two steps may also be done separately (see the "DBGEN" command).

Note that **mapping** does not error check the data. The **mapping** command presumes that all data in the database has been verified, i.e., the data is complete and error-free. Mapping from an incomplete or incorrect database may silently generate inconsistent or erroneous base relations.

The mapping command is submitted to the jobs queue and will be run when system resources allow. Its status (either queued or running) may be checked via the **jobs** command. Upon completion of the job, the user is notified via the **letter** command.

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6.7 The "DBGEN" Command

The **dbgen** command is restricted, meaning only the Lucent Technologies Line Engineer may execute it.

The process of constructing a database for the 5ESS-2000 Switch is accomplished by ODA (Office Data Assembly). ODA Provides an on-line method of accepting data (**de**) and produces a set of relation source files (**mapping**). The **dbgen** command is the process that accepts these relation source files as input and generates the machine readable database that can be pumped to the SMs or booted in the CP.

The line engineer must execute

dbgen

after all data has been entered (**de**), error checked (**crosscheck**), and successfully mapped (**mapping**) to generate a fully populated Office Dependent Database for the 5ESS-2000 Switch.

The **dbgen** command is submitted to the jobs queue and will be run when system resources allow. Its status (either queued or running) may be checked via the **jobs** command. When the job completes, the user is notified via the **letter** command.

6.8 The "EDITOR" Command

The **editor** command allows the Lucent Technologies Systems Equipment Engineer to create and edit free-format files. These files are not part of the ODA database. The primary purpose of the edit files is to communicate detailed data from the Lucent Technologies Systems Equipment Engineer to an ODA administrator. The ODA administrators should be notified by the Lucent Technologies Systems Equipment Engineer that they need to be aware of the information stored in an edit file created with the **editor**. This command can also be used to copy for editing and/or printing output files that were previously created by a 5ODA command (e.g., **crosscheck**). The SEEs can use editor to shorten the size of an output file so that they can view or print out a smaller section of the file instead of the whole file.

Several basic file editor functions are available, including the ability to save edit files, and then edit or review them at a later time. The name of the saved file can be specified on the command line,

editor *file-name*

If *file-name* is not specified, the user is placed in a menu displaying options that are available. Included in these options is the ability to edit and/or print a copy of the output of a previously run 5ODA command such as **crosscheck, errforms**, and **records**.

Execute the command, **manual editor**, to obtain more information on the options available through the **editor** command.

6.9 The "SENDIMST" Command

The SMST (Switching Module System Test) and MMST (Multi-Module System Test) processes at OCW (Oklahoma City Works) and Joint Venture factories require databases containing the equipment translations data for the respective Switching Modules and office configurations to be tested. The SMST database may contain data originating from many different offices and transmitted by different Lucent Technologies engineers. The MMST database will contain data for only one office.

The SEE handbook software schedule should be referenced to determine the date when the SMST/MMST processes need this data. It is critical that before the office data is sent to the factory via the **sendimst** command, that the System Equipment Engineer execute the **crosscheck weco** command to ensure that the data is error free. When the data is found to be error free, the Lucent Technologies line engineer should execute one of the following commands to transmit the equipment data to the factory for testing.

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For U.S. Market offices:

sendimst *[-n] [-s]*

For international offices processed in the U.S.:

sendimst *[-s]*

For international offices not processed in the U.S.:

sendimst *[[mach1!...!]dest_mach]*

For DSN and toll offices only, the **sendimst** command generates the standard trunk and routing data to support site installation call traffic testing. Toll simulation data is dependent on stable and accurate office equipment information and is therefore generated at this time. Standard toll generation occurs only once per toll/DSN office. This type of toll generation only takes place for domestic software releases.

-n - the user does not want to generate standard trunk and routing data with this **sendimst** run. This option is only available for the domestic software releases. Normally, this is only done if the user planned to execute **sendimst** at a later date, and all of the equipment has not yet been entered into the database.

The standard trunk and routing data may also be generated separately by using the **tollsim5** command. See the next section for a detailed description of this command. This data can only be generated once, that is, once it has been inserted into the office database, additional attempts to add it will fail.

-s - used for offices processed in the U.S. to suppress the hard-copy notification that the factory has successfully received the equipment data. Normally, a printout is sent to the region via the **prtoreg** command when the data is loaded at the factory. The user is asked to verify the destination for the printout when **sendimst** is run. If the *-s* option is used, only electronic mail is sent.

dest_mach allows offices processed outside the U.S. to specify the target machine for their send. The destination machine defaults to *ocoda0* unless another machine is specified. If another machine or path of machines is specified, the necessary permissions must be in place to allow the electronic transfer of the data.

A log file is maintained containing the date of the last **sendimst** run, for each 5ODA office. This log file has the line engineer's initials appended to the file name (e.g. "imstlog.abc"). The logfile may be viewed by executing the **listf** command (e.g. **listf imstlog.abc**).

If the data is being resent, the user is prompted to enter the reason for the resend (the text detailing the reason should be entered followed by a line containing only a "."). The reason will be sent to the factory engineers along with the data.

If a Telephone company person is in data entry, the user is asked if he/she wishes to continue. If he/she does want to continue, the user is be asked if the database should be thawed after **sendimst** completes. If yes, the database is thawed whether **sendimst** completes successfully or not.

6.10 The "GENTLINE" Command

The **gentline** command is used to generate test lines for SLATTS high volume call processing testing. The line data is generated according to requirements specified in the SLATTS Volume Test Lines section of the TG-5 (see Division 2, Section 2M).

The **gentline** command prompts the user for a starting TN. It then sequentially generates test lines beginning with the starting TN. Eight test lines are generated for each line unit defined on the EQLUP form (ten test lines for each 10:1 Concentration Ratio line unit). Upon completion, **gentline** prints a summary of the lines loaded into the office database.

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6.11 The "TOLLSIM5" Command

The command **tollsim5** is to used to generate standard trunk and routing data. Under normal office processing, this command will be called by **sendimst**.

If the *-n* option is specified when **sendimst** is executed, however, the standard trunk and routing data are not be generated, therefore, **tollsim5** is not called. This may be desirable, if the System Equipment Engineer knows he/she will be adding more equipment after sending the database to Oklahoma City. In this case, the SEE may execute **tollsim5** separately from **sendimst**.

6.12 The "PRTOREG" Command

The **prtoreg** command is executed by the Systems Equipment Engineer to produce hard copy listings of previously generated **crosschecks, records, errforms** and **summary** outputs at the individual data centers. It can also be used to produce hard copy listings of files produced by the **editor** command and the output of the **manual** command.

This command creates the same output as **listf, listxk,** or **manual**, but the output is sent to the data center instead of to the attached local printer. The first option to the **prtoreg** command is always **listf, listxk**, or **manual**. When the first option is **listf**, the remaining options should be the same as the **listf** command options. Refer to the **listf** section in this manual for more information on the **listf** options, in paragraph Section 4.18 , "The LISTF Command".

The usage of the **prtoreg** command with the **listf** option is as follows:

prtoreg listf*[-u] [-cN] [-r] [-n] [-errors][-summary]*
[-number][command-name[.initials]] [-changed]

If the first option is **listxk**, the remaining options should be **listxk** options. The usage of the **prtoreg** command with the **listxk** option is as follows:

prtoreg listxk*[-cN] [-number] [-summary* |
[-llimit] [-nf | *-rl1l2] [errors]*
[warnings] [package ...]]

If the first option is **manual**, the remaining options should be **manual** options. The usage of the **prtoreg** command with the **manual** option is as follows:

prtoreg manual *[manual-page(s)] [every]*

The *-s* option normally associated with the **listxk, listf,** and **manual** should not be used with the **prtoreg** command because it does not apply to **prtoreg**.

If the size of the output exceeds 5,000,000 bytes, it is divided into multiple print jobs to avoid network congestion problems. The name of each job includes a sequence number so the output can be reassembled in the proper order.

The **prtoreg** command gives the user an option to redirect the output to a region other than the one determined from the order number. For example:

Central Region "CE"
- Eastern Region "EA"
- Southwest Region "SW"
- Southern Region "SO"
- Indian Hill Main "IH"
- Indian Hill South "IX"
- Indian Hill Park "IHP"
- Indian Hill West "IW"

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- Network Software Center "OPR"

6.13 The "OFFLOC" Command

The **offloc** command prints information on offices located on production machines.

offloc *[base_and_control | all]*

base and control - reports the office's order number, order type, and the production machine on which it resides.

all returns a complete list of all production offices on the current machine; they are presented in column format, sorted by base and control. This command may be helpful to the user working on several offices located on different 5ODA production machines.

7. SERVICE PROVIDER COMMANDS

Service Provider data engineers are responsible for ensuring the accuracy of the line and trunk data for the switch office. The SEE (Lucent System Equipment Engineer) will work with the Service Provider data engineer to resolve any data conflicts blocking the completion of the ODD (Office Dependent Data) build.

To simplify the process interface for the Service Provider data engineer, users are greeted with a menu-based interface that displays the valid operations that may be performed at a given time. Depending on what other activities are taking place, the contents of this menu may expand or contract.

A complete list of the operations includes the following:

Available steps for dangd0(daginittest):

1. List error forms output
2. List crosscheck output
3. List records output
4. List contents of datasets
5. Data Entry (REVIEW) forms
6. Data Entry (EDIT) forms
7. Scan (5ed REVIEW) forms
8. Run crosschecks
9. View email
10. Change login password

Select a step to run (or "q" to quit):

The office Base_and_control appears in the heading of the menu and the order number appears in parentheses next to it. The user may enter the number associated with the operation to be performed to run that particular application. Note that the index values for each operation may change, depending on whether the preceding operations are available to be run.

Each of these operations are detailed below.

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7.1 List error forms output

This step provides access to view output from one or more runs of the intra-form checks processing. If output from multiple runs exists, the user ise prompted to select one for viewing:

Available errorforms output:

1. 5e17,1.p11.0 Errors/Summary run #001 by life (May 21 16:20, 9125 bytes)
2. 5e18,1.g14.0 Errors/Summary run #002 by life (Aug 30 15:22, 12011 bytes)
3. 5e18,1.g14.0 Allforms/Summary run #003 by life (Sep 3 11:48, 2157402 bytes)

Select L1/L2 output to view/print ("q" to quit):

The list is arranged from the oldest to the newest. The description provides information on the 5ESS Software Release used, what kind of run was requested, the login ID of the user who requested it, when it completed, and how large is the output.

When the user selects some output to view, the user will see another menu list to determine how the user would like to view the output. Suppose the user selected menu item number 3 in the previous list. Next, the user would see the following:

Available options for 5e18,1.g14.0 L1/L2 output #003 by life:

1. Display summary and allforms
2. Display summary only
3. Display allforms only
4. Send allforms output to printer
5. Remove allforms output for this run

Select an option ("q" to quit):

This menu allows the user to select the type of information to view. Please note that option 4 in the above menu is only available for those sites supporting the UNISON network printing. Other sites may only view the information at the terminal screen. Selecting an item allows users to display the output to the screen for viewing in a paged format.

Note that the last menu item allows the users to attempt to remove the output for the selected run, provided they have permissions to do so. The user may exit each screen by entering a "q" to quit. The system will return the user to the previous menu until the suer quits out of the initial menu to exit the step.

7.2 List crosscheck output

Similar to the previous step, this step provides access to view output from one or more run of the inter-form checks processing. If output from multiple runs exists, the user will be prompted to select one for viewing:

Available crosscheck output to list includes:

1. save_xk.001 (5e17,1.p11.0/1 May 22 15:30)
2. current (5e18,1.g14.0/1 Sep 3 14:52)

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Select a crosscheck run to list ("q" to quit) [current]:

The list is arranged from oldest to newest runs. Previous runs are stored as "save_xk.###". In parentheses, the 5ESS Software Release information and the time that the crosscheck run was completed is stored. The user may select output to view by entering the index number or, in this instance, you may view output from the most recent run merely by hitting the carriage return. The "[current]" string at the end of the selection prompt means that, if an empty new line is entered, the command will assume that you want the most current output and will display that for you.

7.3 List records output

This step allows you to view ODA office records output. Due to the size of these products, only output from the latest run is retained and available for viewing. If output exists, the user is prompted to select a records file to view via the following:

The user may enter regular expressions or multiple space-separated names:

- Enter "*" to view all of the files under records_recs
- Enter "ls" for a listing of the files under records_recs
- Enter "q" when finished

Enter file name(s):

As indicated by the instructions, entering a "*" results in the display of all of the records generated when the SEE submitted the last records request. Entering "ls" displays a listing of each of the files found under the records output directory. When the user wishes to exit this step, the user needs to enter a "q".

Suppose the user entered, "5000", at the "Enter file name(s):" prompt. The user then sees another prompt requesting where the user would like the output directed:

Available options for records_recs listings:

1. Display listings to terminal
2. Send listings to printer

Select an option ("q" to quit):

Please note that, as in the previous steps, the printing mechanism is only supported for those sites using the UNISON network printing package. If UNISON is not available at your location, then the user may only display the records output to the terminal screen.

Once the user has completed viewing the records output, the user is returned to the first prompt above, allowing selection of other records-related operations. A "q" is enterted to complete the desired transactions

7.4 List contents of datasets

This step is very similar to the records listing step from an interface standpoint. In addition to the records output, however, this step allows the user to select from a list of other directories to view their contents as well.

If this step is selected, the following menu is displayed:

1. crosscheck_xk

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2. errorforms_xk
3. records_recs
4. prntfiles_dir
5. dbgstds_rpts
6. mddlog_dir
7. sm2disk_rpt
8. tmp

Select a directory to view ("q" to quit):

Entering the index value of the directory whose contents the user wishes to view yields the next prompt. Suppose the user selects menu item 1. The user sees the following prompt:

The user may enter regular expressions or multiple space-separated names.

- Enter "*" to view all of the files under crosscheck_xk
- Enter "s" for a listing of the files under crosscheck_xk
- Enter "q" when finished
- Enter file name(s):

The user may enter a "*" to select all of the files, "ls" to generate a listing of the contents of the selected directory, "q" to quit, or the name(s) of the file(s) to view. If file names or "*" is entered, another prompt requestd how to direct the output:

Available options for crosscheck_xk listings:

- Display listings to terminal
- Send listings to printer

Select an option ("q" to quit):

Please note that, as in the previous steps, the printing mechanism is only supported for those sites using the UNISON network printing package. If UNISON is not available at your location, then the user may only display the records output to the terminal screen.

Once the user has completed viewing the output, the user is returned to the first prompt above, allowing selection of other data to view. Enter a "q" when the desired transactions are completed.

7.5 Data Entry (REVIEW) forms

This step allows the user to view ODA forms when no edits are needed or desired. It also makes access to the forms possible when other operations have seized control of the ODA forms database in such a manner as to prevent edits. See the next step for details on the available operations and how to use this command interface.

7.6 Data Entry (EDIT) forms

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The interactive data entry command allows the user to enter, change, review or delete data in the database. The 5ODA system uses the general purpose ODIN system to perform these interactive data entry capabilities. In the data entry step, select a form and then enter or change the data associated with a single form instance on the specified form (e.g., customer telephone number 5551313). Figure 9 is a list of examples of the forms associated with a User Group (line, trunk, or weco). In the example above, customer TN (Telephone Number) 555-1313 is a form instance on the line form.

Information is error checked as it is entered with error messages displayed at the bottom of the user's CRT screen. The data entry step performs two levels of data checking:

Level 1 checks are range and syntax checks of a single field and

Level 2 checks are error checks performed between items within the same instance of a logical form.

While in the data entry step, the user can request that the current form instance displayed on the CRT screen be saved in a file for later access in the list contents of a dataset step. Screen images will be stored under the prntfiles_dir directory. Any number of form instances can be saved by responding to Enter Review, Change-insert or Print with a "p".

The step prompts for form name and database operation unless these parameters are passed in from the command line. The next section explains the prompts in detail.

Form selection

When the data entry step displays the form selection prompt "Enter name of form:", the user can make one of three valid responses:

- a valid form name followed by **<return>** (e.g., mlhg)
- enter **<help>**followed by **<return>**to produce a list of all the forms and database operation permissions that the user is allowed to access (see Figure 4)
  - ***NOTE:*** This "help" command must be entered with angle brackets on either side: **<help>**
- · or press **<return>** to exit the data entry step.

If the user specifies a valid form name , the data entry step verifies that the user is allowed access to that form type (line, trunk, or weco) and proceeds to the database operation prompt. If access to the specified form type is denied, the step displays

The user is not allowed access to this form. Enter name of form:

The user must then use one of the three options described above. If the user incorrectly enters a form name, the step displays

Invalid form specified: lne. Try again. Enter name of form:

If the user responds with **<help>**, the step displays all the form names the user is allowed to access, along with the database operation permissions that he has been granted for each form. Figure 4 shows a sample of **<help>** message in the data entry step. In that example, the user is allowed to access 11 different forms, and "review" (read only) seven of the forms (indicated by the "r" preceding the form type), but the user can "insert", "review", "update" and "delete" only four of the forms (indicated by the "irud" preceding the form name). Using this **<help>** list, the user can then choose a valid form name. When the user includes the form name on the command line, the user bypasses the form selection prompt and is given the database operation selection prompt. With this option the user can only operate on that form during the session.

Please note that Service Provider data engineers may only edit non-equipment related forms. The equipment forms may be accessed, but no edits are allowed.

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Database Operation Selection

After the user has selected a form, a database operation must be specified. When the data entry step displays the database operation prompt "Enter Data Base Operation Code:", the user enters one of the following four valid database operations-**i** , **r**, **u** or **d** - followed by **<return>**.

i

- to insert a new form instance in the database.

r

- to review without changing an existing form instance in the database.

u

- to update an existing form instance in the database.

d

- to delete an existing form instance from the database.

The database operation prompt displays only those database operations that the user is permitted to use for the selected form (see Figure 5). If the user is allowed only one of the four operations (usually "review"), de does not display the prompt since the user has no choice, but moves directly to a full-screen display of a "blank" form instance of the selected form (see Figure 6 and Figure 7).

The command line also accepts an operation (**r**, **i**, **u**, **d**) when the form type is entered on the command line. The user is placed into that operation for that form, bypassing the form selection and database operation prompt. If the user is not allowed to make that operation, a message is printed telling the user that he/she will be placed into review mode. With this option the user can only execute that operation on the given form for that session.

Database Operation Restrictions

In some cases update and delete operations may be restricted for a single form instance rather than for an entire form. These restrictions would most likely be applied for retrofit or off-line growth offices. The restrictions would probably be applied to data that has been dumped from an existing 5ESS-2000 Switch.

In addition to form and database type, the restrictions are based on a particular data field found on each form instance. It will be located in different areas on the form, but is generally on the last (or only) page in the top right corner. The legal values are:

E - data dumped from an existing 5ESS-2000 Switch.

C - data from an existing switch that has been changed.

N - new data that has been added to existing data.

The field may also be blank.

The user is not restricted from choosing the update or delete operation. However, before the actual update or delete is performed, a check is executed to determine if the operation is allowed. If the chosen operation is restricted, the user receives one of the following messages, depending on the operation chosen:

Deletes are not allowed on data of type _ on form type _____.

Updates are not allowed on data of type _ on form type _____.

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The user is not allowed to perform the requested operation. An exception to the update restriction is that certain forms may allow non-critical data fields to be updated, overriding the update restriction. On these forms, the user can only position their terminal cursor on those special fields to update. The rest of the fields are shown in a no-change display mode. Depending on the user's terminal type, the no-change fields are displayed at half screen intensity.

Data Entry Session

If the user chooses the insert or update modes, he/she has the facility for changing data values via the change/substitute mode.

Change mode is entered by responding with a "c" to a form operation prompt. The field to be changed is identified by entering the field number in response to the Change field prompt. When the user enters the new data, it is subjected to new error checking. Entering **<return>**, back tab, or abort in response to the Change field prompt, serves to exit change mode and the cursor moves to the form operation prompt. If the user enters a field number that is not on the current screen (multi-screen forms), then the appropriate screen is displayed automatically and processing continues.

Substitute mode is a facility for changing data values in a form. Substitute mode differs from change mode in that it allows substitution of strings within a field rather than forcing the user to re-enter the entire data value when it is necessary to change a field. A field to be changed is identified by entering a field number in response to the Substitute field prompt. In addition to the field number, the operator must respond to the From string: and To string: prompts which identify the existing string and the replacement string within the field, respectively. Normal data checking is then performed on the new field. Care must be observed when using the substitute mode to uniquely identify the string of data within the field to be changed.

If the user enters a field number that is not on the current screen (multi-screen forms), then the appropriate screen is displayed automatically and processing continues. Entering **<return>**, backtab or abort in response to the Substitute field prompt serves to exit substitute mode and the cursor moves to the form operation prompt.

Once a database operation has been specified, a "blank" form (or the first screen of a multi-screen form) is displayed. If the backtab (<) control character is entered in the first field of a form, the system terminates the current database operation and returns the operator to the form type selection prompt. If the backup (^) control character is entered in the first field of the form, the system terminates the current database operation and returns the user to the database operation prompt. The screen is not cleared before displaying this prompt, making operation switches on the same form type a quick process. The operator may respond with a database operation code (i, r, u or d) or a control character as described above. (See Figure 2 at the back of this manual.)

To exit from the data entry step, the user responds to the form selection prompt Enter name of form: with **<return>**.

The user is provided with a complete set of data entry control characters which conserve keystrokes and allow navigation through the form displayed on his CRT screen (see "Figure 2 : "5ODA Data Entry Control Characters"). Navigational control characters may also be attained by entering a "?" during data entry.

Once the user has entered the data entry step, depending on the database permissions, he/she can insert a new form instance; review, update or delete an existing form instance; or request that the current form instance be printed.

7.7 Scan (5ed REVIEW) forms

The scan step is an interactive command that allows the user to examine an office's input form or base relation data. The files are viewed over consecutive screen images with one column per attribute. When executed, you will see the following prompt:

Enter (input form name | base relation name | /expr | **<return>** | "q"):

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Enter (input form name | base relation name | /expr | **<return>**| "q"):

Once a form name has been entered, the scan step provides help, by typing "h" followed by **<return>**. Suppose the **eqim** form was requested. We do the following to enter the help section:

eqim: h

Help Menu:

---

0 DISPLAY ALL HELP SECTIONS

1) SCREEN FORMATTING

2) RECORD SCANNING

3) RECORD SELECTION

4) FIELD INFORMATION

5) WRITING RECORDS TO A FILE

6) MULTIPLE FILES

7) HELP

8) QUIT

Enter help section number(s) [1 or 1,3,4]:

To view a particular item, type the index number followed by **<return>**. Next is what is contained in each help section:

1) SCREEN FORMATTING:

- (c|a) - display fields that can be cut/added.
- (c|a)n - cut/add field n.
- (c|a)1,2,...n - cut/add fields 1,2...n..
- (c|a)n- - cut/add all fields starting from field n.
- (c|a)n-m - cut/add fields in range n to m.
- (c|a)* - cut/add all fields.
- (c|a)/expr - cut/add fields by name using this regular expression.
- p[(l|w|f)] - display current page settings.
- p(l|w)n - change page length/width to size n.
- p# - toggle field number headers printing on and off.

2) RECORD SCANNING:

- (f|b) - forward/backward.

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- (f|b)n - forward/backward from record n.
- (f|b)+n - forward/backward from +n records.
- (f|b)-n - forward/backward from -n records.
- (f|b)p - forward/backward one page.
- return-key - one page. (forward or backward mode).

3) RECORD SELECTION:

- Setting Selection Criteria:
- #/expr - field_number/selection_expression.
- n fld/expr - field_name/selection_expression.
- N[p] fexpr/expr - field_name expression/selection_expression.
- m fexpr/expr - match field_name expression /selection_expression.
- e/expr - every field/selection_expression.
- To select forms that do not match an expr replace the "/" with an "!".

- Executing Selection Criteria:
- r - current record, or number of matching records.
- r# - set current record position at record #.
- + - next record from current record.
- - - previous record from current record.
- [g]// - [global] record selection.
- ? - display current selection criteria.
- * - CANCEL current selection criteria.

4) FIELD INFORMATION:

- # - display field name and selection criteria for this field number.
- n fld - display field number and selection criteria for this field name.

5) WRITING RECORDS TO A FILE:

- w [file] - write screen image to file. File name has user's initials appended to it. Program will generate a name if not specified.

6) MULTIPLE FILES:

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- lf [/expr] - list current form names [optional /expr].
- lr [/expr] - list current relation names [optional /expr].
- ^ - current editable files.
- ^ file_name [sort] - edit file_name [option to sort].
- ^ /expr - list forms or relation name that match expr

7) HELP:

- h [0,1,...,n] - displays a help menu for the different commands. If the optional section number(s) are include those section are displayed.

8) QUIT:

- q - quit the session.

Key attributes are underlined and repeated on each screen image. The step assumes all attributes are to be viewed. When the screen size is too small then attributes are divided over multiple consecutive screens. For convenience the screen images can be reformatted and customized to view only attributes and data of interest. This is accomplished using the **cut** and **add** commands interactively within the step. Records can be scanned in a forward or backward direction in a continuous or single page mode.

To exit from the step, type in the letter "q" (for quit) in response to the prompt (:).

7.8 Run crosschecks

When activated by the Systems Equipment Engineer (SEE), this step will appear in your menu list. It allows the Service Provider Engineer to execute both the errorforms (intra-form checks) and crosschecks (inter-form checks) to validate any changes that were made. Once the command completes, if any errors occurred, you will be notified by email. The errorforms output may be viewed by running the **List error forms output** step above and the crosscheck output may be viewed by running the **List crosscheck output** step above.

7.9 View email

Any step failures or interaction from steps the user runs may be reported to the user in his/her office's mailbox. Each 5ESS Switch office has a mailbox set up on the ODA system. The user's email may be accessed using this step.

7.10 Change login password

The 5ODA system allows the user to change his/her password at any time using this step. When invoked, the system prompts the user for both the existing password and a new password. Since neither the old password nor the new password appears on the screen as hte user types it in, the user is asked to type in the new password twice to insure that it is not mistyped.

The new password must be at least six alphanumeric characters. The password must contain at least one non-alpha character. The user must use the new password the next time he/she logs on.

- **CAUTION:** Because there is no way for the system administrator to determine a user's password, the user is responsible for remembering his/her own password and recording the password in a secure place.

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5ODA USER COMMAND SUMMARY

COMMAND	FORMAT AND DESCRIPTION
The following is a list of the valid 5ODA Telephone Company and Lucent Technologies commands that can be entered whenever the 5ODA command level prompt ("ENTER COMMAND:") is displayed at the user's CRT terminal. In all cases the command must be followed by the **<return>**.	
TELCO and WECO Commands	
allforms	**allforms** *[form-type(s)] [lines] [trunks] [weco] [every] [deficient]* Produces all form instances of one or more specified form types present in the database in CRT screen image format.
dbstatus	**dbstatus** Prints whether the database is frozen (locked) or thawed (unlocked).
de	**de** *[form-type [operation]]* Interactive entry of office data into the database via forms displayed on the user's CRT screen.
errforms	**errforms** *[form-type(s)] [lines] [trunks] [weco] [every] [deficient] [-nf]* **Produces the requested form instances of a form-type(s) that contains errors and/or warnings in CRT screen format.**
helpenv	**helpenv** *[commands | office | forms | records | offloc]* Displays useful 5ODA information.
jobs	**jobs** *[-all | -f]* Prints jobs that are still in the jobs queue.
killjob	**killjob** *[records | crosscheck | mapping | dbgen]* Cancel a job still in the jobs queue that you have submitted.
letter	**letter** *[line | trunk | weco]* Prints or sends messages.
listf	**listf** *[-u] [-s] [-cN] [-r] [-n] [-errors] [-summary] [-number] [command-name[.initials]]**[-changed]*** **Lists the output of the indicated command name at the user's hard-copy line printer or at the user's CRT screen.**
listxk	**listxk** *[-cN] [-number] [-s] [-summary| [[-nf | -l1l2] [-llimit] [errors] [warnings] [package. . .]]* Lists the output of the "crosscheck" command at the user's line printer or at the user's CRT screen.
manual	**manual** *[command-name(s)] [every] [-s]* Prints manual page(s) of 5ODA user commands.
news	**news** *[item . . .]* Prints computer system news.
online	**online** Lists other users with the same base and control currently on the system.
password	**password** Changes a password.
prspeed	**prspeed** *(low | med | hi)* Decrease or increase printing speed.
records	**records** *[record-type(s)] [lines] [trunks] [weco] [every]* Produces office records.
remove	**remove** *[filename]* Removes a file from storage.
restrict	**restrict** Reports on forms that have database operation restrictions.
runxcheck	**runxcheck** Submits a sleeping crosscheck job to the queue.
scan	**scan** Interactively examine input form or base relation data.
suggest	**suggest** *[status]* Suggest an enhancement to the 5ODA tools.
summary	**summary** *[form-type(s)] [lines] [trunks] [weco] [deficient]* Generates a summary of one or more specified form types present in the database.
tlock	**tlock** Secures unattended terminals.
WECO Only Commands	
crosscheck	**crosscheck** *[[anyway | weco] [-print] [-thaw] [-sleep]] | [-status] | [-remove]* Verifies the database.
dbgen	**dbgen** Generate the machine loadable database for the 5ESS Switch.
deficient	**deficient** Lists all forms currently defined as "deficient".
editor	**editor** *[file-name] [manual] [list]*

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	Edit files other than ODA database files.
gentline	**gentline** Generate test lines for SLATTS volume call processing testing.
groupings	**groupings** *forms* | *records* Change the groupings of forms or records.
history	**history** Lists processing history for a particular office/AT&T order number.
mapping	**mapping** *[dbgen]* Generates the base relation data structure.
offloc	**offloc** *[base_and_control* | *all]* List office location for production machines.
prtoreg	**prtoreg** (see **listf**, **listxk**, or **manual** command line) Produce hard copy listings of output from the **listf**, **listxk** , or manual commands at the regional data centers.
sendimst	**sendimst** *[-n] [-s] or sendimst [[mach1!...!]dest_mach]* Send equipment translations input data to MMST and SMST to the factory.
thaw	**thaw** Unlocks the database.
tollsim5	**tollsim5** - generates standard trunk and routing test data.

Figure 1 5ODA USER COMMAND SUMMARY

5ODA DATA ENTRY CONTROL CHARACTERS

Certain data entry control characters are available during the interactive form entry process of the "de" command to provide the user with a means of conserving keystrokes as well as allowing navigation through the form instance displayed on his CRT screen. There are also commands which are informational in nature, such as turning on/off the display of help messages in a session. A few control characters (abort, return and back tab) are recognized as responses to system prompts.

Note that the control characters listed below work on most terminals, but may not work on unusual or unsupported terminal types.

The following control characters are single, printable characters. These characters serve as control characters when they are entered as the first and only character into a field, otherwise they are part of a field value. For example, if the end of form command is invoked by the "$" character, entering a single "$" invokes the command; entering "$$" is not recognized as a command, but as a value and field data checking will occur.

Some terminals are equipped with cursor movement ("arrow") keys and these can be used to quickly move about a form. Cursor movement keys are recognized only at the beginning of a data field; the return key should not be pressed since they are acted upon immediately. Cursor movement keys can be used only for movement between data fields, they cannot be used to back out of the first data field or in response to a system prompt on the command line. The four cursor movement keys and corresponding commands are:

- up arrow invokes back up,

- down arrow invokes return,

- left arrow invokes back tab,

- right arrow invokes forward tab.

If the terminal keyboard has program function keys, pressing PF2 will cause the re-display of the current screen. The key sequence escape Q will have the same effect on most terminal types. If any characters had been entered into a field prior to the re-display sequence, they will be discarded.

If a control character is not meaningful, either in an input field or as a response to a system prompt, then it is ignored and the cursor returns to its original position.

The following is a list of the control characters, along with their default control characters in parentheses. (For a condensed

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version of this text, execute the "manual" command specifying "navigate" as the manual page.)	
VALUE COMMANDS	
123return	Enter a value into a field. To enter a value into an atomic field, type the value followed by "return".
return	No value or response; skip this field or prompt. Pressing the return key only (no characters entered) serves to keep the current value of an input field and go on. In the case of some system prompts, this signifies no response and results in the display of the next or preceding prompt.
null item (')	Set this atomic field to the null (empty or missing) value. In the case of a non-required field, the current field is set to null and is displayed as a string of underscore (_) characters. If the field is required, the message "Required Field!" is flashed in the acknowledgement area and the cursor returns to the beginning of the field.
default value (;)	Set this atomic field to its default value. If a default value exists, it is assigned to the current field. If no default value exists, processing continues as if null item had been entered (see above).
NAVIGATIONAL COMMANDS	
Back up (^)	Back up to the previous field. The current field remains unchanged and the cursor moves to the previous field. If the previous field is a structure or list, the cursor moves to the beginning of the field; if the previous field is on another screen (multi-screen forms), then that screen is automatically displayed. If used repeatedly within a list, the cursor backs up to the beginning of the current row and then backs up within the first column to the beginning of the list.
forward tab (>>)	Skip forward to the next "tab stop". When this command is invoked, the current field remains unchanged and the cursor moves to the next tab stop. If no tab stop exists between the current field and the end of the form, the cursor moves to the form operation prompt on the command line. If the next tab stop is on another screen (multi-screen forms), then that screen is automatically displayed. If a required field that is empty is encountered en route, then the message "Required Field!" is flashed in the acknowledgement area and the cursor moves to that field. If entered when the cursor is positioned at the beginning of a row of a list, the cursor moves to the next tab stop as described above. If the cursor is within a row, but not at the beginning, it is positioned at the beginning of the next row.
back tab (<<)	Back up to the previous "tab stop" or prompt. The current field remains unchanged and the cursor moves to the previous tab stop. If the previous tab stop is on another screen (multi-screen forms), then that screen is automatically displayed. If no previous tab stop exists, the cursor is positioned at the first data field. If entered when the cursor is positioned at the beginning of a row of a list, the cursor moves to the previous tab stop as described above (the first row if the list is tabbed). If the cursor is within a row, but not at the beginning, it is positioned at the beginning of the current row.
next form ( ))	Retrieve next form. If entered into the first keyfield of a form and in a retrieval mode (review, update, delete), the "next" form in the database is retrieved (see "Sequential Retrieval").
previous form (( )	Retrieve previous form. If entered into the first key field of a form and in a retrieval mode (review, update, delete), the "previous" form in the database is retrieved (see "Sequential Retrieval").
end of form ($)	Skip to the end of form.

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	The current field remains unchanged and the cursor moves to the form operation prompt on the command line. If a required field that is empty is encountered en route, the effect is the same as if forward tab had been entered (see above).
execute (*)	Skip forward to the end of form and perform the form operation. Processing continues as if end of form (above) had been entered, followed by the appropriate form operation code (see Database Operations in Section 4.8). This command can also be entered in response to a form operation prompt and will match the current operation code.
abort (!)	Abort this operation. If entered into a data field, the active form is discarded, an "aborted" message is flashed in the acknowledgement area, and the cursor moves to the first key field. If entered in response to a command line prompt, this command serves to abort the active form. (See "Database Operations" in Section 4.8). If entered while in change or substitute modes, this command aborts the change attempt and the cursor returns to the form operation prompt. (See "Database Operations" in Section 4.8).
LIST VALUE COMMANDS	
These commands are recognized only when at the first atomic field in a row of a list.	
null row (")	Set the current row to null values. Each atomic field in the current row is set to the null value. The cursor returns to the beginning of the current row.
default row (:)	Set the current row to default values. Each atomic field in the current row is set to its default value. The cursor returns to the beginning of the current row.
insert row ({})	Insert a new row at the current location. This command is recognized only for compressed type lists. Each row, from the current row to the end of the list, is "pushed down" and a null row is inserted at the current row location. The cursor returns to the current (null) row. If the list is "full" (no null rows), then the message "List is FULL!" is flashed in the acknowledgement area and the cursor returns to the current row.
delete row ({)	Delete the current row. This command is recognized only for compressed type lists. The current row is discarded and each row, from the next to the last, is "pushed up" one row position. The last row is set to null values. The cursor returns to the current row location.
copy row (=)	Copy previous row. The previous row is copied to the current row. The cursor returns to the current row.
LIST NAVIGATIONAL COMMANDS	
These commands are recognized only when at the first atomic field in a row of a list.	
previous row ([)	Back up one row. The cursor moves "up" to the beginning of the previous row in the list. If the current row is the first row, processing continues as if back up had been entered.
next row (])	Skip to next row. The cursor moves "down" to the beginning of the next row in the list. If the current row is the last row, the cursor moves to the next field.
end of list (#)	Skip to end of list. The cursor moves to the next field following the current list.
INFORMATIONAL COMMANDS	
These commands are recognized in all database operation modes when entered into a field, but not in response to a system prompt.	
help messages (?)	Turn on/off help message display.

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	If help messages are currently being displayed, entering this command will turn off this display starting with the next atomic field. If they are not currently being displayed, and a help message exists for the current field, then it will be displayed on the help line. If no help message exists, then the message "No help available." will be flashed in the acknowledgement area. In all cases the cursor returns to the current field.
current mode (.)	Display current database operation mode. The current database operation mode is flashed as a message in the acknowledgement area (e.g., "Insert mode") and the cursor returns to the current field.

Figure 2 5ODA DATA ENTRY CONTROL CHARACTERS

Figure 3 5ODA PROCESS

system:	"ENTER COMMAND"
user:	"de"
system:	"Enter name of form:"
user:	"help"
system:	r: conv
	r: das
	irud: lcc
	irud: line
	irud: mlhg
	irud: mlhln
	r: rate

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```
                    r: rtidx
                    r: scrn
                    r: tkgrp
                    r: trunk
```

Figure 4 EXAMPLE OF <HELP> IN de COMMAND

```
system:          "ENTER COMMAND"
user:            "de"
system:          "Enter name of form"
user:            "tkgrp"
system:          "Enter Data Base Operation Code"
                 "I=Insert R=Review U=Update D=Delete"
```

Figure 5 EXAMPLE OF DATABASE OPERATION PROMPT IN de COMMAND

```
SCREEN 1 OF 3                5ESS Switch
line                 OFFICE DATA ADMINISTRATION
(5109-1/2/3/4)             TELEPHONE NUMBER

                                  EQUIPMENT
*  1. TN       _______     17. FLS      N     29. COIN      N
      NEW TN               18. SUSO     N     30. GST       N
#  3. RAX       __          19. DNY ROH  N     31. TSTLINE   N
#  4. LCC       ___         20. PALIT    N     32. GNDREF    N
   5. OE  TYPE  _           21. COMPL    N     33. RANGEX    N
      NUMBER  ___________   22. SLUS     N     34. LNEQ      N
   8. RTI      ____        23. DTLBILL  N           MISC FEATURES
   9. PTY      I                        35. SERHLN     _______
  10. MFRI     N           24. TRAFFIC  N        BCK LNK
  11. CIDIAL   _______                  37. ALT BILL TN  ___________
  12. PIC      ___          TERM FEATURES     38. NO DIAL      N
   ORIG FEATURES           25. SUST     N     39. HOT LINE TN  _________________
  13. TTC      N           26. ICP      N     40. TEST CODE    ______
  14. BRCS     N           27. DNY BV   N     41. BUSY MONITOR N
  15. EL       N           28. TRC      N     42. ATT MLHG     ____
  16. FGA      N                        43. RBV TGN      ____
```

```
SCREEN 2 OF 3                5ESS Switch
line                 OFFICE DATA ADMINISTRATION
(5109-1/2/3/4)             TELEPHONE NUMBER

  44. ANI7          N              55. SHARED     N
  45. TR303 NAILUP  N              56. PRIVACY    N
  46. RMK           _________________
  47. SA TST ROUTE  N                LASS FEATURES
                              57. AC ALW    _
     BASIC 911 ESB                58. AR ALW    _
  48. RINGBACK      N              59. COT ALW   _
  49. STATMON       N              60. PCP ALW   _
  50. TONDET        N             61. SCA GA ALW _
                              62. SCF GA ALW _
     SCAN & DIST. POINTS          63. SCR GA ALW _
  51. MESG REGISTER  _________     64. SDA GA ALW _
  52. SLEEVE LEAD CKT _________    65. UCR        N
  53. MAKE BUSY KEY  _________
```

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```
 54. CARRIER GRP ALM _________
```

```
SCREEN 3 OF 3                5ESS Switch          _
line                 OFFICE DATA ADMINISTRATION
(5109-1/2/3/4)               TELEPHONE NUMBER

        LTSB                 76. ASP ALW      N
66. ASSOC OE TYPE _                  SCD SCREENING
        NUMBER ___________       78. CLSS         N
69. LEAD PORT      N             79. MCLD DEACT    N
70. MAN EXCL       N             80. BLK 1PLUS     NONE
                             81. LONG DST DR   N
   4-WIRE SPECIFICATIONS
71. ROUTING RINGING   _____
72. PRIORITY RINGING  ______
73. AUDIBLE RINGING   _
74. INC. START SIGNAL _________
75. CONFERENCE BRIDGE _
```

Figure 6 DISPLAY OF LINE FORM IN de COMMAND 5E8 SOFTWARE RELEASE

```
SCREEN 1 OF 5                5ESS Switch
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4)        TRUNK

*1. TGN          ____            16. OUT START DIAL ____
*2. MEMB         ____             17. CGASPN        __________
 3. QTY          01             18. OTODPN1       __________
 4. TEN          ________         19. OTODPN2       __________
 5. DEN          _________        20. SLC OTODPN3   __________
 6. SLEN         _________        21. SLC OTODPN4   __________
 7. TRKOE        _ ___________    22. CLCI TRK ID   ____
10. LTP          _______          23. BRCS          N
11. RAF EN       _______          24. SLVLD SPN     __________
12. TRANS CLASS  __               25. REMOVE TRUNK  N
13. SUPV         ___              26. ISCN          _______
14. IDLE STATE   ON               27. PSCLI         _______
15. IN START DIAL _________
```

```
SCREEN 2 OF 5                5ESS Switch
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4)        TRUNK

    CAMA OPERATOR TRUNKS              CCIS6 TRUNK SIGNALING
28. TRAF SAMPLED       _          37. BAND  ___
29. KEYING TRUNK TGN   ____
30. KEYING TRUNK MBR NO  ____          PRIMARY LINK      MATE LINK
31. TALKING TRUNK TGN    ____       38. SL GROUP __    41. SL GROUP  __
32. TALKING TRUNK MBR NO ____       39. SL MEMB  __    42. SL MEMB   __
                          40. SL VLINK _    43. SL VLINK  _
    EDSL/PRI TRUNKS
```

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```
33. Q921 PROC          NETWORK        DSN FEATURES
34. Q931 PROC          NETWORK    44. EXT. GUARD TIMING  _
                                  45. ANSWER DELAY TIMING N
    ANNC TRUNKS
35. MUSIC SOURCE       N          TSPS TRUNKS
36. MAXCALLS           __         46. NO EXSIG N
```

```
SCREEN 3 OF 5                5ESS Switch
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4)       TRUNK

  PACKET SWITCHING                X.75'/X.75 TRUNK ONLY
47. OCU LOOPBACK _    54. LINK ID            ___    61. HIGH PVC LCN    ___
48. CSU LOOPBACK _    55. SEND THRUPUT CLASS   9600   62. LCN HI TO LOW    _
49. LAPB ADDR    _    56. RCV THRUPUT CLASS    9600   63. LOW INCOMING LCN ___
50. WINDOW SIZE  _    57. SEND PKT SIZE        128    64. HI  INCOMING LCN ___
51. RETRANS N2   __   58. RCV PKT SIZE         128    65. LOW 2 WAY LCN    ___
52. ACK TIME T1  ___  59. SEND PKT WINDOW SIZE 2      66. HI  2 WAY LCN    ___
53. IDLE TIME T3 __   60. RCV PKT WINDOW SIZE  2      67. LOW OUTGOING LCN ___
                                  68. HI  OUTGOING LCN ___
```

```
SCREEN 4 OF 5                5ESS Switch
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4)       TRUNK

          PACKET SWITCHING X.75'/X.75 UTILITY INDICATORS
69. CALL ID        _      74. CUG              _    79. TNIC INDICATOR   _
70. THRUPUT CLASS  _      75. CUG OUTGOING     _    80. UTILITY MARKER   _
71. WND SZ         _      76. REVERSE CHARGE   _    81. UTILITY FLD SIZE _________
72. PACKET SIZE    _      77. ADDR MOD NOTIFY  _    82. NUI BEFORE       _
73. FAST SELECT    _      78. CLR NETWORK ID   _    83. NUI AFTER        _

          PACKET SWITCHING X.75' ONLY UTILITY INDICATORS

84. TARIFF UTILITY    _  87. RPOA UTILITY      _   90. CLEAR SUB NET ID _
85. TRANSIT DELAY IND _  88. ACCESS CHAR       _   91. PROTOCOL CONV   _
86. TRANSIT DELAY SEL _  89. TRANS SUB NET CNT _   92. X75 ID UTILITY  _
```

```
SCREEN 5 OF 5                5ESS Switch          _
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4)       TRUNK

          PACKET SWITCHING X.75 ONLY UTILITY INDICATORS
93. TDI BEFORE    _    99. IN RPOA BEFORE  _   105. TNIC CONFIG  ______
94. TDI AFTER     _   100. IN RPOA AFTER   _   106. X75 ID       ___________
95. TDS BEFORE    _   101. OUT RPOA BEFORE _   107. IC PRESELECT _
96. TDS AFTER     _   102. OUT RPOA AFTER  _
97. TARIFF BEFORE _   103. RPOA DEL SEND   _
98. TARIFF AFTER  _   104. RPOA DEL RCV    _

MISCELLANEOUS
```

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108. MF LOSS 0

Figure 7 DISPLAY OF TRUNK FORM IN de COMMAND 5E8 SOFTWARE RELEASE

SAMPLE OUTPUT FROM A "summary" COMMAND

FORM TYPE	NUMBER OF FORMS	NUMBER WITH ERRORS	NUMBER WITH WARNINGS
line	1490	20	10
fixrt	29	0	0
lcc	22	7	0
trunk	120	0	15
eqtup	1	0	0

Figure 8 SAMPLE OUTPUT FROM A summary COMMAND

EXAMPLES OF FORMS ASSOCIATED WITH THE USER GROUPS

The following is a list of form types by user group. This grouping of form names, "lines", "trunks" and "weco", is defined during office registration and is dependent upon the particular ODA release and/or the specific requirements of a particular office. To receive the current list of form types, execute the "helpenv forms" command (see Section 4.1 , "The HELPENV Command").

USER GROUP	EXAMPLES OF ASSOCIATED FORMS						
lines	iminfo	line	mlhg	mlhln	octa	slcca	
trunks	amact	auto	cgasp	cgidx	cnchg	conv	das
	fixrt	iddd	indit	lcc	ldit	mreg	noc
	ofcopt	pdit	rar	rate	rotl	rtidx	tkgrp
	tlws	tntyp	trfsep	trkcl	trunk		
weco	eqcore	eqds	eqdpn	eqdsp	eqdu	eqdup	
	eqim	eqlu	eqlup	eqmsp	eqmsu	eqncref	eqpc
	eqtu	eqtup					

Figure 9 EXAMPLES OF FORMS ASSOCIATED WITH USER GROUPS

EXAMPLES OF RECORD TYPE BY USER GROUP

The following is a list of office record numbers by user group. This grouping of office records into "lines", "trunks", "weco" and "brcs" is defined during office registration and is dependent upon the particular ODA release and/or the specific requirements of a particular office. To receive a current listing of these groups, execute the "helpenv records" command (see Section 4.1 "The HELPENV Command").

USER GROUP	EXAMPLES OF ASSOCIATED RECORDS							
lines	5104	5106	5107	5108	5109	5109-1		
	5109-2	5109-3	5110-1	5110-2	5110-3	5111-1	5111-2	
	5113	5114	5115	5115-A	5171-1a	lcclen		
trunks	5202-1	5202-2	5202-3	5202-4	5203	5204-1		
	5204-2	5209	5271-1	5271-2	5271-3	5300-1	5300-2	
	5300-3	5300-4	5300-5	5301	5301-1	5302-1		
	5302-2	5302-3	5303	5306	5307	5308		
	5501	5505-1	5505-2	5507	5509	5510	5511	5517
weco	5700-1	5700-2	5701	5702	5703	5705		
	5710	5720	5730	5740	5750	5810		
	5811	5820	5821	5840	5840-1	5840-A	5841	
	5842	5843						
brcs	5117	5608-1A	5617-3	5629-3	5600	5608-1B	5617-4	5629-4
	5601	5608-2	5618-1A	5713-1	5601-1	5608-3	5618-1B	5713-2

* 5100 produces an office record of just the telephone numbers that have been assigned for that office. It must be requested specifically, i.e., it is not included in the group defined as "lines", (e.g., records 5100).

Figure 10 EXAMPLES OF RECORD TYPES BY USER GROUP

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SEC. 8: 5001,5002,5003,5004 ESTABLISH OFFICE DATABASES FOR INITIAL, GROWTH, RETROFIT, AND LARGE TERMINAL GROWTH OFFICES

1. GENERAL

Identification, accounting, and tracking information is needed to set up a database in a computer for each new 5ESS office. The 5001, 5002, 5003, and 5004 Forms are furnished to standardize the presentation of this information.

Send one copy of the appropriate completed 5001, 5002, 5003, or 5004 Form to the address shown on the form one month prior to the date upon which it is intended to insert data into the database which will be established.

Billing is directly dependent on the job type of the office, and it is therefore very important that the correct form indicating the job type is sent to NSC. Read the definitions of each job type carefully prior to completing the form.

2. COMMON LETTER ENTRIES

2.1 Date

The date that the letter is mailed is to be inserted into the space available in the letter.

2.2 Order Number

The Order Number is to be inserted into the space available in the letter. This Order Number is to conform to the instructions found in CI 42.177-21. The Order Number for EACH job type MUST BE unique.

2.3 Base and Control

The Base and Control Number for the office from the Equipment Specification is to be inserted into the space available in the letter. This Base and Control Number is to conform to the instructions found in CI 97.100, Section 18.

2.4 Office Name

The Office Name established by the customer for this 5ESS Switch is to be inserted into the second space available in the letter along with the state in which the office is located.

2.5 Number Of Lines

Enter the number of lines associated with the office, into the space available in the letter. Please note that this count should reflect the totals expected upon job completion, regardless of job type.

2.6 Number Of Trunks

Enter the number of trunks associated with the office, into the space available in the letter. Please note that this count should reflect the totals expected upon job completion, regardless of job type.

2.7 Number Of SMs

Enter the number of SMs (Switching Modules), associated with the office, into the space available in the letter. Please note that this count should reflect the totals expected upon job completion, regardless of job type.

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2.8 Office Type

Indicate whether the office is a Local, Toll, or DSN (Defense Switched Network) office.

2.9 Software Release and Issue

Indicate the FINAL cutover Software Release into the space available in the letter.

2.10 Date Telephone Company Order Received

Indicate the date that the order was received in the region into the space available in the letter.

2.11 Responsible Engineer

Enter the name of the Systems Equipment Engineer responsible for the office database and its contents into the space available in the letter. The entry should be in the form of First Name, Middle Initial, Last Name.

2.12 Telephone Number

Enter the Telephone Number of the Systems Equipment Engineer responsible for the database and its contents into the space available in the letter. The entry should be in the form 630-224-7196.

2.13 Signature

The letter must be signed by the Department Chief to whom the engineer responsible for the database reports, or his/her designated representative.

2.14 Department

The final entry on the letter must be the Department Number of the organization having responsibility for the database. The entry should be in the form 11NW526160.

3. ENTRIES FOR INITIAL OFFICES (5001)

3.1 Definition

An Initial office is an installing 5ESS Switch, that is capable of processing phone calls and IS NOT an RSM (Remote Switching Module) associated with a Host office. An Initial office is considered to be a Host if RSMs associated with it are turning over on the same date.

3.2 Hardware Ship Date

Enter the date on which the hardware is to be shipped, into the space available in the letter. The entry should be in the form 07/10/84 or 07-10-84.

3.3 Current Turnover Date

Enter the date on which Network Systems is to turn the office over to the customer, into the space available in the letter. The entry should be in the form 07/10/84 or 07-10-84.

3.4 Non-Standard Dates

The Hardware Ship date and the Current Turnover date are the key dates which determine the software schedule in accordance with CI 97.100 Section 5, Part 5. If this office will NOT be following the standard schedule, indicate the schedule that the office WILL be following, in the space available under the Modified column in the letter.

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3.5 Virgos Tape

Indicate whether or not a Virgos tape is to be expected at NSC, and the date that the tape should be expected if one is used, in the space available in the letter.

3.6 5ECONV Office

Indicate whether or not this office will be performing a conversion from 1A ESS Switch or 2B ESS Switch to 5ESS Switch. If the office is a conversion office, indicate the date that the tape(s) should be expected, in the space available in the letter.

3.7 Remote Switching Modules

If there are RSMs that are to be included in the Initial database, list the RSM Names, base and controls, and order numbers, and indicate whether a Virgos tape should be expected for each RSM. Please note that in order for the RSM to be included in the Initial office database, the turnover date of the RSM must match the turnover date of the Initial office.

4. ENTRIES FOR GROWTH OFFICES (5002)

4.1 Definition

A Growth office is an addition of hardware to an existing 5ESS Switch, OR a RSM that is associated with an Initial office, but has a turnover date later than that of the Host. Please note that if the turnover date of the RSM is the same as that of the Host, it is to be included in the Initial database.

4.2 Hardware Ship Date

Enter the date on which the hardware is to be shipped, into the space available in the letter. The entry should be in the form 07/10/84 or 07-10-84.

4.3 Current Turnover Date

Enter the date on which Network Systems is to turn the office over to the customer, into the space available in the letter. The entry should be in the form 07/10/84 or 07-10-84.

4.4 Non-Standard Dates

The Hardware Ship date and the Current Turnover date are the key dates which determine the software schedule in accordance with CI 97.100 Section 5, Part 5. If this office will NOT be following the standard schedule, indicate the schedule that the office WILL be following, in the space available under the Modified column in the letter.

4.5 Is This Office a Remote Switching Module?

Indicate whether or not this office is an RSM. If it is, identify the Host office name and base and control. If this office is NOT an RSM, ignore this question.

4.6 Virgos Tape

Indicate whether or not a Virgos tape is to be expected at NSC, and the date that the tape should be expected if one is used, in the space available in the letter.

5. ENTRIES FOR RETROFIT OFFICES (5003)

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5.1 Definition

A Retrofit office is an existing 5ESS Switch that is upgrading from one Generic and ODA issue, to a greater Generic and ODA issue.

5.2 Retrofit Date

Indicate the onsite Retrofit Load Date in the space available in the letter. The entry should be in the form 07/10/84 or 07-10-84. The Retrofit Date is the only date needed to populate the remainder of the software schedule in the Production Scheduling System.

6. ENTRIES FOR LARGE TERMINAL GROWTH (LTG) OFFICES (5004)

6.1 Definition

A Large Terminal Growth office is an existing 5ESS Switch that is growing a large number of additional lines or trunks to be done through ODA, and then merged with the existing office dump, instead of through Recent Change. The Large Terminal Growth process requires that a Retrofit slot be obtained, and during the final interval, follows much the same schedule as a retrofit.

6.2 5ECONV Office

Indicate whether or not this office will be performing a conversion from 1A ESS Switch or 2B ESS Switch to 5ESS Switch. If the office is a conversion office, indicate the date that the tape(s) should be expected, in the space available in the letter.

6.3 Large Terminal Growth Date

Indicate the onsite Large Terminal Growth Date in the space available in the letter. The entry should be in the form 07/10/84 or 07-10-84. The Large Terminal Growth Date is the only date needed to populate the remainder of the software schedule in the Production Scheduling System.

5001(06) TG-5

DATE: _____

Network Systems
5ODA Software Database Management
2600 Warrenville Road - Room 33B1
Lisle, IL 60532

This letter authorizes the establishment of an account for order number ____and base and control _____, for the _____ INITIAL Office. There are ___ lines, ___ trunks, and ___ SMs associated with this office. This office is a _____ (Local, Toll, or DSN) office. The final cutover Software Release and Issue for this office will be _____. The Telco order number for this office was received on _____. The Engineer responsible for this job is _____ whose telephone number is _____.There (will/will not) be a Virgos tape for this office, and the tape will arrive at NSC on _____. This office (is/is not) a 5E Conversion office. Conversion tapes will arrive at NSC on _____.
The following RSMs are turning over with this Host office, and should be included in the Host database:

RSM Name Base & Control Order #, Virgos Tape(y or n)		
Event Description	**Standard**	**Modified**
Registration Date		__/__/__
Office Initialization; Virgos Due		__/__/__
FITTS data entry start		__/__/__
FITTS freeze; Execute sendimst;		__/__/__
Trunk tape due		__/__/__
STR data entry start		__/__/__
STR data entry freeze		__/__/__
STR ship		__/__/__
STR due on site		__/__/__
FTR data entry start; Line tape due		__/__/__
FTR data entry freeze		__/__/__
FTR ship		__/__/__
FTR due on site;		__/__/__
MAIN HARDWARE SHIP DATE	__/__/__	__/__/__
TURNOVER DATE	__/__/__	__/__/__

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Cutover Date __/__/__

SEE Department Chief
Dept # _____

Figure 1 SAMPLE IN ITIAL LETTER

5001(06) TG-5

DATE: _____

Network Systems
5ODA Software Database Management
2600 Warrenville Road - Room 33B1
Lisle, IL 60532
This letter authorizes the establishment of an account for order number ____and base and control _____, for the _____ GROWTH Office. There are ___ lines, ___ trunks, and ___ SMs associated with this office. This office is a _____ (Local, Toll, or DSN) office. The final cutover Software Release and Issue for this office will be _____. The Telco order number for this office was received on _____. The Engineer responsible for this job is _____ whose telephone number is _____. Conversion office. Conversion tapes will arrive at NSC on _____.
There (will/will not) be a Virgos tape for this office, and the tape will arrive at NSC on _____.
The Host office name is _____, and the Host base control is _____.

Event Description	Standard	Modified
Registration Date		__/__/__
Office Initialization; Virgos Due		__/__/__
FITTS data entry start		__/__/__
FITTS freeze; Execute sendimst;		__/__/__
MAIN HARDWARE SHIP DATE	__/__/__	__/__/__
TURNOVER DATE	__/__/__	__/__/__
Cutover Date		__/__/__

SEE Department Chief
Dept # _____

Figure 2 SAMPLE GROWTH LETTER

5001(06) TG-5

DATE: _____

Network Systems
5ODA Software Database Management
2600 Warrenville Road - Room 33B1
Lisle, IL 60532
This letter authorizes the establishment of an account for order number ____and base and control _____, for the _____ RETROFIT Office. There are ___ lines, ___ trunks, and ___ SMs associated with this office. This office is a _____ (Local, Toll, or DSN) office. The final cutover Software Release and Issue for this office will be _____. The Telco order number for this office was received on _____. The Engineer responsible for this job is _____ whose telephone number is _____.
The onsite Retrofit date for this office is _____.

SEE Department Chief
Dept # _____

Figure 3 SAMPLE RETROFIT LETTER

5001(06) TG-5

DATE: _____

Network Systems
5ODA Software Database Management
2600 Warrenville Road - Room 33B1
Lisle, IL 60532
This letter authorizes the establishment of an account for order number ____and base and control _____, for the _____ LARGE TERMINAL GROWTH Office. There are ___ lines, ___ trunks, and ___ SMs associated with this office. This office is a _____ (Local, Toll, or DSN) office. The final cutover Software Release and Issue for this office will be _____. The Telco order number for this office was received on _____. The Engineer responsible for this job is _____ whose telephone number is _____.
The onsite Large Terminal Growth date for this office is _____. This office (is/is not) a 5E Conversion office. Conversion tapes will arrive at NSC on _____.

SEE Department Chief
Dept # _____

Figure 4 SAMPLE LARGE TERMINAL GROWTH LETTER

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SEC. 9: 5ODA BATCH LOAD INTERFACE

1. GENERAL

To accommodate data supplied from existing mechanized systems (e.g. equipment, line or trunk data), the ODA 5ODA provides an interface to merge batch data with the appropriate ODA 5ODA database. The magnetic tape containing batch data must be self-defined, meaning, there is information on the tape which defines the contents of the data records. This allows the customer to add, delete or change a field, when they wish, without coordinating the change with Lucent Technologies, requiring them to only change the tape definition.

2. TAPE FORMAT

The ODA system will process magnetic tapes that meet the following requirements:

1. The tape must be 1600 bpi. The format must be ASCII and produced on 9-track drives only.

2. The magnetic tape itself may be a labeled (e.g. IBM Standard Label) or a non-labeled tape. However, every tape should be marked with a paper label identifying which file is the ODA data file on the tape. If there is no such indicator on the tape, the ODA assumes the data as the first file. The end of a file on a tape is indicated by a tape mark. The ODA system will only process the ODA data file.

3. If one tape volume cannot hold all the data the user wants to send to the ODA, then the user can send multiple tapes. The ODA input tapes do not have to be processed in the same order in which they were produced. This procedure should not cause any problems provided the user never splits a "logical record" (see section on Basic Definitions) over two tapes and each tape begins with a header record and ends with a trailer record (see section on Header and Trailer forms). If the tapes should be processed in a sequential manner they must be marked as such on the tape labels.

3. FILE FORMAT

3.1 Physical Format

The block size of data on the tape should be no more than 2048 bytes. All blocks must be the same size except the last block with can be less than 2048 bytes.

3.2 Logical Format-basic Definitions

The 50DA system interprets the data on the tape as a stream of characters. The characters are grouped into name-value pairs. Each name must be terminated by a colon (i.e. :). Each name-value pair must be terminated by a semi-colon (i.e.:). Leading and trailing blanks around the name and the value will be ignored. Any blanks within a value (e.g. "his name is Joe") will be kept. Therefore, the stream of data could look as follows:

DN: 1234567 ; TTC : Y ; CFW : N;

Name-value pairs are grouped together into logical records. In order to identify the beginning of a logical record (and thus the end of the previous logical record), and to know what type of record it is, the 5ODA selected "FORM NAME" as the logical record initiator name of a name-value pair. The name "FORMNAME'S" associated value identifies the record type. The above example could be preceded by the following name-value pair:

FORMNAME: Line;

The definition of each Directory Number would begin with the above name-value pair.

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3.3 Logical Format-Structure Definitions

A form may use the same name more than once. This will normally happen within a structure definition (e.g., DATE1 AND DATE2 are structures each containing fields month, day and year). In order to distinguish between them, a fully qualified name must be specified. The qualified name would be composed of structure name, "DOT", element name (e.g., DATE1 .DAY). A form's definition will identify when and where a qualified name is necessary.

3.4 Header and Trailer Forms

Forms can be intermixed. A LINE form may be followed by a MLHG form, which in turn is followed by another LINE form. However, the first form on any tape must be the header form. The header form contains office identification information. The definition of the header form is the first page of the attachment to this memorandum. The last form on every tape must be the trailer form. This form has a count of each form passed since the last header form.

Most information on the header record is self-explanatory. The SENDERS field is unique to each system sending batch data to the ODA system. The sender is free to select any eight character name desired that will identify the system sending the data. However, once selected it should never be changed. The SENDER_ISSUE is meant for the senders use. If the ODA has any problems processing the batch data, then the ODA production personnel will contact the sender and let the sender know which issue of the system is causing the problem. We recommend the sender change this value every time a change is made to that system. The BATCH_ISSUE field will change each time the definition memorandum is re-issued. If the sender modifies their system to match the new definition, then they should specify the new BATCH_ISSUE value. The BATCH_ISSUE identifies, to the ODA, what type of data it is to expect.

3.5 Multiple Offices

The administration and generation of ODD (Office Dependant Data) for 5ESS Switch offices requires multiple hardware configurations. Therefore, more than one set of office data per tape is not permitted. Each individual tape must contain data for one office only to expedite the ODA process.

4. DEFINITIONS

The TG-5 (5ESS Switch Translation Guide) defines all the valid ODA form names. Since the form's field names described in the TG-5 may change for aesthetic reasons, it is necessary to establish field names that change less often. A composite listing is available containing these valid attribute names and cross reference for form names. In addition, the TG-5 contains "name" valid values. Refer to *INQUIRIES* in this section for information regarding the procedure to obtain the attribute names and cross reference lists for form names.

Each logical form definition appears on a separate page (some forms such as the LINE form need multiple pages). As stated earlier, the first two pages define the HEADER and the TRAILER forms. The rest of the pages define ODA input forms. At the top of each page is the name of the form defined on that page. Beside the name is the list of 5ESS Switch Software Release issues supported by this form. After the form name is the list of attribute names that make up this form. Beside the attribute name is a brief description of what the field is. The attribute is applicable to all the previously indicated Software Release issues unless another list of Software Release issues appears on a line after the attribute name. In this case, the attribute is only applicable to the Software Release issues specified. If the ODA receives an attribute that is not applicable to the Software Release currently being installed in the office, then the ODA just ignores that attribute. This allows the user to generate an output that is suitable for any number of different Software Releases.

5. LIST DEFINITIONS

Some of the 5ESS Switch input forms contain lists. Informally, a list is a shorthand way to define a

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repeating group of attributes (i.e. 5ESS Switch Translations Guide TG-5 Volume 1: LINEFA form). However, for batch loading purposes, data must be sent corresponding to form definitions that do not contain lists. To batch populate a form that contains a list the corresponding form definitions in this document must be used. These forms basically contain the key fields, non-key fields, and one instance of the list fields (i.e. LINEFA form in this document). Multiple instances of these forms with key and non-key fields repeated should be generated for each set of list fields. The non-list forms will be combined per unique key into one form when the data is loaded into the database.

6. INQUIRIES

All inquiries or requests for information referred to in this section should be sent to the following:

5ESS Software Database Manager

Lucent Technologies

2600 Warrenville Road

Lisle, Illinois 60532

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SEC. 10: ROUTING AND CHARGING

1. GENERAL

The purpose of Routing and Charging is to determine, based on source and destination information, how a call should be routed and charged.

This is normally accomplished in two steps. The first is called screening and the second is routing.

The purpose of screening is to translate the Prefix Index, Screening Index, and Code Index into Routing and Charging Indices. The purpose of routing is to derive the expanded routing data from the database using the Route Index obtained from screening. Figure 1 provides a block diagram of the flow of Routing and Charging Translations.

2. DEFINITIONS OF TERMS

Listed below are abbreviated definitions for each of the components of routing and charging.

2.1 DIGIT ANALYSIS SELECTOR

DAS (Digit Analysis Selector) is a general purpose table that is used to specify the set of tables (Local Digit Interpreter, Incoming Trunk Digit Interpreter and Preliminary Digit Interpreter) that are to be used for digit analysis.

2.2 LOCAL DIGIT INTERPRETER TABLE

LDIT (Local Digit Interpreter Table) is a table that is used to define all dialable codes (NPA, NXX, NPANXX, X11) in a 5ESS Switch office.

2.3 INCOMING DIGIT INTERPRETER TABLE

INDIT (Incoming Digit Interpreter Table) is a table that is used for incoming, two-way, or tandem Trunk Group routing.

2.4 PREFIX\/FEATURE DIGIT INTERPRETER TABLE

PDIT (Prefix/Feature Digit Interpreter Table) is a table that is used to define operator codes (0- and 010) and standard feature codes (72, 73, 2-9, 20-49, etc.).

2.5 CODE INDEX

Code Index is an output from the LDIT, INC DIT, IDDD, or PDIT that is used as an input to the Rate and Route Tables.

2.6 SCREENING INDEX

Screening index is an output from a Line Class Code or a Trunk Group that is used as an input to the Rate and Route Tables.

2.7 ROUTE INDEX

Route Index is an output from the Rate and Route Tables or a Telephone Number that defines the routing, (i.e., Trunk Group Number, digits to be deleted or prefixed, etc.) of a call.

2.8 CHARGE INDEX

Charge index is an output from the Rate and Route Tables that defines the charging, (i.e., MBI (Message

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Billing Index), time, charge, etc.) of a call.

3. RATE AND ROUTE TABLE

The Screening Index and Code Index form a matrix known as a Rate and Route Table. The Rate and Route Table provides a Charge Index and a Route Index based on the prefix dialed (no prefix, 1+, or 0+).

4. CODE CONFLICT

When NPA (Numbering Plan Area) codes and Central Office codes are the same, the routing and charging is resolved by one of two methods.

- Conflict resolved by timing
  - Using this method, the 5ESS Switch will time after receiving seven digits to determine if the call attempt is a seven or ten digit call.
- Conflict resolved by prefixing
  - Using this method, the 5ESS Switch will treat 1+ calls as ten digit attempts and no prefix calls as seven digit attempts. 0+ calls are resolved by the timing method.

5. CODE CONVERSION

Any three digit code may be converted to a seven or ten digit Telephone Number through code conversion. Code conversion is primarily used for X11 (411, 611, etc.) services. However, any three digit code may be converted if it is defined with an appropriate Call Type (i.e., LOCDA, REPAIR, BUSOFC, or EMER).

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Figure 1 BLOCK DIAGRAM - ROUTING AND CHARGING

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SEC. 11: LDMAP SYSTEM DESCRIPTION

1. GENERAL DESCRIPTION

The 1/1A ESS Switch to 5ESS Switch LDMAP (Line Data Mapping) System will extract line related data from a dump of the 1/1A ESS Switch Translations and will map the line data into a format that will be used as input to the 5ODA process. An LDMAP questionnaire is completed by the switch owner is used to define how the Line Data Mapping is to be performed.

The output of the LDMAP system may be used for either the Initial 5ODA process or the LTG (Large Terminal Growth) process.

The LDMAP system provides the following capabilities for the mapping of line data from the 1/1A ESS Switch to a 5ESS Switch.

1. Feature Mapping
2. Feature Substitution
3. Feature Addition
4. Feature Clustering
5. Selection BFG Name Addition
6. Customized IDP Group Names
7. Terminal Group Station Restriction Feature Assignment
8. Multi-Line Hunt Group Renumbering
9. Call Pickup Group Renumbering
10. Partial Office Mapping
11. CAT Code to DPAT Code Mapping for IDP Lines
12. Group Speed Call Listname Mapping
13. Operator Intercept Line Mapping
14. Route Index Line Mapping
15. CENTREX Intercept TN Mapping
16. LINE/MLHLN form Updates

Details for each of the LDMAP capabilities are described later.

The LDMAP system does not do the following:

1. Assignment of 5ESS Switch Line Equipment Numbers
2. Assignment of 5ESS Switch Scan Points
3. Completion of Equipment, Trunking, Routing and Charging Forms
4. Completion of Feature Definition Forms

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5. Completion of Group Definition and Group Dialing Forms

2. FEATURE MAPPING

The LDMAP system uses the 1/1A ESS Switch features that are indicated on the 1107 form to map 1/1A ESS Switch features to 5ESS Switch preconstructed features. Supporting information from the 1109 form is used for the mapping of features on lines that belong to CENTREX Groups.

Refer to Figure 1 for details on how and what features are mapped by the LDMAP system.

If a feature indicated on the 1107 form cannot be mapped to a 5ESS Switch preconstructed feature then the telephone number or Multi-Line Hunt Group and member number along with the 1/1A ESS Switch feature acronym is written to the NO5E report.

Refer to Figure 2 for a list of features indicated on the 1107 TYPE 00 record that are not mapped by the LDMAP system.

Refer toFigure 3 for a list of features indicated on the 1107 form that are not mapped by the LDMAP system.

3. FEATURE SUBSTITUTION

The LDMAP system allows the switch owner to substitute features for the preconstructed features that are assigned by LDMAP.

The new feature may be either a constructed feature or another preconstructed feature. The switch owner is responsible for the completion of Feature Definition forms for any constructed feature that is used for feature substitution.

The feature substitution may be applied in one of the following three methods.

1. All lines in a specified IDP Group.
2. All POTS lines.
3. All lines in the office.

LDMAP will apply feature substitutions to specified IDP groups and POTS lines prior to applying feature substitutions to the entire office.

4. FEATURE ADDITION

The LDMAP system will allow the switch owner to add either preconstructed or constructed features to a specified group of lines. Examples of features added are ARS (Automatic Route Selection) or PFA (Private Facilities Access) features.

A feature may be added to the following:

1. All lines in a specified IDP Group.
2. Lines in a specified IDP Group which meet a DPAT Code requirement.
3. All POT lines.

The completion of Feature Definition Forms for constructed features being added is the responsibility of the switch owner.

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The LDMAP system will only complete LINEFA and MLHLNFA forms for the features being added. Parameter forms are not completed by LDMAP for features being added.

5. FEATURE CLUSTERING

The LDMAP system allows the switch owner to specify clusters that are to be assigned to the lines. The switch owner specifies the cluster name, the features in the cluster and how the cluster is to be applied to the lines.

The cluster may be applied in one of the following three ways:

1. The cluster is applied to a specified IDP Group.
2. The cluster is applied to POT lines.
3. The cluster is applied to the entire office.

The features in the cluster may be preconstructed features assigned by LDMAP, features assigned as a result of feature substitution or features added to the lines as a result of feature addition.

The completion of the cluster definition form (5600 Record) is the responsibility of the switch owner.

6. SELECTION BFG NAME ADDITION

The LDMAP system will allow for the addition of a Selection BFG (BRCS Feature Group) Name to be added to lines in a specified IDP Group. The switch owner will provide the Selection BFG Name that is to be added for each IDP Group. The LDMAP system will then place the Selection BFG Name on the LINEFA or MLHLNFA form for the line.

The completion of the BFG Construction Form (5625 Record) is the responsibility of the switch owner. The 5ODA process will assign the Selection BFG Suffix based on the BFG Construction Form that has been completed.

7. CUSTOMIZED IDP GROUP NAMES

The LDMAP system builds the IDP Group Names in two portions. The first portion of the IDP Group Name is a PREFIX. The second portion of the IDP Group Name is the NUMBER.

The switch owner may specify a PREFIX to be used for all IDP Group Names, a PREFIX for each IDP Group Name or that the IDP Group Name will not contain a PREFIX. The PREFIX may contain any quantity of alpha-numeric characters.

The LDMAP system default is to set the NUMBER portion of the IDP Group Name to a 4-digit number that is the 1/1A ESS Switch CENTREX Group Number.

The switch owner may select to renumber the 1/1A ESS Switch CENTREX Group number to derive the NUMBER portion of the IDP Group Name. Two renumbering methods are available for the renumbering of 1/1A ESS Switch CENTREX Group Numbers.

The first method is called sequential renumbering. Sequential renumbering takes a starting CENTREX Group number provided by the switch owner and will renumber the lowest numbered CENTREX Group in the 1/1A ESS Switch to that CENTREX Group number provided. The next lowest CENTREX Group number in the 1/1A ESS Switch will be renumbered to the CENTREX Group number provided plus one. The sequential renumbering method will renumber all CENTREX Groups in the 1/1A ESS Switch.

The second method is for the renumbering of CENTREX Groups is to provide a mapping table. The mapping table will show each 1/1A ESS Switch CENTREX Group number that is to be renumbered with its

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5ESS Switch CENTREX Group number. Only 1/1A ESS Switch CENTREX Group numbers that appear in the mapping table will be renumbered. If a 1/1A ESS Switch CENTREX Group number is not in the mapping table, then the CENTREX Group number will not be renumbered.

The switch owner must consider CENTREX Group renumbering if the 1/1A ESS Switch is being mapped to a already working 5ESS Switch or if more than one switch is being mapped to the 5ESS Switch.

The switch owner may also specify the quantity of digits that are to be used in the NUMBER portion of the IDP Group Name.

NOTE: The IDP Group Name may be only 8 characters in length.

The IDP Group Name must be shown on a IDP Group Definition Form (5601-4) which has been completed by the switch owner.

8. TERMINAL GROUP STATION RESTRICTION FEATURE ASSIGNMENT

The LDMAP system will assign a TGSR (Terminal Group Station Restriction) feature to each line in a 1/1A ESS Switch CENTREX group. The TGSR feature assigned is based on the OMAJ (Originating Major) Class and the TMAJ (Terminating Major) Class of the line. The following table shows the TGSR feature that will be assigned based on the OMAJ and TMAJ of the line.

OMAJ	TMAJ	FEATURE
16	16	/TGFFx
16	30	/TGFSx
16	18	/TGFUx
17	16	/TGSFx
17	30	/TGSSx
17	18	/TGSUx
18	16	/TGUFx
18	17	/TGUSx
18	18	/TGUUx

If the line has a OMAJ and TMAJ combination that is not in the above table, then a TGSR feature is not assigned to the line and the TN or MLHG and Member Number is written to the NOTGSR Report.

The "x" at the end of the TGSR feature name is replaced by a "T" or an "A" depending on if the TGSR Feature is to be a TONE or ANNOUNCEMENT feature.

The TGSR Feature Type, Tone or Announcement, may be specified to be the same for all 1/1A ESS Switch CENTREX Groups or may be specified for each CENTREX Group individually.

If the ANNOUNCEMENT feature type is specified, then a 5ESS Switch Route Index for the Originating Error Announcement and a 5ESS Switch Route Index for the Terminating Error Announcement must be specified.

The LDMAP system will assign the Terminal Group ID depending on the method selected. The three methods for assigning the Terminal Group ID are

1. The Terminal Group ID will equal the NUMBER portion of the IDP Group Name.
2. The Terminal Group ID will equal the 1/1A ESS Switch CENTREX Group Number.
3. The Terminal Group ID will be determined from a mapping table of 1/1A ESS Switch CENTREX Group Numbers to Terminal Group IDs. If the 1/1A ESS Switch CENTREX Group Number is not in the mapping table, then the 1/1A ESS Switch CENTREX Group Number will be used as the Terminal Group ID.

9. MULTI-LINE HUNT GROUP RENUMBERING

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The LDMAP system will set the 5ESS Switch MLHG (Multi-Line Hunt Group) number to be equal to the 1/1A ESS Switch MLHG number, unless a MLHG Renumbering Method is selected.

If the renumbering of MLHGs is desired, then two methods for renumbering of MLHGs are provided by LDMAP.

The first method is called sequential renumbering. Sequential renumbering takes a starting MLHG number provided by the switch owner and will renumber the lowest numbered MLHG in the 1/1A ESS Switch to that MLHG number provided. The next lowest MLHG number in the 1/1A ESS Switch will be renumbered to the MLHG number provided plus one. The sequential renumbering method will renumber all MLHGs in the 1/1A ESS Switch.

The second method is for the renumbering of MLHGs is to provide a mapping table. The mapping table will show each 1/1A ESS Switch MLHG number that is to be renumbered with its 5ESS Switch MLHG number. Only 1/1A ESS Switch MLHG numbers that appear in the mapping table will be renumbered. If a 1/1A ESS Switch MLHG number is not in the mapping table, then the MLHG number will not be renumbered in the mapping of the MLHG from the 1/1A ESS Switch to the 5ESS Switch.

The switch owner must consider MLHG renumbering if the 1/1A ESS Switch is being mapped to a already working 5ESS Switch which has MLHGs or if more than one switch is being mapped to the 5ESS Switch.

10. CALL PICKUP GROUP RENUMBERING

The LDMAP system will set the 5ESS Switch CPUG (Call Pickup Group) number to be equal to the 1/1A ESS Switch CPUG number unless a renumbering of CPUG numbers is selected.

If the renumbering of CPUGs is desired, then two methods for renumbering of CPUGs are provided by LDMAP.

The first method is called sequential renumbering. Sequential renumbering takes a starting CPUG number provided by the switch owner and will renumber the lowest numbered CPUG in the 1/1A ESS Switch to that CPUG number provided. The next lowest CPUG number in the 1/1A ESS Switch will be renumbered to the CPUG number provided plus one. The sequential renumbering method will renumber all CPUGs in the 1/1A ESS Switch.

1/1A ESS Switch CPUG number that is to be renumbered with its 5ESS Switch CPUG number. Only 1/1A ESS Switch CPUG numbers that appear in the mapping table will be renumbered. If a 1/1A ESS Switch CPUG number is not in the mapping table then the CPUG number will not be renumbered in the mapping of the CPUG from the 1/1A ESS Switch to the 5ESS Switch.

The switch owner must consider the renumbering of CPUGs if the 1/1A ESS Switch is being mapped into an already working 5ESS Switch or if more than one switch is being mapped into the 5ESS Switch.

- ***NOTE:*** If Call Pickup Group 1 exists in the 1/1A ESS Switch, then Call Pickup Group 1 must be renumbered.

11. PARTIAL OFFICE MAPPING

An office is classified as a Partial Office if only a portion of the TNs (Telephone Numbers) in the 1/1A ESS Switch are to be mapped to the 5ESS Switch.

The switch owner will provide the TN ranges that are to be mapped from the 1/1A ESS Switch to the 5ESS Switch. The LDMAP system will then extract the lines in the TN ranges provided and map only this set of lines to the 5ESS Switch.

MLHGs (Multi-Line Hunt Groups) in a Partial Office are mapped based on the LDN (Listed Directory Number) of the MLHG. If the LDN of the MLHG is in the TN ranges to be mapped, then all terminals in MLHG will be mapped to the 5ESS Switch. If the LDN is not in the TN ranges to be mapped, then the

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terminals in the MLHG are not mapped to the 5ESS Switch.

Two error reports are produced when extracting the TNs to be mapped. Both error reports are related to the mapping of MLHGs.

The first error report will indicate MLHG Terminals that have a Hunt TN or Nonhunt TN that is not in the TN ranges to be mapped but the Listed Directory Number is in the TN ranges to be mapped.

The second error report will indicate MLHG Terminals that have a HUNT TN or Nonhunt TN that is in the TN ranges being mapped but the Listed Directory Number is not in the TN ranges being mapped.

12. CAT CODE to DPAT CODE MAPPING

The LDMAP system will map the CAT (CENTREX Access Treatment) code associated with a CENTREX line in the 1/1A ESS Switch to a DPAT (Dialing Plan Access Treatment) code in the 5ESS Switch.

The LDMAP system uses the following default CAT Code to DPAT Code mapping table.

CAT Code	DPAT Code
0	8
1	1
2	2
3	3
4	4
5	5
6	6
7	7

The switch owner must specify a CAT Code to DPAT Code mapping table if the default mapping table is not desired.

13. GROUP SPEED CALL LISTNAME MAPPING

The LDMAP system will assign the first TN to access a 1/1A ESS Switch CENTREX Group Speed Call List as the 5ESS Switch Speed Call Listname for the Group Speed Call List.

The LDMAP system allows the switch owner to change the LDMAP assigned Listname for the Group Speed Call List by associating a new listname to the LDMAP assigned listname.

14. OPERATOR INTERCEPT LINE MAPPING

The LDMAP system has the option to map TNs (Telephone Numbers) in the 1/1A ESS Switch that terminate to Route Index 0084 to 5ODA line forms. These TNs are referred to as Operator Intercept lines.

Operator Intercept lines can be mapped to line forms in one of two methods.

1. The switch owner provides a 5ESS Switch Route Index for the Operator Intercept lines that will complete the RTI field of the line form.

2. The switch owner selects to use Regular Intercept for the Operator Intercept lines which will set the ICP field of the LINE form to "Y".

The switch owner must also provide a 5ESS Switch LCC (Line Class Code) for Operator Intercept lines so that the line form may be completed correctly.

15. ROUTE INDEX LINE MAPPING

The LDMAP system can map TNs in the 1/1A ESS Switch that terminate to a Route Index greater than 0199. These TNs are generally used for DID lines and are called Route Index Lines. The LDMAP system

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will map Route Index Lines to 5ODA LINE or HGRPAS forms.

The switch owner may specify that only line forms be used for the mapping of Route Index Lines. If this mapping option is chosen, then the LDMAP system will construct one 5ODA line form for each Route Index Line.

The other method available for the mapping of Route Index Lines is to use a combination of 5ODA LINE forms and HGRPAS forms.

If a hundreds group of TNs, the 5 leftmost digits of the TNs being the same, all terminate to the same route index then a HGRPAS form will be constructed for those 100 TNs. All other TNs will be mapped to a LINE form.

The 5EE Route Index may either equal the 1/1A ESS Switch Route Index or a mapping table for Route Indexes may be provided.

The mapping table will show the 1/1A ESS Switch Route Index and its equivalent 5ESS Switch Route Index. If a 1/1A ESS Switch Route Index does not appear in the Route Index mapping table, then the 5ESS Switch Route Index will equal the 1/1A ESS Switch Route Index.

A 5ESS Switch Line Class Code is required to complete the LINE forms correctly.

The LDMAP system will process only TNs that terminate to Route Indexes greater than 0199. Route Index 0084 is the only other Route Index processed by LDMAP, refer to the Operator Intercept section for details on the processing of TNs terminating to Route Index 0084.

The switch owner is responsible for the construction of the Route Index Form (5303) for any Route Index used.

16. CENTREX INTERCEPT TN MAPPING

A CENTREX Intercept TN is defined as a TN in the 1/1A ESS Switch that does not have a LEN (Line Equipment Number) but is assigned to a 1/1A ESS Switch CENTREX Group.

The LDMAP system has an option to map CENTREX Intercept TNs to 5ODA LINE forms. The LDMAP system will create a LINE form for each CENTREX Intercept TN. The LINE form has the TN, RTI, and LCC fields completed.

The RTI field is completed with the Base Route Index (BRI) found in the 1/1A ESS Switch CENTREX Common Block or with a switch owner provided Route Index.

The switch owner specifies for each 1/1A ESS Switch CENTREX Group if the BRI is to be used or if a switch owner provided Route Index is to be provided. The switch owner also specifies the LCC to be used to complete the LCC field of the LINE form.

17. LINE/MLHLN FORM UPDATES

The LDMAP can optionally update fields of the LINE or MLHLN forms that have been previously submitted to the 5ODA database. The update data is taken from the 1/1A ESS Switch and owner supplied data.

The LINE and MLHLN fields that will be updated are the following:

1. PIC - Primary Interexchange Carrier
2. TTC - Touchtone Calling
3. ALT BILL TN - Alternate Billing TN
4. SERHLN - Series Complete TN

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5. GST - Ground Start
6. EL - Essential Line Service
7. BRCS - Business and Residence Custom Services
8. PRIVACY - Per Line Privacy
9. LCC - Line Class Code
10. SUSO - Suspend Origination
11. SUST - Suspend Termination
12. TN - MLHG Terminal TN (MLHLN form only)
13. FGA - Feature Group A
14. SLUS - Subscriber Line Usage
15. ANI7 - Automatic Number Identification 7
16. TRC - Call Trace
17. PALIT - Prohibit ALIT
18. FLS - Free Number

The selection of the PIC field will also update the CIDIAL field.

The LCC field can be updated with either the LCC value recovered from the 1/1A ESS Switch or by a LCC mapping table provided by the switch owner.

The SUSO field will be set to "Y", if the Originating Major Class of the Line is equal to 03 or 07.

The SUST field will be set to "Y", if the Terminating Major Class of the Line is equal to 22 or 24.

The selection of the TN field will also update the NONHUNT field and complete a MULTITN form if the MLHG terminal has both a hunt and nonhunt TN.

The FGA field is updated based on the 1/1A ESS Switch Chart Column. The switch owner provides a list of Chart Columns that FGA is to be set to "Y". Lines that have a Chart Column in the list will have FGA set equal to "Y", otherwise FGA will be set to "N".

The SLUS field is updated based on the 1/1A ESS Switch Chart Column. The switch owner provides a list of Chart Columns that SLUS is to be set to "Y". Lines that have a Chart Column in the list will have SLUS set equal to "Y", otherwise SLUS will be set to "N".

The ANI7 field is updated based on the 1/1A ESS Switch Chart Column. The switch owner provides a list of Chart Columns that ANI7 is to be set to "Y". Lines that have a Chart Column in the list will have ANI7 set equal to "Y", otherwise ANI7 will be set to "N".

The above list of LINE and MLHLN form fields are the only fields updated by LDMAP. Additional LINE and MLHLN form fields can be updated by arrangement with the AT&T NSEC engineer.

18. LDMAP OUTPUT REPORTS

This section details the possible reports that are generated from the LDMAP system. The actual reports

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that are generated depends on the LDMAP options that were selected in the LDMAP questionnaire.

If a report is selected to be printed and the file that creates the report is empty or does not exist then the report will be printed with the phrase "Empty Report".

18.1 1/1A ESS SWITCH FORMS

The 1101, 1107, 1109, 1115 and the 1306 forms from the 1/1A ESS switch can be printed from LDMAP only if the Partial Office Step of LDMAP is run.

It is recommended that the 1/1A ESS Switch forms not be printed from LDMAP as a full set of forms is printed from the TDD system.

18.2 TN Report

This report gives the TN Ranges that were used for a Partial Office Conversion. Only TNs in these ranges were converted.

18.3 MLHG MAP

This report shows the mapping of the 1/1A ESS Switch Multi-Line Hunt Group Numbers to 5ESS Switch Multi-Line Hunt Group Numbers.

18.4 CPU MAP

This report shows the mapping of the 1/1A ESS Switch Call Pickup Group Numbers to 5ESS Switch Call Pickup Group Numbers.

18.5 LCC MAP

This report shows the mapping of 1/1A ESS Switch LCC (Line Class Codes) to the 5ESS Switch Line Class Codes.

18.6 RI MAP

This report shows the mapping of 1/1A ESS Switch Route Indexes to 5ESS Switch Route Indexes.

18.7 DPAT MAP

This report shows the CAT Code to DPAT Mapping Table that was used by LDMAP.

18.8 IDP PREFIX

This report shows the PREFIX that was used for each 1/1A ESS Switch CENTREX Group to construct the IDP Group Name.

18.9 CTX MAP

This report shows the mapping of the 1/1A ESS Switch CENTREX Group Numbers to the NUMBER portion of the IDP Group Names.

18.10 TGSR MAP

This report shows the mapping of 1/1A ESS Switch CENTREX Group Numbers to 5ESS Switch Terminal Group IDs.

18.11 FT MAP

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This report gives the FT (Feature Type) that was used for the the TGSR (Terminal Group Station Restriction) Feature assigned to each 1/1A ESS Switch CENTREX Group. The Feature Type is either Announcement (A) or Tone (T).

18.12 ORI MAP

This report gives the RI (Route Index) that was used for the the TGSR (Terminal Group Station Restriction) Feature Originating Error Announcement for each 1/1A ESS Switch CENTREX Group.

18.13 TRI MAP

This report gives the RI (Route Index) that was used for the the TGSR (Terminal Group Station Restriction) Feature Terminating Error Announcement for each 1/1A ESS Switch CENTREX Group.

18.14 BFG Addition

This report provides the input that was used to add a Selection BFG Name to lines in an IDP group.

18.15 Change Listname

This report shows the 5ESS Switch Speed Call Listname assigned by LDMAP for a 1/1A ESS Switch CENTREX Group Speed Call List and the Speed Call Listname that was substituted for the LDMAP assigned name.

18.16 Feature Addition

This report gives the input that was used for the Feature Addition Step of the LDMAP process.

18.17 Feature Substitution

This report shows the Feature Substitution data that was used for the office.

18.18 Feature Clustering

This report shows the Feature Clustering data that was used for the office.

18.19 LASS CSI

This report contains the 1A ESS Switch Chart Columns that are restricted from having a LASS Feature Assigned.

18.20 LASS ACRG

This report contains the LASS Features and the ACRG values that restrict the LASS Feature from access to the Usage Sensative version of the feature.

18.21 FGA

This report contains the list of 1/1A ESS Switch Chart Columns for which the FGA field on the LINE form will be set to "Y".

18.22 SLUS

This report contains the list of 1/1A ESS Switch Chart Columns for which the SLUS field on the LINE form will be set to "Y".

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18.23 ANI7

This report contains the list of 1/1A ESS Switch Chart Columns for which the ANI7 field on the LINE form will be set to "Y".

18.24 CENTREX Intercept - Base Route Index

This report shows the Base Route Index and Line Class Code that was used for each 1/1A ESS Switch CENTREX Group to construct 5ODA LINE forms for CENTREX Intercept TNs.

18.25 Partial Office Error Report 1

This report gives MLHG MEMBERS that have a HUNT TN or NONHUNT TN that is not in the range of TNs to be converted but the LDN (Listed Directory Number) of the MLHG is in range. The MLHG MEMBERS listed in this report are converted.

18.26 Partial Office Error Report 2

This report gives MLHG MEMBERS that have a HUNT TN or NONHUNT TN that is in the range of TNs to be converted but the Listed Directory Number of the MLHG is not in range. The MLHG MEMBERS listed in this report are not converted.

18.27 Error File

This report provides a listing of error messages that are generated by the Feature Conversion step of LDMAP.

18.28 NO5E

This report lists the TN or MLHG MEMBERS that have a 1/1A ESS Switch feature that can not be converted to a 5ESS Switch feature. The 1/1A ESS Switch features for this report comes from the 1107A form.

18.29 NOTGSR

This report gives TNs and MLHG MEMBERS that are in a 5ESS Switch Terminal Group but which no TGSR Feature has been assigned. The 1/1A ESS Switch OMAJ (Originating Major Class) and the TMAJ (Terminating Major Class) for the line is also given.

18.30 GSC No Owner

This report provides a list of 1/1A ESS Switch CENTREX Group Speed Call Lists that do not have an owner or a user of the Group Speed Call List. These 1/1A ESS Switch CENTREX Group Speed Call Lists will NOT be mapped to a 5ESS Switch Speed Call List.

18.31 GSC Listname

This report gives the Speed Call Listname that was assigned by LDMAP to the 1/1A ESS Switch CENTREX Group Speed Call Lists that are being mapped to 5ESS Switch Speed Call Lists.

18.32 GSC Changers

This report gives the 1/1A ESS Switch CENTREX Group Number, the Group Speed Call List Number and either the Telephone Number or Multiline Hunt Group Number and Terminal that have change capability to the Group Speed Call List. These TNs and MLHG Terminals have been assigned a 5ESS Switch Speed Call Feature with change capability for a 2-Digit Speed Call List.

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18.33 GSC Users

This report gives the 1/1A ESS Switch CENTREX Group Number, the Group Speed Call List Number and either a Telephone Number or Multiline Hunt Group and Terminal Number that have access to the Group Speed Cca List but do not have change capability to the Group Speed Call List. These TNs or MLHG Terminals have been assigned a 5ESS Switch Speed Calll Feature without change capability for a 2-Digit Speed Call List.

18.34 TN_CLUS

This report gives the TNs that have had a cluster assigned. The TN is followed by the name of the cluster that was assigned. If more than one cluster has been assigned to a TN, the TN will appear in the report once for each cluster assigned.

18.35 MLHG_CLUS

This report gives the MLHG MEMBERS that have had a cluster assigned. The MLHG number and MEMBER number are followed by the name of the cluster that was assigned. If more than one cluster has been assigned to a MLHG MEMBER, the MLHG MEMBER will appear in the report once for each cluster assigned.

18.36 Feature Summary Report

This report provides a count of lines with unique sets of features for each IDP Group in the office. Lines not in an IDP Group are grouped together under the Group Name "POT". Features that have the character "%" prefixed to the feature name are features that have been included in a cluster. These features will not appear on a LINEFA or MLHLNFA form.

18.37 Feature Map Report

This report provides the mapping of features that was used for this office. The feature mapping is given for each IDP group and for POT lines.

18.38 UPDATE

This report gives the Batch Interface records that were submitted to the 5ODA to update LINE and MLHLN forms.

18.39 NEWFORMS

This report gives the Batch Interface records that were submitted to the 5ODA to add new forms to the 5ODA database.

Automatic Call Back
1107 Form:

Type 00 record, weighted value of 1 in column 60
1109 Form:

None
5ESS Switch Feature:

/ACBC
Parameter Forms Completed:

None
Call Wait - Terminating
1107 Form:

Type 00 record, weighted value of 2 in column 50
1109 Form:

CWI (Call Wait Intragroup) indicated by a weighted value of 2 in column 52 of Descriptive Line.
5ESS Switch Feature:

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/CWT - POTS lines

/CWT - CENTREX lines with CWI

/CWIO - CENTREX Lines without CWI

Parameter Forms Completed:

None

Call Wait - Originating

1107 Form:

Type 00 record, weighted value of 2 in column 49

1109 Form:

None

5ESS Switch Feature:

/CWO

Parameter Forms Completed:

None

Dialed Call Waiting

1107 Form:

Type 00 record, weighted value of 1 in column 56

1109 Form:

None

5ESS Switch Feature:

/CWD

Parameter Forms Completed:

None

Call Forward - Variable

1107 Form:

Type 00 record, weighted value of 4 in column 51

Type 00 record, weighted value of 2 in column 60

Type 00 record, weighted value of 2 in column 72

1109 Form:

CFO (Call Forward Outside) indicated by a weighted value of 1 in column 54 of Descriptive Line.

RGR (Ring Reminder) indicated by a weighted value of 2 in column 50 of Descriptive Line.

5ESS Switch Feature:

/CFV1A - for POTS Lines

/CFV1A - for CENTREX Lines with CFO

/CFIAG - for CENTREX Lines without CFO

Parameter Forms Completed:

cfwlpa, cfwmpa

Call Forward - Don't Answer

1107 Form:

Type 38 record

Type 52 record

Type 1R record

CFUS (Call Forward Unrestricted Source) indicated in column 44 of the above record types.

Column 45 of the above record types is used to complete the TIMEOUT field.

1109 Form:

Type 02 records for determining the quantity of digits for the Forward To TN.

5ESS Switch Feature:

/CFDAAC - for POTS Lines

/CFDAAC - for CENTREX Lines with CFUS

/CFDAIO - for CENTREX Lines without CFUS

Parameter Forms Completed:

cfwlpa, cfwmpa

Call Forward - Busy Line

1107 Form:

Type 26 record

Type 51 record

Type 1R record

CFUS (Call Forward Unrestricted Source) indicated in column 44 of the above record types.

1109 Form:

Type 02 records for determining the quantity of digits for the Forward To TN.

5ESS Switch Feature:

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/CFBLAC - for POTS Lines

/CFBLAC - for CENTREX Lines with CFUS

/CFBLIO - for CENTREX Lines without CFUS

Parameter Forms Completed:

cfwlpa, cfwmpa

Remote Call Forward

1107 Form:

Type 23 record

1109 Form:

None

5ESS Switch Feature:

/CFR

Parameter Forms Completed:

cfwlpa

Call Forward Night Service

1107 Form:

Type 41 record

1109 Form:

None

5ESS Switch Feature:

/CFNS

Parameter Forms Completed:

cfwlpa

Call Hold

1107 Form:

Type 00 record, weighted value of 4 in column 48

1109 Form:

None

5ESS Switch Feature:

/MWCH1 - if line also has Call Transfer or Call Wait Terminating.

/MWCH2 - if line does not have Call Transfer and Call Wait Terminating.

Parameter Forms Completed:

None

Conference Calling (6-way Calling)

1107 Form:

Type 00 record, weighted value of 1 in column 49

1109 Form:

None

5ESS Switch Feature:

/MW6WC

Parameter Forms Completed:

none

Call Transfer (3-way Calling)

1107 Form:

Type 00 record, weighted value of 4 in column 49

1109 Form:

CTD (Call Transfer DID) to DOD indicated by a weighted value of 4 in column 51 of the Descriptive Line.

CTU (Call Transfer Unlimited) indicated by a weighted value of 1 in column 53 of the Descriptive Line.

CTO (Call Transfer Outside) indicated by a weighted value of 4 in column 53 of the Descriptive Line.

CTI (Call Transfer Individual) indicated by a weighted value of 4 in column 54 of the Descriptive Line.

5ESS Switch Feature:

/MW3WC - for POTS Lines

The following table is used for CENTREX Lines.

Call CTU CTO CTI CTD FEATURE

Hold

dc yes yes yes yes /MWCTIA1

dc yes yes yes no /MWCTIA2

yes no yes yes yes /MWCTII1

no no yes yes yes /MWCTII2

yes no no yes no /MWCTII3

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no no no yes no /MWCTII4

yes no no no no /MWCTA1

no no no no no /MWCTA2

Parameter Forms Completed:

None

Call Pickup

1107 Form:

Type 61 record for Regular CPU

1109 Form:

TAS (Trunk Answer Any Station) indicated by a weight of 1 in column 46.

5ESS Switch Feature:

/CPUO, /CPUT -

if Regular CPU and without TAS or TAS control station

/CPUO2 /CPUT -

if Regular CPU and TAS

/CPUO - if TAS only

Parameter Forms Completed:

pulpa, pumpa

If Regular CPU and TAS then SELQ1 is the TAS Pickup Group Number and SELQ2 is the Regular Pickup Group Number.

Directed Call Pickup - Barge In

1107 Form:

Type 00 record, weighted value of 2 in column 52

1109 Form:

none

5ESS Switch Feature:

/CPUDT - for line with above record

/CPUDO - for all other lines in CENTREX Group

Parameter Forms Completed:

None

Directed Call Pickup - Non-Barge In

1107 Form:

Type 00 record, weighted value of 2 in column 56

1109 Form:

None

5ESS Switch Feature:

/CPDNO - for line with above record

/CPDNT - for all other lines in CENTREX group with

Regular CPU

Parameter Forms Completed:

None

Multiple DN

1107 Form:

Type 00 record, weighted value of 1 in column 72

Type 00 record, weighted value of 2 in column 72

Type 1S record

1109 Form:

None

5ESS Switch Feature:

A mtndr form is completed for each Type 1S record.

Parameter Forms Completed:

cfwlpa

The FORWARD MULTIPE TN field is completed based on the weighted values in column 72.

Distinctive Ringing

1107 Form:

Type 00 record, weighted value of 1 in column 61

Type 00 record, weighted value of 2 in column 61

1109 Form:

DRR (Distinctive Ringing and Call Waiting Tone) indicated by a weighted value of 1 in column 48.

5ESS Switch Feature:

/DRIC - if the line has a weighted value of 1 in column 61.

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/DRCWO - if DRR is indicated and no weighted value of 2 in column 61.

/DRDCW - if DRR is indicated and no weighted value of 2 in column 61.

Parameter Forms Completed:

None

Speed Call

1107 Form:

Types 05, 06, 15, 16, 18 19, 45, 64 and 76 records

1109 Form:

None

5ESS Switch Feature:

Use the following table to determine the speed call feature used for 5E6 and later generics.

1 Digit List

changeable /SC1C

nonchangeable /SC1

2 Digit List

changeable /SC2C

nonchangable /SC2

Parameter Forms Completed: sclpa, scmpa, sclist

IDP

5ESS Switch Feature -

For generics 5E6 and later all lines in a 1/1A ESS Switch CENTREX Group will be assigned the Individual Dialing Plan Feature /IDP.

Parameter Forms Completed: idplpa, idpmpa

ICLID

1107 Form:

Type 1T

1109 Form:

None

5ESS Switch Feature:

/LICNDP - if flat rate billing

/LIDADP - if usage sensative billing

Parameter Forms Completed:

None

Automatic Recall

1107 Form:

Type 1H record

1109 Form:

Automatic Recall Access Codes from Data Type 05 Subtype 31 records.

5ESS Switch Feature:

/LAR1 - if subscription access AR ALW field of LINE form equals Y if Usage Sensative access.

Parameter Forms Completed:

None

Automatic Callback

1107 Form:

Type 1H record

1109 Form:

Automatic Callback Access Codes from Data Type 05 Subtype 31 records.

5ESS Switch Feature:

/LAC1 - if subscription access AC ALW field of LINE form equals Y if Usage Sensative access.

Parameter Forms Completed:

None

Customer Originated Trace

1107 Form:

Type 1H record

1109 Form:

Customer Originated Trace Access Codes from Data Type 05 Subtype 31 records.

5ESS Switch Feature:

/COT1 - if subscription access COT ALW field of LINE form equals "Y" if Usage Sensative access.

Parameter Forms Completed:

None

Per Call Privacy

1107 Form:

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None

1109 Form:

Per Call Privacy Access Codes from Data Type 05 Subtype 31 records.

5ESS Switch Feature:

/DIDNP - if subscription access PCP ALW field of LINE form equals "Y" if Usage Sensative access.

Parameter Forms Completed:

None

Figure 1 LDMAP SYSTEM DESCRIPTION FEATURE MAPPING TABLE

COLUMN	WEIGHT	FEATURE ACRONYM	FEATURE NAME
44	1	OP	Originating Priority
44	2	TP	Terminating Priority
44	4	TST	Test Line
45	4	OSI	Open Switch Interval
46	4	SLL	Sleeve Lead
47	2	AMA	Automatic Message Accounting
47	4	HOM	Hotel-Motel Service
48	1	STB	Special Trunk Billing
50	1	AID	Automatic Identified Outward Dialing
53	1	IMB	Call Forward - Inhibit Make Busy
53	2	ILB	Call Forward - Inhibit Line Busy
53	4	OV	Overflow
54	1	DLY	Delay
54	2	CDA	Customer Data Accumulator
54	4	PDT	Prohibit Terminating Disconnect Timing
55	1	FCA	Flash for City of Origin Announcement
55	2	60A	60A CPS Console
56	4	MBL	Mobile
57	1	MSG	Message Detail
57	2	ITQ	Inhibit Trunk Queuing
57	4	INF	Inflow
58	4	IDB	INWATS Data Base DN Indicator
59	1	IWD	INWATS Directory Number
59	2	TLI	Transmission Loss Insertion
59	4	BIS	Busy Idle Status
60	4	ARQ	Permit Access to Restricted Queue
61	2	DDT	Distinctive Ringing and Call Waiting Tone
64	1	CSR	Customer Station Rearrangement
64	2	IAS	Inactive Line Feature
64	4	AGLI	Agent Login
65	1	UTD	Usage Sensative Three-Way Calling
65	2	TIC	Test Interexchange Carrier
66	1	MWI	Message Waiting Indicator
66	2	TLDN	Temporary Local Directory Number
66	4	SDN	Second Local Directory Number
67	4	HMI	Home Intercom
68	1	CEK	Centrex Electronic Key
68	2	CCPIC	Customer Changeable PIC
68	4	CWC1	City Wide Centrex
69	1	PAS	Project Accounting Service
69	4	SAN	Special Access Number Indicator
70	1	VDP	Voice Data Protection

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70	2	RDF	Residential Data Facility Pooling
70	4	SVP	Single Line Variety Package
71	1	MSC	Message Service Center
71	2	VMW	Visual Message Waiting

Figure 2 LDMAP SYSTEM DESCRIPTION 1107 TYPE 0 NO5E

1107 TYPE	FEATURE ACRONYM	FEATURE NAME
02	MSN	Master Scan Point Number
03	SDN	Signal Distributor Number
04	PBX-MBK	PBX Make-Busy Keys
07	CTS	Cellular Telephone Service
10	OSI	Open Switching Interval
11	AIOD	AIOD Index
12	CGA	Carrier Group Alarm
13	GSAN	Ground Start Applique Number
14	EBN	External Billing Number
17	PNBDN	Public Network Billing Directory Number
20	PMBKEYS	Position Make-Busy Key
21	PREF-MLH	Preferential Multi-Line Hunting Lists
22	SFG-POTS	Simulated Facilities Group - POTS
24	TLG	Traffic Line Group
25	DALTNN	Direct Access Line - Trunk Network Number
27	AGT-MBK	Agent Make-Busy Key
28	INH-INTR	Inhibit Intraflow Key - AQTL Queue
29	NITE-KEY	Local Night Transfer Key
30	SDA	Signal Digit Analysis
31	INTER-Q	Interflow Queue
32	VDC	Visual Display Code
33	IIK	Inhibit Inflow Key
34	60B	60B CPS Console
35	CLDI	Calling Line Display Index
39	CSDC	Circuit Switching Digital Capability
40	CONS-CI	Console Call Indicator Lamp
42	CILA	Call Indicator Lamp - Attendant Intercept
43	CILN	Call Indicator Lamp - No Answer Transfer
44	CILP	Call Indicator Lamp - Incoming Priority
47	STDN	Satellite Transfer Directory Number
48	CCIL	Call Indicator Lamp - Attendant Conference
50	ACOF	Attendant Control of Facilities
53	CIBP	Call Indicator Lamp - Busy Line Incoming
54	CIBD	Call Indicator Lamp - DID/CCSA Busy Line
55	CIBT	Call Indicator Lamp - Tie Line
56	CIDD	Call Indicator Lamp - Don't Answer
57	CIAP	Call Indicator Lamp - Direct Dial
58	CIDP	Call Indicator Lamp - Priority AUTOVON
59	SFG-CTX	Simulated Facilities Group - CTX
60	RLS	Release Link Satellite
63	TGN-LPS	Trunk Group Busy Lamps
65	DAG	Data Accumulation Group
66	CSDD	Call Store Data Display
67	CDAR	Customer Dialed Account Recording
68	QNS	Queue Number - Split
69	NORG	Split/Reporting Group Size
70	SUR	Surcharge for Hotel/Motel
71	ACMOS	ACMOS for Selected Intercom Calls
72	DLG	Data Link Groups
73	SCRAF-AC	CSRAF Security Authorization Code
74	VML	CSRAF Variable Message Length Channel
75	CSRAF-IV	CSRAF In-Service Verify
77	OTQ1	Outgoing Trunk Queuing
79	CFG	Customer Facility Groups
80	STAR	Silence - Tone - Audible Ringing
81	APCF	AUTOVON Priority Call Forwarding
82	ACS-MDR	Authorization Code Screening

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83	DNCI	Dedicated Network Customer Number
84	CFPF-A	Call Forwarding Private Facilities
85	CPUG	Centrex Group to Call Pickup
86	CFPF	Call Forwarding Private Facilities
87	CFPF	Call Forwarding Private Facilities
88	CTX-CI	Centrex Carrier Interconnect
89	CWC1	City Wide Centrex
90	LASS-SL	LASS - Screen List
91	BCLID	Bulk Calling Line Identification
92	BCLID	Bulk Calling Line Identification
93	SCF	LASS- Selective Call Forward
1A	MDS	Message Desk Service
1B	APX-CF	Autoplex 100 Call Forward
1C	TLDN-MIN	TLDN to Mobile Identification Number
1D	ICLID	Individual Calling Line Identification
1G	LSA	Limited Service Area
1J	SCR	Selective Call Reject
1K	SCF	Selective Call Forward
1L	DA	Distinctive Alert
1M	BCLID	Bulk Calling Line Identification
1N	RA	Remote Access Service
1P	APX-PCD	Paging Code Data
1Q	VDP	Voice Data Protection
1U	DN-CTX	DN-CTX Extension Digit Replacement
1V	SCD	Selective Carrier Denial
1W	SCF	Separation of Selective Call Forward

Figure 3 LDMAP SYSTEM DESCRIPTION 1107 TYPE NO5E

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SEC. 12: ODA OFF-LINE LARGE TERMINAL GROWTH PLAN

1. GENERAL

This section describes the LTG (Large Terminal Growth) software schedule and the software tools provided by the 5ODA system to grow the ODD (Office Dependent Data). Growth data (non-equipment data) will be added to the existing (dumped) data on an off-line processor at the ODA production facility at either the Network Software Center or Lisle Center 5ESS Switch ODA Production Facility. The ODA off-line process merges the growth and existing data and the complete input forms database processed through mapping and **dbgen**, and delivered to the office site.

This section describes the responsibilities of the Lucent Technologies SEE (System Equipment Engineer) for the large terminal growth procedure. The following steps are necessary to perform the ODD growth:

1. decompile the ODD from binary to ascii base relations,
2. reverse map the dumped data to the existing compatible software release to the ODA input view database,
3. merge the dumped data with the new growth (non-equipment) data,
4. perform the database validity checks, and
5. map the input data into a new machine loadable database.

For 5E6 and later LTGs, an additional optional off-site procedure can be added. Seventeen days of recent changes can be reapplied after the data has been mapped to the final machine loadable format.

The OSDM (Office Software Database Management) organization at NSC monitors the general progress of each office. The success of this off-site processing depends on the timely completion of the LTG schedule requirements. The *final* interval outlined for the off-site processing is a very tight schedule. However, the schedule can be met if each day's objectives are met.

2. LARGE TERMINAL GROWTH REGISTRATION

Before any office can begin off-line growth procedures, the office must be registered in the 5ODA registration system at least 6 weeks prior to the date the preliminary off-site processing is scheduled to begin. The procedure to register a large terminal growth office is the same procedure used to register initial orders. This procedure is described in detail in Division 1, Section 7,*5ODA User's Guide*. After the registration form has been completed and inserted into the registration database, the OSDM organization is automatically notified of the registration and begins initialization procedures. Four logins are set up for each large terminal growth office. One login is provided for the Lucent Technologies SEE. This login is the six character alphanumeric base and control number preceded by *we* (e.g. we1234d0). Two logins are set up for customer use, one is for line (li) error correction (e.g. li1234d0) and the other is for trunk (tr) error correction (e.g. tr1234d0). The support organizations are provided a login which is the office's base and control number preceded by *re* (e.g. re1234d0). This last login is a read-only login to review the office input data. Login procedures are described in Division 1, Section 7, the *5ODA User's Guide*.

3. LARGE TERMINAL GROWTH TAPE REQUIREMENTS

The customer must provide three sets of tapes for LTG,

1. the new bulk data tape,
2. the *Preliminary Dump* tape, and
3. the *Final Dump* tape.

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Only one set of tapes is required for the preliminary dump. The final dump requires two sets of tapes of the ODD and ECD. All the tapes are required to be 2400 foot 9-track magnetic tapes. All of the tapes must be labeled with the following information:

- the office name.
- the office base and control number.
- the content of the tape; whether ODD or ECD, and if it is the preliminary dump, the final dump, or the new bulk data.
- the date that the dump occurred (if dump tape).
- the Software Release issue and release of the dump (if dump tape).
- the tape series number of the total number of tapes (e.g. 1 of 5, 2 of 5, etc.).

The new bulk data tapes are sent to the OSDM group located at the Network Software Center. The actual dump of the ODD and ECD from the 5ESS Switch is performed by the customer or Lucent Technologies. The tapes for both the preliminary and final dumps are shipped air express (overnight carrier only) to the OSDM group at the following address:

Send ODD/ECD tapes to:	**Send new bulk data tapes to:**
Lucent Technologies Network Software Center 2600 Warrenville Rd. Lisle, Illinois 60532	Lucent Technologies Network Software Center 2600 Warrenville Rd. Lisle, Illinois 60532
Attn: 5ESS Switch ODD/ECD	Attn: ODA Tape Processing

The ECD, ODD, and new bulk data tapes are read into the appropriate directory structure on the production computer.

The following sections will detail the processing required for both the preliminary and final office dumps.

4. LARGE TERMINAL GROWTH SCHEDULES

The standard interval for off-line large terminal growth of the ODD and ECD is 5 weeks. This includes the preliminary dump and the final dump of the ODD and ECD.

The time interval for the preliminary dump processing is 3 weeks. The SEE processes the preliminary dump, using manual data entry to remove all Level 1, 2, and 3 errors from the dumped database. The purpose of the preliminary dump is to analyze any database inconsistencies, and to anticipate the amount of error correction required in the final dump.

For 5E5, the final dump is processed within a 12 day interval. For 5E6 and later, the final dump interval is 17 days. The SEE ensures that the daily goals of the software schedule, outlined in the following section, are met.

The following schedule outlines the preliminary and final dump processes showing the time line in weeks and days ending with the Friday night of the on-site large terminal growth.

4.1 Registration, Initialization, Load New Data

An office must first be registered and initialized before any processing of the data.

4.1.1 Week - 13

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The SEE registers the office.

4.1.2 Week - 7

1. OSDM initializes the office and the logins on the appropriate 5ODA production machine.

2. A new database is initialized containing only standard non-equipment data. Therefore, all form types are accessible, except those that start with **eq**.

3. When the bulk data tape arrives, the OSDM group loads the tape into the new database using the **readbatch** and **batchload** commands. The **batchload** command ensures that all the data records are marked internally as new data. All data that is manually inserted is also marked as new data.

4. The SEE and the customer then correct any existing errors. The SEE executes the **crosscheck** command to identify any cross check errors in the database, which then must be corrected. All Level 1, 2, and 3 errors are removed from the new database before it is merged with the preliminary dump data.

4.2 Preliminary Dump

A detailed LTG schedule can be viewed on the 5ODA PSS (Production Scheduling System). This schedule is automatically generated in PSS based on the on-site LTG date. The OSDM will provide instructions on how to access the PSS data if needed. All preliminary dump processing is the responsibility of the SEE. The time interval for the preliminary dump processing is 18 days and should be concluded 2 weeks prior to the on-site large terminal growth date.

4.2.1 Week - 5

1. The customer dumps the ODD and ECD on separate tapes and duplicates them. (The ECD dump is needed to determine the office VTOC (Volume Table of Contents)). The tapes are sent to the OSDM group which is located at the Lisle 5ESS Switch Production Facility.

2. OSDM loads the tapes onto the appropriate 5ODA production machine.

3. The **readdump** command reads the dump tapes onto the processing machine.

4. Following a successful **readdump**, the **revdbgen revmapping** process is automatically submitted to decompile the ODD and recover the dumped data to existing compatible software release version of the 5ODA input forms. This process automatically generates a file of base relation cross checks **(basecheck)**.

5. The SEE uses the **crosscheck** command and manual data entry to remove all errors from the preliminary dump database. The data must be free of all Level 1, 2, and 3 errors prior to merging with the new growth data.

6. The SEE then contacts OSDM to have the new growth data added to the preliminary office dump. OSDM uses the **merge** command to merge the new data with the data from the preliminary dump to create the preliminary merged database.

7. During the merge, duplicate records may be produced. These records will not be inserted into the merged database. The duplicate records are saved in the **prntfiles** directory where the SEE and the 5ODA Customer Technical Support can review them.

8. The SEE uses the **crosscheck** command and manual data entry to remove all errors from the preliminary merged database.

9. Base relation cross checks (**basechecks**) are analyzed by the 5ODA Customer Technical Support,

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and they determine if the update should be applied on-site before the final dump is made.

10. The SEE reviews the analysis report, which is automatically generated during the preliminary data dump processing, to ensure that the office has enough memory.

11. OSDM prepares the preliminary dump database for the final office dump using the command **finalgrow**. The office records in the **prntfiles** directory are saved in the **preprntfiles** directory. All other data from the preliminary dump is removed.

12. This completes the preliminary processing.

4.3 Final Dump

The following steps occur in the 12 day (5E5) or 17 day (5E6 and later) interval prior to the on-site LTG. Any differences between schedules for 5E5 and 5E6 and later are noted for the specific step.

4.3.1 Week - 2 Tuesday (5E5)
Week - 3 Friday (5E6 and later)

1. The final office dump, which was performed on the preceding Monday for 5E5 or the preceding Wednesday for 5E6 and later, must arrive at the Lisle 5ESS Switch Production Facility by 9AM Tuesday (5E5) or Friday (5E6 and later). The OSDM group loads the final dump tapes using the **readdump** command. The reverse process, **revdbgen and revmapping**, is then executed. The process decompiles the dumped ODD, automatically performs base relation crosschecks, and automatically runs Level 1 and Level 2 error checks.

4.3.2 Week - 2 Wednesday (5E5)
Thursday (5E6 and later)

1. When these processes have completed successfully, the final dump database is opened up to the SEE for error correction. The SEE uses the **crosscheck** command and manual data entry to remove all Level 1, 2, and 3 errors from the database.

2. The SEE uses the **crosscheck** command and manual data entry to remove all Level 1, 2, and 3 errors from the new growth data. The new data must be free of all Level 1, 2, and 3 errors prior to merging with the final dump database.

3. The SEE contacts 5ODA Customer Technical Support to have the new growth data added to the final office dump. Both the final dump database and the database containing the new data must be free of Level 1, 2, and 3 errors. OSDM use the **merge** command to merge the new data with the data from the final dump to create the merged database.

4. During the merge, duplicate records may be produced. These records are not inserted into the merged database. The duplicate records are saved in the **prntfiles** directory where they can be viewed by the SEE and the 5ODA Customer Technical Support.

4.3.3 Week - 2 Friday (5E5)
Saturday (5E6 and later)

1. The SEE uses the **crosscheck** command and manual data entry to remove all errors from the merged database.

2. The merged database must be error free by noon Saturday when it will be frozen. Once the database is frozen, the SEE executes the **mapping** and **dbgen** commands which map the data into 5ESS Switch base relations and generates the new ODD. This large processing routine requires

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the weekend to process so that the large terminal growth schedule can be met.

3. The office records are generated.

4.3.4 Week - 1 Monday

1. The **mapping** and/or **dbgen** problems are resolved by Monday morning. 5ODA Customer Technical Support reviews the results of the **dbgen** command.

   For 5E6 or later, the customer can apply the last 17 days of recent changes to the ODDs. The Recent Change log file is electronically transferred from the 5ESS Switch site to the Lisle Center 5ESS Switch ODA Production Facility via SCANS (Software Change Administration and Notification System). The RC log file is first transferred from the switch to a SCANS machine by Lucent Technologies SUMS (Software Update Management System) personnel. It is then automatically transferred to the 5ODA production machine for **offrcr** command processing. If the **dbgen** command has completed successfully, the **moverscan** process automatically submits **offrcr**.

2. The OSDM group executes the **maketape ldft** command to generate the new ODD tapes. They also produce the hard copy listings of the office records and the functional listings. One copy of each is mailed to the site along with the ODD tape(s). A tape of the office records and functional listings is sent to the SEE responsible for the office.

4.3.5 Week - 1 Tuesday

1. After tape verification, the ODD tape(s) are transferred from Lisle Center 5ESS Switch ODA Production Facility to the Network Software Center for packaging and shipping preparation.

2. For offices that have run **offrcr**, the OSDM generates a hard copy listing of the recent changes which were *not* reapplied to the ODD. The OSDM also generates a hard copy listing of the recent changes which were successfully reapplied to the ODD. Both of the above items are mailed back to the site along with the ODD tape(s), office records, and functional listings.

4.3.6 Week - 1 Wednesday:

1. OSDM packages and ships 2 copies of the merged ODD tape(s), 1 copy of office records, and 1 copy of the functional listing to the site. In addition to the above items, for 5E6 and later LTGs, OSDM packages and ships 2 copies of the failed recent change listing and 1 copy of the successfully reapplied recent change listing.

4.3.7 Week - 1 Friday:

1. On-site large terminal growth occurs.

5. SPECIAL NOTES

The above schedule is critical to the success of each large terminal growth. It is the System Equipment Engineer's responsibility to ensure that these dates are met. The dates listed above for data entry, database evolution, input form crosschecks, **mapping** and **dbgen**, and **offrcr** for 5E6 and later are the *latest* dates possible to guarantee a timely ODD delivery. If these benchmarks are met earlier, this helps to ensure the timely delivery of the ODD and the merged database to the site.

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SUMMARY OF LTG PROCEDURE (5E6 and Later)		
Week From LTG Date	**Day**	**Action**
Week - 13		SEE registers office.
Week - 7		1) Initialize offices on production machine; 2) load new bulk data; 3) analyze level 1, 2, and 3 errors on the new data.
Preliminary Dump		
Weeks - 5 & - 4		1) Read in preliminary dump tapes; 2) decompile ODDs to input forms; 3) analyze and clean level 1, 2, and 3 errors from dumped data; 4) merge new growth data to dumped data; 5) analyze duplicate records; 6) analyze and clean level 1, 2, and 3 errors from merged data; 7) review "analysis" report for memory size; 8) OSDM prepare for final dump.
Final Dump		
Week - 3	Fri	1) Read in final dump tapes; 2) decompile ODDs to input forms.
Week - 2	Wed-Thur	1) Clean level 1, 2, and 3 errors on dumped data; 2) clean level 1, 2, and 3 errors on the new data; 3) merge the new growth data to the dumped data.
Week - 2	Fri-Sat	1) Clean level 3 errors on merged data; 2) map error free input forms to new base relations; 3) submit **dbgen** to build new ODDs; 4) generate office records.
Week - 1	Mon	1) Receive RC log file; 2) apply log file to new ODDs; 3) generate new ODD tape.
Week - 1	Tue-Wed	1) Generate new ODD tapes; 2) generate RC reports, office record, and functional listing.
Week - 1	Wed-Thur	1) Tape verification; 2) ship tapes and listings.
Week - 1	Fri	On-site large terminal growth.

Figure 1 SUMMARY OF LARGE TERMINAL GROWTH SCHEDULE (5E6 AND LATER)

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SEC. 13: ODA OFF-LINE RETROFIT PLAN

1. GENERAL

This document presents the scheduling plans and procedures necessary to successfully perform an off-line retrofit of a 5ESS Switch ODD and ECD. It is written for the Lucent Technologies Systems Equipment Engineer and explains the software tools provided by the 5ODA system to perform the ODD and ECD retrofit.

The success or failure of a scheduled 5ESS Switch office retrofit and a subsequent office growth, depends on the delivery of the ODD and ECD at the time dictated by the procedures enclosed. The SEE (Systems Equipment Engineer) is responsible for execution of the retrofit data generation procedures. The SEE must insure that data error corrections are valid and applied to the database within the time constraints.

This document describes the current retrofit software schedule and software tools provided by the 5ODA system to retrofit the ODD (Office Dependent Data) and the ECD (Equipment Configuration Data) from one version of the 5ESS Switch Software Release to another. These databases are retrofitted on an off-line processor at the 5ODA production facility located at the Lisle Center 5ESS Switch ODA Production Facility or the Network Software Center in Lisle, Illinois.

The goal of these retrofit procedures is to upgrade office databases (ODD and ECD) to a new software release load. To retrofit an office to a new software release, the ODD and ECD must be reformatted. The physical structure of ODD and ECD is typically not upward compatible with the new release of the software.

1.1 Command Steps For ODD Retrofit

The following are the command steps necessary to perform the ODD retrofit:

- decompile the ODD from binary to ASCII base relations,
- cross check the decompiled base relations,
- reverse map the dumped data to the compatible existing software release of the ODA input view data base,
- evolve the ODD and ECD to the new software release compatible format,
- correct any inconsistency in the input database,
- perform the input view database validity checks, and
- map the input data into a new machine loadable database.
- In addition, seventeen days of recent changes will be reapplied after the data has been mapped to machine loadable format.

The OSDM (Office Software Database Management) organization at NSC monitors the general progress of each retrofit. The OSDM is responsible for filing a formal "jeopardy" report if a retrofit postponement is possible because processing is behind schedule. A postponed retrofit effort may cause a slip of several months and will require the entire retrofit process to begin again. This includes re-negotiation with the customer, scheduling of a new retrofit date, re-dumping the ODD/ECD, re-analysis of the new dumps by 5ODA Customer Technical Support, the re-application of error correction by the Systems Equipment Engineer and computer processing. Therefore, every effort must be made to keep a retrofit on schedule.

The "final" 17 day interval for retrofits outlined for the off-site processing is a very tight schedule. Experience has shown that this schedule can be met, if the Systems Equipment Engineer responsible for

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the retrofit strictly adheres to each day's objectives.

2. RETROFIT REGISTRATION

Before any office can begin retrofit procedures, the office must be "registered" in the 5ODA registration system at least 4 weeks prior to the date the off-site processing at NSC is scheduled to begin processing. The procedure to register a retrofit office is the same procedure used to register initial orders. This procedure is described in detail in Division 1, Section 7, "The 5ODA User's Guide". After the registration form has been completed and inserted into the registration database, the 5ESS Switch Software Production Organization is automatically notified of the new registration and begins initialization procedures. Four logins are set up for each retrofit office. One login is provided for the Lucent Technologies System Equipment Engineer. This login consists of a six alphanumeric base and control number preceded by 'we' (e.g. we1234d0). Two logins are set up for customer use for line and trunk error correction (e.g. li1234d0 and tr1234d0). The fourth login consisting of the office's base and control preceded by 're' (e.g. re1234d0) is a read-only login for the support organization to review the office input data. Login procedures are described in the Division 1, Section 7.

3. RETROFIT TAPE REQUIREMENTS

The customer dumps the ODD and ECD onto a tape five weeks prior to the retrofit and again 17 days before the actual retrofit. The first data dump is the "Preliminary Dump" and the second data dump is the "Final Dump". The preliminary dump requires one set of dump tapes, while the final dump requires two sets of dump tapes. The dump tape for the ODD and ECD must be a 2400 foot 9-track magnetic tape. Tapes must be labeled with the following information:

- the office name,
- the office base and control,
- the content, whether ODD or ECD, preliminary or final dump,
- the date dump occurred,
- the Software Release type, issues, and release of the dump, and
- the tape series number (e.g. 1 of 5, 2 of 5, etc.).

The actual dump of the ODD and ECD from the 5ESS Switch is performed either by the customer or Lucent Technologies. Tapes for preliminary and final dumps are shipped air express (overnight carrier only) to the Office Software Database Management group at the following address:

- Lucent Technologies
- Network Software Center
- 2600 Warrenville Rd.
- Lisle, Illinois 60532

Attn: ODA Tape Processing

The ECD/ODD tapes are read into the appropriate 5ODA production machine. The Systems Equipment Engineer responsible for the retrofit is notified by the Office Software Database Management group on which production machine the retrofit will be processed.

4. RETROFIT SCHEDULES

The standard interval for off-line retrofit of the ODD and ECD is 5 weeks. This includes the preliminary dump and the final dump of the ODD and ECD.

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The time interval allowed for the preliminary dump processing is 3 weeks. The Systems Equipment Engineer is responsible for the processing of the preliminary dump. After the ODD is decompiled, base relation inconsistencies are identified and analyzed by 5ODA Customer Technical Support. Most problems are corrected by the SEE and customer at the input form level. Recent Change updates and/or overwrites to the live switch will be determined if absolutely necessary, on a case-by-case basis, by the 5ODA Customer Technical Support group. The purpose of the preliminary dump is to analyze any database inconsistencies, identify data to be corrected on switch before final dump, and to anticipate the amount of error correction required in the final dump.

The time allowed for the final dump is 17 days. The Systems Equipment Engineer assigned to the retrofit is responsible for insuring that the schedule outlined in this section is met. The final dump period is a tight schedule. Experience has shown that the schedule can be met if the daily goals are met.

Note that non-standard database configurations are not supported. 5ODA only rebuilds to standard data conditions.

The following schedule shows the time line in weeks and days prior to the Friday night retrofit date.

Week -10:

The SEE registers the office.

Week -7:

OSDM initializes the logins and office on the appropriate 5ODA production machine. A report is sent electronically to the SPOC (Single Point of Contact) at the region identifying the production machine on which the office will be processed.

4.1 The Preliminary Dump

After the registration, a detailed day-by-day retrofit schedule may be viewed on the 5ODA PSS (Production Scheduling System). The daily benchmark dates are automatically generated in PSS based on the date of the on-site retrofit. Contact the Office Software Database Management organization at NSC for instructions on how to access the PSS database. All preliminary dump processing is the responsibility of the Systems Equipment Engineer.

The following procedures begin 5 weeks prior to the actual on-site retrofit and complete 2 weeks before the on-site retrofit.

Week -5:

1. The customer dumps the ODD and ECD to tape(s). The tapes are sent to the OSDM located at the Lisle 5ESS Switch Production Facility.

2. OSDM loads the tapes onto the appropriate 5ODA production machine.

3. Following a successful **readdump**, the **revdbgen revmapping** process is submitted automatically to decompile the ODD and recover the dumped data to the existing compatible software release version of 5ODA input forms. This process automatically generates a file of base relation cross checks via the **basecheck** command.

4. The base relation checks, **basecheck** are analyzed by 5ODA Customer Technical Support. The Customer Technical Support determines whether or not the Recent Change update will be applied on-site before the final dump is made. This listing may be viewed by executing **listf basecheck**.

The SEE should analyze all Level 1, Level 2, and Level 3 errors that exist in the new target software release input view database. The commands used are **errforms**, **de**, and **crosscheck**.

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1. Review "analysis" to insure the office has enough memory.

This completes the "preliminary" processing.

4.2 The Final Dump

The following steps occur within the 17 day interval before the on-site retrofit is to occur. All command execution and data correction is performed by the SEE. The steps are broken down by day.

- ***NOTE:*** The objective for each day must be strictly adhered to or the retrofit date may be jeopardized.

Week -3 Friday:

1. The final dump of the ODD and ECD, which was performed the preceding Wednesday, must arrive at the Lisle 5ESS Production Facility by 9AM on Friday, Week -3. The customer must send two sets of final dump tapes.
2. OSDM loads the tapes on the appropriate 5ODA production machine.
3. Following a successful **readdump** the **revdbgen revmapping** is automatically submitted to decompile the ODD and recover the dumped data to existing software release compatible version of 5ODA input forms. This process automatically generates base relation cross checks (**basecheck**).
4. 5ODA Customer Technical Support analyzes the base relation crosscheck errors generated as part of the reverse mapping process. These errors are then analyzed against the error listing from the preliminary dump. If there are differences, the SEE and/or the customer will be contacted if needed.
5. Following a successful reverse mapping the office is automatically evolved to the new software release input database. The process automatically runs Level 1 and Level 2 error checks. The output of the error check run may be viewed by executing **listf errforms.EVL**

Week -2 Monday:

1. The new software release ODA input database is open and available for Level 1, Level 2, and Level 3 error correction. Both the SEE and the customer use

- the **de** command to perform data entry,
- the **errforms** command to generate Level 1 and Level 2 error listings, and
- the **crosscheck** command to generate listings of Level 3 errors and to freeze the database.

1. The **thaw** command is used if more data entry is needed. At this time some input forms may be locked due to the sensitivity of the data.

- ***NOTE:*** Only error correction may be done. **NO GROWTH DATA IS ALLOWED.**

This data entry window is available Wednesday through Friday and must be strictly adhered to, or the retrofit date may be in jeopardy.

Week -2 Saturday:

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1. By Saturday morning, the input database must be totally error free and frozen.

2. The SEE executes the **mapping** command before 5 P.M. on Friday. The **mapping** command maps the input data into 5ESS Switch base relations to generate the new ODD.

3. The ECD is evolved by the **evolecd** command that is automatically called from the **mapping** command.

4. The SEE executes the **records every** command to generate a complete list of office records.

Week -1 Sunday:

1. 5ODA Customer Technical Support reviews the mapping output and submits **dbgen.**

Week -1 Monday:

1. **Mapping** and/or **dbgen** problems are resolved by Monday morning. 5ODA Customer Technical Support reviews **dbgen** results.

2. The customer can apply the last 17 days of recent changes to the new ODDs. The Recent Change log file is electronically transferred from the 5ESS Switch site to Lisle Center 5ESS ODA Production Facility via SCANS (the Software Change Administration and Notification System). The RC log file is first transferred from the switch to a SCANS machine by Lucent Technologies SUMS (Software Update Management System) personnel. It is then automatically transferred to the 5ODA production machine for **offrcr** processing. If **dbgen** has completed successfully, the **moverscan** process will automatically submit **offrcr**.

Week -1 Tuesday:

1. OSDM generates the merged ODD and ECD tape.

2. If an office has run the **offrcr** process, OSDM generates a hard copy listing of successful and non-successful Recent Changes applied to the ODD. The Recent Changes that were not successful are placed on the ODD/ECD tape to be used on site in the post-**offrcr** process the night of the retrofit.

3. OSDM generates hard copy listings of the office records, functional listing, and **offrcr** reports. One copy of each is mailed to the site along with the ODD/ECD tape(s).

Week -1 Wednesday:

1. After tape verification, the ODD/ECD tape(s) are transferred from the Lisle Center 5ESS Switch ODA Production Facility to the Network Software Center for packaging and shipping preparation.

2. OSDM packages and ships 2 copies of the merged ODD/ECD tape(s), 1 copy of office records, 1 copy of the functional listing to the site. For offices that used the **offrcr** process, OSDM packages and ships 2 copies of the failed recent change listing and 1 copy of the successfully reapplied recent change listing.

Week -1 Friday:

1. On-site retrofit occurs.

5. SPECIAL NOTES

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It is important to note that the above dates are critical to the success of each retrofit. It is the Systems Equipment Engineer's responsibility to ensure that these dates are met. The dates listed above for data entry, database evolution, input form crosschecks, **mapping** and **dbgen**, and **offrcr** are the *latest* dates possible to guarantee ODD delivery. These benchmarks, *if met earlier*, will help ensure the timely delivery of the ODD/ECD to site.

If there is a data problem that cannot be resolved, the entire retrofit process will be postponed until a correction is found and implemented. All parties involved in each off-line retrofit of ODD/ECD (Software Production, SEE, 5ODA Customer Technical Support, and customer) must provide off-hours support, if needed.

The following table summarizes the retrofit schedule.

SUMMARY OF RETROFIT SCHEDULE

Week From Retrofit Date	Day	Action
Week -10		SEE registers office.
Week -7		Initialize offices on production machine.
		Preliminary Dump
Weeks -5 & -4		1) Read in preliminary dump tapes; 2) Decompile ODDs to input forms; 3) Evolve input forms to new software release; 4) Analyze level 1
		Final Dump
Week -3	Fri	1)Read in final dump tapes; 2) Decompile ODDs to input forms; 3) Evolve input forms to new software release.
Week -2	Mon-Fri	Clean level 1
Week -2	Fri-Sat	1) Map error free input forms to new base relations; 2) Evolve ECD; 3) Generate office records.
Week -1	Sun	1) Verify **mapping** output; 2) Submit **dbgen** to build new ODDs.
Week -1	Mon-Tue	1) Receive RC log file; 2) Apply log file to new ODDs.
Week -1	Tue-Wed	1) Generate new ODD/ECD tapes; 2) Generate RC reports, office record, and functional listing.
Week -1	Wed-Thur	1) Verify tape; 2) Ship tapes and listings.
Week -1	Fri	On site retrofit.

Figure 1 SUMMARY OF RETROFIT SCHEDULE

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DIV. 2: FEATURES

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SEC. 1: GENERAL FEATURES

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SEC. 1A: CHARGE-A-CALL

1. FEATURE DESCRIPTION

The Charge-A-Call feature allows a customer to use a special coinless public telephone, instead of the conventional coin station, to make calls not requiring a coin deposit. Only those calls that do not require a coin deposit are allowed from a Charge-A-Call station. Failure Treatment is given on calls that require a coin deposit.

The only calls allowed from a Charge-A-Call station are those not requiring a coin deposit. These calls are of the following types:

- 0- - Dial zero for operator
- 0+ - For customer-dialed toll calls which require TSPS operator assistance
- 01+ - For customer-dialed international calls
- 010 - For calls to the overseas operator
- (1+)800+XXX+XXXX - For toll-free INWATS calls
- (1+)555+XXXX - For Directory Assistance within the local area code
- (1+)NPA+555+XXXX - For long distance Directory Assistance
- N11 - For calls to local Directory Assistance, Emergency Service Bureau, etc.

The Charge-A-Call feature using a CLASS OF SERVICE of "CHGCALL", defined on the LCC form (5306 Record) will not generate an AMA (Automatic Message Accounting) record for the owner of the public phone. The customer using the public phone will be billed directly.

Customer owned coin phones are able to originate 1+ 10-digit calls when a CLASS OF SERVICE of "CHGCALL" is defined on a LCC form and "Y" is entered in the ANI7 field of the LINE form (5109 Record). 1+ 7-digit calls are not affected by the ANI7 field. ANI7 calls from a CLASS OF SERVICE of "CHGCALL" are only for 1+ 10-digit calls with a prefix of one or none. An AMA record will not be generated for the owner of the coin station.

A special software routine is used when ten-digit calls (excluding prefix) are originated by a customer with a Charge-A-Call Class Of Service. If the Call Type on the LDIT form (5300-3 Record) is "NORMAL", then the digits 4, 5 and 6 are checked. If they are 555, then the call is allowed to continue. If not, then the prefix dialed is checked. Only 0+ calls are allowed to continue. If a Normal ten-digit call is not (1+)NPA+555+XXXX or is not dialed with a 0+, the Fixed Route type of "CAC" is checked to determine how to terminate the call. This is typically an announcement instructing the customer to place the call from a coin station. This special software routine was designed to allow the long distance Directory Assistance calls without requiring the 5ESS owner to build these digits out in digit analysis.

Other disallowed calls originated by a Charge-A-Call customer must be failed through entries on the RAR form (5301 Record). Calls that are inappropriate for this class of customer should have the Route Index entered that is associated with the failure treatment designated by the Fixed Route Type, CAC, (e.g., the special announcement).

Free calls are allowed by appropriate Route Index entries on the RAR form. The majority of calls permitted from this class of customer will be 0+ and destined for the TSPS operator. These calls require the TSPS Route Index entry.

If the call is allowed from the Charge-A-Call station, it is processed as a normal POTS call. If the call

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required TSPS handling, an information digit 7 is outpulsed to inform the TSPS to do further screening on the call. If the call does not require a coin deposit, TSPS processes the call. If a deposit is required, the TSPS operator tells the customer to place the call from a coin station.

2. TRANSLATION REQUIREMENTS

2.1 ROUTING AND CHARGING TRANSLATIONS

LCC form (5306 Record) - Enter CHGCALL in the Class Of Service field.

FIXRT form (5301-1 Record) - Build Fixed Route Type, CAC. Normally, a Route Index, which must be defined on the RTIDX form (5303 Record) will be entered so this condition will route to a special announcement.

RAR form (5301 Record) - Enter the appropriate Route Indexes on the table associated with this Class Of Service to route the call to announcement (for calls not allowed), to a Regular Route Index (for free calls that are allowed such as N11, INWATS and long distance Directory Assistance), or to a TSPS Route Index (for nonfree, allowable calls).

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SEC. 1B: DIVISION OF REVENUE

1. FEATURE DESCRIPTION

The DOR (Division of Revenue) feature provides the capability of performing Separation Studies of incoming and outgoing calls. For traffic separations purposes, every incoming or originating call is assigned an INSEP (Incoming Separation Class) and a DESEP (Destination Separation Class). INSEP/DESEP assignment is based on the following criteria:

- Geographical area in which the trunk or line originates,
- Ownership
- Service Class or domain or the originator,
- Type of traffic (e.g., toll, EAS, or local exchange).

The INSEP and DESEP of a call ultimately determine the appropriate accumulating counters to be updated. There is a maximum of 256 INSEPs and 256 DESEPs, therefore 65,536 possible pairs. Each pair may update more than one counter, thus, intermediate counters are used.

The INSEPs and DESEPs are used as indexes into a matrix. Each matrix element, called a cell, contains a pointer to one intermediate counter or cell grouping, which should be updated.

Every call through the 5ESS Switch is recorded in the DOR cell group report. CELL GROUP 0 has always been used as a default cell group for calls that are not applicable to DOR (i.e. busy , reorder, permanent signal , vacant code etc). However, calls with translation problems were also defaulted to cell group 0.

For 5E7 and later, to separate the calls that had translation problems from the calls that are not applicable to DOR, each call is initialized to the following "switch defaults":

- INSEP of 63
- DESEP of 63
- CELL GROUP of 1023.

If a call is not applicable as a DOR call then the call is recorded in the switch default CELL GROUP 1023 or Cell Groups translated with a INSEP/DESEP value of 63, and all translational problem calls are recorded in default CELL GROUP 0.

INSEP/DESEP values of 0 and 63 should not be assigned. An INSEP and DESEP of 0 is used whenever INSEP and/or DESEP is not provided by the line, trunk, or routing translations. The INSEP and DESEP of 63 and a CELL GROUP of 1023 are Switch defaults which are used for calls that are not applicable to DOR.

CELL GROUP 0 is the default cell group. Valid DOR calls not assigned an INSEP and/or DESEP value use INSEP/DESEP 0.

CELL GROUP 1023 is the Switch default cell group. When a call that is not applicable to DOR, the Division of Revenue CELL GROUP 1023 collects the data.

CELL GROUPs translated with DESEP values of 63 include calls routed to a permanent signal, because a call to permanent signal never receives a digit with which to read the database for a DESEP value. A switch default INSEP and DESEP value of 63 is used for non DOR calls, because these calls do not use the INSEP or DESEP database values.

The intermediate results contained in the cell groupings are periodically accumulated into SSR (Separations Summarization Registers). The translations from cell grouping to summary register is a

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mapping function. This mapping, the mapping from INSEP/DESEP pair to cell grouping and the INSEP/DESEP assignment process, are generated by a Division of Revenue administrator.

Division of Revenue measurements can be classified according to the studies in which they are included. There are three types of traffic Separations Studies:

1. monthly studies
2. periodic studies
3. special separations studies

Monthly studies are performed for either a 120 or a 168 hour period during the first or second week of each month. In most cases, a monthly study only includes Peg Counts.

Periodic studies are performed approximately every three years. These studies include the measurements taken monthly as well as additional measurements. Both Peg and Usage Counts are taken for all measurements included in a periodic study.

Special separations studies may be performed occasionally to collect office separations data not normally found in Division of Revenue reports. This type of study temporarily assigns SSRs for special measurements. The special separations mappings are either substituted for or added to the mappings described above.

Division of Revenue measurements are not taken continuously. Furthermore, the frequency and content of DOR reports may change according to the DOR configuration.

The 5ESS Switch provides the flexibility required for the different studies and counts through options set during the ODA process on the OFCOPT form (5509 Record), or through Recent Change.

The master Division of Revenue input turns on the mechanisms of traffic separations. There are no timing mechanisms for automatic control.

A frequency field input determines whether reports will be generated on an hourly basis. Twenty four hour reports are generated regardless of this entry.

A content field input signifies whether peg only, usage only, or peg and usage reports are being generated. The frequency and the content input are mutually independent of each other. Neither is activated if the master Division of Revenue is inactivated.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
IDDD	5307	3	3T	9.6
INDIT	5309	3	3V	9.5
LCC	5306	3	3S	4.1
LDIT	5300-3/5	3	3C	9.3
OFCOPT	5509	3	5I	8.1 8.15
PDIT	5300-2	3	3B	9.2
TKGRP	5202	3	2A	5.1
TRFSEP	5308	3	3U	8.4

2.1 TRUNK TRANSLATIONS

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). For incoming and two-way Trunk Groups which require traffic separations studies, enter an INSEP to indicate Incoming

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Separation Class.

2.2 ROUTING AND CHARGING TRANSLATIONS

IDDD form (5307 Record) - This form is used for IDDD (International Direct Distance Dialing) Country Access Codes. Enter DESEP to indicate Destination Separation Class.

INDIT form (5309 Record) - This form is used to define the initial digit analysis and subsequent treatment of inpulsed digits from all incoming and two-way trunks based upon the initial digits received. Enter DESEP to indicate Destination Separation Class for those entries where LDIT is not used for additional digit analysis but the call passes directly to the ESS 5301 Record, RAR Form.

LCC form (5306 Record) - This form is used to define the Line Class Codes. Enter INSEP to indicate Incoming Separation Class (classification for call originations from this class of customer) and DESEP to indicate Destination Separation Class (classification for terminations to this class of customer).

LDIT form (5300-3/5 Record) - This form is used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Enter DESEP to indicate Destination Separation Class for appropriate Call Types.

PDIT form (5300-2 Record) - The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). Enter DESEP to indicate Destination Separation Class for terminations on Call Types OPER and IDDDOPR.

TRFSEP form (5308 Record) - This form defines the Cell Groupings associated with INSEP/DESEP pairs. Enter each possible combination of INSEPs and DESEPs that have been assigned. Each combination requires a cell grouping.

2.3 MISCELLANEOUS TRANSLATIONS

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. Make the appropriate entries for Division of Revenue fields; ACTIVATE DIV OF REV?, DIV OF REV HOURLY RPTS? and DIV OF REV COUNT TYPES?

3. GLOSSARY

DESEP	Destination Separation Class
DOR	Division of Revenue
INSEP	Incoming Separation Class
SSR	Separation Summarization Registers

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SEC. 1C: REMOTE STAND-ALONE CALL PROCESSING

1. FEATURE DESCRIPTION

This feature provides the capability for a Remote Site to continue limited call processing while in the Stand-Alone state.

For 5E2 and later Software Releases the Remote Site enters the Stand-Alone state when it loses its communication or functionality with either the AM (Administrative Module) or its host Switching Module, or both.

The telephone company may purchase this feature on an individual RSM/ORM/TRM basis. The EQIM form (5700 Record) contains the indication STAND ALONE for each RSM/ORM/TRM. If the feature is not purchased for a Remote SM, and it loses the communication link with the host office, all calls originated at that RSM/ORM/TRM will be routed to reorder tone.

1.1 Remote Stand-Alone Billing

An RSM/ORM/TRM which has Stand-Alone Purchased may optionally be provided with Stand-Alone Billing. This feature may also be purchased on an individual RSM/ORM/TRM basis and is indicated on the EQIM form (5700 Record). Stand-Alone Billing provides the capability for the RSM/ORM/TRM to retain AMA call record information in the Switching Module's memory boards while it is in the Stand-Alone state. When the RSM/ORM/TRM resumes linked operation with the host, the billing information which has been saved will be transmitted over the umbilical links to the AM (Administrative Module). The billing records at the AM will ultimately be sent to an AMA teleprocessing system.

1.2 Emergency Calls

If the RSM/ORM/TRM is equipped with this feature, and it enters Stand-Alone state, the RSM/ORM/TRM continues to process intramodule calls. If the call is destined for outside the RSM/ORM/TRM, it first checks its list for emergency number rerouting entered on the EMRNM form (5108 Record). By rerouting these non-RSM numbers to a local number served by the RSM/ORM/TRM, the calls may continue to be processed. The local number may be an FX line to a nearby office which could pass the call to an operator.

Message trunks can be provided at the RSM/ORM/TRM so emergency numbers may be rerouted to a local trunk.

1.3 Global Hunt Group with Local Members

If the call is to a global hunt group which has local members, either lines or trunks, the RSM/ORM/TRM will be initialized at the time it enters the Stand-Alone state so it will only try to terminate to its own members.

1.4 Non-Emergency Non-local Calls

For non-emergency, non-local calls, the Fixed Route Type of "RSMSA" is checked for further treatment. Normally, "RSMSA" is defined for a Route Index which provides routing to an announcement at a locally provided 13A Recorded Announcement machine. Every RSM/ORM/TRM for which this announcement is desired must have a local member in the announcement trunk group. This trunk group should be designated as Global.

Regular announcement trunk groups, such as vacant code, partial dial, permanent signal, prefix dialing error, etc., which are provided at the host recorded announcement machine will not be accessed during Stand-Alone Call Processing. These conditions will be terminated as defined by the "RSMSA" Fixed Route Type. The announcement trunk groups typically contain only one member because many subscribers can camp-on and listen simultaneously to the same recording. With a recorded announcement machine located at the remote location of the RSM/ORM/TRM, these regular

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announcements could be added as another member of the trunk group so they can be utilized during Stand-Alone Call Processing. However, this may not be efficient during normal operating conditions. The hunt sequence on announcement trunk groups is such that calls will terminate equally to all members in the group on a rotating basis without regard to the location of the originating module. Therefore, calls originated at the host will be sent to the RSM/ORM/TRM announcements and vice-versa. If the office has multiple RSM/ORM/TRMs with recorded announcement machines, calls originated in one RSM/ORM/TRM may route through the host and out to another RSM/ORM/TRM to be connected to the announcement. Although this type of call is short duration, the usage on the Umbilical links may not be engineered for this extra capacity.

1.5 Interoffice Trunks as Primary or Alternate Routes

Provisioning interoffice trunks at the RSM/ORM/TRM will allow these trunks to be used as either the primary or alternate route for interoffice calls. During normal linked operation, the primary or alternate routes can be either at the host 5ESS Switch or at the RSM/ORM/TRM. During Stand-Alone operation, calls requiring a primary or an alternate route located at the host 5ESS Switch will be able to bypass these routes to an alternate route located at the RSM/ORM/TRM.

For example, during Stand-Alone, assume that a call originates that is normally routed to a trunk group with no members at the RSM/ORM/TRM. The alternate route for this call, however, is to a trunk group which does have members at the RSM/ORM/TRM. The RSM/ORM/TRM Stand-Alone routing function will try the primary route first, and the call will be routed if a local trunk is available. If not, subsequent alternate routes will be checked to determine if a local trunk (i.e., at the RSM/ORM/TRM) is available.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	RecordNumber	Division	Section	RC View
EQIM	5700	8	2	18.1
EMRNM	5108	3	1H	4.9
FIXRT	5301-1	3	3G	10.1
MLHLN	5111	3	1K	3.2

2.1 Line Translations

MLHLN form (5111 Record) - If Global Multi-Line Hunt Groups include members which have equipment assignments on an RSM/ORM/TRM with Stand-Alone, enter "Y" in the field RSM REROUTE for all members which have Telephone Numbers assigned and have equipment assignments other than the RSM/ORM/TRM.

EMRNM form (5108 Record) - A maximum of ten Telephone Numbers, which under normal conditions would terminate outside the RSM/ORM/TRM, may be entered on this record for each RSM/ORM/TRM. Corresponding entries are made to indicate what local RSM/ORM/TRM number (i.e., equipment assignment on the RSM/ORM/TRM) is to be rerouted to when the RSM/ORM/TRM is in the Stand-Alone state.

2.2 Trunk Translations

If calls to non-local, non-emergency numbers are to be terminated at a recorded announcement during Stand-Alone state, build an announcement trunk group. Each RSM/ORM/TRM which is to utilize the announcement must have its own local trunk member (i.e., equipment assignment on the RSM/ORM/TRM) in the trunk group.

2.3 Routing and Charging Translations

FIXRT form (5301-1 Record) - If any RSM/ORM/TRM has the Stand-Alone Call Processing option, the route type "RSMSA" must be defined. Usually it will be associated with a Route Index which is defined on the RTIDX form (5303 Record) and pointing to the announcement trunk group described above.

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2.4 Engineering Assignments

EQIM form (5700 Record) - To enable RSM/ORM/TRM Stand-Alone Call Processing, "Y" must be entered in the STAND ALONE field for each RSM/ORM/TRM where it is desired. Also, make the appropriate entry in the field STAND ALONE BILLING.

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SEC. 1D: SINGLE MODULE RSM

1. FEATURE DESCRIPTION

This feature is available with 5E1, and later Software Releases, and provides the capability of having a 5ESS SM (Switching Module) remotely located from the host 5ESS and its AM (Administrative Module). This capability extends the features and services to a remote group of customers outside the normal area of the 5ESS Switch Central Office. The Single Module RSM was formerly known as a 5A Remote Switching Module (RSM).

The Multimodule RSM replaces this feature, adding the capability of having from one to four RSMs located within the same site. For more information on Multimodule RSM see the Multimodule RSM feature section in this guide.

The RSM is linked to the host 5ESS Switch via digital transmission facilities known as T1 Umbilical Links. A minimum of four and maximum of twenty Umbilical Links must be provided between an RSM and its host Switching Module. Each umbilical provides one channel for signaling and four of the umbilical links also provide control time slot links to enable communication between the RSM and the host 5ESS Switch. When four control time slot links are provided, two of them are active and two are backup. If the backup control time slots are not deemed necessary, a minimum of two Umbilical Links is supported. The remaining 22 or 23 channels on each T1 umbilical are used for voice paths. The T1 carrier lines terminate at ANN5 DFI (Digital Facility Interfaces) which are part of DLTU (Digital Line Trunk Units) at both the RSM and host Switching Module. All T1 lines used as umbilicals from an RSM must terminate on the same host module. However, not all DFIs on the host Switching Module must be used for umbilicals.

The RSM must be equipped with one or two DLTUs and a FIU (Facility Interface Unit). The DFIs of the DLTU (Digital Line Trunk Units) are linked to the FIU which converts the T1 carrier format to and from the NCT (Network Control and Timing) format used by the RSM processor. The RSM must also be equipped with LU (Line Units) for analog customers and/or DCLU (Digital Carrier Line Units) for integrated SLC-96 customers served by the RSM. Optional equipment for the RSM include a Trunk Unit (which may be used to access an optionally provided 13A Recorded Announcement machine, PBX DID trunks, and Local Test Desk trunks), a Directly Connected Test Unit and a Remote Alarm Unit.

The RSM can be equipped with analog and/or digital trunks for use as interoffice message trunks. These may be incoming, outgoing or two-way, LTOLLCON or TTOLLCON type trunks.

When the Umbilical Links are intact, the RSM processes intra-RSM calls in essentially the same manner as a 5ESS Switching Module processes intramodule calls. However, calls which are interoffice, inter-RSM, RSM-host and threeway calling are routed over the umbilicals to the host.

If interoffice trunks are provided on the RSM, these calls may not be routed over the umbilicals to the host.

If the RSM loses communication or functionality with either the AM (Administrative Module) or its host Switching Module, it enters the Stand-Alone state. The RSM may be optionally equipped for RSM Stand-Alone Call Processing which is described under that title as a Feature in this guide. Without the Stand-Alone Call Processing option, all calls originated at the RSM during Stand-Alone state will be sent to reorder tone.

2. TRANSLATION REQUIREMENTS

2.1 LINE TRANSLATIONS

Individual lines and Multi-Line Hunt Groups are translated similarly to those served by the host except that a unique set of LENs and/or SLENs are available depending on how the particular RSM is equipped. Typically, the RSM will also have different NXXs from the host which implies a unique set of Telephone Numbers.

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MLHG form (5105-1 Record):
If all members of the Multi-Line Hunt Group are served by a single RSM (i.e., they all have equipment assignments, LENs or SLENs, of the RSM), enter the RSM number in the Local RSM Module field. This allows control of the hunting sequence to be determined by the RSM instead of the host, providing more efficient call processing.

EMRNM form (5108 Record):
Used for the reroute of numbers not served by the RSM when communication with the host is lost if the RSM has the Stand-Alone Call Processing option. See the Feature in this guide titled RSM Stand-Alone Call Processing.

2.2 TRUNK TRANSLATIONS

Trunks are not defined between the RSM and its host Switching Module. The linkage required is defined on the RSMLNK form (5517 Record) . The DFI (Digital Facility Interface) units on the RSM DLTU (Digital Line Trunk Unit) can be used only for Umbilical Links.

If an analog TU (Trunk Unit) is equipped on the RSM, trunks may be assigned for the following uses:

1. PBX Direct-Inward-Dialing (DID)
2. Local Test Desk (LTD)
3. Announcement, if a recorded announcement machine is provided at the remote location. For more information on Announcement Trunks, see the feature RSM Stand-Alone Call Processing.

Both analog trunks on a TU and digital trunks on a DLTU (Digital Line Trunk Unit) may be assigned as interoffice trunks. These may be incoming, outgoing or two way. Both "LTOLLCON" and "TOLLCON" trunk classes are used as either local or tandem applications. Any of the allowable Address Signal and Start Dial combinations for these trunk classes may be used.

TKGRP form (5202-1 Record):
If all members of the Trunk Group are assigned equipment numbers of a single RSM, enter the RSM number in the Local RSM Module field. This allows control of the hunting sequence to be determined by the RSM instead of the host, providing more efficient call processing.

2.3 ROUTING AND CHARGING TRANSLATION

Typically, the RSM is located in a different Rate Area than the host 5ESS Switch. This then is the major consideration in routing and charging for the RSM, but it is no different than building multiple Rate Areas in a 5ESS Switch that is not host to RSMs.

FIXRT form (5301-1 Record):
The type HOSTSA must be defined for any 5ESS Switch which hosts an RSM. RSMSA must be defined if any RSM has the Stand-Alone Call Processing option.

2.4 MISCELLANEOUS TRANSLATIONS

NOC form (5501 Record):
Any unique NXXs used for RSMs must be defined. However, the 5ESS Switch does not require any information that the NXX is destined for the RSM; the Administrative Module (AM) routes based on the module equipment value and not Telephone Number. In fact, NXXs may be shared among any modules, local or remote, in the 5ESS Switch.

IMINFO form (5510 Record):
Information must be provided on this form as with any other Switching Module in the 5ESS Switch. If a

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DCTU (Directly Connected Test Unit) is equipped on the RSM, a unique DCTU Route Index must be assigned on this form and defined on the RTIDX form (5303 Record) . This Route Index must be associated with a unique Trunk Group of Logical Test Ports of the RSM.

TLWS form (5511 Record):
If a Supplemental Trunk and Line Work Station is provided at the location of the RSM, it would not be considered remote but would have a Local Talk and Monitor Telephone Number.

RALM form (5516 Record):
This record is used to define alarm information unique to the remote location of the RSM.

RSMLNK form (5517 Record):
For each RSM, this form must be used to define the two to twenty Umbilical Links between the RSM and its host Switching Module.

2.5 ENGINEERING ASSIGNMENTS

EQIM form (5700 Record):
Both the RSM and the host Switching Module must be defined as such on this record. For the RSM, NCT Even Link should not be entered but RSM Stand-Alone Purchased? must be answered.

Stand-Alone Billing Purchased? must be answered.

EQRAU form (5705 Record):
Defines the Remote Alarm Unit pack in the O.brce Alarm Unit of the RSM.

EQLU form (5710 Record):
Defines the Line Units of the RSM.

EQLUP form (5711 Record):
Defines the equipage of circuit packs on the Line Units.

EQTU and EQTUP forms (5720 Record):
Defines the Trunk Unit of the RSM with circuit pack equipage if required for access to a recorded announcement machine, PBX DID trunks or LTD trunks.

The circuit pack equipage may also be utilized for interoffice message trunks.

EQDU and EQDUP forms (5730 Record):
Defines the DLTU (Digital Line Trunk Unit) and DFI (Digital Facility Interface) usage for both the RSM and host Switching Module.

EQDS and EQDSP forms (5740 Record):
Defines the Local Digital Service Unit and circuit packs for the RSM. Global Digital Service Units may not be defined on an RSM. The host Switching Module may be defined like any other SM. 5750 Record (EQMSU and EQMSP or EQMMSP Forms) Defines the Metallic Service Unit and pack equipage for either regular or modular types. Two scan packs and one distribute point pack must be equipped in both Service Groups of the MSU of the RSM to be used for the remote alarm process.

EQDCTU form (5751 Record):
Defines the Directly Connected Test Unit if it is provided at the RSM.

EQPMU form (5752-1/2 Records):
Defines the Precision Measurement Unit associated with the Directly connected Test Unit.

EQFIU form (5753 Record):
Defines the facility Interface Unit of

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EQDCLU and EQDCLP forms (5810 Record):
Defines the Digital Carrier Line Unit and circuit pack equipage if the RSM is to serve Integrated SLC-96 customers.

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SEC. 1E: FEATURE GROUP A (FGA)

1. FEATURE DESCRIPTION

FGA (Feature Group A) is available with 5E1, Issue 2, Release 3 and later Software Releases, and is a means to provide line-terminated end-to-end interLATA (Local Access and Transport Area) service.

FGA services will be used by InterLATA Carriers who will interface with the FGASO (Feature Group A Serving Office) via FGA lines connected to the Carrier's switch for purposes of originating and/or answering calls on the FGA line. The FGA service may also be utilized for purposes of providing interLATA FX or interLATA private network services. In any case, the calling party accesses the FGA line by dialing its assigned Directory Number.

FGA lines may be denied origination or denied termination but cannot be two party, multiparty, manual, coin, charge-a-call, hotel/motel, or use message registers. FGA lines may be arranged for hunting such as Series Completion or Multi-Line Hunt. Call processing is the same for FGA lines, originating and terminating, as for other lines except that special screening and AMA (Automatic Message Accounting) treatment must be provided.

The type of AMA billing is dependent on whether the FGA line is in the originating or terminating LATA.

In the originating LATA, the calling party dials a Telephone Number which is assigned to the FGA line. The office of this originating party (which may or may not be the FGASO) generates a normal AMA billing record, if required, for calls to the NXX of the FGA line.

At the 5ESS FGASO, the call terminates to the Telephone Number and the 5ESS recognizes that the number is an FGA line (because the line has FGA set to "Y"). When the call is answered by the InterLATA Carrier's switch, an AMA record is generated. The AMA Call Type, FGA Originating LATA, is used and a call code 131 is produced which causes the Billing Directory Number of the FGA line to be entered in the AMA fields of Originating NPA and Originating Number.

Once the InterLATA Carrier answers, it will request additional information (probably by applying second dial tone) from the calling party such as an identification number and the desired Telephone Number. As far as the 5ESS is concerned, the call is in the talking state but it will pass Dual Tone Multi-Frequency digits or tones through to the Carrier as the originating party dials them.

Now the InterLATA Carrier processes the information from the calling party and switches the call over its own network.

The InterLATA Carrier may also use an FGA line to terminate to the called number in the terminating LATA. In this case, the InterLATA Carrier switch originates on an FGA line (recognized by the 5ESS as an FGA because the line is defined with FGA set to "Y"). The InterLATA Carrier then passes the digits of the called number to the 5ESS just like any line customer dialing an originating call.

A special AMA record will be generated on all calls that originate at FGA lines and are answered by the called party. This record, call code 132, is invoked by the line being defined as FGA set to "Y" and is in addition to other AMA records, if any, that would otherwise be generated on the call (e.g., by a Charge Index on the Rate and Route). If the FGA call is to terminate within the same LATA and is routed over the Local Exchange Company's facilities, only one AMA record should be generated. This is the FGA Terminating LATA record, call code 132. Therefore, the Rate and Route should contain a Charge Index set to "FREE" for this kind of call. This requirement indicates that FGA lines must have a Line Class Code that is defined with a unique Screening Index to permit the special routing and charging required on these lines. Local tariffs determine whether FGA calls can terminate to special numbers (e.g., N11 and operator type, 0+) and/or to interLATA points.

2. TRANSLATION REQUIREMENTS

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2.1 LINE TRANSLATIONS

LINE form (5101-3 Record) - Individual lines must have FGA set to "Y". Message Registers may not be assigned.

MLHG form (5105-1 Record) - FGA lines associated with an MLHG are defined on the group level. The MLHG must have FGA set to "Y". Message Registers may not be assigned to the members of the MLHG. All members must have the same signaling type.

2.2 ROUTING AND CHARGING TRANSLATIONS

RAR form (5301 Record) - Determine which Code Index/Prefix combinations should complete to regular routing and which should terminate to an announcement based on local tariffs. Enter the appropriate Route Index. For calls which are allowed to complete to regular routing and terminate within this LATA, enter a Charge Index number which has been defined as FREE. If calls destined for another LATA are allowed to complete, the Charge Index should be the same as used for a POTS line. (This may include Charge Indexes defined as FGBOL and FGDOL with 5E2, Issue 1 and later Software Releases.)

LCC form (5306 Record) - Define a Line Class Code (or codes) with a unique Screening Index to permit special routing and charging as indicated on the RAR Form. The Class Of Service must be "INDIV" or "PBX" and the Terminating Treatment must be "INDIV", "MLHG", or "INWATS".

2.3 MISCELLANEOUS TRANSLATIONS

AMACT form (5506 Record) - FGAOL and FGATL AMA Call Types must be defined to generate the 131 and 132 call code AMA records. These should be provided by ODA.

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SEC. 1F: BRCS FEATURES

1. FEATURE DESCRIPTION

BRCS (Business and Residence Custom Services) permits 5ESS Switch owners to offer modular communications capabilities to their subscribers.

BRCS features are found in Division 4 of this guide and are grouped by section number and letter suffix. The associated record numbers for each capability have common four digits with individual dash numbers to distinguish them. For example, the Terminal Group/Station Restriction capability appears in Sections 8A through 8D and the associated records are 5607-1 through 5607-5.

1.1 Feature Definition

The major component of a BRCS capability is the feature definition form which appears in the first section (section "A") of the TG-5 documentation pertaining to each capability. There are two kinds of features, preconstructed and constructed. A preconstructed feature is defined by Luecnt Technologies and is available to all 5ESS Switch owners (for a particular Software Release). A constructed feature is defined by the 5ESS Switch owners in order to customize a feature for their particular needs.

Each 5ESS Switch owner will purchase a CFL (Constructed Feature Limit) which is defined on the CFL form (5712 Record). This form is defined by the Lucent Technologies engineers. Once the CFL form has been reached, a new limit will have to be purchased before additional features can be constructed. Preconstructed features do not count toward the CFL. Also, all ID (Individualized Dialing) and PFA (Private Facility Access) features, including constructed, are not counted.

A feature is identified by its feature name of one to eight characters. The first character of all preconstructed feature names is always a slash (/). The first character of all constructed feature names is prohibited from being a slash. Preconstructed features may be reviewed in the ODA (Office Data Administration) database but may not be deleted, changed or inserted. The definition of the preconstructed features will also appear in this Translation Guide and can be found in Figure 1 of the "A" section under each particular BRCS capability. See Division 4, Section 2A, Figure 1 for the preconstructed features associated with Individualized Dialing. Note that Abbreviated Dialing (Speed Calling) for subscribers who use either the ODP (Office Dialing Plan) or an IDP (Individualized Dialing Plan) is included in this section.

However, for 5E6 and later Software Releases, Speed Calling assignments are made independently from IDP assignments. This disassociation of assignments is explained further under the heading, "Dissassociate Speed Calling from Individualized Dialing Plan."

When determining whether to use a preconstructed feature or to define a constructed feature, several things must be taken into consideration. First, it must be determined if a preconstructed feature exists for the requirements of the subscriber. Figure 1 of the particular BRCS capability should be reviewed for this purpose. Even if the requirements are met, it may be decided to construct a feature to ease data entry or to ease ongoing administration of the subscriber information.

1.2 Default Parameters

The feature definition form for most BRCS capabilities includes one or more default parameters. These default parameters will be applied to each terminal (line and/or trunk) that has this feature assigned to it, if specific parameters are not defined for the terminal. Generally, preconstructed features will not include definition of default parameters.

1.3 BRCS Features for IDP Implementation

A specific example may help in clarifying this information and illustrate the various combinations of forms that are required to make a BRCS feature applicable (and available) for a terminal's use.

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A company called "Ajax" with 1000 terminals requires an IDP. Ten of these terminals are lines in a Multi-Line Hunt Group which is assigned to an attendant console. One hundred lines are assigned to individual managers and the remaining 890 lines are used by the sales personnel.

The preconstructed features for the IDP are checked in Figure 1 of Division 4, Section 2A. The preconstructed feature, /IDCTX1, meets the requirements for this company and will be used. Note that there are no default parameters defined (and a preconstructed feature cannot be modified).

Because Ajax needs an IDP for initial digit interpretation instead of the ODP, information needs to be defined on the 5601-1 through 5601-5 Records (Division 4, Sections 2B through 2E) for the group level information. These records are tied together through the IDP Group name which, in this case, will be named AJAX.

To assign the Ajax lines to the AJAX IDP Group, parameter forms must be defined. In defining the parameters for each of the lines, they will also be categorized for DPAT (Dialing Plan Access Treatment). DPAT 1 will be used for the console lines which will be allowed to use all codes in the IDP Dialed Code Assignment form (5601-1/2 Record). DPAT 2 will be used for the 100 management lines which will be allowed to use all codes except those which are customer changeable features. DPAT 3 will be used for the sales personnel lines which are similar to DPAT 2 except that they cannot dial 9 (defined in the IDPDCA (Individualized Dialing Plan Dialed Code Assignments; 5601-1/2 Record) as escape to POTS (Plain Old Telephone Sedrvice) - the ODP - with dial tone).

Each of the terminals in the console MLHG are defined on the IDPMPA form (5601-7 Record) as ID FEATURE equal to /IDCTX1, IDP GROUP NAME equal to AJAX and DPAT CATEGORY equal to 1.

- ***NOTE:*** There was a restriction that any line assigned to an IDP Group must have a Telephone Number. However, this has not been enforced through either ODA or Recent Change data entry. If an MLHG terminal does not have a Telephone Number assigned, it will not be busy verifiable.

Each of the management and sales personnel lines are defined on the IDPLPA form (5601-6 Record) as ID FEATURE equal to /IDCTX1 and IDP GROUP NAME equal to AJAX. The DPAT CATEGORY is entered as 2 for the management lines and 3 for the sales personnel lines.

For each of the Ajax lines, the Abbreviated Dial List information is also entered. The preconstructed feature, /IDCTX1, allows both 1 and 2 digit Speed Calling, customer changeable. The appropriate list names and shared indications are entered on the parameter assignment forms with the exception that if a line associated with the IDPLPA has an unshared list, the list name will be built by ODA. Ajax requires all 1-digit lists to be in the range 2 - 9 and all 2 digit lists to be in the range 20 - 49, therefore, the ADLIST forms (5601-9 Record) are not required. (If additional Abbreviated Dialing codes were required for this company, the ADLIST forms would be required for each AD List Name with all code blocks desired.)

The preceding forms built the IDP Group AJAX and assigned each line to the group with its own parameters. Now each line must be assigned the preconstructed feature that was chosen, /IDCTX1. To do this, the feature assignment forms will be defined. The attendant lines use the MLHLNFA form (5113 Record) and the rest of the lines use the LINEFA form (5112 Record) (Division 3, Sections 1M and 1L, respectively).

There is an assumption here that the lines have already been defined with telephone and equipment numbers on the LINE or MLHLN forms found in Division 3, Sections 1I and 1K. BRCS must equal "Y" on these forms. During call processing, this is what triggers the 5ESS Switch to check the feature assignment forms to determine what features have been assigned to each terminal.

If other BRCS features, either constructed or preconstructed, were required for Ajax terminals, then they would also be defined and the feature name entered on these feature assignment forms for each line. (Some features are specific on the group level and therefore do not require defining on the individual terminal basis.) The CLUSTR form (5600 Record) in Division 4, Section 1, could also be used to consolidate from 2 to 16 separate features into one identifying name. Combinations of cluster and feature

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names may be assigned to a terminal (line or trunk) on the feature assignment forms with the constraint that the names do not represent more than 48 features. Also, if a specific feature is assigned to a terminal, then that feature may not be contained in any cluster assigned to the terminal.

The procedure is similar when features are constructed by the 5ESS Switch owner (instead of using a preconstructed feature). One difference is that the feature definition form must be defined. For Ajax, an IDP feature could be defined using the IDFD form (5601 Record) in Division 4, Section 2A. Perhaps Ajax does not want Abbreviated Dial, 2 digit. The IDFD will look similar to /IDCTX1 except that AD 2 DIGIT? is entered as "N". This feature must also have a name so it can be utilized later. It could be named AJAXDP for Ajax Dialing Plan.

Because this feature is being constructed, the default parameter options on the IDFD form can be used. The largest group of Ajax lines is for their sales personnel, therefore, their parameters will be used as the defaults (i.e., primarily their DPAT category of 3). Also, assume that all Ajax lines will have access to a shared 1-digit Abbreviated Dial List named AD1AJAX. Then the default parameters on the IDFD form are IDP Group Name of AJAX (the same group information is defined as before), DPAT Category of 3, AD 1 Name of AD1AJAX and AD 1 Shared equal to "Y".

In this case, because of the default parameters, the IDPLPA, line parameter form, does not need to be entered 890 times, once for each of the sales personnel lines. Instead, the feature name AJAXDP will be entered on each LINEFA form for these lines and the default parameters will be automatically assigned to each of these lines.

IDPMPA and IDPLPA forms will be defined to override the default parameters of this ID feature definition for the attendant and management lines. On these parameter assignment forms, the ID Feature is AJAXDP, IDP Group Name is AJAX, DPAT Category is 1 or 2 and AD1AJAX entered for the 1-digit list name. The MLHLNFA and LINEFA forms will still be required for these lines.

In terms of ODA input, the major difference between using the preconstructed feature, /IDCTX1, and defining the constructed feature, AJAXDP, is that 890 fewer form instances were required for the latter. For ongoing administration of the Ajax lines, it also might facilitate recognizing that a line belongs to Ajax by verifying the feature assignment forms when AJAXDP is used instead of /IDCTX1.

1.4 Wild Card Features

It should also be noted that there is a special kind of preconstructed feature that is not to be assigned to a terminal on the feature assignment forms. These are the wild-card features and will be used in dialing plans, either the office or individualized. The wild-card features can be recognized by their format of slash (/), followed by two alpha characters, followed by an asterisk. See Division 4, Section 2B, or Division 3, Section 3B for information on the use of wild-card features.

1.5 BRCS Features for ODP Implementation

The previous discussion illustrates two ways of defining a large business customer with an IDP. BRCS features are also used for POTS customers using the ODP. An example of this would be a subscriber who requests unshared single digit Speed Calling, customer changeable.

The telephone and equipment assignments are defined on the LINE form in Division 3, Section 1I, with BRCS equal to "Y". The preconstructed features are checked in Division 4, Section 2A, Figure 1 and the feature, /IDSC1C, is found to be appropriate. This feature name is entered on the LINEFA form in Division 3, Section 1L.

The Line Parameter form, IDPLPA, in Division 4, Section 1F, need not be defined for this subscriber. When an ID feature such as /IDSC1C, which does not include an IDP, and the Abbreviated Dialing List is unshared, ODA will build the parameter form with the list name of "A" plus the subscriber's Telephone Number.

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The ADLIST form in Division 4, Section 1I, will not be required for ODA. The subscriber will enter the Telephone Numbers associated with the Abbreviated Dialing codes 2 - 9 after the 5ESS Switch cutover. To do this, the subscriber will dial *74 (or 1174 if the subscriber uses a rotary dial telephone). This dialed code is defined in PDIT (Preliminary Digit Interpreter Table) as ACTION "AD1CH" (Change 1 Digit Abbreviated Dial List).

*74 is an example of a dialed code that must be defined in the ODP, specifically on the PDIT form (5300-2 Record) found in Division 3, Section 3B. These standardized codes must be available (i.e., defined) for subscribers who use the ODP. For subscribers who use an IDP, these actions may also be appropriate. However, the codes are not standardized; they may be unique to each IDP.

See Figure 1 for a composite list of ODP and IDP Action Definitions. These actions are used to define dialed codes in PDIT, IDPDCA and/or CFGGRP (Configuration Group Definition) (5964 Record) for the ODP, IDP, and feature buttons, respectively. Most of the actions are allowed to be used for either ODP or IDP. However, the primary use for the majority of the actions will probably be for the IDPs.

Those actions that are used in PDIT are shown in Figure 1 with "Y" entered in USE IN ODP, followed by specific dialed codes that must be defined in PDIT. A "P" in the USE ODP column indicates the action is "permitted" by defining any desired dialed codes in the ODP. If these actions are used, they are available (and common) to all subscribers using the Office Dialing Plan who have the appropriate features.

A "Y" entered in USE IN IDP indicates the action may be used in defining dialed codes in an Individualized Dialing Plan. These actions, combined with appropriate features, are used in IDPDCA forms found in Division 4, Section 2B.

A "Y" entered in FEATURE BUTTON indicates the action may be used in defining feature buttons on an ISDN station set. These actions are defined on the CFGGRP form (5964 Record).

Figure 1 also provides subsequent tone responses returned by the 5ESS for the dialed codes and expected customer dial responses. In the case of the POTS subscriber entering the 1-digit Abbreviated Dial List, *74 is dialed. (See ACTION, AD1CH in Figure 1.) The 5ESS Switch returns a recall dial tone. The subscriber dials the 1-digit number, 2 through 9, that is to be entered (or changed). The 5ESS Switch returns a second recall dial tone. The subscriber now dials the Telephone Number which is to be stored in this customer's Abbreviated Dial List.

Now, when this subscriber dials the single digit, the PDIT translates the digit as an AD1USE action and retrieves the appropriate Telephone Number from this subscriber's Abbreviated Dial List. The call is processed as if this subscriber had dialed the full Telephone Number.

1.6 Disassociate Speed Calling from Individualized Dialing Plan

Prior to the 5E6 Software Release, the assignment of an IDP to a subscriber included the subscriber's SC (Speed Calling) needs, as well. Therefore, these SC needs and the customer's IDP parameters are included as part of the ODD even though the subscriber's SC needs are normally not known at this time. This causes a large number of changes to be made to the IDP feature assignments after the subscriber's actual SC needs are known. When SC and IDP features are assigned separate from each other in 5E6 and later Software Releases, the need to make this type of change can be avoided, and SC and IDP features are easier to administer and maintain.

For example, disassociating Speed Calling assignments from IDP assignments allows the operating company to assign a different Speed Calling feature, for example, two-digit Speed Calling (SC2), to a line or trunk that already has been assigned a Speed Calling feature (SC1) without having to manually delete the existing feature and Speed Call list.

Subscribers can still select Speed Calling while being part of an IDP, however, the operating company no longer has to make the Speed Calling assignments as part of the IDP assignments. Therefore, this disassociation is transparent to the subscriber and does not affect the functionality of either feature.

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1.7 Time of Day Capability

The TOD (Time of Day) capability is a modular feature that allows the end customer (business/residential subscriber) to control various aspects of other features assigned to the subscriber's line or group. That is, TOD allows the customer to set both the time and day for a particular action to occur, via the use of dial codes. For example, the subscriber may wish to have feature "xwy" activated at noon on Tuesday through Friday and deactivated at 2:00 p.m. on those same days. Similarly, the subscriber may wish to alternate between InterLATA Carriers at specific times. Included among the features which can be controlled by TOD are:

- Account Codes (5E3)
- Authorization Codes (5E3)
- Automatic Route Selection (5E2)
- Call Forwarding (5E3)
- Call Pickup (5E3)
- Call Waiting (5E3)
- Distinctive Ringing (5E3)
- Multiway Calling (5E3)

Using the TOD feature, the subscriber has the ability to control the activation, deactivation, and various alterable aspects of these and other features. Available with the 5E7 Software Release, capability is provided to activate/deactivate the subscriber's IDP.

At the time of initial feature subscription, the switch owner can specify the degree of control allowed for its subscribers for the various TOD actions allowed. For example, will the subscriber be able to control Account Group, Automatic Route Selection, or Authorization group data? Such permissions are defined on the TODFD form (5610-1 Record) (Div. 4, Sec. 11A).

The TOD dial codes represent CORC (Customer-Originated Recent Change) actions associated with the TOD feature or action codes for other modular features assigned to the customer line. These dial codes are based upon either the IDP or the ODP; see the PDIT (Prefix/Feature Digit Interpreter) form (5300-2 Record). For more information on provisioning Time of Day, see Div. 4, Sections 11A thru 11E.

2. TRANSLATION REQUIREMENTS

2.1 Line Translations

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LINE	5109-1/2/3	3	1I	1.1
MLHLN	5111-1/2/3	3	1K	3.2
LINEFA	5112	3	1L	1.8, 1.11, 1.12
MLHLNFA	5113	3	1M	3.8, 3.11, 3.12

LINE form (5109-1 Record). Enter "Y" in the BRCS field for each line that is to have any BRCS feature.

MLHLN form (5111-1 Record). Enter "Y" in the BRCS field for each Multi-Line Hunt Group member that is to have any BRCS feature.

LINEFA form (5112 Record). Enter the subscriber's Telephone Number and feature name assignments (constructed, preconstructed and /or cluster names).

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MLHLNFA form (5113 Record). Enter the Multi-Line Hunt Group and member number and feature name assignments (constructed, preconstructed and /or cluster names).

2.2 Trunk Translations

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
TKGRP	5202-1/2/3/4	3	2A	5.1
TRUNK	5204-1/2	3	2C	5.5
TRUNKFA	5205	3	2D	5.11
TKGRPFA	5206	3	3E	5.4

TKGRP form (5202-1 Record). Enter "Y" in the BRCS field for each Trunk Group that is to have any BRCS feature if all members of the Trunk Group are to have identical features. If "Y" is entered here, a TKGRPFA form must be entered for the Trunk Group.

TRUNK form (5204 Record). Enter "Y" in the BRCS field for each trunk that is to have any BRCS feature if a TKGRP form is not submitted for the group or if the features are required to be different for the member.

TRUNKFA form (5205 Record). Enter the Trunk Group Number and Member Number and feature name assignments (constructed, preconstructed and/or cluster names).

TKGRPFA form (5206 Record). Enter the Trunk Group Number and feature name assignments (constructed, preconstructed and/or cluster names).

2.3 BRCS Routing and Charging Translations

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
PDIT	5300-2	3	3B	9.2

PDIT form (5300-2 Record). Required dialed codes are built by ODA with the associated actions and features. Optionally, enter other codes which will be used for subscribers with specific BRCS features and who use the Office Dialing Plan.

2.4 BRCS Feature Translations

All 5600 Series Records construct features, as necessary, on the various feature definition forms. Use other BRCS forms to define associated requirements, such as the forms for IDP groups. Use the parameter assignment forms as necessary.

2.5 ISDN/PACKET Switching Translations

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
DSL	5900-1/2/3	5	1A	23.1, 23.2
DSMLHLN	5901-1/2/3	5	1B	23.3
DSLUSR	5908-1/2/3/4/5/6/7/8	5	1I	23.2

DSL form (5900 Record. Enter "Y" in the BRCS field if the line has BRCS features assigned.

DSMLHLN form (5901 Record). Enter "Y" in the BRCS field if the line has BRCS features assigned.

DSLUSR form (5908 Record). Enter "Y" in the BRCS field if the line has BRCS features assigned.

ACTION	USE IN	US E	FEATUR E	DESCRIPTION	SYSTEM RESPONSE	CUSTOMER RESPONSE

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	ODP	IN ID P	BUTTON			
AAOFF	P	Y	N	Auto Answer Off via dial code	off-lamp if provisioned dial tone	dial code or press feature button
AAON	P	Y	N	Auto Answer On via dial code	on-light if provisioned dial tone	enter dial code or feature button
ACBCANC	P	Y	N	Cancel auto-callback camp-on	confirmation tone followed by dial tone	none
ACBUSE	P	Y	N	Use auto-callback to camp-on to busy line	confirmation tone followed by dial tone or/ringing tone if line is no longer busy	none
ACCANC	P	Y	N	Deactivate LASS Automatic Callback	cancellation announcement	none
ACCFB	N	N	Y	Deactivate LASS Automatic Callback	cancellation announcement and feature button lamp goes off	none
ACCTACT	P	Y	N	Activate Account Code feature	none	none
ACCTDCT	P	Y	N	Deactivate Account Code feature	none	none
ACCTUSE	P	Y	Y	Account Code Use Code	none	none
ACDXFER				Transfer to ACD from ARU Special Feature - Transfer call to ACD, followed by ACD DN		
ACSROFF	P	Y	N	Deactivate ACSR for group by group controller	none	none
ACSRON	P	Y	N	Activate ACSR moves for group by group controller	none	none
ACSRUSE	P	Y	N	Invoke ACSR move	DSU2-RAF-DTA dial-through announcements will be given	customer responds to announcements
ACSRVFY	P	Y	N	Check status of ACSR move	DSU2-RAF-DTA dial-through announcements will be given	customer responds to announcements
ACTCPNBN	P	Y	N	Activate CPN/BN	confirmation tone followed by dial tone	none
ACTOFF	N	Y	N	Turn off an ACT set	recall dial tone	dial an ACT set number
ACTON	N	Y	N	Turn on an ACT set	recall dial tone	dial an ACT set number
ACUFB	N	N	Y	Activate LASS Automatic Callback	confirmation announcement	or audible alerting
ACUSE	P	Y	N	Activate LASS Automatic Callback	confirmation announcement	or audible alerting
AD1CH	Y *74 1174	Y	Y	Change 1-digit AD list entry	recall dial tone second recall dial tone	dial 1-digit code to be changed dial new digit sequence
AD1USE	Y 2-9	Y	Y	Use 1-digit AD	none	none
AD2CH	Y *75 1175	Y	Y	Change 2-digit AD list entry	recall dial tone second recall dial tone,dial 2-digit code to be changed dial new digit sequence	
AD2USE	Y 20-49	Y	Y	Use 2-digit AD	none	none
AIUSE	P	Y	N	Agent Intercom via dial code	dial tone agent ID connect call	enter dial code

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ALTACT	P	Y	N	Activate Alternate Parameter Set	none	none
ANSBACK	N	Y	Y	Call Park Answer Back	Analog: 1. dial tone 3. recall dial tone ISDN: 1. dial tone 3. recall dial tone	Analog: 2. dial access code 4. dial extension of parked DN ISDN: 2. dial access code or press feature button 4. dial extension of parked DN
AQCUSE	P	Y	N	ACD Queue Calling via dial code	secondary audible tone routes the call	enter dial code
ARCANC	P	Y	N	Deactivate LASS Automatic Recall	cancellation announcement	none
ARCFB	N	N	Y	Deactivate LASS	automatic recall	cancellation announcement and feature button lamp goes off
ARSCP	P	Y	N	Change an ARS active pattern group	recall dial tone	dial an ARS pattern group identifier
ARSDCT	P	Y	N	Deactivate an ARS feature for 1 call		dial digits for call
ARS1USE	P	Y	Y	Use ARS with the private network dialing plan 1 to interpret next dialed sequence	recall dial tone	dial a number to be ARS routed
ARS2USE	P	Y	Y	Use ARS with the private network dialing plan 2 to interpret next dialed sequence	recall dial tone	dial a number to be ARS routed
ARSUSE	P	Y	Y	USE an ARS to interpret next dialed sequence	recall dial tone	dial a number to be ARS routed
ARUFB	N	N	Y	Activate LASS Automatic Recall	confirmation announcement, or audible alerting, or long-term denial, or short-term denial	none
ARUSE	P	Y	N	Activate LASS Automatic Recall	confirmation announcement, or audible alerting, or long-term denial, or short-term denial	none
ASITOG	P	Y	N	Toggle for activating/deactivating ASI Proxy's implicit mode.	stutter dial tone	none
ASIUSE	P	Y	N	Use ASI Proxy in the explicit mode (allows ASI Proxy subscriber to communicate directly with an IP (Intelligent Peripheral)).	immediate connection to an ASI Proxy trunk (no dial or confirmation tone).	Variable (dial digits, respond to announcements, or do nothing).
ASPDNC	Y	Y	N	Use ASP with no digit collection.	none	none

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ASPNORM	Y	Y	N	Use ASP with normal digit collection.	recall dial tone	dial digits for ASP query
ASPVAR	Y	Y	N	Use ASP with variable digit collection.	recall dial tone	dial variable number of digits (up to 32) for ASP query
ATHACT	P	Y	N	Activate Authorization Code	none	none
ATHDCT	P	Y	N	Deactivate Authorization Code	none	none
ATHINS	P	Y	N	Authorization Code in service	none	none
ATHNRQ	Y	Y	N	Non-dialable code used in ODP or IDP; reference for TODCL inputs	none	none
ATHOOS	Y	Y	N	Authorization code out of service	none	none
ATHREQ	Y	Y	N	Non-dialable code used in ODP or IDP; reference for TODCL inputs	none	none
ATHUSE	Y	Y	Y	Authorization code; use code dialed	none	none
AUCUSE	Y	Y	Y	Auto-call set-up with MSS and EDS features	none	none
BPARK	N	Y	Y	Basic Call Park	Analog: 2. recall dial tone 4. confirmation tone ISDN: 2. confirmation tone	Analog: 1. flash hook 3. dial access code 5. hang up or none ISDN: 1. press feature button
CCL	P	Y	Y	Use code calling for call pickup originating	none	none
CFDATCH	P	Y	N	Change don't answer timing for Call Forwarding	recall dial tone	dial new timing value
CFDCT	P	Y	N	Deactivate all Call Forward features with pre-stored telehpone numbers	confirmation tone followed by dial tone	none
CFDNCH	P	Y	N	Change the forward-to telephone number for Call Forwarding	recall dial tone	dial a telephone number
CFVACT	Y	Y	N	Activate all Call Forward variable features	confirmation tone followed by dial tone	none
CFVDCT	Y	Y	N	Deactivate all Call Forward variable features	confirmation tone followed by dial tone	none
CLOFF	P	Y	N	Closed Off via dial code	feature button lamp if activated confirmation tone if successful reorder if not successful	enter dial code
CLON	P	Y	N	Closed On via dial code	feature button lamp if activated confirmation tone if successful reorder if not successful	enter dial code
CLWCUSE	P	Y	Y	Cancel leave word calling	none	none CLWCUSE

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CNDACT	P	Y	N	Activate ICLID Calling Number Delivery	confirmation tone	none
CNDDCT	P	Y	N	Deactivate ICLID Calling Number Delivery	confirmation tone followed by dial tone	none
CNDFBP	N	N	Y	Activate/Deactivate ICLID Calling Number Delivery	confirmation tone and feature button lamp on/off	none
COTFBP	N	N	Y	Activate Customer Originated Trace	successful activation message, or trace not available message, or buffer full message, or short-term denial message, or feature denial message	none
COTUSE	P	Y	N	Activate Customer Originated Trace	confirmation announcement, or trace not available message, or buffer full message, or short-term denial message, or feature denial message	none
CPQ1	P	Y	Y	Pickup a call from pickup queue 1	none	none
CPQ2	P	Y	Y	Pickup a call from pickup queue 2	none	none
CPQ3	P	Y	Y	Pickup a call from pickup queue 3	none	none
CPQ4	P	Y	Y	Pickup a call from pickup queue 4	none	none
CWDLU	P	Y	Y	Use dial Call Waiting for 1 call	recall dial tone	dial a telephone number
CWOACT	P	Y	N	Activate all Call Waiting Originating features	confirmation tone followed by dial tone	none
CWODCT	P	Y	N	Deactivate all Call Waiting Orginating features	confirmation tone	none
CWTACT	P	Y	N	Activate all Call Waiting Terminating features	confirmation tone followed by dial tone	none
CWTDCT	P	Y	N	Deactivate all Call Waiting Terminating features	confirmation tone followed by dial tone	none
CWXCH	P	Y	N	Change Call Waiting tone interval	recall dial tone	dial new tone interval
DALTACT	P	Y	N	Activate alternate parameter set for CSD (ATH)	"CONFIRM" , followed by "CONT:"	none
DBDACT	Y	Y	N	Activate all busy/idle data Call Forward features	confirmation tone followed by dial tone	none
DBDDCT	Y	Y	N	Deactivate all busy/idle data Call Forward features	confirmation tone followed by dial tone	none
DCTCPNBN	P	Y	N	Deactivate CPN/BN	confirmation tone followed by dial tone	none
DCTMWI	P	Y	Y	Deactivate message waiting indicator	none	none
DFRLALT	P	Y	N	Alternate FRL feature is active for CSD (ARS)	"CONFIRM", followed by "CONT:"	none
DGPACT	P	Y	N		"CONFIRM", followed by "CONT:"	none
DGPDCT	P	Y	N		conformation tone followed by dial tone	none
DMAINACT	P	Y	N	Activate main parameter set for CSD (ATH)	"CONFIRM", followed by "CONT:"	none
DNPCAN	P	Y	Y	Cancel Per-Call Privacy	confirmation tone followed by dial tone	dial a telephone number
DNPUSE	P	Y	Y	Use Per-Call Privacy	confirmation tone followed by dial tone	dial a telephone number
DPARK	N	Y	Y	Directed Call Park	Analog: 2. second dial tone	Analog 1. flash hook

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					4. recall dial tone 6. confirmation tone ISDN: 2. second dial tone 4. confirmation tone	3. dial access code 5. dial extension 7. none ISDN: 1. press feature button 3. dial extension 5. none
DPN	P	Y	Y	Use directed call pickup without barge-in	1. none 2. recall dial tone	1. none 2. dial telephone number
DPU	P	Y	Y	Use directed call pickup with barge-in	1. none 2. recall dial tone	1. none 2. dial telephone number
DRPCH	P	Y	N	Change ringing pattern for distinctive ringing	recall dial tone	dial new ringing pattern indicator
DTONE	N	Y	N	Provides second dial	second dial tone	none
DTPOTSA	N	Y	Y	Use the ODP for the following digit sequence	dial tone (removed upon receipt of 1st digit)	dial digits
EMUSE	P	Y	Y	Emergency via dial code or feature button	display at Agent station Routes call	enter dial code or feature button
FRLALT	P	Y	N	Activate the alternate FRL table	none	none
FRLMAIN	P	Y	N	Activate the main FRL table	none	none
FRLDMAIN	P	Y	N	Alternate FRL feature is not active for CSD (ARS)	"CONFIRM", followed by "CONT:"	none
FTACT	Y *72 117 2	Y	N	Activate a BRCS feature	(e.g., Call Forwarding, Pickup Orig. or Term., Call Waiting or Distinctive Ring, Auto Callback, Multiway PFA)	1. recall dial tone 2. confirmation tone followed by dial tone
FTDCT	Y *73 117 3	Y	N	Deactivate a BRCS feature	(e.g., Call Forwarding, Pickup Orig. or Term., Call Waiting or Distinctive Ring, Auto Callback, Multiway PFA)	confirmation tone followed by dial tone
*FTACT	Y *72 117 2	Y		Activate a call forwarding feature	1. recall dial tone 2. recall dial tone 3. confirmation tone followed by dial tone	1. dial target telepone number 2. dial forward to telephone number 3. none

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*FTDCT	Y *73 117 3	Y		Deactivate a call forwarding feature	1. recall dial tone 2. confirmation tone followed by dial tone	1. dial target telephone number 2. none
GPACT	P P Y	N Y Y	N N N	Activate an IDP group Activate an ARS group Activate an ACVT group	confirmation tone followed by dial tone confirmation tone followed by dial tone confirmation followed by dial tone	none none none
GPDCT	N P Y	Y Y Y	N N N	Deactivate an IDP group Deactivate an ARS group Deactivate an ACVT group	confirmation tone followed by dial tone confirmation tone followed by dial tone confirmation tone followed by dial tone	none none none
GRPCARCH	Y	Y	N	Change the group primary Interexchange Carrier	recall dial tone	dial carrier id (XXX)
HIDHOLD	P	Y	N	Used by the Home Intercom feature to put outside calls on hold	confirmation tone followed by dial tone	go on-hook
HIRINGA	P	Y	N	Used by the Home Intercome feature to apply ringing pattern A	confirmation tone	go on-hook
HIRINGB	P	Y	N	Used by the Home Intercome feature to apply ringing pattern B	confirmation tone followed by dial tone	go on-hook
HIRINGC	P	Y	N	Used by the Home Intercom feature to apply ringing pattern C	confirmation tone followed by dial tone	go on-hook
HIRINGG	P	Y	N	Used by the Home Intercome feature to apply ringing pattern G	confirmation tone followed by dial tone	go on-hook
ICMUSE	N	Y	N	Use an intercom range	none	none
LQ1DISP	N	N	Y	Display Status of MLHG Queue from the DSLQMON form	display queue status data for this ACTION (if customer terminal is capable)	none
LQ2DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LQ3DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LQ4DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LQ5DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LQ6DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LQ7DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LQ8DISP	N	N	Y	same as LQ1DISP	Same as LQ1DISP	none
LSP	P	Y	Y	Use call pickup orig. loudspeaker paging	none	none
LSFNOSYM	Y	Y	N	Activate LASS Screen List Editing (SLE) session	DSU2-RAF-DTA Dial-Through-Announcements will be given	Customer responds to announcements
LSFSYM	Y	Y	N	Activate LASS Screen Listing Editing (SLE) session	DSU2-RAF-DTA Dial-Through-Announcements will be given	Customer responds to announcements
LWCUSE	P	Y	Y	Use leave word calling (allow a message from the calling party to be left for the called party)	none	none
MAINACT	P	Y	N	Activate main parameter set	none	none
MDRACT	P	Y	N	MDR feature activation code	none	none
MDRDCT	P	Y	N	MDR feature deactivation code	none	none
MDROFF	P	Y	N	MDR group status off	none	none
MDRON	P	Y	N	MDR group status on	none	none

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MWSOH	P	Y	N	Start multiway feature off hook	recall dial tone	dial digits
MWSPL	P	Y	N	Split last added party from multiway call	none	none
NTPOTSA	N	Y	N	Escape to POTS (ODP) without Dial Tone	none	none
PAEO	N	Y	N	Executive Override precedence access code. Next dialed number is call at Executive Override precedence level and should be an intercom number	second dial tone	dial digits for call
PAF	N	Y	N	Flash precedence access code. Next dialed number is call at Flash precedence level and may be intercom number, PP route code or PP area code	second dial tone	dial digits for call
PAFO	N	Y	N	Flash Override precedence access code. Next dialed number is call at Flash Override precedence level and may be intercom number, PP route code or PP area code	second dial tone	dial digits for call
PAI	N	Y	N		second dial tone	dial digits for call
PAP	N	Y	N	Priority precedence access code. Next dialed number is call at Priority precedence level and may be intercom number, PP route code or PP area code	second dial tone	dial digits for call
PAR	N	Y	N	Routine precedene access code. Next dialed number is call at Routine precedence level and should be intercom number, PP route code or PP area code	second dial tone	dial digits for call
PDTEO	N	Y	Y	Executive Override precedene access code. Next dialed number is call at Executive Override level and should be intercom number, PP route code or PP area code	second dial tone	dial digits for call
PDTF	N	Y	Y	Flash precedence access code. Next dialed number is call at Flash precedence level and may be intercom number, PP route code or PP area code	second dial tone	dial digits for call
PDTFO	N	Y	Y	Flash Override precedence access code. Next dialed number is call at Flash Override precedence level and may be intercom number, PP route code, or PP area code	second dial tone	dial digits for call
PDTI	N	Y	Y	Immediate precedence access code. Next dialed number is call at Immediate precedence level and may be intercom number, PP route code, or PP area code	second dial tone	dial digits for call
PDTP	N	Y	Y	Priority precedence access code. Next dialed number is	second dial tone	dial digits for call

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				call at Priority precedence level and may be intercom number, PP route code, or PP area code		
PDTR	N	Y	Y	Routine precedence access code. Next dialed number is call at Routine precedence level and should be intercom number	second dial tone	dial digits for call
PDTRC	P	Y	N	Use a private facilities access	none or dial tone	dial digits
PFUSE	P	Y	Y	Use a private facilities access	none or dial tone	dial digits
PNTEO	N	Y	Y	Executive Override precedence access code. Next dialed number is call at Executive Override precedence level and should be intercom number	none	dial digits for call
PNTF	N	Y	Y	Flash precedence access code. Next dialed number is call at Flash precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PNTFO	N	Y	Y	Flash Override precedence access code. Next dialed number is call at Flash Override precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PNTI	N	Y	Y	Immediate precedence access code. Next dialed number is call at Immediate precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PNTP	N	Y	Y	Priority precedence access code. Next dialed number is call at Priority precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PNTR	N	Y	Y	Routine precedence access code. Next dialed number is call at Routine precedence level and should be intercom number	none	dial digits for call
PODUSE	P	Y	Y	Print on demand (used with the MSS feature)	none	none
PRCD	N	Y	N	PP route code 0. Provides alternate Route Choice 0 for PP call	none	dial digits for call
PP1AREA	N	Y	N	PP area 1	none	none
PP2AREA	N	Y	N	PP area 2	none	none
PP3AREA	N	Y	N	PP area 3	none	none
PP4AREA	N	Y	N	PP area 4	none	none
PP5AREA	N	Y	N	PP area 5	none	none
PPEO	N	Y	N	Executive Override precedence access code. Next dialed number is call at Executive Override level and should be intercom number	none	dial digits for call
PPF	N	Y	N	Flash precedence access code. Next dialed number is call at Flash precedence level and may be intercom number, PP	none	dial digits for call

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				route code, or PP area code		
PPFO	N	Y	N	Flash Override precedence access code. Next dialed number is call at Flash Override precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PPI	N	Y	N	Immediate precedence access code. Next dialed number is call at Immediate precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PPP	N	Y	N	Priority precedence access code. Next dialed number is call at Priority precedence level and may be intercom number, PP route code, or PP area code	none	dial digits for call
PPR	N	Y	N	Routine precedence access code. Next dialed number is call at Routine precedence level and should be intercom number	none	dial digits for call
PRC0	N	Y	N	PP route code 0; provides alternate Route Choice 0 for PP call	none	dial digits for call
PRC1	N	Y	N	PP route code 1; provides alternate Route Choice 1 for PP call	none	dial digits for call
PRC2	N	Y	N	PP route code 2; provides alternate Route Choice 2 for PP call	none	dial digits for call
PRC3	N	Y	N	PP route code 3; provides alternate Route Choice 3 for PP call	none	dial digits for call
PRC4	N	Y	N	PP route code 4; provides alternate Route Choice 4 for PP call	none	dial digits for call
PRC5	N	Y	N	PP route code 5; provides alternate Route Choice 5 for PP call	none	dial digits for call
PRC6	N	Y	N	PP route code 6; provides alternate Route Choice 6 for PP call	none	dial digits for call
PRC7	N	Y	N	PP route code 7; provides alternate Route Choice 7 for PP call	none	dial digits for call
PRC8	N	Y	N	PP route code 8; provides alternate Route Choice 8 for PP call	none	dial digits for call
PRC9	N	Y	N	PP route code 9; provides alternate Route Choice 9 for PP call	none	dial digits for call
RBQCAN	P	Y	N	Cancel place in ringback queue	confirmation or re-order tone, if the call is or is not in queue, respectively	none
RBQVFY	P	Y	N	Verify place in ringback queue	confirmation or re-order tone, if the call is or is not in queue, respectively	none
RTRV	N	Y	Y	Call Park Retrieve	Analog:	Analog:

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					1. dial tone 3. parked call retrieved ISDN: 1. dial tone 3. parked call retrieved	2. dial access code 4. none ISDN: 2. dial access code or press feature button 4. none
SAUSE	P	Y	Y	Service Assist via dial code or feature button	display to originating agent route the call	enter dial code or feature button.
SP4CAR	N	Y	N	Use the FGD CAC (Carrier Access Code) for next call	none	dial an AD code or an intercom code
SPCAR	N	Y	N	Use the FGD CAC for next call	none	dial an AD code or an intercom code
TD1PAD	P	Y	N	Add a one-parameter code to an action point for Time of Day	recall dial tone second recall dial tone third recall dial tone	dial 2-digit action point identifier dial one-parameter code dial parameter
TDACT	P	Y	N	Activate a Time of Day feature	confirmation tone follwed by dial tone	none
TDADZP	P	Y	N	Add a zero-parameter code to an action point for Time of Day	recall dial tone second recall dial tone	dial 2-digit action point identifier dial zero parameter
TDATCH	P	Y	N	Change action time for Time of Day action point	recall dial tone second recall dial	dial 2-digit action point identifier dial 4-digit action time
TDDALL	P	Y	N	Delete all code lists for a Time of Day action point	recall dial tone	dial 2-digit action point identifier
TDDCT	P	Y	N	Deactivate a Time of Day feature	confirmation tone followed by dial tone	none
TDDEL1P	P	Y	N	Delete one-parameter code list for Time of Day	recall dial tone	dial 2-digit action point identifier
TDOWCH	P	Y	N	Change one-week schedule for Time of Day action point	recall dial tone	second recall dial tone
TDZPDEL	P	Y	N	Delete zero-parameter code list for Time of Day	recall dial tone	dial 2-digit action point identifier
TGACT	P	Y	N	Activate a terminal	recall dial tone followed by	none

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				group/station restriction feature for the hunt group if this is lead line	confirmation tone	
TGDCT	P	Y	N	Deactivate a terminal group/station restriction feature for the hunt group if this is lead line	recall dial tone followed by confirmation tone	none
UCRACT	Y	Y	N	Activate Unidentifed Call Rejection	confirmation announcement	none
UCRDCT	Y	Y	N	Deactivate Unidentifed Call Rejection	confirmation announcement	none

Figure 1 ODP AND IDP ACTION DEFINITIONS

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SEC. 1G: REVISED ROUTING AND SCREENING FOR 5E2 SOFTWARE RELEASE

1. GENERAL DESCRIPTION

For Software Releases earlier than 5E2, Issue 1, the Route Index for a particular call is determined in the Rate and Route tables with a three level access. The originator of the call has been assigned to a Screening Index number by a Line Class Code, for line originations, or on an incoming (or two way) Trunk Group basis, for trunk originations. The Screening Index is the Rate and Route table, (5301 Record), which is represented by a matrix. The Code Index determined in digit analysis (PDIT, LDIT, IDDD and INDIT Forms) points to the particular row in the table. For line originations, PDIT has determined if a prefix has been dialed, deletes the prefix if any, but points to the appropriate column in the table. For trunk originations, the No Prefix column is always used.

With 5E2, Issue 1 and later Software Releases, the call processing is similar, but the Route Index is collected earlier. This is done by entering the Route Index in the digit analysis forms of PDIT, LDIT, IDDD and INDIT. Some new forms associated with CI (Carrier Interconnect) will also include a Route Index. Generally, whenever a Code Index is entered on a form, a Route Index will also be entered.

The Route Index that is entered in digit analysis forms is considered the Regular Route Index, i.e., the Route Index that the majority of the call originators will use to successfully complete the call. This is usually the Route Index that was entered in 5E1 Software Releases in the Rate and Route Record for the one party flat rate or message rate subscriber under either (or both) the No Prefix or 1 Prefix columns.

The exceptions to this routing will be taken care of through Special Route Index entries on the Rate and Route Records. A Special Route Index entry overrides the Regular Route Index during call processing if it is found on the Rate and Route.

The office codes (i.e., the NXXs served by the 5ESS Switch and defined with Normalized Office Codes - NOCs) are also entered on the digit analysis forms with 5E2, Issue 1 and later Software Releases. These forms are usually LDIT and INDIT. Although the NXX column still appears on the Rate and Route, most offices will no longer use these entries.

The Code Indexes 3 - 9 are no longer reserved in the 5ESS Switch. These Code Indexes may now be used if desired. Code Indexes 1 and 2 are still defined in all offices in PDIT for operator and IDDD operator for line originations.

If the call originators assigned to the particular Screening Index for the Rate and Route table are to use the Regular Route Index (or office code) determined in digit analysis, then REGL will be entered in the appropriate prefix column. If a Special Route Index is required for the call originators, then a Route Index number from 1 to 16,383 is entered. The particular Charge Indexes are entered without change in the procedure.

As illustrated in the figures, the use of REGL in the Rate and Route Records allows them to be significantly compacted when compared to the method used with the 5E1 Software Releases. The quantities of Code Indexes are now dependent on charging types and special dialing requirements instead of the requirement to obtain a specific Route Index (in addition to the Charge Index). The REGL indication also aids in the ongoing administration of the 5ESS Switch because, when a new Trunk Group is added, the Route Index can be changed in LDIT to reflect the new Trunk Group instead of adding a new Code Index which requires every prefix type in every Screening Index to be added.

The figures in this section are for illustration purposes only, and are used to emphasize the associated documentation. They should not be construed as a recommendation. The requirements for each office must be determined based on charging types, special codes and the local dialing pattern.

2. LINE ORIGINATIONS

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See Figure 1 for a typical example of a Rate and Route Record used for message unit subscribers. This sample office has a dialing pattern of No Prefix on seven digit calls and Prefix 0 or 1 required for ten digit calls. To dial a 0+ call within the area code, the Home NPA must be dialed, but 1+ the HNPA is now allowed.

Several new columns have been added to the Rate and Route Record for Carrier Interconnect. Ignore these columns for now; they will be discussed later in this section.

Several examples may help illustrate how this revised screening works. A line subscriber who has been assigned to this Screening Index, 1, originates a call and dials 767-1234. This is a 3 Message Unit call and should be routed on a direct Trunk Group to Office B.

Prefix/Feature Digit Interpreter (PDIT) analyzes the digits and recognizes with the digits 76 that all digits for this call should be analyzed in the Local Digit Interpreter Table (LDIT). The LDIT entry for 767 indicates this is NORMAL Call Type with seven digits expected to be dialed. LDIT also indicates the Code Index is 6 and the Regular Route Index is 156.

The call enters the Rate and Route Record, Screening Index 1 in Figure 1. No prefix was dialed so the entry for No Prefix and Code Index 6 is Route Index equal to REGL and Charge Index equal to 6. REGL indicates the Regular Route Index found in digit analysis should be used. In this case, the Route Index is 156 determined in LDIT. Charge Index 6 has been defined on the CHGIDX Form as 3 Message Units.

Now, let's see what happens when this subscriber dials the same number, 767-1234, but inappropriately dials 1+. Remember, in this sample office, one plus seven digits is not permitted. PDIT analyzes the digits 17, deletes the 1 for translation in LDIT, but the prefix type dialed, 1, is remembered for entry into the Rate and Route. LDIT analyzes the digits 767, as before, with the same result. Code Index 6 and Route Index 156.

The call enters the Rate and Route but this time the entry for 1 Prefix and Code Index 6 is Route Index equal to 4 and Charge Index equal to 1. Route Index 4 is considered a Special Route Index which will override the Regular Route Index of 156 found in digit analysis. Route Index 4 is defined so that this subscriber receives an announcement which indicates a one should not be dialed for calls within the local area code.

Different types of customers require unique Screening Indexes so they can be charged differently or so different types of calls can be blocked (i.e., not be allowed to successfully complete). See Figures 2, 3 and 4, respectively, for Rate and Route Records for coin, Hotel/Motel with Message Registers and WATS Band 4 subscribers. When these subscribers dial 767-1234 like the message unit subscriber, the same result is output from digit analysis, i.e., Code Index equal to 6 and Regular Route Index equal to 156. The No Prefix and Code Index 6 combination in Screening Index 2 yields a Special Route Index of 151 for the coin subscriber to be routed to the TSPS operator for completion and coin collection. The Charge Index has been defined as Coin OPR. Screening Index 3 for the hotel subscriber uses the Regular Route Index 156 from digit analysis, but the Charge Index is different from that used in Screening Index 1. This Charge Index has been defined with a Message Billing Index so a message register can be appropriately pegged and the hotel can collect the charge from their guest. Screening Index 4 for the WATS Band 4 subscriber yields the Special Route Index 7 which is associated with an announcement telling the subscriber this call is out of band for the WATS line.

The process is only slightly different when a line originates and dials a Telephone Number that terminates within the office. As mentioned before, the Office Code may also be defined in digit analysis with 5E2 and later Software Releases.

When a subscriber assigned to Screening Index 1 dials 233-1000, digit interpretation starts in PDIT. As soon as 233 has been dialed, PDIT recognizes that all digits are to be analyzed in LDIT. LDIT translates 233 as a Normal Call Type with seven digits expected to be dialed. This time, LDIT has been defined with Code Index equal to 3 and Office Code equal to 233. Digits defined in LDIT as an Office Code must be a code served by this office and therefore defined on the Normalized Office Code Record. When an Office

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Code is entered in a digit analysis table instead of a Route Index, the 5ESS Switch knows that Directory Number Translations are required to terminate to a line defined in this office.

When this call enters Screening Index 1 with No Prefix and Code Index 3, the result is REGL which again means use what was found in digit analysis, in this case, Office Code 233. Again, this "route" to a local Office Code can be overridden with a Special Route Index when it is inappropriate for an originator to complete to a local number. See Screening Index 4 for the combination of No Prefix and Code Index 3: The WATS Band 4 subscriber would be given an announcement.

In offices where more than one LDIT is used for line originations, screening can be simplified with this revised screening method. Usually, a second LDIT is used because the office has two rate areas and it is necessary to get unique Charge Indexes depending on whether the line originator is in Rate Area 1 or 2. (When the second Rate Area is associated with an RSM and the RSM requires a seven digit conversion number for 911, unlike the host, a second DAS and LDIT are usually required.)

With the 5E1 Software Releases, a duplicate set of Screening Indexes were required for the second Rate Area so the appropriate combination of Route Index and Charge Index could be found in the Rate and Route. Because the Regular Route Index (or Office Code) is determined in digit analysis with the 5E2 Software Releases, the same set of Screening Indexes can be used for both Rate Areas.

Two Line Class Codes will still be defined for each customer type. For instance, this office might use 1 MR (Measured Rate) to uniquely describe a one party message rate subscriber. One LCC would be defined for 1MR and Rate Area 1 and another for 1MR and Rate Area 2. Both might indicate Screening Index 1 but would have Digit Analysis Selector (DAS) 1 and 2 respectively for Rate Area 1 and 2. (The DAS is defined so customers in Rate Area 1 use LDIT 1 and customers in Rate Area 2 use LDIT 2.)

Use the example of a customer dialing 767-1234. Assume the LDIT result of Code Index 6 and Route Index 156 is found in LDIT 1 for Rate Area 1 subscribers. Now, the Route Index 156 is also appropriate for the Rate Area 2 subscribers, however, these subscribers should be charged 4 Message Units instead of 3. All that is required when using the same set of Screening Indexes for both Rate Areas is to define the LDIT 2 entry for 767 with Route Index 156 and Code Index 7.

3. TRUNK ORIGINATIONS

Look at some types of trunk originations in this sample office. Each incoming Trunk Group must specify a Screening Index and a Digit Analysis Selector (DAS). The DAS is defined with an Incoming Trunk Digit Interpreter (INDIT) and LDIT, although the LDIT is not necessary used. Digit interpretation always starts for incoming trunks in an INDIT. In the case where the office expects five, six, or seven digit incoming calls and only completes to the 5ESS Switch Office Codes (i.e., the office does not tandem calls through to other offices), it is simplest to enter the digits received of each of the 5ESS Switch Office Codes on the INDIT and enter N in LDIT?

Assume this office has Office Codes 232 and 233 For Trunk Groups where five digits are expected, the appropriate DAS is specified so the INDIT has two entries of 2 and 3 as the Incoming Digits, LDIT? equal to No, Code Index is 1, Office Codes are 232 and 233 respectively and Number of Digits Expected is 5. Screening Index 100 is assigned to this incoming Trunk Group. See Figure 9. This Screening Index is used only for trunk originations so No Prefix is the only type entry that needs to be defined.

Similar to the line origination cases, the entry of REGL found in Screening Index 100 indicates the call should be processed with the Route Index or Office Code found in digit analysis, in this case, the Office Codes 232 or 233 entered in the INDIT. The Charge Index in this case is irrelevant. The far end of the Trunk Group has the responsibility of billing this call for its subscriber. (The Charge Index is pertinent on trunk originations for a CAMA serving office or for some Carrier Interconnect cases. These are illustrated in subsequent paragraphs.)

Perhaps this office also has some incoming Trunk Groups where seven digits are expected for calls terminating in this office. A separate INDIT table is defined similar to the one used for the five digit

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incoming case except the Incoming Digits are entered as 232 and 233 and Number of Digits Expected is 7. The same Screening Index entry will be used for these calls (i.e., Screening Index 100 and Code Index 1).

If this office expects only four digits to be inpulsed for termination in this office, then two Trunk Groups will be required. By defining two INDIT tables, one for each Office Code, 232 and 233, the same Screening Index and Code Index can be used as for the five and seven digit cases. For cases where four digits are expected, none of the digits in the Office Code are received. Therefore, the INDIT should have entries of 0 through 9 as the Incoming Digits. Then each entry is the same as the five and seven digit cases except the Office Code is either 232 or 233 in the particular INDIT and Number of Digits Expected is four.

Perhaps this office receives five digits on a particular Trunk Group, however, not only are Office Codes 232 and 233 received but also 234 through 239 which must be tandemed to other nearby offices. The incoming digits are 2 through 9 with the digits 2 and 3 defined as before for the local Office Codes. Digits 4 and 5 are defined with Route Index 112 and digits 6, 7, 8 and 9 are defined with Route Index 113 to tandem these calls to Offices C and D respectively. Again, Screening Index 100 and Code Index 1 will be used. When a call is received on this Trunk Group with the digits 41234, the Rate and Route entry of REGL means use the information found in digit analysis, this time the Route Index 112 found in this particular INDIT table.

As demonstrated, if the INDIT tables are populated appropriately and the office has no responsibility for billing, only one Rate and Route entry is required to serve a variety of cases.

If this office acts as a CAMA serving office, there are several ways to accomplish routing and screening. Typically, the far end subscriber dials 1+ 7 or 10 digits. The far end office translates the 1, deletes it, and sends all other digits to the CAMA serving office on a "CAMAANI" Trunk Group.

The most efficient way to handle these calls is to use the LDIT built for line originations in this office. To do this, the INDIT is defined with all possible first digits 2 through 9 and LDIT? equal to Yes. The DAS has been defined with this INDIT number and LDIT 1. All calls will be translated in LDIT as if they had been originated in this office. A separate Screening Index must be defined for these calls with the same Code Index entries as for lines, however, only the No Prefix cases must be defined. The 5ESS Switch recognizes with the incoming trunk class of CAMAANI that it must create a billing record for its AMA so the Charge Index found on the Screening Index is used.

If it is necessary to do incoming screening on these calls so that Telephone Numbers in the originators local area or EAS (Extended Area Service) do not complete normally, then either the INDIT or a unique LDIT could be used to separate the traffic.

The INDIT could be populated with all permitted codes which are defined appropriately with either Route Indexes or the 5ESS Switch Office Codes and LDIT? equal to No. All codes not entered would default to reorder. If all calls require the same Charge Index (e.g., a Charge Index defined as Station Paid - SP), then only one entry is required in the Rate and Route similar to Screening Index 100 with the appropriate Charge Index number.

Similarly, a unique LDIT could be used to translate the incoming digits except that LDIT requires all codes to be translated; the LDIT will not permit a default to reorder. Codes 2 through 9 would be entered on INDIT with LDIT? equal to Yes. In this case, permitted codes could use one Code Index entry in the Rate and Route defined as REGL and a Charge Index for Station Paid and another Code Index entry could be defined with either an announcement or reorder Route Index and Charge Index of Free for the disallowed codes. (Remember, Code Index 1 and 2 may not be used in LDIT.)

When incoming screening is desired, whether to use the INDIT or LDIT to translate the codes is dependent on several things. For instance, code conflicts and ambiquities may not be treated in INDIT. Also, if this office is a CAMA serving office for more than one office, then the LDIT method is probably more efficient. The largest group of codes would probably require the same treatment either permitted or not permitted. When the code should be permitted from one Trunk Group but not for another, then a unique Code Index would be required so that the Screening Index associated with the Trunk Group where the call is

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permitted would have a REGL entry. The Screening Index associated with the other Trunk Group would have a Route Index which would override the LDIT Route Index and send the call to tone or announcement.

4. RETROFIT OFFICES

Offices which are currently working on 5E1 Software Releases and retrofit to the 5E2 must define DOMSCR (Dominant Screening) forms before retrofitting. This form is found in Division 3, Section 3x of this guide.

These forms will be used by the ODA process to evolve some of the office data changes required for the revised routing and screening. If the entries on a DOMSCR Form are LDIT, 1 and Screening Index 1, then for each code (Incoming Digits) in LDIT 1, the associated Code Index will be analyzed in Screening Index 1 to find an Office Code or a Route Index that is not a tone or announcement. The No Prefix entry will be tried first followed by 1 Prefix and 0 Prefix. When the Office Code or Route Index is found, it is applied to the LDIT code. All PDIT, LDIT and IDDD codes are populated with the Route Indexes and 5ESS Switch Office Codes dependent on the DOMSCR Form entries.

For INDIT codes where LDIT? equals No, the 5ESS Switch Office Codes and Route Indexes are also populated, however, DOMSCR Forms are not used. If only one Screening Index is associated with an INDIT, with an INDIT, then those values will be used. When more than one Screening Index is associated with the INDIT, then the Screening Index which is used by the greatest number of trunks (or lower Numeric Screening index value if equal quantities) is considered dominant and those values will be used to populate the INDIT Office Code and Route Index entries.

No changes will be made to the Rate and Route tables during this evolution process. To take advantage of the revised screening, it will be necessary to use Recent Change to change the Code Indexes in digit analysis entries, and the Code Index entries in the Rate and Route tables.

For new offices that will be using the 5E2 Software Release at cutover, but are initially loading the Office Dependent Data with an ODA Issue of the 5E1 Software Release, the DOMSCR Forms will also be used. The entry of REGL will not be allowed in the 5E1 ODA Issue, but changes can be made in ODA after the office is evolved to the 5E2 ODA Issue.

5. CARRIER INTERCONNECT REQUIREMENTS

The Carrier Interconnect capability adds several new entries to the Rate and Route and also requires additional Code Indexes to be used for carrier specific routing and charging treatments.

In an EAEO (Equal Access End Office), an originating LATA billing record is required on the AMA for all IC (InterLATA Carrier) calls which originate in this office. Charge Indexes must be defined for FGBOL (Feature Group B Originating LATA) calls, where 950-1XXX has been dialed, and FGDOL (Feature Group D Originating LATA) calls. FGD calls have been dialed with a carrier prefix of 10XXX or the line has been presubscribed to a carrier.

Terminating LATA billing records are required in the office that connects directly to the IC (i.e., where the call enters the LATA). Appropriate Charge Indexes are defined as FGBTL and FGDTL and are always used in an Access Tandem, but only used in the EAEO if the carrier has direct trunks to it. New WATS Band Charge Indexes may also be defined and used on the Rate and Route tables. See Figure 7 for the example of a new IntraLATA WATS Band.

Take a simple example of a carrier call from a subscriber assigned to Screening Index 1. The subscriber dials 10999 + 1 + 219-297-1234. PDIT recognizes the 10999 as a Carrier Access Code and it is retained for the specific carrier translations. The 1 is remembered for entry into the appropriate column of the Rate and Route but it is deleted. Starting with the digit 2, the call is further analyzed in LDIT. LDIT translates 219 as Type of CI Call, INTER for InterLATA calls. Now the specific carrier translations are determined in the InterLATA Carrier Feature Record (ICF Form) for carrier 999. The Domestic Code Index of 31 and

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Domestic Route Index of 119 are used for this call. The call now enters Screening Index 1 and the Code Index 31 and 1 Prefix entry is read. This entry has REGL (use the Regular Route Index found in digit analysis, in this case, the carrier specific Route Index of 119 found in ICF) and the Charge Index 30, which has been defined as FGDOL. Route Index 119 may be defined for transporting the call directly to the carrier or indirectly via an Access Tandem.

On the preceding call, if the ICF for the carrier had DIG ROUTING equal to Yes, then the carrier specific Code Index and Route Index would be found on the CDIM (Carrier Destination Mapping) form. If the Code Index for 219 in the LDIT was 13 then the entry for Code Index 13 and Carrier ID 999 would be used in the CDIM to find the carrier specific Code Index and Route Index which are then used in the RAR. DIG ROUTING and the CDIM Form are normally used for the carrier that currently provides long distance services for the office prior to Carrier Interconnect without the subscribers dialing a Carrier Access Code. The CDIM Forms are initially populated so that the carrier specific Code Index and Route Indexes are the same as the LDIT Code Index and Route Indexes. This insures that the routing of long distance calls (InterLATA) continue as they do today and transition is accomplished by changing the carrier specific Code Index and Route Indexes. If this carrier is permitted and accepts IntraLATA calls, then Code Indexes other than those found in LDIT must be used for the carrier specific Code Indexes. Digit Routing and the CDIM may also be used for other carriers whenever more flexibility is needed to obtain the appropriate carrier Route Index and Charge Index.

The new RAR field CBLK (Carrier Block) is used in conjunction with Line Screening. When Line Screening is equal to Yes and the call is a carrier call, the Rate and Route entry associated with the regular digit analysis forms (PDIT, LDIT and IDDD) is used first. Only if the call succeeds will the carrier specific Code Index and Route Index be used for the second reading of RAR.

There are several ways that Line Screening is set to Yes. The first way is part of the Office Dependent Data defined by the 5ESS Switch owner. There is a new field on the LCC (Line Class Code) form called LINE SCREENING. Line Screening should equal Yes for any LCC that requires screening to be checked first by the regular digit analysis Code Index. Yes is always used for LCCs defined for WATS Bands, Toll Diversion and Code Restriction. No is always used for Charge-A-Call; this is a special case and will be described later.

When the regular digit analysis Code Index is read in the RAR, both the Toll Diversion and Carrier Block designations are analyzed. If both are equal to No, the call processes normally and the RAR is read again, this time using the carrier specific Code Index and Route Index found in either the ICF or CDIM.

For example, a WATS Band 4 subscriber is presubscribed to carrier 998 and dials 1+ 219 + seven digits. Note, physical WATS lines must be preassigned to a specific carrier and may not dial a carrier Access Code. The Line Class Code has Line Screening equal to Yes and the Screening Index is 4. LDIT is defined with Code Index 13 and the Domestic Code Index and Route Index for carrier 998, found in that carrier's ICF, are 30 and 179 respectively. Because Line Screening is equal to Yes, the RAR entry for Code Index 13 and 1 Prefix on Screening Index 4 is read first. (Charge Index 18 in this entry needs to be defined as WATS Band 4.) Both Toll Diversion and Carrier Block are equal to No. Therefore, call processing continues with the carrier specific Code Index 30 and 1 Prefix. This entry indicates the REGL Route Index, 179, should be used and Charge Index 38 is defined as WATS Band 4 InterLATA with a Group Billing Number. Let's see what happens when this same line originates a call with 1 + 213 + seven digits. All the information is the same except Code Index 17 is defined for 213 in the LDIT. This time Code Index 17 and 1 Prefix has Carrier Block equal to Yes. This causes the call to be completed to the Route Index found in this entry, in this case it is for an announcement which tells the subscriber the call is out of band.

For Code Restriction, the processing is similar but Carrier Block should be Yes on the RAR entries which are restricted by forcing the call to tone or announcement.

There are two cases for Toll Diversion; RVB (Reverse Battery) and ATT (Attendant). The LCC is again defined with Line Screening equal to Yes. The call processing is similar to that of the WATS case except what happens to the call when Toll Diversion is other than No on the entry for the regular digit analysis Code Index. When ATT is found, the Call completes to the attendant of this members Terminal Group.

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When RVB is found, Reverse Battery is applied on the line toward the PBX. The PBX will either tear the call down or allow it to continue. If the call stays up, the 5ESS Switch will read the entry again except the RVB will be ignored on the second read. Therefore, the call will continue using the carrier specific Code Index and Route Index.

There are several cases where the software program forces Line Screening to be Yes even though the LCC has been defined with No. These are on a per call basis. That is, Line Screening is temporarily changed to Yes for the carrier call being processed under the following conditions:

A. 10 digits are dialed without a 1 or 0 prefix.

B. 7 digits are dialed with 1+ or 0+.

C. The LCC has a Class of Service equal to CHGCALL and the ICF for the carrier on this call has CAC SCRNING equal to Yes.

The first two conditions allow enforcement of local dialing requirements for carrier calls. By setting Carrier Block to Yes for all entries on all Screening Indexes where the call is normally given an announcement for either dialing a prefix when not allowed or not dialing a required prefix, the carrier calls will also be routed to these announcements when dialed improperly.

The third condition enables a carrier to specify whether or not it wants traditional screening done when calls originate from Charge-A-Call stations (Coinless Public Telephones). If the carrier's ICF has CAC SCRNING equal to No, then the special software routine to block NORMAL 10 digit calls that are not 0+ or not NPA + 555 is not invoked. Also, Line Screening remains set to No. All calls correctly dialed will be sent to the carrier by using the carrier specific Code Index and Route Index. If the carrier's ICF has CAC SCRNING equal to Yes, then the special software routine is invoked and Line Screening is temporarily set to Yes for this call. All entries on the Screening Index assigned to Charge-A-Call that enforce traditional CAC screening (i.e., block the originator with an announcement), must have Carrier Block equal to Yes.

All demonstrated cases of the use of the CBLK field show that when it is Yes, the customer is routed on the Route Index found with the CBLK entry. This is expected to be a tone or announcement to indicate failure to the subscriber. In any case, the CBLK must not be Yes if the associated Route Index entry is REGL because no Route Index number will be found.

The new field IECR (Interexchange Carrier Restriction) is part of the capability that provides call restriction from certain subscribers to a particular carrier. This is also referred to as non-payer screening which was originally intended as a service to the carrier for which the 5ESS Switch is providing billing (i.e., the carrier which is providing toll service before CI). The 5ESS Switch is not limited to providing this service to only one carrier, however, the screeing requirements can become complex if the carriers do not share the same set of non-paying subscribers.

If IECR is equal to Yes, a special two digit ANI information number will be outpulsed on the subsequent Trunk Group. The far end of the Trunk Group is typically a TSPS or similar OS (Operator Service) facility which is equipped for long term OS signalling and can recognize the special ANI information digits as an indication of a non-payer.

If a subscriber normally assigned a Line Class Code which uses Screening Index 1 needs to be screened as a non-payer, first copy Screening Index 1. Figure 8 is an example of Screening Index 1 revised for non-payer screening for Carrier A and has been assigned 51 as the revised Screening Index number. A new Line Class Code will also be defined with Screening Index 51.

First, it must be determined which Code Indexes are used for this carrier. If the ICF for the carrier has DIG ROUTING equal to No, then all Code Indexes are on the ICF. If DIG ROUTING equals Yes, then the carrier Code Indexes are found on the CDIM. To be able to block calls for this carrier and still allow calls to other carriers, including the local company, it is obvious that the Code Indexes must be specifically for this carrier.

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If DIG ROUTING is Yes, then it is likely that Carrier A is the current long distance provider that is in transition and the carrier non-specific Code Indexes 1 through 26 will need to be checked in addition to any carrier specific Code Indexes for this carrier. If DIG ROUTING is No, then the carrier specific Code Index needs treatment.

For each Code Index entry used for this carrier (excluding 800 calls) and the call routes to an appropriate OS facility, enter Y for IECR. For this carrier's Code Indexes that do not currently route to the OS facility, either change the Route Index to one for a tone or announcement that will block the originator or optionally enter the Route Index for the OS facility and make IECR equal to Yes.

The example in Figure 8 of Screening Index 51 shows that non-operator dialed codes are being routed to Route Index 10 which is a special announcement. Carrier A is digit routing in transition and uses Code Indexes 2, 12 - 19, 25 and 29. Now when subscribers who normally are assigned to Screening Index 1 become non-payers of Carrier A, they will be assigned to the new Line Class Code which will allow normal completion on all calls except to Carrier A.

If Carrier A and Carrier B both uniquely require non-payer screening, then three new Line Class Codes and Screening Indexes would be required for this specific case. One to restrict subscriber access to Carrier A, one to restrict subscriber access to Carrier B, and one to restrict subscriber access to Carrier A and B. All other Screening Indexes with other types of subscribers (WATS, Hotel-Motel, etc.) which require non-payer screening, similarly need to be duplicated. The more carriers that are given the option for non-payer screening, the more complex the translations.

Special carrier routing based on Class Of Service can be accomplished by assigning a unique Code Index for the carrier. Special carrier routing may be to route the call to an operator or to a tone or announcement. For instance, on calls to Carrier A from a coin phone, the carrier may request that calls not dialed 0+ also be sent to the carrier's operator service facility for coin return and collection. However, Carrier B does not have the ability to return or collect coins, and therefore requests calls not dialed 0+ to route to an announcement that tells the call originator this type of call is not accepted by this carrier.

As illustrated, the majority of screening requirements for line originated carrier calls are cared for by the Line Screening indicator and the CBLK designations used in the non-carrier specific Code Indexes. A specific carrier Code Index is needed for FGB calls to the FGBOL Charge Index can be used. Distinct carrier Code Indexes are also required for FGD billing but the quantity is dependent on the specific needs of the carriers. Usually, for each carrier that requires non-payer screening or Class Of Service routing, a unique carrier specific Code Index will be required. However, if several carriers have identical requirements for shared non-payers and Class Of Service without specific carrier Route Indexes, they may share a Code Index. One Code Index is required for all other carriers who do not have special routing requirements other than those distinguished by the ICF Forms.

For trunk originated calls in an EAEO, additional Code Indexes are required only if the office has directly connected trunks incoming (or Two way) from any carrier. Then FGB and/or FGD Code Indexes, depending on the type of trunks, are required to provide FGBTL and FGBTL billing records.

For terminating calls from a carrier to an EAEO on a direct Trunk Group, the INDIT must be populated so that calls received that are not subtending codes of this office will be routed to an announcement and the Route Index for the announcement has a RT DES TYP of BADLATA.

On carrier calls incoming from the Access Tandem, additional Code Indexes are not required because the AT is doing the terminating LATA billing. However, two distinct Trunk Groups separating the local company traffic from the carrier traffic are required so the Trunk Group for carrier traffic can be defined to return answer supervision on termination to a free line.

In a trunk only Access Tandem office, FGBOL and FGDOL billing records are the responsibility of the EAEO and therefore not required in the AT. However, the Access Tandem does have billing responsibilities for calls incoming from any carrier so at least one Code Index will be required for each of the charging types, FGBTL and FGDTL. There will be additional requirements if the AT also acts as a

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CAMA serving office.

Although the AT has no billing responsibilities on an EAEO to AT to carrier call, the carrier specific Code Indexes and Route Indexes are derived differently than the EAEO routing to a carrier previously described. When the EAEO must route a carrier call through the AT with equal access signalling, it will prefix digits on its Route Index to divide major categories of calls so the AT can select a proper Trunk Group to the carrier. Spare toll center codes are used as the prefix digits. The format 0ZZ is used for domestic traffic and the format 1NX is used for international traffic. Another distinction may be for operator and non-operator routes for each of the domestic and international types. Any other distinctions required for flexible routing through the AT may be assigned as long as the EAEO and AT are coordinated for prefixing and receiving the codes. There may be common 0ZZ and 1NX codes established for the entire LATA which would ease translation considerations in the Access Tandem.

For instance, a subscriber of the EAEO originates a carrier call by dialing 10997 + 0 + 217-363-1234. The EAEO translates the call and recognizes this call must be routed over a common Trunk Group to the Access Tandem. On the Route Index (which was specified in carrier 997's ICF for Zero Plus), the 0ZZ code of 012 is prefixed. The EAEO seizes a trunk to the AT and outpulses KP + 012 + 997 + ST. The 5ESS Switch Software Release automatically inserts the Carrier Identification Number of 997; this would also be true if this subscriber had presubscribed to carrier 997 and had not dialed 10997.

The AT receives 012997 and translates the 012 on its INDIT as Type of CI call of AVT and Code Index 1. This causes further translations to be done in the Carrier Destination Mapping Record (CDIM Form). The Code Index (1 in this example) and the Carrier ID of 997 are then used to find the carrier specific Code Index and Route Index. The code Index on the RAR could indicate REGL in which case the carrier specific Route Index is used to seize a trunk to the carrier. The AT cuts through the talking path between the carrier and the EAEO so the EAEO can send the second stage of outpulsing KP + (II + ANI) + ST. (II are the two digit information digits and ANI is the calling number, which are only outpulsed if requested by the carrier.) After the subscriber has finished dialing, the EAEO outpulses KP + 0 + 217-363-1234 + ST to the carrier.

On calls incoming to the AT from a carrier, in addition to the FGBTL and FGDTL billing responsibilities, the AT must also perform screening to ensure that only calls to subtending codes are routed to the appropriate end office. Calls to non-subtending codes must be routed to an announcement and the Route Index for the announcement has a RT DES TYP of BADLATA.

6. GLOSSARY

ATT	Attendant
CDIM	Carrier Destination Mapping
CI	Carrier Interconnect
DOMSCR	Dominant Screening
EAEO	Equal Access End Office
EAS	Extended Area Service
FGBOL	Feature Group B Originating LATA
FGDOL	Feature Grop D Originating LATA
IC	InterLATA Carrier
LCC	Line Class Code
LDIT	Local Digit Interpreter Table

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OS Operator Service

RVB Reverse Battery

ESS 5301(06)TG-5 RATE AND ROUTE RECORD 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__1___

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS 1 MR
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CT	IS	ECR	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CT	IS	ECR	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CT	IS	ECR	BLK	
1	REGL		1	N	N	N	N																		0 -
2	REGL		30	N	N	N	N		REGL		30	N	N	N	N		REGL		30	N	N	N	N		
3	REGL		3	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		INTRAOFFICE/Local Flat Rate
4	REGL		4	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		1 MESAGE UNIT
5	REGL		5	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		2 MESAGE UNIT
6	REGL		6	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		3 MESAGE UNIT
7	REGL		7	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		4 MESAGE UNIT
8	REGL		8	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		5 MESAGE UNIT
9	REGL		2	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		SP 7DIGIT INTRA LATA
10	4		1	N	N	N	Y		REGL		2	N	N	N	N		151		1	N	N	N	N		SP 10 DIGIT
11	REGL		30	N	N	N	N		4		1	N	N	N	Y		6		6	N	N	N	Y		WATS Bd 8 - 7D INTRA LATA/INTE
12	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 8 - 10D INTRA LATA/INT
13	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 1 - 10D INTRA LATA/INT
14	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 2 - 10D INTRA LATA/INT
15	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 3 - 10D INTRA LATA/INT
16	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 4 - 10D INTRA LATA/INT
17	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 5 - 10D INTRA LATA/INT
18	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS Bd 6 - 10D INTRA LATA/INT
19	4		1	N	N	N	Y		REGL		30	N	N	N	N		152		30	N	N	N	N		WATS OUT OF BAND
20	4		1	N	N	N	Y		4		1	N	N	N	Y		151		1	N	N	N	N		0+ HOME NPA
21	REGL		10	N	N	N	N		4		1	N	N	N	N		151		1	N	N	N	N		411 DIRECTORY ASSISTANCE
22	REGL		1	N	N	N	N		4		1	N	N	N	N		3		1	N	N	N	N		611 REPAIR
23	REGL		1	N	N	N	N		REGL		1	N	N	N	N		REGL		1	N	N	N	N		911 EMERGENCY

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24	4		1	N	N	N	Y	REG L		30	N	N	N	N	3		1	N	N	N	N	800 INWATS
25	4		1	N	N	N	Y	REG L		30	N	N	N	N	152			N	N	N	N	900 MASS CALLING
26	REG L		1	N	N	N	N	4		1	N	N	N	Y	3		1	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	REG L		31	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	FGB
29	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	CARRIER A FGD
30	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	CARRIER B FGD
31	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	All Other Carries FGD

Figure 1 SCREENING INDEX 1

ESS 5301(06)TG-5 RATE AND ROUTE RECORD DATE _____

5ESS SWITCH

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__2__

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS DTF Coin
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	SE	CT	CR	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	SE	CT	CR	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	SE	CT	CR	BLK	
1	REG L		14	N	N	N	N																								0 -
2	REG L		34	N	N	N	N			REG L		34	N	N	N	N				REG L		34	N	N	N	N				N	
3	REG L		13	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					INTRAOFFICE/Local Flat Rate
4	REG L		13	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					1 MESAGE UNIT
5	151		14	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					2 MESAGE UNIT
6	151		14	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					3 MESAGE UNIT
7	151		14	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					4 MESAGE UNIT
8	151		14	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					5 MESAGE UNIT
9	151		14	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					SP 7DIGIT INTRA LATA
10	4		12	N	N	N	Y			151		14	N	N	N	N				151		14	N	N	N	N					SP 10 DIGIT INTRA LATA
11	152		34	N	N	N	N			4		12	N	N	N	Y				6		12	N	N	N	Y					WATS Bd 8 - 7D INTER LATA/INTE
12	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 8 - 10D INTER LATA/INT
13	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 1 - 10D INTER LATA/INT
14	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 2 - 10D INTER LATA/INT
15	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 3 - 10D INTER LATA/INT
16	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 4 - 10D INTER LATA/INT
17	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 5 - 10D INTER LATA/INT
18	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS Bd 6 - 10D INTER LATA/INT
19	4		12	N	N	N	Y			152		34	N	N	N	N				152		34	N	N	N	N					WATS OUT OF

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																					BAND
20	4		12	N	N	N	Y	4		12	N	N	N	Y	151		14	N	N	N	N	0+ HOME NPA
21	REGL		11	N	N	N	N	4		12	N	N	N	N	3		12	N	N	N	N	411 DIRECTORY ASSISTANCE
22	REGL		12	N	N	N	N	4		12	N	N	N	N	3		12	N	N	N	N	611 REPAIR
23	REGL		12	N	N	N	N	REGL		12	N	N	N	N	REGL		12	N	N	N	N	911 EMERGENCY
24	4		12	N	N	N	Y	REGL		34	N	N	N	N	3		12	N	N	N	Y	800 INWATS
25	4		12	N	N	N	Y	152		34	N	N	N	N	152		34	N	N	N	N	900 MASS CALLING
26	REGL		12	N	N	N	N	4		12	N	N	N	Y	3		12	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	REGL		31	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	FGB
29	152		34	N	N	N	N	152		34	N	N	N	N	REGL		34	N	N	N	N	CARRIER A FGD
30	11		1	N	N	N	N	11		1	N	N	N	N	REGL		34	N	N	N	N	CARRIER B FGD
31	REGL		34	N	N	N	N	REGL		34	N	N	N	N	REGL		34	N	N	N	N	All Other Carriers FGD

Figure 2 SCREENING INDEX 2

ESS 5301(06)TG-5 RATE AND ROUTE RECORD 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__3___

CODE INDEX	NO PREFIX							1 PREFIX							0 PREFIX							REMARKS Hotel/Motel ANI 6 Message Registers
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CSTC	IEC R	CBLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CSTC	IEC R	CBLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CSTC	IEC R	CBLK	
1	REGL		1	N	N	N	N															0 -
2	REGL		30	N	N	N	N	REGL		30	N	N	N	N	REGL		30	N	N	N	N	
3	REGL		20	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	INTRAOFFICE/Local Flat Rate
4	REGL		20	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	1 MESAGE UNIT
5	REGL		21	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	2 MESAGE UNIT
6	REGL		22	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	3 MESAGE UNIT
7	REGL		23	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	4 MESAGE UNIT
8	REGL		24	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	5 MESAGE UNIT
9	151		1	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	SP 7DIGIT INTRA LATA
10	4		1	N	N	N	Y	151		1	N	N	N	N	151		1	N	N	N	N	SP 10 DIGIT INTRA LATA
11	152		30	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	WATS Bd 8 - 7D INTER LATA/INTE
12	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 8 - 10D INTER LATA/INT
13	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 1 - 10D

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																					INTER LATA/INT
14	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 2 - 10D INTER LATA/INT
15	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 3 - 10D INTER LATA/INT
16	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 4 - 10D INTER LATA/INT
17	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 5 - 10D INTER LATA/INT
18	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS Bd 6 - 10D INTER LATA/INT
19	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	WATS OUT OF BAND
20	4		1	N	N	N	Y	4		1	N	N	N	Y	151		1	N	N	N	N	0+ HOME NPA
21	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	411 DIRECTORY ASSISTANCE
22	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	611 REPAIR
23	REG L		1	N	N	N	N	REG L		1	N	N	N	N	REG L		1	N	N	N	N	911 EMERGENCY
24	4		1	N	N	N	Y	REG L		30	N	N	N	N	3		1	N	N	N	Y	800 INWATS
25	4		1	N	N	N	Y	152		30	N	N	N	N	152		30	N	N	N	N	900 MASS CALLING
26	REG L		1	N	N	N	N	4		1	N	N	N	Y	3		1	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	REG L		31	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	FGB
29	152		30	N	N	N	N	152		30	N	N	N	N	REG L		30	N	N	N	N	CARRIER A FGD
30	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	CARRIER B FGD
31	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REGI		30	N	N	N	N	All Other Carriers FGD

Figure 3 SCREENING INDEX 3

ESS 5301(06)TG-5 RATE AND ROUTE RECORD 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__4___

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I STC	E CR	B L K	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I STC	E CR	B L K	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I STC	E CR	B L K	WATS Band 4
1	3		1	N	N	N	Y																		0 -
2	3		1	N	N	N	Y		3		1	N	N	N	Y		3		30	N	N	N	Y		
3	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		INTRAOFFICE/Local Flat Rate
4	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		1 MESAGE UNIT
5	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		2 MESAGE UNIT
6	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		3 MESAGE UNIT
7	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		4 MESAGE UNIT
8	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		5 MESAGE UNIT
9	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		SP 7DIGIT INTRA LATA
10	3		1	N	N	N	Y		7		1	N	N	N	Y		3		1	N	N	N	Y		SP 10 DIGIT INTRA LATA
11	7		1	N	N	N	Y		3		1	N	N	N	Y		3		1	N	N	N	Y		WATS Bd 8 - 7D

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																						INTER LATA/INTR
12	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y	WATS Bd 8 - 10D INTER LATA/INT
13	4		1	N	N	N	Y	REGL		18	N	N	N	N	3		1	N	N	N	Y	WATS Bd 1 - 10D INTER LATA/INT
14	4		1	N	N	N	Y	REGL		18	N	N	N	N	3		1	N	N	N	Y	WATS Bd 2 - 10D INTER LATA/INT
15	4		1	N	N	N	Y	REGL		18	N	N	N	N	3		1	N	N	N	Y	WATS Bd 3 - 10D INTER LATA/INT
16	4		1	N	N	N	Y	REGL		18	N	N	N	N	3		1	N	N	N	Y	WATS Bd 4 - 10D INTER LATA/INT
17	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y	WATS Bd 5 - 10D INTER LATA/INT
18	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y	WATS Bd 6 - 10D INTER LATA/INT
19	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y	WATS OUT OF BAND
20	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	0+ HOME NPA
21	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	411 DIRECTORY ASSISTANCE
22	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	611 REPAIR
23	REGL		1	N	N	N	N	REGL		1	N	N	N	N	REGL		1	N	N	N	N	911 EMERGENCY
24	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	800 INWATS
25	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	900 MASS CALLING
26	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	3		1	N	N	N	N	3		1	N	N	N	N	3		1	N	N	N	N	FGB
29	3		1	N	N	N	N	REGL		38	N	N	N	N	3		1	N	N	N	N	CARRIER A FGD
30	3		1	N	N	N	N	REGL		38	N	N	N	N	3		1	N	N	N	N	CARRIER B FGD
31	3		1	N	N	N	N	REGL		38	N	N	N	N	3		1	N	N	N	N	All Other Carriers FGD

Figure 4 SCREENING INDEX 4

ESS 5301(06)TG-5 RATE AND ROUTE RECORD 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__5___

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS PBX with Toll Diversion
	ROUTE INDEX	NXX	CHARGE INDEX	TDV		SEL		BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV		SEL		BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV		SEL		BLK	
					CT		CR						CT		CR						CT		CR		
1	REGL		1	RVB	N	N	N																		0 -
2	REGL		30	RVB	N	N	N		REGL		30	RVB	N	N	N		REGL		30	RVB	N	N	N		1DDD 010, 011+, 01+
3	REGL		4	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		INTRAOFFICE/Local Flat Rate
4	REGL		4	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		1 MESAGE UNIT
5	REGL		5	N	N	N	N		4		1	N	N	N	Y		6		1	N	N	N	Y		2 MESAGE UNIT

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6	REG L		6	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	3 MESAGE UNIT
7	REG L		7	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	4 MESAGE UNIT
8	REG L		8	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	5 MESAGE UNIT
9	REG L		2	RVB	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	SP 7DIGIT INTRA LATA
10	4		1	N	N	N	Y	REG L		2	RVB	N	N	N	151		1	RVB	N	N	N	SP 10 DIGIT INTRA LATA
11	REG L		30	RVB	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	WATS Bd 8 - 7D INTER LATA/INTE
12	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 8 - 10D INTER LATA/INT
13	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 1 - 10D INTER LATA/INT
14	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 2 - 10D INTER LATA/INT
15	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 3 - 10D INTER LATA/INT
16	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 4 - 10D INTER LATA/INT
17	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 5 - 10D INTER LATA/INT
18	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS Bd 6 - 10D INTER LATA/INT
19	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	WATS OUT OF BAND
20	4		1	N	N	N	Y	4		1	N	N	N	N	151		1	RVB	N	N	N	0+ HOME NPA
21	REG L		10	N	N	N	N	4		1	N	N	N	N	151		1	RVB	N	N	N	411 DIRECTORY ASSISTANCE
22	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	611 REPAIR
23	REG L		1	N	N	N	N	REG L		1	N	N	N	N	REG L		1	N	N	N	N	911 EMERGENCY
24	4		1	N	N	N	Y	REG L		30	N	N	N	N	152		1	N	N	N	Y	800 INWATS
25	4		1	N	N	N	Y	REG L		30	RVB	N	N	N	152		30	RVB	N	N	N	900 MASS CALLING
26	REG L		1	N	N	N	N	4		1	N	N	N	Y	3		1	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	REG L		31	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	FGB
29	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	CARRIER A FGD
30	REG		30	N	N	N	N	REG		30	N	N	N	N	REG		30	N	N	N	N	CARRIER B FGD

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	L							L						L								
31	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	All Other Carriers FGD

Figure 5 SCREENING INDEX 5

ESS 5301(06)TG-5 RATE AND ROUTE RECORD DATE _____
5ESS SWITCH
BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__6___

CODE INDEX	NO PREFIX							1 PREFIX							0 PREFIX							REMARKS Charge-A-Call CPT
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	IS TC	CE R	ROUTE INDEX BLK	NXX	CHARGE INDEX	TDV	C	IS TC	CE R	ROUTE INDEX BLK	NXX	CHARGE INDEX	TDV	C	IS TC	CE R	B L K	
1	REG L		1	N	N	N	N																0 -
2	REG L		30	N	N	N	N	5		1	N	N	N	Y	REG L		30	N	N	N	N		
3	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		INTRAOFFICE/Local Flat Rate
4	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		1 MESAGE UNIT
5	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		2 MESAGE UNIT
6	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		3 MESAGE UNIT
7	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		4 MESAGE UNIT
8	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		5 MESAGE UNIT
9	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		SP 7DIGIT INTRA LATA
10	5		1	N	N	N	Y	REG L		1	N	N	N	N	151		1	N	N	N	N		SP 10 DIGIT INTRA LATA
11	5		1	N	N	N	Y	5		1	N	N	N	Y	6		1	N	N	N	Y		WATS Bd 8 - 7D INTER LATA/INTE
12	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 8 - 10D INTER LATA/INT
13	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 1 - 10D INTER LATA/INT
14	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 2 - 10D INTER LATA/INT
15	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 3 - 10D INTER LATA/INT
16	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 4 - 10D INTER LATA/INT
17	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 5 - 10D INTER LATA/INT
18	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS Bd 6 - 10D INTER LATA/INT
19	5		1	N	N	N	Y	REG L		30	N	N	N	N	152		30	N	N	N	N		WATS OUT OF BAND
20	5		1	N	N	N	Y	5		1	N	N	N	Y	151		1	N	N	N	N		0+ HOME NPA
21	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N		411 DIRECTORY ASSISTANCE
22	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N		611 REPAIR
23	REG L		1	N	N	N	N	REG L		1	N	N	N	N	REG L		1	N	N	N	N		911 EMERGENCY
24	4		1	N	N	N	Y	REG L		30	N	N	N	N	3		1	N	N	N	Y		800 INWATS
25	5		1	N	N	N	Y	5		1	N	N	N	Y	152		30	N	N	N	N		900 MASS CALLING
26	REG L		1	N	N	N	N	4		1	N	N	N	Y	3		1	N	N	N	Y		950 ENFIA C - PRE CI

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27																					
28	REGL		31	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	FGB
29	REGL		30	N	N	N	N	REGL		30	N	N	N	N	REGL		30	N	N	N	N	CARRIER A FGD
30	REGL		30	N	N	N	N	REGL		30	N	N	N	N	REGL		30	N	N	N	N	CARRIER B FGD
31	REGL		30	N	N	N	N	REGL		30	N	N	N	N	REGL		30	N	N	N	N	All Other Carriers FGD

Figure 6 SCREENING INDEX 6

ESS 5301(06)TG-5 RATE AND ROUTE RECORD DATE _____
5ESS SWITCH
BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__7___

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS IntraLATA WATS Band
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	
					S	E	T	CR					S	E	T	CR					S	E	T	CR	
1	3		1	N	N	N	Y																		0 -
2	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y				
3	7		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y				INTRAOFFICE/Local Flat Rate
4	REGL		25	N	N	N	N	3		1	N	N	N	Y	3		1	N	N	N	Y				1 MESAGE UNIT
5	REGL		25	N	N	N	N	3		1	N	N	N	Y	3		1	N	N	N	Y				2 MESAGE UNIT
6	REGL		25	N	N	N	N	3		1	N	N	N	Y	3		1	N	N	N	Y				3 MESAGE UNIT
7	REGL		25	N	N	N	N	3		1	N	N	N	Y	3		1	N	N	N	Y				4 MESAGE UNIT
8	REGL		25	N	N	N	N	3		1	N	N	N	Y	3		1	N	N	N	Y				5 MESAGE UNIT
9	REGL		25	N	N	N	N	3		1	N	N	N	Y	3		1	N	N	N	Y				SP 7DIGIT INTRA LATA
10	4		1	N	N	N	Y	REGL		25	N	N	N	N	3		1	N	N	N	Y				SP 10 DIGIT INTRA LATA
11	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 8 - 7D INTER LATA/INTE
12	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 8 - 10D INTER LATA/INT
13	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 1 - 10D INTER LATA/INT
14	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 2 - 10D INTER LATA/INT
15	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 3 - 10D INTER LATA/INT
16	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 4 - 10D INTER LATA/INT
17	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 5 - 10D INTER LATA/INT
18	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS Bd 6 - 10D INTER LATA/INT
19	3		1	N	N	N	Y	7		1	N	N	N	Y	3		1	N	N	N	Y				WATS OUT OF BAND
20	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y				0+ HOME NPA
21	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y				411 DIRECTORY ASSISTANCE

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22	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	611 REPAIR
23	REG L		1	N	N	N	N	REG L		1	N	N	N	N	REG L		1	N	N	N	N	911 EMERGENCY
24	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	800 INWATS
25	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	900 MASS CALLING
26	3		1	N	N	N	Y	3		1	N	N	N	Y	3		1	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	3		1	N	N	N	N	3		1	N	N	N	N	3		1	N	N	N	N	FGB
29	REG L		27	N	N	N	N	REG L		27	N	N	N	N	3		1	N	N	N	N	CARRIER A FGD
30	REG L		27	N	N	N	N	REG L		27	N	N	N	N	3		1	N	N	N	N	CARRIER B FGD
31	REG L		27	N	N	N	N	REG L		27	N	N	N	N	3		1	N	N	N	N	All Other Carriers FGD

Figure 7 SCREENING INDEX 7

ESS 5301(06)TG-5 RATE AND ROUTE RECORD DATE _____

5ESS SWITCH

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__51__

CODE INDEX	NO PREFIX							1 PREFIX							0 PREFIX							REMARKS
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CSTR	IECR	CBLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CSTR	IECR	CBLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	CSTR	IECR	CBLK	Non Pager Screening for Carrier ASame as Screening Index 1
1	REG L		1	N	N	N																0 -
2	REG L		30	N	Y	N	N	REG L		30	N	N	Y	N	REG L		30	N	N	Y	N	
3	REG L		3	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	INTRAOFFICE/Local Flat Rate
4	REG L		4	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	1 MESAGE UNIT
5	REG L		5	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	2 MESAGE UNIT
6	REG L		6	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	3 MESAGE UNIT
7	REG L		7	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	4 MESAGE UNIT
8	REG L		8	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	5 MESAGE UNIT
9	REG L		2	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	SP 7DIGIT INTRA LATA
10	4		1	N	N	N	Y	REG L		2	N	N	N	N	151		1	N	N	N	N	SP 10 DIGIT INTRA LATA
11	10		30	N	N	N	N	4		1	N	N	N	Y	6		1	N	N	N	Y	WATS Bd 8 - 7D INTER LATA/INTE
12	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 8 - 10D INTER LATA/INT
13	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 1 - 10D INTER LATA/INT
14	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 2 - 10D INTER LATA/INT
15	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 3 - 10D INTER LATA/INT
16	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 4 - 10D INTER LATA/INT

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17	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 5 - 10D INTER LATA/INT
18	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS Bd 6 - 10D INTER LATA/INT
19	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	Y	N	WATS OUT OF BAND
20	4		1	N	N	N	Y	4		1	N	N	N	N	151		1	N	N	N	N	0+ HOME NPA
21	REG L		10	N	N	N	N	4		1	N	N	N	N	151		1	N	N	N	N	411 DIRECTORY ASSISTANCE
22	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	611 REPAIR
23	REG L		1	N	N	N	N	REG L		1	N	N	N	N	REG L		1	N	N	N	N	911 EMERGENCY
24	4		1	N	N	N	Y	REG L		30	N	N	N	N	3		1	N	N	N	N	800 INWATS
25	4		1	N	N	N	Y	10		1	N	N	N	N	152		30	N	N	N	N	900 MASS CALLING
26	REG L		1	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	Y	950 ENFIA C - PRE CI
27																						
28	REG L		31	N	N	N	N	4		1	N	N	N	N	3		1	N	N	N	N	FGB
29	10		1	N	N	N	N	10		1	N	N	N	N	REG L		30	N	N	N	N	CARRIER A FGD
30	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	CARRIER B FGD
31	REG L		30	N	N	N	N	REG L		30	N	N	N	N	REG L		30	N	N	N	N	All Other Carriers FGD

Figure 8 SCREENING INDEX 51

ESS 5301(06)TG-5 RATE AND ROUTE RECORD 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__100__

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	
						STC	SE	CR						STC	SE	CR						STC	SE	CR	Trunk Originations EAEO
1	REG L		1	N	N	N	N																		LOCAL COMPANY TRAFFIC
2	REG L		32	N	N	N	N																		FGDTL INC. TRUNK FROM IC's
3	REG L		33	N	N	N	N																		FGBTL INC. TRUNK FROM IC's

Figure 9 SCREENING INDEX 100

ESS 5301(06)TG-5 RATE AND ROUTE RECORD 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ SCREENING INDEX__101__

CODE INDEX	NO PREFIX								1 PREFIX								0 PREFIX								REMARKS
	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	ROUTE INDEX	NXX	CHARGE INDEX	TDV	C	I	C	BLK	
						STC	SE							STC	SE							STC	SE		Trunk Originations AT

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			X				R K		EX				R K		X				R K	
1	REG L		1	N	N	N	N													LOCAL COMPANY TRAFFIC
2	REG L		40	N	N	N	N													FGBTL
3	REG L		41	N	N	N	N													FGDTL

Figure 10 SCREENING INDEX 101

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SEC. 1H: GUIDELINES FOR ASSIGNING LINES TO LINE UNITS

1. GENERAL

The following guidelines permit the 5ESS Switch owner to provide Load Balance for the Central Office by assigning Lines to Line Unit Models 1, 2 and 3.

A Line Unit has up to eight concentrators. The number of concentrators in a Line Unit depends upon the concentration required in that Line Unit. For 4:1 concentration, four concentrators are required; six and eight for 6:1 and 8:1, respectively. A concentrator has two Switch Groups, each Switch Group has eight switches, and each switch has four levels.

On initial and growth cutover jobs, class of service balancing should be used while assigning lines to LUs. While assigning lines from a given class, business for example, first assign lines across SMs, within an SM across LUs in that SM, within an LU across two Switch Groups, and within a Switch Group across eight switches. The order to be used while assigning lines across eight switches is switch 0, 1, 4, 5, 2, 3, 6 and 7. This means the first line assigned within a Switch Group goes to switch 0; the second line to switch 1; the third to switch 4; etc. The same order is repeated for lines 9 through 16, 17 through 24, etc., in that Switch Group. The four lines assigned to a switch are assigned to levels 0, 1, 2 and 3, in that order. The following example illustrates the above assignment procedure.

Example

Suppose a 5ESS Switching office has n SMs. Let us denote these SMs SM1, SM2, ..., SMn. Further suppose each SM has four Line Units - LU0, LU1, LU2, and LU3 - each with 8:1 concentration. Let us denote the eight concentrators CN0, CN1, ..., CN7; the two Switch Groups in a concentrator SG0 and SG1; the eight switches in a Switch Group SW0, SW1, ..., SW7; the four levels of a switch LV0, LV1, LV2, and LV3. Also, suppose this office has five classes of service C1, C2, C3, C4 and C5. These classes are ordered according to CCS-usage of their lines. C1 has highest CCS-usage lines and C5 has lowest.

The 2048 * n lines (512 lines per Line Unit * four Line Units per SM * n SMs) should be assigned to one class of service at a time and in the order as follows:

SM	Line Unit	Concentrator	Switch Group	Switch in Switch Group	Level
SM1	LU0	CN0	SG0	SW0	LV0
SM2	LU0	CN0	SG0	SW0	LV0
SM3	LU0	CN0	SG0	SW0	LV0
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
SM(n-2)	LU3	CN7	SG1	SW7	LV3
SM(n-1)	LU3	CN7	SG1	SW7	LV3
SMn	LU3	CN7	SG1	SW7	LV3

Thus, these 2048 lines are assigned first to class C1, then to C2, etc., and finally to C5.

Telephones in fire and police departments, operating rooms, switching offices, and most coin phones are usually designated as Essential Service Lines. An office is not expected to have more than 25 percent of its total lines, Essential Service Lines. Essential Service Lines are assigned according in the same manner described above such that no more than one line is assigned to a switch. (Note that since an office is not expected to have more than 25 percent Essential Service Lines, the above procedure will automatically not assign more than one line to a switch).

These guidelines also apply when 8:1 deloaded LUs are engineered for achieving 6:1 concentration or 6:1 LUs for 4:1.

These guidelines assume equal balance of LUs across SMs.

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SEC. 1I: MULTI-MODULE RSM

1. FEATURE DESCRIPTION

Prior to the 5E2(2) Software Release, the RMS (Remote Switching Module) is a single switching module connected to a HRM (Host Switching Module) via umbilical links (T1 carrier digital trunks).

With 5E2(2) to 5E4(2) Software Releases, a RSM Site can consist or one to four RSMs. Each switching module in a RSM Site is connected to a Host Switching Module via umbilical links. The switching modules within a RSM Site are linked to each other by ICL (Intra-Cluster Links); these links are also T1 carrier digital trunks (Fig. 1). The RSMLNK form (5517 Record) provides information about umbilicals and ICL's for each RSM of a specific RSM Site. The EQIM form (5700 Record) is used to specify the RSM Site number to which the RSM is assigned.

2. MULTI-MODULE REMOTE SWITCHING MODULE OPTIONS

Multi-module RSM can be purchased with any of the following four options:

- Stand-Alone
- Alarm Input Option
- Alarm Output Option
- Remote Clock Unit

The Alarm Input, Alarm Output and Remote Clock options require additional hardware, assignment of scan points or assignment of distribute points. This hardware must reside on a single RSM of the RSM Site. This common resource RSM is referred to as the Master RSM of a RSM Site.

Stand Alone Option Stand-Alone occurs when some RSMs (partial stand-alone) or all RSMs (full stand-alone) of a particular RSM Site lose the ability to set up calls to their HSMs. When this occurs, the RSMs will set up Intra-RSM calls utilizing ICLs. The Stand-Alone Option is input via the EQSITE form (5722 Record).

2.1 Stand-Alone Billing Option

If a RSM Site is capable of stand-alone operation, it is possible for a RSM Site to have stand-alone billing. With this option, a RSM Site will maintain a billing record during stand-alone. The Stand-Alone Billing Option is input via the EQSITE form.

2.2 Alarm Input Option

With the Alarm Input Option, a full compliment of scan points are active to report building, power and fire alarms as with RSMs in prior Generics. The Alarm Input Option is assigned to the RSM Site via the EQSITE form. If a RMS Site has the Alarm Input Option, appropriate scan points must be entered via the RALM form (5516 Record). These scan points must reside on the Master RSM.

2.3 Alarm Output Option

With the Alarm Output Option, distribute points on an ASC (Alarm and Status Circuit) display the current status of alarms for a RSM Site. The ASC is similar to the RAU (Remote Alarm Unit) that existed with RSMs prior to the 5E2(2) Software Release. The RAU is still supported in 5E2(2) for single module RSM Sites, but an ASC must be used for all multi-module RSM Sites.

The Alarm Output Option is input via the EQSITE form. If the Alarm Output Option is purchased,

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appropriate distribute points must be entered on the RALM form. In addition, a EQRAU form (5705 Record) must be submitted.

2.4 Remote Clock Unit

The RCU (Remote Clock Unit) helps to ensure that the RSM Site is in synch with the rest of the 5ESS Switch. It also keeps each RSM at a RSM Site in synch when in stand-alone. If RCU is purchased, the EQRCLK form (5723 Record) must be submitted.

3. EMERGENCY NUMBER REROUTING

It is possible to reroute originating calls during stand-alone to a local telephone number at the RSM Site or to a route index. A maximum of ten emergency telephone numbers may be defined for any given RSM Site. When stand-alone mode is in effect, the RSM checks the emergency list and reroutes calls to the numbers on the list to the specified reroute telephone number or route index. The input form used to define these emergency numbers is the EMRNM form (5108 Record).

It is also possible to reroute calls originated outside a module in stand-alone mode to an emergency number physically located on that module. Up to one hundred telephone numbers may be defined on the EMROFC form (5116 Record). When a call to one of the emergency numbers is received and the module is found to be in stand-alone, the call is rerouted using the data entered on the EMROFC form.

If Multi-module RSM (MMRSM) emergency number rerouting is directed to a FX (Foreign Exchange) line, then there should be a FX line on every RSM of the MMRSM. The rerouting TN should be directed to a Multi-Line Hunt Group containing the FX lines. It is recommended that the Multi-Line Hunt Group use UCD hunting which would facilitate the testing of these FX lines using the stand-alone test line or assign each FX line a specific TN.

If MMRSM emergency number rerouting is directed to a Trunk Group via the route index, then this Trunk Group should have members on every RSM of the MMRSM.

4. RSM STAND-ALONE TEST LINES

RSM Stand-alone Test Lines allow testing of RSM emergency number rerouting for a given RSM Site when the RSM Site is not in stand-alone mode. In addition, stand-alone may be tested from the Host 5ESS Switch if desired. Up to ten RSM stand-alone test lines may be defined per RSM. They are defined on a LINE form (5109 Record) with an equipment number (LEN or SLEN) on the RSM for which stand-alone testing is required. The lines must have an LCC (LINE CLASS CODE) with a SERVICE CLASS of "SATSTLN" and a TERMINATING TREATMENT of "INDIV". When conducting the stand-alone rerouting test from the RSM Site, the lines may be used to originate and dial each of the emergency numbers which is normally rerouted during stand-alone operation.

If it is desired to conduct the test from the Host 5ESS Switch, the test lines must be defined with a remote call forwarding BRCS feature (the pre-constructed feature "/CFR" is suitable) with the forwarded-to TN equal to one of the emergency TNs. Either one stand-alone test line may be defined for each emergency TN to be tested, or one stand-alone test line may be defined and Recent Change used during testing to change the forwarded-to TN. No station equipment is required at the RSM if the call-forwarding method is used.

5. TRANSLATION REQUIREMENTS

5.1 LINE TRANSLATIONS

Individual Lines and Multi-Line Hunt Groups are translated similarly to those served by the host except that a unique set of LENs and/or SLENs are available depending on how the particular RSM is equipped. Typically, the RSM will also have different NXXs from the Host which implies a unique set of Telephone Numbers.

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MLHG form (5105-1 Record) - If all members of the Multi-Line Hunt Group are served by a single RSM (i.e., they all have equipment assignments, LENs or SLENs, of the RSM), enter the RSM number in the LOCAL RSM field. This allows control of the hunting sequence to be determined by the RSM instead of the Host, providing more efficient call processing.

EMRNM form (5108 Record) - optional Used for the reroute of numbers not served by the RSM when communication with the Host is lost if the RSM has the Stand- Alone option.

LINE form (5109-2 Record) - When a line is assigned to test the Stand-Alone option, an entry must be made in the SA TST ROUTE field to indicate the type of testing desired.

EMROFC form (5116 Record) - optional Data entered on this form is used by the AM (Administrative Module) to reroute calls to a RSM or Local SM that is in the Stand-Alone mode. For more information on this input form, see Division 3, Section 1p.

5.2 TRUNK TRANSLATIONS

Trunks are not defined between the RSM and its Host Switching Module. The linkage required is defined on the RSMLNK form.

All trunk types available at the Host are available at any RSM.

TKGRP form (5202-1 Record) - If all members of the Trunk Group are assigned equipment numbers on a single RSM, enter the RSM number in the LOCAL RSM field. This allows control of the hunting sequence to be determined by the RSM instead of the Host, providing more efficient call processing.

For local announcement trunk groups (where TRKCLS is "ANNCMNT" and LOCAL RMS is entered), enter the trunk group number of the corresponding global announcement trunk group in the GL ANN TG field.

5.3 ROUTING AND CHARGING TRANSLATION

Typically, the RSM is located in a different Rate Area than the Host 5ESS Switch. This then is the major consideration in routing and charging for the RSM, but it is no different than building multiple Rate Areas in a 5ESS Switch that is not Host to RSMs.

FIXRT form (5301-1 Record) - The FIXED ROUTE TYPE "HOSTSA" must be defined for any 5ESS Switch which hosts an RSM. The FIXED ROUTE TYPE "RSMSA" must be defined if any RSM has the Stand-Alone option.

LCC form (5306 Record) - When defining Stand-Alone test lines, a LINE CLASS CODE must be defined with a CLASS OF SERVICE equal to "SATSTLN".

5.4 MISCELLANEOUS TRANSLATIONS

NOC form (5501 Record) - Any unique NXXs used for RSMs must be defined. However, the 5ESS Switch does not require any information that the NXX is destined for the RSM; the AM routes based on the module equipment value and not TelephoneNumber. In fact, NXXs may be shared among any modules, local or remote, in the 5ESS Switch.

IMINFO form (5510 Record) - Information must be provided on this form as with any other Switching Module in the 5ESS Switch. If a DCTU (Directly Connected Test Unit) is equipped on the RSM, a unique DCTU Route Index must be assigned on this form and defined on the RTIDX form (5303 Record). This Route Index must be associated with a unique Trunk Group of Logical Test Ports on the RSM.

TLWS form (5511 Record) - If a Supplemental Trunk and Line Work Station is provided at the location of the RSM, it would not be considered remote but would have a Local Talk and Monitor Telephone Number.

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RALM form (5516 Record) - This record is used to define alarm information unique to the remote location of the RSM Site.

RSMLNK form (5517 Record) - For each RSM, this form must be used to define the Umbilical Links between the RSM and its host Switching Module, and the ICL (Intra-Cluster Links) between each RSM at the RSM Site.

RCLKREF (5519 Record) - optional Used to define the exterior references for the Remote Clock.

5.5 ENGINEERING ASSIGNMENTS

EQIM form (5700 Record) - Used to define which switching modules are RSMs and what RSM Site they are located in.

EQRAU form (5705 Record) - optional Defines the Remote Alarm Unit.

EQLU form (5710 Record) - Defines the Line Units of the RSM.

EQLUP form (5711 Record) - Defines the equippage of circuit packs on the Line Units.

EQTU and EQTUP forms (5720 Record) - optional Defines the Trunk Unit of the RSM with circuit pack equippage.

EQSITE (5722 Record) - Used to define Multi-module RSM options, such as Stand-Alone, Remote Clock, etc.

EQRCLK (5723 Record) - optional Used to define Remote Clock Data.

EQDU and EQDUP forms (5730 Record) - Defines the DLTU and DFI usage for both the RSM and host Switching Module.

EQDS and EQDSP forms (5740 Record) - Defines the Local Digital Service Unit and circuit packs for the RSM. Global Digital Service Units may not be defined on a RSM. The Host Switching Module may be defined like any other SM.

EQMSU and EQMSP or EQMMSP forms (5750 Record) - Defines the Metallic Service Unit and pack equippage for either regular or modular types. Two scan packs and one distribute point pack must be equipped in both Service Groups of the MSU of the RSM to be used for the remote alarm process.

EQDCTU form (5751 Record) - optional Defines the Directly Connected Test Unit if it is provided at the RSM.

EQPMU form (5752-1/2 Records) - optional Defines the Precision Measurement Unit associated with the Directly connected Test Unit.

EQFIU form (5753 Record) - Defines the facility Interface Unit of the RSM.

EQDCLU and EQDCLP forms (5810 Record) - optional Defines the Digital Carrier Line Unit and circuit pack equippage if the RSM is to serve Integrated SLC-96 customers.

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SEC. 1J: MULTIMODULE RSM STAND-ALONE CALL PROCESSING AND BILLING

1. FEATURE DESCRIPTION

With 5E2(2) Software Releases, MMRSM (Multimodule Remote Switching Module) became available. This new feature added the capability of having from 1 to 4 switching modules remotely located from the Host office(s) within a common remote site. The modules within the site are interconnected by ICL (Intra-Cluster Links) and connected to the Host office(s) via T1 umbilical links.

STAND ALONE CALL PROCESSING (MMRSM)

Stand-alone call processing and billing options for MMRSM are purchased on a RSM Site basis. The form entries for these options are found on the EQSITE form (5722 Record).

The MMRSM Site has two modes of Stand-Alone operation:

- Partial Stand-Alone - Some, but not all, remote modules are in module stand-alone and cannot process calls over their T1 umbilical links.
- Full Stand-Alone - All remote modules are in module stand-alone and cannot process calls over their T1 umbilical links.

Each remote module within the MMRSM Site has two modes of Stand-Alone operation:

- Stand-Alone - The remote module cannot process calls over its T1 umbilical links.
- Module Partial Stand-Alone - The remote module can complete direct calls over its T1 umbilical links, but is prevented from handling global hunt group calls over these links to prevent multiple processors from allocating the same ports.

When an RSM Site is in Full or Partial Stand-Alone, routing in the individual modules of the RSM Site is modified with the goal of completing all calls possible. Intra-RSM calls and calls to local groups continue unchanged from the linked mode.

When a particular module in a RSM Site is in Module Stand-Alone, the other modules are in Partial Stand-Alone. No calls can be switched out of the RSM in Module Stand-Alone via its T1 umbilical links. Intra-RSM, Inter-RSM Site calls and calls to local groups continue unchanged from the linked mode. The modules in Partial Stand-Alone continue to complete direct calls over their T1 umbilical links, but calls to global hunt groups are not allowed. The module in Module Stand-Alone gives stand-alone treatment to the Host controlled calls that normally complete over its T1 umbilicals (i.e., stand-alone announcement).

EMERGENCY NUMBER REROUTING (MMRSM)

Emergency number rerouting can be accomplished in two ways with 5E4(2) and earlier Software Releases. Calls to a RSM in stand-alone can be rerouted by defining the numbers considered to be emergency numbers on an EMROFC form (5116 Record). Calls originating from within a module in stand-alone to an emergency number located outside the RSM Site can be rerouted by defining these emergency numbers on an EMRNM form (5108 Record).

If MMRSM emergency number rerouting is directed to a FX (Foreign Exchange) line, then there should be a FX line on every RSM of the MMRSM. The rerouting TN should be directed to a Multi-Line Hunt Group containing the FX lines. It is recommended that the Multi-Line Hunt Group use UCD hunting which would facilitate the testing of these FX lines using the stand-alone test line or assign each FX line a specific TN.

If MMRSM emergency number rerouting is directed to a Trunk Group via the Route Index, then this Trunk

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Group should have members on every RSM of the MMRSM.

STAND-ALONE BILLING (MMRSM)

Stand-Alone Billing is available as an option of the MMRSM. This allows the MMRSM to buffer call record data during stand-alone operation. Upon restoration of the umbilical links to the Host 5ESS Switch, this call record data is sent to the Administrative Module.

ANNOUNCEMENTS

Announcements are treated differently in MMRSM than in the earlier 5A RSM. The major difference is that if an announcement for some condition (i.e., vacant code, partial dial, etc.) is replicated among the Host 5ESS Switching Modules and one or more RSMs and it is desirable not to make the RSM Site's announcement versions globally available (either because of different announcement wording in the RSM or to minimize T1 umbilical traffic), the calls must be routed to a global announcement trunk group containing the Host 5ESS Switch announcements. For each RSM Site equipped with the announcement, one additional announcement trunk group must be defined as a local announcement group on one of the site's RSMs. Normally, each group will contain one member; more than one member is allowed but is unnecessary. The local trunk group must have the corresponding global announcement trunk group specified in the GL ANN TG field of the TKGRP form (5202 Record). No route index is allowed to point to a local announcement trunk group. No more than one local group may be defined with the same GL ANN TG in any given RSM Site. Calls originated in the RSM Site destined for one of these announcements will terminate to the local group, if defined, and use the RSM Site's version of the announcement.

2. TRANSLATION REQUIREMENTS

2.1 LINE TRANSLATIONS

MLHLN form (5105-2 Record) - If Global Multi-Line Hunt Groups include memberswhich have equipment assignments on RSMs with Stand-Alone purchased, enter "Y" in the field RSM REROUTE for all members which have Telephone Numbers assigned and have equipment assignments other than the RSM.

EMRNM form (5108 Record) - A maximum of ten Telephone Numbers, which under normal conditions would terminate outside the RSM Site, may be entered on this record for each RSM. Corresponding entries are made to indicate what local RSM Site number (i.e., equipment assignment on the RSM) is to be rerouted to when the RSM is in the Stand-Alone state.

LINE form (5109-2 Record) - When a line is assigned to test the Stand-Alone option, an entry must be made in the "SA TST ROUTE" field to indicate thetype of testing desired.

EMROFC form (5116 Record) - Data entered on this form is used by the AM (Administrative Module) to reroute calls to a RSM or Local SM that is in the Stand-Alone mode. For more information on this input form, see Division 3, Section 1p.

MLHG form (5110 Record) - The RSM Stand-Alone Call Processing feature uses the 14A Recorded Announcement system to provide line side announcements in RSM Stand-Alone operation. Only one MLHG per RSM site can have the RSM Stand-Alone Call Processing feature.

2.2 TRUNK TRANSLATIONS

TKGRP form (5202-1 Record) - If all members of the Trunk Group are assigned equipment numbers of a single RSM, enter the RSM number in the Local RSM Module field. This allows control of the hunting sequence to be determined by the RSM instead of the Host, providing more efficient call processing.

For local announcement trunk groups (where TRKCLS is "ANNCMNT" and Local RSM Module is specified), enter the trunk group number of the corresponding global announcement trunk group in the GL ANN TG field.

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2.3 ROUTING AND CHARGING TRANSLATION

FIXRT form (5301-1 Record) - The FIXED ROUTE TYPE "HOSTSA" must be defined for any 5ESS Switch which hosts a RSM. The FIXED ROUTE TYPE "RSMSA" must be defined if any RSM has the Stand-Alone Call Processing option.

LCC form (5306 Record) - When defining Stand-Alone test lines, a LINE CLASS CODE must be defined with a CLASS OF SERVICE equal to "SATSTLN".

2.4 ENGINEERING ASSIGNMENTS

EQSITE form (5722 Record form) - Used to define Multi-Module RSM options, such as Stand-Alone, Remote Clock, etc.

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SEC. 1K: SOFTWARE DEFINED NETWORK

1. FEATURE DESCRIPTION

SDN (Software Defined Network) is a service for businesses with multilocation telecommunications needs. SDN combines transport on the PSN (Public Switched Network) with call processing capabilities that enable the development of corporate telecommunications networks. SDN service emulates a private line network within the PSN and provides end-to-end voice and data communications between prespecified customer locations.

The Software Defined Network is made up of ACP (Action Control Point) switches and NAP (Network Access Point) switches.

An ACP switch can either be a 4ESS Switch or 5ESS Switch. A 5ESS Switch can function as an ACP in 5E5 and later Software Releases. An ACP interfaces with a remote database called a NCP, using CCS7 (Common Channel Signaling Version 7) Direct Signaling TCAP (Transaction Capability). When a SDN call is processed, the ACP will send queries to a NCP and process the calls based on responses from the NCP. The responses from the NCP will include routing, billing and network management information.

The SDN customer can access the ACP by being directly connected to ACP or connected through another office.

A NAP is a local switch which can originate or terminate SDN calls via an ACP switch.

2. NETWORK ACCESS POINT FEATURE DESCRIPTION

Available with 5E3 and later Software Releases, the Network Access Point capability allows the 5ESS Switch to provide switched access to an ACP (Action Control Point) for SDN service.

SDN calls will arrive at the NAP over facilities dedicated to SDN except those served by a Centrex arrangement. Calls coming from a Centrex arrangement will require a prefix to be used to access SDN. The NAP must route the SDN call over a dedicated SDN CAMA (Centralized Automatic Message Accounting) trunk to the ACP.

A basic call flow will be represented by a Centrex arrangement accessing the SDN network via the NAP. A prefix digit (e.g. 8) must be dialed to access the SDN service. The caller dials 8-NNX-XXXX where 8 is the prefix digit which identifies the call as a SDN call and the rest of the digits identify the called party. The 8 is deleted and the NNX-XXXX is sent over a dedicated SDN line to the NAP. The NAP routes the call over CAMA trunks dedicated to SDN to the Action Control Point (ACP). The ACP will send a query to the NCP (Network Control Point). The NCP translates the dialed digits into a routing number and creates SDN billing information. The call will then be routed over dedicated trunks to the terminating NAP. The terminating NAP receives this call over dedicated trunks and then routes the call to the called party.

3. TRANSLATION REQUIREMENTS

3.1 ROUTING AND CHARGING TRANSLATIONS

The NAP routes calls over dedicated CAMA trunks to the Software Defined Network. The Originating NAP should receive 7 or 10 digits for a SDN call or will provide partial dial treatment.

5300-1 Record (DAS form) Unique DAS numbers should be built for SDN calls outgoing and incoming to the NAP.

5300-3/5 Record (LDIT form) Call Type of SDNA should be used when defining LDIT entries for outgoing calls from the NAP. Call Type of SDNE should be used when defining LDIT entries for incoming calls to the NAP.

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3.2 BRCS TRANSLATIONS

5609-2 Record (PFATG form) A MC Route Index should be entered in the SDN MC ROUTE INDEX field to route calls for SDN.

5609-3 Record (PFASFG form) A SFG Number should be entered with a SFG TYPE of SDN.

5304 Record (MCRTIDX form) The SDN MC ROUTE INDEX entered on the PFATG form should be defined on this record. The MC ROUTE TYPE should be SFG. The SFG number entered should be defined on the PFASFG form.

4. ACTION CONTROL POINT FEATURE DESCRIPTION

Available with 5E5 and later Software Releases, the Action Control Point capability allows the 5ESS Switch to be aN ACP (Action Control Point) for Software Defined Network (SDN) service.

To identify the 5ESS Switch as an ACP, the ACT PT SDN field on the OFCOPT form (5509 Record) must be "Y".

A SDN customer may access the ACP by:

- CAMA (Centralized Automatic Message Accounting) trunks dedicated to SDN.
- Equal Access (LATA Connect) trunks dedicated to SDN.
- CCS7 ISUP trunks with a SDN call type indicated from the traveling class mark in the CCS7 IAM (Initial Address Message).
- Direct Access trunks like PF (Private Facilities).
- EDSL (Extended Digital Subscriber Line).

When a Direct Access trunk is used, a SGD (Station Group Designator) may be provided from the PBX. The SGD is used to indicate which group a station belongs. If the SGD is to be sent to the ACP along with the dialed digits, the SDN STAT GRP on the TKGRP form should be "Y".

A basic call flow would be as follows:

- A SDN customer originates a call by dialing 8-NXX-XXXX. The dialed digit 8 identifies the call as a SDN access call. The 8 is deleted and the NXXX-XXXX is sent over the dedicated SDN line to the NAP.
- The NAP routes the call over CAMA trunks dedicated to SDN to a 5ESS Action Control Point. The TKGRP form where the CAMA trunk is defined must have "Y" entered in the ACP SDN field.
- The 5ESS ACP receives the call over the incoming CAMA trunk group and digit analysis is performed. The DAS (Digit Analysis Selector) value of 88 must be defined for a ACP switch. The DAS of 88 is used initially on the first three digits dialed to identify whether a query should be sent to the NCP. A query should not be sent on the following digits dialed and the call should be routed normally:
  - Test calls or maintenance calls with the digits 10X or 95X.
  - 911 calls.
  - Special number originations like 700, 800 or 900.

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If the incoming digits dialed are in the format NXX-XXXX, NPA-NXX-XXXX, 011 + 7-12 digits or 11X + 7-12 digits, then a CALL TYPE of APSDN should be assigned on the LDIT form. A CALL TYPE of APSD indicates that a query should be sent to the NCP.

- The NCP will return a routing telephone number. If the original digits dialed are on off-net number, then the NCP will return the telephone number unchanged. If the digits dialed are an on-net number, the NCP will return a new routing telephone number.
- The routing telephone number returned by the NCP will undergo digit analysis. The DAS value used will be the DAS entered on the TKGRP form for the dedicated incoming CAMA trunk.
- The call is routed over dedicated outgoing CAMA trunks to a NAP. The NAP will terminate the call to the called party.

5. TRANSLATION REQUIREMENTS

5.1 TRUNK TRANSLATIONS

5202 Record (TKGRP) Incoming Trunk groups dedicated to SDN must have a "Y" entered in the ACP SDN field.

On a Direct Access trunk, if the Station Group Designator is to be sent from the PBX to the ACP, then the SDN STAT GRP field should be "Y".

5.2 ROUTING AND CHARGING TRANSLATIONS

5300-1 Record (DAS form) A DAS of 88 must be built to perform digit analysis on incoming digits to determine which call require queries to the NCP.

5300-3/5 Record (LDIT form) Call TYPE of APSDN should be used when defining LDIT entries for calls which require queries to the NCP.

5.3 MISCELLANEOUS TRANSLATIONS

5509 Record (OFCOPT form)

The ACT PT SDN field must be "Y" to indicate that this 5ESS Switch is an ACP.

6. GLOSSARY

ACP - Action Control Point
CAMA - Centralized Automatic Message Accounting
CCS7 - Common Channel Signaling, CCITT Ver. 7
NAP - Network Access Point
NCP - Network Control Point
PSN - Public Switched Network
SDN - Software Defined Network
TCAP - Translation Capability

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SEC. 1L: ELECTRONIC DIRECTORY SERVICE (EDS)

1. FEATURE DESCRIPTION

The EDS (Electronic Directory Service) capability provides the ability to electronically query a directory for call and personnel information without attendant assistance.

Each directory, associated with a business customer, is located on an AP (Applications Processor). A query can be made by either logging on to an AP or using a display station set. Based on the query, an ISDN station set user may request to set up a call automatically. EDS provides the capability to display the name and number of the calling party at the called party's ISDN station set when both parties are in the same business group and switch.

EDS provides the following features. DQD (Directory Query Display) allows the user to press function buttons to initiate a query using an ISDN station set or an attendant console.

Directory query via a data call to an AP allows the user to log directly on to an AP to initiate a query using a non-ISDN terminal with a modem or an ISDN station set.

Auto Call feature allows a user, with an ISDN station set, after a query to automatically set up a call without dialing the telephone number.

Calling Name Display feature provides the calling party's name and number at the called party's ISDN station set when both parties are in the same business customer group and switch.

2. TRANSLATION REQUIREMENTS

2.1 ROUTING AND CHARGING TRANSLATIONS

PDIT form (5300-2 Record) - To activate the Auto Call feature using a dialed code in an Office Dialing Plan, the ACTION field must be "AUCUSE". Auto Call feature option is defined on the EDSFD form.

2.2 BRCS TRANSLATIONS

IDPDCA form (5601-1/2 Record) - To activate the Auto Call feature using a dialed code in an Individualized Dialing Plan, the ACTION field must be "AUCUSE". Auto Call feature option is defined on the EDSFD form.

2.3 ISDN/PACKET SWITCHING TRANSLATIONS

DSLUSR form (5908 Record) - If a telephone number is associated with a feature with one of the feature options set to "Y" on the EDSFD form, then the TN must be defined on the DSLUSR form with CA or CA QTY fields defined. If a Multi-Line Hunt Group/Terminal is associated with a feature with one of the feature options set to "Y" on the EDSFD form, then the MLHG/TERM must be defined on the DSLUSR form with CA or CA QTY fields defined.

2.4 ISDN BRCS TRANSLATIONS

EDSFD form (5961-1 Record) - This form is used to define the various combinations of options associated with the EDS feature. Only one EDSFD feature name is allowed on a given LINEFA, MLHLNFA, or associated CLUSTR forms.

EDSGP form (5961-2 Record) - This form is used to define the group information associated with the EDS feature.

EDSLPA form (5961-3 Record) - This form is used to assign feature parameters to non-Multi-Line hunt lines if the default parameters on the EDSFD form are inappropriate or unspecified.

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EDSMPA form (5961-4 Record) - This form is used to assign feature parameters to Multi-Line hunt lines if the default parameters on the EDSFD form are inappropriate or unspecified.

EDSCNT form (5961-5 Record) - This form is used to identify up to twenty five EDS groups that are to receive measurement counts.

CFGGRP form (5964 Record) - To activate the Auto Call feature using a button, the ACTION field must be "AUCUSE". Auto Call feature option is defined on the EDSFD form.

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SEC. 1M: MESSAGE SERVICE SYSTEM (MSS)

1. FEATURE DESCRIPTION

MSS (Message Service System) provides the capability of call coverage for users by an MSC (Message Service Center). An MSC consists of one or more message desks which are operated by message desk attendants.

MSS provides various call coverage options. One of the call forwarding options, call forwarding busy, call forwarding don't answer or all calls forwarded, can be used to redirect all unanswered calls to the MSC. An attendant in the MSC receives the redirected call and takes a message for the called party.

LWC (Leave Word Calling) feature may also be used. This feature allows predefined standard messages to be sent to/from another MSS user. When a message is received, an audible or visual MWI (Message Waiting Indicator) is activated at the station set.

Notified by the MWI, messages may be retrieved by calling the attendant or using the automated message retrieval options:

- DLOG (Direct Login) allows direct login to the AP (Applications Processor) in order to retrieve and update personal status information using menu driven screens.
- MRD (Message Retrieval Display) which allows the user to directly retrieve messages using ISDN display station set.
- POD (Printout on Demand) which allows the user to request a printout of messages.

The MWI is deactivated after all new messages are retrieved. When a message is displayed after using MRD, a call to the party associated with the message can be made without dialing the destination telephone number. This is an Auto Call set up.

Two forms of MSS service are provided, basic and deluxe. The basic service does not use the AP and limits the use of ISDN station sets by the MSC attendants. MSS users with basic service can use either ISDN or analog station sets.

The deluxe service uses an AP and allows the users and MSC attendants to use either analog or ISDN station sets.

DTC (Dual Telephone Coverage) is an extension of the MSS and is available with 5E6 and later Software Releases. DTC will allow a subscriber to selectively forward calls arriving at his/her station to at least 2 different Message Services (max. of 4). The call forwarding may be based on the source of the call or the condition encountered at the line. The subscriber is alerted to the message via an MWI on the telephone. Also, DTC supports multiple Message Services per AP via a SRV ID, assigned on the MSGP form (5962-2 Record).

To provision DTC, the following features must be assigned to the line or hunt group member via the corresponding feature assignment form, LINEFA form (5112 Record) CLUSTR form (5600 Record), BFG form (5625 Record) or MLHLNFA form (5113 Record):

- One incoming only Call Forwarding feature (e.g., /CFIO), defined on the CFWFD form (5614-1/2 Record), must be assigned to allow calls from outside of the terminal group to be forwarded to one of the Message Services.
- One intra terminal group Call Forwarding feature (e.g., /CFVITG), defined on the CFWFD form, must be assigned to allow calls from within the customer's terminal group to be forwarded to another Message Service.
- Two Message Service features, defined on the MSFD form (5962-1 Record), one for each of the

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following call forwarding features:

- Calls from outside of the customer's terminal group (e.g., /CFIO).
- Calls from within the customer's terminal group (e.g., /CFVITG).

NOTE: Each Message Service feature defined should have a unique group defined on the MSGP form. One Terminal Group feature, defined on the TGSRFD form (5607-1/2 Record), must be assigned to distinguish the calls that are originated within the customers terminal group. Necessary Parameters for the Call Forwarding, Message Service and Terminal Group features.

See FIGURE 1 for the complete form flow for DTC.

2. TRANSLATION REQUIREMENTS

2.1 LINE TRANSLATIONS

MLHG form (5110-1/2/3 Record) - The MLHG form is used to define the MSC. The value entered in the BCID field on the MSGP form must be defined on the MLHG form, matching one of the BCID 1-6 fields. If deluxe service is allowed on the MSGP form, then an AP SITE ID must be entered. The MSG SRV CNTR entered on the MSGP form must be the MLHG entered on the MLHG form.

2.2 ROUTING AND CHARGING TRANSLATIONS

PDIT form (5300-2 Record) - There are various ACTION codes associated with the MSS feature. The options are defined on the MSFD form. The ACTION codes defined on the PDIT form are dialed codes used in an Office Dialing Plan.

To activate Leave Word Calling using a dialed code, the ACTION field must be "LWCUSE". To deactivate Leave Word ^Calling, the ACTION field must be "CLWCUSE".

To activate POD (Printout on Demand) using a dialed code, the ACTION field must be "PODUSE".

To activate the Deactivation of Message Waiting Indicator feature using a dialed code, the ACTION field must be "DCTMWI".

To activate the Auto Call feature using a dialed code, the ACTION field must be "AUCUSE".

2.3 BRCS TRANSLATIONS

IDPDCA form (5601-1 Record) - There are various ACTION codes associated with the MSS feature. The options are defined on the MSFD form. The ACTION codes defined on the IDPDCA form are dialed codes used in an Individualized Dialing Plan.

To activate Leave Word Calling using a dialed code, the ACTION field must be "LWCUSE". To deactivate Leave Word ^Calling, the ACTION field must be "CLWCUSE".

To activate Printout on Demand (POD) using a dialed code, the ACTION field must be "PODUSE".

To activate the Deactivation of Message Waiting Indicator feature using a dialed code, the ACTION field must be "DCTMWI".

To activate the Auto Call feature using a dialed code, the ACTION field must be "AUCUSE".

CFWFD form (5614-1/2 Record) - This form is used to define the call forwarding features used to forward calls to the MSCs.

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TGSRFD form (5607-1/2 Record) - This form is used to define the terminal group feature. With 5E6 and later Software Releases, the terminal group is used by DTC to distinguish where a call will be forwarded.

2.4 ISDN/PACKET SWITCHING TRANSLATIONS

DSL form (5900-1/2/3 Record) - Telephone Number must be defined on the DSL form with FIRST CA and NUM CA fields defined when the AUTO CALL field is "Y" on the MSFD form.

5908 Record (DSLUSR form) This form is available with 5E6 and later Software Releases. The TN or CKT TN must be defined on this form with DISPLAY set to "Y" and the CA and CA QTY fields must be entered when the MSG RTRVL DISP field is "Y" on the associated MSFD form.

The TN or CKT TN must be defined on this form with the CA and CA QTY fields entered when the AUTO CALL field is "Y" on the associated MSFD form.

DSMLHLN form (5901-1/2/3 Record) - Multi-Line Hunt Group/Terminal must be defined on the DSMLHLN form with FIRST CA and NUM CA fields defined when the AUTO CALL field is "Y" on the MSFD form.

2.5 ISDN BRCS TRANSLATIONS

MSFD form (5962-1 Record) - This form is used to define various combinations of options associated with the MSS feature. Only one MSFD feature name is allowed on a given LINEFA, MLHLNFA or associated CLUSTR forms.

MSGP form (5962-2 Record) - This form is used to define the group information associated with the MSS feature. A maximum of 1023 MSS groups can be defined.

With 5E6 and later Software Releases, the SRV ID field was added to to distinguish between multiple MSCs per AP.

MSLPA form (5962-3 Record) - This form is used to assign feature parameters to non-Multi-line hunt lines if the default parameters on the MSFD form are inappropriate or unspecified.

MSMPA form (5962-4 Record) - This form is used to assign feature parameters to Multi-line hunt lines if the default parameters on the MSFD form are inappropriate or unspecified.

MSCNT form (5962-5 Record) - This form is used to identify up to twenty five MSS groups who are to receive measurement counts.

MSCCNT form (5962-6 Record) - This form is used to identify up to twenty five MSC Multiline Hunt Groups who are to receive measurement counts.

5964 Record (CFGGRP form) There are various ACTION codes associated with the MSS feature. The options are defined on the MSFD form. The ACTION codes defined on the CFGGRP form are button features.

To activate Leave Word Calling using a button, the ACTION field must be "LWCUSE". To deactivate Leave Word Calling, the ACTION field must be "CLWCUSE".

To activate POD using a button, the ACTION field must be "PODUSE".

To activate the Deactivation of Message Waiting Indicator feature using a button, the ACTION field must be "DCTMWI".

To activate the Auto Call feature using a button, the ACTION field must be "AUCUSE".

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Figure 1 MESSAGE SERVICE SYSTEM AND DUAL TELEPHONE COVERAGE FORM FLOW

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Figure 2 MESSAGE SERVICE SYSTEM AND DUAL TELEPHONE COVERAGE FORM FLOW

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SEC. 1N: INTER-MODULE TRUNKING

1. FEATURE DESCRIPTION

This feature is available with the 5E5 and later Software Releases and provides direct trunking between Switching modules connected to the same 5ESS Switch.

Switching Module can refer to MMRSM (Multi-Module Remote Switching Module), RSM (Remote Switching Module), SM (Switching Module) or ORM (Optically Remote Modules). Inter-module trunks connect two modules (e.g., ORM to ORM, MMRSM to MMRSM, ORM to MMRSM, etc.)

Inter-module trunks can be used when one or more of the switching modules is isolated from the switch (Stand-Alone).

If an Inter-Module trunk is to be used when the SM goes into stand-alone, the Stand-Alone Call Processing option must be purchased.

1.1 Call Scenarios

If Umbilical 1 Is Cutoff From The Host (See Figure 1):

- Then MMRSM1 goes into stand-alone. When MMRSM1 goes into Stand-alone, calls originating on MMRSM1 or arriving on trunks residing on the MMRSM1 are rerouted using the information on the EMRNM form (5108 Record).
- The EMRNM form allows a telephone number or a range of telephone numbers to be rerouted, using the ROUTE INDEX field, to an Inter-module trunk group. Calls originating on MMRSM1 that do not terminate on MMRSM1 will be rerouted over the IMT (Inter-Module Trunk) trunk group to MMRSM2.

Both Umbilical 1 and Umbilical 2 Are Cutoff From The Host (See Figure 1):

- MMRSM1 and MMRSM2 are in stand - alone mode. MMRSM1 and MMRSM2 can still complete calls that originate or terminate on either one of the modules. For example, B can still call C because the inter-module trunk connects MMRSM1 and MMRSM2. Any calls that terminate outside the modules cannot be completed.
- Inter-Module trunks can be designated as the primary route and the communication links can be designated as the alternate or overflow route. When calls cannot be routed over the Inter-Module trunks, calls are rerouted over the communication links.
- The Route Index specified on the RTIDX form (5303 Record) or MCRTIDX form (5304 Record) should have the Trunk Group Number of the Inter-Module trunk group entered in the TGN field. The NEXT ROUTE INDEX on the RTIDX form or MCRTIDX form should correspond to a route index with a ROUTE TYPE of "DNTRAN". This allows Intra-Module calls to reroute over the Host NCT (Network Control And Timing Link) links to the Communication Module if all members of the Inter-Module trunk group are busy. Inter-Module calls are not rerouted over the communication links, therefore the calls are not completed.

If Calls Cannot Be Routed Over The Inter-Module Trunk (See Figure 1):

- Then the calls are rerouted over Umbilical 1 and Umbilical 2. In another example, if Umbilical 1 is blocked, calls are routed over the Inter-Module trunk which does not affect the routing or completion of the call.
- Host Office may be configured to redirect calls terminating on the isolated module or remote cluster by using the EMROFC form (5116 Record) to specify a telephone number or a range of telephone

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numbers which should route to a Route Index associated with an Inter-Module trunk group on another SM that connects to the isolated module or cluster.

2. FEATURE ASSIGNMENT

2.1 ENGINEERING ASSIGNMENTS

EQIM form (5700 Record) - Designate if the Local Switching Module or Host Switching Module has Stand-Alone capability. Set the STAND ALONE field to "Y".

EQSITE form (5722 Record) - Designate if the Remote Switching Module, Optically Remote Switching Module or Two-Mile Optically Remote Switching Module has Stand-Alone capability. Set the STAND ALONE PURCHASED field to "Y".

2.2 LINE ASSIGNMENTS

EMRNM form (5108 Record) - Specify a Telephone Number or a range of Telephone Numbers which are rerouted when a module goes into Stand-Alone.

EMROFC form (5116 Record) - Specify a Telephone Number or a range of Telephone Numbers which are rerouted when the terminating module goes into Stand-Alone.

2.3 TRUNK ASSIGNMENTS

TKGRP form (5202 Record) - Inter-Module trunk groups must have a "Y" in the INTER SM TRK field. The OPC (Originating Point Code) is the switch's point code. The DPC (Destination Point Code) will be a pseudo DPC.

TRUNK form (5204) - Inter-module trunks can use CCS7 signaling. For each end of the inter-module trunk the CLCI ID (Common Language Trunk Identifier) must be the same.

IMTRK form (5210 Record) - Define the terminating Switching Modules of the Inter-module trunk group.

2.4 ROUTING AND CHARGING ASSIGNMENTS

RTIDX form (5303 Record) - Specify a route index which routes to an Inter-module trunk group.

MCRTIDX form (5304 Record) - Specify a route index which routes to an Inter-module trunk group.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
TKGRP	5202	3	2A	5.1
IMTRK	5210	3	2L	5.46

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The INTER SM TRK field was added.

IMTRK form (5210 Record) - This form is used to define each terminating end for inter-module trunk group members. The IMTRK form was added.

4. GLOSSARY

CCS7 Common Channel Signaling, CCITT Version 7

CLCI Common Language Trunk Identifier

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IMT	Inter-Module Trunk
MMRSM	Multi-module Remote Switching Module
NCT	Network Control And Timing Link
OPC	Originating Point Code
ORM	Optically Remote Modules
RSM	Remote Switching Module
SM	Switching Module

Figure 1 SAMPLE INTER-MODULE TRUNK SCENARIO

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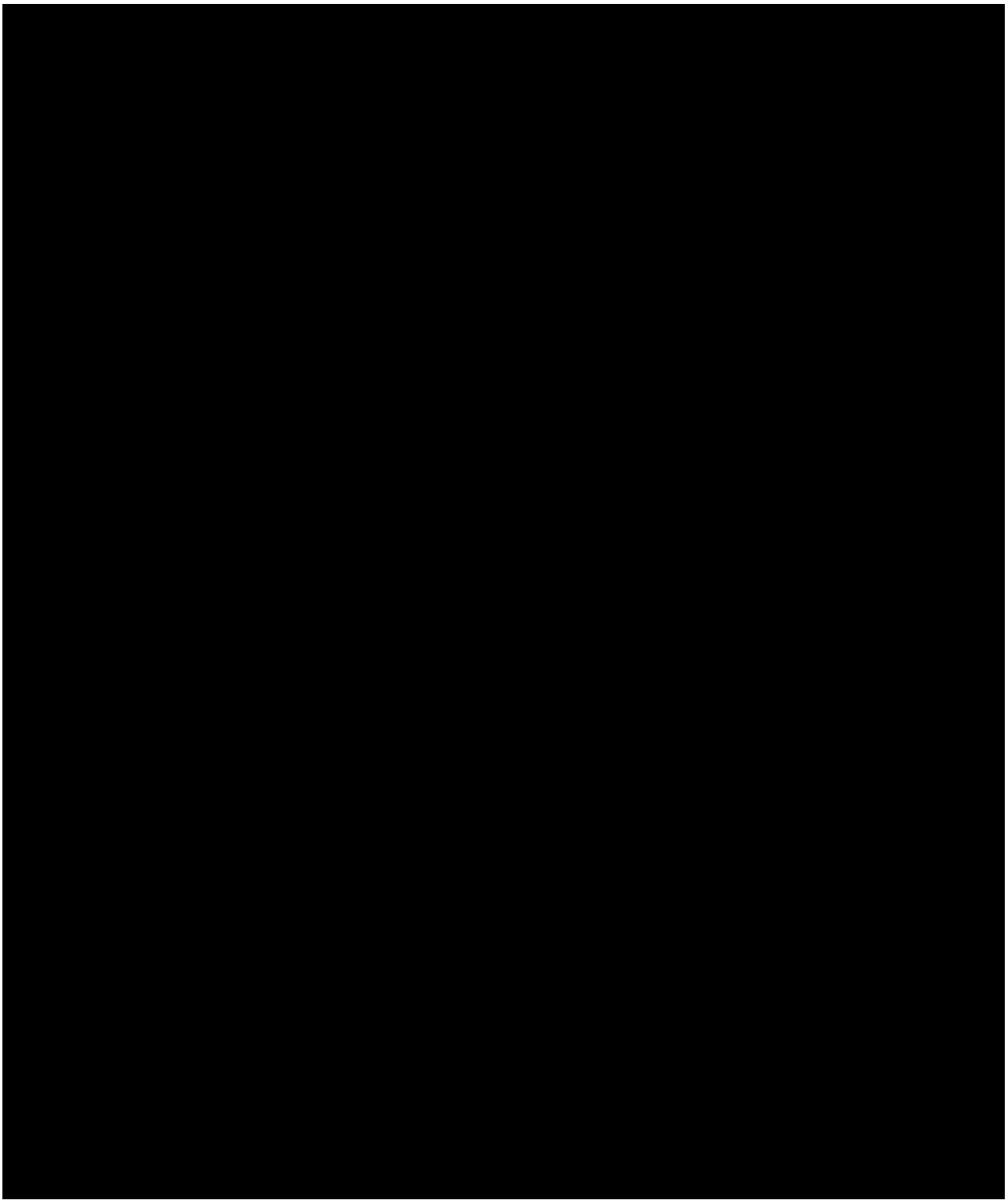

Figure 2 FORM FLOW FOR INTER-MODULE TRUNKING

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SEC. 1O: LEASED NETWORKS

1. LEASED NETWORK ACTION CONTROL POINT

1.1 Feature Description

A Leased Network is a pool of dedicated network facilities operated and maintained by a carrier. It allows customers to lease switch terminations to interconnect their private lines and locations with each other and with the public switched network.

The 5ESS Switch has supported LN (Leased Network) services since the 5E4(2) Software Release. In the earliest timeframe, LN requirements were met by existing BRCS features; no special development was required. The 5E5 Software Release introduced new features and services in response to Leased Network customer requests. The 5E6 Software Release continues to migrate the network architecture and feature offering toward a complete voice and data package.

This section describes features which were introduced in 5E6.

In 5E6 and later Software Releases, a 5ESS Switch can serve as a Leased Network ACP (Action Point).

In earlier releases, all call processing was performed by 5ESS Switch software. In 5E6 when the switch serves as an ACP, call screening, as well as routing and charging information, is provided by a remote NCP (Network Control Point). Communication between the ACP and NCP is performed via CCS7 Direct Signaling TCAP (Transaction Capability)
messages.

A Leased Network call arrives at the switch via a dedicated trunk or ISDN BRI (Basic Rate Interface) line. Since the switch handles both ACP and non-ACP leased networks, it determines from the LN TYPE on the incoming facility (TKGRP or DSLUSR form) if a query should be sent to the NCP. Applicable LN TYPEs are "QRY" and "NOQRY".

When the incoming facility has LN TYPE "QRY", the ACP analyzes the first three incoming digits, using a Leased Network DAS (Digit Analysis Selector) specified in the OFCOPT form. This provides flexibility to bypass the NCP query for test and maintenance calls (10x, 95x), vacant codes and other calls for which call processing should be performed entirely on the switch, e.g., 800 and 900 calls.

When an NCP query is required, the ACP formulates the query message and transmits it via the CCS7 network to the NCP. It suspends call processing to wait for a response from the NCP. A parameter on the OFCOPT form determines the maximum time the ACP will wait before aborting the call.

If the NCP requests collection of an authorization code, the switch collects the code and passes it to the NCP. Upon receipt of the final NCP response, the ACP processes the call according to NCP instructions, routing the call to a specified destination or sending it to final treatment.

Leased Network routing is implemented through the BRCS ARS (Automatic Route Selection) feature with the off-hook queuing option. For LN ACP calls, the ARS group name and FRL (Facility Restriction Level) are determined by the NCP. For non-ACP calls the name and FRL are obtained from ARS forms.

The Leased Network switch at which a call enters the LN is called the Originating Toll Office or the "access" switch. If that switch is not also the destination switch, the access switch may route the call directly to the destination switch or may route it through a "via" switch to the destination switch. "Access" and "via" designations are call dependent and are determined by the incoming facility on which the call enters the switch. A trunk belonging to a trunk group with LN TYPE "QRY" or "NOQRY" indicates "access"; a trunk group with LN TYPE "IMT" (Intermachine Trunk) indicates "via".

The 5E6 Software Release introduces the "crankback" option for routing inter-5ESS Switch voice and data

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traffic. Crankback is the ability of a via switch to return control of a call to the originating (access) switch when the via switch is unable to successfully complete the call. If all circuits from the via switch to the destination switch are busy, the via switch will use the crankback capability to return control of the call to the originating switch. The originating switch must then attempt to complete through another via switch or to terminate the call to reorder if no other paths are available in the route list.

1.2 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ARSGPA	5608-2	4	9B	10.5
DSAPP	5537	3	5AK	8.17
DSLUSR	5908	5	5I	23.2
LNARSGD	5214	3	2P	10.27
LNROUT	5322	3	3AI	10.22
MCRTIDX	5304	3	3Q	10.4
MLDIT/ LDIT	5300-3/5	3	3C	9.3
OFCOPT	5509	3	5I	8.1
SCFAM	5536	3	5AJ	10.18
TKGRP	5202	3	2A	5.1

OFCOPT Form (5509 Record) - The DAS field on the OFCOPT form specifies the DAS for digit interpretation prior to an NCP query for LN ACP calls. In the LDIT form associated with this DAS, calls requiring an NCP query must have CALL TYPE "LNACP".

The TIME OUT field specifies the number of seconds the ACP will wait for a response from the Leased Network NCP before sending the call to reorder.

LNROUT Form (5322 Record) - The Leased Network Routing form specifies screening indexes for ARS routing on a Leased Network switch. One screening index may be specified for each of the following types of calls:

- voice calls on the access switch
- data calls on the access switch
- voice calls on the via switch
- data calls on the via switch

The screening index must match a screening index on the ARSSCRN form.

LNARSGD Form (5214 Record) - For each Leased Network, the LN ARS Group Definition form lists the ARS groups belonging to the Leased Network. Its purpose is to identify ARS Groups that share trunks, for example, Leased Network CCS7 Intermachine Trunks.

The 1-8 character LN GROUP name identifies the Leased Network on the switch.

The ARGPNAME list contains up to 100 ARS Group IDs. Each ID is defined on an ARS Group Parameter (ARSGPA) form (5608-2 Record).

DSLUSR Form (5908 Record) - The LN TYPE field on the DSLUSR form designates whether or not the BRI line belongs to a Leased Network. It also specifies if a Network Control Point data base is to be queried for routing and charging information.

TKGRP Form (5202 Record) - The LN TYPE field on the TKGRP form designates whether or not the trunk group belongs to a Leased Network. When the group does belong to a Leased Network, the field specifies if a Network Control Point data base is to be queried for routing and charging information. It also

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identifies LN Intermachine trunks.

The LN GROUP name represents a set of ARS Groups that share a Trunk Group, in particular a Leased Network CCS7 Intermachine Trunk Group. For LN trunk groups that query the LN NCP and for LN ISUP7 Intermachine trunk groups, there should be a matching tuple in the LNARSGD form that defines the LN GROUP.

The LN VIRT field specifies if the trunk group is a Leased Network virtual on-net trunk group. If this field is set, the switch will prefix the caller's NPA on all 7-digit dialed calls.

MCRTIDX Form (5304 Record) - The MCRTIDX form defines the ARS Route Index list. For 5E6, the CRANKBACK field has been added to enhance Leased Network routing flexibility. When an LN "via" switch exhausts its routing list, it may send a crankback message to the "access" switch which will reroute the call. This feature is available when the CRANKBACK field on the "via" switch is set to "Y" on the last route of an ARS route list.

MLDIT, LDIT Forms (5300 3/5 Record) - A new Call Type, LNACP, has been added to the LDIT and MLDIT forms. The LNACP Call Type indicates that the NCP should be queried for this call.

SCFAM Form (5536 Record) - For a Leased Network ACP, the Structure Code Family form translates the Call Code received from the Leased Network NCP data base to a structure code family. The SCFAM field determines how the call will be billed. For 5E6, the new structure code family, LNACP, specifies that the call should be billed as a Leased Network call at an Action Control Point.

DSAPP Form (5537 Record) - The Direct Signaling Application form is used to specify the Transaction Type and the Subsystem Number to be used by the direct signaling trunks in the CCS7 protocol. For 5E6, a new Application type, LNACP, has been added to define the direct signaling fields for the Leased Network Action Control Point application.

ARSGPA Form (5608-2 Record) - The ARS Group Parameter form defines ARS group level information.

For 5E6, an ARS group must be specified as a voice or data group. The new GROUP TYPE field must be "VOICE" or "CSD".

Also in 5E6, the LN CUST ID field is the numeric ID (1-255) that identifies an LN customer globally to all switches in the Leased Network. For an LN ACP, the ID is stored on the NCP and sent to the ACP in response to a query. For both ACP and non-ACP Leased Networks, the ID is transmitted from the "access" switch to the "via" switch for routing determination. Two ARS groups, one each for voice and data may be assigned the same LN CUST ID.

2. ISDN ACCESS TO LEASED NETWORK

2.1 Feature Description

The ISDN Access to Leased Network feature provides BRI and PRI (Primary Rate Interface) access to Leased Networks for circuit switched data and voice calls. It allows ACP based services to access the Leased Network through CCS7 Network Interconnect signaling for offnet routing through a Local Exchange Carrier. Both ACP and non-ACP based Leased Network customers may use the ISDN feature that delivers CPN/BN (Calling Party Number or Billing Number) to the terminating user.

2.2 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	5I	23.2
TKGRP	5202	3	2A	5.1

DSLUSR Form (5908 Record) - The LN TYPE field on the DSLUSR form designates whether or not the

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BRI line belongs to a Leased Network. When the line belongs to a Leased Network, the field also specifies if a Network Control Point data base is to be queried for routing and charging information.

TKGRP Form (5202 Record) - The LN CRIT Q field indicates if an outgoing trunk group will support critical user queuing. For a call on an incoming Leased Network trunk: if the trunk group supports critical user queuing, the call may queue for this trunk group only if the incoming trunk has Facility Restriction Level equal to 14, and queuing is allowed and active.

3. LEASED NETWORK OS IMPROVEMENTS

3.1 Feature Description

The Leased Network Operating System Improvements feature provides the ability to generate MDR (Message Detail Recording) and HSS (Hundred Second Scan) records for Leased Network customers.

The MDR capability is a BRCS feature that provides customers with detailed records of calls originating on the customers' private facilities. The MDR records are shipped, in real time, to an AP (Application Processor) from the 5ESS Switch.

Leased Network customers can receive two types of MDR records for calls on their LN facilities:

- Originating Private Record (OPR)
- Incoming Private Record (IPR)

To receive MDR records, each line or trunk that serves a customer must belong to one MDR group and be assigned an MDR feature.

The MDRGP form is used to specify if MDR records are to be generated when a call is an 1) effective attempt (completed), 2) ineffective attempt (incompleted) or 3) effective or ineffective attempt. Prior to 5E6 this categorization applied to all MDR record types: OPR, IPR and PubR. In 5E6, the categorization has been changed for Leased Networks. Two effective and ineffective attributes have been replaced by six new attributes: EFF ORIG PRIV, INEFF ORIG PRIV, EFFINC PRIV, INEFF INC PRIV, EFF PUBLIC, INEFF PUBLIC.

Assumptions: MDR features assigned to Leased Network facilities are always active. Dialed code activation and deactivation are not supported for MDR features. The status of the MDR groups to which the LN facilities belong are always "on". The use of dialed codes to change MDR group status is not supported.

In 5E6, MDR record generation for circuit switched data calls is supported; record generation for ISDN packet switched data calls is not.

The Hundred Second Scan feature allows customers to monitor the call load on their networks. It provides information for administration and engineering of private networks. It collects usage data for all Leased Network trunk groups in the switch every 100 seconds and sends the data to a Leased Network Operations System via an API (Applications Processor Interface).

In 5E6, the existing HSS capability has been expanded to allow usage data to be collected on ISDN BRI multiline hunt groups. MLHG usage means the number of lines busy within the Multiline Hunt Group.

3.2 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
APCA	5620-1	4	21A	24.3
APHSS	5620-4	4	21D	24.12

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MDRGP	5624-2	4	25B	24.33

MDRGP Form (5624-2 Record) - The MDRGP form contains six fields, each indicating if a count is to be kept for a specific call type. The new fields for effective and ineffective originating, incoming and public calls are: EFF ORIG PRIV, INEFF ORIG PRIV, EFFINC PRIV, INEFF INC PRIV, EFF PUBLIC, INEFF PUBLIC.

APCA Form (5620 Record) - On the APCA form, the HSS field indicates if the feature is assigned to a customer.

APHSS Form (5620-4 Record) - The APHSS form provides means of assigning and activating the HSS feature for a trunk group or MLHG.

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SEC. 1P: CCS7 NETWORK INTERCONNECT

1. FEATURE DESCRIPTION

The CCS7 Network Interconnect feature supports CCS7 calls between LEC (Local Exchange Carriers) and IC (InterLATA Carriers). It requires new software in the EAEO (Equal Access End Office), the AT (Access Tandem) Office and the TO (Toll Office). It supports interLATA call setup and clearing through CCS7 protocol and provides fundamental signaling for interLATA ISDN calls. At the AT switch, CCS7 NI accommodates interworking from EA/MF signaling to the ISUP7 protocol and vice-versa.

ISDN EA (Equal Access) functionality across network boundaries is achieved with new messages and parameters. The integrity of private parameters within the IC and LEC networks is preserved.

The Leased Network Action Control Point feature employs CCS7 Network Interconnect to access and terminate from a leased network.

The CPN/BN feature relies on CCS7 NI to transport the CPN (Calling Party Number) or BN (Billing Number) to the called party over an ISDN interface.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CKTCODE	5311	3	3X	10.23
FIXRT	5301-1	3	3G	10.1
OFCOPT	5509	3	5I	8.1
RTIDX	5303	3	3P	10.2
TKGRP	5202	3	2A	5.1

OFCOPT Form (5509 Record) - The OFCOPT form provides two timer attributes that assist CCS7 Network Interconnect in providing reliable communication between the End Office, Access Tandem Office and Toll Office.

The Circuit Reservation Acknowledgement Timer, CRA TIMER, specifies the maximum time an originating Toll Office will wait after sending a CRA message to the originating Access Tandem. After sending the acknowledgement, the Toll Office expects an IAM message containing routing and charging information for the call. If the Toll Office does not receive the IAM message before the CRA TIMER expires, it issues an MDII (Machine Detected Interoffice Irregularity).

The Exit Message Delay Timer (EXM D TIMER) is set by the OAT (Originating Access Tandem) Office after it sends the IAM to the OTO (Originating Toll Office). The OAT uses the timer to provide a delay to ensure that glare or blocking is not encountered on the outgoing circuit to the OTO. When the timer expires, the AT sends an Exit Message (EXM) in a backward direction to the End Office. The EXM notifies the EO that an ISUP7 trunk has been selected as the outgoing trunk from the OAT to the OTO.

With 5E7 and later, the BUSY ANNC field was added to determine if the terminating exchange should send a busy tone or a CCS7 Release Message to the originating exchange when the called party is busy.

With 5E7 and later, the LEC ANNC field was added to determine if a busy tone or a CCS7 Release Message should be sent by the terminating exchange for calls that cannot be routed for failure conditions other than those associated with called party screening.

These options are for treatment of Vacant Code, No Circuit Announcement, and Reorder.

The options in this field do not apply to called party screening failures, which include the following CCS7 Release Messages: destination out of order (27), number changed (22), unallocated number (1), user busy (17), no user responding (18), call rejected (21), or bearer capability not implemented (65).

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The value entered in this field will be checked at Local Exchanges by the operational software for call failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call is of type, 3.1kHz audio or speech.
- the call route consists of only ISUP trunks.

With 5E7 and later, the LEC IW REL field was added to determine if a busy tone or a CCS7 Release Message should be sent by the terminating exchange for calls that cannot be routed for failure conditions other than those associated with called party screening.

These options are for treatment of Vacant Code, No Circuit Announcement, and Reorder.

The options in this field do not apply to called party screening failures, which include the following CCS7 Release Messages: destination out of order (27), number changed (22), unallocated number (1), user busy (17), no user responding (18), call rejected (21), or bearer capability not implemented (65).

The value entered in this field will be checked at Local Exchanges by the operational software for call failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call is of type 3.1kHz audio or speech.
- the call route consists of a combination of ISUP trunks interworked to other protocol trunks (e.g., MF).

CKT CODE form (5311 Record) - For all incoming ISUP7 trunks at an Originating Access Tandem office and all incoming ISUP7 trunks at an Originating Toll office that handles international traffic, the circuit code must be populated on the CKT CODE form.

The form is used to translate the four bit circuit code received in an ISUP7 IAM message to a digit value which represents the 0ZZ, 1NX (international call, no operator requested) or 1N'X (international call, operator requested) digit string used in equal access and international signaling.

TKGRP form (5202 Record) - The TKGRP form is used to determine the handling of CCS7 ISUP7 parameters and to activate internetwork services.

The CCS7 TYPE field specifies whether ISUP7 parameters will be interpreted as specified by local telephone company requirements or by AT&T-NSD standards. If CCS7 TYPE is "RBOC" (5E6 only) or "BELLCORE" (5E7 and later), parameters will be handled as specified by Bellcore; if "TOLL" (5E6 only) or "ATT" (5E7 and later), they will be handled as specified by AT&T-NSD. If TRKCLS is "LATA" or "IC", the CCS7 TYPE must be "RBOC". Generally, trunk groups in a local exchange carrier environment are type "RBOC"; trunk groups in the AT&T-NSD environment are type "TOLL" (except "LATA" groups, which are "RBOC").

Three separate fields determine if CCS7 transmission will be restricted for certain types of information. The first is the MAUII RSTRCT field which determines if Message Associated User-to-User Information (MA-UUI) can be passed to the next office. If the feature is restricted, that is the information cannot be passed, the MAUII RSTRCT field must be "Y". With 5E7 and later Software Releases, this field is jointly replaced by the ATP IC RSTRCT and UUI IC RSTRCT fields to conform with CCITT and ANSI standards.

This attribute is used by operational software when the trunk class is "LATA" or "IC". It is ignored for all other trunk groups.

To allow the Billing Number to be delivered to the terminating user, the CHG RSTRCT field must be "N". A

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Billing Number can be forwarded only if TRKCLS is "LATA" and OUTPULSING is "ISUP7". This attribute is used by operational software when trunk class is "LATA". It is ignored for all other trunk groups.

To allow the Calling Party Number to be delivered to the terminating user, the CPN RSTRCT field must be "N". A Calling Party Number can be forwarded only if TRKCLS is "LATA" and OUTPULSING is "ISUP7". CPN RSTRCT is only used by operational software when the trunk class equals "LATA". It is ignored for all other trunk groups.

The PRIVACY attribute is used for EAMF, CAMA, PRI, EDSL and EDSLHM trunk groups to indicate if the received Directory Number is a private number.

The GLARE ACTION field specifies the action to be taken when dual seizure occurs on a two-way trunk.

With 5E7 and later, the CFN RSTRCT field was added to prohibit the generation of the CFN (Confusion Message). The CFN is used in order to identify that unrecognized signaling information has been received at an exchange.

- ***NOTE:*** The CFN should be generated only at LEC switches. Therefore, this attribute should be optioned by the customer at LEC offices where CCS7 TYPE is "BELLCORE" and TRKCLS is not "LATA".

With 5E7 and later, the ATP IC RSTRCT field was added to prohibit the passing/accepting of the ATP (ISUP Access Transport Parameter).

The ATP may be included in any of the following ISUP messages: IAM (Initial Address Message), ACM (Address Complete Message), ANM (Answer Message), CPG (Call Progress Message), or REL (Release Message).

- ***NOTE:*** This field is only used by the operational software at network boundaries. Therefore, this field should be optioned for trunks with a TRKCLS of "LATA" or "IC".

With 5E7 and later, the UUI IC RESTRCT field was added to prohibit the passing/accepting of the UUI (User to User Information Parameter). User to User Information Signaling transfer allows ISDN customers to exchange user data transparently through the network, in the UUI of an ISUP message, during call setup and call clearing.

The UUI may be included in any of the following ISUP messages: IAM (Initial Address Message), ACM (Address Complete Message), ANM (Answer Message), CPG (Call Progress Message), or REL (Release Message).

- ***NOTE:*** This field is only used by the operational software at network boundaries. Therefore, this field should be optioned for trunks with a TRKCLS of "LATA" or "IC".

With 5E7 and later, the NI ANNC field was added to determine if a CCS7 Release Message or an inband tone will be sent to the preceding exchange when a call cannot be routed from an IC (Inter-exchange Carrier).

The value entered in this field will be checked by the operational software for called number screening failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call route consists only of ISUP trunks.

With 5E7 and later, the NI IW ANNC field was added to determine if a CCS7 Release Message or an inband tone will be sent to the preceding exchange when a call cannot be routed from an IC (Inter-exchange Carrier).

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The value entered in this field will be checked by the operational software for called number screening failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call route consists of a combination of ISUP trunks interworked to other signal protocol trunks (e.g., MF).

FIXRT form (5301-1 Record) - For CCS7 Network Interconnect, two new Fixed Route Types are available: NCC and BUSY.

A Route Type of "NCC" indicates there is no circuit available to the carrier. The Route Type "BUSY" interacts with the PLAY ANNC field.

The PLAY ANNC field indicates if a tone/announcement should be played on an ISUP7 trunk which is crossing a network boundary. It is only effective when the Trunk Group is "LATA" or "IC".

RTIDX form (5303 Record) - The CKT CODE and CPN SUBSC fields have been added to the RTIDX form.

The CKT CODE field contains a network identification carried in the CCS7 ISUP message. It maps to a four bit circuit code.

The CPN SUBSC field indicates whether or not the InterLATA/International Carrier subscribes to the Calling Party Number parameter.

With 5E7 and later, the CSI SUBSC field was added to determine whether or not the CSI (Carrier Selection Information) parameter should be sent to the IXC (InterLATA Exchange Carrier) in the IAM (Initial Address Message).

If the OEO (Originating End Office) determines that an IXC is required to complete the call, and if circuit selection results in the selection of a CCS7 outgoing circuit either directly to the IXC or to an AT (Access Tandem), the OEO will mark the circuit busy and formulate an IAM.

With 5E7 and later, the UUI SUBSC field was added to determine whether or not the UUI (User to User Information) parameter should be sent to the far switch in the IAM.

The UUI parameter of the an ISUP message allows ISDN customers to exchange user data transparently through the network during call setup and call clearing.

With 5E7 and later, the ATP SUBSC field was added to determine whether or not the ATP (ISUP Access Transport) parameter should be sent to the far switch in the IAM.Q.931 Information Element transfer facilitates the transport of specific Q.931 information elements in the ISUP Access Transport Parameter (ATP) tranparently between exchanges in the network.

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SEC. 1Q: OPTICAL REMOTE MODULE STAND-ALONE

1. GENERAL

The ORM (Optical Remote Module) Stand-Alone feature allows an ORM or TRM (Two-Mile Optical Remote Module) that has lost functionality with a host 5ESS Switch (or the availability of the AM in 5E5 or the CMP in 5E6 and later Software Releases) to continue processing intra-module calls, rerouting emergency calls or rerouting inter-module calls to announcement. This feature also provides Enhanced Alternate Emergency Number Routing, Stand-Alone Billing, Remote Alarm/Status Panels for ORMs and Stand-Alone Measurement Counts. These options are described in the following sections. The ORM Stand-Alone feature is available with 5E5 and later Software Releases.

ORM Stand-Alone is an extension of the existing Stand-Alone feature that provides functionality for RSMs and MMRSMs to all other SM types. RSM Stand-Alone Call Processing is covered in Division 2, Section 1C. Inter-Module Trunking for 5E5 and later Software Releases is covered in Division 2, Section 1N.

Without the Stand-Alone feature, an SM routes each call origination to re-order.

2. FEATURE DEFINITIONS

2.1 Stand-Alone Call Processing

With Stand-Alone Call Processing, an ORM or TRM isolated from a host 5ESS Switch can terminate calls to any other available port on that module. This includes POTS terminations to lines, MLHGs, local trunk groups and the ports in global trunks and MLHGs that physically terminate on the module.

Examples of call processing features supported during Stand-Alone include:

- Speed Calling
- Call Waiting
- Call Forwarding - Don't Answer
- Call Hold

Features that require shared resources such as a GDSUs (Global Digital Service Units) access to routing data stored in the AM (5E5)/CMP (5E6), or access to hardware associated with the AM (e.g., the DLN for CCS), are not supported during stand-alone. Among these are:

- Three-Way Calling
- Conference Calling - 6 Way
- Directed Call Pickup with Barge-In
- OUTWATs
- Simulated Facility Groups
- Call Transfer (if controller disconnects before third party answers)
- Trunk terminating calls requiring CCS protocols (such as ISDN).

In addition to POTS and BRCS features, this capability supports ISDN packet-switched calls designed for the 5E4 RSM stand-alone environment. ISDN circuit-switched calls and ISDN MLHGs are also designed

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to work in the SM stand-alone environment.

2.2 Alternate Line Emergency Number Routing Without Stand-Alone

Alternate Line Emergency Number Routing provides up to 10 emergency numbers to alternate local DNs. For commonality across module types, local line alternate emergency number routing is separate from stand-alone call processing and is included in the base Software Release for all SMs.

2.3 Enhanced Alternate Emergency Number Routing

The full stand-alone call processing option incorporates and expands the alternate line emergency routing ability to include global MLHGs, local trunk groups, global trunk groups and alternate routing of a range of DNs to a single destination (typically a trunk). The local DNs must be associated with a local POTS/ISDN line or local MLHGs. Stand-Alone increases the number of alternate routes to 100.

The Stand-Alone option also allows alternate routing to local trunk groups and to members associated with global groups which terminate on the isolated module. These include DNs associated with global MLHGs and route indices associated with global trunk groups. Therefore, the stand-alone option allows alternate emergency routing to any port on the switching module.

A range of DNs can also be routed to alternate destinations. This capability is typically used to alternately route a range of dialed DNs associated with the office code for a remote module site to an inter-module trunk used as a backup route terminating at that remote site. If a module becomes isolated from the host switch and cannot complete calls to the remote site via the NCT links, it can still continue to route emergency ranges of DNs via the inter-module trunk directly to that site. The Inter-Module Trunking Feature for 5E5 and later Software Releases is covered in Division 2, Section 1N.

2.4 Stand-Alone Billing

For 5E5 and earlier Software Releases, Stand-Alone Billing uses all available spare memory in an isolated SM to store billing information. This option requires the installation of Stand-Alone Call Processing. If this option is not purchased, the amount of memory to store billing information is 50KB.

2.5 Stand-Alone Announcement

Stand-Alone Announcement can be provided with an announcement circuit such as a 13A announcement machine for the trunk side. A 14A announcement machine could be used for the line side. Utilization of announcement circuits during stand-alone requires the Stand-Alone Call Processing option.

2.6 ORM Remote Alarm Panel

Existing 5A RSM RAUs (Remote Alarm Units) and the MMRSM ASP (Alarm and Status Panel) are available on ORMs and TRMs. This option is independent of the ORM Stand-Alone feature.

2.7 Stand-Alone Measurement Counts

The existing RSM measurement counts that relate to stand-alone operation apply to any module with ORM Stand-Alone.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700-1/2	8	2	18.1
EQSITE	5722	8	15	18.8
EMRNM	5108	3	1H	4.9
EMROC	5116	3	1P	4.9

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MLHLN form (5111-1/2/3 Record) - This form is used to define a multi-line hunt line.

EQIM form (5700-1/2) - In 5E5 and later Software Releases, this form is used to specify Stand-Alone call processing on a host (SM USAGE is "HIM" on an EQIM form) or local SM (SM USAGE is "IM" on an EQIM form); the updated STAND-ALONE (RSM STAND-ALONE in 5E4(2) and earlier Software Releases) field must be set to "Y".

Also updated for 5E5 is the STAND-ALONE BILLING field (RSM STAND-ALONE BILLING in 5E4 and earlier Software Releases). Valid entries are "Y" or "N".

EQSITE form (5722 Record) - The REMOTE SITE field has been added with 5E5 and later Software Releases. It contains the ID for the set of Remote Modules that make up the Remote Site Cluster. Valid entries are from 1-174.

Also added is the MASTER MODULE field which contains the SM number of the master module (if one exists) at the Remote Site. Valid entries are from 1-192. MASTER MODULE must be defined on an EQRAU form (5705 Record).

The required field STAND-ALONE PURCHASED? has been updated for 5E5 (RSM STAND-ALONE PURCHASED in 5E4(2) and earlier Software Releases). Valid entries are "Y" or "N". This option can only be set with the ODA process. This is not a Recent Changeable item.

Also added is the required STAND-ALONE BILLING PURCHASED? field. Valid entries are "Y" or "N". This option can only be set by the ODA process. This is not a Recent Changeable item.

EMRNM form (5108 Record) - The EMRNM form defines stand-alone alternate routing for remote TNs that terminate outside of a remote site. In 5E5 and later Software Releases, remote TNs can be defined for sites that include ORMs and TRMs.

In 5E4 and earlier Software Releases, 10 emergency TNs can be defined for a local SM or RSM. In 5E5 and later Software Releases, up to 100 emergency TNs can be defined for a local SM, RSM, ORM or TRM.

Telephone Numbers not directly assigned to the Remote Site or Local SM, for a subscriber served by the remote site or local SM, are rerouted to a local TN or Trunk Group served by the remote site or local SM. A local TN or trunk group is assigned to an equipment number (LEN, SLEN or LCEN) on the remote site.

The STAND-ALONE field on the EQIM form must be "Y" if more than 10 Emergency TNs are defined for an SM entered in the LOCAL SM field on the EMRNM form. Up to 10 Emergency TNs can be defined for an SM entered in the LOCAL SM even if the SM does not have the stand-alone option.

An isolated remote site with the Stand-Alone Announcement option will reroute all numbers to announcement, except emergency TNs defined on this form that terminate outside of the remote site.

The EMER TN field can contain any valid 1- to 15-digit number (e.g., NXX-XXXX, NPA-NXX-XXXX). International numbers may be entered with either a 01 or 011 prefix.

The EMER TN (emergency telephone number) field indicates a telephone number or range of telephone numbers not served by the remote site or local SM that could be rerouted to an outgoing IMT (Inter-Module Trunk) (or rerouted to another TN located on this SM) when the module is in a stand-alone site. To specify a range of telephone numbers, use the wild-card character (*). Possible entries using the wild-card character are as follows:

- Reroute a hundreds group to the same alternate destination:

  XXX-XX**

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XXX-XXX-XX**

- Reroute an entire office code to the same alternate destination:

  XXX-****

  XXX-XXX-****

- Reroute all office codes within an area code to the alternate destination:

  -*

  XXX-***-****

- Reroute all dialed calls (up to 15 digits) to the same destination:

  *****-***-***-****

The X is a value 0-9. The wild-card (*) character matches any dialed digit at that position.

When determining the order of precedence for matching emergency routing TNs, if an exact match fails on the entire TN, then partial matches are attempted with wild-card digits (*) in the hundreds group, in the whole office code, in the entire area code, and lastly for all 15 digits.

A range of telephone numbers specified with a wild-card character must not overlap another range of telephone numbers for a remote site or local SM in this relation. If an overlap occurs and the modules in stand-alone are connected by IMTs, a routed number that is overlapped would appear to terminate in both modules. This would result in the number looping through all the members of the IMT group until it is blocked.

After a call has been routed to a fixed route or announcement trunk, reorder is given instead of emergency routing. For example, this would occur when a mis-dialed call to an unassigned TN accesses the routing module for that number. Calls to the Operator or 911 that would have terminated to announcement because of stand-alone condition are allowed to emergency alternate route.

Stand-Alone Test Lines allow testing of emergency number rerouting for an RSM/ORM/SM site when the RSM/ORM/SM site is not in stand-alone mode. The lines must have an LCC (Line Class Code) with a SERVICE CLASS of "SATSTLN" and a TERMINATING TREATMENT of "INDIV". When conducting the stand-alone rerouting test from the RSM/ORM/SM site, the lines may be used to originate and dial each of the emergency numbers which is normally rerouted during stand-alone operation.

If a three-digit number is to be rerouted (e.g., 911), the CONV form (5300-4 Record) must be checked to see if that three-digit number can be code converted.

The 5E5 Inter-Module Trunking Feature, provides direct trunking between SMs connected to the same 5ESS Switch. Refer to the feature description of Inter-Module Trunking in Division 2, Section 1N for more information.

EMROFC form (5116 Record) - Entries on the EMROFC form allow an AM to reroute emergency TNs that originate outside an isolated SM or RSM to an Emergency TN within the module. Emergency calls from customers assigned to an SM that is isolated or in Stand-Alone are rerouted based on entries on the EMRNM form (5108 Record).

In 5E4(2) and earlier Software Releases, up to 100 emergency TNs can be defined for an SM or RSM. For

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5E5 and later Software Releases, up to 500 emergency TNs can be assigned throughout the office for remote sites that now include RSMs, ORMs or TRMs.

For more detailed information on Stand-Alone operation, see the RSM Stand-Alone Call Processing feature description in Division 2, Section 1C.

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SEC. 1R: ALLIANCE TELECONFERENCING

1. FEATURE DESCRIPTION

ATC (Alliance Teleconferencing) is available in 5E4(2) and later Software Releases. The feature allows a 5ESS Switch equipped with OSPS (Operator Services Position System) to provide network access for ATC calls.

ATC calls are recognized when they are received on operator trunks and are signaled to the network using CCS7 ISDNUP (Common Channel Signaling System Number 7 Integrated Services Digital Network User Part) capabilities. The calls are routed in the DEV (Direct Egress Voice) domain, using the APN (Action Point Numbering) address plan.

ATC uses a teleconferencing bridge, at a distant NSC (Network Services Complex), that allows many parties to be present on the same call. The ATC capability consists of two services: "Add-On" teleconferencing and "Meet-Me" teleconferencing.

Add-On teleconferencing allows a customer to originate a teleconference and add conferees (through a 5ESS Switch with OSPS capabilities). The originator is billed for the bridge charges and all participant's legs. Billing is actually done at the NSC; a billing record is kept at the switch for access verification.

Meet-Me teleconferencing is scheduled on a reservation basis (by dialing an 800 number) through a dedicated operator who provides a number for a conference controller to call at a reserved time and another number for the other conferees to call at a reserved time. The conference originator specifies a billing option when the conference may be billed for their individual leg charges or all charges may be billed to the originator.

The dialing plan for Add-On and Meet-Me calls is 0+700-45Y-XXXX. The 0+ prefix causes local offices to route Alliance calls on the operator trunks to the OSPS. The Y digit distinguishes between the two services, Add-On and Meet-Me. The Y digit is equal to 6 for Add-On; the Y digit must not equal 6 for Meet-Me.

Alliance teleconferencing calls arriving at the OSPS switch will be screened for valid ANI (Automatic Number Identification), allowable originating area (based on NPA-NXX combinations) and acceptable NCD (Network Call Denial) query status.

2. TRANSLATION REQUIREMENTS

2.1 ROUTING AND CHARGING TRANSLATIONS

DAS form (5300-1 Record) - For ATC calls to be routed in the DEV domain, the 5300-1 Record must be populated with a DAS (Digit Analysis Selector) of "98".

The 5ESS Switch will query the INWATS data base and then attempt to route (in the format of the APN (Action Point Numbering) Plan) in DAS 98. The format of the APN is SSS-TTT-xxxx. This number consists of:

- SSS - Node. Each node is assigned one or more values of "SSS". The SSS digits in the APN normally exclude all valid NPA codes.
- TTT - Indicates a specific trunk group: SSS+TTT six-digit translation at host switch is sufficient to identify Add-On or Meet-Me.
- xxxx - Last four digits of dialed number (Meet-Me), or last four digits returned from INWATS query (Add-On).

This DAS should point to an LDIT (Local Digit Interpreter Table) that can handle the result of the INWATS

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query for Add-On calls and it should point to the result of the delete-prefix that is done on the outgoing trunk for Meet-Me calls. Both Add-On and Meet-Me calls should be able to translate in the DAS assigned to the incoming OSPS trunk. However, the outcome is slightly different after this point:

Add-On: The route index obtained from the LDIT of the first pass of digit analysis should point to a route index that performs the add/delete operation to transpose the 700-456-xxxx to the INWATS query number of 800-050-xxxx.

Meet-Me: The route index obtained from the LDIT should translate the 700-45Y-xxxx (Y must not equal 6) directly into the APN number via the add/delete found for the route index. No second pass of digit analysis is performed; the original LDIT should be set up such that it will route directly to a CCS7 ISDNUP trunk.

ATC numbers are translated in a POTS (Plain Old Telephone Service) domain associated with the incoming OSPS trunk. The 700 number is a POTS number and the APN is a special number requiring the DAS 98 translation. Only Add-On calls use the DAS 98 translation (in the OSO (Originating Screening Office) OSPS Switch), since the response from the NCP requires retranslation. The Meet-Me number is transformed into an APN address and routed from the original DAS (LDIT). But, the Add-On used the POTS DAS to transform the ATC number into an INWATS query number of 800-050-xxxx and then retranslates the INWATS response in DAS 98.

Any 5ESS Switch office in a network between the OSPS/OSO and the host 4 ESS Switch must also be able to translate the SSS-TTT-xxxx number in DAS 98. For this type of office, translations should come up with a CALL TYPE of "NORMAL" and the DAS 98 should ensure CCS7 ISDNUP routing.

LDIT and MLDIT forms (5300-3 Record) - When an ATC Add-On call is made, it is identified in digit analysis by the incoming digits of 700-456-XXXX. The 5300-3 Record must be populated with the CALL TYPE of "ADDON" to identify this as an ATC Add-On call. Similarly, when an ATC Meet-Me call is made, it is identified in digit analysis by the incoming digits of 700-45Y-XXXX (Y must not equal 6). The LDIT form must be populated with the CALL TYPE of "MEETME" to identify this as an ATC Meet-Me call.

FIXRT form (5301-1 Record) - Alliance calls that experience ANI-failure will be routed to an announcement using the fixed routing type of "ATCANIF" that must be populated in the 5301-1 Record.

Non-billable Add-On calls (originating from coin, hotel/motel, multi-party or stations from which paid billing is not permitted), ATC calls identified as ONI and ATC calls originating from a restricted NXX are routed to an announcement. the fixed routing type of "ATCINT" must be populated in the FIXRT form to accommodate these conditions.

Restrictions may be placed on the originating NXX for Add-On or Meet-Me calls by populating the ATC form (5446 Record). When these restrictions exist for the originating NXX, ATC calls will be routed to an announcement using the aforementioned fixed routing type of \&'ATCINT' (that must be populated in the 5301-1 Record).

RTIDX form (5303 Record) - ATC Add-On calls perform an INWATS query to obtain a new forward number on which routing must be done. The 5303 Record must be populated with a route index that is obtained through digit analysis. Associated with this route index are the number of digits to delete and digits to prefix. To perform the INWATS query, 6 digits must be deleted and then prefixed with 800050.

2.2 OSPS TRANSLATIONS

ATC form (5446 Record) - This is a new record that is used to list some or all NXXs, within an NPA, that are restricted from using Meet-Me or Add-On ATC.

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SEC. 1S: RECORDED ANNOUNCEMENT FUNCTION

1. FEATURE DESCRIPTION

The RAF (Recorded Announcement Function) is available with 5E3 and later Software Releases.

The RAF, located in the DSU2 (Digital Service Unit 2), resides in a SM (Switching Module). The DSU2-RAF contains the hardware that is necessary for constructing and playing digitally recorded announcements. Software in the SM selects the announcement header, digit string and trailer to be given in the announcement. The AM (Administrative Module) routes the announcement to the operator. The RAF pieces the actual announcement together in real time from a memory board that maps a phrase identification to memory addresses which contain digitized speech.

The announcement header, trailer and digit string are all application specific. The switch owner is furnished with default phrase values, and is responsible for constructing phrases and digit inflection schemes together through the data base. The flexibility to customize announcements is provided; however, it is essential in all cases that an announcement header, digit string and trailer be assembled together to form an announcement.

OSPS (Operator Services Position System) operators have the capability to access recorded announcements for both OSPS DA (Directory Assistance) and OSPS TA (Toll and Assistance) applications.

With 5E5 and later Software Releases, recorded announcements are provided for RACF (Remote Activation to Call Forwarding) and ACSR (Automatic Customer Station Rearrangement).

With 5E6 and later Software Releases, recorded announcements are provided for LSF (LASS Selective Features), ASP (Advanced Services Platform) and OSPS-MECH (OSPS-Most Efficient Call Handling).

The following describes a Directory Assistance call arriving at an OSPS operator position where the subscriber is given a recorded announcement:

- The call arrives at an operator position. The subscriber requests the directory listing of a party. The operator enters the name of the requested party into a vendor-supplied VDT.
- The VDT is connected to a Directory Assistance System Computer (DAS/C) data base, which retrieves the directory listing.
- This directory listing appears on the operator's VDT. The operator identifies this number as the one to give to the subscriber.
- The DAS/C sends announcement data to the SM.
- The SM constructs an array of phrases using the phrases and commands present in the announcement header, trailer and digit inflection relation, and transfers this data to the RAF, which constructs the announcement and plays it to the subscriber.

2. TRANSLATION REQUIREMENTS

2.1 ROUTING AND CHARGING TRANSLATIONS

RTIDX form (5303 Record) - Each route index (1ST ANN RTI, 2ND ANN RTI, 3RD ANN RTI or CLOSE DOWN RTI) entered on a 5404 Record (OSPSCT form) must be designated in the ROUTE INDEX field of the 5303 Record.

2.2 OSPS TRANSLATIONS

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ANNAPL form (5529 Record) - The Announcement Application SM List form specifies the SMs which are populated with RAF automated announcements.

ANNHD form (5531 Record) - The Announcement Header Phrase List form contains phrase identifications that comprise announcement headers.

ANNDG form (5532 Record) - The Announcement Digit Inflection Scheme form contains inflection commands and phrase identifications that comprise a template for digit strings.

ANNTR form (5533 Record) - The Announcement Trailer Phrase List form contains phrase identifications that comprise announcement trailers.

PHRASE form (5534 Record) - The Announcement Phrase List form defines the phrases that comprise announcements.

2.3 ENGINEERING TRANSLATIONS

EQIM form (5700-1/2 Record) - Switching module entries on the ANNHD form (5531 Record),

ANNDG form (5532 Record) and ANNTR form (5533 Record) must be defined on a 5700-1/2 Record.

EQRA form (5821 Record) - This form defines the Recorded Announcement Function (RAF) unit. The RAF SERVICE TYPE must have one of the following values: "ANN", "DTA" or "CTR". See Figure 1 for further assignments.

EQRAP form (5822 Record) - This form defines the RAF circuit packs. The micro-code assignments are in Figure 1.

DSU2-RAF Common Control for MC5D058A1%TN833 RAF Common Board (J5D003EA1, List1)

First Release	Feature	List	APPLICATION (EQRAP)	MICRO-CODE (EQRAP)			SERVICE TYPE (EQRA)
				pack1 (TN1053)	pack2 (TN1054)	pack3 (TN1054)	
5E4	OSPS DA	4	OSPS-DA	5D087A100002	**		ANN
5E4	OSPS TA	10	OSPS-TA	5D114A100002	**		DTA
5E4	OSPS CTR	10	OSPS-CTR	5D114A100002	**		CTR
5E4	800 DA	11	800-DA	5D144A100001	**		ANN
5E6	OSPS MECH	*20	OSPS-MECH	5D114A300001	**		DTA
5E5	RACF	12	BRCS-RAS	5D142A100001	**		DTA
5E5	ACSR	*16	ISDN-ACS	5D142A100001	5D143A100001	**	DTA
		13		5D142A100001	5D143A100001	**	DTA
5E6	LASS	*18	BRCS-SLE	5D142A100001	5D143A200001	**	DTA
5E6	ASP	14	ASP	5D151A100001	**		DTA

* List 18 used with List 12 provides RACF, ACSR and LASS.

List 16 used with List 12 provides RACF and ACSR.

List 20 used with List 10 provides MECH, OSPS-TA, and OSPS-CTR

** a customized pack may be used for 5E6 and Later Software Releases.

List 15A (MICRO-CODE=5D155xxx0001; xxx indicates the Customer Identification Number shown on the label attached to the pack).

For 5E5 and later Software Releases, the customized pack may be used for OSPS-TA (List 15A).

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Figure 1 DSU2-RAF MICROCODE ASSIGNMENTS

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SEC. 1T: ISDN ATTENDANT FEATURES

1. ISAT HUNTING AND QUEUING FEATURE DESCRIPTION

ISDN Attendant Hunting and Queuing features introduced in the 5E4(2) Software Release provide new hunting and queuing arrangements for ISAT (ISDN Attendant) hunt groups. ISAT Multi-Line Hunt Groups are comprised of specialized terminals (Attendants) that serve incoming calls based on call types.

1.1 ISAT Hunting

ISAT Hunting uses UCD (Uniform Call Distribution) based on ICIs (Incoming Call Identifiers). Using this hunting arrangement, terminals (attendants) of the ISAT Multi-Line Hunt Group can be assigned ICIs to serve particular types of calls.

The ISAT Multi-Line Hunt Group is assigned a number of ICIs up to 16 on the ICIPF form (5903 Record) and each of its associated terminals are assigned a subset (possibly all) of those ICIs (DSMLHLN form (5901 Record)).

NOTE: The DSMLHLN form is for 5E4(2) Software Release and the DSLUSR form (5908 Record) is used for 5E5 and later Software Releases.

In the examples given in Figure 1, "LDN1" (Listed Directory Number 1) and "EMER" (Emergency) type calls will be served by all terminals of the ISAT group, but LDN2 type calls will only be served by terminal number one.

1.2 ISAT Queuing

Modular Queuing for ISDN Attendant groups is affected by how ICIs are assigned to the terminals of the ISAT group and by the priorities given to the ICIs. An example of the effect that ICI assignment to terminals has on modular queuing can be seen in Figure 1. LDN1 is assigned to all terminals and LDN2 is assigned to only one terminal. Calls that are queued will have a much greater chance to be served if they are type LDN1. LDN2 will not be served until the terminal (terminal one in this case) assigned this ICI is idle.

Each ICI assigned on the ICIPF form must also be assigned a priority, 1 through 8, with 1 being the highest priority. These ICIs of higher priority have a greater chance of being served before lower priority ICIs even if the higher priority call is queued later. For example, in Figure 1, if terminal one becomes idle, LDN2 calls will be served first, regardless of the order in which the calls were queued, because the priority of the LDN2 ICI is higher.

Call waiting lamps for the ISDN Attendant console are assigned to buttons on the console. These lamps will operate based on the number of calls in the queue. The Calls Waiting lamp will light whenever there is one or more calls in the queue and the Calls Waiting Warning lamp will light whenever there are more than a pre-specified threshold of calls in the queue. Modular queuing forms QUFD and QUGPA are used to make the appropriate threshold, lamp type and threshold type entries. The configuration group (CFGGRP) form (5964 Record) is used to assign the appropriate actions "QCWT" and "QCWW" to the attendant console feature buttons.

Additionally, an action of "QCUSE" may be assigned to a feature button on the console (via the CFGGRP form), that will allow the attendant to monitor the status of the queue. This feature button will give the attendant a display of the number of calls in the queue for each of the ICIs. Since this feature button works with the display capability, an appropriate display feature must be assigned to the attendants that use this button.

2. TRANSLATION REQUIREMENTS FOR ISAT HUNTING AND QUEUING

New Or Modified ODA Forms				

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Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5
DSMLHLN	5901-1/2/3/4/5	5	1B	23.3
ICIPF	5903	5	1D	3.43
LCC	5306	3	3S	4.1
MLHG	5110-1/2/3	3	1J	3.5
MLHGFD	5604	4	5A	12.18
QUFD	5617-1/2	4	18A	12.40
QUGPA	5617	4	18B	3.40

2.1 Lines

MLHG form (5110-1/2 Record) - Establish an ISAT Multi-Line Hunt Group using the appropriate feature from the MLHGFD form (5604 Record). Two additional SUBTN fields were added with this feature allowing a maximum of eight sub-group telephone numbers for a given ISAT group. These sub-group telephone numbers, if assigned, will have a one-to-one relationship with the ICIs LDN1 through LDN8 or WAT1 through WAT5 (if this is an INWATS hunt group, the maximum number of SUBTNs is five). If desired, a queuing feature may also be assigned from the QUFD form (5617-1/2).

2.2 Routing and Charging

LCC form (5306 Record) - A Line Class Code must be assigned with a CLASS OF SERVICE of "ISATND" (ISDN Attendant Terminal). This LCC will be assigned to the terminals of the ISAT group on the DSMLHLN form.

2.3 BRCS

MLHGFD form (5604 Record) - Select a preconstructed hunting feature using the new "ISAT" hunt type (or construct a feature with this hunt type).

QUFD form (5617-1/2 Record) - If queuing is desired, select an appropriate queuing feature from the preconstructed features or construct one. The following entries apply to queuing features assigned to ISAT groups:

- New fields, LAMP TYPE and THRESHOLD TYPE, are used to designate the type of call waiting lamp (feature button) and the type of threshold.
- The EXTENDED SIZE field must be blank for ISAT Multi-Line Hunt Groups.
- A maximum of ten ISAT Multi-Line Hunt Groups may be assigned to the same Queue Module.

For more information, please refer to Division 4, Section 18A of the TG-5.

QUGPA form (5617-3/4 Record) - If the default parameters associated with the particular queuing feature (QUFD form) are inappropriate or unspecified, QUGPA may be used to enter the appropriate defaults.

2.4 ISDN

DSMLHLN form (5901-1/2/3/4/5 Record) - The following entries will apply to each terminal of the ISAT group:

- Each terminal will be assigned a sub-set (possibly all) of the ICIs assigned against the ISAT group on the ICIPF form.
- Each terminal must have a Line Class Code with a class of service of "ISATND" (ISDN Attendant Terminal) from the LCC form.
- An appropriate configuration group name from the CFGGRP form will be assigned to each terminal. A

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maximum of four configuration groups can be assigned to a given ISAT hunt group.

- Each terminal must be assigned a terminal type of "ATND" (ISDN Attendant Terminal).

ICIPF form (5903 Record) - This is a new form used to assign the ICIs (Incoming Call Identifiers) to the ISAT group and set the priority of each ICI.

CFGGRP form (5964 Record) - The Configuration Group Definition record, as with all ISDN terminals, will be used to define how each terminal within the ISAT group is configured. A maximum of four configuration groups may be assigned to an ISDN Attendant hunt group. For modular queuing, some or all of the following actions may be used:

QCUSE -Calls on queue use.

QCWT -Call waiting (one or more calls on queue).

QCWW -Call waiting warning.

For more information, please refer to Division 6, Section 7A of the TG-5.

3. ISDN OFFERED LOAD STATISTICS FEATURE DESCRIPTION

The Offered Load Statistics feature currently exists and is being expanded with the 5E7 Software Release. The Offered Load Statistics feature will allow the attendant to retrieve and display switch-based attendant traffic counts. These counts are pegged during call processing activities and are presently zeroed out once every 30 minutes. If the customer chooses to buy an AP (Applications Processor), the statistics can be downloaded every half hour, and no manual recording is necessary. With the ISDN Offered Load Statistics feature, the customer will be able to select either a 30 minute or 24 hour reinitializing period.

Two display features, "TCUSE" (traffic counts) and "AWTUSE" (aggregate work time), are currently supported on the ISDN Attendant. This feature will modify the functionality of the TCUSE feature button by allowing multiple button depressions.

For more information, please refer to the 235-190-105 document.

4. TRANSLATION REQUIREMENTS FOR ISDN OFFERED LOAD STATISTICS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
MLHG	5110-1/2/3	3	1J	3.5

4.1 Lines

MLHG form (5110-1/2/3 Record) - An entry of "Y" in the STATS 24 HRS field indicates that a 24 hour time period has been selected to reinitialize the ISAT Load Statistics. An entry of "N" indicates that a 30 minute time period has been selected.

5. ISDN ATTENDANT GROUP OVERLOAD WARNING

The ISDN Attendant Group Overload Warning feature, available with 5E8 and later Software Releases, provides four lamp indicators for ISAT Multi-Line Hunt Groups. Three lamps (PCWT, QWARN, and QBUSY) are assigned via feature buttons; the fourth lamp (QBUSY DPN) is assigned via a distribution point.

5.1 Background

Prior to 5E8, two call waiting indicators existed for ISAT member consoles, the CWT (Call Waiting) and

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CWW (Call Waiting Warning) feature button lamps. The CWT feature button lamp was lit when at least one call in the ISAT queue was in the subset of ICIs (ISDN Call Identifiers) the ISAT member could handle. This lamp remains unchanged for later software releases.

The function of the CWW feature button lamp depended on whether or not the switch was a DSN (Defense Switch Network) office. For a non-DSN switch, the CWW lamp was lit on a member's console when the number of queued calls with ICIs the member could handle exceeded the predefined threshold for the member. For a DSN switch, the CWW lamp was lit when at least one call with a precendence higher than routine (executive, priority, immediate, flash, or flash override), and with an ICI the member could handle, was queued.

For 5E8 and later, the function of the CWW lamp is changed for DSN switches, and the PCWT lamp is introduced so DSN and non-DSN switches can have both features.

5.2 Call Waiting Warning Lamp and Precedence Call Waiting Lamp

For 5E8 and later in the DSN switch, the existing CWW lamp functions the same as it does in a non-DSN switch. The CWW lamp is lit when the number of queued calls with ICIs that a member can handle exceeds the predefined threshold for that member.

The new PCWT (Precedence Call Waiting) indicator functions as the CWW lamp did in the DSN switch for 5E7 and earlier Software Releases; however, it is available to any ISAT MLHG members capable of handling MLPP (Multi-Level Precedence Preemption) calls on either a DSN or non-DSN switch. This PCWT lamp is lit on an attendant console when one or more calls above routine precedence level (executive, priority, immediate, flash, or flash override) which this attendant can handle, are in the queue. PCWT is extinguished when no precedence calls higher than routine level remain in the queue.

5.3 Queue Warn Lamp

The QWARN (Queue Warn) indicator lights on each console having the feature button for QWARN lamp when a predetermined number of calls, regardless of ICIs, are queued. QWARN is extinguished when the number of calls in the queue falls below the predetermined number. The threshold is defined in the QWARN THRESHOLD field of the QUFD or QUGPA form.

5.4 Queue Busy Lamp

When the ISAT queue becomes full, the QBUSY (Queue Busy) feature button lamp lights on each console having that button. QBUSY is extinguished when a queue slot becomes available.

5.5 Queue Busy Distribution Point

The QBUSY DPN (Queue Busy Distribution Point) is activated when the queue is full and is deactivated when a slot becomes available on the queue.

6. TRANSLATION REQUIREMENTS FOR ISDN ATTENDANT GROUP OVERLOAD WARNING

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CFGGRP	5964	6	7A	12.5
QUFD	5617-1a/b/c	4	18A	12.40
QUGPA	5617-3/4	4	18B	3.40

6.1 BRCS

QUFD form (5617-1a/b/c Record) - The fields QWARN THRESHOLD and QBUSY DPN were added to the

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form.

QWARN THRESHOLD defines the number of queued calls that will cause the QWARN feature buttons to be lit. When the number of calls in the queue exceeds the threshold value, the QWARN feature button lamps (identified by an ACTION of "QCWARN" on the CFGGRP form) on ISAT terminals are turned on. When the number of calls in the queue falls below the threshold value, the QWARN feature button lamps are turned off.

The QBUSY DPN field defines a distribute point number. When the ISAT queue is full, the distribute point will cause a lamp to be lit. This lamp is different from the feature button lamp defined on the CFGGRP form with action "QCBUSY".

QUGPA form (5617-3/4 Record) - The fields QWARN THRESHOLD and QBUSY DPN were added to the form.

If the corresponding parameters on the QUFD form are inappropriate or unspecified, these fields may be defined for a particular MLHG and feature.

6.2 ISDN

CFGGRP form (5964 Record) - The ACTIONs "QCBUSY", "QCPCWT", and "QCWARN" were added to the CFGGRP form. Each of these can be assigned to feature buttons on ISAT consoles that are assigned a modular queuing feature.

The "QCBUSY" action specifies a QBUSY button. The lamp associated with this button will be lit when the ISAT queue is full.

The "QCPCWT" action defines an ISAT queue Precedence Call Waiting button. When one or more calls of priority level higher than routine are in the queue, the PCWT lamp is lit on each console that is assigned the feature button and is capable of handling MLPP (Multi-Level Precedence Preemption). The PCWT lamp is extinguished when no precedence calls higher than routine level remain in the queue for that member.

The "QCWARN" action defines an ISAT queue warning button. The QWARN lamp is associated with the QWARN THRESHOLD field on the QUFD or QUGPA form. The QWARN lamp is lit on each console having the feature button when the number of queued calls exceeds the predetermined number defined in the QWARN THRESHOLD field. The QWARN lamp is extinguished when the number of calls in the queue falls below this predetermined number.

7. REMOTE BUSY VERIFY FEATURE DESCRIPTION

RBV (Remote Busy Verify) is available with 5E8 and later Software Releases, and provides the ISAT (ISDN Attendant) on a 5ESS Switch the ability to busy verify any analog or ISDN line on a remote 5ESS Switch using a dedicated network of ISAT BVTs (Busy Verify Trunks). Lines on the remote 5ESS Switch are busy verifiable only if associated to an incoming ISAT BVT. For how various types of TNs are associated, see Section 8

ISAT RBV is similar to ISAT Busy Verification of DNs introduced in the 5E4(2) Software Release, with the added capability allowing busy verification of DNs on a remote 5ESS Switch. The following scenario occurs:

1. When the ISAT verifies a DN on a remote 5ESS Switch, the originating 5ESS Switch routes the call to an ISAT BVT. The translated digits of the DN to be busy verified are outpulsed over the outgoing ISAT BVT to the remote 5ESS Switch.

2. The terminating 5ESS Switch checks that the DN is valid and is remote busy verifiable.

3. If the DN is busy and verifiable, the incoming call from the ISAT across the ISAT BVT is bridged

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onto the active call. The bridging capability is only possible if the busy verifiable DN has a busy verify terminating feature assigned. (where verification barge-in cannot occur, tones are returned from the far 5ESS Switch: high tone for OOS, reorder tone for all else.)

4. If the DN is idle and verifiable, the call alerts as a normal incoming call and the ISAT hears audible alerting.

5. If the called party answers, the ISAT and the called party can converse.

In both the barge-in and idle case, all parties hear a 300 msec, 440 Hz tone from the ISAT's 5ESS Switch every 6 seconds while the ISAT is connected. After 30 seconds, the ISAT is automatically disconnected by the ISAT's 5ESS Switch. During the busy verification call, the ISAT display indicates Remote Busy Verify. This limited display capability is due to the remote 5ESS Switch's inability to provide information over an ISAT BVT to fully populate the DN status display.

DNs may be associated to an ISAT BVT group (via an RBV TGN) or an Attendant Multi-Line Hunt Group (via an ATT MLHG), but not both. Also, ISAT BVTs cannot be of the CCS6 (Common Channel Signaling System 6) or SS7 (Signaling System 7) type.

8. TRANSLATION REQUIREMENTS FOR REMOTE BUSY VERIFY

NOTE: The nature of this feature requires data entry in the Attendant's as well as the remote 5ESS Switch. The following tables indicate the translation requirements for the respective 5ESS Switches.

New Or Modified ODA Forms □ Attendant's Switch

Form Name	Record Number	Division	Section	RC View
TKGRP	5202-1/2/3/4	3	2A	5.1
TIMING	5520	3	5T	8.5
RBVRTI	5950	5	5K	4.63

New Or Modified ODA Forms □ Remote Switch

Form Name	Record Number	Division	Section	RC View
LINE	5109-1/2/3	3	1I	1.6, 1.8
MLHG	5110-1/2/3	3	1J	3.5
MLHLN	5111-1/2/3	3	1K	1.6
TKGRP	5202-1/2/3/4	3	2A	5.1
TIMING	5520	3	5T	8.5
PUTFD	5605-2	4	6B	12.14
SHTN	5902	5	1C	23.20
DSLUSR	5908	5	1I	23.2, 23.8

8.1 Lines

LINE form (5109-1/2/3 Record) - New field RBV TGN enters the number of the incoming trunk group used to Remote Busy Verify the TN (DN) of this form. This TGN allows an ISAT on another 5ESS Switch to Busy Verify this DN if the TGN is associated with an analog TN.

For more information, please refer to Division 3, Section 1I of the TG-5.

MLHG form (5110-1/2/3 Record) - New field RBV TGN enters the number of the incoming trunk group used to Remote Busy Verify the LISTED TN (DN) of this form. This TGN allows an ISAT on another 5ESS switch to Busy Verify this DN if the TGN is associated with a LISTED TN.

For more information, please refer to Division 3, Section 1J of the TG-5.

MLHLN form (5111-1/2/3 Record) - New field RBV TGN enters the number of the incoming trunk group used to Remote Busy Verify the TN (DN) of this form. This TGN allows an ISAT on another 5ESS Switch

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to Busy Verify this DN if the TGN is associated with a TN (DN).

For more information, please refer to Division 3, Section 1K of the TG-5.

8.2 Trunks

TKGRP form (5202-1/2/3/4 Record) - New form checks support the new TRKCLS of "ATNDVFY". The trunk is "outgoing" on the Attendant's Switch, and "incoming" on the Remote Switch.

For more information, please refer to Division 3, Section 2A of the TG-5.

8.3 Miscellaneous

TIMING form (5520 Record) - New form checks support the new SERVICE (Trunk) CLASS of "ATNDVFY". The trunk is "outgoing" on the Attendant's Switch, and "incoming" on the Remote Switch.

For more information, please refer to Division 3, Section 5T of the TG-5.

8.4 BRCS

PUTFD form (5605-2 Record) - A new cross check for FEATURE FUNCTION refers to RBV TGN on the LINE, MLHG, MLHLN, SHTN, or DSLUSR forms.

For more information, please refer to Division 4, Section 6B of the TG-5.

8.5 ISDN

SHTN form (5902 Record) - New field RBV TGN enters the number of the incoming trunk group used to Remote Busy Verify the Secondary Only TN (DN) or the TN associated with a Secondary Only terminal on this form. Remote Busy Verify cannot be assigned to Primary TNs or Primary Terminals on this form. This TGN allows an ISAT on another 5ESS switch to Busy Verify this DN if the TGN is associated with a Secondary Only TN (DN).

For more information, please refer to Division 5, Section 1C of the TG-5.

DSLUSR form (5908 Record) - New field RBV TGN enters the RBV TGN of the incoming trunk group used to Remote Busy Verify the CKT TN (DN) or the CKT SWITCHING MLHG TN of this form. This TGN allows an ISAT on another 5ESS switch to Busy Verify this DN if the TGN is associated with a CKT TN (DN) or CKT SWITCHING MLHG TN.

For more information, please refer to Division 5, Section 1I of the TG-5.

RBVRTI form (5950 Record) - This is a new form used to specify routing parameters for RBV.

New field ISAT MLHG enters the ISAT Attendant MLHG on this 5ESS Switch that busy verifies TNs in a remote 5ESS Switch.

New field RTI enters the route index which normally routes a call to the remote 5ESS Switch for non-data calls.

New field REMOTE RTI enters the route index used to route across an ISAT BVT to busy verify a TN on a remote 5ESS Switch.

For more information, please refer to Division 5, Section 5K of the TG-5.

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3.43
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

HUNT GRP NBR	TERM GRP ID	HUNTING ICI		PREC ICI		FX TRK GRPS			TIE TRK GRPS			CNET TRK GRP			REMARKS
		ICI	PRI	ICI	PRI	ICI	TGN	PRI	ICI	TGN	PRI	ICI	TGN	PRI	
0099		LDN1	3												
		LDN2	2												
		EMER	1												

Figure 1 ICI ASSIGNMENT EXAMPLE

ESS 5901-5(01)TG-5 DIGITAL SUBSCRIBER DATE _____
MULTILINE HUNT GROUP TERMINAL RECORDS
DSMLHLN 5ESS SWITCH
23.3
BASE_____CONT GR____ 5ESS UNIT _____

CKTMLHG	CKT TERM	PKTMLHG	PKTTERM	ICI (INCOMING CALL IDENTIFIERS)								CSD MLHG										MSAU KB EG BR SPY	TSTLINE
				ICI 1 ICI 9	ICI 2 ICI 10	ICI 3 ICI 11	ICI 4 ICI 12	ICI 5 ICI 13	ICI 6 ICI 14	ICI 7 ICI 15	ICI 8 ICI 16	MAKE BUSY KEY					STOP HUNT KEY						
												S	M	S	B	S	S	M	S	B	S		
												M	S U	G	D	P N	M	S U	G	D	P N		
0099	0001			LDN1	LDN2	EMER																	N
	0002			LDN1	EMER																		
	0003			LDN1	EMER																		
	0004			LDN1	EMER																		

Figure 2 ICI ASSIGNMENT EXAMPLE

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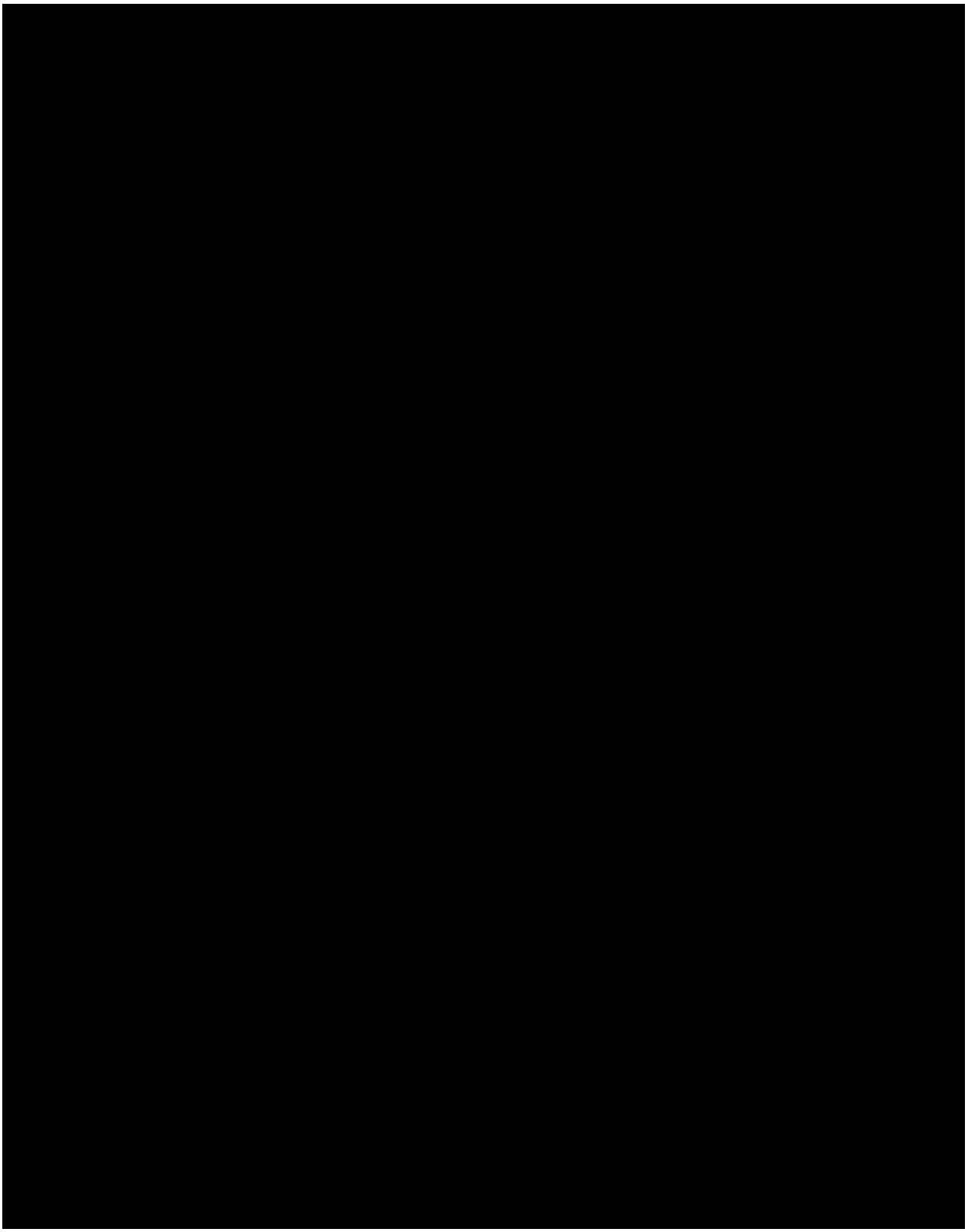

Figure 3 ISDN ATTENDANT MLHG ASSIGNMENT

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SEC. 1U: BFG (BRCS FEATURE GROUPING) FEATURE DESCRIPTION

1. GENERAL

This section provides information and recommendations to the 5ESS Switch owner for the use of the BFG (BRCS Feature Grouping). BFG is available in the 5E4(2) and later Software Releases. BFG optimizes Recent Change response time and conserves Switching Module memory.

This feature description presumes that the user is familiar with implementing BRCS features. BFG cannot be used with trunks.

BFG introduces new procedures for assigning BRCS features to lines. BFG eliminates data redundancies by providing a pool of data that can be shared by a large quantity of lines that have similar subsets of BRCS features.

2. BEST FIT SELECTION

BFG employs the concept of best fit selection making it unnecessary for the user to specify, on either the LINEFA or MLHLNFA form, the exact SELECTION BFGN (BFG NAME) and SUFFIX required to provide the desired features. Entering the appropriate SELECTION BFGN, without a SUFFIX, and the desired feature names along with any applicable parameters enables the best fit selection process. If the SELECTION BFGN has been defined, that BFGN and each of its defined suffixes will be searched using best fit criteria in the attempt to select the SUFFIX.

The best fit criteria is defined to be the SELECTION BFGN and SUFFIX combination that matches the largest quantity of features and any associated parameter information for the features that are to be assigned to the line. If more than one BFGN and SUFFIX meets this criteria, the lowest numbered SUFFIX is selected. The best fit SELECTION BFGN and SUFFIX will be assigned to the subscriber data.

If a SELECTION BFGN and SUFFIX has features that were not requested to be assigned to the line, that SELECTION BFGN and SUFFIX combination will not match and it will not be selected. A line cannot "gain" features during the best fit selection process.

If a best fit match is not found, the subscriber is still placed in service with all the assigned features and applicable parameters assigned outside the BFG structure.

A best fit selection may result in assignment of a BFG that contains only a portion of the desired feature set. The assigned features that did not match the BFG defined features are assigned to the line outside the BFG structure. Features duplicated on the LINEFA or MLHLNFA and the BFG form will be built from the BFG form. Matching features from the LINEFA/MLHLNFA form will be ignored.

Depending on the Modular Feature Type, feature parameters can be defined that are either inside or outside the BFG structure. Using the flexibility of the feature parameter location, parameters can be defined to provide individualized services while still using the BFG concept.

3. BFG CONSTRUCTION

For administrative purposes it is important that the switch owner define and use a consistent naming convention for the construction of UNIQUE, as well as, SELECTION BFGNs.

To convert to BFG, it is suggested that UNIQUE BFGNs be related to USOCs (Universal Service Order Codes), Cluster names, or other switch owner-defined names that are recognized as defining features or groups of features. For UNIQUE BFGNs, USOCs or Cluster, names can be used if they are seven characters or less in length. UNIQUE BFGNs are best suited for use with residential or small business-type subscribers. UNIQUE BFGNs are not eligible for the best fit selection process.

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For SELECTION BFGNs intended for analog subscriber lines, the recommendation is that the TGID assigned to the customer be appended to "CTX" to yield a seven-character SELECTION BFGN, e.g., CTX0025. BFGN is limited to seven characters so the left-most zero of the TGID has been dropped. If the left-most TGID digit is not zero, the recommendation is that "TG" be appended to the TGID to yield a seven-character SELECTION BFGN, e.g., TG10120.

For SELECTION BFGNs intended for ISDN subscriber lines, the recommendation is that the TGID assigned to the customer be appended to "ISD" to yield a seven-character SELECTION BFGN, e.g., ISD0025. The reason for this recommendation will be discussed later.

5ODA provides the first step in the BFG transition process for both initial offices or offices that retrofit to the 5E4(2) Software Release.

The first step requires the separation of subscriber information into two categories:

1. Lines without BRCS features are not affected by BFG.

2. Lines with BRCS features are further categorized as being with or without a TGID (Terminal Group Identification Number) assigned.

All lines with BRCS features but without a TGID are placed in the category called "NONTGID".

Lines with a TGID are put into BFG categories by TGID. Because a BFG NAME is restricted to seven characters, the following BFG naming convention, for lines with TGIDs, has been adopted by ODA and the Software Release. TGIDs less than 10,000 have "CTX" appended to the TGID while TGIDs greater than 9,999 have "TG" appended to the TGID. Example: All lines in TGID 00025 are placed in CTX0025-0, all lines in TGID 00102 are placed in CTX0102-0 and all lines in TGID 10120 are placed in TG10120-0, etc.

These categories are referred to as "base" BFG categories. Only the ODA and Recent Change processes are permitted to build these base BFG categories, thus, a SELECTION BFGN with SUFFIX 0 cannot be constructed by the switch owner. Lines in base BFG categories (NONTGID, CTXXXXX-0 or TGXXXXX-0) can be transitioned to BFG using on-site processes that are described and supported by Recent Change.

4. BFG PARAMETER ASSIGNMENT

During BFG construction, a BFGN is treated like a pseudo line, so the constructed BFG must be able to pass consistency error checks. These checks include the BFG relationship between the LCC (Line Class Code) and the RAX (Rate Center) and the features entered on the BFG Construction form. Consistency is also required between the features and their associated parameters. Depending on the specific Modular Feature being assigned, BFG Construction requires the parameters to be specified either on the BFG form (5625 Record) or the appropriate feature definition form.

Refer to Figure 1 for the definitions of the parameter types associated with each Modular Feature.

BFG Modular Features are separated into the following parameter types:

- Line. Line Type Modular Features do not have parameter data associated with the BFG but only with the line. Line type features may be specified as a part of the BFG but the parameters will be defined either by the line using the LPA/MPA forms or feature definition default parameters will be used.

- Group. For Group Type Modular Features, parameter data is always required. If parameter data is not entered on the BFG form, then parameters must be specified by the default parameters of the associated feature definition form.

  For Group Type Modular Features, when 1) both BFGN and suffix are specified on either the LINEFA or MLHLNFA form, or 2) the LINEFA or MLHLNFA suffix is not specified and the LINEFA/MLHLNFA

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name matches UNIQUE BFGN on a BFG form, then default parameters may not be assigned on the corresponding parameter (LPA or MPA) form.

- Either. During BFG Construction, Either Type Modular Feature parameters follow the same rules as group parameters, in that parameters must be defined on either the BFG form or the feature definition form. Default parameters will be used.

- Neither. Parameters do not exist for these types of features, therefore, there are no parameter requirements.

- Not Allowed. Neither the feature nor parameters for this type of feature may be specified for the BFG.

The BFG parameter entry fields, for Group and Either type Modular Features, are located on various screens of the BFG form. The 5625-1 Record (Screen 1) contains a table of Modular Feature abbreviations and the screen number where their associated parameters are located.

5. SPECIFIC BFG ASSIGNMENT

The assignment of BFGs to lines is dependent on a number of conditions that include the features, their parameter types and whether a specific BFGN is entered or if best fit selection is being attempted.

A specific BFGN is either a BFGN defined on the BFG form as a UNIQUE BFGN or it is a BFGN and SUFFIX entered on a feature assignment form that had been defined on the BFG form as a SELECTION BFGN and SUFFIX.

For the specific BFGN case, features may or may not be entered, as applicable or desired. If all the features, required for the line, are defined by the specified BFGN, the features need not be entered on the feature assignment form. If they are entered, and they exactly match the BFG defined features, they will be ignored and the features will be assigned from the BFGN.

If the line requires a feature or features, that are in addition to the features defined by the BFGN, they should be entered on the feature assignment form. In the switch data base, the additional features will reside in port-specific relations, outside BFG, and the line will also use the features defined by the BFG. A line may be assigned features inside and outside BFG but it may not exceed the feature limitations of a line without BFG. Example: A line may not have more than one ID (Individualized Dialing) feature. Therefore, a line may not have one ID feature inside BFG and another, different ID feature outside BFG.

Parameters associated with features outside BFG must be defined according to existing rules.

According to the particular Modular Feature, parameters assigned to features inside BFG may have additional dependencies.

- Line. For Line type Modular Features the parameters are always specific to the line, even when the feature is defined inside the BFG. Parameters must be entered for the line and the feature on the appropriate parameter assignment form (e.g., CFWLPA or CFWMPA) or the default parameters on the feature definition form must be defined (e.g., CFWFD).

- Group. For Group type Modular Features, the line must use the parameters of the specified BFG. Therefore, specific line parameter data need not be entered. If specific parameter data is entered, it must match the BFG defined parameters or an error condition will exist.

- Either. For Either type Modular Features, the line may use either the BFG parameters or it may define its own parameters. Line-specific parameter data may or may not be required, depending on the requirements of the line. If line parameter data is not entered or if it is entered and it exactly matches the BFG parameter data, then the BFG data will be used and line-specific parameter tuples will not be built. If the line requires parameters that are different from the BFG parameters, then line parameters must be specified on either the parameter assignment form (e.g., IDPLPA or IDPMPA) or in the

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default parameters on the feature definition form (e.g., IDFD). In the switch, for Either type Modular Features, it is recognized that while the features are inside BFG, the feature parameters may be located either inside BFG, in common tuples or outside BFG, in line-specific tuples.

- Neither. Parameters do not exist for these features. Therefore, there are no parameter data requirements.

- Not Allowed. Neither the feature nor the parameters for this type of feature may be specified either inside or outside BFG.

6. BEST FIT SELECTION BFG ASSIGNMENT

To use the earlier-described best fit selection process, the SELECTION BFGN without a SUFFIX is entered on either the LINEFA or MLHLNFA form.

For this case, all the desired features must be entered on the feature assignment form. Also, all parameters associated with these features must be defined for the line on the appropriate parameter assignment form or as default parameters on the feature definition form. All normally required BRCS data, for the line, must be entered.

The selection of a BFGN and SUFFIX is, in part, dependent on the parameter type of the Modular Feature assigned.

Refer to Figure 1 to determine the parameter locations allowed for the various BRCS Modular Feature types.

- Line. For Line type Modular Features the parameters are always specific to the line even if the feature is inside the associated BFG. Therefore, there are no BFG parameters to be compared with the line parameters.

- Group. For Group type Modular Features, if the feature is defined by a BFG, the line must use the BFG parameters. If a BFGN and SUFFIX contains group parameters that differ from the parameters defined for the line, the BFGN and SUFFIX will not be selected. Example: A line has a LINEFA form that specifies a BFGN of CTX0001, a blank SUFFIX and feature /TGUUT. A TGSRLPA form has also been entered, for the same line, with a GROUP ID of 2. SELECTION BFGN CTX0001 and at least one of its suffixes must have been defined with feature /TGUUT and the GROUP ID parameter equal to 2 or none of the CTX0001 suffixes would be eligible to be selected.

- Either. For Either type Modular Features, the line may use either the BFG parameters or its own line parameters. If the line parameters do not match the BFG parameters, the line is still eligible for selection. Line-specific parameter tuples will be built and the additional memory required for this condition is taken into account when determining the best fit SELECTION BFGN and SUFFIX.

- Neither. Parameters do not exist for these type Modular Features. Therefore, there are no requirements for line parameter data. The only criteria used for best fit selection is the feature.

- Not Allowed. Features of this type are not allowed for a line that has a BFG. If a feature of this type is entered for a line, the line is not eligible for BFG selection.

7. BFG (BRCS FEATURE GROUPING) SUMMARY REPORT

The BRCS Feature Group Summary Report (5626 Record) provides statistics related to subscriber feature usage as determined through ODA. This information should be used as the basis for the construction of BFGs that will provide the maximum utility. The following descriptions reference Figure 2 .

The Summary Report information is divided into two basic categories. The first category reflects

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subscriber feature assignment information for subscribers without a TGID (Terminal Group Identification Number) assigned. These are typically POTS or small business-type service customers. Subscriber lines in the non-TGID category may use feature groups that are linked to tariffs, Universal Service Order Codes (USOCs) or other switch owner-defined groups of features.

The second category reflects feature assignments to subscribers that have a TGID assigned. Subscriber lines in the TGID category are typically Centrex groups, both large and small, and may use tariff, USOC or other switch owner-defined groups of features.

The Sample Summary Report contains a total of 14,300 subscriber lines in the non-TGID category, along with 2,089 lines in the TGID category, with 1,975 lines in TGID 00005 and 114 lines in TGID 00010. The Summary Report user should examine the USER TOTALS for these lines. Attention should be concentrated on the groups of BRCS features assigned to the lines in each category.

8. BFG CONSTRUCTION AND ASSIGNMENT

Construction of BFGs can be done using different approaches. The switch owner could simply construct a BFG for each unique USER TOTALS group on the Summary Report. For some categories this may be the best approach but additional approaches will be discussed.

After analyzing the BFG Summary Report statistics, the switch owner should be ready to make decisions on the types and quantities of BFGs to be constructed. Using the Sample Summary Report, it is apparent that UNIQUE BFGNs could be defined for use by the non-TGID subscribers.

Assuming there is a USOC package named ESV that consists of the /CFV and /CWC1 features, the suggestion is to use the USOC name as the UNIQUE BFG NAME (BFGN) on the BFG Construction form. A UNIQUE BFGN named ESV would be constructed with /CFV and /CWC1 defined as the features.

Using Figure 1 it is determined that Call Forwarding is a Line Type Modular Feature and BFG Construction parameters are not permitted. Call Waiting is a Group Type Modular Feature and access to BFG Construction or feature definition form Call Waiting parameters are required. The feature definition form default parameters could be used.

Each feature assignment form that assigns just these two features to a subscriber would have "ESV" entered as the BFGN. Since the USOC name usually appears on the Service Order, this should simplify the conversion to the use of BFG. If desired, the features (/CFV, /CWC1) could be deleted or not entered in the FEATURE Assignment section of the feature assignment form. If features are entered, ODA will do a match to determine if all the features on the feature assignment form match all the features in the BFGN specified.

If there are no incompatibilities between the BFGN-defined features and parameters and the feature assignment features and parameters (LPA, MPA or FD), the features would be assigned from the BFGN named ESV. For this example, because of the assigned features, there cannot be parameter conflicts but in other instances, if the features all match, the associated line parameters must be examined to determine if there is compatibility with the BFGN-defined parameters.

Using similar feature and parameter assignment logic, additional UNIQUE BFGNs could be constructed for the other non-TGID types of BRCS feature groups on the Summary Report.

For the case of BRCS feature groups that have TGIDs, additional analysis should be done before determining the content and quantity of any SELECTION BFGNs constructed. Two approaches to the construction of SELECTION BFGNs will be described.

For TGID 00005, because of the large quantity of subscribers affected, construction of SELECTION BFGN CTX0005 with a SUFFIX for each feature group on the Summary Report would probably be the best approach. Defining a SUFFIX for each feature group, Suffixes (1 - 6) would be constructed.

Using the sample report data, SELECTION BFGN CTX0005, SUFFIX 1 would be constructed with

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features IDFEAT5 and TGSFEAT5. Since these are constructed features, feature definition forms and default parameters would, normally, have already been completed. If required, the feature definition form default parameters could be superseded by parameter data entered on the BFG Construction form.

SELECTION BFGN CTX0005, SUFFIX 2 would be constructed with features CFWFEAT5, IDFEAT5 and TGSFEAT5. Similarly, Suffixes 3 through 6 would be constructed using the groups of features from the Summary Report. In each instance, using Figure 1 to determine the allowable locations for Modular Feature parameters and observing BFG requirements for parameter definition, access to the appropriate parameter data must be provided.

Another approach to BFG Construction can be shown with TGID 00010. Using the sample report, it can be determined that TGID 00010 has a wide range of features spread over a small quantity of subscribers. Examination shows that all 114 subscribers in TGID 00010 share a common group of features: /ACBC, /CPUDO, /CWACODT, /MWACH2, IDFEA10 and TGSFEA10. For TGID 00010 the switch owner may wish to conserve BFGNs while retaining a portion of the BFG benefits. Assuming common parameter requirements, a SELECTION BFGN with a single SUFFIX (CTX0010, SUFFIX 1), that specified the common group of features and the associated parameter information, could be constructed that would permit all the subscribers in TGID 00010 to be assigned using a single SELECTION BFGN and SUFFIX. TGID 00010 subscribers, that required features that were not defined by the constructed SELECTION BFGN and SUFFIX, would be assigned those features outside BFG while the remainder of their features, (/ACBC, /CPUDO, /CWACODT, /MWACH2, IDFEA10 and TGSFEA10), used BFG. This approach retains the benefits of BFG while using only one SELECTION BFGN and SUFFIX.

9. BFGN ASSIGNMENT

Using the previous examples, subscribers would be assigned to their respective BFGNs from the feature assignment forms (LINEFA, MLHLNFA). It would be necessary to place the appropriate BFGN (ESV, CTX0005 or CTX0010) in the BFGN field on these forms. The SUFFIX field would be left blank.

For UNIQUE BFGNs, this would be all the feature assignment data entry required. If a UNIQUE BFGN is entered, unless there are parameter incompatibilities, all of the features defined by that UNIQUE BFGN will be assigned to the line. Best fit selection is not applicable to UNIQUE BFGNs.

For SELECTION BFGNs, the best fit selection process would assign the appropriate SELECTION BFGN and SUFFIX to the subscribers that matched the best fit selection criteria. In each case, depending on the feature, individual line parameter data entry may or may not be required. If feature parameters are required, they must be entered so they can be used by the best fit selection process to determine if the BFG parameters match the desired line parameters.

Another way to use the constructed BFGNs would be to specify the SELECTION BFGN and SUFFIX and enter only the additional features that are not defined by the SELECTION BFGN and SUFFIX on the feature assignment form (LINEFA, MLHLNFA).

To assign all the features defined by SELECTION BFGN CTX0010, SUFFIX 1, both the SELECTION BFGN and SUFFIX would be entered on the feature assignment form. After attempting to match the feature assignment features with the SELECTION BFGN features, presuming there were no parameter inconsistencies, all the features defined by SELECTION BFGN CTX0010, SUFFIX 1 would be assigned to the subscribers. In the case of TGID 00010, for the first group of four subscribers, the additional unmatched features, CFWFEAT5 and PPFEAT4, would be assigned outside BFG.

This method is useful when features are grouped using a USOC or there is a base level of services that are assigned to all subscribers and the customer occasionally requests additional features that are not part of the USOC or base level-defined services to be assigned to specific subscribers. BFG Modular Feature parameter requirements must be met.

The point of these examples is to illustrate how input effort can be reduced and the assignment process simplified using BFG. The least-change method would be to continue to enter the features on the feature

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assignment forms, enter the SELECTION BFGN with a blank SUFFIX along with the desired parameters and let best fit selection take place.

As the switch owners assignment process changes, the base features can be removed from the feature assignment forms and only the appropriate SELECTION BFGN and SUFFIX, along with the appropriate parameters, entered. This method means that only the additional features, features not included in the base features defined by the BFG, need to be entered on the feature assignment forms. This method works well when the base features are packaged in a USOC or other switch owner defined grouping. Significant entry effort can be saved.

10. CLUSTER USAGE

Clusters are compatible with BFG but certain differences must be understood.

Cluster names can be used during BFG Construction to define the features assigned to the BFGN. The individual features will be derived from the Cluster Definition form and the individual features will be part of the BFGN. During ODA processing, the Cluster name will appear on the BFG Construction form, but after the ODA has been processed, only the features, not the Cluster name, will be retained in the switch data associated with the BFG.

Cluster names can be used to specify subscriber features on a feature assignment form. The Cluster-defined features will be matched with the BFGN-defined features, and if they match, the subscriber will be assigned the BFGN and if the BFGN is not a UNIQUE BFGN, the SUFFIX. The Cluster name will appear on the feature assignment forms during ODA processing but only the features, not the Cluster name, will be retained in the switch data for an individual subscriber assigned to a BFGN. The described method allows the switch owner to continue using Clusters in their assignment processes.

The advantage of using BFG is that in the switch, the type of mass changes that were possible with Cluster updates can be readily done with BFG. It is only necessary to change the feature or parameter data associated with a BFGN, and the change is populated to all subscribers that reference that BFGN. The difference is that only one set of BFG relations in each SM (Switching Module) that contains subscribers that reference the BFGN, is updated and the numerous individual subscriber relations are untouched. The combination of Cluster and BFG retains the data entry advantages of Cluster while using the efficient data storage associated with BFG.

11. RECENT CHANGE

BFG can change how the switch will be administered when using Recent Change methods and procedures. This section will not attempt to cover all the effects of BFG on the every day administration of the office, but it will provide an overview of the transition to BFG. The user should refer to Recent Change documentation for further detailed BFG transition-related information.

During initial office ODA processing, it is recommended that the switch owner use BFG for the assignment of subscribers by constructing BFGs and entering the appropriate information on the feature and parameter assignment forms.

For offices that are retrofitting to the 5E4(2) Software Release, the short retrofit interval does not permit the switch owner to transition to BFG during ODA retrofit processing.

The ODA processes, used during both initial office and retrofit ODA processing, perform a portion of the preliminary BFG transition operations. The final transition to BFG can be done by the switch owner using Recent Change based processes.

When the ODD (Office Dependent Data) has been loaded and brought on line in the switch, the switch owner would use Recent Change Views to construct BFGNs in much the same way as has been described in this section. The ODA BFG Summary Report data along with a Recent Change on-line report that is similar to the ODA Summary Report are available as aids for this task.

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The transition to BFG usage requires the separation of subscriber lines into the non-TGID and TGID categories that were previously described in the BFG Summary Report. Switch relations are built and initialized by ODA to contain references to each non-TGID and TGID type of subscriber. Recent Change transition routines perform this same function on the switch. The transition routines would be used to locate subscribers that had been entered into the switch data by Recent Change after the data had been processed by ODA.

Using the described Summary Report data, UNIQUE BFGNs would be constructed using the naming convention defined by the switch owner. Recent Change routines are available to transition the subscribers from NONTGID to the appropriate UNIQUE BFGNs. For NONTGID subscribers, a single transition pass can specify up to sixteen target UNIQUE BFGNs. The quantity of passes required would depend on the quantity of UNIQUE BFGNs constructed.

Using the described report data, SELECTION BFGNs and SUFFIXES would be constructed. After constructing SELECTION BFGNs, the switch owner would initiate a Recent Change routine that attempts to transition all CTX0005, SUFFIX 0 (base BFGN) subscribers to SELECTION BFGN CTX0005 (target BFGN). SELECTION BFGN CTX0005 and each of its defined SUFFIXs would be examined and an attempt made to match the features and parameters assigned to the subscriber with features and parameters defined by the SUFFIX.

In the office, a transition pass will be required for each TGID for which a SELECTION BFGN and some quantity of suffixes had been constructed. The SUFFIX will be picked by the best fit selection process.

Neither ODA nor Recent Change attempt to separate analog and ISDN subscribers in the base BFGN categories. Therefore, if the switch owner has defined BFGNs, for ISDN subscribers, the first transition pass, for each TGID, should designate the ISDN BFGN (ISDXXXX) as the target. This will insure that subscribers, with a mix of analog and ISDN features, would not do a best fit selection using just the analog features and cause the ISDN features to be built outside BFG. Subscribers with only analog features would not select an ISDN BFGN but they should match an analog BFGN on a future transition pass.

Subscribers with features and parameters that match either a UNIQUE BFGN or a SELECTION BFGN and SUFFIX, are assigned to the matching BFGN. When subscribers fail to locate a BFGN match, their data is unchanged and they remain associated with their original base BFGN.

When a BFGN is initially constructed and until it is referenced by any line or terminal, the BFG data is stored in the AM (Administrative Module) only. When a BFGN match is found, the BFG data is moved from the AM to the SM and the individual relations on the SM are changed to reflect the BFGN assignment. BFG data is stored only on those SMs that have lines or terminals assigned that reference the BFG data. When subscribers use a BFGN to define their feature(s), their port and/or terminal relations are changed to reference the common BFG relations on that SM for call processing feature information. Depending on the Modular Feature type, the parameters may be line specific for they may be located in the BFG.

For subscribers with common feature and parameter requirements, the BFG capability replaces the numerous identical individual line tuples with one common set of BFG tuples thus reducing the amount of SM memory needed to support the subscribers. When subscribers are placed in service using BFG, fewer relations are accessed and fewer tuples are required to define the services and this improves Recent Change response time.

BFG (BRCS FEATURE GROUPING) PARAMETER TYPES

Modular Feature Name	Abbreviation	Parameter Type	Feature Type	Record
Account Code	ACCT	Group	Term	5625-7
Advanced Service Interface Proxy	ASI	Either	Term	5625-4
Automatic Customer Station Rearrangement	ACSR	Line	Term	
Attendant Control Voice Terminals	ACVT	Line	Term	
Authorization Code	ATH	Group	Term	5625-7
Automatic Call Back	ACB	Group	Term	5625-6
Automatic Route Selection	ARS	Either	Term	5625-6
Bulk Calling Line Identification	BCLID	Line		

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Call Forwarding	CFW	Line	DN	
Call Pickup - Originating	PUO	Either	Term	5625-5
Call Pickup - Terminating	PUT	Either	DN	5625-5
Call Waiting	CWT	Group	Term	5625-8
Calling Party Number/Billing Number	CPNBN	Neither	DN	
Display	DISP	Neither	Term	
Distinctive Ringing	DR	Group	DN	5625-6
Electronic Directory Service	EDS	Either	DN	5625-7
Home Intercom	HI	Neither	Term	
Individualized Dialing	ID	Either	Term	5625-2
Intercom	ICM	Line	Term	
LASS Automatic Callback	AC	Group	Term	5625-8
LASS Automatic Recall	AR	Group	Term	5625-8
LASS Computer Access Restriction	CAR	Line	DN	
LASS Customer Originated Trace	COT	Line	Term	
LASS Selective Call Acceptance	SCA	Line	DN	
LASS Selective Call Forwarding	SCF	Line	DN	
LASS Selective Call Rejection	SCR	Line	DN	
LASS Selective Distinctive Alert	SDA	Line	DN	
Line Identification	LID	Neither	DN	
Message Detail Recording	MDR	Group	Term	5625-7
Message Service System	MS	Line	DN	
Multi-Way Calling	MW	Group	Term	5625-7
Precedence & Preemption	PP	Group	DN	5625-8
Private Facility Access	PFA	Group	Term	5625-4
Speed Call	SC	Either	Term	5625-2
Terminal Group & Station Restriction	TGSR	Group	DN	5625-3
Time of Day	TOD	Not Allowed	Term	

Figure 1 BFG (BRCS FEATURE GROUPING) PARAMETER TYPES

ESS 5626(01)TG-5 (CLUSTR, LINEFA, MLHLNFA) (TGSRFD, TGSRLPA, TGSRMPA) BFG (BRCS FEATURE GROUPING) SUMMARY REPORT 5ESS SWITCH DATE _____

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

SUMMARY REPORT FOR POTENTIAL BFG CONSTRUCTION

TERMINAL GROUP ID	USER TOTALS	FEATURE	FEATURE	FEATURE	FEATURE	FEATURE
	00500	CFV	CWC1	MW3WC		
	00700	/CWC1				
	01000	/CFV				
	12100	/CFV	/CWC1			
00005	00025	ACCTFT1	ARSFEAT3	CWTFEAT2	CWTFEAT3	DRFEAT2
		EDSFEAT1	IDFEAT5	MDRFEAT1	MWFEAT1	MWFEAT7
		PFAFEAT2	PPFEAT3	TGSFEAT5		
00005	00200	ACBFEAT5	ACCTFT1	ARSFEAT4	CFWFEAT5	DISFEAT5
		DRFEAT5	EDSFEAT1	IDFEAT5	MDRFEAT8	MWFEAT1
		PFAFEAT3	PPFEAT4	PUOFT8	PUTFT5	TGSFEAT5
00005	00300	/MW6WC	CWTFEAT3	CWTFEAT4	DRFEAT4	IDFEAT5
		TGSFEAT5				
00005	00400	ARSFEAT5	CFWFEAT5	IDFEAT5	PUTFT5	TGSFEAT5
00005	00450	CFWFEAT5	IDFEAT5	TGSFEAT5		
00005	00600	IDFEAT5	TGSFEAT5			
00010	00004	/ACBC	/CPUDO	/CWACODT	/MWACH2	CFWFEAT5
		IDFEA10	PPFEAT4	TGSFEA10		
00010	00032	/ACBC	/CPUDO	/CWACODT	/MWACH2	IDFEA10
		PPFEAT4	TGSFEA10			
00010	00038	/ACBC	/CPUDO	/CPUDT	/CWACODT	/DRATT
		/MWACH2	CFWFEAT3	CFWFEAT4	IDFEA10	PPFEAT2
		TGSFEA10				
00010	00040	/ACBC	/CPUDO	/CPUDT	/CWACODT	/DRATT
		/MWACH2	IDFEA10	TGSFEA10		

Figure 2 SAMPLE 5626 RECORD

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SEC. 1V: APPLICATION PROCESSOR FEATURE DESCRIPTION

1. GENERAL

The AP (Application Processor) is available in 5E3 and later Software Releases. An AP is a computer, which in conjunction with either the BCP (Basic Communications Package) or the ACP (Advanced Communications Package), brings a multitude of features to the Business Customer.

The BCP is available in 5E3 and later Software Releases and employs either a 3B2/400 or 3B2/600 Computer, running on the UNIX Operating System and utilizing the BCP application software. The link between the 5ESS Switch and the AP computer is via IOP (Input/Output Processor) ports in the AM (Administrative Module) of the 5ESS Switch. An AP using the BCP package can serve a single 5ESS Switch; a single 5ESS Switch can interface with up to three APs. The 5ESS Switch and the AP(s) must be co-resident in the telephone office.

The ACP is available in 5E3 and later Software Releases. The 5E3 version employs a 3B20S Computer, running on the UNIX Operating System and utilizing the ACP application software and the INGRES data base management system. The link between the 5ESS Switch and the AP computer is via IOP ports in the AM of the 5ESS Switch. An AP using the ACP package can serve up to three 5ESS Switches; a single 5ESS Switch can interface with up to three APs. The AP(s) must be resident on the telephone company premises.

The 5E4(2) version of ACP employs a 3B15 Computer, 3B2/600 Computer or 3B20S Computer, running on the UNIX Operating System and utilizing the ACP application software and the INGRES data base management system. The link between the 5ESS Switch and the AP computer is via DSLs (Digital Subscriber Lines). An AP using the ACP package can serve up to three 5ESS Switches; a single 5ESS Switch can interface with up to 96 APs. The 5ESS Switch(es) and the AP(s) are no longer required to be co-resident in the telephone office. The IOP port linkage will be supported in 5E4(2) for those business customers who installed ACP in 5E3; in this situation, the co-residency requirement is maintained. A combination of IOP port and DSL linkages are possible in an office, but a single AP must use purely one type of linkage.

The ACP functions and access privileges are controlled by an ACP administrator. The ACP administrator in turn gives a single login to the business customer administrator. The ACP administrator determines which features are assigned to a business customer and the business customer administrator determines which features each business customer login can access.

BCP offers two services which may be purchased separately or together. The first service is TD (Traffic Data), which allows the business customer to receive a variety of reports to assist in the administration and provisioning of equipment. The second service is MDR (Message Detail Recording), which permits the business customer to collect in-depth data related to calls.

ACP offers seven services which may be purchased separately or together. The first four services are available in 5E3 and later Software Releases. The last three services are available in 5E4(2) and later Software Releases, and service both analog and ISDN (Integrated Services Digital Network customers. The seven services are:

- ASMDR (Advanced Station Message Detail Reporting) - gives business customers the ability to collect call data on public network and private facility calls. The business customer can request various reports to be produced from data in the INGRES data base which is resident on the AP.

- TDS (Traffic Data System) - affords business customers the opportunity to specify the type and frequency of private feature/ facility measurements they wish to receive.

- ACA (Automatic Circuit Assurance) - assists business customers in isolating trunk problems in their private network. It measures the quantity of trunk group members with calls both under and over a

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short holding time threshold and long holding time threshold, respectively. Additionally, the customer can specify trunk groups to be scanned for non-usage and lock-up.

- FMS (Facilities Management System) - helps the customer to administer a set of BRCS (Business and Residence Custom Services) features. The set of BRCS features is listed below. The FMS feature can also be used to handle certain functions of the ACP services ASMDR, ACA and TDS.
  - Authorization Codes
  - Account Codes
  - Facility Group Queuing
  - Automatic Route Selection
  - Facility Restriction Levels
  - Time of day

- EDS (Electronic Directory Service) - provides the business customer access to a directory for call and personnel information. An ISDN voice/data terminal, an ISDN station set with display or a modem with an asynchronous terminal may be used to gain access. EDS services are grouped into two sets, Basic and Deluxe. Basic EDS operates in stand-alone mode on the AP. Basic EDS offers:
  - Electronic Directory Terminal Session
  - Electronic Directory Administration
  - Customer Message Service System Interface

Deluxe EDS additionally offers:

- Directory Query Display
- Calling Name Display
- Autocall
- EDS engineering data

NOTE: Deluxe EDS requires that the customer has BRCS and customer premises ISDN station sets/terminals. This service is available with 5E4(2) and later Software Releases.

- CMSS (Customer Message Service System) offers the business customer individualized call coverage at a central location. Additionally, the entry, storage and retrieval of messages is provided. The five components available to the ISDN user are:
  - Autocall
  - Leave Word Calling
  - Message Retrieval Display
  - Print on Demand
  - Message Waiting Indicator

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- SMSI (Simplified Message Service Interface) enables a Vendor Message System product, used with the 1A ESS Switch, to operate with a 5ESS Switch, using the same hardware, firmware and software previously used with the Simplified Message Service interface on the 1A ESS Switch.

2. DATA REQUIREMENTS

The 5ESS Switch does not differentiate between ACP and BCP. The AP interface software and the ACP/BCP software combine to deal with the flow of data from the 5ESS Switch to the AP. The 5ESS Switch merely differentiates between the presence or absence of AP(s). The latter difference is indicated in the APPLICATIONS PROCESSOR field of the OFCOPT form (5509 Record). In 5E3, the valid choices are "Y" (for Yes) and "N" (for No). In 5E4(2) and later Software Releases, due to the introduction of DSL links between the 5ESS Switch and AP(s), the choices become more numerous:

- "NO" - There are no APs linked to the 5ESS Switch.
- "AM" - There are AP(s) linked to the 5ESS Switch, and all links are to IOP ports in the AM of the 5ESS Switch.
- "SM" - There are AP(s) linked to the 5ESS Switch, and all links are to DSLs on RISLUs/ISLUs on SMs.
- "AMSM" - There are AP(s) linked to the 5ESS Switch, and the links are a mixture of IOP ports in the AM and DSLs on RISLUs/ISLUs on SMs.

Hardware (IOP port and/or DSL) links from the 5ESS Switch to the AP(s) must now be defined and subsequently assigned to individual APs. The IOP ports that link to the APs are defined on the ECDOPT form (5706 Record). In 5E3, the fields of interest are APDL1 (AP Data Link 1) through APDL6. The valid entries are "Y" (for Yes) to indicate that the IOP port will be used to link to an AP or "N" (for No) to indicate that the IOP port will not be used to link to an AP. It is suggested that each AP should have two consecutive fields, such as APDL1 and APDL2, with an entry of "Y". Thus, the six fields could permit the definition of the IOP ports which serve three APs. However, all six IOP ports could link to a single AP.

The APCOMM form (5507 Record) is used to assign the IOP ports which link to a specific AP. The AP is defined in the field AP SITE ID. The LINK 1 through LINK 6 fields may have an entry of 1 through 6, which correspond to the APDL01 through APDL06 fields on the ECDOPTform (5706 Record), respectively.

In 5E4(2) and later Software Releases, the introduction of the Flexible IOP feature resulted in a drastic revision of the ECDOPT form (5706 Record). The fields of interest are now SDL32, SDL34, SDL36, SDL38, SDL40 and SDL42, respectively. It is suggested that each AP should have two consecutive fields, such as SDL32 and SDL34, with an entry.The desired entry for SDL32 is "APDL01"; the desired entry for SDL34 is "APDL02"; and the pattern continues through to the desired entry for SDL42, which is "APDL06". As before, the APCOMM form (5507 Record) is used to assign the IOP ports which link to a specific AP. The AP is defined in the field AP SITE ID. The LINK 1 through LINK 6 fields may have an entry of 1 through 6, which correspond to the entries "APDL01" through "APDL06" in the fields SDL32 through SDL42, respectively, on the ECDOPT form (5706 Record).

The DSL links to AP(s) are assigned on the DSLAP form (5963 Record). A maximum of 96 DSLAP forms may be entered in order to attach the system maximum of 96 APs to the 5ESS Switch via DSLs. Each DSLAP form permits a single AP, identified in the AP SITE ID field, to have a maximum of 16 DSL links to the AP. A maximum of ten APs may be linked to a single SM. The hardware definition of each DSL link assigned to an AP must take place on three forms: a) the ISLULC form (5942 Record); b) the EQPSU form (5741 Record); and c) the EQPSUPH form (5742 Record).

The AP SITE ID fields defined on the DSLAP form (5963 Record) or the APCOMM form (5507 Record) must be unique.

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Now that the hardware definitions of the data links (IOP port and/or DSL) are defined and assigned to individual APs, the features of the BCP/ACP package must be selected and detailed, and the choices must be related to individual APs and business customers. Throughout the discussion of the forms involved in this process, please refer back to the GENERAL section to recall which features BCP or ACP offer.

The APCA form (5620-1 Record) is keyed by a BCID (Business Customer Identification) number and an AP Identifier (AP SITE ID). In 5E3 and later Software Releases, three features are selectable:

- Traffic Data
- Automatic Circuit Assurance
- Facilities Management

If the feature is selected by indicating "Y" (Yes), then the indicated business customer will have the feature, and the reports and/or 5ESS Switch and AP interaction will take place at the indicated AP. In 5E4(2) and later Software Releases, EPSCS (Enhanced Private Switched Communications Service) 100 Second Scan is available. The field name is HSS, and only an ACP business customer using a DSL link may enter "Y" (Yes) in this field. If any of the features are selected, then an APGFP form (5620-2 Record) must be entered for the combination of BCID and AP SITE ID. Additionally, if Facilities Management is selected, then an APFMA form (5620-3 Record) must be entered for the combination of BCID and AP SITE ID.

The APGFP form (5620-2 Record) is keyed by a BCID number, an AP Identifier (AP SITE ID), a GROUP/FACILITY TYPE and a GROUP NO/GROUP NAME. This form is usedto define feature parameters for those business customers who have selected the features Automatic Circuit Assurance, Traffic Data or Facilities Management. Division 4, Section 21b of the TG-5 delineates the multitude of entries for the GROUP/FACILITY TYPE and the corresponding dependencies between this field and the GROUP NO/GROUP NAME field.

The APFMA form (5620-3 Record) is keyed by a BCID number and an AP Identifier (AP SITE ID). If an APFMA form is entered, keyed by a unique combination of BCID and AP SITE ID, then at least one APGFP form (5620-2 Record) must be entered with the same unique combination of BCID and AP SITE ID. The APFMA form is used to indicate which BRCS/ACP features the business customer will have control of through the AP. The selected BRCS features, which were enumerated in the GENERAL section, must be defined on the appropriate corresponding BRCS feature definition forms.

The APHSS form (5620-4 Record) is available in 5E4(2) and later Software Releases. It is used to indicate if EPSCS 100 Second Scan is activated on a particular trunk group. The form is keyed by GROUP TYPE, which must be set to "TRKG" and GROUP NBR, which must be a trunk group number defined in the TGN field on a TKGRP form (5202-1/2/3/4 Record) with at least one member defined on a TRUNK form (5204-1/2 Record). The BCID and AP SITE ID entries must also be entered, respectively, in the BCID and AP SITE ID fields on an APCA form (5620-1 Record). The AP SITE ID must also be entered in the AP SITE ID field on either an APCOMM form (5507 Record) or a DSLAP form (5963 Record).

If MDR (Message Detail Recording) is applied, then another series of forms will be entered. The 5ESS Switch collects the call-related data, formats the data, then ships it via a link (IOP port or DSL) to an AP. The AP stores and processes the MDR records.

The MDRFD form (5624-1 Record) is used to define a constructed BRCS MDR feature. A single pre-constructed BRCS MDR feature is provided. The feature name is used to assign the feature to each terminal (line or trunk). The terminal must be assigned the feature on an appropriate LINEFA form (5112 Record), MLHLNFA form (5113 Record), TRUNKFA form (5205 Record), TKGRPFA form (5206 Record) or associated CLUSTR form (5600 Record) and must belong to an MDR group. The MDR group name is assigned either as a default parameter with a MDR feature on the MDRFD form or on a MDRLPA form (5624-4 Record), a MDRMPA form (5624-5 Record) or MDRTPA form (5624-6 Record).

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The MDRGP form (5624-2 Record) is used to define the MDR GROUP NAME. A BCID field and an AP SITE ID field appear on this form. The BCID and AP SITE ID entries must have been defined in the BCID field and AP SITE ID field, respectively, on the APCA form (5620-1 Record). These fields will be used to determine the business customer and the AP which will receive the MDR reports. Three types of MDR record types are allowable:

- originating private
- incoming private
- public

The MDRCNT form (5624-3 Record) is used to identify up to a maximum of 25 combinations of Business Customers (BCID) and APs (AP SITE ID) that are to receive MDR reports giving the sum of originating private, incoming private, and/or public MDR records generated or lost. The types of allowable MDR reports are indicated on the MDRGP form (5624-2 Record). Each combination of BCID and AP SITE ID must also be entered in the BCID and AP SITE ID fields, respectively, on both the MDRGP form (5624-2 Record) and the APCA form (5620-1 Record).

If EDS (Electronic Directory Service) is applied, then another series of forms will be entered. These forms are available with 5E4(2) and later Software Releases.

The EDSFD form (5961-1 Record) is used to define a constructed BRCS EDS feature. Several pre-constructed BRCS EDS features are provided. The feature name is used to assign the feature to each terminal (line). The terminal must be assigned the feature on an appropriate LINEFA form (5112 Record), MLHLNFA form (5113 Record) or associated CLUSTR form (5600 Record). Only a single EDS feature is permitted for a terminal. The EDS group name is assigned either as a default parameter with a EDS feature on the EDSFD form or on an EDSLPA form (5961-3 Record) or EDSMPA form (5961-4 Record).

CND (Calling Name Display) is a Deluxe EDS feature and, thus, reserved to ISDN users. However, an analog line's name can be displayed to an ISDN user if the analog line is assigned the EDS pre-constructed feature "/EDNULL".

If the Deluxe EDS features DQD (Directory Query Display) and CND are indicated, then the ISDN user, when defined on the DSL form (5900-1/2/3/4 Record) or DSMLHLN form (5901-1/2/3/4/5 Record), must have the DISPLAY field set to "Y" (Yes).

If an EDS feature with CND and a MSS (Message Service System) feature are assigned to a terminal (line), the terminal should have the same BCID for both features. Also, if CND is used, the originating and terminating terminals must be in the same BCID.

If the Deluxe EDS feature Autocall is used, then an ACTION must be defined whether it is invoked by a dial code or an ISDN button. Users in the Office Dialing Plan must define a dialed code on a PDIT form (5300-2 Record) with an ACTION of "AUCUSE". Users in an Individualized Dialing Plan must define a dialed code on an IDPDCA form (5601-1/2 Record) with an ACTION of "AUCUSE". Users applying an ISDN button, must define the button on the CFGGRP form (5964 Record) with an ACTION of "AUCUSE".

The EDSGP form (5961-2 Record) is used to define the EDS group name in the field EDS GRP. A BCID field and a AP SITE ID field appear on this form. The AP SITE ID entry must have been defined in the AP SITE ID field on the DSLAP form (5963 Record).

The EDSCNT form (5961-5 Record) is used to identify up to a maximum of 25 EDS groups which are to receive measurement counts. Each EDS GRP entered must also be entered in the EDS GRP field on the EDSGP form (5961-2 Record).

If Message Service System (MSS) is applied, then another series of forms will be entered. These forms are available with 5E4(2) and later Software Releases.

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The MSFD form (5962-1 Record) is used to define a constructed BRCS MSS feature. Several pre-constructed BRCS MSS features are provided. The feature name is used to assign the feature to each terminal (line). The terminal must be assigned the feature on an appropriate LINEFA form (5112 Record), MLHLNFA form (5113 Record) or associated CLUSTR form (5600 Record) and should belong to an MSS group. The MSS group name is assigned either as a default parameter with a MSS feature on the MSFD form or on an MSLPA form (5962-3 Record) or MSMPA form (5962-4 Record).

The MRD (Message Retrieval Display) component of the MSS feature requires that the ISDN user, when defined on the DSL form (5900-1/2/3/4 Record) or DSMLHLN form (5901-1/2/3/4/5 Record), must have the DISPLAY field set to "Y" (Yes).

The LWC (Leave Word Calling) component of the MSS feature requires that the requesting party has the LW CALLING field set to "OUT" or "INOUT" and the target party has the LW CALLING field set to "INOUT" and that both parties (TNs) be in the same BCID.

If Leave Word Calling, Print on Demand, Deactivate Message Waiting Indicator or Autocall features are used, then an ACTION must be defined whether it is invoked by a dial code or an ISDN button. Users in the Office Dialing Plan must define a dialed code on a PDIT form (5300-2 Record). Users in an Individualized Dialing Plan must define a dialed code on an IDPDCA form (5601-1/2 Record). Users applying an ISDN button, must define the button on the CFGGRP form (5964 Record). The correct ACTIONs are:

- "LWCUSE" for Leave Word Calling
- "CLWCUSE" for Canceling Leave Word Calling
- "PODUSE" for Print on Demand
- "DCTMWI" for Deactivate Message Waiting
- "AUCUSE" for Autocall

The MSGP form (5962-2 Record) is used to define the MSS group name in the field MSS GRP. A maximum of 1023 MSS groups can be defined. The MSGP form is used in close conjunction with the MLHG form (5110-1/2/3 Record), when the MSS GRP is to be served by an attendant at a Message Service Center.

A BCID field appears on the MSGP form. The value entered in this field must also be entered in one of the fields BCID1 through BCID6 on a MLHG form; the particular MLHG form must be where the value entered in the MLHG field is the same as the value entered in the MSG SRV CNTR field on the MSGP form.

A maximum of 18 MSS GRPs, defined on MSGP forms, may have the same value entered in the MSG SRV CNTR field.

If "Y" (Yes) is entered in the DELUXE field on a MSGP form, then the value entered in the corresponding MSG SRV CNTR field must also be entered in the MLHG field on a MLHG form whose corresponding AP SITE ID field has an entry.

A member of a MSS group may call forward to any Message Service Center that serves the member's BCID.

The MLHG form (5110-1/2/3 Record) is used to define a Message Service Center. The value entered in the MLHG field, if the MLHG is to act as a Message Service Center, must appear on at least one MSGP form.

If the AP SITE ID field on the MLHG form is entered, then the value must also be entered in the AP SITE ID field on a DSLAP form (5963 Record).

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The MLHG defined on the MLHG form must have a MLHG FEATURE such that the associated MLHGFD form (5604 Record) has an entry of "UCD" in the HUNT TYPE field.

Each member of a MLHG, which acts as a Message Service Center, must be defined on a MLHLN form (5111-1/2/3 Record) or DSMLHLN form (5901-1/2/3/4/5 Record) with the SHARED field set to "N" (No).

The MSCNT form (5962-5 Record) is used to identify a maximum of 25 Message Service System groups which are to receive measurements counts. Each entry in the MSS GRP LIST must be unique and defined in the MSS GRP field on a MSGP form (5962-2 Record).

The MSSCNT form (5962-6 Record) is used to identify a maximum of 25 Message Service Center Multi-Line Hunt Groups which are to receive measurements counts. Each entry in the MS MLHG LIST must be unique and defined in the MSS GRP field on a MSGP form (5962-2 Record).

If SMSI is applied, then the same series of forms will be entered as those that are entered for MSS. These forms are available with 5E4(2) and later Software Releases.

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SEC. 1W: CCS7 ISDN-UP ENHANCEMENTS

1. CCS7 CONTROL TYPE

1.1 Feature Description

For 5E8 and later, if an outgoing ISUP7 trunk is selected to route out of an office, but the associated SS7 dynamic routing (i.e., signaling links, signaling transfer point) to the far point code is marked TFP (Transfer Prohibited), before attempting to re-route it should be determined if the current trunk should be skipped or the call should be canceled. The determination should be based on the network topology.

1.2 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
TKGRP	5202	3	2A	5.1

TKGRP form (5202 Record) - This form is used to define characteristics of the trunk groups. The CONTROL TYPE field must be set for ISUP7. For ISUP7 trunks, either "SKIP" or "CANCEL" must be entered in the field. If the trunks are not ISUP7, this field must be blank.

2. RECODE 3.1kHz INFORMATION TRANSFER CAPABILITY

2.1 Feature Description

For 5E8 and later, calls originated from analog phones at an originating end office are assigned a bearer capability of "3.1kHz audio". Calls that are received by a local office via an INBAND signaling speech trunk are also assigned a bearer capability of "3.1kHz audio". In the toll network, "3.1kHz audio" is not assigned as a bearer capability to analog originators or to calls received via INBAND signaling speech trunks. If a 5E8 toll office receives a call via an INBAND signaling speech trunk, or if an analog origination is made from a 5E8 toll switch, the call is assigned the same bearer capability as in 5E7, i.e., "SPEECH".

An office must be able to restrict the sending of "3.1kHz audio" as a bearer capability in order to remain backward compatible with offices that do not support that bearer capability.

2.2 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5I	8.1
TKGRP	5202	3	2A	5.1

2.3 Translations

OFCOPT form (5509 Record) - This form is used to define the global office parameters. The RCD 3PT1 ITC field entry determines if the bearer capability is recoded. When a call with a bearer capability of "3.1kHz audio" is routed out of a LEC switch over an ISUP7 trunk and the RCD 3PT1 ITC field on the TKGRP form is blank, then the OFCOPT form indicator is referenced.

TKGRP form (5202 Record) - This form is used to define the characteristics of a trunk group. The RCD 3PT1 ITC field is the trunk group indicator which is referenced for Recode 3.1kHz Information Transfer Capability. In order to remain backward compatible with earlier Software Releases that do not support 3.1kHz audio, offices must restrict the sending of the 3.1kHz audio as a bearer capability. This is done by entering "SPEECH" in the RCD 3PT1 ITC field for the trunk group.

3. ROUTING BASED ON BEARER CAPABILITY

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3.1 Feature Description

For 5E9(1) and later, the Routing Based on Bearer Capability provides flexible routing for "speech" and "3.1kHz audio" calls. "3.1 kHz audio" calls equate to voiceband data, such as facsimile and modems, therefore, it is important to maintain the absolute integrity of the bit stream. No speech treatments, such as TASI (Time Assignment Speech Interpolation) and LBRV (Low Bit Rate Voice) encoding, should be applied to a "3.1 kHz audio" call. A call with the bearer capability of "3.1 kHz audio" should only be routed out of a switch over the following types of trunks:

- MF voice trunks
- ISUP voice trunks
- ISUP 56K data trunks
- ISUP R64K data trunks
- ISUP 64C data trunks.

"Speech" calls continue to be routed out of a switch over the "speech" facilities, i.e., trunks which have "speech" treatments, unless upgrade routing has been provisioned, i.e., routing over 3.1 kHz trunks which included MF and ISUP voice, ISUP 56K, R64K, or 64C trunks.

3.2 Feature Assignment

When a call is being routed, screening determines whether the call is terminating in this office or is to be routed out to another office. This feature is concerned with calls routing out of this office.

Screening must determine if a separate route is required for a "speech" call in the following cases:

- the dialed data and screen index indicate a route type of hunt, which generally means the NXX dialed is not in this office.
- the dialed data and screen index indicate a route type of DN translation which means the dialed number is in this office, but it is not the end office, e.g.:
  - the whole hundreds group of the dialed DN is not in this office. The route index provided the route out of the office. This is typically for PBXs that are served by this office.
  - some subset of the hundreds group of the dialed DN is not in this office. This is typically for small PBXs that are served by this office.
  - the terminating class of services of the dialed DN indicates an INWATS trunk or a special DN that routes out of the office.

Therefore, for each of these screening cases, if the bearer capability indicates "speech", then the data routing mechanism is used to get the "speech" route to the trunk that has "speech" treatments. The speech alternate route is assigned on the RTIDX form (5303 Record). "Speech" trunks which have speech treatment are assigned on the TKGRP form (5202 Record).

Calls that bypass screening, such as ARS or PFA, do not reach the code added for this feature. The global parameter SPEECH TRK GRPS allows checking for any "speech" trunk provisioned in this office. If no "speech" trunks are provisioned, a segregated route is not needed, and therefore, there is no impact on this office. The global parameter for "speech" trunks in this office is indicated on view 8.15, it is a text only field on the OFCOPT form.

3.3 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
OFCOPT	5509	3	5I	8.1 8.5
RTIDX	5303	3	3P	10.2
TKGRP	5202	3	2A	5.1

3.4 Translations

OFCOPT form (5509 Record) - This form assigns the office options and parameters. The SPEECH TRK GRP field is a Recent Change / Verify only field which displays the number of trunk groups in the office that have speech treatments applied to them.

RTIDX (5303 Record) - This form defines each route index in a 5ESS Switch. The SPEECH ALT RI field assigns the route index for "speech" calls that is used when a call has a bearer capability of "speech.

TKGRP (5202 Record) - This form defines each trunk group on a 5ESS Switch. The SPEECH TRMTS field indicates if speech treatments have been assigned to this trunk group.

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SEC. 1X: SERVICE SWITCHING POINT 800 FEATURE DESCRIPTION

1. FEATURE DESCRIPTION

The SSP 800 feature is available with 5E4(2) and later Software Releases. SSP 800 can be implemented in 5ESS Switch EAEO (Equal Access End Offices), AT (Access Tandems) or Tandems.

This feature enables these offices to interface with the Switch Owners' databases, using the SS7 (Signaling System 7) TC (Transaction Capabilities) protocol, to implement Number Services of which the 800 Service is initially being provided.

Once an 800 call reaches an SSP, the SSP sends a query message to the Switch Owner's database, referred to as an SCP (Service Control Point). Screening is performed at the SCP and a reply message is returned to the SSP containing information to be used in processing the call. The call may be routed either to an IC (InterLATA Carrier) or within the LATA (Local Access Transport Area).

The SSP 800 feature requires the 5ESS Switch to interface with the CNI (Common Network Interface) ring in order to connect to the CCS7 (Common Channel Signaling 7) network for communication with the SCP.

1.1 ASP Interactions

The SSP 800 feature may also be accessed via ASP (Advanced Services Platform). For 5E6 - 5E7, calls for such a feature originate as ASP calls and are not recognized as SSP 800 calls until a call type of "QUERY" is obtained from digit translations and the corresponding code index is associated with a SERV TYPE of "NS800" on a DISERV form (5321 Record).

For 5E8 and later a trigger, which is obtained from digit analysis in place of the query call type, points to an NSTRIG form (5324 Record) with APPLICATION of "800" to indicate an SSP 800 call.

At this point, the call is recognized as an SSP 800 call and enters the regular flow of such a call in Item D of the following scenario (note that by this time, the conversion to 00X has already been done by ASP).

Further information regarding ASP, including the translations required to implement it, can be found in the feature description section for ASP, Division 2, Sections 4A51 and 4A126.

1.2 SSP 800 Call Access Tandem Scenario

The following call scenario describes the interaction of various ODA forms with the SSP 800 feature implemented in an AT office for trunk originations only. For line originations in an AT (Access Tandem), see "SSP 800 End Office Form Flow", Figure Figure 2 . See Figure 1 for Access Tandem Form Flow.

A. A caller dials an 800 number. Depending on the type of EO (End Office), signaling will be TRADITIONAL, CAMA or EA (EQUAL ACCESS) into the AT.

B. The EO may convert the 800 digits to an 00X code to indicate the originating LATA/NPA or coin only traffic. Preliminary digit analysis is set up in the INDIT form (5309 Record) to interpret the 800/00X codes from a non-conforming EO or 0ZZ codes from an EA office.

C. For the non-conforming case, digit analysis continues in the LDIT form (5300-3 Record) with a CALL TYPE of "NS800". For equal access signaling, the 0ZZ codes are translated with a CI CALL TYPE of "AVT" which would normally advance the call to the CDIM form (5300-6 Record) with the 3-digit carrier ID. However, in the NS case, the CDIM form will not be defined. An ICF form (5305 Record) is defined with a carrier type of "PSEUDO". From either the CALL TYPE of "NS800" on the LDIT form or the CARRIER TYPE of "PSEUDO" on the ICF form, the switch recognizes it has an 800 NS call.

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D. The OFCOPT form (5509 Record) is checked to make sure that "Y" is entered in the SERV SWITCH PT field. Also, a LATA number on the OFCOPT form must be defined for this office. If this call originated via ASP (Advanced Services Platform), this step is the point at which the SSP 800 call flow is entered.

E. If the 800 code has been converted to 00X, the ONPA form (5312 Record) is read to obtain the appropriate originating NPA/LATA and also checks the coin indicator.

F. At this point the switch creates a query message to be sent to the SCP database via the CCS7 network. The query message consists of the following:

- The dialed 800 number,
- Calling TN (see Figure 3),
- Originating LATA (see Figure 3),
- Coin Indicator (see Figure 3), or
- SSN (Subsystem Number).

  This SSN is a number in the range 232-252 or 254 which is defined on the DSAPP form (5537 Record) for each application requiring access to an external database.

G. The SCP will return one of the following:

- Announcement code,
- Error code,
- Reject message,
- Normal routing message, or
- An 800 number.

H. A normal routing message will include a true routing TN, a Carrier ID and a billing structure code.

I. The INH SCP NPA DEL field on the OFCOPT form is checked to determine if the NPA in the returned routing number should be deleted prior to post-query digit analysis. If "Y" is entered, the NPA is not deleted and digit analysis will be performed on the full 10-digit routing number. If "N" is entered, see Item J.

The switch checks the IMPLD NPA field on the OFCOPT form and, if necessary, the IMPLD NPA from the LDIT FORM corresponding to the NXX in the routing TN to see if the NPA in the routing TN is the same as the IMPLIED NPA. If it doesn't find a match between the NPA returned from the SCP and the IMPLIED NPA, then the full 10-digit number from the SCP will be used in digit analysis to route the call. If a match is found, then the NPA is dropped and the remaining 7-digit number will be used.

The Carrier ID received from the SCP is used to access the ICF form to determine the CARRIER TYPE. If the CARRIER TYPE is "PSEUDO" or "LEC", the routing DN is expected to be intraLATA and routes to the Local Exchange Carrier. If the CARRIER TYPE is not "PSEUDO" or "LEC", the routing DN could be either interLATA or intraLATA and routes to the Interexchange Carrier.

J. The DAS used to do post-query digit analysis is determined from the SCP 800 DAS field on the

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OFCOPT form. If a value is entered in the SCP 800 DAS field, that value is used. Otherwise, the DAS from the originating TKGRP form (5202 Record) is used. The INDIT from the TKGRP DAS is used prior to using the LDIT. Digit analysis is performed on the 7- or 10-digit routing number resulting in an intraLATA or interLATA call. The SCP may also return an 800 number (800 turn around); for this case, digit analysis is not done. (This special case is described in Item M.)

K. IntraLATA calls, where CI CALL TYPE on the LDIT form is "INTRA" or "NONCI", and CARRIER TYPE on the ICF form is "PSEUDO" or "LEC", may be intraswitch calls or interswitch calls that route to the LEC. If an office code is entered on the LDIT form, it indicates that the call terminates to a line in this office. Otherwise, the NS CDI is checked on the ICF. If the NS CDI is entered, it is used to access the RAR form. If NS CDI is not entered, the CDI field on the LDIT form is used to access the RAR form. The RTI used to access the RTIDX form will be the last known RTI found on either the LDIT form, the ICF form (NS RTI), or the RAR form. The RAR form provides the final place to override all previously found RTIs.

   IntraLATA calls, where CI CALL TYPE on LDIT is "INTRA" and CARRIER TYPE on ICF is "IC" or "CONSOL", route to the interexchange carrier using NS CDI and NS RTI.

L. For interLATA calls where the TYPE OF CI CALL on the LDIT form is "INTER", "IDDD", or "WZ1", the ICF is checked to verify that CARRIER TYPE is "IC", "INC", or "CONSOL". If the TYPE OF CI CALL is "INTER", then NS CDI and NS RTI are used to route the call to the carrier. If the TYPE OF CI CALL is "IDDD" or "WZ1", then INTL CDI and INTL RTI are used to route the call to the international carrier. If necessary, a special RTI may be entered on the resulting RAR form to override a previously known RTI.

M. For the special case when the SCP returns an 800 number, digit analysis is not done. The SCP is required to return an interLATA carrier ID. If no carrier ID is returned or the "PSEUDO" carrier is returned, the call is routed to reorder. If a valid carrier is supplied and DIG ROUTING is "N" on the ICF form, the call is routed based on the DOMES CDI and DOMES RTI. If DIG ROUTING is "Y", the CARRIER CDI and CARRIER RTI on the CDIM form (5300-6 Record) overrides the DOMES CDI and DOMES RTI on the ICF form. If necessary, a special RTI may be entered on the resulting RAR to override a previously known RTI.

N. If the SCP returns an announcement code, this code is used to access the SSPANN form (5535 Record) to determine the ANNC RTI and TGN used to return an appropriate announcement to the originator.

O. In order to provide proper billing, the SCP also returns a billing structure code which is used to access the SCFAM form (5536 Record) which will define the structure code set needed to properly bill this call.

1.3 SSP 800 Call End Office Scenario

The following call scenario describes the interaction of ODA forms with the SSP 800 feature implemented in a 5ESS End Office. See Figure Figure 2 for SSP 800 End Office form flow. The End Office scenario applies to line originations in a 5ESS Switch EAEO (Equal Access End Office) or an AT (Access Tandem).

A. The caller dials an 800 number. The 800 digits are translated in the originator's LDIT with a CALL TYPE of "NS800". This results in a query to the SCP database consisting of the following:

   - Dialed 800 number
   - Calling DN
   - Originator's LATA from the OFCOPT form (5509 Record)

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- Coin Indicator based on CLASS OF SERVICE on the originator's LCC form (5306 Record).

B. An SCP response is returned. From this point on, the call processing is the same as in the Access Tandem Scenario with the following exceptions:

1. If no SCP 800 DAS is found on the OFCOPT form (5509 Record), the DAS from the originator's LCC form is used.

2. Trunk groups defined on the RTIDX forms may route directly to End Offices, carriers, or via an Access Tandem.

C. For 800 queries that result in an intraLATA terminating DN, the use of the NS CDI defined for the "PSEUDO" carrier is shown in the following scenario:

The SCP returns the PSEUDO carrier ID and a 10 digit intraLATA DN where the NPA matches the IMPLIED NPA on the OFCOPT form or the LDIT form. If INH SCP NPA DEL is "N", the NPA is deleted and a 7 digit number is run through digit analysis. Normally for intraLATA calls, the LDIT CDI would be used to access screening (RAR). If this were done, the call could fail as in the case where the subscriber is required to dial a prefix (1 + 7 digits). However, for 800 calls where the PSEUDO carrier ID is returned from the SCP, call processing instead uses the NS CDI assigned on the PSEUDO carrier's ICF to access screening. If "REGL" is entered for both RAR RTI and NS RTI (blank on view 10.3), the LDIT RTI can still be used to route the call.

1.4 Important Notes

- SCP data and 5ESS Switch data must be consistent, e.g., SCP routing numbers must be defined in digit analysis.
- For a call from an EAEO, the CARRIER ID specified for the 800 call in the EAEO must not be defined on the CDIM form in the 5ESS Switch AT. Otherwise, the call will never be recognized as an 800 NS call.
- Part of the SCP Query message must consist of the following information:
  - ORIGINATION NPA
  - ORIGINATION LATA

Figure 3 shows the ODA forms that are used to collect this information for each signaling mode.

2. TRANSLATION REQUIREMENTS FOR ACCESS TANDEM

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1
LDIT	5300-3	3	3C	9.3
CDIM	5300-6	3	3E	9.7
ICF	5305	3	3R	10.3
INDIT	5309	3	3V	9.5
ONPA	5312	3	3Y	8.8
OFCOPT	5509	3	5I	8.1
SSPANN	5535	3	5AI	10.17
SCFAM	5536	3	5AJ	10.18
DSAPP	5537	3	5AK	8.17

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2.1 Trunk Translations

TKGRP Form (5202 Record) - Enter data as required for FAR END NPA, FAR END LATA, FAR END NXX and COIN fields.

2.2 Routing And Charging Translations

LDIT Form (5300-3 Record) - For non-conforming EO, enter a CALL TYPE of "NS800" for incoming digits 800 or 00X.

For EAEO, digit interpretation is not performed on 800 and 00X digits and therefore, no LDIT form entries are required.

Additional records are defined as required for routing numbers returned by the SCP database.

Since the SCP will always return at least 10 digits, specify IMPLIED NPA data for codes dialed on a 7-digit basis and if the IMPLIED NPA is other than the NM DEFAULT NPA on the OFCOPT form.

CDIM Form (5300-6 Record) - When an 800 number is returned from the SCP, this form is used to obtain the carrier specific Code Indexes and Route Indexes for any carrier that has DIG ROUTING set to "Y" on the ICF form. If a CDIM form is not defined, the DOMES CDI/RTI from the ICF form will be used to route the call.

ICF Form (5305 Record) - For 800 calls originating from EAEOs, the carrier defined in the 0ZZ + XXX digit string must have a CARRIER TYPE of "PSEUDO".

ICF forms are also required for all carriers defined in the SCP database with NS CDI/NS RTI entries for domestic carriers and INTL CDI/INTL RTI entries for international carriers.

INDIT Form (5309 Record) - For 800 calls from non-conforming EOs, enter required steering digits with LDIT equal to "Y". For 800 calls from EAEOs, enter the 0ZZ codes with TYPE OF CI CALL field equal to "AVT" and the LDIT field equal to "N". INDIT forms are also needed to specify steering digits as required for SCP routing numbers.

ONPA Form (5312 Record) - If 00X is received from the EO, these special codes are defined on this form to indicate any of the following:

- The NPA of the originator
- The LATA number of the originator
- Coin origination

2.3 Miscellaneous Translations

OFCOPT Form (5509 Record) - Two parameters, COMMON CHAN SIG and SERV SWITCH PT fields must be set to "Y". Also enter an NM DEFAULT NPA (IMPLIED NPA).

SSPANN (5535 Record) - For each announcement code defined in the SCP database, enter an SSPANN form.

SCFAM Form (5536 Record) - The SCP database will return a call code used to bill this 800 call. Enter these call codes on the SCFAM form specifying a structure codes family used to create the billing record.

DSAPP Form (5537 Record) - For the "NS800" application, enter a TRANS TYPE and a SUB SYS NBR.

3. TRANSLATION REQUIREMENTS FOR END OFFICE

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New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LDIT	5300-3	3	3C	9.3
ICF	5305	3	3R	10.3
INDIT	5309	3	3V	9.5
ONPA	5312	3	3Y	8.8
DISERV	5321	3	3AH	8.17
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1
SSPANN	5535	3	5AI	10.17
SCFAM	5536	3	5AJ	10.18

3.1 Routing And Charging Translations

LDIT Form (5300-3 Record) - Enter a CALL TYPE of "NS800" for incoming digits 800.

Additional records are defined as required for routing numbers returned by the SCP database.

Since the SCP will always return at least 10 digits, specify IMPLIED NPA data for codes dialed on a 7-digit basis and if the IMPLIED NPA is other than the NM DEFAULT NPA on the OFCOPT form.

ICF Form (5305 Record) - Required for all carriers defined in the SCP database with NS CDI/NS RTI entries specified for domestic carriers and INTL CDI/INTL RTI entries specified for international carriers.

INDIT Form (5309 Record) - If this end office is a tandem to other end offices, INDIT forms are required for the incoming steering digits (800/00X) similar to the Access Tandem case. Also, INDIT forms are required to specify steering digits for SCP routing numbers.

ONPA Form (5312 Record) - If this EO is a tandem to other EOs and the digits 00X are received, these special codes are defined on this form to indicate any of the following:

- The NPA of the originator
- The LATA number of the originator
- Coin origination

DISERV Form (5321 Record) - For 5E6 - 5E7, when SSP 800 calls are to be triggered via an Advanced Services Platform dialing plan, then the DISERV form is used to identify SSP 800 calls by setting SERV TYPE to "NS800". See Division 2, Sections 4A51 and 4A126 for details on ASP.

DISERV Form (5321 Record) - For 5E8 and later, when SSP 800 calls are to be triggered via an Advanced Services Platform dialing plan, then the NSTRIG form is used to identify SSP 800 calls by setting APPLICATION to "800". See Division 2, Sections 4A51 and 4A126 for details on ASP.

3.2 Miscellaneous Translations

OFCOPT Form (5509 Record) - Two parameters, COMMON CHAN SIG and SERV SWITCH PT must be set to "Y". Also enter the NM DEFAULT NPA (IMPLIED NPA).

SSPANN Form (5535 Record) - For each announcement code defined in the SCP database, enter an SSPANN form.

SCFAM Form (5536 Record) - The SCP database will return a call code used to bill this 800 call. Enter these call codes on the SCFAM form specifying a structure code family used to create the billing record.

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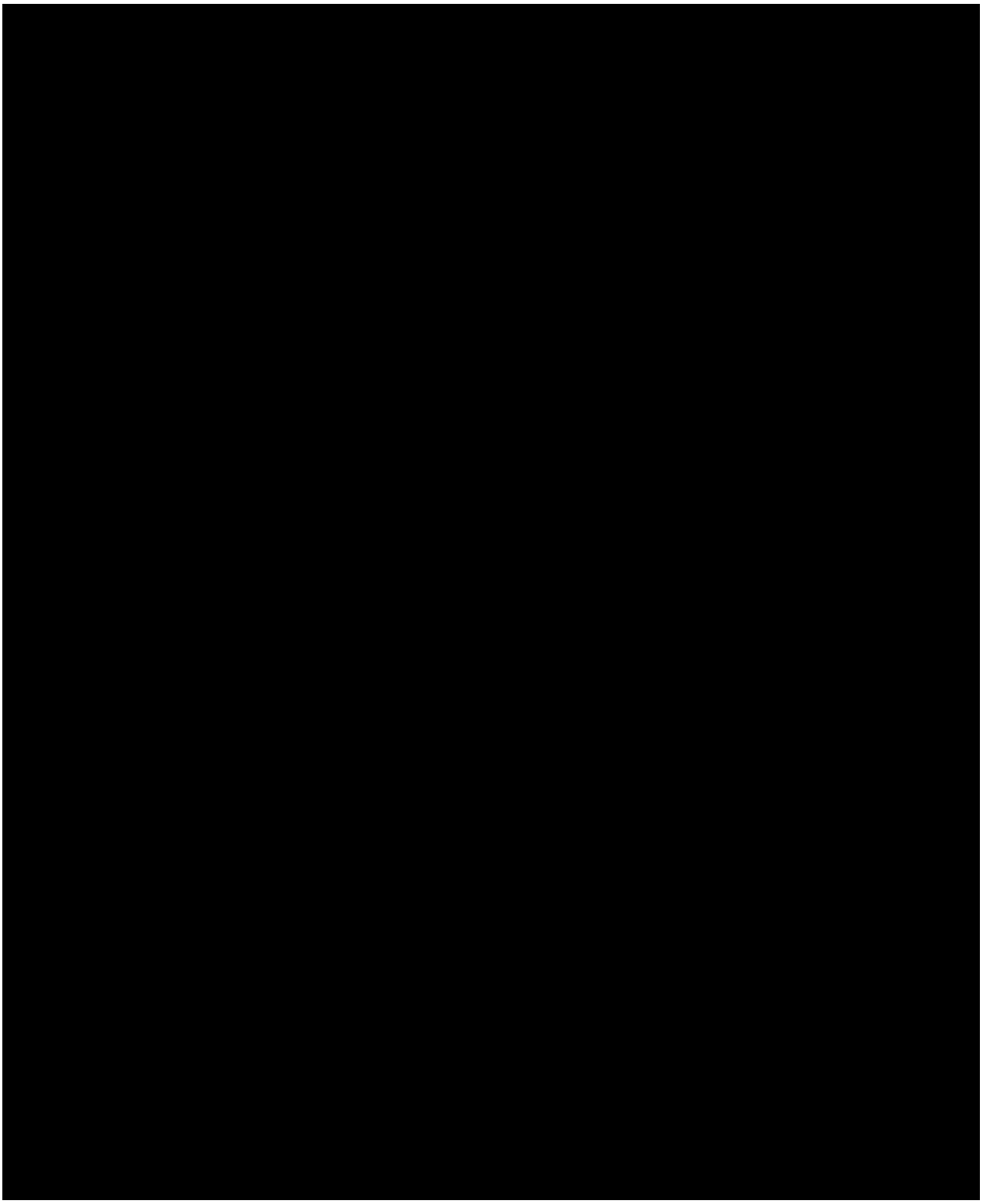

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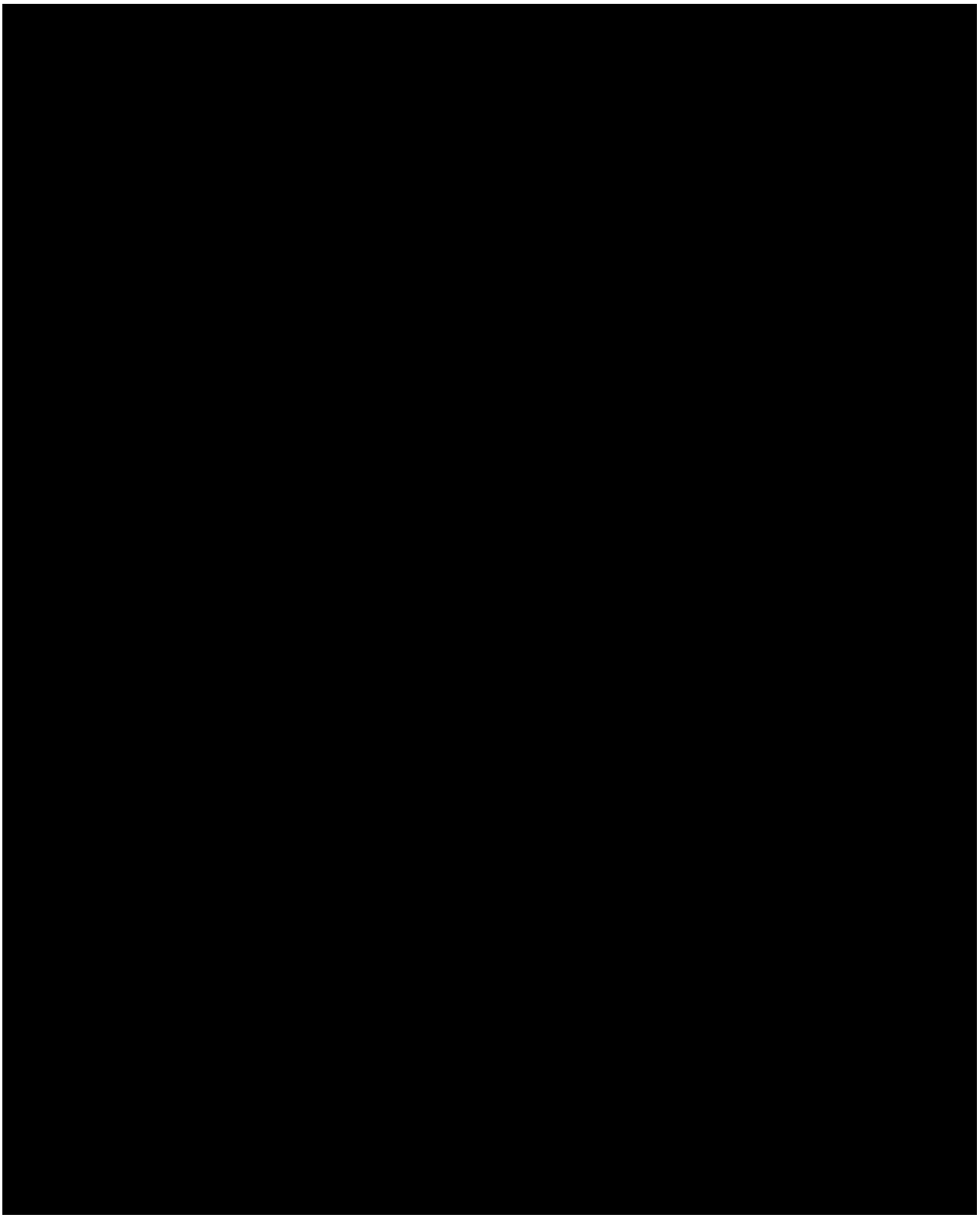

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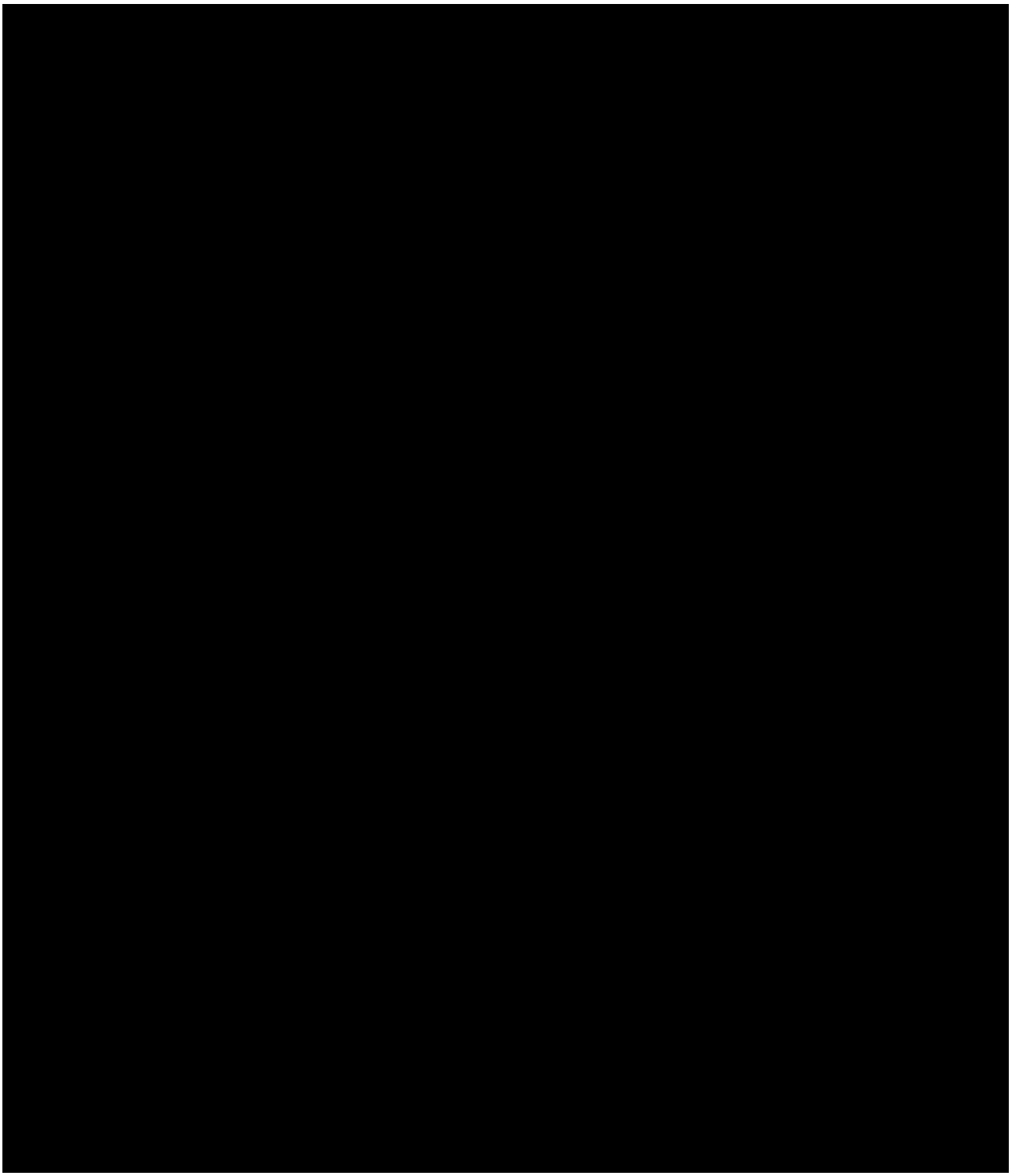

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Figure 1 SSP 800 ACCESS TANDEM FORM FLOW

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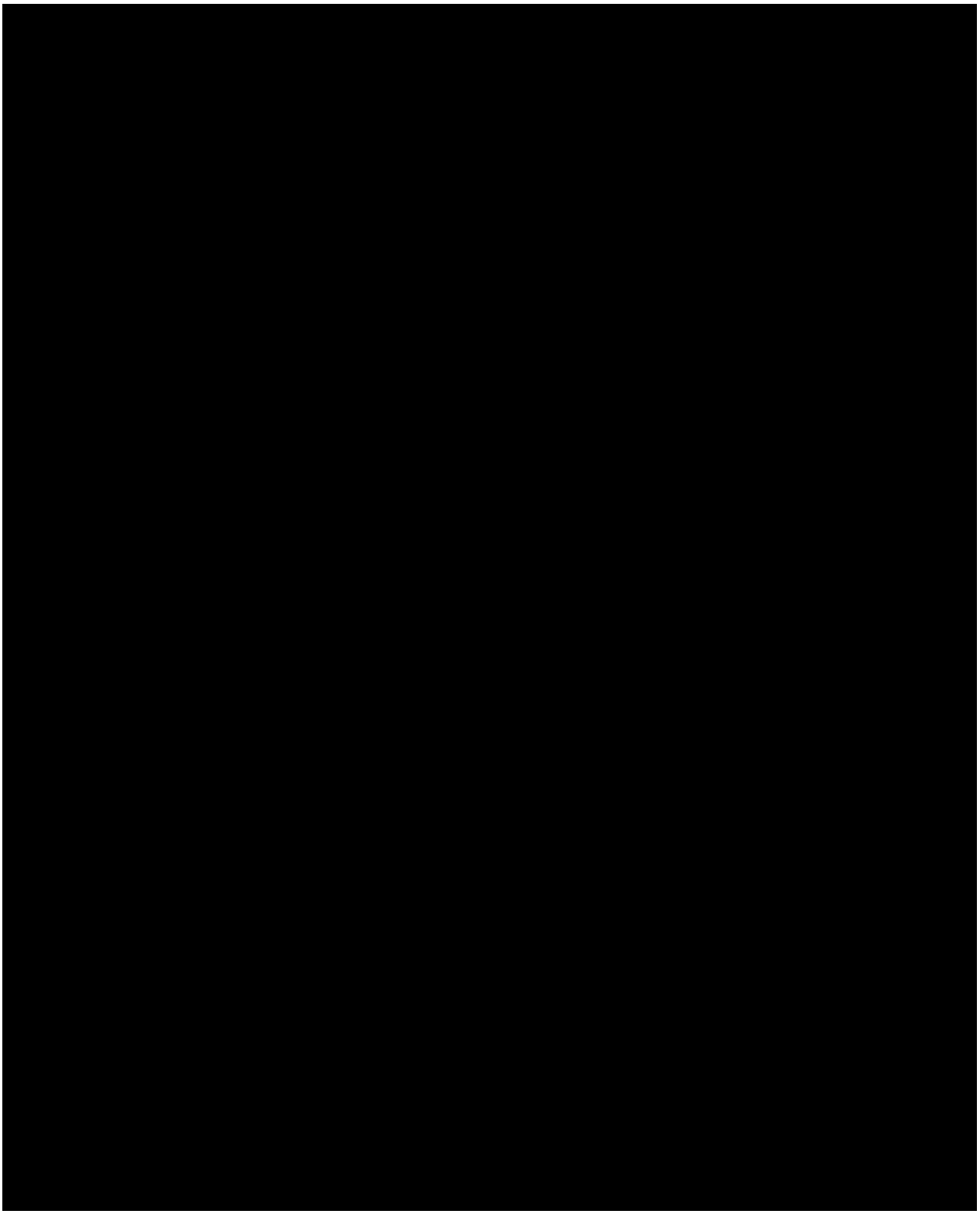

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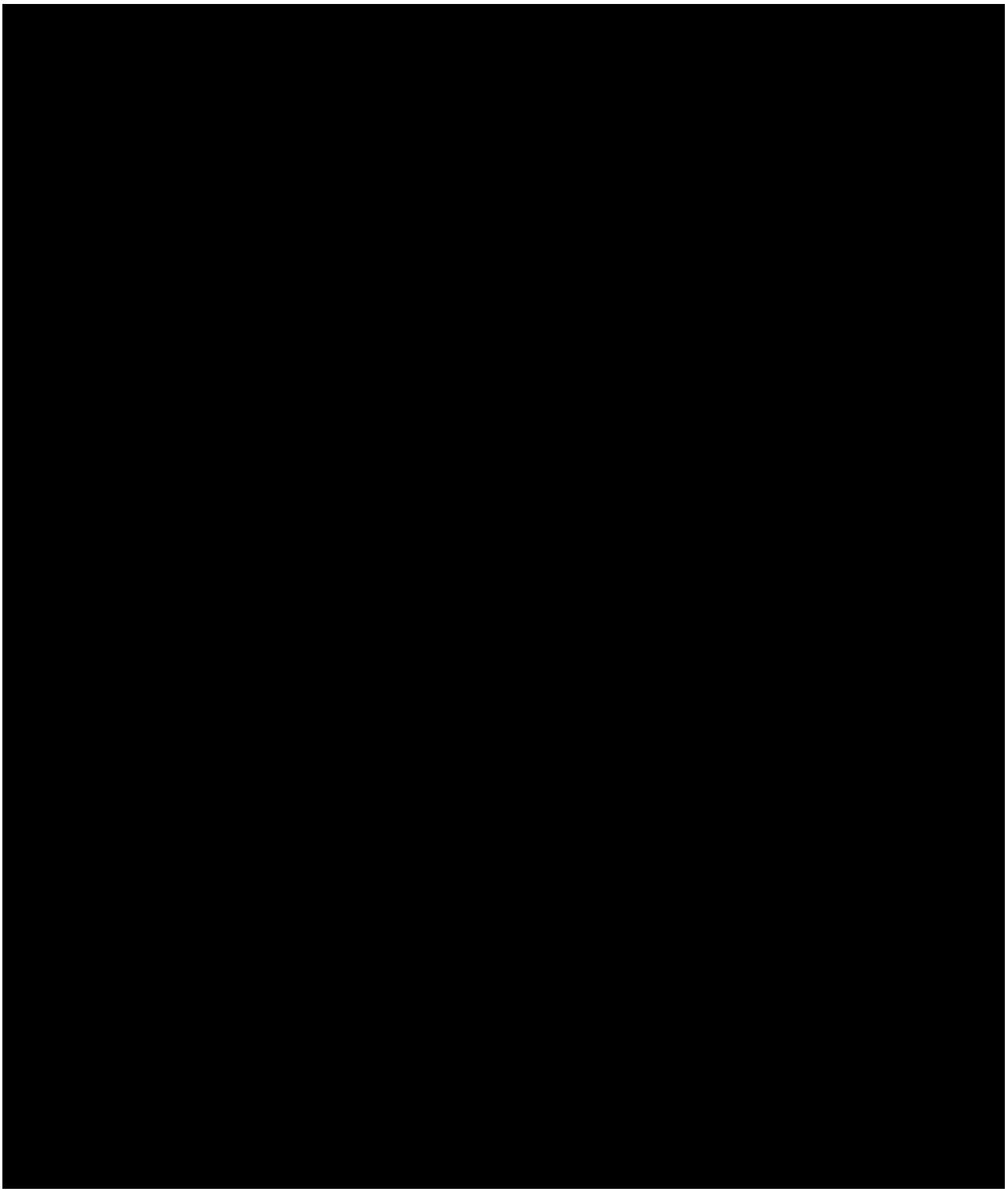

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Figure 2 SSP 800 END OFFICE FORM FLOW

SIGNALING	ORIG NPA	ORIG NXX	ORIG LATA	COIN INDICATOR
EA-10digitANI-00X	ANI	ANI	ONPA	ONPA
EA-10digitANI-800	ANI	ANI	TKGRP	TKGRP
EA-3digitANI-00X	ANI	blank	ONPA	ONPA
EA-3digitANI-800	ANI	TKGRP or blank	TKGRP	TKGRP
TRAD-00X	ONPA	TKGRP or blank	ONPA	ONPA
TRAD-800	TKGRP	TKGRP or blank	TKGRP	TKGRP
CAMA-7digitANI-00X	ONPA	ANI	ONPA	ONPA
CAMA-7digitANI-800	TKGRP	ANI	TKGRP	TKGRP
CAMA-No ANI-00X	ONPA	TKGRP or blank	ONPA	ONPA
CAMA-No ANI-800	TKGRP	TKGRP or blank	TKGRP	TKGRP

Figure 3 SIGNALING MODE AND RELATED ODA FORM

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SEC. 1Y: LOCAL AREA SIGNALING SERVICES

1. LOCAL AREA SIGNALING SERVICES FOR 5E5 AND LATER

1.1 Feature Description

LASS (Local Area Signaling Services) features are available in 5E5 and later Software Releases. The LASS features are AC (Automatic Callback), AR (Automatic Recall), COT (Customer Originated Trace), ICLID (Individual Calling Line Identification), CND (Calling Number Delivery) and PCP (Per Call Privacy).

The LASS features are available for intra-switch calls and inter-switch calls provided there is CCS7 connectivity between the originating and terminating switches.

The ICLID feature was available in the 5E4(2) Software Release but it was only available for intra-switch calls. In the 5E5 Software Release, ICLID information can be provided for intra-switch calls and inter-switch calls.

1.2 Feature Assignment

LASS allows the switch owner to offer the Automatic Callback, Automatic Recall, Customer Originated Trace and ICLID Per Call Privacy features to all customers on a generally available basis per office or on a subscription basis per office.

1.3 Generally Available

A feature made generally available in a 5ESS Switch allows all customers in the 5ESS Switch access to the feature. A user can be denied access to the feature by entering "N" in the AC ALW, AR ALW, COT ALW or PCP ALW fields on the DSLUSR, LINE or MLHLN forms. On a generally available basis, default values for the office are defined on the LASSOP form. A user may subscribe to a customized version of a LASS feature if the generally available feature does not meet the users needs.

1.4 Subscription

A feature made available on a subscription basis allows users to subscribe to a feature. If any one of the LASS features is provided on a subscription basis, then the AC ALW, AR ALW, COT ALW or PCP ALW fields on the DSLUSR, LINE or MLHLN forms are not looked at by the 5ESS Switch, therefore the default values should be used.

1.5 Office Status

In initial offices, 5ODA makes the Automatic Callback, Automatic Recall, Customer Originated Trace and ICLID Per Call Privacy features unavailable to all customers. Changing the office status of a LASS feature to generally available or subscription must be done on the RC View 8.18.

1.6 Automatic Callback

AC (Automatic Callback) allows a calling terminal to automatically place a call to the last incoming call made to the calling terminal. If the call cannot be completed immediately because the called terminal is busy, the called and calling terminals are monitored until they both become idle. Once the called and calling terminals are idle, the calling terminal is given ringback with distinctive ringing. If the calling terminal answers the ringback, a call is automatically placed to the called terminal.

AC is available to analog terminals and ISDN terminals.

AC allows a calling terminal to activate multiple camp-ons to different terminals.

1.7 AC Call Scenario

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The following is a call scenario showing the interaction between forms. If Automatic Callback is generally available on a 5ESS Switch (indicated on RC View 8.18 with "GENAVAIL" in the AC field), then the DSLUSR, LINE or MLHLN form where the calling TN is defined should have the AC ALW field set to "Y" to indicate that the feature is available to the calling TN. The generally available feature for the office is defined in the AC GA FEAT field on the LASSOP form. The AC feature does not have to be assigned to individual users using appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc.) unless the user subscribes to a customized version of Automatic Callback.

If Automatic Callback is provided on a subscription basis (indicated on RC View 8.18 with "SUBSCR" in the AC field), then the AC ALW field on the DSLUSR, LINE or MLHLN form is not looked at by the switch. The feature will be assigned to individual users using the appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc.).

Party-A was the last incoming call received at Party-B. Party-B wants to callback Party-A using the Automatic Callback feature. Party-B goes off-hook, enters a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "ACUSE") or depresses a feature button (defined on the CFGGRP form with an ACTION of "ACUFB") and an appropriate response is returned.

Possible responses are:

- Audible alerting - Called party is alerted immediately because the called station is found to be idle.
- Short-term denial - Reorder tone is given to the user to indicate that network resources are temporarily exhausted or the called party has a feature active that causes the Automatic Callback attempt to be denied (e.g., Call Forwarding Variable). A subsequent attempt by the user to activate the feature may succeed.
- Long-term denial - An announcement is returned indicating that the Automatic Callback feature is not allowed to the user. The route index to the announcement is defined in the LNG TRM DNY RTI field on the LASSOP form.
- Confirmation - An announcement is returned indicating that the Automatic Callback feature has been activated. The route index to the announcement is defined in the AC CNFRM RTI field on the LASSOP form.

Once a confirmation announcement is returned, the AC Delayed Processing (camp-on) phase is initiated. Both the calling and called terminals are being monitored for simultaneous idle status. If both the calling and called terminals are idle before the maximum duration timer for busy/idle scanning expires (defined in the TIMEOUT field on the LASSOP form), then the calling terminal is given ringback alerting with distinctive ringing (defined in the RNGBK TYPE field on the LASSOP form or LSACFD form). Otherwise, AC activation is canceled when both the calling and called terminals are not idle before the maximum duration timer for busy/idle scanning expires (defined in the TIMEOUT field on the LASSOP form).

Ringback alerting is initiated to the calling terminal. The duration of the ringback alerting is defined in the RNG CYCLE field on the LASSOP form. If the initial ringback is not answered, then there may be multiple ringback attempts to the calling party (defined in the MAX RNGBK and RNGBK WAIT fields on the LASSOP form). If the calling party answers the ringback attempt, then an attempt will be made to ring the called party. If the called party is idle then both parties are connected.

If the called party is busy, then an announcement is returned to the calling party indicating that the called party is busy after the ringback attempt (defined in the PTY BUSY RTI field on the LASSOP form). The AC activation is complete.

Automatic Callback may be canceled at any time during the Delayed Processing phase. The user goes off-hook, enters a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "ACCANC") or depresses a feature button (defined on the CFGGRP form with an ACTION of "ACCFB") and a

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cancellation announcement is returned (defined in the AC CNCL RTI field on the LASSOP form). Deactivation of Automatic Callback cancels all multiple camp-on activations of Automatic Callback.

A list of telephone numbers for a 5ESS Switch that cannot be camped on when Automatic Callback is activated are called choke numbers. These numbers are defined on the LASSCK form.

A prefix of 1 may be required by offices when dialing a NPA or an NXX. If an office selects to use a prefix, there may be some exceptions where a prefix cannot be used. If an office chooses not to use a prefix, there may be some exceptions where a prefix is needed. This is defined on the LASSPFX form.

1.8 Automatic Recall

AR (Automatic Recall) allows a calling terminal to automatically place a call to the last outgoing call made from the calling terminal or to camp on to the last outgoing call after receiving busy treatment. Camp-on allows the switch to monitor both the called and calling terminals until they become idle. Once the called and calling terminals are idle, the calling terminal is given ringback with distinctive ringing. If the calling terminal answers the ringback, a call is automatically placed to the called terminal.

AR is available to analog terminals and ISDN terminals.

1.9 AR Call Scenario

The following is a call scenario showing the interaction between forms. If Automatic Recall is generally available on a 5ESS Switch (indicated on RC View 8.18 with "GENAVAIL" in the AR field), then the DSLUSR, LINE or MLHLN form where the calling TN is defined should have the AR ALW field set to "Y" to indicate that the feature is available to the calling TN. The generally available feature for the office is defined in the AR GA FEAT field on the LASSOP form. The AR feature does not have to be assigned to individual users using appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc) unless the user subscribes to a customized version of Automatic Recall.

If Automatic Recall is provided on a subscription basis (indicated on RC View 8.18 with "SUBSCR" in the AR field), then the AR ALW field on the DSLUSR, LINE or MLHLN form is not looked at by the switch. The feature will be assigned to individual users using the appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc).

Party-A calls Party-B and receives busy treatment. To activate the Automatic Recall feature: Party-A goes off-hook, enters a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "ARUSE") or depresses a feature button (defined on the CFGGRP form with an ACTION of "ARUFB") and an appropriate response is returned.

Possible responses are:

- Audible alerting - Called party is alerted immediately because the called station is found to be idle.
- Short-term denial - Reorder tone is given to the user to indicate that network resources are temporarily exhausted or the called party has a feature active that causes the Automatic Recall attempt to be denied (e.g., Call Forwarding Variable). A subsequent attempt by the user to activate the feature may succeed.
- Long-term denial - An announcement is returned indicating that the Automatic Recall feature is not allowed to the user. The route index to the announcement is defined in the LNG TRM DNY RTI field on the LASSOP form.
- Confirmation - An announcement is returned indicating that the Automatic Recall feature has been activated. The route index to the announcement is defined in the AR CNFRM RTI field on the LASSOP form.

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Once a confirmation announcement is returned, the AR Delayed Processing (camp-on) phase is initiated. Both the calling and called terminals are being monitored for simultaneous idle status. If both the calling and called terminals are idle before the maximum duration timer for busy/idle scanning expires (defined in the TIMEOUT field on the LASSOP form), then the calling terminal is given ringback alerting with distinctive ringing (defined in the RNGBK TYPE fields on the LASSOP form or LSARFD form). Otherwise, AR activation is canceled when both the calling and called terminals are not idle before the maximum duration timer for busy/idle scanning expires (defined in the TIMEOUT field on the LASSOP form).

Ringback alerting is initiated to the calling terminal. The duration of the ringback alerting is defined in the RNG CYCLE field on the LASSOP form. If the initial ringback is not answered, then there may be multiple ringback attempts to the calling party (defined in the MAX RNGBK and RNGBK WAIT fields on the LASSOP form). If the calling party answers the ringback attempt, then an attempt will be made to ring the called party. If the called party is idle then both parties are connected.

If the called party is busy, then an announcement is returned to the calling party indicting that the called party is busy after the ringback attempt (defined in the PTY BUSY RTI field on the LASSOP form). The AR activation is complete.

Automatic Recall may be canceled at any time during the Delayed Processing phase. The user goes off-hook, enters a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "ARCANC") or depresses a feature button (defined on the CFGGRP form with an ACTION of "ARCFB") and a cancellation announcement is returned (defined in the AR CNCL RTI field on the LASSOP form).

A list of telephone numbers for a 5ESS Switch that cannot be camped on when Automatic Recall is activated are called choke numbers. These numbers are defined on the LASSCK form.

1.10 Customer Originated Trace

The COT (Customer Originated Trace) feature allows an end user the ability to request an automatic trace of the last call received. The call trace information is provided to an authorized agency , such as the telephone company or a law enforcement agency, not the end user. Once COT has been activated an announcement is returned to the end user providing information on any further action that might be required regarding the trace including the telephone number of the agency (defined in the AGENCY field on the LASSOP form).

Customer Originated Trace is available to analog terminals and ISDN terminals.

1.11 COT Call Scenario

The following is a call scenario showing the interaction between forms. If Customer Originated Trace is generally available on a 5ESS Switch (indicated on RC View 8.18 with "GENAVAIL" in the COT field), then the DSLUSR, LINE or MLHLN form where the calling TN is defined should have the COT ALW field set to "Y" to indicate that the feature is available to the calling TN. The generally available feature for the office is defined in the COT GA FEAT field on the LASSOP form. The COT feature does not have to be assigned to individual users using appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc) unless the user subscribes to a customized version of Customer Originated Trace.

If Customer Originated Trace is provided on a subscription basis (indicated on RC View 8.18 with "SUBSCR" in the COT field), then the COT ALW field on the DSLUSR, LINE or MLHLN form is not looked at by the switch. The feature will be assigned to individual users using the appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc).

After hanging up on a call, the customer can activate COT by going off-hook, entering a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "COTUSE") or depresses a feature button (defined on the CFGGRP form with an ACTION of "COTFBP") and an appropriate response is returned.

Possible responses are:

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- Successful Activation - A message/announcement is returned indicating a successful activation of the COT request and provides information on any further action the user should take. The route index to the announcement is defined in the ACTIVATE RTI field on the LASSOP form.

- Trace not Available - A message/announcement is returned indicating that the call has already been traced or invalid data about the call is stored in the switch (e.g., originating and terminating switches are not connected by CCS7 trunks). The route index to the announcement is defined in the TRC NA RTI field on the LASSOP form.

- Buffer full - A message/announcement is returned indicating that the COT message buffer is full and the user should attempt the trace again later. The route index to the announcement is defined in the NO RESRC RTI field on the LASSOP form.

- Short-term denial - A message/reorder is returned indicating that network resources are exhausted. A subsequent attempt by the user to activate the feature may succeed.

- Feature denial - A message/reorder is returned indicating that the Customer Originated Trace feature is not available to the user.

1.12 Individual Calling Line Identification

ICLID (Individual Calling Line Identification) allows calling party information to be delivered to ISDN terminals or analog terminals. Two ICLID features are available: Calling Number Delivery and Per call Privacy.

1.13 Calling Number Delivery

CND (Calling Number Delivery) allows the called party to receive calling information on incoming calls. To activate the feature: the user goes off-hook, enters a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "CNDACT") or depresses a feature button (defined on the CFGGRP form with an ACTION of "CNDFBP") and a confirmation tone is returned. When the feature is active, the station set display will show the calling information on the incoming call. The CND feature is activated until the feature is deactivated.

Calling Number Delivery may be deactivated. The user goes off-hook, enters a dialed code (defined on the PDIT and/or IDPDCA form with an ACTION of "CNDDCT") or depresses a feature button (defined on the CFGGRP form with an ACTION of "CNDFBP") and a confirmation tone is returned.

- ***NOTE:*** For information concerning which SLCs are compatible with the ICLID feature, refer to 256-015-300, CCS7 Operation Administration and Maintenance.

1.14 Call Privacy

All-call Privacy allows the calling party to prevent delivery of their TN to the called party for all calls. The calling party can deactivate all-call privacy on a per-call basis, allowing the calling TN to be displayed to the called party.

A terminal may not subscribe to all-call privacy, therefore the TN of the calling party will be displayed to the called party for all calls. The calling party may activate TN privacy on a per-call basis, not allowing the calling TN to be displayed to the called party.

This feature was available in the 5E4(2) Software Release for intra-switch calls but with 5E5 and later Software Releases, this feature can also be used with inter-switch calls.

1.15 PCP Call Scenario

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The following is a call scenario showing the interaction between forms. If Per Call Privacy is generally available on a 5ESS Switch (indicated on RC View 8.18 with "GENAVAIL" in the PCP field), then the DSLUSR, LINE or MLHLN form where the calling TN is defined should have the PCP ALW field set to "Y" to indicate that the feature is available to the calling TN. The generally available feature for the office is defined in the PCP GA FEAT field on the LASSOP form. The PCP feature does not have to be assigned to individual users using appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc) unless the user subscribes to a customized version.

If Per Call Privacy is provided on a subscription basis (indicated on RC View 8.18 with "SUBSCR" in the PCP field), then the PCP ALW field on the DSLUSR, LINE or MLHLN form is not looked at by the switch. The feature will be assigned to individual users using the appropriate line assignment forms (i.e., LINEFA, MLHLNFA, BFG, etc).

There are two types of privacy features:

- All-Call Privacy - A user with PRIVACY set to "Y" on the corresponding LINE, DSLUSR or MLHLN form will prevent their TN from being displayed on the called party's terminal. The user may send the TN on a per-call basis by subscribing to the Display feature with TN privacy (defined on the DISPFD form with TN PRIVACY set to "Y"). Once the feature is assigned, the user may enter a Dial Code or depress a feature button with an ACTION of "DNPUSE" on the corresponding PDIT, IDPDCA and/or CFGGRP forms to allow the TN to be displayed.

- Per-Call Privacy - A user with PRIVACY set to "N" on the corresponding LINE, DSLUSR or MLHLN form will allow their TN to be displayed on the called party's terminal. The user may prevent their TN from being sent on a per-call basis by subscribing to the Display feature with TN privacy (defined on the DISPFD form with TN PRIVACY set to "Y"). Once the feature is assigned, the user may enter a Dial Code or depress a feature button with an ACTION of "DNPUSE" on the corresponding PDIT, IDPDCA and/or CFGGRP forms to prevent the TN from being displayed.

1.16 Translation Requirements

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26A	12.9
CFGGRP	5964	6	7A	12.5
DSAPP	5537	3	5AK	8.17
DSLUSR	5908	5	1I	23.2
IDPDCA	5601-1/2	4	2B	9.13
IDPRDCA	5601-11	4	2K	9.27
IDPRICM	5601-12	4	2L	9.26
LASSCK	5946	5	5G	8.19
LASSOP	5945	5	5F	8.21
LASSPFX	5947	5	5H	8.20
LINE	5109-1/2/3	3	1I	1.5
LSACFD	5970-1	6	13A	12.47
LSACLPA	5970-2	6	13B	1.47
LSACMPA	5970-3	6	13C	3.47
LSARFD	5971-1	6	14A	12.48
LSARLPA	5971-2	6	14B	1.48
LSARMPA	5971-3	6	14C	3.48
LSCOTFD	5972	6	15	12.49

1.17 Line Translations

LINE form (5109 Record) - AC ALW, AR ALW, COT ALW and PCP ALW fields indicate which features are available on the line for the generally available basis.

MLHLN form (5111 Record) - AC ALW, AR ALW, COT ALW and PCP ALW fields indicate which features are available on the line for the generally available basis.

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1.18 Routing And Charging Translations

PDIT form (5300-2 Record) - LASS dial codes for the Office Dialing Plan are defined on the form. The ACTIONs are:

Valid ODP ACTIONs

ACTION	Description
ACCANC	Automatic Callback deactivation
ACUSE	Automatic Callback activation
ARCANC	Automatic Recall deactivation
ARUSE	Automatic Recall activation
CNDACT	Calling Number Delivery activation
CNDDCT	Calling Number Delivery deactivation
COTUSE	Customer Originated Trace activation
DNPUSE	Per-Call Privacy activation/deactivation

1.19 Miscellaneous Translations

DSAPP form (5537 Record) - This form is used to specify information for CCS7 trunks. An application of "LASS" must be defined with its corresponding subsystem number.

1.20 BRCS Translations

IDPDCA form (5601 Record) - LASS dial codes for the Individual Dialing Plan are defined on the form. The ACTIONs are:

Valid IDP ACTIONs

ACTION	Description
ACCANC	Automatic Callback deactivation
ACUSE	Automatic Callback activation
ARCANC	Automatic Recall deactivation
ARUSE	Automatic Recall activation
CNDACT	Calling Number Delivery activation
CNDDCT	Calling Number Delivery deactivation
COTUSE	Customer Originated Trace activation
DNPUSE	Per-Call Privacy activation/deactivation

IDPRDCA form (5601-11 Record) - This form supports the interaction between AC and intra-office intercom dialing. It takes the public TN from the network and associates a reverse intercom range (REV ICM RANGE field) with the number.

IDPRICM form (5601-12 Record) - This form takes the public TN, deletes and prefixes the appropriate digits to reconstruct the appropriate intercom dialing sequence.

BFG form (5625 Record) - AC RNGBK TYPE and AR RNGBK TYPE fields were added for Automatic Callback/Automatic Recall to define the distinctive ringing pattern for ringback alerting.

1.21 ISDN/Packet Switching Translations

DSLUSR form (5908 Record) - AC ALW, AR ALW, COT ALW and PCP ALW fields indicate which features are available on the line for the generally available basis.

LASSOP form (5965 Record) - Defines office parameters for LASS features. This form contains default parameters for AC/AR, COT and ICLID PCP.

LASSCK form (5946 Record) - Defines the choke numbers that cannot be camped on when AC/AR is activated.

LASSPFX form (5947 Record) - The prefix of "1" can be required by offices when dialing a NPA or an NXX. If an office selects to use a prefix, there may be some exceptions where a prefix cannot be used. If an office chooses not to use a prefix, there may be a few office codes where a prefix is needed. Used with the Automatic Callback feature.

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1.22 ISDN BRCS Translations

CFGGRP form (5964 Record) - LASS button features for the ISDN station set are defined on the form. The ACTIONs are:

Valid ISDN Button ACTIONs

ACTION	Description
ACCFB	Automatic Callback deactivation
ACUFB	Automatic Callback activation
ARCFB	Automatic Recall deactivation
ARUFB	Automatic Recall activation
CNDFBP	Calling Number Delivery activation/deactivation
COTFBP	Customer Originated Trace activation
DNPUSE	Per-Call Privacy activation/deactivation

DISPFD form (5965 Record) - This form is used to define the display and privacy features allowed on a terminal.

LIDFD form (5966 Record) - This form is used to define whether the calling number will be displayed at a terminal.

LSACFD form (5970-1 Record) - This form is used to define a constructed Automatic Callback feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line).

LSACLPA form (5970-2 Record) - This form is used to assign line parameters to a TN, if they are different from the parameters defined on the LSACFD form.

LSACMPA form (5970-3 Record) - This form is used to assign line parameters to a MLHG/TERM, if they are different from the parameters defined on the LSACFD form.

LSARFD form (5971-1 Record) - This form is used to define a constructed Automatic Recall feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line).

LSARLPA form (5971-2 Record) - This form is used to assign line parameters to a TN, if they are different from the parameters defined on the LSARFD form.

LSARMPA form (5971-3 Record) - This form is used to assign line parameters to a MLHG/TERM, if they are different from the parameters defined on the LSARFD form.

LSCOTFD form (5972 Record) - This form is used to define a constructed Customer Originated Trace feature.

Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line).

2. 5E7 LASS ENHANCEMENTS

With 5E7 the following features were added to enhance the current LASS features. For information on LASS SLE, see Division 2, Section 1Z.

2.1 LASS Announcements For Activation Toward CFV

With 5E7 and later, when an Automatic Recall or Automatic Callback is attempted on a line with Call Forwarding active, a short-term denial announcement rather than reorder tone can be provided from a recorded announcement facility (e.g., 13A).

To receive the announcement rather than reorder tone, the CF ACTIVE DNY RTI field must be specified on the LASSOP form (5945 Record)

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2.2 LASS AR/AC Dual Timer Queuing Activation

With 5E6 and earlier, when a LASS AR or AC activation request is made to the same DN as previously requested, the 5ESS Switch treats the request like a new activation. The previous activation is removed from the queue and a new activation is placed at the end of the queue.

With 5E7 and later, the customer will be allowed to maintain their position in the queue with a reactivation request to the same DN rather than a new request. At the initial activation of the feature, both the T1 timer (initialized via the TIMEOUT field on the LASSOP form, 5945 Record) and the T13 timer (initialized by the MAX CAMP TIME field on the LASSOP form) will be set instead of only one (T1 timer). The T1 timer limits how long a camp-on will remain active toward a particular TN. It can continually be reset if the originator requests activation while the T1 and T13 timers have not expired. The new T13 timer will limit the total length of time a camp-on can exist through activations and reactivations of AC or AR on the same TN.

2.3 LASS AR/AC AMA Reactivation

When a LASS Automatic Recall or Automatic Callback activation is made, the switch can not distinguish if this is an initial activation or a reactivation for AMA billing purposes. With this enhancement, AMA recordings of activations and reactivation will be made so that reactivations can be billed.

2.4 LASS Concurrent Activation Limit and Per Line Queue Size Limit

The 5ESS Switch does not currently limit the number of AR or AC activations by a given line or the number of queue slots that a given terminating line may have to hold AR or AC activation requests. With this enhancement the switch owner will be able to allow a customer to have up to 30 AR (AR ORIG CAMP LIM field on the LASSOP form) requests active at a time and up to 30 AC (AC ORIG CAMP LIM field on the LASSOP form) requests at the same time. A limit will also be placed on the number of AR and AC requests (TERM CAMP LIM field on the LASSOP form) that can be active against any terminating DN. This limit can be set up to 20 combined queued requests. A request that exceeds this limit will be provided reorder tone.

2.5 LASS AR/AC Activation Towards a MLHG with Queuing

The user of AR or AC is allowed to invoke it against MLHG DNs. Prior to 5E7 the 5ESS switch treats the MLHG as idle only if there is an idle hunt group member. If the DN specified for the AR or AC is allowed to use the queue for AR or AC activations, then the 5ESS Switch treats the MLHG as idle with respect to AR or AC activations if there is an idle member, or if there is an available queue position.

2.6 LASS Screen List Editing Compliance

This feature will provide further compliance of the LASS Screen List Editing feature with Bellcore requirements. This feature will impact the following:

- new announcements available by providing new HEADER IDs on the ANNHD form (5531 Record) and new PHRASE IDs on the PHRASE form (5534 Record).
- new DISPLAY IDs on the DISPMSG form (5980 Record) are provided to provide all LASS displays.
- RC View 8.65 is modified to allow the switch owner to change all LASS displays in 5E6.

NOTE: FEATURE ID 536 must be activated on RC View 8.22 to provide the new announcements and displays. This activation is used only to switch from the 5E6 set of announcements to 5E7, after the switch is up.

2.7 2-Level Activation For LASS AC And COT

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The 2-Level activation feature enhances the activation procedure for two 5E5 LASS features, COT and AC. The second level of activation provides the end user an opportunity to cancel the feature activation.

2-level switch owners with ISDN terminals are allowed to edit display messages for LASS AC, and COT activations. Also, Inspect Displays for LASS feature buttons only may be modified.

2-Level Activation of COT provides the subscriber with an announcement following the normal activation by dial code (or feature button) indicating that a trace of the last incoming call is being requested and this request will result in an additional cost to the subscriber. The actual amount of the trace can be provided in the announcement by entering the cost in the COT COST field on the LASSOP form. Otherwise, the amount of the trace is not included. The subscriber can dial 1 to proceed with the trace or disconnect to cancel the trace request. The subscriber can interrupt the announcement at any time by dialing or by going onhook.

2-Level Activation of AC provides the subscriber with an announcement indicating that a call back activation will be made to the LICDN (Last In Coming Directory Number). Also, the announcement may include the time and date by entering the AC VOICE BACK field on the LASSOP form. After the announcement has been provided, the subscriber can then dial 1 to proceed with the call back or disconnect to cancel the call back request.

Feature Assignment: To provide 2-Level COT and AC on the switch, the following must be defined:

- COT ACT LVL and AC ACT LVL must have 2 entered on the LASSOP form.
- The FIXRT form must have a FIXED ROUTE TYPE of "2LEVEL" assigned.
- The ANNAPL form must have an APPLICATION of "2LEVEL" to provide default data for the announcement forms (PHRASE, ANNHD, and ANNDG).
- The DISPMSG form may be used to modify the displays.
- The EQRAP form must have a MICROCODE of 5D142A20 assigned and installed in pack 1 of the RAF.

2.8 5E7 LASS Enhancements Translation Requirements

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LASSOP	5945	5	5F	8.21
TKGRP	5202-1/2/3/4	3	2A	5.1
FIXRT	5301-1	3	3G	10.1
ANNAPL	5529	3	5AC	8.64
ANNHD	5531	3	5AE	8.61
ANNDG	5532	3	5AF	8.60
PHRASE	5534	3	5AH	8.63
DISPMSG	5980	6	23	8.65
EQRAP	5822	8	36	20.10, 20.22

LASSOP form (5945 Record) - COT ACT LVL and AC ACT LV must have 2 entered.

TKGRP form (5202 Record) - TRK DIR must be "RAF", TRKCLS must be "RAFDTA", SVC GRP must be "RAS", and QUEUE ALLOWED "N".

FIXRT form (5301 Record) - FIXED ROUTE TYPE must be "2LEVEL".

ANNAPL form (5529 Record) - APPLICATION must be "2" or "2LEVEL", and at least one associated ANNHD form and one ANNDG form must exist.

ANNHD form (5531 Record) - FEATURE ID 536 must be activated on RC VIEW 8.22 to receive the new

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5E7 LASS HEADER IDs. Otherwise, the LASS HEADER IDs marked as "5E6 and later" in the default data will be supplied to the end user. APPLICATION must be "2" or "2LEVEL", and at least one associated ANNAPL form and one ANNDG form must exist. Also, new PHRASES entries of 16387 (Date), 16388 (Time), and 16389 (Number of dollars and cents) are valid.

ANNDG form (5532 Record) - APPLICATION must be "2" or "2LEVEL", and at least one associated ANNHD form and one ANNAPL form must exist.

PHRASE form (5534 Record) - FEATURE ID 536 must be activated on RC View 8.22 to access LASS phrases 411 through 443. Otherwise, the LASS HEADER IDs marked as "5E6 and later" in the default data will be supplied to the end user. APPLICATION must be "2" or "2LEVEL". Also, new PHRASES entries of 16387 (Date) and 16388 (Time) are valid.

DISPMSG form (5980 Record) - Displays are available for SLE, Inspect feature (for LASS feature buttons only), and 2-Level activations of AC and COT. When FEATURE ID 536 is activated on RC View 8.22, the SLE displays marked as 5E7 and later and the SLE displays marked with an asterisk will be provided from the 5E7 default data Otherwise, the SLE displays marked as 5E6 and later will be provided. DISP TYPE must be entered, as well as DISP ID. DISPLAY's entry must conform to the entries for DISP TYPE and DISP ID.

EQRAP form (5822 Record) - The entry for APPLICATION must correspond to the type of announcements supported by the announcement storage circuit packs (TN1053 and TN1054). For the 2-Level feature, use List 22, an APPLICATION of "BRCS-2LV", PACK1 of "5D142A20", and a SERVICE TYPE (EQRA) of "DTA".

3. BULK CALLING LINE IDENTIFICATION

BCLID is a LASS feature available for 5E8 and later providing call-related information on incoming calls for BRCS/Centrex, Multi-Line Hunt Group, and PBX customers. BCLID provides data only for calls from outside BRCS/Centrex Groups, MLHGs, or PBXs. PBX customers must either have DID (Direct Inward Dialing) capability or be part of an MLHG.

The call-related information (also referred to as the BCLID message) includes:

- The calling DN - set to "P" if the LASS privacy indicator is set, and set to "O" if unavailable.
- The calling line multistatus - set to "M" (for multi), if the true calling DN cannot be identified (that is, for multi-party, PBX, etc.); otherwise set to "T" for the true DN. This indicator is set to "B" if the billing number is provided instead of the calling number.
- The date (day and month) - provided as an option.
- The time the call was received - hours, minutes, and seconds.
- The called DN - replaced by the port/terminal number and group identifier of the called party, if in a Multi-Line Hunt Group.
- The busy/idle status of called DN - if it cannot be determined that the called DN is busy (e.g., PBX), the status is always set to idle.

For interoffice calls, BCLID requires use of Common Channel Signaling so that the calling party information can be provided by the originating switch. Information is transmitted from the terminating switch shortly after each call is received over an API (Application Processor Interface) link. The link terminates to either:

- a DISDNI (Digital Integrated Services Digital Network Interface) connected to an AP (Application Processor), or

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- a 3A translator connected to CPE (Customer Premise Equipment) such as computer terminals, minicomputers, magnetic-tape devices or related equipment.

The AP or CPE translates and provides display or storage of transmitted BCLID data. The transmission of this data does not affect completion of any calls.

BCLID can be provisioned on a subscription-only basis, with BFGs (BRCS Feature Groups). BCLID can also be assigned on a per Trunk Group or per DN/line basis. Billing for BCLID can be on a flat rate or on a usage-sensitive basis.

The end customer does not have the ability to activate or deactivate the BCLID feature. The LEC activates or deactivates BCLID service using the BCLIDGP form. This activates/deactivates all BCLID customers using this BCLID group.

3.1 BCLID Interfaces with Existing Capabilities

The following text details feature interactions for BCLID having impact on translations. For other interactions, see the ***5ESS Switch LASS Feature Document, 235-190-130.***

For Lines and MLHGs, the following CLASSes OF SERVICE on the LCC form (5306 Record) support BCLID: "INDIV", "ATND", "ISDN", "ISATND", "4WINDIV", "PBX", "CHGCALL", "SATSTLN", "CALLBK", "HOTPBX", and "HOTMOTL".

For Trunks, the following TRKCLSs support BCLID; "PF", "PFLASH", "PFITT", "PBXDID", "EDSL" and "EDSLSM".

3.1.1

3.1.2 Automatic Customer Station Rearrangement

If ACSR (Automatic Customer Station Rearrangement) is used to move a station set to another location within the Switch, and the DNs for the station set have BCLID assigned, the assignment of BCLID, the active/inactive status of BCLID, and the billing must remain unchanged by the move.

3.1.3 Multi-Line Hunt Groups (Voice and Data)

BCLID must be assigned directly to MLHG 1.

When termination is made to an MLHG member, the MLHG group is checked to see if BCLID is assigned to it. If so, a BCLID message is sent.

A BCLID message is sent for every termination to an MLHG member, regardless of whether the termination is the result of dialing a Hunted DN, Individual DN, or Non Hunt DN.

If the termination is the result of a hunt, the MLHG is considered busy (for the busy/idle status of the BCLID message) only when all members of the MLHG are busy, or when the MLHG has been made artificially busy (as with a group make busy key). When the MLHG is busy, the member number in the BCLID message is zero.

If the termination is not the result of a hunt, the busy/idle status of an individual DN applies. A Non Hunt DN can have BCLID individually in order to get BCLID messages for Non Hunted calls.

If the BCLID customer wishes to record BCLID information only for calls that originate outside the TG (Terminal Group), (which is identified by the default value of <169>Y<170> for INTER GRP ONLY on the BCLIDFD form), the customer must assign a TG feature to MLHG 1. The 5ESS Switch software then records a BCLID message when the TGID (Terminal Group ID) of the originating party is <->non-existent,

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or does not match the TGID of the TG feature for MLHG 1.

When the called DN to be recorded in the BCLID message is an MLHG DN, the DN is replaced with a <->two-digit MLHG ID associated with the MLHG, and the MLHG member number for the call termination. The MLHG ID has no real association with the MLHGs defined in the Switch, but is just a way to aid in identifying a BCLID customer.

The following scenario is an example of how the MLHG ID could avoid confusion:

Suppose a customer owns two different MLHGs and both are assigned to BCLID. BCLID messages may or may not be received on the same AP.

But if the customer decides to receive the messages generated by both MLHGs on the same AP, then the MLHG ID can be assigned differently for both MLHGs, to identify which MLHG the message comes from.

Circular Hunt, Uniform Call Distribution Hunt, Precedence Hunt, ISAT (ISDN Attendant) Hunt, and MUPH (Multiple Position Hunt), are treated the same as Regular Hunting.

3.1.4 Series Completion

For BCLID to be assigned to an SC (Series Completion) list, each DN in the list must be assigned the feature, or be assigned a BFG that subscribes to the BCLID feature.

If the BCLID customer wishes to record BCLID information only for calls that originate outside the SC list, the customer must assign a TG feature to each DN of the Series Completion list. The 5ESS Switch software then records a BCLID message when the TGID of the originating party is non-existent or does not match the TGID of the TG feature for the SC list.

When a call is made to an SC DN, an attempt is made to each member of the list until an idle member is found that can receive the call. Only one BCLID message is generated for each termination to an SC DN even though multiple attempts are made.

3.1.5 Terminal Group and Station Restriction (Voice and Data)

In Unrestricted Originating TGSR (Terminal Group and Station Restriction), for BCLID to be assigned to a TG, each DN for the group must be assigned the feature, or each DN for the group must be assigned a BFG that subscribes to the BCLID feature.

Unrestricted Terminating, Semirestricted Originating, Semirestricted Terminating, Fully Restricted Originating, and Fully Restricted Terminating TGSR are the same as Unrestricted Originating.

User-Side PRI (Primary Rate Interface) Implementation - (5E6)

A PBX configured as a PRI trunk group may be assigned BCLID.

For an incoming call that originates from an incoming PRI trunk and terminates to a BCLID customer, the calling DN/billing DN, calling DN privacy, and calling line DN multi-status indicator are obtained from the PRI SETUP message.

A "T" appears in the BCLID message as the calling DN multistatus indicator if the calling DN is unique, and an "M" appears if the calling DN is non-unique. When a call is made to a BCLID customer and the billing DN has been passed with no calling DN, a "B" appears in the BCLID message as the calling DN multistatus indicator.

If no calling or billing DN is sent in the PRI SETUP message, an "O" appears in the BCLID message as the calling DN. If the calling DN privacy sent shows the calling DN is private, a "P" appears in the BCLID message as the calling DN.

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If less than a 10 digit calling/billing DN is passed by the PRI, the missing digits are replaced by blanks in the BCLID message. If more than 10 digits are passed, only the first 10 are used.

Multipoint

BCLID works with Multiple Users and Terminals Per ISDN BRI the same as with single-user ISDN BRIs. BCLID is assigned to the DN, so calls to all users and terminals with that DN generate a BCLID message.

Calls terminating to multipoint DNs record the called DN as idle if there is any call appearance available to receive the call.

ISDN Multibutton Key System Services

When a DN appears as an MCA (Multiple Call Appearance) on a terminal, and that DN subscribes to BCLID, calls terminating to that DN record the called DN as idle if there is any call appearance available to receive the call.

BCLID can only be assigned to the MLHG group itself. Therefore, if a MLHG has Multiple DNs, those DNs may not be assigned BCLID.

3.2 5E8 BCLID Translation Requirements

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MLHG	5110	3	1J	3.5
TKGRP	5202	3	2A	5.1
BCLIDFD	5629-1	4	29A	12.62
BCLIDGP	5629-2	4	29B	4.62
BCLIDLPA	5629-3	4	29C	1.62
BCLIDMPA	5629-4	4	29D	1.62
LASSOP	5945	5	5F	8.21

See Figure 1 for the form flow for this feature.

MLHG form (5110 Record) - The MLHG form defines Multi-Line Hunt Group information.

The new field BCLID MLHG ID is a two-character number that can be sent as part of a BCLID message to the CPE, to identify Multi-Line Hunt Group customers generating the BCLID message.

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is common to the entire group. Trunk information for an individual member is entered on a TRUNK form.

The new field BCLID FEATURE contains the BCLID feature name. The new field BCLID GRP contains the name of the BCLID Group this trunk is associated with.

BCLIDFD form (5629-1 Record) - This is a new form. The BCLIDFD form defines various combinations of options available with the BCLID feature.

FEATURE contains the BCLID feature name.

AMA REC indicates whether BCLID billing is usage-sensitive or flat rate. INTER GRP ONLY indicates if BCLID messages are sent to the CPE only forInter-Terminal Group calls or for all calls. INCL DATE indicates whether the date is included in the BCLID message.

BCLID GRP contains the BCLID group name.

BCLIDGP form (5629-2 Record) - This is a new form. The BCLIDGP form defines the group information associated with the BCLID feature.

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BCLID GRP contains the BCLID Group name, BCID a Business Customer Identification, and AP SITE ID the Application Processor ID associated with this BCLID Group.

ALT AP SITE ID contains the optional alternate Application Processor ID used as an alternate destination AP for BCLID messages when the primary AP is unavailable.

GRP ACTIVE indicates whether BCLID records any of the incoming calls to this group.

BCLIDLPA form (5629-3 Record) - This is a new form. The BCLIDLPA form defines BCLID Line Parameters; it is used when a BCLID constructed feature is assigned to a non-Multi-Line Hunt line and the desired parameters are different from the default parameters on the BCLIDFD form.

TN contains the Telephone Number of the BCLID customer. FEATURE contains the BCLID feature name for which the BCLID group parameter is to be assigned. BCLID GRP contains the BCLID group name.

BCLIDMPA form (5629-4 Record) - This is a new form. The BCLIDMPA form defines BCLID Multi-Line Hunt line parameters; it is used when a BCLID constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters are different from the default parameters on the BCLIDFD form.

MLHG is the Multi-Line Hunt Group of the line. MEMB is defaulted to 0001. FEATURE contains the BCLID feature name for which the BCLID group parameter is to be assigned. BCLID GRP contains the name of the BCLID group.

LASSOP form (5945 Record) - The LASSOP form is an ODA input form used to supply global office options and parameters for the LASS features.

The new field BILLING CYCLE specifies the interval for collection of BCLID AMA records of 1, 2, 3, 4, 6, 8, 12, or 24 hours, applying only for BCLID customers with usage-sensitive billing.

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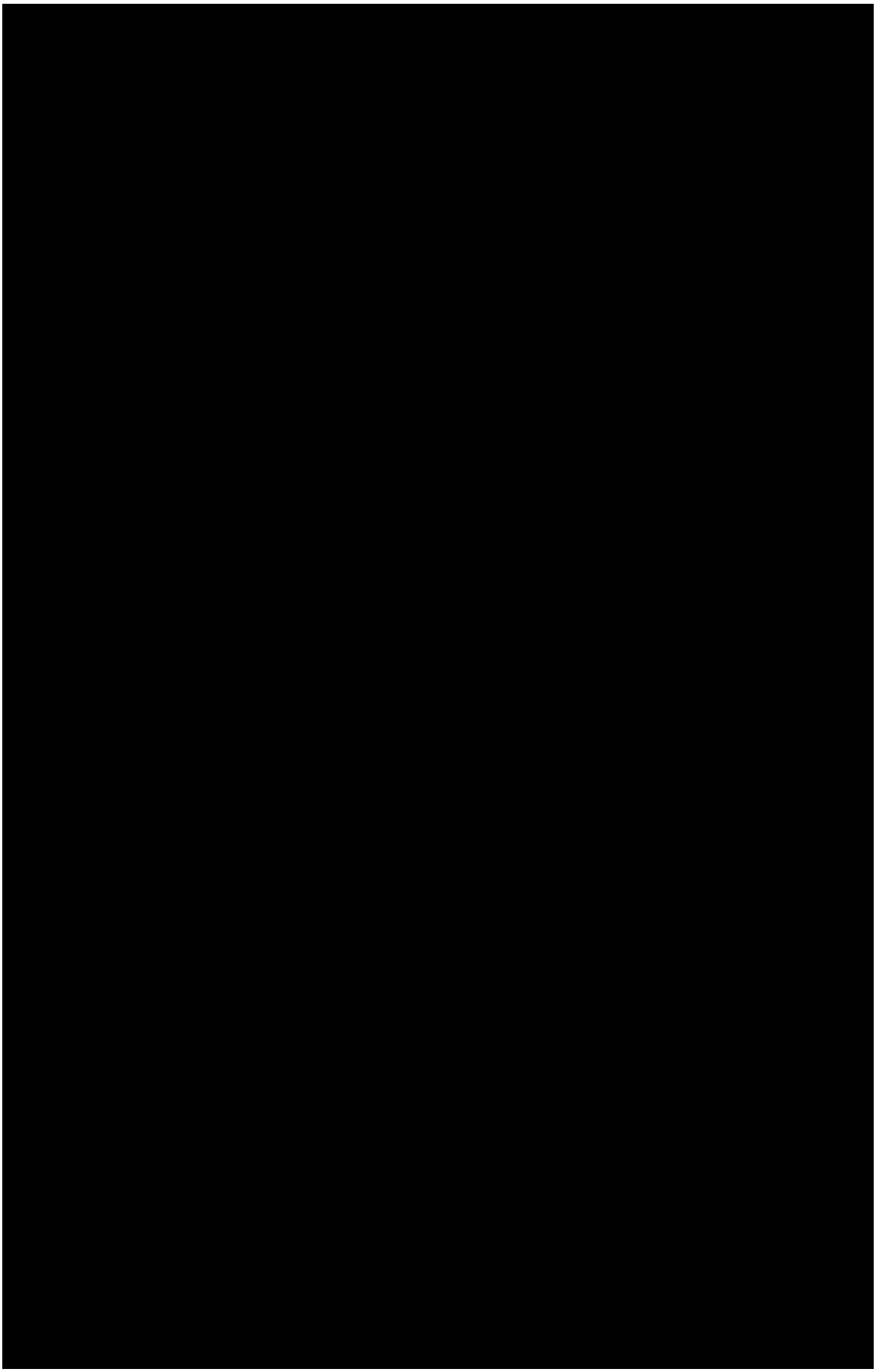

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Figure 1 FORM FLOW - BULK CALLING LINE IDENTIFICATION

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SEC. 1Z: LASS SELECTIVE FEATURES

1. INTRODUCTION

LSF (LASS Selective Features) are available in 5E6 and later Software Releases. The LSF are: SCA (Selective Call Acceptance), CAR (Computer Access Restriction), SCF (Selective Call Forwarding), SCR (Selective Call Rejection) and SDA (Selective Distinctive Alert).

The LSF are available for:

- intraswitch calls.
- interswitch calls provided there is CCS7 (Common Channel Signaling 7) connectivity or PRI connectivity between the originating and terminating offices.

For a detailed description of LASS (Local Area Signaling Services) Features, see AT&T 235-190-130.

2. LASS SELECTIVE FEATURES

2.1 LASS Selective Call Acceptance

Selective Call Acceptance allows residential and business subscribers to restrict which incoming voice calls will be allowed to terminate, based on the TNs entered in the Screening List.

For all terminating calls, the TN of the calling party is compared to the TNs entered in the Screening List. Only the TNs that match a TN on the Screening List will be allowed to terminate.

Calls that are not accepted will be sent to an announcement or may be forwarded to an alternate TN (forward to DN) depending on the user's selection at activation time.

The Screening List is created by the user during an SLE (Screen List Editing) session which is accessed via a dial code. The TNs entered in the Screening List may be 7- or 10-digit telephone numbers. For business users with IDPs (Individualized Dialing Plans), a 1- to 7-digit extension may be entered. The user may activate/deactivate the SCA feature via feature button or during the SLE session.

A user cannot be assigned the SCA feature and the CAR feature.

2.2 LASS Computer Access Restriction

Computer Access Restriction allows a business or residential subscriber to restrict the access of calling parties to the user's computer, based on the TNs entered in the Screening List. This provides the user control over who can access the computer.

For all terminating calls, the TN of the calling party is compared to the TNs entered in the Screening List. Only the TNs that match a TN on the Screening List will be allowed to terminate.

Calls that are not accepted will be sent to an announcement or may be forwarded to an alternate TN (forward to DN) depending on the user's selection at activation time.

The Screening List is created by the user during an SLE session which is accessed via a dial code. The TNs entered in the Screening List may be 7- or 10-digit telephone numbers. For business users with IDPs, a 1- to 7-digit extension may be entered. The user may activate/deactivate the CAR feature via feature button or during the SLE session.

A user cannot be assigned the CAR feature and the SCA feature.

2.3 LASS Selective Call Rejection

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Selective Call Rejection allows residential and business users to select which incoming voice calls will be rejected, based on the TNs entered in the Screening List.

For all terminating calls, the TN of the calling party is compared to the TNs entered in the Screening List. Only the TNs that match a TN on the screening list will be rejected and sent to either a harsh or gentle announcement.

The Screening List is created by the user during an SLE session which is accessed via a dial code. The TNs entered in the Screening List may be 7- or 10-digit telephone numbers. For business users with IDPs, a 1- to 7-digit extension may be entered. The user may activate/deactivate the SCR feature via feature button or during the SLE session.

2.4 LASS Selective Call Forwarding

Selective Call Forwarding allows residential and business users to restrict which incoming voice calls will be forwarded to an alternate TN (forward to DN), based on the identity attribute of the calling party.

For all terminating calls, the TN of the calling party is compared to the TNs entered in the Screening List TNs. Only the TNs that match a TN on the screening list will be forwarded.

The Screening List is created by the user during an SLE session which is accessed via a dial code. The TNs entered in the Screening List may be 7- or 10-digit telephone numbers. For business users with IDPs, a 1- to 7-digit extension may be entered. The user may activate/deactivate the SCF feature via feature button or during the SLE session.

2.5 LASS Selective Distinctive Alert

Selective Distinctive Alert allows residential and business users to select which incoming voice calls will be given a distinctive ring, based on the TNs entered in the Screening List.

For all terminating calls, the TN of the calling party is compared to the TNs entered on the Screening List TNs. Only the TNs that match a TN on the screening list will be given distinctive ringing.

TNs that do not match a TN on the screening list will be given the traditional ringing tone.

The Screening List is created by the user during an SLE session which is accessed via a dial code. The TNs entered in the Screening List may be 7- or 10-digit telephone numbers. For business users with IDPs, a 1- to 7-digit extension may be entered. The user may activate/deactivate the SDA feature via feature button or during the SLE session.

3. LASS SLE SESSION

The SLE session is accessed via the appropriate LSF dial code (defined on PDIT and/or IDPDCA forms (5601-1/2 Record)). The session interactively guides users in editing Screening Lists TNs, activating an LSF, deactivating an LSF and updating the terminating treatment of the calling parties, through announcements for both analog and ISDN users. For ISDN users with terminals that have display capabilities, a display message may be provided along with the announcement.

Screen List TNs may be entered as a 7- or 10-digit TN or 1- to 7-digit extension TNs for users in an IDP group. In addition, the last calling party TN may be added to or removed from the Screening List. If a calling party has TN privacy, the added entry will be considered private and will not be voiced back or displayed to the SLE user.

All TNs may be validated before adding them to the Screen List to ensure that the calls will be screened properly during feature activation. Interoffice CCS7 connectivity, interoffice PRI connectivity, or an intraoffice TN must be provided before a TN can be validated or screened successfully. The VALIDATE LIST ENTRY must be set to "Y" on the LASSOP form (5945 Record) to provide interswitch TN validation.

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4. FEATURE ASSIGNMENT

Since the LSFs are set to "UNAVAIL" by ODA, they must be turned on via RC/V view 8.18 after the switch is in service. The LSFs are turned on per SM (Switching Module) by entering "GENAVAIL" or "SUBSCR" in the corresponding LSF field. When "GENAVAIL" is entered, a default LSF (assigned on the LASSOP form) may be assigned to a particular user via a line definition form or another LSF may be assigned to a user via the corresponding feature assignment form.

4.1 Generally Available

On a GA (Generally Available) basis, the default LSFs for the office are defined on the LASSOP form by entering a preconstructed or constructed feature name in the appropriate LSF GA FEAT field.

If a constructed feature is entered on the LASSOP form, it must be defined on the associated feature definition form (e.g., LSCAFD form (5975 Record)).

The LSF does not have to be assigned to an individual line, using the traditional BRCS line assignment forms (i.e., LINEFA (5112 Record), BFG (5625 Record) or associated CLUSTR form (5600 Record)). Although, each user must have "Y" entered in the appropriate LASS Selective Feature GA field (SCA GA ALW, SCF GA ALW, SCR GA ALW and/or SDA GA ALW fields) on the DSLUSR or LINE forms in order to receive a particular LSF.

- ***NOTE:*** The appropriate LSF fields must be set to "GENAVAIL" on RC/V view 8.18 before the switch can provide Generally Available LSFs.

- ***NOTE:*** Multiline Hunt Lines may not be assigned Generally Available LSFs.

- ***NOTE:*** CAR is only provided on a subscription basis.

4.2 Subscription

When the Generally Available default LSF does not meet the users needs another LSF may be assigned to a line or a Multiline Hunt line. The LSF (i.e., SCA, CAR, SCR, SCF, SDA) must be assigned to an individual user's TN, which is defined on the LINE form (5109 Record), DSLUSR form (5908 Record) or MLHLN form (5111 Record), using the appropriate line assignment form, LINEFA form (5112 Record), MLHLNFA form (5113 Record), associated BFG form (5625 Record) or an associated CLUSTR form (5600 Record).

- ***NOTE:*** The appropriate LSF fields must be set to "GENAVAIL" or "SUBSCR" on the RC/V view 8.18 before the switch can provide subscription LSFs.

4.3 Dial Codes

The dial codes are used by the user to access the SLE session. The switch must provide at least 2 dial codes per LSF for the ODP and each IDP that allows LSFs. The pair of dial codes is needed to provide the proper announcements to users with or without access to the pound sign and asterisk buttons on their phones.

The dial codes are defined on the PDIT form (5300-2 Record) for the ODP and/or IDPDCA form (5601-1/2 Record) for users with an IDP. An ACTION of "LSFSYM" may be used by all users but provides announcements asking for pound sign and asterisk buttons to be entered rather than digit keys on the user's phone. An ACTION of "LSFNOSYM" may be used by all users but provides announcements asking for digit keys to be entered rather than pound sign and asterisk buttons on the user's phone. Each of the ACTIONs must have a corresponding LSF entered in the FEATURE field.

For IDP groups which have asterisks and/or pound signs in their Individualized Dialing Plan, the SLE SYMBOL field must be entered on the IDPGP form (5601-4 Record) to allow the appropriate symbols to be entered with an extension or Forward to DN during an SLE session.

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4.4 Feature Buttons

LSF feature buttons may be defined for ISDN users to toggle between LSF activation and deactivation. The feature button does not allow the user to begin an SLE session. The feature buttons must be defined on the CFGGRP form (5964 Record) with an ACTION of "SCAFB", "SCFFB", "SCRFB" and/or "SDAFB" and the corresponding FEATURE field must be assigned the appropriate LSF name, defined on the LSCAFD/LSCARFD (5975 Record/5979 Record), LSDAFD (5978 Record), LSCFFD (5976 Record) and/or LSCRFD forms (5977 Record).

NOTE: "SCAFB" is used for both SCA and CAR.

4.5 DSU2-RAF-DTA Announcements

The LASS SLE session provides announcements (standard input data provided by ODA) on the following forms: ANNHD (5531 Record), ANNDG (5532 Record) and PHRASE (5534 Record).

NOTE: The LASS APPLICATION must be entered on the ANNAPL form (5529 Record) before Standard Input Data will be provided for the ANNHD form (5531 Record) and ANNDG form (5532 Record).

The announcements are invoked by the user dialing an access code. The access code alerts the switch that a LASS fixed route type (defined on the FIXRT form (5301-1 Record) with a value of "SLE") is needed. The fixed route type determines which route index, defined on the RTIDX form (5303 Record) is needed to route the call over the trunk (TKGRP form (5202 Record), and TRUNK form (5204 Record)) to the DSU2-RAF (Digital Service Unit Model 2 - Recorded Announcement Function). The DSU2-RAF and its announcement packs are defined on the EQRA form (5821 Record) and EQRAP form (5822 Record).

4.6 13A Announcements

The 13A announcements are needed to provide SCA, CAR, and SCR rejection announcements to the calling parties that fail the LSF screening. The route indexes are assigned on the LASSOP form and must be defined on the RTIDX form. The route index is used to access the announcement trunks (TRUNK and TKGRP forms).

4.7 ISDN Display Messages

The ISDN display messages may be displayed (standard input data provided by ODA on the DISPMSG form (5980 Record)) to the user during an SLE session, if the following attributes are assigned:

A. The user is defined on the DSLUSR form and the DISPLAY field has a value of "Y", indicating the terminal has display capabilities.

B. The user has a CLASS OF SERVICE set to "ISDN" on the associated LCC form (5306 Record).

NOTE: The Standard Input Data must reside on the originating SM of the LASS SLE user. Also, an ISDN user must reside on the SM before the Standard Input Data is provided by ODA.

5. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109	3	1I	1.1, 1.2, 1.3, 1.4, 1.5, 1.6
MLHLN	5111	3	1K	3.2
LINEFA	5112	3	1L	1.8, 1.11, 1.12
MLHLNFA	5113	3	1M	3.8, 3.11, 3.12

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TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5
PDIT	5300-2	3	3B	9.2
FIXRT	5301-1	3	3G	10.1
RTIDX	5303	3	3P	10.2
ANNAPL	5529	3	5AC	8.64
ANNHD	5531	3	5AE	8.61
ANNDG	5532	3	5AF	8.60
PHRASE	5534	3	5AH	8.63
DSAPP	5537	3	5AK	8.17
CLUSTR	5600	4	1A	12.2
BFG	5625	4	26A	12.9
IDPDCA	5601-1/2	4	2B	9.13
IDPGP	5601-4	4	2D	9.10
DSLUSR	5908	5	1I	23.2
LASSOP	5945	5	5F	8.21
CFGGRP	5964	6	7A	12.5
LSCAFD	5975	6	18	12.55
LSCARFD	5979	6	22	12.54
LSDAFD	5978	6	21	12.58
LSCFFD	5976	6	19	12.56
LSCRFD	5977	6	20	12.57
DISPMSG	5980	6	23	8.65
LSSLE	5981	6	24	4.48
EQRA	5821	8	35	19.10
EQRAP	5822	8	36	20.10, 20.22

5.1 Line Translations

LINE form (5109 Record) - This form is used to define the LASS user. The SCA GA ALW, SDA GA ALW, SCF GA ALW and SCR GA ALW fields indicate which features are available on the line for the generally available basis.

MLHLN form (5111 Record) - This form defines a member of a hunt group which has an LSF assigned. The feature may be assigned to terminal 1 or a terminal which has the NONHUNT field set to "Y".

- ***NOTE:*** Generally Available LSFs are not available to members of a hunt group.

LINEFA form (5112 Record) - This form is used to assign the LSF to a line (defined on the LINE or DSLUSR form) on a subscription basis.

MLHLNFA form (5113 Record) - This form is used to assign the LSF to a terminal (defined on the MLHLN or DSLUSR form) on a subscription basis.

5.2 Trunk Translations

TKGRP form (5202 Record) - This form defines the DSU2-RAF and 13A Announcement Trunk Groups. The following fields must be entered to receive the LASS SLE announcements:

Field	Value
TRK DIR	"RAF"
TRKCLS	"RAFDTA"
SVC GRP	"RAS"

The following fields must be entered to receive 13A announcements for SCA, CAR, and SCR rejection announcements:

Field	Value
TRK DIR	"ANN"
TRKCLS	"ANNCMNT"
HUNT TYPE	"FIFO"

The route indexes are assigned on the LASSOP form and should be defined on the RTIDX form.

TRUNK form (5204 Record) - This form defines the RAF EN for each trunk member that will provide DSU2-RAF announcements. Also, the TEN's are defined for 13A announcements.

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For RAF EN assignments, the RAF's channel numbers should be assigned sequentially beginning at channel 2 leaving holes where stuffing pattern 1, 2, or 3 indicates (see stuffing patterns in Division 3, Section 2Q). The stuffing pattern is determined by RAF unit and DATA GROUP. The lowest numbered RAF unit (defined on the EQRA form) per DATA GROUP (data interface 0 or 1) should receive stuffing pattern 1, the next lowest should receive pattern 2, the next lowest should receive pattern 3, the next lowest would then receive pattern 1, and etc. (See Division 8, Section 22 for information on Time Slot engineering.

5.3 Routing and Charging Translations

PDIT form (5300-2 Record) - LASS dial codes for the Office Dialing Plan are defined on the form.

Valid ACTION Entries	
Entry	**Definition**
LSFSYM	The LSF action prompts the user for asterisks and pound signsduring an SLE session.
LSFNOSYM	The LSF action prompts the user for digits rather than thepound sign and asterisk during an SLE session.

FIXRT form (5301-1 Record) - This form defines the FIXED ROUTE TYPE of "SLE" which selects the route index needed to access the DSU2-RAF Announcement Trunk group. The ROUTE INDEX must be defined on the RTIDX form.

RTIDX form (5303 Record) - This form defines the ROUTE INDEX which is used to access the DSU2-RAF and 13A Announcement Trunk Groups. The TGN must be defined on the TKGRP form.

5.4 Miscellaneous Translations

ANNAPL form (5529 Record) - The Announcement Application view determines what type of announcements will be provided for a particular SM. An APPLICATION with a value of "LASS" must be entered for the SMs where the DSU2-RAF for LASS announcements is attached.

ANNHD form (5531 Record) - The Announcement Header Phrase List form contains phrase identifications that comprise announcement headers. A standard set of data is provided by ODA as each office is built and normally no data need be entered by the ODA system users.

ANNDG form (5532 Record) - The Announcement Digit Inflection Scheme form contains the inflection commands and phrase identifications that comprise a template for digit strings. A standard set of data is provided by ODA as each office is built and normally no data need be entered by the ODA system users.

PHRASE form (5534 Record) - The Announcement Phrase List form defines the phrases that comprise announcements. A standard set of data is provided by ODA as each office is built and normally no data need be entered by the ODA system users.

DSAPP form (5537 Record) - This form is used to specify information for CCS7. The application "LASS" should be assigned.

5.5 BRCS Translations

CLUSTR form (5600 Record) - This form allows the LSFs to be assigned to a user by grouping features together under a CLUSTER NAME.

BFG form (5625 Record) - This form allows the LSFs to be assigned to a user by grouping features together under a BFG NAME.

IDPDCA form (5601 Record) - LASS dial codes for the Individual Dialing Plans are defined on this form. The corresponding ACTIONs are:

Valid ACTION Entries	
Entry	**Definition**

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LSFSYM	The LSF action prompts the user for asterisks and pound signsduring an SLE session.
LSFNOSYM	The LSF action prompts the user for digits rather than thepound sign and asterisk during an SLE session.

IDPGP form (5601-4 Record) - This form is used to define an IDP group. The SLE SYMBOL field determines which symbols (i.e., '*', '#') an IDP user may use during an SLE Session.

5.6 ISDN/Packet Switching Translations

DSLUSR form (5908 Record) - The SCA GA ALW, SDA GA ALW, SCF GA ALW and SCR GA ALW fields indicate which features are available on the line for the generally available basis.

LASSOP form (5945 Record) - Defines office parameters for LASS features. This form contains default parameters for LSFs.

5.7 ISDN BRCS Translations

CFGGRP form (5964 Record) - This form defines the LASS feature buttons which activate/deactivate the LSFs.

Valid ACTION Entries	
Entry	**Definition**
SCAFB	LASS Selective Call Acceptance and Computer Access RestrictionFeature Button
SCFFB	LASS Selective Call Forwarding Feature Button
SCRFB	LASS Selective Call Rejection Feature Button
SDAFB	LASS Selective Distinctive Alert Feature Button

LSCAFD form (5975 Record) - This form is used to define a constructed SCA feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line). All users (defined on the LINE, DSLUSR or MLHLN form) that are assigned this feature must have a CLASS OF SERVICE with a value of "ISDN", "INDIV", "4WINDIV" or "PBX" defined on the LCC form.

LSCARFD form (5979 Record) - This form is used to define a constructed CAR feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line). All users (defined on the LINE, DSLUSR or MLHLN form) that are assigned this feature must have a CLASS OF SERVICE with a value of "ISDN", "INDIV", "4WINDIV" or "PBX" defined on the LCC form.

LSDAFD form (5978 Record) - This form is used to define a constructed SDA feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line). All users (defined on the LINE, DSLUSR or MLHLN form) that are assigned this feature must have a CLASS OF SERVICE with a value of "ISDN", "INDIV" or "PBX" defined on the LCC form.

LSCFFD form (5976 Record) - This form is used to define a constructed SCF feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line). All users (defined on the LINE, DSLUSR or MLHLN form) that are assigned this feature must have a CLASS OF SERVICE with a value of "ISDN", "INDIV", "4WINDIV" or "PBX" defined on the LCC form.

LSCRFD form (5977 Record) - This form is used to define a constructed SCR feature. Several preconstructed features are provided. The feature name is used to assign the feature to each terminal (line). All users (defined on the LINE form, DSLUSR form or MLHLN form) that are assigned this feature must have a CLASS OF SERVICE with a value of "ISDN", "INDIV", "4WINDIV" or "PBX" defined on the LCC form.

DISPMSG form (5980 Record) - This form provides the messages that are displayed to the user during an SLE Session. A standard set of data is provided by ODA as each office is built and normally no data need be entered by the ODA system users.

NOTE: For retrofits, an ISDN user must be defined on the SM before the display messages will be loaded into the SM.

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LSSLE form (5981 Record) - This form is used by the ODA system users to manually provide LASS Screen List entries to users that may not have the ability to activate an SLE Session which creates screen list entries.

5.8 Engineering Assignments

EQRA form (5821 Record) - This form defines the RAF (Recorded Announcement Function) unit. The RAF SERVICE TYPE must have a value of "DTA" for Dial Through Announcements.

The RAF circuit packs must be defined on the EQRAP form. Also, an associated TRUNK form must be entered with a RAF EN defined.

EQRAP form (5822 Record) - This form defines the RAF circuit packs. The SM must be defined on the EQIM form (5700-1 Record). The following fields must be entered:

Field	Pack1	Pack2
APPLICATION	BRCS-SLE	□
MICROCODE	5D142A10	5D143A20

Also, pack 3 may be included for customized announcements with a MICROCODE of 5D155xxx, where x will be provided on the pack.

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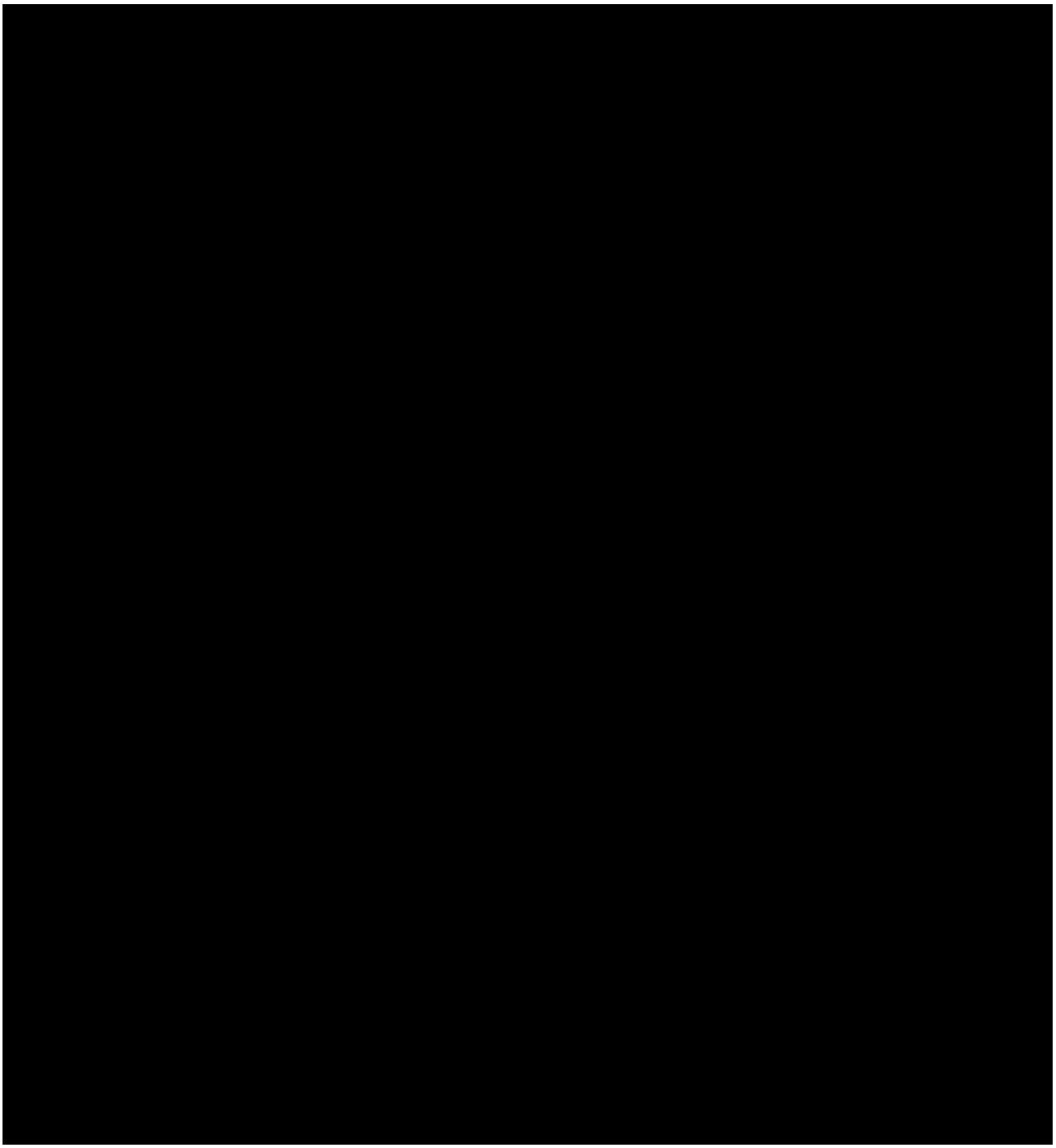

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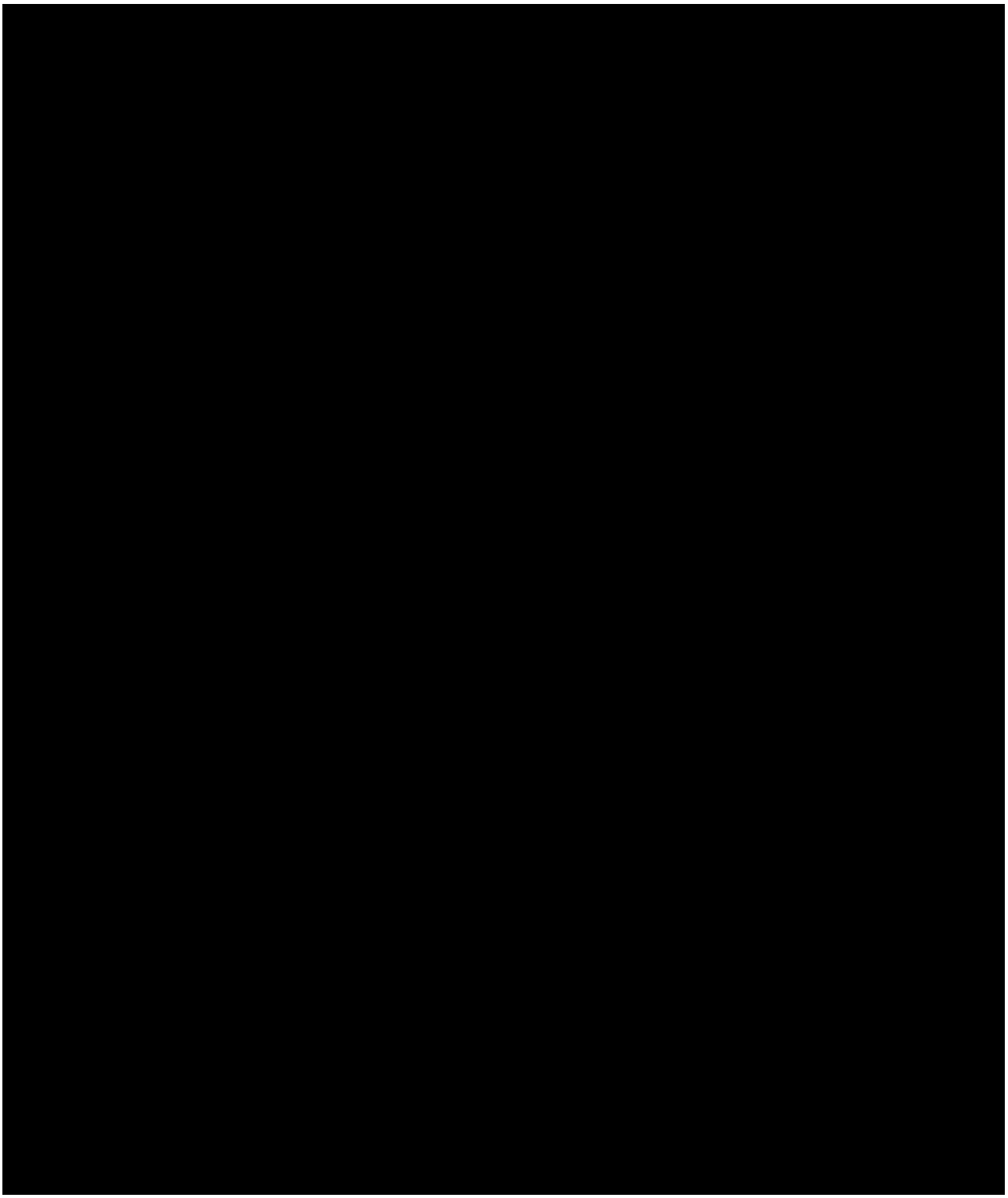

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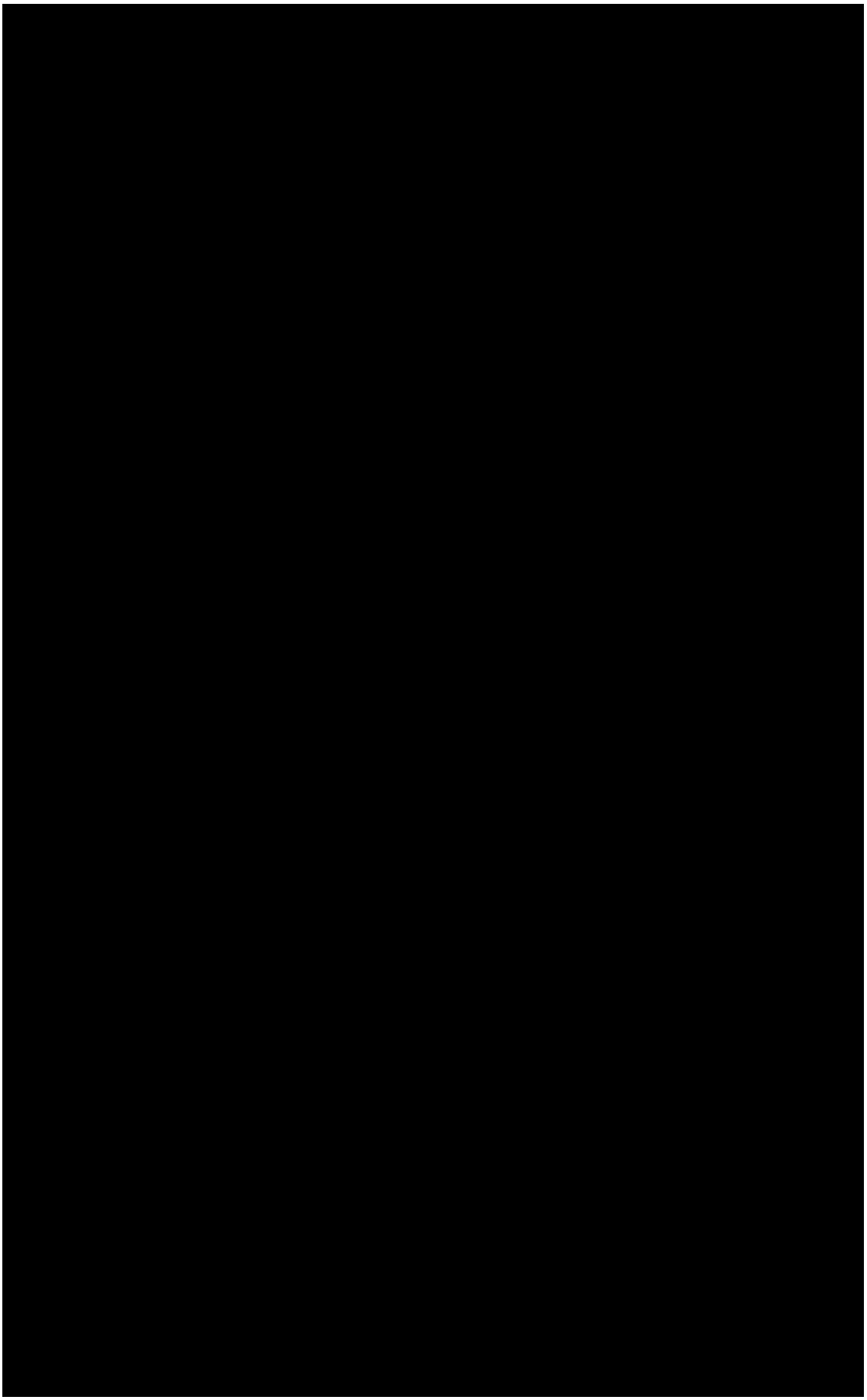

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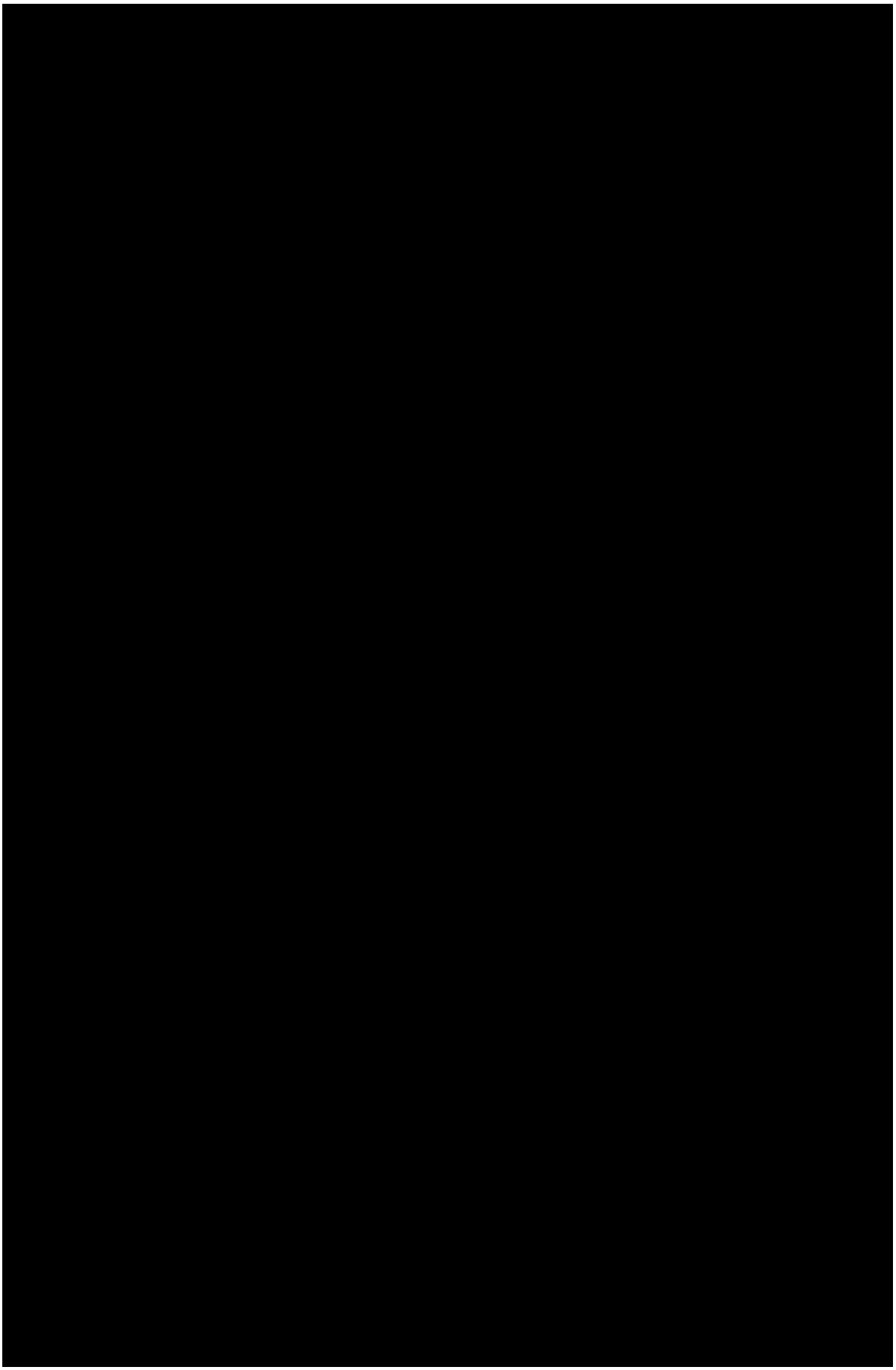

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Figure 1 LASS SELECTIVE FEATURES FORM FLOW

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SEC. 1AA: MULTIPOINT DIGITAL SUBSCRIBER LINE FEATURE DESCRIPTION

1. GENERAL OVERVIEW

The MP-DSL (Multipoint Digital Subscriber Line) feature is available with 5E5 and later Software Releases. The feature gives the ISDN (Integrated Services Digital Network) customer the ability to optimize the utilization of DSL resources. Prior to the 5E5 Software Release, a single DSL (also referred to as a Basic Rate Interface) could provide service to a single user. The MP-DSL feature allows a single DSL to provide service to a maximum of eight users.

Each DSL is comprised of two B-channels and one D-channel.

The B-channels operate at 64 kb/s (kilobits per second) and can carry Circuit Switched Voice, Circuit Switched Data or Packet Switched Data using the X.25 protocol. A B-channel can only be used for one of the three services, by one user, at any given point in time. It is extremely important to realize, when engineering DSL usage, that there will be contention for B-channel services. The application of shared telephone numbers (numbers which appear at more than one terminal) and multiple telephone numbers (more than one number at the same terminal) must also be factored into contention considerations.

The D-channel operates at 16 kb/s and can carry packet switched data using the X.25 protocol and signaling using the Q.931 protocol.

2. FUNDAMENTAL CONCEPTS

There are several fundamental concepts and companion terminology associated with the MP-DSL feature.

2.1 ISDN Terminals

The TERMINAL is the ISDN set connected to the DSL. The abilities of the TERMINAL have major ramifications for the variety of MP-DSL that is applied, as explained in the VARIETIES OF DIGITAL SUBSCRIBER LINE SERVICE section.

TERMINALs employed in the 5E4(2) Software Release ISDN scenario are unable to "identify" themselves to the MP-DSL initialization software. These terminals are referred to as non-EPID (End Point Identification) TERMINALs or BITs (Base Initializing TERMINALs).

TERMINALs which can "identify" themselves to the MP-DSL initialization software are referred to as, conversely, EPID TERMINALs. EPID TERMINALS are either NIT (Non-Initializing TERMINALs) or FIT (Fully Initializing TERMINALs). A FIT TERMINAL is identified by a SPID (SERVICE PROFILE IDENTIFICATION), which will be explained later in this section. A NIT TERMINAL can be identified by the 5ESS Switch via the combination of a directory number and the services of which it partakes. NIT TERMINALs cannot support multi-line hunt group members, key systems, multiple directory numbers, permanent virtual circuits, feature buttons, the EDS (Electronic Directory Service) feature or the MSS (Message Service System) feature.

The USER is basically inseparable from the TERMINAL. The 5ESS Switch software is incapable of determining "who" is using the TERMINAL, just as in the POTS voice world, the software cannot ascertain "who" picked up the handset and desired service, but rather that a phone connected to a particular port has gone off-hook. The word USER is applied throughout the MP-DSL feature documentation.

2.2 USOP

The USOP (USER SERVICE ORDER PROFILE) is generated by the 5ESS Switch software. It includes an internally derived customer identification, the directory number or numbers associated with a USER, the call appearances associated with the USER, the ISDN packet and/or circuit services the USER has provisioned, the billing directory number associated with the USER, and the features to which the USER

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has subscribed. The 5ESS Switch uses the USOP to internally recognize a USER.

2.3 SPID

The SPID (SERVICE PROFILE IDENTIFICATION) is used by the 5ESS Switch to determine which USOP on a DSL is "bound" to which USER on that DSL.

2.4 SPID - 5E8 and Earlier

For 5E8 and earlier, the SPID is constructed from the Telephone Numbers/MLHG memberships that are related to a USER. These Telephone Numbers/MLHG memberships are entered on a DSLUSR form (refer to the DSL AND DSLUSR INPUT FORMS section). The DSLUSR form has seven optional key fields: CKT TN; DPKT TN; ODB TN; CKT MLHG and CKT TERM; and, DPKT MLHG and DPKT TERM (refer to Division 5, Section 1H for a complete explanation of these fields).

The SPID is based on an EPDN (Extended Primary DN). The algorithm which generates a SPID determines the EPDN, from the DSLUSR form entries, in the following hierarchical manner:

- If the CKT TN is entered, it is suffixed with a 0 to produce the EPDN.
- If the CKT MLHG and CKT TERM combination are entered and a CKT MLHG TN (not an optional key field) is entered, the CKT MLHG TN is suffixed with a 0 to produce the EPDN.
- If the CKT MLHG and CKT TERM combination are entered, but a CKT MLHG TN is not entered, the CKT MLHG and CKT TERM are concatenated to produce the EPDN.
- If the ODB TN is entered, it is suffixed with a 0 to produce the EPDN.
- If the DPKT TN is entered, it is suffixed with a 0 to produce the EPDN.
- If the DPKT MLHG and DPKT TERM combination are entered and a DPKT MLHG TN (not an optional key field) is entered, the DPKT MLHG TN is suffixed with a 0 to produce the EPDN.
- If the DPKT MLHG and DPKT TERM combination are entered, but a DPKT MLHG TN is not entered, the DPKT MLHG and DPKT TERM are concatenated to produce the EPDN.

Additionally, the SPID has two other sub-components. First, the SPID marks if the EPDN was built from a Telephone Number (suffixed by 0) or from the concatenation of an MLHG and TERM. Second, the SPID marks if the EPDN is related to a Packet function or a Circuit function.

The SPID can be programmed into the firmware of a TERMINAL (FIT only) or can be entered by the USER when accessing certain services. The 5ESS Switch uses the SPID to externally recognize a TERMINAL, which is CPE (Customer Premises Equipment). The customer can see a SPID via the ODA output-only Record 5908-A or the Recent Change view 23.1. Examples of the construction of and display of a SPID are in order.

Example:The EPDN is produced from a CKT TN of 5551234. Thus, the EPDN is 55512340. It is built from a TN and is related to a Circuit function.

Example:The EPDN is produced from a DPKT MLHG of 1000 and a DPKT TERM of 2000. There is no DPKT MLHG TN. Thus, the EPDN is 10002000. It is built from an MLHG and is related to a Packet function.

Example 1 will be displayed, on Recent Change view 23.1, as "0155512340". The first digit (0) indicates that the EPDN came from a TN and the second digit (1) indicates that it is related to a Circuit function.

Example 2 will be displayed, on Recent Change view 23.1, as "1310002000". The first digit (1) indicates

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that the EPDN came from a MLHG and the second digit (3) indicates that it is related to a Packet function.

2.5 SPID Feature Definition - 5E9(1) and Later

For 5E9(1) and later, the SPID is no longer computed by the system but must be provisioned and administered by the service provider, e.g., the Telephone Company.

The Bellcore specification for National ISDN defines the SPID with two parts: the USPID (User Service Profile Identifier) and the TID (Terminal Identifier). For the National ISDN Standard Interface, the TID, which is the last two digits of the SPID, is specified by the subscriber's ISDN administrator and, with the USPID, is programmed by the end-user into the non-volatile memory of the terminal; the AT&T Custom interface does not use the TID.

Although the TID is not maintained on the switch, the USPID is. The USPID is a variable length numeric identifier which must be entered on every DSLUSR form on which an OE is entered. USPIDs must be assigned by the service providers for custom and standard interface users and must uniquely identify each user.

The USPID assigned for point-to-point, restricted multi-point, and multi-point users on custom DSLs may vary in length from 1-10 digits. To maintain cross-release compatibility, the USPID for a custom DSL user may never exceed 10 digits in length.

For standard DSLs the USPID may be 1-18 digits in length.

Besides appearing on the DSLUSR form (5908 Record), the USPID also appears on the 5908A and 5908B output-only records described in Division 5, Section 1K. The 5908A Record is sorted by the Office Equipment number, while the 5908B Record is ordered by USPID.

When an office retrofits from the 5E8 to the 5E9(1) Software Release, SPIDs that were automatically generated in earlier releases will be carried forward and stored in the new USPID field. They need not be entered by the service providers.

2.6 Additional SPID Feature Definition Information - 5E12 and Later with NPA-NXX Growth (SFID198) provided.

There are no changes to the underlying rules for provisioning USPIDs on the switch. However, note the following discussion on how USPIDs are formed, and the implications for the service provider.

A User Service Order Profile Identifier (USPID) is assigned for each User Service Order Profile (USOP) assigned on an ISDN line. The USPID, the provisioned portion of the SPID, is chosen by the service provider when the USOP is assigned to the ISDN line, and is (1) entered via a RC view into the switch and (2) programmed into the CPE's SPID. Each USPID MUST BE UNIQUE on the switch. For Custom ISDN, the USPID is the same as the SPID and can be from one to ten digits long. For National ISDN, the USPID can be from one to eighteen digits long, and the SPID includes the USPID plus a two-digit TID. Although the SPID can be up to 20 digits long in National ISDN, the National ISDN Council has recommended the use of a fourteen-digit SPID which provides for a ten- digit DN.

A common algorithm used by the service provider to assign USPID values, especially for Custom ISDN, produces a ten-digit USPID that includes the seven-digit DN (i.e. without the NPA). When the NPA-NXX Growth special feature is active, depending on the information encoded in the additional three digits, using seven-digit DNs may no longer produce unique USPIDs. The service provider must adopt a different algorithm for creating SPIDs, taking into consideration the ten-digit limitation for Custom USPIDs, and all currently assigned Custom and National USPIDs (i.e., USPIDs already programmed in the CPE's SPID cannot be changed without also reprogramming the CPE).

Thus since the seven-digit DN is no longer a guarantee of a unique DN on the switch, service providers should examine the algorithms they use for generating SPIDs, with the expectation of changing the

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algorithms to insure the SPIDs are unique.

2.7 SPID Translation Requirements - 5E9(1) and Later

New and Modified ODA Forms				
Form Name	Record Number	Div.	Sec.	RC View
DSLUSR	5908	5	1I	23.2
□	5908A/B	5	1K	23.2

DSLUSR form (5908 Record) - This form is used to define the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, D-channel packet attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

For 5E9(1) and later, the USPID field was added to allow the switch owner to provision part of the SPID, which identifies a terminal to the switch during initialization. It is a unique identifier for each DSL user in the office. The USPID may be 1 - 18 characters in length, with the restrictions stated above.

5908A/B Records - These records are output-only records that list all DSL users in the office. The 5908A records are sorted by Office Equipment number; the 5908B record is sorted by USPID.

2.8 Relationships

There is a one-to-one correspondence between a USER, a USOP, a TERMINAL and a SPID. The four are related together. The TERMINAL (non-EPID or EPID), the USOP and, for 5E8 and earlier, the SPID, do not appear on any ODA input forms, though some or all sub-components of the USOP and the SPID appear. The reason they are presented in this ODA-specific document is for the sake of clarity and understanding.

The word "bound" has been used. The MP-DSL software must be able to determine the "bind" between the USER, the USOP, the TERMINAL and the SPID in order to identify the requester of services and what services the requester has provisioned. The DSL facilities are being shared by a maximum of eight USERs; their individual identities and attributes must be clearly distinguishable to the 5ESS Switch.

3. AUTOMATIC CUSTOMER STATION REARRANGEMENT AND DEFAULT SERVICE

Two additional important concepts are the ACSR (Automatic Customer Station Rearrangement) feature and the Default Service feature.

3.1 ACSR

ACSR allows a USER to move the TERMINAL to another DSL and still maintain all the directory numbers, ISDN services and features associated with the USER (e.g. the USOP). The DSL that the USER moves to must belong to the same ACSR Group as the DSL the USER was with originally.

ACSR also allows the USER to remain at the same TERMINAL, but have a new USOP "bound" to that TERMINAL.

The ACSR software conducts an interactive session with the USER to achieve the desired result in either of the two cases. This interactive session is invoked applying circuit switched voice service. Thus, the USER must have circuit switched voice service provisioned and a circuit telephone number defined.

The combination of an ACSR group and a Default Service feature allow the customer to provision a DSL, with an ACSR group and a Default Service feature, but not define any USERs of the DSL. The USERs can be added later through ACSR and Default Service. This is very valuable in a scenario that involves imminent growth or movement. Refer to the table in the AVAILABLE SERVICE COMBINATIONS section for additional information related to this case.

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3.2 Default Service

The ACSR feature always requires that the DSL has Default Service. Default Service permits a USER at a TERMINAL that the 5ESS Switch cannot identify (a non-EPID TERMINAL or a TERMINAL in a multi-user environment with a mismatched SPID) to be given access to ACSR services and to 911 services.

ACSR can be assigned to a DSL and to an individual USER. A DSL can be in only one ACSR Group. A USER can be in only one ACSR Group. A USER that is in an ACSR Group cannot be defined on a DSL that is not in an ACSR Group. A USER that is not in an ACSR Group can use a DSL that is in an ACSR Group. If a USER that is in an ACSR Group wishes to use a DSL that is in an ACSR Group, then the two ACSR Groups must be one and the same.

ACSR cannot be used in conjunction with Permanent Packet B-Switching (to be explained later), voice members of a multiline hunt group or with modem pooling.

Default Service is always associated with a DSL. It is never associated with an individual USER.

4. VARIETIES OF DIGITAL SUBSCRIBER LINE SERVICE

There are three varieties of the MP-DSL feature in 5E5 and later Software Releases.

4.1 Point-to-Point (Single Point) DSL

The first variety, Point-to-Point (or Single Point) DSL can have only one "active" USER. An active USER can receive DSL services. A maximum of eight USERs can be "provisioned". A "provisioned" USER has DSL services and features assigned, but the USER cannot receive service until it becomes an active USER.

Point-to-Point DSL can handle EPID or non-EPID TERMINALS, though the 5ESS Switch software cannot identify the TERMINAL. If a USER wishes to change the USOP bound to the TERMINAL, then the DSL must have an ACSR Group and Default Service.

Point-to-Point DSL is required for an AP (Application Processor). The DSL links to the AP are defined on the DSLAP form (5963 Record).

Point-to-Point DSL is required for an Attendant. An Attendant can only use the B1 channel.

Point-to-Point is required for OSPS (Operator Services Position System) DSLs. DSLs for OSPS applications are defined on the OSPSDSL form (5411 Record).

Point-to-Point DSL is the default for a 5ESS Switch retrofitting from the 5E4(2) Software Release to the 5E5 Software Release.

Point-to-Point DSL would be the choice of a customer who does not see a need to have more than a single USER on a DSL or does not wish to acquire EPID TERMINALS.

4.2 Restricted Multipoint DSL

The second variety, Restricted Multipoint DSL, can also have only one active USER. A maximum of eight USERs can be provisioned.

Restricted Multipoint DSL would be the choice of a customer who anticipates growth in their DSL usage and will upgrade all their non-EPID TERMINALS to EPID TERMINALS.

Restricted Multipoint DSL can handle a mixture of EPID and non-EPID TERMINALS if the DSL has Default Service. The first USER will be associated with a USOP, but every subsequent USER will receive the Default Service. If the DSL does not have Default Service, subsequent USERs will never receive any service.

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ACSR can be used to update the active USOP. If ACSR is invoked from a non-EPID TERMINAL, then the active USOP will be changed to the new USOP. If ACSR is invoked from an EPID TERMINAL, then the DSL will migrate to a "pure" Multipoint DSL (to be explained later in this section) and USOPs can be added. Thus, a Restricted Multipoint DSL can be used, with ACSR, to move to a "pure" Multipoint DSL; the reverse is not possible.

Restricted Multipoint DSL cannot be used for an AP Application Processor) or for an Attendant.

4.3 Multipoint DSL

The third variety, Pure Multipoint DSL, can have a maximum of eight USERs, all of which can be provisioned as active USERs.

Pure Multipoint DSL should employ only EPID TERMINALS.

Pure Multipoint DSL cannot be used for an AP (Application Processor) or for an Attendant.

Pure Multipoint DSL would be the choice of a customer who uses multiple terminals and must optimize the available DSL resources.

The type of card used for the DSL affects the quantity of USERs. The DSL's LCEN (Line Card Equipment Number) is assigned in the DSL OE field on a DSL form (5907-1 Record). If the LCEN is defined on an ISLULC form (5942 Record) with the TYPE field set to "TLC" (T-card), then a maximum of two active users may use the DSL.

If the LCEN is defined on an ISLULC form (5942 Record) with the TYPE field set to "PULC" or "ULC" (U-card), then a maximum of eight active users may use the DSL.

5. PERMANENT AND DEMAND B-CHANNEL USAGE

An additional concept associated with the DSL feature is the variable use of the B-channels. One or both B-channels can be dedicated to Packet Switched Data using the X.25 protocol. This is accomplished by entering "X25" in the B1 SERV and/or the B2 SERV fields on the DSL form. Any other use of the B-channel, either Circuit Switched Voice or Circuit Switched Data is prohibited. B-channels which are dedicated to Packet Switching are referred to as PPB1 (Permanent Packet B1) and PPB2 (Permanent Packet B2) B-channels.

One or both B-channels can be made available to all the USERs of a DSL. This is accomplished by entering "DMD" in the B1 SERV and/or B2 SERV fields on the DSL form. The USERs may employ the B-channel for Circuit Switched Voice, Circuit Switched Data or Packet Switched Data using the X.25 protocol. B-channels which are available to all the USERs on a DSL are referred to as Demand B-channels.

6. DSL AND DSLUSR INPUT FORMS

A discussion of the combination of services available with DSL must be preceded by an explanation of the two ODA input forms, available with 5E5 and later Software Releases, that are the foundation for implementing the MP-DSL feature. Names of fields on the input forms will appear in parentheses in the explanation of the input forms.

6.1 DSL Form

The DSL input form (5907 Record) is used to define the physical aspects of the DSL, including its port (DSL OE), its Integrated Services Channel Number (ISCN) on a Packet Switch Unit, its associated Peripheral Interface Data Bus (PIDB), Time Slot (D TIMESLOT) and Quarter Time Slot (QTR TS).

The DSL input form is also used to indicate the service desired on the single D-channel (D SERV) and the

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two B-channels (B1 SERV and B2 SERV).

Additionally, the DSL input form is used to define the attributes of one or both B-channels, if either or both are to be Permanent Packet B-channels.

6.2 DSLUSR Form

The DSLUSR input form (5908 Record) is used to provision a maximum of eight USERs of the DSL. The critical link between the DSL input form and the eight possible associated DSLUSR input forms is the port of the DSL (OE). The DSLUSR input form is also used to define the attributes of Circuit Switched Voice and Circuit Switched Data (under the CKT SWITCHING header) for any available Demand B-channel, the attributes of D-channel Packet Switching (under the D-CHANNEL PACKET SWITCHING header) and the attributes of On Demand B-channel X.25 Packet Switching (under the ON DEMAND B-CHANNEL header) for each provisioned USER. There are not separate sections for On Demand B-channel for each B-channel because On Demand B-channel operation employs whichever B-channel is available when a request for service appears.

7. PROVISIONING B-CHANNEL USAGE

It is critical to comprehend the interplay between the DSL and DSLUSR input forms relative to B-channel usage.

If the customer opts to define, on the DSL input form, the B1-channel as Permanent Packet, then one of the USERs provisioned on a DSLUSR input form can indicate that they are "associated" with the channel. When a USER is "associated" with a Permanent Packet B-channel, the USER is allowed to Move, Copy or Swap (Recent Change operations) the Permanent Packet B-channel services to the destination DSL. The Permanent Packet B-channel services are an attribute of the DSL, not an attribute of the USER. In a Pure Multipoint environment, only one of the USERs on a DSL can have this "association". The USER would do so in the PPB1 USR field. Any USER, if they wished to avail themselves of B2-channel services, on a Demand basis, would define the attributes under the CKT SWITCHING header (for Circuit Services) and/or under the ON DEMAND B-CHANNEL header (for Packet Services). The USERs would share the B2-channel since the B1-channel is dedicated to Permanent Packet usage.

If the customer opts to define, on the DSL input form, the B2-channel as Permanent Packet, then one of the USERs provisioned on a DSLUSR input form can indicate that they are "associated" with the channel. The USER would do so in the PPB2 USR field. Any USER, if they wished to avail themselves of B1-channel services, on a Demand basis, would define the attributes under the CKT SWITCHING header (for Circuit Services) and/or under the ON DEMAND B-CHANNEL header (for Packet Services). The USERs would share the B1-channel since the B2-channel is dedicated to Permanent Packet usage.

If the customer opts to define both B-channels as Permanent Packet, on the DSL input form, then the USERs provisioned on the DSLUSR input form cannot define the attributes under the CKT SWITCHING header (for Circuit Services) and under the On Demand B-channel header (for Packet Services) because there are no B-channels to use. A USER could use the PPB1 USR and/or the PPB2 USR fields to indicate they are "associated" with one or both of the Permanent Packet B-channels.

If the customer opts to not define either B-channel as Permanent Packet, on the DSL input form, then any USER provisioned on the DSLUSR input form can define the attributes under the CKT SWITCHING header (for Circuit Services) and under the ON DEMAND B-CHANNEL header (for Packet Services), but they cannot indicate they are "associated" with a B-channel in the PPB1 USR and PPB2 USR fields.

The four scenarios just explained made no mention of D-channel usage. The USERs, in all four scenarios, may define attributes under the DPKT header (for Packet Services) on the DSLUSR form.

Note that a customer who wished to use both B-channels for Permanent Packet, which would be indicated on the DSL input form, and had no other need for additional services on the DSL, does not have to enter any DSLUSR input forms.

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This case is the most pronounced example of the fact that the concept of a Permanent Packet B-channel and the concept of a USER, a PPB1 USR and a PPB2 USR are unrelated. A USER is defined by virtue of entering a DSLUSR form, regardless of which services the USER chooses. A maximum of eight DSLUSR forms can be entered for each DSL. Defining a Permanent Packet B-channel on a DSL form has no bearing whatever on the number of USERs. It is best to think of the Permanent Packet B-channel as a device that is waiting to be exercised. The attributes that are associated with the Permanent Packet B-channel are stored by the 5ESS Switch; the concern is not "who" is using the Permanent Packet B-channel, but rather that the proper services are provided for the device.

It was noted earlier that the ACSR feature was not applicable to Permanent Packet B-channels. When a USER invokes ACSR, the USER is either binding their USOP to a different TERMINAL or the USER is binding a different USOP to the current TERMINAL. A USOP is devoid of meaning in the case of a Permanent Packet B-channel. A USER associated with a Permanent Packet B-channel, through the PPB1 USR/PPB2 USR fields on a DSLUSR form, may not belong to an ACSR group.

8. AVAILABLE SERVICE COMBINATIONS

The D SERV, B1 SERV and B2 SERV fields on the DSL input form are used to indicate the usage of the available bandwidth (two B-channels and one D-channel) for the DSL.

The choices available for D SERV are:

- ADMIN: No D-channel usage
- SONLY: Q.931 signaling only; used for an ISDN Attendant
- SX: Q.931 signaling and X.25 packet switching
- XMP: Modem Pooling; a single USER

The choices available for B1 SERV and B2 SERV are:

- X25: X.25 packet switching (Permanent Packet)
- DMD: Demand (Circuit Switched Voice, Circuit Switched Data, and X.25 On Demand B [ODB] Packet Switched Data)

Refer to Figure 1 for the valid combinations of these three fields.

A caveat to the available service combinations exists in the 5E5 Software Release only. It is strongly recommended that if both B-channels on a DSL are used for Permanent Packet service (B1 SERV and B2 SERV are set to "X25" on a DSL input form), then the D SERV field on that DSL input form be set to "X25" (X.25 and Q.931) and the DSL CLS field on that DSL input form be set to "MP" (Multipoint). Please refer to the explanation of the DSL CLS field.

This should be done even if the D-channel is not going to be used for any purposes and a Multipoint environment is not required. This allows the customer to use the Multipoint wiring information in order to support the two Permanent Packet B-channels on the DSL. There is no need to define any USERS on the DSL.

9. CRITICAL FIELDS

There are several fields on the DSL and DSLUSR input forms which demand special attention.

The DSL form is used to indicate which variety of the MP-DSL feature is applicable. Recall that there are three distinct forms of DSL service. They are:

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Point-to-Point
- Restricted Multipoint
- Pure Multipoint

The DSL CLS field, on the DSL input form, is used to differentiate between Point-to-Point and Multipoint (Restricted or Pure). An entry of "PP" indicates Point-to-Point and an entry of "MP" indicates Multipoint. The RSTR MP field, on the DSL input form, is then used to define which variety of Multipoint is desired. An entry of "Y" (Yes) indicates Restricted Multipoint and an entry of "N" (No) indicates Pure Multipoint.

The ACSR GRP field, on the DSL input form, is used to assign an Automatic Customer Station Rearrangement group to the DSL. An ACSR group can be assigned to a USER through the use of the ACSRLPA input form (5959-3 Record).

The DFLT SRV field, on the DSL input form, is used to assign a Default Service feature to the DSL. The Default Service feature is defined on a DFLTSRV input form (5974 Record). If a DSL is assigned an ACSR group, then the DSL must also be assigned a Default Service feature.

The ACSR INH field, on the DSL input form, is used to "toggle" the use of the Automatic Customer Station Rearrangement feature for the DSL. An entry of "Y" (Yes) inhibits the use of the feature, thus preventing any changes to the existing binding between USERs, USOPs, TERMs and SPIDs. An entry of "N" (No) allows the use of the feature.

The MDPKT field, on the DSL input form, is used to indicate the quantity of USERs that may provision D-channel services. It is an error to enter more DSLUSR forms, for a DSL, with D-channel service provisioned, than the value entered in the MDPKT field.

The MTERM field, on the DSL input form, is used to indicate the quantity of active USERs (TERMINALS) that are allowed service. The USERs are handled on a first "plugged in", first serviced basis.

The MDPKT and MTERM fields are used for equipment and traffic engineering purposes. It is beyond the purview of this document to discuss the engineering.

The CUT DGTS field, on the DSL input form, is used for a gradual cutover by thousands group, as opposed to a flash cut or a gradual cutover by Switching Modules. With the advent of the Multipoint feature, the unique one-to-one correspondence of a port and a telephone number has been lost. A single DSL (port) could be related to a maximum of twenty five telephone numbers; thus, the DSL could be related to multiple thousands groups. To properly cutover a DSL so all the telephone numbers receive service simultaneously, either select the thousands group of the last telephone number to be cutover or select an unused thousands group which does not reflect any of the telephone numbers related to the DSL.

The MAXB CHL field, on the DSLUSR input form, indicates how many B-channels a USER can access with Demand B-channel service for Circuit Services. This field is intertwined with the quantity of B-channels that were defined as Permanent Packet on the DSL input form, since a B-channel cannot be Permanent Packet and Demand.

The ACT USR field, on the DSLUSR form, is used to indicate if a USER is active and can receive service. The field is significant in the Point-to-Point and Restricted Multipoint cases because both permit the provisioning of eight USERs, of which only one can be active. The field is moot in the Pure Multipoint case because every USER is active.

The CSV field, on the DSLUSR form, indicates how many B-channels the USER can access for Circuit Switched Voice service.

The CSV CHL field, on the DSLUSR form, indicates which B-channels the USER can access for Circuit Switched Voice service.

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The CSD field, on the DSLUSR form, indicates how many B-channels the USER can access for Circuit Switched Data service.

The CSD CHL field, on the DSLUSR form, indicates which B-channels the USER can access for Circuit Switched Data services.

The T3XX field, on the DSLUSR form, is an optional timer for On Demand X.25 Packet Switching on a B-channnel. If a USER has seized a B-channel for On Demand X.25 Packet Switching, but is not invoking any virtual calls, the timer can be used to indicate when to "remove" the USER from the B-channel. This can save connection time charges and free the B-channel for other USERs on the DSL.

The BAND field, on the DSLUSR form, is used to indicate the relative amount of usage of the B-channel for ODB (On Demand X.25 Packet) Switching by the USER. The USER can be "banded" with a value between 0 and 15. This spectrum of values can be used to classify the USER as a "light" to "heavy" USER of the service. The ODBRES form (5906 Record) is used to provide a pool of reserved ISCNs for ODB service. The ODBRES form also has a BAND field. When an ODB USER attempts to perform an ACSR move between ISLUs or Switching Modules, the move will fail unless the reserve pool has a BAND that is the same BAND indicated on the DSLUSR form for the USER.

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SEC. 1AB: ENHANCED B-CHANNEL PACKET SWITCHING

1. FEATURE DESCRIPTION

A single BRI (Basic Rate Interface) or DSL (Digital Subscriber Line) consists of three channels: two B-channels (B1 and B2) and one D-channel. The B-channels are used for circuit switched voice, circuit switched data, and packet switched data. The D-channel is used for control signaling and packet switched data. The Enhanced B-channel Packet Switching feature, which is available with 5E5 and later Software Releases, provides two switching services for DSL users: ODB (On Demand B-channel) packet switching and Multiple PPB (Permanent Packet) switching.

The ODB packet switching service dynamically reconfigures either B-channel (B1 or B2) through Q.931 signaling via the D-channel to support packet switched data via the X.25 protocol. After the B-channel is reconfigured, the channel is used exclusively for packet switching by the user who initiated the Q.931 signaling until it is reconfigured again using a Q.931 DISConnect packet or until the T3xx Timer expires and disconnects the B-channel. The range of the timer is 10 - 60 minutes.

When PPB switching is assigned to a DSL, any combination of the two B-channels and D-channel on the same DSL is dedicated to packet switched data via the X.25 protocol on a permanent connection basis (circuit switched voice or data is prohibited).

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2
ODBTS	5905	5	1F	23.13
ODBRES	5906	5	1G	23.14

DSL form (5907 Record) - This form is used to select the type of service desired on the single D-channel (DSERV field) and the two B-channels (B1 SERV and B2 SERV). This form is also used to define the attributes of one or both B-channels if they are to be used for Permanent Packet switching. An indication of Permanent Packet B-channel usage on this form has no impact on the maximum number of users (8) on a DSL.

DSLUSR form (5908 Record) - This record is available with 5E5 and later Software Releases. The DSLUSR form is used to define attributes of circuit switching (under the CKT SWITCHING header), D-channel packet switching (DPKT header) and On Demand B-channel (ODB header). The PPB1 USR and PPB2 USR fields can be used to assign a user to a B-channel being used for Permanent Packet switching.

ODBTS form (5905 Record) - The ODBTS form is used to reserve DPIDB time slots for DSL users with the ODB feature.

ODBRES form (5906 Record) - The ODBRES form is used to reserve ISCNs for DSL users with the ODB feature.

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SEC. 1AC: LINE TIME SLOT BRIDGING FEATURE DESCRIPTION

1. FEATURE DESCRIPTION

The LTSB (Line Time Slot Bridging) feature is available with 5E5 and later Software Releases.

The LTSB feature provides a software emulation of metallically bridged two-party ANI (Automatic Number Identification) lines and a software emulation of two metallically bridged ports which share the same telephone number (commonly referred to as off-premise extensions). The two-party line case shall be henceforth referred to as "2-TN LTSB" while the two port, single telephone number case shall be referred to as "1-TN LTSB".

Both 1-TN LTSB and 2-TN LTSB can service ports which are resident on any type of Switching Module, including RSMs (Remote Switching Modules), ORMs (Optical Remote Modules) and TRMs (Two-mile Remote Models). The modules can be in a Multi Module Cluster or they can be independent. The port, which must be analog, can be on a LU (Line Unit), Integrated or Universal SLC (Subscriber Line Carrier), a Z-card on an ISLU (Integrated Services Line Unit) or a Z-card on a RISLU (Remote Integrated Services Line Unit).

The flexibility afforded as to port location, when combined with the transparency of this feature with the traditional metallically bridged feature, allows the 5ESS Switch owner to offer two-party or off-premise extension service to customers in locations where bridging would have previously been financially prohibitive or impossible.

One member of the LTSB group must be designated as the "lead port". The busy/idle status of the LTSB group is associated with the lead port and therefore the switching module that the lead port resides on will be used as the focal point for originations, terminations and feature activations for the LTSB pair. It thus behooves the customer with a high density of LTSB groups to distribute the lead ports across switching modules as evenly as possible.

If the lead port is Out of Service, the member resident on the non-lead port may still originate calls, but terminations to the member will be blocked. If the non-lead port is Out-of-Service, there is no affect on the lead port. The member resident on the lead port can still originate and terminate calls. If the lead port is on a remote-type switching module, and that module goes into Stand-Alone operation and cannot communicate with the non-lead port, the non-lead port is unable to function.

The LTSB feature provides numerous services. They are explained in the following paragraphs accompanied by scenarios of the service, as appropriate.

Calls may be originated by, with correct billing, either member in both the 1-TN and 2-TN LTSB. If a member of the LTSB group is engaged in a call and the second member of the LTSB group attempts to originate a call, the second member's origination attempt will be treated as a "barge" attempt. The concept of barging will be explained later in this section.

Terminations will always begin at the lead port of the LTSB group. If the LTSB group is in the busy state, then a 1-TN LTSB group will be checked for Call Forward or Call Waiting (a 2-TN LTSB group cannot have these features). If neither feature is assigned and activated in the 1-TN LTSB group or it is a 2-TN LTSB group, then busy tone will be returned to the calling party. If the LTSB group is in the idle state, ringing will be applied to both members of a 1-TN LTSB group and to the called party of a 2-TN LTSB group. Either member of the LTSB group may answer the call, even though one member of the 2-TN LTSB group did not receive ringing. This is transparent with the traditional metallically bridged feature.

A member, in the 1-TN or 2-TN LTSB group, may "barge" into an existing connection between the other member of the LTSB pair and a third party. The call will be handled as a three-way call and will use conference circuits. The term "barge" should not be confused with the barge-in feature of Directed Call Pickup. If the barged member disconnects before the barging member, control and billing will be

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transferred to the barging member. If barging is not allowed, then the member who is attempting an origination will receive busy tone. Barging is not permitted if one member is on a 911 call, connected to a tone, is the controller in a Multiway call, Call Waiting Terminating is in progress or Manual Exclusion is active (for the 1-TN LTSB group, only).

Manual Exclusion allows one member of a 1-TN LTSB group to prevent the other member from barging into a call. Manual Exclusion is invoked on a per-call basis; thus, the feature is never deactivated. Manual Exclusion is not available for 2-TN LTSB. Manual Exclusion may be invoked either through a dialed code before a LTSB member places a call or through a combination of a hook flash and a dialed code for a call in progress. A member who attempts to use Manual Exclusion, but is not eligible to use the feature, will receive re-order tone. A member who attempts to use Manual Exclusion, and is eligible to use the feature, will receive confirmation tone and subsequently a second dial tone.

The customer who wishes to invoke Manual Exclusion before originating a call would dial the Manual Exclusion code, receive confirmation tone followed by a second dial tone, and then dial the desired party's telephone number. The member of the 1-TN LTSB group must have a Multiway Calling feature assigned in order to use Manual Exclusion in this manner.

The customer who wishes to invoke Manual Exclusion while a call is in progress would hook flash first. This would place the call on hold. The customer would receive dial tone at which point they would dial the Manual Exclusion code. The customer would then receive confirmation tone and a second dial tone. The customer may hook flash to retrieve the held call or place a second call. Once again, the member of the 1-TN LTSB group must have a Multiway Calling feature assigned in order to use Manual Exclusion in this manner.

A set of BRCS (Business and Residential Custom Services) features are available for 1-TN LTSB. They are:

For 5E5 and later Software Releases, the following BRCS features are available.

- Call Forwarding, other than those of the busy or no answer varieties.
- Call Waiting Termination
- Multiway Calling, which will be prohibited if the "other" member of the LTSB group is barged onto the call.
- Call Transfer
- Speed Calling, which can be used by the lead port only.

With 5E6 and later Software Releases, the following LASS features are also available for 1-TN LTSB:

- Selective Call Acceptance
- Selective Call Forwarding
- Selective Call Rejection
- Selective Distinctive Alert

The sole BRCS feature available for 2-TN LTSB is Speed Calling. Each of the members may have its own Speed Calling list and cannot access the list of the othermember.

Revertive Calling allows one member of a 2-TN LTSB group to call the other member. The calling member hears busy tone and hangs up. Both members then receive ringing, which will continue for two minutes if neither member goes off-hook. When either member goes off-hook, ringing is ceased to both

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members. This informs both members that a revertive call could be taking place. Both members must go off-hook to complete the call. This is transparent with the traditional metallically bridged feature.

LTSB can support a mixture of rotary and touch-tone phones.

2. TRANSLATION REQUIREMENTS

The primary form to be visited to define a 1-TN LTSB group or a 2-TN LTSB group is the LINE form (5109-1/2/3 Records). The usage of the form is markedly different between the 1-TN LTSB group and the 2-TN LTSB group.

The 1-TN LTSB group requires the use of a single LINE form. The two distinct ports are defined in the OE TYPE and NUMBER field combination and the ASSOC OE TYPE and NUMBER field combination. The LEAD PORT field, which appears after the ASSOC OE TYPE and NUMBER field combination, is related to the port defined in the OE TYPE and NUMBER field combination. The LEAD PORT field must be set to "Y" (Yes), thus designating the port defined in the OE TYPE and NUMBER field as the lead port.

The PTY field must be set to "I".

The RAX and LCC field combination must be defined on a LCC form (5306 Record), in the RATE AREA and LINE CLASS CODE fields respectively, such that the CLASS OF SERVICE is "INDIV" and the TERMINATING TREATMENT is "INDIV" or "AGING".

When the LTSB port is on an Integrated or Universal Subscriber Line Carrier, the SLC Channel Unit Type must correspond to the "INDIV" CLASS OF SERVICE as specified in Figures 4 and 5 of Division 3, Section 1g, SLCCU form (5107 Record).

The 2-TN LTSB group requires the use of two LINE forms. The first LINE form must have the two distinct ports defined in the OE TYPE and NUMBER field combination and the ASSOC OE TYPE and NUMBER field combination. The second LINE form must have the same two distinct ports defined in the OE TYPE and NUMBER field combination and the ASSOC OE TYPE and NUMBER field combination, such that the OE TYPE and NUMBER field combination from the first LINE form appears in the ASSOC OE TYPE and NUMBER field combination on the second LINE form, and the ASSOC OE TYPE and NUMBER field combination from the first LINE form appears in the OE TYPE and NUMBER field on the second LINE form.

Both LINE forms must have a RAX and LCC field combination that is defined on a LCC form or forms, in the RATE AREA and LINE CLASS CODE fields respectively, such that the CLASS OF SERVICE is "TWOPTY" or "2PTY" and the TERMINATING TREATMENT is "PARTY" or "AGING". Both LINE forms' LCC values must be associated with the same CLASS OF SERVICE; there cannot be one associated with "TWOPTY" and one associated with "2PTY".

When the LTSB port is on an Integrated or Universal Subscriber Line Carrier, the SLC Channel Unit Type must correspond to the specified CLASS OF SERVICE, "TWOPTY" or "2PTY", according to Figures 4 and 5 of Division 3, Section 1g, for the SLCCU form (5107 Record).

The CLASS OF SERVICE also impacts the values permitted in the PTY fields on the two LINE forms. If the LINE forms are associated with a CLASS OF SERVICE of "TWOPTY", then one LINE form must have its PTY field set to "T" and the other form must have its PTY field set to "R". If the LINE forms are associated with a CLASS OF SERVICE of "2PTY", then one LINE form must have its PTY field set to 1 through 5 and the other form must have its PTY field set to 6 through 9 or 0.

One of the LINE forms must have the LEAD PORT field set to "Y" (Yes) and the other LINE form must have the LEAD PORT field set to "N" (No). The LEAD PORT field applies to the port defined in the OE TYPE and NUMBER field combination.

The MAN EXCL field on the LINE form is used to indicate if both members of a 1-TN LTSB group have the Manual Exclusion feature. The feature is not available for a 2-TN LTSB group. Recall that Manual

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Exclusion requires a dialed code and is used on a per-call basis. It is never deactivated; it is only invoked, per-call, through the use of a dialed code. If the MAN EXCL field is set to "Y" (Yes), then a PDIT form (5300-2 Record) must be entered to define that dialed code. The code must be entered in the DIGITS TO INTERPRET field, "MEON" must be entered in the ACTION field and "/*" must be entered in the FEATURE field.

Because the Manual Exclusion feature is not available for a 2-TN LTSB group, the two LINE forms that are entered for the definition of a 2-TN LTSB group must both have the MAN EXCL field set to "N" (No).

The set of BRCS features that can be assigned to a 1-TN LTSB group were explained previously. The BRCS features may be assigned on a LINEFA form (5112 Record), an associated CLUSTR form (5600 Record) or an associated BFG form (5625 Record).

A Call Forwarding feature may be assigned that is defined on a CFWFD form (5614-1 Record) with the FWD CONDITION field set to "BOTH".

A Call Waiting Terminating feature may be assigned that is defined on a CWTFD form (5603-1 Record) with the INVOCATION field set to "TERM" and the FLASH ON FORWARD? field set to "Y" (Yes).

A Multiway Calling feature may be assigned that is defined on a MWFD form (5602-1 Record) with the CALL PICKUP field set to "N" (No). This feature must be assigned if the Manual Exclusion feature is desired.

The lead port (explained earlier) may have Speed Calling. Pursuant to that, an Individualized Dialing feature may be assigned that is defined on an IDFD form (5601 Record) with the IDP GROUP?, CUST ACT/DEACT A.C.T.? and GPIC CUST CHANGEABLE? fields set to "N" (No) and the AD 1 DIGIT? or the AD 2 DIGIT? field set to "Y".

For 5E6 and later Software Releases, the following LASS features may also be assigned to a 1-TN LTSB group.

A Selective Call Acceptance feature may be assigned that is defined on a LSCAFD form (5975 Record).

A Selective Call Forwarding feature may be assigned that is defined on a LSCFFD form (5976 Record).

A Selective Call Rejection feature may be assigned that is defined on a LSCRFD form (5977 Record).

A Selective Distinctive Alert feature may be assigned that is defined on a LSDAFD form (5978 Record).

The only BRCS feature that a 2-TN LTSB group can have is Speed Calling. Each member of the 2-TN LTSB group may have their own list and cannot access the other member's list. The feature may be assigned on a LINEFA form, an associated CLUSTR form or an associated BFG form. Pursuant to having Speed Calling, an Individualized Dialing feature may be assigned that is defined on an IDFD form with the IDP GROUP?, CUST ACT/DEACT A.C.T.? and GPIC CUST CHANGEABLE? fields set to "N" (No) and the AD 1 DIGIT? or the AD 2 DIGIT? field set to "Y".

If the feature is assigned on an IDPLPA form (5601-6 Record), then the SHARED? fields under the ABBREVIATED DIAL LIST 1 and ABBREVIATED DIAL LIST 2 headers must be set to "N" (No).

If the feature is assigned on a BFG form (5625-2 Record), then the SHARED? fields under the ABBREVIATED DIAL LIST 1 and ABBREVIATED DIAL LIST 2 headers must be set to "N" (No).

If the IDPLPA or BFG forms were not applied to assign the feature, then the IDFD form, where the feature is defined, must have the AD 1 SHARED? and AD 2 SHARED? fields set to "N" (No).

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SEC. 1AD: AUTOMATIC CUSTOMER STATION REARRANGEMENT

1. FEATURE DESCRIPTION

The ISDN ACSR (Automatic Customer Station Rearrangement) feature is available in 5E5 and later Software Releases. ACSR allows an end user to relocate their Primary Directory Number terminal equipment, features, group membership (Centrex group, dialing plan, etc.) and restrictions within the user's ACSR group without a service order. ACSR also allows:

- A user, given group control, to activate or deactivate ACSR service for the entire group.
- A user to check the status of an ACSR move.

ACSR has the following requirements and restrictions:

- A user must belong to only one ACSR group and may only move to DSLs that are within the user's ACSR group.
- Circuit-Switched voice calls are needed for ACSR Invocation. Therefore, every ACSR user must have a Circuit-Switched TN.
- DSLs supporting Permanently Provisioned B-channel packet services on both B-Channels or Modem Pooling are not allowed the ACSR feature.
- ISDN Attendants are not allowed the ACSR feature.
- Users assigned to a CKT MLHG are not allowed the ACSR feature.
- An ACSR move will be denied to a user moving to a DSL marked as Multi-Point if there are already 8 users assigned to that DSL.
- An ACSR move will be denied to a user moving to a DSL marked as Point-To-Point if there are already 8 users associated with that DSL, even though only one user is currently active.
- DSLs supporting On-Demand B-Channels will be allowed the ACSR service but an ISCN (Integrated Services Channel Number) must be available on the target Switching Module. Such an ISCN is reserved on an ODBRES form (5906 Record). The BAND value on the ODBRES form must match the BAND value on the DSLUSR form (5908-1 Record) where the user is described.

For more information on ACSR see Section 5.5 of AT&T 235-190-105.

1.1 ACSR Invocation

The user must have a circuit telephone number defined in the CKT TN field on a DSLUSR form (5908-1 Record). The entry in the OE field on that DSLUSR form must also appear in the DSL OE field, on a DSL form (5907-1 Record), where the entry in the ACSR INH field is set to "N". The entry in the ACSR GRP field, on the DSL form, must be defined on an ACSRGP form (5959-2 Record). The circuit telephone number must be assigned an ACSR feature defined on an ACSRFD form (5959-1 Record) or on an ACSRLPA form (5959-3 Record). The feature must be assigned to the circuit telephone number on a LINEFA form (5112 Record), on a BFG form (5625 Record) or on an associated CLUSTR form (5600 Record).

A user dials the ACSR access code (defined on a PDIT form (5300-2 Record) and/or an IDPDCA form (5601-1 Record) with an ACTION of "ACSRUSE") from the user's new location. It is recommended that the access code be the same on the PDIT and the IDPDCA forms. The user will then be prompted with the ACSR recorded announcements from the DSU2-RAF (Digital Service Unit Model 2 - Recorded

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Announcement Function) (see Division 2, Section 1S for more information on recorded announcements and Division 3, Section 5AH for the standard announcements) along with the message displayed on the terminal (if the terminal has a display window).

If the user is moving to a Multi-Point DSL with their own FIT, then for 5E8 and earlier, the user will receive an announcement giving the TN and asking for confirmation. Otherwise, the user will receive an announcement asking for their TN first. If the user has been assigned a PIN (Personal Identification Number), defined on a PIDEF form (5117 Record), on the ACSRFD or ACSRLPA form, an announcement will be given to enter the PIN. The user will then receive an announcement saying the ACSR request has been denied or accepted.

1.2 ACSR Ringback

After the ACSR move request has been processed the user will be given a ringback announcement saying whether or not the move was completed. If the user does not answer the ringback within a subscribable time (assigned in the RNG MAX field on the ACSRGP form), the move will still be completed.

1.3 ACSR Status Check

The user dials the ACSR access code of "ACSRVFY" from a terminal in the same ACSR group. The user will then be prompted for their TN and PIN in the same way as the ACSR move. After the TN and PIN have been entered the status will then be given.

1.4 ACSR Group Activation and Deactivation

The user, given control of the group, must have the ACSR feature defined on the ACSRFD form with GRP CNTRL set to "Y". After the group controller dials the ACSR access code "ACSRON" or "ACSROFF" from their terminal, a confirmation tone will be given for a successful update and a reorder tone will be given for an unsuccessful update. Group activation and deactivation can only be invoked from a DSL that has the ACSR feature assigned; they cannot be invoked from Default Service.

1.5 Default Service

When a user powers up a terminal on a DSL, the switch will try to identify the terminal and supply service to it. If a terminal does not have a service associated to it, the DSL must have a Default Service, defined on a DFLTSRV form (5974 Record), to allow a user to invoke ACSR from that terminal.

When Default Service is received, the ODP associated with the Default Service group is used. To avoid confusion, ACSR dial codes defined on the IDPDCA form should match the dial codes defined on the PDIT form. If dial codes need to be different, a separate ODP may be built for Default Service to allow ACSR, BRI Test Line, Repair (e.g., 611), Business Office, and Emergency (e.g., 911) dial codes.

2. TRANSLATION REQUIREMENTS

Figure 1 shows the interaction between forms used in populating the ACSR data. The following translations give a brief description for each of the forms.

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2
TRUNK	5204	3	2C	5.5
TKGRP	5202	3	2A	5.1
RTIDX	5303	3	3P	10.2
FIXRT	5301-1	3	3G	10.1
PDIT	5300-2	3	3B	9.2
IDPDCA	5601-1/2	4	2B	9.13
ACSRFD	5959-1	6	2A	12.50
ACSRGP	5959-2	6	2B	4.47

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ACSRLPA	5959-3	6	2C	1.49
EQIM	5700-1/2	8	2	18.1
EQRA	5821	8	35	19.10
EQRAP	5822	8	36	20.10, 20.22
ANNAPL	5529	3	5AC	8.64
ANNHD	5531	3	5AE	8.61
ANNDG	5532	3	5AF	8.60
ANNTR	5533	3	5AG	8.62
PHRASE	5534	3	5AH	8.63
DFLTSRV	5974	6	17	23.15
PIDEF	5117	3	1Q	4.39
MEASPDF	5615	4	16A	13.3
APFMA	5622	4	21C	24.5
ODBRES	5906	5	1G	23.14
ODBTS	5905	5	1F	23.13

2.1 Line Translations

DSL form (5907-1 Record) - ACSR GRP assigns an ACSR group to a DSL. ACSR INH indicates whether or not ACSR features can be invoked on a DSL. Every DSL with an ACSR group must have the DFLT SRV field entered and the entry defined on a DFLTSRV form (5974 Record).

DSLUSR form (5908-1/2/3/4/5/6/7/8 Record) - The user must have the CKT TN entered to allow the user to be prompted with recorded announcements. Both PPB1 USR and PPB2 USR must be "N" or left blank.

2.2 Trunk Translations

TRUNK form (5204-1 Record) - The RAFEN field must be entered for DSU2-RAF recorded announcements.

TKGRP form (5202-1/2/3/4 Record) - The TRKCLS must be "RAFDTA", TRK DIR must be "RAF", and SVC GRP must be "ACSR" for ACSR DSU2-RAF DTAs (Dial Through Announcements).

- ***NOTE:*** If the trunk group supports RACF (Remote Activation To Call Forwarding) and/or LASS (Local Area Signaling Services) SLE (Screen List Editing) announcements, the SVC GRP must have a value of "RAS", not "ACSR".

2.3 Routing and Charging Translations

RTIDX form (5303 Record) - The TGN number assigned on this form must be defined on a TKGRP form.

FIXRT form (5301-1 Record) - An Announcement Trunk Group must be built to allow ACSR and Default Service failure announcements by entering "ACSR" and "DFLTFAIL" in the FIXED ROUTE TYPE field on two FIXRT forms.

PDIT form (5300-2 Record) - ACSR dial codes for the ODP are defined on this form. The ACTIONs are:

Valid ACTION Entries

Entry	Definition
ACSROFF	Deactivate ACSR group.
ACSRON	Activate ACSR group.
ACSRUSE	Invoke an ACSR move.
ACSRVFY	Verify ACSR queue status.

2.4 BRCS Translations

IDPDCA form (5601-1 Record) - ACSR dial codes for the IDP are defined on this form. The ACTIONs are:

Valid XXXX Entries

Entry	Definition
ACSROFF	Deactivate ACSR group.
ACSRON	Activate ACSR group.
ACSRUSE	Invoke an ACSR move.

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ACSRVFY	Verify ACSR queue status.

2.5 ISDN ACSR Translations

ACSRFD form (5959-1 Record) - This form is used to define a constructed ACSR feature. The FEATURE field is used to assign the ACSR feature to a line.

ACSRGP form (5959-2 Record) - This form is used to define an ACSR group. The ACSR GRP field is used to assign the ACSR group to a DSL or to an ACSR line.

ACSRLPA form (5959-3 Record) - This form is used to assign line parameters to a TN, if they are different from the parameters defined on an ACSRFD form.

2.6 Engineering Translations

EQIM form (5700-1/2 Record) - Switching module entries on the ANNHD form (5531 Record), ANNDG form (5532 Record), PHRASE form (5534 Record) and ANNTR form (5533 Record) must be defined on this form.

EQRA form (5821 Record) - This form defines the RAF unit. The RAF SERVICE TYPE must have a value of "DTA" for DTAs.

The RAF circuit packs must be defined on the EQRAP form (5822 Record). Also, an associated TRUNK form must be entered with a RAF EN defined.

EQRAP form (5822 Record) - This form defines the RAF circuit packs. The SM (Switching Module) must be defined on the EQIM form (5700-1 Record). If the RAF is supporting announcements for RACF, ACSR and LASS, the following fields must be entered:

Field	Pack1	Pack2
APPLICATION	BRCS-SLE	
MICROCODE	5D142A10	5D143A20

If the RAF is supporting ACSR or (ACSR and RACF), the following fields must be entered:

Field	Pack1	Pack2
APPLICATION	ISDN-ACS	
MICROCODE	5D142A10	5D143A10

2.7 Miscellaneous Translations

ANNAPL form (5529 Record) - The Announcement Application SM List form specifies the SMs which are populated with RAF automated announcements.

ANNHD form (5531 Record) - The Announcement Header Phrase List form contains phrase identifications that comprise announcement headers. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

ANNDG form (5532 Record) - The Announcement Digit Inflection Scheme form contains the inflection commands and phrase identifications that comprise a template for digit strings. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

ANNTR form (5533 Record) - The Announcement Trailer Phrase List form contains phrase identifications that comprise announcement trailers. A standard set of input data is provided by ODA as each office is registered and normally is registered and normally no data need be entered by the ODA system users.

PHRASE form (5534 Record) - The Announcement Phrase List form defines the phrases that comprise announcements. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

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DFLTSRV form (5974 Record) - This form allows ACSR to be invoked from a terminal which has no service associated with its DSL.

PIDEF form (5117 Record) - This form is used to define the PIN.

MEASPDF form (5615 Record) - "ACSR" must be entered in the MEASUREMENT TYPE field in order determine the impact of the ACSR feature on the office.

APFMA form (5620-3 Record) - The ACSR field must be entered as "Y" to allow a customer to have administrative control over ACSR. Currently, the AT&T Application Processor does not support this application but it may be supported by another vendor.

2.8 ISDN/Packet Switching Translations

ODBRES form (5906 Record) - This form is used to reserve ISCNs for ODB (Office Data Base) users that are moving across SMs via ACSR. The ISCNs should be reserved on SMs that an ACSR group spans across to allow an ISCN to be assigned to the user at the new SM and to complete the ACSR move without a failure.

ODBTS form (5905 Record) - This form is used to reserve time-slots used by ODB users to access the PSU (Packet Switch Unit). The ISCNs allocated on the ODBRES form or assigned to ODB users must have time-slots reserved between the ISLU and PSU shelves (same shelves as the ISCNs assigned on the ODBRES form) on the ODBTS form (RC view 23.13).

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Figure 1 ACSR FORM FLOW

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SEC. 1AE: INCREASE TRFC30 BUFFER SIZE

1. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the Increase TRFC30 Buffer Size feature has feature number 99-5E-4340. This feature increases the limit of data collection for the Traffic 30 channel from 75KB (Kilobytes) to 384KB and increases the allowable individual section size limit from 32KB to the entire space assigned to TRFC30 buffer (384KB). However, each section's size limit must be changed separately to make use of the new allowable space.

The TRFC30 protocol conforms to the Telcordia Technologies' requirements in TR-TSY-000740, Section 3.1, except the header will not include the SPCS CLLI code field, making the header information non-standard. A new message type, 123 - "30-MINUTE DATA WITH EXPANDED HEADER POOL," replaces the old message number 103 - "30-MINUTE DATA POOL." The Datakit rate of 9600bps (bits/second) minimum is recommended for transferring the Traffic 30 data.

1.1 Traffice Message Type

Beginning with 5E14, the 5ESS Switch will use new message 123 - "30-MINUTE DATA WITH EXPANDED HEADER POOL". The old message, number 103 - "30-MINUTE DATA POOL," will no longer be supported. Only the new 123-message type will be used to identify the 30-minute traffic data. If the 5ESS Switch receives a poll message 103, the switch will reply with "invalid request" message 202.

1.2 OS Support

All OSS (Operational Support Systems) that support the Traffic 30 must be updated to support the new protocol. Customers who use an OSS other than Telecordia's DCOS or Lucent's Netminder TMS (TDMS), must be sure their vendor updates its OSS product to handle the changed protocol and additional data. DCOS and TDMS users should contact the vendor point of contact for availability and specifications.

1.3 Modem Speed

In order to take advantage of this feature's increase in traffic reporting capacity, Lucent highly recommends that larger offices use a minimum of a 9600 bps modem. A traffic data collection message over 75KB will not be completely transmitted in the time window, resulting in loss of data when using modems slower than 9600 bps. When the entire message is not received in the allotted time, the whole message may be dropped, losing all of the data sent in that message. Smaller offices in which the requested amount of traffic data to be reported does not exceed 75KB may stay on 2400 or 4800 bps modems. Thus the traffic engineer must size the amount of data being collected according to the modem speed to prevent loss of traffic data.

2. TRANSLATION REQUIREMENTS

No new forms or fields have been added or modified.

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SEC. 1AF: PACKET SWITCHING DATA BUSINESS GROUP

1. FEATURE DESCRIPTION

The Packet Switching Data Business Group Service feature is available in 5E5 and later Software Releases. This feature enables an operating company to set up and administer intra-switch PBGs (Packet Business Groups) by assigning a PBG number to each X.25 termination to distinguish between intra-PBG calls and other calls on the AMA billing record using AMA call code "378". All PBG members must reside in the same 5ESS Switch; one switch can support up to 100 PBGs.

Billable, intra-group X.25 PVCs (Permanent Virtual Circuits) will also be recorded on the AMA billing record as call code "378". Although the same call code is used for both virtual calls and PVCs, different ODD (Office Dependent Data) is used to control PVCs than is used to control virtual calls, so a comparison of PBG numbers for endpoints of the PVC is not performed. Each PVC in the ODD is statically marked intra-PBG or not intra-PBG; there is no PBG number assigned by the operating company.

During a virtual call, ODD for the two call endpoints is compared to determine whether or not the call is an intra-PBG call. Each individual packet user and each packet MLHG (Multi\-Line Hunt Group) can be assigned a PBG number in the ODD for virtual calls. For an individual user, the PBG number is entered on the DSL or the DSLUSR form, and for an MLHG the PBG number is entered on the MLHG form. The MLHG PBG number is used for an endpoint that is a member of the MLHG if a LISTED TN (i.e. a hunting TN) for the MLHG was called to reach the endpoint or was the calling TN for the endpoint; in all other cases the PBG number entered on the DSL or DSLUSR forms for the endpoint is used. A virtual call is intra\-PBG if it is intra\-switch and the two call endpoints have been assigned the same PBG number. A call is not intra\-PBG: if at least one of the endpoints was not assigned a PBG number in the ODD, the PBG numbers of the endpoints are different, or the call is not intra\-switch.

The following list and Figure 1 present the sequence of events for setting up an X.25 line-to-line virtual call between an originating customer (User A) and terminating customer (User B). A call that has a trunk (e.g. X.75' trunk) at either the originating or terminating end cannot be an intra-PBG call. The sequence of events that takes place during the set-up of a virtual call has not changed due to this feature, however, some of the events themselves have been modified. Information that modifies an existing event due to this feature is marked "PBG".

- User A originates a call to User B by sending an X.25 Call Request packet (see Figure 1). This request packet is processed by a PH (Protocol Handler). The PH circuit pack resides in the PSU (Packet Switching Unit).

- The PH forwards a routing request to the PR (Packet Routing) software subsystem in the originating SMP (Switching Module Processor). The SMP is a subunit of the MCTSI (Module Control/Time Slot Interchanger) in the SM.

- The PR subsystem accesses the ODD for routing information.

  PBG: PR retrieves User A's PBG number. If the originating TN is a "hunting" TN (the user is a MLHG member), the PBG number is obtained from the MLHG form (5110 Record). If the originating TN is for an individual packet user, the PBG number is obtained from the DSL or DSLUSR forms (5907 or 5908 Records).

- PR returns a response message to the PH. PBG: PR includes the PBG number (or a default if no PBG number was assigned) in the response message.

- The originating PH initiates an IP (Internal Protocol) call request through the packet network by sending an IP Call Request packet to the terminating PH.

  PBG: The PBG number is stored in the originating PH. If the PBG number is not the default, it is

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added in the Call Request packet.

- When the terminating PH receives the Call Request packet, it sends a Data Request message to the terminating SMP to request information about the terminating user (User B).
- The PR subsystem in the terminating SMP accesses the ODD for routing information.

  PBG: PR retrieves both of User B's PBG numbers from the 5907 or 5908 Records, and from the 5110 Record (if User B is an MLHG member).
- PR returns a data response message to the terminating PH from the terminating SMP.

  PBG: The PBG numbers (individual and/or hunt group) of the terminating user are added to the response message.
- After receiving the data from the SMP, the terminating PH offers the X.25 call to the CPE (Customer Premises Equipment) via an X.25 Incoming Call packet.

  PBG: The PBG number for the terminating user is determined based on the terminating TN. If the terminating TN is a "hunting" TN (terminating user is a MLHG member), the PBG number from the MLHG form (5110 Record) is used. If the terminating TN is for an individual packet user, the PBG number from the DSL or DSLUSR forms (5907 or 5908 Records) is used.
- The CPE accepts or clears the call.
- The terminating PH returns a Call Accept (or Clear) packet to the originating PH.

  PBG: If User B is in a PBG, the PBG number is added to the Call Accept/Clear packet.
- The originating PH sends a call Connect (or Clear) packet to the originating CPE. For intra-PBG virtual calls, the PBG AMA field on the ISDNOPT form (5941 Record) is checked to see if intra-PBG AMA records are to be generated or if the call is to be treated as non-billable. The comparison of PBG numbers is done at the originating PH; for reverse charge calls the comparison is done at the terminating PH.

2. TRANSLATION REQUIREMENTS

MLHG form (5110 Record) - This form is used to define Multi-Line Hunt Group parameters. Enter a PBG number in the PB GRP field on this form to assign the MLHG to a PBG. Valid values are 1 to 100. If the MLHG is not in a PBG, simply leave the field blank. If a PBG number is assigned, however, then a HUNT TYPE of "UCD" (modem pool only) or "PSUCD" must be defined on the MLHGFD form (5604 Record).

DSL form (5907 Record) - This form's fundamental purpose is to define the attributes of a DSL. DSL is another name for a BRI (Basic Rate Interface). PB GRP fields are located under the PPB1 (PERMANENT PACKET B1) and PPB2 (PERMANENT PACKET B2) headers on the DSL form. Only assign a PB GRP number to a user with a known PPB1 or PPB2 TN, or to a PPB1/PPB2 MLHG/TERM with a known PPB1/PPB2 TN. Valid values are 1 to 100. If no PBG is assigned, simply leave the field blank. The PB GRP entered under PPB1 applies only when B1 is used for a virtual call; the PB GRP entered under PPB2 applies when B2 is used.

DSLUSR form (5908 Record) - This form is used to assign attributes to a user ofa DSL (BRI). PB GRP fields are located on this form under the DPKT (D-CHANNEL PACKET SWITCHING) header and under the ODB (ON-DEMAND B-CHANNEL) header. Only assign a PB GRP number to a user with a known DPKT TN, or to a DPKT MLHG with a known MLHG TN also assigned on this form. Valid values are 1 to

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100. If no PBG is assigned, leave the field blank. The PB GRP entered under DPKT applies only when the D\-channel is used for a virtual call; the PB GRP entered under ODB applies when ODB is used.

PSPVC form (5923 Record) - This form is used to assign PVC (Permanent Virtual Circuit) channel numbers to DSLs. The INTRA GROUP field on this form is used to determine whether or not the billable PVC (Permanent Virtual Circuit) should be marked as intra-group (AMA call code 378).

ISDNOPT form (5941 Record) - The ISDNOPT form is used to define ISDN office options. The PBG AMA field on this form is used to define whether or not AMA billingentries should be generated for intra\-PBG virtual calls.

Figure 1 PACKET SWITCHING DATA BUSINESS GROUP CALL SCENARIO

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SEC. 1AG: REMOTE ACTIVATION TO CALL FORWARDING

1. FEATURE DESCRIPTION

RACF (Remote Activation To Call Forwarding) is available with 5E5 and later Software Releases. It allows a customer to activate or deactivate CF (Call Forwarding) from a remote location. For security, RACF may be restricted to remote activations from within an IDP group. The following requirements are needed for RACF:

- The user must have a CF feature that allows RASs (Remote Access Services) and CF activation/deactivation by dial code.
- The user must have a PIN (Personal Identification Number).
- The user must have the ability to use RASs on a given CF feature.
- The user must access RACF via a touch-tone phone.
- The RADN (Remote Access Directory Number) must be defined to allow access to RAS.

1.1 Call Scenario

The following call scenario shows a customer's interaction with the RACF recorded announcements:

A customer activates the RACF feature by dialing the RADN from a remote location. The RADN routes calls to the DSU2-RAF-DTA (Digital Service Unit Model 2 - Recorded Announcement Function - Dial Through Announcement) via a ROUTE INDEX (defined on the RTIDX form (5303 Record)). The DSU2-RAF-DTA will then give the following announcements:

- "This is your Remote Access Service. Please use a touch-tone telephone only. You may now dial your seven-digit home or office telephone number that has remote access service. Please dial now." The customer dials `7778329'.
- "The number you have dialed is `7778329'. If this number is correct, dial your Personal Identification Number. If the number is not correct, dial `*' and enter a new number. Please dial now." The customer dials `4328'.
- "Please dial a feature code now." The customer dials `*52'.
- "You have accessed the Call Forwarding Activation feature. To confirm this feature, dial `1'. To try a new feature, dial `0'. Please dial now." The customer dials a `1'.
- "This is your Call Forwarding service. Please dial the number to which you want your calls forwarded. If you must dial `1' or an Area Code to reach this number from your home or office, then do so. Please dial now." The customer dials `9825324'.
- "Your call will be forwarded to `9825324'. If this number is correct, dial `1'. If this number is not correct, dial `0'. Please dial now." The customer dials a `1'.
- "Your calls will now be forwarded. You may hang up or dial another feature code now." The customer hangs up.

Remote access may be restricted to the IDP group as the RADN by setting the IDP RESTRICT field to "Y" on the RASRTI form (5538 Record).

2. TRANSLATION REQUIREMENTS

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New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LINEFA	5112	3	1L	1.8, 1.11, 1.12
MLHLNFA	5113	3	1M	3.8, 3.11, 3.12
TRUNK	5204	3	2C	5.5
TKGRP	5202	3	2A	5.1
RTIDX	5303	3	3P	10.2
LDIT	5300-3/5	3	3C	9.3
IDPDCA	5601-1/2	4	2B	9.13
CLUSTR	5600	4	1A	12.2
CFWFD	5614-1/2	4	15A	12.12
ANNAPL	5529	3	5AC	8.64
ANNHD	5531	3	5AE	8.61
ANNDG	5532	3	5AF	8.60
ANNTR	5533	3	5AG	8.62
PHRASE	5534	3	5AH	8.63
PIDEF	5117	3	1Q	4.39
RASRTI	5538	3	5AL	10.19
EQIM	5700-1/2	8	2	18.1
EQRA	5821	8	35	19.10
EQRAP	5822	8	36	20.10, 20.22

Figure 1, "RACF Form Flow", shows the interaction between forms used in populating the RADN, target DN (Directory Number) and the dial codes. The following translations give a brief description for each of the forms.

2.1 Line Translations

LINEFA form (5112 Record) - A value of "Y" must be entered in the R (RAS allowed) field for the CF feature. This allows the feature to be accessed remotely.

MLHLNFA form (5113 Record) - A value of "Y" must be entered in the R (RAS allowed) field for the CF feature. This allows the feature to be accessed remotely.

2.2 Trunk Translations

TRUNK form (5204-1 Record) - The RAFEN field must be entered to receive DSU2-RAF-DTA dial-through announcements.

TKGRP form (5202-1/2/3/4 Record) - The TRKCLS must be "RAFDTA", TRK DIR must be "RAF", and SVC GRP must be "RAS" to receive RACF DSU2-RAF-DTAs.

2.3 Routing and Charging Translations

RTIDX form (5303 Record) - The RTIDX defined here is needed to route to a TKGRP which has the associated RACF DSU2-RAF-DTA announcements. The Trunk Group Number assigned on this form must be defined on the TKGRP form.

LDIT form (5300-3 Record) - This form and/or the IDPDCA form (5601-1/2 Record) must be used to define the digits to be interpreted by the ODP/IDP for the RADN dial codes needed to access the CF feature remotely.

2.4 BRCS Translations

IDPDCA form (5601 Record) - This form and/or the LDIT form must be used to define the digits to be interpreted by the IDP/ODP for the RADN dial codes needed to access the CF feature remotely.

CLUSTR form (5600 Record) - A value of "Y" must be entered in the R (RAS allowed) field for the CF feature. This allows the feature to be accessed remotely.

CFWFD form (5614-1/2 Record) - Any CF features that are defined on this form and allow RAS must

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have dialed codes defined in the appropriate dialing plan. Only CF features with a DEACTIVATION TYPE of "CODE" and an ACTIVATION TYPE of "CDCA1A", "CDDN", "CDDNC", "CDDNCA", or for 5E6 and later, "CODE", are allowed by RACF.

- ***NOTE:*** ACT TYPE (Activation Type) of "CODE" is only allowed when CHANGE FWD TO DN is "Y". Additionally, ACT TYPE of "CODE" does not change the operation of the RACF feature. Therefore, the FORWARD TO DN (The directory number to which calls will be forwarded) will still be prompted for and changed when activating RACF remotely even though ACT TYPE of "CODE" does not require the FORWARD TO DN field to be entered or changed.

2.5 Miscellaneous Translations

ANNAPL form (5530 Record) - The Announcement Application SM (Switching Module) List form specifies the SMs which are populated with RAF (Recorded Announcement Function) automated announcements.

ANNHD form (5531 Record) - The Announcement Header Phrase List form contains phrase identifications that comprise announcement headers. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

ANNDG form (5532 Record) - The Announcement Digit Inflection Scheme form contains the inflection commands and phrase identifications that comprise a template for digit strings. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

ANNTR form (5533 Record) - The Announcement Trailer Phrase List form contains phrase identifications that comprise announcement trailers. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

PHRASE form (5534 Record) - The Announcement Phrase List form defines the phrases that comprise announcements. A standard set of input data is provided by ODA as each office is registered and normally no data need be entered by the ODA system users.

PIDEF form (5117 Record) - This form must be entered to define the PIN which is associated with a TN.

RASRTI form (5538 Record) - This form assigns the dialing plans associated with the RADN. If IDP RESTRICT is set to "Y", the IDPNAME (RADN's IDP group) must be in the same IDP group as the remote location TN (where the call is being made from).

When both an IDP and ODP are assigned to an RADN, the IDP will be used for digit analysis of the user's Target DN.

2.6 Engineering Translations

EQIM form (5700-1/2 Record) - Switching module entries on the ANNHD form, ANNDG form, PHRASE form and ANNTR form must be defined on this form.

EQRA form (5821 Record) - This form defines the RAF unit. The RAF SERVICE TYPE must have a value of "DTA" for DTAs.

The RAF circuit packs must be defined on the EQRAP form (5822 Record). Also, an associated TRUNK form must be entered with a RAF EN defined.

EQRAP form (5822 Record) - This form defines the RAF circuit packs. The SM must be defined on the EQIM form (5700-1 Record). If the RAF is supporting announcements for RACF, ACSR (Automatic Customer Station Rearrangement), and Local Area Signaling Services, the following fields must be entered:

Field	Pack1	Pack2

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APPLICATION	BRCS-SLE	□
MICROCODE	5D142A10	5D143A20

If the RAF is supporting ACSR or (ACSR and RACF), the following fields must be entered:

Field	Pack1	Pack2
APPLICATION	ISDN-ACS	□
MICROCODE	5D142A10	5D143A10

If the RAF is supporting RACF only, the following fields must be entered:

Field	Pack1	Pack2
APPLICATION	BRCS-RAS	□
MICROCODE	5D142A10	□

Figure 1 RACF FORM FLOW

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SEC. 1AH: CALL FORWARDING OVER PRIVATE FACILITIES

1. FEATURE DESCRIPTION

This section describes the Call Forwarding over Private Facilities (CFPF) and Call Forwarding over Private Facilities/Electronic Tandem Switching (CFPF/ETS) feature and data population.

The CFPF feature allows a user with dial access to private facilities or Automatic Route Selection (ARS) the ability to forward calls over private facilities. The private facility or service selected by the user can be either: Common Control Switching Arrangement (CCSA), Outward Wide Area Telephone Service (OUTWATS), Foreign Exchange (FX) or senderized (not cut-through) tie-trunk.

The CFPF/ETS feature allows an ETS collocated or noncollocated main business customer station to have all terminating calls automatically forwarded to another ETS on-network or off-network remote station using the Electronic Tandem Network (ETN).

The following terms will be used in this section:

- An Electronic Tandem Network (ETN) is a private telecommunications system arrangement that contains an X number of Electronic Tandem Switches (ETSs) that are interconnected via intertandem trunks.
- When an ETS of an ETN provides business service and ETS service switching for an ETS customer station, the business is said to be collocated with the ETS.
- If business service switching for an ETS main business customer is provided by a switch other than ETS of the ETN, then the service is said to be noncollocated. In a noncollocated application, the ETS main business customer stations have calling party access to an ETS of the ETN via a non-senderized trunk.

For more information on CFPF National ISDN applications, see Division 2, Section 1AM; for information on CFPF/DA (CFPF/Don't Answer), see Division 2, Section 4A155.

1.1 CFPF FEATURE ACTIVATION

The user goes off-hook, receives dial tone, dials the CFPF activation code, receives 2nd dial tone and dials an ARS or PFA access code. If the access code is valid, a 3rd dial tone is returned awaiting the remote station number. If the user receives confirmation tone and remains off-hook, the call is placed to the remote station to verify the call is being forwarded properly. If the user goes on-hook after confirmation tone, the call forwarding will still be activated.

An ISDN user may use an on-hook activation (pressing CFPF feature button with an ACTION of "BNTOG") thus allowing the account codes, authorization codes and forward to DNs to be defaulted by ODA or RC on the Call Forwarding Feature Definition forms (CFWFD, CFWLPA, or CFWMPA). The account codes, authorization codes and forward to DNs are automatically CORCed during off-hook (dial code of CFPF with an ACTION of "FTACT") activation. This also applies to CFPF/ETS.

1.2 CFPF/ETS FEATURE ACTIVATION

A collocated or noncollocated user goes off hook, receives dial tone, dials a CFPF activation code, receives 2nd dial tone and dials an ARS (collocated) or PFA (noncollocated) access code. If the access code is valid, 3rd dial tone is returned. The user can dial, optionally, a lead account code followed by an account code. If the code was dialed, the 4th dial tone prompts for the 7/10 digit remote station number (with ETS, a 7-digit number is used for call forwarding to an on-network remote station while a 10-digit number indicates a call is being forwarded to a off-network remote station). After remote station dialing, an authorization code will be required for off-network DNs and may be optionally prompted for on-network

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DNs from a noncollocated main business customer. The user dials the authorization code and will receive one of the following tones:

A. If confirmation tone is given, the CFPF/ETS feature is automatically activated and remains activated until deactivated by the station user or the ETS customer attendant.

B. In a collocated base station application, if an invalid remote station DN is dialed, reorder tone will be given instead of confirmation tone.

C. In a noncollocated base station application, if an invalid remote station DN is dialed, confirmation tone followed by reorder tone is returned to the user.

1.3 CFPF AND CFPF/ETS FEATURE DEACTIVATION

The base station user goes off-hook, receives dial tone and dials the CFV deactivation code. If the code is valid, confirmation tone followed by dial tone will be given.

2. TRANSLATION REQUIREMENTS

2.1 LINE TRANSLATIONS

LINEFA form (5112 Record)

The CFPF call forwarding feature defined on the CFWFD form must be assigned to the line that is forwarding calls over private facilities.

The lines which are using an account code and authorization code must have the account and authorization features defined on the ATHFD and ACCTFD forms. The ACCTFD and ATHFD features may be assigned here or on a corresponding BFG or CLUSTR form.

The associated ARS features and PFA features must be assigned to the lines to allow access to the private facilities.

MLHLNFA form (5113 Record)

The CFPF call forwarding feature defined on the CFWFD form must be assigned to the lead member of the MLHG which is forwarding calls over private facilities.

The hunt groups which are using an account code and authorization code must have the account and authorization features defined on the ATHFD and ACCTFD forms.

The associated ARS features and PFA features must be assigned to the lines to allow access to the private facilities.

2.2 ROUTING AND CHARGING TRANSLATIONS

PDIT form (5300-2 Record)

This form and/or the IDPDCA form may be used to define the CFV activation and deactivation codes (ACTION of "FTACT" and "FTDCT"), ARS use codes (ACTION of "ARSUSE", "ARS1USE" or "ARS2USE"), PFA access codes (ACTION of "PFUSE"), ACCT use code (ACTION of "ACCTUSE") or ARS use codes (ACTION of "ARSUSE").

AMACT form (5506 Record)

This form is used to define the CALL TYPE which is associated with the CHARGE INDEX defined on the CGIDX form.

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The following CALL TYPES may be used for trunks which are used for CFPF or CFPF/ETS:

- CFPFNA - A forwarded incoming call will be billed when answer supervision has been returned. If the trunk does not return answer supervision, the billing will begin when the call is answered.
- TANTTK - A forwarded incoming call will be billed when a simulated answer supervision has been returned. With this CALL TYPE, billing will occur even if the the call is not answered.

CGIDX form (5302-1 Record)

This form is used to define the CHARGE INDEX. The index is used to determine which type of billing should be used to forward a call over a trunk which is being accessed by a PFA group with a CODE INDEX assigned on the PFAGPA form. The CALL TYPEs are defined on the AMACT form.

2.3 BRCS TRANSLATIONS

IDPDCA form (5601-1/2 Record)

If the base station user belongs to an IDP group, this form may be used to define the CFV activation and deactivation codes (ACTION of "FTACT" and "FTDCT"), ARS use codes (ACTION of "ARSUSE", "ARS1USE" or "ARS2USE"), PFA access codes (ACTION of "PFUSE"), ACCT use code (ACTION of "ACCTUSE") or ARS use codes (ACTION of "ARSUSE").

CFWFD form (5614-1/2 Record)

This form is used to define the CFPF feature which is to be assigned to the TNs or MLHGs which are forwarding calls over private facilities. The preconstructed feature /CFPF or a constructed feature with CFPF ALW set to "Y" may be used to indicate calls will be forwarded over private facilities.

The ACT TYPE may not be "CDDNCA" or "CDCA1A" and the FWD CONDITION must not be "PRCI" or "IDLE". Note that for 5E9(1) and later, if the CFPF/DA (Call Forwarding Over Private Facilities/Don't Answer) secured feature is purchased and SFID ACT 155 is "Y", FWD CONDITION may be set to "IDLE".

The ACCT CODE is used to store the account code which is used when the call is being forwarded.

The ATH CODE is used to store the authorization code which is used when the call is being forwarded.

The FORWARD TO DN is used to store the account use codes, authorization use codes, LEAD ACCOUNT CODE, defined on the PFAGPA form, ARS use codes, PFA access code and the forward to DN which is used when the call is being forwarded.

The ACCT CODE, ATH CODE and FORWARD TO DN are CORCed during off-hook activation. These fields may be used as defaults after off-hook activation (CORC) or through assignment via RC or ODA as long as on-hook activation (ISDN CFV feature button) is being used.

CFWLPA form (5614-3 Record)

This field is used to assign a specific FORWARD TO DN and ACCT CODE or ATH CODE to a non-multiline hunt line with this call forwarding feature.

CFWMPA form (5614-4 Record)

This field is used to assign a specific FORWARD TO DN and ACCT CODE or ATH CODE to a multiline hunt line with this call forwarding feature.

PFAGPA form (5609-5 Record)

This form is used to define the private facility group which uses the private facility to forward calls.

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An ETS access trunk that operates in senderized mode limits the number of digits that can be outpulsed from the noncollocated main to the ETS of the ETN which makes account code and authorization features unavailable at the noncollocated main location. Therefore, noncollocated CFPF/ETS requires the ETS TRK IND = "Y" on this form and the trunk to be non-senderized which is indicated by the CUT THRU field set to "Y" on the TKGRP form (5202-1/2/3 Record).

- ***NOTE:*** If a CFPF activation is initiated over a non-senderized trunk which is not marked as an ETS trunk, the call will be routed to reorder and the CFPF feature will remain inactive.

This form allows a lead account code and account code to be entered without having an ACCT feature by entering a LEAD ACCT CODE and an ACCT CODE LNGTH. The ACCT CODE LNGTH determines the validity of an account code on a noncollocated switch.

During CFPF/ETS activation, a noncollocated user has the option of being prompted for an authorization code on all on-network calls (7-digit DNs) by entering a value other than "NONE" in the ATH PROMPT field and by entering a value of "Y" in the ATH ALW field. The noncollocated switch has no way of knowing if the authorization code is valid (except by the length indicated by the ATH CODE LNGTH field on the PFAGPA form). The ATH CODE LNGTH and authorization codes may be dialed without having the ATH feature.

- ***NOTE:*** All off-network calls (10-digit DNs) will always be prompted for an authorization code even if the ATH ALW field has a value of "N".

For a noncollocated switch, the digits must be outpulsed to the ETS via a cut through trunk according to the ETS Uniform Dialing Plan. The PAUSE1 field allows time for the ETS to get ready for digit collection. The PAUSE2 field allows a delay between the account code and the DN. The PAUSE3 field allows a delay between the DN and the authorization code.

ACCTFD form (5623-1 Record)

This form is used to define the account code feature. This form must be used if an ACCT CODE is entered on one of the Call Forwarding Feature forms (CFWFD, CFWLPA or CFWMPA).

ATHFD form (5619-1 Record)

This form is used to define the authorization code feature. This form must be used if an ATH CODE is entered on one of the Call Forwarding Feature forms (CFWFD, CFWLPA or CFWMPA).

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SEC. 1AI: CENTRALIZED ATTENDANT SERVICE/RELEASE LINK SERVICE (CAS/RLS)

1. FEATURE DESCRIPTION

Centralized Attendant Service/Release Link Service (CAS/RLS) allows a business customer, having more than one business location served by separate switching machines, to concentrate attendants at a single location. CAS/RLS allows an attendant located at the main switching machine to control certain switching actions at a branch switching location. RLS provides improved trunk facility usage on calls which require attendant assistance. Release Link Trunks (RLTs) are used by RLS to provide short holding time connections for attendant calls from the branch location to the main location.

The CAS/RLS service is similar to the Main/Satellite service except the tie-trunks will be replaced by RLTs from the branch switch to the main switch. See Figure 1 for CAS/RLS configuration. The attendant at the main switch will provide the branch switches with Attendant Call Transfer, Attendant Camp-on, and Attendant Conference when the appropriate Multi-way and Call Waiting features are assigned to the branch side of the RLT. The attendant may be accessed through LDN calls or dial 0 calls (intercom dialing). The RLTs will only be utilized during LDN calls or dial 0 calls originating from the branch switch. The following trunk types may be defined as RLTs:

- Analog (non-ISDN), senderized tie or Foreign Exchange trunks with a class of service of flash repeating. The trunks are one-way incoming at the main and two-way at the branch.
- Analog (non-ISDN), FX trunk with a class of service of flash repeating entering the main switch. The trunk appears as a line in a Multi-line hunt group with a class of service of "PBX" at the branch switch.

Refer to the Business and Residence Feature Descriptions (235-190-103) document for a detailed description of the CAS/RLS feature.

2. TRANSLATION REQUIREMENTS

The form flow for CAS/RLS using intercom dialing is shown in Figure 2.

2.1 RLT Translations

The FX trunks and tie trunks are defined as an RLT by entering "PERM" (permanent hold RLT) or "TEMP" (temporary hold RLT) in the RLT TYPE field on the corresponding TKGRP form or MLHG form. A permanent hold RLT may be released by the attendant by pressing the "RING" or "CAMP" keys on the 50B Console or the "RLS LOOP" key on the ISDN Console. A temporary hold RLT will be released automatically when the extended leg of a multi-way call answers. If a call is split on a temporary hold RLT, the call may be held until the originating party station has been reconnected by the attendant by pressing the "JOIN" key.

The RLT FLASH field indicates the types of signals the branch will send to the main.

If RLT FLASH is set to "Y", signals for called party answer, calling party disconnect, and called party disconnect will be sent over the RLT. Attendant consoles, which have additional status lamps, will be able to recognize the different types of flashes. If the attendant console is an ISDN or 50B console, only called party answer will be recognized by the attendant console.

If RLT FLASH is set to "N", only called party answer will be sent by the branch.

The following forms are used to populate data for the RLTs:

LCC form (5306 Record)
An FX trunk on the branch switch must have an LCC with a CLASS OF SERVICE of "PBX".

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MLHG form (5110 Record)
This form is used to define an FX trunk group as an RLT on the branch switch by entering "PERM" or "TEMP" in the RLT TYPE field.

TKGRP form (5202 Record)
This form defines an FX trunk or a tie trunk as an RLT. The following entries are needed for an FX trunk defined as an RLT on the main switch.

FX Trunk Entries for RLT Main Switch

Field	Entry
CUT THRU	"N"
DIR CON DN	
INPULSING	"NONE"
OUTPULSING	no entry
RLT TYPE	"PERM" or "TEMP"
TRK DIR	"INC"
TRKCLS	"PFLASH"

The following entries are needed for a tie trunk defined as an RLT on the main switch.

Tie Trunk Entries for RLT Main Switch

Field	Entry
TRK DIR	"INC"
TRKCLS	"PFLASH"
INPULSING	"DP", "MF", or "TT"
OUTPULSING	no entry
CUT THRU	"N"
RLT TYPE	"PERM" or "TEMP"

The following entries are needed for a tie trunk defined as an RLT on the branch switch.

Tie Trunk Entries for RLT Branch Switch

Field	Entry
TRK DIR	"2W"
TRKCLS	"PFLASH"
INPULSING	"TT"
OUTPULSING	"DP", "MF", or "TT"
CUT THRU	"N"
RLT TYPE	"PERM" or "TEMP"

MLHLN form (5111 Record)
This form is used to define the FX trunks which have been defined as RLTs on the associated MLHG form by entering "PERM" or "TEMP" in the RLT TYPE field. The RLTs must have the following fields entered:
- BRCS is "Y"
- GNDREF "Y"
- TTC is "Y"

2.1.1 TRUNK form (5204 Record)

This form defines the tie and FX trunks which have been defined as RLTs on the associated TKGRP form.

An FX trunk at the main switch must have the following entries:
- IN START DIAL must be "DIRC"
- OUT START DIAL must not be entered.

A tie trunk at the main switch must have the following entries:
- IN START DIAL must be "WINK".
- OUT START DIAL must not be entered

A tie trunk at the branch switch must have the following entries:
- IN START DIAL must be "DLTN"

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- OUT START DIAL must be "IMED"

2.2 Multi-way Feature Translations

The attendant features are provided for the branch switches by assigning analog Multi-way features (defined on the MWFD form, 5602-1/2) to the originating side (branch side) of the RLT via the TKGRPFA form (5206 Record) for a trunk appearance or the MLHLNFA form (5113 Record) for a line appearance.

Attendant Satellite Transfer may be provided to the branches by assigning the /MWSAT1 feature to the lines (via LINEFA form) and assigning either the /MWCTA1 and /MWCH1 or the /MWCTA2 feature to the originating side of the RLT via TKGRPFA form. If the /MWCTA2 feature is selected, the attendants DN must be specified in the DIRCONDN field on the MWTPA form (5602-5 Record).

2.3 Call Waiting Feature Translations

To provide automatic attendant camp-on, an attendant call waiting feature (/CWACO or /CWACODT) must be assigned to the RLT at the branch side via the TKGRPFA form (trunk appearance) or MLHLNFA form (line appearance).

2.4 Miscellaneous Translations

If queueing is desired, the queueing feature should be assigned to the attendant MLHG at the main not to the RLT at the branch.

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Figure 1 CAS/RLS NETWORK

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Figure 2 CAS/RLS FORM FLOW

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SEC. 1AJ: ATTENDANT CALL FORWARDING/FLEXIBLE NIGHT SERVICE

1. FEATURE DESCRIPTION

1.1 ACF/FLXNS (Attendant Call Forwarding/Flexible Night Service)

Is available with 5E5 and later Software Releases. ACF allows attendants in ISAT or MUPH groups the ability to forward associated TNs and MLHGs to a changeable Forward To DN.

FLXNS, a subset of ACF, allows attendants in ISAT or MUPH groups the ability to forward a LDN (Listed Directory Number) to a changeable NDN (Night Directory Number). The attendants may forward all LDNs at once by forwarding the first LDN. Also, the attendant may deactivate FLXNS for an individual LDN or all the LDNs via a dial code.

The following terms will be used in this section:

- The term "attendant" is any line or group of lines which are given attendant Class of Service.
- The term "Target DN" refers to the DN that the attendant is forwarding.
- The term "Forward To DN" refers to the DN the call is being forwarded to.
- The term "Station TN" is used to define a TN which has an associated attendant which can forward its calls.
- The term "Station MLHG" is used to define a MLHG which has an associated attendant which can forward the groups calls.
- The term "LDN" is defined as a DN which is used to access an ISAT or MUPH group.

1.2 ATTENDANT REQUIREMENTS

All attendants must be in an ISAT or MUPH group (HUNT TYPE = "MUPH" or "ISAT" on the MLHGFD form) with a CLASS OF SERVICE of "ATND" or "ISATND" on the LCC form.

The first terminal of the attendant group must have CFV assigned to it on the MLHLNFA form. Subsequently, all attendants in the group will automatically receive ACF/FLXNS.

1.3 STATION TN REQUIREMENTS

All Station TNs must have the CFV feature assigned to them on the corresponding feature assignment form (LINEFA, BFG, or CLUSTR form) before ACF can be used to activate/deactivate call forwarding for the stations.

All Station TNs must have an associated attendant with ATT MLHG entered on the corresponding DSLUSR or LINE form to allow ACF.

1.4 STATION MLHG REQUIREMENTS

Station MLHGs cannot be an ISAT or MUPH group (HUNT TYPE not equal to "MUPH" or "ISAT" on the MLHGFD form).

The first terminals of each Station MLHG, defined on the DSLUSR or MLHLN form must have the CFV feature assigned to them on the MLHLNFA form before ACF can be used to activate/deactivate call forwarding for the stations.

All Station MLHGs must have an associated attendant for ACF (ATT MLHG field entered on the

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corresponding MLHG form).

1.5 FEATURE ACTIVATION

The attendant will use the same dial code used for CFV in 5E4(2).

The following scenario will show the process used by the attendant to activate ACF for a Station TN (refer to Figure 1):

1.5.1 Scenario

Attendant #2 dials the CFV code '*72'. The system will give recall dial tone, awaiting the Target DN. The attendant enters the Target DN '5102447'. The system will give recall dial tone, awaiting the Forward To DN. The attendant dials the Forward To DN \&'5107898'. The system will give confirmation tone followed by dial tone.

The following scenario will show the process used by the attendant to activate FLXNS for all LDNs that are controlled by the attendant (refer to Figure 1):

1.5.2 Scenario

Attendant #3 dials the CFV code '*72'. The system will give recall dial tone, awaiting the Target DN. The attendant enters the Target DN for LDN #1 '5102346'. The system will give recall dial tone, awaiting the NDN. The attendant dials the NDN '5106335'. The system will give confirmation tone followed by dial tone.

NOTE: When LDN #1 is forwarded, all associated LDNs will be forwarded to the same DN.

1.6 FEATURE DEACTIVATION

In 5E5 and later Software Releases, the following actions take place when the attendant (ISAT or MUPH) deactivates CFV.

The following scenario will show the process used by the attendant to deactivate ACF for the Station TN activated in Scenario 1 (refer to Figure 1):

1.6.1 Scenario

Attendant #4 dials the CFV code '*73'. The system will give recall dial tone, awaiting the Target DN. The attendant enters the Target DN '5102447'. The system will give confirmation tone followed by dial tone.

The following scenario will show the process used by the attendant to deactivate FLXNS for all the LDNs activated in Scenario 2 (refer to Figure 1):

1.6.2 Scenario

Attendant #4 dials the LDN deactivation code '*74'. The system will give confirmation tone followed by dial tone.

1.7 FEATURE INTERACTION

FLXNS and FNS may be used simultaneously but FLXNS will take precedence over FNS. The order in which the Night Service features are activated or deactivated has no effect on the feature.

1.7.1 Scenario

The attendant dials *72 to forward the 2nd LDNs '5106753' calls to DN '5107898'. The attendant then

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presses the CFNS feature button to forward all LDNs to the NDN '5106335'. All LDNs except LDN #2 will be forwarded to the NDN '5106335'. If the attendant dials the deactivation code *73 for LDN #2, all LDNs including LDN #2 will be forwarded to the NDN '5106335'.

2. TRANSLATION REQUIREMENTS

2.1 LINE TRANSLATIONS

DSLUSR form (5908 Record) - This form is used to assign an attendant to a Station TN and Station MLHG. The ATT MLHG field indicates the TN or CKT TN has an associated attendant group. Also, the TN or CKT TN must have CFV assigned to it on the corresponding feature assignment form (LINEFA, BFG, CLUSTR form) to allow the attendant to forward the Station TNs or Station MLHGs calls.

LINE form (5109-1/2/3 Record) - This form is used to assign an attendant to a Station TN. The ATT MLHG field indicates the TN has an associated attendant group. Also, the TN must have CFV assigned to it on the corresponding feature assignment form (LINEFA, BFG, CLUSTR form) to allow the attendant to forward the Station TNs calls.

MLHLN form (5111-1/2 Record) - This form is used to indicate which attendant group can monitor the terminal. The ATT MLHG field indicates which attendant group can monitor the terminal defined on this form.

SHTN form (5902 Record) - The ATT MLHG field indicates which attendant group can forward the Secondary-only TN. The first TN in the Secondary-only TN SHARED LIST will be the Primary TN and will receive Ping-Ring.

MLHG form (5110-1/2/3 Record) - The station MLHG must have the ATT MLHG field entered, indicating which attendant group is able to forward the hunt group via ACF.

The attendant group must have CFV assigned to the first terminal in the hunt group and cannot have an ATT MLHG associated with it.

The LDNs are defined as SUBTNs on this form and may only be assigned to ISAT and MUPH groups.

2.2 ROUTING AND CHARGING TRANSLATIONS

PDIT form (5300-2 Record) - This form and/or the IDPDCA form may be used to define the dial codes which are used to activate/deactivate ACF and FLXNS. The feature is activated by assigning the CFV feature and the "FTACT" ACTION to a dial code. The ACF feature may be deactivated by assigning the CFV feature and the "FTDCT" ACTION to a dial code. Also, all LDNs may be deactivated at once by assigning the CFV feature and the "LDNDCT" ACTION to a dial code.

2.3 BRCS TRANSLATIONS

CFWFD form (5614-1/2 Record) - The Call Forwarding Feature Definition form is used to define the CFV. The CFV feature must be assigned to the first terminal of the attendant group and to the first terminal of all Station MLHGs on the MLHLNFA form to allow for ACF.

IDPDCA form (5601-1/2) - If the user is in an IDP GROUP, this form may be used to define the dial codes which are used to activate/deactivate ACF and FLXNS. The feature is activated by assigning the CFV feature and the "FTACT" ACTION to a dial code. The ACF feature may be deactivated by assigning the CFV feature and the "FTDCT" ACTION to a dial code. Also, all LDNs may be deactivated at once by assigning the CFV feature and the "LDNDCT" ACTION to a dial code.

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Figure 1 ATTENDANT/STATION ASSIGNMENT

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SEC. 1AK: SELECTIVE CARRIER DENIAL

1. FEATURE DESCRIPTION

The SCD (Selective Carrier Denial) feature, which is available with 5E5 and later Software Releases, allows an operating company to screen and block certain carrier-handled calls designated as non-paying subscribers by the particular carrier and is completely independent from the existing 5ESS Switch Carrier Interconnect non-payer screening capability.

After subscribing to the feature, the carrier provides the operating company with a list of subscribers who should be denied access to the carrier's facilities, and a list of previously denied subscribers who should regain access. Any previously denied subscribers who wish to regain access to the carrier must negotiate this issue with the operating company and the carrier in order to have carrier service restored. Also, no more than thirty-one carriers can subscribe to the operating company's SCD service at one time. Furthermore, the operating company is responsible for the administration, support and operation of the SCD feature. These responsibilities include: assigning and removing SCD to and from lines, routing blocked interLATA and intraLATA calls to a tone or announcement via call processing, determining which SACs (Service Access Codes) are to be blocked for SCD screened lines and administering support tools.

The SCD feature screens calls based on the originating line and the carrier that will handle the call, and it applies to the following lines:

- POTS lines
- BRCS (Business and Residential Customer Services) lines
- RSM (Remote Switching Module) lines
- ORM (Optically Remoted Module lines
- SLC (Subscriber Loop Carrier) lines
- Hotel/Motel lines
- PBX (Private Branch Exchange) and FX (Foreign Exchange) lines (PBX and FX lines are trunks using line-type translations.)

ISDN (Integrated Services Digital Network) lines are not included at this time.

The following list shows which screened calls will be blocked. (These calls must originate from one of the previously mentioned lines.)

- Non-operator assisted calls 1 + 7/10 digits [Primary InterLATA Call (PIC) call] 10XXX + (1) + 7/10 digits [non-PIC call]
- Operator-assisted calls 0 + 7/10 digits [PIC call] 10XXX + 0 + 7/10 digits [non-PIC call]
- Operator calls 00- [PIC operator] 10XXX + 0(#) or 10XXX + 00 [non-PIC operator]
- Cut-through calls 10XXX + #
- Information calls 1 + NPA-555-1212 where NPA = Numbering Plan Area
- International calls (10XXX) + 011 + CC + NN [no operator assistance] (10XXX) + 01 + CC + NN [operator assisted call] where CC = Country Code; NN = National Telephone Number
- Service Access Codes (screened only if selected by operating company) (1) + XXX + 7 digits

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Internal 5ESS Switch call processing recognizes SCD line assignments and blocks calls for the specified carrier based on the Office Dependent Data (ODD); this process is called SCD screening (see Figure 1). ODD is created using the necessary input forms required to set up and use the SCD feature (see TRANSLATIONS REQUIREMENTS) and is maintainable over Generic retrofits.

The screening process begins during Digit Analysis with the determination of whether or not a particular carrier is screening the originating subscriber's line (see Figure 1). If no carriers elected to screen this line, SCD screening will terminate and the call will continue with normal call processing. If a carrier has chosen to screen the line, call processing will determine whether or not the SCD feature has been purchased by the carrier handling the call. If SCD has not been purchased, SCD screening will terminate for this call (continue normal call processing).

After verifying that the carrier has or has not purchased the SCD service, call processing determines whether or not the call is a SAC call. If the call is not a SAC call, call processing will determine whether or not the call handled by the carrier should be blocked. Blocked calls are routed to a tone or announcement as defined by the operating company; allowed calls continue with normal call processing (SCD screening terminates).

If the call is a SAC call, call processing will determine whether or not the SAC should be screened. If the SAC should not be screened, SCD screening will terminate at this point. If the SAC is screened, call processing tries to determine whether or not the carrier requesting the screening wants to block this SAC call. Blocked calls are routed to a tone or announcement as defined by the operating company; allowed calls continue with normal call processing (SCD screening terminates).

2. TRANSLATION REQUIREMENTS

2.1 LINE form (5109 Record)

The LINE form is used to define the Office Equipment number and features for each defined TN in the switch. The SCD SCRNING field on this form is a "no display" field. Data in this field can be viewed (not entered or changed) by Recent Change/Verify (RC/V) only. The ODD will contain a value ("Y" or "N") for this field based on whether or not the TN on the LINE form has been assigned the SCD feature via the CARSCR form (5551 Record).

2.2 MLHLN form (5111 Record)

This form is used to define the individual terminal numbers that are assigned to a Multi-Line Hunt Group (MLHG). The SCD SCRNING field on this form is a "no display" field. Data in this field can be viewed (not entered or changed) by Recent Change/Verify (RC/V) only. The ODD will contain a value ("Y" or "N") for this field based on whether or not the TERM on the MLHLN form has been assigned the SCD feature via the CARSCR form (5551 Record).

2.3 FIXRT form (5301 Record)

This form is used to define routing and charging treatment of Fixed Route Types. A FIXED ROUTE TYPE value of "SCD" will provide routing to a tone or announcement for calls blocked by SCD screening.

2.4 ICF form (5305 Record)

Use this form to define the characteristics of interLATA (Local Access Transport Area) carriers. In the SCD SCRNING field on this form, enter "Y" (Yes) or "N" (No) to indicate whether or not the carrier has subscribed to the SCD feature. Enter "N" if the carrier is a Local Exchange Carrier (CARRIER TYPE set to "LEC"). If the carrier has purchased the SCD feature, ensure that a FIXRT form has been defined and has a FIXED ROUTE TYPE of "SCD".

2.5 CARSCR form (5551, 5551A Records)

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This form contains the basic components of an initial SCD assignment and is used to assign carrier line screening information to an individual TN or to an MLHG and MLHG member (TERM field) for a particular carrier. The 5551 Record consists of all carriers requesting the screening of each individual TN or MLHG group and member; the 5551A Record is comprised of each unique CARRIER ID and the corresponding TN or MLHG group and member that the listed carrier is screening.

The TN, MLHG, and TERM values are optional key fields on this form; otherwise, the only key field is the CARRIER ID field. The MLHG and TERM values must be defined on the MLHLN form where OE TYPE/NUMBER is defined and "N" is entered in the SHARED field, and the TN value must be defined on the LINE form where OE TYPE/NUMBER is defined and "N" is also entered in the SHARED field.

If a TN is assigned on this form, the MLHG and TERM fields must be left blank and vice versa due to the fact that one CARSCR form is used per individual TN or MLHG group and member. For either case the CLASS OF SERVICE on the LCC form (5306 Record) must be defined as one of the following: "INDIV", "PBX", "HOTMOTL", or "HOTPBX".

2.6 SACSCR form (5552 Record)

Use this form to assign Service Access Codes that will be screened by the SCD feature. Enter a three-digit Service Access Code in the NPA format where N is any digit in the range 2 - 9, P is in the range 0-1, and A equals 0-9. If a SAC is entered on this form, it must be defined as the first three digits of INCOMING DIGITS on at least one LDIT form with TYPE OF CI CALL set to "SAC". See Figure 1 for SCD SCREENING call flow.

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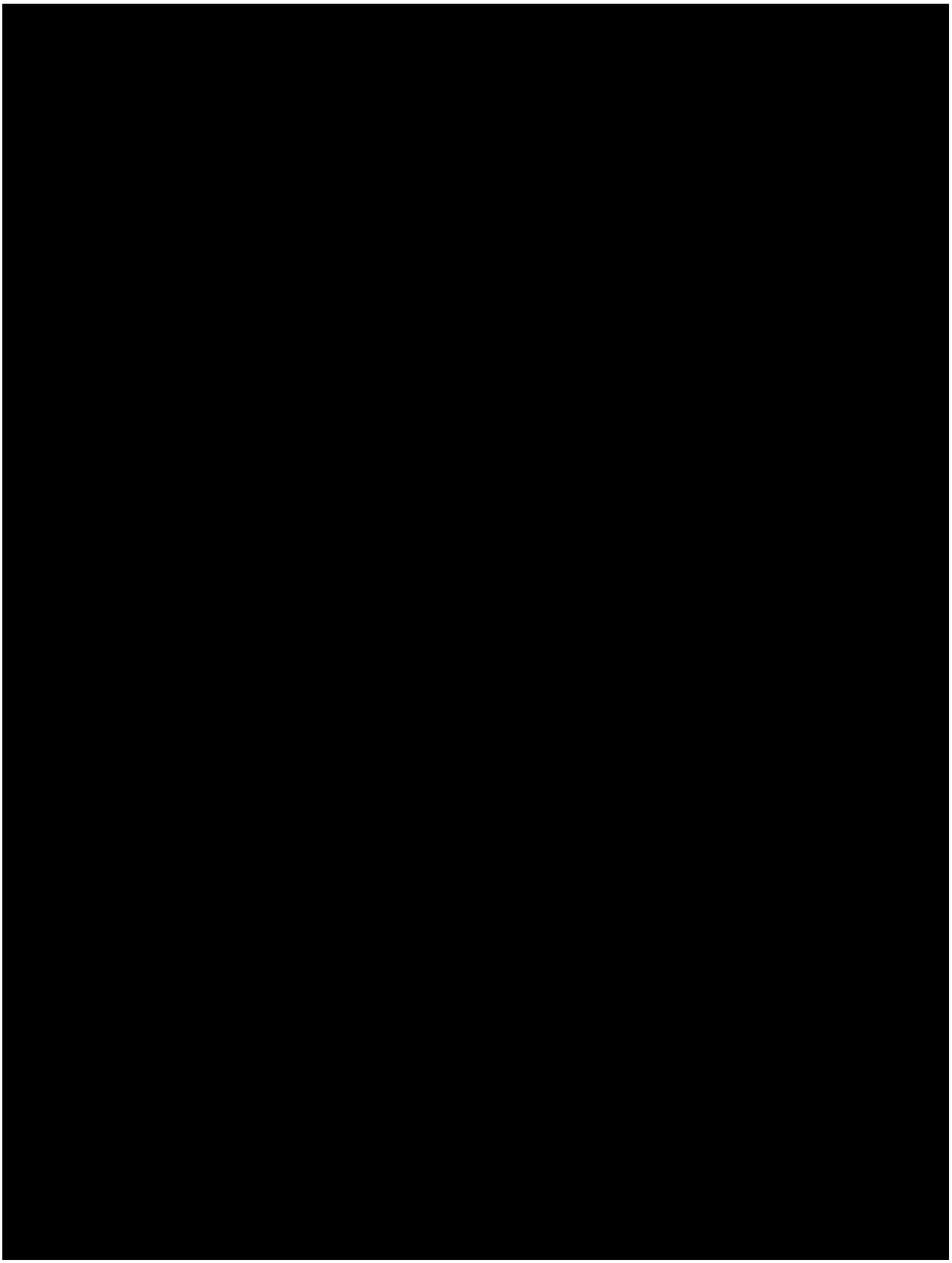

Figure 1 SCD SCREENING CALL FLOW

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SEC. 1AL: ISDN CLOSED USER GROUPS AND MODEM POOLING

1. CLOSED USER GROUP FEATURE DESCRIPTION

The CUG (Closed User Group) feature is an ISDN packet switching service provided on the 5ESS Switch with 5E3 and later Software Releases. Based on CCITT (International Telegraph and Telephone Consultative Committee) Recommendations, the feature allows ISDN packet switching subscribers to establish subnetworks protection against unauthorized access. A subscriber may optionally belong to one or more CUGs.

Each Closed User Group member subscribes to one of the following access arrangements:

- Closed User Group (C) is the simplest and most restrictive type of CUG membership. The subscriber may exchange calls with other members of the same CUG(s) but cannot communicate with anyone outside the CUG(s).
- C+IA (Closed User Group with Incoming Access) is a user with Incoming Access who may make and receive calls as described for the closed user group (C). However, the C+IA user may receive calls from non-CUG users (those who are not members of a CUG) and from members of other CUGs who have outgoing access. The user's outgoing calls are still restricted to members of the user's CUG(s).
- C+OA (Closed User Group with Outgoing Access), is a user with Outgoing Access who may make and receive calls as described for the closed user group (C). The C+OA user may additionally make calls to all non-CUG users and to users of other CUGs who have Incoming Access. The user may receive incoming calls only from members of the user's CUG(s).
- C+IA+OA (Closed User Group with Incoming Access and Outgoing Access), is a user with Incoming Access and Outgoing Access who may make and receive calls as described for both the closed user group with incoming access (C+IA) and the closed user group with outgoing access (C+OA).

All access arrangements and restrictions apply to the CUG member and not to individual CUGs.

1.1 FEATURE ACTIVATION

The Closed User Group feature and its related access arrangements are activated via subscription. A group of users that wishes to establish a secured data environment must coordinate CUG formation and maintenance with the appropriate administrations.

The packet switching data network authority and the Telephone Company jointly administer a Closed User Group.

Each packet switching network is uniquely identified by a DNIC (Data Network Identification Code); in the United States DNICs are assigned to Regional Bell Operating Companies and Interexchange Carriers by the FCC. When the DNIC authority creates a CUG, it assigns an ICN (International Closed User Group Number), uniquely identifying the CUG within the DNIC. The DNIC/ICN must be assigned to each subscriber on the subscriber's originating switch.

1.2 SUBSCRIPTION DATA

For each packet telephone number or MLHG/TERM (Multiline Hunt Group Terminal) that requests CUG service, the following information must be provided via translations:

- List of CUGs to which the DN or MLHG/TERM subscribes.
- Subscriber access permissions.

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- Subscriber preferential CUG designation.

Data for each CUG in a subscriber's CUG list must include the DNIC/ICN identifier as well as an Index, a 2-digit alias by which the subscriber identifies the CUG. The Telephone Company assigns a CUG Index to each of a user's memberships. The index has local meaning between the user and the serving switch and is typically the only CUG identifier known by the subscriber. It is used to specify a preferential CUG in translations and is also used by the subscriber when specifying a CUG in a dialing sequence.

1.3 CALL CONTROL

To understand the Closed User Group translation data, it is helpful to consider control requirements on a CUG call. The Closed User Group protection scheme requires the switching network to determine if a call from or to a subscriber is allowed. For an intra-CUG call, it must also verify that the calling and called parties are members of the same CUG.

When a CUG call is initiated, the originating exchange forwards call control information to the called exchange. This data includes the CUG identification code and, in some cases, an outgoing access indicator.

Upon receipt of the call, the called exchange analyzes the control information. If the outgoing access indicator is absent, the call is an intra-CUG call and both subscribers must be members of the CUG. If the outgoing access indicator is present, the terminating subscriber need not belong to any CUG; if he does belong to a CUG, he must either belong to the same CUG as the originating subscriber or he must have incoming access permission.

1.4 CUG SELECTION

A Closed User Group subscriber can select a CUG on a per call basis by including a CUG index in the dialing sequence. This would be the case when the caller has no preferential CUG or wants to initiate the call from within a CUG other than the preferential.

1.5 PREFERENTIAL CUG

The user may select a preferential CUG via subscription. The preferential is a default CUG. When the user makes a CUG call and does not select a CUG in the dialing sequence, the call is automatically placed within the default CUG.

CUG subscribers with neither Incoming Access nor Outgoing Access must be assigned a preferential CUG index. Subscribers with either type of access are not required to select a preferential CUG but may do so at their option.

1.6 CUG APPLICATIONS

The Closed User Group feature can be used to establish a protected subnetwork for any group of ISDN packet switching users. On the 5ESS Switch it is also used in conjunction with the ISDN Modem Pooling feature and with the OSPS AMLB (Automated Multi-Leaf Bulletin) option. Modem Pooling is explained in this section. For specific information on CUGs in AMLB, see the OSPS (Operator Services) section in Division 2 of the TG-5.

2. CLOSED USER GROUP TRANSLATION REQUIREMENTS

PSCUG form (5924/5924A Record)

This form is used to assign a packet switching subscriber line to a Closed User Group. CUG membership must be assigned separately to each packet telephone number and to each packet MLHG and Member. This includes D Channel packet users, permanent B Channel packet users and On Demand B Channel

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packet users. If a subscriber desires the CUG feature for more than one of these services, CUG membership must be assigned to each service individually.

The PSCUG form also defines the CUG Index that identifies the CUG for the subscriber. The CUG Index is used directly by the subscriber when (s)he dials the CUG along with the called number. It is also used in translations to specify a preferential CUG on the subscriber's line form. For the 5E4(2) and earlier Software Releases, the preferential CUG is specified on the DSL (5900 Record) or DSMLHLN (5901 Record) form. For 5E5 and later Software Releases, it is on the DSL (5907 Record) or DSLUSR (5908 Record) form.

DSL form (5900 Record)

For the 5E4(2) and earlier Software Releases, packet switching is allowed on either the D Channel or one of the B Channels. The DSL form (5900 Record) is used to optionally specify a preferential CUG, Outgoing Access and Incoming Access for a packet switching user on a Digital Subscriber Line.

DSMLHLN form (5901 Record)

For the 5E4(2) and earlier Software Releases, packet switching is allowed on either the D Channel or one of the B Channels. The DSMLHLN form (5901 Record) is used to optionally specify a preferential CUG, Outgoing Access and Incoming Access for a packet switching user on a Digital Subscriber Multiline Hunt Group Terminal.

DSL form (5907 Record)

For 5E5 and later Software Releases, this form is used to optionally specify a preferential CUG, Outgoing Access and Incoming Access for permanent packet users. They are set separately for Permanent Packet B1 and Permanent Packet B2 users.

DSLUSR form (5908 Record)

For 5E5 and later Software Releases, this form is used to optionally specify a preferential CUG, Outgoing Access and Incoming Access for D Channel packet users and for On Demand B Channel Packet Users.

3. CUG CALL FLOW EXAMPLES

The examples in this section illustrate when a packet call will and will not be allowed between subscribers assigned to CUGs. They are based on a small set of data defined in the following extract from a PSCUG form.

Packet Switching Closed User Group Assignment Record. PSCUG (5924 Record)

Sample Data:

Packet Switching			Closed User Group
TN	IDX	DNIC	ICN
5551000	01	3046	01000
5551000	02	3046	03000
5552000	01	3046	02000
5553000	01	3046	03000
5553000	02	3046	02000
5553000	03	7018	01004

Note that if a CUG subscriber originates a packet call without specifying a CUG, i.e., does not dial a CUG and does not have a preferential CUG:

- if the subscriber has Outgoing Access, the call is processed as an ordinary non-CUG call;
- if the subscriber does not have Outgoing Access, the call is not allowed.

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3.1 Example 1. BOTH TNs BELONG TO THE SAME CLOSED USER GROUP.

555-1000 calls 555-3000. The call is originated within CUG 3046 03000. That is, either CUG Index 02 is specified as the preferential CUG on the DSLUSR form for 555-1000 or the caller dials the CUG Index 02 along with 555-3000. Since both 555-1000 and 555-3000 belong to the CUG, the call always connects, regardless of Incoming Access or Outgoing Access permissions on either side.

TN = 555-1000		TN = 555-3000		
OA	ORIG-TERM	IA	ORIG-TERM	CONNECT
Y	ORIG	Y	TERM	YES
Y	ORIG	N	TERM	YES
N	ORIG	Y	TERM	YES
N	ORIG	N	TERM	YES

3.2 Example 2. THE TNs BELONG TO DIFFERENT CLOSED USER GROUPS

555-1000 calls 555-2000. The call is originated within CUG 3046 03000. That is, either CUG Index 02 is specified as the preferential CUG on the DSLUSR form for 555-1000 or the caller dials the CUG Index 02 along with 555-2000. Since 555-2000 does not belong to the CUG, the call connects only if 555-1000 has Outgoing Access and 555-2000 has Incoming Access.

TN = 555-1000		TN = 555-2000		
OA	ORIG-TERM	IA	ORIG-TERM	CONNECT
Y	ORIG	Y	TERM	YES
Y	ORIG	N	TERM	NO
N	ORIG	Y	TERM	NO
N	ORIG	N	TERM	NO

3.3 Example 3. ONLY ONE OF THE TNs BELONGS TO A CLOSED USER GROUP

When 555-1000 calls 555-4000, the call is originated within CUG 3046 03000. That is, either CUG Index 02 is specified as the preferential CUG on the DSLUSR form for 555-1000 or the caller dials the CUG Index 02 along with 555-4000. Since 555-4000 does not belong to any CUG, the call connects only if 555-1000 has Outgoing Access.

When 555-4000 calls 555-1000, the call connects only if 555-1000 has Incoming Access.

TN = 555-1000		TN = 555-4000		
OA	IA	ORIG-TERM	ORIG-TERM	CONNECT
Y	N	ORIG	TERM	YES
N	N	ORIG	TERM	NO
N	N			
N	Y	TERM	ORIG	YES
N	N	TERM	ORIG	NO

4. MODEM POOLING FEATURE DESCRIPTION

The Modem Pooling feature is available with the 5E4(2) and later Software Releases. Modem pooling provides data protocol conversion for customers requiring an interface between the ISDN based X.25 network and the analog network. It permits ISDN customers to make data calls to analog customers who have modems. Likewise, it allows the analog customers to originate calls to ISDN customers who have subscribed to the Modem Pooling feature. These data calls utilize a common pool of modems rather than requiring individual analog lines and modems for each ISDN customer.

Two basic types of Modem Pools may be created: private and public. A Private Modem Pool is restricted to members of a Closed User Group. The CUG is assigned to the Modem Pool and to the ISDN customers who will access it. This is normally the case when the hardware, i.e., modems and terminal adapters, is to be located at the end customer's premises.

A Public Modem Pool, normally located in the Central Office, can be assigned in two different ways. One way is to build the Modem Pool using a new CUG number. Any ISDN customer that subscribes to the

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Modem Pooling feature would be assigned the same CUG as the Public Modem Pool.

Another way is to build the Public Modem Pool with Closed User Group Incoming Access and Outgoing Access, making the pool accessible to anyone who knows the phone number.

A modem pool is characterized by a set of data transmission rates. All modems within the pool must have the same speed or all must be automatically switchable over the same range of speeds. Valid baud rates are 300, 1200, 2400, 4800 and 9600.

4.1 MODEM POOL CONFIGURATION

A connection between an ISDN packet subscriber and an analog subscriber is established by routing the call through a Modem Pool Member. Each Modem Pool should have at least three Members, the minimum required for the TST:MP Input Message to perform maintenance on the pool.

A Modem Pool Member consists of a digital side and an analog side. The digital side is a Terminal Adapter, e.g., an AT&T 7500 Modular Data Module, that terminates to the 5ESS Switch on a DSL (Digital Subscriber Line) provisioned for X.25 packet switching on the D Channel. The Terminal Adapter converts between the ISDN X.25 protocol and the modem's asynchronous transmission protocol.

The Modem Pool Member's analog side is a modem that terminates to an analog Line Unit or an ISLU Z card. The modem performs digital to analog and analog to digital conversion.

Both the analog and digital sides of a Modem Pool Member must reside in the same SM (Switching Module).

An RS232 cable connects the Terminal Adapter and Modem in each Member. See figure 5.

The 5ESS Switch ISDN Feature Descriptions document (235-190-104) describes the Modem Pooling feature.

4.2 MODEM POOL CALLS

Every ISDN subscriber who wishes to receive data calls from non-ISDN subscribers via an X.25 Modem Pool must have an Access DN. This telephone number, which is in addition to the subscriber's PKT DN and CKT DN, is a "data only" DN to be used by analog subscribers to place a data call to the ISDN subscriber. The incoming Access DN notifies the call processing software that the call should be routed through the Modem Pool.

When an analog subscriber places a data call to an ISDN packet subscriber, the subscriber originates the call by dialing the special access DN. The call is set up through the Modem Pool and automatically terminated to the ISDN user's packet telephone number. See Figure 4 for a sample call flow.

When the ISDN subscriber calls the analog user, the caller must dial two numbers. The first number accesses the Modem Pool. After the caller receives a message indicating the modem has been connected, (s)he must dial the second number preceded by the modem dialing command. This second number is the analog subscriber's directory number. Figure 3 shows the flow for a sample digital to analog call.

The ISDN packet subscriber must be on the same 5ESS Switch as the Modem Pool.

5. MODEM POOLING TRANSLATION REQUIREMENTS

A Modem Pool is constructed as a Multiline Hunt Group that contains both analog and digital terminals. For each Modem Pool Member, the analog side is represented by a MLHLN form; the digital side is represented by a pair of DSL and DSLUSR forms. (For the 5E4(2) Software Release, the digital side is represented by a DSMLHLN form.)

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This section describes forms required to build a Modem Pool. To explain critical fields, data from a sample Public Modem Pool is used. The Modem Pool is assigned to Multiline Hunt Group 2, has listed telephone number 350-4085 and has one Modem Pool Member. It is a 2400 baud pool. The ISDN customer that will use the Modem Pool is assigned telephone number 350-4097, but will have an access TN of 350-4090. The ISDN customer and analog customer line assignments are not included in the example.

In the sample data, items shown in parentheses are values to be supplied by the Telephone Company. Unparenthesized values must be entered as shown.

Note that the sample data shows a single Modem Pool Member for sake of simplicity. In actuality, a Modem Pool must have at least three members if the TST:MP input message will be used to test the Modem Pool.

LCC form (5306 Record)

This form is used to build the Line Class Codes for the digital and analog sides of the Modem Pool Members. The DIGIT ANALYSIS SELECTOR and SCREENING INDEX fields on the digital side must be for packet switching, while those on the analog side are for circuit switching.

On the digital side, the Line Class Code must have a TERMINATING TREATMENT of AGING. This prevents analog callers from terminating to a phone number associated with the Hunt Group terminal. The CLASS OF SERVICE must be ISDN. For the 5E4(2) Software Release, this LCC will be assigned to the Terminal Adapter's DSL on the DSMLHLN form. For the 5E5 and later Software Releases, the LCC will be assigned on the DSLUSR form.

LCC for the Digital Side

Field	Value
LINE CLASS CODE	(PS2)
RATE AREA	(01)
CLASS OF SERVICE	ISDN
TERMINATING TREATMENT	AGING
SCREENING INDEX	(3)
LINESCRN	N
DIGIT ANALYSIS SELECTOR	(3)

On the analog side, the CLASS OF SERVICE must be MODEM, while the TERMINATING TREATMENT must be INDIV. This LCC will be assigned to the Modem's analog line on the MLHLN form.

LCC for the Analog Side

Field	Value
LINE CLASS CODE	(DS2)
RATE AREA	(01)
CLASS OF SERVICE	MODEM
TERMINATING TREATMENT	INDIV
SCREENING INDEX	(1)
LINESCRN	N
DIGIT ANALYSIS SELECTOR	(1)

TIMING form (5520 Record)

This form defines the timing values for Modem Pools. The customer does not need to enter this; it is standard data provided when the switch data is initialized.

TIMING Form

Field	Value
SERVICE CLASS	MODEM
START SIGNAL	NONE
SIGNAL TYPE	TT-DP
CRITICAL TIMING	4
PARTIAL DIAL TIMING	20
PERMANENT SIGNAL TIMING	20
OVERLOAD PARTIAL DIAL	10
OVERLOAD PERM. SIGNAL	10

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MLHGFD form (5604 Record)

This form is used to define the hunting feature that will be assigned to the Modem Pool on the MLHG form. The preconstructed feature /MHU is available for Modem Pools and may be used instead of constructing a new one. If a new feature is built, it must have a HUNT TYPE of UCD.

MLHGFD Form

Field	Value
FEATURE NAME	(MPMHG)
HUNT TYPE	UCD
OVERFLOW REG	N
INWATS	N
CF BUSY	N
CF VARIABLE	N
BEARER	VOICE

MLHG form (5110 Record)

This form is used to build the Modem Pool Multiline Hunt Group. The presence of a value in the MPTYPE field indicates that the MLHG is a Modem Pool. The LISTED TN is the telephone number to be called by an ISDN customer when accessing the Modem Pool.

In the sample data, the MLHG FEATURE is the one previously defined in the MLHGFD form. The value of the MPTYPE field represents the baud rate of the modems in this group. In this example, the Modem Pool is owned by the switch owner. When the Modem Pool is owned by a private customer, the MPTYPE field contains billing data. See Division 3, Section 1J, for a detailed explanation of the Modem Pool fields MPTYPE, MAINT, MPPFX and MPIDP.

MAINT indicates whether the switch owner or customer is responsible for maintenance of the Terminal Adapters and Modems ("Y" if switch owner).

The MPPFX field contains the dialing prefix used by the pool's modems to initiate calls. All modems in the pool must use the same prefix. ("atdt" is the common dialing prefix for the Hayes command set.)

MPIDP indicates if the Modem Pool can be accessed with a 4-digit number defined in a customer's Individualized Dialing Plan.

MLHG Form

Field	Value
MLHG	(0002)
MLHG FEATURE	(MPMHG)
LISTED TN	(3504085)
REMARKS	Modem Pool
MPTYPE	(2400)
MAINT	Y
MPPFX	(atdt)
MPIDP	N

MLHLN form (5111 Record)

This form is used to define the analog side of Modem Pool Members. One MLHLN form must be built for each Member. For the 5E4(2) Software Release, the corresponding digital side for a member must be defined in a DSMLHLN form. For 5E5 and later Software Releases, the digital side must be defined on a pair of DSL and DSLUSR forms.

The MLHG field on this form must match the MLHG of the Modem Pool that was defined in the MLHG form. Also, the MLHG and TERM values for the analog side of the Modem Pool Member must match the corresponding fields for the digital side. This is crucial to properly link the Terminal Adapter and Modem of a Modem Pool Member. In the sample data, the MLHG and TERM fields (0002 and 0001) on the MLHLN form are the same as the DPKT MLHG and DPKT TERM fields on the DSMLHLN form.

The analog side Line Class Code, DS2, was defined earlier in the LCC form.

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The OE TYPE specifies the equipment termination for the modem: L for analog Line Unit; C for ISLU Z-Card.

Since both the analog and digital sides of a Modem Pool Member must reside on the same SM, the first three digits of the OE NUMBER, i.e., the SM number, must equal the first three digits of the equipment number on the digital side. In the sample data, the SM number is 027.

The TN field on the MLHLN form must contain a directory number. The testing program initiated by the TST:MP input message uses this TN.

MLHGLN Form

Field	Value
MLHG	(0002)
TERM	(0001)
LCC	(DS2)
OE TYPE	(L)
NUMBER	(02702003)
TN	(3504080)
RMK	Modem Pool

DSMLHLN form (5901 Record)

For the 5E4(2) Software Release, this form is used to build the digital side of Modem Pool Members. There must be one form for each Modem Pool Member. For the Modem Pool to operate properly, the analog and digital side of each Member must have the same terminal number. The MLHG and TERM fields on the MLHLN form must be the same as the PKT MLHG and PKT TERM fields on the corresponding DSMLHLN form.

The LCEN on this form is connected to the Terminal Adapter. Its first three digits, the SM number, must match those of the OE TYPE field on the MLHLN form.

The value XMP in the D SERV field indicates that this form represents the digital side of a Modem Pool Member.

Both 2W LCN fields must be "1". All other LCN fields must be "0".

The digital side of a Modem Pool Member must belong to a Closed User Group as discussed later under the PSCUG form section. The preferential CUG, CUG PREFER CUST IDX specified on this form, must match the CUG IDX defined on the PSCUG form.

In the sample data, the Modem Pool has both CUG Incoming Access and Outgoing Access. Therefore, ISDN subscribers who will use this Modem Pool will not need to be assigned to the pool's CUG. If a Modem Pool does not have the CUG IA and OA features, all ISDN customers who will access the Modem Pool must be assigned to the same Closed User Group on the PSCUG form.

The digital sides of all Modem Pool Members within the same pool should have the same IA and OA access permissions.

DSMHGLN Form

Field	Value
PKT MLHG	(0002)
PKT TERM	(0001)
PKT LCC	(PS2)
LCEN	(02710925)
D ISCN	(004000)
DSL PROF	DX
D SERV	XMP
RMK	Modem Pool
HIGH PVC LCN	0
IN LCN (FROM	TO)
2W LCN (FROM)	1
2W LCN (TO)	1
OUT LCN (FROM	TO)
THRUPUT CLASS (SEND)	1200

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THRUPUT CLASS (RCV)	1200
PKT SIZE (SEND)	128
PKT SIZE (RCV)	128
PKT WINDOW SIZE (SEND)	2
PKT WINDOW SIZE (RCV)	2
CUG PREFER CUST IDX	02
CUG OUT ACCESS	Y
CUG IN ACCESS	Y

DSL form (5907 Record)

For 5E5 and later Software Releases, a pair of DSL and DSLUSR forms are used to build the digital side of Modem Pool Members. There must be one pair for each Modem Pool member. The DSL OE equipment field on the DSL form must match the OE field on exactly one DSLUSR form for a Member.

The DSL OE on this form is connected to the Terminal Adapter. The first three digits of the equipment number portion, the SM number, must match those of the OE TYPE field on the MLHLN form.

The value XMP in the D SERV field indicates that this form represents the digital side of a Modem Pool Member.

In 5E5 and earlier Software Releases, Modem Pools are supported only on Point to Point DSLs. With 5E6 and later Software Releases, they are also supported on Multipoint DSLs. In this example, the DSL CLS is PP (Point to Point).

DSL Form	
Field	Value
DSL OE	(I 02710925)
D ISCN	(004000)
D SERV	XMP
DSL CLS	PP

DSLUSR form (5908 Record)

For 5E5 and later Software Releases, the DSL and DSLUSR forms are used to build the digital side of the MLHG.

For the Modem Pool to operate properly, the digital and analog side of each Modem Pool Member must have the same terminal number. The DPKT MLHG and DPKT TERM fields on the DSLUSR form must be the same as the MLHG and TERM fields on the corresponding MLHLN form.

Both 2W LCN fields must be "1". All other LCN fields must be "0".

The digital side of a Modem Pool Member must belong to a Closed User Group as discussed later under the PSCUG form section. The preferential CUG, CUGPX specified on this form, must match the CUG IDX defined on the PSCUG form.

In the sample data, the Modem Pool has both CUG Incoming Access and Outgoing Access, i.e., CUGOA and CUGIA equal to "Y". Therefore, ISDN subscribers who will use this Modem Pool will not need to be assigned to the Modem Pool's CUG. If a Modem Pool does not have the CUG OA and IA features, all ISDN customers who will access the Modem Pool must be assigned to the same Closed User Group on the PSCUG form.

The digital sides of all Modem Pool Members within the same pool should have the same IA and OA access permissions.

DSLUSR Form	
Field	Value
DPKT MLHG	(0002)
DPKT TERM	(0001)
OE	(I 02710925)
DPKT SWITCHING	
LCC	(PS2)
H PVC LCN	0

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L IN LCN	0
H IN LCN	0
L 2W LCN	1
H 2W LCN	1
L OUT LCN	0
H OUT LCN	0
SEND TPC	1200
PKTSZ	128
PKTWD	2
RCV TPC	1200
PKTSZ	128
PKTWD	2
CUGPX	02
CUGOA	Y
CUGIA	Y
RMK	Modem Pool

PSMTN form (5925 Record)

This form is used to assign the access number by which an analog subscriber can call an ISDN customer. Refer to Figure 4 for a sample analog to digital modem pool call.

The MODEM POOL GROUP is the MLHG defined on the MLHG form for the Modem Pool.

For 5E5 and later Software Releases, the customer may be a Multiline Hunt Group terminal.

PSMTN Form	
Field	Value
PKT TN	(3504097)
PKT MLHG	
PKT TERM	
ACCESS TN	(3504090)
MODEM POOL GROUP	(0002)

PSCUG form (5924 Record)

This form is used to assign to a Closed User Group the digital side of each Modem Pool Member and all ISDN customer TNs that will be allowed access to the Modem Pool.

The Closed User Group is identified by the CUG DNIC and CUG ICN; the pair must be the same on all the forms associated with the same Modem Pool. The following example shows the assignments for the sample Modem Pool Member and one ISDN customer that will use the Modem Pool.

The digital sides of all Modem Pool Members must be assigned to a Closed User Group. All Members of the same pool must be assigned to the same CUG.

ISDN customers who will access the Modem Pool need to be assigned to the CUG only if the Modem Pool Members do not have CUG Incoming Access and CUG Outgoing Access as specified on DSMLHLN or DSLUSR forms.

PSCUG Form		
Field	MP Member Value	ISDN Cust Value
PKT TN	,	
PKT MLHG	(0002),	
PKT TERM	(0001),	
CUG IDX	(1)	(3)
CUG DNIC	(9001)	(9001)
CUG ICN	(02000)	(02000)

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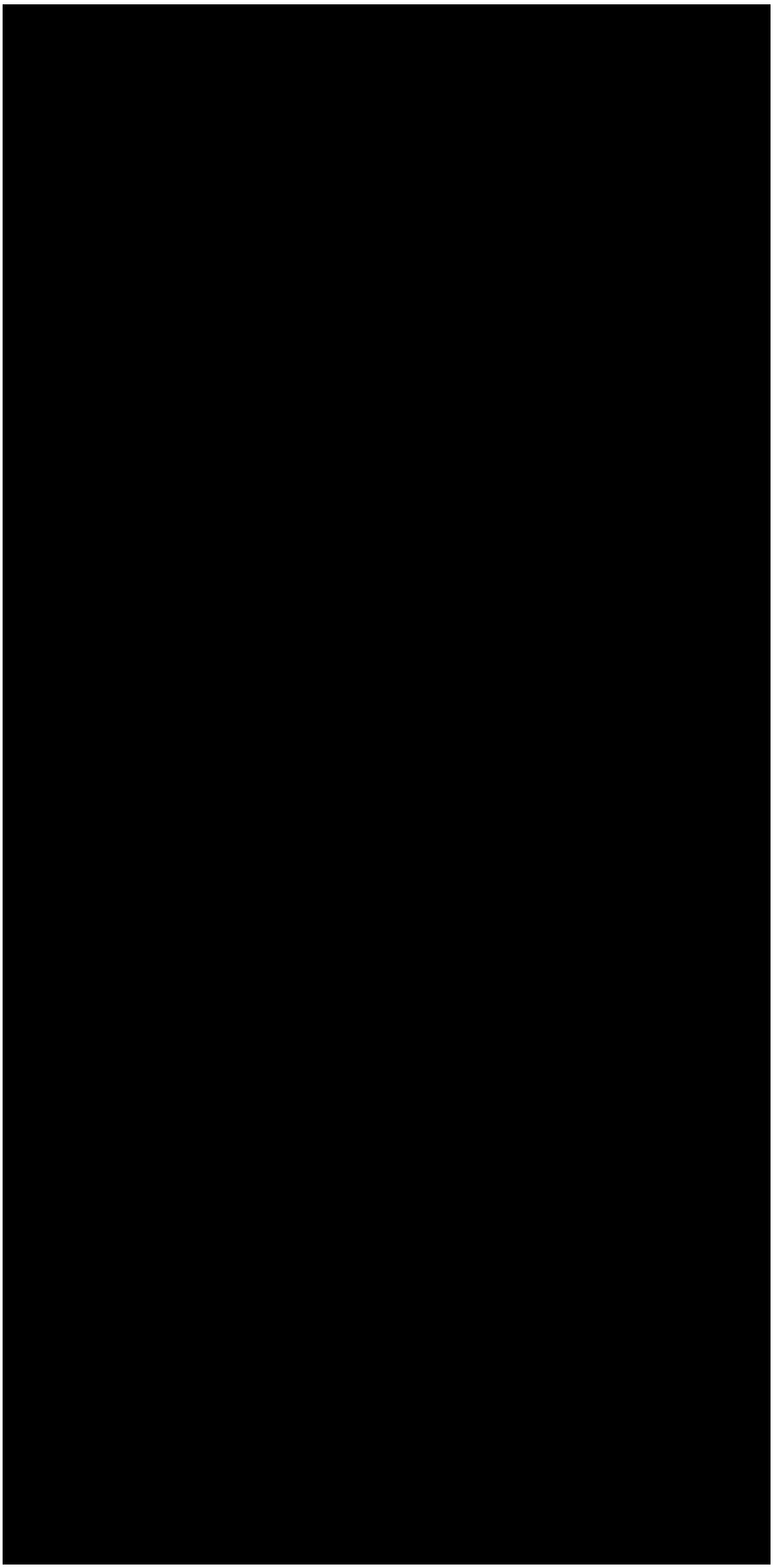

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Figure 1 MODEM POOL ASSIGNMENT FORM FLOW 5E4(2) SOFTWARE RELEASE

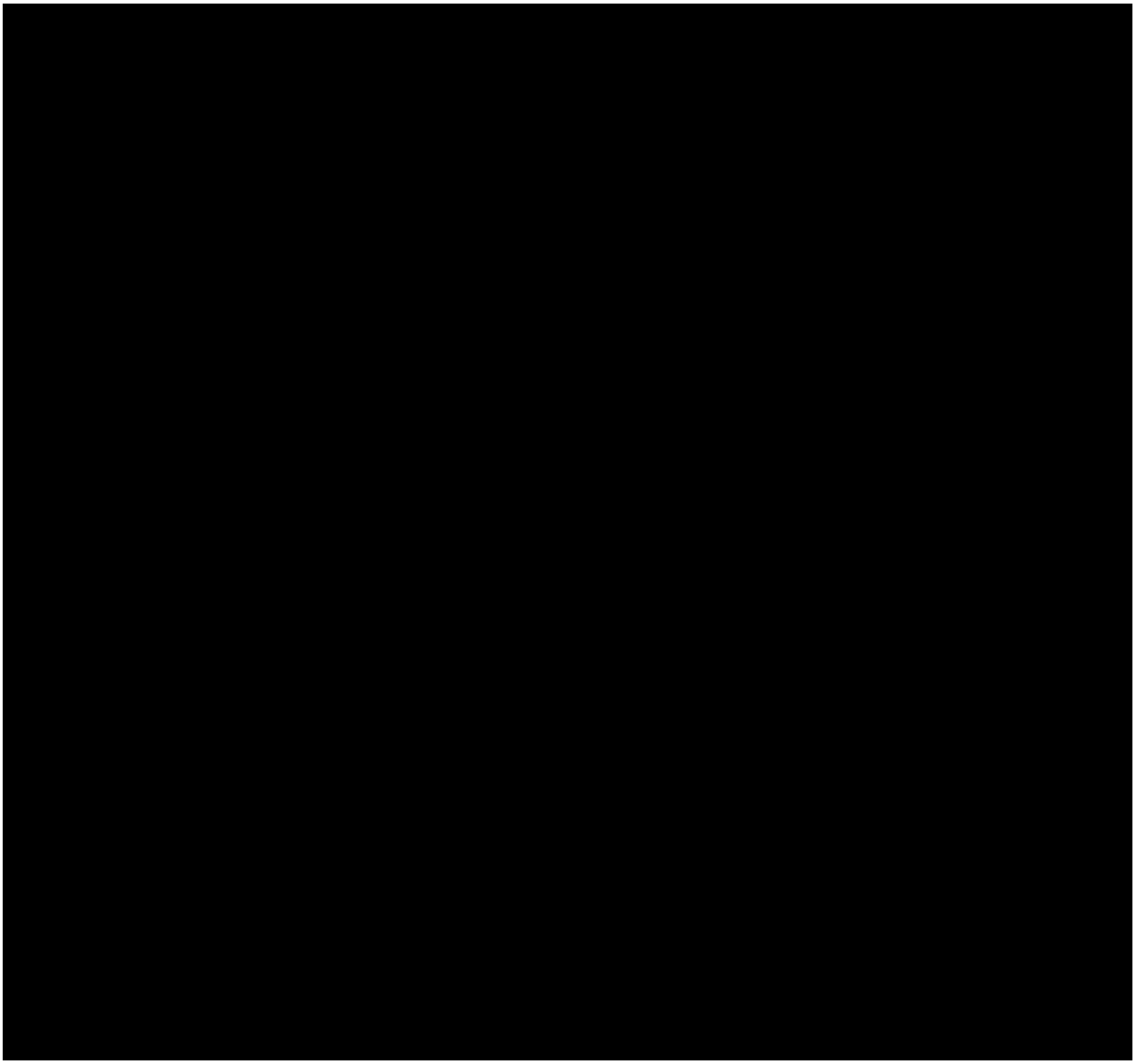

Figure 2 MODEM POOL ASSIGNMENT FORM FLOW 5E5 AND LATER SOFTWARE RELEASES

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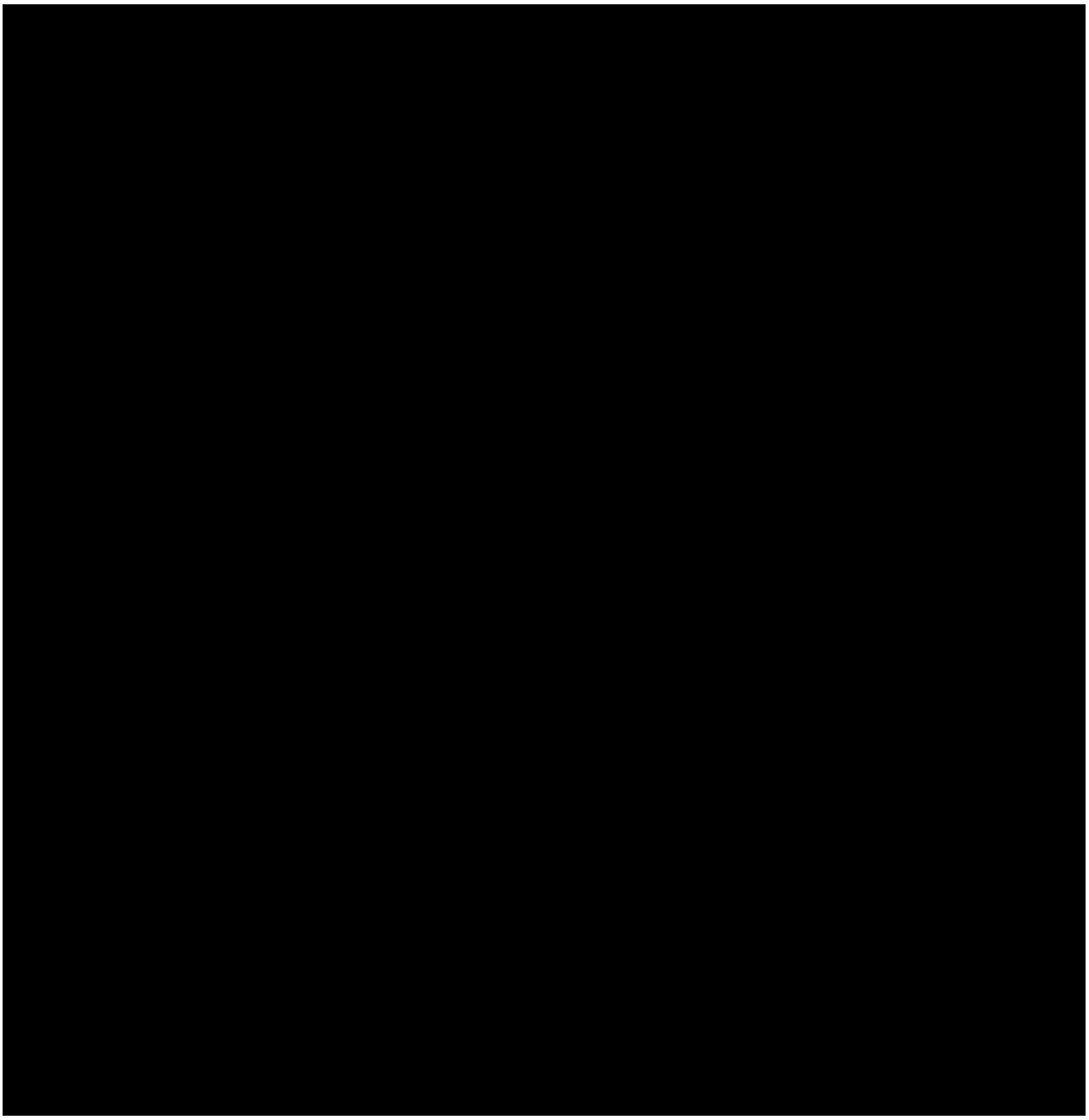

Figure 3 DIGITAL TO ANALOG MODEM POOL CALL

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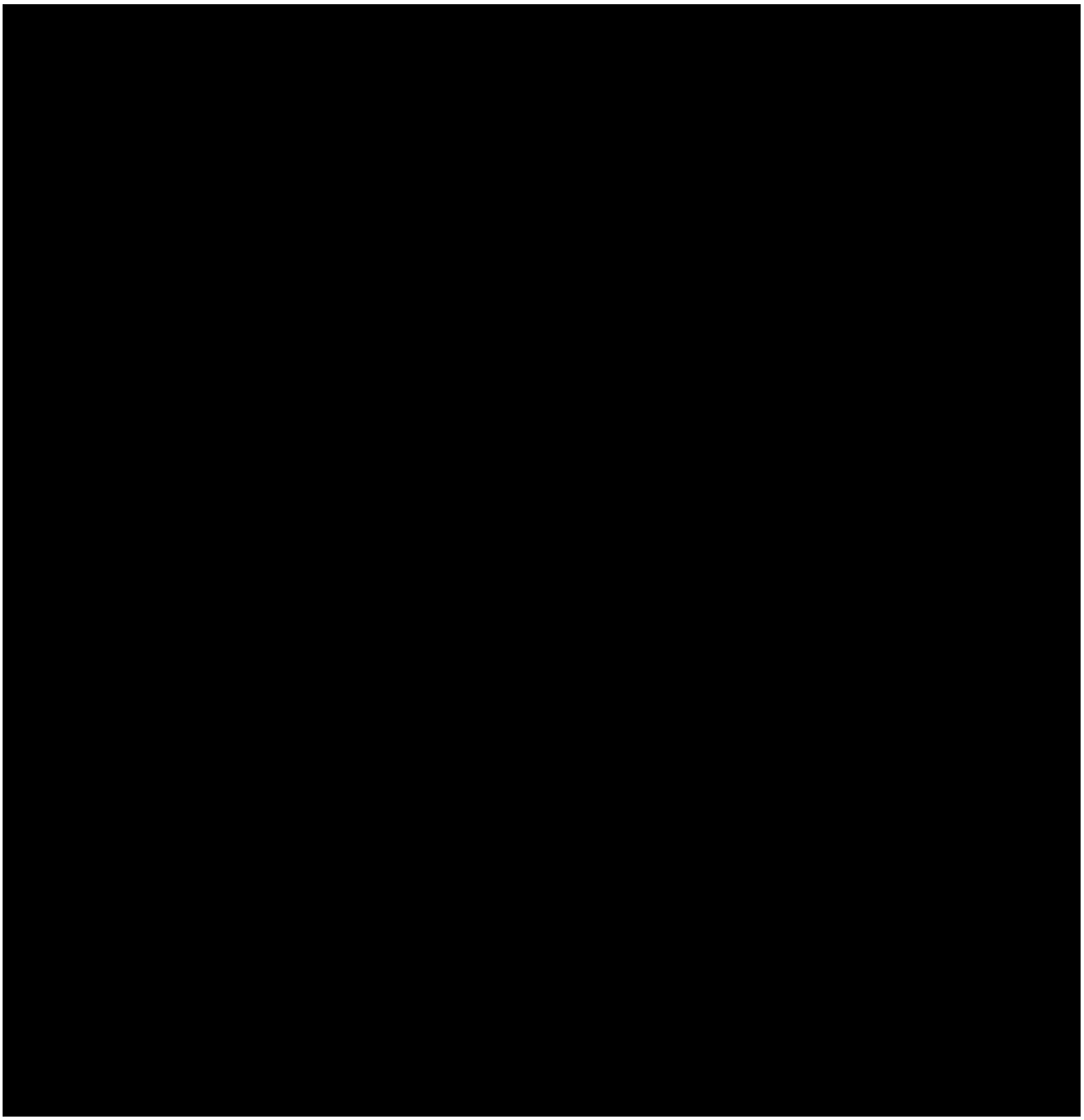

Figure 4 ANALOG TO DIGITAL MODEM POOL CALL

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Figure 5 RS232 CABLE CONNECTION

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SEC. 1AM: NATIONAL ISDN CIRCUIT SWITCHING FEATURES

1. NATIONAL ISDN 1
FEATURE DESCRIPTION

The National ISDN 1 Circuit Switching feature is available with 5E8 and later Software Releases. This feature supports the National ISDN 1 standard BRI (Basic Rate Interface) defined in Bellcore specifications.

For 5E8 and later, the 5ESS Switch will support both the existing BRI, now designated as a "Custom" interface, and the new "Standard" BRI, which meets Bellcore specifications. The interface selected in translations is dependent upon the CPE (Customer Premises Equipment) at the subscriber's location.

To ensure success of future retrofits for BRCs features assigned to BRI lines, it is suggested that separate CLUSTRs and BFGs be maintained for standard and custom DSLs. Although this separation is not enforced by ODA, it is highly recommended.

See the DSL CLS field on the DSL form, Division 5, Section 1H, for explicit lists of BRCS features which can and cannot be assigned to Standard BRI users.

LASS features that are available for Standard BRIs may be provisioned with the introduction of the 5E8 Software Release. The features will not be operable on the switch until after the first Software Update is applied.

Several capabilities that affect translations have been introduced for the Standard BRI. They include the following.

- ACO (Additional Call Offering)
- Automatic Recall
- ISDN Calling Number Identification Services
- EKTS (Electronic Key Telephone Service)
- Flexible Calling
- One B-Channel per User
- Terminal Initialization
- Series Completion

Each of these will be defined separately.

1.1 ACO (Additional Call Offering)

ACO (Additional Call Offering) is the Bellcore equivalent of the existing Multiple Call Appearance feature. It allows a CPE to have multiple appearances of a single DN so that a user can receive notification of an incoming call while active on another call.

1.2 Automatic Recall

The AR (Automatic Recall) feature allows the subscriber to automatically recall the last called party for circuit mode calls. If the party recalled by AR is busy, the network will automatically camp on (monitor) it. The originator will be notified when the camped-on party is idle.

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AR supports interswitch service for voice mode circuit activations provided CCS7 connectivity exists between the originating and terminating offices. For standard BRI users, this feature extends AR to circuit data service. Data mode circuit activations are restricted to intraswitch use.

1.3 ISDN Calling Number Identification Services

I-CNIS (ISDN Calling Number Identification Services) provides the RND (Redirecting Number Delivery) feature, which will be offered for both circuit switched voice and circuit switched data calls on Standard BRIs. For calls that have been forwarded to the called party, this feature delivers the first forwarding number and the associated reason for forwarding to the called party. In the case of sequential forwardings, the last forwarding number and the associated reason for forwarding will be delivered in addition to the first forwarding number and the associated reason for forwarding.

1.4 EKTS

EKTS (Electronic Key Telephone Service) allows terminals to share call appearances for a given DN. EKTS can be "BASIC", allowing only one call appearance per DN, or "CACH", allowing multiple call appearances per DN.

Standard and Custom DSL terminals may not appear in the same Shared List. For further restrictions on Standard DSLs, see the SHTN form, Division 5, Section 1C.

1.5 Flexible Calling

This capability provides terminal compatibility for Flexible Calling and Hold according to the Bellcore standard protocol. Three new feature buttons (conference, transfer, and drop) are introduced for Standard BRI users.

1.6 One B-Channel per User

Restricting a user to 1 B-channel provides a mechanism for grouping a set of distinct physical terminals for the purpose of limiting the group to using at most one B-channel at a time. A set of physical terminals acts like a single integrated terminal with regard to B-channel use. For example, if User 1 consists of a terminal with voice service and a packet terminal configured for ODB service, and User 2 consists of another terminal with voice service, this feature will prevent User 1 from having simultaneous voice and ODB packet calls, guaranteeing User 2 will always have access to a B-channel. Without this feature User 1 could use both B-channels simultaneously.

When groups are defined, two and only two groups may be defined, that is User 1 and User 2. When groups are defined, all terminals with On Demand B-channel services must be a member of one of the two groups.

1.7 Terminal Initialization

The terminal initialization procedures (endpoint identification) have been modified for ISDN terminals on Standard BRIs. The Bellcore-compliant Standard BRIs are specified on DSL forms with DSL CLS set to "STD".

1.8 Series Completion

The Series Completion feature is not available for Standard DSL users (BRI lines).

Analog or Custom DSL users who subscribe to Series Completion, may not series complete to a Standard BRI line, an analog line shared to a Standard BRI, or a Secondary Only TN associated with a Standard BRI. Specific checks are detailed for the SERHLN fields on the LINE, MLHLN, DSLUSR, and SHTN forms.

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2. NATIONAL ISDN 1
TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2
IDPGP	5601-4	4	2D	9.10
ISDNOPT	5941	5	5B	8.1
LSARFD	5971-1	6	14A	12.48
RNDFD	5983	6	26	12.59

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to ISDN CPE (Customer Premises Equipment) terminal buttons. CFGGRP is available with 5E4(2) and later Software Releases.

For the National ISDN 1 Circuit Switching feature, the GRP TYPE field was added, and the ACTION field was modified.

- GRP TYPE: This field indicates if the Configuration Group on this form is applicable to Bellcore BRI users or to BRI users. Its values are "STD" (Bellcore) and "CUSTOM".

  All CFGGRP forms for the same CONFIG GRP must have the same GRP TYPE. If GRP TYPE is "CUSTOM", the CONFIG GRP can be assigned only on DSLUSR forms defined for custom BRI users; if CONFIG GRP is "STD", it can be assigned only on DSLUSR forms defined for standard BRI users.

- ACTION: Three new values were added to this field to support Standard BRIs: "CONF", "DROP", and "XFER". One button on a Standard BRI terminal may be designated "CONF" for the multiway conference feature; another, "DROP" for the multiway drop feature; and a third, "XFER" for the multiway transfer feature.

DSL form (5907 Records) - This form is used to define the attributes of a DSL (Digital Subscriber Line; also called a BRI, Basic Rate Interface). DSL is available with 5E5 and later Software Releases.

- DSL CLS: This field specifies the DSL class as users under the custom protocol or users under the Bellcore standard protocol. With the National ISDN 1 feature the new DSL CLS "STD" was added to identify BRIs that support the Standard Bellcore protocol. Standard BRI's may have up to 8 multiple users.

DSLUSR form (5908 Records) - This form is used to define the TN and other information for a DSL user. This includes circuit switching (voice and data) attributes. The DSLUSR form must have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

For the National ISDN 1 Circuit Switching feature, six fields were added.

- AGI: The Associated Group Indicator designates the group (1 or 2) to which a Demand B-channel user is assigned. AGI applies only to Demand B-channel users on Standard BRIs, that is, users who subscribe to CSV, CSD, or ODB services and are assigned to a DSL that has DSL CLS set to "STD" on the associated DSL form. Users assigned the same AGI are treated as one logical Demand B-channel user.

  If users are assigned to the same BRI without packet service (neither B1 SERV nor B2 SERV is "X25"), then all AGI fields on the DSLUSR forms must have a value or all must be blank. If any user on the BRI has DPKT TN or MLHG/TERM entered, every AGI field in the group must be left blank.

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If users are assigned to the same BRI with packet service on one channel (either B1 SERV or B2 SERV is "X25"), then all AGI fields on the DSLUSR forms must have the same value (either 1 or 2) or all must be blank. If one or more of the DSLUSR forms has DPKT TN or MLHG/TERM entered, every AGI in the group must be left blank.

If users are assigned to the same BRI with packet service on both B-channels (B1 SERV and B2 SERV are "X25"), then no AGI field on the DSLUSR forms may have an entry.

When a value is entered in AGI, MAXB CHL must be 1; and CSV, CSD, or ODB must be 1.

- CSV ACO: The Circuit Switched Voice Additional Call Offering field indicates the type of CSV ACO service provided. The only entry allowed is "U", unrestricted. Since ACO is a Standard BRI feature, this field applies only to users on Standard BRIs. TERM TYPE must be "TYPEA", and CSV LIMIT must be entered. EKTS and CKT MLHG/TERM cannot be entered.

- CSV LIMIT: This field specifies the CSV Call Reference Busy Limit and may have a value of 1 - 16. This field applies only to Standard BRI users. TERM TYPE must be "TYPEA", and CSV must be entered. EKTS and CKT MLHG/TERM cannot be entered.

- CSD ACO: The Circuit Switched Data Additional Call Offering field indicates the type of CSD ACO service provided. The only entry allowed is "U", unrestricted. Since ACO is a Standard BRI feature, this field applies only to users on Standard BRIs. TERM TYPE must be "TYPEA", and CSD LIMIT must be entered. EKTS and CKT MLHG/TERM cannot be entered.

- CSD LIMIT: This field specifies the CSD Call Reference Busy Limit. It applies only to Standard BRI users and may have a value of 1 - 16. An entry in this field is necessary to originate or terminate CSD calls on all types of Standard lines: Basic, ACO, EKTS Basic, and EKTS CACH.

  If CSD LIMIT is entered, CSD must also be entered. For non-EKTS service, TERM TYPE must be "TYPEA"; for EKTS service, TERM TYPE must be "TYPEC". If CSD LIMIT is greater than 1, EKTS cannot be entered.

- EKTS: This field specifies the type of EKTS (Electronic Key Telephone Service) provided. Valid entries are "BASIC", which restricts the user to one call appearance per TN, and "CACH", which permits more than one call appearance.

  TERM TYPE must be "TYPEC"; CSV LIMIT, CSV ACO, and CSD ACO cannot be entered; CPN SCRN must be "Y". If the EKTS user is assigned CSD service, CSD LIMIT must be 1 for the service to be available. For additional rules about EKTS, see the field description in Division 5, Section 1I.

IDPGP form (5601-4 Record) - This form is used to define options associated with IDPs (Individualized Dialing Plans).

The field ESC TO POTS was added. This field defines the dial code used to escape to POTS from Basic Call functional addressing.

ISDNOPT form (5941 Record) - This form is used to define a set of office parameters that must be entered when the office is an ISDN switch.

Two new fields were added.

- TI T1: This is a timer that determines the maximum time in seconds a Standard BRI will wait for an

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initializing terminal to send an initialization request to the switch. Valid entries are 1 - 30 seconds.

- FC T1: This is a timer that determines the maximum time in seconds the switch will wait for a Standard CPE to send a HOLD ACKNOWLEDGE message after the switch has sent a HOLD message. Valid entries are 1 - 10 seconds.

LSARFD form (5971 Record) - This form is used to define LASS AR (Automatic Recall) features.

Two fields were added.

- CSV ALW: This field determines if the AR feature applies to Circuit Switched Voice calls. The voice option applies to both Custom and Standard BRIs. At least one of these two new fields (CSV ALW, CSD ALW) must be set to "Y".

- CSD ALW: This field determines if the AR feature applies to Circuit Switched Data calls. The data option applies only to Standard BRIs.

RNDFD form (5983 Record) - This form is new and is used to define RND (Redirecting Number Delivery) features for Standard BRIs. It includes the following fields.

- FEATURE: This field specifies the name of the feature.

- REMARKS: This field is available for descriptive or commentary remarks.

- ACT: This field specifies the method for activating the feature. The only allowed value is "AUTO"; the feature is automatically active when assigned to a subscriber.

- DEACT: This field specifies the method for deactivating the feature. The only allowed value is "NONE"; the feature cannot be deactivated.

3. NATIONAL ISDN 2 FEATURE DESCRIPTION

The National ISDN 2 Circuit Switching features are available with 5E9(1) and later Software Releases. These features support and extend the initial offering of standard BRI (Basic Rate Interface) features introduced with National ISDN 1. They implement the Standard Services Bellcore Specifications for standard BRIs.

3.1 ACO (Additional Call Offering)

ACO provides notification to an ISDN user that a call directed to that user is present at the serving switch, even though no B-channel can be allocated for the call. For NI1 (National ISDN 1), the number of concurrent ACO calls of which the user may be notified is limited by a subscription parameter, the Call Reference Busy Limit. For NI2 (National ISDN 2), the number of concurrent ACO calls for an ACO subscriber is dependent on the Call Reference Busy Limit, the type of ACO feature, and the Notification Busy Limit. Calls that arrive when defined limits have been reached are given busy treatment.

ACO notifies an ISDN BRI user of an incoming call when that call would normally be cleared because the user's ISDN interface is busy. ACO is available to circuit switched voice calls and circuit switched data calls. The number of additional calls of which the user may be notified concurrently is limited through the call reference busy parameters. The call reference busy limit for the BRI must be greater than or equal to 1. It is recommended that the call reference busy limit should be greater than the number of B-channels the BRI can access, so the user can fully utilize the BRI capacity.

ACO is assigned on a terminal basis on the DSLUSR form; it may not be assigned to an EKTS terminal.

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With the National ISDN 2 ACO feature, two new BBG (Basic Business Group) options are provided: the Intra-ISDN Basic Business Group option and the Incoming-to-ISDN Basic Business Group option. Prior to NI2 (National ISDN 2) ACO provided only an "all calls" option that allowed all calls terminating to the ACO subscriber to be eligible waiting calls without regard to where they originated. NI2, in addition to supporting the "all calls" option, provides the Intra-ISDN BBG option, which allows only calls originating from within the terminal group to be offered as additional calls to the terminating user. The Incoming-to-ISDN BBG option allows only calls originating from outside the terminal group to be offered as additional calls to the terminating user. The BBG options apply only to ACO subscribers who are members of terminal groups.

For NI2, ACO will check the Notification Busy Counter against the Notification Busy Limit before offering a terminating ACO call (assuming the call is not a call reference busy). When the switch offers a call via ACO, the appropriate call reference busy and notification busy counters will be incremented.

3.2 Display

The National ISDN 2 Display feature enhances the display formats used to display call related information to the end user for basic circuit switched voice or data calls. This was done to provide service uniformity for displays in accordance with TR-865.

The meaning of the DISPLAY field on the DSLUSR form was changed with 5E9(1) for National ISDN users. Setting DISPLAY to "Y" means the user will receive all Standard Displays (incoming, outgoing, and feature displays). Assigning an ICLID feature merely provides the user the calling DN in the Standard Display.

The DISP T2 timer field was added to the ISDNOPT form to specify the length of time certain displays will appear on the BRI CPE (Customer Premises Equipment).

3.3 EKTS (Electronic Key Telephone Service)

For EKTS users under National ISDN 2, the handling of bridged calls is changed, and a new intercom feature is introduced.

Prior to the 5E8 Software Release, some members of a Shared DN group can be assigned the Manual Call Exclusion option, while other members of the same group are assigned Automatic Call Exclusion. For 5E8 and later, when members of the same Shared DN group are Standard DSL users, they may not have a mixture of manual and automatic call exclusion options. All members must have CALL EXCL set to "M" "N", or blank; or all must have it set to "A", "N", or blank.

In addition, for members of an EKTS Shared DN group, there is a new concept for putting a call on hold. Before 5E9(1), when a call is bridged, the bridged member cannot put the call on hold. For 5E9(1) and later, when a call is bridged, any active member can put the call on hold. This new feature does not require any provisioning changes.

Also for 5E9(1) and later, a new intercom feature is available for Standard BRI users. This feature, Call Appearance Intercom, allows a subscriber to originate a voice call to another user within the same intercom group by activating a dedicated call appearance. It supports automatic, 1-digit, and 2-digit intercom service. With the automatic feature, the intercom group consists of two members; no additional digits are needed to route the call. With 1-digit and 2-digit intercom service, the intercom digit(s) of the called party must be entered.

The CA-ICOM (Call Appearance Intercom) feature is distinguished from the pre-existing FB-ICOM (Feature Button Intercom) feature in both its provisioning and user activation. The FB-ICOM feature is a BRCS feature defined on an ICMFD form (5960-1 Record) and assigned to an ISDN Standard or Custom BRI user on the associated feature assignment form; it is associated with a Feature Button through the CFGGRP form (5964 Record). The subscriber initiates an intercom call from his terminal by depressing the feature button.

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The new CA-ICOM feature is not a BRCS feature. CA-ICOM can be assigned only to Standard EKTS CACH terminals. The subscriber initiates an intercom call, not by pressing a feature button, but by activating the dedicated call appearance.

To provision the CA-ICOM feature, an Intercom Group dialing plan must be defined on the ICMGP form. This is the same form used to define the dialing plan for Feature Button intercom groups. Both 1-digit (10 position) and 2-digit (100 position) Intercom groups are allowed.

After an Intercom Group is created, it may be assigned to a Standard EKTS CACH terminal on the new CAICOM form (5984 Record); the Intercom Group is associated with one or more call appearance buttons on the terminal. On the CAICOM form, values must be entered in the TN, ICM GRP, SOURCE, CA, and CA QTY fields. If the caller will be required to dial a 1- or 2-digit code to reach an intercom group member, then SOURCE must be set to "DIAL", and AUTO DIAL POSITION must be blank. If the call appearance will directly connect to one member of the intercom group, the caller will not be required to enter any digits but will simply activate the call appearance; then, SOURCE must be set to "AUTO", and AUTO DIAL POSITION must contain the position of the called party in the intercom group. The position is defined in the ICM BLOCK and POSITION fields on the ICMGP form. See Figure 3 for the CA-ICOM provisioning flow.

A terminal may be a member of up to four CA-ICOM groups. Intercom call appearances cannot be shared.

Although ICOM groups may contain a mix of terminals assigned Call Appearance ICOM features and Feature Button ICOM features, an individual terminal may be assigned only one type of ICOM feature, not both.

- ***NOTE:*** To accommodate the transition from FB-ICOM to CA-ICOM features, both types of ICOM features will be available for Standard DSL users in the 5E9(1) Software Release. For 5E9(2) and later, FB-ICOM features will not be allowed for Standard DSL users.

3.4 Call Forwarding

The National ISDN 2 Call Forwarding features provide the activating user a service that is service-uniform across vendors' switches, as defined in Bellcore TR853, *ISDN Call Forwarding.*

To implement this service, the Feature Button Activation/Deactivation Action "CFBN" was added to the CFGGRP form. Additionally, eight new preconstructed features were defined with the CFWFD form (5614-1 Record).

National ISDN 2

Preconstructed Call Forwarding Features

Name	Description
/CFIBL	National ISDN Call Forwarding Busy Line (CSV)
/CFIDA	National ISDN Call Forwarding Don't Answer (CSV)
/CFIDBL	National ISDN Call Forwarding Busy Line (CSD)
/CFIDDA	National ISDN Call Forwarding Don't Answer (CSD)
/CFIDV	National ISDN Call Forwarding Variable (CSD)
/CFIV	National ISDN Call Forwarding Variable with no courtesy call (CSV)
/CFIVC	National ISDN Call Forwarding Variable with courtesy call - No answer required (CSV)
/CFIVCA	National ISDN Call Forwarding Variable with courtesy call - answer required (CSV)

3.5 Flexible Calling

National ISDN 2 modified 6-way call operation to allow the addition of up to six parties via normal add-on conference procedures without first invoking a separate 6-way calling feature.

The value "ET", Explicit Transfer, was added to the MULTIWAY TRANSFER field on the MWFD form. It is a new transfer value that allows a conference call to be transferred only when the controller explicitly requests a transfer. It prohibits a call from being transferred after the controller disconnects.

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Also, the following new preconstructed features were defined using the MWFD form.

National ISDN 2
Preconstructed Multiway Calling Features

Name	Description
/MWI6WBA	Implemented in the 5E8 Software Release. ISDN 6-Way Flexible Calling with Transfer. This feature allows six way operation via a single conference type feature button. It allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer button or if the controller disconnects. In addition, at least one of the conferees must be in the same terminal group as the controller.
/MWI6WBN	ISDN 6-Way Flexible Calling with No Transfer. This feature prevents transfer and the transfer of the conferees under any circumstances.
/MWI6WBT	ISDN 6-Way Flexible Calling with Explicit Transfer. This feature allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer feature button. If the controller disconnects, transfer is not allowed. In addition, at least one of the conferees must be in the same terminal group as the controller in order for the transfer to complete.
/MWI6WB2	ISDN 6-Way Flexible Calling with Transfer. This feature allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer feature button or if the controller disconnects. There are no terminal group restrictions applied to the conferees.
/MWI6WB3	ISDN 6-Way Flexible Calling with Explicit Transfer. This feature allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer feature button. If the controller disconnects, transfer is not allowed. There are no terminal group restrictions applied to the conferees.
/MWICTA2	ISDN Transfer Individual All Calls. This feature allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer feature button or if the controller disconnects. In addition, at least one of the conferees must be in the same terminal group as the controller.
/MWICTA3	ISDN Explicit Transfer Individual All Calls. This feature allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer feature button. If the controller disconnects, transfer is not allowed. There are no terminal group restrictions applied to the conferees.
/MWICTA4	ISDN Explicit Transfer Internal Only. This feature allows normal transfer operation and allows conferees of a conference call to be transferred to each other if the controller presses the transfer feature button. If the controller disconnects, transfer is not allowed. In addition, at least one of the conferees must be in the same terminal group as the controller in order for the transfer to be complete.

3.6 Series Completion

The Series Completion restrictions that existed in National ISDN 1 have been removed with the 5E9(1) Software Release and National ISDN 2. Although no data fields were modified, several data rules that prohibited Standard DSL lines to be specified as series completion to DNs and from DNs were removed.

4. NATIONAL ISDN 2 TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CAICOM	5984	6	3D	23.23
CFGGRP	5964	6	7A	12.5
DSLUSR	5908	5	1I	23.2
ISDNOPT	5941	5	5B	8.1
MWFD	5602-1/2	4	3A	12.19

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4.1 ACO (Additional Call Offering)

DSLUSR form (5908 Records) - This form is used to define the TN and other information for a DSL user. This includes attributes for circuit switched voice and data. The DSLUSR form must have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases. For the National ISDN Circuit Switching ACO feature two fields were modified, and two were added.

- CSV ACO: To accommodate the new feature options for Circuit Switching Voice ACO, two valid entries were added to the CSV ACO field. "INTRA" assigns the Intra-ISDN Basic Business Group option to the CSV user, while "INCOM" assigns the Incoming-to-ISDN BBG option.

  These options may be assigned only to Standard DSL users who have "TYPEA" terminals and are members of a Terminal Group. For specific restrictions regarding the CSV LIMIT (Call Reference Busy Limit), CSV NBLIMIT (Call Notification Busy Limit), and other fields, see the data rules for the CSV ACO field on the DSLUSR form in Division 5, Section 1I.

- CSV NBLIMIT: This new field, the CSV Notification Busy Limit, specifies the maximum number of simultaneous waiting voice calls allowed for this user of the ACO feature. Its value must be less than the CSV LIMIT, which is the Call Reference Busy Limit.

  The range of allowed values is 0 to 15. When ACO is assigned, the CSV NBLIMIT default value is 1 if CSV LIMIT is greater than 1, 0 otherwise.

- CSD ACO: To accommodate the new feature options for Circuit Switching Data ACO, two valid entries were added to the CSD ACO field. "INTRA" assigns the Intra-ISDN Basic Business Group option to the CSD user, while "INCOM" assigns the Incoming-to-ISDN BBG option.

  These options may be assigned only to Standard DSL users who have "TYPEA" terminals and are members of a Terminal Group. For specific restrictions regarding the CSD LIMIT (Call Reference Busy Limit), CSD NBLIMIT (Call Notification Busy Limit), and other fields, see the data rules for the CSD ACO field on the DSLUSR form in Division 5, Section 1I.

- CSD NBLIMIT: This new field, the CSD Notification Busy Limit, specifies the maximum number of simultaneous waiting voice calls allowed for this user of the ACO feature. Its value must be less than the CSD LIMIT, which is the Call Reference Busy Limit.

  The range of allowed values is 0 to 15. When ACO is assigned, the CSD NBLIMIT default value is 1 if CSD LIMIT is greater than 1, 0 otherwise.

4.2 Display

ISDNOPT form (5941 Record) - This form is used to define a set of office parameters that must be entered when the office is an ISDN switch.

The field DISP T2 was added. This is a timer that determines the maximum time in seconds that a Standard BRI will display certain messages on the subscriber's terminal. It represents the TD-2 timer specified for ISDN displays in Bellcore TR-NWT-000865 for call control and selected services. Valid entries are 10 - 60 seconds.

4.3 EKTS (Electronic Key Telephone Service)

CAICOM form (5984 Record) - This form is new with the 5E9(1) Software Release. CAICOM is used to assign an Intercom Group to call appearances on a Standard ISDN EKTS CACH terminal. It includes the

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following fields.

- TN: This key field is the 7-digit telephone number of a Standard ISDN EKTS CACH terminal that is to be assigned the CA-ICOM feature. The TN must be defined on a DSLUSR form as either a CKT TN or CKT MLHG TN.
- ICM GRP: This key field is the Intercom Group to be assigned to the call appearance(s) designated by the CA and CA QTY fields. The intercom group must be defined on an ICMGP form (5960-2 Record).
- SOURCE: The source of the CA-ICOM digits may be "DIAL" or "AUTO". If "DIAL", Intercom calls originated from call appearances require dialing the one or two digits associated by the Intercom Group with the TN being called. If SOURCE is "AUTO", activating the call appearance button automatically originates the call. The automatic feature requires an entry in the AUTO DIAL POSITION field to identify the Intercom Group member to be called.
- AUTO DIAL POSITION: When SOURCE is "AUTO", this field specifies the position in the intercom group dialing plan (on the IDPGP form) to which intercom calls can be placed automatically from the intercom call appearance(s) for this TN.
- CA: This field identifies the button number associated with the first call appearance for the Intercom Group.
- CA QTY: This field specifies the number of consecutive call appearances dedicated to the Intercom Group.

4.4 Call Forwarding

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to ISDN CPE (Customer Premises Equipment) terminal buttons. CFGGRP is available with 5E4(2) and later Software Releases.

For the National ISDN 2 Circuit Switching feature, the "CFBN" value was added to the ACTION field. The Call Forwarding Button ("CFBN") Action applies only to Configuration Groups with GRP TYPE set to "STD"; it may be associated only with Call Forwarding features that are defined on a CFWFD form with ACT TYPE set to "CDDN", "CDDNC", "CDDNCA", or "CDCA1A", and with DACT TYPE set to "CODE".

4.5 Flexible Calling

MWFD form (5602-1/2 Record) - This form is used to define Multiway features.

The "ET" value was added to the MULTIWAY TRANSFER field and is used in new preconstructed features for Standard BRI terminals. "ET", Explicit Transfer, is a new value that allows a conference call to be transferred only when the controller explicitly requests a transfer. It prohibits a call from being transferred after the controller disconnects.

5. AUTOMATIC TERMINAL SETUP

5.1 Feature Description

The ATS (Automatic Terminal Setup) feature is available in 5E9(1) and later Software Releases, and supports National ISDN 2. This feature downloads certain parameters essential for terminal operation on a National ISDN (standard) BRI upon request from the terminal. A terminal can request a parameter download after the initialization of layer 3 protocol, or after the terminal has been notified by the switch that a service order change has been completed. The parameters downloaded include DNs (Directory Numbers), bearer capabilities per DN, the CACH EKTS CA (Call Appearance) map per DN, DNA (DN

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Appearances) per DN, FAs (Feature Activators), FI (Feature Indicators), and service description parameters.

This feature minimizes the number of steps the user or installer must take to establish service. For example, the most simple installation requires the user to plug the CPE into the interface, and then program the SPID (Service Profile Identifier) into the CPE. After the initialization and download procedures are complete, the user may immediately originate and receive voice, circuit-switched data and packet data calls.

ATS minimizes the number of parameters a customer must enter into an ISDN terminal. Without ATS, an ISDN terminal requires that all parameters be entered manually or via other semi-automatic means such as a local data link or pre-programmed data medium. The ATS feature enables the customer's ISDN terminal to read the actual switch-provisioned parameters into memory, thus ensuring the data in the terminal and switch are consistent.

Not all parameters are candidates for downloading. As an example, the SPID is not considered to be downloadable, since it is the bootstrap mechanism by which the terminal identifies itself to the switch at layer 3 protocol for initialization and downloading purposes.

5.2 CPE Parameters

There are three classes of parameters which a CPE requires to provide ISDN service:

- Factory-set: The parameters needed by the CPE to establish layer 2 and layer 3 protocols when it is plugged in. These parameters are programmed into the CPE at the factory. Default values of layer 2 and layer 3 protocol timers and counters, fixed TEI (Terminal Endpoint Identifiers), and fixed button and lamp numbers fall into this category.

- Programmable: These are parameters programmed into CPE by the user. The SPID is an example of this class of parameters. Another example is a terminal with a setup mode which allows the installer or user to define buttons as call appearance or feature, and then number them.

- Downloadable: These are parameters downloaded into the CPE from the switch. The feature described in this capability is concerned with this subset of parameters and the downloading procedures. Any parameters that are not downloaded but are required by the CPE must be either factory-set or programmable.

This ATS feature permits a user to connect any CPE designed to support automatic terminal updates. This feature requires that the switch and CPE both support the proper protocol and procedures for successful downloading to occur. Downloadable and non-downloadable terminals may be mixed on an interface.

5.3 Terminal Setup Mechanism

The ATS feature can only be invoked from an initialized terminal. The terminal requests a download from the switch, and the switch responds by sending the parameter values. The terminal ends the process by sending an acknowledgement to the switch.

The switch notifies a terminal that a download is required when a service order change has been processed which affects downloaded parameters. The terminal can use the notification as a trigger to automatically request a download, or the user can manually request a download via terminal-provided means.

Downloading is accomplished by sending messages across the BRI D-channel. The protocol for these messages is derived from CMISE and ROSE (Common Management Information Service Element and Remote Operations Service Element) specifications with the parameters transported in Q.931/Q.932 messages following the CCITT standards for interface management services, Q.941.

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The ATS feature can be divided into two major functionalities; CPE-initiated download request processing, and switch-initiated notifications from a service order change for a CPE on a standard BRI.

- CPE-initiated download request processing is achieved by two TPs (Terminal Processes). The first TP is created when a CPE requests a download through a REGISTER message. This TP controls the message flow between the CPE and the Switch throughout the download. The second TP is created to process PDUs (Protocol Data Units) and collect the downloadable data. PDUs are exchanged between these two TPs to send the downloadable data to the CPE and receive responses from the CPE throughout the download.

- Switch-initiated notification begins with a service order change via RC/V. Trigger functions examine these service order changes and determine whether the terminal needs notification. Notifications are put in a queue managed by the ATS system process to send a NOTIFY message to the terminal.

5.4 Duplication of Call Appearances

In order to accurately download CPE data, CAs must be unique. Several fields defining DNAs which formerly had been manually entered were added to DSLUSR and SHTN; in addition, the CAICOM form, new for 5E9(1), is involved. See sections Section 4 , Section 5.5 and the respective forms for further information.

CAs are defined on ODA forms with pairs of fields. The following table shows these pairs. The first field is the first CA for a particular CA type; the second field is the number of CAs for the CA type.

Call Appearance Field Names

Form	First CA	Number of CAs
CAICOM	CA	CA QTY
DSLUSR	CA	NUM
	SP DNA	SP DNA QTY
	AU DNA	AU DNA QTY
	K56 DNA	K56 DNA QTY
	K64 DNA	K64 DNA QTY
	DPKT DNA	DPKT DNA QTY
	ODB DNA	ODB DNA QTY
SHTN	CA	NUM
	SP DNA	always 1
	AU DNA	always 1

NOTE: All the fields on SHTN are in the SHARED LIST.

The last CA for a particular appearance type can be calculated from the values of the field pairs above by the relation

Last CA = (First CA + Number of CAs - 1)

Since the first CA is the lower limit, 1 must be subtracted.

To determine duplicate CAs, examine corresponding DSLUSR, SHTN, and CAICOM forms. Forms may correspond in the following ways:

- CKT TN on DSLUSR, SHARED LIST TN on SHTN, or TN on CAICOM are equal;

- CKT MLHG and CKT TERM on DSLUSR, MLHG and TERM NBR (both SHARED LIST) on SHTN are equal; or

- CKT MLHG TN on DSLUSR and TN on CAICOM are equal.

Duplicate CAs are not allowed. Determining duplicate CAs is illustrated by the following examples.

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1. A DSLUSR form has CKT TN of 282-2333, CA of 5, and NUM of 4.

   An SHTN form exists with TN of 282-2333, CA of 7, and NUM of 2.

   Further, a CAICOM form exists with TN of 282-2333, CA of 2, and CA QTY of 4.

   Duplication of CAs exists, since the CA range is 5 - 8 on DSLUSR, 7 - 8 on SHTN, and 2 - 5 on CAICOM. DSLUSR and SHTN, DSLUSR and CAICOM have overlapping CA ranges.

2. A DSLUSR form has CKT TN of 282-5555, AU DNA of 10, and AU DNA QTY of 2.

   An SHTN form exists with TN of 282-5555, CA of 2, and NUM of 3.

   Further, a CAICOM form exists with TN of 282-5555, CA of 5, and CA QTY of 8.

   Duplication of CAs exists, since the CA range is 10 - 11 on DSLUSR, 2 - 4 on SHTN, and 5 - 12 on CAICOM. DSLUSR and CAICOM have overlapping CA ranges.

3. A DSLUSR form has MLHG of 0008, TERM of 0223, CKT MLHG TN of 282-2333, K64 DNA of 5, and K64 DNA QTY of 5.

   An SHTN form exists with MLHG of 0008, TERM NBR of 0223, CA of 7, and NUM of 4.

   Further, a CAICOM form exists with TN of 282-2333, CA of 4, and CA QTY of 4.

   Duplication of CAs exists, since the CA range is 5 - 9 on DSLUSR, 7 - 10 on SHTN, and 4 - 7 on CAICOM. DSLUSR and SHTN, DSLUSR and CAICOM, and SHTN and CAICOM have overlapping CA ranges.

4. A DSLUSR form has MLHG of 1320, TERM of 1029, CKT MLHG TN of 282-5555, K56 DNA of 10, and K56 DNA QTY of 3.

   An SHTN form exists with MLHG of 1320, TERM NBR of 1029, CA of 8, and NUM of 2.

   Further, a CAICOM form exists with TN of 282-5555, CA of 10, and CA QTY of 2.

   Duplication of CAs exists, since the CA range is 10 - 12 on DSLUSR, 8 - 9 on SHTN, and 10 - 11 on the CAICOM form. DSLUSR and CAICOM have overlapping CA ranges.

5.5 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2
SHTN	5902	5	1C	23.20
SRVCDESC	5985	6	27A	8.32

DSLUSR form (5908 Record) - The DSLUSR form defines the TN and status information of a DSL user.

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This includes attributes for circuit switched voice and data, DPKT (D-channel packet), and ODB (On Demand B-channel). This form always has a corresponding DSL form.

Twelve new fields were added in support of ATS. As mentioned in section Section 5.4 , these fields defined DNAs (Directory Number Appearances) which formerly were manually programmed at the terminal.

The SP DNA field is the first DN CA for speech. The SP DNA QTY field is the number of DN CAs for speech.

ISDN routing and digit analysis require speech and audio (voiceband data, e.g., facsimile and modems) calls to be routed differently. Speech treatments should not be applied to an audio call to maintain the integrity of the bit stream. See Division 2, Section 1W for more information on audio and speech calls.

The AU DNA field is the first DN CA for audio. The AU DNA QTY field is the number of DN CAs for audio.

The K56 DNA field is the first DN CA for 56K CSD. The K56 DNA QTY field is the number of DN CAs for 56K CSD.

The K64 DNA field is the first DN CA for 64K CSD. The K64 DNA QTY field is the number of DN CAs for 64K CSD.

The DPKT DNA field is the first DN CA DPKT. The DPKT DNA QTY field is the number of DN CAs for DPKT.

The ODB DNA field is the first DN CA for ODB. The DNA QTY field is the number of DN CAs for ODB.

SHTN form (5902 Record) - The SHTN form assigns a Primary or Secondary TN or MLHG/TERM to ISDN Terminals. A telephone number which appears on more than one terminal is called a Shared TN or MLHG/TERM. Shared TNs or MLHG/TERMs are divided into Primary and Secondary TN or MLHG/TERM.

Two new fields were added to SHTN to support ATS. As mentioned in Section 5.4 , these fields defined DNAs which formerly were manually programmed at the terminal.

The SP DNA field is the DN CA for speech. The AU DNA field is the DN CA for audio.

ISDN routing and digit analysis require speech and audio (voiceband data, e.g., facsimile and modems) calls to be routed differently. Speech treatments should not be applied to an audio call to maintain the integrity of the bit stream. See Division 2, Section 1W for more information on audio and speech calls.

SRVCDESC form (5985 Record) - For 5E9(1) and later, the SRVCDESC form defines all actions and their service descriptions for the ATS feature. It is used to override the default service descriptions.

6. NATIONAL ISDN 3 FEATURE DESCRIPTION

The National ISDN 3 Circuit Switching features are available with 5E10 and later Software Releases. These features support and extend the initial offering of standard BRI (Basic Rate Interface) features introduced with National ISDN 1 and 2. They implement the Standard Services Bellcore Specifications for standard BRIs.

7. NI-3 NON-INITIALIZING TERMINALS

7.1 Feature Description

The Non-Initializing Terminals feature is available for 5E10 and later. It adds to the current level of support

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for NIT (Non-Initializing Terminals) on a Standard ISDN interface. Before 5E10, NITs were only supported for Packet-mode calls. This feature adds support for Circuit-mode calls, and adds the capability of using a NIT with a Permanent Virtual Circuit. The feature number for this capability is 99-5E-2273. This is a secured feature with SFID 225.

A NIT is any terminal that does not perform terminal initialization, i.e., it does not send a SPID (Service Profile Identifier) to the switch as is done by a FIT (Fully-Initializing Terminal). Any FIT that does not successfully complete terminal initialization is also treated as a NIT. A NIT may be used for circuit mode and/ or packet mode calls.

With this feature, a NIT on a Standard ISDN interface can receive service in the following ways:

- By originating calls with its calling DN in the origination message, the terminal receives service provisioned for the DN.
- By originating calls without a calling DN in the origination message, the terminal receives service of the DN provisioned as the default DN on the interface, or of default services.
- By answering calls for its DN, the terminal receives the services of the DN.
- By using a terminal programmed with a provisioned fixed TEI, the terminal receives service of the DN provisioned for the fixed TEI, including Permanent Virtual Circuit service.

7.2 Default Directory Number

Default DN allows a NIT access to the services of a user provisioned as a default DN on a BRI. It defines the user services applied when the NIT makes a call without supplying a valid calling DN, or supplying an invalid calling DN. A default DN user may be provided with circuit and/or packet services. Only one user on a BRI may be provisioned as the default DN for circuit services: only one may be provisioned as a Default DN for packet service. The same user may have the Default DN for both circuit and packet service. If a default DN is provisioned for circuit services, it takes precedence over default service to the BRI.

7.3 Fixed Terminal Endpoint Identifier

This feature provides support for NITs for use with PVC (Permanent Virtual Circuits). The PVC is active as soon as the switch can identify the terminal. For a FIT, this identification is managed through the normal initialization process. For a NIT, a provisioned fixed TEI (Terminal Endpoint Identifier) is used.

The TEI is how the terminal (NIT or FIT) is first known by the switch, and may be either Fixed (programmed into the terminal) or Automatic (generated and supplied by the switch). The Automatic TEI can be different each time the terminal is plugged in, whereas the Fixed TEI is always the value that is programmed into the terminal.

When the NIT uses a fixed TEI that has been provisioned, the switch knows as soon as the terminal is plugged in what services (i.e., PVC) to associate with the NIT. The operating company maintains this Fixed TEI value as part of the provisioned data in the switch for the user's interface. The user communicates this fixed TEI to the service provider at the time they subscribe to the PVC service.

The only time a user must be concerned with the TEI value is when they are subscribing to a PVC for use with a NIT. If a PVC is not provisioned, the switch does not allow the provisioning of a Fixed TEI.

7.4 User Operation

If the NIT is used to originate calls with a DN or terminate calls for a DN, the DN must be programmed in the terminal. If the NIT is using the Provisioned fixed TEI with the PVC interface, it must have the TEI programmed. For originating default DN or default service calls, no parameters are required to be programmed in the NIT.

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7.5 Incompatibilities

Non-initializing terminals are incompatible with the following features:

- All features requiring feature buttons, such as:
  - Flexible Calling - Call Transfer
  - Flexible Calling - Conference Calling
  - Drop
  - Call Forwarding Feature Button Features
  - Visual Message Waiting Indicator
- Automatic Terminal Setup
- Electronic Key Telephone Service
- Terminal Key Systems
- Service Control Point Allowed
- Personal Communications Access on a C-Interface
- Network Element Services Signaling
- Message Desk Service
- Permanent Virtual Circuit without provisioned fixed TEI
- Packet Multiline Hunt Group Members without an individual DN assigned
- Shared DN
- Circuit-mode Multiline Hunt Group members (Packet MLHGs will still be able to use NITs if each NIT is assigned an Individual DN.)

Any user assigned for use by a NIT must not have any of the above features provisioned.

7.6 Limitations

A NIT may use the services of a NIT-compatible user provisioned on the BRI. Only one NIT at a time may have an active call for that user. A user with a fixed TEI provisioned can only be used by a terminal using that TEI. A FIT, receiving service as a NIT, must function in a NIT-mode, e.g., a FIT cannot depend on any NIT-incompatible features such as feature buttons or EKTS functionality for processing calls.

7.7 Automatic Association of Default Services

The Automatic Association of Default Services secured feature, which is available for 5E10 and later, is an enchancement for the NIT feature. It provides for automatically assigning a default service profile to newly created ISDN DSLs at the same time the OE and other per-line parameters are entered to create the DSL. For more information on this feature, see Division 2, Section 4A238.

7.8 Feature Assignment

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Provisioning for this feature permits the following:

- NIT-compatible user assignment and default service user assignment
- Default TN user assignment
- Fixed TEI assignment

7.9 NIT-compatible User Assignment and Default Service User Assignment

For CKT (Circuit) service:

1. User must have a CKT TN
2. Do NOT assign any of the following:

- CONFIG GRP must not be entered.
- EKTS must not be entered or be "NONE".
- CKT MLHG must not be entered.
- SCP ALW must not be entered.
- PASC must not be entered.
- MSS (Message Service System) defined on the MSFD form must not be assigned on the CKT TN.
- The SCP ALW field for the NESS (Network Element Services Signaling) feature must be "N".

For DPKT (D-Channel Packet) and/or ODB (On Demand B-Channel) service:

1. If DPKT service is to be assigned, DPKT TN must be entered.
2. If DPKT services are to be assigned, DPKT H PVC LCN must not be entered.
3. If ODB services are to be assigned, ODB TN must be entered.

7.9.1 On the DSL form (5907 Record):

DFLT SRV must be assigned to this DSL.

7.10 Default TN User Assignment
On the SFSYS form (5713-1 Record):

The ACT field for the SFID 225 must be set to "Y" to activate all NI-3 BRI features.

7.10.1 On the DSLUSR form (5908 Record):

1. Set DFLT TN USER to "Y".

For CKT (Circuit) service:

1. Verify that no other DFLT TN USERs on the OE have CKT service. Only one default DN for CKT

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services is allowed on an OE.

2. User must have a CKT TN
3. Do NOT assign any of the following:

- CONFIG GRP must not be entered.
- EKTS must not be entered or be "NONE".
- CKT MLHG must not be entered.
- SCP ALW must not be entered.
- PASC must not be entered.
- MSS (Message Service System) defined on the MSFD form must not be assigned on the CKT TN.
- DPKT H PVC LCN must not be entered.
- DPKT FIXED TEI must not be entered.
- The SCP ALW field for the NESS (Network Element Services Signaling) feature must be "N".

For DPKT (D-Channel Packet) and/or ODB (On Demand B-Channel) service:

1. Verify that no other DFLT TN USERs on this OE have DPTK or ODB service.
2. If ODB services are to be assigned, ODB TN must be entered.
3. If both DPKT and ODB service are to be assigned, DPKT TN must equal the ODB TN (CHL SEL is "Y").
4. If DPKT service is to be assigned, DPKT TN must be entered.
5. If DPKT services are to be assigned, DPKT H PVC LCN must not be entered.
6. If ODB services are to be assigned, ODB TN must be entered.

On the DSL form (5907 Record):

1. DSL CLS must be "STD"

For CKT (Circuit) service:

1. DFLT SRV must not be assigned to this DSL. Note that this may not be true for 5E10 Software Updates and later Software Releases.

7.11 Fixed TEI Assignment

On the SFSYS form (5713-1 Record):

The ACT field for the SFID 225 must be set to "Y" to activate the FIXED TEI feature.

On the DSLUSR form (5908 Record):

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For CKT (Circuit) service:

1. A CKT TN must be assigned
2. Do NOT assign any of the following:

- CONFIG GRP must not be entered.
- EKTS must not be entered or be "NONE".
- CKT MLHG must not be entered.
- SCP ALW must not be entered.
- PASC must not be entered.
- DFLT TN USER must be "N".
- MSS (Message Service System) defined on the MSFD form must not be assigned on the CKT TN.
- The SCP ALW field for the NESS (Network Element Services Signaling) feature must be "N".

For DPKT (D-Channel Packet) and/or ODB (On Demand B-Channel)

1. Assign DPKT service including DPKT TN.
2. Assign DPKT H PVC LCN.
3. Assign DPKT FIXED TEI. Make sure FIXED TEI is unique on this DSL
4. Assign the PVC.

7.12 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2 23.8
SFSYS	5713-1	3	5AR	8.22

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user. The DFLT TN USER and FIXED TEI fields were added to support the NIT feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 225 must be set to "Y"

8. NI-3 DEFAULT SERVICES USOP

8.1 Feature Description

The Default Service USOP (User Service Order Profile) feature provides a method of provisioning a minimum set of services on a National ISDN BRI interface to serve terminals which do not associate themselves with any other USOP on the interface. The feature number for this capability is 99-5E-2273.

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The feature provides the ability to define one or more Default Service USOPs in the switch. Each Default Service USOP can be defined to enable Circuit Switched Voice originations to any provisioned set of the following services

- 108 Test Line
- 611 (Repair Service Bureau)
- 811 (Business Office)
- 911 (Emergency)
- BRIV (BRI Verification)

Each DSL can be individually associated with a specific Default Service USOP.

This capability allows lines with no DN or subscribed service to provide dial tone and access to the minimum set of services.

This capability allows terminals which cannot associate themselves with any of the subscribed services on the interface to still get dial tone and access to the minimum set of services.

A minimum set of services are provided to all terminals whether they are FITs or NITs and whether they associate themselves with a subscribed USOP or not. (The limitation that the terminal be capable of initiating a voice mode call is acceptable). Some terminals may initialize to a USOP selected by SPID (Service Profile Identifier), others may associate themselves with service by sending a DN, and others may not use either method of identifying themselves. Because of the possibility of different methods of associating a terminal with services, the minimum set of services will be provided by different methods, including the Default Service USOP.

All ISDN BRI access lines which are in service must provide the following minimum set of services:

- Dial Tone
- Ability to originate a voice mode call to BRIV
- Ability to originate a voice mode call to other numbers as provisioned in the switch.

The minimum set of services defined above must be provided to any terminal on the interface which can make a voice mode, non-EKTS call. This includes:

- calling party number in the setup message (could use Default DN USOP or Default Service USOP).
- a NIT (non-initializing terminal) which sends a calling party number in the setup message which is not known at that interface (could use Default DN USOP or Default Service USOP).
- a NIT (Non-Initializing Terminal) which sends a calling party number in the setup message which is known at that interface (In this case the "minimum set of services" must be provisioned with the other services in the USOP which is accessed by that DN).
- an initializing terminal which does not initialize properly because it sends a SPID not available at that interface, and then reverts to NIT protocol procedures as described above (could use Default DN USOP or Default Service USOP).
- an initializing terminal which initializes properly. In this case the "minimum set of services" must be provisioned with the other services in the USOP.

The Default DN USOP alone could meet the needs of provisioning these services but, for reasons described above, the Default Service USOP feature is offered as an alternative which in many cases would be easier to provision and more efficient (doesn't consume a DN, serves more than one terminal at

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a time).

Teriminations to the user will be denied with default service.

8.2 User Operation Example:

A user moves into a new office and has not yet subscribed to service. The user plugs in the ISDN Fully Initializing Terminal carried from the previous location and not programmed with any SPID. The user receives dial tone because the line is provisioned with a Default Service USOP. This enables the user to call the telephone company and arrange for service to be installed for the new office.

8.3 Automatic Association of Default Services

The Automatic Association of Default Services secured feature, which is available for 5E10 and later, is an enchancement for the NIT feature. It provides for automatically assigning a default service profile to newly created ISDN DSLs at the same time the OE and other per-line parameters are entered to create the DSL. For more information on this feature, see Division 2, Section 4A238.

8.4 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DFLTSRV	5974	6	17	23.15
ISDNOPT	5941		5B	8.1

DFLTSRV form (5974 Record) - This form defines Default Service for an unknown CPE (Customer Premise Equipment) on a DSL. To support the NIT feature, the DFLT SRV group name cannot be defined as "NONE". If DFLT SRV is populated, then no terminations are allowed to the BRI.

ISDNOPT form (5941 Record) - This form defines the office parameters that must be entered when the office is an ISDN switch. The field DFLT SRV supports the NIT feature.

9. NI-3 BRI VERIFICATION

9.1 Feature Description

The NI-3 BRIV (National ISDN Basic Rate Interface Verification) feature provides the capability to identify the Office Equipment connected to a Standard ISDN BRI access line. The BRIV feature can be accessed by dialing an access code from an ISDN terminal connected to a Standard ISDN BRI access line provisioned for Circuit-Switched access (voice or data). BRIV provides the installation and maintenance personnel of a Telephone Company the ability to retrieve the OE (Office Equipment) identification value, which identifies the termination of the ISDN interface in use, right from the customer premises. When a test call is placed to BRIV, the OE identification value is displayed which identifies the termination of the ISDN interface from where the test call originated. The feature number for this feature is 99-5E-1221.

BRIV can be accessed by a 3-digit access code or a 7-digit DN. The DN(s) or access code(s) are assigned for the "BRI Test Line" without an association with BRIV or Custom BRITL. When a terminal signals the access code or DN, the 5ESS Switch connects a user terminal to either BRIV or Custom BRITL based on the type of interface (namely, Standard or Custom) associated with the terminal. More than one access code can be assigned to the "BRI Test Line" and the Telephone Company can arbitrarily use one number when calling from standard terminals and another when calling from custom terminals. However, the switch provides BRIV or Custom BRITL capabilities based on the type of line originating the call, not on the number dialed or signaled. For more information on BRITL, see Division 2, Section 2U.

The BRIV feature is not dependent on other feature development to function. However, to be most effective in obtaining the OE identification in an installation scenario, it must be possible to access the feature on a DSL from an initializing terminal or a non-initializing terminal without knowing the SPID

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(Service Profile Identifier) or DN (Directory Number) associated with that DSL.

9.2 Feature Assignment

As with Custom BRITL and the 108 TL (Test Line) features, assignment of BRCS and other similar features may not be assigned to the 3-digit and 7-digit BRITL access codes. Defining the BRIV 3-digit and 7-digit access codes on the forms listed in the table below do not permit assignment of these features.

When defining access codes for BRIV, specify if the access code is the maintenance version or the billed version. If the end user uses the billing version of BRIV, "Y" must be entered in the BRITL ALW field in the DSLUSR form (5908 Record) for the corresponding DSL. However for the Standard Interface, a billed version of BRIV is not allowed, i.e., the BRITL ALW field cannot be set to "Y".

Assignment	ODA Form	Record	Number of Digits
Individual Dialing Plan	IDPICM	5601	3-Digit
Local Digit Analysis	LDIT	5300-3/5	3-Digit
PBX-DID Line Assignment	LINE	5109	7-Digit
Primary Digit Analysis	PDIT	5300-2	3-Digit

9.3 Translation Requirements

No forms were new or modified for this feature.

10. NI-3 ISDN/PCS INTERWORKING

10.1 Feature Description

For 5E10 and later, the ISDN/PCS (Personal Communications Services) Interworking is a PCS offering based on an ISDN interface between the LEC's (Local Exchange Carrier's) switch and radio controllers operated by a PCS provider. The feature number for ISDN/PCS Interworking is 99-5E-2356. It is a secured feature with SFID 228.

ISDN/PCS Interworking allows National ISDN (NI-3/NI96) BRI lines on an AIN (Advanced Intelligent Network) capable 5ESS-2000 Switch the ability to interface with RPCUs (Radio Port Control Units) and/or IBS (Intelligent Base Stations) to provide four basic capabilities fundamental to a PCS user (as well as several vertical services including Call Waiting, Three-Way Calling, and Calling Number Delivery). A PCS user is described as a user with a wireless handset who is associated with a registration area which is managed by an Access Manager located in a SCP (Service Control Point) or in a RPCU. The initial offering of PCS will support PCS users traveling at a low to moderate speed, i.e., walking or traveling in a vehicle in an area restricted by local limits.

The four basic capabilities provided by 5E10 ISDN/PCS Interworking include the ability for a PCS user to:

- Register with the PCS provider
- Originate a call
- Receive a call
- Move automatically from one RPCU to another while maintaining the call (i.e., Automatic Link Transfer; intra-switch only for 5E10)

When mature, PCS will provide three types of mobility: terminal mobility, personal mobility and service mobility. In 5E10, terminal mobility is provided. Terminal mobility is the ability of a terminal, such as a wireless handset, to access telecommunications services from different locations while in motion, and the ability of the network to locate, identify and authenticate that terminal. Personal mobility is the ability for users to access telecommunications services at any terminal or handset on the basis, for example, of a personal identifier. That is, a user may be reached any time, anywhere either on a wireline phone or a

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wireless phone via a personal telephone number. Service mobility is the ability for users to access the vertical features provided by land-line network from wireless telephones.

ISDN/PCS interacts with the following 5ESS-2000 Switch-based features:

- Flexible Calling (provides PCS Three-Way Calling)
- Additional Call Offering (provides PCS Call Waiting).
- ASP Off-Hook Delay
- ASP Feature Code Dialing
- ASP Terminating Attempt Triggers
- ASP NESS
- CPN/BN
- Redirecting Number Delivery
- Display and Privacy

AIN-based PCS features include:

- Profile Manipulation
- PCS Call Forwarding
- PCS Call Screening
- PCS Calling Number Identification Services.

PCS calls are transmitted over an air interface to a RP (Radio Port) and then to a RPCU (Radio Port Control Unit). The RPCU manages one or more RPs and converts the protocol between the wireless and wireline networks. The RPCUs are connected to the 5ESS-2000 Switch via ISDN BRIs. An ALT (Automatic Link Transfer) moves a PCS call from one RPCU (old) to another (new) RPCU. The new RPCU originates the ALT request. When the switch recognizes the ALT request, transfer permission is expected from the old RPCU and a timer is started. The switch expects a response from the old RPCU granting or denying the request before the timer expires. The timer range is specified by the DSL user. If the time expires, the ALT has failed and the call at the new RPCU is cleared and the call remains at the old RPCU.

10.2 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2
ISDNOPT	5941	5	5B	8.1
SFSYS	5713	3	5AR	8.22

DSLUSR form (5908 Records) - This form is used to define the TN and other information for a DSL user. This includes circuit switching (voice and data) attributes. Two new fields were added to support PCS. The PASC (PCS Access Service on a C-Interface) field was added to indicate if ISDN/PCS Interworking is allowed by entering "PCSI" (PCS/ISDN Interworking). The second field added for ISDN/PCS Interworking is ALT to indicate whether the DSL user is allowed to comply with a request for an ALT.

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ISDNOPT form (5941 Record) - This form is used to define a set of office parameters that must be entered when the office is an ISDN switch. The ALT REQUEST field was added to specify the time allowed for the old RPCU to grant or deny permission for the PCS call to ALT.

SFSYS (5713 Record) - This form is used to define secured features. The ACT field for SFID 228 must be set to "Y" to activate this feature.

11. NI-3 INHIBIT DSL MAINTENANCE

11.1 Feature Description

For 5E10 and later, the INH DSL MAINT field was added to the RTERM form to provide the capability to disable the following tests for IDCU TR303 Remote Terminals: ISDN loopback test, ISDN corrupt CRC test, and ISDN Performance Monitoring. Analog lines and trunk are not affected.

11.2 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RTERM	5174	3	1S	18.5

RTERM (5174 Record) - This form is used to define remote terminals connected to the IDCU (Integrated Digital Carrier Unit). Added the INH DSL MAINT field to allow the capability to inhibit the ISDN loopback, corrupt CRC, and Performance Monitoring tests.

12. NI-3 CNIS INTRA-GROUP ONLY DELIVERY OPTIONING

12.1 Feature Description

The CNIGI (CNIS Intra-group Only Delivery Optioning) feature (feature number 99-5E-1451) is available with 5E10 and later Software Releases.

The CNIGI feature provides the ability to restrict for members of a terminal group CPN (Calling Party Number) delivery, RN (Redirecting Number) delivery, delivery of CgPS (Calling Party Subaddress), and provision of ICLID (Incoming Call Line Identification) displays to intra-group calls. CNIGI has no effect on delivery of information to non-terminal group parties (i.e., residential). CNIGI is NOT a separate assignable feature; it allows existing features (e.g., ICLID, CPN/BND) to restrict delivery of information to intra-group calls. Whether or not the CNIGI restriction applies depends on the settings of the CNIGI (CNIS Intra-group) Only Delivery option for the office, business group and individual line/PRI trunk. CNIGI applies to all members of the terminal group, including National ISDN BRI/PRI, Custom BRI/PRI, and analog lines.

A new field (CNIGI) was added to the following forms to support the CNIGI feature.

- TGSRFD
- TGSRLPA
- TGSRTPA
- BFG
- TGATTD
- OFCOPT

The possible settings of the CNIGI option are:

- Null (not valid for OFCOPT, default for group and line)
- No Restrictions (default for OFCOPT) - no change in number delivery

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The phrase "no change in number delivery" means that the calling and/or forwarding number(s) are delivered to the line/PRI for both inter-group and intra-group calls if an active number delivery feature (e.g., ICLID, CPN/BND) indicates to do so.

- Intra-group Only - no delivery of calling and/or forwarding number(s) for inter-group calls.

If a call to a member of a terminal group is an inter-group call, the following translations are used to determine whether CNIGI display/delivery restrictions on calling/forwarding number apply:

1. Check line/PRI CNIGI option (TGSRFD, TGSRLPA, TGSRMPA, TGSRTPA, and BFG)
   - If set to No restrictions, then no change in number delivery
   - If set to Intra-group only, then apply CNIGI restrictions
   - If set to Null, then proceed to next step
2. Check terminal group CNIGI option (TGATTD)
   - If set to No restrictions, then no change in number delivery
   - If set to Intra-group only, then apply CNIGI restrictions
   - If set to Null, then proceed to next step
3. Check office CNIGI option (OFCOPT)
   - If set to No restrictions, then no change in number delivery
   - If set to Intra-group only, then apply CNIGI restrictions

When CNIGI restrictions apply:

- The ISDN display of the Calling Number or Redirecting Number will have "Incoming call" (National BRI) or "INCOMING CALL" (Custom BRI) in place of the actual number.
- For analog displays, a string of ten "1"s will be delivered in place of the calling number.
- The Calling Party Number Information Element will be delivered to an ISDN terminal with no calling party number and with an indication of private. There will be no delivery of Calling Party Subaddress.
- The Redirecting Number Information Element(s) will be delivered to a National ISDN terminal with no forwarding number(s) and with an indication of private.
- The Calling Party Number Information Element will be delivered to a PRI with no calling party number and with an indication of private. There will be no delivery of Calling Party Subaddress (unless unconditional delivery is specified).

12.2 User Operation

In this section there are five scenarios which illustrate CNIGI restrictions. The following are the participants in these scenarios:

- User A

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- Custom ISDN terminal with DN=708-979-1111
- Calling Number Delivery, and ICLID features assigned
- Member of terminal group TG1
- Intra-group only setting of CNIS Delivery option

- User B
  - analog phone with DN=708-979-2222
  - ICLID feature assigned
  - Member of terminal group TG1
  - No restriction setting of CNIS Delivery option

- User C1
  - National ISDN CACH EKTS terminal with primary DN=708-979-3331 and secondary DN=708-979-3332
  - Calling Number Delivery, Redirecting Number Delivery, and ICLID features assigned
  - Member of terminal group TG1
  - Null setting of CNIS Delivery option

- User C2
  - National ISDN CACH EKTS terminal with primary DN=708-979-3332 and secondary DN=708-979-3331
  - Calling Number Delivery, Redirecting Number Delivery, and ICLID features assigned
  - Member of terminal group TG1
  - Null setting of CNIS Delivery option

- PRI trunk P
  - National ISDN PRI
  - Calling Number Delivery assigned; Calling Party Subaddress Delivery with the Conditional (do not deliver if Calling Number is private) option assigned; no Privacy Override
  - Member of terminal group TG1
  - Null setting of CNIS Delivery option

- User D
  - National ISDN terminal with DN=708-713-4444

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- No originating restriction on delivery of Calling Party Number
- Member of terminal group TG2

- User E
  - analog phone with DN=708-355-5555
  - No originating restriction on delivery of Calling Party Number
  - residential user (no terminal group)

Scenario 1:

For this scenario:

- Intra-group only Terminal Group TG1 setting of CNIS Delivery option
- No restriction office setting of CNIS Delivery option

The sequence is as follows:

1. User D places a call to A.
2. Since D is in a different terminal group (TG2) from A (TG1) and A has an Intra-group only setting,

- the Calling Party Number (CPN) Information Element (IE) is delivered to A with no CPN digits and an indication of presentation prohibited of network provided number.
- The ICLID display of A shows INCOMING CALL.

Scenario 2:

For this scenario:

- Intra-group only Terminal Group TG1 setting of CNIS Delivery option
- No restriction office setting of CNIS Delivery option

The sequence is as follows:

1. User E places a call to B.
2. Although E is in a different terminal group (no terminal group) from B (TG1), since B has a No restriction setting, the CNIS Intra-group only Delivery Option feature has no effect:

- The ICLID display of B provides the CPN of E.

Scenario 3:

For this scenario:

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- Intra-group only Terminal Group TG1 setting of CNIS Delivery option
- No restriction office setting of CNIS Delivery option

The sequence is as follows:

1. User D places a call to the primary DN of C1 (708-979-3331).
2. Since D is in a different terminal group (TG2) from C1 (TG1) and C1 has a Null setting, the TG1 Intra-group only setting applies:

- The Calling Party Number (CPN) Information Element (IE) is delivered to C1 and C2 with no CPN digits and an indication of presentation prohibited of network provided number.
- No Calling Party Subaddress IE is sent to C1 or C2.
- The ICLID display of C1 and C2 show Incoming call.

User C2 answers the call and receives an indication that the call has been connected and that the call is an Incoming call.

Scenario 4:

For this scenario:

- Intra-group only Terminal Group TG1 setting of CNIS Delivery option
- No restriction office setting of CNIS Delivery option

The sequence is as follows:

1. User D places a call to a party on a PBX connected to the switch through PRI P.
2. Since D is in a different terminal group (TG2) from PRI P (TG1), and P has a Null CNIGI setting, the TG1 Intra-group only setting applies.

- The CPN (Calling Party Number) IE (Information Element) is delivered to PRI P with no CPN digits and an indication of presentation prohibited of network provided number.
- No Calling Party Subaddress IE is sent to PRI P since the Calling Party Subaddress Delivery parameter is set to Conditional. The Calling Party Subaddress IE would be sent (if available) to PRI P if the Calling Party Subaddress Delivery parameter were set to Unconditional.

Scenario 5:

For this scenario:

- Null Terminal Group TG1 setting of CNIS Delivery option
- Intra-group only office setting of CNIS Delivery option
- User D and E have CFV (Call Forwarding Variable) active such that D forwards calls to E and E forwards calls to the primary DN of C1.

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The sequence is as follows:

1. User A places a call to D.
2. Since CFV is active at D, the call is forwarded to E.
3. Since CFV is active at E, the call is forwarded to the primary DN of C1.
4. Since the primary DN of C1 is in the same terminal group as the calling party (A),
   - the ICLID display for C1 and C2 indicates A's number as the calling party number.
   - the CPN IE is delivered to C with A's number
5. Since the primary DN of C1 is not in the same terminal group as the original called party (D), and both the primary DN of C1 and TG1 have a Null setting, the office Intra-group only setting applies:
   - the ICLID display for C1 and C2 indicates Incoming call for the base number.
   - Type of Number/Number Plan, with an indication of "Presentation prohibited of network-provided number", and with an "Unknown" Reason for Redirection.
6. Since the primary DN of C1 is not in the same terminal group as the last redirecting party (E), and both the primary DN of C1 and TG1 have a Null setting, the office Intra-group only setting applies:
   - the second RN IE is delivered to C1 and C2 without RN digits, with an "Unknown" Type of Number/Number Plan, with an indication of "Presentation prohibited of network-provided number", and with an "Unknown" Reason for Redirection.

12.3 Feature Assignment

The CNIGI (CNIS Intra-group Only Delivery Optioning) feature can be used by a service provider to limit delivery for business group customers of calling party number and forwarding number information, as provided by the CNIS, CPN/BND, RN Delivery, CgPS Delivery and ICLID features, to incoming intra-group calls. There are NO user specified variables under the control of the end-user. The service provider can apply the CNIGI restriction through a combination of office, business (terminal) group, and individual line/PRI trunk options. The possible settings of this Intra-group CNIS option are:

- Null (not valid for per-office) - consult next level up
- No Restrictions - no change in number delivery
- Intra-group Only - no delivery of calling and/or forwarding number(s) for inter-group calls

The following scenario illustrates how to configure the CNIGI options to achieve a desired set of restrictions. Assume most business groups will have an Intra-group only restriction, except for one business group (TG1) which will have No restrictions. This business group (TG1) will have some lines and a PRI trunk which have Intra-group only restrictions. Another business group (TG2) is to be set up with Intra-group only restrictions, but some lines and a PRI trunk will have No restrictions. Assume that members have already been assigned to terminal groups TG1 and TG2.

OFCOPT form:
The the office CNIGI field should be changed from its default value of "NORSTRCT" to "INTRAONLY" using OFCOPT form (5509 Record), Recent Change View 8.1 (Office Options). Since the default setting

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for terminal groups and lines/PRI trunks is Null, all business group customers are now restricted to Intra-group only delivery of CPN, RN, and display information.

TGATTD form:
The the setting of the TG1 CNIGI field should be changed from "NULL" to "NORSTRCT" using TGATTD form (5611 Record), Recent Change View 4.4 (Terminal Group Attendant and Data). Since the default setting of lines/PRI trunks is Null, all lines/PRI trunks in TG1 are now allowed to receive information for both inter-group and intra-group calls. This change has no effect on any lines/PRI trunks which are not members of TG1.

TGSRLPA,TGSRMPA and TGSRTPA forms:
The setting of the CNIGI field for the lines and PRI trunk in TG1 which are not allowed to receive information on inter-group calls should be changed from the default value of "NULL" to "INTRAONLY" using TGSRLPA form (5607-3 Record), Recent Change View 1.29 (Terminal Group Station Restriction Line Parameters) for analog and ISDN lines, and TGSRTPA form (5607-5) Record,View 5.29 (Terminal Group Station Restriction Trunk Parameters) for the PRI trunk.

Change the setting of the lines and PRI trunk in TG2 which are allowed to receive information on inter-group and intra-group calls from the default value of "NULL" to "NORSTRCT" using TGSRLPA form (5607-3 Record), Recent Change View 1.29 for analog and ISDN lines, and TGSRTPA form (5607-5 Record), View 5.29 for the PRI trunk. The other members of TG2 which have "NULL" continue to be controlled by the office setting of Intra-group only (since TG2 setting is NULL).

12.4 Other Features Required

CNIGI is NOT a separate assignable feature; it allows existing features (e.g., ICLID, CPN/BND) to restrict delivery of information to intra-group calls. The features affected by CNIGI are summarized in the following table:

Features Affected by CNIGI

Interface	Features
Analog	ICLID
BRI Custom	ICLID, CPN/BND
BRI National	ICLID, CNIS(CPN/BND), CNIS(RND)
PRI	ICLID, CPN/BND, CNIS(CPN/BND), CgPS Delivery, METROHUB

Note that Calling Party Number Delivery and Redirecting Number Delivery are separate subfeatures of the CNIS feature. Calling Party Number Delivery includes delivery of Calling Party Number and Calling Party Subaddress (CgPS) for BRI; for PRI, CgPS delivery is a separate feature.

The METROHUB feature needs to be active in an office to assign PRI trunks to terminal groups. For interswitch calls these are transported in the SS7 ISUP Calling Party Number parameter and the ATP (Access Transport parameter), respectively. Redirecting Number Delivery for BRI includes delivery of the first and last forwarding numbers. For interswitch calls these are transported in the SS7 ISUP Original Called Number parameter and the Redirecting Number parameter, respectively.

12.5 Compatibilities/Incompatibilities

Two features which also restrict delivery of display information are:

- the LIGI (Limited Intra-group ICLID) feature which allows the calling number and original called number to be displayed at the terminating station only when these numbers are in the same terminal group as the terminating station (Otherwise the number is marked as private.)
- the MH2 (METRO HUB2) feature which applies LIGI treatment to calls terminating to PRI trunks

When LIGI is active and CNIGI restrictions apply, CNIGI restrictions take precedence. This will result in a

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CNIGI display (i.e., "Incoming call") rather than an indication of private number. When MH2 is active, all inter-group calls to a PRI will be marked as private, independent of whether or not CNIGI restrictions apply.

Since LIGI and MH2 offer much less flexibility than CNIGI (e.g., LIGI applies to all lines on the switch, including residential lines), it is likely that when CNIGI is available it will be used in place of LIGI and MH2.

12.6 Interactions

The following features have interactions with CNIGI:

- ICLID (Incoming Calling Line Identification) - see "Other Features Required"
- Calling Party Number/Billing Number Delivery (CPN/BND) - see Other Features Required
- Redirecting Number Delivery (RND) - see "Other Features Required"
- METROHUB - "Other Features Required"
- Call Forwarding
  - CNIGI restrictions apply to delivery of calling number information in the NOTIFY message which is sent when a call is forwarded from a National BRI due to Call Forwarding Variable or Call Forwarding Busy Line.
  - CNIGI restrictions apply to forwarding party information delivered to the terminating party.
- Display feature - CNIGI restrictions on calling and or forwarding numbers apply whenever such call associated display information is sent to an ISDN terminal, whether in the initial SETUP message or in a subsequent message such as an INFO or CONNECT message.
- Analog Calling Name
  - CNIGI restrictions can result in "Incoming call" being displayed in place of the calling name.
- Inspect for ISDN terminals (Custom only)
  - display "INCOMING CALL" in place of the calling number or forwarding number if CNIGI restrictions apply.

The following 5E10 features have interactions with CNIGI:

- Calling Party Subaddress (CgPS) Delivery
- ISDN Calling Name Delivery
  - CNIGI restrictions can result in "Incoming call" being displayed in place of the calling name.

12.7 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26a	12.9
OFCOPT	5509	3	5i	8.1, 8.15

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TGSRFD	5607-1,2	4	8a	12.21
TGSRLPA	5607-3	4	8b	1.29
TGSRMPA	5607-4	4	8c	1.29
TGSRTPA	5607-5	8	8d	5.29
TGATTD	5611	4	12a	4.4

BFG form (5625 Record) - The BFG form is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. BFG is designed to assist the switch owner in the conservation of Switching Module memory and the improvement of Recent Change response time, and it cannot be used with trunks.

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

OFCOPT form (5509 Record) - The OFCOPT form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices.

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

TGSRFD form (5607-1,2 Record) - The TGSRFD form is used to define the Terminal Group and Station Restriction Feature Definition.

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

TGSRLPA form (5607-3 Record) - The TGSRLPA form is used to define a Terminal Group and Station Restriction Line Parameter.

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

TGSRMPA form (5607-4 Record) - The TGSRMPA form is used to define Terminal Group and Station Restriction parameters for an MLHG MEMB (Multi-Line Hunt Group Member).

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

TGSRTPA form (5607-5 Record) - The TGSRTPA form is used to define Terminal Group and Station Restriction Trunk Parameter.

The TGN/MEMB NO Form is associated with the Terminal Group and Station Restriction Feature Definition Form and is keyed by TGN/MEMB. Individual TGN/MEMBs assigned a particular TGSR feature name can be given new specific values for Terminal Group ID, Forward to Directory Numbers (Originating

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or Terminating) that will replace or overwrite the Default Parameter values that are defined on the TGSR Feature Definition Form.

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

TGATTD form (5611 Record) - The TGATTD form is used to define information (such as attendant DN, Source Billing, and SDN DAS) on a Terminal Group basis.

The new CNIGI (Calling Number Identification Services Intragroup Delivery Only) field was added to support CNIS Intra-group Only Delivery Optioning. The CNIGI field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CgPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

13. NI-3 CALL FORWARDING OVER PRIVATE FACILITIES

13.1 Feature Description

The NI-3 CFPF (National ISDN-3 Call Forwarding over Private Facilities) feature, (with feature number 99-5E-2269) is available with the 5E10 and later Software Releases.

NI-3 CFPF allows a call with the CSV (Circuit Switched Voice) CT (Call Type) to be forwarded to an on - or off-network remote DN over the private/public facilities indicated during the activation request in a National ISDN-3 environment from NI-3 compatible CPE (Customer Premises Equipment).

13.2 Private Facilities

The NI-3 CFPF feature can be used for forwarding over private facilities or public facilities, but forwarding over private facilities is only applicable for subscribers who possess a PFA (Private Facilities Access) feature or ARS (Automatic Route Selection) feature. When the NI-3 CFPF subscriber possesses private outgoing facilities such as FX (Foreign Exchange) lines, WATS (Wide Area Telephone Service), CCSA (Common Control Switching Arrangement), or senderized tie trunk facilities, and has PFA dial access or ARS access to these facilities, CFPF will permit the subscriber to use the private facilities during the Call Forwarding activation process. For the NI-3 version of the feature, the subscriber may enter the CFPF activation code or feature button, followed by the PFA (Private Facility Access) or ARS dial access code (or feature button), followed by the desired remote DN. Depending on the CFPF preconstructed feature's activation type (ACTYP), a "courtesy" call to the remote station may be set up, yet the call's completion is not required for activation. Billing of forwarded calls occurs as in normal call forwarding, however, there are no DDD (Direct Distance Dialing) charges associated with the forwarded leg when only private facilities are used.

13.3 ETS

The NI-3 CFPF feature, like the current 5ESS Switch CFPF feature, must remain compatible within ETS (Electronic Tandem Switching) networks. This service allows 5ESS Switch ETS main business customer stations to have all terminating calls automatically forwarded to another ETS on-network or off-network remote station using the ETN (Electronic Tandem Network) to on-network or off-network stations.

13.4 Preconstructed Feature

This feature requires one new preconstructed feature on the 5ESS Switch, which is required so that default parameter values will be available without requiring BRCS (Business and Residence Custom Services) MFC (Modular Feature Construction). The NI-3 CFPF feature supports features compatible on

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a standard BRI in NI-3. These features are the following:

/CFIPF - Call Forwarding Over Private Facilities for NI-3 (new feature for NI-3)

/CFPF - Call Forwarding Over Private Facilities (first available in the 5E5 Software Release).

/CFPFFB - Call Forwarding Over Private Facilities Feature Button (first available in the 5E6 Software Release).

All of these features will allow activation via Dialed Code or Feature Button.

13.5 Feature Activation

CFPF ACTIVATION CALL SCENARIOS

- CFPF ACTIVATION - PFA ACCESS CODE
  - CFPF act + PFA access + DN (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + PFA access + DN (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + PFA access + DN (C_TONE)
  - CFPF act + ATH use + ATH CODE + PFA access + DN (C_TONE)
  - CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + PFA access + DN (C_TONE)

- CFPF ACTIVATION - PFA ACCESS CODE (WITH QUEUING)
  - CFPF act + PFAQ access + DN (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + PFAQ access + DN (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + PFAQ access + DN (C_TONE)
  - CFPF act + ATH use + ATH CODE + PFAQ access + DN (C_TONE)
  - CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + PFAQ access + DN (C_TONE)
  - CFPF act + PFAQ access + DN (C_TONE) + OHQ
  - CFPF act + ACCT use + ACCT CODE + PFAQ access + DN (C_TONE) + OHQ
  - CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + PFAQ access + DN (C_TONE) + OHQ
  - CFPF act + ATH use + ATH CODE + PFAQ access + DN (C_TONE) + OHQ
  - CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + PFAQ access + DN (C_TONE) + OHQ
  - CFPF act + PFAQ access + DN (C_TONE) + RBQ
  - CFPF act + ACCT use + ACCT CODE + PFAQ access + DN (C_TONE) + RBQ
  - CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + PFAQ access + DN (C_TONE) + RBQ

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- CFPF act + ATH use + ATH CODE + PFAQ access + DN (C_TONE) + RBQ
- CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + PFAQ access + DN (C_TONE) + RBQ

- CFPF ACTIVATION - ARS ACCESS CODE
  - CFPF act + ARS access + DN (C_TONE)
  - CFPF act + ARS access + DN + ATH prompt + ATH CODE (C_TONE)
  - CFPF act + ARS access + lead ACCT + ACCT CODE + DN (C_TONE)
  - CFPF act + ARS access + lead ACCT + ACCT CODE + DN + ATH prompt + ATH CODE (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + ARS access + DN (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + ARS access + DN + ATH prompt + ATH CODE (C_TONE)
  - CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + ARS access + DN (C_TONE)
  - CFPF act + ATH use + ATH CODE + ARS access + DN (C_TONE)
  - CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + ARS access + DN (C_TONE)
  - CFPF act + ARS access + DN (C_TONE) + OHQ
  - CFPF act + ARS access + DN + ATH prompt + ATH CODE (C_TONE) + OHQ
  - CFPF act + ARS access + lead ACCT + ACCT CODE + DN (C_TONE) + OHQ
  - CFPF act + ARS access + lead ACCT + ACCT CODE + DN + ATH prompt + ATH CODE (C_TONE) + OHQ
  - CFPF act + ACCT use + ACCT CODE + ARS access + DN (C_TONE) + OHQ
  - CFPF act + ACCT use + ACCT CODE + ARS access + DN + ATH prompt + ATH CODE (C_TONE) + OHQ
  - CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + ARS access + DN (C_TONE) + OHQ
  - CFPF act + ATH use + ATH CODE + ARS access + DN (C_TONE) + OHQ
  - CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + ARS access + DN (C_TONE) + OHQ
  - CFPF act + ARS access + DN (C_TONE) + RBQ
  - CFPF act + ARS access + DN + ATH prompt + ATH CODE (C_TONE) + RBQ
  - CFPF act + ARS access + lead ACCT + ACCT CODE + DN (C_TONE) + RBQ
  - CFPF act + ARS access + lead ACCT + ACCT CODE + DN + ATH prompt + ATH CODE (C_TONE) + RBQ

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- CFPF act + ACCT use + ACCT CODE + ARS access + DN (C_TONE) + RBQ
- CFPF act + ACCT use + ACCT CODE + ARS access + DN + ATH prompt + ATH CODE (C_TONE) + RBQ
- CFPF act + ACCT use + ACCT CODE + ATH use + ATH CODE + ARS access + DN (C_TONE) + RBQ
- CFPF act + ATH use + ATH CODE + ARS access + DN (C_TONE) + RBQ
- CFPF act + ATH use + ATH CODE + ACCT use + ACCT CODE + ARS access + DN (C_TONE) + RBQ

- CFPF ACTIVATION - Auto-ARS
  - auto-ARS + CFPF act + DN (C_TONE)
  - auto-ARS + CFPF act + DN + ATH prompt + ATH CODE (C_TONE)
  - auto-ARS + CFPF act + lead ACCT + ACCT CODE + DN (C_TONE)
  - auto-ARS + CFPF act + lead ACCT + ACCT CODE + DN + ATH prompt + ATH CODE (C_TONE)
  - auto-ARS + CFPF act + DN (C_TONE) + OHQ
  - auto-ARS + CFPF act + DN + ATH prompt + ATH CODE (C_TONE) + OHQ
  - auto-ARS + CFPF act + lead ACCT + ACCT CODE + DN (C_TONE) + OHQ
  - auto-ARS + CFPF act + lead ACCT + ACCT CODE + DN + ATH prompt + ATH CODE (C_TONE) + OHQ
  - auto-ARS + CFPF act + DN (C_TONE) + RBQ
  - auto-ARS + CFPF act + DN + ATH prompt + ATH CODE (C_TONE) + RBQ
  - auto-ARS + CFPF act + lead ACCT + ACCT CODE + DN (C_TONE) + RBQ
  - auto-ARS + CFPF act + lead ACCT + ACCT CODE + DN + ATH prompt + ATH CODE (C_TONE) + RBQ

Feature Activation Acronym Definitions

Acronym	Definition
ACCT use	Account Code use code (or Feature Button)
ACCT CODE	Account Code
ARS ACCESS	Automatic Route Selection use code (or Feature Button)
auto-ARS	Automatic Route Selection - auto entry
ATH use	Authorization Code use code (or Feature Button)
ATH CODE	Authorization Code
C_TONE	Confirmation Tone
CFPF act	CFPF Activation Code (or Feature Button)
DN	Directory Number
lead ACCT	lead Account Code Digit
OHQ	Off-Hook Queuing (Routine or Priority)
PFA Access	PFA Access Code (or Feature Button)
PFAQ Access	PFA Queuing Access Code (or Feature Button)
RBQ	Ring-back Queuing

13.6 User Specified Variables

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All the CFPF features supported in NI-3 permit the activating user to change the value of the remote (forward-to) DN via a CORC (Customer Originated Recent Change) procedure.

The new /CFIPF preconstructed feature is defined under the Call Forwarding Modular feature. As a result, this feature will have multiple parameter values that may be used to "construct" new features via BRCS MFC (Modular Feature Construction). The following line parameters that may be used for the new NI-3 /CFIPF preconstructed feature do not require BRCS MFC in order to change their values:

- Forward-To DN (FWDTODN)
- Account Code (ACCT CODE)
- Authorization Code (ATH CODE)
- Simultaneous Inter-Office Calls Limit (SIMINTER)
- Simultaneous Intra-Office Calls Limit (SIMINTRA)
- Intra-office CF Legs (i.e., "Hops") Limit (CFMAX)
- Base Station "Ping Ring" Indicator

13.7 Other Features Required

Since this feature does not require the user to access private facilities, i.e., the user may activate CFPF to a public DN, as in the "basic" CF features, there are no true prerequisite features that a customer needs in order for this feature to function properly. However, if a user needs to access private facilities either through PFA or ARS during the CFPF activation procedure, then customer must have either a PFA (e.g., /PFA), or an ARS (e.g., /ARC, /ARAD) preconstructed or constructed feature, respectively, assigned to the customer's line.

13.8 Compatibilities/Incompatibilities

The following CF features unavailable in NI-1 and NI-2 will continue to be unavailable in NI-3:

- Flexible Night Service
- Attendant Call Forwarding

13.9 Interactions

The following is a list of the detailed feature interactions:

- ARS (Automatic Route Selection)
  - ERWT (Expensive Route Warning Tone)
- PFA (Private Facility Access)
  - Senderized Facilities
- Account Codes
- Authorization Codes/Facility Restriction Levels

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- Attendant Control of Facilities
- SCCOF (Selective Customer Control of Facilities)
- Speed Calling
- On/Off Hook Queuing
- Uniform Numbering Plan
- Collocated/Non-collocated ETN
- Feature Button Activation requirements

In addition, the NI-3 CFPF feature mainly interacts with the following 5ESS Switch features:

- Call Forwarding Modular Feature
  - All CFPF features assignable in analog and custom ISDN (i.e., /CFPF and /CFPFFB) are assignable in NI-3, and will "inherit" full NI-3 activation and forwarding operation, without all the TR 853 CF default parameter values. The "Feature Button" feature, /CFPFFB, is assignable in NI-3, maintains its current feature button activation/deactivation operation.
- EKTS (Electronic Key Telephone Service)
  - The "ping-ring" reminder notification must be sent to only the lead terminal in an EKTS shared DN group.
- Display
- Switching Module-2000
  - The NI-3 CFPF feature can be assigned to a DN that resides on the SM-2000, or on a SM.

13.10 Limitations

The following limitations and restrictions may be encountered by an NI-3 CFPF user:

- The NI-3 CFPF user will be blocked from accessing non-senderized (cut-through) facilities.
- All activation attempts outside the context of a call (i.e. onhook) will not permit any PFA/ARS information from being entered during the activation procedure.
- When an NI-3 CFPF feature is assigned with "Authorization Required" on RCV 1.11, all activation/deactivation attempts outside the context of a call will be blocked.
- All CF ICI (ISDN Call Identification) information previously available in outgoing displays to the originating user whose call is forwarded will be blocked. The originating user will receive no more information than if the call had terminated to the base DN normally.

13.11 Restriction Capabilities

All of the dialed activation codes that may be used to activate any NI-3 CFPF feature may be DPAT (Dialing Plan Access Treatment) restricted, as determined by the switch owner, assuming the access

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codes are defined in an IDP (Individualized Dialing Plan). If a CFPF access code is DPAT restricted, then specified users will be blocked from dialing the code, and thus, blocked from access to the feature.

13.12 Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CFWFD	5614-1/2	4	15a	12.12
CFGGRP	5964	6	7a	12.5

CFWFD form (5614-1/2 Record) - The CFWFD form defines, Call Forwarding features which allow calls completing to a customer's Directory Number to be redirected to another number. It is used to define a number of separate, but related features, by selecting various feature options for Call Forwarding.

For 5E10 and later, when CKT TN(s) and or CKT MLHG/TERMs on the DSLUSR form have DSL CLS set to "STD" on the DSL form (OE from DSLUSR form matches DSL OE on the DSL form), and are assigned a CFWFD feature with CFPF ALW set to "Y" on the CFWFD form, a SFSYS form must exist with SFID 225 (National ISDN 5E10 BRI Package) set to "Y". This feature is a Secured Feature that must be purchased by the office before a CFWFD feature with CFPF ALW set to "Y" may be assigned.

CFGGRP form (5964 Record) - The CFGGRP form is is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) user terminal buttons.

A data rule was modified that allows PARAM values to be entered for actions of "ARSUSE", "ARS1USE", "ARS2USE", and "ATHUSE" if GRP TYPE is "STD".

Also in 5E10 and later, the CFPF feature can be assigned with an action CFBN.

14. INTER-EXCHANGE CARRIER PRESELECT INDICATION ON X.75' PACKET TRUNKS

14.1 Feature Description

The Inter-exchange Carrier Preselect Indication on X.75' Packet Trunks (feature number 99-5E-2283) is available with 5E10 and later Software Releases.

The ICPI (Inter-exchange Carrier Preselect Indication) is a utility packet mode networks. It is used to pass an indication on an X.75 or X.75' packet trunk that the end-user (originating DTE/CPE) has subscribed to Inter-exchange Carrier Preselect. The ICPI utility is generated by packet switch nodes that have insufficient routing information to decide if an Inter-exchange Carrier is required to complete a call.

This feature allows Switch owners to connect packet devices to a 5ESS-2000 Switch through X.75' interface that do not have the logic necessary to route calls and need to forward the user's Preselected Inter-exchange Carrier through ICPI utility.

This feature essentially enhances and standardizes the 5ESS-2000 Switch X.75' packet trunk interface. It does not directly impact the end-user.

14.2 Feature Assignment

The end-user for this feature is a packet switched DTE/CPE connected on a packet switch directly connected to the 5ESS-2000 Switch. The end-user, can be assigned preselected IC.

The service provider can provision the IC Preselect field (on the TRUNK form (5204 Record), Recent Change View 5.5) to "Y" when the 5ESS-2000 Switch is directly connected to packet switch node that generates ICPI utility.

The IC Preselect field on the TRUNK form (5204 Record), Recent Change View 5.5 cannot be changed unless the X.75' trunk group member is Out-of-Service.

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14.3 Interactions

This feature has interactions with RPOA (Registered Private Operating Agency) Selection utility. When both ICPI and RPOA utilities are present in a call request received on an X.75' packet trunk, the RPOA Selection utility will be used to route the call.

The Recent Change technician can not modify the IC Preselect parameter on Recent Change View 5.5 unless the X.75' trunk group member is Out-of-Service.

14.4 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TRUNK	5204	3	2C	5.5

TRUNK form (5204 Record) - The 5204-1/2 Record is used to define each member of a Trunk Group in a 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Trunk information that is common to the entire Trunk Group is entered on the TKGRP form (5202 Record).

The IC PRESELECT field was moved from Packet Switching X.75 Only Utility Indicators to the Packet Switching X.75P/X.75 Utility Indicators. The functionality of the IC PRESELECT field has changed.

15. NI-3 CALLING NAME FOR BRI

15.1 Feature Description

For 5E10 and later, the I-CNAM (ISDN Calling Name for BRI) feature provides for Calling Name Delivery and Calling Name Identification Services (Name/Number Privacy features) as part of the National ISDN-3 feature set. The feature number for I-CNAM is 99-5E-2264.

The I-CNAM capability extends the delivery of calling party name information previously available for analog subscribers under the LASS Analog Calling Name feature to both Custom and National ISDN BRI subscribers on either a flat-rate or usage sensitive basis. The I-CNAM delivery of calling name information applies to both CSV (Circuit Switched Voice) and CSD (Circuit Switched Data) calls.

This feature also extends the delivery of calling name and/or original called name information available to Custom ISDN BRI terminals to National ISDN BRI terminals for intra-business group calls (i.e. calls between two parties with the same BCID (Business Customer ID)) under the EDS CND (Electronic Directory Service Calling Name Display) feature. EDS CND delivery of calling name and/or original called name information also applies to both CSV and CSD calls but is available only on a flat-rate basis.

For both I-CNAM and EDS CND, the name information that is delivered consists of up to fifteen name characters, a private indication, or an unavailable indication. The name information is obtained from either an SCP (Service Control Point) database using SS7 signaling (e.g. an AIN-SCP or LIDB database), or from a local AP (Attached Processor) database (for intra-business group calls using the EDS CND feature) at the time of call termination. The I-CNAM feature utilizes the same SS7 Translations Type and SSN (Subsystem Number) as is provisioned on the switch for the LASS Analog Calling Name feature.

The ISDN Calling Name Identification Services portion of the I-CNAM feature allows the calling parties to select the presentation status of their name on a per-call basis via a dial code or a feature button basis. The same set of Calling Name Identification Services supported under the LASS Analog Calling Name feature using dial codes:

- NNDA (Name Number Display Allowed)
- NNP (Name Number Private)
- NAP (Name Private)

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are supported under I-CNAM using feature button (a.k.a. feature key) procedures. Feature button access to the Calling Name Identification Services will be provided for both Custom and National ISDN BRI terminals.

In addition, as with LASS Analog Calling Name, the presentation status of the calling name may be linked to the presentation status of the calling number with the office option to "BQPN (Block Queries for Private Numbers)".

One change is being introduced with I-CNAM. In order to align with service uniformity requirements for NI-3, multiple invocations of the Calling Name Identification Services (i.e. PCP (Per Call Privacy) number toggle, NNDA, NNP, or NAP) on a single call will be prohibited. The only exception is that an analog or BRI caller will be able to invoke PCP number toggle followed by the name toggle (NAP), or vice versa. Any other combination of dial code or feature button invocations will not be allowed, as will any attempt to invoke a single Calling Name Identification Service (e.g. PCP number toggle) more than once.

Both the name delivery portion of the I-CNAM or EDS CND and the prohibition of multiple invocations of the Calling Name Identification Services are secured under the NI-3 Secured Feature. To use either of these capabilities, the NI-3 Secured Feature must be purchased and active in the office. The use of dial codes or feature buttons to invoke the Calling Name Identification Services is not secured under the NI-3 Secured Feature.

15.2 Translation Requirements

See Figure 4 for I-CNAM form flow.

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5
DISPMSG	5980	6	23	8.65
DSL	5900	5	1H	23.2 23.8
EDSFD	5961-1	6	4A	12.38
SFSYS	5713-1	3	5AR	8.22
SRVCDESC	5985	6	27A	8.32

CFGGRP form (5964 Record) - This form is used to assign BRCS feature actions to CPE user terminal buttons. For the I-CNAM feature, three new button ACTIONs were added.

DISPMSG form (5980 Record) - This form is used to define the messages that will be displayed on the user's ISDN terminal for LASS (Local Area Signaling Services) features. For I-CNAM feature, the DISP ID entries for "INSP" (Inspect) were increased 1 - 15. Entries 13 -15 for INSP were added to ODA default input data.

DSL form (5907 Record) - This form has two major purposes: 1) it defines the attributes of a DSL, and 2) it defines the attributes of the B1 and/or B2 channel of the DSL. New data rules apply to Standard BRIs where "STD" is entered in the DSL CLS field.

EDSFD form (5961-1 Record) - This form is used to define Electronic Directory Service features with various combinations of options. The /EDS option was added for the I-CNAM feature for 5E10 and later.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 225 must be set to "Y".

SRVCDESC form (5985 Record) -This form defines all actions and their service descriptions for ATS (Automatic Terminal Setup). New standard default data was added to the 5985 record for I-CNAM.

16. GLOSSARY

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ACO	Additional Call Offering
ACVT	Attendant Control of Voice Terminals
AIN	Advanced Intelligent Network
ALT	Automatic Link Transfer
AP	Attached Processor
AR	Automatic Recall
ARS	Automatic Route Selection
ATP	Access Transport Parameter
ATS	Automatic Terminal Setup
BBG	Basic Business Group
BCID	Business Customer ID
BQPN	Block Queries for Private Numbers
BRCS	Business and Residence Customer Service
BRI	Basic Rate Interface
BRIV	Basic Rate Interface Verification
CA-ICOM	Call Appearance Intercom
CACH EKTS CA	Call Appearance
CCSA	Common Control Switching Arrangement
CFPF	Call Forwarding Over Private Facilities
CFV	Call Forwarding Variable
CGPS	Calling Party Subaddress
CKT	Circuit
CMISE	Common Management Information Service Element
CNGI	Calling Number Identification Services Intragroup Delivery
CNIGI	CNIS Intra-group Only Delivery
CORC	Customer Originated Recent Change
CPE	Customer Premises Equipment
CPN	Calling Party Number
CgPS	Calling Party Subaddress
CSD	Circuit Switched Data
CSD LIMIT	Call Reference Busy Limit

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CSD NBLIMIT	Call Notification Busy Limit
CSV	Circuit Switched Voice
CSV LIMIT	Call Reference Busy Limit
CSV NBLIMIT	Call Notification Busy Limit
CT	Call Type
DN	Directory Number
DDD	Direct Distance Dialing
DNA	DN Appearances
DPKT	D-channel packet
DSL	Digital Subscriber Line; also called a BRI Basic Rate
EDS CND	Electronic Directory Service
EKTS	Electronic Key Telephone Service
ETN	Electronic Tandem Network
ETS	Electronic Tandem Switching
FAs	Feature Activators
FB-ICOM	Feature Button Intercom
FI	Feature Indicators
FIT	Fully-Initializing Terminal
FX	Foreign Exchange
I-CNAM	ISDN Calling Name for BRI
I-CNIS	ISDN Calling Number Identification Services
ICI	ISDN Call Identification
ICLID	Incoming Call Line Identification
IDCU	Integrated Digital Carrier Unit.
IDPs	Individualized Dialing Plans.

IE - Information Element

LASS	Local Area Signaling Services
LIGI	Limited Intra-group ICLID
MEMB	Multi-Line Hunt Group Member
MFC	Modular Feature Construction

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MH2	Metro Hub 2
MSS	Message Service System
NAP	Name Private
NESS	Network Element Services Signaling.
NI-3	National ISDN-3
NI-2	National ISDN-2
NIT	Non-Initializing Terminal
NNDA	Name Number Display Allowed
NNP	Name Number Private
ODB	On Demand B-channel.
PCP	Per Call Privacy
PCS	Personal Communications Services
PDUs	Protocol Data Units
PFA	Private Facility Access
PVC	Permanent Virtual Circuits
RN	Redirecting Number
RND	Redirecting Number Delivery
ROSE	Remote Operations Service Element
RP	Radio Port
RPCU	Radio Port Control Unit
RPOA	Registered Private Operating Agency
SCCOF	Selective Customer Control of Facilities
SCP	Service Control Point
SPID	Service Profile Identifier
SR	Station Restriction
SSN	Subsystem Number
TEI	Terminal Endpoint Identifier
TG	Terminal Group
TGSR	Terminal Group and Station Restrictions

TKS - Terminal Key System

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TN	Telephone Number
TPs	Terminal Processes
TR	Technical Reference
WATTS	Wide Area Telephone Service

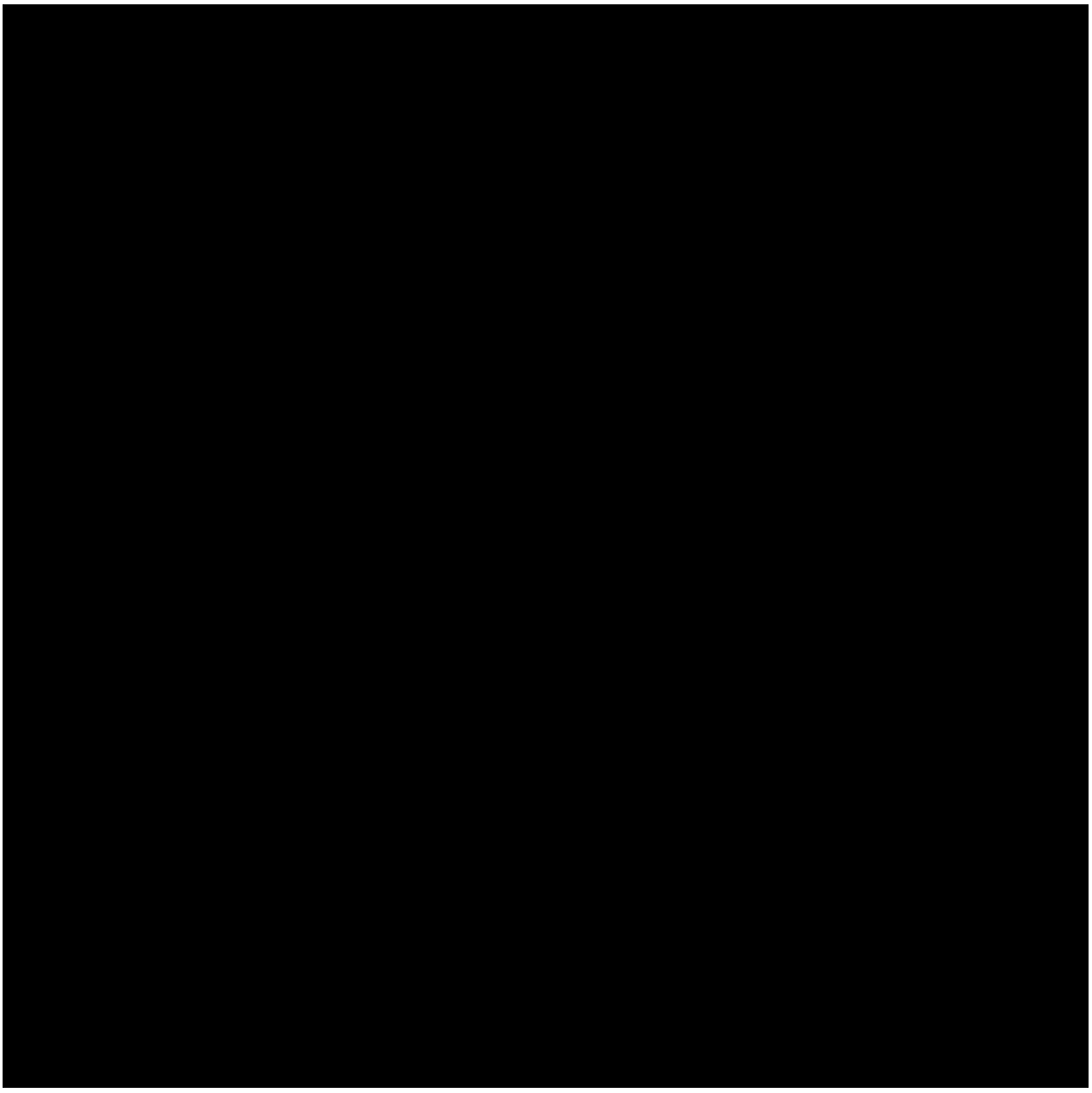

Figure 1 STANDARD BRI FORMS

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Figure 2 NATIONAL ISDN 2 ACO FORM FLOW

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Figure 3 NATIONAL ISDN 2 EKTS CA-ICOM FORM FLOW

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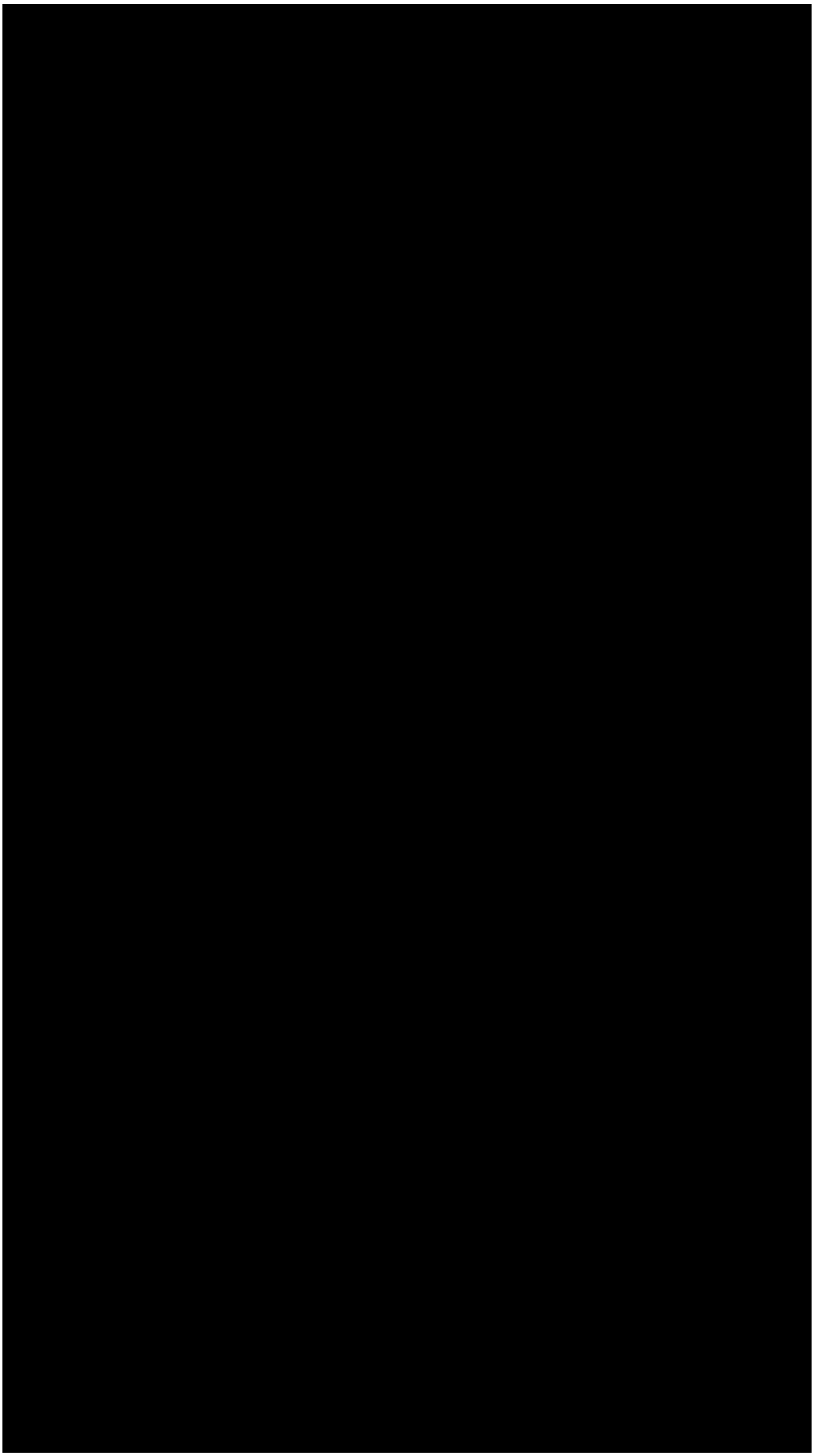

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Figure 4 NATIONAL ISDN 3 FORM FLOW FOR I-CNAM

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SEC. 1AN: ISDN INTERCOM

1. FEATURE DESCRIPTION

1.1 The ISDN Intercom feature is available with 5E4(2) and later Software Releases.

The ISDN Intercom feature allows a user on an ISDN station set to use a dedicated button to call another group member. The caller has the option of using this dedicated button alone or with additional dialed digits.

In the 5E4(2) Software Release, the caller can use a dedicated button alone or with another single digit. This digit, 0 through 9, represents the position of a member in an ISDN Intercom group. The maximum number of members for a group in the 5E4(2) Software Release is 10.

In 5E5 and later Software Releases, an ISDN Intercom group can have a maximum of 100 members. In reaching another ISDN member, a caller can use a dedicated button alone or with an additional two digits, 00 through 99, which represent the position of each ISDN Intercom group member.

A Configuration Group can have up to eight ISDN station sets, each of which may have a maximum of 254 buttons. Four of the 2032 (8 * 254) available buttons can be reserved for the ISDN Intercom feature.

The ISDN Intercom feature is permitted for individual lines only. Members of a multiline hunt group or members of a trunk group are not allowed access to this feature. Each line that uses the ISDN Intercom feature must be in a Configuration Group.

1.2 Assume the following office environment scenario.

A set of five managers share the services of a single administrative assistant. Each manager would like to invoke an ISDN intercom call to the administrative assistant as easily as possible and the administrative assistant would like to reach each of the five managers as quickly as possible. The six parties could make up a single ISDN Intercom group. A single ICMGP form could define the six members of the group, assign a position to each party and list each party's telephone number. For the sake of the example, the ICMGP form would appear as follows:

TN List	
Position	**Primary TN**
0	5551001
1	5551002
2	5551003
3	5551004
4	5551005
5	5551006

The first five POSITIONS (0-4) represent the five managers, while POSITION 5 represents the administrative assistant. An ICMFD form could meet the requirements of the five managers. The form would define a FEATURE with the group (ICM GRP field) and have the SOURCE field set to "AUTO". The DIALED POSITION (or AUTO DIAL POSITION) field would be set to "5". A manager who wishes to talk to the administrative assistant would press the dedicated button on the ISDN station set to connect to the party at POSITION 5, the administrative assistant. A digit need not be dialed to reach the administrative assistant.

Another ICMFD form for the same group would define the FEATURE used by the administrative assistant to quickly reach each of the managers. The SOURCE field for this ICM GRP would be set to "DIAL". For the administrative assistant to reach managers in POSITIONS 0 to 4, dialing a digit for a specific manager's TN after pressing the ISDN Intercom button is required.

2. TRANSLATION REQUIREMENTS

CFGGRP form (5964 Record) - This form is used to indicate which of the four (maximum) buttons

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available within a Configuration Group are dedicated to ISDN Intercom usage. Each selected button is associated with a FEATURE, an ACTION and a PARAM entry. The FEATURE entry must be defined in the FEATURE field of an ICMFD form (5960-1 Record). The ACTION entry must be "I1ICOM", "I2ICOM", I3ICOM" or "I4ICOM". The PARAM field must not be entered.

DSLUSR form (5908-2 Record) - This form is used to assign an ISDN user to a Configuration Group through an entry in the CONFIG GRP field.

ICMFD form (5960-1 Record) - This form is used to define an ISDN Intercom feature. The feature can only be assigned to individual lines using the LINEFA form (5112 Record), the associated CLUSTR form (5600 Record) or the BFG form (5625 Record).

The four members of the GROUP LIST on the ICMFD form correspond to the BUTTON(s) selected for the ISDN Intercom feature for a Configuration Group on a CFGGRP form.

The SOURCE field on the ICMFD form determines whether digits must be dialed after the button on an ISDN station set is pressed. For the 5E4(2) Software Release, if the SOURCE field is "AUTO", then one digit (0-9) must be entered in the field DIALED POSITION. For 5E5 and later Software Releases, if the SOURCE field is "AUTO", then either one (0-9) or two digits (00-99) must be entered in the AUTO DIAL POSITION field. The digit or digits point to the position of a telephone number in the ISDN Intercom group. The user is automatically routed to the number without further dialing.

For the 5E4(2) Software Release, if the SOURCE field is "DIAL", then digits cannot be entered in the DIALED POSITION field. For 5E5 and later Software Releases, if the SOURCE field is "DIAL", then digits cannot be entered in the AUTO DIAL POSITION field. "DIAL" determines whether the user must dial one or two digits after the button is pressed. The digit or digits point to a telephone number in the ISDN Intercom group.

ICMGP form (5960-2 Record) - Lists the seven-digit telephone number for each member of an ISDN Intercom group. The value for the POSITION field on this form relates to a digit or digits entered in a field on an ICMFD form. For the 5E4(2) Software Release, this field is DIALED POSITION. For 5E5 and later Software Releases, this field is AUTO DIAL POSITION. The digit entered in these fields points to the desired POSITION on the ICMGP form and its related PRIMARY TN. The PRIMARY TN field contains the telephone number for a specific ISDN Intercom group member.

For example, if the SOURCE field on an ICMFD form is set to "AUTO" and the corresponding DIALED POSITION (or AUTO DIAL POSITION) field is "8", then a user that presses the button for ISDN Intercom is connected to the party whose telephone number is in the PRIMARY TN field in POSITION 8 on the ICMGP form. The ICMGP form is keyed by the field ICM GRP (ISDN Intercom group). This field links the list of telephone numbers to the ICMFD form where each button is associated with an ICM GRP.

Alternately, if the SOURCE field on an ICMFD form is set to "DIAL" and a user wishes to connect to a particular ISDN Intercom group member, the user must press the ISDN Intercom button and then dial the digit or digits that identify the POSITION and PRIMARY TN for that member on the ICMGP form associated with the ICM GRP of interest.

ICMLPA form (5960-3 Record) - Allows a user to override the default parameters for an ISDN Intercom feature if they are inappropriate.

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SEC. 1AO: FOREIGN AREA TRANSLATOR

1. FEATURE DESCRIPTION

For 5E6 and later Software Releases, operating companies can make use of a FAT (Foreign Area Translator) LDIT during digit analysis. The FAT/LDIT performs further digit analysis on LDITs (5300-3 Records) that are interpreting common dialed or inpulsed digit strings.

For 5E5 and earlier Software Releases, when a switch office has to define multiple LDITs (Local Digit Interpreter Tables), any foreign area NPAs expanded through six-digit analysis have to be built and maintained in all LDITS. By defining an LDIT as a FAT/LDIT, all local LDITs are able to point to this FAT/LDIT for additional digit analysis. This additional digit analysis (expansion of the foreign area NPA) is only required once in a switching office which results in substantial SM memory savings and reduction in administration of LDIT tables.

A switching office has several different rate areas each requiring separate LDITs for proper digit analysis. For example, the home NPA for this particular office is 708, and this office also does six-digit analysis on the neighboring NPA of 815 (815000 - 815999). In 5E5 and earlier Software Releases, the expansion of the 815 six-digit codes is required in all of the local LDITs (see Figure 2). This requires additional memory in each SM that contains the LDITs as well as administration of keeping the expansion of 815 updated in all the LDITs.

By using a FAT/LDIT, the six-digit analysis of the 815 NPA is only done once (see Figure 3). All of the local LDITs have 815 defined with a CALL TYPE of "FAT", therefore, a FAT/LDIT is built with a FAT/LDIT number of 815. The NXX codes 000 - 999 for the 815 NPA are expanded in this FAT/LDIT. Since call processing "escapes" to the FAT/LDIT for 815, the NXX codes for 815 will never be expanded in the local LDIT. By only expanding the 815 codes once in an office, SM memory and administration costs are saved.

1.1 Memory Savings

Memory recovery through the use of FATs is not supported. The LTG (Large Terminal Growth) process does support LDIT modification and memory recovery.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
LDIT	5300-3/5	3	3C	9.3
SMLDIT	5315	3	3AB	9.25

SMLDIT form (5315 Record) - For 5E6 and later Software Releases, the SMLDIT form contains a required field called FAT. This field is used to indicate whether or not this LDIT is to be pointed to by other LDITs, i. e., this field is used to define a FAT/LDIT. Enter "Y" if this FAT/LDIT is to be pointed to by other LDITs to continue digit interpretation; the default value is "N".

If "Y" is entered, the FAT/LDIT table number must be in the range 200 - 999, must not point to another FAT/LDIT, and cannot be assigned directly to any lines or trunks in an office. Also, the LIST OF SWITCHING MODULES must include all SM lists on all LDITs which make reference to this FAT/LDIT. For example, if LDIT 1 is located on SMs 1, 2, and 3; LDIT 2 is located on SMs 3, 4, and 5; and LDITs 1 and 2 both point to FAT/LDIT 815; then the SM list for FAT/LDIT 815 would consist of SMs 1, 2, 3, 4, 5.

LDIT form (5300-3/5 Record) - When a CALL TYPE of "FAT" is entered on this form, call processing will "escape" to the FAT/LDIT assigned on the SMLDIT form (5315 Record) for further digit interpretation. The "FAT" CALL TYPE can not be entered on a FAT/LDIT
(a FAT/LDIT cannot point to another FAT/LDIT). Also, the "FAT" CALL TYPE is not applicable to the CONFLICT RESOLUTION TABLE or the MLDIT form (5300-5 Record).

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When the CALL TYPE is "FAT", the value of INCOMING DIGITS on this LDIT form must be in the range 200 to 999 since this represents the FAT/LDIT table number (FAT/LDITs must be in this range); and must be equal to the LDIT value defined on a SMLDIT form where the FAT field has an entry of "Y" (Yes). Digit interpretation continues on the FAT/LDIT form indexed by the value of the INCOMING DIGITS. Therefore, the NBR OF DIGITS field should not include the digits which are used to index the FAT/LDIT form (see Figure Figure 1).

When this value of INCOMING DIGITS is received, digit analysis continues on the FAT/LDIT; therefore, this value of INCOMING DIGITS cannot be expanded on the local LDIT table. For example, if 815 is interpreted in the LDIT where CALL TYPE is "FAT", the 815 codes (000 - 999) are expanded on the FAT/LDIT table (table index in the range 200 - 999) and not on the LDIT. Since the CALL TYPE is "FAT" for the 815 NPA, the 815 codes will never be expanded on the LDIT.

An IMPLIED NPA cannot be entered on a FAT/LDIT. Also, Code Conversion CALL TYPE's ("EMER", "LOCDA", "REPAIR", and "BUSOFC") cannot be assigned on FAT/LDITs.

A TYPE OF CI CALL or CI TYPE value of "WZ1" (World Zone 1) is allowed on FAT/LDITs, however, instead of this value being related to the first three digits of INCOMING DIGITS, it is related to the FAT/LDIT table number.

LDIT form (LDIT 1, 2, etc.) - RC View 9.3

INC DIGITS	CALL TYPE	CI TYPE	NBR OF DIG
800210	INWATS	SAC	10
800220	VACANT	NONCI	6
708636	NORMAL	INTRA	10

SMLDIT form - RC View 9.25

LDIT	LIST OF SMs
1	1, 2, 3, 4
2	3, 4, 5, 6

6-Digit Translation Without FAT

LDIT form (LDIT 1, 2, etc.) - RC View 9.3

INC DIGITS	CALL TYPE	CI TYPE	NBR OF DIG
800	FAT		
708636	NORMAL	INTRA	10

LDIT form (FAT/LDIT 800) - RC View 9.3

INC DIGITS	CALL TYPE	CI TYPE	NBR OF DIG
210	INWATS	SAC	7
220	VACANT	NONCI	3

SMLDIT form - RC View 9.25

LDIT	FAT	LIST OF SMs
1	N	1, 2, 3, 4
2	N	3, 4, 5, 6
800	Y	1, 2, 3, 4, 5, 6

6-Digit Translation With FAT

Figure 1 SAMPLE 6-DIGIT TRANSLATION CONVERSION TO FAT

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Figure 2 SAMPLE DIGIT ANALYSIS WITHOUT FAT

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Figure 3 SAMPLE DIGIT ANALYSIS WITH FAT

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SEC. 1AP: AMA LONG DURATION RECORDING ENHANCEMENTS

1. FEATURE DESCRIPTION

Available for 5E10 and later, AMA (Automatic Message Accounting) Long Duration Recording Enhancements has the AT&T feature number 99-5E-2326. Prior to this feature, long duration calls records were produced at midnight with no option to change that time. A long duration connection is defined as a call on which, at a scheduled record generation time, both calling and called parties remain "off-hook" ("connected" for carrier timing) and the elapsed time and/or carrier elapsed time of the call already exceeds 1440 minutes (24 hours).

This feature allows the time when long duration call records are produced to be changed. The scheduled record generation time is the time of day when the switch produces the long duration records. The default time is midnight. For log duration connections, two types of AMA (Automatic Message Accounting) records are created, designated as **first records** and **continuation records**.

The **first record** is generated at the occurrence of the first scheduled record generation time after its elapsed time is over 1440 minutes. For internetwork calls, the first record is generated at the occurrence of the first scheduled record generation time after its carrier elapsed time is over 1440 minutes. A continuation record is generated at each subsequent record generation time and at disconnect time.

A **continuation record** must be generated at each record generation time that occurs between the time a call's first record is made and call disconnect. A continuation record must also be generated at call disconnect.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1

OFCOPT form (5509 Record) - This form supplies various miscellaneous office options and parameters.

The field LDC GEN TIME was added which assigns the time of day to generate AMA Long Duration Call records. The time is entered as HH:MM where HH is 00 - 23 and MM is 00 - 59. Midnight is entered as 00:00.

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SEC. 1AQ: CPN/BN TRANSMITTAL AND OPTIONING

1. FEATURE DESCRIPTION

The CPN/BN (Calling Party Number/Billing Number) transmittal and CPN/BN Optioning to the Terminating User capability is available with 5E6 and later Software Releases.

The CPN identifies the originator of a call. It is provided by the originating end office or, if the originating interface is ISDN (BRI or PRI), a PBX or CPE (Private Branch Exchange or Customer Premises Equipment). A user-provided CPN is included in the CPN IE (Information Element) of the Q.931 SETUP message from the CPE and can be 1 to 15 digits. A CPN provided by the switch should be a 10-digit number (NPANXXXXXX) that can be dialed to reach the calling station.

BN is used for billing identification. It is usually a 10-digit number provided by the originating end office. It may or may not be the same as the CPN and may or may not be unique.

A PRI has a single BN associated with it. This number is used as the BN for any calls received over the PRI. Analog lines and BRIs have BNs associated with the DN (Directory Number) of the interface. A terminal on a BRI may have a BN associated with each DN on the terminal.

When a call is made, the following attributes of the CPN and BN are determined and sent in the SETUP message to the end office of the called party: the presentation indicator, screening indicator, uniqueness indicator, type of address and numbering plan identification. In this feature description, these attributes may be collectively referred to as calling party information.

2. CPN/BN TRANSMITTAL IN 5ESS PRIVATE NETWORK ENVIRONMENT

This capability allows a 5ESS PBX (Private Branch Exchange) to send CPN information to a public switch or another PBX over PRIs. This is done for both CSV and CSD (Circuit-Switched Voice and Circuit-Switched Data) calls. Only the CPN is sent from the PBX to the public network; the BN is never sent to the public network. The public switch provides the BN for calls originating on a PBX.

The PBX may also receive calling party information on incoming calls over PRIs. For calls from a public switch, the PBX can specify (on a trunk group basis) which number, CPN or BN, is preferred or which is to be delivered. The PBX must subscribe to receive this information on an exclusive (CPN or BN only) or preferred (CPN preferred or BN preferred) basis. Only the CPN can be delivered for calls originating from another PBX.

The PBX can use this calling party information for features used by the called party, such as CPN/BN optioning or Calling Number Delivery.

3. CPN/BN OPTIONING TO THE TERMINATING USER

CPN/BN Optioning delivers the CPN or BN of the calling party to the terminating user (called party) over an ISDN interface. The originator of the call may be using an analog or ISDN interface and may be making a CSV or CSD call. Also, an all-call or per-call Directory Number privacy may be used to prevent the CPN/BN from being sent to the terminator.

If the terminator subscribes to CPN/BN Optioning, CPN/BN information must be used to format CPN IE sent in the SETUP message to the terminating user. The terminating user must have BRI or PRI (Basic Rate or Primary Rate Interface) to the 5ESS switch. The terminating user can subscribe to one of the following options: CPN only, BN only, CPN preferred or BN preferred.

The call may be intra-switch, intraLATA or interLATA.

4. TRANSLATION REQUIREMENTS

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The newly added CPNBNFD (Calling Party Number/Billing Number Feature Definition) form (5982 Record) names and defines the feature options selected for each line or MLHG using a CPN/BN feature. Included with this record is a list of preconstructed features which are automatically provided in the ODA database at the time of office registration and which cannot be modified. Any line or MLHG that uses a CPN/BN feature must also have a CLASS OF SERVICE of either "INDIV", "ISDN" or "ISATND" assigned on a Line Class Code form (5306 Record) and a feature assignment on the appropriate LINEFA (5112 Record) or MLHLNFA (5113 Record) form, a CLUSTR form (5600 Record) or BFG form (5625-1/7 Record). Only one CPNBNFD Feature Name is allowed on a combination of a LINEFA or MLHLNFA form, a BFG form or CLUSTR form.

An analog shared TN is unable to use CPN/BN data. Therefore, a CPN/BN feature that is assigned to a primary shared analog line or MLHG must have the SHRD DN field on this form set to "ALL".

5. TRUNK TRANSLATIONS

The Calling Party Number SCRNRNG (Screening Ranges) form (5212 Record) has been added to screen user-provided CPNs delivered over a PRI from a PBX or CPE. This is done by entering the PBX ID identifier and a range of valid NPA-NXX and HIGH/LOW values listed in the SCREENING RANGES field of this form. The CPN SCRN field and the PBX ID of the TKGRP form (5202 Record) determine which CPNs are to be screened.

The far-end office may not send the CPN in the full 10-digit NPANXXXXXX form (i.e., NPA may not be included). A 7-digit TN will be changed to a 10-digit TN via the NOC (Normalized Office Code) form (5501 Record) before screening is done. To prevent screening failures, the NPA CODE and OFFICE CODE fields of the NOC form should be entered for every NXX that may be sent from the far-end office.

The PBX ID Assignment form (5213 Record) is a new output only record added in 5E6 to track PBX identifiers already assigned on a TKGRP form, the trunk group they have been assigned to and whether or not CPNs are to be screened for PRIs on that trunk group.

The following fields have been added to the TKGRP form with the 5E6 Software Release.

The CPN BN OPT field indicates the CPN/BN option subscribed to by a PRI for CSV or CSD calls. The options are "NONE", "CPNONLY", "CPNPREF", "BNONLY", "BNPREF" and "CPNUP". This field defaults to "NONE". The TKGRP form contains suggested CPN BN OPT assignments for different switch configurations interconnected via PRIs.

To indicate whether or not private DNs are to be sent over a PRI, a "Y" or "N" is entered in the PRIV OVER field. Normally, private DNs are not sent from a public switch (CO or toll) to a PBX (Private Network Switch). The default for this field is "N".

CPN SCRN determines whether a user-provided CPN will be screened on incoming CSV or CSD calls over a PRI. The TKGRP form contains CPN SCRN assignments for different switch configurations interconnected via PRIs.

A "Y" in the CPN DISC field determines whether a user-provided CPN is discarded and replaced with a network-provided CPN. (A network-provided CPN or default directory number, is placed in the MAIN DN field, explained below.) The CPN is discarded when it has not been screened or fails to meet screening criteria. A "N" (No) in this field means that the user-provided CPN is used as the CPN and is never discarded. The TKGRP form contains suggested CPN DISC assignments for different switch configurations interconnected via PRIs.

The MAIN DN field contains a default directory number that is used when a user-provided CPN is discarded or when the user does not provide a CPN for CSV or CSD calls. This field accepts a 10-digit directory number in the form of NPANXXXXXX.

6. ROUTING AND CHARGING TRANSLATIONS

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The new "ACTCPNBN" and "DCTCPNBN" entries for the ACTION field of PDIT (Prefix/Feature Digit Interpreter) (5300-2 Record) form will either activate or deactivate the CPN/BN feature depending on the CALL TYPE field, which is also entered on this form.

7. BRCS FEATURES TRANSLATIONS

The IDPDCA (Individualized Dialing Plan Dialed Code Assignment). form (5601-1/2 Record) defines the dialed codes used with Individualized Dialing Plans. The entries "ACTCPNBN" and "DCTCPNBN" have been added to the ACTION field of this form to activate or deactivate a CPN/BN feature via dialed code. The corresponding FEATURE entry must appear on a CPNBNFD form (5982 Record) with ACT set to "CODE".

The BRCS Feature Grouping (BFG) Construction form (5625 Record) contains a listing of Modular Feature abbreviations and their associated parameters. The "CPNBNFD" entry has been added to this listing for the CPN/BN feature.

8. ISDN BRCS TRANSLATIONS

The DSLUSR form (5908 Record) has added the CPN SCRN field. This field determines ("Y" or "N") whether a user provided CPN from an ISDN terminal will be screened. This field is required and defaults to "N". The DSLUSR form defines the status and parameters of a digital subscriber line.

The CFGGRP (Configuration Group Definition) form (5964 Record) can be used to activate or deactivate a CPN/BN feature with a terminal button when an ACTION entry of "CPNBNFBT" is entered and "CODE" is entered in the fields ACT and DEACT of the CPNBNFD form (5982 Record).

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Figure 1 CALLING PARTY NUMBER/BILLING FORM FLOW

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SEC. 1AR: 5ESS SWITCH SOFTWARE RESOURCES INCREMENTAL GLOBAL PARAMETERS

1. FEATURE DESCRIPTION

The SRE INCREMENTAL GLOBAL PARAMETERS feature is available with 5E9(2) and later Software Releases. It is used to facilitate efficient utilization of memory per SM or SM-2000. With 5E9(2) and later, there are four 5ESS Switch software configurations: Basic, Standard, Loaded and SM-2000. Prior to 5E9(2), software configurations had fixed memory sizes. For 5E9(2) and later, software configurations are based upon the hardware peripherals in the SM and the size of software resource registers. A software resource is defined as a dynamic ODD (Office Dependent Data) data structure, or data block register, which provides the necessary memory to support various service requirements.

The SREINC form (5547 Record) is used to increment software resource data blocks. This form is intended for use via Recent Change View 8.40 in those rare cases where system messages indicate that a data block register is in danger of exceeding memory allocation. This may occur if a particular service requires an unanticipated growth in the number of registers or when very large ISDN applications experience increasingly high call activity.

Before making any updates to software resources, please refer to AT&T 235-070-100, Administration Guideline Section for Software Engineerable Resources, SM RESOURCE OVERLOAD CONTROL which discusses software resource calculations. See Division 3, Section 5AW for the SREINC form.

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SEC. 1AT: HOME INTERCOM/SINGLE LINE VARIETY PACKAGE

1. FEATURE DESCRIPTION

HI/SVP (Home Intercom/Single Line Variety Package) is available with 5E6 and later Software Releases. The feature consists of two options.

1.1 The Home Intercom Basic Feature

Allows users to establish a talking path between 2 or more extensions on a single-party analog line. To create a Home Intercom Basic call, the end-user goes off-hook, receives dial tone, dials their own telephone number and hangs up after receiving busy-tone. After the phone is put on-hook, the switch applies distinctive ringing pattern B (the default pattern) to all extensions on that line. When one or more extensions go off-hook, the ringing stops on all extensions and a voice path is established between all extensions that go off-hook. The voice path remains established until all extensions go on-hook or until the MAX TALK TIME value, defined on the OFCOPT form (5509 Record), is exceeded.

When a Home Intercom subscriber has Multi-Distinctive Ringing, defined on the MTNDR form (5550 Record) and a "Y" is entered in the MDNL RING field on the HIFD form, the Master TN will receive the default Multi-Distinctive Ringing pattern and the dependents will receive the ringing patterns assigned on the MTNDR form.

When a Home Intercom subscriber has Multi-Distinctive Ringing, defined on the MTNDR form and a "N" is entered in the MDNL RING field on the HIFD form, the Master TN will receive the default Home Intercom Ringing pattern B and the dependents will receive the ringing patterns assigned on the MTNDR form.

For more information on Home Intercom see 235-190-101.

1.2 Single Line Variety Package - includes the following enhancements:

- ICD (Intercom Code Dialing): Allows a subscriber to activate a Home Intercom call via dial code rather than dialing his/her own telephone number.

NOTE: ICM CODE DIAL must have a "Y" entered on the associated HIFD form (5628 Record) and the dial code must be defined on the IDPDCA and/or PDIT form with an ACTION of "HIRINGB".

- SID (Selective Intercom Dialing): Allows a subscriber to activate a Home Intercom call via dial code which will provide one of 4 distinctive ringing patterns.

NOTE: SEL ICM DIAL must have a value of "Y" and ICM CODE DIAL must have a value of "Y" entered on the associated HIFD form and the ACTIONs (i.e., "HIRINGA", HIRINGB", "HIRINGC" and "HIRINGG") must be assigned to the dial codes on the IDPDCA (5601 Record) and/or PDIT forms (5300-2 Record).

- SCT (Selective Call Transfer): Allows a subscriber to transfer an outside call to another extension on the same line by flashing to place an outside call on hold, invoking one of the 4 ringing patterns via dial code and hanging up. A private conference (PRIV CONF = "Y" on the associated HIFD form) may be provided to allow extensions on the same line to talk before reconnecting the outside call.

NOTE: SEL CALL TRANS and SEL ICM DIAL must have a "Y" entered on the associated HIFD form and the ACTIONs (i.e., "HIRINGA", HIRINGB", "HIRINGC" and "HIRINGG") must be assigned to the dial codes on the IDPDCA and/or PDIT forms. DH (Dialable Hold): Allows a subscriber to flash to place an outside call on hold, dial the Dialable Hold dial code, go on-hook and resume the call from any extension on the same line within the time assigned on the

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OFCOPT form in the MAX HOLD TIME field. If the call is not picked up, a ringback will be sent to the subscriber.

NOTE: DIAL HOLD must have a "Y" entered on the associated HIFD form and the dial code must be defined on the IDPDCA and/or PDIT form with an ACTION of "HIDHOLD".

2. FEATURE ASSIGNMENT

2.1 Office Set-Up

Enter the following fields on the OFCOPT form (5509 Record):

- MAX RING TIME - This field indicates how long ringing will be applied before the call is dropped during Home Intercom Basic, ICD, SID and SCT activation.
- MAX TALK TIME - This field indicates how long a Home Intercom Basic, ICD and SID call can be connected before dial tone will be provided.
- MAX HOLD TIME - This field indicates how long an outside party can be placed on hold during Dialable Hold activation before ringback is provided.

2.2 Subscriber Assignments

A pre-constructed or constructed feature, defined on the HIFD form (5628 Record), may be assigned only to a single-party analog line via a LINEFA form (5112 Record), an associated CLUSTR form (5600 Record) or an associated BFG form (5625 Record).

2.3 Dial Codes

The dial codes must be defined on the PDIT form (5300-2 Record) and/or IDPDCA form (5601-1/2 Record) to provide activation for ICD, SID and DH. The dial codes must be assigned the following ACTIONs with their corresponding features:

- "HIRINGA" - (SID) - provides repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
- "HIRINGB" - (ICD or SID) - provides repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on, followed by 4 seconds off.
- "HIRINGC" - (SID) - provides repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on, followed by 4 seconds off.

3. TRANSLATION REQUIREMENTS

3.1 LINE TRANSLATIONS

LINE form (5109 Record) - This form is used to define the Home Intercom subscriber. The subscriber must have a CLASS OF SERVICE of "INDIV" and a TERMINATING TREATMENT of "AGING" or "INDIV" on the associated LCC form (5306 Record). The following fields must be entered:

- SHARED = "N"
- SERHLN = blank
- MFRI = "N"

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- ASSOC OE TYPE = blank

LINEFA form (5112 Record) - This form is used to assign the Home Intercom feature to a line (defined on the LINE form). The AC field must be set to "N".

3.2 ROUTING AND CHARGING TRANSLATIONS

PDIT form (5300-2 Record) - Home Intercom dial codes for the Office Dialing Plan must be defined on this form. The ACTIONs are "HIRINGA", "HIRINGB", "HIRINGC", "HIRINGG" and "HIDHOLD".

3.3 BRCS TRANSLATIONS

OFCOPT form (5509 Record) - This form is used to define the office parameters associated with the Home Intercom feature. The corresponding fields are MAX RING TIME, MAX TALK TIME and MAX HOLD TIME.

CLUSTR form (5600 Record) - This form allows the Home Intercom feature to be assigned to a user by grouping features together under a CLUSTER name.

IDPDCA form (5601 Record) - Home Intercom dial codes for the Individual Dialing Plans may be defined on this form. The corresponding ACTIONs are "HIRINGA", "HIRINGB", "HIRINGC", "HIRINGG" and "HIDHOLD".

The AC field must be set to "N".

BFG form (5625 Record) - This form allows the Home Intercom feature to be assigned to a user by grouping features together under a BFG NAME.

HIFD form (5628 Record) - This form is used to define the Home Intercom feature. The following preconstructed features are available:

- "/HI*" - Wildcard feature
- "/HIBAS1A" - Home Intercom Basic 1A
- "/HIBASIC" - Home Intercom Basic
- "/HISVP" - Home Intercom Single Line Variety
- "/HISVP1A" - Home Intercom Single Line Variety 1A

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Figure 1 HOME INTERCOM FORM FLOW

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SEC. 1AV: SOURCE BILLING FOR ATTENDANT EXTENDED CALLS

1. FEATURE DESCRIPTION

Source Billing for Attendant Extended Calls is available with 5E6 and later Software Releases. This feature allows the source parties billing TN to replace the attendants billing TN on all billing records (AMA and MDR) that result from an attendant extended call.

When a call comes into an attendant to be extended, the originating party is put on hold and the attendant begins the second leg of the call. If the attendant belongs to a terminal group and the Source Billing feature is active (SRC BILL field = "Y" on the TGATTD form), the following checks must be made:

- The source party and the attendant must be in the same terminal group, defined on the TGSRFD form (5607-1/2 Record).
- The source party must be a Centrex line, FX (Foreign Exchange) trunk, or a regular or Centrex tie trunk.

If the above checks pass, the source party's billing TN will replace the attendants TN in the billing record. Otherwise, the call will be billed to the attendant. For FX trunks and tie trunks, the billing TN must be assigned to the trunks on the side where the attendant is located.

note: When the source party is a trunk, the call to the attendant is originated from another switch. Also, the Terminal group feature, defined on the TGSRFD form, must be assigned to the Centrex lines and to the trunks on the side where the attendant is located.

2. TRANSLATION REQUIREMENTS

The following forms are used to define the terminal groups associated with this feature. See FIGURE 1 for the form flow.

2.1 LINE TRANSLATIONS

LINEFA form (5112 Record) - This form is used to assign the terminal group to a line (source party and/or attendant).

MLHLNFA form (5113 Record) - This form is used to assign the terminal group to a hunt group member (source party and/or attendant).

2.2 TRUNK TRANSLATIONS

TKGRPFA form (5206 Record) - This form is used to assign the terminal group to a trunk group (source party).

2.3 BRCS TRANSLATIONS

TGSRFD form (5607-1/2 Record) - This form is used to define the terminal group feature for the attendant and the source party.

TGSRLPA form (5607-3 Record) - This form is used to assign terminal group parameters to a line (source party and/or attendant).

TGSRMPA form (5607-4 Record) - This form is used to assign terminal group parameters to a hunt group member (source party and/or attendant).

TGSRTPA form (5607-5 Record) - This form is used to assign terminal group parameters to a trunk (source party).

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TGATTD form (5611 Record) - This form is used to activate Source Billing for an attendant. The SRC BILL field must have a value of "Y" to activate Source Billing.

CLUSTR form (5600 Record) - This form allows the terminal group to be assigned to the attendants and/or source party by grouping features together under a CLUSTER NAME.

BFG form (5625 Record) - This form allows the terminal group to be assigned to the attendants and/or source party by grouping features together under a BFG NAME.

Figure 1 SOURCE BILLING FORM FLOW

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SEC. 1AW: BRCS SUPPLEMENTARY SERVICES FOR ISDN CIRCUIT-SWITCHED DATA CALLS

1. GENERAL

The BRCS Supplementary Services for ISDN CSD (Circuit-Switched Data) calls feature is available with 5E6 and later Software Releases. It allows BRCS supplementary services originally developed for CSV (Circuit-Switched Voice) calls to apply to CSD calls, as well. BRCS Supplementary services now available for CSD calls are:

- ARS (Automatic Route Selection)
- ATH (Authorization Codes)
- PFA (Private Facilities Access)
- Account Code
- MDR to CL (Message Detail Recording to Customer Location)
- ICLID (Individual Calling Line Identification)

Since the ARS, ATH and PFA services are the only BRCS supplementary services requiring new or modified office dependent data, CSD requirements for only these services will be included in the Translation Guide.

2. TRANSLATION REQUIREMENTS

2.1 Automatic Route Selection

CSD requirements for the ARS service are included in Division 4, Section 9a. The ARS GROUP NAME field has been renamed CSV ARS GROUP. This field and the CSD ARS GROUP field have been added to the ARSFD form (5608 Record) and to the BFG form (5625 Record). The GROUP TYPE field has been added on the ARSGPA form (5608-2 Record) in order to determine if the ARS group is for Circuit-Switched Voice or Circuit-Switched Data calls.

If the default parameters on the ARSFD form are inappropriate or unspecified, an CSV ARS GROUP and/or CSD ARS GROUP can be assigned on a ARSLPA form (5608-3 Record), ARSMPA form (5608-4 Record) or ARSTPA form (5608-5 Record).

A CSD ARS GROUP will use the existing CSV ARS GROUP to do digit analysis in the optionally selected Private Network Dialing Plan available to ARS service users. Therefore, an ARS GROUP NAME on a PNDP form (5608-10/11 Record), PNINFO form (5608-12 Record), PNOFFON form (5608-13 Record) or PNONOFF form (5608-14 Record) cannot be defined as a CSD group on the ARSGPA form (GROUP TYPE is "CSD").

2.2 Authorization Codes

CSD requirements for the ATH service are included in Division 4, Section 20a. The ATH GROUP NAME field has been renamed CSV ATH GROUP. This field and the CSD ATH GROUP field have been added to the ATHFD form (5619 Record) and to the BFG form (5625 Record).

If the default parameters on the ATHFD form are inappropriate or unspecified, an CSV ATH GROUP and/or CSD ATH GROUP can be assigned on a ATHLPA form (5619-5 Record), ATHMPA form (5619-6 Record) or ATHTPA form (5619-7 Record).

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2.3 Private Facilities Access

CSD requirements for the ATH service are included in Division 4, Section 10a. The PFA GROUP field has been renamed CSV PFA GROUP. This field and the CSD PFA GROUP field have been added as default parameters to the PFAFD form (5609 Record) and to the BFG form (5625 Record). The GROUP TYPE field has been added on the PFAGPA form (5609-5 Record) in order to determine if the PFA group is for circuit-switched voice or circuit-switched data calls.

If the default parameters on the PFAFD form are inappropriate or unspecified, an CSV PFA GROUP and/or CSD PFA GROUP can be assigned on a PFALPA form (5609-6 Record), PFAMPA form (5609-7 Record) or PFATPA form (5609-8 Record).

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SEC. 1AX: ALLOW CRAFT TO SET AMA PERCENT FULL ALARM LEVELS

1. FEATURE DESCRIPTION

AMA (Automatic Message Accounting) records generated by the 5ESS Switch are stored on AMA disk pairs (AMA mass storage). Periodically these data are read from AMA mass storage to a tape, or sent over an AMA Teleprocessing data link to an HOC (Host Collector), freeing up space in AMA mass storage for additional AMA data generated by the switch. An office option allows single stream or dual stream AMA recording (See AMA METHOD field on the OFCOPT form (5509 Record)). In single stream recording, all AMA data are stored in the same AMA mass storage region. In the dual stream option, two independent regions of AMA mass storage are provided and AMA records are assigned on a per SM basis to be stored in one region or the other. If either region of AMA mass storage becomes 100% full, further AMA data will be discarded by the switch. These alarms apply to both streams. If one stream is full one message will be given. If both streams are full, two messages are given. Alarms are presently provided to indicate when the occupancy of either region of AMA mass storage reaches certain levels. Minor, major, and critical alarms are generated when the occupancy of either stream reaches 70%, 90%, and 100% respectively. Prior to the 5E8 Software Release, these alarm levels are fixed.

For 5e8 and later, the occupancy levels of primary AMA mass storage that trigger minor, major and critical switch alarms can be determined and set by office personnel. Alarm levels may be set from 0% to 100% in increments of 1%. If a value of 0% is chosen for the minor alarm, the alarm cannot be retired. It is not likely that a value of 0% would be chosen, but if it were chosen, a system real-time problem should not occur. The minor alarm does not periodically repeat. The major and critical alarms repeat every 15 minutes while they are in effect.

The alarm levels for minor, major, and critical alarms will be in increasing order; and no two can differ by less than 2%. The default levels are: minor alarm 70%, major alarm 90%, and critical alarm 100%. The minor alarm must be at least 2% less than the major alarm. Similarly, the major alarm must be at least 2% less than the critical alarm. Because of these restrictions, the range of the minor alarm is 0% to 96%, the range of the major alarm is 2% to 98%, and the range of the critical alarm is 4% to 100%.

2. FEATURE ASSIGNMENT

The minor, major, and critical alarms are office parameters and are entered on the OFCOPT form (5509 Record).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1

OFCOPT form (5509 Record) - This form is used to define global office parameters. The MIN AMA ALRM sets the percent of total AMA disk storage for a minor alarm; the MAJ AMA ALRM sets the percent of total AMA disk storage for a major alarm; and the CRIT AMA ALRM sets the percent of total AMA disk storage for a critical alarm.

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SEC. 1AY: FEATURE GROUP B CARRIER IDENTIFICATION CODE EXPANSION

1. FEATURE DESCRIPTION

Feature Group B Carrier Identification Code Expansion is available in 5E8 and later Software Releases.

1.1 Carrier Identification Codes

CICs (Carrier Identification Codes) are used in dialing plans, administrative reports, MF (Multi-Frequency) and CCS7 (Common Channel Signaling System 7) signaling sequences to indicate the desired IC (Interexchange Carrier) for a call. CICs are used in EA (Equal Access) dialing plans. Previously these plans were:

- FGB (Feature Group B) dialing is 950-0/1XXX,
- FGD (Feature Group D) dialing is 10XXX,

where XXX is the CIC unique to the carrier.

These dialing plans provide non-discriminatory interconnections between the LECs (Local Exchange Companies) and ICs. CICs were limited to 3 digits, allowing a maximum of 1,000 codes.

CICs must be allocated in a non-discriminatory manner; thus, ESPs (Extended Service Providers), as well as ICs, must be granted a CIC on request; therefore CIC numbers were increased from 3 to 4 digits to accommodate all requests.

1.2 Feature Group D

Feature Group D allows the telephone subscriber to specify the IC by a PIC (Presubscribed Interexchange Carrier) or by dialing the CAC (Carrier Access Code) of 10XXX, where XXX is the CIC (Carrier Identification Code). The CIC or PIC routes InterLATA domestic and international calls through the public network via the designated InterLATA carrier. FGD has evolved to use ISDN facilities and CCS7 signaling as well as MF facilities.

1.3 Feature Group B

Feature Group B was originally intended as a temporary mechanism for deployment of EA in the public network. Subscribers would dial 950-WXXX to reach an IC until the originating office could conform to FGD (10XXX or presubscription) and the subscribers could be educated to use the FGD access. However, FGB remains popular, largely due to its attractive rate structure.

In addition to unregulated long distance carriers, the FGB interface is being used by various ESPs. The ability to receive ANI with FGB is desired by most ESPs.

1.4 Feature Definition

FGB CIC expansion consists of the following aspects:

1. The FGB dialing plan is expanded to accommodate 10,000 possible FGB CICs by changing from 950-WXXX, to 950-XXXX, where XXXX becomes the 4-digit code. Currently assigned FGB carrier codes are extended to 4 digits by prepending the current 3-digit code with a 0.

2. The linkage between FGB and FGD CICs is eliminated. Some carriers or ESPs only desire one interface (FGB or FGD) and not both. With this feature, it is possible to have an FGB carrier with CIC equal to 0555, and an entirely different FGD carrier with CIC equal to 555. The switch provides completely separate administration and call processing (routing) of the FGB and FGD CICs, even

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though they are the same numerically. This separation makes data administration easier for the OTC (FGB carriers require much less static ODD than do FGD carriers), and also allows FGB to evolve independently from FGD.

3. Transition Access capability to reach an FGD carrier via 950 dialing continues to be provided for FGB carriers 0/1XXX to FGD carriers XXX.

1.5 Network Upgrade

It is recommended that network components be upgraded in the following order:

1. Upgrade OSSs □ All systems should be capable of receiving 4-digit information from the switch.

2. Upgrade LEC switches □ This requires the feature be deployed in each switch in the network. It is recommended that the access tandems be upgraded before any of the subtending end-offices.

3. Switch conversion □ When all components are in place, the capability can be phased in separately for trunk signaling, product interfaces, and dialing.

1.6 Evolution of Pre-compliant FGB Carrier to 5E8 Compliant Carrier

There is no ODA support for evolution of Pre-Compliant FGB translations in 5E7 to the fully compliant 4-digit FGB feature in 5E8. It will be necessary for the office using the Pre-Compliant feature, if it chooses to evolve to the compliant feature, to change the ODD manually after retrofit. The Pre-Compliant translations will be preserved by the retrofit.

The steps needed to change a Pre-compliant FGB carrier to a compliant carrier are as follows:

Originating Side - End Office or Access Tandem

1. Assume the office is using the Pre-Compliant FGB feature, to provide access to FGB carrier 3288.

2. Line originations have standard screening (nothing unusual).

3. As an example, calls dialed 950-3288 are translated by LDIT 1 as TYPE OF CI CALL of "NONCI". This is a seven digit translation. Destination index is 10, and route index is 955. The calls are routed out of the office on trunk group 705, which is a direct IC trunk group to the carrier. (In the case of an Access Tandem, the INDIT form (5309 Record) (RC View 9.5) would replace the LDIT form (5300-3/5 Record) (RC View 9.3).

   The following table gives the pertinent values entered:

LDIT / INDIT FORM

FIELD	VALUE
LDIT	1
INCOMING DIGITS	9503288
CALL TYPE	NORMAL
TYPE OF CI CALL	NONCI
NBR OF DIGITS	7
CODE INDEX	10
ROUTE INDEX	955
DESEP	201

1. The office retrofits from 5E7 to 5E8.

2. Insert a new FGB carrier in the ODD using the ICF form (5305 Record) (RC/V View 10.3), as follows:

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ICF FORM	
FIELD	**VALUE**
CARRIER ID	3288
FEAT GRP	B
ACCESS TYPE	ITRM
FGB CDI	10
FGB RTI	955

Note that the carrier-specific CDI and RTI on the new ICF form (RC View 10.3) are the same as used for the Pre-compliant carrier.

1. Update the LDIT (or INDIT for Access Tandem) to translate the call as a compliant FGB call. The only change required is to change the value of the TYPE OF CI CALL field to INTRM:

LDIT / INDIT FORM	
FIELD	**VALUE**
LDIT	1
INCOMING DIGITS	9503288
CALL TYPE	NORMAL
TYPE OF CI CALL	INTRM
NBR OF DIGITS	7
CODE INDEX	10
ROUTE INDEX	955
DESEP	201

1. Repeat the above steps for each Pre-Compliant FGB carrier to convert it to a compliant carrier.

2. When all Pre-compliant carriers have been converted in this manner, de-activate the Pre-Compliant FGB Feature by changing LDIT in the originating local office to translate 950-3288 as an FGB call. This will prevent the use of the Pre-compliant feature after evolution, and help insure that all new FGB carriers are added as compliant carriers.

3. You may wish to revise your translations to translate a smaller number of digits for the calls dialed 950-XXXX. This will recover some memory, and improve the digit analysis performance. You should only do this after all Pre-compliant carriers have been converted to compliant carriers.

Terminating Side - End Office or Access Tandem

Pre-compliant FGB Feature documentation suggested a method to provide terminating end billing for FGB carriers with 4-digit CICs using Private Facility trunks and a CGIDX (5302-1 Record) AMA CALL TYPE of "DMRTM". If this method was used, you will need to re-engineer the incoming trunk groups to make use of the fully compliant feature.

1. For those Private Facility trunks established to carry such incoming calls, re-engineer the trunk groups to become Interexchange Carrier trunks. Insert the 4-digit CARRIER ID in the TKGRP form (5202 Record) (RC View 5.1), and set FEAT GRP to "B". The BILLING DN field should be blank.

2. Change the CHGI (Charge Index) on the RAR form (5301 Record) for such calls to point to an AMA CALL TYPE of "FGBTL" instead of the type "DMRTM" previously used for billing.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CARSCR	5551	3	6B	1.60
CDIM	5300-6	3	3E	9.7
CTTU	5518	3	5R	14.4
FIXRT	5301-1	3	3G	10.1
ICF	5305	3	3R	10.3
IDPGP	5601-4	4	2D	9.10

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INDIT	5309	3	3V	9.5
LDIT	5300-3/5	3	3C	9.3
LINE	5109	3	1I	1.6, 1.8
MCRTIDX	5304	3	3Q	10.4
MLDIT	5300-3	3	3C	9.15
MLHLN	5111	3	1K	3.2
OFCOPT	5509	3	5I	8.1
ROTL	5512	3	5L	14.2
RSMCAR	5421	3	4V	26.22
RTIDX	5303	3	3P	10.2
TKEDSLD	5209	3	2K	5.34
TKGRP	5202	3	2A	5.1
TLWS	5511	3	5K	14.3
TODCL	5610-2	4	11B	4.5
TPRCC	5464	3	4BQ	27.6
TPRNPA	5465	3	4BR	27.5
TREAT	5461-4	3	4BL	26.33

2.1 Line Translations

LINE form (5109 Record) - This form defines the office Equipment Number and features for each telephone number in a 5ESS Switch.

A new crosscheck for PIC refers to CARRIER ID and FEAT GRP on the ICF form.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group.

A new crosscheck for PIC refers to CARRIER ID and FEAT GRP on the ICF form.

2.2 Trunk Translations

TKGRP form (5202 Record) - This form defines parameters for each Trunk Group in a 5ESS Switch.

The CARRIER ID field is expanded from three to four digits, 0 - 999 for FGD, 0 - 9999 for FGB. A new key field, FEAT GRP, is added to distinguish between an FGB carrier and an FGD carrier. The FGB BILL field is no longer valid. FEAT GRP will act as a replacement.

A modified cross check for CARRIER ID refers to CARRIER ID and FEAT GRP on the ICF form.

TKEDSLD form (5209 Record) - This form defines EDSL (Extended Digital Subscriber Line) Call by Call features assigned to a B-channel trunk group.

A modified cross check for CARRIER ID refers to CARRIER ID and FEAT GRP on the ICF form.

2.3 Routing and Charging Translations

LDIT form (5300-3/5 Record) - This form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

A new enumeration "INTRM" is added to the TYPE OF CI CALL and CI TYPE fields for an FGB Interim incoming trunk call dialed by the originator as 950XXXX.

MLDIT form (5300-3 Record) - This form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

A new enumeration "INTRM" is added to the TYPE OF CI CALL and CI TYPE fields, for an FGB Interim incoming trunk call dialed by the originator as 950XXXX.

CDIM form (5300-6 Record) - This form defines carrier specific Code Indexes and Route Indexes for the CI (Carrier Interconnect) capability.

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The CARRIER ID field is expanded from three to four digits, 0 - 999 for FGD, 0 - 9999 for FGB. A new key field, FEAT GRP, is added to distinguish between an FGB carrier and an FGD carrier.

A new form check supports FEAT GRP. A modified cross check for CARRIER ID refers to CARRIER ID on the ICF form.

FIXRT form (5301-1 Record) - This form defines Routing and Charging treatment of Fixed Route Types.

Two enumerations are no longer valid for the FIXED ROUTE TYPE field, "10XXERR" and "950ERR". They are replaced by "OEASERR".

RTIDX form (5303 Record) - This form defines each Route Index in a 5ESS switch.

SIGNALING PROTOCOL enumerations "EA" and "FGB" are modified to reflect the identification code expansion.

MCRTIDX form (5304 Record) - This form defines routing for various BRCS capabilities.

SIGNALING PROTOCOL enumerations "EA" and "FGB" are modified to reflect the identification code expansion.

ICF form (5305 Record) - This form defines the characteristics of InterLATA (Local Access Transport Area) carriers.

The CARRIER ID field is increased from three digits to four digits. A new key field, FEAT GRP, is added to distinguish between Feature Group B and D.

A new field, MEASUREMENT, is added to indicate if a carrier needs traffic measurements. A new field, TRANS CARR, is added to give the Feature Group D transition carrier ID for Feature Group B carriers.

Existing fields, TRANS CDI and TRANS RTI are renamed as FGB CDI and FGB RTI, respectively.

INDIT form (5309 Record) - This form defines the initial digit analysis and subsequent treatment of inpulsed digits from all Incoming and Two-Way Trunks based upon the initial digits received.

A new enumeration "INTRM" is added to the TYPE OF CI CALL field, for an FGB Interim incoming trunk call dialed by the originator as 950XXXX. The enumeration "TRANS" is no longer valid.

2.4 OSPS Translations

For more information on OSPS Translations for Feature Group D, see Division 2, Section 3E.

RSMCAR form (5421 Record) - This form defines the routing indexes to a carrier from an RSM (Remote Switching Module).

The CARRIER ID field is expanded from three to four digits, 0 - 999 for FGD, 0 - 9999 for FGB. A new key field, FEAT GRP, is added to distinguish between an FGB carrier and an FGD carrier.

Existing fields, TRANS CDI and TRANS RTI are renamed as FGB CDI and FGB RTI, respectively.

TREAT form (5461-4 Record) - This form assigns the special and normal SET TIME IDs when the ITNA (Improved Third Number Acceptance) feature is applied to the call.

A new crosscheck for CARRIER refers to CARRIER ID and FEAT GRP on the ICF form.

TPRCC form (5464 Record) - This form defines the countries that DIOR (Direct International Originations) can terminate to.

A modified crosscheck for CARRIER refers to CARRIER ID and FEAT GRP on the ICF form.

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TPRNPA form (5465 Record) - This form defines the terminating point restrictions data for a DIOR (Direct International Origination) call with a domestic forward number.

A modified crosscheck for CARRIER refers to CARRIER ID and FEAT GRP on the ICF form.

2.5 Miscellaneous Translations

OFCOPT form (5509 Record) - This form defines various miscellaneous office options and parameters.

A modified crosscheck for CARRIER ID refers to CARRIER ID and FEAT GRP on the ICF form. A new crosscheck for SERV SWITCH PT? refers to FEAT GRP, CARRIER TYPE, NS CDI and NS RTI on the ICF form. A new crosscheck for PSEUDO CARR refers to CARRIER ID and FEAT GRP on the ICF form.

TLWS form (5511 Record) - This form defines each TLWS (Trunk and Line Work Station) associated with a 5ESS Switch.

A modified crosscheck for CARRIER ID refers to CARRIER ID and FEAT GRP on the ICF form.

ROTL form (5512 Record) - The ROTL (Remote Office Test Line) form interfaces with existing CAROT (Centralized Automatic Reporting On Trunks) systems through the DDD Network. This form stores the security call-back telephone numbers of all CAROTS that can access the 5ESS Switch trunks (outgoing and 2-way) in this office, and also defines the maintenance mode of the CAROT.

A modified crosscheck for CARRIER ID refers to CARRIER ID and FEAT GRP on the ICF form.

CTTU form (5518 Record) - This form defines the CTTUs (Central Trunk Test Units), used to test trunks and lines from a remote location.

A modified crosscheck for CARRIER ID refers to CARRIER ID and FEAT GRP on the ICF form.

2.6 Secure Features Translations

CARSCR form (5551 Record) - This form is used by the operating company to assign carrier line screening information to an individual TN or to an MLHG and MLHG member for a particular carrier.

A modified crosscheck for CARRIER ID refers to CARRIER ID, FEAT GRP, and SCDSCRNING on the ICF form.

2.7 BRCS Translations

IDPGP form (5601-4 Record) - This form defines the options associated with IDPs (Individualized Dialing Plans).

A modified crosscheck for GPIC refers to CARRIER ID and FEAT GRP on the ICF form.

TODCL form (5610-2 Record) - This form defines the TOD activities that will occur on a particular line, terminal, or trunk group at a specified time.

A modified crosscheck for PARAMETER refers to CARRIER ID and FEAT GRP on the ICF form.

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SEC. 1AZ: MESSAGE DETAIL RECORDING ASSIGNMENT TO SIMULATED FACILITIES GROUP FEATURE ENHANCEMENT

1. FEATURE DESCRIPTION

The MDR (Message Detail Recording) Assignment To SFG (Simulated Facilities Group) Feature Enhancement is available for 5E8 and later Software Releases. This feature enhances all versions of the MDR feature on the 5ESS Switch by allowing a craft person to assign the MDR to an SFG on a per group basis. Although SFGs may be used for OUTWATS, INWATS, ESSX, EDSL, CCSA, SDN, Megacom, Megacom 800 and six-port conference, this MDR feature enhancement can only be implemented with SFGs used for OUTWATS.

Currently MDR can only be assigned on a per line or per trunk basis. This can cause MDR to be generated for all calls associated with that line or trunk. This new feature enhancement allows MDR records to be generated only when the user utilizes an SFG. This feature eliminates unnecessary records for a user when only records utilizing SFGs are desired.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PFASFG	5609-3A/B	4	10C	7.3
MDRGP	5624-2	4	25B	24.33

PFASFG form (5609-A/B Record) - This form is used to define SFGs which allow controlling access to physical groups such as lines, trunks and special circuits.

Two new fields, MDR GP and MDR ACT, were added to the PFASFG form (5609-3A Record). The MDR GP field allows the customer to assign an MDR GP on an SFG basis. The MDR ACT field activates the MDR capability.

New crosschecks for MDR GRP refer to SFG TYPE and MDR ACT on the PFASFG form and to ORIG PRIV and INC PRIV on the MDRGP form.

A new crosscheck for MDR ACT refers to MDR ACT and MDR GRP on the PFASFG form.

For more information, please refer to Division 4, Section 10C of the TG-5.

MDRGP form (5624-2 Record) - This form is used to define the group information for MDR.

MDR GROUP STATUS on this form is not applicable to MDR GRP which is assigned SFG TYPE "OUTWATS".

A modified crosscheck for PACKET MDR refers to PACKET MDR on the MDRGP form and MDR GRP on the PFASFG form.

For more information, please refer to Division 4, Section 25B of the TG-5.

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SEC. 1BA: SERIES COMPLETION ON ISDN LINES

1. FEATURE DESCRIPTION

Beginning with the 5E6 Software Release, this capability implements Series Completion on BRI (Basic Rate Interface) lines for CSV (Circuit-Switched Voice) calls. The Series Completion feature links DNs in a prearranged order. A call is hunted (series completed) to the next member of a linked list until an idle member is found or until 16 attempts have been made to series complete a call. This feature is not allowed for CSD calls.

Series Completion is similar to Call Forward Busy Line except that each call leg is not billed.

With ISDN, as with analog lines, the feature is assigned per DN (including secondary DNs). A Series Completion Group can consist of all analog lines, all ISDN lines or a mixture of the two. A group can also include Shared DNs.

The Busy Line Precedence List for ISDN BRI lines is the following:

- LASS (Local Area Signaling Service)
- Call Pickup
- CFV (Call Forward Variable)
- ACBC (Automatic Call Back Calling)
- Series Completion
- CFBL (Call Forwarding Busy Line)

The Busy Line Precedence List for analog lines is the following:

- LASS (Local Area Signaling Service)
- Call Pickup
- DCW (Dial Call Waiting)
- CFV (Call Forward Variable)
- ACBC (Automatic Call Back Calling)
- Series Completion
- CWT (Call Waiting Terminating)
- CFBL (Call Forwarding Busy Line)
- CWO (Call Waiting Originating) and Attendant Camp-On

ISDN equivalents to analog call waiting features are not found in the above ISDN precedence list. The ISDN equivalent to CWT is MCA. IPC (Initiated Priority Call) is the ISDN equivalent to analog DCW. OPC (Originating Priority Calling) is the ISDN equivalent to analog CWO.

In all cases, normal call appearances are searched to determine the idle/busy condition. For IPC and OPC calls, priority call appearances are searched. If there are no available call appearances for termination, the called DN is considered busy.

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The two types of Series Completion groups are Regular and Circular. In the Regular group, the last member of the list is not marked to series complete. In a Circular group, the last member series completes back to the first member of the group.

- ***NOTE:*** Series Completion back to a member other than the first member of a group is allowed, but it is considered an irregular configuration which can create timing problems and interfere with the feature's operation.

The length of a linked list is limited only by switch resources.

For calls to an ISDN line on either a BRI or a DSL MDSL (Multiplexed), the called party is considered series completed when all normal call appearances associated with the DN are occupied. Calls to an MDSL should also be considered series completed when both B channels associated with the MDSL where the called DN resides are occupied. Series Completion on both Analog and ISDN lines must only be allowed on the nonhunt DN of MLHG (Multiline Hunt Groups), not on the hunted DN(s) of an MLHG.

The following DNs may not assign this feature: hunted DNs of Multi-Line Hunt Groups, an ISDN default DN, dependent DNs of MDNL (Multiple Directory Numbers per line) with distinctive ringing, all multi-party lines (including two-party), modem pools, Line Time Slot Bridging Lines, coin lines, coinless public lines, intercept lines, trunks, PODS (Plain Old Digital Subscriber) lines. Figure 1 contains a list of line types and classes of service that can be series completed to and series completed from.

2. TRANSLATION REQUIREMENTS

Series Completion must be defined with a 7-digit entry in the SERHLN field on the LINE (5109 Record), MLHLN (5111 Record), DSLUSR (5908 Record) or the SHTN (5902 Record). The SERHLN field on the LINE, MLHLN and SHTN forms has been updated with the 5E6 Software Release to include the CSD call option with the Series Completion feature.

3. ISDN/PACKET SWITCHING TRANSLATIONS

The DSLUSR form (5908 Record) defines the telephone number and status of a DSL (Digital Subscriber Line) user. (DSL is also referred to as a BRI.) This form also defines the CSD attributes for a DSL user. The SERHLN field has been added to DSLUSR with the Series Completion capability. SERHLN defines the 7-digit telephone number (NXXXXXX) to be hunted to.

SERHLN has also been added to the SHTN form (5902 Record) to define a 7-digit telephone number hunted to a shared TN number (i.e., a number that appears on more than one terminal).

The no-display field BCK LNK has been added to both DSLUSR and SHTN for commonality with Recent Change and Verify.

Type of Line/Service Class	Series Complete Form	Series Complete To
INDIV	YES	YES
Analog Nohynt DN of MLHG	YES	YES
911	YES	Only to 911
PBX	YES	YES
Analog Non-Dedicated PVN	YES	YES
Analog LTSB	NO	YES
Analog Multi-Party	NO	YES
Analog Hynted DN of MLHG	NO	YES
Analog Intercept	NO	NO
Analog Coin Line	NO	NO
Analog Charge Call	NO	NO
Analog PVN Dedicated, Direct Connect/Remote Access	NO	NO
AnalogDependent DN of MDN/MDNL	NO	NO
Analog Modem Pool	NO	NO
ISDN	YES	YES
ISDN Shared/Unshared Primary	YES	YES
ISDN Shared/Unshared Secondary	YES	YES

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ISATND (Nohunt DN of MLHG)	YES	YES
ISDN Non-Dedicated PVN	YES	YES
ISDN Hunted DN of MLHG	NO	YES
ISDN Modem Pool	NO	NO
ISDN PODS	NO	NO
ISDN Default DN	NO	NO
ISDN PVN Dedicated, Direct Connect/Remote Access	NO	NO
ISDN Intercept	NO	NO
*TN not Associated with OE	NO	YES

Note: Analog or ISDN Circuit TN not associated to the port cannot have Series Completion

Figure 1 LINE ASSIGNMENTS AND CLASS OF SERVICE ALLOWING SERIES COMPLETION

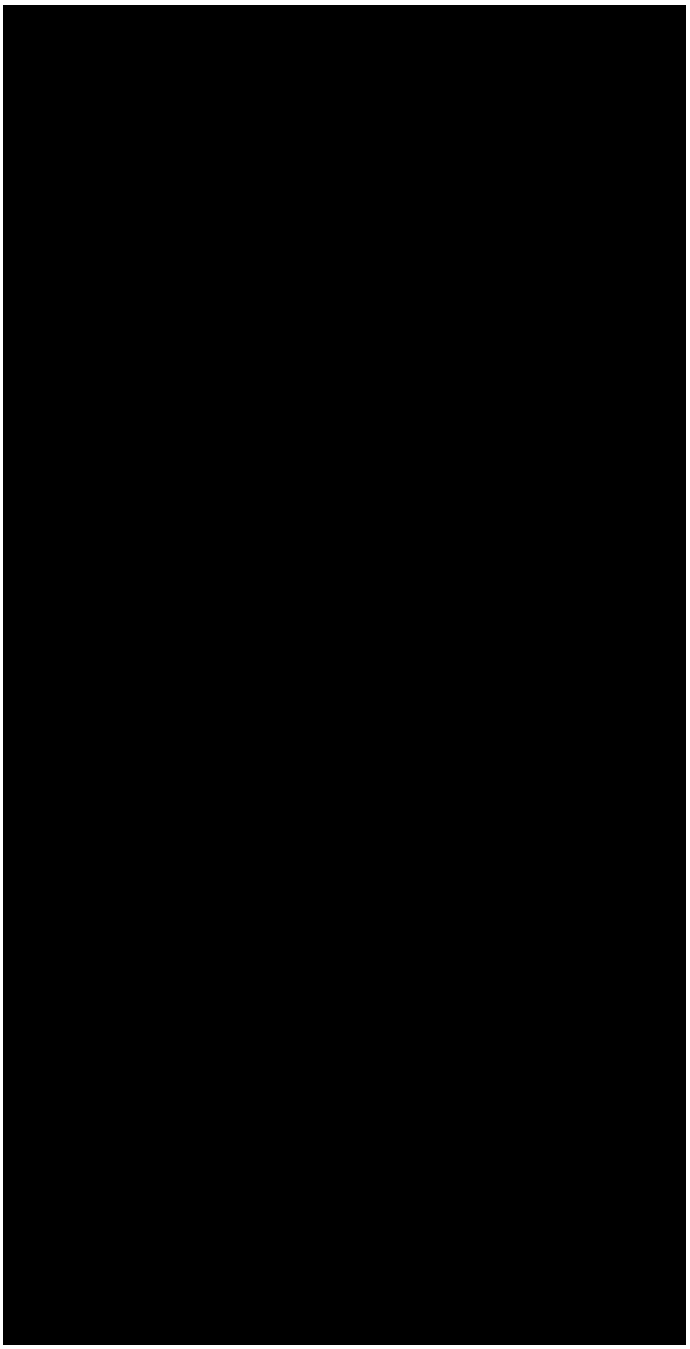

Figure 2 SERIES COMPLETION FEATURE FORM FLOW

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SEC. 1BB: CSD QUEUING

1. FEATURE DESCRIPTION

The CSD (Circuit Switched Data) Queuing capability automatically queues CSD calls to a CSD MLHG when all the members of the hunt group are busy. This feature is available with the 5E6 and later Software Releases.

For CSD calls that are end-to-end Q.931 signaling (i.e., BRI or CCS7 trunks), the originator of the call is informed via Q.931 signaling that the call is being queued. If the call is not end-to-end Q.931 signaling, the calling party is informed via in-band signaling.

The CSD Queuing capability can also display the status of an MLHG queue on supervisor consoles (or DSL monitors) with display capabilities. A DSL monitor is any ISDN terminal that can request or display the status of CSD calls in an MLHG queue. It may or may not be an ISDN Attendant console. It can be a non-MLHG console.

A DSL monitor can monitor up to eight MLHG queues. MLHGs to be monitored can be analog or ISDN, voice or CSD. ISDN Attendant MLHGs cannot be monitored. Each MLHG can be monitored by three separate DSL monitors.

A DSL monitor contains a separate QSFB (Queue Status Feature Button) for each MLHG monitored. The QSFB is used to request or display the status for a particular MLHG queue.

A DSL monitor can have from one to eight QSFBs. Each QSFB is associated with a QTWL (Queue Threshold Warning Lamp). When the number of calls queued for an MLHG exceeds a preset threshold, the QTWLs are lit on all consoles monitoring this MLHG. The QTWL only indicates that the queue threshold has been exceeded. It does not indicate how long the calls have been queued.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLQMON	5904	5	1E	23.17
QUFD	5617-1/2	4	18A	12.40
QUGPA	5617-3/4	4	18B	3.40
CFGGRP	5964	6	7A	12.5

Figure 1, "ODP and IDP Action Requirements", on the BRCS form (Div. 2, Sec. 1F) has defined eight new ACTIONs for the CSD Queuing Feature. The entries in "ODP and IDP Action Requirements" are the ACTIONs used for IDPs, ODPs, and Feature Buttons. The new entries LQxDISP, where x represents the numbers 1 through 8, correspond to the MLHGLIST elements 1 through 8 entered on the DSLQMON form (5904 Record). LQxDISP indicates whether the status of MLHGLIST 1 through MLHGLIST 8 can be requested and displayed on a DSL queue monitor. As "ODP and IDP Action Requirements" indicates, CSD Queuing cannot be used in ODP and IDP.

2.1 ISDN/PACKET SWITCHING TRANSLATIONS

DSLQMON form (5904 Record)- has been added for 5E6 and later Software Releases to map queue monitor information. The form contains a list of MLHGs that are to be monitored. Other fields are DSLQMON telephone number, the MLHG number and the MLHG terminal number.

2.2 BRCS TRANSLATIONS

QUFD form (5617-1/2 Record) - provides queuing for calls attempting to terminate to the listed Directory Number of a MLHG when all members are busy. The "CSD" option has been added for 5E6 and later

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Software Releases to the QUEUE TYPE field to indicate queuing of CSD calls.

Also added to the QUFD form for 5E6 and later Software Releases is the field QMON THRESHOLD. An entry of 1 to 255 in this field determines the limit for the QTWL. When the number of calls in the queue is greater than the entry in QMON THRESHOLD, the QTWL on the console monitoring a particular MLHG is lit.

QUGPA form (5617-3/4 Record) - contains the Modular Queuing parameters for an MLHG when the default parameters on the QUFD form are inappropriate or unspecified. The QUGPA form has also added the QMON THRESHOLD field for 5E6 and later Software Releases to determine the limit of calls queued before the QTWL is lit.

2.3 ISDN BRCS TRANSLATIONS

CFGGRP form (5964 Record) - has added the ACTIONs LQxDISP (where x is 1 through 8) for 5E6 and later Software Releases to represent the Display Status of MLHG Queues 1 through 8 on the DSLQMON form. When a feature button associated with a particular action is pressed, the queue status data associated with its MLHG is displayed.

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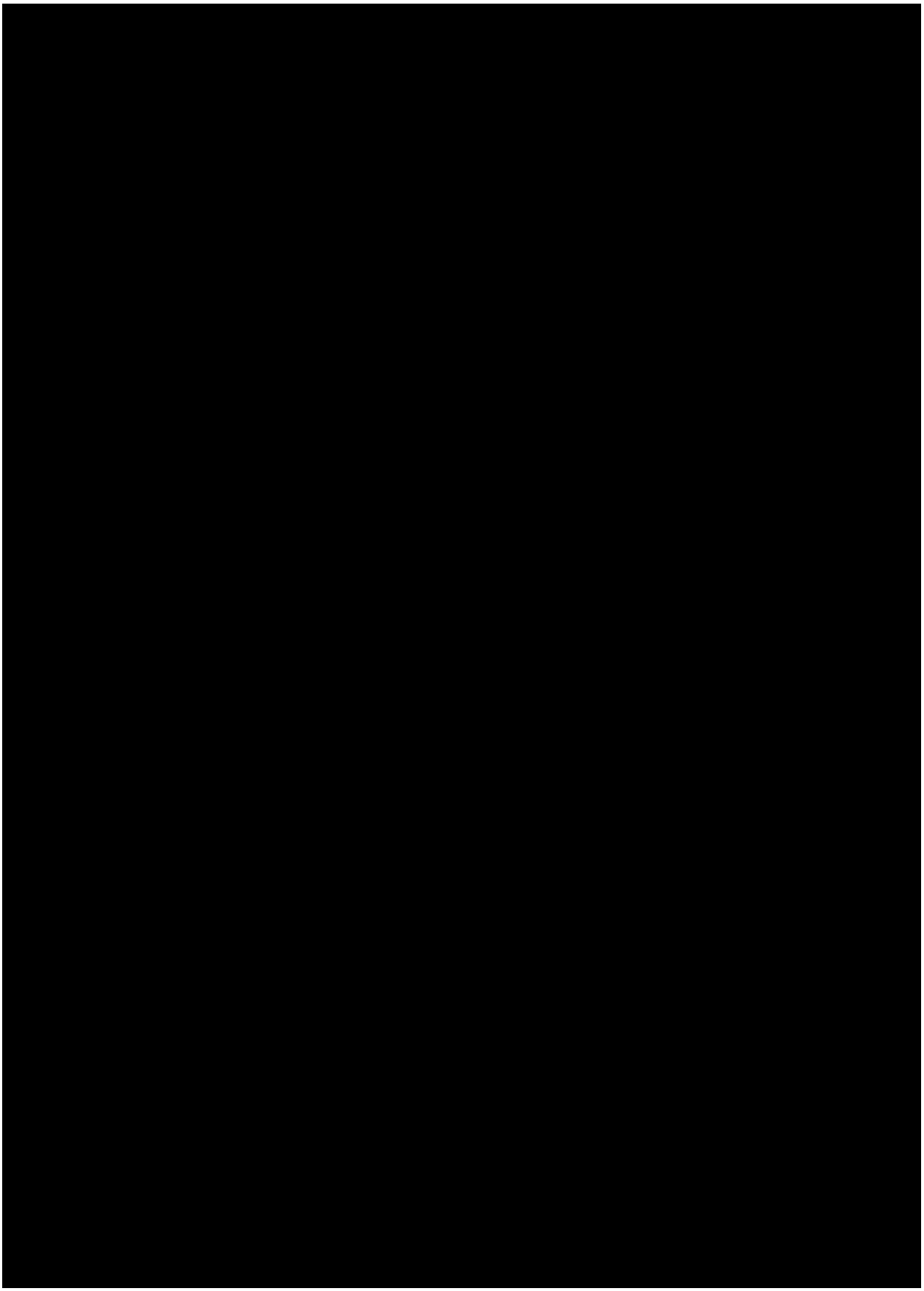

Figure 1 CSD QUEUING FEATURE FORM FLOW

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SEC. 1BC: ISDN CSD CALL FORWARDING HUNT GROUP

1. FEATURE DESCRIPTION

With the 5E6 and later Software Releases, the Call Forwarding feature is available for CSD (Circuit-Switched Data) subscribers with ISDN BRI (Basic Rate Interface). This capability includes the ISDN CSD Call Forwarding feature and CSD Hunt Group Transfer feature.

The following individual features are covered:

- Call Forwarding Variable
- Call Forwarding Incoming Only
- Call Forwarding within a Group Only
- Call Forwarding Busy Line
- Call Forwarding Busy Line Incoming Only
- Call Forwarding Don't Answer All Calls with Variable Timing
- Call Forwarding Don't Answer Incoming Only

The Hunt Group Transfer Feature can be activated through the CF features on the CSD hunt group. The CF features listed above can be assigned to a CSD MLHG.

2. TRANSLATION REQUIREMENTS

The CFWFD (Call Forwarding Feature Definition) form is used to select the options used in call forwarding. The FWD CONDITION field on this form has added the following enumerations:

- DBSY - Forward a CSD call when Busy
- DIDL - Forward a CSD call when Idle
- DBTH - Forward a CSD call when Busy or Idle

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SEC. 1BD: ENHANCED 911 EMERGENCY SERVICE

1. FEATURE DESCRIPTION

1.1 E911 Overview

The Enhanced 911 feature, available for 5E7 and later Software Releases, provides feature transparency with E911 service offered on the 1/1A ESS Switch. E911 connects a caller who dials 911, or another number designated to receive 911 treatment, to an emergency service bureau. In addition, E911 offers the following features.

It eliminates the problem of telephone office boundaries not coinciding with municipal boundaries by allowing 911 calls originated from a station in a particular district (town, zone, etc.) to be routed to the primary PSAP (Public Safety Answering Point) designated to serve that district.

It provides for display of the calling telephone number at the PSAP attendant's position, and it allows the attendant to selectively transfer the call to one of six secondary PSAPs based upon the caller's location.

E911 is a secured feature and must be turned on by a Lucent Technologies SEE (System Equipment Engineer) before the feature can be fully provisioned. (See Feature Assignment.)

- ***NOTE:*** When the call goes out over an SS7 ISUP trunk, (e.g., to the tandem) population of the Calling Party Number paramter is covered by the following: When the PBX Calling ID feature (for information on this feature (99-5E-7431), see Division 2, Section 4A550) is enabled, using SFID 550, and a call is originated from a Private Facility trunk (PF, PFLASH, PFITT) with a non-blank MAIN DN, and the call is routed out of the switch on an outgoing SS7 trunk, a Calling Party Number parameter is included in the outgoing IAM message with the MAIN DN coded in the Address signal subfield. For more complete information, see the *LASS Feature Document 235-190-130.*

1.2 E911 Network Architecture

A 5ESS Switch provisioned with the E911 feature (Figure 1) can serve as a local office for 911 calls from its own lines and as an E911 tandem office for 911 calls from other local offices (called subtending end offices) in the 911 service area. The switch routes calls to one or more PSAPs and may optionally support an attached ESA (E911 Service Adjunct) processor.

- ***NOTE:*** The term "tandem" is used in this section to indicate an office's function as a "control office" for E911 calls.

PSAP (Public Safety Answering Point)

A PSAP is a location (or equipment at a location) where emergency attendants receive 911 calls. Since calls may require one or more public services, the attendant has the ability to transfer calls to a secondary PSAP, e.g., police, fire, or ambulance.

ESA (E911 Service Adjunct)

The 5ESS Switch can provide E911 service with or without an ESA processor. If the E911 tandem office will route 911 calls based on the callers' telephone numbers, i.e., by selective routing, then an ESA is required.

When selective routing is not necessary, e.g., when telephone office and municipal boundaries coincide, proper routing can be determined by the trunk group or dialing plan.

1.3 E911 Service Area Example

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As an example of E911 service, suppose the service area consists of two towns, Town A and Town B (Figure 2). 911 calls that originate from these towns are routed to one PSAP where attendants speak with the caller, determine the type of service required, and transfer the call to the appropriate destination, i.e., police department, fire department, etc. Attendants in this example transfer the calls with the selective transfer option of the E911 feature.

When the PSAP is busy, calls are routed to the local police department, i.e., calls originated from Town A are routed to Police Department A, and calls originated from Town B are routed to Police Department B.

Each town has its own police and fire department, but Town A is divided into two fire districts served by separate stations. Both towns are served by the same ambulance service.

As shown in the diagram in Figure 2 , the 911 service area is divided into three ESZs (Emergency Service Zones), each defined by a specific set of service providers for the zone. In this example, each ESZ is represented in data by an ESN (Emergency Service Number) which translates to the primary PSAP, an alternate PSAP (the local police department), and three selective transfer locations (police, fire, and ambulance).

If a customer in Emergency Service Zone 2 dials 911, (s)he is connected to an E911 attendant at the PSAP. If the customer reports a fire, the attendant activates the "Fire" button on the console, automatically transferring the caller to Fire Department A2 in Town A. With the selective transfer option, the attendant does not need to determine the town or fire district from which the customer is calling.

1.4 E911 Routing Features

The E911 feature includes several methods for routing to a PSAP: selective and non-selective routing, alternate routing, default routing, and stand-alone routing.

Selective Routing: The term "selective routing" refers to the E911 tandem office capability to route a 911 call based, not on the dialed digits, but on the ANI of the calling station. From the caller's ANI, the switch determines the Emergency Service Zone where the call originated and routes the call to the primary PSAP for that zone.

For Selective Routing, the ANI to ESN translations are stored in the ESA. The ANI information received over a trunk, or the billing number associated with a line, is sent as a ten-digit ANI to the ESA which returns the corresponding ESN. The call is routed to the primary PSAP associated with the ESN. If the call cannot be completed to the primary PSAP, it is routed to an alternate location. If Selective Routing is specified, but the ANI is unavailable or the ESA query fails, the call is routed to a default location.

Non-Selective Routing: For Non-Selective (Non-ESA) Routing, the ESN is determined from the trunk group or dialing plan. The 5ESS Switch is either not equipped with an ESA, or if equipped with an ESA, the ESCO (Emergency Service Central Office) associated with the originating trunk group or line (dialing plan) indicates that selective routing is not to be applied to the 911 call.

Alternate Routing: Alternate Routing is a standard service available for each PSAP. It provides the capability for a traffic-busy PSAP, a PSAP on night duty, or a PSAP experiencing a power failure to have 911 calls routed to a predesignated location.

If a PSAP trunk group is assigned a call forwarding option (see the RERTE TN field on the TKGRP form), that routing option takes precedence over alternate routing. If the call forwarding option does not apply, or if its corresponding PSAP is busy, then the 911 call is routed using the alternate route and backup alternate route DNs from the ESN form (5540 Record).

When a 911 call is routed to an alternate location, the NPD (Numbering Plan Digit) and ANI are flashed on the PSAP display.

Default Routing: Default Routing provides the capability to automatically route a 911 call to a predesignated (default) PSAP, or some other location, when selective routing fails because the ANI is

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unavailable or garbled, the ESA is inaccessible, or the ESA returns an invalid ESN value.

For E911 calls that originate in other offices, a default ESN assignment is associated with the incoming trunk group or the dialing plan. For line originations, the default ESNs are associated with the dialing plan.

When a 911 call is routed to a default location, the NPD and ANI are flashed on the PSAP display.

Stand-Alone Routing: The switch provides standalone routing when an E911 caller is served by an SM (Switching Module) that is unable to communicate with the CMP (Communication Module Processor). Since ESN routing data is stored on the CMP, an SM operating in stand-alone mode or failing to communicate with the CMP, is unable to obtain the appropriate ESN to route the call. In this case, the switch routes the call to the primary PSAP specified in the stand-alone routing data stored in the SM.

Stand-alone routing is also used when an ESCO cannot be derived from the calling station.

When a 911 call is routed using stand-alone data, the NPD and ANI are flashed on the PSAP display.

1.5 E911 Transfer Features

When an E911 attendant must transfer a call to another location (a secondary PSAP), the attendant may have up to three options: selective transfer, fixed transfer, and manual transfer.

Selective and fixed transfer are dependent upon the configuration of CAMA PSAP equipment at the attendant's location. They require that the PSAP transmit specific codes to the E911 tandem switch. The switch translates the codes through the IDP or ODP associated with the PSAP trunk group.

The format of the codes is normally "*XY", where an asterisk is followed by two digits, X and Y. In selective transfer codes, X is usually 1, and Y is a value from 1 - 6. In fixed transfer codes, X is normally 2 and Y is 0 - 9.

Selective Transfer: Selective Transfer is a feature which allows a PSAP attendant to transfer a 911 call to the correct secondary PSAP without the primary PSAP attendant having to determine and manually dial the digits for the correct destination. Each attendant may have up to six selective transfer keys labeled with types of emergency service, e.g., police, fire, etc.

To initiate a selective transfer, the attendant operates a key for the type of secondary PSAP desired (e.g., Fire). The E911 tandem office automatically determines the specific secondary PSAP to serve the calling station (e.g., Fire Department B) and selectively transfers the 911 call to that secondary PSAP.

The 5ESS Switch transfers the call to the correct PSAP location based on the access code (*1X, where X is 1 - 6) sent by the PSAP and transfer information contained in the ESN form. Up to six Selective Transfer points may be identified in the ESN form.

Fixed Transfer: Fixed Transfer is a feature which allows a PSAP attendant to transfer a 911 call to a specific PSAP location by operating a single key. The attendant determines the destination and operates the key associated with that (fixed) destination.

For example, if the caller requests Ambulance Service A, the attendant can operate a key that automatically transfers calls to Ambulance Service A.

This feature requires the primary PSAP to send an appropriate dial code (*2X) to request routing to the desired secondary PSAP. The Fixed Transfer dial codes must be translated on the E911 tandem switch through a two-digit Speed Calling feature or an IDP (Individual Dialing Plan) assigned to the PSAP trunk.

Manual Transfer: The Manual Dial Transfer capability allows the PSAP attendant to determine the specific destination desired and manually dial the directory number of the destination or the associated speed calling code if one exists.

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1.6 E911 ANI Display Features

ANI Display

When the switch routes a 911 call to an E911 CAMA PSAP, it transmits an 8-digit ANI in the format NPD-NXX-XXXX. The NPD (Numbering Plan Digit) and directory number are displayed at the attendant position. The NPD, a 1-digit number associated with an NPA, allows the E911 attendant to identify the NPA of the 911 caller when the PSAP serves multiple NPAs.

Flash Calling Display

Flash Calling Display causes the 911 Calling Party Number to be flashed at the attendant position. This feature indicates to the PSAP attendant that the 911 call may require special attention or handling. When a 911 call is routed to an alternate or default location, or is routed using SM stand-alone data, the calling party number is flashed. Also, calls that may require special attention, such as those from hospitals, chemical plants, or schools, may be assigned an ESN that has the Flash Calling Display option activated.

1.7 E911 Translations Testing - 5E8 and Later Software Releases

The E911 feature can be provisioned in a test configuration that permits telephone company personnel to test E911 routing without disrupting the handling of live 911 calls. During the test period, B911 (Basic 911) translations are left in place, and 911 calls translate to call type "EMER" in the ODP (Office Dialing Plan).

Test digits other than 911 must be assigned on the digit analysis forms (PDIT or LDIT) with a CALL TYPE of "EMER" and with a TRIG NBR that matches the TRIG NBR specified in the NSTRIG form (5324 Record) to identify E911 calls.

After the test period is completed, the switch can be cut over to E911 processing by modifying the digit analysis forms for the 911 (or other specified) digits. The CALL TYPE must be "EMER", and the TRIG NBR field must be set to the TRIG NBR specified in the NSTRIG form.

2. FEATURE ASSIGNMENT

Because the E911 translations for a tandem office are complex, this "FEATURE ASSIGNMENT" section presents the translations functionally (as shown in Figure 5). The next section, "TRANSLATION REQUIREMENTS", discusses each field added or modified for the E911 feature. It presents the forms alphabetically and may be used as a reference.

- ***NOTE:*** Some form tables in the following section show field values in parentheses. These values are sample data meant to show relationships between forms. Actual data will be determined by the switch owners.

2.1 E911 Office Data Translations

For each E911 tandem office, the feature must be unlocked, the ESA or non-ESA option specified, E911 call limits established, and the 911 timing delay defined.

E911 Feature Lock

E911 is a Secured Feature which may be turned on through Recent Change or ODA. In ODA the feature must be activated by a Lucent Technologies SEE who, after verifying that the E911 feature has been purchased for the office, sets FEATURE ID 61 to "S" on the SFSYS form (5713 Record). For more information about activating Secured Features, see Division 2, Section 4A.

SFSYS Form	
Field	**Value**
FEATURE ID (61)	"S"

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ESA Option

If the E911 tandem has an attached ESA processor, the E911 OPTION field must be set to "ESA" on the OFCOPT form (5509 Record), and the DSL link that connects the switch with the ESA must be defined on a DSLAP form.

OFCOPT Form	
Field	**Value**
E911 OPTION	"ESA"

DSLAP Form	
Field	**Value**
E911 SITE	"Y"
ALARM	"Y"

Non-ESA Option

If the E911 tandem does not have an attached ESA processor, the E911 OPTION field must be set to "NONESA" on the OFCOPT form.

OFCOPT Form	
Field	**Value**
E911 OPTION	"NONESA"

E911 Call Limits

To prevent 911 facilities from being flooded by an influx of calls from one area, call limits are established to control the number of 911 calls accepted from any one source. The process for enforcing these call limits is called "choking".

Calls over a dedicated E911 trunk group are automatically choked by the size of the trunk group. When all trunks are in use, no additional calls can be sent over the trunk group until one of the trunks becomes available. The maximum load of 911 calls delivered from subtending end offices to the E911 tandem over dedicated trunks depends on the engineering of those trunk groups for the E911 service area.

Calls originating from lines in the E911 office and from non-dedicated trunk groups must be choked at the tandem by simulated facility groups. These sources are controlled separately by SFGs specified on the OFCOPT form and defined on the PFASFG form (5609-3 Record).

The E911 LN SFG field on the OFCOPT form specifies an SFG that limits the number of 911 calls originated in the office. If a call is placed on a line or on a PBX trunk (E911 TYPE set to "PBXNONDED" on the TKGRP form (5202 Record)), it is subject to the call limit specified in the SFG SIZE field on the PFASFG form. When the maximum number of calls are active, the caller receives reorder treatment. Additional 911 calls from within the office cannot be completed to an E911 facility until one of the active calls terminates.

Similarly, the E911 TRK SFG field on the OFCOPT form specifies an SFG that limits the number of E911 calls originated from trunk groups with E911 TYPE "NONDED". It restricts the calls from all non-dedicated E911 trunks in the office.

OFCOPT Form	
Field	**Value**
E911 LN SFG	(52)
E911 TRK SFG	(53)

PFASFG Forms		
Field	**Value**	**Value**
SFG NBR	(52)	(53)
SFG TYPE	E911LNE	E911TRK
SFG SIZE	1 - 511	1 - 511

911 Timing Delay

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The 911 TIMING DELAY field controls interdigital timing performed after a Basic 911 or E911 call is detected on an originating line. The field may be set to 0 - 3 seconds. If the timing delay is 1, the switch will wait 1 to 2 seconds before processing the call; if 2, 2 to 3 seconds; if 3, 3 to 4 seconds.

When TIMING DELAY is 0, the switch does no timing after the digits 911 (or equivalent) are collected and the emergency service call is recognized. Processing of the call proceeds immediately.

When TIMING DELAY is other than 0, the switch will delay for the period indicated by the field value, waiting for additional digits to be dialed. If no digits are dialed and the timing period ends, processing of the emergency service call continues. If an additional digit is dialed during the timing period, the call is routed to reorder tone.

The 911 delay field is intended to distinguish true emergency service calls from calls that are dialed in error. For example, a caller wishing to dial the 914 area misdials the numbers as 911-555-1212. With a 911 timing delay the caller's error will be detected.

WARNING: This delay should be used with caution. Delay timing can cause legitimate emergency service calls to be routed to reorder, for example, when the caller dials 9111 in the anxiety of the moment. The service provider must carefully consider whether the 911 delay capability should be used.

OFCOPT Form

Field	Value
911 TIMING DELAY	0 - 3

2.2 PSAP Trunk Translations

Trunks that connect the E911 tandem switch to PSAP locations must be defined and assigned features according to standard trunk provisioning procedures. A special tone must be defined for the PSAP trunks.

2.2.1 PSAP Trunk Provisioning

PSAP trunks, like other trunks on the 5ESS Switch, must be defined on the TKGRP and TRUNK forms. This section discusses fields that apply specifically to the E911 feature; for explanations of other fields generally used for trunks, see the TG-5 sections for the appropriate forms.

The TRK DIR, TRKCLS, INPULSING, OUTPULSING, E911 TYPE, and CAMA PSAP fields must be defined according to the TKGRP Form table which follows.

TKGRP Form

Field	Value
TRK DIR	"2W"
TRKCLS	"PFLASH"
INPULSING	"TT"
OUTPULSING	"MF"
BILLING DN	Should be entered
MAKE BUSY KEY	(Optional)
E911 TYPE	"NONDED"
CAMA PSAP	"Y"
PSAP RERTE TN	(Optional)
RERTE ACT	Y/N
WINK START	16 (Recommended)
ABND TIMER	18 (Recommended)

A Telephone Number must be entered in the BILLING DN field if PSAP-originated (e.g., transferred) calls routed through an IDP are to be properly billed.

The MAKE BUSY KEY, PSAP RERTE TN, and RERTE ACT fields determine whether or not call forwarding options will be assigned to the PSAP trunk group. Three options are available.

- Night service and/or power failure call forwarding only. This feature forwards calls to the RERTE TN only if a scan point specified in the MAKE BUSY KEY is activated due to night service or a PSAP

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power failure. To provision this feature a 7- or 10-digit telephone number must be entered in the RERTE TN field, a scan point number must be entered in the MAKE BUSY KEY field, and RERTE ACT must be "N".

- Traffic-busy forwarding only. This feature forwards calls to the RERTE TN only if the PSAP is traffic-busy. To provision this feature, a 7- or 10-digit telephone number must be entered in the RERTE TN field, the MAKE BUSY KEY field must be blank, and RERTE ACT must be "Y".

- Night service/power failure and traffic-busy forwarding. This feature forwards calls to the RERTE TN if either the scan point specified in the MAKE BUSY KEY is activated (night service or power failure), or the PSAP is traffic-busy. To provision this feature a 7- or 10-digit telephone number must be entered in the RERTE TN field, a scan point number must be entered in the MAKE BUSY KEY field, and RERTE ACT must be "Y".

Individual trunks within PSAP trunk groups must have IDLE STATE, IN START DIAL, and OUT START DIAL fields specified as shown in the following TRUNK Form table.

TRUNK Form

Field	Value
IDLE STATE	"ON"
IN START DIAL	"DLTN"
OUT START DIAL	"WINK"

If an Automatic Trunk Test Table number is entered in the ATTTN field of the TKGRP form, it must be defined on an AUTO form (5505-1/2 Record) with the following values.

AUTO Form

Field	Value
AUTOMATIC PROGRESSION TEST TYPE	"PB"
PERMANENT BUSY	8

2.2.2 BRCS Feature Assignment

PSAP trunks may be assigned any or all of the following BRCS features: Multiway Calling, Individualized Dialing Plan, and Speed Calling. Features may be assigned via TRUNKFA, TKGRPFA, or associated CLUSTR forms.

Multiway Calling Feature: A multiway calling feature must be assigned to PSAP trunks for attendants to transfer calls. The feature must have the auto-threeway option, e.g., the preconstructed feature /MWMFE.

Individualized Dialing Plan Feature: If an IDP (Individualized Dialing Plan) feature is assigned to PSAP trunks, it must be capable of translating selective and fixed transfer codes sent from the PSAP, as well as digits dialed by the attendant for manual transfers. These may include telephone numbers and speed call codes. If the PSAP trunk group is not assigned an IDP feature, these codes and numbers must be translated through the ODP (Office Dialing Plan).

Each selective transfer code of the form "*1X" (where X is 1 - 6) must be assigned an ACTION of SELnXFER, where n is 1 - 6 and maps to the corresponding selective transfer TNn (n is 1 - 6) on the ESN forms of 911 callers.

Fixed transfer codes are of the form "*2X", where X is 0 - 9, and 2X is a speed call code. The IDP must recognize the fixed transfer "*2X" codes by assigning them an ACTION of "AD2USE".

Speed Calling Feature: A 2-digit speed calling feature must be assigned to PSAP trunks if the attendants have fixed transfer keys. Otherwise, it is optional. If an SC feature is assigned, the PSAP may send the fixed transfer "*2X" codes, and the attendant may manually dial these and additional speed calling codes (*2X, *3X, *4X). All codes must be translated through the dialing plan, IDP or ODP, associated with the PSAP trunk.

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2.2.3 Tone Definition

When an E911 attendant attempts a selective transfer for which no TN is defined on the caller's ESN form, the switch returns a 120 ipm (interruptions per minute) tone. This tone must be defined on the TNTYPE form (5504 Record) with TONE TYPE set to "HIGH120" and TIMED set to "N".

TNTYPE Form

Field	Value
TONE TYPE	"HIGH120"
TIMED?	"N"

2.3 E911 Incoming Trunk Translations

A subtending end office delivers 911 calls to the tandem office over dedicated or non-dedicated E911 trunks. If the trunk carries traffic other than 911 calls, it is considered a "non-dedicated" trunk. If it carries only 911 calls, and terminal maintenance test calls, it is a "dedicated" trunk.

All incoming trunks and trunk groups must be defined with standard trunk translations. Only fields specific to E911 call handling are discussed in the following sections.

Dedicated E911 Incoming Trunks

A dedicated trunk group is defined on the TKGRP form with E911 TYPE set to "DED", "DIRANI", or "DIRNOANI".

Dedicated trunks from subtending end offices must be capable of delivering ANI to the E911 office if the ESA selective routing feature is to be used. When E911 TYPE is "DED", TRKCLS must be "CAMAANI", "LTOLLCON", or "TTOLLCON". If TRKCLS is "LTOLLCON" or "TTOLLCON", INPULSING must be "ISUP7".

Dedicated E911 trunk groups that originate from Step-by-Step offices consist of direct connect trunks with E911 TYPE "DIRANI" or "DIRNOANI". If the trunks transmit the caller's ANI, the E911 TYPE is "DIRANI"; if they do not carry ANI, the type is "DIRNOANI". Both types of trunk groups must have TRKCLS "CAMAANI". Trunk group members typically have IN START DIAL set to "IMMED" on the TRUNK form; they may not have INSTART DIAL set to "DIRC".

All dedicated trunk groups must be incoming only (TRK DIR "INC"), and must be assigned a valid ESCO that is defined on an ESCO form.

- ***NOTE:*** If the end office serves two NPAs, two dedicated E911 trunk groups must be used because the ESCO, assigned on a per trunk group basis in the E911 tandem office, determines the NPD.

TKGRP Form

Field	Value
E911 TYPE	"1ANPD", "DED", "DIRANI", "DIRNOANI", "NONDED", "PBXNONDED", "TNDM TNDM".
TRK DIR	"INC"
TRKCLS	Note 1
INPULSING	Note 2
ORIG NPA	Note 3
OFFCODE	Note 3
ESCO	Must be entered

- ***NOTE:*** 1:If the trunk group is direct connect (E911 TYPE is "DIRANI" or "DIRNOANI"), TRKCLS must be "CAMAANI"; otherwise, if the trunk group is dedicated (E911 TYPE is "DED"), TRKCLS must be "CAMAANI", "LTOLLCON", or "TTOLLCON".

- ***NOTE:*** 2:If TRKCLS is "LTOLLCON" or "TTOLLCON", INPULSING must be "ISUP7".

- ***NOTE:*** 3:If TRKCLS is "CAMAANI", values must be entered in the ORIG NPA and

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OFFCODE 1 fields; the ORIG NPA is sent to the ESA in the query for the ESN.

Non-Dedicated E911 Incoming Trunks

A non-dedicated trunk group is defined on the TKGRP form with E911 TYPE set to "NONDED" or "PBXNONDED".

TKGRP Form	
Field	**Value**
E911 TYPE	"NONDED" or "PBXNONDED"
E911 CPN	Y/N
ESCO	(Optional) See Warning 1 below.
DAS	(5)

If the trunk group has TRKCLS "EDSL" or "EDSLHM", the E911 CPN field applies. It must be set to "Y" if the calling party number, rather than the trunk billing number, is to be used for ESA queries.

Two methods are possible for obtaining the ESCO for 911 calls via non-dedicated trunks. The ESCO is obtained from either the TKGRP form or from the DAS form. If the TKGRP ESCO number is entered, then that ESCO is used for routing. Otherwise, if the TKGRP ESCO is not entered, the ESCO obtained from the DAS form is used.

- ***NOTE:*** However, if the Wireless E911 feature (SFID 298) is active, the TKGRP ESCO number must be entered for incoming ISUP7 trunk groups that carry wireless E911 traffic.

DAS Form	
Field	**Value**
DIGIT ANALYSIS SELECTOR	(5)
ESCO	(Optional) See Warning 1 below.

- **WARNING:** 1:The ODA software does not require that an ESCO be specified on the TKGRP or DAS form for every non-dedicated trunk group in an E911 tandem office. If an ESCO is not assigned to a 911 call via one of these forms, the call is routed using the SM stand-alone data for the SM on which the call originates. See Figure 3 .

Non-dedicated trunks are provisioned on TRUNK forms according to standard procedures.

2.4 E911 Tandem Office Local 911 Calls

When a 911 call originates from a line in the E911 tandem office, the DAS form determines the ESCO for the caller. If the office serves two or more NPAs, separate DAS forms must be defined to yield a different ESCO for each NPA.

DAS Form	
Field	**Value**
ESCO	Should be entered. See Warning 2 below.

- **WARNING:** 2:The ODA software does not verify that an ESCO is assigned on a DAS form for every voice line in an E911 office. If the switch cannot associate an ESCO with a 911 call via a DAS form, it routes the call using SM stand-alone data for the SM on which the call originates. See Figure 3 .

2.5 9-1-1 Digit Analysis Translations - 5E8 and Later Software Releases

The digits dialed by the 911 caller or sent to the E911 tandem office from a subtending end office must be translated on a PDIT form (5300-2 Record) or LDIT form (5300-3/5 Record). The switch recognizes an E911 call when either it arrives at the switch on an E911 direct connect trunk, or the analyzed digits are translated on a PDIT or LDIT form with a CALL TYPE of "EMER" and a value entered in the TRIG NBR field. An INDIT form that translates 911 digits from a trunk must have the LDIT field set to "Y".

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The TRIG NBR on the PDIT or LDIT form matches a TRIG NBR defined on an NSTRIG form that has APPLICATION set to "E911".

PDIT (or LDIT) Form

Field	Value
DIGITS TO INTERPRET (INCOMING DIGITS)	911 (See Note below this table.)
CALL TYPE	"EMER"
TRIG NBR	(7)

- ***NOTE:*** If digits 1 or 11 are expected on E911 dedicated incoming trunks, they must be translated in the INCOMING DIGITS field of the LDIT form.

NSTRIG Form

Field	Value
TRIG NBR	(7)
APPLICATION	"E911"

2.6 PSAP Routing Translations

Since E911 calls are routed based, not on digits dialed, but on the location of the calling party, translations are required to determine the PSAP to which the call will be routed. (See Figure 3 .)

ESCO Translations

The ESCO from the TKGRP or DAS form determines whether or not the 911 call will be selectively routed (based on the ANI of the caller). It also associates a default ESN and an NPD with the 911 caller.

When selective routing is required, the SEL RT field on the ESCO form must be set to "Y"; then the caller's ANI is used to query the ESA for the ESN. If the ANI is garbled or the ESA query fails, the default ESN from the ESCO form is used.

If selective routing is not required, SEL RT must be "N"; then the default ESN is used. If an end office does not send ANI or does not require selective routing, the ESCO for that office may have SEL RT set to "N".

The NPD field is a 1-digit field that can be set to a value from 0 - 3. Since an E911 service area may serve multiple NPAs, the NPD indicates the NPA from which a 911 call originated. The switch sends the CAMA PSAP eight digits, which consist of the NPD from the ESCO form followed by the caller's ANI.

ESCO Form

Field	Value
ESCO	(001)
ESN	(005)
NPD	(0)
SEL RT	Y/N

ESN Translations

The ESN, obtained from an ESA query or from the ESCO form, translates to a primary PSAP TN, one or two alternate PSAP TNs, and a list of selective transfer TNs. It also determines if calls from the ESN should be flashed at the attendant console.

The primary PSAP is the initial answering point for a 911 call.

The primary PSAP or subsequent answering points (secondary PSAPs) can generate a selective transfer code that is translated in digit analysis to an action code that indexes the selective transfer list.

If a PSAP provides ANI display, the FLASH field on the ESN form determines whether or not the ANI display should be flashed to alert the attendant for special 911 call situations. If only some customers within an Emergency Service Zone, e.g., lines from a chemical factory, require the Flash Calling Display option, they must have a different ESN than other customers in the ESZ.

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ESN Form	
Field	**Value**
ESN	(005)
FLASH	Y/N
PRIM PSAP	(911-2345)
ALT1 PSAP	(911-4215)
ALT2 PSAP	(Optional)
TN1	(Optional)
TN2	(Optional)
TN3	(Optional)
TN4	(Optional)
TN5	(Optional)
TN6	(Optional)

SM Stand-Alone Translations

ESN processing is performed on the 5ESS Switch CMP (Communications Module Processor). When an SM is unable to communicate with the CMP, or when an ESCO cannot be associated with the 911 call (its data is not available to send to the CMP), the ESN and its accompanying routing and selective transfer information is inaccessible. Stand-alone data establishes a set of routing and selective transfer numbers the SM uses for these cases.

One stand-alone ESN form must be defined for each SM. These required forms must have only the SM number as a key field; the DAS field must be blank.

If more than one set of emergency stand-alone numbers is required for 911 calls on an SM, distinctions can be made through the DAS associated with the caller. Additional ESN forms can be defined with SM and DAS as keys. In this way, multiple 911 calling areas can be routed to different emergency numbers.

When a 911 call requires stand-alone routing on an SM, the operational software looks first for an ESN form with the SM and DAS. If the form does not exist, it uses the ESN form for the SM (with a blank DAS).

When a 911 call is routed using SM stand-alone data, the caller's NPD and ANI are always flashed on the E911 attendant console at a CAMA PSAP. The flash indicates to the attendant that the call may require special attention □ in this case because it was routed with stand-alone data.

ESN Form (Required for each SM)	
Field	**Value**
SM	(001)
PRIM PSAP	(452-7791)
ALT1 PSAP	(654-1278)
ALT2 PSAP	(Optional)
TN1	(Optional)
TN2	(Optional)
TN3	(Optional)
TN4	(Optional)
TN5	(Optional)
TN6	(Optional)

ESN Form (Optional for SMs)	
Field	**Value**
SM	(001)
DAS	(02)
PRIM PSAP	(463-7462)
ALT1 PSAP	(654-1278)
ALT2 PSAP	(Optional)
TN1	(Optional)
TN2	(Optional)
TN3	(Optional)
TN4	(Optional)
TN5	(Optional)
TN6	(Optional)

2.7 PSAP DN Translations

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Digit analysis of primary and alternate PSAP TNs and selective transfer TNs assigned on the ESN Form, and PSAP reroute TNs assigned on the TKGRP Form, must be translated through the DAS and screening index specified in the E911 fields of the OFCOPT form. This provides uniform screening rules for all PSAP-related calls.

Each of these TNs should be defined on a LINE form (5109 Record) where the route index that translates to the TGN for the PSAP is entered in the RTI field. Normal translations proceed through the RAR form with screen index matching E911 SCR, code index from a digit analysis form, prefix set to "NONE", and RTI set to "REGL". The Charge Index should translate to a FREE call.

OFCOPT Form

Field	Value
E911 DAS	(12)
E911 SCR	(0123)

The LDIT associated with the E911 DAS must be distributed to all operational SMs via the SMLDIT form.

Alternatively, the PSAP DN can be set up as a PBX DID (Direct Inward Dial) line by defining it on the LINE form (5109 Record) with the route index (RTI) field entered.

3. TRANSLATION REQUIREMENTS

This section describes new ODA forms and fields added for the E911 feature. As a reference for the preceding FEATURE ASSIGNMENT section, this section presents the new and modified forms in alphabetical order.

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DAS	5300-1	3	3A	9.1
DSLAP	5963	6	6A	24.7
ESCO	5541	3	5AO	9.41
ESN	5540	3	5AN	9.40
IDPDCA	5601	4	2B	1.26
NSTRIG 5E8 and later	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
PFASFG	5609-3	4	10C	7.3
SFSYS	5713	8	12	8.22
TKGRP	5202	3	2A	5.1
TNTYPE	5504	3	5D	8.6

DAS form (5300-1 Record) - The DAS form is used to define each Digit Analysis Selector in the switch. For the E911 feature, the ESCO field was added.

The ESCO (Emergency Service Central Office) field identifies the originating office or calling area of a 911 caller. When a 911 call originates from a line in the E911 tandem office or arrives at the office on an incoming trunk that does not have an ESCO explicitly assigned on the associated TKGRP form, the DAS form determines the ESCO. If the office serves two or more NPAs, separate DAS forms must be defined to yield a unique ESCO for each NPA.

If the switch cannot associate an ESCO with a 911 call, it routes the call to a PSAP determined by SM stand-alone data.

The ESCO entered in this field must be defined on an ESCO form.

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP (Application Processor) and the 5ESS Switch. For the E911 feature, the E911 SITE field has been added.

If the E911 serving office is equipped with an ESA (E911 OPTION on the OFCOPT form is "ESA"), the data link between the 5ESS Switch and the ESA must be defined on this form. One, and only one,

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DSLAP form must be specified with E911 SITE set to "Y". The ALARM field on that form must be "Y".

ESCO form (5541 Record) - The ESCO form is new for the E911 feature. It is used to define an ESCO (Emergency Service Central Office) that identifies the originating office or calling area of 911 callers. Each ESCO translates to a default ESN, an NPD, and a selective routing indicator.

- ESCO: An ESCO is associated with a 911 call through the dialing plan or trunk group. When the call originates in the E911 tandem office, the ESCO is determined from the DAS form. When the call arrives on a trunk, the ESCO is taken from the TKGRP form unless an ESCO is not assigned or is invalid; then, it is taken from the DAS form. It is recommended that an ESCO be assigned to every DAS form used for voice calls. If a 911 call cannot be associated with an ESCO through the trunk group or dialing plan, the call is routed using the SM stand-alone data defined in the ESN form.

- ESN: An ESN represents a set of emergency services assigned to a specific address. The ESN assigned to the ESCO is used by the operational software when selective routing is not required (SEL RT = "N"), and when a selective routing query to the ESA fails. The ESN must be defined on an ESN form, which determines PSAP and selective call transfer telephone numbers for the caller.

- NPD: The Numbering Plan Digit represents the NPA of the originating 911 call. The NPD and ANI are sent to the PSAP where they are displayed on the attendant's screen.

- SEL RT: The SEL RT (Selective Routing) field determines if the switch will query the ESA for the ESN of the caller. When SEL RT is "Y", a query is sent to the ESA to retrieve an ESN determined by the caller's ANI. When SEL RT is "N", selective routing is not required (e.g., all callers associated with the ESCO are assigned the same ESN), and the ESN on this form is used to route the E911 call.

ESN form (5540 Record) - The ESN form, which is new for the E911 feature, is used for two purposes. First, it is used to define an ESN, a set of telephone numbers for the emergency services a 911 caller may require. Second, it is used to define SM stand-alone data, a set of emergency numbers for a 911 call that arrives at an SM that is unable to communicate with the CMP.

ESN forms can be entered only if the E911 feature has been enabled on the SFSYS form (5713 Record).

The ESN form contains the following fields.

- ESN: The Emergency Service Number defines a set of emergency services, e.g., police, fire, hospital, within a particular district or zone. The ESN for an E911 call is retrieved from the ESA when Selective Routing is specified on the ESCO form. When ESA selective routing fails or is not applicable, the default ESN from the ESCO form is used.

- SM and DAS: When an SM is in stand-alone mode, is unable to communicate with the CMP, or cannot determine an ESCO for the E911 caller, SM stand-alone data is used to determine the PSAP. SM stand-alone records are defined in ESN forms with SM (or SM and DAS) key field(s). For each operational SM on the switch, one ESN form must be defined with SM entered and DAS blank.

  If more than one set of emergency stand-alone numbers is required for 911 calls arriving at an SM, additional ESN forms can be defined with SM and DAS as keys. Through the DAS associated with the caller, multiple 911 calling areas can be routed to different emergency numbers.

  When a 911 call requires stand-alone routing on an SM, the switch looks first for an ESN form with the SM and DAS. If the form does not exist, it uses the ESN form for the SM (with a blank DAS).

- FLASH: This field indicates if the caller's NPD and ANI should be flashed at the PSAP terminal to indicate that the call may require special handling. FLASH may be "Y" only when ESN is entered.

- PRIM PSAP: The Primary Public Safety Answering Point is the TN to which the E911 call is initially

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routed.

- ALT1 PSAP: If the primary PSAP is unavailable, the E911 call is routed to the first alternate PSAP, the telephone number specified in this field. (Note that if PSAP rerouting is activated, the switch first attempts to forward the 911 call to the reroute TN specified on the PSAP's TKGRP form. If forwarding fails, alternate routing occurs.)

- ALT2 PSAP: When both the primary and first alternate PSAPs are unavailable, the E911 call is routed to the second alternate PSAP if a telephone number is specified in this field.

- SELECTIVE TRANSFER TNs (1 - 6): These telephone numbers correspond to six Selective Transfer keys on the PSAP attendant's console. If the attendant depresses one of the keys or enters the equivalent *1X code, the 911 call is transferred to the TN corresponding to the ACTION code on the digit analysis form (PDIT or IDPDCA). For example, if the *12 code translates to ACTION "SEL2XFER", the 911 call is transferred to the number stored in the SELECTIVE TRANSFER TN2 field.

IDPDCA form (5601 Record) - This form is used to define the dialed codes associated with IDPs (Individualized Dialing Plans). For the E911 selective transfer option, six new values have been added to the ACTION and CONFLICT ACTION fields.

The enumerations SELxXFER, where x is 1 - 6, correspond to six selective transfer keys on the PSAP attendant terminal and to the associated *1X codes. These codes determine the SELECTIVE TRANSFER TN (from the ESN form) to which the 911 call may be transferred when the PSAP trunk is assigned an IDP feature.

NSTRIG form (5324 Record) - For 5E8 and later, this form associates a trigger number with a service that may require a query to an external database. For the E911 feature, at least one NSTRIG form must be defined with APPLICATION set to "E911".

The value "E911" is a valid entry for the APPLICATION field. It identifies 911 calls when the dialed digits (e.g., 9-1-1) are assigned a CALL TYPE of "EMER" in the PDIT or LDIT form, and the TRIG NBR on that form matches a TRIG NBR defined on an NSTRIG form that has APPLICATION set to "E911".

OFCOPT form (5509 Record) - This form determines miscellaneous office options and parameters. For the E911 feature, five new fields have been added.

- E911 OPTION: This field specifies what type of E911 processing the switch supports: none, E911 with an ESA, or E911 without an ESA.

- E911 DAS, E911 SCR: The E911 DAS and E911 SCR fields specify the DAS and Screening Index used for routing telephone numbers found in the ESN data. These fields and their associated digit analysis and routing forms must be capable of translating all primary and alternate PSAP TNs and SELECTIVE TRANSFER TNs (1 - 6) assigned on ESN forms, and any PSAP RERTE TNs assigned on TKGRP forms. Because the E911 DAS supports all TNs specified in the stand-alone data, the LDIT associated with the DAS must be distributed to every SM in the office, i.e., it must be specified on an SMLDIT form (5315 Record) for every operational SM.

- E911 LN SFG, E911 TRK SFG: These two fields specify the Simulated Facility Groups used to restrict the number of simultaneously active E911 calls. The E911 LN SFG restricts the number of calls originating from lines and PBXs; the E911 TRK SFG restricts the number of calls incoming over non-dedicated trunk groups.

- 911 TIMING DELAY: This field determines whether or not the switch will wait a specified period of time after the 911 (or equivalent) digits are dialed. When a timing delay is specified, the switch will send a call to reorder if the caller dials additional digits during the timing period; if no further digits are dialed, the call is processed normally. This applies to both B911 and E911.

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PDIT form (5300-2 Record) - This form defines a prefix/feature digit interpreter. For the E911 feature six new ACTION values were added for the selective transfer option.

The enumerations SELxXFER, where x is 1 - 6, correspond to the six selective transfer keys on the PSAP attendant terminal and to the associated *1X codes. These codes determine the SELECTIVE TRANSFER TN (from the ESN form) to which the 911 call may be transferred when the PSAP trunk is not assigned an IDP feature.

PFASFG form (5609-3 Record) - This form is used to define Simulated Facility Groups to control access to physical groups such as lines, trunks, or special circuits. For the E911 feature, two values have been added to the SFG TYPE field , "E911LNE" and "E911TRK".

The line SFG limits the total number of simultaneously active 911 calls that originated from lines or from PBX trunks (trunk groups assigned an E911 TYPE of "PBXNONDED" on the TKGRP form). When the number of active calls exceeds SFG SIZE, additional 911 call attempts from lines and PBX trunks receive reorder treatment.

The trunk SFG limits the total number of simultaneously active 911 calls originated from trunk groups assigned an E911 TYPE of "NONDED" on the TKGRP form. When the number of active calls exceeds SFG SIZE, additional 911 call attempts from non-dedicated trunks receive reorder treatment.

The PFASFG records with SFG TYPE "E911LNE" and "E911TRK" must exist if the switch provides E911 service, i.e., if the E911 OPT field on the OFCOPT form is "ESA" or "NONESA".

SFSYS form (5713 Record) - This form is used to enable Secured Features.

To enable the E911 feature and the entry of ESN forms, SFID 61 must be set to "Y" on the SFSYS form. This can be done only with the assistance of a Lucent Technologies SEE.

TKGRP form (5202 Record) - The Trunk Group form is used to define a trunk group. The trunk information that is entered on these records is information that is common to the entire group.

For the E911 feature, two types of trunk groups require special consideration for E911 service. The first is the set of trunk groups that carry E911 calls into the office. The second consists of those trunk groups that connect the switch to E911 PSAPs. Each of the following fields pertains to one of these groups.

- E911 CPN: For E911 calls originating on trunk groups with TRKCLS "EDSL" or "EDSLHM", the trunk billing number is normally used for ESA queries. If the Calling Party Number, rather than the trunk billing number, should be used, this field must be set to "Y".
- E911 TYPE: This field specifies the type of incoming E911 traffic the trunk group supports:
  - NONDED - Non-dedicated trunk group. E911 calls arriving on this trunk group are counted against the E911 trunk SFG limit as defined in the PFASFG form.
  - PBXNONDED - Non-dedicated PBX trunk group. E911 calls arriving over this trunk group are counted against the E911 line SFG limit as defined in the PFASFG form.
  - DED - E911 dedicated trunk. Only 911 calls and test calls are carried on this trunk group.
  - DIRANI - Direct Connect with ANI. This trunk group carries 911 calls and test calls; it transmits the caller's ANI.
  - DIRNOANI - Direct Connect without ANI. This trunk group carries 911 calls and test calls; it does not transmit the caller's ANI.

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E911 trunk groups from Step-by-Step offices are "DIRANI" or "DIRNOANI".

- 1ANPD - For 5E12 and later, dedicated trunk that handles E911 calls incoming to a 5ESS-2000 Switch from a 1A ESS Switch.

- TNDM_TNDM - For 5E12 and later, dedicated tandem-to-tandem trunk assigned to an incoming ISUP7 trunk group at the terminating E911 Tandem switch; allows the Called DN (in the ISUP7 IAM) to be used for routing to the Primary PSAP.

- ESCO: For trunks that carry incoming E911 traffic, this field identifies the originating office of the caller. It is used to determine the ESN and routing of the call.

  On E911 dedicated trunk groups (see E911 TYPE), ESCO must be entered. ESCO is optional on non-dedicated trunk groups. If it is not present, it will be determined from the DAS form associated with the caller.

- CAMA PSAP: This field is used to identify trunk groups connecting the switch to CAMA PSAPs. These special trunk groups must be uniquely identified by setting CAMA PSAP to "Y".

- PSAP RERTE TN: When a CAMA PSAP trunk group is busy, E911 calls routed to that PSAP may be automatically forwarded to a telephone number specified in this field. Since Call Forwarding features cannot be assigned to trunk groups on the 5ESS Switch, this field provides the Call Forward feature functionality available on the 1A ESS Switch.

  This field is used in conjunction with the MAKE BUSY KEY and/or the RERTE ACT field. One or both of the following options may be assigned to a PSAP trunk group.

  If a telephone number is entered in the PSAP RERTE TN field, and a scan point is entered in the MAKE BUSY KEY field, then calls directed to the PSAP are rerouted to the PSAP RERTE TN when the scan point is activated by a make busy key or a power failure at the PSAP.

  If the PSAP RERTE TN is entered, and RERTE ACT is set to "Y", then calls are rerouted to the telephone number in the PSAP RERTE TN field when the PSAP is traffic-busy.

  These call forwarding options take precedence over alternate routing as defined by the alternate PSAP TNs in ESN forms. Under the conditions described above, a 911 call will first be rerouted to the PSAP RERTE TN; only if that routing fails will the call be routed to an alternate PSAP TN.

- RERTE ACT: When a CAMA PSAP trunk group is traffic-busy, this field determines if E911 calls routed to that PSAP should be forwarded to the telephone number specified in the PSAP RERTE TN field.

- WINK STRT: For a CAMA PSAP trunk group, this field specifies the number of seconds the switch waits for the PSAP to send a start outpulsing signal (wink). The recommended value for this field is 16.

- ABND TIMER: This field specifies the time (in seconds) the switch will wait to release a PSAP trunk after a 911 caller disconnects before the PSAP answers. The timer is designed to synchronize trunk release with a "Nuisance" option on CAMA PSAP equipment. Some PSAP facilities are equipped with a Nuisance Switch that allows 911 calls to be maintained for a period of time after the caller disconnects (prior to the PSAP answering). This gives the PSAP attendant time to answer the call and record the displayed ANI. The ABND TIMER ensures that the trunk connection is maintained for

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the same duration. The recommended value for this field is 18.

TNTYPE form (5504 Record) - This form is used to define tones. For the E911 feature, a new tone type has been added.

When a PSAP attendant dials a selective transfer code for which no Directory Number is stored, a special tone is returned to the PSAP. This tone must be defined on the TNTYPE form with TONE TYPE set to "HIGH120".

4. GLOSSARY

Alternate Routing □ Available for each PSAP, Alternate Routing is used to route calls to a predesignated location for a traffic busy PSAP, a PSAP on night duty or a PSAP experiencing a power failure.

CAMA PSAP □ A PSAP that has CPE (Customer Premises Equipment) which can provide the attendant with the caller's ANI via CAMA-like signaling. The CAMA PSAP allows the attendant to use Enhanced 911 features such as Selective Transfer.

CAMA Signaling □ Centralized Automatic Message Accounting Signaling. A signaling scheme normally used to transmit ANI (Automatic Number Identification) information from a local switch not equipped for AMA recording to another switch capable of AMA recording. This type of signaling is commonly used between the end office and the E911 tandem office, although CCS7-ISUP trunks and direct seizure trunks may also be used. CAMA signaling has been adapted for E911 use to forward the caller's directory number to the PSAP.

CAMA-like Signaling □ Analog trunks with MF signaling using CAMA ANI format. This is the signaling used between the E911 serving office and a CAMA PSAP. This signaling is one-way, from the 5ESS Switch to the CAMA PSAP.

Default Routing □ Automatically routes a 911 call to a predesignated PSAP when the primary ESN (PSAP) cannot be determined (ESN lookup fails to find a match in the ESA, mutilated ANI, etc.). The office is equipped with a ESA, and is using Selective Routing.

Direct Connect Trunk □ See Direct Seizure Trunk.

Direct Seizure Trunk □ A trunk which does not send dialed digits to the E911 serving office. ANI may or may not be received after the trunk is seized at the incoming end. Also called a Direct Connect Trunk.

ESA □ E911 Service Adjunct. A processor, attached to the switch via a DSL link, that provides ANI to ESN translation for E911 Service.

ESN □ Emergency Service Number. The emergency service number is a number that defines the set of emergency services, e.g., police, fire, hospital, within a particular district or zone.

ESCO □ Emergency Service Central Office. A number to identify the originating office or calling area of the 911 caller. An ESCO may be assigned to trunk groups and to the dialing plans for local lines. It translates to a selective routing indicator, a default ESN, and an NPD.

Fixed Transfer □ Allows a PSAP attendant to transfer a 911 call to a particular PSAP location by operating one key.

Manual Dial Transfer □ Allows the PSAP attendant to manually dial the directory number of the destination.

NPD □ Numbering Plan Digit. First digit of ANI outpulsed to a CAMA PSAP; it represents the originating NPA of the call.

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PSAP □ Public Safety Answering Point. Location, or equipment at the location, where emergency attendants receive "911" calls.

Selective Routing □ An E911 feature that selectively routes a 911 call to the primary PSAP associated with the originating station.

Selective Transfer □ Allows a PSAP attendant to transfer a 911 call to the correct secondary PSAP for the caller's emergency service zone. The call is transferred based on the code sent by the PSAP and the telephone number stored in the ESN form.

5. REFERENCES

235-190-115. Local and Toll System Features.

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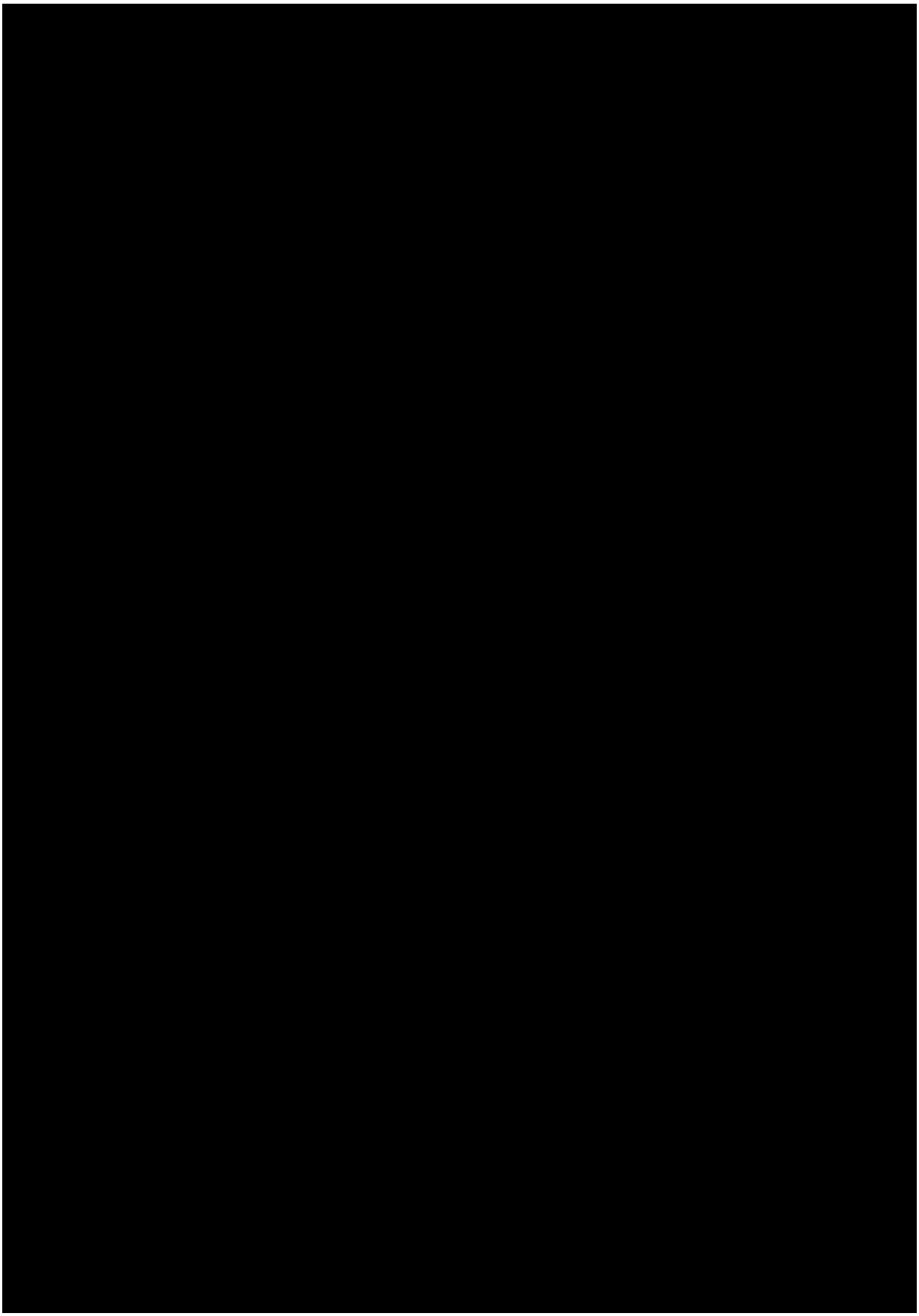

Figure 1 E911 NETWORK ARCHITECTURE

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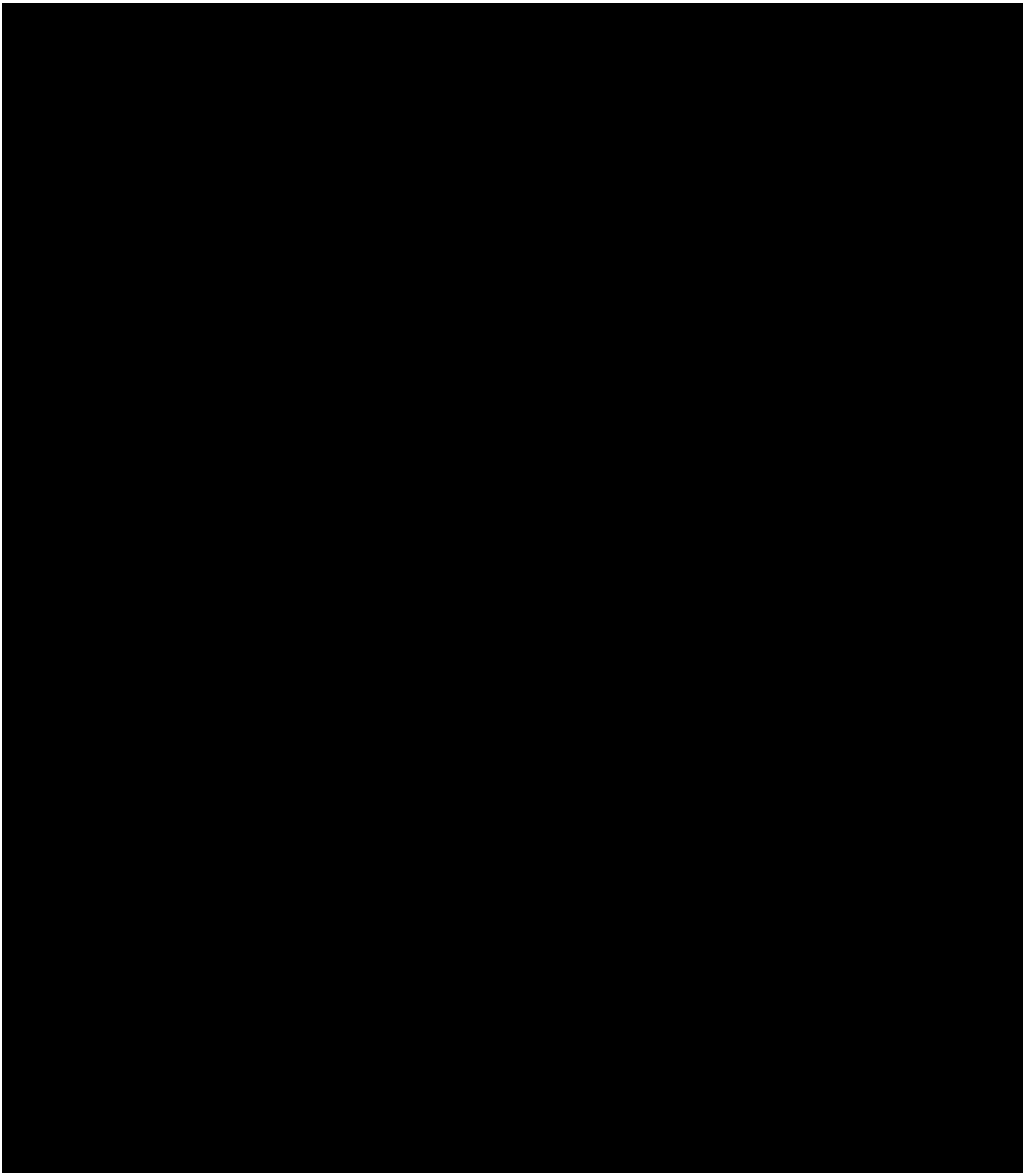

Figure 2 E911 SERVICE AREA EXAMPLE

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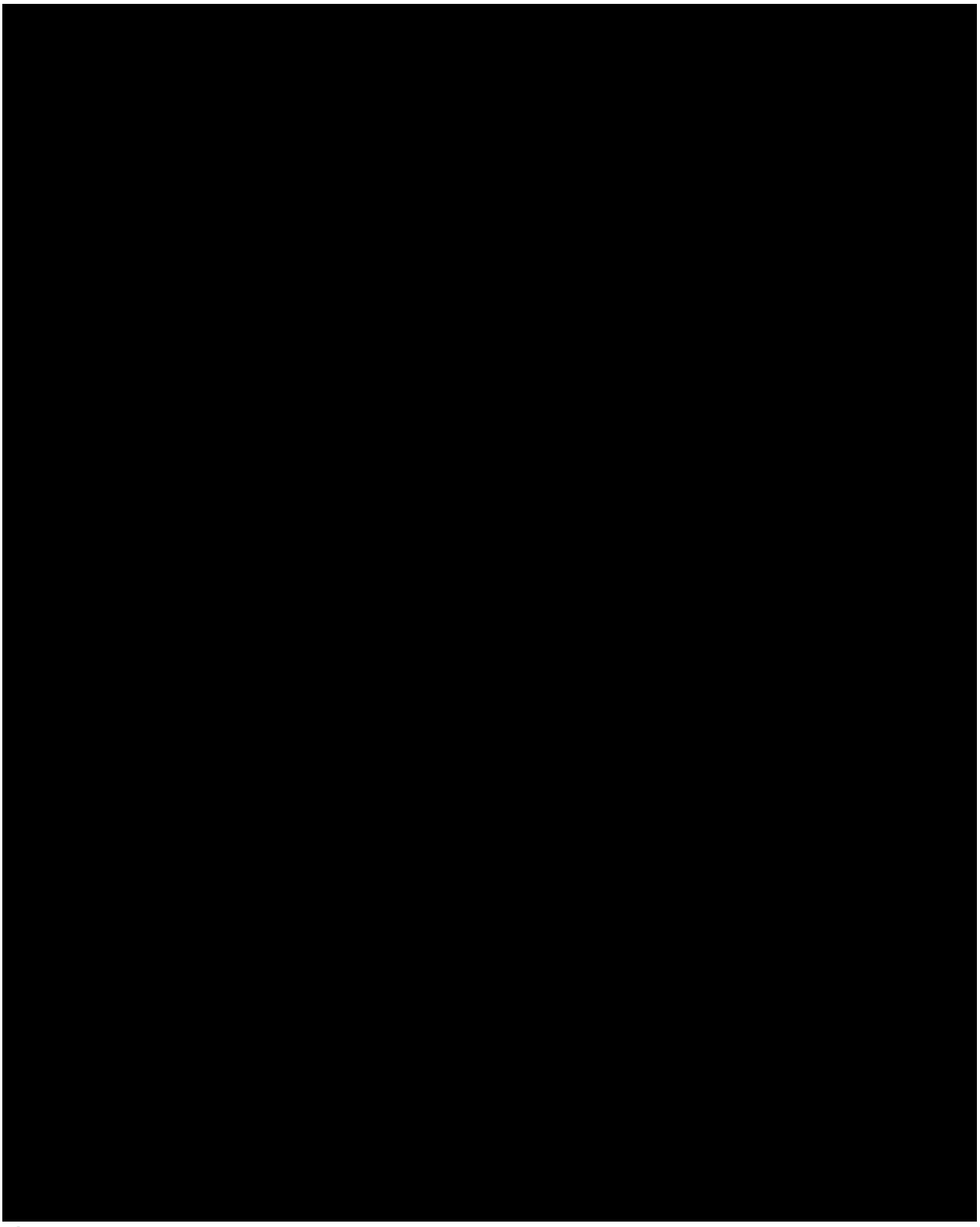

Figure 3 E911 ROUTING TO PRIMARY PSAP 5E7 SOFTWARE RELEASE

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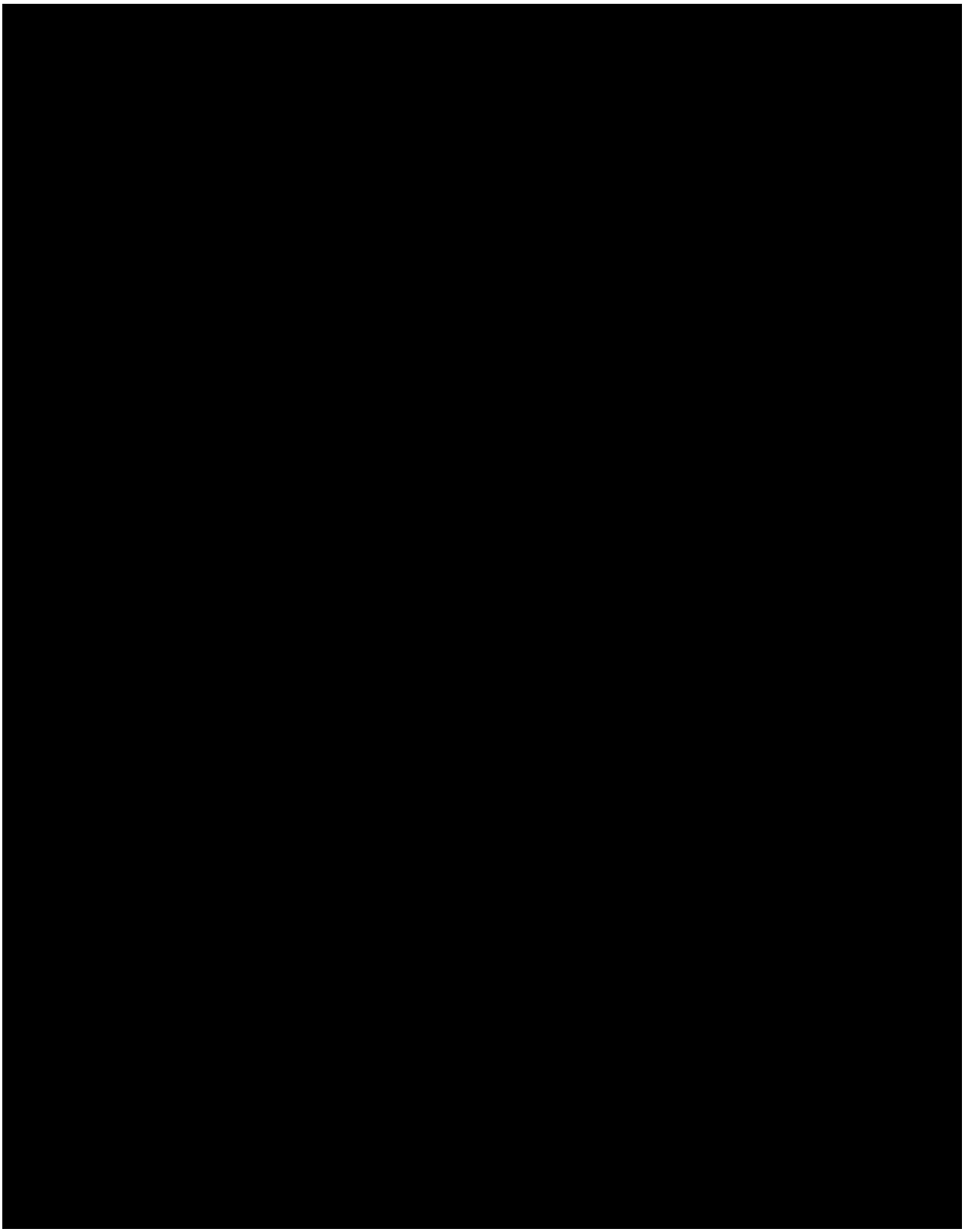

Figure 4 E911 ROUTING TO PRIMARY PSAP 5E8 AND LATER SOFTWARE RELEASES

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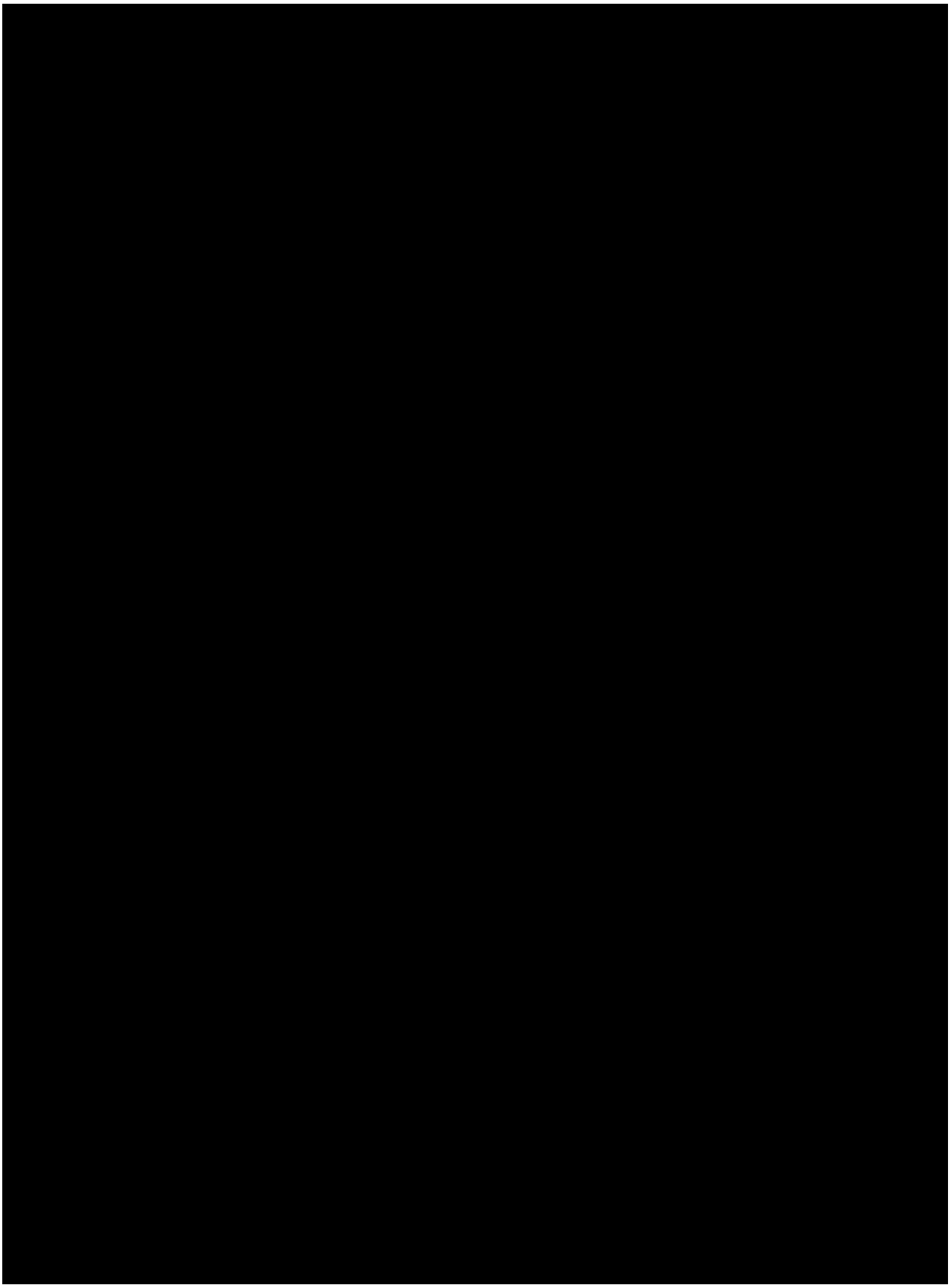

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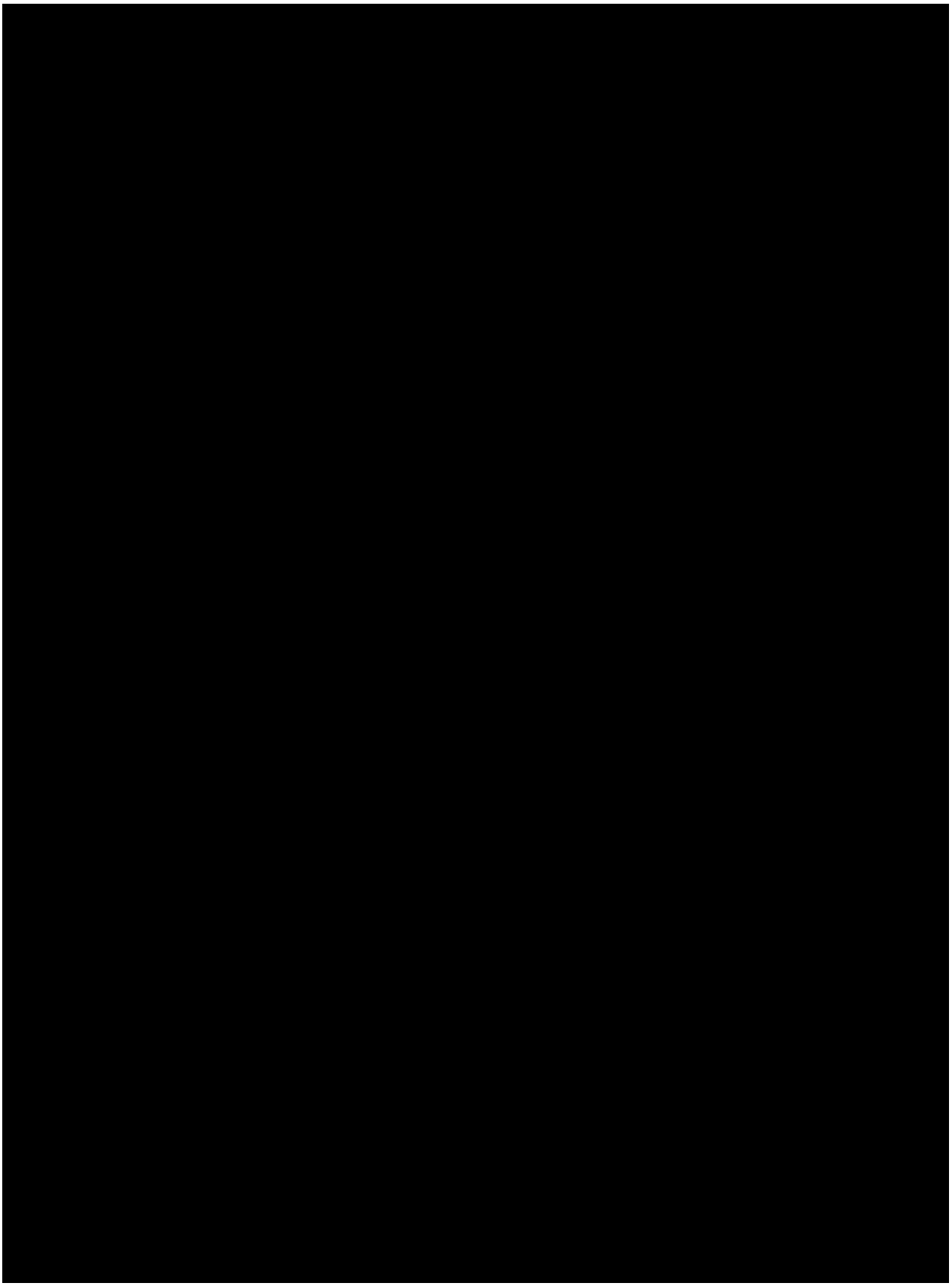

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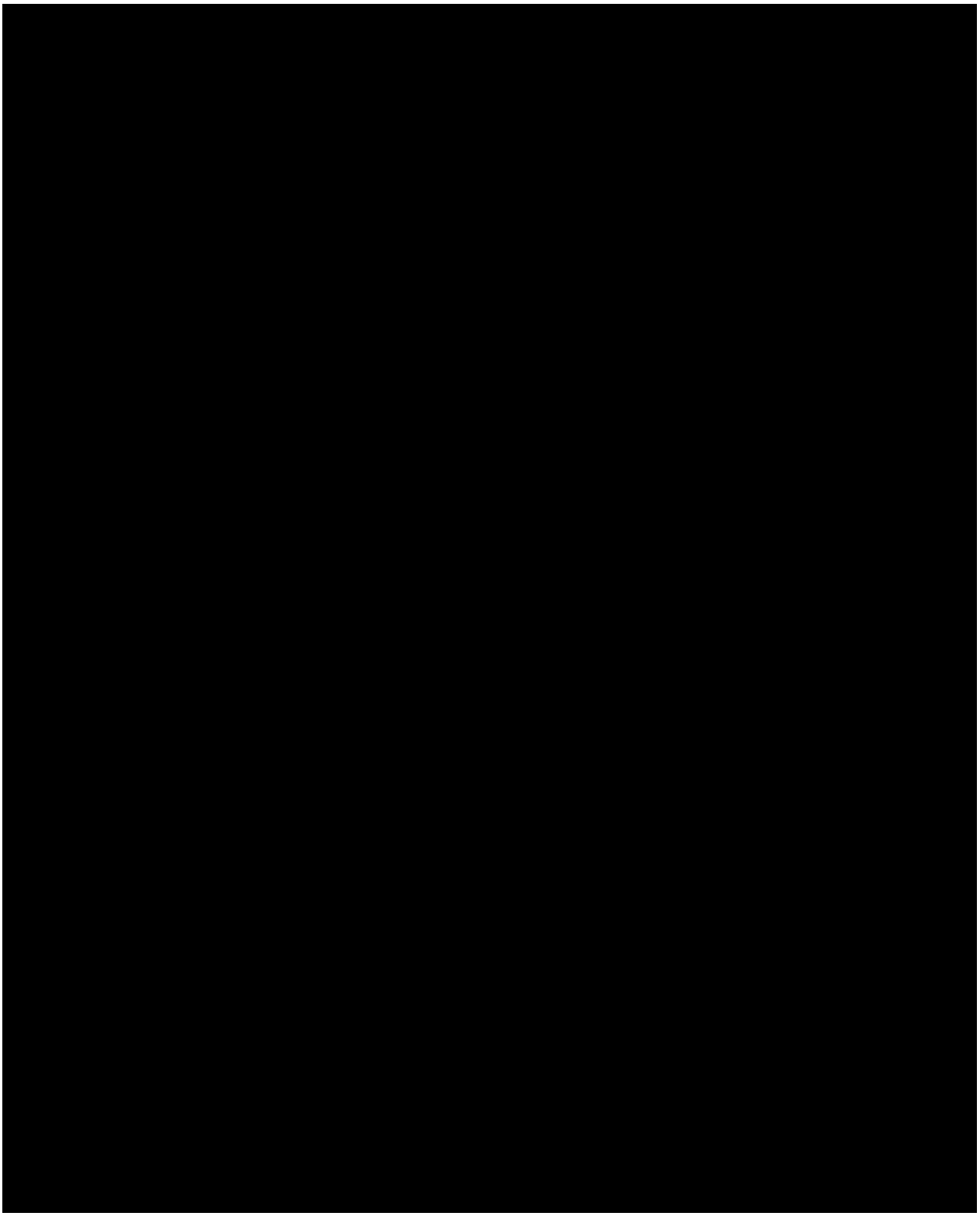

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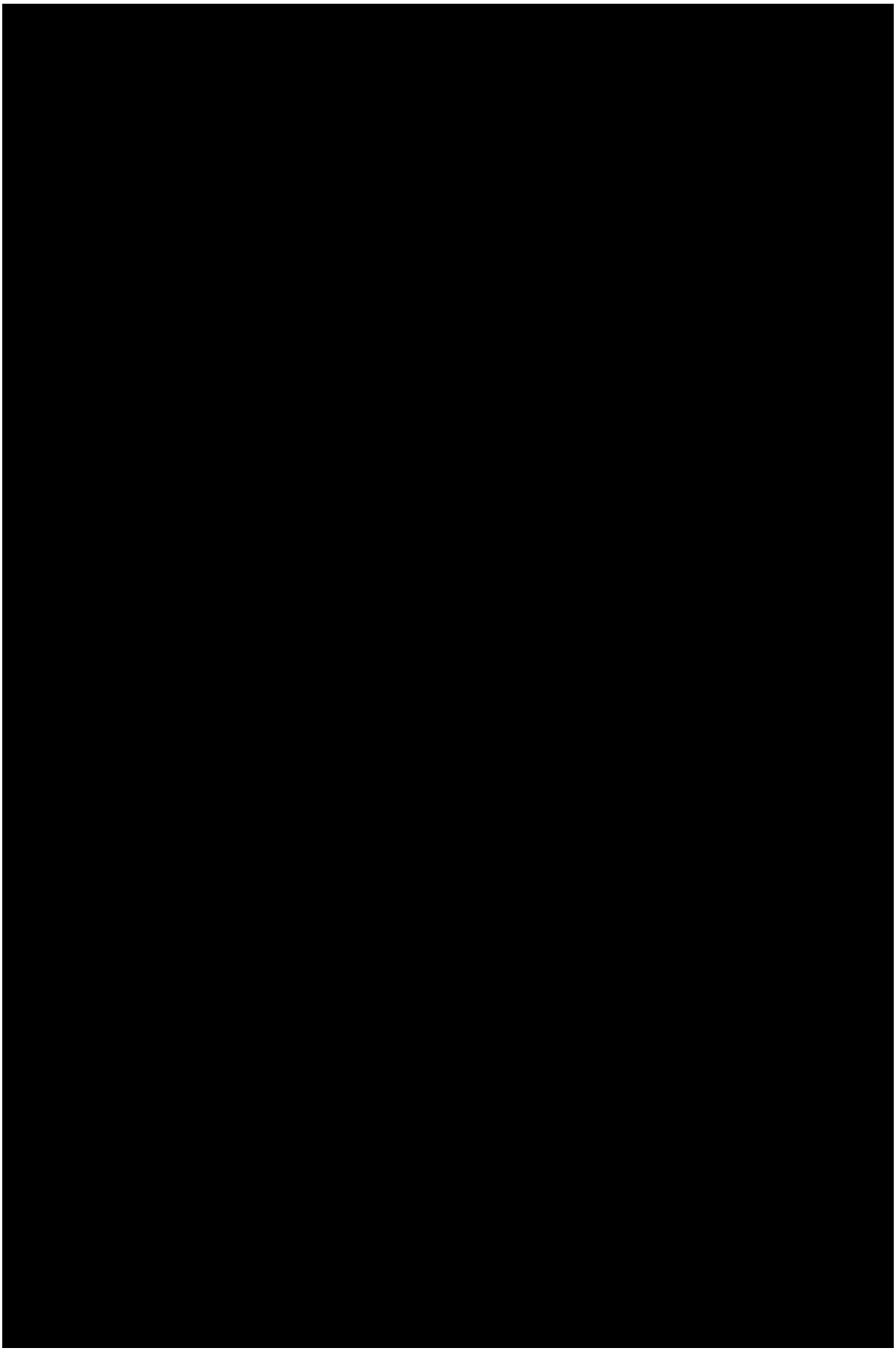

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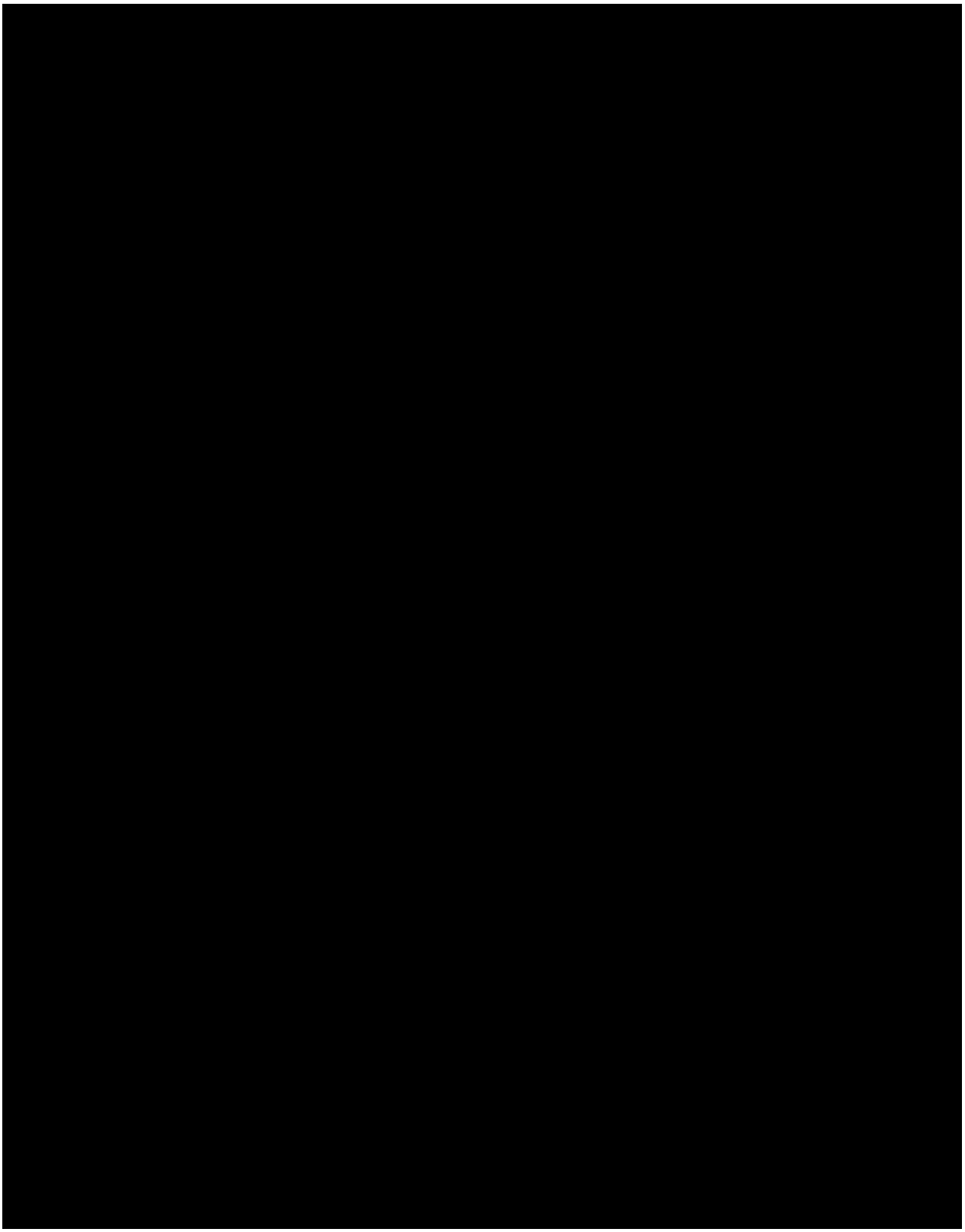

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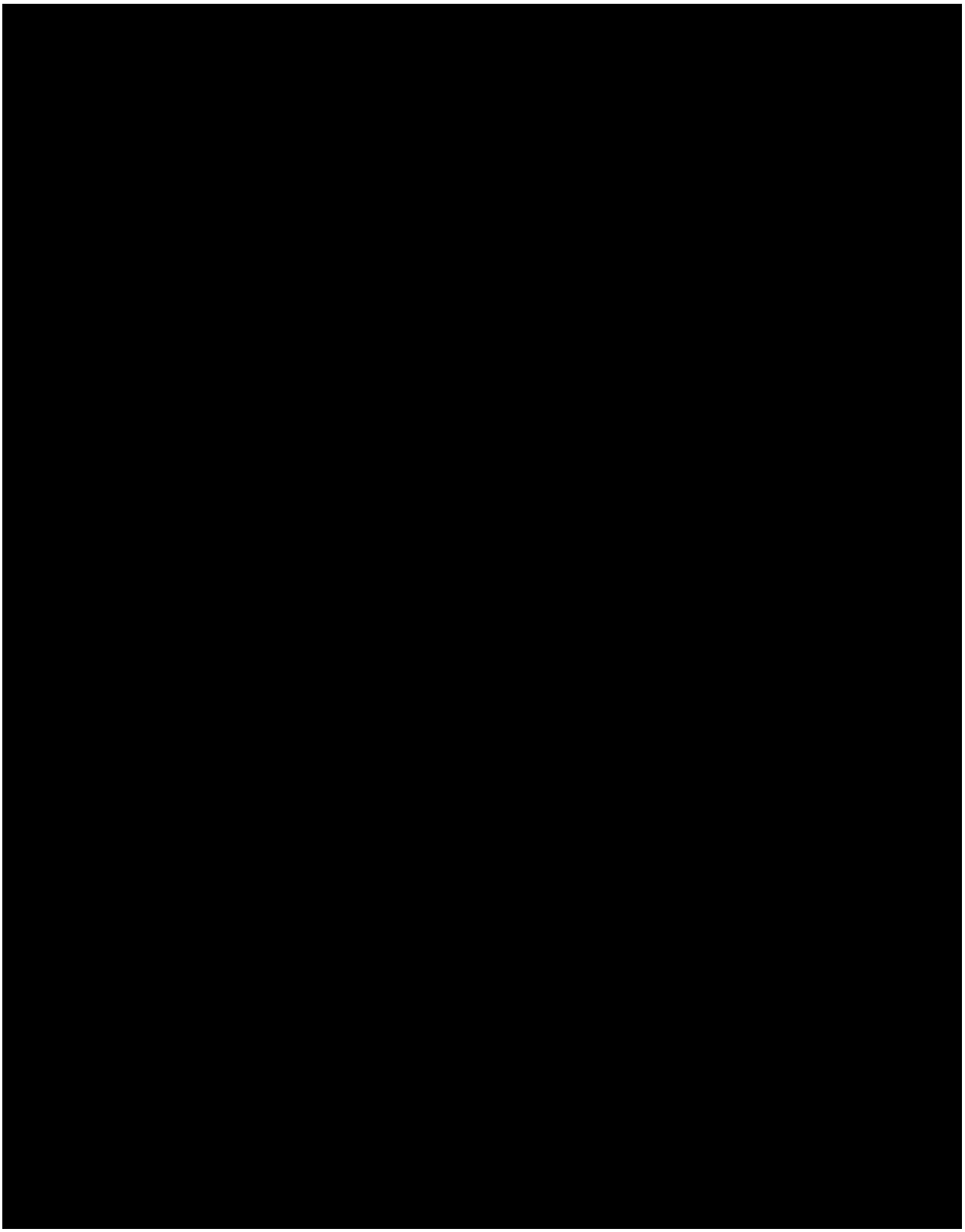

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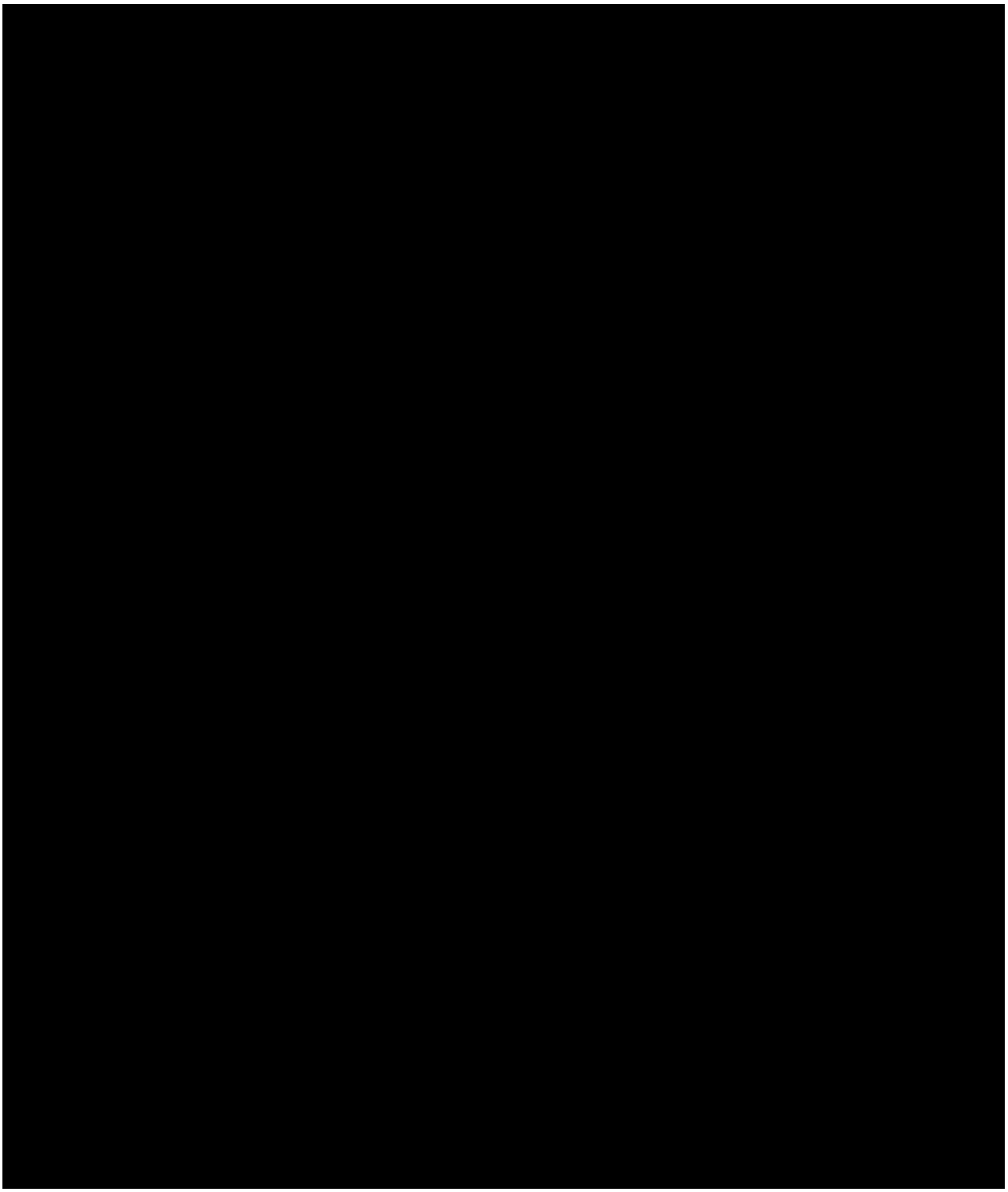

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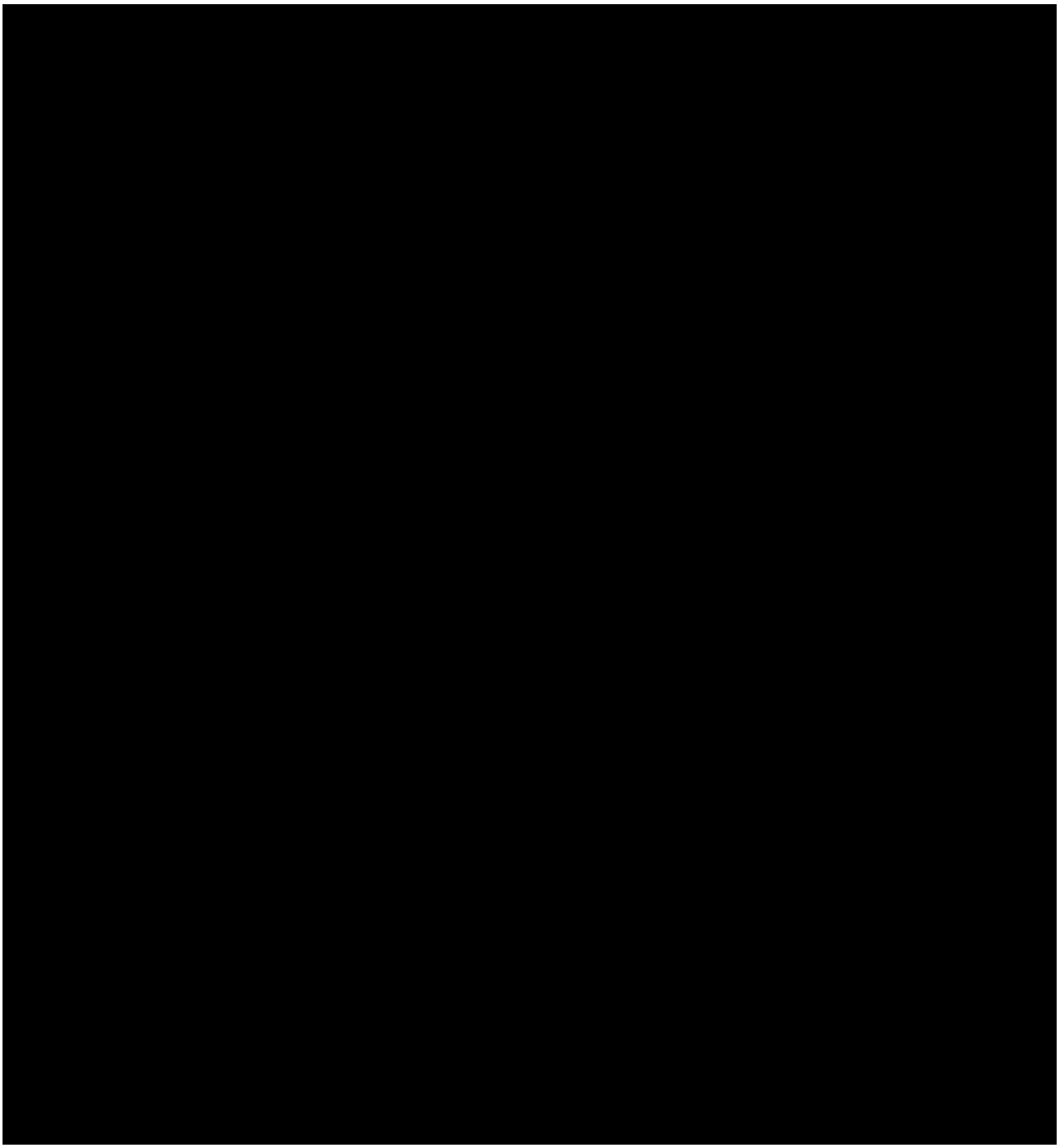

Figure 5 E911 FORM FLOW

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SEC. 1BE: DIGIT ANALYSIS SELECTOR ON AN OUTWATS SIMULATED FACILITY GROUP DAS

1. FEATURE DESCRIPTION

The DAS (Digit Analysis Selector) on an OUTWATS SFG (Simulated Facility Group) feature is added with the 5E7 Software Release. By associating a DAS with an SFG defined as "OUTWATS", this feature allows an office to route calls using a different dialing plan than the dialing plan associated with the originating line or trunk. This also expands the dialing capabilities of end users by allowing access to more than one PDIT, INDIT, or LDIT.

There are currently three features and one type of trunk that use OUTWATS SFGs on the 5ESS Switch. These are:

- PFA (Private Facilities Access)
- ARS (Automatic Route Selection)
- ASP (Advanced Services Platform)
- PRI (Primary Rate Interface) trunks

Of the above, the interaction with ASP is not supported since ASP means that the call is already using a different DAS.

The SFG DAS replaces the DAS associated with a line or trunk before digit analysis is done. Digit analysis then uses the new DAS to analyze the digits and the rest of the call completes as normal.

OUTWATS SFGs are accessed either by a user-dialed authorization code or through a route index contained in an ARS route list.

When a user dials a PFA access code using RBOW (Reorder Before OUTWATS), second dial tone is returned to the user. A message is sent to the CMP (Communication Module Processor) to find an idle SFG member. If the SFG hunt is successful, the SFG group number, member number and type are sent back to the SM prior to digit analysis. If PFA is not using RBOW, digit analysis is done before SFG availability is checked.

ARS uses a route index to access OUTWATS SFGs. This can be done automatically or through a user-dialed authorization code. SFG information is returned as described in the PFA scenario. If digit analysis is done before the SFG DAS is returned from the CMP (e.g., if it was previously done in the UNP (Uniform Numbering Plan)), it may be reinvoked using the ODP (Office Dialing Plan).

PRI trunks can also access OUTWATS SFGs. For example, an incoming PRI trunk connected to a PBX may use SFGs when a call from the PBX is routed out of the 5ESS switch.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PFASFG	5609-3A/B	4	10C	7.3

2.1 BRCS Translations

PFASFG form (5609-3A/B Record) - defines the SFG (Simulated Facility Group) that controls access to physical groups such as lines, trunks and special circuits. SFGs can be used for OUTWATS, INWATS, ESSX, EDSL, CCSA, SDN, Megacom, Megacom 800 and six-port conference circuits. An OUTWATS

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SFG can be associated with either an ARS (Automatic Route Selection) route list, a PFA (Private Facility Access) dial access, or, for 5E4(2) and later Software Releases, EDSL trunk groups. For access to any of these features, the MCRTIDX form (5304 Record) must contain the SFG Number that points to the PFASFG form.

When the SFG is used for OUTWATS, the PFASFG field SCREENING INDEX/SCRN IDX is required for band screening and the determining the appropriate Charge Index (CHGI) on the RAR form (5301 Record).

Added with the 5E7 Software Release for the DAS on OUTWATS SFG feature are the fields LINE DAS and TRK DAS.

The LINE DAS field is the Line Digit Analysis Selector associated with an SFG. Valid Entries are 1 - 99 for 5E14 and earlier and 1 - 254 for 5E15 and later. LINE DAS, if entered, must be defined on a DAS form (5604-3 Record).

TRK DAS is the Trunk DAS associated with this SFG. Valid entries are 1 to 99. A TRK DAS must be also defined on a DAS form.

An entry in LINE DAS or TRK DAS requires an entry in the SFG TYPE field on the PFASFG of "OUTWATS".

Both fields contain the following warning: the corresponding LOCAL DIT on the matching DAS form should be entered on an SMLDIT form (5106 Record) where the LIST OF SWITCHING MODULES contains all SMs in the office. If all potential users of this SFG reside in a subset of SMs in the office, the entry of the subset of SMs on the SMLDIT form is sufficient.

An entry in either LINE DAS or TRK DAS must not be the same as the global PVN DAS entered on the OFCOPT form (5509 Record).

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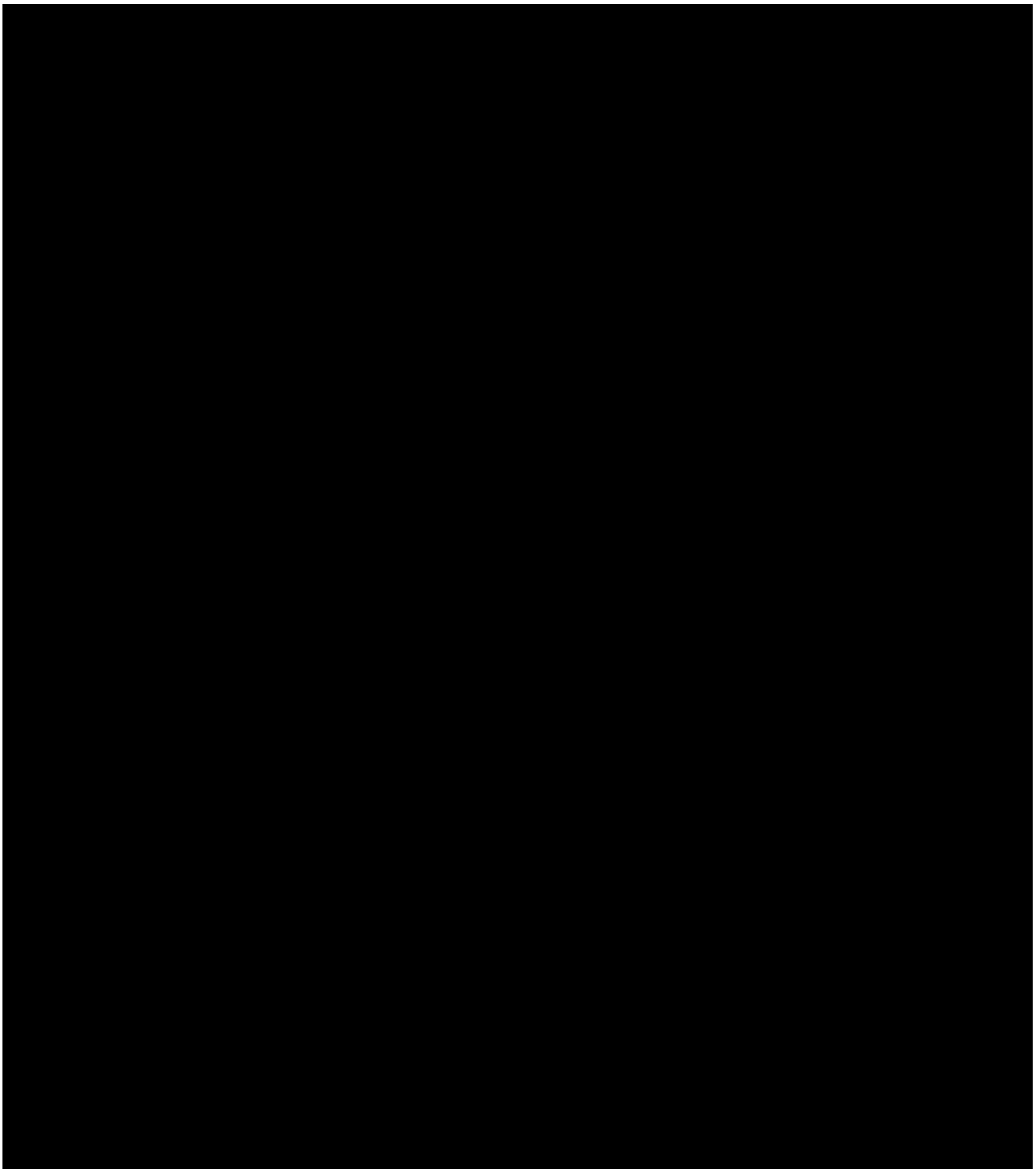

Figure 1 DAS ON OUTWATS FORM DEPENDENCIES

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SEC. 1BF: ANI6/ANI7 ON A TRUNK GROUP OR OUTWATS SIMULATED FACILITY GROUP

1. FEATURE DESCRIPTION

ANI6 (Automatic Number Identification 6) or ANI7 on a Trunk Group or OUTWATS SFG (Simulated Facility Group) is available with 5E7 and later Software Releases. The feature can optionally outpulse an ANI6 I-digit of 6, ANI6 II-digits of 06, an ANI7 I-digit of 7, or ANI7 II-digits of 07 for an OUTWATS SFG call or a trunk origination when the class of service is "PF", "PFITT", or "PFLASH".

Outpulsing is based on the SFG or trunk origination group and is done before the billing DN for call termination to a CAMA, TSPS, LTOLLCON or IC class or service trunk.

ANI I-digit or II-digits indicate to the operator system that the call may require special screening. Presumably, the operator system uses the ANI information for a database lookup to see how the call should be handled.

The ANI6 digits usually indicate a call from a Hotel/Motel customer, and could be similarly handled. Traditionally, ANI7 indicates a call from a coin phone.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MCRTIDX	5304	3	3Q	10.4
TKGRP	5202	3	2A	5.1

2.1 Translations

MCRTIDX form (5304 Record) - Also referred to as the BRCS - MC Route Index form, this record is used to determine routing for various BRCS capabilities. It is similar to the Route Index defined on the RTIDX form (5303 Record). The MCRTIDX, however, allows additional information that is required for ARS (Automatic Route Selection) and sometimes use for PFA (Private Facility Access).

An MC Route Index is usually required if an SFG is used. The only exception is when the SFG is associated with six-port conference circuits. In this case the PFATG form (5609-2 Record) points directly to the SFG Number.

Added with 5E7 under the ANI field group header on this record are the fields ANI6 and ANI7. Also listed under the ANI header are the fields ANI OUTPULSING and ANI II DIGITS.

Both the ANI 6 and ANI 7 field have valid entries of "Y" (Yes) or "N" (No) which determine whether special ANI digits are optionally outpulsed to the operator system to indicate that a call may require special screening.

The default value for both the ANI6 and ANI7 field is "N".

If ANI6 is "Y", the following must be true: ANI7 must not be "Y". Conversely, if ANI7 is "Y", ANI6 must not be "Y".

The following restrictions for MCRTIDX fields apply when either ANI6 or ANI7 is "Y":

- ANI OUTPULSING must be "Y"
- ANI II DIGITS must not be entered
- MC ROUTE TYPE must be "SFG"

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Also SFG NUMBER must be defined on the PFASFG form (5609-3A/B Record) must have an SFG TYPE of "OUTWATS".

The ANI OUTPULSING field is entered to indicate if outpulsing is allowed for an MC ROUTE INDEX. This field is applicable only when a TRUNK GROUP NUMBER has been entered.

ANI II DIGITS assigns ANI pairs to an MC ROUTE INDEX. Flexible ANI is a secured feature used for Automatic Number Identification in 5E6 and later Software Releases.

TKGRP form (5202-1/2/3/4/5/6/7 Record) - The Trunk Group forms are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group.

Added for this feature are the fields ANI6 and ANI7.

The default value for each of these fields is "N". The fields are identical to the ANI6 and ANI7 fields entered on the MCRTIDX form, however, the following restrictions apply specifically for the TKGRP form:

- If ANI6 is "Y", ANI7 must not be "Y"
- If ANI7 is "Y", ANI6 must not be "Y"
- TKRKCLS must be "PF", "PFITT", or "PFLASH"
- TRK DIR must be "INC" or "2W"
- DATA RATE must not be entered.

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SEC. 1BG: INTER-SWITCH VOICE MESSAGING

1. FEATURE DESCRIPTION

The ISVM (Inter-Switch Voice Messaging) feature is available with 5E7 and later Software Releases. This feature extends the functions of MSC (Message Service Center), CHI (Call History Information) Delivery, and MWI (Message Waiting Indicator) Control used in the MSS (Message Service System) feature to work across switches. (Division 2, Section 1M contains a feature description for MSS.)

With ISVM, VM (Voice Messaging) service providers can offer VM on an inter-switch or intra-LATA basis. ISVM communicates between switches using API (Applications Processor Interface) on the CCS7 network.

1.1 Client TN Types

In 5E6 and earlier Software Releases, for any inter-switch call forwarded within the switch serving the VM to the MSC, the OCDN (Original Called Directory Number) is considered as the first forwarding party. In 5E7 and later, if the call is received through a CCS7 trunk and the CHI indicates that the forwarding switch does not have VM, the OCDN is no longer considered the first forwarding party.

ISVM enhances the existing MSS call history information functionality by providing an RDN (Redirecting DN). The RDN is the DN of the last forwarding party before a call terminates.

For example, if A calls B, who forwards to C, who forwards to the MSC, B is the OCDN and C is the RDN. In 5E7, both OCDN and RDN are collected.

Through the newly added CLIENT TN TYPE field, clients can choose whether the OCDN or RDN is sent to the VM system. This field is applied to the group DN and its associated DNs on the MSC MLHG.

CLIENT TN TYPE has been added to the MLHG and MULTITIN forms (See Translation Requirements). Only the group DN and the dependent DNs associated with the group DN of an MSC MLHG can be assigned a CLIENT TN TYPE. This option is not assigned on per-member basis. If a call is forwarded to an MSC MLHG's individual DN or any hunted dependent DNs without a Client TN Type option assigned, the DN that is sent to VM system (either OCDN or RDN) is based on the option which is set for the MSC MLHG.

1.2 Business Group Identification Screening

ISVM does not support the concept of inter-switch business groups. With intra-switch VM the user is associated with one or more MLHGs and BCID (Business Group Identification) numbers. To receive call history information, these MLHGs are assigned as MSCs. MSCs can be assigned to serve clients from a maximum of 6 BCIDs. Calls can only be forwarded to an MSC if the first forwarding party is a client of the forward-to MSC. In addition, when a VM issues an MWI request, the switch only acts on the request when the destination DN is in the same BCID as the VM system's MSC.

Since ISVM does not send BCIDs across switches, calls that are forwarded inter-switch to a VM would fail the BCID check. Therefore, the BCID SCRNING field has been added to the MLHG and to forward calls without screening for the proper BCID (See Translation Requirements).

1.3 Near and Far Switches

A switch that serves the VM system is referred to a "Near" Switch. If the VM user is served by a different switch, that switch is referred to as a "Far" Switch.

Near and Far Switches should be engineered to ensure that all calls fom a user's station served by the Far Switch to the VM served by the Near Switch are routed over CCS7 trunks. If a call is forwarded to a VM system, but routed over non-CCS7 trunks between the Far and Near Switches, data for call history information may not be present or may be incorrect. In addition, an MWI activation message may not

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arrive at the called party's switch.

1.4 ISVM Scenarios

Scenario 1: No Screening MSC for Far Switch Subscribers

For this scenario, see Figure 1.

The INTRA SW DN field on the MLHG form (5110 Record) supports service uniformity for Far/Near Switch subscribers for No Screening MSCs. When this field is set to "N", the inter-switch Original Called Directory Number or the inter-switch Redirecting Directory Number is sent to the VMS. No BCIDs are assigned to the subscriber's lines. No screening is performed at the Message Service Center MLHG for forwarding to the VMS and no screening is done on the subscriber's line for MWI Security. MWI Security is set to "N".

Party A calls Party B. Party B is busy. Party B then forwards Party A to Party F. Party F does not pickup and Party A is forwarded to Party C using ISVM via CCS7 trunks. Party C does not answer and Party A is forwarded to Party D. Party D does not answer, and forwards Party A to the VMS. Since inter-switch OCDN or RDN terminiating numbers may be assigned to the subscriber's line, the following numbers are passed to the VMS:

If client TN Type (5110-3 Record) is set to "OCDN",

- Calling Party Number (CPN) is AAA-AAA-AAAA
- Called Party Number (OCDN) is BBB-BBB-BBBB

If Terminating Number is set to TYPE "RDN",

- Calling Party Number (CPN) is AAA-AAA-AAAA
- Called Party Number (RDN) is DDD-DDD-DDDD

TFOS 554 overrides this setting on a per-switch basis.

Scenario 2: No Screening MSC for Near Switch Subscribers

For this scenario, see Figure 2.

The INTRA SW DN field on the MLHG form (5110 Record) supports service uniformity for Near Switch subscribers for No screening MSCs. When this field is set to <169>Y<170>, the intra-switch Original Called Directory Number or the intra-switch Redirecting Directory Number is sent to the VMS. No BCIDs are assigned to the subscriber's lines. No screening is performed at the Message Service Center MLHG for forwarding to the VMS and no screening is done on the subscribe line for MWI security. MWI Security is set to "N".

Party A calls Party B. Party B is busy. Party B then forwards Party A to Party C using ISVM via CCS7 trunks. Party C does not answer and Party A is forwarded to Party D. Party D does not answer, and forwards Party A to the VMS. Since intra-switch OCDN or RDN terminiating numbers may be assigned to the subscriber's line, the following numbers are passed to the VMS:

If client TN Type (5110-3 Record) is set to "OCDN",

- Calling Party Number (CPN) is AAA-AAA-AAAA
- Called Party Number (OCDN) is CCC-CCC-CCCC

If Terminating Number is set to TYPE "RDN",

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- Calling Party Number is AAA-AAA-AAAA
- Called Party Number (RDN) is DDD-DDD-DDDD

TFOS 554 was provided before the work for MLHG was completed. It provides the same funtionality as the INTRA SW DN field on the MLHG form. If TFOS 554 = "Y" then INTRA SW DN=N will not work. TFOS 554 will take precedence. TFOS 554 is a per-switch application and INTRA SW DN set to "Y" allows the choice on a per MSC basis.

Scenario 3: Extended MSS (Message Service System) Functionality

For this scenario, see Figure 3.

ISVM extends some of the MSS functionality by delivering inter-switch call information such as CPN (Calling Party Number), OCDN (Original Called DN), or Redirecting DN (RDN). RDN is the last station that forwards the call to the VMS. The entire route to the switch must be via CCS7 trunks. The switches without the VMS are known as the Far Switches. The switch with the VMS is known as the Near Switch.

The MSS Software and the ISVM (Interswitch Voice Messaging) Software must be on all switches serving the subscriber base for the particular ISVM system. The ISVM software is used to interface to and from the CCS7 network. ISUP is used to provide the Call History to the Near Switch which uses ISVM to receive and unbundle the ISUP information which is passed to the MSS Software for sending the Call History to the API link and the translation device to produce SMDI (Simplified Message Desk Interface) messages, which are sent to the VMS. The actual physical link must be on the Near Switch only. The API link is a BRI permanent virtual circuit. SMDI messages are produced via a translation process from 5ESS X.25 to SMDI RS232 messages. Conversely, MWI (Message Waiting Indicator) messages are received by the Near Switch from the VMS with a reverse SMDI to X.25 process. If the MWI message is destined for an NPANXX on another switch, the MSS sends the information to ISVM which packages the MWI message in a TCAP message, and sends the message to the SCP for routing to the correct switch. When the destination switch is reached, the ISVM software unpackages the TCAP message, and sends it to the MSS Software for MWI application to the subscriber's line.

Scenario 4: Calling Party Number privacy Off

For this scenario, see Figure 4.

Party B calls the access number for the VMS. Since the Calling Party Number is not Private, the VMS reads the CPN and provides direct access to the caller's mailbox. The ISVM ISUP message carries the status of the Privacy indicators for Calling Party Number. The MSS code on the Near Switch reads the indicator status and since Privacy is not activated for the CPN, the CPN is provided to the VMS.

Scenario 5: Calling Party Number Privacy On

For this scenario, see Figure 5.

Party B calls the access number for the VMS. Since the Calling Party Number is Private, the VMS does not receive Party B's CPN and direct access to Party B's mailbox is denied. The VMS plays an announcement prompting the caller to enter the ten-digit number if the caller has voice mail on this system.

Direct access is denied to Party B's mailbox.

The ISVM ISUP message carries the status of the Privacy indicators for Calling Party Number. The MSS code on the Near Switch reads the indicator status and since Privacy is activated for the CPN, the CPN is not provided to the VMS.

Message Waiting Indicator is not affected by the CPN Privacy status.

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This Privacy interaction is usually based on all calls, per-switch Privacy activation. It is not feasible that a subscriber would activate per-call Privacy for access to the party's own mailbox. Local regulatory rulings can mandate this scenario.

Forwarded calls are not affected by the status of the CPN Privacy or Called Party Number Privacy.

Scenario 6: Calling Party Number Privacy On and Line Blocking Enhancement for ISVM On

For this scenario, see Figure 6.

Party B calls the access number for the VMS. The Calling Party Number is Private, but SFID 240 or OFID 669 is activated either on a per-switch basis via 5E10 SU (Software Update) or on a per Message Service Center Multi-line Hunt Group basis via 5E11 SU or 5E12 BMI. The VMS receives Party B's CPN and direct access to Party B's mailbox is allowed.

The ISVM ISUP message carries the status of the Privacy indicators for Calling Party Number. The MSS code on the Near Switch reads the indicator status and since Privacy is activated for the CPN, the CPN is not provided to the VMS. However, when this feature is activated the Privacy status is ignored and the CPN is presented to the VMS. THIS FEATURE DOES NOT OVERRIDE PRIVACY TO AN ICLID OR CALLER-ID DISPLAY ON A STATION SET OR CALL-ID BOX. This feature only allows presentation of the Private CPN for ISVM VMS on the 5ESS-2000 Switch.

Message Waiting Indicator is not affected by the CPN Privacy status. This Privacy interaction is usually based on all calls, per-switch Privacy activation. It is not feasible that a subscriber would activate per-call Privacy for access to the party's own mailbox. This feature has been developed strictly for the provision of direct access to a VMS by a ISVM subscriber. Forwarded calls are not affected by the status of the CPN Privacy or Called Party Number Privacy.

Scenario 7: Mixed Vendor ISVM Network

For this scenario, see Figure 7.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSAPP	5537	3	5AK	8.17
DSLAP	5963	6	6A	24.7
MLHG	5110	3	1J	3.5
MSFD	5962-1	6	5A	12.37
MSGP	5962-2	6	5B	4.37
MULTITN	5114	3	1N	3.3
OFCOPT	5509	3	5I	8.1

2.1 Line Translations

MLHG form (5110-1/2/3/4 Record) - This form is used to define Multi-Line Hunt Group information. Added to this record for the ISVM feature are the BCID SCRNING and CLIENT TN TYPE fields.

An entry of "Y" or "N" in the BCID SCREENING field determines if business customer ID screening is allowed for this MSC (Message Service Center). This field was added since ISVM does not send BCIDs across switches. An entry of "N", therefore, bypasses the normal screening of BCIDs for an MSC.

If BCID SCRNING is entered, CLIENT TN TYPE must be entered. When BCID SCRNING is "Y", at least one of the six possible BCIDs (Business Customer ID) must also be entered on the MLHG form. When BCID SCRNING is "N", AP SITE ID (also on the MLHG form) must be entered.

Both BCID SCRNING and CLIENT TN TYPE must be entered to allow entries for the MLHG fields AP SITE ID and BCID[1-6].

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The CLIENT TN TYPE field represents a client telephone number type of either OCDN or RDN (see Feature Description). This field allows VM users to choose which TN type is sent to the VM system. When CLIENT TN TYPE is entered, the SUBTN field on the MLHG form cannot contain entries. A CLIENT TN TYPE entry requires a BCID SCRNING entry.

CLIENT TN TYPE cannot be entered when the fields HIGHEST LISTED TN, SUBTN1 or MPTYPE are entered. When CLIENT TN TYPE is "RDN", the AP SITE ID field must also be entered.

MULTITN (5114 Record) - The Multiple TNs for Multiline Hunt Groups form assigns additional telephone numbers to an MLHG Main TN, to MLHG Subgroup TNs or to an individual MLHG member.

The CLIENT TN TYPE field has also been added to this form for additional TNs on an MLHG.

The following restrictions apply to this form: When SUBTN is entered, CLIENT TN TYPE cannot be entered; when CLIENT TN TYPE is entered, TERM must not be entered or must be 1, and NONHUNT must be "N".

2.2 Miscellaneous Translations

OFCOPT (5509 Record) - This form is required to supply various office options and parameters for each 5ESS Switch.

The ISVM TCAP TIMER field has been added with the ISVM feature to determine the timeout value for the ISVM Transaction Capabilities Application Part timer. The valid entry in this field can be from 1 to 10 seconds. The default value is 3 seconds.

DSAPP (5537 Record) - This form is used to specify the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks for CCS7 (Common Channel Signaling System 7) signaling protocols. It available with 5E4(2) and later Software Releases.

Added to DSAPP under the APPLIC field is the enumeration ISVM (or I) which indicates that the Direct Signaling Application type for a particular direct signaling trunk is Inter-Switch Voice Messaging.

2.3 ISDN/BRCS Translations

MSFD (5962-1 Record) - The Message Service System Feature Definition form defines the various options and preconstructed features associated with Message Service System. It is available in 5E4(2) and later Software Releases.

Each line which uses the MSS feature must be assigned only 1 MSS feature (defined on the MSFD form, 5962-1 Record) on the appropriate feature assignment form. (LINEFA, CLUSTR, BFG, or MLHLNEA form).

The MSG WAIT IND SCTY field has been added for the ISVM feature to determine if security for the MWI (Message Waiting Indicator) is activated. If this field is "Y", the MWI request is processed only if the BCID of the VM system matches the BCID of the destination DN of the user requiring the MWI indication. If "N" is entered, no security check is made.

When the AUD MSG WAIT IND or VIS MSG WAIT IND on this form are "Y", MSG WAIT IND SCTY must be entered. When AUD MSG WAIT IND or VIS MSG WAIT IND are "N", MSG WAIT IND SCTY must not be entered.

MSGP (5962-2 Record) - The Message Service System Group Parameters form is used to define the group information associated with the MSS feature.

Each line which uses the MSS feature must have a feature name defined on the MSFD form. Additionally, each line should be assigned to an MSS Group which may be defined as a default parameter of the MSFD form, or on an individual terminal basis with the MSLPA or MSMPA forms.

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The GRP TYPE field added with the ISVM feature defines the Message Service Group Type as either an intra-switch MSC serving users on the same switch or an ISVM group serving users on other switches.

If GRP TYPE is "MSS", then the BCID, DELUXE, MSG SRV CNTR, PASSWORD, and SRV ID fields on this form must all be entered.

If GRP TYPE is "ISVM", then BCID, MSG SRV CNTR, and SRV ID must be 0 and DELUXE and PASSWORD must be "N".

DSLAP (5963 Record) - The DSL Application Processor form is used to define the data links connecting an AP and the 5ESS Switch. Each AP is connected to one ISDN SM with DSL data links.

If a DSLAP form is submitted, then the APPLICATION PROCESSOR field on the OFCOPT form (5509 Record) must be "SM" or "AMSM".

The newly added ISVM field determines if the AP is associated with Inter-Switch Voice Messaging. Valid entries are Yes or No. The default value is No. If the E911 field on this form is "Y", ISVM must be "N".

Figure 1 INTRA-SWITCH DN=N

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Figure 2 INTRA-SWITCH DN=Y/TFOS 554

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Figure 3 EXTENDED MSS FUNCTIONALITY

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Figure 4 CALLING PARTY NUMBER PRIVACY OFF

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Figure 5 CALLING PARTY NUMBER PRIVACY ON

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Figure 6 CALLING PARTY NUMBER PRIVACY ON

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Figure 7 MIXED VENDOR ISVM NETWORK

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SEC. 1BH: ISDN INSPECT

1. FEATURE DESCRIPTION

Available with 5E11 and later, the ISDN Inspect, feature number 99-5E-2320, is a network-provided service, that allows NI-3 (National ISDN Phase 3) users to be presented (via displays) with information about feature activators, idle call appearances and non-idle call appearances.

There are three types of inspect operations:

- FBI (Feature Button Inspect) - Feature button inspect allows the end-user to obtain the service description associated with a feature activator.
- ICAI (Idle Call Appearance Inspect) - Idle call appearance inspect allows the end-user to view the directory number or intercom group information associated with a call appearance on his or her terminal.
- NCAI (Non-Idle Call Appearance Inspect) - Non-idle call appearance inspect allow the ISDN user to view the DN of the other party (if available and not private or CNIGI (Calling Number Intragroup Incoming Call Line Identification) restricted) on an active, held, or offered call. (For terminating calls, the ISDN user must be subscribed to CND (Calling Number Delivery) in order to receive the calling number of the originating party). In addition, calling party name information (if known and not private) is provided for calls terminated to the ISDN user if CNAM (Calling Name Delivery) is active.

2. FEATURE ASSIGNMENT

The form flow in Figure 1 provides information for assigning ISDN inspect.

- On the DISPFD form, set the INSPECT AMA field to "Y" .
- On the ISDNOPT form, set the ISDN INSPECT timer field to the desired value.
- Assign the Display feature to an ISDN line on the DSLUSR form.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DISPFD	5965	6	8A	12.43
ISDNOPT	5941	5	5B	8.1

DISPFD form (5965) - The 5965 Record allows the calling or called number and the time and date to be displayed at an ISDN station set. The INSPECT AMA field was added to support this feature.

ISDNOPT form (5941) - The 5902 Record defines a set of office parameters that must be entered when the office is an ISDN (Integrated Services Digital Network) switch. The ISDN INSPECT field was added to support this feature.

4. GLOSSARY

CND	Calling Number Delivery
CNIGI	Calling Number Intragroup Incoming Call Line Identification
FBI	Feature Button Inspect

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ICAI	Idle Call Appearance Inspect
ISDN	Integrated Services Digital Network
NCAI	Non-Idle Call Appearance Inspect
NI-3	National ISDN Phase 3

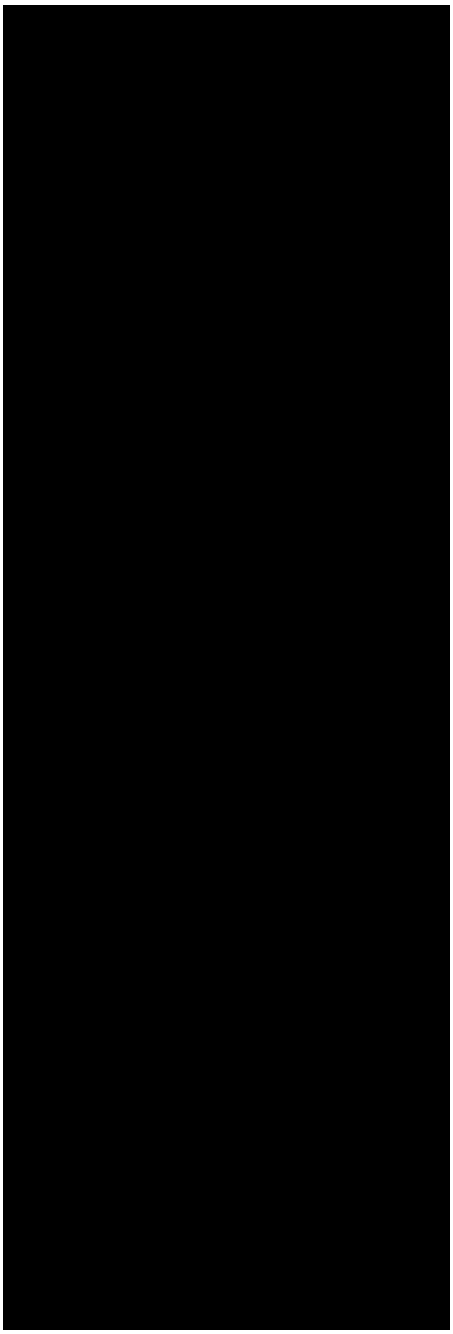

Figure 1 FORM FLOW FOR ISDN INSPECT

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SEC. 1BI: FEATURE GROUP D CARRIER IDENTIFICATION CODE EXPANSION

1. FEATURE DESCRIPTION

FGD (Feature Group D) CIC (Carrier Identification Code) Expansion is available in 5E9(1) and later Software Releases.

1.1 Carrier Identification Codes

CICs (Carrier Identification Codes) are used in dialing plans, administrative reports, MF (Multi-Frequency), CCS7 (Common Channel Signaling System 7), and Q.931 ISDN signaling sequences to indicate the desired IC (InterLATA Carrier) for a call. Previous to 5E8,

- FGB (Feature Group B) dialing was 950-0/1XXX, and
- FGD dialing was 10XXX,

where XXX is the CIC unique to the carrier.

CICs were limited to 3 digits, allowing a maximum of 1,000 codes, and were shared between FGB and FGD.

CICs must be allocated in a non-discriminatory manner; thus, ESPs (Extended Service Providers), as well as ICs, must be granted a CIC on request. In order to avoid exhausting CICs, a two-phase plan was formulated for the expansion of these resources.

Phase 1 (FGB CIC Expansion) in 5E8 and later eliminated the linkage between FGB CICs and FGD CICs to create two separate pools of CICs, and expanded the FGB CICs from 3 to 4 digits (XXXX).

For FGB CIC Expansion information see Division 2, Section 1AY.

1.2 Feature Group D

The FGD CIC Expansion feature is Phase 2 of the plan.

Feature Group D allows the telephone subscriber to specify the IC by a PIC (Pre-subscribed InterLATA Carrier) or by dialing the CAC (Carrier Access Code). This code was formerly 10XXX, where XXX is the CIC (Carrier Identification Code).

FGD CIC expansion consists of the following aspects:

1. Expand the CIC from the current 3 digits to 4 digits in the dialing, administration, and signaling formats for FGD and in all other external interfaces and feature interactions. Currently assigned 3-digit CICs are extended to 4 digits by prepending the current 3-digit code with a 0.
2. Expand the CAC in the FGD dialing plan from 5 digits to 7 digits. The expansion of the CIC from 3 to 4 digits modifies the current FGD dialing plan when dialing to override a presubscribed carrier from 10XXX to 101XXXX.
3. Provide a transitional access capability to reach an FGD carrier via 950 dialing for FGB carriers 0/1XXX to FGD carriers XXX. See Section 2.2 for more information.

For information on OSPS Translations for Feature Group D, see Division 2, Section 3E.

2. FEATURE ASSIGNMENT

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2.1 Network Upgrade

This feature is part of the larger network capability to support 4-digit FGD carrier codes. Other network elements, including the OSs (Operations Systems), APs (Application Processors), SCPs (Service Control Points), and CPEs (Customer Premises Equipments) need to be equipped with the software to support this 5ESS Switch feature. A number of steps required to completely establish the FGD CIC Expansion feature before assignment of 4-digit CICs follow:

1. The first step requires that the link between FGB and FGD access types be broken. This was accomplished by the FGB CIC Expansion feature. This feature should be deployed in each switch upgraded with FGD CIC Expansion, along with the accompanying FGB operations systems enhancements.

2. The second step requires that all systems which receive FGD carrier data from the switch be upgraded. This includes FGD-specific modifications on OSs, APs and SCP databases.

3. The third step requires that the feature as specified in this document be deployed in all equal access switches in the network. When an area is chosen to be upgraded to support FGD CIC Expansion, each switch in that area can be upgraded so long as Steps 1 and 2 above have been accomplished for that switch. While the switches in an area do not need to be upgraded in a specific order, access tandems should be retrofitted first and then subtending end-offices. If the access tandems are upgraded, then trunk signaling conversion can begin as in Step 5 between an end office and the access tandem even if all other end offices have not upgraded. IC/INC offices could upgrade at this time if they so desire, but will not be required to do so.

4. The fourth step requires that every affected interface that will send new data to the switch be upgraded with this capability. These interfaces include PBXs.

5. When all these items are in place, the capability can be phased in separately for the trunk signaling, product interfaces, and dialing.

2.2 Transitional Access Capability

The Transitional Access capability for CICs in the current 3-digit XXX range (prior to the FGB CIC Expansion) is retained. In order for the Transitional Access capability to work, the carrier must get the same code assignment for both FGB and FGD. The expansion of FGB CICs, implemented in the 5E8 FGB CIC Expansion feature, is a pre-requisite for this feature. A Transitional Access carrier with an FGB CIC in the 0XXX or 1XXX range should be assigned an FGD CIC of 0XXX. Subscribers should be allowed to dial either 950-0XXX or 950-1XXX to reach a Transitional Access carrier. Regardless of whether 0 or 1 was dialed for this carrier, the call is considered an FGD call with a CIC of 0XXX, and this is reflected in the signaling, billing, and measurements for the call.

2.3 CAC Code Expansion

The ability to dial an expanded (101XXXX) CAC is determined by a new office parameter on the OFCOPT form. This office parameter indicates the current phase of the office as follows:

- During the pre-permissive period, callers must use the existing 10XXX CAC. Test lines will have the capability to dial the expanded CAC and be routed to the proper carrier.

- During the permissive period, the caller is allowed to dial using the expanded CAC (101XXXX) only for carriers starting with 0, 5, or 6. During this period, both the 10XXX and 101XXXX dialing formats will be accepted.

- During the post-permissive period, callers must use the new 101XXXX CAC (a new FIXED ROUTE TYPE of "INVCAC" is needed prior to changing to the post-permissive period). Use of the old format will result in an error announcement and an incorrectly routed call.

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In summary, the CAC is

- 10XXX for 5e8 and earlier, and in 5E9(1) and later if in the pre-permissive or permissive periods, or
- 101XXXX for 5E9(1) and later if in the permissive or post-permissive periods.

2.4 Office Dialing and Individual Dialing Plans

Office Dialing Plans do not have to be reprovisioned to support expanded CACs. Expanded CACs are also allowed using Individualized dialing plans. However, unlike ODPs, IDP's will require provisioning to support the new CAC format.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CARSCR	5551	3	6B	1.60
CDIM	5300-6	3	3E	9.7
CTTU	5518	3	5R	14.4
DSLUSR	5908	5	1I	23.2, 23.8
FIXRT	5301-1	3	3G	10.1
ICF	5305	3	3R	10.3
IDPGP	5601-4	4	2D	9.10
IDPGPA	5601-1/2	4	2B	9.13
LDIT	5300-3/5	3	3C	9.3
LINE	5109	3	1I	1.6, 1.8
MCRTIDX	5304	3	3Q	10.4
MLDIT	5300-3	3	3C	9.15
MLHLN	5111	3	1K	3.2
OFCOPT	5509	3	5I	8.1
ROTL	5512	3	5L	14.2
RTIDX	5303	3	3P	10.2
TKEDSLD	5209	3	2K	5.34
TKGRP	5202	3	2A	5.1
TLWS	5511	3	5K	14.3
TODCL	5610-2	4	11B	4.5

3.1 Line Translations

LINE form (5109 Record) - This form defines the office Equipment Number and features for each telephone number in a 5ESS Switch.

The definition for the enumeration "ALLOW" for the CIDIAL field is modified from 10XXX to FGD CAC to reflect the change in the CAC. The PIC field is expanded from 3 to 4 digits.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group.

The definition for the enumeration "ALLOW" for the CIDIAL field is modified from 10XXX to FGD CAC to reflect the change in the CAC. The PIC field is expanded from 3 to 4 digits.

3.2 Trunk Translations

TKEDSLD form (5209 Record) - This form defines EDSL (Extended Digital Subscriber Line) Call by Call features assigned to a B-channel trunk group.

The CARRIER ID field is expanded from 3 to 4 digits.

TKGRP form (5202 Record) - This form defines parameters for each Trunk Group in a 5ESS Switch.

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The expansion of the CARRIER ID field from 3 to 4 digits for FGB in 5E8, now also applies to FGD. The PIC field is expanded from 3 to 4 digits. The definition for the enumeration "ALLOW" for the CIDIAL field is modified from 10XXX to FGD CAC to reflect the change in the CAC.

The new field FGD CIC SZ is the expected size for the incoming CIC for 2-way or incoming TTOLLCON, LTOLLCON, or LATA trunk classes. If this field is not entered, a 3-digit CIC is allowed.

Valid entries are:

- "BOTH", 3- or 4-digit CIC expected; and
- "FOUR", 4-digit CIC expected.

3.3 Routing and Charging Translations

CDIM form (5300-6 Record) - This form defines carrier specific code indexes and route indexes for the CI (Carrier Interconnect) capability.

The expansion of the CARRIER ID field from 3 to 4 digits for FGB in 5E8, now also applies to FGD.

FIXRT form (5301-1 Record) - This form defines routing and charging treatment of fixed route types.

The FIXED ROUTE TYPE field added the enumeration "INVCAC" which provides routing for a 7-digit CAC to an error announcement if 101 is not dialed in the post-permissive period.

ICF form (5305 Record) - This form defines the characteristics of InterLATA (Local Access Transport Area) carriers.

The expansion of the CARRIER ID field from 3 to 4 digits for FGB in 5E8, now also applies to FGD.

For the MEASUREMENT field, the number of ICF forms that can have "Y" is increased from 200 to 500.

Note: the transition carriers have not changed.

LDIT form (5300-3/5 Record) - This form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

The SAC OWNER field is expanded from 3 to 4 digits.

MCRTIDX form (5304 Record) - This form defines the routing for various BRCS capabilities.

The CARRIER ID field is expanded from 3 to 4 digits.

A new field, FGD CIC 4, indicates whether the SSP (Service Switching Point) is capable of handling a 4-digit CIC. A value of "Y" means a 4-digit CIC is used; "N" means the 3-digit CIC is still being used. This capability is indicated to the SCP (Service Control Point) on an outgoing Equal Access Trunk.

MLDIT form (5300-3 Record) - This form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

The SAC OWNER field is expanded from 3 to 4 digits.

RTIDX form (5303 Record) - This form defines each Route Index in a 5ESS switch.

A new field, FGD CIC 4, indicates whether the SSP (Service Switching Point) is capable of handling a 4-digit CIC. A value of "Y" means a 4-digit CIC is used; "N" means the 3-digit CIC is still being used. This capability is indicated to the SCP (Service Control Point) on an outgoing Equal Access Trunk.

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3.4 Miscellaneous Translations

CTTU form (5518 Record) - This form defines the CTTUs (Central Trunk Test Units) used to test trunks and lines from a remote location.

The CARRIER ID field is expanded from 3 to 4 digits.

OFCOPT form (5509 Record) - This form defines various miscellaneous office options and parameters.

Fields CARRIER ID, FAIL ID, and PSEUDO CARR are expanded from 3 to 4 digits. The OFFICE CARRIER field is expanded from 3 to 4 digits ("LEC" may also be entered now).

A new field, FGD PHASE, indicates the FGD phase for the office. Valid entries are:

- "PREPHASE", ordinary subscribers are allowed to dial the 5-digit CAC. Test lines will have the capability to dial the expanded CAC and be routed to the proper carrier.
- "PERMPHASE, ordinary subscribers are allowed to dial either the 5- or 7-digit CAC on a call by call basis.
- "POSTPHASE", ordinary subscribers are allowed to dial only the 7-digit CAC.

All values of FGD PHASE do not impact dialing of 950 calls or any other features.

A new field, TCAP CIC, indicates whether the office accepts an expanded TCAP CIC. The value of this field indicates to the SCP whether or not the SSP is capable of handling a 4-digit CIC. A value of "Y" means that a 4-digit CIC is used; "N" means that the 3-digit CIC is still being used.

If FGD PHASE is equal to "POSTPHASE", exactly one FIXRT form must exist with FIXED ROUTE TYPE equal to "INVCAC".

ROTL form (5512 Record) - The ROTL (Remote Office Test Line) form interfaces with existing CAROT (Centralized Automatic Reporting On Trunks) systems through the DDD Network. This form stores the security call-back telephone numbers of all CAROTS that can access the 5ESS Switch trunks (outgoing and 2-way) in this office, and also defines the maintenance mode of the CAROT.

The CARRIER ID field is expanded from 3 to 4 digits.

TLWS form (5511 Record) - This form defines each TLWS (Trunk and Line Work Station) associated with a 5ESS Switch.

The CARRIER ID field is expanded from 3 to 4 digits.

3.5 Secured Features Translations

CARSCR form (5551 Record) - This form is used by the operating company to assign carrier line screening information to an individual TN or to an MLHG and MLHG member for a particular carrier.

The CARRIER ID field is expanded from 3 to 4 digits.

3.6 BRCS Translations

IDPDCA form (5601-1/2 Record) - The IDPDCA form defines the dialed codes associated with IDPs (Individualized Dialing Plans).

The ACTION field contains a new enumeration "SP4CAR" to indicate that a 4-digit carrier code is used.

IDPGP form (5601-4 Record) - This form defines the options associated with IDPs (Individualized Dialing

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Plans).

The GPIC field is expanded from 3 to 4 digits.

TODCL form (5610-2 Record) - This form defines the TOD activities that will occur on a particular line, terminal, or trunk group at a specified time.

The ONE PARAMETER ACTION field must be four digits (0000 - 9999) when ACTION is "GRPCARCH".

3.7 ISDN/Packet Switching Translations

DSLUSR form (5908 Record) - The DSLUSR form defines the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes.

The definition for the enumeration "ALLOW" for the CIDIAL field is modified from 10XXX to FGD CAC to reflect the change in the CAC. The PIC field is expanded from 3 to 4 digits.

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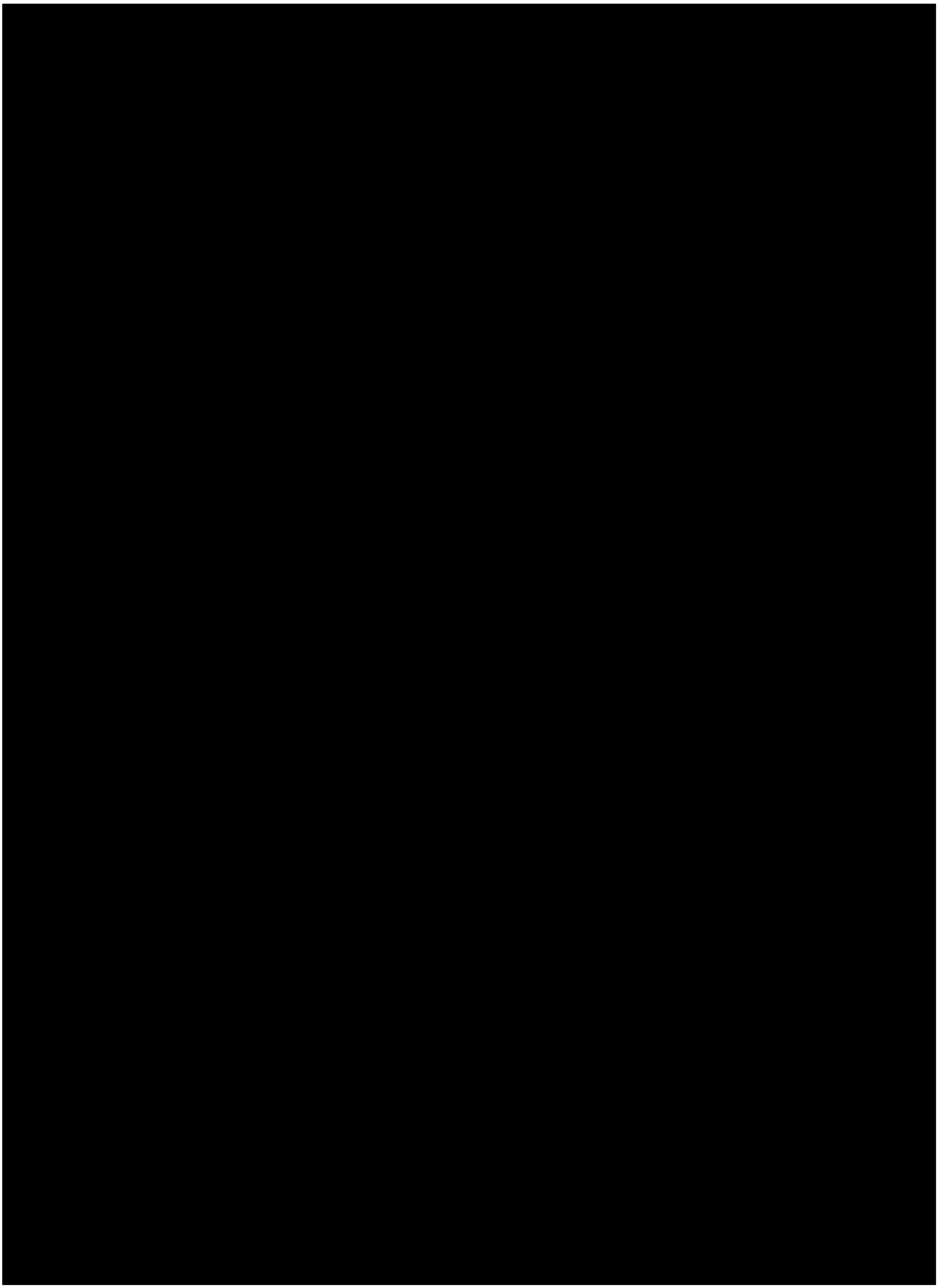

Figure 1 FORM FLOW - FEATURE GROUP D CARRIER IDENTIFICATION CODE EXPANSION

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SEC. 1BK: PSU TIME SLOT ASSIGNMENTS

1. FEATURE DESCRIPTION

The PSU (Packet Switch Unit) section describes the procedures required to engineer and assign TSIU (Time Slot Interface Uit) peripheral side time slots needed for packet switched services and other special services requiring protocol handler assignments on the PSU. Peripheral time slots are provided through PIDBs (Peripheral Interface Data Bus). Each PIDB carries 32 time slots, 0 to 31, and connects a peripheral unit such as a line unit to a data port on a DI (Data Interface). These assignments only apply to SMs□not SM-2000. For each SM, there are two DIs, 0 and 1, and each DI terminates 256 time slots via 16 data ports (see Figure 1).

Most peripheral units such as line units and trunk units use all 32 time slots in the PIDB, i.e., all time slots are occupied with active channels and there are no idle time slots. Other units such as the DFI (Digital Facility Interface) unit or the DSU2-RAF (Digital Service Unit 2-Recorded Announcement Function) unit, only use a subset of the 32 time slots. For these units, stuffing patterns are used to balance the active channels across the 32 time slots on the assigned PIDB. Figure 2 specifies the number of PIDB time slots required by each peripheral unit.

Except for the PSU, peripheral unit time slots are internally allocated on a DI and do not require manual engineering or assignment. These time slots provide a path between a peripheral unit and the TSIU.

With the introduction of ISDN (Integrated Services Digital Network), special signaling protocols such as X.25 and X.75 require assignment to a protocol handler on a PSU. The PSU consists of up to 5 shelves with each shelf equipped with a maximum of 16 protocol handlers. As with the other peripheral units, this signaling information also requires a path to the TSI and is provided through a PSU PIDB from each equipped shelf to one of the DIs. For 5E10 and later, each shelf can have up to 4 PSU PIDBs.

However, unlike the other peripheral units, PSU PIDBs do not have a fixed number of active channels. The usage of these PSU PIDB time slots will be variable depending on services and features provisioned on the PSU. Therefore, the time slots needed for these services must be engineered and assigned on the PSU. Figure 3 lists the various services requiring PSU time slots.

The remainder of this section discusses the procedures necessary to engineer and assign these PSU time slots using both Recent Change for in-service offices, and ODA for initial and Large Terminal Growth offices.

1.1 PSU Time Slot Assignments Using Recent Change

PSU data is entered using RC View 22.2 for shelf 0 (shown in Figure 4) and 22.3 for shelves 1 - 4 (shown in Figure 5). Note that PSU time slots are assigned on RC View 22.2 for the entire PSU, that is, for shelves 0 - 4. Screen 2 reserves time slots for DI 0; screen 3 reserves time slots for DI 1.

A maximum of 128 PSU time slots can be assigned to each DI. However, the total reserved time slots across both DIs cannot exceed 160, based on a maximum of 5 shelves on the PSU with each shelf having access to 32 time slots via a PSU PIDB assignment on each shelf. The 128 time slots for each DI are arranged in 4 rows with each row having 32 time slots. The logic of this arrangement will become apparent later. Note that the headings for these fields are titled "DI(0/1) PSU TSIU TIMESLOTS". This implies that time slots are being reserved in the Data Interfaces (0 or 1) and not specific PIDBs. Hence, there is no correlation between a specific row of time slots and a specific PIDB.

DIs deliver time slots to the TSI which is part of the MCTU (Module Controller and TSIU) on the SM. For a given time slot (00-31), the TSI is designed to simultaneously switch up to 8 active peripheral unit channels. To avoid blocking conditions, attempts to reserve more than 8 active channels to a time slot result in an RC error message.

To provide a quick and easy method to determine unassigned time slots, the AVAILABLE TS field has

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been added to each DI on the 22.2 view beginning in 5e9(1). The AVAILABLE TS field indicates the quantity of unused time slots for each time slot position on each DI. The values (ranging from 0 - 8) indicated in the AVAILABLE TS row reflect current peripheral unit assignments including any PSU time slots already reserved on a DI.

For example, if a 1 is entered in the AVAILABLE TS row under the TS 00 position for DI 0, this means one additional channel may be assigned to TS 00. This implies 7 channels are currently assigned to TS 00 from other peripheral units located on this SM including any PSU time slots already reserved for TS 00 as would be indicated in the 4 RPTSS (Reserved Peripheral Time Slots Set) rows on DI 0. If the value is 2, 2 additional channels may be assigned, if the value is 3, 3 additional channels, and so on.

Services being provisioned are assigned a PH (Protocol Handler) through an ISCN (Integrated Services Channel Number) assignment found on various views. The ISCN is a 6-digit number as follows: X-XX-XXX, where

X - PSU Shelf, 0-4
- XX - Channel Group, 0-15
- XXX - Channel, 000-127

Reserving PSU time slots to a DI is not an arbitrary assignment. The engineering process basically involves determining which DI, RPTSS, and specific time slots provide an optimum configuration that makes efficient use of the DI time slots while at the same time supporting future growth on the selected DI.

1.2 Data Interface Selection

If time slots are being reserved for a specific service, the shelf must be known. Assignments should then be made to the DI terminating the PIDB assigned to this shelf. The PIDB is determined from the DI field on either the 22.2 view for shelf 0 or the 22.3 view for shelves 1-4 (see Figures 4 and 5). Operational PIDBs can be verified by using the 18.7 verify view.

If time slots are being reserved for future use, these views should still be referenced to determine which DI(s) to use. For this case, if all equipped shelves terminate to DI 0, time slots should be reserved in DI 0. If all equipped shelves terminate to DI 1, time slots should be reserved in DI 1. If equipped shelves terminate to both DIs, time slots may be reserved in either or both DIs.

1.3 Reserved Peripheral Time Slot Set Selection

Once the DI has been selected, the next step is to select the RPTSS. As stated earlier, the 128 time slots for each DI are arranged in 4 time slot sets 0-3, with each set having 32 time slots. Time slots are delivered to the DI in groups of 32. Each row therefore, visually represents a PIDB's worth of time slots numbered 00 to 31.

Note that there is no correlation between a specific RPTSS row and a specific PSU PIDB. In other words RPTSS0 does NOT represent the PIDB assigned to shelf 0. A PIDB is required for each RPTSS used for PSU time slots. For example, if time slots are reserved on any 2 RPTSSs on the selected DI, at least 2 PIDBs must terminate to the selected DI. This implies that a minimum of 2 shelves must be equipped on the PSU. If time slots are assigned to any 3 RPTSS on the same DI, at least 3 PIDBs (minimum of 3 shelves) are required, and so on. RPTSS selection normally starts in RPTSS0 then 1, 2 and finally 3.

1.4 Time Slot Selection

Once the DI(s) and RPTSS(s) have been selected, time slots can be reserved based on the values in the AVAILABLE TS field.

In order to maximize the usage of all available time slots and support future growth on the selected DI, the

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following recommendations are offered:

1. Assignments should start in the "least used" TS positions as indicated by the AVAILABLE TS field. The values in the AVAILABLE TS field indicate the quantity of unassigned time slots for each TS position, 00 to 31. Therefore, the "least used" positions will have the highest quantity in the AVAILABLE TS field.

2. Figure 9 shows stuffing patterns for DFIs and DSU2-RAF units, DTA w/o AOC, (Dial Through Announcement without Announcement Only Channel). If possible, PSU assignments should be made using the idle time slots indicated for each of the stuffing patterns. This would allow for future growth of these units to the selected DI.

1.5 Assignment Examples

1.5.1 Example 1:

Reserve 10 time slots for future use. PSU equipped with shelf 0. Refer to figures 6a, 6b, 6c, and 6d.

- RC 22.2 indicates shelf 0 terminates to DI 0 (Figure 6a). No other shelves are equipped. DI 0 is selected.

- PSU only has 1 shelf. Therefore all time slots must be assigned to one RPTSS. RPTSS0 is selected.

- AVAILABLE TS field for DI 0 shows a value of 2 in TS 02, 04, 08, and 10 (Figure 6b). Four reservations are made in these time slots as shown in figure 6c. The other 6 are assigned using idle time slots shown for DFI stuffing pattern A in Figure 9. TS 00, 12, 16, 20, 24 and 28 are selected. This would still allow for growth of a DFI pack with stuffing pattern A. It can be seen that if sequential assignments were made in TS 00 through 09, further peripheral unit growth would not be possible on this DI. Figure 6d shows DI 0 after all assignments are made.

1.5.2 Example 2:

Reserve 5 time slots for future use. PSU equipped with shelves 0 and 1. Refer to Figure 7a, 7b, and 7c-1 and 7c-2.

- Both shelves terminate to DI 0 as indicated on views 22.2 and 22.3 (figure 7a and 7b). DI 0 is selected.

- Since 2 shelves are equipped, time slots can be spread over 2 RPTSSs. RPTSS 0 and 1 are selected.

- Figure 7c-1 shows the AVAILABLE TS field with a value of 3 in TS 02, and a value of 2 in TS 04, 08, and 10. If 5 assignments are required, 4 assignments would be made to TS 02, 04, 08, and 10 on RPTSS0 as in the previous example. Since 2 PIDBs terminate to DI 0, the fifth time slot can be assigned to TS 02 on RPTSS1. Figure 7c-2 shows these assignments with the AVAILABLE TS field showing all 1s. This configuration allows for future growth of any peripheral unit type on this DI.

1.5.3 Example 3:

Reserve 5 time slots for EDSL (Extended Digital Subscriber Line) D channel trunks. PSU equipped with shelves 0 and 1. EDSL trunks to be assigned to shelf 1. Refer to figure 8a, 8b, and 8c.

1.6 PSU Time Slot Assignments Using ODA

PSU data is provided in ODA using the EQPSU form shown in Figure 10. Time slots are reserved using

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the DI0/DI1 PSU TSIU fields.

The switch owner must tell AT&T hardware/software engineering how many time slots to reserve for the PSU. An ISA report shown in Figure 11 is used by the Telco to request PSU TSs. After the time slots are reserved by the AT&T engineer, the switch owner may then assign PSU services using the applicable forms for the type of service. The PSU competes with other peripheral units for DI time slots. If too many assignments are made, system error message "IM 85", will be generated. IM 85 will display current TS assignments and can be used to determine corrective action to eliminate the source of blockage.

There are two essential considerations in time slot assignment to meet the TELCO's requirements: How Many? and Which Ones? The following PSU assignment strategy suggests how to select time slots for the best fit with other peripheral units.

1.6.1 First Pass:

Starting at the upper right hand corner of the RPTSS grid on the EQPSU form, mark a {1} under TS 0. Moving from right to left, mark a {1} every 4 position under TS 4 and 8 and 12 and so forth. Stop when you have marked enough to meet your needs. This provides the first 8 PSU TSs. If more are needed, continue.

1.6.2 Second Pass:

Starting at upper right hand corner of the RPTSS grid on the EQPSU form, mark a {1} under TS 1. Moving from right to left, mark a {1} every 4 position under TS 5 and 9 and 13 and so forth. Stop when you have marked enough to meet the TELCO's needs. This provides the second 8 PSU TSs. If more are needed, continue.

1.6.3 Third Pass:

Starting at upper right hand corner of the RPTSS grid on the EQPSU form, mark a {1} under TS 2. Moving from right to left, mark a {1} every 4 position under TS 6 and 10 and 14 and so forth. Stop when you have marked enough to meet the TELCO's needs. This provides the third 8 PSU TSs. If more are needed, continue.

1.6.4 Fourth Pass:

Starting at upper right hand corner of the RPTSS grid on the EQPSU form, mark a {1} under TS 3. Moving from right to left, mark a {1} every 4 position under TS 7 and 11 and 15 and so forth. Stop when you have marked enough to meet the TELCO's needs. This provides the fourth 8 PSU TSs. If more are needed, continue.

1.6.5 Fifth Pass:

Starting at right hand corner on the second line (RPTSS1) of the EQPSU form, mark a {1} under TS 0.

- ***NOTE:*** This is the second TS 0 assigned; you must have at least 2 PSU PIDBs to this DI. When you start a new line, you must verify (via the PIDB list) the availability of sufficient PSU shelves associated with the DI for which you are reserving timeslots. You cannot continue without enough PSU PIDBs.

Moving from right to left, mark a {1} every 4 position under TS 4 and 8 and 12 and so forth. Stop when you have marked enough to meet the TELCO's requirements. This provides 8 additional PSU TSs. If more are needed, continue.

1.6.6 More Passes:

Continue the same pattern until the TELCO's needs are met. Remember to count your PIDBs when you

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start a new line.

1.6.7 Last Pass:

Starting at the right hand corner of the last line, mark a {1} under TS 3. Moving from right to left, mark a {1} every 4 position under TS 7 and 11 and 15 and so forth. This provides the last 8 PSU TSs. You cannot assign more TS to this DI.

Note that this PSU-TS assignment strategy cannot be used in the following two SM configurations:

- A PSU is mixed with a RAF-DTA w/o AOC
- A PSU is mixed with a DLTU-R serving OSPS.

See Division 8, Section 22 for more information on PSU time slot assignments.

1.7 Glossary

DFI - Digital Facility Interface

DI - Data Interface

DSU2-RAF - Digital Service Unit 2-Recorded Announcement Function

DTA w/o AOC - Dial Through Announcement without Announcement Only Channel

EDSL - Extended Digital Subscriber Line

ISCN - Integrated Services Channel Number

ISDN - Integrated Services Digital Network

MCTU - Module Controller and TSIU

PIDB - Peripheral Interface Data Bus

PH - Protocol Handler

PSU - Packet Switch Unit

RPTSS - Reserved Peripheral Time Slot Set

TS - Time Slot

TSIU - Time Slot Interface Unit

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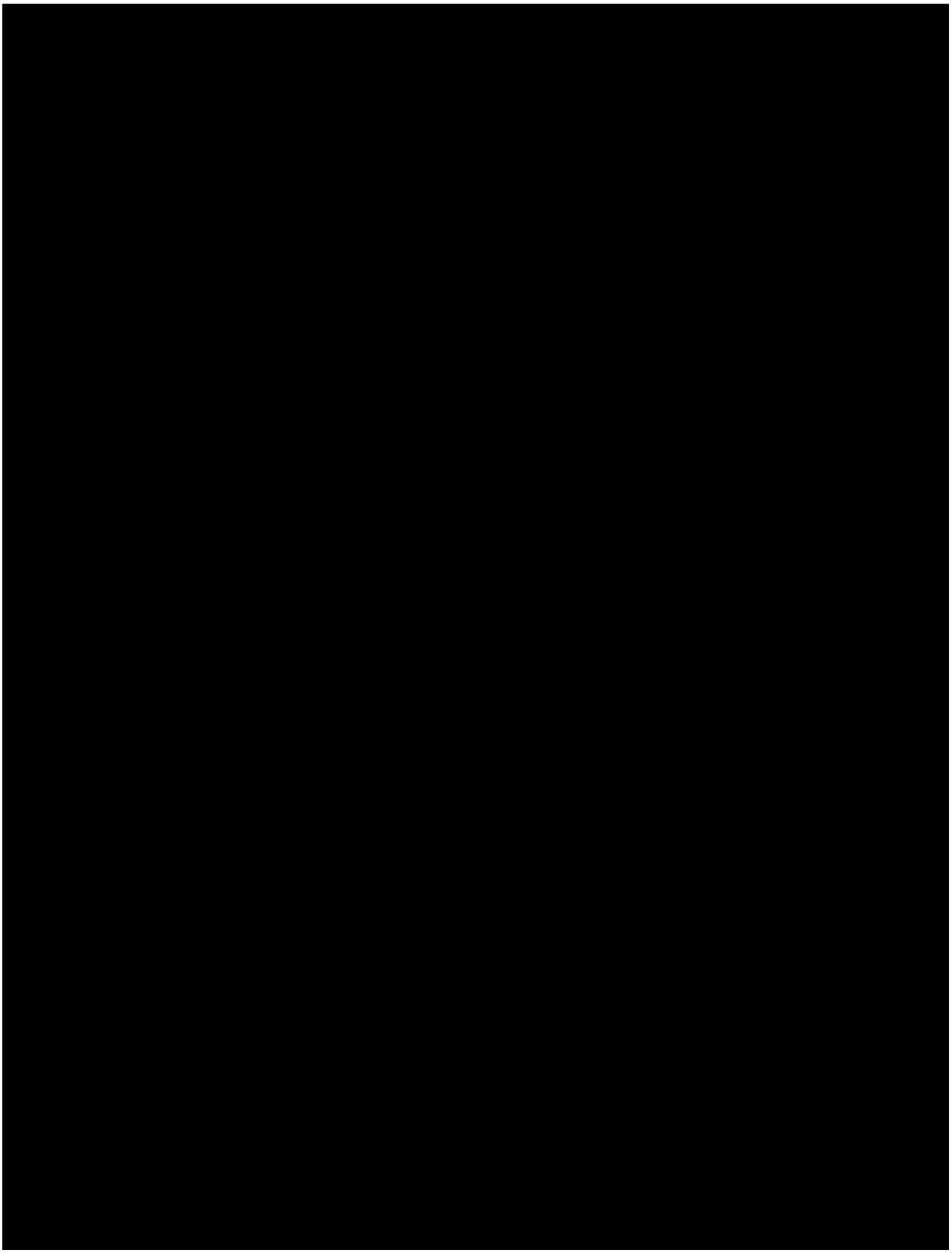

Figure 1 PERIPHERAL UNIT DATA INTERFACES

The following table specifies the number of PIDB TSs required by each peripheral unit.

Required PIDB TSs by Unit			
Form	**Peripheral Unit**	**Time Slots/Data Interface**	**TG-5 Div/Sec**
EQAIU (19.16)	AIU	5E11 and later. 64 TSs per PIDB pair (must be grown as pairs).	8/64
	Remote AIU	5E12 and later. 32 TSs per PIDB (can be grown individually).	
EQDCLU (19.6)	DCLU	32 TSs for LCRs 8:1 - 9:1, per Service Group.	8/30
EQDCLU (19.6)	DCLU	64 TSs for LCRs 4.5:1 and lower, per Service Group.	8/30
EQLU (19.1)	LU	64 TSs, per unit.	8/9
EQTU (19.2)	TU	32 TSs, per Service Group.	8/13
EQIDCU (19.12)	IDCU	32 TSs, per Data Port pair.	8/48
EQISLU (22.5)	ISLU	32 TSs, per Data Port pair.	8/18
EQDS (19.5)	DSU	32 TSs, per Service Group.	8/21
EQISTF (19.11)	DSU2-ISTF	32 TSs.	8/37
EQRA (19.10)	DSU2-RAF	32 TSs per ANN.	8/35
EQRA (19.10)	DSU2-RAF	20 TSs per DTA or CTR, without Announcement Only Channel.	8/35
EQRA (19.10)	DSU2-RAF	32 TSs per DTA or CTR, with Announcement Only Channel.	8/35
EQPSU (22.2)	PSU	Between 0 and 128 TSs (user-specified).	8/22
EQDUP (20.4)	DLTU	24 TSs per DFI-1 pack.	8/17
EQDUP (20.4)	DLTU	24 or 48 TSs per DFI-2 pack.	8/17

Figure 2 REQUIRED PIDB TIME SLOTS BY UNIT

FORM/VIEW	DIV/SEC	FIELD	SM	RECORD	APPLICATION
DSL (22.9, 23.2)	5, IH	PPB1 ISCN	DSL OE (RISLU)	5907-2	Permanent Packet B1-Channel X.25 Packet Switching. Reserved time slots are required only on RISLU. Access the EQRISLU form (22.9) to determine if the OE is a RISLU.
DSL (22.9, 23.2)	5, IH	PPB2 ISCN	DSL OE (RISLU)	5907-4	Permanent Packet B2-Channel X.25 Packet Switching. Reserved time slots are required only on RISLU. Access the EQRISLU form (22.9) to determine if the OE is a RISLU.
DSL (22.9, 23.2)	5, IH	D ISCN	DSL OE (RISLU)	5907-1	D-Channel Services. Reserved time slots are required only on RISLU. Access the EQRISLU form (22.9) to determine if the OE is a RISLU.
AMLBDSL (21.34)	3, 4AV	B1ISCN	LCEN (RISLU)	5447-1	Operator Services Position System (OSPS) Automated Multi-Leaf Bulletin.
OSPSDSL (21.30)	3, 4L	ISCN	LCEN (RISLU)	5411	Assorted OSPS Applications.
PSISM (22.13)	5, 3A	SM	SM	5920	Packet Switching between SMs.
PSISM (22.13)	5, 3A	MATE SM	MATE SM	5920	Packet Switching between SMs.
TRUNK (5.5)	3, 2C	MEMB	DEN	5204-1	Associated TRKCLS on TKGRP form (5202-1 Record) is "PACKET"; used for Internal Protocol Two-Way Packet Switching.
TRUNK (5.5)	3, 2C	MEMB	DEN	5204-1	Associated TRKCLS on TKGRP form (5202-1 Record) is "X75P"; used for Two-Way X.75' connections between a 5ESS Switch and a Public Packet Switch Network.
TRUNK (5.5)	3, 2C	MEMB	DEN	5204-1	Associated TRKCLS on TKGRP form (5202-1 Record) is "X75"; used

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					for Two-Way X.75 connections between a 5ESS Switch and an Inter-Exchange Carrier or Independent Packet Switch Network.
TRUNK (5.5)	3, 2C	MEMB	DEN	5204-1	Associated TRKCLS on TKGRP form (5202-1 Record) is "EDSL"; used for Extended Digital Subscriber Line (also referred to as Primary Rate Interface).
TRUNK (5.5)	3, 2C	MEMB	DEN	5204-1	Associated TRKCLS on TKGRP form (5202-1 Record) is "IFOPER"; used by OSPS to Inter-Flow on an Outgoing Basis.
TRUNK (5.5)	3, 2C	MEMB	DEN	5204-1	Associated TRKCLS on TKGRP form (5202-1) Record is "IFTERM"; used by OSPS to Inter-Flow on an Incoming Basis.
XAT (23.40)	5, 1J	ISCN	DEN	5909-1	X.25 on T1.

Figure 3 APPLICATIONS THAT REQUIRE RESERVED TIME SLOTS

```
                    5ESS SWITCH
SCREEN 1 OF 3                RECENT CHANGE  22.2
(5741)           EQUIPMENT UNIT □ PACKET SWITCH UNIT

*1. SM ___        3. EQSTAT   _     #5. EQLUNVER   __
*2. PSU _        #4. EQLBAY   _     #6. EQLAISLE   ____
                   SG0            SG1

                 7. CLI  ________  10. CLI  ________
                #8. CI   _       #11. CI   _
                #9. PICB __      #12. PICB __
SHELF0           #13. DI  _       #17. DI   _
                #14. PIDB __     #18. PIDB __
21. PH2 MIN SPARE  __  15. EQSTAT _      19. EQSTAT _
22. PH3 MIN SPARE  __  16. CLI  ________  20. CLI  ________
23. BRI RDTA PIDB TS _
```

```
                    5ESS SWITCH
SCREEN 2 OF 3                RECENT CHANGE  22.2
(5741)           EQUIPMENT UNIT □ PACKET SWITCH UNIT

            24. DI0 PSU TSIU TIMESLOTS
         3322 2222 2222 1111 1111 1100 0000 0000
ROW      1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0 1001 1001 1001 1001 1001 1001 1001 1001
2  RPTSS1 0000 0000 0000 0000 0000 0000 0000 0000
3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 0000 0000 0000 0000 0000 0000 0000 0000
```

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```
                              5ESS SWITCH
SCREEN 3 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT

                33. DI1 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0 ____ ____ ____ ____ ____ ____ ____ ____
2  RPTSS1 ____ ____ ____ ____ ____ ____ ____ ____
3  RPTSS2 ____ ____ ____ ____ ____ ____ ____ ____
4  RPTSS3 ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE
TIMESLOTS 0000 0000 0000 0000 0000 0000 0000 0000
```

Figure 4 RECENT CHANGE TIME SLOT ASSIGNMENT VIEW 22.2

```
                              5ESS SWITCH

                              RECENT CHANGE  22.3

                    EQUIPMENT UNIT □ PACKET SWITCH UNIT

*1. SM    ___
*2. PSU   _
*3. SHELF _
                         SG0              SG1
                    #4. DI   _________   #8. DI
                    #5. PIDB __          #9. PIDB __

12. PH2 MIN SPARE    __   6. EQSTAT _          10. EQSTAT _
13. PH3 MIN SPARE    __   7. CLI    _________   11. CLI    _________
14. BRI RDTA PIDB TS _
```

Figure 5 RECENT CHANGE TIME SLOT ASSIGNMENT VIEW 22.3

```
                              5ESS SWITCH
SCREEN 1 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT
*1. SM    1          3. EQSTAT     0      #5. EQLUNVER    15
*2. PSU   0          #4. EQLBAY    0      #6. EQLAISLE    0101
                       SG0               SG1
                     7. CLI    1         10. CLI    1
                     #8. CI    0         #11. CI    0
                     #9. PICB  6         #12. PICB  7
SHELF0               #13. DI   0         #17. DI    0
                    #14. PIDB  6         #18. PIDB  7
21. PH2 MIN SPARE    1    15. EQSTAT 0          19. EQSTAT o
22. PH3 MIN SPARE    0    16. CLI    0          20. CLI    0
23. BRI RDTA PIDB TS 0
```

Fig. 6a

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```
                              5ESS SWITCH
SCREEN 2 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT

                  24. DI0 PSU TSIU TIMESLOTS
3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0 0000 0000 0000 0000 0000 0000 0000 0000
2  RPTSS1 0000 0000 0000 0000 0000 0000 0000 0000
3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1111 1111 1111 1111 1111 1212 1112 1211
```

Fig. 6b

```
                              5ESS SWITCH
SCREEN 2 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT
                  24. DI0 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0 0000 0000 0000 0000 0000 0101 0001 0100
2  RPTSS1 0000 0000 0000 0000 0000 0000 0000 0000
3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1111 1111 1111 1111 1111 1111 1111 1111
```

Fig. 6c

```
                              5ESS SWITCH
SCREEN 2 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT
                  24. DI0 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0 0001 0001 0001 0001 0001 0101 0001 0101
2  RPTSS1 0000 0000 0000 0000 0000 0000 0000 0000
3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1110 1110 1110 1110 1110 1111 1111 1110
```

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Fig. 6d

Figure 6 RECENT CHANGE ASSIGNMENT EXAMPLE - 1

```
                              5ESS SWITCH
SCREEN 1 OF 3                      RECENT CHANGE  22.2
(5741)                  EQUIPMENT UNIT □ PACKET SWITCH UNIT
*1. SM  1            3. EQSTAT     0      #5. EQLUNVER    15
*2. PSU 0            #4. EQLBAY    0      #6. EQLAISLE    0101
                      SG0                  SG1
                    7. CLI     1         10. CLI    1
                    #8. CI     0         #11. CI    0
                    #9. PICB   6         #12. PICB  7

SHELF0              #13. DI    0         #17. DI    0
                   #14. PIDB   6         #18. PIDB  7

21. PH2 MIN SPARE   1   15. EQSTAT  O         19. EQSTAT O
22. PH3 MIN SPARE   0   16. CLI     0         20. CLI    0

23. BRI RDTA PIDB TS 0
```

Fig. 7a

```
                              5ESS SWITCH
                            RECENT CHANGE  22.3
                         EQUIPMENT UNIT □ PACKET SWITCH UNIT
*1. SM    1
*2. PSU   0
*3. SHELF 1

                         SG0                  SG1
                       #4. DI    0          #8. DI     0
                       #5. PIDB  14         #9. PIDB   15

12. PH2 MIN SPARE   1   6. EQSTAT G           10. EQSTAT O
13. PH3 MIN SPARE   1   7. CLI    0           11. CLI    0

14. BRI RDTA PIDB TS 0
```

Fig. 7b

```
                              5ESS SWITCH
SCREEN 2 OF 3                      RECENT CHANGE  22.2
(5741)                  EQUIPMENT UNIT □ PACKET SWITCH UNIT
```

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```
                24. DI0 PSU TSIU TIMESLOTS (DI0)
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0 0000 0000 0000 0000 0000 0000 0000 0000
2  RPTSS1 0000 0000 0000 0000 0000 0000 0000 0000
3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1111 1111 1111 1111 1111 1211 1112 1311
```

Fig. 7c-1

```
                              5ESS SWITCH
SCREEN 2 OF 3                        RECENT CHANGE  22.2
(5741)                  EQUIPMENT UNIT □ PACKET SWITCH
UNIT

                24. DI0 PSU TSIU TIMESLOTS (DI0)
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
1  RPTSS0  0000 0000 0000 0000 0000 0101 0001 0100
2  RPTSS1  0000 0000 0000 0000 0000 0000 0000 0100
3  RPTSS2  0000 0000 0000 0000 0000 0000 0000 0000
4  RPTSS3  0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1111 1111 1111 1111 1111 1111 1111 1111
```

Fig. 7c-2

Figure 7 RECENT CHANGE ASSIGNMENT EXAMPLE - 2

```
                              5ESS SWITCH
                            RECENT CHANGE  22.3
                     EQUIPMENT UNIT □ PACKET SWITCH UNIT
*1. SM    1
*2. PSU   0
*3. SHELF 1
                          SG0                SG1
                      #4. DI    1        #8. DI   1
                      #5. PIDB  12       #9. PIDB 13
12. PH2 MIN SPARE    1    6. EQSTAT G        10. EQSTAT G
13. PH3 MIN SPARE    1    7. CLI    0        11. CLI    0

14. BRI RDTA PIDB TS 0
```

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Fig. 8a

```
                              5ESS SWITCH
SCREEN 3 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT

              33. DI0 PSU TSIU TIMESLOTS (DI1)
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
 1  RPTSS0 0000 0000 0000 0000 0000 0001 0001 0001
 2  RPTSS1 0000 0000 0000 0000 0000 0000 0000 0000
 3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
 4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1111 1111 1111 1111 1111 111 0 1110 1110
```

Fig. 8b

```
                              5ESS SWITCH
SCREEN 3 OF 3                      RECENT CHANGE  22.2
(5741)                EQUIPMENT UNIT □ PACKET SWITCH UNIT

              33. DI1 PSU TSIU TIMESLOTS (DI1)
          3322 2222 2222 1111 1111 1100 0000 0000
ROW       1098 7654 3210 9876 5432 1098 7654 3210
 1  RPTSS0 0000 0000 0000 0000 0000 0000 0000 0000
 2  RPTSS1 0001 0001 0001 0001 0001 0001 0001 0001
 3  RPTSS2 0000 0000 0000 0000 0000 0000 0000 0000
 4  RPTSS3 0000 0000 0000 0000 0000 0000 0000 0000
AVAILABLE
TIMESLOTS 1110 1110 1110 1110 1110 1110 1110 1110
```

Fig. 8c

Figure 8 RECENT CHANGE ASSIGNMENT EXAMPLE - 3

		DFI Stuffing Pattern								
Unit	**Stuffing Pattern**	**31-28**	**27-24**	**23-20**	**16-19**	**12-15**	**11-8**	**7-4**	**3-0**	**Idle Time Slots**
DFI	A	1110	1110	1110	1110	1110	1110	1110	1110	0,4,8,12,16,20,24,28
	B	1101	1101	1101	1101	1101	1101	1101	1101	1,5,9,13,17,21,25,29
	C	1011	1011	1011	1011	1011	1011	1011	1011	2,6,10,14,18,22,26,30

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	D	0111	0111	0111	0111	0111	0111	0111	0111	3,7,11,15,19,23,27,31
DSU2-RAF DTA w/o AOC*	A	0110	1101	1011	0110	1101	1011	0110	1100	0,1,4,7,10,13,16,19,22,25,28
	B	0101	1011	0110	1101	1011	0110	1101	1010	0,2,5,8,11,14,17,20,23,26,29
	C	0011	0110	1101	1011	0110	1101	1011	0110	0,3,6,9,12,15,18,21,24,27,30, 31

*DTA w/o AOC -- Dial Through Announcement without Announcement Only Channel
Figure 9 APPLICATIONS THAT REQUIRE RESERVED TIME SLOTS

```
Screen 1 of 4                5ESS Switch
eqpsu                 OFFICE DATA ADMINISTRATION
(5741-1/2)            PACKET SWITCHING UNIT EQUIPAGE

 *1. SWITCHING MODULE        ___

 #2. CONTROL GROUP            _
 #3. CONTROL PORT            __
 #4. EQUIPMENT BAY            _
 #5. EQUIPMENT VERTICAL      __
 #6. EQUIPMENT AISLE         ____
 #7. SG 0 COMMON CONTROL EQST O
 #8. SG 0 COMMON CONTROL CLI  ________
 #9. SG 1 COMMON CONTROL EQST O
#10. SG 1 COMMON CONTROL CLI  ________
```

```
Screen 2 of 4                5ESS Switch
eqpsu                 OFFICE DATA ADMINISTRATION
(5741-1/2)            PACKET SWITCHING UNIT EQUIPAGE

11. PIDBs


      PSU   SHLF SIDE  SHLF SIDE   SHLF SIDE  SHLF SIDE   DATA    DATA
row   SHELF   0 EQST      0 CLI      1 EQST      1 CLI     GROUP   PORT
 1     0       _     ________      _     ________      _     __
 2     1       _     ________      _     ________      _     __
 3     2       _     ________      _     ________      _     __
 4     3       _     ________      _     ________      _     __
 5     4       _     ________      _     ________      _     __
```

```
Screen 3 of 4                5ESS Switch
eqpsu                 OFFICE DATA ADMINISTRATION
(5741-1/2)            PACKET SWITCHING UNIT EQUIPAGE

            20. DI0 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
          1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0 ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1 ____ ____ ____ ____ ____ ____ ____ ____
```

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3. RPTSS2 ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3 ____ ____ ____ ____ ____ ____ ____ ____

Screen 4 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

29. DI1 PSU TSIU TIMESLOTS
3322 2222 2222 1111 1111 1100 0000 0000
1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0 ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1 ____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2 ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3 ____ ____ ____ ____ ____ ____ ____ ____

Figure 10 ODA TIME SLOT ASSIGNMENT - EQPSU FORM

PSU #1 PROTOCOL HANDLER ASSIGNMENTS

DPIDB Port							-ism - trk/cnl spare							Total		
Shelf	A	B	C	D	E	F	p2	p3	ts	p2	p3	p2	p3,	p2	p3	sum
4	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0
3	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0
2	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0
1	1.00	1.00	0.25	0.00	0.00	0.00	1	0	3	0	1	1	1	2	5	7
0	1.00	1.00	0.25	0.25	4.00	1.00	1	0	3	1	4	1	1	3	13	16

TRUNK/CHANNEL PROTOCOL HANDLER ASSIGNMENTS

PRI				XAT			IP			X.75			X.75P			NU TS	DI
Shelf	CH	p2	p3	CH	p2	p3	TK	p2	p3	TK	p2	p3	TK	p2	p3	(30 avl)	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	7	1
0	2	1	0	5	0	1	6	0	1	4	0	1	4	0	1	24	0

Total PIDBS + DPIDBs for ISLU# 1 = 12

- Total PIDBS + DPIDBs for ISLU# 2 = 16
- Remaining TSIU Ports = 11 ISLU PIDB TS = 160 Spare TS for any unit = 127
- IDCU PIDB TS = 0
- ISTF TS = 0 PSU TS demand = 31
- DLTU TS = 192 Avail. TS for PSU only = 0
- Inter-SM TS = 6 IDCU Nail-up TS for TSIU = 0
- Packet Trunk TS for PSU = 25 Used Nail-up TS for TSIU = 56
- Recovered DLTU TS (0) Avail. Nail-up TS for TSIU = 134

TABLE M SWITCHING MODULE LOADING

DATA GRP	UNIT	TIME SLOT	LINES	NOTE OR TBL
1st	ISLU0	32	250	
1st	ISLU1	64	50	
1st	DLTU0	72		
1st	PSU0	24		

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1st	**TOTAL**	192	300	
2nd	ISLU0	64	SEE ABOVE	
2nd	DLTU0	120		
2nd	PSU1	7		
2nd	**TOTAL**	191		
ALL	**TOTAL**	383	300	

Figure 11 TYPICAL ISA REPORT & SM LOADING TABLE

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SEC. 1BL: PRIVACY FEATURES

1. BACKGROUND

With the introduction of the caller ID feature in 5E4(2), the issue of privacy has been the focus of much attention. Numerous features have been developed that impact the public/private status of calling party information such as CPN (Calling Party Number) and CNAM (Calling Party Name). As a result, the complex interactions between these features has made it increasingly difficult to evaluate and accurately provision the issue of privacy to meet specific customer needs.

The information in this section will attempt to clarify these interactions and allow the desired public/private results to be implemented using the appropriate features.

This section on privacy features includes the following:

- descriptions of the various features which impact the presentation status of the calling party number.
- a series of tables that show how the CPN information is manipulated for each segment of a call
- examples on how to interpret and apply the various tables for different call scenarios.

2. FEATURE DESCRIPTIONS

The following are brief descriptions of the features impacting display and/or delivery of the calling party number. (For more information, please refer to other Lucent Technologies feature documentation as well as other sections in the TG-5.)

ACP (All-Call Privacy) -
defines CPN presentation status (public/private) for all calls originated from a specific line or entire office.

CNIGI (Calling Number Intragroup ICLID) -
restricts delivery of CPN to stations within the same terminal group.

CPN/BN (Calling Party Number/Billing Number) -
for lines: delivers either CPN or BN to a terminating user

for PRI trunks: delivers either CPN or BN over PRI

CPNP (Calling Party Number Presentation) -
provides modification of precedence between all-call/per-call privacy on a screen index basis.

ELIGI (Enhanced Limited Intragroup ICLID): PRI Trunks (METROHUB 2) -
extends LIGI functionality to PRI trunks.

Forced CPN Privacy over CCS (Common Channel Signaling) Trunks -
Forces CPN IAM Calling Party Presentation Indicator "PRIVATE" for all CCS7 calls leaving the office.

ICLID (Incoming Calling Line Identification) -
allows display of the CPN to a terminating line.

LIGI (Limited Intragroup ICLID): Lines -
restricts public CPN delivery to stations within the same terminal group.

PCP (Per-Call Privacy) -
toggles ACP (All-call Privacy) setting using dial codes or feature buttons.

Private Number Delivery Option over PRIs -

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provides option to block delivery of private CPNs over PRI trunks on office basis or PRI trunk group basis.

Station Identification over PRI trunks -
Delivers the STATION ID (CPN) over an outgoing PRI trunk if available.

3. FEATURE INTERACTIONS

The table in Figure 1 lists the translation forms and associated data fields that impact the provisioning requirements for each of the above features.

The complexity of interactions results when several of the features listed in the table are assigned and interact on a per-call basis.

As can be seen from the features listed in the table, privacy affecting features can be assigned on either the originating or terminating side of a call. Therefore, the final status of the CPN is determined by combining the presentation status delivered from the originating side of the call with the terminating features applicable on the terminating side of the call.

For example, the final CPN presentation status for a typical line-to-line intraswitch call could be determined by the interaction between the all-call and per-call privacy features assigned to the originating line, and the TGSR and LIGI features assigned to the terminating line. For an interswitch line-to-line call, the final presentation status is determined by interactions in the originating switch along with those interactions in the terminating switch.

3.1 Call Segments Interactions

The best way to illustrate the interactions of these features on a per-call basis is through the use of a set of tables representing each segment of a call for the following call types:

- Line to Line
- Line to trunk
- Trunk to Line
- Trunk to Trunk

Tables are defined for each of the following call segments:

Call Segment	Figure	Table
Line origination, CPNP off	2	A
Line origination, CPNP on (all call Privacy)	3	B
Line origination, CPNP on (per call Privacy)	4	C
Trunk termination (PRI)	5	D
Trunk termination (CCS)	6	E
Trunk termination (EAMF)	7	F
Trunk origination (EAMF/CCS)	8	G
Trunk origination (PRI - CPNP inactive)	9	H
Trunk origination (PRI - CPNP active)	10	I
Line termination	11	J

These tables can be combined to determine final presentation delivery and display status for both intraswitch and interswitch calls.

Each table reflects a precedence order for the applicable features.

3.2 Assumptions

In using the tables, the following assumptions are made.

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1. PCP (Per-call-privacy) is active via subscription or a generally available feature. For PCP to be available for lines in an office, PCP must be assigned by one of these methods.
2. PCP is set to "SUBSCR" or "GENAVAIL" on LASSFA form (RC view 8.18). For PCP to be available in an office, it must be assigned to one of these values on the 8.18 view.
3. A generally available TN PRIVACY feature is assigned on the LASSOP form (RC view 8.21). This assumption ensures that PCP is available either through a subscribed or a generally available feature.
4. Differences in display formats between custom and standard ISDN are not reflected in the tables.
5. All assigned TGSR features are unrestricted originating and terminating.

4. EXAMPLES

The following examples refer to Figures 2 - 12. Figure 12 shows which figures are to be referenced per Call Type.

4.1 Example 1: Intraswitch Call

Line A calls Line B.

- Call conditions and office data:
  - Line A does not invoke PCP.
  - CPNP is inactive.
  - Office privacy set to NO.
  - Line A privacy is set to NO.
  - A TGSR feature is not assigned.
  - LIGI is inactive.
- From the table usage chart in Figure 12:
  - For Line origination use Table A in Figure 2.
  - For Line Termination use Table J in Figure 11.
- Applying the call conditions and office data to the above tables results in the following:
  - From the table in Figure 1: Line A's CPN/BN status is delivered as PUBLIC.
  - From Table A in Figure 2: Line A's CPN/BN appears on Line B's display.

4.2 Example 2: Intraswitch Call

Line A Calls Line B

- Call conditions and office data:

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- CPNP is active.
- Line A invokes PCP (Per-Call Privacy).
- Line A does not have privacy defined.
- Line A screening index privacy is set to yes.
- LIGI is active.
- CNIGI restrictions do not apply.
- Both lines A and B are assigned to a TGSR, but they are in different terminal groups.

- From the table usage chart in Figure 12:
  - For line origination use Table C in Figure 4 (CPNP active and PCP invoked).
  - For line termination use Table J in Figure 11.

- Applying the call conditions and office data to the above tables results in the following:
  - Table C in Figure 4: Line A's CPN/BN status is delivered as PUBLIC CPNP and is active, with SI privacy set to yes, but PCP is invoked which toggles CPN/BN to PUBLIC.
  - Table J in Figure 11: Line B's display shows PRIVATE NUMBER.

    From Table C in Figure 4, CPN/BN is received as PUBLIC.

    Line A and Line B are in different TGs.

    LIGI is active, which results in PRIVATE NUMBER being displayed.

4.3 Example 1: Interswitch call

Line A in switch A calls line B in switch B over a PRI trunk group (both switch A and switch B are 5ESS-2000 Switches).

- Call conditions and office data:
  - Switch A:
    - Line A does not invoke PCP.
    - Office privacy is set to no.
    - Line A privacy is set to no.
    - CPNP is inactive.
    - PRI is assigned to a valid CPN BN OPTION

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- or STA ID is set to "TRAN".
- TGSR is unassigned.

- Switch B:
  - CPNP is inactive.
  - Office Privacy is set to yes.
  - Trunk group privacy is set to no.

- This scenario is first analyzed as a line-to-trunk call in switch A and then as a trunk-to-line call in switch B.
- From the table usage chart in Figure 12:
  - For line origination in switch A, use Table A in Figure 2 (CPNP inactive, PCP not invoked).
  - For trunk termination to a PRI trunk in switch A, use Table D in Figure 5.
  - For trunk origination from a PRI trunk in switch B, use Table H in Figure 9 (CPNP inactive).
  - For line termination in switch B, use Table J in Figure 11.
- Applying the call conditions and office data to the above tables results in the following:
  - Table A in Figure 2: Line A CPN/BN status is delivered as PUBLIC.
  - Table D in Figure 5: PRI in switch A delivers CPN/BN to switch B.
  - Table H in Figure 9: PRI in switch B delivers CPN/BN with presentation indicator set to PRIVATE (Office PRIVACY has precedence over Trunk group Privacy).
  - Table J in Figure 11: Line B display indicates PRIVATE NUMBER.

4.4 Example 2: Interswitch Call

Line A in switch A calls line B in switch B over a PRI trunk group (both switch A and switch B are 5ESS-2000 Switches).

- Call conditions and office data:
  - Switch A:
    - Line A does not invoke PCP.
    - Office privacy is set to no.
    - Line A privacy is set to no.

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- ELIGI is inactive.
- CPNP is inactive.
- TGSR is not assigned.
- PRI is assigned to a valid CPN BN OPTION
- or STA ID is set to "TRAN".

- Switch B:
  - CPNP is active.
  - TGSR is assigned to PRI and Line B, but they are in different TGs.
  - LIGI is active.
  - CNIGI restrictions apply.

- This scenario is first analyzed as a line-to-trunk call in switch A and then as a trunk-to-line call in switch B.
- From the table usage chart in Figure 12:
  - For line origination in switch A, use Table A in Figure 2 (CPNP inactive, PCP not invoked).
  - For trunk termination to a PRI in switch A, use Table D in Figure 5.
  - For trunk origination from a PRI in switch B, use Table I in Figure 10 (CPNP active).
  - For line termination in switch B, use Table J in Figure 11.
- Applying the call conditions and office data to the above tables results in the following:
  - Table A in Figure 2: Line A CPN/BN status is delivered as PUBLIC.
  - Table D in Figure 5: Line A CPN/BN is delivered over PRI to switch B with presentation status of PUBLIC.

    From Table A in Figure 2, PRI receives Line A CPN/BN as PUBLIC.

    CPN/BN delivery to switch B is allowed through CPN BN OPT or STA ID.

    No TGSR feature is assigned, and

    ELIGI is inactive.
  - Table I in Figure 10: PRI in switch B delivers Line A CPN/BN with a presentation status of

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PUBLIC (valid presentation status received overrides CPNP).

- Table J in Figure 11: Line B display indicates INCOMING CALL.

  PRI and Line B are in different trunk groups.

  LIGI active would result in a display of PRIVATE NUMBER.

  However, CNIGI is also active, which has precedence over the LIGI display, resulting in the display of INCOMING CALL.

4.5 Example 3: Interswitch Call

Line A in switch A calls Line B in switch B over a PRI trunk group (both switch A and switch B are 5ESS-2000 Switches).

- Call conditions and office data:
  - Switch A:
    - Line A does not invoke PCP.
    - Office privacy set to no.
    - Line A privacy set to no.
    - CPNP is inactive.
    - ELIGI is active.
    - CNIGI is active.
    - PRI is assigned to a valid CPN BN OPTION
    - or STA ID set to "TRAN".
    - Line A and PRI are assigned to a TGSR feature, but they are in different trunk groups.
  - Switch B:
    - Don't Care

- This scenario is first analyzed as a line-to-trunk call in switch A and then as a trunk-to-line call in switch B.
- From the table usage chart in Figure 12:
  - For line origination in switch A, use Table A in Figure 2 (CPNP inactive, PCP not invoked).

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- For trunk termination to a PRI in switch A, use Table D in Figure 5.
- For trunk origination from a PRI in switch B, use Table H in Figure 9 or Table I in Figure 10.
- For line termination in switch B, use Table J in Figure 11.

- Applying the call conditions and office data to the above tables results in the following:
  - Table A in Figure 2: Line A CPN/BN status is delivered as PUBLIC .
  - Table D in Figure 5: Line A CPN/BN is blocked from being delivered over PRI.
    - Line A and PRI are in different trunk groups.
    - ELIGI active assigns a presentation status of PRIVATE.
    - However, since CNIGI is also active, Line A CPN/BN is blocked from delivery to switch B.
  - Table H in Figure 9 or 10: CPN/BN is not delivered by the PRI in switch B. Since CPN/BN is not received, privacy features are not applicable.
  - Table J Figure 11: Line B display indicates INCOMING CALL. CPN/BN is not available .

4.6 Interswitch call - Over CCS7 Trunk Group

Line A in switch A calls Line B in switch B over a CCS7 trunk group (both switch A and switch B are 5ESS-2000 Switches).

- Call conditions and office data:
  - Switch A:
    - CPNP is inactive.
    - Line A does not invoke PCP.
    - Office privacy is set to no.
    - Line A privacy is set to no.
    - Forced Privacy on CCS Trunks Feature is active.
  - Switch B:
    - Don't care

- This scenario is first analyzed as a line-to-trunk call in switch A and then as a trunk-to-line call in switch B.

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- From the table usage chart in Figure 12:
  - For line origination in switch A, use Table A in Figure 2 (CPNP inactive, PCP not invoked).
  - For trunk termination to a CCS trunk in switch A, use Table E in Figure 6.
  - For trunk origination over a CCS trunk in switch B, use Table H in Figure 8.
  - For line termination in switch B, use Table J in Figure 11.

- Applying the call conditions and office data to the above tables results in the following:
  - Table A in Figure 2: Line A CPN/BN status is delivered as PUBLIC .
  - Table E in Figure 6: CPN/BN is marked PRIVATE, because Forced Privacy on CCS Trunks feature is active.
  - Table G in Figure 8: CCS trunk in switch B delivers private CPN/BN to Line B.
  - Table J in Figure 11: Line B display shows PRIVATE NUMBER.

4.7 Interswitch call - Via Access Tandem Over MF Trunks

Line A in switch A calls Line B in switch B via an access tandem using equal access signaling over MF (Multi-Frequency) trunks.

The access tandem uses MF to CCS interworking and the call leaves the access tandem via CCS trunks. CCS is used through the carrier network to terminating switch B. (The originating switch, access tandem, and terminating switch are all 5ESS-2000 Switches.)

- Call conditions and office data:
  - Switch A:
    - CPNP is inactive.
    - Line A does not invoke PCP.
    - Office privacy is set to no.
    - Line A privacy is set to no.
    - ANI Outpulsing is set to yes.
  - Access Tandem:
    - Office privacy is set to no.
    - Forced privacy on CCS trunks is inactive.

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- Incoming EAMF (Equal Access Multi-Frequency) trunk group privacy is set to yes.

- Switch B:
  - Don't care

- This scenario is first analyzed as a line-to-trunk call in switch A, a trunk-to-trunk call in the access tandem, and then as a trunk-to-line call in switch B.
- From the table usage chart in Figure 12:
  - For line origination in switch A, use Table A in Figure 2 (CPNP inactive, PCP not invoked).
  - For trunk termination to an EAMF trunk in switch A, use Table F in Figure 7.
  - For trunk origination from EAMF trunk in the access tandem, use Table G in Figure 8.
  - For trunk termination to a CCS trunk in the access tandem, use Table E in Figure 6.
  - For trunk origination from a CCS trunk in switch B, use Table G in Figure 8.
  - For line termination in switch B, use Table J in Figure 11.
- Applying the call conditions and office data to the above tables results in the following:
  - Table A in Figure 2: Line A CPN/BN status is delivered as PUBLIC .
  - Table F in Figure 7: EAMF trunk in switch A sends CPN/BN as ANI digits to the access tandem.
  - Table G in Figure 8: EAMF trunk in the access tandem delivers ANI digits as PRIVATE. EAMF trunk privacy in the access tandem is set to yes.
  - Table E in Figure 6: CCS trunk in the access tandem uses MF-to-CCS interworking and marks the CPN/BN presentation status as PRIVATE in the outgoing IAM message.
  - Table 8 in Figure 8: CCS trunk in switch B delivers the CPN/BN with a presentation status of PRIVATE.
  - Table J in Figure 11: Line B display shows PRIVATE NUMBER.

5. GLOSSARY

ACP	All-Call Privacy
CCS	Common Channel Signaling
CNAM	Calling Party Name
CNIGI	Calling Number Intragroup ICLID
CPN/BN	Calling Party Number/Billing Number
CPNP	Calling Party Number Presentation

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EAMF	Equal Access Multi-Frequency
ELIGI	Enhanced Limited Intragroup ICLID
IAM	Initial Address Message
ICLID	Incoming Calling Line Identification
LIGI	Limited Intragroup ICLID
MF	Multi-Frequency
PCP	Per-Call Privacy
PRI	Primary Rate Interface
SI	Screening Index
TGSR	Terminal Group & Station Restriction

FEATURE	FORM	FIELD	VALUE	DESCRIPTION
ICLID	LIDFD			
All-Call Privacy	OFCOPT	DN PRIVACY	Y/N	sets status of office privacy
	LINE,DSLUSR,MLHLN	PRIVACY	Y/N	sets status of line privacy
Per-Call Privacy	DISPFD	TN PRIVACY	Y/N	Assigns per-call privacy to lines
	LINE,DSLUSR,MLHLN	PCP ALW	Y/N	Enables per-call privacy for lines
	LASSFA	PCP ALW	SUBSCR/ GENAVAIL	Enables per-call privacy for office
	CFGGRP,IDPDCA,PDIT	ACTION	DNPUSE	activates per-call privacy
CPNP	SFSYS	SFID 50		Allows all-call/per-call privacy based on SCR IDX
	SCRIDXPA			
LIGI	FOSYS	TFOS 504		Restricts ICLID to members within same terminal group
ELIGI (METROHUB 2)	FOSYS	TFOS 544		Extends LIGI to PRI trunks
CNIGI	TGSRFD	CNIGI	INTRAONLY, NORSTRCT,blank	
	TGATTD	CNIGI	INTRAONLY, NORSTRCT,blank	Restricts ICLID to members within same terminal group (LIGI has precedence)
	OFCOPT	CNIGI	INTRAONLY, NORSTRCT	
CPN/BN	CPNBNFD			Defines CPN/BN delivery status for lines
	TKGRP	CPN BN OPT		Defines CPN/BN delivery status for PRI trunks
		STA ID		Defines CPN/BN delivery status for PRI trunks (CPN BN OPT has precedence)
Forced CPN Privacy over CCS	SFSYS	SFID 27		If active, sets CPN to private on all calls leaving

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trunks				the office
Private Number Delivery Option	LASSOP	PRI PRVT		Office Option to block delivery of private CPNs to PRI trunks
	TKGRP	PRIV OVER		PRI trunk group option to block delivery of private CPNs

Figure 1 DATA REQUIREMENTS FOR PRIVACY FEATURES

Table A
Line Origination - CPNP OFF

PCP Invoked	Office Privacy	Line Privacy	CPN Status Delivered
N	N	N/Blank	PUBLIC
N	N	Y	PRIVATE
N	Y	D/C	PRIVATE
Y	N	N/Blank	PRIVATE
Y	N	Y	PUBLIC
Y	Y	D/C	*

* Not allowed - Call is routed to REORDER**Precedence:**

1. Office Privacy
2. Line Privacy

Translations:

Feature	Form	Field
Office Privacy	OFCOPT (8.1)	
Line Privacy	LINE/MLHLN (1.6) DSLUSR (23.2)	

Figure 2 LINE ORIGINATION - CPNP OFF

Table B
Line Origination - CPNP ON
(All Calls Privacy)

SCRIDXPA Defined	Line PRIVACY	SCRIDX PRIVACY	Office PRIVACY	CPN/BN Status Delivered
N	N	Blank*	D/C	PUBLIC
N	Y	Blank*	D/C	PRIVATE
N	Blank	Blank*	N	PUBLIC
N	Blank	Blank*	Y	PRIVATE
Y	N	D/C	D/C	PUBLIC
Y	Y	D/C	D/C	PRIVATE
Y	Blank	N	D/C	PUBLIC
Y	Blank	Y	D/C	PRIVATE
Y	Blank	Blank	N	PUBLIC
Y	Blank	Blank	Y	PRIVATE

* Default when no SCRIDXPA (8.24) is defined
Precedence:

1. Line Privacy
2. Screen Index Privacy
3. Office Privacy

Translations:

Feature	Form	Field
Line Privacy	LINE/MLHLN (1.6) DSLUSR (23.2)	
Office Privacy	OFCOPT (8.1)	

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Screen Index Privacy	SCRIDXPA (8.24)	

Figure 3 LINE ORIGINATION - CPNP ON - ALL CALLS PRIVACY

Table C
Line Origination - CPNP on
(Per-Call Privacy)

SCRIDXPA (8.24) Defined	SCRIDX PCP	Line PCP	PCP Allowed	Line Privacy	SCRIDX Privacy	Office Privacy	CPN/BN Status Delivered
N	NO*	N	N	D/C	Blank*	D/C	N/A
N	NO*	Y	Y	N	Blank*	D/C	PRIVATE
N	NO*	Y	Y	Y	Blank*	D/C	PUBLIC
N	NO*	Y	Y	Blank	Blank*	N	PRIVATE
N	NO*	Y	Y	Blank	Blank*	Y	PUBLIC
Y	N	D/C	N	D/C	D/C	D/C	N/A
Y	Y	N	N	D/C	D/C	D/C	N/A
Y	Y	Y	Y	N	D/C	D/C	PRIVATE
Y	Y	Y	Y	Y	D/C	D/C	PUBLIC
Y	Y	Y	Y	Blank	N	D/C	PRIVATE
Y	Y	Y	Y	Blank	Y	D/C	PUBLIC
Y	Y	Y	Y	Blank	Blank	N	PRIVATE
Y	Y	Y	Y	Blank	Blank	Y	PUBLIC

* Default value when no SCRIDXPA (8.24) is defined**Precedence:**

1. Line Privacy
2. Screen Index Privacy
3. Office Privacy

Translations:

Feature	Form	Field
Line PCP	LINE/MLHLN (1.6) DSLUSR (23.2)*	PCP ALW
Line Privacy	LINE/MLHLN(1.6) DSLUSR(23.2)	PRIVACY
Office Privacy	OFCOPT (8.1)	DN PRIVACY
SCRIDX PCP	SCRIDXPA (8.24)	PCP ALW
SCRIDX Privacy	SCRIDXPA (8.24)	PRIVACY

* Generally Available PCP feature via LASSOP (8.21)

Figure 4 LINE ORIGINATION - CPNP ON - PER CALL PRIVACY

Table D
Trunk Termination - PRI Trunks

CPN/BN Status Received	CPN/BN Delivery *	PRI Private	ORIG/TERM TGSR Assigned	Terminal Groups Match and Non-zero	ELIGI Active	CNIGI Restrictions Apply	PRIV OVER	CPN/BN Status Delivered	Note
PUBLIC	CPN BN OPT or STA ID	D/C	N	N	N	D/C	D/C	PUBLIC	1
	CPN BN OPT or STA ID	D/C	N	N	Y	D/C	Y	PRIVATE	2
	CPN BN OPT or STA ID	D/C	N	N	Y	D/C	N	NO CPN/BN	3
	CPN BN	D/C	Y	N	N	N	D/C	PUBLIC	4

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	OPT or STA ID								
	CPN BN OPT or STA ID	D/C	Y	N	N	Y	D/C	NO CPN/BN	5
	CPN BN OPT or STA ID	D/C	Y	N	Y	N	Y	PRIVATE	2
	CPN BN OPT or STA ID	D/C	Y	N	Y	N	N	NO CPN/BN	3
	CPN BN OPT or STA ID	D/C	Y	N	Y	Y	D/C	NO CPN/BN	6
	CPN BN OPT or STA ID	D/C	Y	Y	D/C	D/C	D/C	PUBLIC	7
	NO	D/C	D/C	D/C	D/C	D/C	D/C	NO CPN/BN	8
PRIVATE	CPN BN OPT	D/C	D/C	D/C	D/C	D/C	Y	PRIVATE	9
	CPN BN OPT	D/C	D/C	D/C	D/C	D/C	N	NO CPN/BN	10
	STA ID	Y	D/C	D/C	D/C	D/C	D/C	PRIVATE	11
	STA ID	N	D/C	D/C	D/C	D/C	D/C	NO CPN	12
	NO	D/C	D/C	D/C	D/C	D/C	D/C	NO CPN/BN	8
NO CPN/BN	D/C	D/C	D/C	D/C	D/C	D/C	D/C	NO CPN/BN	13

* Indicates if PRI trunk group subscribes to CPN/BN delivery using either the CPN BN OPT field or the STA ID field on the TKGRP (5.1) form. The CPN BN OPT has precedence over the STA ID field. If STA ID is used, only the CPN is delivered.

Table Notes:

1. Public CPN/BN received, PRI PRVT only applies to PRIVATE CPNs, ELIGI inactive, CNIGI only applies when TGSR is assigned.
2. ELIGI is active
3. ELIGI active, however PRIV OVER set to "N" - blocks CPN/BN
4. ELIGI inactive, CNIGI restrictions do not apply.
5. Same as #4 except CNIGI RESTRICTIONS apply.
6. CNIGI RESTRICTIONS apply
7. ORIG/TERM TGSR match
8. No CPN/BN delivery subscription
9. PRIV OVER set to "Y" allows CPN/BN delivery with presentation status set to PRIVATE.
10. PRIV OVER set to "N".
11. PRI PRVT set to "Y".
12. PRI PRVT set to "N".
13. No CPN/BN received.

Translations:

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Feature	Form	Field
Office Privacy	OFCOPT (8.1)	
Line Privacy	LINE/MLHLN (1.6) DSLUSR (23.2)	
CPN/BN Delivery	TKGRP (5.1)	STA ID set to TRANS
PRI PRVT	LASSOP (8.21)	
ELIGI	FOSYS (8.31)	
CNIGI Restrictions apply	TGSRTPA (5.29)	
	TGATTD (4.4)	
	OFCOPT (8.1)	
PRIV OVER	TKGRP (5.1)	

Figure 5 TRUNK TERMINATIONS - PRI TRUNKS

Table E
Trunk Termination - CCS Trunks

CPN/BN Status Received	Forced Privacy on CCS Trunks	CPN/BN Status Delivered
PUBLIC	N	PUBLIC
PUBLIC	Y	PRIVATE
PRIVATE	D/C	PRIVATE
NO CPN	D/C	NO CPN

Translations:

Feature	Form	Field
Forced Privacy on CCS Trunks	SFSYS (8.22)	SFID 27

Figure 6 TRUNK TERMINATIONS - CCS TRUNKS

Table F
Trunk Termination - EAMF Trunks

CPN/BN Received	ANI Outpulsing	ANI Delivered
Y	Y	Y
Y	N	N
N	D/C	N

Translations:

Feature	Form	Field
ANI OUTPULSING	RTIDX (10.2)	ANI OUTPUSLING

Figure 7 TRUNK TERMINATIONS - EAMF TRUNKS

Table G
Trunk Origination - EAMF and CCS Trunks

Trunk Type	CPN/BN Status Received	Billing DN Received (ANI)	Office Privacy	Trunk Privacy	CPN/BN Status Delivered
EAMF *	N/A	Y	N	N	PUBLIC
	N/A	Y	N	Y	PRIVATE
	N/A	Y	Y	D/C	PRIVATE
	N/A	N	D/C	D/C	NO CPN/BN
CCS7	PUBLIC	N/A	N/A	N/A	PUBLIC
	PRIVATE	N/A	N/A	N/A	PRIVATE
	NO CPN/BN	N/A	N/A	N/A	NO CPN/BN

* Only applicable for MF to CCS interworking

Precedence: MF Trunks

1. Office Privacy
2. Trunk Privacy

Translations:

Feature	Form	Field
Office Privacy	OFCOPT (8.1)	
Trunk Privacy	TKGRP (5.1)	

Figure 8 TRUNK ORIGINATION - EAMF AND CCF TRUNKS

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Table H
Trunk Origination - PRI trunks (CPNP OFF)

CPN/BN Received	Presentation Indicator Received	Presentation Indicator Value	Office Privacy	Trunk Privacy	CPN/BN Status Delivered
Y	Y	PUBLIC	D/C	D/C	PUBLIC
Y	Y	PRIVATE	D/C	D/C	PRIVATE
Y	Y	N/A	N	N	PUBLIC
Y	Y	N/A	N	Y	PRIVATE
Y	Y	N/A	Y	D/C	PRIVATE
Y	N	N/A	N	N	PUBLIC
Y	N	N/A	N	Y	PRIVATE
Y	N	N/A	Y	D/C	PRIVATE
N	D/C	D/C	D/C	D/C	NO CPN/BN

Precedence, CPNP OFF:

1. Office Privacy
2. Trunk Privacy

Translations:

Feature	Form	Field
Office Privacy	OFCOPT (8.1)	
SCRIDX Privacy	SCRIDXPA (8.24)	
Trunk Privacy	TKGRP (5.1)	

Figure 9 TRUNK ORIGINATION - PRI TRUNKS (CPNP OFF)

Table I
Trunk Origination - PRI trunks (CPNP ON)

CPN/BN Received	Presentation Indicator Received	Presentation Indicator Value	SCRIDX Privacy	Office Privacy	CPN/BN Status Delivered
Y	Y	PUBLIC	D/C	D/C	PUBLIC
Y	Y	PRIVATE	D/C	D/C	PRIVATE
Y	Y	N/A	N	N	PUBLIC
Y	Y	N/A	N	Y	PRIVATE
Y	Y	N/A	Y	D/C	PRIVATE
Y	N	N/A	N	N	PUBLIC
Y	N	N/A	N	Y	PRIVATE
Y	N	N/A	Y	D/C	PRIVATE
N	D/C	D/C	D/C	D/C	NO CPN/BN

Precedence, CPNP ON:

1. SCRIDX Privacy
2. Office Privacy

Translations:

Feature	Form	Field
Office Privacy	OFCOPT (8.1)	
SCRIDX Privacy	SCRIDXPA (8.24)	
Trunk Privacy	TKGRP (5.1)	

Figure 10 TRUNK ORIGINATIONS - PRI TRUNKS (CPNP ON)

Table J
Line Termination

CPN/BN Status Received	TGSR Assigned	Terminal Groups Match and are Non-zero	LIGI Assigned	CNIGI Restrictions Apply	Display
PUBLIC	N	D/C	N	D/C	CPN/BN
PUBLIC	N	D/C	Y	D/C	PRIVATE

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					NUMBER
PUBLIC	Y	N	N	N	CPN/BN
PUBLIC	Y	N	N	Y	INCOMING CALL
PUBLIC	Y	N	Y	N	PRIVATE NUMBER
PUBLIC	Y	N	Y	Y	INCOMING CALL
PUBLIC	Y	Y	D/C	D/C	CPN/BN
PRIVATE	D/C	D/C	D/C	D/C	PRIVATE NUMBER
NO CPN	D/C	D/C	D/C	D/C	INCOMING CALL

Precedence, Display only:

1. CNIGI
2. LIGI

Translations:

Feature	Form	Field
CNIGI	TGSRLPA (1.29)	CNIGI
	TGATTD (4.4)	CNIGI
	OFCOPT (8.1)	CNIGI
LIGI	FOSYS (8.31)	TFOS ID 504

Figure 11 LINE TERMINATION

Table Usage					
Call Type	**Trunk Type**	**Line Origination**	**Trunk Termination**	**Trunk Origination**	**Line Termination**
Intraswitch		Tables A - C Figures 2 - 4			Table J Figure 11
Interswitch 5ESS-2000 Switches Originating and Terminating	PRI	Tables A - C Figures 2 - 4	Table D Figure 5	Tables H - I Figures 9 - 10	Table J Figure 11
	CCS		Table E Figure 6	Table G Figure 8	Table J Figure 11
	EAMF		Table F Figure 7	Table G Figure 8	Table J Figure 11
Interswitch 5ESS-2000 Switches Originating Only	PRI	Table A - C Figures 2 - 4	Table D Figure 5		
	CCS		Table E Figure 6		
	EAMF		Table F Figure 7		
Interswitch 5ESS-2000 Switches Terminating Only	PRI			Table H - I Figures 9 - 10	Table J Figure 11
	CCS			Table G Figure 8	Table J Figure 11
	EAMF			Table G Figure 8	Table J Figure 11

Figure 12 TABLE USAGE

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SEC. 1BM: ISDN - CALL APPEARANCE RESERVATION AND PRIORITY CALLING INCOMING ONLY

1. FEATURE DESCRIPTION

This feature consists of two parts:

- Call Appearance Reservation
- Priortity Calling Incoming Only

1.1 Call Appearance Reservation

Available with 5E11 and later, the Call Appearance Reservation Feature has feature number 99-5E-2627. This feature, available with both Basic and CACH EKTS (Call Appearance Call Handling Electronic Key Telephone Service), allows one or more call appearances (i.e., subaddresses) of the DN assigned to an EKTS group to be reserved for one of the following categories of calls:

- originations only
- termination only
- originations and priority incoming terminations

A DN (Directory Number) may have call appearances reserved in more than one of the categories.

1.2 Priority Calling Incoming Only

Available with 5E11 and later, the Priority Calling Incoming Only Feature has feature number 99-5E-2597. Calls terminating to a terminal with this feature will receive priority treatment. If there are no non-reserved call appearances available for termination, the call may be offered on a call appearance reserved for terminations only. If there are no non-reserved call appearances or termination only reserved call appearances available, the call may be offered on a call appearance reserved for originations and priority incoming terminations. This feature is often used with the Distinctive Ringing Incoming Calls feature to provide distinctive alerting as well as reserved call appearance terminations.

2. FEATURE ASSIGNMENT

The form flow in Figure 1 provides information for assigning call appearance reservation on the DSLUSR form. Only one subaddress may be assigned (or none) when EKTS is set to "BASIC". When EKTS is set to "CACH", up to three types of subaddress reservations may be assigned, and may be reserved in any order.

The form flow in Figure 2 provides information for assigning call appearance reservation on the SHTN form. When EKTS on the associated DSLUSR form is set to "CACH", the sum of the values entered in the NI SAR LIST QTY fields must not exceed the entry in the NBR field in row 1 of the SHTN SHARED LIST. When EKTS is "BASIC", only one entry is permitted and that one entry must have an NI SAR LIST QTY equal to 1.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2 23.8
SHTN	5902	5	1C	23.20

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DSLUSR form (5908) - The 5908 Record is used to collect data for digital subscriber lines. For 5E11 and later, added NI SAR LIST (National ISDN Subadress Reservation List), which has TYPE AND ORDER, and QTY fields.

SHTN form (5902) - The 5902 Record is used to specify primary or secondary TN that is shared by several other TNs. For 5E11 and later, NI SAR LIST, TYPE AND ORDER, and QTY fields were added to support these features.

4. GLOSSARY

DN	Directory Number
EKTS	Electronic Key Telephone Service
NI	National ISDN
SAR	Subadress Reservation List

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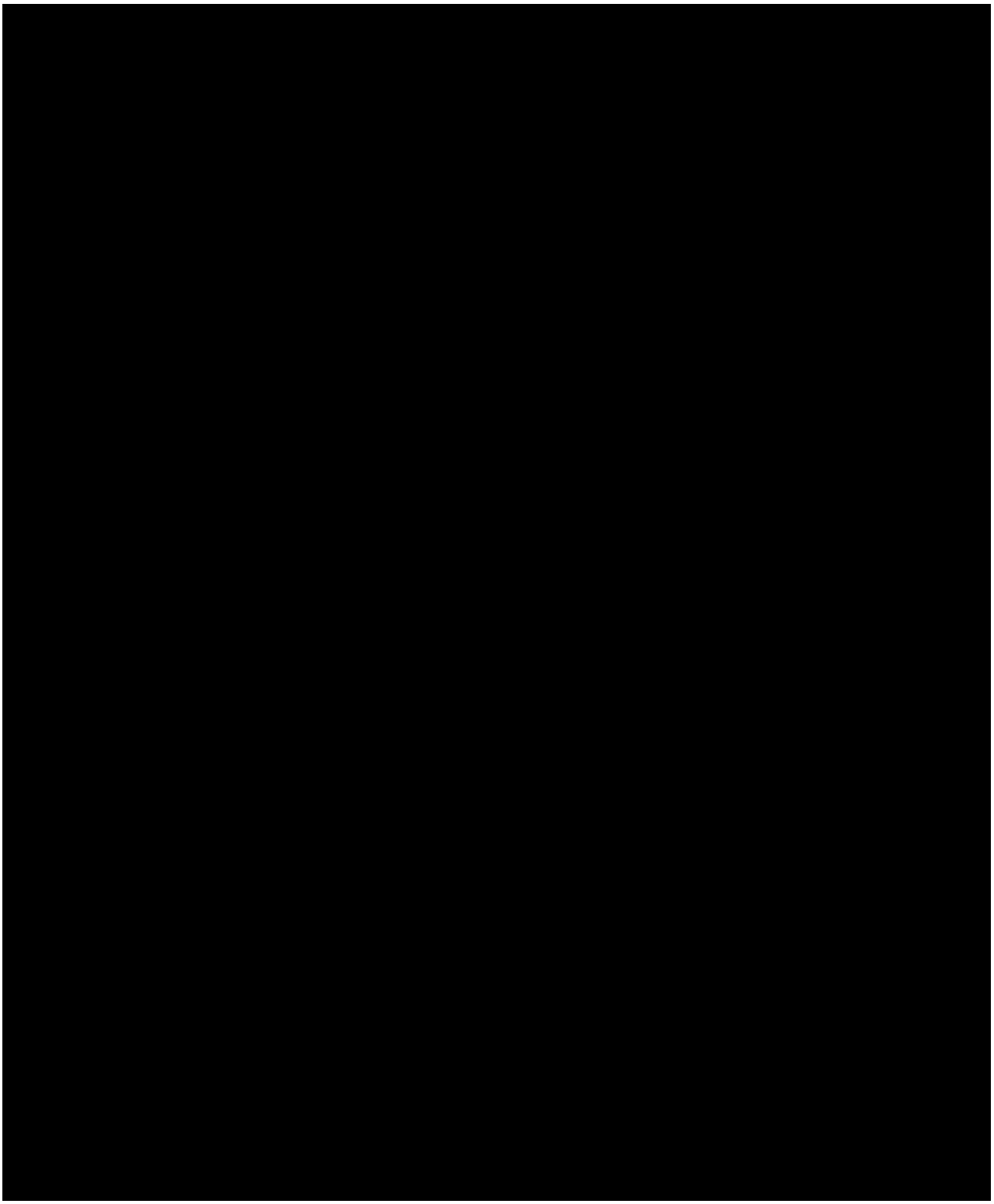

Figure 1 FORM FLOW FOR ISDN CALL APPREARANCE RESERVATION - DSLUSR FORM

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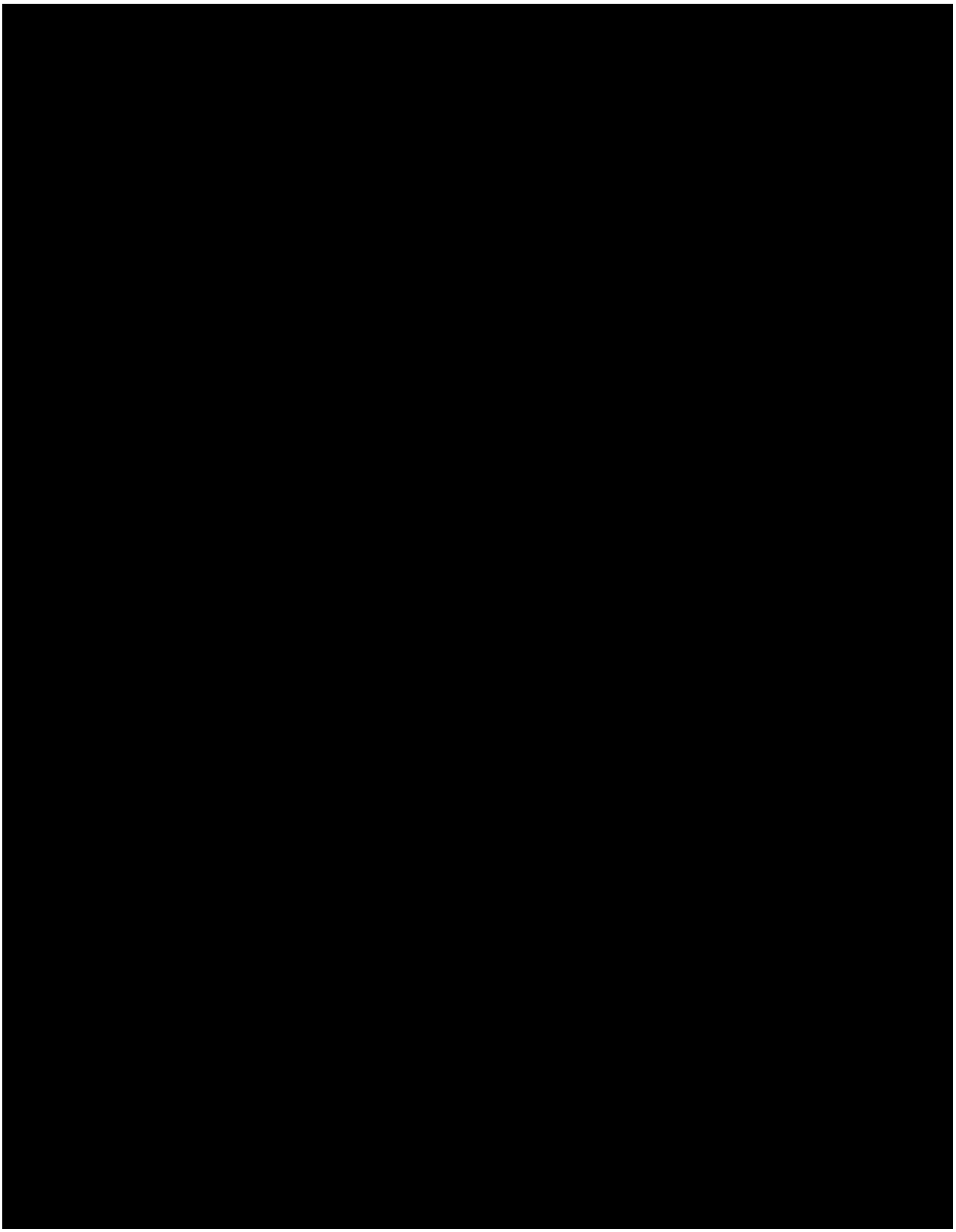

Figure 2 FORM FLOW FOR ISDN CALL APPREARANCE RESERVATION - SHTN FORM

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SEC. 1BN: REORDER THRESHOLD ALARMS

1. FEATURE DESCRIPTION

Effective with the 5E11 Software Release, three thresholds were implemented to provide an alarm, on a per SM basis, when the call "re-order" count reaches a defined level. Re-order refers to the number of incompleted calls routed for retry (re-order). Calls may be re-ordered due to a busy trunk, lack of proper engineering or overload situation, software/hardware resource limitation, and/or database inconsistencies. These alarms provide advance warning as to potential upcoming trouble conditions.

2. FEATURE ASSIGNMENT

The existing re-order counter is compared to the number of call completions to determine a ratio which is checked against the threshold. Three RCR (Reorder Count Ratio) alarm thresholds were added to the OFCOPT form (5700 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1

OFCOPT form (5509 Record) - This form is used to define thevarious switch options. Three thresholds were added: RCR MINOR, RCR MAJOR, and RCR CRITICAL.

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SEC. 1BO: AUTOMATED ISDN LINE ASSIGNMENT

1. FEATURE DESCRIPTION

Available with 5E11 and later, the AILA (Automatic ISDN Line Assignment feature has feature number 99-5E-3777. This feature provides an optional parameter to turn the feature on in an office.

When the ISDN Automatic Line Assignment feature is activated, the following capabilities are available:

- The switch will automatically select packet channels for an ISDN line, i.e. ISCNs (ISDN Channel Numbers) when the application is created or updated on the DSL (Digital Subscriber Line) Assignment form (5907 Record) (RC/V 23.2 or 23.8).
- The switch automatically selects an available D ISCN (ISCN for the D-channel) when the ISDN service is created. If X.25 packet service is created at the same time, the switch automatically selects the B-channel ISCN(s).
- At service creation, the feature works by prohibiting the manual entry of data into the ISCN fields. An explanation appears on the recent change screen if a data entry person attempts to enter a value into an ISCN field.
- Since a D ISCN requires a quarter timeslot on a DPIDB and each B ISCN requires a full DPIDB timeslot, these fields are also prohibited from manual data entry if the AILA feature is turned on. The switch automatically selects ISCNs based on availability of the corresponding DPIDB timeslot(s).
- Once the ISDN service has been created, the ISCN(s) the switch has selected can be changed by updating the service and manually entering a new value. In addition, if X.25 packet service is added to a signaling-only line by updating the DSL Assignment form, the switch automatically selects B-channel ISCNs provided the ISCN fields are not entered.

2. FEATURE ASSIGNMENT

Before the AILA feature can be activated, the ACT field for FID 695 on the FOSYS form (5713-2 Record) must be set to "Y". See Figure 1 for the form flow for the assignment of this feature.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
DSL	5907	5	1H	23.8
DSLAP	5963	6	6A	24.7
DSLUSR	5908	5	1I	23.8
FOSYS	5713-2	3	5AS	8.31
MISLINK	5637	4	32B	6.11
PSUGP	5949	5	3J	22.16

DSL form (5907 Record) - This form is used to define attributes of a DSL (also referred to as a BRI (Basic Rate Interface) and to define the attributes of the B1 and/or B2 channel of the DSL. Data rules were added for this form.

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP (Application Processor) and the 5ESS-2000 Switch. Each AP is connected to one ISDN SM with DSL links. Data rules were added for this form.

DSLUSR form (5908 Record) - This form is used to define the TN and status information of a DSL user. This includes circuit switching (voice and data)attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. Data rules were added for this form.

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FOSYS form (5713-2 Record) - This form is used to activate special features. This feature is activated by setting the ACT field for FID 695 to "Y".

MISLINK form (5637 Record) - This form is used to make the MIS LINK assignments, providing the capability to provision an MIS (Management Information System) SM Event Link for ACD/BRCS on all valid DSLs. Data rules were added for this form.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. The AUTO ASSIGN field and data rules were added for this form.

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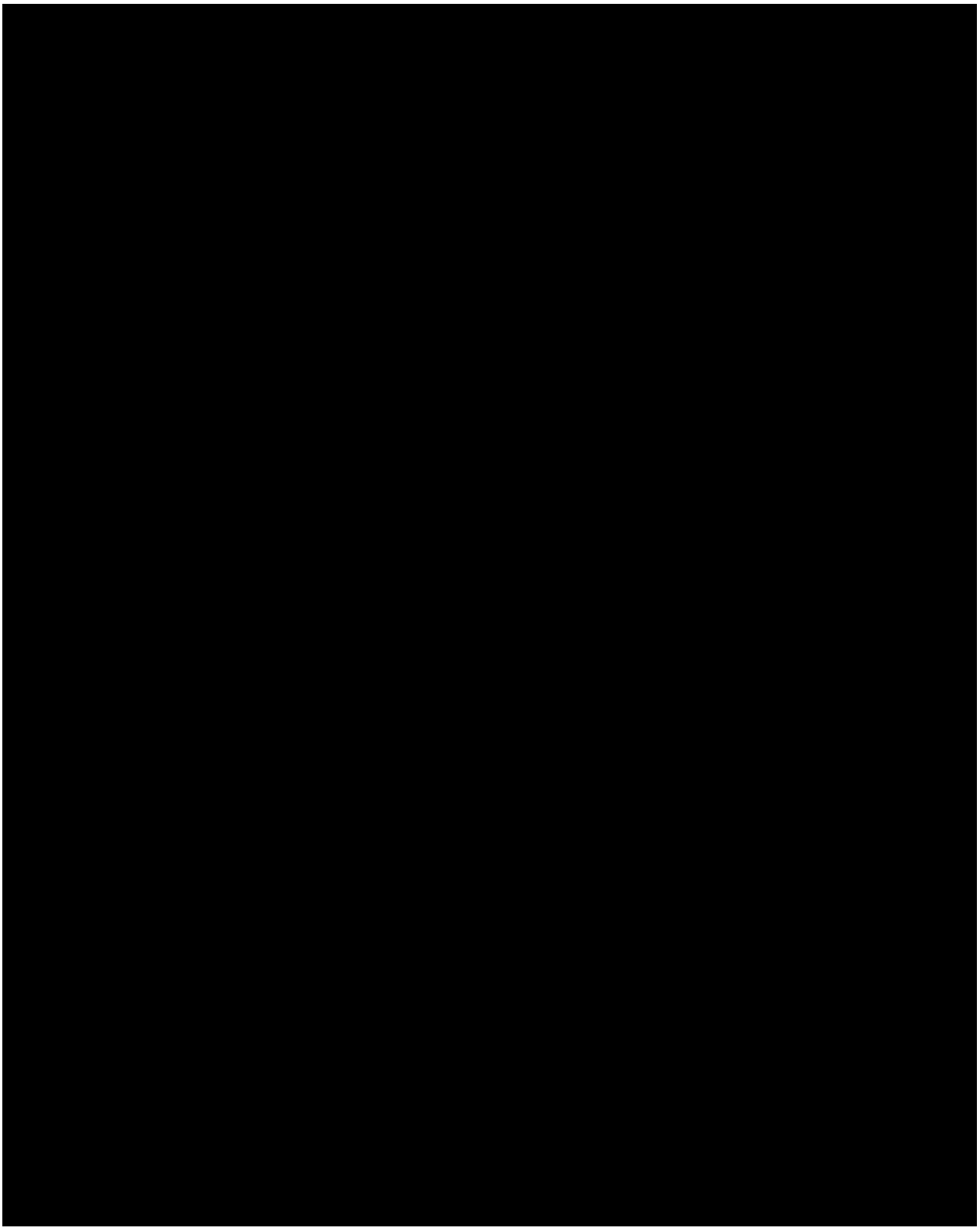

Figure 1 FORM FLOW FOR AUTOMATIC ISDN LINE ASSIGNMENT

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SEC. 1BP: INCREASE DATA LIMITS FOR SELECTED TRAFFIC SECTIONS

1. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the Increase Data Limits for Selected Traffic Sections feature has feature number 99-5E-7000. This feature enhances collection abilities for several selected TRFC30 (Traffic Measurements Report for 30 Minute Interval) sections. Several single section sizes will be increased to allow more collection capabilities beyond the 32000 byte limit. The following will be extended in size to allow the maximum number of components to fit into the 384 kB space assigned for certain sections.

- TG (Trunk Group)
- PSPH (ISDN Packet Switch Protocol Handler)
- DSL (Digital Subscriber Line)
- LINE (Per Line Measurements)
- IPIDB (Integrated Digital Carrier Unit PIDB Peripheral Interface Data Bus)
- ILINE (Integrated Digital Carrier Unit LINES)
- IRT (Integrated Digital Carrier Unit RT)
- SG (Switch Group)
- LGC (Line Group Controller)
- AIULN (Access Interface Unit Measurements for Lines)
- AIULC (Access Interface Unit Line Measurements for AIU)

Some of the space in the TRFC30 buffer is occupied by the section header and the overall header. Hence the maximum space left for data in the TRFC30 buffer is 390016 bytes.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
MEASLU	5539	3	5AM	13.6

MEASLU form (5539 Record) - This form is used to support the LU/ISLU Load Administration Measurements feature. The number of Study Groups allowed was increased from 5 to 19.

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SEC. 1BQ: INHIBIT DELETE FOR ROUTE INDICES

1. FEATURE DESCRIPTION

Available with 5E13 and later Software Releases, the Inhibit Delete for Route Indices feature is assigned feature number 99-5E-7427. This feature provides the functionality to incorporate an additional level of security for lines terminating to a route index that are designated critical by the switch owner.

This feature requires that you check the status of the INHIBIT DEL field on the Line form (5109 Record) before allowing a deletion to occur. If the field is set to "Y", the deletion will be blocked and an error message is sent indicating which field failed. If the field is set to "N", the deletion will continue.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109	3	1I	1.1
MLHLN	5111	3	1K	1.6

LINE form (5109 Record) - This form is used to define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch.

MLHLN form (5111 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. Every MLHG Number assigned on the MLHLN form must be defined on the MLHG form (5110-1/2/3 Record).

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SEC. 1BR: INHIBIT DELETE FOR SELECTED LINES AND TRUNKS

1. FEATURE DESCRIPTION

The Inhibit Delete for Selected Lines and Trunks feature is available as a 5E13 Software Update. The assigned feature number is 99-5E-3900.A.

This feature provides the capability to display an error message upon an attempt to remove lines, DSLs (Digital Subscribers Lines), and trunk members from service that are marked as deletion inhibited.

Before allowing a deletion to occur, this feature verifies the status of the INHIBIT DEL field on the LINE and MLHLN forms (5109, 5111 Records) for analog lines, the DSLUSR form (5900 Record) for ISDN (Integrated Services Digital Network) lines, and the TRUNK form (5204 Record) for trunk members. If the field is set to "Y", the deletion will be blocked and an error message is sent. If the field is set to "N", the deletion will succeed.

2. FEATURE ASSIGNMENT

For 5E13 and later, to allow or disallow the deletion of lines and trunks, the INHIBIT DEL field must be set to "Y" indicating no deletion allowed and "N" if deletion is to be allowed:

- on the LINE and MLHLN forms for analog lines,
- on the DSLUSR form for ISDN lines, or
- on the TRUNK form for trunk members.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2, 23.8
LINE	5109	3	1I	1.1
MLHLN	5111	3	1K	1.6
TRUNK	5204	3	2C	5.5

DSLUSR form (5908 Record) - The DSLUSR form defines the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. Added the INHIBIT DEL field.

LINE form (5109 Record) - This form is used to define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch. Added the INHIBIT DEL field.

MLHLN form (5111 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. Every MLHG Number assigned on the MLHLN form must be defined on the MLHG form (5110-1/2/3 Record). Added the INHIBIT DEL field.

TRUNK form (5204 Record) - This form defines trunk members that access DSU2-RAF (DSU2 With Recorded Announcement Function) channels that have been programmed for ASP (Advanced Services Platform) announcements. See Division 3, Section 2C and 2Q for details on making these assignments. Added the INHIBIT DEL field.

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SEC. 1BS: TRAFFIC REPORTS FOR MODULAR METALLIC SERVICE UNITS

1. FEATURE DESCRIPTION

The Traffic Reports for MMSU (Modular Metallic Service Units) feature (99-5E-4717) is available as a 5E12 and later Software Update. It provides the capability to collect traffic measurements for MMSUs to identify resources which may be blocking testing paths and to identify and apply the optimal MMSU configuration. To implement this feature, two new measurement section names are provided on the MEASSUM form. The SECTION NAME field is used to define MMSU measurements for display on the Traffic 30 Report:

- "MMSUJMTB" - measurements for MMSU Metallic Test Bus
- "MMSUGMTIB" - measurements for MMSU Metallic Test Interface Bus

Note that the Recent Change View (13.9) that is equivalent to the ODA (Office Data Administration) MEASSUM form is a non-entry Recent Change View. Thus, in the Recent Change environment, the views used to further define these measurements are identified in the following tables:

Measurement Collection Selectivity
(13.7)

SECTION NAME = MMSUJMTB	SECTION NAME = MMSUGMTIB
START1COMP=MSU number or blank	START1COMP = MSU number or blank
START2COMP = SG number or blank	DEST SM = SM number
START3COMP = shelf number or blank	
DEST SM = SM number	

Measurement Range Selectivity
(13.8)

SECTION NAME = MMSUJMTB	SECTION NAME = MMSUGMTIB
START1COMP = MSU number or blank	START1COMP = MSU number or blank
END1COMP = MSU number or blank	END1COMP = MSU number or blank
START2COMP = SG number or blank	DEST SM = SM number
END3COMP = shelf number or blank	COLLECT = Y or N
DEST SM = SM number	ROP = Y or N
COLLECT = Y or N	
ROP = Y or N	

Measurement Range Selectivity
(13.9) Verify-Only for RC

SECTION NAME = MMSUJMTB	SECTION NAME = MMSUGMTIB
START1COMP = MSU number or blank	START1COMP = MSU number or blank
START2COMP = SG number or blank	DEST SM = SM number
END3COMP = shelf number or blank	ROP = Y or N
DEST SM = SM number	
COLLECT = Y or N	
ROP = Y or N	

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9

MEASSUM form (5563 Record) - This form is used to identify components in the SECTION NAME field that are to be selected for traffic measurements reporting on the "30-minute" Traffic Measurements Report. Two measurement names were made available to collect measurements for MMSUs.

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SEC. 1BT: TRUNK GROUP HUNT SEQUENCE ENHANCEMENTS

1. FEATURE DESCRIPTION

1.1 Feature Overview

Available with 5E13 and later, the Trunk Group Hunt Sequence Enhancements Feature has feature number 99-5E-4267.

There are many different types of hunting that may be used to search for idle trunks within a particular trunk group. All hunting algorithms basically search the list of trunks in a trunk group when a trunk is needed for an outgoing call. The most common type of hunting is Linear Hunting, which may be performed in either a forward or backward direction. The feature being introduced in this FSD expands on the number of hunting algorithms to include two new trunk hunting algorithms:

- Least Idle: Will choose a trunk within a trunk group which was most recently in use. This will concentrate traffic on a smaller group of trunks, since the trunks that are used most often will be made idle and hunted again.
- Most Idle: Will choose a trunk within a trunk group which was least recently used. This will spread traffic across a larger group of trunks, since the trunk that has been idle the longest will be the one chosen during hunting.

Using different trunk hunting techniques at the opposite ends of the trunks could help alleviate the problems with glare.

Using subgroups when provisioning the trunk will allow the service provider to use only MIDL (Most Idle) hunting, only LIDL (Least Idle) hunting, or a combination of the two types of hunting.

There are four areas in the switch that will be affected by these new trunk hunt mechanisms:

1. Initialization of the trunks in the trunk group
2. Trunk searching
3. Trunk busying - removing the trunk from the MIDL or LIDL queue and marking it busy
4. Freeing the trunk - adding it back into the MIDL or LIDL queue

1.2 Trunk Group Initialization

In order for the traffic initially offered to the trunk group to be handled adequately, each end of the trunk group must populate its MIDL and LIDL queues in a consistent manner. This is especially important if one end of the trunk group uses linear search with a fixed start position and the other end uses MIDL-LIDL trunk hunting. (Such a case might apply if one of the exchanges had performance problems and used linear search to alleviate them).

Figure 1 illustrates the method of how subgroups would be used to define the MIDL and LIDL trunk hunting. For the purposes of description, Switch A has command of trunks *a, b* and *c*, while Switch B has command of trunks *d, e* and *f*.

When the LDP switch is processing calls, it knows when trunks were in use for a call and when trunks were idle. When a trunk is selected from a MIDL queue, the oldest entry is used; when a trunk is selected from a LIDL queue, the youngest entry is used.

NOTE: For a full size queue implementation the maximum MIDL queue size is the same as the

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number of trunks in the trunk group that Switch A commands; the maximum LIDL queue size is the same as the number of trunks that Switch B commands, and the split could be in any proportion determined by the network planner or service provider. The most likely scenario is that the planner will allocate 50% of the trunks to belong to the MIDL subgroup on Switch A, and the remaining 50% will belong to the MIDL subgroup on Switch B. There may be cases where an equal split is not used, again, depending upon how the trunks are provisioned.

It is also conceivable that one switch commands all the trunks in the trunk group. That would result in one switch searching solely for the most idle trunk, while the other switch always searches for the least idle trunk.

1.3 Trunk Searching

If a trunk is required for a call in a trunk group, the MIDL queue is examined first. If this queue contains idle trunks, the one that has been idle the longest (the "oldest" or most idle trunk of the diagram) is chosen. If the MIDL queue is empty, the LIDL queue is examined, "youngest" or least idle first. If this queue is empty, and there is no alternate route to the destination, the call is lost.

1.4 Trunk Busying

If a trunk is selected, it is made busy, and its entry is removed from the appropriate queue.

If a dual trunk seizure, or glare, has occurred however, either the sending switch or the receiving switch must back down and select another trunk for its call to continue.

For glare situations, the existing Glare Control mechanisms will be used. Thus, the non-controlling switch must back down and select another trunk if its call is to continue. This is irregardless of whether the trunk was on the MIDL or LIDL queue of that switch.

Because of the way that trunks are provisioned and hunted, the risk of glare situations is greatly minimized.

1.5 Freeing the Trunk

At the end of a call, the idle trunk is added back to the appropriate MIDL or LIDL queue, and marked as idle.

2. FEATURE ASSIGNMENTS

See Figure 2 .

2.1 Operational User

The operational user is the Service Provider.

The operational user for this feature will be Recent Change Technicians, Switch Administrators or Network Planners who are responsible for activating and maintaining the feature.

To specify that these new algorithms are used, the operational user would create a Trunk Group with a Hunt Type of "MLIDL" on the TKGRP form (Recent Change View 5.1). See Figure 2 .

After the MLIDL (Most Idle - Least Idle) Hunt Type is set for a trunk group, the Service Provider must then assign a trunk to that trunk group, and for each trunk member in that trunk group, determine whether it should belong in the Most Idle Subgroup or the Least Idle Subgroup on the TRUNK form (Recent Change View 5.5). Set LEAST IDLE to "Y" if this trunk member is hunted based on Least Idle trunk hunting sequence. Set LEAST IDLE to "N" if this trunk member is hunted based on Most Idle trunk hunting sequence. See Figure 2 .

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Administrative procedures between the two ends of the trunk group must ensure that for a MLIDL trunk group that connects the two switches, the trunks defined as the MIDL trunks at one switch will be defined as the LIDL trunks at the other switch. This is the essence of defining the MLIDL hunting for a given trunk. Thus, the trunks of the LIDL queue at one switch will be searched in exactly the opposite order as the same trunks in the MIDL queue at the other switch.

Due to the additional subgroup hunting that will need to take place, most likely, this feature will be less efficient and will use more memory than linear hunting methods.

The maximum number of trunk members that may be assigned to a trunk group in the 5ESS-2000 LDP is 192. This feature is sharing the same trunk resources with all of the other trunk groups and thus subject to the same member limits. This feature is neither adding nor increasing any limits.

There is also a concern regarding Least Idle Hunting in that during the time (i.e., milliseconds) it takes for one switch to release the trunk, the far end could be seizing the trunk again (assume the far end is the switch using LIDL Hunting). But since the trunk isn't completely idled at the near end, when the seizure comes in, a signaling error could result.

There is no way to avoid this situation, so care must be taken when a customer decides to use the LIDL algorithm. It is not recommended to use LIDL hunting on very small trunk groups that have a very high occupancy.

When a glare situation occurs, the Glare Control will be handled with the existing Glare Control parameter on the TKGRP form (Recent Change View 5.1). Glare control and retry will be based on the TKGRP form (Recent Change View 5.1), and not on the trunk belonging to the MIDL or LIDL subgroup queue.

2.2 Conceptual View of Least Idle Hunting

When a trunk belongs to the Least Idle subgroup, the trunk to be searched for is the one that was used most recently. The trunks being used can be viewed as each having a date/time stamp associated with each trunk within a trunk group. When a trunk is requested, the trunk that has a date/time stamp that is closest to that of when the trunk is requested can be viewed as the trunk that will be selected. This scenario can be viewed in Figure 3 .

- ***NOTE:*** The following examples use date and time to illustrate the use of the LIDL hunting. This is not meant to indicate in any way that an actual date and time stamp is to be used in the development of this feature.

Utilizing the Least Idle trunk hunt algorithm will result in a smaller subset of trunks being utilized for a particular trunk group.

2.3 Conceptual View of Most Idle Hunting

When a trunk belongs to the Most Idle subgroup, the trunk to be searched for is the one that was used least recently (i.e., idle the longest). The trunks being used can be viewed as each having a date/time stamp associated with each trunk within a trunk group. When a trunk is requested, the trunk that has a date/time stamp that is furthest from that of when the trunk is requested can be viewed as the trunk that will be selected. This scenario can be viewed in Figure 4 .

- ***NOTE:*** The following examples use date and time to illustrate the use of the LIDL hunting. This is not meant to indicate in any way that an actual date and time stamp is to be used in the development of this feature.

Utilizing the Most Idle trunk hunt algorithm will result in the all the trunks of a trunk group being utilized evenly.

2.4 Scenario 1 - Basic MIDL-LIDL Subgroups

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This first scenario explains how a trunk group would be configured if a service provider did not want to make use of the subgroup functionality. All of the trunks in a trunk group would be searched either MIDL or LIDL at a given switch.

As shown in Figure 5 , Switch A commands all of the trunks in the trunk group. This was established by Switch A designating all the trunks in that trunk group as belonging to the MIDL subgroup. Switch A will always search for the Most Idle trunk in the trunk group.

Switch B, however, does not command any of the trunks in the trunk group. Therefore, all of the trunks in Switch B must be assigned to the LIDL subgroup. Switch B will always search for the Least Idle trunk in the trunk group.

Although this scenario represents the simplest configuration for the trunk group, it does not capitalize on the flexibility of subgroups. Nor is it realistic to expect Switch B to not command any trunks in the trunk group.

2.5 Scenario 2 - MIDL-LIDL Subgroup Configuration

This scenario explains how a trunk group would most likely be configured if a service provider wanted to make full use of the subgroup functionality. Half of the trunks in a trunk group would belong to the MIDL subgroup on Switch A and the other half would belong to the MIDL subgroup on Switch B.

As shown in Figure 6 , Switch A commands three of the trunks in the trunk group. This was established by Switch A designating those three trunks in that trunk group as belonging to the MIDL subgroup. Switch A will always search those three trunks (i.e., trunks *a, b, c*) for the Most Idle trunk in the trunk group.

Switch B, in this scenario, will command the other half of the trunks in the trunk group. Thus, it will command the three trunks that are not commanded by Switch A. Switch B will establish command of those three trunks by designating them as belonging to the MIDL subgroup. Switch B will always search those three trunks (i.e., trunks *f, e, d*) for the Most Idle trunk in the trunk group.

As shown in Figure 6 , trunk *a* is busy, so if Switch A has to search for an available trunk, it will search its MIDL queue, consisting of trunks *b* and *c*. By using subgroups, the risk of glare is minimized. Switch A will always hunt for an available trunk within the trunks it commands and Switch B will hunt for a trunk within the subgroup that it commands.

Also by using subgroups with MIDL hunting, it will result in all the trunks in a trunk group being utilized evenly.

2.6 Scenario 3 - MIDL Subgroup Overflow

As in the previous scenario, this scenario explains how a trunk group would most likely be configured if a service provider wanted to make full use of the subgroup functionality. Half of the trunks in a trunk group would be commanded by Switch A and the other half would be commanded by Switch B.

As shown in Figure 7 , Switch A commands three of the trunks in the trunk group (i.e., trunks *a, b, c*). Switch B commands the other half of the trunks in the trunk group (i.e., trunks *f, e, d*).

In this scenario, however, all of the trunks commanded by Switch A are busy, thus Switch A's MIDL subgroup is empty. In addition, one of Switch B's trunks is also busy.

If Switch A has to search for an available trunk, it will first go to its MIDL subgroup. Upon finding that subgroup empty, it will attempt to find a trunk in its LIDL subgroup. Since it is searching for the least idle trunk, it will seize trunk *e*. If, at the same moment that Switch A was searching for a trunk, Switch B was also searching for an available trunk, it would first search its MIDL subgroup. Since it searches its MIDL subgroup looking for the most idle trunk, it would seize trunk *f*.

Again, by using subgroups and by proper configuration, the risk of glare was avoided. Although Switch A

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and Switch B were searching among the same two available trunks in the trunk group, because of different subgroup searching, they each seized a different trunk.

If glare is ever encountered, the existing glare parameter on the trunk group will control the outcome. This is true regardless of whether the trunk belongs to the switch's MIDL or LIDL subgroup queue.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2SC	5.5

TKGRP form (5202) - The 5202 Record used to define each Trunk Group in a 5ESS-2000 Switch. For 5E13 and later, added valid entry of "MLIDL" to the HUNT TYPE field.

TRUNK form (5204) - The 5204 Record is used to define characteristics of individual trunks. For 5E13 and later, added the LEAST IDLE field.

4. GLOSSARY

LIDL - Least Idle

MIDL Most Idle

Figure 1 TRUNK GROUP INITIALIZATION

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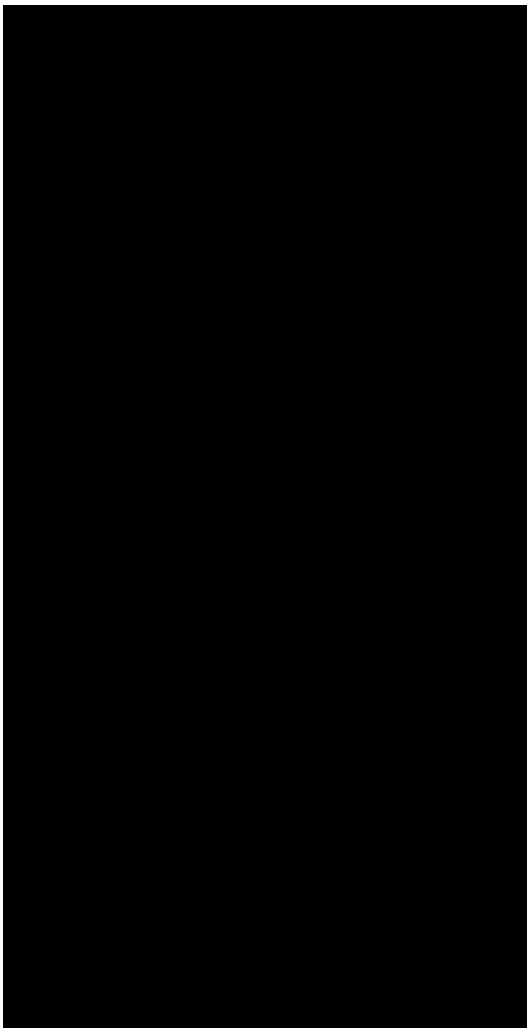

Figure 2 FORM FLOW FOR TRUNK GROUP HUNT SEQUENCE ENHANCEMENTS

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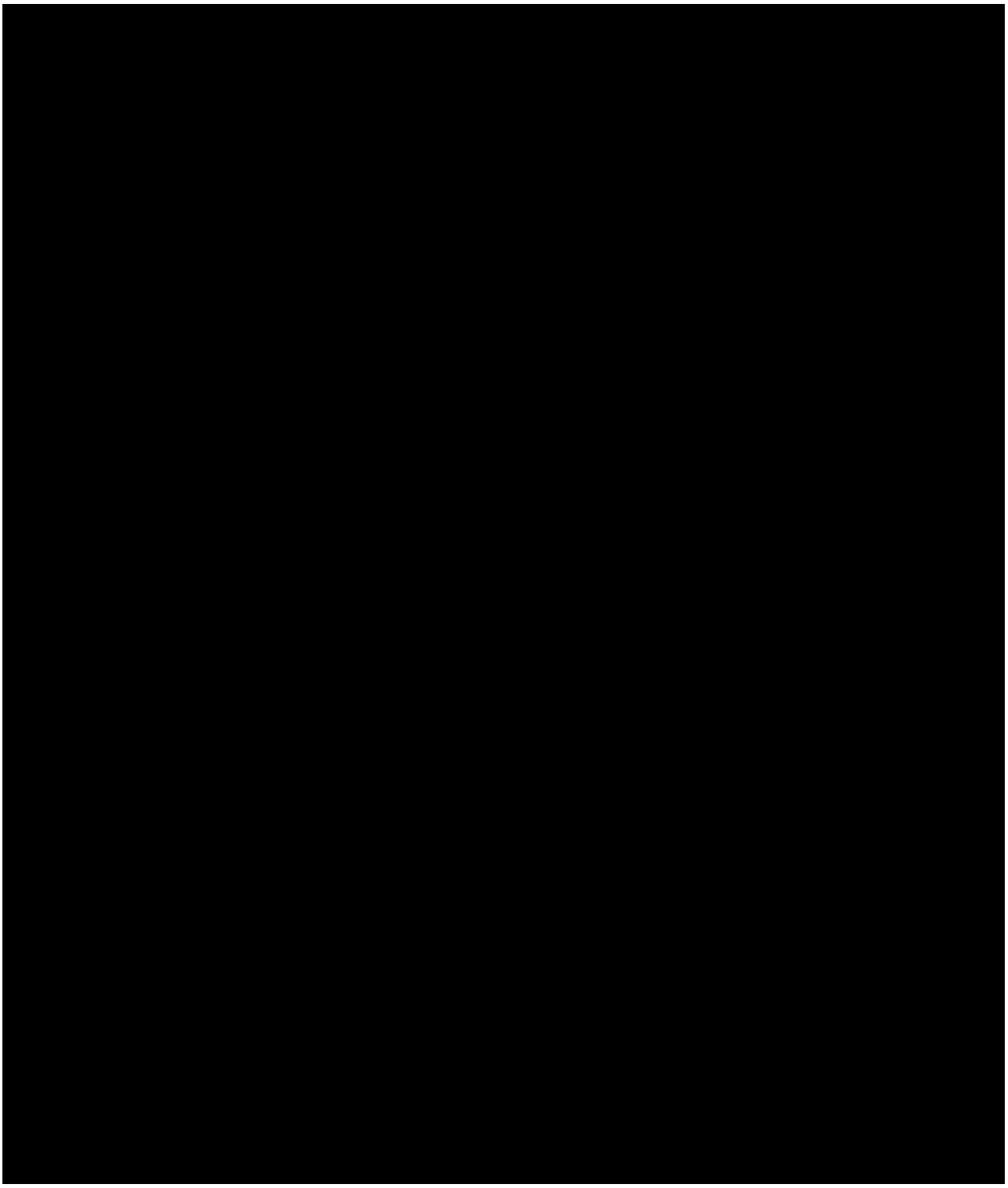

Figure 3 LEAST IDLE HUNT ALGORITHM

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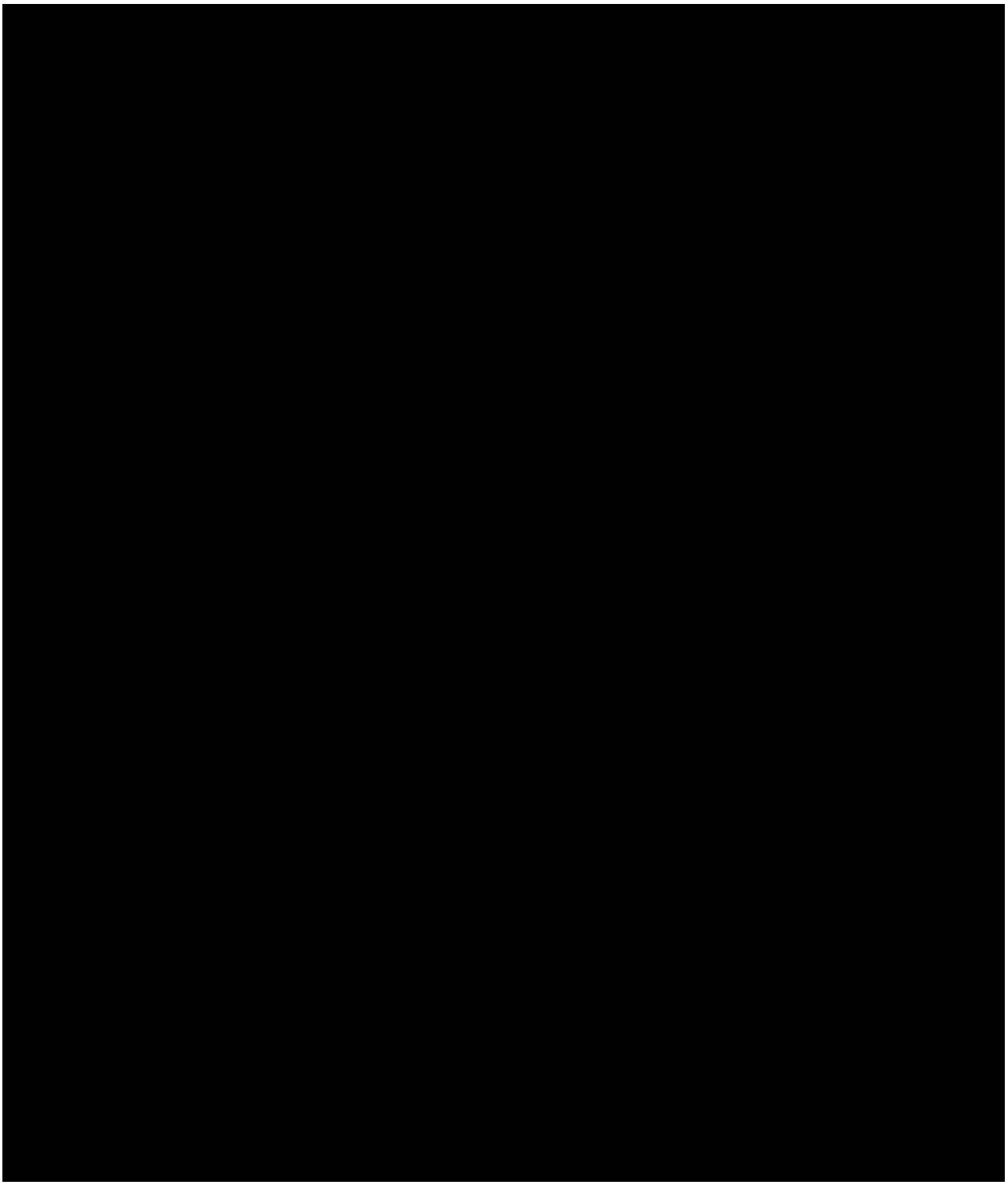

Figure 4 MOST IDLE HUNT ALGORITHM

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Figure 5 BASIC MIDL - LIDL HUNTING

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Figure 6 MIDL - LIDL SUBGROUP HUNTING

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Figure 7 MIDL SUBGROUP OVERFLOW

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SEC. 1BU: RELEASE WITH CAUSE CODE VALUE 1 FOR VACANT NUMBERS

1. BACKGROUND

The 5ESS Switch currently provides treatment locally at the terminating end-office for voice calls to vacant (unallocated) numbers. However, in the Canada PSTN for this case, a terminating end-office sends a release message with cause code value 1 back to the originating end-office. The originating end-office then provides the appropriate treatment.

2. FEATURE DESCRIPTION

Available with 5E13 and later, the Release with Cause Code Value 1 for Vacant Number has feature number 99-5E-7085.

This 99-5E-7085 feature provides a terminating 5ESS Switch the ability to send the Release with Cause Code Value 1 back to the originating switch when a call is made to a vacant number (unallocated number) and the path from the originating switch to the terminating switch is ISUP all the way. The calls originate from analog lines and ISDN lines where the bearer capability is speech, voice or 3.1KHz audio. Any intervening offices will pass on the release message.

This feature is intended for use in Canada only. There is no expectation at this time that this feature will be used in the U.S., and it is not recommended that this feature be turned on in U.S. switches. This is not a secured feature. This feature provides a recent changeable option to turn this feature on or off on an office-wide basis. This feature is for use in Canada so that the 5ESS Switch is consistent with their current procedures for voice calls to vacant numbers.

3. CALL SCENARIOS

When the Release with Cause Code Value 1 for Vacant Number feature is turned on for a terminating end-office, under the following conditions, the terminating end-office will send a Release message containing Cause Code 1 for Vacant Numbers to the originating end-office and the originating end-office will connect the calling party to blank number treatment:

A. The calling party is analog or ISDN with a bearer capability of voice, speech or 3.1KHz audio.

B. The path between the originating and terminating end-offices is ISUP all the way.

C. If LRN routing is used and the NP - Cause Code 26 (ANSI 1) Suppression feature is on.

For the cases when the conditions are not true, existing procedures shall apply. For example:

- If the path is not ISUP all the way, the terminating end-office shall connect the call to blank number treatment.
- If the call was routed using LRN routing, and the regular procedure would be to send a release message with cause code value = 26 (ANSI 1), use that regular procedure. The Release with Cause Code Value 1 for Vacant Number shall not supersede LNP procedures where ANSI cause 26 is sent.

In the following scenarios, it is assumed that this feature 99-5E-7085 is turned on for the terminating end-office.

3.1 Scenario A

This scenario is the case where LNP (Local Number Portability) is not applicable and the route is ISUP all the way.

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1. A call is made to the DN (312) 510-5999 from a analog line or ISDN line where the bearer capability is speech, voice or 3.1 KHz audio.
2. The call is routed through the network to a terminating end office.
3. The terminating switch determines that this DN is a Vacant Number.
4. The terminating switch determines that the call was routed ISUP all the way and formulates a REL message containing cause code 1.
5. The REL is sent back to the originating office.
6. On receipt of this REL, the originating switch looks up blank number treatment, and applies that treatment to the calling party.

3.2 Scenario B

This scenario is the case where LNP (Local Number Portability) is not applicable and the route is not ISUP all the way.

1. A call is made to the DN (312) 510-5999 from a analog line or ISDN line where the bearer capability is speech, voice or 3.1 KHz audio.
2. The call is routed through the network to a terminating end office.
3. The terminating switch determines that this DN is a Vacant Number.
4. The terminating switch determines that the call was not routed ISUP all the way.
5. The terminating switch looks up blank number treatment, and applies that treatment to the calling party.

3.3 Scenario C

This scenario is the case where LNP (Local Number Portability) is applicable and the routing is ISUP all the way.

1. A call is made to the DN (312) 510-5999 from a analog line or ISDN line where the bearer capability is speech, voice or 3.1 KHz audio.
2. The call is routed through the network to a terminating end office.
3. The terminating switch determines that this DN is unallocated and that the call was not LRN routed.
4. The terminating switch determines that the call was routed ISUP all the way, and formulates a REL message containing cause code 1.
5. The REL is sent back to the originating office.
6. On receipt of this REL, the originating switch looks up blank number treatment, and applies that treatment to the calling party.

3.4 Scenario D

This scenario is the case where LNP (Local Number Portability) is applicable, the cause 26 suppression

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feature (SFID 326) is on for the office and the routing is ISUP all the way.

1. A call is made to the DN (312) 510-5999 from a analog line or ISDN line where the bearer capability is speech, voice or 3.1 KHz audio.
2. The call is routed through the network to a terminating end office.
3. The terminating switch determines that this DN is unallocated and that the call was LRN routed, however the cause 26 suppression feature is turned on.
4. The terminating switch determines that the call was routed ISUP all the way, and formulates a REL message containing cause code 1.
5. The REL is sent back to the originating office.
6. On receipt of this REL, the originating switch looks up blank number treatment, and applies that treatment to the calling party.

3.5 Scenario E

This scenario is the case where LNP (Local Number Portability) is applicable, the cause 26 suppression feature (SFID 326) is off for the office and the routing is ISUP all the way.

1. A call is made to the DN (312) 510-5999 from a analog line or ISDN line where the bearer capability is speech, voice or 3.1 KHz audio.
2. The call is routed through the network to a terminating end office.
3. The terminating switch determines that this DN is unallocated and that the call was LRN routed, however the cause 26 suppression feature is turned off.
4. The terminating switch determines that the call was routed ISUP all the way.
5. The terminating switch formulates a REL message containing cause code 26.
6. The REL is sent back to the originating office.

4. FEATURE ASSIGNMENTS

To provision this feature, set the BLANK NBR REL field on the OFCOPT form to "Y".

5. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
OFCOPT	5509	3	5I	8.15

OFCOPT form (5509) - The 5509 Record used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices.The new field BLANK NBR REL was added for 5E13 and later.

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SEC. 1BW: UUCP SUPPORT ON AM

1. BACKGROUND

UUCP (Unix-to-Unix Copy Program) is a standard facility of generic UNIX (UNIX(r) Operating System) dating back to the early 1980s. UUCP allows a user to execute a command to request the transfer of files from one system to another. Initially, the systems were linked by asynchronous serial ports which could be connected to modems for communications over long distances using telephone lines. Asynchronous serial ports are ubiquitous on computer systems for supporting ASCII (American Standard Code for Information Interchange) terminals, and thus provided an inexpensive and readily available method of connecting computer systems.

In addition to the copy utilities, the UUCP package includes the uux (Unix-to-Unix execute) command. A remote user requests the execution of a command on a system accessing either local or remote files and returning the results. This is subject to restrictions on the nature of the commands executed to prevent malicious or inadvertent execution of destructive commands originating on remote systems.

The UUCP Support on AM feature facilitates the distribution of software such as Software Update packages to multiple switches from a central site lowering their OAM&P (Operations, Administration, Maintenance & Provisioning) cost. The file transfer is completely general, however, and can be used for any type of file. Since most central offices where the 5ESS Switch is located do not have resident personnel, the ability to put files on the system without the need for a technician to visit the site with a tape cartridge results in a large cost savings to the service provider.

2. FEATURE DESCRIPTION

The UUCP Support on AM feature (99-5E-7582) is being deployed in the BMI (Beginning Managed Introduction) of the 5E15 Software Release.

This feature provides a method for moving files to and from the 3B21D computer or executing commands from remote sites on the 3B21D. The UNIX system that is sending files or receiving files must be a traditional UNIX system or the UNIX-RTR (Real Time Reliable) operating system running on a 3B21D computer. The UUCP Support on AM feature implements a subset of the UCCP functionality on the UNIX-RTR system running on the 3B21D computer. The UUCP support on the 3B21D is interoperable with UUCP running on a traditional UNIX system such as SUN Microsystems. The UUCP set of tools provides commands that may be used to transfer files between two UNIX systems and request remote systems to execute commands on their behalf. The possible uses for this feature are:

- Maintenance files such as SU (Software Update) packages may be automatically sent to the 3B21D from a UNIX system.
- A UNIX system could transmit requests to the 3B21D to execute routine administrative or bookkeeping commands.

As part of the UUCP on AM feature, the following commands are provided:

- uucp

  The uucp command requests a file copy to or from a remote system.

- uux

  The uux command requests that a remote system execute a command for a user on the local system.

- uuname

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The uuname command can be used to determine the names of remote systems known to the local system. It examines the /usr/lib/uucp/Systems file to determine which systems may connect to the local system.

- uustat/uulog

  The uustat command lists job status. Status may be listed by username or by system name.

  The uulog command queries the UUCP log files to print out uucp or uuxqt transactions by system.

- uucleanup

  uucleanup is used to clean up the uucp spool directory. Entries older than a selectable number of days are removed.

- uuclean.sh

  The uuclean.sh command is a shell script that cleans and truncates log files and also spool files.

- uucheck

  The uucheck command verifies consistency of the configuration files and prints a user readable intrepretation of the contents of the configuration files.

- rmail

  The rmail functionality of the RTR mail command is enhanced to allow for the removal of old messages from the user's mail file.

- uusetup.sh

  uusetup.sh is a new shell script which sets up the UUCP package on the 3B21D.

The uucico process sets the serial line to multicharacter raw mode for efficient file transfer. It negotiates with the remote system for compatible uucp protocol settings and then awaits commands for file transfers from the remote system.

The uuxqt process that handles remote execution requests. It examines the spool directory looking for X. files which contain the parameters and commands that are to be executed.

The UUCP system operates as a set of cooperating commands and worker processes to accomplish its function. The communication between these processes is through a spool area /var/spool/uucp (release 5E15 and later) or /etc/bwm/spool/uucp (release 5E14). The commands that users execute (such as, uucp and uux) place the request for service into the spool area. The worker processes (such as, uucico and uuxqt) examine the work requests in the spool area and cooperate with corresponding processes on other systems to transfer the files and initiate command execution. These processes also send notification of the results to the user who initiated the work, if this is requested.

Errors that can occur in UUCP fall into a few categories:

- Communication errors during file transfers.
- Attempts to transfer a file that is forbidden by access permissions.
- Sequence number violations.
- Attempt to execute a command with uux that is forbidden.

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The UUCP feature requires that the uucp configuration files be preserved over transitions to 5E15 and later. An "evolution" script is executed at the end of the ENTER stage to modify these files to account for the new partition being introduced in 5E15. These "evolved" files are then copied over during the PROCEED stage, and are available to the UUCP feature running on the 5E15 side after booting to this new generic. This functionality is supported over retrofit and Software Release Update, for 5ESS offices. It is not supported for LTG (Large Terminal Growth) transitions. All files under the "/etc/uucp" directory (from the existing "etc" partition) are copied to the same partition/directory on the new side.

3. FEATURE ASSIGNMENT

To activate this feature, follow the instructions in the UUCP Feature Manual.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ECDOPT	5706	8	8	NA

ECDOPT form (5706 Record) - The ECDOPT form (Equipment Configuration Database Options) (5706 Record) is applicable to (and required for) all offices. It is required to translate all options in the AM (Administration Module) for initial offices. This form reflects the current hardware configuration of the system and describes the attributes and status of all processor and peripheral hardware entered into the UNIX-RTR Operating System, formerly DMERT (Duplex Multiple Environment Real Time).

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SEC. 1BX: IMMEDIATE START ANNOUNCEMENT INTERFACE FOR PINNACLE ACD

1. FEATURE DESCRIPTION

Available as a 5E12 and later Software Update, the Immediate Start Announcement Interface for PINNACLE ACD (Automatic Call Distributor) feature provides an interface to the 17A announcement unit from the 5ESS Switch Call Vectoring software for use by existing PINNACLE ACD customers. (See Division 2, Section 4A121.) The 17A unit requires a three-digit announcement index in the range of 1 - 165. This value is defined on the ACDVCT form (5643 Record) in the CARG2 field. The announcement index outpulsed to the 17A unit identifies which announcement to play for the call out of a possible 165 stored announcements. In addition, this feature provides an enhancement to the Call Vectoring ANNOUNCE, PROMPT, and DISConnect commands to provision an announcement index identifying the announcement to be played when routing calls to announcement trunks connected to a 17A Immediate Start Announcement unit.

The feature number is 99-5E-4256.

2. FEATURE ASSIGNMENT

The following sequence should be followed when provisioning an Immediate Start Announcement trunk for use by this feature.

- Provision a trunk group to use immediate start announcements (17A announcement machine) by setting the IMM START ANN field on the TKGRP form to "Y".
- Assign the Immediate Start Announcement trunk group (i.e., TGN) a route index on the Route Index form (5303 Record)
- Assign the Immediate Start Announcement TGN to a call vector command step (PROMPT, DISC, or ANNOUNC) on the ACDVCT form (5643 Record).

- ***NOTE:*** The Route Index defined on the ACDVCT form in the ARG1 (call vector step Argument 1) field should be the same value as was assigned to the immediate start announcement trunk group on the Route Index form.

- ***NOTE:*** The announcement index defined in the CARG2 (call vector step Conditional Argument 2) field should be set to a value between 1 - 165.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDVCT	5643	4	32H	6.7
TKGRP	5202	3	2A	5.1

ACDVCT form (5643 Record) - This form is used to define the Call Vectoring steps that determine how an incoming call is to be treated while waiting for a ACD (Automatic Call Distributor) agent. This form supports the ACD/BRCS Interworking II feature. For more information on this feature, see Division 2, Section 4A121. The Immediate Start Announcement feature makes use of three call vectoring command Codes defined in the CMD CD field: "PROMPT", "DISC", or "ANNOUNC". For this feature, as indicated in the Notes above, the CARG2 field must be entered with a value of 1 - 165 and the ARG1 field must be defined as the ROUTE INDEX on the RTIDX form. Each RTIDX form must have a TRUNK GROUP NUMBER which corresponds to a TGN on the TKGRP form where the IMM START ANN field is set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk

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information that is entered on these records is information that is common to the entire trunk group. For this feature, an IMM START ANN field was added to indicated if this feature is to be activated.

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SEC. 1BY: RC TRANSLATIONS PROTECTION FOR HIGHLY CRITICAL ELEMENTS

1. FEATURE DESCRIPTION

1.1 Recent Change Translations Protection for Highly Critical Elements (99-5E-7336)

The RC (Recent Change) Translations Protection for Highly Critical Elements feature is being deployed on the 5ESS Switch in a Software Update for the 5E14 Feature Release 2, the 5E13 Feature Release 3, and in the BMI (Beginning Managed Introduction) of 5E15 Software Release. The feature number for this feature is 99-5E-7336.

This feature provides protection against the accidental and/or erroneous update or removal of data that has been identified by the operating companies during provisioning, as critical to the operation of the 5ESS Switch. It provides additional protection against user errors in customer specified RC Views. The layer of protection is not for all instances of a particular view. It is only for those which the customer marks as critical during provisioning. An error message, when attempting to remove or modify a critical view instance, indicates that it is a critical one and requires that the view instance be marked not critical before continuing. The critical data indicator field is used to identify a view instance or field that, if updated incorrectly or deleted accidently, could cause service interruption. The field is required and defaults to a value of "N". The customer will be responsible for indicating that updates to fields in a specific view instance may be service impacting by setting this field to "Y". The translations protection becomes effective when the customer provisions the critical indicator field with a value of "Y".

The End User for this feature is the Service Provider, specifically the Recent Change Technician. When the critical indicator is set to "Y", updates or deletions of a view instance causes an error message to appear that will provide relevant information and describe the potential consequences to the user. An example of an error message is as follows:

- INPUT DATA ERROR. CRITICAL DATA - POSSIBLE SERVICE INTERRUPTION.
  Verify view number, field number, and data content. You must update CRIT IND to "N" to process this recent change.

The Recent Change Technician is required to reset the critical indicator to "N" before the original update or delete can proceed. Following an update transaction, if the data continues to be critical, the technician must reset the critical data indicator to a value of "Y" in order to preserve the integrity of the feature.

Recent Change processing supports all requirements for update and delete operations. ODA (Office Data Administration System) supports help and error messages during the insert operation and preserves the value of the critical indicator fields over Large Terminal Growth.

The CRIT IND field on RC View 10.2 is checked by the Digit Analysis RC Views 9.2, 9.3, 9.5, 9.6, 9.9 and 9.15, and Routing RC Views 10.10 and 10.25. These RC Views contain a RTI (Route Index) field. When a Route Index is marked critical on RC View 10.2, Recent Change blocks the attempted update of the RTI field on the above mentioned Digit Analysis RC Views and the Routing RC Views. Likewise, the customer is not allowed to delete a RC View instance that contains a RTI that is defined as critical on RC Views 10.2, 8.1, 8.49 and 10.3.

NOTE: Routing RC View 10.25 becomes a verify only view in 5E14 and therefore no longer is impacted by this feature.

Feature 99-5E-7336 is not a secured feature and, therefore, is available to all customers utilizing the NAR 5ESS Switch Release.

The RCOS (Recent Change Operations Systems) must be notified that failures due to the critical indicator require that the RC transaction be reviewed, that the indicator be updated, and that the transaction be resubmitted.

1.2 Customer Recent Change Input for Critical Translations Protection (99-5E-7370)

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The feature number for the Customer Recent Change Input for Critical Translations Protection feature is 99-5E-7370. This secured feature (SFID 566) is available for 5E15 and later.

This feature allows the customer to input additional information in a comment field that clarifies the important nature of the data. Feature 99-5E-7370 will send the error messages produced by feature 99-5E-7336 to the ROP. Also, it will display the critical data remark field as part of a warning message sent to the ROP when the critical data indicator field is changed from "Y" to "N". It will also display the critical data remark field, along with the critical data indicator field, on a separate screen when the critical data indicator field is changed from "Y" to "N".

2. FEATURE ASSIGNMENT

2.1 Recent Change Translations Protection for Highly Critical Elements (99-5E-7336)

Feature 99-5E-7336 is in use if a critical indicator field, on any Recent Change View impacted by this feature, is provisioned with a value of "Y". Recent Change processing supports all requirements for update and delete operations. ODA supports help and error messages without checks during the insert operation and preserves the value of the critical indicator fields over Large Terminal Growth.

2.2 Customer Recent Change Input for Critical Translations Protection (99-5E-7370)

To enable this feature, the ACT field for SFID 566 must be set to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms - Recent Change Translations Protection for Highly Critical Elements (99-5E-7336) - 5E13 and later

Form Name	Record Number	Div.	Sec.	RC View
ASPOPT	5670	4	31G	8.49
ESCO	5541	3	5AO	9.41
ESN	5540	3	5AN	9.40
ICF	5305	3	3R	10.3
ISDNOPT	5941	5	5B	8.1
OFCOPT	5509	3	5I	8.1
MCRTIDX	5304	3	3Q	10.4
RTIDX	5303	3	3P	10.2

ASPOPT form (5670 Record) - The ASPOPT form (5670 Record) is used to set the ASP office parameters for the office. CRITICAL INDICATORS fields were added for 5E13 and later - CRIT MAX TRIG, CRIT RDRCT THRES, CRIT SCP DAS, CRIT ASP OFC, CRIT MAX CONV, CRIT ORIG BL TRIG, CRIT ORIG NA TRIG, CRIT ARS FCD CDP and CRIT OHI OHD TAT.

ESCO form (5541 Record) - When a 911 call arrives at an E911 serving office, the ESCO form is used to retrieve an ESN (Emergency Service Number), NPD (Numbering Plan Digit), and selective routing indicator, based on the originating calling area. The CRIT IND field is added for 5E13 and later.

ESN form (5540 Record) - The ESN form (5540 Record) serves two purposes. First, it is used to define an ESN (Emergency Service Number), a set of telephone numbers for the emergency services, a 911 caller may require. Second, it is used to define SM stand-alone data, a set of emergency numbers for a 911 call that arrives at an SM unable to communicate with the CMP (Communication Module Processor). The CRIT IND field is added for 5E13 and later.

ICF form (5305 Record) - The ICF form (5305 Record) is used to define the characteristics of Inter-LATA (Local Access Transport Area) and Intra-LATA carriers. The CRIT IND field is added for 5E13 and later.

ISDNOPT form (5941 Record) - The ISDNOPT form (5941 Record) defines a set of office parameters that must be entered when the office is an ISDN (Integrated Services Digital Network) switch. CRITICAL INDICATORS fields were added for 5E13 and later - CRIT PSN, CRIT IMPLIED NPA, CRIT INIC, CRIT PPSN DNIC, CRIT TNIC, CRIT SENSOR ID 1, CRIT SENSOR ID 2 and CRIT ILC.

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OFCOPT form (5509 Record) - The OFCOPT form (5509 Record) is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. CRITICAL INDICATORS fields were added for 5E13 and later - CRIT EXPANDED INBAND SGNLING, CRIT NM DEFAULT NPA, CRIT HOME NPA, CRIT EXTRA START WINK, CRIT CPE OPTION, CRIT OFFICE TYPE, CRIT E911 OPTION, CRIT E911 DAS, CRIT E911 SCR, CRIT IHN SCP NPA DEL, CRIT SCP 800 DAS, CRIT FGD PHASE, CRIT TCAP CIC, CRIT USTWC FEAT, CRIT USTWC ACT, CRIT SPONT AVAIL, AND CRIT CICP BLOCK.

MCRTIDX form (5304 Record) - The MCRTIDX (Modular Customization Route Index) is similar to the Route Index defined on the RTIDX form (5303 Record). The MCRTIDX form (5304 Record), however, allows additional information that is required for ARS (Automatic Route Selection) and sometimes used for PFA (Private Facility Access). The CRIT IND field is added for 5E13 and later.

RTIDX form (5303 Record) - The RTIDX form (5303 Record) is used to define each Route Index in a 5ESS Switch. The record is intended to be used as an office record and as a source document for data entry into the RTIDX form. The CRIT IND field is added for 5E13 and later.

New And Modified ODA Forms - Customer Recent Change Input for Critical Translations Protection (99-5E-7370) - 5E15 and later

Form Name	Record Number	Div.	Sec.	RC View
ESCO	5541	3	5AO	9.41
ESN	5540	3	5AN	9.40
ICF	5305	3	3R	10.3
MCRTIDX	5304	3	3Q	10.4
RTIDX	5303	3	3P	10.2

ESCO form (5541 Record) - When a 911 call arrives at an E911 serving office, the ESCO form is used to retrieve an ESN (Emergency Service Number), NPD (Numbering Plan Digit), and selective routing indicator, based on the originating calling area. The CRIT RMK field is added for 5E15 and later.

ESN form (5540 Record) - The ESN form (5540 Record) serves two purposes. First, it is used to define an ESN (Emergency Service Number), a set of telephone numbers for the emergency services, a 911 caller may require. Second, it is used to define SM stand-alone data, a set of emergency numbers for a 911 call that arrives at an SM unable to communicate with the CMP (Communication Module Processor). The CRIT RMK field is added for 5E15 and later.

ICF form (5305 Record) - The ICF form (5305 Record) is used to define the characteristics of Inter-LATA (Local Access Transport Area) and Intra-LATA carriers. The CRIT RMK field is added for 5E15 and later.

MCRTIDX form (5304 Record) - The MCRTIDX (Modular Customization Route Index) is similar to the Route Index defined on the RTIDX form (5303 Record). The MCRTIDX form (5304 Record), however, allows additional information that is required for ARS (Automatic Route Selection) and sometimes used for PFA (Private Facility Access). The CRIT RMK field is added for 5E15 and later.

RTIDX form (5303 Record) - The RTIDX form (5303 Record) is used to define each Route Index in a 5ESS Switch. The record is intended to be used as an office record and as a source document for data entry into the RTIDX form. The CRIT RMK field is added for 5E15 and later.

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SEC. 1BZ: OFFICE TO OFFICE TESTING

1. FEATURE DESCRIPTION

The Office to Office Testing feature (99-5E-7158) is deployed in a Software Update for 5E13 and in the 5E14 BMI (Beginning Managed Introduction) Software Release.

The OTO (Office to Office) testing is responsible for verifying interoffice continuity and proper line polarity in addition to verification that the directory number associated with a particular cable pair is consistent in both the old and the new switching systems. To verify this consistency, an interface trunk, providing test access from the 5ESS Switch is required to perform line testing. The Office to Office Testing feature provides a digital trunk interface for the new office OTO testing platform. Currently, Office to Office Testing is done on an Analog Trunk Unit (SN102).

This feature allows service providers supporting DLTU (Digital Line and Trunk Unit) trunks in the new office to use the existing OTO platform to provide pre-cutover support on the old office trunks. This digital trunk interface, in conjunction with an IAD (Integrated Analog to Digital Converter) or D4 channel bank, serves as a replacement for the SN102 OTO analog trunk circuit in the new office supporting 5E13 and beyond. The functionality of the OTO test is not expected to change as a result of this feature. The primary focus of this feature is limited to upgrading the new office OTO test interface to support a digital interface. The ATU (Analog Trunk Unit) interface continues to be supported in the existing office configured with an ATU equipped with a SN102 OTO analog trunk circuit. However new office startups are encouraged to support the new interface when at all possible.

2. FEATURE ASSIGNMENT

To provision this feature, the Office to Office parameters should be assigned to the digital trunk members on the TRUNK form (Record 5204). The DEN, OTODPN 1, OTODPN 2, SLC OTODPN 3, and SLC OTODPN 4 fields have to be set on the TRUNK form.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. A data rule was added to the DATA RATE field.

TRUNK form (5204 Record) - The 5204 Record is used to define each member of a Trunk Group in a 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Data rules were added to the OTODPN 1 field.

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SEC. 1CA: REROUTE ON RELEASE

1. FEATURE DESCRIPTION

The Reroute on Release feature is available with the 5E15 Feature Release 2 and later Software Releases. The feature number is 99-5E-7590.

The Reroute on Release feature allows a call to be rerouted if unavailable routes are encountered in the call path.When a call cannot be routed out of a switch, the switch can send a Release message (with an appropriate Cause value) back to the upstream switch. Normally, that Release message initiates the tearing down of the call, but for certain specified Cause values, receipt of the Release message (at the upstream switch) causes the upstream switch to try to reroute the call.

Reroute on Release is an original feature for the LDP (Long Distance Platform) and is part of the MINT (Multi-vendor Intra-Network Trunks) feature. (See Division 2, Section 4A217 for more information on the base MINT feature (TOLL 5ESS Switch Platform for MINT Processing)). A benefit of the Reroute on Release feature is that it was previously available only on the LDP, but is currently available on the local/toll switch. This feature is identical in operation to the Reroute on Release feature that is provided on the LDP (see Division 2, Section 4A250, MINT Reroute on Release feature).

For a complete description of the Reroute on Release capability and for the table summarizing possible Cause values used with the Reroute on Release capability, see Division 2, Section 4A217.

1.1 Interactions with ASP

The ASP (Advanced Services Platform) BLNA (Busy Line No Answer) feature also makes use of rerouting capabilities. This feature allows the SCP (Service Control Point) to be informed when a call encounters a Busy or No Answer condition in the network. It does this by using an NEL (Next Event List) on the call. If a switch receives a Release message, and there is an ASP NEL assigned to the call with User Busy armed, the Call value is checked to see if it should be interpreted by ASP as User Busy. If so, the ASP NEL takes precedence over the Reroute on Release feature, and call control is returned to the SCP. If not, the Reroute on Release is invoked.

2. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

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SEC. 1CB: BICC STATIC CIC ALLOCATION

1. FEATURE DESCRIPTION

The feature number for the BICC (Bearer Independent Call Control) Static CIC (Call Instance Code) Allocation feature is 99-5E-7914. This feature is being deployed in the 5E16 BMI (Beginning Management Introduction) Software Release.

The purpose of this feature is to create a mechanical method to move CIC blocks from one SM-2000 to another SM-2000.

This feature provides both an automatic and manual method of moving many blocks of BICC CIC from one SM-2000 to another SM-2000. It also adds a new Traffic Measurement parameter, "BICCSM", reported on SM basis on the TRFC30 report.

The provisioned CICs required by the BICC protocol for each OPC (Origination Point Code) and DPC (Destination Point Code) pair are divided into blocks of 128 and stored on SM-2000s that are provisioned on RC/V (Recent Change and Verify) 5.70 as being BICC capable.

NOTE: This does not mean that the SM-2000 is equipped with an IWG (InterWorking Gateway), but rather that there is sufficient memory and real time to support the BICC call processing model.

There are three conditions that may require that the CICs be moved from one SM to another. These conditions are:

- Traffic - the SM-2000 is experiencing overload on a regular basis
- Growth - a new BICC enabled SM-2000 is added to the office
- De-Growth - a BICC enabled SM-2000 is being removed from being BICC enabled

In 7R/E PLS 3.0, a manual method was developed to allow the CIC blocks to be moved. This provides the parts to move CIC blocks. This process starts by using a new MML (Man/Machine Language) command that is used to identify CIC block numbers and CIC ranges for a given SM-2000 and BICC Group number. The craft then picks the block number and range that is to be moved and executes the steps necessary to remove the block from service CADN (Circuit Administration) and to block new calls from using the block of CICs. RC/V (Recent Change/Verify) view 5.73 - BICC Group Move - is then used to move the block from the source SM to the destination SM. The last step is to put the moved CIC block back in service.

NOTE: The are several important facts that should be noted:

- High CIC blocks are reserved for maintenance.
- Low CIC blocks ranges are from 0 - 127.
- CICs are provisioned in blocks of 128 CICs per block.
- Provisioned as Base CIC and contiguous CIC Range.
- Base CIC: Must be divisible by 128 and not reserved.
- CIC range: Up to 65,536 BICC CICs for traffic between a single OPC/DPC (Originating Point Code/Destination Point Code) pair.

2. FEATURE ASSIGNMENT

In order to used this feature the following forms must be provisioned:

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The following new fields on the OFCOPT form (5509 Record) are required for this feature.

- CAMPON TIMER
  - Camp-on Timer for CIC Redistribution defines the number of minutes to be used for camp-on for each CIC block that is to be moved during the CIC Redistribution process. It means that when this process is started for a given CIC block, the timer for this block is set to a value defined via this field (in minutes). When the timer expires, the behavior depends on the value of the KILL CALLS parameter.

- KILL CALLS
  - Kill BICC Calls at end of Camp-on parameter defines whether or not the CIC Redistribution process kills calls on selected CIC blocks when the camp-on timer (set via CAMPON TIMER field) has expired.
    - Y - will kill calls
    - N - will not kill calls
    - Default - Y

- GROWTH VIA RCV
  - This parameter specifies whether or not adding a new SM-2000 to CIC Distribution starts the CIC SM Growth process. It only applies to RC/V and has no impact on other parts of this feature (i.e. MML commands). Value entered in this field decides if CIC Redistribution process can be started via RC/V.
    - Y - adding a new SM-2000 to CIC Distribution automatically starts the CIC Redistribution process.
    - N - adding a new SM-2000 to CIC Distribution does not start the CIC Redistribution process.

The new field on view 5.70 is populated as follows:

- INH DIST
  - The Inhibit CIC Distribution parameter specifies whether or a given SM-2000 added to CIC distribution is inhibited from CIC block insertion. This field must have a value for each SM-2000 added on RC/V 5.70. By adding a new SM-2000 on this view, the process configured on view 8.1 in the CIC ALLOCATION section can be started automatically.
    - Y - given SM-2000 is inhibited from CIC block insertion.
    - N - given SM-2000 is allowed CIC block insertion.

3. TRANSLATION REQUIREMENT

New and Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
CICDIST	5217	3	2T	5.70
MEASSUM	5563	3	5BG	13.7/13.8/ 13.9
OFCOPT	5909	3	5I	8.1

CICDIST form (5217 Record) - This form specifies SM-2000 (Switching Module 2000) modules in an office for CIC block distribution. Added the INH DIST field.

OFCOPT (5509 Record) - This form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. Added the CAMPON TIMER, KILL CALLS, and GROWTH VIA RCV fields.

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report (TRFC30). Added a new section for this feature: "BICCSM".

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SEC. 1CC: AMA/RTCD MULTIPLE BILLING RECORDS

1. FEATURE DESCRIPTION

Available with the 5E15 Software Release, the AMA/RTCD (Automatic Message Accounting/Real Time Call Detail) Multiple Billing Records feature has feature number 99-5E-7393. This feature is an enhancement to two Secured Features, which are controlled by Secured Feature IDs 245 (99-5E-4387 Long Distance Platform RTCD Expansion Package A) and 348 (99-5E-3675, Long Distance Platform AMA Enhancement). For more information on these features, see Division 2, Sections 4A245 and 4A348.

In order for this feature to be activated for AMA billing, the "Long Distance Platform AMA Enhancement" feature (SFID 348) must also be active on the switch. In order for the feature to be activated for RTCD billing, the "Long Distance Platform RTCD Enhancement Package A" feature (SFID 245) must also be active on the switch.

The AMA/RTCD Multiple Billing Records feature is a billing feature that supports the recording of two peg counts in the AMA Correlation Module 960 or in the RTCD record for any call that generates an LDP (Long Distance Platform) originating access record and one or more ASP related records. For RTCD billing, the two peg counts are included in subfields of the Record Correlation Parameters (Table C.42). The first peg count contains the total number of records generated for a call at one office. The second peg count indicates the relative sequence number of the record to the other records for that call in the record stream.

1.1 AMA Correlation Module 960

For AMA recording, the total record count is contained in BCD character 1 of Table T900 (Reason Code). It can be populated with values 0-9 where 0 indicates the total is unknown and 9 indicates 9 or more records. The sequence record count is contained in BCD character 2 of the same table. It is populated with values 1-9. (For additional information, refer to the *5ESS Switch Billing Features and Specifications 235-190-300*.)

1.2 RTCD Record Correlation Parameters

For RTCD recording, the total record count is contained in BCD character 1 of the eighth byte of the Record Correlation Parameters. It can be populated with values 0-9 where 0 indicates the total is unknown and 9 indicates 9 or more records. The total is unknown for AMA records that are created while the call is still in progress. The sequence record count is contained in BCD character 2 of the eighth byte of the Record Correlation Parameters. It can be populated with values 1-9.

2. FEATURE ASSIGNMENT

In order for this feature to be activated for AMA billing, the "Long Distance Platform AMA Enhancement" feature (SFID 348) must also be active on the switch. In order for the feature to be activated for RTCD billing, the "Long Distance Platform RTCD Enhancement Package A" feature (SFID 245) must also be active on the switch. The ACT field for SFID 245 and 348 must be set to "Y" on the SFSYS form (5713-1 Record).

NOTE: Once this feature is installed, an upgraded version of the Data Server in the RTCD cabinet must be used for processing the RTCD record. Downstream OSS (Operating Services Systems) software must also be upgraded to process the new record.

3. TRANSLATION REQUIREMENT

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

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SFSYS form (5713-1 Record) - This form is used to activate Secured Features. The ACT field for SFID 245 and 348 must be set to "Y" to activate this feature.

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SEC. 1CE: HIGH WATER MARK ON DLN

1. FEATURE DESCRIPTION

The High Water Mark on DLN (Direct Line Node) feature (99-5E-7693) is available with the 5E15 FR 2 and later Software Releases. This feature provides the capability to report traffic load (processor occupancy) on the DLN. This information will be reported on Section 66 of the TRFC30 report. To support this capability, two new parameters will be provided to measure processor occupancy ("high water mark") and to time stamp the measurement.

1. "APMAX" □ measures the maximal traffic occupancy value (0 - 100%) that took place during the TRFC30 interval (scanned every 6 seconds).

2. "APMXTM" □ reports the time, in milliseconds, that the maximal occupancy measurement was noted.

It may happen that the DLN actually experienced a large burst of traffic over a short time interval since the overload only lasted for about 1 minute. This kind of traffic may cause DLN overloads. This maximal occupacy value is the average occupancy value per TRFC30 collection interval.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9

MEASSUM form (5563 Record) - This form is used to identify traffic measurements components reported on the TRFC30 report. Two new measurements were added: "APMAX" and "AMXTM."

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SEC. 1CF: CODE SPECIFIC REROUTE

1. FEATURE DESCRIPTION

The Code Specific Reroute feature is available with the 5E15 FR4.5 Release. The feature number is 99-5E-8029.

The CSRR (Code Specific Reroute) feature is an enhancement to the existing network management reroute control. It allows NM (Network Management) Personnel to input a 1-10 digit number and/or a Carrier which is then used as a destination by the switch for calls on a specified Trunk Group or BICC (Bearer Independent Call Control) Group. Those calls are then re-routed from their intended route to the route specified by the control. This allows NM Personnel to control traffic around congested or isolated routes.

The control may be entered at the remote Network Management Operations System or at the 5ESS Switch site via I/O messages. While the control is in effect, existing Network Management measurements are collected and analyzed by NM Personnel to determine the effectiveness of the control. This allows them to make any adjustments to maximize traffic flow.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 626 to "Y".

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SEC. 1CG: HARD-TO-REACH

This feature was moved to Division 2, Section 4A625.

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SEC. 1CH: OFFICE-TO-OFFICE TESTING SOFTWARE WITH DNU-S

1. FEATURE DESCRIPTION

The OTO (Office-to-Office) Testing Software with DNU-S (Digital Network Unit - SONET) feature (99-5E-8060) is made available with the 5E15 Feature Release 5 and in the 5E16(2) Beginning Managed Introduction.

The OTO Testing Software with DNU-S feature:

- provides a digital trunk interface for the new OTO testing platform, and
- allows customers supporting DNU-S trunks in the new office to use the existing OTO platform to provide pre-cutover support on the old office lines.

This feature is an enhancement to the Office-to-Office Testing feature (99-5E-7158) which provides the ability to assign either a traditional analog trunk or a digital trunk terminating on a DLTU (Digital Line and Trunk Unit) as the interface for the OTO testing function. The OTO Testing Software with DNU-S feature builds upon the capabilities of feature 99-5E-7158 and provides the ability to assign a digital trunk (NEN) terminating on a DNU-S as the interface on the 5ESS Switch for the OTO testing function.

OTO testing is executed when a new 5ESS Switch is replacing another switch and is planned to serve lines that were being served by the replaced switch. OTO testing is responsible for verifying that the wiring to the old and new switches is correct; that is, there is continuity, correct polarity, and the directory number associated with a particular cable pair is consistent in both the old and the new switching systems. To verify this consistency, an interface trunk, providing test access from the 5ESS Switch to a No-Test-Trunk on the switch being replaced is required to perform the verification testing.

The interface trunk from the 5ESS Switch can be a traditional analog trunk, or since the OTO Testing feature (99-5E-7158), a digital trunk. When a digital trunk interface is used, a signaling converter or a channel bank is needed to fully replace the functions formerly performed by the SN102 analog trunk circuit. Feature 99-5E-7158 only supports a digital trunk that is terminated in a DLTU. This feature (99-5E-8060) adds the ability to use a digital trunk (NEN) on a DNU-S.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
TRUNK	5204	3	2C	5.5

TRUNK form (5204 Record) - The 5204 Record is used to define each member of a Trunk Group in a 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. For 5E13 and later, a data rule was modified for the DEN field. For 5E15 and later, data rules were modified and added for the NEN field.

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SEC. 1CJ: INCREASED DCI THROUGHPUT FOR BILLING

1. BACKGROUND

In normal operation, the DCI (Data Communication Institute) Link can sustain an aggregate transfer rate of approximately 700 Kbytes/second and files can be transferred at a rate of approximately 540 to 720 Kbytes/second. The DCI Link has 256 channels that are served in round robin fashion to prevent a single application from consuming all or most of the bandwidth.

At present, the 5ESS NAR Switch software used to transport billing records from the 3B to the ASM runs under UNIX (not RTR)and operates as follows:

- Read a block of AMA data (1,536 bytes/block) from an AMA disk partition using the UNIX file system and place it in a buffer.
- Break the block into individual records.
- Remove the 28 byte block header and remove 5 bytes of "fill" from each record.
- Put the records into a shared memory segment whose size may be typically 80 Kbytes but which can be as large as 128 Kbytes.
- When the segment is full or nearly full (or maybe when a timer expires), send the address of the segment to the DCI driver along with the length.
- The DCI driver then sends the segment to the ASM.

2. FEATURE DESCRIPTION

The DCI (Dual serial channel Computer Interface) Throughtput Increase for Billing feature (99-5E-7894) is made available with the 5E16(2) Software Release.

This feature increases the throughput of the billing data over the DCI from the current max of 95K per sec/342M bytes per hour to 150K per sec/540Mbytes per hour.

The DCI Throughput Increase for Billing feature is also needed to support the billing volume associated with the 1.5M BHC (Busy Hour Calls) generated by up to 256K ISUP (Integrated Services User Part) trunks. The background behind this need is that the AM (Administration Module) alone can not handle the billing for the 256K ISUP trunk call loads since it only has a single 56Kbps link to the billing center. However, the ASM (Administrative Services Module) has a high speed Ethernet link (10/100Mbps) and also a newer processor that can handle this billing rate. Thus an ASM is needed to support billing for 256K ISUP trunks. Moreover, the billing records must go through the AM (they are stored also in the AM's disk) which then sends them over a DCI link to the ASM.

This feature is used in the AM to prevent the DCI bandwidth from being fully utilized. With this feature the DCI can transport the billing rates associated with 256K trunks. This feature is also required in order to suport 1.5M BHC and 256K ISUP trunks. The HA-SAM (High Availability -ASM) is not required to support this billing rate (a single ASM is enough).

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SEC. 1CL: 3B21D/RTR MEMORY AND DMAC

1. FEATURE DESCRIPTION

The 3B21D/RTR (Real Time Reliable) Memory and DMAC (Direct Memory Access Controller) Test Only feature (99-5E-8202) is made available with the 5E16(2) Software Release.

This feature is for test purposes only on 5ESS Circuit Switch Applications for both NAR (North America Region) and International markets. It addresses both performance and life-cycle issues. It is used to test the KLW256 Memory and the KBN415 DMAC Boards in the 5ESS Switch environment. The redesigned hardware was developed to eliminate life-cycle issues and increase the performance of the 3B21D processor. The redesign of the KLW256 increased the 3B21D memory to 256 MB. The test requirements for this feature are:

- This feature requires the testing of the redesigned KLW256 Memory Board but not the increase in memory capacity resulting from the redesign, and the KBN415 DMA Controller board for functionality and increased processor performance in the 5ESS switch environment.
- The new hardware must be tested and become available in the 5ESS environment on 5E16.2 and the 5EE15.1 base generic releases for NAR and International markets respectively.
- The KBN415 will be tested to the current generic releases and it doesn't have to be tested for portability to earlier releases.

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SEC. 1CM: DATALINK DESCRIPTOR

1. FEATURE DESCRIPTION

The Datalink Descriptor feature (99-5E-7688) is made available with the 5E16(2) Software Release.

This feature provides the technician with information on which AP (Application Processor) Data Links are E911 (Emergency 911). Specifically, it adds an indicator on two MCC (Master Control Center) pages to indicate, for each AP Data Link, whether or not it is dedicated to E911. This new indicator is displayed on MCC pages 1480 and 1481, the "AP DATA LINK DSLS" pages. These pages display the status of AP DSL (Digital Subscriber Lines) and associated sessions. The layout of the two pages (1480, 1481) is identical. The 1481 page is used when the number of DSLs exceeds 15 (which is the display capacity of the 1480 page).

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SEC. 1CN: UPGRADE ASM TO SOLARIS 8

1. FEATURE DESCRIPTION

The Upgrade ASM (Administrative Status Monitor) to Solaris 8 feature (99-5E-7893) is made available with the 5E16(2) Software Release.

This feature upgrades the current ASM operating system, Solaris 2.6, to Solaris 8. This feature also involves the selection, qualification, and deployment of a new hardware platform for ASM. This includes designating the product, and peripheral equipage (i.e., the number of processors, memory, disk configuration, and interfaces).

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SEC. 1CO: LARGE TERMINAL GROWTH FOR IVTOA

1. FEATURE DESCRIPTION

The LTG (Large Terminal Growth) for IVTOA (Integrated Voice Telephony over ATM (Asynchronous Transfer Mode)) feature is available with 5E15 Feature Release 4. The feature number is 99-5E-8067.

The LTG provides the ability to add large quantities of lines, trunks, and other switch data to an operational 5ESS Switch. The LTG allows the bulk loading of new, non-operational, precut office data. Manually input data or existing switch owner data base information is used to generate the new office data to be loaded during the LTG. The new office data is then merged with the existing 5ESS Switch ODD (Office Dependent Data) using off-site ODA (Office Data Administration) processing.

Use of LTG eliminates the need to manually populate line, trunk, and other switch data (using the Recent Change/verify mechanism) during terminal growth on the 5ESS Switch. This feature expands upon the current LTG capabilities to support LTG's for offices that have deployed PLS 3.0 (Packet Local Solution) integrated VTOA capabilities. This feature depends on feature number 99-5E-8018 (originally 99-5E-7554), ATM Global Routing and Signaling. (For more detailed information on the ATM Global Routing and Signaling feature, see Division 2, Section 4A567.)

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CICDIST	5217	3	2T	5.70
LTGCADN	5222	3	2Z	5.76
LTGPCI	5221	3	2Y	5.75

CICDIST form (5217 Record) - This form is used to specify SM-2000 (Switching Module 2000) modules in an office for CIC block distribution. For 5E15 and later, the SM2K MODULE field was added for the LTG CIC DISTRIBUTION (LTGCICDIST) section.

LTGCADN form (5222 Record) - This form is used to preserve the CADN values during the LTG for IVOTA (Integrated Voice and Telephony Over ATM (Asynchronous Transfer Mode)) data. For 5E15 and later, the LTGCADN form was added to support this feature.

LTGPCI form (5221 Record) - This form is used to preserve the SM2K (SM-2000 Switching Modules) and CADN (Call Instance Block Circuit Administration) values during the LTG (Large Terminal Growth) for IVOTA (Integrated Voice and Telephony Over ATM (Asynchronous Transfer Mode)) data. For 5E15 and later, the LTGPCI form was added to support this feature.

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SEC. 1CP: SUPPORT MULTIPLE LEA FOR CCC DIAL OUT

1. FEATURE DESCRIPTION

The Support Multiple LEA (Law Enforcement ACT) for CCC (Customer Call Center) Dial feature (99-5E-8316) is made available with the 5E16(2) FR 2 (Feature Release 2) and later Software Releases. For information on the base CALEA (Communication Assistance for LEA) feature (99-5E-4275) see Division 2, Section 4A509.

Prior to this feature when a subscriber to a 5ESS Switch was identified as a subject, and provisioned with a dial out CCC surveillance, only one LEA collection box could be used to record the call content. If a second LEA desired to monitor the same subject, then dedicated CCCs had to be used to support the surveillance.

This feature provides the capability for two LEAs to monitor the same subject using CCC dial out connections with the combined or separated CCC delivery mode to the respective LEA collection boxes. In addition, the capability for multiple LEAs to surveil the same subject using two CCC dial out connections and up to three dedicated CCC connections is supported.

2. FEATURE ASSIGNMENT

This feature has no ODA impact as it relates to the TG-5.

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SEC. 1CQ: SECTION SIZE INCREASE FOR TRFC30 SECTIONS 224 AND 225

1. BACKGROUND

Prior to the Section Size Increase for TRFC30 (30 minute traffic report) Sections 224 and 225 feature (99-5E-7717), data limitations were being encountered for the TRFC30 report. Currently, the specification limits data collection to a 75000 bytes data buffer and individual section limits are set to 32000 bytes. To meet the increased data needs associated with new features and services as well as load balancing and administration of the switch, these limitations needed to be reduced. The number of TRFC30 sections that can be defined is also limited to 256.

Due to the limitation of the section size to 32000 bytes, the need to alternately choose which data was being collected during a given study period could result in severe data loss. As new features are defined, data collected for a specific field in a report increases, thereby causing corresponding decreases in the number of items that could be collected. This feature provides the capability for the customer to monitor the same number of items.

2. FEATURE DESCRIPTION

The Section Size Increase for TRFC30 Sections 224 and 225 feature (99-5E-7717) is made available with the 5E16(2) Software Release.

This feature allows the customer to use the whole buffer space (384 kbytes) for sections 224 (RDT) or 225 (RDT DNU-S (Digital Network Unit - Sonet) to enable collecting data for up to 8864 RTs (Remote Terminals) connected to the 5ESS Switch. The 8864 components may be collected if one of these sections occupies the whole TRFC30 buffer.

3. FEATURE ASSIGNMENT

The feature has no ODA impact, therefore no provisioning is needed.

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SEC. 1CR: DECOMPOSE RLRT_SPEC RELATION

1. FEATURE DESCRIPTION

The Decompose RLrt_Spec Relation feature is available in the BMI (Beginning Managed Introduction) of the 5E16(1) Software Release. This feature reduces the current usage of memory on SM (Switching Module) memory. It is an enhancement to reduce the amount of space needed to store data. The feature number is 97-5E-7602.

2. FEATURE ASSIGNMENT

The feature has no ODA impact, therefore no provisioning is needed.

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SEC. 1CS: PSU BUS OCCUPANCY MEASUREMENTS

1. FEATURE DESCRIPTION

The PSU (Packet Switching Unit) Bus Occupancy Measurements feature (99-5E-8275) is made available with the 5E17.1 FR 1 (Feature Release 1).

This feature provides direct measurement of the PSU packet bus occupancy via a message and message byte counter in a PHA2 (Protocol Handler for ATM (Asynchronous Transfer Mode) Version 2) hardware. Specifically, this hardware provides a programmable timer to load message bytes and message counts, per packet bus side, that are read by the software. The timer has a default value of 1 second (1000 milliseconds), and can be updated by the software. Only ACT/IS (Active/Immediate Start) PHA2 ATM channel group types can keep counts of Packet Bus occupancy.

While a message byte counter measures all bytes from the opening to the closing flags of a message, a message counter is added to take into account additional preamble and bit stuffing bytes that were not included in a "pure" message byte count measurement.

Additionally, a new section on TRFC30 #165 (30 Minute Traffic Measurements Report) called "PSU Packet Bus Occupancy Report" is used which indicates:

- AVE PBOCC (Average Packet Bus Occupancy) in a TRFC30 section or C-interval report logging period.
- MAX PBOCC (Maximum Packet Bus Occupancy) in a TRFC30 or C-interval collection interval.
- The values of two provisionable thresholds (PB OCC 1TH and PB OCC 2TH).
- The percentage of time the Packet Bus Occupancy exceeds the thresholds in PBOCC1EX, PBOCC2EX.

This feature can only be provisioned if the PSU is a PSU2 (on the EQPSU form (5741 Record)).

2. FEATURE ASSIGNMENT

To provision this feature the following fields will be used:

- PB OCC 1 TH represents the lower threshold for packet bus occupancy, and defaults to 70
- PB OCC 2 TH represents the upper threshold for packet bus occupancy, and defaults to 80
- PB INT is a required field that defaults to 5.

Provision the MEASSUM form for Measurement Range Selectivity:

SECTION NAME = PBOCC
START1COMP = SM number
START2COMP = PSU number
START3COMP = blank
DEST SM = blank

The ROP (Read Only Printer) informs the user whether or not a summary report is printed for the component indicated by fields START1COMP and START2COMP when SECTION NAME is "PBOCC".

3. TRANSLATION REQUIREMENTS

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New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CDMAOPT	5599	8	80	8.75
MEASSUM	5563	3	5BG	13.9

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access) feature. Added the PB OCC 1TH, PB OCC 2TH, and PB INT fields to the form.

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Added the new traffic report value "PBOCC".

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SEC. 1CT: CALEA CDC WITH VOICE BAND DATA TRANSMISSION

1. FEATURE DESCRIPTION

The CALEA (Communication Assistance for Law Enforcement ACT) for CDC (Call Detail Channel) with Voice Band Data Transmission feature (99-5E-8318) is made available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. For information on the base CALEA (Communication Assistance for LEA) feature (99-5E-4275) see Division 2, Section 4A509.

This feature allows the 5ESS Switch to deliver CALEA CDC data to law enforcement by using a PSTN (Public Switched Telephone Network) voice band dial-out connections of two types:

- Forward transmission (5ESS Switch to Collection Box) uses 1200 BPS (Bit Per Seconds) GR30 (Telcordia Generic Requirement 30 for Voice Band Data Transmission) FSK (Frequency-Shift-Key) packets, similar to caller-ID data, which are Large CALEA ASN.1 (Abstract Syntax Notation 1) messages segmented into multiple GR30 packets.

- Backward transmission (Collection Box to 5ESS) uses DTMF (Dual Tone Multi Frequency) digits. Examples are Collection Box login and packet retransmit requests (simple error corrections).

The GR30 CDC implementation runs at a much slower speed than the existing CALEA core TCP/IP (Transport Control Protocol/Internet Protocol) over X.25 ISDN (Integrated Services Digital Network) implementation (1200 BPS vs. 64K BPS). However, it has an advantage for switches with low levels of CALEA activity. It eliminates the dependence upon ISDN provisioning, the presence of PSDN (Public Switched Data Network), and switch-room equipment owned by the LEA.

In general, CALEA Core CDC delivery depends on one of the following:

- Local BRI (Basic Rate Interface),

- BRI remoted over T1 (e.g. BRITE (BRI Terminal Equipment) card),

- BRI converted to V.90 with a switch-room routers, or

- X.75, X.75' or XAT access to PSDN

All of the hardware used for GR30 CDC delivery is integrated in the switch. Typical PSTN voice-quality circuits are sufficient for the 1200 BPS rate.

The GR30 CDC implementation is an alternative to the ISDN delivery, not a replacement. CALEA compliance levels and Law Enforcement requirements dictates which interface(s) are used on a case-by-case basis.

The Collection Box terminating line must enable proper supervision and voice band data transmission. The most likely termination will either be a 2-wire analog line, or an ISDN B channel. Refer to [GR30-EIS] Section 3.1 for requirements and recommendations.

2. FEATURE ASSIGNMENT

This feature has no ODA impact as it relates to the TG-5.

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SEC. 1CV: RTCD DSM STORAGE EXPANSION

1. FEATURE DESCRIPTION

The RTCD (Real Time Call Detail) DSM (Data Server Module) Storage Expansion feature (99-5E-8372) is made available with the 5E16(2) FR 1 and later Software Releases.

This feature increases the disk storage in the DSM used by RTCD by providing the largest SCIC (Semiconductor Integrated Circuit) drive/disc available. This may be a 40 or 80 gigabyte disk. This feature can be applied to all of our Long Distance customers that own a RTCD (Real Time Call Detail) for billing.

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SEC. 1CW: PROXY DATABASE PHASE II - PROXY DATABASE

1. CROSS REFERENCE

This section has been moved to Division 2, Section 4A539.

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SEC. 1CX: RTCD CAPACITY COMPATABILITY WITH NXTMS

1. FEATURE DESCRIPTION

The RTCD Capacity Compatability with NxTMS feature (99-5E-8447) is made available with the 5E16(2) FR 2 and later Software Releases.

The RTCD feature verifies that the RTCD recording CPR (Capacity, Performance, and Reliability) requirements can be met in a 5E-XC environment. This specifically means that RTCD's CPR will be verified while the switch is processing 1.6 MBHCA (Million Busy Hour Call Attempts).

This feature adds the capability to the LDP (Long Distance Platform) 5E-XC Switch to generate per call information in the form of RTCD records. It also enables the LDP (Long Distance Platform) to transmit these records from the switch in near real time via a standard data interface.

Service providers using the RTCD feature may use the records for subscriber billing, network planning and maintenance, and rapid fraud detection, etc. Service providers will recognize much of the initial content of the RTCD records as being similar to that delivered in AMA (Automatic Message Accounting) records, such as calling number, called number, answer time, and carrier connect time. The content of the RTCD records, was driven by existing 5E-XC Switch capabilities and customer input, and is expected to grow with new features and customer needs in the future.

While AMA records are usually only generated at the first switch in a provider's network, sufficient for subscriber billing, RTCD records may be generated on a per trunk group basis anywhere in a service provider's network. A service provider may decide to activate the RTCD feature nominally on all NATs (Network Access Trunks) for those calls entering their network, but will occasionally activate the RTCD feature on their INTs (Intra-Network Trunks) to pinpoint network problems. Other network providers may elect to have the RTCD feature active all the time on all of their toll trunk groups.

Currently, a 5E-XC advertises a maximum call capacity of 1,600,000 busy hour call attempts using low-speed signaling links as of 5E16(2) FR2. RTCD has to meet that capacity assuming 100% of all attempts are billed and that no more than 25% of all call attempts use ASP (Advanced Services Platform) call processing (i.e. 8YY, LNP, or N11 calls). The initial release of RTCD guarantees that 99.999% of the RTCD records generated by the switch, is accurately transmitted. Future enhancements may improve this reliability.

For those service providers currently using AMA, the RTCD feature does not affect the ability of the 5E-XC Switch to format and generate AMA records. Both AMA and RTCD could be active for the same calls.

The RTCD records generated by the 5E-XC are transmitted from the switch via an Ethernet interface to a local Data Server where they are stored on disk and transmitted to a downstream Data Manager. The office will have its local Data Server in a "duplex" configuration (two Hubs and two data Servers).

The trunk groups can carry a mixture of voice and circuit switched data calls. The service provider can activate the RTCD feature on any toll trunk group. When a call enters the LDP 5E-XC Switch via a trunk group with the RTCD feature active, the switch generates a RTCD record when the call disconnects, and transmits the record out of the switch via an Ethernet link. Barring unusual conditions (SM in stand-alone, Ethernet link unavailable, etc.), the switch transmits the RTCD record within ten seconds after the call disconnects, even during the busy hour. The switch does not retain a copy of the RTCD record once the record is transmitted to the Data Server.

Each 5E-XC Switch using the RTCD feature equips one SM-2000 with a MHEIB (Message Handler Ethernet Interface Board). This SM-2000 is referred to in this document as the GBSM (Global Billing SM). The GBSM provides the termination of the Ethernet link at the switch side. The GBSM receives RTCD records generated by the various SMs in the office, including itself, and transmits the records to the outside world via the Ethernet link and TCP/IP (Transmission Control Protocol/Internet Protocol). RTCD messages transmitted via this interface is sent utilizing the GDI (Generating System to Data Server Interface) protocol.

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Due to the volume of messages produced by this feature, the QLPS (Quad-Link Packet Switch) is required. Switches with more than one SM-2000 already has need of the QLPS, regardless of the RTCD feature. The Ethernet links from the Data Server to the Data Manager uses the DDI (Data Server to Data Processing Management System) Interface protocol utilizing FTP (File Transfer Part).

1.1 Call Processing Impacts

The RTCD feature provides a mechanism for displaying information previously defined in Call Processing (from previous features). AMA and RTCD routines are normally called at call-termination - when some of the desired information is no longer accessible. Hence, the need to modify some Call Processing requirements, to retain these values for RTCD formatting

MINT placeholder fields: The 5E12 RTCD record layout contains placeholder-fields (and default values) for several screening and routing parameters defined within the 5E12 MINT (Multifarious Intra-Network Trunks) feature.

Advanced Services Platform: Sometimes the translation of the received "called number" forces the 5ESS-2000 Switch to query an external network database - an SCP (Service Control Point) . The call leaves the "long distance platform" software, to be handled by ASP software.

- The original "called number" will always be placed in the destination number field (C.13 of RTCD record).
- The SCP can return a new destination address, to be used for routing the call through the network. This will be stored in the translated number field (C.14 of RTCD record). If more than one SCP query is made, and more than one translated number returned from the SCP, only the final one is recorded.
- Only one RTCD record per call is generated at any given office. In contrast, it is possible to generate multiple AMA records per call: (1) an LDP originating-toll AMA record, and (2) one or more separate ASP AMA records. (Note that an ASP AMA record is generated each time that an SCP message contains the AMAslp parameter. A call with multiple SCP-triggers (i.e., a call with multiple billable legs) has the potential for causing multiple ASP AMA records to be generated.)

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SEC. 1CY: SIGNALING PH OUTAGE PREVENTION

1. FEATURE DESCRIPTION

The SPOP (Signaling PH (Protocol Handler) Outage Prevention) feature (99-5E-8529) is made available with the 5E17(1) FR 3 and later Software Releases.

Prior to this feature, if an office had only 2 active signaling PH's on the same GSM (Global Switching Module), they would be pumped in sequential order. However, the second PH can be taken out of service before the first PH is fully handling traffic. This leaves the first PH in the state of not fully restored back to service and the second PH already out of service with UP (Update Program) in progress. This sometimes resulted in a total signaling outage.

The SPOP feature modifies the update code so that an accessibility check is done to determine if the same point code is accessible via another signaling link (from a different PH) from the same GSM. If so, the SU (Software Update) will proceed. If not, the SU will skip that signaling PH and proceed to the next. Upon completing the update to the rest of the office, the SU will abort and indicate on the ROP (Read Only Printer) the reason for the abort. Please note, the office signaling state has no impact on the SPOP feature, (i.e., if the office signaling state is not normal, the SPOP feature may proceed).

2. FEATURE ASSIGNMENTS

This feature has no ODA impact, therefore no provisioning is needed.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1

OFCOPT Form (5509 Record) - The OFCOPT form is used to supply various miscellaneous office options and parameters. Added the SPOP field.

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SEC. 1DA: CHANNEL ELEMENT - FRAME SELECTOR BACKWARD COMPABILITY

1. FEATURE DESCRIPTION

The Channel Element - Frame Selector Backward Compatibility feature (99-5E-8391) is made available with the 5E17(1) FR 2 and later Software Releases.

This feature (previously called CBC (Cell Backward Comptibility)) was designed to reduce the incompatibilities between the entities (ECP (Executive Cellular Process), 5ESS_DCS (Digital Cellular Switch), and Cells) and enhance the interoperability between the cells and 5ESS, the Cell and ECP, and between the ECP and 5ESS. This feature applies to both voice and data services.

From the 5ESS perspective, this feature impacts the SMP (Switch Module Processor) software and the PSU2 (Packet Switching Unit) software. More specifically, this feature requires the SMP software to negotiate with the ECP by exchanging the protocol versions via heartbeat checks (i.e., Heartbeat messages). Depending upon whether or not the ECP supports the CBC feature, the 5ESS will send a SH_ASGN with or without a MA X_FS_PP_PV (protocol version) information element to the ECP. The ECP relays the MAX -FS-PP-PV to the cell site. If the cell site supports CBC, then the CE (Channel Element) establishes PP (Packet Pipe) connection via modified XID_CON_CMD, XID_MAINT_CMD (protocol version), and modified FS_messages. If the cell site does not support CBC, then the messages will not be modified and the interface between CE-SH (Channel Element-Speech Handler) will work as it previously worked.

1.1 Protocol Versions

- MAX_FS_PP_PV
  - The maximum frame selector packet pipe protocol version represents the most recent packet pipe protocol version supported by the frame selector.
- MAX_CE_PP_PV
  - The maximum channel element packet pipe protocol version represents the most recent packet pipe protocol version supported by the channel element.
- PP_PV_IN_USE
  - The packet pipe protocol version in use represents the protocol version used for a call leg.
- PP_PV_FOR_MAINTENANCE
  - The packet pipe protocol version for maintenance represents the protocol version used for link maintenance in the XID (Exchange Identifier) maintenance message.

2. FEATURE ASSIGNMENTS

There is no specific provisioning related to this feature.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
TKGRP	5202	3	2A	5.1

TKGRP Form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added data rules to the TRKCLS field.

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SEC. 2: MAINTENANCE AND TESTING FEATURE REQUIREMENTS

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SEC. 2A: AUTOMATIC LINE INSULATION TESTING (ALIT)

1. FEATURE DESCRIPTION

Automatic Line Insulation Testing is a feature to detect lines with leakage to battery or ground and unpressurized or under pressurized line cables, on a routinely scheduled basis. Its primary use is in preventive loop and cable maintenance, to detect gradual cable deterioration through frequent checking and identification of line faults.

This feature is available with all 5ESS Switch Software Releases.

2. TEST INITIATION

2.1 ALIT sequential testing can be requested from three different sources. These are:

- Programmed start by the 5ESS Switch software.
- Via an input message from the TLWS (Trunk and Line Work Station) at the local office.
- Via a message from the RSB (Repair Service Bureau) TTY link.

In most cases, programmed start will be used to start sequential testing, with the output sent to the appropriate channel. Sequential testing will be requested via a message only in those cases where a start time other than the programmed start time is desired, or when the switch owner wishes testing to begin at a particular line. Single line testing will be requested via message only, either from the TLWS or the RSB.

3. TRANSLATION REQUIREMENTS

The start time, test duration and resistance range for the programmed ALIT testing are office options and should be entered on the OFCOPT Form.

Once an ALIT request has been received, the 5ESS Switch software determines the particular MSU (Metallic Service Unit) whose Metallic Test Buses serve the Line Unit containing the line to be tested (see the EQLU Form). ALIT software accesses translations from the MSURI Form (5E1, Issue 1a Software Release), or the IMINFO Form (5E1, Issue 2 and later Software Releases), and obtains two Route Indexes, an ALIT Route Index and a Metallic Access Junctor Route Index.

For offices with multiple SMs (Switching Modules), a unique ALIT Route Index is required for each SM which has one or two Metallic Service Units (Regular or Modular) with at least one ALIT type pack assigned. Each ALIT Route Index is associated with a unique Logical Test Port Trunk Group.

Each SM which requires an ALIT Route Index must also have a unique MAJ (Metallic Access Junctor) Route Index. These MAJ Route Indexes are also associated with unique Logical Test Port Trunk Groups.

Each ALIT Route Index must be defined on the RTIDX Form with a Route Type of Hunt and associated with a unique LTP (Logical Test Port) Trunk Group. Each Trunk Group must be defined on the TKGRP Form with the following characteristics:

- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPALIT
- IAPT - Yes

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- The number of LTP members in the Trunk Group must equal the number of ALIT packs equipped as operational on all Metallic Service Units (Regular of Modular) of the given SM (i.e., the SM specified on the MSURI Form or the IMINFO Form). Each LTP member must be in this SM and defined on the Trunk Form.

The Metallic Access Junctor Route Indexes and Trunk Groups are shared by ALIT testing and DC Jack Testing as well as other line and trunk testing. For these requirements refer to the Metallic Access for Line and Trunk Testing section in Division 2 of this guide.

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SEC. 2B: AUTOMATIC PROGRESSION TESTING (APT)

1. FEATURE DESCRIPTION

Automatic Progression Testing consists of sequential, progressive testing of Outgoing and Two Way Trunks based upon the AUTO form (Automatic Trunk Test Table) assigned to each trunk. APT Test Types are:

- Synchronous
- Non-Synchronous
- Permanent Busy
- 103 Tests
- INV Tests (ISTF)
- NINV Tests (ISTF)
- CONT

The Synchronous, Non-Synchronous, Permanent Busy and 103 Test Types are available with 5E1 and later Software Releases. INV and NINV Test Types are available with 5E4 and later Software Releases and requires an ISTF Unit. CONT Test Type is available with 5E3 and later Software Releases.

2. TEST INITIATION

APT is initiated either by a manual request from the TLWS (Trunk and Line Work Station) or automatically, based upon a predefined schedule.

3. TRANSLATION REQUIREMENTS

The start time and test duration for the predefined APT testing are office options and should be entered on the OFCOPT Form (5509 Record). Once APT has been initiated, the 5ESS software examines each Trunk Group, and determines whether or not the group is to be tested. This is based on the value entered in the IAPT (Inhibit Automatic Progression Tests) field. A Yes would indicate that the Trunk Group should not be tested; while a No would indicate that the Trunk Group should be tested.

If the Trunk Group is to be tested, appropriate information is obtained from the AUTO Form and carried through the testing of each member of the Trunk Group. At the same time, the Software Release accesses the FIXRT (Fixed Route Type) data and obtains the APT Route Index.

The APT Route Index points to a Logical Test Port Trunk Group. The Route Type on the Route Index is HUNT. The Trunk Group has the following characteristics:

- The number of members recommended is based upon the number of Two-Way and Outgoing Trunks in the office: Up to 500 Trunks - 2 members; 501 to 2000 Trunks - 3 members; More than 2000 Trunks - 4 members.
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPOGTC

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- IAPT - Yes
- LTPOGTC - The Logical Test Ports assigned must be in the same Switching Module as a TTF (Transmission Test Facility) and should be evenly distributed among them in the instance of multiple TTFs.

The Route Index and/or Trunk Group assigned may be the same one used for Outgoing Transmission Test calls and Interactive TLWS testing. If the test functions share a Trunk Group, the number of members in the Trunk Group should be the maximum required for any one of the test functions.

The ISTF XMIT Route Index points to a Logical Test Port Trunk Group. The Trunk Group has the following characteristics:

- The number of members recommended is based upon one of the following.
- Assign one member per type of test services required (maximum if 31 per unit). Available test services are: EQUIPMENT (required) LOOPBACK TRANSMISSION.
- Assign three members per ISTF unit. Trunk Direction - LTP.
- Hunt Type - FIFO.
- Trunk Class - LTPISTFL or LTPISTFX.
- IAPT - Yes.
- LTPOGTC - The Logical Test Ports assigned must be in the same Switching Module as an ISTF Unit.

For 5E10 and later, with the introduction of the Global Digital Service Function, see the EQGDSC3 form (5860 Record), Division 8, Section 63.

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SEC. 2C: OUTGOING TRANSMISSION TEST CALLS

1. FEATURE DESCRIPTION

Outgoing Transmission Test Calls consist of 100, 102, 104, 105, INV and NINV Test Calls initiated at the 5ESS Switch to test Outgoing and Two-Way Trunks. The 100, 102 and 105 Test Call Types are supported by all Software Releases. The 104 Test Call Type is available with the 5E1, Issue 2 Software Release. INV and NINV Test Call Types are available with 5E4, Issue 1 and later Software Releases.

2. TEST INITIATION

Outgoing Transmission Test Calls are manually
initiated from the 5ESS Switch TLWS (Trunk and Line Work Station).

3. TRANSLATION REQUIREMENTS

Once an Outgoing Transmission Test Call is initiated, appropriate outpulsing information is obtained from the AUTO (Automatic Trunk Test Table) form (5505 Record) for the trunk under test. In addition, the Software Release accesses the FIXRT (Fixed Route Type Record) form (5302-2 Record) and obtains the "OGTRANS" Route Index.

The "OGTRANS" Route Index points to a Logical Test Port Trunk Group. The Route Type on the Route Index is "HUNT". The Trunk Group has the following characteristics:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- The number of members recommended is based upon the number of Two-Way and Outgoing Trunks in the office:
  - Up to 500 Trunks - 2 members
  - 501 to 2000 Trunks - 3 members
  - More than 2000 Trunks - 4 members
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPOGTC
- IAPT - Yes
- LTPOGTC - The Logical Test Ports assigned must be in the same SM (Switching Module) as a TTF (Transmission Test Facility) and should be evenly distributed among them in the case of multiple TTFs.

For 5E10 and later, with the introduction of the Global Digital Service Function:

- LTPOGTC - The Logical Test Ports assigned must be in the same SM/SM-2000 as a GDSF of certain configuration types as illustrated in the following table:

SM Type	Configuration Type
SM	2, 5, 7, 8
SM-2000	2, 5, 8

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For a given SM, the number of "LTPOGTC" trunk members cannot exceed the number of GDSF tone transceivers plus the number of GDSF guard-to-guard tone transceivers plus the number of TTF tone responders plus two times the number of TTF processors. The number of GDSF tone transceivers and the number of GDSF guard-to-guard tone transceivers are determined based on the CONFIGURATION and the number of PIDB LIST PIDBs entries on EQGDSC3 forms entered for a particular SM. The number of TTF tone responders is determined based on the DSU pack entries with TYPE of "TTFRESP" on EQDSP forms entered for a particular SM. The number of TTF processors is determined based on the DSU pack entries with TYPE of "TTFPROC" on EQDSP forms entered for a particular SM.

See Figure 1 of this section and the EQGDSC3 form (5860 Record), Division 8, Section 63 for more detailed information on configuration types.

The Route Index and/or Trunk Group assigned may be the same one used for Automatic Progression Testing and Interactive TLWS testing. If these test functions share a Trunk Group, the number of members in the Trunk Group should be the maximum required for any one of the test functions.

The "ISTFXMIT" Route Index points to a Logical Test Port Trunk Group. The Trunk Group has the following characteristics:

- The number of members recommended is based upon one of the following:
  - Assign one member per type of test services required (maximum if 31 per unit). Available test services are: EQUIPMENT (required) LOOPBACK TRANSMISSION
  - Assign three members per ISTF unit. Trunk Direction - LTP.
- Hunt Type - FIFO.
- Trunk Class - LTPISTFL or LTPISTFX.
- IAPT - Yes.
- LTPOGTC - The Logical Test Ports assigned must be in the same Switching Module as an ISTF Unit.

For 5E10 and later, with the introduction of the Global Digital Service Function (see the EQGDSC3 form (5860 Record), Division 8, Section 63):

- LTPOGTC - The Logical Test Ports assigned must be in the same SM/SM-2000 as a GDSF of certain configuration types, as illustrated in the following table:

SM Type	Configuration Types
SM	4, 5, 6, 8
SM-2000	4, 5, 7

GDSC Integrated Services Test Function - Number of Logical Test Ports by Configuration Type

GDSC Configuration Type	Logical Test Port	SM - 1 PIDB	SM - 2 PIDBs	SM-2000
4	LTPISTFL	28	56	44
	LTPISTFX	4	8	10
5	LTPISTFL	8	28	32
	LTPISTFX	4	4	4
6	LTPISTFL	2	22	-
	LTPISTFX	6	12	-
7	LTPISTFL	-	-	32
	LTPISTFX	-	-	16
8	LTPISTFL	4	16	-

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LTPISTFX	4	4	-

Figure 1 GDSC LOGICAL TEST PORT ASSIGNMENTS 5E10 AND LATER SOFTWARE RELEASES

LTPISTFL = Logical Test Port for the DSU2 Integrated Services Test Function Loopback.

LTPISTFX = Logical Test Port for the DSU2 Integrated Services Test Function Transmission.

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SEC. 2D: TERMINATING TEST LINES

1. TEST LINE DESCRIPTIONS

Synchronous Test Line - The Synchronous Test provides an automatic series of on hook/off hook flashes for each pulsing rate on a trunk. After all of the series of flashes are complete, the trunk is left in the quiet termination state.

Permanent Busy - The PB (Permanent Busy) test line provides a Busy Tone when accessed.

100 Test Line - The 100 Test Line provides far to near end loss measurements and near end noise measurements. The 100 Test Line supplies 5 seconds of milliwatt tone and then applies a quiet termination to the caller until the caller hangs up.

101 Test Line - The 101TL (101 Test Line) feature provides a path for communication and test access from any incoming trunk or line to a TWS (Trunk Work Station). A 101 TL call can be directed to one of the following.

At the 5ESS Switch:

- MCC/TLWS (Master Control Center/Trunk and Line Work Station)
- STLWS (Supplementary Trunk and Line Work Station)

At the Switching Control Center (SCC):

- Remote MCC/TLWS
- CTTU (Central Trunk Test Unit). The CTTU could also be at a remote work center other than the SCC

The 101TL call will terminate at a T&M (Talk and Monitor) phone at a TWS so the customer maintenance personnel can report trouble and/or initiate a testing session. Two customer personnel are needed to make the tests. The far end customer personnel initiate the 101TL call. The near end customer personnel accept the call. Depending upon how the office is engineered, a 101TL call may be initiated by dialing (or outpulsing) a specific TN (Telephone Number) or AC (Access Code) or a general TN or AC. The specific TN or AC will terminate to a specific TWS. The general TN or AC will terminate to any available TWS based on the priorities entered on the OFCOPT form (5509 Record).

102 Test Line - The 102 Test Line provides far to near end loss measurements. The 102 Test Line supplies 9 seconds of milliwatt tone and then applies a quiet termination for one second. This 10 second sequence is repeated indefinitely until the caller hangs up.

103 Test Line - The 103 Test Line provides supervisory and signaling testing for primary intertoll and TSPS trunks equipped with ring forward (re-ring) features.

- On seizure the 103 Test Line returns an off-hook signal
- On receipt of a re-ring signal, returns an on-hook signal
- On receipt of a second re-ring signal, returns a 120-IPM flash

104 Test Line - The 104 Test Line provides a test termination for 2-way transmission testing and 1-way noise testing on toll connecting trunks.

105 Test Line - The 105 Test Line provides two-way loss and noise measurements. The 105 Test Line is used by the CAROT (Centralized Automatic Reporting On Trunks) system.

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106 Test Line - Available with 5E3 and later Software Releases. The 106 Test Line is used in conjunction with the 102-type to provide loop around or two-way transmission testing of lines and trunks. The 106 Test Line provides 10 seconds of 1004 Hz tone followed by loop around of the T and R to T1 and R1 leads until a disconnect is sensed on the E lead.

NOTE: 106 Test Lines are available only in DSN (Defense Switched Network) offices.

2. LOCAL ACCESS APPLICATION

Calls to the Permanent Busy, Synchronous, 100, 101, 102, 104, 105 and 106 Test Lines may originate from a local line or at the far end of an incoming or two-way trunk. Line originated calls access the Test Lines by dialing a 7-digit Telephone Number. Trunk originated calls access the Test Lines by inpulsing the code which would normally correspond to the 7-digit Telephone Number (e.g., The 4, 5 or 6-digit code that the 5ESS Switch would normally expect from the trunk to terminate in the 5ESS Switch office). All of these calls are initially processed like a normal POTS call to a Telephone Number.

Synchronous Test Line - The Telephone Number assigned to the Synchronous Test Line must have CLASS OF SERVICE and TERMINATING TREATMENT set to "TEST" on a LCC form (5306 Record) and TEST CODE "SYN" and RTI not entered on a LINE form (5109 Record).

Permanent Busy Test Line - The Telephone Number assigned to the Permanent Busy Test Line must have CLASS OF SERVICE and TERMINATING TREATMENT set to "TEST" on a LCC form and TEST CODE "PB" and RTI not entered on a LINE form.

100, 102, 104, 105, 106 Test Lines - The Telephone Numbers assigned to the 100, 102, 104, 105 and 106 Tests must have CLASS OF SERVICE and TERMINATING TREATMENT set to "TEST" on a LCC form and an appropriate TEST CODE (i.e., 100, 102, 104, 105 and 106) and ROUTE INDEX entered on a LINE form.

The Route Index points to a Logical Test Port Trunk Group. The ROUTE TYPE on the associated RTIDX form (5303 Record) must be "HUNT". The Trunk Group has the following characteristics:

NOTE: Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- The number of members should be the total number of incoming and two-way local trunks divided by 370, but a minimum of 3,
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPICTC
- IAPT - Yes
- The Logical Test Ports assigned should be evenly distributed among the IMs equipped with Transmission Test Facilities.

The same Trunk Group and Route Index should be used for all four test lines.

101 Test Line - A Telephone Number used for accessing the 101 Test Line may be defined as a General Access Telephone Number and Specific Access Telephone Number.

GENERAL ACCESS TN: For 5E2(2) and earlier Software Releases, the General Access Telephone Number must be defined on a LINE form with a value of "101" in the TEST CODE field and a value of "RTI" in the ENTYPE field, but no value in the RTI field. For 5E3 and later Software Releases, "101" must

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be in the TEST CODE field, and the RTI field must not be entered. The priority of routing to available TWSs must be defined with values in the TWS for 101TL fields of the OFCOPT form.

SPECIFIC ACCESS TNs: Each Specific Access Telephone Number must be defined on a LINE form with a value of "ICX" in the LCC field, where X is equal to 1-9. When X is equal to 1-8, then X is the Work Station Number on the corresponding TLWS form (5118 Record). "IC9" is used to access CTTU User Number 2. "RTI" must be in the ENTYPE field of the LINE form but the RTI field must not be entered. One Telephone Number may be defined for each of the TLWSs and the CTTU (Central Trunk Test Unit) User Number 2. These Telephone Numbers are used to distinguish which TWS to route the incoming Test Line Call to, but the call will actually be completed over the Talk and Monitor Telephone Numbers specified on the TLWS or CTTU form (5518 Record). For local TLWSs, the Talk and Monitor phones will be local Telephone Numbers (served by the 5ESS Switch) and usually the remote TLWS and the CTTU Talk and Monitor phones will not be local Telephone Numbers. In any case, the Specific Access Telephone Numbers must be distinct from the Talk and Monitor Telephone Numbers.

For both the General and Specific Access cases, the LCC form associated with each Telephone Number used for accessing the 101 Test Line must have a CLASS OF SERVICE and a TERMINATING TREATMENT of "TEST"; no LEN (Line Equipment Number) is allowed. Refer to Division 3, Sections 5k and 5r for other requirements.

3. TOLL ACCESS APPLICATION

All Terminating Test Lines are accessed from incoming and two-way toll trunks via the LDIT (Local Digit Interpreter Table) translations rather than line translations. The normal access codes are 10n, 95810n or 95910n.

If the 5ESS Switch is used as a toll-only switch (i.e., it has no lines), these translations must be used to access any of the desired types of test lines.

Offices with lines may use the toll access in addition to the local access application, if desired.

The access code (e.g., 10n) is defined on a LDIT form (5300-3) with an appropriate CALL TYPE as follows:

Access Code Table

CALL TYPE	USAGE
100	100 Test Line Calls
101	General Access to 101 Test Line.
IC1-IC8	Specific Access to the 101 Test Line associated with the TLWS number which is the same digit of the ICX code.
IC9	Specific Access to the 101 Test Line terminating at the Central Trunk Test Unit User Number 2.
102	102 Test Line Calls
103	103 Test Line Calls
104	104 Test Line Calls
105	105 Test Line Calls
106	106 Test Line Calls
PB	Permanent Busy Test
SYN	Synchronous Test Call

Each entry must have a CODE INDEX value which must be defined on a RAR form (5301 Record) with an appropriate Route (and Charge) Index for the no prefix case.

Route Indexes must be established to handle these Test Line Calls. These Route Indexes must be separate and distinct from those used for local (i.e., 7 digit) access to similar test functions. These route indexes associated with the Local/Toll Test Line Access all require a ROUTE TYPE of "TEST". Route Index and Trunk Group requirements for specific Test Call Types are as follows:

Incoming 100, 102, 104, 105 and 106 Test Line Calls may share the same Route Index and/or Trunk Group. Each Route Index provided must specify a Trunk Group with the following characteristics:

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- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

  - The number of members should be the total number of incoming and two-way toll trunks divided by 370, but a minimum of 3.
  - Trunk Direction - LTP
  - Hunt Type - FIFO
  - Trunk Class - LTPICTC
  - IAPT - Yes
  - The Logical Test Ports assigned should be evenly distributed among the SMs equipped with Transmission Test Facilities.

- ***NOTE:*** Local and Toll Access to the 100, 102, 104, 105 and 106 Test Lines may share a common Trunk Group (but not a common Route Index). If a shared Trunk Group is engineered, the number of members should be the total number of incoming and two-way trunks (both Local and Toll) divided by 370, but a minimum of 3.

The Incoming 101, 103, PB and SYN Test Line Calls require a Route Index so that the Software Release can identify the call as a Toll Test Line call. Any ROUTE INDEX value with a ROUTE TYPE of "TEST" may be entered on a RAR form. The TRUNK GROUP NUMBER on the RTIDX form is not used by the Software Release for this CALL TYPE but is a required entry on this form. Therefore the recommended ROUTE INDEX is the same as that used for 100, 102, etc. Incoming Test Line Calls.

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SEC. 2E: LOCAL TEST DESK (LTD)

1. FEATURE DESCRIPTION

This feature allows the 5ESS to interface with the existing OS (Operational Systems). The OS could be a No. 14 LTD, No. 16 LTD, the LSV (Line Status Verifier), ALV (Automtic Line Verifier), MLT (Mechanized Loop Testing), SARTS (Switch Access Remote Test System; for simplicity, OS herein will be called LTD.

The LTD feature provides for the following:

- Establish metallic connection between LTD and a subscriber line, when LTD initiates the call.
- Line Circuit Test.
- Establish metallic connection between a subscriber line and LTD, when a field craft initiates a call from a subscriber premises.
- Touch-Tone Test.

There are two trunks associated with the LTD:

- an incoming test trunk for LTD originated calls and
- an outgoing test trunk for line originated calls to an LTD.

2. LTD ORIGINATED CALLS

The Local Test Desk originates a call from an Incoming Test Trunk Group. The LTD dials digits as if it were a normal incoming trunk call. The Trunk Group has the following characteristics:

- Trunk Direction - Incoming
- All normal incoming Trunk Group requirements
- Inpulsing - MF
- Trunk Class - TSTK

Each Trunk Member required for LTD originated calls has the following characteristics to be specified on the Trunk Form:

- TEN - (SN107 - LTD TEST TRUNK CKT)
- CLEI - (Applicable CLEI Code for SN 107)
- IN START DIAL - WINK

There are no additional special translation requirements for LTD originated calls.

LTD originated calls are suppported by all 5E Software Releases.

3. LINE ORIGINATED CALLS TO AN LTD

Line Originated calls to an LTD are available with 5E1 and later Software Releases.

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An LTD is accessed from a local line by dialing a 3 or 7 digit code. Translation requirements for the two cases are different and are as follows:

Three (3) digit access to LTD - The 3 digit code is entered on the LDIT (Local Digit Interpreter) (5300-3a Record) with a Call Type of LTD.

The Fixed Route Type, TSTTRK (Test Trunk), must have a Route Index and a Charge Index entered on the FIXRT (Fixed Route Type) (5301-1 Record).

The Route Index points to a Trunk Group with the following characteristics:

- Trunk Direction - Outgoing
- All normal outgoing Trunk Group requirements
- Hunt Type - FIFO
- Trunk Class - TSTK
- IAPT - Yes
- Outpulsing - blank

Each Trunk Member required for LTD originated calls has the following characteristics to be specified on the Trunk form:

- TEN - (SN107 - LTD TEST TRUNK CKT)
- CLEI - (Applicable CLEI Code for SN107)
- OUT START DIAL - WINK
- Seven (7) digit access to LTD

The 7-digit directory is defined on the Telephone Number Record with a Route Index (no LEN) and a Test Code of LTD.

The Fixed Route Type, TSTTRK, must have a Route Index and a Charge Index entered on the FIXRT form.

The Route Index points to a Trunk Group with the following characteristics:

- Trunk Direction - Outgoing
- All Normal Outgoing Trunk Group requirements
- Hunt Type - FIFO
- Trunk Class - TSTK
- IAPT - Yes
- Outpulsing - blank

Each Trunk Member required for Line Originated Class to an LTD has the following characteristics to be

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specified on the Trunk form.

- TEN - (SN107 - LTD TEST TRUNK CKT)
- CLEI - (Applicable CLEI Code for SN107)
- OUTSTART - WINK

NOTE: The Semi-Integrated No Test Trunk feature (99-5E-7303) is available with 5E15 and later Software Releases. This feature provides the capability to support the NTT without requiring the use of an analog trunk unit and its associated circuit pack (SN107). For more information on this feature see Division 2, Section 7AS.

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SEC. 2F: STATION RINGER TOUCH-TONE TESTS

1. FEATURE DESCRIPTION

The SRTT (Station Ringer Touch-Tone) Feature provides installation craft with the ability to test the Touch-Tone pad of a station set. In addition, it performs station ground tests to check the party identification and station ringer tests.

The SRTT Test is performed by the Telephone Company upon installation of a telephone or complaint of poor service from the Telephone Company's customer.

This feature is supported by the 5E1, Issue 2 and later Software Releases. It is not supported by the 5E1, Issue 1A Software Release.

2. TEST INITIATION

The connection to the SRTT line is initiated from the telephone to be tested by dialing a 3-digit SRTT Test Code followed by the 4-digit Directory Number of the line (station set under test).

3. TRANSLATION REQUIREMENTS

The 3-digit SRTT Test Code is translated in the Local Digit Interpreter Table with a Call Type of SRTT. A Code Index is meaningless for this Call Type and is prohibited.

The Call Type SRTT intiates a Software Release Software process which accesses the FIXRT (Fixed Route Type) data and obtains the ICSRTT Route Index.

The ICSRTT Route Index contains a Logical Test Port Trunk Group. The Route Type on the Route Index is Hunt. The Trunk Group has the following characteristics:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- One member is recommended for each equiped TTF responder board, each with a Logical Test Port in the Switching Module containing the responder board. See the EQDSP Form for responder board equippage.
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPICTC
- IAPT - Yes

The Route Index and Trunk Group should not be shared with any other test functions.

For 5E10 and later, for a given SM, the number of "LTPICTC"trunk members cannot exceed the number of GDSF tone transceiver circuits plus the number of GDSF guard-to-guard tone transceiver circuits plus the number of TTF tone responder circuits plus three times the number of TTF processor circuits. The number of GDSF tone transceiver circuits and the number of guard-to-guard tone transceiver circuits are determined based on the CONFIGURATION and the number of PIDB LIST PIDBs entries on EQGDSC3 forms entered for a particular SM. The number of TTF tone responder circuits is five times the number of DSU pack entries with TYPE of "TTFRESP" on EQDSP forms entered for a particular SM. The number of TTF processor circuits is the DSU pack entries with TYPE of "TTFPROC" on EQDSP forms entered for a particular SM.

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SEC. 2G: OFFICE-TO-OFFICE TESTING

1. FEATURE DESCRIPTION

Office-to-Office Testing (or Board-to-Board Testing) is performed prior to the transfer of a number of customer lines from one telephone switching office (or offices) to another. There are two applications for this capability. The first application is office cutovers where one office is replacing another office (or offices). The second is an area transfer from office being deloaded to another office which can better handle that load.

Office-To-Office Testing ensures that the connections of the transferred lines in the old office to the transferred lines in the new office are correct with respect to the existing connections of these lines to the old office (or offices).

This feature, with 5E1, Issue 2 Software Releases, provides for automatic Office-To-Office Testing between a 5ESS Office and Step By Step offices. It can also provide Office-To-Office Testing between a 5ESS office and a Crossbar office that is equipped with regular LTD Test Trunk(s). However, no Series Completion or Multi-Line Hunt Lines can be tested for Crossbar offices.

With 5E2, Issue 1 and later Software Releases, this feature provides for automatic Office-To-Office testing between 5ESS and the following offices:

- Step-by-Step
- No. 5 Crossbar
- 1A Crossbar
- 1/1A ESS
- 2/2B ESS
- 3 ESS

If testing a crossbar office equipped with a non-no test trunk, series completion and Multi-Line Hunt Group lines cannot be tested.

Office-To-Office Testing is supported by the 5E1 Issue 2 and later Software Release. It is not supported by 5E1, Issue 1A Software Release.

2. TEST INITIATION

Testing is initiated from the MCC, TLWS, STLWS, or RC/V terminal via input request specifying the Route Index and line(s) to be tested. The testing progresses through the specified lines, bypassing untestable lines. Untestable lines currently include unassigned lines.

3. TRANSLATION REQUIREMENTS

Every 5ESS that is replacing a Step-By-Step, Crossbar office or ESS requires a Trunk Group for Office-To-Office Testing. A Route Index must be specified on the RTIDX Form which points to the Office-To-Office Trunk Group. The Trunk Group has the following characteristics:

- Maximum of 2 members for 5E1, Issue 2 Software Releases or a maximum of four members for 5E2, Issue 1 and later Software Releases, per Trunk Group per office to be replaced.
- Trunk Direction - Outgoing

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- Hunt Type - FIFO
- Trunk Class
- BTBTK (5E2, Issue 2 and earlier Software Releases).
- OTOTK (5E3 and later Software Releases).
- IAPT - Yes
- OUTPLS - DP or MF

Each trunk required for Office-To-Office Testing has the following characteristics to be specified on the 5ESS Trunk Form:

- TEN - SN102 1-way outgoing Loop Supervision
- CLEI - Applicable CLEI Code for SN102
- OUT START DIAL - Must be WINK when replacing a crossbar and ESS offices and must be IMED when replacing a Step-By-Step office.
- BTBDIST1 - Distributing Point (5E2, Issue 2 and earlier Software Releases) OTODPN1 - Distributing Point (5E3 and later Software Releases)
- BTBDIST2 - Distributing Point (5E2, Issue 2 and earlier Software Releases) OTODPN2 - Distributing Point (5E3 and later Software Releases)

NOTE: BTBDIST1/OTODPN1 and BTBDIST2/ OTODPN2 must be located on the same Metallic Service Unit Service Group.

If a Crossbar or ESS office is being replaced, Fixed Route Type BBTTF or OTOTTF is required. This Fixed Route Type must have Tone set to "N" and must point to a Route Index. The corresponding Route Index has a Route Type of Hunt and points to a Trunk Group with the following characteristics:

NOTE: Calculate the maximum allowable LTPs using the TTF Requiremnets Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class
  - LTPBBTTF (5E2, Issue 2 and earlier Software Releases).
  - LTPOTOTF (5E3 and later Software Releases).
- IAPT - Yes
- Two members are required with Logical Test Ports in the same SM (Switching Module) as a Global Digital Service Unit which is equipped with a TTF (Transmission Test Facility). The TTF is used for the Office-To-Office Testing.

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SEC. 2H: TRUNK AND LINE WORK STATION TEST ACCESS UNIT

1. FEATURE DESCRIPTION

Effective with the 5E2 and later Software Releases, each TLWS associated with a 5ESS Switch must be defined on the TLWS form (5511). The TLWS TAU (Test Access Unit) provides two AC Jacks and two DC Jacks on a TLWS for testing of lines and trunks. The TAU is used with portable AC and DC plug-in test equipment to test lines and trunks.

The TAU is required on the MCC (Maintenance Control Center) TLWS and is optional on STLWSs (Supplementary TLWSs). The TAU is not available on Remote TLWSs.

The MCC and SCC are usually designated as WORK STATION NUMBER 1 and 2, respectively. The remaining TLWS designations are referred to as STLWSs. Prior to 5E9(1), six STLWSs were allowed (WORK STATION NUMBERs 3 - 8). Effective with 5E9(1) and later, twenty-four STLWSs were added (WORK STATION NUMBERs 9 - 32).

Prior to 5E6, the system automatically computed an associated DEVID for each STLWS based on the WORK STATION NUMBER entered. For 5E7 and 5E8 Software Releases, the DEVID must be entered on the TLWS form and its associated DEVICE TYPE defined on the ECDOPT form (5706 Record). For 5E9(1) and later, the requirement of designating an associated DEVICE TYPE for an STLWS on the ECDOPT form was removed. However, it is recommended that all STLWS designations continue to be identified on the ECDOPT form using the DEVICE TYPE field even though a one-to-one DEVICE/TYPE relationship is no longer enforced.

1.1 Test Initiation

A TAU test call is originated by Software Release software as a result of a manual request from the TLWS to test a specific DN (Directory Number), LEN (Line Equipment Number), MLHG (Multi-Line Hunt Group) and MBR NO. (Member Number) or MBR NO. (Trunk Group and Member Number).

2. FEATURE ASSIGNMENT

Once the test call is initiated, Software Release software accesses the FIXRT (Fixed Route Type) data and obtains the INTTF Route Index.

The INTTF Route Index points to a Logical Test Port Trunk Group. The Route Type on the Route Index is Hunt. The Trunk Group has the following characteristics:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- The number of members should be two times the number of TLWSs equipped with TAUs.
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPWSTTF
- IAPT - Yes
- The Logical Test Ports assigned must be in the same Switching Module as a Transmission Test Facility and should be evenly distributed among them in case of multiple TTFs.

For 5E10 and later, for a given SM, the number of "LTPWSTTF" trunk members cannot exceed two times

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the number of GDSF tone transceivers plus the number of TTF tone responders plus three times the number of TTF processors. The number of GDSF tone transceivers is determined based on the CONFIGURATION and the number of PIDB LIST PIDBs entries on EQGDSC3 forms entered for a particular SM. The number of TTF tone responders is determined based on the DSU pack entries with TYPE of "TTFRESP" on EQDSP forms entered for a particular SM. The number of TTF processors is determined based on the DSU pack entries with TYPE of "TTFPROC" on EQDSP forms entered for a particular SM.

2.1 D.C. Jack Connections

For D.C. Jack connections, 5ESS Switch software determines the Logical Test Port of the DC Jack from the TLWS Form data and the equipment location of the line or trunk being tested from the Line or Trunk Form data. 5ESS Switch software then determines the particular MSU (Metallic Service Unit) whose MTBs (Metallic Test Buses) serve the line or trunk under test.

Once the MSU is determined, the system accesses the IMINFO Form data and obtains the Metallic Access Junctor Route Index. The Metallic Access Junctor Route Indexes and Trunk Groups are shared by DC Jack testing and Automatic Line Insulation Test testing as well as other line and trunk testing. For these requirements refer to the Metallic Access for Line and Trunk Testing section in Division 2 of this guide.

The Logical Test Ports associated with DC Jacks must be defined on both the TLWS Form and in a Trunk Group. No Route Index may point to the Trunk Group. The Trunk Group has the following characteristics:

- Two members are required for each TLWS containing a TAU.
- Trunk Direction - LTP
- Hunt Type - Blank
- Trunk Class - LTPDCJCK
- IAPT - Yes

2.2 AC Jack Connections

For AC Jack Connections, the TEN is entered on the TLWS Form. A normal connection is then established through the network to the trunk or line under test.

In addition to the TLWS interactive connection request, an AC Jack connection may be established by plugging an appropriate test set into the AC Jack, going off-hook and keying in the appropriate digits. This type of origination is handled identically to any other incoming trunk call.

2.3 Trunk Group Assignments

It is recommended, but not required, that all AC Jacks for all equipped TAUs be included in the same Trunk Group. Members of the Trunk Group should be spread ever different trunk units. The Trunk Group(s) has the following characteristics:

- Two members per equipped TAU
- Trunk Direction - Incoming
- Trunk Class - ACJACK
- IAPT - Yes

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- Inpulsing - MF

2.4 Trunk Member Assignments

Assignment of members is not related to the AC Jack number or TAU but the member numbers or TENs (Trunk Equipment Numbers) entered on the TLWS Form must be included in the Trunk Group.

The Trunk Member characteristics are:

- TEN - 4W E and M Trunk Circuit (SN104) For AC Jack No. 1 specify a 4-Wire E and M circuit from SG 0 of a Trunk Unit. For AC Jack No. 2 specify a 4-Wire E and M circuit from SG 1 of a Trunk Unit.
- CLEI - Applicable CLEI for 4-Wire E and M Trunk Circuit.
- TRANS CLS - Blank
- SUPV - EM2
- IDLESTATE - On (Default)
- IN START DIAL - Blank
- OUT START DIAL - Blank

See Division 3, Section 5K for more information on TLWS assignments. For a description of CALL TYPEs associated with TLWS, see the LDIT/MLDIT (Local Digit Interpreter Table/Multiple Local Digit Interpreter Table) form (5300-3/5 Record) and the RDIT (Remaining Digit Interpretation) form (5300-7/8 Record), Division 3, Section 3C and Division 3, Section 3H, respectively.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LDIT/MLDIT	5300-3/5	3	3C	9.15
RDIT	5300-7/8	3	3H	9.9
TLWS	5511	3	5K	14.3

For 5E9(1) and later, the following forms were updated to add new CALL TYPES IC10 through IC33, and to redefine CALL TYPE IC9.

LDIT/MLDIT form - 5300-3/5 Record

- RDIT form - 5300-7/8 Record

TLWS Form (5511 Record) - This form is used to define TLWSs. The valid range of WORK STATION NUMBERs was increased from 3 - 8 to 3 - 32 to accommodate the addition of twenty-four new TLWS.

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SEC. 2I: REMOTE OFFICE TEST LINE

1. FEATURE DESCRIPTION

The ROTL (Remote Office Test Line) feature provides 5ESS the ability to interface with the existing CAROT (Centralized Automatic Reporting On Trunks) system for trunk maintenance. CAROT accesses ROTL through the Direct Distance Dialing network by dialing a Directory Number assigned to ROTL which will terminate at test software in the 5ESS switch. Once this access is made, CAROT and ROTL communicate via Multi-Frequency digits and tones. CAROT may request trunk tests, trunk status information or changes in the maintenance status of trunks. ROTL replies to these requests with appropriate responses or indications of error conditions. The ROTL feature is available with 5E1, Issue 2 Software Release.

2. TRANSLATION REQUIREMENTS FOR OFFICES WITH LINES

The Remote Office Test Line "test line" must be defined on the line form with the following requirements:

- Line type must equal "RTI".
- Equipment number fields LEN and SLEN must be blank.
- Route Index field must be numeric and point to a Route Index on the RTIDX form that is associated with a Trunk Group with LTP members.
- Test code must equal ROT for 5E1, Issue 2, Release 1; and ROTL for 5E1, Issue 2, Release 2 and later Software Releases.

The Route Index (RTIDX Form) is of Route Type "HUNT" and points to a Trunk Group with the following characteristics (TKGRP Form):

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.
- One member per 7000 trunks rounded up to the next integer - but a minimum of two members
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPROTL
- IAPT - YES
- The Logical Test Ports assigned to the Logical Test Port members must be in the same Switching Module(s) as TTF (Transmission Test Facility).

Once the Software Release software selects an LTPROTL trunk, it then uses the inpulsed Centralized Automatic Reporting On Trunks Identification Code to obtain the security callback number from the Remote Office Test Line form. This information plus the LTPSCR (Logical Test Port Screening) and the LTPDAS (Logical Test Port Digit Analysis Selector) fields on the Office Option Table (OFCOPT) form are interpreted using normal line digit analysis (forms PDIT and LDIT) and screening (form RAR) to call the Centralized Automatic Reporting On Trunks back through the Direct Distance Dialing network. When the security callback succeeds, trunk testing commences.

For a Connection Appraisal Test, the ROTL originates a call in a subscriber-like manner using normal call processing to a test line in a distant office. LTPSCR and LTPDAS from the Office Options Record

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(OFCOPT) are used for screening and digit analysis during this process.

3. TRANSLATION REQUIREMENTS FOR OFFICES WITHOUT LINES (TOLL OR TANDEM)

The FX (Foreign Exchange) lines for ROTL feature provides Centralized Automatic Reporting On Trunks system access to the ROTL in a toll or tandem 5ESS Switch which is not assigned an office code. This capability is available with 5E2 Software Releases.

With this capability, a toll or tandem ROTL is assigned a Directory Number on a near-by Central Office. The ROTL is then accessed via an FX line from that Central Office to a dedicated port in the toll or tandem office. An off hook on the ROTL dedicated port indicates a call from CAROT which is then routed to the ROTL.

The ROTL LTP (Logical Test Port) must be defined on the TKGRP Form with the following requirements:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- One ROTL LTP member per 5000 trunks rounded up to the next integer with a minimum of two members.
- TRK DIR - LTP
- Hunt Type - FIFO
- Trunk Class - LTPROTL
- IAPT - Yes
- The Logical Test Ports assigned to the LTP members must be in the same Switching Module(s) as the TTF.

The FX dedicated ports must be digital (on a DLTU) and be defined on the TKGRP Form with the following characteristics:

- TRK DIR - INC
- TRKCLS - FXROTL

One dedicated FX ROTL port must be assigned for each ROTL LTP plus one spare dedicated ROTL port for each group of four ROTL LTPs.

There must be a fixed route type ICROTL (FIXRT Form) which has a Route Index (RTIDX Form) pointing to the Trunk Group of LTPs.

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SEC. 2J: DIRECTLY CONNECTED TEST UNIT (DCTU)

1. FEATURE DESCRIPTION

The DCTU (Directly Connected Test Unit) is available for Multi-module offices with 5E1 and later Software Releases and is used to perform basic metallic measurements and test on lines or trunks.

This capability provides a more efficient and convenient customer personnel interface for metallic testing than the present D.C. Jack method through a TLWS (Trunk and Line Work Station) TAU (Test Access Unit) with a portable test set.

Customers are now allows to interactively do metallic tests between a line or trunk and the DCTU hardware from the Maintenance Control Center/Trunk and Line Work Station, a Supplementary TLWS or a CTTU (Central Trunk Test Unit). The DCTU test equipment performs DC and sub-audio voltage and current measurements on the trunk or line under test.

A DCTU can be functionally divided into one to three PMUs (Precision Measurement Units), from one to three EANs (Equipment Access Networks) and from one to twelve test circuits. The Precision Measuring Unit performs all measurements associated with the Metallic Interface including voltage and current measurements and application of DC or AC potential. The Equipment Access Network provides the capability to connect any port to be tested to any PMU through a series of multicontact relays. LTPs (Logical Test Ports) are required to be associated with the DCTU test circuits. The present recommendation is to assign one LTP for each DCTU test circuit.

The 5ESS software routing routines will establish a metallic connection by the Switching Module of the specified line or trunk and then obtaining that SMs DCTU Route Index from the IMINFO Form. The Route Index will point to a Trunk Group consisting of DCTU test circuit LTPs. Multiple DCTUs are possible in a 5ESS office and necessary in a RSM (Remote Switching Module) that is outside the metallic range (3000 ohms) of the host office.

2. TEST INITIATION

Testing performed by the DCTU can be requested from three different sources:

- The TLWS (Trunk and Line Work Station)
- The CTTU (Centralized Trunk Testing Unit). Available with 5E1 Release 2 and later Software Releases.
- The MLT-2 (Mechanized Loop Testing Version 2 System). Available with 5E2 and later Software Releases.

3. TRANSLATION REQUIREMENTS

Once a DCTU test request has been received, 5ESS software determines the Switching Module containing the line or trunk to be tested. The Directly Connected Test Unit software then obtains the DCTU Route Index for that SM, RSM or with 5E3 and later Software Releases, an ORM (Optically Remote Switching Module) or a TRM (Two-Mile Optically Remote Switching Module) (specified on the IMINFO form). The DCTU Route Index is a Route Type equal to HUNT if the SM is served by a DCTU or Route Type equal to REORDER if it is not served by a DCTU. If the DCTU Route Index is of Route Type HUNT, it points to a Logical Test Port Trunk Group with the following characteristics.

- One member per DCTU test circuit, each with a Logical Test Port assigned in the same SM as the DCTU test circuit.

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- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPDCTU
- IAPT - Yes

Each DCTU equipped on a non-RSM SM may have its own DCTU Route Index and Trunk Group or all DCTUs on non-RSM SMs may share the same DCTU Route Index and Trunk Group. In either case, a Trunk Group serving non-RSM DCTUs may not contain any members with LTPs in an RSM.

Each RSM (or with 5E3 and later Software Releases, "ORM" or "TRM") at a single-RSM (or with 5E3 and later Software Releases, "ORM" or "TRM") site that is equipped with a DCTU requires a DCTU Route Index and Trunk Group each of which is dedicated to the RSM (or with 5E3 and later Software Releases, "ORM" or "TRM"). All of the members of the Trunk Group must have LTPs in the RSM or with 5E3 and later Software Releases, "ORM" or "TRM".

For multimod RSM sites, each DCTU equipped on one of its RSMs or with 5E3 and later Software Releases, "ORM" or "TRM", must have its own DCTU Route Index and Trunk Group and all members of each Trunk Group must have LTPs on the SM equipped with the DCTU.

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SEC. 2K: NO. 2 SES (SERVICE EVALUATION SYSTEM)

1. FEATURE DESCRIPTION

Service evaluation is a feature required for all local switching systems that serve more than 3000 lines. Service evaluation for offices serving less than 3000 lines is optional. This feature is used to assess the overall quality of network service and to direct quality control activites. The 5ESS Switch performs service evaluation by interfacing with the No. 2 SES. The hardware interface consists of one 2-way data link and up to four voice monitor links (see Figure 1). It should be noted that presently SES is not used to analyze the transmission quality of the network which is a subjective measure, but concentrates only on call completing activities, e.g., busy, reorder, answer, ring, announcements, etc.

The 5ESS Switch is required to support both dial line service evaluation and MECCA (Mechanized Evaluation of Call Completion Anomolies). Dial line service evaluation refers to determining the disposition (i.e. completion or incompletion characteristics) of calls that originate from lines. MECCA refers to the monitoring of outgoing calls that have long holding times (e.g. 90 seconds) without answer supervision. The primary intent of MECCA is to identify potential trunk problems that will result in unbilled calls.

The service evaluation is controlled by No. 2 SES with the switching system acting as the slave. An evaluation begins with a request from No. 2 SES for the switch to bridge onto the next call of a specific type. The switch selects the call, collects call data, and establishes a bridge connection between the originating port and a voice monitor link. After No. 2 SES has analyzed the call to its satisfaction it requests the switch to terminate the connection.

2. TRANSLATION REQUIREMENTS

2.1 2-Way Data Liuk

No translations required.

2.2 Voice Monitor Links

A Trunk Group must be established with the following characteristics:

- Trunk Direction - Outgoing
- Hunt Type - blank
- Trunk Class - "SES"
- IAPT - "Y"
- Outpulsing - blank
- The Trunk Group may have from one to four members which must be numbered consecutively starting with 1. The Member Numbers correspond to the voice monitor link numbers known to SES.

When an "SES" trunk group is defined on the switch, the trunk group number must be entered in the SES field on Recent Change View 8.1. The SES field does not appear on the corresponding OFCOPT form in the 5ODA system.

2.3 102 Test Line

Voice monitor link maintenance requires a 102 Test Line (see Terminating Test Lines in Division 4 of this guide). Access to the 102 Test Line by the 5ESS SES software requires that a fixed route type, "IC102", be defined with a Route Index and a Charge Index (normally defined as a free call). The Route Index

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should be the one defined for normal 102 Test Line access.

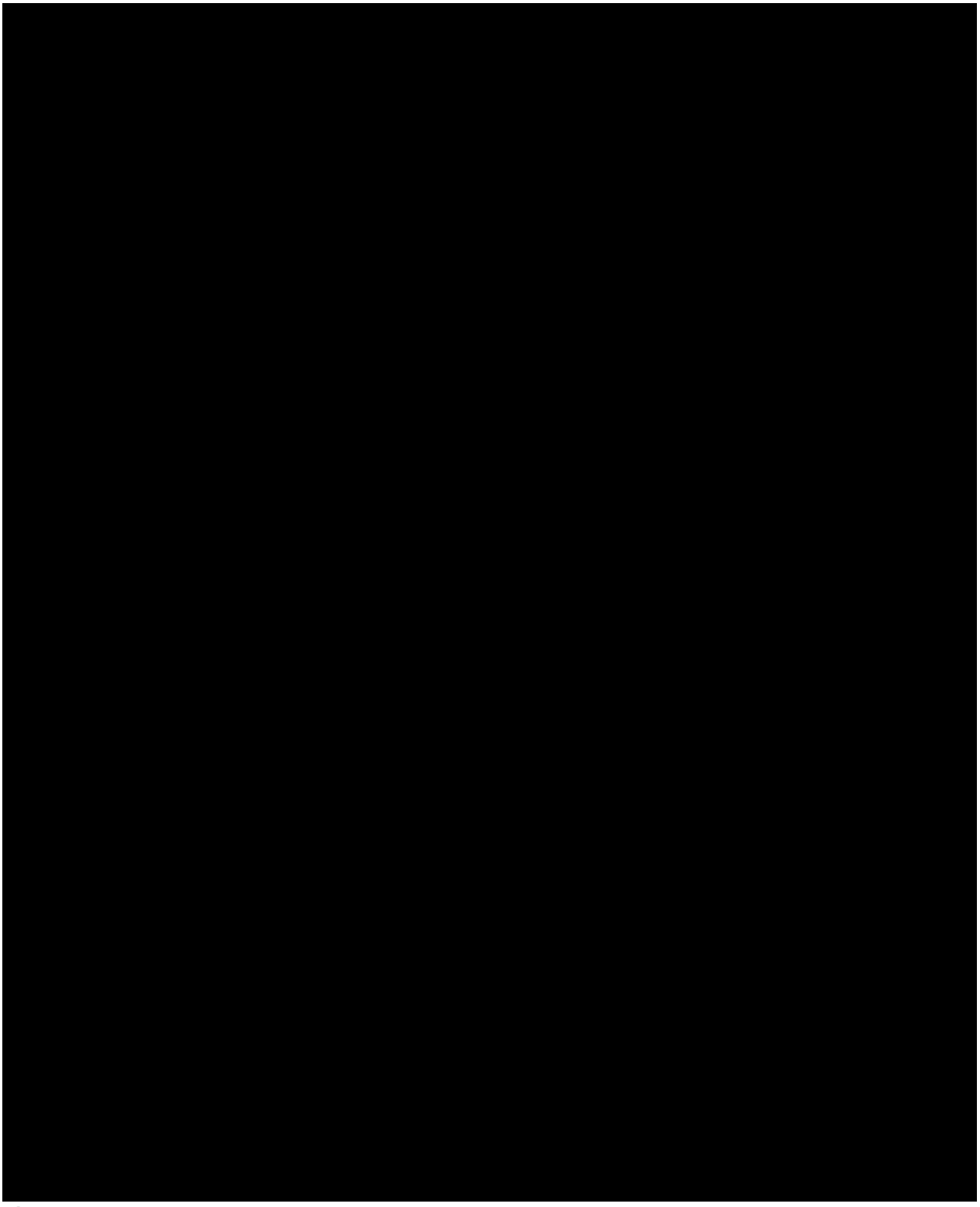

Figure 1 SES INTERFACE CONFIGURATION

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SEC. 2L: CHANNEL CIRCUIT DIAGNOSTICS

1. FEATURE DESCRIPTION

In a 5ESS Switch office which has multiple SMs (Switching Modules), the TTF (Transmission Test Facility) is used by channel circuit diagnostics for analog trunk and line units and DLC (Digital Loop Carrier) remote terminals. These translations are required for all offices. This section describes the translations required for these diagnostics.

2. TRANSLATION REQUIREMENTS

2.1 Trunk and Line Unit Diagnostics

Two FIXRT (Fixed Route Type) forms (5301 Record) are required for trunk and line unit diagnostics. The first form is used to define the TTF tone generators (FIXED ROUTE TYPE set to "DGTGEN"). The second form defines the TTF responders (FIXED ROUTE TYPE set to "DGRESP"). Each of these fixed routes requires a CHARGE INDEX (usually "FREE") defined on the CGIDX (Charge Index Expansion) Form (5302 Record), and a unique ROUTE INDEX defined on the RTIDX Form (5303 Record) with a ROUTE TYPE of "HUNT", which points to a unique Trunk Group on the TKGRP form (5202 Record). Each Trunk Group should have the following characteristics:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- The minimum number of LTPs (Logical Test Ports) should be one; the maximum number of LTPs should not exceed the number of TTF responders ; for GDSC3, the Configuration Type is used to determine the number of responders (see Figure 1).

- Trunk Direction - "LTP"

- Hunt Type - "FIFO"

- Trunk Class - "LTPDGTTF"

- IAPT - "Y"

- The LTP (Logical Test Ports) must be selected from SMs containing a TTF. It is recommended that the LTPs, assigned in both trunk groups, have the same SMs. For example, if the "TGEN" trunk group has LTP members in SMs 1 and 14, then the "RESP" trunk group should have LTP members in SMs 1 and 14.

For 5E10 and later, for a given SM, the number of "LTPDGTTF" trunk members cannot exceed the number of GDSF tone transceivers plus the number of GDSF guard-to-guard tone transceivers plus the number of GDSF tone generators plus two times the number of TTF tone responders plus the number of TTF tone generators. The number of GDSF tone transceivers and the numer of GDSF guard-to-guard tone transceivers is determined based on the CONFIGURATION and the number of PIDB LIST PIDBs entries on EQGDSC3 forms entered for a particular SM. The number of TTF tone responders is determined based on the DSU pack entries with TYPE of "TTFRESP" on EQDSP forms entered for a particular SM. The number of TTF tone generators is determined based on the DSU pack entries with TYPE of "TTFTGEN" on EQDSP forms entered for a particular SM.

For 5E10 and later, with the introduction of the Global Digital Service Function, refer to the EQGDSC3 form (5860 Record), Division 8, Section 63 for additional configuration information.

2.2 DLC Remote Terminal Diagnostics

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One FIXRT form (5301 Record) is required for DLC (Digital Loop Carrier) diagnostics with a FIXED ROUTE TYPE set to "S96CTST" to define access to the TTF responder used by the DLC channel testing function. This fixed route is defined by a CHARGE INDEX (usually "FREE") and a unique ROUTE INDEX with a ROUTE TYPE of "HUNT", which points to a unique trunk group. This trunk group has the following characteristics:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- One LTP member for each TTF responder in the office
- Trunk Direction - "LTP"
- Hunt Type - "FIFO"
- Trunk Class - "LTPS96TF"
- IAPT - "Y"
- The LTP must be selected from an SM/SM-2000 containing a TTF responder function.

For 5E10 and later, with the introduction of the Global Digital Service Function, refer to Figure 1 of this section and to the EQGDSC3 form (5860 Record), Division 8, Section 63 for additional configuration information.

GDSC Logical Test Port Assignments Per TTF Responder Function (LTPDGTTF, LTPS96TF)

GDSC Configuration Type	Logical Test Port	SM - 1 PIDB	SM - 2 PIDBs	SM-2000
2	LTPDGTTF	6	6	6
	LTPS96TF	6	6	6
5	LTPDGTTF	2	4	2
	LTPS96TF	2	4	2
7	LTPDGTTF	1	2	-
	LTPS96TF	1	2	-
8	LTPDGTTF	3	3	6
	LTPS96TF	3	3	6

GDDC = Global Digital Service Circuit

LTPDGTTF = Logical Test Port Diagnostics using the TTF

LTPS96TG = Logical Test Port Diagnostics for remote terminals

TTF = Transmission Test Facility

Figure 1 GDSC LOGICAL TEST PORT ASSIGNMENTS - 5E10 AND LATER SOFTWARE RELEASES

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SEC. 2M: SELECTED LINE AND TRUNK TRANSLATIONS (SLATTS)

1. GENERAL DESCRIPTION - SLATTS

SLATTs (Selected Line And Trunk Translations) consists of Selected line assignments, complete trunk assignments and other essential translations necessary to test selected hardware and verify operational integrity. Translations for trunking, routing and charging should be as complete and accurate as possible. SLATTs are used by Installation for testing.

SLATTs are shipped to the installation site three weeks after the main ship date.

Several categories of test lines are required for every 5ESS Switch and are assigned in the 5ODA SLATTs data entry interval. The TN (Telephone Number) and LEN (Line Equipment Number) assignments are made by the customer's office administrators on line-related 5ODA input forms.

Various test lines, such as the volume and optional feature test lines are required for use in the 5ESS Switch installation interval and can be removed at the customers discretion or need, after the office turns over. Other test lines, such as external sanity monitor, scan or TLWS (Trunk and Line Work Station) talk and monitor lines, are permanently assigned to the 5ESS Switch.

2. VOLUME TEST LINES - LINE UNITS

All 5ESS Switches with Line Units require a group of volume test lines to test sufficiently the call capacity of the LUs (Line Units) mounted on SMs (Switching Modules). The volume testing for heat and general acceptance purpose is provided by the procall test sets. A total of eight lines must be assigned to each LU, regardless of the line concentration ratio or type of LU (4AB1 or 4AC1). These lines are defined by unique TN and LEN (Line Equipment Number) combinations, and apply only to analog lines. The valid LU Concentration Ratios are 10:1, 8:1, 6:1, and 4:1. The 4:1 ratio is valid only with 4AC1 LUs. The 6:1 and 8:1 ratios are always allowed for all LU types. 10:1 ratio is valid with 4AD1 LUs and is available with 5E3 and later Software Releases. (See Figure 1.)

It should be noted that the actual LEN values assigned to unique TNs are fixed, based on the LU Concentration ratio of the associated LU. This allows the installation personnel to know which LENs are to be used for testing in each office. Figure 1 provides the fixed LEN assignments associated with each Line Unit Concentration Ratio. For ease of administrating the LEN load balance, it is recommended, but not required, that all local LUs in a host have the same Concentration Ratio. The LUs and their associated Concentration Ratio assigned to RSMs are independent of the local SMs, but their associated volume test lines are submitted in the same 5ODA SLATTs database as the host SM/LU LENs.

2.1 LINE Input Restrictions

The following information provides additional line input for restrictions:

Set Line Type - "LEN"
Set RAX - 1
Set LCC - "1FR" or "1MR" (see fixed tables)
Set LEN - unique value from table
Set PTY - "I"
Set TTC - "Y" for all test lines
Set PALIT - "Y"
Set TSTLINE (Precut) - "Y"
Set RMK - Data in fixed LEN tables LUz where z is 0-7
All other fields on the LINE form should be the default value of "N", or unknown (blank).

2.2 Volume Test Requirements

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The following information applies to volume test line requirements as shown in Figure 1. The three tables show only the Line Class Code, Remarks, and the last four digits of the LEN. The leading four digits of the LEN will vary based on the particular SM/LU combinations equipped in the offices. The value "Z" in the Remarks field corresponds to the LENs associated LU value.

2.3 Automatic Generation Of Test Line Data

The test line data may be automatically generated by the User Interface ODA command gentline. The gentline command first prompts the SEE (System Equipment Engineer) for a starting TN. It then sequentially increments the TN for each LINE form that it generates. The automated process generates the assignments for the LEN, LCC, and REMARKS fields according to Figure 1. It also sets the remaining fields on the LINE form correctly.

Depending on the Concentration Ratio, the range of vacant TNs, from the starting TN, should equal eight to ten times the number of Line Units in the office. If a given TN is already assigned, the gentline command does NOT insert that individual generated test line into the database.

3. VOLUME TEST LINES - INTEGRATED SERVICES LINE UNITS

All 5ESS Switches with ISLUs (Integrated Services Line Units) require a group of volume test lines to test the call capacity of the ISLUs mounted on SMs. The call capacity can be tested by a number of available facilities, such as a DGC (Digital Call Generator) ITE-6500 which can generate up to 20,000 calls per hour. To perform the volume test, a total of 8 lines must be assigned to each ISLU. These assignments should be made in the following locations:

DRAWER	LINE GROUP	SLOT
1	2	0, 1
2	6	0, 1
3	10	0, 1
4	14	0, 1

Slot 0 is considered as originating and Slot 1 as terminating. The testing is performed on the lines *only* if the associated drawer is equipped.

These slots should be populated as "T" type interface cards unless the ISLU contains only "Z" type analog interface cards. In this case, these slots should be populated as "Z" cards.

The "T" or "Z" card must be indicated as "O" (Operational) on an ISLULC form (5942 Record).

The 8 lines that are needed must be defined by a unique Telephone Number, CKT TN, and an LCEN (Line Card Equipment Number) on DSL form for a "T" type interface.

NOTE: For 5E4(2) and earlier, the DSL form (5900 Record) is used. For 5E5 and later, the DSL (5907 Record) and DSLUSR (5908 Record) forms are used for these assignments.

If the interface is a "Z" type, then a unique TN and an OE TYPE of "C" must be defined on the LINE forms. It should be noted that the actual equipment number values assigned to unique TNs are fixed. This allows the installation personnel to know which equipment numbers are to be used for testing for each office. The following table provides the fixed Equipment Number assignments:

LCEN (Line Card Equipment Number)		
LGC	**LC**	**REMARKS**
02	00	Orig1
02	01	Term1
06	00	Orig2
06	01	Term2
10	00	Orig3
10	01	Term3
14	00	Orig4
14	01	Term4

ISLU2 (2 - 4 SHELF) TEST LINES			

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ISLU2 LINE SHELF NUMBER	LINE GROUP	LINE BOARD NO.	LINE CKT NO.
1	0	0	01 ORIG
	0	1	01 TERM
	4	0	01 ORIG
	4	1	01 TERM
2	8	0	01 ORIG
	8	1	01 TERM
	12	0	01 ORIG
	12	1	01 TERM
3 (When Equipped)	0	4	01 ORIG
	0	5	01 TERM
	4	4	01 ORIG
	4	5	01 TERM
4 (When Equipped)	8	4	01 ORIG
	8	5	01 TERM
	12	4	01 ORIG
	12	5	01 TERM

The table shows only the last four digits of the Equipment Number. The first four digits of the Equipment Number will vary based on the particular SM and ISLU combination equipped in the 5ESS Switch.

The following provides additional information needed on DSL forms (for "T" type interface testing) or LINE forms (for "Z" type interface testing):

DSL Form(5900 Record): 5E4(2) and earlier

Set CKT RAX - 1
Set CKT LCC - "1IR" (or any LCC assigned to ISDN lines)
Set LCEN - From the above table
Set DISCN as shown on the following table.

	DISCN	
PSU SHELF	**DSL GROUP**	**PH CHANNEL**
odd	ISLU	000
odd	ISLU	001
odd	ISLU	002
odd	ISLU	003
even	ISLU	004
even	ISLU	005
even	ISLU	006
even	ISLU	007

- ***NOTE:*** For odd assignments, the PSU SHELF is determined from the EQISLU form (5731 Record). Use the highest odd PIDB number (i.e., 1, 3, 5, 7, 9 or 11) where PIDB TYPE is equal to "PSU" to obtain the PSU SHELF.

For even assignments, the PSU SHELF is determined from the EQISLU form. Use the highest even PIDB number (i.e., 0, 2, 4, 6, 8 or 10) where PIDB TYPE is equal to "PSU" to obtain the PSU SHELF.

The DSL GROUP assignment should be the same as the ISLU number that the particular test lines are being assigned in. For example, if test lines are being assigned in ISLU 0, the DSL GROUP would be 00; for test lines in ISLU 1, the DSL GROUP would be 01, etc.

Set D SERV - "SONLY"
Set DSL PROF - "ISDN"
Set CIDIAL - "ALLOW"
Set PKT SUST - "Y"
Set CA PREF - "I"
Set TSTLINE - "Y"

DSL Form(5907 Record): 5E5 and later

Set OE - From table for LCEN
Set DISCN - From table for DISCN

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Set D SERV - "SX"

DSLUSR Form (5908 Record): 5E5 and later

Set CKT TN - Unique TN to be tested
Set OE - From above table for LCEN
Set MAXB CHL - 2
Set MAXB CHL -2
Set CKT LCC - "1IR" (or any LCC assigned to ISDN lines)
Set CSV - 2
Set CSV CHL - "ANY"
Set AC ALW - "N"
Set AR ALW - "N"
Set COT ALW - "N"
Set PCP ALW - "N"

LCC Form (5306 Record):

If an LCC is defined as "1IR", then define an LCC input form as follows:

Set LINE CLASS CODE - "1IR"
Set RATE AREA - 01
Set CLASS OF SERVICE - "ISDN"
Set TERMINATING TREATMENT - "INDIV"
Set SCREENING INDEX - 0001
Set LINE SCREENING - "N"
Set DIGIT ANALYSIS SELECTOR - 01

LINE Form (5109 Record):

Set RAX - 1
Set LCC - "1FR"
Set OE TYPE - "C"
Set NUMBER - From the LCEN table
Set PTY - "I"
Set TTC - "Y" for all test lines
Set PALIT - "Y"
Set TSTLINE - "Y"

4. VOLUME TEST TRUNKS

4.1 Toll Applications

Call loading in a toll office is accomplished with the CS5 (Call Simulation 5) program. VTT (Volume Test Trunk) assignments, required for call simulation, are entered automatically by the factory into your data base upon system registration and are unassigned by installation prior to turnover. Figures 2 and 3 illustrate the configurations that will be used to implement the test network. The office will be partitioned into as many groupings of Figure 2 as possible. The remaining SMs will follow the the Figure 3 configuration.

The following assignments must be reserved when preparing your data:

- Each SM: DLTU-0, DFIs 1 & 2, channels 1-12
- Trunk Group Numbers 700 through 959
- Screening Indexes 1000 through 1129

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- DAS number 99
- INDIT number 999
- Code Index number 1000

It is recommended that when you first sign-on to the ODA data entry system that you obtain a copy of all populated forms. This will show you not only what the Systems Equipment Engineer has entered on the equipment forms, but also, the Volume Test Trunk assignments.

Note that the automatic assignment of Volume Test Trunk data will not work unless SMs defined on the EQIM form as "IM" or "HIM" are numbered sequentially starting with one.

4.2 Configuration Explanation

Figure 2 illustrates the standard configuration used to generate calls. CS5 is downloaded into SM A with the library supervisor. When CS5 is executed it seizes a member of outgoing trunk group 1 (T1) and outpulses the defined digits over the T1 connection to incoming trunk group 3 (T3). At T3 the incoming digits are translated and routed to outgoing trunk group 4 (T4) in SM B. At T4 the digits are outpulsed over the T1 connection to incoming trunk group 5 (T5). At T5 the incoming digits are translated and routed to outgoing trunk group 6 (T6) in SM A. Trunk group 6 (T6) outpulses the received digits over the T1 connection to CS5 incoming trunk group 2 (T2), where the call is terminated.

Figure 3 represents the configuration used for any SM or RSM that cannot be represented by the configuration in Figure 2. In this configuration CS5 is downloaded into the SM/RSM and seizes a member of trunk group 1 (T1). CS5 then outpulses the defined digits over the T1 connection to incoming trunk group 7 (T7). At trunk group 7 (T7) the incoming digits are translated and routed to outgoing trunk group 8 (T8). Trunk group 8 (T8) outpulses the digits over the T1 connection to incoming trunk group 2 (T2), where CS5 terminates the call.

- ***NOTE:*** The reason that RSMs must be assigned to SM A in Figure 2 or to Figure 3 is that the RSMs may have to be tested in the stand-alone mode. The only way to satisfy this requirement is to have CS5 executing in the RSM under test.

4.3 Local/Toll Applications

The normal way of placing a load on a 5ESS Switch is to use the PROCALL call generator to originate and terminate calls on Line Units. In local/toll applications, however, it is not unusual to have SMs that have no Line Units. As it is desirable to have a call load in each SM, a way of providing the call load in SMs without Line Units is needed. Figure 4 illustrates the configuration needed to implement this load. PROCALL is used to originate a call in SM A. The incoming digits are translated and routed to outgoing Trunk Group T1 in DFI 1. The digits are outpulsed over a T1 carrier that is cross-connected to incoming Trunk Group T2 in DFI 2. At T2 the incoming digits are translated and routed to the terminating line in SM A.

4.4 Assumptions And Requirements

The following are considerations in determining the translations needed to equip the test network and to route through it.

A. Channels in DFIs 1 and 2 of DLTU 0 should be reserved in each SM that will have trunk calls routed through it. One channel should be reserved, in each DFI, for each test line that will route a call to the DFIs.

B. The same channels must be reserved in both DFIs inside a given SM. This requirement is necessary because of the T1 connection between the DFIs.

C. The ODA input forms associated with equipping the trunks should contain the value "TST" in the

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remarks field.

D. Digit Analysis and Routing translations will be required for a line to trunk and a trunk to line call for the test network. These forms should also have the value "TST" in the remarks field to allow easy identification when they are removed.

5. TRUNK AND LINE WORK STATION TALK AND MONITOR PHONES

A local Talk and Monitor phone is required for the MCC Trunk and Line Work Station and is recommended for all Supplemental TLWS (required if 101 Test Line processing is expected). These TNs must be assigned on either the LINE or MLHLN input forms. If 101 testing is expected with multiple work stations, then define the lines in a single Multi-Line Hunt Group with circle hunt. The main Directory Number of the group should be the T&M (Talk and Monitor) number of work station 1 (MCC).

Refer to the Trunk and Line Work Station section in Division 2, Section 2H for complete assignment requirements for TLWS entries.

6. SCANS DIAL UP ACCESS

If SCANS (Software Change Administrative and Notification System) is to be used in a given 5ESS Switch, two dedicated TNs must be defined on the 5ODA input LINE form. These TNs and their associated unique LENs are used as alternate 4-wire back up communication lines for dedicated SCANS access.

6.1 LINE Form Assignment Requirements

The LEN value must be unique and the LCC/RAX combination must be defined on the LCC (Line Class Code) input form with both Class Of Service Class and Terminating Treatment equal to "INDIV".

Additional **LINE Form** Requirements:

Set TTC - "Y"
Set SUSO - "Y"
Set EL - "Y"
Set PALIT - "Y"
Set TSTLINE (precut) - "Y"
All other features are set to "N" or default (empty) values.

7. AMARC LOAD TEST

If the office is linked to an AMARC OSS, twenty five lines are required for the AMARC load test. Each of these test lines are assigned a unique TN and LEN on the 5ODA input LINE form with the following additional restrictions:

LINE Form:

Set RAX - 1
Set LCC - "1MR"
Set TTC - "Y"
Set PALIT - "Y"
Set TSTLINE (precut) - "Y"
Set RMK - "AMARC TEST LINE"
Set all other fields to default values of the form.

Spread the LENs evenly over all LUs in the office. If there are more than 25 LUs, then assign test lines to cover selected LUs in all IMs. Additional test lines or new selection rules will be developed for offices with more than 25 SMs. These AMARC test lines are needed only in the installation interval and can be freed

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up for normal assignment use by the customers company at turnover.

8. TEST CODE LINES ASSOCIATED WITH TNS

The Telephone Numbers assigned for maintenance and craft testing purposes are defined on the LINE form using the assignment requirements described in Division 2. The TNs assigned to test codes must have their line type field set to "RTI", whether or not they are associated with a Route Index. The test code entries are optional, depending on the testing requirements of the individual company.

9. EXTERNAL SANITY MONITOR

The External Sanity Monitor feature (previous name was Dial Tone Delay Alarm) is required to be equipped in every multi-mod 5ESS Switch. Hardware circuits are mounted in a miscellaneous cabinet and two software TNs and associated LENs are assigned on the LINE form.

Refer to External Sanity Monitor in Division 2, Section 2Q for complete requirements.

- ***NOTE:*** The External Sanity Monitor has been discontinued and is no longer required after 1990.

10. RSM STAND-ALONE TEST LINES

RSM Stand-alone Test Lines allow testing of RSM emergency number rerouting for a given RSM Site when the RSM Site is not in stand-alone mode. In addition, stand-alone may be tested from the Host 5ESS Switch if desired. Up to ten RSM stand-alone test lines may be defined per RSM. They are defined on the LINE form with an equipment number (LEN or SLEN) on the RSM for which stand-alone testing is required. The lines must have an LCC (Line Class Code) with a Service Class of "SATSTLN" and a Terminating Treatment of "INDIV". When conducting the stand-alone rerouting test from the RSM Site, the lines may be used to originate and dial each of the emergency numbers which is normally rerouted during stand-alone operation.

If it is desired to conduct the test from the Host 5ESS Switch, the test line must be defined with a remote call forwarding BRCS feature (the preconstructed feature "/CFR" is suitable) with the forwarded-to TN equal to one of the emergency TNs. Either one stand-alone test line may be defined for each emergency TN to be tested, or one stand-alone test line may be defined and Recent Change used during testing to change the forwarded-to TN. No station equipment is required at the RSM if the call-forwarding method is used.

VOLUME TEST LINE FIXED LEN ASSIGNMENT TABLE

10:1 LU CONCENTRATION RATIO - VOLUME TEST LINES

LCC	CONC	SWG	SW	LEV	REMARKS
1FR	0	0	0	0	Orig1-LUz
1FR	1	1	1	1	Term1-LUz
1MR	2	0	2	2	Orig2-LUz
1MR	3	1	3	3	Term2-LUz
1FR	4	0	4	0	Orig3-LUz
1MR	5	1	5	2	Term3-LUz
1MR	6	0	6	3	Orig4-LUz
1FR	7	1	7	1	Term4-LUz
1FR	8	0	0	0	Orig5-LUz
1FR	9	1	1	1	Term5-LUz

8:1 LU CONCENTRATION RATIO - VOLUME TEST LINES

LCC	CONC	SWG	SW	LEV	REMARKS
1FR	0	0	0	0	Orig1-LUz
1FR	1	1	1	1	Term1-LUz
1MR	2	0	2	2	Orig1-LUz
1MR	3	1	3	3	Term1-LUz
1FR	4	0	4	0	Orig1-LUz
1MR	5	1	5	2	Term1-LUz
1MR	6	0	6	3	Orig1-LUz

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1FR	7	1	7	1	Term1-LUz

6:1 LU CONCENTRATION RATIO - VOLUME TEST LINES

LCC	CONC	SWG	SW	LEV	REMARKS
1FR	0	0	0	0	Orig1-LUz
1FR	1	1	1	1	Term1-LUz
1MR	2	0	2	2	Orig1-LUz
1MR	3	1	3	3	Term1-LUz
1FR	4	0	4	0	Orig1-LUz
1MR	5	1	5	2	Term1-LUz
1MR	3	1	7	0	Orig1-LUz
1FR	2	0	6	3	Term1-LUz

4:1 LU CONCENTRATION RATIO - VOLUME TEST LINES

LCC	CONC	SWG	SW	LEV	REMARKS
1FR	0	0	0	0	Orig1-LUz
1FR	1	1	1	1	Term1-LUz
1MR	2	0	2	2	Orig1-LUz
1MR	3	1	3	3	Term1-LUz
1FR	1	1	5	2	Orig1-LUz
1MR	0	0	4	1	Term1-LUz
1MR	3	1	7	0	Orig1-LUz
1FR	2	0	6	3	Term1-LUz

Figure 1 VOLUME TEST LINE FIXED LEN ASSIGNMENT TABLE

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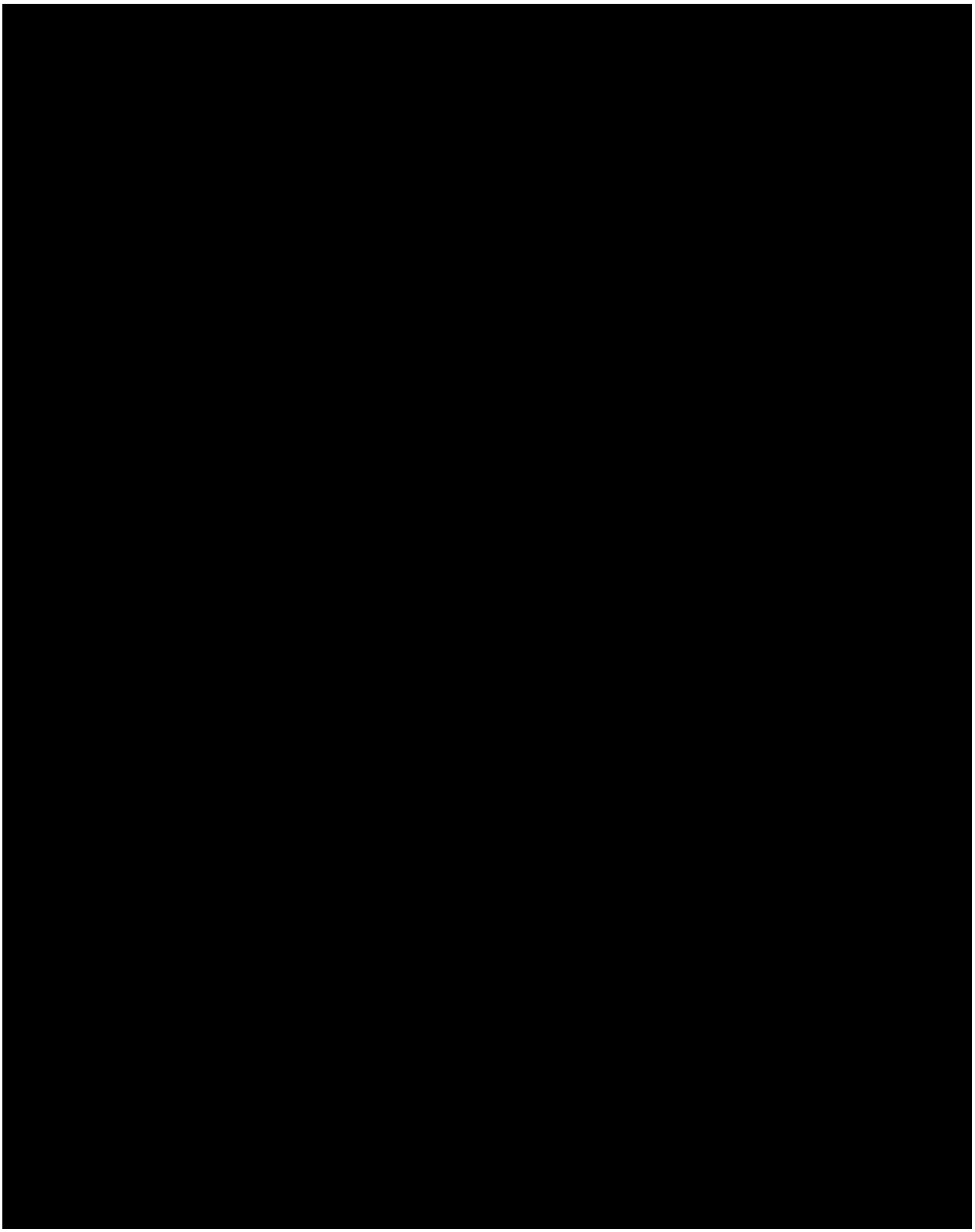

Figure 2 CALLSIM5 SETUP FOR 2 SMs

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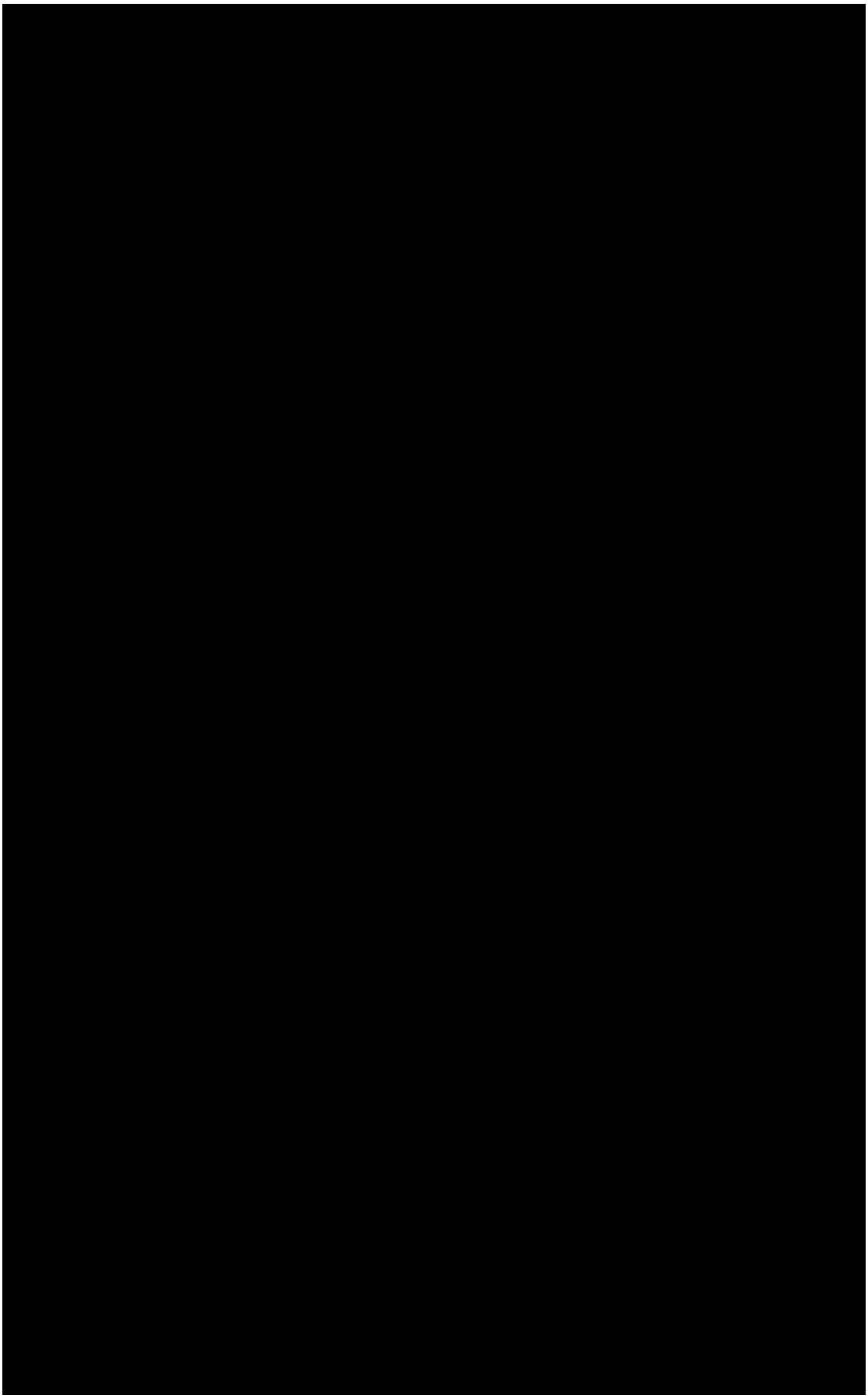

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Figure 3 CALLSIM5 SETUP FOR A STANDALONE RSM OR REMAINING SM

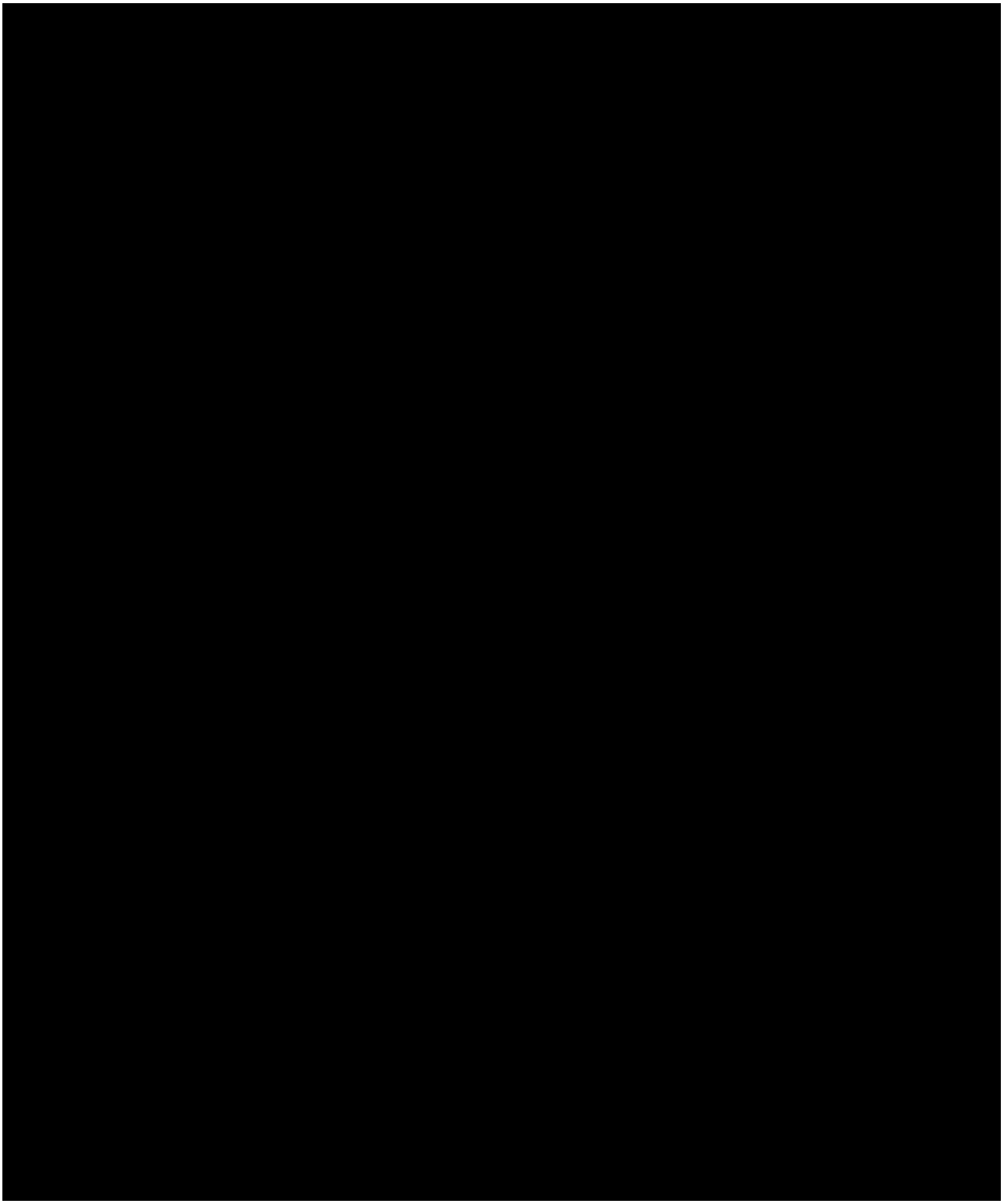

Figure 4 PROCALL SETUP FOR 2 SMs

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SEC. 2N: COIN STATION TEST LINES (CSTL)

1. FEATURE DESCRIPTION

The CSTL (Coin Station Test Line) is used to allow a craftsperson at a pay phone to test the operation of the coin station. It performs Coin Presence Tests, Ground Removal Relay Operation Test, Dial Pulse or Touch-Tone Receiver Test, Coin Relay Time Test, Coin Collect and Return Tests and Loop and Leakage Resistance Tests.

For a CSTL to be used in a RSM, ORM or TRM, please refer to the IMINFO form (5510 Record).

2. TRANSLATION REQUIREMENTS

A CSTL is accessed from a local coin line by dialing a 3 or 7-digit code. Translation requirements for the two instances are different and are as follows:

- Three (3) digit access to CSTL

  The 3-digit code is entered on the LDIT (Local Digit Interpreter) Form with a Call Type of CSTL.

  The FIXRT (Fixed Route Type), CSTL must have a Route Index and a Charge Index (normally free).

  The Route Index is of Route Type - Hunt and points to a Trunk Group with the following characteristics to be specified on the TKGRP Form:

  - Trunk Direction - Outgoing
  - All normal outgoing Trunk Group requirements
  - Hunt Type - FIFO
  - Trunk Class - TSTK
  - IAPT - Yes
  - Outpulsing - Blank

Each trunk required for the CSTL has the following characteristics to be specified on the TRUNK Form:

- TEN - (SN107 - LTD TEST TRUNK CKT)
- CLEI - Applicable CLEI Code for SN107
- OUT START DIAL - WINK

- Seven (7) digit access to the CSTL

  The 7-digit Telephone Number associated with the CSTL feature is defined on the line input form with the following requirements:

  - Line Type must equal "RTI".

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- Equipment number fields LEN and SLEN must be blank (unknown).
- Route Index must be numeric and point to an entry on the RTIDX input form with a defined Trunk Group.
- Test code must equal "CSTL".

The FIXRT (Fixed Route Type), CSTL must have a Route Index and a Charge Index (normally free).

The Route Index is of Route Type = Hunt and points to a Trunk Group with the following characteristics to be specified on the TKGRP Form:

- Trunk Direction - Outgoing
- All normal outgoing Trunk Group requirements
- Hunt Type - FIFO
- Trunk Class - TSTK
- IAPT - Yes
- Outpulsing - Blank

If both 3 and 7-digit access is provided to the CSTL, they may share both the Route Index and the Trunk Group.

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SEC. 2O: OPEN CIRCUIT TEST LINE (OCTL)

1. FEATURE DESCRIPTION

The OCTL (Open Circuit Test Line) is used to allow the customers personnel at a subscribers telephone to test the line for shorts or crosses without help from personnel at a centralized maintenance location or the central office.

NOTE: OCTL test calls are not supported on SLC lines.

2. TRANSLATION REQUIREMENTS

An OCTL is accessed from a subscribers telephone set by dialing a 3- or 7-digit code (based upon local practices). Translation requirements for the two cases are different and are as follows:

3. Three (3) digit access to OCTL.

The 3-digit code is entered on the Local Digit Interpreter, LDIT Form (5315 Record) with a CALL TYPE of "OCTL" if the data is being input via the ODA System and no Code Index. If the data is being input via Recent Change on the 9.3 view, CALL TYPE must be "OCT".

4. Seven (7) digit access to OCTL.

The seven digit Directory Number associated with the OCTL is defined on the LINE form (5109 Record) with the following requirements:

- Equipment number (LEN or SLEN) must be blank (unknown value).
- Line type field must equal "RTI".
- Route Index field must be blank.
- For ODA input, TEST CODE must equal "OCTL" for the LINE form.

  For Recent Change, "OCT" must be entered on 1.6 view on the 5ESS Switch.

The Open Circuit Test Line must also have two office options assigned. The office options, OCTL Tone Duration and OCTL Open Duration must be defined on the OFCOPT Form (5509 Record).

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SEC. 2P: ELECTRONIC LOOP SEGREGATION (ELS)

1. FEATURE DESCRIPTION

ELS (Electronic Loop Segregation) is a feature of the 5ESS Switch which periodically determines the loaded/non-loaded characteristics of analog lines and updates the office data base to specify the most accurate balance network option to be used in the line units channel circuit. The data base is used to set up the channel circuits during line calls.

2. TEST INITIATION

The ELS Program should be scheduled by the switch owner personnel to run on each line no less frequently than once a week and no more than twice a day. Once scheduled the ELS program runs automatically. Recent Change Messages are available to the switch owner to prohibit ELS from modifying the data base for specified lines.

3. TRANSLATION REQUIREMENTS

Once initiated, the ELS program obtains the DNRESP or ELSRESP Fixed Route Type (Form FIXRT) and obtains its Route Index. The DNRESP or ELSRESP Route Index has a Route Type of Hunt and points to a Trunk Group with the following characteristics:

- ***NOTE:*** Calculate the maximum allowable LTPs using the TTF Requirements Table. Refer to Division 2, Section 2X, for TTF Requirements information.

- The number of members equal to the number of TTF (Transmission Test Facility) responders in the office.
- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class
  - LTPELTTF (5E2, Issue 2 and earlier Software Releases)
  - LTPELSTF (5E3 and later Software Releases)
- IAPT - Yes
- The Logical Test Ports assigned to individual members must be in the same Switching Module as the corresponding TTF responder.

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SEC. 2Q: EXTERNAL SANITY MONITOR

1. FEATURE DESCRIPTION

The External Sanity Monitor for 5ESS is an autonomous circuit which tests the ability of the 5ESS to complete calls. It accomplishes this by periodically originating a call on a direct connect (hotline), denied termination telephone which terminates at a denied origination line on another Switching Module. Failure of the External Sanity Monitor to detect audible ringing tone within 15 seconds of the origination results in an audible alarm in the office and at the SCC (Switching Control Center).

The External Sanity Monitor in 5ESS Switch consists of an SD1A277-01 Dial Tone Delay Alarm circuit mounted in an SD5D120-01 or SD5D130-01 Miscellaneous Cabinet with appropriate cabling and options. The two required telephone lines, two scan points and a distribute point are cross-connected to the circuit.

REX (Routine Exerciser) tests are used to test 5ESS Switch lines. REX executes diagnostics on Line Unit cards, executes grid board FAB (Fabric Test) to test the line loops between the grid boards and the SMs, and performs ELS (Electronic Loop Segregation) to check the lines' transmission specifications (db loss, gain, etc.). However, the REX tests should not be run for the originating and terminating lines connected to the External Sanity Monitor since it takes those lines out of service.

If the lines are out of service, then the External Sanity Monitor will be out of service and unable to detect a loss of dial tone in the lines. Also, REX tests will bring a line back in service after the testing is completed. However, if an error is detected, the line will remain out of service.

NOTE: The External Sanity Monitor has been discontinued and is no longer required after 1990.

2. TRANSLATION REQUIREMENTS

Two dedicated Telephone Numbers with associated LEN (Line Equipment Numbers) must be assigned in every multi-module office. The LENs must be selected from different SM (Switching Modules) which are not Host or RSM. These assignments are made on the LINE form (5109 Record) and input at the time of SLATTS.

The first of the two lines must be defined with SUST equal to "Y", NO DIAL equal to "HOT", and HOT LINE TN equal to the seven- digit Telephone Number of the second line.

The second line must be defined with SUSO equal to "Y".

Both lines should be defined with PTY equal to "I" and FLS, PALIT, and TSTLINE equal to "Y". Both lines also require a LCC (Line Class Code) defined on a LCC form (5306 Record) with CLASS OF SERVICE of "INDIV" and TERMINATING TREATMENT of "INDIV".

The two required scan points are on the IOP (Input-Output Processor) and must be defined in the 3B DEMERT Equipment Configuration Data. The distribute point is used to clear any alarm initiated by the External Sanity Monitor and is defined on the EQDPN form with an ASSIGNED CIRCUIT NAME of "DTDA" and an ASSIGNED CIRCUIT LEAD DESIGNATION of "RSTDP".

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SEC. 2R: METALLIC ACCESS FOR LINE AND TRUNK TESTING

1. FEATURE DESCRIPTION

Metallic Access to lines or trunks for various testing is provided via the MACC (Metallic Access Circuit) packs of Metallic Service Units (Regular or Modular). MTBs (Metallic Test Buses) interconnect Line and Trunk Units with the Metallic Service Units.

In an office with multiple SMs (Switching Modules), not every SM will contain an MSU. However, every MSU which contains a MACC pack has access to some SM's Line Units and Trunk Units via the Metallic Test Buses or to other MSUs (and their served Line Units and Trunk Units) via the Metallic Test Interconnection Bus.

Types of testing that require connection to lines or trunks by metallic access include Automatic Line Insulation Test testing and DC testing via either a Trunk and Line Work Station Test Access Unit or a DCTU (Directly Connected Test Unit).

2. TRANSLATION REQUIREMENTS

When a test is initiated, the 5ESS software determines the particular Metallic Service Unit whose Metallic Test Buses serve the Line or Trunk Unit containing the line or trunk to be tested. Routing translations are obtained from the MSURI Form for 5E1 Software Release or the IMINFO Form for 5E1 and later Software Releases for a MAJ (Metallic Access Junctor) Route Index.

For offices with multiple SMs (Switching Modules), a unique MAJ Route Index is required for each SM which has one or two Metallic Service Units (Regular or Modular) with at least one MACC (Metallic Access Circuit) pack assigned. Each MAJ Route Index is associated with a unique Logical Test Port Trunk Group.

Each MAJ Route Index must be defined on the RTIDX Form with a Route Type of Hunt and associated with a unique LTP (Logical Test Port) Trunk Group. Each Trunk Group must be defined on the TKGRP Form with the following characteristics:

- Trunk Direction - LTP
- Hunt Type - FIFO
- Trunk Class - LTPMSU
- IAPT - Yes
- The number of LTP members in the Trunk Group is determined by the type of Metallic Service Units (Regular or Modular) equipped with MACC packs of the given SM (i.e., the SM specified on the MSURI Form or the IMINFO Form). The number of members is equal to eight times the number of Regular Metallic Service Units equipped with one or more MACC packs plus eight times the number of Modular Metallic Service Unit shelves equipped with one or more MACC packs. (This formula assumes that both Service Groups of the Metallic Service Units are similarly equipped. One LTP trunk is required for each junctor of a Metallic Service Unit equipped with MACC packs. For Regular Metallic Service Units there are four junctors per Service Group. For Modular Metallic Service Units there are four junctors per shelf per Service Group.) Each LTP member must be in this SM and defined on the Trunk Form.

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SEC. 2S: INTEGRATED MECHANIZED LOOP TESTING SYSTEM

1. FEATURE DESCRIPTION

The IMLT-2 (Integrated Mechanized Loop Testing-2) feature allows the MLT-2 system to communicate directly with the 5ESS Switch through the IOP (Input/Output Processor) thus controlling test peripherals integrated into the 5ESS Switch.

IMLT-2 is available with 5E2 and later Software Releases. It provides the functions necessary to remotely test lines connected to the 5ESS Switch, its MDF (Main Distributing Frame), its RSMs (Remote Switching Modules), and its SLC-96 (Subscriber Loop Carrier) systems. MDF test access requires the DFTAC (Distributing Frame Access Controller) circuit pack. An optional PGTC (Pair Gain Test Controller) gives test access to Universal SLC-96 systems. The PGTC is external to the 5ESS Switch.

The DCTU (Directly Connected Test Unit) is used to perform all of the DC and low frequency AC measurements requested by MLT-2. The TTF (Transmission Test Facility) is used to perform the Touch Tone Analysis test.

The following items are required for test access for IMLT-2:

- Metallic access from a DCTU test circuit to a line. This includes access to lines connected to integrated SLC-96 systems. In order to establish a metallic connection to a Universal SLC-96 system, the DCTU test circuits are connected (as required) through the PGTC.
- MDF testing will require a Distributing Frame Test Access Controller (DFTAC) located in the MSU/MMSU. The DFTAC allows MLT-2 to control MDF Test Trunk Circuits (TTCs) and provides a metallic connection to the DCTU.
- A Touch Tone Analysis test can be requested by MLT-2. When requested, the TTF is set up to perform this test and software logic analyzes the results.
- A digit "0" security callback pro- cedure is provided. If digit "0" is not detected by the 5ESS Switch within forty seconds, the callback access will be denied.
- This capability provides features to MLT-2 that are provided for in the 5ESS Switch (e.g., ringing, switch- ing between metallic and callback modes).

2. TRANSLATION REQUIREMENTS

The IMLT-2 requires a Trunk Group of LTPs (Logical Test Ports) for callback, Data Link capability to the office from the MLT-2, and a DCTU (Directly Connected Test Unit). Optional DFTAC (Distributing Frame Test Access Controller) circuits for MDF (Main Distributing Frame) testing and a PGTC (Pair Gain Test Controller) for Universal SLC-96 testing are available. To turn on the IMLT-2 capability the OFCOPT form (5509 Record) must have IMLT-2 field equal to "Y" (Yes). To turn on the Data Link capability from the MLT-2 to the 5ESS Switch the ECDOPT form (5706 Record) must have the IMLT-2 field equal to "Y" (Yes), in 5E3 and earlier Software Releases. In 5E4(2) and later Software Releases, the value "SDL2" must appear in a DEVICE TYPE field in the FLEXIBLE IOP SELECTION list on the ECDOPT form.

Callback Requirements - The callback function is required for IMLT-2. It is necessary to establish a Trunk Group with a minimum of six members of LTPs (Logical Test Ports). There are no other restrictions on size or placement of these LTPs. This Trunk Group is pointed to by the Route Index of the Fixed Route Type of "CALLBACK".

The CALLBACK Trunk Group has the following characteristics defined on a TKGRP form (5202 Record):

- TRK DIR - LTP

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- HUNT TYPE - FIFO
- TRKCLS - LTPCLBCK
- IAPT - Y
- Outpulsing - Leave Blank
- Minimum of six members. There are no other restrictions on size or placement of these LTPs.

The CALLBACK Fixed Route Type has the following characteristics defined on a FIXRT form (5301-1 Record):

- FIXED ROUTE TYPE - CALLBACK
- TONE - N
- ROUTE INDEX - Enter the Route Index number which points to Trunk Group of "LTPCLBK".
- CHARGE INDEX - As assigned by office.

The Route Index established for Fixed Route Type of "CALLBACK" has the following characteristics defined on a RTIDX form (5303 Record):

- ROUTE TYPE - Hunt
- TRUNK GROUP NUMBER - Trunk Group with Trunk Class of "LTPCLBCK"
- DIGITS TO BE DELETED - 0
- PREFIX DIGITS - Leave Blank
- NEXT ROUTE - As assigned by office (routing to reorder suggested)
- ANI OUTPULSING - N
- OVERLAP OUTPULSING - N
- SIGNALING PROTOCOL - TRAD
- CI ROUTE TYPE - OTHER

DFTAC Requirements - (An optional circuit pack) The DFTAC circuit is located in the MSU/MMSU. This circuit requires a dedicated line to a Line Unit (LU) and a Logical Test Port (LTP). The LTP must be assigned in the same Switching Module (SM) as the DFTAC circuit location.

The DFTAC Circuit Pack location is defined on the EQMSP/EQMMSP form (5750 Record). The pack position can be in rows 01 to 16 for the EQMSP form, or rows 01 to 32 for the EQMMSP form. Pack TYPE is "DFTC" and EQST is "0".

Each DFTAC circuit has a dedicated LEN on a LU (Line Unit). This is a "normal" POTS line (e.g. 1FR, 1MR) with denied origination. Do NOT use a LINE CLASS CODE which has a CLASS OF SERVICE or TERMINATING TREATMENT of "TEST". The DFTAC dedicated LEN is defined on a LINE form (5109 Record) with the following characteris- tics:

- RAX - As defined by office

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- LCC - As defined by office
- OE TYPE - L
- PTY - I
- TTC - Y
- SUSO - Y
- Other line characteristics as for a "NORMAL" POTS line

Each DFTAC circuit requires an LTP. The Trunk Group and member numbers of the LTPs must be the same as the Trunk Group and member numbers established in the IMLT database. All DFTAC LTPs are assigned to the same Trunk Group. Each host office, RSM or RSM cluster must have a unique Trunk Group of LTPs.

The MDFTA form (5502 Record) is used to define the MDF, MDF Trunk, DFTAC and the LTP.

Each DFTAC circuit for a LTP Trunk Group must be defined on a TKGRP form with the following characteristics:

- TGN - Same as TGN in IMLT database
- TRK DIR - LTP
- HUNT TYPE - FIFO
- TRKCLS- LTPDFTAC
- IAPT - Y
- OUTPULSING - Leave Blank The LTP trunk members must be defined on TRUNK forms (5204 Record) with the following characteristics:
- MEMB - Same as MBR No. in IMLT database
- LTP - In same SM as DFTAC circuit

PGTC Requirements - The PGTC (Pair Gain Test Controller) is an optional, external facility used to test Universal SLC-96 lines. The PGTC, if configured, requires two MTBs (Metallic Test Buses) and two DPs (Distribute Points). In order to use the PGTC, it is necessary to wire two MTBs to the PGTC test circuit; one to the input and one to the output of the PGTC. In addition, two DPs are wired through the 5ESS Resistor Panel out to the Sleeve Control input of the PGTC test circuit.

Only one PGTC frame is allowed per host office. The host PGTC frame will always be identified as one (1). RSM PGTC frames will always begin with the module number of the RSM. In the case of clustered RSMs, only one PGTC frame will service the cluster and the frame number will be that of the lowest numbered RSM in the cluster.

The following restrictions apply to PGTC configuration:

- An MSU/MMSU shelf can terminate no more than one PGTC test port.
- A PGTC test port must terminate on each MMSU where a DCTU port used for testing universal SLC-96 remote terminals terminates.

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- Both MTBs must be assigned sequen- tially to the same MACC pack.
- Both DPs must be assigned sequen- tially to the same DIST pack.
- The MACC pack that terminates the MTBs must be in the same MSU/MMSU as the DIST pack that terminates the DPs.
- A minimum of one MTB assigned to the DCTU must terminate on the same MMSU service group shelf as the two MTBs assigned to the PGTC.
- For higher testing throughputs (PST), PGTC test ports must be assigned to each MMSU service group shelf where a DCTU port used for testing Universal SLC-96 remote terminals terminates.
- The Metallic Test Buses, Distribute Points, PGTC frame and trunk numbers must be defined on the PGTC form for offices equipped with a PGTC.

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SEC. 2T: INTERFACE FOR DID PBX CHANNEL UNITS ON INTEGRATED SLC CARRIER SYSTEM

1. GENERAL

This feature is available in 5E6 and later Software Releases and allows Integrated SLC carrier systems to terminate PBX DID (Direct Inward Dialing) facilities on SLC remote terminals. A DID facility is a one-way trunk with loop reverse-battery signaling supporting either dial tone or dual tone multifrequency outpulsing.

This feature also provides fraud control capabilities. These include blocking the forward talk path until answer supervision is returned to the switch by the PBX, and generating AMA "study" records of calls over DID facilities when answer supervision is not returned within a specified time limit. These fraud control capabilities (path blocking and AMA recording) are applicable to all PBX DID configurations supported by the 5ESS switch.

2. TRANSLATION REQUIREMENTS

SLCCU (5107 Record)

This record is used to define

an integrated SLEN (SLC-96 Line Equipment Number). For DID facilities, the SLEN defined on this form is assigned to the trunk on the TRUNK form (5204 Record). The channel unit in the Remote Terminal that is terminating the DID facility must be defined on the SLCCU form as "DID" or "DIDDPT".

TRUNK (5204 Record)

Assign a SLEN on this record if the trunk is a DID facility terminating on an integrated SLC-96 remote terminal. The channel unit in the Remote Terminal that is terminating the DID facility must be defined on the SLCCU form (5107 Record) as "DID" or "DIDDPT".

AMACT (5506 Record)

The DIDSTUDY call type has been added to this form to allow an AMA study record to be generated as a means of fraud control for the call on the DID facility. The study is generated after a specified time interval has elapsed; this interval is defined on the OFCOPT form (5629 Record).

OFCOPT form (5629 Record)

The DID TIMEOUT field has been added to determine the amount of time in minutes that a DID facility will be terminated without receiving answer supervision from the PBX. When this time elapses, an AMA DID study record will be generated.

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SEC. 2U: BASIC RATE INTERFACE DIAL UP TEST LINE BASIC RATE INTERFACE VERIFICATION

1. FEATURE DESCRIPTION

1.1 Overview

Custom BRITL (BRI Dial Up Test Line) is available with 5E5 and later Software Releases. This feature allows the operating company to test a DSL (Digital Subscriber Line) from the CPE end of a custom DSL. The Custom BRITL feature provides the operating company the ability to provide a telephone number which may be used to gain access to a test facility from a CPE which has circuit-switched voice service. Once access is gained from the CPE, the field craft may run the following tests:

- Verify the LCEN (Line Card Equipment Number)
- Verify the Primary TN of the DSL.
- Run Bit Error Rate Tests on a selected B-Channel.

For 5E6 and later, the Custom BRITL feature is expanded to allow for a billed Custom BRITL call. If the end user subscribes to this feature, the bill is based on the duration of the call. The nonbilled call is available for the craft as a maintenance tool; no billing record is generated.

The tester will be allowed to run the following tests:

- Verify features that are assigned to Feature Buttons.
- Verify TNs which are associated to a Call Appearance.

For 5E7 and later, as an alternative to assigning the Custom BRITL access codes on digit analysis forms, the billed and nonbilled codes may be assigned on the LINE form. This offers the switch owner greater flexibility in the assignment of Custom BRITL test lines.

For 5E8 and later, the Custom BRITL feature has been expanded to allow access to both billed and nonbilled Custom BRITL from an IDCU (Integrated Digital Carrier Unit) DSL. With the exception of testing terminations to BRITE CUs, the tester will be allowed to run all previous tests. Additionally, the tester may run the following test:

- Verify the IDCU Line Equipment Number.

For 5E10 and later, the tester may run the following additional test:

- Verify the ISLU2 line equipment number

For 5E10 and later, the BRIV (Basic Rate Interface Verification) feature provides the capability to identify the office equipment connected to a standard ISDN BRI access line right from the customer premises. The BRIV feature is accessed by dialing an access code from an ISDN terminal connected to a standard ISDN BRI access line provisioned for Circuit Switched access, either voice or data. For more information on NI-3 BRIV see Division 2, Section 1AM on National ISDN features.

1.2 Service Restrictions

In order to use Custom BRITL from a CPE, the CPE must be bound to a user profile, which is allowed to originate voice calls. Originations from Default Service are allowed on both multipoint, single point, and

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Standard DSLs. Circuit Switched Data and Packet Switched Data calls are not allowed to use Custom BRITL.

In order to use BRIV from a standard CPE, the standard ISDN BRI access line connected to the CPE must be provisioned for Circuit Switched access, either voice or data.

1.3 Sample Procedure for Custom BRITL

The following procedure provides an operational test of a DSL by making a voice origination, verifying the LCEN (5E5 and later) or IDCU Line Equipment Number (5E8 and later) or the ISLU2 Line Equipment Number (5E10 and later), verifying the Call Appearances and the Feature Buttons, and invoking digital tests on the B-Channels.

- At the CPE, go off-hook and dial the Custom BRITL access code. A secondary dial tone will be heard and a message will be seen on the CPE display indicating a successful origination to the BRI Test Line. From this point on, a second dial tone will indicate that the Custom BRITL keypad commands may be entered. See Figure 1 for the keypad command sequences.
- Verify LCEN (5E5 and later) or IDCU Line Equipment Number (5E8 and later) - enter *3# on the keypad. The equipment number will be displayed on the CPE.
- Verify Primary TN - enter *4# on the keypad. The Primary TN or the Multiline Hunt Group and member number will be displayed on the CPE.
- Test Call Appearances and Feature Buttons - press the CA or FB. The TN or Feature associated with the button will be displayed on the CPE.

  Note: Depending on the CPE, the display for the Call Appearances may be abbreviated.
- If necessary, set the default digital test parameters. See Figure 1 for the keypad command sequences.
- Test Channel B1 - enter *111#. The test results will be displayed on the CPE when the test is complete. If the test fails, try using another loopback termination (e.g., CPE, NT1, BRITE CU, or line termination).
- Test Channel B2 - enter *112#. The test results will be displayed on the CPE when the test is complete. If the test fails, try using another loopback termination (e.g., CPE, NT1, BRITE CU, or line termination).
- Terminate the BRI Test Line call by going on-hook.

  Note: The user must go off-hook before a non-BRITL origination (e.g., use of a Feature Button or Call Appearance) can be made.

1.4 BRI Test Line Call Treatments

The following treatments may be heard during a Custom BRITL call:

- Continuous Dial Tone - Waiting for new command from CPE.
- One Burst of High Tone - Test has succeeded.
- Two Bursts of Low Tone - Test has failed.
- Ringing - Digital Test is waiting for test equipment.

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- Busy - Digital Test has aborted.
- Silence - Test is still running.
- Reorder - A test call using the billing Custom BRITL access code from a CPE which has BRITL ALW equal to "N" on the DSLUSR form.

1.5 Sample Procedure for BRIV

From CSV line on the customer premise enter a 3-digit or 7-digit access code on the key pad of the Standard CPE. If the access code is successful, the user will hear an audible ring tone for 2 seconds for a voice call. The CPE then displays "connected" indicating a successful connection to the BRIV feature. The word "connected" is displayed for 1 second, and then the office equipment number is displayed for 60 seconds or until the user drops the call.

2. TRANSLATION ASSIGNMENTS

For 5E5 and later, the feature may be assigned by entering the LDIT form with the following field values.

LDIT Form (5303-3 Record)

Field	Value
LDIT	The LDIT that the ISDN lines are using.
INCOMING DIGITS	A three- or seven-digit access code used to gain access to the Custom BRITL feature from the CPE.
CALL TYPE	"BRITL" is used for non-billed BRITL calls; for 5E6 and later, "BBRITL" may be used for billed CustomBRITL calls.
TYPE OF CI CALL	"NONCI"
NBR OF DIGITS	3 or 7, depending on the size of the access code.

For 5E6 and later, the Custom BRITL feature may be assigned in the Office Dialing Plan and/or the Individualized Dialing Plan. The following forms may be entered to access the Custom BRITL feature.

PDIT Form (5303-2 Record)

Field	Value
PDIT	The PDIT that the ISDN lines are using.
DIGITS TO INTERPRET	The Custom BRITL access code.
CALL TYPE	"FEATURE"
TYPE OF CI CALL	"NONCI"
FEATURE	"/*"
ACTION	"BTLUSE" for non-billed BRITL calls; "BBTLUSE" for billed Custom BRITL calls.
PREFIX	"NONE"

IDPDCA Form (5601-1 Record)

Field	Value
IDP GROUP NAME	The IDP group of the ISDN lines.
INCOMING DIGITS	The Custom BRITL access code.
DIALING STATE	"NORMAL"
ACTION	"BTLUSE" for non-billed BRITL calls; "BBTLUSE" for billed Custom BRITL calls.
FEATURE	"/*"

For 5E6 and later, a DSL circuit-switched voice user may subscribe to billed Custom BRITL. The BRITL ALW field on the subscriber's DSLUSR form must be "Y". If the user places a test call to a billing Custom BRITL number, and the BRITL ALW field is not "Y", the caller receives a reorder tone to signal that the call is rejected. If BRITL ALW is "Y", the billed Custom BRITL call proceeds and a billing record is produced after the test call is completed.

DSLUSR Form (5908 Record)

Field	Value
BRITL ALW	"Y" must be entered for billed Custom BRITL access only.

For 5E7 and later, the Custom BRITL feature may be assigned on the LINE form.

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LINE Form (5109 Record)	
Field	**Value**
TN	7-digit Telephone Number, the Custom BRITL access code
PTY	"I" (Individual)
RAX	Rate Area. See the note for LCC.
LCC	Line Class Code. The LCC and RAX on this form must be defined on an LCC form where Service Class and Terminating Treatment are "TEST".
RTI	0
TEST CODE	"BRITL" for non-billed BRITL calls; "BBRITL" for billed Custom BRITL calls.

3. REFERENCES

235-190-105. *5ESS Switch ISDN Feature Description.*

KEYPAD SEQUENCE	ACTION	SOFTWARE RELEASE
*111#	Run BER Test on Channel B1 with current parameters	5E5 and later
*112#	Run BER Test on Channel B2 with current parameters	5E5 and later
*120#	Display current Test Termination	5E5 and later
*121#	Set test termination to CPE default setting	5E5 and later
*122#	Set test termination to NT1	5E5 and later
*123#	Set test termination to line termination	5E5 and later
*1241#	Set test termination to BRITE CU1	5E6 and later
*1242#	Set test termination to BRITE CU2	5E6 and later
*1243#	Set test termination to BRITE CU3	5E6 and later
*1244#	Set test termination to BRITE CU4	5E6 and later
*1245#	Set test termination to BRITE CU5	5E6 and later
*1246#	Set test termination to BRITE CU6	5E6 and later
*130#	Display current test duration	5E5 and later
*131#	Set test duration to 20 seconds default setting	5E5 and later
*132#	Set test duration to 2 seconds	5E5 and later
*133#	Set test duration to 20 minutes	5E5 and later
*140#	Display current test data rate	5E5 and later
*141#	Set current test data rate to 64k Clear	5E5 and later
*142#	Set current test data rate to 64k Restricted	5E5 and later
*143#	Set current test data rate to 56k Clear default setting	5E7 and later
*2#	Send alerting signal to CPE	5E5 and later
*3#	Print LCEN on CPE display	5E5 and later
	Print IDCU Line Equipment Number on CPE display	5E8 and later
	Print ISLU2 Line Equipment Number	5E10 and later
*4#	Print Primary TN/MLHG on CPE display	5E5 and later
*0#	Repeat previous message (display/tone)	5E5 and later

Figure 1 BRITL KEYPAD COMMAND SEQUENCES

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SEC. 2V: IMPROVED DLC OPERATIONAL STATUS INDICATIONS

1. BACKGROUND

When the lines on ISLC (Integrated Subscriber Loop Carrier) systems are tested by a non-integrated MLT (Mechanized Loop Test System) via the "No Test Trunk" interface, indications of "test pair busy" and "carrier alarm" are needed to achieve a desired high testability index.

The MLT system when testing ISLC configurations, receives an "overflow" signal from the switch when a Test Pair Busy or Carrier Alarm condition exists. The "overflow" signal is translated to a trouble identification code of B0. This is the same trouble identification code that is used when the switch cannot setup a test because of a routing failure or because of a lack of switch resources or because internal switch test paths are not available. Prior to this feature the signal from the switch and the resulting code B0 did not provide a sufficiently detailed and useful description of the trouble on the line.

2. FEATURE DESCRIPTION

The Improved DLC (Digital Loop Carrier) Operational Status Indications Feature (99-5E-2678) is available with the 5E8 and later software release.

The Improved DLC (Digital Loop Carrier) Operational Status Indications Feature sends the "intercept" signal for "DN is ISLC with Carrier Alarm" and "DN is ISLC with Test Pair Busy" instead of the "overflow"signal when MLT responds with the "open sleeve" signal. The feature provides one of two new responses to the "open sleeve"in order to provide and identify the "DN is ISLC with Carrier Alarm" and "DN is ISLC with Test Pair Busy" status on top of the existing "DN is on Intercept status". This feature separates the 500 ohm ring ground from the 480Hz tone, which currently are sent together (the intercept signal), and allow the feature to provide the 500 ohm ring ground signal without the 480Hz tone (indicates Carrier Alarm status) and the 480Hz tone without the 500 ohm ring ground signal (indicates Test Pair is Busy status).

3. FEATURE ASSIGNMENT

The provisioning of Improved DLC Operational Status Indications is done on the TKGRP form (5202 Record RC view 5.1). With the TRK CLASS field set to "TSTK"and the TRK DIR field set to "INCOM",set the MLT ISLC OPT field to "Y".See Figure 1 for feature assignment form flow for Improved DLC Operational Status Indications.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1

TKGRP form (5202 Record) - The 5202 Records is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

For 5E8 and later the MLT ISLC OPT field was added to support the Improved DLC Operational Status Indications feature.

5. GLOSSARY

DLC Digital Loop Carrier

DN Directory Number

ISLC Integrated Subscriber Loop Carrier

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MLT	Mechanized Loop Test (System)
MTP	Metallic Test Pair
RT	Remote Terminal
TBCU	Test Bus Control Unit

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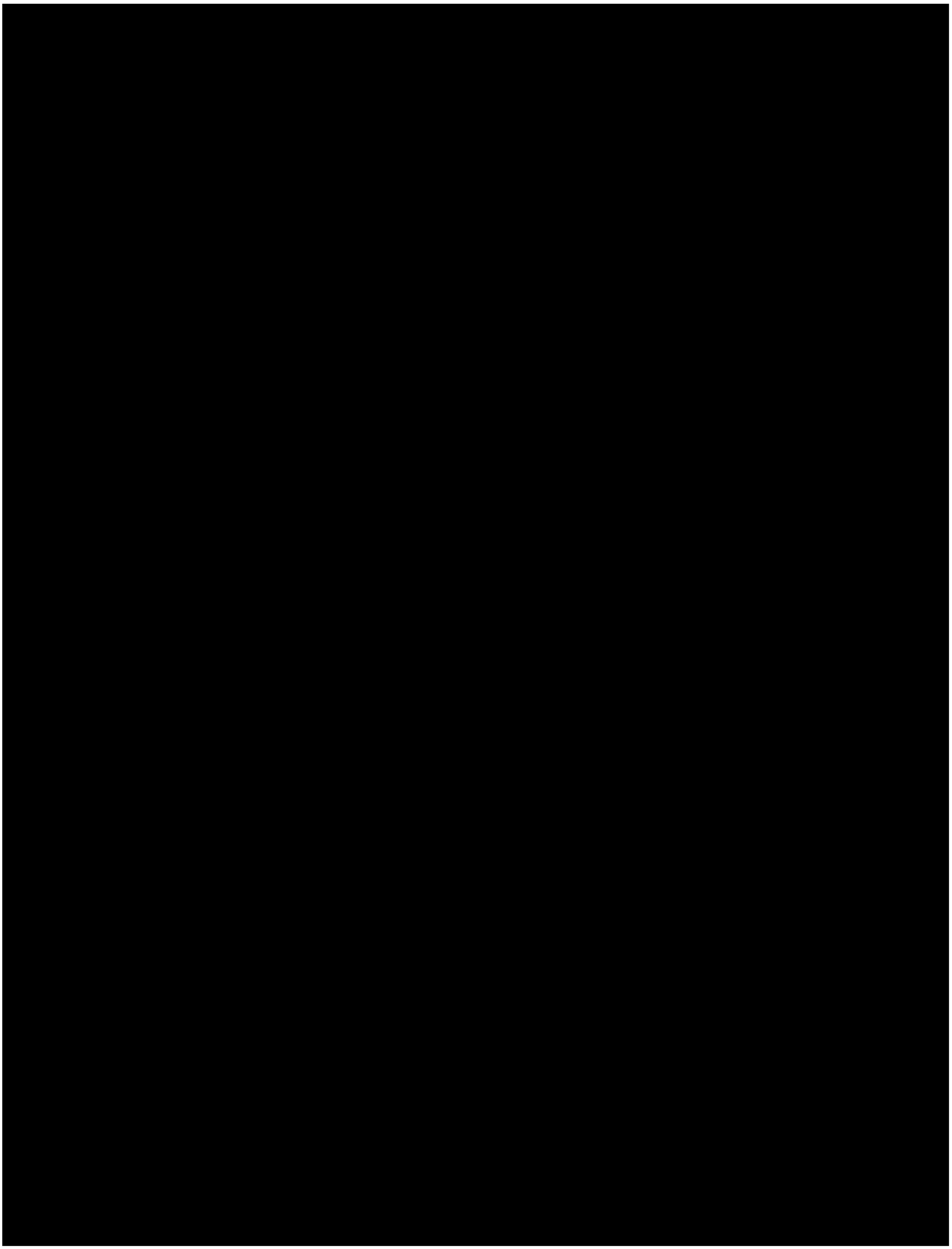

Figure 1 FORM FLOW FOR ASSIGNING IMPROVED DLC OPERATIONAL STATUS INDICATIONS

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SEC. 2W: AUTOMATIC POWER RECOVERY

1. FEATURE DESCRIPTION

The feature number for the APR (Automatic Power Recovery) feature is 99-5E-2404. This feature is available with the 5E10 and later Software Releases for the SM, SM-2000, CDX (Compact Digital Exchange), and VCDX (Very Compact Digital Exchange) switches. This feature controls the application and removal of power. It is designed to increase the efficiency of sustaining call processing functions during a power outage which can occur when commercial AC (Alternating Current) power is not present, an office battery is in deep discharge, and/or when backup (diesel) power is not available to sustain call processing functions. It allows the recovery of the switch without depending on SCC (Switching Control Center) action or travel to the site before recovery can be initiated.

With APR, the switch recovers automatically from an extended AC power outage, for a short duration outage, or for transient power losses, possibly due to technician errors. Once system power is restored, manual on-site intervention is not required to physically charge capacitors, enable power start circuit packs, start TASTECH converters, or to re-initialize software. In addition, no pre-charging of GPDF (Global Power Distribution Frame) load fuse positions is required.

Full recovery for all switch hardware (AM, CM, and SM core, both host and remote peripherals is provided. However, APR for Line Units 1 and 2 is not supported because power startup for these units requires the technician to manually remove fuses to prevent circuit pack damage. In addition, APR is not applicable for the ISLU (Intergrated Service Line Unit) and the PH1 (Protocol Handler 1).

Once power is restored, any other hardware entities (e.g., Common Network Interface) may need manual intervention for complete restoration to a call-processing-capable state.

To implement APR, the EXPANDED CMP/APR field on the EQCORE form (5701 Record) must be defined and the APR field on the ECDOPT form (5706 Record) must be set to "Y". In addition, the following circuit packs had CLI changes.

Circuit Pack	Unit	ODA Form	Field Name
TN831C/ TN832C	LU3	EQLUP	GDX ACCESS CKT
TN833C	ISTF	EQISTF	CLI
	RAF	EQRA	CLI
	MCTU2	EQIM	LDSU
TN1058C	LU3	EQLUP	LU GRID
TN1077E	MCTU2	EQIM	DLI
TN1082B	PSUI	EQPSU	SG0,1 CLI
SN516B	RCU	EQRCLK	CLOCK CLI
SN730	DLTU-R	EQDUP	CLI
	DLTU2	EQDUP	CLI
UN192B	PSUI	EQPSU	SHLF CLI
UN516B	MCTU2	EQIM	IMPU

Note that the following equipment supports APR, but no APR CLI is required for these units:

- SM-2000/SMPU4/TSIU4/DSU3
- MCTU3
- PSU2

Refer to Division 8, Section 1 for CLI (Change Level Indicator) information.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	Record	Division	Section	RC View

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	Number			
ECDOPT	5706	8	8	N/A
EQCORE	5701	8	3	17.1
Equipment Assignment	N/A	8	1	N/A

ECDOPT form (5706 Record) - This form is used to translate all options in the AM for initial offices. The APR field is added to specify (Yes, No) the availability of APR.

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments in a 5ESS Switch office. The EXPANDED CMP field was modified to include APR (i.e., EXPANDED CMP/APR).

Equipment Assignment - This TG-5 section provides CLI value information for all affected forms. CLI values for the APR circuit packs were added.

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SEC. 2X: TTF REQUIREMENTS TABLE

1. GENERAL

The following table can be used to calculate the limits on LTPs (Logical Test Ports) that can be added per Test Trunk type per SM according to their existing hardware equipage. This table provides guidelines for engineering TTFs (Transmission Test Facilities).

TTF Requirements Table

TG-5 Section	Trunk Class	MAXLTPS Calculation
Div. 2, Sec. 2D Div. 2, Sec. 2F	LTPICTC	MAXLTPS <<= (# of txcvr + # of gtxcvr + (3 x ttfproc) + # of ttfresp)
Div. 2, Sec. 2C	LTPOGTC	MAXLTPS <<= (# of txcvr + # of gtxcvr + (2 x ttfproc) + # of ttfresp)
Div. 2, Sec. 2G	LTPOTOTF	MAXLTPS <<= (# of gtxcvr + # of ttfdptc)
Div. 2, Sec. 2H	LTPWSTTF	MAXLTPS <<= (2 x # of txcvr) + (3 x ttfproc) + # of ttfresp)
Div. 2, Sec. 2I	LTPROTL	MAXLTPS <<= (# of gtxcvr + # of ttfdptc)
Div. 2, Sec. 2L	LTPDGTTF	MAXLTPS <<= (# of tgen + # of txcvr + # of gtxcvr + ttfgen + (2 x # of ttfresp))
Div. 2, Sec. 2L	LTPS96TF	MAXLTPS <<= (# of gtxcvr + # of ttfdptc)
Div. 2, Sec. 2P	LTPELSTF	MAXLTPS <<= (# of gtxcvr + # of ttfdptc)

TTF Per SM Equipage (GDSU)

ttfproc	Processor (Interface Brd) (1)
ttfgen	Tone Generator (1)
ttfresp	Tone Responder (1-3)
ttfdptc	Port-to-Carot Tone Detector

GDSF Per SM Equipage

tgen	GDSF Tone Generator (24 max)
txcvr	GDSF Tone Transceiver (12 max)
gtxcvr	Guard-Data-Guard Tone Transceiver (6 max)

Figure 1 TTF REQUIREMENTS TABLE

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SEC. 2Y: ASP TIMEOUT ALARM

1. FEATURE DESCRIPTION

The ASP Timeout Alarm feature is available with the 5E15 Feature Release 3 and later Software Releases. The feature number is 99-5E-7172.

This feature provides a major alarm as an indication for when a timeout indicator exceeds a particular threshold previously set by the switch owner. The alarm serves as an identification of conditions that may require corrective action for potential service-affecting problems. The ASP Timeout Alarm feature allows the switch owner the ability to set thresholds in accordance with changing traffic conditions.

The major alarm generated is audible and visible on the 118 MCC (Master Control Center) page and recorded in ROP (Read Only Printer). The craft sees an indication on the 118 MCC page and hears an audible alarm as well as ROP indication for the alarm.

2. FEATURE ASSIGNMENT

To use this feature, the TIME INTERVAL and ALARM THRESHOLD fields must be set on the ASPOPT form (5670 Record). The alarm on the MCC and ROP appears when the percentage of ASP timeout queries is exceeded in a given time interval entered on the ASPOPT form. (See Division 4, Section 31G.)

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPOPT	5670	4	31G	8.49

ASPOPT form (5670 Record) - This form is used to define ASP office parameters for a switch. For 5E15 and later, added the ASP TIMEOUT ALARM field group heading and the associated TIME INTERVAL and ALARM THRESHOLD fields.

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SEC. 2Z: DELETE CONSTRUCTED FEATURES VIA AUDIT TOOL

1. FEATURE DESCRIPTION

The Delete Constructed Features via Audit Tool feature is available with the 5E14 and later Software Releases. The feature number is 99-5E-7712.

Starting from the 5E13 generic "use_count" is no longer updated for information for BRCS (Business and Residential Custom Services) constructed features. Also the Recent Change Capacity Improvement feature (99-5E-4539) released in the mentioned generic, removed delete options from RCV (Recent Change/Verify) BRCS views, thus eliminating any possibility of deleting constructed features. This feature (99-5E-7712) is being implemented to allow the deletion of constructed features. The primary function of the tool is to check whether or not a BRCS constructed feature is being used and then delete it if requested. Craftshell input/output messages are provided for the BRCS feature audit.

The audit generates a report of the usage of selected features. It checks the usage of BRCS constructed features by MFTYPE. The MFTYPEs supported are listed below. The output file provides the information indicating whether or not a BRCS constructed feature is being used and also which TNs (Telephone Numbers) are using it. If the feature has not been currently assigned to any TN, the corresponding tuples in base relations can be removed. It also allows the user to delete constructed feature definitions that are no longer assigned to any subscriber lines or used in other related relations.

The feature types that will be audited are:

- Individualized Dialing Plan, IDP
- Call Waiting, CWT
- Call Forwarding, CFW
- Terminal Group, TGR
- Time of day, TOD
- Multiway, MWY
- Pick Up Originating, PUO
- Pick Up Terminating, PUT
- Automatic Route Selection, ARS
- Private Facilities, PFA
- Distinctive Ringing, DR
- Multiline Hunt Group, MLHG
- Auto-Call-Back Calling, ACBC
- Modular Queuing, QU
- Precedence And Preemption, PP
- Account Code, ACCT
- Message Detail Recording, MDR
- Authorization Code, ATH

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- ☐ LASS Automatic Callback, AC
- ☐ LASS Automatic Recall, AR
- ☐ Customer Originated Trace, COT
- ☐ Automatic Customer Station Rearrangement, ACSR
- ☐ Electronic Directory Service, EDS
- ☐ Message Desk Service, MDS
- ☐ Display Features, DISP
- ☐ Line Identification Features, LID
- ☐ ISDN Intercom, ICM
- ☐ Attendant Control, ACTR
- ☐ ID after IDP/SC split, ID
- ☐ SC after IDP/SC split, SC
- ☐ LASS Selective Call Acceptance, SCA
- ☐ LASS Selective Call Forwarding, SCF
- ☐ LASS Selective Call Rejection, SCR
- ☐ LASS Selective Distinctive Alert, SDA
- ☐ CPN Features, CPI
- ☐ Home Intercom Single Line Variety, HI
- ☐ Redirecting Number Delivery, RND
- ☐ Bulk Calling Line Identification, BCLID
- ☐ Advanced Service Interface, ASI
- ☐ Advanced Services Platform Originating, ASPO
- ☐ Advanced Services Platform Terminating, ASPT
- ☐ Advanced Services Platform Non-Call, ASPN

2. FEATURE ASSIGNMENT

This is a Recent Change only feature. There is no ODA impact.

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SEC. 2AA: MOBILE TO LAND TEST CALL ON SELECTED TRUNKS

1. BACKGROUND

Before this feature, a test call originating from the suspect trunk and terminating to an adjacent switching office could be placed, but audible detection of echo canceller failure requires some delay in the call path. A call path with only the suspect trunk will not suitably reproduce the call path delay inherent in an end-to-end mobile-to-landline call path.

2. FEATURE DESCRIPTION

The Mobile to Land Test Call on Selected Trunks feature (99-5E-7995) is available with the 5E15 Feature Release 3 and later software releases.This feature provides wireless service providers with an audible means to verify customer complaints of poor transmission such as echo, static, warble, etc., on calls that complete over a particular trunk from the DCS (Digital Cellular Switch) to the PSTN (Public Switched Telephone Network). It provides wireless service providers with the capability to place a call over a specific trunk and talk over that connection to see if the conditions reported by a subscriber are also experienced by wireless service provider personnel over the part of the network that the wireless service provider has some control and maintenance responsibilities.

Specifically, this feature allows a mobile user to dial a service provider selectable Feature/Service Code, a called number, a trunk group number, a member number, and a route list selector number, all in a "*"-delimited string of dialed digits, and the ECP will recognize the type of call, parse the delimited digit string, and cause the called number to be signaled out over the specified trunk from the DCS to PSTN. The trunk used on a given call from the DCS to the PSTN currently can be identified using the ECP (Executive Cellular Processor) AMA (Automatic Message Accounting) record made for the complaining subscriber's completed call.

3. TRANSLATION REQUIREMENTS

Figure 1 illustrates scenarios with three possible locations for the technician at the landline side of the test call. The connection that the mobile technician will specify for the test-call is labeled "c". The most probable scenario would utilize L1 where the technician on the landline side of the call is connected directly off the DCS in the wireless service provider's MSC (Mobile Switching Center). In this situation, it is necessary that a trunk connection (labeled "d") exist between the the PSTN switch and the MSC. This could be either a two-way trunk trunk group in which the suspect member resides or an entirely different trunk group. The airpath (labeled "a") and the cell-site connection (labeled "b") may not be exactly the same as the complainant's call.

This feature is independent of the type of air interface. It applies to both ISUP (ISDN User's Part) and MF (Multi Frequency) trunks outgoing from the DCS.

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Figure 1 TEST CALL SCENARIO

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SEC. 2AC: PRESERVE THE SETTINGS OF TRAFFIC MEASUREMENTS REPORTS

1. FEATURE DESCRIPTION

The Preserve the Settings of Traffic Measurements Reports feature is made available with the 5E16(1) FR 2 (Feature Release 2) Software Release, and is associated with feature number 99-5E-7971.

This Feature allows the customer to save measurement settings prior to a retrofit, restore the settings upon completion of retrofit, and resume measurement collection activity on the same reports and components as were active before the retrofit.

Data to be restored after the retrofit include (if applicable):

- Collection/Print status of TRFC15 (15 minute traffic report) report
- TRFC30 (30 minute traffic report) Sections allowed for collection
- TRFC30 Sections allowed for Print
- TRFC30 Sections allowed for TRFCH (Traffic channel (APX))
- All Components of TRFC30 Sections allowed for collection via RC/V (Recent Change/Verify) or MML (Man-Machine Language) command
- All Components of TRFC30 Sections allowed for print on the ROP
- TRFC30 Interval (30 or 60 minute interval)
- Collection/Print status of Hourly Traffic Separation Report and 24 Hour Traffic Separation Report
- Collection/Print status of Hourly Plant Report, 24 Hour Plant Report and Monthly Plant Report

New MML commands are introduced to initiate the saving of settings of the various reports, sections, and components associated with the measurements, and restore the saved settings upon completion of the retrofit. To acquire valid traffic measurement data after retrofit and restore the saved data, a complete interval after the restore is required.

New MML commands associated with this feature:

- BKUP:TRFM[,UCL]
- RST:TRFM[,NOCHG]

2. FEATURE ASSIGNMENT

This feature has no ODA impact and no provisioning is needed.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASRET	N/A	3	5BR	N/A

MEASRET form (Record) - This form is used to retrofit the TRFMSET Relation. This is a new form that supports this feature.

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SEC. 2AD: AUTOMATIC PROGRESSION TESTING (APT) ENHANCEMENTS

1. FEATURE DESCRIPTION

The APT (Automatic Progression Testing) Enhancements feature is made available with the 5E16(2) Software Release, and is associated with feature number 99-5E-8150.

This feature enhances the APT base capability to accommodate 256K trunk offices, by increasing the number of simultaneous tests that can be initiated by APT, without changing the maximum duration of the schedule (8 hours per day) and the office cycle time (complete within a month). The 256K trunk offices are grown to capacity using the capability related to the 256K DS0 Trunk Scaling feature. For more information on this feature see, Division 2, Section 4B990. Also for information on the base APT feature see, Division 2, Section 2B.

After the deployment of the 256K DS0 Trunk Scaling feature, customers are able to be equipped with 256,000 trunks in an office. This enhancement feature speeds up APT testing capabilities for 256K trunk offices.

The enhancement feature covers the following:

- Increases the number of the TM (Terminal Maintenance) processes that can be run concurrently to test trunks using APT.
- New testing algorithms which manage testing of trunk groups, from office levels and DS1 (Digital Signal Level 1) facility levels.
- The previous APT testing mode for digital trunks is preserved, and defined as one of the new testing algorithms, "Sequential".
- The previous APT testing mode for analog trunks is preserved. The new office and DS1 test algorithms are not applicable.
- The previous input/output user interfaces for APT are preserved.

2. FEATURE ASSIGNMENT

This feature can be activated on the OFCOPT form (5509 Record), and RC/V (Recent Change/Verify) view 8.1, by setting the ALGORITHM field to a value other then "SEQN" (Sequential). The number of concurrent APT processes run during an APT session can be changed from the PROCS NBR field.

For trunks on a particular digital trunk unit, it is possible to use an APT algorithm different from that being set for the office (i.e., value of the ALGORITHM field on RC/V view 8.1) as follows:

- for the DLTU/DLTU2 (Digital Line and Trunk Unit), go to the EQDUP form (5730 Record), RC/V view 20.4, and set the ALG FAC 0 field and/or the ALG FAC 1 (the latter only for DLTU2 unit) field to a required value.
- for the DNU-S (Digital Networking Unit - SONET (Synchronous Optical Network)), go to the EQVT form (5858 Record), RC/V view 20.24, and set the ALGORITHM field to a required value.
- for the PLTU (PCT (Peripheral Control and Timing) Line and Trunk Unit.) go to the EQPCTT form (5871 Record), RC/V view 20.27, and set the APT ALG (ODA), or ALGORITHM (RC) field to a required value. These fields are different for ODA and RC because of the differences in the sreen layout of the two.
- for the OIU (Optical Interface Unit), go to the EQLVC form (5764 Record), RC/V view 20.31, and set

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the ALGORITHM field to a required value.

This feature can be deactivated on the OFCOPT form, RC/V view 8.1, by setting the ALGORITHM field to "SEQN" (Sequential), and the PROCS NBR field to 2. Then the APT algorithm set for a specific digital trunk unit on the EQDUP, EQVT, EQPCTT, or EQLVC forms, RC/V views 20.4, 20.24, 20.27 or 20.31, respectively, has no impact on the way the trunks are tested until the APT algorithm for that office is changed to a value other than "SEQN" (this means that the APT Enhancements feature is active).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDUP	5730	8	17	20.4
EQLVC	5764	8	89	20.31
EQPCTT	5871	8	75	20.27
EQVT	5858	8	60	20.24
OFCOPT	5509	3	5I	8.1

EQDUP form (5730 Record) - This form is used to define equipment location information for the Digital Line/Trunk Units. Added the ALG FAC 0 and ALG FAC 1 fields and associated data rules.

EQLVC form (5764 Record) - This form is used to insert, review, update, and delete LVCs (Low Level Virtual Containers) and their associated container information. Added the ALGORITHM field and associated data rule.

EQPCTT form (5871 Record) - This form is used to support the MSM (Multi Service Module) on PLTU (PCT Line and Trunk (virtual)) Unit. For more information on this feature see Division 2, Section 7AP. Added the APT ALG field and associated data rule.

EQVT form (5858 Record) - This form is used for the equipage of the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S - feature number (99-5E-1427). For more information on DNU-S, see Division 2, Section 9C. Added the ALGORITHM field and associated data rule.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. Added the ALGORITHM and PROCS NBR fields and associated data rule.

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SEC. 2AE: ENHANCED TLP FOR E-BUS CABLES

1. BACKGROUND

Traditionally cables are not placed upon a TLP (Trouble Location Procedure). The complicated nature of the E-Bus requires cable information be made available explicitly. The alternative methods (such as searching through installation documentation) are too laborious and error prone. This feature remedies this situation.

2. FEATURE DESCRIPTION

The Enhanced TLP for E-Bus Cables feature is being deployed in the 5E15 FR 5 (Feature Release 5) Software Release. The feature number for this feature is 99-5E-7979.

This feature provides the capability of including E-Bus cables on a TLP ROP (Read Only Printer) message. A TLP is produced when a diagnostic detects a faulty condition. The TLP is used by the technician to locate/replace the faulty hardware.

This feature creates a TLP which lists E-Bus cables associated with suspect faulty equipment. It is an enhancement to the CM2 TMS (Communication Module 2 Time-Multiplexed Switch) diagnostic.

3. FEATURE ASSIGNMENT

The feature has no ODA impact, therefore no provisioning is needed.

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SEC. 2AF: TLP BASED UPON HISTORICAL ROP

1. FEATURE DESCRIPTION

The TLP (Trouble Location Procedure) Based upon Historical ROP (Read Only Printer) for E-Bus Cables feature is being deployed in the 5E15 FR 5 (Feature Release 5) Software Release. The feature number for this feature is 99-5E-8008.

This feature provides the capability of including E-Bus cables on a TLP ROP (Read Only Printer) message. A TLP is produced when a diagnostic detects a faulty condition. The TLP is used by the technician to locate/replace the faulty hardware.

This feature creates a TLP which lists E-Bus cables associated with suspect faulty equipment. It is an enhancement to the CM2 TMS (Communication Module 2 Time-Multiplexed Switch) diagnostic.

2. FEATURE ASSIGNMENT

The feature has no ODA impact, therefore no provisioning is needed.

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SEC. 2AG: OUTPUT MESSAGES FOR METALLIC PATH SETUP FAILURES

1. BACKGROUND

Output Messages for Metallic Path Setup Failures is a new feature that replaces all of the metallic blockage and failure PTRACEs with a new output message. This new output message is more user friendly and gives the service providers the information they need to be able to resolve the problem. The printing of the new output message is controlled by new options on the ALW:DEBUG and INH:DEBUG input messages. PTRACEs need not be turned on to get the new output message so that the noise from the ROP (Receive/Read Only Printer) is less when investigating metallic problems.

2. FEATURE DESCRIPTION

The Output Messages for Metallic Path Setup Failures feature (99-5E-4718) is being deployed as a 5E12 and 5E13 Software Update and for the BMI (Beginning Managed Introduction) of the 5E14 Software Release.

This feature replaces the metallic PTRACESs with an output message which reports failures in the setup of metallic paths for metallic testing of trunks or lines. This information is available for all metallic testing whether initiated from an OS (Operations Support), like IMLT (Integrated Mechanized Loop Testing), or switch based TLWS (Trunk and Line Work Station), like SLIM (Subscriber Line and Instrument Measurement).

When the metallic path setup does not succeed, an output message indicates the cause and provides information about the metallic path being setup at the place the failure occurred. The printing of the new output message is controlled by the ALW:DEBUG input message. There are two types of the new output message REPT METALLIC, blockage and failure. An input message is provided to enable or disable the printing of the new output message. This is used to determine if only blockage problems, only failure problems, or all metallic problems should be printed. The ALW:DEBUG input message gives the flexibility of enabling the printing of none, both, just blockages, or just failures. A blockage is when a resource needed to setup the metallic path is unavailable and a failure is when the metallic path setup is not successful for another reason. When a metallic path is requested from any source that uses MSU (Metallic Service Unit) metallic resources and the request fails, an output message is printed if it is allowed, to help isolate the cause of the metallic path setup problem. There is also a new input message OP:DEBUG to show which flags are set.

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SEC. 2AH: TST PSLNK ENHANCEMENT

1. FEATURE DESCRIPTION

The TST PSLNK feature (99-5E-8477) is being made available with the 5E17(1) FR 3 and later Software Releases.

This feature provides a new delay option to the existing tst:pslnk command that indicates when ATM (Assynchronous Transfer Mode) delay information should be output. The delay is reported in micro seconds and includes the PHA (Protocol Handler for ATM) processing and scheduling overhead as well as the ATM delay time that was measured during the completion of the test.

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SEC. 3: OPERATOR SERVICES POSITION SYSTEM FEATURES

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SEC. 3A: OPERATOR SERVICES POSITION SYSTEM (OSPS)

1. INTRODUCTION

OSPS (Operator Services Position System) is a feature of the 5ESS Switch that is provided with 5E3 and later Software Releases. It facilitates the integration of operator/attendant services on a 5ESS Switch. An OSPS can be used to provide DA (Directory Assistance) service (i.e., 411), ACD/MIS (Automatic Call Distributor/Management Information System) telemarketing services such as order processing and TA (Toll and Assistance) service to customers for completion of toll calls such as collect, calling card, person-to-person, bill to third number and rate requests.

Division 2 Section 3 is intended to serve as a guide to populating the ODA input forms required for operator services. It is subdivided into sections as described below.

Section 3a, OPERATOR SERVICES POSITION SYSTEM, explains the fundamental concepts of OSPS which pertain to all offices providing operator services. Such key concepts as serving teams, call types, ACD, etc., are explained. This should be read first before proceeding on to the section describing the particular feature of interest.

Section 3b, OSPS DIRECTORY ASSISTANCE, provides descriptive information pertaining specifically to the OSPS DA feature, which is available in 5E3 and later Software Releases. A high level functional overview is given, followed by a summary of the required ODA input forms.

Section 3c, LISTING SERVICES, describes the Listing Services features for 5E6 and later Software Releases.

Section 3d, ACD/MIS TELEMARKETING SERVICES, describes the telemarketing services from a functional perspective. These services are available in 5E4(2) and later Software Releases.

Section 3e, TOLL AND ASSISTANCE, describes the OSPS TA services both functionally and from an ODA input form standpoint. This is the largest and most complex section since there are a large number of features provided by Toll and Assistance. The OSPS concepts described earlier are expanded upon, and an overall "road map" to all of the ODA input forms pertinent to Toll and Assistance is provided to facilitate the use of these features. The Toll and Assistance features are available in 5E4(2) and later Software Releases, unless otherwise noted.

2. TRANSLATION REQUIREMENTS FOR ALL OSPS OFFICES

This section provides information which is relevant to all three of the major operator services - Directory Assistance, Telemarketing Services and Toll and Assistance.

TERMINOLOGY

The term "operator" is used frequently in this section. For ACD/MIS service, the generally accepted term is "agent". For the sake of simplicity, the term "operator" will apply to both operators and agents in this section. The term "position" refers to both the functional entity and physical equipment associated with a single operator's work station. In terms of terminal equipment, this could be a BST (Basic Services Terminal), a VDT (Video Display Terminal) or an APT (Agent Position Terminal).

3. CALL PROCESSING

Incoming calls to a 5ESS Switch are terminated on switching modules. When a call requiring OSPS services is detected, the switching module sends a message identifying the CALL TYPE to the administrative module. The administrative module then associates a CALL TYPE identifier to a serving team designated to handle that specific CALL TYPE.

The ACD in the administrative module attempts to identify an idle operator position on the serving team by

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searching the data provided to the administrative module.

When an idle operator position is identified, the administrative module instructs the applicable switching module processor to seize the operator position. The operator at the position is alerted to the seizure by an audible tone, and call information is displayed on either the BST for directory assistance or on the VDT for Toll and Assistance.

For ACD/MIS teleservices applications, incoming calls are controlled by an ACD/MIS. Calls are routed to available agents on a serving team designated to handle specific types of calls. Management information for call centers serviced by a 5ESS Switch is provided through a comprehensive set of graphic and text reports.

4. OSPS SERVING TEAMS

A serving team is a collection of operators who share equally in providing service to a common collection of CALL TYPES. A maximum of 128 serving teams can be identified in the database. Each serving team must be assigned a number from 1 through 128. It is not necessary to assign serving team numbers sequentially.

When a serving team is assigned a number in the database, the OSPS administrator must define the capabilities and permissions of the serving team or accept system default values. The capabilities and permissions defined for the team apply to members assigned to the team. However, specific capabilities and permissions among team members may vary.

Serving team members are defined in the database using operator ID numbers. These ID numbers are operator login assignments. For OSPS DA and ACD/MIS applications, these IDs are 4-digit numbers, from 0000 through 8999. For OSPS TA applications, the IDs can include alpha characters as well as numeric characters. A typical ID for an OSPS TA operator might be "100A". Note that operator ID "100A" is not the same operator ID as "100a". Operator IDs 9000 through 9999 are reserved and, therefore, cannot be assigned.

RELATIONSHIP OF SERVING TEAM to CALL TYPES AND QUEUES

Incoming OSPS traffic is identified in the 5ESS Switch equipped with OSPS through trunk group, previous system action and digit analysis processes. Administrators of an OSPS define CALL TYPE data, including call identification screening information, into the database. This information is used by the 5ESS Switch in digit analysis processes to route incoming OSPS calls into call queues. These terms identify the smallest group of traffic that may be independently routed and share a common speed-of-answer service objective.

When a call queue is being defined in the database, there is a requirement that a principal serving team be assigned responsibility for handling calls in that queue. A serving team can be assigned responsibility for more than one queue, but a queue cannot be shared between or among principal serving teams (except with the 5E5 Software Release where Intraflow allows call queues to be shared between or among serving teams). The OSPS can accept 128 call-type definitions. Therefore, the OSPS is capable of handling 128 call queues.

For every call queue, queue parameters are required. Some parameters have default values that are automatically entered into the database if none are specified; others have no default values generated by the system and require an input from the administrator. For example, a queue requires a value for the maximum number of calls allowed in the queue. If the administrator does not enter a value, the default value entered by the system is "30" and the database will accept the queue definition.

For a different example, queues also require routing index values to route to the 13A recorded announcement machine. If the administrator does not enter a value, or enters an invalid value, there is no default generated by the system. The database will not accept the queue definition.

5. AUTOMATIC CALL DISTRIBUTOR (ACD)

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The nucleus of an OSPS is the ACD (Automatic Call Distributor). The ACD assigns incoming calls to a CALL TYPE. Incoming calls that require operator assistance are placed in a queue for that CALL TYPE. Each queue is served by a team of operators. An operator is assigned to a serving team upon logging in at a position.

The ACD then distributes the incoming calls to serving teams designated by OSPS administration to handle specific CALL TYPES. A serving team consists of a group of operators trained in processing specific CALL TYPES.

When a specific call reaches the front of a queue, the ACD seizes the next available position in the team assigned to that queue. If the appropriate call queue is empty when a call arrives, then the ACD immediately seizes the position at the front of the idle-operator queue (usually the operator who has been idle the longest). The operator at the position is alerted to the seizure by an audible tone, and the call information is displayed at the position.

The ACD ODA forms allow the 5ESS Switch administrators to separate incoming operator assistance traffic into distinct CALL TYPE queues that can be handled by distinct teams of operators, allowing flexibility in assigning calls to serving teams. The sections that follow describe how a call is assigned to an OSPS ACD queue, how that queue is assigned to an OSPS serving team, and how an operator is assigned to an OSPS serving team. The sections apply to 5E3 and later Software Releases, except where noted otherwise.

ODA Forms

The following forms are used to populate ACD:

- ACDPOL form 5412-B/C/E/F Records) (5E5 and later Software Releases)
- ACDCTP form (5412-A/D Records)
- DAS form (5300-1 Record)
- INDIT form (5309 Record)
- LDIT form (5300-3 Record)
- OSPSCT form (5404 Record)
- OSPSOA form (5403 Record)
- OSPSOP form (5401 Record)
- OSPSOPT form (5424 Record)
- RTIDX form (5303 Record)
- STINFO form (5402 Record)
- TKGRP form (5202 Record)

Translation Requirements

CALL TYPE determination is used to assign a request for operator assistance to an ACD CALL TYPE queue in order to handle an incoming OSPS call. The ACD will also attempt to find an idle Interflow position if Interflow is activated for the serving team assigned to the CALL TYPE. For more information on the Interflow feature, refer to Sections 3b through 3d for the application of interest (DA, ACD/MIS, TA). Although the ODA forms for ACD CALL TYPE queues, serving teams and operator logins are common for all three OSPS applications (DA, ACD/MIS, TA), the CALL TYPE determination method is not. Directory

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Assistance and Telemarketing services calls use one method of determination, while TA calls use a different method.

DA and ACD/MIS

Directory Assistance and ACD/MIS calls arrive on Multi-Frequency, Dial Pulse, Touch-Tone, Common Channel Signaling, 3CL and Seizure Only trunk groups. These trunk groups may also (and usually will) carry non-OSPS traffic. Call type determination is based on the incoming trunk group and/or the dialed digits received on the trunk. POTS trunk origination call processing proceeds through digit analysis, at which time the switch checks to see if the call is destined for an OSPS operator, assuming the OSPS DA field on the OSPSOPT form is set to "Y". The standard digit analysis data is used, starting with the DAS found on the TKGRP form (5202 Record), using that key as a key to the DAS form (5300-1 Record) to find correct digit interpreters. The INDIT form (5309 Record) and LDIT form (5300-3 Record) would be populated as for POTS calls to the directory number assigned to the CALL TYPE queue.

ORAR form (5405 Record) - This form is the first OSPS form used by the switch to determine if the call is an OSPS call. The keys are the SCREEN INDEX for the trunk group from the TKGRP form, the CODE INDEX found in digit analysis from the INDIT or LDIT forms and the PREFIX INDEX from digit analysis. These are determined by the switch exactly as they are for trunk POTS calls. If an entry is not found with these key values, the call is not considered an OSPS call and normal trunk call processing proceeds. If an entry is found, this is an OSPS call and further OSPS database queries will be required, using the CALL ID and OPER NOC IDX from this form to determine the CALL TYPE queue. If the CALL ID is zero, the OPER NOC IDX must be non-zero and will be used as one of the keys to the OCTA form (5406 Record). If the CALL ID is non-zero, the OPER NOC IDX must be zero and the OPCTO form (5407 Record) will be used next.

The OPER NOC IDX is non-zero when the local part of the dialed digits is used to determine the CALL TYPE queue without incurring the additional memory overhead of translating all the incoming digits. For example, assume that the digit sequence '555-1212' is to be assigned to one CALL TYPE queue. Digit analysis forms could be populated to translate all 7 digits to a code index. Each translated digit causes 10 tuples to be populated in the appropriate digit analysis base relation. Therefore, 7*10=70 tuples would have to be populated by ODA or RC if all 7 digits were to be translated. Using the OPER NOC IDX link to the OCTA form, the digit analysis forms could be populated to translate the first 3 digits to a code index. The ORAR form with this code index would have a non-zero OPER NOC IDX which is then used as a partial key to the OCTA form. The other part of the key would be the local digits (i.e., the last 4 of the dialed digits), which are '1212' in this case. This would require 3*10=30 base digit analysis tuples and one OCTA form and would use less memory than the first method.

OCTA form (5406 Record) - As stated in the above section, the OCTA form is used when the local part of the dialed digits are to be used to assign a call to a CALL TYPE queue. The keys are the OPER NOC IDX from the ORAR form above and the LOCDN, which is made up of the last 4 incoming digits. The non-key attribute is the CALL ID, which is used as a key to the OPCTO form.

OPCTO form (5407 Record) - This form uses the dialed digits as they have been broken down by the above forms (into the CALL ID) and the incoming trunk group to assign the call to a CALL TYPE queue. The key to this form is the CALL ID, which comes from either the ORAR or OCTA form, and the incoming trunk group number, TGN. Based on that, the call's CALL TYPE queue and the Basic Services Terminal (BST) display index are determined. The call processing software first tries to find an entry with the CALL ID determined from the previous steps and the call's incoming trunk group. If an entry exists with these keys, the CALL TYPE and DISPLAY INDEX attributes from that record are used. If an entry does not exist with these keys, the call processing, Recent Change and ODA require that a record with the wild card value exist for each CALL ID that has been assigned. The CALL TYPE value found will be the key to the OSPSCT form (5404 Record).

Toll and Assistance

Toll and Assistance calls generally arrive on ISP (Intermediate Switch Point) and CAMA trunk groups.

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They can also be on some other type of inward trunk from another operator.

- ***NOTE:*** Additional information on ISP and CAMA calls is provided in Section 3e, OSPS TOLL AND ASSISTANCE.

Call type determination is done based upon how the call arrived at the OSPS, the way that the call was dialed, whether it is a coin call, the carrier of the call and the sending OSPS ID (for Interflowed calls). The ACDCTP form is used to select a CALL TYPE queue based on the details of call arrival. For a detailed discussion of call type determination in 5E5 and later Software Releases, refer to the ACD Expanded CALL TYPE Determination section.

It is assumed that the OSPS TA field on the OSPSOPT form has been set to "Y", indicating that this office has the OSPS Toll and Assistance feature.

ACDCTP form (5E4 Software Release)

In the 5E4(2) Software Release, there are four pieces of information used in choosing a call queue. The ORIGIN CALL field specifies how the call arrived at the OSPS. A call can come in over an ISP trunk, a system CAMA trunk or a transfer CAMA trunk. Alternatively, an inward call from another operator can arrive over some other type of inward trunk. CALL CLASS indicates whether this is the first time that the call has come to an operator, or if this is a recall of a previously handled call. The PREFIX is set according to the dialed prefix and the CARRIER according to the carrier handling the call. The most common call served is one over an ISP trunk. For these to be handled by an operator, there needs to be entries with an ORIGIN CALL of "ISP". The PREFIX would take on values over those handled, such as 0M (for zero minus), 1 and 0. If international calls are allowed, then 01 and 011 would have to be included. For the initial seizure, the CALL CLASS would have a value of "INT", and the CARRIER would be either "LEC" or "IC", depending upon which carrier ISP had selected. On an error condition, the CARRIER would be unknown.

To handle recalls of these ISP calls, there must be entries that assign a CALL TYPE for the CALL CLASS of "RECB" and "RECFB" rather than"INT". The ORIGIN CALL would still be "ISP", and the PREFIX would be the same as for the initial seizure. The CARRIER would be the carrier type used to route to the forward number when the call was floated.

Another type of recall is the recall of an operator-initiated call. There should not be an entry in the ACDCTP form for an ORIGIN CALL of "OPI" and a CALL CLASS of "INT", since an operator-initiated call does not have to pick an operator to handle it. When a recall occurs, there needs to be an entry for the ORIGIN CALL of "OPI", a PREFIX of "NULLP", the CARRIER of "LEC" and "IC" and the CALL CLASS of "RECB" and "RECFB".

CAMA and inward calls require specific entries in the ACDCTP form. See the descriptions of CAMA and inward calls in Section 3d, OSPS TOLL AND ASSISTANCE, for a discussion of what is needed for these types of calls. Note that for CAMA calls, a PREFIX of "NULLP" and a CARRIER of "DC" are used since a prefix and a carrier do not make sense for these types of calls. This is also the case for initial seizures of inward calls.

After a call has reached an operator and has been identified as a SOST (Special Operator Services Treatment) call, there will be a recall later to handle the charges. To find an operator for this, there needs to be an entry for ORIGIN CALL of "RES", CALL CLASS of "RECFB", PREFIX as originally dialed and CARRIER as the one that handled the call.

For coin calls, there are coin recalls and coin notify CALL CLASSES to handle. When this occurs, the ORIGIN CALL is "ISP", the PREFIX is as dialed and the CARRIER is the one that handled the call.

Just as for Directory Assistance calls, the CALL TYPE determined is used as the call queue is used to determine the serving team to handle the call and is ultimately used to select an operator for this call.

ACDCTP form (5E5 and later Software Releases)

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- The CALL ORIGIN field specifies how the call arrived at the OSPS. A call can come in over an ISP trunk ("ISP"), a system CAMA trunk ("SYS") or a transfer CAMA trunk ("XFER"). Alternately, an inward call from another operator can arrive over some other type of inward trunk ("INW"). It can also be an operator-initiated (delayed) call ("OPI") or a residual call ("RES"). It can also be a Directory Assistance to VDT call ("DA2VDT") or Non-ISP call ("NIT").

- The PREFIX is set according to the dialed prefix, and the CARRIER according to the carrier handling the call.

- The COIN field indicates whether the call is a coin call or not.

- The OSPS ID field indicates the 4-digit identifier of the OSPS which interflowed the calls to this switch. For a noninterflow call, the OSPS ID is 0. For an Interflow call, the OSPS ID can be the sending office ID. This is the value which the sending office would enter for its OSPS ID on the OSPSOPT form.

- Further call determination can be done based on the incoming trunk group and/or the destination index as determined from digit analysis. Refer to the ACD ECTD (Expanded CALL TYPE Determination) section for more information on this type of CALL TYPE determination.

The most common call served is one over an ISP trunk. For these to be handled by an operator, "ISP" must be entered in the CALL ORIGIN field on the ACDCTP form. The PREFIX field would have an entry of the prefix that was originally dialed on the call - such as "0M" (for zero minus), "1" or "0". If international calls are allowed, then "01" and "011" would be allowed. The entry in the CARRIER field would be either "LEC" or "IC", depending upon which carrier ISP had selected. For conditions such as a non-conforming end office, the CARRIER could be "UNKWN". The CARRIER is the carrier type used by the operator to route to the forward number. The COIN indicator is used to determine queues for coin calls. The OSPS ID allows interflowed calls to be distributed according to the identity of the sending switch.

Recall queues are assigned based on the queue that handled the call originally. Operator-initiated and residual recall must go through CALL TYPE determination because of the way that these calls were handled on the initial call. They need entries in the ACDCTP form because the initial call did not receive a call queue which would normally be used as a key to the OSPSCT form to retrieve the recall call queue.

For CAMA calls, a PREFIX of "NULLP" and a CARRIER of "DC" are used.

For coin calls, a CALL ORIGIN of "ISP", a PREFIX as dialed, and the CARRIER that handled the call are used.

Just as for Directory Assistance calls, the CALL TYPE determined is used as the call queue, is used to determine the serving team to handle the call, and is ultimately used to select an operator for this call.

ODA Forms Applicable to DA, ACD/MIS, and TA Calls

OSPSCT form (5404 Record)

Each CALL TYPE defined for the switch must have an OSPS Call Type (OSPSCT) Record submitted. The switch can have a maximum of 128 CALL TYPE queues. The key field is the CALL TYPE, which is also the queue number. The queue number is the result of CALL TYPE determination, or is entered by the operator in the case of conferences and transfers. The OPER TYPE field indicates whether the queue is to be used for calls bound for BSTs or VDTs. The RECALL CALL TYPE field is the call queue for two- and one-party recall. The SERV TEAM indicates the queue's principal serving team. More than one queue may have the same serving team, but a queue can have only one principal serving team.

The SERV OBJ field enables the administrator to specify the desired service objective (i.e., answer delay) for this CALL TYPE queue. It is when the queue's serving team handles more than one queue. When an

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operator becomes available on a team that serves more than one queue, the ACD calculates a 'delay ratio' for the call at the head of each queue. The 'delay ratio' is the time that the call has been waiting divided by the SERV OBJ of the queue. The ACD then chooses the call with the highest delay ratio as the next to be served by the available operator. Delay ratio queuing balances the distribution of calls from the queues so that each queue is served equally, relative to its service objective. Because the service objective is used in calculating the delay ratio, a relative priority scheme can be established among the team's queues by assigning lower service objectives to the queues that should be served faster.

The MAX CALLS field contains the maximum number of calls that can be in the CALL TYPE queue awaiting an operator. If a call arrives and there already are MAX CALLS in the queue, the call will not be allowed to queue. The treatment applied to the call depends on the application. In some cases, the call will be routed to the announcement listed under the field 3RD ANNC RTI. In others, reorder may occur.

The CALL WAITING ON and CALL WAITING OFF fields are thresholds used by the ACD to determine when to turn the call waiting indicator on and off for this queue. The call waiting indicator appears on the operator's BST or VDT and on various OSPS Administrative Processor (OAP) displays. The ACD periodically determines the service being provided to each queue and then calculates the expected delay that calls arriving in the next period will experience. If the expected delay is greater than the CALL WAITING ON threshold (i.e., the queue is in the call waiting state), the indicator will be turned on for all positions logged into that queue's principal team. Note that since a serving team can be a principal team for multiple queues, the call waiting indicator for the team will be turned on if any of the queues for which that team is the principal team are in the call waiting state.

If the expected delay is less than the CALL WAITING OFF threshold, the indicator will be turned off for all positions logged into that queue's principal team. No change is made to the indicator if it is already on or off.

The four RTI fields are route indexes that must appear in the RTIDX form. The RTIDX must lead to a TKGRP form that has a 13A announcement machine trunk group. The CLOSE DOWN RTI field gives the 13A announcement route index to be used when the queue is closed (as indicated by "N" entered in the CALL TYPE OPEN field, e.g., when a business office closes for the night).

The other RTI fields are used with the DELAY fields. When a call arrives and must be queued, the 'expected' delay for that queue is calculated based on the queue's current service level. The expected delay is compared to each of the delay attributes. If the expected delay is greater than the entry in the 1ST ANNC DELAY field, but less than that in the 2ND ANNC DELAY field, then the queued call will be routed to the 13A announcement indicated by the 1ST ANNC RTI, provided the application allows delay announcements. The 2ND ANNC DELAY and 2ND ANNC RTI are used in an analogous way. If the expected delay exceeds the entry in the 3RD ANNC DELAY, the call will be routed to the 3RD ANNC RTI (again dependent on the application) and will not be queued. The determination of delay treatment while awaiting an operator is based on the expected delay at the time the operator is requested, not on the actual time that a call has waited once queued.

With 5E5 and later Software Releases, the COIN RECALL field has been added and contains the queue to be routed to for a coin one- or two-party recall. The COIN NOTIFY field has also been added and is used to define the queue to be given the call when a recall is done during the notify period of a coin call. The CALL TYPE NAME field is used by the OAP as a heading on the 15-minute reports.

With 5E5 and later Software Releases, the INTRAFLOW ALW field has been added and is used to determine if this queue is allowing calls for this queue to be intraflowed to supporting serving teams. Up to eight supporting serving teams can be defined in the SUP TEAM 1 through SUP TEAM 8 fields. The DELAY THRSH 1 through DELAY THRSH 8 fields define the time in seconds that the queued call must be delayed before that serving team is allowed to receive the call for processing. Each DELAY THRSH value must be greater than or equal to the previous DELAY THRSH value (i.e., DELAY THRSH3 must be greater than or equal to DELAY THRSH2).

A serving team that has Interflow or rerouting activated is not eligible to receive intraflowed traffic. A

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queue whose principal team is being interflowed, or interflowed via rerouting may be intraflowed to a supporting team whose delay outflow threshold is zero. If an Interflow channel is not found and no supporting team server is found, the call will fail because queuing is not allowed for teams which are interflowed or rerouted. Refer to the Intraflow description later in this section for additional information on the Intraflow feature.

STINFO form (5402 Record)

Each serving team defined for the switch must have a STINFO form submitted. The switch can have a maximum of 128 serving teams. The SERVING TEAM field is the key for this record, and is the number of the operator serving team. The SERVICE ATTN CALL TYPE field is the number of the queue (identified in the OSPSCT form) that will be used when the operator depresses the Service Assistant (SA) key on their VDT. The EXTERNAL DIALING PERM field is used for DA and Commercial ACD serving teams to indicate the external (non-OSPS) dialing permission for this team: unrestricted, restricted or denied. This scenario uses the following sequence on the BST. When an operator has restricted permission, the number dialed is looked up in the RESXDL form with the DIALING PERM INDEX values as its key. The RESXDL form contains the numbers that teams with this DIALING PERM INDEX are restricted to dialing. If the number is found in that restricted dialing table or the operator has unrestricted dialing permission, the SCREEN INDEX and the DIG ANALYSIS SEL are used by regular trunk digit analysis to route the call. External dialing for DA serving teams uses CARRIER DIAL PERM and CARRIER ID fields analogously to their use for POTS calls.

The EMRG CONF ALLOW field indicates whether a conference should automatically be established to the queue listed in the EMRG CONF CALL TYPE field when an operator on this team depresses the EMERG key on the operator's BST. If "Y" is entered in the EMRG CONF ALLOW field, then the EMRG CONF CALL TYPE must contain the number of a queue that exists in the OSPSCT form.

The DAS/C AVAILABLE field indicates whether the serving team communicates with a Directory Assistance System/Computer. A "Y" should be entered in this field only when a DA team uses a DAS/C, in which case "CCI" or "IBM" must be entered in the DASC VENDOR field on the OPARM form.

Operators have the ability to transfer, conference, and handoff incoming calls. The TRANSFER ALLOWED, CONF TRANS ALLOWED, and HANDOFF ALLOWED fields are used to set the transfer, conference and handoff permissions for all operators that belong to the particular serving team. If "Y" is entered in the TRANSFER ALLOWED field, then an operator can transfer a calling party to another call queue. If "Y" is entered in the CONF TRANS ALLOWED field, then an operator can conference with, or transfer a call to a specific operator ID or position number. If "Y" is entered in the HANDOFF ALLOWED field, then an operator can hand a call off to another operator. The difference between the transfer and the handoff function is:

- Transfer: The operator transfers the back party to another call queue (or to a specific operator if the CONF TRANS ALLOWED field is "Y") without establishing a conference with the new operator.

- Handoff: The operator hands off the back party to another call queue (or to a specific operator if the CONF TRANS ALLOWED field is "Y") by releasing from the call after establishing a conference with the new operator.

The secondary digit analysis selector, SEC DIG ANALYSIS SEL, is used in place of the DIG ANALYSIS SEL field when the operator makes a call using the 'DIAL #0 **<digits>** ENTER' key sequence on the BST to dial an Operator Special Dialed Code.

With 5E5 and later Software Releases, the NON ISP AND TA field has been added and indicates whether the serving team may handle non-ISP and TA calls. The NON ISP ONLY field indicates whether only NON ISP calls are handled by this serving team. These fields were added because a serving team with an OPER TYPE of "TA" can serve ISP and non-ISP calls simultaneously or serve ISP or non-ISP calls exclusively.

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Also new for 5E5 and later Software Releases, the INTRAFLOW ALW field indicates whether this serving team is accepting calls from supporting queues (i.e., will it allow calls to be intraflowed to it). The PCT INTRAFLOW is the percentage of active operators of this serving team that can process intraflowed calls at any time. The OPER TYPE field indicates whether this team is used by operators at BSTs or VDTs. Refer to the Intraflow description later in this section for more information on the Intraflow feature.

OSPSOA form (5403 Record)

Each OSPS operator login identification must have an OSPSOA form. The OPERATOR ID field is the operator's login identification which is entered at the beginning of a work session at the BST or VDT. The SERVING TEAM field identifies the serving team to which the operator is assigned. The EXTERNAL DIALING PERM field indicates whether the operator has restricted, unrestricted or no permission to dial external to OSPS. If the operator is restricted, then the DIALING INDEX from the operator team's STINFO form is used as the key to the table of numbers found in the RESXDL form to which the operator is restricted. The EXTERNAL DIAL PERM and DIALING INDEX fields only apply to DA and ACD/MIS operators.

When the operator has a calling party and another operator in a conference, the operator may hand off the call to the other operator if "Y" is entered in the HANDOFF ALLOWED field. An operator may transfer a calling party to another call queue if the "Y" is entered in the TRANSFER ALLOWED field. An operator may conference with or transfer a call to a specific operator identification or position number if "Y" is entered in the CONF TRANS ALLOWED field. The operator is allowed to monitor other operators if "Y" is entered in the MON PERM field (and if the operator is logged in at a position that is designated as a monitoring position on the OSPSOP form).

Each operator login is restricted to using either a BST or a VDT as indicated in the OPER TYPE field.

The following list describes the ODA forms used to direct calls arriving on trunk group 308 with the digits 5551212 to call type queue 104 and serving team 6 (see Figure 4):

- **TKGRP form (5202 Record)** - The call arrives on the two-way (trk dir=twoway) trunk group 308 (tgn=308) which is assigned screening index 11 (scr=11) and digit analysis selector 2 (das=2). The screening index is used for routing and charging in normal POTS call processing.

- **DAS form (5300-1 Record)** - Digit analysis selector 2 does not use the preliminary digit translator (pdit=0), but uses the incoming trunk digit translator 1 (inc dit=1) and the local digit translator 1 (ldit=1). Incoming trunk digit analysis is performed first and specifies whether local digit translation should follow, in which case the local digit translator will be used.

- **INDIT form (5309 Record)** - The incoming trunk digit translator 1 (inc dit=1) will translate the incoming digits 555 (inc digs=555), without resorting to the local digit translator (ldit=n), to code index 10 (cdi-10). The translation process will expect 7 digits (nde=7) and will delete 3 digits (ndd=3), thereby leaving only the the '1212' left after digit analysis.

- **ORAR form (5405 Record)** - OSPS call identification uses the screening index 11 (scr=11), that was initially looked up by trunk group view 5.1, the code index 10 (cdi=10), that was determined by digit analysis in view 9.5, and no prefix (pfx=none), because none was found by digit analysis, to get call type id 0 and operator noc index 1 (oper noc idx=1). Because operator noc index is non-zero, view 21.25 must be checked next to use the digits remaining after digit analysis.

- **OCTA form (5406 Record)** - Operator noc idx 1 (oper noc idx=1) and local digits 1212 (locdn=1212) give preliminary call type id 4 (call type id 4).

- **OPCTO form (5407 Record)** - Preliminary call type id 4 (call type id 4) on originating trunk group 308 (tk group=308) uses call type queue 104 (call type=104) and BST seizure display index 104 (dispx=104).

- **OSPSCT form (5404 Record)** - OSPS call type queue 104 (call type=104) is finally served by serving

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team 6 (serv tm=6).

Other Details

Particular entries on the ACDCTP form are needed to handle CAMA calls and DARK calls. See the descriptions of CAMA and DARK calls in Section 3b, OSPS TOLL AND ASSISTANCE, for a discussion of what is needed for these types of calls.

6. INTRAFLOW

The OSPS Intraflow feature is available with 5E5 and later Software Releases. Intraflow allows an ACD/OSPS administrator to assign for each call queue, a single principal serving team and up to eight supporting serving teams which may handle calls from the call queue when all of the operators on the principal serving team are busy.

Each serving team has a threshold indicating the maximum percentage of the team that can simultaneously handle calls from its supporting queues. A queue 'Intraflows' traffic from its principal serving team to a supporting team when the delay of the oldest call on queue exceeds the delay outflow threshold for the supporting team. The supporting serving team will accept the call as long as doing so would not violate the team's supporting queue call percentage threshold.

A member of a serving team can serve its supporting queues, subject to the existing Delay Ratio Queuing strategy, only when there are no other available serving team members on its team and there are no calls in any of its principal queues. The same team threshold and outflow thresholds are checked before a member of a serving team can accept a call from one of its supporting queues.

ODA Forms

- OSPSOPT form (5424 Record)
- STINFO form (5402 Record)
- OSPSCT form (5404 Record)

Translation Requirements

OSPSOPT form (5424 Record)

One field has been added to the OSPSOPT form for this feature. The field INTRAFLOW ALW, under the heading FEATURE ACTIVATION, must be set to "Y") to enable this feature.

Intraflow, however, must also be individually activated or deactivated for each call type and serving team on the STINFO forms and OSPSCT forms, respectively, before the feature is used.

STINFO form (5402 Record)

Two fields have been added to this form - INTRAFLOW ALW and PCT INTRAFLOW. If INTRAFLOW ALW is set to "Y", then the SERVING TEAM keying this form will handle intraflowed calls. The PCT INTRAFLOW entry determines what percentage of the team will handle these intraflowed calls. If "30" is entered here, then no more than 30% of the team members can accept intraflowed calls at any one time. If "0" is entered in the PCT INTRAFLOW field, then INTRAFLOW ALW will automatically be set to "N".

OSPSCT form (5404 Record)

The field INTRAFLOW ALW has been added to this form along with SUPPORT TEAM LIST. The INTRAFLOW ALW entry must be "Y" if a call to the OSPS CALL TYPE (queue) is allowed to be intraflowed to a serving team. The principal team is defined in the SERVING TEAM field and up to 8

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supporting teams can be entered in the SUPPORT TEAM LIST. If INTRAFLOW ALW is set to "Y", there must be at least one entry in the SUPPORT TEAM LIST.

The SUPPORT TEAM LIST consists of two fields - SUP TEAM and DELAY THRSH. Each supporting team entered here must have an associated delay 'outflow threshold' (in seconds) entered. The supporting team will receive intraflowed calls only when this threshold value has been exceeded. The first entry in the SUPPORT TEAM LIST field is the first supporting team number which will accept an intraflowed call after its DELAY THRSH time has been exceeded. Each succeeding SUP TEAM listed must have its associated DELAY THRSH value set to a number greater than or equal to the preceding one.

Intraflow Call Scenario: Call Looking for a Server

When the ACD receives a request for an operator and no position is available on the serving team designated to handle this call, the original call is queued.

If the INTRAFLOW ALW field on the OSPSOPT (5424 Record) is "Y" and the CALL TYPE has INTRAFLOW ALW set to "Y" on the OSPSCT form, then an attempt is made to identify a supporting serving team. The teams TEAM1 through TEAM8 and the thresholds THRSH1 through THRSH8 and the thresholds THRSH1 through THRSH8 from the OSPSCT form are used in the search for a supporting serving team to handle an intraflowed call.

The delay on the oldest call in the queue is compared to the delay (THRSH1) for the first supporting serving team (TEAM1). If the delay on the waiting call is greater than THRSH1 for supporting serving team TEAM1, and if TEAM1 has INTRAFLOW ALW set to "Y" on the associated STINFO form, then PCT INTRAFLOW is checked on the STINFO form for the TEAM1 to make sure the supporting serving team is not handling more than that percent of calls as a supporting serving team. If this succeeds, the ACD then trys to get a position from that supporting serving team, TEAM1. If anything fails, including finding a position, the next supporting serving team, TEAM2, is checked in the same manner using its threshold (THRSH2). This continues until a position is found, the delay for the next supporting serving team cannot be exceeded, or there are no more supporting serving teams to try.

Intraflow Call Scenario: Server Looking for a Call

When a position becomes available, the principal CALL TYPE queues are searched for a call that this operator can handle. If no call is found in any of the principal call queues, INTRAFLOW ALW on the OSPSOPT and STINFO forms are set to "Y", the serving team that this operator belongs to has not exceeded its PCT INTRAFLOW on the STINFO form (i.e., the number of intraflowed calls being handled by operators in this serving team is not a percentage greater than PCT INTRAFLOW), and the system is not in overload, all supporting call queues are searched for a call to handle. If a call is on a supporting call queue with INTRAFLOW ALW set to "Y", the operator's serving team is searched for among the list of supporting serving teams for that CALL TYPE queue. If the team is found among the supporting teams for that queue, the delay of the oldest call queued is compared to the matching threshold. If the threshold is exceeded, the call has its delay ratio calculated as is done for calls found on principal call queues. Then when all supporting queues are searched, the call meeting the above mentioned conditions with the highest delay ratio is given to the operator to handle.

Intraflow Call Processing Example

The following example illustrates the use of the Intraflow feature. It must be kept in mind that supporting teams are searched in the order that they are listed on the OSPSCT form until either the call's queue does not exceed a delay outflow threshold, the call checks all of its supporting teams without success or the call is assigned to a serving team.

For example, assume the following when a call arrives for CALL TYPE "1".

- CALL TYPE "1" has the following populations:

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- Principal serving team (SERVING TEAM) equals "2".
- Supporting serving teams (SUP TEAM 1 and SUP TEAM 2) equal "3" and "4", respectively.
- Delay outflow thresholds (DELAY THRSH 1 and DELAY THRSH 2) equal "5" and "15", respectively.

- CALL TYPE 1 has two calls on queue, and there are no available servers on principal SERVING TEAM 2.
- The call at the head of CALL TYPE queue 1 has waited 17 seconds.
- Supporting serving team 3 (SUP TEAM 1) has an Intraflow percentage value of 50% (PCT INTRAFLOW on the STINFO form equals 50), i.e., only half of its members can take intraflowed calls. It has four agents (operators) logged in; two are already busy with intraflowed calls and two are idle.
- Supporting serving team 4 (SUP TEAM 2) has an intraflowed percentage of 75% (PCT INTRAFLOW is 75). It has ten agents logged in; only one is busy with an intraflowed call.

The new call is queued at the end because other calls are already queued (all of the principal team operators are busy). The ACD (Automatic Call Distributor) checks the call at the head of the queue, and finds that it has waited longer than the delay outflow threshold for its first supporting serving team 3 (SUP TEAM 1). The call cannot be intraflowed to team 3 because doing so would cause more than 50% of the agents on the team to be simultaneously handling calls from supporting queues. The ACD checks the next supporting team - team 4 (SUP TEAM 2). The call has also waited longer than its delay outflow of 15 seconds. The call can then be intraflowed to team 4 because team 4 will still have only 20% of its agents handling calls from its supporting queues (which is much less than its team percentage threshold of 75%).

7. ENGINEERING ASSIGNMENTS

An OSPS can be operated with a 5ESS Switch dedicated solely to OSPS services such as OSPS TA, or can be integrated into a gateway or network switching system. As a feature of a 5ESS Switch, OSPS relies on the services, features, functions and facilities already available from the switch in such areas as administration, billing, maintenance, support systems, power, etc.

A PSM (Position Switching Module) is the only hardware physically located at the 5ESS Switch that is dedicated to the OSPS. A PSM is an ISDN (Integrated Services Digital Network) switching module loaded with OSPS integrated software. The PSM supports operator positions and OSPS- specific data links and service circuits. Lines are usually not connected directly to a PSM, although they can be in lightly loaded PSMs. A PSM does the following:

- Receives digital signals from DSL (Digital Subscriber Lines)
- Does many of the call processing functions in the 5ESS Switch such as recognizing requests for service and digit reception
- Supports the AM in completing intermodule calls (between two SMs)
- Switches time slots between interface units within the PSM or to the time multiplexed switch via the network control and timing links
- Provides service circuits such as ringing circuits, tone generators, tone decoders, conference circuits, recorded announcements or test facilities
- Provides signaling used in the monitoring and charging of telephone calls

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Depending on the distance from a PSM to either an OSC (Operator Services Center) or ACD/MIS call center, a PSM must contain either an ISLU (Integrated Services Line Unit) or a DLTU-RH (Digital Line Trunk Unit - RISLU Host). An ISLU can be located up to a maximum of 1 kilometer (approximately 5/8ths of a mile) from the 5ESS Switch.

If that distance limit is exceeded, then a Remote ISLU (RISLU) is used. A RISLU is an ISLU which has been remoted from the switch over digital carrier facilities. A DLTU-RH terminates digital carrier facilities that connect the RISLU to the PSM. Otherwise, an ISLU terminates the DSLs from a co-located OSC (or ACD/MIS call center) when digital carrier facilities are not required.

If a PSM is co-located with an OSC (or ACD/MIS call center), the PSM can be equipped with an ISLU to interface with DSLs which meet the ISDN T-interface standards. These DSLs carry three channels of information in a "2B+D" format. The term "2B+D" means the line can carry two "B-channels" (64 kb/s each) and one "D-channel" (16 kb/s).

The DSLs give the switch the capability to function in an ISDN environment. Also, DSLs are used to connect OSPS peripheral equipment to a 5ESS Switch.

If a PSM is not co-located with an OSC (or ACD/MIS call center), transmission facilities must be used to connect the PSM to the RISLU. The DLTU is the interface between the PSM and digital carrier lines and trunks. The DLTU converts the digital signals used by the carriers to the digital signal format used internally by the switch.

The PSM service units provide services such as tone generation, tone decoding, testing and conferencing. The following is a list of the PSM service units and a brief description of the function of each unit.

- Local Digital Services Unit: The LDSU provides high usage functions such as tone generation and tone decoding. This unit is required in every PSM.

- Digital Service Unit 2 Recorded Announcement Facility: The DSU2-RAF independently plays back the pre-recorded, variable length, variable content announcements. The DSU2-RAF provides 32 simultaneous, independently phased announcement channels. The DSU2-RAF DTA (Dial Through Announcement) generates announcements on an output port with the simultaneous decoding of signals on an input port. The announcement is disabled when the first digit signal is decoded. The DSU2-RAF COIN provides coin announcements and decodes dual frequency coin deposit tones. The announcements are provided on an output port, and the coin tones are decoded on an input port. Announcements are aborted upon decoding the first signal from a deposited coin. Note that all three of the DSU2-RAFs can be equipped in either PSMs or non-PSMs, as long as they are "LOADED" SMs (i.e., the CONFIGURATION field on the EQIM form is set to "LOADED").

- Global Digital Service Unit: The GDSU provides conference circuits and transmission test functions. Each 5ESS Switch contains at least one GDSU. This unit is an engineered quantity since the GDSU functions can be shared by multiple PSMs.

The interface units in a PSM provide the interface point between the 5ESS Switch and the digital lines or digital carriers served by the switch. The following is a list of the interface units, along with a brief description of their functions:

- Integrated Services Line Unit: The ISLU connects to DSLs (Digital Subscriber Lines). The DSLs connect operator positions to the 5ESS Switch via 4-wire digital lines connected to the ISLU. The ISLU provides an interface that conforms to the CCITT standard for ISDN. This BRI (Basic Rate Interface) permits voice and data to be multiplexed into a 2B + D format appropriate for a DSL that operates at 192Kb/s. The T-type line cards are used to connect to the DSLs. The DSLs cannot be longer than 1 kilometer (0.62 mile). Since transmission facilities are not needed for a co-located PSM/OSC arrangement, a DLTU is not required. An RISLU can be installed at remote locations. The ISLU provides similar functions whether mounted in a PSM or RISLU cabinet.

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- Digital Line Trunk Unit (Host and Remote): The DLTU connects to digital carrier facilities used for the communication links to a RISLU. Two types of DLTUs are equipped: the DLTU-H and the DLTU-R. The DLTU-H is used in the PSM for communication links while the DLTU-R is used in the RISLU cabinet located in an OSC to provide a communication link to the switch.

- Digital Line Trunk Unit: The DLTU connects to digital carrier facilities used for digital trunks or Interflow links to another OSPS. The DLTU provides a PRI (Primary Rate Interface) where voice and data are multiplexed into a 23 B + D format using X.25 protocol for an OSPS EDSL (Extended Digital Subscriber Line) operating at 1.544 Mb/s. This DLTU is equipped with ten DFIs (Digital Facility Interfaces) with each DFI terminating one T1 line.

A PSM is equipped with a PSU (Packet Switch Unit) for the switching and processing of packet data used by OSPS. The PSU is applicable for use in an ISDN environment.

8. RISLU PORT ASSIGNMENTS

The SM (Switching Module) is equipped to allow an SM to handle more than 60 OSPSports. These OSPS ports can be divided between one or more RISLUs. With ACD/MIS applications, a customer may request more than 60 ports. These OSPS ports can be divided between one or more RISLUs. With ACD/MIS applications, a customer may request more than 60 positions on a single RISLU. To achieve this and to maximize T1 facility usage, a change was required to modify the path hunt algorithm to preassign the time slots through the RISLU. The time slots are chosen based on the LC (Line Card) and the LGC (Line Group Controller) that the OSPS position is wired in. The OSPS DSL assignment should follow these recommendations in order to maximize T1 usage and ensure no position is blocked from initializing.

RISLU Port Assignment Recommendations

LGCs will be logically divided into four SLGCs (Sub Line Group Controllers) each containing up to four OSPS ports. The SLGCs should be grown in order. This means that the first four operator positions should be installed in LC slots 16, 18, 20, and 22 of LGC 0, SLGC 0 (see Figure 5). The next four operator positions should be installed in LC slots 16, 18, 20 and 22 of LGC 1, SLGC 1. This should be done on all sixteen LGCs before a fifth LC slot is equipped on any other LGC. Additional growth should start at LGC 0, SLG 16 and equip LC slots 8, 10, 12, and 14, SLG 16. This routine should be followed for each of the operator positions in the order of SLGC numbers until the desired number of operator positions are equipped (see Figures 1 through 3 and Figure 5).

OSPS ports which are connected to the RISLU are divided into two groups. These groups are Class-1 DSLs and Class-2 DSLs. Class-1 DSLs are devices which use a B-channel or a B-channel and D-channel time slot (e.g., BST, VDT, AMLB SRA or AUTOQUOTE Z-card). Class-2 DSLs are devices which use a D-channel time slot only (e.g., OAP, DAS/C, ACC, RTRS, HOBIS/HOBIC, AUTOQUOTE T-card). Certain SLGCs are not allowed to have more than three Class-1 DSLs assigned to them, the remaining slot is reserved for a Class-2 DSL. Figure 1 shows the number of Class-1 DSL's which can be terminated on each SLGC.

Assignment Rules

The number of active facilities will determine which SLGCs should be used (see Figure 2).

Each SLGC should be assigned as many DSLs as allowed before equipping the next SLGC to ensure that facility time slots will not be wasted. Time slots allocated for (but not occupied by) a Class-1 DSL can be used to terminate Class-2 DSLs, but Class-1 DSLs cannot be used in places allocated for a Class-2 DSL.

The Maximum number of SLGCs that can be equipped in a single RISLU is 60. The Limit is determined from a maximum of 12 transmission facilities per RISLU and 5 SLGCs per facility (5 x 12 = 60).

Most SLGCs can have up to four Class-1 DSLs connected to them, the remaining will only have three Class-1 and one Class-2 DSLs (see Figure 1 to determine which SLGCs these are).

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By using Figures 1 and 2 , you can determine the number of Class-1 and Class-2 DSLs which can be equipped for each facility.

In 5E3, the first four operator positions on an LGC were assigned to LC slots 16, 18, 20 and 22. By conforming to these standards, no hardware configurations changes will be necessary when updating from 5E3 to 5E4(2) and later Software Releases unless operator positions 59 and 60 are equipped. In 5E3, operator positions 59 and 60 are located in LGCs 5 and 7, respectively, but in 5E4(2) (and later) they should be in SLGC 16 which is located in LGC 0. If positions 59 and 60 are used in 5E3 they must be moved to SLG 16 when updating to 5E4(2). See Figure 5.

To avoid simultaneous multiple link failures, observe the following rules in assigning data links for which the possibility for such occurrence should be minimized.

- Terminate them on separate LGCs, not just separate SLGCs.
- If possible, the selected LGCs should be at least five LGCs apart (e.g., LGC 0 and LGC 5).

9. TRANSLATION REQUIREMENTS FOR POSITION DSLs

A DSL must be defined for each operator position. The OSPSDSL form (5411 Record) is used to assign Line Card Equipment Numbers associated with operator positions to Integrated Services Channel Numbers. DSLs for Directory Assistance BSTs (Basic Services Terminals) must be assigned a SERVICE CLASS of "DAOPER". DSLs for Toll and Assistance VDTs (Video Display Terminals) must be assigned a SERVICE CLASS of "TAOPER". DSLs for agent position terminals used in telemarketing applications must be assigned a SERVICE CLASS of "DAOPER".

Position DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

The following fields are not used for position DSLs and should be left blank: DSL NAME ID, DSL NAME RL, MATE LCEN, SCR IDX and DAS.

Maximum Number of Class-1 aned Class-2 DSLs per Sub-Line Group Controllers for a 24-Channel Transmission Facility

SLG #	Max. Class-1 DSLs	Class-2 DLSs
0	3	1
1	4	0
2	4	0
3	4	0
4	3	1
5	3	1
6	4	0
7	3	1
8	4	0
9	4	0
10	3	1
11	4	0
12	4	0
13	3	1
14	4	0
15	4	0
16	4	0
17	3	1
18	4	0
19	3	1
20	4	0
21	4	0
22	3	1
23	4	0

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24	3	1
25	4	0
26	3	1
27	4	0
28	4	0
29	3	1
30	4	0
31	3	1
Subtotals	115	13

SLG #	Max. Class-1 DSLs	Class-2 DLSs
32	4	0
33	4	0
34	3	1
35	4	0
36	4	0
37	3	1
38	4	0
39	3	1
40	4	0
41	3	1
42	4	0
43	4	0
44	3	1
45	4	0
46	3	1
47	3	1
48	4	0
49	4	0
50	3	1
51	4	0
52	3	1
53	4	0
54	4	0
55	4	0
56	4	0
57	3	1
58	4	0
59	3	1
..	..	..
..	..	..
..	..	..
..	..	..
Subtotals	101	11

Grand Total Class-1 = 216*

Grand Total Class-2 = 24

*This is the physical limitation for the maximum number of OSPS positions on an RISLU

Other limitations such as engineering rules and specific applications may limit this number.

Figure 1 LINE GROUP CONTROLLER ASSIGNMENT TO SUB-LINE GROUPS

Number of Active Facilities	Usable SLGs FROM - TO
1	0 - 4
2	0 - 9
3	0 - 14
4	0 - 19
5	0 - 24
6	0 - 29
7	0 - 34
8	0 - 39
9	0 - 44
10	0 - 49
11	0 - 54

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12	0 - 59

Figure 2 USABLE SUB-LINE GROUPS

The table below defines all of the SLGs that are provided for an OSPS equipped (R)ISLU

SLG	LGC	LINE CARDS
0	0	16,18,20,22
1	1	16,18,20,22
2	2	16,18,20,22
3	3	16,18,20,22
4	4	16,18,20,22
5	5	16,18,20,22
6	6	16,18,20,22
7	7	16,18,20,22
8	8	16,18,20,22
9	9	16,18,20,22
10	10	16,18,20,22
11	11	16,18,20,22
12	12	16,18,20,22
13	13	16,18,20,22
14	14	16,18,20,22
15	15	16,18,20,22
16	0	8,10,12,14
17	1	8,10,12,14
18	2	8,10,12,14
19	3	8,10,12,14
20	4	8,10,12,14
21	5	8,10,12,14
22	6	8,10,12,14
23	7	8,10,12,14
24	8	8,10,12,14
25	9	8,10,12,14
26	10	8,10,12,14
27	11	8,10,12,14
28	12	8,10,12,14
29	13	8,10,12,14
30	14	8,10,12,14
31	15	8,10,12,14
32	0	24,26,28,30
SLG	LGC	**LINE CARDS**
33	1	24,26,28,30
34	2	24,26,28,30
35	3	24,26,28,30
36	4	24,26,28,30
37	5	24,26,28,30
38	6	24,26,28,30
39	7	24,26,28,30
40	8	24,26,28,30
41	9	24,26,28,30
42	10	24,26,28,30
43	11	24,26,28,30
44	12	24,26,28,30
45	13	24,26,28,30
46	14	24,26,28,30
47	15	24,26,28,30
48	0	0,2,4,6
49	1	0,2,4,6
50	2	0,2,4,6
51	3	0,2,4,6
52	4	0,2,4,6
53	5	0,2,4,6
54	6	0,2,4,6
55	7	0,2,4,6
56	8	0,2,4,6
57	9	0,2,4,6
58	10	0,2,4,6
59	11	0,2,4,6
60	12	0,2,4,6
61	13	0,2,4,6
62	14	0,2,4,6
63	15	0,2,4,6

Figure 3 SLGs PROVIDED FOR AN OSPS-EQUIPPED (R)ISLU

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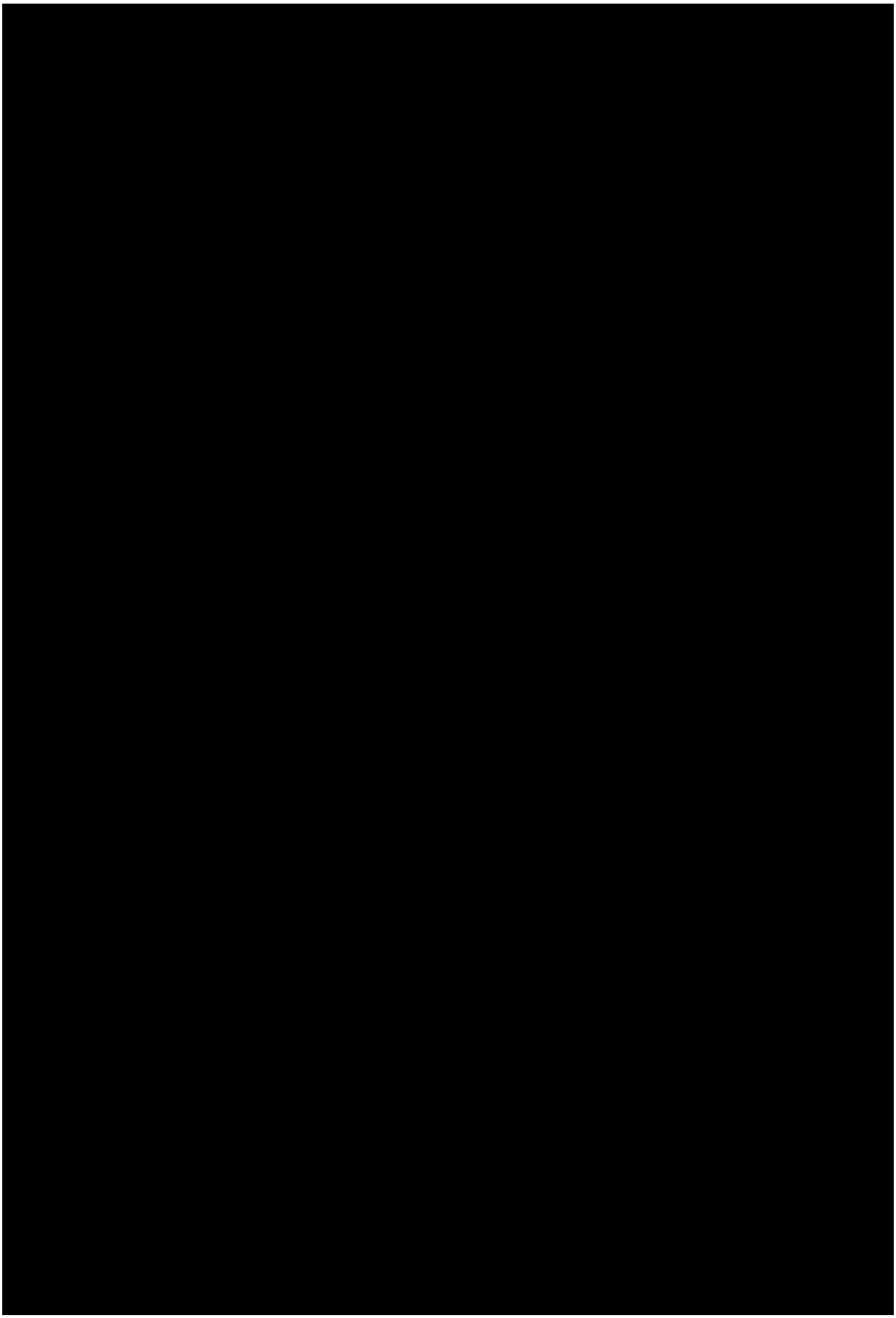

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Figure 4 ODA FORMS FOR LINE ORIGINATION TO ACD QUEUE

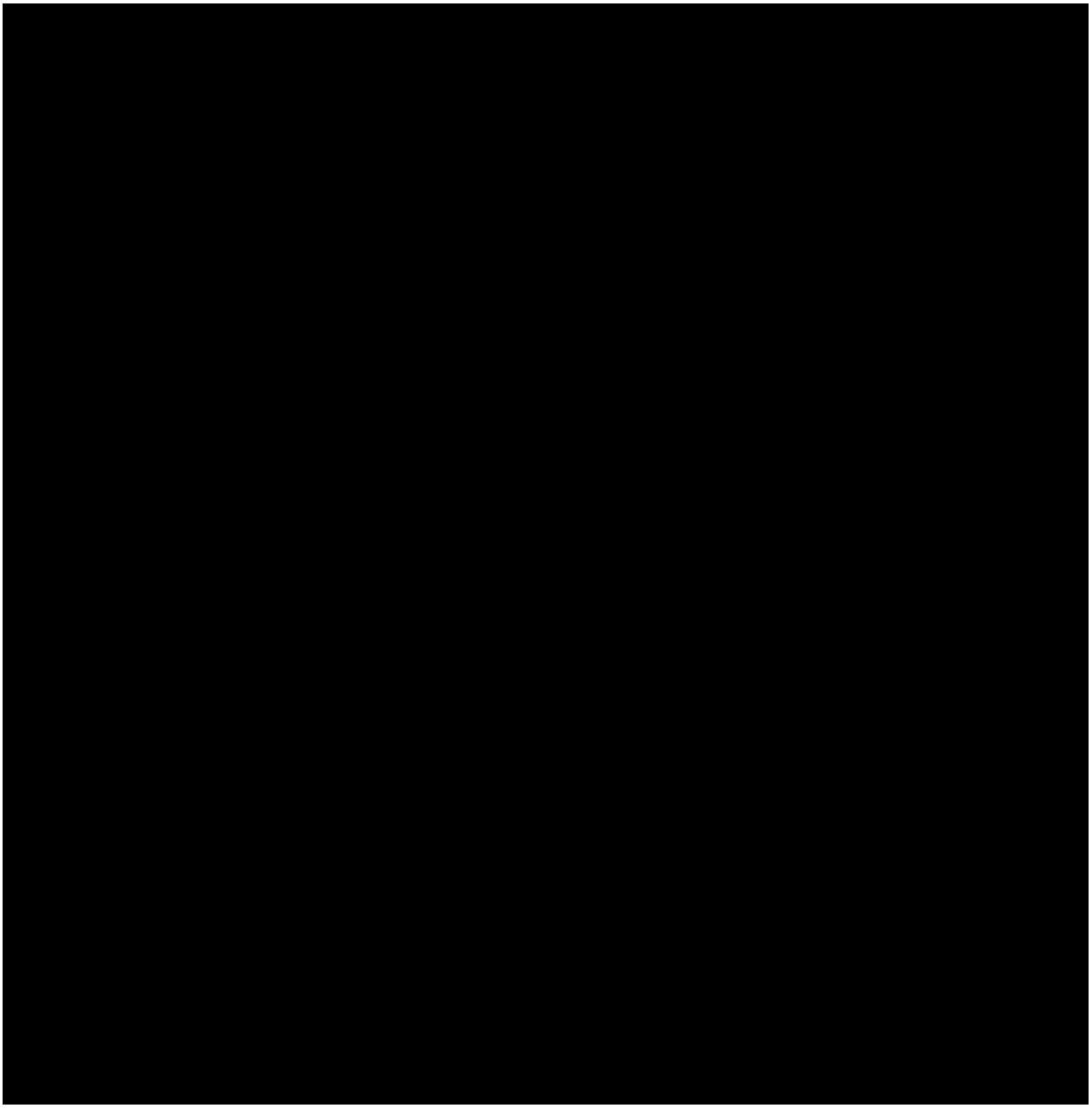

Figure 5 ODA FORMS FOR LINE ORIGINATION TO ACD QUEUE

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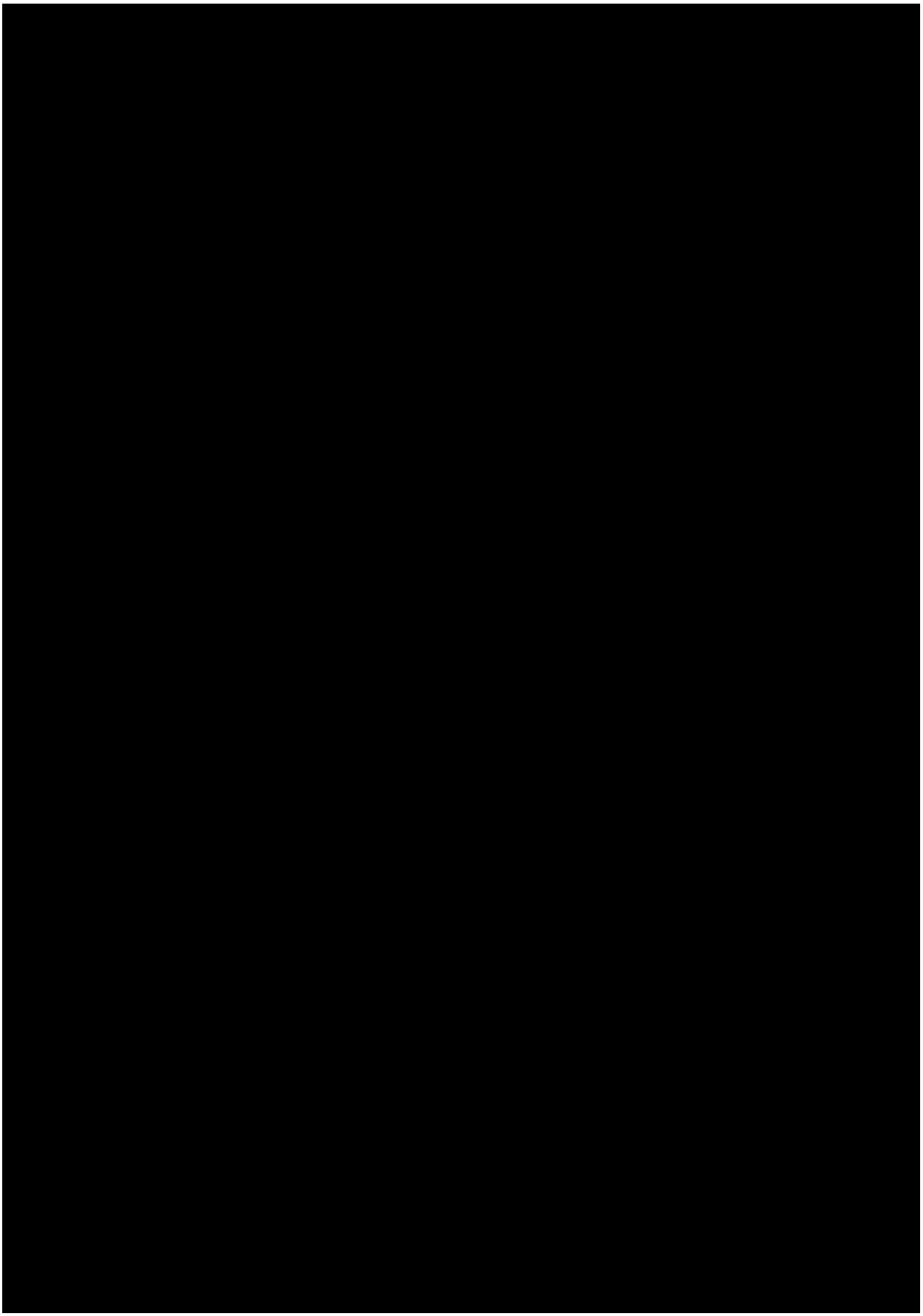

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Figure 6 LINE GROUP CONTROLLER ASSIGNMENT TO SUB-LINE GROUPS

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SEC. 3B: OSPS DIRECTORY ASSISTANCE

1. FUNCTIONAL DESCRIPTION

The Directory Assistance feature of OSPS gives operators at operator positions the ability to provide number services to their customers. Examples are 411 and 555-1212. This feature is provided by building incrementally on the 5ESS Switch with ISDN and RISLU features. It uses the base architecture of the 5ESS Switch as the foundation of its structure. A 5ESS Switch configured to provide Operator Services is called an OSPS.

Each OSPS can consist of a maximum of 32 OSC (Operator Services Centers) and 8 FMC (Force Management Centers). An OSC is a physical location comprised of operator positions, service assistant positions, service management terminals and supporting hardware. An FMC is similar to an OSC, but serves to coordinate the OSCs in providing an acceptable grade of service.

1.1 Operator Call Processing

Operators are assigned to serving teams upon login. The ACD (Automatic Call Distribution) function partitions incoming calls into CALL TYPES, enabling the staffed operators to specialize by CALL TYPES and maximize operator efficiency.

The following activities typify an OSPS directory assistance call:

- The operator receives an incoming call on the BST (Basic Services Terminal).
- The operator uses a vendor-supplied DAS/C (Directory Assistance Computer) to search for a directory number.
- The operator instructs OSPS to provide a recorded announcement.
- The operator releases the call during the announcement.
- The customer can recall the operator (by staying off hook).

Directory assistance operators receive calls on a BST (Basic Services Terminal). The BST has a standard 12-key key pad, 20 function buttons, a 20-character display and operator headset jacks. Information about the incoming call is provided on the display. Keys and buttons are provided on the BST for control of the position.

OSPS operators are able to perform a variety of functions such as accessing operators in distant manual offices, as well as operators in serving teams within the same OSPS. Operators are able to place a call into the switched network, and activate/deactivate their position. Operators can hold calls at their position while consulting with another operator or supervisor, or make other calls.

Each OSPS operator position is identified by the combination of an absolute position number and a relative position number. The absolute number (1 through 1023) identifies the position as an OSPS terminal. The relative position number is used to correlate an operator position to a specific OSC. The absolute number and relative position number (used in combination to define an operator position D-port assignment and a position number in an OSC) must be recorded in the database to provide a "position to port" map for OSC operators and administrators.

An operator is assigned to one of a possible 128 serving teams when logged on at a position and the members of a serving team can be distributed among any or all OSCs.

Calls are entered into queues if no operator is available. An indication is given to all members of a serving team whenever the waiting time of a call exceeds a preset threshold, and customer announcements and audible ring are provided. Call origin information (trunk group, dialing sequence, etc.) is automatically

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indicated to the operator upon position seizure.

Several administrative features are available with OSPS, including monitoring, where OSPS managers may bridge onto a call in progress. Calls can be monitored from these positions in either an undetected or a detected mode.

1.2 Operator Services Center

An OSC (Operator Services Center) is an administrative grouping of operators typically reporting to a "manager of operator services". The operators may work in one or more rooms, or multiple OSCs may be defined within one physical room.

OSC offices are equipped with operator positions (BSTs), an OPC (Operator Position Controller), a processing unit, an OAP (OSPS Administrative Processor), a system console, administrative printers and interface circuitry required to allow communications between OSC entities and a 5ESS Switch PSM.

OSPS measurements are periodically provided by 15- and 30-minute traffic reports and 24-hour division of revenue and plant reports. A 15-minute OSPS traffic report and a 24-hour operator report are printed on an administrative printer at an OSC. In addition to the OSPS traffic and operator reports, OSC administrators have access to various status and performance displays. The displays are available at OSPS administrative terminals via the OAP "ospsadm" and "ospscmd" logins.

1.3 Force Management Center

One or more FMC (Force Management Centers) are associated with a 5ESS Switch with the OSPSDA feature. A single 5ESS Switch can support up to 8 FMCs. An FMC does not handle calls, but coordinates the OSCs in providing an acceptable grade of service.

An FMC is a physical location comprised of an OAP and system console, and may also contain an operator trouble report printer, administrative terminals and printers, and a security terminal and printer. The FMC offices are not equipped with operator positions. The FMC communicates with the OSPS through the OPC in one or more OSCs. The FMC collects and analyzes data, such as traffic (call) measurements, serving team and individual operator performance and operator trouble reports. The FMC can send force administration data to the OSPS (through the OPC) to change traffic flow, operator assignments and other parameters.

The OSPS 15-minute traffic report provides performance statistics for the last 15 minutes. The report includes switch-wide totals on a call-queue basis, office totals on an FMC ID number basis and processor occupancy on a PSM basis. The statistics include position seizures, various call completions, abandons, average answer delays, average call handling times, overflows, operator occupancy, call handling volume, etc.

The 24-hour operator report provides a summary of the performance statistics for the last 24 hours. The report includes operator call-handling statistics per operator, per serving team, per group manager and per FMC.

The OAP, which must be an AT&T 3B2 computer, is the nucleus of the FMC. The OAP has an internal operating system and application software that permit the FMC to operate independently from the OSPS, except for communication through the OPC. Ports on the OAP provide communication with terminals, printers and remote systems. These peripherals permit independent administration of the OAP and display of reports. The reports include OAP performance, OSPS traffic measurements and operator trouble.

1.3.1 OSC/FMC DATABASE OVERVIEW

The database must contain administrative parameters for each OSC/FMC defined in the database. When an OSC/FMC is defined in the database, office administrators must specify these parameters or accept

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system default values. The OSPS office administrative parameters include the following:

- Display permissions for administrative terminals
- Print permissions for OSPS traffic and operator performance reports
- Transfer permissions for OSC/FMC data
- Residency maps for OSPS serving team members

1.4 Interflow

The Interflow feature is available with 5E5 and later Software Releases. The OSPS Interflow feature allows for immediate, scheduled or permanent close down of one, some or all operator serving teams at an OSPS. Call traffic requiring operator assistance that is otherwise handled by the closed serving teams is subsequently interflowed to another OSPS. This section describes the Interflow feature as it applies to DA (Directory Assistance) calls.

For the OSPS DA application, Interflow is accomplished via rerouting the calls over analog or digital facilities to other operator switches for operator services and call handling. In the course of rerouting the call, data can be populated such that the dialed digits received are outpulsed, different digits than those received are outpulsed or some digits are outpulsed in the case where no digits were received. An operator switch that receives a rerouted call has no indication that the call has been rerouted, therefore, caution should be taken when populating the data such that rerouted calls do not end up back at the switch that initiated the reroute.

1.5 Interflow Activation/Deactivation

Interflow activation and deactivation allows a user to turn Interflow "on" or "off" on an immediate or scheduled basis. Activation and deactivation of Interflow may be accomplished via Recent Change only, that is to say, Interflow cannot be activated or deactivated via ODA.

Interflow is activated and deactivated to a receiving OSPS Interflow switch on a serving team basis. That is, a user turns Interflow "on" or "off" for a serving team. A serving team may be activated to Interflow to only one receiving OSPS switch at a time, but multiple serving teams may be activated to the same receiving OSPS switch. When a serving team is activated for Interflow, all calls that would otherwise be handled by an operator on that serving team are interflowed.

If the activated serving team handles DA, ACD/MIS or Non-ISP to VDT calls then the calls will be interflowed via rerouting the calls through the network to another operator switch. If the activated serving team handles T&A call traffic, then the calls will be interflowed via the OSPS EDSL to the receiving OSPS switch. If the case exists where a serving team handles both T&A and Non-ISP to VDT calls, then the T&A calls will be interflowed via the OSPS EDSL and the Non-ISP to VDT calls will be interflowed via rerouting calls out over trunks to the network.

1.6 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9

Since activation and deactivation of Interflow can be accomplished only via Recent Change Views 21.7, 21.8 and 21.16, there are no ODA input forms to activate or deactivate Interflow. The following sections describe how to activate and deactivate Interflow via Recent Change.

1.6.1 Scheduled Interflow Activation/Deactivation

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The Q DRN TIME parameter on the OSPSOPT form is used only when Interflow has been scheduled for activation. Interflow can be scheduled for activation on quarter hour boundaries via Recent Change Views 21.16 and 21.8. Q DRN TIME specifies the number of minutes prior to the scheduled quarter hour when Interflow activations are to occur. For example, if Interflow is scheduled to be activated at 8:15 AM and Q DRN TIME is set to 3 (minutes), then the activation will actually occur at 8:12 AM. This parameter was defined because once Interflow is activated for a serving team, all newly arriving calls will be interflowed and calls that were queued will not be interflowed and, therefore, must be served on the initial OSPS switch. If an administrator wishes to not have any operators handling calls at or near to the scheduled quarter hour, then Q DRN TIME should be set to nonzero. If Q DRN TIME is set to zero, then operators must stay logged in past the scheduled quarter so that the calls that were queued at the time of activation will be served.

The OSPS ID field on the OSPSOPT form identifies the originating OSPS switch. These OSPS IDs should be selected such that OSPS switches within the same Interflow network are unique. The OSPS ID is used when reporting the occurrence of Interflow activations and deactivations at the OAP (OSPS Administrative Processors) at both the originating and receiving Interflow switches. These reports always indicate the OSPS ID of the switch which initiated the activation or deactivation.

RC Views 21.16, OSPS Automatic Reconfiguration Time and 21.8, OSPS Scheduled Interflow Activation and Deactivation, are used to schedule Interflow activations and deactivations. RC View 21.16 defines an auto-reconfiguration pattern in terms of a PAT ID and the time that the pattern should take effect. Patterns may be scheduled to take effect either on an hour boundary or 15, 30 or 45 minute quarter hour boundary for a given forcing day.

Activation/deactivation data is entered into the pattern with RC View 21.8. This view is constructed such that the user specifies for a particular Interflow receiving switch (i.e., the DEST ID field) which serving teams should be activated or deactivated. The OSPS ID of the receiving OSPS should be entered in the DEST ID field.

If Interflow is to be activated for a serving team, an "A" is entered on the field corresponding to the serving team number. Conversely, a "D" is entered if Interflow is to be deactivated for a serving team. A serving team's scheduled status may be deleted by updating an "A" or "D" to " ". A blank entry indicates that the associated serving team is neither activated or deactivated by this pattern when this pattern takes effect.

1.6.2 Immediate Interflow Activation/Deactivation

As for scheduled activations and deactivations, the OSPS ID field on the OSPSOPT form identifies the originating OSPS switch. It is used when reporting the occurrence of Interflow activations and deactivations at the OSPS Administrative Processors at both the originating and receiving Interflow switches.

RC View 21.7, OSPS Immediate Interflow Activation and Deactivation, is used to immediately (manually) activate/deactivate Interflow. This view is constructed such that serving teams can be activated or deactivated for a particular receiving Interflow OSPS switch as specified by the DEST ID field. The OSPS ID of the receiving OSPS should be entered in the DEST ID field. An "A" should be entered for each serving team that is to be activated and a "D" for those that are to be deactivated. The Interflow activations and deactivations take place immediately upon completion of the RC UPDATE operation.

1.7 ACD for Interflow Calls

Interflow for Directory Assistance, ACD/MIS and Non-ISP to VDT calls is accomplished by rerouting the calls back into the telephone network. This section describes the ACD operation for DA calls.

1.8 Translation Requirements

New Or Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
INFLDEST	5448	3	4AW	21.27
RAR	5301	3	3F	10.10

The INFLDEST form allows for assigning a new code index (OUTGO CDI field) to an incoming OSPS call that is to be interflowed via reroute through the network. After the ACD determines that a DA call must be interflowed, a new code index must be determined and used to route the call back into the network. Determination of a new code index is based on the code index derived from digit analysis on the incoming call, the incoming trunk group number and the ID of the receiving operator switch. Each of these are used to match on the respective INC CDI, TGN and DEST ID fields in the INFLDEST form. The OUTGO CDI entered on the INFLDEST form must exist in the RAR form. The DEST ID field on the INFLDEST form is also used in reporting Interflow activations and deactivations at the OAPs.

1.8.1 Interaction with Intraflow

A serving team that has Interflow activated is not eligible to receive intraflowed traffic. A queue whose principal team is being interflowed may be intraflowed to a supporting team whose delay outflow threshold is zero. If an Interflow channel is not found and no supporting team server is found, the call will fail because queuing is not allowed for teams which are interflowed.

1.9 Intraflow

The OSPS Intraflow feature is available with 5E5 and later Software Releases. Intraflow allows an ACD/OSPS administrator to assign for each call queue, a single principal serving team and up to eight supporting serving teams which may handle calls from the call queue when all of the operators on the principal serving team are busy.

2. SYSTEM CONFIGURATION

Adding a fully equipped Directory Assistance feature to the 5ESS Switch involves using one or more ISDN switching modules as PSM (Position Switching Modules) and then adding the following for each PSM:

- An OPC (Operator Position Controller), which consists of a RISLU (Remote Integrated Services Line Unit) and associated interface hardware
- BST (Basic Services Terminal(s))
- Data links to the DAS/C (Directory Assistance System/Computer) via STA (Synchronous Terminal Adapters)
- An OAP (OSPS Administrative Processor) and associated ATA (Asynchronous Terminal Adapters)
- An ACC (Alarm Conversion Circuit) and associated ATA

The PSM resides in the host 5ESS Switch. The OPC, BST(s), DAS/C equipment, OAP, ACC and associated ATA/STA reside in an OSC (Operator Services Center) or FMC.

2.1 Position Switching Module

The ISDN switch module is the building block for OSPS. By adding the OSPS software and hardware, the ISDN SM is converted into a PSM (Position Switching Module) for OSPS. This can include the DSU2-RAF (Digital Services Unit 2 - Recorded Announcement Facility). The DSU2-RAF minimizes the time an operator spends handling a call by automatically relaying announcements to the user.

2.2 Operator Position Controller

An OPC is the main equipment required to support directory assistance operator positions and the OAP at

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an OSC. The main function of the OPC is to interface voice/data channels that serve operator positions to a 5ESS Switch. It does this through the use of the RISLU.

2.2.1 OPC - RISLU

The RISLU is a switching module peripheral unit that supports analog and digital line terminations in the 5ESS Switch, but is located on the customer premises away from the 5ESS Switch. The RISLU serves as the interface between the 5ESS Switch and the OSC, allowing operators to be remoted as far as 1000 miles away from the 5ESS Switch. The RISLU provides the multiplexing of up to 18 positions onto each DS1 facility. The RISLU is connected to the PSM via digital carrier facilities.

2.2.2 OPC - DSL

A DSL is the transmission channel connecting an OPC with a BST, OAP, DAS/C or ACC. The DSL application for OSPS provides a T-type interface with a T-type line card in the RISLU. This 4-wire interface, operating at 192kb/s, conforms to CCITT requirements. The use of T-type line cards restricts the distance from a RISLU to a terminal to 1 km (0.62 mile).

Two types of DSLs are used in the OSPS application. A class 1 DSL uses either a 1B or a 1B + D configuration. A class 2 DSL requires only a D-channel. Operator positions (BSTs) require a class 1 DSL with a 1B + D configuration, while the OAP, DAS/C and ACC require a class 2 DSL. Refer to the Translations Requirements for OSPS DSLs section below for data population information.

2.3 Alarm Conversion Circuit

The ACC (Alarm Conversion Circuit) monitors and operates building alarms for OSPS.

2.4 Terminal Adapters

A STA (Synchronous Terminal Adapter) is used to interface with external databases (via the DAS/C). The STA converts the ISDN data format that comes out of the RISLU into a format compatible with the external data base software. The ATA (Asynchronous Terminal Adapter) provides the same function as the STA for asynchronous applications.

2.5 Basic Services Terminal

The BST provides voice and call information to the directory assistance operator and is used by the operator to control the call. There can be as many as 60 BSTs for each PSM.

2.6 Directory Assistance System/Computer

The DAS/C (Directory Assistance System/Computer) is a vendor supplied system that contains the database of directory assistance listings. The DAS/C is connected to the OPC by data links that go through an STA. The STA provides 9600 baud, synchronous data communications to the DAS/C. Once the number is found in the DAS/C computer, the operator instructs the OSPS (through a key sequence on the BST) to provide an automatic announcement of the directory number to the customer. The operator is then released from the call while the announcement is being played, and is ready to receive another call.

2.7 Operator Administrative Processor

The OSPS Administrative Processor is an AT&T 3B2 computer that processes measurement and administrative data. The OAP supports administrative terminals, which allow access to OSPS-related, office-dependent data. It also supports administrative printers which print traffic and operator performance reports. The OAP is connected to the OPC by an ATA, which provides asynchronous data communications to the 3B2 computer.

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2.8 OSPS Announcements

Directory assistance announcements are provided by the DSU2-RAF hardware in which DA announcement firmware has been loaded.

The following sections will cover the hardware and ODA input forms needed to configure an OSPS office with the ability to provide DA announcements.

2.8.1 OSPS Announcement Hardware

DA announcements are provided by the DSU2-RAF hardware, which consists of the DSU2-RAF circuit board (TN833) and the associated DSU2-RAF Memory board (TN1053). The DA announcements are stored on the memory board. The announcements are accessed through predefined trunk groups and associated trunk group members. DA calls that require an announcement are routed to the trunk group associated with the type of announcement needed.

Data for OSPS announcements are divided into three general categories: Announcement Data, RAF Hardware Equipage Data and Routing - Trunking Data. The following sections will describe how data should be populated in each of these areas for DA offices.

2.8.2 Announcement Data

Announcement Data uses six ODA forms which are listed below. All six forms must be populated for DA offices.

2.9 Translation Requirements

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNAPL	5529	3	5AC	8.64
ANNDG	5532	3	5AF	8.60
ANNHD	5531	3	5AE	8.61
ANNTR	5533	3	5AG	8.62
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

The ANNAPL form allows an office to define the SMs requiring DA announcements. SMs in this list must contain RAF hardware and equipage data for DA. They must also be "LOADED" SMs (i.e., the CONFIGURATION field on the EQIM form is set to "LOADED").

The ANNHD form defines header identification numbers that map to a set of phrase IDs. The phrase IDs are defined on the PHRASE form.

The ANNDG form defines digit inflection numbers that map to digit inflection schemes. The inflection schemes consist of phrase IDs and inflection commands. The phrase IDs are defined on the PHRASE form.

The ANNTR form defines trailer identification numbers that map to a set of phrase IDs. The phrase IDs are defined on the PHRASE form.

Note that ODA will automatically populate a default set of ANNHD, ANNDG, ANNTR and PHRASE forms for OSPS if the ANNAPL form is populated with OSPS application data.

The OSPSOPT form defines the following DA announcement options.

- OSPS RAF - enter "Y" when the DSU2-RAF provides DA announcements. The default is "Y".
- DABRAND - enter "Y" if a branding phrase should be given on DA announcements. The default is "Y". .

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2.10 RAF Hardware Equipage Data

The Equipage Data is populated on two ODA forms which are listed below. Both forms must be populated for DA offices.

2.11 Translation Requirements

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQRA	5821	8	35	19.10
EQRAP	5822	8	36	20.10 20.22

The EQRA form defines the physical location where the DSU2-RAF hardware is located along with the type application (DA) that will be downloaded by the SM. EQRAP defines the application along with the associated micro-code.

2.12 RAF Routing and Trunking Data

Routing and Trunking Data consist of four ODA forms which are listed below. All the forms must be populated for DA offices.

2.13 Translation Requirements

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FIXRT	5301-1,3	3	3G	10.1
RTIDX	5303,3	3	3P	10.2
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

The FIXRT form uses the FIXED ROUTE TYPE of "OSPSDA" to obtain a fixed route index. The route index is defined on the RTIDX form, which in turn contains the trunk group number needed to access DA announcements.

2.14 Translation Requirements For OSPS DSLs

OSPS requires DSL (Digital Subscriber Lines) for multiple features. Two types of DSLs are used in the OSPS application. A class 1 DSL uses either a 1B or a 1B + D configuration. A class 2 DSL requires only a D-channel. Operator positions (BSTs) require a class 1 DSL with a 1B + D configuration, while the OAP and DAS/C require a class 2 DSL. Each type is described below.

2.14.1 OPERATOR POSITION DSL

The OSPSDSL form (5411 Record) is used to assign Line Card Equipment Numbers associated with operator positions to Integrated Services Channel Numbers. DSLs for Directory Assistance Basic Services Terminals must be assigned a SERVICE CLASS of "DAOPER".

Position DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

The following fields are not used for operator position DSLs and should be left blank: DSL NAME ID, DSL NAME RL, MATE LCEN, SCR IDX and DAS.

2.14.2 OAP DSL

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The OAP provides a force management interface to the OSPS. The OAP is connected to OSPS via a DSL. The OSPSDSL form is used to assign Line Card Equipment Numbers associated with the OAP to an Integrated Services Channel Number. An OAP DSL must be assigned a SERVICE CLASS of OAP. Typically an OAP DSL is assigned per Operator Service Center with a maximum of 32 OAP DSLs per switch. There may be only one OAP DSL assigned per OAP. There is a maximum of 32 OSCs per switch.

OAP DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

The following fields are not used for OAP DSLs and should be left blank: DSL NAME ID, DSL NAME RL, MATE LCEN, SCR IDX and DAS.

2.14.3 DASC DSL

OSPS interfaces via DSLs to an external Directory Assistance Service Computer as part of the DA automated announcement feature. The DASC provides the directory listings. The following ODA forms are used to define a DASC DSL.

- 5411 - OSPSDSL
- 5424 - OSPSOPTS

2.14.4 OSPSDSL form (5411 Record)

Typically, two DSLs are defined between the OSPS and DASC for each Switching Module that supports DA operator positions. There may only be two DSLs defined per SM, thus the SM portion of the LCEN may be the same for only two DASC DSLs. Each DASC DSL must have a SERVICE CLASS equal to "DASC".

The DSL NAME ID and DSL NAME RL fields are used to define the external names used to reference the DSLs. If a maintenance message pertaining to a DASC DSL is printed on the ROP, these two fields are used to identify the DSL.

When two DASC DSLs are assigned to the same SM, they must have the same DSL NAME ID. In the case where only one DASC DSL is defined for a particular SM, the DSL NAME RL field must be an even number, e.g., 2. In the case where two DASC DSLs are defined for a particular SM, the DSL NAME RL values must be consecutive, with the even DSL NAME RL value equal to the odd value minus one, e.g., 2 and 3 or 4 and 5. For additional information on DASC DSLs and the use of the DSL NAME ID and DSL NAME RL fields, please refer to Division 3, Section 4L.

DASC DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

2.14.5 OSPSOPT form (5424 Record)

The DASC VENDOR option on the OSPSOPT form must be set to indicate the vendor of the DASC.

2.15 Translation Requirements Summary

In summary, the following ODA forms are used for the OSPS Directory Assistance feature.

ANNDG form (5532 Record)
The Announcement Digit Inflection Scheme form contains inflection commands and phrase identifications that comprise digit strings.

ANNHD form (5531 Record)
The Announcement Header Phrase List form contains phrases that identify announcement headers.

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ANNTR form (5533 Record)
The Announcement Trailer Phrase List form contains phrases that comprise announcement trailers.

DAS form (5300-1 Record)
The DAS form is used to define DAS values which are assigned on the STINFO form.

EQIM form (5700-1/2 Record)
Switching module entries on the ANNHD form, ANNDG form and ANNTR form must be defined on the EQIM form.

FIXRT form (5301-1 Record)
The FIXRT form is used to define routing and charging treatment of fixed route types.

ICF form (5305 Record)
The ICF form is used to define the carriers which are assigned on the STINFO form.

INDIT form (5309 Record)

ISDNOPT form (5941 Record)
Any OSPS office type entered on the OPARM form must be designated on the ISDNOPT form in the OSPS INSTALLED field.

ISLULC form (5942 Record)
Any line card equipment number (LCEN) entered on the OPARM form, OSPSOP form or OSPSDSL form must be specified on the ISLULC form. On the ISLULC form, the equipment status must be "O" (Operational).

LDIT form (5300-3 Record)

OBSTS form (5408 Record)
The OSPS Basic Services Terminal Seizure form provides information for OSPS BST displays. Display contents, starting positions and lengths are defined.

OCTA form (5406 Record)
The OSPS CALL TYPE Assignment form assigns OSPS CALL TYPES from OSPS normalized office code and local digits-dialed combinations.

OPARM form (5400-1/2 Record)
The OSPS Operator Parameters form defines parameters of an OSPS office including type of equipment, displays and reports and the assignment of serving teams.

OPCTO form (5407 Record)
The OSPS CALL TYPE for Trunk Originations form determines OSPS call types and a BST display indexes for trunk origination from OSPS call identification/trunk group combination. Entries (other than 9999) in the TGN field of this form must be defined in the TKGRP form.

ORAR form (5405 Record)
The OSPS Rate and Route form identifies a call as an OSPS call by defining the routing and charging for each OSPS screening index/code index combination in a 5ESS Switch.

OSPSCT form (5404 Record)
The OSPS CALL TYPE Parameters form assigns CALL TYPE information such as "open for business" and serving teams to OSPS CALL TYPES through operator position to local port mapping. Each route index (1ST ANN RTI, 2ND ANN RTI, 3RD ANN RTI or CLOSE DOWN RTI) entered on this form must be defined on a RTIDX form.

OSPSDSL form (5411 Record)
The OSPS Digital Subscriber Line form assigns OSPS circuits to line card ports.

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OSPSOA form (5403 Record)
The OSPS Operator Assignments form defines OSPS operator positions, assigns operators to serving teams and defines valid operator actions.

OSPSOP form (5401 Record)
The OSPS Operator Position form defines each operator position within an OSC, assigns RISLU (Remote Integrated Service Line Unit) ports and assigns operator positions.

OSPSOPT form (5424 Record)

OTRVLD form (5410 Record)
The OSPS Operator Trouble Report form defines OSPS operator trouble report information.

PHRASE form (5534 Record)
The Announcement Phrase List form lists phrase identifications that comprise announcements.

RAR form (5301 Record)
The RAR form is used to define screening index values which are assigned on the STINFO form.

RESXDL form (5409 Record)
The OSPS Restricted External Dialing form defines restricted dialing sequences for an OSPS serving team's operators.

RTIDX form (5303 Record)
The RTIDX form is used to define route indices which are assigned on the OSPSCT form.

STINFO form (5402 Record)
The OSPS Serving Team Information form provides information about an OSPS serving team. Each digit analysis selector value and secondary digit analysis selector value entered on this form must be defined on the DAS form. Each screening index entered on this form must exist on the RAR form. Each carrier specified on this form be defined on an ICF form.

TKGRP form (5202-1/2 Record)
The TKGRP form is used to define the trunk groups which are assigned on an OPCTO form.

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SEC. 3C: OSPS LISTING SERVICES

1. FUNCTIONAL DESCRIPTION

OSPS Listing Services is available with the 5E6 and later Software Releases. Listing Services allows OSPS operators to provide manual and semi-automated Listing Services or fully-automated Listing Services requiring no operator intervention. The OSPS Directory Assistance feature and the Listing Services feature can coexist on the same OSPS Position Switching Module. Figure 1 shows an ODA Walkthrough of the Listing Services Call.

1.1 Manual Listing Services

Manual Listing Services routes the call to an operator who can access the information requested by the caller. For example, this information could be in the form of paper listings or electronic databases. OSPS operator position terminals may identify the incoming service on the call processing displays with a unique name of up to 10 characters. In addition, the OSPS VDT (Video Display Terminal) and CST (Combined Services Terminal) have the capability to switch the display to a specific database session assigned to the service. Billing for Manual Listing Services is not provided by OSPS; therefore, either the subtending local office creates a billing record or an adjunct billing system is needed.

1.2 External Information System

Semi-automated Listing Services require a call processing interface with a system external to OSPS, an EIS (External Information System). The EIS may supply customized databases or other resources used in conjunction with the 5ESS Switching System features supported by OSPS. As with Directory Assistance, callers are routed to an operator who performs an EIS database search for the requested listing using an EIS-compatible database terminal. The operator then releases the caller to an ARU (Audio Response Unit) group specified by the EIS. When an available announcement unit is successfully selected from the ARU pool, the operator is dropped from the call to assist another caller. The current caller is provided his/her information by listening to the ARU announcement.

Fully-automated Listing Services require no operator assistance. The External Information System receives and provides service directives via the call processing interface and supplies various service resources as they are required to process the call. Information used to perform a listings search may be obtained from the digits dialed by the caller or other related 5ESS Switch office data. Some Listing Services may provide an announcement to prompt the caller to input information via the DTMF (Dual Tone Multifrequency) pad on their telephone.

The EIS works with the call processing software of OSPS to define Customized Listing Services and to supply service resources that are not considered part of a digital switching system (See Figure 2). The selected EIS must support a call processing interface developed jointly between OSPS and the EIS vendor so that control and status information can be shared between the two entities. This interface is implemented using EIS DSLs (Digital Subscriber Lines), more commonly referred to as CPDLs (Call Processing Data Links). When a call arrives at an operator position, a message is sent to the EIS, via a CPDL. The message contains the position seized and a call identifier (Call ID) used to create a new call record or to access an existing call record within the EIS. If the EIS also supports the database which supplies the up-to-date service information, then the EIS is required to update the associated database session of the selected operator with the appropriate display. Upon locating the information, the operator may verbally relate the data or, if an ARU group has been provided, the operator may transfer the caller to an announcement unit.

Announcement units may be provided by either OSPS or the EIS. The Listing Services feature supports both internal OSPS DSU2-RAF's, as well as EIS external ARU's which interface with OSPS using digital or analog trunks.

OSPS supports up to sixteen External Information Systems. A single loaded SM can interface with a

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maximum of eight EISs via CPDLs, i.e., as many as sixteen CPDL's can terminate on a loaded SM.

If the number of data links required to support the Listing Services of an EIS during the busy hour is denoted by the letter N and the number of CPDLs allocated for spare CDPL capacity is specified by the letter K, then N + K is the number of CPDLs assigned to support an EIS with spares assigned based upon the data link configuration and reliability desired for the Listing Services of the EIS. The sum, N + K, can range from 1 to 16. K can be zero. See Figure 2 for the basic system configuration for an EIS.

The capabilities provided by OSPS for the EIS interface must also be supported by the EIS vendor, i.e., not all EIS interface capabilities discussed in this section are supported by each EIS vendor that has developed an interface with OSPS.

1.3 Listing Services Call Processing

Figure 1 shows an ODA walk through of a Listing Services Call. The following scenario is a typical Listing Services Call.

1. Based upon the incoming trunk group and/or dialed digits, a call type is assigned.
2. The call type (CALL TYPE field on the OSPSCT form (5404 Record) RC 21.22) maps to a Service ID (SVC ID on the OSPSCT form) for Listing Services calls.
3. The initial action for a service may

- route the caller to an operator,
- route the caller directly to an announcement (no EIS interface is required)
- establish an EIS interface or
- request the initial action from the EIS

1. If the Service ID routes the caller to an operator, then the Service ID and serving team may specify the EIS assigned to the call and the OSPS VDT or CST database session to be selected. If an EIS-compatible terminal is being used with the BST-LS (Basic Services Terminal for Listing Services), the database session indicator is irrelevant.
2. Based upon the operator login, the operator has been assigned to a serving team which receives specific call types from the OSPS ACD (Automatic Call Distributor).
3. If the current service has been assigned an EIS, an available CPDL is chosen and a "position seizure" message is sent over the data link. The same CPDLs can be used for many Listing Services that are supported by an EIS.
4. The operator is presented with the appropriate database display, enters the search information given by the caller and locates the desired information.
5. If an ARU is provided to announce the information, the operator may press a "Release to Audio" key.
6. The EIS sends a "transfer request" message to OSPS. The destination and data given in the "transfer request" message indicates the announcement group that is to be used.
7. OSPS then selects an idle announcement unit/trunk, the operator is released and a "port select" message is sent to the EIS to identify the ARU that has been selected.
8. After the caller hears the information that the caller has requested, the caller can terminate the call

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by hanging up or the caller can remain off hook after the announcement has completed to be returned to a "recall" operator.

The EIS normally determines the recall delay time (period between the end of the announcement and routing to an operator) and the number of recalls permitted for a service; however, OSPS recall data may be specified internally, if necessary.

Though Listing Services operators may receive Listing Services calls on an OSPS BST-LS, VDT or CST, calls at a OSPS VDT may be somewhat limited due to the need, of some EISs, for special hardware interfaces and terminal emulations not provided by the VDT.

1.4 Operator Services Center

The Operator Services Center is discussed in Division 2, Section 3B for Directory Assistance.

1.5 Force Management Center

The Force Management Center is discussed in Division 2, Section 3B for Directory Assistance.

1.6 Intraflow

The OSPS Intraflow feature is available with 5E5 and later Software Releases. Intraflow allows an ACD/OSPS administrator to assign a principal serving team for each call type and up to eight support teams which may handle calls when all of the operators of the principal serving team are busy.

Intraflow may be used for Listing Services to permit more efficient use of idle operator and EIS resources. For example, assume Service ID (SVC ID field on the OSPSCT form, 5404 Record) 411 is assigned to CALL TYPE 11 and the principal serving team uses EIS number 1 (EIS NBR field on the EISDATA form, 5462-1 Record). The first Intraflow support serving team may also be assigned EIS NBR 1; however, the second support team for CALL TYPE 11 may be assigned the physically different EIS NBR 2.

A second EIS may be required when a single External Information System cannot support the traffic volume generated by the OSPS. Other CALL TYPES with the entry of 411 may assign principal serving teams to EIS NBR 2, whereas, the supporting team(s) can be assigned to use EIS NBR 1.

OSPS data can assure any operator recall is handled by an operator who accesses the same EIS number which was used for the initial seizure, whether handled by the principal or a support serving team.

For additional information on Intraflow, see Division 2, Section 3B on Directory Assistance.

1.7 Interflow

Interflow Activation/Deactivation information is provided in Division 2, Section 3B on Directory Assistance.

2. SYSTEM CONFIGURATION

The system configuration for EIS is given below. See Figure 2 for Basic Configuration of an External Information System. Adding a fully equipped Listing Services feature to the 5ESS Switch involves using one or more ISDN switching modules as PSM (Position Switching Modules) and then adding the following for each PSM:

- An OPC (Operator Position Controller), which consists of a RISLU (Remote Integrated Services Line Unit) or an ISLU (Intergated Services Line Unit) and associated interface hardware to a PSM.
- OSPS Terminal(s) BST-LS, VDT or CST
- CPDLs (Call Processing Data Links) to the External Information System via S-TA

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(Synchronous-Terminal Adapters)

- An OAP (OSPS Administrative Processor) and associated A-TA (Asynchronous-Terminal Adapters)
- A RAS (Remote Alarm System)
- EIS (External Information System) interfaced by analog, digital or packet switching trunk circuits and CPDLs (Call Processing Data Links).

The PSM resides in the host 5ESS Switch. The OPC, BST(s), EIS, OAP, the RAS and associated A-TA/S-TA and the EIS (5E6 and later Software Releases) reside in an OSC (Operator Services Center).

2.1 Position Switching Module

The ISDN switch module is the building block for OSPS. By adding the OSPS software and hardware, the ISDN SM is converted into a PSM (Position Switching Module) for OSPS. This can include the DSU2-RAF (Digital Services Unit 2 - Recorded Announcement Facility), however, it is not required. The DSU2-RAF minimizes the time an operator spends handling a call by automatically relaying announcements to the user.

2.2 Operator Position Controller

An OPC (Operator Position Controller) is the main equipment required to support Listing Services assistance, operator positions and the OAP at an OSC. The main function of the OPC is to interface voice/data channels that serve operator positions to a 5ESS Switch. It does this through the use of the RISLU or an ISLU.

2.3 OPC - RISLU/ISLU

The RISLU or ISLU is a switching module peripheral unit that supports analog and digital line terminations in the 5ESS Switch, but is located on the customer premises away from the 5ESS Switch. The RISLU serves as the interface between the 5ESS Switch and the OSC, allowing operators to be located as far as 1000 miles away from the 5ESS Switch. The RISLU provides the multiplexing of up to 18 positions onto each DS1 facility. The RISLU or ISLU is connected to the PSM via digital carrier facilities.

2.4 OPC - DSL

A DSL is the transmission channel connecting an OPC with a BST, OAP, EIS or RAS. The DSL application for OSPS provides a T-type interface with a T-type line card in the RISLU. This 4-wire interface, operating at 192 kb/s, conforms to CCITT requirements. The use of T-type line cards restricts the distance from a RISLU to a terminal to 1 km (0.62 mile).

Two types of DSLs are used in the OSPS application. A class 1 DSL uses either a 1B or a 1B + D configuration. A class 2 DSL requires only a D-channel. Operator positions (BSTs) require a class 1 DSL with a 1B + D configuration, while the OAP, EIS and RAS require a class 2 DSL. The CPDL (Call Processing Data Links) are DSLs that allow the 5ESS Switch PSM and the EIS to exchange status and control messages.

2.5 Remote Alarm System

The RAS (Remote Alarm System) permits monitoring of up the 32 scan points from a remote OSPS OPC (Operator Position Controller). The RAS uses a 5ESS Switch RISLU for fire alarms, battery alarms and other miscellaneous site-related alarms required for system operation and support. A triggered alarm may be displayed at the site on an associated ASP (Alarm Status Panel) and a message is returned to the main OSPS location via one of two asynchronous data links and routed to the MCC (Master Control Console). The RAS is housed in the OSPS LAU (Link Adapter Unit) and is composed of two ACC's (Alarm

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Conversion Circuits) [TN1089], two Scan Applique Circuits (ASC's □ 16 scan points each) [TN867] and two A-TA (Asynchronous Terminal Adapters) [TN1087].

2.6 Terminal Adapters

The OSPS Terminal Adapter [TN1087] provides the conversion of ISDN DSLs (Digital Subscriber Lines) into RS-232 compatible interfaces in one of two modes. The A-TA (Asynchronous Terminal Adaptor) terminates the physical ISDN T-interface, the layer 2 Q.921 LAPD protocol, the layer 3 X.25 protocol and supplies an asynchronous RS-232 DTE interface at a selectable baud rate. The S-TA (Synchronous Terminal Adapter) not only terminates the physical ISDN interface, but also provides conversion of the layer 2 Q.921 LAPD protocol to X.25 LAPB protocol rate via a synchronous RS-232 DTE interface; this mode requires the clock source from the RS-232 DCE interface of a modem.

The OSPS DII (Digital Intelligent Interface) unit, supports both the A-TA and S-TA functions among others. The DII provides the RS-232 synchronous interface with a choice of either the DTE or DCE configuration so that modem usage is not required for local terminations of a data link.

2.7 Basic Services Terminal for Listing Services

The BST-LS (Basic Services Terminal for Listing Services) is the same physical terminal as the earlier OSPS BST, now called the BST-DA; however, it has been updated with firmware to permit its use with the 5E6 Software Release OSPS OPT (Operator Position Terminal) port. Though the BST-DA still requires its special BST port, the OSPS BST-LS, VDT and CST (Combined Services Terminal) can be terminated in any OPT port of an OSPS. The naming convention of the BST-LS keys has been modified to be more consistent with those of the OSPS VDT and CST. The BST-LS continues to support a physical interface required by some EIS-compatible terminals.

2.8 Video Display Terminal

The OSPS VDT (Video Display Terminal) remains primarily a Toll and Assistance terminal; however, due to the new OPT port definition of the 5E6 Software Release, a VDT can also handle some Listing Services calls. Up to 15 databases can be defined for the VDT based upon the serving team associated with the current operator login. Two database sessions can be active simultaneously. Any type of Manual Listing Service can be provided at a VDT. Semi-automatic Listing Services require use of an interface with an External Information System and may require use of an EIS-compatible database terminal; however, EIS-compatible terminals that require special physical interfaces are not supported by the VDT. On the other hand, data accessed from a database supporting the OSPS AMLB terminal emulation may be displayed directly on the VDT.

2.9 Combined Services Terminal

The OSPS CST (Combined Services Terminal) is a PC-based operator terminal designed to support Toll and Assistance as well as Listing Services traffic. It is connected to OSPS via the OPT port. Up to 15 data bases can be defined for the CST based upon the serving team associated with the current operator login. A maximum of six of the databases can have sessions active simultaneously. The CST provides terminal emulations that allow it to interface with a variety of databases. The CST does not provide special physical interfaces required by some EIS-compatible Listing Services terminals.

2.10 Operator Administrative Processor

The OAP (OSPS Administrative Processor) is an AT&T 3B2 computer that processes measurement and administrative data. The OAP supports administrative terminals, which allow access to OSPS-related, office-dependent data. It also supports administrative printers which print traffic and operator performance reports. The OAP is connected to the OPC by an A-TA, which provides asynchronous data communications to the 3B2 computer.

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2.11 External Audio Response Unit

The Switched Access External ARU (Audio Response Unit) provides the OSPS Listing Services with the ability to connect the calling party to automated announcements generated by a vendor-supplied ARU external to the 5ESS Switch. The ARU is connected to the 5ESS Switch SM via T1 digital trunks or analog trunks. The outgoing T1 trunks provide the ARU announcement of the information from the Listing Services database. The announcement trunks are controlled by on-hook, off-hook signaling.

3. TRANSLATION REQUIREMENTS

3.1 New and Changed Forms for EIS and External ARU

Figure 3 shows the form flow for cross checks for EIS translations. The following forms are new or have changes for the EIS/External ARU feature.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
EISDATA	5462-1	3	4BM	21.51
EISSM	5462-3	3	4BO	10.1
FIXRT	5301	3	3G	10.1
OPDBPARM	5434	3	4AI	27.30
OPEISDB	5462-2	3	4BN	21.55
OPEXTDB	5435	3	4AJ	27.31
OSPSCT	5404	3	4E	21.22
OSPSDSL	5411	3	4L	21.30
SERVDATA	5466	3	4BS	21.54
SERVDEST	5467	3	4BT	21.53
TKGRP	5202	3	2a	5.1
TRUNK	5204	3	2C	5.5

3.2 External Information System Translations

See Figure 3 for EIS translation cross check form flows. The following are the translations for EIS.

EISDATA form (5462-1 Record) - For 5E6 and later Software Releases, the EISDATA form defines the operational parameters for a specific OSPS EIS. Each External Information System is assigned an EIS NBR, which identifies the EIS. An EIS NAME is also assigned to the EIS to permit a more convenient method of reference.

EIS VENDOR field indicates the EIS vendor that developed the EIS interface with OSPS.

The MSG SET field specifies the format of the external messages that are exchanged via the CPDLs (Call Processing Data Links).

The SWITCH ID field is used by some EISs to differentiate this switching system from other switching systems that may also interface with the EIS.

The MSG DELAY field indicates to call processing software the length of time to wait for an expected message response from the EIS; this period is definable in 50 millisecond segments, e.g., a value of 100 provides a 5-second wait interval.

The MAX CALLS field assigned to a CPDL assures that data links do not become overloaded, even if the number of in-service CPDLs drops below the minimum number required to support the current call load. Although some calls may require manual operator handling, those calls, which are allocated a CPDL, can be completed efficiently with little chance of interruption due to CPDL overload.

The MAX MSGS field is expressed in messages per second and is based upon the message throughput expected from the CPDLs associated with an EIS; this may be dependent upon the data link facility used, the data rate chosen, the OSPS Terminal Adapter selected and/or the EIS. The MAX MSGS parameter is

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used in the calculation of the "average usage" of a CPDL given in Section 124 of the 30-minute traffic report.

The cross checks for EISDATA form follow.

- A unique EIS NAME must be entered on each EISDATA form.
- Every EISDATA form requires a corresponding OSPSDSL form where the SERVICE CLASS is "EIS" and the DATA LINK GRP matches the EIS NBR on the EISDATA form. A corresponding EISSM form must exist for each OSPSDSL form, where SERVICE CLASS is "EIS".
- If an EIS NAME is entered on a OPEISDB form, it must match the EIS NAME on a corresponding EISDATA form.
- A corresponding EISDATA form must exist where EIS NAME matches EIS NAME on the SERVDEST form.

3.3 Service Identification Translations

SERVDATA form (5466 Record) - For 5E6 and later Software Releases, the SERVDATA form defines the EIS service parameters for the service ID (SVC ID) field.

The initial action of "route to operator" (enter "TOOPER" in the INITIAL ACTION field) normally provides the caller with an operator from the principal serving team of the current call type. Listing Services can make use of support serving teams when Intraflow is active. An entry of "TODEST" in the INITIAL ACTION field routes the caller to the service destination (SVC DEST) defined on this form. The service destination may be an external announcement unit which returns off hook, plays the announcement and returns on hook after receiving off hook supervision on the external ARU facility. This announcement unit is only controlled by trunk supervision and does not use the call processing interface associated with an EIS. The service destination may be an OSPS internal ARU (DSU2-RAF), in which case the INT ANNC TYPE field provided by this form specifies the phrase sequence to be given. "ASKEIS" entered in the INITIAL ACTION action field directs the OSPS to "ask the EIS" for the initial action. In this case, the PRE OPER EIS field on this form allows call processing to locate an SM with CPDLs (Call Processing Data Links) for that EIS; an EIS call processing interface is then established to send an initial "request action" message. The External Information System then directs OSPS to route the caller to an operator or an announcement. Note that the EIS software must be capable of supporting a call processing interface prior to an operator being assigned to the call.

The OSPS SVC CODE field assigns the call processing interface protocol to be used by OSPS software for this service. The EIS APPL CODE (application code) is used by some EIS vendors to specify the application resources and processes needed by this particular service.

The NBR RECALLS field and RECALL DELAY field are included on this form in the event an EIS interface specification requires OSPS to provide this data. Typically, the External Information System controls these parameters and overrides this information.

Cross checks for SERVDATA follow.

- A corresponding EISDATA form must exist where EIS NAME matches EIS NAME on the SERVDEST form.
- When PRE OPER EIS is entered on the SERVDATA form, a corresponding EISSM form must exist where PRE OPER is "Y" and NAME matches PRE OPER EIS on the SERVDATA form.
- When SVC DEST is entered on the SERVDATA form, a corresponding SERVDEST form must exist where SVC DEST and EIS NAME on the SERVDEST form match SERV DEST and PRE OPER EIS on the SERVDATA form respectively.

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- When SVC DEST and INT ANNC TYPE are both entered on a SERVDATA form, RTE TYPE on the corresponding SERVDEST form must be "FIIA" or "RIIA". A corresponding SERVDEST form is where SVC DEST and EIS NAME fields on the SERVDEST form match SVC DEST and PRE OPER EIS fields on the SERVDATA form respectively. See Figure 5 for Cross Checks for RTE TYPE equal to "RIIA" or see Figure 6 for Cross Checks for RTE TYPE equal to "FIIA".
- If SVC DEST is entered and INT ANNC TYPE is NOT entered on a SERVDATA form, then RTE TYPE field on the corresponding SERVDEST form must NOT be "FIIA" or "RIIA". A corresponding SERVDEST form is where SVC DEST and EIS NAME fields on the SERVDEST form match SVC DEST and PRE OPER EIS fields on the SERVDATA form respectively.

- When INT ANNC TYPE is entered on a SERVDATA form, a corresponding ANNHD form must exist where "OSPSDA" is entered in the APPLICATION field and the HEADER ID field on the ANNHD form matches INT ANNC TYPE on the SERVDATA form.
- A second OPEISDB form and a second OSPSCT form are required for a first OSPSCT form if LIST SVC RECALL is "Y" on the OSPSCT form and PRE OPER EIS, entered on the corresponding SERVDATA form, is different than the EIS NAME on the first OPEISDB form.
  - A corresponding SERVDATA form is found by matching SVC ID field with SVC ID field on the OSPSCT form.
  - The first OPEISDB form is found by matching SERVING TEAM and SVC ID with SERVING TEAM and SVC ID, respectively, on the first OSPSCT form.
  - The second OPEISDB form is found by matching SVC ID and EIS NAME with SVC ID and PRE OPER EIS, respectively, on the SERVDATA form.
  - The second OSPSCT form is found by matching SERVING TEAM and SVC ID with SERVING TEAM and SVC ID, respectively, on the second OPEISDB form.

3.4 Interconnect Carrier Translations

ICF form (5305 Record) - The ICF form is used to define the carriers which are assigned on the STINFO form.

3.5 Trunk Translations

The equipment forms for incoming trunks are the following:

3.5.1 EQDU form (5730 Record)

3.5.2 EQDUP form (5730 Record) RC View 20.4

3.5.3 EQTU form (5720 Record) RC View 19.2

In addition to the seizure-only trunks 5E4 and 5E5 Software Releases, Listing Services for the 5E6 Software Release supports FG-D, FG-C and ISP incoming trunk types. If a back number is required for the operator or the EIS, then ANI must be "Y" for these trunks on the TKGRP form.

The ODA forms for trunk translations are:

TKGRP form (5202 Record) - The TKGRP form defines the EIS trunk groups. For 5E6 and later Software Release, The trunk class field, TRKCLS, must equal "EISTRK", the trunk direction is outgoing, TRK DIR

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equals "OUT" and the LS DLY ANS field must be set to "Y".

The cross checks for TKGRP with TRKCLS of "EISTRK" for EIS trunks or a TRK DIR of "RAF" for internal announcement trunks are the following:

- A corresponding TKGRP form is required for each SERVDEST form with a RTE TYPE of "RIIA" or "FIIA", (route to an internal announcement).
- The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form whose ROUTE INDEX matches the RTE CODE on the SERVDEST form for RTE TYPE of "RIIA". If the RTE TYPE is "FIIA" then the ROUTE INDEX on the FIXRT form, where the FIXED ROUTE TYPE is "OSPSEIS", matches the ROUTE INDEX on the RTIDX form. Also the TRK DIR on the TKGRP form must be "RAF". See Figure 5 for the cross checks for a RTE TYPE of "RIIA" on the SERVDEST form and Figure 6 for the cross checks for a RTE TYPE of "FIIA".
- A corresponding TKGRP form is required for each SERVDEST form with a RTE TYPE of "RIXA" (route to an external announcement). See Figure 4 for the cross checks for RTE TYPE of "RIXA" on the SERVDEST form. The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form whose ROUTE INDEX matches the RTE CODE on the SERVDEST form. Also the TRKCLS on the TKGRP form must be "EISTRK".

TRUNK form (5204 Record) - The TRUNK form defines the specific trunk. For 5E6 and later Software Releases, the EIS trunk must be part of a trunk group where "EISTRK" is entered in TRKCLS on the TKGRP form.

EIS trunks cannot have an entry in OUT START DIAL on the TRUNK form. An EIS trunk has "EISTRK" entered in the TRKCLS field on the TKGRP form.

RTIDX form (5303 Record) - For 5E6 and later Software Releases, the RTIDX form has the following cross checks for EIS trunks.

- For every SERVDEST form with "RIIA", "FIIA" (route to an internal announcement) or "RIXA" (route to an external announcement) entered for RTE TYPE, there must exist a RTIDX form where ROUTE INDEX matches RTE CODE on the SERVDEST form for RTE TYPEs "RIIA" and "RIXA" or the ROUTE INDEX on the FIXRT form for RTE TYPE of "FIIA". The ROUTE TYPE on RTIDX form is "HUNT". See Figure 4 for cross checks for RTE TYPE equal "RIXA", Figure 5 for cross checks for RTE TYPE equal to "RIIA" and Figure 6 for cross checks for RTE TYPE equal to "FIIA".
- A second RTIDX form is required for each SERVDEST form with a RTE TYPE of "FIIA", "RIIA" or "RIXA". The ROUTE INDEX on the second RTIDX form must match the NEXT ROUTE on the first RTIDX form. The ROUTE INDEX on the first RTIDX form matches the RTE CODE on the SERVDEST form for RTE TYPEs of "RIIA" or "RIXA". The ROUTE INDEX on the first RTIDX form must equal the ROUTE INDEX on a FIXRT form, where FIXED ROUTE TYPE equals "OSPSEIS", for RTE TYPE of "FIIA". Also, the ROUTE TYPE on the second RTIDX form must be "HUNT" or "REORDER".
- When the RTE TYPE on the second RTIDX is "HUNT", a corresponding TKGRP form is required where TGN matches TRUNK GROUP NUMBER on the second RTIDX form.

FIXRT form (5301 Record) - For 5E6 and later Software Releases, "OSPSEIS" must be entered in the FIXED ROUTE TYPE if "FIIA" (fixed route to an internal announcement) is entered in the RTE TYPE field on the SERVDEST form.

The cross checks for FIXRT if the RTE TYPE on the SERVDEST form is "FIIA" follow.

- For every SERVDEST form with "FIIA" entered for RTE TYPE, there must exist a FIXRT form with "OSPSEIS" entered for FIXED ROUTE TYPE.

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- A corresponding RTIDX form is required for each FIXRT form with a FIXED ROUTE TYPE of "OSPSEIS" where the ROUTE INDEX on the RTIDX form matches the ROUTE INDEX on the FIXRT form and the ROUTE TYPE on the RTIDX form is "HUNT".

- A corresponding TKGRP form is required for each FIXRT form with a FIXED ROUTE TYPE of "OSPSEIS". The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on a RTIDX form where the ROUTE INDEX on the RTIDX form matches the ROUTE INDEX on the FIXRT form. Also the TRK DIR on the TKGRP form must be "RAF".

- A second RTIDX form is required for each FIXRT form with a FIXED ROUTE TYPE of "OSPSEIS". The ROUTE INDEX on the second RTIDX form must match NEXT ROUTE on the first RTIDX form where the ROUTE INDEX on the first RTIDX form matches the ROUTE INDEX on the FIXRT form. Also the ROUTE TYPE on the second RTIDX form must be "HUNT" or "REORDER".

- If the ROUTE TYPE on the second RTIDX form is "HUNT", a corresponding TKGRP form is required where TGN matches TRUNK GROUP NUMBER on the second RTIDX form and TRK DIR is "RAF".

3.6 Digit Analysis for Incoming Digits Translations

Listing Services has a call type assigned based upon the incoming trunk group and/or dialed digits. The ODA forms for digit analysis follow.

DAS form (5300 Record) - The DAS form is used to define DAS values which are assigned on the STINFO form. See Division 2 Section 3B on Directory Assistance for restrictions on using DAS field for OSPS DSLs on the OSPSDSL form form (5411 Record).

3.6.1 SMLDIT form (5315 Record)

3.6.2 INDIT form (5309 Record)

3.6.3 LDIT form (5315 Record)

3.7 Call Type Determination Translations

RAR form (5301 Record) - The RAR form is used to define screening index values which are assigned on the STINFO form.

ORAR form (5405 Record) - The OSPS Rate and Route form identifies a call as an OSPS call by defining the routing and charging for each OSPS screening index/code index combination in a 5ESS Switch.

OCTA form (5406 Record) - The OSPS CALL TYPE Assignment form assigns OSPS CALL TYPES from OSPS normalized office code and local digits-dialed combinations.

OPCTO form (5407 Record) - The OPCTO (OSPS CALL TYPE for Trunk Originations) form determines OSPS call types and a BST display indexes for trunk origination from OSPS call identification/trunk group combination. Entries (other than 9999) in the TGN field of this form must be defined in the TKGRP form.

OBSTS form (5408 Record) - This form provides information for OSPS Basic Services Terminal displays.

OSPSCT form (5404 Record) - The OSPSCT form assigns the OSPS call type information. For 5E6 and later Software Releases, this form assigns the EIS service ID (SVC ID) to a serving team. It also provides the ability to assign the EIS recall call type (LIST SVC RECALL) based on the SERVING TEAM and the SVC ID.

The cross checks for EIS on OSPSCT form are as follows:

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- A SVC ID entry on the OSPSCT form requires an OPEISDB form be entered for every SERVING TEAM and SUP TEAM entry, on the corresponding OSPSCT form. The SVC ID fields on the two forms must be equal and SERVING TEAM or SUP TEAM on the OSPSCT form must be equal to SERVING TEAM on the OPEISDB form.

- Each EIS NAME and SVC ID on a OPEISDB form may have only one OSPS CALL TYPE on a OSPSCT form used as the Listing Services Recall Call Type. If LIST SVC RECALL is "Y" on an OSPSCT form, OSPS CALL TYPE is used as the Listing Services Recall Call Type for the EIS NAME on the OPEISDB form pointed to by the SERVING TEAM and SVC ID on this OSPSCT form.

- Call types used as a recall type must have the same EIS name assigned to all serving teams for this call type. For each OSPSCT form where LIST SVC RECALL is "Y", a corresponding OPEISDB form must be submitted where SERVING TEAM and SVC ID match on the two forms. A corresponding OPEISDB form must also be submitted for each SUP TEAM entered on the OSPSCT form where the SERVING TEAM and SVC ID on the OPEISDB form matches SUP TEAM and SVC ID on the OSPSCT form. Also the EIS NAME must be the same on all corresponding OPEISDB forms.

- A second OPEISDB form and a second OSPSCT form are required for a first OSPSCT form where LIST SVC RECALL is "Y" and PRE OPER EIS, entered on the corresponding SERVDATA form, is different than the EIS NAME on the first OPEISDB form.

    - A corresponding SERVDATA form is found by matching SVC ID with SVC ID on the first OSPSCT form.

    - The first OPEISDB form is found by matching SERVING TEAM and SVC ID with SERVING TEAM and SVC ID, respectively, on the first OSPSCT form.

    - The second OPEISDB form is found by matching SVC ID and EIS NAME with SVC ID and PRE OPER EIS, respectively, on the SERVDATA form.

    - The second OSPSCT form is found by matching SERVING TEAM and SVC ID with SERVING TEAM and SVC ID, respectively, on the second OPEISDB form.

3.8 Call Processing Data Link Translations

The equipment forms for CPDLs (Call Processing Data Links) are the following:

3.8.1 EQIM form (5700 Record)

3.8.2 ISLUC form (5742 Record)

3.8.3 EQPSU form (5741 Record)

3.8.4 EQPSUPH form (5742 Record)

Call Processing Data Links permit OSPS and an EIS to coordinate their activities by exchanging control and status information. The ODA forms for CPDL translations follow.

OSPSDSL form (5411 Record) - For 5E6 and later Software Releases the OSPSDSL form defines EIS CPDL parameters. OSPSDSL assigns external names to DSL instead of directory numbers. The external name of a CPDL consists of an identifier, the DATA LINK GRP (EIS number) and an EIS relative link number, the DATA LINK NBR. The DATA LINK NBR is relative to the External Information System; this allows the craft of OSPS and the EIS to refer to the CPDL using a common data link number. The SM LINK NBR is a recent change only data link number relative to the SM which is assigned internally by OSPS and used by call processing to make call handling more efficient.

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For 5E6 and later Software Releases, the LVL2 PROF field is the level 2 profile type for the corresponding service class.

Cross checks for OSPSDSL follow.

A maximum of sixteen links with SERVICE CLASS of "EIS" may be assigned to the same SM on OSPSDSL forms.

An OSPSDSL form submitted with a SERVICE CLASS of "EIS" must have a corresponding EISDATA form submitted where the EIS NBR on the EISDATA form matches the DATA LINK GRP on the OSPSDSL form.

If the SERVICE CLASS is "EIS", a corresponding EISSM form must exist for each OSPSDSL form. The SM field on the EISSM form must match the SM portion of the LCEN on the OSPSDSL form.

EISSM form (5462-3 Record) - For 5E6 and later Software Releases, the EISSM form determines the minimum number of CPDL's terminating to an EIS that are required on each SM. Not all SM's must have the same number of CPDL's to an EIS. This MIN LINKS number is used by maintenance software as the minimum number of CPDL's required to support EIS Listing Services at the busy hour and is often denoted by the number N. If a conditional removal request is made for a CPDL and removal of the data link would cause the number of in-service CPDL's associated with an EIS to drop below N, the conditional removal is disallowed. Unconditional removal of a CPDL, leaving less than N data links in service for the associated EIS, activates a major alarm.

The "pre-operator" service field (PRE OPER) may be used for EISs which support the establishment of a EIS call processing interface prior to an operator being assigned to the call. This field allows the OSPS administrator to chose which SM's are to be selected for these pre-operator services; this may be important as some SM's may support EIS Listing Services which require all the available CPDL resource during the busy hour, while other SM's are equipped with spare CPDL capacity.

Cross checks for EISSM follow.

A corresponding EQIM form is required for each EISSM form submitted. The SM number on the EQIM form must match the SM number on the EISSM form. Also, CONFIGURATION on the EQIM form must be 'LOADED'.

A corresponding EISSM form must exist for each OSPSDSL form, where SERVICE CLASS is "EIS". SM on the EISSM form must match the SM portion of the LCEN on the OSPSDSL form. In addition, an EISDATA form must be entered where EIS NBR on the EISDATA form matches DATA LINK GRP on the OSPSDSL form.

When PRE OPER EIS is entered on the SERVDATA form, a corresponding EISSM form must exist where PRE OPER is "Y" and NAME matches PRE OPER EIS on the SERVDATA form.

3.9 External ARU Trunk Translations

The equipment forms for external ARU trunks are the following:

3.9.1 EQDU

3.9.2 EQDUP

3.9.3 EQTU

The following ODA forms for external ARU trunks have been discussed under the paragraphs on "Trunk Translations" for EIS.

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3.9.4 TKGRP

3.9.5 TRUNK

3.9.6 RTIDX

3.9.7 TRKCL

3.10 Internal Announcement Definition Translations

Internal Announcement Translations are discussed in Division 2, Section 3B in the paragraphs under "Announcement Data". The ODA forms needed for internal announcement definition translations follow.

3.10.1 ANNAPL form (5430 Record)

3.10.2 ANNDG form (5532 Record)

ANNHD form (5531 Record) - When INT ANNC TYPE is entered on a SERVDATA form for internal announcements for Listing Services, a corresponding ANNHD form must exist where APPLICATION is "OSPSDA" and HEADER ID matches INT ANNC TYPE on the SERVDATA form.

3.10.3 ANNTR form (5533 Record)

3.10.4 OSPSOPT form (5424 Record)

3.10.5 PHRASE form (5534 Record)

3.11 Internal ARU Trunk Translations

The equipment forms for internal ARU trunks are the following:

3.11.1 EQRA

3.11.2 EQRAP

The DSU2-RAFs need not be on the same PSM as the BST-LS, which was a requirement for 5E4 Software Release Directory Assistance. Though the DSU2-RAFs may be provisioned on a PSM, it is more efficient to grow the internal ARUs on some other "standard" SM in the office. The following ODA forms for internal ARU trunks are discussed under "Trunk Translations" for EIS.

3.11.3 TKGRP

3.11.4 TRUNK

3.11.5 RTIDX

FIXRT - For 5E6 and later Software Releases for Listing Services, the Fixed Route Type for internal announcement is "OSPSEIS" rather than "OSPSDA" in Software Releases prior to 5E6. The translations for FIXRT form are discussed under the heading "Trunk Translations".

3.11.6 TRKCL

3.12 Service Destination Translations

SERVDEST form (5467 Record) - For 5E6 and later Software Release, the SERVDEST form is used to

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translate a service destination to a 5ESS Switch routing type and possibly a RTE CODE. The service destination maybe provided by the Switch owner or the External Information Services vendor. Rather than have specific ranges assigned for a particular destination route type, any destination ID provided by an EIS vendor can be mapped into current or future destination route types. A destination ID of zero is not supported by OSPS.

See Figure 4 for cross checks for RTE TYPE equal to "RIXA", Figure 5 for cross checks for RTE TYPE equal to "RIIA" and Figure 6 for RTE TYPE equal to "FIIA". Cross checks for SERVDEST follow.

- When SVC DEST is entered on the SERVDATA form, a corresponding SERVDEST form must exist where SVC DEST and EIS NAME on the SERVDEST form match SERV DEST and PRE OPER EIS on the SERVDATA form respectively.

- When SVC DEST and INT ANNC TYPE are both entered on a SERVDATA form, RTE TYPE on the corresponding SERVDEST form must be "FIIA" (route to an internal announcement with a fixed route index) or "RIIA" (route to an internal announcement). A corresponding SERVDEST form is where SVC DEST and EIS NAME on the SERVDEST form match SVC DEST and PRE OPER EIS on the SERVDATA form respectively.

- Conversely, if SVC DEST is entered and INT ANNC TYPE is NOT entered on a SERVDATA form, RTE TYPE on the corresponding SERVDEST form must not be "FIIA" or "RIIA", i.e., it cannot route to an internal announcement.

- For every SERVDEST form with "FIIA" entered for RTE TYPE, there must exist a FIXRT form with "OSPSEIS" entered for FIXED ROUTE TYPE.

- For every SERVDEST form with "FIIA", "RIIA" or "RIXA" entered for RTE TYPE, there must exist a RTIDX form where ROUTE INDEX matches RTE CODE on the SERVDEST form for "RIIA" and "RIXA" or the ROUTE INDEX equals the ROUTE INDEX on the FIXRT form, where FIXED ROUTE TYPE is "OSPSEIS" for "FIIA". ROUTE TYPE on the RTIDX form is "HUNT".

- A second RTIDX form is required for each SERVDEST form with a RTE TYPE of "FIIA", "RIIA" or "RIXA". The ROUTE INDEX on the second RTIDX form must match the NEXT ROUTE on the first RTIDX form. The ROUTE INDEX on the first RTIDX form matches the RTE CODE on the SERVDEST form if RTE TYPE is "RIIA" or "RIXA". The ROUTE INDEX on the first RTIDX form is equal to the ROUTE INDEX on the FIXRT form, where FIXED ROUTE TYPE is "OSPSEIS", for RTE TYPE Of "FIIA". Also the ROUTE TYPE on the second RTIDX form must be "HUNT" or "REORDER". If "RIIA" or "FIIA" is entered for RTE TYPE and the RTE TYPE on the second RTIDX is "HUNT", a corresponding TKGRP form is required where TGN matches TRUNK GROUP NUMBER on the second RTIDX form and TRK DIR on the TKGRP form is "RAF". If "RIXA" is entered for the RTE TYPE and the RTE TYPE on the second RTIDX is "HUNT", then a corresponding TKGRP form is required where TGN matches TRUNK GROUP NUMBER on the second RTIDX form and TRKCLS is "EISTRK".

- A corresponding TKGRP form is required for each SERVDEST form with a RTE TYPE of "RIIA" or "FIIA". The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form whose ROUTE INDEX matches the RTE CODE on the SERVDEST form for RTE TYPE of "RIIA" or matches the ROUTE INDEX on the FIXED ROUTE form, where FIXED ROUTE TYPE is "OSPSEIS", for the RTE TYPE of "FIIA". Also the TRK DIR on the TKGRP form must be "RAF".

- A corresponding TKGRP form is required for each SERVDEST form with a RTE TYPE of "RIXA". The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form whose ROUTE INDEX matches the RTE CODE on the SERVDEST form. Also the TRKCLS on the TKGRP form must be "EISTRK".

- A corresponding EISDATA form must exist where EIS NAME matches EIS NAME on the SERVDEST

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form.

3.13 Serving Team Translations

The translations for serving teams are discussed in Division 2, Section 3B under the heading "Operator Call Processing".

The equipment forms for serving teams translations are the following:

OSPSDSL - See the paragraphs under "Call Processing Data Link Translations" for OSPSDSL translations.

The RESXDL form for restricted dialing is no longer applicable to Listing Services; Listing Services operator has unrestricted dialing. The ODA forms needed for serving team translations follow.

STINFO form (5402 Record) - The STINFO form provides information about the OSPS serving team.

OSPSOA form (5403 Record) - The OSPS Operator Assignments form defines OSPS operator positions, assigns operators to serving teams and defines valid operator actions.

3.14 Operator Trouble Report Translations

OTRVLD form (5410 Record) - The OTRVLD form defines the OSPS OTRs (Operator Trouble Reports) and the destination for the ORT.

3.15 Operator Service Position and Force Management Center Translations

OSC (Operator Service Center) and FMC (Force Management Center) are discussed in Division 2, Section 3B in the paragraphs under those headings.

The ODA forms needed for OSC and FMC translations follow.

OSPSDSL - See the paragraphs under "Call Processing Data Link Translations" for OSPSDSL translations.

ISDNOPT form (5941 Record) - Any OSPS office type entered on the OPARM form must be designated on the ISDNOPT form in the OSPS INSTALLED field.

OSPSOP form (5401 Record) - The OSPS Operator Position form defines each operator position within an OSC, assigns RISLU (Remote Integrated Service Line Unit) ports and assigns operator positions.

OPARM form (5400 Record) - The OSPS Operator Parameters form defines parameters of an OSPS office including type of equipment, displays and reports and the assignment of serving teams.

3.16 External Data Base Translations

The translations for the external database follow.

OPDBPARM form (5434 Record) - The OPDBPARM (OSPS External Data Base Parameter) form specifies the database and X.25 protocol parameters, from the perspective of the external database, that are required for an OSPS operator terminal to communicate with an external data base. It is keyed by the assigned external database number.

If DB NAME is entered on OPEXTDB form, it must match DB NAME on a corresponding OPDBPARM form.

OPEXTDB form (5435 Record) - The OPEXTDB (OSPS External Operator Data Base) form provides the

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database operator parameters such as the database login sequence, database terminal emulation type and an indicator that a database session should be established automatically upon login to the OSPS operator terminal. This information is based upon the OSPS terminal database key assignment, the OSC to which the terminal belongs and the serving team derived from the operator's OSPS terminal login.

OPEISDB form (5462-2 Record) - For 5E6 and later Software Release, the OPEISDB (OSPS Operator to EIS and Data Base Mapping) form assigns, for a particular serving team and service ID, the database key of the OSPS operator's terminal and an EIS name. This allows the proper OSPS terminal database display and EIS interface to be provided when a Listing Services call is routed to an operator. (See Figure 3 for flow diagram of cross checks for EIS.)

- For each OPEISDB form with a TERM DB KEY entry there must exist one or more corresponding OPEXTDB forms where SERVING TEAM and TERM DB KEY match. Also DB NAME must be the same on all OPEXTDB forms associated with the same OPEISDB form.

- If DB NAME is entered on OPEXTDB form, it must match DB NAME on a corresponding OPDBPARM form.

3.17 Call Type Translations

OSPSCT form (5404 Record) - The OSPSCT form gives OSPS call type information. This form assigns the EIS service identification to a serving team via the SVC ID field. It also provides the ability to assign the Listing Service's recall call type (LIST SVC RECALL field) based on the SERVING TEAM and the SVC ID.

Cross checks for OSPSCT follow.

- An entry in SVC ID on the OSPSCT form requires an OPEISDB form be entered for every SERVING TEAM and SUP TEAM entry, on the corresponding OSPSCT form. The SVC ID fields on the two forms must be equal and SERVING TEAM or SUP TEAM on the OSPSCT form must be equal to SERVING TEAM on the OPEISDB form.

- Call types used as a recall type must have the same EIS name assigned to all serving teams for this call type. For each OSPSCT form where LIST SVC RECALL is "Y", a corresponding OPEISDB form must be submitted where SERVING TEAM and SVC ID match on the two forms. A corresponding OPEISDB form must also be submitted for each SUP TEAM entered on the OSPSCT form SERVING TEAM and SVC ID on the OPEISDB form matches SUP TEAM and SVC ID on the OSPSCT form. Also, the EIS NAME must be the same on all corresponding OPEISDB forms.

- Each EIS NAME and SVC ID on a OPEISDB form may have only one OSPS CALL TYPE on a OSPSCT form used as the Listing Services Recall Call Type. If LIST SVC RECALL is "Y" on an OSPSCT form, the OSPS CALL TYPE is used as the Listing Services Recall Call Type for the EIS NAME on the OPEISDB form pointed to by the SERVING TEAM and SVC ID on this OSPSCT form.

- A second OPEISDB form and a second OSPSCT form are required for a first OSPSCT form if LIST SVC RECALL is "Y" and PRE OPER EIS entered on the corresponding SERVDATA form, is different than the EIS NAME on the first OPEISDB form.

- A corresponding SERVDATA form is found by matching SVC ID with SVC ID on the first OSPSCT form.

    - The first OPEISDB form is found by matching SERVING TEAM and SVC ID with SERVING TEAM and SVC ID, respectively, on the first OSPSCT form.

    - The second OPEISDB form is found by matching SVC ID and EIS NAME with SVC ID and PRE OPER EIS, respectively, on the SERVDATA form.

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- The second OSPSCT form is found by matching SERVING TEAM and SVC ID with SERVING TEAM and SVC ID, respectively, on the second OPEISDB form.

3.18 Intraflow Translations and Interflow Translations

Intraflow and Interflow translations are discussed in Division 2, Section 3B.

4. LISTING SERVICES PRESENTATION PROTOCOL ENHANCEMENT

For 5E6(1), the LSPP (Listing Services Presentation Protocol) feature provided terminal emulation so that a CST (Combined Services Terminal) could be used with the CCI (Computer Consoles Incorporated) interface. The TERMINAL TYPE is defined on the OPEXTDB form. Whereas the Automated Multi-Leaf Bulletin (AMLB) TERMINAL TYPE is "BASIC", the TERMINAL TYPE for LSPP is "TEMPLATE". Enhancements had to be made to the LSPP software in the CST to meet the CCI requirements. This section describes the LSPP enhancements and the effect on OSPS Office Data.

The two changes to the enhancement are

1. The CST does not re-login to the CCI database as a result of a link failure.
2. If the TERMINAL TYPE is "TEMPLATE", two switched virtual circuits are mapped to each database. This provides for a dual path design, thereby increasing reliability. This enhancement requires that two Data Base Access (DBA) T1s be defined for each database one for each switched virtual circuit.

4.1 Login Procedure Enhancement

CCI considers a terminal that is logged in to a database as logged in until such time that one of the following conditions occur:

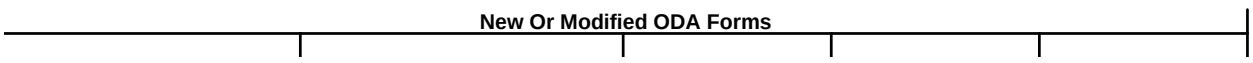
1. A logoff message is received (logoff is accomplished by unplugging or by the depression of the DB LOGOFF key on the CST).
2. A new login message is received.
3. A time-out has occurred due to inactivity on the link.

Therefore, a CST remains logged in to a CCI database, from a CCI perspective, after communication has been re-established on a link that has been physically disconnected.

4.2 Dual Switched Virtual Calls Enhancement

The CCI requirement that two switched virtual calls be mapped to each database increased reliability should one of the links go down. With the use of dual switched virtual calls, data may be passed between OSPS and the database over either link. When data is received by OSPS over either of the two links, it is treated as data received from one database. OSPS attempts to send data to the database over the same logical channel as was used to receive data from the database. Additionally, if data is received from the database over one of the links and that link goes down, the other link will be used to pass data back to the database. When one of the links goes down and the other remains active, OSPS will periodically attempt to re-establish the switched virtual call for the downed link.

4.3 Enhanced LSPP Translations



Form Name	Record Number	Division	Section	RC View
OPDBPARM	5434	3	4AI	27.30
MLHG	5110	3	1J	3.5
XAT	5909-1/2	5	1J	23.40

OPDBPARM form (5434 Record) - The dual switched virtual call configuration requires two packet switched TNs (Telephone Numbers), two MLHGs (Multi-Line Hunt Groups), and two DBA T1s. The following solution is implemented for 5E6 and 5E7. When a session is established with a CCI database from a TEMPLATE type terminal, the packet switched telephone number obtained from the DB PKT TN field on OPDBPARM form is sent in the IMLOGIN message. This single packet TN is used to establish the two switched virtual calls. In addition to the packet switched TN on the OPDBPARM form, a second packet switched TN is used. The second packet TN should be the first packet TN plus one. The following table gives examples of the pairs of initial and second packet TN.

DB PACKET TN	SECOND PACKET TN
9990100	9990101
9990101	9990102
9990102	9990103
9990103	9990104
9990104	9990105
9990105	9990106
9990106	9990107
9990107	9990108
9990108	9990109
9990109	9990100

Notice that if the last digit of the first packet TN is 9, then the last digit of the second packet TN will be 0.

MLHG form (5110 Record) - Each of the two packet TNs need to be defined in the LISTED TN field on the MLHG form. Therefore, two Multi-Line Hunt Groups need to be defined □ one for each packet TN. Each entry must be made in Office Record 5110 such that the value populated in the MLHG (Multiline Hunt Group Number) field is unique. This allows for the creation of two Multi-Line Hunt Groups. One entry should be made in the MLHG form such that the packet TN populated in the LISTED TN field is the same as the packet TN obtained from the DB PKT TN field from the OPDBPARM form. The other entry should be made such that the packet TN populated in the LISTED TN field is one greater than the packet TN identified in the DB PKT TN field of the OPDBPARM form described above.

XAT form (5909-1/2 Record) - Each Multi-Line Hunt Group will then map to a unique DBA T1 to provide access to the external database. Entries for the DBA T1s are made on the XAT form. The value populated in the PKT MLHG field is the same as the value obtained from the MLHG field on the MLHG form. The value populated in the PKT TN field should match at least the first three digits of the entry in the LISTED TN field on the MLHG form. However, the packet TN entries from the two Office Records cannot be identical. If more than one DBA T1 channel is to be associated with a Multi-Line Hunt Group, the values populated in the TERM NBR and PKT TN fields should be different while the value of the PKT MLHG field should remain the same.

5. INTERCEPT SERVICES USING AN EIS

This capability is available with 5E6(2) and later Software Releases. The Intercept Services are provided by the LECs (Local Exchange Companies) to end-users (both business and residential) whose numbers have been changed, disconnected, or are in trouble. These services are also utilized by the LECs when calling customers reach vacant numbers. The 5ESS Switch OSPS can communicate with EISs (External Information Systems), which provide database storage, retrieval, and external announcement recording and/or playback functions. The OSPS Intercept System provides LECs with customized announcements, intercept call completion, and intercept voice messaging.

5.1 Intercept Services Feature Assignment

The following forms are required to assign this feature.

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The TKGRP form has a new class of service for incoming intercept trunks that was added because intercept traffic is routed to an OSPS intercept office over dedicated trunk facilities.

The OPRTK form specifies if the incoming trunk group supports answer supervision and if the calls arriving on the trunk group are eligible for call completion.

The AISCLS form determines the destination index to be used in intercept call type determination on the basis of the intercept class and called number information.

The ACDCTP form determines the call type. The new value for CALL ORIGIN is "AIS" for Intercept Services type calls.

The SERVDATA form defines a new treatment type to support routing of certain types of intercept calls to reorder at call origination. It indicates if call completion is supported for a particular service ID.

The OSPSOPT form defines the global parameters for the office. New parameters for interLATA intercept call completion, and for initial treatment type for intercept call originations with signaling irregularities or invalid intercept classes was added for Intercept Services.

5.2 ODA Forms

Figure 7 shows the form flow for Intercept Services Using An EIS.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	4M	26.10
ACDPOL	5412-B/C/E/F	3	4M	26.10
AISCLS	5469	3	4BV	21.57
OPRTK	5417	3	4R	26.26
OSPSCT	5404	3	4E	21.22
OSPSOPT	5424	3	4Y	8.9
SERVDATA	5466	3	4BS	21.54
TIMING	5520	3	5T	8.5
TKGRP	5202	3	2A	5.1

5.3 Translations For Intercept Services Using An EIS

AISCLS form (5469 Record) - This form is used to define the treatment for intercept calls. If the destination index is blank, the call will receive treatment according to the call origination data on the ACDCTP form (5412 Record) when "DEST" is entered in the SECOND LEVEL field, or on call origination and incoming trunk group when "TGRP" is entered in SECOND LEVEL on the ACDCTP form.

If the WITH ANI field or WITHOUT ANI field is entered, an ACDPOL form (5412 - B/C/E/F Record) must exist where TGRP/DEST is "DEST" and TGN/CDI field matches the WITH ANI or WITHOUT ANI on the AISCLS form. In addition, the PRE CALL ID value on the associated ACDPOL form must match the PRE CALL ID on the ACDCTP form that has "AIS" entered in the CALL ORIGIN field.

ACDCTP form (5412-A/D Record) - This form assigns call type information for the OSPS ACD. For an incoming intercept call, "AIS" should be entered in the CALL ORIGIN field.

If "AIS" is entered in the CALL ORIGIN field, the following cross checks are needed.

- If CALL ORIGIN is "AIS", then APOS CALL TYPE cannot be entered on the ACDPOL form.
- When CALL ORIGIN on the ACDCTP form is "AIS" and PRE CALL ID is entered, CALL ORIGIN must be the same on all ACDCTP forms with the same PRE CALL ID.
- An OSPSCT form is required for each ACDCTP form where OSPS CALL TYPE on the OSPSCT form matches CALL TYPE on the ACDCTP form. SVC ID must be entered on the OSPSCT form and OPER TYPE must be "TA" on that OSPSCT form. Conversely if "AIS" is not entered for CALL

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ORIGIN, SVC ID must not be entered on the OSPSCT form.

- For each list element on an ACDPOL form where CALL TYPE is entered, SVC ID must be entered on the associated OSPSCT form when CALL ORIGIN on the associated ACDCTP form is "AIS" or "LSTA". OSPS CALL TYPE on the associated OSPSCT form matches CALL TYPE on the ACDPOL form and PRE CALL ID on the associated ACDCTP form matches PRE CALL ID on the ACDPOL form. Conversely, if CALL ORIGIN on the associated ACDCTP form is not "AIS" or "LSTA", SVC ID must not be entered on the associated OSPSCT form.

- If "AIS" is entered in CALL ORIGIN filed of the ACDCTP form then a SERVDATA form must be entered with an OSPS SVC CODE of "INCPT" or "IBMINCPT". The SVC ID on the OSPSCT form must be the same as the SVC ID of the SERVDATA form. (OSPS CALL TYPE on the OSPSCT form is matched with CALL TYPE of the ACDCTP form.) Conversely, if "AIS" is not entered, then "INCPT" and "IBMINCPT" cannot not be entered as the OSPS SVC CODE.

SERVDATA form, 5466 Record - This form defines the EIS service parameters. For 5E6(2) Listing Services calls, the "REORDER" enumeration was added to the INITIAL ACTION field. The "SRVC1" enumeration was changed to "LS" and "IBMLS", "INCPT", and "IBMINCPT" enumerations were added to the OSPS SVC CODE field for Intercept Services and the IBM EIS interface.

If CALL ORIGIN on the ACDCTP form is "AIS", a SERVDATA form must be entered with OSPS SVC CODE of "INCPT" or "IBMINCPT". (SVC ID of the SERVDATA form is matched with SVC ID of the OSPSCT form to find the SERVDATA form. OSPS CALL TYPE of the OSPSCT form is matched with CALL TYPE of the ACDCTP form to find the OSPSCT form). Conversely if CALL ORIGIN is not "AIS", OSPS SVC CODE cannot be "INCPT" or "IBMINCPT".

OPRTK form (5417-1/2 Record) - This form stores the per trunk group data for the new intercept trunks. The TRKCLS and ANSWER SUPV fields are new for the Intercept Feature. LSTG SVC, TRAF and CALL COMPL are also used for Intercept Services.

OSPSCT form (5404 Record) - This form is used to define parameters, such as OSPS serving teams or delay announcements, for OSPS call types.

OSPSOPT form (5424 Record) - This form is used to define the office parameters for OSPS. For 5E6(2), Listing Services parameters LS FEATURE WORD, COIN PAID TRAF, and LS INTER CC were added. INTER CC, DEST IDX, and AIS DAS fields were added for Intercept Services.

TIMING form (5520 Record) - This form is used to define intervals for permanent signal, partial dial, and critical timing in a 5ESS Switch. For 5E6(2) and later, the "INAISTRK" enumeration was added to the SERVICE CLASS field for Intercept Services.

TKGRP form (5202 Record) - This form is used to define parameters for trunk groups. For 5E6(2) and later, the enumeration "INAISTRK" was added to the TRKCLS field for Intercept Services.

6. IBM EIS LISTING SERVICES INTERFACE

This capability is available with 5E6(2) and later Software Releases and supports the EIS (External Information System) interface for IBM (International Business Machines) Listing Services with Call Completion, IBM Intercept, an extension of the CCI (Computer Consoles Incorporated) Listing Services interface, and CCI Intercept.

The IBM Listing Services capability provides an interface to an IBM EIS and to an associated IBM external ARU (Audio Response Unit). (See Translation Requirements for EIS and ARU in this section.) This feature permits the calling party to be connected to automated listing services announcements provided by an IBM-supplied ARU. This allows the caller to hear announcements for Directory Assistance and other Listing Services that may be offered by IBM, such as customer name, address, and ZIP code.

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All Listing Services calls by an EIS are to be billed either to "no charge" (billed at the local office) or "station paid" (paid by the calling number). Neither the CCI nor the IBM interface supports billing for the intercept service. With Call Completion enabled, either interface may continue "station paid" billing for call completion or may indicate alternate billing by entering the correct DTMF (Dual Tone Multifrequency - Touch Tone) digit during or after the listing announcement.

The IBM interface does not support Intercept Call Completion. The CCI interface does support Intercept Call Completion, but only when the listed party has indicated they will accept the call completion charges, i.e., auto collect.

6.1 IBM EIS Listing Services Feature Assignment

Figure 8 shows the form flow for IBM EIS LISTING SERVICES. The following forms are required to assign this feature.

The IBMRNGS form defines the range of operator positions that can interface with an IBM DAS (Directory Assistance System), and the ARU trunk members assigned to IBM DAS.

The EISDATA form defines the operational parameters for IBM as the EIS vendor.

The OSPSDSL form must have a SERVICE CLASS entry of "EIS".

The SERVDATA form OSPS SVC CODE must have an entry of "IMBINCPT" for IBM Intercept.

6.2 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
IBMRNGS	5471-1	3	4BW	21.58
EISDATA	5462-1	3	4BM	21.51
SERVDATA	5466	3	4BS	21.54

6.3 IBM Listing Services Interface Translations

The following forms are required to provision the IBM Interface.

IBMRNGS form (5471-1 Record) - This form is used to define the global parameters for the IBM interface. MIN POSITION, MAX POSITION, and TGN LIST range allows the OSPS owner to obtain IBM Position IDs for each of the OSPS operator positions associated with the IBM DAS (Directory Assistance System) working in conjunction with an OSPS.

MIN POSITION assigns the lowest (minimum) operator position number served by the IBM DAS, and MAX POSITION assigns the range of sequential positions from the minimum position that may interface with the IBM DAS. For example, when OSPS position numbers in the range of 500 to 1499 are planned to interface with an IBM DAS, MIN POSITION is set to 500 and MAX POSITION is set to 1499. Not all the positions within this range are required to interface with the IBM DAS. Only OSPS operator position ID's where "OPT" is entered in the POS TYPE field on the OSPSOP form (5401 Record) are converted to IBM Position ID. However, all current and future positions which provide services via the IBM DAS must fall within these bounds. If the MIN POSITION entry or MAX POSITION entry is changed later, all IBM Position IDs associated with ARU ports will need to be reassigned in the IBM DAS; therefore, room for operator position growth should be considered when assigning these values.

The IBM Position ID equals the POS NUM entry on the OSPSOP form. If the OSPS owner wishes to start the sequence at OSPS position number 1, the POS NUM value can be set to zero to make the OSPS position number and IBM Position ID equal; this only wastes the first IBM Position ID (ID = 0), as OSPS has no position number zero. Alternately, this parameter can be set to one, which makes the IBM Position ID one less than the corresponding OSPS position number.

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MAX POSITION entry minus MIN POSITION entry must be less than 4097.

The sum of all the ports (MAX POSITION - MIN POSITION + sum of MAX MEMB entries + the number of MAX MEMB entries (1 through 8)) may not exceed 9000. This is an IBM system limit. Note that the 9000 range must be potentially shared with other switching systems that use a given IBM DAS.

- **WARNING:** When the total ports sum exceeds 4500, indicating that over half the available array in the IBM DAS has been allocated for this office alone, a reassessment may be required if other offices share an IBM DAS.

If MAX POSITION is not 0, then the sum of number of MAX MEMB entries in the TGN LIST must be greater then 0, i.e. one of the fields must have an entry.

The IBMRNGS form must be submitted when SERVICE CLASS on the OSPSDSL form is "EIS" and VENDOR on the EISDATA form is "IBM" (EIS NBR on the EISDATA form matches DATA LINK GRP on the OSPSDSL form).

Each DAS1 (DAS2, DAS3, DAS4) TGN, entered on the IBMRNGS form, must have a matching TGN on a TKGRP form. The TRKCLS on the corresponding TKGRP form must be either "EISTRK" or "RAFANNC".

If the TRKCLS is set to "RAFANNC", SVC GRP on the TKGRP form must be set to "DA".

If the TRKCLS is set to "EISTRK", no other DAS TGN value entered on the same row on the IBMRNGS form can have the same TGN. For example, the TGN value for DAS1 cannot be entered for DAS2, DAS3, or DAS4.

EISDATA form (5462-1 Record) - This form is used to define the operational parameters for IBM EIS and ARU. Enter "IBM" in the VENDOR field, and "SET2" in the MSGSET field that identifies the message sets supported by the IBM Interface.

If "IBM" is entered as VENDOR:

- DATA LINK NBR on the OSPSDSL form must be less than 255 and the SERVICE CLASS on the OSPSDSL form is "EIS" (EIS NBR on the EISDATA form matches DATA LINK GRP on the OSPSDSL form).

- OSPS SVC CODE on the SERVDATA form must be either "IBMLS" or "IBMINCPT" and PRE OPER EIS entered on the SERVDATA form matches EIS NAME on the EISDATA form.

SERVDATA form (5466 Record) - This form defines the EIS service parameters.

When OPER TYPE is "TA" on the OSPSCT form, OSPS SVC CODE of SERVDATA form must be "INCPT" or "IBMINCPT".

When CALL ORIGIN on the ACDCTP form is "AIS", a SERVDATA form must be entered with OSPS SVC CODE of "INCPT" or "IBMINCPT". The forms correspond if SVC ID of SERVDATA form matches SVC ID of OSPSCT and OSPS CALL TYPE of OSPSCT form matches CALL TYPE of ACDCTP form to find OSPSCT form. Conversely, if CALL ORIGIN on the ACDCTP form is not "AIS", OSPS SVC CODE field on the SERVDATA form cannot be "INCPT" or "IBMINCPT".

OSPSDSL form (5411 Record) - This form assigns OSPS circuits to line card ports. The SERVICE CLASS must be "EIS" for any EIS.

7. RECOGNITION OF CUSTOMER PROVIDED TERMINAL

7.1 Feature Description

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For 5E9(1) and later, the Recognition of Customer Provided Terminal feature gives the OSPS the ability to recognize and differentiate between workstations and operator terminals provided by DAS (Directory Assistance System) providers. The 5ESS Switch recognizes that a CPT (Customer Provided Terminal) is being used and insures the correct interface to the CPT.

The following summarizes the characteristics of a CPT:

- has the same physical and electrical interface to the 5ESS Switch as a VDT or CST, although the PC used is not supplied by AT&T OSPS.
- is maintained and administered from the 5ESS Switch like a VDT or CST.
- offers Listing Services capabilities with IBM or VDR on a single terminal, using the CPDL (Call Processing Datalink) interface specification for call control and the IBM POS or VDR IOC software to provide database access. (This is unlike a BST (Basic Services Terminal) arrangement which has a separate vendor supplied terminal.)
- offers the same TA call handling capabilities as a VDT or CST.
- supports Combined Service applications at a single operator position.
- supports MDBA capabilities handling up to 6 active database sessions to any combination of either AMLB (Automated Multi-leaf Bulletin) and IBM DAS type databases or AMLB and VDR DAS type databases.
- introduces OSPS software operating in the Microsoft Windows environment.

7.2 Feature Assignment

Figure 10 shows the form flow for Recognition of Customer Provided Terminal.

The database information needs to be defined on the OPDBPARM form, (5434 Record) and the OPEXTDB form (5435 Record). For the IBM or VDR database access, the database name is used on the associated softkey at the WINCST (Windows CST), the TERM TYPE is set to "IBM" and the auto session field is set to "Y". None of the X.25 parameters are needed.

After the database is defined, the office parameter that contains the maximum number of WINCSTs that are allowed should be entered on the OSPSOPT form. This parameter cannot be entered or changed on the RC view 8.9.

The OSPSOP form (5401 Record) is used to enable the IBM or VDR interface within the WINCST positions on the specified DSL. The IBM or VDR interface and database access are enabled or disabled each time an operator logs into OAP.

7.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OPDBPARM	5434	3	4AI	27.30
OPEXTDB	5435	3	AJ	27.31
OSPSOP	5401	3	4B	21.32
OSPSOPT	5424	3	4Y	8.9

OPDBPARM form (5434 Record) - This record defines the database and X.25 protocol parameters necessary to establish a session to an external database from an operator's terminal. This form defines the login and password strings being passed from the external database. The "IBM" or "VDR" enumeration was added as a TERM TYPE for 5E9(1) and later.

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OPEXTDB form (5435 Record) - This record assigns each Serving Team within an OSPS OSC access to one or more external databases. The AUTO SESSION value must be set to "Y" whenever "IBM" or "VDR" is entered as a TERM TYPE on the OPDBPARM form, indicating that IBM or VDR is the terminal emulation type.

OSPSOP form (5401 Record) - This record defines each operator position within an OSPS OSC, and assigns RISLU ports. For 5E9(1) and later, the CST INTERFACE field indicates the vendor for the CST software. "IBM" or "VDR" are only entered for this feature. This value is only allowed if the POS TYPE field on this form is set to "OPT". The total number of OSPSOP forms with the CST INTERFACE field cannot be greater than the value of MAX DUAL PORT CST field on the OSPSOPT form. The number of ports that have this value set to "IBM" or "VDR" cannot exceed the value extracted from the password entered on the OSPSOPT form.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. For 5E9(1) and later, MAX DUAL PORT CST indicates the maximum number of operator positions allowed to use the CST software for the Recognition of Customer Provided Terminal feature.

8. DIRECTORY ASSISTANCE CALL COMPLETION

DACC (Directory Assistance Call Completion) allows callers who have received Listing Services, such as Directory Assistance, to have their calls completed to the listed number without having to originate a new call or dial the number they wish to call. The vendor supplied EIS contains the database of numbers, announces the retrieved number, and prompts the caller to enter a digit to indicate whether or not call completion is desired. The OSPS determines if the TCA (Telephone Company Administration) allows this call to be completed and then completes the call with TA (Toll and Assist).

8.1 Directory Assistance Call Completion Feature Assignment

The SERVDATA form assigns the route indexes for announcements for Call Completion.

The OPRTK form for Call Completion indicates if a Toll and Assistance switch has previously handled the listing services call, if listing services traffic is carried on the trunk, whether or not call completion is allowed for the trunk, and whether or not an interLATA carrier can be used for interLATA Call Completion calls.

The OSPSOPT form defines the office parameters for Directory Assistance Call Completion. The parameters define if interLATA coin sent paid billing is allowed, and if interLATA call completion is allowed.

The ACDCTP form assigns the call type information for OSPS ACD.

8.2 ODA Forms

Figure 9 shows the form flow for Directory Assistance Call Completion.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	4M	26.10
ACDPOL	5412-B/C/E/F	3	4M	26.10
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
SERVDATA	5466	3	4BS	21.54

8.3 Directory Assistance Call Completion Translations

ACDCTP form (5412-A/D Record) - The ACDCTP form assigns call type information for the OSPS ACD (Automatic Call Distribution) feature. If the incoming call is a Listing Services Call using TA (Toll and Assist) originating treatment, "LSTA" should be entered in the CALL ORIGIN field.

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When CALL ORIGIN on the ACDCTP form is "LSTA" and PRE CALL ID is entered, CALL ORIGIN must be the same on all ACDCTP forms with the same PRE CALL ID.

If "AIS" or "LSTA" is entered in CALL ORIGIN, the following cross checks are needed.

- If the PRE CALL ID of the ACDPOL form matches the PRE CALL ID of the ACDCTP form, CALL ORIGIN cannot be "LSTA" or "AIS", and APOS CALL TYPE cannot be entered.

OSPSOPT form (5424 Record) - The following are the new office parameters of Call Completion: LS FEATURE WORD, COIN PAID TRAF, LS INTER CC.

OSPSCT form (5404 Record) - If CALL ORIGIN on ACDCTP form is "LSTA", SVC ID must be entered on the OSPSCT form. An OSPSCT form is required for each ACDCTP form where OSPS CALL TYPE on the OSPSCT form matches CALL TYPE on the ACDCTP form. OPER TYPE must be "TA" on that OSPSCT form. Conversely if "LSTA" is not entered for CALL ORIGIN. SVC ID must not be entered on the OSPSCT form.

In addition, for each list element on an ACDPOL form where CALL TYPE is entered, SVC ID must be entered on the associated OSPSCT form when CALL ORIGIN on the associated ACDCTP form is "LSTA". OSPS CALL TYPE on the associated OSPSCT form matches CALL TYPE on the ACDPOL form and PRE CALL ID on the associated ACDCTP form matches PRE CALL ID on the ACDPOL form.

SVC ID of OSPSCT form must be same as the SVC ID of SERVDATA form. (OSPS CALL TYPE of OSPSCT form is matched with CALL TYPE of ACDCTP form.)

If APOS CALL TYPE is entered on the ACDPOL form, CALL ORIGIN cannot be "LSTA" on the corresponding ACDCTP form. Forms correspond if PRE CALL ID of ACDPOL form matches the PRE CALL ID of ACDCTP form.

OPRTK form (5417 Record) - CALL COMPL, INTER FOR CC LSTG, SVC TRAF, and FROM TA SYSTEM fields have been added for the Listing Services Call Completion feature.

If TRKCLS is not "FIOPR", "DIOR" or "INAISTRK" on the TKGRP form associated with an OPRTK form, the trunk group is used for Listing Services and LSTG SVC TRAF must be "Y". The TKGRP form is found by matching TGN on the OPRTK form with TGN on the TKGRP form.

SERVDATA form (5466 Record) - New fields for call completion are CALL COMP, DIGIT TIMING, TURN BACK RI, and CALL PROG RI.

If CALL PROG RI or TURN BACK RI is entered, a corresponding RTIDX form is required, where the ROUTE INDEX value on the RTIDX form must match the CALL PROG RI value. In addition, this matching RTIDX form must have ROUTE TYPE set to "HUNT" and CI ROUTE TYPE set to "GENANN". A corresponding TKGRP form is also required. The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form. Additionally, on the TKGRP Form, the TRK DIR must be "ANN".

9. DIRECTORY ASSISTANCE CALL COMPLETION RELEASE 2

9.1 Feature Description

DACC R2 (Directory Assistance Call Completion - Release 2) provides the ability for an LS (Listing Services) operator at a CST (Combined Services Terminal) to enter charging information to apply to the subsequent DACC call. Any alternate billing information entered shall apply only to the DACC call; the LS function is billed as sent paid only.

The capabilities added for a CST-equipped LS operator by DACC - R2 are the following:

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- the calling party (back) number can be entered in case of ANI Failure or ONI.
- a charging type can be entered.
- an ABS (Alternate Billing Service) number, either a card number or a third number, can be entered.
- DACC with same (sent paid) or different billing can be indicated. Call completion can be requested before the listing is retrieved.

The capability added for a BST-LSDB (Basic Services Terminal - Listing Services Data Base) is the following:

- the calling party (back) number can be entered in case of ANI Failure or ONI.

The Listing Service operator is the user of this feature. The CST-equipped operator may enter a charging type and number to be applied to a DA call completion call at any time during DA call handling. The operator may also indicate that DACC service is desired before a retrieved listed directory number is identified to OSPS. Any Listing Service operator may enter a back number in case of ONI or ANI Failure.

9.2 Call Scenario

The call begins when a caller dials an LS. The call is sent to an OSPS, and the OSPS routes the call to an operator at a CST or a BST-LSDB.

The CST uses 2 display pages for LS calls: the DB (Database) page is used to communicate with the EIS and perform listing searches, and the CP (Call Processing) page is used to display OSPS call information as for TA calls.

The BST-LSDB is used in combination with a KDT (Keyboard-Display Terminal) to provide LS. Many TA keys are not available to operators using a BST-LSDB.

The OSPS and EIS communicate through CPDL (Call Processing Data Links). At seizure, a message is sent to the EIS. The Operator then uses the CST or KDT to search for the information requested by the caller. Once the listing is found, the operator may announce the number manually or release the call for an automated announcement provided by an ARU (Audio Response Unit) controlled by the EIS. The EIS provides the listed number to the OSPS, (either in the message reporting the verbal report or the message requesting transfer to announcement, depending on the vendor).

Once the listed number is received over the CPDL, call completion may be requested, either by an operator keying in the number or by a customer response to a prompt from the ARUs. If completion is requested, the EIS is disconnected from the call, and the OSPS collects billing information and completes the call.

DACC R2 allows operators to enter billing information and a request for call completion during the LS portion of a call (during the listing retrieval) that is applied to the subsequent DACC.

9.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
SERVDATA	5466	3	4BS	21.54

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. To activate DACC R2, "Y" must be entered in the LSCC field on this form.

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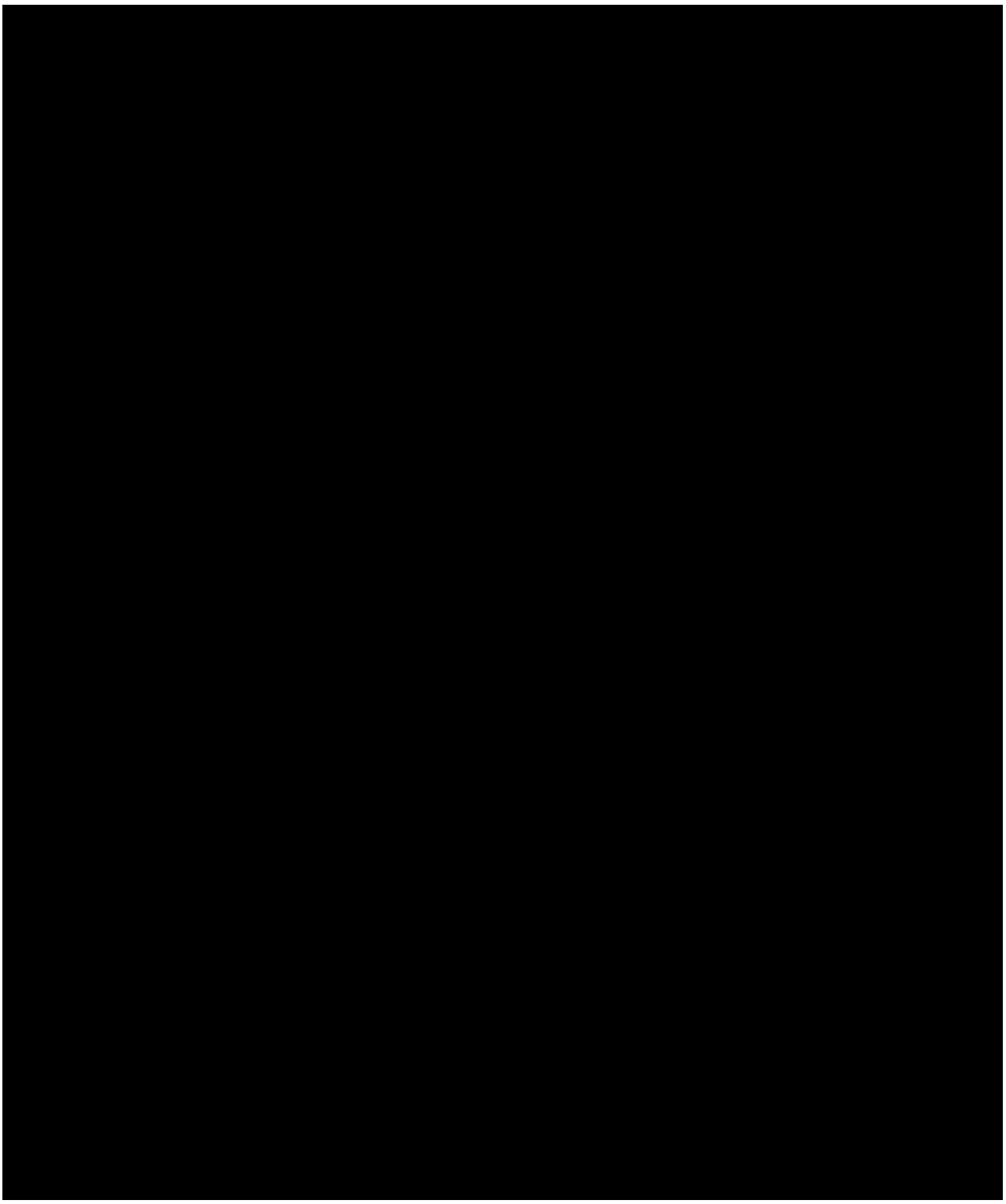
SERVDATA form (5466 Record) - This record defines the EIS service parameters for the 5ESS Switch owner. For 5E9(1) and later, if SVC ID is entered on the SERVDATA form, the LSTG SVC field on the OSPSOPT form must also be entered.



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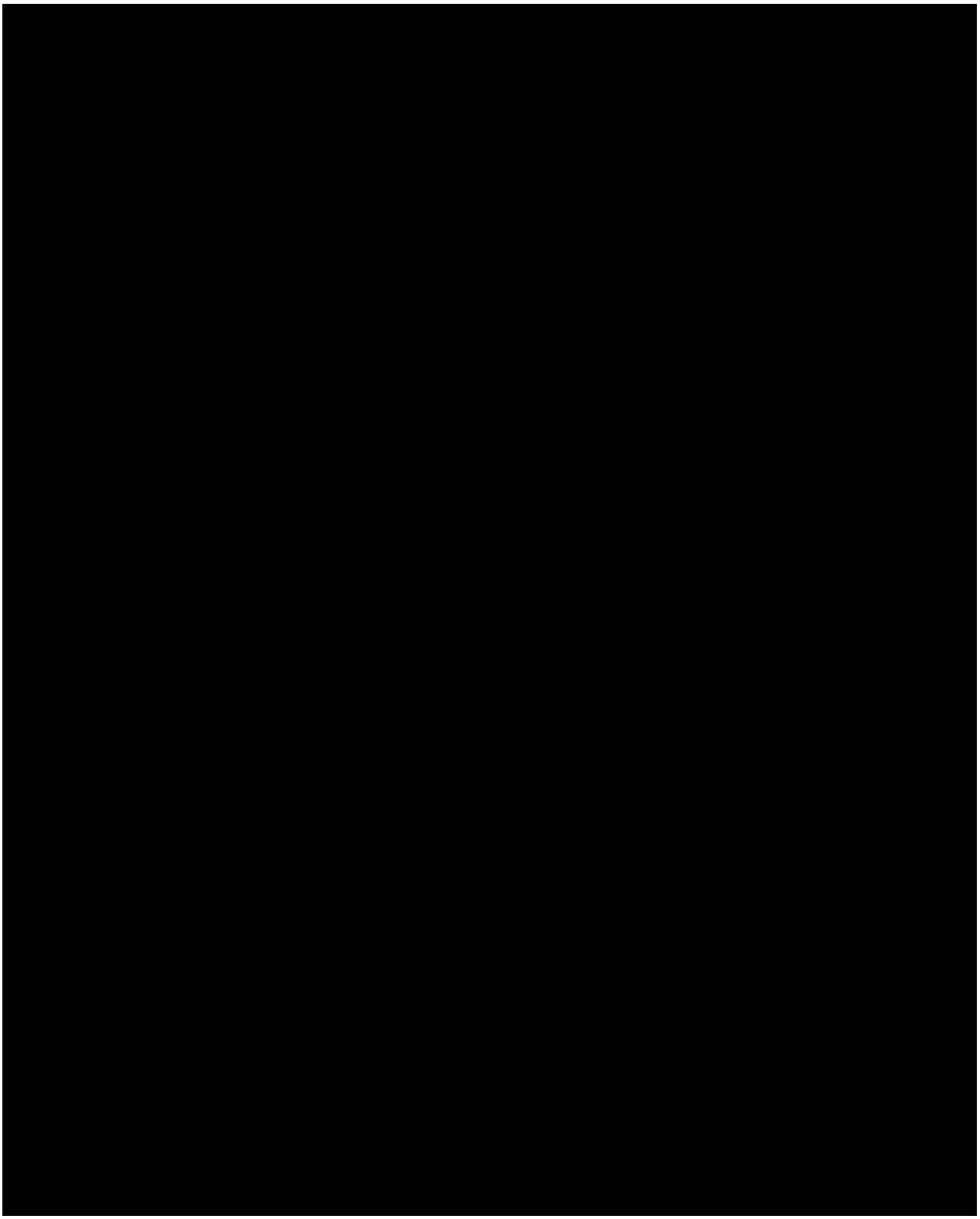

Figure 1 ODA FORM FLOW FOR A LISTING SERVICES CALL

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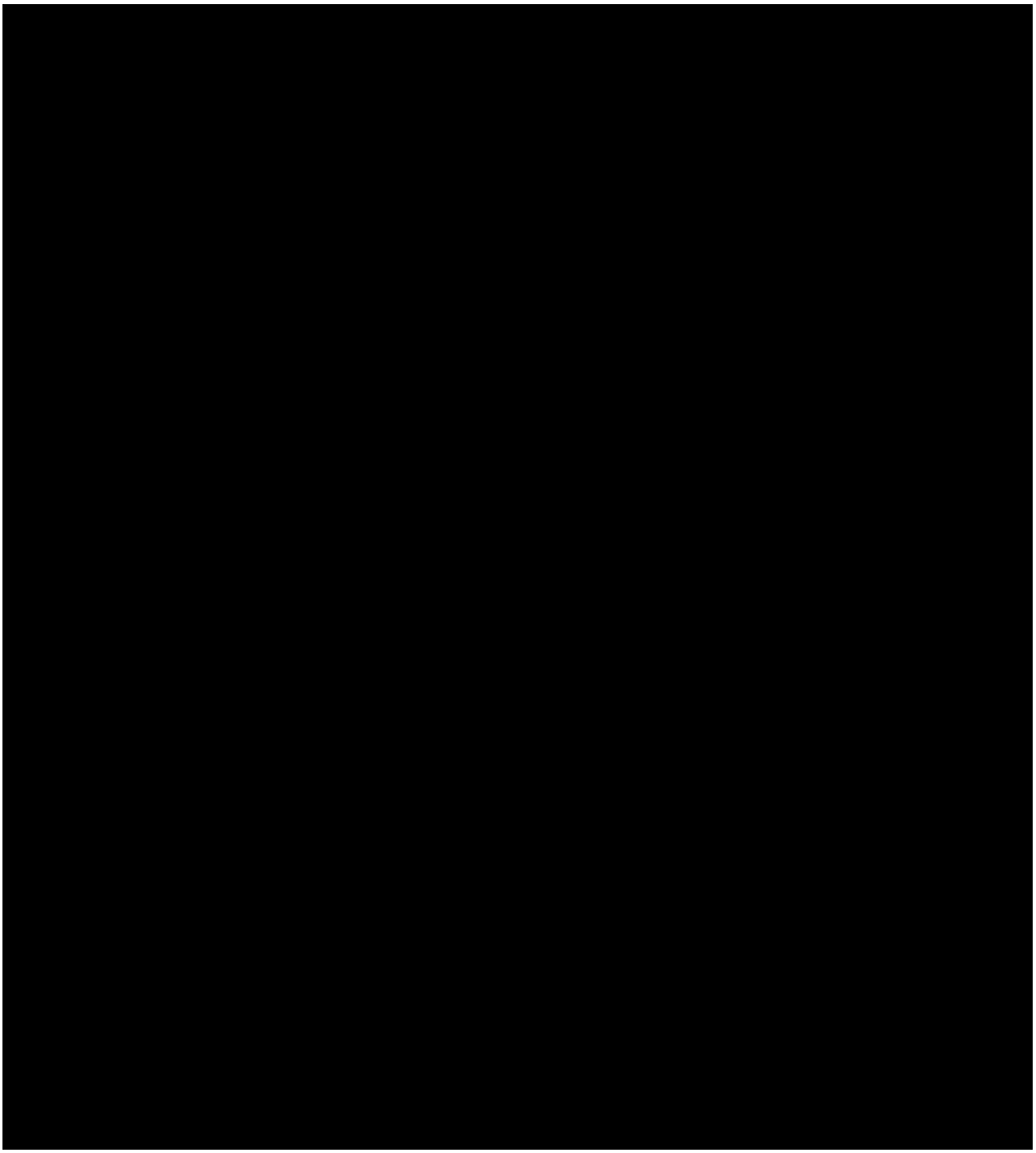

Figure 2 BASIC CONFIGURATION OF AN EXTERNAL INFORMATION SYSTEM

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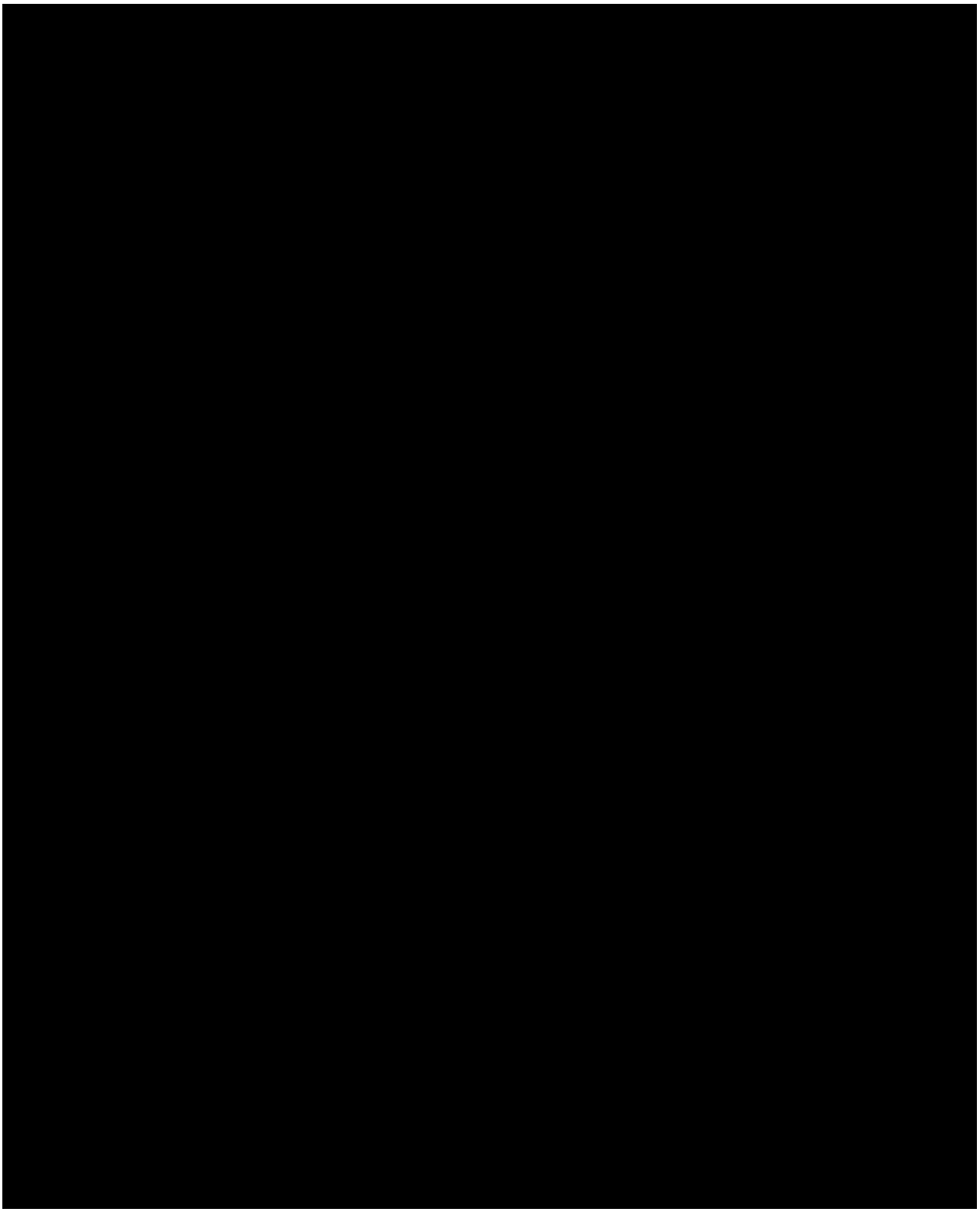

Figure 3 FORM FLOW FOR EIS TRANSLATIONS

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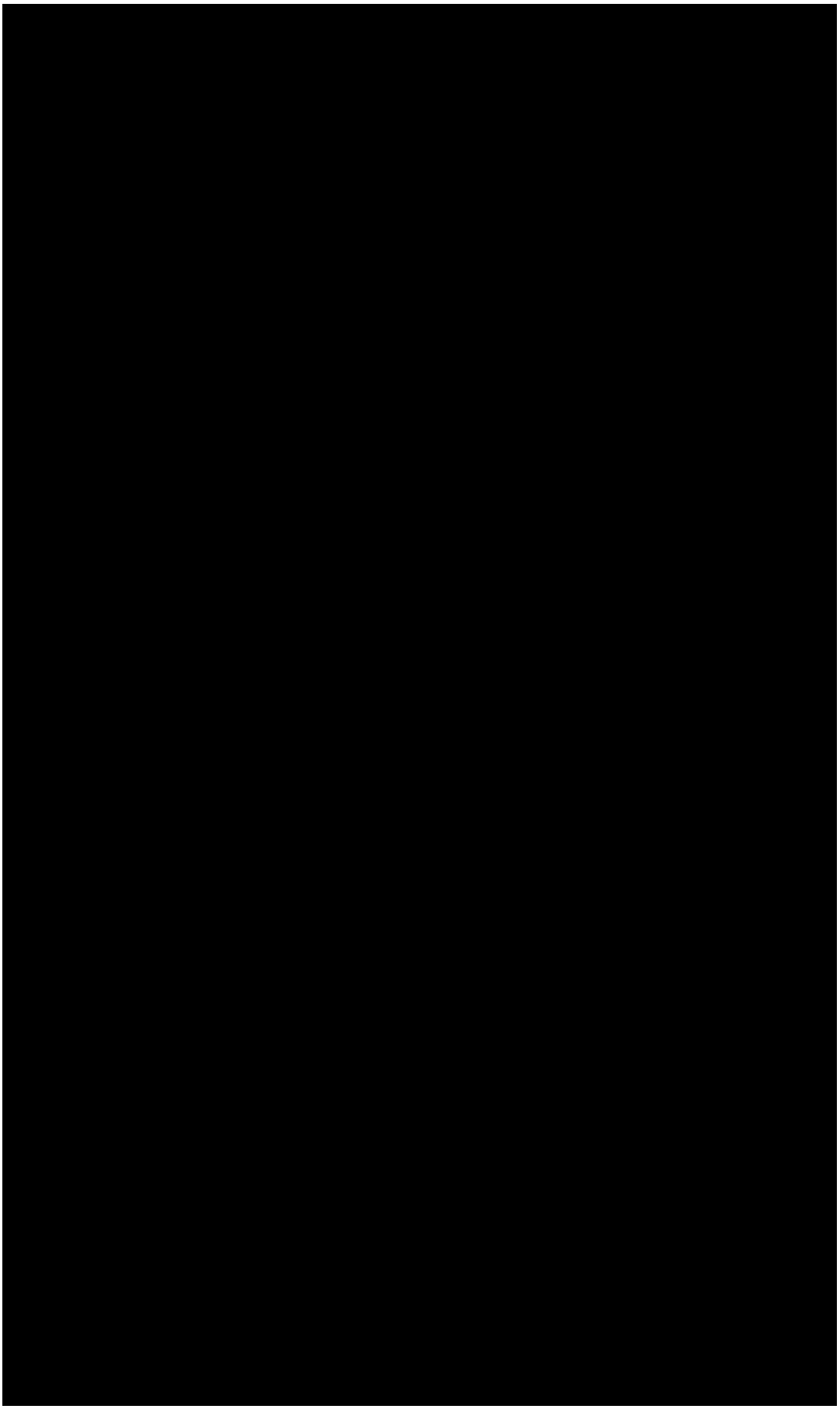

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Figure 4 CROSS CHECK FORM FLOW FOR SERVDEST IF RTE TYPE IS "RIXA"

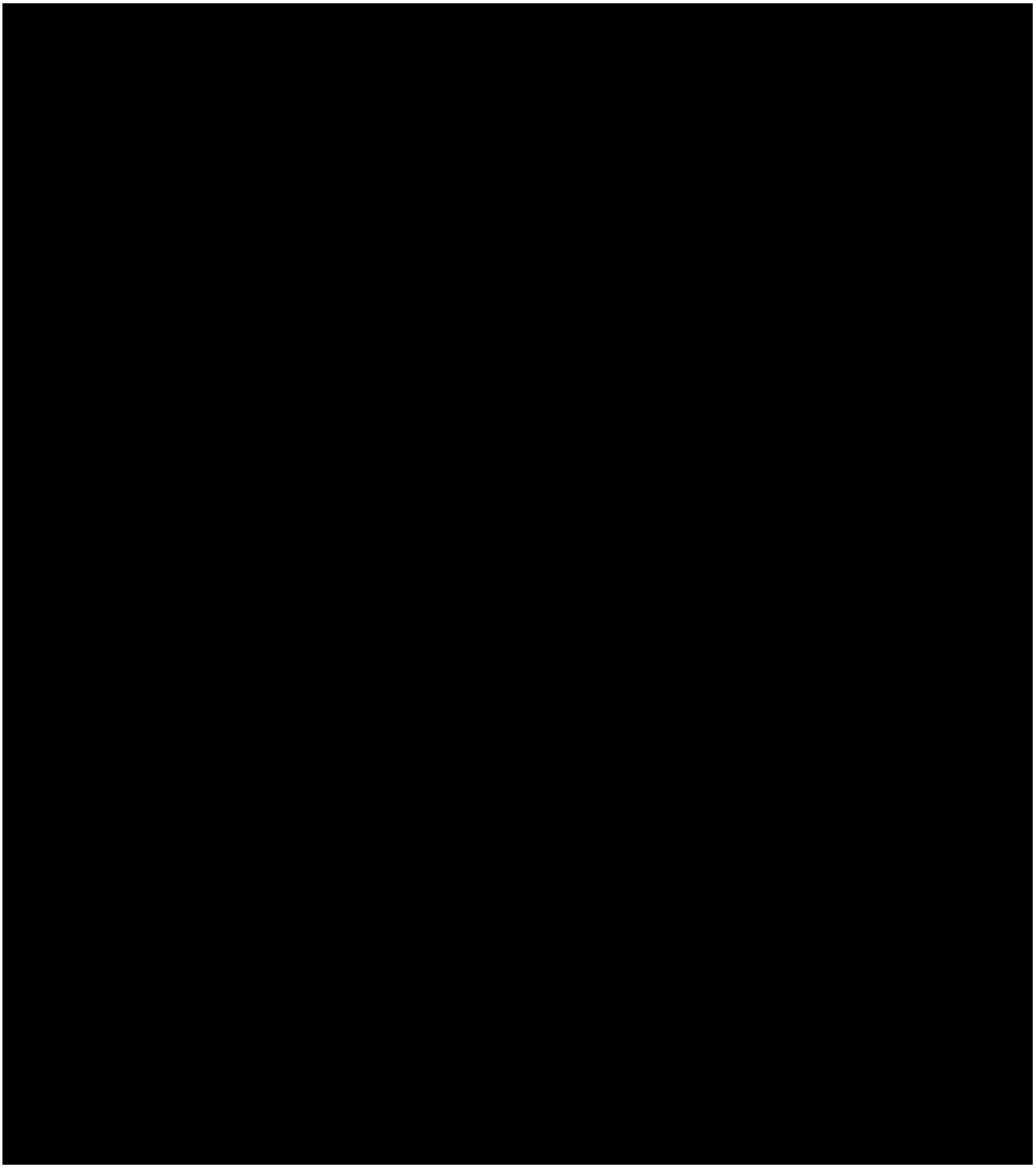

Figure 5 CROSS CHECK FORM FLOW FOR SERVDEST IF RTE TYPE IS "RIIA"

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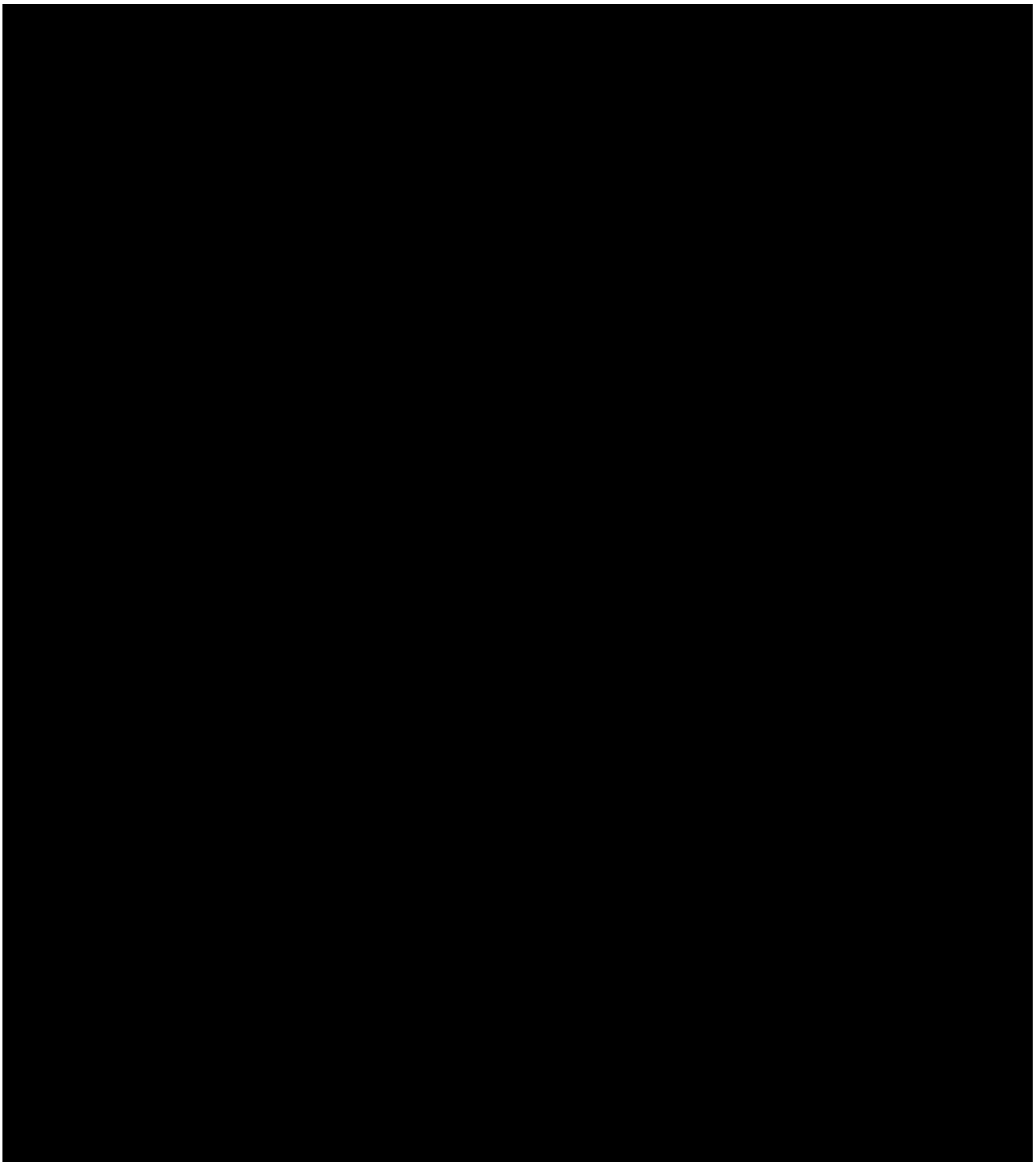

Figure 6 CROSS CHECK FORM FLOW FOR SERVDEST IF RTE TYPE IS "FIIA"

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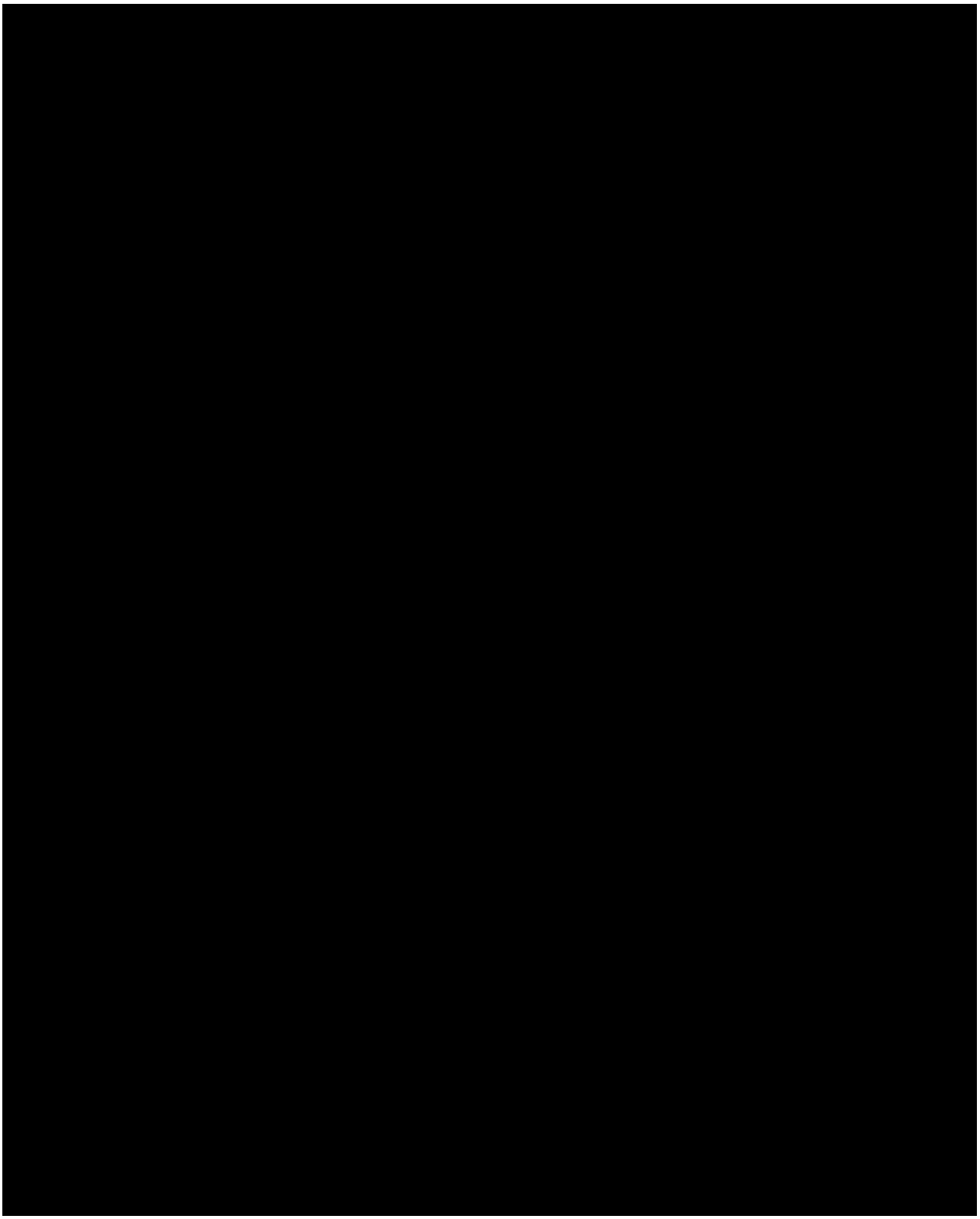

Figure 7 FORM FLOW FOR INTERCEPT SERVICES

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Figure 8 IBM EIS LISTING SERVICES FORM FLOW

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Figure 9 FORM FLOW FOR DIRECTORY ASSISTANCE CALL COMPLETION

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Figure 10 FORM FLOW FOR RECOGNITION OF CUSTOMER PROVIDED TERMINAL

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SEC. 3D: OSPS COMMERCIAL ACD (AUTOMATIC CALL DISTRIBUTION)

1. GENERAL

For 5E4(2) and later Software Releases, the CACD (Commercial Automatic Call Distribution) feature distributes incoming calls to ACD/MIS agent groups on a call-type basis in a way similar to call distribution for other (operator) serving teams. Typically, the different agent groups serve different listed directory numbers (800-xxx-xxxx or NPA-yyy-yyyy). The administrative module allocates the path from the incoming trunk group through the switching module, communications module, PSM (Position Switching Module) and APC (Agent Position Controller) to the longest-idle agent position in a particular serving team. A serving team is assigned to be a queue's principal or supporting serving team (see the Intraflow (5E5 and later Software Releases) description in this section). Up to 128 agent and operator serving teams are allowed. When all positions are busy, calls may be queued until a position becomes idle. Note that calls are not queued if:

- The maximum number of calls in the call queue has been exceeded, or
- The third level delay threshold (emergency announcement) has been exceeded.

2. ANNOUNCEMENTS

Announcements are triggered if the "expected answer delay" for queued calls exceeds delay thresholds assigned to each queue. Up to three delay level thresholds and three different announcements can be assigned per queue. The announcement is entered at the announcement machine, but selection of announcements and timing thresholds is administered via the MIS (Management Information System). The announcement circuits can be connected to any switching module, including the PSM.

3. AGENT POSITIONS

An agent interacts with a calling party through the voice path provided with the agent position. The agent can make outgoing calls and transfers, if permitted, but most calls are incoming. The position also provides a data path via the DSL so that an agent can interact with the OSPS software by pressing keys on the position and by observing data displayed by the terminal.

An agent position can be assigned to any agent serving team associated with a particular client. Agent positions receive calls only when an agent is logged in at the position, the position is in the "idle" condition and a call is distributed to that serving team. The status of an agent position changes as an agent interacts with the position and the supporting software in the following way:

- A position is "unoccupied" until an agent plugs a headset into the terminal and logs in using an agent ID number.
- A position changes from idle to busy when a call is distributed to it directly or from the queue.
- A position changes to made-busy when a make busy key is pressed on a logged-in terminal. New calls will not be received, but an existing call stays at the position until released. Pressing the make busy key a second time restores the idle status, and the position is ready to receive the next call, assuming that the existing call ended while the position was made-busy.
- Releasing from a call makes the position idle (unless the position has been made busy) and ready to receive the next call.
- A position changes back to "unoccupied" status when the headset is unplugged.

4. CALL EVENT LINK TO THE ACD/MIS

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As agents log on, receive calls, release from calls, make the position busy and log off, call event data is collected and sent over the 9600b/s asynchronous link to the ACD/MIS. Each PSM that routes ACD/MIS calls must have a link to the ACD/MIS (through the APC).

5. ACD/MIS COMPUTERS

Whether the ACD/MIS contains one or several computers, a major purpose is to process the call-event data and create administrative reports of agent performance, resource utilization, answer delay trends and other statistical and historical data. The reports enable an administrator to make decisions to more effectively use agents and facilities. Many reports can be displayed in color in graphic form on the supervisor workstation, allowing quicker comprehension of complex data than if the same data were printed as columns of statistics.

The MIS computers also provide controlled access to the RC/V (Recent Change and Verify) software to change agent assignments to serving teams, to queue attributes such as delay thresholds, to change the distribution of CALL TYPES to serving teams, to assign agent ID numbers, etc. The MIS is partitioned into local exchange carrier administrative areas controlled by the administrator for the telephone company and administrative areas controlled by the clients (who control only their own agents and facilities).

When only one client uses the CACD service, only one computer is required, although the client has the option of using a separate MIS computer located on customer premises. In a multiclient environment, the ECL (Event Control Link) computer on local exchange carrier premises serves two purposes: to distribute call-event data to the proper client's MIS computer and to allow access to the limited subset of the RC/V data allotted to each client.

6. ADMINISTRATIVE TERMINALS AND PRINTERS

The administrative terminal permits access by the LEC administrator to configure the ECL/MIS, assign IDs, allocate resources and set up the call-event links. Reports can be scheduled at the administrative terminal. Most reports can be viewed on the administrative terminal or sent to the printer. A second printer is provided to print error messages.

7. RC/V LINKS

The ECL computer is set up (through the administrative process) to allow access to a limited subset of recent change data for each client. The recent change data resides in the switch and is accessed through an input/output processor port. As each client changes agent assignments, etc., the change is transmitted via the RC/V link to the switch. The synchronous RC/V link operates at 4800 b/s.

8. SUPERVISOR WORKSTATIONS

Each ACD/MIS client has a supervisor workstation to administer the resources assigned to that client. Reports can be viewed on the workstation screen or sent to an attached printer.

9. INCOMING CALLS

An incoming CACD call appears on the switch as a seizure on an incoming trunk. The incoming digits for the called number are analyzed by digit analysis to determine the number's validity. If valid, the number is routed to CACD This telephone number can be:

- a POTS (Plain Old Telephone Service) termination to ACD/MIS.
- a POTS termination to ACD/MIS where the terminating telephone number is defined as providing free terminating line service. (Free line service are calls that are not billed. They can be from a class of lines, such as intraoffice, or from specified trunks to a line that is designated free.)
- an INWATS (Inward Wide Area Telephone Service) termination to ACD/MIS.

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The Office Data translations necessary to handle these three types of incoming calls are defined in the following sections.

9.1 POTS Termination

A POTS termination to CACD appears on the switch as a seizure on an incoming trunk. The incoming digits are analyzed using digit analysis to determine if the number is valid. If the terminating telephone number is valid, the call is routed to ACD/MIS. Table 1 provides a summary of the Office Data used in this process.

9.1.1 ODA FORMS

- DAS form (5300-1 Record)
- INDIT form (5309 Record)
- LDIT form (5300-3 Record)
- OBSTS form (5408 Record)
- OCTA form (5406 Record)
- OPCTO form (5407 Record)
- ORAR form (5405 Record)
- OSPSCT form (5404 Record)
- OSPSOA form (5403 Record)
- RAR form (5301 Record)
- STINFO form (5402 Record)
- TKGRP form (5202 Record)
- TRUNK form (5204 Record)

9.2 Translation Requirements

9.2.1 TKGRP form (5202 Record)

The incoming trunk group must be defined on the Trunk Group - TKGRP form. The individual Trunk members are defined on the Trunk Features and Assignments - TRUNK form (5204 Record). In addition to defining the characteristics of the incoming trunk, the TKGRP form provides the Digit Analysis Selector, DAS,and Screening Index Number, to be used for digit analysis, routing and charging.

9.2.2 DAS form (5300-1 Record)

The Digit Analysis Selector - DAS form is looked at next. The key to this form is the DAS obtained from the TKGRP form. The DAS form provides the INDIT (Incoming Trunk Preliminary Digit Interpreter Table) number, INC. TRUNK PRELIMINARY DIT and the Local Digit Interpreter Table number, LOCAL DIT, which are the keys for the INDIT and LDIT forms.

9.2.3 INDIT form (5309 Record)

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The Incoming Trunk Preliminary Digit Interpretation - INDIT form is looked at next. The keys to this form are the INC. TRUNK PRELIMINARY DIT determined in the DAS form and the incoming digits. For ACD/MIS call seizures, the entry on this record normally indicates that no digits should be deleted and that translation continues with the LOCAL DIT in the LDIT form. At this point, the ROUTE INDEX and CODE INDEX could be specified on the INDIT form and digit analysis would be completed.

9.2.4 LDIT form (5300-3 Record)

If the INDIT form indicates that the LDIT should be used, the Local Digit Interpretation Table - LDIT form is looked at next. The keys to this form are the LOCAL DIT determined in the DAS form and the incoming digits. The CALL TYPE, TYPE OF CI CALL, CODE INDEX and ROUTE INDEX are determined from the LDIT form. If more than one incoming digit string starts with the same digits (e.g. the incoming digits could be 312-979-3456 or 312-1234), then this record should indicate that there is a conflict. The Conflict Resolution entries on the LDIT form (5300-5 Record) are used. Conflict resolution is based on the number of digits entered and is used to define the same information as was found on the LDIT form (5300-3 Record).

9.2.5 RAR form (5301 Record)

A form entry in the Rate and Route - RAR form is required next, although it may not be used by ACD/MIS. The keys for the RAR record are the Screening Index Number, obtained from the TKGRP form and the CDI (CODE INDEX) (on the RAR form) obtained from either the INDIT form (5309 Record) or the LDIT form (5300-3 Record). If the INDIT was used, then a prefix PFX of "NONE" is required on the RAR form. A RAR form PFX entry is required to satisfy the cross checks associated with the OSPS Rate and Route Record - ORAR form (5405 Record).

Once digit analysis has verified that the number is valid and has determined the CODE INDEX and ROUTE INDEX, screening data is looked at to determine if the incoming call is destined for CACD.

9.2.6 ORAR form (5405 Record)

The first form to be looked at is the OSPS Rate and Route - ORAR form. The key fields for the ORAR form are the Screening Index Number, which is obtained from the TKGRP form (5202 Record) and the CDI (on the RAR and ORAR forms) obtained from either the INDIT form or the LDIT form. If the call is an ACD call and the CODE INDEX came from the INDIT form, then a prefix, PFX, of "NONE" should be entered in the ORAR form.

The ORAR record provides either a Normalized Office Code, NOC, used as one of the keys for the OSPS Call Type Assignment - OCTA form, (5406 Record) or a pre-call identification number, OSPS CALL ID, used as one of the keys for the OSPS Call Type for Trunk Originations - OPCTO form (5407 Record).

The form to be looked at next is determined by the entries on the ORAR form. If a NOC is specified on the ORAR form, then the OCTA form will be looked at next. Otherwise, if an OSPS CALL ID is specified, screening will proceed directly to the OPCTO form.

9.2.7 OCTA form (5406 Record)

If a NOC was specified on the ORAR form, the OSPS Call Type Assignment - OCTA form will be looked at next. The keys for the OCTA form are the OPER NOC obtained from the ORAR record and the last four digits of the incoming digit string LOCDN. The OCTA record provides a pre-call identification number (OSPS CALL ID) used as one of the keys for theOSPS Call Type for Trunk Originations Record (5ODA record number 5407).

9.2.8 OPCTO form (5407 Record)

The OSPS Call Type for Trunk Originations - OPCTO form is looked at next. The key fields for the OPCTO form are the OSPS CALL ID obtained from either the ORAR form or the OCTA form and the incoming

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TGN (Trunk Group Number) obtained from the TKGRP form.

Optionally, a value of 9999 may be entered as the trunk group number when screening of incoming calls by trunk group is not desired. An entry of 9999 designates any incoming trunk group.

The OPCTO form provides an OSPS CALL TYPE used as a key for the OSPS Call Type Parameters - OSPSCT form (5404 Record) and a BST DISPLAY INDEX used as a key for the OSPS Basic Services Terminal Seizure - OBSTS form (5408 Record).

9.2.9 OSPSCT form (5404 Record)

The OSPS Call Type Parameters - OSPSCT form is looked at next. The key for the OSPSCT form is the OSPS CALL TYPE obtained from the OPCTO form. This form defines the Call Type and is used to assign serving teams, delay announcements and to define other parameters associated with Call Types. Fields to be noted on this form are the operator type field, OPER TYPE, which must be set to "DA" and the CACD Call Type field (AUTO CALL DIST?) which must be set to a "Y". The SERVING TEAM provided by the OSPSCT record is used as a key for the OSPS Serving Team Information - STINFO form (5402 Record).

9.2.10 OBSTS form (5408 Record)

The OSPS Basic Services Terminal Seizure - OBSTS form will be used when the incoming call seizes an ACD/MIS agent's position. This form defines the text to be displayed at the agent's position when an incoming call seizes the position.

9.2.11 STINFO form (5402 Record)

The OSPS Serving Team Information - STINFO form defines the serving team that will service a Call Type. Fields to be noted on this form are the operator type field, OPER TYPE, which must be set to "DA" and the ACD/MIS serving team field, AUTO CALL DIST?, which must be set to a "Y".

9.2.12 OSPSOA form (5403 Record)

The OSPS Operator Assignment - OSPSOA form is used to define ACD/MIS agent login ids, assign the agent to a serving team and provide parameters which define valid agent actions. A field to be noted on this form is the operator type field, OPER TYPE, which must be set to "DA".

9.3 Free Line Termination

A Free Line termination to CACD appears on the switch as a seizure on an incoming trunk, just like a POTS termination to ACD/MIS. The incoming digits are analyzed using digit analysis to determine the numbers' validity. If the terminating telephone number is valid, the call is routed to ACD/MIS.

A Free Line termination to ACD/MIS is defined by:

- Setting the FREE ANS field on the TKGRP form (5202 Record) to "N" to indicate that answer supervision is not to be returned when completing to a free line, and
- Assigning a Charge Index number, via the appropriate RAR form (5301 Record), where the AMA CALL TYPE field on the CGIDX form (5302-1 Record) is set to "FREE". The keys for the RAR record are the Screening Index Number, obtained from the TKGRP form (5202 Record), the CODE INDEX, obtained from either the INDIT form (5309 Record) or the LDIT form (5300-3 Record) and a PREFIX, PFX, of "NONE" since the INDIT was used.

When defining a telephone number terminating to ACD/MIS as providing free line service, ACD/MIS Originating Treatment will not relay an answer signal over the incoming trunk.

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9.4 INWATS Termination

An INWATS termination to CACD appears on the switch as a seizure on an incoming trunk, much like a POTS termination to ACD/MIS. The incoming digits are analyzed using digit analysis to determine the numbers' validity. If the terminating telephone number is valid, the call is routed to ACD/MIS. The same Office Data is required to route an INWATS termination to ACD/MIS as is required to route a POTS termination to ACD/MIS. This data was described earlier in the "POTS Termination to CACD" section. Additional data is required to define the incoming call as an INWATS termination to ACD/MIS. Table 1 provides a summary of the Office Data used in digit analysis, routing and charging. Table 2 provides a summary of the additional Office Data used to route an INWATS termination to ACD/MIS.

After completing digit analysis, routing and screening of the incoming digits, INWATS terminations to ACD/MIS are routed through a Simulated Facility Group, SFG, before being routed to a ACD/MIS agent. Routing the call through an SFG serves three purposes:

- the SFG is used to limit the total number of call appearances terminating to the ACD/MIS INWATS telephone number,
- the SFG can be used to provide a billing number for all incoming calls terminating to the INWATS telephone number and
- optionally provide the ability to overflow from one SFG to another.

Allowing one SFG to overflow to another effectively provides the ability to support WATS band overflows. When populating data to provide for SFG overflows, a billing telephone number should be assigned to each SFG to insure that calls are billed to the appropriate telephone number.

The following office data is used only to define the terminating INWATS telephone number and is not used during the routing of an ACD/MIS call.

9.4.1 ODA Forms

- CGIDX form (5302-1 Record)
- HGRPAS form (5115 Record)
- LCC form (5306 Record)
- LINE form (5109 Record)
- MCRTIDX form (5304 Record)
- NOC form (5501 Record)
- PFAINWT form (5609-4 Record)
- PFASFG form (5609-3 Record)
- RAR form (5301 Record)

9.5 Translation Requirements

9.5.1 NOC form (5501 Record)

The Normalized Office Code - NOC form is used to define an Office Code and to assign it a Normalized Office Code. This record also assigns a default ROUTE INDEX and CHARGE INDEX to be used for

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routing to the Regular Intercept, Blank Number, Out-of-Service and Deny Termination treatments. The key for the NOC record is the OFFICE CODE.

9.5.2 LCC form (5306 Record)

The Line Class Code - LCC form is used to define a Line Class Code on the switch. The keys for the LCC record are the LINE CLASS CODE and the RATE AREA number. An LCC is assigned to a telephone number and provides routing and service information. For INWATS telephone numbers terminating to ACD/MIS the CLASS OF SERVICE should be assigned as Individual, "INDIV" and the TERMINATING TREATMENT should be assigned the value "INWATS". Therefore, the LCC record is used to assign an INWATS terminating treatmentto a telephone number.

9.5.3 LINE form (5109 Record)

The Telephone Number - LINE form is used to define the Office Equipment Number and features for each telephone number in a switch. The key for the LINE record is the seven-digit local telephone number. Fields to be noted on the LINE record are the RAX and LCC fields used to assign a Rate Area and Line Class Code, respectively, to the telephone number. When defining INWATS telephone numbers terminating to ACD/MIS, the LCC defined in step 2 would be assigned to the ACD/MIS telephone number. In addition, the telephone number must be assigned an analog-type Line Equipment Number, LEN, in the OE TYPE and OE NUMBER fields. No calls would ever terminate to this LEN but it could be used to originate calls, if a station set was used, although doing so is not recommended.

The routing of an INWATS termination to ACD/MIS continues and the following Office Data is used in the routing of the call:

9.5.4 RAR form (5301 Record)

The first form to be looked at is the Rate and Route - RAR form. The keys for the RAR record are the Screening Index Number, obtained from the TKGRP form (5202 Record), the CODE INDEX, obtained from either the INDIT form (5309 Record) or the LDIT form (5300-3 Record), and a PREFIX, PFX, of "NONE" since the INDIT was used. The RAR record is to be populated such that the Route Index field, RTI, is left blank. Instead, the Office Code of the ACD/MIS telephone number is entered in the NXX field and a Charge Index number is entered in the CHGI field. The Office Code and Charge Index number must have been previously defined using the NOC form (5501 Record) and the CGIDX form (5302-1 Record), respectively. Entering an Office Code in the NXX field indicates that special directory number translations are to be done for calls terminating to this telephone number.

9.5.5 CGIDX form (5302-1 Record)

The Charge Index Expansion - CGIDX form is looked at next. The key for the CGIDX form is the Charge Index number, CHARGE INDEX, obtained from the RAR form (5301 Record). This form provides charging, or billing, information for the call.

9.5.6 HGRPAS form (5115 Record)

The Hundreds Group(s) Assignment - HGRPAS form is looked at next. The keys for the HGRPAS form are the OFFICE CODE, and the THOUSANDS DIGIT and HUNDREDS DIGIT of the terminating telephone number. The Thousands Digit and the Hundreds Digit are the fourth and third digits, respectively, of the local telephone number. The HGRPAS form is used to assign a routing module for a hundreds group. Once the routing module has been determined, the originating Switch Module will transfer control for the routing of the incoming call to the designated routing module.

9.5.7 PFAINWT form (5609-4 Record)

The INWATS Simulated Facility TN - PFAINWT form is looked at next. The key for the PFAINWT form is

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the seven-digit local telephone number. The local telephone number must have been previously defined using the LINE form (5109 Record). The PFAINWT form provides an MC ROUTE INDEX used as a key for the BRCS - MC Route Index Expansion - MCRTIDX form.

9.5.8 MCRTIDX form (5304 Record)

The BRCS - MC Route Index Expansion - MCRTIDX form is looked at next. The key for the MCRTIDX form is the MC ROUTE INDEX obtained from the PFAINWT form (5609-4 Record). The MCRTIDX form is to be populated such that the MC ROUTE TYPE field is set to "SFG", and the SFG NUMBER field contains a valid SFG number. The SFG NUMBER serves as the key for the Simulated Facility Group - PFASFG form (5609-3 Record). The NEXT MC ROUTE INDEX field should contain the key for an MCRTIDX form where the MC ROUTE TYPE is set to "REORD" in cases where overflow from one SFG to another is not desired. When overflow from one SFG to another is desired, then the NEXT MC ROUTE INDEX field should contain the key for the MCRTIDX form which routes the next SFG.

9.5.9 PFASFG form (5609-3 Record)

The Simulated Facility Group, PFASFG form, is looked at next. The key for the PFASFG record is the SFG number, SFG NBR, obtained from the MCRTIDX form (5304 Record). The PFASFG form defines the characteristics of the SFG, such as the SFG TYPE which should be set to "INWATS", the SFG size and the Special Bill Number (if desired). The Queue Allowed field should be set to "N".

At this point, control of the call is returned to ACD/MIS Originating If an idle SFG member was found and allocated to the incoming call, the call will be routed to a ACD/MIS agent. Otherwise, the incoming call is blocked and the incoming call is connected to the reorder tone.

10. OUTGOING EXTERNAL CALLS

Currently, an CACD agent originates an outbound external call by pressing the DIAL key, followed by the external network access code (#9), the desired external number and the ENTER key. Digit analysis is done on the external number to determine the number's validity. If it is valid, the number is routed to its destination. This process is described below in the "Outbound External Call Origination" section.

To provide speed calling capabilities and to allow for standard billing records, outbound external calls may be routed over loop around (hair-pin) trunks. The section "Loop Around Trunk Interactions" presents the information needed to allow for this.

The section entitled "Example" presents an example of two-digit speed calling.

10.1 Outbound External Call Origination

After the agent has entered an external number, digit analysis is done to determine the number's validity. The following office data is used in this process.

10.1.1 ODA Forms

- CGIDX form (5302-1 Record)
- DAS form (5300-1 Record)
- ICF form (5305 Record)
- INDIT form (5309 Record)
- LDIT form (5300-3 Record)
- OSPSOA form (5403 Record)

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- PDIT form (5300-2 Record)
- RAR form (5301 Record)
- RTIDX form (5303 Record)
- STINFO form (5402 Record)
- TKGRP form (5202-1 Record)

10.2 Translation Requirements

10.2.1 OSPSOA form (5403 Record)

The agent's serving team is determined. Using the agent's login id as the key, the OSPS Operator Assignment - OSPSOA form is checked to determine the serving team the agent belongs to.

10.2.2 STINFO form (5402 Record)

Using the agent's serving team number as the key, the OSPS Serving Team Information - STINFO form is checked. Assuming that this form says that the agent is allowed to originate calls, the following information from that form is needed: Digit Analysis Selector, Screen Index, pre-subscribed Carrier and Carrier Dialing Permission.

10.2.3 DAS form (5300-1 Record)

Using the DIG ANALYSIS SEL from the STINFO form as the key, the INDIT (Incoming Trunk Digit Interpreter Table) and LDIT (Local Digit Interpreter Table) are determined from the Digit Analysis Selector - DAS form. If the agent is allowed to dial a prefix or a carrier access code, a PDIT (Prefix/Feature Digit Interpreter Table) could be specified rather than an INDIT.

10.2.4 INDIT form (5309 Record)

This record is used to define the initial digit analysis and subsequent treatment of inpulsed digits from all Incoming and Two-Way Trunks based upon the initial digits received.

10.2.5 PDIT form (5300-2 Record)

Depending on whether an INDIT or PDIT is specified, one of the following 2 steps is executed.

- Using the INDIT determined above and the external number entered by the agent, the Incoming Trunk Digit Interpretation - INDIT form is looked at next. For OSPS ACD/MIS agent calls, the entry on this record normally indicates that no digits should be deleted and that translation continues with the LDIT. A route index and code index could be specified at this point and digit analysis would have completed.

Alternately,

- Using the PDIT determined above and the external number entered by the agent, the Prefix/Feature Digit Interpretation - PDIT form is looked at next. Using this form, a carrier access code (e.g., 10288) and/or a prefix (0 or 1) entered by the agent can be identified. After doing this, the translation continues with the LDIT.

10.2.6 LDIT form (5300-3 Record)

If the previous form indicates that the LDIT should be used, the CALL TYPE, TYPE OF CI CALL, CODE

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INDEX and ROUTE INDEX are determined from the Local Digit Interpretation Table - LDIT form. The keys to this form are the LOCAL DIT determined in the DAS form and the external number. If more than one external number starts with the same digits (e.g., the agent could dial 312-979-3456 or 312-1234), then this record should indicate that there is a conflict. The Conflict Resolution entries on the LDIT form (5300-5 Record) are used. Conflict resolution is based on the number of digits entered and is used to define the same information as was found on the LDIT form (5300-3 Record).

10.2.7 ICF form (5305 Record)

If the agent had entered a carrier access code or if the external number entered required a carrier, carrier specific routing information is needed. Using the agent entered carrier access code, or the pre-subscribed carrier, CARRIER ID, from the OSPS Serving Team Information - STINFO form (5402 Record), a carrier specific ROUTE INDEX and CODE INDEX are found from the InterLATA Carrier Feature - ICF form. This ROUTE INDEX, CODE INDEX pair is used in routing.

Once digit analysis has verified that a number is valid and has determined the CODE INDEX and ROUTE INDEX, the agent entered external number is routed to. The following office data is used in this process:

10.2.8 RAR form (5301 Record)

Using as keys the CODE INDEX previously determined, the prefix, PFX, from the PDIT form (5300-2 Record), or a prefix of "NONE" if the INDIT is used, and the SCREEN INDEX from the STINFO form (5402 Record), a Charge Index, CHGI and a potentially different Route Index, RTI, are specified on the Rate and Route - RAR form. If a Route Index is specified on the form, it is used in routing.

If the information from digit analysis defines this call as terminating at a line, that data must be changed at this point so that the call routes over a trunk.

10.2.9 CGIDX form (5302-1 Record)

The CHARGE INDEX is used as the key to the Charge Index Expansion - CGIDX form. This gives the charging information for the call.

10.2.10 RTIDX form (5303 Record)

Using the ROUTE INDEX as the key, the trunk group to route out of, the type of signaling to use and the digits to delete and/or prefix are found from the Route Index - RTIDX form.

10.2.11 TKGRP form (5202-1 Record)

The characteristics of the outgoing trunk group are found for routing from the Trunk Group - TKGRP form, using the Trunk Group Number, TGN, as the key. This trunk group must be either outgoing or two-way.

10.3 Billing Outgoing Calls From Agents

The calls to and from the agent positions are supported primarily by the same software as for DA service. Traditionally, because no AMA records are generated, outgoing calls from DA operator positions are not charged. Optionally, the calls can be charged using the following procedure. When ACD/MIS service is added, a means for charging outgoing calls is required. One or more loop-around trunks are allocated to each ACD/MIS client, and call routing is administered so that all charged outgoing calls are automatically routed through a loop-around trunk. The routing cannot be changed by the ACD/MIS client. Calls routed in this way appear as incoming calls to the same 5ESS Switch and are billed to the ACD/MIS client.

An agent outbound external call may be routed over a loop around trunk to associate a billing number with an agent call or to support speed dialing.

10.3.1 Billing Number

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This section describes the office data used when this call arrives back in the 5ESS Switch.

10.3.2 TKGRP form (5202-1 Record)

The incoming end of the loop-around trunk group must be defined in the Trunk Group, TKGRP form. The Trunk Class, TRKCLS, for this trunk must be either "PF" or "PFLASH". Assuming no speed calling or BRCS (Business and Residence Custom Services) features are associated with this incoming trunk group, the DAS and Screen Index, found on this form are used in digit analysis, charging and routing. For billing purposes, the BILLING DN on the form is used.

10.3.3 Speed Calling

This section describes the office data used when this call arrives back in the 5ESS Switch.

10.3.4 ODA Forms

- ADLIST form (5601-9 Record)
- IDFD form (5601 Record)
- IDPDCA form (5606-1 Record)
- IDPGP form (5601-4 Record)
- IDPTPA form (5601-8 Record)
- TKGRP form (5202-1 Record)
- TKGRPFA form (5206 Record)
- TRUNK form (5204 Record)
- TRUNKFA form (5205 Record)

10.4 Translation Requirements

10.4.1 TKGRP form (5202-1 Record)

The incoming end of the loop-around trunk group must be defined in the Trunk Group - TKGRP form. The Trunk Class for this trunk must be either "PF" or "PFLASH".

Before digit analysis is done for the number received over this trunk group, a check is made to see if any BRCS (Business and Residence Custom Services) features are assigned to the trunk group member or the entire trunk group. One BRCS feature is an IDP (Individual Dialing Plan). If BRCS features are assigned to all members of the trunk group, then the BRCS field on the TRKGRP form (5202-1 Record) for the trunk group is set to "Y".

10.4.2 TRUNK form (5204 Record)

Alternately, if BRCS features are to be assigned to trunk group members individually, allowing individual members to have different features, then the BRCS field on the TRUNK form for the trunk group member is set to "Y". Since a speed call could arrive over any member of the trunk group, the entire trunk group should normally show BRCS features as assignable.

10.4.3 TRUNKFA form (5205 Record)

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This 5205 Record defines information for Feature Assignment keyed by TRKGRP and TKMEMB.

10.4.4 TKGRPFA form (5206 Record)

Assuming IDP is used, the feature name associated with the IDP feature must be determined. There are two methods through which this is done: the first is for individual trunk group members, while the second is for an entire trunk group. The methods use data as follows:

- To determine what features are assigned to a particular trunk group member, the Feature Assignment Trunk Group Member Number - TRUNKFA form is checked, using the Trunk Group, TGN and Member Number, MEMB, as keys. Since 2 digit speed calling is desired, an IDP pre-constructed or constructed feature name could be specified.

- To determine what features are assigned to the entire trunk group, the Feature Assignment Trunk Group, TKGRPFA form, is checked, using the TRUNK GROUP Number as the key. Since 2 digit speed calling is desired, an IDP pre-constructed or constructed feature name should be specified.

10.4.5 IDPTPA form (5601-8 Record)

This record is used for assigning IDP (Individualized Dialing Plan) to trunks.

10.4.6 IDFD form (5601 Record)

Now that the IDP feature name is determined, the individualized dialing plan name, the abbreviated dialing list name and other information about the feature is needed. Based on whether a pre-constructed or constructed feature is used, this data is found in one of two places.

- If a pre-constructed IDP feature is used, the IDP data must be specified on a per Trunk Group Member basis. This is done using the IDP Trunk Parameter, IDPTPA form. Using the TRUNK GROUP, MEMBER number and the pre-constructed feature name, ID FEATURE, this record indicates if the IDP is active, if 1 and/or 2 digit speed calling is part of the feature and gives the IDP group name along with AD1 (1 digit abbreviated dialing) and AD2 lists names.

- For a constructed feature, the Individualized Dialing Feature Definition, IDFD form is checked, using the IDP constructed feature name specified in the previous step. This record indicates if an IDP is active, if 1 and/or 2 digit speed calling is part of the feature, and gives the IDP group name along with AD1 and AD2 group names. The speed calling list names are stated on this form since they are shared lists.

10.4.7 IDPGP form (5601-4 Record)

Dialing error treatment is defined using the Individualized Dialing Plan Group Definition - IDPGP form. This also specifies the default intraLATA carrier.

10.4.8 IDPDCA form (5601-1 Record)

The incoming digits are analyzed. Using the IDP group name from the IDFD form (5601 Record) or the IDPTPA form (5601-8 Record) and the incoming digits, the Individualized Dialing Plan Dialed Code Assignment - IDPDCA form is consulted. The ACTION field indicates how the incoming digits should be treated, while the DIALING STATE indicates if the digits alone specify how to treat the number. For 2 digit speed calling, an action of "AD2USE" should be assigned. If more than one ACTION starts with the same digits, then the correct DIALING STATE is "CONFLCT", and the Individualized Dialing Plan Conflict Resolution Entries section of the IDPDCA form (5601-2 Record) is consulted.

10.4.9 ADLIST form (5601-9 Record)

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Now that the 2-digit speed calling code has been identified, the number actually wanted is determined from the Abbreviated Dialing List - ADLIST form. The keys to this are the AD LIST NAME from the IDFD form (5601 Record) or the IDPTPA form (5601-8) form and the 2-digit speed dialing code.

This newly determined number is then run through digit analysis and routing.

10.5 Example

For this example, agent 1234 dials the external two-digit speed calling number 22 through the DIAL #9 22 ENTER dialing sequence. In addition to speed calling, 22 could also be the first two digits of a valid four-digit extension number or a seven-digit external number. This number is sent out over a loop-around trunk, a billing number is associated with the call, and the speed calling number is replaced with the actual number of 1-312-979-0000. This example uses a pre-constructed IDP feature that is assigned to the individual members of the loop-around trunk group.

Figure 3 illustrates digit analysis being done on the agent entered number. Agent 1234 is identified as belonging to serving team 6. A DAS of 9 is used for outgoing external numbers dialed by agents on serving team 6. Associated with the DAS of 9 are an INDIT of 4 and an LDIT of 1. The INDIT deletes no digits and just passes the number to the LDIT. In the LDIT, there is a conflict because the digits 22 represent a valid 2-digit number and the first 2 digits of a 4- or 7-digit number. In the conflict resolution record, it is determined that 22 by themselves comprise a valid normal number, have no carrier interaction, use a code index of 400 and a route index of 700. Because these dialed digits have a CI TYPE of NONCI, no carrier is expected or allowed and the 5305 form is not used.

Figure 4 illustrates this call routing to a trunk. Using the screen index for serving team 6 (to which agent 1234 belongs), the code index of 400 and a prefix of NONE, the charge index of 1 is determined. Since the route index value of REGL is specified, the previously obtained route index of 700 is used. The charge index shows this to be a free call. The route index of 700 translates into routing out over trunk group 700 using traditional signaling and deleting/prefixing no digits. Trunk group 700 is an outgoing LTOLLCON trunk. The dialed digits of 22 are outpulsed over this trunk using TT (not MF) signaling.

Figure 5 illustrates how this call is handled when it arrives at the other end of the loop around trunk. The outgoing end of this hair-pin is 700 and the incoming end is 800. Trunk 800 has a billing DN of 999-0000 assigned to it. In addition, BRCS features can be assigned to it. This call arrives over incoming member 2, which has the /IDCTX10 and /TGUUA pre-constructed features assigned to it. The /IDCTX10 feature has an IDP associated with it (the CACDGP IDP group), has a shared 2-digit speed dialing list (the CACDAD2 abbreviated dialing list) and inhibits charging for calls completed within the terminal group. The /TGUUA feature is used to define terminal group permissions. The CACDGP group shows that there is a conflict with numbers starting with 22, and, as the conflict record shows, digits 22 by themselves mean that 2-digit speed dialing is wanted. A 4-digit number starting with 22 is treated as intercom call to another member of the same terminal group. Longer sequences starting with 22 are translated using the office dialing plan. The CACDAD2 list shows that 22 represents the digits 13129790000.

This new number is now analyzed, first using the IDP, and then using the office dialing plan.

11. INTERFLOW

The Interflow feature is available with 5E5 and later Software Releases. The OSPS Interflow feature allows for immediate, scheduled or permanent close down of one, some or all operator serving teams at an OSPS. Call traffic requiring operator assistance that is otherwise handled by the closed serving teams is subsequently interflowed to another OSPS. This section describes the Interflow feature as it applies to ACD/MIS calls. For complete information on the Interflow feature for offices providing Directory Assistance services, refer to the DIRECTORY ASSISTANCE OFFICES description in this section. For complete information on the Interflow feature for T&A (Toll and Assistance) calls, refer to the TOLL AND ASSISTANCE OFFICES description in this section.

For the ACD/MIS application, Interflow is accomplished via rerouting the calls over analog or digital

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facilities to other operator switches for operator services and call handling. In the course of rerouting the call, data can be populated such that the dialed digits received are outpulsed, different digits than those received are outpulsed, or some digits are outpulsed in the case where no digits were received. An operator switch that receives a rerouted call has no indication that the call has been rerouted, therefore, caution should be taken when populating the data such that rerouted calls do not end up back at the switch that initiated the reroute.

12. INTERFLOW ACTIVATION/DEACTIVATION

Interflow activation and deactivation allows a user to turn Interflow "on" or "off" on an immediate or scheduled basis. Activation and deactivation of Interflow may be accomplished via Recent Change only. Interflow cannot be activated or deactivated via ODA.

Interflow is activated and deactivated to a receiving OSPS Interflow switch on a serving team basis. A user turns Interflow "on" or "off" for a serving team. A serving team may be activated to Interflow to only one receiving OSPS switch at time, but multiple serving teams may be activated to the same receiving OSPS switch. When a serving team is activated for Interflow, all calls that would otherwise be handled by an operator on that serving team are interflowed.

If the activated serving team handles ACD/MIS, DA or Non-ISP to VDT calls, then the calls will be interflowed via rerouting the calls through the network to another operator switch. If the activated serving team handles T&A call traffic, then the calls will be interflowed via the OSPS EDSL to the receiving OSPS switch. If the case exists where a serving team handles both T&A and Non-ISP to VDT calls, then the T&A calls will be interflowed via the OSPS EDSL and the Non-ISP to VDT calls will be interflowed via rerouting calls out over trunks to the network.

For complete information on the Interflow feature for offices providing Directory Assistance services, refer to the DIRECTORY ASSISTANCE OFFICES description in this section. For complete information on the Interflow feature for T&A calls, refer to the TOLL AND ASSISTANCE OFFICES description in this section.

ODA Forms

OSPSOPT form (5424 Record)

12.1 Translation Requirements

Since activation and deactivation of Interflow can be accomplished only via Recent Change Views 21.7, 21.8 and 21.16, there are no ODA input forms to activate or deactivate Interflow. The following sections describe how to activate and deactivate Interflow via Recent Change.

12.1.1 Scheduled Interflow Activation/Deactivation

The Q DRN TIME parameter on the OSPSOPT form is used only when Interflow has been scheduled for activation. Interflow can be scheduled for activation on quarter hour boundaries via Recent Change Views 21.16 and 21.8. Q DRN TIME specifies the number of minutes prior to the scheduled quarter hour when Interflow activations are to occur. For example, if Interflow is scheduled to be activated at 8:15 AM and Q DRN TIME is set to 3 (minutes), then the activation will actually occur at 8:12 AM. This parameter was defined because once Interflow is activated for a serving team, all newly arriving calls will be interflowed and calls that were queued will not be interflowed and, therefore, must be served on the initial OSPS switch. If an administrator wishes to not have any operators handling calls at or near to the scheduled quarter hour, then Q DRN TIME should be set to nonzero. If Q DRN TIME is set to zero, then operators must stay logged in past the scheduled quarter so that the calls that were queued at the time of activation will be served.

The OSPS ID field on the OSPSOPT form identifies the originating OSPS switch. These OSPS IDs should be selected such that OSPS switches within the same Interflow network are unique. The OSPS ID is used when reporting the occurrence of Interflow activations and deactivations at the OAP (OSPS

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Administrative Processors) at both the originating and receiving Interflow switches. These reports always indicate the OSPS ID of the switch which initiated the activation or deactivation.

OSPS Automatic Reconfiguration Time and OSPS Scheduled Interflow Activation and Deactivation, are used to schedule Interflow activations and deactivations defines an auto-reconfiguration pattern in terms of a PAT ID and the time that the pattern should take effect. Patterns may be scheduled to take effect either on an hour boundary or 15, 30 or 45 minute quarter hour boundary for a given forcing day.

If Interflow is to be activated for a serving team, an "A" is entered on the field corresponding to the serving team number. Conversely, a "D" is entered if Interflow is to be deactivated for a serving team. A serving team's scheduled status may be deleted by updating an "A" or "D" to " ". A blank entry indicates that the associated serving team is neither activated nor deactivated by this pattern when this pattern takes effect.

12.1.2 Immediate Interflow Activation/Deactivation

As for scheduled activations and deactivations, the OSPS ID field on the OSPSOPT form identifies the originating OSPS switch. It is used when reporting the occurrence of Interflow activations and deactivations at the OSPS Administrative Processors at both the originating and receiving Interflow switches.

OSPS Immediate Interflow Activation and Deactivation, is used to immediately (manually) activate/deactivate Interflow. This view is constructed such that serving teams can be activated or deactivated for a particular receiving Interflow OSPS switch as specified by the DEST ID field. The OSPS ID of the receiving OSPS should be entered in the DEST ID field. An "A" should be entered for each serving team that is to be activated and a "D" for those that are to be deactivated. The Interflow activations and deactivations take place immediately upon completion of the RC UPDATE operation.

13. ACD FOR INTERFLOW CALLS

Interflow for ACD/MIS, Directory Assistance and Non-ISP to VDT calls is accomplished by rerouting the calls back into the telephone network. This section describes the ACD operation for ACD/MIS calls. For complete information on the Interflow feature for offices providing Directory Assistance services, refer to the DIRECTORY ASSISTANCE OFFICES description in this section. For complete information on the Interflow feature for T&A (Toll and Assistance) calls, refer to the TOLL AND ASSISTANCE OFFICES description in this section.

ODA Forms

INFLDEST form (5448 Record)

RAR form (5301 Record)

13.1 Translation Requirements

The INFLDEST form allows for assigning a new code index (OUTGO CDI field) to an incoming OSPS call that is to be interflowed via reroute through the network. After the ACD determines that an ACD/MIS call must be interflowed, a new code index must be determined and used to route the call back into the network. Determination of a new code index is based on the code index derived from digit analysis on the incoming call, the incoming trunk group number and the ID of the receiving operator switch. Each of these are used to match on the respective INC CDI, TGN and DEST ID fields on a INFLDEST form. The OUTGO CDI entered on the INFLDEST form must exist on a RAR form. The DEST ID field on a INFLDEST form is also used in reporting Interflow activations and deactivations at the OAPs.

13.1.1 Interaction with Intraflow

A serving team that has Interflow activated is not eligible to receive intraflowed traffic. A queue whose principal team is being interflowed may be intraflowed to a supporting team whose delay outflow threshold

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is zero. If an Interflow channel is not found and no supporting team server is found, the call will fail because queuing is not allowed for teams which are interflowed.

14. INTRAFLOW

The OSPS Intraflow feature is available with 5E5 and later Software Releases. Intraflow allows an ACD/OSPS administrator to assign for each call queue, a single principal serving team and up to eight supporting serving teams which may handle calls from the call queue when all of the operators on the principal serving team are busy.

For detailed information on the Intraflow feature, refer to the Intraflow description in the TRANSLATIONS REQUIREMENTS FOR ALL OSPS OFFICES portion of this section.

15. TRANSLATION REQUIREMENTS FOR AGENT POSITION AND MIS DSLs

The ACD/MIS feature uses DSLs for agent positions and MIS links. The translation requirements for these two types of DSL are specified below.

Agent Position DSL

The OSPSDSL form (5411 Record) is used to assign Line Card Equipment Numbers associated with operator positions to Integrated Services Channel Numbers. DSLs for agent position DSLs must be assigned a SERVICE CLASS of "DAOPER".

Position DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

The following fields are not used for agent position DSLs and should be left blank: DSL NAME ID, DSL NAME RL, MATE LCEN, SCR IDX and DAS.

MIS (Management Information System) DSL

The MIS (Management Information System) is a PC-based teleservices workstation, that provides detailed real-time displays and historical reports for telemarketing call traffic. The MIS is connected to the 5ESS Switch via a DSL.

The OSPSDSL form is used to assign the Line Card Equipment Number to which the MIS DSL is connected to an Integrated Services Channel Number. There is at least one MIS DSL per SM that has agent position terminals connected. MIS DSLs must be assigned a SERVICE CLASS of "MISLNK".

MIS DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

The DSL NAME ID and DSL NAME RL are for assigning external names to DSLs to be used when reporting maintenance messages. MIS DSLs having the same DSL NAME ID must have their DSL NAME RL fields in consecutive order beginning with 0.

16. CALL VECTORING

For 5E6 and later Software Releases, Call Vectoring allows the CACD (Commercial Automatic Call Distributor) customer to specify a series of steps that an incoming ACD call follows before it is routed to an CACD agent. These series of steps are referred to as a Call Vector.

A call is routed to the appropriate vector based on the dialed digits and/or the trunk group. If a conflict occurs, e.g., a trunk group is assigned to a different vector then the vector for the dialed digits, the vector for the dialed digits is used. Any combination of up to 2000 trunk groups and up to 4096 dialed digits combinations can be assigned to any one of the 256 call vectors. These assignments are controlled by the CACD customer. If an assigned vector cannot be retrieved for any reason, vectoring does not take

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place. Instead, the call receives standard treatment, i.e., the call is placed into a default queue according to Call Type.

Each step in a vector contains a command. Some commands are conditionally executed based on parameters such as time of day, day of the week or queue length. The selection and ordering of the commands, as well specifying the conditions, are under the control of the ACD administrator. Vectors and the assignment of trunk groups or dialed digits to vectors may be changed at any time through Recent Change Views. When altering a vector it may be desirable to temporarily redirect all calls that normally use the vector to another vector. Each vector has a redirection step to do this. If the call is redirected to a second vector, it cannot be redirected again to a third vector. If the attempt is made to redirect the call from a second vector to a third vector, the third vector is ignored and the call receives the treatment specified by the second vector.

Call Vectoring Steps

Call Vector steps are defined on the CVECT form (5460 Record. The following is a list of the actions provided by call vectoring:

- Place call in queue
- Branch on queue or team status
- Route call to a DN over public or private networks
- Return answer supervision
- Branch to another vector
- Connect a call to an announcement
- Delay vector processing for a specified number of seconds
- Branch to another step of the vector
- Force disconnect
- Force busy
- Stop further vector processing
- Prompt for caller TOUCH-TONE digit entry
- Provide branching according to the caller entered digits after Prompt announcement

Each vector has an activation field. If the field is set to "no" the vectoring is suppressed, the contents of the redirection vector are not examined, and the call is placed in the default call queue.

Originating Treatment

If the originating treatment determines that a vector is assigned to the trunk group or dialed digits, and the SM is not in overload, vector processing will begin. If a vector is not assigned or the SM is in overload, the call is placed into the queue corresponding with the Call Type.

Vectoring Termination

- Vector processing terminates when
- the call is connected to an available agent,

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- the caller abandons
- after a ROUTE step is processed,
- after a DISC step is processed, or
- after a BUSY step is processed.

In all five cases, any resource being used for vector processing, e.g., timers or MDBs (Model Data Blocks), are released.

If a "ROUTE" or "DISC" step is encountered during vector processing, the call is immediately disconnected from any active delay treatment.

Stop Vector Processing

Call vectoring stops when

- a "STOP" step is encountered,
- the limit on the number of total vector steps or a specific vector limit is exceeded,
- the limit for the amount of time a call can be vectored without being queued is exceeded,
- a fatal error is encountered during vector processing or
- the last step of a vector is processed and does not cause a branch to another step.

If the call has NOT been placed into a queue when vectoring stops, reorder tone is returned to the caller. If the call has been placed into a queue when vectoring stops, it remains in the queue and any active delay treatment continues. The call remains in this state until an agent becomes active or the caller abandons.

Vector Processing Limits

To prevent infinite loops in a vector, a 5ESS Switch TCA limit is set for the number of vector steps. Every limit has a default value. If no limit is specified, the limit is not enforced. The limits are administered through a CACD Administration on the CACDPARM form, 5458 Record, which is not accessible via Recent Change to the MIS administrator.

Delay Treatment

Call Vectoring provides three types of delay treatment,

- connect call to music for a period of time as specified in the "MUSIC" step on the CVECT form (5460 Record)
- connect call to audible ring for a period of time as specified in the "RING" step on the CVECT form (5460 Record)
- delay processing for a period of time as specified in the "QUIET" step on the CVECT form (5460 Record)

Announcements

Calls are connected to an announcement using the "ANNOUNC" Step. The announcement step requires a route index for the path to the port for the announcement unit. The vector process can branch to an

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optional error step, if the routing to the announcement fails,

Conditional Branching

Call Vectoring supports the ability to branch on the following conditions:

- Day of Week "GOTODOW"
- Time of Day "GOTOTOD"
- Number of calls in a queue "GOTOQUE"
- Age of call at head of the queue "GOTOAGE"
- Number of staffed agents on serving team "GOTOSTA"
- Number of agents available to handle a call "GOTOAVL"
- Expected delay "GOTODLY"
- TOUCH-TONE number entered by caller "GOTONUM"

The conditional GOTO steps require specifying conditional arguments. (See CVECT form, 5460 Record)

Prompting Caller For TOUCH-TONE Digits

The "PROMPT" step routes the caller to an announcement that prompts the caller to enter TOUCH-TONE digit(s). The "GOTONUM" command is used in conjunction with the "PROMPT" command to provide branching on the digits entered by the caller.

The "PROMPT" command is a Secured Feature. Secured Features are the optional service features that can be purchased in addition to the features included in the current Software Releases. The Secured Features need to be enabled by an AT&T SEE (System Equipment Engineer). Once the SEE determines through the TEO (Telephone Equipment Order) that Secured Features have been purchased by the customer, the SEE enables those features either through 5ODA for 5E5 and later Software Release or through Recent Change. To activate a Secured Feature, see Division 2, Section 4a, which describes Secured Features.

Forced Disconnect and Forced Busy

The "DISC" And "BUSY" steps are used when a CACD site cannot handle a call, e.g., after business hours or the queue is full. When "BUSY" or "DISC" is step is encountered, the call is disconnected from any active delay treatments, such as audible ring or music. It is also removed from any queue. If the call is routed to an agent before it is removed from a queue by "DISC" or "BUSY", the "DISC" or "BUSY" step is aborted.

Queuing Calls

Call are placed into a queue or transferred between queues using the "QUEUE" step. The "QUEUE"step contains a Call Type identifying the queue, an optional display index and an error step number to be used if the call cannot be queued or transferred.

Answer Supervision

Answer supervision is returned when an "ANSWER" step is processed.

Routing to an Alternate Destination Telephone Number

When the "ROUTE" step is encountered, the caller is rerouted to an alternate destination. If billing is

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required for the connection between the CACD site and the "ROUTE" step destination number, the charge is applied to the number of the CACD customer. The caller does not get these charges.

The destination number specified in the "ROUTE" step is translated into a telephone number or route index on the CVDSTTN form, 5459 Record. The destination number ID must be specified with the "ROUTE" step. The destination number ID is a key into the CVDSTTN form, 5459 Record, which is used to identify the destination telephone number or route index. For each destination number ID, either a 7- or 10-digit telephone number is entered in the TN field, or a ROUTE INDEX, defined on the RTIDX form is entered in the RI field on the CVDSTTN form.

For INWATS terminations, the telephone number identified in the SPECIAL BILL NBR field of the PFASFG form, 5609-3 Record, is billed for the forwarded leg of the call.

If billing is required for the connection between the CACD site and the destination telephone number of the "ROUTE" step, the call should be rerouted over a line that has remote call forwarded "/CFR". Although a line unit is required for the "/CFR" line, no physical line to the customer's site and no CPE (Customer Premise Equipment) are involved. The TN (Telephone Number) associated with the call forwarding line, "/CFR", may be used as the billing number for the subsequent the leg of the call. If the TN field on the CVDSTTN form is entered, the TN must be defined on a LINE form, MLHLN form, PSMTN form, DSLUSR form, DFLSRV form, SHTN form, ACQS form, MTNDR form or a MLTITN form.

If the call is routed over a Private Facility trunk group, three features should be created: a Call Forwarding feature, an Individualized Dialing feature and a Private Facility Access feature. "PFITT" is entered in the TRKCLAS field on the TKGRP form.

If the call is routed to a trunk group, enter the route index in the RI field on the CVDSTTN form (5459 Record). The RTIDX form (5303 Record) and the TRKCL form (5203 Record) also must be entered. **Music Source**

The CACD customer can define an announcement or music port for the "MUSIC" step interface (or for Music on Hold interface, see MUSIC RI field on the STINFO form. The port must be defined as barge-in because no periodic start-of-announcement is generated. The maximum number of calls per announcement/music port is given by the MAXCALL field on the TRUNK form (5204 Record).

17. SYSTEM CONFIGURATION

The basic system configuration elements for call vectoring are the incoming trunks, SMs, PSM, ACD/MIS, Call Event Link and outgoing trunks to music source or announcement. If the caller is prompted for digits, a UTD (Universal Tone Decoder) is needed. See Figure 6 for the basic system configuration.

The CACD calls arriving on a trunk are treated like any other CACD OSPS call. If the Originating Treatment determines that a vector has been assigned to the trunk group or dialed digits and the SM is not in overload vector processing begins. If the SM is in overload or no vector is assigned, the call is given standard treatment.

CACD/MIS

The CACD/MIS system may consist of the following external equipment:

- ECL (Event Control Link) provides interconnection between CACD/MIS services and the physical distribution of the RC/V interfaces.
- Management Information System Computer provides statistical information on a workstation and on office performance.
- RCOS (Recent Change Operations System) link is used to communicate between the AM/PIP and the ECL.

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- MIS Call Event Link is used to communicate between the RISLU and the ECL.

Announcement Ports

All announcement and music sources are a 13A unit or a similar Type.

DSU2 Universal Tone Decoder

If the caller is required to press additional digits for the Call Vectoring "PROMPT" Step, additional DSU2 Universal Tone Decoders may be needed and should be equipped in the Originating Switch Module.

18. CALL VECTORING TRANSLATIONS

New and Changed Forms for Call Vectoring

The following forms are new or have changes for the Call Vectoring feature.

- TRUNK form (5204 Record)
- TKGRP form (5202 Record)
- ORAR form (5405 Record)
- OCTA form (5406 Record)
- CACDPARM form (5458 Record)
- STINFO form (5402 Record)
- OPCTO form (5407 Record)
- CVECT form (5460 Record)
- CVDSTTN form (5459 Record)
- SFSYS form (5713 Record)

18.1 ODA Forms for Incoming Calls for Call Vectoring

The ODA Translations for Call Vectoring require the following forms for the incoming call:

- TKGRP form (5202 Record)
- DAS form (5300-1 Record)
- INDIT/LDIT form (5309 Record)/(5300-3 Record)

18.2 ODA Forms for Commercial ACD Associated With Call Vectoring

The ODA translations for CACD associated with Call Vectoring require the following forms:

- OSPSOPT form (5424 Record)
- CACDPARM form (5458 Record)
- ORAR form (5405 Record)

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- OCTA form (5406 Record)
- OPCTO form (5407 Record)
- OSPSCT form (5404 Record)

18.3 Incoming INWATS Translations

Additional data is required to define the incoming INWATS (Inward Wide Area Telephone Service). The translations for INWATS is given in the paragraphs under the heading INWATS TERMINATION in this Section of the TG-5 for CACD Services.

18.3.1 CACD Serving Team Translations

The translations for the CACD Serving Teams is given in the paragraphs under the heading "INCOMING CALLS" in this Section of the TG-5 on CACD Services.

ODA Forms For Call Vectoring Translations The ODA translation for Call Vectoring require the following forms:

18.3.2 CACDPARM form (5458 Record)

For 5E6 and later Software Releases, the CACDPARM form defines the OSPS CACD Call Vectoring global parameters. Only one CACDPARM form is entered for an office.

18.3.3 CVECT form (5460 Record)

The CVECT form defines the Call Vector steps for each CALL VECTOR ID.

18.3.4 ODA Forms For Call Vector Steps

The additional forms required for the translations for specific Vector Steps in the CVECT form are listed below.

- DISC Step or ANNOUNC Step
  - RTIDX form (5303 Record)
  - TKGRP (5202 Record)
- ROUTE Step
  - CVDSTTN form (5459 Record)
  - LINEFA form (5112 Record)
  - CFWLPA form (5614-3 Record)
  - LINE form, MLHLN form, MLHG form, PSMTN form, DSLUSR form, DFLSRV form, SHTN form, ACQS form, MTNDR form or MULTITN form.

Or, to reroute to Private Facilities translations require IDPLPA, IDPGP, IDFD, IDPDCA, PFAFD, PFAGPA, LCC, RAR, RTID and TKGRP forms.

- MUSIC Step

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- RTIDX form (5303 Record)
- TKGRP form (5202 Record)
- TRUNK form (5204 Record)

- PROMPT Step and GOTONUM Step
  - SFSYS form (5713 Record)
  - RTIDX form (5303 Record)
  - TKGRP form (5202 Record)
  - TRUNK form (5204 Record)

19. CALL VECTORING TRANSLATION REQUIREMENTS

The ODA Translations for Call Vectoring follow. See Figures 6 through 9 for form flows for Call Vectoring Translations.

Incoming Call Translations For Call Vectoring

See Figure 7 for a form flow of the incoming call translations for call vectoring. The incoming call translations follow:

TKGRP form (5202 Record)

When a call arrives at an OSPS office equipped with the C-ACD application, normal digit analysis steps are performed on the forward number. The TKGRP form (5202 Record) has an entry in the DAS field for the incoming trunk group. The DAS Field entry must be defined in the DAS form (5300-1 Record), which is used to assign the preliminary and primary translation tables. The TRUNK DAS field should have entries in the TRUNK DAS subfields, INC. TRUNK PRELIMINARY DIT and LOCAL DIT. These entries identify the tables used for a trunk DAS. See Figure 7 for the form flow for incoming calls.

DAS form (5300-1 Record)

INC. TRUNK PRELIMINARY DIT and INCOMING DIGITS entries on the DAS form are the keys to the INDIT form.

INDIT form (5309 Record)

If call vectoring is determined by an incoming trunk group, then the INDIT form has LDIT = "N" and an entry in the CDI field.

If call vectoring is determined by the incoming digits, then LDIT = "Y" and CDI field is blank. The form flow then enters the LDIT form (5300-3 Record) for the CDI field entry. The CDI field is the key to the ORAR form (5405 Record).

LDIT form (5300-3 Record)

If call vectoring is determined by the incoming digits, then the LDIT form (5300-3 Record) is entered for the CDI, which is the key to the ORAR form (5404 Record).

CACD Translations for Incoming Calls

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See Figure 8 for the form flow for translations for CACD for Call Vectoring. After the incoming call has successfully passed through digit analysis, the following forms are checked for Commercial ACD translations for the incoming call:

OSPSOPT form (5424 Record)

If call vectoring is determined for the incoming digits or trunk groups, then set the field OSPS DA = "Y" to allow CACD to be activated on the CACDPARM form (5458 Record). (For 5E6 and later Software Releases, the COMMERCIAL ACD field has been moved to the CACDPARM form.)

CACDPARM form (5458 Record)

For 5E6 and later Software Releases, the COMMERCIAL ACD field has been moved from the OSPSOPT form (5424 Record) to the CACDPARM form. For call vectoring to be activated, the COMMERCIAL ACD field = "Y" and CALL VECTORING = "Y". This form also establishes the maximum number of times a conditional command (GOTO command) can be executed per call, maximum delay between steps and the number of seconds that a call is paused if any of the resettable limits are reached.

ORAR form (5405 Record)

The ORAR form allows call treatment, such as Call Vectoring, to be based on either the incoming trunk group or the incoming digits. If the call treatment can be defined based on the incoming trunk group alone, the OSPS CALL ID field is populated and the NOC field is blank. The OSPS CALL ID must be defined on the OPCTO form (5407 Record).

If the call treatment is based on the incoming digits, the NOC field must be populated and the OSPS CALL ID must be left blank. The NOC field is the key into the OCTA form (5406 Record), which then assigns the OSPS CALL ID. The OSPS CALL ID must be defined on the OPTCO form (5407 Record).

OCTA form (5406 Record)

If the call treatment is based on the incoming digits on the ORAR form (5405 Record), the NOC field on the ORAR form is a key to the OCTA form. The OSPS CALL ID is assigned on this form for the incoming digits.

If the call treatment is based on the incoming digits, then the TGN field on the OPCTO form (Record 5407) must be the wild card "9999".

OPCTO form (5407 Record)

This form defines the OSPS CALL TYPE. For Call Vectoring, the VECTOR ID is assigned to an OSPS CALL ID. The VECTOR ID provides the type of call handling for incoming calls that are waiting for a CACD agent. The OSPS CALL TYPE field points to a CACD call queue.

If screening of the incoming calls by trunk group is desired, the TGN field may be populated with the incoming trunk groupnumber, or, the TGN field can be populated with the wild card value of "9999". If the wild card value, "9999", is used, another OPCTO form cannot exist with the same value for OSPS CALL ID, OSPS CALL TYPE and DISPLAY INDEX, respectively.

An entry in the VECTOR ID field requires an entry in the VECTOR ID field on the CVECT form, which defines the Call Vectoring steps. Also, the SVC ID field in the corresponding OSPSCT form must be blank. (The forms correspond if the OSPS CALL TYPEs match on both forms.) The corresponding OSPSCT form must also have the AUTO CALL DIST set to "Y" and OPER TYPE is set to "DA".

OSPSCT form (5404 Record)

The OSPSCT form assigns parameters to the OSPS CALL TYPE. If VECTOR ID on the OPCTO form has an entry, then the SVC ID field must be blank on the corresponding OSPSCT form. (The OSPS CALL

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TYPE is the same on Corresponding forms.) Also, the following fields must be populated, AUTO CALL DIST = "Y" and OPER TYPE = "DA".

Call Vectoring Translations

The following translations are required to activate Call Vectoring.

CVECT form (5460 Record)

The CVECT form defines call vectoring steps and activates call vectoring. If VECTOR ID is assigned on the OPTCO form (5407 Record), then VECTOR ID must be defined on the CVECT form.

Calls can be diverted to another Vector for alternate Call Vectoring treatment by setting the REDIRECT VECTOR field to the VECTOR ID of the alternate Vector. If the VECTOR ID of the alternate vector does not exist, the call does not receive call vectoring treatment, but is placed in a call queue for a CACD agent. Only one level of redirection is permitted. If the alternate vector has REDIRECT VECTOR = VECTOR ID, the second redirection is ignored and the call is provided with the call vectoring treatment of the first alternate vector.

Up to 15 steps or commands can be identified in each Vector. Longer command sequences can be created by chaining vectors together with the GOTO commands.

The NOOP command can be used to temporarily disable vector commands instead of deleting them.

Translations For Call Vector Steps CMD CD

Additional translations are required for the Vector Command Steps in the CVECT form that are listed below.

DISC and ANNOUNC Steps

The following forms are required for the the CMD CD field "ANNOUNC" or "DISC".

RTIDX (5303 Record)

If ARG1 on the CVECT form is a route index, then the following fields on RTIDX form are affected:

- TRUNK GROUP NUMBER = TGN on TKGRP form and TRUNK form
- ROUTE INDEX = Route Index in ARG1 on CVECT form
- SIGNALING PROTOCOL = "TRAD"
- ROUTE TYPE = "HUNT"
- CI ROUTE TYPE = "GENANN"

TKGRP (5202 Record)

The following fields are affected:

- TGN = TRUNK GROUP NUMBER on the RTIDX form (ARG1 on CVECT form is a route index)
- TRK DIR = "ANN"
- HUNT TYPE = "ANN"
- TRUNK CLASS = "ANNCMNT"

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- CYCLES = the number of times the announcement is given to the caller. CYCLES should "1".
- BARGE IN (wait for announcement to begin at the start, or begin immediately). If BARGE IN is "Y", then AUD RING must equal "N".
- MAXCALLS = Number of callers attached to port or a unit at one time.

TRUNK (5204 Record)

The following fields are affected:

- SUPV = "EM2"
- IDLE STATE = "ON"
- TGN = TRUNK GROUP NUMBER on RTIDX form and TGN on the TKGRP form
- MEM = 0

ROUTE Step

CVDSTTN form (5459 Record)

This form defines the destination for a call specified in a call vectoring route.

The following fields are affected:

- DEST NBR = Destination Number Index in ARG1 of CVECT form
- TN = the caller is either rerouted to this 7 to 10 digit number, or to the route index entered in the RI field. Any TN on the CVDSTTN form must be defined on a LINE, MLHLN, MLHG, PSMTN, DSLUSR, DFLTSRV, SHTN, ACQS, MTNDR or MLTITN If an entry is made in the TN field, then RI field must be left blank. If an entry is made in the RI field, then the TN field must be left blank.
- RI = ROUTE INDEX on RTIDX form. This should be the route index to a private facility trunk. If this field is entered, the TN field must be left blank. For provisioning data rules see figure 9.

LINEFA (5112 Record)

FEATURE field should be "/CFR", if the call is not routed over private facilities.

CFWLPA (5614-3 Record)

LINE form, MLHLN form, MLHG form, PSMTN form, DSLUSR form, DFLSRV form, SHTN form, ACQS form, MTNDR form or MULTITN form.

The translations for rerouting calls are given in this Section under the paragraph heading "INCOMING CALLS".

Or, to reroute to Private Facilities translations require IDPLPA, IDPGP, IDFD, IDPDCA, PFAFD, PFAGPA, LCC, RAR, RTIDX and TKGRP. These translations are given in this Section under the paragraph heading "INCOMING CALLS".

MUSIC Step

RTIDX (5303 Record)

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The following fields are affected:

- TRUNK GROUP NUMBER = TGN on TKGRP form and TRUNK form
- ROUTE INDEX = Route Index in ARG1 on CVECT form
- SIGNALING PROTOCOL = "TRAD"
- CI ROUTE TYPE = "GENANN"
- ROUTE TYPE = HUNT

TKGRP (5202 Record)

At least one TKGRP form must have the following:

- TGN = TRUNK GROUP NUMBER on a RTIDX form where ROUTE INDEX = ARG1 on the CVECT form.
- TRK DIR = "ANN"
- HUNT TYPE = "ANN"
- TRUNK CLASS = "ANNCMNT"
- CYCLES = "0"
- BARGE IN = "Y"
- AUD RING = "N"
- MAXCALLS = Number of callers attached to port or a unit at one time. If CYCLES = "0", then BARGE IN = "Y". If TRK DIR = "ANN", then the corresponding TRUNK form (the TGN fields on both forms are equal) must have an entry in the MAXCALLS field. If MAXCALLS field on the TRUNK form differs from MAXCALLS field on the TKGRP form, the MAXCALLS field on the TRUNK form will be populated for that specific trunk.

TRUNK (5204 Record)

The following fields are affected:

- SUPV = "EM2"
- IDLE STATE "ON"
- MEM = "0"
- TGN = TRUNK GROUP NUMBER on RTIDX form
- MAXCALLS = Number of callers attached to port at one time.

PROMPT and GOTONUM Step

If the caller is routed to the announcement unit, which is specified by the Route Index in ARG1, see the DISC and ANNOUNC Steps above for translations. ARG2 gives the maximum number of digits to collect Digits entered after the maximum value has been reached are ignored.

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If ARG1 on the CVECT form is a route index, then the following ODA forms are required for the PROMPT Step.

SFSYS form (5713 Record)

This form can only be entered by the AT&T SEE. See Division 2, Section 4a for information on activating secured features. FEATURE NUMBER = "41"

RTIDX form (5303 Record) The following fields are affected:

- ROUTE INDEX = ARG1 on CVECT form

TKGRP form (5202 Record)

- TRK DIR = "ANN" CYCLES = 1

TRUNK form (5204 Record)

The following fields are affected:

- TGN = TRUNK GROUP NUMBER on the RTIDX form
- MEMB = "0" for the first trunk member.

The MIS receives a vector PROMPT message for all PROMPT steps in which the value of the ARG2 field is greater than one even if the caller enters only one digit. Single digit entries are not sent to the MIS, as they are associated with the selection of a call queue and would not be useful to the CACD customer.

Once the caller-entered digits have been collected, the GOTONUM command is evaluated. The conditional arguments supported by the GOTONUM command are LE (Less Than Or Equal To), GT (Greater Than) and EQ (Equal To). If the condition evaluates to be TRUE, Call Vectoring treatment branches to the specified step or another vector given in the ARG1 and ARG2 fields. If the condition evaluates to be FALSE, the next step in the current vector is processed.

QUEUE Step

ARG1 of the QUEUE step is the OSPS CALL TYPE. The corresponding OSPS CALL TYPE field must populated on the OSPSCT form (5404 Record).

ARG2 can be left blank or it is the BST DISPLY INDEX on the OBSTS form.

GOTO Steps

If the conditional (GOTO) steps specify a VECTOR ID in ARG1, then that VECTOR ID must defined on another CVECT form.

GOTOQUE, GOTOAGE, GOTODLY Steps

If the CMD CD is "GOTOQUE", "GOTOAGE" or "GOTODLY have populated the CARG1 field with the OSPS CALL TYPE, then that OSPS CALL TYPE must be defined on the OSPSCT form (5404 Record).

GOTOSTA, GOTOAVL Steps

If the CMD CD of "GOTOSTA" or "GOTOAVL" have populated the CARG1 field with the serving team number, then the SERVING TEAM number must be entered on the STINFO form (5402 Record), where SERVING TEAM equal CARG1.

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20. BASE COMMERCIAL ACD

With the 5E6 Software Release, the Base Commercial ACD (Automatic Call Distribution) Capability implements the Expansion of Maximum Number of Positions. This feature provides up to 4000 OSPS positions per 5ESS Switch and 200 positions per PSM. Base Commercial ACD ensures that adequate resources are available in the AM, PSM and PIP to support terminal connectivity to these positions for data base relation engineering and 5E6 memory allocation.

This feature was activated in the 5E4(2) and 5E5 Software Releases by an entry of "Y" in the COMMERCIAL ACD field of the OSPSOPT form (5424 Record). With the 5E6 and later Software Releases, the expanded CACD is activated on the newly added Commercial ACD Parameter, CACDPARM form (5458 Record).

21. TRANSLATION REQUIREMENTS FOR BASE ACD

CACDPARM form (5458 Record) has been added with 5E6. This form defines OSPS (Operator Services Position System), CACD (Commercial Call Distributor) and Call Vectoring global parameters residing in the SM (Switching Modules). Also defined on this record are call vectoring limits that can be set by TCA (Telephone Company Administration). Only one CACDPARM form is entered per office.

OPCTO form (5407 Record) a new attribute has been added to this form. An entry of "Y" or "N" in the attribute DAA determines whether Direct Agent Access is assigned to CACD Call Types.

OSPSDSL form (5407 Record) is usedThe OSPS Service Class field on to assign equipment to a specific LCEN. A restriction has been added for the enumeration "MISLNK" which sets up the OSPS commercial Automatic Call Distribution datalink. With 5E6, MISLINKS within a data link group must be numbered consecutively from 0 to 2 without regard to the DATA LINK GRP number.

OSPSOP form (5401 Record) has increased the maximum number of operator positions per SM to 200.

OSPSOPT form (5424 Record) has added a required field for this feature with the 5E6 Software Release. The CLAIM CQDB field specifies the maximum number of conference and transfer requests within the OSPS ACD to specific positions (i.e., requested by operator login id or position number) that can be queued because the "claimed" positions are busy. Valid entries are from 0 to 5000. The default is "0"

RAR form (5301 Record) must have a corresponding ORAR (OSPS Rate and Route) form (5405 Record) with matching values for SCR, CDI and PFX. For the CACD feature, the RAR form is used to detect a free call to a CACD agent (charge index is FREE) or to determine if routing data would (if used) lead to INWATS data and a simulated facilities group.

22. DIRECT AGENT ACCESS

The DAA (Direct Agent Access) feature allows a caller to reach a specific CACD agent by dialing a number in which the last four digits correspond to the agent's login ID. This feature also allows agents to receive personal calls.

Direct Agent Access is available with the 5E5 and later Software Releases, however, feature activation differs between 5E5 and 5E6. In 5E5, the BST DISPLAY INDEX field on the OPCTO assigns DAA to a Call Type. In 5E6, the DAA field on the OPCTO form is set to "Y" (Yes) to activate the feature.

A DAA call "seizes" an agent's terminal when that agent is idle. The agent hears a normal call arrival alerting tone in the head/handset and sees the unique claim indicator "d" (indicating a DAA call) and the login ID in the office-defined display region.

A DAA call can "claim" an agent's position while that agent is handling a call. In this case, the "d" appears in position 19 of the claim region and the agent hears a double beep in the head/handset. The caller hears a ring. The agent can handle the claimed call when the active call is terminated.

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When an agent already handling a call is also claimed by a DAA call, all other DAA calls to that agent are routed to busy.

A DAA call can also claim an agent in the "ACMADEBUSY" state. This agent may be handling an ICT (Interposition Communication and Transfer) call or an outgoing call, or may have pressed the "SPCL" or "MAKE BUSY" key. When claimed, this agent sees the unique claim indicator and hears the double beep. An external tone sounds if the agent presses either the "SPCL" or "MAKE BUSY" key while claimed. A caller to this agent hears a ring. if appropriate firmware is loaded into ACT.

An agent does not have to be a member of the serving team that is handling a specific DAA Call Type to receive a DAA call. The agent may also receive a DAA call when the DAA Call Type is closed (the "CALL TYPE OPEN?" field in the OSPSCT form (5404 Record) is set to "N").

The DAA feature has precedence over Reroute, Intraflow and Call Vectoring. A DAA call receives Intraflow or Call Vectoring treatment only when a specific agent is not logged in. Members of a serving team assigned to Reroute will still receive DAA calls.

ACD does not reroute non-DAA calls to an agent actively handling a DAA call.

An agent that terminates a DAA call can continue to handle non-DAA calls if the agent is not claimed by another DAA call and does not press the "MAKE BUSY" key.

ODA Forms

OSPSOA (OSPS Operator Assignment) form, (5403 Record)

OSPSCT (OSPS Call Type Parameters) form, (5404 Record)

ORAR (OSPS Rate and Route) form, (5405 Record)

OCTA (OSPS Call Type ID Assignment) form, (5406 Record)

OPCTO (OSPS Call Type for Trunk Originations) form, (5407 Record)

OBSTS (OSPS Basic Services Terminal Seizure) form, (5408 Record)

22.1 Translation Requirements

A call's OSPS CALL ID (determined in the ORAR or OCTA form) is a key into the OPCTO form. This record defines the OSPS CALL ID and a trunk group identified in the TGN field. To screen an incoming trunk group, the trunk group value or a wild card value of "9999" is required in the TGN field. If a match for the incoming trunk group is not found, the wild card value is used. The "CALL TYPE" field contains the Call Type queue associated with the incoming call. This entry must be defined in the OSPSCT form.

For 5E5, the BST DISPLAY INDEX field of the OPCTO form assigns the DAA feature to a Call Type. For DAA, this field can be from 1-511. Prior to this feature, the maximum value that could be entered was 276. Entries in the range of 1-256 are associated with a back number Display Index, and entries in the range of 257-276 are associated with a forward number Display Index. The DAA feature is assigned whenever a Display Index greater than 276 is entered.

Each Display Index identified in the OPCTO form must be defined in the OBSTS form. The valid Display Index identified in the OBSTS form remains 1-276. Any Display Index defined in the OPCTO form with a value greater than 276 corresponds to the Display Index in the OBSTS form that has a value 276 less than the value in the OPCTO form. For example, a Display Index of 280 in the OPCTO form corresponds to a Display Index of 4 in the OBSTS form (280 - 276 = 4).

For 5E6, the BST DISPLAY INDEX field on the OPCTO form no longer assigns DAA to a Call Type; therefore, entries in this field greater than 276 are not allowed in the 5E6 Software Release. Instead the

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field DAA has been added to the OPCTO form. This field is set to "Y" (Yes) to assign DAA to a Call Type.

Once DAA is assigned to a Call Type, the last four digits of the forward number are compared to each operator login ID (defined in the OSPSOA form). If no match is found, the call receives normal CACD call processing treatment (i.e., the call is placed in the appropriate Call Type queue with treatment based on system status).

If a login ID match is found, the caller is routed to the desired agent. If that agent is not logged in, the caller receives normal CACD call processing treatment.

For an office that has activated the DAA feature in the 5E5 Software Release, any Call Type which has a Display Index greater than 276 on the OPCTO form results in an entry of "Y" in the DAA field during a 5E5 to 5E6 retrofit. The Display Index is also created in this record by subtracting 276 from the 5E5 Display Index value. No change is made to the Display Index range on the OBSTS form.

23. MUSIC ON HOLD

The MOH (Music on Hold) feature routes a caller to a music source when placed on hold by a CACD agent. The caller hears music until the call is taken off hold by the agent. MOH can only be applied by CACD calls.

MOH is activated for a serving team, therefore, MOH treatment is applied to all calling parties placed on hold by agents belonging to a serving team. A caller can be connected to a music source multiple times during a call.

Only the caller hears music while on hold.

The unit that provides the music must conform to a 13-A interface. The music source can be at the CACD customer location or at the telephone company. If the 13-A music source is not available or if the number of calls currently connected to the music port is the maximum allowed, the caller hears silence.

ODA Forms

TKGRP (5202 Record)

TRUNK (5204 Record)

RTIDX (5303 Record)

STINFO (5402 Record)

OSPSCT (5404 Record)

ODA Translations

Each CACD serving team entered on an OSPSCT form must be defined on the STINFO form. For MOH feature, two fields have been added to STINFO. The MUSIC RI field identifies the Route Index that connects callers to a music source. CACD customers can enter this field after Telco personnel have created the Route Index in the RTIDX form. The MUSIC SELECTD field activates or deactivates ("Y" or "N") the MOH feature for each serving team. The MUSIC SELECTD field cannot be set to "Y" unless a Route Index is populated in the MUSIC RI field.

The trunk group identified on the RTIDX form must be defined on the TKGRP form. The fields TRK DIR and HUNT TYPE on the TRKGRP form must both be "ANN" and TRUNK CLASS must be "ANNCMNT". The CYCLES field determines the number of times the caller hears an announcement. For MOH this field must be "0". The BARGE IN field is used with announcement trunks only. It identifies whether callers should immediately "barge in" to an announcement once attached to an announcement port or whether the caller must wait until the announcement is queued to the beginning. The BARGE IN field must be set to

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"Y" for a music trunk to allow callers to be be provided with music treatment immediately upon attachement to a music port. The AUD RING field must be "N". This field provides audible ring to a caller who is waiting for an announcement to queue and must be set to "N" when BARGE IN is "Y". The SVC GRP field must be "NQANNC". The MAX CALLS field has been added with the 5E6 Software Release. It defines the maximum number of callers that can be connected to a music or announcement port at a given time. A maximum of 50 callers can be connected to a port at a given time, with 32 being the default for this field. The RETRY field is also new for 5E6 and identifies whether attachment to announcement or music source is retried if attachment fails in the first attempt. Each music trunk group member must be defined in the OSPSCT form. Trunk group member entries should be made with the SUPV field set to EM2 and the IDLE STATE field set to "ON".

24. CALLING PARTY NUMBER DELIVERY

The CPND (Calling Party Number Delivery) feature is available with 5E6 and later Software Releases. The feature allows CACD customers to display a calling number at a BST (Basic Services Terminal) or an ACT (Agent Communication Terminal). Prior to 5E6, CACD customers could only display the called number or predefined call originating information on a BST or ACT.

The calling number can be displayed under the following circumstances:

- The call arrives at the CACD site on a CCS7 trunk.
- All switches between the CACD site and the calling party support the transmission of the calling number.
- The calling number is not private (i.e., the calling party has not identified that the calling number should not be displayed).

The calling number is displayed on the agent's BST or ACT upon terminal seizure. The calling number is also displayed on any terminal that the call is transferred to, on any terminal that the agent conferences with and on any terminal that is monitoring the agent handling the call. When a calling party number is eligible for display on a call that has encountered a vector "ROUTE" step (used to reroute a call to another CACD site), the calling number is forwarded to the alternate destination if the call is routed over CCS7 trunks.

Up to 15 calling number digits can be sent to the MIS (Management Information System); however, a maximum of 10 calling number digits can be displayed.

ODA Forms

OSPSCT (5404 Record)

OPCTO (5407 Record)

OBSTS (5408 Record)

ODA Translations

The OPCTO form contains three new fields that define CPND treatment for a call. The CPND ASSIGNED field assigns the feature to a Call Type. This field must be "Y" for a calling number to be eligible for display. Only telephone company administration can assign and unassign CPND. This field cannot be set to "Y" unless the AUTO CALL DIST field of the OSPSCT form for the given Call Type is also "Y". This ensures that the CPND feature can only be assigned for CACD Call Types.

The other new fields on the OPCTO form control the use of the calling number. The CPND TO MIS field ("Y" or "N") determines if the calling number arriving at the switch is delivered to the MIS. The CPND TO AGENT field ("Y" or "N") determines whether the calling number is displayed at an agent's terminal. The

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CACD customer can enter "Y" in these fields only when the CPND ASSIGNED is "Y".

The BST DISPLAY INDEX field (valid entries 1-276) on the OPCTO form identifies the display index associated with a given Call Type. The display index is defined on the OBSTS form. Prior to 5E6, entries were made in the DN START and DN LENGTH fields only if the display index entered in the GST DISPLAY INDEX field was in the range 257-276. These fields were used to format the display of the called number only. The CPND feature allows entries to be made in these fields for display indices 1-276. Display of the called number continues to be formatted with indices 1-256, 257-276. The calling number display is formatted with indices 1-256. The DISPLAY field can display up to 10 alphanumeric characters associated with the calling number. DISPLAY entries are allowed only for indices 1-256 (i.e., only with a calling number display index.)

The DN START field identifies the digit in either the calling or called number that will begin the number display. The DN LENGTH field identifies the length of the number display. If a called number is "3125551234", and if the DN START field contains an entry of "4"and A value of "7" in the DN LENGTH field indicates that display should be 7 characters in length. The display would then be "5551234".

With the 5E6 Software Release, the calling number and the text identified in the DISPLAY field can be displayed together. The calling number is displayed the DN START and DN LENGTH fields are entered for a display index less than 257. When text is also to be displayed, it must be determined whether calling number digits should be used to replace all or part of the textual information. The calling number digits should be used to replace all or part of the textual information. The calling number is displayed if there are enough digits to satisfy the defined values of the DN START and DN LENGTH fields (the calling number must consist of at least DN START + DN LENGTH - 1 digits). If this condition is met, the selected digits will be placed in the rightmost portion of the display. If the value of the DN LENGTH field is 7, for example, the rightmost 7 characters of the text would be replaced with 7 digits of the calling number. The leftmost 3 characters of the text would continue to be displayed.

Suppose that the calling number of a call is "3125551234"and the OBSTS form contains the following:

DISPLAY = SALES DN START = 4 DN LENGTH = 7

The display would be:

SAL5551234

The DN START entry indicates that the calling number should be displayed starting with the fourth digit. The DN LENGTH entry indicates that the next 7 digits of the calling number should be displayed. This 7-digit portion of the calling number is displayed right justified allowing only "SAL" to be displayed. If a calling number is only 7 digits in length (5551234) and the OBSTS form contains the values identified above, the display would be SALES.

The DN START and DN LENGTH fields in the example above indicate that the calling number must be at least 10 digits in length before any of the calling number is displayed (DN START + DN LENGTH -1 or 4 + 7 - 1).

The next example contains the calling number "3125551234"and the following entries in the OBSTS form:

DISPLAY = SALES DN START = 1 DN LENGTH = 10

The display would be:

3125551234

In this example, the the DN START and DN LENGTH fields indicate that the entire 10-digit display is text and is completely overwritten by the calling number populated with the calling number.

25. DELAY LEVEL 3 AND CLOSEDOWN ANNOUNCEMENT ROUTING

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With 5E6 and later Software Releases, the Delay Level 3 and Closedown Announcement Routing feature allows CACD calls that would normally receive either Delay Level 3 or Closedown Announcement treatment to be routed to a DN. Prior to this feature, if the expected delay of a CACD call met or exceeded the Delay Level 3 threshold or the call queue was full, the call was routed to general announcement. Likewise, when the Call Type associated with a call was closed, the call was also routed to general announcement.

ODA Forms

TKGRP (5202 Record)

RTIDX (5303 Record)

OSPSCT (5404 Record)

25.1 ODA Translations

The 3RD ANNC RTI field on the OSPSCT form identifies the Route Index used for call handling when the expected delay for a call meets or exceeds the delay threshold specified in the 3RD ANNC DELAY. This Route Index is also used when the queue is full (i.e., number of queued calls equals MAX CALLS). In this case, new calls are not queued but receive the same treatment as calls in which the Delay Level 3 threshold is exceeded. Rather than queuing a call, Delay Level 3 treatment disconnects the call after the caller receives specified treatment. Prior to this feature, the Route Index entered in the 3RD ANNC RTI field only pointed to a general announcement.

Also on the OSPSCT form, the CLOSE DOWN RTI field identifies the Route Index used for call handling when the call queue is closed (i.e., CALL TYPE OPEN? field is "N"). As with Delay Level 3 treatment, a call cannot be queued when the call is closed. The call is disconnected after specified treatment. Therefore, the Route Index entered in this field cannot point to a general announcement.

A Route Index entered in either of these fields must be defined in the RTIDX form. The PREFIX DIGIT field of this record can contain the forward DN routed to for a Route Index. Up to 10 digits can be entered in this field. These digits are outpulsed using the trunk group identified in the TRUNK GROUP NUMBER field. Each trunk group identified in this field must be defined on the TKGRP form.

26. TRANSLATION REQUIREMENTS SUMMARY

In summary, the following ODA forms are used for the ACD/MIS feature.

CACDPARM form (5458 Record) for 5E6 and later Software Releases, the COMMERCIAL ACD field has been moved from the OSPSOPT form (5424 Record) to the CACDPARM form. The CACDPARM form defines the OSPS CACD and Call Vectoring global parameters residing in the Switching Module.

CFWLPA form (5614-3 Record) This form defines the call forwarding line parameters.

CVDSTTN form (5459 Record) This form defines the destination for a call specified in a call vectoring route.

CVECT form (5460 Record) The CVECT form defines the Call Vector steps for each CALL VECTOR ID.

DAS form (5300-1 Record) The DAS form is used to define DAS values which are assigned on a STINFO form.

FIXRT form (5301-1 Record) The FIXRT form is used to define routing and charging treatment of fixed route types.

ICF form (5305 Record) The ICF form is used to define the carriers which are assigned on a STINFO form.

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INDIT form (5309 Record)

ISDNOPT form (5941 Record) Any OSPS office type entered on the OPARM form must be designated on the ISDNOPT form in the OSPS INSTALLED field.

ISLULC form (5942 Record)

Any LCEN (Line Card Equipment Number) entered on the OPARM form, OSPSOP form or OSPSDSL form must be specified on the ISLULC form. On the ISLULC form, the equipment status must be 'O' (Operational).

LDIT form (5300-3 Record)

LINE form (5109 Record) The Telephone Number - LINE form is used to define the Office Equipment Number and features for each telephone number in a switch.

LINEFA form (5112 Record)

LINEFA form defines the BRCS (Business and Residence Custom Services) Features to a particular customer telephone number.

OBSTS form (5408 Record) The OSPS Basic Services Terminal Seizure form provides information for agent terminal displays. Display contents, starting positions and lengths are defined.

OCTA form (5406 Record) The OSPS CALL TYPE Assignment form assigns ACD/MIS CALL TYPES from ACD/MIS normalized office code and local digits-dialed combinations.

OPARM form (5400-1/2 Record) The OSPS Operator Parameters form defines parameters of an ACD/MIS office including type of equipment, displays and reports and the assignment of serving teams.

OPCTO form (5407 Record) The OSPS CALL TYPE for Trunk Originations form determines ACD/MIS call types and a agent terminal display indexes for trunk origination from ACD/MIS call identification/trunk group combination. Entries (other than 9999) in the TGN field of this form must be defined on a TKGRP form.

ORAR form (5405 Record) The OSPS Rate and Route form identifies a call as an ACD/MIS call by defining the routing and charging for each ACD/MIS screening index/code index combination in a 5ESS Switch.

OSPSCT form (5404 Record) The OSPS CALL TYPE Parameters form assigns CALL TYPE information such as "open for business" and serving teams to ACD/MIS CALL TYPES through agent position to port mapping. Each route index (1ST ANN RTI, 2ND ANN RTI, 3RD ANN RTI or CLOSE DOWN RTI) entered on this form must be defined on a RTIDX form.

OSPSDSL form (5411 Record) The OSPS Digital Subscriber Line form assigns ACD/MIS circuits to line card ports.

OSPSOA form (5403 Record) The OSPS Operator Assignments form defines OSPS agents positions, assigns agents to serving teams and defines valid agent actions.

OSPSOP form (5401 Record) The OSPS Operator Position form defines each operator position within an OSC, assigns RISLU (Remote Integrated Service Line Unit) ports and assigns agent positions.

OSPSOPT form (5424 Record)

RAR form (5301 Record) The RAR form is used to define screening index values which are assigned on a STINFO form.

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RESXDL form (5409 Record) The OSPS Restricted External Dialing form defines restricted dialing sequences for a serving team's agents.

RTIDX form (5303 Record) The RTIDX form is used to define route indices which are assigned on an OSPSCT form.

SFSYS form (5713 Record) This form can only be entered by the AT&T SEE. See Division 2, Section 4a for information on activating secured features.

STINFO form (5402 Record) The OSPS Serving Team Information form provides information about an OSPS serving team. Each digit analysis selector value and secondary digit analysis selector value entered on this form must be defined on the DAS form. Each screening index entered on this form must exist on a RAR form. Each carrier specified on this form be defined on an ICF form.

TKGRP form (5202-1/2 Record)

The TKGRP form is used to define the trunk groups which are assigned on an OPCTO form.

ODA			RC
Number	**Name**	**Title**	**View**
5202	TKGRP	Trunk Group	5.1
5204	TRUNK	Trunk Features and Assignments	5.5
5300-1	DAS	Digit Analysis Selector	9.1
5309	INDIT	Incoming Trunk Preliminary Digit Interpreter	9.5
5300-3	LDIT	Local Digit Interpreter Table	9.3
5301	RAR	Rate and Route	10.10
5405	ORAR	OSPS Rate and Route	21.24
5406	OCTA	OSPS Call Type ID Assignment	21.25
5407	OPCTO	OSPS Call Type for Trunk Originations	21.23
5404	OSPSCT	OSPS Call Type Parameters	21.22
5408	OBSTS	OSPS Basic Services Terminal Seizure	21.26
5402	STINFO	OSPS Service Team Information	21.2
5403	OSPSOA	OSPS Operator Assignment	21.4

Figure 1 POTS TERMINATION FORM

ODA			RC
Number	**Name**	**Title**	**View**
5501	NOC	Normalized Office Code	8.2
5306	LCC	Line Class Code	4.1
5109	LINE	Telephone Number	1.1
5301	RAR	Rate and Route	10.10
5302-1	CGIDX	Charge Index Expansion	10.11
5115	HGRPAS	Hundreds Group(s) Assignment	4.14
5609-4	PFAINWT	INWATS Simulated Facility TN	7.4
5304	MCRTIDX	BRCS - MC Route Index Expansion	10.4
5609-3	PFASFG	Simulated Facility Group	7.3

Figure 2 INWATS TERMINATION FORM

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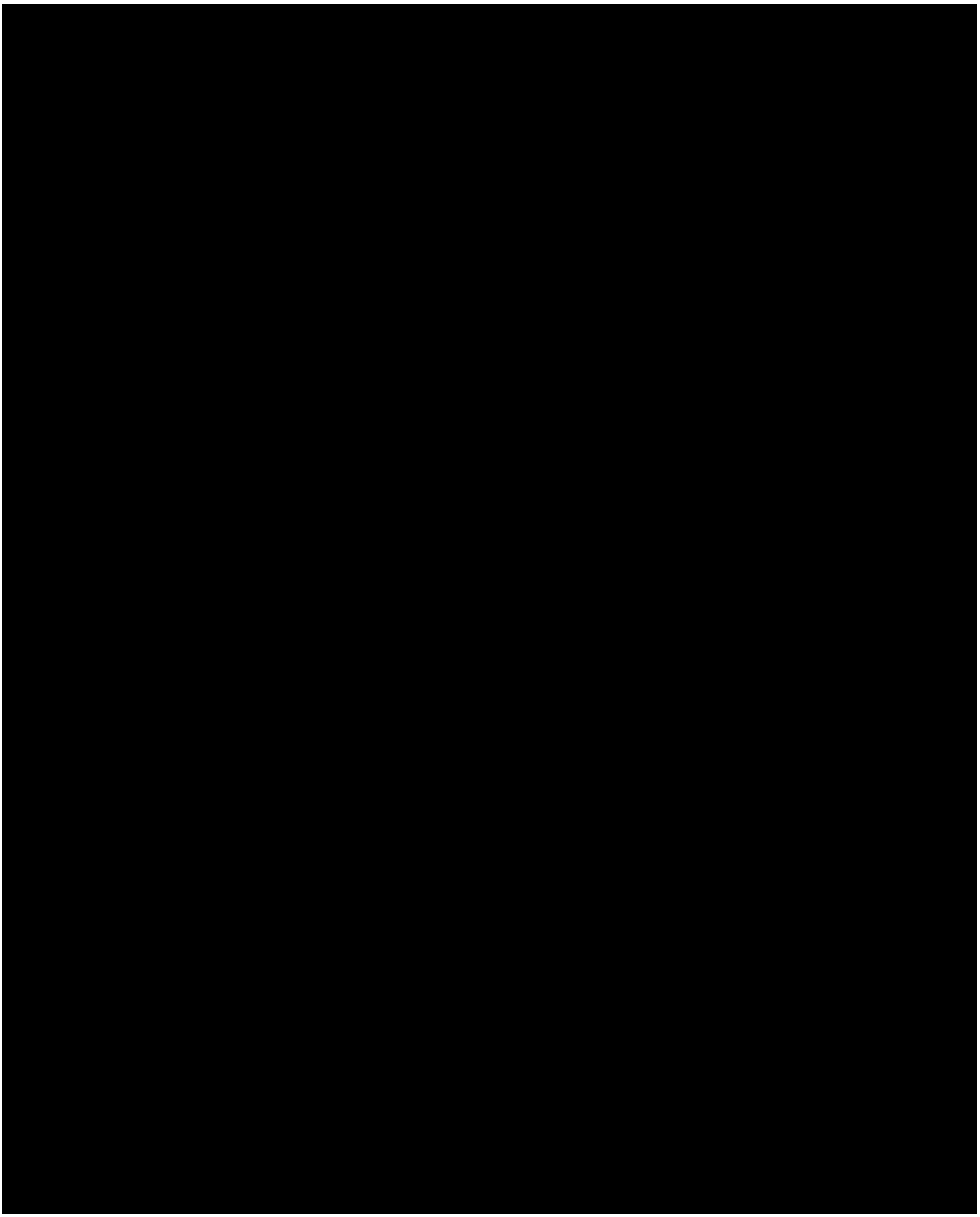

Figure 3 OUTBOUND CALL: DIGIT ANALYSIS

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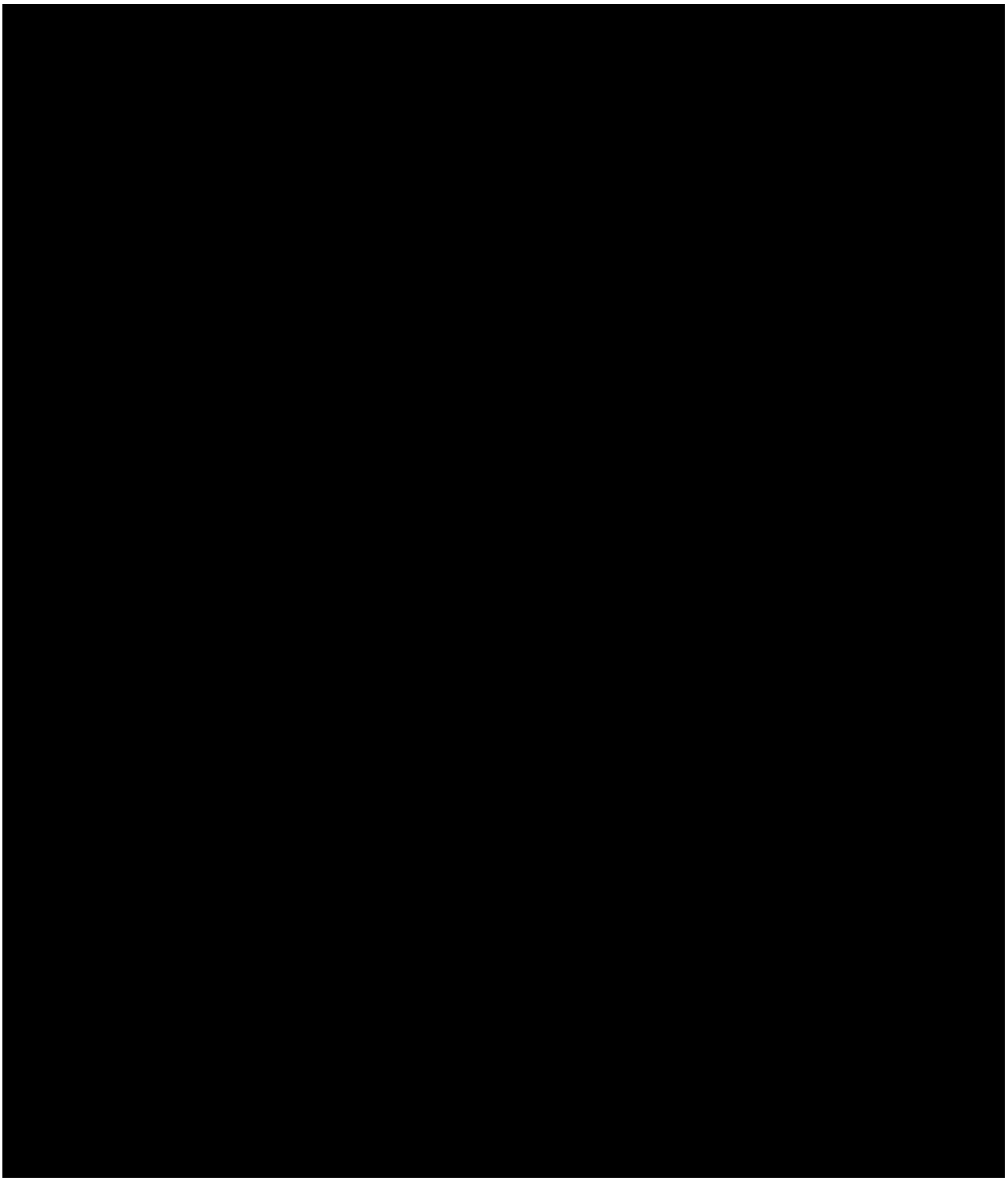

Figure 4 OUTBOUND CALL: ROUTING

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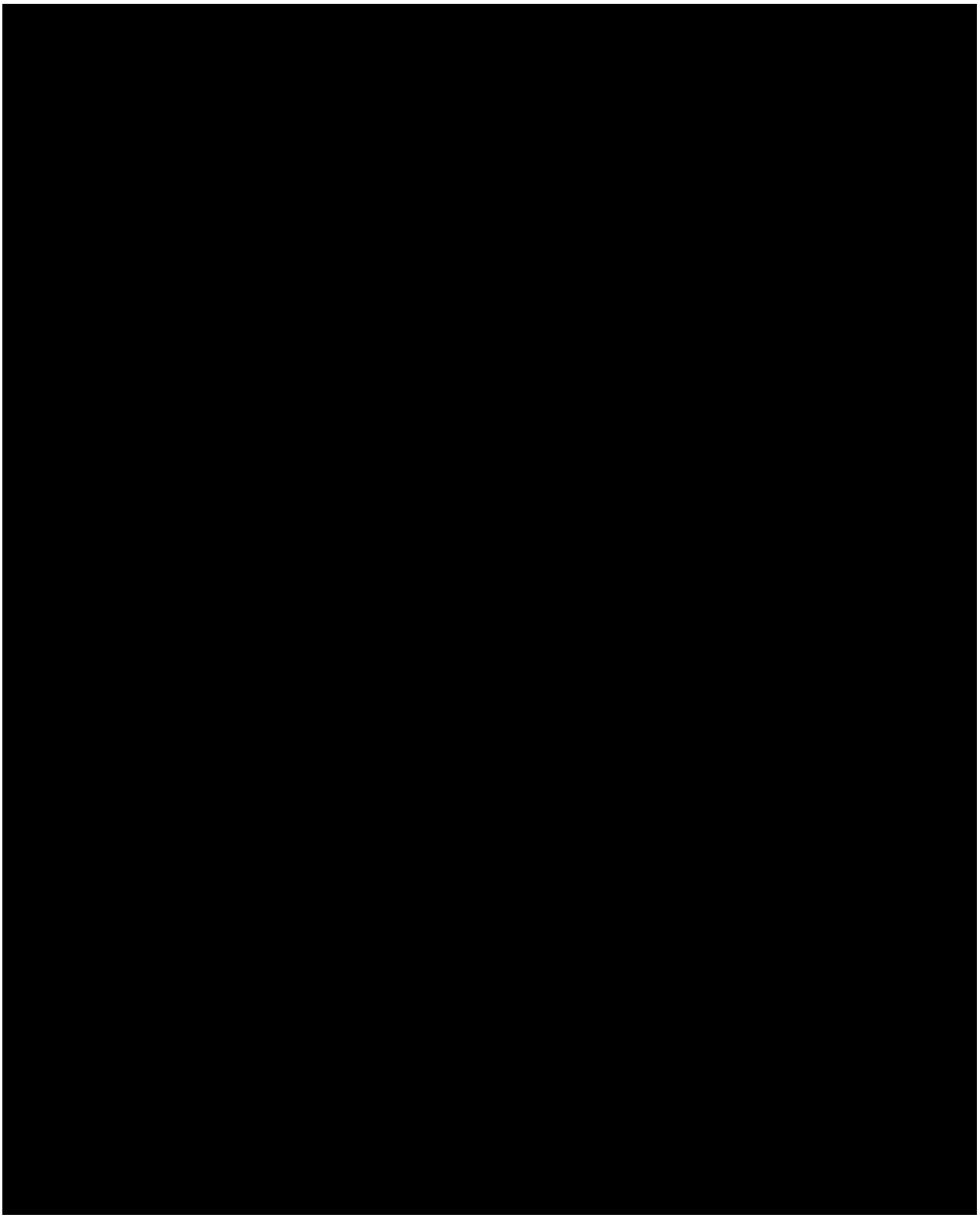

Figure 5 OUTBOUND CALL: BILLING AND FEATURE HANDLING

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Figure 6 BASIC SYSTEM CONFIGURATION FOR CALL VECTORING FEATURE

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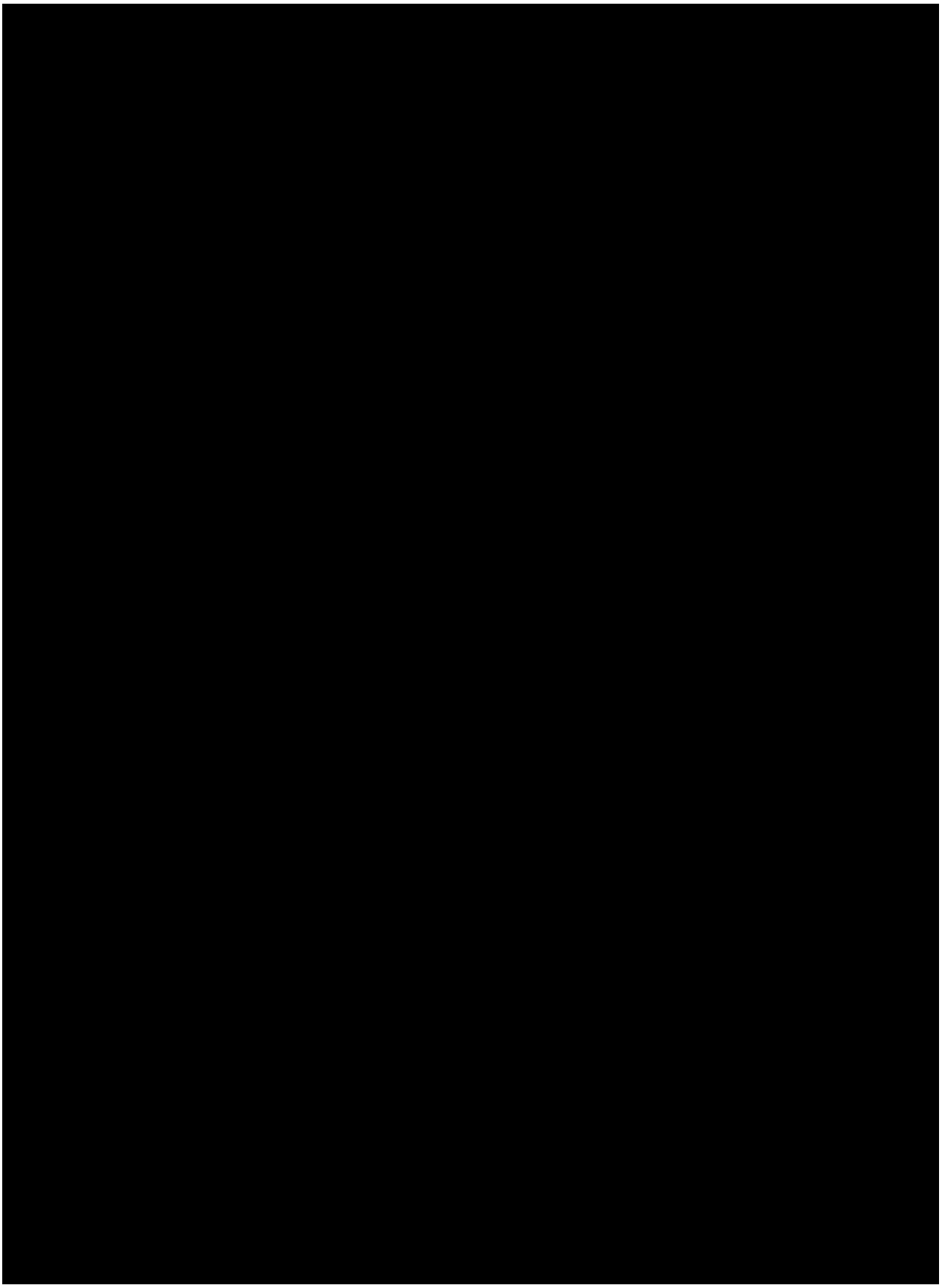

Figure 7 FORM FLOW FOR INCOMING CALLS FOR CALL VECTORING

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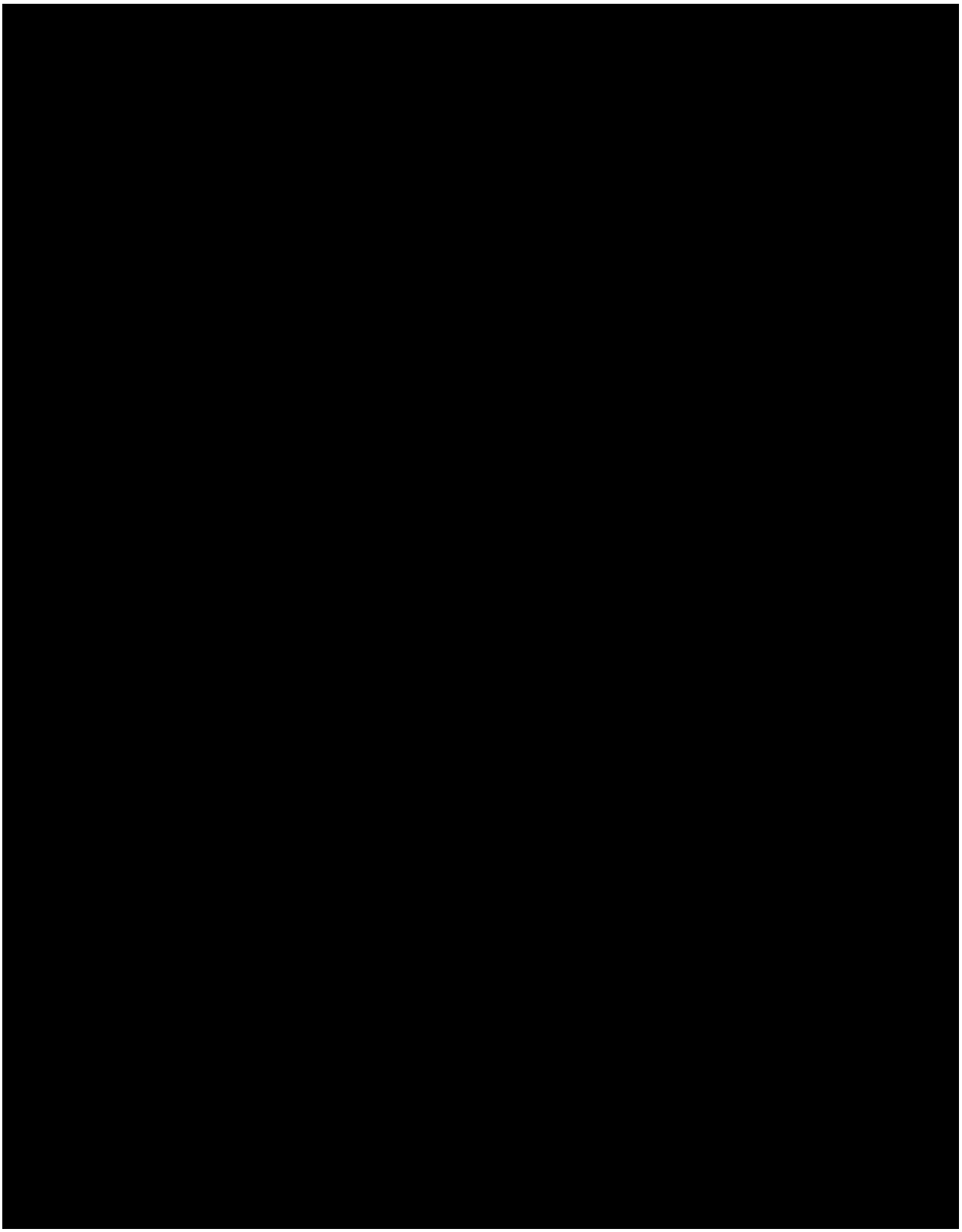

Figure 8 FORM FLOW FOR CACD FOR CALL VECTORING FEATURE

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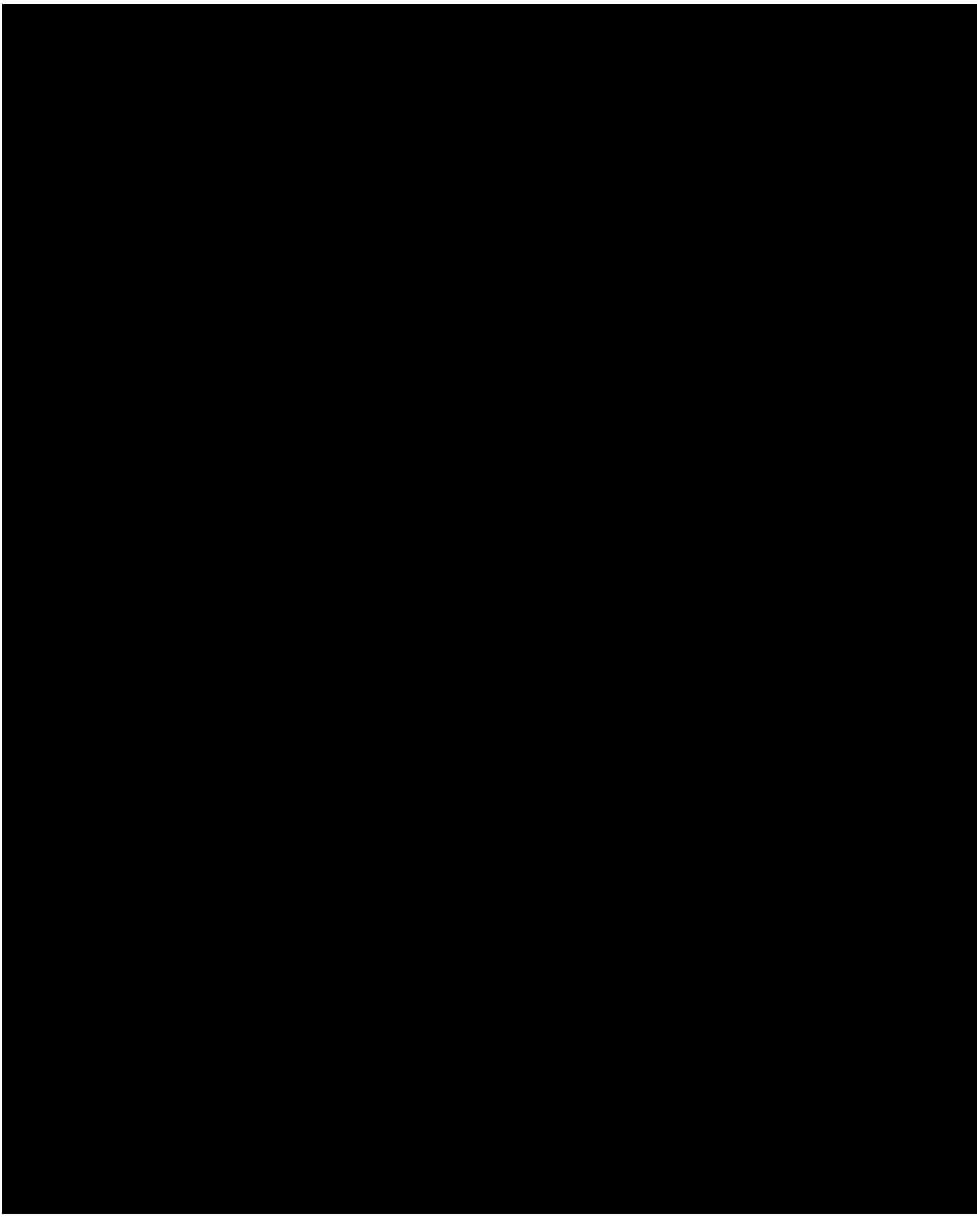

Figure 9 CROSS CHECKS FOR VECTOR COMMANDS ON CVECT FORM, 5460 RECORD

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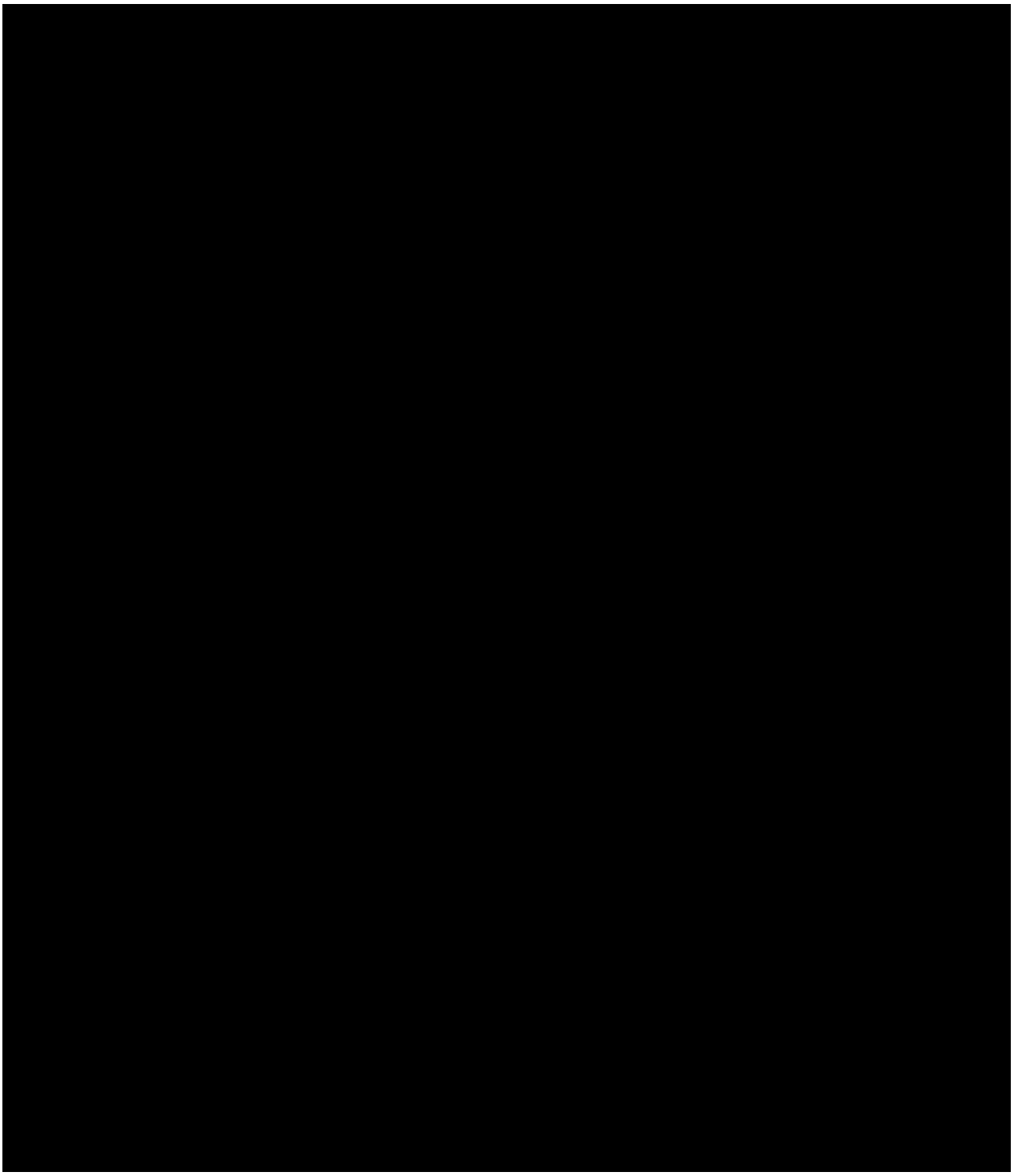

Figure 10 FORM FLOW FOR BASE CACD

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SEC. 3E: OSPS 5ESS SWITCH ENHANCEMENTS

1. GENERAL

This section describes the translations for features that enhance and upgrade the OSPS Switch for 5E8 and later Software Releases. This section provides brief descriptions of the feature and how to provision the feature from an ODA input perspective.

2. INTERMEDIATE SWITCH POINT OSPS FEATURE GROUP B CARRIER IDENTIFICATION CODE EXPANSION

The ISP/OSPS FGB CIC (Intermediate Switch Point OSPS Feature Group B Carrier Identification Code) feature is available for 5E8 and later Software Releases. The ISP/OSPS FGB CIC Expansion Capability is responsible for splitting the administration of FGB and FGD CICs and expanding FGB CICs from three to four digits for use by ISP and OSPS.

This Capability depends on the Feature Group B Carrier Expansion Capability, see Division 2, Section 1AY.

2.1 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DIOPR	5418	3	4S	26.25
RSMCAR	5421	3	4V	26.22

2.2 Modified Forms

DIOPR Form (5418 Record) - This form defines the type of carrier and traffic over each carrier group that can access the OSPS operator. For 5E8 and later, the B CARRIER field indicates if this is a Feature Group B carrier and the *Data Rules* section indicates the fields that apply to a B CARRIER.

RSMCAR Form (5421 Record) - This form defines routing indexes to a carrier from an RSM (Remote Switching Module). For 5E8 and later, the FEAT GRP field was added to indicate a Feature Group B or a Feature Group D carrier. The fields which apply to Feature Group B only and Feature Group D only were grouped accordingly on the form. The Carrier ID number was increased to 9999 for Feature Group B.

3. INTERCHANGEABLE NPA

3.1 Feature Description

In order to increase the supply of the NPA (Numbering Plan Area) codes for future use, the format for the NPA has been changed from N[0/1]X to N[0-9]X. For 5E9(1) and later, the digits 2 - 9, in addition to 0 or 1, can be used for the NPA. Also, OSPS provides a dialing option parameter on a per trunk group basis that indicates the number of digits that a customer is required to dial on a call (ALLOW 7 DIGITS field on the OPRTK form (5417 Record)).

3.2 Feature Assignment

Expanding the middle digit to 0 - 9 has an effect on dialing procedures. In some areas the state commission requires that 0+ and 1+ 7-digit dialing be allowed in addition to the 0+ and 1+ 10-digit dialing. In order to accommodate this, the end office performs most of the checks on the number of digits dialed.

The ISP (Intermediate Switching Point) OSPS INPA (Interchangeable NPA) Code feature allows the ISP/OSPS to recognize the NPA codes in the new format and handle the call properly.

See Figure 1 for feature assignment form flow for INPA.

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3.3 INPA Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ACCST	5428	3	4AC	26.40
ACQS	5425	3	4Z	26.11
ANNHD	5531	3	5AE	8.61
ATC	5446	3	4AT	27.40
BLVNPA	5441	3	4AP	27.10
BLVEX	5442	3	4AQ	27.11
DNNTWK	5419	3	4T	26.20
ESPINFO	5472	3	4BX	27.65
FTSNANP	5486	3	4CN	27.77
NXXZN	5427	3	4AB	26.12
OCNTWK	5420	3	4U	26.21
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
PRONXX	5413	3	4N	26.13
PHRASE	5534	3	5AH	8.63
SPABS	5319	3	3AF	10.20
SPAENXX	5320	3	3AG	10.21
TCSNPA	5437	3	4AL	27.2
TMZN	5426	3	4AA	26.14
TPRNPA	5465	3	4BR	27.5

ANNHD form (5531 Record) - This form lists the phrase IDs in the required order to be associated with an announcement header ID. For the INPA feature, announcement header ID OSPSTA 155 was added to the standard default data. It is used to prompt for NPA, if required, on forward number input, e.g. ACCS sequence calling.

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS operator. The ALLOW 7 DIGITS field indicates whether a 7-digits number is allowed on automated sequence calls for this trunk group.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The OSPS INPA field indicates if INPA is active for this office. The EX CONF DN field has been expanded to include 2 - 9 digits for the middle digit for NPA.

PHRASE form (5534 Record) - This form defines and describes phrase IDs which are provided on the DSU2-RAF Announcement Storage circuit packs for each application. New phrase IDs 318 and 319 were added for the INPA feature.

The following forms were updated to reflect expanding the range of the middle digit of the NPA code from 0/1 to 0 - 9.

- ACCST form 5428 Record
- ACQS form 5425 Record
- ATC form 5446 Record
- BLVNPA form 5441 Record
- BLVEX form 5442 Record
- DNNTWK form 5419 Record
- ESPINFO form 5472 Record
- FTSNANP form 5486 Record
- NXXZN form 5427 Record
- OCNTWK form 5420 Record
- PRONXX form 5413 Record
- SPABS form 5319 Record
- SPAENXX form 5320 Record
- TCSNPA form 5437 Record
- TMZN form 5426 Record

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- TPRNPA form 5465 Record

4. FEATURE GROUP D CARRIER IDENTIFICATION CODE EXPANSION

4.1 Feature Description

For 5E9(1) and later, the OSPS FGD CIC (Feature Group D Carrier Identification Code) Expansion feature allows 4-digit FGD CICs.This feature supports the entry and display of 4-digit FGD CICs at the operator position, the specification of 4-digit CICs in OSPS Recent Change and Verify, and the signaling of 4-digit CICs to operation support systems such as Real Time Rating System and EIS (External Information Systems) vendor systems. For more information on base 5ESS Switch FGD CIC Expansion, see Division 2, Section 1BI.

4.2 Feature Assignment

Background

CICs (Carrier Identification Codes) are used in dialing plans and within MF and CCS7 signaling sequences to indicate the desired carrier for a call. These CICs are signaled to the AT (Access Tandem) in the first stage of MF (Multi-frequency) signaling using FGD (Feature Group D) type of signaling or in the IAM (ISDN-UP Initial Address Message) when the call is being routed through an AT. Calls that are being routed directly to an IC (Interexchange Carrier) or an INC (International Carrier), are routed slightly differently. The CIC is signaled to the IC/INC only when the call is an international call. Previous to 5E8, CICs were identified using a set of 3-digits shared by both FGB (Feature Group B) and FGD carrier access types. A single CIC (XXX) could identify one carrier which provides both FGB and FGD access. Alternately, a single CIC could identify one carrier which provided only FGB or FGD access, but not both for that CIC. A single CIC, however, could not be used to represent an FGD carrier (currently identified by dialing 10XXX), and simultaneously to represent a different FGB carrier. Only equal access offices could handle FGD type of signaling.

For calls handled by a Toll and Assistance OSPS operator, the CIC and the name of the IC/INC selected to route to the forward party is displayed to the operator. The operator can use keying actions to enter a different CIC or carrier name. If the call is to be completed without using an IC/INC, "LEC" is displayed to the operator. OSPS also allows the TCA (Telephone Company Administration) to specify the CIC of an FGD IC/INC carrier (i.e., the carrier specified in the office data) used to route to conference, bill-to-third and non-floatable route numbers.

FGD CIC Expansion

The FGD CIC Expansion feature is an enhancement to the current Carrier Interconnect feature. It allows the ISP (Intermediate Switching Point) and the OSPS to recognize the new 4-digit CIC and handle the call properly. It allows the expansion of the current 3-digit CIC (XXX) to 4-digits (XXXX) and the current 5-digit CAC (Carrier Access Code) (10XXX) to 7-digits (101XXXX). The FGB CIC Expansion feature eliminates sharing the same set of digits for both FGB and FGD CICs.

FGC

All operator calls come in on TSPS trunks in FGC (Feature Group C) format (Address first and ANI second). However, LS (Listing Services) calls can also come in on FGD trunks (ANI first and Address second). The OSPS can outpulse calls using either the FGC or the FGD signaling protocol or CCS7.

Dialing Plan Conversion

In order to facilitate the dialing plan conversion, during a permissive period the caller can dial either the old or the new dialing format, i.e., dial either the 5-digit CAC or the new 7-digit CAC. All systems supporting only 3-digit CIC capability that expect to support the new 4-digit CIC must be updated by the end of the

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permissive period.

For trunk groups marked 3-digits, a 3-digit CIC is transmitted in the signaling sequence and for trunk groups marked 4-digits, a 4-digit CIC is transmitted in the signaling sequence. Once the switches involved have the capability to handle 4-digit CIC signaling, the MF trunk groups between those offices will be converted to 4-digit signaling. CCS7 trunk groups can handle both types of traffic on the same trunk group. The TNS (Transit Network Selection) parameter in the ISDN-UP protocol has been modified to identify whether a 3-digit or a 4-digit CIC is involved

ISP

The ISP/OSPS will have to determine from the routing data whether the outgoing IC/INC trunk is marked as 3-digit or 4-digit. In order to accommodate a 3-digit CIC in the outgoing signaling on an international call, the leading digit will be dropped from a 4-digit CIC. In the case of a 3-digit CIC destined for a 4-digit trunk group, a leading 0 will be prepended to the CIC. The call will use an FGD CIC if the forward number is other than 950. If the forward number is 950-XXXX and the call is being routed using FGC protocol, then an FGB CIC will be used.

Recent Change and ODA

Recent Change and ODA (Office Data Administration) records that are associated with a CIC should be updated to accommodate the 4-digit CIC and explicitly identify the carrier as being FGD or FGB or both (ICF form (5305 Record), RSMCAR form (5421 Record)).

See Figure 2 for feature assignment form flow for FGD.

4.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DIOPR	5418	3	4S	26.25
DNNTWK	5419	3	4T	26.20
OCNTWK	5420	3	4U	26.21
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
RSMCAR	5421	3	4V	26.22
STINFO	5402	3	4C	21.2
TPRCC	5464	3	4BQ	27.6
TPRNPA	5465	3	4BR	27.5
TREAT	5461-4	3	4BL	26.33

The following forms were updated to reflect expanding the CIC from 3-digits to 4-digits.

- DIOPR form 5418 Record
- DNNTWK form 5419 Record
- OCNTWK form 5420 Record
- OPRTK form 5417 Record
- OSPSOPT form 5424 Record
- RSMCAR form 5421 Record
- STINFO form 5402 Record
- TPRCC form 5464 Record
- TPRNPA form 5465 Record
- TREAT form 5461-4 Record

5. OFFICE TRAFFIC MIX

5.1 FEATURE DESCRIPTION

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For 5E9(2) and later, the amount of dynamic memory per trunking SM can be globally allotted in the COIN MECH field on the OSPSOPT form (5424 Record) for coin phone originations plus MECH attempts. LS (Listing Services) incoming attempts plus Quantum incoming attempts can be globally allotted in the LS QUANTUM field on the OSPSOPT form.

The Office Traffic Mix capability does not have a capability number.

5.2 FEATURE ASSIGNMENT

The COIN MECH field and the LS QUANTUM field on the OSPSOPT form allow the Telephone Company Personnel to allot only the memory necessary to support the MECH, coin, LS, and Quantum traffic for the office.

NOTE: The values for these fields must be determined by the Telephone Company Personnel and given to ODA *AFTER* the final dump and BEFORE the retrofit tapes are made if a value other than the default value is needed.

COIN MECH:

The COIN MECH field defines the percentage of call attempts originating from coin phones plus the percentage of MECH attempts that a particular telephone office expects for the overall traffic mix on a switch.

To calculate the COIN MECH value, determine the total number of incoming call attempts for a particular time frame, such as the last busy season. Next estimate the percentage of the selected period's total incoming call attempts

1. that originated from prepay and postpay coin stations and
2. that were released from operator positions and from APSs (Automated Position Systems) for MECH handling.

The sum of these two percentages, plus an additional padding of 2%, should be the value that is used to populate the COIN MECH field. Thus:

COIN MECH = (% of COIN calls) + (% of MECH calls) + 2%)

This field is very important because it dictates dynamic memory availability by creating only the amount of dynamic memory resources that are needed for the coin and MECH combined traffic load on SMs that have "FIOPR" trunks. Setting the value too high defeats the purpose of this parameter, which is to save resources. However, if the value is set too low, then the resources are exhausted when the coin and MECH load exceeds the expected amount and the additional coin and MECH attempts are dropped.

If COIN MECH dynamic memory becomes exhausted for an SM, an OP OVRLD alarmed report prints for SM=X, RESOURCE COINOT and assert 32765 (for 5E9(2)) are generated.

If coin and MECH calls exhaust the resources, or if an overall coin - MECH traffic increase is planned, more resources can be made available in one of the following ways:

1. If SM COINOT is exhausted, request more software resources for OSPS Coin Originating Treatment dynamic data for the SM with RC/V view 8.40.

   Enter the SM number in the MODULE field.

   Enter "COINOT" in the SOFTWARE RESOUCES field.

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Increase the number of "COINOT" resources via the INCREMENTAL VALUE field. The incremental value can be increased, by up to 50 resources per update, until the needed total is reached. For example, if the incremental value is 10 and 75 resources are needed, first update to 60 and then update to 75. The CURRENT TOTAL VALUE display reflects the true SM total plus the additional resources that are automatically reserved to complete a resource "page".

2. If the coin and/or MECH call load is expected to increase by a large amount as part of the overall traffic mix, then via RC/V view 8.9, adjust the value of the COIN MECH field to reflect the new percentage for the office (based on the COIN MECH formula shown earlier).

LS QUANTUM:

The LS QUANTUM field defines the percentage of Listing Services attempts plus the percentage of Quantum attempts that a particular telephone office expects for the overall traffic mix. The value of this field must be determined by the Telephone Company Personnel.

To calculate the LS QUANTUM value, determine the total number of incoming call attempts for a particular time frame, such as the last busy season. Next estimate, from the selected period's total incoming call attempts, the percentage of that total that were LS attempts and the percentage that were Quantum attempts. The sum of these two percentages, plus an additional padding of 2%, should be the value that is used to populate the LS QUANTUM field. Thus:

5.2.1 LS QUANTUM = (% of LS attempts) + (% of QUANTUM attempts) + 2%

This field is very important because it dictates dynamic memory availability by creating only the amount of dynamic memory resources that are needed for the LS and Quantum combined traffic load on trunking SMs. Setting the value too high defeats the purpose of this parameter, which is to save resources. However, if the value is set too low, then the resources are exhausted when the LS and Quantum load exceeds the expected amount and the additional LS and Quantum calls are dropped.

If LS QUANTUM dynamic memory becomes exhausted for an SM, an OP OVRLD alarmed report prints for SM=X, RESOURCE SRVOT and assert 33091 (5E9(2)) are generated.

If LS and QUANTUM calls exhaust the resources, or if an overall LS or Quantum traffic increase is planned, more resources can be made available in one of the following ways:

1. For SM SRVOT exhausted resources, request more software resources for Listing Services Call Data Originating Treatment and EIS (External Information Systems) Interface, i.e., SRVOT resources for the SM, with RC/V view 8.40.

   Enter the SM number in the MODULE field.

   Enter "SRVOT" in the SOFTWARE RESOUCES field.

   Increase the number of "SRVOT" resources via the INCREMENTAL VALUE field. The incremental value can be increased, by up to 50 resources per update, until the needed total is reached. For example, if the incremental value is 10 and 75 resources are needed, first update to 60 and then update to 75. The CURRENT TOTAL VALUE display reflects the true SM total plus the additional resources that are automatically reserved to complete a resource "page".

2. If the Listing Services and/or Quantum call load is expected to increase by a large amount as part of the overall traffic mix, then adjust the value of the LS QUANTUM field on RC/V view 8.9, to reflect the new percentage for the office (based on the LS QUANTUM formula shown earlier).

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5.3 TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OSPSOPT	5424	3	4Y	8.9

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters.

6. GLOSSARY

ACTS	Automatic Coin Toll System
APS	Automated Position System
AT	Access Tandem
CAC	Carrier Access Code
CIC	Carrier Identification Code
EIS	External Information Systems
FGB	Feature Group B
FGC	Feature Group C
FGD	Feature Group D
IC	Interexchange Carrier
IAM	ISDN-UP Initial Address Message
INC	International Carrier
INPA	Interchangeable NPA
ISP	Intermediate Switch Point
LS	Listing Services
MECH	More Efficient Call Handling
MF	Multi-frequency
NPA	Numbering Plan Area
ODA	Office Data Administration
OSPS	Operator Services Position System
QUANTUM	Easy Reach 700 Calls
TCA	Telephone Company Administration
TNS	Transit Network Selection

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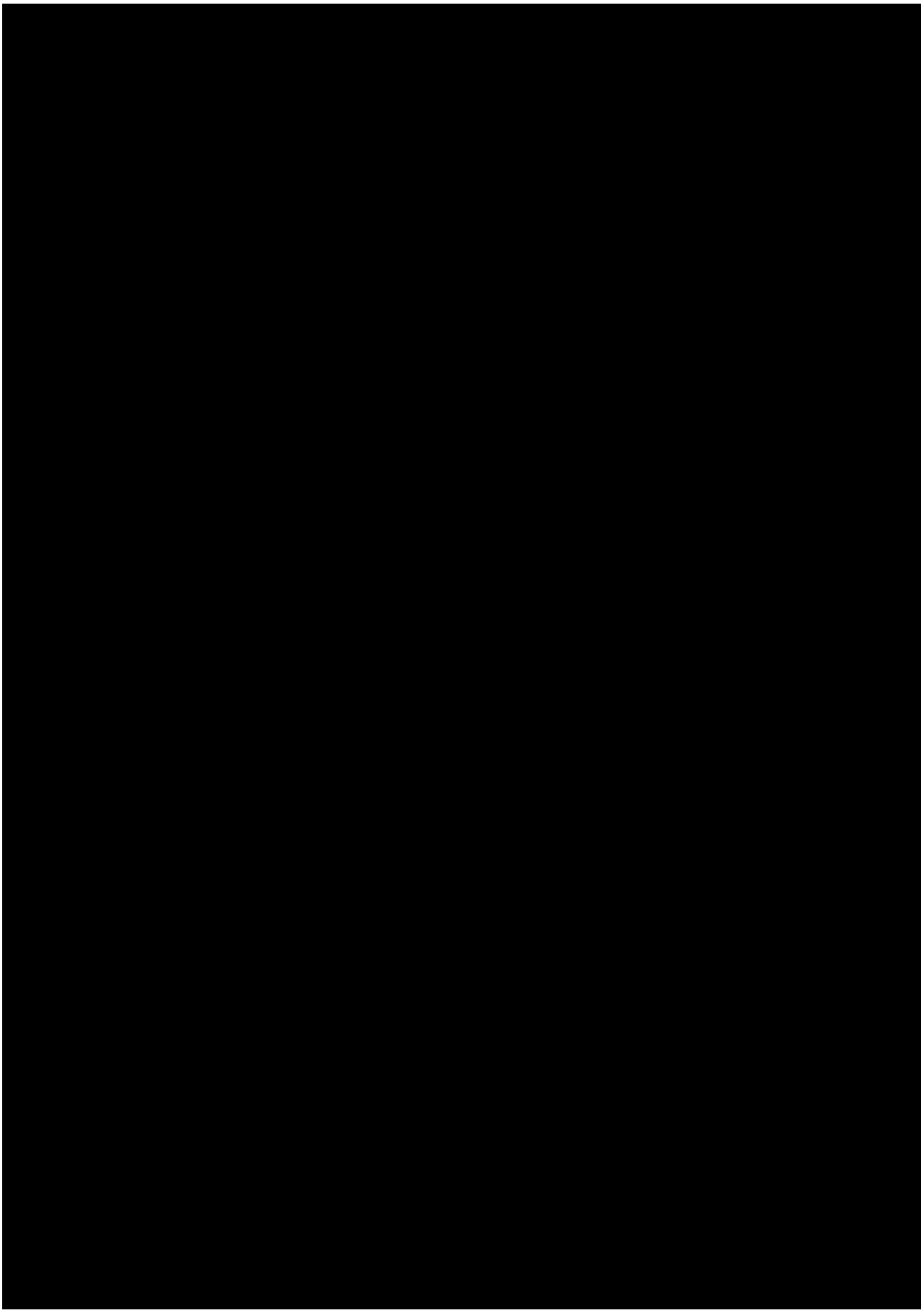

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Figure 1 INPA FORM FLOW

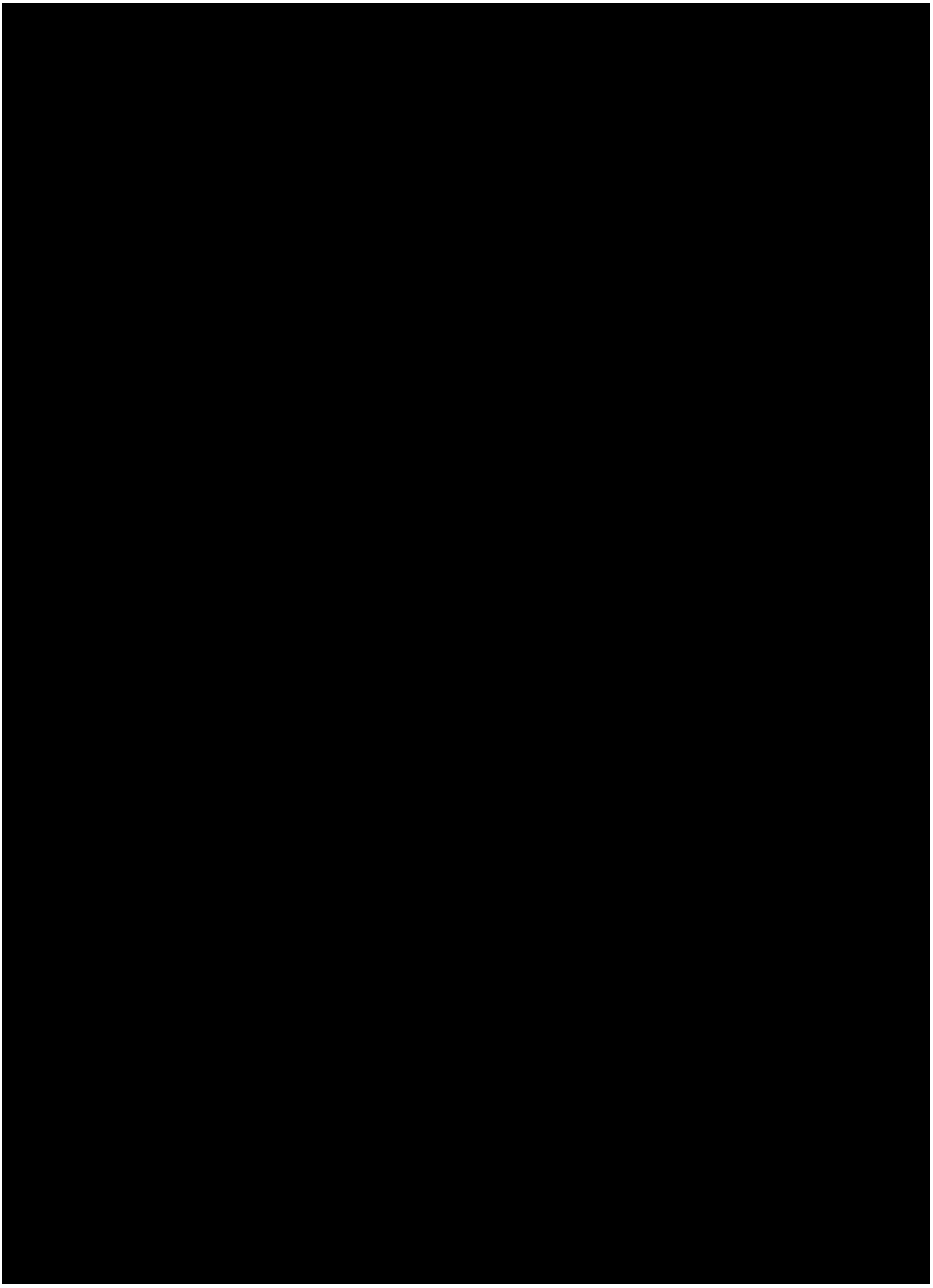

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Figure 2 FGD CIC EXPANSION FORM FLOW

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SEC. 3F: OSPS COMBINED SERVICES

1. FEATURE DESCRIPTION

For 5E6 and later Software Releases, the CS (Combine Services) feature allows an operator to use a single terminal to process both T&A (Toll and Assist) and Listing Services Calls. Prior to implementation of this feature, these types of calls were typically handled by two separate groups of operators, located in different OSCs (Operator Services Centers). Due to the changing call traffic patterns, some OSCs experienced heavy call loads, while others had relatively light loads. This feature allows the OSCs to be consolidated, thereby reducing traffic pattern problems. Through the CS feature, T&A and Listing Services calls my be handled together on either a VDT (Video Display Terminal) or a CST (Combined Services Terminal). The VDT is limited to using manual access to data bases. The CST (Combined Services Terminal) handles all operator services and data base lookups for T&A, Listing Services and AMLB.

2. TRANSLATION REQUIREMENTS

For Listing Services translations, such as EIS (External Information System), External ARU (Audio Response Unit) and Internal ARU, see Division 2, Section 3c. For T&A translations, see Division 2, Section 3e.

Figure 1 give the form flow for Combined Services. The translations for the Combined Services feature require the following forms:

- OSPSOPT (5424 Record)
- OSPSCT (5404 Record)
- STINFO (5402 Record)
- OSPSOA (5403 Record)
- OSPSOP (5401 Record)
- OSPSDSL (5411 Record)

2.1 Combined Services Translations

The following translations are required for an OSPS Office to handle Listing Services calls and T&A calls.

2.1.1 OSPSOPT (5424 Record)

For an OSPS office to handle Combined Services calls, both the OSPS DA and the OSPS TA field must be set to "Y". If only T&A call handling is being provided, then only the OSPS TA field needs to be set to "Y".

2.1.2 OSPSCT (5404 Record)

This form is used to assign OSPS serving teams and other parameters to OSPS call types. Listing Services and T&A calls may both be handled by the same serving team, but they are not allowed to be associated with the same call type. For both Listing Services and T&A CALL TYPEs, the OPER TYPE field must be set to "TA" and the AUTO CALL DIST? field must be set to "N". However, a Listing Services call type must have an entry in the "SVC ID" field, associating a Service ID with the call type. The Service ID is a number assigned by the TCA (Telephone Company Administration) to define a Listing Service to be provided to calls assigned to the identified call type. An entry in the SVC ID is not allowed for T&A call type. This distinguish the Listing Services call type from the T&A call type.

2.1.3 STINFO (5402 Record)

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Each serving team must have an entry in the STINFO form, which is used to define the parameters associated with a group of operators that compose a serving team. A serving team that will provide service for both Listing Services and T&A must have the OPER TYPE field set to "TA" and the AUTO CALL DIST? field must be set to "N".

2.1.4 OSPSOA (5403 Record)

Each operator login ID assigned to a serving team must have an entry in the OSPSOA form, which is used to assign parameters to an operator login ID, which is the OPERATOR ID field. The SERVING TEAM field contains the SERVING TEAM number identified in the STINFO form (5402 Record). The OPER TYPE field must be set to "TA" for both Listing Services and T&A operator, allowing a single operator to handle both Listing Services and T&A calls.

2.1.5 OSPSOP (5401 Record)

Each operator terminal must have an entry in the OSPSOP form. For both operator terminals, VDT or CST, the POS TYPE field must be set to "OPT". The LCEN field identifies the physical port used to connect the terminal to the switch.

2.1.6 OSPSDSL (5411 Record)

Each terminal, (either a VDT or a CST) must have an entry in the OSPSDSL form. The LCEN field entry on the OSPSDSL form must match the LCEN field entered on the OSPSOP form. The SERVICE CLASS field should be set to "TAOPER". To allow an operator terminal to use packet switching for external data bases the LVL2 PROF field must be set to "VDT". If access to an external data base is not desired, then LVL2 PROF should be set to "BST".

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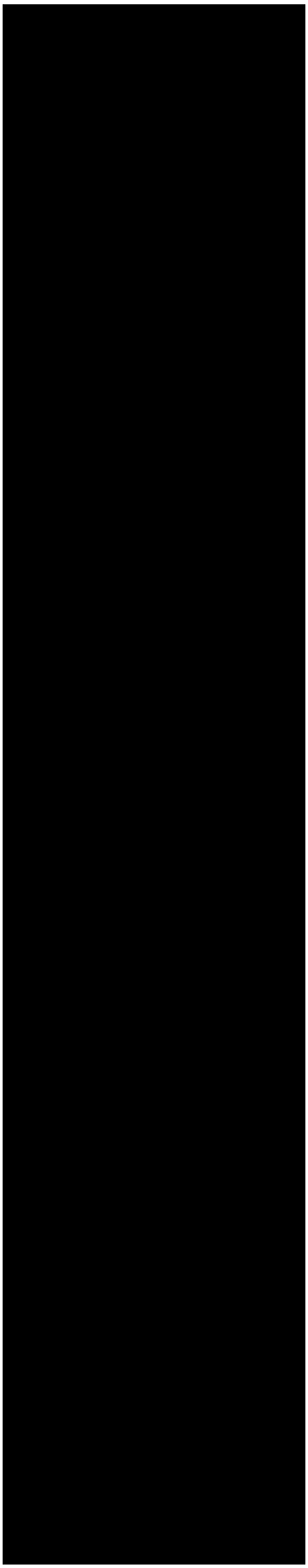

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Figure 1 FORM FLOW FOR COMBINED SERVICES

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SEC. 3G: OSPS MULTIPLE DATA BASE ACCESS (MDBA)

1. INTRODUCTION

The MDBA (Multiple Data Base Access) capability allows an operator to establish two or more simultaneous data base sessions from a single terminal.

MDBA is considered an expansion of the 5E4(2) AMLB (Automated Multi-Leaf Bulletin) capability introduced in the 5E4(2) Software Release. Whereas AMLB allowed the operator to interact with a single external data base, MDBA allows two simultaneous sessions on a VDT (Video Display Terminal), six simultaneous sessions on a CST (Combined Services Terminal) and access of up to 15 data bases from either terminal. While a VDT can only interface with AMLB-like data bases, a CST can interface with any combination of AMLB- or Listing Services-type data bases.

An independent full-screen virtual terminal is created and dedicated to each active data base, but only one active data base can be in the foreground. An operator on a VDT or CST can only interact with this foreground data base; however, a CST can exchange data and control with all active data bases, foreground or background.

Access permissions are assigned to an entire serving team. ODD (Office Dependent Data) may deny access to an operator whose serving team does not have the necessary login information to establish a session with a particular data base.

The type of external data base to be accessed determines which office data paths are followed and which records are required by ODA. A BRI (Basic Rate Interface) DSL (Digital Subscriber Line) is used to access AMLB-like data bases through an external data base DSL assignment. This requires entries in the OSPSDSL form (5411 Record) for the DSL. With the 5E6 Software Release, a DBA (Data Base Access) T1 (i.e., an X.25 packet-switched interface providing 24 B channels per facility) can also access an external data base. DBA T1 access requires entries in the XAT form (5909 Record).

1.1 ODA Forms

1.1.1 OPDBPARM (5434 Record)

1.1.2 OPEXTDB (5435 Record)

1.1.3 OSPSOPT (5424 Record)

2. TRANSLATIONS REQUIREMENTS

OSPSOPT (5424 Record)

For an OSPS operator to interface with an external data base, the OSPSOPT form (5424 Record) must have the OSPS TA and OPER EXT DB fields set to "Y".

OPEXTDB (5435 Record)

This record allows an operator terminal on the OSC (Operator Service Center) to access one or more external data bases. Terminal access is determined by an entry in the OSPSOP form (5401 Record) and the operator's serving team (derived from the operator's login ID on the OSPSOA form (5403 Record)).

With the 5E6 Software Release, the fields TERM DB KEY, DB NAME and TERM TYPE have been added to support the MDBA feature. The DB NAME field contains a unique data base name. This unique name is defined on the OPDBPARM form (5434 Record). The TERM DB KEY field on the OPEXTDB associates a data base key on the operator terminal with one of 15 possible external data bases. The LOGIN ID and PASSWORD fields identify the login ID and password values used to log an operator into a data base. The

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LOGIN DELIM and PASSWORD DELIM fields identify a terminating character for the login ID and password strings.The AUTO LOGIN field indicates the auto login procedure is executed whenever a session is established with the data base. If a data base session is to be established whenever an operator logs into to OSPS, the AUTO SESSION field should be set to "Y". The OSPS LOGIN field determines if the operator's login ID should be used to login to the data base. If this field is set to "Y", no entry can be made in the LOGIN ID field. An entry of "Y" in the REVERSE CHARGE field causes the external data base link to be charged for calls to the data base. If "N" is entered in this field, the operator terminal DSL is charged. The TERM TYPE field identifies the type of terminal emulation used for a session interface. If the terminal is a VDT, this field should be set to "BASIC". If the terminal is a CST, this field can contain either "BASIC" or "TEMPLATE".

OPDBPARM (5434 Record)

This record defines the data base and X.25 protocol parameters that allow accessto an external data base. The DB NAME entry on this form must be defined in the DB NAME field on the OPEXTDB form. Each DB NAME entry is assigned to a unique data base number identified in the DB NUMBER field. This field has been expanded in the 5E6 Software Release to allow up to 31 external data bases to be defined in Office Dependent Data (ODD).

The DB PKT TN field contains an ISDN telephone number to access an external data base. The number entered in this field is sent through digit analysis to establish a routing path to the desired data base.

The CUGPX field identifies the customer closed user group index. The index is sent to the operator terminal which uses this value to form an X.25 call request packet. Each entry in this field must match an entry in the CUG LIST IDX field of the AMLBDSL form (5447 Record). If either of the SEND WINDOW SIZE, SEND PACKET SIZE, RECEIVE WINDOW SIZE or RECEIVE PACKET SIZE field of the OPDBPARM form has a value other than zero, the FLOW CNTL field of the corresponding AMLBDSL form must be "Y". The FIRST SEARCH STRING and SECOND SEARCH STRING field of the 5434 Record identify the first and second prompt strings sent out by the external data base during a login sequence. The SEND WINDOW SIZE field identifies the sending size of the X.25 level 3 packet window for the terminal. The size of the X.25 level sending packet is identified in SEND PACKET SIZE field. This field identifies the size of the information data block sent to the external data base. The RECEIVE WINDOW SIZE field identifies the receiving size of the X.25 level 3 packet window for the terminal. The size of this packet is identified in the RECEIVE PACKET SIZE field. This field identifies the size of the information data block received from the external data base.

With 5E6, the fields RESTART COUNT, DATA TIMER and RESTART TIMER will assist in fine tuning protocol parameters for each system that employs data base access via ISDN. The parameters involve the timing, sending, acknowledging and restarting of X.25 level 3 timer information sent between the VDT and the 5ESS Switch.

In addition to the forms listed above, the following forms are also used in implementing the MDBA feature.

OSPSDSL form (5411 Record)

The OSPSDSL form (5411 Record) identifies OSPS DSLs (Digital Subscriber Lines), assigns these DSLs to line card ports, and defines data link parameters. This form also defines the parameters of the DSL D channel. Each operator terminal requires an entry in this record. The LCEN field identifies the physical port through which the operator terminal is connected to the switch. The entry for the operator terminal in this form must have SERVICE CLASS set to "TAOPER" regardless of the type of terminal being used (VDT or CST). For an operator terminal to access an external data base using packet switching, the LVL2 PROF field must be "VDT".

AMLBDSL (5447 Record)

The AMLBDSL form defines the characteristics and parameters to access an external data base. Each terminal allowed access must have an entry of "SX" in the D SERV field to determine the type of ISDN

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service allowed on the D channel.

Access to an AMLB-type external data base requires several AMLBDSL form entries to provide B-channel packet switching capabilities. The entry for an LCC for an AMLB-like data link must have CLASS OF SERVICE equal to "XDB" (matching the OSPSDSL form) and the D SERV field equal to "ADMIN".

MLHGFD (5604 Record)

The MLHGFD form defines an MLHG feature. To implement the MDBA feature, the FEATURE NAME field on this form should be set to the pre-constructed feature "/MHXPS" or to a user-constructed feature that is similar to "/MHXPS". Also, HUNT TYPE must be "PSUCD", the fields OVERFLW REG, INWATS, CF BUSY and CF VARIABLE must all be "N" and the BEARER field must be "PACKET".

MLHG (5110 Record)

Typically, a unique Multi-Line Hunt Group is defined for each set of external data bases that contain the same information; therefore, the MLHG field on this form would contain a number associated with each unique MLHG. Also, the QUEUING FEATURE and QUEUE MASTER SWITCH field should be blank since queuing is not used when routing to an external data base.

For access to a AMLB-type external data base, the DATA LINK GRP field on the OSPSDSL form must be assigned to a member defined in the MLHG field on the MLHG form.

XAT (5909 Record)

The XAT form defines parameters for access to an external data base over a DBA T1. A seven-digit number is entered in the PKT TN field of this form. The first five digits of this number should match the first five digits of the LISTED TN field on the MLHG form. Also, the PKT MLHG field of this form must match the MLHG field on the MLHG form. An entry in the LCC field on the XAT form must be defined on the LCC form (5306 Record).

LCC (5306 Record)

This record defines routing and service information for a given Line Class Code. For a DBA T1 data link LCC, the CLASS OF SERVICE field must be "XAT" and the TERMINATING TREATMENT field must be "INDIV".

An LCC for an operator terminal (from the AMLBDSL form) must have CLASS OF SERVICE equal to "TAOPER" and TERMINATING TREATMENT equal to "INDIV".

An LCC for an AMLB-like data link (also from the AMLBDSL form) must have CLASS OF SERVICE equal to "XDB" and TERMINATING TREATMENT equal to "INDIV".

DAS (5300-1 Record)

The DAS from the LCC form must be defined in this record. The DAS form assigns preliminary and primary translation tables for digit analysis. The PDIT and LDIT fields on this form should contain entries for an operator terminal DAS that would correspond to these tables.

PDIT (5300-2 Record)

The PDIT field on the DAS form must be defined on the PDIT form for preliminary digit analysis. Also, the DIGITS TO INTERPRET field should contain an entry for the TN from the DB PKT TN field of the OPDBPARM form. The PDIT form must have the following entries for the following fields: the CALL TYPE field must be set to LDIT; the CDI and RTI fields must be blank; the PREFIX field should be "NONE"; DIGITS TO BE DELETED should be "0".

LDIT (5300-3 Record)

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The LDIT field on the DAS form is defined in the LDIT form. This form is used for digit analysis of the Data Packet TN. The LDIT form must have the following entries for the following fields: CALL TYPE as "NORMAL"; TYPE CI CALL as "PSNCI"; RTI should be blank; OFFCOD should contain the NXX entry from the OPBDPARM form; the NBR OF DIGITS field should be the same number of digits as the Data Base Packet TN. Also, INCOMING DIGITS should be entered to ensure that unique treatment is provided to the TN from the DB PKT TN field of the OPDBPARM form and CODE INDEX should have a value that serves as a key to the RAR form (5301 Record).

RAR (5301 Record)

This record determines routing. The SCREEN INDEX from the LCC form, the CODE INDEX from the LDIT form and the PREFIX from the PDIT are the keys into the RAR form. The RTI field should be blank, the NXX field must contain the NXX from the DB PKT TN of the OPDBPARM form and the CHGI field should contain a CHARGE INDEX defined on the CGIDX form (5302-1 Record).

HGRPAS (5115 Record)

This record assigns a routing module to a hundreds group (a group of seven-digit numbers that have the first five digits in common). The OFFICE CODE field on this form should contain the NXX of the Data Base Packet TN from the OPDBPARM form.

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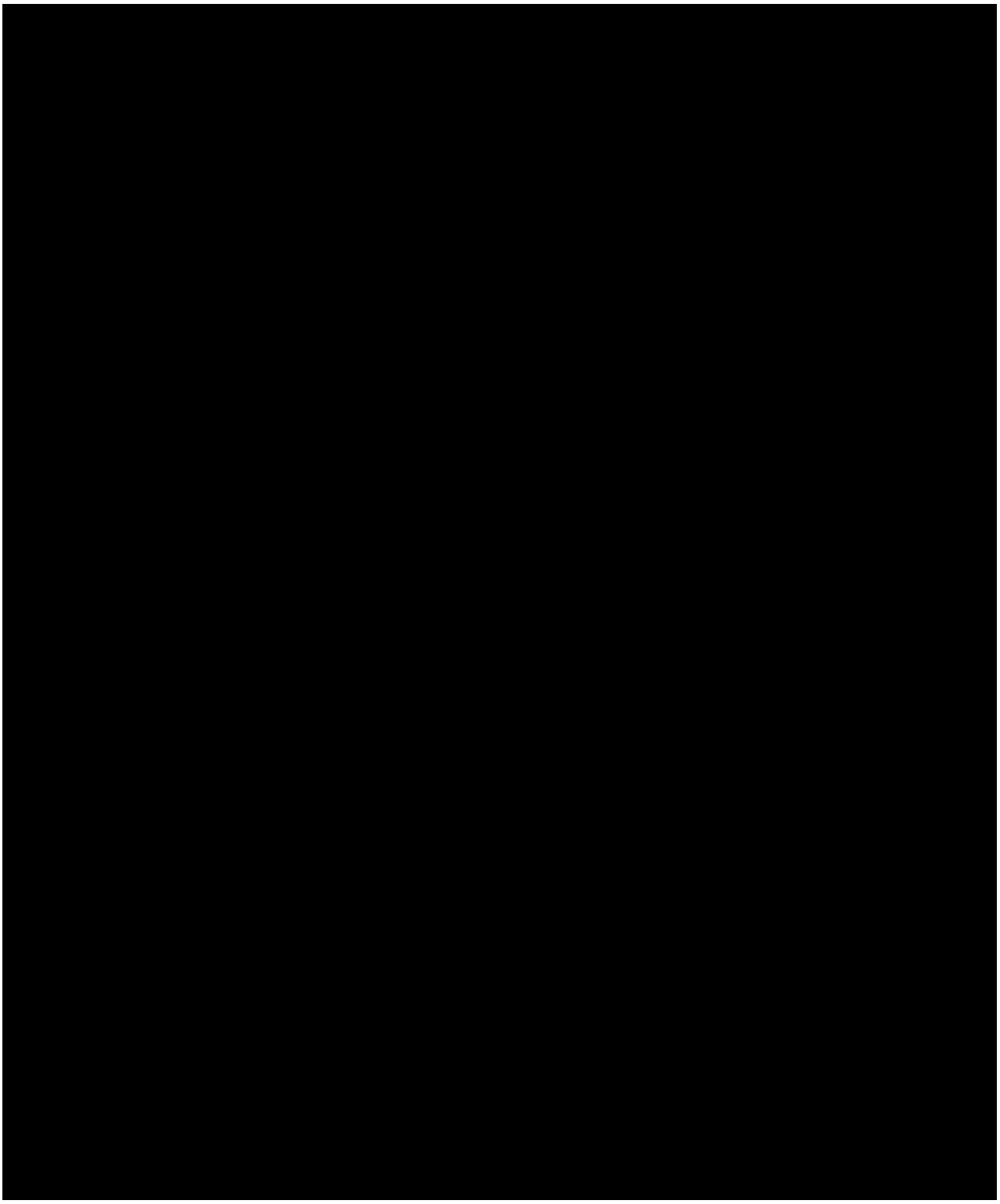

Figure 1 ODA FORM FLOW FOR THE MULTIPLE DATA BASE ACCESS FEATURE

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SEC. 3H: OSPS TOLL AND ASSISTANCE FEATURES FOR 5E4(2) SOFTWARE RELEASE

1. INTRODUCTION

OSPS Toll and Assistance provides for operator handling of a call to facilitate collect, person-to-person, calling card and third party billing calls, as well as providing support for automated coin collection, automated calling card service, hotel/motel billing quotation and external rating data bases.

This section provides brief descriptions of the initial capabilities and features which comprise the OSPS TA (Toll and Assistance) features for 5E4(2) Software Release. Each feature is described functionally, from an ODA input form perspective.

All features described in this section are available with the 5E4(2). Division 2, Section 3I describes functionality added to TA for 5E5 and later Software Releases.

2. GENERAL DESCRIPTION

Each OSPS can consist of a maximum of 32 OSC (Operator Services Centers) and 8 FMC (Force Management Centers). An OSC is a physical location comprised of operator positions, service assistant positions, service management terminals and supporting hardware. An FMC is similar to an OSC, but serves to coordinate the OSCs in providing an acceptable grade of service.

2.1 Operator Call Processing

Operators are assigned to serving teams upon login. The ACD (Automatic Call Distribution) function partitions incoming calls into CALL TYPES, enabling the staffed operators to specialize by CALL TYPES and maximize operator efficiency.

OSPS operators are able to perform a variety of functions such as accessing operators in distant manual offices, as well as operators in serving teams within the same OSPS. Operators are able to place a call into the switched network and activate/deactivate their position. Operators can hold calls at their position while consulting with another operator or supervisor or make other calls.

Each OSPS operator position is identified by the combination of an absolute position number and a relative position number. The absolute number (1 through 1023) identifies the position as an OSPS terminal. The relative position number is used to correlate an operator position to a specific OSC. The absolute number and relative position number (used in combination to define an operator position D-port assignment and a position number in an OSC) must be recorded in the data base to provide a "position to port" map for OSC operators and administrators.

An operator is assigned to one of a possible 128 serving teams when logged on at a position and the members of a serving team can be distributed among any or all OSCs.

Calls are entered into queues if no operator is available. An indication is given to all members of a serving team whenever the waiting time of a call exceeds a preset threshold and customer announcements and audible ring are provided. Call origin information (trunk group, dialing sequence, etc.) is automatically indicated to the operator upon position seizure.

Several administrative features are available with OSPS, including monitoring, where OSPS managers may bridge onto a call in progress. Calls can be monitored from these positions in either an undetected or a detected mode.

2.2 Operator Services Center

An OSC (Operator Services Center) is an administrative grouping of operators typically reporting to a "manager of operator services". The operators may work in one or more rooms or multiple OSCs may be

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defined within one physical room.

OSC offices are equipped with operator positions (VDTs), an OPC (Operator Position Controller), a processing unit, an OAP (OSPS Administrative Processor), a system console, administrative printers and interface circuitry required to allow communications between OSC entities and a 5ESS Switch PSM.

OSPS measurements are periodically provided by 15- and 30-minute traffic reports and 24-hour division of revenue and plant reports. A 15-minute OSPS traffic report and a 24-hour operator report are printed on an administrative printer at an OSC. In addition to the OSPS traffic and operator reports, OSC administrators have access to various status and performance displays. The displays are available at OSPS administrative terminals via the OAP "ospsadm" and "ospscmd" logins.

2.3 Force Management Center

One or more FMCs (Force Management Centers) are associated with a 5ESS Switch with the OSPS Toll and Assistance feature. A single 5ESS Switch can support up to 8 FMCs. An FMC does not handle calls, but coordinates the OSCs in providing an acceptable grade of service.

An FMC is a physical location comprised of an OAP and system console and may also contain an operator trouble report printer, administrative terminals and printers and a security terminal and printer. The FMC offices are not equipped with operator positions. The FMC communicates with the OSPS through the OPC in one or more OSCs. The FMC collects and analyzes data, such as traffic (call) measurements, serving team and individual operator performance and operator trouble reports. The FMC can send force administration data to the OSPS (through the OPC) to change traffic flow, operator assignments and other parameters.

The OSPS 15-minute traffic report provides performance statistics for the last 15 minutes. The report includes switch-wide totals on a call-queue basis, office totals on FMC ID number basis and processor occupancy on a PSM basis. The statistics include position seizures, various call completions, abandons, average answer delays, average call handling times, overflows, operator occupancy, call handling volume, etc.

The 24-hour operator report provides a summary of the performance statistics for the last 24 hours. The report includes operator call-handling statistics per operator, per serving team, per group manager and per FMC.

The OAP, which must be an AT&T 3B2 computer, is the nucleus of the FMC. The OAP has an internal operating system and application software that permit the FMC to operate independently from the OSPS, except for communication through the OPC. Ports on the OAP provide communication with terminals, printers and remote systems. These peripherals permit independent administration of the OAP and display of reports. The reports include OAP performance, OSPS traffic measurements and operator trouble.

3. OSC/FMC DATA BASE OVERVIEW

The data base must contain administrative parameters for each OSC/FMC defined in the data base. When an OSC/FMC is defined in the database, office administrators must specify these parameters or accept system default values. The OSPS office administrative parameters include the following:

- Display permissions for administrative terminals
- Print permissions for OSPS traffic and operator performance reports
- Transfer permissions for OSC/FMC data
- Residency maps for OSPS serving team members

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4. DIGIT ANALYSIS, CARRIERS, AND ROUTING

Digit analysis, carrier selection and routing are three of the basic functions provided by the 5ESS Switch. In setting up the digit analysis and routing data for an OSPS application, several new considerations have to be taken into account. This section will look at some of these facts. It is assumed that the reader is familiar with how digit analysis currently works and how the data used is populated.

The data in the local interpreter defines the valid set of dialed-digits and gives associated routing information. This section summarizes what data is expected for an OSPS and how it differs from a non-OSPS switch.

4.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DAS	5300-1	3	3A	9.1
INDIT	5309	3	3V	9.5
LDIT	5300-3/5	3	3c	9.3
NPAMAP	5414	3	4O	26.1
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
STINFO	5402	3	4C	21.2
TKGRP	5202	3	2A	5.1

4.2 Translation Requirements

TKRGP form (5202 Record) - The starting point for digit analysis is the DAS (Digit Analysis Selector). When a call arrives at an ISP (Intermeditate Switch Point), a TKGRP form contains the DAS and screen index associated with that trunk. On a call for which ISP does digit analysis (e.g., a 0+ call from a non-equal access end office), the trunk's DAS is used. If a call reaches an operator, this same DAS is used for all operator entered numbers, except busy line verification calls.

ISP does not modify the number dialed, so if zero plus seven digits are dialed, the seven-digit number needs to be accepted in the digit analysis data. On the other hand, when an operator enters a directory number, OSPS code will do some preprocessing on that number before digit analysis is done. If the number entered is 7 digits long, the number passed to digit analysis will have an NPA based on the back number prepended. But if an operator enters a 7-digit conference number without a valid back number, then no NPA is prepended.

LDIT form (5300-3/5 Record) - Thus, for an OSPS, a LDIT form must contain data for 7-digit numbers and 10-digit numbers, including those that begin with the home area code. If any N11 numbers will be handled, they must be defined in this data. Because of restrictions on OSPS billing, the CALL TYPE for these N11 numbers should be other than "NORMAL".

Another type of number that uses the same DAS is a route number. An operator entered route number is used to reach another operator or an automated process at a different site. To be accepted, the CALL TYPE for a route number must be either "OPINW" or "AUTINW", for operator inward and automated inward, respectively and must be distinguished from a number that a customer is allowed to dial. The possible formats for domestic route numbers are: NPA-TTC-OSDC, NPA-OSDC, TTC-OSDC and OSDC, where TTC stands for Terminating Toll Center Code. A route number to an international operator center is of the form 160-CC, while an international route number is of the form CC-OSDC, where CC stands for a 1-3 digit Country Code. Both an NPA and a TTC are 3 digits long, with the first digit of a TTC always zero. An OSDC (Operator Special Dial Code) always starts with a one and can be 3, 4 or 5 digits long. These facts have an impact on what data the digit translators must contain.

If an operator is not allowed to use 4-digit OSDCs, then distinguishing a number of the form NPA-TTC-OSDC from NPA-NXX-XXXX is simple. The LDIT form can separate the two because the former has a length of either 9 or 11 digits, while the latter is always 10-digits long. However, if 4-digit OSDCs are

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allowed, the situation is more complicated. At least 4 digits need to be translated for each NPA, since a zero fourth digit in a 10-digit number indicates a route number, while any other digit from 2 to 9 indicates a normal directory number. The conflict resolution table on a LDIT form would then need entries for NPA-0 with the number of digits equal to 9, 10 and 11. If the NPA-OSDC form of a route number is also allowed, then a minimum of 4-digit translation is still needed, since a fourth digit of one means that this route number has been found. The LDIT form would then have entries for NPA-1 with the number of digits equal to 6, 7 or 8. See Figure Figure 1 for a summary of this information.

The discussion above depends on not having any NPA, NXX conflicts. If there is such a conflict, it would be impossible to represent both an NPA-OSDC with a 4-digit OSDC and NXX-XXXX. For example, using an OSDC of 1158, does 312-1158 represent a local directory number or is it an inward code to NPA 312? This problem of meaning is decided by how the CALL TYPE is set for this 7-digit number. Numbers of the form TTC-OSDC and OSDC do not present the same problems, although using them does add additional data to the translators in the local and conflict tables.

OSPSOPT form (5424 Record) - When an operator tries to complete a busy line verification call, the DAS and screen index referred to above are not used. The BLV DIGTREE STRT field on the OSPSOPT form contains the DAS of interest and the BLV SCREEN IDX field contains the screen index.

STINFO form (5402 Record) - On an operator-initiated call, a conference number or a route number can be entered and routed to without a back number. When this occurs, the DAS and screen index used come from a STINFO form. Note that the SEC DAS found in the STINFO form is used by OSPS Directory Assistance only.

NPAMPA form (5414 Record) - On an operator initiated call with a valid back number, the NPAMAP form is consulted to see what trunk a call from that back number would arrive on. The DAS and screen index associated with that trunk, found on a TKGRP form is used for digit analysis and routing. If the NPAMAP form shows that the entered NPA-NXX is for termination only or if the NPA-NXX is not found, then that number is not allowed as a back number.

OPRTK form (5417 Record) - Assuming the back number is allowed, a OPRTK form is used to determine what the default carrier is, based on the trunk group number, on the NPAMAP form.

INDIT form (5309 Record) - While there is an INDIT form and an LDIT form associated with the DAS for the incoming trunk, it is expected that the INDIT form will be set up to delete no digits and pass control to the primary translator. This is the case because the CALL TYPES handled by OSPS are found only in the primary translator. It is assumed that the preliminary and primary translators contain appropriate routing data when the carrier is the switch owner.

OPRTK form (5417 Record) - A screen index is also found in an OPRTK form. This index is used by ISP and OSPS if a call is to be transferred out to another carrier's operator system.

5. ANNOUNCEMENTS - DSU2-RAF

OSPS Toll and Assistance announcements are provided by DSU2-RAF hardware in which TA announcement firmware has been downloaded. TA announcements are further broken down into Coin Announcements and DTA (Dial Through Announcements).

Coin announcements are provided by DSU2-RAF firmware with CTR (Coin Tone Receivers). DTA announcements are provided by DSU2-RAF firmware with Dial Through Announcement capabilities.

The following sections will cover the hardware and ODA input forms needed to configure an OSPS office with the ability to provide TA announcements.

5.1 OSPS Announcement Hardware

TA announcements are both provided by the DSU2-RAF (Digital Service Unit Model 2 - Recorded

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Announcement Function) hardware. This hardware consists of the DSU2-RAF circuit board (TN833) and the associated DSU2-RAF memory board (TN1053). It is on the memory board that the announcements are stored. Access to announcements are through predefined trunk groups and associated trunk group members. TA calls that require an announcement are routed to the trunk group associated with the type of announcement needed.

Data for OSPS announcements are divided into three general categories: Announcement Data, RAF Hardware Equipage Data and Routing - Trunking Data. The following sections will describe how data should be populated in each of these areas for TA offices.

5.2 RAF Announcement Data

Announcement Data uses six ODA forms, which are listed below. All six forms must be populated for TA offices.

5.3 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNAPL	5529	3	5AF	8.64
ANNDG	5532	3	5AF	8.60
ANNHD	5531	3	5AE	8.61
ANNTR	5533	3	5AG	8.62
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

5.4 Translation Requirements

ANNAPL form (5529 Record) - The ANNAPL form allows an office to define the SMs requiring TA announcements. SMs in this list must contain RAF hardware and equipage data for DTA and/or COIN. They must also be "LOADED" SMs (i.e., the CONFIGURATION field on the EQIM form is set to "LOADED").

ANNHD form (5531 Record),
ANNDG form (5532 Record),
ANNTR form (5533 Record),
PHRASE form (5534 Record) - The ANNHD, ANNDG and ANNTR forms all use phrase IDs which have been defined on the PHRASE form. Note that ODA will automatically populate a default set of ANNHD, ANNDG, ANNTR and PHRASE forms for OSPS, if the ANNAPL form is populated with OSPS application data.

OSPSOPT form (5424 Record) - The OSPSOPT form defines ACCS and SAB-1 announcement options as specified below.

- BRAND PHRASE - enter "Y" when a "branding phrase" is to be used to indicate the carrier for a call. When BRAND PHRASE is "Y" a "branding phrase" is given whenever the carrier of a call is the same as the carrier of the office. Enter "N" when no "branding phrases" are to be given. The default value is "Y".

- INIT THANK YOU - enter "Y" when a "thank you" announcement for initial credit card validation should be given. The default value is "Y".

- SEQ THANK YOU - enter "Y" when a "thank you" announcement for sequential credit card validation should be given. The default value is "Y".

PHRASE form (5534 Record) - Two "Thank You" announcements may be given:

- Header ID 5 - "Thank You" [BRAND PHRASE="N"]

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- Header ID 16 - "Thank You for using [branding phrase]" [BRAND PHRASE="Y"]

An office may define its branding phrase to be one of those listed on in Division 3, Section 5AH, the PHRASE form under the application OSPSTA starting with phrase 00183. Therefore, the second phrase of header 16 in ANNHD may change depending on the branding phrase used.

5.5 RAF Hardware Equipage Data

The Equipage Data is populated on two ODA forms which are listed below. Both forms must be populated for TA offices.

5.6 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQRA	5821		35	19.10
EQRAP	5822	8	36	20.10/20.22

5.7 Translation Requirements

EQRA form (5821 Record) - The EQRA form defines the physical location where the DSU2-RAF hardware is located along with the type of application (i.e., DTA, CTR) that will be downloaded by the SM.

EQRAP form (5822 Record) - EQRAP defines the application along with the associated micro-code.

5.8 RAF Routing And Trunking Data

Routing and Trunking Data consist of four ODA forms which are listed below. All forms must be populated for TA offices.

5.9 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FIXRT	5301-1	3	3G	10.1
RTIDX	5303	3	3P	10.2
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

5.10 Translation Requirements:

FIXRT form (5301-1 Record) - The FIXRT form uses a FIXED ROUTE TYPE of "ROACCS" or "ROCOIN" to obtain the associated fixed route index.

RTIDX form (5303 Record) - The route index is then used on the RTIDX form to obtain the trunk group number needed to access TA announcements.

5.11 Stuffing Pattern

A staggered stuffing method is used to assign the 20 DTA RAF ports or 20 COIN RAF ports. This method involved three stuffing patterns for assigning RAF port (and the associated trunk members). No assignments are made to ports 0 or 31 in either of the three patterns. The purpose of the stuffing patterns is to allow 3 DTA RAF units to only use a total of 2 timeslots at any one time. This is an effort to efficiently use TSI timeslots. The stuffing patterns for assigning RAF DTA and COIN ports are provided below:

5.11.1 Stuffing Pattern 1

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2,3,5,6,8,9,11,12,14,15,17,

18,20,21,23,24,26,27,29,30

5.11.2 Stuffing Pattern 2

1,3,4,6,7,9,10,12,13,15,16,

18,19,21,22,24,25,27,28,30

5.11.3 Stuffing Pattern 3

1,2,4,5,7,8,10,11,13,14,16,

17,19,20,22,23,25,26,28,29

6. AUTOMATIC MESSAGE ACCOUNTING RECORD DETERMINATION

OSPS AMA (Automatic Message Accounting) records are generated at the end of a call. The determination of making an AMA record, the CALL TYPE and the structure code is based on the information in the call record, i.e., it is based on what the operator and the customer did on the call.

6.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AMACT	5506	3	5F	10.12
OSPSOPT	5424	3	4Y	8.9
TKGRP	5202	3	2A	5.1

6.2 Translation Requirements

OSPSOPT form (5424 Record) - The normal criteria for making an AMA record are those in effect when blocked Calling Card Service call recording (OSPSOPT form - BCCSC REC), inward call recording (OSPSOPT form - INW C REC), special antifraud studies recording (OSPSOPT form - ACCSQ REC), sampling (OSPSOPT form - SAMPLE N) or routing number recording (OSPSOPT form - ROUTE REC) have not been turned on.

6.3 Blocked CCS Call Recording

Recording of blocked Calling Card Service calls can be turned on by the TCA (Telephone Company Administration) via Recent Change. This shall result in an AMA record for each Calling Card call blocked because of unsuccessful validation attempts. Calls that are blocked because the Calling Card is a restricted PIN Calling Card and the forward number dialed does not match the Calling Card number are not AMA recorded under Blocked CCS Call Recording.

6.4 Special Antifraud Studies Recording

Per-Calling Card Service query antifraud studies recording can be turned on by the TCA via Recent Change. This shall result in an AMA record for each failed reply to a CCS validation query, i.e., for decimal reply codes 2 (NPA-NXX or RAO-0/1XX is a vacant code), 8 (Billing number not valid for Calling Card Service), 9 (Service denial in effect for valid Calling Card billing number) and 10 (No PIN match for valid Calling Card billing number).

If both types of fraud studies are turned on, at most two AMA records shall be made, one at the failure of the first CCS query and one at the failure of the second and final CCS query. The structure code of the record made shall be determined in the normal way. In all cases, the reason for the failure shall be

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recorded in the ^Billing Number Failure field and the elapsed time field of these AMA records shall contain zeros. The AMA CALL TYPE shall be Station Special Calling.

6.5 Sampling

One out of N sampling can be activated through Recent Change, where N is a digit from 1 to 99. This means that as long as the OSPS AMA formatter function is called, within each SM, every Nth OSPS call is AMA recorded, regardless of any other considerations. A value of 2 is set in the Service Observed/Traffic Sampled field of the associated AMA record. If a call is not the Nth call, then the decision about whether or not to make a record follows its normal course.

The "Nth" OSPS call is "Nth" with respect to a given SM, but may not be "Nth" with respect to the switch as a whole. However, in the aggregate, the number of sampled OSPS calls would be 1/N times the total number of OSPS calls reaching the switch. Route Number Recording can be turned on by the TCA via Recent Change. This shall result in a Special Service Call AMA record being made for the inward call initiated by the OSPS operator via the ROUTE# key. The number entered in the ROUTE# field shall be recorded in the Special Service Call AMA record. "Inward call" in this case means the call from the OSPS to an external operator system.

If the OSPS operator also enters a special service code (through the BLG CODE key), only one special Service Call AMA record is made.

6.6 Inward Call Recording

Inward Call Recording can be turned on by the TCA via Recent Change. This shall result in a SSC (Special Service Call) AMA record being made for the inward call served either automatically by the OSPS or manually by an OSPS operator. A specific per-office "billing code" or "special service code" is recorded in the SSC AMA record. Any "billing code" entered by an OSPS operator will simply replace this specific per-office value in the SSC AMA record. The (incoming) inward code is stored in the Originating Number field of the SSC AMA record.

TKRGP form (5202 Record) - A carrier must be specified on a TKGRP form for each incoming trunk that can handle inward traffic from a carrier. This carrier will be used in creating the AMA record when INWARD AMA recording is on.

OSPSOPT form (5424 Record) - INWARD AMA recording is turned on by setting the INW C REC field on the OSPSOPT form to a specified billing code. Any billing code may be used that the office chooses. This billing code will be used on every INWARD call the OSPS receives.

The billing code used for the INWARD calls may be changed by the operator on a per-call basis whether INWARD AMA recording is on or off. If INWARD AMA recording is off, an AMA record will be created for each call where an operator manually enters a billing code. If INWARD AMA recording is on, an AMA record will not be created for any call where an operator manually deletes the billing code.

6.7 Call Type Determination

AMACT form (5506 Record) - Once an AMA record is decided to be made, a CALL TYPE, which is specified on the AMACT form, is determined for the call based on various information.

7. LATA MAPPING

LATA mapping introduces another step in digit analysis at which a dialed number can be classified as interLATA or intraLATA. LATA mapping is based on comparing the LATA number associated with a called number to that for the calling number. It is expected that this will be of use when there is only one local interpreter populated, but it is still desired to determine if a call is interLATA or intraLATA. LATA mapping can be turned on or off and only has an effect when the local interpreter shows a number to be non-carrier interconnect.

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7.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LDIT	5300-3/5	3	3c	9.3
NPAMAP	5414	3	4O	26.1
OSPSOPT	5424	3	4Y	8.9

7.2 Translation Requirements

OSPSOPT form (5424 Record) - The LATA MAP field on the OSPSOPT form indicates if LATA mapping is desired or not. When this field is set to "Y", LATA mapping is done by ISP and OSPS on forward numbers only and will only have an impact if the digit analysis data indicates a call is non carrier interconnect.

NPAMAP form (5414 Record) - The NPAMAP form is checked with the back number to determine the originating LATA number. The LATA number used on the NPAMAP form should always be between 2 to 15 if LATA mapping is used. This LATA number is compared with the TERM LATA number for the forward number found on the LDIT form. If the originating and terminating LATA numbers are the same, then the call is treated as intraLATA; otherwise, it is interLATA.

7.3 Other Details

In the local interpreter, a LATA number of 1 represents an area outside of the area served by this OSPS.

If exception area mapping is also done, it takes place after LATA mapping. This means that it is possible for the type of carrier interconnect to come into LATA mapping as non-carrier interconnect, to change to interLATA and then change again to intraLATA by exception area mapping.

If turned on, ISP does LATA mapping before it selects the carrier from an OPRTK form. However, ISP will not do this mapping for calls coming from a conforming end office.

It is expected that this feature will be used in a toll owned OSPS which only has one local interpreter, but which still desires to determine if a call is interLATA or intraLATA.

8. EXCEPTION AREA MAPPING

Exception area mapping is used to determine if a call can be treated as intraLATA even if it crosses LATA boundaries. This occurs when a call originates in an exception area and terminates in a corresponding exception area. This feature may be turned on or off and requires additional data population. It is expected that an OSPS owned by a local carrier is more likely to use this capability than one owned by an interLATA carrier.

8.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EXMAP	5440	3	4BL	26.32
NPAMAP	5414	3	4O	26.1
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9

8.2 Translation Requirements

OSPSOPT form (5424 Record) - The EXCEPT DETRM field on the OSPSOPT form indicates whether or not exception area mapping is desired. A call that originates in one LATA and terminates in another, but that can be treated as if an intraLATA call can be detected by ISP and OSPS via exception area mapping.

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If the parameter is set to "Y", this mapping is done as part of digit analysis for forward numbers only before deciding that a call is interLATA or non carrier interconnect.

OPRTK form (5417 Record) - Using the trunk group that the call arrived on, the OPRTK form is checked to see if there are any originating exception areas served by that trunk.

NPAMAP form (5414 Record) - If there exception ares, then the back number's NPA-NXX is used as the key to an NPAMAP form to see if the call originated in an exception area. If that back number is in an exception area, then the forward number is used as the key to NPAMAP to see if this call will terminate in an exception area.

EXMAP form (5440 Record) - Finally, if both ends are in exception areas, the EXMAP form is checked with the exception area indexes for the back and forward numbers to see if these are corresponding areas so that the call can be treated as a complete (exception area) call; otherwise, the type of carrier interconnect is not changed.

8.3 Other Details

LDIT form (5300-3/5 Record)
NPAMAP form (5414 Record) - For some numbers, there are two places where a LATA number can be found: a NPAMAP form and a LDIT form. When LATA and exception area mapping are both done, a sanity check of the LATA numbering is done. If a forward number is found on a NPAMAP form, then the ORIG LATA number in that form is compared to the TERM LATA found on the LDIT form. If these do not match, the inconsistent data is reported to the craft.

OPRTK form (5417 Record) - If ISP does exception area mapping, it occurs before the carrier is selected from an OPRTK form. However, ISP will not do this mapping for calls coming from a conforming end office.

NPAMAP form (5414 Record) - A NPAMAP form need only contain data about the area served by the OSPS and about exception areas that can be routed to from this service area. Data about other areas is not expected.

9. CARRIER SELECTION

To route any call, a carrier must be used. This carrier may be the local exchange carrier, an interLATA carrier or an international carrier. For an OSPS call, the carrier selected depends upon two factors: what connection is being processed and how the data is set up.

9.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CDIM	5300-6	3	3E	9.7
DNNTWK	5419	3	4T	26.20
ICF	5305	3	3R	10.3
OCNTWK	5420	3	4U	26.21
OFCOPT	5509	3	5I	8.1
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9

9.2 Translation Requirements

OPRTK form (5417 Record) - When a call is passed off to OSPS software, the ISP (Intermediate Switch Point) has already selected a carrier for the call, based on the signaling and/or digit analysis, using the carrier data specified in an OPRTK form. If the call is handled without operator intervention (e.g., an Automated Calling Card Service call), then the carrier selected by ISP is the one used and cannot be changed. If the call does reach an operator, the carrier selected by ISP is displayed to the operator. If the

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operator enters a forward number (or changes the one dialed), digit analysis is done on this new number, still using the carrier displayed to the operator. If that carrier cannot handle the call and if the OPRTK form associated with the incoming trunk shows carrier selection enforcement as off, then a default carrier is tried. The default interLATA and international carrier for a forward number are both specified in the OPRTK form.

ICF form (5305 Record) - The LEC SERVICE field on the ICF form for the carrier must be set to "Y". The default intraLATA carrier for a forward number is the Local Carrier. If carrier selection enforcement is on, then no carrier change will be done.

DNNTWK form (5419 Record) - The carrier, either the local or an interLATA carrier, for an operator entered forward third, back third or conference number is found in a different way. A DNNTWK form is checked, based on the NPA-NXX entered, to see if a specific carrier is wanted for this call. If such a carrier is listed, it will be used. If there is no entry in that form for the NPA-NXX, then the call will try to use the switch owner as the carrier.

OSPSOPT form (5424 Record) - If the third or conference number needs an interLATA carrier and the carrier set above is not of that type, the carrier specified in the CONF field on the OSPSOPT form (conference carrier) is used. To be used, the carrier selected does not have to have operator services supplied to them by this OSPS (i.e., LEC SERVICE does not have to be set to "Y").

OCNTWK form (5420 Record) - If an operator entered route number is floatable (i.e., the operator can drop off the call and leave the back and route parties talking), then the carrier used must be the same as the one used for the forward number. The carrier for an operator entered non-floatable domestic route number is found in a way similar to the way a third number carrier is selected. First the OCNTWK form is consulted to see if a specific carrier is wanted. If there is no entry, the switch owner is tried.

OSPSOPT form (5424 Record) - Finally, if an interLATA carrier is needed and the carrier set above is not of that type, then the carrier specified in the ROUTE field on the OSPSOPT form (route carrier) is used. For an international route number, the carrier specified in the INTL ROUTE field on the OSPSOPT form (international route carrier) is used. The carrier selected for a non-floatable route number does not need to have operator services supplied to them by this OSPS.

There are other relationships that exist between CI (Carrier Interconnect) type and the carrier that can be used for a call. Figure 2 summarizes these relationships, including information about where the routing data is found and the difference in meaning for a toll owned versus a locally owned OSPS.

9.3 Other Details

When a call is routing out of an RSM to a carrier, other data must be set so that RSM routing is done. See the description of RSM routing for further details on this.

When a service access code number is entered (e.g., 800-NXX-XXXX), the carrier to use is specified in the digit analysis data. As long as the other requirements for using a carrier are met (carrier valid, LEC SERVICE set to "Y", RSM routing done, carrier selection enforcement not violated), this carrier will be used. A transition forward number (e.g., 950-1XXX) is treated in the same way.

OSPSOPT form (5424 Record) - The OFFICE TYPE and OFFICE CARRIER fields on the OSPSOPT form are used in carrier selection and must be set according to who owns the OSPS. If this is a LEC OSPS, then the OFFICE TYPE field on the OSPSOPT form should be set to "N" and the OFFICE CARRIER field set to zero; otherwise, OFFICE TYPE should be "Y" and OFFICE CARRIER should be set to the carrier ID of the switch owner.

ICF form (5305 Record) - On an OSPS owned by an interLATA carrier, an ICF form must still be filled out for the switch owner. While the routing data found on that form is not used, the form's presence is still required so that the carrier is known as being valid and so that the operator's display can correctly show it. Routing data when the owner is used comes from the local interpreter. The fields from the ICF form which

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are used are CARRIER TYPE, ACCESS TYPE, DIG ROUTING, INTRA LATA, CARRIER NAME and LEC SERVICE.

CDIM form (5300-6 Record) - An CDIM form can be used to modify the routing data found in an ICF form. This form can be used to provide a new carrier route index and carrier code index. If DIG ROUTING in the ICF form is set to "Y", then the carrier related routing forms are used in the following order: ICF form first, RSMCAR form next and then the CDIM form; the last two only if appropriate.

10. RSM ROUTING

When an OSPS call originates from a trunk group member on an RSM, the call should complete to another trunk on that RSM. OSPS uses the data on the LDIT form (5300-3 Record), ICF form (5305 Record), and/or the RSMCAR form (5421 Record) to support this.

10.1 LEC Or Interexchange Carrier OSPS Owner

When the carrier for an OSPS call is LEC or the Interexchange carrier that owns the OSPS, routing data from the ICF form or RSMCAR form is not used. The RSM routing of these calls is made possible by assigning a unique screen index to the originating trunks on the RSM, or RSM cluster. The unique screen index is assigned on the TKGRP form (5202 Record). Specific RSM routes can then be defined in the RAR form, based on the code index from the LDIT and this unique screen index.

10.2 Interexchange Carrier Other Than Switch Owner

When the carrier for an OSPS call is an Interexchange carrier other than the switch owner, routing data from the RSMCAR form for this RSM is used in place of the routing data from the ICF form. This allows for RSM specific route and code indexes to be defined. In addition, data can be defined to indicate if the OSPS serves this carrier from the RSM and if intraLATA calls can be completed using this carrier on this RSM. However, the DIG ROUTING, CARRIER TYPE and ACCESS TYPE fields from the ICF are still used. If an RSM is in a different LATA from the host switch, then a separate DAS and LDIT for the RSM should be used.

10.3 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ICF	5305	3	3R	10.3
LDIT	5300-3/5	3	3c	9.3
RSMCAR	5421	3	4V	26.22

10.4 Translation Requirements

RSMCAR form (5421 Record) - This record defines the routing indexes to a carrier from an RSM (Remote Switching Module). When the carrier for an OSPS call is an Interexchange carrier other than the switch owner, routing data from the RSMCAR form for this RSM is used in place of the routing data from the ICF form. When the carrier for an OSPS call is LEC or the Interexchange carrier that owns the OSPS, routing data from the ICF form or RSMCAR form is not used; RSM routing is supported with the LDIT and RAR forms.

LDIT form (5300-3/5 Record) - The LDIT form is used to define all area, office, and service codes in a 5ESS Switch. If an RSM is in a different LATA from the host switch, then a separate DAS and LDIT for the RSM should be used. When the carrier for an OSPS call is LEC or the Interexchange carrier that owns the OSPS, specific RSM routes can be defined in the RAR form based on the code index from the LDIT and a unique screen index.

RAR form (5301 Record) - This form is used to define the routing and charging for each Code Index and Screening Index combination in the 5ESS Switch. When the carrier for an OSPS call is LEC or the

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Interexchange carrier that owns the OSPS, specific RSM routes can be defined in the RAR form based on the code index from the LDIT and a unique screen index.

11. EXTERNAL TRANSFER

When a call is at the operator's position, it can be transferred to either a turnback announcement or to the operator system of another carrier.

11.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
DIOPR	5418	3	4S	26.25
OPRTK	5417	3	4R	26.26
OSPSCT	5404	3	4E	21.22
RAR	5301	3	3F	10.10

11.2 Translation Requirements

OSPSCT form (5404 Record) - If an operator wants to send a call to a turnback announcement, the keying sequence is transfer key, digit 1, send. The BACK ANNC RTI field on an OSPSCT form contains the route index used to route this call.

The operator can also send a call to an external operator system using the keying sequence of transfer key, digit zero, send. If a valid but unserved carrier is currently displayed to the operator, then the call is sent to that carrier's operator system.

OSPSOPT form (5424 Record)
OPRTK form (5417 Record)
DIOPR form (5418 Record) - If there is not a valid carrier displayed, then the carrier specified in the ICOS field on the OSPSOPT form is the carrier which will be used. The route index used to route this call out is found on the RAR form, based on the triple key of prefix, screen index and code index. For a transfer, a prefix of none is always used. The screen index for this transfer is found in the OPRTK form, based on the trunk that the call arrived on. The code index used is based on the carrier that the call is destined for. Using this carrier, the primary code index is found on a DIOPR form.

11.3 Other Details

For transfer to a turnback announcement to work, the route index found above must lead to a 13A announcement machine trunk group.

12. CENTRALIZED AMA CALLS

There are three types of CAMA (Centralized AMA) calls to consider. The first type is a transfer CAMA call, which is a call that needs operator service and arrives from a CAMA office. The second and third types are system CAMA calls. These are routed to the OSPS either over CAMA trunks or over operator trunks. Each of these possibilities is discussed further below.

12.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ACDCTP	5412-A/D	3	3M	26.10
EQDSP	5740	8	21	20.5
OSPSOPT	5424	3	4Y	8.9
TCITG	5422	3	4W	26.23
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

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12.2 Translation Requirements Incoming Transfer CAMA Calls

Incoming transfer CAMA calls are calls from a CAMA office to an OSPS that need operator service for CAMA ANIF/ONI calls. Each incoming transfer CAMA trunk consists of two trunks:

- Keying Trunk (Trunk Class "TCIKT")
- Talking Trunk (Trunk Class "TCITT")

Each CAMA office will have two trunk groups to the OSPS for transfer CAMA service; one will have all keying trunks and the other will have all talking trunks. A keying trunk and its corresponding talking trunk should have the same trunk group member number and must terminate on the same SM in the OSPS.

TCITG form (5422 Record) - When an incoming transfer CAMA call arrives, the OSPS returns an alerting tone to the calling party if ALERT TONE is specified as "Y" on the TCITG form for the two trunk groups associated with the CAMA office. There are two different signaling protocols between the CAMA office and the OSPS. If the trunks are analog loop trunks, SIGNAL TYPE should be specified as "1" on the TCITG form. If the trunks are analog E&M trunks, SIGNAL TYPE should be specified as "2". If the trunks are digital trunks, SIGNAL TYPE can be either "1" or "2" depending on the CAMA office end. If the CAMA office is a 5ESS Switch, the SIGNAL TYPE should be "2".

ACDCTP form (5412-A/D Record) - For this call to reach an operator, there must be an entry for transfer CAMA in an ACDCTP form. This entry associates a call queue with transfer CAMA calls. The entry must have an ORIGIN CALL of "XFER", a PREFIX of "NULLP", a COIN indicator of "N" and a CARRIER of "DC". Based on the call queue, a serving team to handle the call is selected.

TCITG form (5422 Record) - If the OSPS operator enters a trouble number while handling an incoming transfer CAMA call, the OSPS will transmit a 7-digit NXX-YYYY to the CAMA office, where NXX is specified in OTR OFFICE on the TCITG form for the associated trunk groups. YYYY is the associated trunk group member number.

EQDS2P form (5740 Record) - The SM that terminates an incoming transfer CAMA trunk should have a DSU 2 - LDSUF unit and it should have a number of CAMA tone decoder circuits in both service groups of the DSU 2 - LDSUF unit of the same SM. CAMA tone decoder circuits are specified with circuit type of "LDSU2CTD" on an EQDS2P form. CAMA tone decoder circuits are used to decode the tone from a CAMA to identify whether the call is due to ANIF or ONI.

12.3 Other Details

Incoming Transfer CAMA calls should not terminate on a SM which has only a DSU 1 since a DSU 1 cannot provide CAMA tone decoder circuits.

13. SYSTEM CAMA CALLS ON CAMA TRUNKS

System CAMA calls on CAMA trunks are CAMA calls from a local office to a CAMA office. Incoming CAMA trunks are identified with the TRKCLS field set to "CAMAANI" or "CAMAONI" on a TKGRP form. CAMA calls are billed by the CAMA office. In order to bill a call, the calling number is required. Operator service is required to obtain this calling number from the calling party if the calling number is not available to the CAMA office. If the incoming CAMA trunk is marked as "CAMAANI", operator service is required for a call from this trunk if there is an ANIF (Automatic Number Identification Failure) or the call originates from a multiparty telephone. If the incoming CAMA trunk is marked as "CAMAONI", the operator is required for all calls, since the local office is unable to forward the calling number to its CAMA office.

When OSPS and CAMA are in the same 5ESS Switch, operator service for system CAMA calls on CAMA trunks can be provided by OSPS operators in the switch. This can be activated by setting OSPS TA to "Y" and TRANS OFC to "N" on the OSPSOPT form. When a CAMA call that requires operator service is

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received, CAMA software uses the values entered in these two fields to see whether OSPS operators in the switch can provide operator service. If so, it transfer control to the OSPS software. When an OSPS operator enters the calling number, OSPS software verifies that the calling number's NXX is specified on the TKGRP form before accepting the calling number.

For this call to reach an operator, there must be an entry for system CAMA on an ACDCTP form. This entry associates a call queue with system CAMA calls. The entry must have an ORIGIN CALL of "SYS", a PREFIX of "NULLP", a COIN indicator of "N" and a CARRIER of "DC". Based on the call queue, a serving team to handle the call is selected.

13.1 Other Details

If this feature is not activated, operator service for system CAMA calls on CAMA trunks shall be provided by an external operator system over outgoing transfer CAMA trunks. The outgoing transfer CAMA trunks are identified with the TRKCLS field set to "CAMOPKEY" or "CAMOPTLK" on a TKGRP form. But when the operator service for these calls are provided by OSPS operators in the same switch, there is no need to have outgoing transfer CAMA trunks.

14. SYSTEM CAMA CALLS ON OPERATOR TRUNKS

CAMA calls are sometimes routed across operator trunks instead of CAMA trunks for economic reasons. OSPS handles four types of system CAMA calls that are routed on operator trunks:

1. System CAMA calls with good ANI
2. System CAMA calls that are ANIF or ONI
3. Calls that are possibly System CAMA, but definitely ANIF/ONI with a 1+ prefix
4. Calls that are possibly System CAMA, but definitely ANIF/ONI with no prefix

The ACDCTP form is used to determine the call queue. There must be an entry with the CALL ORIGIN set to "SYS" to represent system CAMA and the value for CARRIER is either "LEC" or "IC", COIN ("Y" or "N"), an OSPS ID of "0" and PREFIX of "1" to represent how the call was dialed. Based on this valid CALL TYPE (or queue), a serving team to handle the call is selected.

15. DARK CALLS

A DARK call is a call that ISP has handed off to OSPS (i.e., ISP is resident with OSPS) after an ANI (Automatic Number Identification) transmission failure has occurred. The station type of the calling party or the dialed prefix cannot be determined because of the transmission failure. OSPS attempts to identify the station type and dialed prefix for these calls based on trunk markings in the ODD (Office Dependent Data). As a result, the calls may arrive at OSPS-TA positions minus station type information (the station type is "UNKNOWN") or minus the dialed prefix or minus the station type and dialed prefix. Most commonly, DARK calls (calls minus dialed prefixes or station types) arrive on DP (Dial Pulse) supercombined or combined trunks.

15.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	3M	26.10
OPRTK	5417	3	4R	26.26
PRONXX	5413	3	4N	26.13
TRUNK	5204	3	2C	5.5
VALOFFC	5423	3	4X	26.24

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15.2 Translation Requirements

When a DARK call is received by OSPS, the treatment of the call is dependent on the trunk type. The following are descriptions of treatments given to DARK calls detected on various trunk types.

- Dedicated - The prefix is determined in OSPS by the examining the trunk type such as dedicated dial 0, dedicated dial 0+, dedicated 1+.
- Combined (DIAL TYPE on the OPRTK form is "COMB") -
  - Station type - The station type can be determined by looking at the ACQS screening (ACQS ID on the OPRTK form) and the COIN (COIN on the OPRTK form) attributes for the given trunk. If the ACQS screening is set to dedicated (ACQS ID on OPRTK is "DED"), the station type will be set to ACQS. Else if the COIN indicator is set to "Y" on OPRTK, the station type will be set to "COIN". Else the station type is set to "NON-COIN".
  - 0- The absence of dialed digits determines that the prefix is 0-
  - 0+ and 1+ The presence of digits could indicate 0+ or 1+ traffic so no prefix will be displayed to the operator
- Super_combined (DIAL TYPE on the OPRTK form is "SUP") -
  - Station type - The station type cannot be determined since the trunk carries both COIN and NON-COIN traffic. However, if the trunk is dedicated to ACQS (ACQS ID is "DED") traffic, the station type will be set to "ACQS"
  - 0- The absence of dialed digits determines that the prefix is 0-
  - 0+ and 1+ The presence of digits could indicate 0+ or 1+ traffic so no prefix will be displayed to the operator

ACDCTP form (5412-A/D Record) - In order for the DARK calls to reach OSPS and receive the proper treatment, the ACDCTP form must contain entries for each of the following conditions:

CALL ORIGIN = ISP
PREFIX = NULLP
COIN = Y,N
OSPSID = 0
CARRIER = IC, LEC

OPRTK form (5417 Record) - The START PULSE field on the OPRTK form must contain a default start pulse. If the call is to be turned back by ISP, this field should set to "TURNBACK"; otherwise, it is routed with the default start pulse if OSPS is external to ISP. If ISP is resident with OSPS and a start pulse is provided, the call will then be recognized by the internal OSPS as a DARK call. The CALL TYPE displayed on the VDT is a valid station type determined from the DIAL TYPE and COIN attributes on the OPRTK form or UNKNOWN (if the station type is indeterminate).

VALOFFC form (5423 Record) - When a back number is entered on an ANIF call, the VALOFFC form is checked to see if the NXX of the back number is valid for the trunk upon which the call arrived.

OPRTK form (5417 Record) - The OPRTK form is checked to make certain that the NPA entered is correct.

PRONXX form (5413 Record) - If there are protected NXXs served by the incoming trunk, the PRONXX form is checked for the true NPA. If none is found on the PRONXX form or if there are no protected NXXs,

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then the NPA must be found on the OPRTK form.

16. DELAY CALLS

Delay calls are calls that are placed from OSPS-TA positions connecting both back (calling) and forward (called) parties. These calls are placed at the request of a subscriber who initially calls an OSPS-TA operator and requests that the call be placed at a later time. The OSPS-TA operator then places the call at the appropriate time. The area that Delay calls can originate from are restricted on the basis of the NPA-NXX combination of the back party.

16.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
NPAMAP	5414	3	4O	26.1
OPRTK	5417	3	4R	26.26
TKGRP	5202	3	2A	5.1

16.2 Translation Requirements

NPAMAP form (5414 Record) - If the TERM ONLY field on a NPAMAP form (for the NPA-NXX of the back number) is set to "Y", then DELAY calls with that particular NPA-NXX as the back number are not allowed. Otherwise, the TGN must be non-zero and that TGN must have an entry on the OPRTK form for the call to proceed. The call is treated as if it had arrived on that trunk.

16.3 Other Details

OPRTK form (5417 Record) - The Digit Analysis Selector and the screen index used in routing this call are those associated with the trunk group specified on the OPRTK form and are found on the TKGRP form.

17. INWARD SEIZURES

An inward seizure occurs when an operator uses a route number to contact another operator. This second operator is known as the inward operator. When an OSPS hosts the inward operator, certain digit analysis data must be set to detect an inward seizure and then to possibly route the call.

17.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ACDCTP	5412-A/D	3	3M	26.10
LDIT	5300-3/5	3	3c	9.3
OFCOPT	5509	3	5I	8.1
TKGRP	5202	3	2A	5.1

17.2 Translation Requirements

TKRGP form (5202 Record) - On an inward seizure, this OSPS is being used to complete a call or to provide some service for another operator. When a call of this type arrives at a switch, digit analysis is done using the DAS specified on the TKGRP form for the incoming trunk.

LDIT form (5300-3/5 Record) - The CALL TYPE field of the LDIT form must be set to either "OPINW" or "AUTINW" so that the call is recognized as an inward seizure. "OPINW" is used for operator inward and "AUTINW" for automated inward.

ACDCTP form (5412-A/D Record) - Once the call is determined to be inward, the ACDCTP form is used to determine the call queue that the call belongs to. To handle inward calls, there must be a record with

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ORIGIN CALL of "INW", a PREFIX of "NULLP", an OSPS ID of "0", a COIN indicator of "N" and a CARRIER of "DC". Based on the call queue given, a serving team and ultimately an operator is chosen. Other entries may be needed to handle recalls. For a detailed discussion of CALL TYPE determination, refer to ECTD (Expanded CALL TYPE Determination) in this section.

For some seizures, the operator enters a forward number and tries to complete the call. To route the call, digit analysis is done on the number entered by the inward operator. The DAS and screen index used are the ones associated with the incoming trunk group. The number entered will only be accepted and routed if the office owner can handle the call.

OSPSOPT form (5424 Record) - If the OFFICE TYPE field on the OFCOPT form is set to "N", then this is an OSPS owned by a local carrier and the call must be routed with the local carrier. If OFFICE TYPE is set to "Y", then the carrier specified in the OFFICE CARRIER field on the OFCOPT form is the carrier used.

17.3 Other Details

While the digit analysis data for the inward call was used to detect this type of seizure, the routing data that also came from digit analysis is not used.

18. RESIDUAL CALLS

Residual Calls are specialized operator calls such as conference, mobile or marine calls handled by a SOST (Special Operator Services Traffic) operator. The OSPS operator cannot complete these calls because they require special operating procedures.

18.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LDIT	5300-3/5	3	3c	9.3
OSDC	5439 Record	3	4AN	27.4
OSPSOPT	5424	3	4Y	8.9

18.2 Translation Requirements

OSDC Form (5439 Record) - The OSDC form provides the possible residual codes associated with various SOST (Special Operator Services Traffic) operators.

LDIT form (5300-3/5 Record) - LDIT form must be populated with the digit analysis translation data required to accept and route residual calls.

OSPSOPT form (5424 Record) - When the ROUTE REC field on the OSPSOPT form is set to "Y", an AMA record is made whenever a residual connection is established. A record is made whenever any Route number connection is established.

18.3 Other Details

If digit analysis translates less than the complete residual code, the routing of these will be the same as many other route numbers. This occurs because the first several digits of the residual codes are the same as those for many route numbers. However, an office may choose to put the entire residual code on a LDIT form if different routing is desired.

19. AUTOMATED CALLING CARD SERVICE

The information about ACCS (Automated Calling Card Service) is divided into 3 parts: announcement specific data, access specific data and restriction data.

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19.1 ACCS Announcements

A set of standard announcements have been specified for ACCS. All announcements should be the same for each OSPS office with the exception of branding announcements which have been provided for AT&T and five individual LECs (Local Exchange Carriers).

19.2 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNDG	5532	3	5AF	8.60
ANNHD	5531	3	5AE	8.61
PHRASE	5534	3	5AH	8.63
OSPSOPT	5424	3	4Y	8.9

19.3 Translation Requirements

ANNHD form (5531 Record)
ANNDG form (5532 Record) - As mentioned above, all ACCS announcements should be compatible among OSPS sites, with the exception of the one phrase (announcement 16) which specifies the branding announcement for that site. The announcement selection mechanism used for ACCS is the same one which was defined for OSPS-Directory Assistance in the 5E3 Software Release. It is assumed that announcements 1-15 and 17-26 in the ANNHD and ANNDG forms are the same in all OSPS sites.

The unique branding announcement for each site is announcement 16 from the ANNHD form. A specific announcement is available for AT&T and five individual LECs.

PHRASE form (5534 Record) - The data required to populate announcement 16 for a given switch owner is shown in Division 3, Section 5AH, PHRASE form, under the application OSPSTA.

OSPSOPT form (5424 Record) - Several office parameters specified on the OSPSOPT form determine whether branded announcements are applied to an ACCS call. First, the INIT THANK YOU field is examined to determine if any acknowledgement announcement is given to the calling (back) party. If no acknowledgement is specified, the call is outpulsed immediately. If an acknowledgement announcement is specified, the BRAND PHRASE field is examined to determine if a branded announcement should be given. If no branded announcements are to be given, the caller hears announcement 5 ("Thank You") from the ANNHD form. If branded announcements are specified, the indicated carrier for the call is compared to the OFFICE CARRIER field on the OSPSOPT form. If they match and the call is not a Directory Assistance call, Announcement 16 is played to the caller. If they match but the call is determined to be a Directory Assistance call, then the DABRAND field is examined to determine if Directory Assistance calls should be branded. If so, the call is given announcement 16. Otherwise, announcement 5 is given to the caller (back) party. Finally, if the indicated carrier does not match with the carrier specified in OFFICE CARRIER, then announcement 5 is played to the back party.

The switch owner may choose not to brand any calls. In this case, announcement 16 should be populated as with APPL of "OSPSTA", PHRASES of "52,0" and ANNOUNCEMENT of "THANK YOU"

20. ACCS DSU2-RAF

A DSU2-RAF (Digital Services Unit 2-Recorded Announcement Facility) is used during the processing of ACCS (Automated Calling Card Service) calls. The main purpose of this hardware device is to generate announcements on an output port with the simultaneous decoding of signals on an input port. The announcement is disabled when the first digit signal is decoded. All circuits on a DSU2-RAF belong to a designated trunk group. Several RAFs can belong to the same trunk group, provided they are the same type of RAF. For example, ACCS uses RAFs having the DTA (Dial-Through Announcement) capability. Therefore, all RAF circuits having the DTA capability used by ACCS belong to the same trunk group and this trunk group must not be shared by other types of DSU2-RAFs.

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20.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQRA	5821		35	19.10
EQRAP	5822	8	36	20.10/20.22
FIXRT	5301-1	3	3G	10.1
OSPSOPT	5424	3	4Y	8.9
QUFD	5617	4	18a	12.40
RTIDX	5303	3	3P	10.2
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

20.2 Translation Requirements

The data associated with the DSU2-RAF falls into two distinct categories: hardware data and routing data.

EQRAP form (5822 Record) - The EQRAP form is used to set up the hardware data associated with the number of RAFs to be engineered for the office. Much of this data is defined when the hardware is installed. After this data is defined, the DSU2-RAF routing data may be defined.

FIXRT form (5301-1 Record) - When a 0+ call requiring ACCS treatment is received at the OSPS, routing to a DSU2-RAF occurs. The routing takes place based on the FIXED ROUTE TYPE of "ROACCS" specified on a FIXRT form. This is used in the standard way, leading to RTIDX and TKGRP forms.

QUFD form (5617 Record) - If a DSU2-RAF port is not available, queuing for an available port takes place. The BRCS (Business and Residential Custom Services) Modular Queuing II feature is used for the queuing mechanism. This feature requires data in a QUFD form.

OSPSOPT form (5424 Record) - A call will remain on the queue for the time in seconds designated in the DSU2 Q TIME field on the OSPSOPT form. If a call is still on queue after the number of seconds specified in the DSU2 Q TIME field, the call is routed to an operator.

20.3 ACCS Access Options

If the calling (back) party dials an OSPS call using a 0+ prefix, there are optional announcements which can be played to the caller, as well as an option which indicates that the call should be routed to an operator. This flexibility is provided via two separate mechanisms. The ACCS Special Treatment Table and two office options are used to indicate which option is to be selected.

20.4 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ACCST	5428	3	4AC	26.40
OSPSOPT	5424	3	4Y	8.9

20.5 Translation Requirements

ACCST form (5428 Record) - When a 0+ call is received at the OSPS, if the call is not screened against calling card service, the ACCST form is checked, based on the calling (back) NPA-NXX entered, to determine the handling of the call. Possible values in the ACCST form include route the call to an operator ("OP"), provide a tone-only protocol to the caller ("TONE") or provide tone and announcement protocol to the caller ("TANN").

If the calling (back) number is not found on the ACCST form, default treatment is applied to the call depending on the type of originating station. If the originating station type is coin or a hotel/motel establishment (ACQS (Automatic Charge and Quotation Service)), the call treatment is determined by the

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ACCS 1 entry on the OSPSOPT form. Treatment of all other originating station classes is determined by the ACCS 2 field. The default value for coin and hotel/motel lines is set to (OAPR TN ANN - tone and announcement). The default value for ACCS 2 (all others) is set to OAPR TONE - tone only. A value of 'route to operator' is not allowed for these default parameters.

It is assumed that calls originating from most stations will use the default parameters. The ACCST form is used to provide a different option to those customers who do not want the standard ACCS service option.

21. ACCS Restrictions

ACCS customers are restricted from using certain called numbers when dialing ACCS sequence calls. In addition, the switch owner has the ability to allow or block calling card replies when the data base could not be accessed to determine the validity of the calling customer's calling card.

21.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
SEQREST	5429	3	4AD	26.41

21.2 Translation Requirements

SEQREST form (5429 Record) - The switch owner may choose to block completion of ACCS calls to certain special directory numbers when dialed as a sequence call. This selection is performed via the SEQREST form. Individual numbers which may be blocked include the following:

- Service Access Codes (700, 800 or 900)
- Directory Assistance Numbers (411, 555-1212 or NPA-555-1212)
- The universal repair service bureau number "611" and the universal emergency number "911."

OSPSOPT form (5424 Record) - Whenever the Billing Validation Application data base cannot be accessed to determine the validity of an ACCS calling card (initial or sequence call), an indeterminate response is returned to the OSPS. The switch owner has the option of specifying whether the call should be allowed to complete (assuming an unrestricted PIN (Personal Identification Number)) or whether the call should be blocked. This choice is made by examining the BILL BLOCK field on the OSPSOPT form.

22. AUTOMATIC CHARGE QUOTATION SERVICE

ACQS (Automatic Charge Quotation Service) is a feature which gives OSPS the ability to direct billing information (time and charge quote) to a centralized system for sent-paid calls originating from specific line numbers or directly to a specified printer/computer at the originating site.

An ACQS client can be a hotel, hospital, motel, law office, etc. The ACQS client will receive a time and charge quote upon termination of a call originating from a line at the ACQS client site. The quote will be sent by the 5ESS Switch OSPS in one of three manners:

1. The quote will be electronically transmitted to a HOBIC/HOBIS (Hotel Billing Information Center or System), where an operator will then verbally transmit the information to the ACQS client. This is referred to as voice quote.

2. A Network Auto Quote will be electronically transmitted to a HOBIC or HOBIS, where an operator will then verbally transmit the information to the ACQS client. This will appear as a voice quote to the ACQS client.

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3. The quote is electronically transmitted directly to the ACQS client over a leased line to a printer/computer. This is referred to as an auto quote.

22.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACQS	5425	3	4Z	26.11
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9

22.2 Translation Requirements

ACQS form (5425 Record) - When a call is made from an ACQS client where the charges must be calculated and reported back within a short time, ACQS service is used. When a call comes to OSPS, an attempt is made to determine if it is from one of these ACQS clients. All 10-digit line numbers of these clients are listed on the ACQS form. If a line number is on this form, it is assumed that it is from one of these clients and requires ACQS service. This form provides additional information such as whether it is a true hotel, the true billing number, if any, the number to call or send the quote to, whether it uses auto quote service or voice quote service and whether it is a manual PBX (manual PBX's may or may not require this service depending on what is indicated to the OSPS operator).

OSPSOPT form (5424 Record) - At the end of a call, a query is sent out to the data base, either RTRS or CFR, to determine the charges for the call. If the query fails, the ACQS FAIL field on the OSPSOPT form indicates whether a record of the call is to be sent to HOBIC/HOBIS or whether the call is to go free.

- ***NOTE:*** The ACQS form must not be entered unless an OSPSOPT form has been submitted and the OSPS TA field has been specified as "Y".

If there is a heavy load, quotes may be queued. The HOBIS/C TIME field on the OSPSOPT form indicates the maximum length of time in minutes that a quote should be held in the buffer before a credit record is made and further attempts to send the record are discontinued. The HOBIS/C ALARM field specifies the software alarm threshold for the number of HOBIC or HOBIS messages that will be buffered before an alarm is given. The Q CHK TIME field indicates the amount of time to wait before checking whether the software alarm threshold of buffered messages is still in effect or not and to send out a message indicating the current status.

In order to send a quote out to a centralized location (HOBIS or HOBIC) and, perhaps, to the site (AUTOQUOTE), there must be links which connect the switch to these locations. These links are attached to one SM, indicated in the ACQS SM field. The switch must be connected to either a HOBIS or a HOBIC: the choice is indicated by the HOBIS/C field.

In the case of HOBIC, the DUP HOBIC field is set to indicate if there are both voice quote ttys and record ttys.

OSPSDSL form (5411 Record) - In the process of sending quotes out over the links, the OSPSDSL form is checked to obtain information about the links and ports. In the case of AUTOQUOTE, this form contains information about the digital to analog port relationship.

23. AUTOQUOTE DSL

The AUTOQUOTE Service feature gives the OSPS the capability to send time and charge quotations, for calls originating at specified line numbers, directly over switched connections to remote printers/computers located on the customer premises. The hardware configuration required to support the remote autoquote printers includes the establishment of autoquote DSLs. Typically there are at least two AUTOQUOTE DSLs defined, although there can be a maximum of 16 AUTOQUOTE DSLs defined per 5ESS Switch. Each AUTOQUOTE DSL must be on the same SM and that SM must be the same SM that supports

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HOBIS or HOBIC DSLs. The number of AUTOQUOTE DSLs required is based on the amount of AUTOQUOTE traffic expected to be handled (the 5ESS Switch has a system maximum of 1000 AUTOQUOTE establishments).

23.1 ODA Forms

The following ODA forms are used to define AUTOQUOTE DSLs.

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9

23.2 Translation Requirements

OSPSDSL form (5411 Record) - A maximum of sixteen AUTOQUOTE DSLs per switch may be defined using the OSPSDSL form. They must all have a SERVICE CLASS set to "AQDSL" and they must all be assigned to the same SM, i.e., the SM portion of the LCEN for each DSL must be equal.

OSPSOPT form (5424 Record) - In addition, the SM must be equal to the SM that the HOBIS or HOBIC DSLs are connected, i.e., the SM must equal the ACQS SM option on the OSPSOPT form.

The AUTOQUOTE hardware configuration requires each AUTOQUOTE DSL to terminate on a Z-card. The MATE LCEN specifies the LCEN of the Z-card which must also be located on the same SM as the DSL, therefore, the SM portion of the MATE LCEN must also equal the SM portion of the LCEN. Note that although the Z-card and the DSL must be on the same SM, they are not required to be on the same ISLU on that SM.

AUTOQUOTE DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

The SCRN IDX and DAS fields must be set for AUTOQUOTE DSLs. These fields indicate the screening index and Digit Analysis Selector, respectively. They are used to route calls from the DSL termination to the analog ports assigned to the AUTOQUOTE customers.

OSPSOPT form (5424 Record) - The ACQS SM option indicates the SM to which HOBIS or HOBIC DSLs and AUTOQUOTE DSLs are connected.

23.3 HOBIS DSL

The ACQS feature allows the OSPS to direct time and charges quotations for calls originating at specified line numbers to a HOBIS (Hotel Billing Information System).

23.4 ODA Forms

The following ODA forms are used to define HOBIS DSLs.

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9

23.5 Translation Requirements

OSPSDSL form (5411 Record) - A maximum of eight HOBIS DSLs may be defined using the OSPSDSL form. They must all have a SERVICE CLASS set to "HOBIS" and they must all be assigned to the same SM, i.e., the SM portion of the LCEN for each DSL must be equal.

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HOBIS DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

OSPSOPT form (5424 Record) - The HOBIS/C option on the OSPSOPT form must be set to HOBIS indicating that the OSPS is connected to a "HOBIS" as opposed to a HOBIC. The ACQS SM option must be set to the number of the SM to which the HOBIS DSLs are connected.

23.6 HOBIC DSL

The ACQS feature allows the OSPS to direct time and charges quotations for calls originating at specified line numbers to a HOBIC (Hotel Billing Information Center).

23.7 ODA Forms

The following ODA forms are used to define HOBIC DSLs.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9

OSPSDSL form (5411 Record) - There are two types of HOBIC DSLs. One type supports HOBIC "voice quote" TTY (teletypewriters) and the other supports HOBIC "record" teletypewriters.

The DSLs for "voice quote" TTYs are assigned a SERVICE CLASS of "HOBICV". The DSLs for "record" TTYs are assigned a SERVICE CLASS of "HOBICR".

A maximum of eight "voice quote" TTY DSLs and eight "record" TTY DSLs may be defined per SM using the OSPSDSL form. All the DSLs, for both "voice quote" TTYs and "record" TTYs, must be assigned to the same SM, i.e., the SM portion of the LCEN for each DSL must be equal. Note that since the DSLs must all be on the same SM, the maximums listed above also pertain to the switch.

HOBIC DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

OSPSOPT form (5424 Record) - The HOBIS/C option on the OSPSOPT form must be set to "HOBIC" indicating that the OSPS is connected to a HOBIC as opposed to a HOBIS. The ACQS SM option must be set to the number of the SM to which the HOBIC DSLs are connected. If "record" TTY DSLs are defined, then the DUP HOBIC option should be set to "Y" (Yes); otherwise, no time and charge quotes will be sent to the "record" TTYs.

24. AUTOMATED COIN TOLL SERVICE

This section is divided into 2 parts: the first describes the ACTS (Automated Coin Toll Service) announcements and the second discusses the feature in general.

24.1 ACTS Announcements

A set of announcements is provided for the Automated Coin Toll Service. The announcements are for 1+ Fully Automated ACTS Coin Calls and for the ACTS Coin Test Call. All announcements should be identical across all OSPS offices except for branding announcements 105 and 107. Branding is provided for AT&T and for five individual LECs (Local Exchange Carriers).

24.2 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View

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ANNHD	5531	3	5AE	8.61
ANNDG	5532	3	5AF	8.60
ANNTR	5533	3	5AG	8.62
OFCOPT	5509	3	5I	8.1
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

24.3 Translation Requirements

ANNDG form (5532 Record) - All ACTS announcements should be identical across different OSPS sites except for the branding announcements (105 and 107). The construction of each announcement header and trailer requires that inflection and phrase data be populated using the PHRASE form and the ANNDG form.

ANNHD form (5531 Record) - Announcement headers 101 to 120 should be specified using ANNHD.

ANNTR form (5533 Record) - Announcement trailers 101 to 104 should be specified using ANNTR.

OSPSOPT form (5424 Record) - Branding announcements are defined by announcement headers 105 and 107. Announcement header 105 gives a branding announcement without credit, and header 107 gives a branding announcement with credit. The branding announcements are given only during the Initial Contact seizure phase of a 1+ ACTS Fully Automated coin call. The BRAND PHRASE filed on the OSPSOPT form allows branding to be activated or deactivated for all 1+ ACTS traffic originating on a given SM.

The type of branding which is given is controlled by changing the PHRASE ID in announcement headers 105 and 107. For example, the following two announcements use Northwestern Bell as the branding phrase. The branding phrase is 126.

Entry	Definition
APPL	OSPSTA
HDR	105
PHRASES	121,,122,,126
ANNOUNCEMENT	"Thank you for using Northwestern Bell."
APPL	OSPSTA
HDR	107
PHRASES	121,,122,,126,,118, 16500,,100,,120
ANNOUNCEMENT	"Thank you for using Northwestern Bell." "You have # credit towards overtime." (# = amount of credit)

To change the branding to AT&T, a dedicated phrase (67) is used; the results are as follows.

HGRID(Z_SINGLE)	
Entry	**Definition**
APPL	OSPSTA
HDR	105
PHRASES	67
ANNOUNCEMENT	"Thank You for using AT&T."
APPL	OSPSTA
HDR	107
PHRASES	67, 118, 16500, 100, 120
ANNOUNCEMENT	"Thank You for using AT&T." "You have # credit towards overtime." (# amount of credit)

ANNHD form (5531 Record) - The ANNHD form is used to change the above announcement headers.

ANNTR form (5533 Record) - Announcement trailers 101 to 104 are defined using the ANNTR form. These trailers are used in the ACTS Coin Test Call.

24.4 ACTS DSU2-RAF

Automated Coin Toll Services uses a Digital Services Unit 2 - Recorded Announcement Facility to provide announcements and to decode dual frequency coin deposit tones. The announcements are provided on an output port and the coin tones are decoded on an input port. Announcements are aborted upon decoding

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the first signal from a deposited coin. Coin tones are decoded and reported to the terminal process monitoring the DSU2-RAF. Access to DSU2-RAF ports with Coin Tone Receivers is via a RAF port group. The RAF port group can contain RAF ports from different switches. There is a restriction that all RAFs in a service group must be either DSU2-RAF-COIN or DSU2-RAF-DTA (Dial Through Announcement); DA RAFs cannot belong to the same service group.

24.5 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQRA	5821		35	19.10
EQRAP	5822	8	36	20.10/20.22
FIXRT	5301-1	3	3G	10.1
RTIDX	5303	3	3P	10.2
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

24.6 Translation Requirements

The DSU2-RAF data are divided into two groups: data associated with the DSU2-RAF hardware and data used in routing.

EQRA form (5821 Record)
EQRAP form (5822 Record) - The EQRA and EQRAP forms are used to set up the hardware related data for a DSU2-RAF-COIN.

FIXRT form (5301-1 Record)
RTIDX form (5303 Record)
TKGRP form (5202 Record)
TRUNK form (5204 Record) - DSU2-RAF-COIN trunking and routing data is defined using the TKGRP, TRUNK, FIXRT and RTIDX forms. Routing to a DSU2-RAF-COIN occurs for 1+ACTS Fully Automated coin calls and for 0+/0- ACTS Partially Automated coin calls. A fixed route index which points to a RAF port group is used for routing. The FIXRT and RTIDX forms define routing to the RAF port group, while the TKGRP and TRUNK forms define the RAF ports belonging to the RAF port group.

Unlike the routing for DSU2-RAF-DTA (Dial-Through-Announcement) which is used by ACCS, DSU2-RAF-COIN routing does not use queuing.

25. ACTS General Description

25.1 ODA Forms

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OSPSOPT	5424	3	4Y	8.9

25.2 Translation Requirements

OSPSOPT form (5424 Record) - The following fields on the OSPSOPT form are used to enable/disable the Automated Coin Toll Service and to control its operation.

- ACTS - Activation of Automated Coin Toll Service in a switch
- INI TIMER - Period for coin timeout during initial contact with the customer
- OVT TIMER - Period for coin timeout during interim overtime charge-due seizures
- INT C TIMER - Period for intercoin timeout during a charge-due seizure

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- INI RAT FL - Option when a CFR/RTRS rating failure occurs during the initial contact period of an ACTS call
- EOC RAT FL - Option when a CFR/RTRS rating failure occurs during the end-of-call period of an ACTS call
- LRG CHG THR - Threshold value at which an ACTS coin call is marked as a large-charge call
- C TSTS CALL - ACTS coin station test call number

The ACT field activates or deactivates the Automated Coin Toll Service in a 5ESS Switch. The value of "Y" indicates that coin station calls originating in the switch can be automated using ACTS. A value of "N" indicates no ACTS activation.

If a RTTS/CFR (Real Time Rating System/Centralized Flexible Rating) initial contact rating query fails, then the INI RAT FL field determines the action taken by ACTS. If INI RAT FL has a value of "OPR", then the call is routed to an operator. With the value of "ANN", an announcement is given. Similarly, the EOC RAT FL field determines the action taken for a failure during an RTRS/CFR end-of-call rating query. If EOC RAT FL is set to "OPR", the call is routed to an operator. Otherwise, the value of "FREE" allows the call to terminate without further charges.

The LRG CHG THR field determines the threshold at which a coin call is marked as a large-charge call. The default value is 60 nickels ($3.00).

During a 1+ ACTS Fully Automated coin call, the coin timeout periods are determined by the INI TIMER, OVT TIMER and INT C TIMER fields. During an initial contact seizure, the coin timeout period after an announcement is determined by the value of INI TIMER. After an announcement, a customer has the value of (INI TIMER) * 0.5 seconds before coin timeout occurs during an initial contact seizure. During an interim or end-of-call charge-due seizure, after an announcement a customer has the value of (OVT TIMER) * 0.5 seconds before coin timeout. If the customer makes a partial deposit, then intercoin timeout occurs if no further deposit is made in the (INT C TIMER) * 0.5 second interval immediately after the last coin deposit. All three of these fields are set in units of 0.5 seconds. The INI TIMER and INT C TIMER have default values of 11 (5.5 seconds) and the OVT TIMER has a default value of 16 (8.0 seconds).

The C TST CALL field defines the ACTS coin station call number. Its default value is "959-1230".

26. ALLIANCE TELECONFERENCING

ATC (Alliance Teleconferencing®) is available in 5E4(2) and later Software Releases. The feature allows a 5ESS Switch equipped with OSPS (Operator Services Position System) to establish a conference connection between a number of parties. This conference can be set up by either the customer or the Alliance Teleconferencing Operator.

ATC calls are recognized when they are received on operator trunks and are signaled to the AT&T network using CCS7 ISDNUP (Common Channel Signaling System Number 7 Integrated Services Digital Network User Part) capabilities. The calls are routed in the DEV (Direct Egress Voice) domain.

ATC uses a teleconferencing bridge, at a distant NSC, that allows many parties to be present on the same call. The ATC capability consists of two services: "Add-On" teleconferencing and "Meet-Me" teleconferencing.

Add-On teleconferencing allows a customer to originate a teleconference and add conferees (through a 5ESS Switch with OSPS capabilities). The originator is billed for the bridge charges and all participant's legs. Billing is actually done at the NSC; a billing record is kept at the 5ESS Switch for access verification.

Meet-Me teleconferencing is scheduled on a reservation basis (by dialing an 800 number) through a dedicated operator who provides a number for a conference controller to call at a reserved time and

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another number for the other conferees to call at a reserved time. The conference originator specifies a billing option when the conference is reserved; the conferees may be billed for their individual leg charges or all charges may be billed to the originator.

The dialing plan for Add-On and Meet-Me calls is 0+700-45Y-XXXX. The 0+ prefix causes local offices to route Alliance calls on the operator trunks to the OSPS. The Y digit distinguishes between the two services, Add-On and Meet-Me. The Y digit is equal to 6 for Add-On; the Y digit must not equal 6 for Meet-Me.

Alliance teleconferencing calls arriving at the OSPS switch will be screened for valid ANI (Automatic Number Identification) and also to see whether the originating area is allowable (based on NPA-NXX combinations).

26.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ATC	5446	3	4AT	27.40
DAS	5300-1	3	3A	9.1
FIXRT	5301-1	3	3G	10.1
INDIT	5309	3	3V	9.5
LDIT	5300-3/5	3	3c	9.3
RAR	5301	3	3F	10.10
RTIDX	5303	3	3P	10.2

26.2 Translation Requirements

The routing for an Alliance call will be explained by first looking at the Meet-Me call. This will show how the CCS7 trunk group is built. The Add-On call will be explained next, using the information gained from the Meet-Me call routing.

26.3 Meet-Me Translation Requirements

The customer dials an Alliance Meet-Me call by dialing 0-700-45X-XXXX. The last digit of the NXX determines which of the 4 NSCs the customer wishes to use:

NXX	Definition
NXX of 452	Chicago NSC
NXX of 453	White Plains NSC
NXX of 454	Dallas NSC
NXX of 455	Reno NSC

The local office strips off the leading 0 prior to sending this call to the OSPS. The call arrives at the switch with a 0+ prefix (STP or ST3P). The ATC codes, 700-452, 700-453, 700-454 and 700-455 are translated via the DAS/INDIT/LDIT combination used by the normal "FIOPR" incoming trunk groups.

TKGRP form (5202 Record) - Taking the DAS from the incoming TKGRP form, use the DAS form to get the INDIT and LDIT for the call. These forms (INDIT and LDIT) will be the same ones used for normal routing translations of other calls on the switch.

INDIT form (5309 Record) - The INDIT form is first examined to ensure that the call should be translated in it.

LDIT form (5300-3/5) - The LDIT form then provides the ROUTE INDEX and CDI. On the LDIT form, CALL TYPE = "MEETME" TYPE OF CI CALL = "NONCI", NBR OF DIGITS = "10", CODE INDEX should be a number UNIQUE for ATC and ROUTE INDEX should be a number pointing to the CCS7 trunk group for the assigned Alliance node.

Using the SCR from the incoming trunk and the unique ATC CDI from the LDIT form as keys, examine the RAR form. On the RAR form, the "0" prefix points to "REORDER", the "1" points to "REORDER" and

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"NONE" points to "REGL".

RTIDX form (5303 Record) - The final form, RTIDX, uses the ROUTE INDEX from the LDIT as the key and the call should be pointed at the outgoing CCS7 trunk. The DIGITS TO BE DELETED field should be "4", PREFIX DIGITS should be "7000" and SIGNALING PROTOCOL should be "TRAD". This allows the 5ESS Switch to outpulse 700-05X-XXXX to the 4E-HUB. The 4ESS must translate these digits in the DEV domain and route this call in the POTS domain.

26.4 Add-On Translation Requirements

The customer dials an Alliance Add-On call by dialing 0-700-456-XXXX. The XXXX value determines the NSC as follows:

XXXX	Definition
1001	Reno NSC
1002	Chicago NSC.
1003	White Plains NSC.
1004	Dallas NSC.

The local office strips off the leading 0 prior to sending the call to the OSPS and the call arrives with a 0+ prefix (STP or ST3P). The DAS/INDIT/LDIT combination assigned to the incoming "FIOPR" trunk group should translate the 700-456-XXXX in the assigned LDIT form.

LDIT form (5300-3/5) - On the LDIT form, CALL TYPE is "ADDON", TYPE OF CI CALL is "NONCI", NBR OF DIGITS is "10", CODE INDEX is a number UNIQUE for ATC and the ROUTE INDEX points to a "dummy" trunk group. This "dummy" trunk group has no members and appears only on the TKGRP form where it is used to convert the 700 number to an 800 number.

RTIDX form (5303 Record) - The RTIDX form for this "dummy" trunk group should have DIGITS TO BE DELETED set to "6", PREFIX DIGITS set to "800050" and SIGNALING PROTOCOL of "TRAD". This will set the call up for a translation in the OSO (Original Screening Office) using the now dialed number of 800-050-XXXX.

The OSO translation will return a 702 number (as 702-047-1001) for the Reno NSC, a 312 number (as 312-001-1692) for the Chicago NSC, a 914 number (as 914-000-7823) for the White Plains NSC and a 210 number (as 210-987-5191) for the Dallas NSC. The returned number could also be 205-987-5191 if it is after the normal time the NSCs are in service, such as Saturday and Sunday. These returned numbers, using a domain of DEV, will be run through digit analysis again starting as DAS 89. DAS 89 should point to INDIT 89 containing individual Digits 0 to 9 pointing to LDIT 89. LDIT 89 should include Digits 0 to 9 with all except Digits 2, 3, 7 and 9 pointing to CALL TYPE of "VACANT". Digits 2, 3, 7 and 9 should show CALL TYPE of "NORMAL", TYPE OF CI CALL of "NONCI", CODE INDEX which is UNIQUE for ATC, NBR OF DIGITS of "10" and a ROUTE INDEX number pointing to the CCS7 Trunk Group for each NPA involved (312, 214, 702, 205 and 914).

The Route Indexes for the 312 NPA is handled differently than the other 4 NPAs. For 214, 702, 205 and 914 numbers the RTIDX forms should show DIGITS TO BE DELETED set to "0", PREFIX DIGITS left blank and SIGNALING PROTOCOL of "TRAD". For 312, the RTIDX form must have DIGITS TO BE DELETED set to "3" and PREFIX DIGITS set to "981". Thus, the outpulsed number of 312-001-1692 is changed to 981-001-1692. The Next Route Index for all of these Route Indexes should point to "REORDER".

RAR form (5301 Record) - The RAR forms for all of these NPAs is accessed by using the SCR of the original incoming trunk and the CDI of the LDIT form. The RAR form should have "REGL" in the RTI field for a prefix of "NONE".

FIXRT form (5301-1 Record) - Alliance calls that experience ANI-failure will be routed to an announcement using the fixed routing type of "ATCANIF" that must be populated on a FIXRT form.

Non-billable Add-On calls (originating from coin, hotel/motel, multi-party or stations from which paid billing

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is not permitted), ATC calls identified as ONI and ATC calls originating from a restricted NXX are routed to an announcement. The fixed routing type of "ATCINT" must be populated in a FIXRT form to accommodate these conditions.

The ATC form is a new form created for the Alliance feature. It provides for restrictions to be placed on originating NXXs for Add-On or Meet-Me calls. Some or all of the NXXs within an NPA can be restricted for either of the two ATC types of call. When these restrictions exist for the originating NXX, Alliance calls will be routed to an announcement using the aforementioned fixed routing type of "ATCINT", entered on a FIXRT form.

27. AUTOMATED MULTI-LEAF BULLETIN

The AMLB (Automated Multi-Leaf Bulletin) capability is available with 5E4(2) and later Software Releases. AMLB is an on-line query system that contains frequently used information, of an emergency or general nature, which may be used by an operator to complete a customer's call. Some of the information maintained in the AMLB consists of hospital telephone numbers, emergency service telephone numbers and area codes.

The AMLB capability also extends the functionality of the OSPS VDT (Video Display Terminal) to include emulation of commercial terminal and packet switching DTE (Data Terminating Equipment) functions. A VDT user connected to ISDN (Integrated Services Digital Network) packet switching facilities can communicate with remote systems such as data base computers. With 5E4(2) and later Software Releases, OSPS uses the AMLB capability to access a multi-leaf bulletin data base. However, the capability can be extended to access other systems accessible via ISDN packet switching.

An AMLB data base computer is connected to the OSPS switch via an ISDN DSL (Digital Subscriber Line). When the data base page is invoked on the operator's VDT, the VDT emulates a commercial terminal supported by the data base computer. The VDT, physically connected to the OSPS switch on an ISDN DSL, communicates with the AMLB data base computer using ISDN packet switching features to transport packets between the VDT and the data base computer.

27.1 AMLBDSL Port

The AMLB (Automated Multi-Leaf Bulletin) feature provides an interface to an on-line data base, i.e., reference data base. Using the VDT, an OSPS operator can display pages of information used to complete calls or to answer customer inquiries. This information might include dialing codes, inward operator route codes, emergency numbers, telephone company business office numbers, etc., This section describes the office data and related ODA forms used to define an AMLBDSL.

27.2 ODA Forms

The following ODA forms are used in defining an AMLBDSL.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AMLBDSL	5447	3	4AV	21.34
ISDNOPT	5941	5	5B	8.1
LCC	5306	3	3S	4.1
MLHG	5110	3	1J	3.5
MLHGFD	5604	4	5A	12.18
OPDBPARM	5434	3	4AI	27.30
OPEXTDB	5435	3	4AJ	27.31
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9
PSISM	5920	5	3A	22.13

27.3 Translation Requirements

The AMLB feature makes use of the BRCS MLHG (Multiline Hunt Group) feature to access a port to the

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AMLB data base. The AMLBDSLs must be assigned to a preconstructed MLHG feature definition.

MLHGFD form (5604 Record) - A switch that is ordered with the AMLB feature should already have an entry in the MLHGFD form with a FEATURE NAME equal to "/MHXPS", therefore, an entry into this form is not necessary. The HUNT TYPE field must be set to "PSUCD", indicating that the hunting algorithm for the AMLB MLHG is packet switching uniform call distribution. The OVERFLOW REG, INWATS, CF BUSY and CF VARIABLE fields must be set to their default value of "N" (No) for AMLB. The BEARER field must be set to "PACKET", indicating packet switched calls will be routed to the AMLB MLHG.

MLHG form (5110 Record) - The MLHG form is used to define more information related to the AMLB MLHG. A unique MLHG is typically defined for each set of AMLB data bases that contain the same information. The MLHG FEATURE field must be identical to the FEATURE NAME field in the MLHGFD form, e.g., "/MHXPS". AMLB does not make use of the MLHG queuing feature, therefore, the QUEUING FEATURE and QUEUE MASTER SWITCH fields should be left blank.

The LISTED TN is the listed telephone number of the AMLB MLHG. This TN is used by the operator positions to dial up the associated AMLB. The HIGHEST LISTED TN field is typically left blank for an AMLB MLHG. The RAX field indicates the Rate Center that will be used for routing and charging calls made to the AMLB.

The remaining fields on this form should be left blank or retain their default values for an AMLB MLHG.

LCC form (5306 Record) - For AMLB, two instances of the LCC form are used to define LCC (Line Class Codes). One entry defines a LCC for the AMLBDSLs and the other entry defines the LCC for the operator position DSLs that will be originating packet switched calls to the AMLB data base.

For the AMLBDSL, the Line Class Code field should be assigned the character string "MLB". The RATE AREA field must be assigned the same value that was assigned to the RAX field in MLHG. The CLASS OF SERVICE for the AMLBDSL is "XDB" and the TERMINATING TREATMENT is "INDIV".

RAR form (5301 Record) - The SCREEN INDEX must be assigned a valid screening index that exists on a RAR form. The LINE SCREENING field should be assigned the default value of "N" and the INSEP and DESEP should remain blank.

DAS form (5300-1 Record) - A valid DAS from the DAS form should be assigned to the DIGIT ANALYSIS SELECTOR field to be used in routing and charging calls to the AMLB data base.

The differences between the operator position DSL entry and the AMLBDSL entry are: (1) "OPR" is assigned to the Line Class Code field and (2) "TAOPER" is assigned to the CLASS OF SERVICE field.

OSPSDSL form (5411 Record) - OSPSDSL is used to assign a D-channel of a DSL to a line card port connected to an AMLB. The LCEN (Line Card Equipment Number) field specifies the SM, (R)ISLU, LGC and Line Card to which the AMLB DSL is connected. An AMLB may be connected to an ISLU or RISLU. A SERVICE CLASS of XDB must be assigned for AMLBDSLs. The FIRMWARE CLI field must be left blank for AMLBDSLs. The ISCN field defines the location of the DSL in the PSU (Packet Switching Unit).

The DSL NAME ID field must match the MLHG field in the MLHG field on the MLHG form which corresponds to the entry made for the AMLB. Each AMLBDSL must be assigned a unique DSL NAME RL associated with a particular DSL NAME ID. The DSL NAME RL field is populated to indicate the MLHG member, which is typically assigned in sequential order for multiple AMLBDSLs.

The DPIDB, D TIMESLOT and QTR TS fields may only be assigned values when the AMLBDSL is connected to an ISLU. They must be left blank if the AMLBDSL is assigned to an RISLU. If the fields are left blank and the LCEN corresponds to an ISLU, then ODA will assign appropriate values to these fields. The rules for populating these three fields are defined in the OSPSDSL form portion of this section.

The remaining fields on this form should be left blank for AMLBDSLs.

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AMLBDSL form (5447 Record) - AMLBDSL is used to assign D-channel packet switching capabilities to operator position DSLs and B-channel packet switching capabilities for accessing AMLBDSLs. This form must be completed for each AMLBDSL and each operator position DSL that will be used to access an AMLB data base.

The LCEN entered on AMLBDSL must match an LCEN entered on the OSPSDSL form that has a CLASS OF SERVICE of "XDB". D SERV must be set to "ADMIN".

Each PKT TN entered for an AMLBDSL will automatically become a member of the Multiline Hunt Group defined for the AMLB. Typically, the NXX for each of these TNs is set to 999 when the OSPS is not located in an end-office or central office. These TNs are also used for billing purposes and routing.

The PKT RAX and PKT LCC entered for an AMLBDSL must match the AMLB entry in LCC, i.e., PKT RAX must equal RAX in LCC and PKT LCC must equal Line Class Code in LCC.

The following fields are typically populated accordingly for an AMLBDSL. PKT SUST must equal "N". HIGH PVC LCN is left blank. IN LCN LOW and IN LCN HIGH are populated as follows. Typically, for a COMPIS (Computerized Position Information System) AMLB data base, the IN LCN LOW is set to 1 and the IN LCN HIGH is set to 16. This allows 16 logical channels per AMLB data link. With two DSLs to the data base, this allows 32 logical channels and thus a maximum of 32 operators accessing the data base simultaneously.

For the CSIDP (Call Servicing Information Delivery Platform) feature for 5E8 and later, the following fields are typically populated accordingly for an AMLBDSL. PKT SUST must equal "N". HIGH PVC LCN is left blank. IN LCN LOW and IN LCN HIGH are populated as follows. Typically, for a CSIDP AMLB data base, the IN LCN LOW is set to 1 and the IN LCN HIGH is set to 48. This allows 48 logical channels per AMLB data link. (For more information on CSIDP, see Division 2, Section 4C13.)

Typically, for an OFDB (Office Records Data Base) AMLB data base, the IN LCN LOW is set to 1 and the IN LCN HIGH is set to 80. This allows 80 logical channels per AMLB data link. With two DSLs to the data base, this allows 160 logical channels and thus a maximum of 160 operators accessing the data base simultaneously. IN LCN BARRED must be "N". 2W LCN LOW and 2W LCN HIGH are left blank. OUT LCN LOW and OUT LCN HIGH are left blank. OUT LCN BARRED is set to "Y". For the AMLB application, the maximum size of packets exchanged between the operator position and the data base is 128 bytes, therefore, the SEND and RCV PKT SIZE fields must be 128. The IECP DNIC field is left blank. The SEND and RCV PKT WINDOW SIZE fields should be set to 3. This will allow a maximum of 3 packets to be sent to the data base while waiting for an acknowledgement from the data base indicating that the first outstanding packet was successfully received. The WNDSZ field should be set to 7, which is the maximum number of frames to be sent to the data base while waiting for an acknowledgement from the data base indicating that the first outstanding frame was successfully received. The N2 field should be set to 3, which is the number of re-transmissions that will be attempted for an unacknowledged frame. The T1 field should be set to 30, which is the number of tenths of seconds that the OSPS will wait before attempting to retransmit an unacknowledged frame. SEND and RCV THRUPUT CLASS should be set to 19200.

The CUG (Closed User Group) parameters should be set as follows. A CUG consists of two parts, a DNIC and an ICN. The DNIC refers to the Data Network Identification Code and currently may be set to any valid value as long as every AMLBDSL is assigned the same value. The ICN refers to the International CUG code and is typically set to 1 for AMLB, since AMLB is the only CUG on an OSPS switch. The IDX field is a sequential numbering of each CUG assigned to the DSL. IDX for the first CUG should be assigned a value of 1 and so forth. Since there is typically only one CUG for AMLB, only one entry is made in the CUG list. Also, since there is typically only one CUG for AMLBDSLs, the PREFER CUST IDX and HIGHEST CUST IDX fields are set equal to the IDX field.

The OUT ACCESS field indicates whether calls are allowed to be originated from an AMLBDSL to a CUG other than the CUG defined for the AMLBDSLs. This is typically set to "N" for AMLBDSLs. The IN ACCESS field indicates whether calls that originate from a CUG other than the CUG defined for the AMLBDSLs are allowed to terminate to an AMLBDSL. This is typically set to "N" for AMLBDSLs. Since

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operator positions are assigned to the same CUG defined for the AMLBDSLs, access to the AMLB data base will be restricted to those positions.

The FLOW CNTL, THRUPUT IND, REV CHARGE, FAST SELECT and INTERCOM ADD IND fields are typically set to their default values of "N" for AMLB DSLs.

The B1 ISCN, B RELPIDB and B TIMESLOT fields should be set so that they are consistent with the OSPS hardware configuration.

27.4 Operator Position DSL for AMLB

The LCEN entered on AMLBDSL must match an LCEN entered on OSPSDSL that has a CLASS OF SERVICE of "TAOPER". D SERV must be set to "SX".

The PKT RAX and PKT LCC entered for a position DSL must match an entry in LCC, i.e., PKT RAX must equal RAX in LCC and PKT LCC must equal Line Class Code in LCC.

The following fields are typically populated accordingly for a position DSL. PKT SUST must equal "Y". HIGH PVC LCN is left blank. IN LCN LOW and IN LCN HIGH are left blank. IN LCN BARRED must be "Y". 2W LCN LOW and 2W LCN HIGH are left blank. OUT LCN LOW and OUT LCN HIGH are set to one (1). OUT LCN BARRED is set to "N". The SEND and RCV PKT SIZE fields must be 128. SEND and RCV THRUPUT CLASS should both be set to 19200. IECP DNIC field is left blank. The SEND and RCV PKT WINDOW SIZE fields should be set to 3.

The FLOW CNTL field must be set to "Y" if the SEND WINDOW SIZE, SEND PACKET SIZE, RECEIVE WINDOW SIZE and RECEIVE PACKET SIZE fields on the OPDBPARM form are not zero. It should also be set equal to the value of FLOW CNTL that is assigned to the AMLBDSLs.

The remaining fields, PREFER CUST IDX, HIGHEST CUST IDX, CUG LIST DNIC, CUG LIST ICN and CUG LIST IDX should be set equal to the values associated with the AMLB DSL entry to which the position will interface.

PSISM form (5920 Record) - PSISM must be populated only when positions that will be used to access the AMLB data base are connected to a SM other than the SM to which the AMLBDSL is connected. This form defines a dedicated path from an ISCN (Integrated Services Channel Number) in one SM to an ISCN in another SM for packet switching. Populate one PSISM form for each SM pair. For example, if the AMLBDSL is connected to SM 15 and the position DSL is connected to SM 17, then an entry must be made such that SM equals 15 and MATE SM equals 17. MASTER must be set to "Y".

ISDNOPT form (5941 Record) - This form defines the global office options associated with ISDN Packet Switching. Typically, the default values for all required fields are sufficient for AMLB.

OPDBPARM form (5434 Record) - The OPDBPARM form is used to define the interface parameters to the external data base (e.g., AMLB). Interfaces to 15 different types of external data bases may be defined and are uniquely identified by the DATA BASE INDEX field.

The DB PKT TN field identifies the packet switching telephone number used to access the external data base. It must be set equal to the LISTED TN field in the MLHG form associated with the Multi-Line Hunt Group defined for accessing the external data base.

CUGPX assigns a Closed User Group index to the external data base and must be equal to the value of the PREFER CUST IDX field that was assigned to the external data base DSLs on the AMLBDSL form (typically 1 for AMLB). The DB NAME field allows for labeling the external data base with an alphanumeric name.

The FIRST SEARCH STRING identifies the prompt that is returned from the external data base after the data base answers (e.g., "login:"). The SECOND SEARCH STRING identifies a possible second prompt returned from the external data base after a response from the switch to the FIRST SEARCH STRING

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(e.g., "password:"). If either string is left blank, the switch does not look for a string after the data base answers and, therefore, does not reply with a login or password.

SEND WINDOW SIZE, SEND PACKET SIZE, RECEIVE WINDOW SIZE and RECEIVE PACKET SIZE fields identify the X.25 level 3 protocol parameters used to transmit data to the external data base. These fields are typically left zero (default value) for AMLB. They must be left zero if the external AMLB data base is an ORDB. However, they may be non-zero if the external AMLB data base is a COMPIS. If they are non-zero, then they must equal the corresponding values of the SEND PKT WINDOW SIZE, SEND PKT SIZE, RCV PKT WINDOW SIZE and RCV PKT SIZE fields on the OSPSDSL form assigned to the external data base DSLs, i.e., DSLs with D SERV equal to "ADMIN". Also, if these four fields are non-zero, then the FLOW CNTL field on the AMLBDSL form must be set to "Y" for each AMLBDSL (D SERV = "ADMIN") and each operator position DSL (D SERV = "SX") that will be used to access the AMLB data base. Conversely, if these four fields are left zero, then the FLOW CNTL field on the AMLBDSL form must be set to "N", which is the case for the ORDB AMLB data base.

OPEXTDB form (5435 Record) - The OPEXTDB form is used to define which external data base a serving team may access and the interface parameters used by the team in establishing a session with the data base.

The OSC NBR and SERVING TEAM fields identify the OSC and serving team for which data base access is being defined. The DB NBR field must be set to "1", since currently a serving team may be assigned access to only one external data base. The DATA BASE TYPE field identifies which external data base the serving team may access. This field must match an entry in the DATA BASE INDEX field from the OPDBPARM form.

The LOGIN ID, LOGIN DELIM, PASSWORD and PASSWORD DELIM fields are used when the switch automatically logs in an operator on the serving team to the external data base, i.e., AUTO LOGIN is set to "Y". The LOGIN ID and LOGIN DELIM fields specify the switch response to the FIRST SEARCH STRING field as defined on the OPDBPARM form. The PASSWORD and PASSWORD DELIM fields specify the switch response to the SECOND SEARCH STRING field as defined on the OPDBPARM form. If the OSPS LOGIN field is set to "Y", then the operator's login ID will be used instead of the LOGIN ID field whenever the switch automatically logs the operator into the data base.

If the AUTO SESSION field is set to "Y", then a session with the AMLB data base will be established whenever the operator logs into an operator position. If AUTO LOGIN is set to "Y" and AUTO SESSION is set to "Y", then a session will automatically be established and the operator will be automatically logged in. If AUTO LOGIN is set to "N" and AUTO SESSION is set to "Y", then a session will be automatically established and the operator will have to manually log into the AMLB data base.

If the AUTO SESSION field is set to "N", then a session with the AMLB data base will not be established until the operator depresses the MAIN DB key on the operator's position. In this case, the operator will have to manually log in if AUTO LOGIN is set to "N" or the switch will automatically log in the operator if AUTO LOGIN is set to "Y".

The REVERSE CHARGE field is typically set to its default value of "N" for AMLB. If it is "Y", then the data base DSL entries in the AMLBDSL form (DSERV = "ADMIN") must have the REVERSE CHARGE field set to "Y" to allow reverse charging.

OSPSOPT form (5424 Record) - The OPER EXT DB field must be set to "Y" indicating that operators are able to access an external data base.

28. BUSY LINE VERIFICATION

BLV (Busy Line Verification) is a domestic feature that permits an operator, using a special, privately owned verify network, to determine whether a telephone line is actually busy or not. This type of call is generally made at the request of a caller who has tried repeatedly and unsuccessfully to reach a line and received busy tone. The operator is able to verify that a line is busy by listening for conversation through a

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scrambler circuit. In addition, the operator is able to break in on the line to deliver an emergency notification. Prior to the operator breaking in on the line, an intrusion tone is given to the customers who will be interrupted.

28.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BLVEX	5442	3	4AQ	27.11
BLVNPA	5441	3	4AP	27.10
CCCOPT	5432	3	4AG	21.99
DAS	5300-1	3	3A	9.1
INDIT	5309	3	3V	9.5
LDIT	5300-3/5	3	3c	9.3
OSPSOPT	5424	3	4Y	8.9
PDIT	5300-2	3	3B	9.2
RAR	5301	3	3F	10.10
RTIDX	5303	3	3P	10.2
TKGRP	5202	3	2A	5.1
TRUNK	5204/5271-2	3	2C	5.5

28.2 Translation Requirements

This section outlines translation requirements.

28.3 Defining Verifiable Number Plan Areas

BLVNPA form (5441 Record) - For each NPA that can be verified by the OSPS office, the NPA must be assigned on a BLVNPA form. A maximum of 16 NPAs may be specified. For every NXX in the NPA, a status must be specified. The NXX status may be verifiable (i.e., all line numbers in the NXX can be verified) or non-verifiable (i.e., the NXX is not verifiable from this office). If the NXX is verifiable but some line numbers (exclusions) are excluded from verification, those exclusions must be specified on the BLVEX form.

BLVEX form (5442 Record) - Exclusions can be ranges of line numbers or single lines. A maximum of 200 entries (a range or a single line represent one entry) can be specified on BLVEX. Each NPA, however, is limited to a maximum of 96 exclusion entries.

28.4 BLV Trunk Selection and Routing

BLVNPA form (5441 Record) - For each verifiable NPA, a unique BLV routing code must be established. Routing codes can range from 000 to 199. The BLV routing code is specified on a BLVNPA form. The routing code replaces the NPA digits of the forward number before the number is passed to the terminating terminal process for outpulsing.

The routing code and the NXX-XXXX (last 7 digits of the 10-digit forward number) are passed to digit analysis so that a BLV trunk can be selected for routing the BLV call. A digit tree must be created to recognize the BLV routing codes plus 7 digit numbers. This requires the use of the DAS, PDIT, LDIT and INDIT forms.

DAS (5300-1 Record) - The OSPS office option BLV DIGTREE STRT should be set to the DAS (Digit Analysis Selector) specified on the DAS form for BLV use. The OSPS office option BLV SCREEN IDX should be set to the screening index used for BLV. Note that for a POTS call, the DAS and screening index are normally obtained from the trunk or line data associated with the back number. For BLV calls, the digit analysis functions use these OSPS office options as their starting values.

28.5 BLV Trunk Assignments

The TKGRP, TRUNK and RTIDX forms are used to define BLV trunks. Trunks for this feature are

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considered as outgoing and have their TRKCLS field set to "BVTOLLCM" or "BVINTOLL" on a TKGRP form. These trunks are selected for use based on the routing information found in the previously described digit analysis.

28.6 Miscellaneous BLV options

CCCOPT form (5432 Record) - The EI THRESHOLD IND field on the CCCOPT form indicates whether or not to print a message on the security printer if the operator stays in the EI (Emergency Interrupt) mode longer than a specified limit. The EI limit is defined in the EI LIMIT field on the CCCOPT form.

OSPSOPT form (5424 Record) - The ability to turn on or off the BLV feature in the OSPS office is provided. This is done via the BLV field on the OSPSOPT form.

28.7 BLV Craft Test Calls

The craft is able to test BLV trunks from an operator's position before the trunks are actually put in service. No new data other than the above is required. The feature activation field (BLV) may be off. To make a BLV craft test call, the position must be made busy, then a loop accessed. A back number is entered, but completing the back connection is not required. A forward number is entered. The normal operator verify procedures can then be followed from this point on.

28.8 Queuing for BLV Trunks

The ability to queue for BLV trunks is provided. It uses the BRCS queuing mechanism modified to handle BLV. Queuing is defined when the BLV trunk group is assigned. The rules for using the BLV queuing are as follows:

1. BLV trunk queuing should not be used when the 5ESS Switch is performing as a tandem office and only passing the BLV call through the network. Queuing should not be used when the OSPS originates BLV calls and is on a node in the BLV network.

2. BLV queuing should only be used when there are a minimal number of BLV trunks providing access to the BLV network for one OSPS office. It should also be done when the OSPS is not on a BLV network node.

3. Since most OSPS offices will probably be on a node in the BLV network, BLV queuing should seldom be used.

29. CUSTOM INFORMATION DISPLAY

The CID (Custom Information Display) is used to associate text with a trunk group number. This text indicates special services associated with the trunk group, such as an operator greeting for all calls on a trunk group.

29.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LECTEXT	5444	3	4AS	27.20
TGNLEC	5443	3	4AR	27.21

29.2 Translation Requirements

When a call is sent to an OSPS operator position, the trunk group number is searched for in the TGNLEC form. If it is found, then the LECTEXT form is used to retrieve the CID text for the TGN. This text is displayed in the detail window of the VDT and informs the operator of special services for the TGN.

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30. EXTERNAL DATA BASE MESSAGE HANDLER

The EDBMH (External Data Base Message Handler) is the software within the OSPS that provides the interface between the Call Processing software and data bases external to the OSPS. Currently, its interfaces are with the BVA (Billing Validation Applications), NCD (Network Call Denial) and CFR (Centralized Flexible Rating) data bases which reside on the CCS network. In addition, it interfaces with the RTRS (Real-Time Rating System) data base which is connected to a SM with ISDN capabilities.

The BVA data base is used for the validation of calling cards, collect numbers and billed-to-third numbers. The NCD data base is used to prevent billing of AT&T carried calls to delinquent customers. The CFR data base and the RTRS database are used for the rating of calls in real-time.

30.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9

OSPSOPT form (5424 Record) - Much of the EDBMH software is controlled via OSPS office options, which are listed below:

- RATE DB
- OSPS TA
- SAMPLE SQD
- RATE (TIME, MIN QRY, ALARM THR, OVLD TIME 1)
- CC (TIME, MIN QRY, ALARM THR, OVLD TIME 1)
- BNS (TIME, MIN QRY, ALARM THR, OVLD TIME 1)
- NCD (TIME, MIN QRY, ALARM THR, OVLD TIME 1)

30.2 Translation Requirements

The options listed above are grouped together according to their functionality. Options within the same group serve the same purpose but control separate query types. The groups of options are used as follows:

TIME (Timeout Options) - This set of options is used to indicate the timeout period for the specific query types. That is, the EDBMH software will wait for the specified amount of time for a response from the data base. If it does not receive a response within the specified time, it will notify the Call Processing software of the failure. The action taken by Call Processing in failure situations is dependent upon the query type and CALL TYPE. Responses received from the data base after the timeout period are ignored by the EDBMH software.

- **WARNING:** This option is also used to determine how long Query IDs will be in use for every query sent. Therefore, specifying a timeout period greater than the default values may result in a shortage of Query IDs during high traffic periods.

Overload Timing Controls Options (OVLD TIME 1) - This set of options is used to indicate the overload timing period for the specific query types. This option is defined only for those query types that use linear cutback controls (cutback N out of 8 query attempts). Query types that use call gapping controls (send 1 query every N1 seconds for a duration of N2 seconds), do not have this type of option.

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This option indicates the longest period of time that any one non-zero overload indicator sent back from the data base will be in effect. If the data base sends back a non-zero database control, those controls will be in effect for the specified overload period or until another non-zero overload control is received, which ever comes first.

Alarm Minimum Query Options (MIN QRY) - This set of options is used to indicate the minimum number of query attempts for a specific query type that must have been made in a 15-minute period before query alarm calculations will be performed. This is used to protect against alarm activations during low traffic periods in which a few query failures could result in alarm threshold violations. This option along with the next option are used by the EDBMH Query Software Alarm processing.

Alarm Threshold Options (ALARM THR) This set of options indicate the minimum threshold value for each query type for query software alarm calculations. If the query success rate falls below the specified threshold and the minimum number of queries has been satisfied for that 15-minute period (see above option), an alarm is sounded and a message printed at the MCC.

Rating Data Base Option (RATE DB) - This option indicates whether the OSPS is to communicate with the CFR data base or the RTRS database for its real-time rating information. The OSPS office can only communicate with one of the two rating data bases.

OSPS Toll and Assistance Option (OSPS TA) - This option indicates whether the OSPS toll and assistance is on. The global EDBMH software is triggered only when this option is on.

Sampling Rate For Supplemental Query Data (SAMPLE SQD) - This option is used as a threshold for requesting a Supplement Query Data message from an SM when the total number of successful BVA queries is equal to or greater than the value of this option.

30.3 EDBMH with DLN equipped

OSPSOPT form (5424 Record) - The following EDBMH options will also be populated in the DLN when the office is equipped with the hardware. Their usages are the same as mentioned above.

- RATE DB
- OSPS TA
- SAMPLE SQD
- RATE (TIME, OVLD TIME 1)
- CC (TIME, OVLD TIME 1)
- BNS (TIME, OVLD TIME 1)
- NCD (TIME)

WARNING: Since the DLN is external to the 5ESS Switch, the current design for updating any office option in this hardware imposes a delay of 15 minutes at most before the new data can be used.

31. INTERMEDIATE SWITCH POINT

The ISP (Intermediate Switching Point) Capability serves two functions in the 5ESS Switch: 1) It provides a means to route operator calls to an appropriate OSPS; 2) If the 5ESS Switch contains an OSPS internally, then calls can be handed-off or calls can be routed to an outgoing trunk group destined for an OSPS associated with the carrier identified. Thus, ISP can function with or without an OSPS resident to a 5ESS Switch.

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If there exists an OSPS on a 5ESS Switch, then ISP provides the front-end processing required for handling OSPS calls (e.g., digit collection, determining CALL TYPE, passing trunk characteristic information, etc.). If there is no OSPS on the 5ESS Switch, then ISP will route calls to the appropriate OSPS based on the carrier (i.e., intraLATA, interLATA or international).

31.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACQS	5425	3	4Z	26.11
DIOPR	5418	3	4S	26.25
EXMAP	5440	3	4BL	26.32
NPAMAP	5414	3	4O	26.1
OFCOPT	5509	3	5I	8.1
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
RAR	5301	3	3F	10.10
TKGRP	5202	3	2A	5.1

31.2 Translation Requirements

The ISP uses two input forms and three office options for a majority of its processing. However, it accesses five other ODA records and four office options that are either shared with OSPS or used in general call processing. Details on the forms and options are discussed below.

OPRTK form (5417 Record) - The OPRTK form contains a number of attributes to identify the characteristics of the incoming Trunk Group. The key to this relation is the TGN (Trunk Group Number) which must be defined on a TKGRP form. The OPRTK form also contains the carrier ID used for routing intraLATA, interLATA and international OS calls. The carrier is determined by ISP and that carrier ID is then used as an index into the next record.

DIOPR form (5418 Record) - The DIOPR form contains routing information for a particular carrier ID (key). It also provides data to determine if all CALL TYPES will be handled by the same OS (could have restricted CALL TYPES). If no call restrictions are present for a carrier ID, then the primary code index and overlap outpulsing indicator will be used to route the call. If the primary code index is "0", this means the call will be handed off to an internal OSPS and not routed externally to the 5ESS Switch.

Listed below are the possible restrictions that can exist on a carrier ID.

- Coin
- ACQS Auto Quote
- ACQS Voice Quote
- Non Coin 950-WXXX
- Coin 0+ 950-WXXX
- Coin 1+ 950-WXXX
- Teleconferencing

If a particular CALL TYPE is restricted and ISP determines that the restrictions apply to the call, the code index and overlap outpulsing indicator is overwritten by an alternate value and the call is routed normally.

ACQS form (5425 Record) - The ACQS form is used by ISP to determine if a hotel back number is Auto Quote or Voice Quote. This is necessary only if hotel calls have traffic restrictions for a particular carrier.

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NPAMAP form (5414 Record)
EXMAP form (5440 Record) - LATA Mapping and Exception Area Mapping may also be done by ISP. If turned on, the data used in this mapping must be defined in a NPAMAP form and a EXMAP form. ISP shares these relations with OSPS.

RAR form (5301 Record) - A RAR form is used by ISP to determine the route index for a call to route to an external OS. The keys to this form are the code index, prefix and screening index. The code index used is the one found in the DIOPR form. The screening index comes from the OPRTK form.

TKGRP form (5202 Record) - The TKGRP form is used to define ISP incoming trunks. For ISP software to be entered, the TRKCLS field on this form must be "FIOPR".

31.2.1 Office Options

There are a total of six office options used by ISP. The names and functions are described below.

31.2.2 OSPSOPT form (5424 Record)

- OSPS TA - Set to indicate if OSPS is integrated on the switch.
- LATA MAP - Defined as a boolean value identifying if LATA mapping is to be performed.
- EXCEPT DETRM - Defined as a boolean value identifying if exception area determination is to be performed.

31.2.3 OFCOPT form (5509 Record)

- ISP DIGITS - Ranges from 2 to 31 and determines the initial number of digits to collect prior to the beginning overlap outpulsing.
- OVERLAP SIZE - Ranges from 1 to 15 and determines the number of digits to collect when performing the overlap outpulsing function.
- FAIL ID - Set to the carrier ID for MFJ (Modified Final Judgement) trunks where ANI (Automatic Number Identification) transmission failure occurs and carrier cannot be determined.

31.3 Other Details

The ISP uses standard digit translation for its digit analysis. The major difference is that ISP overwrites the code index received from digit analysis and inserts the code index from the DIOPR form. All other routing data remains the same.

32. ORIGINATING LINE SCREENING

OLS (Originating Line Screening) restricts classes of charge billed to by specified back numbers. It also indicates special operator treatment to be given to users of specified back numbers via text displayed to the operator. Furthermore, OLS is where lines are flagged as coin lines and where a back number can be flagged so that all calls from that back number are operator-handled. True billing numbers are stored in OLS tables.

32.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FIXRT	5301-1	3	3G	10.1
LINESCRN	5416	3	4Q	26.2

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NPAMAP	5414	3	4O	26.1
OPRTK	5417	3	4R	26.26
SCRNCODE	5415	3	4P	26.3

32.2 Translation Requirements

NPAMAP form (5414 Record) - Because the quantity of OLS data is too great to be stored on each SM, the data is divided among all SMs used for OSPS traffic by assigning all OLS data for an NPA-NXX to a SM. This assignment is specified in a NPAMAP form. The SM specified on a NPAMAP form cannot be a RSM.

OPRTK form (5417 Record) - Whenever a call arrives on a trunk specified in the OPRTK form as ANI-Search, Dedicated-Screened or possibly carrying coin traffic or is signaled with an ANI-7 digit, the back number is checked against OLS records. First, the NPA-NXX of the back number is used to find the SM on which any OLS data for the back number is stored by searching the data specified in the NPAMAP form.

LINESCRN form (5416 Record) - Once the SM has been determined, OSPS sends a query to that SM to retrieve any data that may be in the LINESCRN form for the back number. The data found can indicate:

- billing restrictions,
- whether to always route the call to an operator position,
- whether the call receives ACCS (Automated Calling Card Service) treatment,
- the originating station type,
- whether the back number is a coin phone,
- whether there is a true billing number to replace the back number,
- or whether the back number is restricted from SAB (Subaccount Billing).

SCRNCODE form (5415 Record) - If the call is sent to an OSPS operator position, the screen code associated with the back number is searched for among the SCRNCODE forms and the class of charge restrictions and associated text are used to deny or allow classes of charge and to inform the operator of the restrictions.

FIXRT form (5301-1 Record) - 1+ calls that are OLS-screened against the PAID class of charge are routed to an announcement using the fixed routing type of "OLSPD" that is populated in the FIXRT form. If routing to the announcement fails, the call is sent to reorder. Any call for which no data is found is treated as not OLS-screened.

33. OPERATOR TROUBLE REPORTS

This section will address operator trouble reports. The first topic presented is setting up the data for any trouble report, while the remaining two parts discuss specific types of reports.

33.1 OTR (Operator Trouble Reports)

OTRs generated from a VDT are printed on the OTRP (Operator Trouble Report Printer) that is connected to an OAP located at an OSC (Operator Service Center) or FMC (Force Management Center). Certain OTRs can also be forwarded to an EOAS (External OTR Analysis System) from a properly equipped FMC. The data for the OTRs and the location of the OAP must be properly defined through the following ODA forms.

33.2 ODA Forms

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New Or Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
OPARM	5400	3	4A	21.1
OSPSOA	5403	3	4D	21.4
OSPSOPT	5424	3	4Y	8.9
OTRVLD	5410	3	4K	21.6

33.3 Translation Requirements

OTRVLD form (5410 Record) - When an operator enters a trouble code to generate an OTR, the trouble code is matched to the corresponding OTR ID in an OTRVLD form, if it exists. The trouble code that has been matched successfully is then checked to determine if the IN USE field is set to "Y". If so, the remaining data from the OTRVLD form is checked as follows: the MCC field to determine if the OTR is to be printed on the ROP, OKTR (Operator Keyed Trouble Report) to determine if it is to be printed on the OTRP, the OFFICE TYPE and OFFICE NUMBER to determine which office the report is to be sent to. The OFFICE TYPE and OFFICE NUMBER match with data supplied in the OPARM form to determine where the OAP is located. It is possible that the OAP is connected to a PSM other than the one from which the OTR was generated.

33.4 Interflow Considerations

On Interflow calls operator-keyed trouble reports are output at the "receiving OSPS," i.e., the OSPS at which the operator VDT resides. The validity of the trouble code is checked at the receiving OSPS. The position ID field is that of the operator's VDT position.

33.5 Other Details

OPARM form (5400 Record) - The OAP must be defined as an FMC or an OSC. This should correspond to the OPARM form and can be defined by running 'sysgen' on the OAP. If it is not defined correctly, then the OAP will not log into the switch successfully.

Only offices defined as FMC will be equipped with a link to an EOAS (External OTR Analysis System). OSCs are only capable of printing OTRs on the OTRP while FMCs can print the OTRs and forward valid OTRs to an EOAS.

OSPSOA form (5403 Record) - OTRs that are to be forwarded to an EOAS, such as NOTIS or NSCS, must have trouble codes between 010 and 099 and be generated by an operator with an ALL NUMERIC login ID, defined on an OSPSOA form. Trouble codes entered on the VDT that are two-numeric digits will have a leading zero attached to the code, thus, "10" is the same as "010".

OTRs in the range of 010 - 099 can be marked so that they are not printed on the OTRP. All other numeric and alphanumeric OTRs that are defined will always be printed on the OTRP. OTRs that are marked for non-printing, by setting OTRP to "N", are still sent to the OAP even though they will not be printed. All OTRs can be defined so that they are not printed on the ROP.

33.6 Coin Fraud/Coin Credit Operator Keyed Trouble Reports

Coin Fraud and Coin Credit OKTRs (Operator Keyed Trouble Reports) are used to generate reports whenever an operator handles a request for credit on a coin call or believes there was fraud on a coin call, e.g., blue box usage to generate tones.

Whenever an operator enters a coin fraud or coin credit trouble number in the Trouble Number field on the VDT, OSPS generates a record on the OAP.

33.7 Automatic Operator Trouble Reports for ANI Failure Calls

OTRs (Operator Trouble Reports) may be automatically generated within the OSPS for ANI (Automated

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Number Identification) failure calls. This will log each ANI failure that arrives at an OSPS operator position at the OAP OTR printer and/or the MCC ROP. The trouble code used in each case will be '090'.

33.8 Interflow Considerations

For Interflow calls the trouble reports for code "090" are output at the "sending OSPS," i.e., the OSPS at which the call is initially handled. If an operator keys in a trouble code of "090", the trouble report is handled the same as for automatically generated trouble reports. The position ID field of the trouble report with code "090" contains the position number of the Interflow channel at the sending OSPS.

OSPSOPT form (5424 Record) - If the ANIF TRBL RPT field on the OSPSOPT form is set to "Y", then "090" trouble reports will be generated for each ANI failure call. If it is set to "N", then no "090" trouble reports will be automatically be reported.

33.9 Other Details

This trouble report is created each time a back number is keyed in by the operator, so it is conceivable that more than one trouble report may be generated per ANI failure.

Trouble code "998" is to be used in case the Back Party on the call is TALKING to the operator but the operator's display shows that the Back Party is on-hook. When entered at the operator position, this trouble code will cause the operator's display to be updated showing the Back Party as off-hook.

Trouble code "999" is to be used in case the Forward Party on the call is TALKING to the operator but the operator's display shows that the Forward Party is on-hook. When entered at the operator position, this trouble code will cause the operator's display to be updated showing the Forward Party as off-hook.

- **WARNING:** Trouble codes "998" and "999" should only be used for the purpose stated above. If these trouble codes are used for any other purpose, there could be harmful side effects, i.e., incorrect billing and asserts.

34. REAL TIME RATING SYSTEM

To handle any calls requiring immediate calculations of time and charges, a real time rating data base is needed. RTRS (Real Time Rating System) receives queries sent from the switch regarding a specific call and sends back a reply containing the chargeable time and the charges for the call.

34.1 ODA Forms

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
NXXZN	5427	3	4AB	26.12
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9
TMZN	5426	3	4AA	26.14

34.2 Translation Requirements

OSPSOPT form (5424 Record) - There are two RTRS links connected to the RTRS data base(s) used to send and receive queries. The two links may be connected to one RTRS data base or to two separate RTRS data bases. These links are connected to one ISDN SM in the 5ESS Switch. The RTRS SM field on the OSPSOPT form must be set to indicate to which SM these links are attached so all queries can be sent out over them. For RTRS to function, the RATE DB field on the OSPSOPT form must be set to indicate that the data base is "RTRS", not CFR (Centralized Flexible Rating).

If there is a load on the system or the RTRS data base, queries may be queued before they can be sent out. The (RATE) TIME field on the OSPSOPT form is set to the time that the query may be queued before a timeout is assumed for that query and a failure is returned to the system.

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If there is a heavy load on the RTRS data base, the database may return in one of its query replies a cutback parameter from 1 to 7. This parameter indicates the number n of 8 queries which are to be cut back for a certain period of time. This time is indicated in the (RATE) OVLD TIME 1 field of the OSPSOPT form.

NXXZN form (5427 Record) - In the process of sending out a data base query to retrieve charge information, the start time of the call must be sent. The time at the customer location may, however, differ from that of the switch. In order to calculate the time at the customer's location, the TMZN form and the NXXZN form are used.

TMZN form (5426 Record) - Based on the originating NPA, the TMZN form indicates which of 3 time zones the majority of the customers reside in and if there are exceptions, that is, if all customers in the NPA are not in the same time zone. The NXXZN form shows the exceptions to the majority of customers, based on the originating number's NPA-NXX combination.

There may be up to 3 time zones served by a switch. The 3 possibilities are prime time (the same time as the switch), an alternate 1 time and an alternate 2 time. The difference between alternate 1 time and the time of the switch is found in the A1 ZONE field on the OSPSOPT form and, correspondingly, the difference between alternate 2 time and the switch is found in the A2 ZONE field on the OSPSOPT form.

OSPSDSL form (5411 Record) - OSPS interfaces to the RTRS via DSLs. Typically, 2 DSLs are established between the OSPS and RTRS data base(s); therefore, 2 entries in the OSPSDSL form are made. Both DSLs are actively used to send rating queries to and receive responses from the RTRS data base(s). Both DSLs must be connected to the same SM, thus the SM portion of the LCEN entered for both DSLs must be equal. Each RTRS DSL must have a SERVICE CLASS equal to "RTRS".

The DSL NAME ID and DSL NAME RL fields are used to define the external names used to reference the DSLs. If a maintenance message pertaining to a RTRS DSL is printed on the ROP, these 2 fields are used to identify the DSL.

In the case where only one RTRS DSL is defined, the DSL NAME RL must be an even number, e.g., 2. In the case where 2 RTRS DSLs are defined, the DSL NAME RL values must be consecutive, with the even DSL NAME RL value equal to the odd value minus one, e.g., 2 and 3 or 4 and 5. For additional information on RTRS DSLs and the use of the DSL NAME ID and DSL NAME RL fields, please refer to Division 3, Section 4L.

RTRS DSLs may be connected to a RISLU or ISLU. In the case where they are connected to an ISLU, the DPIDB, D TIMESLOT and QTR TS fields must be assigned values.

35. TERMINATING CODE SCREENING

TCS allows the Telephone Company Administration (TCA) to restrict selected originating station classes from making collect or credit card calls to certain NPAs, NPA-NXXs or Country Codes. For automated credit card calls, TCA has the option to route the call to an operator position or to give the calling party reorder. There can also be special TCS text printed on the VDT screen if a forward number is called to give special instructions on how to handle the call.

35.1 ODA Forms For TCS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TCSCC	5438	3	4AM	27.3
TCSNPA	5437	3	4AL	27.2
TCSTEXT	5436	3	4AK	27.1

35.2 TCS Feature Assignment

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This section outlines the steps for assigning the feature.

35.3 Credit Card Calls

The first step in deciding if a call is TCS restricted is based on the forward number. For a domestic number, the TCSNPA form is checked. An entire NPA can be screened or screening can be done based on an NPA-NXX basis. If there is an entry for an entire NPA and another for a particular NXX within the same NPA, the screening for the entire NPA takes precedence. For an international number, the TCSCC form is checked, based on the Country Code of the forward number. If an entry is found, the call has TCS data.

The second step is based on the screen code found in either the TCSNPA or TCSCC form. If the screen code is zero, the call is not considered TCS restricted. The screen code must be non-zero for any TCS restrictions to be enabled.

Next, the originating station class of the call is determined. All calls are grouped into three categories: public phones, hotel phones and non-public non-hotel phones. For automated and operator-assisted credit card calls, the screen code determined in step two is used to find the corresponding entry in the TCSTEXT form. The originating station class field is checked for TCS restrictions and, if the field is set to "Y", the call is TCS restricted.

The fourth step deals with routing and messages. For an automated call that is TCS restricted, the reorder field in the matching entry in the TCSNPA form is looked at. If the field is set to "Y", the back party will receive reorder. If the field is set to "N", the call will route to an operator with a TCS error message in the loop data window of the VDT screen. For an operator-assisted call, a TCS error message will appear in the loop data window of the VDT screen.

35.4 Collect Calls

Steps one and two apply as well for collect calls. The third step is irrelevant since originating station classes have no effect on TCS restricted collect calls.

The next step is to find the matching entry in a TCSTEXT form, using the screen code of step two. If no code is found, TCS restrictions do not apply for collect calls. If a code is found, check the ALL DENY COLLECT field. If it is set to "Y", all collect calls will be TCS restricted. If it is set to "N", check the STATION ONLY DENY COLLECT field. If this is set to "Y", station collect calls will be TCS restricted, but not person collect. If both fields are "N", no collect calls are TCS restricted to this forward number.

If the collect call is TCS restricted, an error message will appear in the loop data window of the VDT screen.

35.5 TCS Text

No matter if a call is TCS restricted or not, a call may have TCS text associated with it. Find the screen code of the forward number as in steps one and two above. Next, use this code to find a matching entry in a TCSTEXT form. If the code matches a value in the screen code field, the characters in the TEXT field comprise the TCS text. Any time a call is at an operator position and there is a forward number that has TCS text associated with it, the TCS text will appear on the screen page of the VDT.

35.6 Other Details

If the data appears to be set up correctly and the calls are not properly TCS restricted, you might want to check the OLS data and the hotel data if you are making a hotel call. These screening checks are done before the TCS checks.

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DIGIT ANALYSIS DATA

The following tables summarize how data for numbers of the form NPA-NXX-XXXX, NPA-TTC-OSDC and NPA-OSDC can be put into the Local Digit Interpretation Record and the Conflict Resolution Record. In the tables, INCOMING DIGITS and NUMBER OF DIGITS represent the actual dialed digits. RECORD means either enter this in the LDIT record only or in the LDIT and the CONFLICT record. MEANING indicates whether this number is vacant, is a route number or is a normal directory number

The table below shows the minimal amount of data that would be set up if 4 digit OSDCs are not used and if the NPA-OSDC form of a route number is not used.

INCOMING DIGITS	NUMBER OF DIGITS	RECORD	MEANING
NPA	9	CONFLICT	ROUTE
NPA	10	CONFLICT	NORMAL
NPA	11	CONFLICT	ROUTE

The following table shows the minimal amount of data that would be set up if 4 digit OSDCs are used while the NPA-OSDC form of a route number is not used.

INCOMING DIGITS	NUMBER OF DIGITS	RECORD	MEANING
NPA0	9	CONFLICT	ROUTE
NPA0	10	CONFLICT	ROUTE
NPA0	11	CONFLICT	ROUTE
NPA1	10	LDIT	VACANT
NPA2	10	LDIT	NORMAL
NPA3	10	LDIT	NORMAL
NPA4	10	LDIT	NORMAL
NPA5	10	LDIT	NORMAL
NPA6	10	LDIT	NORMAL
NPA7	10	LDIT	NORMAL
NPA8	10	LDIT	NORMAL
NPA9	10	LDIT	NORMAL

The next table shows the minimal amount of data that would be set up if both 4-digit OSDCs and the NPA-OSDC form of a route number are used.

INCOMING DIGITS	NUMBER OF DIGITS	RECORD	MEANING
NPA0	9	CONFLICT	ROUTE
NPA0	10	CONFLICT	ROUTE
NPA0	11	CONFLICT	ROUTE
NPA1	6	CONFLICT	ROUTE
NPA1	7	CONFLICT	NORMAL or ROUTE
NPA1	8	CONFLICT	ROUTE
NPA2	10	LDIT	NORMAL
NPA3	10	LDIT	NORMAL
NPA4	10	LDIT	NORMAL
NPA5	10	LDIT	NORMAL
NPA6	10	LDIT	NORMAL
NPA7	10	LDIT	NORMAL
NPA8	10	LDIT	NORMAL
NPA9	10	LDIT	NORMAL

The case above with two meanings occurs when there is an NPA, NXX conflict. Since only 1 choice can be made as to the meaning, this generally would represent a 7-digit local directory number.

Figure 1 DIGIT ANALYSIS DATA

This table shows the relationship between carriers and the type of Carrier Interconnect for a call

CI Type VS Carrier Compatibility

CI Type	OSPS Owner				
	LOCAL Carrier		TOLL Carrier		
	LEC	IC	LEC	IC (owner)	IC (other)
NONCI	C (1)	NC	NC	C (1, 4)	NC
INTRA	C (1)	C (2, 5)	C (1)	C (1, 4, 5)	C (2, 5)
COMP	C (1)	C (2)	C (1)	C (1, 4)	C (2)
PRIV	C (1)	C (2)	C (1)	C (1, 4)	C (2)
INTER	NC	C (2)	NC	C (1, 4)	C (2)
IDDD	NC	C (2)	NC	C (1, 4)	C (2)

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WZ1	NC	C (2)	NC	C (1, 4)	C (2)
SAC	C (1)	C (1, 3, 4)	C (1)	C (1)	C (1, 3, 4)
TRANS	NC	C (2, 6)	NC	C (1, 4, 6)	C (2, 6)

LEGEND:
CI Type - The type of carrier interconnect determined by digit analysis or as set by LATA mapping/ exception area mapping.
C - CompatibleNC - Not Compatible
Notes:
1 - Routing data from INDIT/LDIT used
2 - Routing data from carrier related forms (ICF, RSMCAR, CDIM) used
3 - Routing data may be modified by RSMCAR data
4 - Routing data may be modified by CDIM data
5 - Only allowed if INTRA IND on ICF form is set to YES
6 - Only allowed if ICF form indicates carrier accepts this type of access

For a carrier to be used for a forward or floatable route number, the LEC SERVICE field of the ICF form must be set to YES.

Figure 2 CARRIER INTERCONNECT AND ROUTING DATA

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SEC. 3I: OSPS TOLL AND ASSISTANCE FEATURES FOR 5E5 AND LATER SOFTWARE RELEASES

1. INTRODUCTION

OSPS Toll and Assistance provides for operator handling of a call to facilitate collect, person-to-person, calling card and third party billing calls, as well as providing support for automated coin collection, automated calling card service, hotel/motel billing quotation and external rating databases.

This section provides brief descriptions of the various capabilities and features which were added to the OSPS Toll and Assistance features for 5E5 and later Software Releases. Each feature is described functionally, from an ODA input form perspective.

2. DA TO VDT CALLS

This feature allows a DA (Directory Assistance) call to be directed to a VDT position. The call queue can be determined based on either the incoming trunk group number or the digit received or neither. DA calls come from MF (Multifrequency), DP (Dial Pulse) and Seizure Only trunks. If rerouting is not in effect, an operator request is generated and the call is routed to a position. Re-routing of a DA call occurs when the serving team that handles DA calls are actively being interflowed to another switch. DA calls will not be interflowed; instead they will be rerouted to another switch.

(For 5E7 and later please also refer to Directory Assistance Call Completion in Division 2, Section 3C on Listing Services Features.)

2.1 ODA Forms

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	3M	26.10
ACDPOL	5412-B/C/E/F	3	4M	26.10
INFLDEST	5448	3	4AW 21.27	
OBSTS	5408	5	1F	23.13
OSPSCT	5404	3	4E	21.22
RAR	5301	3	3F	10.10
RTIDX	5303	3	3P	10.2

2.2 Translation Requirements

ACDCTP form (5412-A/D Record)
ACDPOL form (5412-B/C/E/F Records) - The result of a standard digit analysis using 5300 series ODA records for a DA call is a destination type of DA2VDT. The initial digit analysis is done on the incoming digits dialed for the DA2VDT call. The destination type is passed to call processing so that special handling can be performed for the routing of this call. The ACDCTP and ACDPOL forms are used to determine the CALL TYPE (or call queue) of this call. Refer to the expanded CALL TYPE determination information in Division 3 Section 4M for the use of these forms. The keys to the ACDCTP form are:

Entry	Definition
CALL ORIGIN	This is "DA2VDT" for the call.
PREFIX	This is the prefix digit dialed
COIN	This is the coin indicator ("Y" or "N").
CARRIER	This is the carrier handling the call.
OSPS ID	This is the Sending OSPS identifier for received Interflow calls only. All other calls have the default value of "0".

The DISPLAY INDEX field on the ACDCTP form or the DISPLAY field on the ACDPOL form (whichever is used as final ECTD result) is used to index into an OBSTS form for the text which will be displayed on the VDT.

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INFLDEST form (5448 Record) - If DA re-routing is active, then the Destination ID (DEST ID), the incoming TGN (Trunk Group Number) and the digit analysis destination index (INC CDI) are used as keys to an INFLDEST form. The result is a new Outgoing Destination Index (OUTGO CDI) and a Destination Name (DEST NAME).

OSPSCT form (5404 Record) - The serving team is then determined from an OSPSCT form.

RAR form (5301 Record) - The OUTGO CDI and the screen index from incoming trunk group digit analysis are the keys to a RAR form. The output from the RAR form is the RTI (Route Index).

RTIDX form (5303 Record) - The RTI is in turn the key to a RTIDX form. The output from the RTIDX form is the TGN for this call to the new destination. The call is then handled by that destination office (DEST NAME) as if it were a new incoming call.

3. NON - INTERMEDIATE SWITCH POINT CALLS

This feature allows a NON ISP (Intermediate Switching Point) call to be directed to a VDT position. The call queue can be determined based on either the incoming trunk group number or the digit received or neither. NON ISP calls come from MF (Multifrequency), DP (Dial Pulse) and Seizure Only trunks. CCS (Common Channel Signaling) and ISP trunks are not supported.

3.1 ODA Forms

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	3M	26.10
ACDPOL	5412-B/C/E/F	3	3M	26.10
INFLDEST	5448	3	4AW	21.27
OBSTS	5408	5	1F	23.13
OSPSCT	5404	3	4E	21.22
RAR	5301	3	3F	10.10
RTIDX	5303	3	3P	10.2

3.2 Translation Requirements

The result of a standard digit analysis using 5300 series ODA records for a NON ISP call is a destination type of "OPNIT". The initial digit analysis is done on the incoming digits dialed for the NON ISP call. The destination type is passed to call processing so that special handling can be performed for the routing of this call.

ACDCTP form (5412-A/D Record)
ACDPOL form (5412-B/C/E/F Records) - The ACDCTP and ACDPOL forms are used to determine the CALL TYPE (or call queue) of this call. Refer to the expanded CALL TYPE determination section for additional information on use of these forms. The keys to the ACDCTP form are:

Entry	Definition
CALL ORIGIN	This is "NIT" for NONISP call.
PREFIX	This is the prefix digit dialed.
COIN	This is the coin indicator ("Y" or "N").
CARRIER	This is the carrier handling the call.
OSPS ID	This is the Sending OSPS identifier for received Interflow calls only. All other calls have the default value of "0".

The DISPLAY INDEX field on the ACDCTP form or the DISPLAY field on the ACDPOL form (whichever is used as final ECTD result) is used to index into an OBSTS form for the text which will displayed on the VDT.

INFLDEST form (5448 Record) - If DA re-routing is active, the Destination ID (DEST ID), the incoming TGN and the digit analysis Destination Index (INC CDI) are used as keys to an INFLDEST form. The result is a new outgoing Destination Index (OUTGO CDI) and a Destination Name (DEST NAME).

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OSPSCT form (5404 Record) - The serving team is then determined from an OSPSCT form.

RAR form (5301 Record)
RTIDX form (5303 Record) - The OUTGO CDI and the screen index from incoming trunk group digit analysis are the keys to a RAR form. The output from the RAR form is the RTI (Route Index). The RTI is in turn the key to the RTIDX form. The output from a RTIDX form is the TGN for this call to the new destination. The call is then handled by that destination office (DEST NAME) as if it were a new incoming call.

4. INTERNATIONAL CALLS - FULLY CODED ADDRESSING

International Calls are calls placed from one world numbering zone to another world numbering zone. The data described below allows for calls from an OSPS office within the United States to be placed to another world numbering zone.

In the 5E5 Software Releases, the FCA (Fully Coded Addressing) feature was added to allow International outbound calls to be routed over CCS trunks with a one-stage signaling protocol. FCA can also route over non-CCS trunks using the traditional two-stage protocol. When the OSPS FCA feature is activated, all of the OSPS International Outbound calls will use the reserved FCA digit tree for digit analysis instead of the trunk group digit trees.

4.1 ODA Forms

The ODA forms used for populating ODD for International Calls are, for the most part, the same ODA forms used in populating ODD for normal POTS calls. The exceptions are the IDDD (5307 Record), OSPSOPT (5424 Record) and TCSCC (5438 Record) forms. Forms to be discussed are:

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	3M	26.10
ICF	5305	3	3R	10.3
IDDD	5307	3	3T	9.6
LDIT	5300-3/5	3	3c	9.3
OFCOPT	5509	3	5I	8.1
OSPSOPT	5424	3	4Y	8.9
PDIT	5300-2	3	3B	9.2
RAR	5301	3	3F	10.10
RSMCAR	5421	3	4V	26.22
TCSCC	5438	3	4am	27.3

4.2 Translation Requirements

ACDCTP form (5412-A/D Record) - New international prefixes (01 and 011 for "01+" and "011+" calls, respectively) have been added to the ACDCTP form. Figure 3 contains a sample of the ACDCTP form with international data.

ICF form (5305 Record) - Given the carrier selected for the call, the ICF form provides a possible new code and route index for international calls, coming from the INTL CDI and INTL RTI fields, respectively.

IDDD form (5307 Record) - The IDDD form accomplishes the same function for international calls. Since the customer dials the CAC after the prefix, it is this code that is entered as the key on the IDDD form.

When digit analysis is done on an operator entered international forward or international route number, a prefix of "011+" is always used. The only time the "01+" prefix is used is when ISP does digit analysis on an international number signaled from a non-conforming end office.

The value for the minimum number of digits field, MNDE, should be the minimum length of the appropriate Country Code plus the national number. In a local office, this can be as small as 7. For the IDDD form associated with an incoming ISP trunk, another value for MNDE must be considered. The alternate value

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is the Country Code plus 3, since an OSPS operator can enter an international route number with as few as 4 digits (e.g., a 1-digit Country Code plus route number 121). If operators are not allowed to enter and route to international route numbers, then MNDE should be set to the same value as was used in the local office, otherwise the alternate value should be used. The maximum number of digits field, MXDE, should continue to be set to the sum of the Country Code plus the maximum length of the national number.

LDIT form (5300-3/5 Record) - For domestic calls, the LDIT form is used to populate the possible incoming digits (after the prefix) that may be dialed by the customer.

OSPSOPT form (5424 Record) - The FCA feature is only available in AT&T TOLL offices. The OFFICE TYPE field on the OFCOPT form must be set to "Y" for Toll offices. The OFFICE CARRIER field must be set to "288" to indicate that this is an AT&T office. The FCA feature is activated by setting the FCA ON field on the OSPSOPT form to "Y".

PDIT form (5300-2 Record) - The PDIT form allows an end office to enter the possible International prefixes that customers may dial in making International calls. OSPS allows "0-", "01+" and "011+" international prefixes. "01+" is synonymous to the "0+" domestic prefix. "011+" is synonymous to the "1+" domestic prefix. Since "0-" applies to domestic as well as international, an office would usually already have this prefix in a PDIT form.

"01+" and "011+" may have to be added. Entries of the form "01X" and "011X" should be entered as DIGITS TO INTERPRET on a PDIT form to handle the "01+" and "011+" prefixes, where "X" is the first digit of the CAC (Country Access Codes) that are to be defined. The CALL TYPE field should be set to "LDIT". PREFIX should be set to "1" for "011+" and 0 for "01+" prefixes. The DIGITS TO DELETE field should always be "0". Figure 3 contains a sample of this form with international data.

RAR form (5301 Record) - Given a screen index, a code index and a prefix, the RAR form provides routing and charging information. Rating and Routing data for calls dial with a "01+" prefix is provided in the 0+ PFX fields of this form. Rating and Routing data for calls dial with a "011+" prefix is provided in the 1+ PFX fields of this form. Rating and Routing data for calls placed by an OSPS operator is provided in the NO PFX fields on this form.

RSMCAR form (5421 Record) - The CODE INDEX and ROUTE INDEX should continue to be set in the normal way. These values are the initial routing indices and may be changed by the data in the ICF or RSMCAR forms.

Figure 3 contains a sample of the IDDD form with international data.

If the call is being routed out of a RSM, an RSMCAR form is used to provide RSM specific data. This data is not used if the OSPS is owned by a consolidated carrier and if the carrier is the same as the owner.

The IDDD form has been modified for FCA to include a CALL TYPE field. The IDDDPFX field and the TYPE CI CALL field have been modified to allow new values for FCA. The IDDDPFX field has been modified to require a blank to be entered as a prefix for FCA calls. TYPE CI CALL field has been modified to require a "NONCI" value for FCA calls. The CALL TYPE field must have "IDDDFCA" for FCA calls. Figure 3 contains a sample of the IDDD form with international data for FCA.

TCSCC form (5438 Record) - The TCSCC form is used to populate data for the International feature and the Terminating Code Screening feature. The Country Code field should be populated with the Country Codes entered on the IDDD form. A PAIRED Country Code is assigned for each Country Code on this form. The remaining fields are related to TCS screening restrictions on the given international CACs. Refer to the TCS information in this section for more on these fields. Figure Figure 3 contains a sample of the TCSCC form with international data.

5. TERMINATING CODE SCREENING ENHANCEMENTS

TCSE (Terminating Code Screening Enhancements) is available with 5E7 and later Software Releases and provides two major enhancements to the 5E4(2) TCS capability. It provides restrictions for collect calls

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based on both the originating NPA and the terminating code. (Only the terminating code was used in TCS.) It also provides screening for calling card calls based on the originating NPA (Numbering Plan Area), terminating code (i.e., country code, NPA, and or NPA-XXX), and originating station class (i.e., public, hotel, or non-hotel/non-public). (Only the terminating code and originating station class are used in TCS.)

Text for the operator displays is selected on the basis of both the originating NPA and terminating code. (Only the terminating code is used in TCS.) The number of available TCS screening codes is increased to 128.

This capability allows the telephone company to have different calling card and collect call terminating screening treatment and unique operator displays for the various originating NPAs served by the OSPS. In addition it increases the number of displays that can be used for informing operators of billing restrictions and/or special procedures for fraud prevention or traffic problems.

5.1 ODA Forms For TCSE

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TCSCC	5438	3	4AM	27.3
TCSNPA	5437	3	4AL	27.2
TCSTEXT	5436	3	4AK	27.1

5.2 TCSE Translation Requirements

Figure Figure 8 shows the form flow for TCSE.

TCSCC form (5438 Record) - This record contains the terminating screen codes for Country Codes and is used for the international feature and the TCS feature. For TCSE, ORIGINATING NPA LISTS field was added. It contains the originating NPA of the back number. If "ALL" is entered for any originating NPA on this form, no other originating NPA entry is allowed. When retrofitting from 5E6 to 5E7, the originating NPA, NP1 of row 1 will be set to "ALL".

TCSNPA form (5437 Record) - This record contains the terminating screening codes for NPA-NXXs. The ORIGINATING NPA LISTS field contains the originating NPA of the back number. If "ALL" is entered for any originating NPA on this form, no other originating NPA entry is allowed. When retrofitting from 5E6 to 5E7, the originating NPA, NP1 of row 1 will be set to "ALL".

TCSTEXT form (5436 Record) - This record contains the text and restrictions associated with TCS as it appears on the VDT (Video Display Terminal). The SCRN CODE field has been increased to 0 - 127.

6. TERMINATING CODE SCREENING RELEASE 3

TCS R3 (Terminating Code Screening Release 3) enhances the TCS feature to allow denial of third number billing calls to specified NPAs or Country Codes based on originating station type. TCS R3 also adds the ability to restrict non-blocked collect calls so that they may be completed only by manual operator outpulsing.

6.1 TCS R3 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
TCSTEXT	5436	3	4AK	27.1

6.2 TCS R3 Modified Forms

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OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8 and later, the TCS PUB IND field indicates if the "Public ??" indicator should be displayed for collect calls requiring manual outpulsing for the TCS feature.

TCSTEXT form (5436 Record) - The screen code is used to find the corresponding entry in the 5436 Record for automated and operator-assisted class of charge restriction. This form contains the text and restrictions associated with TCS as it appears on the VDT (Video Display Terminal).

For screening collect calls to a forward number, the field ALL was renamed DENY ALL, STATION ONLY was renamed DENY STATION, and a third field RESTRICT was added to indicate if non-blocked collect calls should be restricted to manual operator outpulsing.

Under the heading DENY THIRD NBR (TH), the following fields determine TCS for billing to a third number: PUBLIC, HOTEL, and OTHER.

7. CUSTOMER ACCOUNT SERVICES

The CAS (Customer Account Services) feature is available with 5E5 and later Software Releases. There are several releases of CAS. Each is discussed separately, however the information in the earlier releases generally applies to later releases.

7.1 CAS Release 1

The CAS 1 feature provides automated and operator-assisted support for the new AT&T Calling Card and also provides the ability to query the new CAS database via the CCS network. The AT&T calling card can be given automated treatment, operator treatment or inward treatment.

The AT&T CAS card can be used for intraLATA and interLATA calls. Calls can be restricted based on geographic location, both domestically and internationally (this is a feature of the external database, not the switch). The CAS cards are issued by the AT&T Special Long Distance Services and they conform to the CCITT format. They are validated in the AT&T CAS database using CCIS6/DCIS6 signaling. Inward validation is supported in addition to ACCS (Automated Calling Card Services) and operator handling. If a card cannot be identified in the credit card identification tables (TCCID form) or if only 14 digits are dialed, the card is assumed to be a LEC (Local Exchange Carrier) card.

Contract and Inverse Contract tables are used to indicate whether a billing contract exists for an AT&T call to be charged to a Local Exchange Carrier card, or a contract exists for a LEC call to be charged to an AT&T card.

If a check into a Contract Table (AT&T card - LEC carrier) fails, the customer is either routed to an operator or given an announcement prompting for entry of an LEC card number. If the check fails a second time on the same call, the customer is asked to hang up and arrange other billing, after which the call is dropped. The translation requirements section below provides additional information on how to specify which call treatment the customer will receive (CON TO OPR field on the OSPSOPT form).

If an Inverse Contract Table (LEC card - AT&T carrier) check fails, the customer is either routed to an operator or given an announcement prompting for entry of an AT&T card number. If the check fails a second time on the same call, the customer is asked to hang up and arrange other billing, after which the call is dropped. The translation requirements section below provides additional information on how to specify which call treatment the customer will receive (INCON TO OPR field on the OSPSOPT form).

7.2 CAS Release 1 Call Processing

When a "0+" call is received at the OSPS, the standard ACCS call screening against the calling card service is applied to the call. If the customer is allowed to use a CAS Calling Card, the calling card digits are collected by the Operator system. For CAS 1, only the AT&T Calling Card (CAS) is supported. After the first 7 digits are collected (CAS ON is "Y"), the data from the TCCID form is checked (in "0-" calls, all

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calling card digits are collected from the customer but only the first 7 are used for credit card identification). The TCCID data contains all of the non-LEC cards (CAS, CCC or TEL) that are recognized by the switch.

If the calling card can be identified, call processing will collect the remaining required digits (total digits = no. of issuer digs + no. of account digits + no. of check digits + no. of PIN digits). The maximum acceptable number of total digits is 32. If the calling card cannot be identified or if 14 digits are entered followed by a timeout, call processing will assume it is a 10+4 LEC card and process it accordingly.

After all of the card digits are collected, the Contract Tables (from the CASCON form) or the Inverse Contract Tables (from the CASICON form) are checked to verify that the call is allowed to complete. If the call is blocked based on the contents of the Contract or Inverse Contract tables, call processing will check the CON TO OPR or INCON TO OPR values on the OSPSOPT form. If these are set to "Y", the caller will be routed to an operator who can provide the caller with more information. Otherwise, after a second failed attempt, the call is terminated with an announcement.

If the call is allowed, a CAS query is formatted and the query is sent to the external database. The CAS TIME field on the OSPSOPT form determines the maximum time the call processing will wait for a reply from the external database. If an indeterminate reply is received, the INDT BLK value on the OSPSOPT form decides if the call is blocked.

If the calling card used was found to be an LEC card and the Contract check allows the call, the "standard" ACCS calling process is performed with the following exception: if the carrier is AT&T, the NCD OFF value on the OSPSOPT form is checked to verify if an NCD query is generated.

7.3 CAS Release 2

The CAS 2 feature provides the additional recognition of CCC (Commercial Credit Cards) and non-CAS CCITT Telecommunication cards (89C) for the CAS feature. The CCC cards must conform to the ISO (International Standards Organization) and ANSI (American National Standards Institute) standards.

CAS cards are validated in the AT&T CAS database using CCIS6/DCIS6 signaling, while other TEL (Telecommunication) cards and CCC (Commercial Credit Cards) must be manually validated by an operator. All card numbers can be keyed by the customer in response to the ACCS prompt or given to the operator. Calls requiring manual validation are routed to the operator after card recognition. Fourteen-digit cards, which are assumed to be the current Telecommunication cards, can be validated in the Billing Validation Application (BVA) or LIDB (Line Information Data Base). These cards are handled the same as in CAS 1. AT&T CAS cards continue to be handled as in CAS 1.

7.4 CAS Release 2 Call Processing

When CCC ON is set to "Y", the values in ZERO TIME OUT and DIGS TIME OUT on the OSPSOPT form are used in setting up the interdigit timing for the digit collection process. PROMPT TIME will set the timing interval from bong tone to initial digit reception for customer 0+ ACCS calls, with timeout sending the call to operator position. CAS, CCC and TEL card types will be supported, but the card must be manually validated if it is a non-CAS card (i.e., CCC or TEL). Other than this, the call processing process is as described for CAS 1.

7.5 CAS Release 3

CAS 3 provides the following enhancements to the existing CAS 1 and CAS 2:

- Automatic validation of AT&T CAS cards and commercial credit cards.
- Automatic validation of 89C cards using ICCV (International Credit Card Validation) CCS7 TCAP Protocol for cards that do not reside in the AT&T CAS database.
- Subaccount billing for AT&T "cards" - callers who bill their calls to cards that are pre-subscribed to

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CDBS (Customer-Defined Bill Segmentation) services. The subaccount number, which is contained in a CAS database reply, is then recorded by OSPS in the AMA record for the call.

- Prompt for a PIN (Personal Identification Number) when a potentially valid card number is entered except for the PIN. On automated calling card calls an announcement is given to the caller. On operator-handled calls a display is given to the operator.

7.6 CAS Release 4, Carrier Specific Routing

CSR requires the use of the CAS Release 3 card recognition and, for outgoing routing, FCA (Fully Coded Addressing) and CCS7 call signaling.

The CSR provides carrier selection for international calls billed to an international carrier's credit card, based on the issuer of the card and the destination country. If an international call is terminating in the "home" country of the card issuer and this country has multiple carriers, the call is routed to the network of the card issuer. If the call encounters a busy condition, then depending on the agreement with the card issuer, it may be overflowed by the GATEWAY office to another carrier's network in that country.

The OSPS is required to detect that CSR applies to a particular call and to select the foreign carrier for the call in the destination country. OSPS also indicates whether the selected carrier is mandatory or the call can be overflowed to another carrier. This data is signaled by the OSPS to a TOLL office via an outgoing CCS7 IAM message. The TOLL office then routes the call to an appropriate ICS (International Switching Center). Based on the CSR attributes, the ISC office routes the call to an appropriate carrier's network in the destination country.

If the CSR feature is activated for an office, the CSR ATTR ID field on the OSPSOPT form is set to "Y", and the CSR ATTR ID field on the TCCID form must be a non-zero value, i.e. a CSR ATTR ID number must be associated with the TCC number. The CSR feature requires that OSPS provides three attributes, the card vendor country code, the international administration identifier, and the CSR preference indicator. The card vendor country code is then compared to the country code of the forward number. If the call is to be routed to the TOLL office using CCS7 signaling, then the Administration ID and the CSR Preference ID are transferred to the TOLL office. The CSRATTR form is checked for these three attributes.

7.7 ODA Forms For CAS

The following forms are new or changed for CAS.

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
CASCON	5455	3	4BD	27.53
CASICON	5456	3	4BE	27.54
CSRATTR	5475	3	4CA	27.58
DSAPP	5537	3	5AK	8.17
OSPSOPT	5424	3	4Y	8.9
PHRASE		3	5AH	8.63
TCCATTR	5473	3	4BY	27.56
TCCID	5454	3	4BC	27.55

7.8 CAS Translation Requirements

The following fields were added to the OSPSOPT form for the 5E5 Software Release under the heading of CAS (for CAS 1) and COMMERCIAL CREDIT CARD (for CAS 2):

Fields under CAS

- TIME

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- MIN QUERY
- ALARM QRY
- CAS ON
- INDT BLK
- PIN ONLY
- NCD OFF
- CON TO OPR
- INCON TO OPR

Fields under Commercial Credit Card (CAS 2)

- CCC ON
- PROMPT TIME
- ZERO TIME OUT
- DIGS TIME OUT

Please refer to Division 3, Section 4Y for more detailed information concerning the required population of these OSPSOPT CAS global fields. For 5E7 and later, the OSPSOPT form was reorganized. Please refer to the Table of Contents in the front of the section for these fields.

7.9 CAS Release 1 Translation Requirements

CASCON form (5455 Record) - For 5E5 and later this form is used to create the Contract Table which defines the contract status for LEC calls charged to an AT&T card. The form is keyed by the NPA and the status is indicated by entering "A" (allowed), "D" (denied) or "P" (partially allowed) for that NPA. If "P" is entered then those NXXs which are not allowed are specified by entering an "N" in the corresponding NXX List.

CASICON form (5456 Record) - This form is used to create the Inverse Contract Table which defines the contract status for AT&T calls charged to an LEC Card. The form is keyed by the NPA or RAO (Regional Accounting Office) value. If an RAO value is entered, the status is indicated as either "A" (allowed) or "D" (denied). If an NPA is entered, the status can be "A" (allowed), "D" (denied) or "P" (partially allowed). If "P" is entered (for NPA only), those NXXs in the NPA which are not allowed, are specified by entering a "N" in the corresponding NXX List.

OSPSOPT form (5424 Record) - There are nine new fields on the OSPSOPT form. The CAS ON global must be set to "Y" to turn the CAS feature on. When "Y" is entered, at least one entry must be made in the CASCON form and the CASICON form, i.e., a contract table must exist. The TIME field is used to specify the time to wait for a CAS query reply (in tenths of seconds). Since the level of query traffic that can be handled decreases as the holding time increases, extreme care should be used when increasing the value above the default value of 20 (i.e., 2 seconds). A timeout will result in call processing handling the call as determined by the entry in the INDT BLK field. The INDT BLK entry will indicate whether the call should be blocked if the card query response is indeterminate. A "Y" means the calls are blocked.

The MIN QUERY entry is used to define the minimum CAS query attempts required in a quarter hour before CAS software alarm calculations are performed. The ALARM THR field entry sets the successful query percentage. If the percentage falls below this threshold an alarm is activated. The PIN ONLY value

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indicates whether the customer can dial a 4-digit PIN only for calling cards (pre-authorized collect feature). The operator may enter a 4-digit PIN, regardless of the value entered here. The NCD OFF entry indicates whether the NCD (Network Call Denial) query for the call is turned off. If "Y" is entered here, CAS ON must be set to "Y".

The CON TO OPR field determines whether the caller is routed to an operator when a contract table check violation is detected by call processing. The contract table check is performed when the caller uses an AT&T CAS Calling Card on a LEC carried call. The INCON TO OPR determines whether the caller is routed to an operator when an inverse contract table check violation is detected by call processing. The inverse contract table check is performed when the caller uses a LEC calling card on an AT&T carried call.

The following ACCS fields also require population on the OSPSOPT form: DABRAND, BRAND PHRASE, ACCS 1, ACCS 2, INIT THANK YOU. Refer to the ACCS information in this section, as well as Division 3, Section 4Y.

The ACCS (automated call processing only) ODA forms ANNHD, ANNDG, ANNTR, PHRASE, ACCST and SEQREST have not been changed by this capability.

TCCID form (5454 Record) - The OSPS Telephone Credit Card Identification form is used for identifying telephone calling cards other than the 14-digit LEC card. The ISSUER ID DIGS field defines the digits in the Issuer ID number. The CARD TYPE field identifies the type of TCC (Telephone Calling Card) and for the CAS 1 feature, the only acceptable value is "CAS". The ACCT NBR represents the number of digits in the TCC account number field and the CHECK NBR is either 0 or 1 to represent the number of check number digits as calculated by the Luhn algorithm. If the Luhn check digit is separate from the account number, then the CHECK NBR field should be set to "1", otherwise it should be set to "0". The PIN entry defines the number of digits in the PIN (Personal Identification Number).

7.10 CAS Release 2 Translation Requirements

CASCON form (5455 Record) - There is no change in the use of this form from CAS 1, except that the contract tables in CAS 2 are searched for CCC and TEL cards in addition to CAS (AT&T) cards. That is, all "non-LEC" cards must go through a contract table check if the call is LEC carried.

CASICON form (5456 Record) - There is no change from CAS 1 in the use of this form.

OSPSOPT form (5424 Record) - In addition to the nine OSPSOPT CAS fields described in the CAS 1 section, there are four new fields added for CAS 2. These are shown on OSPSOPT form under the heading - Commercial Credit Cards. CCC ON is the field which turns this feature on, i.e., OSPS can be used to process CCC (Commercial Credit Cards) and other non-AT&T telecommunication cards (TEL). The fields CAS ON and OSPS TA must be set to "Y" before CCC ON can be set to "Y".

The PROMPT TIME field indicates the timing interval from the bong tone to initial digit reception for customer 0+ ACCS calls. Timeout will send this call to an operator position. ZERO TIME OUT will set the timing interval for all card types to route to an operator position when the initially dialed card number is a 0 after the bong tone. The DIGS TIME OUT entry defines the inter-digit timing interval for all card types, from the first non-zero digit after the bong until the last of a maximum of 32 digits are received. Timeout is the end of the calling card number entry process. Entries into these 3 fields will have no affect unless the CAS 2 feature is activated (CCC ON must be set to "Y").

TCCID form (5454 Record) - The CAS 2 feature uses the TCCID form in the same manner as is described for CAS 1 with two exceptions. One is that the card types supported are as follows:

- CAS (AT&T calling card)
- CCC (commercial cards)
- TEL (telecommunication cards other than AT&T)

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The other is that if the card type is "CCC" and there are a variable number of account digits for that Credit Card, then the field ACCT NBR should be left blank.

7.11 CAS Release 3 Translation Requirements

Figure 7 shows the ODA form flow for CAS 3.

DSAPP form (5537 Record) - For 5E7 and later, "CCS7" and "ICCV" enumerations were added to the APPLIC field. "CCS7" signaling goes to a CAS/NCP (Network Control Point) database. "ICCV" signaling goes to a foreign database.

OSPSOPT form (5424 Record) - The fields under the CAS R3 Title were added for 5E7 and later. They are the following:
CAS R3 ON - Is the CAS 3 feature enabled in this office?
OFFICE ADMIN ID - Is used on ICCV queries to identify originating administration (AT&T) to foreign card databases
CCS7 ALARM THR - Software alarm query threshold for CCS7
ICCV ALARM THR - Software alarm query threshold for ICCV
CCS7 MIN QUERY - Minimum number of CAS TCAP queries for CCS7
ICCV MIN Query - Minimum number of ICCV TCAP queries
RECOGNIZE 10P4 - Recognize 10 + 4 cards in the card recognition table

TCCATTR form (5473 Record) - For 5E7 and later, new card attributes are required for CAS 3. The TCCATTR form identifies a set of credit card attributes for a card identification number that can be used by many different card types. The attributes are the following: the calling card type, the signaling type, the length of time for a query timeout, whether time and charges be should given for this call, whether calling card should be allowed if a query can't be sent to the database, and whether 891 should be prepended to the card number.

Every CARD ATTR ID entered on the TCCID form must have a corresponding TCCATTR form with the same CARD ATTR ID. If the CARD TYPE on TCCATTR is "CCC", the AACT NBR on the TCCID form must be 0.

TCCID form (5454 Record) - For 5E7 and later, CARD ATTR ID and TRANS TYPE attributes were added. The CARD ATTR ID should match a CARD ATTR ID on the TCCATTR form. The TRANS TYPE identifies the signaling type.

7.12 CAS Release 4 And CSR Translation Requirements

Figure 9 shows the ODA form flow for CAS 4 and CSR.

CSRATTR form (5475 Record) - This form defines the Card Vendor Country Code, CARD VENDOR CC, the Administration ID indicating the foreign carrier for the call, INTL ADMIN ID, and the PREFERENCE ID indicating if the call can be overflowed to another carrier.

OSPSOPT form (5424 Record) - The field CSR ON must be set to "Y". In addition, CAS Release 3 is required for the CSR feature.

TCCID form (5454 Record) - The CSR ATTR ID field must contain a non-zero value, i.e. a CSR ATTR ID number must be associated with the TCC (Telephone Credit Card) number. The CSR ATTR ID is the key into the CSRATTR form where the Card Vendor Country Code is checked to see if it matches the Country Code of the Forward number, and the Administration ID number and CSR Preference ID are entered.

8. ENHANCED OPERATOR CUT-THROUGH

The ECUT (Enhanced Operator Cut-Through) feature enhances the existing ACCS (Automated Calling Card Services) by allowing calling card users to request an AT&T operator if an automated entry of a card

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number results in a card recognition failure or a Contract Table/Inverse Contract Table lookup failure. This feature is intended to help calling card users deal with any difficulties they may encounter in the wake of multiple calling card formats and reciprocal billing agreements between AT&T and the local telephone companies. Previously, the call would have been automatically routed to an operator, or the call would have been abandoned, or the caller would have received an announcement and been disconnected.

8.1 Enhanced Operator Cut-Through Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ANNHD	5531	3	5AE	8.61
EQRAP	5822	8	36	20.22
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

8.2 Enhanced Operator Cut-Through Modified Forms

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. The announcement header IDs OSPSTA 56 - 58 were added to the 5E8 and later default data for the Enhanced Operator Cut-Through feature.

EQRAP form (5822 Record) - This form is used to define the RAF (Recorded Announcement Function) circuit packs. New micro-codes for DSU2-RAF Announcement Storage circuit packs were added for 5E8.

OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8, the ECUT ON, ECUT TIME, and ECUT ODO fields were added for the Enhanced Operator Cut-Through feature.

ECUT ON indicates if the Enhanced Operator Cut-Through feature is activated. ECUT TIME indicates the interdigit timing after the fourteenth digit of the calling card digit has been collected. ECUT ODO determines if an operator request is automatically generated, or the call is idled with a disconnect announcement when a caller's second attempt to enter a calling card number results in an ECUT card recognition failure.

PHRASE form (5534 Record) - This form defines and describes the phrase IDs that are provided on the DSU2-RAF Announcement Storage circuit packs for each application. For 5E8 and later, phrases 290 - 291 and 304 - 305 default input data were added for Enhanced Operator Cut-Through feature.

9. CUSTOMER ACCOUNT SERVICES - INWARD VALIDATION IDENTIFICATION

CAS - IVI (Customer Account Services - Inward Validation Identification) allows OSPS to use CAS CCS7 TCAP signaling to indicate that this is an inward validation request.

9.1 CAS - IVI Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OSPSOPT	5424	3	4Y	8.9

9.2 CAS - IVI Modified Form

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. Only one OSPSOPT form is submitted for an office. For 5E8, the INW VAL ID field indicates if the CAS - IVI feature is activated. CAS R3 ON must be "Y", for CAS - IVI to be activated.

10. CUSTOMER-DEFINED BILL SEGMENTATION SEQUENCE DIALING

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CDBS (Customer-Defined Bill Segmentation) Sequence Dialing enhances the 5E7 CAS R3 CDBS feature and Subaccount Billing for LEC customers by allowing a subscriber to enter a new PIN (Personal Identification Number) on a calling card sequence call. The entry of the new PIN allows the caller to associate each new call with a separate CDBS code, thus eliminating the need to hang up and dial again.

10.1 CDBS-SD Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ANNHD	5531	3	5AE	8.61
EQRAP	5822	8	36	20.22
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

10.2 CDBS-SD Modified Forms

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. Announcement header IDs OSPSTA 59 and OSPSTA 60 were added to the 5E8 and later default data for CDBS Sequence Dialing.

EQRAP form (5822 Record) - This form is used to define the RAF (Recorded Announcement Function) circuit packs. New micro-codes for DSU2-RAF Announcement Storage circuit packs were added for 5E8.

OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8, the CDBS SEQ field indicates if CDBS has been activated for Sequence Calls.

PHRASE form (5534 Record) - This form defines and describes the phrase IDs that are provided on the DSU2-RAF Announcement Storage circuit packs for each application. For 5E8 and later, phrases 292 - 294 default input data were added for CDBS Sequence Dialing feature.

11. CUSTOMER ACCOUNT SERVICES PURCHASE LIMIT.

For 5E8, CAS PL (Purchase Limit) allows a card holder to preset a spending limit for calls billed to the card. (For 5E9(1), see Enhanced Limits, CAS Card Duration Limit, and CAS Card Volume Limit.) Three Purchase Limit options are available:

1. EWD (Enforced With Disconnect) option disconnects the call once the card balance has been depleted, and no further calls are allowed.

2. EWOD (Enforced Without Disconnect) option does not disconnect the current call once the card balance has been depleted. However, no further calls may be made.

3. NE (Not-Enforced) option does not prohibit any calls, even after the balance has been depleted. However, the customer is notified that the balance is depleted.

Card balances are maintained in the CAS/NCP database, and the card balance at the beginning of the call is returned in the database reply to the OSPS. Every 10 minutes (or the time limit set by the TCA on the OSPSOPT form (5424 Record)) the OSPS must inform the CAS/NCP of the charges accrued against the card by performing RTRS queries and sending update message to the CAS/NCP. A final RTRS query and database message is sent at the end of the call.

11.1 CAS PL Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ANNHD	5531	3	5AE	8.61

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EQRAP	5822	8	36	20.22
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

11.2 CAS - PL Modified Forms

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. Announcement header IDs OSPSTA 61 and 62 were added to the 5E8 default data for CAS PL (Customer Account Services Purchase Limit) feature. For 5E9(1), OSPSTA 158 and 171 were added. For 5E8, PL calls are terminated 30 seconds after a disconnect warning announcement (OSPSTA 91) is played. (This interval was changed for 5E9(1), see Purchase Limit Enhancements for 5E9(1).)

EQRAP form (5822 Record) - This form is used to define the RAF (Recorded Announcement Function) circuit packs. New micro-codes for DSU2-RAF Announcement Storage circuit packs were added for 5E8.

OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8, the PL ON field indicates if the Purchase Limit feature has been activated. If "Y" is entered in PL ON, then "Y" must be entered in INV VAL ID.

The OSPS is responsible for providing incremental expenditure updates to the database upon:

- the expiration of an intermediate time limit before the call is terminated.
- the end of 48 hours.
- the termination of the call.
- following a test query.

The intermediate time limit interval is set by the TCA. This time limit is the amount of time, while a call is in progress, which elapses before intermediate updates are sent to the card database for how much has been spent and to indicate to the database that the call is still in progress. For example, if the limit is 10 minutes, at the end of each 10 minutes interval while the call is in progress, the information is sent to update the database. The time limit should be set high enough that a high percentage of the Purchase Limit calls terminate before the time limit expires. The PL TIME field sets the intermediate time limit in 30-second intervals. The default is 20, i.e. 10 minutes.

PHRASE form (5534 Record) - This form defines and describes the phrase IDs that are provided on the DSU2-RAF Announcement Storage circuit packs for each application. For 5E8 and later, phrases 295 - 297, and 306 default input data were added for CAS PL.

12. PURCHASE LIMIT ENHANCEMENTS FOR 5E9(1) AND LATER.

12.1 Feature Description

The new Card Limit features for 5E9(1), Enhanced Limits, Volume Limit, and Duration Limit, required enhancements to the Purchase Limit feature.

12.2 Flat-rate PL Calls

In 5E8 only, the ECDM (End Call Disposition Message) was sent as soon as the forward party answered. For 5E9(1), all card limit calls receive card limit treatment for the duration of the call, except for the calls billed to a Volume Limit only MCIP (Multiple Calls in Process) card. For the VL-MCIP, the ECDM is sent as soon as the forward party answers.

PL does not limit the length of a flat-rate call; the call may proceed indefinitely. Also, PL does not query

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RTRS (Real Time Rating System) before sending CDMs. The charge for a flat-rate call is already known from the initial RTRS PL query.

12.3 Calculation of Call Duration

For 5E9(1), the call duration is calculated and saved in the call record.

12.4 Variable Disconnect Warning Interval

In 5E8, the Disconnect Warning Interval, which is the time from the end of the Disconnect Warning announcement to the moment a PL call is forcibly disconnected, was set to 30 seconds. In 5E9(1), the Disconnect Warning Interval can be set from 10 to 90 seconds in increments of 5 seconds, see the WARN TIME field on the OSPSOPT form (5424 Record).

12.5 Initial Period and Courtesy Interval

For 5E8, PL assumed the minimum duration of an initial period was 60 seconds. This insured that the customer could talk for at least 30 seconds before getting a Disconnect Warning announcement. For 5E9(1), the minimum initial period was set to 18 seconds. However, this could result in zero talk time before the Disconnect Warning announcement was played. To prevent this from occurring, a courtesy interval specifies the desired length of time (8 - 99 seconds) customer may talk before getting the Disconnect Warning announcement. (See the COURTSEY INTERVAL field on the OSPSOPT form.) It has a higher priority than the DWI, so that if the allowed time for the call is less than the sum of the courtesy interval plus the Disconnect Warning Interval, the original Disconnect Warning Interval value is discarded and a 10 second interval is used instead. A call which must use the 10-second interval is a Short Allowed Time call.

12.6 Translation Requirements

See Enhanced Limits, Volume Limit, and Duration Limit for the translations requirements for 5E9(1) card limit features.

13. ENHANCED LIMITS

13.1 Feature Description

For 5E9(1) and later, this feature consists of two capabilities: Multiple Calls in Progress and Single Calls in Progress Enforcement. The Multiple Calls in Progress capability allows a card that subscribes to the Purchase Limit or the Duration Limit features to place several balance-affecting calls simultaneously. The Single Call in Progress enforcement ensures that cards that subscribe to this capability place only a single balance-affecting call at a time.

13.2 Multiple Calls In Progress

The Multiple Calls in Progress capability allows a card that subscribes to PL (Purchase Limit) and/or DL (Duration Limit) features to make several balance-affecting calls that may debit charges against the card simultaneously. The card database must record charges against the card and maintain accurate balances for the card. In addition, except when the balance is low, the card database does not allocate the entire balance that is available to a single charge attempt. Instead, it allocates a smaller portion than the total available balance, preserving part of the available balance for future charge attempts that may originate before the current call disconnects.

Since the card database does not grant the entire available limit balance to any one charge attempt on the card, the OSPS requests additional PL and/or DL balances from the card database, if the enforcement level of the particular limit feature is EWD (Enforced With Disconnect) and the call has not terminated before the initial balance granted by the card database is about to be consumed. The OSPS makes these

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requests as part of the CDMs (Call Disposition Messages) that it sends periodically to the card database to update the database limits balances while the call is still in progress. If the card database returns an additional balance, the OSPS augments the balance for the call and allows the call to continue for an additional period as represented by the returned balance. The OSPS continues to make these requests to the card database:

- until the call ends;
- or until the card database denies a request for additional balance made by the OSPS;
- or the balance granted by the card database increases the allowed call duration by an amount smaller than the MRT (Minimum Re-query Time);
- or if the maximum time limit (for most PL calls - 48 hours) has been reached.

If the card database denies the request, the OSPS allows the call to continue until the balance is about to be fully consumed and then plays the Disconnect Warning Announcement before possibly forcibly disconnecting the call.

13.3 Single Call in Progress

The Single Call in Progress enforcement capability allows a card to specify that once a call being charged to this card has been attempted and is in progress, other concurrent calls that attempt to charge to this card are not allowed. A card may subscribe to this limit or to this limit and one of the other limits capabilities. A card that does not have any of the other limits is referred to as an SL (Single Limit) card. The card database enforces that multiple simultaneous calls cannot be charged to this card, because it authorizes all charge attempts and it is the only central point that is aware of all charge attempts to a particular card. The OSPS must inform the card database, by means of CDM messages, of the disposition of SL calls.

When the OSPS receives the SCIP (Single Call In Progress) indicator in an "Allow" reply from the card database, it assumes that SCIP enforcement applies to this call. The OSPS attempts to complete the call. If the call completes, the OSPS starts an Intermediate Timer for the call. The first time that the Intermediate Timer fires, provided that the call has not terminated, the OSPS sends an ICDM (Intermediate CDM) to the card database as an indication that the call completed successfully. Periodically after that whenever the Intermediate Timer fires, the OSPS sends an ICDM message to the card database indicating that the call is still in progress. Depending on other limit conditions that apply to this call, the CDM messages may also contain other information such as incremental PL call charges or incremental DL call duration amounts. If the call terminates before the first Intermediate Timer interval, the OSPS does not send any ICDM. The OSPS always sends an ECDM (End CDM) message to the card database to inform it about the final disposition of the call and any information required by other limit features.

13.4 Feature Flow Scenarios

The following scenarios represent examples of how calls are handled subject to enhanced limits handling. The interactions between the caller, the OSPS, the card database and RTRS (Real Time Rating System), along with an indication of the type of announcements played and the typical elapsed time for the call are shown.

For all the following scenarios:

- the Intermediate Timer is set to its default value of 10 minutes.
- the Disconnect Warning Interval is set to its default value of 30 seconds.
- the Query Time is equal to 10 seconds.

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- the Minimum Re-query Time is set to its default value of 120 seconds.

13.4.1 Scenario 1

1. The caller goes off-hook on a DTMF (Dual Tone Multifrequency) phone and dials 0 + called number. OSPS recognizes the incoming 0+ call and plays the bong tone prompt and the audible logo to the caller.

2. The caller responds to the prompt by dialing a card number.

3. OSPS recognizes the card number has a valid format, and sends a TCAP BEGIN message to the CAS/NCP (Network Control Point) to validate the card.

4. CAS/NCP (the card data base) recognizes the card number and PIN as valid and that the card subscribes to Duration Limit/Enforced with Disconnect and Multiple Calls in Progress. It determines that the call can be granted an initial duration balance of 14 minutes. It sends a TCAP CONTINUE message to the OSPS indicating valid card, Duration Limit/EWD (Enforced With Disconnect), MCIP (Multiple Calls in Progress), and duration balance of 14 minutes.

5. OSPS receives the CONTINUE message. It plays an announcement to the caller "Thank you for using AT&T" and routes the call.

6. The called party's phone rings.

7. The caller hears audible ring.

8. (Clock time 0:00 minutes:seconds) The called party answers.

9. (Clock time 0:00) OSPS sees that the call is answered, and begins timing the call for 10 minutes, which is the Intermediate Timer value.

10. The caller converses with called party.

11. (Clock time 10:00) The OSPS call timer expires. OSPS sends a TCAP CONTINUE message to the CAS/NCP, containing a first TAP (Transaction Amount Parameter) for Duration Limit indicating that 10 minutes have been used on this call, and a second DL TAP with the "More" bit set requesting an additional 6:40 (20:40 - 14:00).

12. CAS/NCP receives the CONTINUE message and determines that the request for more duration balance can be honored. It sends a TCAP CONTINUE message to the OSPS containing a DL TAP granting the requested 6:40.

13. (Clock time 10:01) OSPS receives the TCAP CONTINUE message with the additional balance of 6:40. It determines that the additional balance granted will allow the call to continue until it has lasted 20:40.

    OSPS begins timing the call for 9 minutes 59 seconds (20:40 - 10:01 - 30 seconds - 10 seconds), the total granted duration balance minus the balance already used minus the Disconnect Warning Interval minus the Query Time interval required for requesting more balance before the Disconnect Warning Announcement is played to the conversing parties.

14. The caller converses with called party.

15. (Clock time 20:00) The OSPS call timer expires. OSPS sends a TCAP CONTINUE message to the CAS/NCP, containing a first TAP for DL (Duration Limit) indicating that an additional 10 minutes has been used on this call, and a second DL TAP with the "More" bit set requesting an additional 10

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minutes.

16. CAS/NCP receives the CONTINUE message and determines that the request for more duration balance can be honored. It sends a TCAP CONTINUE message to the OSPS containing a DL TAP granting the requested 10 minutes.

17. (Clock time 20:01) OSPS receives the TCAP CONTINUE message with the additional balance of 10 minutes. It determines that the additional balance granted will allow the call to continue until it has lasted 30:40.

    OSPS begins timing the call for 9 minutes 59 seconds (30:40 - 20:01 - 30 seconds - 10 seconds).

18. (Clock time 24:45) The caller and called party hangs up.

19. (Clock time 24:45) OSPS recognizes the end of the call. OSPS sends a TCAP END message to the CAS/NCP, containing a TAP for Duration Limit indicating that an additional 4 minutes 45 seconds has been used on this call.

    OSPS releases the network paths and writes an AMA record.

13.4.2 Scenario 2

This scenario illustrates a Purchase Limit/Enforced Without Disconnect call that must request more purchase balance to be able to be established. This call is a person-to-person call to Mexico, and ends before the first intermediate timer expires.

1. The caller goes off-hook on a rotary dial phone and dials 0 + called number.

2. OSPS recognizes the incoming 0+ call. OSPS plays the bong tone prompt and audible logo to the caller.

3. The caller does not respond.

4. OSPS sends the call to an operator.

5. The operator asks caller for call information.

6. The caller tells the card number to operator.

7. The operator enters card number.

8. OSPS recognizes the card number as being of valid format, and sends a TCAP BEGIN message to the CAS/NCP to validate the card. It changes the operator display to indicate that billing validation is proceeding (displays "BLG CHECK").

9. CAS/NCP recognizes the card number and PIN as valid. It further sees that the card subscribes to Purchase Limit/Enforced Without Disconnect and Multiple Calls in Progress. It determines that the call can be granted an initial purchase balance of $5. It sends a TCAP CONTINUE message to the OSPS indicating valid card, Purchase Limit/EWOD, MCIP, and purchase balance of $5.

10. OSPS receives the CONTINUE message. It formats and sends an Initial PL query to RTRS containing the calling and called numbers and the $5 purchase balance.

11. RTRS determines that the call requires $8.50. It formats and sends a reply to OSPS that indicates insufficient balance, and that $8.50 is required to establish the call.

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12. OSPS receives the reply. It sends a TCAP CONTINUE message to the CAS/NCP containing a DL TAP (Transaction Amount Parameter) for Purchase Limit with the "More" bit set requesting an additional $3.50.

13. CAS/NCP receives the CONTINUE message and determines that the request for more purchase balance can be honored. It sends a TCAP CONTINUE message to the OSPS containing a Purchase Limit TAP granting the requested $3.50.

14. OSPS receives the TCAP CONTINUE message with the additional balance of $3.50. It sees that this is sufficient to establish the call. It changes the operator's display to indicate that billing has been validated and that the call may proceed (changes "BLG CHECK" to "BLG OK" and displays "PR OK".)

15. The operator outpulses call from position.

16. OSPS routes the call.

17. The called party's phone rings.

18. The caller hears an audible ring.

19. (Clock time 0:00) The person called answers, and the operator releases the call.

20. (Clock time 0:00) OSPS sees that the call is answered, and begins timing the call for 10 minutes, the Intermediate Timer value.

21. The caller converses with called party.

22. (Clock time 7:13) The caller and called party hang up.

23. (Clock time 7:13) OSPS recognizes the end of the call. OSPS releases the network paths and sends a TCAP END message to the CAS/NCP, containing a TAP for Purchase Limit indicating that $8.50 has been used on this call. OSPS writes an AMA record.

13.4.3 Scenario 3

This scenario illustrates a Multiple Call in Progress call with combined Purchase Limit/Enforced with Disconnect, Duration Limit/Enforced with Disconnect, and Volume Limit/Enforced card limits features. To continue the call, both purchase and duration balances are requested until no more balance is available, after which the call is forcibly disconnected.

1. The caller goes off-hook on DTMF phone and dials 0+ called number.

2. OSPS recognizes the incoming 0+ call. OSPS plays the bong tone prompt and AT&T audible logo to the caller.

3. The caller responds to the prompt by dialing a card number.

4. OSPS recognizes the card number as being of valid format, and sends a TCAP Begin message to the CAS/NCP to validate the card.

5. CAS/NCP recognizes the card number and PIN (Personal Identification Number) as valid. It further sees that the card subscribes to Purchase Limit/Enforced with Disconnect, Duration Limit/Enforced with Disconnect, Volume Limit/Enforced, and Multiple Calls in Progress. It determines the call can be granted an initial purchase balance of $7.00 and duration balance of 11 minutes. It sends a TCAP Continue message with the above information to the OSPS.

6. OSPS receives the Continue message. It then launches an Initial Purchase Limit RTRS query,

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sending the value of $7.00 and the calling and called numbers.

7. RTRS calculates the amount of calling time that $7.00 would buy for this call, which in this case is 13 minutes. It formats and sends the value of 13 minutes in a reply to OSPS, also indicating the call was successfully rated.

8. Because sufficient resources are available for the call, OSPS plays an announcement to the caller - "Thank you for using AT&T" - and routes the call.

9. The called party's phone rings and the caller hears an audible ring.

10. (Clock time 0:00) The called party answers.

11. (Clock time 0:00) OSPS sees that the call is answered and begins a 10:00 intermediate timer. Sufficient balance is available for the call to last beyond the intermediate interval and still leave time to request more balance before the Disconnect Warning Announcement must be given. (11:00 of EWD time - 30 seconds DWI (Disconnect Warning Interval) - 10 seconds Query Time equal 10:20).

12. The caller converses with called party.

13. (Clock time 10:00) The first intermediate timer expires. OSPS determines that not enough time is remaining to cover the full intermediate interval (only 30 seconds before the Disconnect Warning Announcement should be played if no more balance is obtained). Therefore, it proceeds to determine how much additional balance must be granted to this call to allow it to continue undisturbed until another intermediate interval has expired. It determines that the length of call at that time will be 20:40. (10:00 of call time already used + 10:00 for the next intermediate interval + 10 seconds for query time + 30 seconds for DWI = 20:40). OSPS sends a Subsequent Purchase Limit query to RTRS for a call duration of 20:40 to determine the cost if the call lasts that long.

14. RTRS determines that the cost for this call would be $9.16 and returns that value to OSPS in a reply.

15. OSPS calculates the difference between the money it needs and the money it already has ($9.16 - $7.00 previous allocation = $2.16). It formats a Purchase Limit TAP (Transaction Amount Parameter) requesting $2.16 more. It formats a Duration Limit TAP to inform the CAS/NCP that 10:00 minutes were used by this call. OSPS calculates how much more duration balance it needs to cover the next intermediate interval (20:40 - 11:00 it had previously equaled 9:40) and formats a Duration Limit TAP requesting 9:40 more. (Note: OSPS cannot yet inform the CAS/NCP how much money has been spent because it doesn't know the cost of the 10:00 minutes transpired so far. It only knows the cost of 13:00 which has not yet been completely used up.) OSPS then sends the TCAP Continue message to the CAS/NCP.

16. CAS/NCP responds, granting an additional $2.16 for Purchase Limit and 9:40 for Duration Limit in a TCAP Continue message to OSPS.

17. OSPS sees that the balances received equal the balances requested and sets the intermediate timer to expire at 20:00, which is 40 seconds (10 seconds Query Time and 30 seconds DWI) before the call must end given the current balances.

18. (Clock time 20:00) The second intermediate timer expires. OSPS determines that not enough time remains to cover the full intermediate interval (only 10 seconds before the Disconnect Warning Announcement should be played if no more balance is obtained). Therefore, it proceeds to determine how much additional balance must be granted to this call to allow it to continue undisturbed until another intermediate interval has expired. It determines that the length of call at that time will be 30:40. (20:00 of call time already used + 10:00 for the next intermediate interval + 10 seconds for query time + 30 seconds for DWI = 30:40). OSPS sends a Subsequent Purchase Limit query to RTRS for a call duration of 30:40 to determine the cost if the call lasts that long.

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19. RTRS determines that the cost for this call would be $12.06 and returns that value to OSPS in a reply.

20. OSPS formats a Purchase Limit TAP to inform the CAS/NCP that $7.00 were spent on this call, since the complete 13:00 for the original $7.00 balance have expired. It then calculates the difference between the money it needs and the money it already has ($12.06 - $9.16 previous allocation = $2.90) and formats a Purchase Limit TAP requesting $2.90 more. It formats a Duration Limit TAP to inform the CAS/NCP that 10:00 more minutes were used by this call. OSPS calculates how much more duration balance it needs to cover the next intermediate interval (30:40 - 20:40 it had previously = 10:00) and formats a Duration Limit TAP requesting 10:00 more. OSPS then sends the TCAP Continue message to the CAS/NCP.

21. CAS/NCP responds, sending less than the requested Purchase balance, only $2.27 and all of the requested Duration balance, 10:00, in a TCAP Continue message to OSPS.

22. OSPS sees that the Purchase balance received does not equal the balance requested and therefore, in order to determine how long the call can last, launches an Initial Purchase Limit RTRS query with a purchase amount of $11.43 ($9.16 total previous allocation + $2.27 = $11.43).

23. RTRS calculates the time that $11.43 will buy for this call, which in this case is 28:55. It formats and sends the value of 28:55 in a reply to OSPS, also indicating the call was successfully rated.

24. OSPS determines that Adjusted Remaining Time for the call is greater than the Minimum Re-query Interval and sets the intermediate timer to expire at 28:15, which is 40 seconds (10 seconds Query Time and 30 seconds DWI) before the call must end given the current balances.

25. (Clock time 28:15) The third intermediate timer expires. OSPS determines that there is not enough time remaining to cover the full intermediate interval (only 10 seconds before the Disconnect Warning Announcement should be played if no more balance is obtained). Therefore, it proceeds to determine how much additional balance must be granted to this call to allow it to continue undisturbed until another intermediate interval has expired. It determines that the length of call at that time will be 38:55. (28:15 of call time already used + 10:00 for the next intermediate interval + 10 seconds for query time + 30 seconds for DWI = 38:55). OSPS sends a Subsequent Purchase Limit query to RTRS for a call duration of 38:55 to determine the cost if the call lasts that long.

26. RTRS determines that the cost for this call would be $14.33 and returns that value to OSPS in a reply.

27. OSPS formats a Purchase Limit TAP to inform the CAS/NCP that $2.16 more were spent on this call, the charge for the time between 13:00 and 20:40. It then calculates the difference between the money it needs and the money it already has ($14.33 - $11.43 previous allocation = $2.90) and formats a Purchase Limit TAP requesting $2.90 more. It formats a Duration Limit TAP to inform the CAS/NCP that 8:15 more were used by this call. OSPS calculates how much more duration balance it needs to cover the next intermediate interval (38:55 - 30:40 it had previously = 8:15) and formats a Duration Limit TAP requesting 8:15 more. OSPS then sends the TCAP Continue message to the CAS/NCP.

28. CAS/NCP runs out of Purchase balance and signifies this by not sending a Purchase Limit TAP. It still has plenty of Duration balance and sends the 8:15 requested.

29. OSPS determines that the Adjusted Remaining Time for the call is less than the Minimum Re-query Interval and determines that the call cannot be continued beyond 28:55. It sets the warning timer to expire at 28:25, which is 30 seconds before the call must end.

30. (Clock time 28:25) The warning timer expires. OSPS plays the Disconnect Warning Announcement "Due to calling card restrictions, this call will be terminated in 30 seconds" to both the calling and called parties. It then sets the disconnect timer to expire at 28:55.

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31. (Clock time 28:55) The disconnect timer expires. OSPS then tears down the talking paths between the calling and called parties. OSPS sends a Subsequent Purchase Limit query to RTRS for a call duration of 28:55 to determine the cost of the call now that it is finished.

32. RTRS determines that the cost for this call was $11.43 and returns that value to OSPS in a reply.

33. OSPS formats a Purchase Limit TAP to inform the CAS/NCP that $2.27 more were spent on this call. It formats a Duration Limit TAP to inform the CAS/NCP that 40 seconds more were used by this call. OSPS then sends the TCAP ECDM (End Call Disposition Message) to the CAS/NCP and writes an AMA record, disconnect due to PL depletion.

34. The caller goes on-hook.

35. The called party also goes on-hook.

13.5 Feature Assignment

The Enhanced Limits feature must be activated on the OSPSOPT form (5424 Record). In addition, the Card Limit Minimum Re-query time between subsequent requests to the card database for additional courtesy interval balances must be entered.

Announcement Headers, OSPSTA 156 - 160, 171, and 172 for the Purchase Limit, Volume Limit, and Duration Limit, are applicable to this feature. The WARN TIME is set via announcement header OSPSTA 171.

13.6 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. Announcement header OSPSTA 156 - 160, 171, and 172 default input data have been added for the Enhanced Limits feature. Header ID OSPSTA 171 is used to set the display only, WARN TIME field on view 8.0.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The ENHANCED LIMIT field activates this feature for this OSPS office. The MIN REQUERY field sets the minimum required time between requests to the database for additional balances. The COURTSEY INTERVAL field sets the minimum time before the caller hears the warning annoucement.

14. CAS CARD VOLUME LIMIT

14.1 Feature Description

For 5E9(1) and later, the Card Volume Limit feature provides the ability to limit the number of calls charged to a card that has been validated using an AT&T CAS card validation query. With this feature, a card can have a predetermined number of calls that can be charged against that card. The Enforced or the Non-Enforced options are applied when the volume balance has been reached.

See the Enhanced Limits feature for scenarios describing the Volume Limit, Duration Limit, and Purchase Limit.

14.2 Feature Assignment

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This feature is activated on the OSPSOPT form (5424 Record). Announcement header OSPSTA 157 was added as default data associated with CAS Volume Limit feature announcements.

14.3 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. Announcement header OSPSTA 157 default input data has been added for the Volume Limit feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The VOLUME LIMIT field indicates if the Volume Limit feature is active for this switch.

15. CARD DURATION LIMIT

15.1 Feature Description

For 5E9(1) and later, the Card Duration Limit feature provides the ability to limit the duration of a card call to an amount specified in the reply to an AT&T CAS card validation query. A card can have a predetermined amount of call duration time that can be debited against that card when it is used to charge a call that can affect this balance. As with the Purchase Limit feature, EWD (Enforced with Disconnect), EWOD (Enforced Without Disconnect), and NE (Non-Enforced) options apply to Duration Limit.

With 5E9(1) and later, a combination of Purchase Limit, Duration Limit and Volume Limit can be subscribed to. The limit that imposes the shortest duration takes precedence with respect to how long a call is allowed to continue. For example, if PL (Purchase Limit) with an NE (Non-Enforced) option and DL (Duration Limit) with EWD (Enforced With Disconnect) both apply to a call, and if the DL/EWD balance is 52 hours, then the PL/NE limit which allows the call to last for 48 hours (assuming the call is not a free or flat-rated call) takes precedence. If the call has not disconnected in 48 hours, the OSPS forcibly disconnects it at that time, after playing a Disconnect Warning Announcement to the caller.

15.2 Feature Assignment

For both Purchase Limit and Duration Limit for 5E9(1), if the feature is activated on the OSPSOPT form (5424 Record), the Card Disconnect Warning Interval, which is the amount of time after a Card Limit Disconnect Warning Announcement is played before the call is forcibly disconnected, is determined by the time interval found in the Standard Default Input Data for ANNHD form for Header ID "OSPSTA" 171 in the third to last phrase.

A courtesy interval indicates the desired minimum amount of time a customer may talk before hearing the warning disconnect announcement. These global parameters are specified on the OSPSOPT form. For both Duration Limit and Purchase Limit features for 5E9(1), if the desired "courtesy interval" of uninterrupted talking time using the normal WARM TIME cannot be achieved, the call is considered a "short allowed time call" and the call receives a special 10-second "warn time" treatment.

New default data announcement header IDs for Duration Limit feature are "OSPSTA" 156, 159, and 171.

See Paragraph Section 13.4 on Enhanced Limits Feature for scenarios involving the Duration Limit feature.

15.3 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. New announcement header IDs for the Duration Limit feature are "OSPSTA" 156, 159, and 171.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The new fields for the Duration Limit feature are DURATION LIMIT, WARN TIME, COURTESY INTERVAL, and MIN REQUERY.

16. ALL CARDS FAIL

16.1 Feature Description

The ACF (All Cards Fail) feature is intended to control fraud by preventing a caller from determining a valid card account number for a given PIN by trial and error, or by holding the PIN constant and varying the card account number until the call completes. The ACF feature is triggered by the receipt of certain card validation replies, and will apply on all card calls and for all card types that can be validated automatically by the OSPS through a card validation database using ANSI TCAP, CCS7 TCAP, or ICCV CCITT TCAP protocols.

16.2 Feature Assignment

The ACF capability provides the following four global parameters, which are only accessible from the OSPS OAP security terminal:

- a feature activation parameter
- a parameter that is used to indicate the ACF Fraud Attempts Threshold. The ACF Fraud Attempt Threshold is the number of card validation replies matching the ACF fraud criteria. When this threshold has been exceeded, attempted fraud is to be assumed and PIN/back number pair should be moved from the ACF Fraud Candidate List to the ACF Fraud List.
- a parameter that is used to indicate the ACF Lockout Interval, which is the specified time interval, in minutes, that an entry will be kept on the ACF Fraud List.
- a parameter is used to indicate the ACF Fraud Candidate Interval. The ACF Fraud Candidate Interval is the specified time interval, in minutes, to allow repeated failures before causing a call to be blocked without making a card validation query.

16.3 Translation Requirements

The above parameters cannot be entered on an ODA view; they can only be entered on the Recent Change view 21.99 (OSPS Parameters For Security Terminal). The following fields were added to this view for the ACF feature.

- ACF ON - This field activates the All Cards Fail feature.
- PERMIT TIME - This field indicates the ACF fraud candidate interval, 4 - 20 minutes.
- LOCK OUT TIME - ACF lockout interval 5 - 120 minutes.
- FAILURE THRESHOLD - Maximum ACF fraud attempts per PERMIT TIME, 4 - 30 attempts.

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17. CARD CALLING / CALLED NUMBER RESTRICTIONS FOR 5E8.

17.1 Feature Description

For 5E8, the CGNR (Calling Number Restrictions) and CDNR (Enhanced Called Number Restrictions) feature provided the capability to disallow calls originating from a particular calling station and to disallow calls to preselected locations based on the CAS card number. Up to 200 number restrictions are provided, 50 domestic and 50 international for both called and calling numbers.

Prior to this feature, if an automated call was denied due to geographic restrictions, the caller was allowed a second chance to enter a valid card number. With this feature callers do not have a second opportunity. The caller is given a message informing the caller to hang up and arrange other billing. The caller is then disconnected.

For automated sequence calls, if the call is denied due to CDNR, the caller is prompted to enter a new forward number on the first attempt. For a second attempt, the caller is informed to hang up and arrange other billing.

CAS CGNR (Calling Number Restrictions) is an enhancement to the CAS Geographic Restrictions feature which allows restrictions based on the called number. In addition, this feature introduces customer-supplied restrictions on back (calling) numbers.

17.2 Feature Assignment

New announcements are provided for this feature. A new announcement will be given to the caller for initial and sequence calls for calling number restrictions. New displays are given for operator assisted calls.

17.3 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
PHRASES	5534	3	5AH	8.63

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. Announcement header IDs for this feature are "OSPSTA" 7, 26, 88, 89, and 90.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The CDNR RESTRICT field should be set to "Y" to activate this feature for 5E8.

PHRASE form (5534 Record) - The form defines and describes phrase IDs which are provided on the DSU2-RAF. New default input phrases have been added to support this feature.

18. CARD CALLING / CALLED NUMBER RESTRICTION FOR 5E9(1) AND LATER

18.1 CAS Calling Number Restrictions Feature Description

For 5E9(1) and later, this feature provides the caller with an opportunity to reach an operator during automated announcement treatment. New announcements are given to the caller for initial and sequence calls for calling number restrictions. These new announcements inform the caller that the entered card can not be used from that particular station. An announcement also gives the caller the option of pressing 0 for operator assistance. If the caller enters anything other than a 0 to reach an operator, an error announcement is given and the caller is disconnected. "#" and "*" are ignored.

A new operator display is also provided to give the operator more information about the call.

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The announcements for the 5E8 feature are not used in 5E9(1).

18.2 Scenarios

In each of the following scenarios, after each of the announcements the back party has a choice of hanging up, dialing 0 to go to an operator, doing nothing or dialing some other number. In the scenarios the back party may not do anything until the last announcement. Once the announcement ends, the back party has 5 seconds to enter a zero or be disconnected.

If the back party should choose to dial any number other than zero, the back party will get the following announcement; "Please hang up and dial again. (Pause) The number you have dialed is not correct", followed by disconnect.

Scenario 1 - 0+ CAS Credit Card Call With CDNR

1. The back party places a 0+ call.
2. OSPS plays an RAF announcement "Bong" tone and audible logo.
3. The back party enters a CAS credit card number and PIN number.
4. OSPS sends a CAS CCS7 TCAP message to CAS/NCP.
5. CAS/NCP checks for any restrictions on the card. A Called Number Restriction is found.
6. CAS/NCP sends a TCAP message.
7. OSPS interprets TCAP message with the called number restrictions indication in the message. The following RAF announcement is played. "This call cannot be billed to this card. To arrange other billing please press zero for an operator now."
8. The back party does nothing.
9. After 3 seconds, the "Bong" tone is played.
10. The back party does nothing.
11. After 3 seconds, the following RAF announcement is played. "To arrange other billing please press zero for an operator now."
12. The back party dials 0 within the 5-second timing.
13. OSPS routes the call to operator.
14. The following is displayed on the operator's terminal (for 5E8 and later):
    - "BLG DENY",
    - "Card number not allowed with forward
    - number" (new type 7 error display),
    - the forward number,
    - the back number, and

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- the credit card number in reverse video.

15. The operator and the back party converse.
16. The back party gives a new card number.
17. The operator enters the new card number and PIN.
18. OSPS sends CAS CCS7 TCAP message to CAS/NCP.
19. OSPS displays "BLG CHECK".
20. CAS/NCP checks for any restrictions on the card. None are found.
21. CAS/NCP sends TCAP message.
22. OSPS interprets TCAP message indicating no restrictions.
23. "BLG OK" is displayed on operator's terminal.
24. The operator releases call.

Scenario 2 - 0+ Sequence CAS Credit Card Call With CDNR

This scenario is for a sequence call that has CDNR (Called Number Restrictions). The back party has already had a successful call using a CAS credit card and has pressed the "#" sign, received the prompt message, and is now entering the forward number.

1. The back party enters the forward number.
2. OSPS sends CAS CCS7 TCAP message to CAS/NCP
3. CAS NCP checks for any restrictions on the card. A Called Number Restriction is found.
4. CAS/NCP sends the TCAP message.
5. The OSPS interprets TCAP message with the called number restrictions indicated in the message.
6. The following RAF announcement is played: "This call cannot be billed to this card. Please dial another telephone number now, or to arrange other billing, press zero for an operator now."
7. The back party does nothing.
8. After 3 seconds, an RAF announcement "Bong" tone is played.
9. The back party does nothing.
10. After 3 seconds, the RAF announcement "Please dial now" is played.
11. The back party dials 0 within the 5-second timing interval.
12. OSPS routes the call to an operator.
13. The following is displayed on the operator's terminal (for 5E8 and later):
    - "BLG DENY",

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- "Card number not allowed with forward
- number." (new type 7 error display),
- the forward number,
- the back number, and
- the credit card number in reverse video.

14. The operator and the back party converse.
15. The back party gives a new forward number.
16. The operator enters the new forward number.
17. OSPS sends CAS CCS7 TCAP message to CAS/NCP.
18. "BLG CHECK" is displayed.
19. CAS/NCP checks for any restrictions on the card. No restrictions are found.
20. CAS/NCP sends TCAP message.
21. OSPS interprets TCAP message indicating no restrictions.
22. "BLG OK" is displayed on the operator's terminal.
23. The operator releases call.

18.3 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
PHRASES	5534	3	5AH	8.63

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. New default input values for announcement headers "OSPSTA" 88 - 90 were entered for this feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The CDNR CGNR field specifies whether the Called Number/Calling Number Restrictions feature is active. This feature is an enhancement to the CAS R3 feature and allows identification of a reply code from a card database query that indicates a restriction on the called number.

PHRASE form (5534 Record) - The form defines and describes phrase IDs which are provided on the DSU2-RAF. New default input phrases have been added to support this feature.

19. CUSTOMER-DEFINED BILL SEGMENTATION INTERNATIONAL CREDIT CARD VALIDATION.

CDBS ICCV (Customer-Defined Bill Segmentation International Credit Card Validation) enhances the 5E7

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CAS R3 ICCV feature by adding CDBS to ICCV. When OSPS sends an ICCV CCITT TCAP query for a card that subscribes to CDBS, and after the foreign administration database validation is formulated and sent, the OSPS accepts the CDBS code that is returned in that response and records it in the AMA record.

19.1 CDBS-ICCV Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9

19.2 CDBS - ICCV Modified Forms

OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8, the ICCV CDBS field indicates if CDBS is activated for ICCV Calls.

20. ICCV GEOGRAPHIC RESTRICTIONS

20.1 Feature Definition

For 5E9(1) and later, this feature allows geographic restriction to be placed on PTT (Post Telegraph and Telephone) card-billed calls that originate on an OSPS. It provides announcements, operator displays, and the ability to reach an operator during automated call handling.

This feature enhances the present Geographic Called Restrictions feature, and builds on the ICCV basic validation introduced for ICCV CCITT TCAP signaling protocol.

If a call is charged to a PTT card, the OSPS sends a query to the PTT database. The query contains the called number (if available) and the operation code which informs the database that ICCV CDNR restrictions processing applies to the card. If the call is restricted by ICCV CDNR restrictions, the caller will be given further assistance on operator-handled calls or instructions (via announcement) on automated calls. A caller on an automated call will be able to reach an operator by pressing 0. In addition, on sequence calls, the caller will be able to enter a new called number. Callers on automated initial calls will not be allowed to enter new card numbers on calls that violate geographic restrictions.

20.2 Call Scenarios

See also the scenarios under the Calling/Called Number Restrictions feature, paragraph Section 18.2 .

Scenario 1 - Initial Call with Bail Out to an Operator

The back party places an automated initial call using a PTT card on OSPS. This call attempt violates ICCV CDNR restrictions and the OSPS plays an announcement that instructs the BACK PARTY that the call cannot be billed to the card, and to arrange other billing the caller should press zero for an operator. The BACK PARTY bails out of automated treatment to an OSPS operator by pressing 0. The OSPS uses display indications to inform the operator.

1. The back party places a 0+ call
2. The "Bong" tone and audible logo are played, and the following announcement: "Please dial your card number and PIN or zero for an operator now".
3. The back party enters a PTT card number and PIN.
4. OSPS recognizes the PTT card and sends an ICCV CCITT TCAP validation query to the PTT database.

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5. PTT checks for any restrictions on the card, and an ICCV CDNR called number restriction is found.
6. PTT sends a TCAP query reply message to OSPS.
7. OSPS interprets the TCAP reply message with the ICCV CDNR indication in message.
8. OSPS plays the announcement for header ID "OSPSTA" 161 for the first failed attempt because of ICCV CDNR geographic restrictions: "This call cannot be billed to this card. To arrange other billing, please press zero for an operator now."
9. The back party makes no response within 3 seconds after announcement.
10. The "Bong" tone is played.
11. The back party makes no response within 3 seconds after the "Bong" tone.
12. Announcement for header ID "OSPSTA" 162 is played: "To arrange other billing, please press zero for an operator now."
13. The back party presses 0 for an OSPS operator.
14. OSPS routes the call to an operator.
15. The following information is displayed on the VDT/CST:
    - "BLG DENY",
    - the back number,
    - the forward number,
    - the back card number in reverse video,
    - the message: "Card Number not allowed with Forward Number."
16. The operator requests a new card number from the caller.
17. The back party gives a new card number and PIN.
18. The operator enters the new card number and PIN.
19. OSPS sends ICCV CCITT TCAP message to PTT database.
20. "BLG CHECK" is displayed.
21. PTT checks for any restrictions on the card. None are found.
22. PTT sends the TCAP reply message.
23. OSPS interprets the TCAP reply message indicating that no restrictions were found.
24. "BLG OK" is displayed on the operator's terminal.
25. The operator releases call.

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Scenario 2 - Initial Call Second Attempt with Disconnect

In this scenario, the back party places an automated ACCS initial call billed to a PTT card. The caller enters an invalid card number the first time and is asked to reenter the number. The caller then enters the correct number which violates ICCV CDNR geographic restrictions and an announcement is played telling the back party that the call cannot be billed to the card and if they wish to arrange other billing to press 0 for an operator.

1. The back party places a 0+ call
2. OSPS plays the "Bong" tone and the audible logo with the following annoucement: "Please dial your card number and PIN or zero for an operator now".
3. The back party enters PTT card number and PIN.
4. OSPS recognizes the PTT card and sends an ICCV CCITT TCAP validation query to the PTT database.
5. PTT checks for any restrictions on the card. An invalid card number is found.
6. PTT sends a TCAP query reply message to OSPS.
7. OSPS determines that the card number was invalid and plays the following announcement: "We're sorry, your card number is invalid. (1 sec pause) Please redial your complete card number and PIN now."
8. The back party enters a PTT card number and PIN.
9. OSPS recognizes the PTT card and sends an ICCV CCITT TCAP validation query to the PTT database.
10. PTT performs a card validation. An ICCV CDNR called number restriction is found.
11. PTT sends a TCAP query reply message to OSPS.
12. OSPS interprets the TCAP reply message indication that ICCV CDNR called number restrictions apply.
13. OSPS plays announcement header ID "OSPSTA" 161 for the second failed attempt because of ICCV CDNR restrictions: "This call cannot be billed to this card. To arrange other billing, please press zero for an operator now."
14. The back party makes no response within the 5-seconds time interval.
15. OSPS updates the call record and disconnects the call.

Scenario 3 - Automated Sequence Call

The back party has already had a successful call using a PTT credit card and has pressed the "#" sign and received the prompt message and is now entering the forward number.

1. OSPS prompts back party for another telephone number with the following announcement: "You may dial another AT&T handled call now."
2. The back party begins entering a new forward number (NPA NXX-XXXX).
3. OSPS recognizes the PTT card and sends an ICCV CCITT TCAP validation query to the PTT database.

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4. PTT checks for any restrictions on the card. An ICCV called number restriction is found.
5. PTT sends a TCAP query reply message to OSPS.
6. OSPS interprets TCAP reply message indicating ICCV CDNR called number restrictions.
7. OSPS plays the following announcement for header ID "OSPSTA" 163 for the first failed attempt because of ICCV geographic restrictions: "This call cannot be billed to this card. Please dial another telephone number now or to arrange other billing please press zero for an operator now. "
8. OSPS plays the "Bong" tone announcement.
9. The back party makes no response within 3 seconds after the "Bong" tone.
10. OSPS then plays the following announcement for header ID "OSPSTA" 164: "Please dial now."
11. The back party enters a number other than 0 or valid forward number.
12. The OSPS plays the following announcement for header ID "OSPSTA" 165: "Please hang up and dial again. The number you have dialed is not correct."
13. OSPS updates the record, disconnects the call, then creates an AMA (Table 24) for the condition of ICCV CDNR Restrictions (value 12) when sampling is turned on.

20.3 Feature Assignment

The CDNR feature must be active for the ICCV Geographic Restrictions feature to be active.

20.4 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. New default input values for OSPSTA 161 - 165 have been added for this feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The global parameter GEO RESTRICT activates/deactivates this feature.

PHRASE form (5534 Record) - This form defines and describes phrase IDs that are provided on the DSU2-RAF announcement storage circuit packs for each application. New default input data has been added to support this feature.

21. NON-ENGLISH ANNOUNCEMENTS FOR CARD CALLS.

21.1 Feature Description

The OSPS NACC (Non-English Announcements for Card Calls) feature provides the capability to play announcements in up to four languages other than English (e.g., French, German, Japanese, Spanish) on an automated card call except on inward calls and on calls to an Alliance forward number. The language in which the announcement will be played is based on the card issuer's chosen language and/or the card holder's requested language. This feature also provides an indication of the language associated with the card on an operator handled call.

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21.2 Feature Assignment

See Figure 10 for the feature assignment form flow for the NACC feature.

To set up NACC, the non-English phrases must exist on the RAF packs and be populated in the announcement phrase form, PHRASE form, view 8.63. The non-English announcement phrase IDs to be used with card calls must be populated in the announcement header form, ANNHD form, view 8.61. The non-English phrase should have the same announcement header identifier, as the corresponding English phrase under application type "OSPSTA", but the application type for the non-English language announcement header and phrases should match the non-English language, which is assigned on the LANGTBL form (5483-1 Record). This form should be populated with the data linking the language number and possibly the Language Override Parameter as returned in the card query response message, to the application type and display identifier for the operator position. Also, the PHRLANG form (5483-2 Record) must be populated with the phrases which correspond to the special branding phrases used by the Customized Market Announcements.

The TCCID form, view 27.55 should be updated to show the language, if any, requested by the card issuer (the default language is English).

This feature can be activated on the OSPSOPT form, view 8.9.

21.3 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNAPL	5529	3	5AC	8.64
ANNHD	5534	3	5AE	8.61
ANNTR	5533	3	5AG	8.62
LANGTBL	5483-1	3	4CI	8.66
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63
PHRLANG	5483-2	3	4CJ	8.67
TCCID	5454	3	4BC	27.55

ANNAPL form (5529 Record) - This form is used to enter the SMs on which the DSU2-RAFs reside and the type of application announcements supported by that RAF. The L2-7 application enumerations were added to this form for 5E9(1).

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. The Non-English Announcement phrases must be entered on this form under the same announcement header ID as English phrases, but with the Language application identifier assigned on the LANGTBL form.

ANNTR form (5533 Record) - This form lists phrases that identify the announcement trailer. The application enumerations L2-7 were added for 5E9(1).

LANGTBL form (5483-1 Record) - This form is available with the 5E9(1) Software Release. An entry in this table maps the language value for a calling card to the announcement application type so that card announcements may be played in the appropriate language for a customer. LANGUAGE is equivalent to the LOP (Language Override Parameter) that may be returned in a calling card query reply from the CAS (Customer Account Services) NCP (Network Control Point) database. It also associates a language display for the operator position with the language announcement. The language application identifier, ANNC APPL, to be entered on the ANNHD form, is assigned on this form.

Each non-English language available on OSPS should have an entry in this record.

If ACTIVATE is set to "Y" on the LANGTBL form, then the non-English language is used by the OSPS. If it is set to "N", then English announcements are used.

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OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The Non-English Announcement for Card Calls feature is activated on this form via the NACC field. The MAX LOP field indicates the maximum number of LANGUAGE entries on the LANGTBL form.

PHRASE form (5534 Record) - This form defines and describes phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Facility) Announcement Storage circuit packs for each application. The non-English phrase identifiers must be entered on this form. Note that the application type on this form is not the non-English identifier; the application type is "OSPSTA" on this form.

PHRLANG form (5483-2 Record) -An entry in this form maps an English language phrase to a corresponding non-English language phrase. For example, the entries in this form map English phrases, such as those use for for CMA (Customized Market Announcements) to corresponding non-English language phrases.

TCCID form (5454 Record) - The TCCID form provides identification of telephone calling cards other than the 14-digit LEC (Local Exchange Carrier) card. This identification is used in the CAS (Customer Account Service) features. For 5E9(1) and later, the LANGUAGE field identifies the language in which the card issuer wants card announcements played on card calls. The value entered in this field should match one of the language numbers on the LANGTBL form.

22. ICCV REQUEST FOR CALL DURATION AND CHARGE

22.1 Feature Description

ICCV-CDC (International Credit Card Validation - Call Duration and Charges) is a capability created through a partnering agreement with foreign card administrations. This feature enables the OSPS to send a CDM (Call Disposition Message) at the end of a call, if such a message is requested in the response to an ICCV query by a foreign issuing calling card administration (PTT).

It introduces the concept of the following call types:

- Home Country Call:

  A call originated in the U.S. and terminated in a foreign partner country that issued the card. OSPS does not rate the call.

- Domestic Call:

  A call originated and terminated within the U.S. using a foreign partner issued card. OSPS rates the call by sending a Subsequent PL (Purchase Limit) query to the RTRS (Real Time Rating System).

- Third Country Call:

  A call originated in the U.S. and terminated in a country other than the home country of the card issuer. OSPS rates the call by sending a Subsequent PL query to RTRS.

The CDM contains the start time and duration of the call, the type of call, and, except for calls to the home country of the card issuer, it contains an estimated call charge. It can be used to track and control potential fraud, and estimate the amount of revenue generated through card usage with foreign partners.

22.2 Feature Assignment

See Figure 11 for the feature assignment form flow for the ICCV CDC feature.

Before turning on the ICCV CDC feature, the data that cross references each card issuer to country code, NPA, NPA-NXX for Home Country and Third Country determination must be populated on the NONUSA

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form (5477-1 Record).

Cards that use ICCV signaling must populate the data that associates a database number with a card issuer on the ICCVDB form (5478 Record). ICCV CDC introduces the use of Call Disposition Messages for ICCV signaling. The craft should verify that the associated foreign database is ready to accept these new CDMs.

If the number is an international number, the Country Code is entered on the IDDD form (5307 Record).

The TCCATTR form (5473 Record), contains the fields that correspond to the card issuer.

CAS R3 must be turned on, i.e. CAS R3 ON field on the OSPSOPT form (5424 Record) must be "Y", before this feature can be activated, i.e. "Y" is entered in the CALL DUR CHRG field on the OSPSOPT form.

22.3 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ICCVDB	5478	3	4CD	27.60
NONUSA	5477-1	3	4CC	26.6
OSPSOPT	5424	3	4Y	8.9
TCCATTR	5473	3	4BY	27.56
TCCID	5454	3	4BC	27.55

ICCVDB form (5478 Record) - The 5478 Record is available with 5E9(1) and later Software Releases. This table is used to provide a ratio percentage of successful queries on a card issuer basis and the minimum number of query attempts required before the query success ratio is applied.

NONUSA form (5477-1 Record) - The 5477-1 Record is available with the 5E8 Software Release. This record is used to construct a table of NPA NXXs that are located within the NANP (North American Numbering Plan), but are outside the United States. The HOME COUNTRY field provides the home country identifier associated with the card issuer on the TCCID form (5454 Record).

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The ICCV CALL DUR CHRG field activates this feature.

TCCATTR form (5473 Record) - This form defines the attributes for a card type. It is used to group a set of card attributes together so that particular group of attributes can be associated with a particular card or cards that are identified via the Card Identification Tables. See Figure 11 for data checks for 5E9(1).

TCCID form (5454 Record) - The TCCID form provides for identification of telephone calling cards other than the 14-digit LEC (Local Exchange Carrier) card. This identification is used in the CAS (Customer Account Service) feature. The ICCV DB LABEL field is used to identify the ICCV card issuer and query alarm information on the ICCVDB form. The COUNTRY field identifies the country of the ICCV card issuer. This field is assigned on either the NONUSA form or the IDDD form.

23. LOCAL EXCHANGE CARRIER ALTERNATE CARD FORMAT

23.1 LECACF Feature Description

The LECACF (Local Exchange Carrier Alternate Card Format) feature provides 891/CCC Card validation using ANSI TCAP (Transaction Capability Application Part) Type I signaling for 5E7 and later Software Releases. This feature is an enhancement to the 891 LEC Flexible Card Fast Feature, allowing OSPS to provide calling card services to cards issued in the ANSI/ISO 891 format as well as other Commercial Credit Card format. Measurement and software alarms are provided for Type I.

23.2 LECACF Translations Requirements

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New And Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
DSAPP	5537	3	5AK	8.17
OSPSOPT	5424	3	4Y	8.9
TCCATTR	5473	3	4BY	27.56

23.3 LECACF Modified Forms

DSAPP form (5536 Record) - For 5E7 and later, "AT1" enumeration was added to the APPLIC field. "AT1" signaling is ANSI TYPE I signaling. "AT1" must be entered for LECACF.

OSPSOPT form (5424 Record) - This form defines the global parameters for an office. The global parameters 891/CCC MIN QUERY and ALARM THR were added for LECACF.

MIN QUERY is the minimum number 891/CCC ANSI Transaction query attempts in a 15 minute period before an SW (software) alarm is given.

ALARM THR is the 891/CCC ANSI TCAP (Transaction Capabilities Application Part) query software alarm threshold, which is the successful ANSI non-alarmed query percentage. This percent is number of ANSI TCAP queries attempted in a 15 minutes period, which Every fifteen minutes, counts of the number of ANSI TCAP queries attempted and the number of queries with reply valid are sent to the DS SP (Direct Signaling - System Process) are counted. The ANSI TCAP query success rate is calculated from these counts and is compared to the value in this field.

TCCATTR form (5473 Record) - For 5E7 and later enter the SIGNALING TYPE of "AT1" for ANSI TYPE I signaling. When the SIGNALING TYPE is "AT1", then QUERY TIMEOUT must be entered, and the associated TCCID form must have PIN set to 4. The associated TCCID form is found by matching the CARD ATTR ID on the TCCATTR form with the CARD ATTR ID on the TCCID form.

24. LIDB

The LIDB (Line Information Data Base) capability is available with 5E5 and later Software Releases. This feature provides the message formats and equipment interface for an OSPS (Operator Services Position System) to communicate with a LIDB. It offers the ability to obtain billing authorization information from the LIDB via the LEC's SS7 (Signaling System 7) network for intraLATA traffic or from the BVA (Billing Validation Application) via AT&T's CCIS6 or DCIS6 network. These capabilities are needed to permit LECs to process Calling Card, Collect and Bill-To-Third number calls in an environment where the billing authorization database is distributed between the LECs and AT&T. A LEC can now either query AT&T's BVA database or the LEC LIDB database.

24.1 ODA Forms

New And Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
LIDBLNQ	5449	3	4AX	27.32 27.33
OSPSOPT	5424	3	4Y	8.9

24.2 Translation Requirements

LIDBLNQ form (5449 Record) - LIDB uses the LIDBLNQ form to determine the query destination for calling card calls, collect and bill-to-third number calls.

OSPSOPT form (5424 Record) - Several fields have been added to the OSPSOPT form, under the heading of L CC and L BNS. These fields serve the purpose of determining the query destination (BVA or LIDB) for calling card and BSN queries.

The query destination selection mechanism is described below in the EABS Call Handling portion of this

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section.

25. EXCHANGE ALTERNATE BILLING SERVICES CALL HANDLING

The EABS (Exchange Alternate Billing Services) capability is available with 5E5 and later Software Releases. EABS call handling provides for the handling of Calling Card, Collect and Bill-To-Third number calls based on responses to queries sent to the LIDB over an SS7 (Signaling System 7) network using the LIDB interface feature. To provide Billed Number Screening and calling card validation in a mixed BVA/LIDB environment, the OSPS supports bimodal (concurrent) access to either the BVA (Billing Validation Application) or LIDB based on the NPA-NXX of the called number for collect calls, the third number for bill-to-third-number calls, the card number for line number-based calling cards and the RAO-0/1XX for RAO-based calling cards. (RAO is expanded to Revenue Accounting Office.)

25.1 ODA Forms

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LIDBLNQ	5449	3	4AX	27.32 27.33
OSPSOPT	5424	3	4Y	8.9

25.2 Translation Requirements

LIDBLNQ form (5449 Record) - To introduce EABS in a new office where connection to LIDB is already established, the LEC INTRA field can be set to "C" (both BVA and LIDB) to indicate that query destination can be either BVA or LIDB and that accessing the LIDBLNQ form is required. The LIDBLNQ form should be populated with the NPA-NXX data in the LIDB.

OSPSOPT form (5424 Record) - The basic call handling for EABS is the same as that for Automated Calling Card Service except that EABS allows bimodal (concurrent) access to either BVA or LIDB data base. The calling card query option or BNS query option fields on the OSPSOPT form are used to determine the query destination. These fields determine query destinations based on the carrier (AT&T or LEC) and the type of the call (interLATA or intraLATA). The CC and BNS related fields indicate whether the queries should be sent to BVA, LIDB or use the LIDBLNQ form for their query destination. For example, if the LEC INTRA field (OSPSOPT form) is set at:

- "A" - then all LEC-carried intraLATA calls will query BVA.
- "B" - then all LEC-carried intraLATA calls will query LIDB.
- "C" - then the entry on the OSPSOPT form alone is not enough to determine the query destinations: the LIDBLNQ form has to be used. The data in the LIDBLNQ form will indicate whether for a particular NPA-NXX or RAO-0/1XX, BVA ("N" entered in the LIDB field) or LIDB ("Y" entered in the LIDB field) should be accessed.
- "D" - then the entries on the L CC DEFAULT and L BNS DEFAULT fields (they must be equal) will be used to determine the query destination.

26. ACD EXPANDED CALL TYPE DETERMINATION

The ECTD (Expanded CALL TYPE Determination) capability is available with 5E5 and later Software Releases. This feature allows the CALL TYPE for Toll and Assistance calls to be determined more specifically from the digits received and/or the incoming trunk group number.

26.1 ODA Forms

New And Modified ODA Forms

Form Name	Record	Division	Section	RC View

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	Number			
ACDCTP	5412-A/D	3	4M	26.10
ACDPOL	5412-B/C/E/F	3	4M	26.10
INFLTAP	5451	3	4AZ	27.51
OSPSCT	5404-1	3	4E	21.22
STINFO	5402	3	4C	21.2

26.2 Translation Requirements

ACDCTP form (5412-A/D Records)
ACDPOL form (5412-B/C/E/F Records) - The ECTD (Expanded CALL TYPE Determination) feature makes use of four ODA forms. The ACDCTP form and record used in the 5E4(2) Software Release for ACD (Automatic Call Distribution) is replaced by the ACDCTP and ACDPOL forms in the 5E5 Software Release. There can now be, at most, 3 levels of CALL TYPE determination. Calls may now be more specifically (in addition to prefix, call origin, etc.) determined in the following ways:

- based on a trunk group (uses 5412-A/D and 5412-B/C/E/F),
- based on a trunk group and then a destination index (uses 5412-A/D and 5412-B/C/E/F),
- based on a destination index (uses 5412-A/D and 5412-B/C/E/F),
- based on a destination index and then a trunk group (uses 5412-A/D and 5412-B/C/E/F),
- or no trunk group or destination index (uses 5412-A/D only).

Three levels of CALL TYPE determination can now be made using the data on ACDCTP first and then additionally the trunk group and destination index data on the ACDPOL form.

The six office records (5412-A/D and 5412-B/C/E/F Records) are sorted in multiple ways to make it easier to find the record entry of interest.

The new COIN field on the ACDCTP form indicates whether or not this is a coin type of call. The new OSPS ID field contains the 4-digit identifier of the OSPS which interflowed the call to this switch, if any (non-Interflowed calls should be set to zero). The OSPS ID is received from the sending OSPS Interflow switch and is not obtained from any data populated on this switch. The CALL TYPE field contains the call queue number that the call will be routed to if no further CALL TYPE determination is performed (i.e., second or third levels using trunk group or destination index). The DISPLAY INDEX field contains the VDT display index number for calls with a CALL ORIGIN of "DA2VDT" or "NIT".

When assigning a TA call queue to a type of call which is not "DA2VDT" or "NIT", the serving team associated with the call queue cannot be designated as a "non-ISP only" serving team. That is, if the CALL ORIGIN on ACDCTP is neither "DA2VDT" or "NIT", the CALL TYPE must have a serving team assigned to it (on OSPSCT) where the serving team has NON ISP ONLY (STINFO form) set to "N".

ACDPOL form (5412-B/C/E/F Records) - If additional CALL TYPE determination is to be performed, the PRE CALL ID field and SECOND LEVEL fields are used for the second level of CALL TYPE determination. If no additional CALL TYPE determination is required, the SECOND LEVEL field is "NONE". The PRE CALL ID field on this form is used only as a key by the ACDPOL form (in addition to the TGN field) if a trunk group is used in the next level of CALL TYPE determination. The PRE CALL ID field on this form is used as a key by the ACDPOL form (in addition to the CDI field) if a code index (destination index) is used in the second level of call type determination. The destination index comes from digit analysis (i.e., the PDIT, LDIT or INDIT forms). The DISPLAY INDEX field contains the VDT display index number for calls with a CALL ORIGIN of "DA2VDT" or "NIT" (on ACDCTP).

The ACDPOL form requires a SEQ NO (sequence number) in addition to the PRE CALL ID field. SEQ NO is an internal value used to allow multiple instances of this form to be created for the same PRE CALL ID. SEQ NO does not affect the mapping of data from the ACDCTP form nor the CALL TYPE determination.

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The TGRP/DEST field is where you indicate which type of data you are populating using "T" or "D" values. In the TGN/CDI field the Trunk Group Number or CDI (Destination Index) to be used is specified. Not all trunk groups or destination indices need to be populated! Only populate the data which needs a specific CALL TYPE (queue) determined. Any calls which are indicated as having a SECOND LEVEL but do not have a trunk group or destination index populated on ACDPOL will default to the CALL TYPE value indicated on the original ACDCTP form. This is also true of the THIRD LEVEL scenario, but the CALL TYPE used will be that of the previous SECOND LEVEL data read. The CALL TYPE field contains the call queue number that the call will be routed to if no further CALL TYPE determination is performed. The DISPLAY INDEX field contains the VDT display index number for calls with a CALL ORIGIN of "DA2VDT" or "NIT" (on the ACDCTP form). If no additional CALL TYPE determination is required, the THIRD LEVEL field is "NONE".

The OSPSCT form contains various CALL TYPE information, sorted by CALL TYPE. New fields used on this form for the ECTD feature are COIN RECALL and COIN NOTIFY. The existing RECALL TYPE field is also used by ECTD for normal recalls. Each of these fields contains a call queue number used to handle these types of calls, respectively.

INFLTAP form (5451 Record) - When assigning an OSPS ID value to handle Interflowed calls, the value used must be defined as an OSPS Incoming Toll and Assistance Identifier on an INFLTAP form.

OSPSCT form (5404-1 Record) - With the 5E5 Software Release, the CALL CLASS field from the 5E4(2) ACDCTP form has been deleted. The COIN RECALL and COIN NOTIFY fields should be used where in 5E4(2) the CALL CLASS field would be set to "CNRCL" or "CNNOT" values, respectively. Where CALL CLASS would have been set to "RECB" or "RECFB", the RECALLTYPE field on the OSPSCT form should be used.

27. INTRAFLOW

The OSPS Intraflow feature is available with 5E5 and later Software Releases. Intraflow allows an ACD/OSPS administrator to assign for each call queue, a single principal serving team and up to eight supporting serving teams which may handle calls from the call queue when all of the operators on the principal serving team are busy.

For detailed information on the Intraflow feature, refer to the Intraflow description in Division 2, Section 3A, the Section for All OSPS Offices.

28. SUBACCOUNT BILLING

SAB (Subaccount Billing) is a new feature available in 5E5 and later Software Releases. This feature allows a customer to associate a one-to-four digit number with each call they make, for billing itemization purposes. These numbers are determined by the customer and are available to RAO (Regional Accounting Offices) to be printed on the customer's bill in association with each number called. This feature is invoked at the ACCS (Automatic Calling Card Service) prompt (bong tone) by the customer dialing the SAB access code followed by the one-to-four digit SAB number the customer has chosen. The customer does not presubscribe to this feature.

The AMA records will contain the SAB number so that the customer's bill can be itemized by the SAB number. Since these SAB numbers are customer-determined and have no meaning to OSPS, the customer must keep track of their meaning.

SAB calls may also consist of a sequence of up to ten calls per call session. Sequence calls are allowed by keying "#". The same SAB number will be used, i.e., the SAB number cannot be changed. Carriers cannot be changed on sequence calls.

At the present time, only automated processing is allowed for a SAB call, so the calls are restricted to calls for which paid billing are allowed and which are dialed "0+". SAB service is restricted from hotel (ACQS) and coin stations. Additionally, the switch owner can block a calling number from using SAB service or

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restrict certain special directory numbers from being forward numbers for SAB sequence calls.

28.1 ODA Forms

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINESCRN	5416	3	4Q	26.2
OSPSOPT	5424	3	4Y	8.9
SEQREST	5429	3	4AD	26.41

28.2 Translation Requirements

LINESCRN form (5416 Record) - The field SUBACCT BILL has been added to this form. An "N" entered here will restrict the SAB feature for the back number or range of back numbers keying the form.

OSPSOPT form (5424 Record) - There are three new fields on the OSPSOPT form under the SUBACCOUNT BILLING heading. The SAB ON entry indicates if this feature is turned on. The ACCESS CODE entry is the value entered by the customer after the ACCS bong tone to indicate that the call should receive Subaccount Billing treatment.

The LEC ALW field is used if the switch is owned by an IC (Interexchange Carrier). It is used to indicate if the LEC serving this switch also provides SAB service. A "Y" can be entered here only if SAB ON is set to "Y".

SEQREST form (5429 Record) - This form is used for restricting sequence calls. Two fields have been added for SAB feature use - ACCS and SUBACCT BILL. Formerly the form was used only for ACCS restriction. Now restriction can be placed on an either/or basis for ACCS and SAB. If "N" is entered in the SUBACCT BILL field, then the 3-, 7- or 10-digit TN in the key field is restricted from being a forward number for a Subaccount Billing sequence call. If ACCS is set to "N", then the TN is restricted from being a forward number for an ACCS sequence call.

29. CALL FLOW EXAMPLES

The following example shows what data is used in a sample call processing scenario. This example looks at a 0- call that comes from a conforming end office. Once this call reaches an operator, a forward number will be entered and routed to. For example, assume that an OPRTK form (5417 Record) shows that carrier selection is on and that the call does not originate from a coin phone. Assume that exception area mapping is turned on.

An incoming trunk is seized. The TKGRP form (5202 Record) indicates that it is an "ISPOPR" trunk and thus ISP software is invoked.

The OPRTK form for this trunk shows that equal access signaling is being used. ISP collects the called number and the calling number, noting that the signaling indicates that the call is to be handled by intraLATA carrier. The INTRA CARR ID value given on the OPRTK form is the one used. Assume that it is set to "LEC".

The DIOPR form (5418 Record) is looked at, using the LEC carrier as the key. DIOPR shows restrictions on the type of calls to be handled (such as coin restrictions). The type of arriving traffic is compared against any restrictions. If this call is not handled, then the alternate code index, the screen index from the OPRTK form and a prefix of none are used as the keys to a RAR form (5301 Record) to get a route index to send this call to an external operator system. When this occurs, further routing and charging information is found in the usual manner from the 5302, 5303 and 5202 Records.

If the call is not transferred out yet, then the primary code index in the DIOPR form is looked at. If the primary code index is not zero, the call is still sent to an external operator system, where the primary code index from the DIOPR form, the screen index from the OPRTK form and a prefix of "none" are used as keys. Routing is then done.

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If the call is still not transferred out, it is passed off to an internal OSPS. The remaining steps of this scenario are done only when there is an internal OSPS.

The full back number is now constructed. Signaling should have sent the NXX-XXXX of the calling number. To determine the originating NPA, the OPRTK form is checked to see if there are any protected NXXs served by the incoming trunk group. If there are, then the NXX of the back number and the NPA from the OPRTK form are used as a key to the PRONXX form (5413 Record). If an entry in the PRONXX form is not found or if there are no protected NXXs, then the back number comes from the NPA given on the OPRTK form. If an entry is found on the PRONXX form, then the NPA from that record is used.

The OPRTK form is checked to see if there are calls arriving from ACQS establishments on the incoming trunk. For this example, assume that there are none.

The OPRTK form is checked to see if OLS (Originating Line Screening) may be done on the back number. If so, the SM containing the screening information for this NPA-NXX is found on a NPAMAP form (5414 Record), based on the back number (previously determined).

Using the data on the correct SM, the LINESCRN form (5416 Record) provides the OLS screening index (SCRN CODE) as a key into the SCRNCODE form (5415 Record), which provides the restrictions. If there is a true billing number associated with this back number, then the back number is replaced with the true billing number.

Since there is no forward number, the call is now routed to an operator.

To select an operator, the ACDCTP form (5412 Record) is checked to determine what the call type is. In this case, the key is a CALL ORIGIN of "ISP", a PREFIX of "0M" (zero minus), a CALL CLASS of "INT" and a CARRIER of "LEC".

Using this call type, the serving team to handle the call is found in the OSPSCT form (5404 Record) and the Automatic Call Distributor selects an operator who belongs to that team (as shown in the OSPSOA form (5403 Record)) to handle the call.

The operator's VDT shows the seizure, displaying the back number and a carrier of LEC with a lock next to it (since carrier selection enforcement is on). Based on the incoming trunk group, the TGNLEC form (5443 Record) is checked to see if any special display is associated with this trunk group. If so, then the LEC index is used to access the LECTEXT form (5444 Record) and display that text to the operator. If there is originating line screening, the text found on the SCRNCODE form is available on the screen page. Although not displayed, any OLS restrictions are still enforced.

The operator enters a forward number. For a 7-digit forward number, an NPA is prepended to it before digit analysis. If the OPRTK form for the incoming trunk group indicates that there are protected NXXs, then the PRONXX form is checked with that from the NPA, the OPRTK form and the entered NXX. If such an entry is found, that true NPA is prepended to the entered digits; otherwise, the NPA on the OPRTK form is used. If a 3- or 10-digit number is entered, no prepending is done.

Digit analysis is done on this number. The DAS (Digit Analysis Selector), used as the starting point (the one associated with the incoming trunk), is found in TKGRP form. Digit analysis is done using the standard data given on the DAS, PDIT, LDIT and INDIT forms.

Since exception area mapping is turned on, the NPAMAP form is checked with the back number to determine what exception area (if any) the call originated in. This form is also checked with the forward number for a terminating exception area. If both are in such areas and if they correspond on the EXMAP form (5440 Record), the call is intraLATA, digit analysis is successful and the scenario continues below. If any of this is not true, digit analysis fails and an error display is given to the operator indicating that the forward number is not compatible with the carrier. The carrier will not change automatically since carrier selection enforcement is on.

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Since the forward number is valid and can be served by the current carrier, the TCSNPA form (5437 Record) is checked with the forward number to see if any terminating code restrictions are in effect. If so, then the text displayed to the operator is retrieved from the TCSTEXT form (5436 Record). Any restrictions are also enforced.

When the operator tries to route this call, the code and route indexes used come from one of the INDIT or LDIT forms, as is normally done by digit analysis. When an RAR form is accessed in routing, the code index just mentioned is used, a prefix of none is always used and the screen index from the TKGRP form for the incoming trunk group is used. The route index from the RAR form is used to index into a RTIDX form (5303 Record), which contains the trunk group used for routing this call.

The following six examples will show what data is used in call processing, the order in which it is accessed and the way in which it fits together. In these examples, ODA form numbers will be used without an explanation of what the form is.

29.1 Example 1: 0- Call from Conforming End Office

This example will look at a 0- call that comes from a conforming end office. Interflow and Intraflow features are not turned on. Once this call reaches an operator, a forward number will be entered and routed to. For this example, assume that the OPRTK form shows carrier selection is on and that the call does not originate from a coin phone. Also assume that exception area mapping is turned on.

1. An incoming trunk is seized. The TKGRP form indicates that it is an "FIOPR" trunk and thus ISP software is invoked.

2. The OPRTK form for this trunk shows that equal access signaling is being used. ISP collects the called number and the calling number, noting that the signaling indicates that the call is to be handled by the intraLATA carrier. The intraLATA carrier in the OPRTK form is the one used. Assume that it is set to "LEC".

3. The DIOPR form (5418 Record) is looked at, using the carrier of "LEC" determined above as the key. One thing this form shows is restrictions on the type of calls to be handled (such as coin restrictions). The type of traffic arriving is compared against any restrictions. If this call is not handled, then the alternate code index, the screen index from the OPRTK form and a prefix of none are used as the keys to a RAR form to get a route index to send this call to an external operator system, out an FOPRI or FOPRT trunk. When this occurs, further routing and charging information is found in the usual manner from the 5302, 5303 and 5202 Records.

4. If not transferred out yet, then the primary code index for this carrier in the DIOPR form is looked at. If it is not zero or if the OSPS TA field on the OSPSOPT form is set to "N", the call is still sent to an external operator system. The route index to do this comes from the RAR form, where the keys are the primary code index from the DIOPR form, the screen index from the OPRTK form and a prefix of none. The routing is then done in a manner equivalent to that above.

5. If not transferred out yet, this zero minus call is passed off to an internal OSPS. The remaining steps are only done when there is an internal OSPS.

6. The full back number is now constructed. Signaling should have sent the NXX-XXXX of the calling number. To determine the originating NPA, the OPRTK form is checked to see if there are any protected NXXs served by the incoming trunk group. If there are, then the NXX of the back number and the NPA from the OPRTK form are used as the keys to the PRONXX form (5413 Record). If an entry in the PRONXX form is not found or if there are no protected NXXs, then the back number is assumed to have come from the NPA given in the OPRTK form. If an entry is found on the PRONXX form, then the NPA from that record is used.

7. The OPRTK form is checked to see if there are calls arriving from ACQS (Automatic Charge Quotation Service) establishments on the incoming trunk. For this example, assume that the form

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shows none.

8. The OPRTK form is checked to see if OLS (Originating Line Screening) may be done on the back number. If so, the SM that contains the screening information for this NPA-NXX is found in the NPAMAP form, based on the back number previously determined. Using the data on the correct SM, the LINESCRN form provides the OLS screening index (SCRN CODE) as a key into the SCRNCODE form, which provides the restrictions. If there is a true billing number associated with this back number, then the back number is replaced with the true billing number.

9. Since there is no forward number, the call will be routed to an operator.

10. A call type is now determined by accessing data from the ACDCTP form first. For this example, the keys are a CALL ORIGIN of "ISP", a PREFIX of "0M" (zero minus), COIN indicator of "N", CARRIER is "LEC" and OSPS ID is "0" (non-interflow call). Assume for this example that the incoming trunk group number is to be used in determining the call type and that an entry for this trunk group exists on the ACDPOL form. Thus, using the above five pieces of information, the PRE CALL ID and SECOND LEVEL of TGRP are obtained from the ACDCTP form. A SECOND LEVEL of TGRP indicates that the ACDPOL form must be accessed. The PRE CALL ID obtained and the incoming trunk group number associated with the call are keys to the ACDPOL form. Assume that ACDPOL has THIRD LEVEL set to "NONE". Therefore, call type determination is completed and the call type is the value given to CALL TYPE in 5412-B/C/E/F.

11. Using this call type, the serving team to handle the call is found in the OSPSCT form and the ACD (Automatic Call Distributor) selects an operator who belongs to that team (as shown on the OSPSOA form) to handle the call.

12. The operator's VDT shows the seizure, displaying the back number and a carrier of LEC with a lock next to it since carrier selection enforcement is on. Based on the incoming trunk group, the TGNLEC form (5443 Record) is checked to see if any special display is associated with this trunk group. If so, then the LEC index for that trunk group is used to access the LECTEXT form (5444 Record) and display that text to the operator. If there is originating line screening, the text found in the SCRNCODE form is available on the screen page of the operator's VDT. Any OLS billing restrictions are enforced.

13. The operator enters a forward number. For a 7-digit domestic forward number, an NPA is prepended to it before digit analysis. If the OPRTK form for the incoming trunk group indicates that there are protected NXXs, then the PRONXX form is checked with the NPA from the OPRTK form and the entered NXX. If such an entry is found, that true NPA is prepended to the entered digits; otherwise, the NPA in the OPRTK form is used. If a 3- or 10-digit domestic number is entered, no prepending is done.

14. Digit analysis is done on this number. The DAS (Digit Analysis Selector), used as the starting point, is the one associated with the incoming trunk, found in TKGRP form. Digit analysis is done using the standard data given on the 5300-1, 5309, 5300-3 and 5300-5 Records. If this is an intraLATA call, then exception area mapping is not done and the call processing continues at step 16. If this is an interLATA call, continue with step 15.

15. Since exception area mapping is turned on, the NPAMAP form is checked with the back number to determine what exception area (if any) the call originated in. This form is also checked with the forward number for a terminating exception area. If both are in such areas and if they correspond in the EXMAP form (5440 Record), the call is intraLATA, digit analysis is successful and we can continue below. If any of this is not true, digit analysis fails and an error display is given to the operator indicating that the forward number is not compatible with the carrier. The carrier will not change automatically since carrier selection enforcement is on.

16. Since the forward number is valid and can be served by the current carrier, the TCSNPA form (5437 Record) is checked with the forward number to see if any terminating code restrictions are in effect.

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If so, then any TCS text associated with the terminating screening code is retrieved from the TCSTEXT form (5436 Record) and displayed to the operator. Any terminating billing restrictions are also enforced.

17. When the operator tries to route this call, the code and route indexes used come from either the INDIT or LDIT forms. This is the same as is normally done for POTS (Plain Old Telephone Service) calls. When the RAR form is accessed in routing, the code index just mentioned is used, a prefix of none is always used and the screen index from the TKGRP form for the incoming trunk group is used. The route index from the RAR form is used to index into a RTIDX form (5303 Record), which contains the trunk group used for routing this call.

29.2 Example 2: 0+ Call on MF Trunk

This example looks at a 0+ call that arrives on an MF trunk. This assumes that the number dialed is interLATA and that the call is arriving at an OSPS owned by an interLATA carrier. The call may be sent directly from an end-office or from an ISP located in another switch.

1. An incoming trunk is seized. The TKGRP form indicates that it is an "FIOPR" trunk and thus ISP software is invoked.

2. Assume the OPRTK form shows that equal access signaling is not being used and that the trunk group carries dedicated interLATA traffic. The carrier for this call is the interLATA carrier found in the OPRTK form. If the trunk was not marked as carrying dedicated traffic, digit analysis would have been done, using the DAS found on the TKGRP form associated with the incoming trunk. Note that the DIOPR form (5418 Record) is looked at next and that the ICF form (5305 Record) is never checked at this time.

3. Repeat step 3 from example 1, checking the DIOPR form to see if handling of the call is restricted and should be transferred out. In this example, the carrier used to access the DIOPR form is the interLATA carrier specified on the OPRTK form.

4. The primary code index is checked in the DIOPR form to see if the call should be transferred out as in step 4 from example 1.

5. If not transferred out yet, this zero plus call is passed off to an internal OSPS. The remaining steps are only done when there is an internal OSPS.

6. The full back number is now constructed in the same manner as in step 6 of the first example.

7. A check for ACQS treatment is made, as in step 7 of example 1. If the OPRTK form indicates that there may be ACQS traffic on this trunk, then the ACQS form (5425 Record) is checked with the back number. If no entry is found, this is not an ACQS call; otherwise, information about the ACQS establishment is found on this form.

8. Originating line screening is checked for, as in step 8 of example 1.

9. If 0+ a 7 digit domestic number was dialed, then a full 10-digit forward number is constructed. The OPRTK form is again checked to see if there are protected NXXs served by the incoming trunk. If so, the NXX dialed and the NPA from the OPRTK form are used as the keys to the PRONXX form. If an entry in the PRONXX form is not found or if there are no protected NXXs, then the dialed number is assumed to have the same NPA as is found in the OPRTK form. If an entry is found in the PRONXX form, then the NPA from that form is used instead. If the number dialed is other than a 7-digit domestic number, then no prepending is done. This is the number that digit analysis is done on.

10. Digit analysis is done on the possibly modified dialed number. Data appropriate to route the call using this OSPS is found. The DAS and thus subsequent digit analysis data, is based on the

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incoming trunk group and is the same one that ISP used if it did digit analysis. The carrier previously selected by ISP is still used and, for this example, it is assumed to be the switch owner. Since it is the owner, the routing data found on the INDIT or LDIT forms is used. If the carrier was different from the owner, then the routing information relevant for that carrier from the ICF form would be used. If the call type from digit analysis was "ADDON" or "MEETME", the call would be handed off to Alliance Teleconferencing at this point. Note that if this call was dialed as a zero plus a 7-digit domestic number, ISP did digit analysis on that 7-digit forward number, while a 10-digit forward number with a prepended NPA is used at this time.

11. Since the forward number is valid and can be served by the current carrier, the TCSNPA form (5437 Record) is checked with the forward number to see if any terminating code restrictions are in effect. If so, then any TCS text associated with the terminating screening code is retrieved from the TCSTEXT form (5436 Record) and displayed to the operator. Any terminating billing restrictions are also enforced.

12. Assuming originating line screening does not prevent it, automated calling card service is given to the call. Based on the back number, the ACCST form (5428 Record) is inspected to see if this call gets any special prompt treatment. If no special treatment is given, the ACCS 2 field on the OSPSOPT form indicates if the call routes to a tone or to an announcement, both generated by a DSU2-RAF-DTA.

13. An announcement is given and the customer enters a valid card number.

14. The call is routed, using the code and route indexes that came from one of the INDIT or LDIT forms. This is the same as is normally the case for POTS calls. When the RAR form is accessed in routing, the code index just mentioned is used, a prefix of none is always used and the screen index from the TKGRP form for the incoming trunk group is used. The route index from the RAR form is used to index into the RTIDX form, which contains the trunk group used for routing this call.

29.3 Example 3: 0+ Call on MF Trunk from Non-Conforming End Office

This example looks at a 0+ call that comes from a non-conforming end office on an MF trunk. Interflow and Intraflow features are not turned on. This is an intraLATA call for which the operator will enter and route to a non-floatable route number. Assume that exception area mapping and LATA mapping are not done.

1. An incoming trunk is seized. The TKGRP form indicates that it is an "FIOPR" trunk and thus ISP software is invoked.

2. The OPRTK form shows that equal access signaling is not being used. Assume the form specifies that this trunk is not dedicated to certain traffic. ISP starts to collect the called number so that it may do digit analysis. The DAS associated with the incoming trunk, found in TKGRP form, is the one used. Digit analysis uses the standard data given on the INDIT or LDIT form and will interpret as far as the data indicates. In order to allow for overlap outpulsing, ISP may not collect the entire dialed number at this time. Since an intraLATA number was dialed, the intraLATA carrier found in the OPRTK form is used. Assume that it is set to "LEC".

3. Repeat step 3 from example 1, checking the DIOPR form to see if handling of the call is restricted and if it should be transferred out.

4. The primary code index is checked in the DIOPR form to see if the call should be transferred out as in step 4 from example 1.

5. If not transferred out yet, this zero plus call is passed off to an internal OSPS. The remaining steps are only done when there is an internal OSPS.

6. The full back number is now constructed in the same manner as in step 6 of the first example.

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7. A check for ACQS treatment is made, as in step 7 of example 1. Assume that there is none.

8. Originating line screening is checked for, as in step 8 of example 1.

9. A default NPA may be added to the forward number in the same manner as step 9 of example 2.

10. Digit analysis is again done on the dialed number. Data appropriate to route the call using this OSPS is found. The DAS is the same as was used by ISP in step 2 of this example. Note that if this call was dialed as a zero plus a 7-digit domestic number, ISP did digit analysis on that 7-digit forward number, while a 10-digit forward number with a prepended NPA is used at this time. The carrier previously selected by ISP is still used. Since the local carrier is used and this is a locally owned OSPS, the routing data for this call comes from the local translator, not from the ICF form (5305 Record).

11. Since the forward number is valid and can be served by the current carrier, the TCSNPA form is checked with the forward number to see if any terminating code restrictions are in effect. If so, then any TCS text associated with the terminating screening code is retrieved from the TCSTEXT form and displayed to the operator. Any terminating billing restrictions are also enforced.

12. Assuming the OLS does not prevent it, automated calling card service is given to the call. Based on the back number, the ACCST form is inspected to see if this call gets any special prompt treatment. Assume that this form says that the call should route to the operator.

13. The Automated Call Distributor selects an operator to send the call to, as in step 10 of example 1. A prefix of 0+, rather than 0M, is used in this case since the call was dialed as 0 plus other digits.

14. The operator's VDT shows the seizure, displaying the back number, the forward number and a carrier of LEC. Based on the incoming trunk group, the TGNLEC form (5443 Record) is checked to see if any special display is associated with this trunk group. If so, then the LEC index for this trunk group is used to access the LECTEXT form (5444 Record) and display that text to the operator. If there is originating line screening, the text found in the SCRNCODE form (5415 Record) is also available on the screen page of the operator's VDT. Although not displayed, any OLS billing restrictions are enforced.

15. The operator enters and routes to a non-floatable route number.

16. Digit analysis is done on this route number, using the DAS from the TKGRP form. For this number to be valid, the call type determined by digit analysis must be either "OPINW" or "AUTINW".

17. If a carrier is specified for this non-floatable route number on the OCNTWK form, then that carrier is used; otherwise, the switch owner will be tried.

18. If the digit analysis data indicates that this is an interLATA call and the carrier set above is not of that sort, then the CARRIER ID ROUTE field on the OSPSOPT form is used. .SP The routing data used for this call depends on the carrier. Since this is a locally owned OSPS, the routing information in the digit translator is set to route using the local carrier. Thus, if the call uses the local carrier, the data from the translator is used. If an interLATA carrier is used, the routing information for that carrier is found in the ICF form. If this call originated on a RSM, then the interLATA carrier routing information from the ICF form is superseded by the RSM specific information from the RSMCAR form (5421 Record). If the ICF form for the interLATA carrier indicates that destination mapping is used, the CDIM form is checked after getting routing information from the ICF form or the RSMCAR form if appropriate. If a carrier code index and a carrier route index pair are specified for the previously determined code index and carrier id, then these are used; otherwise, the routing data found above is used.

19. When this connection is set up and the RAR form is accessed, the code index mentioned above is used, along with a prefix of none and the screen index from the TKGRP form. The route index from the RAR form is used to index into a RTIDX form, which contains the trunk group used for routing

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this call.

20. When the operator releases the route party and sets up a connection to the forward party, the routing information determined in step 10 is used and the call is routed as in step 16 of example 1.

29.4 Example 4: 0- Call from Conforming End Office, Interflow

This example is the same as example 1, except Interflow has been activated for the serving team that is to receive the call. The call enters the originating interflow switch and is handled as in steps 1 through 10 in example 1. The differences for Interflow begin with step 11, which is where this example will begin.

1. After the call type has been determined as in step 10 of example 1, the serving team that is to receive the call is found in the OSPSCT form.

2. A check is made to determine if the serving team is activated for Interflow and if so, to what destination. For this example, it is activated.

3. Using the destination ID, the switch then looks in an INFLTADP form (5452 Record) to obtain the B and D channel trunk groups assigned to the EDSL that connects to the receiving (destination) interflow switch. The switch sends the call to the receiving interflow switch over an available B channel. Information that is sent to the receiving switch includes a four-digit OSPS ID and four alphanumeric name of the originating interflow switch as found in OSPSOPT form (5424 Record). The OSPS ID is used in determining the call type on the receiving interflow switch. The alphanumeric name is displayed to the operator when the interflow call seizes a position on the receiving switch.

4. The interflowed call is received on the receiving interflow switch and the call type is redetermined as described in step 10 of example 1. The only difference is that the OSPS ID of the originating interflow switch, the incoming trunk group on the originating interflow switch and the call destination index on the originating interflow switch may be used as input to the ACDCTP form (5412-A/D Records) and the ACDPOL form (5412-B/C/E/F Records).

NOTE: The receiving switch may not have populated the ACDCTP form with the originating switch OSPS ID and/or the ACDPOL form with the originating switch's trunk group and destination information. This will not cause an error in call type determination.

1. After the call type is determined on the receiving switch, the call is routed to an operator's position and completed as in steps 11 through 17 of example 1.

29.5 Example 5: INTRAFLOW

Intraflow has two basic scenarios:

1. a call is looking for an operator because it has been queued too long,

2. an operator is looking for a call that has been queued too long.

29.6 Example 5-1: Call Looking for a Server

The OSPS scenario for a call to this point is the same as any call that comes into the switch that is for an operator. The following steps are what the ACD would do after the request was made for an operator and no operator was found on the principal serving team that handles the assigned call type.

1. If no position is available on the principal serving team designated to handle this call (on the

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OSPSCT form), the call is queued.

2. If the office parameter INTRAFLOW ALW? is set to "Y" on the OSPSOPT form and the call type has INTRAFLOW ALW set to "Y" on the OSPSCT form, and the system is not in overload, the ACD looks for a supporting serving team for the assigned call type on the OSPSCT form. The teams SUP TEAM 1 through SUP TEAM 8 and the thresholds THRSH1 through THRSH8 from the OSPSCT form are used for the search for a supporting serving team to handle an intraflowed call.

3. The current delay on the oldest call in the queue is compared to the threshold (THRSH1) for the first supporting serving team (TEAM1) as retrieved from form 5404-2. If: (1) the current delay on the queued call is greater than THRSH1 for supporting serving team TEAM1; and (2) TEAM1 has INTRAFLOW ALW set to "Y" in its STINFO form and (3) supporting serving team TEAM1 is not activated for interflow, then PCT INTRAFLOW is checked in the STINFO form for TEAM1 to make sure it is not handling more than that percent of intraflow calls as a supporting serving team.

4. Assuming these conditions are met, the ACD routes the queued call to a position in supporting serving team TEAM1.

5. Assuming one of the conditions are not met for TEAM1, supporting serving team TEAM2 is checked in the same manner using its threshold (THRSH2). The process continues until: (1) a position on a supporting serving team is found; (2) the call delay does not exceed the threshold of the supporting serving team being checked or (3) there are no more supporting serving teams to check.

6. After a supporting serving team is found, an operator is selected to handle the call (as shown on the OSPSOA form).

29.7 Example 5-2: Server Looking for a Call

This scenario is the case where an operator position becomes available and the ACD initiates a search for another call for that position to receive.

1. When a position becomes available, the principal call queues assigned to the associated serving team on the STINFO form are searched for a call that this position can receive.

2. If: (1) no call is found in any of the principal call queues; (2) INTRAFLOW ALW? on the OSPSOPT form is set to "Y"; (3) the serving team that this position belongs to has not exceeded its PCT INTRAFLOW on the STINFO form (i.e., the percentage of intraflowed calls currently being served by this serving team is not greater than PCT INTRAFLOW); (4) the serving team has INTRAFLOW ALW set to "Y" on the STINFO form and (5) the system is not in overload, then all supporting call queues are searched for a call to handle.

3. For each call queue that has INTRAFLOW ALW set to "Y" on the OSPSCT form, the available serving team is searched for in that call queue's list of supporting serving teams until a match is made.

4. Once a match is made, the delay of the oldest call on the associated call queue is compared to the threshold assigned to this serving team on the OSPSCT form. If the threshold is not exceeded, the call delay ratio is calculated and the next call queue for which this serving team is a supporting serving team is searched for.

5. After all call queues are searched, the call with the highest delay ratio is routed to the available position.

29.8 Example 6: Non-ISP to VDT Calls

This feature allows a non-Intermediate Switching Point (non-ISP) call to be directed to a VDT position.

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The call queue can be determined based on either the incoming trunk group number or the digits received.

Non-ISP calls come from Multifrequency, Dial Pulse and Seizure Only trunks. Common Channel Signaling and ISP trunks are not supported.

The DAS associated with the incoming trunk from the TKGRP form (5202 Record) is used as input to the digit analysis forms to determine the call type of "NIT". The value of "NIT" is passed along to the call processing software so that special handling can be performed for the routing of this call. The NON-ISP call then enters call type determination (ODA forms ACDCTP and ACDPOL) to determine the call type (queue). The call type is determined by information from digit analysis, the incoming trunk group and other information as specified earlier in ACD EXPANDED CALL TYPE DETERMINATION.

After the call type is determined, the serving team must be determined via the OSPSCT form using the call type as the key. Now that the serving team is known, a special check is performed to see if the serving team is currently interflowing (via reroute to the network) NON-ISP calls.

If interflow is activated, the incoming destination index, the trunk group and the interflow destination identification number are used to index into an INFLDEST form (5448 Record). The result of this reference is a new outgoing destination index to which the call should be interflowed. The call is handled by that destination office as if it is a new incoming call.

If interflowing (via reroute to the network) is not in effect for this serving team, then an operator is requested from the ACD.

30. MORE EFFICIENT CALL HANDLING

MECH (More Efficient Call Handling) allows a call to be handled by two operators during the normal completion of an operator assisted call. This saves operator work on Person-to-Person and Collect Calls. The first operator enters the class of charge for the call and may enter the name of the person desired and the name of the calling party. Then the first operator releases the call, OSPS outpulses, monitors for answer supervision and connects the call to a second operator when the called party answers. The second operator (also known as the MECH operator) obtains billing authorization or the requested party. If the proper person and/or acceptance of charges is obtained, the MECH operator can release the call with both parties connected. Unanswered calls are disconnected when the calling party hangs up.

30.1 ODA Forms

The following forms have been changed for MECH translations.

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQRA	5821		35	19.10
EQRAP	5822	8	36	20.10/20.22
FIXRT	5301-1	3	3G	10.1
OSPSCT	5404-1	3	4E	21.22
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63
TCSNPA	5437	3	4AL	27.2
TCSCC	5438	3	4AM	27.3
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

The following forms are also required for MECH translations.

Other Required ODA Forms

Form Name	Record Number	Division	Section	RC View
RTIDX	5303	3	3P	10.2
ANNHD	5531	3	5AE	8.61

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30.2 Translation Requirements For MECH

Collect Calls or Person-to-Person calls are eligible for MECH treatment. Once a valid back number is obtained, the OLS (Originating Line Screening) is checked to determine the billing types allowed from the originating station. Upon entry of a valid forward number, valid billing type and carrier, a BNS (Billed Number Screening) or CCS (Calling Card Service) query is launched. The call continues when a favorable reply is returned from the appropriate database. Figure 4 shows the form flow for MECH.

ANNHD form (5531 Record) - The header IDs that are entered in the UNBRANDED ANNC field or the BRANDED ANNC field on the OSPSOPT form are defined in the ANNHD form. For more information on translations for recorded messages, see Division 2, Section 1S.

The header IDs that are defined in the ANNHD form (5531 Record, RC View 8.61) are entered in the UNBRANDED ANNC field or the BRANDED ANNC field.

EQRA form (5821 Record) - The MECH Feature uses the following fields on the EQRA form.

- AOC = "Y"
- SERVICE CNT

The MECH feature uses DSU2-RAF (Digital Service Unit 2 - Recorded Announcement Function) service circuits to play MECH announcements. The ACCS (Automated Calling Card Service) capability uses a DSU2-RAF with DTA (Dial Through Announcements) to generate announcements on an output port and to decode dialed digit signals on an input port. The coin capability uses a DSU2-RAF with coin (DSU2-RAF-COIN) to generate announcements on an output port and to detect deposited coin tones on an input port. For ACCS and coin, only 20 of the 32 available RAF channels may be used due to the real time demands of these applications. Prior to 5E6 Software Release, the remaining 12 channels were unused. These channels may now be used as AOC (Announcement Only Channels) by the MECH feature to play MECH holding announcements without impacting the ACCS and coin capabilities.

EQRA form is used to define the characteristics of a RAF unit. If "DTA" is entered in the SERVICE TYPE field, the RAF unit is used for ACCS. If "CTR" is entered in the SERVICE TYPE field, then RAF unit is used for coin. A RAF unit may be used for MECH if either "DTA" or "CTR" is entered in the SERVICE TYPE field and the AOC field is set to "Y". The AOC field allows unused ACCS and coin channels to be used for announcements only. (For Recent Change only, to enter the data for RAF, "DTA" must be entered in SERVICE TYPE for ACCS, coin or MECH. The Recent Change only field, COIN UNIT, must be set to "Y" to allow a RAF to be used for coins).

When "Y" is entered in the AOC field, all channels not initialized as "DTA" or "CTR" are initialized as type "ANN" for announcement only trunks. If "N" is entered in the AOC field, all channels not initialized as "DTA" or "CTR" remain uninitialized.

SERVICE CNT field identifies the number of channels that should be initialized as "DTA" or "CTR". When "Y" is entered in the AOC field, the remaining channels are initialized as announcement only. If SERVICE TYPE is "DTA" or "CTR" and "N" is entered in the AOC field, the valid entries are 1 through 20. If "Y" is entered in the AOC field, the valid entries are 0 through 20. For example, if the SERVICE TYPE is "DTA" and AOC is "Y", then an entry of 20 in the SERVICE CNT field indicates that 20 channels are initialized for DTA use and 12 are initialized for AOC to be used for MECH. An entry of "0" in SERVICE CNT field allows an entire RAF unit to be initialized as announcement only.

All DSU2-RAF ports (channels) on the same DSU2-RAF must be assigned to the same trunk group (TGN) on TRUNK forms, with the exception that AOC (Announcement Only Channels) on DTA or CTR RAFs, as defined on the EQRA form, may be assigned to a different trunk group.

AOC cannot be assigned to RAFs of type DTA or CTR unless the AOC field on the EQRA form is "Y". AOC channels must have a TRKCLS of "RAFANNC" on the TKGRP form(s).

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EQRAP form (5822 Record) - This form defines the RAF circuit pack for OSPS MECH announcements.

FIXRT form (5301-1 Record) -

To route a call to the DSU2-RAF-AOC channels to play the MECH holding announcement, "ROAOC" must be entered in the FIXED ROUTE TYPE field on the FIXRT form. The ROUTE INDEX field provides the key into the RTIDX form which points to the trunk group that accesses the AOC channels.

For more translation information on RAFs see Division 2, Section 1S on RAF (Recorded Announcement Function).

OSPSCT form (5404-1 Record) After MECH treatment has been applied to a call, if the originating station is non-coin or is coin without a paid class of charge and the back party sends a flash prior to the forward party answering, the forward connection is dropped and a recall operator is requested. DIOR (Direct International Originations) calls and coin PAID calls ignore a flash during the ringing interval. The recall type used for this call is the entry in the RECALL CALL TYPE field on the OSPSCT form. The RECALL CALL TYPE must be defined in the OSPS CALL TYPE field.

If the forward party answers before the back party sends a flash, the forward and back parties are both muted. The system attempts to attach an operator belonging to the MECH call type entered in the MECH TYPE field on the OSPSCT form for the original call type. If "N" is entered in the MECH ANNC field on the OSPSOPT form, then the entry in the 1ST ANNC DELAY field on the OSPSCT form gives the first delay threshold to be exceeded before a holding announcement will be played.

If MECH TYPE is entered on an OSPSCT form, it must match the OSPS CALL TYPE on the same form or another OSPSCT form. Also, if MECH TYPE matches OSPS CALL TYPE on a different OSPSCT form, the OPER TYPEs must be the same.

OPRTK form (5417 Record) - If collect calls are allowed to the forward number, the MECH field on the OPRTK form is checked. If it is set to "Y", then MECH treatment can be applied to calls arriving on the trunk group identified in the TGN field. This field provides the TCA (Telephone Company Administration) with the ability to activate or deactivate the MECH treatment based on the incoming trunk group. By default, the MECH treatment is allowed for incoming trunks.

OSPSOPT form (5424 Record) - The following fields are new or have changed for MECH.

- FEATURE WORD
- PERSON SWITCH
- MUTE BK
- MUTE FWD
- MECH ANNC
- MECH BRAND
- UNBRANDED ANNC
- BRANDED ANNC
- REPEAT INTERVAL
- OFF HOOK WAIT

The FEATURE WORD field must be set to "Y" for further checks on MECH to continue. The FEATURE

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WORD field can also be set to "T" for testing calls eligible for MECH treatment over the trunk group and member number, to allow TCA to test MECH prior to activating the feature.

If a Collect Call is also a Person-to-Person call or the call is a Person-to-Person call the PERSON SWITCH field should be set to "Y" to allow MECH treatment to be applied to calls with a person rate class. If it is set to "Y", a PR OK message is displayed to the operator indicating MECH treatment can be applied to the call. If the operator presses the SEND key, the call will not be considered for MECH treatment. If the operator presses the POS REL key, the appropriate number is outpulsed and MECH treatment is given to the call.

When a call is released for MECH treatment, a conference circuit is obtained prior to outpulsing the forward number. Because conference circuits are used for many purposes, the ringing interval is timed after outpulsing occurs. If answer supervision is not received within the time interval specified in the OFF HOOK WAIT field, the call will be torn down and the conference circuit made available. The default wait value is four minutes. A value of zero disables the timing, i.e., no timing occurs.

If the forward party answers the MECH call and a flash has not been received from the back party, both parties are muted. If an operator is available, the MUTE BK field and the MUTE FWD field indicate if the back and forward parties are muted upon position seizure. An entry of "N" in either of these fields indicates that the voice path to the back or forward party should be unmuted when attaching to the MECH operator.

When a MECH operator is not immediately available to handle a MECH call, the call has to be queued. The system then determines what delay announcement to play, if any. If "Y" is entered in the MECH ANNC field, the MECH holding announcement will always be played when a MECH call is queued. If "N" is entered in the MECH ANNC field, then the holding announcement is only played when the expected delay exceeds the first delay threshold entered in the 1ST ANNC DELAY field on the OSPSCT form. If an announcement is played, the MECH branded announcement will be played. If "Y" is entered in the MECH BRAND field and the carrier of the call is the switch owner. If "N" is entered in the MECH BRAND field or the carrier is not the switch owner, the MECH unbranded announcement is played.

PHRASE form (5534 Record) - The MECH phrases are defined on the PHRASE form (5534 Record, RC View 8.63). An example of a branded announcement is "Please hold, an AT&T operator will be connected to the call promptly." An example of an unbranded call is "Please hold, an operator will be connected to this call promptly." Announcement Translations are discussed in Division 2, Section 1S, Recorded Announcement Feature.

The MECH holding announcement is repeated if the MECH operator is not available in the time period identified in the REPEAT INTERVAL field of the OSPSOPT form.

The phrases used for MECH calls in a MECH operator queue are defined on the PHRASE form.

RTIDX form (5303 Record) - The ROUTE INDEX entry on this form identifies the trunk group used to access the AOC channels. The ROUTE INDEX used for AOC channels must have "GENANN" entered in the CI ROUTE TYPE field. The TRUNK GROUP NUMBER on the RTIDX form must correspond with a TGN on the TKGRP form.

TCSNPA form (5437 Record)
TCSCC form (5438 Record) - If the class of charge is collect, the TCSNPA form (5437 Record) is checked using the NPA-NXX of the forward number or TCSCC form (5438 Record) is checked using the Country Code of the forward number to identify if the forward number is allowed to accept collect calls.

The TCSNPA form and the TCSCC form are checked to determine if MECH treatment is allowed to be applied to calls for the forward number. TCSNPA form identifies the TCS (Terminating Code Screening) information associated with a forward NPA (Numbering Plan Area) or NPA-NXX number. MECH is allowed by default on the TCSNPA form.

The TCSCC form identifies the Terminating Code Screening associated with a forward Country Code.

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MECH treatment is denied by default on the TCSCC form.

TKGRP form (5202 Record) - The TGN pointed to by the RTIDX form for AOC channels must have the following characteristics:

- TRK DIR = "RAF"
- HUNT TYPE = "FIFO"
- TRKCLS = "RAFANNC"
- SVC GRP = "AOC"

RAF (Recorded Announcement Function) trunk assignments (RAF EN is entered on the TRUNK form) for DTA (Dial-Through-Announcement) channels or CTR (Coin Tone Receiver) channels must follow an assignment pattern as explained in TG-5 Division 8, Section 35 and shown on the 5271-4 RAF Equipment Number record.

The TRKCLS on the TKGRP form must agree with the RAF TYPE on the 5271-4 Recorded Announcement Function Equipment Number Record. The 5271-4 office record is pointed to by the RAF EN on the TRUNK form.

TRKCLS on the TKGRP form must be "RAFANNC" if the AOC (Announcement Only Channels) are assigned to RAFs of type "DTA" or "CTR" and the AOC field on the EQRA form is "Y".

TRUNK form (5204 Record) - The TRUNK form defines the members of the trunk group to access AOC channels.

If RAF EN is entered on the TRUNK form, then RAF (Recorded Announcement Function) trunk assignments for DTA (Dial-Through-Announcement) channels or CTR (Coin Tone Receiver) channels must follow an assignment pattern as explained in TG-5 Division 8, Section 35 and shown on the 5271-4 RAF Equipment Number record.

All DSU2-RAF ports (channels) on the same DSU2-RAF must be assigned to the same trunk group (TGN) on TRUNK forms, with one exception, that is the AOC (Announcement Only Channels) on DTA or CTR RAFs as defined on the EQRA form may be assigned to a different trunk group.

31. DIOR

The DIOR features have been moved to Division 2, Section 3K.

32. IMPROVED THIRD NUMBER ACCEPTANCE

For 5E6 and later Software Releases, the ITNA (Improved Third Number Acceptance) feature provides TCA (Telephone Company Administration) with the ability to determine whether third number verification by the OSPS operator is required, and 100 therefore, the ability to automatically outpulse to the third number. The intent of this feature is to reduce fraud on bills to third number calls and to relieve the operator from the task of deciding if third number verification is required. Automatic outpulsing also reduces the operator work time for calls which require billing verification.

32.1 ODA Forms

The following forms are new or changed for the ITNA feature.

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EXCPT	5461-1	3	4BI	26.32

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OSPSOPT	5424	3	4Y	8.9
SETID	5461-2	3	4BJ	26.30
SPECL	5461-3	3	4BK	26.31
TREAT	5461-4	3	4BL	26.33

32.2 Translations for ITNA Treatment of Calls

Figures Figure 5 and Figure 6 give the form flows for the ITNA feature. The following forms need to be entered for ITNA translations.

ITNA treatment is only provided on Back Third Number requests. If the Back Number is not screened against Back Third Number billing (as identified in the OLS (Originating Line Screening) data), a BVA (Billing Validation Application) BNS (Billed Number Screening) or LIDB (Line Information Data Base) BNS query is launched after the following is entered: a valid forward number, valid back third number, Back Third Number class of charge, and carrier. In addition, if the carrier for the call is AT&T, a NCD (Network Call Denial) query is launched. ITNA treatment will be provided based on the replies from the BVA or LIDB database (and NCD database when AT&T is the carrier for the call). The following tables summarize when ITNA treatment is given to a call.

BVA Table

Reply	BVA		
	Allow	**Deny**	**Indeterminate**
Allow	ITNA	No	ITNA
Deny	No	No	No
Indeterminate	Special	No	Special

LIDB Table

Reply	LIDB		
	Allow	**Deny**	**Indeterminate**
Always accept	Allow	No	Allow Allow

Table entries of "ITNA" indicate that ITNA treatment will be performed. Entries of "No" indicate that ITNA treatment will not be attempted. The ITNA feature has the ability to provide Special Area checks for number that return Indeterminate replies from the BVA or LIDB databases when the NCD reply is "Allow" or "Indeterminate". Special Area checks are provided for situation where the third number is not in the BVA or LIDB database and the OSPS is capable of handling the call. An example of this is traffic handled near the Canadian border where the back third number NPA is actually a Canadian NPA. If Special Area checks are allowed, ITNA determines if an entry is available for the back third number NPA. If the back third number NPA is found, then ITNA checks are performed. LIDB reply of "Always Accept" indicates that third number verification is not required. For these cases, ITNA treatment is not provided as third number billing is always accepted by the third number.

OSPSOPT form (5424 Record) - For cases in which ITNA treatment will be performed, the OSPSOPT form has "Y" entered in the ITNA field indicating that ITNA feature is activated and ITNA Treatment Tables checks will be performed. If ITNA field is set to "N", bill to third calls are handled as they were in previous Software Releases.

(For Recent Change only, an entry of "T" in the ITNA field provides the TCA with the ability to test the ITNA feature over a predefined test trunk prior to activation of the feature to calling customers. When "T" is specified, ITNA treatment will be performed for calls that are placed on the specified trunk group and member number.)

When the BVA or LIDB reply is "indeterminate" (and the NCD reply is either "Allow" or "Indeterminate" if AT&T is the carrier) and the ITNA CHECKS field is set to "Y", then the Special Area Table is checked.

SPECL form (5461-3 Record) - If the Back Third Number NPA has an entry in the Special Area Table, the ITNA Treatment Table is checked and ITNA may be applied to the call. If an entry is not found, a display will be shown on the VDT indicating that an indeterminate reply was received.

TREAT form (5461-4 Record) - The ITNA Treatment Table information is entered in the TREAT form. The ITNA Treatment Table indicates whether acceptance is always required, acceptance is not required,

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or acceptance depends on the time of day. Entries in this table are based on the Originating Station type, carrier for the call, and the incoming trunk group number. An entry of "UNKNOWN" or "5" in the ORIG STAT TYPE field indicates all originating station types other than the ones specifically listed will be treated the same. An entry of "OTHER" indicates exclusion, that is all originating types other than, for example, non-coin or non-public.

Specific carrier entries may be made in the "CARRIER" field. This indicates that Bill to Third Party calls handled by that carrier may have specific ITNA treatment defined for that carrier. Single trunk group entries or a range of trunk groups may be entered on this record in the BEGIN TGN and the END TGN fields. Specific ITNA treatment is provided for calls arriving on the identified trunk group(s). If the CARRIER and TGN fields are left blank, then the Bill to Third Party calls for the Originating Station Type receive the same treatment regardless of carrier and/or incoming trunk group.

The TIME SET ID field is based on the Originating Station, carrier, and incoming trunk group. If "ALWAYS" is entered in the TIME SET ID field, then acceptance is always required and the Bill to Third Party number will be outpulsed automatically for verification. If "NEVER" is entered in the TIME SET ID field, then acceptance is not required. However, the calling number may have an entry in the ITNA Exception Table overriding the treatment identified in the ITNA Treatment Table. If "NEVER" is entered, the EXCPT form is checked using the NPA-NXX-XXXX of the calling number. If TS1 through TS8 (TCA defined time SET IDs) are entered, and entry is required on the SETID form.

When the TREAT form is entered with a TIME SET ID equal to an entry other than "NEVER" or "ALWAYS", a SETID form must be entered with TIME SET ID equal to TIME SET ID on the TREAT form.

The range of trunk group numbers should never overlap on the TREAT form.

The data entered on the TREAT form must be consistent for alike ORIG STAT TYPEs.

There are three ORIG STAT TYPEs of "PREPCOIN". One form entry has a CARRIER and a TGN entered. The other two only have TGNs entered. This is an error since all the "PREPCOIN" entries must have the same fields entered consistently (they do not have to match). However, it is permissible to have a TGN entered on one and a TGN range entered on another.

SETID form (5461-2 Record) - This form identifies the times of day that auto outpulsing should be performed. Up to eight TIME SET IDs may be defined. If a Bill to Third call is attempted at a time of day that falls on or between the start or stop times defined on this form, auto outpulsing to the Bill to Third number takes place. If the call is attempted outside of the range of start and stop times, the ITNA Exception Table is checked to determine if alternate ITNA treatment should be provided to the calling number.

EXCPT form (5461-1 Record) - The TIME SET ID on this form indicates that auto outpulsing should always be performed for the calling number or that auto outpulsing depends on the time of day. If the time of day determines auto outpulsing, the TIME SET ID from the EXCPT form is checked on the SETID form. If the time of day of the originating station is between the start and stop times for the TIME SET ID, then auto outpulsing occurs. If the time of day is not between the start and stop times, a message is displayed to the operator indicating that verbal acceptance is required but the time of day is not appropriate. At this point the operator may attempt to obtain alternate billing or may manually outpulse to the third number for verification.

When the ITNA Exception Table is checked and the calling number is not found, the TIME SET ID from the ITNA Treatment Table (TREAT form) is used. If the TIME SET ID from the ITNA Treatment Table is set to "NEVER", a message will be displayed to the operator indicating that no acceptance is required. If a time range was indicated by the TIME SET ID, a message will be displayed to the operator that verbal acceptance is required but the time of day is not appropriate. Again, the operator may attempt to obtain alternate billing or may manually outpulse to the third number for verification.

For every EXCPT form entered, a corresponding NPAMAP form must be entered where the NPA and NXX

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are equivalent on both forms.

Directory numbers should never overlap on EXCPT forms. An EXCPT form may not include the same directory number(s) in a range that is also entered on another EXCPT form.

When "TS1" "TS2", "TS3", "TS4", "TS5", "TS6", "TS7", or "TS8", is entered in the TIME SET ID field on the EXCPT form, a SETID form must be defined with that TIME SET ID.

When the routing to the third number takes place the RAR form (5301 Record) is checked. The keys to the RAR form are the Screen Index from the incoming trunk group (TKGRP form, 5202 Record), the Code Index from the digit analysis either the INDIT or the LDIT form, and a PFX of "NONE" from the RAR form. If the RTI field on the RAR form is set to REGL, the route index from digit analysis is used to route the call. If RTI field contains an actual route index, then that route index will be used to route the call.

A Charge Index that has been previously defined in the CGIDX form (5302-1 Record) must be entered in the CHGI field on the RAR form.

The Route index to be used in routing the call must be defined on the RTIDX form (5303 Record). The TGN field on the RTIDX form identifies the trunk group to be used to establish the connection with the forward party.

33. VOICE MESSAGING SERVICE INTERFACE

The VMSI (Voice Messaging Service Interface) is available with 5E7 and later Software Releases and provides an automated or operator assisted way that a calling party can leave a message for a busy line or a called number that doesn't answer. The caller can leave a message in an ESP VMS (Enhanced Service Provider's Voice Messaging Service). VMS is a network voice storage and forward service offered to the callers by an ESP external to the 5ESS Switch.

33.1 VMSI Feature Assignment

VMSI does not have interdependencies with other records. The OSPSOPT form (5424 Record) defines the office parameters for VMSI. The ESPINFO form (5472 Record) defines information about an ESP, and acts as a table to translate the ESP access code into a ten digit telephone number to be used in processing a request for VMS service.

33.2 ODA Forms For VMSI

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ESPINFO	5472	3	4BX	27.65
OSPSOPT	5424	3	4Y	8.9

33.3 VMSI Translation Requirements

ESPINFO form (5472 Record) - This form defines information about the ESP and translates the access code into a ten digit telephone number of the ESP.

OSPSOPT form (5424 Record) - This form defines the office parameters for VMSI. SERCIVE CODE, OSPS OWNER, TIME OUT, and VMS ON fields define the office parameters for VMSI. VMS ON enables or disables VMSI. The TIME OUT field is used by the VMSI feature to indicate the time out for "ready to receive". SERCIVE CODE assigns the VMSI Service Code. OSPS OWNER identifies the owner of the originating OSPS.

34. VOICE MESSAGING SERVICE INTERFACE ANNOUNCEMENT PROMPT

34.1 VMSI AP Feature Description

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The VMSI AP (Voice Messaging Service Interface Announcement Prompt) feature offers the use of announcements to prompt a customer, on a credit-card call, to transfer to a voice messaging service if the call encountered a busy or ring no-answer condition that was identified by CCS7 signaling. This feature is available with 5E7 and later Software Releases. The prompt is truncated if the customer depresses # or, on ring no-answer, if the forward party answers. Therefore, announcement prompts apply only to calls awaiting an answer (ringing or busy) that allow entry of a DTMF "#" for sequence dialing and that are set up with outgoing CCS7 signaling.

34.2 VMSI AP Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
EQRAP	5822	8	36	20.10
				20.22
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63

34.3 VMSI AP Translations

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. Announcement header IDs OSPSTA 52 and 53 were added for 5E7 and later.

EQRAP form (5822 Record) - This form is used to define the RAF (Recorded Announcement Function) circuit packs. Memory board 5D172A10[L24] is an optional OSPS-TA announcement board that was added for 5E7 and later.

OSPSOPT form (5424 Record) - This form is used to define the OSPS office option global parameters. The global parameters added for VMSI AP are PROMPT ON BUSY (activates VMS prompt treatment on busy calls), PROMPT ON RING (activates VMS prompt treatment on ring no-answer calls) and RING TIME OUT (number of seconds before applying VMS prompt on ring no-answer).

PHRASE form (5534 Record) - This form defines and describes the phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Function) Announcement Storage circuit packs for each application. Standard phrase IDs for OSPSTA 260 - 288 were added for 5E7 and later.

35. ESP (VMS) CREDIT CHECKING

35.1 ESP (VMS) Credit Checking Feature Description

For 5E7 and later Software Releases, the ESP (Enhanced Service Provider) (VMS (Voice Messaging Service)) Credit Checking feature causes card billing information to NOT be sent to the ESP when the card used has been presubscribed in the card database to be blocked from charging ESP services. When OSPS receives a card query reply that indicates ESP services are not allowed and an ESP transfer is requested, it allows the ESP transfer, but it does not send the card billing to the ESP. CAS R3 with CCS7 validation of CAS card and VMS Release 2 must be active before ESP (VMS) Credit Checking can be activated.

35.2 ESP (VMS) Credit Checking Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9

OSPSOPT form (5424 Record) - This form is used to define the OSPS office option global parameters. The global parameter CREDIT CHECK activates the ESP (VMS) Credit Checking feature.

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36. VOICE MESSAGING SERVICE INTERFACE RELEASE 4

The VMS (Voice Messaging Service) is a network voice storage and forward service offered to the public by ESPs (Enhanced Service Providers) Release 4 of the VMSI features builds on functionality offered in previous releases with the following improvements:

1. Improved Call-Data Transfer:

   Previous releases used in-band DTMF signaling to transfer call data to ESCs. Release 4 offers CCS7 signaling to reduce data transfer times, while continuing to support DTMF signaling.

2. Additional Call Data:

   Call Disposition data is sent to ESCs that receive their data via CCS7 signaling. This data indicates the state of the original call (busy, ringing, or indeterminate) prior to its transfer to the ESC.

36.1 VMSI R4 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ESPINFO	5472	3	4BX	27.65

36.2 VMSI R4 Modified Form

ESPINFO form (5472 Record) - This form defines information about the ESP for VMS. For 5E8 and later, CCS7 signaling can be used to transfer data to an ESC (Enhanced Service Complex). The CCS7 SIGNALING field indicates if CCS7 signaling is being used. The CC DIGIT TYPE field is used to indicate that the Billing Number sent in a Generic Digit Parameter is a card number.

The PIN DIGIT TYPE, CAC DIGIT TYPE, SAB DIGIT TYPE and the THIRD NBR TYPE fields allow the TCA to initialize or modify the Type of Digits value of the Generic Digits Parameter used to send the PIN information, CCC Authorization Code, SAB Number information, and the Third Number Billing information to any specific ESC. The CC DIGIT TYPE, PIN DIGIT TYPE, CAC DIGIT TYPE, and SAB DIGIT TYPE must be unique entries. The default values for these fields are the expected values to be used by the AT&T ESC.

37. ALTERNATE ACCESS TO OPERATOR SERVICES / SOFTWARE DEFINED NETWORK AND NETWORK REMOTE ACCESS

The AATOS (Alternate Access To Operator Services) and SDN/NRA (Software Defined Network/Network Remote Access) feature is available with 5E7 and later Software Releases. AATOS and SDN/NRA allows a telephone company to route incoming calls to the OSPS over nonoperator trunks and allows card calls to be routed to a private network from telephones not included in that network. AATOS allows a customer to access an OSPS via a 1+800 number, if the caller is using COCOT (Customer Owned Coin Operated Telephones), hospital or hotel phones that block traffic from reaching a specific carrier.

The SDN feature allows callers to place SDN calls from stations off their private networks via a 1+800 number. The SDN/NRA feature expands the SDN feature to allow initial and sequence calling card calls under automated protocol (0+, 01+) and operator assistance (0-, 0+, 01+) calls.

For 1 + 800 calls, the OSPS first prompts the caller to enter the number they are calling, and then to enter credit card number. Callers who time out or dial zero are sent to an operator. The operator can enter the called number and establish collect, card, or third number billing. The call is routed over the Public Switched Network and OSPS creates the billing record.

37.1 ODA Forms For AATOS/SDN NRA

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New And Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OPRTK	5417-2	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9

37.2 AATOS/SDN NRA Translation Requirements

ANNHD form (5531 Record) - This form lists the phrases in the required order to be associated with an announcement header. The default data provided by ODA is given in Division 3, Section 5AE. Two new header IDs were added for AATOS and SDN NRA, "OSPSTA 050" and "OSPSTA 051".

OPRTK form (5417-2 Record) - This form defines the common information and type of traffic over each trunk group that can access an OSPS operator. The AATOS SDN NRA field indicates whether or not the trunk carries only AATOS SDN/NRA traffic.

OSPSOPT form (5424 Record) - This form defines the global parameters for an office. FEATURE WORD and SDN NRA CARRIER fields were added for AATOS and SDN/NRA. FEATURE WORD activates processing AATOS and SDN/NRA calls. SDN NRA CARRIER assigns the default carrier for SDN/NRA calls.

38. OPERATOR ASSISTANCE FOR 900 SERVICES

The Operator Assistance for 900 Services feature handles 900 Services (Multiquest) calls which can be charged to AT&T-issued credit cards, Commercial Credit Cards, and LEC-issued credit and calling cards on an automated or operator basis. This feature also limits class of charge for 900 Services from certain origins, for example, block paid calls to 900 from hotel and public phones. The credit card numbers are screened against the Card Attribute Table, and, if valid, are sent with the 900 number, SAB number, and CCC authorization code (if available) in a CCS7 ISUP signaling message.

38.1 Operator Assistance For 900 Services Translation Requirements

New And Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
EQRAP	5822	8	36	20.22
OSPSOPT	5424	3	4Y	8.9
PHRASE	5534	3	5AH	8.63
TCCATTR	5473	3	4BY	27.56

38.2 Operator Assistance For 900 Services Modified Forms

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. Announcement Header IDs OSPSTA 63 and OSPSTA 64 were added to the 5E8 and later default data for Operator Assistance For 900 Services.

EQRAP form (5822 Record) - This form is used to define the RAF (Recorded Announcement Function) circuit packs. New micro-codes for DSU2-RAF Announcement Storage circuit packs were added for 5E8.

OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8, the MQ900 field indicates if the Operator Assistance For 900 Services feature is active, inactive, or (for Recent Change only) being tested before being activated in the office.

PHRASE form (5534 Record) - This form defines and describes the phrase IDs that are provided on the DSU2-RAF Announcement Storage circuit packs for each application. For 5E8 and later, phrases 298 - 303 default input data were added for Operator Assistance For 900 Services.

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TCCATTR form (5473 Record), - This form defines the attributes for a card type. The field ALLOW 900 CALLS indicates whether or not OSPS 900 services are allowed for that card type.

39. THE DIFFERENTIATION OF CARD SERVICE CHARGES

The Differentiation of CSC (Card Service Charges) feature provides the OSPS with the ability to provide card rate quotes and charging information for credit card T&C (Time and Charges) calls based on the Vendor/Issuer ID of the card. In addition, this feature has the ability to give comparison card information rate quotes. Also, this feature allows operators to specify the prefix (0-, 0+, or 1+) and indicate if the call was "automated" or "operator assisted" for all rate quotations.

39.1 Differentiation CSC Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CMPCRD	5476	3	4CF	27.45
OSPSOPT	5424	3	4Y	8.9

39.2 Differentiation CSC New And Modified Forms

CMPCRD form (5476 Record) - This form defines the TCA calling card comparison card for the Differentiation of CSC feature and assigns a label which identifies the Issuer of the comparison card.

OSPSOPT form (5424 Record) - This form defines the OSPS office global parameters. Only one OSPSOPT form can be entered per office. For 5E8, the DIFF CARD ON field indicates if the Differentiation CSC feature is activated.

OSPS TRUNK TYPE	TRK DIR	TRK CLASS	INPULSING	OUTPULSING
Outgoing D Channel	SGNL	IFOPER	DCHN	DCHN
Outgoing B Channel	OUT	IFOPER		DCHN
Incoming D Channel	SGNL	IFTERM	DCHN	DCHN
Incoming B Channel	INC	IFTERM	DCHN	

Figure 1 OSPS EDSL TRUNK CHARACTERISTICS

D4 FRAMING FORMAT

DFI MODE	DATA RATE	TRANSMISSION CHARACTERISTICS
D4	56K	56 kb/s, noninverted, ZCS (Zero Code Suppression)
D464	R64K	64 kb/s, restricted channel, inverted, B8ZS (Bipolar 8-bit Zero Suppression)
64K	64K	64 kb/s, clear channel, noninverted, B8ZS

EXTENDED SUPER FRAME FORMAT

DFI MODE	DATA RATE	TRANSMISSION CHARACTERISTICS
FEB7	56K	56 kb/s, noninverted, ZCS
FE64	R64K	64 kb/s, restricted channel, inverted, ZCS
FE8Z	64K	64 kb/s, clear channel, noninverted, B8ZS

Figure 2 OSPS EDSL TRUNK TRANSMISSION CHARACTERISTICS

Below is an example of the PREFIX/ FEATURE DIGIT INTERPRETER TABLE that would be set up in a local office to handl international dialing.

DIGITS TO INTERPRET	CALL TYPE	PREFIX	DIGTS TO DELETE	REMARKS
0112	LDIT	1	00	IDDDSTA-TO-STA
0113	LDIT	1	00	IDDDSTA-TO-STA
□	□	□	□	□
□	□	□	□	□
□	□	□	□	□
012	LDIT	0	00	IDDDOPRASST
013	LDIT	0	00	IDDDOPRASST

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The next example is of an INTERNATIONAL DIRECT DISTANCE DIALING RECORD. The routing information given here is sample information only.

CAC	MNDE	MXDE	CODE INDEX	ROUTE INDEX
33	05	10	0002	0835
504	06	12	0003	0836
□	□	□	□	□
□	□	□	□	□
□	□	□	□	□
973	06	12	0004	0837

The following is an example of the TERMINATING CODE SCREENING FOR COUNTRY CODES RECORD.

COUNTRY CODE	PAIRED COUNTRY CODE	SCRN CODE	REORDER
33	033	331	Y
504	884	00	N
□	□	□	□
□	□	□	□
□	□	□	□
973	973	00	N

This example is of the 5E4(2) ACD CALL TYPE RECORD. This shows how the international calls could be assigned call types.

ORIGIN CALL	PREFIX	CALL CLASS	CARRIER	CALL TYPE
ISP	01	INT	IC	050
ISP	011	INT	IC	050
ISP	01	RECB	IC	051
ISP	011	RECB	IC	051
ISP	01	RECFB	IC	051
ISP	011	RECFB	IC	051

The following example shows data population for FCA (Fully Coded Addressing) in 5E5.

LDIT	CAC	IDDDPFX	MNDE	MXDE	CODE INDEX	ROUTE INDEX	DESEP	CALL TYPE	TYPE CI CALL	REMARKS
10	33	011	05	10	0002	0035				FRANCE 1+
10	33	01	05	10	0002	0035				FRANCE 0+
10	504	011	06	12	0003	0036				HONDURAS 1+
10	504	01	06	12	0003	0036				HONDURAS 0+
70	33		05	10	0125	0850		IDDDFCA	NONCI	FRANCEFCA
70	504		05	10	0124	0851		IDDDFCA	NONCI	HONDURASFCA

Figure 3 INTERNATIONAL CALL DATA

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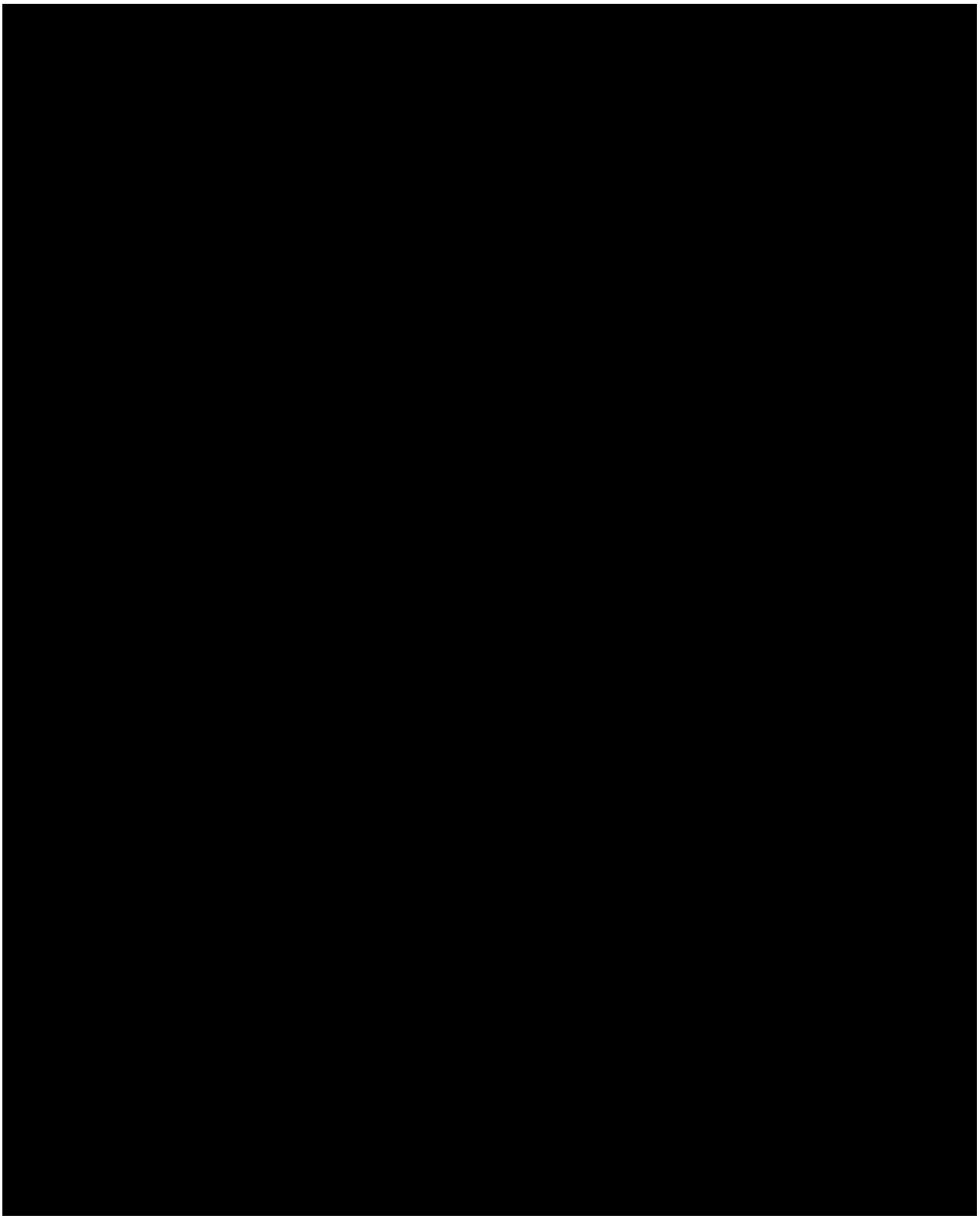

Figure 4 FORM FLOW FOR MECH FEATURE

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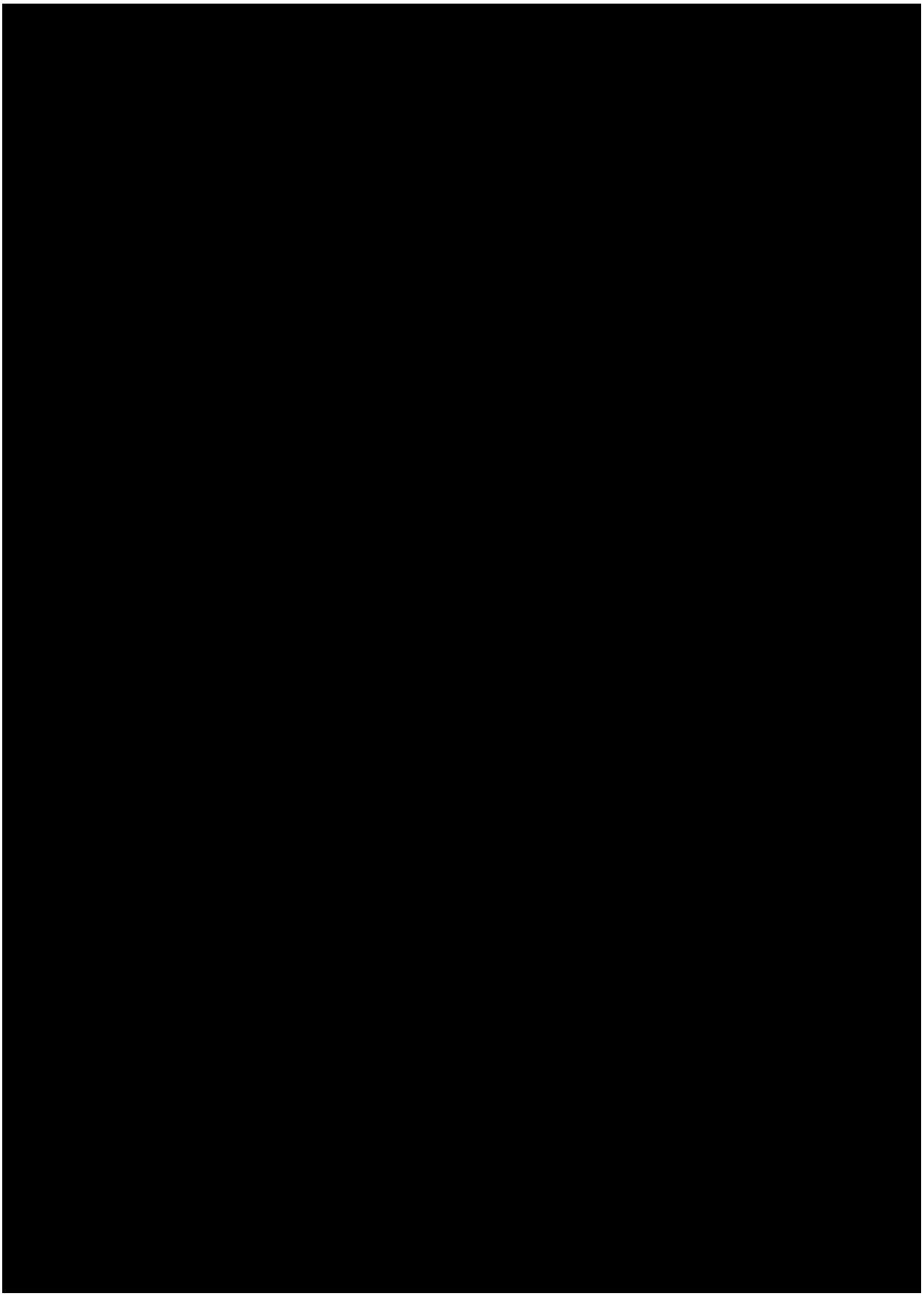

Figure 5 FORM FLOW FOR INCOMING CALL FOR ITNA

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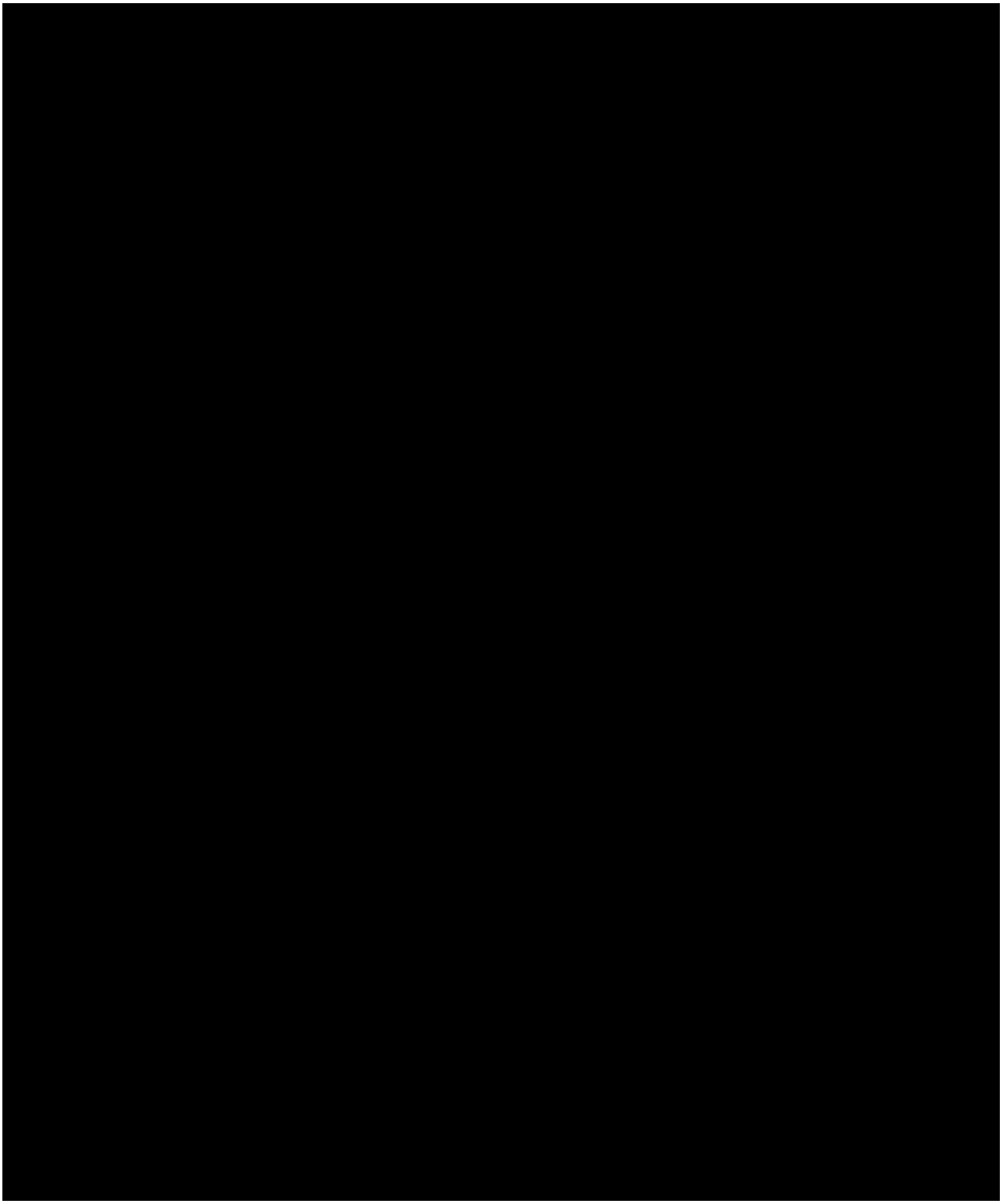

Figure 6 FORM FLOW FOR ITNA TREATMENT FOR CALLS

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Figure 7 FORM FLOW FOR CAS RELEASE 3

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Figure 8 FORM FLOW FOR TCSE

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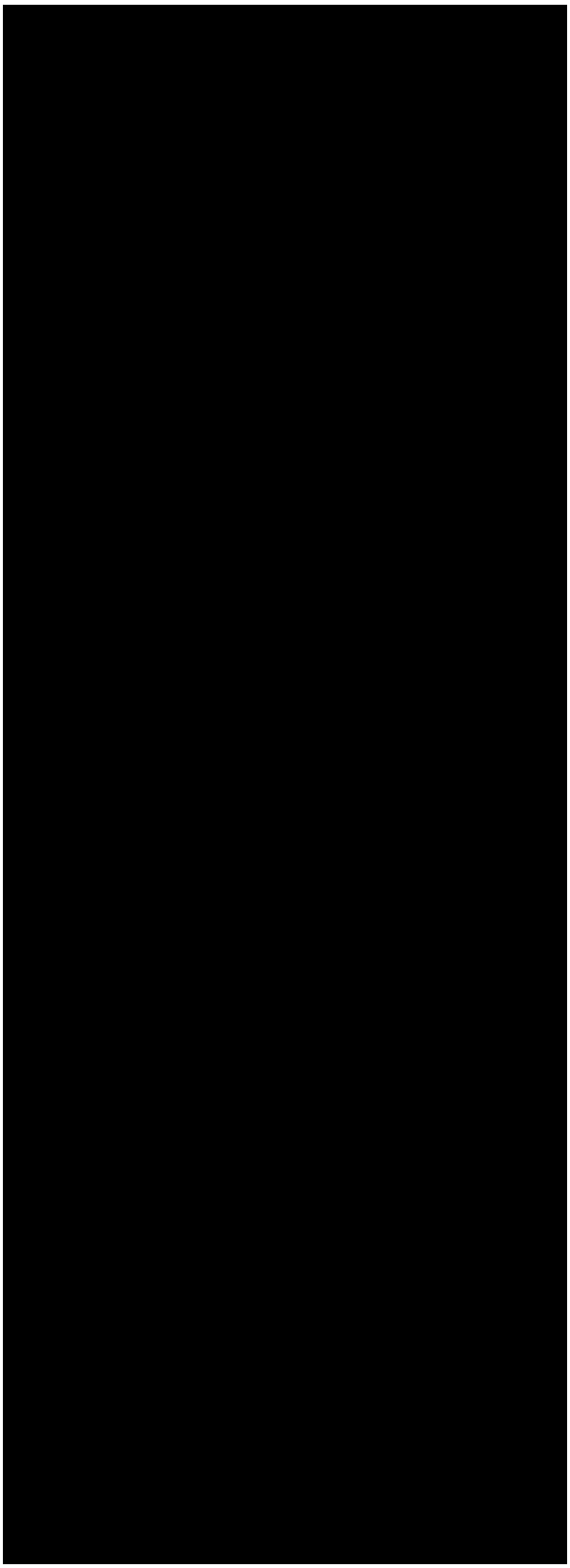

Figure 9 FORM FLOW FOR CAS RELEASE 4 AND CSR

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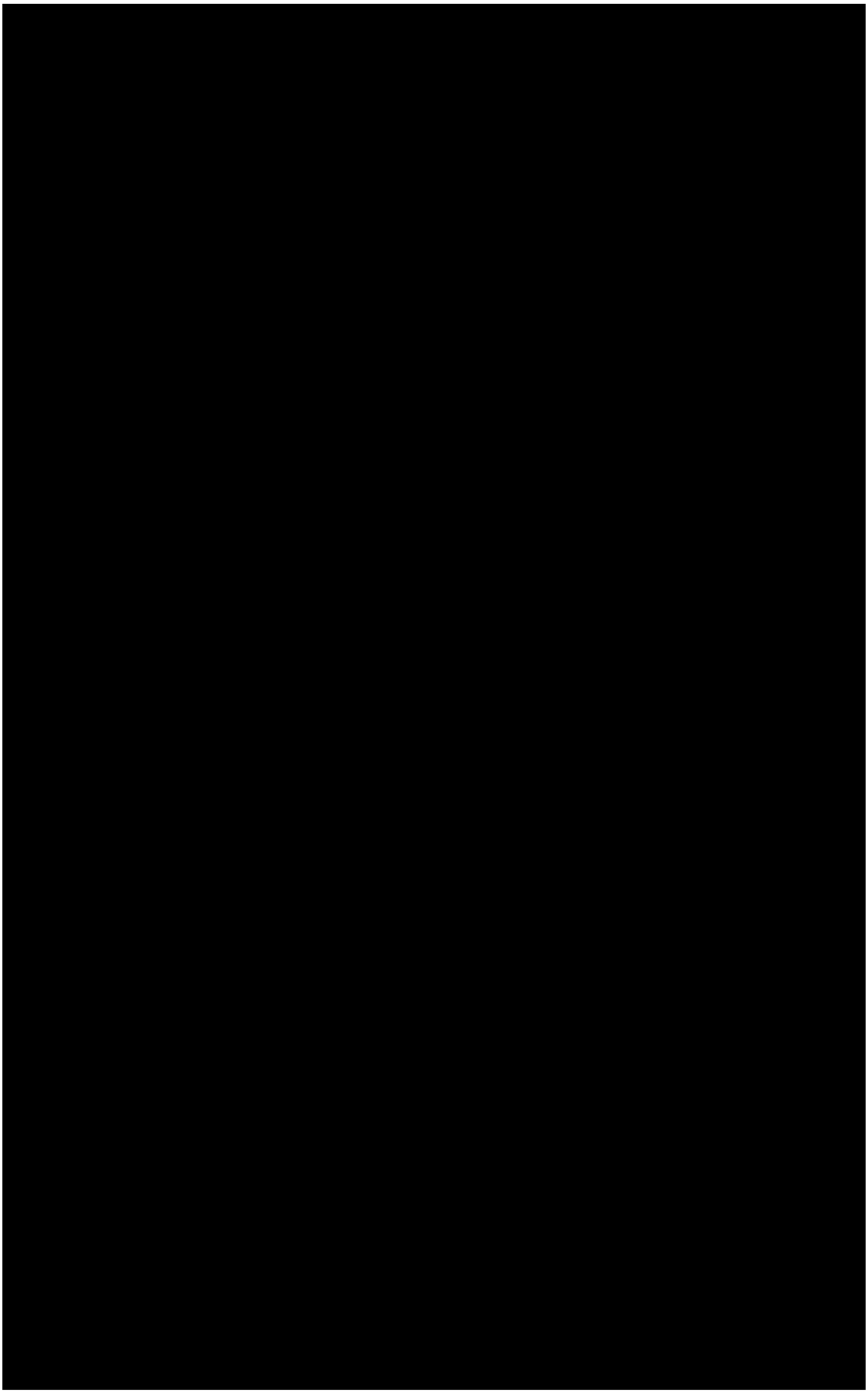

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Figure 10 FORM FLOW FOR NON-ENGLISH ANNOUNCEMENTS FOR CARD CALLS

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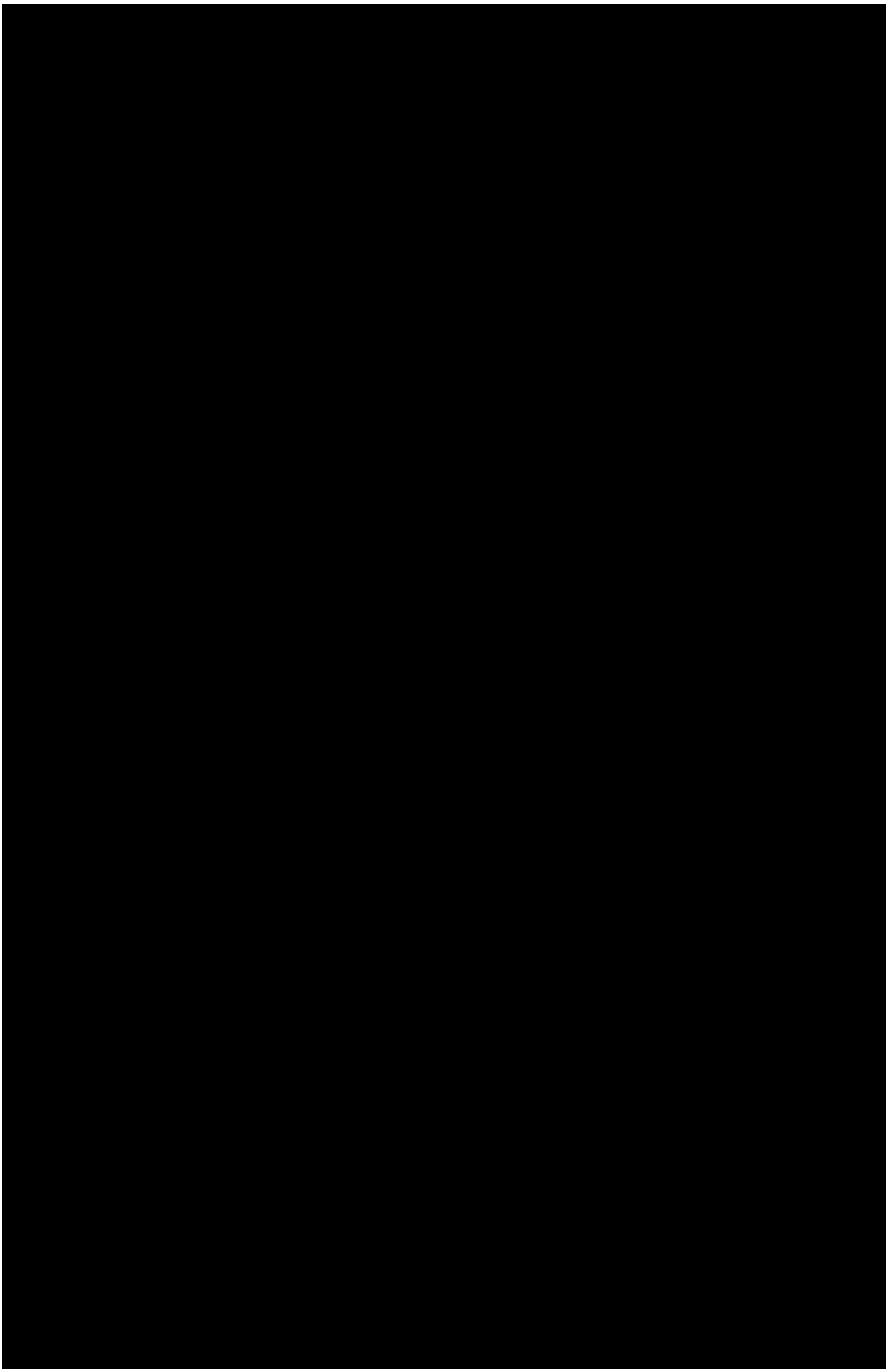

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Figure 11 FORM FLOW FOR ICCV CALL DURATION AND CHARGE

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Figure 12 TOLL AND ASSIST FEATURE INDEX FOR 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3J: SERVICE ANNOUNCEMENT SYSTEM

1. 5E9(2) SERVICE ANNOUNCEMENT SYSTEM FOR SM

1.1 Background Information

Prior to the SAS (Service Announcement System) feature, the DSU2-RAF (Digital Service Unit Model 2 - Recorded Accouncement Function) provides announcements to customers. Each DSU2-RAF service group consists of a control card and 1 - 3 memory boards. The 3 boards have a combined capacity of 10 MB which can hold approximately 1300 seconds of uncompressed, digitally-encoded (64KBPS) speech. This speech is stored on the DSU2-RAF in phrases such as "Please dial", "the number you dialed", and "We're sorry". The DSU2-RAF has the capability of generating announcements by concatenating these phrases together, based on a series of phrase IDs which are assigned to the various announcements through Recent Change or through ODA default input data. A DSU2-RAF service group can play up to 32 announcements at once. DSU2-RAFs programmed with "dial-through" capabilities can support 20, 2-way channels. Dial-through announcements are interruptible announcements commonly used by the OSPS application for entering calling card information.

Prior to SAS, DSU2-RAF memory boards were populated with ROM (Read Only Memory). Updating the phrases on a board involved pulling the DSU2-RAF from service and swapping the boards with other boards that contain the updated phrase data.

SAS consists of new hardware that plugs into the existing DSU2 housing and the associated switch software. It also provides a timely announcement update system and advanced algorithms (e.g. speech compression) to run on the SAS DSPs (Digital Signal Processors).

1.2 Feature Description

The first phase is implemented in the 5E9(2) Software Release. The feature number for this capability is 99-5E-1532.

The main objective is to produce a high capacity announcement system that provides both RAF (Recorded Announcement Facility) transparency and an improved platform on which to accommodate new capabilities.

SAS-SM (Service Announcement System on an SM) hardware technology is based on the DSC-3 (Digital Service Circuit 3), developed for SM-2000. Each SAS physical service group has 1 - 4 memory boards, with each board having slots for 8 flash memory cards, and one SAS DSC Control Group, 1 SAS-DSC control card.

SAS effectively increases the announcement capacity on standard SMs while remaining compatible with existing DSU2-RAF hardware and announcement administration. SAS also provides a more powerful platform on which to support advanced switching applications.

1.3 Feature Assignment

See Figure 1 for equipment provisioning form flow. See Figure 2 for phrase and announcement provisioning form flow.

1.4 Provisioning SAS Equipment

SAS equipment is provisioned on the EQRA form (5821 Record) and the EQSASP form (5859 Record).

When a SAS common board is being inserted, the equipage status cannot be "O" (operational). When a SAS memory board (circuit pack) is being inserted, the equipage status of the memory board cannot be greater than that of the common board. The equipage status cannot be changed directly from "U" to "O" in Recent Change. It must be first changed to "G" (grow) and then to "O". SAS circuits must be OOS (Out Of

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Service) before updates can be performed.

SAS memory boards are inserted sequentially and contiguously. The equipage status of the current board cannot be greater than that of the succeeding board, e.g. if board3 is being inserted, the EQSTAT of board3 cannot be greater than the EQSTAT of board2.

A SAS memory board can be inserted with no memory flash card data specified. However, if memory flash card data is specified, the card sizes and card version numbers specified in the list must be equal to the number specified in the cards equipped attribute, i.e., the sum of the number of entries in MEMORY CARD LIST must equal the CARDS EQUIP entry on the EQSASP form.

1.5 Phrase and Announcement Data

Each phrase on a DSU2-RAF memory board or SAS memory card must be represented with an entry in the PHRASE form. Once the entry is in the PHRASE form, it can be used to construct announcement headers (ANNHD form) or announcement trailers (ANNTR form).

1.6 Replacing a RAF With a SAS

The RAF can be degrown and the SAS grown on the same equipment. The trunk members associated with the RAF unit must be deleted. The trunk members (up to 32) to be associated with the SAS must be inserted. For more information on degrowing the RAF, see AT&T document 235-105-331. For more information on growing the SAS see AT&T document 235-105-231.

1.7 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
ANNTR	5533	3	5AG	8.62
EQRA	5821	8	35	19.10 20.22
EQRAP	5822	8	36	20.10 20.22
EQSASP	5859	8	61	20.26
NPAMAP	5414	3	4O	26.1
PHRASE	5534	3	5AH	8.63
PHRLANG	5483-2	3	4CJ	8.67
SCRNCODE	5415	3	4P	26.3
SERVDATA	5466	3	4BS	21.54
TKGRP	5202	3	2A	5.1

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. The HEADER ID field was increased to support the SAS feature. More phrases are allowed per announcement HEADER ID. The DURATION field, which is a Recent Change/Verify only field, was added to ODA for information.

ANNTR form (5533 Record) - This record lists phrases that identify the announcement trailer. The PHRASE ID field has been increased to support SAS. The DURATION field, which is a Recent Change/Verify only field, has been added for information.

EQRA form (5821 Record) - This form defines the RAF and SAS services. The UNIT NUMBER field replaced the RAF UNIT field, UNIT TYPE and SAS SERVICES fields were added to support the SAS feature. A second "read only" screen identifies which SAS service has been assigned to a specific channel.

EQRAP form (5822 Record) - This form defines the RAF circuit packs. The RAF UNIT field was renamed UNIT NUMBER field to support the SAS feature.

EQSASP form (5859 Record) - This form defines the equipage information for the SAS memory packs

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and the cards with the memory pack.

NPAMAP form (5414 Record) - This form assigns an SM, trunk group, exception area index and a LATA to an NPANXX combination. The PHRASE ID field was increased to support the SAS feature.

PHRASE form (5534 Record) - This form defines and describes phrase IDs which are provided on the DSU2-RAF Announcement Storage or SAS circuit packs for each application. PHRASE ID and DURATION fields were increased to support the SAS feature.

PHRLANG form (5483-2 Record) - An entry in this form maps an English language phrase ID to a corresponding non-English phrase ID. The PHRASE ID fields were increased to support the SAS feature.

SCRNCODE form (5415 Record) - This record defines billing restrictions on the back number. The ANNC HEADER ID and PHRASE ID fields were increased to support the SAS feature.

SERVDATA form (5466 Record) - This form is used to define EIS (External Information Systems) service parameters. The INT ANNC TYPE field has been increased to reflect the larger HEADER ID on the ANNHD form to support the SAS feature.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The RAF MBR field was added to support the SAS feature.

2. 5E10 SAS ON SM-2000

2.1 Feature Description

The SAS on SM-2000 feature is a 5E10 feature that has the capability of the 5E9(2) feature Service Announcement Service which was implemented on an SM. The 5E10 SAS on SM-2000 feature implements SAS on SM-2000s. The AT&T feature number for this capability is 99-5E-2695.

The DSU2-SAS (Digital Service Unit2-Service Announcement System) offers the following:

- Greater storage capacity
- Increased channel capacity (for dial through announcements)
- An interface for allowing on-line announcement updates by the customers
- A base for enhanced feature offerings.

For 5E10 and later, the DSU2-SAS can be equipped on both SMs and on SM-2000s and offers a high capacity announcement system that provides both RAF (Recorded Announcement Function) transparency and an improved platform on which to accommodate new capabilities.

DSU2-SAS consists of two hardware packs that reside in the DSU2. The first is the controller pack (TN1841) and the second is a memory board (TN1842) for flash cards that contains the recorded announcements. For SM-2000, only DSU2-SAS provides recorded announcement functionality. For SMs, either DSU2-RAF or DSU2-SAS can be equipped to provide recorded announcement functionality. The total number of DSU2-SAS units that are allowed per SM is 8. SAS for 5E10 supports a maximum of 80,000 announcement seconds.

2.2 Feature Assignment

The data for SAS on an SM was implemented in 5e9(2). In 5E10, data changes are to implement SAS on SM-2000. To provision SAS on an SM-2000, the data on the EQRA form (5821 Record) must reflect an

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SM-2000.

2.3 Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQRA	5821	8	35	19.10
EQIM	5700	8	2	18.1

EQRA form (5821 Record) - This form defines the RAF and SAS services. For SAS on SM-2000, the enumerations for the CONTROL GROUP, DATA GROUP, DATA PORT, and EQUIPMENT BAY have been increased.

EQIM form (5700 Record) - The form defines Switching Module equipage Assignments. The UNIT TYPE must be "SM2000" for SAS on SM-2000 feature.

3. Glossary

DSC-3	Digital Service Circuit 3
DSPs	Digital Signal Processors
DSU2-RAF	Digital Service Unit Model 2 - Recorded Accouncement Function
DSU2-SAS	Digital Service Unit2-Service Announcement System
EIS	External Information Systems
OOS	Out Of Service
OSPS	Operator Services Position System
RAF	Recorded Announcement Function
ROM	Read Only Memory
SAS	Service Announcement System

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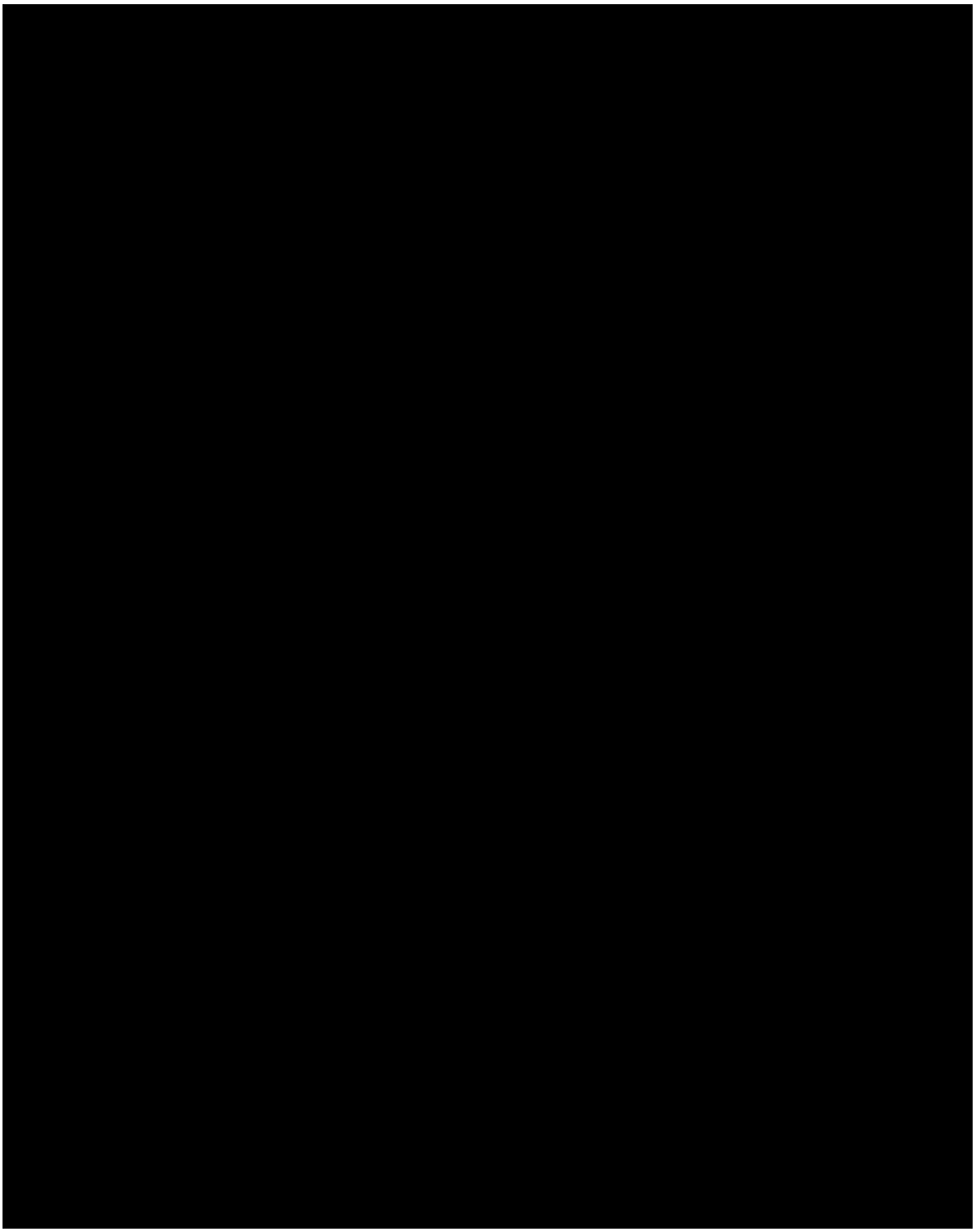

Figure 1 SAS EQUIPMENT PROVISIONING FORM FLOW

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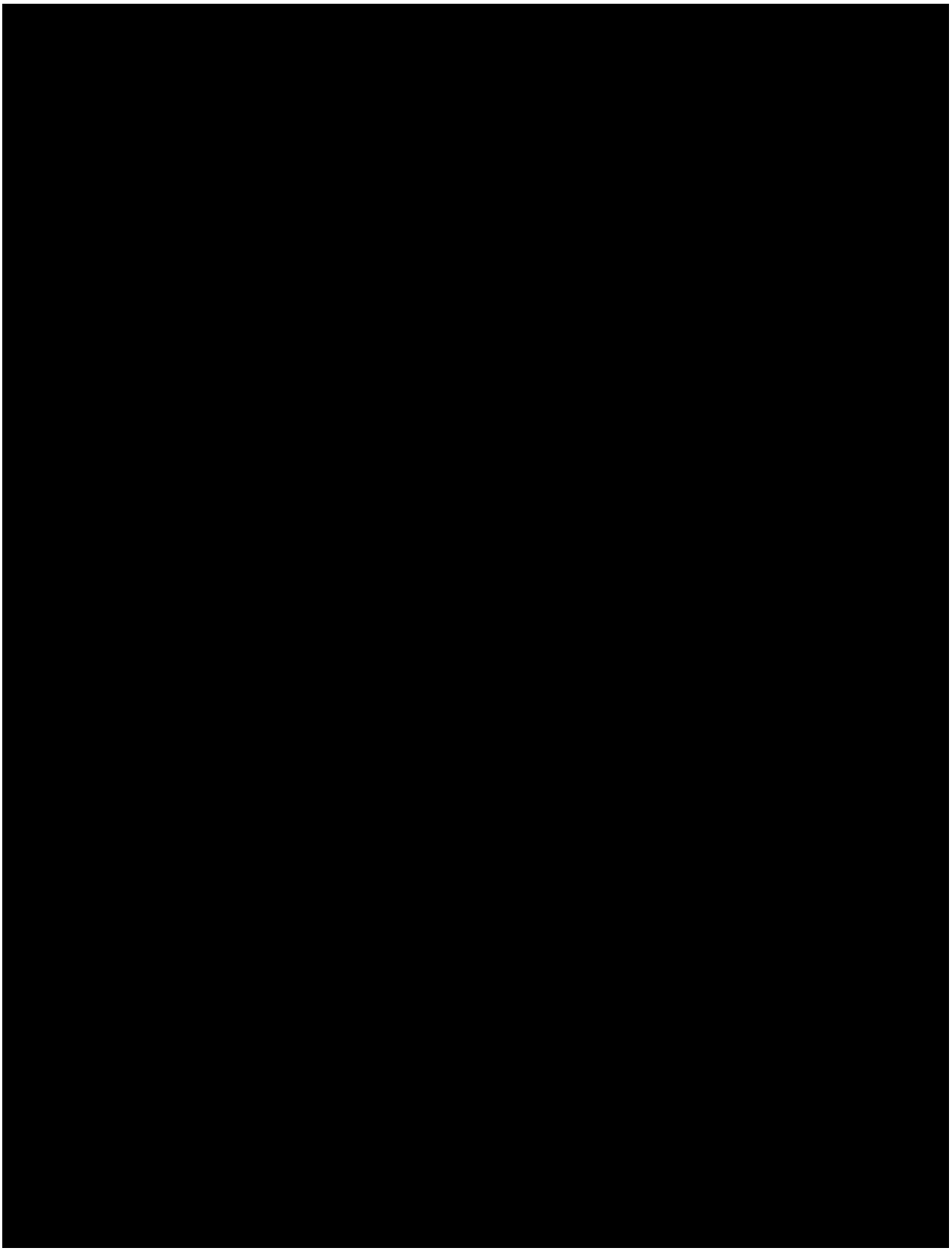

Figure 2 SAS ANNOUNCEMENT PROVISIONING FORM FLOW

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SEC. 3K: DIRECT INTERNATIONAL ORIGINATION FEATURES

1. DIRECT INTERNATIONAL ORIGINATION

1.1 Feature Description

The DIOR (Direct International Origination) feature allows a customer outside of the Unites States to complete a call to a domestic (U.S.) or other international location by directly accessing an operator in the U.S. DIOR thus eliminates the need for an operator in another country to set up a call to the U.S.

DIOR treatment is activated when a call is made from a designated DIOR station or when a DIOR access code is dialed. DIOR stations are considered exclusively non-coin and non-Automated Charge Quotation Service.

A DIOR call is identified by an access code sent across international facilities from either an originating local office or originating station equipment to a gateway office in the U.S. The gateway office then passes the call to OSPS.

The access code from an overseas location is in the form: SSS-CCC-XXXX

Entry	Definition
SSS	DIOR Special Access Code (in the range of 100-199)
CCC	Originating Country Code
XXXX	Originating Station Information

DIOR calls can arrive at the OSPS office on MF (Multifrequency) or CCS (Common Channel Signaling) trunks. Since only MF signaling is supported, calls on CCS trunks are routed through the switch onto an MF trunk group. Trunks dedicated to DIOR must only carry DIOR traffic.

The gateway office may send either the full 10-digit number or a 7-digit number (CCC-XXXX) to the OSPS office. When a 7-digit number is sent, the OSPS office uses the "SSS" identified in office data for calls arriving on the DIOR trunk group. An initial DIOR call is marked as 0- and requires operator assistance.

OLS (Originating Line Screening) can be used on the pseudo NPA (SSS) to restrict certain classes of charge. The classes-of-charge allowed are collect, calling card and bill to third.

ACCSQ (Automated Calling Card Sequence) calls can be placed without operator assistance when Back Card Number or a DDD (Direct Distance Dialing) Back Card Number class of charge is used. For these calls to be completed, DTMF signal quality from the originating country must be acceptable. A calling card that is not a Commercial Credit Card or a non-AT&T Telecommunications Card, must be validated by an operator on an off-line external database.

1.2 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CCNAME	5463	3	4BP	27.7
LINESCRN	5416	3	4Q	26.2
NPAMAP	5414	3	4O	26.1
OPRTK	5417	3	4R	26.26
SCRNCODE	5415	3	4P	26.3
TCSNPA	5437	3	4AL	27.2
TKGRP	5202	3	2A	5.1
TPRNPA	5465	3	4BR	27.5

CCNAME form (5463 Record) - Upon position seizure, the CCNAME form is checked to identify the call's originating country. The COUNTRY NUMBER field on this form contains the 3-digit Originating CC (Country Code) signaled by an overseas location. The country seen on the VDT is taken from the COUNTRY NAME field on this form. The operator obtains the desired forward number at this point. The forward number may be either a domestic or an international destination. A DIOR call to a domestic

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location requires that a 10-digit number entry be made. Entries less than 10 digits are not accepted. Entries greater than 10 digits are truncated to 10 digits and treated as a 10-digit entry.

LINESCRN form (5416 Record) - The LINESCRN form has also added a DIOR NPA field for pseudo-NPAs. LINESCRN identifies a Screening Code associated with a line number. The Screening Code is then defined in the SCRNCODE form (5415 Record, RC View 26.3).

SCRNCODE has been modified to allow Forward Card Number and Forward 3rd Number classes of charge to be restricted separately. Prior to 5E6, these classes of charge were only restricted together in the FORWARD BILL field.

NPAMAP form (5414 Record) - The NPAMAP form is the first record checked for OLS treatment to identify the SM where OLS data resides for the NPA-NXX identified.

The NPAMAP form has added the DIOR NPA field for pseudo-NPA entries. When set to "Y", this field allows NPA entries to be made in the range of 100-199.

OPRTK form (5417 Record) - Each trunk group defined as "DIOR" on the TKGRP form must also have an entry of "Y" in the DIOR NPA field of the OPRTK form Also, the ORIG NPA field must have an entry from 100 to 199. This entry is the pseudo-NPA used as a prefix when the gateway office signals 7 digits rather than a 10-digit number. The CARRIER fields identify the DIOR service provider. Only one DIOR service provider should be identified for a DIOR trunk group. The COIN and ACQS fields must indicate that only non-coin and non-ACQS traffic are allowed on the trunk group.

When a call arrives at an OSPS office on a DIOR trunk group, the OL SCRN field on the OPRTK form indicates whether OLS (Originating Line Screening) checks are to be done. Typically, a DIOR trunk group is dedicated to screened traffic in this field by an entry of "DED".

TCSNPA form (5437 Record) - When a forward number passes TPR checks, normal Terminating Screening checks determine if the desired class of charge is allowed to the forward destination. For a domestic forward number, the TCSNPA form is checked using the "NPA" or "NPA-NXX" of the forward number. An entry in this record may identify a Screening Code. The TCSTEXT form (5436 Record, RC View 27.1) is then checked for valid billing types. For an international forward number, the TCSCC form is checked using the COUNTRY CODE of the forward number. As with the domestic forward number, an entry in this record may identify a Screening Code defined in the TCSTEXT form. If the forward number is not restricted against the type of billing desired, an appropriate database query is done, after which the operator can connect the forward and back parties.

TKGRP form (5202 Record) - DIOR calls arrive at an OSPS office on trunks dedicated to DIOR service. The TRUNK CLASS field on the TKGRP form (5202 Record) must have an entry of "DIOR".

TPRNPA form (5465 Record) - Digit analysis is done to determine the validity of the forward number and routing information. If the forward number passes digit analysis, TPR (Terminating Point Restriction) checks are done to identify whether a DIOR call to the forward location is allowed. If a domestic forward number has been entered, the TPRNPA form is checked based on the carrier for the call (CARRIER field) and the NPA or NPA-NXX of the forward number. An entry in this record indicates that a DIOR call is NOT allowed to the NPA or NPA-NXX.

2. DIOR SPEED DIALING

2.1 Feature Description

The feature number for this capability is 98-5E-2092. This special feature is available for 5E8 and later Software Releases. This Feature allows a USA Direct customer to reach domestic or international service providers through the use of abbreviated or speed-dialing codes. The dialing code is 1- to 3-digits and must be proceeded by a 2-digit DIOR speed-dialing access code. All DIOR callers have access to these numbers either through the ACCS (Automated Calling Card Service) or with the assistance of an operator.

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2.2 Feature Assignment

The DIOR speed-dialing access code is assigned in the DSD SERVICE CODE field on the OSPSOPT form (5424 Record). It conforms to the format for existing service access codes such as those for VMS (Voice Messaging Service) and Subaccount Billing. Checks ensure that the DSD service code does not conflict with existing service access codes.

The speed codes are assigned on the DIORSD form (5484 Record) and is only be accessible by DIOR callers. The translated directory number and an international indicator are associated with the speed codes. The international indicator is used by call processing to highlight the INTL FWD# field at the operator position for international calls. It is used by automated call processing to prefix the digits 01 to the translated international forward number for use by digit analysis.

When a DIOR customer dials a forward number, or a DIOR customer receives operator assistance in dialing a forward number, this feature performs additional checks. If the forward number is identified as a DIOR speed-dialing access code and speed code, the FID 565 is checked to indicate if the feature is active. If it is active, the forward number is translated into the full directory number and passed to digit analysis where processing continues as normal. The translated forward number appears in the AMA record and at the operator position if operator assistance is required on the call. All applicable terminating number restrictions apply to the translated forward number for both automated and operator assisted calls.

An indication is made in the call record that an operator and customer dialed speed code was dialed for AMA recording purposes.

2.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DIORSD	5484	3	4CL	27.9
OSPSOPT	5424	3	4Y	8.9

DIORSD form (5484 Record) - This form maintains a list of 1- to 3-digit speed codes for DIOR Speed Dial feature. It assigns the speed code to a forward number and indicates if the forward number is an international number.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The DIOR Speed Dial access code is assigned in the DSD SERVICE CODE field on this form.

3. DIOR COUNTRY PAIR SCREENING

3.1 Feature Description

The DIOR CPS (Direct International Originations Country Pair Screening) feature allows certain country-to-country DIOR calls, and disallows others, depending on the originating-to-terminating country pair. If the inbound leg of the call is a DIOR call, and if the outbound leg is to a point outside of the United States, CPS checks to determine whether to allow the DIOR call.

Currently several international countries are allowed for DIOR country-to-country calls. A DIOR caller from an "allowed" country and carrier may place a call to another country that is also an "allowed" country, as specified by the screening data provided by the tables constructed from the DCPSP form and the NONUSA form.

For example, if France and Russia are "allowed", a DIOR country-to-country call can originate from France and can terminate to Russia. A DIOR call originating from a foreign destination such as France that is dialed to another foreign destination such as Russia must pass CPS checks in order for the DIOR call to be completed. The CPS restrictions are determined by data.

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3.2 Feature Assignment

For 5E8 and later, two new forms are used to identify the originating country and carrier as well as the terminating country code and the terminating NPA-NXX that is within the NANP (North American Numbering Plan) but outside of the United States. Upon an entry of a forward number (domestic or international) by the caller during automated handling or by the OSPS operator, the call is blocked or allowed based on tables constructed by these new forms.

An error treatment is applied to the call if it is restricted, and the call cannot be routed to the forward number. For an automated initial DIOR call, the error treatment sends the call to the operator. For Automated Sequence DIOR, the caller will receive an error announcement and the call is aborted.

For 5E8 only, during the data transition period the TCA (Telephone Company Administration) can setup the CPS data prior to the activation of the new CPS feature. To activate the feature, the DIOR CPS feature parameter field must be set to "Y" on the OSPSOPT form (5424 Record).

3.3 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DCPSP	5477-2	3	4CK	27.8
NONUSA	5477-1	3	4CC	26.6
OSPSOPT (5E8 only)	5424	3	4Y	8.9

The translations for DIOR CPS require the following forms. See Figure 1 for the form flow for DIOR CPS.

CCNAME form (5463 Record) - This form is used to map a numeric country code to a 15-character country name. If COUNTRY CODE is entered on the DCPSP form and it is greater than 199, it must match a COUNTRY NUMBER on a corresponding CCNAME form.

DCPSP form (5477-2 Record) - The 5477-2 Record is available with the 5E8 and later and it is used to construct a table of "allowed" Originating Country Codes and Carrier, and Terminating Country Codes.

NONUSA form (5477-1 Record) - For 5E8 and later, this record is used to construct a table of NPA-NXXs which are within the NANP, but are outside of the United States. The table indicates that the NPA-NXX is an acceptable terminating number for a DIOR country-to-country call.

OSPSOPT form (5424 Record) - This record defines the OSPS office option global parameters. For 5E8 only, DIOR CPS must be set to "Y" to activate this feature.

4. DIOR TOLL-FREE INTERNATIONAL SERVICE

4.1 Feature Description

DIOR Toll-Free International Service is available for 5E9(1) and later. The feature number for this capability is 98-5E-2501.

The DIOR Toll-Free International Service Feature allows callers that use the DIOR service (such as USADirect callers) to reach certain toll-free numbers free of charge, because the subscribers of those toll-free numbers have specified a desire to receive and pay for these calls. In addition, this feature allows toll-free subscribers to block access to their toll-free numbers for callers from specific calling countries or optionally from all countries. This is an enhancement to the existing capability of the OSPS DIOR feature which allows callers to dial domestic toll-free numbers provided the callers pay for the international-access leg of the call.

4.2 Feature Assignment

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See Figure 2 for feature assignment form flow for DIOR Toll-Free Service feature.

The format of the CCS7 ISUP (ISDN User Part) IAM (Initial Address Message) is changed by this feature. The receiving 4ESS® Switch needs a corresponding feature to receive this new format. Therefore, activation on this feature must be coordinated with the 4ESS Switch. This feature must be activated on the 4ESS Switch before it is activated at the OSPS.

The Recent Change view 27.7 was modified and renumbered as view 27.81 to enable all new views for DIOR features to be grouped together (see the corresponding ODA CCNAME form (5463 Record).)

This feature is activated on the OSPSOPT form (5424 Record). This feature is not enabled until the purchaser has made the necessary arrangements with AT&T. Information on feature enabling is provided upon ordering. This feature does not have a secured feature activation.

The CCNAME form (renumbered view 27.81) maps the DIOR country code to an IDDD country code that is used in the charge number parameter of the IAM message to the 4ESS Switch for toll-free calls.

The DEHOCSM form (5496 Record) indicates in which standard or loaded SM the DEHNP data for a particular 8XX-NXX is located. Once the **DEHNP** data for an 8XX-NXX is in place it cannot be moved to another SM unless it is completely deleted and re-inserted.

The DEHNP form (5431 Record) allows the user to define how an 8XX number is to be treated from the originating DIOR countries. The default is caller-paid meaning that OSPS or an operator will request card billing. The default treatment can be changed to either free (8XX subscriber pays) or denied (call is blocked). The data can also be setup to provide alternate treatments for calls from different originating DIOR countries by providing the country code and applicable different treatment in the COUNTRY CODE TREATMENT LIST. The data can also be setup to change the default for all callers to either denied or free and then state exceptions to the new default by populating the data in the COUNTRY CODE TREATMENT LIST.

4.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
CCNAME	5463	3	4BP	27.81
DEHNP	5431	3	4AF	27.85
DEHOCSM	5496	3	4CW	27.84
OSPSOPT	5424	3	4Y	8.9

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. New announcements headers 217, 218, and 223 are needed for this feature. Announcement Header 223 currently has a default value. The following are the DIOR Toll-Free Service feature HEADER IDs per the customer's implementation instructions to the field. 217 and 218 use custom phrases; they should be entered on the RC view 8.61 / ODA form ANNHD (5531 Record). The customer may also wish to override the default data for HEADER ID 223, which currently is the following:

- HEADER ID: 223
- APPL: OSPSTA
- PHRASE LIST
- ROW PHR
- 1 155
- 2 125

"Thank you for using AT&T"

to the following phrases:

- HEADER ID: 223

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- APPL: OSPSTA
- PHRASE LIST
- ROW PHR
- 1 155
- 2 125

"Thank you for using AT&T"

The HEADER ID for 217 should be the following:

- HEADER ID: 217
- APPL: OSPSTA
- PHRASE LIST
- ROW PHR
- 1 156
- 2 14391 (custom)
- 3 27
- 4 145

"We're sorry, this number cannot be dialed from this international location. 1/2 second pause. Please dial another telephone number now."

The HEADER ID for 218 should be the following:

- HEADER ID: 218
- APPL: OSPSTA
- PHRASE LIST
- ROW PHR
- 1 156
- 2 14391 (custom)
- 3 27
- 4 64

"We're sorry, this number cannot be dialed from this international location. 1/2 second pause. Please, hang up."

CCNAME form (5463 Record) - This form is used to map the COUNTRY NUMBER to a 15-character country name, which is used for DIOR calls. For this feature the translation from the DIOR country code to the IDDD country code was added. This form also indicates whether or not the call is originating in an 809 area code. This yes/no value has implications on the data sent in the IAM message, if the call is free to the calling party.

DEHOCSM form (5496 Record) - This form specifies the SM (Switching Module) on which the billing treatment data is stored for DIOR calls to an 8XX number. The craft have the ability to distribute the data so that a large amount of memory is not necessary on every SM.

DEHNP (5431 Record) - This form specifies the 8XX number and the billing treatment that applies to it from all DIOR originating countries or the **default treatment plus per-country alternate treatments.**

This form indicates how the NXX-XXXX of the 8XX number is to be treated. If no data is found for the number, the caller must enter a credit card number or go to an operator for further handling. The data can also be setup to allow the call for free to the 8XX numbers or to deny the call to the 8XX number based upon the IDDD country code which was entered on the CCNAME form (5431 Record).

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. This feature is activated by setting the TOLL FREE 800 field to "Y".

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5. OSPS TOLL-FREE NPA EXPANSION

5.1 Feature Description

This feature supports SACs (Service Access Codes) other than 800, with 888 expected to be the first new SAC assigned. Calls to these new SAC codes will be identified as toll-free calls and will be treated as 800 calls are now treated. This is a secured feature with SFID 405. For provisioning information about this feature see Division 2, Section 4A405.

6. DIOR COUNTRY PAIR SCREENING - SPECIAL SCREENING

6.1 Feature Description

The DIOR CPS (Country Pair Screening) - SS (Special Screening) feature is available for 5E9(1) and later. It provides the OSPS with the ability to screen DIOR country-to-country calls and provide special call handling for certain service provider selected country-to-country pairs. This special call handling includes restricting card billing and forcing certain country-to-country pairs to always receive operator handling. The feature number for this capability is 98-5E-2639.

This feature is intended to reduce the amount of fraud committed on DIOR originated calls that are completed to international destinations. Fraud can be associated with a specific country-to-country pair or for all DIOR calls terminating to a particular country. One way fraud is reduced by this feature is by screening the types of calling cards allowed for these calls and by requiring an additional verification step for AT&T cards. The additional validation step involves the use of a CPC (Card Protection Center) operator to verify the card user, which will help eliminate the use of fraudulent calling cards on these identified country-to-country calls. The other way this feature can reduce fraud for specified country pairs or terminating country codes is by requiring an operator to handle on the call. The operator handling step impedes fraudulent callers that use automated means of access, because some fraudulent callers are deterred simply by the delay and inconvenience operator handling brings to the call.

6.2 Feature Assignment

To activate the DIOR Country Pair Screening - SS feature set the CPS R2 field on the OSPSOPT form (5424 Record) to "Y". The TCS (Terminating Code Screening) operator display changes are active upon loading of this feature and does not depend on the feature activation in the CPS R2 field on the OSPSOPT form.

The data which determines that a certain originating country code and carrier to a terminating country code should receive the CPS Card Screening and/or the Terminating Operator Handling treatments is populated on the DCPSS form (5433 Record).

6.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DCPSSS	5433	3	4AH	27.86
OSPSOPT	5424	3	4Y	8.9

DCPSSS form (5433 Record) - This form specifies additional screening which may be done on a country pair for DIOR (Direct International Originations) calls. For a Terminating Country Code (TERM CC field), calls may be required to use an AT&T card or be automatically routed to an operator based on the Originating Country Code (ORIG CC field) and/or CARRIER.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. To active the DIOR CPS - SS feature, set the CPS R2 field to "Y".

7. DIOR SEQUENCE CALL HANDLING

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7.1 Feature Description

DIOR Sequence Call Handling is available for 5E9(1) and later. This feature allows DIOR callers from eligible countries to reach an operator to place additional calls, in the event that their call attempt is unanswered or busy, or when their call completes and the called party hangs up first. This feature also allows the switch owner finer control over which calls are allowed automated initial and automated sequence call handling. The feature number for this capability is 98-5E-2390.

This feature allows DIOR callers using card billing at non-DTMF (Dual Tone Multifrequency) or DTMF phones to make sequence calls. If the call is not answered after a specified interval, or if the called number is determined to be busy, or if the called party goes on-hook for a specified interval with the calling party remaining off-hook, then the OSPS releases the network connection to the called party and plays an announcement to the caller.

The announcement prompts the caller to leave a message and to remain on the line to be connected to an operator; additionally, if the caller is allowed automated sequence calling privileges, it reminds the caller that "#" can be dialed to start automated sequence calling treatment. If the caller remains off-hook for a specified interval after the announcement finishes, the caller is routed to an operator for assistance. If the caller is eligible and dials "#", automated sequence call treatment is provided. If the caller hangs up, the call is ended with no further special treatment.

Additionally, this feature enhances the switch owner's ability to control DIOR automated calling by separating permission for automated initial dialing from that for automated sequence dialing, and by adding control by originating local access carrier.

7.2 Feature Assignment

New announcement header IDs with the appropriate phrase list should be entered on the ANNHD form (5531 Record).

The following announcements should be inserted. The recommended phrases are shown; these can be altered at the site if so desired. One possible alteration is the length of the pause following the announced text, to allow the caller more or less time to hang up before the recall to an operator is initiated. To alter the length of the pause, add or delete instances of phrase 28 at the end of the announcement. Each instance of phrase 28 alters the pause length by 1 second.

Phrases for Announcement Header IDs

Header ID	Phrase Number	Text
200	14023	Your party is not answering.
	26	(1/4 sec pause)
	158	Please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
201	14023	"Your party is not answering
	26	(1/4 sec pause)
	14042	Press "pound"
	71	now
	26	(1/4 sec pause)
	14047	or
	158	please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
202	14019	BUSY TONE
	26	(1/4 sec pause)]
	158	Please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
203	14019	BUSY TONE
	26	(1/4 sec pause)
	1402	Press "pound"

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	71	now
	26	(1/4 sec pause)
	14047	or
	158	please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
204	14023	Your party is not answering
	26	(1/4 sec pause)
	14037	To leave a message
	14025	for a charge
	26	(1/4 sec pause)
	102	please
	14042	press "pound"
	2	one
	3	two
	4	three
	71	now
	26	(1/4 sec pause)
	14047	or
	158	please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
205	14019	BUSY TONE
	26	(1/4 sec pause)
	14022	The phone is busy
	26	(1/4 sec pause)
	14037	To leave a message
	14025	for a charge
	26	(1/4 sec pause)
	102	please
	14042	press "pound"
	2	one
	3	two
	4	three
	71	now
	26	(1/4 sec pause)
	14047	or
	158	please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
214	158	Please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)
215	14042	Press "pound"
	71	now
	26	(1/4 sec pause)
	14047	or
	158	please hold for
	162	an
	159	operator
	28 28 28 28	(4 sec pause)

The per-country per-carrier permissions are specified on the CCNAME form (5463 Record). For each country specified determine which originating local access carriers (values 0 - 9) can send calls to the OSPS. (As a cross-reference: Country Pair Screening, DCPSP form (5477-2 Record), also uses originating local access carrier values.) For each of these country/carrier combinations, determine whether automated initial call treatment, automated sequence call treatment, and/or offer to transfer to operator treatment are allowed.

To turn on the feature set the DIOR OTTO ACT field to "Y" on the OSPSOPT form (5424 Record). The data to control feature operation are also specified on this form. Determine the appropriate values to use for the DOM WAIT, INTL WAIT, and POST COMPL parameters. Determine which of the BUSY ANN, RNA ANN, and/or UNDEF ANN options of the feature should be activated for this switch. (Note that the value chosen for POST COMPL can also be used to activate or deactivate the post-completion announcement option in this switch.)

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7.3 Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CCNAME	5463	3	4BP	27.81
OSPSOPT	5424	3	4Y	8.9

CCNAME form (5463 Record) - This form is used to map the COUNTRY NUMBER to a 15-character country name, which is used for DIOR calls. The list of carrier permissions was added as part of the DIOR Sequence Call Enhancements special feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The following fields support DIOR Sequence Calling on the OSPSOPT form (5424 Record)

- BUSY ANN ACT
- DIOR OTTO ACT
- DOM WAIT
- INTL WAIT
- POST COMP
- RNA ANN ACT
- UNDEF ANN ACT

8. DIOR NETWORK REMOTE ACCESS

8.1 Background

Prior to the DIOR NRA (Network Remote Access) feature, the SDN (Software Defined Network) customer dialed a toll-free access number from a particular country. The international TA (Telecommunication Administration) translated this number into a routing number of the form 143-WXY-NCCZ, where:

- 143 identified the call as an NRAI (NRA International) call within the ASN (AT&T Switched Network).
- WXY identified the NRAI subscriber (i.e., the SDN the caller is trying to reach).
- NCC was an NRA Country Code used for rating, billing, and fraud control within the NRAI platform.
- Z was a "don't care".

The International Telecommunications Administration then routed the call to the ISC (International Switching Center) with this routing number. The ISC signaled the same routing number to a 4ESS Switch ATP (AT&T Trigger Platform), which (in conjunction with an SDN) NCP (Network Control Point) provided SDN service to the customer. Having obtained a valid authorization code and dialed number, the call was routed through the ASN to the local office serving the dialed number. The AT&T Service Provider was able to offer this version of service (called NRA International or NRAI) from only a handful of international locations.

8.2 Feature Description

The DIOR NRA (Network Remote Access) feature is available for 5E10 and later. The feature number for DIOR NRA is 98-5E-3104. DIOR NRA allows the OSPS on DIOR calls to recognize 8XX numbers that are used to gain remote access to domestic SDN (Software Defined Network) services. Customers use DIOR as a means of accessing the ASN (AT&T Switched Network), and then dial an 8XX number to access their private network. If allowed from the originating country, the call is class charged auto-collect, and OSPS signals the call forward with the necessary routing information. The 8XX subscriber is responsible for both the DIOR access costs and the domestic 8XX service costs associated with all answered and completed DIOR NRA calls.

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As a result of this new feature, OSPS distinguishes NRA 8XX numbers from all other 8XX forward numbers on DIOR calls. In contrast with other DIOR 8XX calls, DIOR NRA calls that are allowed will always be "toll free" (i.e., calls made by NRAI customers are class charged "auto-collect"). OSPS uses DIOR NRA specific routing data to determine routing for DIOR NRA calls. In addition, when signaling the call to the 4ESS Switch ATP, OSPS provides the routing information that the 4ESS Switch ATP expects to receive from the ISC (International Switching Center) in the current NRAI architecture.

8.3 Operator Displays

Operators could encounter the DIOR NRA feature under the following conditions:

- the originating country is not eligible for automated switch handling (initial calls, sequence calls, or both).
- the NRAI customer bails-out from automated switch handling or AP (Automated Position) handling.
- the customer attempted to make a sequence call subsequent to an automated DIOR NRA or "toll-free" DIOR I8XX (DIOR International 8XX) initial call (which is sent to the operator as a DIOR 0- call).

To complete these calls, the operator is required to enter a forward number. Once a forward number is entered and the call is determined to be a DIOR NRA call, OSPS provides one of the following:

- If the call is "allowed", the operator may see displays indicating that this 8XX call is a DIOR NRA call, an AUTOCOLLECT charge, and either a display indicating that the operator may float the call ("PR OK") or a display indicating that manual outpulsing is required (if the call is TPR (Terminating Point Restrictions) "restricted"). Any OLS (Origination Line Screening) restriction against auto-collect is automatically overridden.

  If a previous class-of-charge was present for the call, it is overridden (e.g., on sequence calls, on calls where the forward number is entered after the class-of-charge, or on calls where the operator previously entered a different forward number that was not charged auto-collect). Once OSPS class charges the call auto-collect, the operator may not enter an alternate COC (Class of Charge) without changing the forward number.

- If the call is "blocked", the operator displays indicate that the NRAI customer is not allowed to make this DIOR call because of a forward number restriction from the originating country: the error message "FWD# not allowed from BK country" and the forward number is displayed in reverse video.

  In order to release the blocked call, the operator must either cancel the call or change the forward number and obtain a valid class-of-charge. (This new error message is also used by the DIOR Toll-Free International feature to indicate a blocked call.)

- If the operator attempts to enter a credit number using the "CREDIT #" key on a blocked DIOR NRA call or a blocked DIOR Toll-Free International call, that entry is rejected by OSPS.

8.4 AMA

The translated CPN (e.g. 143-WXY-NCCZ) is recorded as the terminating number instead of the dialed 8XX number.

An AMA record is generated on every DIOR NRA call that is either answered, or sampled.

8.5 DIOR NRA Functionality

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In order to support NRAI as a service to domestic SDN customers in international locations, OSPS provides the following functionality on DIOR NRA calls.

- OSPS provides DIOR access. NRAI customers use a DIOR access number in their international location to reach the AT&T network. Associated with this access is a DIOR Pseudo Country Code, which is signaled from the International Switching Center.

- OSPS provides DIOR functionality. Calls are given DIOR originating treatment, providing NRAI customers with an opportunity to enter a forward number for initial or sequence calls. This treatment may be provided either by automated switch handling, or position handling (operator or AP) depending on the originating country and office/trunk data.

  Callers may enter any forward number which is allowed as a DIOR forward number. This includes speed dial codes. In order to encounter the DIOR NRA feature, NRAI customers must enter an 8XX number or a speed dial code that translates into an 8XX number.

- OSPS provides screening. OLS (Originating Line Screening) and TPR (Terminating Point Restrictions) checks are performed on each DIOR NRA call. Any OLS screening that applies to the call against auto-collect billing is overridden by OSPS if the call is determined to be an allowed DIOR NRA call. All TPR screening that applies to the call is honored.

- For potential DIOR NRA calls (i.e., the forward number is an 8XX number), OSPS maps the DIOR Pseudo Country Code into the country code format used by NRAI (i.e., an NRA Country Code) using data contained in the modified DIOR Pseudo Country Code to IDDD Country Code Mapping Table CCNAME form (5463 Record, View 27.81).

- OSPS determines whether the call should be given DIOR NRA processing, by searching a new NRA 800 Number Recognition table to determine whether the 8XX number is an NRA number. This table contains the following:

  - A list of NRA 8XX numbers for which DIOR NRA treatment shall be provided.

  - An associated default treatment associated with each NRA 8XX number. The default treatment value specifies whether calls to a given NRA 8XX number should be allowed or blocked.

  - An exception list containing countries from which the default treatment does not apply.

  - A seven-digit routing number associated with each NRA 8XX number. OSPS searches in this table using the 8XX number dialed by the customer and the NRA Country Code as keys. If the 8XX number is present, then the call is a DIOR NRA call which OSPS treats as either "allowed" or "blocked".

    If OSPS determines that the call is not a DIOR NRA call, it proceeds as in the absence of this feature.

- OSPS performs CPN (Called Party Number) Translation, in order to obtain a routing number to be used in populating the AMA record and the IAM to the 4ESS Switch ATP.

  OSPS translates the seven digit routing number (found in the new NRA 800 Number Recognition Table look-up) into a ten-digit routing number using the NRA Country Code. This is the routing number that the ISC signals to the 4ESS Switch in the current NRAI architecture.

  OSPS also performs CN (Charge Number) Translation to transform the charge number into a format acceptable to the 4ESS Switch network.

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OSPS translates the DIOR ANI into an NRAI ANI using the NRA Country Code and the seven-digit routing number found in the new NRA 800 Number Recognition Table.

- OSPS identifies DIOR NRA calls to the operator or AP, and provides a billing indicator or error message (corresponding with the default treatment or exception in the NRA 800 Number Recognition Table). These indicators are provided after the valid non-TPR blocked 8XX number is entered and is determined to be an NRA number. The indicators are used to distinguish DIOR NRA calls from DIOR International 8XX calls.

  Although DIOR NRA calls are different from DIOR International 8XX calls, position handling is the same as for "Toll-Free" DIOR International calls.

- On automated calls, OSPS provides announcements to keep NRAI customers informed of call progress. The AP may also provide announcements.

- OSPS routes the call to a 4ESS Switch ATP using DIOR NRA specific routing data (i.e., the DIOR NRA Destination Index and DIOR NRA Routing Index specified in global office data on the OSPSOPT form (5424 Record)). This routing data allows DIOR NRA calls to receive different routing from other DIOR 8XX calls.

- OSPS uses CCS7 signaling. The IAM includes the following when signaling the call:

  - The Called Party Number parameter is populated with the Translated CPN.

  - The Charge Number parameter is populated with the Translated CN.

  - The Dialed Number parameter is populated with the 8XX forward number.

  - The Forward Call Indicator parameter is populated with zero. This specifies to the 4ESS Switch that the call is not an incoming international call (the call is coming from OSPS, not an international TA).

- OSPS generates an AMA record for all DIOR NRA calls that are answered or sampled. On each record, the back number field shall be populated with the DIOR ANI, and the forward number field shall be populated with the Translated CPN.

8.6 Feature Assignment

Activation of this feature should be coordinated with changes to the toll network.

The following new announcement headers support this feature and should be populated on the ANNHD form (5531 Record).

New Announcement Headers

Header ID	Definition
123	Thank You announcement on initial calls
124	Thank You announcement on sequence calls
125	First attempt reprompt on blocked DIOR NRA calls
126	Termination announcement on blocked DIOR NRA calls

- ***NOTE:*** For 5E9(2) only, standard default data was populated for Announcement Header ID OSPSTA 123 (Thank you for using AT&T) and OSPSTA 124 (Number invalid).

On the CCNAME form (5463 Record, View 27.81), the NRA CC field is used to specify a country code other than the IDDD CAC (International Direct Distance Dialing Country Access Code) for DIOR NRA (Network Remote Access) calls originating from the country specified in the COUNTRY NUMBER field.

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This country code is used to determine call completion permissions.

The DEHOCSM form (5496 Record, View 27.84) is used by DIOR NRA (in addition to DIOR Toll-Free) to specify the SM that stores the 8XX number office code data. In the FEATURE field, enter "TF8" for DIOR Toll-Free feature or "NRA" for the DIOR NRA feature. Existing data for the DIOR Toll-Free feature maps to "TF8".

The DNRA form (6400 Record, View 27.87) supports the DIOR Network Remote Access feature. This form specifies the DIOR NRA 8XX access number, a routing number for routing the call to the NRA toll office, and up to 128 specific originating country codes that are exceptions to the default treatment. The OFFICE CODE / LINE field on the DNRA form cannot be used on the DEHNP form (5431 Record), the OFFICE CODE/LINE cannot support the DIOR NRA and the DIOR Toll-free feature.

For the OSPSOPT form (5424 Record, View 8.9), three fields have been added to support DIOR NRA. The destination index and route index fields should be populated with the destination and route indexes to be used when routing the DIOR NRA calls to the appropriate NRA toll office. The DIOR NRA feature activation field should be set to "Y" when all the other DIOR NRA data have been populated and the feature is to be turned on.

8.7 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCNAME	5463	3	4BP	27.81
DEHOCSM	5496	3	4CW	27.14
DNRA	6400	3	4CZ	27.87
OSPSOPT	5424	3	4Y	8.9

CCNAME form (5463 Record) - This form is used to map the COUNTRY NUMBER to a 15-character country name, which is used for DIOR calls. The NRA CC field supports this feature.

DEHOCSM form (5496 Record) - This form specifies the SM (Switching Module) on which the billing treatment data is stored for DIOR calls to an 8XX number. The "NRA" value for the FEATURE field indicates the DIOR NRA feature.

DNRA form (6400 Record) - This form specifies the DIOR NRA 8XX access number, a routing number for routing the call to the NRA toll office, and up to 128 specific originating country codes that are exceptions to the default treatment. This is a new form to support the DIOR NRA feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The DIOR NRA ACT, NRA RTE IDX, and NRA DEST IDX fields support the DIOR NRA feature.

9. DIOR AUTOMATED INITIAL CALLS: RELEASE 3

9.1 Feature Description

The DIOR AIC (Automated Initial Calls) - Release 3 feature provides AP (Automated Position) handling to DIOR automated initial calls that have bailed-out from switch-based automated handling. The feature number for this capability is 98-5E-2704.

With this feature, the OSPS determines if a DIOR call is eligible for switch-based AIC handling and for DIOR AP handling, by consulting the OSPS Country Number to Country Name Mapping table on the CCNAME form (view 27.81) either on an originating country basis or on an originating country and originating local access carrier basis. For a call to be sent to an AP, AP call types have to be defined and AP handling has to be activated on the applicable trunk groups, regardless of the new DIOR per country AP controls.

The following four treatments can be specified for initial DIOR calls based on the originating country and/or

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the originating local carrier:

- Send call to operator position (as a DIOR 0- call).
- Send call to Automated Position (as a DIOR 0- call).
- Give call switch-based AIC handling, bail-out to operator (as a DIOR 0+ call) if customer signals for operator or times-out after forward number entry.
- Give call switch-based AIC handling, bail-out to Automated Position (as a DIOR 0+ call) if customer signals for operator or times-out after forward number entry.

If the call is not eligible for AIC handling ("non-automated" DIOR call), the switch sends the call to a position. The type of position the call will be sent to depends on the value of the DIOR AP handling for that origination. If DIOR AP handling does apply and the trunk group permits it, the call is sent to an AP. If DIOR AP handling does not apply or the trunk group does not allow APS (Automated Position System), the call is sent to an operator position.

If the call is eligible for AIC handling, the switch provides an automated forward number prompting to the call. When the caller enters a valid forward number the switch continues by prompting the caller for a card number. If a valid card is entered, the call is routed. If the caller enters a card number that results in the call receiving restriction handling such as TPR (Terminating Point Restrictions), CPS (Country Pair Screening), or Digit Analysis Failures, the call is sent to an operator regardless of the DIOR AP handling applicable to the origination. If the caller times-out or dials 0 for an operator, then the DIOR call is routed (based on this feature) to either an APS or an operator. If DIOR AP handling does not apply to the initial call and the caller signals for an operator (0/0#) or times-out, the call is sent to an operator for handling. If DIOR AP handling does apply to the initial call and the caller signals for an operator or times-out, the call is sent to an AP for handling.

9.2 Feature Assignment

Before activating this feature on the switch, the AP System Software Update package must be applied. The OSPS switch data population for this feature must be coordinated with an update of the Cluster data in the AP systems.

See Figure 4 for feature assignment form flow for the DIOR AIC R3 feature.

The following order should be followed in provisioning data for this feature to insure that call queue data exists before this feature is activated:

1. Populate the call type determination information on ACDCTP and ACDPOL forms (5412 Record, views 26.9, and 26.10) to define the AP call types for these DIOR calls.
2. Enter the AP protocol information on the OSPSOPT form (5424 Record, view 8.9), if this data has not already been populated. activate the DIOR AIC R3 feature.
3. Enter the DIOR AP handling data on the CCNAME form (5463 Record, view 27.81) for the appropriate originating country or originating country/local access carrier pair identified for this feature.
4. Activate the DIOR AIC R3 feature on the OSPSOPT form.
5. Enter the AP treatment information on the OPRTK form (5417 Record, view 26.26) for each trunk group handling these DIOR calls.

9.3 Scenario for Automated Initial DIOR Call

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The caller dials a DIOR call that is set up for automated initial call handling and when prompted for a forward number, enters 0, 0# or times-out. The call is sent to the appropriate position queue (operator or automated) based on how the AP handling data is set up. If APS is allowed on the OPRTK form and if AP handling is allowed on the CCNAME form, then the call is routed to the AP call queue.

9.4 Scenario for Non-automated Initial DIOR Call

The caller dials a DIOR call that is not set up for automated initial call handling. The call is sent to the appropriate position queue (operator or automated) based on how the AP handling data is set up. If APS is not allowed on the OPRTK form or if AP handling is not allowed on the CCNAME form then the call is routed to an operator instead of an AP.

9.5 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCNAME	5463	3	4BP	27.81
OSPSOPT	5424	3	4Y	8.9

CCNAME form (5463 Record) - This form is used to map the COUNTRY NUMBER to a 15-character country name, which is used for DIOR calls. The AP QUEUE field is used to indicate whether the Automated Position queue should be used when an automated call needs to be sent to a position and the carrier is not identified on this form.

The APQ field is used to indicate whether the Automated Position queue should be used when an automated call from this carrier needs to be sent to a position. This is used whenever the CARRIER is identified.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The DIOR Automated Initial Calls Release 3 is activated by the DIOR AIC R3 field.

10. GLOSSARY

ACCS	Automated Calling Card Service
ACCSQ	Automated Calling Card Sequence
AP	Automated Position
APS	Automated Position System
AIC	Automated Initial Calls
ASN	AT&T Switched Network
ATP	AT&T Trigger Platform
CAC	Country Access Code
CC	Country Code
CCS	Common Channel Signaling
CN	Charge Number
COC	Class-Of-Charge

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CPC	Card Protection Center
CPN	Called Party Number
CPS	Country Pair Screening
DDD	Direct Distance Dialing
DIOR	Direct International Origination
DTMF	Dual Tone Multifrequency
IAM	Initial Address Message
IDDD	International Direct Distance Dialing
ISC	International Switching Center
ISUP	ISDN User Part
MF	Multifrequency
NANP	North American Numbering Plan
NCP	Network Control Point
NRA	Network Remote Access
NRAI	Network Remote Access International
OLS	Originating Line Screening
OSPS	Operator Services Position System
SDN	Software Defined Network
SS	Special Screening
SM	Switching Module
TA	Telecommunication Administrations
TCA	Telephone Company Administration
TCS	Terminating Code Screening
TPR	Terminating Point Restriction
VMS	Voice Messaging Service

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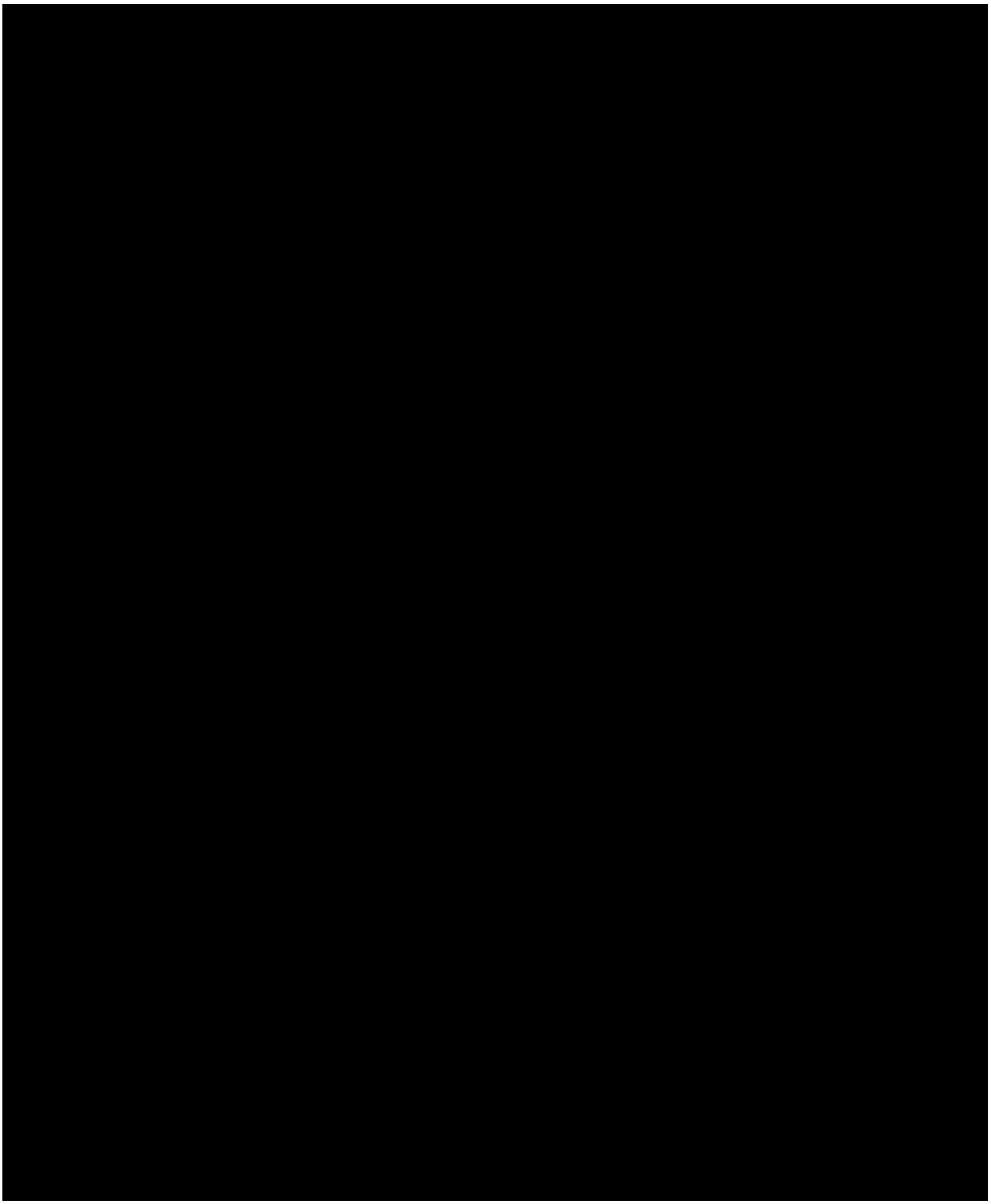

Figure 1 DIOR COUNTRY PAIRED SCREENING FORM FLOW

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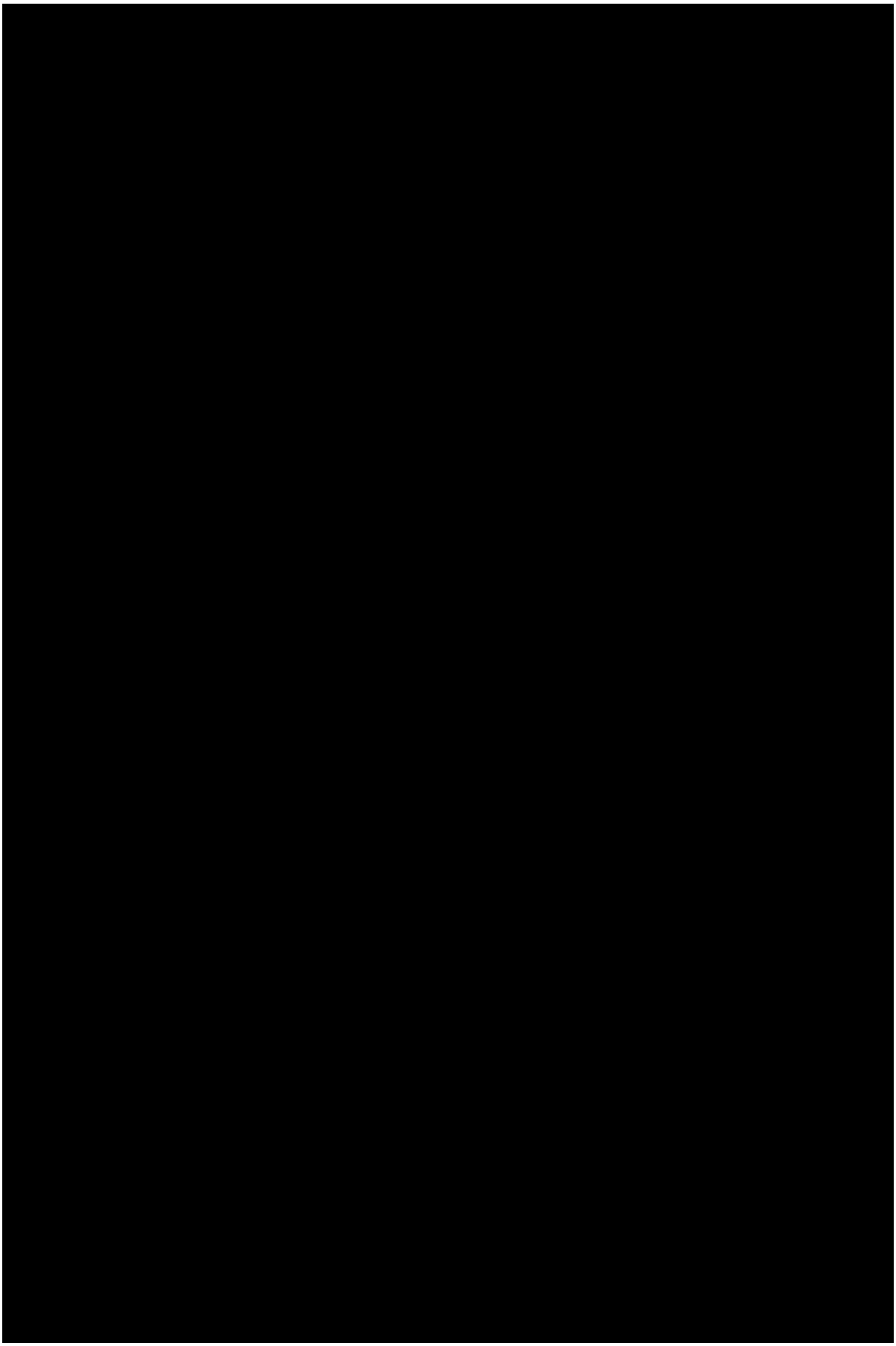

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Figure 2 DIOR TOLL FREE INTERNATIONAL 800 SERVICE FORM FLOW

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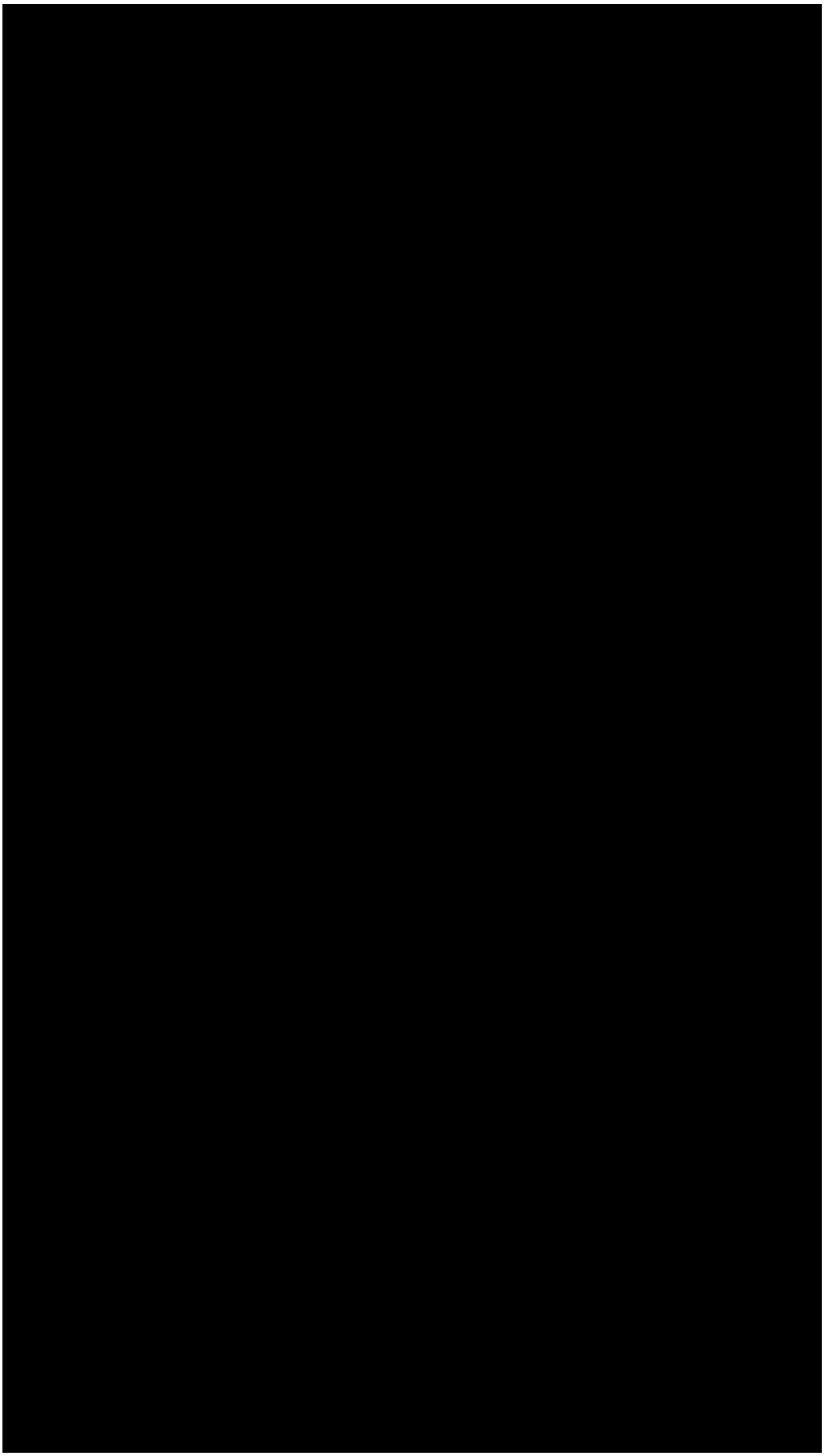

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Figure 3 DIOR NRA FORM FLOW

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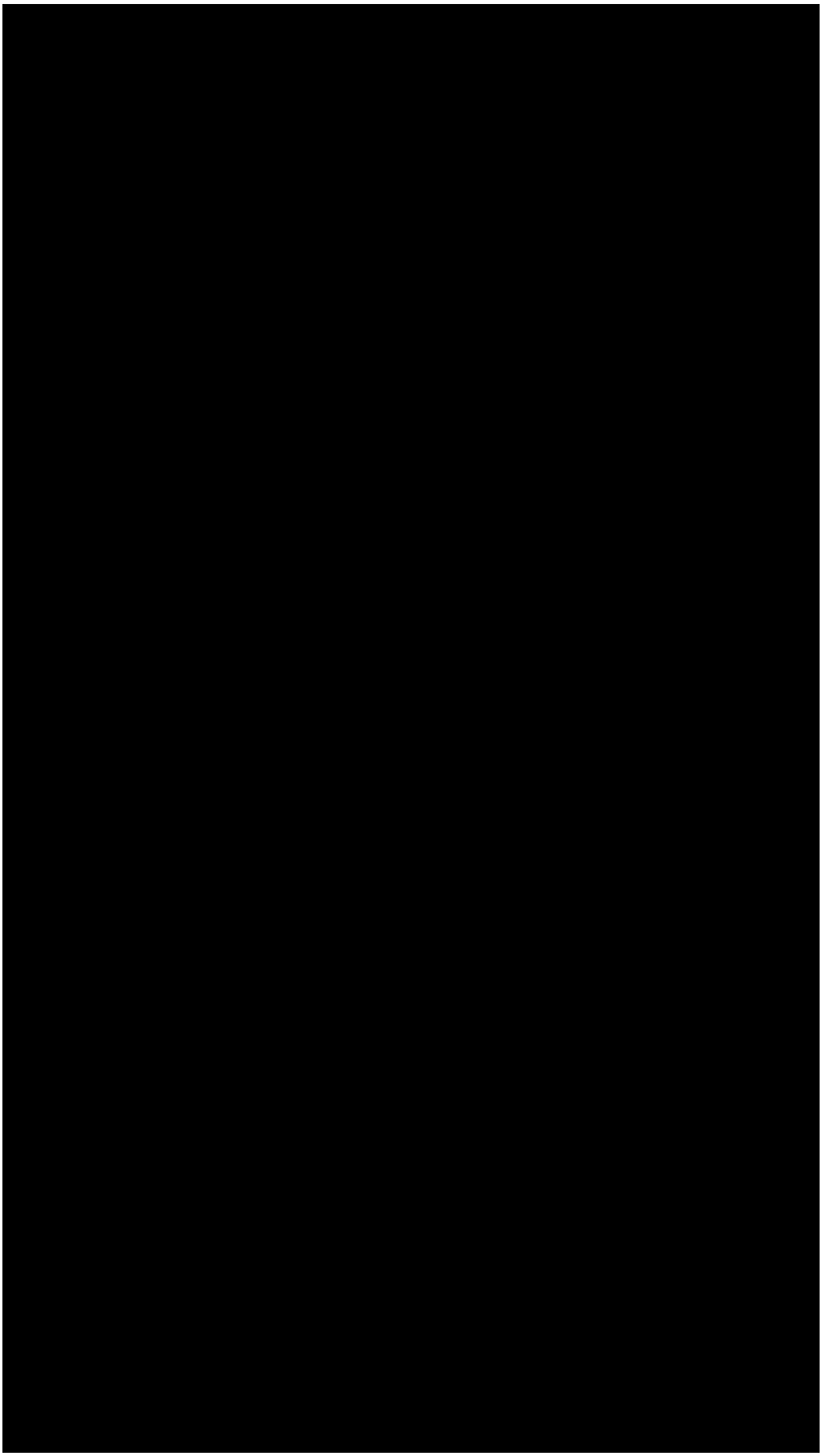

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Figure 4 DIOR AIC R3 FORM FLOW

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SEC. 3N: INTERFLOW FEATURES

1. INTERFLOW

The Interflow feature is available with 5E5 and later Software Releases. The OSPS Interflow feature allows for immediate, scheduled or permanent close down of one, some or all operator serving teams at an OSPS. Call traffic requiring operator assistance that is otherwise handled by the closed serving teams is subsequently interflowed to another OSPS.

For the TA (Toll and Assistance) OSPS application, Interflow is accomplished via dedicated digital facilities called OSPS EXSLs (Extended Digital Subscriber Lines). Call completion, charging, final routing and other switch functions are carried out by the OSPS on which the call originally arrived; only service provided by the operator will be handled by the Interflow receiving OSPS. The OSPS switch from which a call is to be interflowed is referred to as the originating OSPS and the switch to which a call is to be interflowed is referred to as the receiving OSPS.

1.1 OSPS Extended Digital Subscriber Line

OSPS EDSLs are required to interflow Toll and Assistance call traffic between two OSPS switches. An OSPS EDSL is actually a T1 transmission facility on which 23 B channels (voice) and a single D channel (data) are provided. There are four types of trunk groups that must be defined for OSPS EDSLs:

- Outgoing D Channel
- Incoming D Channel
- Outgoing B Channel
- Incoming B Channel

The outgoing D channel and outgoing B channel trunk groups are defined on the originating OSPS. The incoming D channel and incoming B channel trunk groups are defined on the receiving OSPS.

If multiple OSPS EDSLs are used between two OSPS switches, then the D channel on each OSPS EDSL that connects those two switches must be assigned to the same trunk group. The B channels on each OSPS EDSL that connects those two switches must also be assigned to the same trunk group. The trunk group defined for the D channels cannot be the same as the trunk group defined for the B channels. The outgoing D channel trunk group number on the originating OSPS does not have to equal the incoming D channel trunk group number on the receiving OSPS. The same is true for the outgoing B channel trunk group and incoming B channel trunk group.

If an OSPS is interflowing to multiple OSPSs, then a unique outgoing D channel trunk group and outgoing B channel trunk group must be defined for each receiving OSPS. Conversely, if an OSPS is receiving interflow call traffic from multiple OSPSs, then a unique incoming D channel trunk group and incoming B channel trunk group must be defined for each originating OSPS.

1.2 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AUTO	5505	3	5E	14.1
TKGRP	5202	3	2A	5.1
TRKCL	5203	3	2B	5.3
TRUNK	5204	3	2C	5.5

AUTO form (5505 Record) - Automatic trunk testing by the switch may only be performed on outgoing B channel OSPS EDSL trunk groups and not on the other three interflow trunk group types. For automatic

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trunk testing to occur on an outgoing B channel OSPS EDSL trunk group, the ATTTN field must be set to a valid entry on the AUTO form. Testing of outgoing B channels is accomplished with the use of the ISTF (Integrated Services Test Facility), therefore, the entry used from the AUTO form must have AUTOMATIC PROGRESSION TEST TYPE set to "INV" or "NINV".

Associated with automatic trunk testing is the AML PERCENT field which specifies the percentage of trunk group members that may be removed from service without sounding an alarm or causing a craft AML message to be printed at the MCC ROP. Again, this field may only be populated for an outgoing B channel OSPS EDSL trunk group and not the other three interflow trunk group types.

TKGRP form (5202 Record) - The TKGRP form is used to define the OSPS EDSL trunk groups numbers. The TRK DIR and TRKCLS fields are used to distinguish the four types of OSPS EDSL trunk groups. The two fields should be set according to the following table. The INPULSING and OUTPULSING fields must also be set according to the table.

Refer to Figure 1 for a summary of these fields for OSPS EDSL trunk groups.

The DATA RATE field on the TKGRP form must be populated for all four types of OSPS EDSL trunk groups and must be populated consistently with the DFI MODE field on the EQDUP form so that the desired facility transmission characteristics are achieved. Figure 2 lists the transmission characteristics that result from the setting of these two parameters for both D4 framing and ESF (Extended Super Frame) transmission formats.

The remaining fields in the TKGRP form should be left blank or retain their default values for all four types of OSPS EDSL trunk groups.

TRUNK form (5204 Record) - The TRUNK form is used to define trunk group members for the OSPS EDSL trunk groups. This is accomplished by assigning the DEN (Digital Equipment Numbers) for the B and D channels to the respective B and D channel trunk groups.

Each OSPS B and D channel trunk group member should be assigned a TRANS CLS that is defined for a digital facility (i.e., TRUNK TYPE in the TRKCL form must be "DIGITAL").

The outgoing D channel trunk group members on the originating OSPS (TRK DIR = "SGNL" and TRKCLS = "IFOPER" in the TKGRP form) and the incoming D channel trunk group members on the receiving OSPS (TRK DIR = "SGNL" and TRKCLS = "IFTERM" in the TKGRP form) must be assigned an ISCN (Integrated Services Channel Number) and PSCLI (Protocol Software Change Level Indicator). These fields should remain blank for the outgoing B channel trunk group members on the originating OSPS (TRK DIR = "OUT" and TRKCLS = "IFOPER" in the TKGRP form) and for the incoming B channel trunk group members on the receiving OSPS (TRK DIR = "INC" and TRKCLS = "IFOPER" in the TKGRP form)

The PSCLI is defined to accommodate the possibility of protocol interface differences that may exist between two OSPSs executing on different software releases. This attribute is used to identify the software release of the 5ESS Switch on the far end of the OSPS Interflow link. The value entered indicates the PSCLI of the resident 5ESS Switch.

The remaining fields in the TRUNK form should be left blank or retain their default values for all four types of OSPS EDSL trunk groups.

1.3 INTERFLOW Activation/Deactivation

Interflow Activation and Deactivation allows a user to turn Interflow "on" or "off" on an immediate or scheduled basis. Activation and deactivation of Interflow may be accomplished via Recent Change only. Interflow cannot be activated or deactivated via ODA.

Interflow is activated and deactivated to a receiving OSPS Interflow switch on a serving team basis. That is, a user turns Interflow "on" or "off" for a serving team. A serving team may be activated to interflow to only one receiving OSPS switch at a time, but multiple serving teams may be activated to the same

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receiving OSPS switch. When a serving team is activated for Interflow, all calls that would otherwise be handled by an operator on that serving team are interflowed. If the activated serving team handles TA call traffic, then the calls will be interflowed via the OSPS EDSL to the receiving OSPS switch.

- ***NOTE:*** If the activated serving team handles DA, Telemarketing or Non-ISP to VDT calls, then the calls will be interflowed via rerouting the calls through the network to another operator switch. If a case exists where a serving team handles both TA and Non-ISP to VDT calls, then the TA calls will be interflowed via the OSPS EDSL and the Non-ISP to VDT calls will be interflowed via rerouting calls out over trunks to the network. For additional information on the interflow of non-TA calls, refer to the DIRECTORY ASSISTANCE OFFICES, Division 2, Section 3B and/or the ACD/MIS TELEMARKETING SERVICES, Division 2, Section 3D.

1.4 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
STINFO	5402	3	4C	21.2

Since activation and deactivation of Interflow can be accomplished only via Recent Change Views 21.7, 21.8 and 21.16, there are no ODA input forms to activate or deactivate Interflow. The following sections describe how to activate and deactivate Interflow via Recent Change.

1.5 Scheduled INTERFLOW Activation/Deactivation

OSPSOPT form (5424 Record) - The SCHED IFLOW field indicates if the the INTERFLOW feature is activated. The Q DRN TIME parameter on the OSPSOPT form is used only when interflow has been scheduled for activation. Interflow can be scheduled for activation on quarter hour boundaries via Recent Change Views 21.16 and 21.8. Q DRN TIME specifies the number of minutes prior to the scheduled quarter hour when interflow activations are to occur. For example, if interflow is scheduled to be activated at 8:15 AM and Q DRN TIME is set to 3 (minutes), then the activation will actually occur at 8:12 AM. This parameter was defined because once interflow is activated for a serving team, all newly arriving calls will be interflowed and calls that were queued will not be interflowed and, therefore, must be served on the initial OSPS switch. If an administrator wishes to not have any operators handling calls at or near to the scheduled quarter hour, then Q DRN TIME should be set to nonzero. If Q DRN TIME is set to zero, then operators must stay logged in past the scheduled quarter so that the calls that were queued at the time of activation will be served.

The OSPS ID field on the OSPSOPT form identifies the originating OSPS switch. These OSPS IDs should be selected such that OSPS switches within the same interflow network are unique. The OSPS ID is used when reporting the occurrence of Interflow activations and deactivations at the OAP (OSPS Administrative Processors) at both the originating and receiving Interflow switches. These reports always indicate the OSPS ID of the switch which initiated the activation or deactivation.

RC Views 21.16, OSPS Automatic Reconfiguration Time and 21.8, OSPS Scheduled Interflow Activation and Deactivation, are used to schedule Interflow activations and deactivations. RC View 21.16 defines an auto-reconfiguration pattern in terms of a PAT ID and the time that the pattern should take effect. Patterns may be scheduled to take effect either on an hour boundary or 15, 30 or 45 minute quarter hour boundary for a given forcing day.

Activation/deactivation data is entered into the pattern with RC View 21.8. This view is constructed such that the user specifies for a particular Interflow receiving switch (i.e., the DEST ID field) which serving teams should be activated or deactivated. The OSPS ID of the receiving OSPS should be entered in the DEST ID field.

If Interflow is to be activated for a serving team, an "A" is entered on the field corresponding to the serving team number. Conversely, a "D" is entered if Interflow is to be deactivated for a serving team. A serving

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team's scheduled status may be deleted by updating an "A" or "D" to "blank". A blank entry indicates that the associated serving team is neither activated or deactivated by this pattern when this pattern takes effect.

1.6 Immediate INTERFLOW Activation/Deactivation

OSPSOPT form (5424 Record) - As for scheduled activations and deactivations, the OSPS ID field on the OSPSOPT form identifies the originating OSPS switch. It is used when reporting the occurrence of Interflow activations and deactivations at the OSPS Administrative Processors at both the originating and receiving Interflow switches.

RC View 21.7, OSPS Immediate Interflow Activation and Deactivation, is used to immediately (manually) activate/deactivate Interflow. This view is constructed such that serving teams can be activated or deactivated for a particular receiving Interflow OSPS switch as specified by the DEST ID field. The OSPS ID of the receiving OSPS should be entered in the DEST ID field. An "A" should be entered for each serving team that is to be activated and a "D" for those that are to be deactivated. The Interflow activations and deactivations take place immediately upon completion of the RC UPDATE operation.

STINFO Form (5402 Record) - The NON ISP AND TA and NON ISP ONLY fields are used to inform the Interflow activation/deactivation process whether Interflow must be activated/deactivated for a TA serving team that handles only T&A call traffic (NON ISP AND TA = "N" and NON ISP ONLY = "N"), a TA serving team that handles only Non-ISP call traffic (NON ISP AND TA = "N" and NON ISP ONLY = "Y") or a TA serving team that handles both NON ISP and TA call traffic (NON ISP AND TA = "Y" and NON ISP ONLY = "N"). This is necessary since TA call traffic is interflowed via dedicated digital facilities, i.e., OSPS EDSLs and NON ISP call traffic is interflowed via reroute through the network.

- ***NOTE:*** For additional information on the interflow of non-TA calls, refer to the DIRECTORY ASSISTANCE OFFICES, Division 2, Section 3B and/or the ACD/MIS TELEMARKETING SERVICES, Division 2, Section 3D.

A TA serving team which handles only NON ISP call traffic, i.e., NON ISP ONLY = "Y", must be assigned to call queues defined to receive DA to VDT or NON ISP to VDT calls. That is, if a serving team on a STINFO form has NON ISP ONLY set to "Y", then the serving team must only be assigned to a call type on the OSPSCT form which is used on the ACDCTP form with CALL ORIGIN equal to "DA2VDT" or "NIT".

1.7 INTERFLOW Software Compatibility

The Interflow feature provides software compatibility between two OSPS that are executing on different software releases or different software issues within the same software release. This is accomplished by having each OSPS identify the software release issue that it is executing in what is called an OSPS Translation ID.

1.8 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
INFLTRID	5453	3	4BB	27.50
OSPSOPT	5424	3	4Y	8.9

INFLTRID form (5453 Record) - Each switch checks the INFLTRID form to ensure Interflow compatibility exist between the two switches. The INFLTRID form contains a list of interflow translation IDs that the resident switch has compatibility with. The existence of compatibility ensures that the application software on the two Interflow switches are able to compensate for any possible changes that may be made in the software interface.

OSPSOPT form (5424 Record) - The IFTRANSID field in the OSPSOPT form is assigned a value that

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identifies the Translation ID of the resident OSPS switch. During the initialization of the OSPS EDSLs between two cooperating Interflow OSPS switches, the value of IFTRANSID is exchanged between the two switches.

1.9 ACD For INTERFLOW Calls

Interflow for Toll and Assistance is conducted over OSPS EDSLs connecting to two OSPS switches. The OSPS switch from which a call is to be interflowed is referred to as the originating OSPS and the switch to which a call is to be interflowed is referred to as the receiving OSPS. The ACD on both the originating and receiving OSPS switches are involved in routing an interflow call to an operator for assistance.

1.10 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412-A/D	3	4M	26.9
ACDPOL	5412-B/C/E/F	3	4M	26.10
INFLTADP	5452	3	4BA	27.52
INFLTAP	5451	3	4AZ	27.51
OSPSOP	5401	3	4B	21.32
OSPSOPT	5424	3	4Y	8.9
TKGRP	5202	3	2A	5.1

ACDCTP/ACDPOL forms (5412 Record) - The ACDCTP/ACDPOL forms are used to assign call type information for the OSPS ACD feature. When a call is interflowed to the receiving switch, the sending switch's FIOPR TGN number is used by the receiving switch for expanded call type determination.

If the receiving switch has an FIOPR TGN with the same TGN number as the sending switch, a conflict may result unless precautions are made. The following will prevent problems when the OSPS APS (Automated Position System) is added to any OSPS switch.

To resolve this conflict, the receiving switch should use the fifth key to ACDCTP form, which is the OSPS ID field. If the OSPS ID field is NOT 000, i.e., it is the OSPS ID of the sending switch, then all calls from that sending switch that match the other four keys will be controlled by the entries on the record on the receiving switch. This information can then be used to match up to a PRE CALL ID that does not use the conflicting TGN number. PRE CALL ID is on the ACDCTP form, and it is the key to the ACDPOL form.

In addition, if the OSPS ID field is 000 on the receiving switch and if there is a matching OSPS ID entry for each sending Office, then all non-interflowed calls (calls that originate on the receiving switch) that match the other four keys will be controlled by the entries in this record on the receiving switch.

INFLTADP form (5452 Record) - On the originating OSPS, the INFLTADP form contains a list of OSPS switches to which calls may be interflowed. The list consists of two switch identifiers; one is a four-digit ID and the other is a four alphanumeric character ID. Also listed are the B and D channel trunk groups assigned to the OSPS EDSLs that connect the originating OSPS to the associated receiving OSPS. Each entry in the INFLTADP form essentially defines a pseudo serving team for the ACD to route calls to. Each OSPS EDSL B channel trunk group appears to the ACD on the originating switch as just another serving team, the members of which are the members of the B channel trunk group. The D channel trunk group identifies the trunk group to be used by call processing when transmitting data information between the two OSPS switches. These trunk groups must be valid trunk groups defined on a TKGRP form for the originating OSPS.

INFLTAP form (5451 Record) - The OSPS ID received at the receiving OSPS must exist on an INFLTAP form on the receiving OSPS. This form maintains a list of OSPS switches from which interflowed calls may be received. Listed for each originating OSPS are a four-digit ID, a four alphanumeric character ID and the OSPS EDSL B and D channel trunk groups. These trunk groups must be valid trunk groups defined on a TKGRP form for the receiving OSPS.

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The ACD on the receiving switch routes interflowed calls to operator positions similar to the way that it routes non-interflowed calls. The only difference is in call type determination. As previously stated, the OSPS ID of the originating OSPS may be used in determining the call type. Also, the incoming trunk group number may be used in determining the call type for an interflowed call. The incoming trunk group number used is with respect to the originating OSPS, not the receiving OSPS, i.e., it is the trunk group number of the trunk on which the call initially arrived on the originating OSPS.

The ACD on the receiving switch also ensures that interflowed calls are not interflowed again, i.e., double interflow is not allowed. Calls for which double interflow occurs will be given reorder tone and a Double Interflow message will be printed at the OAPs.

OSPSOP form (5401 Record) - Since the ACD on the originating switch treats OSPS EDSL B channel trunk groups as pseudo serving teams, then each B channel trunk group member port must appear to the ACD as a pseudo operator position port. This is accomplished via the OSPSOP form. On that form, each B channel DEN (Digital Equipment Number) is mapped to a receiving OSPS ID that must exist on a INFLTADP form.

OSPSOPT form (5424 Record) - The OSPS ID field in the OSPSOPT form is a four-digit identifier used to identify the originating OSPS. The originating OSPS uses the value of this field in reporting Interflow activations and deactivations at the OAPs. The value of this field is sent to the receiving OSPS with each call that is interflowed. The receiving OSPS uses the OSPS ID to generate interflow traffic measurements on a per originating OSPS basis and to report interflow activations and deactivations at the OAPs. It may also be (but does not have to be) used in determining a call type for an interflowed call at the receiving OSPS. This is accomplished via the OSPS ID field on an ACDCTP form.

The IFNAME field in the OSPSOPT form is a four alphanumeric character identifier which is also sent to the receiving OSPS with each call that is interflowed. It is displayed to the operator when an interflow call seizes an operator position.

1.11 Directory Assistance, Non-ISP To VDT And Telemarketing Services

For information on ACD for interflow of non-TA calls, refer to the DIRECTORY ASSISTANCE, Division 2, Section 3B and/or the ACD/MIS TELEMARKETING SERVICES, Division 2, Section 3D.

1.12 Interaction with INTRAFLOW

A serving team that has Interflow (or rerouting for non-TA calls) activated is not eligible to receive intraflowed traffic. A queue whose principal team is being interflowed or interflowed via rerouting may be intraflowed to a supporting team whose delay outflow threshold is zero. If an Interflow channel is not found and no supporting team server is found, the call will fail because queuing is not allowed for teams which are interflowed or rerouted.

2. INTERFLOW: EXPANDING THE NUMBER OF TRUNKS GROUPS

This feature increases the number of incoming Interflow connections from 16 to 100. An OSPS receiving site can handle Interflow traffic from up to 100 differnt OSPS sending sites. The number of outgoing Interflow connections was not increased. The AT&T feature number for this capability is 98-5E-2858.

This is a secured feature, SFID 394 (or SFID 288). For more information on this feature, see Division 2, Section 4A394.

OSPS TRUNK TYPE	TRK DIR	TRK CLASS	INPULSING	OUTPULSING
Outgoing D Channel	SGNL	IFOPER	DCHN	DCHN
Outgoing B Channel	OUT	IFOPER		DCHN
Incoming D Channel	SGNL	IFTERM	DCHN	DCHN
Incoming B Channel	INC	IFTERM	DCHN	

Figure 1 OSPS EDLS TRUNK CHARACTERISTICS

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D4 FRAMING FORMAT		
DFI MODE	**DATA RATE**	**TRANSMISSION CHARACTERISTICS**
D4	56K	56 kb/s, noninverted, ZCS (Zero Code Suppression)
D464	R64K	64 kb/s, restricted channel, inverted, B8ZS (Bipolar 8-bit Zero Suppression)
64K	64K	64 kb/s, clear channel, noninverted, B8ZS

EXTENDED SUPER FRAME FORMAT		
DFI MODE	**DATA RATE**	**TRANSMISSION CHARACTERISTICS**
FEB7	56K	56 kb/s, noninverted, ZCS
FE64	R64K	64 kb/s, restricted channel, inverted, ZCS
FE8Z	64K	64 kb/s, clear channel, noninverted, B8ZS

Figure 2 OSPS EDSL TRUNK TRANSMISSION CHARACTERISTICS

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SEC. 4: SPECIAL FEATURES AND TRANSPARENCY FEATURES

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SEC. 4A: SECURED FEATURES

SEC. 4A0: SECURED FEATURES DESCRIPTION

1. SECURED FEATURE DESCRIPTION

Secured features are the optional service features that can be purchased in addition to the features included in the current Software Release. The secured features must be enabled by a Lucent Technologies SEE (System Equipment Engineer). Once the SEE determines through the TEO (Telephone Equipment Order) that secured features have been purchased by the customer, the SEE enables those features either through 5ODA for 5E5 and later Software Releases or through Recent Change for earlier Software Releases.

For a new 5ESS Switch office, 5ODA enables the secured features that the office has purchased. The Lucent Technologies SEE populates the SFSYS form (5713-1 Record), thereby enabling access to the secured features that the office has purchased. The SFSYS form is available only to Lucent Technologies. Customers cannot enable secured features. Once Lucent Technologies has enabled the feature, the customer can then populate the 5ODA forms which assign the specific secured feature. For example, to activate the ERCO (Executive Ringer Cutoff) secured feature, the Lucent Technologies SEE enables ERCO on the SFSYS form. Refer to Division 3, Section 5AR. Once the ERCO feature is enabled, it can be assigned to a line on the DSLUSR form (5908 Record) and assigned to a Button on a key set on the CFGGRP form (5964 Record).

During retrofits, 5ODA preserves the current values of the secured features from the database and evolves the values to the new Software Release.

1.1 Increase Secured Feature ID's

For 5E13 and later, the Increase Secured Feature ID's feature increased the SFID (Secured Feature ID) number fields from 500 to 996. The feature number for this feature is 97-5E-4652.

2. SECURED FEATURE ACTIVATION

2.1 Background

Prior to the Secured Feature Activation feature, a customer had to contact the Regional Engineer to activate a SFID (Secured Feature Identification) in the 5ESS Switch. The Regional Engineer executes SFAC (Secured Feature Activation) using the MAP X, MAP Y, MAP Z (Office ID), and the appropriate MAP list rows from the switch's Recent Change View 8.22. This results in a generated password which is valid for 2.5 hours. The customer then activates the SFID on Recent Change View 8.22 with the data generated from SFAC.

2.2 Feature Description

The Secured Feature Activation feature (99-5E-7035) is being deployed for the BMI (Beginning Managed Introduction) of the 5E15 Software Release.

This feature provides an efficient and easy to use procedure to speed-up the secured feature application process when a company buys a feature for all of their switches. It also gives them unlimited time to activate the purchased feature. The process allows activation of an SFID using a single Company Password (COPASSWD) in multiple offices rather than having to activate each office with an individual Password (PASSWD). Two new fields are added to RC View 8.22, MAP Z which is the Company ID and COPASSWD, which is the generated password. The Company Identification Code is treated in a manner similar to the Office ID. The Company ID is determined by the customer and updated using ODBE (Office Data Base Editor). Refer to the 235-105-210 Routine Operations and Maintenance Procedures for the procedure to update the Company ID. When a customer wants to activate a SFID that they have purchased

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for all of their switches, the MAP Z value is used on Recent Change View 8.22. The Regional Engineer executes SFAC and requests the values for MAP X, MAP Y, MAP Z and the SFID that is being activated. SFAC generates a company password that is valid for all customer switches when the Company ID is used. The customer is then responsible to distribute the generated password to their switches.

The password for individual Secured Feature Activation is not affected by the addition of the company password.

2.3 Feature Assignment

To provision this feature, set the COMPANY ID field on the OFCOPT form. The Lucent Technologies Secured Feature Administrator has to be contacted for assistance in the update operation.

2.4 Translation Requirements

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
OFCOPT	5509	3	5I	8.1

OFCOPT form (5509 Record) - The OFCOPT form (5509 Record) is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. A new field, COMPANY ID, is added for 5E15 and later.

3. SECURED FEATURES TABLES

Information on secured features is documented in the TG-5 as follows:

- Division 2, Section 4A contains a listing (index) by feature number and by feature name.
- Division 2, Section 4A0 provides a numerical list which contains software release information (see Figure 1). The SOFTWARE UPDATE/FEATURE RELEASE column provides the SU or FR number associated with the feature. The INFO SOFTWARE UPDATE/FEATURE column provides the number used to access the feature description using SCANS (Software Change Administration and Notification System). In addition to SCANS, these Informational Software Updates can also be accessed in the 5ESS Switch electronic media documentation. They are located on the menu for 5ESS Switch documentation on-line or on CD-ROM.
- Each secured feature is described in Division 2, Section 4A, identified by its SFID. For example, CPNP (Calling Party Number Presentation) has SFID 50 and is documented in D2S4A50 (Division 2, Section 4A50).

FEATURE NAME	**SFID**	**SOFTWARE RELEASE**	**SOFTWARE UPDATE / FEATURE RELEASE**	**INFO SOFTWARE UPDATE / FEATURE RELEASE**
MDNL (Multiple Directory Numbers per Line)	1	5E4(2) 5E5 5E6	SU 880057 GA GA	SU 880096 GA GA
OSPS 0-/0+ Rate Differential	2	5E4(2) 5E5 5E6	SU 880104 GA GA	SU 890035 GA GA
VPATH 7/10 Digit Outpulsing	3	5E4(2) 5E5 5E6	SU 890044 GA GA	SU 890071 GA GA
OSPS DA And C-ACD Full Monitoring Path (Open Mike)	4	5E4(2) 5E5	SU 890070 GA	SU 890063 GA

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		5E6	GA	GA
ANI (Automatic Number Identification) Over Private Facilities	5	5E4(2)	SU 900067	SU 900057
		5E5	SU 900081	SU 900071
		5E6	SU 900054	SU 900036
		5E7	GA	GA
CST (Circuit Switched Trunk)	6	5E4(2)	SU 890127	SU 890119
		5E5	SU 890060	SU 890045
		5E6	GA	GA
SIC (Service Indicator Code) Expansion	7	5E4(2)	SU 910004	SU 900056
		5E5	SU 910006	SU 900106
		5E6	SU 910004	SU 900044
		5E7	GA	GA
108 Test Line	8	5E6	SU 920060	SU 920056
		5E7	SU 920096	SU 920080
		5E8	GA	GA
CICP (Carrier Identification Code Parameter)	9	5E8	SU 940015	SU 940016
		5E9(1)	SU 940026	SU 940062
		5E9(2)	GA	GA
LDP Enhanced DAL (Data Access Link)	10	5E15	GA	GA
EAOSS (Exchange Access Operator Services System) Signaling for Operator Service Calls	11	5E8	SU 930045	SU 930079
		5E9(1)	SU 940006	SU 940013
		5E9(2)	GA	GA
DC-ACVT (Direct Connect) Capability through the ISDN ACVT (Attendant Control of Voice Terminals) feature for analog lines)	12	5E8	SU 930033	SU 930050
		5E9(1)	GA	GA
SCD (Selective Carrier Denial)	13	5E5	GA	GA
		5E6	GA	GA
Executive Ringer Cutoff	14	5E5	SU 890021	SU 890014
		5E6	GA	GA
OSPS Custom Toll and Assistance Branding	15	5E5	GA	GA
		5E6	GA	GA
OSPS/ACD C-ACD Direct Agent Access	16	5E5	SU 900074	SU 900066
		5E6	GA	GA
OSPS 10XXX Unblocking Fraud Prevention	17	5E5	SU 900065	SU 900049
		5E6	GA	GA
TGSR for ISUP Trunks	18	5E5	SU 900110	SU 900086
		5E6	SU 900048	SU 900010
		5E7	GA	GA
Pre-Compliant FGB CIC Expansion	19	5E6	SU 900048	SU 900035
		5E7	GA	GA
		5E8	GA	GA
OSPS C-ACD Alternated External Dialing	20	5E5	SU 900085	SU 900077
		5E6	SU 900031	SU 900027
		5E7	GA	GA
OSO AMA Recording For ANI Delivery	21	5E5	SU 900129	SU 900098
		5E6	SU 900066	SU 900046
		5E7	GA	GA
OSPS 891 Format Credit Card Service	22	5E5	SU 900130	SU 900128
		5E6	SU 910072	-
		5E7	NA	NA
OSPS Virtual Card	23	5E8	SU 930035	SU 930053
		5E9(1)	GA	GA
OSPS Purchase Limits Balance Quotation - Phase 1	24	5E8	SU 930039	SU 930063
		5E9(1)	GA	GA
TRS (OSPS Telephone Relay Service Call Handling)	25	5E8	SU 930033	SU 930048
		5E9(1)	GA	GA
OSPS BNS (Billed Number Screening) Fraud Control	26	5E8	SU 930027	SU 930045
		5E9(1)	GA	GA
Forced Calling Number Privacy on CCS Trunks	27	5E6	SU 930003	SU 930003
		5E7	SU 930005	SU 930003
		5E8	SU 930007	SU 930009
		5E9(1)	GA	GA

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800 Post Dial Delay MF Signaling Transmission Reduction (for End Office)	28	5E6 5E7 5E8 5E9(1)	SU 930002 SU 930004 SU 920019 GA	SU 920093 SU 920136 SU 920138 SU 920025 SU 920043 GA
800 Post Dial Delay MF Signaling Response Reduction (for Access Tandem Office)	29	5E6 5E7 5E8 5E9(1)	SU 930002 SU 930004 SU 920019 GA	SU 920093 SU 920136 SU 920026 SU 920044 GA
MCLD (Modified Called Line Disconnect) Enhancement	30	5E8	GA	GA
OSPS Interworking with SSP 800	31	5E6 5E7 5E8	SU 920060 SU 920096 GA	SU 920055 SU 920079 GA
AM Based Protocol Monitoring Translator	32	5E6 5E7 5E8	SU 920035 SU 920064 GA	SU 920034 SU 920046 GA
AR/AC with Privacy Number ID for AMA (Return Call AMA)	33	5E6 5E7 5E8	SU 920004 SU 920005 GA	SU 910159 SU 910023 GA
Proportionate Bidding	34	5E6 5E7 5E8	SU 920027 SU 920104 GA	SU 920006 SU 920066 GA
OSPS Position Release of NPA-131 Calls	35	5E6 5E7	SU 910095 GA	SU 910093 GA
LASS Validation and Screening for NPA Split	36	5E6 5E7 5E8	SU 910133 SU 910033 GA	SU 910114 SU 910019 GA
Multi-Distinctive Ringing II / Enhanced MDNL (Depends on SFID 1, see Division 2, Section 4A1)	37	5E6	GA	GA
Flexible ANI	38	5E6	GA	GA
Enhanced INWATS-Type AMA Records	39	5E6	GA	GA
Calling Name Delivery Phase 0	40	5E6 5E7 5E8	SU 910142 SU 920005 GA	SU 910112 SU 910020 -
Calling Name Delivery Phase 2	40	5E7 5E8	SU 920105 GA	SU 920087 -
Calling Name Delivery Phase 2.1	40	5E8 5E9(1)	SU 930010 GA	SU 920029 GA
OSPS C-ACD Call Interaction Interface of Inbound Call Management (Call Vectoring Command PROMPT)	41	5E6	GA	GA
OSPS C-ACD Conference And Transfer For Outgoing TM/TS Calls	42	5E6 5E7	SU 910007 GA	SU 910005 GA
Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback)	43	5E6 not 5E7	SU 910014 NA	SU 910011 NA
ITSE (Incoming Trunk Service Evaluation)	44	5E6 5E7	SU 900054 GA	SU 900035 GA
OSPS Automated Operator	45	5E6 5E7	SU 910022 GA	NONE GA
OSPS ANI II Digit Treatment	46	5E6 5E7	SU 900073 GA	SU 900061 GA
UCR (Unidentified Call Rejection)	47			
- Base		5E5	SU 910089	SU 910084
- Base		5E6*	SU 910052	SU 910042
- Dial Code Activation of UCR		5E6	SU 910063	SU 910162
- UCR Announcement for Dial Code		5E6	SU 920004	SU 910156
- Base		5E7	SU 920035	SU 910018
POLIN (Privacy Option For Last Incoming Number)	48	5E6	SU 910004	SU 910003

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		5E7	GA	GA
Remove ISDN COT Agency	49	5E6 5E7	SU 910052 GA	SU 910043 GA
CPNP (Calling Party Number Presentation)	50	5E6 5E7	SU 910100 GA	SU 910083 GA
ASP Feature Release 0.1A (ASP Enhancement) (Depends on SFID 58, see Division 2, Section 4A58)	51	5E6 5E7 5E8	SU 920027 SU 920052 GA	SU 910155 SU 910017 GA
OSPS ANI Forwarding	52	5E6 5E7	SU 900073 GA	SU 900060 GA
Operator Line Verification Interaction With Call Forwarding Busy Line	53	5E6 5E7	SU 910052 GA	SU 910041 GA
OSPS Emergency Interrupt AMA	54	5E6 5E7	SU 910032 GA	SU 910021 GA
OSPS Feature Group B Prepay Coin Access Charge Recording	55	5E6 5E7	SU 910032 GA	SU 910023 GA
OSPS Missing LIDB Data Call Handling Modifications	56	5E6 5E7	SU 910050 GA	SU 910035 GA
OSPS Unblock 900 For Rate Quotes	57	5E6 5E7	SU 910050 GA	SU 910034 GA
ASP Base Feature Lock	58	5E6 5E7	SU 910077 GA	SU 910060 GA
IDDD Routing via SFG	59	5E6 5E7	SU 910077 GA	SU 910062 GA
Metro Hub	60	5E6 5E7	SU 910092 GA	SU 910084 GA
E911 (Enhanced 911)	61	5E7	GA	GA
CFDA (Call Forward Don't Answer) after Call Waiting	62	5E7	GA	GA
CLSS (Calling Line Side Supervision)	63	5E7	GA	GA
Music On Hold	64	5E7 5E8	SU 920085 GA	SU 920084 GA
OSPS Automated Position Call Type Determination	65	5E7	GA	GA
OSPS Automated Sequence Dialing Following Operator Release	66	5E7	GA	GA
OSPS OAP 15 Minute Traffic Report MECH Usage Data	67	5E7	GA	GA
OSPS OAP 24 Hour Traffic Report MECH Usage Data	68	5E7	GA	GA
OSPS Specialized Handling for 700 Calls	69	5E7	GA	SU 920032
CLAMA (Coin Line Automatic Message Counting)	70	5E7	GA	SU 920040
Transfer From ARU to ACD	71	5E7 5E8	SU 920035 GA	SU 910030 GA
5E8 Base Lock for ISTF	72	5E7 5E8	GA GA	GA GA
OSPS Real Time Rating Improvements for DACC	73	5E7	GA	GA
PBX Trunk Access to OSPS	74	5E7	GA	SU 920011
OSPS OLS Before DACC Prompt	75	5E7	GA	GA
OSPS OLS - Alternate Routing	76	5E7 5E8	SU 920019 GA	SU 920011 GA
OSPS Block 900 Calls for 10+4 Cards	77	5E7 5E8	SU 920019 GA	SU 920011 GA
OSPS Completion of Inter-LATA calls Accessing Directory Assistance	78	5E7 5E8	SU 920057 GA	SU 920050 GA
OSPS ACCS for 0+800 Calls From Wireless Service Providers	79	5E7 5E8	SU 920081 GA	SU 920074 GA
Intra-Switch Analog Line Transfer	80	5E7 5E8 5E9(1)	SU 920131 SU 930006 GA	SU 920015 SU 920102 GA
OSPS LIDB - Change Handling of Indeterminate Reply Codes	81	5E7 5E8	SU 920096 GA	SU 920092 GA
OSPS ACQS Rate Distinction Based on Quote Delivery	82	5E8 5E9(1)	SU 930027 GA	SU 930039 GA
OSPS Feature Group D Incoming Signaling for Special Applications	83	5E8 5E9(1)	SU 930027 GA	SU 930043 GA
OSPS Alternate Access to Language Specific	84	5E8	SU 930010	SU 930013

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Operator Services		5E9(1)	GA	GA
OSPS FTS/NRA	85	5E8 5E9(1)	SU 930012 GA	SU 930025 GA
OSPS EABS (Exchange Alternate Billing Services) Alternate Routing	86	5E8 5E9(1)	SU 930008 GA	SU 930010 GA
OSPS Volt Delta DA Interface	87	5E8 5E9(1)	SU 930008 NA	SU 930006 NA
Circuit Switched Trunk Enhancement (Depends on SFID 6, see Division 2, Section 4A6)	88	5E8 5E9(1)	SU 930010 GA	SU 930020 GA
OSPS Specialized Handling for 700 Calls Release 2.1	89	5E8 5E9(1)	SU 930010 GA	SU 930012 GA
OSPS Subaccount Billing - ANI Screening	90	5E7 5E8	SU 920096 GA	SU 920088 GA
Call Waiting with Distinctive Tones/Ringing for Long Distance Calls	91	5E8	GA	GA
Bridging Onto Conference Call, Multiple Bridgers, RHR of Cong. Call	92	5E8	GA	GA
Advanced Service Interface Proxy	93	5E8 5E9(1)	SU 930015 GA	SU 930001 GA
OSPS MECH Zip Tone	94	5E8	GA	GA
OSPS Independent Company, Announcement Branding	95	5E8	GA	GA
OSPS OLS - Customized Market Announcements	96	5E8	GA	GA
OSPS Original Line Number Screening Before DACC - Phase 2	97	5E8	GA	GA
OSPS Purchase Limits - Alert Tone Prior to Disconnect	98	5E8	GA	GA
OSPS Originating Station Class for DA Call Completion	99	5E7 5E8	SU 920083 GA	- GA
OSPS VMS Service Code Measurements	100	5E8 5E9(1)	SU 920015 GA	SU 920031 GA
OSPS International Billed Number Screening	101	5E8 5E9(1)	SU 920015 GA	SU 920028 GA
OSPS 0- Transfer Over Feature Group D Trunks	102	5E8 5E9(1)	SU 920020 GA	SU 920040 GA
AP (Applications Processor) Link Diversification	103	5E8	GA	GA
AMA - Recording of Calls from Wireless Service Providers	104	5E8 5E9(1)	SU 930006 GA	SU 930002 GA
CENTREX PRI (Primary Rate Interface) Enhancements (Depends on SFID 60, see Division 2, Section 4A60)	105	5E8 5E9(1)	SU 930037 GA	SU 930047 GA
Usage-Sensitive Three-Way Calling	106	5E8 5E9(1)	SU 940001 GA	SU 930058 GA
OSPS AIBNS (Automated Inward Billed Number Screening)	107	5E8 5E9(1)	SU 930008 GA	SU 930004 GA
Dual ESA for E911	108	5E8 5E9(1)	SU 920020 GA	SU 920017 GA
ALIC-5 (Analog Line to Integrated Carrier on the 5ESS Switch)	109	5E8 5E9(1)	SU 930010 GA	SU 920049 GA
OSPS CICADA (Completion of Calls Accessing Inter-LATA Directory Assistance II Block/Unblock 809 (Depends on SFID 78, see Division 2, Section 4A78)	110	5E8 5E9(1)	SU 930008 GA	SU 930007 GA
AC (Automatic Callback) Blocked to Private Number	111	5E8 5E9(1)	SU 930012 GA	SU 930015 GA
OSPS AMA Identification of 800 Access Calls	112	5E8 5E9(1)	SU 930019 GA	SU 930030 GA
OSPS Intraflow to Interflow Call Handling	113	5E8 5E9(1)	SU 930024 GA	SU 930040 GA
ISDN PSAP (Public Safety Answering Point) (Depends on SFID 61, see Division 2, Section 4A61)	114	5E8 5E9(1) 5E9(2)	SU 940012 SU 940011 GA	SU 940008 SU 940022 GA

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OSPS CICADA Mute Back to Connect Operator (Depends on SFID 78, see Division 2, Section 4A78)	115	5E8 5E9(1)	SU 930015 GA	SU 930022 GA
CPN (Calling Party Number) Delivery on E911 Calls (Depends on SFID 61, see Division 2, Section 4A61)	116	5E8 5E9(1) 5E9(2)	SU 940012 SU 940011 GA	SU 940008 SU 940020 GA
OSPS Enhancements to DA and DACC for Wireless Users	117	5E8 5E9(1) 5E9(2)	SU 930045 SU 940006 GA	SU 930077 SU 940005 GA
15A Announcement	118	5E9(1) 5E9(2)	SU 940024 GA	SU 940068 GA
Alternate Language LASS Announcement	119	5E8 5E9(1) 5E9(2)	SU 940007 SU 940023 GA	SU 940001 SU 940010 GA
Originating AR/AC Destination Point Code	120	5E14	SU	SU
ACD (Automatic Call Distributor/BRCS DN Provisioning	121	5E9(1)	GA	GA
ACD (Automatic Call Distributor/BRCS Position Provisioning (Depends on SFID 121, see Division 2, Section 4A121)	122	5E9(1)	GA	GA
ACD (Automatic Call Distributor/BRCS Agent Login (Depends on SFID 122, see Division 2, Section 4A122)	123	5E9(1)	GA	GA
Call Park	124	5E9(1)	GA	GA
Fractional DS1 Switching - N x DS0	125	5E9(1)	GA	GA
ASP (Advanced Service Platform) Release 0.1B (Depends on SFID 51, see Division 2, Section 4A51)	126	5E9(1)	GA	GA
AMATRC (AMA Trace) Enhancements	127	5E9(1)	GA	GA
AMA Capabilities for Type 2A Cellular Interconnections	128	5E9(1)	GA	GA
Software Update Process Automation	129	5E9(1)	GA	GA
Digital Cellular Switch (Digital AMPS TDMA)	130	5E9(1) 5E9(2)	SU 930005 GA	- GA
ELINK (E-Link Access and Alternate A-Link Set Routing)	131	5E9(1)	GA	GA
FPCR (Full Point Code Routing)	132	5E9(1)	GA	GA
CIDCW (Calling Identity Delivery on Call Waiting) (Depends on SFID 140, see Division 2, Section 4A140)	133	5E9(1) 5E9(2)	SU 940017 GA	SU 940024 GA
ATTS (Automatic Trunk Test Scheduler)	134	5E9(1)	GA	GA
ASP Distinctive Ringing (Depends on SFID 126, see Division 2, Section 4A126)	135	5E9(1) 5E9(2)	SU 940020 GA	SU 940069 GA
ASP Default Routing for Termination Attempt Triggers (Depends on SFID 126, see Division 2, Section 4A126)	136	5E9(1) 5E9(2)	SU 940020 GA	SU 940045 GA
ASP BRCS OHD Interworking (Depends on SFID 126, see Division 2, Section 4A126)	137	5E9(1) 5E9(2)	SU 940016 GA	SU 940017 GA
ASP OHD LASS Interworking (Depends on SFID 126, see Division 2, Section 4A126)	13 7	5E9(1) 5E9(2)	SU 940033 GA	SU 940077 GA
Vector Prompt Enhancement (Depends on SFID 41 and 123, see Division 2, Section 4A41 and Division 2, Section 4A123)	138	5E9(1) 5E9(2) 5E10	SU 940037 SU 950003 GA	SU 940089 SU 950005 GA
ASP Interworking with NISDN and ISATs (Depends on SFID 126, see Division 2, Section 4A126)	139	5E9(1) 5E9(2)	SU 940016 GA	SU 940023 GA

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Switch-to-CPE Analog Off-Hook FSK Data Interface	140	5E9(1) 5E9(2)	SU 940017 GA	SU 940024 GA
Dual ESA (Emergency Services Adjunct) for E911 Enhancements (Depends on SFID 108, see Division 2, Section 4A108)	141	5E9(1) 5E9(2)	SU 940023 GA	SU 940051 GA
Flexible ANI Enhancements (Depends on SFID 38, see Division 2, Section 4A38)	142	5E9(1) 5E9(2)	SU 940024 GA	SU 940044 GA
Pinnacle ACD E911 Service (Depends on SFID 114 and 123, see Division 2, Section 4A114 and Division 2, Section 4A123)	143	5E9(1) 5E9(2)	SU 940034 GA	SU 940067 GA
Dual Circuit FX (Foreign Exchange) Plugs	144	5E9(1) 5E9(2)	SU 950001 GA	SU 940037 GA
Call Waiting Deluxe - Phase I (Depends on SFID 140, see Division 2, Section 4A140)	145	5E9(1) 5E9(2) 5E10	SU 950007 SU 950014 GA	SU 950011 SU 950041 GA
A-I-Net LASS-SCN/Intelligent Peripheral Interworking (Depends on SFID 139, see Division 2, Section 4A139)	146	5E9(1) 5E9(2) 5E10	SU 940037 SU 950003 GA	- SU 950010 GA
ASP Busy/No Answer Subsequent Event Detection (Depends on SFID 126, see Division 2, Section 4A126)	147	5E9(1) 5E9(2) 5E10	SU 950010 SU 950016 GA	SU 950013 SU 950035 GA
ASP Interworking with SMDR (Station Message Detail Recording) (Depends on SFID 58, see Division 2, Section 4A58)	148	5E9(1) 5E9(2)	SU 940017 GA	SU 940052 GA
ICLATA (Inter-LATA Carrier's Intra-LATA) Capability	149	5E9(1) 5E9(2) 5E10	SU 940037 SU 950008 GA	SU 940103 SU 950029 GA
Additional ASP OHD Interactions with Account Code and CPN/BN (Depends on SFID 126, see Division 2, Section 4A126)	150	5E9(1) 5E9(2)	SU 940033 GA	SU 940084 GA
Protocol Monitoring Translator for National ISDN (Depends on SFID 32, see Division 2, Section 4A32)	151	5E9(1) 5E9(2) 5E10	SU 950019 SU 960001 GA	SU 950043 SU 950080 GA
ASP 3/6/10 Digit Trigger Screening (Depends on SFID 58, see Division 2, Section 4A58)	152	5E9(1) 5E9(2) 5E10	SU 940035 SU 940006 GA	SU 940094 SU 940005 GA
ASP Default Routing for 3/6/10 Digit Triggers (Depends on SFID 126, see Division 2, Section 4A126)	153	5E9(1) 5E9(2) 5E10	SU 950009 SU 950020 GA	SU 950016 - GA
Toll Connecting Routing and Billing Enhancement	154	5E9(1) 5E9(2) 5E10	SU 950004 SU 950005 GA	SU 950006 SU 950023 GA
Call Forwarding Over Private Facilities/Don't Answer	155	5E9(1) 5E9(2) 5E10	SU 950016 SU 950019 GA	SU 950031 SU 950060 GA
Spontaneous Usage Sensitive 3-way Calling	156	5E9(1) 5E9(2) 5E10	SU 95A015 SU 960001 GA	SU 950029 SU 950065 GA
Toll-Free Treatment for NPA 888 Phase 1	158	5E9(1) 5E9(2) 5E10	SU 950018 SU 950020 GA	SU 950035 SU 950064 GA
ASP Trunk Trigger for Toll (Depends on SFID 126, see Division 2, Section 4A126)	159	5E9(1) 5E9(2) 5E10	SU 950009 SU 950010 GA	SU 950019 SU 950044 GA
Type 2A/2B CMC (Cellular Mobile Carrier) via CCS (Common Channel Signaling)	160	5E9(1) 5E9(2)	SU 950018 SU 960003	SU 950039 SU 950075

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(Depends on SFID 128, see Division 2, Section 4A128)		5E10 5E11	SU 960001 GA	SU 950016 GA
Redirecting Number Parameter Delivery on PRI	161	5E9(1) 5E9(2) 5E10 5E11	SU 950018 SU 960001 SU 96A004 GA	SU 950041 SU 950077 SU 960012 GA
ASP Multiple Rate Center Support (Depends on SFID 126, see Division 2, Section 4A126)	162	5E9(1) 5E9(2) 5E10	SU 95A017 SU 950022 GA	SU 950036 SU 950066 GA
ISUP Message Loop Detection	163	5E11	GA	GA
TRFC30 30 to 60 Minute Collection	164	5E9(1) 5E9(2) 5E10 5E11	SU 950018 SU 960001 SU 960006 GA	SU 950040 SU 950076 SU 960017 GA
Toll Digital Exchange Basic Call Processing for Toll 5ESS-2000 Switch	165	5E10 5E11	SU 96A004 GA	SU 960008 GA
AMA Recording For AIN Busy And Don't Answer Calls (Depends on SFID 126, see Division 2, Section 4A126)	166	5E10 5E11	SU 960002 GA	SU 960004 GA
AMA Capabilities for Type 1 Cellular Access	167	5E10 5E11	SU 960009 GA	SU 960007 GA
Enhanced Poke Confirmation Feature	168	5E10 5E11	SU 96A010 GA	SU 960020 GA
Increase Collection Unit for ROP - Section 144	169	5E11	GA	GA
SSNCI (Subsystem Number Capacity Increase) (Depends on SFID 126, see Division 2, Section 4A126)	170	5E10 5E11	SU 96A008 GA	SU 960021 GA
TCAP Improvements for a Switch Spanning Multiple LATAs	171	5E11	GA	GA
Increase Number of Trunk Groups to 4000	172	5E11	GA	GA
AIN Toll Free Service Phase 2 (Depends on SFID 236, see Division 2, Section 4A236)	173	5E11	GA	GA
LRN (Local Number Portability) (Depends on SFID 126, see Division 2, Section 4A126)	174	5E11	SU 970020	-
Expanded SLS (Signaling Link Selection)	175	5E11	GA	GA
Improved SLT (Signaling Link Test)	176	5E11	GA	GA
MTP (Message Transfer Part) Node Restart	177	5E11	GA	GA
Pre-Query Screening for OHD Triggers (Depends on SFID 58, see Division 2, Section 4A58)	178	5E10 5E11	SU 960013 GA	SU 960033 GA
Enhanced Professional Office	179	5E11	SU 970005	SU 970011
NP - Basic LRN AMA	180	5E11 5E12	SU 970005 GA	- GA
Centrex Network	181	5E9(2)	GA	GA
Centrex Network with ISVM (Depends on SFID 181, see Division 2, Section 4A181)	182	5E9(2)	GA	GA
Centrex Network for Government Security (Depends on SFID 181, see Division 2, Section 4A181)	183	5E9(2)	GA	GA
Far Access Remote	184	5E9(2)	GA	GA
ASP NESS (Network Element Services Signaling) (Depends on SFID 139, see Division 2, Section 4A139)	185	5E9(2) 5E10	SU 950007 GA	SU 950018 GA
Suppressed Ringing	186	5E9(2) 5E10	SU 950021 GA	SU 950074 GA
IXE Tandem Calls via 2 Local Access Tandems	188	5E9(2) 5E10 5E11	SU 950022 SU 950005 GA	SU 950078 SU 950021 GA
ASP Originating Busy/No Answer Triggers with	189	5E11	SU 97A016	SU 970041

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Extended Ringing (Depends on SFID 126, see Division 2, Section 4A126)		5E12	GA	GA
ASP Enhancements to Multiple Rate Center Support (Depends on SFID 51, see Division 2, Section 4A51)	190	5E10 5E11	SU 960017 GA	SU 960040 GA
IS-634 A2 Interface	191	5E13	GA	GA
ICLID Enhancement for MLHG	192	5E10 5E11	SU 96A008 GA	SU 960026 GA
E911 Trunk Failure Alarms	193	5E11 5E12	- GA	- GA
A/B Link and No Path Access Delay and Blockage	194	5E11	GA	GA
TCAP Message Tandem	195	5E11	GA	GA
MLPP (Multi-Level Precedence and Preemption) on SS7-Stage 1	196	5E11 5E12 5E13	SU 970024 SU 970007 GA	SU 970046 SU 970001 GA
MLPP (Multi-Level Precedence and Preemption) on SS7-Stage 2 (Depends on SFID 196, see Division 2, Section 4A196)	197	5E11 5E12 5E13	SU 970024 SU 970007 GA	SU 970046 SU 970001 GA
Number Portability - NPA-NXX Growth	198	5E12	GA	GA
NP - AMA Access Billing (Depends on SFID 180, see Division 2, Section 4A180)	199	5E11 5E12	SU 970006 GA	SU 970019 GA
Automatic SPID Download	200	5E10 5E11 5E12	SU 970003 SU 970015 GA	SU 970004 SU 970009 GA
Deny Automatic Callback on Intra-LATA PIC Calls - Per CIC Control	201	5E10 5E11 5E12	SU 960020 SU 97A016 GA	SU 960057 SU 970032 GA
LDP Multiple CIC Support (Depends on SFID 165, see Division 2, Section 4A165)	202	5E11 5E12	SU 970006 GA	SU 970007 GA
LDP Data Calls (Depends on SFID 165, see Division 2, Section 4A165)	203	5E11 5E12	SU 970006 GA	SU 970007 GA
Decoupling of AM/CM for CM-Only Initilization	204	5E12	GA	GA
Multiple Tandem Cut Through to IXC (Inter□Exchange Carrier) for CAP (Competitive Access Provider) (Depends on SFID 154, see Division 2, Section 4A154)	205	5E10 5E11	SU 960019 GA	SU 960050 GA
Data Only for PRI (Primary Rate Interface)	206	5E10 5E11 5E12	SU 970004 SU 970002 GA	SU 970005 SU 970002 GA
LDP Multiple ANI Support (Depends on SFID 165, see Division 2, Section 4A165)	207	5E12	GA	GA
Call Information Display	208	5E10 5E11 5E12	SU 97A013 - GA	- - GA
Repeat Dial Interworking with AIN Originating Busy Trigger (Depends on SFID 189, see Division 2, Section 4A189)	209	5E11 5E12	- GA	SU 970058 GA
ASP Inhibiting of Originating Busy/No Answer Office Triggers (Depends on SFID 189, see Division 2, Section 4A189)	210	5E11 5E12	- GA	SU 970056 GA
ASP Provisioning of Originating Busy/No Answer Office Triggers (Depends on SFID 189, see Division 2, Section	211	5E12	GA	GA

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4A189)				
Call Screening for ASP Originating Busy/No Answer Office Triggers (Depends on SFID 189, see Division 2, Section 4A189)	212	5E11 5E12	- GA	SU 960057 GA
Route International Calls by Country Code (Depends on SFID 159, see Division 2, Section 4A159)	213	5E10 5E11 5E12	SU 960025 SU 960004 GA	SU 960025 SU 960004 GA
TBCT (Two B-Channel Transfer) on PRI (Primary Rate Interface) and ISDN TBCT Notify to Controller	214	5E13	GA	GA
CDMA Data Services - Circuit Mode (Depends on SFID 221, see Division 2, Section 4A221)	215	5E12	GA	GA
NP - Non-Conditional 10-Digit Trigger for LRN (Depends on SFID 174, see Division 2, Section 4A174)	216	5E11 5E12	SU 970061 GA	SU 970061 GA
General MINT Capability, Alpha Signaling (Depends on SFID 165, see Division 2, Section 4A165)	217	5E12 5E13	SU 980024 GA	- GA
5ESS-2000 LN (Local Nodal) EO (End Office) (Depends on SFID 38, see Division 2, Section 4A38)	218	5E12	GA	GA
PRI Call-by-Call Service Selection for Hotel/Motels and SCOCS	219	5E11	GA	GA
Calling Name for ISDN PRI	220	5E11	GA	GA
CDMA (Code Division Multiple Access) (Depends on SFID 130, see Division 2, Section 4A130)	221	5E10	GA	GA
Third Party Call Control Request Route (Depends on SFID 121, see Division 2, Section 4A121)	222	5E10 5E11	SU 960002 GA	SU 960001 GA
CCITT Recommendation E.164 Compliance for 15 Digit IDDD (International Direct Distance Dialing)	223	5E10	GA	GA
PHA (Protocol Handler for Asynchronous Transfer Mode)	224	5E10	GA	GA
National ISDN 5E10 BRI Package	225	5E10	GA	GA
ASP BRCS/OHD Interworking Extensions (Depends on SFID 137, see Division 2, Section 4A137)	226	5E10	GA	GA
ASP Call Routing Parameters (Depends on SFID 126, see Division 2, Section 4A126)	227	5E10	GA	GA
ISDN PCS (Personal Communications Services) Interworking (Depends on SFIDs 137, 146, 147, 150, 185, 225, and 227, see appropriate Division 2, Section 4A)	228	5E10	GA	GA
AIN 0.2 Send To Outside Resource (Local) (Depends on SFID 126, see Division 2, Section 4A126)	229	5E10 5E11	SU 96A007 GA	SU 960018 GA
TLWS (Trunk Line Workstation Metallic Test Capability on SM2000 Using SLIM 2 (Subscriber Line and Instrument Measurements 2)	230	5E10	GA	GA
Third Party Call Control Redirect Alerting Call (Depends on SFID 122, see Division 2, Section 4A122)	231	5E10 5E11	SU 960002 GA	SU 960001 GA
Third Party Call Control Transfer/Conference Position Call (Depends on SFID 122, see Division 2, Section 4A122)	232	5E10 5E11	SU 960002 GA	SU 960001 GA
Third Party Call Control Originate Call (Depends on SFID 122, see Division 2, Section	233	5E10 5E11	SU 960002 GA	SU 960001 GA

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4A122)				
Switch Verification for Multiple Directory Numbers	234	5E10	GA	GA
Toll Digital Exchange ANI Table Processing (Depends on SFID 165, see Division 2, Section 4A165)	235	5E10 5E11	SU 96A004 GA	SU 960008 GA
ANI Toll Free Phase 1 (Depends on SFID 126, see Division 2, Section 4A126)	236	5E10 5E11	SU 960022 GA	SU 960053 GA
ASP Interworking with CSD (Circuit Switched Data) (Depends on SFID 126, see Division 2, Section 4A126)	237	5E10 5E11	SU 960022 GA	SU 960054 GA
Automatic Association of Default Service	238	5E10 5E11	SU 950005 GA	SU 950019 GA
ASP (Advanced Service Platform) Selective NPA Deletion for ASP Multiple Rate Center Support (Depends on SFID 51, see Division 2, Section 4A51)	239	5E10 5E11 5E12	SU 970010 - GA	SU 970015 - GA
Line Blocking Enhancement for ISVM (Inter-Switch Voice Messaging)	240	5E10 5E11 5E12	SU 970002 SU 970003 GA	SU 970002 SU 970006 GA
AIN Send to Outside Resource (Remote) (Depends on SFID 229, see Division 2, Section 4A229)	241	5E11 5E12	SU 980001 GA	SU 980001 GA
VPN-LDP (Virtual Private Network - Long Distance Platform) (Depends on SFIDs 235, 203, and 202, see Division 2, Section 4A235 or, Division 2, Section 4A203, or Division 2, Section 4A202)	242	5E11 5E12	SU 970020 GA	SU 970053 GA
Carrier Routing / Call Processing By Facility Presence (Depends on SFID 126, see Division 2, Section 4A126)	243	5E11 5E12	SU 97A021 GA	SU 970054 GA
Modified Redirecting Number Parameter Origination on PRI	244	5E10 5E11 5E12	SU 970011 SU 970015 GA	SU 970013 SU 970030 GA
RTCD (Real Time Call Detail) Platform/Application (Depends on SFID 165, see Division 2, Section 4A165)	245	5E12	GA	GA
MINT Beta Signaling (Depends on SFID 217, see Division 2, Section 4A217)	247	5E12 5E13	SU 980024 GA	- GA
MINT Gamma Signaling (Depends on SFID 217, see Division 2, Section 4A217)	248	5E12 5E13	SU 980024 GA	- GA
Reroute Queuing	249	5E12 5E13	SU 980024 GA	- GA
MINT Reroute on Release	250	5E12 5E13	SU 980024 GA	- GA
MINT Time Dependent routing	251	5E12 5E13	SU 980024 GA	- GA
AIN Announcement ID Expansion (Depends on SFID 126, see Division 2, Section 4A126)	252	5E12	GA	GA
Restrict Usage of ASP Triggers (Depends on SFID 126, see Division 2, Section 4A126)	254	5E11 5E12	SU 97A021 GA	SU 970052 GA
ASP Originating Triggers (Depends on SFID 126, see Division 2, Section 4A126 - For more information see Division 2, Section 4A254)	255	5E11 5E12	SU 97A021 GA	SU 970052 GA
ASP Dialing Plan Triggers	256	5E11	SU 97A021	SU 970052

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(Depends on SFID 126, see Division 2, Section 4A126 - For more information see Division 2, Section 4A254)		5E12	GA	GA
ASP Terminating Triggers (Depends on SFID 126, see Division 2, Section 4A126 - For more information see Division 2, Section 4A254)	257	5E11 5E12	SU 97A021 GA	SU 970052 GA
National ISDN Call Park	258	5E12 5E13	SU 99A002 GA	SU 980055 GA
Switched Based TDMA (Time Division Multiple Access) Vocoders (Depends on SFID 130, see Division 2, Section 4A130)	259	5E12	GA	GA
Protocol Monitor for CCS Signaling Links	260	5E12 5E13	SU 98A021 GA	- GA
LDP Operator Routing Based on Called Party Number (Depends on SFID 165, see Division 2, Section 4A165)	261	5E12	GA	GA
IBDS (Internally Bridged Dual Services), Package 1	262	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 970073 SU 970006 GA
IBDS (Internally Bridged Dual Services), Package 2 (Depends on SFID 262, see Division 2, Section 4A262)	263	5E12 5E13	SU 980006 GA	SU 970007 GA
Telephone Status Monitor and Select	264	5E12 5E13	SU 980005 GA	SU 980015 GA
Selective Manual RC Output Priority	265	5E12	GA	GA
Prohibit REX on BRI Lines Per Office	266	5E11 5E12 5E13	SU 97A021 GA GA	SU 970055 GA GA
Prohibit REX on BRI Lines Per Line	267	5E11 5E12 5E13	SU 97A021 GA GA	SU 970055 GA GA
Two Simultaneous Voice Calls on BRI	268	5E11 5E12	SU 970019 GA	SU 970051 GA
Alternate Local Service Provider Routing	269	5E12 5E13	SU 990004 GA	SU 990005 GA
VPN (Virtual Private Network) Expansion Package A (Depends on SFID 242, see Division 2, Section 4A242)	270	5E12 5E13	SU 98A022 GA	- GA
DNIS (Dialed Number Identification Service)	271	5E12	GA	GA
DALs (Direct Access Links) (Depends on SFID 126, see Division 2, Section 4A126)	272	5E12	GA	GA
Call Forward on Trunks	273	5E11 5E12 5E13	SU 97A025 SU 970005 GA	SU 970075 SU 970008 GA
Signaling System 7 F-Links	274	5E12	GA	GA
Feature Interactions with 10-Digit Office Dialing Plan	275	5E10 5E11 5E12 5E13	SU 970011 SU 970014 SU 980001 GA	SU 970016 SU 970038 SU 970017 GA
NP Service Provider Portability AMA Enhancements (Depends on SFID 199, see Division 2, Section 4A199)	276	5E11 5E12 5E13	SU 98A013 SU 98A017 GA	SU 980023 SU 980028 GA
VFDE (Voice Frequency Data Enhancement)	277	5E11 5E12 5E13	SU 980008 SU 980008 GA	SU 980010 SU 980010 GA
Local Trunk Billing Enhancement	278	5E11 5E12 5E13	SU 980006 SU 980007 GA	SU 980006 SU 980006 GA

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GETS (Government Emergency Telecommunications Service) High Probability of Call Completion	279	5E13	GA	GA
IBDS (Internally Bridged Dual Service) - Package 3 (Depends on SFID 263, see Division 2, Section 4A263)	280	5E13	GA	GA
Operator & Directory Assistance Billing for Unbundled Local Switching	281	5E11 5E12 5E13	SU 98A011 SU 98C014 GA	SU 980019 SU 980025 GA
II Digits Screening (Depends on SFID 165, see Division 2, Section 4A165)	282	5E13	GA	GA
Ability to stop RST:TRK, TKGMN	283	5E12 5E13	SU 980011 GA	SU 980011 GA
Recovery from ABD (Alternate Boot Disks)	284	5E13	GA	GA
CDMA Data Services-Packet Mode (Depends on SFID 130, see Division 2, Section 4A130)	285	5E13	-	-
TDMA Data Services-Circuit Mode (Depends on SFIDs 259 and 130, see Division 2, Section 4A259 or Division 2, Section 4A130)	286	5E13	-	-
5ESS-2000 LDP (Long Distance Platform) MINT Expansion Package A (Depends on SFID 165, see Division 2, Section 4A165)	287	5E13 5E14	SU 990009 GA	SU 990031 GA
OSPS CSG (Communications Services Group) Secured Feature Office Identifier	288	5E9(1) 5E9(2)	SU 940020 GA	- GA
LDP (Long Distance Platform) RTI (Route Index) Expansion/List	289	5E13	-	-
LDP (Long Distance Platform) Final Route Trigger (Depends on SFID 237, see Division 2, Section 4A237)	290	5E13	-	-
Deny Transfer of Digit Screened Calls	291	5E12 5E13	- GA	- GA
Simplified Custom ISDN Attendant	292	5E12 5E13	- -	- -
E911 Call Error Detection and Alarm	293	5E11 5E12 5E13	SU 980011 SU 98C014 GA	SU 980017 - GA
Route Outage AML (Automatic Maintenance Limit) E911 Call Error Detection and Alarm	294	5E11 5E12 5E13	SU 98A011 SU 98C014 GA	SU 980017 SU 980022 GA
ASP Persistent Transactions Enhancements (Depends on SFID 126, see Division 2, Section 4A126)	295	5E12 5E13	SU 990009 SU 980007	SU 990007 -
Delete Warning Display for Essential Services	296	5E11 5E12 5E13	SU 980009 SU 980011 GA	SU 980020 SU 980024 GA
ASM (Administrative Services Module) Base	297	5E12 5E13	- GA	- GA
Wireless E911 (Depends on SFID 61, see Division 2, Section 4A61)	298	5E12 5E13	SU 98A016 GA	- GA
FGD (Feature Group D) Interface to E911 (Depends on SFID 61, see Division 2, Section 4A61)	299	5E12 5E13	SU 980013 GA	- GA
Number Portability - Test Query for LRN (Depends on SFID 126, see Division 2, Section 4A126)	300	5E11 5E12 5E13	SU 98A011 SU 980016 GA	SU 980027 SU 980027 GA
ASP Network Busy Event (Depends on SFID 126, see Division 2, Section 4A126)	301	5E13	GA	GA
Enhanced Alternate Carrier Routing	302	5E13	GA	GA

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(Depends on SFID 126, see Division 2, Section 4A126)				
LPN (Local Number Portability) on the LDP (Long Distance Toll Platform) (Depends on SFID 174, see Division 2, Section 4A174)	303	5E12 5E13	- GA	- GA
Number Portability - Non-Conditional Trigger for DID Trunks (Depends on SFID 216, see Division 2, Section 4A216)	304	5E11 5E12 5E13	SU 980014 SU 980021 GA	SU 980038 SU 980051 GA
Global Recent Change Interaction with LASS AR (Depends on SFID 189, see Division 2, Section 4A189)	305	5E11 5E12 5E13	SU 980016 SU 98A022 GA	SU 980040 SU 980040 GA
5E Acceptance of 1A Wink NPD and ANI for 911 Routed Calls (Depends on SFID 61 and 193, see Division 2, Section 4A61 or Division 2, Section 4A193)	314	5E11 5E12 5E13	SU 980003 SU 980017 GA	- SU 980046 GA
Incoming/Outgoing Trunk Group Usage Counts	315	5E13 5E14	- GA	- GA
OSDE (On-Site Data Evolution) (Depends on SFID 297, see Division 2, Section 4A297)	316	5E12 5E13	- GA	- GA
Packet Pipe Enhancements (Depends on SFID 221, see Division 2, Section 4A221)	317	5E13 5E14	- GA	- GA
CNAM (Originating Switch Calling Name)	318	5E13	GA	GA
NP Service Provider Portability AMA Enhancements II (Depends on SFID 199, see Division 2, Section 4A199)	319	5E11 5E12 5E13 5E14	SU 980013 SU 98A017 GA GA	SU 980032 SU 980028 GA GA
Feature Deployment via the Data Services Module (Depends on SFID 297, see Division 2, Section 4A297)	320	5E12 5E13	- SU 99A004	- -
AMA Recording for Resale and Unbundling	321	5E12 5E13 5E14	- - GA	- - GA
Recent Change Front End on the ASM (Depends on SFID 297, see Division 2, Section 4A297)	322	5E13	GA	GA
Trunk Group Hunt Sequence Enhancements	323	5E13	GA	GA
OSPS Listing Services - International Directory Assistance	324	5E12 5E13 5E14	SU 980023 SU 980002 GA	SU 980078 - GA
City Code Routing on International Calls	325	5E12 5E13	SU 980026 SU 980004	- SU 980006
Number Portability - Officewide Reserved Marketing (Depends on SFID 174, see Division 2, Section 4A174)	326	5E12 5E13 5E14	SU 98A021 SU 980005 GA	SU 980064 SU 980013 GA
ADSI Acknowledgment Timer Optional Value (Depends on SFID 140, see Division 2, Section 4A140)	327	5E12 5E13 5E14	SU 980025 SU 980004 GA	SU 980060 - GA
Support for AMADNS Phase 1 (Depends on SFID 297, see Division 2, Section 4A297)	328	5E12 5E13 5E14	- SU 990005 GA	- SU 990012 GA
OSPS Limit for Customer-Controlled Reconnect to LS/DA	329	5E12 5E13 5E14	SU 990004 SU 990003 GA	SU 980057 - GA
Tandem to Tandem E911 (Depends on SFID 61, see Division 2, Section 4A61)	330	5E12 5E13 5E14	SU 990005 SU 980006 GA	SU 990010 SU 990014 GA
Talking Call Waiting	331	5E12	SU 99B006	SU 990017

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		5E13	SU 99A005	SU 990019
		5E14	GA	GA
Pay Phone Compensation for Tollfree Calls,	332	5E11	SU 990002	SU 990001
Tollfree Calling Enhancement for Flexible ANI II		5E12	SU 990007	SU 990018
		5E13	SU 990007	SU 990026
		5E14	GA	GA
ASP Send to Outside Resource Interworking with	333	5E12	SU 990006	SU 990016
Orig Busy/No Answer with Extended Ringing		5E13	-	-
(Depends on SFID 126, 189, and 229, see		5E14	GA	GA
Division 2, Section 4A126 or Division 2, Section 4A189 or Division 2, Section 4A229)				
Call Forward Don't Answer - Ring Control	335	5E12	SU 990004	SU 990006
		5E13	SU 99A004	SU 990009
		5E14	GA	GA
NPA to NPD Translation Table for E911 Calls	337	5E12	SU 990009	SU 990011
(Depends on SFID 61, see Division 2, Section		5E13	SU 990007	SU 990015
4A61)		5E14	GA	GA
OSPS DIALECT by OLS	338	5E12	-	-
		5E13	-	-
		5E14	GA	GA
OSPS Customized Operator Service - Release 1	339	5E12	-	-
		5E13	-	-
		5E14	GA	GA
866 - 822 Toll Free Service	340	5E12	-	-
(Depends on SFID 158, see Division 2, Section		5E13	-	-
4A158)		5E14	GA	GA
Distinctive Call Forwarding Alert	341	5E12	-	-
		5E13	-	-
		5E14	GA	GA
Module 55803 Enhancement	342	5E13	SU 990010	-
		5E14	GA	GA
ASP Mid Call Event Detection	343	5E13	-	-
(Depends on SFID 126, see Division 2, Section		5E14	-	-
4A126)		5E15	-	-
Raw Formatted Output for Office Records	344	5E12	IMR 664621	IMR 664621
		5E13	IMR664621	IMR664621
		5E14	GA	GA
ASP Mid Call Event Detection	345	5E13	-	-
(Depends on SFID 126, see Division 2, Section		5E14	-	-
4A126)		5E15	GA	GA
NP - Append BAF Module 164 with CNA	346	5E13	GA	GA
(Chargeable Account Number)				
Announcement on Detection of NPA Split	347	5E13	FR4	-
		5E14	FR3	-
		5E15	GA	GA
LDP AMA Correlation Module	348	5E13	IMR 671818	SU 990060
		5E14	GA	GA
TSI Nailup of Consecutive DS0s for DNU-S	349	5E13	FR1 IMR 674164	99-0073
		5E13	FR2 IMR 674164	99-0024
		5E14	GA	GA
Multiline Hunt Group Capacity Expansion	351	5E15	GA	GA
OSPS Interflow for Operator Conferences	361	5E9(1)	GA	GA
OSPS ICCV Call Screening	362	5E9(1)	GA	GA
OSPS CIID - Carrier Specific Routing	363	5E9(1)	GA	GA
OSPS Operator Trouble Report with Automated	364	5E9(1)	GA	GA
Position				
OSPS Card Based Speed Dialing - Phase 2	365	5E9(1)	SU 940002	SU 940017
		5E9(2)	GA	GA
OSPS Screening for Real Time Call Details	366	5E9(1)	SU 940008	SU 940019
		5E9(2)	GA	GA
OSPS Speed Dialing Auto Provisioning	367	5E9(2)	GA	GA
(Depends on SFID 365, see Division 2, Section				

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4A365)				
OSPS LIDB - Recognition of PSDI Value 4	368	5E9(1) 5E9(2)	SU 940003 GA	SU 940003 GA
OSPS Enhanced AMA for Listing Services	369	5E9(1) 5E9(2)	SU 940020 GA	SU 940054 GA
OSPS Automated Inward Line Screening	370	5E9(1) 5E9(2) 5E10	SU 940023 SU 940009 GA	SU 940106 SU 940009 GA
OSPS Terminating Point Restriction Expansion	371	5E9(1) 5E9(2)	SU 940023 GA	SU 940061 GA
OSPS Prepaid Overtime for Coin Calls	372	5E9(1) 5E9(2)	SU 940018 GA	SU 940043 GA
OSPS Feature Group D Incoming Signaling for Special Applications - Release 2	373	5E9(1) 5E9(2)	SU 940018 GA	SU 940048 GA
OSPS Calling Card Screening by Carrier	374	5E9(1) 5E9(2)	SU 940018 GA	SU 940047 GA
OSPS TCS Screen Code Expansion	375	5E9(1) 5E9(2)	SU 940020 GA	SU 940056 GA
OSPS Recall from Subscriber Deactivation	376	5E9(1) 5E9(2)	SU 940023 GA	SU 940053 GA
OSPS 800 Access Using Feature Group D Signaling	377	5E9(1) 5E9(2)	SU 940026 GA	SU 940075 GA
OSPS Carrier Specific Branding on Seizure for ACCS and ACTS	378	5E9(1) 5E9(2) 5E10	SU 940030 SU 940009 GA	SU 940079 SU 940004 GA
OSPS LEC Feature Group D Incoming Signaling/Special Handling of Calls	379	5E9(1) 5E9(2) 5E10	SU 940030 SU 940009 GA	SU 940086 SU 940004 GA
OSPS Network Access Interrupt	380	5E9(1) 5E9(2) 5E10	SU 940038 SU 950002 GA	SU 940095 SU 940022 GA
OSPS Customer Controlled Reconnect to DA	381	5E9(1) 5E9(2) 5E10	SU 94A037 SU 950005 GA	SU 940105 SU 950020 GA
OSPS Forward Number Interdigit Timing Change	382	5E9(1) 5E9(2) 5E10	SU 940034 SU 950002 GA	SU 940092 SU 940018 GA
OSPS Feature Group D Enhancements (Depends on OFID 617, see Division 2, Section 4A617)	383	5E9(1) 5E9(2) 5E10	SU 940034 SU 950002 GA	SU 940091 SU 940002 GA
OSPS ASAP - Release 2	384	5E9(1) 5E9(2) 5E10	SU 94A037 SU 950002 GA	SU 940099 SU 940025 GA
OSPS Inmate Calling Service	385	5E9(2) 5E10	SU 950009 GA	SU 950033 GA
OSPS International Billed Number Screening - Release 2	386	5E9(1) 5E9(2) 5E10	SU 940002 SU 950004 GA	SU 940116 SU 940026 GA
OSPS TPR Expansion for International Numbers	387	5E9(2) 5E10	SU 950004 GA	SU 950002 GA
OSPS ACCS for Commercial Credit Cards	388	5E9(2) 5E10	SU 950004 GA	SU 950004 GA
OSPS Extending Round Trip Delay for OSC	389	5E10	GA	GA
OSPS ACCS Thank You Branding Timer	390	5E9(2) 5E10	SU 950005 GA	SU 950026 GA
OSPS Teleconferencing Service Signaling Interface	391	5E9(2) 5E10	SU 950010 GA	SU 950030 GA
OSPS AMA Recording of the Access ID for CAP Calls	392	5E9(2) 5E10	SU 950007 GA	SU 950022 GA
OSPS BNS Query Message Enhancements	393	5E9(1) 5E9(2) 5E10	SU 950004 SU 950005 GA	SU 950004 SU 950017 GA
OSPS Expanding Interflow Incoming Trunks	394	5E10	GA	GA

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Incoming ISUP (SS7) to OSPS	395	5E10	GA	GA
OSPS 1+ Time And Charges	396	5E9(1)	SU 950007	SU 950012
		5E9(2)	SU 950011	SU 950032
		5E10	GA	GA
OSPS Specialized AMA for 15 Digit International	397	5E10	GA	GA
OSPS ASAP for Language Specific Operator	398	5E9(2)	SU 950007	SU 950027
Services Using Route Number		5E10	GA	GA
OSPS Early Position Release of International Calls	399	5E9(2)	SU 950013	SU 950038
		5E10	GA	GA
OSPS Purchase Limits Balance Quotation	400	5E9(2)	SU 950016	SU 950050
Business/Residential Cards		5E10	SU 950003	SU 950008
OSPS AATOS Fraud Control	401	5E9(2)	SU 950018	SU 950054
		5E10	GA	GA
OSPS Quiet Hear	402	5E9(2)	SU 950020	SU 950061
		5E10	SU 950006	SU 960007
		5E11	GA	GA
OSPS AATLSOS - Automated Access Prompt	403	5E9(2)	SU 950020	SU 950063
		5E10	SU 950006	SU 950003
		5E11	GA	GA
OSPS Closed End Branding for Operator Handling	404	5E9(2)	SU 950021	SU 950070
Calls		5E10	SU 950005	SU 950015
		5E11	GA	GA
OSPS 800 Toll Free Services NPA Expansion	405	5E10	GA	GA
OSPS Allow Leading 1 and 011 for Automated	406	5E9(2)	SU 950022	SU 950067
Phone Number Collection		5E10	SU 950004	SU 950001
		5E11	GA	GA
OSPS DACC AMA Record with Operator Entered	407	5E9(2)	SU 950022	SU 950071
Forward Number		5E10	SU 960002	SU 960020
		5E11	GA	GA
OSPS Automation of T&A Information	408	5E10	SU 960002	SU 960022
		5E11	GA	GA
OSPS Automation of TCS/CPS Override	409	5E10	SU 96A010	SU 960028
		5E11	GA	GA
OSPS Universal T1.5 Access Signaling Changes	410	5E11	GA	GA
OSPS Identification of Calls Originated Through	411	5E10	SU 960009	SU 960025
Special Access Methods		5E11	GA	GA
OSPS Automated Access Prompting using Call	412	5E10	SU 960025	SU 960046
Processing Data Links		5E11	GA	GA
OSPS OLS Call Routing for Special Services	413	5E10	SU 96A010	SU 960024
		5E11	GA	GA
OSPS ASAP Language Specification Operator	414	5E10	SU 960017	SU 960044
Services Rating Changes		5E11	SU 960007	SU 960001
		5E12	GA	GA
OSPS Record and Playback	415	5E10	SU 960019	SU 960052
		5E11	SU 960006	SU 960004
		5E12	GA	GA
OSPS Bill To Third Fraud Control Based on Third	416	5E10	SU 960016	SU 960037
Number NPA		5E11	SU 960005	-
		5E12	GA	GA
OSPS Local Number Portability for Local Exchange	417	5E11	SU 960007	SU 970007
Carrier Offices		5E12	GA	GA
OSPS VMS Access Dialing Changes	418	5E10	SU 960028	SU 960068
		5E11	SU 970001	SU 960015
		5E12	GA	GA
OSPS Local Number Portability for AT&T Version	419	5E11	SU 960007	SU 970007
		5E12	GA	GA
OSPS Customer Account Services International	420	5E10	SU 960025	SU 960061
Intercept		5E11	SU 960005	SU 960003
		5E12	GA	GA
OSPS Inmate Calling Services Allow Coin Handling	421	5E10	SU 960023	SU 960060
		5E11	SU 960006	SU 960006
		5E12	GA	GA
OSPS AMA Recording for Listing Services Search	422	5E10	SU 970002	SU 960075

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Types		5E11 5E12	SU 970002 GA	SU 970004 GA
OSPS 800 Universal International Numbering	423	5E11 5E12	SU 97A008 GA	SU 970018 GA
OSPS CICADA Release 3	424	5E10 5E11 5E12	SU 960028 SU 970002 GA	SU 960069 SU 970003 GA
OSPS DIALECT (Direct Integrated Access to Language Enhanced Capabilities)	425	5E11 5E12	SU 97A019 GA	SU 970047 GA
OSPS NPA Handling by Trunk Group	426	5E11 5E12	SU 97A008 GA	SU 970024 GA
OSPS LS: Automated Directory Assistance System Release 1 (Depends on SFID 415, see Division 2, Section 4A415)	427	5E10 5E11 5E12	SU 97A006 SU 97A009 GA	SU 970009 SU 970025 GA
OSPS Rate for Flat and Measured Service	428	5E11 5E12	SU 970016 GA	SU 970033 GA
OSPS LSCC with SS7 Redirection	429	5E11 5E12	SU 970023 GA	SU 970040 GA
OSPS TCS-NPA Expansion	430	5E11 5E12	SU 970018 GA	SU 970039 GA
OSPS AMA - Record ANI II Digits - Interim	431	5E11 5E12	SU 97A009 GA	SU 970026 GA
OSPS ACCS - Special Calling Card Handling - LEC Pin Prompt	432	5E11 5E12	SU 970014 GA	SU 970036 GA
OSPS ACCS - Special Calling Card Handling - 10 Digit True Choice Calling Card	433	5E11 5E12	SU 970014 GA	SU 970036 GA
OSPS AMA - Record ANI II Digits	434	5E11 5E12 5E13	SU 97A019 SU 97B007 GA	SU 970049 SU 970010 GA
OSPS DIOR with Commercial Credit Card Capability	435	5E11 5E12 5E13	SU 970023 SU 980005 GA	SU 970064 SU 970011 GA
OSPS 800 Peel Out for Calling Card	436	5E12 5E13	SU 980005 GA	SU 980007 GA
OSPS 800 Peel Out for Multiple Card	437	5E12 5E13	SU 980005 GA	SU 980007 GA
OSPS CDR Charging Records (Depends on SFID 245, see Division 2, Section 4A245)	438	5E12 5E13	SU 980005 GA	SU 980007 GA
OSPS Automated Sequential Card Queries	439	5E12	GA	GA
OSPS PLBQ With Add-On Capability	440	5E11 5E12 5E13	SU 980003 SU 980007 GA	SU 980002 SU 980001 GA
OSPS CCS7 Incoming Signaling Wireless Call Indicator	442	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 980008 SU 980016 GA
OSPS National DA 00-Access LSCC with SS7 Redirection	443	5E11 5E12 5E13	SU 980001 SU 980002 GA	SU 980003 SU 980002 GA
OSPS CAS TCAP Query Changes for International Terminating Numbers	444	5E11 5E12 5E13	SU 970024 SU 97B006 GA	SU 970066 SU 970012 GA
OSPS IBNS Call Blocking	445	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 970078 SU 970016 GA
OSPS Acceptance of New Parameters in LIDB BNS and Card Replies	446	5E11 5E12 5E13	SU 980006 SU 980003 GA	SU 980005 SU 980003 GA
OSPS Credit Key Blocking	447	5E11 5E12	SU 980005 SU 980006	SU 980009 SU 980009

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		5E13	GA	GA
OSPS AMA - Record ANI II Digits - Release 2	448	5E11	SU 980003	SU 970071
		5E12	SU 980009	SU 980004
		5E13	GA	GA
OSPS NPA Code Expansion	449	5E12	SU 980024	SU 980063
		5E13	GA	GA
OSPS Flexible Automated Call Type Determination	450	5E13	GA	GA
OSPS 0- LEC Calls Maintenance Assert Handling	451	5E13	GA	GA
OSPS Originating Line Number Screening	452	5E12	SU 980024	SU 980069
		5E13	SU 990003	SU 990003
		5E14	GA	GA
OSPS DIOR 800 Services	453	5E12	SU 98A021	SU 980048
		5E13	GA	GA
OSPS ATT LNP (Local Number Portability) Using	454	5E12	SU 980022	SU 980049
Single Number Query		5E13	GA	GA
OSPS Flexible ANI Enhancement	455	5E11	SU 98A009	SU 980025
		5E12	SU 98C014	SU 980031
		5E13	GA	GA
OSPS AATLSOS-Automated Access Prompting	457	5E11	SU 98A009	SU 980026
Non-Tariffed Announcement		5E12	SU 980A17	SU 980030
		5E13	GA	GA
		5E14	GA	GA
OSPS ESP 5ESS Operator Services Overlay	458	5E12	-	-
Interface Control (and ES System Integrity/Reliability		5E13	-	-
(99-5E-4327.A) see Division ???)		5E14	GA	GA
OSPS DA Listing in AMA Record	459	5E12	SU 990004	SU 990004
		5E13	SU 990003	SU 990008
		5E14	GA	GA
OSPS Control of DACC per LS/DA Transporting	460	5E12	SU 980025	SU 980068
Carrier		5E13	SU 980004	SU 980001
		5E14	GA	GA
OSPS DIOR Calling Card Restrictions to Domestic	461	5E12	SU 980025	SU 980076
Terminations		5E13	SU 990002	SU 980012
		5E14	GA	GA
OSPS Rate Announcement on 0+ Call, Release 2	462	5E12	SU 980023	SU 980071
		5E13	SU 980004	SU 980004
		5E14	GA	GA
OSPS ANSI Incoming Signaling System No. 7 from	463	5E14	GA	GA
End Office				
OSPS Listing Services Call Completion Service	464	5E12	SU 990005	SU 990003
Measurements		5E13	SU 990005	SU 990007
		5E14	GA	GA
OSPS - Rate Announcement on 0+ Calls	465	5E15	GA	GA
OSPS Provide Account Owner to LSDB	466	5E14	GA	GA
NP Verify Office for LRNs	505	5E14	GA	GA
DRM-2000	506	5E14	GA	GA
ASP Terminating Busy/NoAnswer Triggers and	507	5E14	-	-
Subsequent Event Detection		5E15	GA	GA
(Depends on SFID 126, see Division 2, Section 4A126)				
ASP Display on BRI	508	5E14	-	-
(Depends on SFID 126, see Division 2, Section 4A126)		5E15	GA	GA
CALEA - Core	509	5E14	GA	GA
Wireless Digital Loop Carrier (RDT on a Switch)	510	5E14	GA	GA
(Depends on SFID 221, see Division 2, Section 4A221)				
Message Waiting Indicator MWI Via PRI NOTE:	511	5E14	GA	GA
FEATURE CANCELLED				
FGD (Feature Group D) Cut Through Enhancements	512	5E13	SU 990009	SU 990030
(Depends on SFID 165, see Division 2, Section 4A165)		5E14	GA	GA
PINNACLE Third Party Call Control Enhancements	513	5E13	-	-

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1 (Depends on SFID 123, see Division 2, Section 4A123)		5E14	GA	GA
National ISDN Smart Attendant Service	514	5E14	GA	GA
Proprietary.	515	5E14	GA	GA
Default Routing for Off-Hook Delay Triggers (Depends on SFID 126, see Division 2, Section 4A126)	516	5E14	GA	GA
AIN Furnish AMA Information Component (Depends on SFID 126, see Division 2, Section 4A126)	517	5E14	GA	GA
AC/AR by Destination Point Code	518	5E13 5E14	SU 980005 GA	SU 980010 GA
Release Link for Toll - ANSI Standard Protocol and TOPS Nonstandard Protocol (Depends on SFID 165 and OFID 788, see Division 2, Sections 4A165 and 4B788)	520	5E14	GA	GA
Release Link for Toll - TOPS Nonstandard Protocol (Depends on SFID 165 and OFID 788, see Division 2, Sections 4A165 and 4B788)	521	5E14	GA	GA
SS7 PSU MTP Routing Enhancements	522	5E14	-	-
Improved RC Verify	523	5E13 5E14	- GA	- GA
LD CIC at Terminating Tandem	524	5E14 5E15	- GA	- GA
DRM (Distinctive Remote Module)	525	5E14	GA	GA
Call Screening	526	5E14	-	-
Verify Office Capability for Long Distance Platform	527	5E14 5E15	FR1 GA	SU990008 GA
ASP Toll Free Service Interaction with Flexible ANI Features (Depends on SFID 332, see Division 2, Section 4A332)	528	5E13 5E14 5E15	- - GA	- - GA
CALEA PHASE III	529	5E14	GA	GA
1000 Block Number Pooling Using Number Portability (Depends on SFID 174, see Division 2, Section 4A174 and OFID 955, see Division 3, Section 5AS)	530	5E14 5E15	FR3 GA	- GA
TCP/IP Interface for Traffic Measurements	532	5E15	GA	GA
CNA CC720 Modification (Depends on SFID 180, see Division 2, Section 4A180)	533	5E14 5E15	FR2 GA	- GA
ASP AMA Recording for Abandoned STOR Connections (Depends on SFID 229, see Division 2, Section 4A229)	534	5E13 5E14 5E15	FR3 FR2 GA	- - GA
MDR (Multi-Distinctive Ringing)/CW (Call Waiting/CF (Call Forwarding) Interaction Enhancement (FAX Ring)	535	5E14	GA	GA
60 Minute Traffic Reporting Option	537	5E14	GA	GA
Type 1/2A/1B CMC ID Enhancement (Depends on SFIDs 128, 160, and 167. Refer to Division 2 Section 4A538)	538	5E14 5E15	FR1 GA	SU990003 GA
Proxy Database Phase 1 Proxy Database	539	5E15	GA	-
Easy Access to Voice Mail	540	5E15	GA	GA
Proprietary.	541	5E15	GA	GA
64KBPS X.75/X.75 Trunk Group	542	5E13 5E14 5E15	FR3 FR2 GA	SU 000007 SU 000014 GA
OSPS DA Custom Branding by Account Owner (Depends on OFID 970)	543	5E13 5E14 5E15	FR3 FR2 GA	SU 000011 - GA
Usage Sensitive Call Forwarding (USCF)	544	5E15	GA	GA

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Multi Services Platform Summary Alarm Status	545	5E14 5E15	FR2 GA	- GA
Terminating Trunk Group Trigger (Depends on SFID 126, see Division 2, Section 4A126.)	546	5E15	GA	GA
Proprietary.	547	5E15	FR1	-
Proprietary.	548	5E15	FR2	-
Audible Calling Name on *69 (Automatic Callback) (Depends on OFID 971. See Division 2, Section 4B971.)	549	5E14 5E15	FR3 GA	- GA
PBX Calling ID	550	5E14 5E15	FR3 GA	- GA
Flexible DNIS (Dialed Number Information Service)	551	5E14 5E15	FR3 GA	- GA
Echo Cancellation for CDMA	552	5E15	GA	GA
Usage Sensitive Six-Way Calling	553	5E15	GA	GA
Dial Code Terminal Make Busy for MLHGS	555	5E15	GA	GA
II/OLI Delivery for National ISDN PRI	556	5E14 5E15	FR3 GA	- GA
ASP CDP on PRI	557	5E15	GA	GA
TCW - Inter-LATA Call Enhancements	558	5E14 5E15	FR3 GA	- GA
DA Automatic Position Release (Depends on OFID 977. See Division 2, Section 4B977.)	559	5E14	FR3	-
ASP Extended TSTRC Timer	560	5E15	GA	GA
Rate Area Exchange Increase	561	5E15	GA	GA
ASP Monitor for BRI and Multiline Hunt Group	563	5E15	FR1	-
DAS Increase	564	5E15	GA	GA
AMA Module 104 Direction Indicator	565	5E14 5E15	FR3 GA	- GA
Customer Recent Change Input For Critical Translations Protection	566	5E15	GA	GA
ATM Global Routing and Signaling	567	5E15	FR1	-
OSPS Commercial Credit Card Alternate Access Methods	568	5E14 5E15	FR4 GA	- GA
VTOA [Voice Telephony Over ATM (Asynchronous Transfer Mode)] LS (Local Services) (Depends on SFID 567. See Division 2, Section 4A567.)	569	5E15 5E16	FR-PSAX GA	- GA
Proxy Database Phase 1 Recent Change and SQUAL	570	5E15	GA	-
Proxy Database Phase 1 User Defined Database	571	5E15	GA	-
ASP Unrestricted FCD Trigger	572	5E15	FR1	-
Non-Restrictive ANI over Private Facility	573	5E14 5E15	FR3 GA	- GA
LTSB Interworking with Home Intercom	575	5E15 5E16	FR2 GA	- GA
Per Use Three Way Calling with Call Transfer This feature requires a USTWC feature to be active, therefore ACT must be "Y" for SFID 106 or SFID 156.	577	5E15 5E16	FR3 GA	- GA
Visual Call Pickup	578	5E15 5E16	FR2 GA	- GA
Talking Call Waiting with Caller ID	579	5E16	GA	GA
AIN Operator Services Trigger	584	5E16	GA	-
Furnish AMA Recording for Abandonded STOR Connections	585	5E15	FR2 GA	- GA
Direct Call Transfer to Voice Mail	586	5E16	GA	GA
Simultaneous Ringing	587	5E16	GA	GA
Call Transfer Enhancements	588	5E16	GA	GA
ESN (Emergency Service Number) Expansion for E911 (Depends on SFID 61. See Division 2, Section 4A61.)	589	5E16	GA	GA
Talking Call Waiting - Distinctive Call Waiting Tones	590	5E16	GA	GA
FCCS (Forwarded Call - Call Screening) Enhancement	592	5E16	GA	GA

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AIN Ping Ring in a Forward Call Message	593	5E15 5E16	FR 2 GA	- GA
Code Conversion Expansion for N11	594	5E15 5E16	FR3 GA	- GA
RC Security for View and Class with Login ID	595	5E15 5E16	FR3 GA	- GA
Trunk Group Register Expansion	596	5E15 5E16	FR3 GA	- GA
Carrier Selection Information Default Handling for the Long Distance Platform Feature	597	5E14 5E15 5E16	- - GA	- - GA
Expanded Virtual Terminal Access for ASM	598	5E16	GA	GA
G.168-2000 Compliance and Acoustic Echo Cancellation on PHV5	599	5E16	GA	GA
Use of NPA for E911 Default Routed Calls	600	5E15 5E16	FR3 GA	- GA
Billing and Comptrollers	601	5E15	FR3	-
7R/E Packet Solutions 4.0 ATM Transport Solution	602	5E16	GA	GA
SS7 Using Operator Services	603	5E16	FR2	-
PRI Calling Name for the Canadian Market	604	5E15 5E16	- GA	SU 010046 GA
TCP/IP for SCCS/NFM	608	5E15	IMR 731330	SU 10058
External Interface Infrastructure Expansion	609	5E15	IMR 731330	SU 10061
Increased ASM Disk Space For AMADNS	610	5E15	IMR 732254	SU 10062
SS7-PSU Remove Routing Data From Dedicated Host GSM	615	5E15	FR5	-
CNI Network ID Expansion	619	5E16(1)	GA	GA
CNI/PSU Support for 128K ISUP Trunk	622	5E15	SU 20006	SU 20001
IWG PCT Link Reservation (Feature has been canceled)	624	5E16(2)	-	-
Network Management Hard-To-Reach	625	5E16(2)	GA	GA
Network Management Code Specific Reroute	626	5E15 FR4.5 5E16	FR4.5 GA	- GA
Increase Terminal Sessions for Read Only RC on ASM	627	5E15	FR4	SU 20018
TCP/IP Security Enhancements for CALEA	628	5E15 FR5 5E16	FR5 GA	- GA
EAI (Emergency Action Interface) via ASM	631	5E15 FR5 5E16	FR5 GA	- GA
Digital Trunk Interface for TAU (Test Access Unit).	632	5E15 5E16	FR1 GA	- GA
Critical Alarms (DCS) Improvement	633	5E16(1)	SU 2A004	SU 20008
Voice and Data Channel Counts	635	5E16(2)	GA	GA
Dual PSU RTU feature for 1 SM (See Division 2, Section 7BK.)	636	5E16	FR2	-
Dual PSU RTU feature for 2 SMs (See Division 2, Section 7BK.)	637	5E16	FR2	-
Dual PSU RTU feature for 3 SMs (See Division 2, Section 7BK.)	638	5E16	FR2	-
Dual PSU RTU feature for 4 SMs (See Division 2, Section 7BK.)	639	5E16	FR2	-
Dual PSU RTU feature for 5 SMs (See Division 2, Section 7BK.)	640	5E16	FR2	-
Dual PSU RTU feature for 6 SMs (See Division 2, Section 7BK.)	641	5E16	FR2	-
Dual PSU RTU feature for 7 SMs (See Division 2, Section 7BK.)	642	5E16	FR2	-
Dual PSU RTU feature for 8 SMs (See Division 2, Section 7BK.)	643	5E16	FR2	-
Dual PSU RTU feature for 9 SMs (See Division 2, Section 7BK.)	644	5E16	FR2	-
Dual PSU RTU feature for 10 SMs (See Division 2, Section 7BK.)	645	5E16	FR2	-
Dual PSU RTU feature for 11 SMs (See Division 2, Section 7BK.)	646	5E16	FR2	-
Dual PSU RTU feature for 12 SMs	647	5E16	FR2	-

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(See Division 2, Section 7BK.)				
Dual PSU RTU feature for 13 SMs (See Division 2, Section 7BK.)	648	5E16	FR2	-
Dual PSU RTU feature for 14 SMs (See Division 2, Section 7BK.)	649	5E16	FR2	-
Dual PSU RTU feature for 15 SMs (See Division 2, Section 7BK.)	650	5E16	FR2	-
Dual PSU RTU feature for 16 SMs (See Division 2, Section 7BK.)	651	5E16	FR2	-
Dual PSU RTU feature for 17 SMs (See Division 2, Section 7BK.)	652	5E16	FR2	-
Dual PSU RTU feature for 18 SMs (See Division 2, Section 7BK.)	653	5E16	FR2	-
Dual PSU RTU feature for 19 SMs (See Division 2, Section 7BK.)	654	5E16	FR2	-
Dual PSU RTU feature for 20 SMs (See Division 2, Section 7BK.)	655	5E16	FR2	-
Dual PSU RTU feature for 21 SMs (See Division 2, Section 7BK.)	656	5E16	FR2	-
Dual PSU RTU feature for 22 SMs (See Division 2, Section 7BK.)	657	5E16	FR2	-
Dual PSU RTU feature for 23 SMs (See Division 2, Section 7BK.)	658	5E16	FR2	-
Dual PSU RTU feature for 24 SMs (See Division 2, Section 7BK.)	659	5E16	FR2	-
Dual PSU RTU feature for 25 SMs (See Division 2, Section 7BK.)	660	5E16	FR2	-
CM3 TMS Fabric Expansion (see Division 2, Section 7BO)	662	5E16(2)	GA	GA
CM3 TMS Fabric Expansion (see Division 2, Section 7BO)	663	5E16(2)	GA	GA
CM3 TMS Fabric Expansion (see Division 2, Section 7BO)	664	5E16(2)	GA	GA
GETS Enabled Edge Switch (depends upon SGID 279 and SFID 218)	665	5E16(2)	GA	GA
New Traffic Measurements for NxTMS	666	5E16(2)	GA	GA
Call Transfer/COT/AC Enhancements	667	5E16	GA	GA
AIN Activity Test Message (Depends on SFID 126. See Division 2, Section 4A126.)	668	5E16(2)	FR1	SU 30001
Patch Space Recovery Tool	669	5E16(2)	FR 1	-
SAAL SS7 High Speed Signaling Links	670	5E16(2)	FR 1	GA
Assert Mnemonics on the ROP	671	5E16(2)	GA	GA
RC/V Security' Logging and Verbose Enhancements	674	5E16(2)	GA	GA
FCCS (Forwarded Call - Call Screening) Announcement Modification	678	5E16(2)	GA	GA
High Capacity APT Enhancements	682	5E16(2)	FR1	GA
OIU SIP-T	684	5E16(2)	FR3	GA
IMLT Access Improvements and Metallic A-Link Blockage Notification	685	5E16(2)	FR1	GA
3B21D/RTR High Speed Performance Improvement	686	5E16(2)	FR1	SU 30013
TCP/IP via ASM for CIA	689	5E16(2)	FR2	GA
ASM Model 1 Support Extension	690	5E16(2)	FR2	-
ASM Model 1 Support Extension	691	5E16(2)	FR2	-
CIC Routing Solution	697	5E17(1)	FR3	GA
Secured Feature Module Growth Update Automation	NA	5E5 5E6	SU 900085 GA	- GA

Notes:

- = Software Release Feature. No Informational Software Update available.

GA = Feature available in the General Availability Software Release.

NA = Feature no longer uses SFID or is not available for this Software Release.

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* = When multiple software updates are listed for a single software release, all of the software updates for that software release must be installed for the feature to function.

FR = Feature is available with a feature release; e.g., FR2 indicates Feature Release 2.
Figure 1 SECURED FEATURE ID NUMBERS AND CORRESPONDING FEATURE NAMES

SEC. 4A1: MULTI-DISTINCTIVE RINGING

1. FEATURE DESCRIPTION

Multi-Distinctive Ringing is available with 5E4(2) and later Software Releases. It allows multiple TNs (dependent TNs) with distinctive ringing to be assigned to a single analog line (Master TN) termination. An unlimited number of Dependent TNs may be assigned to the Master TN, but only 4 distinctive ringing patterns are available to be assigned to Dependent TNs. The Master TN will receive ringing pattern A unless the Distinctive Ringing feature, defined on the DRFD form (5606-1 Record), is assigned to the Master TN.

All BRCS features (except Distinctive Ringing) that are assigned to the Master TN will be applied to the Dependent TNs. The Call Forwarding and Call Waiting features are enhanced with the Multi-Distinctive Ringing feature.

When Call Waiting is assigned to the Master TN, distinctive call waiting tones which correspond to the distinctive ringing tones will be applied to the Dependent TNs.

When Call Forwarding Variable is assigned to the Master TN, one of the following options may be chosen:

- All calls to the Master TN and its dependents will be forwarded.
- Only calls to the Master TN will be forwarded.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
MTNDR	5550	3	6A	1.9
SFSYS	5713-1	3	5AR	8.22
CFWFD	5614-1/2	4	15A	12.12
CFWLPA	5614-3	4	15B	1.22

MTNDR form (5550 Record) - Used to assign multiple TNs with distinctive ringing to a single analog line.

SFSYS form (5713-1 Record) - Used by the SEE (Lucent Technologies System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 1 must be set to "S<170 on the SFSYS form to make this feature functional for the office.

CFWFD form (5614-1/2 Record) - Used to define the Call Forwarding feature. The DDNCFI field is used to indicate whether or not dependent DNs are forwarded for Call Forward Variable.

CFWLPA form (5614-3 Record) - Used to assign Call Forwarding parameters to an individual line. The DDNCFI field is used to indicate whether or not dependent DNs are forwarded for Call Forward Variable.

SEC. 4A3: VPATH 7/10 DIGIT OUTPULSING

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

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SEC. 4A5: AUTOMATIC NUMBER IDENTIFICATION OVER PRIVATE FACILITIES

1. FEATURE DESCRIPTION

For 5E4(2) and later Software Releases, the PFA (Private Facility Access) feature allows customers to have dial code access to various types of public and private switching networks. The ANI (Automatic Number Identification) over PF (Private Facility) Special Feature provides ANI in a form similar to that employed by FG-D (Feature Group-D) signaling. The similarities to FG-D provided by this special feature are, two ANI information digits and outpulsing the billing number before the called number. Prior to this feature, billing information on PF trunks was available in a CAMA (Centralized Automatic Message Accounting) format, where the called number was outpulsed before the single ANI information digit and the billing number.

The following two tables describe the differences in format between the ANI over Private Facility Special Feature format, and CAMA format:

ANI Over Tie Trunk Format	
ANI II + Billing Number	First Stage
Called Number	Second Stage
MF Signaling (Required)	First and Second Stage

CAMA Format	
Called Number	First Stage
ANI I + Billing Number	Second Stage
MF Signaling (Required)	Second Stage Only

The following is the office-to-office signaling that occurs for the ANI over Private Facility Special Feature:

1. User dials access code + called number
2. Near end seizes trunk
3. Far office returns wink
4. ANI is outpulsed to far office
5. The called number is outpulsed to far office
6. Far office returns acknowledgement wink
7. Near end waits for answer supervision.

The ANI over Private Facility Special Feature will only be implemented over senderized, wink start, PF trunks with multifrequency signaling. Trunk access will be limited to PFA and ARS dialed calls only. Cut through and/or FX trunks will not be allowed. This feature will expect the trunk class at far end to accept the signaling format used by this feature. The ANI over Private Facility Special Feature provides ANI over PF trunks (in a format similar to FG-D) to a Private Network for generating station level billing records of remote access calls.

Customers of a PF group access these facilities by dialing a PFA code which can be defined on either an IDPDCA form (5601-1/2 Records), PDIT form (5300-2 Record) or CFGGRP form (5964 Record) with ACTION equal to "PFUSE". Currently the ANI is not outpulsed during PFA.

This feature will provide a new trunk signaling protocol for PF trunks, which allows the ANI to be outpulsed over multifrequency trunking facilities to the private network.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
MCRTIDX	5304	3	3Q	10.4
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22

MCRTIDX form (5304 Record) - This form is used to determine routing for various BRCS capabilities.

For 5E7 and later, SIGNALING PROTOCOL must be "PNANI", a new entry added to the SIGNALING PROTOCOL field. When "PNANI" is entered, CI ROUTE TYPE must be "OTHER", OVERLAP OUTPULSING must be "N", and ANI OUTPULSING must be "Y". "PNANI" may not be entered unless the ANI over PF secured feature has been activated with FEATURE ID 5 set to "Y" on the SFSYS form (5713-1).

RTIDX form (5303 Record) - This form is used to define each Route Index in a 5ESS office.

For 5E7 and later, SIGNALING PROTOCOL must be "PNANI", a new entry added to the SIGNALING PROTOCOL field. When "PNANI" is entered, CI ROUTE TYPE must be "OTHER", OVERLAP OUTPULSING must be "N", and ANI OUTPULSING must be "Y". "PNANI" may not be entered unless the ANI over PF secured feature has been activated with Secured Feature ID 5 set to "Y" on the SFSYS form (5713-1).

SFSYS form (5713-1 Record) - This form is used to enable Secured System Optional Features for an entire 5ESS Switch or for selected switching modules. The Secured Feature ID 5 must be set to "Y" to make ANI Over Private Facilities functional for the office.

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Figure 1 FORM FLOW FOR ANI OVER PRIVATE FACILITIES

SEC. 4A6: CIRCUIT SWITCH TRUNK

1. FEATURE DESCRIPTION

The CST (Circuit Switch Trunk) feature is available for 5E5 and later. This secured feature (SFID 6) is a Number Service that provides call routing capability from end users to ESPs (Enhanced Service Providers) based on the dialed number. End users in an EAEO (Equal Access End Office) dial a 7- or 10-digit access code to place a call to the ESP. The 7- or 10-digit code is assigned to the CST service. The CST Tandem receives calls from EAEOs and routes the calls to ESPs.

2. FEATURE ASSIGNMENT

This secured feature must be enabled by setting the ACT field for SFID 6 to "Y" on the SFSYS form (5713-1 Record).

The following must be entered on the ICF form (5305 Record):

- CARRIER TYPE must be "PSEUDO"
- DIG ROUTING must be "Y".

Outgoing trunks to the ESP should appear similar to trunks going to an Interexchange Carrier.

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Th SSP/800 feature must be equipped and perational in order to use the CST feature.

3. TRANSLATION REQUIREMENTS

There are no new or changes forms for this feature.

SEC. 4A9: CARRIER IDENTIFICATION PARAMETER

1. BACKGROUND

Prior to this feature, a given IXC (Inter-Exchange Carrier) was assigned more than one CIC (Carrier Identification Code) for various services; separate dedicated trunk groups were provided in order to identify each assigned carrier code for different services.

2. FEATURE DESCRIPTION

Available with Software Release 5E8 and later, the CIP (Carrier Identification Parameter) feature is a secured feature using SFID (Secured Feature ID) 9 and must be purchased before being activated. The feature number for this feature is 99-5E-1526.

The CIP feature

- provides the capability for 5ESS-2000 to deliver the CIC over a shared ISUP (Integrated Services - User Part) trunk to an IXC to identify various services.
- enables IXCs to combine a variety of services into one trunk group between the LEC (Local Exchange Carrier) EAEO (Equal Access End Offices)/AT (Access Tandem)and IXC location so that trunking facilities can be used more efficiently.

The CIP feature supports all InterLATA, FGD (Feature Group D), 700, 800-NXX, 900-NXX, and 800 database calls except the FGB (Feature Group B) with traditional signal (SIG_PRO is set to FGB on ODA form RTIDX (5303 Record) and international calls.

This feature only applies to delivery of the CIP to carrier by the ISUP trunks.

3. FEATURE ASSIGNMENT

See Figure 2 for form flow.

The CIP feature is a secured feature and must be activated before the capability can be provisioned to deliver the CIC to IXC on per routing index basis. Therefore, the ACT field for SFID 9 on the SFSYS form (5713-1 Record) must be set to "Y".

To enable the CIP to be delivered over the RTI (Routing Index) (pointed by Carrier XXX[X]) to IXC, the RTI must be entered and CICP SUBSC set to "Y" on the RTIDX form (5303 Record). Otherwise, set CICP SUBSC to "N".

To block CIP from being delivered over the RTI to IXC if the interworking connection came from MF trunk (incoming trunk to this office is an MF trunk), OFFICE ID must be specified and CICP BLOCK set to "Y" on the OFCOPT form (5509 Record). Otherwise, set CICP BLOCK to "N".

The two tables in Figure 1 show the CIP delivery based on the subscription parameters.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**

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OFCOPT	5509	3	5I	8.1, 8.15
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The CICP BLOCK field was added to determine whether a Carrier Identification Code Parameter is to be included in the outgoing IAM (Initial Address Message) which is part of the ISUP protocol for interworking between Multi-Frequency and CCS7 trunks.

RTIDX form (5303 Record) - This form is used to define each Route Index for the 5ESS-2000 Switch. The CICP SUBSC field was added to indicate whether or not the CICP should be included in the IAM sent from the originating end office to the far switch.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 9 to "Y".

5. GLOSSARY

AT	Access Tandem
CCS7	Common Channel Signaling, CCITT Version 7
CIC	Carrier Identification Code
CIP	Carrier Identification Parameter
EAEO	Equal Access End Offices
FGB	Feature Group B
FGD	Feature Group D
IAM	Initial Address Message
ISUP	Integrated Services - User Part
IXC	Inter-Exchange Carrier
LATA	Local Access And Transport Area
LEC	Local Exchange Carrier
RTI	Routing Index
SFID	Secured Feature ID

CIP Delivery For EO-IXC

Call Type	CIP Capable	CIP Subscribed	MF Block	Will IXC Receive CIP?
-	N	-	-	N
-	Y	N	-	N
InterLATA(7/10)	Y	Y	-	Y
FGD 10[1X]XXX	Y	Y	-	Y
10[1X]XXX+700	Y	Y	-	Y
700	Y	Y	-	Y
800-NXX	Y	Y	-	Y
800 Query Call	Y	Y	-	Y
900-NXX	Y	Y	-	Y
Others*	Y	Y	-	N

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*: FGB calls with traditional signal (SIGNALING PROTOCOL is set to FGB on the RTIDX form (5303 Record) is not supported. FGB with non-traditional signal (SIGNALING PROTOCOL is set to EA on the RTIDX form) is based on the subscription of the RTI to either deliver or not deliver the CIP.

CIP Delivery For EO-AT-IXC

EO Conditions	**AT Conditions**							
Call Type	**CIP Capable**	**CIP Subscribed**	**EO-AT Trunk**	**Will AT Receive CIP?**	**CIP Capable**	**CIP Subscribed**	**MF Block**	**Will IXC Receive CIP?**
-	N	-	CCS	N	Apply Table 1 treatment			
Non-FGB	Y	-	CCS	Y	Y	Apply Table 1 treatment		
Non-FGB	Y	-	CCS	Y	N	-	-	Y
FGB%	-	-	CCS	N	-	-	-	N
-	-	-	MF	N	N	-	-	N
-	-	-	MF	N	Y	N	-	N
-	-	-	MF	N	Y	Y	Y	N
-	-	-	MF	N	Y	Y	N	Y/N#

%: FGB call with non-traditional signaling (SIGNALING PROTOCOL is not set to FGB on the RTIDX form) will deliver the CIP to AT.

#: The CIP will be delivered only for those call types specified in the Table 1.

Figure 1 CIP DELIVERY BASED ON SUBSCRIPTION PARAMETERS

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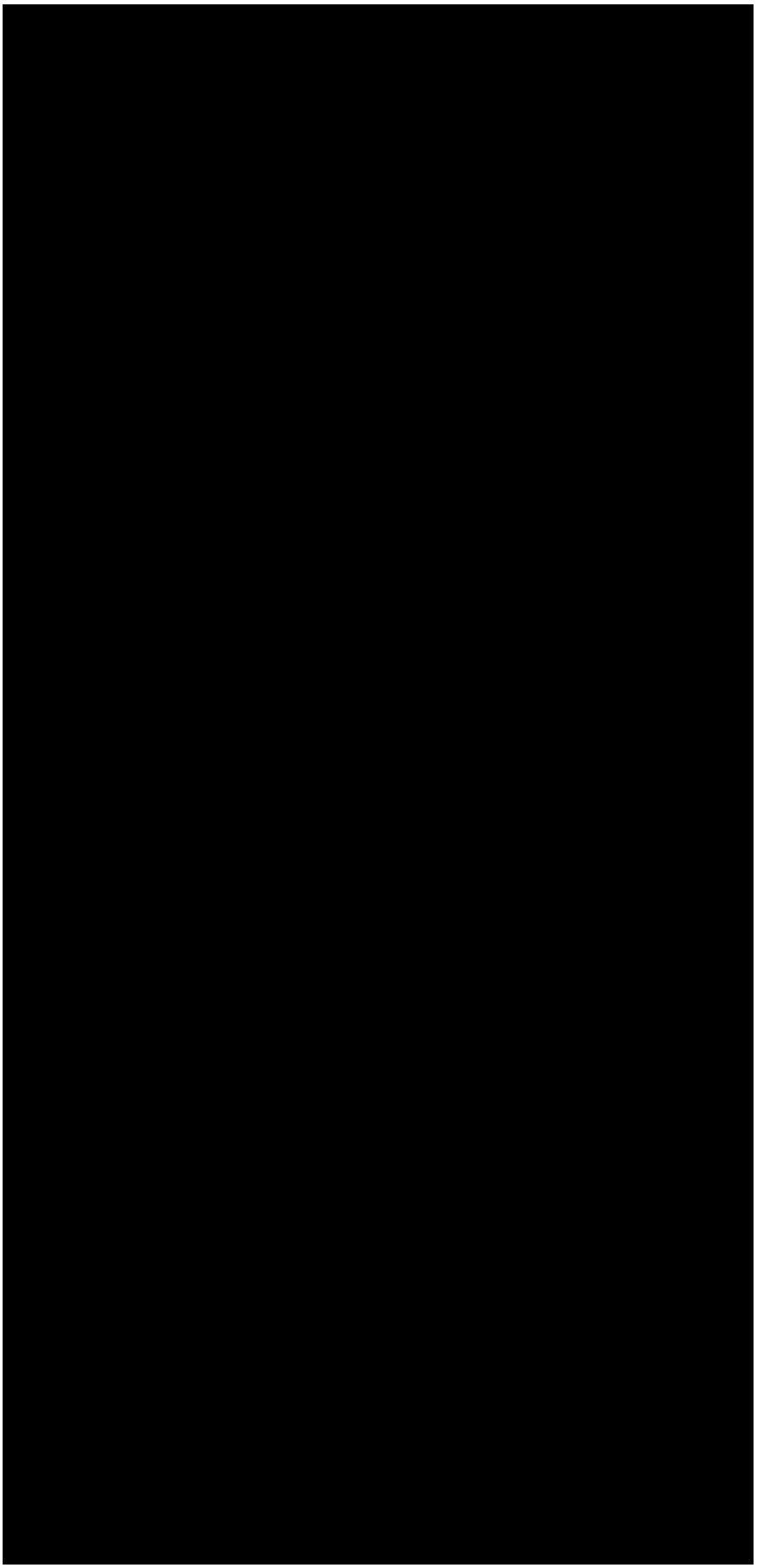

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Figure 2 FORM FLOW FOR CARRIER IDENTIFICATION PARAMETER

SEC. 4A10: LDP ENHANCED DAL (DATA ACCESS LINK)

1. FEATURE DESCRIPTION

The LDP (Long Distance Platform) Enhanced DAL (Data Access Link) feature is a secured feature (SFID 10) that is being made available in the 5E15 Software Release. The feature number for this feature is 99-5E-7346.

A DAL is a direct access link (trunk) to the 5ESS Switch from a PBX (Private Branch Exchange) or other key systems. The ability to connect a PBX directly to a 5ESS Long Distance Switch gives the PBX providers greater flexibility in services that can be offered to their customers, as well as allowing them to by-pass the LEC (Local Exchange Carrier). Calls can also terminate to a PBX via a trunk that is directly connected to the 5ESS Long Distance Platform Switch. This is called a terminating DAL, even though there is no indication on the 5ESS Switch that the trunk is connected to a PBX instead of another 5ESS Switch or an End Office Switch.

Currently available with the 5ESS LDP Switch is DAL processing that requires all calls originating on the DAL to be processed by a SCP (Service Control Point). No LDP "on-switch" features can be used to process the call. This feature provides the ability to process a DAL without required SCP interaction that can be used with the 5ESS Switch Long Distance Platform features. DAL originated calls can be processed "on-switch" with the ability to use most of the LDP features, including ANI (Automatic Number Identification), CIC (Carrier ID), and II Digits Table Processing.

Also included with this feature is the ability for calls that terminate to a PBX trunk that requires a special protocol (specified by SPC (Secondary Point Code) PBX on the TKGRP form (5202 Record) and RC/V (Recent Change/Verify) 5.1), to overflow to any trunk to provide alternate routes that can be used to terminate the call.

In addition, there will be Carrier Compare Functionality for SCP DAL Post-Query Processing.
With the SCP DAL feature (99-5E-4307) (for information on this feature, see Division 2, Section 4A272), when the LDP Switch receives a response from the SCP for the DAL originated call, the LDP Switch processes this response as if it was being received by the non-LDP switch process. That is, if a CIC is returned from the SCP, the switch routes the call based on the carrier (carrier routing instead of digit routing).

Therefore, when the SCP response contains a CIC for one of the carriers being supported by the LDP Switch, the call has to be "looped-around" to the same switch to complete the routing of the call. This is not how the LDP switch performs Post-Query Processing for other types of SCP responses, instead it uses the "carrier compare" process for the call. To align the SCP DAL feature with the other LDP features, the Enhanced DAL feature adds the "carrier compare" process to the SCP DAL feature.

The "carrier compare" process examines the CIC returned by the SCP, and attempts to match it against the carriers provisioned on the LDP Carrier Table (LDPCTBL form (5562 Record) and RC/V 8.52) or the office default (OFCOPT form (5509 Record) and RC/V 8.1). When the returned CIC matches one of these, digit routing of the call is performed instead of carrier routing. When the returned CIC does not match one of these, carrier routing is performed.

2. FEATURE ASSIGNMENT

For 5E15 and later, to provision this feature:

- SFSYS form (5713-1 Record)

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- Set the ACT field for SFID 165 to "Y".
- Set the ACT field for SFID 10 to "Y".

- TKGRP form (5202 Record)
  - Set the LDP field to "Y".
  - Set the DAL ACCESS field to "Y".
  - Set the TRK DIR field to "INC" or "2W".
  - Set the TRKCLS field to "EDSL", "EDSLHM", or "PF".
  - If TRKCLS is set to "EDSL" or "EDSLHM", set the INPULSING field to "DCHN".
  - If TRKCLS is set to "PF", set the INPULSING field to "MF" or "TT", and set the BILLING DN field with the proper billing number.
  - Set the ASP TOLL field to "N".
  - Set the CARRIER TRIG field to "N".
  - Set the LN TYPE field to "NONE".
  - Set the NCD SCREENING field to "NONE".
  - Set the CMC field to "N".
  - Set the VPN ACCESS field to "N".
  - Set the BRCS field to "N".
  - The TRIG NBR field must be blank.
  - The CUT THRU TRIG field must be blank.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate SFIDs (Secured Feature IDs). This feature is activated by setting the ACT fields for SFID 165 and SFID 10 to "Y" on this form.

TKGRP form (5202 Record) - The 5202 Record is used to define each Trunk Group in a 5ESS Switch. Added data rules to CARRIER ID, PREF NPA, ANI PROCESS, and DAL ACCESS fields.

SEC. 4A11: EAOSS SIGNALING FOR OPERATOR SERVICES CALLS

1. BACKGROUND

Two types of MF (Multifrequency) signaling are being used to provide the LEC (Local Exchange) network interconnection to ICs (Interexchange Carriers) and INCs (International Carriers). EA (Equal Access)

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signaling, also known as Feature Group D signaling, is used for signaling calls from an Equal Access End Office to an IC/INC either directly or through an Access Tandem. Operator Services signaling is used on calls that require operator services to pass information to an IC/INC that provides such services.

EA signaling provides for combining of Direct Distance Dialed traffic for different ICs/INCs on a single trunk group between an EAEO and an AT. Operator services signaling requires separate trunk groups for each IC/INC. This leads to significant trunking inefficiences as the number of ICs and INCs served increases. EAOSS (Exchange Access Operator Services Signaling) permits much greater trunk efficiency by allowing different types of traffic (e.g., operator and non-operator, coin and non-coin, LEC and IC/INC, etc.) for all carriers to be routed over a single, large trunk group. However, Inward calls will continue to be routed over different trunk groups.

2. FEATURE DESCRIPTION

The feature number for EAOSS Signaling for Operator Services Calls Special Feature is 99-5E-2234. This secured feature is available for 5E8 and later.

The Exchange Access Operator Services Signaling feature for local switches includes enhancements to Equal Access Signaling that allows operator and non-operator traffic to be routed over a single trunk group. In conjunction with office data, the EAOSS feature allows the AT (Access Tandem) to recognize the information received from the EAEO and determine whether to route the information to an IC/INC or a LEC operator system. The information is transferred through signaling information fields via digits between a KP (Key Pulse) signal and an ST (Start Signal) and also via variations of KP and ST signals. In the case where the call is delivered to the LEC OSPS by the AT, the EAOSS feature allows the OSPS to recognize the received information. In the case where no direct link exists between the LEC operator system and an IC/INC operator system, the LEC operator system transfers the information to the IC/INC via the AT after providing the appropriate operator services.

The EAOSS Signaling for Operator Services Calls feature allows a 5ESS Switch/5ESS-2000 Switch EAEO (Equal Access End Office) to combine the following types of traffic on a single trunk group connecting to an AT (Access Tandem) serving as an OSS (Operator Services System):

- Operator services traffic being tandemed to the OSSs of one or more IC/INCs (InterLATA Carriers/International Carriers or Consolidated Carriers which serve as both an IC and an INC.)
- LEC (Local Exchange Carrier) operator services traffic.
- IC/INC operator services traffic which the LEC OSS is handling for one or more IC/INCs.

The feature supports both coin and non-coin originations.

EAOSS Signaling for Operator Services Calls supports three MF signaling protocols that are designed to be combined on the same trunk group, MEA, EOSS, and EAOSS.

MEA - Modified EA signaling, which is similar to FGD (Feature Group D) signaling developed at the time of divestiture, except that the IC/INC returns an off-hook rather than an Acknowledgement Wink at the end of signaling. The off-hook initiates an operator hold condition allowing the EAEO to accept specialized operator signaling from the IC/INC OSS. Modified EA signaling may be used on direct trunk groups to IC/INCs or on tandem trunk groups. When used on tandem trunk groups, it allows calls for different IC/INCs to be combined on a common trunk group. Modified EA signaling is used when an IC/INC is providing its own operator services.

Modified EA signaling for coin calls was developed with the TAISP (Tandem Access for InterLATA Sent-Paid Coin Calls) feature. EAOSS Signaling for Operator Services Calls extends that capability to include non-coin operator services calls. It also allows the IC/INC to use either IS (Inband Signaling) or EIS (Expanded Inband Signaling) for providing special operator functions. (Only EIS was supported with TAISP.)

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EOSS - Exchange Operator Services System signaling. EOSS signaling is used to signal local operator services calls handled by the LEC (Local Exchange Carrier). It improves upon TSPS signaling by sending two ANI information digits rather than one, 10-digit calling party identification rather than 7-digit, and by varying the ANI KP (Key Pulse) signal to indicate whether DP (Dial Pulse) or DTMF (Dual Tone Multifrequency) signaling was used on the call. Both IS and EIS are supported with EOSS signaling.

EAOSS - Exchange Access for Operator Services System signaling. EAOSS signaling supports interLATA calls directed to IC/INCs which are being provided operator services by the LEC. Like MEA signaling to an AT OSS, EAOSS signaling is also an extension of FGD signaling. EAOSS signaling looks like MEA signaling except that an ST' is signaled in the first stage of outpulsing to indicate that LEC operator services are to be provided, and the KP in the ANI sequence is varied to indicate if 10XXX for 5E8 or 10XXXX for 5E9(1) and later was dialed and whether DP or DTMF signaling is allowed on the line. Both IS and EIS are supported with EAOSS signaling.

The ability to accept EOSS, EAOSS, or MEA signaling at a 5ESS Switch/5ESS-2000 Switch OSPS office or 5ESS Switch/5ESS-2000 Switch Local/Toll office is not provided by this feature.

See Figure 1 for an example of how the signaling protocols provided by this feature might be used to reconfigure operator services traffic in an EAEO to consolidate trunk usage.

With EAOSS Signaling for Operator Services Calls Special Feature, the service provider is able to designate, for calls routed to the common trunk group, the types that should be signaled with each of the three signaling protocols. A new common trunk group should be defined or calls should be routed over an existing trunk group that matches the translations requirements. (See table below.) One or more new route indexes or one or more modified existing route indexes should be used for calls to be routed over the shared trunk group. The route index indicates the signaling protocol (i.e. EAOSS, EOSS, or MEA) to be used. The following table indicates the type of signaling that may be accepted at a 5ESS Switch/5ESS-2000 Switch OSPS office.

LEC OS	SIGNALING PROTOCOL	CI CALL TYPE	SIGNALING PROVIDED
N	INCM	STG	MEA
N	INCM	DTG	MEA
N	MEA	STG	MEA
N	MEA	DTG	MEA

MEA and EAOSS signaling are both designated with signaling protocols of MEA, for domestic calls, and INCM, for international calls. The two types of signaling are distinguished by a new field, LEC OS, which has been added to the Route Index RTIDX form. LEC OS is set to "Y" for EAOSS signaling, and set to "N" for MEA.

Like EAOSS signaling, EOSS signaling is designated with a signaling protocol of MEA and "Y" entered in the LEC OS field. EOSS signaling is used if the call is an intraLATA operator services call for which no IC has been designated, or if the call is a corridor call for which the LEC has been designated as carrier. EAOSS signaling is used if the call is interLATA that is not handled by the LEC (except for the LEC-handled corridor calls), or if an interLATA carrier has been designated to handle the call.

With each of the three types of signaling described above, return of the off-hook by the OSS signifies the start of an operator hold condition. During operator hold, the EAEO is prepared to accept IS (or EIS, if provisioned) from the OSS. The originator may recall the operator with a switchhook flash (operator recall is not supported for lines which have subscribed to features that offer recall dial tone upon flash, or during calls accepted with a call waiting feature). Also, during operator hold, the EAEO does not release the connection until the OSS disconnects from the call or the originating station has remained on-hook with no operator signals from the OSS for longer than the operator hold timeout interval, which is four minutes. If no signal is received and the time out is exceeded, the call is disconnected and the trunk is given "High and Wet" treatment.

Since AMA records for those calls signaled with EOSS and EAOSS signaling are generally made at the AT/OSS, the EAEO has the option of not entering AMA records This is done by appropriately provisioning

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the charging information using the existing procedure as with any signaling change.

The service provider must ensure that the 5ESS Switch/5ESS-2000 Switch EAEO does not begin to signal calls using MEA, EOSS or EAOSS signaling before the AT has been configured to receive and correctly process the signaling.

3. FEATURE ASSIGNMENT

EAOSS Signaling for Operator Services Calls is a secured feature that must be activated before the capability to route a non-coin call with MEA signaling or before any call with EOSS or EAOSS signaling can be provisioned.

The following sample data descriptions are for an EAEO. The EAOSS special feature is enabled in the office and the office parameter of EXPANDED INBAND SGNLING is set to "Y" on the OFCOPT form (5509 Record):

- Define the new shared trunk group or use an existing trunk group from EAEO to the AT. For example, enter the following fields on the TKGRP form (5202 Record).

TKGRP Form (5202 Record)

Field	Entry
TGN	500
TRK DIR	OUTGO
HUNT TYPE	FIFO
TRKCLS	TSPS
CARRIER ID	(not entered)
INC TND WNK	N
OUTPULSING	MF
FREE ANS	Y
SIGNAL	INBAND or EXINBND
FREE TERM	N
INIT	N
FINAL	Y
TSPS TYPE	COMBINED

- Define new routing information for EAOSS or EOSS signaling using the new shared trunk group for domestic calls. For example, enter the following fields on the RTIDX form (5303 Record).

RTIDX Form (5303 Record)

Field	Entry
ROUTE INDEX	79
TRUNK GROUP NUMBER	500
PREFIX DIGITS	099
SIGNALING PROTOCOL	MEA
ANI OUTPULSING	Y
CI ROUTE TYPE	STG
REMARKS	EAOSS or EOSS with MEA signaling protocol
LEC OS	Y

- Define new routing information for EAOSS signaling using the new shared trunk group for international calls. For example, enter the following fields on the RTIDX form (5303 Record).

RTIDX Form (5303 Record)

Field	Entry
ROUTE INDEX	80
TRUNK GROUP NUMBER	500
PREFIX DIGITS	199
SIGNALING PROTOCOL	INCM
ANI OUTPULSING	Y
CI ROUTE TYPE	STG
REMARKS	EAOSS with INCM signaling protocol
LEC OS	Y

- Define the new dedicated trunk group from EAEO to the AT. For example, enter the following fields on

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the TKGRP form (5202 Record).

TKGRP Form (5202 Record)	
Field	**Entry**
TGN	501
TRK DIR	OUTGO
HUNT TYPE	FIFO
TRKCLS	TSPS
CARRIER ID	288
INC TND WNK	N
OUTPULSING	MF
FREE ANS	Y
SIGNAL	INBAND/EXINBND
FREE TERM	N
COINRTN INT	N
COINRTN FNL	Y

- Define new routing information for MEA signaling using the new shared trunk group for domestic calls with CI ROUTE TYPE set to "DTG". For example, enter the following fields on the RTIDX form (5303 Record).

RTIDX Form (5303 Record)	
Field	**Entry**
ROUTE INDEX	83
TRUNK GROUP NUMBER	501
PREFIX DIGITS	(not entered)
SIGNALING PROTOCOL	MEA
ANI OUTPULSING	Y or N
CI ROUTE TYPE	DTG
REMARKS	MEA signaling protocol
LEC OS	N

- Define new routing information for MEA signaling using the new shared trunk group for domestic calls with CI ROUTE TYPE set to "STG". This example is allowed when the EAOSS special feature is disabled in the office and the office parameter of EXPANDED SIGNALING is equal to "Y" on the OFCOPT form. In addition, the SIGNAL on the TKGRP form must be "EXINBND". For example, enter the following fields on the RTIDX form (5303 Record).

RTIDX Form (5303 Record)	
Field	**Entry**
ROUTE INDEX	82
TRUNK GROUP NUMBER	500
PREFIX DIGITS	099
SIGNALING PROTOCOL	MEA
ANI OUTPULSING	Y or N
CI ROUTE TYPE	STG
REMARKS	MEA signaling protocol
LEC OS	N

- Define new routing information for MEA signaling using the new shared trunk group for international calls with CI ROUTE TYPE set to "STG". This example is allowed when the EAOSS special feature is disabled in the office and the office parameter of EXPANDED SIGNALING is equal to "Y" on the OFCOPT form. In addition, the SIGNAL on the TKGRP form must be "EXINBND". For ex ample, enter the following fields on the RTIDX form (5303 Record).

RTIDX Form (5303 Record)	
Field	**Entry**
ROUTE INDEX	84
TRUNK GROUP NUMBER	501
PREFIX DIGITS	199
SIGNALING PROTOCOL	INCM
ANI OUTPULSING	Y or N
CI ROUTE TYPE	STG
REMARKS	MEA signaling protocol
LEC OS	N

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- Define new routing information for MEA signaling using the new shared trunk group for international calls with CI ROUTE TYPE set to "DTG". This example is allowed when the EAOSS special feature is disabled in the office and the office parameter of EXPANDED SIGNALING is equal to "Y" on the OFCOPT form. In addition, the SIGNAL on the TKGRP form must be "EXINBND". For example, enter the following fields on the RTIDX form (5303 Record):

RTIDX Form (5303 Record)

Field	Entry
ROUTE INDEX	85
TRUNK GROUP NUMBER	501
PREFIX DIGITS	199
SIGNALING PROTOCOL	INCM
ANI OUTPULSING	Y or N
CI ROUTE TYPE	DTG
REMARKS	MEA signaling protocol
LEC OS	N

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RTIDX	5303	3	3P	10.2

RTIDX form (5303 Record) - This form is used to define the route indexes for routing a call. The LEC OS field was added for this feature to indicate if operator services were provided by the LEC or by the IC.

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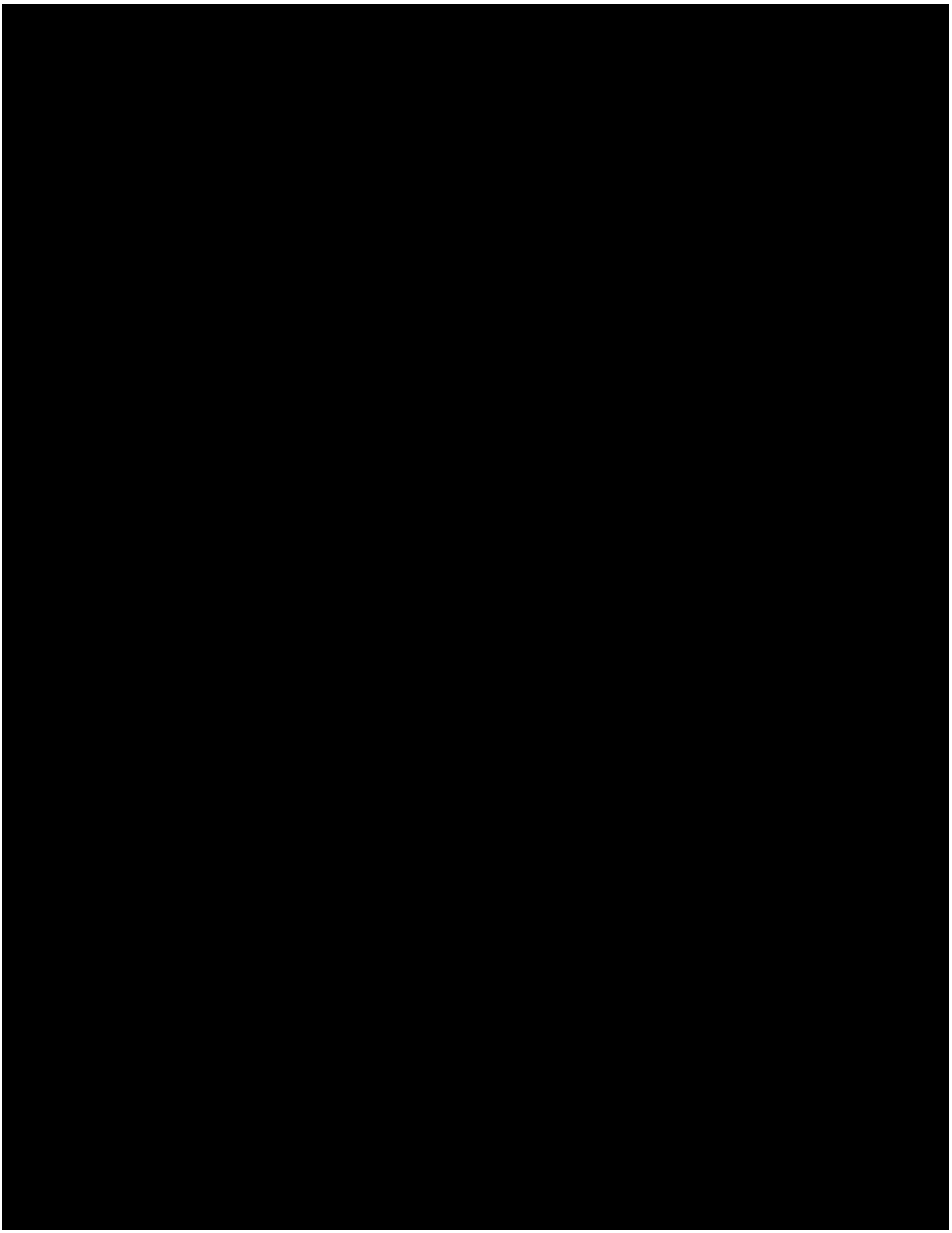

Figure 1 TRUNK CONFIGURATION FOR EAOSS SIGNALING FOR OPERATOR SERVICES

SEC. 4A12: DIRECT CONNECT CAPABILITY THROUGH THE ISDN ACVT FEATURE FOR ANALOG LINES

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1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

SEC. 4A13: SELECTIVE CARRIER DENIAL

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4A14: EXECUTIVE RINGER CUTOFF

1. DESCRIPTION

ERCO (Executive Ringer Cutoff) is a Secured System Optional Feature available with 5E5 and later Software Releases.

ERCO allows the ISDN key set user to press a feature button on an ISDN key set to turn audible ringing on or off for all incoming calls except Key set ICOM (Intercom) calls, 911 emergency calls and ringback calls from ACBC (Auto Call Back Calling). When ringing is turned off by ERCO, the user will still be alerted visually of an incoming call and may still pick up the call. ERCO allows the primary shared DN user to have incoming calls screened by another person on a shared DN line.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
DSLUSR	5908	5	1I	23.2
CFGGRP	5964	6	7A	12.5

SFSYS form (5713-1 Record) - Enable Secured System Optional Features for an entire 5ESS Switch or for selected Switching Modules. Secured Feature ID 14 must be set to "S" on the SYSYS form to make this feature functional for the office.

DSLUSR form (5908 Record) - Assign ERCO to a BRCS shared DN line.

CFGGRP form (5964 Record) - Assign ERCO to a button on an ISDN key set.

3. FEATURE ASSIGNMENT

If AT&T has enabled the ERCO feature for the office, ERCO is assigned to a primary shared DN on a DSLUSR form by entering "Y" in the ERCO ASGN field. In addition, if ERCO is assigned to an ISDN key set button on a CFGGRP form (see below), the Configuration Group name defined on the CFGGRP form must be entered in the CONFIG GRP field on the DSLUSR form.

ERCO is assigned to an ISDN key set button by setting the ACTION field, for the appropriate BUTTON, on a CFGGRP form (5964 Record) to "ERCO".

SEC. 4A16: OSPS DIRECT AGENT ACCESS

1. FEATURE DESCRIPTION

Please see Division 2, Section 3D - OSPS Commercial ACD features for translation information for Direct Agent Access Secured Feature.

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SEC. 4A18: TERMINAL GROUP STATION RESTRICTION FOR ISUP (ISDN USERS PART) TRUNKS

1. FEATURE DESCRIPTION

TGSR (Terminal Group Station Restriction) is a BRCS feature that will allow the customer to restrict calls within a terminal group. The ISUP trunks are dedicated trunks between two switches. Calls between the terminal groups containing the ISUP trunks will be treated as intra-terminal group even though the call is interswitch. It should be noted that the actual terminal group values may be different between the switches; the ISUP trunk must be set up to be part of the correct terminal group within each switch.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1
TGSRFD	5607	4	8A	12.21
SFSYS	5713-1	3	5AR	8.22

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. The BRCS paragraph was altered to specify the changed form checks.

TGSRFD form (5607 Record) - These records are used to define the Terminal Group and Station Restriction Feature Definition. This form was altered to accommodate a new cross check.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. TGSR for ISUP Trunks Secured Feature ID 18 must be set to "S" to make the feature functional for the office.

SEC. 4A19: PRE-COMPLIANT FEATURE GROUP B CARRIER IDENTIFICATION CODE EXPANSION

1. FEATURE DESCRIPTION

Available with 5E6 and later, FGB CIC (Feature Group B Carrier Identification Code Expansion) expands the range of FGB CICs which can be supported by the 5ESS Switch in both End Office and Access Tandem applications. The secured feature ID for this secured feature is 19

Prior to this feature only CICs in the range of 000 - 999 were supported. In order to expand the range, this pre-compliant feature provides support for 4-digit CICs in the 2000 - 9999 range.

Carriers with 3-digit CICs will continue to be defined on the ICF (interLATA carrier feature) form. Carriers with 4-digit CICs will be defined via modifications to the routing and charging translations that will cause existing carrier selection to be bypassed.

2. TRANSLATION EXAMPLE

This section describes the steps necessary to define translations for this feature. Additionally, an example translations will be provided for the definition of FGB CICs 2000-2009.

1. On ODA form TKGRP, build the trunk group which will connect to the IC (Inter-Exchange Carrier) or to the FGB TANDEM.

   In our example:

   - Set TRKCLS based on DATA CONFIGURATION Figure 1.

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- CARRIER ID is required for IC trunks. Since 4-digit carriers are not supported on the TKGRP form, insert a 3-digit carrier code (for example, 000) that will not be used by FGB or FGD carriers.

2. Isolate existing 3-digit FGB CICs on the LDIT and MLDIT forms. Existing FGB digit analysis translations may need to be altered so that only 9500 and/or 9501 will continue to use 3-digit FGB CICs. Other digit analysis translations will be added for 950NXXX (N = 2 - 9) to define the 4-digit FGB CICs.

   Note: Avoid non-FGB uses of the digits 950.

   In our example:

   - Define incoming digit strings 9500 and 9501 to handle existing 3-digit FGB calls. As desired for the local dialing plan, either define both strings with TYPE OF CI CALL "TRANS", or define one string with TYPE OF CI CALL "TRANS" and the other with "VACANT". Set both to "TRANS" when either 9500XXX or 9501XXX can currently be dialed for FGB calls. Set only one to "TRANS" when only one of the two dialed strings can currently be used for FGB calls.

   - Set NBR OF DIGITS to 7 for both strings. The "TRANS" string(s) will continue to perform standard carrier selection for 3-digit FGB CICs using the ICF form.

3. As needed, define 7-digit dialing strings 950NXXX for the 4-digit FGB CICs. The CALL TYPE should be "NORMAL", TYPE CI CALL should be "NONCI", and NBR OF DIGITS should be seven. Specify a ROUTE INDEX and CODE INDEX for the carrier.

   Also define rate and route information (screening indexes, route indexes, charge indexes, etc.) as needed.

   In our example:

   For each of the 10-digit strings 9502000 through 9502009, define a VACANT code or a 4-digit CIC as follows:

   - Verify that the carrier's needs can be met according to Figure 1.

   - Build digit string 950200X (where X is 0 - 9) on an LDIT or MLDIT form. Set CALL TYPE to "NORMAL" and TYPE CI CALL to "NONCI". NBR OF DIGITS should be 7.

   - For each screening index, build an RAR (rate and route) form using the carrier's code index. The RTI (route index) on the RAR form should point to the carrier and agree with the ROUTE INDEX specified on the LDIT or MLDIT form.

   - The CHGI (charge index) should be defined on a CGIDX form with an AMA CALL TYPE of "FGBOL" (Feature Group B, Originating LATA).

   - Build an RTIDX (route index) form for any new route indexes defined.

4. Define all unused 950NXXX dialed strings as "VACANT" CALL TYPEs.

   In our example:

   A. To define 4-digit CICs of 2000 - 2009, build CICs 2010 - 9999 as VACANT as follows:

   - Build digit strings 9503 through 9509 with a CALL TYPE of "VACANT" and NBR OF DIGITS of 7.

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- Build digit strings 95021 through 95029 with a CALL TYPE of "VACANT" and NBR OF DIGITS of 7.
- Build digit strings 950201 through 950209 with a CALL TYPE of "VACANT" and NBR OF DIGITS of 7.

5. Other blocks of 10, 100 or 1000 can be opened up as needed. Care must be taken to see that each block is built out completely, i.e., if 9503305 is built, then 9503300 - 9503304 and 9503306 - 9503309 must also be built. In other words, holes should not be left in the dialing plan.
6. Terminating billing for a 4-digit carrier can be provided at the EO or FGBT if private facility trunks are used on the terminating end.

On the TKGRP (trunk group) form set TRKCLS (trunk class) to "PF" (Private Facility) and the BILLING DN to 950XXXX (where XXXX is the CIC). A unique SCR (screening index) is recommended.

Build RAR forms for the screening index with an RTI (route index of "REGL" (regular line termination) and if necessary, an NXX. The call should terminate to the line specified by the impulsed digits.

The CHGI (Charge Index) on the RAR form should be defined on a CGIDX form with AMA CALL TYPE of "DMRTM" (Detailed Message Rate Timed, MBI).

In our example:

- Build the TKGRP form with TRKCLS equal to "PF" and BILLING DN equal to 950200X (where X is 0 - 9 as defined in step 3 above). Appropriate RAR and CGIDX forms should also be built.

3. TRANSLATIONS REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 19 must be set to "S" on the SFSYS form to make FGB CIC Expansion functional for the office.

CONFIGURATION		**ODA FORMS AND FIELDS**						
SPAN	**ANI**	**LDIT MLDIT**	**RTIDX**					**TKGRP**
		TYPE OF CI CALL				**OVERLAP OUTPULSING**	**CI ROUTE TYPE**	**TRKCLS**
EO to IC	YES	TRANS	FGB	(OPT)	N	N	DTG	CAMA
EO to IC	NO	TRANS	FGB	(OPT)	N	N	DTG	IC
EO to FGBT	YES	TRANS	FGB	(NU)	N	N	STG	CAMA
EO to FGBT	NO	TRANS	FGB	(NU)	N	N	STG	LTOLLCON
FGBT to IC	NO*	TRANS	FGB	(OPT)	N	N	DTG	IC

Key:

OPT - Option as requested by carrier

NA - Not available

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NU - Not used

NO* - ANI is not available from FGBT to IC

SPAN NO* - ANI is not available from FGBT to IC- Types of offices connected
Figure 1 FGB INTERIM PLAN

SEC. 4A24: OSPS PURCHASE LIMITS BALANCE QUOTATION RELEASE 1/2

1. PURCHASE LIMITS BALANCE QUOTATION, RELEASE 1

1.1 Feature Description

The feature number for this capability is 98-5E-2220. The Purchase Limits Balance Quotation Release 1 is a secured feature, with a secured feature ID of 24 for 5E8 and later.

The PLBQ (Purchase Limits Balance Quotation) feature provides special handling for a subset of PL (Purchase Limits) cards known as "disposable cards." A disposable card is defined as a card that subscribes to PL (Purchase Limits) with an enforcement level of EWD (End With Disconnect) and the balance of that card cannot be replenished.

Calls that are billed to disposable cards receive a quotation of their remaining balance in dollars and cents prior to call completion. Calls billed to disposable cards can use a different set of rates from those that are used for other card calls, as long as the DIFFCARD feature is active and the rater supports disposable card rates.

The disposable cards can be distinguished by their numbering scheme. The OSPS recognizes a disposable card through its card recognition processing. The unique rating is automatically provided by the RTRS (Real Time Rating System) through its card differential rate schedules.

1.2 Feature Assignment

See Figure 1 for feature assignment form flow for the PLBQ feature.

Default input data for this feature has been entered in the ANNDG form (5532 Record) and ANNHD form (5531 Record).

The PL Disposable Card Issuer IDs should be defined on the TCCID form (5454 Record) by setting the DISPOSABLE CARD field to "Y".

The secured feature is activated by setting SFID 24 ACT field to "Y".

Activate the feature on the switch by setting the PLBQ ON field on the OSPSOPT form (5424 Record) to "Y".

1.3 Scenarios

Scenario: Automated PL Balance Quotation Call

The caller dials 0 + forward number.

OSPS gives the Bong Tone to the caller.

The caller enters the PL Disposable Card number.

OSPS sends a calling card query to validate the card to the CAS/NCP and receives a query reply of "ALLOW" with a PL TAP (Transaction Amount Parameter) containing an enforcement level of EWD and the card's balance.

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OSPS sends an initial PL query to RTRS, which sends an initial PL query reply of a RATED call.

OSPS quotes the balance remaining on the PL disposable card, expressed in dollars and cents and then plays a thank you announcement (if applicable) and routes the call to the forward party.

The called party answers the phone and both parties talk for some time and then hang up.

OSPS, upon termination of the call, sends an ECDM to the CAS/NCP.

Scenario: Operator-Assisted PL Balance Quotation Call

Initial 0- seizure:

The caller makes a 0- call and provides the operator with the PL Disposable Card number followed by the forward number. The operator enters the PL Disposable Card number as dictated by the caller and enters the forward number.

OSPS sends a card validation query to the CAS/NCP. The "BLG CHECK" indicator is displayed.

OSPS then sends an initial PL query to RTRS, which returns an initial PL query reply of a RATED call.

The "BLG OK" is displayed at the operator terminal and a new message is displayed, indicating to the operator to quote the balance to the caller. The operator quotes the PL balance to the caller and floats the call.

The called party answers the phone and both parties talk for some time and then hang up.

Upon termination of the call, OSPS sends an ECDM to the CAS/NCP.

1.4 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNDG	5532	3	5AF	8.60
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22
TCCID	5454	3	4BC	27.55

ANNDG form (5532 Record) - This form contains a list of inflection commands and phrases used to convert a digit string into a set of phrase identifications. For the PLBQ feature, default input data for INFLECTION IDs 121 - 141 for the "OSPSTA" application were added.

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. The default input data for announcement HEADER ID 191 was added for the PLBQ feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. To activate the PLBQ feature on the switch, the PLBQ ON field must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to enable secured features. To enable the secured feature PLBQ, the SFID 24 ACT field must be set to "Y".

TCCID form (5454 Record) - The TCCID form provides identification for telephone cards other than the 14 digit LEC card. The DISPOSABLE CARD field identifies the credit card number as a disposable card.

2. PURCHASE LIMITS BALANCE QUOTATION, RELEASE 2

2.1 Feature Description

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For 5E9(1) and later, PLBQ2 (Purchase Limits Balance Quotation, Release 2) enhances the existing PLBQ1 feature by making the disposable card identification portable (when a card number can be assigned as a disposable card and later reassigned as a non-disposable card and vice-versa). It expands the balance quotation to a broader category of cards and supports unique rating by handling new information contained in the calling card query reply of calls whose card uses CAS7 signaling and is verified at the CAS/NCP (Customer Account Services/Network Control Point). In addition, PLBQ2 introduces the concept of formatting variable length queries and appending information modules at the end before they are sent to the RTRS (Real-Time Rating System) database for calls that require real-time rating. PLBQ2 is dependent on PLBQ1, which is secured feature (SFID 24). The feature number for this capability is 98-5E-2221.

In addition, the PLBQ2 feature introduces a new AMA Generic Data module to store the new card information received in the calling card query reply.

2.2 Feature Assignment

To activate the PLBQ2 feature:

1. PLBQ2 depends on PLBQ1 being turned on.
2. PLBQ2 ON field on the OSPSOPT form (5424 Record) must be set to "Y".

To activate the AMA Generic Data module, the AMA GENERIC DATA field on the OSPSOPT form must be set to "Y". (It depends on PLBQ2 being turned on.) The format of RTRS queries changes with this feature. The unused fields are deleted causing the queries to no longer be the same length. The variable length of the queries are not dependent on the feature activation.

2.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The activation parameters for PLBQ2 are PLBQ2 ON and AMA GENERIC DATA.

3. GLOSSARY

CAS	Customer Account Services
EWD	End With Disconnect
NCP	Network Control Point
PL	Purchase Limits
PLBQ	Purchase Limits Balance Quotation
RTRS	Real-Time Rating System
TAP	Transaction Amount Parameter

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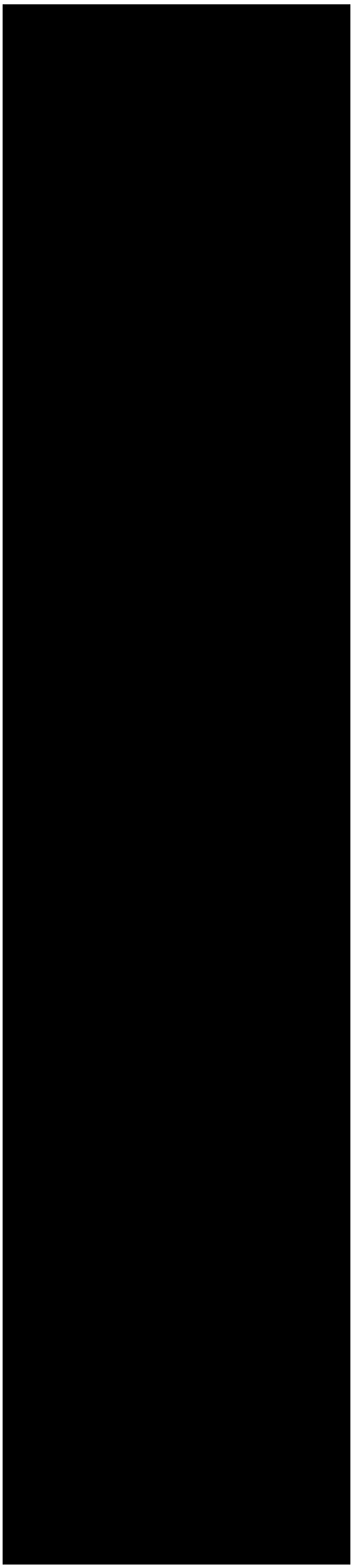

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Figure 1 PURCHASE LIMIT BALANCE QUOTATION FEATURE FORM FLOW

SEC. 4A25: OSPS TELEPHONE RELAY SERVICE CALL HANDLING

1. FEATURE DESCRIPTION

For 5E8 and later, the OSPS TRS (Telephone Relay Service) Call Handling is a secured feature (SFID 25) and an optioned feature (FID 575). The feature is activated after both the FID and SFID have been activated. The feature number for this capability is 98-5E-2115.

TRS is a service provided for the hearing and/or speech impaired. A Communications Assistant at the TRS center serves as a translator between the impaired person (using a TTY to communicate) and the hearing person. The TRS centers are operated by various carriers under contract to the center owners. In the past, the carrier operating the center provided the transport of the call. The Americans With Disabilities Act that became law in July, 1992, mandates that users of the TRS be able to select a carrier of their choice to transport the call. The TRS center must route the call to the chosen carrier via a signaling protocol acceptable to the equipment of both carriers. The carrier providing the transport is required to provide a discount to the TRS user. Thus, the billing information must contain data that identifies the call as a TRS call.

The OSPS TRS Call Handling special feature provides identification of TRS call billing restrictions based on received ANI Information Digits (ANI II), screening of calls originating in the area normally served by the receiving OSPS, and identification of the calls as TRS calls in the AMA records for billing purposes.

Due to the discounting requirement of TRS, the OSPS cannot correctly rate in real time the TRS calls. Except for Hotel Room Number (sent paid) calls from hotels within the normally served area of the OSPS, services and charging methods that require real time rating by OSPS are prohibited. The rating for the hotel calls will not include the discount. The 0+ or 0- calls have access to all OSPS features that do not require the operator services hold, through supervision, or real time rating.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for TRS Call Handling feature.

This feature is dependent upon the Feature Group D Incoming Signaling for Special Applications feature. The FGD Incoming Signaling is a secured feature (SFID 83) and an optioned feature (FID 572). The following data is needed in addition to the above:

- Add INFO DIGITS 60, 66, and 67 to the EASID form (5317 Record) and set both INTL and DOMESTIC fields to "EA10ANI".
- Trunk group class, TRKCLS field, must be "LATA" trunk on the OPRTK form (5417 Record), with the LATA TYPE set to "BOTH" and TRK TYPE set to "COMB". In addition, OL SCRN and ACQS SCRN should be set to "ASRCH". Both the WIRELESS SA field and the SELECTIVE OLS should be set to "N". Also, the ALLOW 7 DIGITS field and the FROM LOCAL OFC field must be "N".
- Populate the fields, TRS UNRESTRICTED, TRS RESTRICTED, and TRS HOTEL, on the OSPSOPT form (5424 Record) with the default values (60, 67, 66 respectively).
- The secured features and the optioned features for TRS Call Handling and FGD Incoming Signaling should be activated on the SFSYS form and FOSYS forms respectively.

3. SCENARIO

The following is a typical TRS call scenario. The TRS user dials the dedicated 800 number to access the non-AT&T TRS center. The LO (Local Office) routes the call to the TRS switch. The TRS switch uses its

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ACD capabilities to select an available CA (Communication Assistant) for the call. The CA at the non-AT&T TRS Serving Center determines that the customer wants AT&T as the carrier for the call.

The CA determines the calling number, if not signaled from the LO, proper ANI II digits, and the billing number if other than the calling number (e.g., calling card number). The CA enters the ANI II digits and calling number if necessary.

If the call can be carried by AT&T, the call is routed through an AT (Access Tandem) switch to an AT&T OSPS Switch.

The following information is received by the OSPS 5ESS Switch from the AT using the MF-FGD signaling protocol:

- One of three ANI II information digit pairs identifies the call as a TRS call and specifies billing restrictions for the call as follows:
  - Unrestricted (ANI II digits 60)—all types of billing allowed.
  - Restricted (ANI II digits 67)—sent paid billing not allowed.
  - Hotel (ANI II digits 66)—sent paid billing not allowed on calls with ANI outside the normally served area of the OSPS.
- A 10-digit ANI (originating calling number).
- The dialed call type: 1+ and 0+ or 0- (0 prefix on called number for dialed 0+ or 0-).
- 10-digit called number.

The OSPS 5ESS Switch analyzes this information and applies applicable screening.

- For 1+ sent paid POTS calls, no OSPS operator is needed. The AMA record is generated and the call completed. The billing number is the originating ANI.
- For 0+ calls, ACCS treatment is provided.
  - If the call is to be billed to a calling card and the CA has DTMF capability, the CA enters the number. The OSPS validates the card number.
  - If the call is not a card call or the CA does not have DTMF capability, the call is connected to an available position with an indication on the display that the call is a TRS call. The CA verbally provides the OSPS operator with additional information necessary to process the call such as calling card number, hotel room number, billing number for bill-to-third number billing, or the request for collect or person billing.
  - The OSPS operator provides the required assistance. Any restrictions that are applicable to the call are applied. For card calls, the card number is validated. When bill-to-third number billing is requested and acceptance is required, the OSPS operator places a call to the billing number. If the call terminates to a TTY using the ASCII protocol, the operator releases the connection immediately upon hearing the carrier signal and informs the CA that bill-to-third number billing cannot be allowed.

The OSPS 5ESS Switch signals the call forward for completion using the called number received in the MF-FGD signaling or entered by the operator at the request of the CA.

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When the OSPS operator stays on the connection for collect billing acceptance or person verification and the call terminates to a TTY using the ASCII protocol, the operator releases the connection immediately upon hearing the carrier signal and informs the CA that the call cannot be completed by the OSPS.

Normal terminating treatment is applied and the appropriate AMA record is generated by the OSPS.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.22 (5E8) 8.31 (5E9(1))
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to enable Transparency and Special Features. FID 575 ACT must be set to "Y".

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The TRS parameters TRS UNRESTRICTED, TRS RESTRICTED, and TRS HOTEL should be set to their default values.

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 25 ACT must be set to "Y" to enable the TRS Call Handling Feature.

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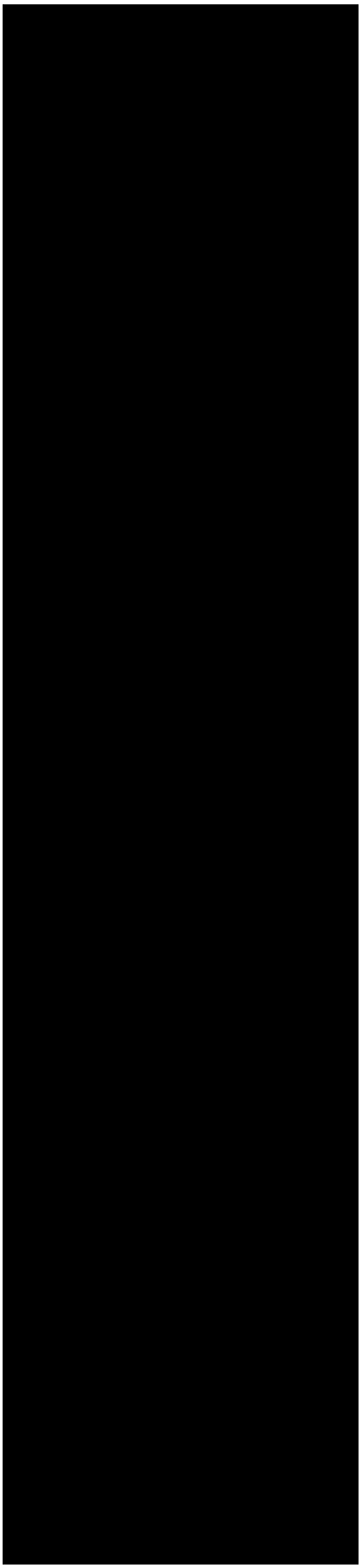

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Figure 1 TRS CALL HANDLING FORM FLOW

SEC. 4A27: FORCED CALLING NUMBER PRIVACY ON CCS TRUNKS

1. BACKGROUND

The CPN (Calling Party Number) is sent between offices over CCS (Common Channel Signaling) trunks. DN Privacy is normally used to mark the CPN as private for all calls in the office. LIGI (Limited Intragroup Individual Calling Line Identification) is used to display any non-private number within the terminal group. Some customers would like LIGI to work while marking the CPN private for all calls leaving the office. Thus, the desire is to have non-private numbers displayed in the terminal group while having the capability to mark the CPN as private for those calls leaving the office.

2. FEATURE DESCRIPTION

The Forced Calling Number Privacy on CCS Trunks feature is a secured feature using SFID (Secured Feature ID) 27 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-1627.

Available with 5E6 and later, Forced Calling Number Privacy on CCS Trunks provides the ability to mark the CPN as private for those calls leaving the office over CCS7 trunks. The Forced Calling Number Privacy on CCS Trunks feature sets the CCS7 IAM's (Initial Address Message's) Calling Party Presentation Restricted Indicator to restricted for all CCS7 calls leaving the office. This prevents the far-end office from displaying the originators directory number. The lines at the far end office which are provisioned with a Calling Number Display feature will have "PRIVATE NUMBER" displayed for calls originated from the office with this special feature active.

Calling Example 1 with feature inactive:

- User A (221-0000) in office Y with Forced Calling Number Privacy on CCS Trunks inactive.
- User B (979-1234) in office Z provisioned with CND (Calling Number Delivery) feature active.
- Office Y and Office Z are connected via CCS7 trunks.
- User A calls B.
- Call routes from office Y to office Z over CCS7 trunk.
- User B starts to ring.
- User B gets 708-221-0000 displayed.

Calling Example 2 with feature active:

- User A (221-0000) in office Y with Forced Calling Number Privacy on CCS Trunks active.
- User B (979-1234) in office Z provisioned with CND feature.
- Office Y and Office Z are connected via CCS7 trunks.
- User A calls B.
- Call routes from office Y to office Z over CCS7 trunk with Calling Party.
- Presentation Restricted Indicator set to restricted.
- User B starts to ring.

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- User B gets "PRIVATE NUMBER" displayed.

3. FEATURE ASSIGNMENT

There are no new forms or new fields added for this feature.

This feature is a secured feature and is activated by setting the ACT field for SFID 27 to "Y" on the SFSYS form (5713-1 Record). No other translations are needed to activate this feature.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company.

SEC. 4A28: 800 POST DIAL DELAY MF SIGNALING TRANSMISSION REDUCTION (FOR END OFFICES)

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4A29: 800 POST DIAL DELAY MF SIGNALING TRANSMISSION REDUCTION (FOR ACCESS TANDEM)

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4A30: MODIFIED CALLED LINE DISCONNECT ENHANCEMENT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4A31: OSPS INTERWORKING WITH SSP 800

1. FEATURE DESCRIPTION

The feature number for this capability is 98-5E-0446. For 5E6 and later, OSPS Interworking with SSP 800 (Service Switching Point for Basic 800 Service) secured feature enables the OSPS to interface with the SSP capability of the 5ESS Switch. The SSP capability allows the OSPS to query Telephone Company databases using Signaling System 7 and Transaction Capabilities protocols to implement Telephone Company NS (Number Services). Number Services are a group of services that require special numbers (e.g., 800) to be dialed, and provide special handling for these calls. The SSP feature provides the routing of 800 Service calls directly from the 5ESS Switch EAEO (Equal Access End Office) or an AT (Access Tandem) switch to either an IC (Interexchange Carrier) or within the Telephone Company. The database reply from the SCP (Service Control Point) database provides information used to route the call, or to

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respond with failure messages.

This feature allows calls that have been handed off to the OSPS and identified as NS 800 to interact directly with the SSP capability of the 5ESS Switch. Formerly, these calls were routed out of the 5ESS Switch on loop-around trunks in combined OSPS/SSP arrangements where they were handled by the 5ESS Switch Tandem capability. In those cases where the OSPS and the SSP 800 function did not reside in the same switch, the calls were routed out of the OSPS as call completions to the SSP 800 switch.

This feature allows the ICs and 800 subscribers to obtain calling number information for bill verification and market analysis on calls. It also eliminates the loop-around trunks, requires fewer switch ports, increases switch capacity, and decreases call setup and transmission delays.

NS 800 calls outpulsed while still at a position (where the operator enters the SEND key, i.e. not an early position release) will have calling number information available, but will continue to require loop-around trunks to access the SSP 800 function.

1.1 NS 800 Calls

The following OSPS-handled NS 800 calls are affected by the use of this feature:

- 0- call that is handled by an operator with early position release. The operator enters the forward NS 800 number, class charges the call as "AUTO COLLECT", and releases the call since it is eligible for early position release. Note that if the "SEND" key is used to connect the forward party, the SSP 800 functionality is not accessed directly from the OSPS and continues to require the use of loop-around trunks to access the SSP 800 function in combined OSPS/SSP arrangements.
- NS 800 number dialed as a sequence call.
- Customer-dialed 1+ NS 800 number encountering ANIF (Automatic Number Identification Failure) or ONI (Operator Number Identification) that is routed to a position for a back number entry. Upon the entry of the back number, the call is released from the position.

1.2 Scenario

The following is a typical NS 800 call handled by the OSPS.

1. A customer initiates an NS 800 call.
2. The call is routed to the LEC OSPS switch, if it is not the originating switch.
3. The ISP (Intermediate Switching Point) capability of the AT (Access Tandem) identifies the call as requiring OSPS treatment and passes control to OSPS.
4. The OSPS identifies the call as an NS 800 call and launches a query containing all the necessary information to the SCP (Service Control Point) database via the SSP capability resident on the combined OSPS /Tandem switch.
5. The SCP database examines the contents of the SS7 query and determines the appropriate call treatment. A reply is formatted and returned to the SSP.
6. The SSP receives the reply from the SCP and applies the appropriate call treatment that may include the following:
   - Route the call via intraLATA.
   - Route the call using the interLATA carrier returned from the SCP.
   - Play an announcement.

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- Perform error handling.

7. At the completion of the call, an AMA record is made according to the requirement of the SSP 800 Tandem capability. In addition, an OSPS AMA record is generated if necessary.

1.3 Translations for Operator SENT Calls

The treatment of SSP 800 calls outpulsed from operator positions should not be changed by this feature. Early Position Release (entering the 800 number, pressing Auto Collect for class of charge, and then pressing Position Release) does not need a loop-around trunk. The translations for these 0- calls leaving the OSPS are SSP 800 translations given in Division 2, Section 1X.

However, if the operator enters the 800 number and presses the SEND key, these 0- 800 calls require a loop-around trunk. The translations from the operator position to the outside loop around trunk are as follows:

- The outgoing loop-around trunk group from the OSPS switch to the Access Tandem should be a toll connecting type (Trunk Class is "TTOLLCON", "LTOLLCON", "PRINTOLL" on the TKGRP form (5202 Record)).
- A pseudo carrier must be defined on the ICF form (5305 Record) for which the LEC may provide operator service. The following fields should be entered as shown:
  - LEC SERVICE should be "Y"
  - CARRIER TYPE should be "PSEUDO".
- In the LDIT where the 800 numbers are translated, the following fields should be entered as shown:
  - INC DIGS should be "800NXX"
  - CALLTYPE should be "NORMAL"
  - CI TYPE should be "SAC".
  - SAC OWNER should be the pseudo carrier defined on the ICF form.
- The route index which is obtained from digit analysis and routing is used to determine the characteristics for the outpulsing of this call. The fields on the RTIDX form (5303 Record) should be entered as follows:
  - RTIDX should be the route index from digit analysis
  - TGN should be the outgoing trunk number defined on the TKGRP form
  - PREFDIG should be 058
  - SIG PRO should be "EA"
  - ANI IND should be "Y"
  - RT DES TYPE should be "STG".

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Once these translations have been made, the operator-entered 800 numbers are outpulsed to the Access Tandem using 3-Stage FGD signaling.

2. FEATURE ASSIGNMENT

This feature provides the OSPS a direct interface to the SSP 800 capability in a combined OSPS/Tandem switch. The SSP is integrated into the LEC (Local Exchange Carrier) network allowing the LEC the ability to route and handle 800 calls based on responses from the SCP databases. No new translations are required. See Division 2, Section 1X for SSP 800 translations.

This feature eliminates the use of loop-around trunks in combined OSPS/Tandem switches for all calls except those which are sent from the Operator Position with the SEND key.

This is a secured feature, therefore Secured Feature ID 31 must be activated for this feature to become operational.

For 5E9(1) and later, if the SSP 800 call is coming from a Remote SM, then the NS CDI and NS RTI fields should be entered on the RSMCAR form (5421 Record). If the NS CDI and NS RTI fields are not entered on the RSMCAR form, the default values will be the NS CDI and NS RTI fields are entered on the ICF form (5305 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RSMCAR	5421	3	4V	26.22
SFSYS	5713-1	3	5AR	8.22

RSMCAR form (5421 Record) - This form defines the routing indexes to a carrier from an RSM (Remote Switching Module). When an OSPS call is routed to a carrier, the routing information is normally on an ICF form (5305 Record). But, if the call came to the OSPS through an RSM, it is routed out of that same RSM to the desired carrier. For 5E9(1) and later, RSM 800 SSP calls require NS CDI and NS RTI entered on the RSMCAR form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The secured feature ID, SFID 31, should be set to "Y".

SEC. 4A32: AM BASED PROTOCOL MONITORING TRANSLATOR

1. FEATURE DESCRIPTION

The feature number for the AM Based Protocol Monitoring Translator feature is 99-5E-0796. This feature is controlled by SFID (Secured Feature ID) 32 and is deployed in a Software Update for the 5E6, 5E7, and 5E8 Software Releases.

The protocol monitoring feature provides for the recording and reporting of a limited amount of the CPE (Customer Premise Equipment) and switch ISDN (Integrated Services Digital Network) protocol exchange. The recorded data is reported directly to the requesting terminal and to the ROP (Receive Only Printer). The printed data is in a hexadecimal format that, in general, requires translation to extract the salient protocol information. This feature provides the translator tool based in the AM (Administrative Module) which takes this data and translates it into a user readable format.

This feature provides for:

- The storage of the PM (Protocol Monitoring) output data into an AM disk file.

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- The translation of the PM data from hexadecimal format into a more appropriate English format.
- Enhanced session monitoring capabilities to provide a means of interactively following the progress of the session.

The AM Based Protocol Monitoring Translator Feature provides for three input command formats:

- EXC:PM

  Invocation Message - start a PM session.

- OP:PM

  Query Message - display the current state of PM session.

- STP:PM

  Termination Message - stop a PM session.

The behavior of the session is determined by the invocation message (EXC:PM), and optionally by the termination message (STP:PM). The query message (OP:PM) is entirely for information purposes and has no effect on the progress of the session.

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 32 on the SFSYS form (5713 Record) must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 32 to "Y".

SEC. 4A33: AR/AC WITH PRIVACY NUMBER ID FOR AMA (RETURN CALL AMA)

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-130 Local Area Signaling Services.*

SEC. 4A34: STATIC PROPORTIONATE BIDDING

1. FEATURE DESCRIPTION

Available with 5E6 and later, domestic Static Proportionate Bidding is a secured feature which uses secured feature ID 34. This feature provides traffic allocation capabilities similar to the static portion of the Proportionate Bidding feature available with the international 5ESS Switch. Specifically, this feature distributes outgoing international calls proportionately among competing carriers which carry traffic to a given location. For 5E8, the feature also measures the number of calls offered to each carrier.

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Static Proportionate Bidding is in direct conflict with Equal Access as implemented in the United States. Therefore, this feature is currently targeted at foreign countries using domestic 5ESS switches. The main difference between the two access methods is that with Static Proportionate Bidding the caller does not choose the carrier. The carrier is chosen by the switch based on recent history of calls allocated to the carriers and the proportions specified by the user. With Equal Access, the caller chooses the carrier. There is no allocation of traffic. Equal Access and Static Proportionate Bidding would never be used in the same office.

Static Proportionate Bidding is defined by assigning a PB RTI (Proportionate Bidding route index) within digit analysis in place of the normal route index. In turn, this PB RTI will define a PROPBID form (5325 Record) which identifies up to four carriers and their particular information. See the PROPBID form section.

The PB RTIs are limited to a specific range. When a route index in this range is assigned in digit analysis and is not defined as a PB RTI on a PROPBID form, then it will be used as a regular route index rather than a PB RTI.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PROPBID	5325	3	3AL	10.37
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22

PROBID form (5325 Record) - This form allows the customer to create, on a per Proportionate Bidding route index basis, a list of carriers (up to 4) used to route calls sent to this Proportionate Bidding route index from the digit analysis forms. This form specifies the carriers, what percentage of calls each carrier should handle and the route index each carrier uses to route out of the office.

RTIDX form (5303 Record) - This form defines each Route Index in a 5ESS switch. A new data rule has been added for the NEXT ROUTE field.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 34 on the SFSYS form must be set to "S" to indicate that the feature has been purchased. This allows PROPBID forms to be entered to enable Static Proportionate Bidding.

3. FEATURE PROVISIONING

3.1 Secured Feature

Forms: SFSYS

Proportionate Bidding is a secured feature. SFID 34 on the SFSYS form (5713-1 Record) is set to "S" indicating that the feature has been purchased. This allows the remaining data for this feature to be entered.

3.2 Proportionate Bidding Tables

Forms: PROPBID, RTIDX

Outgoing carriers are grouped into 1 - 32 Proportionate Bidding groups of 1 - 4 carriers each. For each Proportionate Bidding group a PROPBID form is built. Each PROPBID form is keyed by a PB RTI (Proportionate Bidding route index) in the range of 1001 - 1032. This PB RTI is used to set up the digit analysis tables described below. For every PB RTI used, the PB RTI must be defined on an RTIDX form (5303 Record) with a ROUTE TYPE of "HUNT", "BUSY" or "REORDER". When this feature is active, each

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carrier's real route index, defined as CARRIER RTI on the PROPBID form, must be defined on an RTIDX form.

3.3 Digit Analysis, Routing and Charging

Forms: LDIT, PDIT, INDIT, RDIT, RAR.

Digit analysis tables are built in the usual manner. However, for routing to carriers through Proportionate Bidding groups, rather than routing directly via the route index given in digit analysis, that index is interpreted by the proportionate bidding tables as a PB RTI. Calls going to these PB RTIs are distributed proportionally among the CARRIERs defined on the appropriate PROPBID form. Each carrier's real route index is defined as CARRIER RTI on the PROPBID form.

SEC. 4A36: LASS NPA SPLIT RESOLUTION

1. BACKGROUND

When performing an NPA (Numbering Plan Area) split, a given line will at different times be identified by the original NPA and/or the new NPA. Other offices may or may not know of the proper NPA to be used for the line when using various LASS (Local Area Signaling Systems) functions, such as AR (Automatic Recall), AC (Automatic Callback) and SLE (Screen List Editing). Since LASS validation and screening are normally done on a 10-digit DN, this validation and screening can be disrupted as offices gradually convert DNs to the new NPA.

As an example, Person A (708-555-1111) and person B (312-555-2222) reside in offices 1 and 2 respectively. Office 1 has converted to the new NPA (708), but office 2 has not and is on the old NPA (312). Person A previously built a screening list that includes B's number, 312-555-2222. If person A tries to delete the number, then the implied NPA of Office 1, (708), would be prepended to B's number and the number will not be deleted since 708-555-2222 does not exist in the screening list. If person A were to add B to the list, the implied NPA of 708 would be prepended to B's number, 555-2222, and the number 708-555-2222 would be added to the list. Now two numbers, 312-555-2222 and 708-555-2222 will be in the list. Since only 7 digits are displayed, the number 555-2222 will appear twice in the screening list.

2. FEATURE DESCRIPTION

Available for 5E6 and later, LASS NPA Split Resolution is a secured feature using secured feature ID 36. This feature provides a table, called the NPA split table, that relates the old and new NPAs involved in an NPA split. This feature also specifies which actions should or should not screen for both the old and the new NPAs involved in an NPA split to insure continuity in LASS feature functionality.

3. TRANSLATION REQUIREMENTS

3.1 5E6 - 5E7 Only Software Releases

New Or Modified ODA Forms For 5E6 And 5E7

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
FOSYS	5713-2	3	5AS	8.22
NPASPLIT	5546	3	5AV	8.25

SFSYS form (5713-1 Record) - This form is used by the AT&T SEE (System Equipment Engineer) to enable the feature for the operating company. The secured feature ID 36 on the SFSYS form must be set to "S" to provide offices with control of this feature.

NPASPLIT form (5546 Record) - For 5E6 and 5E7 Software Releases, this form allows customers to build data for a single NPA split. The OPTION 1 - OPTION 4 fields are for informational purposes only. These fields are controlled by setting/resetting TFOS ID 546, 547, and 548 on the FOSYS form (5713-2

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Record).

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Transparency and Special features and as feature options to control various aspects of feature operation.

For 5E6 and 5E7, this feature requires three office options, one to control validation of TCAP (Transaction Capabilities Application Part) queries, one to control screening of incoming calls, and one to control SLE (Screening List Editing) addition/deletion of screening list entries. These options are controlled by TFOS IDs 546, 547, and 548 on the FOSYS form (5713-2 Record).

TFOS ID 546 controls the TCAP mismatch option. This option is used for TCAP queries to validate a DN in a TCAP query for AC (Automatic Callback), AR (Automatic Recall) or SLE (Screen List Editing). If TFOS ID 546 is "S" and the NPA in the TCAP query matches an NPA in the NPA split table, the DN in the TCAP query is considered valid.

TFOS ID 547 is the screening office option. This option is used when performing screening on an incoming call. If TFOS ID 547 is "S", screening is done on the seven digits, NXX-XXXX, of the calling DN. If the seven digits match a DN on the screening list, and if the calling NPA and the screening list NPA are associated with the same NPA split, a match has been found. If the screening list NPA is not associated with the same NPA split as the calling NPA, screening continues.

TFOS ID 548 is the SLE add/delete option. If TFOS ID 548 is "S" and the NPA of the DN being added/deleted from the screening list is in the NPA split table, SLE uses both old and new NPAs to check if the DN is on the screening list.

3.2 Old NPA - New NPA Correspondence

For 5E6 and 5E7, there is a one-to-one correspondence between an old NPA and a new NPA. A given old NPA can be split into only one new NPA. A given new NPA can be split from only one old NPA.

3.3 5E8 And Later Software Releases

New Or Modified ODA Forms For 5E8 And Later

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
NPASPLIT	5546	3	5AV	8.25

SFSYS form (5713-1 Record) - This form is used by the AT&T SEE (System Equipment Engineer) to enable the feature for the operating company. The secured feature ID 36 on the SFSYS form must be set to "S" to provide offices with control of this feature.

NPASPLIT form (5546 Record) - For 5E8 and later, this form allows customers to build data for a single NPA split.

3.4 Old NPA - New NPA Correspondence

For every NPA split one or more NPASPLIT forms are entered. For 5E8 and later, there can be a one-to-many and/or a many-to-one relationship between an old NPA and a new NPA. A given old NPA can be split into more than one new NPA. A given new NPA can be split from more than one old NPA. An NPASPLIT form is entered for every combination of old NPA and new NPA.

SEC. 4A37: MULTI-DISTINCTIVE RINGING II

1. FEATURE DESCRIPTION

Multi-Distinctive Ringing II is available with 5E6 and later Software Releases. This feature enhances the

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Multi-Distinctive Ringing feature by allowing distinctive ringing to be assigned to analog hunt lines which have multiple TNs.

When Call Forwarding Variable is assigned to the Master TN, one of the following options may be chosen:

- 0 - All calls to the Master TN and its dependents will be forwarded.
- 1 - Only calls to the Master TN will be forwarded.
- 2 - Only calls to the dependent TNs will be forwarded.

Also, the options may be changed by the user by activating the Call Forward Variable action code (defined on the PDIT (5300 Record) or IDPDCA form (5601 Record)). When the CFV is activated, a stutter tone will be provided, the user enters 0, 1 or 2 for the corresponding call forwarding option. After the option has been entered, Recall dial tone will be provided to allow the user to enter the forward to DN.

- ***NOTE:*** Multi-Distinctive Ringing must be purchased along with this feature.

MDNL/CFPF (Multi-Distinctive Ringing/Call Forwarding to Private Facilities Interaction) modification to this feature removes the restriction that prevents enhanced MDNL from being used with CFPF. Thus, CFPF can be assigned to enhanced MDNL lines.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
CFWFD	5614-1/2	4	15A	12.12
CFWLPA	5614-3	4	15B	1.22
MULTITN	5114	3	1N	3.3

MTNDR form (5550 Record) - This form is used to assign multiple TNs with distinctive ringing to a single analog line.

MULTITN form (5114 Record) - For 5E3 and later Software Releases, this form is used to assign multiple TNs to the following:

- Any hunted member of a Regular, Circular or a UCD (Uniform Call Distribution) hunt group.
- Any OUTDIAL member of a Regular, Circular or a UCD hunt group.
- The LISTED TN of a UCD hunt group.
- Any SUBTN(s) of a MUPH or ISAT group.,

With 5E6 and later Software Releases, this form was enhanced to allow distinctive ringing on multiple TNs. A ringing pattern other than "A" can be assigned only to Regular, Circular, and UCD analog hunt groups.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature IDs 1 (Multi-Distinctive Ringing) and 37 (Multi-Distinctive Ringing II) must be set to "S" on the SFSYS form to make Multi-Distinctive Ringing II functional for the office.

CFWFD form (5614-1/2 Record) - This form is used to define the Call Forwarding feature. The MDNL ENHANCED field was added and the DDNCFI field was replaced by MDNL FWD and MDNL RCF.

CFWLPA form (5614-3 Record) - This form is used to define the Call Forwarding feature. The MDNL

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ENHANCED field was added and the DDNCFI field was replaced by MDNL FWD and MDNL RCF.

SEC. 4A38: FLEXIBLE ANI INFORMATION DIGITS ASSIGNMENT

1. FEATURE DESCRIPTION

FLEX ANI (Flexible ANI Information Digits Assignment Feature) is the flexible assignment of two digit ANI Pairs. The feature is a secured feature and is available with 5E6 and later Software Releases.

FLEX ANI via Recent Change offers the purchaser the following capabilities:

- Allows the purchaser to assign new ANI pairs based on originating class of service.
- Allows the purchaser to assign new ANI pairs based on Route Index that can be entered via Recent Change.
- Leaves both existing service and class of service hard coded ANI pairs to co-exist with the Flexible ANI capability.
- Allows the purchaser to verify the current list of assigned ANI pairs.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
RTIDX	5303	3	3P	10.2
MCRTIDX	5304	3	3Q	10.4

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable Secured System Optional Features for an entire 5ESS Switch or for selected Switching Modules. Secured Feature ID 38 must be set to "S" on the SFSYS form to make FLEX ANI functional for the office.

RTIDX form (5303 Record) - Used to define each Route Index in a 5ESS office. The 5303 Record is intended to be used as an office record and as a source document for data entry into the RTIDX form.

MCRTIDX form (5304 Record) - Used to determine routing for various BRCS capabilities.

SEC. 4A39: ENHANCED INWATS-TYPE AMA RECORDS

1. FEATURE DESCRIPTION

EITA (Enhanced INWATS-Type AMA Records) is a Secured System Optional Feature available with 5E6 and later Software Releases.

EITA provides the ability to specify an ASFC (Alternate Service Feature Code) in the range 800 to 999 for each INWATS SFG (Simulated Facility Group). If an ASFC is specified, it replaces the default SFC of 8 in the AMA record. By using ASFCs, the Regional Accounting Office can distinguish among calls and bill them differently.

2. BACKGROUND

An SFC (Service Feature Code) is an enumeration that defines special services associated with a call. It appears in the AMA call record. Currently, all INWATS calls have an SFC of 8 written into the AMA records. EITA allows the operating company to override the default value of 8.

3. TRANSLATION REQUIREMENTS

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New Or Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
PFASFG	5609-3	4	10C	7.3

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 39 must be set to "S" on the SFSYS form to make EITA functional for the office.

PFASFG form (5609-3 Record) - Specify the ASFC (Alternate Service Feature Code) for an INWATS SFG.

If AT&T has enabled the EITA feature for the office, an Alternate SFC can be specified for an INWATS Simulated Facility Group in the ALT SFC field in the PFASFG form.

SEC. 4A40: ANALOG CALLING NAME DELIVERY

1. GENERAL

Analog Calling Name Delivery was released in phases. Each phase is dependent upon the implementation of the previous phase.

2. PHASE 0

2.1 Feature Description

Available for 5E6 and later, CNAM Phase 0 is a terminating line option for analog lines and provides the base functionality for delivering the name associated with a calling number to the called party's CPE (Customer Premise Equipment). The calling party's name is stored in the NNDB (Network Names Data Base) external to the switch (one name per directory number). The switch attempts to do queries on these numbers. The success of the queries is dependent on the information stored in the database. A successful database query delivers the name associated with the calling number to the appropriate Analog Calling Name Display CPE. If the calling DN (Directory Number) is private, "PRIVATE" is displayed on the customer's CPE. If the calling DN is public, the privacy indicator in the database is used for name delivery. If the calling DN is out of area, "OUT OF AREA" is displayed on the customer's CPE.

2.2 Feature Definition

NNDB queries made by this feature use the TCAP (Transaction Capability Application Part) of the CCS7 (Common Channel Signaling System 7) protocol. A new Direct Signaling Application type of "ACND" with the corresponding Translation Type and Subsystem Number must be defined on the DSAPP form in order to provide information required for these queries. CNAM Phase 0 is a secured feature and must be purchased before "ACND" can be defined on the DSAPP form.

A terminating switch option, BQPN (Block Query with Private Number), is available using an OFS (Optioned Feature System) ID to determine if a TCAP query is allowed when the calling DN is private. When OFS ID 541 is "Y" on the FOSYS form (5713-2 Record) and the calling DN is "private", a TCAP query is not made and "PRIVATE" is displayed on the customer's CPE.

CNAM Phase 0 is directly related to the ICLID (Individual Calling Line Identification) LASS (Local Area Signaling Services) CND (Calling Number Delivery) feature. An ICLID customer has the ability to subscribe to CND or both CND and CNAM Phase 0 causing the calling party number or both the calling party number and the name (in addition to time and date) to be delivered to the CPE upon successful queries of the NNDB. If the Calling Directory Number is private, "PRIVATE" will be displayed on the customer's CPE. If the calling DN is public, the privacy indicator in the database is used for name delivery. If the calling DN is out of area, "OUT OF AREA" is displayed on the customer's CPE.

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CNAM Phase 0 is activated by assigning one of 4 new ICLID preconstructed features, defined on the LIDFD form (5966 Record), to an analog line via the LINEFA, MLHLNFA, CLUSTR, or BFG form. Because this feature is dependent on the ICLID CND feature in Phase 0, the line must also have a CND feature (defined on the LIDFD form) assigned.

2.3 CNAM Phase 0 Translation Requirements

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSAPP	5537	3	5AK	8.17
FOSYS	5713-2	2	5AS	8.22
LIDFD	5966	6	9A	12.44
SFSYS	5713-1	3	5AR	8.22

DSAPP form (5537 Record) - This form is used to specify the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks which use the CCS7 (Common Channel Signaling System 7) signaling protocols. The enumeration "ACND" will be added to the already existing field APPLIC.

FOSYS form, (5713-2 Record) - This form is used to administer OFS IDs. The ability to block a query to the NNDB is controlled at the terminating switch by an option called BQPN (Block Query with Private Number) which is enabled by setting the OFS ID 541 field ACT to "Y". The BQPN option is honored only if the calling number is marked private. When the BQPN option is disabled (the default), TCAP queries for private DNs are allowed; in that case, the NNDB determines the private/public status of the calling name.

LIDFD form (5966 Record) - This form contains feature options and default values to construct Line Identification feature definitions. Four new preconstructed features were added for CNAM Phase 0.

- /LIRCNMA - CNAM and CND all terminals feature.
- /LIRCNMP - CNAM and CND primary terminal only feature.
- /LIRDNMA - CNAM and CND all terminals feature activation/deactivation.
- /LIRDNMP - CNAM and CND primary terminal only feature activation/deactivation.

SFSYS form (5713-1 Record) - This form is used by the AT&T SEE (System Equipment Engineer) to enable the feature for the operating company. The SFID 40 on the SFSYS form must have the field ACT set to "Y" to enable CNAM Phase 0.

3. PHASE 2

3.1 Feature Description

Available for 5E7 and later, CNAM Phase 2 provides enhancements to CNAM Phase 0, the terminating part of the CNAM feature, which provides the calling name to the called analog subscriber's special CPE. CNAM Phase 2 is a secured feature and requires that SFID 40 have the ACT field set to "Y" on the SFSYS form (5713-1 Record).

In addition to the basic functionality provided by CNAM Phase 0 described above, CNAM Phase 2 provides:

- Invocation of privacy dial codes for the originating side
- Billing at the originating side
- TCAP query control

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- CNAM only feature

3.1.1 Invocation of Privacy Dial Codes

The originating part of this feature provides the caller (either analog or ISDN) with the ability to specify whether the caller's name and/or number are provided to the called party on a per-call basis. This feature is an enhancement to ICLID (Individual Calling Line Identification) which includes both CND (Calling Name Delivery) and DNP (Directory Number Privacy) features. The originating part of the feature is invoked when a caller with the proper Display and Privacy feature dials a CNAM privacy dial code before dialing the called DN. The new per-call CNAM privacy codes are as follows:

- NNP - Name and Number Privacy (both name and number are forced private for the current call)
- NAP - Name Privacy (toggles the default name privacy status retrieved from the NNDB)
- NNDA - Name and Number Delivery Allowed (both name and number are forced public for the current call)

These privacy codes are provided, as for ICLID DN Privacy, within the definition of the Display and Privacy preconstructed modular feature (e.g., /DIDLX, /DIDNP, and /DIGA preconstructed features). No new Display features (/DIxxx) are defined. So with CNAM Phase 2, the caller may have per-call blocking and unblocking of number only, name only, or name and number.

This originating feature which provides the capability for users to dial these privacy codes (NAP, NNDA, NNP) is not secured. These privacy features are available on installation of the feature.

3.1.2 Billing

When a caller successfully dials a new CNAM privacy access code (NNP, NAP, or NNDA), a billing record is generated if the caller has access to a Privacy feature that is defined with TN PRIVACY set to "Y" on the DISPFD form (5965 Record). A maximum of one billing record is generated per privacy code per call. For example, if a caller dials the NNP code, then the NNDA code, then NNP again, this feature generates two billing records: one for the initial NNP code and another for the NNDA code. No billing record is generated for the second NNP code dialed on the call.

3.1.3 TCAP query control

The basic NNDB query functionalities are provided in CNAM phase 0. CNAM Phase 2 enables the 5ESS Switch to reduce queries to the CSS network NNDB database when the CCS7 network is congested. When the NNDB query response is received by the 5ESS Switch, the response may contain a component of information telling the 5ESS Switch to reduce future queries.

The ability to block a query to the NNDB is controlled at the terminating switch by an option called BQPN (Block Query with Private Number) which is enabled by setting the OFS ID 541 field ACT to "Y" on the FOSYS form (5713-2 Record). In CNAM Phase 2, the BQPN option is honored only if the calling number is marked private and no name indicator is present (i.e., no name privacy code was dialed). When the BQPN option is disabled (the default), TCAP queries for private DNs are allowed; in that case, the NNDB determines the private/public status of the calling name.

3.1.4 CNAM only feature

For CNAM Phase 0, an ICLID customer could subscribe to CND or both CND and CNAM Phase 0. With CNAM Phase 2, a customer can subscribe to CNAM only, to ICLID CND only, or to both CNAM and ICLID CND. The new preconstructed CNAM feature /LIRMA provides CNAM-only functionality without ICLID CND.

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3.2 CNAM Phase 2 Restrictions

- On the 5ESS Switch, it is possible to assign terminating CNAM features to ISDN lines, shared analog lines, or to B911 lines, but no name information will be delivered.
- On the 5ESS Switch, when the controlling party of a three-way call has call waiting and goes on-hook for ringback, no name or number information is delivered.
- On the 5ESS Switch, no name or number is delivered on a ringback given the following call scenario: a multiway subscriber has call waiting. The subscriber flashes to connect to the new caller. The subscriber goes on-hook and is rung back by the held party.
- On the 5ESS Switch, no name or number information is delivered on ACBC (Automatic Call Back Calling) ringback.
- As with ICLID PCP, the following line types are not allowed to access the privacy features: ISDN PRI, denied origination, trunks, and private facilities.

3.3 CNAM Phase 2 Translation Requirements

Translation requirements for CNAM Phase 2.0 include those for CNAM Phase 0.

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DISPFD	5965	6	8A	12.43
IDPDCA	5601-1/2	4	2B	9.13
LASSOP	5945	5	5F	8.21
LIDFD	5966	6	9A	12.44
PDIT	5300-2	3	3B	9.2

DISPFD form, (5965 Record) - This form allows the calling or called number and the time and date to be displayed at an ISDN station set, analog lines with special CPEs, and to inter-switch calls with the use of the CCS7 signaling network. The data rule for the TN PRIVACY field was modified so that when TN PRIVACY is "Y", the enumerations "CNPUSE", "NNPRV" and "NNPUB" are included as valid ACTION entries.

IDPDCA form, (5601-1/2 Record) - This form is used to define the dialed codes associated with IDPs (Individualized Dialing Plans). For the new dial codes, the enumerations "CNPUSE", "NNPRV" and "NNPUB" were added as valid ACTION entries on this form when the TN PRIVACY field on the DISPFD form is set to "Y".

LASSOP form, (5945 Record) - This form is used to supply global office parameters for the LASS features. The field CNAM TCAP was added. This field indicates the CNAM CCS7 TCAP query wait period in seconds. CNAM TCAP is a timer having a range of 1 to 6 seconds with a default of 3 seconds. When the CNAM TCAP timer is 3 seconds or less, the customer does not perceive delay to power ringing. If the CNAM TCAP timer value is set to greater than 3 seconds, the customer can experience a delay of as much as 3 seconds before the start of power ringing. The delay can be as large as the difference between the CNAM TCAP timer value and 3. For example, a CNAM TCAP timer value of 5 could result in a delay of as much as 2 seconds. This delay is caused by waiting for the TCAP response before power ringing.

LIDFD form (5966 Record) - This form contains feature options and default values to construct Line Identification feature definitions. The field CNAM was added. CNAM indicates whether or not the calling name is to be delivered to the terminating analog line. The new preconstructed ICLID feature, /LIRMA, was added to provide flat-rate CNAM-only functionality without ICLID CND.

PDIT form, (5300-2 Record) - This form provides information defining feature and operator access and

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prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). For the new dial codes, the enumerations "CNPUSE", "NNPRV" and "NNPUB" were added as valid ACTION entries on this form when the TN PRIVACY field on the DISPFD form is set to "Y".

4. PHASE 2.1

4.1 Feature Description

Available for 5E8 and later, CNAM Phase 2.1 is a secured feature. SFID 40 on the SFSYS form must have the field ACT set to "Y" to enable the CNAM feature.

In addition to providing the functionality of CNAM Phase 2 (see PHASE 2 above), CNAM Phase 2.1 allows CNAM to be assigned to subscribers on a usage-sensitive basis. (Only flat-rate billing was available for 5E7 and earlier).

When a customer is assigned flat-rate CND (Calling Number Delivery) and usage-sensitive CNAM, or usage-sensitive CNAM only, the AMA record produced contains the following counts:

- The number of times the calling name was delivered to the CPE.
- The number of times the calling name was "unavailable".

"Unavailable" either means that "O" (Out-of-Area) was delivered to the CPE indicating that the calling name or number was unavailable, or "P" (Private) was delivered to the CPE indicating that the calling name or number had privacy set, either per-call or by default.

It should be noted that unlike the ICLID feature, which contains data for three subscribers for the AMA record, CNAM AMA records contain data for a single subscriber.

No AMA record is generated when a customer is assigned to CNAM on a flat-rate basis.

When a customer is assigned usage-sensitive CNAM and usage-sensitive CND (Calling Number Delivery), no ICLID record will be generated for the subscriber. Only one record is created, instead of two, with both CNAM and CND information. The AMA record produced will contain the following counts:

- The number of times that both calling name and calling number are delivered to the CPE.
- The number of times that both calling name and calling number are "unavailable".
- The number of times that the calling name was delivered to the CPE and the calling number was "unavailable".
- The number of times that the calling number was delivered to the CPE and the calling name was "unavailable" to the CPE.

The above counts are strictly used in AMA recording and do not appear on any traffic reports. Generation of the counts occurs when the customer has the feature(s) active regardless of whether the CPE display is turned on or off. Deactivation of the feature will disable these counts automatically.

The AMA counts are collected, and an AMA record is written if at least one non-zero count exists. The AMA record is generated once during a scheduled daily collection cycle at approximately 3:12 a.m. An AMA record will also be generated just prior to an overflow condition (e.g., if a count reached a value of 255).

If a full system initialization occurs, the billing counts accumulated since the last collection cycle will be zeroed.

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4.1.1 Usage Sensitive Billing:

Usage-sensitive billing is only assigned to a terminating line. The billing is controlled by the Line Identification feature assigned to the line via the BFG, CLUSTR, LINEFA, or MLHLNFA form. The LID features are defined on LIDFD form (5966 Record); LID features which have the CNAM AMA field set to "Y" use usage-sensitive billing for CNAM. A billing record is only generated when a usage-sensitive feature is assigned. The following preconstructed LID features were added for usage-senstive terminating billing:

- /LIRDAMU - provides flat-rate CND and usage-sensitive CNAM all terminals feature activation and deactivation.
- /LIRDNMU - provides both usage-sensitive CND and CNAM all terminals feature activation and deactivation.
- /LIRMDU - provides usage-sensitive CNAM only activation and deactivation. The combination of CND and CNAM is selected by the LID feature assigned to the line. Only one /LI feature is allowed per line.

4.2 CNAM Phase 2.1 Translation Requirements

Translation requirements for CNAM Phase 2.1 include those for CNAM Phase 2.0 and CNAM Phase 0.

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LIDFD	5966	6	9A	12.44

LIDFD form (5966 Record) - This form contains feature options and default values to construct Line Identification feature definitions. CNAM AMA indicates whether usage-sensitive or flat-rate billing will be done for the terminating side. Three new preconstructed LID features were added for terminating usage-sensitive billing:

- /LIRDAMU - provides flat-rate CND and usage-sensitive CNAM all terminals feature activation and deactivation.
- /LIRDNMU - provides both usage-sensitive CND and CNAM all terminals feature activation and deactivation.
- /LIRMDU - provides usage-sensitive CNAM only activation and deactivation.

SEC. 4A43: LIMITED 2-LEVEL COT/AC

1. FEATURE DESCRIPTION

Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback) is a secured feature available with 5E6 and later Software Releases. The 2-Level COT/AC feature makes the dialing of a COT or AC use code only a preliminary request for feature activation. After being prompted by an interactive announcement, the subscriber may dial 1 to confirm the request or hang up to cancel the request. If the subscriber dials a string of digits (e.g., "1234") then only the first digit will be interpreted. The rest of the digits will be ignored. This feature provides 2-Level activation for analog phones only.

2. FEATURE ASSIGNMENT

To activate the Limited 2-Level COT/AC secured feature, SFID 43 on the RC View 8.22 must be set to "Y". In addition, the COT ACT LVL and/or AC ACT LVL fields must be set to 2 on the RC View 8.21.

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3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
ANNAPL	5529	3	5AC	8.64
ANNHD	5531	3	5AE	8.61
ANNDG	5532	3	5AF	8.60
PHRASE	5534	3	5AH	8.63
FIXRT	5301-1	3	3G	10.1
EQRAP	5822	8	36	20.10, 20.22

SFSYS form (5713-1 Record) - This form is used by the SEE to enable the feature for the operating company. Secured Feature ID 43 must be set to "S" to make Limited 2-Level COT/AC functional for the office.

ANNAPL form (5529 Record) - This form is used to enter the SMs (Switching Modules) where the DSU2-RAFs (Digital Service Unit Model 2 - Recorded Announcement Function) reside as well as the type of application announcements supported by that DSU2-RAF. A form keyed by "LASS" must be entered. This form is used by both the LASS (Local Area Signaling Services) SLE (Screen List Editing) application and the Limited 2-Level COT/AC application.

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. An announcement header enables a group of phrases (comprising an announcement) to be accessed with a "header identification number." Seven forms keyed by APPLICATION equal to "LASS" and HEADER IDs of 249 through 255 must be entered (these headers are used only by Limited 2-Level COT/AC and are not used by LASS). These headers will not be provided through standard data, but must always be entered by the office through RC or ODA.

ANNDG form (5532 Record) - This form contains a list of inflection commands and phrases used to convert a digit string into a set of phrase identifications. Eight forms keyed by APPLICATION equal to "LASS" and INFLECTION IDs of 1 through 7 and 10 must be entered. These ANNDG forms will be shared by the LASS SLE and Limited 2-Level COT/AC applications.

PHRASE form (5534 Record) - This form defines and describes phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Function) Announcement Storage circuit packs for each application. Forms keyed by APPLICATION equal to "LASS" and PHRASE IDs of 1 through 46, 65, 98, 104 through 177, or any customized phrase number used by the above mentioned ANNHD forms must be entered. PHRASE IDs 104 through 177 will not be provided through standard data, but must always be entered by the office through RC or ODA.

FIXRT form (5301-1 Record) - This form is used to define Routing and Charging treatment of Fixed Route Types. A form keyed by FIXED ROUTE TYPE equal to "ACSR" must be entered to provide a route for announcements from the DSU2-RAF.

EQRAP form (5822 Record) - This form is used to define the RAF (Recorded Announcement Function) circuit packs. The RAF unit is defined on the EQRA form (5821 Record). The TN1053 Announcement Storage Circuit board for the RAF must use new firmware described on this form for the Limited 2-Level COT/AC.

SEC. 4A44: INCOMING TRUNK SERVICE EVALUATION

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

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SEC. 4A47: UCR (UNIDENTIFIED CALL REJECTION)

1. BACKGROUND

The introduction of the display feature in 5E4(2) made it possible to display the number of the calling party to the called party. Several features, such as all-call privacy and per-call privacy, were made available to allow the calling party to administer the presentation status as public or private. Currently, when a caller invokes DN (Directory Number) Privacy to prevent his/her number from being revealed to the called party, the called party who has ICLID (Incoming Calling Line Identification) CND (Calling Number Delivery) is simply informed that the number is private. Since the called party is not presented with the identity of the caller, the called party cannot choose whether to answer the call or not based on the identity displayed.

2. FEATURE DESCRIPTION

2.1 UCR Base Feature

For 5E5 and later, UCR (Unidentified Call Rejection) is a Secured Feature and must be purchased. UCR gives the called party the ability to automatically reject calls if the calling number has been marked private. The user, therefore, only receives calls for which the identity of the calling party is available. This feature discourages the use of DN Privacy (which displays calls as private to those having the Calling Number Delivery feature) by not allowing calls to complete to the called party if UCR is active.

UCR routes calls with the calling number marked private to a 13A/14A uninterruptible announcement that will indicate that the called party is not accepting calls from parties with private numbers. The called party is not alerted when calls are routed to the announcement. Calls, for which the calling party number is not available or is not marked private, are not affected.

UCR can be activated, and private calls rejected, even if Calling Number Delivery is not assigned to the line.

UCR should not be assigned to the base station of a customer who has Remote Call Forwarding on their line. Although the assignment of UCR will not be blocked in ODA, assignment of UCR to these lines would block receiving calls which were marked private.

UCR is available for unshared analog lines only.

2.2 UCR Options

A. **Dial Code Activation of UCR**

For 5E6 and later, this option allows the customer to activate and deactivate UCR by means of dial codes. Once dial codes have been defined within the IDP (Individualized Dialing Plan) or ODP (Office Dialing Plan) the customer has the capability to activate and deactivate UCR.

B. **Charge/No Charge for UCR Rejection Announcement**

When a subscriber with UCR active rejects a call from a calling party having a private number, the calling party will be rerouted to a 13A/14A announcement. For 5E6 and later, this billing option allows telephone companies to charge calling parties for connection time to a UCR call rejection announcement after having been rerouted from the line of a called UCR subscriber.

C. **Confirmation Tone/Announcement Option for UCR Activation Dial Codes and Confirmation Tone/Announcement Option for UCR Deactivation Dial Codes**

Available with 5E6 and later, these two options are independent of each other, and neither option is

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reliant upon the activation status of the other option for its operation. Each of these options can only be active or inactive for an entire office.

1. **Confirmation Tone/Announcement Option for UCR Activation Dial Codes**

   Confirmation Tone/Announcement Option for UCR Activation Dial Codes allows telephone companies to exercise a per-office option of providing UCR subscribers with either confirmation tone or a confirmation announcement in response to a successful activation of UCR by dial code.

2. **Confirmation Tone/Announcement Option for UCR Deactivation Dial Codes**

   Confirmation Tone/Announcement Option for UCR Deactivation Dial Codes allows telephone companies to exercise a per-office option of providing UCR subscribers with either confirmation tone or a confirmation announcement in response to a successful deactivation of UCR by dial code.

3. FEATURE ASSIGNMENT

3.1 UCR Base Feature Assignment

For 5E5, the assignment of UCR to a line requires a service order setting UCR on the LINE form to "Y". When UCR is assigned, it is always active. Deactivation of UCR requires a service order setting UCR on the LINE form to "N".

For 5E6 and later, the assignment of UCR to a line requires a service order before UCR can be set on the LINE form to "Y". When initially assigned, UCR will not be active.

If UCR is ever unassigned from the line and later reassigned to the line, it will be reassigned as inactive (just as when it was first assigned to the line).

3.2 UCR Options

A. **Dial Code Activation of UCR**

For 5E6 and later, once dial codes have been defined within the IDP (Individualized Dial Plan) or ODP (Office Dialing Plan) by assigning "UCRACT" (for activation) or "UCRDCT" (for deactivation) to the ACTION field on the IDPDCA or PDIT form, the customer can activate and deactivate UCR by means of dial codes.

B. **Charge/No Charge for UCR Rejection Announcement**

For 5E6 and later, this billing option allows telephone companies to charge calling parties for connection time to 13A/14A announcement facilities when UCR announcements are given. When OFS ID 550 is set to "S" (OFS ID 550 has ACT set to "Y" for 5E9(1) and later) on the FOSYS form (5713-2 Record), the switch will provide answer supervision and the automatic generation of an AMA (Automatic Message Accounting) billing record when a calling party is rerouted from the line of a called UCR subscriber and connected to a UCR call rejection announcement. The AMA billing record is the same record that is used for normal, unfeatured telephone calls. When this option is disabled, answer supervision and billing will not be provided for UCR announcements.

C. **Confirmation Tone/Announcement Option for UCR Activation Dial Codes and Confirmation Tone/Announcement Option for UCR Deactivation Dial Codes**

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For 5E6 and later, these two options apply only when:

- the UCR base feature has been purchased and made available to customers, and
- UCR activation and deactivation dial codes have been properly defined in a telephone office's ODP and in the IDPs of UCR subscribers.

Thus, subscribers are capable of activating/deactivating UCR via dial codes.

1. **Confirmation Tone/Announcement Option for UCR Activation Dial Codes**

Option inactive (Confirmation Announcement Provided)

If OFS ID 553 is blank (for 5E9(1) and later, OFS ID 553 has ACT blank or set to "N") on the FOSYS form (5713-2 Record), there are two possible scenarios:

- If an FIXRT form (5301 Record) exists with FIXED ROUTE TYPE set to "ACTUCR", the associated RTI (route index) should provide routing to 13A/14A UCR activation confirmation announcement. Customers that activate UCR by dial code will receive a UCR activation confirmation announcement. Wording for the UCR activation confirmation announcement is provided by the telephone company.
- If an FIXRT form is not populated as described above, a customer that activates UCR by dial code will receive confirmation tone instead of an activation confirmation announcement; however, an assert to indicate an error will print on the ROP (Read Only Printer) of the customer's office. The nature of the assert will be to inform craft personnel of the office that announcement data expected by the 5ESS Switch in conjunction with the UCR activation dial code action has not been populated or correctly populated

Option active (Confirmation Tone Provided)

If OFS ID 553 is set to "S" (for 5E9(1) and later, OFS ID 553 has ACT set to "Y") on the FOSYS form (5713-2 Record), an FIXRT form having FIXED ROUTE TYPE set to "ACTUCR" is not needed or expected by the switch. Therefore, an error condition will not occur, and the switch will not cause an assert to be printed on the ROP of the customer's office. A subscriber that activates UCR by dial code will receive confirmation tone as standard procedure.

2. **Confirmation Tone/Announcement Option for UCR Deactivation Dial Codes**

Option inactive (Confirmation Announcement Provided)

If OFS ID 557 is blank (for 5E9(1) and later, OFS ID 557 has ACT blank or set to "Y") on the FOSYS form (5713-2 Record), there are two possible scenarios:

- If an FIXRT form (5301 Record) exists with FIXED ROUTE TYPE set to "DCTUCR", the associated RTI (route index) should provide routing to 13A/14A UCR deactivation confirmation announcement. Customers that deactivate UCR by dial code will receive a UCR deactivation confirmation announcement. Wording for the UCR deactivation confirmation announcement is provided by the telephone company.
- If an FIXRT form is not populated as described above, a customer that deactivates UCR by dial code will receive confirmation tone instead of a deactivation confirmation announcement; however, an assert to indicate an error will print on the ROP (Read Only Printer) of the

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customer's office. The nature of the assert will be to inform craft personnel of the office that announcement data expected by the 5ESS Switch in conjunction with the UCR deactivation dial code action has not been populated or correctly populated.

Option active (Confirmation Tone Provided)

If OFS ID 557 is set to "S" (for 5E9(1) and later, OFS ID 557 has ACT set to "Y") on the FOSYS form (5713-2 Record), an FIXRT form having FIXED ROUTE TYPE set to "DCTUCR" is not needed or expected by the switch. Therefore, an error condition will not occur, and the switch will not cause an assert to be printed on the ROP of the customer's office. A subscriber that deactivates UCR by dial code will receive confirmation tone as standard procedure.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FIXRT	5301	3	3G	10.1
FOSYS	5317-2	3	5AS	10.19 for 5E5 8.22 for 5E6 - 5E8 8.31 for 5E9(1) and later
IDPDCA	5601-1	4	2B	9.13
LINE	5109	3	1I	1.6
PDIT	5302	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22

FIXRT form (5301 Record) - This form is used to define the Routing and Charging treatment of Fixed Route Types. For 5E5 and 5E6, a form keyed by FIXED ROUTE TYPE equal to "DENYORIG" must be entered to provide a route to an announcement when a call is rejected by UCR. For 5E7 and later, a form keyed by FIXED ROUTE TYPE equal to "UCRDENY" must be entered to provide a route to an announcement when a call is rejected by UCR.

For 5E6 and later, the enumerations "ACTUCR" and "DCTUCR" were added for the field FIXED ROUTE TYPE to provide routing to a confirmation announcement for subscribers activating or deactivating UCR by means of dial codes.

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 550 must be set to "S" (OFS ID 550 must have ACT set to "Y" for 5E9(1) and later) to enable the Charge/No Charge for UCR Rejection Announcement option. OFS ID 553 must be blank (OFS ID 553 must have ACT blank or set to "N" for 5E9(1) and later) for the office to provide Confirmation Tone/Announcement Option for UCR Activation allowing subscribers to have a confirmation announcement delivered when activating UCR with a dial code. OFS ID 557 must be blank (OFS ID 557 must have ACT blank or set to to "N" for 5E9(1) and later) for the office to provide Confirmation Tone/Announcement Option for UCR Deactivation allowing subscribers to have a confirmation announcement delivered when deactivating UCR with a dial code.

IDPDCA form (5601 Record) - This form is used to define the dialed codes associated with IDPs. For 5E6 and later, the UCR dial codes are defined on this form. The ACTION entry "UCRACT" activates UCR. The ACTION entry "UCRDCT" deactivates UCR.

LINE form (5109 Record) - This form is used to define a line. The new field UCR was added for 5E5 and later. The UCR field must be set to "Y" to activate the UCR feature on a given line. For 5E5, all calls to this line marked with a presentation status of private will be rejected without alerting the called party. Rejected calls will be routed to an uninterruptible announcement. For 5E6 and later, calls receive the same processing only if the called party has activated the feature by means of a dial code.

PDIT form (5302 Record) - This form is used to define dialed codes associated with ODPs. For 5E6 and later, the UCR dial codes are defined on this form. The ACTION entry "UCRACT" activates UCR. The ACTION entry "UCRDCT" deactivates UCR.

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SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. SFID 47 must be set to "S" (SFID 47 must have ACT set to "Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record) before UCR can be set to "Y" on the LINE form (5109 Record) to make UCR functional for the office.

SEC. 4A48: POLIN (PRIVACY OPTION FOR LAST INCOMING NUMBER)

1. FEATURE DESCRIPTION

Available with 5E6 and later, the POLIN (Privacy Option For Last Incoming Number) feature ensures that the calling party number is not revealed and is treated as private by some features whose primary function is other than providing the calling party number. The number would be treated as private even if the calling party had not marked it as private. Features that are affected by this implementation are:

LASS Screening List Editing (SLE)

LASS Automatic Callback (AC)

LASS Automatic Recall (AR).

This feature will provide a per-office option so that offices may have the LICDN (Last Incoming Call Directory Number), which is stored in a line's ILHB (Incoming Line History Block), considered private when SLE or AC/AR try to retrieve it and voice-back or display it to the user.

Currently, the LICDN stored in a line's ILHB is also used by AC2L (Automatic Callback Two Level Activation) to voice-back or display the LICDN to the user before call back. This feature will not change AC2L. This is to avoid a 1AESS Switch transparency issue. The 1AESS Switch allows the LICDN to be voiced back to the user by AC2L. A display of the calling party number is prevented by not providing the feature. There is a similar situation with the ICLID (Individual Calling Line Identification) feature. Display of the calling party number is one of ICLID's main functions, and it is possible to prevent the display by simply not providing the feature.

There are other features like Direct Access to Message Data Base, Message Retrieval Display, Print On Demand, and Voice Message System that may reveal the calling party number in different manners, which do not use the LICDN from the ILHB. This feature, POLIN will not prevent these features from revealing the calling party information.

2. FEATURE ASSIGNMENT

POLIN is a secured feature that is enabled by setting the Secured Feature ID 48 to "S" on the SFSYS form (5713-1 Record). Subsequently, the feature is activated on a per-office basis by setting the TFOS (Transparency Feature Optioning System) ID 534 to "S" on the FOSYS form (5713-2 Record).

- ***NOTE:*** The TFOS should be activated or deactivated on a per office basis. Although it is possible to set each SM separately in the module field of FOSYS form, this should be avoided. The intent of this feature is to enable/disable the revealing of DN office-wide.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
SFSYS	5713-1	3	5AR	8.22
FOSYS	5713-2	3	5AS	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. Secured Feature ID 48 must be set to "S" to enable the feature and indicate that the feature has been purchased.

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FOSYS form (5713-2 Record) - This form is used to administerTFOS (Transparency Feature Optioning System) bits for Special andTransparency Features. TFOS ID 534 on the FOSYS form must be setto "S" to activate this feature for the office.

SEC. 4A49: REMOVE ISDN COT AGENCY

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-130 Local Area Signaling Services.*

SEC. 4A50: CALLING PARTY NUMBER PRESENTATION

1. BACKGROUND

Beginning with the introduction of the display feature in 5E4(2), it became possible to display the number of the calling party to the called party. The all-call privacy and per-call privacy features were developed to allow the user to administer the presentation status (public or private) of the calling party. The CPNP (Calling Party Number Presentation) special feature applies specifically to per-call and all-call privacy features and the manner in which they interact to determine the presentation status of a call.

Currently the all-call privacy feature is administered by the DN PRIVACY field on the OFCOPT form and the PRIVACY field on the LINE, MLHLN, and DSLUSR forms, Per-call privacy is administered by the TN PRIVACY field on the DISPFD form, the PCP ALW field on the LINE, MLHLN and DSLUSR forms, and the PCP ALW field on the LASSFA form. The DISPFD form provides per-call privacy on a subscription basis (that is, feature assignment) while the LINE, MLHLN, DSLUSR and LASSFA forms provide per-call privacy on a LASS General Availability basis.

The current presentation status precedence is:

1. If DN PRIVACY on the OFCOPT form is set to "Y", all calls originating within the office will be marked as private. If DN PRIVACY is "N", then the presentation status will be determined by (2) or (3).

2. If the line has access to per-call privacy via subscription or LASS GA and is using it, then per-call privacy usage will toggle the presentation status as determined by the setting of the PRIVACY field on the LINE, MLHLN or DSLUSR form.

3. When DN PRIVACY on the OFCOPT form is set to "N" and the line is not using per-call privacy, then the PRIVACY field on the specific LINE, MLHLN or DSLUSR form will determine the presentation status.

2. FEATURE DESCRIPTION

Available with 5E6 and later Software Releases, the CPNP special feature changes the above mentioned presentation status precedence list and introduces a new means of administering per-call and all-call privacy. The new means of administration will be done through the screening index. This is in addition to per-line and per-office administration.

The new presentation status precedence is:

1. If the line has access to per-call privacy (by means of subscription of LASS GA) and is using it, then per-call privacy usage will determine the presentation status.

2. If the line has the per-line all-call privacy indicator set, it will be used to determine the presentation status.

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3. If the line does not have per-line all-call privacy set and the per-screening index all-call privacy indicator is set, then it will be used to determine the presentation status.

4. If the per-line all-call privacy and the per-screening index all-call privacy indicators have not been set, then the per-office all-call privacy indicator (denoted by the DN PRIVACY field on the OFCOPT form) will be used to determine the presentation status.

Therefore, allowing or denying all-call privacy for a screening index is used only when all-call privacy has not been set on a per-line basis. Essentially, for all-call privacy, per-line (LINE, MLHLN, DSLUSR forms) overrides per-screening index (SCRIDXPA form) which overrides per-office (OFCOPT form) settings.

Per-call privacy is not as straight-forward as all-call privacy. Normally, the PCP field on the LASSFA form determines whether or not PCP is generally available in the office, and if it is, then the PCP ALW field on the LINE, MLHLN, or DSLUSR form determines if PCP is generally available on the line. With CPNP active in the office, screening index PCP parameters will, in some instances, override the LASSOP form for a particular screening index:

1. If LASSFA has PCP set to "SUBSCR", then PCP is not generally available (assignment of a DISP feature is the only way to get PCP). However, if the new screening index form, SCRIDXPA, is entered with PCP ALW set to "Y", then PCP is generally available within that screening index. Lines within the screening index that have their per-line PCP ALW set to "Y" will have PCP generally available on the line.

2. If LASSFA has PCP set to "GENAVAIL", then PCP is generally available within the office. However, if the new screening index form, SCRIDXPA, is entered with PCP ALW set to "N" and PCP is not line subscribed, then PCP is not generally available within that screening index. Lines assigned the screening index cannot receive PCP by means of general availability.

3. If LASSFA has PCP set to "UNAVAIL" or "TEMPUNAVAIL", then PCP cannot be accessed as generally available by anyone within the office.

In all cases, PCP can be made available via subscription, and subscription PCP has a precedence over general available PCP.

If the new screening index form, SCRIDXPA, is not entered and PCP ALW is "Y", the line will be allowed to use PCP.

NOTE: See Figure 3 for a list of CPNP call privacy precedence.

In addition, subscription and LASS GA per-call privacy is allowed for use on lines with four classes of service not previously supported: "TWOPTY", "HOTMOTL", "COIN", or "2PTY". See the DISPFD form (595 Record) for the full list.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DISPFD	5965	6	8A	12.43
DSLUSR	5908	5	1I	23.2
FIXRT	5301	3	3G	10.10
LINE	5109	3	1I	1.6
MLHLN	5111	3	1K	1.6
SCRIDXPA	5543	3	5AQ	8.24
SFSYS	5713-1	3	5AR	8.22

DISPFD form (5965 Record) - This form is used to allow the calling or called number and the time and date to be displayed at an ISDN station set. New data rules were added for assignment of CLASS OF

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SERVICE and for the TN PRIVACY field.

DSLUSR form (5908 Record) - This form is used to define a digital line. The PRIVACY field on the DSLUSR form designates whether or not all-call privacy is in effect. The PRIVACY field is no longer a required field for this form. If PRIVACY is set to "Y", the calling number is private. If PRIVACY is set to "N", the calling number is public. If PRIVACY is blank, the privacy status of the calling number will be determined by the PRIVACY field on the SCRIDXPA form (5543 Record) or the DN PRIVACY field on the OFCOPT form (5509 Record).

In addition, the PRIVACY field now defaults to blank if the CPNP feature has been purchased (FID 50 on the SFSYS form set to "S"). If the CPNP feature has not been purchased (FID 50 on the SFSYS form not set to "S"), the PRIVACY field defaults to "N".

FIXRT form (5301-1 Record) - This form is used to define Routing and Charging treatment of Fixed Route Types. A form keyed by FIXED ROUTE TYPE equal to "VFYERR" (for 5E6) or "PCPDENY" (for 5E7 and later) must be entered to provide a route to announcements when attempting to use per-call privacy and the use of per-call privacy has been denied.

LINE form (5109 Record) - This form is used to define a line. The PRIVACY field on the LINE form designates whether or not all-call privacy is in effect. The PRIVACY field is no longer a required field for this form. If PRIVACY is set to "Y", the calling number is private. If PRIVACY is set to "N", the calling number is public. If PRIVACY is blank, the privacy status of the calling number will be determined by the PRIVACY field on the SCRIDXPA form (5543 Record) or the DN PRIVACY field on the OFCOPT form (5509 Record).

In addition, the PRIVACY field now defaults to blank if the CPNP feature has been purchased (FID 50 on the SFSYS form set to "S"). If the CPNP feature has not been purchased (FID 50 on the SFSYS form not set to "S"), the PRIVACY field defaults to "N".

MLHLN form (5111 Record) - This form is used to define a multi-line hunt line. The PRIVACY field on the MLHLN form designates whether or not all-call privacy is in effect. The PRIVACY field is no longer a required field for this form. If PRIVACY is set to "Y", the calling number is private. If PRIVACY is set to "N", the calling number is public. If PRIVACY is blank, the privacy status of the calling number will be determined by the PRIVACY field on the SCRIDXPA form (5543 Record) or the DN PRIVACY field on the OFCOPT form (5509 Record).

In addition, the PRIVACY field now defaults to blank if the CPNP feature has been purchased (FID 50 on the SFSYS form set to "S"). If the CPNP feature has not been purchased (FID 50 on the SFSYS form not set to "S"), the PRIVACY field defaults to "N".

SCRIDXPA form (5543 Record) - This form is used to administer line attributes on a screening index basis. The per-call privacy and all-call privacy fields on this form are only applicable to the CPNP special feature. The PCP ALW field on this form may be set to "Y" only when the CPNP special feature has been purchased (FID 50 on the SFSYS form has been set to "S").

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 50 on the SFSYS form must be set to "S" to make CPNP function for the office.

CPNP ACP (All-Call Privacy) Precedence

Line Status	Screen Index	Switch Indicator	ACPResult
Public	Don't Care	Don't Care	Public
Private	Don't Care	Don't Care	Private
Not Set	Public	Don't Care	Public
Not Set	Private	Don't Care	Private
Not Set	Not Set	Public	Public
Not Set	Not Set	Private	Private

CPNP PCP (Per-Call Privacy) Precedence

LASSFA PCP	Line Subscribed?	SCRIDXPA PCP ALW	LINE MLHLN or DSLUSR PCP ALW	Result PCP Allowed?
LASSDEF	Dont'Care	Don't Care	Don't Care	No
UNAVAIL	Dont'Care	Don't Care	Don't Care	No
TEMPUNAVAIL	Dont'Care	Don't Care	Don't Care	No
SUBSCR	Subscribed	Don't Care	Don't Care	Yes
SUBSCR	Not Subscribed	N	Don't Care	No
SUBSCR	Not Subscribed	Y	N	No
SUBSCR	Not Subscribed	Y	Y	Yes
SUBSCR	Not Subscribed	Form Does Not Exist	Don't Care	No
GENAVAIL	Subscribed	Don't Care	Don't Care	Yes
GENAVAIL	Not Subscribed	N	Don't Care	No
GENAVAIL	Not Subscribed	Y	N	No
GENAVAIL	Not Subscribed	Y	Y	Yes
GENAVAIL	Not Subscribed	Form Does Not Exist	Y	Yes
GENAVAIL	Not Subscribed	Form Does Not Exist	N	No

Figure 1 CALLING PARTY NUMBER PRESENTATION CALL PRIVACY PRECEDENCE

SEC. 4A51: ADVANCED SERVICES PLATFORM (5E6 - 5E8)

1. FEATURE DESCRIPTION

ASP (Advanced Services Platform), available with 5E6 and later Software Releases (for ASP available with 5E9(1) and later Software Releases, see Division 2, Section 4A126), provides a platform of service-independent capabilities at a 5ESS Switch which allow it to interact with an external network element (an SCP (Service Control Point)) via CCS7 TCAP (Common Channel Signaling, CCITT Version 7 Transaction Capabilities Application Part) messages to help determine appropriate call handling treatment.

The SCP contains a customer defined database with the information necessary to determine the appropriate call handling treatment. The SCP may be queried by an SSP (Service Switching Point) via CCS7 TCAP messages utilizing out of band signaling. When queried, the SCP performs screening and provide routing control and billing information.

For 5E6 - 5E8, ASP calls may also be generated in a non-SSP switch referred to as a NAP (Network Access Point). A NAP cannot directly query the SCP; rather, it passes the call on to an SSP which in turn queries the SCP. Additionally, a non-conforming 5ESS PBX connected to an NAP or an SSP can originate a call that will be interpreted as an ASP call by translations within the NAP or SSP (see the description of Shared Interoffice Trunk and Trunk Seizure triggers in Section Section 3).

For a list of features possible on this platform, see AT&T 235-190-125, *5ESS Switch Advanced Services Platform, Release 0 and Release 0.1A.*

ASP is a Secured Feature. To use the feature in 5E6 - 5E8, SFIDs 58 (5E6 Software Release) and 51 (5E6 Software Update and 5E8 Software Release) must be marked as purchased on the SFSYS form.

Early ASP implementation in ODA (Office Data Administration) forms and Recent Change Views used the term PVN (Private Virtual Network) and references to PVN are found throughout the ASP-related sections and paragraphs in the TG-5. PVN is but a single service that can be provided via ASP; it should be understood that the use of the term "PVN" within the TG-5 does not place any limitations on the abilities of ASP outside of PVN functionality.

For 5E8 and later, many ODA input forms had fields or field enumerations renamed to reflect "ASP" rather than "PVN". For a full description of this, see Section 8 The field or enumeration names used in this document are the 5E8 names in the sections previous to Section 8

1.1 Definitions

The following definitions are used within this feature description section:

Term	Definition

SCP	Service Control Point. The SCP provides the network database. It performs network translation functions for routing, billing and maintenance. The phrase "query the SCP" refers to querying the network database located on the SCP.
SSP	Service Switching Point. An SSP is a 5ESS Switch that performs local screening, digit collection, routing and billing functions. Only an SSP is capable of directly querying the SCP. For purposes of this feature description section, an SSP will be assumed to support ASP.
NAP	Network Access Point. A NAP is a Switch that concentrates ASP traffic and routes that traffic to an SSP. For purposes of this feature description section, an NAP will be assumed to support ASP. Note: NAPs are not supported by 5ESS Switches.

2. ASP DIALING PLAN

An ASP dialing plan is defined within the ODP. The DNs (Directory Numbers) dialed should correspond to the following ASP dialing plan:

Term	Definition
Domestic calls	NXX-XXXX 1+NPA-NXX-XXXX (1+800-NXX-XXXX may be treated as NS (Number Services) calls or ASP calls, dependent upon digit analysis translations)
International	011+CC+NN where CC=Country Code and NN=National Number
Attendant	0-
N11	N11 may be treated as standard N11 or ASP calls, dependent upon how digit analysis translations are set up.

5E6 - 5E7 Only Software Releases

An ASP dialing plan is built using a combination of existing CALL TYPEs and/or the new CALL TYPE of "QUERY" available on the LDIT form (5300-3/5 Record), MLDIT form (5300-3 Record), PDIT form (5300-2 Record) and IDDD form (5307 Record). The CALL TYPE of "QUERY" indicates a QUERY to the SCP is required. When a CALL TYPE of "QUERY" is found, the CODE INDEX on the same form references the DISERV form (5321 Record) to see what type of query, if any, should be made.

Additionally, ASP originations for trunks may be identified via the INDIT form (5309 Record) by specifying a TYPE OF CI CALL of "AVT". When the 0ZZ-XXX is collected, the XXX is compared to the PSEUDO CARR on the OFCOPT form (5509 Record) and if equal, the call is considered an ASP call. The CODE INDEX on the INDIT form is then used to reference the DISERV form (5321 Record) to see what type of query, if any, should be made.

Figure 1 shows the inclusion of ASP in the ODP at an NAP. Figure 3 shows the inclusion of ASP in the ODP at an SSP.

The ASP dialing plan is represented by one or more ASP DASs (Digit Analysis Selectors). When multiple ASP DASs exist, one is be considered the "default" ASP DAS while the remainder are considered "virtual" ASP DASs. The default ASP DAS is identified via the ASP DAS field on the OFCOPT form (5509 Record). Both the default and the virtual ASP DASs are defined on the DAS form (5300-1 Record) just like other DASs.

A single ASP DAS (the default ASP DAS) will probably suffice for a majority of applications. The main use of virtual ASP DASs occurs when a customer wishes certain lines and/or trunks to be dedicated to an ASP DAS other than the default ASP DAS. Such a customer would build his lines and/or trunks so that they use the virtual ASP DAS. It should be noted that in this case, ODP feature/prefix code triggers and IDP triggers from such lines still use the default ASP DAS (see the following paragraph).

The default ASP DAS will be used for translating DNs on ASP calls originated via an ASP ODP feature/prefix trigger or IDP trigger (see Section 3 for explanation). In these cases, the ASP DAS on the

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OFCOPT form overrides the DAS normally associated with the line or trunk.

WARNING: Since it is possible to build multiple ASP DASs within an office, some care must be taken not to assign BRCS features to off-hook immediate triggers, off-hook delay triggers, trunk seizure triggers and channel setup PRI triggers dedicated to ASP services (see Section Section 3 for further information on triggers).

It is possible to create an ASP off-hook immediate trigger, off-hook delay trigger, trunk seizure trigger or channel setup PRI trigger where the DAS on the LCC form (5306 Record) or TKGRP form (5202 Record) equals the DAS of an ASP DAS other than the one specified by ASP DAS on the OFCOPT form (5509 Record). Since this line or trunk is not dedicated or direct-connected to the default ASP DAS, ODA will not block the assignment of BRCS features to the line or trunk, thereby allowing the creation of an ASP trigger that is dedicated or direct-connected to ASP services and has BRCS features. However, BRCS interworking for ASP is not supported for lines and trunks dedicated or direct-connected to ASP services. If calls were originated from lines or trunks setup in such a manner, problems such as incorrect billing, call instability and unexpected routing may occur.

5E8 Software Release

For 5E8 and later, there is no longer a CALL TYPE of "QUERY", nor a DISERV form.

Instead, an ASP dialing plan is built using a combination of existing CALL TYPEs and the new field TRIG NBR defined on the NSTRIG form and available on the LDIT, MLDIT, PDIT, INDIT, RDIT, and IDDD forms. The existence of a trigger number (TRIG NBR field) indicates a query to the SCP may be required. When a TRIG NBR is entered, it will be used to reference NSTRIG to determine what parameters the query will use.

Additionally, ASP originations for trunks may be identified via the INDIT form (5309 Record) by specifying a TYPE OF CI CALL of "AVT". When the 0ZZ-XXX is collected, the XXX is compared to the PSEUDO CARR on the OFCOPT form (5509 Record) and if equal, the call is considered an ASP call. The TRIG NBR on the INDIT form is then used to reference NSTRIG to determine what parameters the query will use.

The CODE INDEX on the LDIT, MLDIT, PDIT, IDDD form is now a "real" code index rather than just a pointer to the DISERV form.

Figure 2 shows the inclusion of ASP in the ODP at an NAP. Figure 4 shows the inclusion of ASP in the ODP at an SSP.

2.1 Remaining Digit Analysis Tables

For 5E8 and later, RDIT was added to assist in defining digit analysis translations for ASP.

NOTE: Use of RDIT is not limited to ASP. RDIT can be used by any digit analysis translations.

See the RDIT form, Division 3, Section 3H, for details of remaining digit analysis.

3. ASP TRIGGERS

The following paragraphs describe the triggers by which ASP calls can be originated. Mention of specific ODA forms is made in the following paragraphs to help relate ODA forms and fields to the actions taken in each scenario. Further details on the input forms and fields can be found in Section 9 For the sake of brevity, the forms' corresponding record numbers are not listed following every mention of the form name, but can be found in Section 9

3.1 Off-hook Immediate Trigger (Direct Connect Lines)

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An ASP off-hook immediate trigger occurs when a line direct-connected to ASP services goes off-hook. The query is immediately launched to the SCP using the terminal's billing number as ANI with no dialed digits. For this type of trigger, the service key is always ANI. An ASP off-hook immediate trigger is specified on the LINE form or MLHLN form by setting NO DIAL to "HOT" and ASP ALW to "Y".

- **WARNING:** See the warning in the Section 2 regarding the assignment of BRCS features on an ASP off-hook immediate trigger.

The DIGIT ANALYSIS SELECTOR on the LCC form should point to the default ASP DAS (assigned as ASP DAS on the OFCOPT form), even though no digits are dialed or translated.

If the trigger occurs at an NAP (ASP OFC is set to "BILLNAP" or "NOBILLNAP" on the OFCOPT form), the call is routed to an SSP using the ASP RTI on the ICF form corresponding to the PSEUDO CARR assigned on the OFCOPT form.

If the trigger occurs at an SSP (ASP OFC is set to "SSP" on the OFCOPT form), a query is made to the SCP to obtain further routing information.

3.2 Off-hook Delay Trigger (Dedicated Lines)

An ASP off-hook delay trigger origination occurs when a line dedicated to ASP services goes off-hook and dials any DN. An ASP off-hook delay trigger is specified on the LINE form, MLHLN form or DSLUSR form by setting ASP ALW to "Y" and then, on the corresponding LCC form, setting DIGIT ANALYSIS SELECTOR equal to an ASP DAS (such as ASP DAS on the OFCOPT form).

- **WARNING:** See the warning in Section 2 regarding the assignment of BRCS features on off-hook delay triggers.

The DIGIT ANALYSIS SELECTOR on the LCC form should point to an ASP DAS.

- **5E6 - 5E7 Software Releases**

If the call is translated with a CALL TYPE of "QUERY" on a LDIT, MLDIT, PDIT or IDDD form, the CODE INDEX on the same form will appear on a DISERV form where SERV TYPE determines what action to take.

If SERV TYPE is "NOQRY" (i.e., at an NAP), then the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If SERV TYPE is a value other than "NOQRY" (i.e., at an SSP), a query is made to the SCP to obtain further routing information.

- **5E8 Software Release**

If the call is translated with a known TRIG NBR on the LDIT, MLDIT, PDIT or IDDD form, the TRIG NBR on the same form will appear on an NSTRIG form, where APPLICATION must be "ASP".

If at an NAP, the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If the call is at an SSP, a query is made to the SCP to obtain further routing information.

3.3 Trunk Seizure Trigger (Dedicated Trunks)

An ASP trunk seizure or PRI trigger origination occurs when a trunk dedicated to ASP services is seized

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and digits are inpulsed. An ASP trunk seizure trigger is specified on the TKGRP form by setting UNRES EA equal to "Y" and TRKCLS equal to "PF", "PFLASH" or "PFITT". This combination of UNRES EA and TRKCLS causes all originations to be recognized as ASP triggers; digits are collected and a query launched.

- **WARNING:** See the warning in Section 2 regarding the assignment of BRCS features on trunk seizure triggers. This warning also applies to PRI triggers.

3.4 Channel Setup PRI Trigger (Dedicated Trunks)

An ASP channel setup PRI trigger origination occurs when a trunk dedicated to ASP services is seized and digits are inpulsed. An ASP channel setup PRI trigger is specified on the TKGRP form by setting ASP ALW equal to "Y", TRKCLS equal to "EDSL" and DAS equal an ASP DAS (such as ASP DAS on the OFCOPT form).

- **WARNING:** See the warning in Section 2 regarding the assignment of BRCS features on channel setup PRI triggers.

The DAS on the TKGRP form should point to an ASP DAS.

- **5E6 - 5E7 Software Releases**

If the call is translated with a CALL TYPE of "QUERY" on the LDIT, MLDIT, PDIT or IDDD form, the CODE INDEX on the same form will appear on a DISERV form where SERV TYPE determines what action to take.

If SERV TYPE is "NOQRY" (i.e., at an NAP), the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If SERV TYPE is a value other than "NOQRY" (i.e., at an SSP), a query is made to the SCP to obtain further routing information.

- **5E8 Software Release**

If the call is translated with a known TRIG NBR on the LDIT, MLDIT, PDIT or IDDD form, the TRIG NBR on the same form will appear on an NSTRIG form.

If at an NAP, the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If the call is at an SSP, a query is made to the SCP to obtain further routing information.

3.5 Shared Interoffice Trunk Triggers (Non-Dedicated Trunks)

An ASP shared interoffice trunk trigger origination occurs when a non-conforming 5ESS PBX connected to an SSP originates a call the SSP recognizes as an ASP call.

This is accomplished in translations by using the appropriate INDIT forms with TYPE OF CI CALL set to "AVT". Upon receipt of an 0ZZ-XXX (for EAMF (Equal Access Multi-Frequency) trunks) or a TNS parameter (for CCS7 trunks) where XXX or the TNS parameter is equal to PSEUDO CARRIER on the OFCOPT form, the CODE INDEX on the INDIT form finds a DISERV form. The existence of a DISERV form triggers an ASP call. The lack of a DISERV form causes the ANI (Automatic Number Identification) II digits to be compared to ASP ANI on the OFCOPT form. For 5E8 and later, the NSTRIG form, with APPLICATION equal to "ASP" triggers the ASP call.

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If the ANI II digits match the ASP ANI on the OFCOPT form, an ASP call is triggered.

If the ANI II digits do not match, the inpulsed digits is checked to see if it is an 800 call.

If it is an 800 call, the call is treated as an SSP 800 call. Remaining calls not screened as 800 calls receive treatment based on the UNRES EA value on the TKGRP form. When UNRES EA is "Y", the calls are treated as ASP triggers. When UNRES EA is "N", the calls fail.

For 5E8 and later, for provisioning non-subscribed DNT 0ZZ EA originations at an EAEO/NAP, the end office must send the ASP Pseudo Carrier to the AT/SSP. The Route Index on LDIT is an EO-SSP trunk. For the LDIT form, TYPE OF CI CALL must be "SAC", and CODE INDEX and ROUTE INDEX must be entered.

For provisioning at the SSP:

- On the INDIT form, the INDIT value is derived from the incoming trunk DAS, the INCOMING DIGITS are the 0ZZ from the EAEO, and the XXX from the EAEO must equal the ASP Pseudo Carrier. TRIG NBR is from the APPLICATION of "ASP" on the NSTRIG form. When analyzing the 0ZZ, an EAOFC trigger is encountered. This instructs the SSP to run the dialed digits through the ODP.

- For dialed digits, the incoming trunk DAS references the LDIT from the DAS form, INDIT instructs the Switch to run the dialed digits through LDIT, which has an ASP trigger with TRIG NBR equals 2, and NATURE of NBR equals "NATL". For INDIT, LDIT must equal "Y", and NBR OF DIGITS TO BE DELETED must be 0. For LDIT, CALL TYPE must be "NORMAL", TYPE OF CI CALL equals "INTRA", and ROUTE INDEX must be entered.

3.6 ODP Feature/Prefix Code Trigger

An ASP ODP feature/prefix code trigger origination occurs when a line that is allowed to originate such ASP calls goes off-hook and dials an ASP access code followed by a DN or when a trunk that is allowed to originate such ASP calls is seized and digits corresponding to the ASP access code and a DN are inpulsed.

A line or trunk specifies its ability to originate ASP calls via an ODP feature/prefix code trigger by setting ASP ALW to "Y" on the appropriate LINE, MLHLN, DSLUSR or TKGRP form. The ASP access code is defined by setting ACTION to "ASPUSE" on the PDIT form.

After the access code and DN have been dialed, and it has been determined that the line is allowed to originate ASP calls, the access code is deleted and the DN translated using the ASP DAS as specified by ASP DAS on the OFCOPT form (ASP DAS overrides the DIGIT ANALYSIS SELECTOR on the appropriate LCC form).

- **5E6 - 5E7 Software Releases**

If the call is translated with a CALL TYPE of "QUERY" defined on a LDIT, MLDIT, PDIT or IDDD form, the CODE INDEX on the same form appears on a DISERV form where SERV TYPE determines what action to take.

If SERV TYPE is "NOQRY" (i.e., at an NAP), the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and is outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If SERV TYPE is a value other than "NOQRY" (i.e., at an SSP), a query is made to the SCP to obtain further routing information.

- **5E8 Software Release**

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If the call is translated with an entered TRIG NBR on the LDIT, MLDIT, PDIT or IDDD form, the TRIG NBR on the same form will appear on an NSTRIG form.

If at an NAP, the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If the call is at an SSP, a query is made to the SCP to obtain further routing information.

3.7 IDP Trigger

An ASP IDP trigger origination occurs when a line that belongs to an IDP group goes off-hook and dials the IDP's ASP access code followed by a DN or when a trunk that belongs to an IDP group is seized and digits corresponding to the IDP's ASP access code followed by a DN are inpulsed.

The IDP's ASP access code is defined by setting ACTION to "IDPASP" on the IDPDCA form. When such a code is defined within an IDP, all lines and trunks within that IDP have access to the access code.

After the access code and the DN are dialed, the access code is deleted and the DN is translated using the ASP DAS as specified by ASP DAS on the OFCOPT form (ASP DAS overrides the DIGIT ANALYSIS SELECTOR on the appropriate LCC form).

- **5E6 - 5E7 Software Releases**

If the call is translated with a CALL TYPE of "QUERY" defined on a LDIT, MLDIT, PDIT or IDDD form, the CODE INDEX on the same form appears on a DISERV form where SERV TYPE determines what action to take.

If SERV TYPE is "NOQRY" (i.e., at an NAP), the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by the RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If SERV TYPE is a value other than "NOQRY" (i.e., at an SSP), a query is made to the SCP to obtain further routing information.

- **5E8 Software Release**

If the call is translated with an entered TRIG NBR on the LDIT, MLDIT, PDIT or IDDD form, the TRIG NBR on the same form will appear on an NSTRIG form.

If at an NAP, the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If the call is at an SSP, a query is made to the SCP to obtain further routing information.

- ***NOTE:*** Beginning with 5E8, IDP features may be assigned to PRI trunks as part of the CENTREX PRI Enhancements feature (For more information on this feature, see Division 2, Section 4A105). However, IDP/CDP ASP triggers are not supported by this feature.

3.8 Feature Button Trigger

An ASP feature button trigger origination occurs when a BRI also known as a DSL) presses an ASP access feature button and dials a DN.

An ASP access feature button can be defined by setting ACTION to either "ASPUSE" or "IDPASP" on a

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CFGGRP form.

After the feature button has been pressed and the DN has been entered, then the DN is translated using the ASP DAS as specified by ASP DAS on the OFCOPT form (ASP DAS overrides the DIGIT ANALYSIS SELECTOR on the appropriate LCC form).

- **5E6 - 5E7 Software Releases**

If the call is translated with a CALL TYPE of "QUERY" defined on a LDIT, MLDIT, PDIT or IDDD form, then the CODE INDEX on the same form appears on a DISERV form where SERV TYPE determines what action to take.

If SERV TYPE is "NOQRY" (i.e., at an NAP), the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by the RAR form, and is outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If SERV TYPE is a value other than "NOQRY" (i.e., at an SSP), a query is made to the SCP to obtain further routing information.

- **5E8 Software Release**

If the call is translated with an entered TRIG NBR on the LDIT, MLDIT, PDIT or IDDD form, the TRIG NBR on the same form will appear on an NSTRIG form.

If at an NAP, the call is routed to an SSP using the RTIDX assigned on the LDIT, MLDIT, PDIT or IDDD form, unless overridden by an RAR form, and outpulsed with the carrier defined in the PSEUDO CARR field on the OFCOPT form.

If the call is at an SSP, a query is made to the SCP to obtain further routing information.

3.9 Automatic Route Selection Trigger

An ASP ARS (Automatic Route Selection) trigger origination occurs when a line belonging to an ARS group dials a DN or a trunk belonging to an ARS group is seized and inpulses a DN and call processing searches through the ARS list and selects a route designated as an ASP route.

An ASP route is specified in the ARS route list by entering "ASP" as the MC ROUTE TYPE on an appropriate MCRTIDX form.

When the ASP call originates via an ARS trigger the actions taken depend on the type of office in which the trigger occurs.

If ASP OFC on the OFCOPT form is set to "SSP" (i.e., this is an SSP office), the SCP is queried to obtain additional routing information.

If ASP OFC is set to "BILLNAP" or "NOBILLNAP" (i.e., this is an NAP office), the TRUNK GROUP NUMBER on the MCRTIDX form specifies the trunk to be used to route the call to an SSP. The carrier defined in the PSEUDO CARRIER field on the OFCOPT form is outpulsed with the call to the SSP.

ASP ARS triggers have different restrictions in the SSP and the NAP. In an SSP, an ASP route can be specified as the last route selection in an ARS list. When an ASP ARS trigger occurs in an SSP, ARS releases control of the call to ASP and a query is made to the SCP. Once control is turned over to ASP, the ARS list cannot be reaccessed again where searching left off in the event that the query cannot be made; hence the reason ASP must be the last route in the list. In an NAP, an ASP route can appear anywhere within the ARS list, and multiple ASP routes may appear within a single list. This is possible because the ASP ARS triggers in the NAP supply a route to an SSP rather than making a query to an SCP.

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When the SCP returns a routing response that again accesses MCRTIDX routes advance routing occurs where the MCRTIDX list of routes is hunted until either an available trunk facility is found, the end of the MCRTIDX route list is encountered, an ASP route is encountered, an overflow to OUTWATS is encountered or and overflow to Direct Distance Dialing is encountered. When the hunting terminates for any reason other than an available trunk being found, these facilities are considered unavailable and alternate routing is attempted. See Section 4 for descriptions of alternate and advance routing.

3.10 Directory Number Trigger (Remote Access)

An ASP DN trigger origination occurs when a customer calls a DN designated as an ASP "remote access" DN by setting TERMINATING TREATMENT to "RAPVN" on the DN's corresponding LCC form. Upon dialing the DN, a query is immediately launched to the SCP.

When attempting a DN trigger origination, the originating line must have CLASS OF SERVICE on its corresponding LCC form set to "10PTY", "2PTY", "4PFS", "4PSS", "4WINDIV", "5PTY", "8PSS", "ATND", "CHGCALL" "HOTMOTL", "HOTPBX", "INDIV", "MODEM", "PBX", and "TWOPTY".

A TRKCLS of "EDSL", "EDSLHM", "IC", "LTOLLCON", "PF", "PFITT", "PFLASH", "PRINTOLL", or "TTOLLCON" is allowed to originate calls to an ASP DN trigger.

Note that the DN trigger exists only in the software and has no physical equipment associated with it.

ASP remote access DNs are supported only at an SSP and cannot be defined at an NAP.

An ASP DN trigger exists only in 5e6 and 5e7. The concept is replaced by DNTs (Dialed Number Triggers) in 5E8. See the next section.

Digit analysis tables for the translated DN are built with a TRIG NBR and appropriate trigger information is entered on the NSTRIG form. This is the 5e8 and later version.

For details on how DN triggers are carried forward, reference Section Section 8

3.11 Dialed Number Triggers

Non-Subscribed Dialed Number Triggers allow an SSP to launch a query to the SCP database based on the complete dialed number (e.g., NXX-XXXX, NPA-NXX-XXXX, or N11), or leading portions of a dialed number (e.g., NPA, NXX, or NPA-NXX). In addition to indicating the need to launch a query, Dialed Number Triggers may be associated with line equipment to provide services like Terminating Screening.

To provision DNTs, the NSTRIG form is populated with APPLICATION equals "ASP". Digit analysis (IDDD, PDIT, LDIT, MLDIT, RDIT) then references the NSTRIG form via the TRIG NUM field.

When attempting a DNT, the originating line must have CLASS OF SERVICE on its corresponding LCC form set to "10PTY", "2PTY", "4PFS", "4PSS", "4WINDIV", "5PTY", "8PSS", "ATND", "CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "INDIV", "MODEM", "PBX", and "TWOPTY".

A TRKCLS of "EDSL", "EDSLHM", "IC", "LTOLLCON", "PF", "PFITT", "PFLASH", "PRINTOLL", or "TTOLLCON" is allowed to originate calls to an ASP DNT.

4. SCP QUERY AND RESPONSE

The SCP acts as the controller for the ASP service. It provides the service database, sends instructions for routing, billing and additional digit collection, and performs screening and maintenance functions.

This section is intended to give a brief overview of what information is passed between the SCP and the SSP and how that information relates to translations within the SSP. This section is not intended to be a complete description of SCP protocols and messages. Complete details can be found in AT&T Document

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235-190-125, *5ESS Advanced Services Platform, Release 0 and Release 0.1A*.

The SCP is queried from an SSP. The SSP is linked to the SCP via the CNI ring using TCAP. See Division 9 for detailed information on CNI.

On the initial query to the SCP, the SSP provides the ANI of the originator, the dialed digits (if any), the ANI II digits (specified by ASP ANI on the OFCOPT form) and the LATA (Local Access And Transport Area) number (specified by LATA NUMBER on the OFCOPT form).

The SCP responds with one of the following:

1. Instructions to "Play Announcement(s) and Collect Digits", accompanied by up to two IDs of the announcements to play and the number of digits to collect.

   The announcement ID must be defined as the ANNC CODE on a SSPANN form (5535 Record) with a CUST HDRID and (optionally) a CUST TRLID entered.

   Fixed route "NSANNC" must be defined on FIXRT (5301-1 Record) with a route index which points to a trunk group that accesses the DSU2-RAF announcements for ASP.

2. Instructions to "Play Announcement(s)", accompanied by one ID of the announcements to play. The call terminates following the announcement.

   The announcement ID must be defined as the ANNC CODE on a SSPANN form (5535 Record) with a CUST HDRID and (optionally) a CUST TRLID entered.

   Fixed route "NSANNC" must be defined on FIXRT (5301-1 Record) with a route index which points to a trunk group that accesses the DSU2-RAF announcements for ASP.

3. Instructions to "Route the Call per SCP Instructions", accompanied by private facilities routing information (up to 3 route indices), public routing information (up to 3 carriers or the LEC (Local Exchange Carrier), accompanied by a DN) and other optional information (such as billing information).

   A route index must be defined as a ROUTE INDEX on a RTIDX form (5303 Record) or an MC ROUTE INDEX on a MCRTIDX form (5304 Record) with an MC ROUTE TYPE of "MC" or "SFG".

   When a DN is to be routed to a carrier, the carrier must be defined as CARRIER ID on an ICF form (5305 Record). When a DN is to be routed via the LEC or an Interexchange Carrier, the DN is retranslated using the SCPL DAS or SCPT DAS defined on the OFCOPT form (5509 Record).

   When a DN is retranslated, intraLATA and interLATA calls are handled differently. When the carrier returned by the SCP is a pseudo carrier or LEC, the DN returned by the SCP is retranslated and final routing uses the information provided by the retranslation. When the carrier returned by the SCP is not a pseudo carrier or LEC, the DN returned by the SCP is retranslated to determine if the switch agrees the call is an interLATA call.

   If the switch agrees, the call is routed using the carrier returned by the SCP rather than the carrier found during retranslation. Otherwise, the call is given intraLATA treatment.

   Additionally, DNs may be one of two types: an outpulse DN or a routing DN. The outpulse DN is

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accepted "as is" while the routing DN is validated via digit analysis translations. An outpulse DN can only be referenced by non-OUTWATS trunk facilities. A routing DN can be referenced by non-OUTWATS private SCP routes but must be provided for OUTWATS private SCP routes as well as public carrier SCP routes.

The SCP can respond with no carrier information. In that case, the call will receive switch-based carrier information.

4. Dialed Number Trigger (DNT). If post query digit analysis indicates a trigger number, the routing DN is an SCP Dialed Number Trigger (DNT) resulting in additional queries. This is called serial triggering.

   Serial Triggering allows a single SSP to query multiple times on the same ASP call. This capability can provide multiple billing for the serial legs of the call. See the MAX CONV field on the OFCOPT form.

   DNTs may be encountered in processing a call initiated by another trigger whenever PSEUDO/LEC routing is selected by the SSP. When a DNT is encountered in routing, the SSP must test to determine if the current DNT is equivalent to the previous DNT. These tests determine whether the SSP should launch another query to an SCP. Serial Triggering is the response to a trigger with another trigger. Serial Triggering may only occur if the Route DN is itself a DNT.

   Analysis of the Route DN is required to determine if another DNT has been received by the SSP. Serial Triggering will not be allowed when the maximum allowed number of queries has been reached.

   Conversations with between an SSP and SCP occurring during a Serial Triggering episode may involve a different SCP per transaction. Global Title derivation is based on Called Party Numbers which are determined from the SCP Route DN during Serial Triggering. Alternate Global Title values may also be used.

   Serial Triggering cannot be invoked directly, and is contained within Network Services boundaries.

Depending on the SCP response, the SSP then plays announcements, collects and returns digits to the SCP, routes the call as specified, or performs additional queries.

The ASP RESP field on the OFCOPT form (5509 Record) defines the ASP SCP response timer. If the SCP fails to respond in the specified time, the call is routed to reorder.

Until the time that the call is actually routed, the SCP may be informed of all non-fatal errors encountered in processing the response from the SCP.

ALTERNATE ROUTING: Since multiple routes may be returned, "alternate routing" may be required. When multiple trunk groups are returned, they are termed as primary, alternate and second alternate trunk group. When multiple carriers are returned, they are termed as primary, alternate and second alternate carrier routes. The primary Trunk Group/carrier route always is tried first.

If the facilities of the primary are unavailable, the alternate is tried.

If the facilities of the alternate are unavailable, the second alternate is tried. This process of attempting primary, followed by alternate, followed by second alternate, is referred to as "alternate routing".

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Private routes are always checked first, with public routes being checked only after all private routes have failed.

The SCP must set overflow indication for alternate routing.

ADVANCE ROUTING: "Advance routing" is the process of attempting the next route in a route list until either the end is reached or an available facility is encountered. A route list can be comprised of a chain of routes on either an RTIDX form (5304 Record) or an MCRTIDX form (5304 Record).

Meeting certain criteria during advance routing (see Section 3.9 for a detailed list) can result in the facilities being considered unavailable, thereby resulting in alternate routing as described above.

5. BRCS AND ISDN FEATURE INTERACTIONS

ASP has many interactions with BRCS features and ISDN features. For a full explanation of all 5ESS BRCS and ISDN feature interactions, consult AT&T Document 235-190-125, *5ESS Advanced Services Platform, Release 0 and Release 0.1A*.

6. OTHER SERVICE INTERACTIONS

Although ASP interacts with many types of networks and services, this section serves to reference a specific subset which require or allow special translations within ASP.

6.1 SSP 800

ASP can be used to translate SSP 800 calls. SSP 800 calls defined via ASP have the same functionality as SSP 800 calls defined outside of ASP. SSP 800 calls outside of ASP are identified via a CALL TYPE of "NS800" on an LDIT or MLDIT form (5300-3/5 Record). The difference lies in whether calls are to be considered as SSP 800 or ASP calls for billing purposes.

Further information on SSP 800 outside of ASP can be found in the feature description section for SSP 800, Division 2, Section 1X. SSP 800 via ASP is defined by specifying a SERV TYPE of "NS800" on the DISERV form (5321 Record).

For 5E8 and later, since QUERY" and> the DISERV form is being removed, it is necessary to use the new TRIG NBR field on the digit analysis forms (PDIT, LDIT, INDIT, IDDD, RDIT, and MLDIT) along with the new NSTRIG to provision this service. When retrofitting, if the office is configured to handle SSP800 calls, the NSTRIG form for TRIG NBR 6 will be built, as shown in Section Section 8

6.2 E911

E911 was provisioned in 5E6 - 5E7 by matching a Code Index from the digit interpreter forms (PDIT, LDIT, INDIT, IDDD, and MLDIT) with a Call Type of "QUERY" to a DISERV form. For 5E8 and later, since DISERV and the Call Type "QUERY" are being removed, it is necessary to use the new NSTRIG form, along with the new TRIG NBR field on the PDIT, LDIT, INDIT, IDDD, RDIT, and MLDIT forms to provision E911. For offices that have purchased Enhanced 911, the NSTRIG form for TRIG NBR equals 7 will be built.

7. PRIMARY RATE INTERFACE INTERACTIONS

A B-Channel PRI can originate ASP calls as a channel setup PRI trigger, by calling an ASP DN trigger, or by dialing a DNT. See the previous section on ASP Triggers (Section 3) for information on defining channel setup PRI triggers and DN triggers.

When a PRI originates an ASP call via a DN trigger and the PRI is attached to the SSP containing the DN trigger, some limitations are incurred.

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NOTE: For the 5E6 software update and later, this special provisioning is not necessary.

1. The PRI protocol does not allow "connect" messages to be followed by anything other than "disconnect" messages. Hence a "connect" message is not sent to the originating office during an ASP play & collect session if requested for an ASP DN trigger. Since the originating office begins billing upon receipt of the "connect" message, the originating office does not begin billing the DN triggered ASP call until it is routed to its final destination. In contrast, the SSP office (terminating end of the PRI) initiates billing as soon as the play & collect session begins. Hence, if Message Detail Recording is used, local billing records at the originating office are not consistent with billing records at the SSP office.

   Additionally, ASP terminating announcements are not billed consistently. The originating office does not bill for the call because the "connect" message is withheld at the SSP office, whereas the SSP office bills the call for the duration of the terminating announcement.

2. In order for play & collect sessions to work properly over a PRI, the originating end of the PRI must be configured for early voice cut through. This is accomplished by setting VOICE CUT THRU to "EARLY" on the TKGRP form (5202 Record) on the originating end of the PRI. This results in the talk path being cut through in both directions so that the caller can hear the announcement and the SSP can collect the digits. Otherwise, since the "connect" message is withheld until after play & collect, the talk path is unidirectional from the SSP to the originating office. This would result in the caller on the originating switch being able to hear the announcement, but the SSP would be unable to collect ("hear") the digits dialed.

If an ASP call receives instructions from the SCP to route the call to a PRI, a TCM (Traveling Class Mark) is included in the "setup" message if any of the following conditions are met:

A. the SCP response includes a TCM;

B. the ASP call originated from a trunk that inpulsed a TCM;

C. the ASP call originated on a line or trunk subscribing to an ARS list (the ASP call may or may not have originated via the list) and has an assigned Facility Restriction Level that can be converted to a TCM.

When more than one of the above conditions is met, the precedence is determined by the listed order above.

8. RETROFIT

The purpose of this section is to address the major changes automatically made to the data during retrofits.

8.1 Retrofit to 5E8

Removal of CALLTYPE "QUERY" and Replacing DISERV with NSTRIG

During retrofit, all PDIT, INDIT, LDIT, and IDDD input forms have the CALL TYPE value of "QUERY" replaced with a CALL TYPE of "NORMAL". In addition, CODE INDEX finds a DISERV input form so SERV TYPE can be determined. SERV TYPE assigns a trigger number to the Interpreter Table forms and to determine the nature of number for IDDD, LDIT, MLDIT, PDIT and RDIT.

1. Default NSTRIG forms are first created. The table below describes how each default input form is populated. The default forms are created as follows:

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- TRIG NBR equals 001 and 002 are created when ASP OFC on OFCOPT equals "SSP",
- TRIG NBR equals 003 is created when ASP OFC on OFCOPT equals "BILLNAP" or "NOBILLNAP",
- TRIG NBR equals 004 and 005 are created when ASP OFC on OFCOPT is not "NONE",
- TRIG NBR equals 006 is created when SERV SWITCH PT? on OFCOPT equals "Y", and
- TRIG NBR equals 007 is created when E911 OPTION on OFCOPT is not "INACTIVE".

Default NSTRIG Form Relations

TRIG NBR	APPLICATION	SERV KEY	ALT GBL TITLE
001	ASP	ANI	blank
002		CDPN	
003			
004	EAOFC		
005	EAASP		
006	800	CDPN	
007	E911	blank	

1. Next, a DISERV form is found with CDI equal to the CODE INDEX on IDDD, LDIT, or PDIT. The value(s) of TRIG NBR and NATURE OF NBR (and NON in the case of LDIT CONFLICT RESOLUTION) are set to the values in the following table (RDIT forms are created identical to LDIT):

SERV TYPE to TRIG NBR/NATURE OF NBR Correspondence

Form	SERV TYPE	TRIG NBR	NATURE OF NBR
IDDD	PVN	5	N/A
LDIT			null
PDIT		1	
IDDD	PVNON	1	N/A
LDIT			PRIV
PDIT			null
IDDD	PVNDOM	1	N/A
LDIT			NATL
PDIT			null
IDDD	PVNINT	1	N/A
LDIT			IDDD
PDIT			null
IDDD	NOQRY	3	N/A
LDIT			null
PDIT			
IDDD	NS800	6	N/A
LDIT			null
PDIT			
IDDD	E911	7	N/A
LDIT			null
PDIT			

- ***NOTE:*** For all INDIT forms, TRIG NBR is set to "null", unless the following applies: if TYPE OF CI CALL on INDIT equals "AVT", CODE INDEX on INDIT equals CDI on DISERV, and SERV TYPE on DISERV equals "ASP". Then an NSTRIG form is found with APPLICATION equals "EAASP", ALT GBL TITLE not entered and SERV KEY not entered. The INDIT TRIG NBR is set equal to the TRIG NBR on that NSTRIG form.

1. Next, CALL TYPE of "QUERY" is changed to "NORMAL", except when CODE INDEX equals CDI on a DISERV form where SERV TYPE equals "E911". For the exception, CALL TYPE is set equal to "EMER".
2. All DISERV forms are deleted.

Identifying DN Triggers and Converting DN Triggers to DNTs

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DN Triggers are defined in Section 3.10 . The terminating treatment of "RAPVN" indicated a query was necessary. In 5E8 and later, that trigger will be determined when translating the DN in digit analysis. Thus a trigger will be built into the digit analysis tables for every such DN.

1. All DN Triggers are located. These are LINE forms whose LCC/RAX value is the key to an LCC form where TERMINATING TREATMENT is "RAPVN".

2. The LDIT forms assigned to the DN Trigger are searched for a full 7-digit translation on the DN. If found, the default TRIG NBR of 2 is assigned to those incoming digits.

3. If a full translation is not found, the proper partial digit translation (i.e. less than 7 INCOMING DIGITS and NBR OF DIGITS equals 7) is searched for. When found, an RDIT for that LDIT is built, and assigned the default TRIG NBR. All routing information for the RDIT is copied from the appropriate LDIT.

4. All INDIT forms that conform to the following criteria are found: LDIT equals "N", NBR OF DIGITS EXPECTED minus NBR OF DIGITS TO BE DELETED equals 4, OFFICE CODE is entered and matches OFFICE CODE of the DNT, and ROUTE INDEX is not entered.

   If OFFICE CODE on INDIT matches the first three digits of the DN Trigger, the following are reset: LDIT and RECONSTRUCT to "Y"; TYPE OF CI CALL, CODE INDEX, ROUTE INDEX, IMPLIED NPA, DESEP, and NBR OF DIGITS EXPECTED to not entered; and POLYGRID to "N".

5. All LINE forms using the "RAPVN" LCC are deleted.

6. All LCC forms with TERMINATING TREATMENT equals "RAPVN" are deleted.

8.2 Rename of "PVN" to "ASP"

For 5E8 and later, field names and enumerations containing "PVN" were renamed with "ASP". The following tables detail the changes.

Form	Old Field Name	New Field Name
DSLUSR, LINE, MLHLN, SHTN, TKGRP	PVN ALW	ASP ALW
TKGRP	PVN TERM	ASP ORIG
ICF	PVN CDI	ASP CDI
	PVN RTI	ASP RTI
OFCOPT	PVN DAS	ASP DAS
	PVN OFC	ASP OFC
	PVN ANI	ASP ANI
	PVN RESP	ASP RESP

Form	Field Name	Old Enumeration	New Enumeration
ANNAPL, ANNHD, ANNTR, PHRASE	APPLICATION	PVN	ASP
CFGGRP	ACTION	PVNUSE	ASPUSE
		IDPPVN	IDPASP
DSAPP	APPLIC	PVN	ASP
IDPDCA	ACTION	IDPPVN	IDPASP
MCRTIDX	MC ROUTE TYPE	PVN	ASP
PDIT	ACTION	PVNUSE	ASPUSE
SCFAM	STRUCT CODE FAMILY	PVN	ASP
TGSRFD	TERMINATING RESTRICTION/ DEFAULT	PVNF	ASPF
		PVNS	ASPS
TKGRP	SVC GRP	PVN	ASP

9. ASP 5E6 - 5E7 TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				

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Form Name	Record Number	Division	Section	RC View
ANNAPL	5529	3	5AC	8.64
ANNDG	5532	3	5AF	8.60
ANNHD	5531	3	5AE	8.61
ANNTR	5533	3	5AG	8.62
CFGGRP	5964	6	7A	12.5
DISERV	5321	3	3AH	9.30
DSAPP	5537	3	5AK	8.17
DSLUSR	5908	5	1I	23.2, 23.8
FIXRT	5301-1	3	3G	10.1
ICF	5305	3	3R	10.3
IDDD	5307	3	3T	9.6
IDPDCA	5601-1/2	4	2B	9.13
INDIT	5309	3	3V	9.5
LCC	5306	3	3S	4.1
LDIT	5300-3/5	3	3C	9.3
LINE	5109-1/2/3	3	1I	1.6, 1.8
MCRTIDX	5304	3	3Q	10.4
MLDIT	5300-3	3	3C	9.15
MLHLN	5111-1/2/3	3	1K	3.2
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
PHRASE	5534	3	5AH	8.63
SCFAM	5536	3	5AJ	10.18
SHTN	5902	5	1C	23.20
SSPANN	5535	3	5AI	10.17
TGSRFD	5607-1/2	4	8A	12.21
TKGRP	5202	3	2A	5.1

9.1 Line Translations

LINE form (5109-1/2/3 Record) - The field PVN ALW was added to indicate whether or not the line can originate ASP calls via an ODP feature/prefix trigger.

MLHLN form (5111-1/2/3 Record) - The field PVN ALW was added to indicate whether or not the line can originate ASP calls via an ODP feature/prefix trigger.

9.2 Trunks Translations

TKGRP form (5202-1/2/3/4 Record) - Three fields, PVN ALW, UNRES EA and PVN TERM were added. PVN ALW indicates whether or not trunks within the trunk group can originate ASP calls via an ODP feature/prefix trigger. For PF trunks, UNRES EA indicates whether this trunk group is using only EA (Equal Access) signaling and is not conforming to the normal EA signaling (unrestricted dialing). For shared interoffice trunks, if no other criteria has determined what type of call has been made, having UNRES EA set to "Y" indicates such calls should be treated as ASP calls. PVN TERM indicates whether all originations within this trunk group should be considered ASP originations for the purposes of terminating terminal group station restrictions. Additionally, a new SVC GRP enumeration of "PVN" was added for ASP announcements.

9.3 Routing and Charging Translations

DISERV form (5321 Record) - For every LDIT, MLDIT, PDIT or IDDD form where CALL TYPE is "QUERY", a DISERV form must be entered to relate the CODE INDEX to a service type. When an INDIT form has a TYPE OF CI CALL of "AVT" and translates a call where the 0ZZ-XXX code (for EAMF trunks) has XXX matching PSEUDO CARR on the OFCOPT form, the CODE INDEX on the INDIT form is used to read a DISERV form. When an INDIT form has a TYPE OF CI CALL of "AVT" and translates a call where the TNS parameter (for CCS7 trunks) matches PSEUDO CARR on the OFCOPT form, the CODE INDEX on the INDIT form is used to read a DISERV form. The service type indicates what type of query, if any, should be made. For ASP, either the call is treated as an NS 800 call (also known as a SSP 800 call), is routed to an SSP or generates an ASP query to an SCP.

ICF form (5305 Record) - Two new fields, PVN CDI and PVN RTI, have been added to identify the code

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destination index and route index to be used for ASP calls that are interLATA public carrier route calls (at an SSP), interLATA ASP OUTWATS calls (at an SSP), off-hook immediate triggers (direct connect) calls from an NAP to an SSP and unrestricted equal access calls from an NAP to an SSP.

IDDD form (5307 Record) - A new CALL TYPE of "QUERY" has been added to indicate a possible query to an external database (i.e., an SCP query). This new call type may be used to define an ASP DAS.

INDIT form (5309 Record) - While the INDIT form does not possess a CALL TYPE field, the potential for making a query can be indicated by the use of a TYPE OF CI CALL of "AVT". Upon receipt of an 0ZZ-XXX (for EAMF trunks) or a TNS parameter (for CCS7 trunks) where XXX or the TNS parameter is equal to PSEUDO CARRIER on the OFCOPT form, the call is considered as an ASP trigger.

LCC form (5306 Record) - A new TERMINATING TREATMENT of "RAPVN" has been added for use in the defining of ASP DN triggers.

LDIT (5300-3/5 Record) and MLDIT form (5300-3 Record) - A new CALL TYPE of "QUERY" has been added to indicate a possible query to an external database (i.e., an SCP query). This new call type may be used to define an ASP DAS.

LDIT form (5300-3/5 Record) - (CONFLICT RESOLUTION) A new CALL TYPE of "QUERY" has been added to indicate a possible query to an external database (i.e., an SCP query). This new call type may be used to define an ASP DAS.

MCRTIDX form (5304 Record) - A new MC ROUTE TYPE of "PVN" has been added to identify ASP calls originating from within an ARS list.

PDIT form (5300-2 Record) - A new CALL TYPE of "QUERY" has been added to indicate a possible query to an external database (i.e., an SCP query). This new call type may be used to define an ASP DAS. A new ACTION of "PVNUSE" has been added to define an ASP dialed access code in the ODP.

9.4 Announcement Translations

ANNAPL form (5529 Record) - A new APPLICATION of "PVN" has been added for use in building ASP announcements.

ANNHD form (5531 Record) - A new APPLICATION of "PVN" has been added for use in building ASP announcement header phrase lists.

ANNTR form (5533 Record) - A new APPLICATION of "PVN" has been added for use in building ASP announcement trailer phrase lists.

FIXRT form (5301-1 Record) - A new FIXED ROUTE TYPE of "NSANNC" has been added to specify the route index to the Digital Service Unit Model 2 - Recorded Announcement Function containing the ASP announcements.

PHRASE form (5534 Record) - A new APPLICATION of "PVN" has been added for use in building phrases to be used in ASP announcements.

RTIDX form (5303 Record) - This defines the route index found on the FIXRT which points to the DSU2-RAF.

SSPANN form (5535 Record) - An SSPANN form must be entered for every announcement code that could be returned by the SCP. Two new fields, CUST HDRID and CUST TRLID, were added to specify customized header and trailer IDs to be played when failure announcement code is received from an SCP. The existing ANNC RTI field was made optional when a CUST HDRID is entered. One new field, SM, was added for commonality with the Recent Change view and cannot have data entered into it on the ODA form.

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TKGRP form (5202 Record) - Defines the trunk group that points to the DSU2-RAF for ASP announcements. Set TRK DIR to "RAF", TRKCLS to "RAFDTA" and SVC GRP to "ASP".

TRUNK form (5204 Record) - Defines trunk members that access DSU2-RAF channels that have beem programmed for ASP announcments. See Division 3, Section 2C and 2Q for details on making these assignments.

9.5 Miscellaneous Translations

DSAPP form (5537 Record) - A new APPLIC of "PVN" has been added to allow the direct signaling information to be supplied for ASP applications.

OFCOPT form (5509 Record) - Seven fields, SCPT DAS, SCPL DAS, PVN DAS, PVN OFC, PSEUDO CARR, PVN ANI and PVN RESP, were added. SCPT DAS and SCPL DAS define the trunk DAS and line DAS (respectively) to be used for retranslating DNs received from an SCP query. PVN DAS defines the default ASP DAS. PVN OFC defines the type of ASP support provided by the office and distinguishes between NAP, SSP and other types of offices. PVN ANI defines a unique value for the ANI information digits (called ANI II). This value distinguishes ASP calls from other interLATA traffic over shared EAMF and CCS7 ISDN User Part trunk facilities. PVN RESP defines the SCP response timer.

SCFAM form (5536 Record) - A new STRUCT CODE FAMILY of "PVN" has been added to identify the ASP structure code family. This structure code family is used when the call code returned from the SCP is to be billed as an SSP ASP call.

9.6 BRCS Features Translations

IDPDCA form (5601-1/2 Record) - A new ACTION of "IDPPVN" has been added to define an ASP dialed access code in an IDP.

TGSRFD form (5607-1/2 Record) - Two new TERMINATING RESTRICTIONs and TERMINATING DEFAULTs of "PVNF" and "PVNS" have been added so that ASP calls can be allowed to override terminating Terminal Group & Station Restriction.

9.7 ISDN/Packet Switching Translations

DSLUSR form (5908-1/2/3/4/5/6/7/8 Record) - The field PVN ALW was added to indicate whether or not a line can originate ASP calls via an ODP feature/prefix code trigger.

SHTN form (5902 Record) - The field PVN ALW was added to indicate whether or not a secondary only TN can originate ASP calls via an ODP feature/prefix code trigger.

9.8 ISDN BRCS Translations

CFGGRP form (5964 Record) - Two new ACTIONs of "PVNUSE" and "IDPPVN" have been added to define ASP access codes for feature buttons. "PVNUSE" defines an ASP access code via the ODP, whereas "IDPPVN" defines an ASP access code via an IDP.

10. ASP 5E8 TRANSLATION REQUIREMENTS

All requirements for 5E6 and 5E7 also apply to 5E8 with the following additions and/or modifications:

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DISERV	5321	3	3AH	9.30
IDDD	5307	3	3T	9.6
INDIT	5309	3	3V	9.5
LDIT	5300-3/5	3	3C	9.3
MLDIT	5300-3	3	3C	9.15

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NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
RDIT	5300-7/8	3	3H	9.9

10.1 Routing and Charging Translations

DISERV form (5321 Record) - For 5E8 and later, the DISERV form no longer exists, because the ASP dialing plan in Section 2 is done differently. Refer to that section.

IDDD form (5307 Record) - The CALL TYPE of "QUERY" is replaced by entering a trigger number. The new field TRIG NBR, if entered, indicates an SCP query.

INDIT form (5309 Record) - The new field RECONSTRUCT indicates whether the dialed digits should be reconstructed for Network Services triggers. The new field TRIG NBR, if entered, indicates an SCP query.

LDIT (5300-3/5 Record) and MLDIT form (5300-3 Record) - The CALL TYPE of "QUERY" is replaced by entering a trigger number. The new field TRIG NBR, if entered, indicates an SCP query. New field NATURE OF NBR is used in query formulation of Network Services calls. New field RDIT is used for remaining digit interpretation.

LDIT form (5300-3/5 Record) - (CONFLICT RESOLUTION) The CALL TYPE of "QUERY" is replaced by entering a trigger number. The new field TRIG NBR, if entered, indicates an SCP query. New field NON is used in query formulation of Network Services calls. New field RDIT is used for remaining digit interpretation.

NSTRIG form (5324 Record) - This is a new form, providing query information based on the trigger number from trigger analysis. The field TRIG NBR is defined on NSTRIG, and assigned in digit analysis. The field APPLICATION is the type of network service to be provided the trigger number. The field ALT GLOBAL TITLE is a ten-digit number used as the default address of SCP if routing information is not available. The field SERV KEY determines which SERV KEY parameter is populated in the query, ANI or CDPN.

PDIT form (5300-2 Record) - The CALL TYPE of "QUERY" is replaced by entering a trigger number. The new field TRIG NBR, if entered, indicates an SCP query. New field NATURE OF NBR is used in query formulation of Network Services calls.

RDIT form (5300-7/8 Record) - This is a new form, containing information for the translation of remaining digit strings for digit analysis. The field TRIG NBR, if entered, indicates an SCP query. The field NATURE OF NBR is used in query formulation of Network Services calls. The field RDIT is used for remaining digit interpretation. For conflict resolution, the field NATURE OF NBR is named NON.

10.2 Miscellaneous Translations

OFCOPT form (5509 Record) - A new field, MAX CONV, is added, specifying the maximum number of SCP conversations allowed.

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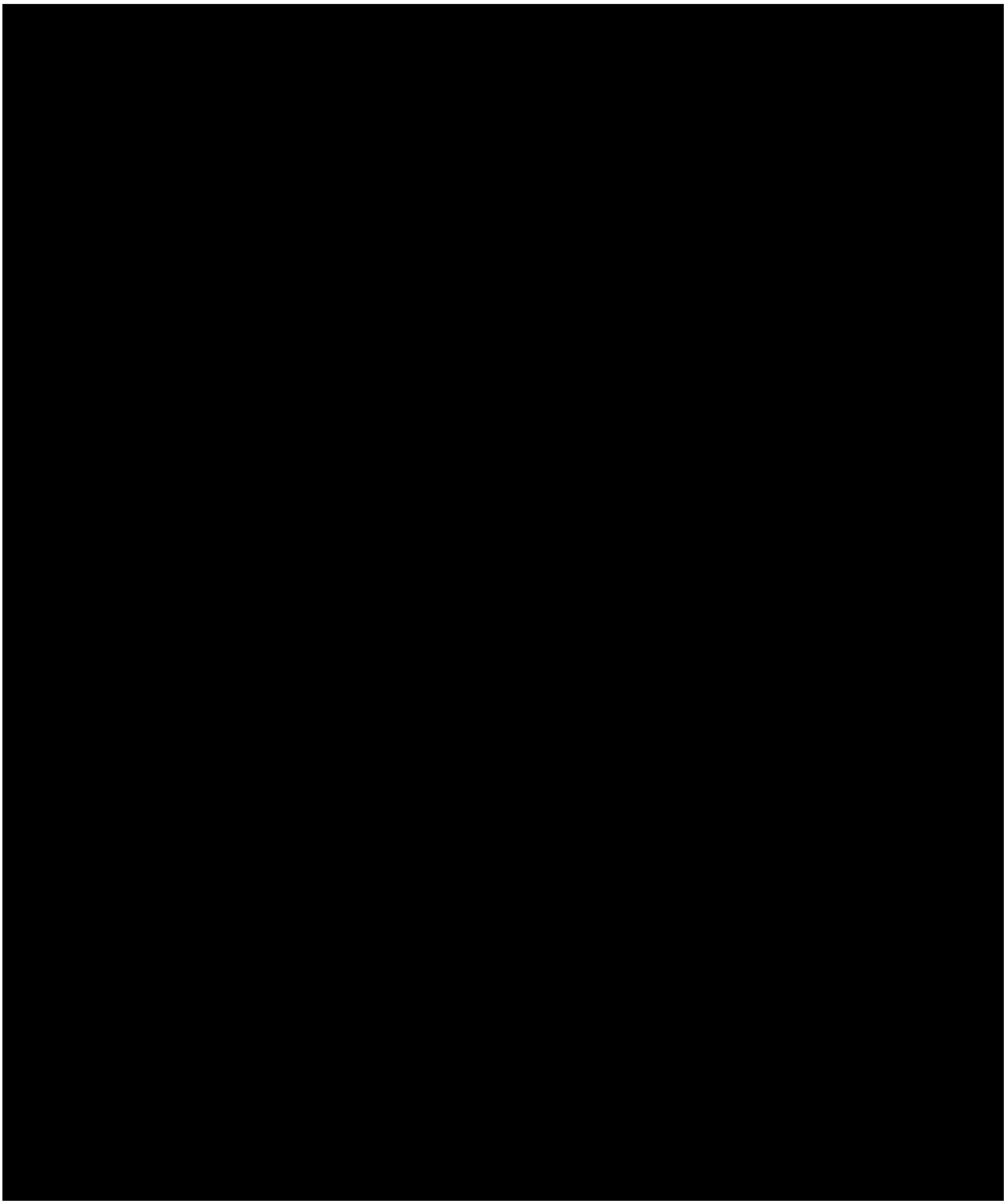

Figure 1 ASP DIALING PLAN AT NAP FORM FLOW 5E6 - 5E7 SOFTWARE RELEASES

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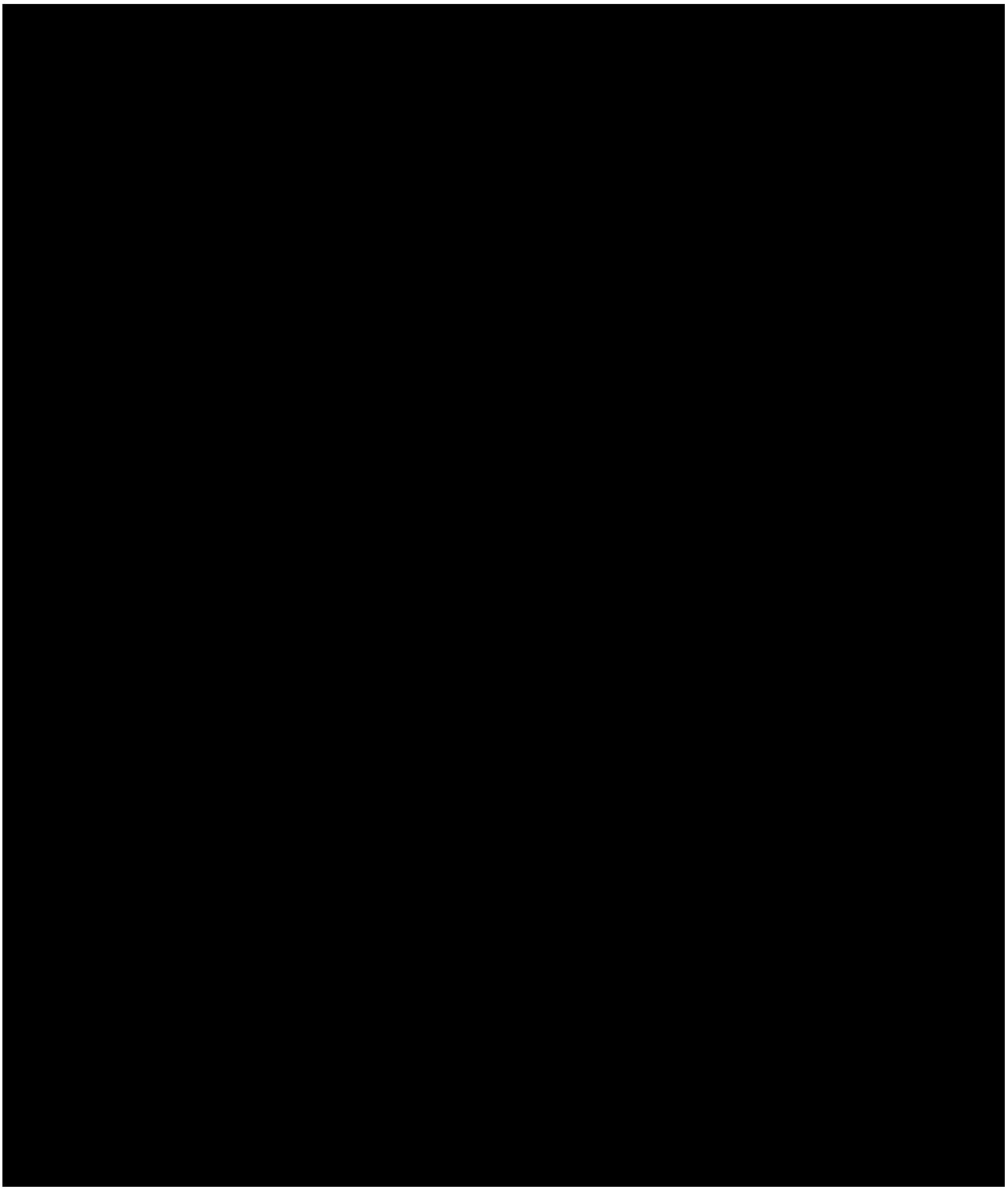

Figure 2 ASP DIALING PLAN AT NAP FORM FLOW 5E8 SOFTWARE RELEASE

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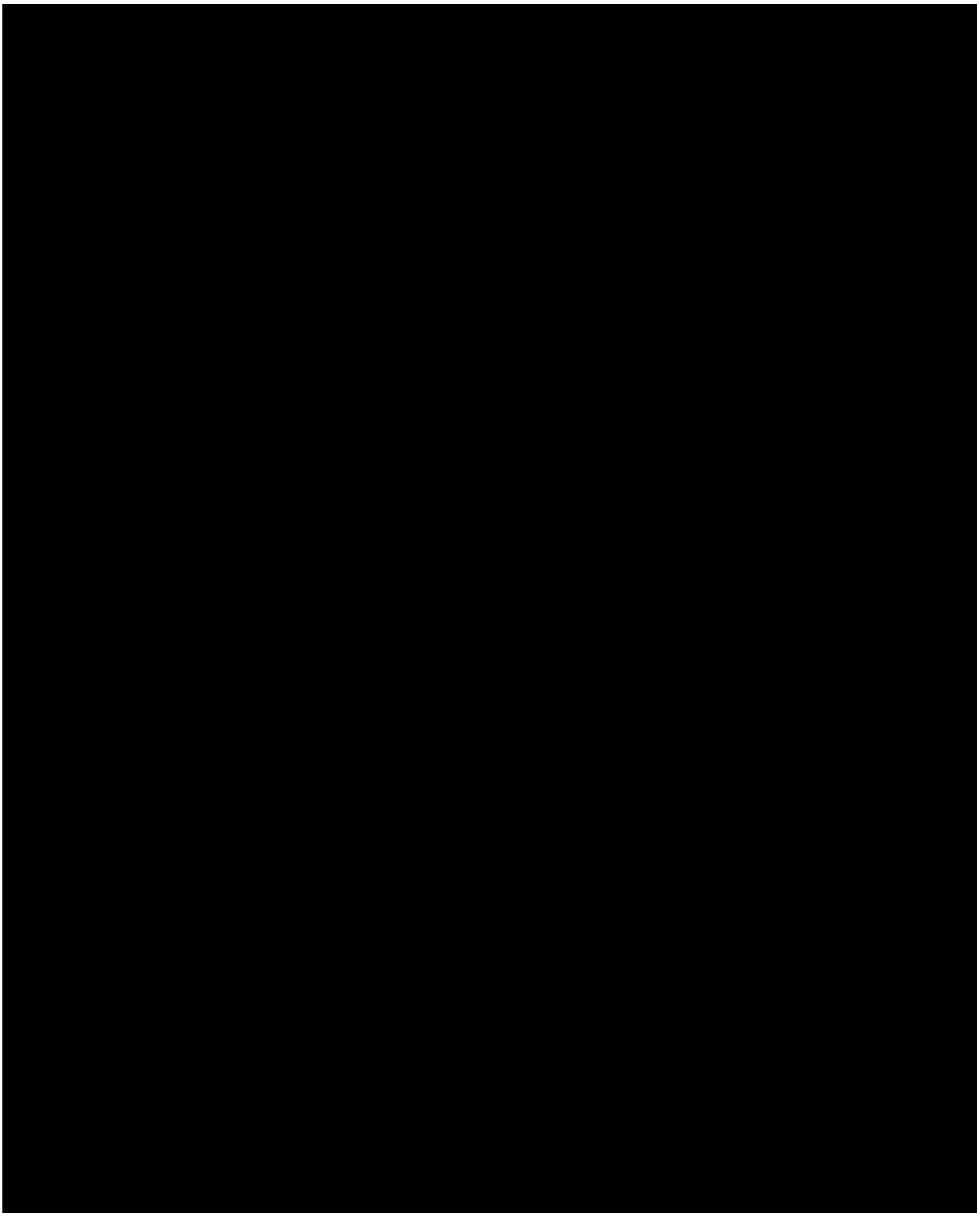

Figure 3 ASP DIALING PLAN AT SSP FORM FLOW 5E6 - 5E7 SOFTWARE RELEASES

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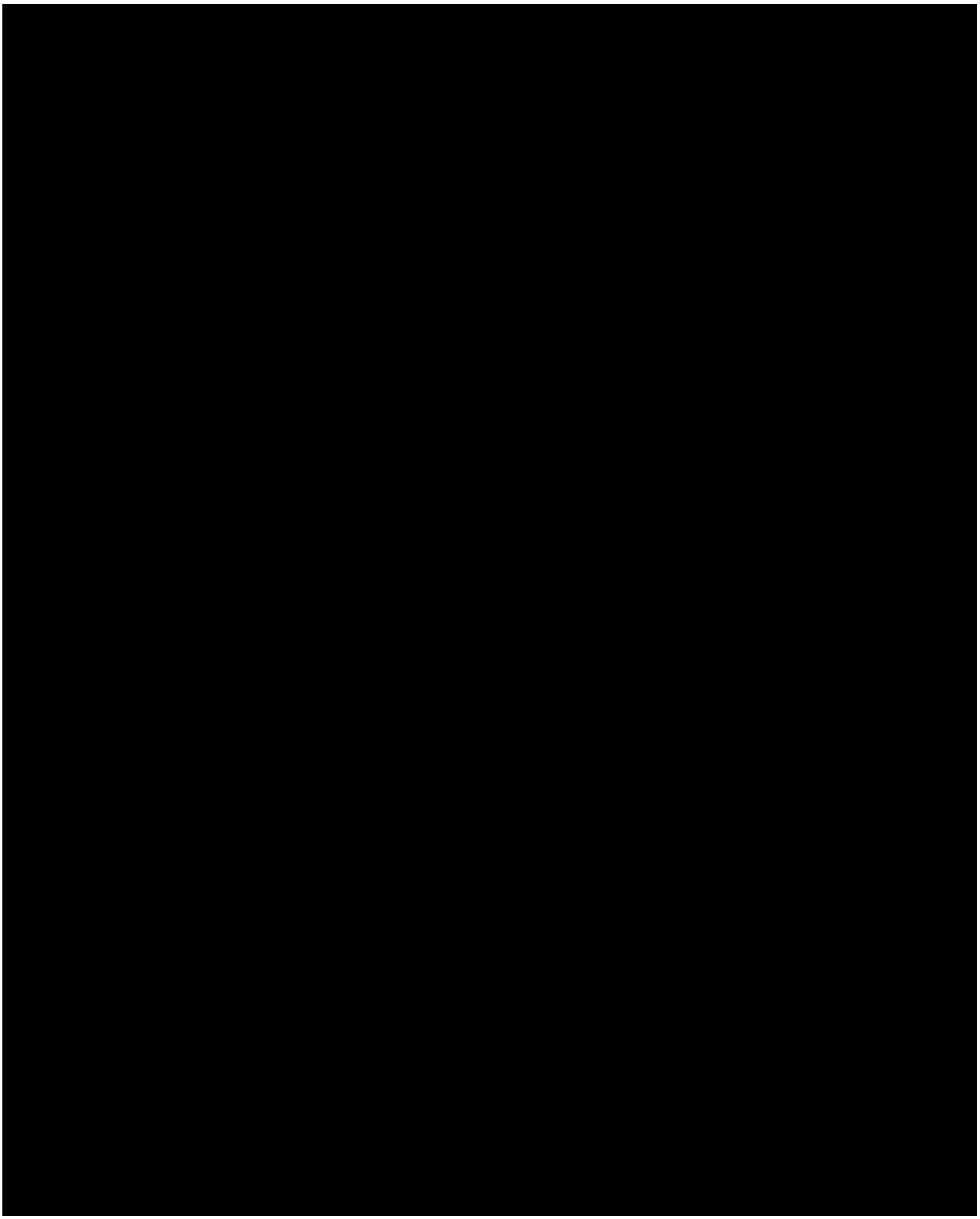

Figure 4 ASP DIALING PLAN AT SSP FORM FLOW 5E8 SOFTWARE RELEASE

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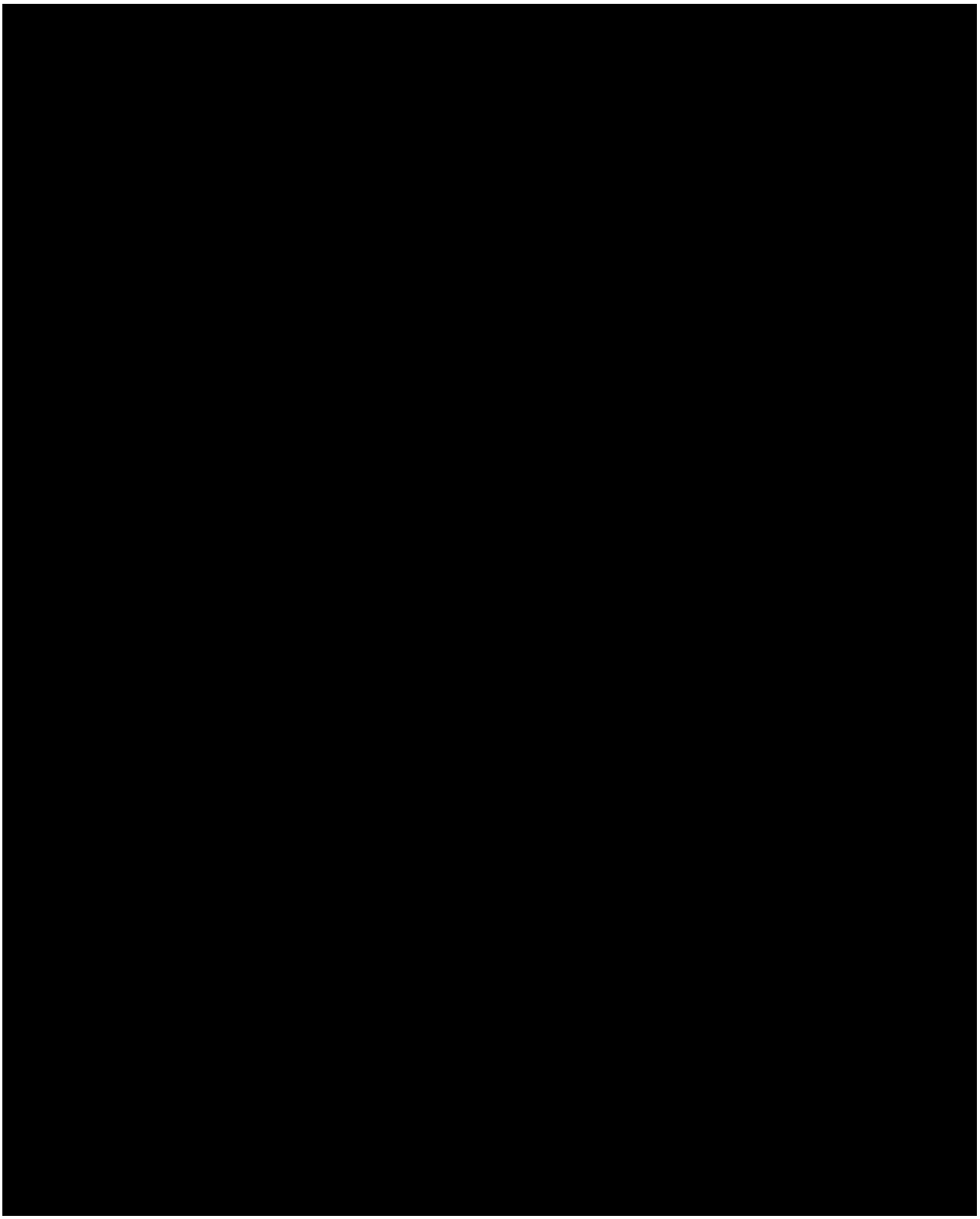

Figure 5 ASP ANNOUNCEMENT FORM FLOW 5E6 - 5E7 SOFTWARE RELEASES

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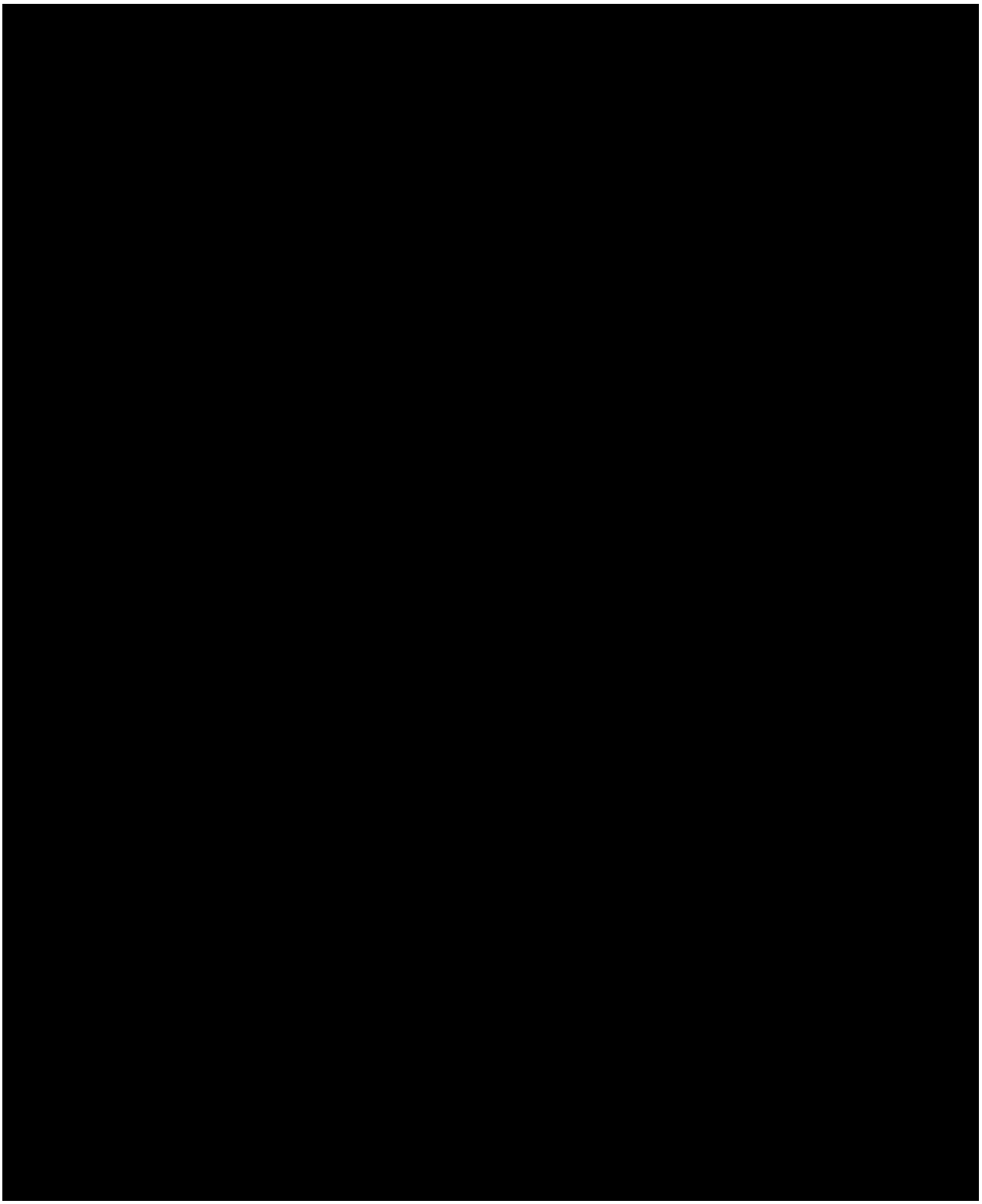

Figure 6 ASP ANNOUNCEMENT FORM FLOW 5E8 AND LATER SOFTWARE RELEASES

SEC. 4A58: ADVANCED SERVICES PLATFORM FEATURE LOCK

For ASP for 5E6-5E8 Software Releases, see Division 2, Section 4A51.

For ASP for 5E9(1) and later software Releases, see Division 2, Section 4A126.

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SEC. 4A60: METRO HUB

1. FEATURE DESCRIPTION

Available with 5E6 and later, the Metro Hub is an enhancement to the LIGI feature and also extends Terminal Group functionality to PRI (Primary Rate Interface) trunks. The Metro Hub capability will allow the calling number to be sent to and from PRI users as long as the call originates and terminates within the same terminal group.

2. BACKGROUND

The ICLID (Individual Calling Line Identification Number Display feature, a 5E4 feature, is activated when the called party subscribes to ICLID CND (Calling Number Display) and the calling DN is available, the calling DN is displayed to the terminating station set. However, certain tariffs state that the Calling DN be displayed for calls within the Terminal Group only. The LIGI (Limited IntraGroup) ICLID feature was designed to enable the office to restrict calling DN display to calls that originate and terminate within the same Terminal Group.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
TGSRFD	5607	4	8A	12.21
TGSRTPA	5607	4	8D	5.29
SFSYS	5713-1	3	5AR	8.22

TGSRFD form (5607 Record) - These records are used to define the Terminal Group and Station Restriction Feature Definition. A new Data Rule was added.

TGSRTPA form (5607 Record) - This form is used to define each Terminal Group and Station Restriction Trunk Parameter. A new Data Rule was added.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID must be set to "S" on the SFSYS form to make METRO HUB functional for the office.

SEC. 4A61: E911

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4A62: CALL FORWARD DON'T ANSWER INVOCATION AFTER CALL WAITING

1. FEATURE DESCRIPTION

The CFDA AFTER CW (Call Forward Don't Answer after Call Waiting) Feature is invoked on a busy line that is being call waited. The feature then allows the call waiting party to be either answered or forwarded to a remote DN (if the call waiting party has not answered the call waiting within a prespecified length of time).

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CFWMPA	5614-4	4	15C	3.22

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SFSYS	5713-1	3	5AR	8.22
CFWFD	5614-1/2	4	15A	12.12
CFWLPA	5614-3	4	15B	1.22

CFWMPA form (5614-4 Record) - This form is used to define specific parameters assigned to a Multi-Line Hunt Line associated with specific Call forwarding feature. A new field CFDA AFTER CW was added.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 62 must be set to "S" to make CFDA AFTER CW functional for the office.

CFWFD form (5614-1/2 Record) - This form is used to define the Call Forwarding feature. A new field CFDA AFTER CW was added.

CFWLPA form (5614-3 Record) - Used to define the specific parameters assigned to a line associated with specific Call Forwarding features. A new field CFDA AFTER CW was added.

SEC. 4A63: CALLING LINE SIDE SUPERVISION

1. FEATURE DESCRIPTION

Available with 5E7 and later Software Releases, CLSS (Calling Line Side Supervision) provides battery reversal that will assist the CPE in determining the state of the called party. The secured feature ID for this secured special feature is 63.

The CLSS (Calling Line Side Supervision) feature will allow the 5ESS Switch to provide battery reversal to an intelligent CPE, thereby indicating that the called party answered. The battery will remain in a reversed state until the called party goes onhook. Once a called party onhook is detected, the switch will again reverse the battery (i.e., return to normal), thereby indicating to the CPE that the called party has disconnected. This battery reversal assumes that the calling party is still offhook. Providing battery reversal will assist the CPE in determining the state of the called party.

Both the battery reversal for called party answer and called party disconnect will be given as soon as the originating switch becomes aware of the answer or disconnect. The sending of the battery reversal for called party answer is not dependent on expiration of the valid answer timer. The sending of the battery reversal for called party disconnect is not dependent on expiration of the delay disconnect timer.

2. FEATURE ASSIGNMENT

A line that wishes to subscribe to the CLSS feature must have the CLSS field set to "Y" on the LINE or MLHLN form. CLSS is not applicable to digital lines, shared analog lines, lines with BRCS features, lines with LASS GA (Generally Available) features or lines with LTSB (Line Time Slot Bridging). CLSS is intended simply for POTS lines.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109	3	1I	1.6
MLHLN	5111	3	1K	1.6
SFSYS	5713-1	3	5AR	8.22

4. LINE TRANSLATIONS

LINE form (5109 Record) - This form is used to define a line. The new field CLSS was added. The CLSS field must be set to "Y" to activate the CLSS feature on a given line. The calling party will then detect a battery reversal upon called party answer, and another battery reversal (returning to normal state) upon called party disconnect.

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MLHLN form (5111 Record) - This form is used to define a multi-line hunt line. The new field CLSS was added. The CLSS field must be set to "Y" to activate the CLSS feature on a given line. The calling party will then detect a battery reversal upon called party answer, and another battery reversal (returning to normal state) upon called party disconnect.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 63 on the SFSYS form must be set to "S" to enable the CLSS feature.

SEC. 4A64: MUSIC ON HOLD

1. FEATURE DESCRIPTION

Music on Hold enables the local switching company to optionally provide customers with the ability to place a call on hold and provide music to the held party during the hold period. Prior to this feature, customers had the ability to provide either silence, audible ring, or announcement to the held party.

Available with 5E7 and later Software Releases, Music on Hold is a secured feature using Secured Feature ID 64. Music may be provided to parties placed on hold by a controlling party of a BRCS Modular Feature such as Multi-Way Calling, Call Waiting, Call Hold, ISDN Hold, Call Pickup, Home Intercom, and Attendant Camp-On. Music on Hold is available to calls controlled from any analog CPE (Customer Premise Equipment) and ISDN MBKS (Multibutton Key Sets) that signal the switch when a call is placed on hold, including an analog attendant console and an ISDN Attendant Console (defined with an "INDIV", "ATND", "ISDN", or "ISATND" CLASS OF SERVICE on the LCC form (5306 Record)). This feature is available to a terminal group member (defined by assigning Terminal Group Station Restriction features via the LINEFA, MLHLNFA, CLUSTR, or BFG form that have a common Terminal Group ID defined via the TGSRFD, TGSRLPA/TGSRMPA, or BFG form). The audio source is also specified on a terminal group basis via the TGATTD form.

1.1 Music Source Configuration for Terminal Groups

When the terminal group member and music port reside on the same SM (Switch Module), the connection to music for a held party by the terminal group member is recognized as a "local" path. However, when the terminal group member and the music port reside on different SMs, the path must be set up as a "global" path. Once a "global" path is defined for a terminal group member with a held party, other terminal group members or members of other terminal groups (which are accessing the same music port) served by that SM, that have held parties and are allowed to provide music, may share this established "global" path. In order to avoid exhausting system resources, limitations are imposed on the maximum number of paths (32) connected from a requesting SM to different music sources. A limit of 60 paths is also imposed on the number of music paths incoming to a music source on an SM. The number of music paths to a music source is controlled via Recent Change View 5.5.

Implementation of this feature should take into consideration the distribution of music source trunks in such a way as not to be detrimental to the efficiency of any one SM.

The music source should reside on an SM with the maximum number of subscribers who can request music from this source. As an example, the music trunk should reside on the SM with the maximum number of terminal group members that need to access the music source.

The following describes the various thresholds associated with the Music on Hold feature.

- **User and Music Source on the Same SM**
  - There are no thresholds applicable to this scenario except for the obvious user limitation based on available peripheral timeslots.

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- **User and Music Source on Different SMs**
  - Maximum Number of Music Source Paths from a Requesting SM

    This threshold represents the maximum number of paths from a requesting SM to different music sources on other SMs. This threshold is not translatable and has an internal limit of 32. This limit is imposed to prevent excessive use of SM resources which could result in degradation of call processing on the requesting SM.

  - Maximum Number of Music Source Paths from Requesting SMs to the Same Music Source

    This threshold indicates the maximum number of inter-SM paths that can simultaneously terminate to the same music source. This threshold is translatable using the MAXCALLS field on the TRUNK form (5204 Record) or Recent Change View 5.5 and has a maximum value of 60. This threshold is necessary to prevent exhaustion of network timeslots on the music source SM. Once an inter-SM path is established from a particular requesting SM to a particular music source, multiple users on the requesting SM may be concurrently connected to the music source via the already established inter-SM path.

  - Maximum Number of Music Source on the Same SM

    More than one music source may be assigned to the same SM. However, as stated above, a global music source can simultaneously terminate a maximum of 60 inter-SM paths. This potentially represents about 12% of the network timeslots used exclusively for each music source. If two music sources are located on the same SM, each with MAXCALLS of 60, this would mean about 24% (60 x 2 = 120) network timeslots could potentially be used exclusively for inter-SM paths to both music sources.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26A	12.9
CWTFD	5603-1	4	4A	12.15
SFSYS	5713-1	3	5AR	8.22
TGATTD	5611	4	12A	4.4
TGSRFD	5607-2	4	8A	12.21
TGSRLPA	5607-3	4	8B	1.29
TGSRMPA	5607-4	4	8C	3.29

BFG form (5625 Record) - This form is used to specify and construct BFGs (BRCS Feature Groupings) for use when assigning subscriber features to analog lines or ISDN terminals. BFG is designed to assist the switch owner in the conservation of Switching Module memory and the improvement of Recent Change response time, and it cannot be used with trunks.

The field MOH ALW is added to this form. Once a call has been placed on hold, this field will indicate whether or not music is to be provided to the held party during the hold period. This field is only applicable when the Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

CWTFD form (5603-1 Record) - This form defines a number of separate features by selecting various feature options for Call Waiting. The enumeration "MUSIC" is added to the field CGPTY TONE INDICATOR. Once a call has been placed on hold, this field specifies the type of audible output that is to be provided to the held party. This enumeration is only applicable when the Secured Feature ID 64 is set

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to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 64 on the SFSYS form must be set to "S" ("Y" for 5E9(1) and later) to enable the Music on Hold feature.

TGATTD form (5611 Record) - This form assigns attribute information (such as attendant DN, Source Billing, and SDN DAS) on a Terminal Group basis. The fields TGN and MEMB for MUSIC ON HOLD were added to this form. These fields define the music source for the Music on Hold feature that is to provide music to the held party once a call has been placed on hold. Before data can be entered in this field, Secured Feature ID 64 must be set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

TGSRFD form (5607-2 Record) - This form defines the Terminal Group and Station Restriction Feature Definition. Terminal Group and Station Restriction provide a means of grouping two or more terminals to provide station screening. The screening is based on the terminal's membership in a given TG (Terminal Group) and the type of SR (Station Restriction) characteristics of the terminal.

The field MOH ALW was added as one of the DEFAULT PARAMETERS on this form. Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when the Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

TGSRLPA form (5607-3 Record) - This form defines the Terminal Group and Station Restriction Line Parameters. This form is associated with the Terminal Group and Station Restriction Feature Definition form and is keyed by the TN (Telephone Number). Individual TNs assigned a particular TGSR Feature name can be given specific values for Terminal Group ID, Forwarded to DNs (Originating or Terminating) and Error Announcement Route Indexes (Originating or Terminating) that will replace or overwrite the default parameter values that are defined on the TGSR Feature Definition form.

The field MOH ALW was added to the TGSRLPA form for the Music on Hold feature. Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when the Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

TGSRMPA form (5607-4 Record) - This form defines the Terminal Group and Station Restriction MLHG/TERM (Multi-Line Hunt Group Number/Multi-Line Hunt Group Terminal Number) Parameter. The MLHG/TERM form is associated with the TGSRFD (Terminal Group and Station Restriction Feature Definition) form and is keyed by MLHG/TERM. Individual MLHG/TERMs assigned a particular TGSR Feature name can be given specific values for Terminal Group ID, Forward to DNs (Originating or Terminating) that will replace or overwrite the default parameter values that are defined on the TGSR Feature Definition form. There are certain feature options that require either a value on a TGSR Feature Definition default parameter field or the presence of the associated MLHG/TERM Parameter field. The MLHG/TERM form is used to distinguish those customer lines that have Station Restrictions which are different than those defined on the TGSRFD form.

The field MOH ALW was added to the TGSRMPA form for the Music on Hold feature. Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when the Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

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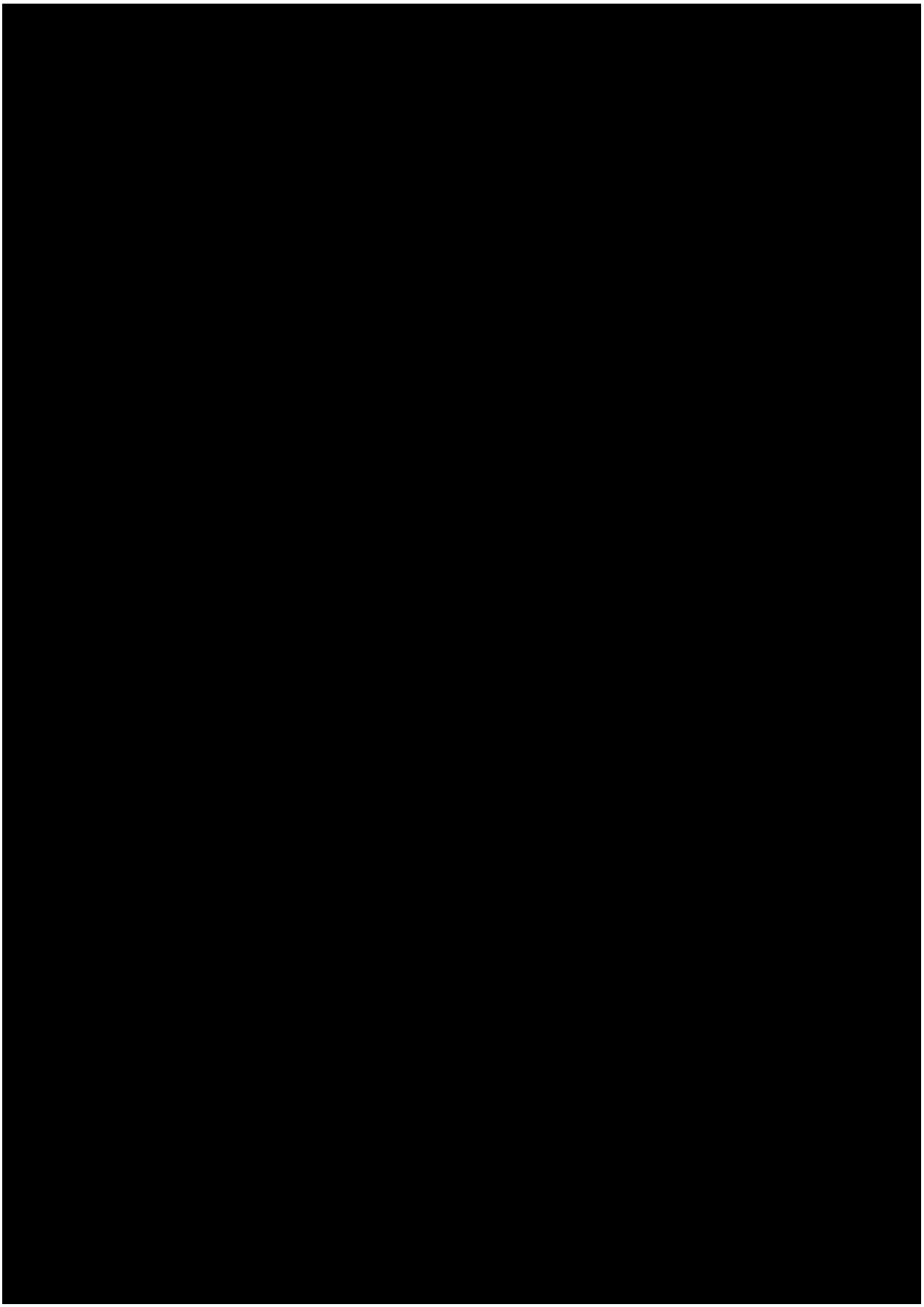

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Figure 1 FORM FLOW FOR MUSIC ON HOLD

SEC. 4A65: OSPS AUTOMATED POSITION

1. AUTOMATED POSITION FEATURE DESCRIPTION

The AABS-AP (Automated Alternate Billing Services - Automated Position) feature provides full automation of collect, third number, and calling card calls. It also partially automates the handling of person-to-person calls. The AP (Automated Position) is supported on the 5ESS Switch by the following three secured features:

1. Switch Changes for AP - supports the AP on the switch.
2. Improved AP Call Selection.
3. Sequence Calling on Operator Handled Calls - allows sequence dialing before answer for operator handled card calls.

The AABS-AP feature allows a calling party making a 0+ call to enter a call type identifier by using speech and/or DTMF (Dual Tone MultiFrequency) input or a billing number using DTMF input in response to a prompt. Recognized spoken call type phrases include "credit card", "calling card", "collect", "third number", "person", and "operator". Acceptable dialed calling party inputs include credit card and calling card account numbers, 4-digit PINs (Personal Identification Numbers), and 2 or 3-digit call-type codes in the format 1Z or 19Z, where Z is 1 - 8. For 1STAGE LEC, some 10-digit telephone numbers may also be specified to be interpreted as third number billing numbers at the initial prompt. The prompting announcements may be interrupted by customer speech or DTMF dialing. An adjunct processor is used to collect the digits or speech, recognize the utterances using ASR (Automated Speech Recognition), give announcements, and record calling party speech. This processor interfaces with OSPS using existing operator terminal protocol to validate billing information and process the call. Card and PIN processing is similar to that provided by the automated calling card service. This feature adds processing of caller-entered third numbers and call type codes. If the calling party does not respond with DTMF or speech input within a time-out interval, the caller is transferred to an operator. If unintelligible speech or unrecognized service codes are received, an instructional prompting announcement specifies how to request particular call types. If a collect or third number request is identified, the AP may (under telephone company control by billing type) prompt the calling party to speak his/her name and record the subsequent utterance. The call is outpulsed and, when the third party or collect-called party answers, the billed party is prompted for acceptance of the charges with the recorded name of the calling party included in the prompt. OSPS-AP uses ASR to determine whether the billed party said "yes", accepting the call, or "no", refusing the call, or "operator", requesting assistance on the call. DTMF equivalents are also available for these responses.

For more information on the Automated Position see the following documents:

250-600-100 5ESS Switch OSPS Automated Position Description and Operation

250-600-101 5ESS Switch OSPS Automated Position Administrative Guidelines and Recent Change

250-600-102 5ESS Switch OSPS Automated Position Installation, Maintenance, and Growth Procedures.

2. SWITCH CHANGES FOR AP

This feature provides support for calls handled by automated positions. This feature has no ODD with the exception of entering the Secured Feature ID on the SFSYS form (5713-1 Record, Secured Feature IDs are listed in Division 3, Section 5AR).

3. IMPROVED AP CALL SELECTION

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Improved Automated Position call selection enhances the telephone company's ability to select the calls to be handled by automated positions. This feature allows the TCA (Telephone Company Administration) to specify whether any calls in the office should receive Automated Position treatment. In addition, the TCA specifies by trunk group whether any calls arriving on that trunk group should receive automated position treatment. If automated treatment is specified for the office, the TCA also specifies whether one stage or two stage protocol is to be used for 0+ calls. One stage protocol means that 0+ calls designated for automated position handling are routed to an automated position at initial seizure. Two stage protocol means that 0+ calls are given automated calling card service initially; then if the caller does not enter a card number, calls designated for automated position handling are routed to an automated position to handle card or other types of billing.

When calls are designated for automated position treatment, they are routed to the ACD (Automatic Call Distributor). The TCA can use any of the call parameters provided by the ACD feature and the expanded call type determination feature to route the call to an Automated Position or operator team. This feature adds the capability to associate both an automated position team and an operator team with any set of the ACD parameters for which Automated Position treatment is desired. For other ACD parameter combinations, only an operator team is specified. Calls from lines designated for operator handling in the Originating Line Screening or Special Treatment Tables are never treated as Automated Position calls and always use the operator team. OSPS also uses the operator team for situations encountered during automated calling card service that require routing to an operator. Otherwise, calls arriving on operator trunk groups that are designated for Automated Position treatment and that have the ACD parameters associated with an automated position team use the automated position team. Other calls use the operator team.

4. IMPROVED AUTOMATED POSITION CALL SELECTION FEATURE ASSIGNMENT

The OSPS AABS-AP feature automates the handling of 0+ dialed calls with collect, third number, and card billing. The feature provides two different protocols for delivering calls to the APs: one stage and two stage. A one stage protocol uses incoming OSPS trunk data to determine whether to provide AP or ACCS/CAS (Automated Calling Card Services/Customer Account Services) automation of 0+ calls. The one stage protocol provides APOS handling for all 0+ dialed calls.

In two stage protocol, if the caller fails to respond in ACCS/CAS treatment, incoming OSPS trunk data is used to send the calls to AP queues. In a two stage office, ACCS provides the automation for calling card billing, and the APs automate collect and third number billing in addition to calling card calls. In a two stage protocol, the caller is sent to an AP if the party fails to respond (timeout, flash, or dials 0) to the ACCS offering of calling card billing and the incoming trunk is marked for AP handling. In this situation, the AP provides the automation for collect and third number billing, in addition to calling card calls. The "1STAGE" or "2STAGE" are entered in the APOS PROTOCOL field on the OSPSOPT form (5424 Record).

The TCA selects the traffic that may receive automated position treatment by trunk groups. This data is used in conjunction with call type determination. In addition to the data such as prefix and originating trunk group, two queues are specified; one is used when call processing determines that an automated position is appropriate, and the other is used when an operator is appropriate. For call types that require only operator handling, only the operator call type queue needs to be defined. An incoming OSPS trunk group that is to receive AP automation is marked on the OPRTK form. The AP call queue is defined on the ACDCTP form (5412 B/D/E/F Record).

The secured feature ID 65 on the SFSYS form (5713-1 Record) must be set to "S".

5. AUTOMATED POSITION TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412	3	4M	26.9
ACDPOL	5412	3	4M	26.10

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OPRTK		3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

ACDCTP/ACDPOL forms (5412 Record) - These forms are used to assign call type information for the OSPS ACD (Automated Call Distribution) feature. Enter the APOS CALL TYPE to be served by the Automated Position. Every ACDCTP form requires a corresponding OSPSCT form where the OSPS CALL TYPE on the OSPSCT form matches the APOS CALL TYPE on the ACDCTP/ACDPOL forms. The OPER TYPE must be "TA" and SVC ID must not be entered on the OSPSCT form.

When the APOS CALL TYPE is entered on the ACDCTP form, CALL ORIGIN cannot be "LSTA" or "AIS" because AP automation cannot be used for Listing Services or the Automatic Intercept System.

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS (Operator Services Position System) operator. If Automated Position Treatment is provided on a trunk group, APOS PROTCOL must be set to "Y". AP automation cannot be used for Listing Services or the Automatic Intercept System, therefore, if TRKCLS is "INAISTRK", APOS TREATMENT must be "N".

OSPSOPT form (5424 Record) - The OSPSOPT form defines the OSPS office parameters. The APOS PROTOCOL field is used by the Automated Position feature. APOS PROTOCOL is a Secured Feature, and must be purchased before it can be assigned. FEATURE ID 65 on the SFSYS form must be set to "S" before APOS PROTOCOL on the OSPSOPT form can be set to "1STAGE" or "2STAGE". When OSPS TA is "N", APOS PROTOCOL must be "OFF". When OSPS TA is "Y", APOS PROTOCOL must be "OFF", "1STAGE", or "2STAGE".

SFSYS form (5713-1 Record) - Secured Feature ID 65 on the SFSYS form must be set to "S" to make this feature functional for the office.

SEC. 4A66: OSPS AUTOMATIC SEQUENCE DIALING

1. FEATURE DESCRIPTION

The Automated Sequence Dialing Following Operator Release allows callers served by an operator or automated position to place sequence calls while awaiting answer. This capability is available on station card-billed calls released from the position prior to outpulsing of the call. The service is the same as is available to callers on initial automated calling card calls. The caller can initiate a sequence call while awaiting answer by entering a "#" using DTMF (Dual-Tone MultiFrequency) input. The acceptable entries following the "#" depend on the features active at the time (e.g., Automated Calling Card Service, OSPS Interface to Voice Messaging Service). This feature reduces the number of times a caller has to hang up and reinitiate a call. This feature is secured and must be purchased prior to use.

2. AUTOMATIC SEQUENCE DIALING TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

OSPSOPT form (5424 Record) - The OSPSOPT form defines the OSPS office parameters. OPER SEQUENCE field activates the Automatic Sequence Dialing Following An Operator Release feature.

SFSYS form (5713-1 Record) - Secured Feature ID 66 on the SFSYS form must be set to "S" to make this feature functional for the office.

SEC. 4A69: OSPS SPECIALIZED HANDLING FOR 700 SERVICES RELEASE 2.0

1. FEATURE DESCRIPTION

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The capability number for the Specialized Handling for 700 Services - Release 2 feature is 98-5E-0435 This feature is available for 5E7 and later.

The Specialized Handling for 700 Calls - Release 2 feature is a voice service that assigns to the subscriber a permanent 700 number for callers to reach the subscriber when dialing long distance. For more information on Specialized Handling for 700 Services, Release 2.1, see Division 2, Section 4A89. For more information on Specialized Handling for 700 Calls Test Call, see Division 2, Section 4C17.

2. FEATURE ASSIGNMENT

This feature is a secured feature. The ACT field for SFID 69 must be set to "Y" on the SFSYS form (5713-1 Record) to activate these features.

The adjunct processor must be at a software level capable of providing this feature before it can be used. However, existing functionality will remain prior to the adjunct update with no changes required.

See Figure 1 for the form flow for Specialized Handling for 700 Services, Release 1.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP/ ACDPOL	5412	3	4M	26.9 26.10
EISDATA	5462-1	3	4BM	21.51
SERVDATA	5466	3	4BS	21.54
SFSYS	5713-1	3	5AR	8.22

ACDCTP/ACDPOL form (5412 Record) - This form assigns call type information for ACD (Automatic Call Distribution). The "SPCL700" enumeration was added to the CALL ORIGIN field to support this feature. For the Special 700 entry, the CALL TYPE field should be populated with a Service ID as defined in the SVC ID field on SERVDATA form (5466 Record).

EISDATA form (5462-1 Record) - This form defines the operational parameters for a particular OSPS EIS (External Information System). The "CGI" enumeration was added to the VENDOR field to support this feature.

SERVDATA form (5466 Record) - This form is used to define EIS service parameters. The "SPCL700" enumeration was added to the OSPS SVC CODE field to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 69 must be set to "Y".

4. GLOSSARY

ACD	Automatic Call Distribution
ACQS	Automated Charge Quotation Service
CCS7	Common Channel Signaling Version 7
EIS	External Information System
DTMF	Dual Tone Multifrequency
IAM	Initial Address Message
ISUP	Integrated Services Digital Network User Part

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OSPS Operator Services Position System

Figure 1 FORM FLOW FOR SPECIALIZED HANDLING FOR 700 SERVICES, RELEASE 1

SEC. 4A70: COIN LINE AUTOMATIC MESSAGE ACCOUNTING

1. BACKGROUND

Prior to this feature, AMA (Automatic Message Accounting) records were not produced for local coin line calls unless done through traffic sampling per coin line. The temporary nature of traffic sampling is not always sufficient and can only be achieved on a per coin line basis. Prior to the CLAMA (Coin Line Automatic Message Accounting) secured feature there existed no method to produce AMA records on an office-wide basis for local coin calls.

2. FEATURE DESCRIPTION

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Available with 5E7 and later, CLAMA (Coin Line Automatic Message Accounting) is a secured feature which uses Secured Feature ID 70. This feature provides the capability to obtain, on an optional and per-office basis, detailed AMA records in the local switch for each coin telephone originated, answered, chargeable call that is sent-paid and processed at the end office as a local coin call. These CLAMA records use existing standard LSSGR (Local Switching System General Requirements) AMA record formats and do not include coin collected information. These AMA records can be used in allocating revenues from such local coin calls.

Since there is no flash recall operator system access for a coin sent-paid call unless the original call was operator handled, an operator system cannot be accessed during these calls. There is no change in the existing processing of these calls other than the recording of an AMA record in the local switch.

Billing owners of non-smart coin telephones for sent-paid calls requires the correlation of AMA records from all switches that may control charging of such calls. The originating end office CLAMA records will have to be combined with records at the TELCO operator services switch for detail billing since CLAMA records do not contain any coin collected information. When CLAMA records are combined with AMA information from all associated operator services, detailed billing data will exist for all chargeable sent-paid calls from all non-smart coin telephones processed at the end office.

3. FEATURE ASSIGNMENTS

This secured feature is enabled by setting Secured Feature ID 70 to "S" on the SFSYS form (5713-1 Record) and activated by setting the LOCAL COIN field to "Y" on the OFCOPT form (5509 Record).

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. A new field, LOCAL COIN, has been added under AMA RECORDING OPTIONS . This field indicates whether or not Coin Line AMA records should be produced.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 70 on the SFSYS form must be set to "S" to indicate that the feature has been purchased.

SEC. 4A71: TRANSFER TO ACD FROM AN ARU

1. FEATURE DESCRIPTION

The Transfer to ACD (Automatic Call Distributor) from an ARU (Automatic Response Unit) Special Feature is available for 5E6 and later.

For 5E6, this feature, Transfer to ACD from ARU, provides the ability for the ARU to redirect a call to an ACD agent without the use of loop-around trunks. The calls must enter the switch on non-CCS trunks with a Trunk Class of "IC" or "LTOLLCON". This feature consists of two portions, a basic portion and an enhanced portion for the CCS7 interface. The basic portion of the feature is provisioned on a per-office basis. To activate this feature, enter "S" in the FID 540 field of the FOSYS form (5713-2 Record).

1.1 CCS7 Interface Enhancement

The second portion of this feature is available in 5E7 and later software releases. After the basic feature has been enabled, the secured feature portion for CCS (Common Channel Signaling) interface of this

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feature may be activated. This portion provides the transfer to the ACD from the ARU for calls that enter the switch on CCS7 trunks with a TRKCLS of "IC" or "LTOLLCON". To activate this part of the feature, enter "S" for FEATURE ID 71 on the SFSYS form (5713-1 Record).

1.2 Automatic Response Unit

An ARU is a processor that screens incoming calls to the 5ESS ACD/MIS Switch before connecting to an ACD agent. The call is routed to the ARU using existing digit analysis and call processing. The ARU prompts the caller to enter digits that affect the routing of the call. If the ARU determines that an ACD agent is needed, the call is transferred to the ACD. Prior to this feature, the originator of an ACD call must be a trunk, so in order to effect this transfer, the call is routed over a loop-around trunk. With this feature, there is no need for loop-around trunks for incoming calls on trunks with TRKCLS of "LTOLLCON" or "IC". Once the ARU has determined that an ACD agent is required, it flashes to put the call from the incoming trunk on hold. The ARU dials the "ACDXFER" access code and the ACD DN (Directory Number) followed by a # . If the access code is ambiguous, the ARU must dial a # after the access code and before the ACD DN. If the access code is unique, the ARU should not dial a # after the access code and before the ACD DN. The ACD DN must always be followed by a # . The ACD DN is sent to the incoming trunk's terminal process where the digits are analyzed using the incoming trunk's dialing plan, and the call is rerouted directly to the ACD. The call then terminates to an ACD agent.

1.3 The ARU Line Features

The ARU line may have the Call Forwarding Busy Line, Call Forward Don't Answer, or Call Forwarding Variable feature active. The call to the ARU can then be forwarded to the ACD using this feature. The forward-to-DN should contain the access code and the ACD DN. If the access code is ambiguous, a # MUST separate the access code from the ACD DN. If the access code is not ambiguous, the # after the access code is optional in the forward-to-DN digit string. A # cannot be at the end of the forward-to-DN string.

When this feature is active, the ACD agent will not notice any change in the way ACD calls are received or distributed.

1.4 Treatment if Feature Is Not Activated

If the access code associated with this feature is dialed or is included in the forward-to-DN and the office is not configured as an ACD provider, reorder treatment is given.

The following conditions will result in the call being transferred to the ACD via loop-around trunks:

- the access code associated with this feature is dialed or is in a forward-to-DN, and the feature has not been activated.
- the access code associated with this feature is dialed or is in a forward-to-DN, and the signaling type of the call's incoming trunk is CCS7 but the secured portion of the feature is not active.
- the access code associated with this feature is dialed or is in a forward-to-DN, and the Trunk Class of the incoming trunk is not "IC" or "LTOLLCON".
- the access code associated with this feature is dialed and the call was previously transferred within this switch before terminating at the ARU dialing the access code.

The CCS interface portion of this feature supports only ISUP (ISDN User Part) signaling, and only for 5E7 and later software releases.

2. FEATURE ASSIGNMENT

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To provision this feature, the following assignments must be made.

1. The Transfer to ACD from ARU (ACDXFER) access code(s) dialed by the ARU must be defined in the ODP (Office Dialing plan) or the ARU's IDP (Individual Dialing Plan).

   For an ODP, define the access code for this feature on the PDIT form. The access code is defined in the DIGITS TO INTERPRET field. "ACDXFER" is specified in the ACTION field. The feature is the null feature (/*).

   For an IDP, define the access code on the IDPDCA form for this feature. The access code is defined in the INC DIGITS field. "ACDXFER" is specified in the ACTION field. The feature is the null feature (/*). The same access code can be used by all the ARUs on the same switch.

2. The dialing plan used by the trunk on which the call comes into the switch must be set up so that the ACD DN (dialed by the ARU after the access code) causes the call to route directly to the ACD.

3. In the event that one of the conditions for the use of this feature is not met (for example, if the feature isn't active, or the call entered the switch on a line, or on a trunk with a TRKCLASS other than "IC" or "LTOLLCON"), the dialing plan used by the ARU must be set up so that the call can route to the ACD via loop-around trunks, using the ACD DN dialed by the ARU.

4. If a call to an ARU line is to be forwarded to an ACD using a call forwarding variable, busy line or don't answer feature (such as /CFV, /CFBL or /CFDA), the forward-to-DN must be updated to include the "ACDXFER" access code, a pound sign, and the ACD DN. If the access code is ambiguous, it and the ACD DN must be separated by a # .

5. To enable this feature, the FID 540 field must be set to "S" on the FOSYS form. To enable this feature for CCS7 portion, the FEATURE ID 71 field on the SFSYS form must be set to "S".

6. Commercial ACD must be available in the office before the Transfer to ACD from ARU feature can be used. For more information on CACD see Division 2, Section 3D.

7. The line to the ARU must be an analog line with an individual line Class of Service. The terminating treatment may be individual or MLHG.

8. The ARU line must not have the Call Forwarding over Private Facilities feature active.

9. The CCS interface portion of this feature does not support CCS6 signaling.

10. The maximum number of digits allowed in the ACD DN digit string is 15 (i.e., access code + # + ACD DN must be 15 or fewer digits).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
IDPDCA	5601	4	2B	9.13
PDIT	5300-2	3	3B	9.2

3.1 Translations

IDPDCA form (5601-1/2 Record) - This form is used to define the dial codes associated with IDPs. The enumeration "ACDXFER" was added as a valid action to the ACTION fields. This action is only valid with the NULL feature (/*).

PDIT form (5300-2 Record) - This form is used to define the Prefix/Feature Digit Interpreter in a 5ESS

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Switch. The enumeration "ACDXFER" was added to the ACTION field. This action requires that the null feature (/*) be used.

SEC. 4A76: OSPS ORIGINATING LINE SCREENING ALTERNATE ROUTING

1. FEATURE DESCRIPTION

This secured feature is available for 5E7 and later Software Releases. It is activated after it is purchased by setting ACT field to "Y" for SFID 76 on the SFSYS form (5713-1 Record). The feature number for this feature is 98-5E-0519.

The OLS (Originating Line Screening) Alternate Routing feature allows an OSPS to populate alternate routing translation data for a call and apply the data just before routing the call from the OSPS to the final routing destination. The final routing destination is based on the alternate screening index associated with the screening code for the back line number of the call. Possible destinations can be anything that can be accomplished through routing translations: including announcement facility (e.g. 13A announcement), reorder, or an alternate trunking arrangement.

This feature uses the screening code applied to the back number of the call to determine the alternate screening index to be used. OAR (OLS Alternate Routing) feature works in conjunction with the existing OLS feature which allows the OSPS to assign OLS code(s) to a given back-line number(s). The OSPS could choose to assign all the back line numbers to one OLS code or to assign back line numbers to separate OLS codes. This feature provides a finer control in handling the call appropriately.

1.1 Routing to a Local Announcement

To use this feature, the OSPS examines the translation data assigned and decides what OLS codes should be used, and which screening indexes should be placed into the new OAR table (SCROAR form, 5481 Record). The OSPS populates the translation data so that the new screening indexes along with the other routing data associated with the call result in routing the call to the desired destination. The OSPS can assign the destination to be an announcement facility, so that the OSPS can record an announcement locally. This announcement will be played to the caller (calling from a line number that the OSPS wants to screen) to tell the caller the reason that the call is not going through before the call is disconnected.

1.2 Routing to a Different Trunk Group

The feature can also be used to change routing, based on the OLS code, to different trunk groups than the ones normally used.

1.3 Routing Affected by OAR

This feature affects routing to forward numbers and international forward numbers only. The following are NOT affected: routing to route numbers, back numbers, conference numbers, international route numbers, emergency numbers, BLV (Busy Line Verify) network, and SDN NRA (Software Defined Network Network Remote Access) private network.

This feature affects automated, operator handled, and sequence calls dialed from the screened lines regardless of class charge, TCS (Terminating Code Screening), or TCS override. AATOS (Alternate Access To Operator Services) calls are also affected if the OSPS has routes AATOS calls from those screened lines to an OSPS that contains OAR data for those back line numbers. (However, any call set up to route over the private network will be exempted from the OAR treatment.)

2. FEATURE ASSIGNMENT

The following translations are needed to assign this feature:

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- If the OLS data has not already been populated with the screening codes that will be used to identify the back number(s) for the OAR feature, then:

  The SCRNCODE form (5415 Record) needs to be populated with the screening code information.

  The LINESCRN form (5416 Record) needs to be populated with the screening code identified by the OSPS to be used by this feature for the affected back numbers.

- New screen index tables on the RAR form 5301 Record need to be added to handle the screen indexes entered in the OSPS BACK NUMBER ALTERNATE ROUTING table (SCROAR form, 5481 Record). The OSPS must add the necessary translation data to perform the alternating routing with the screen indexes listed in the OAR table.

- The SCROAR form (5481 Record) must be populated with the alternate screen index associated with each screening code assigned for this feature.

- This feature must be activated on the SFSYS form by setting the ACT field to "Y" for SFID 76.

3. SCENARIOS

3.1 Automated Call

1. The caller enters a 0+ call and receives bong treatment.

2. The Caller enters a valid card number. If the OLS code associated with the back number matches the screening code in the OAR table then depending on how the OAR feature data is set up for the call, the call will receive an announcement, reorder, or be routed over a valid trunking arrangement set up by the OSPS.

3.2 Operator Handled Call

1. Caller enters 0-. Call arrives at an OSPS operator position.

2. Operator enters a forward number whose translation data is set up for OLS alternate routing (routing to either an announcement facility, reorder, or valid alternate trunking arrangement). In this scenario, three different results are possible:

- If the call scenario allows for early position release after the operator enters a valid COC (Class of Charge) and releases the call, the caller will receive the appropriate response depending on how the alternate routing data was set up.

- If the operator manually outpulses the call and the alternate routing is set up to go to an announcement facility or reorder, a new error display will be given to the operator. This error display is "Termination denied to number". Reorder tone is not heard. However, the announcement will be heard by the operator and caller.

- If this scenario routes the call over a valid trunking arrangement set up by the OSPS, then the appropriate trunk routing will occur.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
SCROAR	5481	3	4CG	26.5

SCROAR form (5481 Record) - This form is used to populate the OSPS Back Number Alternate Routing Table. This table provides alternate routing based on the alternate screening index that is associated with the screening index for the back line number of the call.

SEC. 4A77: BLOCKING 900 CALLS FOR LEC CARDS

1. FEATURE DESCRIPTION

The OSPS Blocking 900 Calls for LEC Card feature provides the ability to block 900 calls from being charged to LEC Cards (10 + 4). For 5E7 and later, the identification is based on the NPA (Numbering Plan Area) or RAO (Revenue Accounting Office) code on the LEC calling card. For 5E8 and later, LEC Cards can be blocked for 900 calls on the basis of NPA, NPA-NXX, or RAO code.

2. FEATURE ASSIGNMENT

This feature requires entering the secured feature identification number on the SFSYS form, and assigning the NPA/RAO on the BLK900 form. In addition, CAS (Customer Account Services) Release 1 must be activated on the OSPSOPT form (CAS ON must be "Y") prior to implementing this feature.

3. CALL SCENARIOS

The following describe call scenarios for automated calls and operator handled calls.

3.1 Automated Call Scenario

The following is a call scenario for an automated call.

1. The caller enters a 0+900 number.
2. The caller receives the audible bong treatment indicating that the credit card number should be entered.
3. The caller enters the LEC card number.
4. The LEC card number is found in the blocking table and is marked as "blocked".
5. The caller receives the error announcement, "This card cannot be used for this service. (pause) Please dial a different card number and PIN now". (This is Announcement Header ID 45.).

If the caller enters a blocked LEC card for the second attempt, the caller hears the error announcement, "This card cannot be used for this service. (pause) Please hang up and dial again." (Announcement Header ID 46.) The call is then disconnected.

3.2 Operator Handled Call Scenario

The following is the call scenario for operator handled calls.

1. The caller enters 0-.
2. The call arrives at an OSPS operator position.
3. The operator enters a 900 forward number.
4. The operator enters a LEC card that is found in the blocking table and is marked as "blocked".

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5. An error message, "Card type not allowed with 900#", is displayed at the OSPS position, and the class of charge field (back card number) is displayed in reverse video.

6. The operator then requests alternate billing.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BLK900	5482A/B	3	4CH	27.59
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

4.1 Translations

BLK900 form (5482A/B Record) - This form is used to specify (or verify) whether a 900 call can be charged to a LEC (Local Exchange Carrier) calling card. The identification is based on the NPA, NPA NXX, or RAO on the LEC calling card. With 5E8 and later, either all NXXs for an NPA can blocked, or only specific NXXs within an NPA can be blocked.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. There are no new or modified fields. However, "Y" must be entered in the CAS ON field before this feature can be implemented.

SFSYS form (5713-1 Record) - This form is used to enable Secured Features. To enable the OSPS Blocking 900 Calls For LEC Cards, FEATURE ID 77 must be set to "S".

SEC. 4A79: ACCS 0+800 CALLS FROM WIRELESS

1. FEATURE DESCRIPTION

This feature is available with 5E7 and later Software Releases and identifies calls coming from wireless service providers under contract with OSPS to provide "air time" billing services, and provides special handling of 700, 800, and 900 calls from wireless.

The wireless service provider is connected to the OSPS through a PBX (Private Branch Exchange) Trunk Access to OSPS feature. However, this does not preclude the use of operator trunks. For PBX trunk access, the ANI (Automatic Number Identification) is not signaled from the PBX, but is instead determined from trunk group data at the OSPS. Flash, operator system hold, coin control signaling, and ring back are not supported through this access; furthermore, flash is treated as a disconnect.

If a 0+800 call arrives at an OSPS with an OLS code matching either of the two OLS code parameters defined for the wireless service provider, the OSPS plays an announcement to prompt the caller for a valid card number and informs the caller that there is a charge for the 800 call. The announcement header may be constructed from existing phrases to include the rates for the call. After the announcement is played, the OSPS provides automated calling card treatment with the normal operator bail-out opportunities. At the end of the call, OSPS makes an AMA (Automatic Message Accounting) record for the call.

Normal card sequence call processing is available except for 700, 800 or 900 forward numbers.

1.1 Call for the Operator Position

If the caller reaches an operator position through either dialing 0-, bail-out of automated protocol, or for some other reason, the operator will see the OLS text assigned to the back number, and possibly some information in the CID (Customer Information Display) for the incoming trunk group indicating that the call is coming from a wireless service provider under contract to OSPS for service. The operator will handle

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the call and secure valid billing before releasing from the position. Valid billing is determined in OLS data. The call is then routed normally and at the end of the call the OSPS makes an AMA record appropriate to the billing service selected by the caller.

1.2 700 and 900 Services

The 700 and 900 services are not supported with this feature. If a 0+700 or 0+900 call arrives at an OSPS from a wireless service provider with an OLS code matching either of the two OLS code parameters defined for the wireless service provider, the OSPS plays a disconnect announcement and the appropriate termination treatment is given. If an operator enters a 700 or 900 forward number at the operator position from a wireless service provider and the OLS code matches either of the two OLS code parameters, the OSPS rejects the entry of the forward number and displays an error message.

1.3 Scenarios

1.3.1 Automated call:

A caller enters a valid 0+800 call from a wireless service provider that has contracted with the OSPS. The caller receives an announcement explaining that a service charge applies and prompts for ACCS (Automated Calling Card Service) treatment. The caller enters a valid card number, and the call is outpulsed to the called number. At the completion of the call, an AMA (Automatic Message Accounting) record is made reflecting the appropriate billing.

1.3.2 Operator Handled call:

A caller enters a 0- call from a wireless service provider that has contracted with the OSPS. The call arrives at an OSPS operator position. The operator enters the valid 800 forward number and the appropriate billing information. The operator releases the call. At completion of the call, an AMA record is made reflecting the appropriate billing.

2. FEATURE ASSIGNMENT

2.1 Announcement Header IDs

The announcement header IDs of OSPSTA 93, 94, 95, and 96 are required for this feature. Although announcement header ID OSPSTA 93 has default data provided by ODA, the TCA may wish to change the rate information in that header ID on ANNHD form (5531 Record), view 8.61.

2.2 Text Display Information

The LECTEXT form (5444 Record), view 27.20 text information may be updated to include text that would be displayed to identify the particular wireless service provider if the call comes to a position. (This is optional.)

2.3 Screen Codes

The OLS code(s) information based on the screen code(s) and valid COC (Class of Charge(s)) that will be assigned to the wireless service provider(s) for this feature should be assigned on the SCRNCODE form (5415 Record), view 26.3. Informational text may be added that identifies the call as coming from a wireless service provider. (The existing OLS feature growth procedures may be used to enter this information.)

The screen code that is used to identify calls from the back number of a wireless service provider is assigned on the LINESCRN form (5416 Record), view 26.2. The ORIG STATION field requires a setting of "NCNPUB" so proper ITNA and TCS handling are performed on the call.

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This feature requires that one or both of the WL SCRN CODE 1 and WL SCRN CODE 2 fields on the OSPSOPT form (5424 Record), view 8.9 are entered with the OLS code parameter(s) which identifies the OLS code(s) assigned to each wireless service provider by the OSPS.

NOTE: If only one of the fields is assigned, the other field must not be entered.

2.4 Secured Feature

This is a secured feature, therefore the FEATURE ID 79 must be set to "S" on the SFSYS form (5713-1 Record), view 8.22. If this feature is using PF (Private Facility) trunks to connect the OSPS to the PBX, then the PBX Trunk Access to OSPS special feature, FEATURE ID 74, must also be activated.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

3.1 Translations

ANNHD form (5531 Record) - This form is used to assign phrases to an announcement header ID. Header IDs for OSPSTA 93, 94, 95, 96 apply to this feature. Although default data has been entered for OSPSTA 93, the TCA may wish to change the rate information in this Header ID.

OSPSOPT form (5424 Record) - This form is used to define the global office parameters for OSPS. WL SCRN CODE 1 and WL SCRN CODE 2 define the OLS codes used to identify a wireless provider.

SFSYS form (5713-1 Record) - This form is used to activate secured features. FEATURE ID 79 must be set to "S" to activate this feature.

SEC. 4A80: INTRA-SWITCH ANALOG LINE TRANSFER

1. BACKGROUND

IALT (Intra-Switch Analog Line Transfer) reduces the down time interval and expands the number of lines that can be supported during a line transfer. Without this feature, customers can experience excessive down time during office cutover or cable-line transfer. Using LTSB (Line Time Slot Bridging) can somewhat alleviate this situation. However, since many BRCS (Business and Residence Custom Services) features are not supported on LTSB, the down time interval may be longer than desired.

2. FEATURE DESCRIPTION

Available with 5E7 and later Software Releases, Intra-Switch Analog Line Transfer is a Secured Special Feature using Secured Feature ID 80. The feature number for this capability is 99-5E-1400.

The IALT feature is a temporary feature used only during office cutovers or cable-line transfers and provides the ability to duplicate the line data associated with a TN (Telephone Number), including per-line BRCS features, on an associate (new) OE (Originating Equipment) number. The duplicate data assignment helps to minimize any outage associated with a move of analog OE numbers on a 5ESS Switch.

When IALT is assigned, only one of the OE numbers associated with the TN is active or in use at a time. Calls may be originated from either OE, but calls will only terminate to the active OE. Initially, the original OE is active. This means that calls may be originated from the new OE number, but calls will only terminate to the original OE. After the cutover or cable-line transfer, a single, per-office Recent Change

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may be used to activate service to all the new IALT OE numbers and deactivate the old OE numbers. In addition, if desired, activation of the new IALT OE number may be done on a per-SM (Switching Module) basis. If lines are being moved across SMs, all affected SMs must be set to terminate to the new OE number. This Recent Change needs to be closely synchronized with the physical cable-line transfer or cutover since it will determine to which OE the call will terminate.

The presence of the BRCS/LASS features on both OE numbers allows customers to use most aspects of their custom features throughout the cable-line transfer or cutover. Some functionality is restricted from the new OE whether it is active or not. The major restrictions are inhibiting CORCs (Customer Originated Recent Change), including the modification of TORC (Time Originated Recent Change) schedules, and disallowing LASS screening. CORC attempts from the new OE number, with the exception of MSS (Message Service System) MWI (Message Waiting Indicator) deactivation, will result in REORDER tone being returned to the subscriber.

The work to restore full functionality to all customers would be performed shortly following a cable-line transfer or cutover using two Recent Changes per line. The first Recent Change removes IALT from the line and the second changes OE to the new OE number. These Recent Changes should be done in two consecutive operations since the line will not have service after the first Recent Change is applied. As soon as both Recent Changes for an OE number have completed, that customer again has full service.

3. FEATURE ASSIGNMENT

3.1 Recent Change Procedures

Since the feature is temporary, it is expected that the entire process (IALT assignment, cutover, new OE activation, and IALT removal) will be completed within a few days. The following sequence of steps shows how the feature is expected to be used as the cutover or cable-line transfer work progresses.

1. Planning Interval
2. IALT Assignment RC Set I
3. Lines Transferred
4. IALT Removal RC Set II

The following is a description of the activity for each step in a cable transfer:

1. The planning interval is done prior to IALT feature assignment. The lines to be transferred are identified and the new target OE numbers are created. There must be one new target OE number for each line to be moved.

   Also, at this time, two Recent Change scripts need to be prepared. These two scripts are used during later time intervals. The first script is used to assign IALT to each line to be moved. IALT is assigned by setting IALT to "Y", LEADPORT to "Y", and the ASSOC OE field to the target OE for the line on the COMPOSITE LINE view 1.6.

   The second script is used to restore full service on the new target OE. This set contains two Recent Changes for each line. The first is an update to view 1.6 to remove IALT by setting IALT to "N", LEADPORT to "N", and the ASSOC OE field to blank. The second Recent Change is another update to view 1.6 to set the CHG OE to the target OE for the line. These two Recent Changes should be executed in pairs since the line will not have any service after the first update has completed. Both Recent Changes should complete within 25-30 seconds. Once the second Recent Change has completed the line has full functionality.

   - ***NOTE:*** For those TNs that have certain BRCS features (e.g., Call Forwarding, Distinctive Ringing, Individual Dialing Plan), the completion time will vary.

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2. IALT is assigned to the identified lines using the first Recent Change script created in step 1. The data is duplicated on the new OE number for each of the lines.

   Once IALT has been assigned, no other changes can be made to that line via Recent Change until the IALT feature has been removed from the line. Also, IALT lines cannot be identified using office records, but can be found using the line query operation on the MULTIPLE LINE QUERY view A.2.

   At this point in time:

   - The original OE is active.
   - Calls may be originated from either OE.
   - Calls will terminate only to the original OE.
   - CORCs may be executed from and are applied to the original OE.
   - TORCs that execute will apply to the original OE only.
   - The original OE has full BRCS functionality.

3. This is the actual cutover (or cable-line transfer) from the original to the new OE numbers. If all of the IALT lines in the office are moved at one time, only a single Recent Change is needed to make the new OE numbers active. Otherwise, one Recent Change per affected SM is required. One SM is the smallest unit to activate the new OE numbers. To activate the new OE, set ACTIVE to "Y" for FEATURE ID 555 on the SECURED FEATURE UPGRADE view 8.22. To activate the new OEs for the whole office, MODULE should be set to "OFC". Otherwise, it should be set to the affected SM number. In 5E9(1) and later Software Releases, the MODULE, ACTIVE, and FEATURE ID fields must be set from the OPTIONED FEATURES view 8.31.

   Once Feature ID 555 has been made active:

   - The new OE is active.
   - The new OE has most of the BRCS feature functionality.
   - CORCs are not allowed except for MSS MWI deactivation.
   - TORCs that execute will apply only to the original OE.

   The main focus at this point is to keep downtime to a minimum. The Recent Change script to activate the new OE takes less than a minute. If the physical cutover is expected to take several minutes, the outage can be minimized by doing this Recent Change approximately halfway through the physical move. Also, since the active OE does not have full functionality, this interval should be kept as small as possible.

4. IALT is removed from the line and full activation of the new OE number is achieved by using the second set of Recent Changes created in step 1. Once IALT is removed from the lines and the data has been moved to the new OE numbers, the cable-line transfer or cutover is complete. Also at this point FEATURE ID 555 should have ACTIVE reset to "N" for the office or the affected SMs.

3.2 Restrictions and Limitations

WARNING: The IALT feature is not supported during a retrofit. Before a retrofit can be performed, IALT procedures must be complete, and IALT must be "N" on Recent Change View 1.6.

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Although there are no per-line BRCS/LASS feature assignment restrictions with the IALT feature, a number of line feature restrictions exist. IALT assignment restrictions and limitations are (where field names refer to view 1.6):

- No multi-line hunt group lines,
- No coin lines,
- No lines without an individual class-of-service (originating and terminating),
- No ISDN,
- MAN EXCL (Manual Exclusion) must be "N",
- CIDIAL limited to DENY, ALLOWED, or REQUIRED,
- NODL (No Dial) must be "N",
- GNDREF (Ground Reference) must be "N",
- BUSY MONITOR must be "N",
- SHARED must be "N",
- FGA (Feature Group A) must be "N",
- ATT MLHG (Attendant Multi-Line Hunt Group) must be 0,
- RBV TGN (Remote Busy Verify Trunk Group Number) must be blank,
- ESP (Essential Services Protection) may have to be "N" (RC Views 5.31, 12.31).

ESP must be "N" if the ASSOC OE specified is on the same SM, LU (line unit), CONC (concentrator), SWG (Switch Group), and SW (Switch), as another line with ESP set to "Y".

An existing restriction to the values allowed for MFRI (Multifrequency Ringing Individual) lines that should be kept in mind when using the IALT feature. LUs, ISLUs, and, in 5E8, IDCUs allow different ranges for the party value for MFRI lines. LUs allow party values 0-9, while ISLUs allow only 1-4 and IDCUs allow 1-5. If an MFRI line on an LU is being moved to an ISLU or IDCU, the party value must be in the valid range for the new OE.

The presence of the BRCS/LASS features on both OE numbers allows customers to use most aspects of their custom features throughout the cable-line transfer or cutover. However, restrictions exist for features applied by CORCs. Attempts to apply CORCs from non-lead ports are blocked whenever IALT is set to "Y". Customers attempting CORCs on non-lead ports receive reorder tone. The only exception to this is MSS MWI deactivation.

TORCs are always applied against the lead port no matter which port is active when the TORC is executed. If the new OE is active when the TORC is executed, the end user will not see the affects of the TORC on the new OE. Should a TORC occur at the same instant as the Recent Change to move to the new OE, that TORC may be lost. Since there is only about a 20 second window in which this can occur, the probability that it will occur is low. Once the cutover is complete and IALT has been removed from the line, the final Recent Change that moves the line data to the new OE also moves any CORCed/TORCed data.

3.3 Changing Subscriber Service

Setting the new IALT field on view 1.6 to "Y" enables feature access from the "B port" OE numbers. Certain restrictions apply to the "B portY", the only allowed recent change activity on that line will be to set

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the ASSOC OE field to blank and reset the IALT field. A new office mechanism will be used to control the activation of the "B port" OE numbers. Control of the IALT OE numbers will be provided by the OFS (Optioned Feature System). OFS ID 555 will be used for the IALT feature. At cutover, this option will be set to activate the "B port" IALT OE numbers.

The OFS option can be set on a per-office or per-SM basis. However, lines being moved from one SM to another SM must have the IALT activation/deactivation option set/reset on both SMs. If the IALT field on view 1.6 is set to "Y", the following holds for other fields on view 1.6:

- MAN EXCL must be "N",
- CIDIAL is limited to "DENY", "ALLOWED", and "REQ",
- NODL must be "NONE",
- GNDREF must be "N",
- BUSY MONITOR must be "N",
- SHARED must be "N",
- FGA must be "N",
- ATT MLHG must blank,
- RBV TGN must be blank,
- CLSS must be "N",
- SLLC must be blank.

4. TRANSLATION REQUIREMENTS

Provisioning of the IALT feature using ODA input forms is not allowed. Provisioning of this feature is done using Recent Change as described below.

. **WARNING:** The IALT feature is not supported during a retrofit. Before a retrofit can be performed, IALT procedures must be complete, and IALT must be "N" on Recent Change View 1.6.

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
LINE	5109	3	1I	1.6

LINE form (5109 Record) - This form is used to define the Office Equipment Number and features for each TN on a 5ESS Switch. The ODAfield IALT was added which is defaulted to "N" and is notchangeable.

SEC. 4A81: LIDB CHANGE HANDLING OF INDETERMINATE REPLY CODES

1. FEATURE DESCRIPTION

For 5E7 and later this feature gives the OSPS three different treatments for three different sets of LIDB CCD (Calling Card) and BNS (Billed Number Screening) TCAP query replies.

Currently, all "indeterminate" query replies (both LIDB CCD and LIDB BNS) are treated as a group; they are either allowed or denied as a whole. If this feature is active, the OSPS has the ability to select three different treatments for three different sets of LIDB CCD and BNS query replies as follows:

1. Unavailable network resources and nonparticipating group query replies,

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2. Timeout query replies, and

3. The "error" query replies, "Missing Group, Misroute, Reject, and Garbled Message".

One of the following three treatments may be selected for each of the above replies:

1. Existing treatment. The treatment given for LIDB CCD indeterminate replies is either allow or deny according to the value of the CC BILL BLOCK field on the OSPSOPT form (5424 Record). The existing treatment for LIDB BNS is for PUBLIC?? to be displayed at the operator's position and the call is allowed or denied per the operator's discretion.

2. Allow, which overrides any existing treatment.

3. Deny, which overrides any existing treatment.

1.1 LIDB CCD Call Scenarios

A caller enters 0+intraLATA call and hears the bong treatment. The caller then enters LEC card number and a query is sent to the LIDB database. The query reply indicates "unavailable network resource".

- If the LIDB Change Handling of Indeterminate Reply Code feature is not active, the CC BILL BLOCK field is checked on the OSPSOPT form. If the field is set to "Y", then the call is rejected and caller is asked to enter the card number for a second attempt. If the field is set to "N", then the call is allowed and a "Thank You" announcement is played.

- If this feature is active, the UNR AND NPG field on the OSPSOPT form is checked after the query reply returns. If the field is set to "E" (existing treatment), then the above scenario applies. If the field is set to "A" (allow), the call is allowed and the "Thank You" announcement is played. If the field is set to "D", then the call is rejected and the caller is asked to enter the card number for a second attempt.

1.2 LIDB BNS Call Scenarios

A caller enters 0+intraLATA call and hears the bong treatment. The caller dials 0 for operator. The call reaches an operator position. The caller wants to bill the call to a third number and gives the operator the third number to bill. An LIDB BNS query is sent to the LIDB database. The query reply indicates "missing group".

- If the LIDB Change Handling of Indeterminate Repy Codes feature is not active, then PUBLIC?? is displayed at the operator's position. The operator informs the caller that third number billing is not allowed.

- If this feature is active, the OTHER INDET field on the OSPSOPT form is checked after the query reply returns. If that field is set to "E" then the above scenario applies. If that field is set to "A", then BLG OK is displayed at the operators terminal and the call is allowed. If the field is set to "D", then BLNG DNY is displayed and the call is blocked from third number billing.

2. FEATURE ASSIGNMENT

This feature must be activated on the SFSYS form by setting the Secured Feature ID field to "S". In addition, three new fields on the OSPSOPT form define treatment for LIDB Change Handling of Indeterminate Reply Codes feature.

3. TRANSLATION REQUIREMENTS

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Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

3.1 Translations

OSPSOPT form (5424 Record) - This form is used to define the OSPS office option global parameters. The following three fields were added to define LIDB handling of indeterminate replay code treatment:

- UNR AND NPG specifies whether LIDB unavailable network resources and nonparticipating group query replies should be allowed, denied or given existing treatment. Existing treatment is specified by the field CC BILL BLOCK for credit card, and indeterminate for BNS.
- TIMEOUT specifies whether a LIDB timeout query reply should be allowed, denied or given existing treatment. Existing treatment is specified by the field CC BILL BLOCK for card, and indeterminate for BNS.
- OTHER INDET specifies whether the other LIDB indeterminate query replies, "Misroute, Missing Group, Reject Message, and Garbled Message", should be allowed, denied or given existing treatment. This field does not apply to reply codes No Translation Address, Subsystem Congestion, Subsystem Failure, Unequipped User, Network Failure, or Network Congestion. Existing treatment is specified by the field CC BILL BLOCK for credit card, and indeterminate for BNS.

SFSYS form (5713-1 Record) - This form is used to enable Secured Features. To enable LIDB Change Handling of Indeterminate Reply Codes, enter "S" for FEATURE ID 81.

SEC. 4A83: OSPS FEATURE GROUP D INCOMING SIGNALING FOR SPECIAL APPLICATION

1. FEATURE DESCRIPTION

For 5E8 and later, FGD SA feature is a secured feature and requires that SFID 83 ACT must be set to "Y" to activate this feature on the switch. The feature number for this capability is 98-5E-2112.

The FGD IS SA (Feature Group D Incoming Signaling Special Application) feature provides FGD signaling access to OSPS Toll and Assistance features for wireless, TRS (Telephone Relay Service), and certain other service applications. It provides identification of wireless calls based on trunk group data, screening, and additions to the AMA records for billing purposes.

With FGD IS, the OSPS is able to receive 1+ and 0+/0- incoming calls signaled using the FGD direct connect protocol. Depending on the trunk group data, either true answer is returned to the originating switch when the call reaches the billing state, or answer is returned after the signaling acknowledgement wink. OSPS services requiring the hold and/or through supervision are not permitted. Pseudo operator hold is provided in the OSPS to prevent a call from disappearing from an operator position when the calling party disconnects while the call is at a position.

For the wireless application, which is identified by the incoming trunk group data, the signaled ANI may contain one of the three II digit pairs, 61, 62, and 63 assigned to mobile service or an II of 00 and the MIN (Mobile Identification Number) of the originating station. When a BDN (Billing Directory Number) is contained in the trunk group data, it is used for rating. If no BDN is contained in the trunk group data, the received MIN is used for rating. The number used for rating is also used as follows:

- the number displayed when a call appears at a position.
- the number placed in the calling number field in the AMA record.

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- the number placed in the billing number field in the AMA record for a station paid call.
- the number used for card validation queries.
- the number used for the NCD (Network Call Denial) query for 5E8 only. For 5E9(1) and later, MIN is used for the NCD query when a BDN is present in the trunk group data.

Either the BDN or the MIN may be used for the OLS (Originating Line Screening) and TCS (Terminating Code Screening) depending on the contents of the trunk group data. When a BDN is contained in the trunk group data, it is used. If the BDN is not contained in the trunk group data, the MIN is used. Based on the value of the trunk group screening parameter and a new selective OLS parameter, all incoming calls or just 0+/0- calls can be screened.

The MIN is recorded in the AMA module 931. That module is added to the AMA record for wireless calls by a previous feature, AMA for Wireless. The OSPS does not determine the roamer/non-roamer status of the originating station.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for FGD IS feature.

2.1 Digit Analysis

Digit analysis data needs to be populated unless the OSPS already has it populated.

The DAS must be populated to use the proper incoming LDIT and PDIT. This DAS is used on the TKGRP form.

2.2 Activation of the Feature

On the TKGRP form, populate the BILLING DN field if a trunk group dedicated to wireless traffic should use the BILLING DN rather that the signaled MIN. If BILLING DN is not populated, the MIN will be used. The TRKCLS field must be "LATA", the BILL TRKGRP field (or ATT BILL field on view 5.1) must be "Y", and the DAS field must be set to the DAS that contains the required digit analysis data.

On the OPRTK form, set WIRELESS, the wireless indicator field, to "Y" for the trunk group number that is dedicated to the wireless services provider, and set WIRELESS SA to "Y". For 5E8 only, if WIRELESS and WIRELESS SA are activated, the WIRELESS SA supersedes the functionality of the WIRELESS feature. Also, set the OLS screening indicator, SELECTIVE OLS to "Y" for the trunk group number that is dedicated to the wireless services provider if OLS is to be done only for 0-/0+ calls. Set SELECTIVE OLS to "N" for normal OLS screening (1+/0-/0+ calls).

The wireless secured feature must be turned on, i.e., the SFID 104 on the SFSYS form must be "Y". Also, the SFID 83 must be set to "Y" for the FGD SA feature, which is a secured feature.

The WIRELESS REC field on the OSPSOPT form activates the AMA Recording of Calls from a Wireless Provider feature.

The feature activation ID 572 must be set to "Y" on the FOSYS form to active the FGD IS feature for the Special Applications feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2/3	3	5AS	8.31
OPRTK	5417	3	4R	26.26

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OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2/3 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) IDs for Special and Transparency Features. The feature activation ID 572 must be set to "Y" to activate FGD IS feature.

OPRTK form (5417 Record) - This form is used to define the characteristics of InterLATA (Local Access Transport Area) carriers. For FGD IS, the wireless indicator fields, WIRELESS and WIRELESS SA must be set to "Y".

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The WIRELESS REC field must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to enable secured features. The SFID 104 ACT field for the Wireless Secured Feature must be set to "Y", and the SFID 83 ACT field for the FGD SA feature must be set to "Y".

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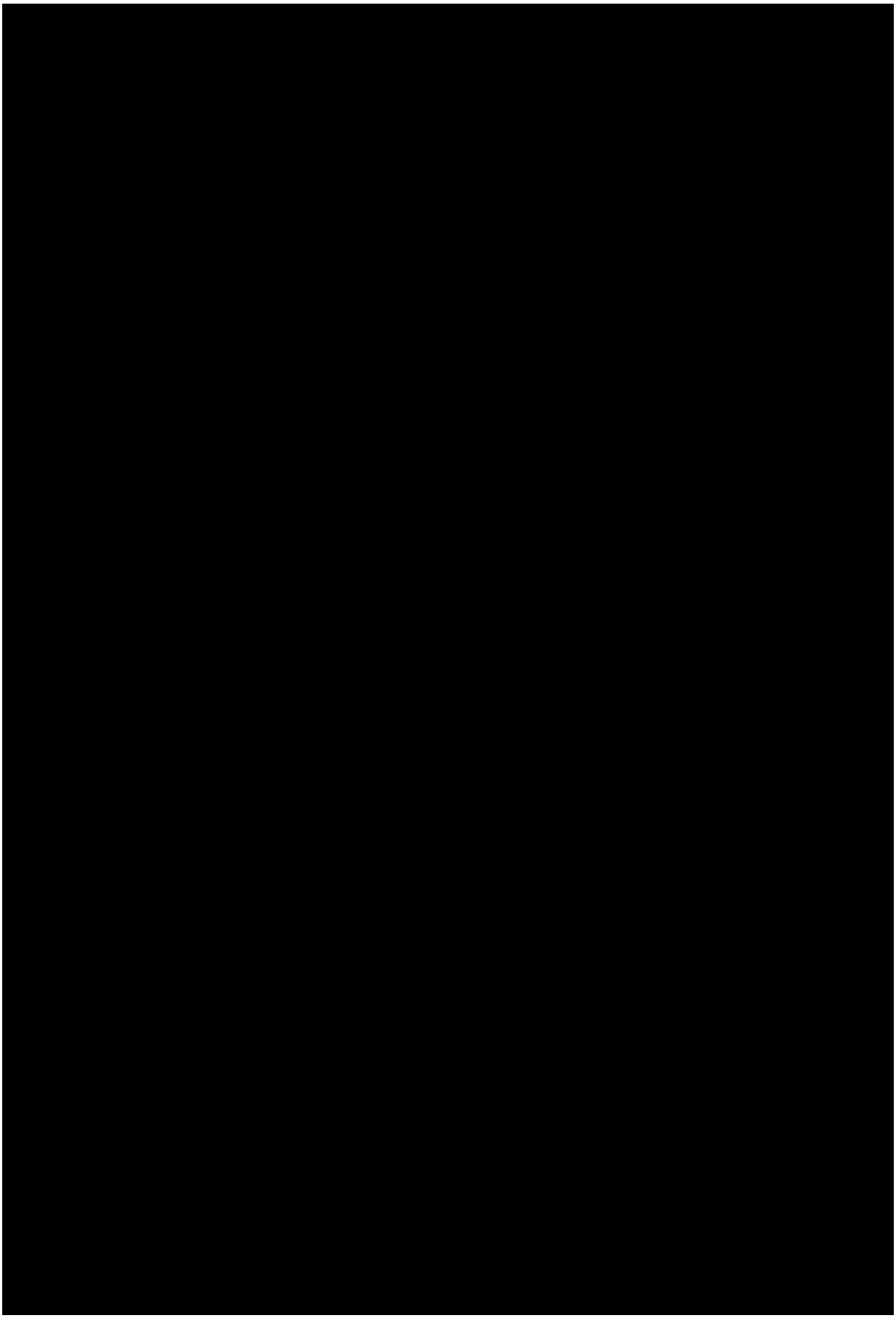

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Figure 1 FGD IS SA FORM FLOW

SEC. 4A85: OSPS FTS 2000 NETWORK REMOTE ACCESS

1. BACKGROUND

The FTS-2000 (Federal Telecommunication System) network is a dedicated network of 5ESS Switches serving Federal Government customers. This network provides connectivity for these government customers between various locations and off-network locations. The FTS-2000 network also provides network attendant services. The network uses 10-digit NANP (North American Numbering Plan) for FTS network destinations.

Calling card billing services for calls are provided in the AT&T network by the OSPS with CAS (Customer Account Services) NCP (Network Control Point) and with special card service to access SDN (Software Defined Networks). The AATOS (Alternate Access to Operator Systems) and SDN NRA (Network Remote Access) features provide the special card services. The SDN NRA feature provides the SDN customer access to the SDN and provides the SDN card holder with card billing to private network, domestic, and international destinations. The AATOS features provide 1+800 dialed calls access to AT&T operator services.

The FTS-2000 NRA feature uses the CAS, AATOS, and SDN NRA capabilities for Federal Card customers.

2. FEATURE DESCRIPTION

The FTS-2000 NRA feature is available for 5E8 and later Software Releases. The feature number for this capability is 98-5E-2081.

The FTS NRA feature offers the customer:

- reduced number of digits dialed for the NRA by FTS Card customers.
- Federal Card billing for international calls.
- access to OSPS for FTS Network calls.
- Federal Card sequence calling. The ability to place sequence calls reduces the number of dialed digits required to place a call.
- 1+800 access to OSPS to reach FTS network, domestic, and international destinations.

For the FTS NRA feature, the OSPS

- recognizes special 700+NXX numbers as FTS NRA calls.
- handles Federal Card initial and sequence calls using an automated protocol (0+, 01+, and 1+800) or operator assistance (0-, 00-, 0+, 01+, and bailout).
- allows Federal Card callers to complete calls from rotary dial phones.

The OSPS identifies FTS calls through

- special 700 numbers or an 800 number assigned to FTS.
- return of a special FTS routing number in calling card validation query replies. Through the routing number, OSPS can determine if the call is routed to the ASN (AT&T Switched Network) or the FTS network.

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2.1 Service Access

SDN NRA and AATOS capabilities recognize special FTS dialed access via special SSC-WXY code (SSC is the Special Service code, see key attribute for the SRVDESIG form (5474 Record) for FTS 1+800 access and 700-NXX digits in the forward number.

2.2 Scenarios

2.2.1 0- Access

1. Call arrives at an operator position.
2. Caller provides a forward number in the NANP or international format, a card number, and a PIN (Personal Identification Number.
3. OSPS determines the call is an FTS NRA call if

- 700-FTS number is entered.
- FTS routing number in CAS NCP reply.

2.2.2 0+, 01+Access

1. An NANP or International call arrives at the OSPS.
2. OSPS gives the "bong" tone and prompts the caller for a card number and PIN.
3. A card validation query is sent to the CAS NCP data base.
4. If an FTS Routing number is returned in the query reply, the call is given FTS NRA treatment.

2.2.3 1+800 FTS Access

1. Caller dials a 1+800+FTS+CALL, which is a number assigned to the FTS network.
2. The LEC (Local Exchange Carrier) EO (End Office) recognizes the AT&T 800 number and routes the call to an AT&T OSO (Originating Screening Office).
3. The OSO queries the IDB (INWATS Database) NCP, which translates the 800 number into a routing number of the form SSC(a)-WXY-NPAZ. The SSC(a) code is the same that is used for identifying Advanced 800 services. A unique SSC(a)-WXY code is assigned to the FTS-2000 to distinguish the FTS call from an SLD (Special Long Distance) call.
4. The OSO recognizes the SSC code as an Advanced 800 call and queries the DSD (Direct Services Dialing) NCP with the SSC(a)-WXY-NPAZ and the calling station's ANI (Automatic Number Identification).
5. The DSD NCP translates the SSC and ANI information into an SSC(b)-WXY-NPAZ routing number specific to the OSPS serving area of the calling station.
6. Based on the SSC(b) code, the OSO routes the call to a toll switch which translates the SSC(b) code to the unique SSC(c)-WXY code used to route the call to the appropriate OSPS and sends a 7-digit ANI and the SSC number via FGC (Feature Group C) MF (Multifrequency) signaling.

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7. The OSPS recognizes the FTS-2000 call from the SSC(c)-WXY code and marks the call for special FTS NRA call handling.

8. If no ANI is received, the OSPS routes the call to an operator to perform ONI (Operator Number Identification).

9. If the ANI is received, the OSPS prompts the caller to enter the forward number. If the caller is calling from a rotary phone, the caller must timeout for an operator.

   If the caller is dialing from a DTMF (Dual Tone Multifrequency) station, the caller can

   - Dial an NANP number
   - Dial 01+ and international number
   - Timeout and be routed to an operator, or dial 0 for and operator.

10. If the caller from a DTMF station dials only the forward number and does not enter a card number, the call is sent to an operator.

11. After the forward number and Federal Card number are collected, OSPS formulates the CCS7 (Common Channel Signaling System 7) TCAP (Transaction Capability) calling card validation query that is delivered to the CAS NCP.

12. The CAS NCP validates the card number and send a reply message that has a 10-digit routing number in the form SSC(c)-WXY-NPAZ.

13. OSPS checks the SSC(c)-WXY-NPAZ to determine if it is assigned to FTS-2000.

14. On a call that is to be routed over the private network, existing denial treatment will be given if a routing number is not returned from the CAS/NCP if a 1 + 800 FTS access number is used.

15. OSPS routes the call either over the FTS PNI (Private Network Interface) or the ASN. International calls are routed over the ASN or the FTS private network.

16. Calls routed over the ASN receive AMA (Automatic Message Accounting) recording in the OSPS. Calls routed over the PNI receive AMA treatment from the PNI.

2.2.4 FTS NRA Sequence Calls

1. FTS caller requests sequence calling at the end of a call or as the result of a no answer or busy.

2. OSPS recognizes the # as a request for a new call.

3. OSPS collects the new forward number from the caller and attempts to establish the newly requested call using FTS NRA.

2.3 FTS PNI

The FTS PNI uses trunk facilities between the OSPS and the FTS-2000 switches. These inter-network trunks use CCS7 signaling. OSPS provides signaling messages to the FTS-2000 switches for FTS network services use.

3. FEATURE ASSIGNMENT

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See Figure 1 for feature assignment form flow for FTS NRA feature.

3.1 Secured Feature

This is a secured feature, therefore the ACT field for SFID 85 must be set to "Y" on the SFSYS form (5713-1 Record) to indicate this feature has been purchased. To activate this feature, the ACT field for the option feature ID OFID 563 on the FOSYS form (5713-2 Record) must be set to "Y".

To activate the ATTOS - Change Handling of All Zeros ANI feature, the ACT field for OFID 561 must be set to "Y" on the FOSYS forms.

3.2 Office Parameters

The following fields on the OSPSOPT form (5424 Record) support this feature:

- "Y" must be entered in the CAS R3 ON field to activate the CAS R3 feature. For more information on CAS R3 see Division 2, Section 3I.
- RECOGNIZE 10P4 must be "Y" to activate the Inclusion of 14 Digit Cards in the Card Recognition Tables feature.
- AS FEATURE WORD must be "Y" to activate the AATOS/SDN NRA feature. See Division 2, Section 3I for more information on this feature.

  In addition, on the SRVDESIG form (5474 Record), the SSC WXY field must be entered, and the SERVICE TYPE field must be set to "SDNNRA" or "S".

3.3 Announcements

Four new announcement Header IDs have been created in association with the FTS NRA feature. In addition, the FTS NRA feature uses four existing announcements.

The existing HEADER IDs are the following:

HEADER ID 2 is provided to a caller who has entered a calling card (in the caller's initial attempt) and the associated data base reply is either "Invalid Card", "Missing Customer Record", or "Vacant Code".

HEADER ID 4 is provided to a caller who has entered a calling card (in the caller's second attempt) and the associated data base reply is either "Invalid Card", "Missing Customer Record", or "Vacant Code". This announcement is also provided on an initial attempt when the associated data base reply is either "No Translation Data for This Specific Address" or "Unequipped User". After the announcement, the call is disconnected.

HEADER ID 46 is provided to a caller who has entered a calling card that has an associated FTS Routing Number and the forward number is a 700 Quantum number. After the announcement, the call is disconnected.

The following announcements support the FTS NRA feature:

HEADER ID 166 is provided to a caller when the caller has requested SAB (Subaccount Billing) treatment on an FTS Service Address Call (i.e. 700-FTS or 1+800-FTS). After the announcement, the call is disconnected.

HEADER ID 167 is provided to a caller (on the caller's first attempt) on an FTS Service Address call when the associated data base reply is "Accept" and either an FTS routing number is not returned from the data base or a non-FTS Routing Number was returned.

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HEADER ID 168 is provided to a caller (on the caller's second attempt) on an FTS Service Address call when the associated data base reply is "Accept" and either an FTS Routing Number is not returned from the data base or a non-FTS Routing Number is returned. After the announcement, the call is disconnected.

HEADER ID 169 is provided on a sequence attempt (after an initial FTS NRA call) when the associated data base reply is "Accept" and either an FTS routing number is not returned from the data base, or a non-FTS routing number is returned, or the data base response was either "Invalid Card", "Missing Customer Record", or "Vacant Code". After the announcement, the call is disconnected.

3.4 FTS NRA Forms

The following forms support the FTS NRA feature:

- FTSCC form
- FTSNANP form
- FTSNXX form
- FTSRN form

The FTSCC form indicates if an international call is routed on the FTS or ASN network.

The FTSNANP form indicates if a domestic number should be routed on the ASN or FTS network.

The FTSNXX form indicates if the 700 number dialed is a 700-FTS number.

The FTSRN form indicates if the routing number is a valid FTS Routing Number. The SDN DAS entry on the OSPSOPT form is used to analyze the FTS Routing Number.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
FTSCC	5485	3	4CM	27.78
FTSNANP	5486	3	4CN	27.77
FTSRN	5488	3	4CP	27.76
FTSNXX	5487	3	4CO	27.75
SRVDESIG	5474	3	4BZ	27.70

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. Four new announcement HEADER IDS 166 - 169 support this feature.

FTSCC form (5485 Record) - This form identifies international locations that must be routed over the FTS private network rather than the AT&T public switched network. When OSPS processes a call to an international forward number and an FTS Routing Number is returned in the CAS query reply, then this form is checked. If a matching country code is found, the call cannot be completed on the AT&T public switched network. Instead, the call is completed over the FTS private network. If an entry is not found in this form the call is routed over the AT&T public switched network.

FTSNANP form (5486 Record) - This form identifies calls to a domestic forward number that must be routed over the AT&T public switched network rather than the FTS private network even if an FTS routing number was returned in the CAS query reply. If an entry is not found on this form, OSPS routes the call over the FTS private network.

FTSNXX form (5487 Record) - This form identifies the 700 number NXXs that can be dialed by a caller to signal the caller's desire to receive FTS NRA treatment. When OSPS handles a call with a 700 forward number, the FTS NRA feature checks this form for an entry that matches the NXX of the forward number. If one is found, the call receives FTS NRA treatment. If a match is not found, an additional check is made to determine if the number is an Alliance number and should receive Alliance treatment. Otherwise, the

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call (by default) receives Quantum treatment.

FTSRN form (5488 Record) - This form identifies the 10-digit FTS NRA routing numbers used to route calls on the FTS private network. A routing number is returned to the OSPS from the CAS NCP when a Federal Calling Card is used as the billing method. If a match is found, the routing number is used to route the call on the FTS private network.

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+800 calls arriving on AATOS and SDN/NRA MF trunks. The FTS field indicates if the 1+800 number is an FTS NRA call.

5. GLOSSARY

AATOS	Alternate Access to Operator Systems
ANI	Automatic Number Identification
ASN	AT&T Switched Network
CAS	Customer Account Services
CCS7	Common Channel Signaling System 7
DSD	Direct Services Dialing
DTMF	Dual Tone Multifrequency
EO	End Office
FGC	Feature Group C
Federal Card	a calling card issued by AT&T to FTS 2000 customers.
FTS	Federal Telecommunication System

FTS Routing Number the number returned in the CAS card validation

IDB	INWATS Database
LEC	Local Exchange Carrier
MF	Multifrequency
NANP	North American Numbering Plan
NCP	Network Control Point
NRA	Network Remote Access

OSO - Originating Screening Office

OSPS	Operator Services Position System
ONI	Operator Number Identification
PIN	Personal Identification Number
PNI	Private Network Interface

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SAB	Subaccount Billing
SLD	Special Long Distance
TCAP	Translation Capability

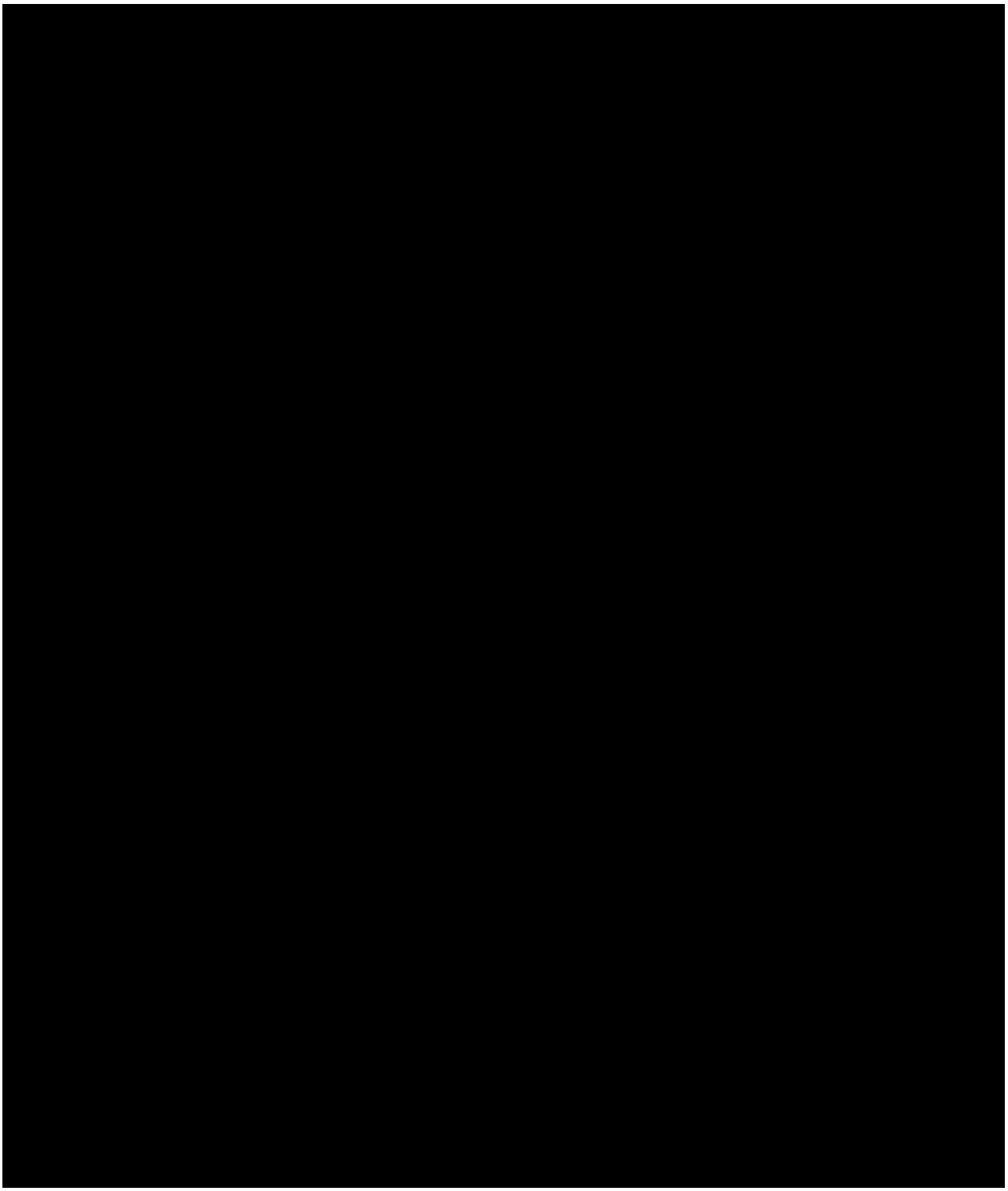

Figure 1 FORM FLOW FOR FTS NRA FEATURE

SEC. 4A86: OSPS EXCHANGE ALTERNATE BILLING SERVICES ALTERNATE ROUTING

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1. BACKGROUND

The EABS (Exchange Alternate Billing Services) software provides the switch owner with the ability to direct calling card and BNS (Billed Number Screening) queries to either the LIDB (Line Information Database) or the BVA (Billing Validation Application) for validation. This can be accomplished on a 3-digit or 6-digit basis of the card or billing number. Validations directed to the LIDB use the ANSI (American National Standards Institute) TCAP (Transaction Capability Application Part) CCS7 (Common Channel Signaling 7) signaling. Those directed to the BVA use DCIS6 (Direct Common Channel Signaling 6) signaling.

For 5E8 and later, the EABS Alternate Routing feature provides an alternate destination for the validation of these card and BNS queries. This alternate destination replaces the BVA option and uses existing LIDB signaling.

2. FEATURE DESCRIPTION

The EABS Alternate Routing is a secured feature with SFID 86 and optioned feature ID 562. The feature number for this capability is 98-5E-2093.

The alternate destination is selected in the same way that the BVA is selected. The EABS tables in the OSPSOPT form (5424 Record), DSAPP form (5537 Record), and LIDBLNQ form (5449 Record) determine whether the Card or BNS query is sent to the LIDB or to another destination. This feature effectively changes the "Other" destination from the BVA to an AD (Alternate Destination) that is capable of processing a query using LIDB signaling.

The LIDB and the AD share existing LIDB timeout values, indeterminate treatment handling, event traps, software alarms, and measurements.

3. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the EABS Alternate Routing feature.

For an AD, "LALT" must be entered in the APPLIC field on the DSAPP form with appropriate values for TRANS TYPE and SUB SYS NBR.

Values for LIDB Calling Card and LIDB BNS queries on the OSPSOPT form should be checked to ensure the queries are sent to the proper database, either the LIDB or the AD database. Queries to the AD also use the other LIDB related fields on the OSPSOPT form for timeouts and software alarms.

Ensure correct processing of Calling Card and BNS queries on the LIDBLNQ form if the OSPSOPT form requires a 3 or 6-digit selection.

EABS Alternate Routing is a secured feature. To enable this feature the ACT field for SFID 86 must be set to "Y" on the SFSYS form (5713-1 Record). In addition, the Optioned Feature ID 562 must be activated by setting the ACT field for OFS ID 562 to "Y" on the FOSYS form (5713-2/3 Record).

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSAPP	5537	3	5AK	8.17
FOSYS	5713-2/3	3	5AS	8.22
LIDBLNQ	5449	3	4AX	27.32 27.33
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

DSAPP form (5537 Record) - This form is used to specify the direct signaling application type, the

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transaction type, and the subsystem number used by the direct signaling trunks which use CCS7 signaling protocols. The application for the LIDB alternate destination is "LALT".

FOSYS form (5713-2 Record) - This form is used to enable transparency and special features. The ACT field for OFS ID 562 must be set to "Y" to enable this feature.

LIDBLNQ form (5449 Record) - This form is used to designate a query destination on the basis of the NPA-NXX or the RAO(0/1)XX. The alternate destination database is used if RANGE LIDB and LIDB fields are set to "N".

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The ATT INTER, LEC INTER, ATT INTRA, LEC INTRA, and DEFAULT fields indicate the database for queries.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 86 should be set to "Y"

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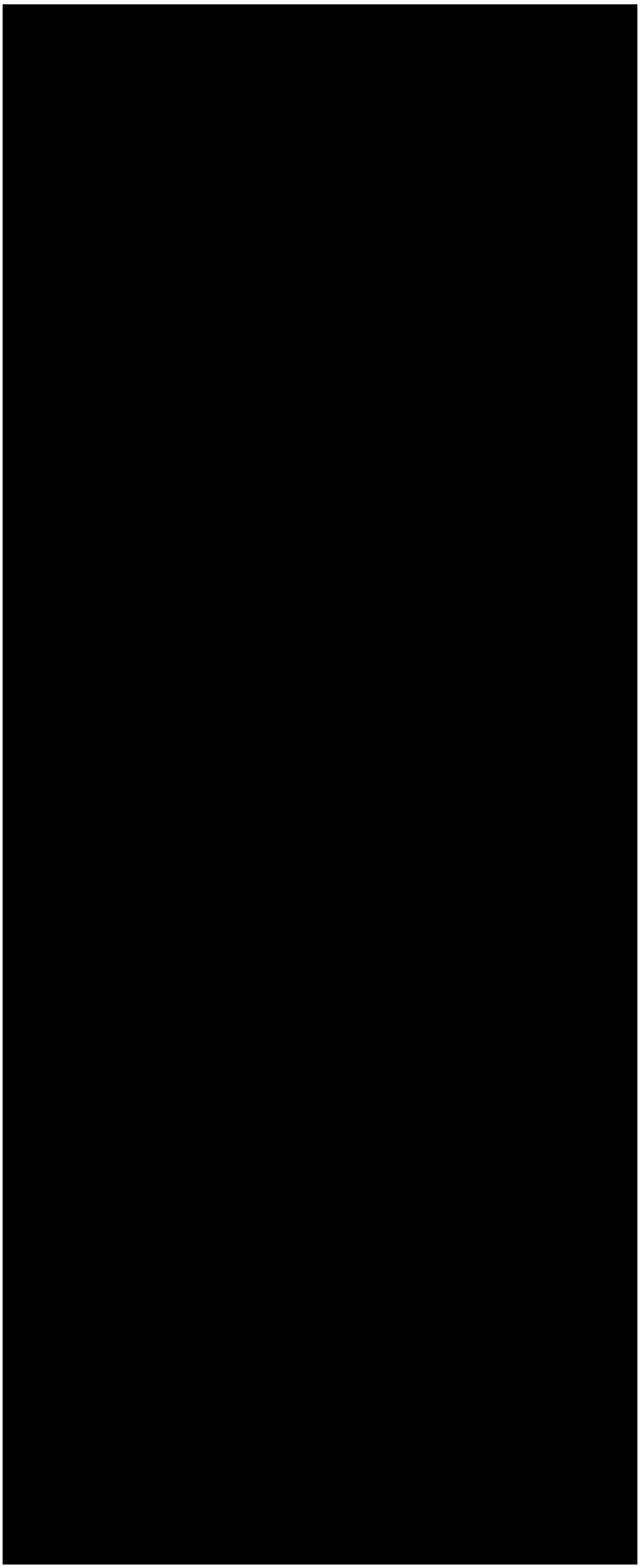

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Figure 1 EABS ALTERNATE ROUTING FEATURE FORM FLOW

SEC. 4A89: OSPS SPECIALIZED HANDLING FOR 700 SERVICES RELEASE 2.1

1. FEATURE DESCRIPTION

The capability number for the Specialized Handling for 700 Services - Release 2.1 feature is 98-5E-2024. This feature is available with 5E7 and later.

The Specialized Handling for 700 Services - Release 2.1 provides four new features:

1. The Back to the Platform feature allows the caller to indicate via DTMF (Dual Tone Multifrequency) input their desire to return to the adjunct for further processing. Input is during pre-answer and post-disconnect.

2. The Forced Return feature returns caller to the adjunct for further processing after an adjunct specified timeout upon forward party disconnect.

3. The Busy/Ring No Answer feature provides an alternate routing number if the forward party is busy or does not answer. After an adjunct specified timeout, the adjunct is notified and an alternate routing number (e.g., messaging service) is specified by the adjunct for routing.

4. The Dual Billing feature provides two AMA records which are generated when a caller is routed to a messaging service. The first record is written against the caller for a completed call. The second record is written against the 800 number used to access the messaging service.

For information on Specialized Handling for 700 Services Release 1, see Division 2, Section 4A69. For information on Specialized Handling for 700 Services testing, see Division 2, Section 4C17.

2. FEATURE ASSIGNMENT

This feature is a secured feature. The ACT field for SFID 89 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

The adjunct processor must be at a software level capable of providing this feature before it can be used. However, existing functionality will remain prior to the adjunct update with no changes required.

3. GLOSSARY

ACQS	Automated Charge Quotation Service
CCS7	Common Channel Signaling Version 7
DTMF	Dual Tone Multifrequency
IAM	Initial Address Message
ISUP	Integrated Services Digital Network User Part
OSPS	Operator Services Position System

SEC. 4A91: ENHANCED LONG DISTANCE / CALL WAITING WITH DISTINCTIVE TONES AND DISTINCTIVE RINGING FOR LONG DISTANCE CALLS

1. BACKGROUND

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The Enhanced LDCW (Long Distance Call Waiting) special feature (feature number 99-CP-3441) modifies the existing Call Waiting With Distinctive Tones and Distinctive Ringing For Long Distance Calls feature and is available for 5E10 and later. This modification does not have a separate secured feature ID. The 5ESS-2000 Switch will no longer support the prior version of this feature after the new feature changes are introduced.

2. FEATURE DESCRIPTION

Prior to this feature, when an incoming call activated call waiting, the called party was alerted via a tone. The same tone was used for both local and long distance calls. The "normal" tone to be provided was determined by the value of the CDPTY TONE INDICATOR field on the CWTFD form (5603-1 Record) that was assigned to the called party's line.

When a handset rang due to an incoming call, both local and long distance calls used the same kind of ringing pattern.

The Call Waiting with Distinctive Tones and Distinctive Ringing for Long Distance Calls secured feature is available for 5E8 and later. This feature allows the current call waiting and ringing operations to provide a distinctive call waiting tone or a distinctive ringing pattern for long distance calls. This feature is assignable on both a per-feature and per-line basis. The feature number for this capability is 99-5E-1105.

2.1 Feature Definition

This feature allows a customer to distinguish between local and long distance calls when the phone rings, or when call waiting produces a tone to indicate an incoming call.

2.2 Call Waiting

The special tone for call waiting is the existing pattern "E", which consists of three beeps as follows:

- 0.1 second on
- 0.1 second off
- 0.3 second on
- 0.1 second off
- 0.1 second on.

This affects only the called party indicator and does not affect the calling party indicator or the party departure indicator as specified on the called party's CWTFD form (5603-1 Record). (See the CDPTY TONE INDICATOR, CGPTY TONE INDICATOR, and DEPTY TONE INDICATOR fields on the CWTFD form.)

The application of this special tone has three options.

1. Apply the normal call waiting tone (CDPTY TONE INDICATOR field) to both local and long-distance calls. In this option the special tone is not used. This is the default option.

2. Apply the special tone (pattern E) to long distance calls and apply no tones for the local calls.

3. Apply the normal call waiting tone (CDPTY TONE INDICATOR field) to local calls and the special call waiting tone (pattern E) to the long distance calls.

Options 2 and 3 override the treatment specified by the CDPTY TONE INDICATOR field, but the treatment specified by the CGTPY TONE INDICATOR and DEPTY TONE INDICATOR fields are not affected.

2.3 Distinctive Ringing

The special ringing for long distance calls is pattern "E":

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- 0.3 second on
- 0.2 second off
- 1.0 second on
- 0.1 second off
- 0.3 second on
- 0.4 second off.

Distinctive ringing applies to analog lines (LINE and MLHLN forms) and non-standard Lucent Technologies ISDN BRI (Basic Rate Interface) lines (DSLUSR form).

2.4 Screening

The screening portion of the feature determines which calls are considered local and which are considered long-distance. This screening is used by both the call waiting and distinctive ringing portions of this feature.

2.5 Enhanced Long Distance Call Waiting

The LDCW special feature (feature number 99-CP-3441) modifies the existing Call Waiting With Distinctive Tones and Distinctive Ringing For Long Distance Calls feature. This feature provides the following enhancements:

- Applies SS7 (Signaling System 7) Calling Party number screening treatment of incoming calls over IC (InterLATA Carrier) class of service designated trunks.

  This modification treats calls coming in over IC trunks the same as the calls coming in over "LTOLLCON" type trunks. That is, the SS7 CPN (Calling Party Number) information and the screening DAS+NPA+NXX table is used to determine if the call is long distance or not. Thus, the IC trunks would have to be SS7 type trunks. All calls coming in over non-SS7 IC (or non SS7 LTOLLCON) trunks would be treated as local calls.

- Allows a screening NPA+NXX local call table for each DAS (rate center).

  This change provides a screening NPA+NXX table for each DAS in the switch. The LOCSCRN form (5545 Record), Recent Change View 8.26 (the DAS+NPA+NXX screening table view) is modified such that the DAS, NPA and NXX number are key fields for the view. The switch treats calls to lines with a specified DAS based on the screening NPA+NXX table associated with that DAS. These added screening tables are used to determine the call treatment for intra-switch and inter-switch calls. The switch supports a screening NPA+NXX table for each DAS (maximum of 99 for 5E14 and earlier and 254 for 5E15 and later) entries.

- Screens intra-switch calls based on CPN and the NPA-NXX table.

  This change provides screening of intra-switch calls based on the CPN to determine call treatment (local or long distance). Before this change, all intra-switch calls were treated as local. With the new screening table per DAS, intra-switch calls (in addition to inter-switch calls) now need to have the CPN number compared with the screening NPA-NXX table of the called line's DAS.

- Removes Charge Party Number from being included in the decision on whether a call is long distance or local.

  This change removes the Charge Party Number from being used as secondary information to the CPN for determining call treatment as local or long distance. Before this change, the switch looked at

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the Charge Party Parameter if there is no information or undecipherable information in the CPN field.

- Determine the treatment of all calls when Calling Party Number information is not available or indeterminate.

  This change provides a new LDCW TRMT field on the OFCOPT form (5509 Record), (Recent Change View 8.1) for setting the switch treatment of SS7 calls when no Calling Party Number information is available or the information is indeterminate. Before this feature, the switch considered calls without this information to be long distance. This new field allows these calls to be treated as either local or long distance on a per office basis. A "N" value indicates to treat calls without SS7 CPN information the way the switch treats them now - always as long distance. A "Y" value indicates treating calls without SS7 CPN information as local.

3. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for the Call Waiting with Distinctive Tones and Distinctive Ringing for Long Distance Calls feature.

3.1 Secured Feature

This is a secured feature and must be purchased before Distinctive Tones and Distinctive Ringing can be activated. The ACT field for SFID 91 on the SFSYS form (5713-1 Record) must be set to "Y".

3.2 Call Treatment

Are SS7 calls without Calling Party Number information to be treated as local calls for the Long Distance Call Waiting Feature?

3.3 Screening

For 5E9(2) and earlier, calls coming in over IC trunks (TRKCLS is "IC") are treated as long distance. Calls coming in over trunks which are not SS7 (Signaling System 7) with a trunk class of "LTOLLCON" are treated as local calls. The NPA or NPA-NXX values for calls coming in over SS7 "LTOLLCON" trunks are compared to the table constructed on the LOCSCRN form. The values found in that table are treated as local calls. The values not in the table are treated as long distance calls.

For 5E10 and later, assign a screening NPA+NXX local call table for each DAS (rate center).

3.4 Call Waiting Assignment

The call waiting distinctive tone option is selected via the LONG DST DT field on the CWTFD, CWTLPA, CWTMPA and BFG forms.

3.5 Distinctive Ringing Assignment

The distinctive ringing option is selected via the LONG DST DR field on the LINE, MLHLN, and DSLUSR forms. When LONG DST DR is "N", the "normal" ringing is applied for both local and long distance calls. When "Y" is entered, "normal" ringing is applied for local calls, and distinctive ringing pattern is applied to long distance calls.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26A	12.9

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CWTFD	5603-1	4	4A	12.15
CWTLPA	5603-2	4	4B	1.24
CWTMPA	5603-3	4	4C	3.24
DSLUSR	5908	5	1I	23.2
LINE	5109	3	1I	1.1
LOCSCRN	5545	3	5AU	8.26
OFCOPT	5509	3	5I	8.1
MLHLN	5111	3	1K	1.6

BFG form (5625 Record) - This form is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. The LONG DST DT field was added to support distinctive call waiting tones for long distance calls.

CWTFD form (5603-1 Record) - This form is used to define options for Call Waiting features. The LONG DST DT field was added to support distinctive call waiting tones for long distance calls.

CWTLPA form (5603-2 Record) - This form is used to define specific parameters assigned to every non-Multi-Line Hunt line assigned with a specific constructed Call Waiting feature. The LONG DST DT field was added to support a distinctive call waiting tone for long distance calls.

CWTMPA form (5603-3 Record) - This form is used to define specific parameters assigned to every Multi-Line Hunt line associated with a specific constructed Call Waiting feature. The LONG DST DT field was added to support a distinctive call waiting tone for long distance calls.

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user. The LONG DST DR field was added to support distinctive ringing for long distance calls.

LINE form (5109 Record) - This form defines the Office Equipment Number and features for each telephone number in the 5ESS Switch. The LONG DST DR field was added to support distinctive ringing for long distance calls.

LOCSCRN form (5545 Record) - This form defines all NPA and NPA NXX entries that are considered local to the office. The NPA or NPA-NXX of an incoming call on an SS7 "LTOLLCON" trunk group is compared to the list compiled on this form to determine if it is a local call or it is a long distance call which may require a distinctive call waiting tone or distinctive ringing for the long distance call. The DAS field was added for 5E10 and later.

MLHLN form (5111 Record) - This form defines the individual terminal numbers assigned to a particular MLHG (Multi-Line Hunt Group). The LONG DST DR field was added to support distinctive ringing for long distance calls.

OFCOPT form (5509) - The 5509 Record provides the office option global parameters residing in the CP (Central Processor). The LDCW TRMT field was added for 5E10 and later.

5. GLOSSARY

BMI **-** *Begin Managed Introduction*

BRI **-** *Basic Rate Interface*

CPN **-** *Calling Party Number*

IC **-** *InterLATA Carrier*

LDCW Long Distance Call Waiting

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SS7 - Signaling System 7

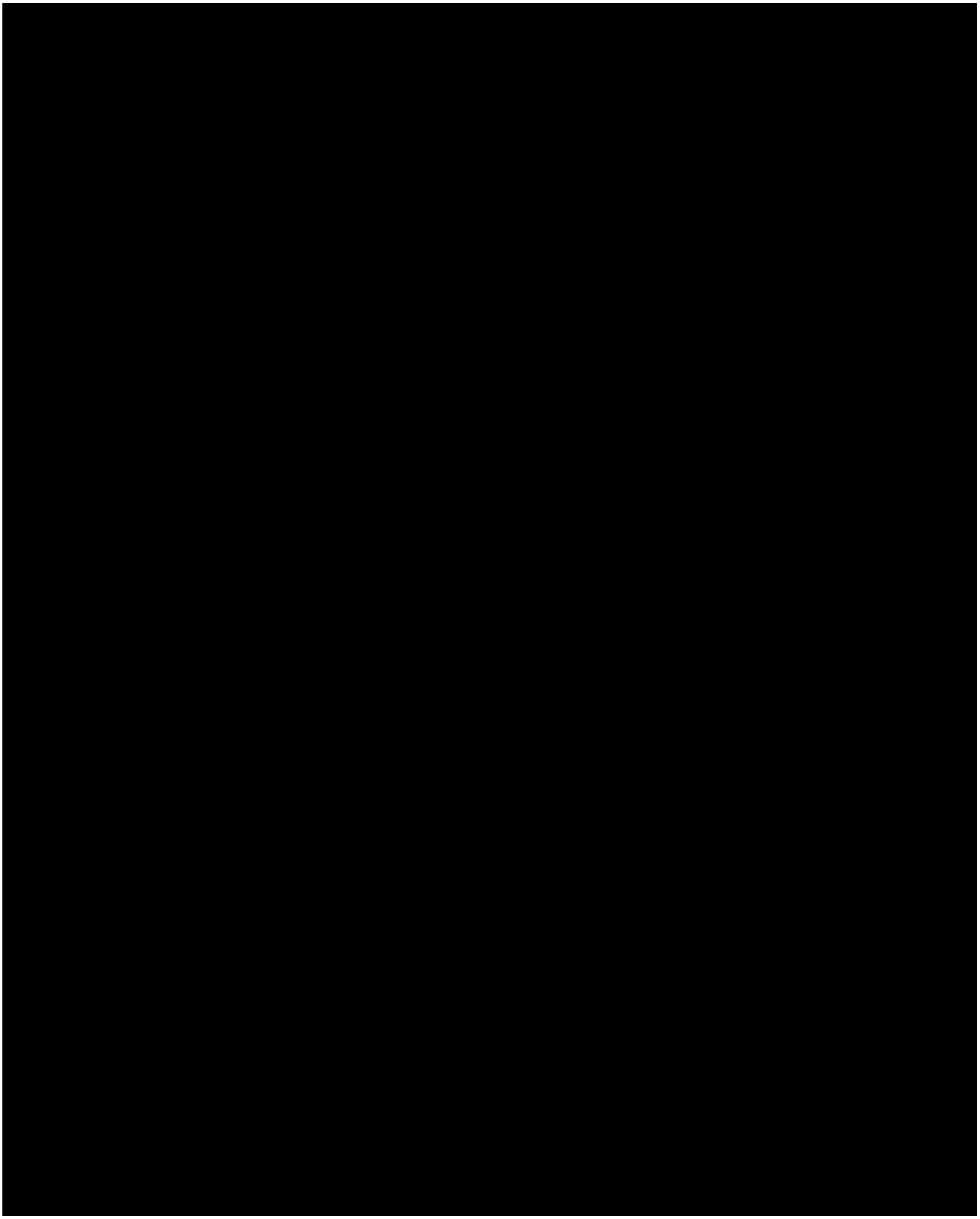

Figure 1 CALL WAITING DISTINCTIVE TONES AND DISTINCTIVE RINGING FOR LONG DISTANCE FEATURE FORM FLOW

SEC. 4A93: ADVANCED SERVICE INTERFACE PROXY

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1. FEATURE DESCRIPTION

The ASI (Advanced Service Interface) Proxy is a secured feature available with 5E8 and later, and provides a 5ESS Switch-based platform for connecting non-ISDN customers to an IP (Intelligent Peripheral). The IP provides automated call handling to subscribers. The ASI Proxy capability on the Switch does not provide the automated call handling by itself; rather, the IP acts as a subscriber "proxy" and provides the switch with the sequences of instructions for call handling, call extension and feature access.

1.1 Modes of Operation

The ASI Proxy capability, which is implemented as a BRCS terminal feature, provides two modes of operation:

- *Implicit Mode* allows the IP to be silently, directly connected onto the subscriber's phone upon origination or secondary dial tone. In this mode, the IP may:
  - Provide information to the subscriber upon origination of a call (through an announcement, dial tone, etc.);
  - Accept non-dialed (such as verbal) non-DTMF user requests and initiate dialing on the subscriber's behalf (dialing by the customer disconnects the IP);
  - Remain silent and wait for explicit invocation.

The subscriber can activate or deactivate the implicit mode feature by a CORC (Customer Originated Recent Change) toggle defined in the ODP. This toggle reverses the current status of the implicit mode feature. The subscriber must have the Implicit ASI Proxy feature assigned.

In this mode, the IP may also be used to provide auto dialing (call extension, feature activation) functions for the subscriber.

- *Explicit Mode* allows the subscriber to dial an ASI Proxy access code to communicate at length with the IP. In this mode, the Switch provides dial pulse to Touch-Tone conversion when necessary and passes along any customer dialed digits ending with "#" to the IP. The IP is also able to dial on behalf of the subscriber.

1.2 Remote Access

Remote Access to ASI is built upon the base ASI Poxy capability. The Remote Access to ASI allows remote access to the IP and allows the IP/subscriber to make calls using the features that are active on their directory number.

1.3 Interactions Between Capabilities

The following text details feature interactions having impact on translations.

1.3.1 Trunk Groups

Only one-way outgoing trunks with TRKCLS of "PFLASH" may be identified as ASI Proxy trunks.

1.3.2 Multi-Line Hunt Groups

Individual lines in an MLHG (Multi-Line Hunt Group) may be assigned any of the ASI Proxy features. However, only MLHG member lines that have individual TNs may have an ASI Proxy feature assigned to

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them.

1.3.3 Line Assignment

For lines and MLHGs, the CLASS OF SERVICE of "INDIV" on the LCC form (5306 Record) supports ASI Proxy. There is no restriction on the terminating class of service.

1.3.4 Home Intercom

Lines with Home Intercom may not have ASI Proxy assigned to them.

1.3.5 Shared Analog

Shared Analog lines may not have ASI Proxy assigned to them.

1.3.6 Line Time Slot Bridging

ASI Proxy may not be assigned to lines with LTSB (Line Time Slot Bridging).

1.3.7 Measurements

Existing peg counts can tally the explicit mode invocations, or the CORC Implicit Mode toggles. All existing measurements and counts are utilized for the connection to the IP, just like any other outgoing trunk connection.

Measurements may be provided by the 30-minute traffic report on BRCS Feature Measurements. To include ASI Proxy features in the report, the feature data must be populated from the Recent Change view 13.3.

For additional measurements information, refer to AT&T 235-070-100 Appendix 1, *Traffic and Plant Measurements*.

1.4 Feature Activation

ASI Proxy is enabled by setting SFID (Secured Feature ID) 93 to "Y" on the SFSYS form.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASIFD	5630-1	4	30A	12.61
ASILPA	5630-2	4	30B	1.61
ASIMPA	5630-3	4	30C	1.61
ASIGP	5630-4	4	30D	4.61
BFG	5625	4	26A	12.9
FIXRT	5301-1	3	3G	10.1
IDPDCA	5601-1, 2	4	2B	9.13
IMINFO	5510	3	5J	18.1, 11.1
LCC	5306	3	3S	4.1
OFCOPT	5509	3	5I	8.1, 8.15
PDIT	5300-2	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

2.1 Trunk Translations

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form.

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New field ASI PROXY indicates whether the trunk group is capable of carrying ASI Proxy traffic.

2.2 Routing and Charging Translations

FIXRT form (5301-1) - The FIXRT form is used to define Routing and Charging treatment of Fixed Route Types.

One new enumeration ``RASI'' for the FIXED ROUTE TYPE field was added to support Remote Access to the Advanced Service Interface feature.

LCC form (5306) - The LCC form is used to define each LCC (Line Class Code) in a 5ESS Switch. A Telephone Number and a Line Equipment Number provide an LCC and Rate Area number. These two inputs are used to access routing and service information contained on this form.

One new enumeration ``ASIRA'' for the TERMINATING TREATMENT field was added to support the Advanced Service Interface feature Remote Access.

PDIT form (5300-2 Record) - The PDIT form defines the Prefix/Feature Digit Interpreter in a 5ESS Switch. It provides information defining feature and operator access, and prefix information for dialed codes which are analyzed in the LDIT (Local Digit Interpreter Table). Digit analysis for all line originated calls in a 5ESS Switch starts in PDIT. At least the first digit of every valid dialable code must be represented in PDIT.

Two new enumerations for the ACTION field were added for ASI Proxy. "ASITOG" is a toggle for activating/deactivating ASI Proxy's implicit mode. "ASIUSE" allows use of ASI Proxy in the explicit mode.

2.3 Miscellaneous Translations

OFCOPT form (5509 Record) - The OFCOPT form supplies miscellaneous office options and parameters.

New field ASI ON enables or disables ASI Proxy traffic. The field cannot be changed unless the feature is purchased and SFID 93 has been set to "S" on the SFSYS form (see below).

IMINFO form (5510 Record) - The IMINFO form gathers and builds miscellaneous customer data related to a given SM (Switching Module).

The new field UTD LIMIT is the percentage of UTDs on the SM (Universal Tone Decoders) that may be used for ASI Proxy.

SFSYS form (5713-1 Record) - The SFSYS form enables Secured Features.

An SFSYS form must exist with SFID 93 set to "S" for ASI Proxy to be used.

2.4 BRCS Translations

ASIFD form (5630-1 Record) - The ASIFD form is a new form used to define ASI Proxy attributes for ASI Proxy features.

Remote Access to ASI is built upon the base Advanced Service Interface capability. The RMT BILL, RMT SERV CODE, and REC SERV CODE fields were added to this form to support Remote Access to ASI as the final phase of the ASI Proxy feature development.

ASIGP form (5630-4 Record) - The ASIGP form is a new form that contains information needed to define the routing and signal conversion characteristics of an ASI Proxy group. The MEA field was added to support Modified Extended Access.

ASILPA form (5630-2 Record) - The ASILPA form is a new form that provides a means to create an ASI

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Proxy Line (keyed by TN) form which overwrites the Default Parameters on the corresponding ASIFD form.

Remote Access to ASI is built upon the base Advanced Service Interface capability. The RMT BILL, RMT SERV CODE, and REC SERV CODE fields were added to this form to support Remote Access to ASI as the final phase of the ASI Proxy feature development.

ASIMPA form (5630-3 Record) - The ASIMPA form is a new form that provides a means to create an ASI Proxy Line (keyed by MLHG/TERM) form which overwrites the Default Parameters on the corresponding ASIFD form.

Remote Access to ASI is built upon the base Advanced Service Interface capability. The REMOTE BILL, RMT SERV CODE, and REC SERV CODE fields were added to this form to support Remote Access to ASI as the final phase of the ASI Proxy feature development.

BFG form (5625 Record) - The BFG form specifies and constructs BFGs (BRCS Feature Groups) for use when assigning subscriber features to analog lines or ISDN terminals.

Five new fields were added for ASI Proxy.

ASI GRP is the name of the ASI Proxy group to be used by the ASI Proxy feature assigned within this BFG.

SERV CODE is the service code digits defining the services allowed during implicit mode access to the IP.

ASI SID is the Subscriber Identification used to identify the subscriber to the IP. If not specified, the SID is the station TN of the line.

IP DIAL BILL indicates if the subscriber wants AMA (Automatic Message Accounting) billing records for an otherwise non-billable call dialed by the IP, and EXP DIAL BILL indicates if the subscriber wants AMA records for an explicit connection to the IP.

For 5E9(1) and later three new fields were added for Remote Access to ASI Proxy.

RMT BILL indicates if an AMA billing record should be generated for remote access to Intelligent Peripheral calls.

RMT SERV CODE is the Remote Access Service Code used to define the set of services allowed during remote access to the Intelligent Peripheral.

REC SERV CODE is the set of services allowed during a remote reconnect to the Intelligent Peripheral.

IDPDCA form (5601-1,2 Record) - The IDPDCA form defines the dialed codes associated with IDPs (Individualized Dialing Plans).

Two new enumerations for the ACTION field were added for ASI Proxy. "ASITOG" is a toggle for activating/deactivating ASI Proxy's implicit mode. "ASIUSE" allows use of ASI Proxy in the explicit mode.

SEC. 4A95: INDEPENDENT COMPANY BRANDING ANNOUNCEMENT

1. FEATURE DESCRIPTION

The ICO (Independent Company) Branding Announcement feature is an OSPS special feature which allows operating companies to play branding announcements based on the telephone company carrying the incoming initial ACCS (Automated Calling Card Services) call. The feature number for this capability is 98-5E-2037. This feature is available for 5E8 and later.

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The telephone companies using this feature contract out operator services. Calls from the telephone company are routed to the contractor's OSPS. The OSPS determines the telephone company for these calls by reading the NPA-NXX form and passing the PHRASE ID to ACCS for the correct branding announcement.

The ICO Branding Announcement feature introduces two new announcements based on the independent company carrying the 0+ intraLATA call. The first announcement of the name of the independent company is given just after the bong tone is played to the customer. The second ICO announcement is played as part of the "Thank You" announcement. The customer hears, for example, "Thank you for using *ICO name*".

2. FEATURE ASSIGNMENT

OSPS determines the company carrying the incoming ACCS calls, and determines what announcement to play according to the PHRASE ID entered in the NPAMAP form (5414 Record). OSPS must be capable of playing branding announcements over DSU2-RAF channels for 0+ IntraLATA initial ACCS calls which are not AATOS (Alternate Access to Operator Services) or SDN/NRA (Software Defined Network/Network Remote Access).

At 0+ seizure, the name of the carrier is played after the bong tone. The customer hears a "Thank You" announcement and the Telephone Company's name before the call is routed.

If the operating company does not supply a valid PHRASE ID or if the branding announcement cannot be played because of equipment failure or unavailability, an unbranded announcement is given.

The ICO feature is a secured feature and must be activated with the secured feature ID, SFID 95.

The new phrases must be inserted on the announcement board. The header IDs, phrase IDs, application and duration must be entered on the ANNHD form (5531 Record). The phrase ID, application, phrase text and duration must be entered on the PHRASE form (5534 Record). The PHRASE ID for the telephone company must be entered on the NPAMAP form (5414 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
NPAMAP	5414	3	4O	26.1
SFSYS	5713-1	3	5AR	8.22

NPAMAP form (5414 Record) - This form is used to assign an SM, trunk group, exception area index and a LATA to an NPA-NXX combination. The PHRASE ID field contains the phrase ID for the Independent Operating Company branding name.

SFSYS form (5713-1 Record) - This form is used to enable secured features. To enable ICO, SFID 95 ACT field must be set to "Y".

SEC. 4A96: ORIGINATING LINE SCREENING - CUSTOMIZED MARKET ANNOUNCEMENTS

1. BACKGROUND

Currently, OSPS provides a service called AHIT (Automated Hotel Identification Text) to its customers, through which operators provide branding announcements for hotels. When a call originating from an applicable hotel phone comes to an OSPS position, AHIT OLS text data is displayed on the screen to prompt the operator to give a branding announcement. After providing service on the call, the operator would say to the caller, for example, "Thank you for using AT&T and enjoy your stay at Holiday Inn!". The OLS-CMA special feature provides an AHIT-like branding announcement on ACCS calls for businesses and companies.

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2. FEATURE DESCRIPTION

The feature number for this capability is 98-5E-2036. This feature is available for 5E8 and later.

The OLS-CMA feature provides branding announcements for eligible customers on initial ACCS calls. Each customer is provided with up to 20 announcement headers, with which the customer can provide 20 basic messages. Each of these messages when followed by a specific company name phrase, will be used to provide a branding announcement for that company.

The phone numbers for which the OLS-CMA branding announcement applies are populated in OLS, and two new fields have been added; one field points to 1 of 20 announcement headers, and the other new field points to a single RAF phrase that identifies the company name. When a call from an applicable customer comes into the OSPS position, an OLS check is performed, screen information related to the current back number is retrieved, and the associated screen code is written to the call record.

2.1 Interfaces with Existing Annoucement Treatments

The OLS-CMA feature interfaces with existing announcement treatments in the following way:

- OLS-CMA announcement is played after the existing Thank You announcement. If there is no Thank You announcement or there is an unbranded Thank You, OLS-CMA replaces it with the default AT&T branding.

- The OLS-CMA announcement does not interact with ICO branding feature. ICO applies to intraLATA calls originating from the Article 4 ICO's service areas, the call owner is not the same as the switch owner and is for the LEC market. OLS-CMA, on the other hand, applies to calls that are marked 288 (AT&T) and call owner is the same as the switch owner. Therefore, the OLS-CMA feature is not used on ICO intraLATA calls, and vice versa.

3. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for the OLS-CMA feature.

To provision the OLS-CMA feature:

1. The TCA (Telephone Company Administration) must ensure that customized announcement board is correctly installed.

2. Phone numbers using the OLS-CMA feature should be populated in OLS.

3. The OLS-CMA secured feature must be activated. (The SFID ACT 96 field is set to "Y" on the SFSYS form.)

4. The ACCS BRAND PHRASE and INIT THANK YOU fields on the OSPSOPT form (5424 Record) must be "Y". Also, "TANN" should be entered in the ACCS 2 field.

5. The announcement header ID and associated phrase IDs must be entered on the ANNHD form, and the PHRASE ID must be entered on the PHRASE form.

6. The ANNC HEADER ID and PHRASE ID fields on the SCRNCODE form must be entered. These two new fields were added to the SCRNCODE form for customized branding announcements.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
SCRNCODE	5415	3	4P	26.3

SCRNCODE form (5415 Record) - This form is used to define billing restrictions on the back number. The new fields ANNC HEADER ID and PHRASE ID were added for OLS-CMA.

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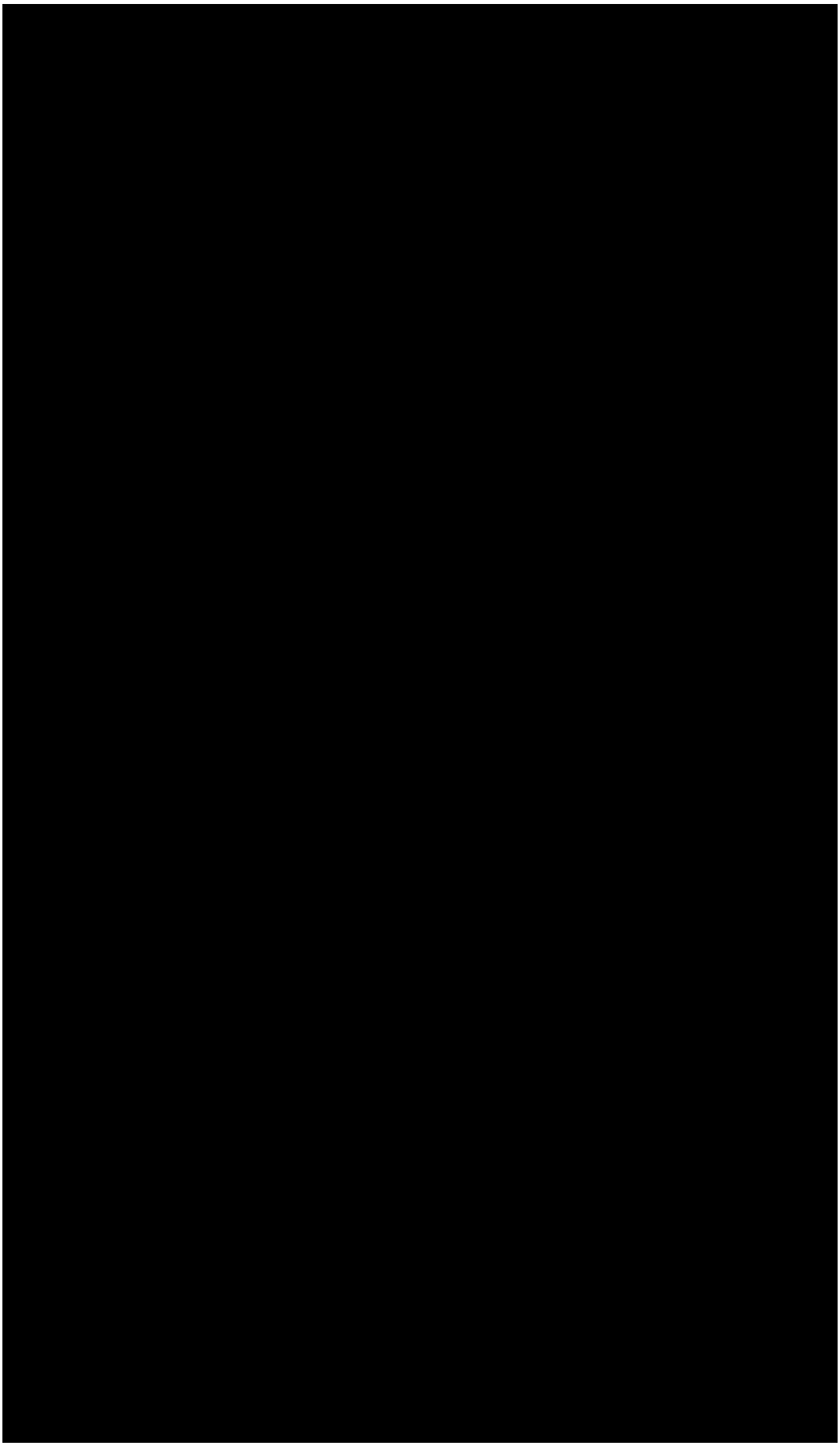

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Figure 1 FORM FLOW FOR OLS - CMA

SEC. 4A97: ORIGINATING LINE SCREENING FOR DIRECTORY ASSISTANCE CALL COMPLETION

1. FEATURE DESCRIPTION

The OLS for DACC (Originating Line Screening for Directory Assistance Call) feature number for this capability is 98-5E-2060. This feature is available for 5E8 and later.

This feature provides the ability to enter OLS restrictions for LSCC (Listing Service Call Completion) calls into the 5ESS Switch. It also provides the ability to pass these restrictions to an EIS (External Information System) vendor, so that the vendor can provide the proper call completion announcements. This is needed so that customers who are not offered call completion are not billed by a method which may later be determined invalid. The OLS restrictions are the following:

- No restrictions, i.e., allow all billing methods on the call.
- Sent paid is denied.
- Alternate billing is denied.
- Only auto-collect billing allowed.
- Deny all call completion to the back number.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for the OLS DACC feature.

This feature is a secured feature and is activated by setting SFID ACT 97 field to "Y" on the SFSYS form, 5713-1 Record. If this feature is turned on then SFID ACT 75 field (Phase 1 of OLS before DACC) is automatically overridden.

The back number and screen code must be entered on the LINESCRN form (5416 Record).

The class of charge restrictions must be entered on the SCRNCODE form (5415 Record).

3. CALL SCENARIO

The following is a call scenario for OLS for DACC.

1. The customer dials 411 from a hotel line to get Directory Assistance.
2. The call is routed to the OSPS, and OLS indicates that the call is a hotel call. The call is marked as restricted against Sent Paid LS Call Completion.
3. OSPS routes the call to an available LS operator. At this point a position seizure message is sent to the EIS informing the EIS of the OLS restrictions on the call. (No Sent Paid)
4. The operator determines that the calling customer wants the number to "Pizza Restaurant" and keys the listing information into the LSDB (Listing Services Database).
5. The EIS displays all the "Pizza Restaurant" information from that area.
6. The operator then keys the line designator for the "Pizza Restaurant" requested and presses the release-to-audio key.

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7. The calling party is routed to an ARU trunk where the EIS provides the listed number announcement. This announcement is followed by an announcement, "This call can be completed for an additional charge. Please press 1, if you wish to automatically complete this call."

8. The customer keys 1 to indicate that he/she would like to complete the call.

9. EIS checks the restrictions and determines that sent-paid is not allowed. The only billing methods allowed are either alternate or auto-collect. Since Pizza Restaurant has not subscribed to Auto-collect billing, the caller is provided with the announcement, "Please press 0 if you wish to complete the call using alternate billing."

10. The customer presses 0 to indicate alternate billing.

11. The EIS formats a message to the OSPS indicating to complete the call using an alternate billing method.

12. OSPS receives the indication for call completion and once again checks the OLS data if alternate billing is allowed. Since this billing method is not restricted, the calling party is routed to a DSU2-RAF which provides a bong tone.

13. The calling party enters the calling card. The call is completed to the listed number.

14. Both parties hang up and an AMA record is written with an LSCC module appended to indicate that LSCC had been provided.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SCRNCODE	5415	3	4P	26.3
SFSYS	5713-1	3	5AR	8.22

SCRNCODE form (5415 Record) - This form is used to define billing restrictions on the back number. Three fields were added to SCRNCODE for the OLS for DACC feature.

- DACC PAID field indicates if paid billing is allowed.
- DACC ALT BILL field indicates if alternate billing is allowed.
- DACC ALLOW indicates if DA Call Completion is allowed.

SFSYS form (5713 Record) - This form is used to enable secured features. To enable OLS DACC, the SFID ACT 97 field must be set to "Y".

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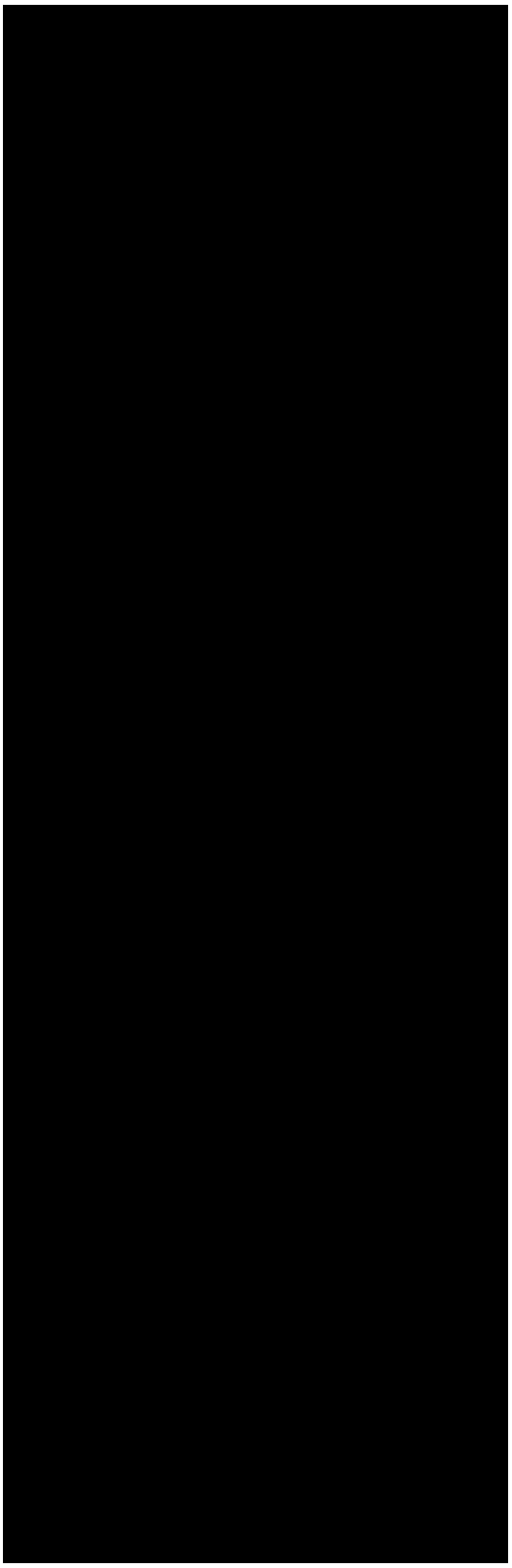

Figure 1 OLS FOR DACC FORM FLOW

SEC. 4A101: OSPS INTERNATIONAL BILLED NUMBER SCREENING

1. FEATURE DESCRIPTION

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For 5E8 and later Software Releases, this feature allows an International operator to access an OSPS to perform a billed number screening check on a collect billing number. The billing number must be in the North American numbering plan format and be 10 digits. The OSPS automatically sends a LIDB (Line Information Data Base) query and provides the query results to the International operator via an announcement. This feature only allows queries to a LIDB data base. An announcement indicating that "the service is unavailable" is given if the data indicates that the query should be sent to a BVA (Billing Validation Application) data base.

The international operator may access the OSPS with inward codes of 1173 (Multifrequency signaling) or 1175 (Dual Tone Multifrequency signaling).

Initial digit timing will be 15 seconds. Initial digit timing for all other inward validation remains at 60 seconds.

NCD queries are sent in parallel with the LIDB BNS query if the OFFICE TYPE parameter on OFCOPT form, view 8.1, is set to "Y" indicating a Toll Switch.

1.1 Scenario

The following is an IBNS scenario.

1. The international operator accesses an OSPS by dialing the proper prefix plus 1173 or 1175, depending upon the signaling available to the international operator.

2. The OSPS prompts the operator to enter a billing number.

3. After successful entry of a 10-digit number, the OSPS determines that an LIDB BNS query should be sent. An NCD query will also be sent if the OFFICE TYPE parameter on the OFCOPT form, view 8.1, is set to "Y".

4. Upon analyzing the query reply results, an announcement will be played for either a billing allow or an invalid number. The international operator is then disconnected.

2. FEATURE ASSIGNMENT

2.1 Announcement Headers

The following new announcement headers have been defined for this feature. Phrases are assigned for each header ID on the ANNHD form, view 8.61.

- Initial prompt announcement:

  Announcement ID 176 - Recommended phrase is

  "Please dial now."

- First incorrect attempt at billing number entry:

  Announcement 177 - Recommended phrases are

  "Invalid Number. Please dial again now."

- Second incorrect attempt at billing number entry:

  Announcement ID 178 - Recommended phrases are

  "Invalid Number - Please hang up."

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- Query reply indicates allowed billing:

  Announcement ID 179 - Recommended phrase is

  "Billing Allowed."

- Query reply indicates billing number is denied:

  Announcement ID 180 - Recommended phrase is

  "Invalid Number."

- Office data indicates query goes to a BVA database:

  Announcement ID 181 - Recommended phrase is

  "The service you have requested is not available."

2.2 Office Parameters

The IIW INDET DNY field was added to the OSPSOPT form, view 8.9. This parameter indicates if indeterminate replies should be given "deny" treatment.

An attempt to send an NCD query will be made in parallel to the LIDB BNS query, if the OFFICE TYPE parameter on the OFCOPT form, view 8.1 is set to "Y".

2.3 Digit Analysis Tables

The inward codes of 1173 and 1175 may need to be added in the digit analysis tables, LDIT form, View 9.3.

2.4 Secured Feature.

The OSPS International Billed Number Screening special feature is a secured feature. The FEATURE ID 101 must be activated on the SFSYS form, view 8.22.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

3.1 Translations

ANNHD form (5531 Record) - Default data has been added for announcement header IDs 176 - 181.

OSPSOPT form (5424 Record) - This form is used to define OSPS global office parameters. The IIW INDET DNY field was added to the OSPSOPT form, view 8.9. This parameter indicates if indeterminate replies should be given "deny" treatment. The default value is "N", which indicates that IBNS indeterminate query reply treatment results in "allowed" treatment. This parameter should be changed if "deny" treatment should be given indeterminate query replies.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To enable IBNS, FEATURE ID 101 must be set to "S".

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SEC. 4A102: 0- TRANSFER OVER FEATURE GROUP D TRUNKS

1. FEATURE DESCRIPTION

Prior to this feature, if a LEC operator received a call that was an IC (Interexchange Carrier) call, the call was either transferred to the IC or the operator would give instructions to the customer on how to reach the carrier.

1.1 TRANS-0-SEND Capability

Available for 5E8 and later, this feature allows the LEC operator to use the TRAN-0-SEND capability to transfer calls to any IC supporting FGD (Feature Group D) signaling. TRANS-0-SEND is the action of transferring a call to the number 0. If the operator enters 288, or enters AT&T as the carrier and uses TRAN-0-SEND to transfer the call, the call is routed over ISP trunks. To transfer calls to non-AT&T carriers, the operator transfers to a 10-digit number that is recognized as operator services by the IC. The 10-digit number is necessary because non-AT&T carriers do not support ISP signaling. If a carrier other than AT&T is entered and TRAN-0-SEND is used to transfer, the call is routed over FGD trunks to the carrier, i.e., (KP+II+ANI+ST)+(KP+0+ST) is outpulsed to the carrier. In both cases, the OSPS generates billing access records using structure code 00625 or 00627 and call type code 110 (InterLATA sent paid). Because the OSPS is not the billing office, it does not do a TRD (Timed Release Disconnect).

1.2 Feature Group D Coin Calls

When a coin call is transferred to a carrier that only accepts FGD (Feature Group D) signaling, the carrier is unable to tell that the call is coin since there is no indication in the signaling. This allows unrestricted billing capabilities which may lead to fraud. This feature provides the carrier with an indication that the call is coin by changing the ANI digits to 27 when TRAN-0-SEND is used on a coin call. In addition, for coin calls, the OSPS turns flash capabilities off and leaves the DTMF (Dual Tone Multi-Frequency) pad enabled throughout the call while the OSPS has control of the DTMF pad. Therefore, the initial deposit can be returned if necessary.

2. FEATURE ASSIGNMENT

This feature must be activated on SFSYS form or Recent Change view 8.22. The Secured Feature ID is 102.

The CIC information must be populated on the DIOPR form or 26.25 view.

If the call is from a coin phone and is transferred to a non-AT&T carrier, the OSPS changes the ANI digits to 27 to indicate to the IC that the call is from a coin phone. On the OSPSOPT form or the Recent Change View 8.9, the LEC has the ability, on a per-switch basis, to control whether or not the ANI digits should be changed to 27.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

3.1 Translations

OSPSOPT form (5424 Record) - This form is used to define the OSPS (Operator Services Position System) office option global parameters. The ID COIN LINE field determines if coin lines are identified on FGD TRAN-0-SEND. If this field is "Y", the ANI INFO digits on coin lines are signaled to the IC as 27 when FGD TRAN-0-SEND is used.

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SFSYS form (5713-1 Record) - This form is used to activate Secured Features. To activate the 0-Transfer Over Feature Group D Trunks feature, enter "S" for FEATURE ID 102.

SEC. 4A103: APPLICATION PROCESSOR LINK DIVERSIFICATION

1. BACKGROUND

Without this feature, an AP (Application Processor) can connect up to 16 API (Application Processor Interface) links to a single SM (as defined on the DSLAP form (5963 Record)), and up to 96 links total from multiple 5ESS Switches. However, an AP can interface to only one ISDN SM on any one 5ESS Switch. If that SM, or the data links to the AP from that SM are removed from service, the AP cannot communicate with the 5ESS Switch.

2. FEATURE DESCRIPTION

Available with 5E8 and later, the AP Link Diversification feature has feature number 99-5E-1071. It is a Secured Feature using SFID (Secured Feature ID) 103 and must be purchased to be activated.

This feature enables a single AP to interface with two ISDN SMs on the same 5ESS Switch. Thus, data for a second set of 16 API links is allowed to be defined from an AP processor to a different ISDN SM on the DSLAP form. If an AP SITE ID defined on the DSLAP form has this secondary AP SITE ID (SEC AP SITE ID) entered, this feature will be invoked whenever the communications path through the primary ISDN SM is blocked. The SM number entered on this second DSLAP form would then be used as a secondary (backup) SM for routing purposes. Data would be transmitted to the AP processor and this secondary ISDN SM. This ensures that a problem with a single SM or its AP data links will not result in an interruption of service from the AP.

NOTE: The secondary AP SITE ID number does not refer to a separate physical AP processor. Rather, it is being used as a means of identifying another set of links from a different ISDN SM to the same physical AP processor. All AP SITE IDs must be unique.

3. FEATURE ASSIGNMENT

This feature is a Secured Feature and must be purchased before activation. SFID 103 on the SFSYS form (5713-1 Record) must have the field ACT set to "Y" to activate the feature.

A secondary AP SITE ID (SEC AP SITE ID) can be entered on any existing DSLAP form. However, the secondary AP SITE ID must be defined on its own DSLAP form with

- a different SM number,
- SEC AP SITE ID blank,
- PRIM E911 SITE set to "N",
- SEC E911 SITE set to "N",
- the same ISVM value.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
DSLAP	5963	6	6A	24.7
DSLAP	5963	6	6A	24.7

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP and the 5ESS Switch. Each AP is connected to one ISDN SM with DSL data links.The field SEC AP SITE ID was added

for this feature. This fielddefines the secondary AP SITE ID for this processor which has beenused to define backup links to a separate ISDN SM.

SEC. 4A104: OSPS AMA RECORDING OF CALLS FROM WIRELESS SERVICE PROVIDERS

1. FEATURE DESCRIPTION

The OSPS AMA Recording of Calls from WSP (Wireless Service Providers) feature is available for 5E8 and later Software Releases. It allows the TCA (Telephone Company Administration) to administer a new attribute in trunk group data that identifies a trunk group as a WSP. All calls that arrive at the OSPS from this trunk group are treated as WSP calls. When this featues is active, calls over WSP trunk groups are AMA recorded with a unique module to define the wireless service for billing.

1.1 Replaces Method Used by 0+800 Calls from WSP

Once the AMA Recording of Calls from WSP feature has been activated, the 0+800 Calls from WSP Special Feature method used to identify WSP calls will no longer apply . If the AMA Recording of Calls from WSP feature is deactivated for any reason, the OSPS will revert back to the previous mechanism of identifying Wireless Service Providers if the OLS code data still exists in ODD. In the 5E9(1) Software Release, the previous mechanism will be removed.

1.2 Scenarios

The following are scenarios for this feature.

1.2.1 Automated Call:

The caller enters a valid 0+ call from a wireless service provider which has contracted with the OSPS and receives the ACCS (Automated Calling Card Service) treatment with a prompt announcement. The caller enters a valid card number, and the call is outpulsed to the called number. At completion of the call, an AMA (Automatic Message Accounting) record is made reflecting the appropriate billing for a WSP 0+ call.

1.2.2 Operator Handled Call:

The caller enters a 0- call from a WSP which has contracted with the OSPS. The call arrives at an OSPS operator position. The operator enters a valid forward number and the appropriate billing information allowed by this feature, and releases the call. At the completion of the call, an AMA record is made reflecting the appropriate billing for WSP.

2. FEATURE ASSIGNMENT

Populate data for the ACCS for 0+ Calls from WSP Special Feature. See Division 2, Section 4A79 for more information on ACCS for 0+800 Calls from WSP.

To implement the AMA Recording of Calls from WSP, the following data is required.

2.1 Define TGN as Wireless

On the OPRTK form (5417 Record) view 26.26, set the wireless indicator field, WIRELESS, to "Y" for the TGN (Trunk Group Number) that is dedicated to the WSP.

2.2 Secured Feature Activation

This is a secured feature. It is activated by setting the FEATURE ID 104 on the SFSYS form (5713-1 Record) view 8.22 to "S".

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2.3 OSPS Office Parameters

The feature also requires that the WIRELESS REC field on the OSPSOPT form (5424 Record) view 8.9 be set to "Y" to activate this feature.

- ***NOTE:*** When activated, this feature supersedes the functionality of the ACCS for 0+800 Calls from WSP Special Feature. Once it is permanently activated, the TCA may deactivate the previous WSP feature by setting the WL SCRN CODE 1 and WL SCRN CODE 2 fields to null. (These fields will be removed from the form/view for 5E9(1).)

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

3.1 Translations

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS operator. The WIRELESS field must be set to "Y".

OSPSOPT form (5424 Record) - This form is used to define the OSPS office parameters. The WIRELESS REC field must be set to "Y".**SFSYS form (5713-1 Record)** - This form is used toactivate secured features. FEATURE ID 104 must be set to"S".

SEC. 4A105: CENTREX PRIMARY RATE INTERFACE ENHANCEMENTS

1. FEATURE DESCRIPTION

The CENTREX PRI (Primary Rate Interface) Enhancements feature is a secured feature with secured feature ID 105 and having AT&T feature number 99-5E-1154. Available with 5E8 and later Software Releases, this feature provides the ability to assign tie trunk features to a trunk group with PRI D-channel (Q.931) signaling. In previous software releases, trunk groups with MF (Multi-Frequency), DP (Dial Pulse), and touch tone signaling can be assigned the following tie trunk features:

- PFA (Private Facility Access)
- ARS (Automatic Route Selection)
- IDPs (Individual Dialing Plans)
- SC (Speed Calling)

With the CENTREX PRI Interface Enhancement feature, these same capabilities can be assigned to a PRI trunk or PRI trunk group when the SFID 105 feature as been purchased (i.e., the ACT field for SFID 105 is set to "Y") and the Trunk Group (TGN) is defined on the TKGRP form with a Trunk Service Class (TRKCLASS) of "EDSL" or "EDSLHM".

1.1 Private Facility Access

The expanded PFA feature provides a private PRI communication link between customer locations served by different central offices or PBXs. The feature can be divided into two categories:

- Outgoing to a PRI tie trunk

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- Incoming on a PRI tie trunk.

The capabilities necessary for outgoing PFA calls over a PRI have been available since 5E6. With these capabilities an outgoing PRI call originating from an attendant, a station in the terminal group, or incoming tie trunks is activated via dialed access codes ranging from one to five digits. Dial access by stations, PRI trunks, or the attendant is provided by the Dial Access to Private Facilities feature.

The CENTREX PRI Enhancement feature allows similar features for incoming calls coming to the 5ESS Switch over a PRI. When a business has several CENTREX terminal groups located in multiple switches that are interconnected by PRI tie trunks, the subscriber may request the tandem tie trunk dialing feature (part of PFA) to create a Tandem Tie Trunk Network. The tandem tie trunk dialing feature is activated via dialed access codes. All digits collected by the originating line are manipulated and sent as part of the setup message over the PRI by the originating office to the tandem switch. The tandem switch receives and manipulates the digits and routes the call to a remote switch. The call may terminate at the remote switch or the tandeming process may be repeated again, based on the digits dialed by the originating party and the capabilities assigned to the PRI tie trunks in each office.

The following PFA capabilities are not provided by this feature when the call is incoming via a PRI trunk:

- Overlapped outpulsing
- Cut-through dialing capabilities
- ANI (Automatic Number Identification) over Private Facilities
- Radio Paging Access
- Recorded Telephone Dictation

1.2 Automatic Route Selection

The ARS feature allows flexible routing of calls over the first available (non-busy) PRI trunk. Routing is transparent to the end user because routing preference is provisioned via recent change. The ARS feature has been available since 5E6, but only as automatic entry ARS. With CENTREX PRI, ARS can be activated with an access code or with automatic entry, depending upon the ARS capabilities assigned to the lines and PRI trunks in the office.

1.3 Individual Dialing Plan

The IDP feature provides a common group numbering plan for all lines, trunks, and PRI trunks within the same CENTREX terminal group. An incoming call over a PRI trunk may contain one to fifteen digits, ten of which are then manipulated by the group numbering plan. Either the call is routed to the terminating line or the digits are sent as part of the setup message over an outgoing trunk. This feature allows intercom dialing, access to an attendant, attendant control of facilities, and dial access to private facilities between multiple switches linked by a PRI trunk.

1.4 Speed Calling

The SC feature allows a customer to specify a speed calling list containing dialing sequences, each of which is associated with a unique speed calling code. When the switch with this feature receives an incoming call with a valid speed calling code which was sent over a PRI, the system attempts to complete the call to the dialing sequences in the speed calling list. The Speed Calling feature provides the ability to store dialing sequences of up to 32 characters in length.

2. FEATURE ASSIGNMENT

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The following are general restrictions applicable to the CENTREX PRI Enhancements feature:

- The MetroHub feature (secured feature ID 60) is required. Therefore, SFID 60 ACT field on SFSYS Form (5713-1 Record) must be set to "S" (5E8) or "Y" (5E9(1) and later).
- No provision is made for the collection of account codes or authorization codes for a CENTREX PRI.
- The VFY:OFC (Verify Office) input command supports PRI trunks which have been assigned IDP and/or ARS. Craft personnel are able to check translations to determine where incoming and outgoing calls will be routed; VRY:OFC does not work with PFA.
- If access codes, "*" and/or "#" digits are defined in a dialing plan used by an EDSL trunk from a 5ESS Switch to a 4ESS Switch, VRY:OFC output will not find this normally valid condition in error even though the AT&T Custom PRI protocol on a 4ESS Switch does not support access codes, "*" and/or "#" digits.

2.1 PFA

- The trunk class for the PRI with the CENTREX PRI Enhancements feature is assumed to be "EDSL" or "EDSLHM". Because "EDSL" or "EDSLHM" trunk classes utilize 23B+D channel signaling, the following private facility classes are not supported:

- "PF"
- "PFITT"
- "PFLASH"
- "PFCPE"

- If all private facilities within the group are busy (busy physical facilities), the ability to return reorder tone after dialing a PFA access code is not supported.

2.2 ARS

- The following ARS actions are not supported:

- "ARSCP"
- "ARSDCT"
- "GPACT"
- "GPDCT"
- "FRLMAIN"
- "FRLALT"
- "FRLDMAIN"
- "DFRLALT"
- "DARSCP"

- Similarly, the activate and deactivate use codes for ARS are not supported over the PRI. However, ARS actions "ARSUSE" (ARS use code dialed), "ARS1USE" (ARS use code dialed for dialing plan 1), and "ARS2USE" (ARS use code dialed for dialing plan 2) are supported.

2.3 Speed Calling

- SC preconstructed or constructed features must be assignable to a PRI trunk member or a PRI trunk

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group via Recent Change. However, the following SC Customer Changeable List features are not assignable to a trunk:

- "/SC1CP"
- "/SC1CQ"
- "/SC1CPQ"
- "/SC2C"
- "/SC2CP"
- "/SC2CQ"
- "/SC2CPQ"

- If the PRI is assigned a SC feature, the administration of the SC entries can be done either by the service provider or via CORC (Customer Oriented Recent Changes) from a user directly connected to the 5ESS Switch. CORCs are not supported from the PRI.
- Customer changeable attributes for SP lists are not supported for PRI trunks by this feature. Likewise, the following IDP codes, which are customer changeable for lines assigned with the IDP feature, are not customer changeable for PRI trunks assigned the IDP feature:
  - the ability to change the IDP group carrier,
  - the ability to activate/deactivate the IDP, or
  - the ability to activate/deactivate the Alternate Code Treatment.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. The SFID 105 ACT field on this form must be set to "S" (5E8) or to "Y" (5E9(1) and later) toactivate the feature.

SEC. 4A106: USAGE SENSITIVE THREE-WAY CALLING

1. FEATURE DESCRIPTION

The USTWC (Usage-Sensitive Three-Way Calling) is being deployed in a software update for the 5E8 Software Release and in the Beginning Managed Introduction of 5E9(1) Software Release.

This feature is a secured, which is controlled by SFID 106 and has feature number 99-5E-1230.

USTWC allows a customer, by dialing an access code, to request the capability of adding a third party to the two-way connection which is established by subsequent dialing. The customer may be charged for each USTWC established and answered. A USTWC Charge Record may be made for each USTWC if the call is not normally AMA recorded or an indication that USTWC was used would appear in the normal AMA record. Provision is also made to allow billing for the USTWC activation. A USTWC Activation record is created if a two-way connection reaches a talking state after the controller dials the USTWC code. Any number of three-way calls may be made during a single USTWC activation; each one is charged. If the originator disconnects with a party on hold, the originator will be rung back to restore the held party to the talking connection. USTWC is stopped when the originator goes on hook, except when there is a held party. USTWC differs from the existing MW (Multi-Way) TWC (Three-Way Calling) feature in the following

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ways:

1. Assignment of the feature to the user - when USTWC is turned on in an office, any valid terminal can access it without subscribing to it.

2. Access of the feature by the user - to activate usage of the USTWC feature, the user dials the USTWC access code before placing a call. The user must decide in advance that a three-way call will be established.

3. Billing of the feature to the user - the user is billed per usage rather than the flat rate fee charged for subscription TWC. Two types of records may be optionally made -- USTWC Charge records and USTWC Activation records. Generation of each is controlled independently on an office-wide basis.

4. Feature interactions - the user is not allowed to use the feature if already subscribed to any other MW feature or to a TG (Terminal Group) feature. CW (Call Waiting) will be inhibited while USTWC is active on a call.

The following is an end user activation scenario for USTWC. For this scenario, the three parties are designated A, B, and C. Parties A and B represent the stable 2-way call with A being the controlling (calling) party and party B being the terminating (called) party of the original 2-way call. Party C represents the third or added on party.

1. A USTWC customer, party A, requests activation of USTWC by going off hook, receiving dial tone, and dialing the USTWC dialed code. If the dialed code is recognized, special dial tone is returned to party A, and the BRCS feature attempt count for the USTWC feature is pegged.

2. Party A now dials the DN associated with the first leg of the call, that is, party B. When B answers, a normal two-party connection is established. A USTWC Activation Record is made when B answers if USTWC Activation Records are enabled in the office. At this point, the USTWC activation is complete. Party A can now make a three-way call if desired.

3. Party A initiates a switch hook flash. The two-party call is interrupted and B is temporarily placed on hold. Special dial tone is returned to A.

4. Party A dials the second leg of the call, adding on Party C. If C answers, a USTWC Charge Record is made or the Service Feature Field is marked in the existing AMA record for the call if USTWC Charge Records are enabled in the office. The BRCS feature activation count for the USTWC feature is also pegged.

   Party A and C are now talking. At this point, if A initiates a flash, B is taken off hold and a three-way call is established. This connection remains until one of the parties abandons the call by going off hook.

5. If A disconnects with a called station party on hold and ring back applies, then party A is rung back.

   The USTWC feature is automatically deactivated when the activating customer, party A, disconnects unless there is a party on hold. If a called party is on hold, USTWC is deactivated when the held party goes on hook provided A is still on hook. If the controller goes back off hook to reestablish a call with the held party, USTWC is still active.

   Deactivation is not recorded for billing purposes. There are no traffic counts associated with this automatic deactivation.

The following describe abnormal end user interactions. For these interactions, the two parties are designated A and B. Parties A and B represent the stable 2-way call with A being the controlling (initiating, calling) party and party B being the terminating (called) party of the original 2-way call.

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1. Error treatment is given if:

   A. USTWC is not allowed on party A's line because the service class or the feature set is not valid (described below),

   B. USTWC has a valid service class and feature set but has been denied use of the USTWC feature on MLHLN (described below).

   C. the originator, party A, dials the USTWC access code, and has subscribed to another flash feature,

   D. the originator, party A, dials the USTWC access code, and USTWC is already activated on that call,

   E. the originator, party A, makes an error dialing the USTWC access code or the called party's DN,

2. The originator, party A, is not allowed to flash if the first called party, party B, has not answered. USTWC is not activated until the called party answers.

3. If the originator, party A, flashes and there are no three-port facilities are available, the flash is ignored.

2. FEATURE ASSIGNMENT

To activate USTWC:

1. Enable the feature by setting the ACT field for SFID 106 on the SFSYS form (8.22 Record) to "Y".

2. Install the USTWC preconstructed feature /MWUS3WC.

3. Allow the new USTWC dialed code action (US3WC) to be assigned to a USTWC feature.

4. On the MLHLN form (5111 Record), USTWC ALW field default is "Y" for all valid terminals. For invalid terminals, USTWC ALW defaults to "N". Valid terminals are those with a service class of "INDIV", "PBX", or "4WINDIV" (MLHLN form LCC, RAX fields where the SERVCL is specified on LCC form) except shared analog terminals, terminals that are "HOT" or "MAN" lines (MLHLN NO DIAL field), or those that have the Calling Line Side Supervision feature (MLHLN form CLSS field).

   For every terminal which is valid but which should not be allowed to access USTWC, update MLHLN form field USTWC ALW to "N".

5. Define a USTWC feature, if desired, on OFCOPT or use the new preconstructed feature /MWUS3WC.

6. On the OFCOPT form, set the USTWC fields as follows:

   - USTWC FEAT:

     - To activate the USTWC feature in the office, enter the desired USTWC feature -- either "/MWUS3WC" or the feature constructed on MWFD form.

     - To deactivate the USTWC feature in the office, enter blank.

     - The default for USTWC FEAT is inactive (blank). This field cannot be changed from the default unless the USTWC feature has been purchased.

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- USTWC ACT:
  - To make USTWC AMA Activation Records for all USTWC calls in the office, set this field to "Y".
  - Set this field to "N" if USTWC AMA Activation Records should not be made on USTWC calls.
  - The default for USTWC ACT is "N". This field cannot be changed from the default unless the USTWC feature has been purchased.
- USTWC CHRG:
  - To make USTWC AMA Charge Records for all USTWC calls in the office, set this field to "Y".
  - Set this field to "N" if USTWC AMA Charge Records should not be made on USTWC calls.
  - The default for USTWC CHRG is "N". This field cannot be changed from the default unless the USTWC feature has been purchased.

7. On the PDIT form, define the USTWC dialed code by setting FEATURE to either "/MWUS3WC" or the feature constructed on the MWFD form and ACTION to "US3WC".

2.1 AMA (Automatic Message Accounting)

A USTWC AMA Activation Record is made when the first called party answers if the USTWC ACT office parameter is "Y". The Structure Code for the USTWC Activation record is 00028; the Call Type is 049.

A USTWC AMA Charge Record is made for an added on party that answers if the USTWC CHRG office parameter is "Y" and there would not normally be an AMA record made for this call. The structure codes for USTWC Charge records are 00001 and 00101; the Call Type is 048. The Service Feature Field in this record is populated with a value of 018.

- ***NOTE:*** Unlike the Activation Record, this record is generated when the call is disconnected or at midnight in cases where long duration records apply. For more information see the *Billing Features and Specifications* document 235-190-300.

If an AMA record would normally be made for the added on party call, the Service Feature Field in this record is populated with a value of 018 if the USTWC CHRG office parameter is "Y".

- ***NOTE:*** Unlike the Activation Record, this record is generated when the call is disconnected or at midnight in cases where long duration records apply. For more information see the *Billing Features and Specifications* document 235-190-300.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MLHLN	5111	3	1K	1.6
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

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MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group. The USTWC ALW field was added to this form.

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. The fields USTWC FEAT, USTWC ACT, and USTWC CHRG were added to this form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The SFID 106 ACT field on this form must be set to "Y"

SEC. 4A108: DUAL EMERGENCY SERVICES ADJUNCT FOR E911

1. BACKGROUND

Without this feature, a pair of E911 AP (Application Processor) data links is used to connect one ESA to a 5ESS Switch. This provides redundancy in case of a communications failure on one link. However, it does not address a failure within the ESA or problems with both AP data links.

2. FEATURE DESCRIPTION

Available with 5E8 and later, the Dual ESA for E911 feature has feature number 99-5E-1401. It is a Secured Feature using SFID (Secured Feature ID) 108 and must be purchased to be activated.

This feature permits a single 5ESS Switch to interface to two ESAs for E911 selective routing service. This feature improves the reliability of E911 service by allowing the use of a second ESA. The secondary link pair need not be on the same ISDN SM as the primary pair. In fact, it is recommended that the secondary link pair be on a different ISDN SM than the primary pair. If communication with the primary ESA fails, the 5ESS Switch will attempt to communicate with the secondary ESA via the second pair of AP links. This prevents a failure with a single ESA (or its AP link pair) from interrupting E911 selective routing.

3. FEATURE ASSIGNMENT

To provision this feature:

- Set the ACT field for SFID 108 to "Y" on the SFSYS form (5713-1 Record).
- Set PRIM E911 SITE to "Y" on a new or existing DSLAP form (5963 Record). Only one form may this this field set.
- Set SEC E911 SITE to "Y" on a second or existing DSLAP form. Only one form may have this field set.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
DSLAP	5963	6	6A	24.7
OFCOPT	5509	3	5I	8.1, 8.15

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP and the 5ESS Switch. Each AP is connected to one ISDN SM with DSL data links.

The field SEC E911 SITE was added for this feature. This field designates a set of links for secondary (backup) E911 ESA. For 5E9(1) and later, the existing field E911 SITE was changed to PRIM E911 SITE.

OFCOPT form (5509 Record) - This form must be completed for a 5ESS Switch and supplies various miscellaneous office options and parameters.

For 5E8 and later, the existing text-only field E911 APID was renamed PRIM E911 APID. The text-only

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field SEC E911 APID was also added.

SEC. 4A111: AUTOMATIC CALLBACK BLOCKED TO PRIVATE NUMBER

1. BACKGROUND

The LASS (Local Area Signaling Services) AC (Automatic Callback) feature allows a user to call back the number associated with the last call to have alerted the user. A customer can originate Automatic Callback calls from an ISDN terminal by using the AC dialed code or feature button. Analog attempts to invoke AC are dialed code only. The ILHB (Incoming Line History Block) contains information associated with the last incoming call, including the privacy indicator. A call is marked private if the call originator has the All-Call Privacy feature or uses Per-Call Privacy feature to make the private call. The POLIN (Private Option for the Last Incoming Number) feature also causes an incoming number to be marked as private. Prior to this feature, attempts to invoke AC to a private number were not blocked.

2. FEATURE DESCRIPTION

The Automatic Callback Blocked to Private Number feature is a secured feature using SFID (Secured Feature ID) 111 and must be purchased before being activated. The Lucent Technologies feature number for this feature is 99-5E-1169.

Available with 5E8 and later, the Automatic Callback Blocked to Private Number secured feature allows a switch to block attempts to invoke AC towards a private number by routing the customer to a switch changeable rejection announcement. This feature provides a switch option to block or not block AC calls to private numbers.

When AC is invoked, this feature will check to determine whether the last call had a private number. If the calling number is private, and the AC Blocked to Private Number secured feature has been purchased and active, the call will be routed to an announcement or reorder treatment.

There is no interaction of Calling Name Delivery features with the AC Blocked to Private Number feature since use of a Calling Name Delivery Privacy option on an incoming call will not affect the status of the Calling Number field in the ILHB (assuming that a Calling Number Privacy option is not also involved).

2.1 Scenario

The following is a sample call scenario:

Line A has a LASS AC feature assigned. Line B has All-Call Privacy. The AC Blocked to Private Number Special Feature has been purchased and activated to return an error announcement.

- B calls A.
- A goes offhook.
- A and B talk.
- A and B go onhook.
- A dials the AC code.
- A is routed to the error announcement specified on the LASSOP form.

Without the AC Blocked to Private Number secured feature, the previous call would attempt to route normally and would not be blocked.

3. FEATURE ASSIGNMENT

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When this feature has been purchased, it can be activated on the LASSOP form (5945 Record). In addition, the route index of the announcement to be played when AC Blocked to Private Number occurs can also be specified on the LASSOP form.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LASSOP	5945	5	5F	8.21
SFSYS	5713-1	3	5AR	8.22

LASSOP form (5545 Record) - This form is used to supply global office options and parameters for the LASS features. Two new fields were added. The AC BLOCK TO PRIV field is used to activate the feature. The AC BLOCK RTI field specifies the route index of a switch changeable rejection announcement (or as a switch option to an existing announcement or to reorder tone) to be played when AC is blocked to a private number.

SFSYS form (5713-1 Record) - This form is used to enable secured features. This feature must be purchased, and SFID 111 ACT field must be set to "Y" to enable this feature.

SEC. 4A113: OSPS INTRAFLOW TO INTERFLOW CALL HANDLING WITH INTERFLOW CALL QUEUES

1. FEATURE DESCRIPTION

The feature number for this capability is 98-5E-2087. This feature is available for 5E8 and later, and provides the ability to intraflow calls to an interflow destination and to queue calls for an interflow trunk on the sending switch. This is a secured feature, therefore the SFID 113 ACT field must be set to "Y" on the SFSYS form to activate this feature.

This feature also allows interflow serving teams to be assigned as intraflow supporting teams. These serving teams will follow the same rules as any other supporting teams for call distribution through the intraflow feature.

If the data is translated by the ACD (Automatic Call Distributor) as a serving team that is assigned to an interflow destination and all interflow links on that serving team are busy, this feature allows the ACD to place the call on queue.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the Intraflow to Interflow Call Handling with Interflow Call Queues feature.

This feature depends on a serving team and call queue being added for each interflow destination. Because of data restrictions for 5E8 and 5E9(1), the data for serving teams 110 through 117 and for call types 110 through 117 are reserved for this feature. These correspond to interflow serving teams 129 through 136.

NOTE: Secured Feature ID 113 should not be activated prio to loading the Software Update.

1. All serving teams in the range 110 - 117 inclusive must be inserted. Insert serving teams 110 - 117 and call types 110 - 117 on OSPSCT form (5404 Record). The call type and serve team number must be the same (i.e., call type 110 serving team 110, etc.). No other call type may have a serving team of 110 through 117 as its primary serving team. Nor may call types 110 through 117 be used as active call types.

2. All call types in the range 110 - 117 inclusive must be inserted. Each call type must point to the

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corresponding serving team (i.e., call type 110 to serving team 110, call type 111 to serving team 111, ...).

3. No other call type may have a serving team of 110 through 117 as its primary serving team. Nor may call types 110 through 117 be used as active call types.

4. Activate the secure feature parameter. The Intraflow to Interflow Call Handling with Interflow Call Queues feature is a secured feature with SFID 113.

5. Turn on intraflow for the applicable serving teams (i.e., 110 - 117). A feature activation parameter, local to the switch, has been included in the OSPSOPT form (5424 Record).

6. INFLTADP form (5452 Record) will show the interflow destinations and the serving teams which support them in the ISERVTM field.

If the serving teams and call types are inserted and the secured feature parameter is activated, intraflow and the intraflow percentage can be updated to activate intraflow for that serving team (110 - 117) on STINFO form (5402 Record). The intraflow supplemental teams are inserted/updated on OSPSCT form.

- ***NOTE:*** Interflow calls were not queued before this feature. Therefore, check the queuing information on OSPSCT form for valid data of service objectives, delay thresholds, and announcement route indices.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
INFLTADP	5452	3	4BA	27.52
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

INFLTADP form (5452 Record) - This form is used for Destination (outgoing) Interflow Serving Team information for OSPS (Operator Services Position System). This form defines the interflow destinations and associates them with B- and D-channels. The ISERVTM field shows the interflow destinations and the serving teams which support them.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. INTRA TO INTER is the feature activation parameter, which is local to the switch.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The SFID 113 ACT field must be set to "Y" to activate this secured feature.

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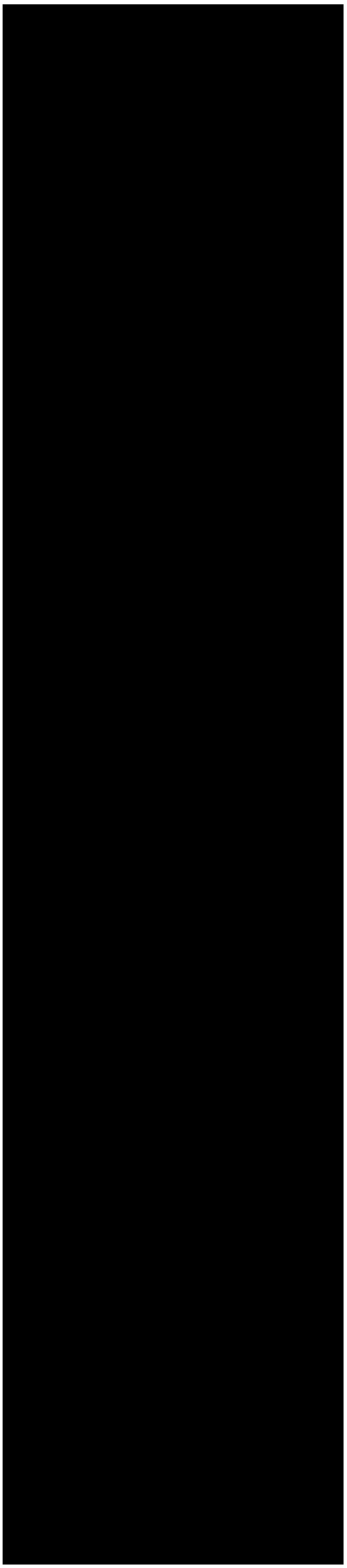

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Figure 1 INTRAFLOW TO INTERFLOW CALL HANDLING WITH INTERFLOW QUEUES FORM FLOW

SEC. 4A114: ISDN PSAP SUPPORT

1. FEATURE DESCRIPTION

The feature number for the ISDN PSAP (Public Safety Answering Point) Support feature is 99-5E-1505. Available for 5E8 and later, this feature provides the ability to assign a BRI (Basic Rate Interface) as a voice connection to a PSAP and have it, together with a PC (Personal Computer), provide all the functionality that currently exists with a CAMA PSAP. This is a secured feature; the SFID 114 ACT field on the SFSYS form must be set to "Y" to activate the feature.

The E911 (Enhanced 911) secured feature (SFID 61) must be available and active before ISDN PSAP Support can be used. The Calling Party Number Delivery on Enhanced 911 Calls secured feature (SFID 116) can be used in conjunction with the ISDN PSAP Support feature. For more information about these features see Division 2, Section 1BD, and Division 2, Section 4A116.

E911 provides switch functionality to recognize E911 originations in an E911 office, launch a query to the ESA (E911 Service Adjunct), and interpret the response message received from the ESA. The normal response message from the ESA is an ESN (Emergency Service Number) that the switch translates into a Primary PSAP, two Alternate PSAPs, up to six Selective Transfer numbers, and an FCD (Flash Control Digit). The E911 CESID (caller's Customer Emergency Services Identifier) is delivered to the PSAP and is used for access to the ALI/DMS (Automatic Location Information / Data Management System) database to retrieve the caller's information (such as address). With the ISDN PSAP Support feature, the Primary and/or Alternate PSAPs, and any of the Selective Transfer numbers can be ISDN PSAPs, which have full E911 functionality.

For more information on all the features available for the E911 Service please refer to document 235-190-115, Section 9.

1.1 Hardware Requirements

The ISDN PSAP hardware consists of a PC connected to an ISDN 7506 or 7507 (or equivalent) phone via an RS-232 interface. The PC abides by the protocol specified by the ISDN Asynchronous Data Module 2 Feature Package 3.2 API over an RS-232D interface between the PC and the ISDN phone. The PC has an additional interface to the ALI/DMS database or uses B-channel circuit switched data or D-channel packet (if the ALI/DMS has these capabilities) for ALI lookup requests. The BRI line provides voice and E911 CESID to the PSAP position. The ISDN PSAP PC Software is a separate deliverable. Optionally, an ISDN 7500 set to be used for data can be configured on a Multipoint DSL.

1.2 Call Scenario

The call scenario that follows demonstrates a 911 call as it is routed through the E911 system to an ISDN PSAP. In this case the PSAP is a member of a Multi-Line Hunt Group. The caller reports a fire; the PSAP attendant uses the Selective Transfer option to route the call to the appropriate fire department.

A. A caller dials 911 to report a fire.

B. The call is routed to the E911 serving switch over a CAMA, PRI, or SS7 trunk.

C. The E911 serving switch determines that the call is an E911 call and launches a query with the E911 CESID to the ESA (E911 Service Adjunct).

D. The ESA passes back the appropriate ESN (Emergency Service Number) based on the E911 CESID.

E. The switch retrieves the routing data associated with the ESN and routes to the Primary PSAP. For

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this scenario, the Primary PSAP is an ISDN PSAP with an MLHG DN where member 3 is available. The switch hunts and routes the call to member 3 of the MLHG and passes the E911 CESID and the flash control information along with the call.

F. The PC connected to the receiving attendant's phone launches a query to the ALI/DMS data base with the E911 CESID using a B-channel or D-channel data call over the same ISDN BRI line that received the 911 call. Note that the query is launched even before the call is answered..

G. The ALI/DMS system returns location information that the PC displays on the screen when the attendant answers the 911 call. Then the attendant can see the ALI data as the attendant interrogates the caller.

H. Once the attendant determines that the caller is reporting a fire, the attendant presses the selective transfer function key for fire.

I. The switch uses the selective transfer number for fire associated with the caller's ESN and sets up a 3-way call between that number and the 911 caller. The E911 CESID of the 911 caller, rather than the number of the PSAP initiating the transfer, is passed to the fire department's phone.

J. When the fire department answers, the transferring PSAP may disconnect to complete the transfer.

1.3 General Feature Characteristics

- An ISDN PSAP DN is blocked from dialing 911.
- When routing an E911 call to an ISDN PSAP, if the ISDN PSAP Support feature is not activated, the call receives alternate routing and an assert is delivered to the craft.
- When routing an anonymous call to an ISDN PSAP, if the ISDN PSAP Support feature is not activated, the call receives reorder and an assert is delivered to the craft.
- When routing an E911 call to an ISDN PSAP, the E911 CESID is sent to the ISDN CPE for display. This display information is used by the PC for the ALI/DMS look-up. An ICI code of "Emr" indicates that the incoming call should be flashed on the PC.
- When routing an E911 call to an ISDN PSAP, DN Privacy is ignored and the E911 CESID is included in the information sent to the ISDN PSAP. Calls routed to administrative DNs (not 911) at the PSAP are subject to DN Privacy.
- Anonymous calls are identified with a "000-911-0000" display. Default Routed calls are identified with a "000-911-0TTT" display where TTT is the ESCO (Emergency Service Central Office) of the caller.
- If a busy non-CAMA PSAP is encountered on an E911 call, ACBC (Automatic Callback Calling) camp-on is not allowed.
- When an ISDN user with multiple call appearances is on a 911 call, LASS (Local Area Signaling Services) AR (Automatic Recall) and AC (Automatic Callback) ringback are allowed.
- When an ISDN PSAP receives an anonymous call, the Incoming Line History Block (if applicable) is updated with the caller's DN and this DN is marked PRIVATE so that LASS cannot be used to get this anonymous caller's number. So, for AC from the PSAP to the anonymous caller, the display shows "PRIVATE NUMBER."
- Multipoint Digital Subscriber Line is allowed assignment to an ISDN PSAP. B-channel blocking is possible if two or more terminals are assigned to a single B-channel, or if 3 or more terminals are assigned to two B-channels. MDSL supports multiple voice and data terminals (up to 8) on the same BRI. Each ISDN PSAP that is separately connected to the BRI has a unique USOP (User Service

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Order Profile) and therefore subscribes to the ISDN PSAP features individually. It is recommended that no more than two ISDN PSAPs be assigned to a Multipoint DSL.

- If CPN/BN (Calling Party Number/Billing Number) is assigned to an ISDN PSAP, it does not overwrite the Display IE (Information Element) for E911 and anonymous calls.

1.4 MLHG ISDN PSAPs

The following paragraphs describe ISDN PSAPs arranged in an MLHG.

- The PSAP MLHG DNs (Group DNs, Individual Hunt DNs and Individual No-Hunt DNs) are considered Emergency numbers and, if dialed directly (not by dialing 911), such calls are considered anonymous calls.
- The ISDN PSAP Support feature does not change how MLHG works, but it uses MLHG capabilities such as Group Make Busy to trigger "Alternate Routing" - similar to the Trunk Group Make Busy Keys used on CAMA PSAPs..
- Two types of busy that can be given different treatment are:
  - group make busy key that controls the MLHG, and
  - traffic or maintenance busy indicated by the MLHG member status.
- When forwarding with CFBL, if the forward-to DN is a CAMA PSAP and all trunks are busy, the reroute DNs are attempted. If all reroutes are busy, alternate routing is attempted.

  The treatment given is determined by the type of busy detected. When CFBL is encountered, an attempt to route to the forward-to DN is made. The limit of sequentially active intraoffice call forwarding legs that can be used on any call forwarded call is specified by the SEQ ACT FWD LEGS field on the CFBL feature. The default is 5; therefore, 15 routes may be attempted (5 for each of the 3 ESN routes).
- When attempting to complete to an ISDN PSAP with the Group Make Busy key operated, the switch attempts alternate routing as follows:
  - If CFBL is assigned to the MLHG, an attempt to route to the forward-to DN is made first.
  - If neither CFBL nor CFBL-IMB is assigned, or if CFBL is assigned and the destination indicated by the forward-to DN fails, the first Alternate Routing DN is used.
  - If CFBL-IMB is assigned, the first Alternate Routing DN is used.
  - If the destination indicated by the first Alternate Routing DN fails, the second Alternate Routing DN if populated in the ESN is used.
  - If all attempts fail, reorder is returned to the caller.
- When attempting to complete to an ISDN PSAP where all members of the MLHG are busy, the switch attempts Alternate Routing as follows:
  - If no idle member is found and CFBL or CFBL-IMB is assigned to the MLHG, the forward-to DN is used to complete the call.
  - If the forward-to DN fails (i.e., busy or reorder), or CFBL or CFBL-IMB is not assigned, the first Alternate Routing DN is used.

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- If the destination indicated by the first Alternate Routing DN fails, the second Alternate Routing DN if populated in the ESN is used.
- If all attempts fail, reorder is returned to the caller.

1.5 Individual ISDN PSAPs

When attempting to complete to an individual (non-MLHG) ISDN PSAP where the PSAP is busy, the switch attempts Alternate Routing as follows:

- If CFBL is assigned to the the ISDN PSAP, first the forward-to DN is used to complete the call.
- If the forward-to DN fails (i.e., busy or reorder), or CFBL is not assigned, the first Alternate Routing DN is used.
- If the destination indicated by the first Alternate Routing DN fails, the second Alternate Routing DN if populated in the ESN is used.
- If all attempts fail, reorder is returned to the caller.

1.6 Selective Transfer for ISDN PSAPs

The following paragraphs describe Selective Transfer for ISDN PSAPs.

- Selective Transfer provides switch functionality to transfer an established E911 call from a primary PSAP to an emergency agency based on the transfer information contained in the ESN tuple.
- An ISDN terminal can have up to six possible selective transfer feature buttons. These buttons may be used from any PSAP DN on the terminal. The lamp provides confirmation treatment for Selective Transfer buttons when the CPE is in dial tone state with a call on soft hold. Rejection treatment is given when the selective transfer button is pressed in any other state; e.g., on-hook, talking, or call on hard hold.
- Selective Transfer is applicable when an E911 call has been routed to a PSAP using Selective, Alternate, or Default routing. Since anonymous calls are not processed by the E911 feature software, no ESN information is available, and therefore the Selective Transfer feature is unavailable for anonymous calls to the PSAP.
- When attempting a selective transfer to a CAMA PSAP where all trunks are busy, the reroute DNs are attempted. If all reroutes are busy, busy tone is applied.
- "One-Button" Selective Transfer can be initiated with the PC as follows:
  - Select the Selective Transfer function key on the PC.

    The result is to place the incoming E911 call on soft hold, initiate the call to the selected location, and conference the incoming E911 call, the attendant, and the transferred-to party together.
  - Disconnect to complete the transfer.
- Selective Transfer can be initiated without the PC as follows:
  - Push the Conference button on the ISDN CPE. The incoming E911 call is placed on soft hold.
  - With auto-hold, the switch selects a new call appearance.

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- Push the appropriate Selective Transfer feature button or dial the appropriate Selective Transfer dialed code.
- Push the Conference button again either during ringing or after the secondary PSAP answers. This joins the two calls in a three-way connection.
- Disconnect to complete the transfer.

- Selective Transfer updates the outgoing line history block used for LASS Automatic Recall to "invalid" for AR resulting in Long-term Denial treatment on a subsequent AR invocation.

1.7 Fixed Transfer

The following describes Fixed Transfer which is invoking transfer and then speed calling.

- "One-Button" Fixed Transfer can be initiated with the PC as follows:
  - Select the appropriate Fixed Transfer function key on the PC. The result is to place the incoming E911 call on soft hold, initiate the call to the selected location defined by the speed call number, and conference the incoming call, the attendant, and the transferred-to party together.

- Fixed Transfer can be initiated without the PC as follows:
  - Push the Conference button on the ISDN CPE. The incoming E911 call is placed on soft hold.
  - With auto-hold, the switch selects a new call appearance.
  - Push the appropriate Speed Call button or dial the speed call code.
  - Push the Conference button again and the switch joins the two calls in a three-way connection.
  - Once the other PSAP answers and the primary PSAP disconnects, the transfer is complete.

1.8 Manual Transfer

Manual Transfer allows the PSAP attendant to transfer a caller to another PSAP attendant by dialing a valid telephone number or the speed calling codes (or pressing a speed call button). Manual Transfer PSAP attendant operation is similar to the Fixed Transfer operation.

1.9 All Transfer/Conference Features

All transfer/conference features have the following in common:

- Transfer can only be on an intra-switch basis if E911 feature operation is to be maintained for the call.

  When the transferred-to PSAP is on another switch, and the Handoff capability is used in conjunction with the transfer, the receiving switch sees the transferred E911 call as a new E911 call, with dialed digits of 911 and the original caller's E911 CESID. The receiving switch is responsible for correctly routing the E911 call and for providing E911 functionality.

- Two calls that are both on PSAP call appearances can be merged for conference/transfer; but a call on a PSAP call appearance cannot be merged with a call on a Non-PSAP call appearance.

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When conference (or transfer) is invoked while active on a PSAP call appearance, the switch checks to see if there is a soft-held call on a Non-PSAP call appearance. If there is, the conference on the Non-PSAP call appearance is negated and the PSAP conference is allowed. The Non-PSAP call is put on hard-hold.

- If the transferred-to or conferenced-in party is a PSAP, the E911 CESID of the "911 caller" is sent instead of the calling party information about the PSAP initiating the transfer or conference call.
- When an ISDN PSAP transfers an E911 call to a station with B911 Class of Service, and the transfer is completed leaving the original caller connected only to the B911 station, B911 Emergency Ringback and B911 Forced hold capabilities are available if the call originated from a line on the E911 serving switch.

  There is no interaction between the Three-way 911 feature and the ISDN PSAP Support feature; i.e., when an ISDN PSAP is the controller of a 3-way call that has added a B911 PSAP, the PSAP can:

  - Drop the last added party; i.e., drop the B911 PSAP.
  - Transfer the incoming 911 call to the B911 PSAP.
  - Allow bridging if the controller is on a Shared Call Appearance.

- If a transfer/conference is unsuccessful and was initiated with the PC, the attendant can activate the DROP function on the PC to restore the connection to the 911 caller. Activating the DROP function is interpreted by the PC as a request to disconnect the transferred-to/conferenced location and restore the initial connection.

  If the transfer/conference was initiated without the PC, the attendant can press the Drop button on the CPE and then press the Call Appearance of the original call.

- If any conference attempt fails, the PC informs the attendant that the conference attempt failed. The attendant may choose to wait for answer on the second call and then toggle back to the original E911 call.
- Selective, Fixed, or Manual Transfer is not allowed while in stand-alone because the required conference circuits are not accessible. The attendant can make the call and toggle back to the E911 call, interrogate the caller, and relay the information to the other PSAP.

  Any conferences that are up at the time the RSM goes into stand-alone will be dropped because the conference circuits are not on the RSM.

- Six-Way Conferencing - because an ISDN PSAP cannot have a TG (Terminal Group) feature assigned, it defaults to POTS TG for Multiway filtering. Transferred-to PSAPs also default to POTS TG. Therefore, the transfer of a Six-Way conference looks like an intra-group call and is allowed.
- A conference on a shared call appearance of an ISDN PSAP is always eligible for transfer regardless of whether the controller (member that initiated the conference) is still on the call or whether parties were added by members other than the controller.

  A Shared DN member active on a conference call can drop the last added party provided that party was added by the member requesting the drop. This is an existing Shared DN capability that is preserved for ISDN PSAP.

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1.10 Call Forwarding Features

The CF (Call Forwarding) features are described below:

- When CF is assigned to an ISDN PSAP DN, the E911 call originator's E911 CESID is preserved and displayed at the forward-to PSAP. The ESN and associated data must be available after forwarding.

- Whenever CF is encountered in routing or transferring an E911 call to an ISDN PSAP, the ICI code of "EMR" is included in the Display IE to indicate that the E911 CESID is to be flashed on the PC screen.

- If CFDA (Call Forward Don't Answer) is assigned to the ISDN PSAPs, this takes precedence over Alternate Routing. That is, the call rings a specified number of times and then attempts to forward to the forward-to DN. If the forward-to DN is busy and has CFBL treatment, an attempt is made to forward again; if the forward-to DN is busy and does not have CFBL treatment, the caller continues to receive audible ringing.

  When an ISDN PSAP is forwarded using CFDA (CF Don't Answer), if forwarding fails or, if the last DN of the CF chain is busy or a busy CAMA PSAP trunk group is reached, the base station continues to ring. The reroute DN for a busy CAMA PSAP trunk group is not tried.

- Any CF feature that has TG requirements cannot be assigned to an ISDN PSAP because a TG feature cannot be assigned to a PSAP.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the ISDN PSAP Support feature.

2.1 Set Up Procedures

A. Activate the E911 and the ISDN PSAP Support secured features(SFID 61 ACT and SFID 114 ACT must be set to "Y" on the SFSYS form). ISDN PSAPs cannot be defined unless the ISDN PSAP Support feature is unlocked.

B. If Shared DN is to be used for supervisory monitoring, activate the Shared DN Bridging onto Conference secured feature (SFID 92 ACT must be set to "Y" on the SFSYS form). This feature allows a Shared DN member to bridge onto a conference. It also allows multiple bridgers on a call. Without this feature, an attempt to create a conference fails when a call is being monitored on a shared call appearance.

C. Specify the ISDN user as a PSAP.

   To guarantee that the PSAP DSLs are initialized as quickly as possible during a retrofit or full initialization of an SM, it is recommended that the PSAP DSLs and the ESA DSL links belong to the lowest numbered DSL groups (in particular, group 0) to take advantage of the current implementation on the switch which initializes DSL groups sequentially starting at DSL group 0 (note that this ordering is NOT a switch requirement - it is the current implementation and is, therefore, subject to change).

   An ISDN User can be specified as an E911 PSAP on the DSLUSR form. To make a user an ISDN PSAP set E911 PSAP to "Y". It is recommended that AUTO HOLD and ONE TOUCH be set to "Y".

   A Calling Party Number display feature and a Multi-Way Calling feature are also required (but not enforced) for 911 functionality and should be assigned to the user on a LINEFA, BFG, or associated

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CLUSTR form.

When E911 PSAP is "Y", the following restrictions apply for that user:

1. The user must have Circuit Switched Voice capabilities (CSV must be greater than 0).
2. The user cannot use Series Completion (to or from); SERHLN must be blank and BCK LNK must be "N".
3. The user cannot have suspended origination or termination; SUSO and SUST must be "N".
4. The user must be on a type B or D terminal; TERM TYPE must be "TYPEB" or "TYPED".
5. The user must be on a custom BRI; DSL CLS on the corresponding DSL form must be "PP" or "MP". If the user is on a point-to-point DSL (DSL CLS is "PP"), an ACSR Group must not be specified - to prevent "bumping" the ISDN PSAP into "limbo".

D. When an ISDN PSAP is assigned to an MLHG, the following applies:

1. On the MLHG form, the MLHG must be marked as a PSAP; E911 PSAP must be "Y".

   If an ISDN PSAP is a member of an MLHG, the MLHG must be marked as a PSAP group. When assigning a PSAP MLHG in Recent Change, the MLHG must be marked as an E911 PSAP group before members can be added.

   All members of the MLHG must be ISDN PSAPs.

   Once members have been added to an MLHG, the E911 PSAP field cannot be updated in Recent Change. The E911 PSAP field can be updated only after all members of the MLHG have been removed.

2. Also on the MLHG form, the MLHG cannot be marked as a Message Service Center; it cannot be marked for Modem Pooling; and MLHG queuing is not allowed.

   MSC must be "N"
   MPTYPE must be blank.
   QFEATURE must be blank.

3. On the MLHGFD form, the bearer type must be circuit-switched voice, and HUNT TYPE must be one of the following types: Uniform Call Distribution, Circular Hunt or Regular Hunt.

   BEARER must be "VOICE".
   HUNT TYPE must be "UCD", "HTC", or "REG".

4. Secondary-only DN/MLHG-members are supported as PSAPs (within existing restrictions) on terminals where the Primary DN is PSAP.
5. To do supervisory monitoring, Shared DN can be assigned with MLHG. Each member to be supervised needs an Individual DN. The supervisory position has shared call appearances that correspond to the first call appearance of each of the members to be monitored.
6. On the DSLUSR form, if the user is a member of an MLHG, the member cannot be outdial; CKT MEMB must be less than or equal to 2015.

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E. Associate feature buttons with Selective Transfer action. Feature buttons are associated with selective buttons via a Configuration Group on the CFGGRP form. The following entries populate buttons X through X+5 as the feature buttons for the 6 selective transfer numbers associated with the ESN.

BUTTONLIST[n].BUTTON: X
BUTTONLIST[n].FEATURE: /*
BUTTONLIST[n].ACTION: SEL1XFER
BUTTONLIST[n].PARAM: blank

BUTTONLIST[n+1].BUTTON: X+1
BUTTONLIST[n+1].FEATURE: /*
BUTTONLIST[n+1].ACTION: SEL2xFER
BUTTONLIST[n+1].PARAM: blank

BUTTONLIST[n+2].BUTTON: X+2
BUTTONLIST[n+2].FEATURE: /*
BUTTONLIST[n+2].ACTION: SEL3XFER
BUTTONLIST[n+2].PARAM: blank

BUTTONLIST[n+3].BUTTON: X+3
BUTTONLIST[n+3].FEATURE: /*
BUTTONLIST[n+3].ACTION: SEL4XFER
BUTTONLIST[n+3].PARAM: blank

BUTTONLIST[n+4].BUTTON: x+4
BUTTONLIST[n+4].FEATURE: /*
BUTTONLIST[n+4].ACTION: SEL5XFER
BUTTONLIST[n+4].PARAM: blank

BUTTONLIST[n+5].BUTTON: X+5
BUTTONLIST[n+5].FEATURE: /*
BUTTONLIST[n+5].ACTION: SEL6XFER
BUTTONLIST[n+5].PARAM: blank

In addition, GRP TYPE must be "CUSTOM".

To associate the feature buttons defined in the configuration group with the ISDN PSAP, specify the configuration group name in the CONFIG GRP field on the DSLUSR form.

These selective transfer actions can be verified on Recent Change View 23.22 (Call Appearances and Feature Buttons).

F. Assign an ICLID (Incoming Calling Line Identification) feature to the PSAP (for example /LICNDA

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and /LIDLXA; however, /DIDLX does NOT work).

G. Assign additional features.

1. If Shared DN is assigned, the display feature, /LICNDA, is required in order to ensure that the Display IE (Information Element) is delivered to all members of the Shared DN group.

2. Multi-Way Call Transfer Individual All Calls for ISDN, /MWICTIA, is required in order to set up 3-way conferences and allow transfer.

3. Multi-Line Hunt Group is optional.

4. ISDN Six-Way Conference Calling /MWI6WC, if desired, should be assigned to an ISDN PSAP terminal. The PC "Phone Buttons" configuration needs to be coordinated with the feature.

5. ESP (Essential Service Protection) provides priority service to subscriber lines designated by the administrative personnel as "essential". It is recommended that ESP be assigned to ISDN PSAPs by setting the EL field on RC View 23.2 to "Y".

6. Supervisory monitoring can be accomplished using Shared DN. The supervisor can share a call appearance with each member of a PSAP MLHG. The limiting factor is the availability of call appearances on the supervisor's terminal.

7. CFDA (Call Forwarding Don't Answer), CFBL (Call Forwarding Busy Line), CFBL-IMB (Call Forwarding Busy Line - Inhibit Make Busy), CFV (Call Forwarding Variable) are optional.

   It is suggested that ISDN PSAPs use the CFBL feature to provide the PSAP-busy reroute capability. This allows the assignment of a DN that is used if all members of the MLHG are busy when a termination is attempted.

   The assignment of CFBL also allows calls to busy individual ISDN PSAPs to be rerouted.

H. The options selected on the PC must be consistent with the features assigned to the line. See CALL-STALKER(R) ISDN PSAP Installation Guide, for details on configuring the ISDN PSAP PC software.

I. It is recommended that an originate-only call appearance be assigned to the PSAP DN to be used for conference and transfer.

   If desired, the customer may configure the E911 call appearances as denied origination. This provides a service similar to that of the existing CAMA PSAPs. If provisioned in this way, it is necessary to provision secondary PSAP call appearances to be used to set up conference or transfer.

J. Global Recent Change is not supported for ISDN PSAP.

K. The following paragraphs describe feature interactions with the ISDN PSAP Support feature. Assignment of the following features to an ISDN PSAP is blocked:

- Account Codes
- ASP (Advanced Services Platform)
- ACSR (Automatic Customer Station Rearrangement)

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- ARS (Automatic Route Selection)
- Authorization Codes
- CFPF (Call Forwarding over Private Facilities)
- Call Pickup, including Call Park
- ISDN Intercom
- MDR (Message Detail Recording)
- MSS (Message Service System)
- Modem Pooling
- PP (Precedence and Preemption)
- PFA (Private Facility Access)
- Queuing
- Series Completion (both to and from an ISDN PSAP)
- Suspend Origination (block setting to "Y" if ISDN PSAP)
- Suspend Termination (block setting to "Y" if ISDN PSAP)
- TGSR (Terminal Group Station Restriction)
- TOD (Time of Day)

Most of the above features are terminal features and thus are blocked from secondary (administrative) DNs as well as the PSAP DNs. TGSR, Series Completion, PP, and Call Pickup Terminating are assigned to DNs and, if desired, can be assigned to the non-PSAP secondary DNs.

If any of the above blocked features is assigned to an ISDN user, the user cannot be marked as a PSAP.

L. PSAP cannot be assigned to an ACD Position DN without the Pinnacle ACD E911 feature (refer to Division 2, Section 4A143 for more information on this feature).

M. E911 PSAP cannot be set to "Y" for Shared Analog. However, this does not prevent a Shared Analog DN from being an administrative DN on an ISDN PSAP terminal.

N. If a Shared DN is a PSAP DN, the Primary DNs of all terminals that share that DN must be PSAP. Before the DN is shared to a PSAP, it must already be marked as a PSAP; a Shared DN cannot be made an ISDN PSAP.

O. The ISDN phone is capable of using either B-channel circuit switched data or D-channel packet switched data to access the ALI system.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5

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DSLUSR	5908	5	1I	23.2,23.8
MLHG	5110	3	1J	3.5
SFSYS	5713-1	3	5AR	8.22
SHTN	5902	5	1C	23.20

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) terminal buttons. The new ACTION values "SELnXFER", where n is 1 - 6, were added to assign selective transfer keys to ISDN PSAP terminals. These keys can be assigned only to terminals on Custom (non-Standard) DSLs.

DSLUSR form (5908 Record) - This form is used to define the TN and status of a DSL user. The E911 PSAP field was added to define the user as an E911 Public Safety Answering Point.

MLHG form (5110 Record) - This form is used to define a Multi-Line Hunt Group. The E911 PSAP field was added to define the MLHG as an E911 Public Safety Answering Point.

SFSYS form (5713 Record) - This form is used to enable secured features. The SFID ACT 114 field must be set to "Y" to activate this secured feature.

SHTN form (5902 Record) - This form is used to assign shared TNs and MLHG members to ISDN terminals. The E911 PSAP field was added to define a secondary only TN or MLHG member as an E911 Public Safety Answering Point.

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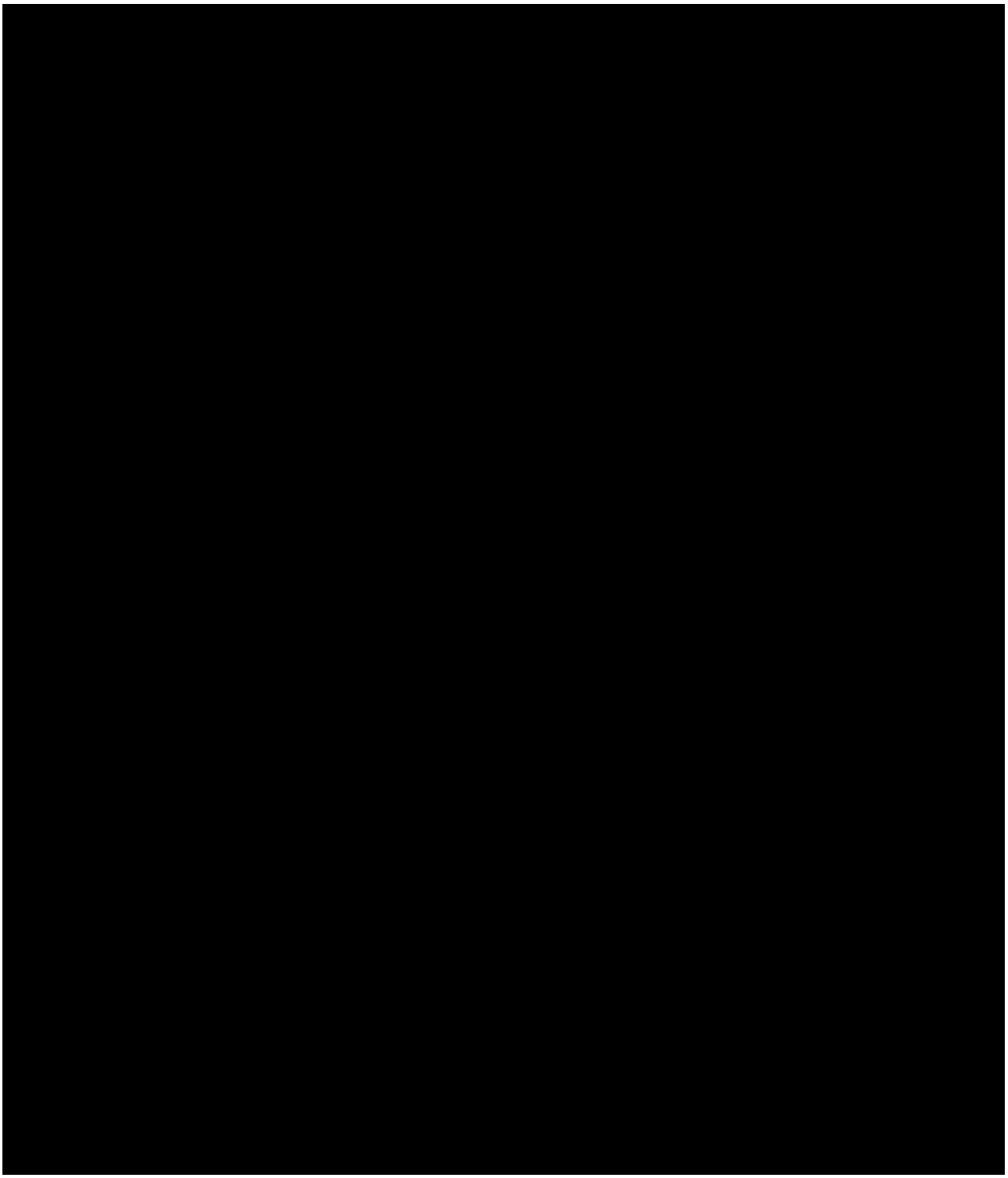

Figure 1 ISDN PSAP SUPPORT FORM FLOW

SEC. 4A116: CPN (CALLING PARTY NUMBER) DELIVERY ON E911

1. FEATURE DESCRIPTION

Available with 5E8 and later, the CPN (Calling Party Number) Delivery on E911 Calls feature has feature number 99-5E-2202. It is a Secured Feature, using SFID (Secured Feature ID) 116, which must be purchased to be activated.

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This feature is dependent on the E911 (Enhanced 911) secured feature (SFID 61), which must also be purchased and activated. See Division 2, Section 1BD.

The CPN Delivery on E911 Calls feature specifies on a per office basis whether the BN (Billing Directory Number) or the CPN will be used for ESA (E911 Service Adjunct) queries, PSAP (Public Safety Answering Point) displays, and ALI/DMS (Automatic Location Information / Data Management System) look-ups. This number is referred to as the CESID (Customer Emergency Services Identifier).

To route an E911 call, the CESID used for the ESA query and subsequent ALI/DMS look-up is obtained as follows:

- For calls delivered over CAMA trunks, ANI is used as the CESID. (CPN delivery over CAMA trunks from an end office to an E911 serving switch is not supported. For an end office to take advantage of the CPN Delivery on E911 Calls, SS7 trunks must be used.)
- For calls delivered over SS7 trunks or local lines:
  - If CPN Delivery on E911 Calls has been activated, the CESID is the CPN or BN, depending on the option set for the office.
  - If CPN Delivery on E911 Calls has not been activated, the BN is used as the CESID.
- For calls delivered over PRI trunks, the CESID depends on the option set for the trunk group: CPN or BN. This is not affected by the CPN Delivery Special Feature.
- If the CESID is supposed to be the CPN but the CPN is not available, the BN will be used.
- If the CESID is supposed to be the CPN, but the "nature of address" is not public, the BN will be used.
- If the CESID is supposed to be BN, but BN is not available, the call will be default routed.

The CESID will be displayed at the terminating PSAP.

2. FEATURE ASSIGNMENT

To enable this feature, SFID 116 on the SFSYS form (5713-1 Record) must have ACT set to "Y".

In addition, the E911 CESID field on the OFCOPT form must be set to "BN" or "CPN". The value will be used for E911 calls from lines on the serving switch and E911 calls incoming over SS7 trunks.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
OFCOPT	5509	3	5I	8.1

OFCOPT form (5509 Record) - This form is used to define miscellaneous office options and parameters.

The field E911 CESID was added for this feature. This field determines whether the Billing Number or the Calling Party Number will be used for ESA queries, PSAP displays, and ALI/DMS look-ups.

SEC. 4A117: OSPS ENHANCEMENTS TO DA AND DACC FOR WIRELINE AND NON-WIRELINE USERS

1. FEATURE DESCRIPTION

OSPS Enhancements to DA and DACC for Wireline and Non-Wireline Users provides enhancements to

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the OSPS DA (Directory Assistance) and DACC (Directory Assistance Call Completion) features to allow an OSPS, in cooperation with an LSDB (Listing Services Data Base), to provide improved DA and DACC service on calls delivered to the OSPS by CMC (Cellular Mobile Carriers) and other traffic aggregators such as universities and hotels.

The feature number for this capability is 98-5E-2057. This feature is a secured feature with secured feature ID 117.

The feature allows trunks from CMCs and other aggregators to be marked, so that all DA calls arriving on those trunks (and any subsequent DACC calls) are given special treatment.

It allows Telephone Company Administrations to define a 5-digit ID (Identification Code) for as many as 32 CMCs or other traffic aggregators, and associate an aggregator ID with each incoming DA aggregator trunk. The aggregator ID will then be explicitly identified in the AMA record made for all DA/DACC calls made on those trunks.

It also allows the OSPS to indicate to the associated LSDB that a DA call is from a particular CMC or other traffic aggregator, and thus allow the LSDB to provide custom announcements.

In addition, this feature handles the complications caused by roaming cellular users. An NPA and NXX associated with the MTSO (Mobile Telephone Switching Office) from which calls originate will be entered for each trunk carrying CMC traffic. The MTSO NPA/NXX will be used to perform LATA mapping and Exception area determination.

2. FEATURE ASSIGNMENT

The secured feature ID for this feature is SFID 117. The SFID must be activated the SFSYS form (5713-1 Record) before feature data can be populated.

Separate trunk groups must be defined to carry traffic from each DA aggregator (CMC, university, hotel, etc.) to the DA OSPS. This is required because the aggregator ID for the AMA record is defined in trunk group data.

For CMCs, separate trunk groups must be defined to carry traffic from each LATA and exception area served by the CMC. This is required because the MTSO NPA/NXX used for LATA and Exception Area determination is defined in trunk group data.

Existing DA/DACC growth procedures should be used to grow the necessary trunks to carry DA aggregator traffic. Any of the trunk types which support DACC may be used to carry DA aggregator traffic.

For DA aggregator trunks that have AGGR IS CMC set to "Y", the OPRTK form (5417 Record) must indicate that coin calls are not carried, i.e., COIN and COIN POST PAID are set to "N" and SIG TYPE is "NOCN", and that Originating Line Screening type is not dedicated, i.e., OL SCRN is not "DED". For all DA aggregator trunks, LSTG SVC TRAF must be "Y".

Once the existing growth procedures for the aggregator trunks are completed, the data for this special feature may be defined.

On the OPRTK form, each aggregator should be assigned an aggregator ID in the range 0-99999 and an aggregator index in the range 0-31. The aggregator ID will be included in the new module appended to the AMA record for each DA/DACC call from the aggregator. The aggregator index will be passed to the LSDB if needed to identify the aggregator.

For each DA aggregator trunk from a CMC, an appropriate NPA/NXX should be determined. The NPA/NXX chosen will determine the LATA and Exception Area index used for calls on that trunk.

The LSDB must be able to identify aggregator-initiated DA calls and provide any special announcements or treatment required.

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3. SCENARIO

The scenarios for this feature are identical to those for other DA/DACC calls, with the following exceptions:

- Module 150 will be appended to any AMA records for DA and any subsequent DACC calls.
- The OSPS will not assert if the signaled ANI for a call from a CMC is not found in office data.
- Determination of LATA and Exception Area for DACC calls from CMCs will use the MTSO NPA and NXX from trunk group data.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OPRTK	5417	3	4R	26.26
SFSYS	5713-1	3	5AR	8.22

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS operator. An OPRTK form must be completed for each incoming trunk group in the office that can access the OSPS operator.

The aggregator fields on this form are:

- DA AGGR TRK - indicating whether this special feature should be applied to this trunk group
- AGGR ID - the 5-digit ID for the aggregator
- AGGR INDEX - the index of the aggregator
- AGGR IS CMC - indicates if the aggregator is a Cellular Mobile Carrier
- AGGR NPA and AGGR NXX - the NPA and NXX for LATA determination (only allowed for CMC aggregators).

SFSYS form (5713-1 Record) - This form is used to activate secured features. "Y" should be entered in the ACT field for SFID 117.

SEC. 4A118: 15A CASCADING ANNOUNCEMENT

1. FEATURE DESCRIPTION

The 15A Cascading Announcement feature is a secured feature using SFID (Secured Feature ID) 118 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-2211.

Available on the 5ESS-2000 Switch for 5E9(2) and later, this feature provides the capability of connecting the end user to the desired announcement that will start playing next. In order to accomplish this, the 15A unit can be configured with two circuit packs each having eight channels, with each starting the announcements at a different time. The software determines which channel will start playing next and connects the caller to that trunk. For trunk groups connected to the 15A cascading announcement circuits, the calls are routed to the announcement that plays next, thereby minimizing the delay between the camp-on to the announcement trunk and the actual connection to the announcement.

When the announcement is recorded, the 15A frame divides the length of the announcement (maximum of 60 seconds) by eight (the number of trunks) to determine how far apart to begin each announcement. This is all done internally by the 15A frame. All the customer must do is record the announcement.

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This arrangement gives the caller the shortest possible waiting time and ensures that the entire announcement is heard from start to finish. This is especially useful when used in conjunction with ACD BRCS vectoring, where multiple announcements are often necessary.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
TKGRP	5202	3	2A	5.1
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features. The 15A Cascading Announcement feature is a secured feature and is activated by setting the ACT field for SFID 118 to "Y" on the SFSYS form (5713-1 Record).

TKGRP form (5202 Record) - This form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form.

The translations for this feature are very similar to those of the 13A announcement trunks. In addition, the new field CASCADING was added to this form. Setting this field to "Y" treats this trunk group as a 15A Announcement trunk group.

When this field is "Y" the MAXCALLS field must be set to 60 on the TKGRP form. MAXCALLS is also listed on the Trunk form (5204 Record) but must still be set to 60. 15A Announcement trunks are also allowed to have the AUD RNG field on the TKGRP form set to " N".

- ***NOTE:*** Once the data has been setup for the 15A trunk group, the trunks MUST BE REMOVED AND RESTORED before they will be treated as a 15A group.For installation information please refer to the 15A hardwaredocumentation *AT&T 201-522-101* that is included with the hardware.

SEC. 4A119: ALTERNATE LANGUAGE LASS ANNOUNCEMENT CAPABILITY

1. FEATURE DESCRIPTION

The Alternate Language LASS Announcement Capability feature gives the 5ESS Switch the ability to provide the LASS DSU2-RAF (Digital Services Unit 2 - Recorded Announcement Frame) interactive announcements in either of two languages on a per-line basis. The LASS Selective Features that support this feature are:

- SCA (Selective Call Acceptance)
- CAR (Computer Access Restriction)
- SCF (Selective Call Forwarding)
- SCR (Selective Call Rejection)
- SDA (Selective Distinctive Alert)

This feature also supports Two-Level AC (Automatic Callback) and Two-Level COT (Customer Originated Trace). A per line subscription option provides the LASS announcements in either the main language (e.g. English) or the alternate language (e.g. Spanish). The office determines which language is the main language for the office.

This feature is secured feature, which is controlled by secured feature SFID 119 and is available for 5E8 and later. The feature number for Alternate Language LASS Announcement Capability is 99-5E-2331.

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The alternate language DSU2-RAF announcement packs can be ordered using the existing DSU2-RAF custom announcement process. The announcement phrase IDs (ANNHD form) for the alternate language must exactly match the phrase IDs for the main language. Therefore, the translation from English must be a phrase by phrase translation.

This feature does not modify the order of the phrases used to voice back numbers. For example, the number "21" is voiced back in English (assume that English is the main language) as a combination of the phrase "twenty" followed by the phrase "one." In the alternate language the number "21" must also be voiced back as the phrase for "twenty" followed by the phrase for "one" (with each phrase translated into the alternate language.) It is not possible to have the phrase reversed in the alternate language (i.e., "one" followed by "twenty.")

This feature provides the ISDN displays associated with LASS features in English. (It does not modify the current operation of ISDN displays associated with LASS features.)

The feature does not affect the 13A/14A announcements provided by any of the LASS features.

This feature only modifies the operation of AC (Automatic Callback) if the AC ACT LVL switch parameter on the LASSOP form is set to 2. This feature only modifies the operation of COT if the COT ACT LVL switch parameter on the LASSOP form is set to 2.

2. FEATURE ASSIGNMENT

The following steps are necessary to activate the feature assuming that the main language RAF is currently available:

- Grow in the DSU2-RAF for the alternate language according to AT&T Practices Document 235-190-115, "5ESS Switch Local and Toll System Features Document" section 8. Verify that the Announcement Application SM List (form ANNAPL) for LASS and 2LEVEL is updated to include the SMs which contain the alternate language DSU2-RAF units.

- On the FIXRT form (5301-1 Record), populate the fixed route types "ALSLE" and "AL2LVL" with the route index for the alternate language DSU2-RAF.

- Activate the Secured Feature ID 119 on the SFSYS form.

- For the lines which desire the alternate language, set the line parameter ALT LANG to "Y" on the LINE or MLHLN forms for analog lines or the DSLUSR form for ISDN lines.

When a customer requests one of the LASS features that is supported by this feature, verify on the LINE or MLHLN forms for analog users or DSLUSR form for ISDN users that the correct language is selected by the ALT LANG field. A value of "Y" indicates that the user will be routed to the alternate language DSU2-RAF via the FIXED ROUTE TYPE "ALSLE" or "AL2LVL". A value of "N" indicates that the user will be routed to the main language DSU2-RAF via the fixed route "SLE" or "2LEVEL" . The default value for the ALT LANG field is "N" indicating that the main language for the office will be provided by default.

See Figure 1 for feature assignment form flow for Alternate Language LASS Announcement Capability.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2, 23.8
FIXRT	5301-1	3	3G	10.1
LINE	5109	3	1I	1.5, 1.6
MLHLN	5111	3	1K	1.6

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DSLUSR form (5908 Record) - The 5908 Records are used for four major purposes:

- Defines the associated TN(s) and status of a DSL user. The OE field on this form is the field that associates a user with a particular DSL.
- Defines the circuit switching (voice and data) attributes of a DSL user.
- Defines the D-channel packet switching attributes of a DSL user.
- Defines the On Demand B-channel packet switching attributes of a DSL user.

The ALT LANG field was added to support this feature. The ALT LANG field is used to specify if an alternate language is to be used for announcements.

FIXRT form (5301-1 Record) - The 5301-1 Record defines the Routing and Charging treatment of Fixed Route Types. FIXED ROUTE TYPE entries "AL2LVL" and "ALSLE" are added to support this feature.

LINE form (5109 Record) - The 5109 Records define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch. The ALT LANG field was added to support this feature. The ALT LANG field is used to specify if an alternate language is to be used for announcements.

MLHLN form (5111 Record) - The 5111 Record defines the individual Terminal Numbers assigned to a particular MLHG. The ALT LANG field was added to support this feature. The ALT LANG field is used to specify if an alternate language is to be used for announcements.

4. GLOSSARY

AC	Automatic Callback
COT	Customer Originated Trace
CAR	Customer Access Restriction
SCA	Selective Call Acceptance
SCF	Selective Call Forwarding
SCR	Selective Call Rejection
SDA	Selective Distinctive Alert

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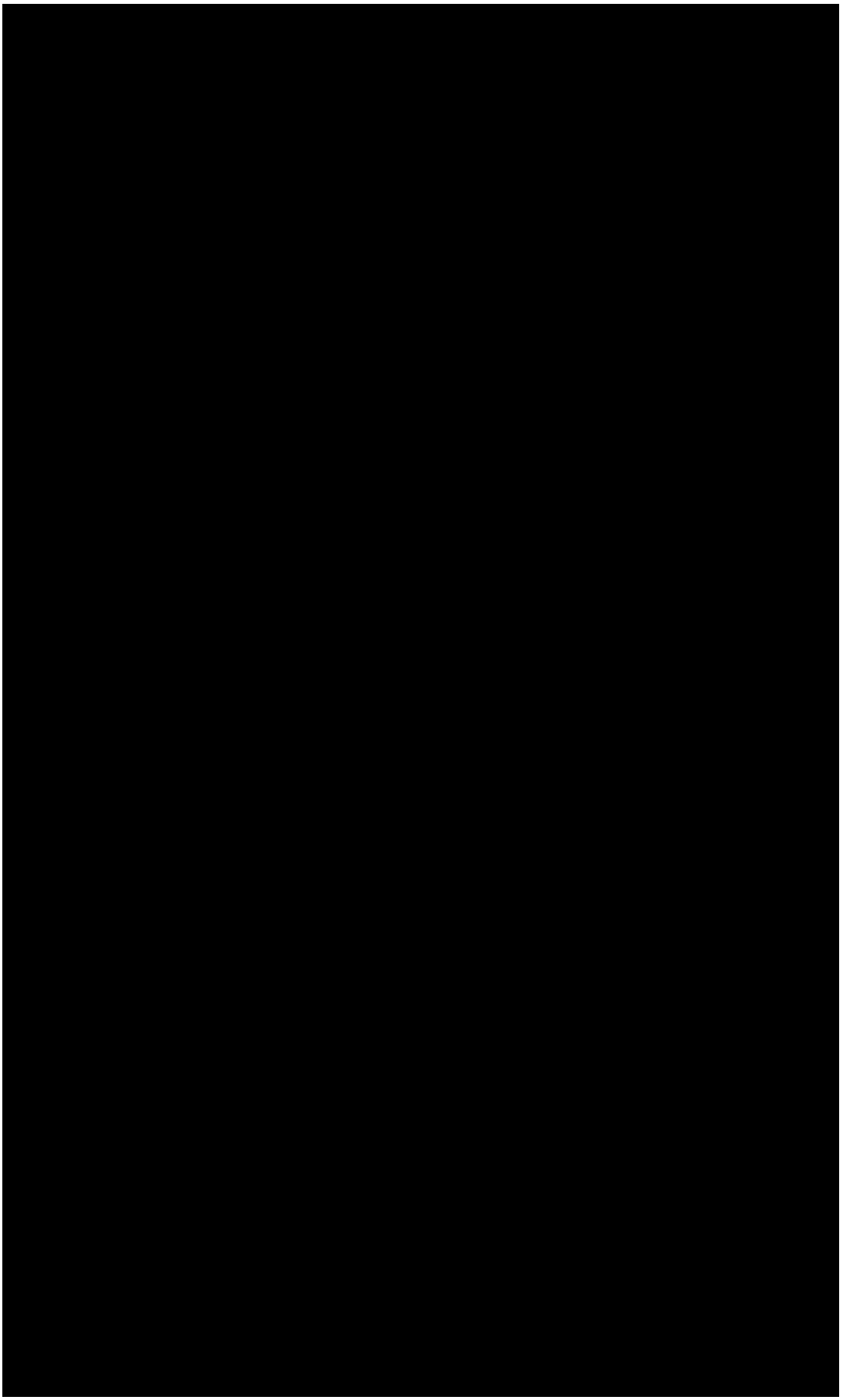

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Figure 1 FORM FLOW FOR ALTERNATE LANGUAGE ANNOUNCEMENT CAPABILITIES

SEC. 4A120: ORIGINATING AR/AC DESTINATION POINT CODE

1. FEATURE DESCRIPTION

The Originating AR (Automatic Recall) or AC (Automatic Callback) DPC (Destination Point Code) feature is a secured feature (SFID 120) for the 5ESS Switch, 5ESS Switch CDX (Compact Digital Exchange), and 5ESS Switch VCDX (Very Compact Digital Exchange) that is available with the 5E14 and later Software Releases. The feature number for this feature is 99-5E-7567.

When an AR or AC session is invoked, the AR/AC Initial Query TCAP (Translation Capabilities Application Protocol) message is sent using GTT (Global Title Translation) SCCP (Signaling Connection Control Part) routing. The STP (Signaling Transfer Point), in conjunction with a Service Control Point (when Number Portability is involved) performs the GTT to derive the DPC of the terminating switch and routes the message. When the originating switch receives a message from the terminating switch subsequent to sending the Initial Query message, the message contains the DPC and Subsystem Number of the terminating switch. Currently, the 5ESS Switch does not store this DPC or Subsystem Number of the terminating switch, but instead uses GTT routing for subsequent TCAP messages. In the latest version of the Telcordia Technologies AR and AC TRs (TR-215 Issue 3, and TR-227 Issue 3) new requirements (R-209 in TR-215 and R-223 in TR-227) were added to require that the originating switch save the Point Code and Subsystem Number of the terminating switch and use Point Code SCCP routing (instead of GTT SCCP routing) for all subsequent messages sent to the terminating switch during the AR/AC session.

2. FEATURE ASSIGNMENT

For 5E14 and later, to enable this feature, the ACT field for SFID 120 on the SFSYS form (5713-1 Record) must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features. The ACT field for SFID 120 must be set to "Y" on the SFSYS form to enable this feature.

SEC. 4A121: ACD BRCS - AUTOMATIC CALL DISTRIBUTOR BUSINESS AND RESIDENTIAL CUSTOM SERVICES

1. ACD/BRCS 5E9(1) - 5E10

1.1 Feature Description

For 5E9(1) and later, this feature gives the ability to use both ACD (Automatic Call Distributor) capabilities and ISDN BRCS (Business and Residence Custom Services) capabilities from the same ISDN station set over a BRI. The BRI interfaces supported for ACD/BRCS secured feature are the Lucent Technologies Type B or Type D terminals. Incoming ACD calls are directed to the agent serving a particular team (hunted calls) who has been idle the most. These calls receive ACD Originating treatment, Call Vectoring, Queuing, and Delay Treatment. For more information on Custom ISDN features see 235-190-105, *Custom ISDN Feature Descriptions.*

1.2 BRCS Features

The BRCS features are allowed for outgoing calls and incoming non-hunted calls. Multiple call

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appearances and multiple DNs are available to the station set. Shared DN (Directory Number) is not allowed on the primary DN at a terminal to which ACD is assigned (the position DN), but it is allowed on a secondary DN. Position DNs may not be assigned to Multi-Line Hunt group members, nor are Multi-Line Hunt group features allowed on Position DNs. (A Position DN is defined to be a CKT TN (Circuit Telephone Number) on the DSLUSR form with an entry in the ACD POS NUM field. A CKT TN is the primary DN on an ISDN phone position.)

The ACD/BRCS feature eliminates the need for loop around trunks that were used for originations into the ACD from lines, for terminations from ACD agents to lines, and for billing of agent originated calls.

ACD agents can conference and transfer between ACD calls and external parties (outside the ACD), and the ACD agents can transfer a call after a conference has been established. ACD agents can conference and transfer with other ACD agents, or with any other parties to which they can connect. An ACD agent can place an active ACD call on hold to answer a non-ACD call.

Agents can use the 5ESS-2000 Switch ISDN Data Services such as ODB (On Demand B Channel Packet Switching) and PPB (Permanent Packet B Channel Packet Switching). Data calls are not affected by the ACD functionality at the terminal.

1.3 ACD Features

Current ACD functions are maintained, such as MIS (Management Information System) statistics on ACD calls, DAA (Direct Agent Access) by dialing a Directory Number that links to a specific agent, monitoring agents (also known as service observing), the ability to dial agents by an access code plus an agent ID, and the ability to dial queues by access code plus queue number. Also, MIS information is provided on calls to ACD Call Appearances when the DAA agent is not logged in. However, they are tracked against the physical position rather than an agent ID.

This feature also provides the ability to mix ACD agents that are served from the ACD OSPS platform and those that are served from the ACD/BRCS platform on the same switch, which also may include the same customer and serving team.

The following is a summary of the ACD capabilities:

- Incoming ACD calls can be placed in a queue and given call vectoring treatment, which includes the ability to collect digits for the Call Vectoring PROMPT step.
- TGSR screening is provided.
- Forwarding treatment is provided for a DAA agent who is not logged in.
- Monitoring permissions are available for the ability to monitor ACD/BRCS agent's voice calls and the associated displays.

1.4 Call Processing Data Flow

The call processing data flow for ACD/BRCS ACD and DAA DNs, Agent Intercom Calls, Agent login, Agent Makebusy, and Agent monitoring follow.

ACD Hunted Call and DAA DN Call Data Flow - The Customer dials an ACD DN or DAA DN.

1. Perform digit analysis.
2. Route the call.
3. Determine the ACD treatment.

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4. For ACD DN: Check the queue to see if it is open or closed.
5. For ACD DN: Queue the call.
6. For ACD DN: Determine the available agent for ACD.

   For DAA DN: Determine if the DAA agent is logged in.
7. For ACD DN: Dequeue and deliver the call.
8. Retrieve ISDN/BRCS resources.
9. Select the features for ACD/BRCS position.
10. Offer the call to ACD/BRCS position.

Agent Intercom Call Data Flow - An agent dials the AIC (Agent Intercom Call) code.

1. Perform digit analysis.
2. Determine if called agent is logged in.
3. Locate called agent and deliver call.
4. Retrieve ISDN/BRCS resources.
5. Select features for the agent position.
6. Offer call to ACD/BRCS position.

Agent Login Data Flow - The agent depresses the login button.

1. Route the button request.
2. Check the position status.
3. Light the login and MAKEBUSY lamps.
4. Prompt the agent for login and password.
5. Verify the login, password, and TGID.

Agent Makebusy Data Flow - The agent depresses the MAKEBUSY button.

1. Route the button request.
2. Update the position status.
3. Update the agent status.
4. Light the MAKEBUSY lamp.

Agent Monitoring Data Flow - The Service Observer goes off hook on a non-hunted Position DN call appearance.

1. Depress SO (Service Observing) button (service observer).

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2. Route the button request.
3. Check the service observer's preconditions.
4. Update the position status.
5. Light the SO lamp.
6. Prompt the service observer for the target agent.
7. Verify the target agent.

1.5 Feature Assignment

See Figure 1 for data assignment form flow for the ACD/BRCS feature.

The following BRCS features are required for ACD Position Numbers: a CFW feature with FWD CONDITION of "ACDI"; an MW feature with Multiway Control of "3WAY" and Feature Button of "Y"; a TGSR feature; and an IDP feature.

The following BRCS features are not allowed for ACD Position Numbers: ACVT features, ACSR features, and PP features.

No features may be assigned to ACD or DAA Telephone Numbers.

1.6 ACD/BRCS Position Assignment

- Office Set Up -

  The new dial access codes for an entire office are entered in the PDIT form (5300-2 Record) and new dial access codes for Business Groups are entered in the IDPDCA form (5601 Record).

- MIS Link -

  The MISLINK form (5637 Record) is used to make MIS Link assignments, which provide the capability to provision an MIS Event Link for ACD/BRCS on all valid DSLs (Digital Subscriber Lines).

- Feature Assignment -

  An existing feature may be used, or a feature may be constructed for the ACD/BRCs Position. If the feature is included in a cluster the CLUSTR form, (5600 Record) must be updated. If it is included in a BFG then the BFG form (5625 Record) must be updated. New ISDN feature button configurations are entered in the CFGGRP form (5964 Record).

- Line Assignment -

  Terminal assignment is entered on the DSLUSR form (5908 Record). The feature assignment is entered on the LINEFA form for ODA, and on View 23.8 for Recent Change. The Line Parameters are assigned on the CFWLPA, MWLPA, TGSRLPA, and IDPCLPA forms. Secondary DN assignments are entered on the SHTN form (5902 Record).

1.7 ACD Serving Team, Agent, and Call Type Assignment

The serving team is assigned on the STINFO form, view 21.2, with the operator assignment on the OSPSOA form, view 21.4 and the call type assigned on the OSPSCT form, view 21.22.

Displays are entered on the OBSTS form, view 21.26. Call vectoring is assigned on CVECT form, view

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21.41.

The ACD TN and DAA TN are defined on the ACDTN form, view 4.15. The ACD TN is a number that is assigned to a serving team, such as the Home Shopping Network number. The DAA TN is a number that is assigned to a specific agent.

1.8 Secured Features

ACD/BRCS is a secured feature and requires that the following SFIDs be set to "Y" on the SFSYS form (5713-1 Record):

- SFID 121 - ACD/BRCS Interworking
- SFID 122 - ACD/BRCS Position Provisioning
- SFID 123 - ACD/BRCS Agent Login
- SFID 16 - OSPS ACD/DAA for DAA
- SFID 64 - Music On Hold
- SFID 4 - Live Mike

1.9 Translation Requirements

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDTN	5631-1	4	32A	4.15 for 5E9(1) - 5E10 6.10 for 5E11 and later
CACDPARM	5458	3	4BF	8.30
CFWFD	5614	4	15A	12.12
CFGGRP	5964	6	7A	12.5
DSLUSR	5908	5	1I	23.8/23.2
IDPDCA	5601	4	2B	9.13
MISLINK	5637	4	32B	23.19 for 5E9(1) - 5E10 6.11 for 5E11 and later
OSPSCT	5404	3	4E	21.22
OSPSOP	5401	3	4B	21.23
PDIT	5300-2	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22
STINFO	5402	3	4C	21.2

ACDTN form (5631-1 Record) - For 5E9(1) and later, this form is used to define an ACD directory number or a DAA (Direct Agent Access) directory number. See Figure 1 for form flow of cross checks for ACDTN.

CACDPARM form (5458 Record) - This form assigns office options and parameters. The following three parameters for the maximum number of simultaneous forwarded calls were added for the ACD/BRCS feature: SIMINTRA, SIMINTER, and CF MAX.

CFWFD form (5614 Record) - This form defines the feature options for Call Forwarding. "ACDI" is the forward condition for ACD/BRCS feature.

CFGGRP form (5964 Record) - This form assigns BRCS feature conditions to the CPE user terminal button. The following action entries were added for ACD/BRCS: AATOG, BITOG, CLTOG, CWLMP, ECUSE, EMUSE, LGNTOG, MBTOG, SAUSE, and SOTOG.

DSLUSR form (5908 Record) - The DSLUSR form defines associated TN and status, the circuit switching attributes, D-channel packet switching, and On Demand B-channel packet switching attributes of a DSL user. For 5E9(1) and later, the ACD POS NUM field identifies an ACD/BRCS position.

IDPDCA form (5601 Record) - This form is used to define the dialed codes associated with IDPs. The following actions were added for ACD/BRCS feature: AAON, AAOFF, AIUSE, AQCUSE, CLON, CLOFF, EMUSE, and SAUSE.

MISLINK form (5637 Record) - This form is used to make MIS Link assignments, providing the capability

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to provision an MIS Event Link for ACD/BRCS on all valid DSLs.

OSPSCT form (5404 Record) - This form is used to assign OSPS call types. This form has two Recent Change / Verify only fields for ACD/BRCS. The TGID field displays the Terminal Group Identifier if it is assigned to an ACD/BRCS serving team. The ACD OR DAA TN field displays the ACD or DAA telephone number for the CALL TYPE on the OSPSCT form.

OSPSOP form (5401 Record) - This form defines each operator position and assigns the RISLU ports. The corresponding Recent Change/ Verify screen displays the ACD LCEN, ACD POS TN, and the TGID.

PDIT form (5300-2 Record) - The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). The following ACTIONS were added for ACD/BRCS: AAOFF, AAON, AIUSE, AQCUSE, CLOFF, CLON, EMUSE, and SAUSE.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The following secured feature IDs should be set to "Y" to activate the secured features associated with ACD/BRCS:

- SFID 121 - ACD/BRCS Interworking
- SFID 122 - ACD/BRCS Position Provisioning
- SFID 123 - ACD/BRCS Agent Login
- SFID 16 - OSPS ACD/DAA for DAA
- SFID 64 - Music On Hold
- SFID 4 - Live Mike

STINFO form (5402 Record) - This form provides information about the serving team. The fields AFTER CALL WK, LIVE MIKE, WARN TONE, and TGID were added for the ACD/BRCS feature.

2. ACD/BRCS INTERWORKING II (5E11 AND LATER)

2.1 Feature Description

To support the trend in today's ACD marketplace for smaller and specialized agent groups which require more switch queue capacity, this feature expands the current queue limitation and increases the switch capacity for the following switch resources:

- ACD DNs (256 - 2048)
- Agent IDs (8999 - 32,767)
- Call Classes (511 - 2048)
- Call Vector IDs (256 - 2048)
- Destination DNs (256 - 2048)
- Display Indices (276 - 2047)
- Position IDs (4095 - 9999)
- Queues (128 - 999)
- Queue Slots (5000 - 40000)
- Serving Teams (128 - 999)
- Vectors (1024 - 2048)

This feature is available for 5E11 and later Software Releases. The feature number is 99-5E-2776 for ACD/BRCS Interworking II.

2.2 Feature Assignment

See Figure 2 for feature assignment form flow for ACD/BRCS Interworking II feature.

To improve the maintainability and quality of the ACD product, new Recent Change and Verify views have been developed for administering ACD resources which were previously administered using common

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views with OSPS.

For 5E11 and later, data entry for ACD/BRCS has been moved to new forms which are specific to ACD/BRCS. To help transition from provisioning in 5E9(1) - 5E10 to provisioning in 5E11, the following table gives a correlation of the 5E10 forms to the 5E11 forms.

5E10 Forms VS 5E11 Forms

5E10 Form	5E11 Form
ACDTN	ACDTN
CACDPARM	ACDBPARM
CVDSTTN	ACDVCTN
CVECT	ACDVCT
MISLINK	MISLINK
OBSTS	SZDISP
OSPSCT	CQPARM
OSPSOA	AGNTID
STINFO	STPARM

Two new verify only Recent Change views correspond to the 5E10 views as shown below:

5E10 Views VS 5E11 Verify Views

5E10 View	5E11 View
21.3	
21.32	

2.3 ACD Group

The attribute called "ACDGROUP" allows a centrex customer to define multiple ACD groups and provide security between the groups. This enables the ACD to define separate clients within a Terminal Group and is sometimes defined as client partitioning.

2.4 AIU and MIS Changes

This feature requires co-ordinated changes between the switch, the AIU (Application Interface Unit), and the MIS (Management Information System). The MIS and AIU changes allow existing customers to easily transition from a 5E10 and earlier release to 5E11. The changes to the AIU and MIS software must be installed prior to the installation of the 5E11 Software Release on the 5ESS-2000 switch.

2.5 ICLATA Secured Feature

To add the preferred intraLATA carrier ID for the ICLATA secured feature (SFID 149) to ACD/BRCS, the PTC field on the ACDTN form (5631-1 Record) must be entered in addition to the ICLATA feature being activated on the switch. The PTC field on the ACDTN form (5631-1 Record) provides a second carrier ID for ACD and DAA DNs to provision the presubscribed intraLATA carrier ID.

2.6 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDBPARM	5645	4	32K	6.9
ACDTN	5631-1	4	32A	6.10
ACDVCT	5643	4	32H	6.7
ACDVCTN	5644	4	32I	6.8
AGNTID	5639	4	32D	6.3
CQPARM	5640	4	32E	6.4
DSLUSR	5908	5	1I	23.2 23.8
MISLINK	5637	4	32B	6.11
SREINCR	5547	3	5AW	8.40
STPARM	5638	4	32 C	6.1
SZDISP	5641	4	32F	6.5

ACDBPARM form (5645 Record) - This form defines the parameters for ACD/BRCS features, ACD

users, and the limits for call vectoring.

ACDTN form (5631-1 Record) - This form defines the ACD directory number or the DAA (Direct Agent Access) number. The PTC field was added to support the ICLATA (InterLATA Carrier IntraLATA Capability) feature for ACD/BRCS.

ACDVCT form (5643 Record) - This form defines the Call Vectoring steps that determine how an incoming call is to be treated while waiting for an ACD agent.

ACDVCTN form 5644 Record) - This form defines and administers remote telephone numbers for the call vectoring process.

AGNTID form (5639 Record) - This form associates an Agent ID with a serving team.

CQPARM form (5640 Record) - This form assigns administrative data to be applied to call queues.

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user. For 5E11 and later, the range for ACD POS NUM was increased and the ACD GROUP field was added to support this feature.

MISLINK form (5637 Record) - This form assigns MIS event links for ACD/BRCS on all valid DSLs. The Recent Change View number was changed from 23.19 to 6.11 for 5E11 and later.

SREINCR form (5547 Record) - This form is used to maintain incremental global parameters per SM. The SOFTWARE RESOURCE entry "QVSTATE" was added to support this feature.

STPARM form (5638 Record) - This form defines parameters for an ACD/BRCS serving team.

SZDISP form (5641 Record) - This form defines the display parameters provided when the operator position is seized for an ACD/BRCS call.

3. GLOSSARY

ACD	Automatic Call Distributor
AIC	Agent Intercom Call
AIU	Application Interface Unit)
BRCS	Business and Residence Custom Services
DAA	Direct Agent Access
DN	Directory Number
DSL	Digital Subscriber Line
ISP	Intermediate Switching Point
MIS	Management Information System
ODB	On Demand B Channel Packet Switching
OPT	Operator Position Terminal
PPB	Permanent Packet B Channel Packet Switching
SO	Service Observing

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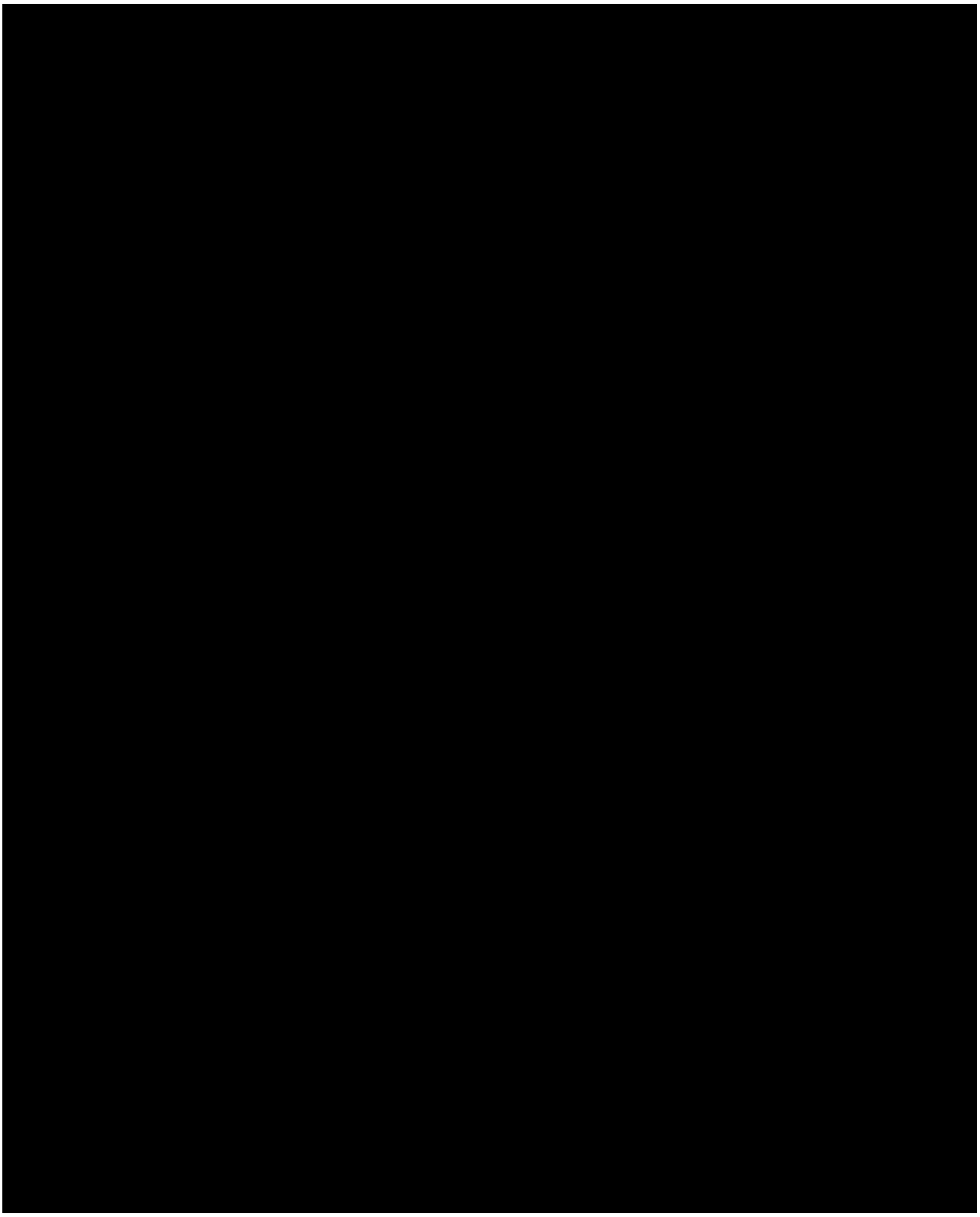
TGID Terminal Group Identifier

TN Telephone Number



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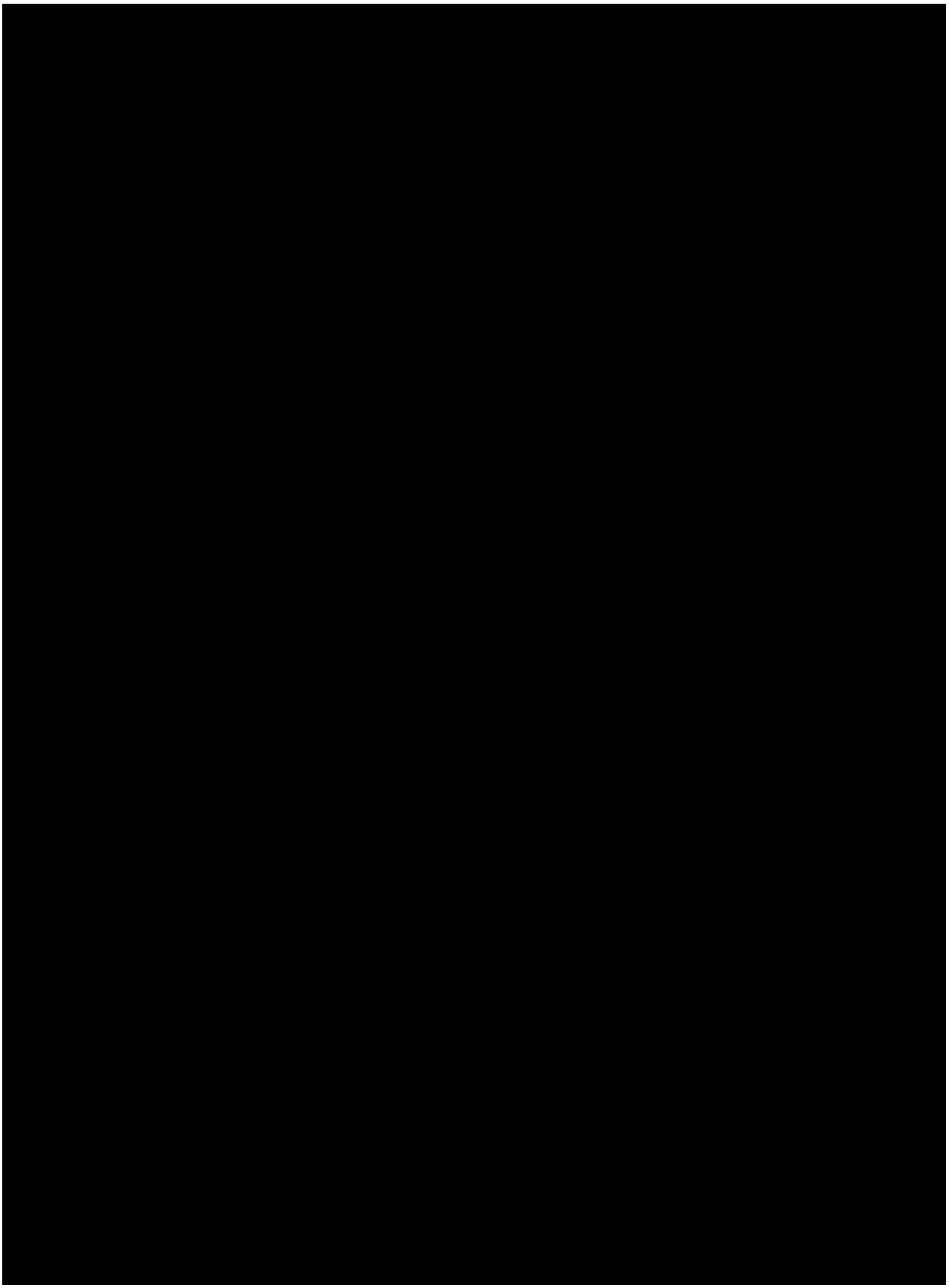

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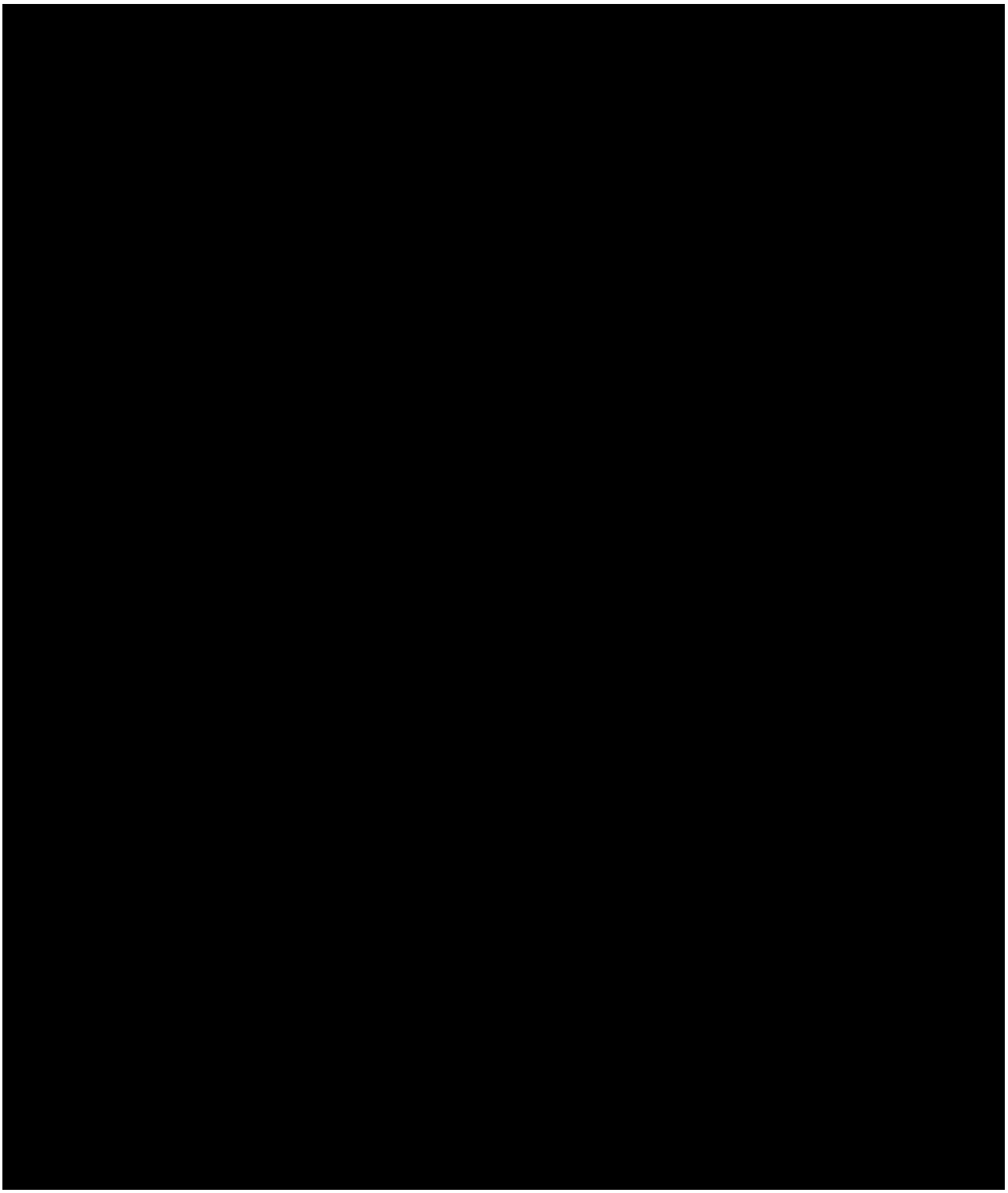

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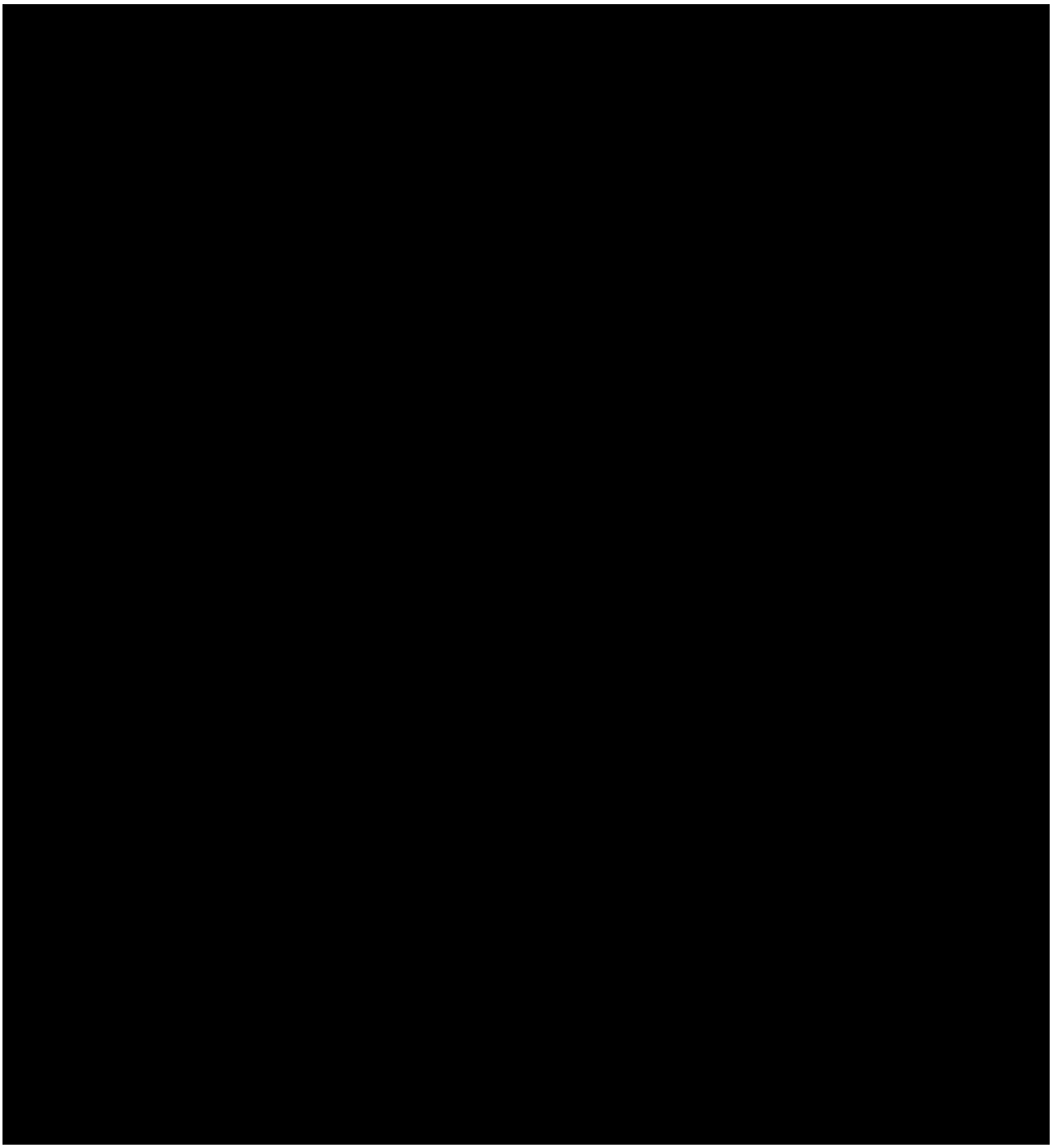

Figure 1 ACD BRCS DATA 5E9(1) 5E10 FORM FLOW

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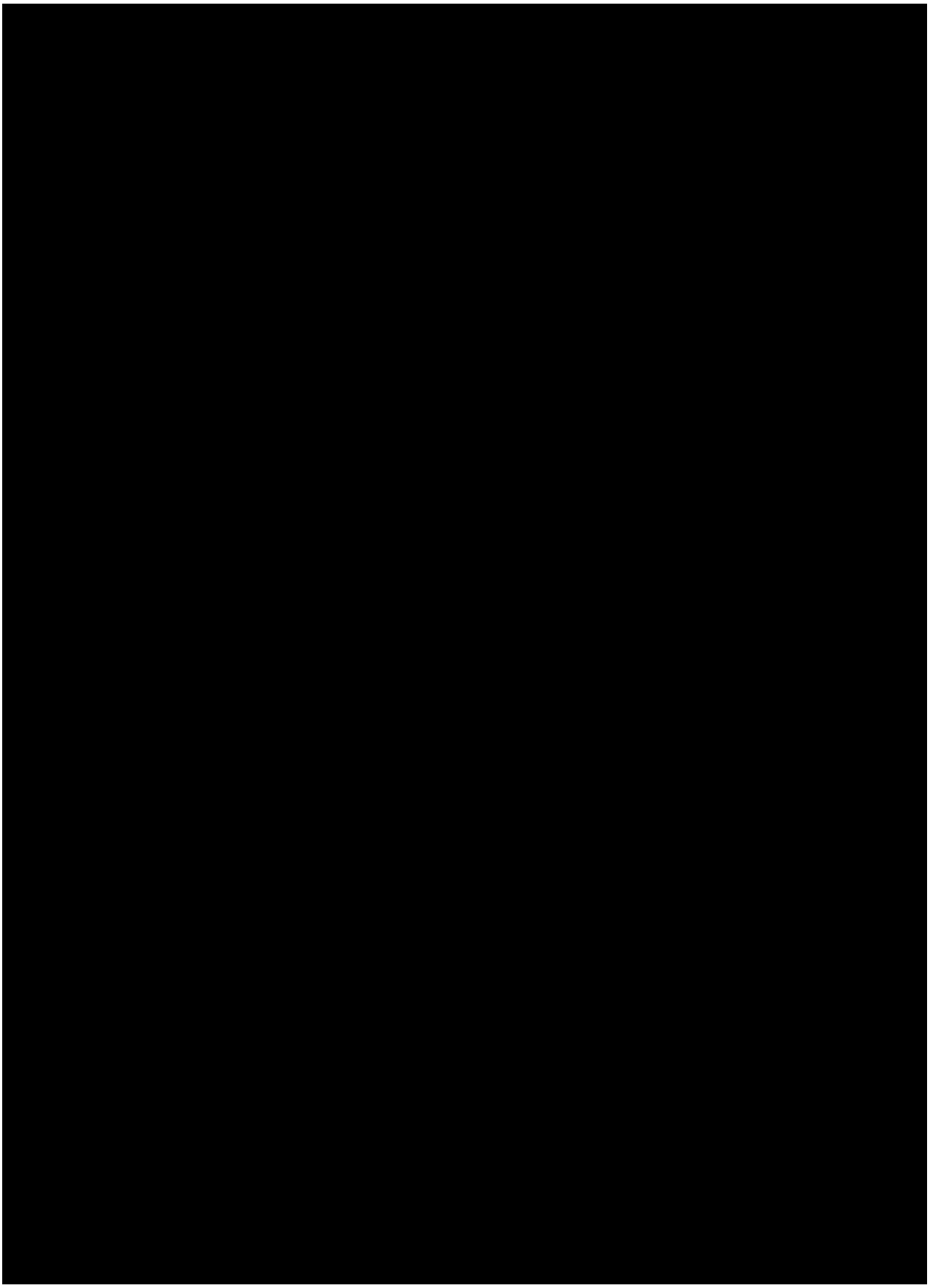

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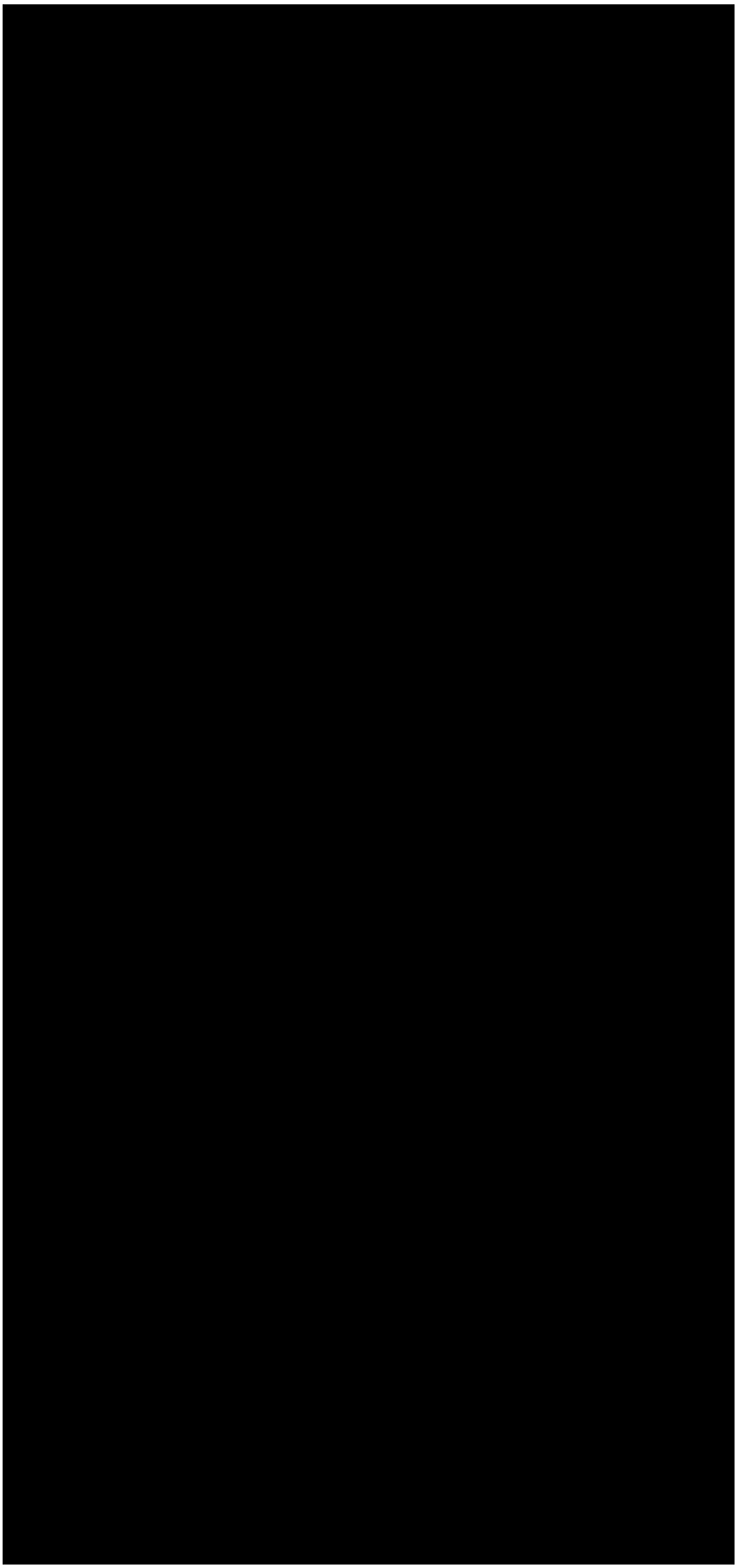

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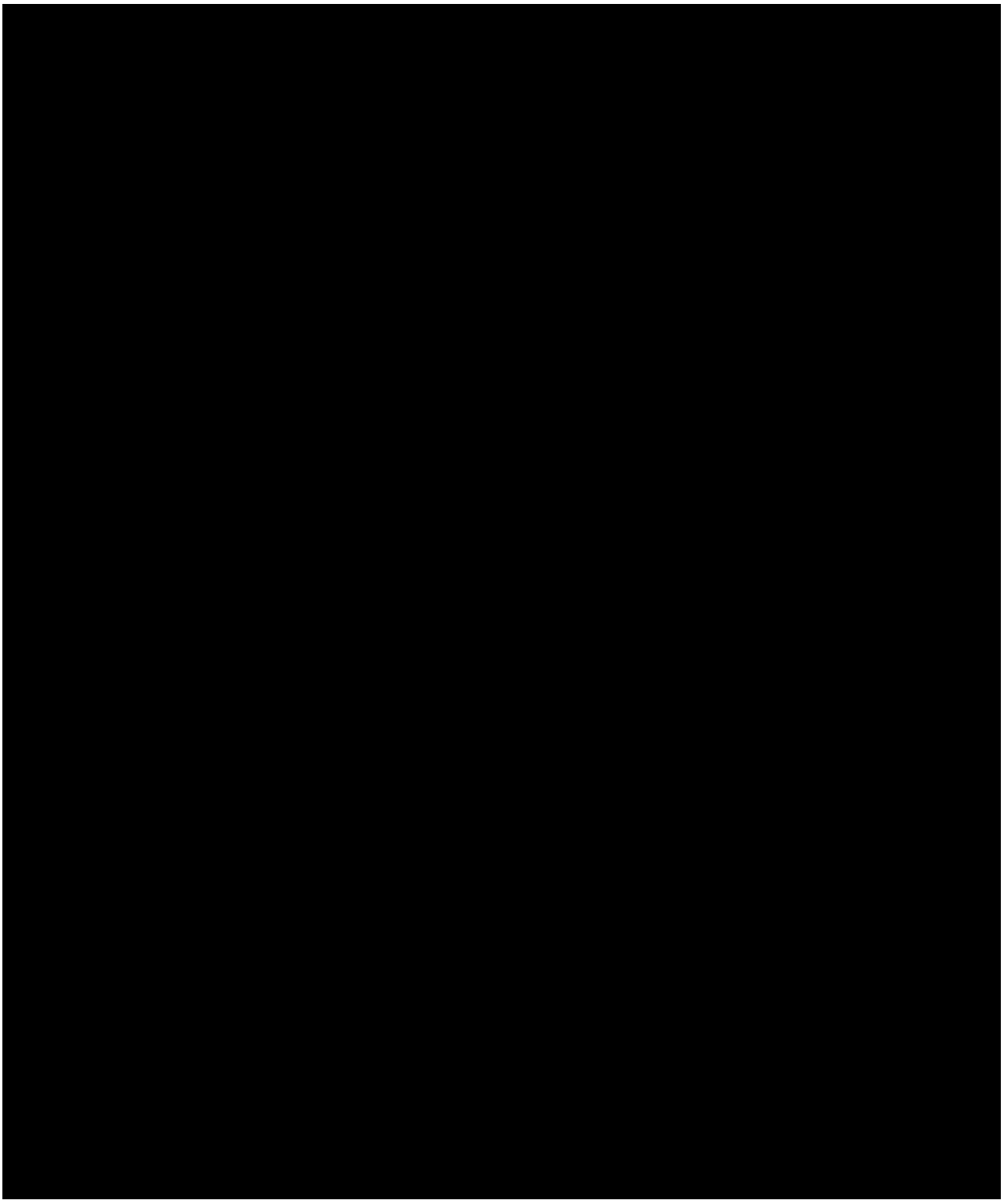

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Figure 2 ACD BRCS DATA 5E11 FORM FLOW

SEC. 4A124: CALL PARK

1. FEATURE DESCRIPTION

Available with 5E9(1) and later, Call Park is a secured feature which uses Secured Feature ID 124. Call Park is a Custom ISDN and analog Centrex feature with characteristics similar to Call Hold and Call Pickup. The Call Park service is comprised of the feature capabilities:

- Basic Call Park
- Directed Call Park
- Answer Back
- Retrieve
- Ring-back after Time-out
- Call Park for Attendants

The following describes each capability and its use:

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- Basic Call Park - Basic Call Park allows a user active on a call to park a call (similar to placing the call on Hard Hold) against the user's DN (directory number) or extension.

  Analog: User A performs a switch-hook flash and gets recall dial tone as user B is put on soft hold. User A enters Call Park access code, receives confirmation tone followed by silence. User B is now parked against A's DN. The parked party B receives silence (or music, if Music on Hold is assigned) while parked.

  ISDN: User A presses a Call Park feature button, receives confirmation tone followed by silence. User A's Call Park feature button lamp lights and then is extinguished. The active Call Appearance lamp on user A's terminal is extinguished. User B is parked against user A's DN which was active with B. The ISDN MBKS (Multibutton Key System) has a feature button for Retrieve. Therefore, the switch will light the lamp corresponding to the Retrieve button indicating that a call is parked against the station set's primary DN. The parked party B receives silence (or music, if Music on Hold is assigned) while parked.

  The call may be retrieved by the DN against which the call was parked (Parked DN) or answered back from any DN within the same terminal (Centrex) group. After parking the call, the Parking Party may go on hook; once on hook, the parking party is free to receive incoming calls or originate outgoing calls.

  Basic Call Park is useful when a party receiving a call wishes to physically move to another location for convenience or to locate information; the party may Park the call, walk down to another office, and then answer back the Parked call. In this way Call Park serves as an alternative to call transfer, in situations when the user does not know to which extension to transfer the call.

- Directed Call Park - Directed Call Park allows station users to park a call against their own DN or to direct the call to be parked against another directory number in the terminal (Centrex) group.

  Analog: If user A is connected with user B and wishes to park the call against user C's DN, user A flashes, receives second dial tone, dials the Directed Call Park access code and receives a recall dial tone. User A dials user C's extension and receives confirmation tone followed by silence. User B is no longer on hold and is parked against user C's DN. The parked party B receives silence (or music, if Music on Hold is assigned) while parked. The call from user B can be answered back by another user in the same terminal (Centrex) group or retrieved by user C's station.

  ISDN: If user A is connected with user B and wishes to park the call against user C's DN, user A presses a Directed Call Park feature button placing user B on park hold. User A selects an idle call appearance, receives second dial tone, dials C's extension, and receives confirmation tone followed by silence. User A's lamp associated with Directed Call Park lights for a few seconds and then is extinguished. User B is no longer on hold and is Parked against user C's DN. The parked party B receives silence (or music, if Music on Hold is assigned) while parked. User A's two call appearances involved in the parking party's terminal (the active appearance and that of the call which was park-held) have their lamps extinguished

  The call from user B can be answered back by another user in the same terminal (Centrex) group or retrieved by user C's station.

  Directed Call Park is most useful in loudspeaker paging applications, where the attendant has an allocated range of extensions on which to Park paging calls. Call Park is also useful in situations where a secretarial station providing call coverage wishes to park a call, locate the desired party for

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the call (possibly via an intercom call), and have that party pick up on the parked call. The parked party perceives that the call has been placed on "hold".

- Answer Back - Answer Back of a parked call allows a call to be answered back from any station set (DN) within the terminal group.

  Analog: If user B is parked against user A's DN, user C in the same terminal (Centrex) group can Answer Back the parked call. User C originates and receives dial tone, enters an Answer Back access code, receives rcall dial tone, and enters the extension of the parked DN (A's DN). Connection between user C and user B is established.

  ISDN: If user B is parked against user A's DN, user C can Answer Back the parked call. User C originates and receives dial tone, enters an Answer Back access (or presses a Call Park Answer Back feature button), receives rcall dial tone, and enters the extension of the parked DN (A's DN). Connection between user C and user B is established. If the parked DN is a primary DN at an MBKS set with an Answer Back feature button, its lamp will be extinguished. This indicates that there is no longer a call parked against the station set's primary DN.

- Retrieve - Retrieve is the process of answering a call which is Parked against a station set's DN (similar to retrieval of a call on analog Hard Hold).

  Analog: When user A hangs up after parking a call, user A is free to place or receive calls. User A can retrieve a call parked against its own DN. User A originates at its own station set, receives dial tone, and dials a Retrieve access code. The call is re-established with user B.

  ISDN: User A can Retrieve a call parked against user B's DN. User A originates on a call appearance for that DN, receives dial tone, enters a Retrieve access code (or presses a Retrieve feature button). Users A and B's connection is re-established. The lamp associated with the Retrieve feature button is extinguished. Note that without the Retrieve service, the users would have to go off-hook, receive dial tone, enter an answer back code and then dial the the user's own DN.

- Ring-back after Time-out - Ring-back after Time-out allows parked calls (that have not disconnected) to be rung back at the parking station after a specified period of time. If a call remains parked longer than a predesignated timer limit, the terminal that parked the call will be rung back on the DN from which the call was parked. The following two timers could be used to signal ring-back of a parked call:

  - Timer value entered on the PARK TIME or ATND PARK TIME field on the TGATTD form (5611 Record).

    If a ring-back timer value has been entered on the TGATTD form and expires, an attempt will be made to ring back the terminal for thirty seconds on the DN from which the call was parked. After thirty seconds, if the call has not been answered, ringing will be stopped and an attempt will be made to reroute the call to the attendant as defined in the terminal group (TGATTD form), if one exists. If an attendant does not exist in the terminal group, the call will be cleared. If the port is busy (Analog), a B channel is not available, or there are no idle call appearances for that DN on the terminal that parked the call (ISDN), a check will be made to see how many ring-back attempts have been made. If less than three ring-back attempts have been made, the ring-back timer will be reset to the original value from the TGATTD form and the next attempt to ring back the terminal will be made when the timer expires again. If three ring-back attempts have been made, the call will be rerouted to the attendant as defined in the terminal group, if one exists. If an attendant does not exists in the terminal group, the call will be cleared.

  - Twenty minute timer.

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The twenty minute timer will be used when a ring-back timer value does not exist on the TGATTD form. When this timer expires, an attempt will be made to ring back the terminal for thirty seconds, on the DN from which the call was parked. After thirty seconds, if the call has not been answered, ringing will be stopped and the call will be cleared. This call will not be rerouted to the attendant in the terminal group. If the port is busy (Analog), a B channel is not available, or there are no idle call appearances for that DN on the terminal that parked the call (ISDN), a ring-back timer will not be reset. An attempt will not be made to reroute the call to an attendant in the terminal group, and the call will be cleared.

- Call Park for Attendants - This allows Call Park features to be assigned to and used by 50B and ISAT (ISDN Attendant) attendant consoles.

  Analog 50B Attendant Console: For analog 50B attendant consoles, the user scenarios are almost identical to that shown for a normal analog station. The only differences are:

  - For Directed Call Park, the extension at which the call will be parked may also be specified by use of the attendant Direct Station Selection feature rather than dialing the extension digits.
  - The attendant uses the Start key rather than a switch-hook flash.
  - For a MUPH 50B attendant console, Basic Call Park and Retrieve are not allowed. Entry of "#" by a MUPH attendant is not allowed for the extension.

  ISDN Attendant Console: For ISDN attendant consoles, the user scenarios for Call Park are similar to that for an ISDN MBKS terminal. Differences include that for Directed Call Park, a single call appearance is used, different buttons are used to originate calls, and the extension at which the call will be parked may also be specified by the use of the attendant Direct Station Selection feature rather than by dialing the extension digits.

2. FEATURE ASSIGNMENT

To enable this feature, SFID 124 on the SFSYS form (5713-1 Record) must have ACT set to "Y". In addition, Call Park features will have to be assigned to the line before use.

See Figure 1 for Call Park form flow.

- ***NOTE:*** In order to both park and retrieve calls, two Call Park features need to be assigned to a line: one feature (Basic Call Park, Directed Call Park) to park calls and one feature (Retrieve, Answer Back) to retrieve calls.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5
IDPDCA	5601-1/2	4	2B	9.13
PUOFD	5605-1a/b	4	6A	12.13
SFSYS	5713-1	3	5AR	8.22
TGATTD	5611	4	12A	4.4

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) user terminal buttons. The following enumerations were added for the field ACTION: "ANSBACK", "BPARK", "DPARK", and "RTRV".

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IDPDCA form (5601-1/2 Record) - This form is used to define the dial codes associated with IDPs (Individualized Dialing Plans). The following enumerations were added for the field ACTION: "ANSBACK", "BPARK", "DPARK", and "RTRV".

PUOFD form (5605-1a/b Record) - This form is used to define a number of separate but related features by selecting various feature options for CPUO (Call Pickup Originating). The following enumerations were added for the field INITIATE: "ANSBACK", "BPARK", "DPARK", and "RTRV".

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. SFID 124 must have the field ACT set to "Y" to enable the feature.

TGATTD form (5611 Record) - This form is used to define information (such as attendant DN, Source Billing, and SDN DAS) on a Terminal Group basis. The field PARK TIME was added which specifies the answer back or retrieve timeout limit for ring back of a parked call for non-attendant lines in the terminal group. The field ATND PARK TIME was added which specifies the attendant answer back or retrieve timeout limit for ring back of a call parked against the terminal group attendant's DN or a DN with attendant class of service.

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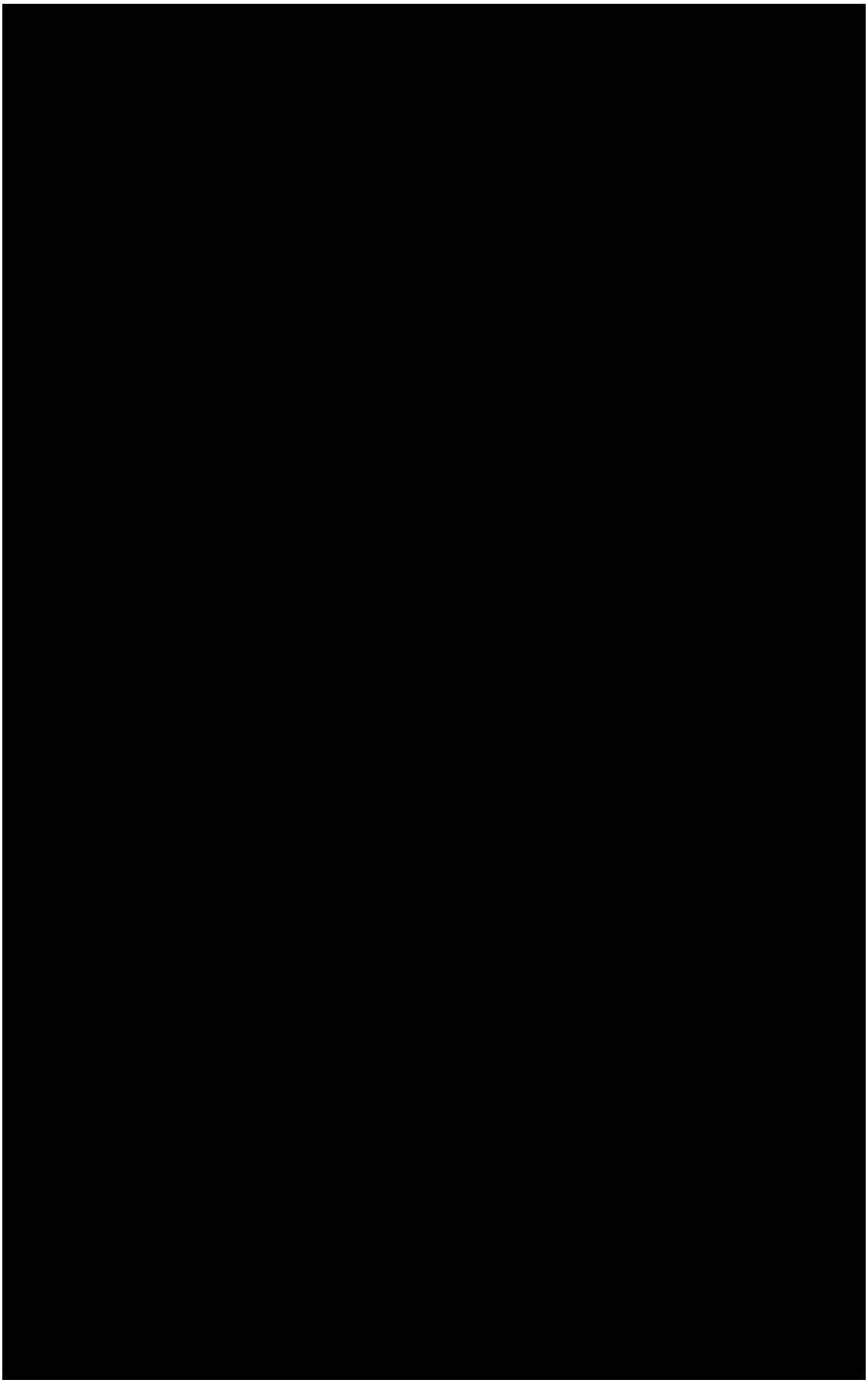

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Figure 1 FORM FLOW FOR CALL PARK

SEC. 4A125: FRACTIONAL DS1 SWITCHING - NXDS0

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

SEC. 4A126: ADVANCED SERVICES PLATFORM (5E9(1) AND LATER)

1. FEATURE DESCRIPTION

ASP (Advanced Services Platform), available with 5E6 and later Software Releases (for ASP available with 5E6 - 5E8 Software Releases, see Division 2, Section 4A51), provides a platform of service-independent capabilities at a 5ESS Switch which allow it to interact with an external network element (an SCP (Service Control Point)) via CCS7 TCAP (Common Channel Signaling, CCITT Version 7 Transaction Capabilities Application Part) messages to help determine appropriate call handling treatment.

The SCP contains a customer defined database with the information necessary to determine the appropriate call handling treatment. The SCP may be queried by an SSP (Service Switching Point) via CCS7 TCAP messages utilizing out of band signaling. When queried, the SCP performs screening and provide routing control and billing information.

For 5E9(1) and later, ASP is provisioned as a BRCS feature and it is no longer necessary to have a separate ASP dialing plan. In addition, several enhancements were added to make it compliant with industry-standard AIN (Advanced Intelligent Network) requirements.

In this feature section and some affected form sections there are references to AIN Release 0 and AIN Release 0.1. AIN Release 0 refers to the ASP releases for 5E6 - 5E8, requiring SFID 51 ACT and SFID 58 ACT to be marked as "Y" on the SFSYS form. AIN Release 0.1 refers to the ASP release for 5E9(1), requiring SFID 126 ACT to be marked as "Y" on the SFSYS form.

NOTE: The 5ESS Switch continues to support the R0 protocol.

The provisioning of ASP as a BRCS feature results from retrofit to 5E9(1), and is independent of purchase of the ASP secured feature available in 5E9(1) and later (that requiring SFID 126 ACT equals "Y").

The following describes the changes made to ASP by retrofit to 5E9(1):

1. Detection and validation of Subscribed ASP Triggers is now done using new BRCS provisioning;

- OHI (Off Hook Immediate),
- OHD (Off Hook Delayed) - Line, Trunk, PRI,
- FCD (Feature Code Dialing), previously known as ASP ODP, and
- CDP (Customized Dialing Plan Feature Code), previously known as ASP IDP.

Provisioning is done with the ASPFD, ASPLPA, ASPMPA, ASPTPA, and ASPDP forms (see Section 4).

1. Escape Code processing for OHD triggers and certain types of SIT triggers allows escape from

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OHD processing. Dialed codes not to be processed as an OHD call are specified in the digit analysis tables. An example of a digit string which may specify escape is 911.

The following describes the enhancements to ASP available by purchase of 5E9(1) ASP:

1. Trigger Activation and Deactivation by the SCP allows the following triggers to be activated or deactivated by the SCP:

- Offhook Immediate,
- Offhook Delay,
- Feature Code Dialing,
- Customized Dialing Plan, and
- Terminating Attempt Triggers.

1. TATs (Terminating Attempt Triggers) allow the SSP to launch queries based on the DN the call is terminating to, before determining the physical port for that DN.

   The TAT functionality enables terminating line services (e.g., enhanced call screening and call forwarding) to be administered more easily, since triggers are based on terminating line attributes.

   TATs may also be used to play announcements. This capability allows services such as customized call screening and terminating call management.

   TATs can be assigned to analog DNs and MLHG terminals via the new ASP BRCS provisioning.

2. The SCP has the capability to include display text (to be displayed at the called party's terminal) in the response message it sends to the SSP. This text is only displayed at the called party's terminal, and is not transmitted to the calling party.

   The display capability allows the switch owner the ability to provide additional information to the called party, enabling the caller to better determine the priority and handling of the call. SCP-controlled display can be used to enhance or construct such call delivery based services as call Screening and Calling Name Delivery.

3. The SCP Monitor Feature allows the SCP to monitor the busy/idle status of analog lines assigned to a TN.

   The Monitor capability allows the switch owner the ability to create network terminating call management services. These network terminating call management services allow call distribution to attendants that reside on SSPs.

For more information about 5E9(1) ASP, see *AT&T 235-190-126, Advanced Services Platform, Release 0.1B.*

2. ASP TRIGGERS

For 5E9(1) and later, the following descriptions assume

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- All basic line/trunk, digit analysis and routing data is defined;
- The office is an SSP (ASP OFC equals "SSP" on OFCOPT);
- All ASP secured features (58, 51, and 126) are active;
- CCS7 protocol data via DSAPP is defined (APPLIC equals "ASP", "AINR0D1", or "NS800"); and
- "ORIGASP" refers to any ASP originating feature.

2.1 Trigger Terminology

For 5E9(1) and later, several triggers have changed in terminology. The following table compares changes in the trigger terminology between 5E6 - 5E8 ASP and 5E9(1) and later ASP.

Trigger Terminology

Pre-5E9(1)	5E9(1)
Off-Hook Immediate (Dedicated Lines)	Off-Hook Immediate (OHI) (Dedicated Lines)
Off-Hook Delay (Dedicated Lines)	Off-Hook Delay (OHD) (Dedicated Lines)
Trunk Seizure Trigger (Dedicated Trunks)	(1) For UNRES EA = "N": Off-Hook Delay (Dedicated Trunks) (OHD) (2) For UNRES EA = "Y": Private EAMF Trunk Seizure Trigger
Channel Setup PRI	Off-Hook Delay (Dedicated Trunks) (OHD)
Shared Interoffice Trunk Triggers (Non-dedicated Trunks)	Shared Interoffice Trunk Triggers (Non-dedicated Trunks) (SIT)
ODP Feature/Prefix Code Trigger	Feature Code Dialing Trigger (FCD)
IDP Trigger	Custom Dialing Plan Trigger (CDP)
Dialed Number Trigger (DNT)	3/6/10-Digit / N11 Trigger (DNT)
	Terminating Attempt Triggers (TAT)
Automatic Route Selection Trigger	Automatic Route Selection Trigger

2.2 Query Terminology

Although the AIN 0.1 protocol introduces several new query messages (as illustrated in the following table), for the purposes of this document, the query messages are referred to by the trigger name, since both protocols are being documented together. For example, an Origination_Attempted query will be called an OHI query, and an Info_Collected query sent when a SIT trigger is encountered will be called a SIT query.

Query Terminology

Trigger	Query Message (AIN 0.1 Protocol) (Note 1)
OHI	Origination_Attempted
OHD (Lines, Trunks, PRIs)	Info_Collected
SIT	
Private EAMF	
FCD	Info_Analyzed
CDP	
3/6/10-Digit / N11 (DNT)	
TAT	Termination_Attempted
ARS	No Equivalent (AIN 0 protocol only)

- ***NOTE:*** 1:In the AIN 0 protocol, no differentiation between triggers is made. All triggers result in the same query message.

2.3 1BOff-hook Immediate Trigger (Direct Connect Lines) (OHI)

For 5E9(1) and later, the following is an example of provisioning for OHI triggers.

OHI Trigger (Lines only)

Form	Field	Value
ASPFD	FEATURE	ORIGASP
	CONTROL	ORIG
	OHI TRIG NBR	1-255

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	OHI TRIG ACT	Y/N (Note 1)
NSTRIG	TRIG NBR	From ASPFD, ASPDP, ASPLPA, or ASPMPA
	APPLICATION	ASP
	ADM ST CD	ULK/LK
LCC	CLASS OF SERVICE	INDIV
LINEFA, MLHLNFA	FEATURE	ORIGASP (Note 2)
	ACTIVE	Y/N
ASPLPA, ASPMPA	Generated per line data from ASPFD	

NOTE: s:1. No other triggers can be defined on an ASP Originating feature in conjunction with OHI.
2. No other BRCS features can be assigned except an ASP Terminating feature.

Call Processing based on the above provisioning proceeds as follows:

1. An ASP Originating feature assigned and active is detected on the LINEFA or MLHLNFA forms.
2. An active OHI trigger on the ASPLPA or ASPMPA forms is detected.
3. A CLASS OF SERVICE on the LCC form of "INDIV" is verified.
4. OHI TRIG NBR accesses the NSTRIG form, and verifies that ADM ST CD equals "ULK".
5. A query is launched using the NSTRIG data.
6. If the ASP Originating feature is not active, the OHI trigger is not active, or ADM ST CD equals "LK", then processing continues as if the trigger was not detected.

2.4 Off-hook Delay Trigger (Dedicated Lines) (OHD)

For 5E9(1) and later, the following is an example of provisioning for OHD triggers.

OHD Trigger (Lines only)

Form	Field	Value
ASPFD	FEATURE	ORIGASP
	CONTROL	ORIG
	OHD TRIG NBR	1-255
	OHD TRIG ACT	Y/N
NSTRIG	TRIG NBR	From ASPFD, ASPLPA, ASPMPA (OHD)
	APPLICATION	ASP
	ADM ST CD	ULK/LK
NSTRIG	TRIG NBR	From digit analysis (DNT)
	APPLICATION	ASP
	ADM ST CD	ULK/LK
LCC	CLASS OF SERVICE	INDIV, ATND
PDIT, LDIT, RDIT	ESC CODE	Y/N
	TRIG NBR	Blank, 1-255
IDDD	ESC CODE	Y/N
	TRIG NBR	Blank, 1-255
LINEFA, MLHLNFA	FEATURE	ORIGASP
	ACTIVE	Y/N
ASPLPA, ASPMPA	Generated per line data from ASPFD	

The call processing flow for this trigger is shown in Figure 5 .

2.5 Off-Hook Delay Trigger (Dedicated Trunks)

For 5E9(1) and later, the following is an example of provisioning for OHD triggers for PF trunks. This includes triggers previously called Trunk Seizure Triggers and Channel Setup PRI Triggers.

OHD Trigger (PF and PRI Trunks) - 5E9(1)

Form	Field	Value
ASPFD	FEATURE	ORIGASP

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	CONTROL	ORIG
	OHD TRIG NBR	1-255
	OHD TRIG ACT	Y/N
NSTRIG	TRIG NBR	From ASPFD, ASPTPA (OHD)
	APPLICATION	ASP
	ADM ST CD	ULK/LK
NSTRIG	TRIG NBR	From digit analysis (DNT)
	APPLICATION	ASP
	ADM ST CD	ULK/LK
TKGRP	TRKCLS	EDSL, EDSLHM, PF, PFLASH, PFITT
	UNRES EA	Y/N
PDIT, LDIT, RDIT	ESC CODE	Y/N
	TRIG NBR	Blank, 1-255
IDDD, INDIT	ESC CODE	Y/N
	TRIG NBR	Blank, 1-255
TKGRPFA	FEATURE	ORIGASP
	ACTIVE	Y/N
ASPTPA	Generated per trunk data from ASPFD	

The call processing flow for this trigger is shown in Figure 6 .

2.6 Private EAMF Trunk Seizure Trigger (Dedicated Trunks)

For 5E9(1) and later, the following is an example of provisioning for private EAMF Trunk Seizure Triggers (previously grouped with Trunk Seizure Triggers).

Private EAMF Trigger (PF Trunks) - 5E9(1)

Form	Field	Value
ASPFD	FEATURE	ORIGASP
	CONTROL	ORIG
	OHD TRIG NBR	1-255
	OHD TRIG ACT	Y/N
NSTRIG	TRIG NBR	From ASPFD, ASPTPA (OHD)
	APPLICATION	ASP
	ADM ST CD	ULK/LK
TKGRP	TRKCLS	PF, PFITT, PFLASH
	UNRES EA	Y
TKGRPFA	FEATURE	ORIGASP
	ACTIVE	Y/N
ASPTPA	Generated per trunk data from ASPFD	

The call processing flow for this trigger is shown in Figure 6 .

2.7 Shared Interoffice Trunk Triggers (Non-Dedicated Trunks)

3/6/10-Digit / N11 triggers can be on SITs (see section Section 2.12).

For 5E9(1) and later, the following is an example of provisioning for SIT triggers.

SIT Trigger Dialed Number Trigger via SIT - 5E9(1)

Form	Field	Value
OFCOPT	PSEUDO CARR	1-999
	ASP ANI	1-99
	INT OFC TRIG	1-255
	ESC CD CNTL	Y/N
NSTRIG	TRIG NBR	From INDIT (0ZZ)
	APPLICATION	ASP, EAOFC
NSTRIG	TRIG NBR	From TKGRP or OFCOPT
	APPLICATION	ASP
NSTRIG	TRIG NBR	From ODP (DNT)
	APPLICATION	ASP
INDIT	INC DIGS	0ZZ
	TYPE OF CI CALL	AVT
	TRIG NBR	Blank, 1-255
TKGRP	UNRES EA	Y/N
	TRIG NBR	Blank, 1-255
	DAS	1-99
PDIT, LDIT, RDIT	TRIG NBR	1-255
	ESC CODE	Y/N
IDDD	TRIG NBR	1-255
	ESC CODE	Y/N

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CKTCODE	CKT CODE	0-15 (ISUP7 only)
ICF	CARRIER TYPE	PSEUDO

The call processing flow for this trigger is shown in Figure 7 .

SITs are designed to handle both SSP800 and ASP traffic. The following table summarizes the precedence of SSP800 and ASP over these types of trunks.

ASP/SSP800 Precedence Summary

SIT Trigger	Dialed Digits	Switch Action
ACTIVE 0ZZ	DN (a DN not a DNT)	ASP SIT query
	DN (specifies an OHD escape)	Switch routing if CST purchased, else error treatment
	800	ASP SIT query
	800 (specifies an OHD escape)	SSP800 query (escape from SIT)
	DNT	ASP SIT query
	DNT(inactive)	
	DNT (escape)	ASP DNT query (escape from SIT)
	DNT (escape)(inact)	Switch routing if CST purchased, else error treatment
INACTIVE 0ZZ		Look first for ANI II match, then 800 dialed, then UNRES EA. Results in ASP SIT trigger for ANI II and UNRES EA, and SSP800 query for 800. Else error treatment.
ACTIVE ANI II	800	ASP SIT query
	All else	
INACTIVE ANI II	800	SSP800 query
	All else	Error treatment unless UNRES EA, then ASP SIT query.
ACTIVE UNRES EA	800	SSP800 query (800 takes precedence)
	All else	ASP SIT query
INACTIVE UNRES EA	800	SSP800 Query
	All else	Error Treatment

For the above table,

1. 0ZZ is a SIT trigger detected when the 0ZZ digits specify an ASP trigger;
2. ANI II is a SIT trigger detected when the outpulsed ANI II matches ASP ANI; and
3. UNRES EA is a SIT trigger detected when UNRES EA equals "Y".
4. No digit analysis is done on dialed digits on the ANI II or UNRES EA triggers (this implies that no escape processing can be done and the call can not be routed using these dialed digits if the trigger is inactive).

2. If the 0ZZ SIT trunk trigger is inactive, it is treated as if it was not encountered. That is, processing continues to look for the ANI II and UNRES EA cases, and digit analysis will not be done on the dialed digits.

3. The table assumes that ESC CD CNTL on the OFCOPT form equals "Y" (the Circuit-Switched Trunk secured feature must be purchased and SFID 6 ACT is "Y" on the SFSYS form). If "N", the escape would be ignored and the call would be treated like the non-escape case.

2.8 Feature Code Dialing Trigger (FCD) (Previously ODP)

For 5E9(1) and later, the following is an example of provisioning for FCD triggers.

FCD Trigger (Lines, PF Trunks) - 5E9(1)

Form	Field	Value
ASPFD	FEATURE	ORIGASP
	CONTROL	ORIG
	FCD TRIG ACT	Y/N

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NSTRIG	TRIG NBR	Associated with ASP ACTION defined on PDIT
	APPLICATION	ASP
	ADM ST CD	ULK/LK
LCC	CLASS OF SERVICE	INDIV, ATND
TKGRP	TRKCLS	PF, PFLASH, PFITT
PDIT	ACTION	ASPDNC, ASPNORM, ASPVAR
	FEATURE	ORIGASP
	TRIG NBR	1-255
LINEFA, MLHLNFA	FEATURE	same as on PDIT (defined on ASPFD)
	ACTIVE	Y/N
TKGRPFA	FEATURE	same as on PDIT (defined on ASPFD)
	ACTIVE	Y/N
ASPLPA, ASPMPA	Generated per line data from ASPFD	
ASPTPA	Generated per trunk data from ASPFD	

The call processing flow for the FCD and CDP triggers proceeds as follows:

1. Access code digits are collected and analyzed, and an ASP action detected.
2. An ASP Originating feature matching the feature associated with the ASP ACTION on PDIT or IDPDCA assigned on LINEFA, MLHLNFA, or TKGRPFA is verified.
3. This ASP Originating feature is verified as active on LINEFA, MLHLNFA, or TKGRPFA.
4. The FCD/CDP trigger is verified active on ASPLPA, ASPMPA, or ASPTPA.
5. The Class of service for a line ("INDIV", "ATND") or trunk ("PF", "PFLASH", "PFITT") is verified.
6. Collection and analysis of called DN digits proceeds as follows according to the value of ACTION:

- If ACTION equals "ASPDNC", no called DN digits are collected or analyzed;
- If ACTION equals "ASPNORM", called DN digits are collected and analyzed; or
- If ACTION equals "ASPVAR", called DN digits are collected until inter-digit timing expires or "#" is entered; digit analysis is not done.

1. The TRIG NBR assigned to the ACTION on PDIT(FCD)/IDPDCA(CDP) accesses the NSTRIG form. The TRIG NBR on NSTRIG is verified as active (ADM ST CD equals "ULK"), and the FCD/CDP query is launched.
2. If any of the following conditions are encountered, call is routed to error treatment:

- The current ASP Originating feature is not active or does not exist on LINEFA, MLHLNFA, or TKGRPFA;
- The FCD/CDP Trigger is not active on ASPLPA, ASPMPA, or ASPTPA, or
- TRIG NBR is inactive on NSTRIG (ADM ST CD equals "LK").

2.9 Custom Dialing Plan (CDP) Triggers (Formerly IDP)

For 5E9(1) and later, the following is an example of provisioning for CDP triggers.

CDP (Customized Dialing Plan) Trigger - 5E9(1)

Form	Field	Name
ASPFD	FEATURE	ORIGASP
	CONTROL	ORIG

	CDP TRIG ACT	Y/N
NSTRIG	TRIG NBR	From IDPDCA
	APPLICATION	ASP
	ADM ST CD	ULK/LK
LCC	CLASS OF SERVICE	INDIV, ATND
TKGRP	TRKCLS	PF, PFLASH, PFITT
IDPDCA	ACTION	ASPDNC, ASPNORM, ASPVAR
	FEATURE	ORIGASP or /ID*
	TRIG NBR	1-255
LINEFA, MLHLNFA	FEATURE	Associated with ASP ACTION defined on IDPDCA
	ACTIVE	Y/N
TKGRPFA	FEATURE	Associated with ASP ACTION defined on IDPDCA
	ACTIVE	Y/N
ASPLPA, ASPMPA	Generated per line data from ASPFD	
ASPTPA	Generated per trunk data from ASPFD	

The call processing flow for this trigger is the same as for FCD triggers (see Section 2.8).

Note that for the unrestricted CDP (FEATURE on IDPDCA equals "/ID*"), steps 3 and 4 are not done. The user has permission to dial an ASP access code by virtue of having any IDP feature.

- ***NOTE:*** Beginning with 5E8, IDP features may be assigned to PRI trunks as part of the CENTREX PRI Enhancements feature (For more information on this feature, see Division 2, Section 4A105). However, IDP/CDP ASP triggers are not supported by this feature.

2.10 Feature Button Trigger

Release 0.1, available in 5E9(1) and later, does not support feature button access for ISDN.

- ***NOTE:*** ASP R0 feature buttons are still supported on custom ISDN sets. However, the actions "OASPNORM" and "IASPNORM" are used for FCD (ODP) and CDP (IDP) access, respectively. "ASPUSE", "IDPASP" and other ASP actions valid in releases prior 5E9(1) are no longer valid in 5E9(1).

Available with 5E9(1) Software Update and later, the secured feature, ASP Interworking with NISDN and ISATs (Secured Feature ID 139), allows ASP features to be assigned to National ISDN lines and supports R0.1. However, feature buttons are not carried over to work on NISDN sets with R0.1.

2.11 Automatic Route Selection Trigger

For 5E9(1) and later, there is no change in provisioning or call processing for an ASP ARS Trigger, with the exception as noted earlier that NAPs are no longer supported.

2.12 3/6/10-digit /N11 Triggers (previously known as DNTs)

See Section 2.7 for the provisioning of a 5E9(1) 3/6/10-digit / N11 through an SIT, and Figure 7 for the call processing.

For 5E9(1) and later, the following is an example of provisioning for DNTs.

3/6/10-digit / N11 Trigger - Subscriber and SCP Originated - 5E9(1)		
Form	**Field**	**Value**
IDDD, LDIT, MLDIT, PDIT, RDIT	TRIG NBR	1 - 255
NSTRIG	TRIG NBR	from Digit Analysis
	APPLICATION	ASP
	ADM ST CD	Y/N
OFCOPT	MAX TRIG	1-6

The call processing flow for this trigger is shown by the following sequence:

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1. The dialed or SCP returned digits are collected and analyzed.

2. A non-zero TRIG NBR is found in digit analysis.

3. If the TRIG NBR is subscriber originated, the TRIG NBR from digit analysis accesses NSTRIG.

4. If the TRIG NBR is SCP originated, the trigger count is verified to be less than or equal to MAX TRIG, and the TRIG NBR from digit analysis accesses NSTRIG.

5. If APPLICATION equals "ASP" and ADM ST CD equals "ULK", a 3/6/10-digit / N11 query is launched using NSTRIG data. If APPLICATION equals "ASP" and ADM ST CD equals "LK", Switch routing is used.

2.13 Terminating Attempt Triggers

The TAT (Terminating Attempt Trigger), initially available in 5E9(1) ASP, allows a directory number to be designated as an ASP trigger. The TAT is a subscribed trigger, since a terminating ASP feature must be assigned to the directory number provisioned as a TAT. But to an originator encountering a TAT, it is viewed as a non-subscribed trigger since the originator does not require the assignment of an originating ASP feature. When an attempt is made to terminate a call to a directory number provisioned as a TAT, a query is launched instead of completing the call. When call processing attempts to complete a call and detects the assignment of the ASP terminating feature, call processing for the call is suspended and a query launched. The call is routed based upon the SCP's instructions.

In general, assigning Terminating Attempt trigger functionality requires the following:

- The TAT directory numbers must be local at the SSP office where they are being defined, and require line equipment assignments. The line equipment does not need associated CPE to function as a TAT.

- A terminating ASP feature is to be associated with the TAT directory number. The ASP terminating feature or line parameters, associated with the TAT, must identify a trigger number that utilizes 5E9(1) ASP protocol.

- Assignment of a TAT to analog-only facilities must include the following:

  - An analog directory number (Note: When the MDNL (Multiple Directory Numbers per Line) capability is associated with an analog directory number, a TAT is encountered when any of the DNs are dialed.)

  - The lead member of an analog MLHG;

  - Any no-hunt member of an MLHG.

- Directory numbers assigned as TATs can have the following originating and terminating service on the LCC form:

  - CLASS OF SERVICE equals

    - "10PTY",

    - "2PTY",

    - "4PFS",

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- "4PSS",
- "4WINDIV",
- "5PTY",
- "8PSS",
- "ATND",
- "CALLBK",
- "CHGCALL",
- "COIN",
- "HOTMOTL",
- "HOTPBX",
- "INDIV",
- "MODEM",
- "PBX",
- "SATSTLN", or
- "TWOPTY".

- TERMINATING TREATMENT equals:
  - "INDIV",
  - "INWATS",
  - "MLHG", or
  - "PARTY".

- An inactive TAT completes calls to the associated directory number without encountering the trigger. TATs can be deactivated by use of the TA TRIG ACT field on ASPLPA or ASPMPA, deactivating the

feature on the LINEFA form, or the ADM ST CD field on the NSTRIG form (though this latter method would also remove the ASP functionality from all lines/trunks associated with the trigger number. This deactivation method could affect various types of ASP triggers (that is, OHI, OHD), since a defined NSTRIG trigger number can be removed).

For 5E9(1) and later, the following is an example of provisioning for a TAT trigger.

Terminating Attempt Trigger - 5E9(1)

Form	Field	Value
ASPFD	FEATURE	/ASPTERM
	CONTROL	TERM
NSTRIG	TRIG NBR	3
	APPLICATION	ASP
	ALT GBL TITLE	blank
	SERV KEY	
	STP TT NBR	
	ADM ST CD	ULK
	AIN REL	R0D1
LINEFA	TN	7138000
	FEATURE	/ASPTERM
	A	Y
	P	U
ASPLPA, ASPMPA	TN	7138000
	FEATURE	/ASPTERM
	TA TRIG NBR	3
	TA TRIG ACT	Y
	INTRA OFFICE FWD	blank
	INTER OFFICE FWD	

3. FEATURE ASSIGNMENT

3.1 Trigger Precedence

With the introduction of the escape processing from OHD triggers and the concept of inactive triggers, more than one trigger can be encountered on a call before the initial query is sent to the SCP. The following general rules apply to the precedence of these triggers (note that this is pre-query):

- No subsequent subscribed triggers may be encountered after OHI. Note that if the line is defined as a direct connect line, it is treated as such if the OHI is inactive.
- If a trigger is inactive, and requirements specify that the call should continue as though no trigger was detected, a subsequent trigger then takes precedence.
- DNTs are ignored if encountered after an active subscribed trigger unless they specify escape processing and the previously encountered trigger was OHD.
- FCD triggers take precedence over a previously encountered subscribed trigger only if: they specify normal digit collection, the digits collected specify escape treatment, and the previous trigger is OHD.

Figure 1 summarizes the precedence of the originating triggers.

3.2 Inactive Trigger Processing

ASP triggers may now be deactivated at three levels:

1. Individual ASP trigger within the ASP feature assigned to a line or trunk - The craft and the SCP can deactivate specific triggers within the feature on a per subscriber basis.
2. BRCS feature level - The craft can deactivate the ASP feature assigned to a line or trunk for a specific subscriber via LINEFA or MLHLNFA. This logically deactivates all ASP triggers defined for that subscriber within the ASP feature.

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3. Trigger Table - The craft can deactivate any ASP trigger via NSTRIG. This deactivates all triggers which reference the specified trigger number. Note that this trigger number can be for a 3/6/10-digit / N11 (DNT) as well as any of the subscribed triggers.

Detection of an inactive trigger will in some cases result in the trigger being ignored and in others will result in error treatment. The following table summarizes the processing for each of the ASP triggers when the trigger is inactive.

Processing of Inactive Triggers

Trigger	Processing
OHI	Continue as though trigger not detected.
OHD (Line)	
OHD (Trunk)	
OHD (PRI)	
FCD	Error Treatment.
CDP	
SIT (OZZ)	Continue as though trigger not detected. Will look for ANI II, 800 digits, or UNRES EA, else error treatment. No further digit analysis done.
SIT (ANI II)	Error Treatment unless 800 dialed or UNRES EA encountered.
SIT (UNRES EA)	Error Treatment (the SIT trigger would not be hit if 800 dialed).
PRIVATE EAMF (OHD)	
DNT	Continue as though trigger not detected.
DNT on SIT	(Note, the EAOFC trigger can not be inactive) If DNT trigger inactive, continue as though trigger not detected if CST purchased. Can also hit 800 DEST TYPE.
TAT	Continue as though trigger not detected.

3.3 Retrofit to 5E9(1)

For 5E9(1) and later, there are several aspects to retrofit to 5E9(1).

1. The first is the new form ASPDP. This ODA-only view defines ASP parameter data on a feature basis. ASPDP recovers existing (5E8) default parameter ASP data into the new BRCS format. This form can change default parameter data (the data cannot be changed for preconstructed ASP features on ASPFD).

2. The second is the concept of a Predominant Trigger Number. In 5E8, trigger numbers were assigned in digit analysis. In 5E9(1), trigger numbers are assigned on a per terminal basis. Since multiple triggers can exist in digit analysis, and only one trigger can be assigned to a terminal, ODA must determine a predominant trigger. The predominant trigger is determined by the following factors:

- The number of dialable codes having a non-zero TRIG NBR within the ASP dialing plan (ASP DAS on OFCOPT).
- The Weighting factor for number of digits defined in the incoming digits. For example, if the thousands group 2201 is assigned a non-zero TRIG NBR in the ASP dialing plan, this represents 1000 dialable codes accessing ASP.
- Only TRIG NBRs having an APPLICATION equals "ASP" on NSTRIG are involved.

The following tables describe the ASP data evolution from 5E8 to 5E9(1) for each trigger type. These evolutions can be defined as if/then relationships (if the first table of a pair is the provisioning for 5E8, the second table of the pair is the corresponding provisioning for 5E9(1) and later).

OHI Trigger (lines only) - 5E8

Form	Field	Value
LINE, MLHLN	NODL	HOT
	HTN	Blank
	ASP ALW	Y
LCC	DAS	ASP DAS

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OFCOPT	ASP OFC	SSP

OHI Trigger (lines only) - 5E9(1)

Form	Field	Value
NSTRIG	TRIG NBR	254
	APPLICATION	ASP
	ALT GBL TITLE	Blank
	SERV KEY	ANI
	STP TT NBR	blank
	ADM ST CD	ULK
	AIN REL	R0
LINEFA, MLHLNFA	FEATURE	/ASPORIG
	ACTIVE	Y
ASPLPA, ASPMPA	FEATURE	/ASPORIG
	OHI TRIG NBR	254
	OHI TRIG ACT	Y
ASPDP	OHI TRIG NBR	254
	TRIG ACT	Y

OHD Trigger (lines, trunks) - 5E8

Form	Field	Value
LINE, MLHLN	ASP ALW	Y
LCC	DAS	ASP DAS
OFCOPT	ASP OFC	SSP

OHD Trigger (lines, trunks) - 5E9(1)

Form	Field	Value
NSTRIG	TRIG NBR	Predominant trigger
	APPLICATION	ASP
	ALT GBL TITLE	carried forward from 5E8 data
	SERV KEY	carried forward from 5E8 data
	STP TT NBR	blank
	ADM ST CD	ULK
	AIN REL	R0
LINEFA, MLHLNFA, TKGRPFA	FEATURE	/ASPORIG
	ACTIVE	Y
ASPLPA, ASPMPA, ASPTPA	FEATURE	/ASPORIG
	OHD TRIG NBR	Predominant trigger (ODA)
	OHD TRIG ACT	Y
	FCD ALLOWED	Y
	FCD TRIG ACT	Y
ASPDP	FEATURE	/ASPORIG
	OHD TRIG NBR	Predominant trigger (ODA)
	OHD TRIG ACT	Y
	FCD ALLOWED	Y
	FCD TRIG ACT	Y

FCD Trigger (lines, PF trunks) - 5E8

Form	Field	Value
LINE, MLHLN, TKGRP	ASP ALW	Y
LCC or TKGRP	DAS	NOT ASP DAS
OFCOPT	ASP OFC	SSP
PDIT	ACTION	ASPUSE

FCD Trigger (lines, PF trunks) - 5E9(1)

Form	Field	Value
NSTRIG	TRIG NBR	carried forward from 5E8 data
	APPLICATION	ASP
	ALT GBL TITLE	carried forward from 5E8 data
	SERV KEY	carried forward from 5E8 data
	STP TT NBR	blank
	ADM ST CD	ULK
	AIN REL	R0
PDIT	ACTION	ASPNORM
	FEATURE	/ASPORIG
	TRIG NBR	carried forward from 5E8 data
LINEFA, MLHLNFA	FEATURE	/ASPORIG
	ACTIVE	Y
TKGRPFA	FEATURE	/ASPORIG
	ACTIVE	Y
ASPLPA, ASPMPA	FCD ALLOWED	Y
	FCD TRIG ACT	Y
ASPTPA	FCD ALLOWED	Y
	FCD TRIG ACT	Y

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CDP Trigger (lines, PF trunks) - 5E8

Form	Field	Value
LINE, MLHLN, TKGRP	ASP ALW	Y
LCC or TKGRP	DAS	NOT ASP DAS
OFCOPT	ASP OFC	SSP
IDPDCA	ACTION	IDPASP

CDP Trigger (lines, PF trunks) - 5E9(1)

Form	Field	Value
NSTRIG	TRIG NBR	from 5E8 data
	APPLICATION	ASP
	ALT GBL TITLE	from 5E8 data
	SERV KEY	from 5E8
	STP TT NBR	blank
	ADM ST CD	ULK
	AIN REL	R0
IDPDCA	ACTION	ASPNORM
	FEATURE	/ASPORIG
	TRIG NBR	Predominant trigger (ODA)
LINEFA, MLHLNFA	FEATURE	/ASPORIG
	ACTIVE	Y
TKGRPFA	FEATURE	/ASPORIG
	ACTIVE	Y
ASPLPA, ASPMPA	CDP ALLOWED	Y
	CDP TRIG ACT	Y
ASPTPA	CDP ALLOWED	Y
	CDP TRIG ACT	Y

There are also several new fields added to support 5E9(1) ASP. In addition, TRIG NBR from 5E8 is expanded from 1 - 127 to 1 - 255.

New Field Settings

Form	Field	Value
OFCOPT	INT OFC TRIG	255
	ESC CD CNTL	N
	MAX TRIG	Blank
	RDRCT THRES	Blank
	SCP DAS	SCPL DAS
IDDD, INDIT, LDIT, RDIT, PDIT	ESC CODE	N

4. ASP 5E9(1) TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPDP	5632-5	4	31E	12.64
ASPFD	5632-1	4	31A	12.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
ASPTPA	5632-4	4	31D	5.64
CFGGRP	5964	6	7A	12.5
DSAPP	5537	3	5AK	8.17
DSLUSR	5908	5	1I	23.2, 23.8
IDDD	5307	3	3T	9.6
IDPDCA	5601-1, 2	4	2B	9.13
INDIT	5309	3	3V	9.5
LDIT	5300-3/5	3	3C	9.3
LINE	5109	3	1I	1.5, 1.6
MLDIT	5300-3	3	3C	9.15
MLHLN	5111	3	1K	1.6
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
RDIT	5300-7/8	3	3H	9.9
SHTN	5902	5	1C	23.20
TGSRFD	5607-1, 2	4	8A	12.21
TKGRP	5202	3	2A	5.1

4.1 Line Translations

LINE form (5109 Record) - The LINE form defines the office Equipment Number and features for each

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telephone number in a 5ESS Switch.

The field ASP ALW was removed.

MLHLN form (5111 Record) - The MLHLN form defines the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group.

The field ASP ALW was removed.

4.2 Trunks Translations

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form.

The field TRIG NBR is the trigger number used when the ANI II digits or the UNRESEA field on TKGRP detect a shared interoffice trigger. If this field is blank, the trigger number assigned to the INT OFC TRIG field on OFCOPT is used.

Fields ASP ALW and ASP ORIG were removed.

4.3 Routing and Charging Translations

IDDD form (5307 Record) - The IDDD form is used for IDDD (International Direct Distance Dialing) Country Access Codes.

IDDD provides the capability for Direct Distance Dialing points outside the North American Network by the customer without the assistance of an operator.

The field ESC CODE is associated with digits dialed after an active OHD or 0ZZ SIT trigger is detected. If this field is set to "Y", call processing escapes from the detected trigger. Escape processing applies to the following triggers: OHD on lines, OHD on PF trunks, PRI channel setups, and SITs (0ZZ on INDIT) if SFID 6 ACT on SFSYS is "Y".

Upon escape from OHD processing, the call may encounter a DNT.

INDIT form (5309 Record) - The INDIT form defines the initial digit analysis and subsequent treatment of inpulsed digits from all Incoming and Two-Way Trunks based upon the initial digits received.

The field ESC CODE was added (see description under IDDD).

The NATURE OF NBR field was removed.

LDIT form (5300-3/5 Record) - The LDIT form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

The field ESC CODE was added (see description under IDDD).

The NATURE OF NBR and NON fields were removed.

MLDIT form (5300-3 Record) - The MLDIT form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

The field ESC CODE was added (see description under IDDD).

The NATURE OF NBR field was removed.

NSTRIG form (5324 Record) - The NSTRIG form identifies a network service application, and was created primarily for the ASP network service, but can be used by other network services. The view

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contains alternate STP network addressing and information for the switch owner's selectable service key.

The field AIN REL has two enumerations to determine the query format:

- "R0" is AIN Release 0, requiring SFID ACTs 58 and 51 equals "Y" on the SFSYS form; and
- "R0D1" is AIN Release 0.1, requiring SFID ACT 126 equals "Y" on SFSYS.

The field STP TT NBR defines the STP Translation Type Number for this particular trigger. If blank, the TT assigned to the application on DSAPP is used. This field applies only to 5E9(1) triggers.

The field ADM ST CD defines the administrative state code: "LK" (locked), or "ULK" (unlocked), and provides craft control of ASP services for a specific trigger number.

The enumeration "EAASP" was removed from the APPLICATION field.

PDIT form (5300-2 Record) - The PDIT form defines the Prefix/Feature Digit Interpreter in a 5ESS Switch. It provides information defining feature and operator access, and prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). Digit analysis for all line originated calls in a 5ESS Switch starts in PDIT. At least the first digit of every valid dialable code must be represented in PDIT.

The field ESC CODE was added (see description under IDDD).

Upon escape from OHD processing, call processing may encounter a DNT trigger or FCD trigger.

Enumerations were added to the ACTION field to support FCD and CDP triggers. These triggers can be assigned to lines (CLASS OF SERVICE of "ATND" or "INDIV") and trunks (TRKCLS of "PF", "PFLASH", and "PFITT"). The new ACTIONs are:

- "ASPDNC" - No further digits are collected and an immediate query is sent to the SCP. A response is received and the call is routed;
- "ASPNORM" - Digit collection and digit analysis on the collected digits are performed. A query is then launched to the SCP, a response is received and the call is routed; and
- "ASPVAR" - Digits are collected until interdigit timing expires. A query is launched and a response is received from the SCP. The call is routed.

The enumeration "ASPUSE" was removed from the ACTION field. The NATURE OF NBR field was removed.

RDIT form (5300-7/8 Record) - The RDIT form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request.

The field ESC CODE was added (see description under IDDD).

The NATURE OF NBR and NON fields were removed.

4.4 Miscellaneous Translations

DSAPP form (5537 Record) - The DSAPP form specifies the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks which use the CCS7 signaling protocols.

The APPLIC field enumeration of "AINR0D1" defines the CCS7 protocol. The SFSYS SFID ACT 126

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must be "Y" before this value can be assigned.

OFCOPT form (5509 Record) - The OFCOPT form supplies various miscellaneous office options and parameters.

The field ACG FNL TRMT specifies the final AIN handling treatment for calls blocked due to ACG (Automatic Call Gapping) controls. Enumerations are "RT", reorder tone, or "VA", voice announcement of no circuit available.

The field INT OFC TRIG is the Shared Interoffice Trigger Number, used when ANI II or UNRES EA detects a shared interoffice trigger and TRIG NBR on TKGRP is blank.

The field ESC CD CNTL , if set to "Y", allows escape codes to be used on dialed digits following the detection of an 0ZZ shared interoffice trigger on INDIT. To change this parameter to "Y" the office must purchase the ASP secured feature SFID 126 and SFID 006.

The field MAX TRIG specifies the maximum number of times an ASP call can serially trigger. If the ASP SFID 126 is set to "Y", the values are 1 to 6. Otherwise, the value is fixed at 3.

The field RDRCT THRES is the Forward Call Redirection Threshold, and limits how many originating and terminating redirection parameters a given call may receive. To assign a non-zero value, the ASP SFID 126 must be activated.

The field SCP DAS is used as the DAS for translating routing numbers returned from the SCP database, replacing SCPL DAS and SCPT DAS.

For the ASP OFC field, enumerations "BILLNAP" and "NOBILLNAP" are no longer supported, since 5E9(1) ASP does not support NAP offices.

The fields ASP DAS, SCPL DAS, and SCPT DAS were removed.

4.5 BRCS Features Translations

The field assignments for ASPDP, ASPFD, ASPLPA, ASPMPA, and ASPTPA are shown in Figure 3 .

ASPDP form (5632-5 Record) - For 5E9(1) and later, ASPDP defines ASP parameter data on a feature basis. It recovers existing (5E8) default parameter ASP data into the new BRCS format. This form can change default parameter data, but the data cannot be changed for preconstructed ASP features on the ASPFD form.

ASPFD form (5632-1 Record) - For 5E9(1) and later, ASPFD defines the various combinations of options available with the ASP feature.

ASPLPA form (5632-2 Record) - For 5E9(1) and later, ASPLPA defines ASP Line Parameters, and is used when an ASPFD constructed feature is assigned to a non-Multi-Line Hunt line and the desired parameters are different from the default parameters on the ASPFD form.

ASPMPA form (5632-3 Record) - For 5E9(1) and later, ASPMPA defines ASP Multi-Line Hunt line parameters, and is used when an ASP constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters are different from the default parameters on the ASPFD form.

ASPTPA form (5632-4 Record) - For 5E9(1) and later, ASPTPA assigns ASP feature parameters to trunks if the default parameters of the ASPFD form are inappropriate or unspecified.

IDPDCA form (5601-1/2 Record) - The IDPDCA form defines the dialed codes associated with IDPs.

The field TRIG NBR is used for CDP triggers.

Enumerations were added to the ACTION field to support FCD and CDP triggers (see description under

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PDIT).

TGSRFD form (5607-1/2 Record) - The TGSRFD form defines the TGSR (Terminal Group and Station Restriction) Feature Definition. Terminal Group and Station Restriction provides a means of grouping two or more terminals to provide station screening.

The TERMINATING RESTRICTIONs and TERMINATING DEFAULTs of "ASPF" and "ASPS" were removed.

NOTE: Beginning with 5E8, IDP features may be assigned to PRI trunks as part of the CENTREX PRI Enhancements feature (For more information on this feature, see Division 2, Section 4A105). However, IDP/CDP ASP triggers are not supported by this feature.

4.6 ISDN/Packet Switching Translations

DSLUSR form (5908 Record) - The DSLUSR form defines the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form.

The field ASP ALW was removed.

SHTN form (5902 Record) - The SHTN form assigns a Primary or Secondary TN or MLHG/TERM to ISDN Terminals. A telephone number which appears on more than one terminal is called a Shared TN or MLHG/TERM. Shared TNs or MLHG/TERMs are divided into Primary and Secondary TNs or MLHG/TERMs.

The field ASP ALW was removed.

4.7 ISDN BRCS Translations

CFGGRP form (5964 Record) - The CFGGRP form assigns BRCS feature actions to CPE user terminal buttons.

The ACTION enumerations "ASPUSE" and "IDPASP" were removed.

4.8 Announcement Translations

ANNAPL form (5529 Record) - A new APPLICATION of "PVN" has been added for use in building ASP announcements.

ANNHD form (5531 Record) - A new APPLICATION of "PVN" has been added for use in building ASP announcement header phrase lists.

ANNTR form (5533 Record) - A new APPLICATION of "PVN" has been added for use in building ASP announcement trailer phrase lists.

FIXRT form (5301-1 Record) - A new FIXED ROUTE TYPE of "NSANNC" has been added to specify the route index to the Digital Service Unit Model 2 - Recorded Announcement Function containing the ASP announcements.

PHRASE form (5534 Record) - A new APPLICATION of "PVN" has been added for use in building phrases to be used in ASP announcements.

RTIDX form (5303 Record) - This defines the route index found on the FIXRT which points to the DSU2-RAF.

SSPANN form (5535 Record) - An SSPANN form must be entered for every announcement code that could be returned by the SCP. Two new fields, CUST HDRID and CUST TRLID, were added to specify

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customized header and trailer IDs to be played when failure announcement code is received from an SCP. The existing ANNC RTI field was made optional when a CUST HDRID is entered. One new field, SM, was added for commonality with the Recent Change view and cannot have data entered into it on the ODA form.

TKGRP form (5202 Record) - Defines the trunk group that points to the DSU2-RAF for ASP announcements. Set TRK DIR to "RAF", TRKCLS to "RAFDTA" and SVC GRP to "ASP".

TRUNK form (5204 Record) - Defines trunk members that access DSU2-RAF channels that have beem programmed for ASP announcments. See Division 3, Section 2C and 2Q for details on making these assignments.

Active OHD	Active CDP or FCD	Dialed Digits	Switch Action
Yes	No	DN	OHD query
Yes	No	DNT	OHD query
Yes	No	DNT (inact)	OHD query
Yes	No	DNe	switch routing (escaped OHD query)
Yes	No	DNTe	DNT query (escaped OHD query)
Yes	No	DNTe (inact)	switch routing (escaped OHD query)
Yes	No	*ASP + anything	Error
Yes	Yes	DN	OHD query
Yes	Yes	DNT	OHD query
Yes	Yes	DNT (inact)	OHD query
Yes	Yes	DNe	switch routing (escaped OHD query)
Yes	Yes	DNTe	DNT query (escaped OHD query)
Yes	Yes	DNTe (inact)	switch routing (escaped OHD query)
Yes	Yes	*ASP + DN	OHD query
Yes	Yes	*ASP + DNT	OHD query
Yes	Yes	*ASP +DNT (inact)	OHD query
Yes	Yes	*ASP + DNe	Access code query (escaped OHD query)
Yes	Yes	*ASP + DNTe	Access code query (escaped OHD query)
Yes	Yes	*ASP + DNT (inact)	Access code query (escaped OHD query)
Yes	Yes	*ASP + none	OHD query
Yes	Yes	*ASP + variable	OHD query
No	Yes or No	any DN, inactive DNT	switch routing
No	Yes or No	DNT	DNT query
No	Yes	*ASP + correct subsequent digits	Access code query
No	No	*ASP + anything	Error

Figure 1 ORIGINATING TRIGGER PRECEDENCE SUMMARY 5E9(1) AND LATER SOFTWARE RELEASES

Field	Description	Value(s)	Forms
FEATURE	The ASP feature Name	1 □ 8 characters	ASPFD, ASPLPA, ASPMPA, ASPDP
CONTROL	The ASP feature type control	"ORIG", Feature is appliedto the originator. "TERM", Feature is applied to the terminator	ASPFD
OHI TRIG NBR	The trigger number for off-hook immediate triggers	1 □ 255	ASPFD, ASPLPA, ASPMPA, ASPDP
OHI TRIG ACT	Is the off-hook imediate trigger active?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPTPA, ASPDP
OHD TRIG NBR	The off-hook delay trigger	1 □ 255	ASPFD, ASPLPA, ASPMPA,

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	number		ASPDP
OHD TRIG ACT	Is the off-hook delay trigger active?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPTPA, ASPFD
CDP ALLOWED	Is the customized dialing plan trigger allowed?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPTPA, ASPDP
CDP TRIG ACT	Is the customized dialing plan trigger active?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPTPA, ASPDP
FCD ALLOWED	Is the feature code dialing trigger allowed?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPTPA, ASPDP
FCD TRIG ACT	Is the feature code dialing trigger active?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPTPA, ASPDP
TA TRIG NBR	The terminating attempt trigger number	1 □ 255	ASPFD, ASPLPA, ASPMPA, ASPDP
TA TRIG ACT	Is the terminating attempt trigger active?	Y, N	ASPFD, ASPLPA, ASPMPA, ASPDP
INTRA OFFICE FWD	The number of intra office calls that can be forwarded	1 □ 99	ASPFD, ASPLPA, ASPMPA, ASPDP
INTER OFFICE FWD	The number of inter office calls that can be forwarded	1 □ 99	ASPFD, ASPLPA, ASPMPA, ASPDP

Figure 2 ASP BRCS FORMS - FIELD ASSIGNMENTS 5E9(1) AND LATER SOFTWARE RELEASES

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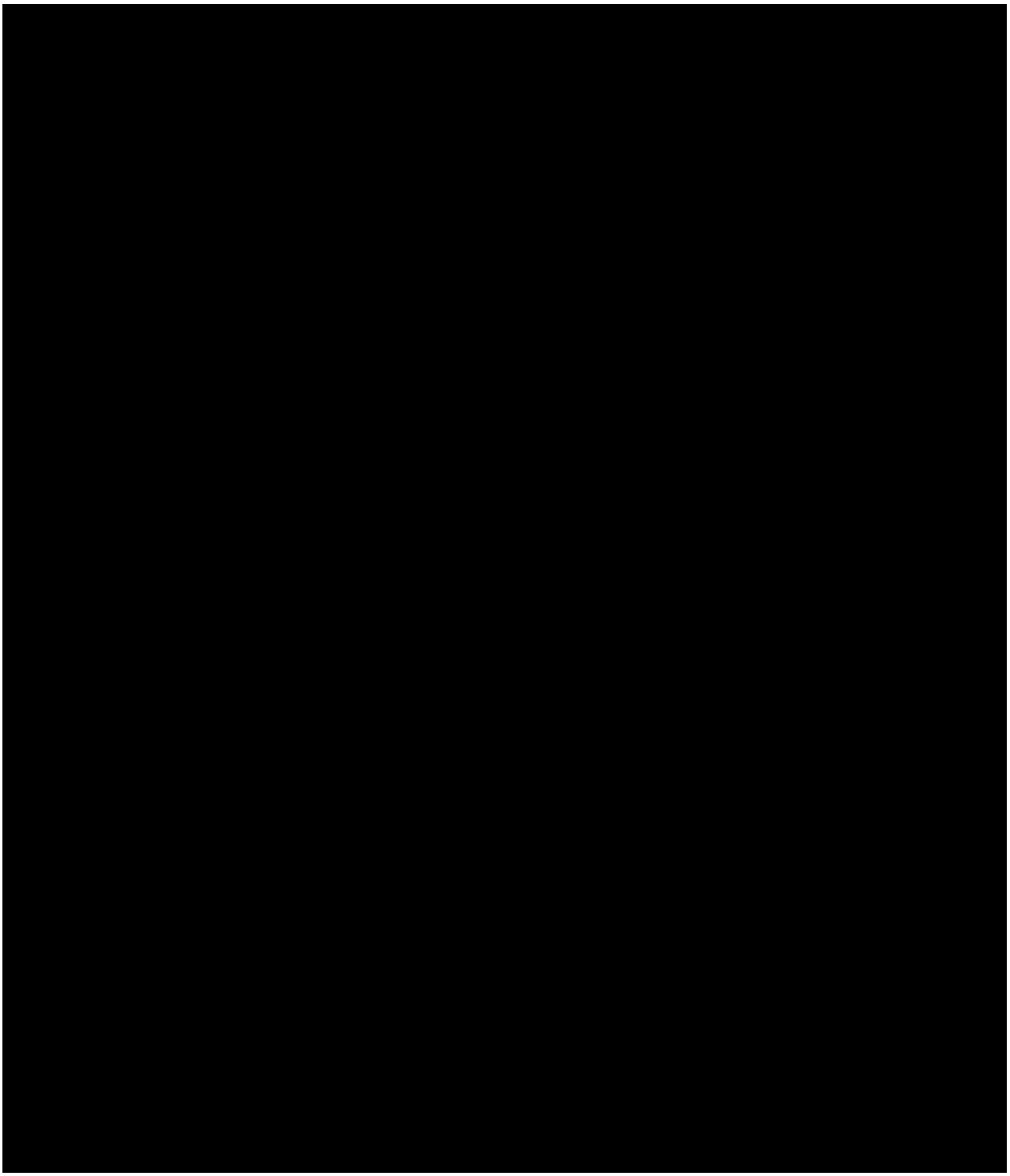

Figure 3 ASP DIALING PLAN AT SSP FORM FLOW 5E9(1) AND LATER SOFTWARE RELEASES

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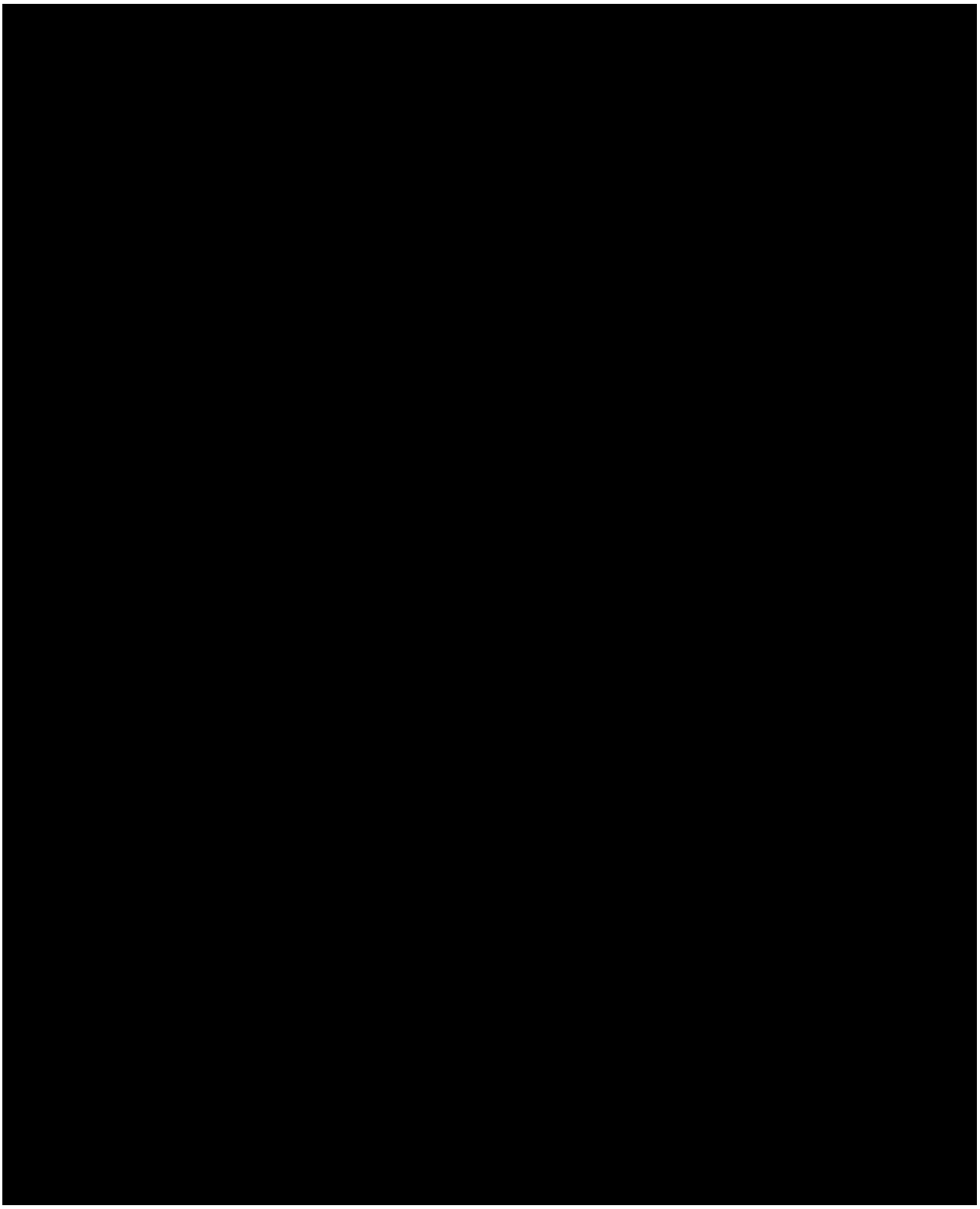

Figure 4 ASP ANNOUNCEMENT FORM FLOW 5E8 AND LATER SOFTWARE RELEASES

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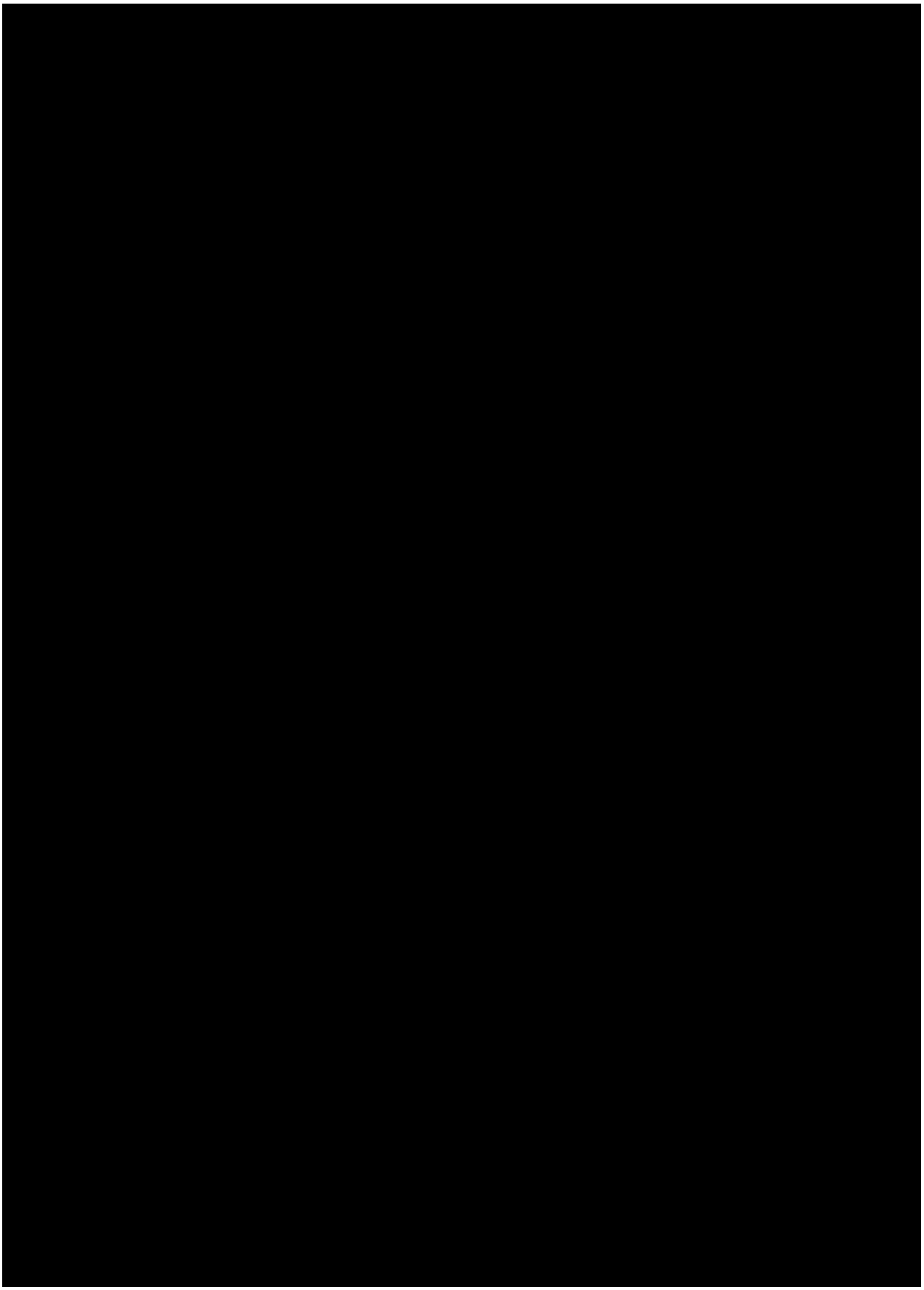

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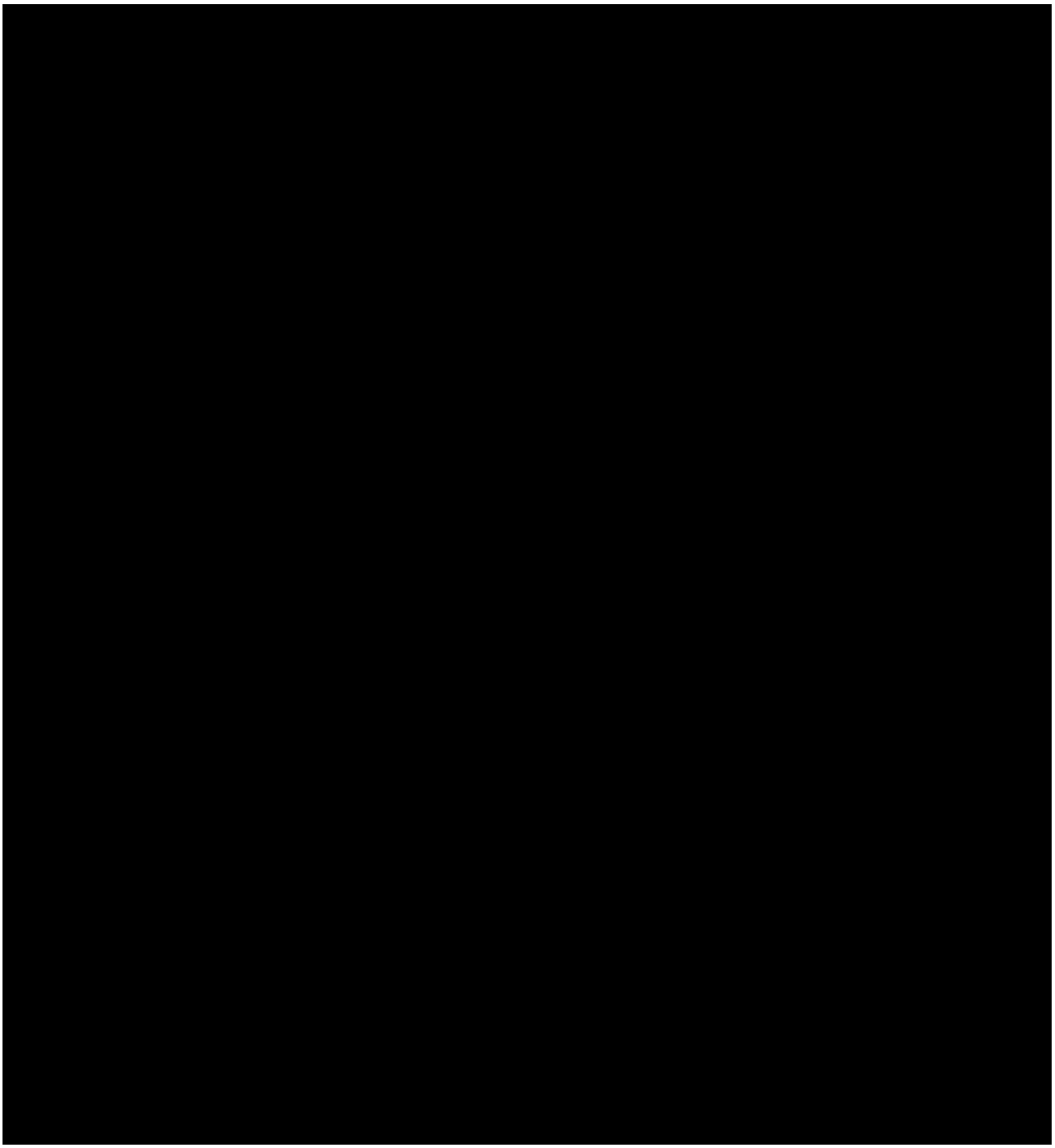

Figure 5 CALL PROCESSING OHD TRIGGER (LINES) 5E9(1) AND LATER SOFTWARE RELEASES

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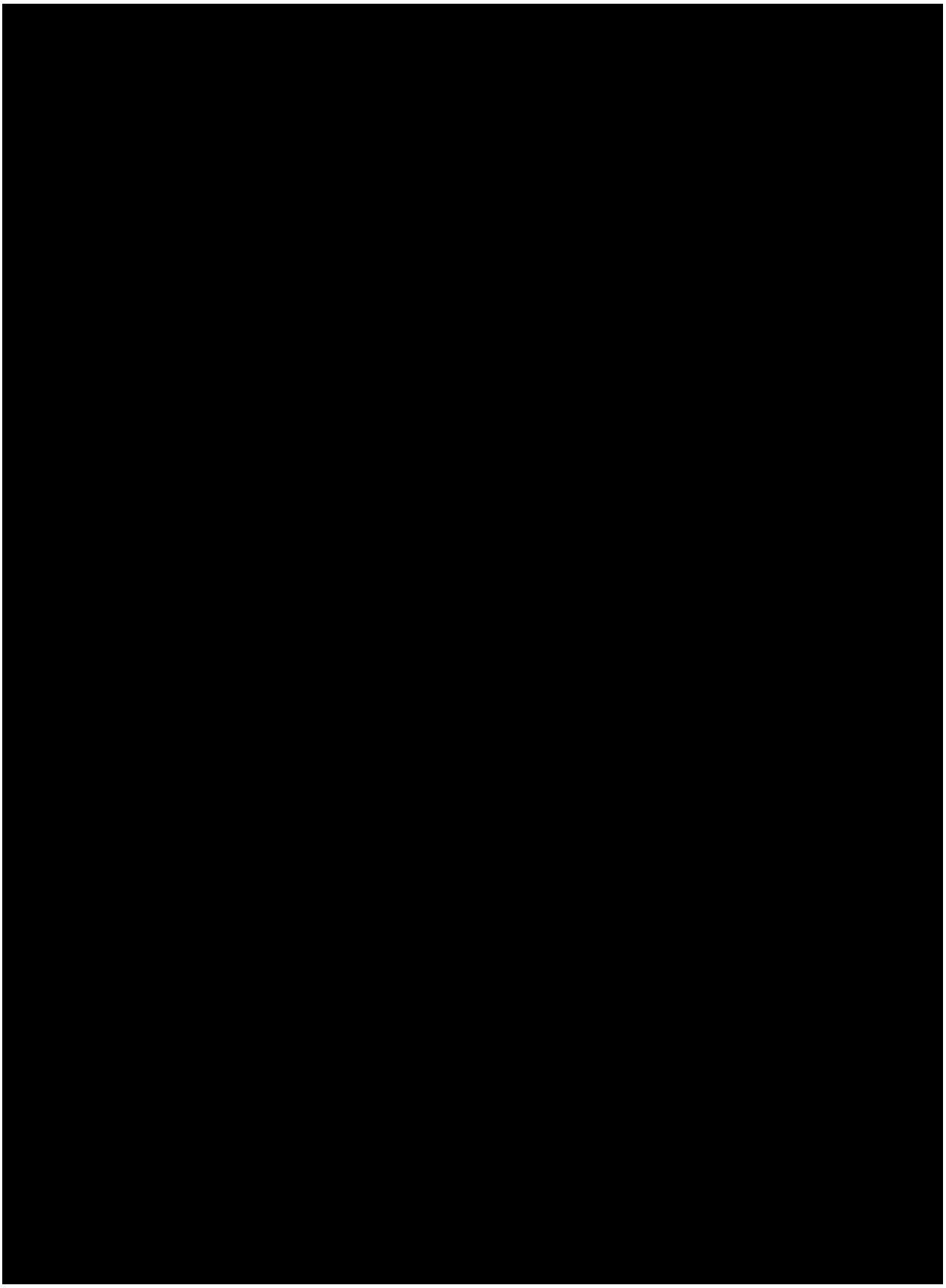

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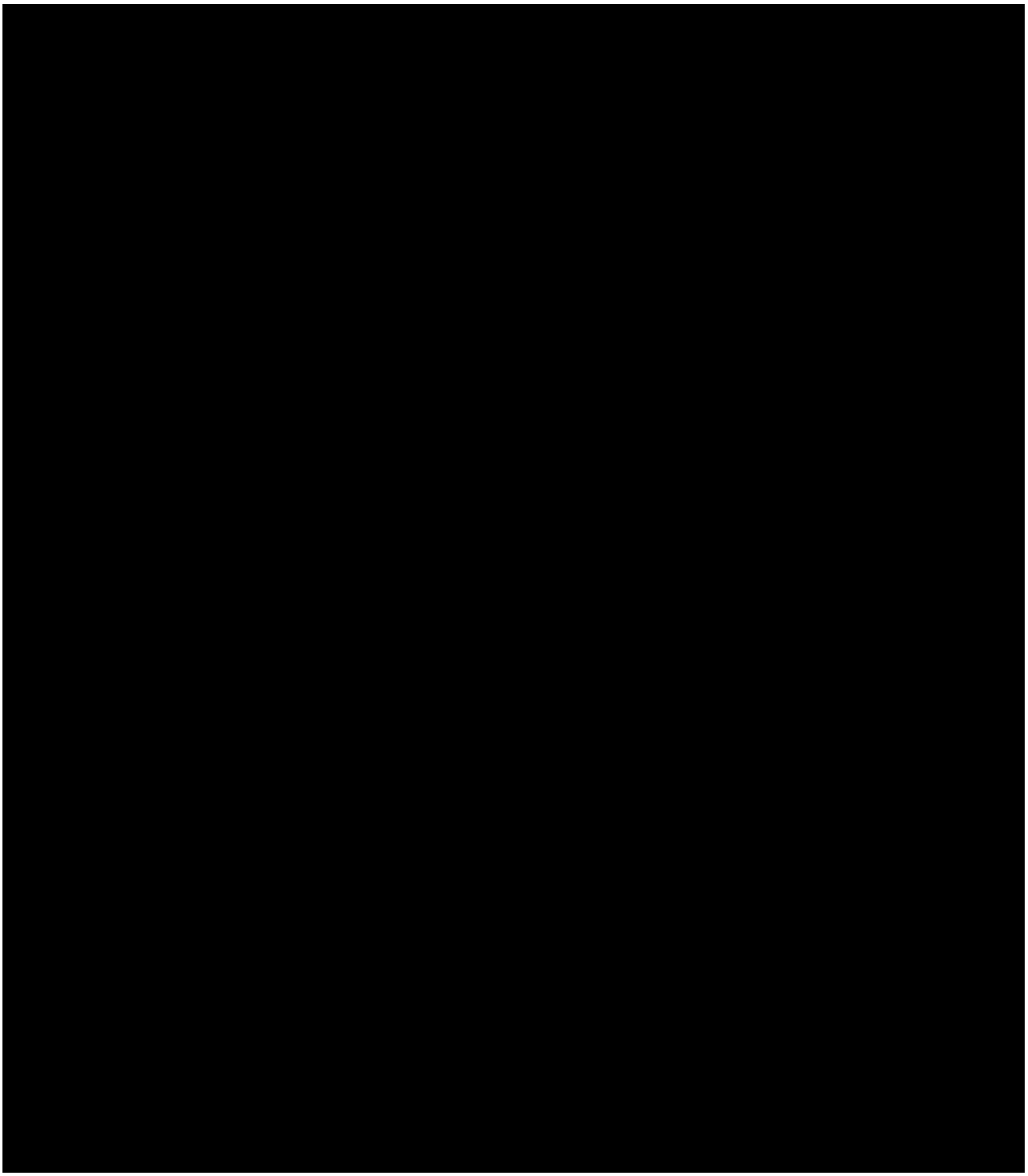

Figure 6 CALL PROCESSING OHD, CHANNEL SETUP PRI, AND PRIVATE EAMTF TRIGGERS (TRUNKS) 5E9(1) AND LATER SOFTWARE RELEASES

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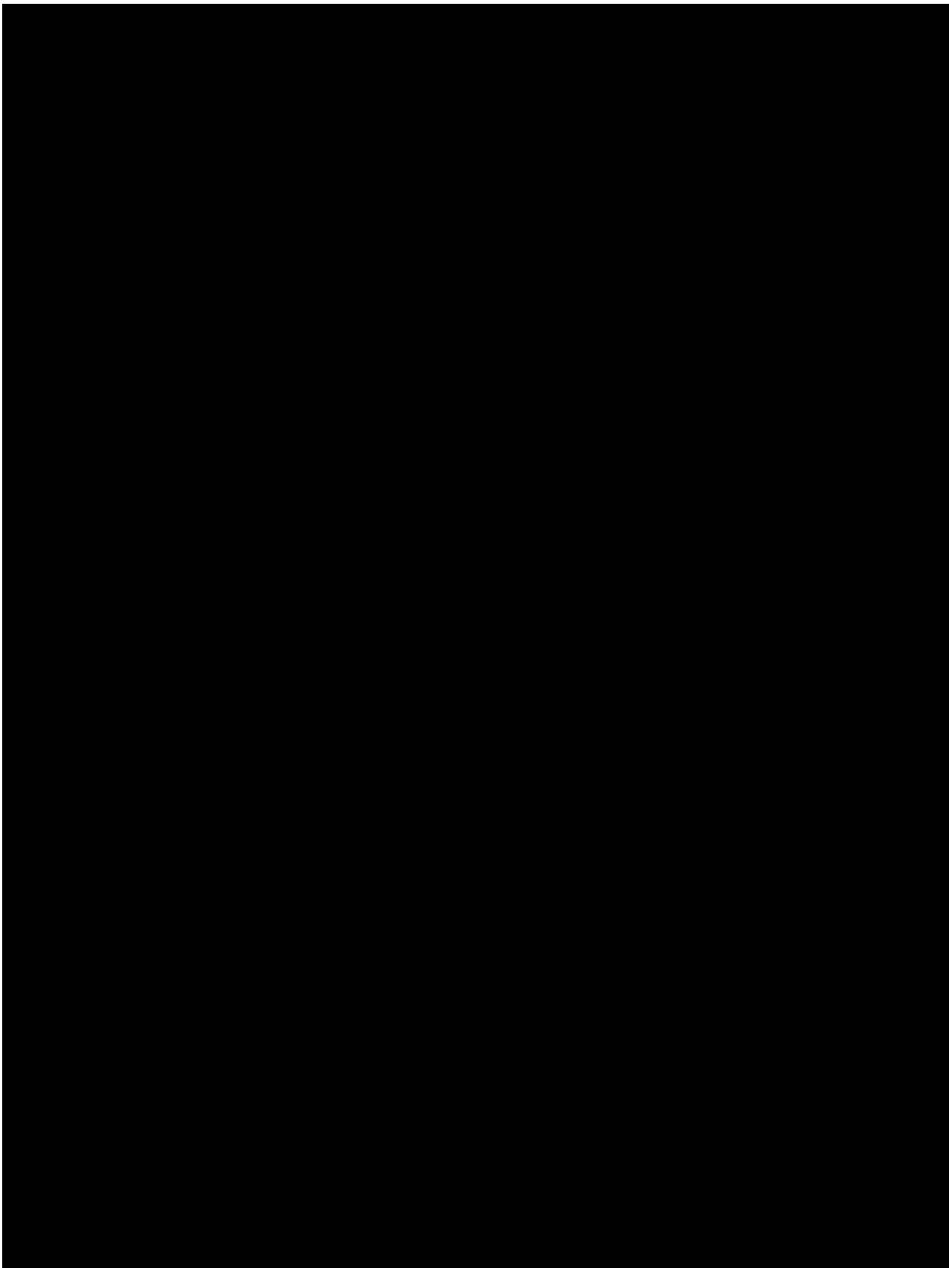

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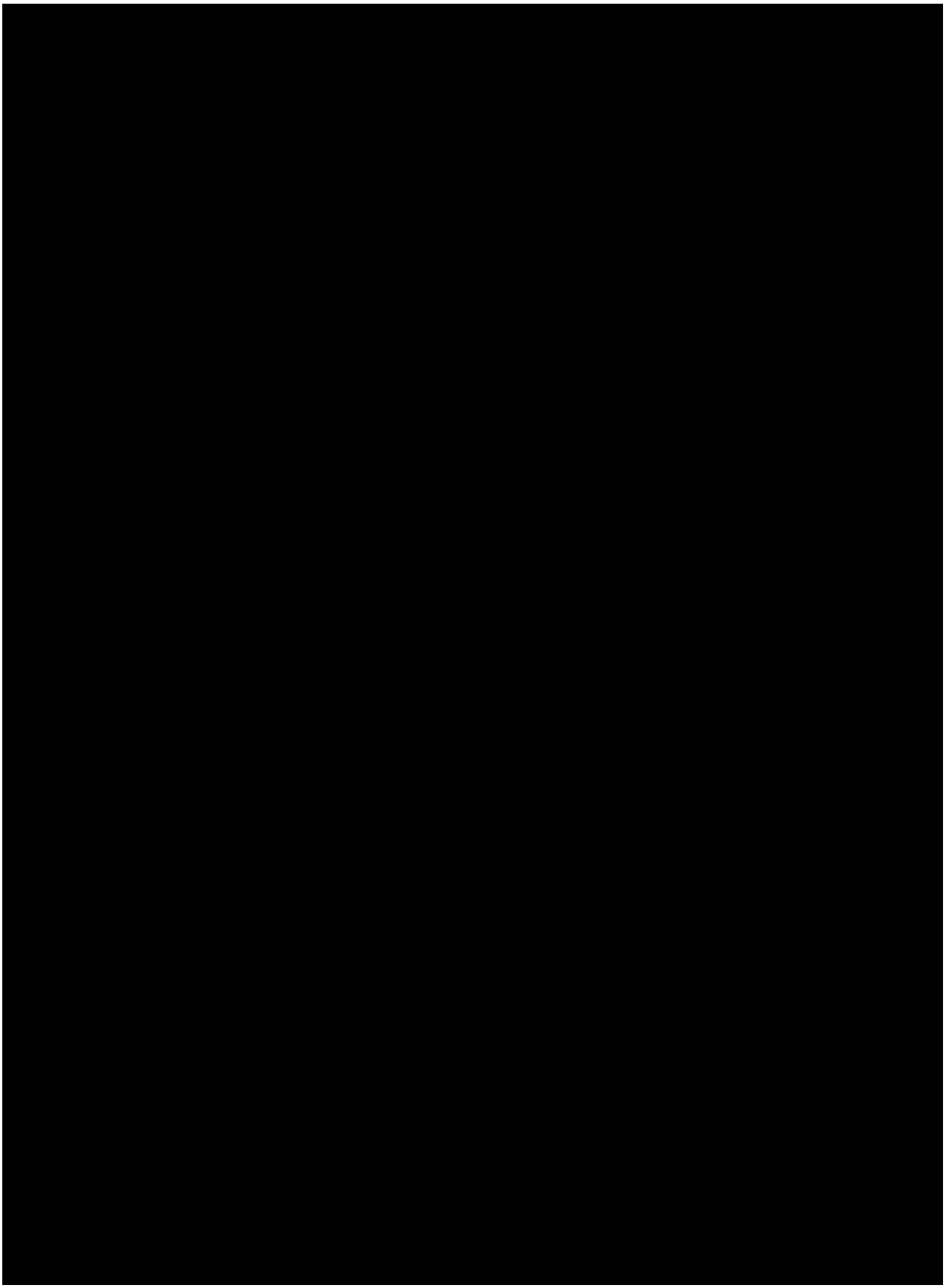

Figure 7 CALL PROCESSING SIT TRIGGER AND DNTS ON SITS 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4A127: AMA TRACE (AMATRC) ENHANCEMENTS

1. FEATURE DESCRIPTION

AMATRC Enhancements is a secured feature using SFID (Secured Feature ID) 127 and must be purchased before being activated. The feature number for this feature is 99-5E-1077.

Available with 5E9(1) and later, this feature provides a number of enhancements to the AMATRC feature. These enhancements include the following:

- The ability to activate multiple DNs (Directory Numbers) in AMATRC currently a maximum of one DN can be active.
- An input message (that is, audit) which queries the 5ESS-2000 switch for a listing of all DNs AMATRC is currently tracing.
- The DN should be compared to the AMA record's Terminating DN, Originating DN, or both.
- Tracing the Originating and/or Terminating DNs for Packet-Switched AMA records.
- The input of a hexadecimal representation of the AMA record preceding the formatted AMA record.
- The ability to direct AMATRC output to a switch-based log file.

The end-user of this feature will be 5ESS-2000 switch owner personnel. It will be invoked with a number of input/output messages from a 5ESS-2000 switch terminal. See the Input/Output Manual for details on the ALW:AMATRC command.

2. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. This feature is a secured feature and is activated by setting the ACT field for SFID 127 to "Y" on the SFSYS form (5713-1 Record). This feature has an RTU (Right to Use) fee and is restricted until the purchaser has made the necessary financial arrangements with the Lucent Technologies Account Representative.

SEC. 4A128: AMA CAPABILITIES FOR TYPE 2A CELLULAR INTERCONNECTIONS

1. BACKGROUND

CMCs (Cellular Mobile Carriers) provide mobile telephone service via radio links from call sites to mobile telephone switching offices. In order for these mobile customers to be able to send and receive telephone calls from land-based telephone customers and customers of other CMCs, it is necessary to provide an interface between CMCs and land-based switching systems. This can be done by using existing features in EA (Equal Access) switching systems. Calls from a CMC switch are billed at the CMC switch when the land-based switches cannot generate AMA (Automatic Message Accounting) records for tandem and terminating calls.

2. FEATURE DESCRIPTION

Available with 5E9(1) and later, the AMA Capabilities for Type 2A Cellular Interconnections Secured

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Feature has feature number 99-5E-1081 and uses SFID (Secured Feature ID) 128. This feature provides the ability to generate a new CMC AMA record for each CMC trunk group and for each direction when a call is completed between the 5ESS Switch AT (Access Tandem) for Type 2A Cellular Interconnections and mobile customers. A Type 2A interconnection provides a connection to a telephone company's AT. It also provides connections to and from co-located lines, ICs (Inter-LATA Carriers), and other CMCs having terminations within the LATA. A maximum of 60 CMC IDs is supported. Originating carrier access records for FGB (Feature Group B) and FGD (Feature Group D) connections are made at the AT.

SFID 128 provides the OTC the ability to make AMA billing records for calls to and from a CMC in a tandem switch provided the tandem switch is directly connected to the CMC. The AMA records consist of normal end office and AT records which are normally generated for calls from and to a line, as well as new records for the CMC portion of the call. These new records are much like the existing FGD originating and terminating LATA records, and allow verification of records rendered by the CMC.

For the Type 2A feature (SFID 128), CMC trunks use in-band MF (Multi-Frequency) signaling, that is, CCS7 signaling between the CMC and the AT is not supported. Available as a 5E9(1) and later Software Update, the CMC Type 2A/2B Cellular Interconnections via CCS feature (SFID 160) implements CCS7 signaling between the CMC and the AT, as well as MF signaling for Type 2B interconnections. That is, SFID 160 supports both Type 2A/2B with CCS7 and Type 2B with MF, while SFID 128 supports Type 2A only with MF only. The Type 2B Interconnection feature provides a connection to a OTC's EO (End Office), providing connections only to and from terminals served by that EO (including lines, private trunks, and other CMCs having terminations within the switch itself). See Division 2, Section 4A160).

3. AMA RECORDING

On a per trunk basis the land telephone company is able to specify whether CMC AMA records are to be made on calls to CMCs. When CMC AMA records for calls to CMCs are specified to be generated, a CMC AMA record is made on all calls on which a trunk to the CMC has been seized and the CMC returned a wink and on all calls from a CMC on which a seizure has been detected on a trunk from the CMC.

Referring to Figure 1, the connection A and B is between cellular end users on two different CMC switches connected to the 5ESS Switch access tandem by Type 2A connections. Two CMC AMA records are made for this connection, one for each CMC.

The connection A and C is between a cellular end user and a line served by the 5ESS Switch. For a call in either direction between A and C, the 5ESS Switch makes a CMC AMA record. For a call from C to A, the 5ESS Switch tandem may in addition make an AMA record charged to user C. This record is totally independent of the CMC record.

The connection A and D is between a cellular end user and a subscriber D served by another switch in the LATA. For calls between A and D in either direction, the 5ESS Switch tandem makes a CMC AMA record. For a call from D to A, the EO (End Office) may, in addition, make an AMA record charged to end user D. This record is totally independent of the CMC record made at the tandem switch.

The connection A and IC/INC is between an IC (Interexchange Carrier) and cellular end user A. For a call between A and the IC in either direction, a new CMC AMA record is made. If the IC is of type FGA (Feature Group A), FGB (Feature Group B), or FGD (Feature Group D), then a carrier access record is made by the 5ESS Switch access tandem in addition to the CMC record.

- For calls from the IC to cellular user A, the 5ESS Switch access tandem currently makes terminating carrier access records, and these records will continue to be made in addition to the CMC record. The creation of a CMC record at the AT is a new capability provided by this feature.

- For calls from cellular user A to a directly connected FGA IC, the 5ESS Switch tandem currently makes an originating carrier access record. This record will continue to be made in addition to the new CMC record.

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- For calls from cellular user A to an FGB or FGD IC, originating carrier access records are made in addition to the new CMC record. Originating carrier access records for FGB and FGD are currently made at the end office, not at the access tandem. This feature provides the capability for these records to be made at the 5ESS Switch tandem.

The 5ESS Switch currently treats calls to and from an FGC carrier the same as calls to another switch in the LATA. No change is made for FGC calls, and no originating or terminating carrier access records are made for FGC calls. However, a CMC record is made for FGC calls at the access tandem.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
AMACT	5506	3	5F	10.12
OFCOPT	5509	3	5I	8.1/8.15
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1
	5056	3	2A	10.16

AMACT form (5506 Record) - This form is used to define AMA (Automatic Message Accounting) Call Types. The enumerations "CMCTT" and "CMCOT" were added for the AMA CALL TYPE field. "CMCOT" specifies an AMA call type originating to a CMC. "CMCTT" specifies an AMA call type terminating from a CMC.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The field CMC WINK CONNECT was added. CMC WINK CONNECT specifies whether the initial wink received from the FGD carrier is used as the connect time for calls from a CMC to an FGD carrier. When CMC WINK CONNECT is "Y", the connect time is when the initial wink is received from the FGD carrier. The default "N" for this field specifies that the connect time is when a seizure is detected on an incoming trunk from the CMC. This field must be "N" unless this feature has been purchased and SFID 128 has the ACT field set to "Y" on the SFSYS form.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The fields ORIG CMC and TERM CMC were added. ORIG CMC specifies the billing type of AMA records for originating Cellular Mobile Carrier calls. TERM CMC specifies the billing type of AMA records for terminating Cellular Mobile Carrier calls. These fields may not be entered unless this feature has been purchased and SFID 128 has the ACT field set on the SFSYS form.

View 10.16 (5056 Record) - This Recent Change View contains two fields, CMC ID and CMC BILL. CMC ID is indicated on the TKGRP form as a 10.16 view field. CMC ID is a 2-digit number which identifies the CMC. CMC BILL assigns a 10-digit billing number to the CMC ID. The CMC BILL field corresponds to the BILLING DN field on the TKGRP form.

SFSYS form (5713-1 Record) - This form is used by the SEE (Lucent Technologies System Equipment Engineer) to enable the feature for the operating company. SFID 128 must have the field ACT set to "Y" to enable the feature.

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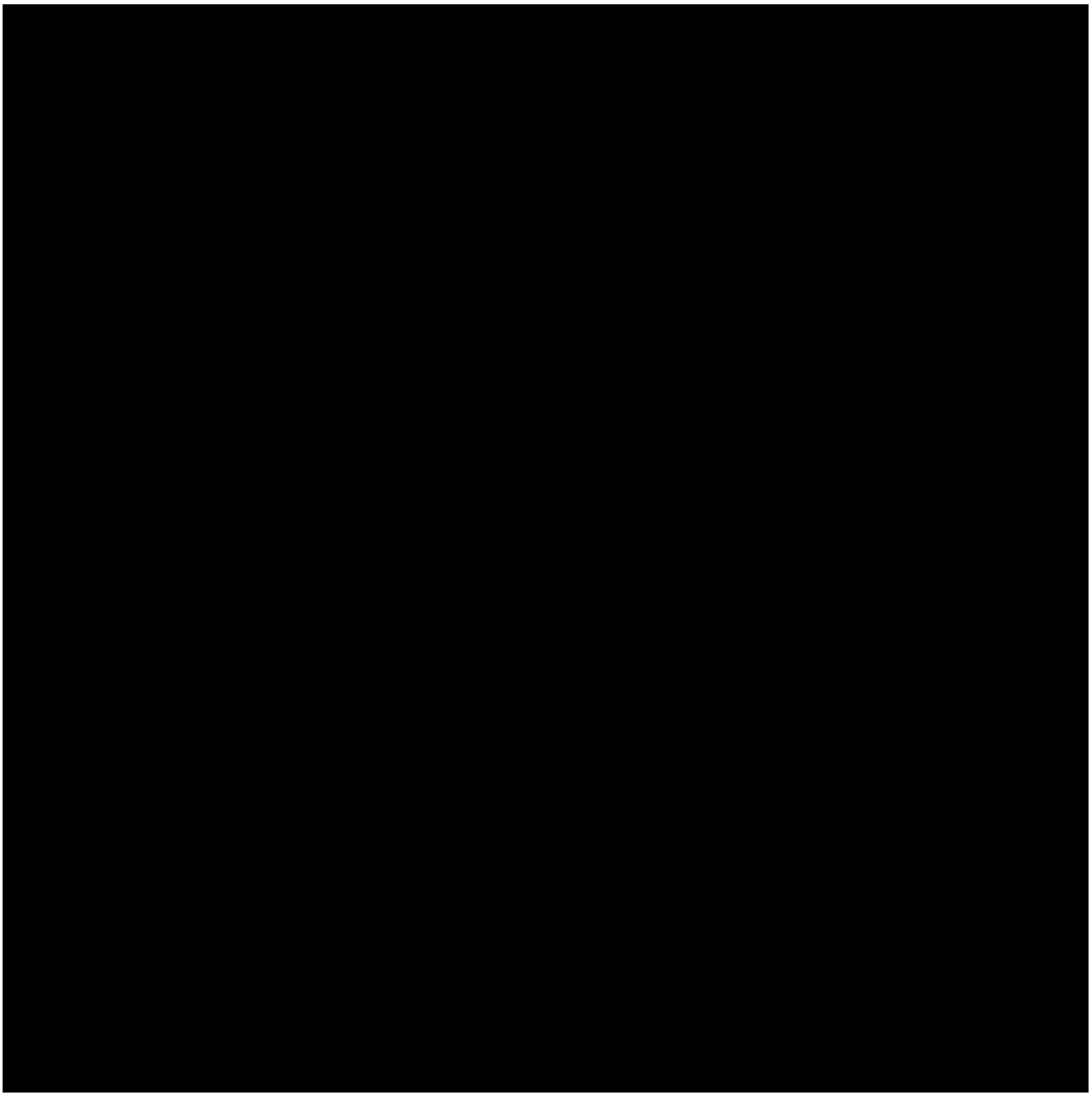

Figure 1 CELLAULAR INTERCONNECTIONS

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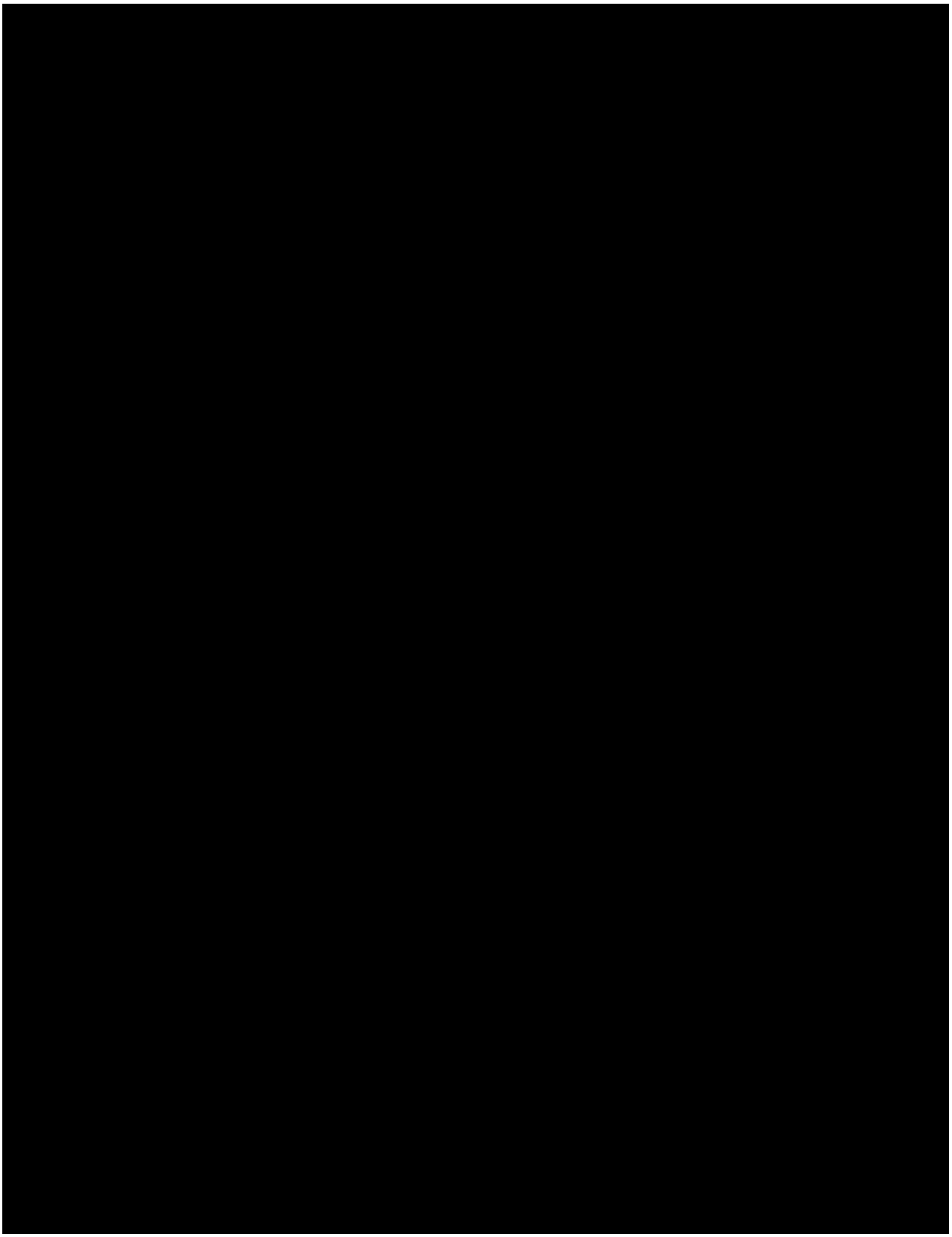

Figure 2 FORM FLOW FOR AMA CAPABILITIES FOR TYPE 2A CELLULAR INTERCONNECTIONS

SEC. 4A129: SOFTWARE UPDATE PROCESS AUTOMATION

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1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

SEC. 4A130: DCS (DIGITAL CELLULAR SWITCH)

1. FEATURE DESCRIPTION

For 5E9(1) and later, a wireless service provider can use a 5ESS Switch as a DCS (Digital Cellular Switch) in a cellular network. It replaces or coexists with Definity G2 DCSs in the APX-1000 system, offering higher call capacity with improved performance and better reliability. Configured with a CNI (Common Network Interface) ring, the 5ESS Switch communicates with the ECP (Executive Cellular Processor) through CCS7 messaging.

1.1 Secured Feature ID

The DCS feature is secured. Before the feature can be provisioned, the ACT field for SFID 130 must be set to "Y" on the SFSYS form.

For more information about this secured feature, see Division 2, Section 8A on DCS.

SEC. 4A131: E-LINK ACCESS AND ALTERNATE A-LINK SET ROUTING

1. FEATURE DESCRIPTION

The feature number for the E-Link Access and Alternate A-Link Set Routing feature is 99-5E-1216. It is a secured feature (SFID 131) which is available in 5E9(1) and later Software Releases. This feature provides the 5ESS-2000 Switch in a LEC (Local Exchange Carrier) SS7 (Signaling System 7) network with the capability to connect signaling links between SEPs (Signaling End Points) and non-home STPs (Signal Transfer Points). At the SEP, E-link sets are used for alternate routing access when A-link set routing fails and vice versa; when E-link set routing fails, A-link sets provide alternate access.

The ELINK feature is a component of the CNI (Common Network Interface)feature which allows signaling to be transmitted between switches.

For more information about this secured feature and CNI Implementation, see Division 9, Section 1A.

2. TRANSLATION REQUIREMENTS

There are no ODA translation requirements for the ELINK feature. This feature is supported by RC/V only. Refer to *3.4 ELINK Translation Requirements*, Division 9, Section 1A for details of the RC/V translation requirements.

SEC. 4A132: FULL POINT CODE ROUTING

1. FEATURE DESCRIPTION

The feature number for the FPCR (Full Point Code Routing) feature is 99-5E-1200. It is a secured feature (SFID 132) which is available in 5E9(1) and later Software Releases.

The FPCR feature provides the 5ESS-2000 Switch, in a LEC (Local Exchange Carrier) network, with the capability to directly route traffic on a specific combined link set to another STP (Signal Transfer Point) pair based upon the DPC (Destination Point Code).

FPCR is allowed over combined link sets and direct link sets. A direct link set may or may not be part of a combined link set. Also, a link set may or may not be an inter-network link set. When one member of a

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cluster is routed to using FPCR, all members of that cluster must be routed to by way of FPCR.

The FPCR feature is a component of the CNI (Common Network Interface) which allows signaling to be transmitted between switches.

For more information about this secured feature and CNI Implementation, refer to Division 9, Section 1A.

2. TRANSLATION REQUIREMENTS

There are no ODA translation requirements for the FPCR feature. This feature is supported by RC/V only. Refer to *3.8 FPCR Translation Requirements*, Division 9, Section 1A for details of the RC/V translation requirements.

SEC. 4A133: CALLING IDENTITY DELIVERY ON CALL WAITING

1. FEATURE DESCRIPTION

The CIDCW (Calling Identity Delivery on Call Waiting) is a secured feature using SFID (Secured Feature ID) 133 and is dependent on the Switch-to-CPE (Customer Premise Equipment) Analog Off-Hook FSK (Frequency Shift Key) Data Interface secured feature using SFID 140. Both features must be purchased and activated in order to implement CIDCW. The AT&T feature number for the CIDCW feature is 99-5E-1106.

Available with 5E9(1) and later, this feature allows a subscriber, while off-hook on an existing call, to receive information (in the form of Caller ID) about a calling party on a waiting call. For CIDCW to be active, the subscriber must have Call Waiting Terminating and ICLID-CND (Individual Calling Line Identification)-(Calling Number Delivery) or CNAM (Analog Calling Name Delivery) features assigned to the line.

NOTE: This feature will not add any new preconstructed features. The exiting Call Waiting Terminating and ICLID-CND or CNAM preconstructed features will be used.

When CIDCW is active on a subscriber's line and the subscriber is engaged in a telephone conversation, then for calls which seek to terminate to the CIDCW subscriber:

- the calling party will receive call waiting tone
- the CIDCW subscriber will receive CAS (CPE alerting signal) after the call waiting tone for the new "waiting" call
- the voice path to the other party will be temporarily muted so the party does not hear the call waiting tone and the CPE alerting tone intended for the CIDCW subscriber
- the caller ID data will be displayed to the CIDCW subscriber's CPE
- if the CIDCW subscriber already has a call in the waiting or held state, CIDCW treatment will not apply to the subsequent call; the call will receive busy treatment, and the CIDCW subscriber will not be alerted to that call.

CIDCW differs from the traditional Call Waiting in the alerting procedure. The alerting signal for the CIDCW feature is not the same as for traditional call waiting. For CIDCW, the alerting sequence is composed of two parts:

- the SAS (Subscriber Alerting Signal) which is identical to the current call waiting tone that the subscriber is accustomed to (e.g. normal 440 Hz or distinctive tone).
- the CAS (CPE Alerting Signal) which is a very short signal designed to alert a special purpose CPE

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that a data transmission will follow. Once the CPE responds with ACKNOWLEDGMENT, the Caller ID information is transmitted in FSK encoded ASCII format.

Once the customer receives the Caller ID data, he or she may decide whether to ignore the waiting call, interrupt the current call and flash to answer the waiting call, or end the current conversation in order to be connected to the new caller. These options are the same as for the existing call waiting feature. However, the subscriber now has the ability to identify the waiting caller, thus helping the subscriber to make a better informed decision as to which of these options to take.

Typical End-User Scenario

Scenario Participants:

Subscriber A, with /CWT and /LIRCNMP features.
Party B and Party C can be POTS lines.

CPE Type:

Because CIDCW is a terminating feature, the only CPE that is important to identify is the CPE associated with Subscriber A. Subscriber A's CPE must be CIDCW-compatible which is capable of recognizing and responding to a CAS tone. If Subscriber A is not equipped with the right CPE or does not have any CPE, the CIDCW signaling treatment will be given, but no Caller ID information will be displayed.

The software for CIDCW must be loaded and enabled on the switch for this scenario to operate. Additionally, the subscriber must be assigned the CIDCW capability.

Call Scenario

- Subscriber A's line is initially idle.
- Party B dials Subscriber A's telephone number and receives audible ringing.
- Subscriber A's telephone rings and Party B's Caller ID information is displayed before Subscriber A's telephone rings the second time.
- Subscriber A views Party B's information and answers the call.
- Subscriber A and Party B are engaged in conversation when Party C dials Subscriber A's telephone number and receives audible ringing.
- The talking path between Party B and Subscriber A is muted and Subscriber A hears call waiting tone followed by a very short duration high frequency tone which alerts Subscriber A's CPE.
- Party C continues to hear audible ringing.
- Subscriber A hears nothing because Subscriber A's CPE has muted the voice path to receive incoming Caller ID data from the switch.
- Subscriber A now views his/her CPE display which shows Party C's Caller ID information and is reconnected to Party B.
- Subscriber A can now make an informed choice whether or not to converse with Party C via established call waiting methods (flash, hang-up, ignore).

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				

Form Name	Record Number	Div.	Sec.	RC View
LINE	5109	3	1I	1.1
SFSYS	5713-1	3	5AR	8.22

LINE form (5109 Record) - This form is used to define a line. The new field CID CW was added. Prior to setting the CID CW field to "Y" to activate the feature on a given line, the ACT field for SFID 133 must be set to "Y" on the SFSYS form. For the CID CW field to be activated, the subscriber must have Call Waiting Terminating and ICLID-CND or CNAM features assigned to the line. CIDCW assignment is not allowed on an MLHG line and only supports the following Service Classes: INDIV, 4WINDIV, ATTENDANT and PBX.

SFSYS form (5713-1 Record) - This form is used to enable a secured feature for the operating company. The ACT field for SFID (Secured Feature ID) 133 must be set to "Y" to enable the CIDCW feature. Before the CIDCW SFID 133 can be activated, the CIDCW subscriber must also purchase the secured feature Switch-to-CPE Analog Off-Hook FSK Data Interface (SFID 140).

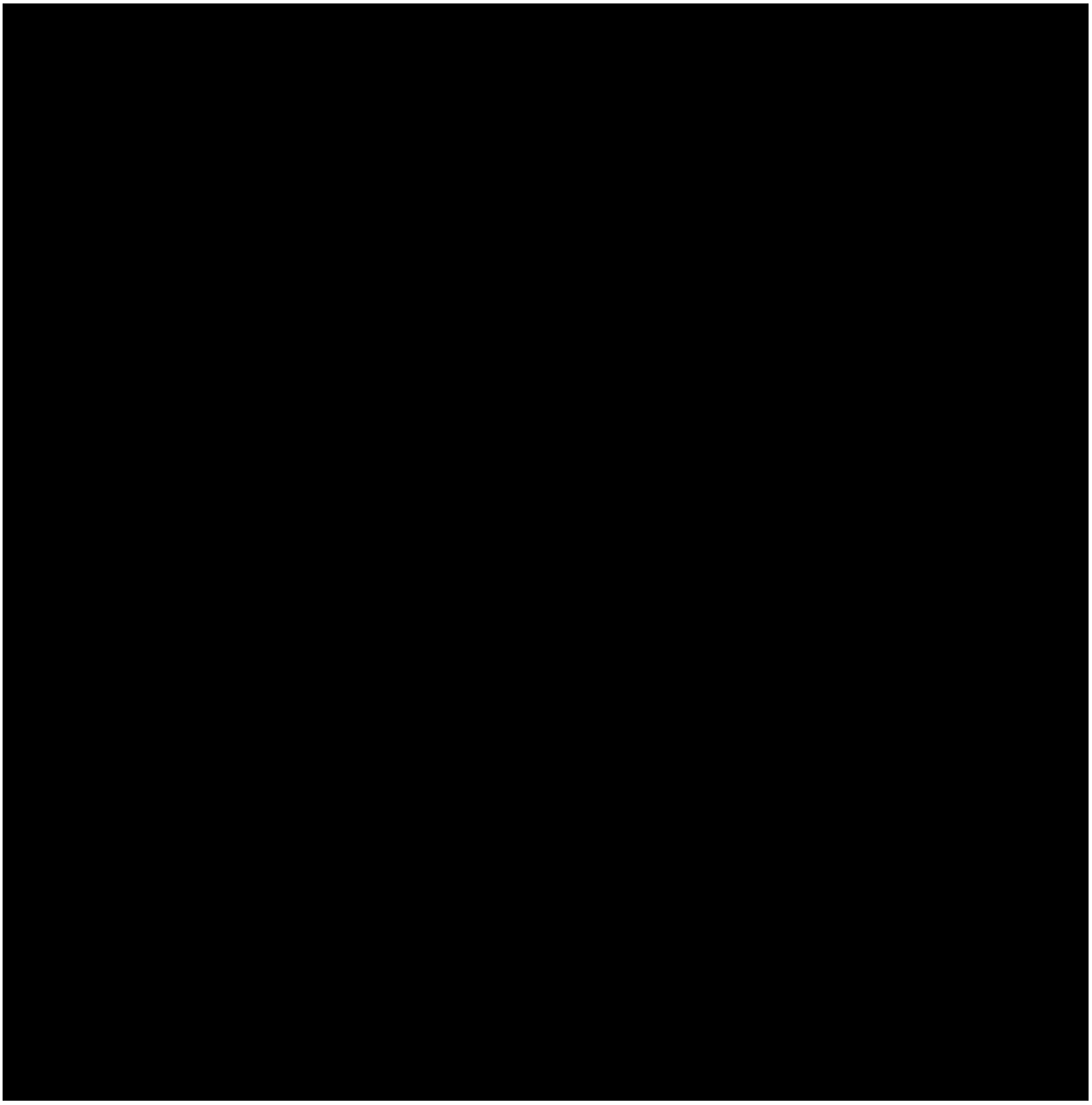

Figure 1 FORM FLOW FOR CIDCW

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SEC. 4A134: AUTOMATIC TRUNK TEST SCHEDULER, NON-AUTOPLEX SWITCH

1. FEATURE DESCRIPTION

The Automatic Trunk Test Scheduler, Non-Autoplex Switch feature is a secured feature using SFID 134 and must be purchased before being activated. The feature number for this feature is 99-5E-4245. This feature is available with the 5E9(1) and later software releases.

The ATTS (Automatic Trunk Test Schedule) feature provides a means of scheduling automatic execution of specific types of operational trunk/trunk group tests. The results of the test are logged on the AM disk and can be retrieved at a later time. The scheduling of the tests is accomplished by creating and maintaining a set of tests (sessions) in a schedule of tests created using the input forms. The ATTS can be accessed from normal maintenance channels such as the TLWS (Trunk and Line Work Station). A maximum of 20 schedules can run concurrently. Entries in each schedule correspond to scheduled tests (sessions). Each schedule is operated independently with the schedule data base accessible to multiple users, simultaneously. This feature is the non-Autoplex version of ATTS.For more information see the Autoplex version of the ATTS featurein Division 2, Section 8A.

SEC. 4A135: ADVANCED SERVICES PLATFORM DISTINCTIVE RINGING

1. FEATURE DESCRIPTION

The ASP (Advanced Service Platform) Distinctive Ringing feature is a secured feature using SFID (Secured Feature ID) 135 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-2205.

Available with 5E9(1) and later, the ASP Distinctive Ringing secured feature provides the capability for the SCP (Service Control Point), utilizing AIN (Advanced Intelligent Network) Release 0.1 protocol, to send a distinctive ringing pattern to the SSP (Service Switching Point) to be applied when ringing the called party's terminal. This secured feature is available for all analog lines, NI (National ISDN), and Custom ISDN terminals.

1.1 Alerting Patterns

The ASP Distinctive Ringing secured feature provides two components of alerting.

- Distinctive Ringing - The SCP can indicate one of three ringing patterns.

Distinctive Ringing Patterns

Value	Name	Treatment	Switch Pattern
64	Alerting On Pattern 0 Normal	Normal Ringing 2 sec on, 4 sec off	A
65	Alerting On Pattern 1 Distinctive Intergroup	800ms on, 400ms off 800ms on, 4 sec off	B
66	Alerting On Pattern 2 Distinctive Special	400ms on, 200ms off 400ms on, 200ms off 800ms on, 4 sec off	C

- Distinctive Call Waiting Tones - For subscribers with call waiting, the SCP can indicate one of three call waiting tones to be given to the called party.

Distinctive Call Waiting Tones

Value	Name	Treatment
64	Alerting On Pattern 0	One-Beep Call Waiting Tone 300 ms tone
65	Alerting On Pattern 1	Two-Beep Call Waiting Tone 100 ms tone, 100 ms silence

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		100 ms tone
66	Alerting On Pattern 2	Three-Beep Call Waiting Tone 100 ms tone, 100 ms silence 100 ms tone, 100 ms silence 100 ms tone

A switch-based distinctive ringing feature does not need to be assigned to the terminating line (called party) to receive ASP Distinctive Ringing. Only stations that subscribe to switch-based call waiting can receive ASP distinctive call waiting tones. ASP Distinctive Ringing and Distinctive Call Waiting Tones take precedence over all alerting patterns assigned to the terminating party on the switch.

The ASP Distinctive ringing pattern only applies to lines in the serving SSP. The pattern is not transported inter-switch.

The SCP can return distinctive ringing patterns in the following response messages utilizing the existing fields in the TCAP (Transaction Capabilities Application Part) message as a result of the ASP query.

Query Message	Response Message	Message Parameter
Info_Analyzed	Analyze_Route	Passive Leg Treatment
Info_Collected	Analyze_Route	Passive Leg Treatment
Origination_Attempt	Analyze_Route	Passive Leg Treatment
Termination_Attempt	Forward_Call	Passive Leg Treatment
Termination_Attempt	Authorize_Termination	Controlling Leg Treatment

If the SCP returns a distinctive ringing pattern in a response message that is not supported, normal alerting treatment is returned to the called party.

For a more detailed discussion of the ASP feature, please refer to Division 2, Section 4A126 and the AT&T Document AT&T 235-190-126, *5ESS Switch Advanced Services Platform, Release 0.1B.*

- ***NOTE:*** In order to provide distinctive ringing as a result of a National ISDN or ISDN Attendant origination, the ASP Interworking with National ISDN and ISAT secured feature must be purchased. This secured feature provides National ISDN, including EKTS (Electronic Key Telephone System), and ISATs (ISDN Attendants) with the exclusion of OHD (Off-Hook Delay) triggers, the ability to have ASP AIN Release 0.1 subscribed triggers. NI terminals may also subscribe to Termination Attempt triggers. This feature is a secured feature and is activated by setting the ACT field for SFID 139 to "Y" on the SFSYS form (5713-1 Record). For more information, see Division 2, Section 4A139.

2. FEATURE INTERACTIONS

This feature applies to all calls and call types that receive call routing instructions via ASP SCP queries. The following ASP and switch-based features interact with this feature as specified below:

- ASP Serial Triggering - If ASP Serial Triggering is encountered, the alerting pattern provided in the last valid ASP response message from the SCP is used to specify the alerting treatment to the terminating line. Previous alerting patterns provided by the SCP are ignored.
- Call Forwarding - The ASP distinctive ringing pattern is ignored if the ASP call encounters Call Forwarding. Normal alerting treatment based on the switch-based forwarding feature and switch-based alerting is provided.
- Call Waiting - One of the following switch-based Call Waiting features must be assigned to the line to provide ASP distinctive call waiting tones:
  - CWIO (Call Waiting Incoming Only)
  - CWO (Call Waiting Originating)

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- DCW (Dial Call Waiting)
- CWT (Call Waiting Terminating)

- LASS (Local Area Signaling Services) SDA (Selective Distinctive Alert) - ASP Distinctive Ringing takes precedence over switch-based LASS SDA.
- Executive Ringing Cutoff - Executive Ringing Cutoff takes precedence over ASP Distinctive Ringing. ASP Distinctive Ringing patterns are ignored.
- Abbreviated and Delayed Ringing - NI EKTS and Custom MBKS (Multibutton Key System) with ISDN Abbreviated and Delayed Ringing supports ASP Distinctive Ringing for the abbreviated and delayed ringing.
- Series Completion - ASP Distinctive Ringing is propagated to subsequent members of the Series Completion group.
- MLHG (MultiLine Hunt Group) - ASP Distinctive Ringing applies to the hunted MLHG members when ASP routed calls with distinctive ringing patterns are routed to the lead member DN (Directory Number) of the MLHG. ASP Distinctive Ringing applies after de-queuing from non-ISAT MLHG.
- MFRI (Multi Frequency Ringing Interface) - ASP calls routed to MFRI lines ignore the ASP distinctive ringing pattern.
- LTSB (Line Time Slot Bridging) - ASP Distinctive Ringing is provided for lines with LTSB. For both the case where the two LTSB lines are provisioned, one with 1-TN (1 Telephone Number) and the other with 2-TN, ASP Distinctive Ringing applies.
- MultiParty - ASP Distinctive Ringing does not apply on MultiParty lines.
- SHDN (Shared DN) - Calls routed to an NI or Custom ISDN SHDN group receive ASP Distinctive Ringing including the lead analog member.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

This feature is a secured feature and is activated by setting the SFID 135 ACT field to "Y" on the SFSYS form (5713-1 Record). Before activating this feature, the base 5E9(1) ASP Release 0.1B feature must be activated by setting the SFID 126 ACT field to "Y" on the SFSYS form.

4. GLOSSARY

AIN	Advanced Intelligent Network
ASP	Advanced Services Platform
CWIO	Call Waiting Incoming Only
CWO	Call Waiting Originating
CWT	Call Waiting Terminating
DCW	Dial Call Waiting
DN	Directory Number

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DNT	Dialed Number Trigger
EKTS	Electronic Key Telephone Service
ISAT	ISDN Attendant
LASS	Local Area Signaling Services
LTSB	Line Time Slot Bridging
MBKS	Multibutton Key System
MFRI	Multi-Frequency Ringing Interface
MLHG	MultiLine Hunt Group
NI	National ISDN
OHD	Off-Hook Delay
SCP	Service Control Point
SDA	Selective Distinctive Alert
SHDN	Shared DN
SSP	Service Switching Point
TCAP	Transaction Capabilities Application Part
TN	Telephone Number

SEC. 4A136: ASP DEFAULT ROUTING FOR TERMINATION ATTEMPT TRIGGERS

1. FEATURE DESCRIPTION

Prior to this ASP (Advanced Services Platform) Special Feature, when encountering a Release 0.1 TAT (Termination Attempt Trigger), a query was sent to the SCP (Service Control Point) database. If a failure (See the failures supported by ASP Default Routing for TATs listed below) or the expiration of the T1 timer occurred, the call would not terminate. The call would be given REORDER or sent to an announcement.

This feature is a secured feature, which is controlled by secured feature ID 136 and is available for 5E9(1) and later. The feature number for ASP Default Routing For Termination Attempt Triggers Capability is 99-5E-2204.

Default Routing for TATs, a new ASP call processing special feature, allows for continuation of calls that encounter a TAT when the query to the SCP database fails (see the failures supported by ASP Default Routing for TATs listed below). These calls terminate to the DN (directory number) assigned the TAT. When default routing feature is used to route the call to the port assigned to the TAT DN, other switch-based terminating features assigned to the port will operate as normal. For calls delivered to the port as a result of TAT default routing, the normal POTS billing is followed.

The requirements for this Advanced Services Special Feature are built on the 5ESS Switch ASP Release 0.1B requirements. For a more detailed explanation of Termination Attempt Triggers refer to Division 2, Section4A126 and the 5ESS Switch Advanced Services Platform, Release 0.1B Feature Document (235-190-126). For a more detailed explanation of the TCAP (Transaction Capabilities Application Part) , please refer to the 5ESS Switch Advanced Services Platform, Release 0.1B Feature Document (235-190-126).

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1.1 TAT Failures

The various types of TAT failures, which invoke ASP Default Routing occur as follows:

- Whenever the TAT query ASP Response timer (T1) expires (Timer Range 1-5) defined on the OFCOPT form. This timer is started when any query is launched and is stopped when a response to the query is received from the SCP. Examples of T1 timeout conditions are given below:
  - SCP database does not send a response to the TERMINATION ATTEMPT query message.
  - SCP database sends a response to the TERMINATION ATTEMPT query message after expiration of the T1 timer.
- Whenever the TAT query attempt is blocked by ACG (Automatic Call Gapping) (Refer to the ASP ACG section of 235-190-126.).
- Whenever the TAT query attempt is blocked due to switch hardware/software failures, e.g. (CNI (Common Network Interface) Ring or SS7 links are down).
- Whenever an invalid response to the TERMINATION ATTEMPT query message is received by the SSP (Service Switching Point) from the SCP database. Examples of invalid responses are listed below:
  - Unexpected Message - Message received is not allowed in response to the query.
  - Unexpected Message - Message received contains multiple components which are not allowed in the response message.
  - Unexpected Message Sequence - Invalid order of parameters in the message within the same TCAP package.
- Whenever the SCP sends an application or protocol error message to SSP, such as receiving a garbled TERMINATION ATTEMPT query message.

When a TAT response message is recognized to be an AUTH TERM, DISCONNECT, SEND TO RESOURCE, or FORWARD CALL, the appropriate current response message processing is followed. These response processing treatments are not changed by this special feature.

With respect to SEND_TO_RESOURCE responses:

- ASP default routing will not be encountered if the resources requested by a SEND_TO_RESOURCE operation are not available (e.g., when a call processing database read cannot be performed).
- ASP default routing will not be encountered when an unexpected message is received after a SEND_TO_RESOURCE session is initiated (following the TAT).
- ASP default routing will not be encountered after a RESOURCE_CLEAR is sent to the SCP following the initial SEND_TO_RESOURCE.
- ASP default routing will be encountered if the SEND_TO_RESOURCE message requesting a play and collect session also includes the disconnect flag (i.e., Fatal Erroneous Data Value application error in TAT query response).

In particular, if a TAT query results in a SEND_TO_RESOURCE request from the SCP, and the

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SEND_TO_RESOURCE TCAP message is received and recognized and does not contain any fatal protocol or application errors, ASP default routing no longer applies to the call unless a subsequent TAT is encountered.

ASP default routing is available for TAT queries and is not encountered once it is determined that a valid response message is received. In addition, if the call originator abandons the call during ASP TAT processing, the call will be cleared.

2. FEATURE ASSIGNMENT

Provisioning the Default Routing for Terminating Attempt Triggers requires the the following:

- Activate the Secured Feature ID 126 on the SFSYS form.(5713-1 Record)
- Activate the Secured Feature ID 136 on the SFSYS form.
- On the ASPFD form (5632-1 Record) or the ASPDP form (5632-5 Record) set the DFLT ROUTE field to "Y".
- If the ASPFD form (5632-1 Record) or the ASPDP form (5632-5 Record) is not defined, or a line needs different TAT parameters than defined by the ASP feature: on the ASPMPA form (5632-3 Record) for Multi-line Hunt Groups or the ASPLPA form (5632-2 Record) for non-Multi-line Hunt lines set the DFLT ROUTE field to "Y".

See Figure 1 for feature assignment form flow for ASP Default Routing For Terminating Attempt Triggers.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPDP	5632-5	4	31E	12.64
ASPFD	5632-1	4	31A	12.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This feature is a secured feature and must be purchased before being activated by setting the ACT field for SFID 136 to "Y" on the SFSYS form (5713-1 Record). Before activating this feature, the base 5E9(1) ASP Release 0.1B feature must also be purchased and activated by setting the ACT field to "Y" for SFID 126 on the SFSYS form.

ASPDP form (5632-5 Record) - The 5632-5 Record is available with the 5E9(1) Software Release, and defines ASP parameter data on a feature basis. It converts existing (5E8) default parameter ASP data into the new BRCS format. This form can change default parameter data, but the data cannot be changed for preconstructed ASP features on the ASPFD form (5632-1 Record).

A new field, TA DFLT ROUTE, was added to the ASPDP form in the Terminating Triggers section. The initial value of this field is "N". The default value of the DFLT ROUTE parameter for a given ASP terminating feature is specified on this form. When the feature is initially assigned to a line, the value of DFLT ROUTE field is copied from this form to the line.

The TA DFLT ROUTE field is used to indicate whether ASP Default Routing is active or inactive.

A "Y" indicates this call is routed to the port on which the TAT is assigned. This routing occurs only if an error occurred while communicating with the SCP and the transaction has not been closed. An "N" indicates that the standard error treatment of reorder or announcement is given when an error condition is encountered.

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ASPFD form (5632-1 Record) - The ASPFD defines various combinations of options available with the ASP feature.

A new field, TA DFLT ROUTE, was added to the ASPFD form in the Terminating Triggers section. The default value of the DFLT ROUTE parameter for a given ASP terminating feature is specified on this form. When the feature is initially assigned to a line, the value of DFLT ROUTE field is copied from this form to the line.

The TA DFLT ROUTE field is used to indicate whether ASP Default Routing is active or inactive. An entry of "Y" indicates this call is routed to the port on which the TAT is assigned. This routing occurs only if an error occurred while communicating with the SCP and the transaction has not been closed. An "N" indicates that standard error treatment of reorder or announcement is given when an error condition is encountered.

ASPLPA form (5632-2 Record) - The ASPLPA form defines ASP Line Parameters. The Line Parameter Form is used when an ASPFD constructed feature is assigned to a non-Multi-Line Hunt line and the desired parameters are different from the default parameters on the ASPFD form (5632-1 Record).

The new field, TA DFLT ROUTE is used to indicate whether ASP Default Routing is active or inactive.

An entry of "Y" indicates that this call is routed to the port on which the TAT is assigned. This routing occurs only if an error occurred while communicating with the SCP and the transaction has not been closed. An "N" indicates the standard error treatment of reorder or announcement is given when an error condition is encountered.

ASPMPA form (5632-3 Record) - The ASPMPA form defines ASP Multi-Line Hunt line parameters. The Line (MLHG/Term) Parameter Form is used when an ASP constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters are different from the default parameters on the ASPFD form (5632-1 Record).

A new field, TA DFLT ROUTE, was also added to the ASPMPA form in the Terminating Triggers section.

The TA DFLT ROUTE field is used to indicate whether ASP Default Routing is active or inactive.

An entry of "Y" indicates this call is routed to the port on which the TAT is assigned. This routing occurs only if an error occurred while communicating with the SCP and the transaction has not been closed. An "N" indicates that the standard error treatment of reorder or announcement is given when an error condition is encountered.

4. GLOSSARY

ASP - Advanced Services Platform

BRCS Business And Residence Custom Services

CNI Common Network Interface

DN - Directory Number

SCP - Service Control Point

SSP Service Switching Point

TAT Termination Attempt Trigger

TCAP - Transaction Capabilities Application Part

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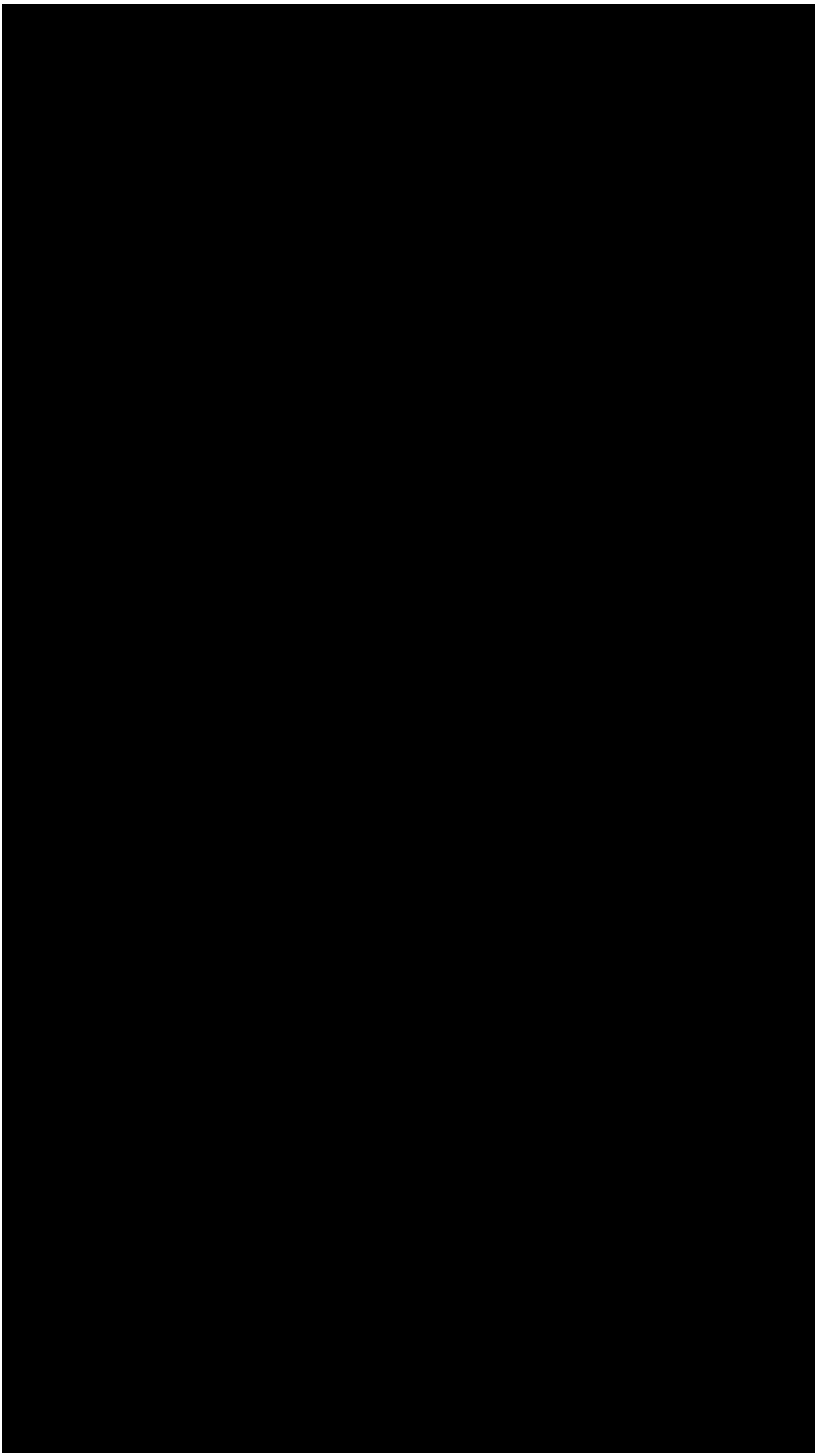

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Figure 1 FORM FLOW FOR ASP DEFAULT ROUTING FOR TERMINATION ATTEMPT TRIGGERS

SEC. 4A137: ADVANCED SERVICES PLATFORM OFF-HOOK DELAY INTERWORKING

1. BACKGROUND

A trigger is an event where the SSP (Service Switching Point) switch determines that ASP (Advanced Services Platform) treatment is needed for a call, based on some characteristic of the call, such as originating line or the dialed digits.

An Off-Hook Delay trigger is a subscribed originating trigger that queries the SCP (Service Control Point) database after all dialed/signaled digits have been collected and validated from the originating line/trunk. If the dialed/signaled digits have been defined as an escape code, an OHD query is not launched; rather, normal call processing treatment is applied where a 3/6/10/N11 trigger may be detected.

Prior to these secured features, ASP Release 0.1B as implemented for 5E9(1) prohibits assignment of BRCS and LASS features and an OHD (Off-Hook Delay) trigger to the same line.

2. ADVANCED SERVICES PLATFORM BRCS OFF-HOOK DELAY INTERWORKING

2.1 Feature Description

The ASP (Advanced Service Platform) BRCS (Business and Residential Customer Services) OHD Interworking is a secured feature using SFID (Secured Feature ID) 137 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-2203.

Available with 5E9(1) and later, this feature allows the interaction between OHD triggers and a subset of BRCS features for National ISDN stations, National ISDN with EKTS stations, and analog stations.

The ASP National ISDN Interworking and ASP ISAT Interworking special features provide the ability to assign subscribed triggers (including the OHD trigger) to National ISDN stations, National ISDN with EKTS stations, and to assign subscriber triggers (excluding OHD) to Custom ISDN ISATs. This feature is also a secured feature using SFID 139 and must be purchased before being activated.

The BRCS features which interwork with the OHD trigger are:

- 3-Way Calling
- 6-Way Calling
- Call Hold (also called Soft Hold)
- Call Transfer
- CF (Call Forwarding) including CFV (Call Forwarding Variable)
- CFVFB (CFV Feature Button)
- CFBL (CF Busy Line)
- CFBLFB (CF Busy Line Feature Button)
- CFDA (CF Don't Answer)
- CFDAFB (CF Don't Answer Feature Button)
- Remote Access to Call Forwarding

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- Call Waiting Feature including Call Wait Terminating
- Cancel Call Waiting

2.2 Translation Requirements

There are no new forms or new fields added for this feature.

SFSYS form (5713-1 Record) - This feature is a secured feature and must be purchased before being activated by setting the ACT field for SFID 137 to "Y" on the SFSYS form (5713-1 Record). Before activating this feature, the base 5E9.1 ASP Release 0.1B feature (for information on this feature, see Division 2, Section 4A126) must also be purchased and activated by setting the ACT field to "Y" for SFID 126 on the SFSYS form.

In order for OHD and BRCS features to coexist on NI (National ISDN) stations, the following features must be purchased and implemented via the SFSYS form:

- the base 5E9.1 ASP Release 0.1B feature must be activated by setting the ACT field to "Y"for SFID 126
- the ASP BRCS OHD Interworking feature must be activated by setting the ACT field to "Y" for SFID 137
- the ASP Interworking with NI and ISAT feature must be activated by setting the ACT field to "Y" for SFID 139.

ASPFD form (5632-1 Record) - No new fields or enumerations were added. With this feature active, other BRCS features may be assigned to a line or Multi-Line Hunt Group for Standard BRI users.

3. ADVANCED SERVICES PLATFORM LASS OFF-HOOK DELAY INTERWORKING

3.1 Feature Description

The ASP (Advanced Service Platform) LASS (Local Area Signaling Services) OHD (Off-Hook Delay) Interworking is a secured feature using SFID (Secured Feature ID) 137 and must be purchased before being activated. SFID 137 is the same feature lock for the BRCS/OHD Interworking Secured Feature released earlier. In addition, the base 5E9.1 ASP Release 0.1B Feature (see Division 2, Section 4A126) must be purchased and the ACT field for SFID 126 set to "Y" on the SFSYS form (Record 5713-1) in order for this feature to be enabled. Both this feature and the ASP Interworking with NI (National ISDN) and ISAT feature (SFID 139) (see Division 2, Section 4A139) must be activated in order for OHD and LASS features to be assigned together on NI stations. The AT&T feature number for this feature is 99-5E-2347.

Prior to this feature, ASP Release 0.1B prohibited assigning LASS features and an ASP OHD trigger to the same line. Available with 5E9(1) and later, the ASP OHD LASS Interworking feature provides the ability for selected LASS features and an ASP OHD trigger to be assigned to the same line, and for the selected LASS features to interwork with an ASP call which has encountered the OHD trigger. This feature is incremental in nature to ASP Release 0.1B as provided in 5E9(1). It also expands enhancement to the ASP National ISDN Interworking Secured feature which provides the ability to assign an OHD trigger to an NI station, and an NI with EKTS station.

The LASS/OHD feature allows the following LASS features on terminals which also have an ASP OHD trigger assigned:

- CNAM (Analog Calling Name Delivery)
- AC (Automatic Callback) (including 2-level AC)

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- COT (Customer Originated Trace) (including 2-level COT)
- AR (Automatic Recall)
- ICLID (Individual Calling Line Identification) for Analog and National ISDN, e.g., including
  - CND (Calling Number Delivery)
  - NP (Directory Number Privacy)
  - ACP (All-Call Privacy)and
  - PCP (Per-Call Privacy).
- SCA (Selective Call Acceptance)
- SCF (Selective Call Forwarding)
- SCR (Selective Call Rejection)
- SDA (Selective Distinctive Alert)
- CAR (Computer Access Restriction)
- UCR (Unidentified Call Rejection)

The BCLID (Bulk Calling Line Identification) feature is not included in the set of LASS features which can coexist and interwork with an ASP OHD trigger.

This feature applies to the following terminal types with an ASP OHD trigger with the specified protocol assigned:

LASS/OHD and Terminal Types with ASP OHD Triggers

Terminal Type	Protocol
Analog lines	R0, R0.1
National ISDN lines	R0.1
National ISDN with EKTS lines	R0.1

LASS feature activation/deactivation codes or feature buttons for the interworking LASS features may be received from an ASP OHD subscriber line. The LASS feature associated with the dialed code (or feature button) is subject to normal invocation criteria: assigned, active, applicable call state.

LASS features which do not place calls (like ICLID or SCR) do not encounter the OHD trigger. Operation of such LASS features are not impacted by the assignment of an OHD trigger to the line.

LASS features which attempt to place a call (AR, AC, SCF, SCA, and CAR) will encounter the OHD trigger when the call is attempted within the context of the invoked feature. The full range of ASP response processing is now available. No additional limitation on the type of SCP reply, or the routing options specified in a Routing message are imposed. SCA, SCF, and CAR operation are compatible with existing restrictions imposed upon ASP CFV (Call Forwarding Variable) interactions.

The switch ignores an inactive OHD trigger encountered on a feature call and continues processing the call as if there were no OHD trigger. When LASS routes a call, if the digits are an escape code (that is, an address or address pattern defined in digit analysis to specify escape), the OHD trigger is ignored. Requests for TN (Termination Notification) within the context of a LASS feature interaction on an OHD line

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are honored. ASP OHD billing will be done, if applicable.

There are no changes to existing feature interactions between LASS and 3/6/10 Digit - N11 Triggers (3/6/10/N11) or TATs (Terminating Attempt Triggers). When a LASS feature places a call, and a subsequent trigger (3/6/10/N11 or TAT) is encountered after the OHD trigger, serial triggering will occur. Existing feature interactions between LASS features and triggers which can be encountered without an OHD trigger apply if such a subsequent trigger is encountered following the OHD trigger.

- **WARNING:** 1:Involvement of AIN (Advanced Intelligent Network) Switch capabilities on the call prior to delivery to the terminating station may have resulted in a CPA different than that of the actual Call originator. The CPA is the CPN (Calling Party Number) and associated indicators such as privacy and uniqueness. In addition, the SCP may modify the Called Party Address. Called or Calling Party Addresses that have been modified by the SCP have an impact on LASS. See the individual feature descriptions below for more details on the impact. Some of these limitations exist even without the LASS/OHD feature.

3.2 Feature Interactions

An ASP OHD trigger and any of the LASS features cannot be assigned to a Custom ISDN line.

3.2.1 Automatic Callback including 2-level Activation of AC

AC Automatic Callback) is the LASS feature that returns the last incoming call and camps on that call if that party is busy.

Assignment of an OHD trigger to a valid line with access to an AC feature affects the operation of the AC feature as follows: When a line with access to AC and OHD activates an AC feature, the RDLS (Retrieve Distant Line Status) operation is performed using the entry in the ILHB (Incoming Line History Block) without encountering the OHD trigger. If LASS determines that the entry in the ILHB is not a valid destination, LTD (Long-Term Denial) error treatment is given. If the destination is valid, then when it is determined that the station is idle, AC places the call and the OHD trigger is encountered. The call is completed according to SCP instructions.

When AC places a call which encounters an active OHD trigger, and then sends a Query; error detection and processing from that point on is handled by ASP. ASP error treatment is given consistent with the error detected.

If ASP completes a call to a Final Announcement as specified by the SCP instructions, AC considers the call successfully completed. AC billing and measurements for completion of the call applies.

When the user invokes AC, if the DN in the ILHB is an active trigger in the user's dialing plan, LTD is returned to the user.

- ***NOTE:*** OHD triggers are associated with the terminal, not the DN. So this statement does not apply to OHD triggers.

AC Choking (the process of enforcing call limits established to control the number of 911 calls accepted from any one source or area) is performed based on the DN in the ILHB.

- **WARNING:** 1:In order for AC to operate as expected, the SCP cannot allow this call to be redirected to a DN different from the DN in the ILHB. If the SCP changes the called party number, then the RDLS, performed on the contents of the ILHB, will have received the status of and, if busy, camped onto a DN different from the one to which it finally routed.

- **WARNING:** 2:The ILHB stores the CPA (Calling Party Address) currently associated with the call. If ASP triggers are involved in the incoming call, the ILHB contains any CPA supplied by an SCP which may not be the CPA of the originator. Knowledge of any CPN previously associated with the call is lost. If the number in the ILHB is not a valid NANP (National Numbering Plan) address, the AC

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capability is not able to determine the status of this number and returns LTD to the user.

3.2.2 Automatic Recall

AR (Automatic Recall) is the LASS feature that returns the last outgoing call and camps on if that party is busy.

Assignment of an OHD trigger on a valid line with access to an AR feature affects the operation of the AR feature as follows:

- The OLHB (Outgoing Line History Block) is updated as normal with the dialed called party address when a call is placed, and is subject to existing LASS requirements pertaining to destination validation. If the number dialed results in the SCP which returns something that is invalid for AR or should not update the OLHB, the OLHB reflects this, even though the DN is not overwritten with the returned digits. For example, triggering to 911 does not update the OLHB; triggering to SSP800 updates the OLHB to invalid.
- When a line with AR and OHD activates the AR feature, the RDLS operation is performed using the DN in the OLHB without encountering the OHD trigger. If LASS determines that the entry in the OLHB is not a valid destination, LTD treatment is given. If the destination is valid, then AR places the call when it is determined that the station is idle, and the OHD trigger is encountered. The call is completed according to SCP instructions.
- When AR places a call, encounters an active OHD trigger, and then sends a Query, error detection and processing from that point is handled by ASP. ASP error treatment consistent with the error detected is given.
- If ASP completes a call to a Final Announcement as specified by the SCP instructions, AR considers the call successfully completed. AR billing and measurements for completion of the call applies.
- When the user invokes AR, if the DN in the OLHB is an active trigger in the user's dialing plan, LTD is returned to the user.

NOTE: OHD triggers are associated with the terminal, not the DN. So this statement does not apply to OHD triggers.

Access code triggers also cause LTD to be returned to the user.

AR Choking is performed based on the DN in the OLHB.

WARNING: 1:In order for AR to operate as expected, the SCP must not cause this call to be redirected to a DN different from the number in the OLHB. If the SCP changes the called party number, then the RDLS, performed on the contents of the OLHB, receives the status of and, if busy, camps onto a DN different from the one to which it was finally routed.

WARNING: 2:The Routing Number returned by the SCP is not used to update the OLHB. If the number in the OLHB is not a valid NANP address, AR is not able to determine the status of this number and returns LTD to the user.

3.2.3 Customer Originated Trace including 2-level Activation of COT

The COT (Customer Originated Trace) and 2-level COT features operate as usual as the COT capability when invoked on a line with access to the COT feature and with an OHD trigger assigned. The OHD trigger assigned is not encountered during COT processing nor does it have an impact on the operation of COT.

WARNING: 1:COT uses the last CPA information for the trace. The involvement of the AIN Switch capabilities on the call prior to the invocation of COT may have resulted in a CPA different than that of

the actual Call originator. COT operates on the information currently associated with the call and has no knowledge of any previous CPA information.

3.2.4 Analog Calling Name Delivery

The CNAM feature operates as the CNAM capability when it is invoked on a line with access to a CNAM feature and an with OHD trigger assigned. The OHD trigger is not encountered during CNAM processing nor does it have an impact on CNAM operation. The Calling Party Name is delivered or not, depending on privacy, and presentation indicators received with the calling party name.

- **WARNING:** 1:Note that involvement of AIN Switch capabilities on the call prior to the invocation of CNAM may have resulted in a Calling Party Address and/or Name different than that of the actual Call originator. CNAM operates on the information currently associated with the call and has no knowledge of any previous CPN or Name information.

3.2.5 Individual Calling Line Identification, Calling Number Delivery, Directory Number Privacy, All-Call Privacy, and Per-Call Privacy

The ICLID (Individual Calling Line Identification) features operate as previously when invoked on a line with access to ICLID features and with an OHD trigger assigned. The OHD trigger is not encountered during ICLID processing nor does it have an impact on ICLID operation.

- **WARNING:** 1:Note that involvement of AIN Switch capabilities on the call prior to the invocation of ICLID may have resulted in a Calling Party Address different than that of the actual Call originator. ICLID operates on the information currently associated with the call and has no knowledge of any previous CPN.

Privacy features invoked by the user are reflected in the Calling Party address parameter of the R0.1 Query, if the OHD trigger indicates R0.1 protocol. R0 protocol does not allow privacy indications in the OHD Query. This privacy is maintained in the Calling Party address information on the switch.

3.2.6 Unidentified Call Rejection

The UCR (Unidentified Call Rejection) feature operates as previously when invoked on a line with access to the UCR feature and with an OHD trigger assigned. The OHD trigger is not be encountered during UCR processing nor does it have an impact on UCR operation.

- **WARNING:** 1:Note that previous involvement of AIN Switch capabilities may have associated an SCP-supplied CPN value with the call. The SCP is able to specify the privacy and presentation indicators when supplying a CPN value. The UCR feature operates based on SCP-supplied information when an SCP-supplied privacy indicator is associated with the call.

3.2.7 Screen List Editing and Call Screening

Originating:

The SLE capability operates as the SLE capability when invoked on a valid line with access to a LASS Selective feature and with an OHD trigger assigned. The OHD trigger is not encountered during nor does it have an impact on validation of the screening list entries or the RTN (Remote Telephone Number) for SCA, SCF, and CAR.

Terminating:

SCA, CAR, and SCF can, when a call is screened, forward that call to the RTN. If the user has an ASP OHD trigger then the OHD query processing would be encountered on the forwarding number.

Without the LASS/OHD feature, screening is not allowed even though the screening list can be built via

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RC (for GA LSF features) for ASP OHD users. The call will not screen; incoming calls will terminate as if there is no screening list.

WARNING: 1:If the AIN Switch capabilities have associated an SCP-supplied number with the called or calling party, a customer may attempt to place an entry on the screening list which will cause call processing behavior which is not expected by the user. For example:

- The user may attempt to place the number in the ILHB which is not a valid address in the user's dialing plan on the list. SLE does not place this number on the list.
- The user may put an entry on the list which does not affect the delivery of the incoming call as intended. The user could put the NANP number of another party on the list, but the number delivered when a call is received from that other party could be modified by the SCP. The result, since the number on the list and the number actually delivered when the call attempts to terminate are different, would be that the call would fail screening and would not be given the expected screening treatment.

3.2.8 Selective Call Acceptance/Computer Access Restriction

Originating:

The SCA (Selective Call Acceptance) and CAR (Computer Access Restriction) features operates as SCA and CAR capabilities when invoked on a valid line with an access to an SCA or CAR feature and an OHD trigger assigned. The OHD trigger is not encountered during an SCA or CAR SLE session.

Terminating:

If the Calling Party Number associated with a call placed to an SCA/CAR user is not on the accepted list and the call is routed to the RTN, the OHD trigger is encountered for the redirected call if the trigger is active and the RTN does not specify escape.

3.2.9 Selective Call Forwarding

Originating:

The SCF (Selective Call Forwarding) feature operates as th SCF capability when invoked on a valid line with access to an SCF feature and with an OHD trigger assigned. The OHD trigger is not encountered during an SCF SLE session.

Terminating:

If the Calling Party Number associated with a call placed to an SCF user is on the forwarding list, the OHD trigger is encountered for the forwarded call if the trigger is active and the forward-to number does not specify escape.

3.2.10 Selective Call Rejection

Originating:

The SCR (Selective Call Rejection) feature operates as the SCR capability when invoked on a valid line with access to an SCR feature and with an OHD trigger assigned. The OHD trigger is not encountered during an SCR SLE session.

Terminating:

The OHD trigger is not encountered while providing rejection treatment.

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3.2.11 Selective Distinctive Alert

Originating:

The SDA (Selective Distinctive Alert) feature operates as the SDA capability when invoked on a valid line with access to an SDA feature and with an OHD trigger assigned. The OHD trigger is not encountered during an SDA SLE session.

Terminating:

The OHD trigger is not encountered while providing alerting treatment.

WARNING: 1:Previous involvement of AIN Switch capabilities may have associated an SCP-supplied distinctive alerting value with the call. For ASP 0.1B protocol, the SCP-specified alerting pattern is applied instead of what SDA would supply.

3.2.12 Account Codes

ACCT, AR and AC, and ASP OHD are not allowed to interact.

3.2.13 Network Management

ACG (Automatic Call Gapping) may be encountered when LASS places the call and encounters the OHD Query processing. ACG error treatment is applied.

3.3 Feature Assignment

The following shows how the LASS features, both GA (Generally Available) and Subscription, interact with ASP OHD users and the provisioning required. If access is denied, then standard BRCS error treatment for an unassigned feature is returned to the ASP OHD user attempting use of a LASS feature.

3.3.1 Subscription LASS features

RC (Recent Change) and ODA (Office Data Administration) allow any of the LASS features to be assigned on the same terminal with an ASP OHD trigger assigned (regardless of the active/inactive state of the feature or the trigger) if:

- the appropriate features have been unlocked.
- the terminal type is allowed.
- for AC and AR only: an ACCT (Account Codes) feature is not assigned to the terminal.

3.3.2 Generally Available LASS features

RC/ODA has no impact on GA (Generally) LASS feature usage for ASP OHD users.

Call Processing enforces the following rules for ASP OHD users:

- when an ASP OHD trigger is assigned, use of all of the LASS Selective Features are allowed if:
  - the appropriate features have been unlocked.
  - the terminal type is allowed.
- when an ASP OHD trigger is assigned, use of AC/AR is allowed if:

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- the appropriate features have been unlocked.
- the terminal type is allowed.
- the user does not have an ACCT feature assigned.

- use of COT, and ICLID (privacy features):
  - there are no restrictions on the use of the rest of the LASS GA features on terminals assigned an ASP OHD trigger.

3.3.3 Unidentified Call Rejection and All-Call Privacy

There are no restrictions on the use of UCR (Unidentified Call Rejection) or ACP (All-Call Privacy) on terminals assigned an ASP OHD trigger.

3.3.4 Advanced Intelligent Network and Local Area Signaling Services

There are no new views or fields on views for this feature. The only impact is that feature assignment of LASS features are not blocked for ASP OHD subscribers. Normal Line and DSL Assignment Views are used. All other restrictions related to assignment of features applicable to both LASS and ASP OHD triggers continue to apply.

The active/inactive status of the OHD trigger is not considered in deciding whether or not to allow a LASS feature to be assigned. It is important to understand some of the ramifications of the interactions between AIN and LASS features. All of the LASS features are affected if either the called or calling party address is modified anywhere in the call. This is true even without the LASS/OHD feature. Examples of possible impacts are described below:

- **Calling Party Number Overwrite**

  R0.1 allows the service logic in the SCP to change the CPA (the Calling Party Number and associated indicators such as privacy and uniqueness) associated with a call. Once the SCP has supplied a new CPA, all knowledge of the previous CPA value is lost. This may impact users of LASS features that deliver the CPN or Name or any of the LASS Selective features that screen on the CPN. These terminating features operate based on the CPA supplied by the SCP, and not on the true CPA associated with the originator of the call.

  Users with LASS Selective features are unable to selectively block or accept calls when the call's CPN has been changed by service logic, if they will have entered the expected caller's true CPN on their screening list.

  Another example is an attempt to use the AC feature which may prove unsuccessful if service logic has changed the CPN. If the SCP-supplied CPN is a valid NANP address, but is different from the true CPN of the caller, the AC attempt places a call to some other station than expected. If the SCP-supplied CPN is a Virtual DN, not a valid NANP address, the busy/idle status check which precedes the call may lead to unexpected behavior in other network elements (see discussion of Virtual Telephone Numbers).

- **Virtual Telephone Numbers**

  With AIN, the number which the caller dials and the actual routing number as determined by SCP

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service logic may be different. The OHD trigger requires that the number dialed by the caller be defined in the caller's dialing plan, but there is no requirement that the number be a valid NANP address. An example of a problem with this is the AR feature interaction. The OLHB associated with a call originator stores the last dialed number. It does not store the routing number supplied by the SCP. Thus if the dialed number is a virtual number, not a valid NANP number, an attempt to activate AR based on the last dialed number may lead to unexpected results. In particular, the switch may not have sufficient information to determine where to check the distant line status, and return LTD error treatment to the user. The user may be confused by this if the previous call completed to the expected terminating party. If the switch determines that the OLHB DN is interswitch, it sends an RDLS query into the network containing the virtual number dialed. Other network elements may determine that the number is not associated with an actual terminating station, and invoke error procedures.

- **Redirected Calls**

  AIN service logic may cause calls to be routed to a destination other than the one originally dialed. The AR OLHB stores the dialed digits rather than the SCP-supplied routing number.

  Because of this, an attempt to activate AR may lead to unexpected results. The RDLS check is performed on the station corresponding to the dialed digits, rather than the station to which the service logic will complete the call. When the OLHB station is idle, the AR call will occur. At this point the OHD trigger is encountered, and service logic may cause the call to be redirected elsewhere. The actual terminating station may be busy, despite the OLHB station being idle.

3.4 Translation Requirements

There are no new forms or new fields added for this feature.

SFSYS form (5713-1 Record) - This feature is a secured feature and must be purchased before being activated by setting the ACT field for SFID 137 to "Y" on the SFSYS form (5713-1 Record). Before activating this feature, the base 5E9.1 ASP Release 0.1B feature (for information on this feature, see Division 2, Section 4A126) must also be purchased and activated by setting the ACT field to "Y" for SFID 126 on the SFSYS form.

In order for OHD and LASS features to coexist on NI stations, the following features must be purchased and implemented via the SFSYS form:

- the base 5E9.1 ASP Release 0.1B feature must be activated by setting the ACT field to "Y"for SFID 126
- the ASP BRCS OHD Interworking feature must be activated by setting the ACT field to "Y" for SFID 137
- the ASP Interworking with NI and ISAT feature must be activated by setting the ACT field to "Y" for SFID 139.

4. GLOSSARY

AC	Automatic Callback
ACCT	Account Codes
ACP	All-Call Privacy

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AIN	Advanced Intelligent Network
AR	Automatic Recall
ASP	Advanced Services Platform
BCLID	Bulk Calling Line Identification
BRCS	Business and Residential
CAR	Computer Access Restriction
CF	Call Forwarding
CFBL	CF Busy Line
CFBLFB	CF Busy Line Feature Button
CFDA	Call Forwarding Don't Answer
CF Don't Answer	Call Forwarding Don't Answer
CFDAFB	CF Don't Answer Feature Button
CFV	Call Forwarding Variable
CFVFB	CFV Feature Button
CNAM	Analog Calling Name Delivery
CND	Calling Number Delivery
COT	Customer Originated Trace
CPA	Calling Party Address
DNP	Directory Number Privacy
ICLID	Individual Calling Line Identification
ILHB	Incoming Line History Block
LASS	Local Area Signaling Services
LTD	Long-Term Denial
NI	National ISDN
ODA	Office Data Administration
OHD	Off-hook Delay
OLHB	Outgoing Line History Block
PCP	Per-Call Privacy
RC	Recent Change
RDLS	Retrieve Distant Line Status
SCA	Selective Call Acceptance

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SCF	Selective Call Forwarding
SCP	Service Control Point
SCR	Selective Call Rejection
SDA	Selective Distinctive Alert
SLE	Screen List Editing
SSP	Service Switching Point
TN	Termination Notification
UCR	Unidentified Call Rejection

SEC. 4A138: VECTOR PROMPT ENHANCEMENT

1. BACKGROUND

Prior to the Vector Prompt Enhancement feature, a user could enter touch-tone input during the prompt step, but that data would not be delivered to the agent. If the agent needed to perform any retrieval action based on the customer input, he/she would ask the customer for that data again.

Often it is costly for customers to modify their existing data applications to accept data messages from a switch interface. As an alternative, data can be delivered to the telephone set of the CSR (Customer Service Representative) handling the call. From the telephone set display, the CSR can manually key the information into the data retrieval system. If an ISDN (Integrated Services Digital Network) telephone device is used, the displayed information can be used for automatic data retrieval.

The Vector Prompt Enhancement feature was developed to assist in this automatic data retrieval process.

2. FEATURE DESCRIPTION

The Vector Prompt Enhancement Feature is being deployed on the 5ESS Switch in a Software Update for the 5E9(1) and 5E9(2) Software Releases and in the Beginning Managed Introduction of 5E10 Software Release.

This feature is a secured feature, which is controlled by SFID (Secured Feature ID) 138 and is dependent on SFID 41, the EPIC (Enhanced Prompting for Incoming Calls) feature and SFID 123, the ACD/BRCS (Automatic Call Distribution/Business and Residential Custom Services) Agent Login feature. The feature number for Vector Prompt Enhancement is 99-5E-2285.

This document uses PINNACLE ACD as an example since it is the biggest user of this feature. It should be noted that this feature is not limited to just PINNACLE ACD.

The Vector Prompt Enhancement feature is provided on a per-switch basis to business customers using the PINNACLE ACD system. This feature provides a new capability for ACD/BRCS customers who use the Call Vectoring and EPIC features. When a user makes a call to an ACD/BRCS position, some additional information from that user may be needed in servicing the call. If a user is instructed to enter touch-tone data during the prompt step of a call vector, the Vector Prompt Enhancement feature provides the ability to display that data on the telephone set of the agent answering the call.

Sophisticated call handling applications require the use of an ISDN call center service provided by the 5ESS Switch subsystem, PINNACLE ACD. These call handling applications often involve a parallel application for data entry or for information retrieval processes. To provide maximum efficiency of a call center operation, it is desirable to automate and link these processes as much as possible.

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When a user enters touch-tone input during the prompt step of a call vector, the Vector Prompt Enhancement feature displays the data on the telephone set of the answering PINNACLE ACD subscriber. The Vector Prompt Enhancement feature will deliver up to 15 characters of the customer entered data for display on the ACD agent's telephone. If the telephone cannot display all 15 digits, the consequences are dependent on how that particular telephone handles it.

The subscriber to a PINNACLE ACD system is normally a business that utilizes the system's vector prompting features. The business has customers who when calling must input touch-tone responses to a set of menu commands before contact is established with a CSR (for example, a caller can be prompted to enter an account number using the touch-tone keypad on the telephone handset).

The Vector Prompt Enhancement feature displays important information about the caller on a CSR's ISDN telephone set during call alerting, while the call is being handled. The CSR can then act on this displayed information; for example, an insurance company representative can input a customer policy number (as displayed on the ISDN telephone set) into a data base and have policy holder information at hand while responding to the customer call.

Subscribers (CSRs) to the PINNACLE ACD service who log in to receive calls from the incoming call queue are eligible to receive Vector Prompt Enhancement displays. When calls which are allowed Vector Prompt Enhancement treatment are delivered to CSRs logged in on PINNACLE ACD, the collected digits appear on the telephone display. This feature does not interact with any other features on the switch outside the set of PINNACLE ACD features. The telephone display must be in Normal Mode to display any information sent by features. If it is in Miscellaneous Mode, as in the case of invoking the Directory feature, the display is not overwritten. An example of when the display will be overwritten is when both the Calling Name and Vector Prompt features are used. The collected digits will overwrite the calling name field of the display. If the CSR engages the telephone display for another purpose (such as electronic directory service), the digits will not be displayed until the display is released and made available for update by the switch.

PINNACLE ACD call center administrators (switch personnel) are responsible for activating the feature for each customer. MIS (Management Information System) is an adjunct system that administers ACD resources and interacts with Recent Change using modifiable data base definitions to provide management control of the PINNACLE ACD system.

In the Management Information System, call vectors including EPIC prompt steps, are defined by the call center administrator. MIS provides a user-friendly interface with pop-up choice lists to assist in these administrative tasks and includes the ability to select the subscriber telephone display as the delivery destination for the collected data.

Using PINNACLE ACD MIS administration procedures, switch personnel can:

- administer, activate and deactivate call vectors,
- administer the vector prompt enhancement selection on individual EPIC prompts,
- administer EPIC prompts and announcements.

The Vector Prompt Enhancement feature exists only for BRI (Basic Rate Interface) in the 5E9(1) and later Software Releases that include PINNACLE ACD.

This feature is not supported for

- Analog systems,
- National ISDN,

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- OSPS (Operator Services Position System) / ACD positions.

2.1 Call Scenarios

TYPICAL END-USER SCENARIO - Normal Operation between cable company call center with PINNACLE ACD and customer dialing from an analog telephone set (with touch-tone service) at home.

- The customer calls the call center using a 1-800 number to check on whether or not a Pay-Per-View concert will be activated for the customer's cable television service.
- The call is placed into the Customer Service call vector and queue based on the dialed number.
- The call vector contains an EPIC prompt step, which plays an announcement to the customer and asks for the subscriber number.
- The calling customer enters the DTMF (Dual Tone Multifrequency) digits: "122344".
- The call vector collects the digits and plays another announcement thanking the customer and asking him/her to wait for an available agent.
- The PINNACLE ACD selects the call from the head of the Customer service queue for delivery to an agent's telephone set. The longest waiting agent is selected to receive the call.
- The call is delivered to the telephone set of that agent. The telephone set has a display and when the call is delivered, the following is shown on the telephone display:
  CUST SRVC 122344 InI

  - ***NOTE:*** The digits "122344" will be displayed in the Calling Name Field. Absolute placement of the message will depend on the type and size of the agent's display unit.

- The agent is then able to use the customer's subscriber number to access the customer service records. The agent doesn't have to ask the customer for that information, thus saving time on the call.

TYPICAL END-USER SCENARIO - Abnormal Operation between the cable company call center with PINNACLE ACD and customer dialing from an analog telephone set (without touch-tone service) at home.

- Same as above, except for when the call is delivered to the telephone set of an agent. The telephone set display will show the following:
  CUST SRVC NO DATA SENT InI
- Since no data was sent, the agent knows that the calling customer was unable to enter a subscriber number into the system. The agent will then need to ask the customer for that information.

3. FEATURE ASSIGNMENT

This is a secured feature and is activated by setting the ACT field for SFID 138 on the SFSYS form (5713-1 Record) to "Y". In addition, since this feature is dependent on two other secured features the ACT fields for SFID 123 (ACD/BRCS Level 3) and SFID 41 (EPIC) must be set to "Y" respectively, on the SFSYS form (5713-1 Record).

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

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CVECT	5460	3	4BH	21.41

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 138, 123 and 41 to "Y".

CVECT form (5460 Record) - This form is used to define Call Vectoring steps that determine how an incoming call is to be treated while waiting for a CACD (Commercial Automatic Call Distributor) agent. The CMD CD field should be set to "PROMPT" and the field CARG1 must be set to "1".

SEC. 4A139: ASP INTERWORKING WITH NATIONAL ISDN AND CUSTOM ISDN ATTENDANT

1. BACKGROUND

A 3/6/10-digit or N11 trigger is a non-subscribed (office) trigger that is recognized whenever the telephone company designated digit string, that is defined in the ODP (Office Dialing Plan), is encountered by a line or trunk. This trigger, when encountered, suspends call processing after completion of digit analysis and attempts to query the SCP (Service Control Point) for further processing instructions.

Prior to this feature, NISDN (National ISDN) could not access ASP originating features. NISDN did have the ability to access both AIN (Advanced Intelligent Network) Release 0 and AIN Release 0.1 3/6/10/N11 triggers. Custom ISATs (ISDN Attendants) were not able to access ASP originating, ASP terminating, or 3/6/10/N11 triggers.

2. FEATURE DESCRIPTION

The ASP Interworking with NISDN and Custom ISAT (ISDN Attendant) is a secured feature using SFID (Secured Feature ID) 139 and must be purchased before being activated. The Lucent Technologies feature number for ASP Interworking with NISDN is 99-5E-2206. The Lucent Technologies feature number for ASP Interworking with Custom ISAT is 99-5E-2372.

99-5E-2206 for 5E9(1) and later:

Available with 5E9(1) and later, this feature provides National ISDN customers, including EKTS (Electronic Key-Telephone Service) users, and ISDN Attendants (with the exclusion of Off-Hook Delay (OHD) triggers) the ability to have ASP AIN Release 0.1 subscribed triggers.

99-5E-2846 for 5E9(1):

For 5E9(1), this feature gives ISATs access to 3/6/10 and N11 triggers. ASP AIN Release 0 is not supported on ISATs.

99-5E-2846 for 5E9(2) and later:

For 5E9(2) and later, ASP Interworking with Custom ISDN (feature number 99-5E-2846) expands the current release 0.1 Advance Service Platform Interworkings to include CISDN (Custom ISDN terminals and features.

- ***NOTE:*** With the introduction of ASP Interworking with Custom ISDN, the secured feature ID 139 name does not change. it is still called: ASP Interworking with National ISDN and ISAT.

Prior to 5E9(2), the ASP Release 0.1 call processing software interacts with Custom ISDN services by allowing CISDN originated calls to encounter Termination Attempt Triggers and office wide triggers like 3/6/10 and N11. However, release 0.1 ASP subscribed triggers were not currently available for CISDN and the Termination Attempt Trigger could not be assigned to a CISDN terminal. CISDN could have release 0.0 triggers assigned but NOT release 0.1 triggers.

This feature expands the interactions between ASP and CISDN by allowing CISDN terminals to have

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access to additional ASP capabilities in release 0.1. Also, this feature will provide necessary feature interactions between the switched-based CISDN features and the ASP release 0.1 trigger operations.

This feature applies for the 5ESS-2000 switch implementation of CISDN BRI (Basic Rate Interface) and AIN 0.1. The interactions between ASP and CISDN defined by this feature consists primarily of the following:

Allows the subscribed Originating ASP Release 0.1 Triggers to be assigned to DNs on CISDN BRI terminals. The ASP originating triggers include the following:

- Customized Dialing Plan (CDP) Triggers on Custom ISDN BRI terminals utilizing immediate, normal, or variable digit collection mechanism.
- Feature Code Dialing (FCD) Trigger on Custom ISDN BRI terminals utilizing immediate, normal, or variable digit collection mechanism. This trigger is also called the PODP FC (Public Office Dialing Plan Feature Code) trigger.
    - Allowing the subscribed Terminating ASP Triggers to be assigned to DNs on CISDN terminals. The ASP terminating trigger is the Termination Attempt Trigger.
    - Allowing ASP interactions of the previous mentioned triggers with CISDN switched-based features. In other words, everything on CISDN in terms of feature interactions with ASP should work the same as they do for analog.

The following capabilities are supported from Custom ISDN terminals:

- Allows ASP interactions with Custom ISDN switch based features.
- ASP capabilities are supported on Custom ISDN terminals. Any Call appearance on a Custom ISDN terminal will inherit the ASP originating feature assigned to the primary DN of the terminal. For ASP terminating features, the feature is supported only on the DN assigned the ASP terminating feature.
- ASP capabilities to interwork with the Shared DNs
- The SCP has the ability to activate/deactivate assigned triggers on Custom ISDN BRI terminals. For Shared DN this is limited to Originating triggers only.
- TATs on MLHGs (Multiline Hunt Groups)

The table in Figure 1 defines which originating line and trunk types can access the different 5E9(1) ASP triggers by AIN Release 0 and Release 0.1 protocols when the 5E9(1) ASP feature (SFID126) and NISDN/ISAT Interworking feature (SFID 139) are purchased.

For a more detailed discussion of ASP triggers, see 235-190-126, *5ESS Switch Advanced Services Platform, Release 0.1B.*

For a more detailed discussion of National ISDN, see 235-190-110, *5ESS Switch National ISDN*.

For a more detailed discussion of ISDN Attendants, see 533-700-200 and 533-700-210, *5ESS Switch Integrated Services Digital Network - Attendant Console Administration.*

2.1 Trigger Activation/Deactivation

For a more detailed discussion of trigger activation and deactivation refer to Division 2, Sections 4A51 and 4A126 in the TG-5 and 235-190-126, *5ESS Switch Advanced Services Platform, Release 0.1B*. The following applies to ASP AIN Release 0.1 triggers.

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2.1.1 NISDN

Trigger Activation/Deactivation for ASP Originating subscribed triggers applies to all call appearances on the NISDN terminal where the originating feature is assigned to the Primary DN. A request to update the status of a trigger to a non-shared Secondary-Only DN updates the status of the Primary DN. An update request to Shared Secondary-Only DN is denied with "unavailable resource" reported to the SCP (Service Control Point). Trigger Activation or Deactivation to a Shared Secondary DN only affects the status of the trigger where the DN is Primary.

For ASP Terminating Subscribed Triggers, Trigger Activation/Deactivation is only applicable to the Primary DN where the ASP Terminating Feature is assigned. Trigger Activation and Deactivation to Shared DNs, Secondary-Only DNs, or Shared Secondary-Only DNs will be denied with "unavailable resource" reported to the SCP.

TATs (Terminating Attempt Triggers) can be assigned to any member of an MLHG but can only be detected from a no-hunt DN. In addition, if a TAT is assigned to Member 1, calls to the Main DN of the MLHG will encounter the TAT trigger. A Trigger Activation/Deactivation request to the no-hunt DN is allowed. A request to update the status of the Individual DN will fail and "unavailable resource" is reported to the SCP. A Trigger Activation/Deactivation request for NISDN terminals for UCD, Circular, or Regular MLHG to the Main DN or Member 1 DN is supported.

2.1.2 Custom ISAT Attendant

5E9(1):

Trigger Activation and Deactivation on ISATs is applicable to the member DNs that have the ASP originating feature assigned. A request to update the status of a sub-TNS will be denied with "unavailable resource" reported to the SCP.

Trigger Activation/Deactivation to TATs assigned to ISATs are the same as described above for NISDN.

5E9(2) and later:

Please refer to Section 3.9.2 of the 235-190-126 document for a detailed discussion of Trigger Activation and Deactivation.

Trigger Activation/Deactivation for ASP Originating subscribed triggers applies to all call appearances on the Custom ISDN terminal where the originating feature is assigned to the Primary DN. A request to update the status of a trigger to a non-shared Secondary-Only DN updates the status of the Primary DN. An update request to Shared Secondary-Only DN is denied with "unavailable resource" reported to the Service Control Point (SCP). Trigger Activation or Deactivation to a Shared Secondary DN only affects the status of the trigger where the DN is Primary.

For ASP Terminating Subscribed Triggers, Trigger Activation/Deactivation is only applicable to the Primary DN where the ASP Terminating Feature is assigned. Trigger Activation and Deactivation to Shared DNs, Secondary-Only DNs, or Shared Secondary-Only DNs will be denied with "unavailable resource" reported to the SCP.

TATs can be assigned to any member of an MLHG but can only be detected from a no-hunt DN. In addition, if a TAT is assigned to Member 1, calls to the Main DN of the MLHG will encounter the TAT trigger. A Trigger Activation/Deactivation request to the no-hunt DN is allowed. A request to update the status of the Individual DN will fail and "unavailable resource" is reported to the SCP. A Trigger Activation/Deactivation request for Custom ISDN terminals for UCD, Circular, or Regular MLHG to the Main DN or Member 1 DN is supported.

Feature Interactions

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Feature Interactions for Custom ISDN are the same as analog, as applicable, as described in the 235-190-126 ASP feature document. Any changes to existing functionality is highlighted below.

CSV (Call Forwarding Modular Feature):

The CDP or FCD access code and digits may be included as a part of the forward to DN. Calls to the base station that forwards will encounter the ASP CDP or FCD trigger.

If a courtesy call is required in a Call Forward CORC (Customer OriginatedRecent Change) procedure, a CDP or FCD trigger is encountered prior to the courtesy call. If a courtesy call is not required, no query is sent.

A Custom ISDN originator may subscribe to a Release 0.1 ASP originating feature, with the exclusion of OHD, and the following Call Forwarding features.

- CFV (Call Forward Variable)
- CFVFB (Call Forward Variable Feature Button)
- CFBL (Call Forward Busy Line)
- CFDA (Call Forward Don't Answer)
- CFDAFB (Call Forward Don't Answer Feature Button)
- CFBLFB (Call Forward Busy Line Feature Button)

CSV (Call Waiting Modular Feature):

Call Waiting is not applicable to Custom ISDN.

Calling Party Number Presentation:

ASP Calling Party Number Overwrite displays a "private" number format (XXXXXXXXXX) when SCP does not return a 10 digit National Number. Custom ISDN will only format 10 digit National Numbers as NPA NXX-XXXX.

CUSTOM ISDN:

ASP originating features are terminal features and apply to all originations from any DN on the terminal.

ASP terminating features are DN features and apply to only DNs that have the feature assigned. TATs can not be assigned to Secondary-Only DNs.

A DN that has an ASP terminating feature assigned can have multiple call appearances. The ASP terminating feature applies to all appearances of the DN.

- Shared Call Appearance of a Directory Number
  - A Custom ISDN terminal can have multiple DNs which may each have a TAT assigned. The TAT trigger encountered is destined for a particular DN with the TAT assigned. A TAT can be associated with a DN that has call appearances that are shared by members of a Shared DN group. The triggering occurs before the call is offered to the group members.
- Bridged Call
  - A Shared DN subscriber can bridge onto an ASP call after the call has routed providing that Bridged Call Exclusion is not active on the call. A Shared DN user can bridge into an active call

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to another member of the group. Bridging into a call during an ASP announcement is not supported.

- Delayed and Abbreviated Ringing
  - A TAT assigned to a DN on an Shared DN does not have any affect on Delayed or Abbreviated Ringing assigned to the DN.
- Custom ISDN Hold
  - ASP calls originated using FCD or CDP triggers can be placed on HOLD and retrieved from HOLD. Calls that are made to Custom ISDN lines and encounter a TAT trigger can be placed on HOLD and retrieved from HOLD.
- Music On Hold
  - Music is provided to ASP calls held that encounter an ASP trigger
- Multiway
  - Any attempt to Conference or Transfer requests received during Digit Collection after a FCD or CDP trigger is encountered are ignored.
- Conference Calling
  - A Conference Invocation attempt for a call reference associated with a call that has encountered an ASP trigger is allowed.
  - A call connected to an ASP announcement, in the digit collection state, or in the process of ASP routing can not be placed on soft hold.
- Transfer
  - A transfer invocation attempt is allowed for a call reference associated with a call that encountered an ASP trigger.
  - A call connected to an ASP announcement, in the digit collection state, or in the process of ASP routing can not be placed on soft hold.
- Drop
  - A call that has encountered an ASP trigger may be dropped. A drop request received during ASP digit collection after a FCD or CDP trigger has been dialed is honored.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

SFSYS form (5713-1 Record) _ This feature is a secured feature and must be purchased. The feature is activated by setting the ACT field for SFID 139 to "Y" on the SFSYS form (5713-1 Record). Before activating this feature, the base 5E9.1 ASP Release 0.1B feature must be purchased and activated by

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setting the ACT field to "Y" for SFID 126 on the SFSYS form.

ASPFD form (5632-1 Record) - No new fields or enumerations were added. With this feature, lines or Multi-Line Hunt Groups may additionally have a CLASS OF SERVICE of "ISDN" and "ISATND" and access ASP AIN Release 0.1 subscribed triggers.

4. GLOSSARY

AIN	Advanced Intelligent Network
ASP	Advanced Services Platform
BRI	Basic Rate Interface
CDP	Custom Dialing Plan
CFBL	Call Forward Busy Line
CFBLFB	Call Forward Busy Line Feature Button
CFDA	Call Forward Don't Answer
CFDAFB	Call Forward Don't Answer Feature Button
CFV	Call Forward Variable
CFVFB	Call Forward Variable Feature Button
CISDN	Custom ISDN
CORC	Customer Originated Recent Change
CSV	Call Forwarding Modular Feature
EKTS	Electronic Key-Telephone Service
FCD	Feature Code Dialing
	ISDN Attendant
NISDN	National ISDN
ODP	Office Dialing Plan
PODP FC	Public Offering Dialing Plan Feature Code
SCP	Service Control Point
TAT	Terminating Attempt Trigger

ACCESS TO RELEASE 0/ 0.1 PROTOCOL TRIGGERS BY TYPE OF ORIGINATOR

ASP TRIGGER TYPE	TYPE OF ORIGINATOR						
	CUSTOM ISDN	ISAT	NATIONAL ISDN	NATIONAL ISDN	ANALOG	PF TRUNKS	PRI

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	0	0.1	0.1	0	0.1	0	0.1	0 & 0.1	0 & 0.1
CDP Access Code Unrestricted	Y	Y	Y	N	Y	Y	Y	Y	N
CDP Access Code Restricted	Y	Y	Y	N	Y	Y	Y	Y	N
Off-Hook Immediate	N	N	N	N	N	Y	Y	N	N
Off-Hook Delay	Y	N	N	N	Y	Y	Y	Y	Y
3/6/10	Y	Y	Y	Y	Y	Y	Y	Y	Y
N11	Y	Y	Y	Y	Y	Y	Y	Y	Y
Feature Code Dialing	Y	Y	Y	N	Y	Y	Y	N	N
ARS	Y	N	N	Y	N	Y	N	N	N
PRI	NA	NA	NA	NA	NA	NA	NA	NA	Y
BRI Feature Button	Y	N	N	N	N	NA	NA	NA	NA
Termination Attempt	NA	Y	Y	NA	Y	N	Y	N	N

Figure 1 ACCESS TO RELEASE 0/0.1 PROTOCOL TRIGGERS BY TYPE OF ORIGINATOR

SEC. 4A140: SWITCH-TO-CPE ANALOG OFF-HOOK FSK DATA INTERFACE

1. FEATURE DESCRIPTION

Switch-to-CPE (Customer Premises Equipment) Analog Off-Hook FSK (Frequency Shift Key) Data Interface is a secured feature using SFID (Secured Feature ID) 140 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-1580.

Available with 5E9(1) and later, this feature provides the signaling requirements for the switch transmission to CPE for analog FSK data interface. This feature is used as a signaling platform for various features that send data to a subscriber when that subscriber is off-hook. For example, the secured feature Caller Identity Delivery on Call Waiting delivers caller information via this signaling platform to compatible CPE.

This feature is a switch capability and is not assignable on a per-subscriber basis. The features developed to make use of this capability may be administered on a per-subscriber basis.

This feature requires a special CPE capable of recognizing the CAS (CPE Alerting Signal) tone, returning an acknowledgement to the switch and acting upon the subsequent data transmitted from the switch. The successful transport will carry the data transmitted from the switch and will result in information accepted, formatted and/or displayed by the CPE. An unsuccessful transport will result in the information not being accepted, formatted and/or displayed by the CPE.

2. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. This feature is a secured feature and is activated by setting the ACT field for SFID 140 to "Y" on the

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SFSYS form (5713-1 Record). This feature has an RTU (Right to Use) fee and is restricted until the purchaser has made the necessary financial arrangements with the AT&T Account Team.

SEC. 4A141: DUAL ESA FOR E911 ENHANCEMENTS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4A142: FLEXIBLE ANI ENHANCEMENT

1. BACKGROUND

ANI (Automatic Number Identification) causes the local switch to outpulse the identity of the originating station on a CAMA (Centralized Automatic Message Accounting), TSPS (Traffic Service Position System), E911, Operator Services System, IC (InterLATA Carrier), or INC (International Carrier) trunk. ANI information digits are 1- or 2-digit codes that precede the 7- or 10-digit DN (Directory Number) of the calling party. One digit ANI information digits are used when a call is routed on a CAMA, E911, or TSPS trunk. Two digit ANI information digits (also called II digits, or ANI pairs) are used for equal access, when routing a call to an InterLATA or International Carrier, or to an Operator Services System.

The purpose of the ANI information digits is to provide information about the calling party DN, which is then used for billing and/or routing purposes.

The Flexible ANI Enhancement feature allows the switch owner to assign ANI information digits based on screen indexes and to supply the ANI pairs to ICs that want to do their own billing. Flexible assignment applies only to 2-digit ANI information digits.

2. FEATURE DESCRIPTION

Available with 5E9(1) and later, the Flexible ANI Enhancement feature has feature number 99-5E-1337. It is a Secured Feature using SFID (Secured Feature ID) 142 and must be purchased to be activated. It is dependent on the Flexible ANI base feature (SFID 038), which must also be purchased and activated.

The Flexible ANI Enhancement feature provides the ability to send ANI II digits, associated with a screen index, on a per carrier basis. In particular, it allows the switch owner to:

- assign ANI II digits to a screen index, and
- control whether the ANI II digits will be sent to a carrier.

When more than one ANI pair applies to a call, only one pair is assigned according to the following precedence (highest to lowest):

- InterLATA Restricted ANI pairs (08, 68, 78)
- Hardcoded feature ANI pairs, e.g. SSP800, ASP
- Service-related Flexible ANI pairs associated with simulated facilities, e.g. OUTWATS, SDN
- Service-related Flexible ANI pairs associated with dedicated access facilities, e.g. dedicated access OUTWATS
- Screen Index-related ANI pairs (Flexible ANI Enhanced feature)
- Class of Service Flexible ANI pairs (Flexible ANI base feature)

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- Hardcoded Class of Service ANI pairs, ANI6, or ANI7, e.g. multiparty, coin.

This feature supports both line and trunk originations.

3. FEATURE ASSIGNMENT

To enable this feature, SFID 142 on the SFSYS form (5713-1 Record) must have ACT set to "Y"; and SFID 038 (the Flexible ANI base feature) must have ACT set to "Y".

In addition, ANI II digits must be associated with screen indexes on the SCRIDXPA form (5543 Record). Sending ANI II digits (associated with the screen index) to a carrier must be allowed in the SEND ANI II field on the ICF form (5305-1/2 Record).

See Figure 1 for a Flexible ANI Enhancement form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ICF	5305-1/2	3	3R	10.3
SCRIDXPA	5543	3	5AQ	8.24
SFSYS	5713-1	3	5AR	8.22

ICF form (5305-1/2 Record) - This form is used to define the characteristics of an IC (InterLATA Carrier).

The field SEND ANI II was added for this feature. This field determines if the ANI II digits associated with a screen index on the SCRIDXPA form will be sent on calls for the IC.

SCRIDXPA form (5543 Record) - This form is used to assign parameters to a line or trunk on a per screening index basis.

The field ANI II DIGITS was added for this feature. It associates the ANI digits with the screen index.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. Secured Feature ID 142 on the SFSYS form must have ACT set to "Y" to enable the Flexible ANI Enhancement feature.

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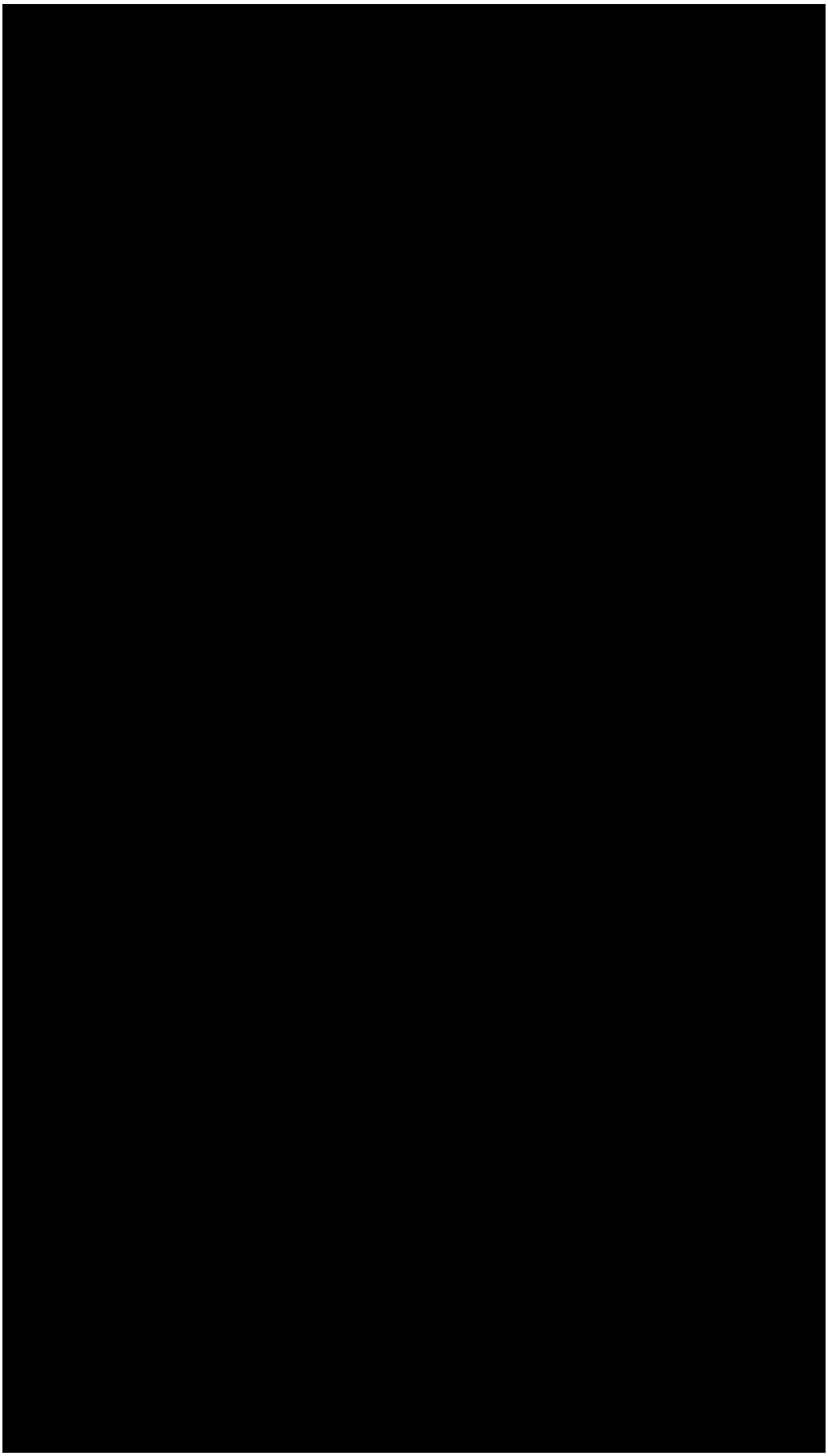

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Figure 1 FLEXIBLE ANI ENHANCEMENT FORM FLOW

SEC. 4A143: PINNACLE ACD E911

1. BACKGROUND

In the B911 (Basic 911) service, on the 5ESS-2000 Switch, all emergency calls originating within the B911 dialing plan are routed to the same PSAP (Public Safety Answering Point) regardless of incongruities between the central office service area and the municipal boundaries. The B911 service does not provide caller location information of the 911 caller.

The E911 (Enhanced 911) service provides caller location information and consists of E911 serving offices (5ESS-2000 switches), PSAPs, a E911 SR (Selective Routing System) and ALI (Automatic Location Identification) data base.

In the traditional E911 environment, emergency calls are routed to E911 tandem switches that in turn route the calls over CAMA (Centralized Automatic Message Accounting) facilities to an appropriate PSAP. These PSAPs provide the necessary trunk termination equipment to accept the calls. They also provide line interface equipment to deliver the calls to agent positions.

The ISDN PSAP feature allows the 5ESS-2000 Switch to route the E911 calls to an ISDN PSAP position over a BRI (Basic Rate Interface). This eliminates the need for trunk termination and line equipment at the PSAP location. These ISDN PSAPs could not be ACD (Automatic Call Distributor) positions. See Div. 2, Sec. 4A114 for information on the ISDN PSAP feature.

The Pinnacle ACD E911 feature utilizes many of the BRCS features that are allowed on ISDN PSAPs.

For information on E911 overall services, see Document 235-190-115 Section 9. Also refer to Section 5.59 for a description of the Pinnacle ACD ISDN PSAP feature.

The addition of Pinnacle ACD/BRCS (Automatic Call Distributor/Business and Residential Custom Services) features provides ACD capabilities at the PSAP location and the associated MIS (Management Information System) provides significant functional improvements for all PSAP ACDs in a geographic area.

2. FEATURE DESCRIPTION

The feature number for Pinnacle ACD E911 Special Feature is 99-5E-2207. This secured feature is available as a Software Update for 5E9(1) and 5E9(2) Software Releases and BMI (Beginning Managed Introduction) for 5E10. See Div.2, Sec. 4A121 for provisioning the basic ACD services.

This feature is a Call Processing secured special feature, which is controlled by Secured Feature ID 143. The Pinnacle ACD E911 special feature provides ISDN PSAP support for the 5ESS Switch ACD/BRCS feature. It provides the ability to specify an ACD DN (Directory Number) as a PSAP DN for a E911 call. The use of an ACD DN defined as a PSAP DN will provide the E911 caller with access to the queuing, call vectoring, delay treatment, and the most idle agent position call routing that is currently available for the Pinnacle ACD system. The Pinnacle ACD E911 special feature depends upon the following two features:

1. ACD/BRCS which was introduced in the 5E9(1) generic.

2. ISDN Public Safety Answering Point (PSAP) special feature.

Pinnacle ACD E911 provides the ability to assign an ACD Position as an ISDN PSAP. This capability allows incoming 911 dialed calls to be handled by an ACD (Automatic Call Distributor) which will enable customized treatment of the call. This "customized treatment" will provide more responsive service during wide spread emergencies. During peak incoming emergency calls to an office, this feature will provide for the queuing of calls for an available E911 position, call vectoring, delay treatment, and the selection of the most idle E911 agent position.

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This feature allows assignment of an ACD DN or a DAA (Direct Agent Access) DN to be designated as an ACD E911 PSAP DN. Calls terminating to this PSAP DN will be treated as emergency calls. There are two ways that "emergency" calls can be initiated:

1. The caller dials 911 - the switch first queries a database to get the ESN (Emergency Service Number), which will contain the Primary PSAP. The Primary PSAP is an ISDN PSAP with an ACD DN. The switch will terminate to an E911 agent serving the ACD DN.

2. The caller dials the ACD DN/DAA DN directly - the switch will terminate to an E911 agent serving the ACD DN/DAA DN.

2.1 Call Scenario

The following is a typical E911 call scenario:

1. A caller from an end office dials 911 to report a fire.

2. The call is routed to the E911 serving switch over a CAMA or SS7 trunk.

3. The E911 serving switch determines that the call is an E911 call and launches a query with the CESID (Customer Emergency Services ID) to the ESA (E911 Service Adjunct).

4. The ESA passes back the appropriate ESN (Emergency Service Number) based on the CESID.

5. The switch retrieves the routing data associated with the ESN (i.e., the Primary PSAP, a maximum of 2 alternate PSAPs, up to 6 selective transfer numbers, and a flash control indicator) and routes the call to the Primary PSAP. For this scenario, the Primary PSAP is an ISDN PSAP with an ACD DN.

6. The ACD attempts to find an agent to service the call, but there are no available agents. The call is queued and delay treatment is applied.

7. An agent becomes available and the call is routed to the available agent of the 911 Serving Team servicing that ACD DN and the CESID and the flash control information is passed along with the call.

8. The PC connected to the receiving agent's phone launches a query to the ALI/DMS (Automatic Location Identification/Database Management System) data base with the CESID.

9. The ALI/DMS system returns location information that the PC displays on the screen for the agent to use, to interrogate the caller. (If the flash control information is indicated, the CESID will be flashed on the screen.)

10. Once the agent determines that the caller is reporting a fire, the attendant (E911 agent) presses the selective transfer function key for fire.

11. The switch uses the selective transfer number for fire associated with the caller's ESN and sets up a 3-way call between that number and the "911 caller". The CESID of the "911 caller" is passed to the fire department PSAP rather than the number of the PSAP initiating the transfer. The ESN data associated with the caller is also passed to the fire department PSAP.

12. When the fire department answers, the transferring PSAP may disconnect to complete the transfer.

13. If the fire department is another ISDN or CAMA PSAP, it can do another ALI/DMS look-up to get the caller's location.

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2.2 Feature Interaction

The Pinnacle ACD E911 special feature interacts with the existing BRCS features the same way that the ACD/BRCS base feature and the ISDN PSAP special feature does, with the following exceptions:

1. Both the assigned and default TGSR (Terminal Group Station Restriction) features required by this feature must be fully unrestricted. The ACD/BRCS base feature allows any type of restriction and the ISDN PSAP special feature does not allow TGSR at all.

2. The ACD Position DN that is assigned as an ACD E911 PSAP cannot be a shared DN. The ACD/BRCS base feature does not allow the position DN to be shared, however, the ISDN PSAP special feature does allow the primary DN to be shared.

3. The ACD Position DN that is assigned as an ACD E911 PSAP cannot be a member of a multi-line hunt group. The ACD/BRCS base feature does not allow this. The ISDN PSAP special feature does allow the assignment of the DN to a MLHG.

2.3 Allowed and Blocked BRCS Features

The following lists the BRCS features which are allowed or blocked for the Pinnacle ACD E911 special feature.

BRCS FEATURE	STATUS
Account Codes	blocked
Attendant Control of Voice Terminals	blocked
Authorization Codes	blocked
Automatic Callback	allowed
Automatic Call Back Calling	allowed
Automatic Customer Station Rearrangement	blocked
Automatic Recall	allowed
Automatic Route Selection	blocked
Advanced Services Platform	blocked
Call Forwarding	allowed
Call Park	blocked, for 5E12 and later this feature is allowed for direct dialed calls only.
Call Forwarding over Private Facilities	blocked
Call Pickup	blocked
Call Waiting	allowed
Call Originated Trace	allowed
Distinctive Ringing	allowed
Electronic Desk Service	allowed
Individualized Dialing Plan	allowed
ISDN Intercom	blocked
Message Detail Recording	blocked
Modem Pooling	blocked
Message Service System	blocked
Multi-Line Hunt Group	blocked
Multiway	allowed
Precedence and Preemption	blocked
Private Facilities Access	blocked
LASS Selective features (SCA, SCF, SCR, SDA)	allowed
Speed Calling	allowed
Series Completion	blocked
Shared DN	blocked
Terminal Group Station Restriction	allowed
Time of Day	blocked

3. FEATURE ASSIGNMENT

The Pinnacle ACD E911 special feature is provisioned as follows (See Figure 1):

1. On the SFSYS form. Verify that the ACD/BRCS base feature is active and that all three levels of security have been turned on (Secured Feature IDs (ACD/BRCS DN Provisioning) 121, (ACD/BRCS Position Provisioning) 122, and (ACD/BRCS Agent Login) 123).

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2. On the SFSYS form. Verify that the ISDN PSAP special feature is active (Secured Feature ID 114).

3. Turn on the Pinnacle ACD E911 special feature. On the SFSYS form set SFID 143 ACT to "Y".

4. For 5E9(2) and 5E10, on the STINFO form, assign a serving team as an E911 PSAP by setting the E911 PSAP field to "Y".

   For 5E11 and later, on the STPARM form, assign a serving team as an E911 PSAP by setting the E911 PSAP field to "Y".

5. For 5E9(2) and 5E10, on the OSPSCT form, assign any call type queues that will be used by ACD E911 PSAP DNs. The serving teams for these call types must be marked as E911 PSAPs via the STINFO form.

   For 5E11 and later, use the CQPARM form. Assign any call type queues that will be used by ACD E911 PSAP DNs. The serving teams for these call types must be marked as E911 PSAPs via the STPARM form.

6. On the ACDTN form, assign an ACD DN or a DAA DN to be an E911 PSAP DN. The E911 PSAP field should be set to "Y".

7. On the DSLUSR form, assign an ACD Position to be an ACD E911 Position. The E911 PSAP field should be set to "Y". The "POS NUM" field must be non-zero for this ISDN position to be an ACD Position.

NOTE: If a serving team is updated to become an E911 PSAP (refer to step four), all call type queues using this serving team must be assigned to an ACD DN/DAA DN that is marked as an E911 PSAP.

If a serving team is not marked as an E911 PSAP, all call type queues using this serving team must not be assigned to an ACD DN/DAA DN that is marked as an E911 PSAP.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDTN	5631-1	4	32A	4.15 (5E10) 6.10 (5E11 and later
DSLUSR	5908	5	1I	23.8
SFSYS	5713-1	3	5AR	8.22
STINFO (for 5E9(2) and 5E10)	5402	3	4C	21.2
STPARM	5638	4	32C	6.1

ACDTN form (5631-1 Record) - The 5631-1 Record is used by the ACD/BRCS (Automatic Call Distributor/Business and Residential Custom Services) feature to define the ACD directory number or the DAA (Direct Agent Access) directory number.

The E911 PSAP field was added.

DSLUSR form (5908 Record) - The 5908 Record is used to collect data for digital subscriber lines.

Added Data Rule to the E911 PSAP field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 143 to "Y".

STINFO form (5402 Record) - The 5402 Record provides information about a serving team. A serving

team is a group of operator positions that services one or more call types.

The E911 PSAP field was added and applies to 5E9(2) and 5E10. For 5E11 and later the E911 PSAP field is located on the STPARM form.

STPARM form (5638 Record) - The 5638 Record provides information about a serving team. A serving team is a group of agent positions that service one or more call queues. This form supports the ACD/BRCS Interworking II feature.

For 5E11 and later the E911 PSAP field provides the functionality formerly provided by the E911 PSAP field on the STINFO form.

5. GLOSSARY

ACD	Automatic Call Distributor
ALI/DMS	Automatic Location Identification/Database Management System
B911	Basic 911
BMI	Beginning Managed Introduction
BRCS	Business and Residential Custom Services
CAMA	Centralized Automatic Message Accounting
CESID	Customer Emergency Services ID
DAA	Direct Agent Access
DN	Directory Number
E911	Enhanced 911
ESA	E911 Service Adjunct
ESN	Emergency Service Number
ISDN	Integrated Services Digital Network
MIS	Management Information System
PSAP	Pubic Safety Answering Point
TGSR	Terminal Group Station Restriction

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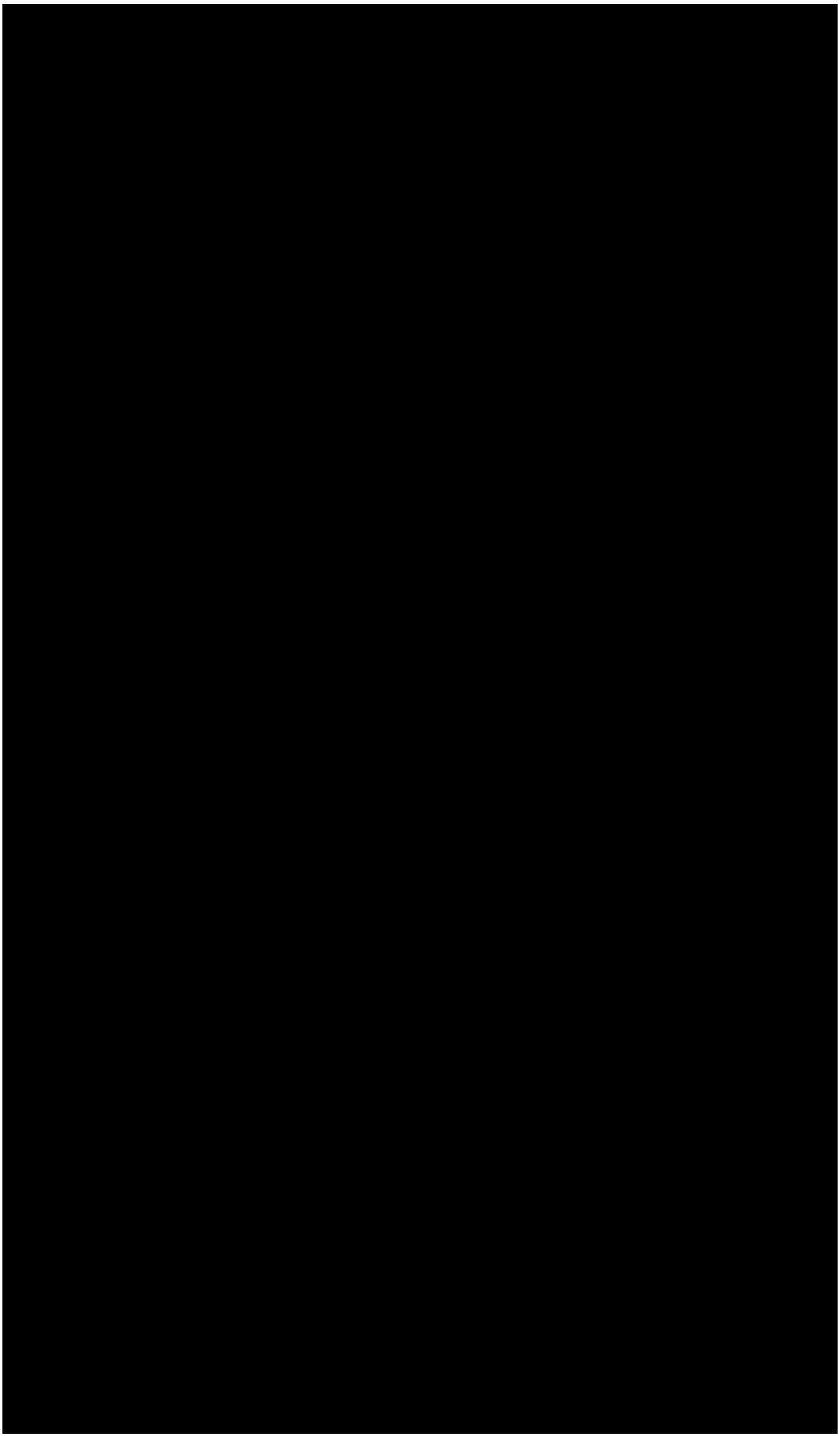

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Figure 1 FORM FLOW PINNACLE ACD E911

SEC. 4A144: DUAL CIRCUIT FX (FOREIGN EXCHANGE) PLUGS

1. BACKGROUND

Prior to this feature, the 5ESS Switch's Remote Terminal DCLU and IDCU software assumed that the FX (Foreign Exchange) plugs were of single circuit design. Therefore, provisioning of the adjacent "even numbered" FX circuits was denied. This feature removes this restriction currently imposed by the DCLU's and IDCU's TR-008 Mode I Interfaces. This feature is not supported for Mode II interfaces. Since all capabilities to originate and terminate calls will be maintained, this feature will be transparent to the end users of the Dual Circuit FXS Plugs.

2. FEATURE DESCRIPTION

The feature number for Dual Circuit FX (Foreign Exchange) Plugs Special Feature is 99-5E-2299. This secured feature is available for 5E9(1) and later.

This feature provides a new integrated 5ESS Switch access capability for the DCLU's and IDCU's TR-008 Mode I Interfaces which allows them to terminate, provision, and maintain SLC-96 compatible Dual Circuit FXS Plugs. Both loop start and ground start signaling will be supported.

For the 5E9(1) 5ESS Switch Software Release, the character string "SF1" will be used to identify the Dual Circuit FXS Plug. Therefore, when provisioning a Dual Circuit FXS Plug, the Channel Unit type will be "SF1". In 5E9(2) and later Switch Software Releases, the character string "DFXS" will be used to identify the Dual Circuit FXS Plug.

3. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 144 is set to "Y" on the SFSYS form.

When the feature has been enabled, Dual Circuit FXS Plugs can be provisioned on the RTERM form (5174 Record) if IDCU is provided or on the SLCCU form (5107 Record) if IDCU is not provided. On either of these forms the CHANNEL UNIT field is set to "SF1" for 5E9(1) or "DFXS" for 5E9(2) and later.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
RTERM	5174	3	1S	18.15
SLCCU	5107	3	1G	18.11

RTERM form (5174 -1/2/3/4 Record) - This form is used by the switch owner to define all remote terminals connected to IDCU (Integrated Digital Carrier Unit) equipment. Channel Unit types "SF1" for 5E9(1), and "DFXS" for 5E9(2) and later are added to support this feature.

SLCCU form (5107 Record) - This form is used to define the assignment of SLC (Subscriber Loop Carrier) - 96 Channel Units to equipped shelves of a Integrated SLC-96 Remote Terminal. Channel Unit types "SF1" for 5E9(1), and "DFXS" for 5E9(2) and later are added to support this feature.

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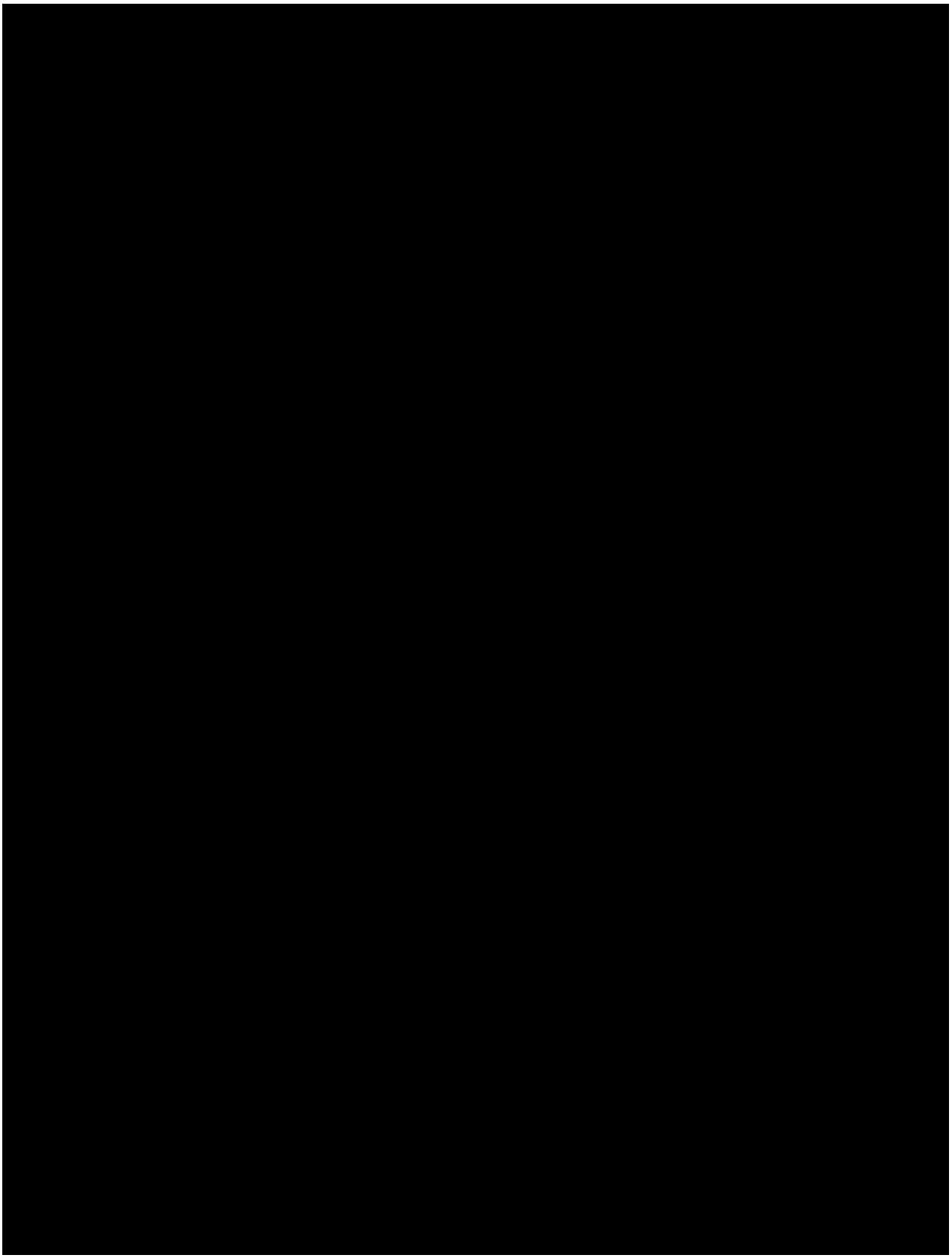

Figure 1 FORM FLOW DUAL CIRCUIT FX (FORIEGN EXCHANGE) PLUGS CAPABILITIES

SEC. 4A145: CALL WAITING DELUXE PHASE I AND II

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1. BACKGROUND

The Call Waiting Deluxe feature was separated into two phases. The Call Waiting Deluxe Phase I was deployed on the 5ESS Switch in a software update for the 5E9(1), 5E9(2) 5ESS Switch Software Releases and 5E10 in the BMI (Beginning Managed Introduction) Software Release. Call Waiting Deluxe Phase II is being deployed on the 5ESS Switch in a software update for 5E10 and 5E11 in the BMI Software Release.

2. FEATURE DESCRIPTION - CALL WAITING DELUXE PHASE I

The CWD (Call Waiting Deluxe) Phase I is a secured feature using SFID (Secured Feature ID) 145 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-2354.

Available with 5E9(1), 5E9(2), and 5E10, this feature allows an end-user to control the treatment applied to incoming calls while the end-user is already off-hook on a stable call. While the end-user is on an existing call, CWD notifies the end-user of an incoming call by sending Call Waiting Tone and immediately follows that with a CAS (CPE (Customer Premise Equipment) Alerting Signal) dual tone to notify the end-user's CPE of an incoming call. If the end-user has CIDCW (Calling Identity Delivery on Call Waiting) (Feature Number is 99-5E-1106) the CID (Calling ID) data may be provided to the customer immediately following CWD alerting and the ACK (Acknowledge) response from the CPE.

Upon being alerted of a second call, the CPE displays the menu for the CWD options and the customer may choose one of the following CWD options for treating the incoming call:

- ANSWER the waiting call and put the existing call on hold
- ANSWER the waiting call and DROP the existing talking connection,
- FORWARD the waiting call to the CFDA (Call Forwarding Don't Answer) destination
- Connect the waiting call to an ANNOUNCEMENT (i.e., suggesting the caller waiting call back later)
- Put the waiting call on HOLD connected to a hold announcement (i.e., asking the waiting calling party to wait) or
- CONFERENCE the waiting call with the existing call.

The above choices (for the CWD subscriber) are called "per-call options," and require the subscriber to take an action to notify the switch which option is desired.

If the end-user does not select one of the above treatments for the incoming call, the end-user's default treatment is applied. The default treatment is chosen by the CWD customer when he/she initially subscribes to the CWD service. The possible default treatments include:

- "forward" the incoming call to the CFDA destination,
- "continue ringing" continues to provide audible ringing to the incoming call. (If the CWD subscriber has this default, the subscriber can still select the CWD options).

The above choices which are available to the CWD subscriber are called "default treatment," and take effect if the subscriber does not take action to notify the switch which option is desired. In this case the treatment option is provided by the switch. The "default option" takes effect after the CFDA timer times out.

The "forward" default option is supported if the CFDA feature with the CFDA/CW (Call Forwarding after Call Waiting option) is assigned and active. If the CFDA feature with the Call Forwarding after Call Waiting option is not assigned, or is assigned but is inactive, the "continue ringing" default option is executed.

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Once the customer has put either the incoming call or the existing call on hold, CWD provides the customer with the following additional per-call options:

- Alternate between the held party and existing call (RETURN),
- Connect to the held call and disconnect the existing call (DROP),
- Conference the held call and the existing call (CONFERENCE).

If the customer conferences the calls, CWD per-call options allows the customer to:

- disconnect the last added party (DROP LAST) from the conference call at any time. The last added party was the waiting party during the WAIT state.
- disconnect the first party (DROP FIRST) from the conference call at any time. The first party was the party in the talking connection during the WAIT state.

The end-user is required to have a special screen based ADSI (Analog Service Display Interface) to receive the full functionality of the CWD feature. However, subscribers who have a CIDCW set or a standard 2500 sets can also subscribe to this feature. If the set is a CWD ADSI compatible set or a CIDCW set, it responds with an ACK signal consisting of a DTMF A or a DTMF D, respectively. Even though the line might be given SAS (Subscriber Alerting Signal) + CAS (CPE Alerting Signal) alerting, a 2500 extension set on the line may have been used for the original two-party call, so an ACK is not guaranteed. The path is muted during the SAS + CAS alerting. If an ACK (Acknlwledge) is received within the allotted time, FSK (Frequency Shift Keying) data is sent to the CPE. After the FSK data is sent, the switch reconnects the CWD subscriber to the original party, and the waiting party is getting audible ringing. See Figure 3.

Call Waiting Deluxe is an ADSI based feature and does not require the development of the ADSI signaling protocol on the switch. It is considered an ADSI feature because:

- the subscriber should use an ADSI compatible CPE to take full advantage of the feature functionality
- the CPE needs to be initialized after being plugged into the wall telephone socket if an ADSI CPE is used.

Initialization is accomplished by downloading, via ADSI signaling techniques, firmware scripts which execute in the CPE. The scripts provide the menu displays and interpret the soft-keys as specific DTMF signals to be sent to the switch. The ADSI scripts are obtained from an ADSI server. The switch is not an ADSI server and does not itself provide scripts to the CPE. See Figure 2.

2.1 Preconstructed CWD Phase I Features

The CWD feature adds ten new preconstructed CWD features to the CWTFD (Call Waiting Feature Definition) form with the CW DELUXE field set to "Y".

The new preconstructed CWD features are:

- /CWDTDT2
- /CWDTDT1
- /CWDT
- /CWDIODT

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- /CWDIO
- /CWDC2DT
- /CWDC2
- /CWDCDT2
- /CWDCDT1
- /CWDC1

These new preconstructed CWD features are defined in the 5603-1 Record for the CWTFD form.

The mapping of the current Call Waiting Terminating features to the new Call Waiting Deluxe features is shown in Figure 1.

The switch provides the capability to request on demand and receive the following information on a per line basis:

- If CWD is assigned, which CWD preconstructed feature is assigned
- If CIDCW is assigned to the line
- If CFDA is assigned to the line
- If the CFDA/CW option of CFDA is assigned to the line
- If Call Waiting Distinctive Tones on Long Distance is assigned to the line.

The CWD feature is not dependent on the CIDCW feature. However, if the CWD subscriber also subscribes to the CIDCW feature, Caller ID information is provided to the customer in the off-hook state in conjunction with the CWD feature. For the Caller ID information to be delivered to the subscriber, the CIDCW feature must also be assigned to the CWD subscriber's line.

For the CONFERENCE option, the switch internally understands that a multiway feature is required and automatically incorporates one in the feature operation. Thus, no external assignment of a multiway feature is required.

2.2 CW Deluxe Phase I Restrictions

- If a customer has a call in the hard hold state (i.e. on hold because Call Hold was activated), the CWD feature is not invoked.
- The switch does not invoke CWD on a line engaged in a stable two-party connection if the Cancel Call Waiting feature has been invoked for the call.
- The switch does not invoke the CWD feature on a CWD customer's line during a TWC (Three Way Calling) session that was initiated by the CWD customer. The switch does not allow the TWC feature to be used from a CWD customer's line if the customer has a CWD session active.
- The switch does not allow Call Transfer to be activated from a CWD customer's line when that line has a CWD session active. CWD does not restrict far-end parties from using their Call Transfer features. Even though the line has subscribed to CWD, the switch does not invoke the CWD feature on a customer's line during a Call Transfer session that was initiated by the CWD customer.
- The CIDCW CPE set is not fully supported in Phase I. The T_flash option is not supported, requiring

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the CWD subscriber using a CIDCW set to signal the DTMF digit in the HOLD state within the time out interval of T_tone. Also, the telephone company will not be able to restrict non-ADSI sets from using the per-call options.

- Regardless of any additional flash features assigned to the line, all flashes are interpreted as requests for CWD options during CWD sessions.
- The 2500 set is not fully supported in Phase I. All lines, including those with 2500 sets, receive SAS + CAS tone in Phase I. Thus the CWD subscriber using a 2500 set is required to wait for the switch to time-out waiting for the ACK before being reconnected to the original party. Furthermore, the T_flash option is not supported. The telephone company is also not able to restrict non-ADSI sets from using the per-call options.
- The CWD feature only applies to analog lines. It does NOT apply to ISDN lines. The switch does not allow CWD to be assigned on:
  - ISDN lines,
  - multiline hunt group lines,
  - lines with remote call forwarding,
  - coin lines,
  - four-wire classes of service,
  - attendant lines,
  - shared DN Analog,
  - LTSB (Line Time Slot Bridging) lines,
  - two-party lines or
  - multiparty lines (i.e., four-party and eight-party lines).

3. CW DELUXE PHASE I SCENARIOS

The following are typical end-user normal operation scenarios:

3.1 Scenario #1 Participants:

- Subscriber A, with /CWDT /LIRCNMP features.
- Party B and Party C can be POTS lines.

3.1.1 CPE:

- The only CPE which is important to identify (because CWD is a terminating feature) is the CPE associated with Subscriber A. Subscriber A's line has ADSI CPE.

3.1.2 Translation:

- CWD must be purchased and enabled on the switch for this scenario to operate. Additionally, the subscriber must be assigned one of the CWD features. See Figure 1. Call Scenario:

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- Subscriber A's line is initially idle.
- Party B then dials Subscriber A's telephone number and receives audible ringing.
- Subscriber A's telephone rings; sees party B's Name and Number displayed on the CPE and answers the call.
- Subscriber A and Party B are engaged in conversation when Party C dials Subscriber A's telephone number and receives audible ringing.
- The talking path between Party B and Subscriber A is muted and Subscriber A hears call waiting tone followed by a very short duration high frequency tone which alerts Subscriber A's CPE.
- Party A's CPE displays the CWD per-call options before Subscriber A receives a second call waiting tone.
- Subscriber A can now select any of the CWD per-call options to handle the incoming. For example, Subscriber A selects the HOLD option. Party C gets routed to the HOLD announcement (since flash is not honored during the setup of the call, the subscriber should allow sufficient time for routing and set up of the hold announcement before selecting another option again.) and hears silence after the announcement finished playing.

At this point Party A can FLASH to answer Party C or select the CONFERENCE option to conference the call or DROP the call.

3.2 Scenario #2 Participants:

- Subscriber A, with /CWDT /LIRCNMP features with CIDCW feature.
- Party B and Party C can be POTS lines.

3.2.1 CPE:

- The only CPE which is important to identify (because CWD is a terminating feature) is the CPE associated with Subscriber A. Subscriber A's line has ADSI CPE.

3.2.2 Translation:

- CWD must be purchased and enabled on the switch for this scenario to operate. Additionally, the subscriber must be assigned one of the CWD features. See Figure 1.

3.2.3 Call Scenario:

- Subscriber A's line is initially idle.
- Party B then dials Subscriber A's telephone number and receives audible ringing.
- Subscriber A's telephone rings
- Party B's Caller ID information (Name and Number) is displayed
- Subscriber A views Party B's information and answers the call.
- Subscriber A and Party B are engaged in conversation when Party C dials Subscriber A's telephone

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number and receives audible ringing.

- The talking path between Party B and Subscriber A is muted and Subscriber A hears call waiting tone followed by a very short duration high frequency tone which alerts Subscriber A's CPE.
- Subscriber A now views Party C's Caller ID information on on the CPE along with the CWD per-call options before Subscriber A's telephone rings the second time.
- Subscriber A can now select any of the CWD per-call options to handle the incoming call. For example, Subscriber A selects the FORWARD option. Party C gets forwarded to the Forward-to-DN destination. Party A and B continue to converse.

3.3 Scenario #3 Participants:

- Subscriber A, with /CWDT /LIRCNMP features.
- Party B and Party C can be POTS lines.

3.3.1 CPE:

- The only CPE which is important to identify (because CWD is a terminating feature) is the CPE associated with Subscriber A. Subscriber A's line has ADSI CPE.

3.3.2 Translation:

- CWD must be purchased and enabled on the switch for this scenario to operate. Additionally, the subscriber must be assigned one of the CWD features.

3.3.3 Call Scenario:

- Subscriber A's line is initially idle.
- Party B then dials Subscriber A's telephone number and receives audible ringing.
- Subscriber A's telephone rings; sees party B's Name and Number displayed on the CPE and answers the call.
- Subscriber A and Party B are engaged in conversation when Party C dials Subscriber A's telephone number and receives audible ringing.
- The talking path between Party B and Subscriber A is muted and Subscriber A hears call waiting tone followed by a very short duration high frequency tone which alerts Subscriber A's CPE.
- Party A's CPE displays the CWD per-call options before Subscriber A receives a second call waiting tone.
- Subscriber A can now select any of the CWD per-call options to handle the incoming. For example, Subscriber A selects the ANSWER option and answers Party C's call. Part A and Party C are talking and Party B is on hold. Now, Subscriber A's CPE displays a new menu (FLASH, CONFERENCE and DROP) options. Party B goes on-hook. Party A and C are in a 2-way talk path. However, the CPE's screen stays the same. This results in the switch and the CPE getting out of synchronization. Now, if Party A presses one of the softkeys, it is interpreted wrong.

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4. CW DELUXE PHASE I FEATURE ASSIGNMENT

4.1 Provisioning Features on the Switch

This feature is a secured feature. The ACT field for SFID 145 on the SFSYS form (5713-1 Record) must be set to "Y" to activate this feature. In addition, the secured feature Switch-to-CPE Analog Off-Hook FSK Data Interface feature must be active for the CWD feature. Therefore, the ACT field for SFID 140 must be set to "Y" on the SFSYS form. For more information on the Switch-to-CPE Analog Off-Hook FSK Data Interface feature, see Division 2, Section 4A140.

To provision features on the switch:

- If call forwarding optons of CWD are desired, CFDA (Call Forwarding Don't Answer with the CF/CW (Call forwarding Don't Answer after Call Waiting options secured feature must be active. The ACT field for SFID 62 must be set to "Y" on the SFSYS form. For more information, see Division 2, Section 4A62.

- If calling number delivery is desired with CWD, CND (Calling Number Delivery, also known as ICLID (Incoming Call Line Identification)) special feature must be active. The ACT field for OFS ID 10 must be set to "Y" on the FOSYS form (5713-2 Record). For more information, see Division 2, Section 4C10.

- If calling name delivery is desired with CWD, CNAM (Analog Calling Name Delivery) secured feature must be active. The ACT field for SFID 40 must be set to "Y" on the SFSYS form. For more information, see Division 2, Section 4A40.

- If calling number delivery and/or calling name delivery is desired with CWD, CIDCW (Calling Identity Delivery on Call Waiting secured feature must be active. The ACT field for SFID 133 must be set to "Y" on the SFSYS form. For more information, see Division 2, Section 4A133.

- The secured feature Switch-to-CPE Analog Off-Hook FSK Data Interface feature must be active for CWD (as well as, the CIDCW feature, if present). The ACT field for SFID 140 must be set to "Y" on the SFSYS form. For more information, see Division 2, Section 4A140.

- The CWD secured feature must be active. The ACT field for SFID 145 must be set to "Y" on the SFSYS form.

4.2 Provisioning the Announcements

- Route indexes for two announcements must be provisioned (Require 13A or 14A announcements).
  - Per-call ANNOUNCEMENT.
  - Per-call HOLD announcement.

4.3 Provisioning CWD on Lines

To provision CWD on lines:

- Determine the subscriber's default option
  - If the subscriber wants forwarding as the default option, provision the CFDA (Call Forwarding Don't Answer) secured feature with the CF/CW (Call forwarding Don't Answer after Call Waiting) option.

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- If the subscriber wants the continue ringing as the default option, verify that the subscriber has the CFDA secured feature with CF/CW option set to "N".

- On the 5ESS Switch, choose which of the new Call Waiting Deluxe preconstructed features in Figure 1 to provide to the subscriber.

5. CW DELUXE PHASE I TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CWTFD	5603-1	4	4A	12.15
SFSYS	5713-1	3	5AR	8.22

CWTFD form (5603-1 Record) - This form is used to define a number of separate features by selecting various feature options for Call Waiting. The CW DELUXE field was added to support the Call Waiting Deluxe feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is a secured feature and is activated by setting the ACT field for SFID 145 to "Y" on the SFSYS form (5713-1 Record).

In addition, before this feature can be activated, the secured feature Switch-to-CPE Analog Off-Hook FSK Data Interface must be purchased and enabled. This feature is activated by setting the ACT field for SFID 140 to "Y" on the SFSYS form. For more information on this feature see Division 2, Section 4A140.

6. FEATURE DESCRIPTION - CALL WAITING DELUXE PHASE II

The CWD (Call Waiting Deluxe) Phase II is a secured feature using (SFID 145) and must be purchased before being activated. The feature number for this feature is 99-5E-2354.A. Call Waiting Deluxe Phase II is available for 5E10 and later.

The CWD feature should be viewed as a single feature, two versions of CWD are NOT supported. Now that Phase II is available in a generic, Phase I is no longer supported in that vintage of the generic.

CWD is a feature that allows an end-user to control the treatment applied to incoming calls while the end-user is already off-hook on a stable call. While the end-user is on an existing call, CWD notifies the end-user of an incoming call by sending Call Waiting Tone, and immediately follows that with a CAS (CPE Alerting Signal) dual tone (Providing the CWD subscriber does not have an alerting type of SAS-ONLY) to notify the end-user's CPE of an incoming call. If the end-user has CIDCW (Calling Identity Delivery on Call Waiting Feature Number 99-5E-1106) the CID data may be provided to the customer immediately following CWD alerting and the ACK response from the CPE.

Upon being alerted of a second call, the CPE displays the menu for the CWD options and the customer may choose one of the following CWD options for treating the incoming call:

- ANSWER the waiting call and put the existing call on hold,
- ANSWER the waiting call and DROP the existing talking connection,
- FORWARD the waiting call to the CFDA (Call Forwarding Don't Answer) destination.
- Connect the waiting call to an ANNOUNCEMENT (e. g. suggesting the caller waiting call back later),
- Put the waiting call on HOLD. (i.e. asking the waiting calling party to wait) or
- CONFERENCE the waiting call with the existing call.

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The above choices open to the CWD subscriber are called "per-call options," and require the subscriber to take action to notify the switch what option is desired.

If the end-user does not select one of the above treatments for the incoming call, the end-user's default treatment is applied. The default treatment is chosen by the CWD customer when he/she initially subscribes to the CWD service. The possible default treatments include:

- "Forward" the incoming call to the CFDA destination,
- Connect the incoming call to an "announcement" (this is not the same announcement as mentioned above), or
- "Continue ringing" continues to provide audible ringing to the incoming call.

The above choices available to the CWD subscriber are called "default treatments," and take effect if the subscriber does not take action to notify the switch what option is desired. In this case the treatment option is provided by the switch. The "default option" takes effect after the T default timer times out. Phase I utilized the CFDA timer as the default timer; the T default timer has replaced the need for the CFDA timer.

- The "forward" default option is supported if the CFDA feature with the CFDA/CW (Call Forwarding after Call Waiting) option is assigned and active. If the "forward" default option is chosen, and the CFDA feature with the Call Forwarding after Call Waiting option is not assigned, or is assigned but is inactive, the "continue ringing" default option is executed.
- If the "continue ringing" default option is executed, the calling party continues to receive audible ringing, and the CWD subscriber may select a per-call option at any time, provided the calling party does not disconnect.

  Once the customer has put either the incoming call or the existing call on hold, the CWD subscriber can select one of the following per-call options:

- Alternate between the held party and existing call (RETURN),
- Connect to the held call and disconnect the existing call (DROP),
- Conference the held call and the existing call (CONFERENCE).

If the CWD customer is a non-ADSI (Analog Service Display Interface) subscriber and has unrestricted use of the per-call options, the CWD subscriber has T flash time after hitting the FLASH key to select one of the above mentioned per-call options. If the customer conferences the calls, CWD per-call options allows the customer to:

- Disconnect the last added party (DROP LAST) from the conference call at any time. The last added party was the waiting party during the WAIT state.
- Disconnect the first party (DROP FIRST) from the conference call at any time. The first party was the party in the talking connection during the WAIT state.

Call Waiting Deluxe is available to customers with screen based phones such as ADSI compatible CPE, as well as customers with non-ADSI (i.e.standard 2500 sets and CIDCW sets) that are able to signal DTMF (Dual Tone Multifrequency). An ADSI CPE simplifies the selection of a treatment by displaying options (via text prompts associated with soft keys) to the customer and allowing them to press a soft key to select a treatment. In phase I of CWD, the CWD subscriber always sent the SAS plus CAS alerting sequence, and all CWD subscribers could utilize the per-call options. However, with CWD phase II,

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depending on the alerting type selected, the Switch Owner has the ability to chose whether to send SAS-only alerting or SAS plus CAS alerting, and to restrict the use of the per-call options for non-ADSI subscribers. All CWD subscribers have the ability to select the RETURN and ANSWER per-call options, and the ability to utilize any of the default options. Please refer to Figure 3 to see what restrictions are given to non-ADSI CPE depending on the alerting type.

The CWD feature has added four new preconstructed CWD MW (Multiway) features to the MWFD form, (5602-1,2 Record, RC/V 12.19) which are similar in functionality with existing MW features, with exception that the CONTROL field is set to "HLD ALT 3W". The four new preconstructed MW features are: /MWCWDAC, /MWCWDIO, /MWCWDNG, and /MWCWDGO. These four new CWD Multiway preconstructed feature replaces the existing MW features associated with the 10 Call-Waiting-Deluxe Terminating preconstructed features on the CWTFD form, (5603-1A/1B Record, RC/V 12.15).

The following is a mapping of the existing MULTIWAY feature to the new MULTIWAY feature:

Multiway Feature Mapping

New MW Feature	**Existing MW Feature**
/MWCWDGO	/MWCWGO
/MWCWDAC	/MWCWAC
/MWCWDNG	/MWCWNG
/MWCWDIO	/MWCWIO

6.1 CW Deluxe Phase II Restrictions And Feature Interactions

The CW Deluxe Phase II feature is dependent on the following:

- The recent change system shall not allow activation of the CWD secured feature if the secured feature for the Switch-to-CPE Analog Off-Hook FSK Data Interface feature has not already been enabled.
- If a customer has a call in the hard hold state (i.e. on hold because Call Hold was activated), the CWD feature is not invoked.
- The switch shall not invoke CWD on a line engaged in a stable two- party connection if the Cancel Call Waiting feature has been invoked for the call.
- The switch shall not invoke the CWD feature on a CWD customer's line during a TWC (Three Way Calling) session that was initiated by the CWD customer. The switch shall not allow the TWC feature to be used from a CWD customer's line if the customer has a CWD session active.
- The switch shall not allow Call Transfer to be activated from a CWD customer's line when that line has a CWD session active. CWD shall not restrict far-end parties from using their Call Transfer features. Even though the line has subscribed to CWD, the switch shall not invoke the CWD feature on a customer's line during a Call Transfer session that was initiated by the CWD customer.
- The telephone company has the ability to restrict non-ADSI sets from using the per-call options.
- The telephone company has the ability to limit the CWD alerting sequence to SAS-only alerting
- A CWD feature with SAS-ONLY alerting may NOT be assigned to a line that has the CIDCW feature.
- The CWD feature is not supported with ASI (Advanced Services Interface).
- The CWD subscriber can assign "forward" as the per-line default option if and only if a CFDA feature with the CFDA/CW option is assigned to the customers line. There is no equivalent check, if the subscriber has a default option of OFCDFLTOPT (use office default) and the per-office default value is "forward".
- The CWD feature only applies to analog lines. It does NOT apply to ISDN lines. The switch shall not allow CWD to be assigned on:

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- ISDN lines,
- multiline hunt group lines,
- lines with remote call forwarding,
- coin lines,
- four-wire classes of service,
- attendant lines,
- shared DN analog lines,
- LTSB (Line Time Slot Bridging lines,
- two-party lines or
- multiparty lines (i.e., four-party and eight-party lines).

- The CWD terminating feature takes precedence over the Dial Call Waiting Feature. Therefore, the CWD subscriber has the ability to utilize their per-call options when call waited.
- The CWD feature is not dependent on the CIDCW feature. However, if the CWD subscriber is also subscribed to the CIDCW feature, it provides Caller ID information to the customer in the off-hook state in conjunction with the CWD feature. For the caller ID information to be delivered to the subscriber, the CIDCW feature must also be assigned to the CWD subscriber's line.
- If Music on Hold is allocated for the terminal group associated with the CWD subscriber, the calling party receives music for T hold time between the HOLD announcement and reminder announcement, and between subsequent reminder announcements.

7. CW DELUXE PHASE II SCENARIOS

Typical End-User Scenario - Normal Operation

7.1 Scenario #1 Participants:

- Subscriber A, with /CWDT (with alerting type of CWD - SAS-only).
- Party B and Party C can be POTS lines.

CPE Needs:

The only CPE which is important to identify (because CWD is a terminating feature) is the CPE associated with Subscriber A. Subscriber A's line is a 2500 set.

Call Scenario:

- Subscriber A's line is initially idle.
- Party B then dials Subscriber A's telephone number and receives audible ringing.
- Subscriber A's hears telephone ring and answers the call.
- Subscriber A and Party B are engaged in conversation when Party C dials Subscriber A's telephone

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number and receives audible ringing.

- The talking path between Party B and Subscriber A is muted and Subscriber A hears the call waiting tone.
- Subscriber A can now select any of the CWD per-call options to handle the incoming call.
- Subscriber A selects the HOLD option (FLASH plus DTMF 6). Party C's gets routed to the HOLD announcement and hears silence after the announcement finished playing.
- After T hold time, Party C's call gets routed to the reminder announcement and hears silence after the announcement finished playing.
- Party A is now given additional T flash time to select the ANSWER option (FLASH).
- Party B is on hold and Party C and Party A are talking.
- Party A is not given additional T flash time to select the CONFERENCE option (FLASH plus DTMF 3).
- Parties A, B and C are now all on a conference call.
- All parties go on-hook and are disconnected.

7.2 Scenario #2 Participants:

- Subscriber A, is assigned to Terminal Group 1 with Music On Hold and has features /CWDT (Call Waiting Deluxe Terminating), /TGUUT (Terminal Group Allow Originate Allow Terminate), and /LIRCNMP (Line Identification NUM DEL PRIM TERM Only) with CIDCW.
- Party B POTS line.
- Party C is assigned to Terminal Group 1 and has features /CWD, and /TGUUT.

CPE Needs:

The only CPE which is important to identify (because CWD is a terminating feature) is the CPE associated with Subscriber A. Subscriber A's line has ADSI CPE.

Call Scenario:

- Subscriber A's line is initially idle.
- Party B then dials Subscriber A's telephone number and receives audible ringing.
- Subscriber A's telephone rings and Party B's Caller ID information (Name and Number) is displayed.
- Subscriber A views Party B's information and answers the call.
- Subscriber A and Party B are engaged in conversation when Party C dials the Dial Call Waiting Activation Code followed by Subscriber A's telephone number and receives audible ringing.
- The talking path between Party B and Subscriber A is muted and Subscriber A hears call waiting tone followed by a very short duration high frequency tone which alerts Subscriber A's CPE.
- Subscriber A now views Party C's Caller ID information on the CPE along with the CWD per-call options.

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- Subscriber A now selects the HOLD option. Party C's call is routed to the HOLD announcement.
- After the HOLD announcement is complete Party C hears music. After T hold time, party C is connected with the reminder announcement.
- Subscriber A selects the DROP option. Party B is immediately disconnected, and Party C is connected to Party A. Party A and B continue to converse.

8. CW DELUXE PHASE II FEATURE ASSIGNMENT

This feature is a secured feature and must be purchased before being enabled.

Provisioning the CWD phase II Feature (Figure 4) requires the following:

- Make sure that the CWD phase II 5E10 Software Update has been purchased and SFID 145 ACT field on SFSYS (5713-1 Record) is set to "Y".
- The MULTI WAY field on the CWTFD form, (5603-1A/1B Record, RC/V 12.15) has been updated with one of the following new MW features: /MWCWDIO, /MWCWDNG, /MWCWDAC, /MWCWDGO.

CWD Feature to New MW Feature Mapping

CWD Feature	New MW Feature
/CWDC1 - Call Waiting Deluxe W/Cancel 1 (POTS)	/MWCWDAC
/CWDCDT1 - Call Waiting Deluxe W/Cancel 1 W/Dist Tones 1	/MWCWDGO
/CWDCDT2 - Call Waiting Deluxe W/Cancel 1 W/Dist Tones 2	/MWCWDNG
/CWDC2 - Call Waiting Deluxe W/Cancel 2 (Business)	/MWCWDIO
/CWDC2DT - Call Waiting Deluxe W/Cancel 2 W/Dist Tones	/MWCWDIO
/CWDIO - Call Waiting Deluxe Incoming Only	/MWCWDIO
/CWDIODT - Call Waiting Deluxe Incoming Only 2/Dist Tones	/MWCWDIO
/CWDT - Call Waiting Deluxe Terminating	/MWCWDAC
/CWDTDT1 - Call Waiting Deluxe Term W/Dist Tones 1	/MWCWDGO
/CWDTDT2 - Call Waiting Deluxe Term W/Dist Tones 2	/MWCWDNG

- For the CONFERENCE option, the switch internally understands that a multiway feature is required, and automatically incorporates one in the feature operation. Thus no external assignment of a multiway feature is required, even though a multiway feature is used to support this feature.
- If the CWD Phase I feature is already installed the CWDBUSY and the CWDHOLD announcements may already be available. To set up the CWD HOLD , CWD BUSY, HOLD REMINDER, and the CWD DEFAULT announcements, set the FIXED ROUTE TYPE on the FIXRT form (5301-1 Record, RC/V 10.1) to: "CWDHOLD", "CWDBUSY", "CWDDFANC", or "CWDREMDR", as a key. The appropriate RTI (Route Index) for the CWD feature is used to route to a 13A or 14A trunk.
- The SM should be engineered with a pumpable DSU2 (Digital Service Unit Model 2) - LDSU (Local Digital Service Unit). A sufficient number of TTR (Tone Transceiver) circuits should be engineered on the LDSU.
- Via the LINEFA form, (5112 Record, RC/V 1.8 or 1.11) assign any one of the of the CWD features.

9. CW DELUXE PHASE II FEATURE TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26A	12.9
CWTFD	5603-1	4	4A	12.15
CWTLPA	5603-2	4	4B	1.24
CWTMPA	5603-3	4	4C	3.24
FIXRT	5301-1	3	3G	10.1
LASSOP	5945	5	5F	8.21

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MWFD	5602-1/2	4	3A	12.9
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

BFG form (5625 Record) - The 5625-1/8 Record is to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. The ALERT TYPE, DFTL OPT, and USG SENS CONF fields were added.

CWTFD form (5603-1 Record) - This form is used to define a number of separate features by selecting various feature options for Call Waiting. The ALERT TYPE, DFTL OPT, and USG SENS CONF fields were added.

CWTLPA form (5603-2 Record) - The 5603-2 Record is used to define specific parameters assigned to every non-Multi-Line Hunt line assigned with a specific constructed Call Waiting feature. The ALERT TYPE, DFTL OPT, and USG SENS CONF fields were added.

CWTMPA form (5603-3 Record) - The 5603-3 Record is used to define specific parameters assigned to every Multi-Line Hunt line associated with a specific constructed Call Waiting feature. The ALERT TYPE, DFTL OPT, and USG SENS CONF fields were added.

FIXRT form (5301-1 Record) - The 5301-1 Record is used to define Routing and Charging treatment of Fixed Route Types. Enumerations were added to the FIXED ROUTE TYPE field.

LASSOP form (5945 Record) - The 5945 Record is an ODA (Office Data Administration) input form that is used to supply global office options and parameters for the LASS features. The AMA AGGR TIME field was added.

MWFD form (5602-1/2 Record) - The 5602-1/2 Record is used to define many of the add-on and conferencing features used in other switching systems (e.g., Call Hold, Three-Way Calling, Six-Port Conferencing, and Call Transfer) and replaces the Three-Way Calling feature in earlier 5ESS Software Releases. An enumeration was added to the MULTIWAY CONTROL field. Data rules were added to the FEATURE BUTTON, DIAL CODE OR BUTTON, and ISDN ATTENDANT fields.

OFCOPT form (5509 Record) - The OFCOPT form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The ALERT TYPE, DFLT OPT, USG SENS CONF, SUPV ANNC, DFLT ANNC, HOLD ANNC, FLASH TIMER, DFLT TIMER, and HOLD TIMER fields were added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is a secured feature and is activated by setting the ACT field for SFID 145 to "Y" on the SFSYS form (5713-1 Record).

In addition, before this feature can be activated, the secured feature Switch-to-CPE Analog Off-Hook FSK Data Interface must be purchased and enabled. This feature is activated by setting the ACT field for SFID 140 to "Y" on the SFSYS form. For more information on this feature see Division 2, Section 4A140.

10. GLOSSARY

2500 Set A non-ADSI (Analog Service Display Interface)

ACK - Acknowledge

ADSI Analog Service Display Interface

ADSI Set An analog telephone set capable of recognizing the

CAS CAS (CPE Alerting Signal) is a dual tone sent to the

CFDA Call Forwarding Don't Answer

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CFDA/CW	Call Forwarding Don't Answer after Call Waiting
CID	Calling ID
CIDCW	Calling Identity Delivery on Call Waiting
CPE	Customer Premise Equipment
CWC1	Call Waiting with Cancel 1
CWC1DT1	Call Waiting with Cancel 1 with Distinctive Tone
CWC1DT2	Call Waiting with Cancel 1 with Distinctive Tone
CWC2	Call Waiting with Cancel 2
CWC2DT	Call Waiting with Cancel 2 with Distinctive Tones
CWD	Call Waiting Deluxe
CWDC1	Call Waiting Deluxe with Cancel 1
CWDC2	Call Waiting Deluxe with Cancel 2
CWDC2DT	Call Waiting Deluxe with Cancel 2 with Distinctive
CWDCDT1	Call Waiting Deluxe with Cancel 1 with Distinctive
CWDCDT2	Call Waiting Deluxe with Cancel 1 with Distinctive
CWDIO	Call Waiting Deluxe Incoming Only
CWDIODT	Call Waiting Deluxe Incoming Only with Distinctive
CWDT	Call Waiting Deluxe Terminating
CWDTDT1	Call Waiting Deluxe Terminating with Distinctive
CWDTDT2	Call Waiting Deluxe Terminating with Distinctive
CWIO	Call Waiting Incoming Only
CWIODT	Call Waiting Incoming Only with Distinctive Tones
CWT	Call Waiting Terminating
CWTDT1	Call Waiting Terminating with Distinctive Tone 1
CWTDT2	Call Waiting Terminating with Distinctive Tone 2
CWTFD	Call Waiting Feature Definition
DTMF	Dual Tone Multifrequency
FSK	Frequency Shift Keying
LTSB	Line Time Slot Bridging
RTU	Right-To-Use
RTI	Route Index

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SAS SAS (Subscriber Alerting Signal) is standard call waiting

SFID Secured Feature ID

TWC Three Way Calling

CALL WAITING TERMINATING TO CALL WAITING DELUXE FEATURE MAPPING	
5E8 and earlier CWT Feature	**5E9(1) and later CWD Feature**
/CWC1 (CALL WAITING W/ CANCEL 1) (POTS)	/CWDC1 (CALL WAITING DELUXE W/ CANCEL 1) (POTS)
/CWC1DT1 (CALL WAITING W/ CANCEL 1 W/ DISTINCTIVE TONE 1)	/CWDCDT1 (CALL WAITING DELUXE W/ CANCEL 1 W/ DISTINCTIVE TONE 1)
/CWC1DT2 C(ALL WAITING W/ CANCEL 1 W/ DISTINCTIVE TONE 2)	/CWDCDT2 (CALL WAITING DELUXE W/ CANCEL 1 W/ DISTINCTIVE TONE 2)
/CWC2 (CALL WAITING W/ CANCEL 2) (BUSINESS)	/CWDC2 (CALL WAITING DELUXE W/ CANCEL 2) (BUSINESS)
/CWC2DT (CALL WAITING W/ CANCEL 2 W/ DISTINCTIVE TONES)	/CWDC2DT (CALL WAITING DELUXE W/ CANCEL 2 W/ DISTINCTIVE TONES)
/CWIO (CALL WAITING INCOMING ONLY)	/CWDIO (CALL WAITING DELUXE INCOMING ONLY)
/CWIODT (CALL WAITING INCOMING ONLY W/ DISTINCTIVE TONES)	/CWDIODT (CALL WAITING DELUXE INCOMING ONLY W/ DISTINCTIVE TONES)
/CWT (CALL WAITING TERMINATING)	/CWDT (CALL WAITING DELUXE TERMINATING)
/CWTDT1 (CALL WAITING TERMINATING W/ DISTINCTIVE TONE 1)	/CWDTDT1 (CALL WAITING DELUXE TERMINATING W/ DISTINCTIVE TONE 1)
CWTDT2 (CALL WAITING TERMINATING W/ DISTINCTIVE TONE 2)	/CWDTDT2 (CALL WAITING DELUXE TERMINATING W/ DISTINCTIVE TONE 2)

Figure 1 MAPPING OF CALL WAITING TERMINATING FEATURES TO CALL WAITING DELUXE PHASE I FEATURES

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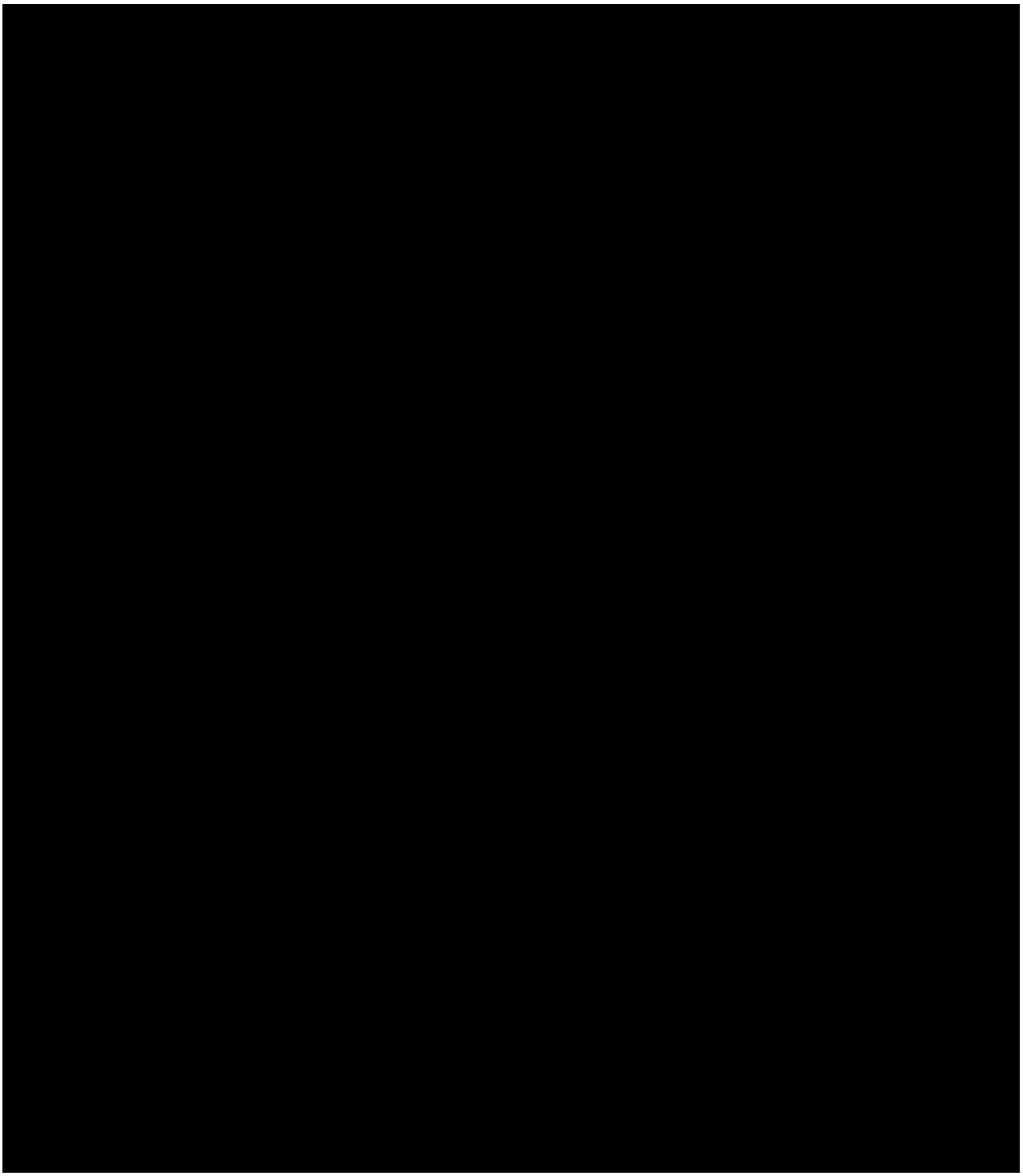

Figure 2 ADSI SCRIPT DOWNLOADING

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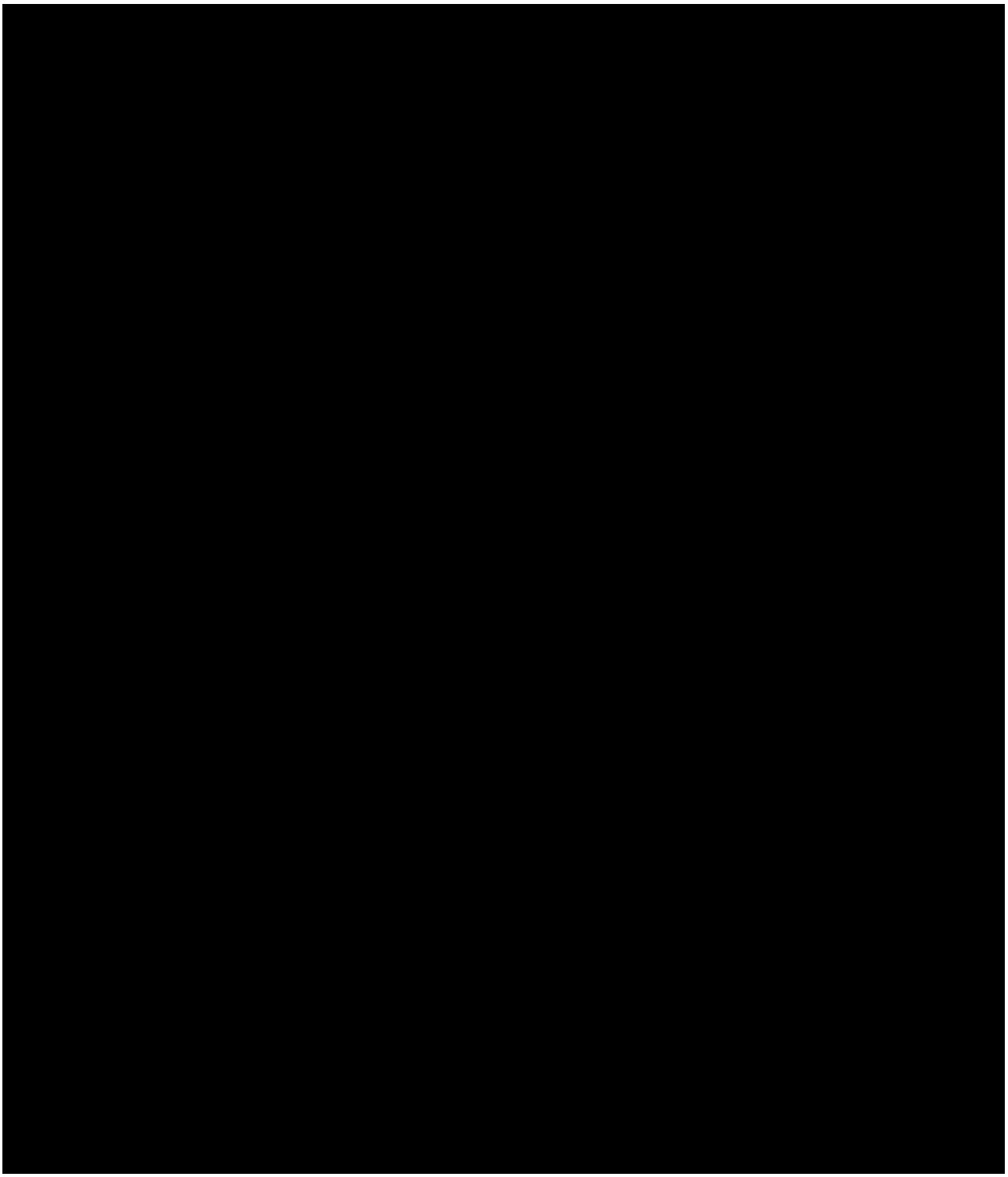

Figure 3

RESTRICTIONS GIVEN TO NON-ADSI CPE					
VALUE	**RC VALUE**	**NAME**	**ALLOWED OPTIONS**	**ALERTING**	**OFF-HOOK DELIVERY OF CID DATA**
1	CWD1 w/o CIDCW	CWD on ADSI Sets onlyno CIDCW [SAS + CAS with non	ADSI sets all options; Answer & Return on non ADSI sets	SAS + CAS	Time parameter only

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		ADSI per call options restricted w/o CIDW]			
2	CWD1 with CIDCW	CWD on ADSI sets only [SAS + CAS with non ADSI per call options restricted with CIDW]	ADSI sets all options; Answer & Return on non ADSI sets	SAS + CAS	Deliver CID data according to CID feature on the line
3	CWD w/o CIDCW	CWD w/o CIDCW [SAS only w/o CIDCW]	ADSI & non ADSI sets - all options	SAS only	no FSK
4	CWD2 w/o CIDCW, CWD w/o CIDCW	[SAS + CAS with non ADSI allowed w/o CIDCW]	ADSI & non ADSI sets - all options	SAS + CAS	Time parameter only
5	CWD2 with CIDCW	Complete CWD [SAS + CAS with non ADSI allowed with CIDCW]	ADSI & non ADSI set - all options	SAS + CAS	Deliver CID data according to CID feature on the line

Figure 4 RESTRICTIONS GIVEN TO NON-ADSI CPE

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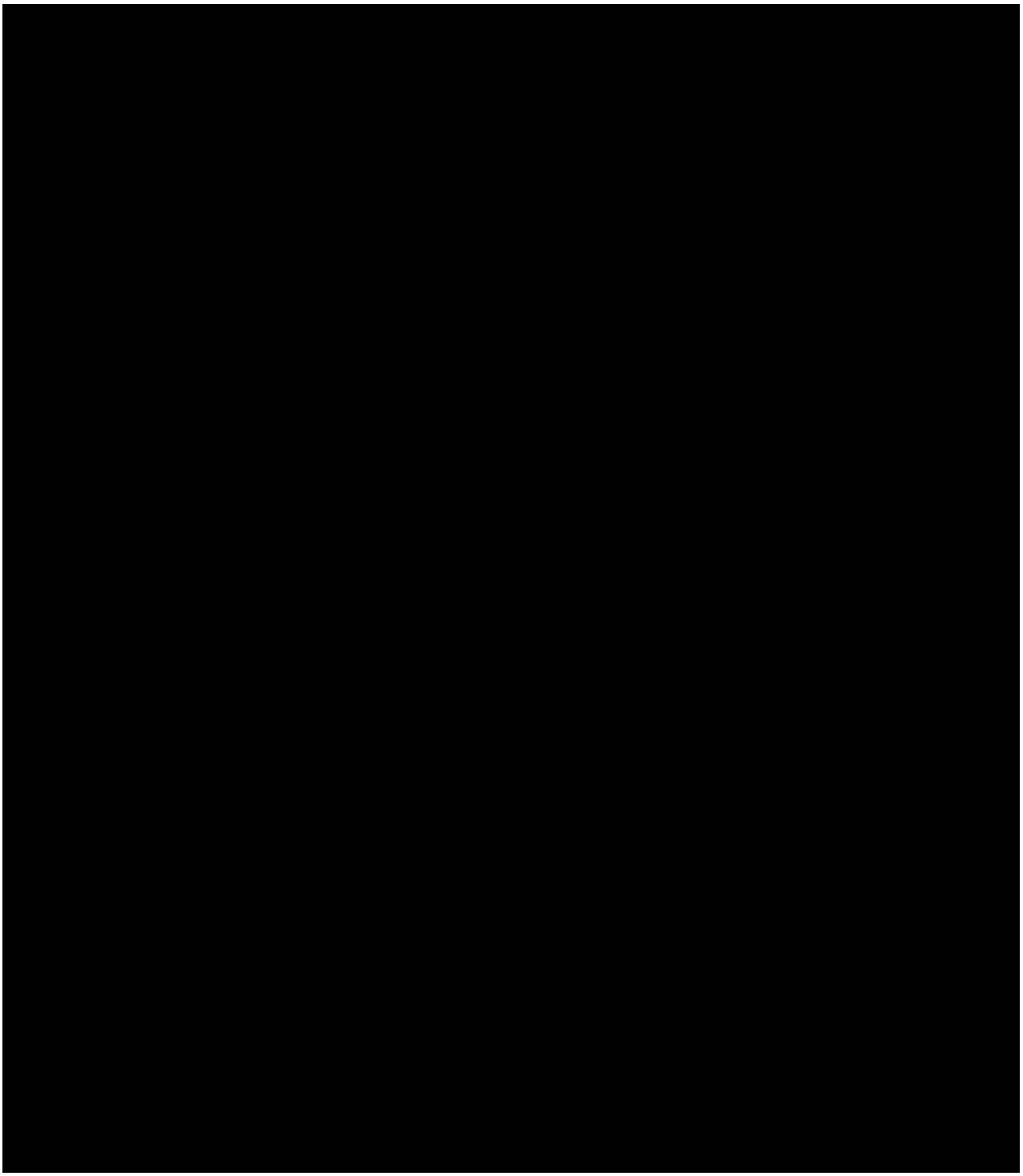

Figure 5 FORM FLOW FOR CALL WAITING DELUXE PHASE II

SEC. 4A147: ADVANCED SERVICES PLATFORM BUSY/NO ANSWER SUBSEQUENT EVENT DETECTION

1. BACKGROUND

Prior to this feature, ASP (Advance Services Platform) Release 0.1B provided the SCP (Service Control Point) with the ability to specify one or more routes (i.e. Carrier/DN or Route Index) which the switch used to complete the call. Once the SCP supplied the switch with routing instructions, its involvement in the call

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was over. If the switch could not find an idle route from the set of routes supplied, the call completed to reorder. Additionally, if the call was completed over an idle route, and the terminating station was busy or rings without being answered, Alternate routing could not redirect the call.

2. FEATURE DESCRIPTION

Available with Software Release 5E9(1) and later, the ASP BL/NA (Advanced Services Platform Busy/No Answer) Subsequent Event Detection feature is a secured feature using SFID (Secured Feature ID) 147 and must be purchased before being activated. The feature number is 99-5E-1576.

This feature allows the SCP to continue its involvement on a call by specifying that it is interested in being notified if certain call processing events occur while the switch is completing the call. The SCP does this by indicating in a NEL (Next Event List) the events in which it is interested.

There are two types of events.

- Request events - require further instructions from the SCP before routing can occur
- Notification events - are reported to the SCP and call processing continues.

When request events occur that were specified in the NEL, the SSP (Service Switching Point) informs the SCP of the event and the SCP can then return additional routing instructions to the switch, or can play a final or interactive announcement. When Notification events occur that were specified in the NEL, the SSP notifies the SCP and continues routing the call.

This feature supports four events that the SCP can request in the NEL. The events are:

- the terminating line or trunk has been seized (or is ringing)
- busy has been detected
- the terminating line has not been answered
- the terminating line has been answered.

The seize and answer events are notification events, whereas the busy and no answer events are request events. These events are defined in more detail in further sections.

These four events are those defined as OCM (Originating Call Model) events which the SCP can indicate in a NEL which accompanies either an Analyze_Route message or a Forward_Call message. Four synonymous events in the TCM (Terminating Call Model) can be indicated in a NEL which accompanies an Authorize_Termination message. The TCM events are not supported by this feature.

Because the events supported by this feature are OCM events, their detection occurs in the OCM (which models the call portion of the calling party). Note that the User Busy condition, for example, actually occurs in the TCM (which models the call portion of the called party), and is made "visible" to the OCM only after any applicable features assigned to the called party (i.e., CFBL (Call Forwarding Busy Line), CWT (Call Waiting Terminating) are allowed to operate.

Because of the definition of the OCM and TCM, the OCM events supported by this feature are appropriate to use when the SCP redirects the call using a Forward_Call message, since the redirected portion of the call is modeled with an OCM.

When the SCP includes a Request component including a NEL indicating the events which it is in, the switch will maintain the TCAP (Transaction Capabilities Application Part) transaction with the SCP, and inform the SCP when the requested condition occurs. If an indicated event occurred and is a Notification event, the SSP informs the SCP that the event occurred, and continues processing the call. If an indicated

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event occurred and is a Request event, the SSP informs the SCP that the event occurred, and the SCP can then return additional routing instruction to the switch, or can play a final or interactive announcement.

The ASP BL/NA Subsequent Event Detection feature is only supported by ASP Release 0.1B and the Next Event List can accompany either an Analyze_Route message or a Forward_Call Message.

2.1 End User Perspective

The End User of this feature is a telephone subscriber who uses an AIN-based (Advanced Intelligent Network) service which makes use of the capabilities described in this document. This user may be either the calling party or the called party depending upon the nature of the AIN-based service.

The calling party may hear multiple call progress tones when the NEL capabilities are used by the SCP. For example, if the SCP has indicated that it is interested in the No Answer Event, the calling party hears normal audible ringing, and if the No Answer Timer expires, the calling party may hear an interval of silence. At this point the user may hear an announcement, more ringing if the call is redirected to another idle party, busy tone if the call is redirected to a busy party etc.

2.2 Customer Perspective

The capabilities provided by this feature are not assignable to any switch-based resource. They are invoked on a call-by-call basis by the SCP.

The Service Provider is impacted with respect to the ability to make use of the Next Event List and associated capabilities when creating or deploying AIN-based services.

2.2.1 Scenario 1

Suppose that the subscriber's first alternate DN is his or her other office across town. Per SCP instructions in the Forward_Call message, the switch attempts to complete the call. If a No Answer condition occurs, the switch informs the SCP, and the SCP will consult the Subscriber's list of alternate DNs and send the switch another routing message with instructions to complete the call to the second alternate DN, in this case the subscriber's cellular DN. Again, the SCP sends a Next Event List with the routing message indicating it wants to be informed of either busy or no answer.

Again, the switch attempts to complete the call per the SCP's instructions, and again it "monitors" the call for occurrence of the events the SCP indicated.

This scenario ends when either the call is answered (perhaps by the subscriber at one of the alternate locations, or perhaps by a voice mail system listed as the last alternate DN), or when the SCP has no more alternate DN entries to try after previous attempts have been unsuccessful and instructs the switch to play the caller a final announcement.

2.2.2 Scenario 2

The user dials a particular Feature Code (*321) which is defined as an ASP Feature Code trigger. When this code is dialed, the trigger is detected, and address digits are collected from the caller. When digit collection is complete, a Query is launched to the SCP. The SCP replies by sending an Analyze_Route message to the switch instructing it to complete the call to the address dialed by the caller. Along with the routing message, the SCP sends a Next Event List indicating that the SCP wants to be informed if the call encounters a Busy or No Answer condition.

If the call is answered, or the caller hangs up, the SSP sends a Close message to the SCP indicating that neither event in which the SCP was interested occurred, and no further SCP processing takes place.

If either a No Answer or Busy condition is detected, the switch sends a message to the SCP, and the SCP will send another Analyze_Route message to the switch instructing it to complete the call to another

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phone number, perhaps a VMS (Voice Messaging System). The VMS will interact with the caller to record the message and any delivery instructions.

2.2.3 Scenario 3

A user originates a call that encounters an originating trigger. A query is made to the SCP which responds with an Analyze Route message with a NEL with a no answer event. This is transaction T1. The DN returned in the Analyze Route message routes to a TAT (Terminating Attempt Trigger). The SCP is queried again and a NEL with a busy event is returned in the Forward Call. This is transaction T2. Finally, a TAT is encountered on the DN that was returned in the Forward Call message and a NEL is returned with a no answer event. This is transaction T3. At this point, 3 transactions are open for this call and 2 no answer timers are running.

Assume the no answer timer associated with T1 expires first. An O_No_Answer message is sent to the SCP. The SCP responds with an Analyze Route message with a NEL requesting the seize event. The call is cleared from this point forward and ringing to the originator is stopped. The NELs associated with transaction T2 and T3 are closed. The call is now routed to the DN specified in the Analyze Route message and the call is monitored for seizure. Assume the terminating line is busy so the originator now hears busy. Seizure does not occur and is not reported and the last NEL is closed via a Close message to the SCP.

2.3 Limitations

Existing ASP Release 0.1B requirements for detection of ASP Serial Triggers do not apply when a NEL is associated with a transaction. No further ASP serial triggering is allowed within the same call portion when a NEL is associated with the call (see the note below for SSP800/E911). However, serial triggers can be encountered in the terminating call portion and thus a Termination Attempt Trigger could be encountered.

An ANALYZE ROUTE with an NEL can be returned on any type of originating trigger (CDP (Custom Dialing Plan), FCD (Feature Code Dialing), DNT (Dialed Trigger Number), SIT (Special Information Tones), OHI (Off-Hook Immediate), OHD (Off-Hook Delay) from any type of OTP (Originating Terminal Process) (CCS (Common Channel Signaling), MF (Multi-Frequency) Trunk, POTs, BRCS, ISDN). For this feature, the detection of these events is isolated in a new OSDS (Operating System for Distributed Switching) process, called an ASP_TP, which resides "between" the OTP and TTP (Terminating Terminal Process). The ASP_TP is created when a NEL parameter is encountered in an OTP. The ASP_TP, after receiving the RT_GEN from the OTP, routes the call via RTA (5ESS Subsystem/Routing and Terminal Allocation) to the final destination, establishes a "forward" path to the TTP, and finally establishes a "backward" path back to the OTP.

- ***NOTE:*** The term "ASP Serial Triggering" is used in the paragraph above to specifically indicate the case of encountering another ASP trigger. This does not include encountering E911 or SSP800 features. If an ASP call with one or more open NELs is routed and invokes the E911 or SSP800 feature, the NEL associated with the E911 or SSP800 transaction will be closed.

If the SCP includes a NEL in the Routing Component, no Termination Notification may be requested in the Routing Component.

However, DNT serial triggering is allowed after a FORWARD CALL message with an NEL is returned in response to a TAT query. Since the TCAP transaction associated with a FORWARD CALL message remains open, the DNT query cannot be launched from the same OSDS process as was done prior to this feature. This is because of the current restriction that only one TCAP transaction can be opened per OSDS process. Instead of launching a query, the query is formatted and stored in a TAT_DB tuple. An ASP_TP process will then be created to retrieve the query and send it off to the SCP. Thus, an ASP_TP is created for each opened TCAP transaction and associated NEL. The ASP_TP remains open until the TCAP transaction is closed.

3. FEATURE ASSIGNMENT

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This is a secured feature, therefore, before it can be activated the ACT field for SFID 147 on the SFSYS form (5713-1 Record) must be set to "Y".

This feature is also dependent on the ASP Release 0.1B base feature. Therefore, the ACT field for SFID 126 on the SFSYS form must be set to "Y".

The ORIG NO ANS TIME field indicates the no answer timeout value in seconds for the ASP Busy Line/No Answer feature.

- ***NOTE:*** Test Query provides the means by which craft can initiate a test query and the response returned from the SCP displayed on the I/O channel. TST:ASPTQ is the only switch means of determining that a NEL is involved with a call.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The ORIG NO ANS TIME field is set to 1 - 120 seconds. This field is used to indicate the no answer timeout value in seconds for the ASP Busy Line/No Answer feature. This field is the timer

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 147 to "Y". Before activating this feature, the base 5E9.1 ASP Rel 0.1B feature must be activated by setting the ACT field to "Y" for SFID 126 on the SFSYS form.

5. GLOSSARY

AIN	Advanced Intelligent Network
ASP	Advanced Services Platform
BL/NA	Busy/No Answer
CCS	Common Channel Signaling
CDP	Custom Dialing Plan
DN	Directory Number
DNT	Dialed Trigger Number
FCD	Feature Code Dialing
MF	Multi-Frequency
NEL	Next Event List
OCM	Originating Call Model
OHD	Off-Hook Delay
OHI	Off-Hook Immediate
OSDS	Operating System for Distributed Switching

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OTP	Originating Terminal Process
SCR	Selective Call Rejection
SCP	Service Control Point
SFID	Secured Feature ID
SIT	Special Information Tones
SSP	Service Switching Point
TAT	Terminating Attempt Trigger
TCM	Terminating Call Model

SEC. 4A148: ADVANCED SERVICES PLATFORM INTERWORKING WITH STATION MESSAGE DETAIL RECORDING

1. BACKGROUND

Prior to this feature, SMDR records were not affected by ASP (Advanced Service Platform) DNT (Dialed Number Trigger) originated calls. These triggers displayed the dialed number as the called party in the MDR (Message Detail Recording) record. Information from the SCP (Service Control Point) response message is not displayed in the MDR record.

ASP calls having an initial query from a subscribed origination created an MDR record type based on the route derived from the final response message. Only the called number or outgoing trunk group information was derived from the final response depending on whether it was a public or private route. TAT (Terminating Attempt Trigger) subscribers that have MDR assigned, created an MDR record only when a forward call response was sent. This record contained the TAT DN as the calling party and the forward-to number as the called party.

Message Detail Recording is not assignable to lines with OHD (Off-Hook Delay) and OHI (Off-Hook Immediate) triggers, so SMDR records are never made for these calls.

2. FEATURE DESCRIPTION

The ASP Interworking with SMDR feature is a secured feature using SFID (Secured Feature ID) 148 and must be purchased before being activated. The feature number for this feature is 99-5E-2563.

Available with 5E9(1) and later, this feature is applicable for ASP customers with SMDR assigned to their line or any station or trunk origination which encounters a CDP (Custom Dialing Plan) trigger, FCD (Feature Code Dialing) trigger or a TAT with SMDR assigned, which possibly progresses through zero or more "play and collect" sequences, and then gets routed.

This feature does not affect DNT originated calls. AMA (Automatic Message Accounting) recording is also unaffected. Only subscribed origination ASP calls and TAT calls are affected by this feature.

This ASP SMDR Interworking feature populates AIN (Advanced Intelligent Network) specific data onto SMDR records. The AIN data that is used to populate the SMDR record is returned from the SCP when directing the switch to route a call.

It is important to realize that once this feature is turned on, MDR subscribers encountering CDP, FCD and TAT triggers will generate SMDR records containing the AIN specific data. In addition, any data provided by the user in terms of Account/Authorization/Access Codes is overwritten by the Account/Authorization/Access Codes in the SCP response if they are populated.

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It is also important to realize that the SMDR ASP feature changes how the Calling Party Number field of the MDR record is populated in the AIN R0.1 protocol for TAT calls that return a FORWARD_CALL response with an AMAslpID parameter and an AMAAlternateBillingNumber parameter. With the SMDR ASP feature de-activated (i.e. existing functionality), the MDR record looks like this:

Calling Party Number = TAT DN

With the SMDR ASP feature unlocked (feature has been purchased), the MDR record looks like this:

Calling Party Number = AMAAlternateBillingNumber

If the SCP does not return the AMAAlternateBillingNumber parameter, the Calling Party Number in the MDR record will revert back to the TAT DN.

2.1 Example Scenarios

The following scenarios illustrate how this feature operates. These call scenarios are examples provided to help illustrate how this feature works.

Scenario 1

A station, with SMDR assigned, dials a number (e.g. 2468), a CDP trigger is encountered and a query is sent to the SCP. The SCP replies with routing information and AIN information. This feature generates an existing SMDR record with some of the record fields being filled with AIN data sent from the SCP when AMA billing is generated. The AIN data is gathered from the message sent from the final SCP when the AMA billing parameters are included. The AIN data is gathered from the message sent. The fields to be overwritten in the SMDR record are different between AIN Release 0.0 and 0.1 protocols. For this scenario, the fields generated in the SMDR record for AIN Release 0.0 and Release 0.1 protocols are shown in the following table.

Table 1
SMDR Fields Generated For AIN

AIN Release 0.0	AIN Release 0.1
Called Number (Routing Number)	Called Number (Routing Number)
Calling Number	Calling Number
Business Customer ID	Business Customer ID
Authorization Code	Authorization Code
	Account Code
	Access Code

Scenario 2 - CENTREX Extended Calls

In this scenario, the CENTREX station located outside the CENTREX HUB with CENTREX extend capabilities places a call that results in the call getting routed to the CENTREX HUB. Once the call gets to the CENTREX HUB, the call encounters a TAT with SMDR assigned. A query is sent to the SCP, and the SCP asks for "play and collect" (possibly more than one). Then the SCP replies with routing information and AIN information. The AIN data will be gathered from the message sent from the SCP in the final SCP response. The fields to be overwritten in the SMDR record for AIN Release 0.1 protocol are as follows:

Table 2
SMDR Fields Generated For AIN

AIN Release 0.1
Called Number (Routing Number)
Calling Number
Business Customer ID
Authorization Code
Access Code

In general, this scenario applies to any station or trunk origination which encounters a TAT trigger with SMDR assigned, possibly progressing through zero or more "play and collect" sequences, and then is

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routed.

3. FEATURE OPERATION

The only triggers that are under consideration for this feature are the CDP and FCD triggers using the AIN Release 0.0 and Release 0.1 protocols, and the TAT trigger using the AIN Release 0.1 protocol. The following table illustrates this point and shows the expected SCP responses.

Table 3
Triggers and Protocol Responses

Trigger	Protocol 0.0 Response	Protocol 0.1 Response
CDP/FCD	INVOKE_CONNECT	ANALYZE_ROUTE/STR (final) DISCONNECT
TAT	Not Applicable	FORWARD CALL/DISCONNECT STR (final announcement)

The "public" and "private" pre-defined MDR record structures are used to produce the SMDR record containing the AIN specific data (See Table 1). The "public" and "private" MDR record structure is used in both AIN Release 0.0 and 0.1 protocols.

In AIN Release 0.0 protocol, the AIN data (See Table 1) is collected from the INVOKE_CONNECT message received from the final SCP response. The AIN specific fields in the INVOKE_CONNECT message are used to populate the SMDR record (See Table 3).

In AIN Release 0.1 protocol, the AIN data (See Table 1) is collected from one of the following messages received from the SCP:

- ANALYZE_ROUTE
- FORWARD_CALL
- SEND_TO_RESOURCE (final announcement)
- DISCONNECT

The AIN specific fields in either one of the above mentioned messages is used to populate the SMDR record (See Table 3).

In AIN Release 0.0 and 0.1 protocols, the response message in the final leg of the call must have the billing indicators (Billing_Indicators in 0.0 protocol and AMAslpID in 0.1 protocol) present in order to produce the SMDR record containing the AIN specific data. If the final SCP response does not have the billing indicators or information field is missing, then the SMDR record reverts back to the current operations.

When hitting a release AIN 0.0 protocol CDP/FCD trigger, the AIN specific data (see Table 1 for populating the SMDR record) will be retrieved from the INVOKE_CONNECT message sent from the SCP. Table 4 below shows which fields are used from the SCP response to populate the SMDR record for AIN Release 0.0 protocol.

Table 4
SCP Response To SMDR Mapping 0.0 Protocol

INVOKE_CONNECT	SMDR Fields
Called Party Number	Called Number
Billing Number	Calling Number
Business Customer ID	Business Customer ID
Authorization Code	Authorization Code
Personal Identification Number	Personal Identification Number

When hitting an AIN Release 0.1 protocol CDP/FCD trigger (see call Scenario 1), the AIN specific data

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(see Table 1) for populating the SMDR record is retrieved from one of the following response messages sent from the SCP:

- ANALYZE_ROUTE
- SEND_TO_RESOURCE (final Announcement)
- DISCONNECT

The table below shows which fields are used from the SCP response to populate the SMDR record for AIN Release 0.1 protocol.

Table 5
SCP Response To SMDR Mapping 0.1 Protocol

SCP Message	SMDR Fields
Called PartyID	Called Number
AMAAlternateBillingNumber	Calling Number
AMABusinessCustomerID	Business Customer ID
AMADigitsDialed.contextid=001	Authorization Code
AMADigitsDialed.contextid=002	Account Code
AMADigitsDialed.contextid=003	Access Code

In AIN Release 0.1 protocol, any station or trunk origination which encounters a TAT, with SMDR assigned, possibly progressing through zero or more "play and collect" sequences, and then is routed, should produce an SMDR record with AIN specific data (see Table 5). The AIN specific data is retrieved from the response message sent from the SCP.

When encountering a TAT, while using the AIN Release 0.1 protocol (see call scenario 2), the data for populating the SMDR record is retrieved from one of the following response messages sent from the SCP:

- FORWARD_CALL
- SEND_TO_RESOURCE (final Announcement)
- DISCONNECT

Table 6 shows the fields that are used from the SCP response to populate the SMDR record for AIN Release 0.1 protocol.

In AIN Release 0.0 protocol, it is possible to get both the authorization code and the PIN in a single response from the SCP. If this happens, populate the last parameter in the message into the authorization field on MDR record. This is the same approach that AMA billing is using.

In AIN Release 0.1 protocol, the authorization/account/access code is retrieved from the SCP response message (AMADigitsDialedWC parameter) if the response message has the data populated. If the AMADigitsDialedWC parameter is not included in the SCP response, or is included but does not contain the authorization/account/access code digits, then the codes are obtained from the user dialed digits.

In AIN Release 0.1 protocol, if the AMADigitsDialedWC parameter is returned from the SCP with more than a 15-digit authorization/account code, then the first 15 digits will be included in the MDR record because the MDR record only has room for 15 digits. The remaining digits are truncated.

In AIN Release 0.1 protocol, if more than one occurrence of authorization/account/access code appears in a single SCP response (AMADigitsDialedWC parameter), then the first occurrence of the code is stored in the MDR record, providing the response also includes the AMAslpid (i.e. other occurrences are ignored).

In AIN Release 0.0 and 0.1 protocols, if the BCID (Business Customer Identification Number) field from view 24.33 and the MDRGP form (5624-2 Record) is not included in the SCP response, or is included but does not contain any digits, then the default BCID value is used to populate the MDR record.

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In AIN Release 0.0 and 0.1 protocols the SMDR record has a maximum value of 65535 for the BCID field. If a number greater than 65535 is received, then the BCID from view 24.33 is used to populate the MDR record.

If the Billing_Number (R0.0) or the AMAAlternateBillingNumber (R0.1) parameter is returned from the SCP with more than 10 digits, the first 10 digits are included in the MDR record because the MDR record only has room for 10 digits. The rest of the digits are truncated.

4. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

This feature is a secured feature and is activated by setting the ACT field for SFID 148 to "Y" on the SFSYS form (5713-1 Record).

5. GLOSSARY

AIN	Advanced Intelligent Network
AMA	Automatic Message Accounting
ASP	Advanced Services Platform
BCID	Business Customer Identification Number
CDP	Custom Dialing Plan
DNT	Dialed Number Trigger
FCD	Feature Code Dialing
MDR	Message Detail Recording
OHD	Off-hook Delay
OHI	Off-hook Immediate
SCP	Service Control Point
SMDR	Station Message Detail Recording
TAT	Terminating Attempt Trigger

SEC. 4A149: INTRA-LATA PIC CAPABILITY

1. FEATURE DESCRIPTION

The Intra-LATA PIC (Presubscribed Inter-LATA Carrier) feature is available with the 5E9(1) and later software release. The feature number is 99-5E-1291.
The Intra-LATA PIC feature is also referred to as ICLATA feature.

The Intra-LATA PIC allows the LEC (Local Exchange Carrier) to open up certain Intra-LATA Toll routes, which were previously handled exclusively by the LEC, to competition on an equal access basis between the LEC and the ICs (Inter-LATA Carriers). Refer to Figure 1 for competition categorization on a presubscription basis. The "certain Intra-LATA Toll routes" that are open to competition on a presubscription basis are based on [NPA]-NXX codes on a per "Digit Interpreter Table" basis through the introduction of a new type of CI (Carrier Interconnect) call.

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The Intra-LATA PIC capability allows a subscriber to presubscribe to a PTC (Presubscribed Intra-LATA PIC/Intra-LATA Toll Carrier) which handles all Intra-LATA Toll traffic (7 - digit or 10 - digit calls with or without a "1/0" prefix), if dialed without a 10XXX (or 101XXXX) prefix, but which may or may not be the same as the PIC (Presubscribed Inter-LATA Carrier). If an Intra-LATA PIC user wishes to place an Intra-LATA Toll call via a carrier other than the PTC, a 10XXX (or 101XXXX) prefix must be dialed. The PTC may designate the LEC, if the LEC has an XXX code. 10XXX (or 101XXXX) dialing for the LEC will be available. Refer to Figure 2 for a feature flow diagram of an Intra-LATA PIC direct call.

Each central office specifies how operator assisted 0+ 7 - or 10 - digit Intra-LATA PIC calls are routed for Intra-LATA PIC customers on a per carrier basis. The switch may designate that all 0+ Intra-LATA PIC calls for a given carrier are handled either by the PTC or by the LEC (if the PTC carrier chose the LEC to carry the PTC Intra-LATA PIC operator assisted calls). Refer to Figure 3 for a flow diagram of a Intra-LATA PIC 0+ operator call and Figure 5 for a diagram of Intra-LATA PIC selection.

The switch provides the capabilities so that all 0- Intra-LATA PIC calls can be handled either by the LEC or by the PTC on a per carrier basis. Refer to Figure 4 for a flow diagram of a Intra-LATA PIC 0- operator call and Figure 5 for a diagram of Intra-LATA PIC selection.

The 0+ and 0- calls may be routed to ICs differently than the non-operator handled calls.

All local calls are carried by the LEC if dialed without a 10XXX (or 101XXXX) prefix.

International calls, Inter-LATA calls, and Intra-LATA Local calls dialed with or without a 10XXX (or 101XXXX) prefix are not affected by Intra-LATA PIC feature.

The Intra-LATA PIC capability applies to both analog and ISDN line originated calls. It also applies to trunk originated calls (e.g., EDSL/PRI, PF trunk).

Once the carrier for a Intra-LATA Toll call has been determined, the call is routed as would be any other call the carrier handles. Intra-LATA Toll calls to the ICs are signaled as Inter-LATA calls, while those to the LEC are signaled as Intra-LATA calls.

Intra-LATA PIC calls carried by an IC are treated with respect to routing, billing, signaling, and measurements just as Inter-LATA calls are treated; Intra-LATA PIC calls carried by the LEC are treated as Intra-LATA Local calls.

1.1 End User Perspective

- The Intra-LATA PIC supports both business and residential customers. The assigned PTC is used on an Intra-LATA toll call dialed without a CAC (Carrier Access Code). The dialed IC or LEC is used if a CAC is dialed.
- Intra-LATA toll calls are billed according to each carrier's procedures, based on Inter-LATA AMA records from the LEC switch.
- Operator assistance for Intra-LATA toll calls is given by the PTC or dialed carrier. The carrier has an option (on the ICF form (5305 Record)) to have the LEC actually handle these operator calls.
- Calls are dialed using existing dialing formats.

1.2 Telephone Operating Company Personnel Perspective.

With this feature activated, the switch owner is able to perform the following operations:

- Specify the dial codes that are given Intra-LATA PIC treatment on the PDIT form, LDIT form, RDIT form, and MLDIT form. This implies separate forms for Intra-LATA toll and Intra-LATA Local calls rather than current consolidated forms marked as Intra-LATA (with TYP CI CALL field set to

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"INTRA"). Enough digits in the dial code must be defined so as to distinguish between calls that are to get the different treatments. Calls to be given Intra-LATA PIC treatment must have the TYP CI CALL field marked as "TOLL".

- Specify the dial codes that have conflicting treatments. This entails the specification of the TYP CI CALL attribute on the digit analysis form as well as attributes on the RAR form.

  Conflict situations arise where two or more groups of end customers have the same dialing capabilities except for a few dial codes that are given different treatment by the switch. The screening index (on the LCC form, 5306 Record) is used to give separate treatment to different callers.

  The Intra-LATA PIC introduces a new type of treatment, so the interactions become more complex. With three possible treatments available for handling a call - Intra-LATA Local (formerly Intra-LATA), Intra-LATA Toll, and Inter-LATA - dial codes can be defined with four different types of overlap of these treatments as follows:

  - Intra-LATA Local vs. Inter-LATA.
  - Intra-LATA Local vs. Intra-LATA Toll.
  - Intra-LATA Toll vs. Inter-LATA.
  - Intra-LATA Local vs. Intra-LATA Toll vs. Inter-LATA.

- Conflict "Intra-LATA Local vs. Inter-LATA" which existed prior to the introduction of this feature, continue to be supported without any action by the switch owner. This conflict is identified in the digit analysis tables by a TYP CI CALL value of "CONFL", and the treatment given a specific caller can be determined by examining the SCREENING and ROUTING translations for the LEC (Intra-LATA or non-carrier) routing as follows:

  - If Feature Option 523 on the FOSYS form is set to "Y" or if the call is dialed with a 0+ prefix, then Intra-LATA call treatment is indicated providing the LEC Intra-LATA routing does not result in an announcement; if the call does result in an announcement, then Inter-LATA routing is given.
  - If Feature Option 523 is turned off and the call is dialed with either a 1+ or no prefix, and the route index from the RAR form is the same as that from digit analysis, then Intra-LATA treatment is given. Different route indexes result in Inter-LATA treatment.

    These treatments are enhanced with the Intra-LATA PIC capability with the addition to the RAR form of three conflict resolution fields, (one associated with each dialable prefix):

    ZERO PLUS CONF

    ONE PLUS CONF

    NONE CONF

    The Intra-LATA PIC capability introduces new conflict resolution treatments. An additional TYP CI CALL value of "TCONF" is added to the digit analysis forms to help identify the conflicts. The conflict situations and the data population that can be used to give customers different treatments are summarized in the following table:

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TABLE 1

Conflict Situation	TYP CI CALL in Digit Analysis	RESOLVED CI CALLTYPE		
		INTRA	TOLL	INTER
Intra-LATA Local vs Inter-LATA	CONFL	blank *1	-	blank *1 or I
	TCONF	blank	-	I
Intra-LATA Local vs Inter-LATA Toll	CONFL	blank *1	T	-
	TCONF	blank	T	-
Intra-LATA Toll vs Inter-LATA	CONFL	-	T	I
	TCONF	-	T	I
Intra-LATA Local vs IntraLATA Toll vs Inter-LATA	CONFL	blank *1	T	blank *1 or I
	TCONF	blank	T	I

*1 Resolution is provided by existing methods

Populating "T" or "I" in the new CONF fields on the RAR form and "TCONF" in TYP CI CALL field on the digit analysis forms (LDIT, RDIT, or MLDIT) is not allowed unless the Intra-LATA PIC Special Feature (SFID 149) has been purchased and activated.

- Assign or change the Line PTC. The PTC is assignable to lines on a RSM (Remote Switching Module) and ORM (Optically Remote Module). An MLHG (Multi-Line Hunt Group) does not have one PTC associated with the entire group, however, each MLHG member may have its own PTC.

- Assign or change the Group PTC on an IDP (Individualized Dialing Plan) (or Centrex) group. The IDP Group PTC applies to both lines and PF (Private Facility) Trunks if the trunks belong to the IDP group.

- Assign or change the Office PTC.

- Specify whether 0+ Intra-LATA PIC operator-assisted calls are to be handled by the IC or by the LEC on a per-IC basis. Operator-assisted 0+ 7/10D calls are handled as follows:

TABLE 2

Call Type	Dialed Digits	Carrier
Intra-LATA PIC (Intra-LATA Toll)	0 + 7D or 10D	PTC or LEC, based on the Carrier's ICLATA OPT 0+ option
	10XXX + 0 +7D, 10D or 101XXXX + 0 + 7D, 10D	XXX or LEC, based on the Carrier's ICLATA OPT 0+ option
Intra-LATA (Intra-LATA Local)	0 + 7D, 10D	LEC only
	10XXX + 0 + 7D, 10D or 101XXXX + 0 + 7D, 10D	XXX Carrier or denied based on Carrier's INTRALATA option

On the ICF form, setting the ICLATA OPT field to "Y" means that the LEC handles the call; setting the ICLATA OPT field to "N" means the IC handles the call.

- Specify whether 0- Intra-LATA PIC calls are to be handled by the PTC or LEC on a per-IC basis.

  If the TYP CI CALL for 0- on the PDIT form is "TOLL" the call is routed to the PTC operator if that carrier's ICLATA OPT field is set to "N" (default).

  If the PTC's ICLATA OPT field is set to "Y" in this situation, the call is routed to the LEC operator instead.

  If the TYP CI CALL for 0- is "INTRA" the call is routed to the LEC operator.

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If TYP CI CALL is "INTER" the calls continue to be routed to the operator for the PIC carrier. If the TYP CI CALL for 00- on the PDIT form is "TOLL" the call is routed to the PTC operator if that carrier's ICLATA OPT field is set to "N" (default). Calls dialed 10XXX 0- are routed to the operator for the XXX IC based on the 0- ICLATA OPT field. It is to be noted that 00- ICLATA calls will route to the LEC (if PIC2 is blank, or PIC2=IC with 0- option on ICF is the LEC) provided the LEC routes (CDI/RTI) for 00- are properly set in PDIT (should be same as that for 0- calls).

- Set the Office 0- option for SCD (Selective Carrier Denial) treatment given to 0- Intra-LATA PIC calls from a non-paying customer.

  The SCD special feature on the 5ESS-2000 Switch, SFID 013, provides the ability to selectively inhibit completion of certain carrier-handled calls from those lines which have been designated as non-paying by the particular carrier. SCD can be used to deny access to multiple carriers.

  Intra-LATA PIC calls are blocked by the SCD feature if the caller attempts to access an IC and is considered to be a non-payer for that carrier.

  A 0- Intra-LATA PIC call from a customer who is denied access to the PTC carrier (as a result of SCD screening) can optionally be routed to the LEC operator based on the value of the ICLATA SCD IND indicator. The ICLATA SCD IND indicator, on the OFCOPT form (5509 Record) does not apply to 10XXX 0- calls. If the indicator is set to "N" (default), the call is routed to the LEC operator; if the indicator is set to "Y", the call is given SCD treatment (tone or announcement).

  Also, 0- Intra-LATA PIC calls routed to the LEC operator as a result of SCD screening cause ANI II digits to be sent. This informs the LEC operator that this caller is a non-payer for the carrier.

- Assign a PTC to a PRI trunk. The Intra-LATA PIC capability applies to PRI (Primary RATE Interface) (PRI, it is also known as EDSL (Extended Digital Subscriber Line)) trunk group. The PRI trunk group can have a PTC assigned to it on the TRKGRP form (5202 Record), Recent Change View 5.1.

  A new field, "DIR CON IC", is introduced on the TRKGRP form (5202 Record), Recent Change View 5.1. This field takes on values "Y" or "N", with a default value of "N". The DIR CON IC field is allowed to be set to "Y" only for EDSL and EDSLHM trunk classes, and only if the Intra-LATA PIC feature is turned on. This field should be set to "Y" only for PRI trunk groups that directly connect to an Inter-exchange Carrier's switch.

  If the DIR CON IC field is set to "Y", then for all outgoing Intra-LATA Toll PRI calls, no carrier ID information is sent in the TNS IE of the PRI SETUP message.

  If the DIR CON IC field is set to "N" (default), then for all outgoing Intra-LATA Toll PRI calls, the carrier ID that is obtained by the carrier selection procedure is sent in the TNS/NSF IE of the PRI SETUP message. If no carrier is obtained by the carrier selection procedure, then no carrier ID is sent in the TNS/NSF IE of the PRI SETUP message.

  For incoming Intra-LATA Toll PRI calls, if a carrier is received in the TNS IE and/or the NSF IE of the incoming SETUP message, existing procedures for carrier determination for Inter-LATA calls are applied to Intra-LATA Toll calls.

  For incoming Intra-LATA Toll PRI calls, if no carrier is received in the TNS and/or NSF IEs of the incoming SETUP message, then the PTC carrier assigned to the PRI trunk group is used for the call. If the PRI trunk group PTC is not assigned, then the IDP group PTC is used; if the IDP group PTC is not assigned, then the Office PTC is used; if the Office PTC is not assigned, then the LEC is used for the call.

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- Assign Toll Restriction and Toll Diversion to Intra-LATA PIC calls.

  These existing features are not modified by the Intra-LATA PIC. Toll Restriction/Diversion is done on a dial code basis through Code Index CDI field on the RAR form (5301 Record) and in conjunction with the Line Screening capability of a line LCC form (5306 Record). By using existing Code Indices (or assigning new Code Indices) to Intra-LATA PIC calls, the switch owner has the flexibility of applying or not applying Toll Restriction/Diversion to Intra-LATA PIC calls.

- Assign Originating LASS (Local Area Signalling Services) Features. The Intra-LATA PIC call works as follows:

  - AR/AC (Automatic Recall/Automatic Callback) Interaction with Intra-LATA PIC:

    When LASS AC or AR is attempted and the ILHB (Incoming Line History Block) DN in the case of AC or the OLHB (Outgoing Line History Block) DN in the case of AR is such that the AC/AR attempt would result in an Intra-LATA Toll call, then the AC/AR attempt is not blocked by the INTER LATA AC/AR field on the LASSOP (5945 Record) form being set to "N". An Intra-LATA Toll call is treated as Intra-LATA for AC/AR attempt and therefore the INTER LATA AC AR field does not apply to the AC/AR attempt.

    In the 5ESS-2000 Switch, the current operation of LASS invalidates the OLHB when a call is dialed with a CAC (10XXX/101XXXX) and the INTER LATA AC /AR field on the LASSOP (5945 Record) form is set to "N" even if the call is Intra-LATA (local or toll). Thus, if an Intra-LATA (local or toll) call is dialed with a CAC, the OLHB is invalidated and AR does not succeed immediately following the call.

  - Screen List Editing (SLE) feature interaction with Intra-LATA PIC:

    The ability to add an Intra-LATA number to a screening list of an SLE feature (e.g., Selective Call Rejection, Selective Call Forwarding, etc.) is affected by whether calls, made by the SLE feature subscriber, are carried by the LEC or an IC.

- Terminating LASS features (call to a LASS user), the Intra-LATA PIC call works as follows:

  All LASS features work properly with incoming Intra-LATA PIC calls, provided the calling number is delivered. However, if the LEC does not transmit the calling party number to the IC, or the IC does not transmit the calling party number to the LEC, then features which depend on delivery of calling party number do not work properly. These include AC, ICLID, COT (Customer Originated Trace), BCLID, the SLE screening features (e.g., SCR, SCA, SCF, SDA), CPN/BND (Calling Party Number/Billing Number Delivery). Note that the CPN SUBSC option on the DTRTX form (5314 Record) can be used to allow/disallow passing of the SS7 Calling Party Number parameter to an IC.

1.3 Intra-LATA PIC Call Scenarios

1.3.1 NONE/1+ 7/10 Digit Calls

When an end user originates an Intra-LATA non-operator assisted call (None or 1+ 7/10 digits and no CAC), the switch checks to see if the dialed number is one which is treated as an Intra-LATA PIC call; this is indicated by a CI CALL TYPE of "TOLL" in digit analysis. If so, the switch determines the carrier (IC or LEC) to handle the call as follows:

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Refer to Figure 6 for a flow chart.

- Verify Intra-LATA PIC capability is active. SFSYS form SFID 149 ACT field is set to "Y".
- If a line PTC is assigned, the call is routed to that carrier.
- If n line PTC is designated, but an IDP Group and IDP Group PTC is, the call is routed to the IDP Group PTC.
- If there is no line or IDP Group PTC, but an Office PTC exists, then the call is routed to the Office PTC.
- If no line, IDP Group, or Office PTC is designated, then the call is routed to the LEC.

1.3.2 Intra-LATA Local/Intra-LATA Toll Conflict

This scenario involves 2 subscribers, A and B. For a specific Intra-LATA destination, 220-1000, subscriber A dials 220-1000 which is a local call, and subscriber B dials 1 + 220-1000 which is a toll call. Assume SI1 (Screening Index 1) is assigned to subscriber A and SI 2 is assigned to subscriber B. The switch processes the call as follows:

Refer to Figure 7 for a flow chart for this scenario.

- The call is recognized as a CI conflict by the CI CALL TYPE equal to "TCONF" in digit analysis.
- This CI CALL TYPE is new for Intra-LATA PIC so the switch verifies the Intra-LATA PIC is active (SFID 149).
- To resolve the conflict, the switch checks the NONE CONF, ZERO PLUS CONF, AND ONE PLUS CONF fields on the RAR form (5301 Record) using the originator's screening index and the code index from digit analysis.
- If the call was dialed with no prefix (subscriber A), the NONE CONF field is checked on the SI 1 RAR form(5301 Record). No entry is indicated (blank). This resolves CI CALL TYPE to INTRA, and the call is routed to the LEC.
- If the call was dialed with a 1 + prefix (subscriber B), the ONE PLUS CONF field is checked in the SI 2 RAR form (5301 Record). The field is populated with a "T". This resolves CI CALL TYPE to toll, and from this point the call is handled the same as the toll case in the first scenario, using the PTC or the LEC to handle the Intra-LATA toll call.

1.4 Intra-LATA PIC Capability Interactions

The Intra-LATA PIC Special Feature has the following interactions:

- Full/Split 1+ Blocking applies to Intra-LATA PIC calls carried by a carrier (presubscribed or 10XXX dialed) other than the LEC. Full/Split 1+ Blocking does not apply to Intra-LATA PIC calls carried by the LEC (presubscribed, office default, or 10XXX dialed, where XXX is the LEC).
- 911 can not be marked as Intra-LATA PIC. However, other N11 types of codes (i.e. 411, 611, 811, and etc.) can be marked as Intra-LATA PIC.
- Currently, when an ASP (Advanced Services Platform) call is made from a line, the PIC for Inter-LATA calls or the LEC for Intra-LATA calls is transmitted by the switch to the SCP (Service Control Point) under the TCAP (Transactions Capabilities Application Part) protocol. The SCP sends back a message to the switch containing a routing number and carrier information. The carrier information

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may indicate an IC, LEC, or autonomous (unknown) carrier should be used to carry the call.

ICLATA will not transmit PIC2 for IntraLATA Toll calls as part of the TCAP message. ICLATA calls will be treated as IntraLATA for population of the carrier (i.e., LEC) in the query.

ICLATA will not override any carrier information sent back by the SCP. However, in the case of Autonomous carrier, if the switch reanalyzes the routing number to determine the type_ci_call (INTER, INTRA, ICLATA) and finds that the type_ci_call is ICLATA, then the PIC2 (or the XXX carrier if 10XXX is dialed) should carry the call. For autonomous carrier selection after a serial trigger, the PIC2 will be used for ICLATA calls.

Calls which encounter a trigger, but do not query will use the PIC2 for ICLATA calls. These would be calls which encounter an OHD escape or, an inactive trigger. These end up routing using just switch information.

Another case is the "CONTINUE" response from the SCP which means to route the call using the switch information. ICLATA calls will use the PIC2.

- The Intra-LATA PIC capability does not apply to calls routed using ARS (Automatic Route Selection) routes. However, if a ARS call overflows to the public network as an Intra-LATA toll call, ARS will mark the call as Intra-LATA and route it as such.
- On an Intra-LATA PIC call, 10XXX (or 101XXXX) is prohibited from being dialed, if the CI DIAL per-line attribute is set to "DENY"; however, 10XXX or (101XXXX) dialing is not required even if the CI DIAL is set to "REQ".

2. FEATURE ASSIGNMENT

The Intra-LATA PIC is a secured feature that must be activated before any Intra-LATA PIC data can be assigned on ODA forms such as the following:

- TOLL CARRIER and ICLATA SCD IND fields on the OFCOPT form.
- The PTC attribute on forms IDPGP, LINE/MLHLN, LINEFA, DSL/DSLUSR, TKGRP.
- The values of "TOLL" or "TCONF" to the TYP CI CALL attribute on forms PDIT, LDIT, RDIT, and MLDIT.
- The ONE PLUS CONF, ZERO PLUS CONF, and NONE CONF attributes on the RAR form.
- The ICLATA OPT field on the ICF form.

Provisioning the Intra-LATA PIC capability (Figures 8, 9, 10, 11, and 12) requires the following:

- Activate the Secured Feature ID 149 on the SFSYS form. The ACT field for SFID 149 is set to "Y" on the SFSYS form (5713-1 Record).
- Assign the TOLL CARRIER (i.e. the office PTC) and ICLATA SCD IND fields on the OFCOPT form. In order to set the ICLATA SCD IND field to "Y", both Intra-LATA PIC and SCD special features must be purchased and activated. When the ICLATA SCD IND field is set to "Y", the Intra-LATA PIC 0- calls blocked by SCD are routed to an SCD announcement. When the ICLATA SCD IND field is set to "N", the LEC handles the blocked Intra-LATA PIC 0- calls.

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- Assign the Intra-LATA PIC 0+/0- option on the ICF (Inter-LATA Carrier Feature) form. This field is used to represent both Intra-LATA PIC 0+ and Intra-LATA PIC 0- options in 5E9(1) and later. When the ICLATA OPT field is set to "Y", the LEC handles the Intra-LATA PIC 0+/0- calls for the designated carrier. When the ICLATA OPT field is set to "N", the Intra-LATA PIC 0+/0- calls are handled by this FGD carrier. For 5E10, the ICLATA OPT field is split into ZPLUS OPT and ZMINUS OPT fields.

  The PTC must be predefined on the ICF form (5305 Record).

  The INTRA LATA field does not apply to Intra-LATA PIC calls.

  The ICLATA OPT field must be set to "N" when any one of the following conditions is true:

  - FEAT GRP is set to "B"
  - CARRIER TYPE is "INC"
  - CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950"
  - CARRIER TYPE is "PSEUDO "

NOTE: For 5E9(1) and 5E9(2), in order for 0- calls to route to the RBOC, and 0+ calls to route to an IC's PTC (if populated), the TYPE OF CI CALL on the PDIT form must be "INTRA". The "INTRA" type on PDIT allows 0- calls to route to the RBOC, while TYPE OF CI CALL of "TOLL" on the LDIT form allows the 0+ calls to route to an IC's PTC.

- Assign TYP CI CALL of "TOLL" on the LDIT form. (See Figure 8)
- Assign the conflict resolution on either the LDIT, RDIT, or MLDIT forms and the RAR form.
  - Figure 9 uses the existing conflict resolution between Inter-LATA and Intra-LATA Local conflict, (resolving the conflict to either INTER or INTRA (Local) when the Intra-LATA PIC is activated). TYP CI CALL of "CONFL" can be assigned on either LDIT, RDIT or MLDIT forms; only the LDIT form is shown in Figure 9.
  - Figure 10 uses the LEC to route the call for conflict combination Intra-LATA Local vs. Inter-LATA, Intra-LATA Local vs. Intra-LATA Toll, and Intra-LATA Local vs. Intra-LATA Toll vs. Inter-LATA from Table 1 (when the Intra-LATA PIC is activated): (TYP CI CALL of "TCONF" can be assigned from either LDIT, RDIT, or MLDIT; only the LDIT form is shown in the Figure 10.)
  - Figure 11 uses the Inter-LATA carrier to route the call for the conflict combination Intra-LATA Local vs. Inter-LATA, Intra-LATA Toll vs. Inter-LATA, and Intra-LATA Local vs. Intra-LATA Toll vs. Inter-LATA, from Table 1 (when the Intra-LATA PIC is activated): (TYP CI CALL of "CONFL" or "TCONF" can be assigned from either LDIT, RDIT, or MLDIT; only the LDIT form is shown in Figure 11.)
  - Figure 12 uses the PTC carrier to route the call for the conflict combination Intra-LATA Local vs. Intra-LATA Toll, Intra-LATA Toll vs. Inter-LATA, and Intra-LATA Local vs. Intra-LATA Toll vs. Inter-LATA, from Table 1 (when the Intra-LATA PIC is activated): (TYP CI CALL of "CONFL" and "TCONF" can be assigned from either LDIT, RDIT, or MLDIT; only the LDIT form is used in Figure 12.)
- Assign the PTC for analog lines on the LINE/MLHLN form.

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- Assign the PTC for analog lines on the LINEFA form.
- Assign the PTC for ISDN lines on the DSL/DSLUSR form.
- Assign the PTC for the TKGRP form.
- Assign the GROUP PTC on the IDPGP form.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2, 23.8
ICF	5305	3	3R	10.3
IDPGP	5601-4	4	2D	9.10
LDIT	5300	3	3C	9.3
LINE	5109	3	1I	1.5, 1.6
MLDIT	5300	3	3C	9.15
MLHLN	5111	3	1K	1.6
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
RAR	5301	3	3F	10.10
RDIT	5300-7/8	3	3H	9.9
TKGRP	5202	3	2A	5.1

DSLUSR form (5908 Record) - The 5908 Records are used for four major purposes:

1. DSLUSR defines the associated TN(s) and status of a DSL user. The OE field on this form is the field that associates a user with a particular DSL. This DSL is defined on a DSL form (5907-1 Record) in the DSL OE field. These two fields are the only link between a DSL form and a DSLUSR form.
2. DSLUSR defines the circuit switching (voice and data) attributes of a DSL user.
3. DSLUSR defines the D-channel packet switching attributes of a DSL user.
4. DSLUSR defines the On Demand B-channel packet switching attributes of a DSL user.

For 5E9(1) and later, the PTC field was added to support the Intra-LATA PIC Secured Feature.

ICF form (5305 Record) - The 5305 Record is used to define the characteristics of Inter-LATA carriers. For 5E10 the ICLATA OPT field is split into ZPLUS OPT and ZMINUS OPT fields.

For 5E9(1) and later, the ICLATA OPT field was added to support the Intra-LATA PIC Secured Feature.

IDPGP form (5601-4 Record) - The 5601-4 Record defines the options associated with IDPs (Individualized Dialing Plans).

For 5E9(1) and later, the GROUP PTC field was added to support the Intra-LATA PIC Secured Feature.

LDIT form (5300-3 Record) - The 5300-3 and 5300-5 Records are used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Any code from 1 to 15 digits in length may be defined. The LDIT serves as both a "local" and "foreign" area translator.

For 5E9(1) and later, "TCONF" and "TOLL" valid entries were added to the list of valid entries for the TYPE OF CI CALL field to support the Intra-LATA PIC feature.

MLDIT form (5300-5 Record) - The 5300-3 and 5300-5 Records are used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Any code from 1 - 15 digits in length may be

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defined. The MLDIT serves as both a "local" and "foreign" area translator.

For 5E9(1) and later, "TCONF" and "TOLL" valid entries were added to the list of valid entries for the TYPE OF CI CALL field to support the Intra-LATA PIC feature.

LINE form (5109 Record) - The 5109 Record defines the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch.

For 5E9(1) and later, the PTC field was added to support the Intra-LATA PIC Secured Feature.

MLHLN form (5111 Record) - The 5111-1/2/3 Record, defines the individual Terminal Numbers assigned to a particular MLHG.

For 5E9(1) and later, the PTC field was added to support the Intra-LATA PIC Secured Feature.

OFCOPT form (5509 Record) - The 5509 Record is used to supply various miscellaneous office options and parameters.

For 5E9(1) and later, TOLL CARRIER and ICLATA SCD IND fields were added to support the Intra-LATA PIC Secured Feature.

PDIT form (5300-2) - The 5300-2 Record is used to define the Prefix/Feature Digit Interpreter in a 5ESS Switch. The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which are analyzed in the LDIT (Local Digit Interpreter Table). Digit analysis for all line originated calls in a 5ESS Switch start in PDIT. At least the first digit of every valid dialable code must be represented in PDIT.

For 5E9(1) and later, "TOLL" was added to the list of valid entries for the TYPE OF CI CALL field to support the Intra-LATA PIC feature.

- ***NOTE:*** For 5E9(1) and 5E9(2), in order for 0- calls to route to the RBOC, and 0+ calls to route to an IC's PTC (if populated), the TYPE OF CI CALL on the PDIT form must be "INTRA". The "INTRA" type on PDIT allows 0- calls to route to the RBOC, while TYPE OF CI CALL of "TOLL" on the LDIT form allows the 0+ calls to route to an IC's PTC.

RAR form (5301 Record) - The 5301 Record, is used to define the routing and charging for each Code Index and Screening Index combination in a 5ESS Switch.

For 5E9(1) and 5E9(2), the NONE CONF, ZERO PLUS CONF, and ONE PLUS CONF fields were added to support the Intra-LATA PIC Secured Feature. For 5E10, CONF replaces the NONE CONF, ZERO PLUS CONF, and ONE PLUS CONF fields to support the Intra-LATA PIC feature.

RDIT form (5300-7/8) - The RDIT input form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request.

For 5E9(1) and later, "TCONF" and "TOLL" were added to the list of valid entries for the TYPE OF CI CALL field to support the Intra-LATA PIC feature.

TKGRP form (5202 record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

For 5E9(1) and later, the PTC field was added to support the Intra-LATA PIC Secured Feature. Also for EDSL/PRI Trunk Groups, the DIR CON IC field was added to support the Intra-LATA PIC Secured Feature.

4. GLOSSARY

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AC	Automatic Callback
AR	Automatic Recall
ARS	Automatic Route Selection
ASP	Advanced Service Platform
BCLID	Bulk Calling Line Identification
BND	Billing Number Delivery
CAC	Carrier Access Code is the 5-digit prefix 10XXX where XXX is the 3-digit CIC Carrier Identification Code. A new CIC expansion feature was introduced in 5E9(1) that increased the CAC to 7-digit prefix (i.e. 101XXXX) with 4-digit carrier codes.
CDI	Code Index
CI	Carrier Interconnection
CIC	Carrier Identification Code
CPN	Calling Party Number/Billing
EAEO	Equal Access End Office
EAS	Extended Area Service
EDSL	Extended Digital Subscriber Line
FGD	Feature Group D (Equal Access)
ICF	Inter-LATA Carrier Form
ICLATA	Inter-LATA Carrier's Intra-LATA Capability, also same as Intra-LATA PIC
Intra-LATA PIC	Intra-LATA Presubscribed Inter-LATA Carrier Capability , also same as ICLATA
IC	Inter-LATA Carrier handles Inter-LATA calls dialed via the North American Numbering Plan, and may be allowed to handle Intra-LATA toll calls through the Intra-LATA PIC capability, or Intra-LATA loc calls dialed with a CAC.
IND	Indicator
Intra-LATA LOCAL CALLS	All Intra-LATA calls that are not defined to be Intra-LATA PIC/Intra-LATA Toll calls are referred to as Intra-LATA Local calls in this document. These calls are carried by the LEC unless dialed with a CAC (Carrier Access Code) for an IC (Inter-LATA Carrier) with approval to carry Intra-LATA calls.
Intra-LATA PIC	Inter-LATA Carrier's Intra-LATA Capability described in this document. Also, used synonymously with ICLATA an Intra-LATA toll.
Intra-LATA PIC/Intra-LATA TOLL/TOLL Calls	Intra-LATA PIC or Intra-LATA Toll Calls as defined in this document are any Intra-L calls which are open to competition. Usually such calls are inter-s and are not defined by the tariff as a Local Calling Area call or an EAS (Extended Area Service) call. The LEC defines which calls are Intra-LATA PIC/Intra-LATA Toll calls.
LASS	Local Area Signalling Service
LATA	Local Access and Transport Area is a defined non- overlapping geographical area where

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	an EAEO (Equal Access End Office) and/or AT (Access Tandem) can provide a carrier access to the local exchan
LEC	Local Exchange Carrier, the Local Telephone Company th owns the switch, provides the local loop, and serves as the default carrier for Intra-LATA calls.
NPA	Numbering Plan Area
ODA	Office Data Assembler
ORM	Optically Remote Module
PF	Private Facility
PIC	Presubscribed Inter-LATA Carrier, an IC which handles Inter-LATA calls dialed without a CAC. A PIC can be associated with a line, an IDP (Individualized Dialing Plan) Group, or with the entire office.
PIC2	Presubscribed Intra-LATA PIC/Intra-LATA Toll Carrier
PRI	Primary Rate Interface
PTC	Presubscribed Intra-LATA Toll Carrier, an IC (or LEC) which handles Intra-LATA toll calls dialed without a CAC. A PTC can be associated with a line, an IDP (Individualized Dialing Plan) group (CENTREX), or with the entire office.
RSM	Remote Switching Module
TCAP	Transactions Capabilities Applications Part

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Figure 1 COMPETITION CATEGORIZATION ON A PRE-SUBSCRIPTION BASIS

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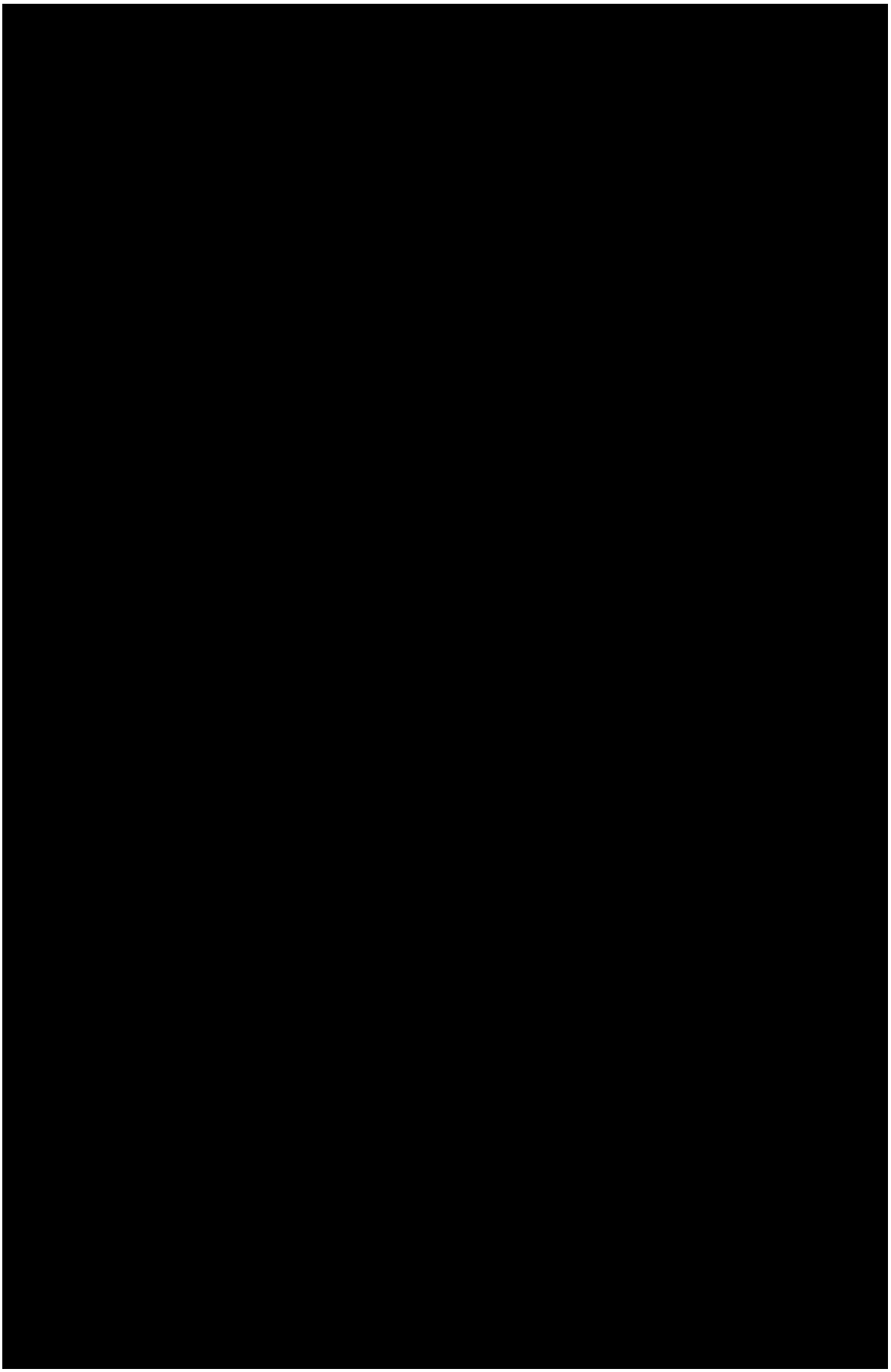

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Figure 2 FEATURE FLOW DIAGRAM Intra-LATA PIC DIRECT CALL

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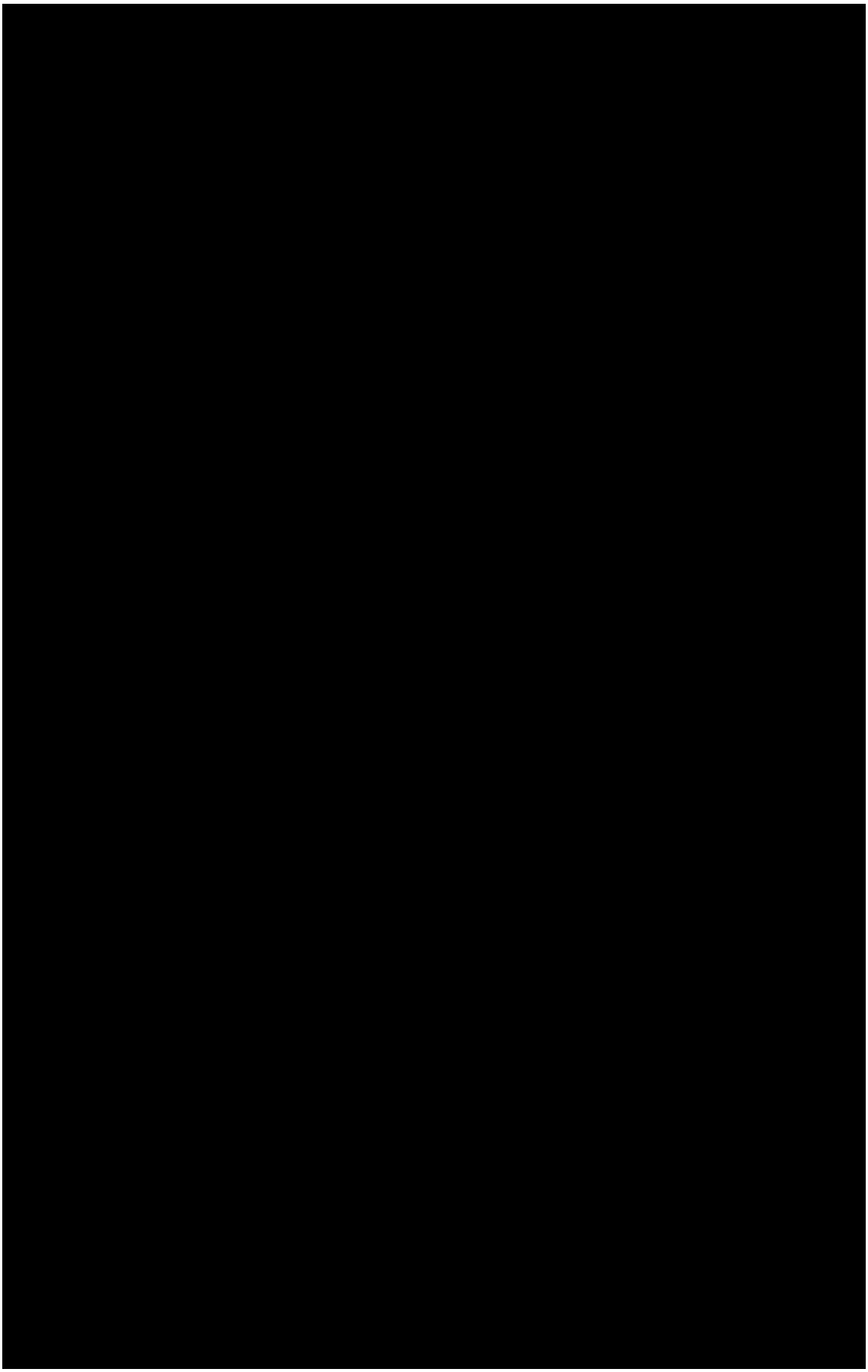

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Figure 3 FEATURE FLOW DIAGRAM Intra-LATA PIC 0+ OPERATOR CALL

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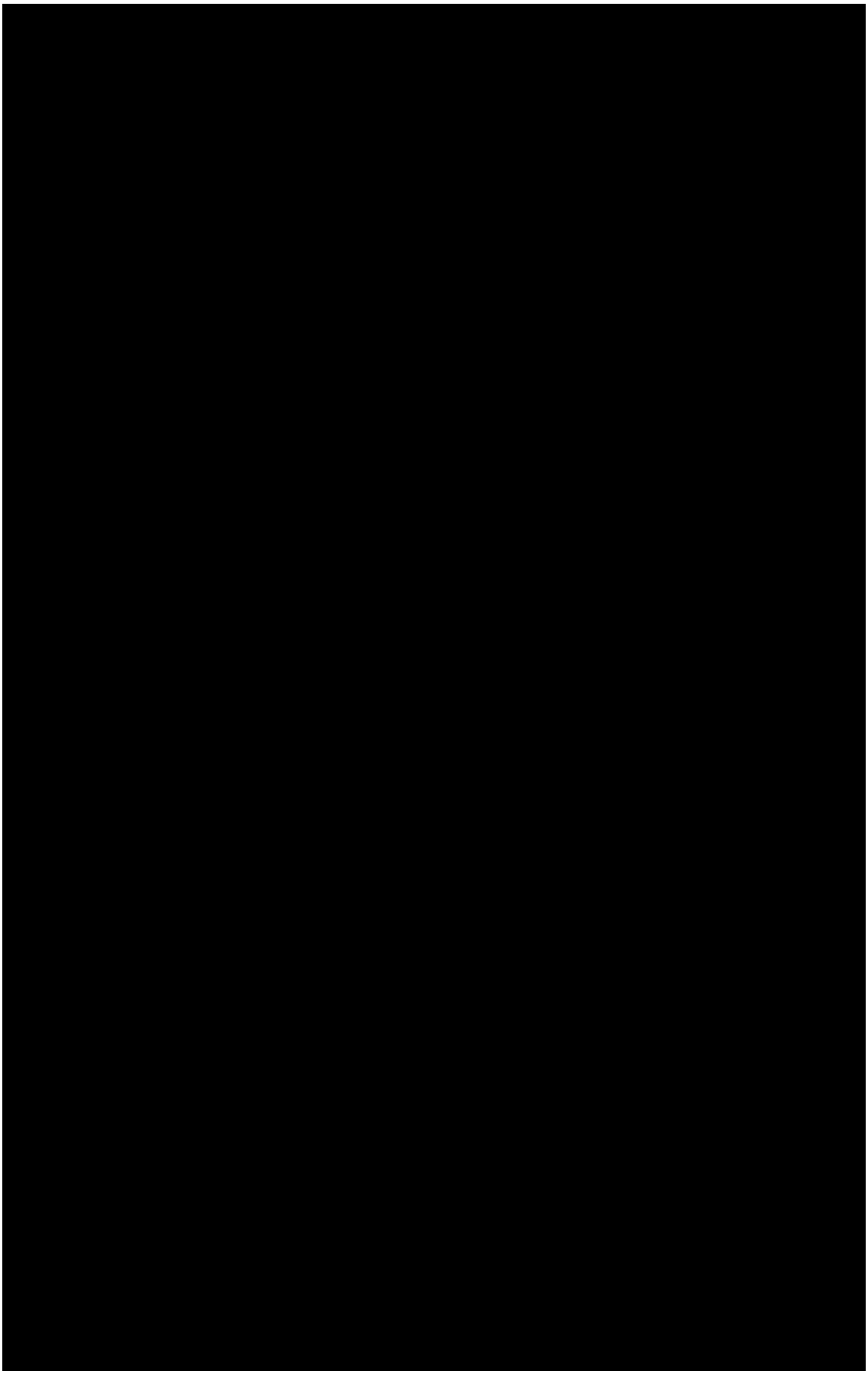

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Figure 4 FEATURE FLOW DIAGRAM Intra-LATA PIC 0- OPERATOR CALL

ICLATA CARRIER SELECTION							
TYPE CI CALL	**DIALED CAC**	**PREFIX**	**ICLATA OPT (ZMINUS OPT)***	**ICLATA OPT (ZPLUS OPT)***	**INTRA LATA**	**USE CIC**	**CSI MATCH**
TOLL	NONE	1+/NONE	-	-	-	PTC	PTC
TOLL	NONE	0+	-	N	-	PTC	PTC
TOLL	NONE	0+	-	Y	-	LEC	N/A
TOLL	NONE	0-	N	-	-	PTC	PTC
TOLL	NONE	0-	Y	-	-	LEC	N/A
TOLL	XXX	1+/NONE	-	-	-	XXX	PTC
TOLL	XXX	0+	-	N	-	XXX	PTC
TOLL	XXX	0+	-	Y	-	LEC	N/A
TOLL	XXX	0-	N	-	-	XXX	PTC
TOLL	XXX	0-	Y	-	-	LEC	N/A
INTER	XXX	-	-	-	-	XXX	PIC
INTER	NONE	-	-	-	-	PIC	PIC
INTRA	XXX	-	-	-	Y	XXX	PIC
INTRA	XXX	-	-	-	N	ANN	N/A
INTRA	NONE	-	-	-	-	LEC	N/A

*Note: In 5E9(1) and 5E9(2), the ICLATA OPT field on the ICF form is the same for both 0- and 0+ calls. With 5E10 and later, the ICLATA OPT field is split into two fields, ZMINUS OPT and ZPLUS OPT.The following is an explanation of the values used for each attribute of the table above:

- TYPE CI CALL
  - TOLL : Intra-LATA Toll
  - INTER : Inter-LATA
  - INTRA : Intra-LATA Local
- DIALED CAC
  - XXX : The user dialed 10XXX or 101XXXX
  - NONE : The user did not dial a CAC
- PREFIX
  - 1+/NONE : The user dialed a call with a 1+ or NONE prefix
  - 0+ : The user dialed a call with a 0+ prefix
  - 0- : The user dialed a 0- call
- ICLATA (ZMINUS) OPT
  - N : Carrier routes the 0- Intra-LATA PIC call
  - Y: LEC routes the 0- Intra-LATA PIC call
- ICLATA (ZPLUS) OPT
  - N : Carrier routes the 0+ Intra-LATA PIC call

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- Y : LEC routes the 0+ Intra-LATA PIC call

- INTRA LATA
  - N : Carrier not allowed to carry Intra-LATA calls
  - Y : Carrier allowed to carry Intra-LATA calls

- USE CIC
  - XXX : Dialed CAC will carry the call
  - PIC : Presubscribed Inter-LATA carrier will carry the call
  - PTC : Presubscribed Intra-LATA Toll carrier will carry the call
  - LEC : Local Exchange Carrier will carry the call
  - ANN : Announcement will be provided

- CSI MATCH
  - PIC : Compare against PIC if CAC dialed to determine CSI
  - PTC : Compare against PTC if CAC dialed to determine CSI
  - N/A : Not Applicable
  - Generally, ``-'' in a field means it does not matter.

Figure 5 Intra-LATA PIC SELECTION

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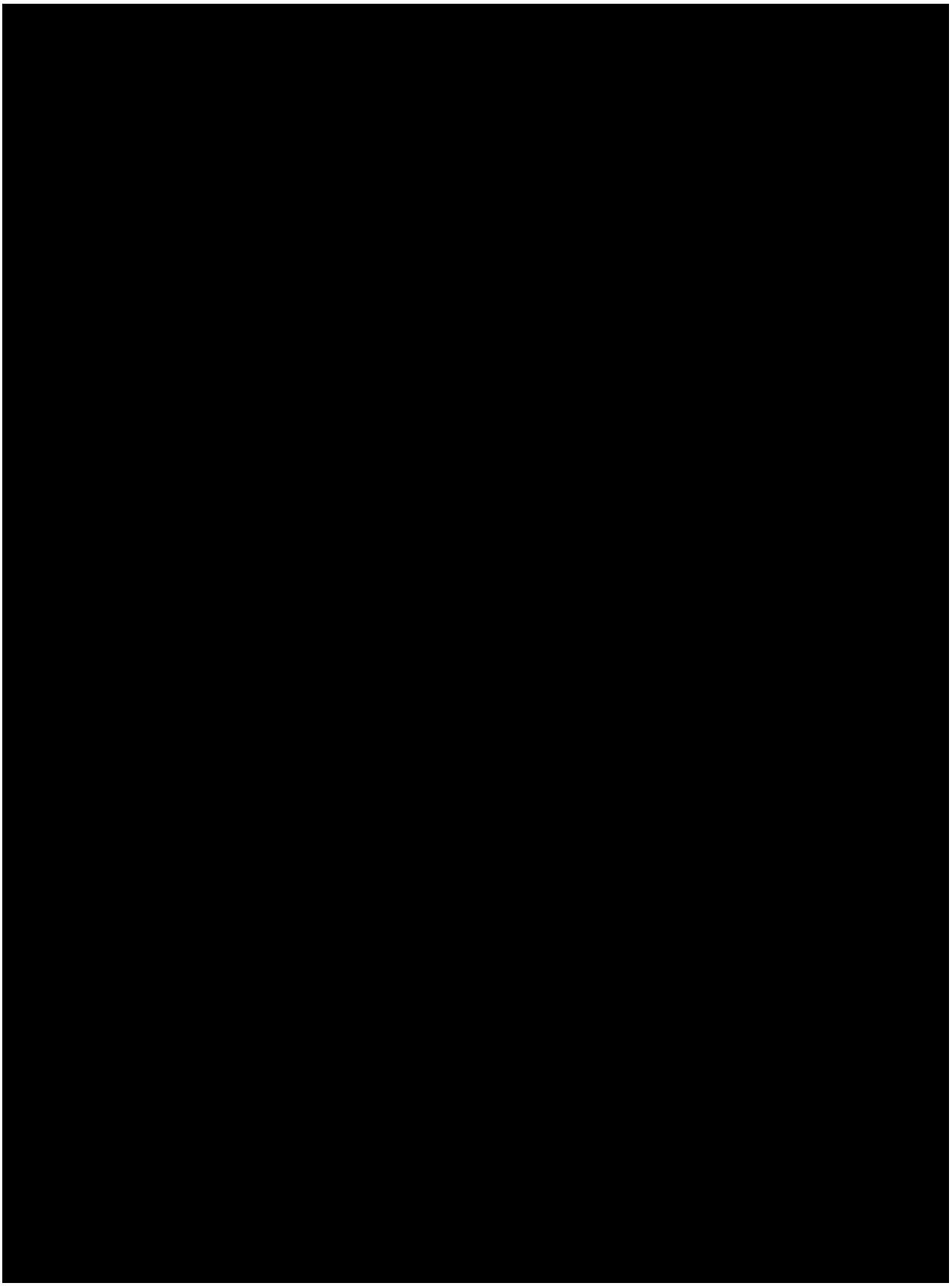

Figure 6 CALL FLOW FOR Intra-LATA PIC (1) + 7/10 DIGIT CALL

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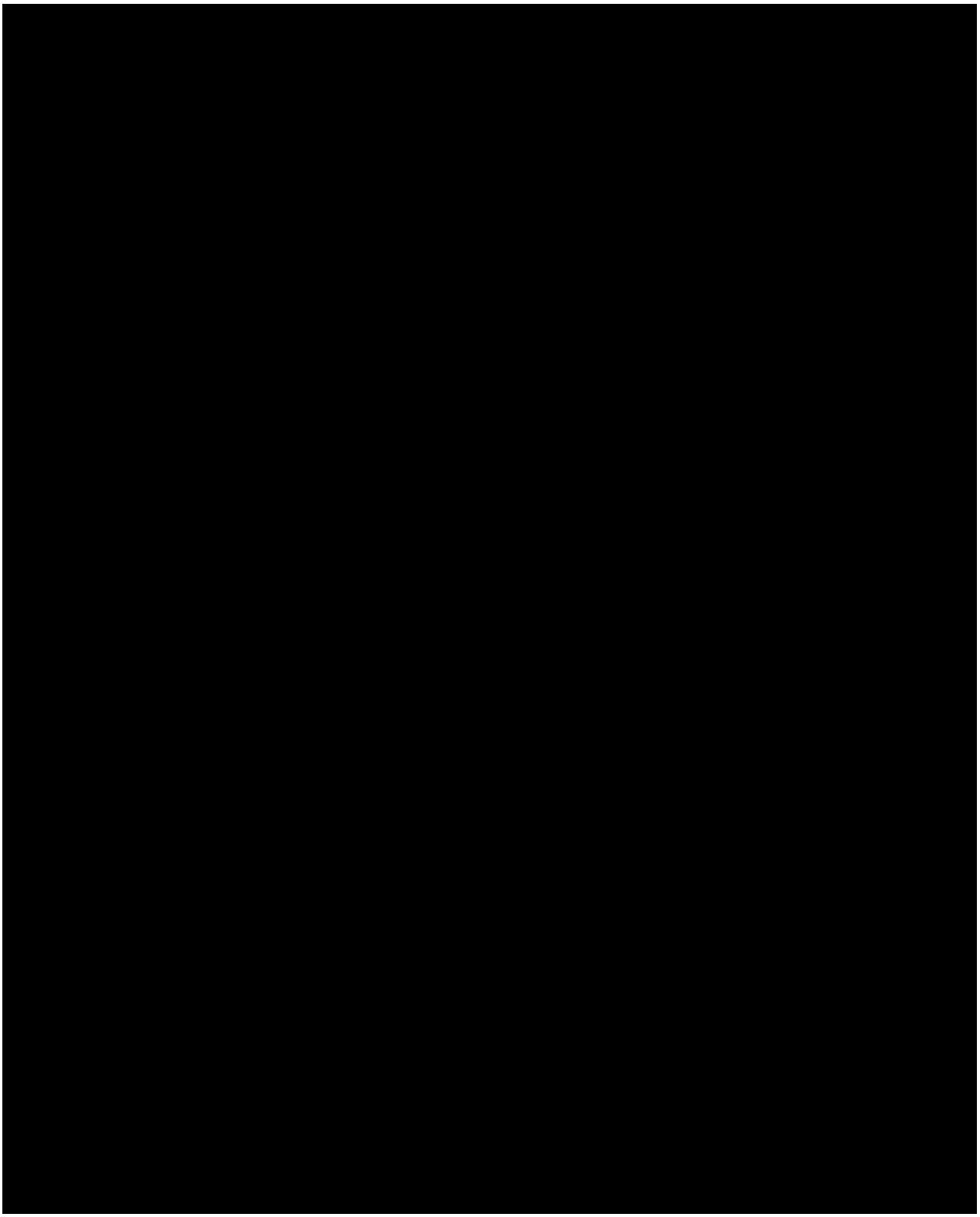

Figure 7 CALL FLOW FOR Intra-LATA PIC CONFLICT FOR Intra-LATA LOCAL AND Intra-LATA TOLL CALLLS

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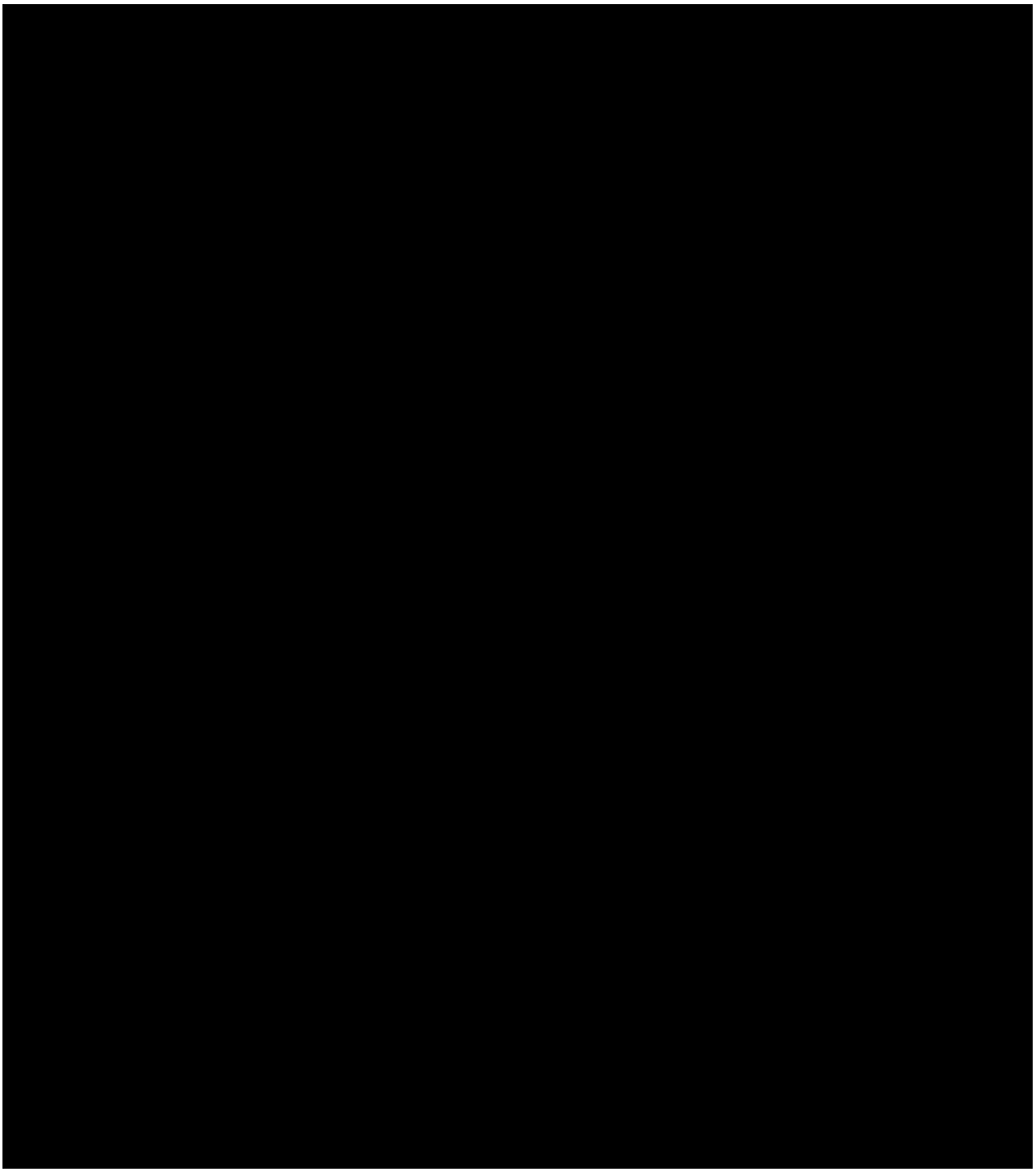

Figure 8 FORM FLOW FOR ASSIGNING Intra-LATA PIC CAPABILITY

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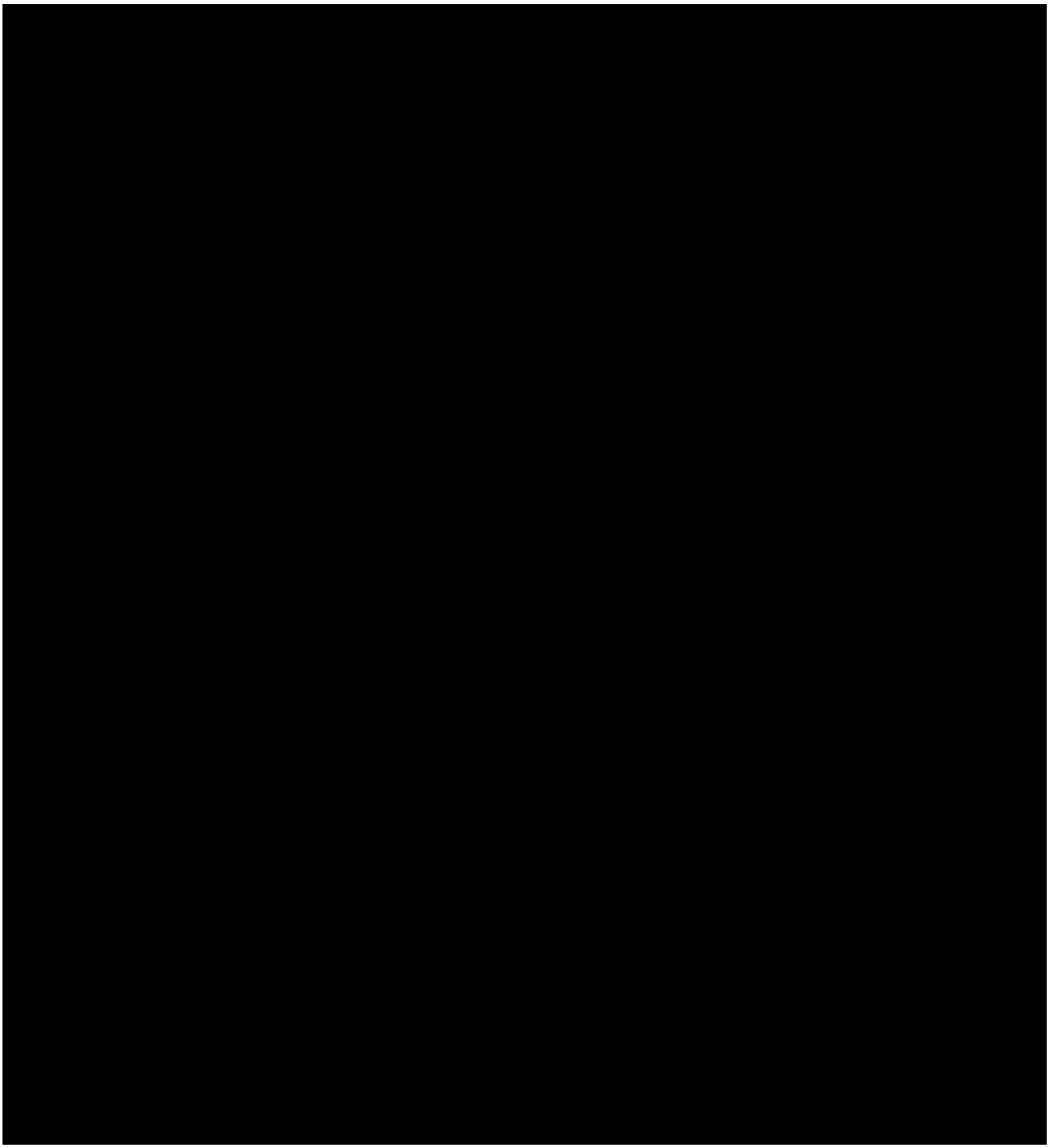

Figure 9 FORM FLOW FOR CONFLICT RESOLUTION USING THE EXISTING CONFLICT RESOLUTION

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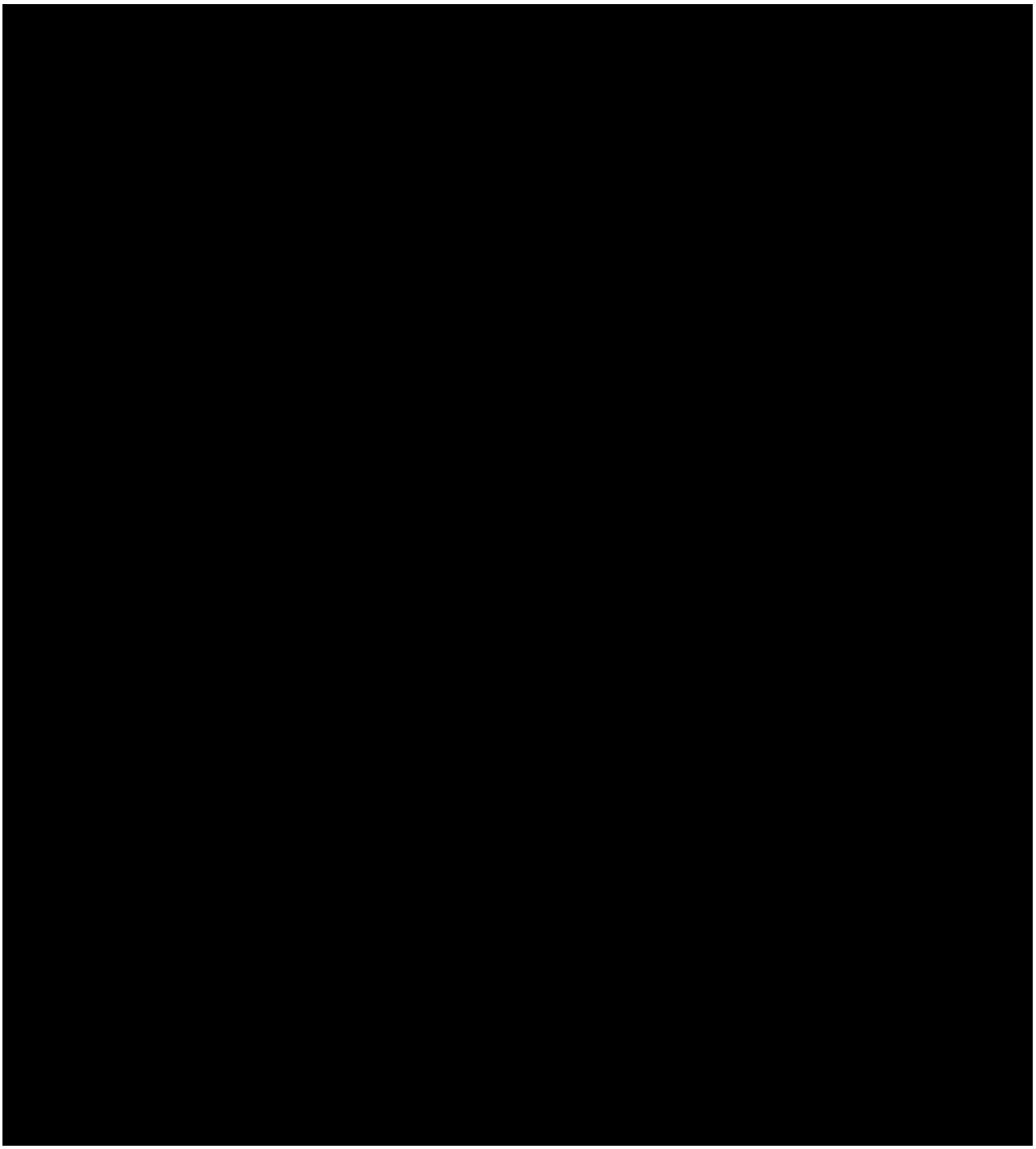

Figure 10 FORM FLOW FOR CONFLICT RESOLUTION USING THE LEC TO ROUTE THE CALL

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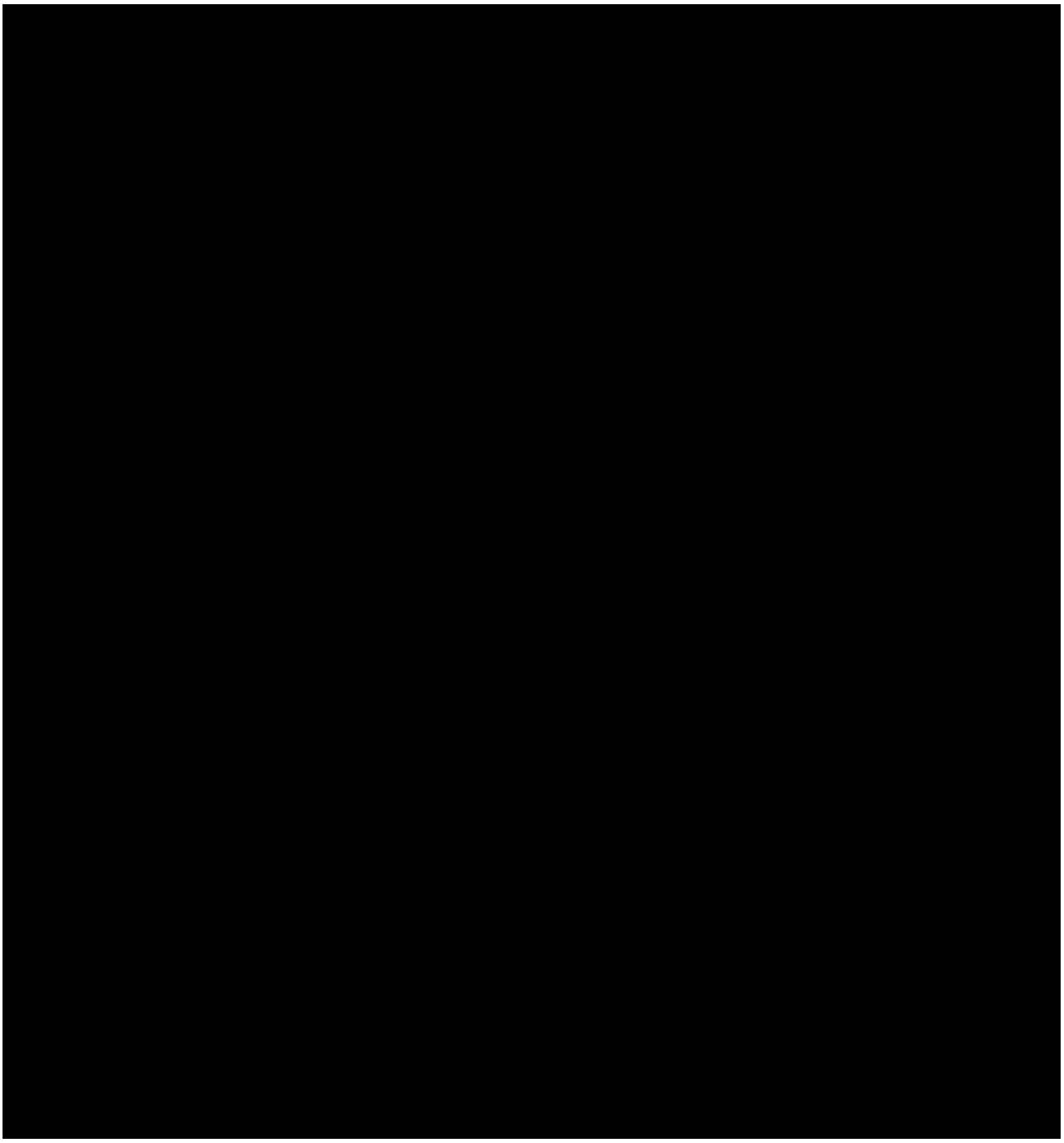

Figure 11 FORM FLOW FOR CONFLICT RESOLUTION USING THE Inter-LATA CARRIER TO ROUTE THE CALL

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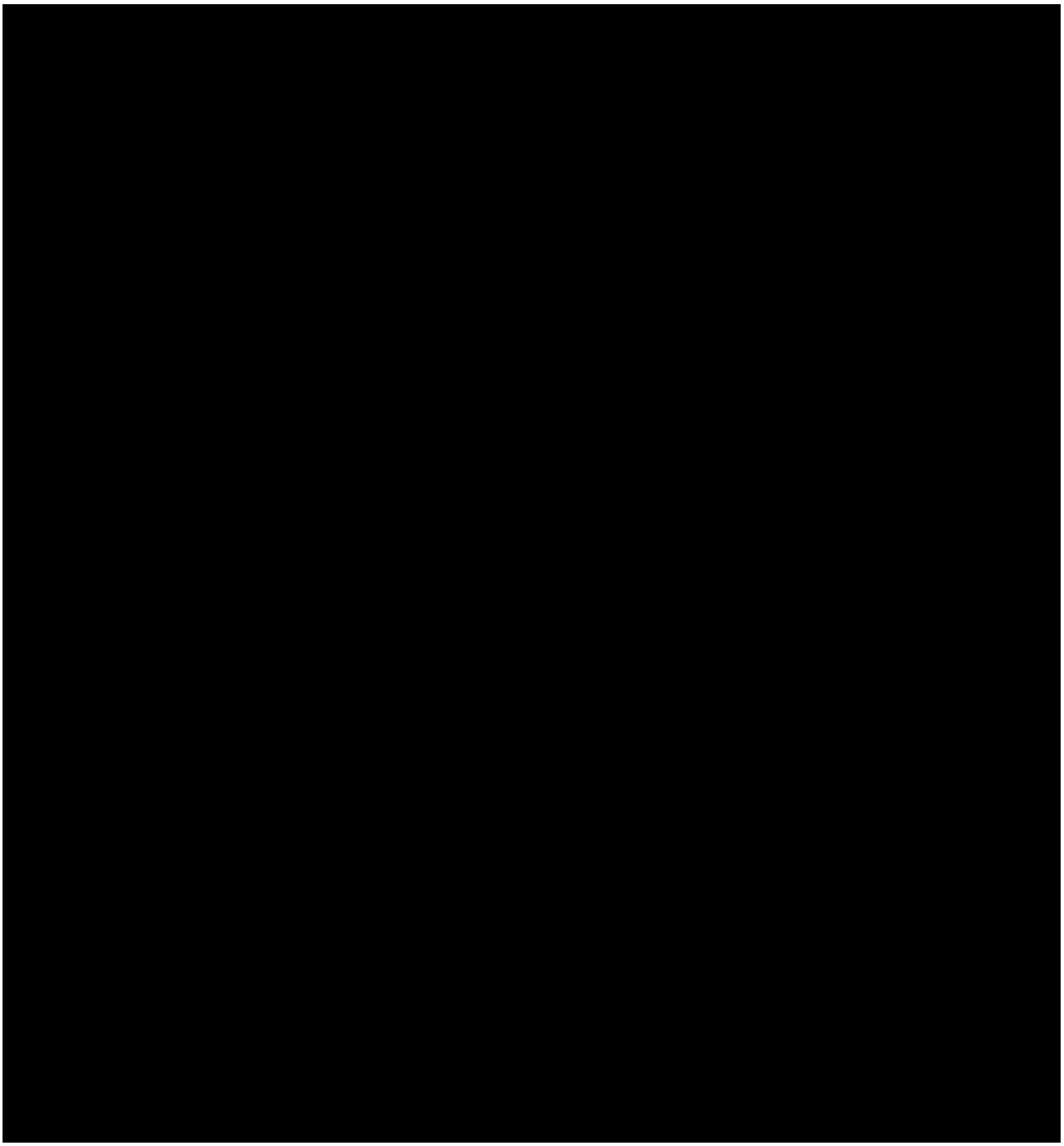

Figure 12 FORM FLOW FOR CONFLICT RESOLUTION USING THE PTC CARRIER TO ROUTE THE CALL

SEC. 4A150: ADDITIONAL ASP OHD INTERACTIONS WITH ACCOUNT CODE AND CPN/BN

1. BACKGROUND

As implemented in 5E9(1), ASP (Advanced Services Platform) Release 0.1B feature prohibited the assignment of BRCS features and an OHD (Off-Hook Delay) trigger to the same line. SCN (Service Circuit Node) services were not allowed on the same line as an OHD trigger. The ASP Interworking with National ISDN and ISAT secured feature (SFID 139) and the ASP OHD BRCS Interworking secured feature (SFID 137) provide the ability to assign an OHD trigger to a National ISDN station and the ability to assign several

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BRCS features to an analog or National ISDN station concurrently with an ASP OHD trigger.

2. FEATURE DESCRIPTION

The Additional ASP OHD (Off-Hook Delay) Interactions with Account Code and CPN/BN (Calling Party Number/Billing Number) feature is a secured feature using SFID (Secured Feature ID) 150 and must be purchased before being activated. The feature number for this feature is 99-5E-2477.

Available with 5E9(1) and later, the Additional ASP OHD Interactions with Account Code and CPN/BN secured feature is necessary to provide a variety of SCN services. This feature allows an Account Code, Calling Party Number/Billing Number Delivery or RND (Redirecting Number Delivery) feature to be assigned to a line that is also assigned an ASP OHD trigger.

This feature is in addition to the ASP Interworking with National ISDN and ISAT and ASP OHD BRCS Interworking secured features that assign BRCS features to an analog or National ISDN station concurrently with an ASP OHD trigger. For more information on these features, see Division 2, Section 4A137 and Division 2, Section 4A139, respectively. This feature is not dependent upon either of the above mentioned interworking features. However, the ASP Interworking with National ISDN and ISAT secured feature must be activated in order to provision an ASP OHD trigger on an NISDN line.

2.1 Feature Interaction

When a line is assigned an Account Code feature and also has an ASP OHD trigger, the account code feature may be invoked by dialing an Account Use dialed code or pressing an Account Code feature button. The user is prompted to enter an account code and a valid number of Account Code digits. If the user dials additional digits, the digits are collected and the OHD trigger causes an Info_Collected query message to be sent to the SCP (Service Control Point). If no additional digits are dialed after the account code is entered, the query will not be sent. The only exception to this scenario is the case in which the Account Code use code is associated with a valid digit pattern (which would ordinarily encounter the OHD trigger if dialed from the line) in the Account Code Association table. In this case the digits in the Account Code Association table are analyzed and the Info_Collected query sent to the SCP.

If an Account Code is to be used for a line that has an OHD feature assigned and active, the OHD trigger provisioned for the line is active, and the trigger's administration status is unlocked, the Account Code procedures must be invoked before address digits are collected. Once address digits are collected, the OHD trigger will cause an Info_Collected query to be launched and the user will not be prompted for an Account Code.

For example, assume line A has an AMA (Automatic Message Accounting) restricted account code group, and account code and ASP OHD features assigned. When user A dials a DN (Directory Number) that would result in a billable call, the OHD trigger will cause an Info_Collected query to be sent to the SCP. The user is not prompted to enter an account code.

This contrasts to the case in which the ASP OHD feature is not assigned to the line. Assume line B has an AMA restricted account code group and an account code feature assigned. When user B dials a directory number that would result in a billable call, the user is prompted to enter an account code.

Account code digits will not be included in the query message to the SCP.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields for this feature.

This feature is a secured feature and is activated by setting the SFID 150 ACT field to "Y" on the SFSYS form (5713-1 Record). Before activating this feature, the base 5E9(1) ASP Release 0.1B feature must be activated by setting the SFID 126 ACT field to "Y" on the SFSYS form.

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4. GLOSSARY

AMA	Automatice Message Accounting
ASP	Advanced Services Platform
BRCS	Business and Residential Customer Services
CPN/BN	Calling Party Number/Billing Number
DN	Directory Number
ISAT	ISDN Attendant
OHD	Off-Hook Delay
RND	Redirecting Number Delivery
SCN	Service Circuit Node
SCP	Service Control Point

SEC. 4A151: PROTOCOL MONITORING TRANSLATOR FOR NATIONAL ISDN

1. FEATURE DESCRIPTION

The feature number for the Protocol Monitoring Translator for National ISDN (Integrated Services Digital Network) feature is 99-5E-1539. This feature is controlled by SFID (Secured Feature ID) 151 and is deployed in a Software Update for the 5E9(1) and 5E9(2) Software Releases.

The NI (Network Interconnect) Protocol Translator capability is dependent on the AM Based Protocol Monitor Translator feature (feature number 99-5E-0796, SFID 32).

The Protocol Monitoring Translator for National ISDN feature allows the 5ESS Switch to translate messages and message components which were introduced by the National ISDN Protocol changes. In addition, triggering of Protocol Monitoring sessions on new NI messages is now possible.

New Q.931 message translation and triggering capability includes:

- Codeset 0 (CCITT Encoding) Messages:

  USER INFORMATION
  SUSPEND REJECT
  RESUME REJECT
  HOLD
  SUSPEND
  RESUME
  HOLD ACKNOWLEDGE
  SUSPEND ACKNOWLEDGE
  RESUME ACKNOWLEDGE
  HOLD REJECT
  RETRIEVE
  RETRIEVE ACKNOWLEDGE
  RETRIEVE REJECT
  SEGMENT
  FACILITY
  REGISTER

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FACILITY ACKNOWLEDGE
NOTIFY
FACILITY REJECT
CONGESTION CONTROL

- Codeset 6 (Network-Specific Encoding) Messages:

  KEY HOLD
  KEY RELEASE
  KEY SETUP
  KEY SETUP ACKNOWLEDGE

New Q.931 Information Element translation capability:

- Codeset 0 (CCITT Encoding) Information Elements:

  Segmented Message
  Connected Number
  Extended Facility
  Call Identity
  Standard Facility
  Notification Indicator
  Display
  Information Request
  Standard Feature Activation
  Standard Feature Indication
  Standard Service Profile ID
  Standard Endpoint ID
  Precedence Level Information
  Connected Number
  Connected Subaddress
  Calling Party Subaddress
  Called Party Subaddress
  Redirecting Number
  Redirection Number
  Low-Layer Compatibility
  Hi-Layer Compatibility

- Codeset 5 Information Elements:

  Operator System Access
  Standard Display

- Codeset 7 Information Elements:

  Standard Call Appearance

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT fields for SFIDs 32 and 151 on the SFSYS form (5713-1 Record) must be set to "Y".

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3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 32 and 151 to "Y".

SEC. 4A152: ADVANCED SERVICES PLATFORM 3/6/10 DIGIT TRIGGER PRE-QUERY SCREENING

1. FEATURE DESCRIPTION

ASP (Advanced Services Platform) 3/6/10 Digit Trigger Pre-Query Screening is a secured feature using SFID (Secured Feature ID) 152 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-2848.

Available with 5E9(1) and later, the ASP 3/6/10 Digit Trigger Pre-query Screening feature provides the ability to screen 3/6/10 digit triggers and inhibit the query to the SCP (Service Control Point) if the trigger fails screening. It is applicable to both AIN (Advanced Intelligent Network) Release 0 and AIN Release 0.1 protocol triggers.

When a 3/6/10 digit trigger is encountered as the first trigger on a call, it is screened using the information on RAR (Rate and Route) form referenced using the SCR (Screening Index) of the originating facility, the dialed or impulsed prefix (NONE, 0+ or 1+) and the CDI (Code Index) derived from the translation of the dialed number.

The 3/6/10 digit trigger will pass screening if the referenced SCREENING DATA entry either does not exist or contains one of the following:

- RTI is "REGL" on the RAR form (5301 Record)
- RTI on the RAR form matches the RTI from the translation of the 3/6/10 digit DN in the Office Dialing Plan
- OFFCOD on the RAR form matches the OFFCOD from the translation of the 3/6/10 digit DN in the Office Dialing Plan

For all other cases, the 3/6/10 digit trigger will fail screening.

If the 3/6/10 digit trigger passes screening, the call proceeds as an ASP call, and the ASP query is sent to the SCP. If it fails screening, no query is sent, the call proceeds as a non ASP call, and the call is routed via the RTI or OFFCOD specified by the SCREENING entry.

Note that the dialed or derived carrier is not used either in screening the 3/6/10 digit trigger or in routing the call if it fails screening.

Screening is done for 3/6/10 digit triggers encountered as the first trigger on any of the following originations:

- All line originations currently allowed to encounter a 3/6/10 digit trigger
- Extended Digital Subscriber Line (EDSL and EDSLHM)

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- Private Facility Trunks (PF, PFITT, PFLASH)

Screening is not done in any of the following cases:

- For originations other than those listed above
- For a 3/6/10 digit trigger detected as a subsequent trigger on a call
- For a 3/6/10 digit trigger detected in routing an SSP800 call
- For a 3/6/10 digit trigger DN collected after an FCD (Feature Code Dialing) trigger or CDP (Custom Dialing Plan) trigger.
- For a 3/6/10 digit trigger DN collected after an Off Hook Delay Trigger, unless the 3/6/10 digit trigger specifies escape.
- For originations with Type of CI Call of "TCONF" when Option ID 743 (Pre-Query Swreening for Type of CI' Call TCONF) is not active.

2. FEATURE ASSIGNMENT

There are no new forms or new fields for this feature. The only translation needed to enable this feature is to set the SFID 152 ACT field to "Y" on the SFSYS form (5713-1 Record).

If the feature is not enabled, 3/6/10 digit triggers will not be screened pre-query which is consistent with the existing functionality.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. SFID 152 must have the field ACT set to "Y" to enable the feature.

SEC. 4A153: ASP DEFAULT ROUTING FOR 3/6/10 DIGITS

1. FEATURE DESCRIPTION

The feature number for the ASP (Advanced Services Platform) Default Routing for 3/6/10 digits is 99-5E-2533. This secured feature (SFID 153) is available for 5E9(1) and later Software Releases. The feature allows calls that initiate an AIN (Advanced Intelligent Network) 3/6/10-digit query and encounters failures in the response to provide default routing to the dialed DN (Directory number) or the 13A announcement. The type of default routing provided will be provisioned via the use of a new field DFLT RT which will be defined on each form where a 3/6/10-digit trigger can be defined.

When the 5ESS-2000 Switch encounters a 3/6/10-digit trigger, an ASP TCAP (Transaction Capabilities Application Part) query is sent to an SCP (Service Control Point). If a fatal protocol error or an application error is detected in the response, or the response is not received prior to the ASP global timer expiring, then current 5ESS-2000 Switch operations will route the call to reorder.

When ACG (Automatic Call Gapping) is active, the call will be routed to an NCA (No Circuits Available) announcement.

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When an error is encountered in the response to a 3/6/10-digit query or ACG is active, the provisioned trigger data is checked to determine whether default routing applies. Default routing treatment will allow the call to be routed to the dialed number, provided the number is a valid number in the Public Office Dialing Plan, or to an office-wide 13A announcement.

The default routing options are:

- None. No default routing applies. Existing error treatment will be provided.
- Dialed DN. Route the call to the dialed 3/6/10-digit trigger directory number.
- Announcement. Route the call to the ASP 3/6/10-digit Trigger Default Routing 13A announcement.

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 153 is set to "Y" on the SFSYS form.

When the feature has been enabled, ASP DEFAULT ROUTING for 3/6/10 can be provisioned on the PDIT form (5300-2 Record), LDIT form (5300-3 Record), IDDD form (5307 Record), RDIT form (5300-7a Record), or the MLDIT form (5315 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
PDIT	5300-2	3	3B	9.2
LDIT	5300-3	3	3C	9.3
IDDD	5307	3	3T	9.6
RDIT	5300-7A	3	3H	9.9
MLDIT	5315	3	3AB	9.15

SFSYS form (5713-1 Record) - This form is used to activate secured features. The following secured feature SFID 153 should be set to "Y" to activate this feature.

PDIT form (5300-2 Record) - The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table).

LDIT form (5300-3/5 Record) - This form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

IDDD form (5307 Record) - This form is used for IDDD (International Direct Distance Dialing) Country Access Codes.

RDIT form (5300-7/8 Record) - The RDIT form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request.

MLDIT form (5300-3 Record) - This form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch.

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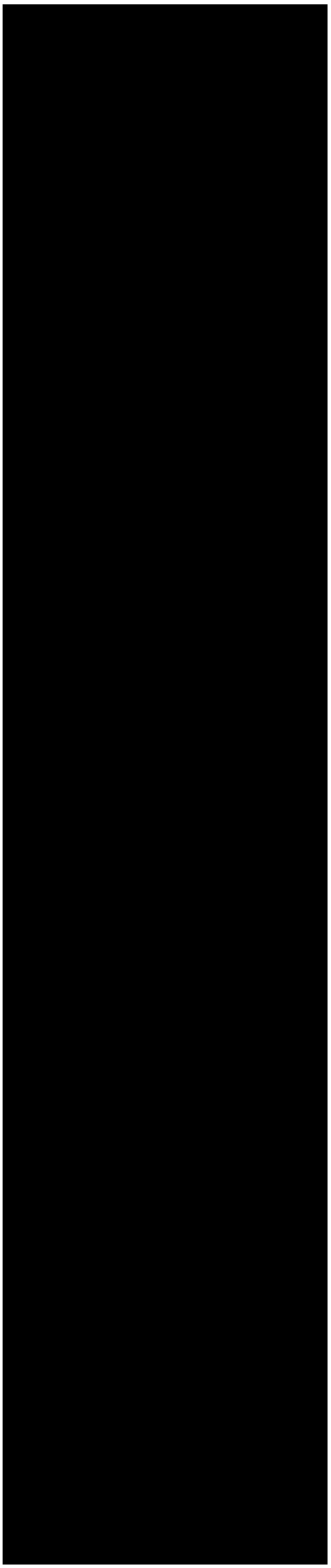

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Figure 1 FORM FLOW FOR ASP DEFAULT ROUTING FOR 3/6/10 DIGITS

SEC. 4A154: TOLL CONNECTING ROUTING AND BILLING FEATURE

1. FEATURE DESCRIPTION

The Toll Connecting Routing and Billing feature is a secured feature (SFID 154) and must be purchased before being activated. The feature number for this feature is 99-5E-2851.

Available with 5E9(1) and later, this feature provides a means of accepting SS7 (Signaling System 7), FGD (Feature Group D) signaling, or EAMF (Equal Access Multifrequency) signaling from an EAEO (Equal Access End Office) or AT (Access Tandem) switch and to switch the traffic to an IC (Interexchange Carrier) for completion.

An example of this configuration is:

EAEO □->> AT□->> Service Provider □->> IC

Control of the feature operation is based on trunk groups having a trunk class of "TTOLLCON" and the office having SFID 154 activated.

Specifically this feature provides the following:

- Routes an incoming SS7 IAM (Initial Address Message) containing the 10 digit called number, the ANI (Automatic Number Identification), and the OLI (Originating Line Identity) or an incoming EAMF trunk to either an SS7 outgoing group to an IC or an EAMF group to an IC. The called number, ANI, and OLI are passed to the IC. Routing is based on the called number. No carrier ID (Identification) is received from the LEC (Local Exchange Carrier). Any routing that is needed and is based on the carrier ID must be done with separate trunk groups for each carrier from the LEC.

- Routes an incoming SS7 IAM containing an international destination, an ANI, an OLI, and a TNS (Transit Network Selection) (containing carrier ID and circuit code) or an incoming EAMF international call to an SS7 outgoing group, to an IC, or to an EAMF group to an IC. The called number, ANI, OLI, and carrier ID/circuit code information will be passed to the IC with the appropriate signaling.

- Routes 0+, 0- calls received on an SS7 or EAMF incoming group to either an SS7 outgoing group or EAMF outgoing group. 0+ calls are routed the same as non operator requested calls. If 0+ and 1+ calls are to be separated for the IC, they must be separated from the LEC on two trunk groups.

- Records FGDOL (Feature Group D Originating LATA) AMA (Automatic Message Accounting) records on calls received on "TTOLLCON" trunk classes. The FGDOL record will be populated with information available to the call, that is, not all tables will be populated as they would be at an EAEO. The AMA record will not contain the carrier ID because it is not signaling from the LEC. Operator information will not be stored, all calls will be marked as 1+ calls. The carrier ID will be recorded if it is received from the LEC.

  For the specific case of an EAMF call where the tandem cuts through after the first stage of digits (0ZZ-XXX or 1NX-XXX-CCC), the AMA record will not contain the ANI or the dialed number.

- Handles the CRM (Circuit Reservation Message) from the LEC indicating MF-SS7 interworking in the LEC network. Before this feature the message was only handled for trunk groups with a trunk class of "LATA".

2. FEATURE ASSIGNMENT

To enable this feature, SFID 154 must have the field ACT set to "Y" on the SFSYS form.This feature

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becomes assigned to any trunk group with a "TTOLLCON" trunk class when SFID 154 is activated. This feature does not change any existing capabilities of trunk groups with a "TTOLLCON" trunk class.

Specific translations are needed to provide the capabilities outlined under the feature description section. These translations are specific to the Toll Connecting and Routing Billing Feature.

2.1 Routing 10 - Digit Incoming 0+ and 1+ Calls

To route 10 - digit incoming 0+ and 1+ calls, the following translations are needed. The indication of 0+ or 1+ is contained in the SS7 IAM Called Party number Nature of Address field and is not used by the 5ESS Switch but is passed on. (See Figure 1)

- TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Set TRKCLS to "TTOLLCON".

- DAS form (5300-1 Record) - This form is used to associate the translation environment for the incoming trunk group with trunk class "TTOLLCON". The DAS is obtained from the Trunk Group (5202-1 Record).

- INDIT form (5309 Record), LDIT (5300-3/5 Record) - These forms are used to translate called digits. At a minimum digits 2 through 9 must be populated to handle all NPAs (Numbering Plan Area) in the NANP (North American Numbering Plan). Calls may be routed directly from the INDIT using a TYPE OF CI CALL set to "NONCI", NBR OF DIGITS EXPECTED set to 10, and an appropriate ROUTE INDEX set to an SS7 or EAMF trunk group. Calls may also be routed using the LDIT with CALL TYPE set to "NORMAL", and TYPE OF CI CALL set to "NONCI".

- RAR form (5301 Record) - All calls are handled by setting the PFX field to "NONE". The SCR is obtained from the Trunk Group Record and the CODE INDEX is obtained from the INDIT or LDIT record.

- RTIDX form (5303 Record) - The route index used to derive the outgoing trunk group must be set up correctly for SS7 or MF signaling. For SS7 signaling, the SIGNALING PROTOCOL must be "TRAD". The SS7 parameters such as calling party number, charge number, and originating line information will then be passed by the 5ESS Switch. For EAMF signaling trunks, the SIGNALING PROTOCOL must be "EA", or CI ROUTE TYPE must be "DTG", and ANI OUTPULSING must be "Y" in order to send the ANI to the next switch.

2.2 Routing International Calls

Both international DDD (Direct Distance Dialing) calls, and operator assisted calls are handled using existing 5ESS Switch AT (Access Tandem) capabilities. The indication of direct dialed versus operator assisted is contained in the Circuit Code field of the SS7 IAM Transit Network Selection parameter. The following translations are needed to route international calls. (See Figure 2)

- CKTCODE form (5311 Record) - This form is used to convert the Circuit Code contained in the SS7 IAM Transit Network Selection parameter to the equivalent 1NX code used for EAMF international signaling. Typically, CKT CODE equal to 1 yields DIG equal to 138, and CKT CODE equal to 2 yields DIG equal to 158.

- DAS form (5300-1 Record) - This form is used to associate the translation environment for the incoming trunk group with trunk class "TTOLLCON". The DAS is obtained from the TKGRP form (5202-1 Record).

- INDIT form (5309 Record) - This form is used to map 138 or 158 to the correct call type. For INCOMING DIGITS equal to 138 or 158, TYPE OF CI CALL must equal "INC", NBR OF DIGITS EXPECTED is equal to 9 (this correlates to the MF 1NX-XXX-CCC signaling sequence.), LDIT is equal to "N", and a valid CODE INDEX must be populated.

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- CDIM form (5300-6 Record) - This form is used to route the international call to the correct trunk group. The CODE INDEX is from the INDIT, and the CARRIER ID is from the SS7 IAM Transit Network Selection parameter. The CARRIER CDI (Code Index) and CARRIER RI (Route Index) are used in conjunction with the SCR field from the incoming TKGRP form to route the call.

- RAR form (5301 Record) - International calls are handled by setting the PFX field to "NONE". The SCR value is obtained from the TKGRP Record and the CODE INDEX is obtained from the CDIM record.

- RTIDX form (5303 Record) - The route index used to derive the outgoing trunk group and is obtained from the CDIM record and must be set up as follows: the SIGNALING PROTOCOL must be "INC", CI ROUTE TYPE must be "DTG", and ANI OUTPULSING must be "Y" in order to send the ANI to the next switch.

2.3 Routing 0- Calls

To handle 0- calls, the following translations are needed. Since no digits are received in the SS7 IAM, the 5ESS Switch inserts the digit 0 prior to performing digit analysis for SS7 calls which are marked Nature of Number equal to No Number Present, Operator Requested. Digit analysis in then performed on the digit 0. (See Figure 3)

- TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Set TRKCLS to "TTOLLCON".

- DAS form (5300-1 Record) - This form is used to associate the translation environment for the incoming trunk group with trunk class "TTOLLCON". The DAS is obtained from the TKGRP Record (5202-1).

- INDIT form (5309 Record) - This form is used to route 0- calls with the following information: INCOMING DIGITS equal to 0, TYPE OF CI CALL equal to "NONCI", NBR OF DIGITS EXPECTED equal to 1, NBR OF DIGITS TO BE DELETED equal to 1, and the appropriate ROUTE INDEX and CODE INDEX.

- RAR form (5301 Record) - In this configuration, 0- calls are handled by setting the PFX field to "NONE". The SCR is obtained from the TKGRP form and the CODE INDEX is obtained from the INDIT form.

- RTIDX form (5303 Record) - The route index used to derive the outgoing trunk group must be set up correctly for SS7 or MF signaling.

    - For SS7 signaling, the SIGNALING PROTOCOL must be "TRAD". The SS7 parameters, such as calling party number, charge number, and originating line information will be passed by the 5ESS Switch.

    - For EAMF signaling trunks, the SIGNALING PROTOCOL must be "EA", CI ROUTE TYPE must be "DTG", and ANI OUTPULSING must be "Y" in order to send the ANI to the next switch.

2.4 Generating AMA Records

AMA Records are generated for this feature provided that the Charge Index derived from the Rate and Route form yields a valid AMA type. In order to discriminate between calls from various trunk groups, the trunk group SCR index may be used to obtain a different charge index via the RAR Record. An Alternate Service Feature Code may be used on each Charge Index to indicate different trunk groups.

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- CGIDX form (5302-1 Record) - This record is used to generate an AMA record. The CHARGE INDEX is obtained from the RAR form (5301 Record) for the call. The AMA CALL TYPE must be "FGDOL" in order to generate a Feature Group D Originating LATA AMA Record .

2.5 Circuit Reservation Message Translations

No specific translations are needed to handle the SS7 Circuit Reservation Message.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable the feature for the operating company. SFID 154 must have the field ACT set to "Y" to enable the feature.

4. GLOSSARY

AMA - Automatic Message Accounting

CDI	Code Index
CRM	Circuit Reservation Message
DDD	Direct Distance Dialing
EAEO	Equal Access End Office
EAMF	Equal Access Multifrequency
FGD	Feature Group D
FGDOL	Feature Group D Originating LATA
IAM	Initial Address Message
IC	Interexchange Carrier
LATA	Local Access And Transport Area
LEC	Local Exchange Carrier
MF	Multi-Frequency
NANP	North American Numbering Plan
NPA	Numbering Plan Area
OLI	Originating Line Identity
SFID	Secured Feature ID
SS7	Signaling System 7
TNS	Transit Network Selection

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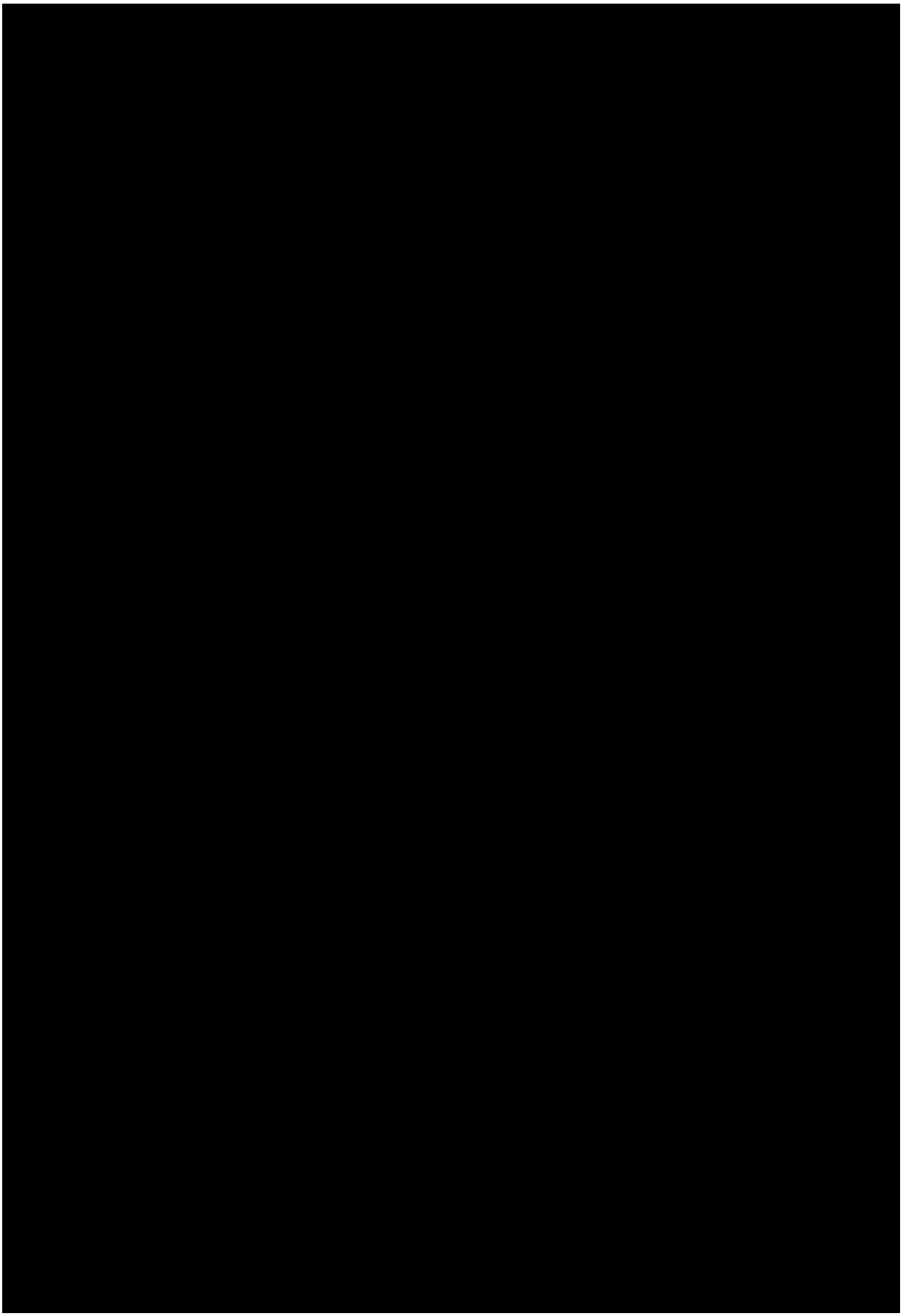

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Figure 1 FORM FLOW FOR ROUTING INCOMING SS7 IAM CONTAINING 10 DIGIT CALLED NUMBERS

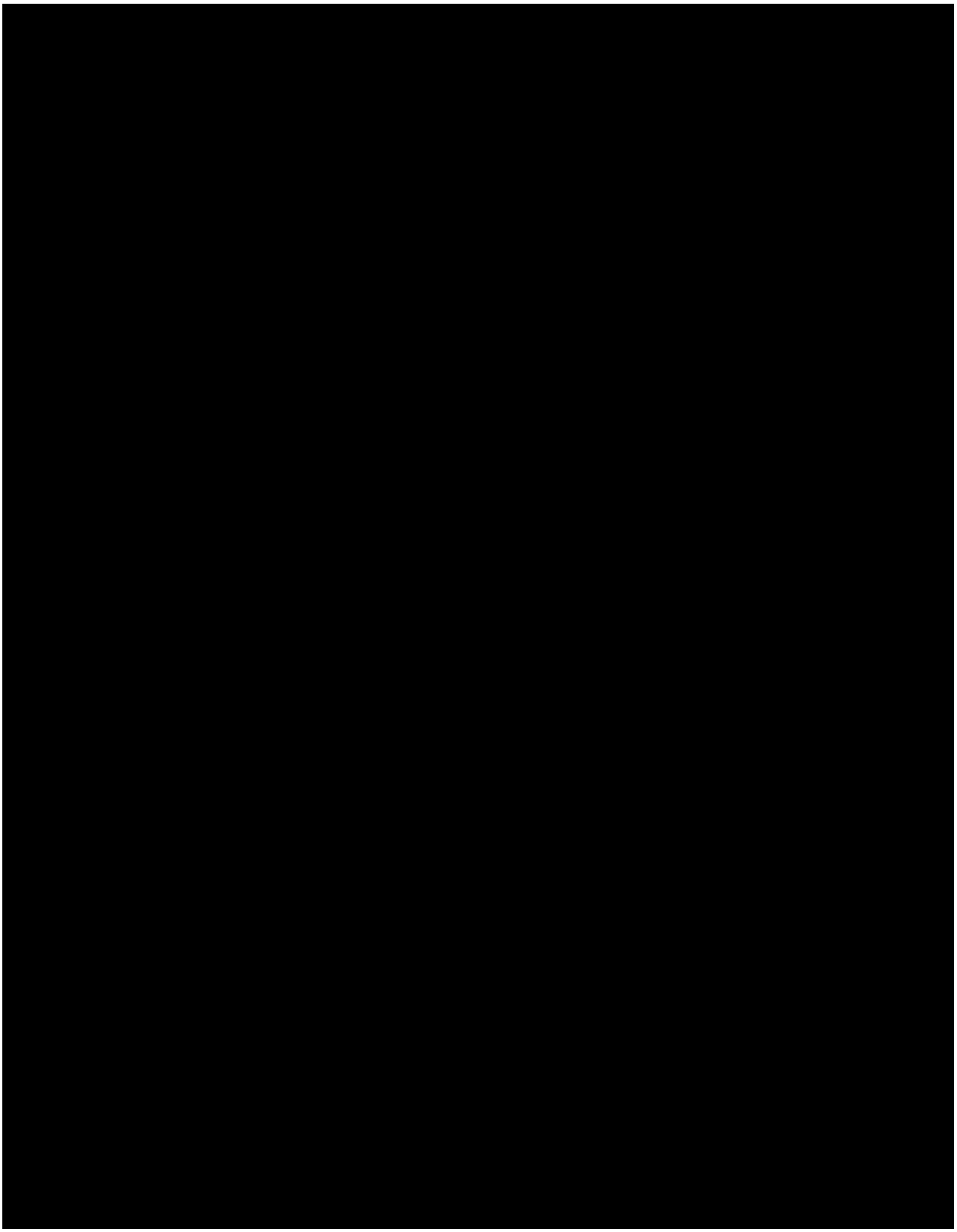

Figure 2 FORM FLOW FOR ROUTING INCOMING SS7 IAM CONTAINING AN INTERNATIONAL DESTINATION

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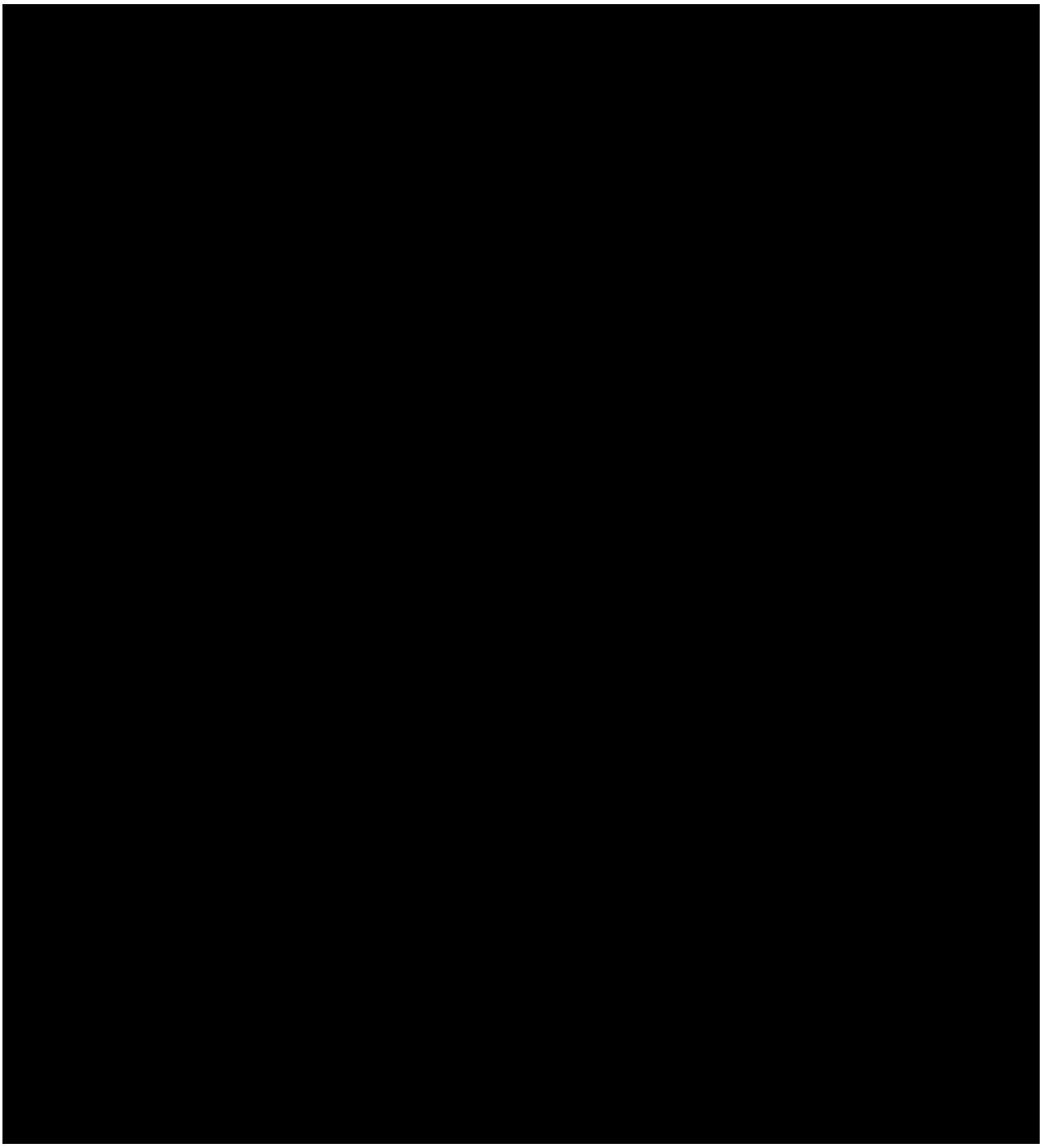

Figure 3 FORM FLOW FOR ROUTING 0- CALLS

SEC. 4A155: CALL FORWARDING OVER PRIVATE FACILITIES/DON'T ANSWER

1. FEATURE DESCRIPTION

The feature number for the CFPF/DA (Call Forwarding Over Private Facilities/Don't Answer) capability is 99-5E-2669. This feature is available with 5E10 and later Software Releases and as a Software Update for 5E9(1) and 5E9(2). This is a Secured Feature with SFID 155. An SFSYS form (5713-1 Record) must exist with the ACT field for SFID 155 set to "Y" to activate this feature.

This capability provides the ability to construct a CFPF feature so that calls terminating to analog, custom ISDN, or National ISDN (only available for 5E10 and later) lines may call-forward over dedicated private

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facilities in the case of a "don't answer" condition. That is, this feature allows CFPF when the Forwarding Condition (FWD CONDITION) feature option is set to "IDLE" for analog, custom ISDN, or National ISDN lines. The ability to provide CFPF when the FWD CONDITION is "BUSY" (e.g., like CFBL (Call Forwarding Busy Line)) is currently available on the 5ESS-2000 Switch via BRCS MFC (Modular Feature Customization).

The present design for all 5ESS-2000 Switch CFDA features does not allow for forwarding over private facilities nor does the present design for the CFPF features allow for forwarding over private facilities when the FWD CONDITION is set to "IDLE". The current CFPF design only allows for forwarding over private facilities when the FWD CONDITION is "BOTH" (i.e., like Call Forwarding Variable) or "BUSY" (i.e., like Call Forwarding Busy Line, when BRCS MFC is used). This feature allows CFDA access to Private Facilities via the ARS (Automatic Route Selection) and PFA (Private Facilities Access) features to eliminate LMS (Local Measured Service) charges for the forwarded portion of the call (e.g., to a VMS (Voice Messaging Service).

This feature does not permit activation nor routing (forwarding) over non-senderized (cut-through) facilities. Any attempt to construct a CFPF/DA feature with the DNSK (Directory Number Screening option "K" (IDP PFA Cut-Through)) on the CFWFD form (5612 Record) value set to "Y" will be blocked.

2. FEATURE ASSIGNMENT

To define CFPF/DA, the following attributes on the CFWFD form must be as inndicated:

- FWD CONDITION must be "IDLE"
- CFPF ALW must be "Y"
- if DN SCREENING is "Y",
  - DNSK must be "N"
  - either DNSL or DNSO must be "Y"
  - DNSK must be "N"
- DNSQ = "N" (This is recommended since dialing of Precedence and Preemption and DSN (Defense Switched Network) codes in a forward-to DN is not permitted; however, no data rule is enforced.)

For additional information on CFPF, see Division 2, Section 1AH. For CFPF National ISDN applications, see Division 2, Section 1AM.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFWFD	5612-1/2	4	15A	12.12
SFSYS	5713-1	3	5AR	8.22

CFWFD form (5612-1/2 Record) - This form is used to define a number of separate but related features by selecting various feature options for Call Forwarding. Data rules were added to indicate that if the CFPF ALW field is set to "Y", the FWD CONDITION field must be set to "IDLE" when SFID 155 (CFPF/DA) is purchased (for 5E9(1) and later). Data rules were also added to block access to non-senderized (cut-through) facilities.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate this feature, the ACT field for SFID 155 must be "Y".

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SEC. 4A156: SPONTANEOUS USAGE SENSITIVE 3-WAY CALLING

1. FEATURE DESCRIPTION

SUSTWC (Spontaneous Usage-Sensitive Three-Way Calling) is a secured feature using SFID (Secured Feature ID) 156 and must be purchased before being enabled. The AT&T feature number for this feature is 99-5E-2530.

Available with 5E9(1) and later, this feature allows end-users to make three-way calls on a sporadic and spur of the moment basis without requiring line subscription to a Multi-way feature. This feature allows analog users to invoke a three-way call while active on a two-party call without having to indicate their intentions prior to the two-party call. Users are billed for the service on a "per use" basis, also known as a usage-sensitive basis.

This feature was built upon the access code version of the secured feature USTWC (Usage Sensitive Three-Way Calling) but does not change the USTWC method of operation or provisioning. The major difference between USTWC and SUSTWC is that SUSTWC allows an end-user to initiate a three-way call by flashing while active on a two-party call and adding a third party. USTWC requires that the end-user dial a code before initiating the two-party call.

The USTWC feature (Secured Feature ID 106) does not have to be enabled for the SUSTWC feature to be enabled, and SUSTWC can be provisioned to function like USTWC. Details on how this is done are discussed in the Feature Assignment section. The USTWC and SUSTWC features are mutually exclusive on a given switch.

The SUSTWC feature expands functionality of the MW (Multi-Way) TWC (Three-Way Calling) feature in the following ways:

- Assignment of the feature to the user: when SUSTWC is made generally available in an office, any valid terminal can access it. Alternatively the feature can be turned off for all terminals in the office and made available only to those customers who wish to subscribe to it.

- Billing of the feature to the user: the user can be billed per usage rather than the flat rate fee charged for subscription TWC. USTWC Charge records and USTWC Activation records are two types of records that may be optionally made. Generation of each is controlled independently on an office-wide basis.

- Feature interactions: the user is not allowed to use the feature if the user already subscribed to any other MW feature or to a TG (Terminal Group) feature. CW (Call Waiting) is inhibited while SUSTWC is active on a call.

Any number of three-way calls may be made during a single SUSTWC activation; each one is charged. If the originator disconnects with a party on hold, the originator will be rung back to restore the held party to the talking connection.

1.1 Scenario

The following is an end user scenario for SUSTWC. For this scenario, the three parties are designated A, B, and C. Parties A and B represent the stable 2-way call with A being the controlling party with access to the SUSTWC feature. Party C represents the third or added on party.

1. Party A has either originated a call to party B or party B has originated a call to party A. In either case, answer has occurred and a normal two-party talking connection has been established.

2. Party A initiates a switch-hook flash. The two-party call is interrupted and party B is temporarily placed on hold. Special dial tone is returned to party A.

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3. Party A dials the second leg of the call, adding on party C. Party C is either ringing or answered. At this point, a USTWC Activation Record is made if the USTWC Activation Records are enabled in the office and any of the following occur:

- Party A initiates a flash, B is taken off hold and a three-way call is established.
- Party C disconnects and party A is automatically reconnected to party B after 10 second disconnect timing elapses.
- Party A disconnects and party C is dropped. Ring back is applied and party A answers the ring back.

If C answers and Party A initiates a second switch hook flash to form a 3-way call, there are four AMA (Automatic Message Accounting) related scenarios:

If USTWC Charge Records are enabled in the office,

- and this call is not normally AMA recorded, a USTWC Charge Record is made.
- and this call is normally AMA recorded, the service feature field will indicate that USTWC was used.

If USTWC Charge Records are not enabled in the office,

- and this call is not normally AMA recorded, there will be no output.
- and this call is normally AMA recorded, the service feature field will indicate that USTWC was used.

The BRCS feature activation count for the SUSTWC feature is also pegged. Party A and C are now talking.

The following describes abnormal end user interactions. For these interactions, the two parties are designated A and B. Parties A and B represent the stable 2-way call with A being the controlling party of the original 2-way call.

- SUSTWC is not allowed on party A's line because the service class or the feature set is not valid (See Feature Assignment).
- SUSTWC has a valid service class and feature set but has been denied use of the SUSTWC feature on the LINE form (See Feature Assignment).
- Party A attempts to flash before the first called party answers.

1.2 Billing

This feature makes it possible to record a USTWC Charge Record for the added party, if the call is not normally AMA recorded or if the call is AMA recorded to provide an indication via the service feature field that USTWC was used.

Provision is also made to allow AMA recording for the SUSTWC activation. A USTWC Activation record can be created when the user flashes to add-on a second party or is reconnected to the soft-held party.

Automatic Message Accounting is affected as follows:

A USTWC AMA Activation Record is made when a successful 3-way conference call has been established or when the controller returns to the soft-held party before a 3-way conference call is established. The record is only made if the USTWC ACT office parameter is "Y". The Structure Code for

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the USTWC Activation record is 00028; the Call Type is 049.

A USTWC AMA Charge Record is made for an added-on party that answers if the USTWC CHRG office parameter is "Y" and an AMA record is not normally made for this call. The structure codes for SUSTWC Charge records are 00001 and 00101; the Call Type is 048. The Service Feature Field in this record is populated with a value of 018.

- ***NOTE:*** Unlike the Activation Record, this record is generated when the call is disconnected or at midnight in cases where long duration records apply.

If an AMA record would normally be made for the added-on party call, the Service Feature Field in this record is populated with a value of 018 if the SUSTWC CHRG office parameter is "Y".

- ***NOTE:*** Unlike the Activation Record, this record is generated when the call is disconnected or at midnight in cases where long duration records apply.

2. FEATURE ASSIGNMENT

- ***NOTE:*** This feature may lead to increased usage of 3-port conference circuits. Therefore, examination of existing traffic measurements to determine if additional 3-port hardware circuits are required is suggested before making this feature generally available.

2.1 To activate SUSTWC:

1. The SUSTWC feature must be enabled for any other value to be entered. Set the ACT field for SFID 156 to "Y" on the SFSYS form to enable the SUSTWC feature.

2. Enable Optioned Feature. The switch provides an office option via the FOSYS form, RC View 8.31 to allow the generation of USTWC Charge Records (Call Type 048) for every spontaneous USTWC call. Set the ACT field for FID 664 to "Y" on the FOSYS form, RC View 8.31 to enable the Billing Option for SUSTWC feature. This option can be turned on regardless of the value of the USTWC CHRG field on the OFCOPT form, RC View 8.1. If this option is turned on, it takes precedence over the USTWC CHRG field on the OFCOPT form. If this option is turned on, then the switch will always generate a Call Type 48 charge record when a spontaneous three-way call is made □ even if a normal AMA record is made. The switch will not set the SFF field to 18 in a normal AMA record either, if this option is turned on. For more information, see Div. 2, Sec. 4B664.

3. The SUSTWC preconstructed feature /MWSP3WC is installed as part of the SU (Software Update) installation.

4. Use the new preconstructed feature /MWSP3WC, or if desired, define a SUSTWC feature on the MWFD form. Only the name of the SUSTWC feature can be changed; none of the feature options or parameters can be modified for this type of feature.

5. On the OFCOPT form, set the USTWC fields as follows:

□ SPONT AVAIL determines how SUSTWC operates. The default of this field is "UNAVAIL".

□ "GENAVAIL" - all the lines in the office with field USTWC ALW set to "Y" on the LINE form have access to the feature.

□ "SUBSCR" - only those lines in the office with field SUBSCR USTWC set to "Y" on the LINE form have access to the feature.

□ "UNAVAIL" - SUSTWC is not allowed in this office. If USTWC FEAT has a feature entered, the original code activated USTWC functionality is available in the office.

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- In the USTWC FEAT field, enter the desired SUSTWC feature either "/MWSP3WC" or the feature constructed on the MWFD form if SPONT AVAIL is "GENAVAIL" or "SUBSCR". If SPONT AVAIL is "UNAVAIL", USTWC FEAT must be "/MWUS3WC", its equivalent constructed feature, or blank. The default for USTWC FEAT is inactive (blank). This field cannot be changed from the default unless the SUSTWC or USTWC feature has been purchased and enabled.

- USTWC ACT field must be set to "Y" to make USTWC AMA Activation Records for all SUSTWC calls in the office. Set this field to "N" if USTWC AMA Activation Records are not to be made on SUSTWC calls. The default for USTWC ACT is "N". This field cannot be changed from the default unless the SUSTWC or USTWC feature has been purchased and enabled.

- USTWC CHRG field must be set to "Y" to make USTWC AMA Charge Records for all USTWC calls in the office. Set this field to "N" if USTWC AMA Charge Records are not to be made on SUSTWC calls. The default for USTWC CHRG is "N". This field cannot be changed from the default unless the SUSTWC or USTWC feature has been purchased and enabled.

1. On the LINE form, set the USTWC fields to allow SUSTWC.

- USTWC ALW field is used when the SPONT AVAIL field on the OFCOPT form is set to "GENAVAIL". The USTWC ALW field default is "Y" for all valid terminals (described below). For invalid terminals, USTWC ALW defaults to "N".

  Valid terminals are those terminals with a CLASS OF SERVICE of "INDIV", "PBX", or "4WINDIV" except shared analog terminals, which are terminals that are "HOT" or "MAN" lines (i.e., NO DIAL field on the LINE form), or those that have the Calling Line Side Supervision feature (CLSS field on the LINE form).

- SUBSCR USTWC is used when SPONT AVAIL on the OFCOPT form is set to "SUBSCR". This field must be set to "Y" for every terminal which should be allowed to access SUSTWC. The SUBSCR USTWC field default is "N" and can be set to "Y" only on valid terminals (see above).

- ***NOTE:*** For 5E9(1) and 5E9(2) Recent Change operation only, to avoid OS (Operations System) (e.g., MARCH) impact when updating on an invalid terminal, if the SUBSCR USTWC field is set to "Y", it automatically changes back to "N" (without ERROR or WARNING messages).

2.2 To deactivate SUSTWC:

1. The SUSTWC feature can be turned off for the entire office by setting the SPONT AVAIL field on the OFCOPT form to "UNAVAIL". Note that in the "UNAVAIL" mode, the LINE form fields SUBSCR USTWC and USTWC ALW have no effect. Even if they are set to "Y", the line cannot use the feature since the SPONT AVAIL field is set to "UNAVAIL".

2. If SPONT AVAIL is "GENAVAIL", the feature can be de-activated on a per line basis, by setting field USTWC ALW to "N" on the LINE form. Note in the "GENAVAIL" mode, the LINE form field SUBSCR USTWC has no effect on the operation of the feature for other lines and can be set to either "Y" or "N".

3. If SPONT AVAIL is "SUBSCR", the feature can be deactivated on a per line basis, by setting field SUBSCR USTWC to "N" on the LINE form. Note in the "GENAVAIL" mode, the LINE form field USTWC ALW has no effect on the operation of the feature for other lines and can be set to either "Y" or "N".

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3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LINE	5109	3	1I	1.6
MLHLN	5111-3	3	1K	1.6
MWFD	5702-1/2	4	3A	12.19
OFCOPT	5509-4	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

LINE form (5109 Record) - This form is used to define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch office. The SUBSCR USTWC was added to indicate if the line has subscribed to USTWC (Usage-Sensitive Three-Way Calling).

MLHLN form (5111-3 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG (Multi-Hunt Line Group). The SUBSCR USTWC was added to indicate if the line has subscribed to USTWC (Usage-Sensitive Three-Way Calling).

MWFD form (5702-1/2 Record) - This form is used to define many of the Add-On and conferencing features and to define how call processing is affected by customer attempts to flash or disconnect while holding, adding, or transferring calls. The new preconstructed feature /MWSP3WC was added to support the SUSTWC feature.

OFCOPT form (5509-4 Record) - This form is used to supply various miscellaneous office options and parameters. The field SPONT AVAIL was added to support the SUSTWC feature and determines if SUSTWC is available and how it operates.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. SFID 124 must have the field ACT set to "Y" to enable the feature.

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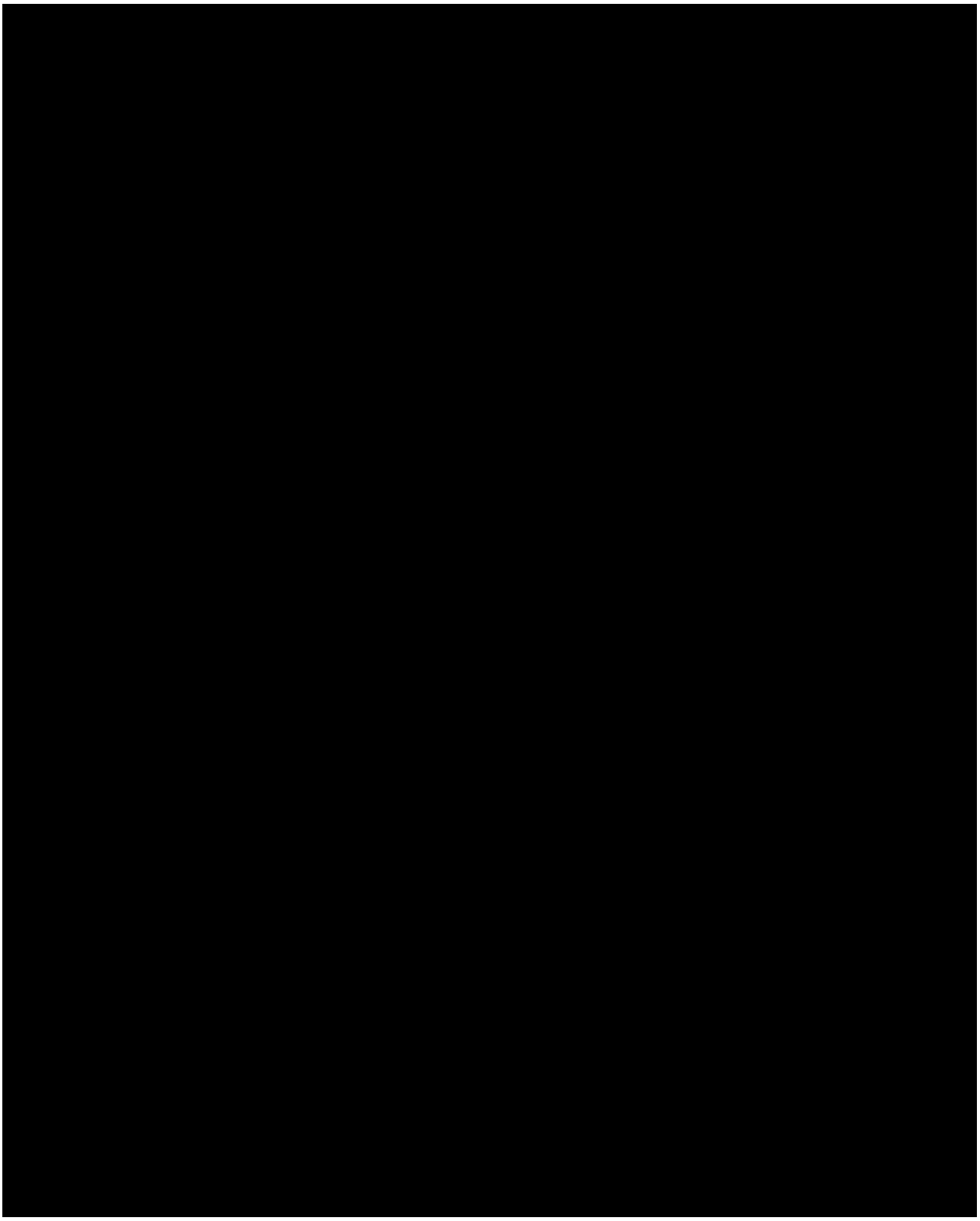

Figure 1 SPONTANEOUS USAGE SENSITIVE 3-WAY CALLING FORM FLOW

SEC. 4A158: TOLL-FREE TREATMENT FOR NPA 888 - PHASE 1

1. BACKGROUND

The quantity of 800 numbers which are either in use or unavailable has reached a point of exhausting the

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pool of 800 numbers. Therefore, additional telephone numbers are needed to support the growing usage of toll-free services.

2. FEATURE DESCRIPTION

Toll-Free Treatment for NPA 888 - Phase 1 feature is a secured feature using SFID 158, has feature number 99-CP-3042 and must be purchased before being activated.

Available with 5E9(2) and later, this feature provides the LEC (Local Exchange Carrier) network with an additional set of toll-free DNs (Directory Numbers) by expanding 800 toll-free service to include two more NPAs (Numbering Plan Areas), 888 and 877, besides 800. Dialed DNs with 888 and 877 NPAs are treated as toll-free calls.

This feature is built on the existing SSP800 (Service Switching Point 800) NS (Number Service) Feature platform. As a result, all current aspects of SSP800 functionality on the 5ESS-2000 Switch apply to this feature. This includes the querying process, billing, measurements, network management, test query message, send notification, event trapping, etc.

Consistent with SSP800 requiring an interface to an SCP (Service Control Point) database, the new 888 and 877 NPA DNs also need to query the database to obtain actual routing information for a call. The interface to the SCP database is handled by CCS7 TCAP (Common Channel Signaling System 7 - Transaction Capabilities Application Protocol) either in the AM (Administrative Module) or a DLN (Direct Link Node).

The querying process occurs at the SSP (Service Switching Point) office. The SSP office may be the same office where the call originates, such as an EO (End Office), or an intermediate office, such as an AT (Access Tandem), where the call must route over trunks in order to perform the querying process. The calls may be directed to intermediate, SSP offices from End Offices that are designated as:

- EA (Equal Access) EO
- non-conforming EO using traditional signaling or
- non-conforming EO using CAMA (Centralized Automatic Message Accounting) signaling.

The only signaling difference between SSP800 and this feature is that this feature does not support 00Y translation of an 888 or 877 NPA DN as the called DN, when signaled from a non-conforming EO using traditional signaling. The AT would be unable to interpret the 00Y code as an 888 or 877 NPA DN on the receiving end as well.

3. FEATURE ASSIGNMENT

Office data in end and intermediate offices must be provisioned similar to the current handling of 800 NPA DNs (except for 00Y translation) in order to recognize 888 and 877 NPA DNs as toll-free service calls when dialed, signaled, or received in an office. Other switching equipment interfacing with the 5ESS-2000 must be modified to support the new 888 and 877 NPA DNs. For example, the STP (Signaling Transfer Point) should add additional global title table entries to support 888 and 877 NPAs as part of valid global title digits; or, the SCP database should increase its number of database entries to accept and respond to 888 and 877 NPA DN queries.

The AMA (Automatic Message Accounting) record for access charge billing is made at the SSP office, once the carrier information is provided, which is consistent with Number Services. This feature reuses the existing Number Service structure codes used for SSP800.

4. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

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This feature is a secured feature and is activated by setting the ACT field for SFID 158 to "Y" on the SFSYS form (5713-1 Record).

5. GLOSSARY

AM	Administrative Module
AMA	Automatic Message Accounting
AT	Access Tandem
CAMA	Centralized Automatic Message Accounting
CCS7	Common Channel Signaling System 7
DLN	Direct Link Node
DN	Directory Numbers
EA	Equal Access
EO	End Office
LEC	Local Exchange Carrier
NPA	Numbering Plan Areas
NS	Number Service
SCP	Service Control Point
SSP800	Service Switching Point 800
STP	Signaling Transfer Point*TCAP* - Transaction Capabilities Application Protocol

SEC. 4A159: ADVANCED SERVICES PLATFORM TRUNK TRIGGER FOR TOLL

1. BACKGROUND

Prior to this feature, there was a need to provide ANI (Automatic Numbering Identification) based call processing for trunk originated equal access calls. This processing could include ANI based routing or screening. One way to screen these calls was to use an AIN SCP (Advanced Intelligent Network Service Control Point) and, for every call received by the 5ESS Switch on a trunk group with the ASP (Advanced Service Platform) Toll bit set, send an AIN Query to an SCP and let the SCP determine how the call is handled.

2. FEATURE DESCRIPTION

Available with Software Release 5E9(1) and later, the ASP Trunk Trigger for Toll feature is a secured feature using SFID (Secured Feature ID) 159 and must be purchased before being activated. The feature number for this feature is 99-5E-3156.

Available with Software Release 5E9(1) and later, the ASP Trunk Trigger for Toll feature provides the ability to generate an SCP query for every call on a given trunk group designated as ASP TOLL.

The ASP TOLL field is entered on a trunk group basis on the TKGRP form (5202 Record, R/C View 5.1). When the ASP TOLL field is set to "Y", a valid ASP 0.1 trigger must be populated in the TRIG NBR field.

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The ASP TOLL can be entered only for a two-way or incoming SS7 (Signaling System 7) trunk with trunk class of "TTOLLCON".

When the ASP TOLL is active on a trunk group, the 5ESS Switch generates an AIN 0.1 "INFO-Collected" OHD (Off-Hook Delay) query message for every call received on the trunk group (including IDDD (International Direct Distance Dialing), 1+, 0+ 0- calls).

For this feature, there is no ASP BRCS feature required on the trunk group or members.

3. FEATURE ASSIGNMENT

See Figure 1 for ASP Trunk Trigger for Toll form flow. This is a secured feature, therefore, before it can be activated the ACT field for SFID 159 on the SFSYS form (5713-1 Record) must be set to "Y". In addition, since this feature depends on SFID 126, the ASP Release 0.1B secured feature must be activated by setting the ACT field for SFID 126 on the SFSYS form to "Y". For more information concerning the ASP Release 0.1B feature, see Division 2, Section 4A126.

The ASP TOLL field on the TKGRP form (5202 Record) must also be set to "Y".

In addition, the Trunk Trigger for Toll feature translation environment (INDIT/LDIT) requires some specialized setup. This is necessary because digit translations occur on these calls prior to the SCP database query.

- All NPAs/NXXs should be built with a TYPE CI CALL of "NONCI". This prevents the 5ESS from attempting to use the office carrier information for carrier derivation on INTRA/INTERLATA calls.
- The digit 0 (zero) must be built in the INDIT as "NONCI". This is used in operator cases when SFID 154 changes the called party number to zero when the IAM's nature-of-number is operator.
- All country codes and international prefixes must be built in the IDD form (5307 Record) (RC 9.6 views).
- The 1NX codes for international must be built in the INDIT. The associated CDIM entries for 1NX & XXX must be defined. This is necessary because international calls deliver the carrier code in the TNS parameter and carrier type digit analysis occurs.
- All international XXX codes must be built in the ICF form (5305 Record) (RC view 10.3).

The ASP response uses the SCP DAS located in the OFCOPT form (5509 Record)(RC view 8.1). This must select a unique translation environment (PDIT/LDIT) for digit analysis of the response. Standard 5ESS translation techniques apply at this point This means that

- NPA/NXX must be TYPE OF CI CALL and must be appropriately set to "INTRA", "INTER", "TOLL", ...
- All country codes and international prefixes must be built in the IDDD form (5307 Record) (RC 9.6 views).
- All possible XXX responses from the SCP must be built.
- Route Indexes built for all possible trunk groups return from the ASP response.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

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SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 159 to "Y". Before activating this feature, the base 5E9.1 ASP Rel 0.1B feature must be activated by setting the ACT field to "Y" for SFID 126 on the SFSYS form.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The ASP TOLL field was added to this form to support this feature. This field determines if all incoming calls over this toll trunk group will generate an SCP query.

5. GLOSSARY

AIN	Advanced Intelligent Network
ANI	Automatic Numbering Identification
ASP	Advanced Services Platform
CAP	Competitive Access Provider
IDDD	International Direct Distance Dialing
OHD	Off-hook Delay
SCP	Service Control Point

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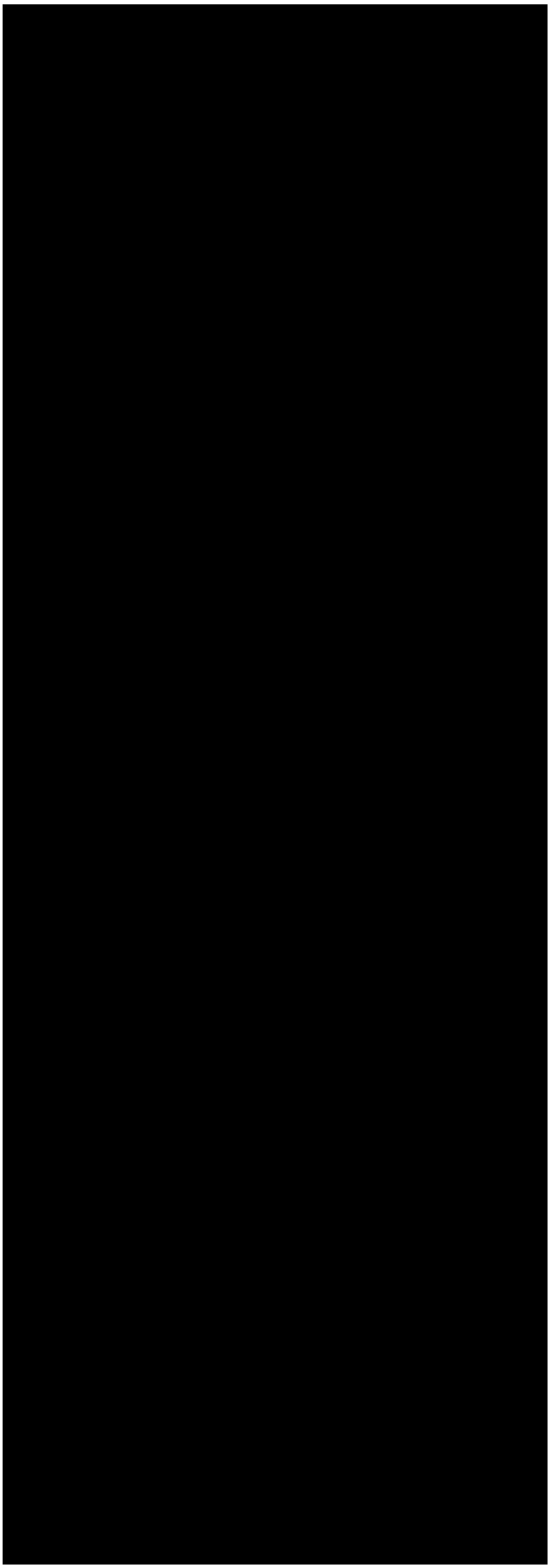

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Figure 1 FORM FLOW FOR ASP TRUNK TRIGGER FOR TOLL

SEC. 4A160: TYPE 2A/2B CELLULAR MOBILE CARRIER INTERCONNECTION VIA COMMON CHANNEL SIGNALING

1. FEATURE DESCRIPTION

The Type 2A/2B CMC (Cellular Mobile Carrier) Interconnection Via CCS (Common Channel Signaling) feature is available for the 5E9(1) and later Software Releases. The feature number is 99-5E-2540. The secured feature ID is 160. This feature is dependent on AMA (Automatic Message Accounting) capabilities for Type 2A Cellular Interconnections feature (SFID 128). Refer to Division 2, Section 4A128 for background information on SFID 128.

The Type 2A/2B CMC via CCS feature provides the land-based telephone company with the capability to specify whether CMC AMA records can be made on CMC calls originating and terminating (see Glossary) over CCS7 trunk interconnections. This allows the land-based telephone company to more accurately record the details for calls of this type. Type 2B interconnections provide connections only to and from terminals served by a particular telephone company's end office, including lines, private trunks and other CMCs having terminations within the switch itself (see Figure 1). These restrictions are provided only through digit analysis data in the switch.

Type 2B CMC AMA records are in addition to any AMA records currently being made for billing land-based telephone company customers or ICs (Inter-LATA Carriers). Some non-CMC AMA records (e.g., SSP/800 and originating IC) associated with a CMC call are also altered by this capability. This feature also provides CMC AMA records for Type 2B interface over CMC CCS7 or CMC MF (Multi-Frequency) interconnections.

The telephone company's RAO (Revenue Accounting Office) will receive additional detailed billing records for Type 2A and Type 2B interconnections when this feature is active and billing records have been requested for at least one CMC. If the switch has the current MF AMA capability (SFID 128) active, then the content of such records will change somewhat when this new feature is activated. In addition, some 800 Service AMA records and originating IC records associated with CMC calls will have their fields modified by this feature, specifically, the Originating Number and Service Feature fields. No other existing AMA records will be automatically replaced or modified by these detailed billing records.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5200-1/2/	3	2A	5.1

SFSYS form (5713 Record) - This form is used to enable secured features for an entire 5ESS Switch of selected Switching Modules. The ACT field for SFIDs 128 and 160 must be set to "Y".

TKGRP form (5200 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The fields ORIG CMC and TERM CMC must both be "2A" or "2B" to activate this feature. The CMC ID and CMC Billing Number must first be assigned on Recent Change View 10.16.

3. GLOSSARY

CMC Cellular Mobile Carrier.

Originating CMC Call/record A CMC Originating call is one that originates in or is received by the LEC network and is routed TO a CMC. CMC AMA records are made in the switch directly connected to the CMC Type 2A or Type 2B interface. Such CMC AMA records are called "Originating CMC" records but have Structure Codes (653/654) commonly associated with

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"Terminating IC" calls. This definition is based on Bellcore requirement GR-1504-CORE.

Terminating CMC Call/record A CMC Terminating call is one incoming FROM a CMC Type 2A or Type 2B interface, for completion in or via the LEC network. Such CMC AMA records are called "Termina CMC" records but have Structure Codes (625/627) commonly associat with "Originating IC" calls. This definition is based on Bellcore requirement GR-1504-CORE.

Type 2A Interconnection Connections to a land based tandem switch, LT (Local Tandem) or AT (Access Tandem). Type 2A interconne also provide connections to and from co-located lines in the tandem, inter-LATA carriers, and other CMCs having terminations within the LATA. This feature does NOT provide AMA billing support for the con between CMC and a Local Tandem Switch.

Type 2B Interconnection Connection to a telephone company end office. It provides connections only to and from terminals serve by that end office, including lines, private trunks and other CMCs having terminations within the switch itself.

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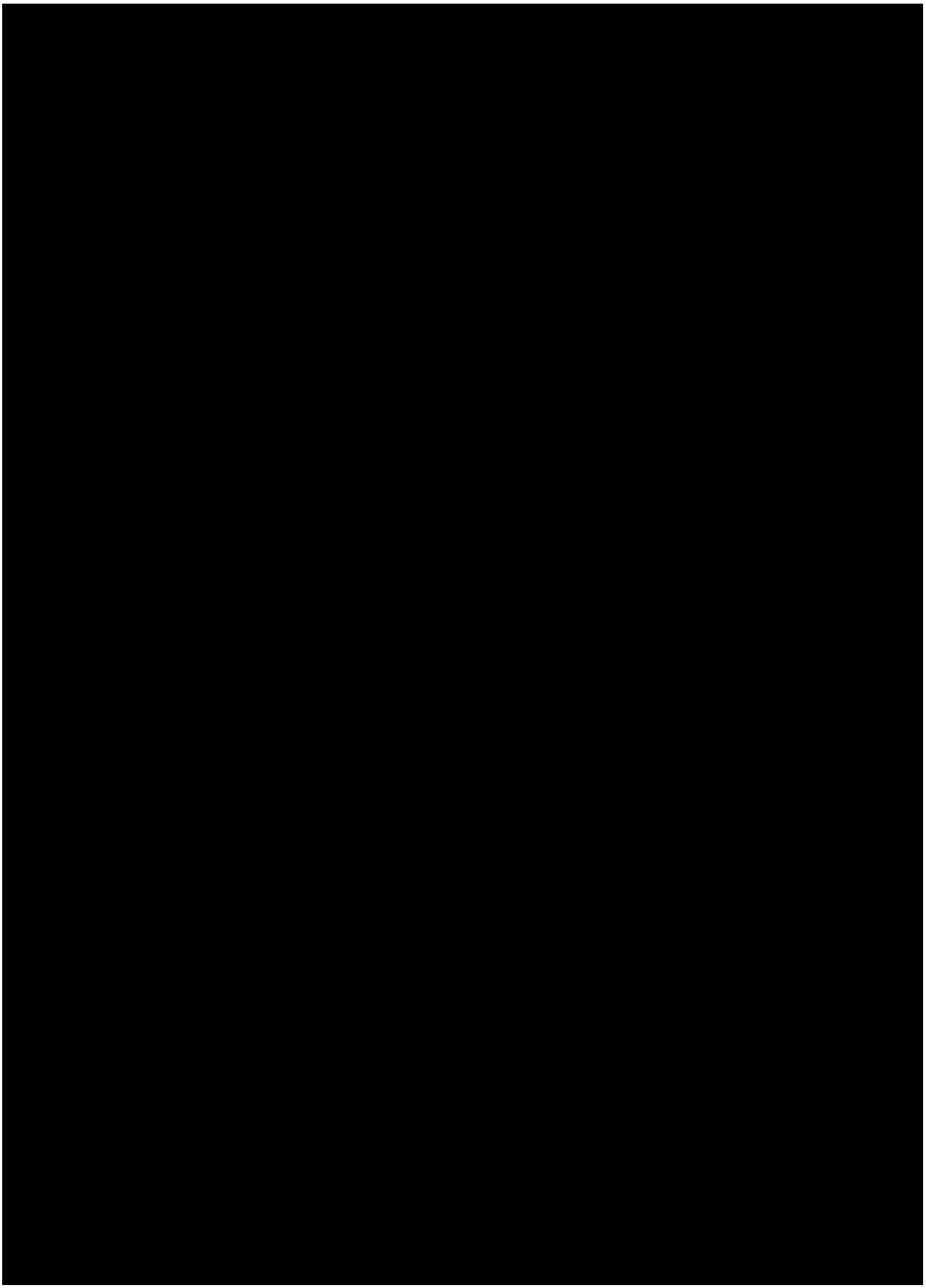

Figure 1 TYPE 2B CELLULAR CONNECTIONS

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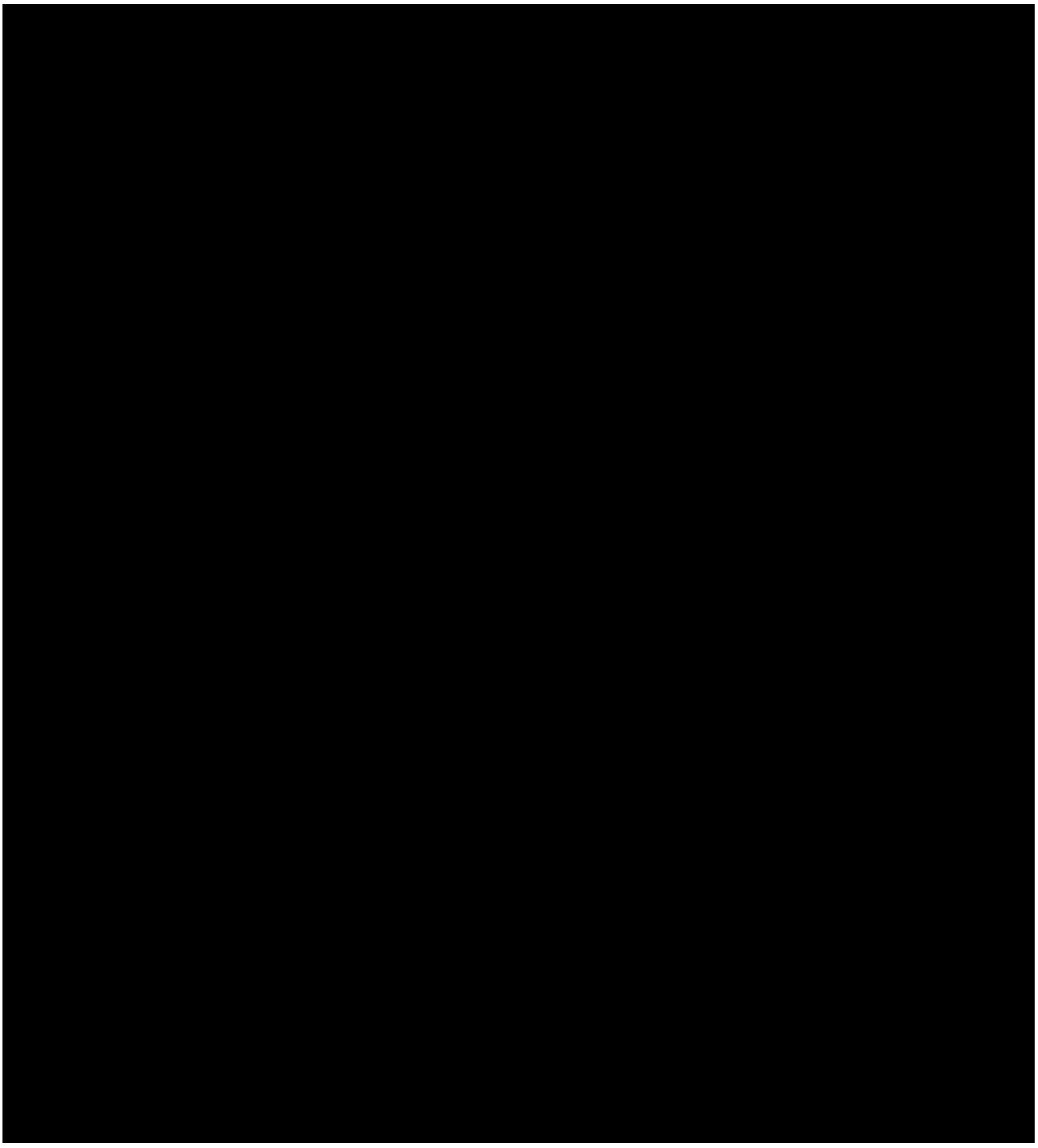

Figure 2 FORM FLOW FOR TYPE 2B CELLULAR INTERCONNECTIONS

SEC. 4A161: REDIRECTING NUMBER ON PRI

1. FEATURE DESCRIPTION

The Redirecting Number on PRI (ISDN (Integrated Services Digital Network) Primary Rate Interface) feature is a secured feature (SFID 161) and must be purchased before being activated. The feature number for this feature is 99-5E-3045.

Available with 5E9(1) and later, this feature maps the SS7 (Signaling System 7) redirection information in the SS7 OCN (SS7 Original Called Number parameter), RN (SS7 Redirecting Number parameter), and RI

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(SS7 Redirecting Information parameter) parameters into the RN IE(s) (ISDN Q.931 Information Element) for a terminating PRI. Furthermore the feature populates the terminating RN IE(s) for calls redirected from lines on the same switch to a PRI.

This feature is operational on SMs (Switching Module) as well as SM-2000.

This feature is provided on a per PRI B-channel trunk group basis for AT&T custom and AT&T national ISDN PRIs.

1.1 User Perspective

In the following scenarios, the RN on PRI feature is subscribed to on a CO (Central Office) #3 on the PRI that terminates on PBX #3, the customer's CPE (Customer Premise Equipment). Field UUI on the TKGRP form (5202 Record) for MAUUI (Message Associated User-to-User Information) transport is set to "Y" on the terminating PRI B-channel trunk group.

- ***NOTE:*** Please refer to the Limitations section for the descriptionof User-to-User information that's discarded when the RN on PRI feature is active.

Scenario 1 - SS7 Origination to PRI Termination (with 2 previous forwardings). (See Figure 1)

- Caller D originates a call on PBX #1 (connected to CO #1 via PRI) to station E on CO #2. PBX #1 includes User-to-User information in the call setup request to CO #1. CO #1 routes the call over the SS7 network to CO #2. The User-to-User information is passed over the SS7 network to CO #2 in the SS7 ATP (SS7 Access Transport Parameter). Switch CO #2 routes the call to called party E. Party E is busy and CO #2 forwards the call to station F, a station on CO #2. Party F does not answer and CO #2 forwards the call to party K (connected to PBX #3 off of CO #3). CO #2 forwards the call over SS7 facilities to CO #3, and includes call redirection information (SS7 OCN, RN and RI parameters) as well as the User-to-User information in SS7 ATP parameter.

  When the call is received at CO #3 and terminated at the PRI to PBX #3:

  - With the RN on PRI feature turned on, the redirection information is populated from the OCN, RN and RI parameters of SS7 IAM (SS7 Initial Address Message) but the User-to-User information is discarded.
  - Without the RN on PRI feature turned on, the redirection information is populated from ATP parameter (not Bellcore compliant) of the SS7 IAM message and User-to-User information is retained.

Scenario 2 - CO #3 Line Originated Call with 3 forwardings. Lines G, A, H, and I are located on CO #3. (See Figure 1)

- BRI (ISDN Basic Rate Interface) G originates a call to analog station A, A forwards to BRI H, H forwards to analog station I, I forwards to K on PBX #3:
  - With the RN on PRI feature turned on, the redirection information is populated from the internal call forwarding information structures. The User-to-User information doesn't exist.
  - Without the RN on PRI feature turned on, the redirection information is NOT populated. The User-to-User information doesn't exist.

1.2 Interactions

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- Metro Hub Special Feature
  - For 5E9 (1) only: when the Metro Hub feature (SFID 60) is active in an SM or switch, it treats as private the Redirecting Number associated with the last call forwarding (second RN) that is not a member of the same Terminal Group as the called PRI.
  - For 5E9(2) and later: when the Metro Hub feature is active in an SM or switch, it treats as private Redirecting Numbers associated with the first as well as the last call forwarding (first and second RN) that is not a member of the same Terminal Group as the called PRI.
- CNIGI (CNIS Intra-Group Delivery Option Feature)
  - For 5E10 and later: CNIGI can also restrict delivery of forwarding party information to intra-group calls. If the forwarding number (either first or last) is not a member of the same terminal group as the called PRI trunk, the switch will block the number delivery.

NOTE: Metro Hub is required for CNIGI in that Metro Hub allows a Terminal Group to be assigned to a PRI B-channel trunk group.

- Intra/Inter Switch CPN/BND (Calling Party Number/Billing Number Delivery
  - When a call's forwarding number is marked private, the switch delivers the forwarding number (either first or last) address digits if the per-PRI trunk group "Privacy Over-ride" option is active.

NOTE: CNIGI takes precedence over privacy override, i.e. if CNIGI restrictions apply, the address digits are not be delivered.

1.3 Limitations

MAUUI generally refers to the following ISDN Information Elements: Connected Number, user-to-user Information, Low-Layer Compatibility, Codeset 7 information and Redirecting Number (from SS7 IAM's ATP parameter). It's referred to as User-to-User information in the scenarios of the USER PERSPECTIVE section.

WARNING: When a PRI B-channel trunk group is subscribed to the RN on PRI feature, MAUUI will be discarded for calls that terminate to such a trunk group. Redirection information received from a PRI is currently treated by the 5ESS-2000 Switch as MAUUI, so it will not be available.

2. FEATURE ASSIGNMENT

On the SFSYS form (5713-1 Record), SFID 161 must have the ACT field set to "Y".

On the TKGRP form (5202 Record), the UUI and STD RN SRC fields must be set to "Y".

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to enable the feature for the operating company. SFID 161 must have the field ACT set to "Y" to enable the feature.

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TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS switch. The STD RN SRC field was added to support this feature.

4. GLOSSARY

ATP	SS7 Access Transport Parameter
BND	Billing Number Delivery
BRI	ISDN Basic Rate Interface
CNIGI	CNIS Intra-Group Delivery Option
CNIS	ISDN Calling Number Identification Services
CPE	Customer Premise Equipment
CPN	Calling Party Number
IAM	Initial Address Message
IE	ISDN Q.931 Information Element
ISDN	Integrated Services Digital Network
MAUUI	Message Associated User-to-user Information
OCN	SS7 Original Called Number parameter
PRI	ISDN Primary Rate Interface
RN	SS7 Redirecting Number parameter
SFID	Secured Feature ID
SM	Switching Module
SS7	Signaling System 7

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Figure 1 CONFIGURATION FOR END - USER SCENARIOS

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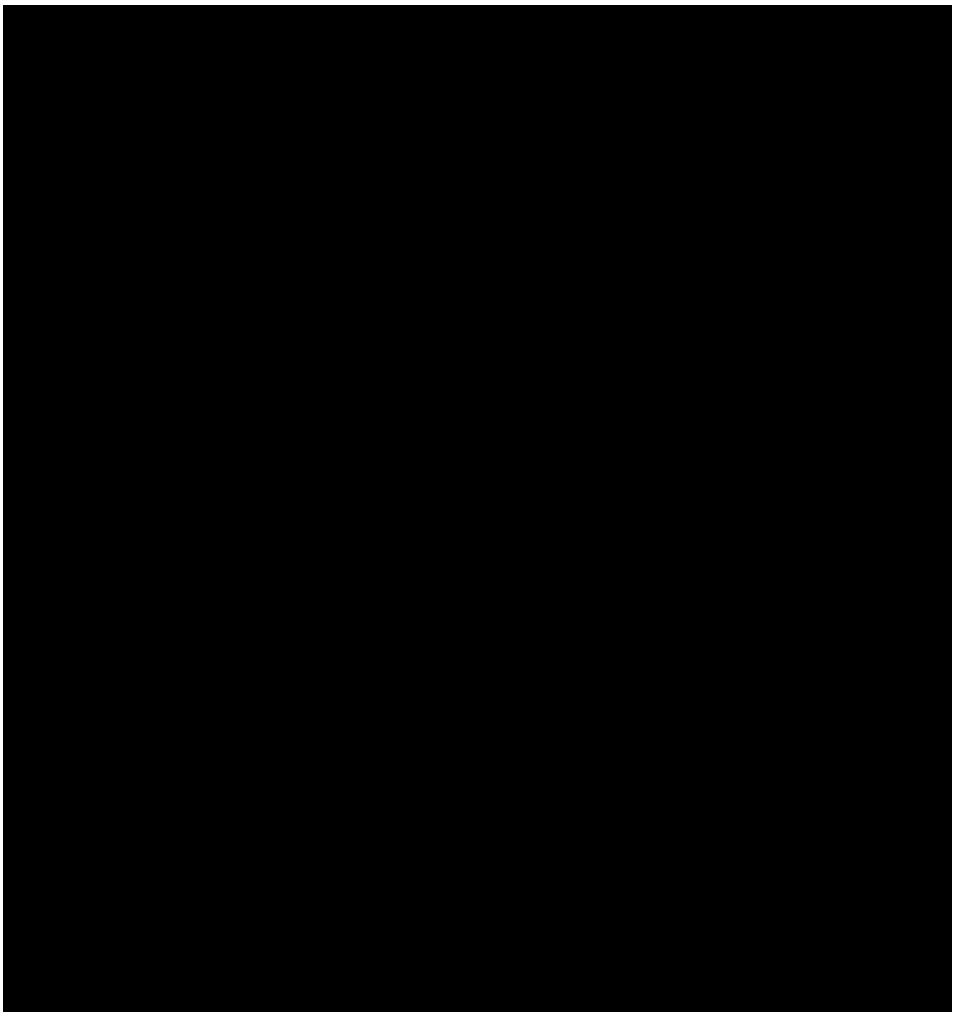

Figure 2 REDIRECTION NUMBER ON PRI FORM FLOW

SEC. 4A162: ADVANCED SERVICES PLATFORM MULTIPLE RATE CENTER SUPPORT

1. FEATURE DESCRIPTION

The ASP (Advanced Service Platform) Multiple Rate Center Support feature is a secured feature (SFID (Secured Feature ID) 162) and must be purchased before being activated. The feature number for this feature is 99-5E-3192. This feature applies to both ASP Release 0 and ASP Release 0.1 protocol.

Available with 5E9(1) and later, this feature provides the ability to use the SCP (Service Control Point) DAS (Digit Analysis Selector) or the originator's DAS for originating subscribed triggers on calls that originated from lines and line-like interfaces. Also, this feature provides the ability to use the TAT (Termination Attempt Trigger) subscriber's DAS or the SCP DAS for all types of originations to TATs for post query translation of the routing DN (Directory Number).

2. FEATURE ASSIGNMENT

To enable the feature, SFID 162 must have the field ACT set to "Y".

The office parameters ARS FCD CDP (Automatic Route Selection Feature Code Dialing Customized Dialing Plan) and OHI OHD TAT (Off Hook Immediate Off Hook Delayed Termination Attempt Trigger) were added on the OFCOPT form (5509 Record) for this feature.

When the ARS FCD CDP originating DAS parameter on the OFCOPT form is set to "Y", routing numbers

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returned from the SCP due to line, PRI (Primary Rate Interface), and PF (Private Facility) trunk-originated calls encountering CDP, FCD, and Release 0 ARS triggers will be translated in the ODP associated with the originating facility. In particular, for the Release 0 ARS trigger, the originator's ODP (Office Dialing Plan) will be used rather than the ARS dialing plan.

When the ARS FCD CDP originating DAS parameter is set to "N", routing numbers for CDP, FCD, and Release 0 ARS triggers will be translated in the SCP DAS as is currently done.

When the OHI OHD TAT originating DAS parameter is set to "Y", a Called Party ID returned from the SCP due to encountering OHI and OHD triggers is translated in the ODP associated with the originating facility. When the OHD OHI TAT originating DAS field is "Y", a Called Party ID returned from the SCP due to encountering a TAT is translated in the ODP associated with the TAT line.

When the OHI OHD TAT originating DAS parameter is set to "N", routing numbers for these subscribed triggers (OHI, OHD, and TAT) will be translated in the SCP DAS as is currently done.

Calls encountering the SIT (Shared Interoffice Trunks (non-dedicated trunks)) trigger, or calls originating on any type of facility and encountering 3/6/10 digit trigger will translate in the SCP DAS regardless of the value of the ARS FCD CDP and OHI OHD TAT office parameters.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Two office parameters, ARS FCD CDP for the originating DAS and OHI OHD TAT for the originating DAS were added. The first parameter controls the feature's capability for CDP, FCD, and Release 0 ARS triggers, while the other parameter controls the remaining subscribed triggers (OHI, OHD, and TAT).

SFSYS form (5713-1 Record) - This form is used to enable the feature for the operating company. SFID 162 must have the field ACT set to "Y" to enable the feature.

4. GLOSSARY

ARS	Automatic Route Selection
ASP	Advanced Services Platform
CDP	Custom Dialing Plan
FCD	Feature Code Dialing
ODP	Office Dialing Plan
OHD	Off-hook Delay
OHI	Off-hook Immediate
PF	Private Facility
PRI	Primary Rate Interface
SCP	Service Control Point
SFID	Secured Feature ID

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SIT Shared Interoffice Trunk

TAT Termination Attempt Trigger

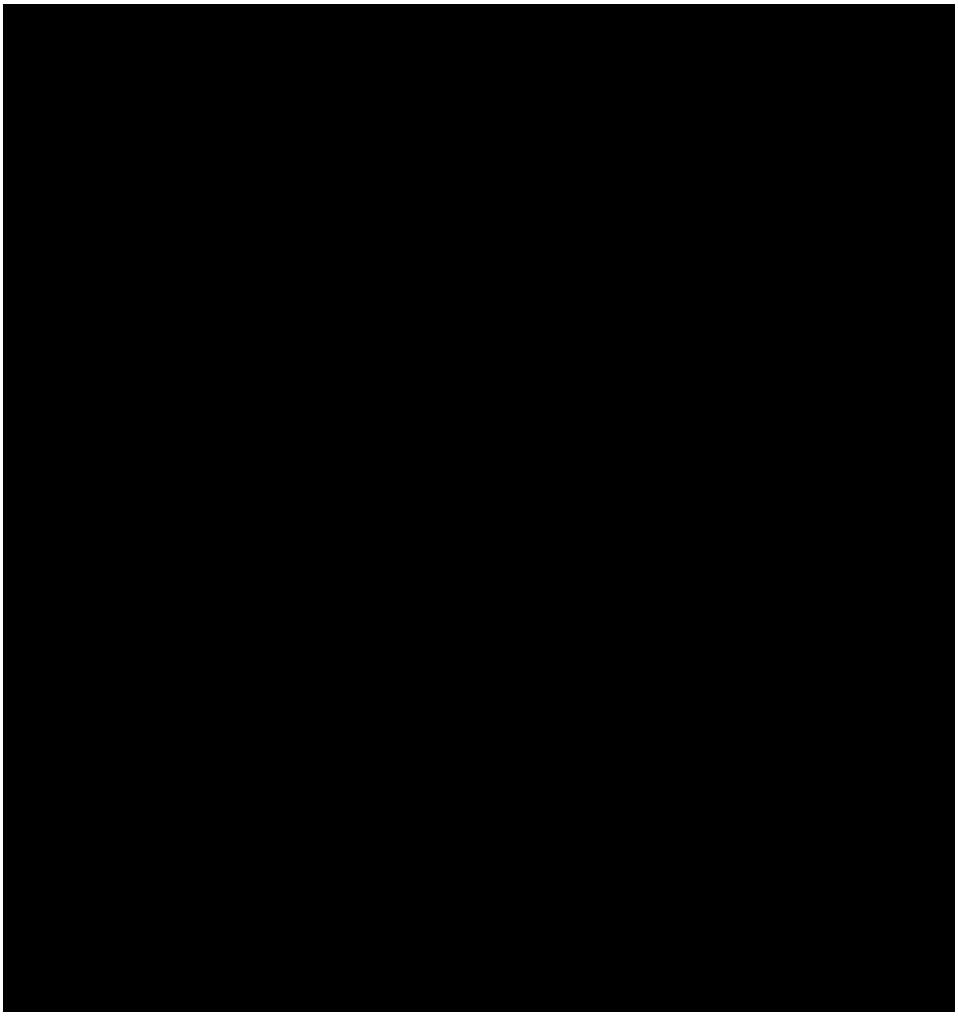

Figure 1 ASP MULTIPLE RATE CENTER SUPPORT FEATURE FORM FLOW

SEC. 4A163: ISUP MESSAGE LOOP DETECTION

1. FEATURE DESCRIPTION

The ISUP Message Loop Detection feature is a secured feature (SFID 163) and must be purchased before being activated. The feature number for this feature is 99-CP-3053.

Available with 5E11 and later, this feature provides for inclusion of an additional ISUP (Integrated Services Digital Network User Part) parameter to be signaled between switching offices via the SS7 (Signaling System Number 7) network. The new optional ISUP parameter is named Hop Counter and contains information that indicates the number of switches or hops this message has traversed. The Hop Counter parameter may be included in the IAM (Initial Address Message) at an intermediate switch and is initialized with a configurable number of allowed hops for this message. As the call progresses through the network, the hop count is decremented by one by the intermediate switch and, if the counter reaches zero, the SS7 message is rejected by the intermediate switch. The Hop Counter parameter is defined for only the IAM message.

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The main purpose for this additional parameter is to stop an SS7 signaled call from entering an infinite loop in the signaling network. When a Hop Counter parameter is included in the message, the message terminates after a specified number of hops and the looping of the SS7 IAM is avoided.

2. FEATURE ASSIGNMENT

On the SFSYS form (5713-1 Record), SFID 163 must have the ACT field set to "Y".

On the TKGRP form (5202 Record), the ISUP MLD field must be set to "Y". If the MAX HOP COUNT field is left blank it will default to 20.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS - 2000 Switch. The ISUP MLD and MAX HOP CNT fields are added to support this feature.

4. GLOSSARY

IAM - Initial Address Message

ISUP Integrated Services Digital Network User Part

SS7 Signaling System 7

SEC. 4A165: TOLL DIGITAL EXCHANGE BASIC CALL PROCESSING FOR TOLL 5ESS SWITCH

1. FEATURE DESCRIPTION

The LDP (Long Distance Platform) Feature Set, 5E10 and later:

- TDX (Toll Digital Exchange) Basic Call Processing.
- TDX ANI (Automatic Number Identification) Table Processing.
- TDX ASP (Advanced Services Platform) Interface.
- TDX 15-Digit Account Code (in ANI Table).
- ANI Table Line Class Code Special Feature. This feature is deployed on the 5ESS Switch in a software update for the 5E10 and 5E11 Software Release. This feature has NO RTU (Right to Use) fee.

The above features are deployed on the 5ESS Switch in a software update for the 5E10 Software Release. The first four features have a RTU (Right to Use) fee. These features are secured features. The Lucent Technologies feature number for each feature is shown in the following table.

LDP Feature Set (5E10 and later)

Feature Name	Feature No.	Security tag
TDX Basic Call Processing	99-5E-3127	SFID 165
TDX ANI Table Processing (5E10 through 5E12)	99-5E-3032	SFID 235

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TDX ASP Interface	99-5E-3033	SFID 126*
TDX 15 Digit Accnt Code	99-5E-3034	SFID 235
ANI Table Line Class Code Special Feature	99-5E-3993	This feature has NO RTU fee

* part of the more general ASP functionality of the switch

The 5E10 and later LDP feature set is composed of 5 subfeatures:

- 99-5E-3127 - TDX Basic Call Processing - this is the BASE feature and is required by the other features. It contains the basic TDX offering.
- 99-5E-3032 - TDX ANI Table Processing - this contains the data base for customer specific toll call processing.
- 99-5E-3033 - TDX ASP Interface - this feature handles the interface to the SCP (Service Control Point).
- 99-5E-3034 - TDX 15 Digit Account Codes - this feature is different from the BRCS (Business/Residential Customer Services) Account Code feature. It introduces new interfaces to the RAF (Recorded Announcement Frame) Controller code in 5E11.
- 99-5E-3993 - ANI Table Line Class Code Special Feature - this feature interacts with the LDP Basic call processing capability (99-5E-3127) and ANI Table processing capability (99-5E-3032). This Special Feature builds upon those features by allowing increased flexibility in defining the screening code for a call with a given ANI. This feature has a dependency upon existing features 99-5E-3127 (Basic LDP Processing - SFID 165) and feature 99-5E-3032(LDP ANI Table Processing - SFID235). The Basic LDP Processing Feature (SFID 165) must be purchased before the the Default ANI Table changes take effect and the LDP ANI Table Processing Feature (SFID 235) must be purchased before the ANI Table modifications will take effect.

Each are available for 5E10 and later Software Releases.

These features give the switch the ability to handle basic POTS (Plain Old Telephone Service) toll calls, along with the ability to apply specialized feature processing on a per customer basis. The customer is identified by the incoming ANI associated with the call. The specialized features that will be available to the customer with the introduction of these features will be per call account codes, interactions with an A-I-Net (Advanced Intelligent Network) SCP, switch based Network Call Denial, and Fixed Carrier Routing.

The operation of these features can apply to either the classic or SM2K processors.

The above features are provided on both a per-office (5ESS Switch) and per-trunk group basis. Certain data items apply to the whole switch and other data items govern how this processing is done on calls which are associated with the given trunk group.

The LDP Feature Set, 5E11 and later:

- LDP Multiple CIC (Carrier Identification Code) Support.
- LDP AMA Enhancements.
- LDP Data Capabilities.

The above features are deployed on the 5ESS Switch in a software update for the 5E11 Software Release. These features have a RTU (Right to Use) fee. These features are secured features. The Lucent Technologies feature number for each feature is shown in the following table.

LDP Feature Set (5E11 and later)		

Feature Name	Feature No.	Security tag
LDP Multiple CIC Support	99-5E-3133	SFID 202
LDP AMA Enhancements	99-5E-3675	SFID 202
LDP Data Calls	99-5E-3379	SFID 203

The 5E11 and later LDP feature set is composed of 3 subfeatures:

- 99-5E-3133 - LDP Multiple CIC (Carrier Identification Code) Support - provides custom routing to calls that have been associated with different carriers.
- 99-5E-3675 - LDP AMA Enhancements - AMA records for toll calls are enhanced.
- 99-5E-3379 - LDP Data Calls - this feature provides for incoming 56Kbps, 64Kbps, and wideband CSD (Circuit Switched Data) calls.

The LDP Feature Set, 5E12 and later:

The Lucent Technologies feature numbers are shown in the following table.

LDP Feature Set (5E12 and later)		
Feature Name	**Feature No.**	**Security tag**
LDP Multiple ANI	99-5E-3939	SFID 207
7-Digit DN Handling	99-5E-4429	This feature has NO RTU fee
ANI Table Expansion - 3-Digit and 6-Digit	99-5E-4221	This feature has NO RTU fee
ANI Table - NPA NXX Expansion	99-5E-4219	This feature has NO RTU fee

- 99-5E-3939 - LDP Multiple ANI - A single customer may subscribe to up to 8 carriers.
- 99-5E-4429 - 7-Digit DN Handling feature - This feature provides the ability for the Long Distance Platform to prefix an NPA (Numbering Plan Area) to a 7-digit destination number.
- 99-5E-4221 - ANI Table Expansion, 3-Digit / 6-Digit feature - This feature allows for partial matching of an ANI to an entry in the ANITBL (5E12 and earlier) form / ANITABLE (5E13 and later) .
- 99-5E-4219 - ANI Table, NPA NXX Expansion - This feature increases the size of the NPA-NXX table from 14,000 to 64,000.

Primary documentation for all LDP features is shown in a new subsection of the 235-200-110 (Long Distance Platform) document.

The LDP Feature Set, 5E13 and later:

- FGD Cutthrough Trigger.
- Multistage 2-Way FGD.
- AIN (Advanced Intelligent Network) LDP Support for High Speed Data.

The above features are deployed on the 5ESS Switch as a 5E13 Software Update. The feature numbers for these feature are as follows:

LDP Feature Set (5E13 and later)		
Feature Name	**Feature No.**	**Security tag**
FGD Cutthrough Trigger	99-5E-4269	This feature has NO RTU fee
Multistage 2-Way FGD	99-5E-4301	This feature has NO RTU fee
400 HZ Carrier Tone	99-5E-4300	This feature has NO RTU fee
ANI Table Index	99-5E-4528	SFID 235
AIN LDP Support for High Speed Data	99-5E-4582	This feature has NO RTU fee

- 99-5E-4269 - FGD Cutthrough Trigger - Allows for ASP (Advanced Services Platform) triggering on

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FGD (Feature Group D) calls for a given trunk group.

- 99-5E-4301 - Multistage 2-Way FGD - Allows the ANI (Automatic Number Identification) to be sent to LECs (Local Exchange Carriers) or PBXs (Private Branch Exchanges) on calls egressing the LDP (Long Distance Platform) network on a LATA (Local area Transport Area) MF (Multi-Frequency) trunk.
  - 99-5E-4300 - This feature adds a 400Hz tone, called Carrier Tone to the Long distance Platform.
    - 99-5E-4528 - This feature ia an evolution of the LDP ANI Table Processing (99-5E-3032) feature implemented in 5E10 and is secured using the same SFID 235.

- 99-5E-4582 - AIN LDP Support for High Speed Data - This feature provides support for high speed CSD (Circuit-Switched Data) calls and allows them to launch an ASP (Advanced Services Platform) query to the SCP Service Control Point.

1.1 TDX Basic Call Processing (5E10 and later)

The TDX Basic Call Processing capability is summarized as follows:

- Route Calls.
  - Routing by carrier ID and call type.
  - Routing of calls to other networks.
  - Routing of operator calls to an operator service provider switch.
- Provide AMA records at specific points in the toll network.
- Provide specialized signal interworking to other networks.
- Provide toll cut-through processing for callers that want a second dial tone from the TDX Switch.
- Provide special called party number processing (DNTs (Dialed Number Trigger) from LATA Trunks).
- Provide time of Day/Day of Week routing from OTDX (Originating Toll Digital Exchange) Switch.
- Provide DNTs on LATA (Local Area Transport Area) Trunks.

The TDX Basic Call Processing feature is a secured feature with SFID 165 and is associated with the TDX field on the TKGRP form, (5202 Record, RC/V 5.1).

1.2 TDX ANI Table Processing (5E10 and later)

With the ANI Table Processing feature, custom call processing specifications can be specified for each subscriber at the point where the call enters the TDX network.

The TDX ANI Table Processing feature is summarized as follows:

- Custom Routing by carrier ID and call type.
  - Number Screening (DAS (Digit Analysis Selector) Selection optioned for each customer, e.g. a line DAS).

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- Routing by call type optioned for each customer.
- Ability to declare SCPNs (Special Called Party Number) exempt from custom routing specifications.

- Network Call Denial for selected customers.

The TDX ANI Table Processing feature is secured with an SFID 235 and is associated with ANI PROCESS field on the TKGRP form, (5202 Record, RC/V 5.1). See (Section 1.16) for more information.

1.3 TDX ASP Interface (5E10 and later)

The TDX ASP Interface feature provides for integration of TDX functionality with the Advanced Intelligent Network interface and with centralized data bases.

The TDX ASP Interface feature is summarized as:

- Toll call handling may be done based on results of an ASP (Advanced Services Platform) query. The stimulus to do call handling in this way may be specified on a per customer basis. The DNT number is provisioned in the switch for each billing number. (Note that billing number can either be the charge number or the calling party number as determined by the existing algorithm to determine the ANI for the call.)

SFID 126 must be active to use the ASP part of this feature. (See below.)

1.4 TDX 15-digit Account Code (5E10 and later)

The TDX 15 Digit Account Code recording feature allows the TDX Switch to collect up to 15 digits of account code for each call at the point of entry into the TDX network. The account code will then appear in billing records.

The TDX 15-digit Account Code feature is summarized as follows:

- Custom Billing (Account Code Collection)
  - In 5E10, collection of account code digits is done similar to the collection authorization codes for Leased Network trunks, i.e., return BEEP2 tone to indicate to the user to begin dialing the account code digits. A billing record will be provided which contains the Account Code.
  - In 5E11 and later, the SAS (Service Announcement System) capability can be used to collect digits. An announcement will be played requesting the user to enter his/her Account Code. The office may be provisioned to use the 5E10 version of the account code feature if desired by the switch owner. A billing record will be provided which contains the Account Code, if applicable.

SFID 235 is used to secure the account code feature.

1.5 ANI Table Line Class Code Special Feature (5E10 and later)

ANI Table Line Class Code Special Feature will allow the provisioning of a different screening index than the one specified on the trunk group for an LDP toll call with the given ANI information.

With the ANI Table Line Class Code feature activated, the switch reads the ANI of the incoming call and looks it up in the ANI Table. Based on the information in the ANI Table entry, the switch determines how

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to process the call.

If there is an entry in the ANI table that matches the ANI of the incoming call, the switch uses the screening code associated with the ANI to process the call.

If there is an entry in the ANI table associated with the incoming call, but the entry does not contain a screening index value, the switch uses the default ANI table screening.

If there is no entry in the ANI table associated with the incoming call's ANI or if the switch does not have a default ANI table, the switch uses the trunk group information to process the call.

1.6 LDP Multiple CIC Support (5E11 and later)

The Multiple CIC Support for LDP feature allows the 5ESS Switch LDP to recognize and process calls for up to 20 different carriers. Each carrier is assigned a Separate CIC.

For the 5E11 software release only, this is a secured feature (SFID 202).

For the 5E12 and later software releases, the Multiple CIC Support for LDP feature is incorporated into the Basic Long Distance Platform features (99-5E-3032 and 99-5E-3127) and does not require a separate SFID to enable the feature.

The switch owner creates a Long Distance Platform Carrier Table using the LDPCTBL form, (5562 record, RC/V View 8.52), which can define up to 20 CICs. Each subscriber also has a default CIC, which is stored in the ANI table.

If a subscriber dials a call and does not select an alternate carrier, the default carrier (from the ANI table) is used to process the call. If a subscriber dials a call and selects an alternate carrier, the feature examines the LDP carrier table to verify that the carrier is valid.

When the ANI PROCESS field on the TKGRP form is set to "N" the following applies. Incoming calls are associated with a carrier identifier. The call's carrier id is then compared with the home carrier ANITBL (5E12 and earlier) form, (5561 record, RC/V View 8.51) / ANITABLE (5E13 and later) form (5575 record, RC/V View 8.58) LDP CARRID field and entries in the LDPCTBL form(5562 record, RC/V View 8.52). If a match is found, then specifications for that carrier (either the LDPCTBL entry or the Default ANI table for the home carrier) are used to process the call. If the carrier does not match then the call is routed using carrier routing and the call's carrier.

When the ANI PROCESS field on the TKGRP form is set to "Y" the following applies. Incoming calls are associated with a carrier identifier. The caller's entry in the ANI table is retrieved. The carrier id of the call is then compared to the subscribed carrier id. If a match occurs, the specifications for that ANI (ANI table entry) are used to process the call. In the case that the call's carrier does not match the subscribed carrier id, then the processing of the call depends on how the call's carrier id matches with either the home carrier or the LDPCTBL entries. If the carrier does not match then the call is routed using carrier routing and the call's carrier.

1.7 LDP AMA Enhancements (5E11 and later)

The LDP AMA Enhancement feature provides additional AMA billing or routing information, which is appended to the AMA billing record. This information allows service providers to more easily perform reconciliation of usage charges.

During call processing of LDP calls, the switch stores certain billing information, such as routing and billing numbers, class of service, and whether the call is an originating toll call. When the call ends, this billing information is appended to the AMA billing record for the call.

For the 5E11 software release only, this is a secured feature (SFID 202).

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For the 5E12 and later software releases, the LDP AMA Enhancements for LDP feature is incorporated into the Basic Long Distance Platform features (99-5E-3032 and 99-5E-3127) and does not require a seperate SFID to enable the feature.

1.8 LDP Data Calls (5E11 and later)

The LDP Data Capabilities Feature allows the 5ESS Switch to be used for data calls by suppressing certain call processing functions.

The following data calls are supported:

- 56Kbit/s
- 64Kbit/s
- 384Kbit/s
- 1472Kbit/s
- 1536Kbit/s
- Multi-rate

The switch first determines whether or not the incoming call is a data call, as follows. If the call arrives on an MF trunk group which has an assigned data rate, then the trunk group is considered to be dedicated to data traffic and all calls are assigned the data rate of the trunk group. Otherwise, the CCS7 user service information in the IAM (Initial Address Message) will indicate that it is a data call.

If a call is determined to be a data call, the switch chooses an outgoing route for the call based on the fact that it is a data call. Data calls are routed over the same or seperate trunk groups as voice calls, depending on the engineering requirements of the office.

ANI table processing applies to data calls , as follows. If the NCD (Network Call Denial) indicator is set for the incoming ANI, the call will be denied without playing an announcement before disconnect. Fixed carrier routing operates the same for data calls as it does with non-data calls. Also, the switch ignores account code processing even when the LDP Account Code field is set for the incoming ANI.

Special toll billing considerations apply to data calls. AMA records for wideband data calls are formatted with structure code 645. Module 70/71 is used to describe the data rate of the call. AMA records for single channel data calls are formatted with structure code 625.

This is a secured feature (SFID 203).

1.9 LDP Multiple ANI (5E12 and later)

The LDP Carrier Table and the Default LDP Carrier Carrier Table, LDPCTBL form, are enhanced to allow a distinction in call handling specifications between calls where the carrier was presubscribed and calls where the carrier was not presubscribed.

This is a secured feature (SFID 207).

1.10 7-Digit DN Handling (5E12 and later)

The feature number for the 7-Digit DN Handling feature is 99-5E-4429. This feature is being deployed as a 5E12 Software Update. No SFID is required to enable this feature.

This feature provides the ability for the Long Distance Platform to prefix an NPA (Numbering Plan Area) to

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a 7-digit destination number incoming to the switch on a LATA (Local Area Transport Access) class trunk group. The prefixing is done prior to digit analysis. The service provider is able to choose whether to prefix the NPA designated on the incoming trunk group or the the NPA of the incoming ANI (Automatic Numbering Identification).

1.11 ANI Table Expansion - 3-Digit and 6-Digit (5E12 and later)

The feature number for the ANI Table Expansion - 3-Digit and 6-Digit feature is 99-5E-4221. This feature is being deployed as a 5E12 Software Update. No SFID is required to enable this feature.

This feature allows for partial matching of an ANI to an entry in the ANITBL (5E12 and earlier) form / ANITABLE (5E13 and later) form (5575 Record, RC/V View 8.58). Before implementation of this feature, an ANI matched an entry in the ANITBL / ANITABLE only if all 10 digits of the incoming ANI matched an entry in the ANITBL / ANITABLE.

On a trunk group with LDP set to "Y" and ANI PROCESS set to "Y", the Toll 5ESS Switch shall search the ANI table for a match. If a match is found, information for that entry in the ANITBL / ANITABLE will be used. The search occurs as follows:

- Search for an entry that matches on both the call's 10-digit ANI (NPA NXX XXXX) and the LDP CARRIER.
- Not finding the above entry, search for an entry that matches the call's 10-digit ANI and has the LDP CARRIER set to :
  - For 5E12: "10004" for the wild card LDP Carrier.
  - For 5E13 and later: "ANY" for the wild card LDP Carrier.
- Not finding the above entry, search for a 6-digit ANI entry (NPA NXX ANY) that matches the call's NPA-NXX and the call's LDP CARRIER.
- Not finding the above entry, search for a 6 digit ANI entry (NPA NXX ANY) that matches the call's NPA-NXX and has the LDP CARRIER set to :
  - For 5E12: "10004" for the wild card LDP Carrier.
  - For 5E13 and later: "ANY" for the wild card LDP Carrier.
- Not finding the above entry search for a 3-digit ANI entry (NPA-000-0000) that matches the call's NPA and the call's LDP CARRIER.
- Not finding the above entry search for a 3-digit ANI entry (NPA-000-0000) that matches the call's NPA and has the LDP CARRIER set to :
  - For 5E12: "10004" for the wild card LDP Carrier.
  - For 5E13 and later: "ANY" for the wild card LDP Carrier.

If no entry is found, then there is no match for the call in the ANITBL / ANITABLE.

1.12 ANI Table - NPA NXX Expansion (5E12 and later)

The feature number for the ANI Table - NPA NXX Expansion feature is 99-5E-4219. This feature is being deployed as a 5E12 Software Update. No SFID is required to enable this feature.

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This feature increases the size of the NPA-NXX table from 14,000 to 64,000. The table is stored on all SMs and is used to point to the SM containing the ANI Table to be used for a given NPA-NXX number.

The ten-digit ANI tables are divided among different SMs.

No forms are added or changed to support this feature.

1.13 FGD Cutthrough Trigger (5E13 and later)

The feature number for the FGD Cutthrough Trigger feature is 99-5E-4269. This feature is being deployed as a 5E13 Software Update.

This feature provides the ability to set a trigger to trigger on FGD cut-through calls on a per trunk group basis.

1.14 Multistage 2-Way FGD (5E13 and later)

The feature number for the Multistage 2-Way FGD feature is 99-5E-4301. This feature is being deployed as a 5E13 Software Update.

The 5ESS Long Distance Switch supports direct access for business customers to the Toll Switch via the DAL (Direct Access Line) trunk class. Prior to this feature this was available only over one-way trunks. This feature extends the capability to two-way trunks (the type of trunk typically connecting a PBX and a Toll Switch.

1.15 400 HZ Carrier Tone (5E13 and later)

The feature number for the 400 Hz Carrier Tone feature is 99-5E-4300. This feature is being deployed as a 5E13 Software Update.

Many IECs (Inter-Exchange Carriers) have elected to use a steady, 400Hz signal (known as Carrier Tone) in the voice path for communicating with end customer equipment. Carrier Tone lets CPE (Customer Premise Equipment) know that it has reached an IEC and that additional dialed digits will be needed. Carrier Tone has become a "de facto" standard in the long distance marketplace. An existing IEC wanting to put a new toll switch into its network, will require that Carrier Tone be an alternative to the standard tones or announcements, so that it will not have to ask its customers to re-program their CPE. Prior to this feature, the 5ESS Switch did not offer a 400Hz tone.

This feature adds a 400Hz tone, called Carrier Tone, to the Long Distance Platform. As an option, either Standard Tones and Announcements, or Carrier Tone can be used during various Long Distance call scenarios. This feature adds Carrier Tone to the list of possible options.

This feature will not require a security mechanism for itself. This feature is providing basic enhancements to the Long Distance Platform. It relies on the condition that SFID 165 (for Long Distance Platform) is unlocked.

1.16 ANI Table Index (5E13 and later)

The feature number for ANI Table Index is 99-5E-4528. This feature is being deployed as a 5E13 Software Update. This feature is an evolution of the LDP ANI Table Processing (99-5E-3032) feature implemented in 5E10 and is secured using the same SFID 235.

Before implementing this feature if the LDP administrator wants to group a set of ANIs together (have the same values in the ANI table for these ANIs), the administrator would have to populate the above seven fields in the same way for each ANI in the group. Similarly, if the administrator wants to change how the switch handles this group of ANIs, the administrator would have to go to each ANI entry and change it. There is a high administrative overhead when they are dealing with groups of ANIs in the millions.

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What this feature does is break the ANI tables (ANITBL) into a header part (ANITABLE) and a data part (LDPINDEX). The header part contains the keys fields and an index to the data table. This index field will point to a new table that will contain the same key fields that were in the previous ANITBL.

If the LDP administrator wants to group a set of ANIs together, the administrator need only give this group the same index and then populate that index in the LDPINDEX INDEX field. If later, the administrator wants to change how calls are handled for this group of ANIs, the administrator need only change one entry in the LDPINDEX form.

1.17 AIN LDP Support for High Speed Data (5E13 and later)

The feature number for the AIN (Advanced Intelligent Network) LDP Support for High Speed Data feature is 99-5E-4582. This feature is being deployed as a Software Update.

Currently, if a CSD (Circuit Switched Data) call with a data rate greater than 64 Kbps comes into a 5ESS Switch LDP and encounters an ASP (Advanced Services Platform) trigger, the ASP trigger is ignored and no ASP R0.1 query is launched to the SCP (Service Control Point). AIN supports CSD calls for data rates of 56Kbps and 64 Kbps, but does not support high speed CSD calls with data rates greater than 64 Kbps.

This feature provides support for high speed CSD calls and allows them to launch an ASP query to the SCP. These calls can now be re-routed based on the reply from the SCP. For high speed CSD calls, the bearer capability field in the ASP R0.1 query is fixed at 64 Kbps by this feature, as this is the maximum allowable data rate for AIN CSD calls.

There is no new SFID (Secured Feature ID) required for this feature and no forms are added or changed to support this feature.

1.17.1 Call Processing

This feature is only supported for LATA trunk, VPN, and DAL originations on the 5ESS Switch LDP. A brief description of each of these valid originations is as follows:

- For LATA service class on the LDP, VPN (Virtual Private Network) calls and DAL (Direct Access Links) trunk originations, if the SERVICE ALWD field on the NSTRIG form is equal to "CSD" or "BOTH", high speed CSD calls are allowed to proceed. If, however, the SERVICE ALWD field is equal to "VOICE", the high speed CSD call ignores the ASP trigger.
- For all calls other than LATA trunk originations, VPN calls and DAL trunk originations on the LDP, if the SERVICE ALWD field on the NSTRIG form is equal to "CSD" or "BOTH", high speed CSD calls ignore the ASP trigger. If, however, the SERVICE ALWD field is equal to "VOICE", the high speed CSD call ignores the ASP trigger.
- If the call originates on a non-LDP trunk group, high speed calls ignore the ASP triggers and no query is launched to the SCP.

ASP triggers that can be hit for high speed data calls for LATA trunk, VPN, and DAL originations include the following:

- DNT (Dialed Number Triggers)
- ANI (Automatic Number Identification) Table Triggers
- ANI II (Identification Information) Table Triggers
- Carrier Table Triggers
- VPN Access Triggers

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- DAL Access Triggers

1.17.2 Restrictions

This feature:

- is intended for ASP R0.1; ASP R0 does not support CSD calls.
- is limited to high speed CSD LATA, DAL, and VPN originations on the 5ESS Switch LDP. All other types of high speed CSD originations on the 5ESS Switch LDP do not encounter ASP triggers.
- involves the ASPTQ (ASP Test Query) which is a switch-based tool that allows the user to build and launch ASP test queries. As this feature fixes the bearer capability field in the ASP query to 64 Kbps, no changes are needed for the ASP Test Query tool. The desired result can be obtained by the input of the bearer capability equal to 64 Kbps. The generated ASP test query has bearer capability equal to 64 Kbps.

1.17.3 Scenarios

1.17.3.1 Pre-application

- Provision a DNT for a high speed CSD call coming in on a LATA trunk with the LDP field on the TKGRP form set to "Y". (Make sure the trigger assigned is an ASP R0.1 trigger and can support the CSD, NSTRIG form.)
- Make the call such that the provisioned DNT should get hit.
- Although the digits dialed correspond to the provisioned ASP R0.1 trigger, no ASP query is generated. ASP functionality is totally bypassed and the call proceeds as a non-ASP high speed CSD call. It goes through digit analysis and routes to the destination it derived from digit analysis.
- Finally, without the SU (Software Update) applied, ASP does not support high speed CSD calls.

1.17.3.2 Post-application

- Apply the SU containing the AIN LDP Support for High Speed Data feature (99-5E-4582) and make the call again as described in the first two items listed in the Pre-application section of this document.
- An Info_Analyzed ASP R0.1 query should be generated for the high speed data call. Note that the bearer capability field in this query is fixed at 64 Kbps regardless of the data rate of the high speed CSD call. The SCP is now able to respond to the ASP R0.1 query and possibly redirect the call.
- Finally, after the SU is applied, ASP supports high speed CSD calls and generates ASP R0.1 queries with the bearer capability field in the query fixed at 64 Kbps.

1.18 Network Configurations

Many network configurations are possible with the LDP Feature. Four basic configurations are discussed in Figures 1, 2, 3, and 4.

1.19 Interactions

The LDP feature set is not dependent on any other 5E10 external features.

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The full LDP feature set is dependent on the following base features:

- ASP DNT - The DNT query mechanism is used when a trigger number is specified in the ANI TABLE.
- EAMF (Equal Access Multi Frequency) Signaling FGD (Feature Group D) - EA/MF FGD signaling functionality is used to signal calls from an OLDP switch to another network.
- CCS-NI (Common Channel Signaling - Network Interconnect) Signaling - EA/ISUP7 FGD signaling functionality is used to signal calls from an OLDP switch to another network.
- Multi-Party Lines - These features may be used to make calls to the LDP network. Three digit ANI is delivered to the LDP network when such calls are made.
- AMA Record Formatting - Specialized AMA records are provided for LDP calls. The generation of these records does not disrupt the generation of billing records at existing points in the network.
- CDX (Compact Digital Exchange) LDP calls are provided on a CDX Switch.
- VCDX (Very Compact Digital Exchange) - LDP calls are provided at a VCDX Switch.
- International Dialing (including 15-digits) - LDP calls must be made with the IDDD15 feature.
- Network Management strategies must work in the LDP switch.

1.20 Engineering Considerations

The assignment of a processor for storage of customer processing information (ANI Table entries) for each NPA-NXX combination may either be engineered or allocated at random by the software. See the 235-040-100 for more details.

2. FEATURE ASSIGNMENT

2.1 The LDP Feature Set (5E10 and later)

The following is the suggested provisioning sequence assuming all 5 features in this LDP Feature set are to be provisioned. Users who wish to only use a subset of these features can shorten one or more of these steps. Provisioning the LDP Feature (Figure 5) requires the following:

- Make sure the Basic TDX Call Processing Feature is turned on by setting the SFID ACT 165 field on the SFSYS form, (5713-1 Record, RC/V View 8.22) to "Y".
- Make sure the ANI Table Processing Feature is turned on by setting the SFID ACT 235 field on the SFSYS form, (5713-1 record RC/V View 8.22) to "Y".
- Create the default ANI Table using the ANITBL (5E12 and earlier) form, (5561 Record, RC/V View 8.51) / ANITABLE (5E13 and later) form (5575 Record, RC/V View 8.58).
- Plan which of the SMs will be resident for all customer data for each possible NPA-NXX combination. Align this with the placement of trunk groups from which traffic will be presented. Enter this data using the ANIMOD form, (5560 Record, RC/V View 8.50).
- Use the ANITBL (5E12 and earlier) form (5561 Record, RC/V View 8.51) / ANITABLE form (5575 Record, RC/V View 8.58)(5E13 and later) to create additional ANI Table entries for each ANI value which desires custom processing specifications.
- After the ANI Table Line Class Code Special Feature has been loaded, the screening index can be updated by entering a value in the SCR field of the ANITBL (5E12 and earlier) form, (5561 Record,

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RC View 8.51) / LDPINDEX (5E13 and later) form (5576 Record, RC View 8.59). If it is desirable to enter an SCR value for the Default ANI Table, then enter an SCR value on the ANITBL / LDPINDEX form when the key is : NPA equals 000, NXX equals 000, XXXX equals 0000. If no SCR value is entered on the ANITBL / LDPINDEX form, for a given ANI and there is no SCR value in the Default ANITBL / LDPINDEX SCR field, the screening index on the TKGRP form (5202 Record, RC View 5.1) is used.

- Decide how many calls are to be routed out of the OTDX switch using FGD vs. TRAD signaling.
- Use the DAS, PDIT, and SMLDIT forms (5300-1, 5300-2, 5315 Records, RC/V Views 9.1, 9.2, and 9.25) to provision appropriate DAS data. Include desired DNTs and specifications for BYPASS equals "Y" for some numbers.
- Use the ICF form, (5305 Record, RC/V View 10.3) to populate appropriate carrier routing data. Provision appropriate TRIG NBR data using the NSTRIG form, (5324 Record, RC/V View 9.35).
- For calls that go to particular carriers, use the CDIM form (5300-6 Record, RC/V 9.7) to specify tandem routing and carrier routing when DIG ROUTING is "Y" on the ICF form, (5305 Record, RC/V View 10.3).
- Set the TDX field to "Y" and/or the ANI PROC field to "Y" for appropriate trunk groups using the TKGRP form, (5202 Record, RC/V 5.1).

2.2 LDP Feature Set (5E11 and later)

The following is the suggested provisioning sequence assuming all 3 features in this LDP Feature set are to be provisioned. Also, assume that the user has provisioned the switch for the Basic LDP call processing feature and activated SFID165. The Users who wish to use a subset of these features can shorten one or more of these steps.

- Make sure the Basic TDX Call Processing Feature is turned on by setting the SFID ACT 165 field on the SFSYS form, (5713-1 Record, RC/V View 8.22) to "Y".
- Make sure the ANI Table Processing Feature is turned on by setting the SFID ACT 235 field on the SFSYS form (5713-1 Record RC/V View 8.22) to "Y".
- Turn on the 5E11 LDP feature set by setting the SFID ACT 202 and 203 fields on the SFSYS form (5713-1 Record RC/V View 8.22) to "Y".
- Create the default ANI Table using the ANITBL (5E12 and earlier) form (5561 Record, RC/V View 8.51) / ANITABLE (5E13 and later) form (5575 Record, RC/V View 8.58).
- Create the default LDP Carrier Table using the LDPCTBL form (5562 Record, RC/V View 8.52). Provide 1 entry for each carrier other than the home carrier for which custom processing is desired.
- Create the LDP Carrier Table using LDPCTBL form (5562 Record, RC/V View 8.52).
- Use ANITBL (5E12 and earlier) form / ANITABLE (5E13 and later) form to create ANI Table entries for each ANI value which desires custom processing specifications.
- Process calls for multiple carriers.

2.3 LDP Feature Set (5E12 and later)

- Make sure the Basic LDP Call Processing Feature (SFID165) and the LDP Multiple CIC feature (SFID202) is turned on with SFSYS form (5713-1 Record, RC/V View 8.22).

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- Make sure the ANI Table Processing Feature is turned on by setting the SFID ACT 235 field on the SFSYS form (5713-1 Record RC/V View 8.22) to "Y".
- Create the default ANI Table using ANITBL (5E12 and earlier) form (5561 Record, RC/V View 8.51) /ANITABLE (5E13 and later) form (5575 Record, RC/V View 8.58).
- Create the default LDP Carrier Table using LDPCTBL form (5562 Record, RC/V View 8.52). Provide 1 entry for each carrier other than the home carrier for which custom processing is desired.
- Create the LDP Carrier Table using LDPCTBL form (5562 Record, RC/V View 8.52). Up to 64 entries may be entered. One of these entries corresponds to the home carrier id LDP CARRIER. Separate entries are made for CARRIER PRESUBSCD equal to "Y" and CARRIER PRESUBSCD equal to "N".
- Use ANITBL / ANITABLE form to create ANI Table entries for each ANI value which desires custom processing specifications. Each entry includes a carrier id to which the customer has subscribed.
- Process calls for multiple carriers.

2.4 LDP Feature Set (5E13 and later)

For provisioning of these features:

- For all features listed below, make sure the Basic LDP Call Processing Feature (SFID165) is turned on by setting the ACT field on the SFSYS form (5713-1 Record) to "Y".
- For FGD Cutthrough Trigger feature (99-5E-4269):
  - On the NSTRIG form (5324 Record), set the APPLICATION field to "ASP" and the AIN REL field to "ROD1".
  - Set CUT THRU TRIG on the TKGRP form (5200 Record) to "Y".
- For Multistage 2-Way FGD feature (99-5E-4301):
  - Set PASS ANI to "Y" on the TKGRP form.
- For 400 HZ Carrier Tone feature (99-5E-4300). See Figure 8.
  - Set CARRIER TONE to "Y" on the OFCOPT form.
  - For Carrier Tone as a Network Announcement prompt, set TONE TYPE on the SSPANN form to "CARRIER".
  - For Carrier Tone as a prompt tone for collecting account codes and other information:

    For trunk group option, set ACCT PROMPT to "CARRIER" and CT FOR DT to "Y" on the TKGRP form.

    For switch wide option, set ACCT PROMPT to "GLOBAL" on the TKGRP form and set ACCT PROMPT to "CARRIER" on the OFCOPT form.
- For the AIN LDP Support for High Speed Data feature (99-5E-4582), the following is a list of valid originations:

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- LATA Originations - Set the LDP field to "Y" on the TKGRP form (5202 Record). (This implies that SFID 165 is activated.)
- VPN Originations - Activate the VPN LDP feature (SFID 242) by setting the ACT field on the SFSYS form (5713-1) to "Y". On the TKGRP form, set the VPN ACCESS field to "Y".
- DAL Originations - Activate the DAL feature (SFID 272) by setting the ACT field on the SFSYS form to "Y". On the TKGRP form, set the DAL ACCESS field to "Y".

3. TRANSLATION REQUIREMENTS

3.1 The LDP Feature Set (5E10 and later)

TABLE 3.1
New and Modified ODA Forms (5E10 and later)

Form Name	Record Number	Division	Section	RC View
ANIMOD	5560	3	5BD	8.50
ANITBL	5561	3	5BE	8.51
IDDD	5307	3	3T	9.6
LDIT	5300-3	3	3C	9.3
MLDIT	5300-5	3	3C	9.3
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
RDIT	5300-7/8	3	3H	9.9
TKGRP	5202	3	2A	5.1

ANIMOD form (5560 Record) - The 5560 Record is used to define the SM (Switch Module) which contains further Outbound Services data for the given ANI (Automatic Number Identification).

This new form supports the TDX ANI Table Special Feature.

ANITBL form (5561 Record) - The 5561 Record contains the switch based ANI (Automatic Number Identification) table. The ANI table contains ANIs designating special treatment when a match occurs with an ANI associated with an incoming TDX (Toll Digital Exchange) Call based on the option set, which is defined on this form. With 5E13 and later this form is replaced by the ANITABLE and LDPINDEX forms.

For 5E10 and later, this new form was added to support the TDX ANI Table Special Feature. Also the SCR field was added to support the ANI Table Line Class Code feature.

IDDD form (5307 Record) - The 5307 Record is used for IDDD (International Direct Distance Dialing) Country Access Codes.

For 5E10 and later, the ANI BYPASS field was added to support TDX ANI Table Processing, SFID 235.

LDIT form (5300-3 Record) - The 5300-3 and 5300-5 Records are used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Any code from 1 - 15 digits in length may be defined. The LDIT serves as both a "local" and "foreign" area translator.

For 5E10 and later, the ANI BYPASS field was added to support TDX ANI Table Processing, SFID 235.

MLDIT form (5300-5 Record) - The 5300-3 and 5300-5 Records are used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Any code from 1 - 15 digits in length may be defined. The MLDIT serves as both a "local" and "foreign" area translator.

For 5E10 and later, the ANI BYPASS field was added to support TDX ANI Table Processing, SFID 235.

OFCOPT form (5509 Record) - The 5509 Record is used to supply various miscellaneous office options and parameters.

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For 5E10 and later, the TDX CARRID field was added to support TDX Basic Call Processing, SFID 165.

PDIT form (5300-2 Record) - The 5300-2 Record is used to define the Prefix/Feature Digit Interpreter in a 5ESS Switch. The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which are analyzed in the LDIT (Local Digit Interpreter Table). Digit analysis for all line originated calls in a 5ESS Switch start in PDIT. At least the first digit of every valid dialable code must be represented in PDIT.

For 5E10 and later, the ANI BYPASS field was added to support TDX ANI Table Processing, SFID 235.

RDIT form (5300-7/8 Record) - The RDIT input form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request.

For 5E10 and later, the ANI BYPASS field was added to support TDX ANI Table Processing, SFID 235.

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

For 5E10 and later, the TDX, ANI PROCESS, and TERM BILL fields were added to support TDX Basic Call Processing (SFID 165) and TDX ANI Table Processing (SFID 235).

3.2 LDP Feature Set (5E11 and later)

TABLE 3.2
New and Modified ODA Forms (5E11 and later)

Form Name	Record Number	Division	Section	RC View
ANITBL	5561	3	5BE	8.51
LDPCTBL	5562	3	5BF	8.52

ANITBL form (5561 Record) - The 5561 Record contains the switch based ANI (Automatic Number Identification) table. The ANI table contains ANIs designating special treatment when a match occurs with an ANI associated with an incoming TDX (Toll Digital Exchange) Call based on the option set, which is defined on this form. With 5E13 and later this form is replaced by the ANITABLE and LDPINDEX forms.

For 5E11 and later, the LDP CARRIER field was added to support LDP Multiple CIC Support, SFID 165.

LDPCTBL form (5562 Record) - The 5562 Record provides a LDP Carrier Table and Default Carrier Table.

This new form supports the LDP Multiple CIC Special Feature.

3.3 LDP feature set (5E12 and later)

TABLE 3.3
New and Modified ODA Forms (5E12 and later)

Form Name	Record Number	Division	Section	RC View
ANITBL	5561	3	5BE	8.51
LDPCTBL	5562	3	5BF	8.52
TKGRP	5202	3	2A	5.1

ANITBL form (5561 Record) - The 5561 Record contains the switch-based ANI (Automatic Number Identification) table. The ANI table contains ANIs designating special treatment when a match occurs with an ANI associated with an incoming TDX (Toll Digital Exchange) Call based on the option set, which is defined on this form. With 5E13 and later this form is replaced by the ANITABLE and LDPINDEX forms.

For 5E12 and later, the valid entries for the LINE and LDP CARRIER fields are changed to support the ANI Table Expansion - 3-Digit and 6-Digit feature.

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LDPCTBL form (5562 Record) - The 5562 Record provides a LDP Carrier Table and Default Carrier Table.

For 5E12 and later, the CARRIER PRESUBSCD field was added to support LDP Multiple ANI, SFID 207.

TKGRP form (5202 Record) - The 5202 Record is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on this record is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

For 5E12 and later, the PREF NPA was added to support the 7-Digit DN Handling feature.

For 5E12 and later, a data rule was added to the TDX field.

3.4 LDP feature set (5E13 and later)

TABLE 3.4
New and Modified ODA Ffirns (5E13 and later)

Form Name	Record Number	Division	Section	RC View
ANITABLE	5575	3	5BP	8.58
LDPINDEX	5576	3	5BQ	8.59
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22
SSPANN	5535	3	5AI	10.17
TKGRP	5202	3	2A	5.1

ANITABLE form (5575 Record) - The 5575 Record contains the ANI's designating special treatment when a match occurs with an incoming LDP (Long Distance Platform) Call based on an index-defined option set, which is defined on the LDPINDEX form. This form was added to suppport the ANI Table Index feature.

LDPINDEX form (5576 Record) - The 5576 Record contains the option set for the ANITABLE form. This form was added to support the ANI Table Index feature.

OFCOPT form (5509 Record) - The 5509 Record is used to supply various miscellaneous office options and parameters. For 5E13 and later, the ACCT PROMPT and CARRIER TONE fields were added to support the 400Hz Carrier Tone Feature. For 5E13 the LDP ANI field was added to indicate which ANI table to use for populating ANI data. This field was added to support the ANI Table Index feature and only exists in 5E13.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 165 to "Y".

SSPANN form (5535 Record) - This form is used to specify an announcement code and either the route index to an announcement trunk group to be used to supply the appropriate message or pointers to customized header and trailer announcements. For 5E13 and later, the TONE TYPE field was added to support the 400Hz Carrier Tone Feature.

TKGRP form (5202 Record) - The 5202 Record is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on this record is information that is common to the entire group.

For 5E13 and later, the CUT THRU TRIG field was added to support the FGD Cutthrough Trigger feature and the PASS ANI field was added to support the Multistage 2-Way FGD feature.

For 5E13 and later, the ACCT PROMPT and CT FOR DT fields were added to support the 400Hz Carrier Tone feature.

4. GLOSSARY

AIN Advanced Intelligent Network

ANI Automatic Numbering Identification

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ASP	Advance Services Platform
BRCS	Business/Residential Customer Services
CCS	Common Channel Signaling
CDX	Compact Digital Exchange
CIC	Carrier Identification Code
DAL	Direct Access Line
DAS	Digit Analysis Selector
DNT	Dialed Number Trigger
EA	Equal Access
FGD	Feature Group D
ISUP	Integrated Services - User Part
LATA	Local Area Transport Area
LDP	Long Distance Platform
LEC	Local Exchange Carrier
MF	Multi-Frequency
NI	National ISDN or Network Interconnect
NPA	Numbering Plan Area
ODA	Office Data Assembler
OTDX	Originating Toll Digital Exchange
PBX	Private Branch Exchange
RAF	Recorded Announcement Frame/Function
RC	Recent Change Subsystem
RTU	Right to Use
SCP	Service Control Point
SCPN	Special Called Party Number
SM	Switching Module
SM2K	Switching Module 2000
TDX	Toll Digital Exchange
VCDX	Very Compact Digital Exchange

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Figure 1 LDP CONFIGURATION 1

Figure 2 LDP CONFIGURATION 2

Figure 3 LDP CONFIGURATION 3

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Figure 4 LDP CONFIGURATION 4

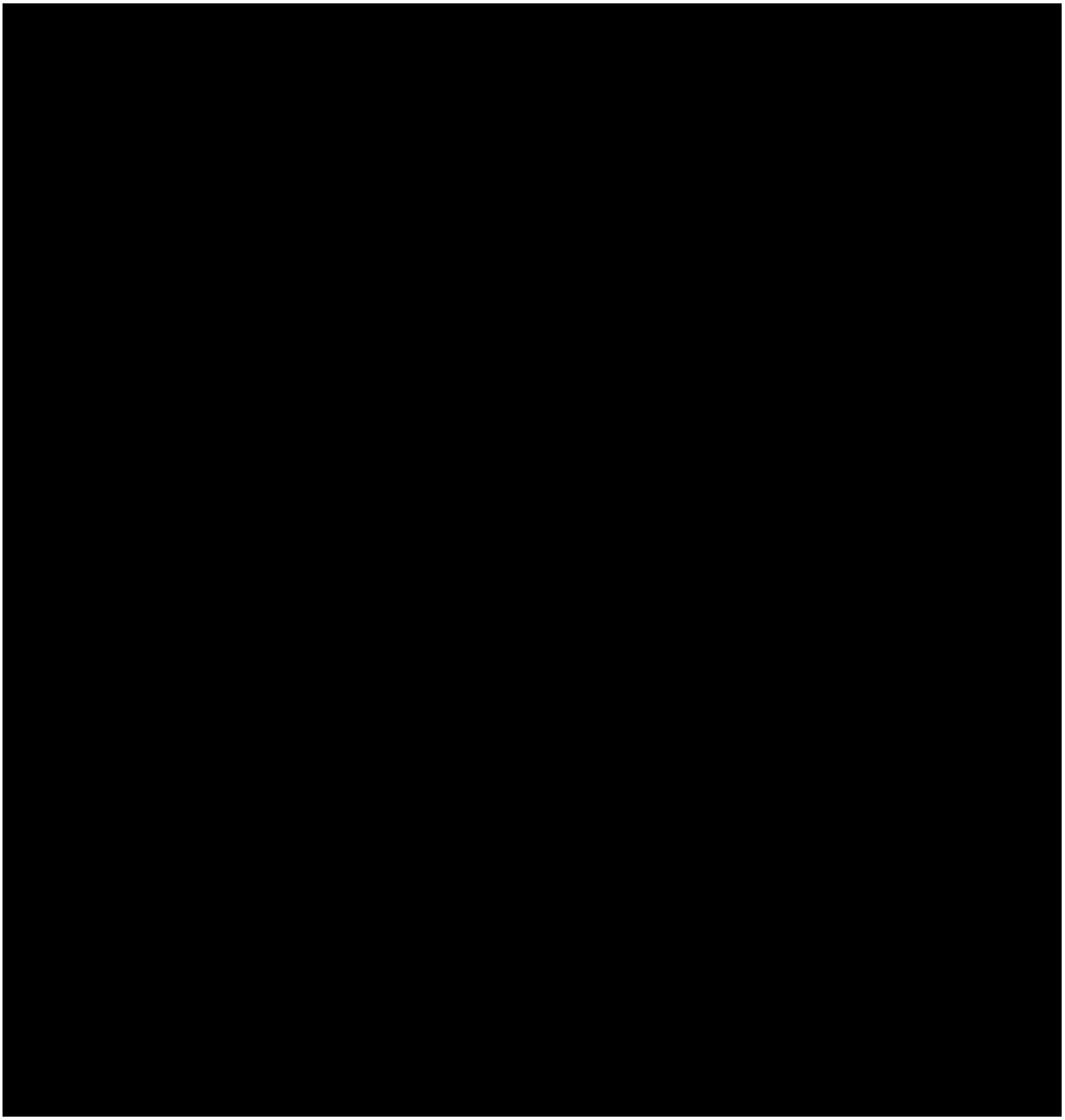

Figure 5 FORM FLOW FOR 5E10 AND LATER LDP FEATURE SET

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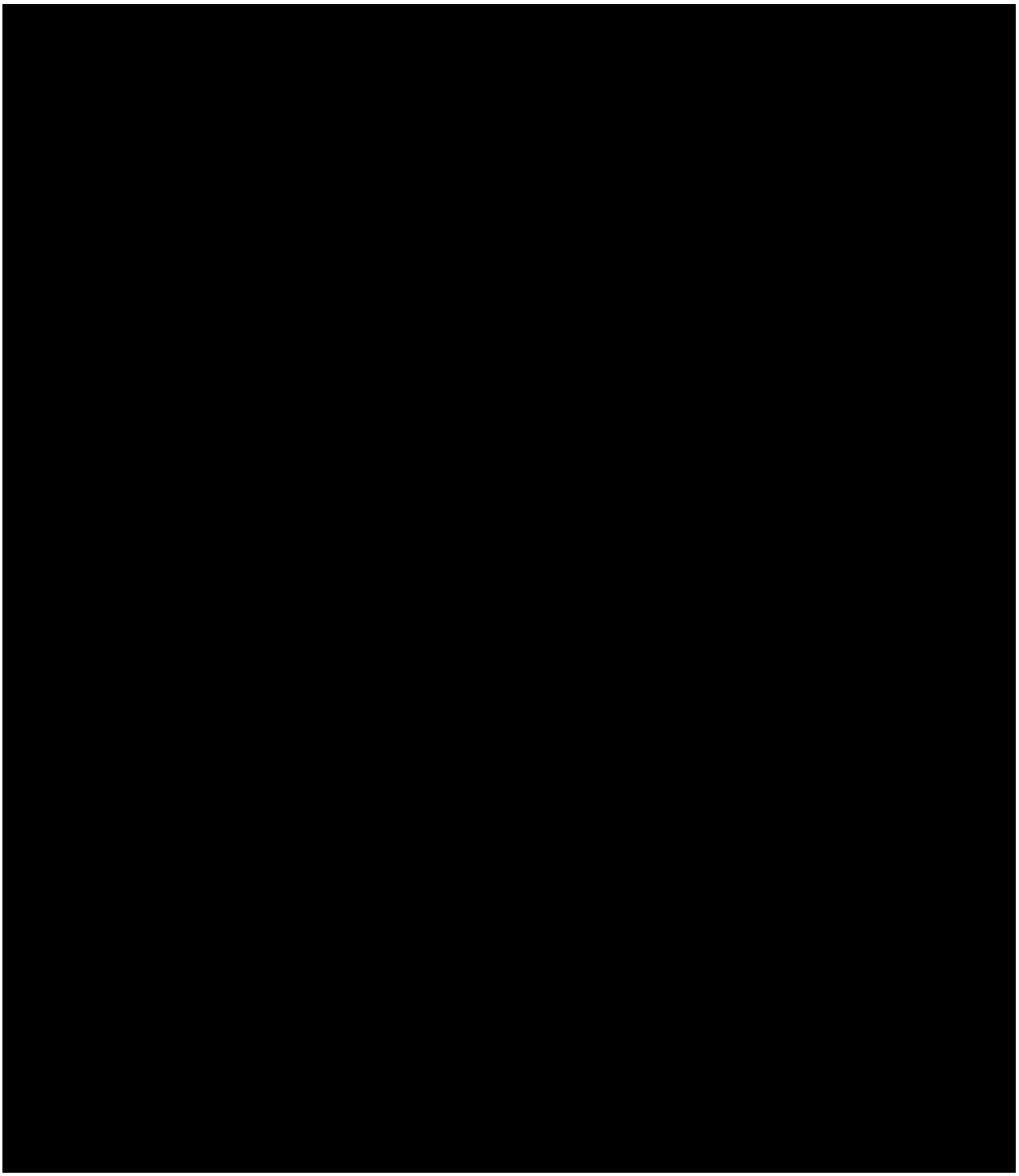

Figure 6 FORM FLOW FOR 5E11 AND LATER LDP FEATURE SET

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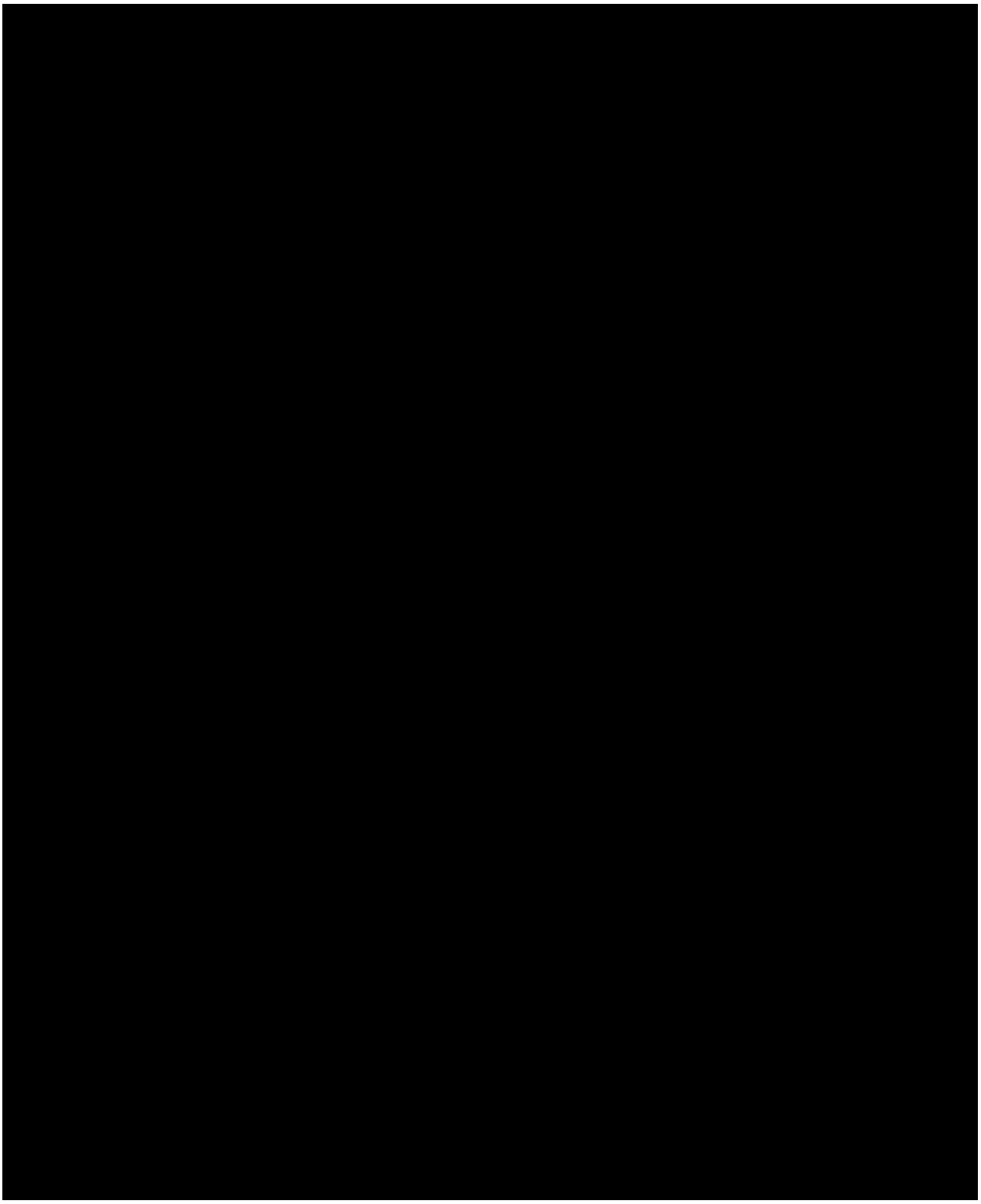

Figure 7 FORM FLOW FOR 5E12 AND LATER LDP FEATURE SET

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Figure 8 FORM FLOW FOR 5E13 AND LATER LDP FEATURE SET

SEC. 4A166: AMA RECORDING FOR AIN BUSY AND DON'T ANSWER CALLS

1. BACKGROUND

Prior to this feature, AMA (Automatic Message Accounting) provided treatment for unanswered calls but only applied to calls which reach set-up complete state. This feature, which is consistent with the current functionality, includes busy calls and calls that abandon prior to set-up complete state.

2. FEATURE DESCRIPTION

The AMA Recording for AIN (Advanced Intelligent Network) Busy and Don't Answer Calls is a secured feature using SFID (Secured Feature ID) 166 and must be purchased before being activated. The feature number for this feature is 99-5E-3152. Activation of this feature also requires the base ASP secured feature (SFID 126). For more information regarding this feature, see Division 2, Section 4A126.

Available with 5E10 and later, this feature provides the ability to provide AMA recording for an unanswered or busy ASP (Advanced Services Platform) call or ASP call leg which used the AIN 0.1 protocol and has a pending AMA record. The determination for AMA treatment is based on the AMA AIN BUSY NA field on the OFCOPT form (5509 Record). When this field is set to "N", busy ASP calls with a pending AMA record will not generate a record. Existing AMA functionality determines whether abandoned or unanswered ASP calls with a pending AMA record will generate a record. When this field is set to "Y", a busy or abandoned

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ASP call with a pending AMA record will generate an XX220 or XX221 record.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office and parameters. The field AMA AIN BUSY NA was added to this form.

SFSYS form (5713-1 Record) - This form is used to enable the feature for the operating company. SFID 166 (and SFID 126) must have the field ACT set to "Y" to enable and use the feature.

Figure 1 AMA RECORDING FOR AIN BUSY AND DON'T ANSWER CALLS FORM FLOW

SEC. 4A167: AMA CAPABILITIES FOR TYPE 1 CELLULAR ACCESS

1. FEATURE DESCRIPTION

The AMA Capabilities for Type 1 Cellular Access is available with the 5E10 Software Release. This feature generates AMA records for the purpose of providing billing information concerning the WSP (Wireless

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Service Provider) using a Type 1 interface and the time the WSP is connected to the LEC (Local Exchange Carrier) network. These records do not replace any currently generated AMA records; they are in addition to the records. The Type 1 interface is a PF (Private Facilities) trunk using traditional MF (Multi-Frequency) signaling. The feature number for this capability is 99-5E-2725.a.

2. FEATURE ASSIGNMENT

To activate this secured feature, "Y" must be entered in the ACT field for SFID 167 on the SFSYS form (5713-1 Record).

AMACT form 5506 Record:
Assign an AMA CALL TYPE on the AMACT form. For an originating tandem form, AMA CALL TYPE is "CMCBOT". For a terminating tandem, the AMA CALL TYPE is "CMCBTT".

TKGRP form 5202 Record:
Assign the CMC ID and CMC trunk billing number (BILLING DN and BILL TRKGRP).

Assign a trunk group as a WSP trunk group with a CMC ID but leave the ORIG CMC and TERM CMC fields blank. This will not generate any WSP terminating/originating records for all calls originated from or terminated to the WSP.

Data Example:

Trunk Data	
Field	**Entry**
TGN	562
TRK DIR	TWOWAY
TRK CLASS	PF
INPLS	MF
OUTPLS	MF
LATA/TTOLL	
CMC	Y
CMC ID	1
ORIG CMC	
TERM CMC	

Assign a trunk group as a WSP trunk group with a CMC ID, the ORIG CMC field set to "T1" and the TERM CMC field left blank. This generates Type 1 WSP originating records for all calls terminating to the WSP.

Data Example:

Trunk Data	
Field	**Entry**
TGN	562
TRK DIR	TWOWAY
TRK CLASS	PF
INPLS	MF
OUTPLS	MF
LATA/TTOLL	
CMC	Y
CMC ID	1
ORIG CMC	T1
TERM CMC	

Assign a trunk group as a WSP trunk group with a CMC ID, the TERM CMC field set to "T1" and the ORIG CMC field left blank. This generates a Type 1 WSP terminating records for all calls terminating to the WSP.

Data Example:

Trunk Data	
Field	**Entry**
TGN	562
TRK DIR	TWOWAY
TRK CLASS	PF

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INPLS	MF
OUTPLS	MF
LATA/TTOLL	
CMC	Y
CMC ID	1
ORIG CMC	
TERM CMC	T1

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 167 must be set to "Y"

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The value "T1" was added to the ORIG CMC and TERM CMC fields to indicate AMA for Type 1 Cellular interconnection.

4. GLOSSARY

MF Multi-Frequency

Originating WSP Call/record A WSP Originating call is one that originates in or is received by the LEC network and is routed to a WSP. WSP AMA records are made in the switch directly connecte to the WSP Type 1 interface. Such WSP AMA records are called "Originating WSP" records but have a Structure Code (653) commonly associate with "Terminating IC" calls.

PF Private Facilities

Terminating WSP Call/record A WSP Terminating call is one incoming from a WSP Type 1, for completion in or via the LEC network WSP AMA records are called "Terminating WSP" records but hav a Structure Code (625) commonly associated with "Originating IC" calls.

Type 1 Interconnection Connection to a telephone company end office. It provides connections only to and from terminals serve by that end office, including lines, private trunks and other WSPs having terminations within the switch itself. These restrictions are provided only through digit analysis data in the switch, since the specific restrictions would be difficult to determine for every case.

WSP Wireless Service Provider, previously known as a CMC (Cellular Mobile Carrier).

SEC. 4A169: INCREASE COLLECTION UNIT FOR ROP - SECTION 144

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-070-100 for TRFC30 Section 144 - Switch Group Measurements Feature Document.*

SEC. 4A170: Subsystem Number Capacity Increase

1. BACKGROUND

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Prior to the introduction of this feature, remote subsystem numbers in the range of 8 to 231 received by the 5ESS-2000 Switch would not be correctly returned to the remote node. This occurred because SSN's in the range of 8 to 231 were not considered valid which caused values in that range not to be maintained correctly. With the introduction of this feature, ASP (Advanced Services Platform) R0.1 SCCP (Signaling Connection Control Part) and TCAP (Translation Capabilities Application Protocol) messages containing a remote subsystem number in the range of 8 to 231, will be returned to the destination node as received.

2. FEATURE DESCRIPTION

The SSNCI (Subsystem Number Capacity Increase) is a secured feature using SFID (Secured Feature ID) 170 and must be purchased before being activated. The feature number for this feature is 99-5E-3183.

This feature is being deployed on the 5ESS-2000 Switch in a Software Update for the 5E10 and later Software Releases.

The SSNCI special feature provides unaltered remote subsystem numbers in the range of 8 to 231 for all ASP R0.1 messages returned by the 5ESS-2000 Switch to the SCP (Service Control Point). This feature does not alter the processing of local subsystem numbers.

When the 5ESS-2000 Switch receives an SCCP or a TCAP message initiated by another node, both the local and remote subsystem numbers are contained in this message. The local subsystem number is used by the switch to specify the application to process the SCCP message. In response to this message, a message is sent to the destination node and includes the remote subsystem number. This remote subsystem number is used by the remote node to identify the application to process this message.

- ***NOTE:*** Monitoring of remote subsystem numbers in the range of 8 to 231 will not be performed by the 5ESS-2000 Switch.

- ***NOTE:*** This feature does not work for remote subsystem numbers in ASP R0 TCAP messages.

FEATURE ASSIGNMENT

The activation of this feature is dependent on the ASP Protocol 0.1 feature (99-5E-3033), SFID 126. See Division 2, Section 4a126 for more information.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713 Record) - This form is used to activate secured features. Before the SSNCI feature can be activated, the feature ASP R0.1 must be activated by setting the ACT field for SFID 126 to "Y" on the SFSYS form (5713-1 Record).

The SSNCI feature can then be enabled by setting the ACT field for SFID 170 to "Y" on the SFSYS form (5713-1 Record).

SEC. 4A171: TCAP IMPROVEMENTS FOR A SWITCH SPANNING MULTIPLE LATAs

1. FEATURE DESCRIPTION

The TCAP (Transaction Capabilities Application Part) Improvements for a Switch Spanning Multiple LATAs (Local Access And Transport Areas) feature is available with the 5E11 Software Release. The feature number is 99-5E-2708 which includes the functionality of the InterLATA 800 Service feature (99-5E-2302). This is a secured feature (SFID 171) which must be activated to use this feature.

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1.1 Background

The original design of the LASS (Local Area Signaling Services) and SSP (Service Switching Point) 800 capabilities assumed that all lines served by one End Office would reside in one LATA as defined by the LATA NUMBER on the OFCOPT form (5509 Record). Prior to this feature, LASS TCAP queries from any line resulted in queries to the STP (Signaling Transfer Point) which corresponded to the LATA NUMBER on the OFCOPT form. Similarly, prior to this feature, SSP 800 calls from any line resulted in queries to the 800 database that included the LATA NUMBER from the OFCOPT form. Such calls received over trunks were allowed to designate another LATA NUMBER based on the TKGRP form (5202 Record) using the FAR END LATA field.

1.2 Multiple LATAs

With this feature, the customer can associate a LATA with a subscriber. An additional LATA number is used to select the appropriate signaling link based on the STP for LASS services or be used to populate the SSP 800 TCAP query to the SCP (Service Control Point). This feature provides switch capability to serve geographically dispersed territories where, through the use of RSMs (Remote Switching Modules), some ORM/RSM/EXM-2000 lines may exist in LATAs which are different from the host switch. This feature permits lines (or groups of lines) to be assigned a LATA NUMBER different from the default LATA NUMBER associated with the office as defined on the OFCOPT form.

This feature allows LASS TCAP queries to route to the correct STP A-link for lines in a different LATA than the default LATA. For SSP 800 toll-free calls, inquiries to the SCP database for SSP 800 calls can query using the same A-link regardless of the LATA, but the TCAP query specifies the LATA of the originating subscriber (the SSP 800 capability assumes that one end office serves one LATA). With this feature, the switch is able to associate a LATA with a set of lines and this LATA is used to formulate the SSP 800 query.

2. FEATURE ASSIGNMENT

To use this feature, SFID 171 must activated on the SFSYS form (5713 Record). To provide this feature, a new LATA field was added to the LCC form (5306 Record). When creating a new Line Class in a Rate Area outside the default LATA, the provider enters the LATA number associated with that Rate Area on the LCC form. If no LATA number is entered on the LCC Form, the LATA NUMBER defined on the OFCOPT form is used for LASS TCAP query routing or in the formulation of the 800 SSP query. For the LASS TCAP query routing only, the service provider must specify a pair of DPCs (Destination Point Codes) associated with the LATA and APPLIC (Application) fields on the DSAPP form (5537 Record). This allows the service provider the means to send TCAP traffic to different STPs based on the LATA/Application. It should be noted that DPCs are not required for the 800 SSP query as the switch is able to associate a LATA for the SSP 800 query.

Lines within the host switch LATA need not have a LATA number directly associated with them - the LATA NUMBER from the OFCOPT form would continue to be used for such lines as a default. Lines that are resident in different LATAs but on the same switching system are also supported by the 5ESS-2000 Switch and the CDX (Compact Digital Exchange) Switch.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSAPP	5537	3	5AK	8.17
LCC	5306	3	3S	4.1
SFSYS	5713-1	3	5AR	8.22

DSAPP form (5537 Record) - This form is used to define the Direct Signaling Application type, the Transaction Type, and the Subsystem Number. For this feature, the LATA, DPC 1, and DPC 2 fields were added. If LATA is entered on this form, there must be an associated DSAPP form with the LATA field

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blank.

LCC form (5306 Record) - This form is used to define each LCC (Line Class Code) in a 5ESS-2000 Switch. For this feature, the LATA field was added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. Secured Feature ID 171 must be set to "Y".

SEC. 4A172: INCREASE NUMBER OF TRUNK GROUPS TO 4000

1. FEATURE DESCRIPTION

Available with 5E11 and later, the Increase Number of Trunk Groups to 4000 secured feature has feature number 99-5E-2487 (formerly 97-5E-2487) and uses SFID (Secured Feature ID) 172. This feature provides for increasing the maximum number of trunk groups of trunks carrying voice traffic from 2000 to 4000. Also the maximum number of route indexes is increased from 3617 to 4095.

WARNING: This feature can not be used with any EDAS (Engineering Administration Data Acquisition System) type OSS (Operational Support System) as it will disrupt Traffic 30 Measurements. Only non EDAS type OSSs that have been modified to handle 4000 trunk group measurements will work with this feature. For a description see: "EDAS Interface", 235-070-100, Traffic and Plant Measurements Descriptions.

2. FEATURE ASSIGNMENT

2.1 Feature Activation/Deactivation

To activate this feature, the ACT field for SFID 172 must be "Y" on the SFSYS form (5713-1 Record). In addition, MAX TGN and MAX RTIDX fields on the OFCOPT form must be set to the maximum value.

3. TRANSLATION REQUIREMENTS

TABLE 3
New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACCTGP	5623-2	4	24B	4.21
ACCTTPA	5623-6	4	24F	5.42
ACDCTP	5412	3	4M	26.9
ACDVCT	5643	4	32H	6.7
ACVTFD	5967-1	6	10A	12.46
ACVTGP	5967-2	6	10B	4.46
ACVTLPA	5967-3	6	10C	1.46
ACVTMPA	5967-4	6	10D	1.46
APGFP	5620-2	4	21B	24.4
APHSS	5620-4	4	21D	24.12
APXANNC	5051	7	1B	10.38
ARSGPA	5608-2	4	9B	10.5
ARSSCRN	5608-6	4	9F	10.6
ARSSIG	5608-9	4	9I	10.7
ARSTPA	5608-5	4	9E	5.21
ASIGP	5630-4	4	30D	4.61
ASPTPA	5632-4	4	31D	5.64
ATHGP	5619-2	4	20B	4.17
ATHTPA	5619-7	4	20G	5.41
ATSDATA	5052	7	1C	14.9
BFG	5625	4	26A	12.9
CCSRTI	5313	3	3Z	10.26
CDIM	5300-6	3	3E	9.7
COTH	5513	3	5M	11.2
CQPARM	5640	4	32E	6.4
CVDSTTN	5459	3	4BG	21.42
CVECT	5460	3	4BH	21.41
CWTTPA	5603-4	4	4D	5.24
DSLUSR	5908	5	1I	23.2 23.8

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EMRNM	5108	3	1H	4.9
EMROFC	5116	3	1P	4.9
HGRPAS	5115	3	1O	4.14
IBMRNGS	5471	3	4BW	21.58
ICF	5305	3	3R	10.3
ICIPF	5903	5	1D	3.43
IDDD	5307	3	3T	9.6
IDPTPA	5601-8	4	2H	5.26
IMINFO	5510	3	5J	18.1 11.1
IMTRK	5210	3	2L	5.46
INDIT	5309	3	3V	9.5
INFLDEST	5448	3	4AW	21.27
INFLTADP	5452	3	4BA	27.52
INFLTAP	5451	3	4AZ	27.51
IPFDCA	5969	6	12	12.7
LASSOP	5945	5	5F	8.21
LDIT	5300-3 AB/5	3	3C	9.3
LINE	5109-1/2/3	3	1I	1.6
MCRTIDX	5304	3	3Q	10.4
MDRTPA	5624-6	4	25F	5.33
MLHG	5110	3	1J	3.5
MLHLN	5111	3	1K	1.6
MSUSP	5530	3	5AD	8.13
MWTPA	5602-5	4	3D	5.27
NOC	5501	3	5A	8.2
NPAMAP	5414	3	4O	26.1
ODAOP	5524	3	5W	NA
OFCOPT	5509	3	5I	8.1 8.15
OPCTO	5407	3	4H	21.23
OPRTK	5417	3	4R	26.26
OSPSCT	5404	3	4E	21.22
PDIT	5300-2	3	3B	9.2
PFAGPA	5609-5	4	10E	7.1
PFAINWT	5609-4	4	10D	7.4
PFASFG	5609-3	4	10C	7.3
PFATG	5609-2	4	10B	7.2
PFATPA	5609-8	4	10H	5.28
PNDP	5608-10/11	4	9J	9.21
PPPOLY	5618-7	4	19G	10.34
PPSCRN	5618-2	4	19B	10.31
PROPBID	5325	3	3AL	10.37
PSDNICRI	5921	5	3B	10.35
PULPA	5605-3	4	6C	1.23
PUMPA	5605-4	4	6D	1.23
PUOFD	5605-1	4	6A	12.13
QUFD	5617-1/2	4	18A	12.40
QUGPA	5617-3/4	4	18B	3.40 7.12
RAR	5301	3	3F	10.10
RASRTI	5538	3	5AL	10.19
RBVRTI	5950	5	5K	4.63
RDIT	5300-7/8	3	3H	9.9
RSMCAR	5421	3	4V	26.22
SCFD	5627-1	4	27A	12.51
SCLIST	5627-5	4	27E	4.2
SCLPA	5627-2	4	27B	1.51
SCMPA	5627-3	4	27C	1.51
SCRNCODE	5415	3	4P	26.3
SCTPA	5627-4	4	27D	5.51
SERVDATA	5466	3	4BS	21.54
SERVDEST	5467	3	4BT	21.53
SHTN	5902	5	1C	23.20
SSPANN	5535	3	5AI	10.17
STINFO	5402	3	4C	21.2
TCITG	5422	3	4W	26.23
TGATTD	5611	4	12A	4.4
TGNLEC	5443	3	4AR	27.21
TGSRFD	5607-1/2	4	8A	12.21
TGSRLPA	5607-3	4	8B	1.29
TGSRMPA	5607-4	4	8C	1.29
TGSRTPA	5607-5	4	8D	5.29
TKEDSLD	5209	3	2K	5.34
TKGRP	5202	3	2A	5.1
TKGRPFA	5206	3	2E	5.4
TODTPA	5610-5	4	11E	5.30
TREAT	5461-4	3	4BL	26.33

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TRUNK	5204	3	2C	5.5
TRUNKFA	5205	3	2D	5.11
UTTKGRP	5215	3	2R	5.16
UTTKGRP	5215	3	2R	5.16
VALOFFC	5423	3	4X	26.24
X75PVC	5926	5	3G	5.13

ACCTGP form (5623-2) - The 5623-2 Record contains information needed to describe the Account Code group parameters. For 5E11 and later, changed valid entries for ANNC INDEX.

ACCTTPA form (5623-6) - The 5623-6 Record contains information needed to describe the Account Code trunk parameters. For 5E11 and later, changed valid entries for TGN.

ACDCTP/ACDPOL form (5412) - The 5412 Record is used to supply OSPS ACD call type information. For 5E11 and later, changed valid entries for TGN/CDI.

ACDVCT form (5643) - The 5643 Record defines the Call Vectoring steps that determine how an incoming call is to be treated while waiting for a ACD (Automatic Call Distributor) agent. This is a new form for 5E11.

ACVTFD form (5967-1) - The 5967-1 Record defines the Attendant Control constructed Feature. For 5E11 and later, changed valid entries for ROUTE INDEX.

ACVTGP form (5967-2) - The 5967-2 Record defines the per group parameter data associated with an Attendant Control Constructed Feature. For 5E11 and later, changed valid entries for ROUTE INDEX.

ACVTLPA form (5967) - The 5967 Record defines the per port data associated with the Attendant Control Constructed Feature. For 5E11 and later, changed valid entries for ROUTE INDEX.

ACVTMPA form (5967-4) - The 5967-4 Record defines the per port data associated with the Attendant Control Constructed Feature. For 5E11 and later, changed valid entries for ROUTE INDEX.

APGFP form (5620-2) - The 5620-2 Record indicates if the customer has Trunks measurement specified. This also indicates what group types are using Facilities Management and/or Traffic Data to Customer Location capabilities. For 5E11 and later, changed data rules for GROUP NO/GROUP NAME.

APHSS form (5620-4) - The 5620-4 Record defines whether or not the 100 second scan activation feature has been turned on for the customer. For 5E11 and later, changed valid entries for GROUP NBR. Changed data rule for GROUP NBR.

APXANNC form (5051) - The 5051 Record provides mapping between ECP (Executive Control Processor) announcement identification numbers and 5ESS-2000 Switch route indices. For 5E11 and later, changed valid entries for BARGE IN RTI, and NON BARGE IN RTI. Added data rule for BARGE IN RTI.

ARSGPA form (5608-2) - The 5608-2 Record provides ARS (Automatic Route Selection) Group parameter data for each ARS Group Name which is used in SM for Automatic Route Selection Feature. For 5E11 and later, changed valid entries for BAD NUMBER ANNOUNCEMENT RTI.

ARSSCRN form (5608-6) - The 5608-6 Record is used to determine the initial route of a route list for ARS groups. For 5E11 and later, changed valid entries for ARS INDEX, and MCRTI.

ARSSIG form (5608-9) - The 5608-9 Record contains the segmented signaling pause length and corresponding digit position for on-network numbers. For 5E11 and later, changed valid entries for MC ROUTE INDEX.

ARSTPA form (5608-5) - The 5608-5 Record provides a mean to create an ARS Trunk (keyed by TGN/MEMB) form which overwrites the Default Parameters on the corresponding ARSFD forms. For 5E11 and later, changed valid entries for TGN.

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ASIGP form (5630-4) - The 5630-4 Record contains information needed to define the trunk and signaling characteristics of an Advanced Service Interface group. For 5E11 and later, changed valid entries for RTI.

ASPTPA form (5632-4) - The 5632-4 Record defines the trunk data associated with the Advanced Services Platform Feature. For 5E11 and later, changed valid entries for TGN.

ATHGP form (5619-2) - The 5619-2 Record contains information needed to describe the Authorization Code group parameters. For 5E11 and later, changed valid entries for ANNC ROUTE INDEX.

ATHTPA form (5619-7) - The 5619-7 Record contains information needed to describe the Authorization Code trunk parameters. For 5E11 and later, changed valid entries for TGN.

ATSDATA form (5052) - The 5052 Record provides data that defines a test session in a certain test schedule to be invoked by ATTS (Automatic Trunk Testing Scheduler) for the purpose of performing automated trunk testing over a specified range of equipped members of a specified trunk group. For 5E11 and later, changed valid entries for TGN.

BFG form (5625) - The 5625 Record contains information for the BRCS (Business And Residential Customer Services) Feature. For 5E11 and later, changed valid entries for ORIGINATING and TERMINATING.

CCSRTI form (5313) - The 5313 Record defines a new route index value for incoming CCS (Common Channel Signaling) calls into a 5ESS -2000 Switch that need to be rerouted onto an outgoing or 2-way Trunk Group whose chosen route does not meet per call restrictions identified in the CCS IAM message. For 5E11 and later, changed valid entries for ROUTE INDEX.

CDIM form (5300-6) - The 5300-6 Record is used for defining carrier destination index used in the routing of interLATA call when 5ESS-2000 Switch serves as an Access Tandem. For 5E11 and later, changed valid entries for CARRIER RTI.

COTH form (5513) - The 5513 Record is used to gather and build data associated with Cutover by thousands group. For 5E11 and later, changed valid entries for ALT CUTOVER RTI.

CQPARM form (5640) - The 5640 Record is used to assign administrative data to be applied to call queues. This is a new form for 5E11.

CVDSTTN form (5459) - The 5459 Record is used to define and administer remote telephone numbers. For 5E11 and later, changed valid entries for RI.

CVECT form (5460) - The 5460 Record defines call vector definitions. For 5E11 and later, changed valid entries for CMD CD and ARG1.

CWTTPA form (5603-4) - The 5603-4 Record is used to allow call waiting parameters (other than the defaults) to be assigned. For 5E11 and later, changed valid entries for TGN.

DSLUSR form (5908) - The 5908 Record is used to collect data for digital subscriber lines. For 5E11 and later, changed valid entries for RBV TGN.

EMRNM form (5108) - The 5108 Record is used to define the remote site and/or local SM emergency TN assignments for remote site stand-alone or SM isolation operation. For 5E11 and later, changed valid entries for RI.

EMROFC form (5116) - The 5116 Record is used to define the AM (Administrative Module) emergency TN alternate routing assignments for isolation or stand-alone operation of SM(s) or remote site(s) that contain the called Emergency TN(s). For 5E11 and later, changed valid entries for EMERGENCY.

HGRPAS form (5108) - The 5108 Record provides hundreds groups assignment of the routing SM to support Distributed Line Terminations for Phase 1 of Distributed Call Processing or of the route index

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(which defines the block of of 100 TNs reserved for a particular special Route Index). For 5E11 and later, changed valid entries for ROUTE INDEX.

IBMRNGS form (5471-1) - The 5471-1 Record allows the OSPS owner to obtain IBM position IDs for each of the ARU (Audio/Audible Response Unit) trunk group members (ports) associated with the IBM DAS (Directory Assistance System). For 5E11 and later, changed valid entries for DAS1 TGN, DAS2 TGN, DAS3 TGN, and DAS4 TGN.

ICF form (5305) - The 5305 Record is used to allow the craft to assigning elements for interLata carriers. For 5E11 and later, changed valid entries for FGB RTI, DOMES RTI, ZMINUS RTI, CI CUT RTI, ZPLUS RTI, INTL OP RTI, NS RTI, and ASP RTI.

ICIPF form (5903) - The 5903 Record defines ICIs for a specific MLHG or terminal group. For 5E11 and later, changed valid entries for TGN.

IDDD form (5307) - The 5307 Record defines IDDD (International Direct Distance Dialing) country access codes. For 5E11 and later, changed valid entries for ROUTE INDEX.

IDPTPA form (5601-8) - The 5601-8 Record is used for assigning IDP (Individualized Dialing Plan) to trunks. For 5E11 and later, changed valid entries for TRUNK GROUP, and TGN.

IMINFO form (5510) - The 5510 Record is used to gather and build miscellaneous data related to a given SM. For 5E11 and later, changed valid entries for DCTU ROUTE INDEX, SLIM ROUTE INDEX, ALIT ROUTE INDEX, MAJ ROUTE INDEX, CSTL ROUTE INDEX, LTD ROUTE INDEX, and ALT CUTOVER RTI.

IMTRK form (5210) - The 5210 Record defines each terminating end for inter-module trunk group members. For 5E11 and later, changed valid entries for TGN, and MATE TGN.

INDIT form (5309) - The 5309 Record provides information pertaining to the disposition of incoming calls. That is, it directs incoming calls based on the trunks directing codes to appropriate translators for either local terminating or tandem treatment. For 5E11 and later, changed valid entries for ROUTE INDEX.

INFLDEST form (5448) - The 5448 Record is used for assigning an outgoing destination index based on incoming destination index, trunk group number and a destination office ID. For 5E11 and later, changed valid entries for TGN.

INFLTADP form (5452) - The 5452 Record provides interflow serving team parameters and status information. For 5E11 and later, changed valid entries for BCHTGN and DCHTGN.

INFLTAP form (5451) - The 5451 Record is a ODA (Office Data Administration) input form that is used for Interflow (incoming) Serving Team information for OSPS. For 5E11 and later, changed valid entries for BCHTGN and DCHTGN.

IPFDCA form (5969) - The 5969 Record provides means to enter dial codes and Information for ISDN attendant groups. For 5E11 and later, changed valid entries for GRPNUM. Added data rule for GRPNUM.

LASSOP form (5945) - The 5945 Record is used for RC (Recent Change) of LASS (Local Area Signaling Services) office parameter data. For 5E11 and later, changed valid entries for ACTIVATE RTI, TRC NA RTI, NO RESRC RTI, AC CNFRM RTI, AR CNFRM RTI, CF ACTIVE DNY RTI, LNG TRM DNY RTI, AC CNCL RTI, AR CNCL RTI, PTY BUSY RTI, AC BLOCK RTI, SCA REJ RTI, CAR REJ RTI, HARSH RTI, GENTLE RTI, and ERROR TREAT RTI.

LDIT form (5300-3A/3B/5) - The 5300-3A/3B/5 Record defines valid dialed or inpulsed digits. For 5E11 and later, changed valid entries for ROUTE INDEX.

LINE form (5109) - The 5109 Record is used to define OE numbers and features for each TN. For 5E11 and later, changed valid entries for RTI and RBV TGN.

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MCRTIDX form (5304) - The 5304 Record contains options for MC (Modular Customization) route index expansion. For 5E11 and later, changed valid entries for NEXT ROUTE, NEXT MC ROUTE INDEX, MC ROUTE INDEX, TRUNK GROUP NUMBER, and SFG NUMBER.

MDRTPA form (5624-6) - The 5624-6 Record provides a means to create a MDR (Message Detail Recording) trunk (keyed by TGN/MEMB) data which overwrites the default parameters on the corresponding MDRFD form. For 5E11 and later, changed valid entries for TGN.

MLHG form (5110) - The 5110 Record is used define Multiline Hunt Groups. For 5E11 and later, changed valid entries for RBV TGN.

MLHLN form (5111) - The 5111 Record is used to define individual terminal numbers assigned to a specific MLHG. For 5E11 and later, changed valid entries for RBV TGN.

MSUSP form (5530) - The 5530 Record contains information needed for scan point assignments. For 5E11 and later, changed valid entries for TGN.

MWTPA form (5602-5) - The 5602-5 Record contains trunk parameters for Multiway calling feature. For 5E11 and later, changed valid entries for TGN.

NOC form (5501) - The 5501 Record is used to assign NOCs (Normalized Office Code) and route indices and charge indices for regular intercept, blank number intercept, out-of-service intercept and denied intercept for each local office code. For 5E11 and later, changed valid entries for REG ICPT RTI.

NPAMAP form (5414) - The 5414 Record is used to assign a switching module, a trunk group, an exception area index, and a LATA (Local Access And Transport Area) number to a NPA (Numbering Plan Area) - NXX (Office Code (Part Of Dialed Number)) combination. For 5E11 and later, changed valid entries for TGN.

ODAOP form (5524) - The 5524 Record is used to supply miscellaneous ODA options and parameters for retrofits or large terminal growth. For 5E11 and later, changed valid entries for ASP DEFAULT ROUTE INDEX.

OFCOPT form (5509) - The 5509 Record provides the office option global parameters residing in the CP (Central Processor). For 5E11 and later, changed valid entries for SES, E911 LN SFG, and E911 TRK SFG. Added the MAX TGN and MAX RTIDX fields.

OPCTO form (5407) - The 5407 Record provides the OSPS call type and BST (Basic Services Terminal) display index depending on the OSPS Pre-call ID and trunk group number. For 5E11 and later, changed valid entries for TGN.

OPRTK form (5417) - The 5417 Record defines the incoming trunk groups for an OSPS Administrative office. For 5E11 and later, changed valid entries for TGN.

OSPSCT form (5404) - The 5404 Record is used to supply call type information. For 5E11 and later, changed valid entries for 1ST ANNC RTI, 2ND ANNC RTI, 3RD ANNC RTI, CLOSE DOWN RTI, and BACK ANNC RTI.

PDIT form (5300-2) - The 5300-2 Record is used for defining prefix, operator and feature access codes. For 5E11 and later, changed valid entries for ROUTE INDEX.

PFAGPA form (5609-51) - The 5609-51 Record is used to assign a private facility access group. For 5E11 and later, changed valid entries for ROUTE INDEX.

PFAINWT form (5609-4) - The 5609-4 Record is used to assigns an MLHG INWATS TN to an SFG (Simulated Facility Group) via an MC route index on the the MCRTIDX and PFASFG forms. For 5E11 and later, changed valid entries for MC ROUTE INDEX.

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PFASFG form (5609-3A/B) - The 5609-3A/B Record defines PFA (Private Facilities Access) SFG (Simulated Facility Group). For 5E11 and later, changed valid entries for RTI.

PFATG form (5609-2) - The 5609-2 Record defines PFA terminal group and associates ESSX (Private Facilities Feature Which Emulates A PBX In The 5ESS-2000 Switch) terminating and/or originating MC route indexes, CCSA (Common Control Switching Arrangement) terminating and/or originating MC route indexes, and/or SDN (Software Defined Network) MC route indexes, and SFG numbers required for SFG conference facilities, all to a Terminal Group ID. For 5E11 and later, changed valid entries for ORIG MC ROUTE INDEX, TERM MC ROUTE INDEX, CCSA ORIG MC RTI, CCSA TERM MC RTI, SDN MC ROUTE INDEX, ORIG MC ROUTE INDEX, TERM MC ROUTE INDEX, CCSA ORIG MC RTI, and CCSA TERM MC RTI.

PFATPA form (5609-8) - The 5609-8 Record provides a means to create a PFA Trunk (keyed by TGN/MEMB) form which overwrites the default parameters on the corresponding PFAFD form. For 5E11 and later, changed valid entries for TGN.

PNDP form (5608-10/11) - The 5608-10/11 Record is used to provide private digit analysis on both public and private numbers. For 5E11 and later, changed valid entries for ARS INDEX.

PPPOLY form (5618-7) - The 5618-7 Record contains AUTOVON (Automatic Voice Network) information for polygrid routing data. For 5E11 and later, changed valid entries for POLY RT NUM, and ROUTE INDEX.

PPSCRN form (5618-2) - The 5618-2 Record contains screening information for Precedence & Preemption features. For 5E11 and later, changed valid entries for MC ROUTE INDEX, REGL ROUTE INDEX, and ROUTE INDEX.

PROPBID form (5325) - The 5325 Record defines information for proportionate bidding route indices, including carriers, proportion of calls to be handled by each carrier, and the route index to be used for each carrier. Up to four carriers can be specified for each proportionate bidding route index. For 5E11 and later, changed valid entries for CARRIER RTI.

PSDNICRI form (5921) - The 5921 Record is used to assign a route index, that routes to a packet switching trunk, and then outside the 5ESS-2000 Switch to another packet network and its associated DNIC (Data Network Identification Code). For 5E11 and later, changed valid entries for ROUTE INDEX.

PULPA form (5605-3) - The 5605-3 Record contains line parameters to construct a Call - Pick - Up feature. For 5E11 and later, changed valid entries for TGN.

PUMPA form (5605-4) - The 5605-4 Record contains MLH line parameters to construct a Call - Pick - Up feature. For 5E11 and later, changed valid entries for TGN.

PUOFD form (5605-1A/B) - The 5605-1A/B Record contains feature options and default parameters to construct a Call Pickup Originating feature. For 5E11 and later, changed valid entries for TGN.

QUFD form (5617-1) - The 5617-1 Record contains feature options and default parameters to construct a Modular Queuing feature. For 5E11 and later, changed valid entries for TGN.

QUGPA form (5617-3) - The 5617-3 Record contains group parameters for Modular Queuing feature. For 5E11 and later, changed valid entries for GROUP NUMBER, and TGN.

RAR form (5301) - The 5301 Record provides the data for the screening matrix. For 5E11 and later, changed valid entries for RTI.

RASRTI form (5538) - The 5538 Record associates a route index with remote access service. For 5E11 and later, changed valid entries for ANNC RTI.

RBVRTI form (5950) - The 5950 Record defines the remote busy verify route index to be used by an ISAT

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(ISDN Attendant) attendant when doing remote busy verify for the key route index. Used to associate a remote route index with an ISAT MLHG and digit analysis route index combination. For 5E11 and later, changed valid entries for RTI, REMOTE RTI.

RDIT form (5300I-7/8) - The 5300I-7/8 Record defines valid dialed or inpulsed digits. For 5E11 and later, changed valid entries for ROUTE INDEX.

RSMCAR form (5421) - The 5421 Record provides RSM (Remote Switching Module)/carrier data. For 5E11 and later, changed valid entries for FGB RTI, DOMES RTI, TRANS RTIINTL RTI, SAC RTI, and NS RTI.

RTIDX form (5303) - The 5303 Record defines characteristics of the route index. For 5E11 and later, changed valid entries for ROUTE INDEX, TRUNK GROUP NUMBER, NEXT ROUTE, SPEECH ALT RI, 56K, R64K, 64K, 384K, 1536K, and MULTIRATE.

SCFD form (5627-1) - The 5627-1 Record defines Speed Call features. For 5E11 and later, changed valid entries for SC LIST.

SCLIST form (5627-9) - The 5627-9 Record defines subscriber speed call lists. For 5E11 and later, changed data rule for SC LIST.

SCLPA form (5627-2) - The 5627-2 Record is used for assigning SC (Speed Call) feature parameters to non MLHG lines. For 5E11 and later, changed valid entries for SC LIST.

SCMPA form (5627-3) - The 5627-3 Record is used for assigning speed call parameters to MLHG lines. For 5E11 and later, changed valid entries for SC LIST.

SCRNCODE form (5415) - The 5415 Record defines screen code number and the billing restrictions. For 5E11 and later, changed valid entries for ACD TRK NUMBER.

SCTPA form (5627-4) - The 5627-4 Record is used for assigning speed call parameters to trunks. For 5E11 and later, changed valid entries for TGN, and SC LIST.

SERVDATA form (5466) - The 5466 Record provides the customer with service parameters as defined by the 5ESS-2000 Switch owner. For 5E11 and later, changed valid entries for TURN BACK RI, and CALL PROG RI.

SERVDEST form (5467) - The 5467 Record provides a mapping of a service destination to a 5ESS-2000 Switch routing type and associated routing code such as a route index. For 5E11 and later, changed valid entries for RTE CODE.

SHTN form (5902) - The 5902 Record is used to specify primary or secondary TN that is shared by several other TNs. For 5E11 and later, changed valid entries for RBV TGN.

SSPANN form (5535) - The 5535 Record defines SSP (Service Switching Point) announcement codes. These codes are used by call processing to determine failure announcement route. For 5E11 and later, changed valid entries for ANNC RTI.

STINFO form (5402) - The 5402 Record provides information about a serving team. For 5E11 and later, changed valid entries for MUSIC RI.

TCITG form (5422) - The 5422 Record provides data Associated with CAMA (Centralized Automatic Message Accounting) transfer trunks. For 5E11 and later, changed valid entries for TGN.

TGATTD form (5611) - The 5611 Record defines Terminal Group Attendant and Data Information. For 5E11 and later, changed valid entries for TGN.

TGNLEC form (5443) - The 5443 Record provides software release with information for mapping a TGN to the appropriate text to be displayed to an operator when a call comes to an OSPS operator position.

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The text is specified by/for the LEC (Local Exchange Carrier) whose traffic the trunk carries. For 5E11 and later, changed valid entries for TGN.

TGSRFD form (5607-1) - The 5607-1 Record contains information needed to describe the Terminal Group And Station Restriction feature definition. For 5E11 and later, changed valid entries for ORIGINATING, and TERMINATING.

TGSRLPA form (5607-3) - The 5607-3 Record is used to define a terminal group and station restriction line parameter. For 5E11 and later, changed valid entries for ORIGINATING, and TERMINATING.

TGSRMPA form (5607-4) - The 5607-4 Record defines TGSR parameters for a line MLHG/MEMB parameter view. For 5E11 and later, changed valid entries for ORIGINATING, and TERMINATING.

TGSRTPA form (5607-5) - The 5607-5 Record defines TGSR parameters for trunk parameters. For 5E11 and later, changed valid entries for TGN, ORIGINATING, and TERMINATING.

TKEDSLD form (5902) - The 5902 Record defines data for the EDSL (Extended Digital Subscriber Line) call by Call Service Selection feature. For 5E11 and later, changed valid entries for TGN, and MC RTI.

TKGRP form (5202-1) - The 5202-1 Record provides general trunk group information for all trunk members in a group. For 5E11 and later, changed valid entries for TGN, GL ANN TG, and OVFL MC RTIDX.

TKGRPFA form (5206) - The 5206 Record assigns information for feature assignment to trunk groups. For 5E11 and later, changed valid entries for TRUNK GROUP.

TODTPA form (5610-5) - The 5610-5 Record assigns a TOD (Time Of Day) code list to a TGN/MEMB. For 5E11 and later, changed valid entries for TGN.

TREAT form (5461-4) - The 5461-4 Record assigns the special and normal Time Set ID. For 5E11 and later, changed valid entries for BEGIN TGN, and END TGN.

TRUNK form (5204) - The 5204 Record is used to define characteristics of individual trunks. For 5E11 and later, changed valid entries for TGN, KEYING TRUNK TGN, and TALKING TRUNK TGN.

TRUNKFA form (5205) - The 5205 Record defines information for Feature Assignment keyed by TRKGRP and TKMEMB. For 5E11 and later, changed valid entries for TGN.

UTTKGRP form (5215) - The 5215 Record defines the parameters for a Utility Telemetry Trunk Group. For 5E11 and later, changed valid entries for TGN.

VALOFFC form (5423) - The 5423 Record defines data associated with ISP (Intermediate Switching Point) Operator Trunks for which the OSPS Operator can enter billing number. For 5E11 and later, changed valid entries for TGN.

X75PVC form (5926) - The 5926 Record is used to assign PVC (Permanent Virtual Circuit) logical channel numbers to X.75'/X.75 trunks. For 5E11 and later, changed valid entries for TGN.

4. GLOSSARY

ACD - Automatic Call Distributor

AM - Administrative Module

ARS	Automatic Route Selection
ARU	Audio/Audible Response Unit
ATTS	Automatic Trunk Testing Scheduler

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AUTOVON	Automatic Voice Network
BRCS	Business And Residential Customer Services
BST	Basic Services Terminal
CAMA	Centralized Automatic Message Accounting
CCS	Common Channel Signaling
CCSA	Common Control Switching Arrangement
CP	Central Processor
DNIC	Data Network Identification Code
ECP	Executive Control Processor
EDSL	Extended Digital Subscriber Line
ESSX	Private facilities feature which emulates a pbx in the
IDDD	International Direct Distance Dialing
IDP	Individualized Dialing Plan
ISAT	ISDN Attendant
ISP	Intermediate Switching Point
LASS	Local Area Signaling Services
LATA	Local Access And Transport Area
LEC	Local Exchange Carrier
MC	Modular Customization
MDR	Message Detail Recording
NOC	Normalized Office Code
NPA	Numbering Plan Area
NXX	Office Code (Part Of Dialed Number)
PFA	Private Facilities Access
RC	Recent Change Subsystem
RSM	Remote Switching Module
SC	Speed Call
SDN	Software Defined Network
SFG	Simulated Facility Group
SSP	Service Switching Point

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TN Telephone Number

TOD Time Of Day

SEC. 4A173: AIN TOLL FREE SERVICE PHASE 2

1. FEATURE DESCRIPTION

Available with 5E11 and later, the AIN (Advanced Intelligent Network) Toll Free Service Phase 2 has feature number 99-5E-3260 and SFID (Secured Feature ID) number 173.

The AIN Toll Free Service features (Phase 1 and Phase 2) provide "toll free" services based on an AIN architecture. The features allow for end user and IXC (Inter Exchange Carriers) transparency between the existing SSP/800 feature and AIN-based toll free services using either the existing 800 code or new codes designated for toll free services such as 888. The AIN Toll Free Service Phase 2 feature is dependent on the AIN Toll Free Service Phase 1 feature (99-5E-3151). For more information on the AIN Toll Free Service Phase 1 feature, see Division 2, Section 4A236.

The AIN Toll Free Service Phase 2 feature provides the following items, incremental to the functionality provided by the AIN 0.1B feature (99-5E-1150) (for information on this feature, see Division 2, Section 4A126):

- ACG (Automatic Call Gap) List Size Increase.

  Increases the size of the two ASP ACG lists to 256 entries in each list, for a total of 512 entries in both.

- Measurements.

  The following new measurement appears on the existing Section 232 of the 30-minute Traffic Report:

  - Announcement Number Unavailable.

    This count is pegged whenever the Announcement Number included in an STR (Send To Resource) message is not defined:

    - when the received Announcement ID is not defined on the View.

    - when the STR message is for an interactive announcement, and the Announcement ID is defined but is associated with a Route Index rather than a RAF/SAS (Recorded Announcement Facility / Service Announcement Service) Header and Trailer.

A separate portion of the existing Section 118 is provided which contains the same measurements as those currently existing in Section 118 and a newly defined portion for section 118. The counts on this new section are to be generated under the same criteria as the existing section /can118 counts and new counts provided by this feature only when the ASP call encountered a DNT (Dialed Number Trigger) which is marked as an ASP Toll Free trigger. General ASP counts are also pegged for such calls; thus, the call pegs both sets of measurements under appropriate criteria. The following three new ASP "Base" (Total Office) counts are provided on a new 5-minute traffic package:

- Total Completed ASP Calls

  The total number of ASP calls which are successfully completed within the 5-minute interval.

- Total SCP (Service Control Point) Overload List Overflow.

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This count measures the number of times that a request to install an SCP Overload ACG control cannot be honored due to list overflow.

- Total SMS (Service Management System)-Initiated List Overflow.

  This count measures the number of times that a request to install an SMS-Initiated ACG control cannot be honored due to list overflow.

This package can be scheduled independent of the ASP Toll Free Phase 2 being locked or unlocked (i.e., the ACT field for SFID 173 is set to "N" or "Y" on the SFSYS form (Record 5713-1), respectively).

The following ASP Toll Free specific counts are provided on a new 5-minute package:

- Total ASP Toll Free Call Attempts.

  This count measures the number of calls (both originating and incoming) which encountered a DNT marked for Toll Free within the 5-minute interval.

- Total Completed ASP Toll Free Calls.

  The total number of ASP calls which are successfully completed within the 5-minute interval.

- Total ASP Toll Free Calls Blocked by SCP Overload Controls.

  This count measures the number of calls encountering a DNT marked for Toll Free which have the Query blocked due to an SCP Overload ACG control in the 5-minute interval.

- Total ASP Toll Free Calls Blocked by SMS-Initiated Controls.

  This count measures the number of calls encountering a DNT marked for Toll Free which have the Query blocked due to an SMS-Initiated ACG control in the 5-minute interval.

This package can be scheduled only if the ASP Toll Free Phase 2 is unlocked (i.e., the feature is enabled by setting the ACT field for SFID 173 to "Y" on the SFSYS form). If it is requested, and the feature is locked, the request shall be refused with an informative explanation.

A new 30-second discrete, the "Toll Free Service SCP-Initiated Control Discrete" is used to indicate whenever one or more ASP calls which encountered a Toll Free DNT could not be completed because the resulting Query was blocked by an ACG control during the 30-second interval.

This discrete shall be "on" whenever a Query resulting from a Toll Free DNT is blocked due to ACG control.

The discrete remains on until a Remote Network Management Center polls for it. After the poll, the discrete is "off" until the next time a Toll Free DNT Query is blocked.

2. TRANSLATION REQUIREMENTS

No new ODA forms, fields, or enumerations added for this feature.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) -This form is used to enable secured features. The SFID ACT 173 field must be set to "Y" to activate this secured feature. In addition, since this feature depends on AIN Toll Free Service Phase 1, the ACT field for SFID 236 must be set to "Y" before activating the AIN Toll Free Service Phase 2 feature.

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SEC. 4A174: NUMBER PORTABILITY

1. FEATURE DESCRIPTION

The NP (Number Portability) feature is a secured feature (SFID 174) and must be purchased before being activated. Available with 5E11 and later Software Releases, the feature number for this feature is 99-CP-3169.

Number Portability gives the end-user the ability to move from one switch to another and keep his/her original DN (Directory Number). There are 3 types of Number Portability:

- Service Portability allows an end user to retain his/her DN after changing services and only on an inter-switch basis.
- Service Provider Portability allows an end user to retain his/her DN after changing service providers.
- Location Portability, also known as Geographic Portability, allows an end user to retain his/her DN after changing physical locations. In this case, the subscriber may or may not change service providers.

For the 5E11 Software Release, Location Portability will be limited to portability within a LATA (Local Access Transport Area).

The basic Number Portability feature offered in the 5E11 Software Release is built on the ASP (Advanced Services Platform) Release 0.1B base and follows the AIN (Advanced Intelligent Network) Release 0.1 protocol. This feature introduces a new trigger that supports all three types of portability in the 5E11 Software Release.

When an NPA-NXX (Numbering Plan Area Office Code) is defined as portable, the SCP's (Service Control Point's) service logic is defined to return an LRN (Location Routing Number) of the serving switch, or rate center within a switch, for the DNs that have been ported. A query is not required for intra-switch calls. Information obtained from the terminating line data and switch data are used to route the call.

When the switch receives an LRN from the SCP, the LRN is used to route the call to its correct destination. The LRN is populated in the IAM's (Initial Address Message's) Called Party Number parameter. The actual dialed digits are in the GAP (Generic Address Parameter). The FCI (Forward Call Indicator) parameter in the ISUP (ISDN User Part) IAM is used to determine whether the Called Party Number is translated or not. This FCI parameter can be set based on information from the query response or from switch translations. This is accomplished by an LNP query for inter-switch calls or by reading the switch data translations for intra-switch calls. The FCI parameter is used as a fail-safe mechanism to prevent more than one LNP query from being launched on a call. Note that for this feature, FCI refers to the translated number indicator.

For Location Portability, it is desirable that a unique LRN (unique in its NPA-NXX) be mapped to each Rate Center within a switch. The option, LRN screening, is provided which allows the type CI call and code index to be obtained from analysis of the LRN. If LRN screening is not set, the information is used from the original analysis of the dialed digits.

If an NPA-NXX has been geographically ported and a call is being made to that NPA-NXX, it cannot be assumed that intra-LATA Local calls can be distinguished from intra-LATA Toll calls. It is necessary to analyze the LRN to determine whether the call is intra-LATA Local or intra-LATA Toll.

If the call is ICLATA (Inter-LATA Carrier's Intra-LATA Capability), i.e., intra-LATA Toll, then the call is routed to the dialed carrier or PTC (Pre-subscribed Toll Carrier). For non-geographically ported calls, this can be determined pre-LNP query. For geographically ported calls it may or may not be determined pre-query depending on the data provisioning. If it can be determined pre-query, the call can be routed to

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the carrier without an LNP query being made. SeeFigure 1 for the different options.

- ***NOTE:*** The NP - Basic AMA and NP - AMA Access Billing features do not support inter-rate center Location Portability. Therefore, the AMA record may be inadequate to rate and bill a call to/from an inter-rate center ported subscriber. For more information, see the 235-190-127 document, Number Portability User's Guide.

Queries for non-ported DNs will cause the SCP to return the actual dialed DN or CONTINUE and not the LRN. In this case, the call is routed using the information returned from the original call to digit analysis.

Default routing for LNP triggers is available when the LNP query fails. The default routing capabilities available for LNP are built on the default routing capabilities provided by ASP for the ASP 3/6/10-digit triggers (For more information concerning this feature (SFID 153), see Division 2, Section 4A153). When assigned to the LNP trigger, default routing allows the craft to select whether to allow the call to be sent to a single office-wide announcement or to allow the call to proceed as if an Analyze_Route message were received with the CalledPartyID being the same as the pre-query CalledPartyID value. Without default routing assigned, the call is sent to final treatment if the query fails. With default routing provisioned (and unlocked), the craft can specify whether calls encountering LNP triggers receive announcement treatment or continue to route in the event that the LNP query fails.

Switches that do not have LNP-SCP access capabilities route the call to the incumbent switch (the switch the DN was initially ported from) or a tandem switch that has LNP-SCP access capabilities, and the incumbent or tandem switch launchs the query to determine routing.

No TCAP (Transaction Capability Application Part) protocol changes are required for the AIN Release 0.1 messages in this software release. This feature builds on the ASP Release 0.1B platform capabilities. The LNP triggers make use of the existing AIN Release 0.1 TCAP protocols. This feature does not use the AIN Release 0 TCAP protocols. In addition, the ASP Release 0 platform capabilities are not modified to support LNP.

For inter-switch calls, the functionality provided by the basic Number Portability feature, is only applicable to calls encountering the LNP trigger. This functionality allows the switch to create an LNP GAP for use in inter-switch ISUP signaling and for LNP call routing operations. This feature is not applicable to inter-LATA calls. For intra-switch calls, an LNP trigger is not necessary, but may be provisioned if the dialed NPA-NXX involves terminating DNs that have been ported to other switches. For geographical portability an LNP trigger is always required.

1.1 ASP Capabilities and Number Portability

The following pertain to the Number Portability feature and ASP capabilities:

- This feature is dependent on the ASP 0.1B Platform (SFID 126).
- This feature specifies a new ASP trigger operation which can be encountered within an SSP either prior to routing or during initial call routing.
- The feature specifies a new LRN DAS for ISUP trunks to analyze the LRN. The ASP post-query DAS or SCP DAS supported by other features can also be used to analyze the LRN for lines and trunks obtained from query response or the LRN table. The LRN Table is the form LRNINDEX which assigns an index number to each Home LRN. For more information, see the 235-190-127 document, Number Portability User's Guide.
- The post-query DAS used by this feature is defined by the ASP Multiple Rate Center Features (99-5E-3192 and 99-5E-3426). For more information concerning this feature, see Division 2, Section 4A190.
- This feature specifies assignment of the LNP trigger, using the new LNP trigger number, based on the current 3/6/10-digit trigger assignments, and/or the Ported In bit.

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- Receipt of an SCP "Continue" in response to an LNP query shall be treated using existing ASP procedures. The SCP can respond with an Analyze_Route for both non-ported (with the actual DN) and ported (with the LRN) numbers for LNP triggers.
- Office equipment (an OE) does not need to be associated with the LNP trigger assignment.
- The LNP trigger will be encountered based on analysis of the dialed/received digits; however, the LNP query will be conditionally sent based on additional call routing determinations and checks (e.g. line resident on the switch).
- When the LNP trigger is assigned, the following feature interactions will be supported:
  - CNAM (Calling Name Display) will be operational when the LNP trigger is encountered.
  - LASS (Local Area Signaling Services) Automatic Callback and Automatic Recall features will be operational when the LNP trigger is encountered.
  - LASS SLE (Screen List Editing) will be operational when the LNP trigger is encountered.
  - The ISVM (Inter-Switch Voice Messaging) feature will be operational when the LNP trigger is encountered.
  - Circuit Switched Data will be operational when the LNP trigger is encountered.
  - Intra-LATA PIC (Presubscribed Inter-LATA Carrier) will be operational when the LNP trigger is encountered.

NOTE: For additional information, see the 235-190-127 document, Number Portability User's Guide. Unless noted, the interactions between the LNP trigger operation and switch-based features, including other ASP capabilities, will be identical to the feature interactions specified for the existing ASP Release 0.1B 3/6/10-Digit Triggers.

- Location Routing Numbers (LRNs) will be provisioned to uniquely identify each switch in the Number Portability network at a minimum for Service Provider and Service portability.
- LRNs can be provisioned per rate center/switch for Location Portability and is recommended.
- Default routing will be available for the LNP triggers to allow the call to continue in the event that the SCP is unavailable or a fatal signaling error occurs.
- The Recent Change impact of this feature provides for the LNP trigger capability to be identified through the use of the LNP trigger number assignments.
- The LNP trigger will follow the existing ASP serial triggering, and persistent transaction rules. That is, the LNP trigger can be encountered following an ASP trigger resulting in the serial trigger count being incremented, and the serial triggering threshold being checked. With respect to persistent transactions, if an ASP originating trigger or ASP non-subscribed trigger is initiated, a second non-subscribed (namely, an LNP trigger in this case) trigger on the same leg of the call cannot be launched until the transaction associated with the initial trigger has been closed.
- The 3/6/10-digit trigger has precedence over an LNP trigger in an event that there is an LNP trigger with digits that coincide with 3/6/10-digit trigger.
- The secured feature lock for the Basic LRN feature is SFID 174 (Secured Feature ID).

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1.2 Feature Scenarios

The following scenarios illustrate the call flows for the basic types of LNP calls within a network of LRN and non-LRN switches. The Figure 1 depicts the entire network. Each scenario shows only the involved switches, trunks, and lines pertaining to that scenario. The forms shown are the LDIT (RC/V 9.3) forms of interest for the given scenario. Each LDIT form belongs to a switch as indicated. The RDIT form could have also been used. The new LNP fields are not provisioned on PDIT form, since PDIT is not usually used to terminate calls. The LNP fields are not supported on the INDIT form for an LNP trigger number since the dialed number is expected to always be a 7- or 10-digit number, and LRNs are always analyzed via the LDIT form.

The purpose of the scenarios is to show some basic call flows. In the last few scenarios, carriers are involved in the call. The ICF form (RC/V 10.3) is shown for these scenarios. The trunk numbers, route index numbers, DAS numbers, and LDIT numbers generally match each other when related.

1.3 Scenario 1 - Call to Non-Ported DN in Portable NPA-NXX on Originating Switch

See Figure 2 for call flow.

Switch B - Line to Line, DNTRAN found, Non-Geographically Ported DN

- Line 708-636-7144 on Switch B calls 312-612-3456.
- Digit Analysis detects an LNP trigger, 89. (This NPA-NXX is portable.) No IC is derived.
- An office code (612) exists on LDIT. (This is the incumbent exchange.)
- A DNTRAN tuple is found. (This is the home switch.)
- The DNTRAN tuple has an LRN Index of 0. (The called DN was not geographically ported.)
- The call terminates to the terminating line using the LDIT view with office code (612).

1.4 Scenario 2 - Call to Non-Ported DN in Portable NPA-NXX on Remote Switch

See Figure 3 for call flow.

Switch B - Line to Trunk, PORTED IN is "N", Non-Ported DN

- Line 708-416-9200 on Switch B calls 708-979-1115.
- Digit Analysis detects an LNP trigger, 11. (This NPA-NXX is portable). No IC is derived (i.e., the originating line has no PTC (Pre-subscribed Toll Carrier)).
- A Route Index, rather than an Office Code, is found. (This is not the incumbent switch.)
- PORTED IN is "N". (This NPA-NXX has not been ported to Switch B.)
- An LNP query is launched. The response is 708-979-1115, which matches the originally dialed digits. (The number was not ported.)
- The call routes out of trunk 6 using RTI which is 6 from the LDIT form with FCI set. The LNP trigger is ignored.

Switch C - Trunk to Trunk, FCI is "Y", LRN is not Included

- Trunk group 5 on switch C receives a call with FCI is set to "Y".

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- An LRN is not included. (The number called was not ported.) Since FCI is "Y", the IAM is checked for the presence of a Ported Number GAP.
- The dialed digits received over the trunk are analyzed in the trunk DAS. The call is routed out over trunk 98 using RTI 98 from the LDIT.

Switch E - Trunk to Line, FCI is "Y", LRN is not Included

- Trunk group 99 on switch E receives the call with FCI is set to "Y".
- An LRN is not included. (The number called was not ported.)
- The dialed digits received over the trunk are analyzed in the trunk DAS. An Office Code of 979 is found on the LDIT. The call is routed to the Terminating Line using the LDIT.

1.5 Scenario 3 - Call From Non-LRN Switch to Non-Ported DN in Portable NPA-NXX

See Figure 4 for call flow.

Switch D - Trunk to Line, DNTRAN is found, Non-Geographically Ported DN

- A call comes in to Switch D from non-LRN switch A over trunk 2 with dialed digits of 312-444-2244.
- FCI is "N". (It is unknown whether the called DN is ported since no LNP query has occurred.)
- The trunk DAS is used to analyze the dialed digits. An LNP trigger, 4, is encountered. Carrier selection determines that the LEC will route the call.
- An office code (444) exists on LDIT. (This is the incumbent exchange.)
- A DNTRAN tuple is found. (This is the home switch.)
- The DNTRAN tuple has an LRNINDEX of 0. (The called DN was not ported.)
- The call terminates to the terminating line using the LDIT form with office code (444).

1.6 Scenario 4 - Call From Non-LRN Switch to Non-Ported DN on Remote Switch

See Figure 5 for call flow.

Switch C - Trunk to Trunk, FCI is "N", PORTED IN is "Y", but the called number has not itself ported into this switch.

- A call comes into Switch C from Switch A over trunk 5 with dialed digits 708-979-1115.
- FCI is "N". (An LNP query has not been performed.)
- The trunk DAS 5 is used to analyze the dialed digits. An LNP trigger 10 is encountered. Carrier selection does not derive a carrier.
- A Route Index, rather than an Office Code, exists on the DAS form. (This is not incumbent exchange.)
- PORTED IN is "Y". (Some numbers from this NPA-NXX have ported in to this switch.)
- The NOC is set based upon the NXX.

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- No DNTRAN tuple is found, so the SCP is queried.
- The response, 708-979-1115, matches the originally dialed digits. (The DN has not ported.)
- The call routes out of trunk 98 using RTI set to 98 from the LDIT form with FCI set to "Y".

Switch E - Trunk to Line, FCI is "Y", LRN Not Included

- Trunk group 99 on switch E receives the call with FCI is "Y". (The previous switch has determined whether this number is ported).
- An LRN is not included. (The number called was non-ported.)
- The dialed digits are analyzed in the trunk's DAS, 99. LNP triggers, if found, are ignored.
- The call is routed to the terminating line using the LDIT with the Office Code of 979.

1.7 Scenario 5 - Call Flow from Non-LRN Switch to DN Ported in to Switch

See Figure 6 for call flow.

Switch A - Trunk to Line, FCI is "N", PORTED IN is "Y", Ported In

- A call comes over trunk 5 from switch A to switch C with dialed digits 708-979-1116.
- FCI is "N". (An LNP query has not been performed.)
- The trunk DAS, 5, is used to analyze the dialed digits. An LNP trigger, 10, is encountered. Carrier selection does not derive a carrier.
- A Route Index, rather than an Office Code, is found on the DAS form. (This is not the incumbent exchange.)
- PORTED IN is "Y". (Some DNs from this NPA-NXX have ported into this switch.)
- The NOC is set based upon the NXX.
- A DNTRAN tuple is found. (This is the home switch.)
- The DNTRAN tuple has an LRN INDEX. (The called DN has been geographically ported.)
- The LRN INDEX is used to obtain the LRN, 312-555-1000.
- The LRN is analyzed in the POST QUERY DAS which is 10 and associated with LNP Trigger 10.
- The FCI is set to indicate that we have found the LRN.
- The pre-LRN analysis NOC, that had been set based upon the NXX, is restored.
- The call terminates to the terminating line using the pre-LRN analysis NOC, associated with NXX (979).

1.8 Scenario 6 - Call from Non-LRN Switch to Ported In DN with OFFICE CODE, Dialed NXX

See Figure 7 for call flow.

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1.8.1 Switch D - Trunk to Line, PORTED IN is "N", HOME LRN is "Y"

- A call comes in to Switch D from non-LRN switch A over trunk 2 with dialed digits of 888-999-1113.
- FCI is "N". (It is unknown whether the called DN is ported since no LNP query has occurred.)
- The trunk DAS is used to analyze the dialed digits. An LNP trigger of 44 is encountered. The carrier selection determines that the LEC will route the call.
- A Route Index, rather than an Office Code, is found on the DAS form. (This is not the incumbent exchange.)
- PORTED IN is "Y". (It appears as though no DNs have been ported in. Therefore, no attempt is made to set the NOC based on the NXX.)

1.9 Scenario 7 - ICLATA Carrier Call with Pre-subscribed Toll Carrier to Non-Ported DN

See Figure 8 for call flow. Switch B - Line to Trunk, ICLATA call with PTC

- On switch B, 708-416-9200 originates a call by dialing 708-979-1115.
- The originating line has presubscribed to carrier 288 for Intra-LATA toll calls.
- The dialed digits are analyzed in the originator's DAS. An LNP trigger of 11, is detected.
- GEO PORT is "Y". (This NPA-NXX has been geographically ported, so the TYPE CI CALL and other LDIT data only represent the non-ported case.)
- The TYPE CI CALL is "TOLL". The originator has pre-subscribed for Toll calls.
- A Route Index, rather than an Office Code, is found on the DAS form. (This is not the incumbent switch).
- PORTED IN is "N". (The number was not ported into this switch.)
- An LNP query is launched. The SCP returns the originally dialed digits. (The called DN has not ported.)
- Since the DN was not ported, the TYPE CI CALL of "TOLL" is valid for this call.
- The call is routed (FCI is not set) to the carrier using the CDI and RTI on the ICF form for that carrier. The carrier will now be responsible for determining how to route to the called DN.

1.10 Scenario 8 - Intra-LATA Toll Call with Dialed Carrier, INTRA LATA is "N"

See Figure 9 for call flow. Switch B Line to Trunk, ICLATA Call with Dialed Carrier, INTRA LATA is "N"

- On switch B, 708-416-9200 originates a call by dialing 10-288-708-979-1115.
- The dialed digits are analyzed in the originator's DAS. An LNP trigger, 11, is detected.
- The TYPE CI CALL is "TOLL".
- GEO PORT is "Y". (This NPA-NXX has been geographically ported. Therefore, the TYPE CI CALL is correct for non-ported DNs, but might not be for other calls to this NPA-NXX.
- The Intra-LATA Indicator on the ICF form is set to "N". Therefore, if the TYPE CI CALL is "INTRA", the

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dialed carrier is not valid.

- A Route Index, rather than an Office Code, is found on the DAS form. (This is not the incumbent switch).
- PORTED IN is "N". (The number was not ported into this switch.)
- An LNP query is launched. The SCP returns the originally dialed digits. (The called DN has not ported.)
- Since the DN has not ported, the TYPE CI CALL of "TOLL" is valid for this call.
- The ICF form (RC/V 10.3) is used to obtain an RTI used to route the call to the carrier. The carrier is now responsible for determining how to route to the called DN.

1.11 Scenario 9 - AR (Automatic Recall)

See Figure 10 for call flow. Call to DN Geographically Ported Within Remote Switch

Switch B:

- 708-416-9200 (Line A) on Switch B calls 708-979-5555 (Line B), which may have been ported geographically within switch E.
- Digit Analysis detects an LNP trigger of 11. (This NPA-NXX is portable).
- A route index, rather than an office code, is found. (This is not the incumbent switch).
- PORTED IN is "N". (This NPA-NXX has not been ported in to Switch B).
- An LNP query is launched. The response is 708-222-1113, which does not match the dialed digits. (This number has been ported.)
- The LRN is analyzed in the POST QUERY DAS 75 from NSTRIG, which is associated with the LNP trigger of 11.
- HOME LRN is set to "N". (The called DN is not on this switch).
- The call routes out of trunk 6 using RTI of 6 to trunk 99 via trunk 98. FCI is set and GAP populated.
- Line A's OLHB (Outgoing Line History Block) is updated with the digits that Line A dialed to call Line B.

Switch C:

- FCI is "Y" and
- An LRN is included (The number called was ported) and is analyzed in the trunk's LRN DAS, DAS is 75.
- HOME LRN is "N" on the LRN LDIT. (The call is not on this switch.) The LRN and GAP digits are passed along.
- OFFICE CODE is 979 and is used to terminate the call to the called DN.

Switch E:

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- FCI is "Y" and
- An LRN is included (The number called was ported) and is analyzed in the trunk's LRN DAS, DAS is 75.
- HOME LRN is "N" on the LRN LDIT. (The call is not on this switch.)
- OFFICE CODE is 979 and is used to terminate the call to the called DN.
- The ILHB (Incoming History Block) of line B gets with Line A's DN when the terminal gets alerted.

Switch B:

- Line A goes on-hook.

User dialed AR use code and camps-on

- Line A goes off-hook and dials AR use code.
- Digit Analysis detects an LNP trigger.
- Line B is not found on this switch.
- The Originating Process determines that this is an inter-switch call and sends an AR Initial Query TCAP message for the called party number to the STP (Signal Tranfer Point) requesting GTT (Global Title Translation).
- The STP does a GTT on line B's NPA-NXX-XXXX which results in routing the message to the LNP-SCP, based on the Translation Type and NPA-NXX. The SCP performs final GTT and forwards the message to switch E.
- Switch E sends the Response contains information on the busy/idle status on line B's line.
- If line B is busy, line A receives an AR confirmation announcement. Subsequent messages in this AR session can be routed in the same manner.

Both Idle - Camps-On Ringback

- Line A answers the ringback. A Final TCAP Busy/IDLE status query is sent to determine if Line B is still idle. After the B/I status returns idle, LNP processing occurs.
- LNP trigger is launched and the call is completed as before.

Automatic Callback is exactly the same for a ported DN in the ILHB (the TCAP busy/idle status processing is done before the LNP query) as described for AR.

1.12 Scenario 10 - SLE (Screen List Editing)

See Figure 11 for call flow.

Ported In Line to Originating Switch

- Line 312-444-2244 (Line A) on Switch D goes off-hook and dials SCR activation code.
- Line A gets connected to an interactive RAF announcement.

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- Line A enters 708-979-1119 (Line B's DN).
- Digit Analysis detects an LNP trigger of 4. (This NPA-NXX is portable).
- A route index, rather than an office code, is found. (This is not the incumbent switch.)
- PORTED IN is "Y". (Some numbers from this NPA-NXX have ported in to this switch.)
- The NOC is set based upon the NXX.
- A DNTRAN tuple is found. (This is the home switch).
- The DN resides on the same switch as the SLE user, therefore, this will not result in a TCAP SLE DN verification query being sent to the SCP.
- The 708-979-1119 is added to line A SCF list.

2. GENERAL CALL FLOW

Since this is a secured feature, before it can be activated the ACT field for SFID 174 on the SFSYS form (5713-1 Record) must be set to "Y". In addition, since this feature depends on SFID 126, the ASP Release 0.1B secured feature must be activated by setting the ACT field for SFID 126 on the SFSYS form to "Y". For more information on this feature, see Division 2, Section 4A126.

For call processing flow, see Figure 12.

A. Call processing begins with a normal line or trunk origination.

B. If PFX is 0- or 0+, calls are sent through normal routing to an operator. (Operator calls bypass LNP processing).

C. In LDIT, if either LNP TRIG NBR is non-zero or PORTED IN is "Y", this indicates a portable NPA-NXX. Otherwise, the NPA-NXX is not portable and the call is routed using basic call processing.

D. If the NPA-NXX is portable, GEO PORT is checked:

E. If GEO PORT is "N":

- This indicates there are no DNs in the NPA-NXX that have been geographically ported.
- Carrier selection checks TYPE CI CALL, PTC (if TYPE CI CALL is "TOLL") and 10XXX dialing pre-subscribed carriers to determine the carrier.
- If the carrier is an IC, the call is routed to the IC using appropriate carrier routing on the ICF form.
- If carrier is the LEC, the OFFICE CODE/ROUTE INDEX fields are checked.
  - If OFFICE CODE is specified and an OE exists, the call terminates to the dialed DN using normal routing to DN translations.
- If an OE is not found and an LNP TRIG NBR is assigned, an LNP query is launched.
- If ROUTE INDEX is specified, a check is made to see if the dialed NPA-NXX has "ported in" to this switch.

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- If PORTED IN is "Y", this indicates that at least one DN in NPA-NXX may have ported into this switch. The dialed NXX is converted to a NOC and a check is made for an entry in line translations. If found, the call terminates to the DN.

NOTE: The dialed NXX is assumed to be an OFFICE CODE. If not, the feature will not function properly. For 5E12 and later, the NXX Expansion feature allows the ability to continue to handle NPA-Splits. In this case, when PORTED IN is "Y", the NOC is no longer derived using the dialed digits. The NPA and OFFCODE within LDIT are used to derive the NOC.

- If an OE is not found and an LNP TRIG NBR is assigned, an LNP query is launched. If no LNP TRIG NBR is assigned, the route index from LDIT/RDIT is used to route the call to a trunk group.
- If PORTED IN is "N", an LNP query is launched.

A. If GEO PORT is "Y":

- This indicates one or more DNs in the NPA-NXX may have been geographically ported to another switch or to another rate center on this switch.
- Since the routing data for the dialed DN represents the non-ported case, carrier selection cannot be determined at this point in the call.
- The OFFICE CODE/ROUTE INDEX fields are checked.
- If OFFICE CODE is specified, this is the incumbent switch of the DN(s) that have been geographically ported.
  - The OFFCODE is converted to a

    NOC and a check is made for an

    entry in Line Translations.
  - If no entry is found, this indicates the dialed DN may have been geographically ported to another switch and an LNP query is needed to obtain the correct LRN.
  - If a line translations entry does exist, the LRN INDEX field is checked.
  - If the value is 0, this indicates the dialed DN has not ported geographically and the call terminates to the DN or carrier.
  - If the value is non-zero, this indicates the DN has been geographically ported to another rate center on this switch.
  - Since this is an intra-switch call, it is not necessary to do an LNP query. Instead, the value is used to retrieve an LRN from the LRNINDEX form.
  - The LRN is analyzed using either the POST QUERY DAS on the NSTRIG form associated with the LNP TRIG NBR, or the SCP DAS on the OFCOPT form.
  - LRN SCREENING is checked to determine what screening data to use:
  - If set to "Y", screening data (TYPE CI CALL, CDI) is taken from the LRN.
  - If set to "N", screening data is taken from the originally dialed DN.

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- The selected routing data is used to do carrier selection and screening.
- If the carrier is an IC, the call is routed to the IC using appropriate carrier routing on the ICF form. The IC will then determine how the call should be routed to the terminating DN.
- If the carrier is the LEC, the call terminates to the dialed DN or trunk.

- If ROUTE INDEX is specified, a check is made to see if the dialed DN or trunk may have "ported in" to this switch.
  - If PORTED IN is "Y", this indicates that at least one DN in NPA-NXX may have ported into this switch. The dialed NXX is converted to a NOC and a check is made for an entry in line translations. If found, the call terminates to the DN.
  - If no entry is found, or if PORTED IN is "N", an LNP query is launched.

B. If an LNP query is required, the LNP TRIG NBR is used to access the NSTRIG form.

- Checks are made to ensure APPLICATION is "ASP" and the trigger is active.
- A query is launched. A successful query will return an analyze_route message.
- If query failure occurs, the call is routed to DFLT 3/6/10 routing treatment, only if the DFLT 3/6/10 feature is active (SFID 153) and field DFLT RT is entered.
  - If the returned message contains the originally dialed DN, this indicates the DN has not ported.
  - If the carrier is an IC, the call is routed to the IC using appropriate carrier routing on the ICF form. The IC will then determine how the call should be routed to the terminating DN.
  - If carrier is the LEC, the call is routed to the dialed DN using either the OFFICE CODE or ROUTE INDEX from LDIT/RDIT.
  - If the returned message contains an LRN, this indicates the DN has ported.

C. The LRN is analyzed using either the POST QUERY DAS on the NSTRIG form or the SCP DAS on the OFCOPT form.

- LRN SCREENING is checked to determine what screening data to use:
- If set to "Y", screening data (CITYPE, CDI and PREFIX) is taken from the LRN.
- If set to "N", screening data is taken from the originally dialed DN.
- The selected routing data is used to do Carrier selection
- If the carrier is an IC, the call is routed to the IC using appropriate carrier routing on the ICF form. The IC will then determine how the call should be routed to the terminating DN.
- If carrier is the LEC, HOME LRN is checked:
- If HOME LRN is "Y", this indicates the called DN terminates on this switch.
  - The dialed NXX is converted to a NOC and the call terminates to the dialed DN.

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- If HOME LRN is "N", the called DN is not served on this switch and the call is routed to a trunk group using the ROUTE INDEX from the LRN LDIT entry.

D. The next switch receives a trunk origination and checks the FCI indicator.

- If FCI is "N", this indicates no LNP query has occurred and it is unknown whether the called DN may have ported. For this case, call processing would treat this as a normal trunk origination. Call flow would begin at the starting point in the call flow diagram with possible LNP triggers encountered.
- If FCI is "Y", the IAM is checked for the presence of a Ported Number GAP.
  - If no Ported Number GAP is included, this indicates the called DN was not ported.
    - The dialed digits are analyzed using the normal TRK DAS on the TKGRP form and the call terminates to the DN using the OFFCODE, or is routed to a trunk group using the ROUTE INDEX.
    - If the call is routed over a trunk group, call flow would repeat starting at point I until the call reaches the terminating switch.
  - If a Ported Number GAP is included, the called Number Parameter is treated as an LRN.
    - The LRN is analyzed using the LRN TRK DAS from TKGRP (or the TRK DAS, if none is found) and HOME LRN is checked.

E. If HOME LRN is "N", this indicates the dialed DN does not terminate on this switch.

- The INH DNT field is checked:
- If INH DNT is "Y" (on LRN LDIT), the call terminates using the data on the LRN's LDIT.
  - Any Non-LNP triggers (DNTs (Dialed Number Triggers), TATs (Terminating Attempt Triggers), etc.) encountered are ignored, the FCI setting is preserved, and the call is routed to the next switch.
  - Next switch call processing would re-enter the call flow diagram at point E.
- If INH DNT is "N", the dialed digits are analyzed in the TRK DAS but only to the extent of finding a Non LNP Trigger.
  - Any Non-LNP triggers encountered are honored, the FCI setting is reset, and the new trigger application takes over the call (ASP/NS800...).
  - If a Non-LNP Trigger is not encountered, then the call is routed based on the LRN and FCI is not reset.
    - On the next switch call processing would re-enter the call flow diagram at point I.
    - If FCI has been cleared, LNP call processing could be called again depending on subsequent call events.

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F. If HOME LRN is "Y", this indicates the called DN terminates on this switch.

- INH DNT checks made.
  - The dialed digits are analyzed using the normal TRK DAS, any Non-LNP triggers encountered are honored, the FCI indicator is cleared, and the call terminates via normal SCP processing.
  - LNP call processing could be called again depending on subsequent call events.
  - When no Non-LNP Triggers are encountered, a NOC is derived using the digits within the GAP. If a DNTRAN is found, the call is terminated to the line. If a DNTRAN is not found, the new Release Cause 26 (Mis-routed call to a Ported Number) is sent.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2, 23.8
LDIT	5300-3/5	3	3C	9.3
LINE	5109	3	1I	1.6
LRNINDEX	5328	3	3AM	9.36
MLDIT	5300-3	3	3C	9.15
MLHLN	5111	3	1K	1.6
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1
RDIT	5300-7/8	3	3H	9.9
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

See Figures 18 - 20 for form flow for this feature.

DSLUSR form (5908 Record) - This form is used to define: 1) the associated TN and status of a DSL user, 2) the circuit switching attributes of a DSL user. The LRN INDEX was added to support this feature. A non-zero value indicates this line has been geographically ported to a different rate center on the same switch or geographically ported in from another switch. The value is used to access an LRN in the LRNINDEX form.

LDIT form (5300-3/5 Record) - This form is used to define all area, office and service codes in a 5ESS-2000 Switch and serves as a local and foreign translator. The LNP TRIG NBR, GEO PORT, PORTED IN, HOME LRN, LRN SCREENING and INH DNT fields were added to support this feature.

- LNP TRIG NBR - Indicates NPA-NXX may have ported DNs. This field is used to launch LNP query if LNP processing indicates ported DNs terminate on another switch.
- GEO PORT - If set to "Y", this field indicates NPA-NXX has DNs which have been geographically ported to another rate center on the incumbent switch, geographically ported to another switch, or geographically ported in from another switch. Proper TYPE CI CALL and CDI cannot be determined until an LRN obtained either from an SCP or switch database has been analyzed.
- PORTED IN - If set to "Y", this field indicates NPA-NXX has DNs which have ported into the originating switch either through geographic portability or service provider portability.
- HOME LRN - If set to "Y", this field indicates LRN is owned by or is homed on this switch. This field only applies to LRNs and NOT to dialed digits.

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- LRN SCREENING - If set to "Y", screening data is obtained from the analyzed LRN value. If set to "N", screening data is obtained from originally dialed DN. This field only applies to LRNs and not to dialed digits.

- INH DNT - If set to "N", other Non-LNP triggers encountered during analysis of the dialed DN will be honored. If set to "Y", Non LNP triggers encountered will NOT be honored. This field only applies to LRNs received on incoming ISUP trunks and not to dialed digits.

LINE form (5109 Record) - This form is used to define the Office Equipment Number and features for each telephone number in the 5ESS-2000 Switch. The LRN INDEX field was added to support Number Portability. A non-zero value indicates this line has been geographically ported to a different rate center on the same switch or geographically ported in from another switch. The value is used to access an LRN in the LRNINDEX form.

LRNINDEX form (5328 Record) - This form was added to associate a LRN index to an LRN number. Typically, a unique LRN will be assigned to each office or rate center. The LRN obtained is analyzed using a DAS from either the NSTRIG form or SCP DAS from the OFCOPT form.

MLDIT form (5300-3 Record) - This form is used to define all area, office and service codes in a 5ESS-2000 Switch and serves as a local and foreign translator. The LNP TRIG NBR, GEO PORT, PORTED IN, HOME LRN, LRN SCREENING and INH DNT fields were added to support this feature. Refer to the LDIT form above for the description of these fields.

MLHLN form (5111 Record) - This form is used to define the individual terminal numbers assigned to a particular MLHG (Multi-Line Hunt Group). The LRN INDEX field was added to support Number Portability. A non-zero value indicates this line has been geographically ported to a different rate center on the same switch or geographically ported in from another switch. The value is used to access an LRN in the LRNINDEX form.

NSTRIG form (5324 Record) - This form is used to identify a network service application. The POST QUERY DAS field is used to specify the DAS (Digit Analysis Selector) used to analyze the LRNs either returned from the LNP SCP or retrieved from the LRNINDEX form. The ASP Multiple Rate Center secured feature (SFID 190) must be active to assign these DASs.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The JIP (Jurisdiction Information Parameter) field was added which contains the NPA-NXX of a designated LRN (Local Routing Number) identifying the office.

RDIT form (5300-7/8 Record) - This form is used for translation of remaining dialed digit strings for digit analysis. The LNP TRIG NBR, GEO PORT, PORTED IN, HOME LRN, LRN SCREENING and INH DNT fields were added to support this feature. Refer to the LDIT form above for the description of these fields. The "IGN", ignore indication, was added for use on the RDIT form, and only for population of the LNP Trigger Number field. When call processing encounters the "IGN" indication (for the LNP TRIG NBR assignment) on the RDIT forms, then call processing will use the corresponding assignments of: DFLT RT, LNP TRIG NBR, PORT IN, and GEO PORT found on the corresponding LDIT view.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 174 to "Y". In addition, since this feature depends on SFID 126, the ASP Release 0.1B secured feature must be activated by setting the ACT field for SFID 126 on the SFSYS form to "Y". For more information on this feature, see Division 2, Section 4A126. In addition, the ACT field for SFID 190 must be set to "Y" if per-trigger POST QUERY DASs are assigned on the NSTRIG form.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The LRN DAS, and SIG PNUM fields were added to support this feature.

- LRN DAS - This DAS is used to analyze LRNs contained in the CdPN parameter for incoming ISUP calls.

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- SIG PNUM - If set to "Y", the dialed DN will be signaled in the CdPN (Called Party Address Parameter) parameter of the ISUP IAM instead of the LRN, and the FCI's translated number indicator will be set to number not translated.

4. GLOSSARY

AIN	Advanced Intelligent Network
AR	Automatic Recall
ASP	Advanced Services Platform
CI	Carrier Interconnect
CNAM	Calling Name
DN	Directory Number
FCI	Forward Call Indicator
GAP	Generic Address Parameter
GTT	Global Title Translations
IAM	Initial Address Message
IC	Interexchange Carrier
ICLATA	Inter-LATA Carrier's Intra-LATA Capability
IHLB	Incoming History Block
ISUP	ISDN User Part
ISVM	Inter-Switch Voice Messaging
JIP	Jurisdiction Information Parameter
LASS	Local Area Signaling Services
LATA	Local Access Transport Area
NP	Number Portability
LRN	Location Routing Number
NP	Number Portability
NOC	Normalized Office Code
NPA-NXX	Numbering Plan Area Office Code
PIC	Pre-subscribed Inter-LATA Carrier
PTC	Pre-subscribed Toll Carrier
SCP	Service Control Point
SLE	Screen List Editing

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STP	Signal Transfer Point
TAT	Terminating Attempt Trigger
TCAP	Transaction Capability Application Part
TOLHB	Temporary Outgoing History Block

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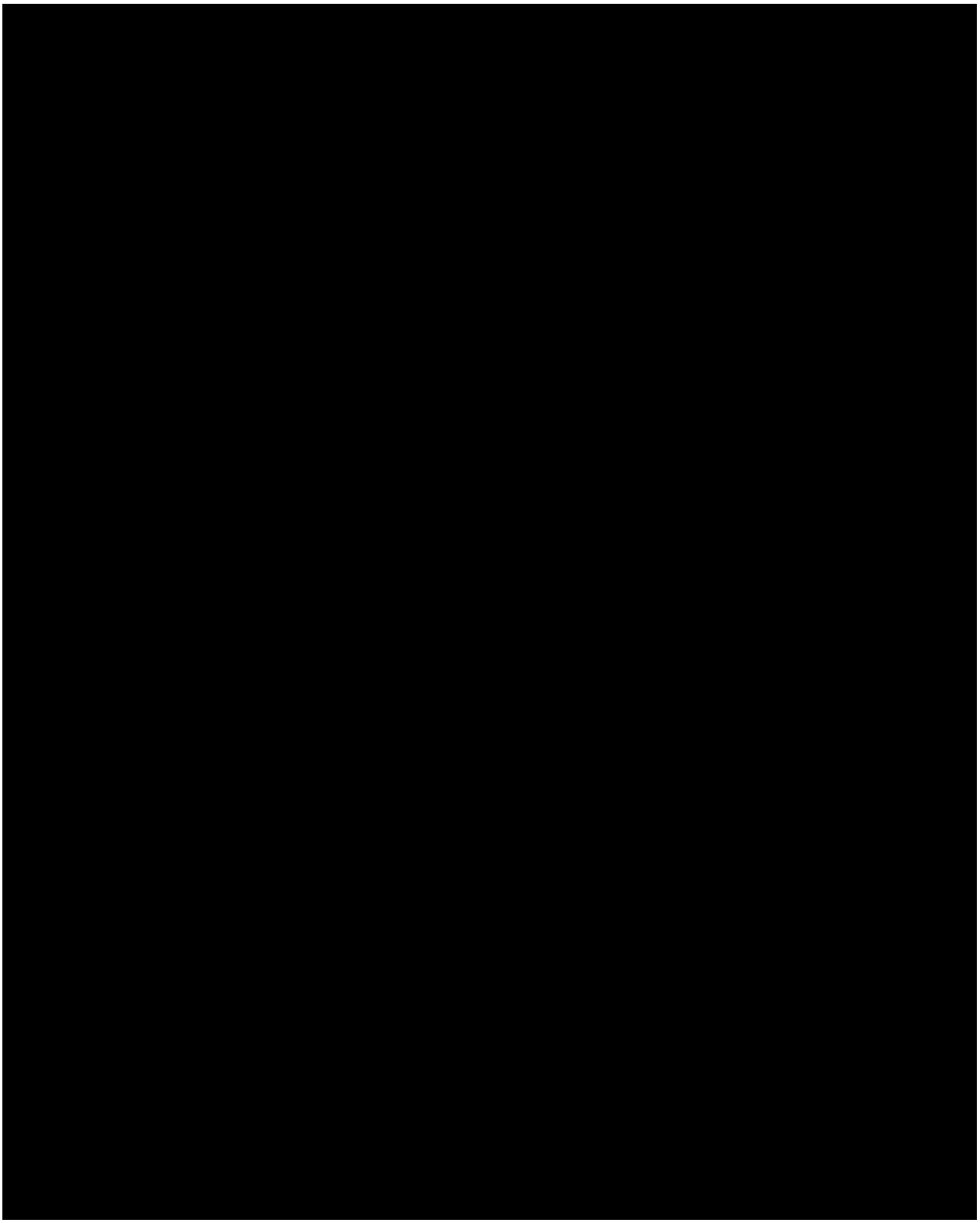

Figure 1 BASIC TYPES OF LNP CALL SCENARIOS WITHIN A NETWORK OF LRN AND NON-LRN SWITCHES

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Figure 2 SCENARIO 1 - CALL TO NON-PORTED DN IN PORTABLE NPA-NXX ON ORIGINATING SWITCH

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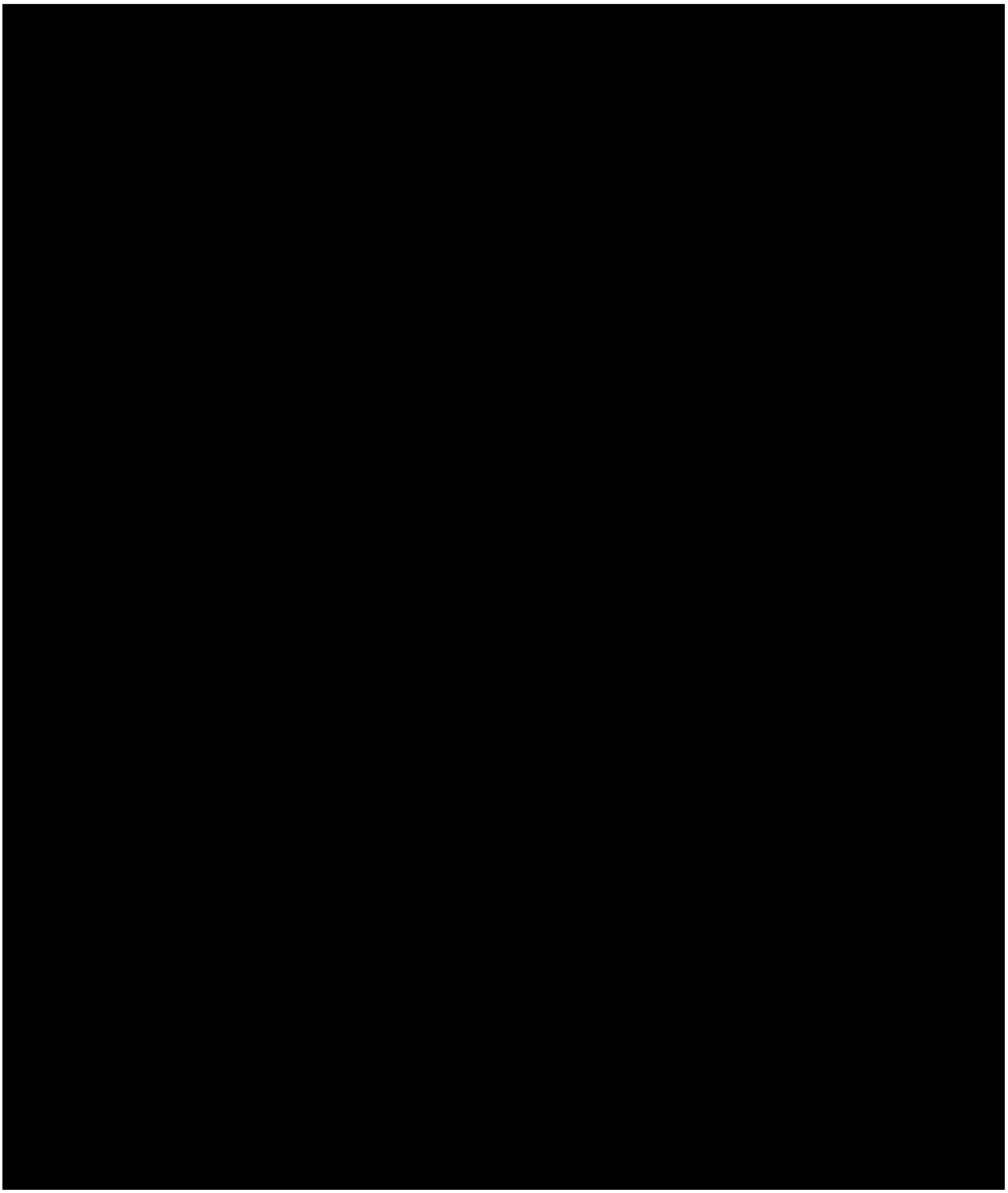

Figure 3 SCENARIO 2 - CALL TO NON-PORTED DN IN PORTABLE NPA-NXX ON REMOTE SWITCH

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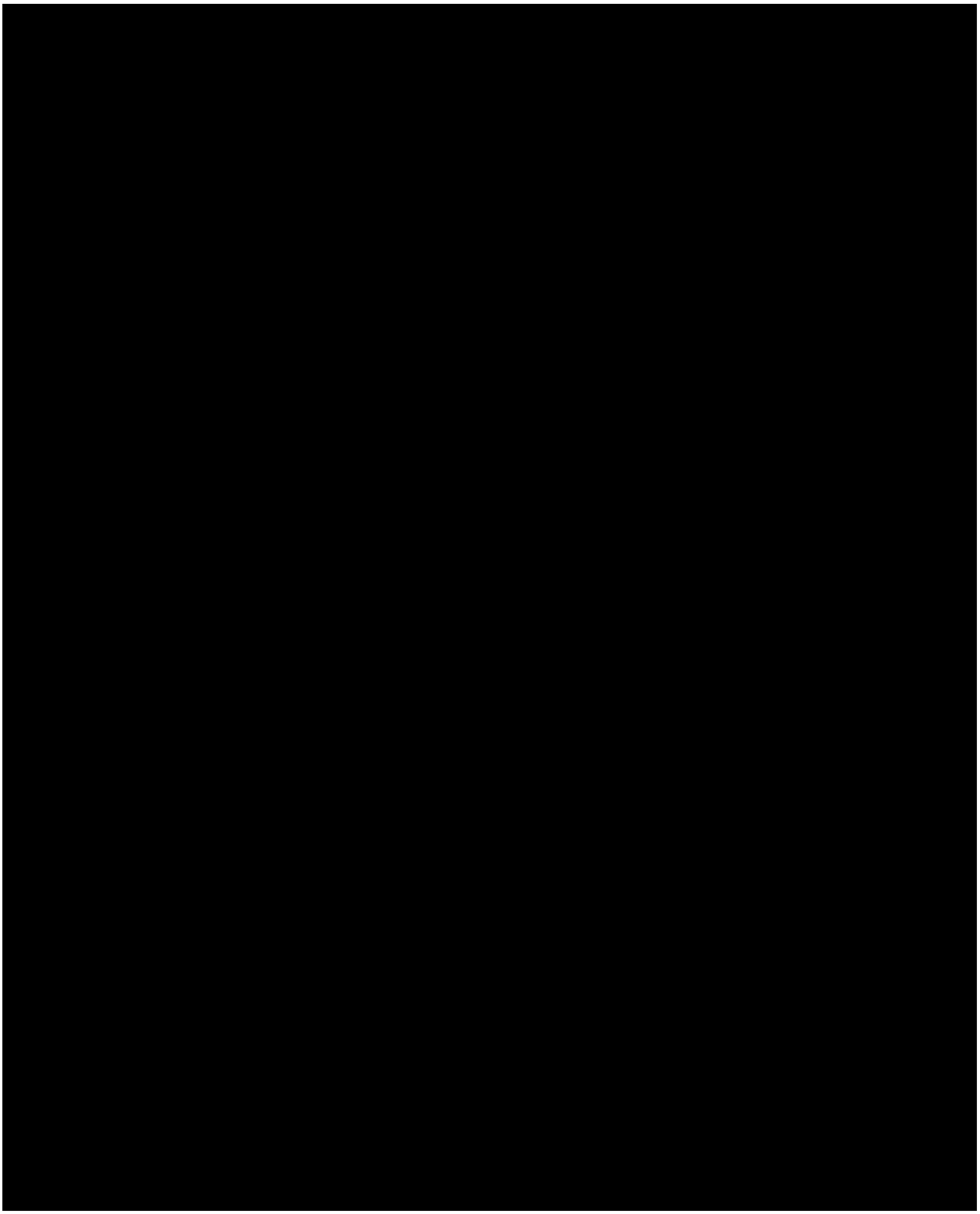

Figure 4 SCENARIO 3 - CALL FROM NON-LRN SWITCH TO NON-PORTED DN IN PORTABLE NPA-NXX

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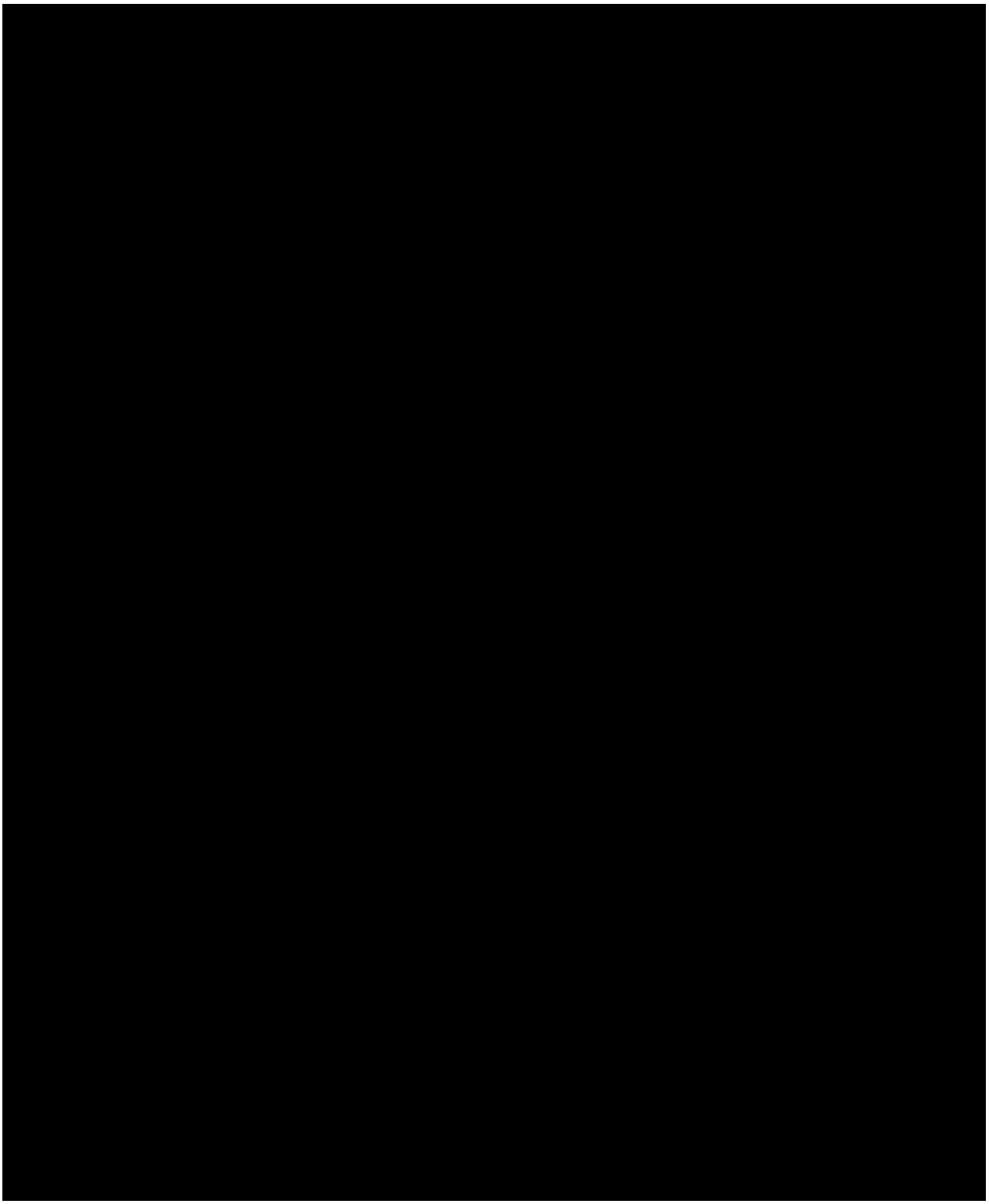

Figure 5 SCENARIO 4 - CALL FROM NON-LRN SWITCH TO NON-PORTED DN ON REMOTE SWITCH

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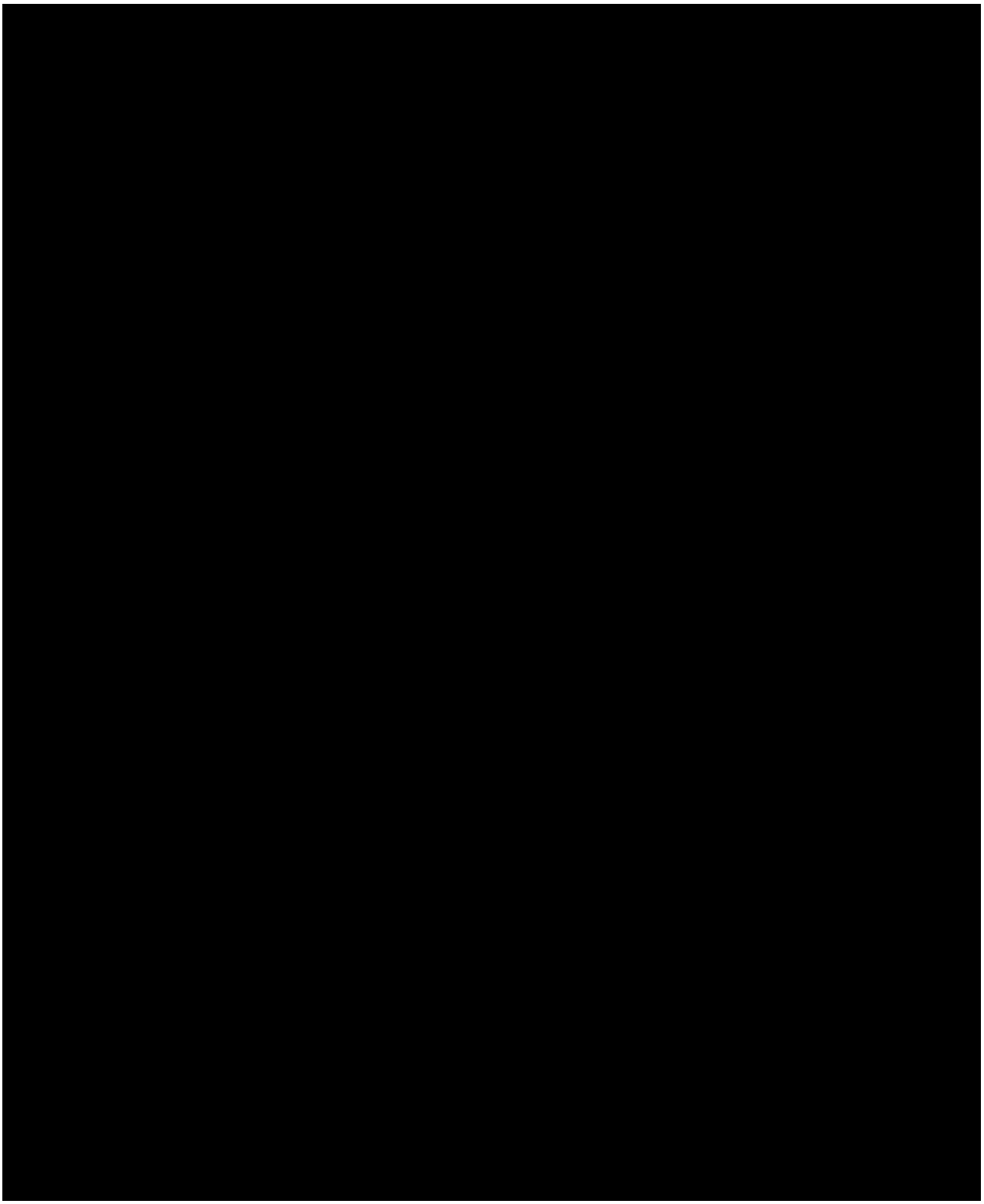

Figure 6 SCENARIO 5 - CALL FROM NON-LRN SWITCH TO DN IN PORTED IN TO SWITCH

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Figure 7 SCENARIO 6 - CALL FROM NON-LRN SWITCH TO PORTED DN WITH BLANK OFFICE CODE AND DIALED NXX

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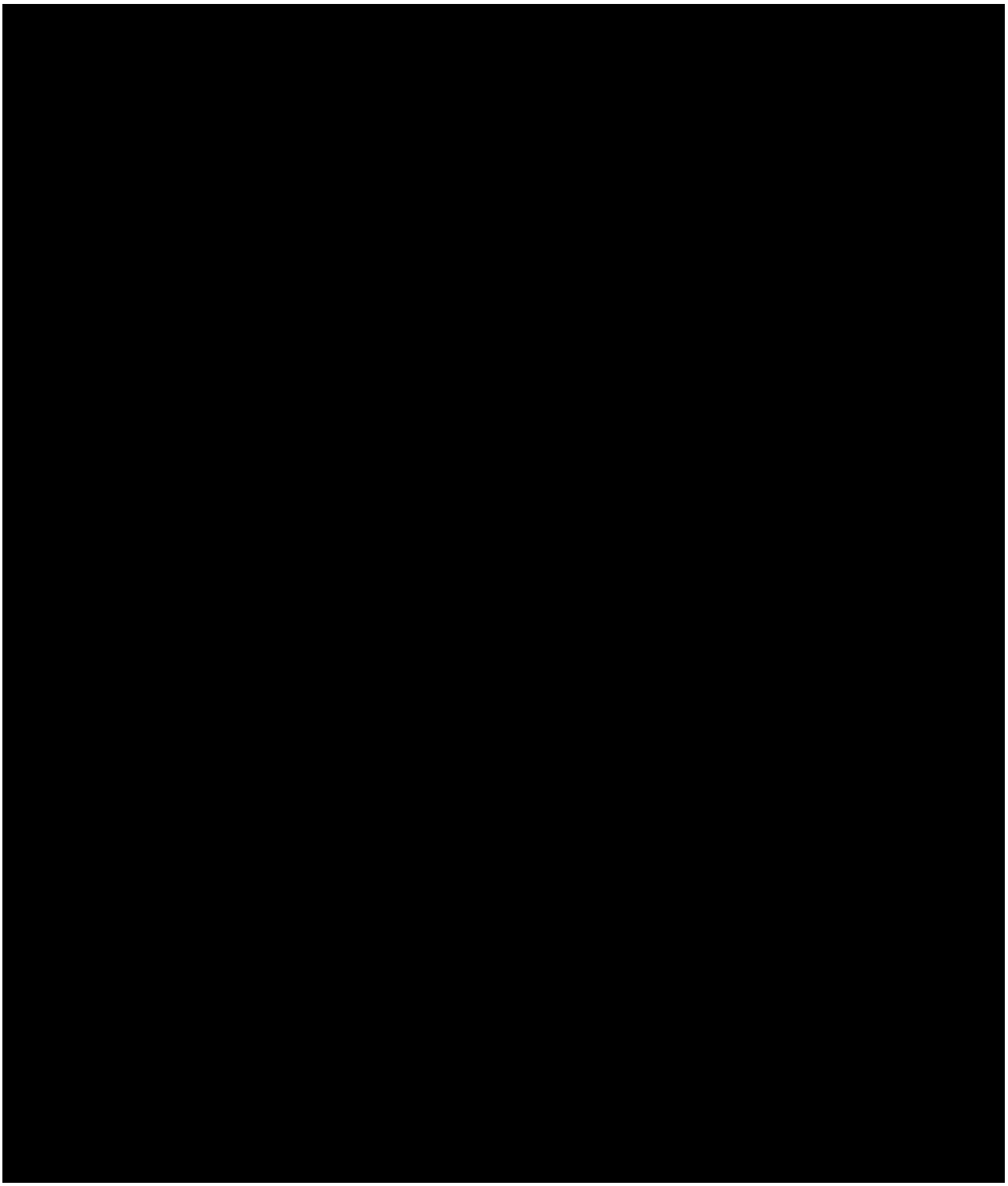

Figure 8 SCENARIO 7 - ICLATA CARRIER CALL WITH PRESUBSCRIBED TOLL CARRIER TO NON-PORTED DN

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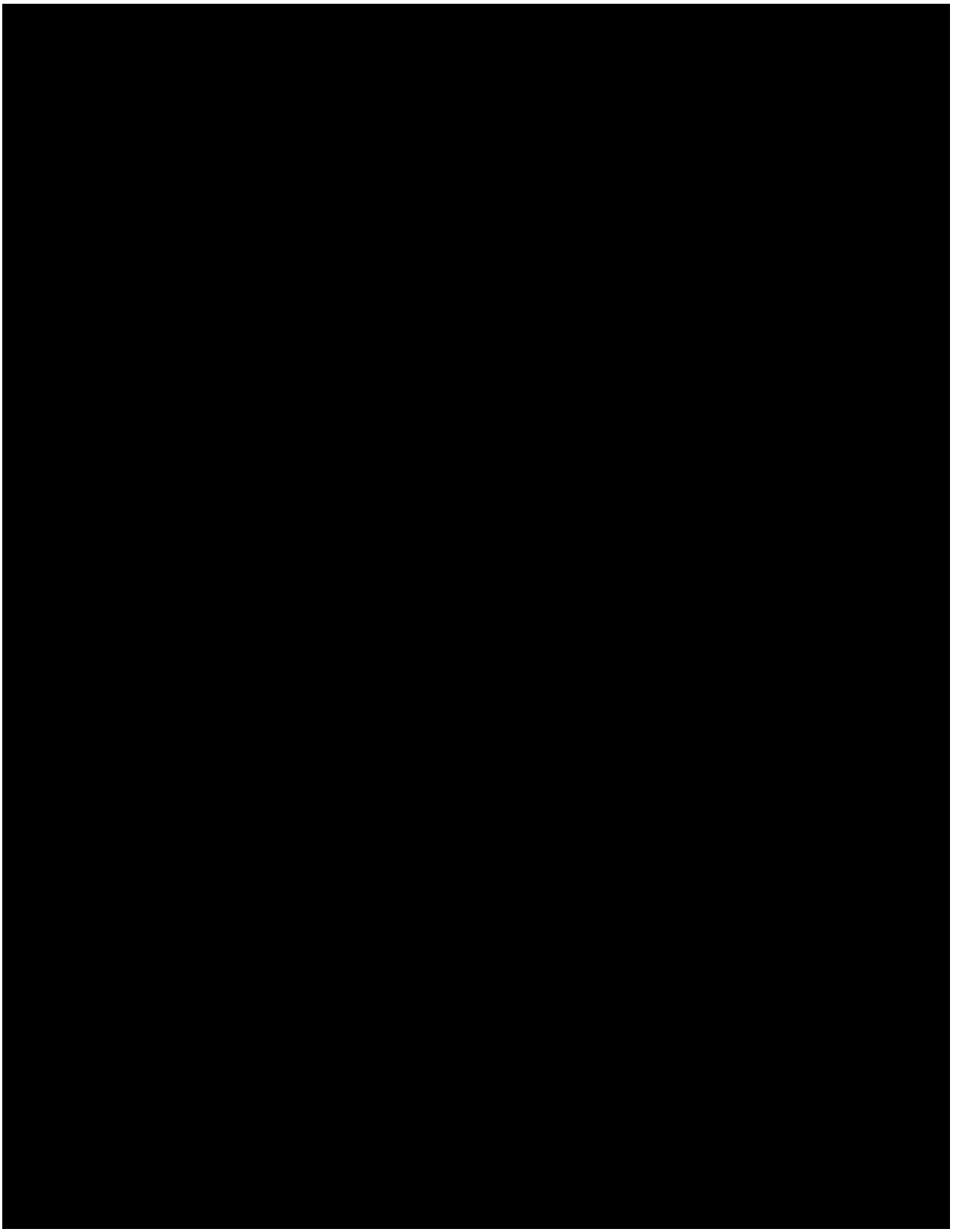

Figure 9 SCENARIO 8 - INTRA-LATA TOLL CALL WITH DIALED CARRIER, INTRA LATA="N"

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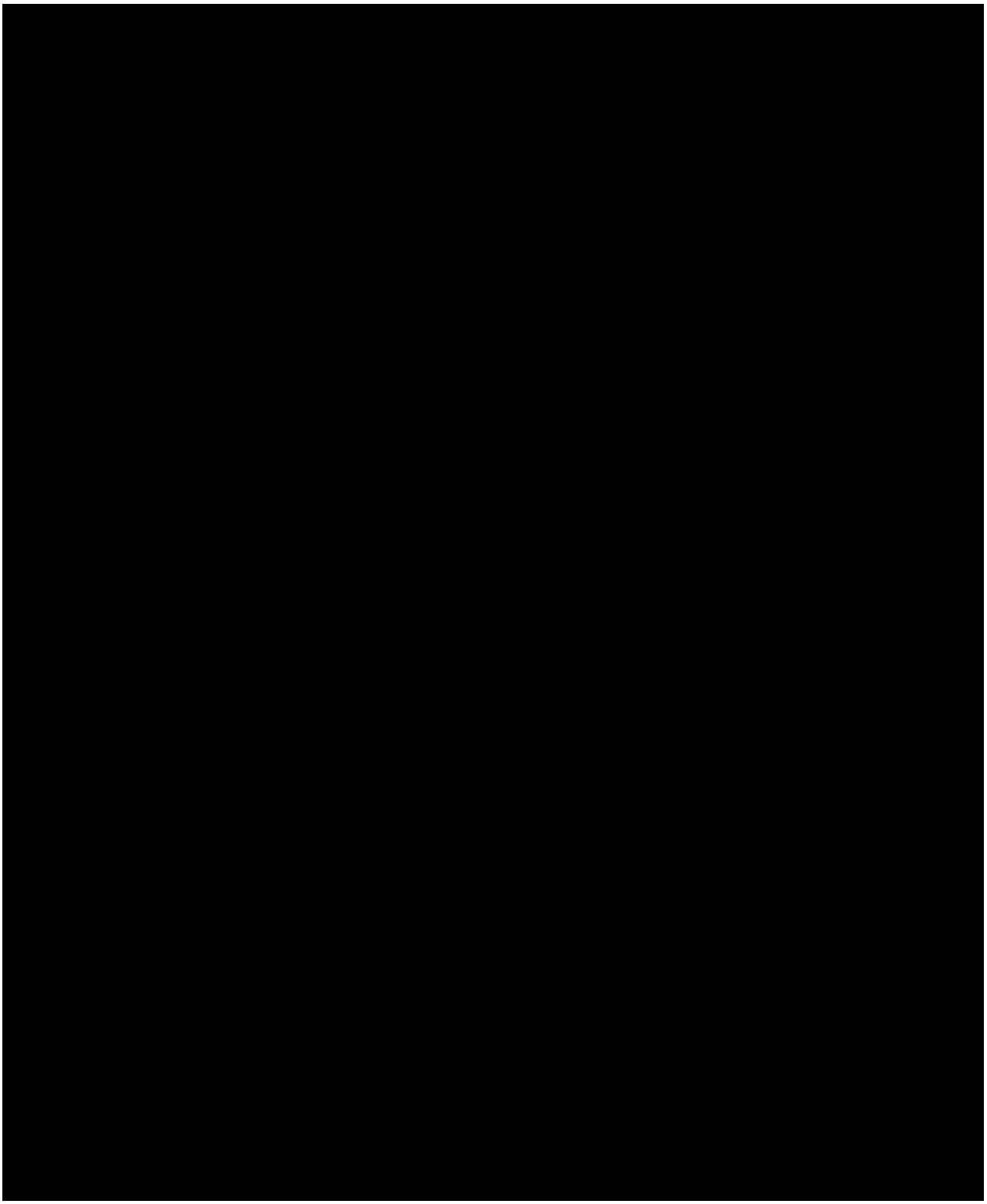

Figure 10 SCENARIO 9 - AR CALL TO DN PORTED WITHIN REMOTE SWITCH

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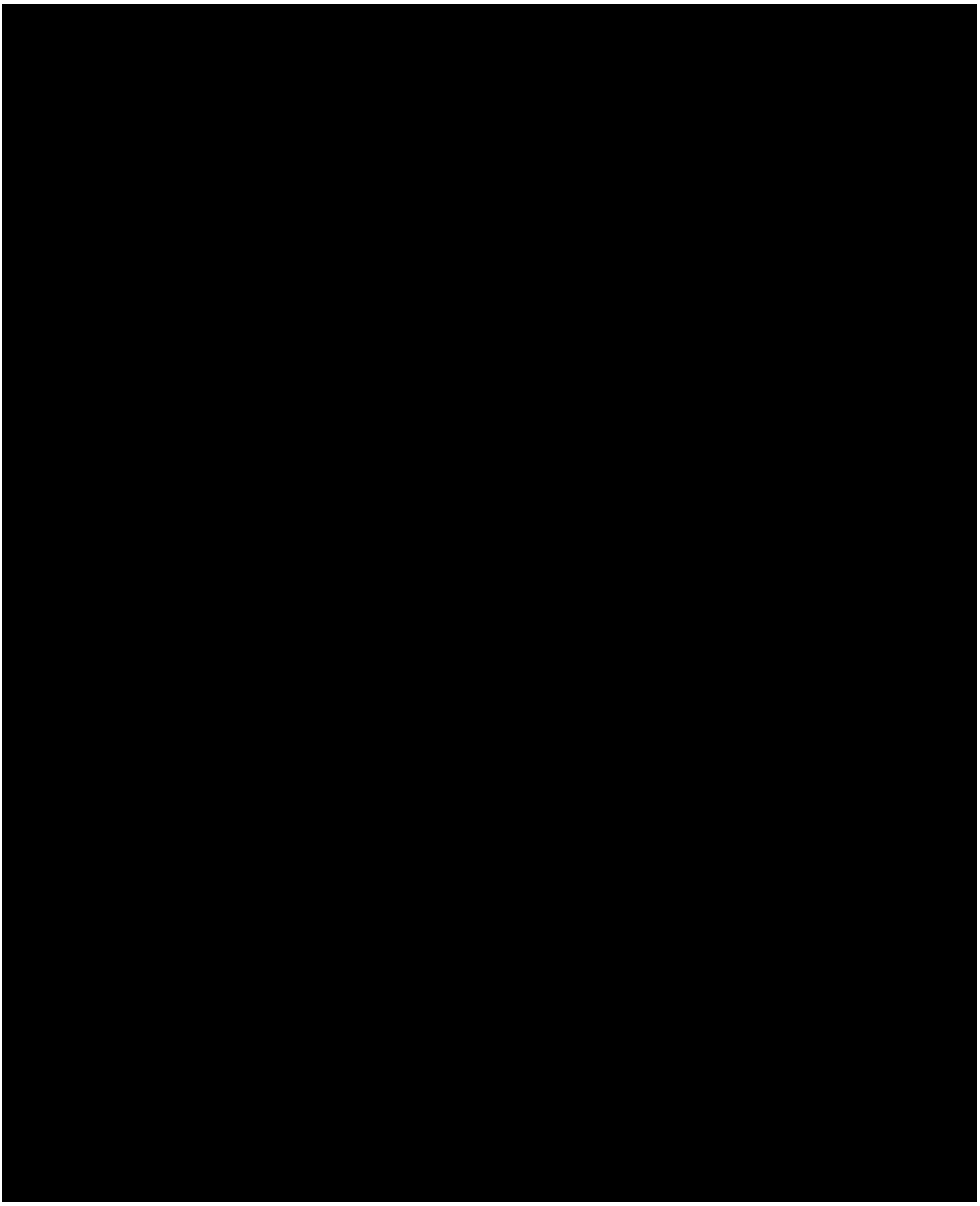

Figure 11 SCENARIO 10 SLE - PORTED IN LINE TO ORIGINATING SWITCH

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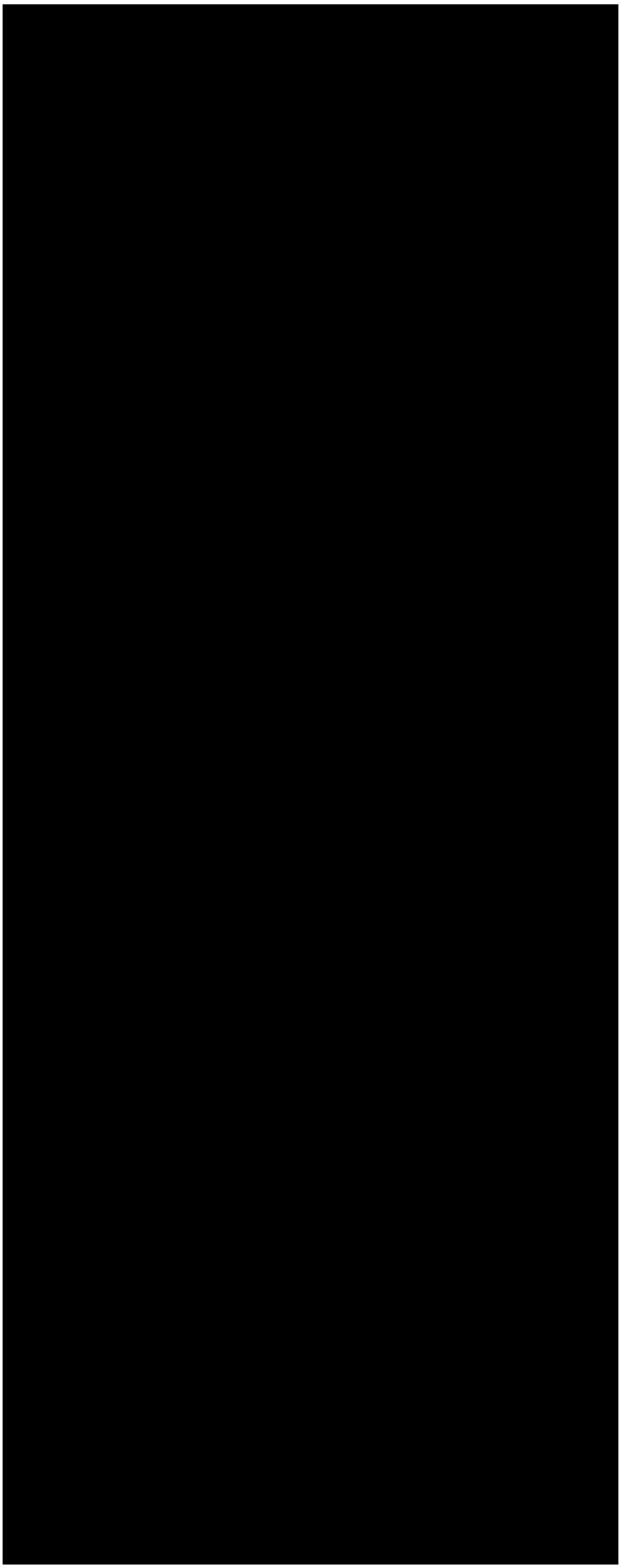

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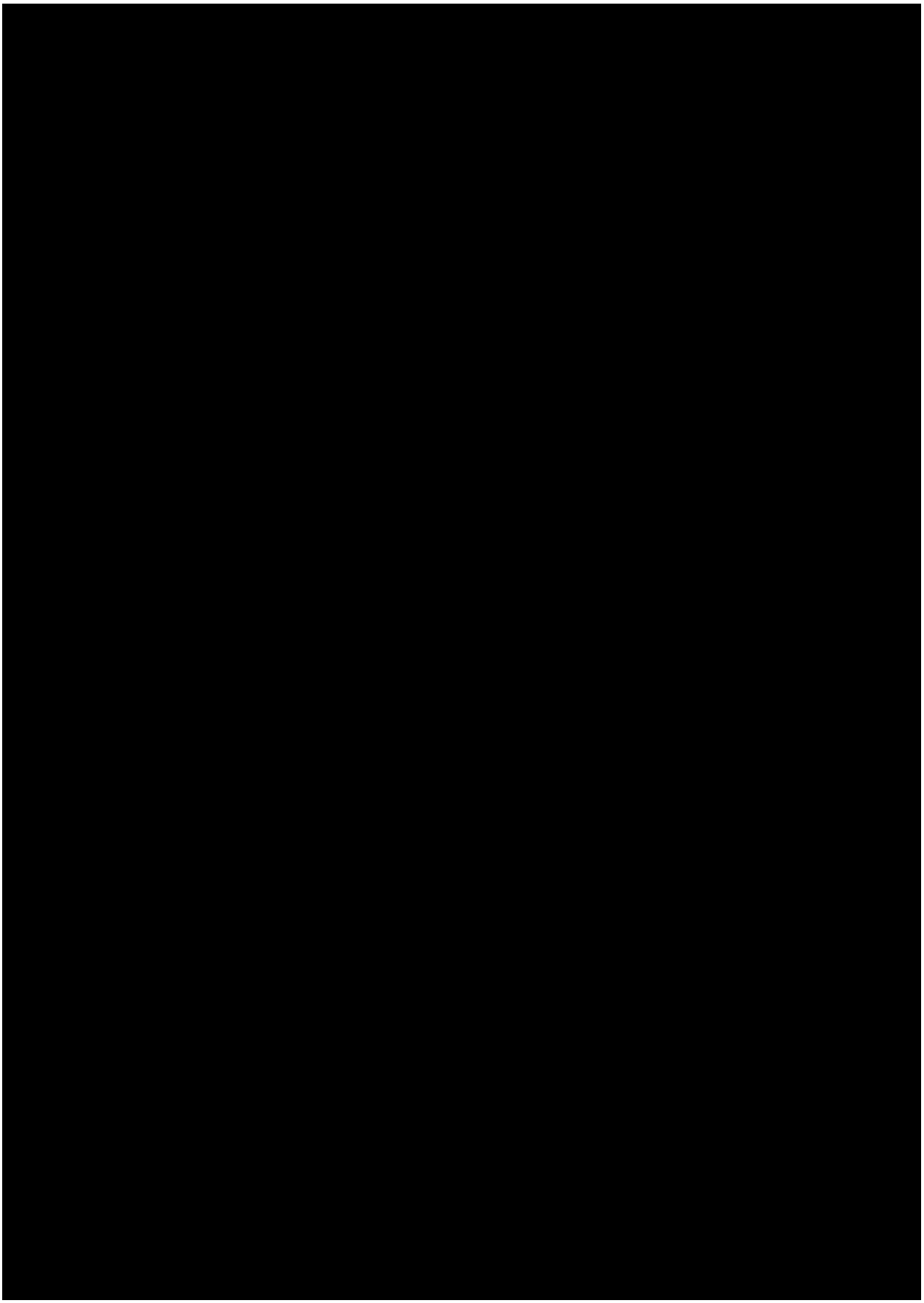

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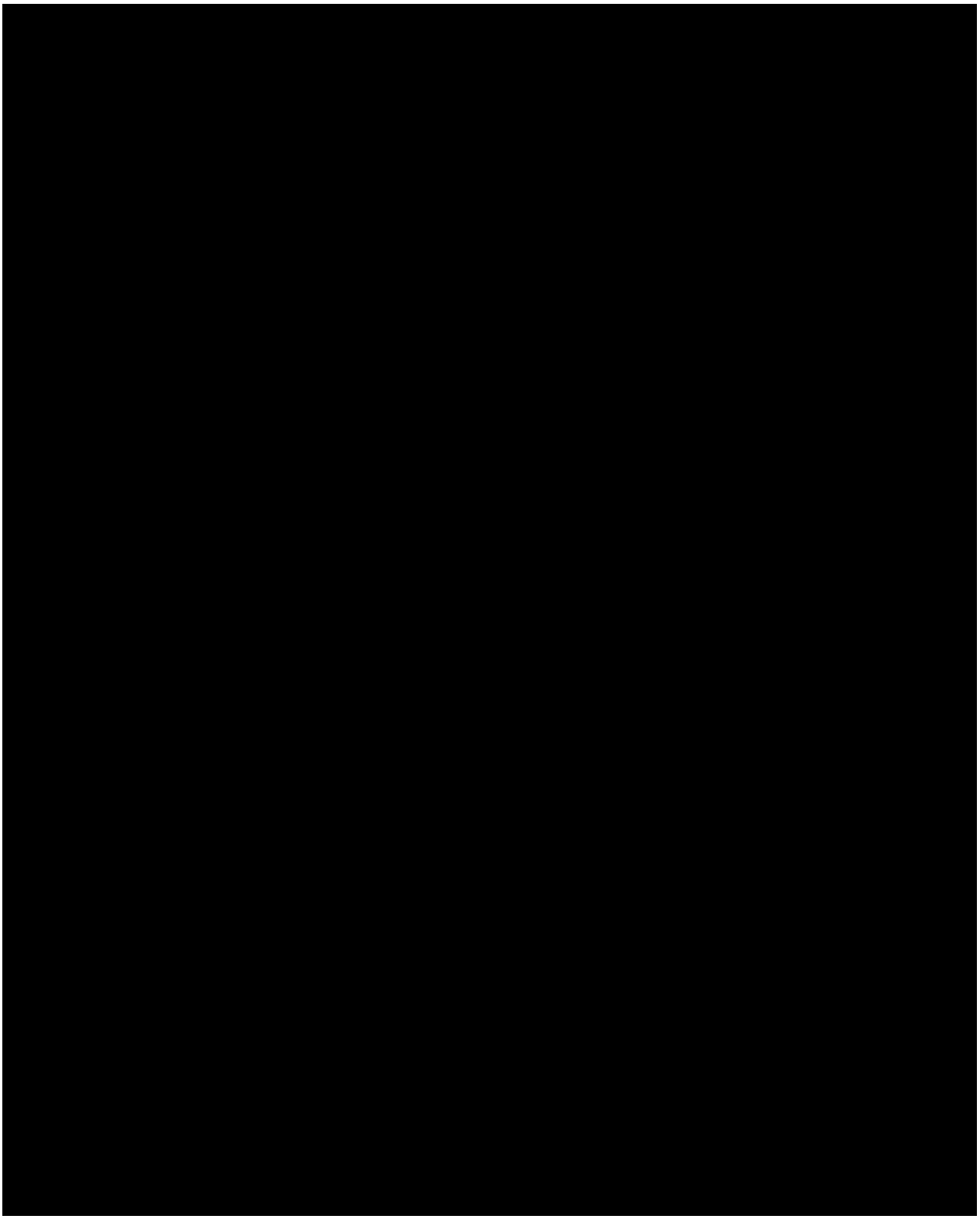

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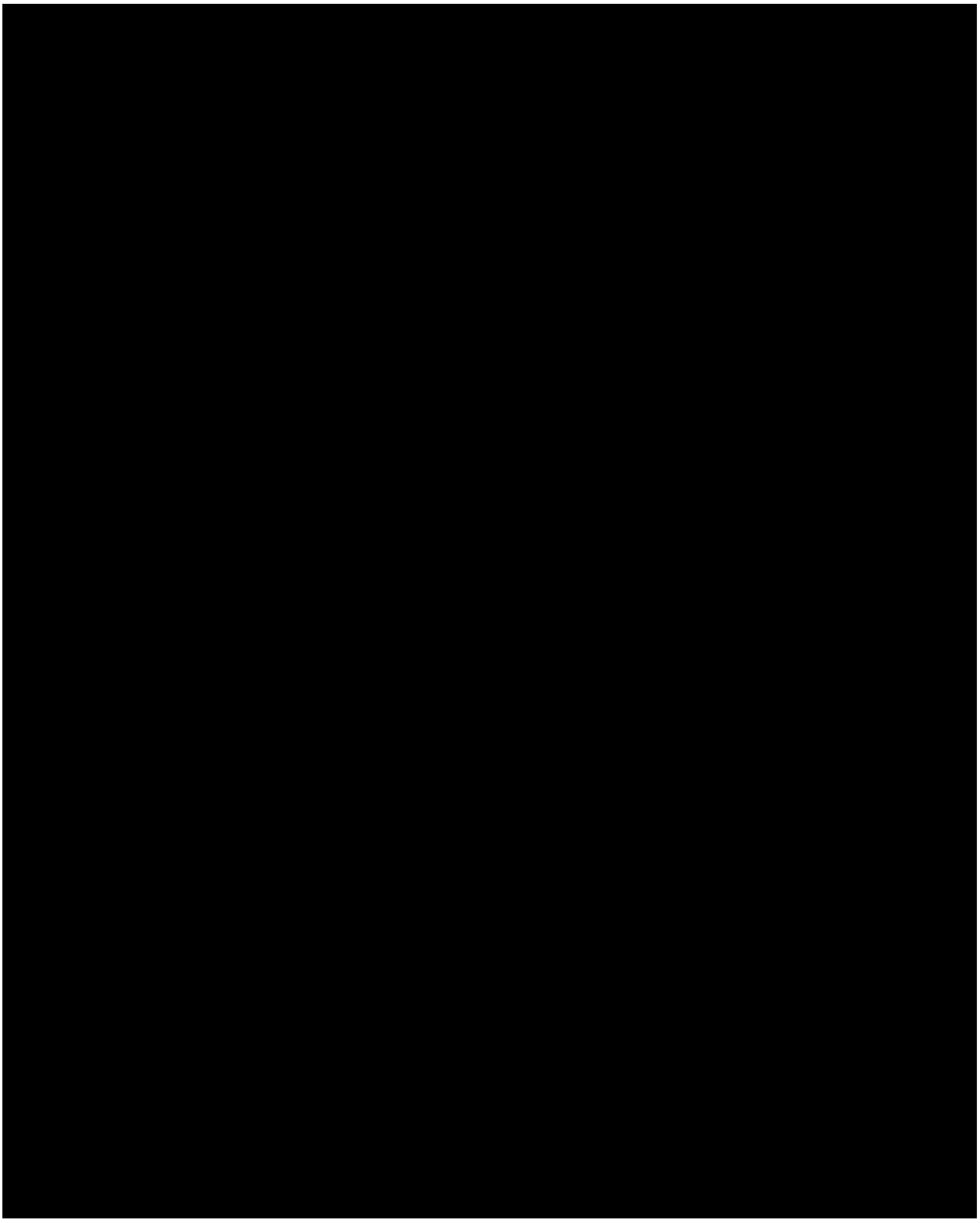

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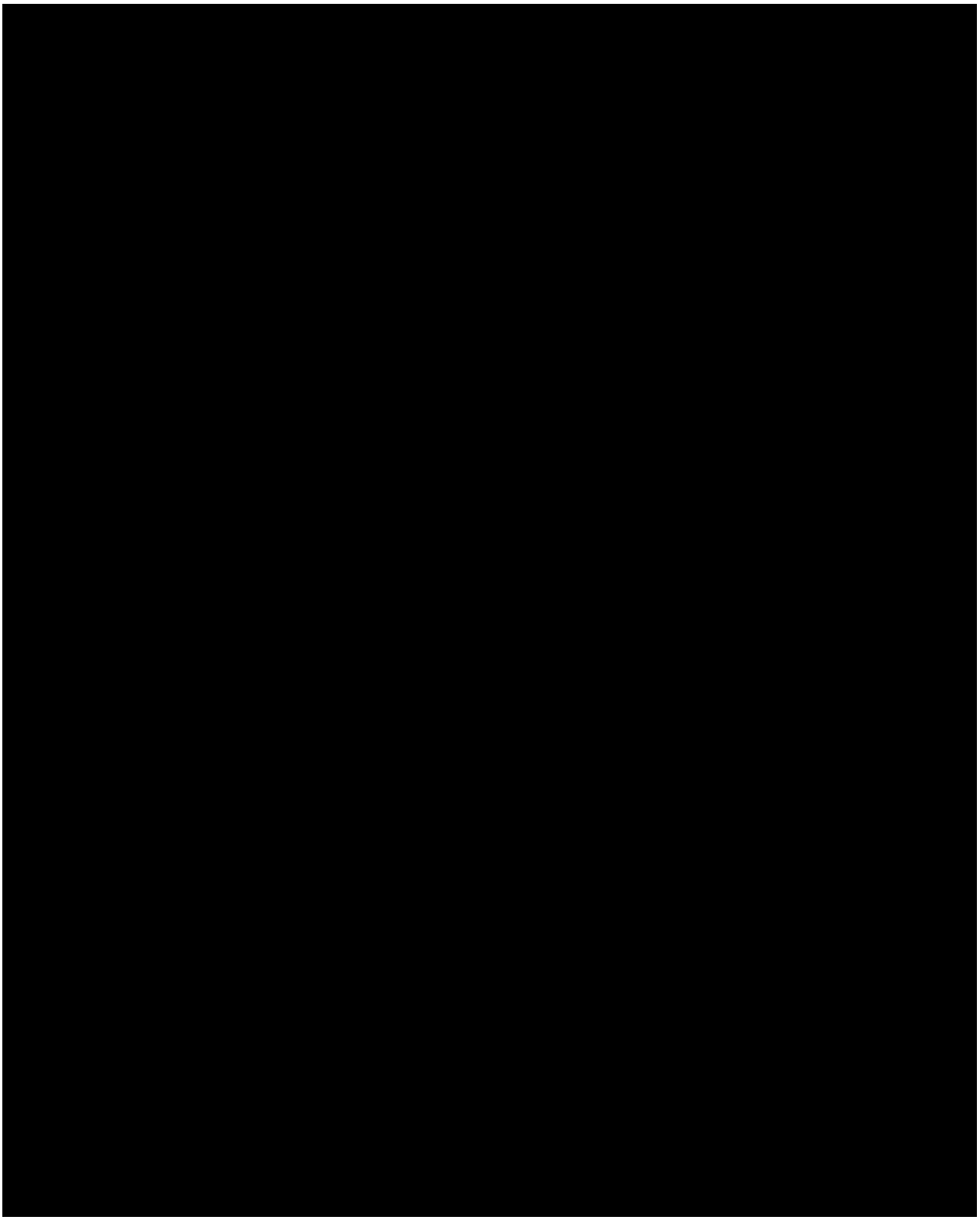

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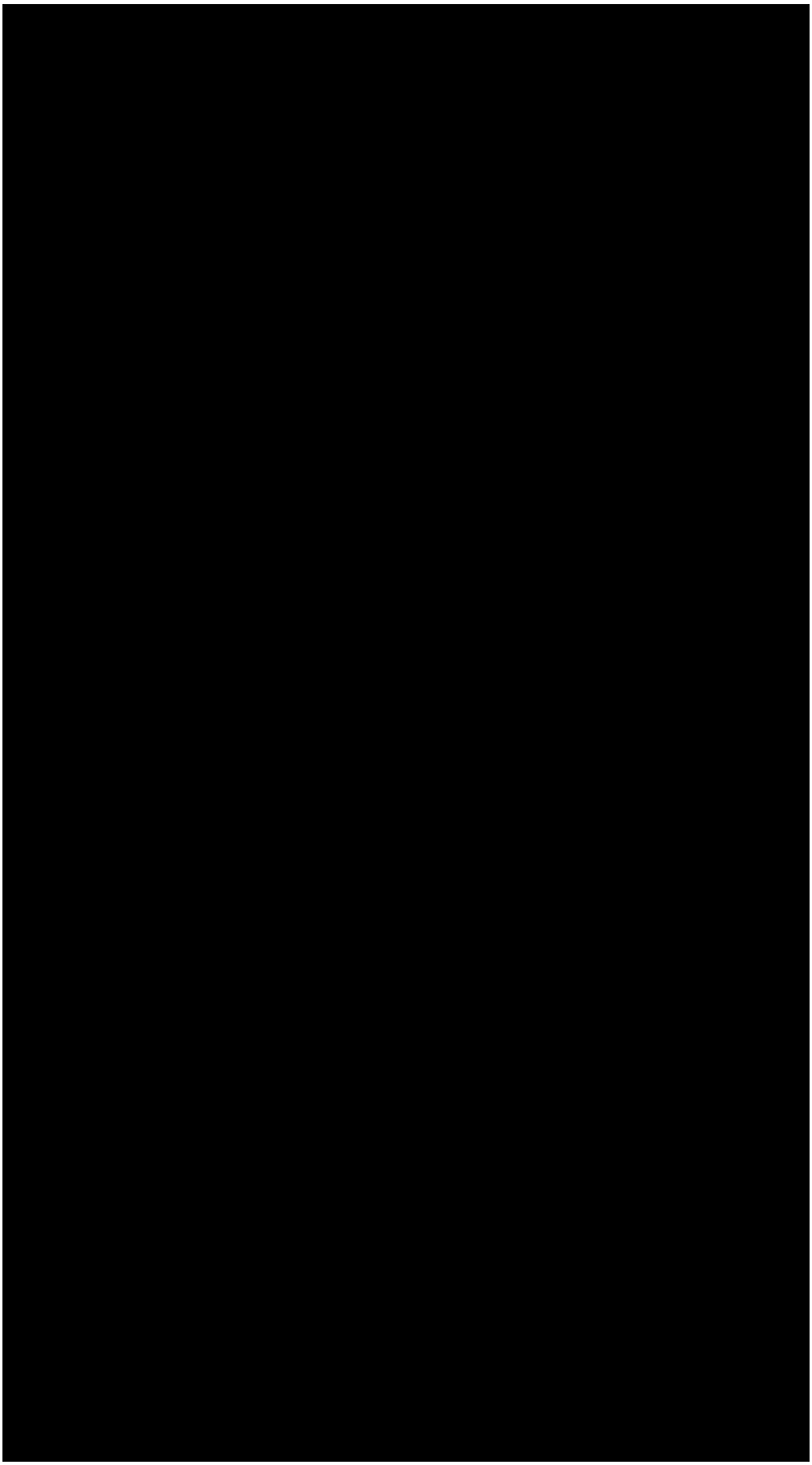

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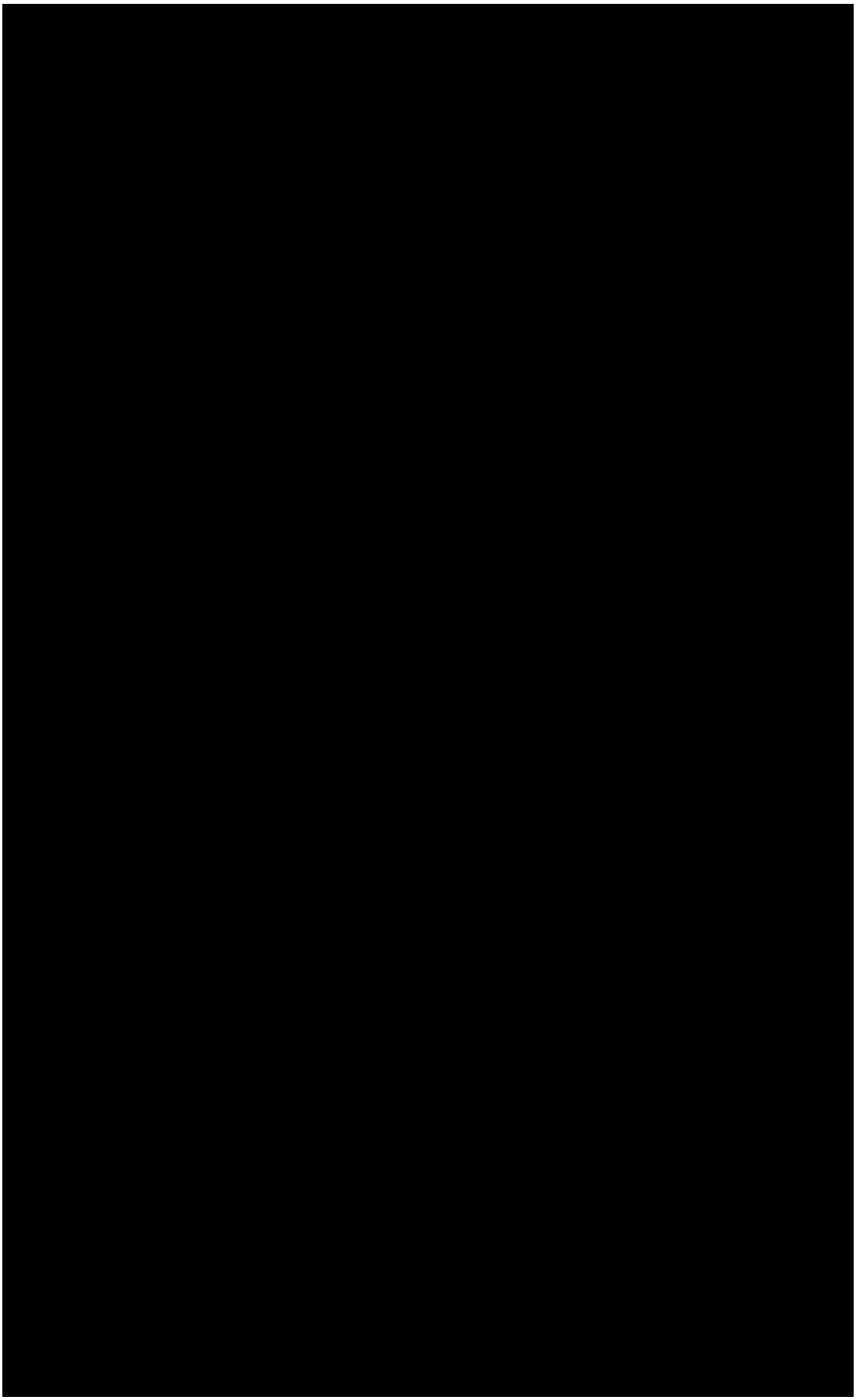

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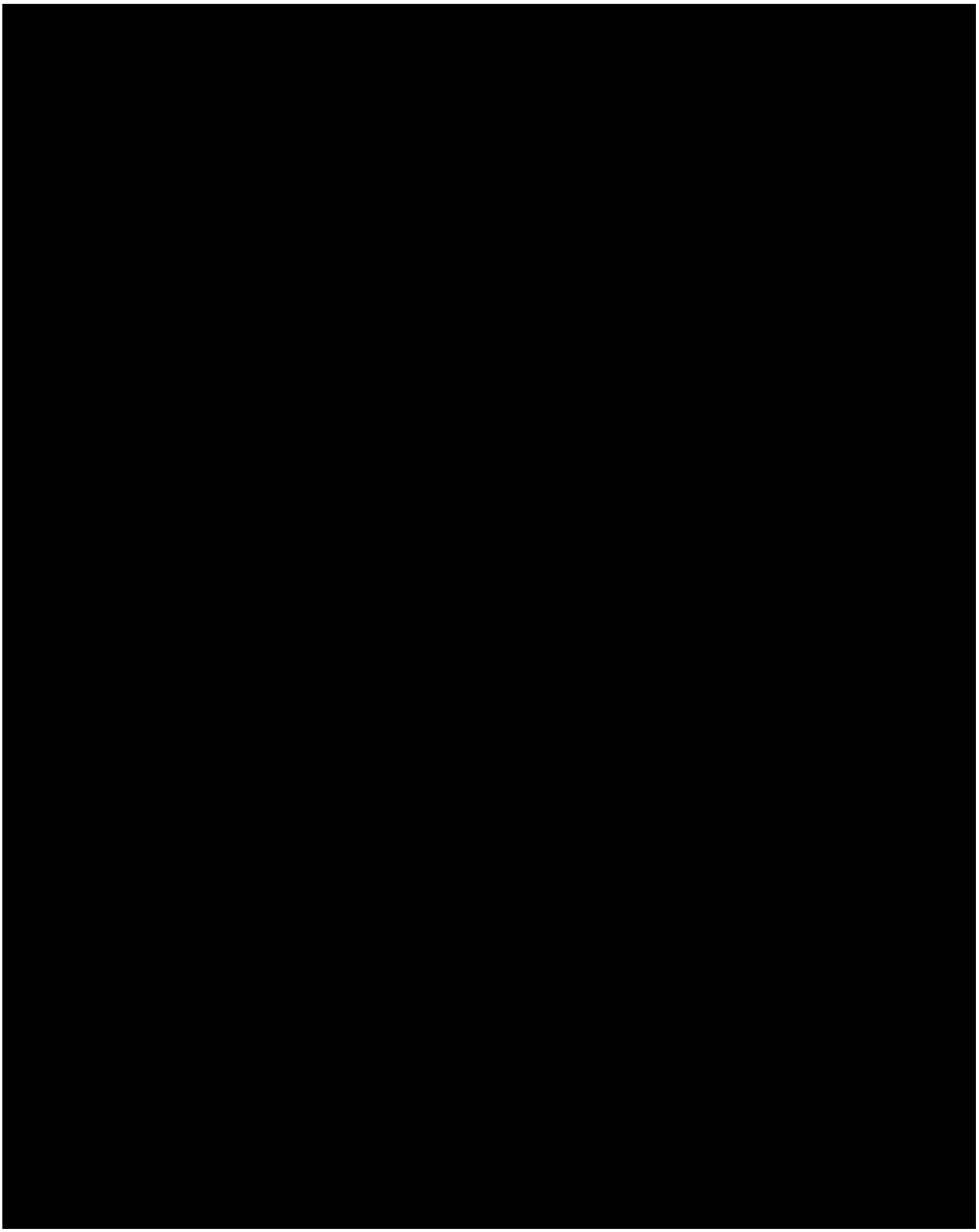

Figure 12 NUMBER PORTABILITY CALL PROCESSING FLOW

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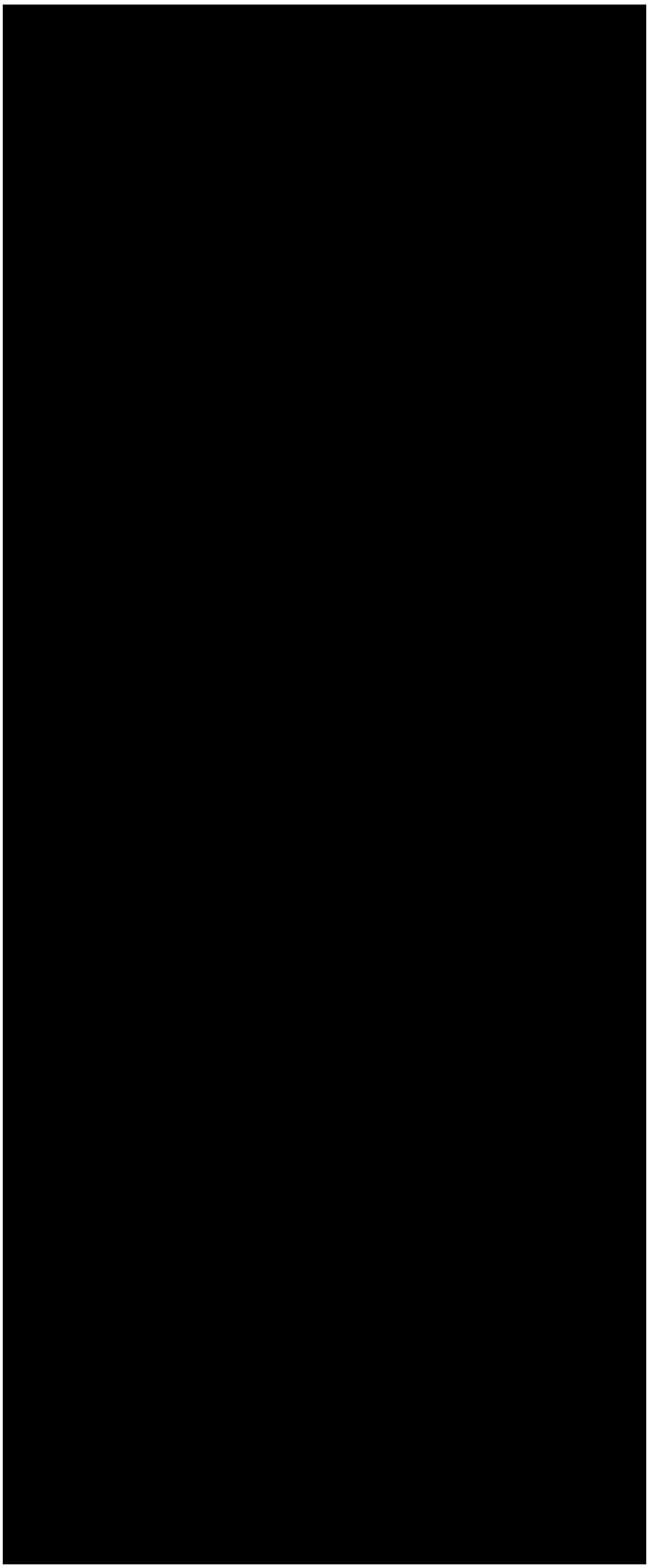

Figure 13 NUMBER PORTABILITY INCUMBENT SWITCH FORM FLOW

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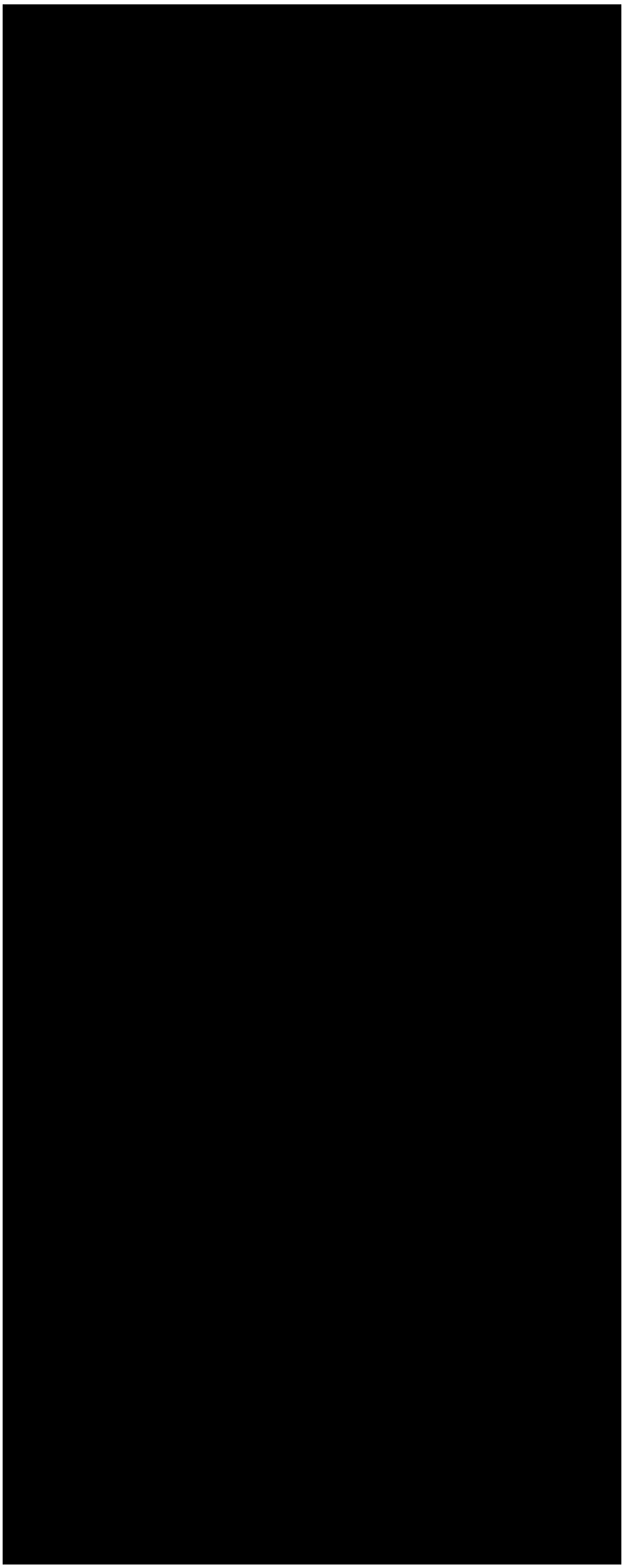

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Figure 14 NUMBER PORTABILITY TANDEM SWITCH FORM FLOW

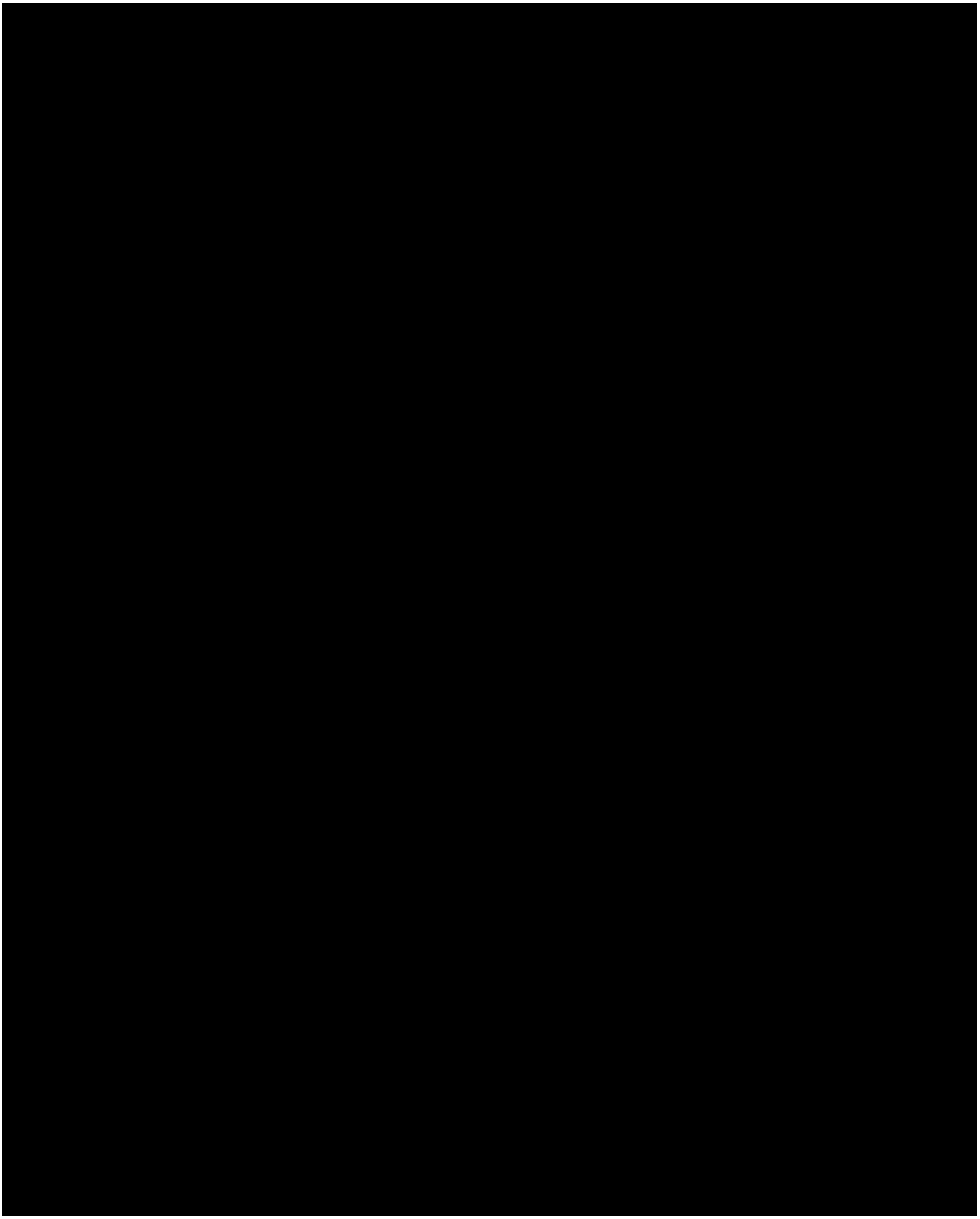

Figure 15 NUMBER PORTABILITY SERVING SWITCH FORM FLOW

SEC. 4A175: EXPANDED SLS (SIGNALING LINK SELECTION)

1. FEATURE DESCRIPTION

The Expanded SLS feature is available with 5E11 and later Software Releases. It is a SS7 (Signaling System 7) Network Reliability feature and is available for both the CNI (Common Network Interface)-based SS7 signaling platform, and the PSU (Packet Switch Unit)-based SS7 signaling.

Expanded SLS is a secured feature with SFID 175. This feature determines the specific links and STPs (Signal Transport Points) used to route a message. This feature allows for the expansion of the SLS capability to 8 bits. Such expansion allows the maximum size of a B or D link set to be 16 links compared to the previous value of 8. The expansion also allows a more even traffic distribution on links in a (combined) link set, especially after link failures. For example, with a 5-bit SLS, traffic load between links in a link set could differ in some cases by a factor of 2. With the 8-bit SLS, traffic will differ by less than 25 percent in all cases.

The Expanded SLS feature number is 99-CP-2316.

2. FEATURE ASSIGNMENT

The Expanded SLS feature is activated by setting SFID 175 ACT on the SFSYS form (5713-1) to "Y". The feature is defined for CNI on the OFCOPT form (5700 Record), by setting the EXPANDED SLS field to "Y".

The feature is defined for PSU on the CCGSM form (6008 Record), by setting the EXPANDED SLS field to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCGSM	6008	9	10H	16.1
OFCOPT	5700	3	5I	8.15
SFID	5713	3	5AR	8.22

CCGSM form (6008 Record) - This form is used to specify data used for the Global Switching Module(s) associated with the PSU (Packet Switching Unit)-based SS7 signaling platform. The EXPANDED SLS field defines this feature.

OFCOPT form (5700 Record) - This form is used to define the parameters in a CNI office. The EXPANDED SLS field was added to define this feature.

SFSYS form (5713 Record) - This form is used to activatesecured features. SFID 175 was added to designate the Expanded SLS feature.

SEC. 4A176: IMPROVED SLT (SIGNALING LINK TEST)

1. FEATURE DESCRIPTION

The Improved SLT (Signaling Link Test) feature is available with 5E11 and later Software Releases. It is a SS7 (Signaling System 7) Network Reliability feature and is available for both the CNI (Common Network Interface)-based SS7 signaling platform, and the PSU (Packet Switch Unit)-based SS7 signaling.

Improved SLT is a secured feature with SFID 176.

The current SLT procedure provides a signaling link for reliable transfer of signaling messages between two directly connected "signaling points". The on-line signaling link test procedure involves communication between the two ends of the concerned signaling link. This procedure verifies the physical link assignments and can detect looped links and other irregularities in the operation of the link. This procedure is used when a signaling link is activated or restored. The signaling link will be available to carry traffic only if the test is successful.

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The Improved Signaling Link Test Procedures feature adds two additional requirements to the existing Signaling procedure.

- clarification that the test pattern sent in the second signaling link test message should be the same as that sent in the first signaling link test message. This allows the response to the first test message to be accepted as a response to the second test message, in effect allowing twice the time for a response to the first signaling link test message.
- when the "test available (i.e., in-service) links periodically" option is on, the test should be performed even on links which are experiencing transmit or receive congestion.

The Improved SLT feature number is 99-CP-3072.

2. FEATURE ASSIGNMENT

The Improved SLT feature is activated by setting SFID 176 ACT on the SFSYS form (5713-1) to "Y". The feature is defined on the OFCOPT form (5700 Record), by setting the IMPROVED SLT field to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5700	3	5I	8.15
SFID	5713	3	5AR	8.22

OFCOPT form (5700 Record) - This form is used to define the parameters in an office. The IMPROVED SLT field was added to define this feature.

SFSYS form (5713 Record) - This form is used to activatesecured features. Setting the SFID 176 ACT field to "Y"activates the Improved SLT feature.

SEC. 4A177: MESSAGE TRANSFER PROTOCOL NODE RESTART

1. INTRODUCTION

The following two features are described in this section:

- the Message Transfer Protocol (MTP) Node Restart feature, available for a CNI (Common Network Interface)-based SS7 (Signaling System 7) signaling platform.
- the SS7 (Signaling System 7) PSU (Packet Switch Unit) Whitebook MTP Enhancements feature, available for a PSU (Packet Switch Unit)-based SS7 signaling platform.

2. MESSAGE TRANSFER PROTOCOL NODE RESTART

2.1 Feature Description

The MTP (Message Transfer Protocol) Node Restart feature is available with 5E11 and later Software Releases. This is a secured feature using SFID (Secured Feature ID) 177. The feature number for this feature is 99-CP-2314. This feature is a SS7 Network Reliability feature and is available for both the CNI-based SS7 signaling platform, and the PSU-based SS7 signaling platform.

The MTP Node Restart procedure enables the MTP at a signaling point that has just become available to bring sufficient signaling links into the available state to handle the expected traffic and to stabilize its routing before user traffic is restarted to the point. This procedure uses the TRA (Traffic Restart Allowed) and TRW (Traffic Restart Waiting) messages. The TRW message is an indication to the receiving signaling

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point that user signaling traffic (i.e., traffic from the users of the MTP, such as ISUP (Integrated Services User Part)) should not be sent to the originator of the TRW until a TRA message is received from the same signaling point. A TRA is an indication of the receiving signaling point that user signaling traffic may be resumed to the originator of the message. The MTP Restart procedures may not only be performed at a restarting signaling point, but also at signaling points adjacent to the signaling point which is restarting.

2.2 Feature Assignment

The MTP Node Restart feature is activated by setting the ACT field for SFID 177 on the SFSYS form (5713-1) to "Y". The feature is defined on the OFCOPT form (5700 Record), by setting the MTP NODE RESTART field to "Y".

2.3 Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5700	3	5I	8.15
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5700 Record) - This form is used to define the parameters in an office. The MTP NODE RESTART field was added to define this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. Setting the SFID 177 ACT field to "Y"activates the MTP Node Restart feature.

3. SS7 PSU WHITEBOOK MTP ENHANCEMENTS

3.1 Feature Description

The SS7 PSU Whitebook MTP (Message Transfer Part) Enhancements feature is available with 5E14 and later Software Releases. This is a secured feature using SFID 177. The assigned feature number is 99-5E-4238.

This feature is an enhancement to the base MTP feature and is available for PSU-based SS7 signaling. It provides additional reliability to the network. For more information on the base MTP feature, refer to Message Transfer Protocol Node Restart in Section 2 of this document.

3.2 Feature Assignment

To activate this feature, the ACT field for SFID 177 on the SFSYS form (5713-1) must be set to "Y".

3.3 Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CCGSM	6008	9	10H	16.1
CCPBD	6012	9	10M	16.22
CCSGT	6015	9	10N	16.25
CCSPR	6011	9	10L	16.21
CC7PR	6001-2	9	10A	16.2
PC	6006	9	10F	16.10
SFSYS	5713-1	3	5AR	8.22

CCGSM form (6008 Record) - This form is used to specify data used for the global switching module. The RESTART OPTION, SUFFICIENT RTE, and SUFFICIENT LNK fields were added.

CCPBD form (6012 Record) - This form is used to define the primary and backup destinations for SCCP

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signaling. Valid entries were added for the SSN PRIMARY and SSN BACKUP fields.

CCSGT form (6015 Record) - This form is used to maintain single fixed or primary plus secondary digit string for Global Translations. Valid entries for the DEST SS NUM field were added.

CCSPR form (6011 Record) - This form is used to define the individual parameters for a Signaling Connection Control Part Global Switching Module. The SCCP STATUS MGMT heading and the REMOTE SCCP MGMT, LOCAL INIT SPEC, and LOCAL INIT SSN ALW fields were added.

CC7PR form (6001-2 Record) - This form is used to specify and update the GSM CCITT7 (International Telegraph and Telephone Consultative Committee - Common Channel Signaling System No. 7), office parameters and MTP Level 3 timers. The ANSI TRA WAIT, ANSI TRW WAIT, ANSI TRA ANSWER, and MTP STPO fields were added.

PC form (6006 Record) - This form is used to specify the point code and alternate link set routing. The RESTART OPTION field and its data rule, and the REMOTE INIT SSN ALW field were added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 177 to "Y".

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SEC. 4A178: ASP Pre-Query Screening for OHD Triggers

1. FEATURE DESCRIPTION

The feature number for the ASP (Advanced Services Platform) Pre-Query Screening for OHD (Off-Hook Delay) Triggers feature is 99-5E-3175. This feature is a call processing secured special feature, which is controlled by SFID (Secured Feature ID) 178. This feature is being deployed as a Software Update for the 5E10 Software Release.

The ASP Pre-Query Screening for OHD Triggers feature provides the ability to screen OHD Triggers and inhibit the query to the SCP (Service Control Point) if the trigger fails screening. It is applicable to both Release 0 and Release 0.1 protocol triggers.

Pre-Query Screening was initially provided by the 3/6/10 Digit Trigger Pre-Query Screening special feature, and is being expanded for OHD Triggers.

When an OHD Trigger is encountered as the first trigger on a call that is dialed or inpulsed directly from the originating access, or on a call that is originated by a feature (e.g., Speed Calling, Call Forwarding, Multiway Calling), the call is screened using the information on the RAR form (5301 Record) (Recent Change View 10.10 SCREENING). The RAR form entries used to perform the screening function are derived as follows:

- SCR (Screening Index) of the originating line/trunk,
- PFX (Dialed or inpulsed Prefix) (none, 0+ or 1+),
- CDI (Code Index) derived from the translation of the dialed number.

The OHD Pre-Query Screening passes and an Info_Collected R0 or R0.1 query is sent to the SCP if the translation of the SCR, PFX, and the CDI entries on the RAR form (5301 Record) either does not exist or is defined as one of the following:

- Route Index (RTI) = "REGL"
- Route Index (RTI) Number = the RTI number from the translation of the dialed digits in

the Office Dialing Plan

- Office Code (OFFCOD) = OFFCOD digits from the translation of the dialed digits in the Office Dialing Plan

For all other cases, the OHD Trigger will fail screening.

If the OHD Trigger passes screening, the call proceeds as an ASP call and the ASP query is sent to the SCP. If it fails screening, a query is not sent, the call proceeds as a non ASP call and is routed via the RTI or OFFCOD.

Note that the dialed or derived carrier is not used either in screening the OHD Trigger or in routing the call if it fails screening.

A boolean office parameter is introduced for the Pre-Query Screening for OHD Triggers special feature to indicate whether pre-query screening should be ignored on 0+ calls. If the parameter is set to "N", then 0+ calls are not ignored and are subject to screening, as occurs for 1+ and no-prefix calls. If the parameter is set to "Y", then pre-query screening is ignored on 0+ calls, and these calls will not be part of the pre-query screening.

A new field IGN OHD 0+PQSCR, has been added to the OFCOPT form (5509 Record) which is used to indicate that Pre-Query Screening for OHD Triggers will be ignored for calls originating with a dialed or inpulsed prefix of 0+. In the 5E12 Software Release this field has been moved to the ASPOPT (5670 Record) (Recent Change View 8.49).

Screening is done for OHD Triggers encountered for any of the following originations:

- All line originations currently allowed to encounter an OHD Trigger.
- Extended Digital Subscriber Line (EDSL and EDSLHM).
- Private Facility Trunks (PF, PFITT, PFLASH), when the trunk's Unrestricted Equal Access Indicator is set to "N".

Screening is NOT done for OHD Triggers in any of the following cases:

- Originations other than those listed above.
- Calls originating with a dialed or inpulsed prefix of 0+, when the PRE QUERY SCR office parameter is set to "Y".
- Calls made when the Pre-Query Screening feature is locked.
- Calls in which the digits dialed after the OHD trigger is detected represent an Escape Code.
- Private Facility Trunks (PF, PFITT, PFLASH), when the trunk's Unrestricted Equal Access Indicator is set to "Y".
- Calls in which an FCD trigger is encountered, even when the OHD Pre-Query Screening feature is unlocked and active.

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 178 on the SFSYS form (5713-1 Record) must be set to "Y".

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- For 5E10 and 5E11 on the OFCOPT form:
  - Set the PRE QUERY SCR field to "Y" .
- For 5E12 and later on the ASPOPT form:
  - Set the IGN OHD 0+PQSCR field to "Y" .

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPOPT	5670	4	31G	8.49
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

ASPOPT form (5670 Record) - This form is used to define ASP office parameters. For 5E12 and later added a new field, PRE QUERY SCR.

OFCOPT form (5509 Record) - This form is used to define miscellaneous office options and parameters. For 5E10 and 5E11 added a new field, PRE QUERY SCR.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 178 to "Y".

SEC. 4A179: ENHANCED PROFESSIONAL OFFICE

1. FEATURE DESCRIPTION

The Enhanced Professional Office feature is a secured feature (SFID 179) and must be purchased before being activated. The feature number for this feature is 99-5E-2371.

For Custom ISDN, the EPO (Enhanced Professional Office) feature provides the interface between the switch and the external AIU (Application Interface Unit) / MIS (Management Information System) that is used to monitor the activity of Custom ISDN terminals in real time at the customer's site. The EPO feature enhances the current ACD/BRCs feature to other BRCS users, not just those who are part of a call center. The Service offers the following capabilities:

- Provides status of BRCS Professional Office Positions to Management.
- Allows tracking of primary and secondary (shared, non-shared, and shared analog) DNs (Directory Number) as well as tracking of members of multi-line hunt groups. DNs assigned as series completion DNs can also be tracked.

For more information on the ACD/BRCS feature see Division 2 Section 4A121.

2. FEATURE ASSIGNMENT

An EPO position terminal can have information about calls to its circuit TN (Telephone Number) or circuit MLHG (Multiline Hunt Group) member call appearances tracked and sent to the MIS. The MIS provides user reports and displays based on the call-related data. In order for complete information to be tracked for a specific TN or MLHG member on calls to or from its call appearances on a specific terminal, the terminal must be provisioned as an EPO position (EPO POS NUM field on DSLUSR), and the TN or MLHG member must be provisioned as a TN or MLHG to be tracked on the terminal (EPO ON field on

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DSLUSR). See Figure 1 for form flow for EPO.

2.1 Recent Change Provisioning of EPO on

The tracking field, EPO ON, can be provisioned for TNs and MLHG members whether or not the terminals on which they have call appearances have been provisioned as EPO positions. This provides the convenience of provisioning tracking before designating EPO positions, as well as the ability to remove an EPO position without having to change all associated tracking fields before being permitted to perform the update. Tracking only occurs for TNs or MLHG members which have call appearances on at least one terminal provisioned as an EPO position, and the tracking is set for the TN or MLHG member to be tracked on the terminal by setting EPO ON to "Y".

2.2 Provisioning EPO - DSLUSR form

The following steps provide information for defining a Custom ISDN terminal to be an EPO position and to assign EPO tracking to the CKT TN/MLHG-TERM on the terminal. The steps provided must be done in addition to the normal provisioning steps for the DSLUSR form:

- Turn on the SFID (Secured Feature ID) 179 for the office.
- On the DSLUSR form define a Custom ISDN Terminal to be an EPO position by setting the EPO POS NUM field to a number between 1 and 15,000.

Restrictions:

- The EPO POS NUM must be unique, i.e. only one terminal can have this EPO POS NUM; it cannot already be assigned to another terminal. The terminal cannot be an ACD position (ACD POS NUM cannot be entered).
- The terminal must have TERMTYP set to "TYPEB" or "TYPED".
- The DSL CLS must be "MP" or "PP".
- The CKT TN/MLHG-TERM must be a voice user (i.e. CSV must be set to 1 or 2).
- On DSLUSR, indicate whether or not the primary CKT TN/MLHG-TERM of the terminal should be tracked for EPO information. Set the EPO ON field to "Y" if tracking is desired, otherwise leave the field alone and it will default to "N" (no tracking).

NOTE: If EPO ON is set to "Y", calls to the CKT TN/MLHG TERM will only be tracked for complete information (originations and terminations) if the terminal has been defined as an EPO position (EPO POS NUM is entered). If EPO ON is set to "Y" and EPO POS NUM is not entered, the CKT TN/MLHG TERM will only be tracked on the terminal if the CKT TN/MLHG TERM is shared (SHTN form) onto at least one terminal which is defined as an EPO position. In that case, calls to the CKT TN/MLHG TERM call appearances on the terminal (with no EPO POS NUM) will be tracked, but calls from the CKT TN/MLHG TERM call appearances on the terminal will not be tracked.

2.3 Provisioning EPO - SHTN form

The following provides information for assigning EPO tracking for a shared TN/MLHG TERM NBR onto primary ISDN terminals.

- On the SHTN form, set the EPO ON field in the SHARED LIST to "Y" if tracking of the shared TN on the ISDN terminal in the SHAREDLIST is desired. Otherwise leave the EPO ON field alone and it will

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default to "N" for no EPO tracking.

Restrictions:

- The EPO ON field can only be set to "Y" on Custom terminals.
- If the entry in the SHAREDLIST is an ACD position terminal, EPO ON cannot be set to "Y".

NOTE: If EPO ON is set to "Y", calls to the CKT TN/MLHG TERM will only be tracked for complete information (originations and terminations) on terminals which have been defined as EPO positions (i.e. the terminal has an EPO POS NUM entered on the DSLUSR form). If EPO ON is set to "Y" and EPO POS NUM is not entered, the CKT TN/MLHG TERM will only be tracked on the terminal if the CKT TN/MLHG TERM is shared onto at least one terminal which is defined as an EPO position. In that case, calls to the CKT TN/MLHG TERM call appearances on the terminal (with no EPO POS NUM) will be tracked, but calls from the CKT TN/MLHG TERM call appearances on the terminal will not be tracked.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2 23.8
SHTN	5902	5	1C	23.20

DSLUSR form (5908) - The 5908 Record is used to collect data for digital subscriber lines. Added the EPO POS NUM and EPO ON fields to support this feature.

SHTN form (5902) - The 5902 Record is used to specify a primary or secondary TN that is shared by several other TNs. Added the EPO ON field to support this feature.

4. GLOSSARY

AIU - Application Interface Unit

DN Directory Number

EPO Enhanced Professional Office

ISDN Integrated Services Digital Network

MIS Management Information System

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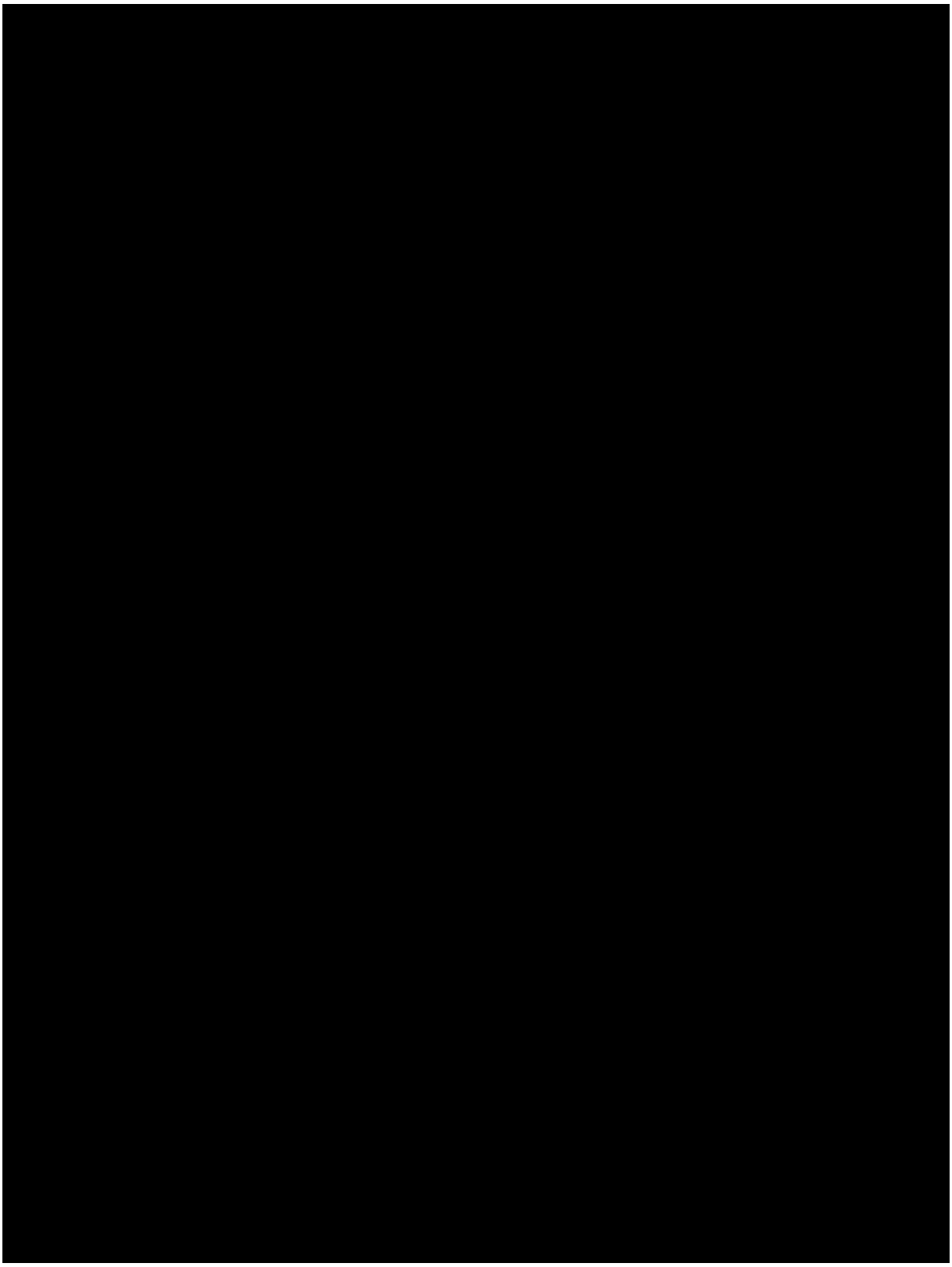

Figure 1 FORM FLOW FOR ENHANCED PROFESSIONAL OFFICE

SEC. 4A180: NP - BASIC LRN AMA

1. FEATURE DESCRIPTION

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1.1 NP - Basic LRN AMA

Available with 5E11 Software Update and later, the NP (Number Portability) - Basic LRN (Local Number Portability) AMA (Automatic Message Accounting) feature is a secured feature using SFID 180 and must be purchased before being activated. The feature number for this feature is 99-CP-3667.

The NP - Basic LRN AMA feature provides billing functions for Service Provider Portability within a rate center. It will provide a BAF (Bellcore AMA Format) LNP AMA Module for two new occurrences to support billing and cost recovery for Number Portability.

- an LNP-SCP (Service Control Point) database query.
- a call transiting a network boundary between two local service providers.

For the occurrence of an LNP-SCP database query, this feature provides a BAF AMA Module appended to an existing AMA record. The module is appended to the AMA record produced, if any, for the "pre-LNP query call leg". The LNP Module initially contains the LRN (Local Routing Number), if any, returned by the LNP-SCP database for a ported terminating DN (Directory Number). The LNP Module is appended to either the end-user AMA record at an originating exchange or to a terminating access record (at an intermediate, Tandem, or donor exchange). For an exchange that performs an LNP-SCP database query, LNP-SCP service logic may force the creation of an AIN (Advanced Intelligent Network) AMA record by returning the appropriate information (i.e. AMAslpID (AMA Service Logic Provider ID)) to the querying exchange. In this case, the receipt of the AMAslpID causes the querying exchange to generate an ASP (Advanced Service Platform) AMA record and the LNP Module is appended to the ASP AMA record instead of to the "pre-LNP query" call leg AMA record.

To provide AMA recording for the occurrence of a call transiting a network boundary between two local service providers, a new type of "terminating access" record can be produced by this feature. It is known as CNA (Connecting Network Access) record. The CNA Recording option is provided on a per-Trunk Group basis and is available either for all calls received over the trunk-group or only for those calls resulting in an LNP-SCP database query. To provide LNP database look-ups for non-capable networks or exchanges, this option may be used to produce terminating access records to bill for calls which enter the network over traditional (also known as Feature Group C) inter-office trunks for which no access records are presently produced.

1.2 CNA Trunk Group Billing Number Option

The CNA Trunk Group Billing Number Option special feature is an enhancement to the NP-Basic AMA feature (99-5E-3667). The feature is being deployed on the 5ESS Switch in a software update for the 5E11(1) and 5e12(1) 5ESS Switch Software Releases and in the Beginning Managed Introduction of the 5E13(1) Software Release. This feature can be utilized if the NP-Basic AMA feature has already been purchased. The Lucent feature number for the CNA Trunk Group Billing Number Option enhancement is (99-CP-4550). With NP-Basic AMA feature (SFID 180) unlocked, a new office Optioned Feature Identifier field OFID 719 (CNA Trk Grp Billing No) on the FOSYS form (RCV 8.31) can be set to allow the new functionality to be turned on or off as desired. OFID 719 defaults to inactive.

When active, this parameter will affect only CNA records using Call Code 720 generated for an incoming trunk call. The originating NPA & originating number fields in the CNA record will always record the BN (Billing Number) assigned to the incoming trunk group regardless of any incoming ANI or SS7 charge number received. The trunk group billing number is required to be populated for every trunk group with the CNA flag set.

When this option is NOT active, the CNA record will be populated with the received SS7 CHG or MF ANI in accordance with the NP-Basic AMA feature procedures (99-5E-3667). Lacking either SS7 CHG or MF ANI, the assigned trunk group billing number is used as a last resort.

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2. FEATURE ASSIGNMENT

The NP - Basic LRN AMA feature is activated by setting SFID 180 ACT field on the SFSYS form (5713-1 Record).

The NP - Basic LRN Method feature is not required in order to activate the NP - Basic LRN AMA feature. If the NP - Basic LRN Method feature is not active, the only function provided by the NP - Basic LRN AMA feature is to produce CNA AMA records. No LNP BAF Modules are produced and appended to any AMA records without the NP - Basic LRN Method feature, because the conditions under which an LNP Module is produced (i.e. LNP-SCP database query performed) cannot exist without the presence of the NP - Basic LRN Method feature.

The call processing functions of the NP - Basic LRN AMA feature which generate an LNP BAF Module when an LNP query is performed is controlled by office option FOSYS ID 665. This option is activated by setting the FID 665 ACT field to "Y" on the FOSYS form (5713-2 Record). An LNP BAF Module is not appended when the option is inactive. Note that this office option does not control the CNA Access recording option. See Figure 1 for form flow.

The CNA Trunk Group Billing Number Option special feature is activated by setting the FID 719 ACT field to "Y" on the FOSYS form (5713-2 Record).

2.1 Call Flows

For the following call flows, assume that the calls are handled by a Local Service Provider. For these calls intra-LATA SS7 (Signaling System 7) signaling and SS7/MF interworking are used. Assume that the office performing the LNP query has the NP - Basic LRN AMA feature active and that measured recording is active in the originating switch for flat rate calls.

Scenario 1: Originating Exchange LNP Processing Direct to Serving Switch.

In this case a subscriber ports his/her number to a different exchange and the subscriber can be connected via direct connection.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX (708-713) and the line does not reside on the switch.
- The switch sends a query based on the dialed digits to the LNP-SCP.
- The LNP-SCP sends an "Analyze_Route" response containing the LRN of the Serving switch.
- The Originating switch receives the LNP-SCP response and analyzes the data. The LRN is translated in a Post_Query DAS associated with the trigger and an ISUP (ISDN User Part) route out of the switch is determined. The LRN is stored in the CdPN parameter and the dialed digits are stored in the GAP parameter of the ISUP IAM (Initial Address Message) message. The FCI (Forward Control Indicators) Translated Called Number Indicator is set to indicate that an LNP query has been done (set to "translated number").
- The call is routed to the Serving Switch based on the LRN.
- The Serving Switch receives and processes the contents of the IAM message. The exchange determines that an LRN is received and that it is the switch's LRN. It replaces the CdPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP and finds the subscriber on the switch.
- The Serving Exchange completes the call to the subscriber.

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- An intra-LATA AMA record is generated for the call by the originating end-office with an appended LNP Module (Bellcore AMA Format Module - 720). The LNP module contains the LRN returned from the LNP-SCP database and an indication that the module applies to the "terminating party", as well as a query status indication of "no query failure".

Scenario 2: Originating Exchange LNP Processing Direct to Serving Exchange - Non-Ported.

In this case the call is made to the Serving Exchange for a number that is not ported and still resides on the switch. The same processing can be applied whether the call is incoming from a line or trunk.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX (708-713) and does not reside on the switch.
- The switch sends a query based on the dialed digits to the LNP-SCP.
- The LNP-SCP sends a "Analyze_Route" response containing the Dialed Number to the Originating Exchange. For example, the Dialed Number with Analyze_Route response could be sent when the number is in a ported NPA-NXX but the subscriber has not ported. This allows the SCP to only have information about ported subscribers.
- The Originating Exchange receives the LNP-SCP response and analyzes the data. The dialed number is translated in a post_query or SCP DAS and an ISUP route out of the switch is determined. The dialed number is stored in the CdPN parameter and the FCI Translated Called Number Indicator is set to indicate an LNP query has been done (set to "translated number"). The GAP is NOT included in the IAM for this scenario.
- The call is routed using a route index to the Serving Exchange (based on the Dialed Number).
- The Serving Exchange receives and processes the contents of the IAM message. The switch does digit analysis on the dialed digits and finds the subscriber on the switch.
- The Serving Exchange completes the call to the subscriber.
- An Intra-LATA AMA record is generated for the call by the originating exchange with an appended LNP BAF Module. The LNP module contains only an indication that the module applies to the " terminating party", as well as a query status indication of "no query failure". The dialed DN is not recorded in the LRN field of the LNP module, rather the LRN field is filled with hexadecimal Fs.

Scenario 3: Originating Exchange LNP Processing Indirect to the Serving Exchange.

In this case when an intermediate exchange is between the originating exchange doing the LNP query and the serving exchange. For this scenario it is assumed that the intermediate exchange is in the same network as the originating exchange, but that the Serving exchange is a different local service providers network. It is also assumed that the serving exchange has the Connecting Network Access Recording Option active for all calls (i.e. YES or UNCONDITIONAL) received over the incoming trunk group from the intermediate exchange.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX (708-713) and does not reside on the switch.

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- The switch sends a query based on the dialed digits to the LNP-SCP.
- The LNP-SCP sends a response containing the LRN of the Serving Exchange.
- The Originating Exchange receives the LNP-SCP response and analyses the data. The LRN is translated in a Post_Query DAS associated with the trigger number and an ISUP route out of the switch is determined. The LRN is stored in the CdPN parameter and the dialed digits are stored in the GAP parameter of the ISUP IAM message. The FCI Translated Called Number Indicator is set to indicate that an LNP query has been done (set to "translated number").
- The call is routed to an Intermediate Exchange based on the LRN.
- The Intermediate Exchange receives and processes the contents of the IAM message. The FCI is set and the CdPN is checked for an LRN on this switch. The LRN is analyzed in the trunk's LRN DAS. The LRN does not belong to this switch so the call is routed using existing ISUP procedures.
- The Intermediate Exchange routes the call to the Serving Exchange.
- The Serving Exchange receives and processes the contents of the IAM message. It replaces the CdPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP and finds a subscriber on the switch.
- The Serving Exchange completes the call to the subscriber.
- An intra-LATA AMA record is generated for the call by the originating exchange with an appended LNP Module. The LNP module contains the LRN returned from the LNP-SCP database and an indication that the module applies to the "terminating party", as well as a query status indication of "no query failure".
- A CNA AMA record ("terminating access record") is generated for the call by the Serving Exchange for the call received from another local service providers network over a trunk group explicitly marked for CNA recording on all calls (i.e. CNA Recording Option of YES or UNCONDITIONAL).

Scenario 4: Incumbent Exchange with LNP Query.

In this case the originating exchange does not have any knowledge that the dialed number is a ported number and routes the call to the incumbent exchange. The incumbent exchange recognizes the ported number. The incumbent exchange will direct the call to the Serving Exchange. For this scenario it is assumed that the incumbent exchange is in the same network as the originating exchange, and does not have the CNA recording option active on the incoming trunk group from the originating exchange. It is further assumed that the LNP-SCP database is configured to return an AMAslpID for LNP-SCP queries, in order to insure that an ASP AMA record is generated for the query.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the call.
- The call is routed to the Incumbent Exchange based on the dialed number (Originating Exchange is not involved in NP).
- The Incumbent Exchange performs digit analysis on the dialed digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX (708-713) and the line does not reside on the switch.
- The Incumbent Exchange sends a query based on the dialed digits to the LNP-SCP.

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- The LNP-SCP sends an "Analyze_Route" response containing the LRN of the Serving Exchange.
- The Incumbent Exchange receives the LNP-SCP response and analyzes the data. The LRN is translated in a Post_Query DAS associated with the trigger and an ISUP route out of the switch is determined. The LRN is stored in the CdPN parameter and the dialed digits are stored in the GAP parameter of the ISUP IAM message. The FCI Translated Called Number Indicator is set to indicate an LNP query has been done (set to "translated number").
- The call is routed to the Serving Exchange based on the LRN.
- The Serving Exchange receives and processes the contents of the IAM message. The switch determines that the LRN is its LRN and replaces the CdPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits and finds the subscriber on the switch.
- The Serving Exchange completes the call to the subscriber.
- An ASP AMA record with structure code 220 is produced for the call at the incumbent exchange (following existing ASP AMA procedures) due to the receipt of an AMAslpID in the LNP-SCP response message. An LNP module is appended to the ASP AMA record to record the LRN returned from the LNP-SCP database along with an indication that the LNP module applies to the "terminating party" and that "no query failure" occurred.

Scenario 5: Originating Exchange with LNP Query and Outgoing MF Signaling.

In this case a subscriber moves to an exchange but the call encounters MF signaling between the switch launching the LNP query and the serving exchange.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX and the line does not reside on the switch.
- The switch sends a query based on the dialed digits to the LNP-SCP.
- The LNP-SCP sends an "Analyze_Route" response containing the LRN of the Serving Exchange.
- The Originating Exchange receives the LNP-SCP response and analyses the data. The LRN is translated in a Post_Query DAS and determines an MF route out of the office.
- The Originating Exchange signals, using MF signaling, the dialed number (not the LRN) to the Serving exchange using existing procedures.
- The Serving Exchange performs digit analysis on the incoming digits to determine how to route the call and determines that the line is on the switch.
- The Serving Exchange completes the call to the subscriber.
- An intra-LATA AMA record is generated for the call by the originating exchange with an appended LNP BAF Module. The LNP module contains the LRN returned from the LNP-SCP database and an indication that the module applies to the "terminating party", as well as a query status indication of "no query failure".

Scenario 6: Intermediate Exchange with LNP Query and Incoming MF Signaling In this case the LNP trigger is encountered for digits received via a trunk. For this scenario it is assumed that the intermediate exchange is in a different local network as the originating exchange, and has CNA recording option active

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on the incoming trunk group from the originating exchange.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the call.
- The call is sent to the Intermediate Exchange via MF signaling.
- The Intermediate Exchange performs digit analysis on the incoming digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX (708-713) and the subscriber is not on the switch.
- The switch sends a query based on the dialed digits to the LNP-SCP.
- The LNP-SCP sends an "Analyze_Route" response containing the LRN of the Serving Exchange.
- The Intermediate Exchange receives the LNP-SCP response and analyzes the data. The LRN is translated in a Post_Query DAS and an ISUP route out of the switch is determined. The LRN is stored in the CdPN parameter and the dialed digits are stored in the GAP parameter of the ISUP IAM message. The FCI Translated Called Number Indicator is set to indicate that an LNP query has been done (set to "translated number").
- The call is routed to the Serving Exchange based on the LRN.
- The Serving Exchange receives and processes the contents of the IAM message. It replaces the CdPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP and finds the subscriber on the switch.
- The Serving Exchange completes the call to the subscriber.
- Since the intermediate exchange has the CNA recording option active for all calls incoming on the trunk group from the originating exchange, the intermediate exchange generates a CNA AMA record (Structure Code 0625, Call Code 720) for the call with an appended LNP Module. The LNP module contains the LRN returned from the LNP-SCP database, and an indication that the LNP module information applies to the "terminating party", as well as a query status indicator of "no query failure".
- An intra-LATA AMA record is generated by the originating exchange for the call. This is a function of existing recording, and no additional functionality is provided by the NP - LRN Basic AMA feature.

Scenario 7: Intermediate Exchange with LNP Query and Outgoing MF Signaling.

In this case the LNP trigger is encountered for digits received via a trunk. The call is routed via MF signaling to the serving exchange that has the subscriber. For this scenario it is assumed that the intermediate exchange is in a different local network as the originating exchange, and has CNA Recording conditionally active on the incoming trunk group from the originating exchange. (When conditionally active, the CNA Recording option will only result in a CNA AMA record being generated for calls incoming over the trunk group for which an LNP query is performed by the exchange.) For this scenario it is assumed that the serving exchange is in a third local network, different than both the originating and intermediate exchanges, and has CNA recording option active on the incoming trunk group from the intermediate exchange. (When unconditionally active, the CNA Recording option will result in a CNA AMA record being generated for all calls incoming over the trunk group regardless of whether or not an LNP query is performed by the exchange.)

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits to determine how to route the

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call. It routes the call to the Intermediate Exchange (Originating Exchange is not LNP-capable).

- The Originating Exchange selects an ISUP trunk to the Intermediate exchange and signals using ISUP existing procedures.
- The Intermediate Exchange performs digit analysis on the incoming digits to determine how to route the call. The switch determines that B is in a portable NPA-NXX (708-713) and that B is not on the switch.
- The switch sends a query based on the dialed digits to the LNP-SCP.
- The LNP-SCP sends a response containing the LRN of the Serving Exchange.
- The Intermediate Exchange receives the LNP-SCP response and analyses the data. The LRN is translated in an LNP DAS and an MF route out of the switch is determined. The LRN is replaced with the dialed digits for signaling MF to the Serving Exchange.
- The Intermediate Exchange signals, using MF signaling, the dialed digits to the Serving exchange.
- The Serving Exchange processes the incoming call to find the subscriber.
- The Serving Exchange completes the call to the subscriber.
- Since the intermediate exchange had the CNA Recording option conditionally active (e.g. set to CONDITIONAL) on the incoming trunk group, and since the intermediate exchange did perform an LNP query for the call, the intermediate exchange will generate a CNA AMA record (Structure Code 0625, Call Code 720) for the call and append an LNP Module to the CNA AMA record. The LNP module will contain the LRN returned from the LNP-SCP database, and an indication that the LNP module information applies to the "terminating party", as well as a query status indicator of "no query failure". (Note - the LNP module may be attached at an intermediate exchange to any type of end-user or access AMA record generated for the call - not just to a CNA Record. For example, if the intermediate exchange were to instead generate a "Feature Group D Terminating Access Record - CC0119" for the call, the LNP module would be appended to that record.)
- Since the serving exchange had the CNA Recording option active (e.g. set to YES or UNCONDITIONAL) on the incoming trunk group, the serving exchange will generate a CNA AMA record (Structure Code 0625, Call Code 720) for the call.

Scenario 8: DN ported in geographically to Originating Exchange.

In this case there is an Intra-switch call to a Ported DN.

- Line A (708-224-1111) dials Line B (708-713-2222).
- The Originating Exchange performs digit analysis on the dialed digits. The switch determines that B is in a portable NPA-NXX (708-713) and finds the subscriber is on the switch.
- The line data is used to determine the Home LRN.
- The Home LRN is translated in a Post_Query DAS associated with the LNP trigger. The FCI Translated Called Number Indicator is set to indicate that the location of the terminating DN was found (set to "translated number").
- The Originating Exchange completes the call to the subscriber based on the analysis of the LRN.
- An intra-LATA AMA record is generated by the originating exchange for the call. Since no LNP database query was necessary to complete the call to the Ported DN, no LNP module is generated.

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3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
AMACT	5506	3	5F	10.12
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

AMACT form (5506 Record) - This form is used to define AMA Call Types. The new AMA CALL TYPE "CNA" was added.

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. The call processing functions of the NP - Basic LRN AMA feature which generate an LNP BAF Module when an LNP query is performed is controlled by office option FOSYS ID 665. This option is activated by setting the FID 665 ACT field to "Y" on the FOSYS form (5713-2 Record). An LNP BAF Module is not appended when the option is inactive. Note that this office option does not control the CNA Access recording option.

The CNA Trunk Group Billing Number Option special feature is activated by setting the FID 719 ACT field to "Y" on the FOSYS form (5713-2 Record).

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 180 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The field ASP TOLL was added to this form. This field determines if all incoming calls over this toll trunk group will generate an SCP query.

4. GLOSSARY

AIN	Advanced Intelligent Network
AMA	Automatic Message Accounting
ASP	Advanced Service Platform
BAF	Bellcore AMA Format
CNA	Connecting Network Access
DN	Directory Number
DNT	Dialed Number Trigger
FCI	Forward Control Indicators
IAM	Initial Address Message
ISUP	ISDN User Part
LNP	Local Number Portability
LRN	Local Routing Number
NP	Number Portability
SCP	Service Control Point

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SS7	Signaling System 7

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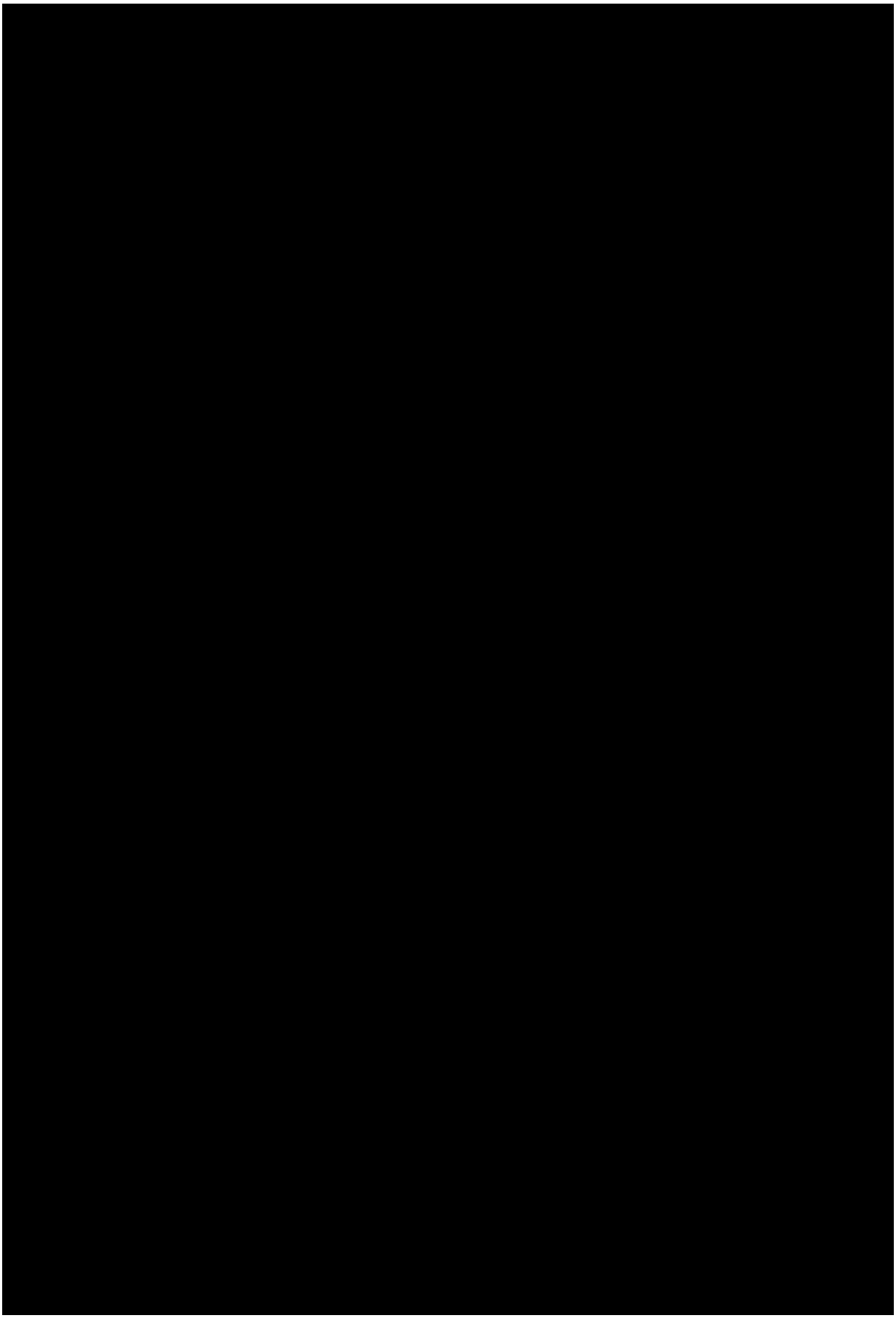

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Figure 1 FORM FLOW FOR NP - BASIC LNP AMA

SEC. 4A181: CENTREX NETWORK

1. FEATURE DESCRIPTION

The CENTREX Network feature is available for 5E9(2) and later. The feature number for this capability is 99-5E-1156. The CN ISVM (CENTREX Network Interswitch Voice Messaging) and CNS (CENTREX Network Special) features are secondary features to the CN feature. See Division 2, Sections 4A182 and 4A183 for information on the CN ISVM and CNS features.

The CN (CENTREX Network) secured feature provides some of the CENTREX functionality on multiple switches that is currently provided on a single switch. By associating an MBG (Multiswitch Business Group) identifier with a terminal group identifier CENTREX Network Service can be provided across several switches. CN provides the following:

- Interswitch station-to-station intercom dialing
- Single LDN (Listed Directory Number) for the CENTREX customer to reach attendant assistance
- DID (Direct Inward Dialing) and DOD (Direct Outward Dialing) with station identification on outgoing calls
- The following basic features of a single switch are expanded to include stations on multiple switches.
  - Call Forwarding Screening
  - Call Waiting Screening
  - Call Pick-Up Screening
  - Three-Way Calling Screening
  - Call Transfer Screening
  - Distinctive Ringing
  - ISAT (ISDN Attendant) assisted calls
  - ISAT Camp-on to Remote Stations
  - Display of Station Restrictions at ISAT for on-network calls.

1.1 ISAT Feature Interactions

- For ISAT (ISDN Attendant) Source Billing for Remote Stations:
  - for interswitch MBG calls that are extended by the ISAT, the attendant's BDN (Billing Directory Number) is replaced with the originator's BDN.
  - for interswitch forwarded calls extended by the ISAT, the forwarding party's BDN replaces the ISAT's BDN.
  - If the forwarding party's BDN is not available in the SS7 IAM message, the originator's BDN is used.

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- For ISAT Camp-on to Remote Stations:
  - Camp-on is allowed for interswitch MBG calls from the attendant to MBG members.
  - The attendant must use IDP (Individualized Dialing Plan) intercom dialing for interswitch calls. Calls using the ODP (Office Dialing Plan) will not invoke camp-on to a busy MBG station.

- For ISAT Display:
  - Originating party information (ICLID - Incoming call line identification)is provided to the attendant.
  - Call forwarding indication is provided to the attendant for interswitch calls within the attendant's MBG. Also, the number of calls in the queue is available to the attendant.
  - The originating restrictions including the toll restrictions are displayed to the attendant. The display also indicates if the caller is in the attendant's MBG.

1.2 Precedence and Preemption Feature Interactions

- For Precedence and Preemption:
  - All calls from MBG stations assigned a PP (Precedence and Preemption) feature are treated as non-MBG calls.
  - IDP intercom calls are treated as MLPP DSN (Multi-level Precedence and Preemption Defense Switched Network) calls and receive MLPP screening.
  - All non-intercom calls (i.e. *9 - escape to POTS) are non-MLPP calls and do not receive MLPP screening.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the CN feature.

The CN feature requires the following translations:

- Activate the secured feature. The ACT field of SFID 181 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.
- Define the terminal group on the TGSRFD form (5607 Record).
- Assign to at least one port on the LINEFA form (5112 Record) or the DSLUSR form (5908 Record).
- Define the MBG on the MBG form (5633 Record).

The following translation provisioning is optional.

- Set the terminal display restrictions on the TGSRLPA or TGSRMPA forms (5607-3/4 Records). Toll restriction can also entered on the BFG form (5625 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				

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Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26A	12.9
DSLUSR	5908	5	1I	23.2
ICIPF	5903	5	1D	3.43
MBG	5633	4	22A	4.12
MLHG	5110	3	1J	3.5
SFSYS	5713-1	3	5AR	8.22
TGATTD	5611	4	12A	4.4
TGSRFD	5607-1/2	4	8A	12.21
TGSRLPA	5607-3	4	8B	1.29
TGSRMPA	5607-4	4	8C	1.29

BFG form (5625 Record) - This form is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. The DISP RESTRICT field indicates the restriction that displays on the ISAT's terminal for an incoming MBG call.

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user. For 5E9(2) and later, ISAT groups may have a maximum of 63 terminals; CKT TERM may not exceed 63.

ICIPF form (5903 Record) - This form is used to assign ICI (Incoming Call Identification) parameters to ISDN Attendant Multi-Line Hunt Groups and Terminal Groups. The CNET (CENTREX Network) Trunk Group ICIs are assigned on this form.

MBG form (5633 Record) - This form defines the data associated with an MBG and associates the MBGID with a TGID.

MLHG form (5110 Record) - This form defines Multi-Line Hunt Group information. Data rule restrictions were added for 5E9(2) and later to the QUEUING FEATURE, INTRA SW OCDN, and AP SITE ID fields.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 181 should be set to "Y"

TGATTD form (5611 Record) - This form defines the information such as attendant DN, Source Billing, and SDN DAS on a Terminal Group basis. The MBG ID field is a Verify only field, it cannot be entered on this ODA form or on the corresponding Recent Change view 4.4.

TGSRFD form (5607-1/2 Record) - This form defines the Terminal Group and Station Restriction Feature definitions. The DISP RESTRICT field indicates the restriction that is displayed on an ISAT's terminal for an incoming MBG call.

TGSRLPA form (5607-3 Record) - This form defines Terminal Group and Station Restriction Line parameters. The DISP RESTRICT field indicates the restriction that is displayed on an ISAT's terminal for an incoming MBG call.

TGSRMPA form (5607-4 Record) - This form defines the Terminal Group and Station Restriction parameters for an MLHG Member. The DISP RESTRICT field indicates the restriction that is displayed on an ISAT's terminal for an incoming MBG call.

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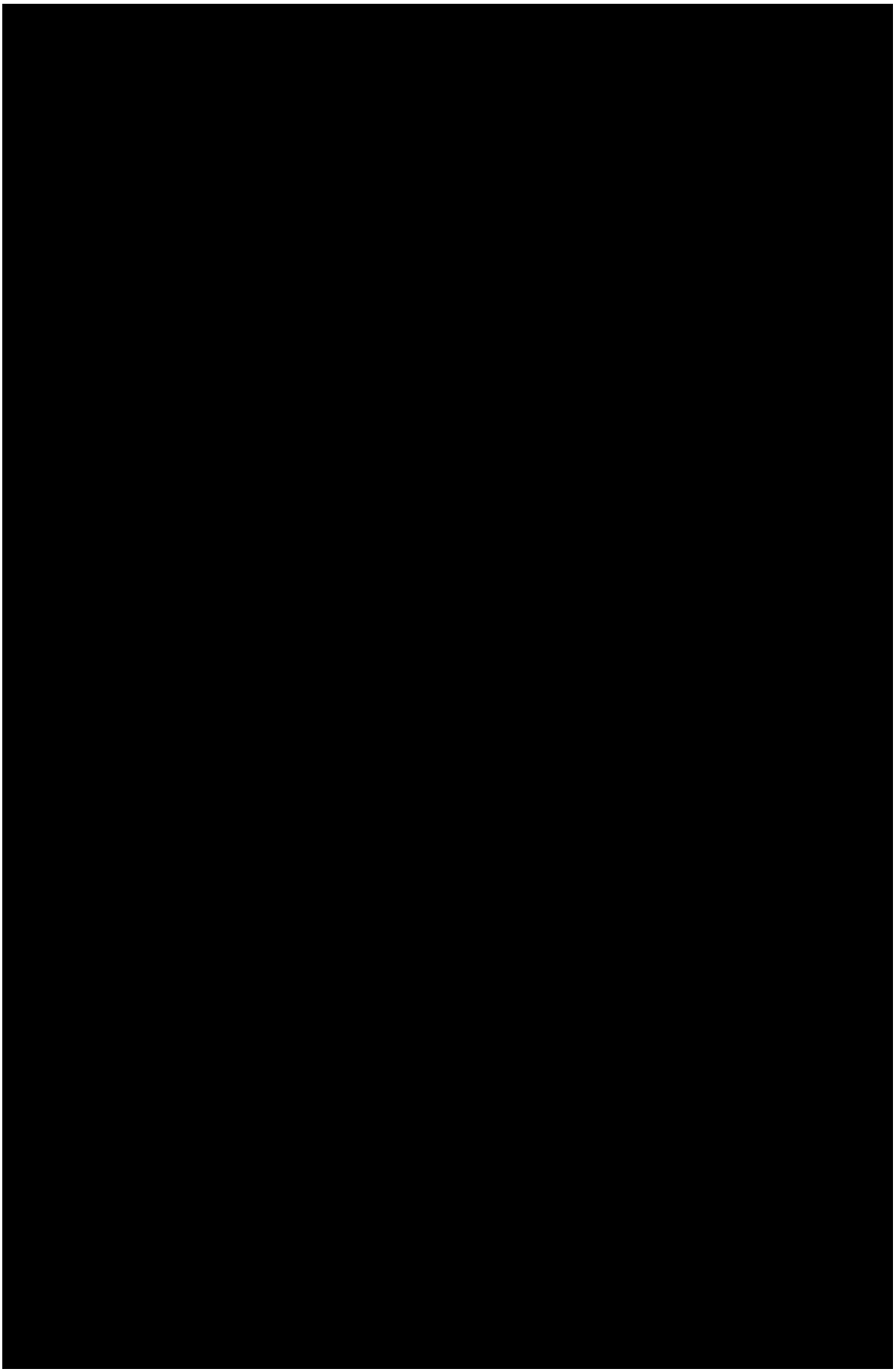

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Figure 1 CENTREX NETWORK FEATURE FORM FLOW

SEC. 4A182: CENTREX NETWORK FOR INTERSWITCH VOICE MESSAGING

1. FEATURE DESCRIPTION

The feature number for this capability is 99-5E-1156. The CN ISVM (CENTREX Network for Interswitch Voice Messaging) feature is available for 5E9(2) and later Software Releases. CN ISVM is an enhancement to the CENTREX Network Feature. It provides BCID (Business Customer Identifier) screening for trunk originated MBG calls that are routed to a VMS (Voice Messaging System). Calls to an MBGE (Multiswitch Business Group Element) in one switch can be forwarded to a VMS on another 5ESS Switch. This feature provides BCID screening in the 5ESS Switch before delivery to a VMS.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for the CN ISVM feature.

This feature must be activated on the SFSYS form (5713-1 Record). The ACT field for SFID 182 must be set to "Y". In addition, the CENTREX Network feature must be activated; the ACT field for SFID 181 must be set to "Y".

The ISVM feature for CN is activated on the MBG form (5633 Record) by setting the CNISVM field to "Y". The BCID (Business Customer ID) is used for screening to verify that the MBG station is served by the VMS. A BCID can map to only one MBG ID. However, multiple MBG IDs may be to the same BCID. The CNISVM field cannot be set to "Y" unless SFID 182 has been activated on the SFSYS form.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MBG	5633	4	22A	4.12
SFSYS	5713-1	3	5AR	8.22

MBG form (5633 Record) - This form defines the data associated with an MBG. CNISVM must be set to "Y" and the BCID must be entered.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 182 must be set to "Y"

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Figure 1 CN ISVM FEATURE FORM FLOW

SEC. 4A183: CENTREX NETWORK SPECIAL

1. FEATURE DESCRIPTION

The feature number for this capability is 99-5E-1156. CN-S (CENTREX Network Special) feature is available for 5E9(2) and later Software Releases.

The CN-S secured feature is an enhancement to the CENTREX Network secured feature (see Division 2, Section 4A181). This feature provides additional features for the DTS-W (Defense Telecommunications System - Washington DC). It provides enhanced ISAT (ISDN Attendant) displays showing DSN (Defense Switch Network) identity and precedence levels. With the CN-S feature, an ISAT can see the originating trunk type of calls that originate from trunks which are routed to an MBGE (Multiswitch Business Group Element), and which get forwarded to the ISAT. The ISAT may be in either the same switch as the trunk or an ISUP7 connected switch different from the original MBGE termination. The trunk type (FX, TIE, or FTS2000) is delivered to the ISAT.

The CN-S also provides SFG (Simulated Facilities Group) control of MBG calls which overflow from private trunk groups into the public network.

1.1 Precedence and Preemption

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CN-S interacts with PP (Precedence and Preemption). The MBG IDP (Individualized Dialing Plan) intercom call, from an MBGE that is assigned a PP feature and a PP access code is not dialed, is treated as an MBG call and populates the MBG parameter if the trunk is on-net or overflowed to a public SS7 trunk. MBG calls are not screened for MLPP (Multi-Level Precedence and Preemption). The PP DISP ONLY field on the MBG form is used to indicate whether or not PP display format will be used for all calls terminating at the MBG ISAT or just PP calls.

MLPP DSN IDP intercom calls, which dialed the PP access code, receive MLPP screening. MLPP DSN calls are only allowed with proper originating TGSR restriction.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for CN-S. See for Figure 2 feature assignment form flow for CN-S Queuing and Display.

CN-S is a secured feature and must be activated on the SFSYS form (5713-1 Record) by setting the ACT field for SFID 183 to "Y". (Also, ACT field for SFID 181 for CENTREX Network feature must be set to "Y".)

CN-S must also be activated on the MBG form (5633 Record). The CN-S field indicates that the CN-S feature has been activated.

Trunk groups must be identified as part of a specific MBG network in the MBG ID field. Call processing checks this field prior to populating MBG information in the IAM message to ensure network specific information is only being populated on a trunk marked with the proper MBGID value. At an end office, the MBG ID is also checked before overflowing CN-S MBG calls to the public network. Access to the SFG to provide control for the CN-S MBG calls overflowing to the public network is entered in the OVFL MC RTIDX field. The TRK ICI field determines the ICI display to ISAT for calls coming into the CN-S MBG network.

The hunting ICIs are entered on the ICIPF form (5903 Record). The HUNTING ICIs correspond to the TRK ICI on the TKGRP form as follows:

TRK ICI	HUNTING ICI
FTS	FTSICN - ICI displayed to ISAT for call incoming over trunks connected to the FTS-2000 network.
FX	FXICN - ICI displayed to ISAT for calls incoming over trunks connected to FX private facilities.
TIE	TIEICN - ICI displayed to ISAT for call incoming over trunks connected to TIE trunk private facilities.

The TGN for trunk groups connected to the FTS-2000 network to be displayed to the ISAT and the priority of these calls in the queue for the ISAT are entered on the ICIPF form.

The SFG TYPE field, which is accessed when CN-S MBG calls overflow to the public network, is entered on the PFASFG form (5609-3a/b Record).

The ICI list is entered on the DSLUSR form (5908 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2
ICIPF	5903	5	1D	3.43
MBG	5633	4	22A	4.12
PFASFG	5609-3	4	10C	7.3
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user. The ICIs "FTS", "FXICN", "TIEICN" and "FTSICN" were added for the CN-S

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feature.

ICIPF form (5903 Record) - This record is used to assign ICI (Incoming Call Identification) parameters to ISDN Attendant Multi-Line Groups and Terminal Groups. The values "FTSICN", "FXICN", and "TIEICN" for the HUNTING ICIs and FTS TRK GRP fields support the CN-S feature. The HUNTING ICIs are used for hunting, queuing for the ISAT, and also for display.

MBG form (5633 Record) - This form defines the data associated with an MBG. The CNS field indicates if CN-S is active. Also the PP DISP ONLY field determines the display format for ISAT assigned to a PP feature.

PFASFG form (5609-3 Record) - This form defines SFGs (Simulated Facility Groups) which allow control of access to physical groups such as lines, trunks, and special circuits. The SFG TYPE "CNSOVFL" supports the CN-S feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 183 must be set to "Y"

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

The following fields support CN-S on the TKGRP form. The MBG ID field identifies the trunk group as part of a specific MBG network. Call processing checks this field prior to populating MBG information in the IAM message to ensure network specific information is only being populated on a marked private trunk. This field is also checked prior to overflowing CN-S MBG calls to the public network.

The OVFL MC RTIDX field allows the SFG to provide control for CN-S MBG calls. The TRK ICI field determines if FX, TIE, or FTS will be displayed at the ISAT's terminal.

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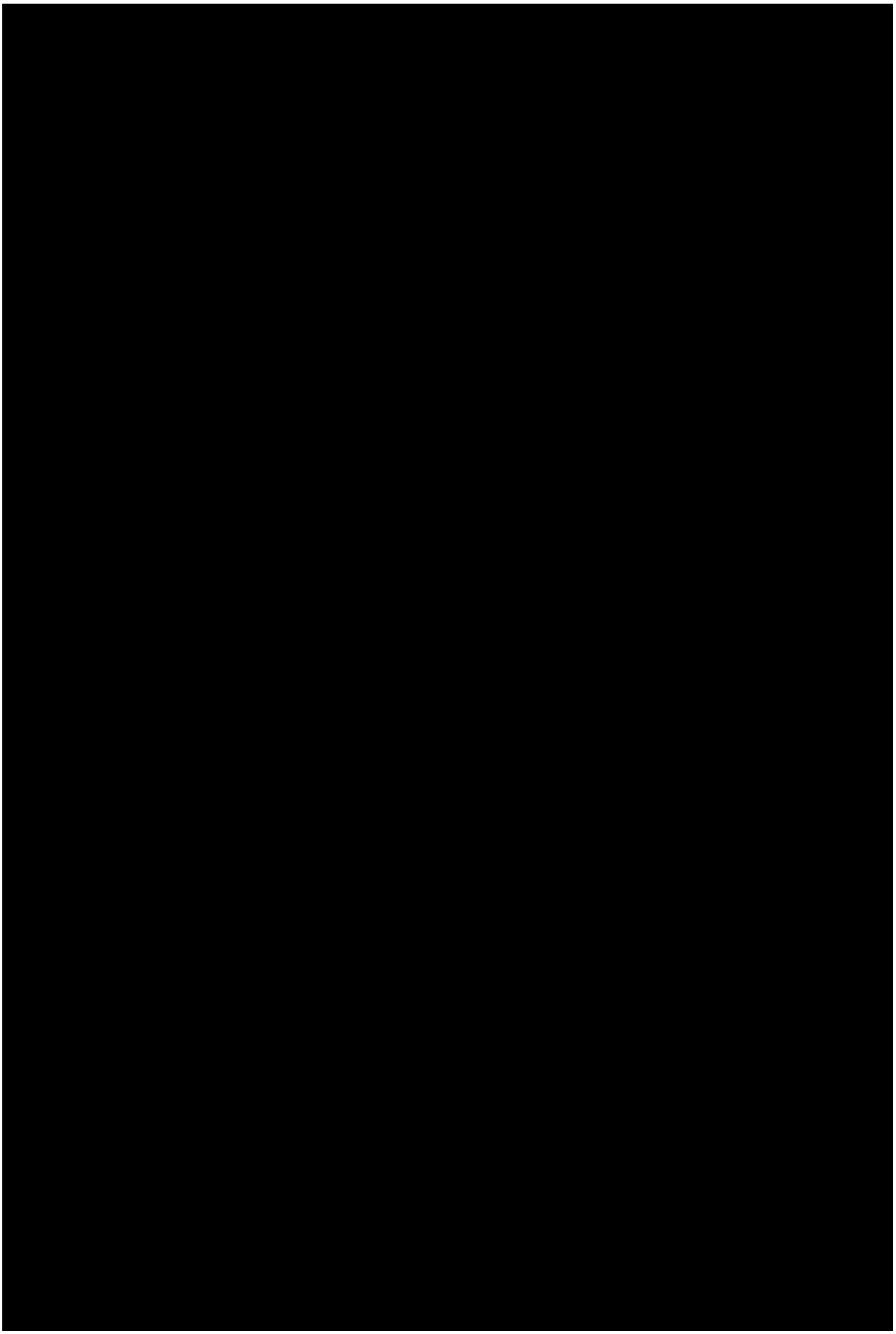

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Figure 1 CNS FEATURE FORM FLOW

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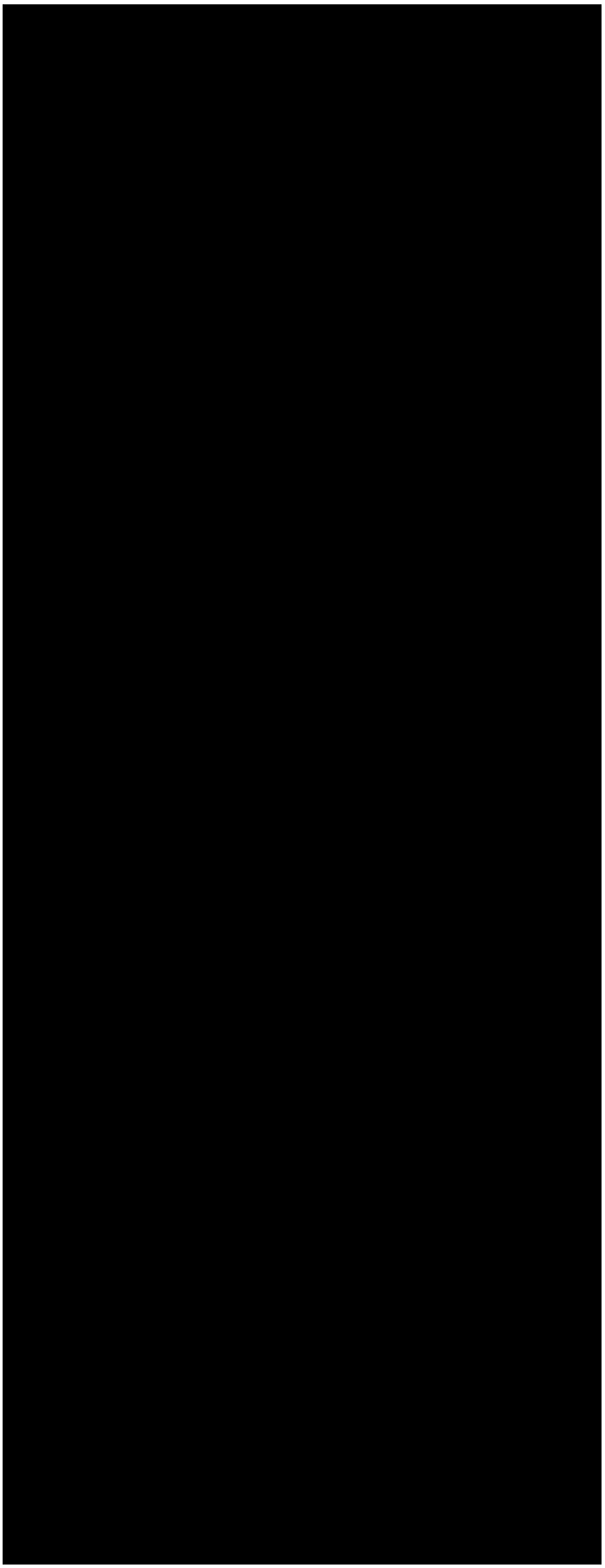

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Figure 2 CNS QUEUING AND DISPLAY FORM FLOW

SEC. 4A184: FAR ACCESS REMOTE

1. BACKGROUND

Prior to this feature LSSGR (Local Switching Systems Generic Requirements) specified a loss of 0dB for a line-to-line call in a single switch. This specified loss was sufficient for a centralized architecture in which no trunking was involved within the switch itself, and the distances were relatively short between phones.

The 5ESS Switch has a distributed architecture. SMs (Switching Modules) are separated from each other via NCT (Network Control and Timing) links. Remote Switch Modules can be remoted from SMs via umbilicals, e.g., T1 spans. ORMs (Optically-Remoted Modules) can be separated from host SMs via optical carrier.

The potential situation with voice traffic to remote units is that each of these remote units is equivalent to a small switch itself, and all of these umbilicals, although frequently not recognized as such, are effectively trunks. However, since they do not span to another switch and are within the distributed architecture it is considered a single 5ESS Switch; calls between the local and remote units are considered line-to-line calls. The 5ESS Switch can only apply 0dB loss to these calls, even though the range of distances of these line-to-line calls can be hundreds of miles.

However, remote units can be 150 to 600 miles away from the host. Under these conditions, unacceptable service occurs due to reflective delays. These delays occur along the umbilicals to these remote units which effectively make them unusable at those distances. The problem introduced with RSMs at these distances is noticeable detection of talker echo and listener echo to the human ear. This causes an objectional voice transmission quality to the end customers (persons making the call).

In the case of long umbilicals, modifying the loss can limit the echo heard by the end customer. This is a reasonable compromise between signal strength (or loudness) and the degree of acceptable echo. Thus, adding loss to the path along the umbilicals to remote units can allow them to be placed at distances over 150 miles and up to 600 miles.

2. FEATURE DESCRIPTION

The Far Access Remote feature is a secured feature using SFID (Secured Feature ID) 184 and must be purchased before being activated. The feature number for this feature is 99-5E-1252.

Available with 5E9(2) and later, this feature provides the ability to minimize effects to the human interface and provide more consistent perceived service while the actual configuration of the switching equipment is allowed to change. For example, if a customer is moved from a configuration where that customer is served by a unit which does not have a long umbilical to a unit which does, this feature enables craft to modify loss in order to minimize any perceived difference in service. These differences include echo on the line during calls and the loudness of calls when the new equipment configuration is installed.

In order to maintain flexibility for the Central Office engineer to tailor this loss to individual circumstances, this feature does not specify the loss value to be added. In the case of long umbilicals, this loss can be modified to limit echo as a compromise between signal strength (or loudness) and degree of acceptable echo.

When a transmission engineer determines that a remote module is homed on an umbilical that is exceptionally long, loss can be assigned to all lines on that remote via the REMOTE LOSS field on the IMINFO form (5510 Record). For calls originating or terminating on an SM (not going over an umbilical), loss can be assigned via the LOCAL LOSS field on the IMINFO form.

This feature applies to analog voice service and analog lines. Loss is not added by this feature for data calls or for calls terminating to an ISDN port. OSPS calls are also not covered by this feature, and this

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feature does not add loss to OSPS calls. This feature applies to TSI (Time Slot Interchanger) loss only; no additional loss will be applied at the LU (Line Unit) channel, ISLU (Integrated Services Line Unit) or RISLU (Remote Integrated Services Line Unit).

The end user of this feature is the switching office craft. After installation of the hardware to support an RSM or ORM at a distance of greater than 150 miles, the craft uses Recent Change to insert a loss value to be associated with the module (SM, RSM, or ORM). Then, when an analog voice Line-to-Line call is made in the office that traverses an umbilical, the call will have that loss applied to it on the receive side of the TSI time slot engaged in that call.

The factors which determine the values of loss to be entered into the LOCAL LOSS or REMOTE LOSS parameters and the criteria to determine if these parameters need to be set are not hard and fast. This feature makes no requirements that any particular length umbilical necessitate a non-zero loss value be inserted. These values are to be determined by the transmission engineer. The following documents provide the transmission engineer with the information regarding recommended loss values and ranges:

- Local Switching Systems Generic Requirements (TR-507, December, 1994 or later issue)
- Loss Plan for Evolving Digital Networks (T1.508)
- 5D5-900-306, The 5ESS Transmission Loss Plan

The values are determined so as to provide an acceptable performance for voice calls within a module or RSM cluster and for calls which traverse umbilicals outside a module or RSM cluster. This feature allows these loss values to be set and added to voice calls, but does not check or enforce the values themselves.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
IMINFO	5510	3	5J	11.1 18.1
SFSYS	5713-1	3	5AR	8.22

IMINFO form (5510 Record) - This form gathers and builds miscellaneous customer data related to a given SM. The LOCAL LOSS and REMOTE LOSS fields were added to this form.

SFSYS form (5713-1 Record) - This form is used to enable a secured feature for the operating company. This feature is a secured feature which has an RTU (Right to Use) fee and must be purchased through the Lucent Technologies Account Team. The ACT field for SFID 184 must be set to "Y" on the SFSYS form before the default data on the LOCAL LOSS and REMOTE LOSS fields on the IMINFO can be changed.

SEC. 4A185: ADVANCED SERVICES PLATFORM NETWORK ELEMENT SERVICES SIGNALING

1. FEATURE DESCRIPTION

The ASP NESS (Advanced Services Platform Network Element Services Signaling) feature is a secured feature with secured feature ID 185 and having AT&T feature number 99-5E-1511. Available with 5E9(2) the ASP NESS feature provides a mechanism for transporting data between the A-I-Net SCN (Service Circuit Node), or any other IP (Intelligent Peripheral), and the A-I-Net SCP (Service Control Point. The SCN to SCP, or SCP to SCN data, is transported through the 5ESS Switch, SSP (Service Switch Point). In essence, the SSP is providing the interface between the SCN and SCP.

Currently, the SCN to SCP interface is provided by an X.25 link. The X.25 link was intended as an interim solution until an alternate solution (such as, NESS) became available. The implementation of the NESS

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secured feature through an SSP provides the SCN to SCP interface and the following enhancements:

- Centralization of subscriber data at the SCP.
- Centralized monitoring, by the SCP, of SCN resources.
- Further utilization of existing SS7 resources rather than using X.25 links.

This service allows the A-I-Net Service Circuit Node to communicate with a database resident on an A-I-Net SCP. An example of a planned SCN service is ACS (Audible Call Screening), which requires that the calling party's name be audibly delivered to the subscribers of the ACS service. Incoming calls to ACS subscribers are forwarded to the SCN. The SCN uses ASP NESS to retrieve the name associated with the calling party from the SCP database.

The SCN is linked to the SSP via National ISDN BRIs (Basic Rate Interfaces). The BRI terminals are generally configured as one or more multi-line hunt groups. To utilize the ASP NESS interface provided by the SSP, an SCN BRI terminal must be capable of transmitting and receiving Q.931 REGISTER and RELease COMplete messages. The ATS (Automatic Terminal Setup) feature is currently the only other feature to utilize REGISTER messages. The REGISTER message contents allows the switch to distinguish whether the ASP NESS or ATS feature is being invoked. When the SSP receives a NESS REGISTER message from the SCN, the SSP checks for the following:

- The NESS secured feature is unlocked in the SSP office.
- The terminal that sent the REGISTER message has the ASP NESS feature assigned and activated.
- The length of the ASP NESS parameters, to be sent to the SCP, does not exceed 192 octets.
- The CallingPartyID value provided matches the primary DN for the BRI terminal.
- The CalledPartyID and CallingPartyID values provided are both 10 digits in length.
- The CalledPartyID value provided is on a CallingPartyID screening list of allowed DNs.

Once the REGISTER message is validated by the SSP, as identified in the above list, a RELease COMplete message is sent to the BRI terminal to release the call reference value selected by the BRI terminal. The SSP checks ACG (Automatic Call Gapping) controls, and if none apply, sends a NESS Unidirectional message to the SCP. If ACG controls are applied to the NESS message request, the switch terminates the NESS transaction. No message is returned to the ISDN CPE (Integrated Services Digital Network Customer Premise Equipment) that originated the REGISTER message. The NESS Unidirectional message is formulated from the information supplied in the REGISTER message. Specific to the ACS service, this NESS Unidirectional message would contain the original CallingPartyID. An SCP look-up would be done for the name associated with the number. An SCP originated NESS Unidirectional message would carry the ACS name information back to the SCN.

1.1 NESS information sent from the SCP to the SCN

A NESS message from the SCP may be either a response to an SCN request for information or an SCP initiated message to the SCN to:

- Download user profile data (such as, updating a call forward DN).
- Determine if that SCN is up and running.
- Determine if specific SCN resources are available.

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The SCP sends NESS information for the SCN through NESS Unidirectional messages. The NESS Unidirectional messages contain a CalledPartyID parameter that represents the destination DN for the NESS data. The CalledPartyID parameter is a 10 digits primary DN associated with a destination SCN. If the digits equate to a 3/6/10-digit or Termination AAttempt trigger, the trigger is ignored.

The SSP validates the terminal to be a fully-initialized and in-service National ISDN BRI (i.e., the DSLUSR form has the field SCP ALW set to "Y" and the DSL CLS field set to "STD").

A NESS REGISTER message is sent to the selected BRI terminal. The NESS REGISTER message includes the NESS data form the SCP and SSP generated call reference value. Immediately after the sending of the REGISTER message to the SCN, the SSP sends a RELease COMplete message to the BRI terminal to release the call reference value.

1.2 Limitations

The following are limitations for this feature:

- This feature supports only unidirectional messages between the network elements. The query/response mechanism proposed by Bellcore is not supported, although A-I-Net applications themselves residing in the SCN and SCP may correlate messages at the application level. For example, the SCN and SCP may encode their own correlation IDs within the envelopes that they transmit.
- This feature does not apply to a Primary Rate Interface between the switch and ISDN CPE.
- This feature does not support AMA recording at the switch.
- The NESS feature can only be assigned to standard ISDN (National ISDN) terminals. The ASP NESS feature is not supported on Custom ISDN .
- If ACG controls are applied to the NESS message request, the switch terminates the NESS transaction. No message is returned to the ISDN-CPE that originated the REGISTER message.
- The AT&T implementation of NESS eliminates the need to count the number of call references from any given D-channel. As soon as the SSP receives a NESS REGISTER message on a D-channel, a RELease COMplete message, specifying the call reference value identified in the REGISTER message, is sent to the ISDN CPE and the call reference is released.
- For the ASN.1 encoding for the nCAData operation the following parameters are not supported: SrhrGroupID, Amp1, Amp2, and ExtensionParameter. The switch does not include these four parameters in the NESS Unidirectional message to the SCP.

2. FEATURE ASSIGNMENT

See Figure 1 for ASP NESS feature form flow.

2.1 Enabling SCN to SCP NESS Messaging

In support of the ASP NESS feature, a new preconstructed BRCS (Business Residential Custom Services) modular feature type has been created to assign NESS capabilities to an National ISDN terminal. The existing ASPFD (ASP Feature Definition) form (5632-1 Record) defines the new NESS preconstructed feature /ASPNESS or any NESS constructed features (if feature construction is allowed by the switch). The /ASPNESS feature, or any constructed NESS feature, is defined on the ASPD form with a CONTROL field entry of "NESS". Three NESS parameter fields have been added to the ASPFD form. The three NESS parameters are also added to ASPLPA (ASP Line Parameters) form (5632-2 Record) and the ASPMPA (ASP Multi-Line Hunt Group Parameters) form (5632-3 Record). These forms allow NESS parameter modification at the individual line level. The three NESS parameters are:

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- TRIG NBR.

The NESS TRIG NBR specified on ASPFD or ASPLPA (or ASPMPA) must be defined on the NSTRIG (Network Services Trigger) form (5908 Record). The NSTRIG trigger number (TRIG NBR) selected for NESS must specify the following in the remaining NSTRIG fields:

- APPLICATION must be "ASP".
- ALT GBL TITLE is not entered. If one is defined it is unused.
- STP TT NBR is allowed. If one is specified it overrides the Transaction Type on the DSAPP (Direct Signaling Application) form (5537 Record).
- ADM CD ST is not used for NESS. If a value is specified it is unused.
- AIN REL must be "R0D1".

- TRIG ACT.

The NESS TRIG NBR defines whether the NESS trigger is active or inactive.

- SCRN GRP.

The number defined in the SCRN GRP field is used to reference the SCRN GRP field on ASPGRP (ASP NESS Group Screening List) form (5634 Record). The ASPGRP form is a new form for NESS CallingPartyID screening. Each SCRN GRP number defined on the ASPGRP form can support a list of 128 10-digit DNs. The SCRN GRP number defines the list of allowed CalledPartyID destination numbers (used by the CallingPartyID to select the SCP) for the ISDN CPE.

The ASP NESS feature can be assigned to the NISDN terminal from either:

- the DSLUSR form (5908 Record) or
- the LINEFA (MLHLNFA) form (5112 (5113) Record).

The NESS feature may be assigned directly to the terminal, or indirectly through a cluster. Assignment through a BFG (BRCS Feature Group) is not supported.

2.2 Trigger Activation / Deactivation

The NESS trigger may be assigned in either the active or inactive state. It can be activated/deactivated as follows:

1. ASPFD form, TRIG ACT field.

   This affects all future NESS feature assignments.

2. ASPLPA and ASPMPA form, TRIG ACT field.

   This affects an individual line.

3. LINEFA, MLHLNFA, DSLUSR form, A field.

   If this method of feature deactivation is used, the ASP NESS trigger will be marked inactive (TRIG

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ACT set to "N") on the ASPLPA/ASPMPA form. Trigger reactivation requires feature activation from LINEFA, MLHLNFA, or DSLUSR forms followed by trigger activation on ASP

4. LINEFA form, M field.

   The feature's master override status may be marked active or inactive. If this method of feature deactivation is used, the ASP NESS trigger is marked inactive (TRIG ACT set to "N") on ASPLPA or ASPMPA form. Trigger reactivation requires feature activation from LINEFA, MLHNFA, or DSLUSR form followed by trigger activation on the ASPLPA or ASPMPA form.

It is important to note that NSTRIG form is not included in the above list. The Trigger Number active/inactive status (ADM ST CD field) does not affect the use of the NESS capability.

2.3 Enabling SCP to SCN NESS Messaging

Standard BRIs capable of receiving SCP NESS messages can be identified by setting the field, SCP ALW, on DSLUSR form to "Y". If the terminal is a member of a MLHG, then the member must have an individual primary DN that is marked no-hunt (i.e., NONHUNT set to "Y").

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPFD	5632-1	4	31A	12.64
ASPGRP	5634	4	31F	4.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
DSLUSR	5908	5	1I	23.2
SFSYS	5713-1	3	5AR	8.22

ASPFD form (5632-1 Record) - This form defines various combinations of options available with the ASP feature.

The following fields support the ASP NESS feature:

The NESS TRIG NBR field is used to locate the unique network service for the ASP terminating attempt trigger. An entry in this field indicates that a query will be launched to an external database.

The NESS TRIG ACT field indicates whether the ASP terminating attempt trigger is active or inactive.

The NESS SCRN GRP field is used to specify the unique group number for the TN screening list.

ASPGRP form (5634 Record) - This new form defines a list of allowed called TN values for a given screening list group. This screening list group is used by terminals that have the ASP NESS secured feature assigned to them.

The following fields support the ASP NESS feature:

The SCRN GRP field is used to specify the unique group number for the TN screening list.

ASPLPA form (5632-2 Record) - This form is used to define ASP line parameters.

The following fields support the ASP NESS feature:

The NESS TRIG NBR field is used to locate the unique network service for the ASP terminating attempt trigger. An entry in this field indicates that a query will be launched to an external database.

The NESS TRIG ACT field indicates whether the ASP terminating attempt trigger is active or inactive.

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The NESS SCRN GRP field is used to specify the unique group number for the TN screening list.

ASPMPA form (5632-3 Record) - This form is used to define ASP Multi-Line Hunt line parameters.

The following fields support the ASP NESS feature:

The NESS TRIG NBR field is used to locate the unique network service for the ASP terminating attempt trigger. An entry in this field indicates that a query will be launched to an external database.

The NESS TRIG ACT field indicates whether the ASP terminating attempt trigger is active or inactive.

The NESS SCRN GRP field is used to specify the unique group number for the TN screening list.

DSLUSR form (5908 Record) - This form defines the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel Packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form.

The field SCP ALW indicates whether or not the terminal may receive messages from the SCP.

SFSYS form (5713-1 Record) - This form is used by the SEE (AT&T System Equipment Engineer) to enable the feature for the operating company. SFID 185 must have the field ACT set to "Y" to enable the feature.

4. GLOSSARY

ACG	Automatic Call Gapping
ACS	Audible Call Screening
AIN	Advanced Intelligent Network
ASP	Advanced Services Platform
ATS	Automatic Terminal Setup
BRI	Basic Rate Interface
CPE	Customer Premise Equipment
DPKT	D-channel Packet
IP	Intelligent Peripheral
ISDN	Integrated Services Digital Network
NESS	Network Element Services Signaling
NISDN	National (or Standard) ISDN
ODB	On Demand B-channel
SCN	Service Circuit Node
SCP	Service Control Point
SFID	Secured Feature IDendtifier
SS7	Signaling System Number 7
STP	Signal Transfer Point

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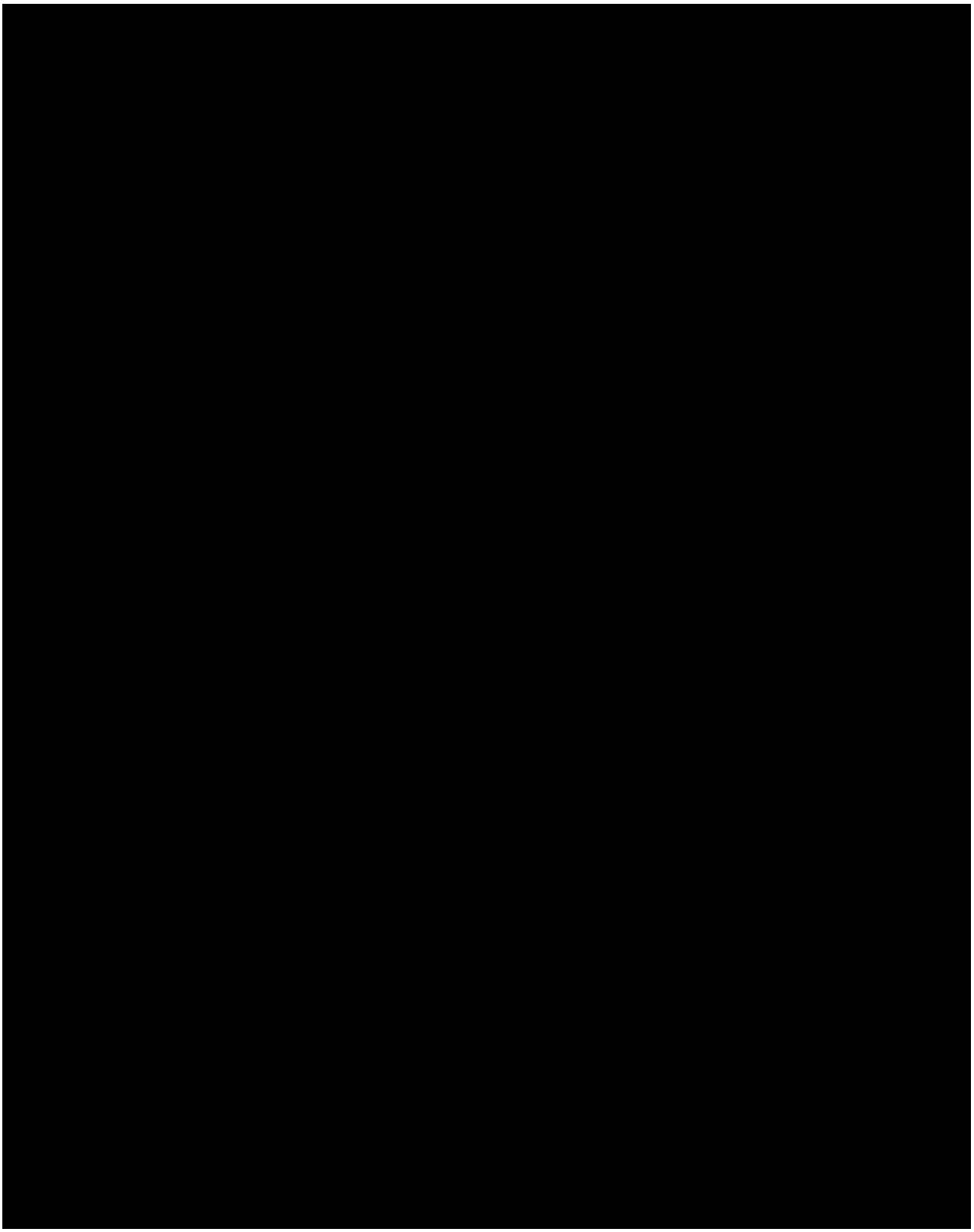

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Figure 1 ASP NESS FORM FLOW

SEC. 4A186: SUPPRESSED RINGING

1. FEATURE DESCRIPTION

The Suppressed Ringing feature is a secured feature using SFID (Secured Feature ID) 186 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-1457.

Available with 5E9(2) and later, this feature allows non-ringing access to an end user's line regardless of the assigned features. This access method is used to transport data without interruption to the end user or its telephone service. Therefore, data can be efficiently transported in a non-restrictive way between Utility companys as well as ESPs (Enhanced Service Providers) and an end user's TIU (Telemetry Interface Unit) or other CPE (Customer Premises Equipment) which is attached to the line.

The TIU is a CPE device that provides the interface to one or more meters (water, gas, and electric) or other telemetry/control devices and is typically located in the residence (or commercial business). The TIU connects to the end user's line on the customer side of the Network Interface.

The Suppressed Ringing feature allows a transmission path to be established between a trunk and a line

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without ringing the line. This permits external systems to exchange data between a COSU (Central Office Service Unit) and CPE/TIU over existing switching fabric (trunk to line) when the end user's line is not in use.

The COSU is connected to the 5ESS via trunks. These trunks are defined on the 5ESS as LATA (Local Access and Transport Area) Connect trunks marked for UTS (Utility Telemetry Service) usage. The trunk OTP (Originating Terminal Process) is modified to handle originations on these trunks. The COSU originates a call over these trunks using a two stage Equal Access signaling. The first digit string contains the CTI (Call Type Identification) digits and the billing directory number. The second digit string contains the directory number for the intended termination. Once the OTP receives and analyzes the digits successfully, routing to a line is requested.

Routing is performed for UTS calls to valid idle analog lines. Once routing is successful, a line TTP (Termination Terminal Process) is created. Information is then requested from the OTP as for the type of signals needed to activate the line.

The activation signal is determined by the ST (Start Pulse) signal from the second digit string sent by the COSU. The valid ST signals are ST, STP, ST2P and ST3P. These pulses represent a ring duration parameter used to activate the line. Connection from the line unit to the port via GDX (Gated Diode Crosspoint (Connects lines to channels)) cross points are set up to support on-hook transmission of the alerting tone (from the COSU).

When the connection is made, the TTP acknowledges this to the OTP which sends a wink signal to the COSU. Upon receiving the wink, the COSU sends an alerting tone over the cut-thru path to the TIU. Upon receiving the tone, the TIU goes off-hook. (The TTP sets a timer and waits a maximum of 2 seconds for the off-hook to occur). The TTP receives the off-hook and releases the GDX cross point connections.

The call is then seen as a normal trunk to line call. (The OTP sets a call duration timer). The COSU and the TIU communicate over the voice path until one of them goes on-hook or the call duration times out.

The normal disconnect sequence is initiated by the COSU. After data is collected from the TIU, the COSU goes on-hook. This triggers the voice path to be released. The TTP senses the path release and sends an 800ms open interval to the line to get the TIU to go on-hook. The trunk and line are then idle.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
AMACT	5506	3	5F	10.12
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1
UTTKGRP	5215	3	2R	5.16

AMACT form (5506 Record) - This form is used to define AMA (Automatic Message Accounting) Call Types. The enumeration "UTT" was added for the AMA CALL TYPE field.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The new field UTT was added to designate a trunk as a utility telemetry trunk.

UTTKGRP form (5215 Record) - This form is used to define the parameters for a utility telemetry trunk group.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the Suppressed Ringing secured feature, the SFID 186 ACT field on this form must be set to "Y".

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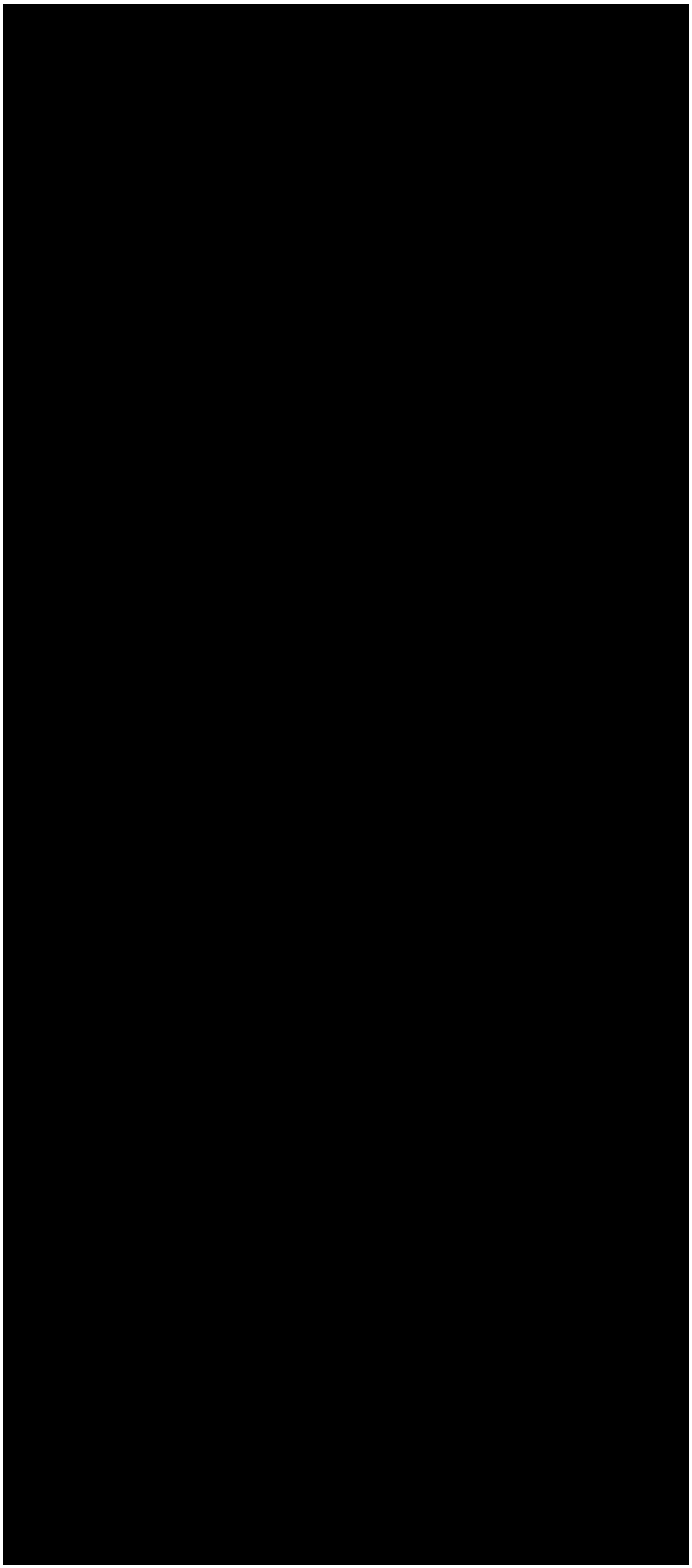

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Figure 1 FORM FLOW FOR SUPPRESSED RINGING

SEC. 4A188: IXE TANDEM CALLS VIA 2 LOCAL ACCESS TANDEMS

1. FEATURE DESCRIPTION

The IXE (Inter-exchange End office Tandem) Tandem Calls via 2 Local Access Tandems feature is a secured feature (SFID 188) and must be purchased before being activated. The feature number for this feature is 99-5E-3112.

The IXE Tandem Calls via 2 Local Access Tandems feature is available for 5E9(2) and later software releases.

The IXE Tandem Calls via 2 Local Access Tandems feature allows service providers a better way to route low-usage IXC (Inter-exchange Carrier) traffic between two different 5ESS-2000 Switch AT (Access Tandem) offices.

A single small carrier trunk group routes all low-usage carrier traffic from one access tandem switch to a second access tandem switch, thus providing consolidation of all small carrier traffic. The second access tandem switch then routes the small carrier traffic directly to the small IXC carriers. Using a single trunk group and a second access tandem switch provides a good alternative to using direct trunk groups for each small IXC carrier.

This feature is available on a per-switch basis and can be assigned on a per-trunk group basis. It works in both digital and analog environments.

2. FEATURE ASSIGNMENT

See Figure 1 for the form flow for the IXE Tandem Calls via 2 Local Access Tandems feature.

On the SFSYS form (5713-1 Record), SFID 188 must have the ACT field set to "Y".

To assign the IXE Tandem Calls via 2 Local Access Tandems feature, populate the RTIDX form (5303 Record RC/V View 10.2) field TGN with the appropriate trunk group number to route calls over a single small carrier trunk group. Field RT DES TYP should be set to a value of "STG" and field SIG PRO must be set to a value other than "TRAD" because FGD signaling is used.

For the TKGRP form (5202 Record RC/V View 5.1), although there are no modifications to the form, this feature will utilize the TRK CLASS field which must be set to a value of "LTOLLCON" or "IC" for the small carrier trunk group.

3. TRANSLATION REQUIREMENTS

TABLE 3
New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22

RTIDX form (5303) - The 5303 Record defines characteristics of the route index. Data rules are added to the PREFIX DIGITS and CKT CODE fields.

SFSYS form (5713-1) - This form is used to enable the feature for the operating company. SFID 188 must have the field ACT set to "Y" to enable the feature.

4. GLOSSARY

AT - Access Tandem

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IXC - Inter-exchange Carrier

IXE Inter-exchange End office Tandem

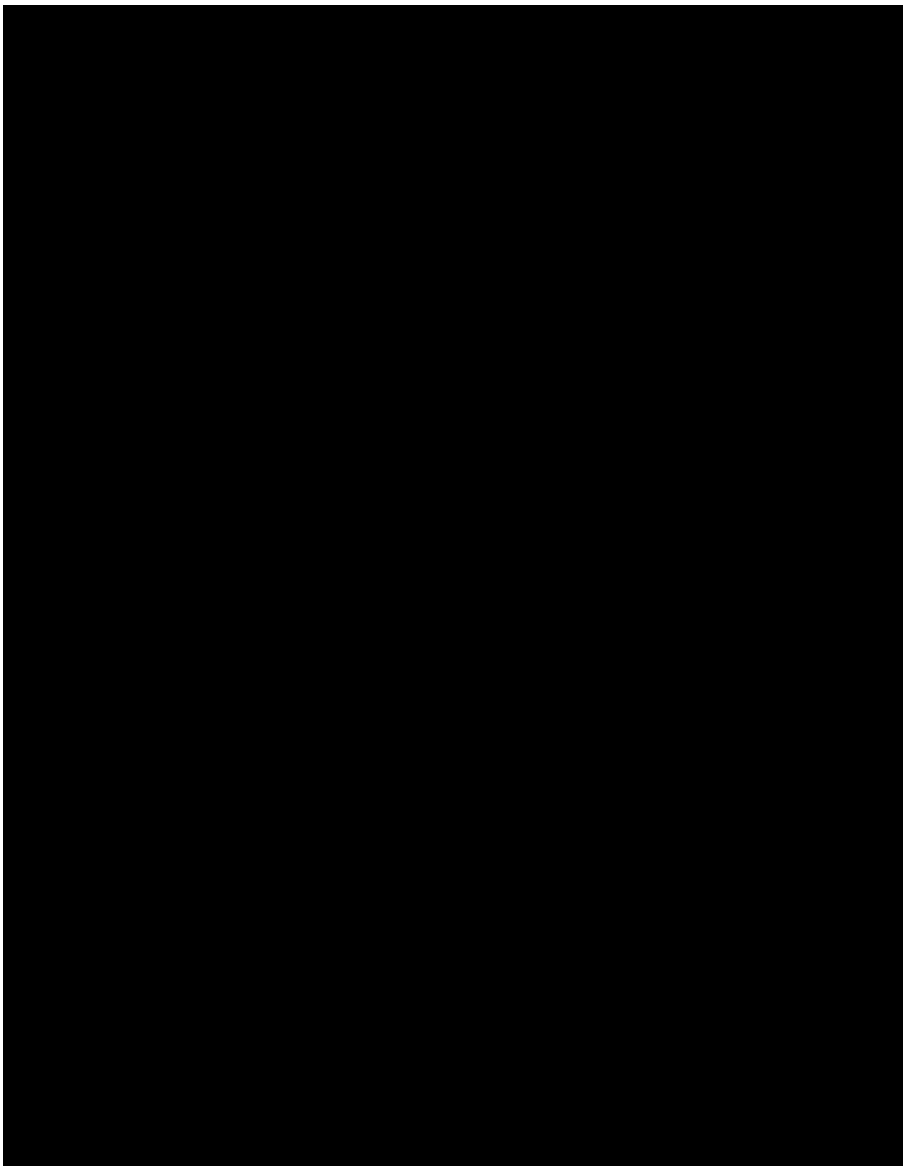

Figure 1 FORM FLOW IXE TANDEM CALLS VIA 2 LOCAL ACCESS TANDEMS

SEC. 4A189: ASP ORIGINATING BUSY/NO ANSWER TRIGGERS WITH EXTENDED RINGING

1. FEATURE DESCRIPTION

The ASP Originating Busy/No Answer Triggers With Extended Ringing feature is available as a 5E11 Software Update and for the BMI (Beginning Managed Introduction) of the 5E12 Software Release. This is a secured feature with SFID 189. The ASP (Advanced Services Platform) feature, SFID 126, must be enabled before SFID 189 can be enabled. (Note that the ASP Busy/No Answer Subsequent Event Detection feature (SFID 147) does NOT have to be unlocked before this feature (SFID 189) can be unlocked.)

This feature allows the SSP (Service Switching Point) to query the SCP (Service Control Point) upon

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detection of a busy or no answer condition for all calls originated by lines at the SSP. These new capabilities allow service providers to implement applications that are driven by the fact that callers have encountered busy or no answer when placing calls.

In addition to the office-based ASP Originating Busy/No Answer Triggers, this feature defines a capability known as "Extended Ringing". Extended Ringing allows the called party's line to continue to receive ringing after the "no answer" trigger has been activated and the SSP is playing an announcement (specified through an SCP (Send_To_Resource message) to the calling party. Extended Ringing also allows the calling party to be connected to the called party if the called party answers while the SSP is playing an announcement to the calling party.

The feature number for this feature is 99-5E-3529.

2. FEATURE ASSIGNMENT

See Figure 1 for the provisioning form flow. The ASP Originating Busy/No Answer Triggers With Extended Ringing feature is a secured feature. The feature must be activated by setting the SFID 189 ACT field on the SFSYS form (5713-1 Record) to "Y". The ASP base feature must also be active by setting the SFID 126 ACT field on the SFSYS form to "Y".

3. TRANSLATION REQUIREMENTS

To implement this feature, two new fields were added. For 5E11, the following fields were added to the OFCOPT form (5509 Record): ORIG BUSY TRG and ORIG NO ANS TRG. For 5E12 and later, the fields were renamed to ORIG BL TRIG and ORIG NA TRIG and moved to the new ASPOPT form (5670 Record).

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
ASPOPT	5670	4	31G	8.49
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to define global office parameters for a switch. For 5E11, the ORIG BUSY TRG and ORIG NO ANS TRG fields were added. For 5E12 and later, the fields were renamed and moved to the new ASPOPT form (5670 Record). This feature also makes use of the ORIG NO ANS TIME field.

- ***NOTE:*** For 5E11, the Recent Change View 8.1 fields are ASP BL TRIG NBR and ASP NA TRIG NBR.

ASPOPT form (5670 Record) - This form is used to define ASP (Advanced Services Platform) office parameters for a switch. For 5E12 and later, the ORIG BL TRIG and ORIG NA TRIG functionality was moved from the OFCOPT form to this form. This feature also makes use of the ORIG NO ANS TIME field.

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features. To activate the ASP Originating Busy/No Answer Triggers With Extended Ringing feature, the SFID 189 ACT field on this form must be set to "Y".

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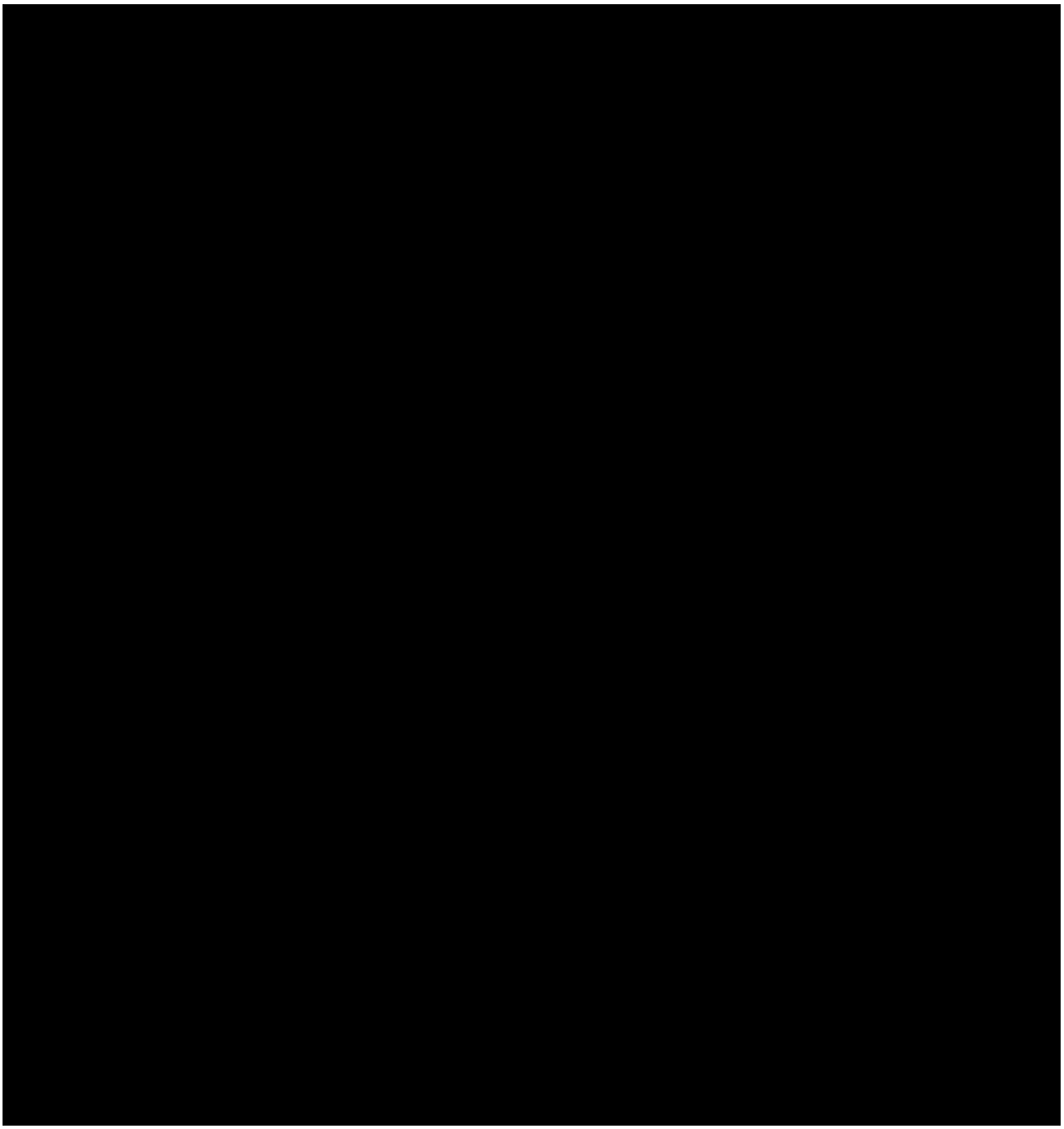

Figure 1 ASP ORIGINATING BUSY/NO ANSWER TRIGGERS WITH EXTENDED RINGING FORM FLOW

SEC. 4A190: ASP ENHANCEMENTS TO MULTIPLE RATE CENTER SUPPORT

1. BACKGROUND

SSPs (Service Switching Points) with multiple rate areas must use the appropriate routing and charging data for each rate area.

The ASP (Advanced Services Platform) Enhancements to Multiple Rate Center Support feature allows triggers to be assigned a DAS (Digit Analysis Selector), which can be be used to indicate the rate area in which the trigger exists. As a result, trigger subscribers are allowed to receive routing and charging treatment appropriate for their rate area.

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2. FEATURE DESCRIPTION

Available with 5E10 and later, the ASP Enhancements to Multiple Rate Center Support is a secured feature using SFID 190 and must be purchased before being activated. The feature number for this feature is 99-5E-3426.

The primary use for this feature is to allow the switch-owner to provide line-like attributes to triggers. A typical example is to allow post-query routing and charging resulting from a 3/6/10-digit trigger to act as if the trigger were a line.

This feature is an enhancement to the ASP Multiple Rate Center Support secured feature. For more information on this feature, see Division 2, Section 4A162. The ASP 0.1B secured feature must also be active for this feature. For more information of this feature, see Division 2, Section 4A126.

This feature allows the assignment of a DAS to a trigger number. When a call is made which encounters an ASP trigger, if a DAS is assigned to the trigger number, that DAS is used for analysis of the routing number returned by the SCP (Service Control Point). This analysis determines routing and charging for the post-query leg of the call.

2.1 Feature Interactions

This feature has an effect on switch-based STR (Send_To_Resource) processing. When an STR interactive announcement is played and "normal" digit collection is requested, the DAS used to validate the collected digits is selected following the rules described in the OFCOPT section below.

This feature interacts with the AIN 0.2 Send To Outside Resource (SFID 229) secured feature as follows:

The DAS which is used to translate the DestinationAddress parameter in a STOR message received from the SCP, continues to be the SCP DAS defined on OFCOPT form.

For any Analyze_Route or Forward_Call received after a STOR operation, the DAS used to translate the CalledPartyID is selected following the rules described in the OFCOPT section below.

This feature has an effect on the ASP BLNA (Busy Line/No Answer) Subsequent Event Detection secured feature (SFID 147). After the switch has reported a Busy or No Answer event, the DAS used to translate the CalledPartyID received when an Analyze_Route message is received, is selected following the rules described in the OFCOPT section below. Generally, whatever DAS is used to route the call on the first leg where the Next Event List was received (which would obey the rules of this feature), would be the DAS used for collecting and analyzing digits for a Send To Resource message requesting normal digit collection as well as translating any digits received in a routing message that is received after a Busy or No Answer event.

3. FEATURE ASSIGNMENT

For the form flow for this feature, see Figure 1.

3.1 Secured Features

This is a secured feature, therefore, before it can be activated the ACT field for SFID 190 on the SFSYS form (5713-1 Record) must be set to "Y". In addition, since this feature depends on the ASP Release 0.1B secured feature, the ACT field for SFID 126 on the SFSYS form must be set to "Y".

3.2 NSTRIG

If this feature is enabled, any valid DAS (from 1 - 99 for 5E14 and earlier (1 - 254 for 5E15 and later) can be defined in the POST QUERY DAS field on the NSTRIG form, when the following fields on the NSTRIG form (5324 Record) are defined as follows:

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- APPLICATION field is "ASP"
- AIN REL field is "R0" or "R0D1" protocol.

The value of the POST QUERY DAS field applies to calls from any type of facility that encounters any originating ASP trigger, or a TAT (Terminating Attempt Trigger). The CalledPartyID in the SCP Analyze_Route or Forward_Call Response message, is translated in the ODP (Office Dialing Plan) identified by the POST QUERY DAS.

3.3 ASPOPT

If the trigger number's POST QUERY DAS field is not entered, the following applies:

- For 3/6/10-digit triggers, the SCP DAS on the ASPOPT form is used.
- For subscribed triggers, if the ASP Multiple Rate Center Support (for more information of this feature, see Division 2, Section 4A162) secured feature is additionally enabled, and the appropriate ASPOPT field enabled, the call routes through the originator's DAS or the DAS associated with the TAT. If this secured feature is not enabled or the appropriate ASPOPT form (5509 Record) field not enabled, then the SCP DAS is used.

When a Continue message is received for a detected 3/6/10-digit trigger or Default Routing for 3/6/10-digit triggers occurs, the association of a DAS in the POST QUERY DAS field does not affect post-query digit analysis and digit analysis occurs in the "previous" DAS; i.e., the one in which the 3/6/10-digit trigger was **detected**.

For example, subscriber A is assigned DAS 1 and dials a 3/6/10 digit trigger. The 3/6/10 digit trigger has a POST QUERY DAS value of 2 on the NSTRIG form. The SCP returns an AnalyzeRoute and the digits are analyzed in DAS 2 where a second 3/6/10 digit trigger is detected. That trigger also has a POSTQUERY DAS value on the NSTRIG form, and it's set to 3. The SCP returns a Continue message in response to the second Info_Analyzed query. DAS 2 is used for post-query digit analysis since that's the DAS in which the second trigger was detected.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
NSTRIG	5324	3	3AK	9.3 5
SFSYS	5713-1	3	5AR	8.22

NSTRIG form (5202 Record) - This form is used to identify a network service application. The field POST QUERY DAS was added to this form. This field specifies the DAS to be used during the post-query routing of calls encountering any type of ASP trigger.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 190 to "Y". Before activating this feature, the base 5E9.1 ASP Rel 0.1B feature must be activated by setting the ACT field to "Y" for SFID 126 on the SFSYS form.

5. GLOSSARY

ASP	Advanced Services Platform
DAS	Digit Analysis Selector
ODP	Office Dialing Plan

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SCP	Service Control Point
SFID	Secured Feature ID
SSP	Service Switching Points
STOR	Send to Outside Resource
STR	Send to Resource
TAT	Terminating Attempt Trigger

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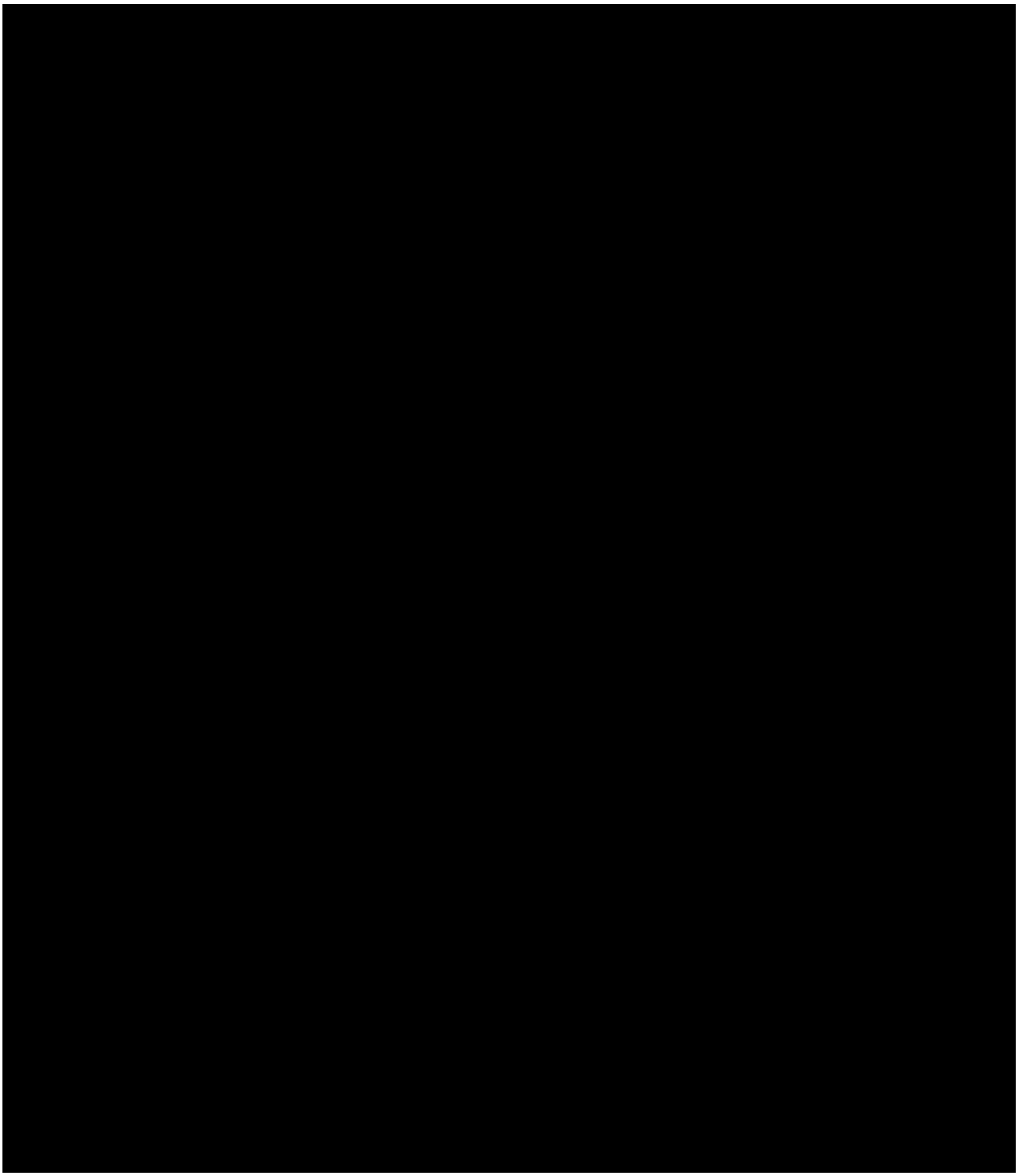

Figure 1 FORM FLOW FOR ASP ENHANCEMENTS TO MULTIPLE RATE CENTER SUPPORT

SEC. 4A191: IS-634 A2 INTERFACE

1. FEATURE DESCRIPTION

The IS-634 A2 Interface feature is available as a 5E13 Software Update. It allows service providers to choose any base station that complies with the IS-634 standard. For example, terrestrial circuits for voice paths from the 5ESS-2000 Switch to the base stations are known as IS-634 A2 Interface trunks. They are given trunk group and member numbers which are known at the ECP (Executive Control Processor) in the

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5ESS-2000 Switch. These are 56K/64K trunks with 24 or 30 channel (DS0) digital facilities (DS1) in which each channel is a PCM (Pulse Code Modulation) voice trunk. All signaling for controlling calls on these trunks is done out-of-band using the ECP/DCS (Executive Control Processor/Digital Cellular Switch) message set. The speech handlers reside at the base stations. Even though the vocoder resides in the base station, echo cancellers are turned on for IS-634 A2 Interface Trunk calls, in case of a handoff to a non-A2 trunk. From the 5ESS perspective, while these calls have an air interface of CDMA, the digital interface is a PCM trunk much like a cell site trunk.
A new TRKCLS of "A2" was added to handle the connections to these base stations. The trunk group and member of this new trunk type are used in CDMA messages where normally speech handler information is transmitted. This leads to some confusion as to whether IS-634 A2 Interface is a CDMA feature of a CDMA "Service" and what exactly is a CDMA call? For the purpose of the IS-634 A2 Interface feature, the following definitions apply:

- From the ECP perspective, the call is a CDMA call because it is a CDMA air interface.

- From the 5ESS-2000 Switch perspective, the air interface is PCM trunk circuits.

The IS-634 A2 Interface feature is not dependent on the CDMA feature. Initially, CDMA was the only air interface supported by the IS-634 A interface. Since it does not make a difference to the 5ESS-DSC what the air interface is, there is no relationship between the IS-634 A2 Interface feature and CDMA. No support is required from the 5ESS-DCS to support soft handoffs since soft handoffs are supported by the base station. The 5ESS-DCS will continue to support hard handoffs between Lucent cells and non-Lucent cells.

The IS-634 A2 Interface feature is a secured feature which must be activated before it can be provisioned. To activate this feature, SFID 191 must be set to "Y" on the SFSYS form (5713-1 Record).

The feature number for this feature is 99-5E-3457.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 191 must be set to "Y".

TKGRP Form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The following data conditions must exist for the IS-634 A2 Interface:

- TRKCLS must be "A2",

- TRKCLS must NOT be "A2" when FAR E911 is "Y,

- all corresponding trunk members of the trunk group (defined on the TRUNK form (5204 Record)) must have a DEN or NEN defined on the TRUNK form,

- IN START DIAL and OUT START DIAL (on the Trunk form) must not be entered,

- TRK DIR must be "2W",

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- DCSTRK must be "Y",
- PBX/CPE ID must not be entered,
- VPA TYPE must not be entered or must be entered as "NOVPA",
- DAS must not be entered,
- SCR must not be entered,
- INPULSING must be "DCS",
- OUTPULSING must be "DCS",
- an ATSDATA (Automatic Trunk Testing Scheduler) form (5052 Record) must not be entered for this feature.

SEC. 4A192: ICLID ENHANCEMENT FOR MLHG

1. BACKGROUND

Prior to this feature, analog MLHG (MutiiHunt Line Group) members, which are not required to have an individual DN assigned (e.g., not the first member), use a group DN (which may be the DN assigned to the first member, depending on the MLHG type) as the calling party DN when such an MLHG member originates a call and the MLHG member does not have an individual DN assigned.

2. FEATURE DESCRIPTION

Available with 5E10 and later Software Releases, the ICLID (Incoming Call Line Identification) Enhancement for MLHG feature is a secured feature using SFID 192 and must be purchased before being activated. This feature is enabled/disabled with OFID 653. The feature number for this feature is 99-5E-3673.

The ICLID Enhancement for MLHG feature allows an analog MLHG member to have the MLHG's group DN used as the calling party number for call originations. When the feature is active, these analog MLHG members use as their calling party DN the group DN that is used (currently) as their calling party DN when they do not have an individual DN assigned. When this feature is active, this group DN will be used by features which use the calling party DN, including the features: ICLID, Call Forwarding, and ASP SCP queries.

NOTE: If a BTN and DN are assigned, the BTN is used instead of the Group DN. If a DN is assigned without a BTN, the DN is used instead of the Group DN.

3. FEATURE ASSIGNMENT

This is a secured feature and is activated by setting the ACT field for SFID 192 on the SFSYS form (5713-1 Record) to "Y". In addition, the feature is enabled/disabled by setting the ACT field for OFID 653 to "Y" or "N", respectively, on the FOSYS form (5713-2 Record).

4. TRANSLATION REQUIREMENTS

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5. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
FOSYS	5713-2	3	5AS	8.31

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 192 to "Y".

FOSYS form (5713-2 Record) - This form is used to activate tranparency features. This feature is enabled by setting the ACT field for OFID 653 to "Y".

SEC. 4A193: (E911) TRUNK FAILURE ALARMS

1. FEATURE DESCRIPTION

The (E911) Trunk Failure Alarms feature is available for 5E11 and later. This feature provides a selectable alarm level (minor, major, or critical) whenever the pre-set AML (Automatic Maintenance Limit) threshold for the trunk group has been exceeded, provided one or more trunk groups in the office are

- Incoming trunks dedicated to E911 trunks and
- E911 trunks are assigned only to these dedicated trunk groups with no mixing of service types within any of the trunks groups.
- 2-way, outgoing, or announcement trunk
- EDSL D-Channel trunks

The feature number for this feature is 99-5E-3190.

2. FEATURE ASSIGNMENT

The (E911) Trunk Failure Alarms feature is a secured feature. It must be activated on the SFSYS form (5713-1 Record) by setting the ACT field for SFID 193 to "Y".

This feature provides the flexibility to set the AML alarm level for AML trunks on the TKGRP form (5202 Record). The AML ALARM field can be set to "MINOR", "MAJOR", or "CRITICAL". The default alarm level will be "MAJOR". It is recommend the the alarm level be set to "CRITICAL" for E911 trunks.

2.1 Recent Change Provisioning

A user can assign an AML ALARM (having a value of "MAJOR", "MINOR", or "CRITICAL") to any 2-way, outgoing, announcement, EDSL D-Channel trunks or an incoming trunk dedicated E911 services on RC/V 5.1. The user may assign/update an AML ALARM to a value other than the default, "MAJOR", when the secured feature, (E911) Trunk Failure Alarms, has been purchased by the office.

When a user assigns/updates a TGN to have an E911 TYPE of "DED", "DIRANI" or "DIRNOANI", a warning message will be provided to the user that recommends that AML ALARM be set to "CRITICAL". The user then has the option of changing the value of AML ALARM or ignoring the warning.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

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TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 193 must be set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The AML ALARM field allows users, who have purchased this feature, to set the AML alarm level to "MINOR", "MAJOR", or "CRITICAL".

SEC. 4A194: A/B LINK AND NO PATH ACCESS DELAY AND BLOCKAGE FOR TRFC30 SEC. 11

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-070-100 Appendix A Traffic and Plant Measurements.*

SEC. 4A195: TCAP MESSAGE TANDEM

1. FEATURE DESCRIPTION

The TCAP (Transaction Capabilities Application Part) Message Tandem feature is a secured feature using SFID (Secured Feature ID) 195. This feature has feature number 99-5E-2821 and is available for the 5E11 and later software releases.

The TCAP Message Tandem features allows the STP (Signal Transfer Point) to process 6-digit GTTs (Global Title Translations) when an NPA-NXX is distributed between more than one switch. The telephone network sends CCS7 (Common Channel Signaling CCITT Version 7) TCAP queries, initially routed by directory number, to activate or support LASS (Local Area Signaling Services) and ISVM subscriber features. The destination for these queries is determined by the CCS7 STP through GTT tables of the subscriber's directory number, converting the directory number to switch network address. When translating on a number group basis, a single database entry can account for up to 10,000 DNs. When DNs with the same NPA-NXX are shared between different central office switches, the destination DN for these messages cannot be determined based on only the NPA-NXX. Without more granular GTT, the TCAP message will be directed to the wrong switch, and the subscriber's LASS and ISVM services will not operate properly. The TCAP Message Tandem feature allows the STP to send all LASS AC/AR or ISVM TCAP queries for a given NPA-XXX to one switch which will re-address the query to the correct destination. This feature minimizes administrative work, especially for small STPs that lack the memory and real-time processing to perform 10-digit GTTs.

2. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1) - This form is used to enable secured features for the operating company. This feature is a secured feature and is activated by setting the ACT field for SFID 195 to "Y" on the SFSYS form. This feature has an RTU (Right To Use) fee and is restricted until the purchaser has made the necessary financial arrangements with Lucent Technologies.

SEC. 4A196: MLPP ON SS7 - STAGE 1

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1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-300 Defense Switched Network Applications.*

SEC. 4A197: MLPP ON SS7 - STAGE 2

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-300 Defense Switched Network Applications.*

SEC. 4A198: NUMBER PORTABILITY - NPA-NXX GROWTH

1. FEATURE DESCRIPTION

Available with 5E12 and later, the Number Portability - NPA-NXX Growth Secured Feature has feature number 99-5E-3730 and uses SFID (Secured Feature ID) 198.

Previous to the "Number Portability - NPA-NXX Growth" feature (through the 5E11 Software Release) the 5ESS-2000 Switch could support up to 250 office codes populated with DNs (Directory Numbers) on the switch (i.e. office codes defined via the NOC (Normalized Office Code) form (RC/V 8.2), versus office codes defined in digit analysis which cause routing on trunks to other switches). The office codes defined on the switch had to be unique, that is the office code could only be associated with one NPA (Numbering Plan Area).

If the Secured NPA-NXX Growth Feature is activated, the 5ESS-2000 Switch will support up to 8,000 NPA-NXX codes. In addition, the office codes can be non-unique, that is the office code value can be associated with two or more NPA codes. The office code value then becomes ambiguous. It will take an area code to identify which of the office codes is identified with that value. Previously since all the office codes were unique, 7 digits was usually sufficient to identify what directory number was identified in ODA forms or RC/V Views, craft I/O messages and messages on data links with external CPE (Customer Premises Equipment). Now that office codes can be associated with more than one area code on the same switch, most of these cases will require 10-digit numbers to uniquely identify which directory number is addressed.

In the context of this document a DN is defined as follows:

- Unique DN - a DN associated with a unique office code.
- Non-unique DN - a DN associated with a non-unique office code.

Thus if two DNs have the same office code but different area codes, the last 4 digits of the DNs do not need to match, to say that the DNs are non-unique.

WARNING: OS (Operational Support) Systems, whether they be within your company, or external vendors, the following issues should be raised:

- Some OS Systems maintain internal data bases which store the DNs associated with a switch. These data bases may need to change to store 10-digit DNs.
- Communications with the switch will require 10-digit DNs in order to uniquely specify a DN associated with an office code that is non-unique.
- All the switch interfaces that employ some form of a directory number will undergo a significant change to support unique 10-digit directory numbers.

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- Even 5E12 users that do not use this feature will see some impact from this feature.

2. USER CONSIDERATIONS

The following observations are made regarding service providers using the 5ESS-2000 Switch who expect to deploy this feature.

- Service providers should begin reviewing internal procedures for instances where the need will arise to specify 10-digit numbers in communications with either the switch or supporting OSs, and begin to plan to change their internal procedures to accommodate the change.
- Service providers need to open a dialogue with their OS providers to determine what changes they will need in their OSs, and the time frame for these changes.

NOTE: Even service providers that do not employ this feature wil see some impact from it, due to:

- the RC/V display capability,
- some craft I/O messages, and
- for switches provisioned to support the PINNACLE ACD (Automatic Call Distributor)feature, the interface with the AIU (Application Interface Unit)and MIS (Management Information System).

3. APPLICATIONS

There are at least two applications for this feature.

1. In an NPA split situation, where there are lines in an office code on the switch that will retain the old NPA, and also lines in that same office code on the switch that will pick up the new NPA, this feature will allow all those lines to continue to be supported by the same 5ESS-2000 Switch. Previously, the lines in either the old or the new NPA had to be rehomed on a different switch, or they had to undergo a number change. This occurred because previous to this feature the same switch could not support an office code that was associated with two different area codes. NPA overlays are similarly supported.
2. The second application is in a number portability environment. If a subscriber served by Switch "A" has their service moved to Switch "B" and retains their DN, Switch "B" grows a new office code, and possibly a new NPA as well. This feature allows (1) more office codes to be populated on Switch "B", and (2) the same office code to be populated in more than one area code on Switch "B", thus better supporting the needs of number portability.

4. IMPACTS

This document discusses the impacts of this feature on the areas listed below:

- RC/V
- Administrative Craft I/O Messages
- Traffic Counts
- IMLT (Integrated Mechanized Loop Test)
- External Switch Interfaces

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- LASS (Local Area Signaling Services) - COT (Customer-Originated Trace
- LASS - BCLID (Bulk Calling Line Identification)
- MSS (Message Service Systems)
- ACD-MIS (Automatic Call Distributor - Management Information System)
- LTOLLCON (Local Toll Connecting Trunks) - Used for third party ANI service
- PRI (Primary Rate Interface), when provisioned to support Calling Party number screening
- PRI (Primary Rate Interface), when provisioned to support Calling Party number screening
- ASI-Proxy (Advanced Services Interface)
- EDS (Electronic Directory Service)

- ISDN SPID

NOTE: These areas have interfaces with OS (Operational Support) Systems and/or external switch interfaces. Corresponding changes may be needed in the OS systems and external equipment interfacing with the switch. Some of the impacts occur only if this secured feature is turned on. Other impacts occur during a generic retrofit, whether or not the feature is turned on.

4.1 RC/V Impacts

Since the same NXX code value can be assigned with two or more NPA codes, 7-digit directory numbers will no longer be sufficient to uniquely identify a line. Thus RC/V Views containing DNs (and TNs (Telephone Numbers)) are changed. OS Systems providing RC/V support must be compatible with these changes. The following summarizes the new RC/V operation. For more details and exceptions to these general rules see, Lucent Technologies "Recent Change Reference 5E12 Software Release" Practice 235-118-253.

Both when this feature is active and when this feature is not active:

- In general, either 7 or 10-digit directory numbers may be entered into the RC/V Views, in both key fields and non-key fields.
- Although the DN may be entered as a 7-digit number, in non-key fields displays of DN information in these fields will show their full 10-digit representation.
- DNs entered in key fields may be entered with either their 7 or 10-digit representation, and the key field will display the DN with the same number of digits that was entered.
- With regard to the following Class A Views which treat the directory number as a range of TNs, the directory number information will be required to be 10 digits. If less than 10 digits is entered for either end of the range, an error message will be returned, even if either or both ends of the range are unique DNs.
  - A.2 MULTIPLE LINE QUERY
  - A.9 PRESUBSCRIBED INTER-LATA (Local Access Transport Area) CARRIER REPORT
  - A.12 SCD (SELECTIVE CARRIER DENIAL) CARRIER REPORT

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- A.13 LINE PARAMETER QUERY

When this feature is not active:

- Since all the office codes remain unique, in general 7-digit DNs will be accepted.

When this feature is active:

- In general, either 7 or 10-digit directory numbers may be entered into the ODA forms (RC/V Views), in both key fields and non-key fields. However, when 7-digit directory numbers are entered in an ODA form (RC/V View), whether in key fields or non-key fields, the 7-digit directory numbers will be accepted only if the directory number is associated with an office code that is uniquely defined on the switch. If a 7-digit directory number is entered that is associated with an office code that is not unique, that is the office code value is associated with more than one area code on the switch, the switch does not know precisely which DN is specified, and the request will fail.

4.2 Administrative Craft I/O Messages

Similar to the RC/V screens, if an input message contains a DN as a parameter, the DN must be uniquely identified to the switch. If the switch provides a DN in a field in an output message when office codes are non-unique, in general 10 digits will be presented to avoid ambiguity about which DN is specified. OS Systems interacting with the administrative craft I/O channels must be compatible with these changes. For details and all exceptions to these general rules see, Lucent Technologies "Input/Output Manual" Practice 235-600-700/750, for the 5E12 Software Release.

For input messages:

- Both when this feature is active and when this feature is not active, either 7 or 10-digit directory numbers may be entered for DNs into the input messages.
- When this feature is not active, since all the office codes remain unique, 7-digit DNs will be accepted since they will be unique.
- When this feature is active,
  - Either 7-digit or 10-digit directory numbers may be entered into an input message. However, when 7-digit directory numbers are entered the 7-digit directory numbers will be accepted only if the directory number is associated with an office code that is uniquely defined on the switch. If a 7-digit directory number is entered that is associated with an office code value that is not unique, that is the office code value is associated with more than one area code on the switch, the switch does not know precisely what DN is specified, and the input message request will fail.
  - When directory numbers are entered in an input message with all 10 digits, whether the associated office code is unique or not, the switch will process the requested operation.

For output messages:

- A RC/V controlled attribute on View 8.1 called "ROP DISP DN 10" will allow the switch to output either 7-digit DNs or 10-digit DNs. This control defaults to the current operation which sends 7 digits to the interface. While all the office codes on the switch are unique, whether this feature is active or not active, this attribute can be changed so either 7 or 10 digits are sent out. When this feature is active and one or more office codes become non-unique, although the value of the attribute can be

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changed, the attribute no longer controls how many digits are printed to represent DNs. The switch internally recognizes that one or more office codes are non-unique and prints 10-digit DNs for all office codes to avoid ambiguity about which DN is specified. This attribute similarly controls the Customer Originated Trace output message with regard to whether 7 or 10-digit called party DNs are output.

Some cases will remain where 7-digit DNs will need to be entered and/or output even for DNs in non-unique office codes, and other cases occur where a 10-digit DN or TN is required even if the office code is unique. For example, in the VFY:OFC command the parameter "DIG" specifies which DN is called. It needs to agree with the dialing plan used by the DN specified as the originator. These cases will be identified in the 5E12 version of the Input/Output Messages Manual.

Examples of other exceptions include:

- The OP:OFR input message will allow only 7-digit TN ranging. However, it will also allow a new secondary optional range of NPAs. If a 7-digit TN is non-unique, all the 7-digit TNs will be dumped to the office record. No error will be provided. For example,

  op:ofr:form=5109,tn=2200100-2870100

  will dump all TNs within that range, giving the full 10-digit TN in the output. If there are non-unique TNs, they will all (i.e., all NPAs) be dumped in the output. However, including the optional "npa=" parameter, such as

  op:ofr:form=5109,tn=2200100-2870100,npa=630

  will dump all TNs within the range, (full 10-digit output), but only for area code 630. This operation occurs both when this feature is active and when this feature is not active.

- When the TN information is entered for the tst:grc input message (also available as grc:test),

  TST:GRC,NAME=a[SECT=b],TN=c[-d]

  GRC:TEST,NAME=a[SECT=b],TN=c[-d]

  it can be entered as a single TN or a range of TNs. The following rules will apply:

  - If a single TN is entered the general rule established above applies.
  - If a range of TNs is entered, then a check will be made to ensure that the range is entered using 10-digit TNs. If less than 10 digits are entered for either end of the range, then an error message will be returned.

    This operation occurs both before the NPA-NXX Growth feature is activated and after the feature is activated.

- The VFY:CPU input message supports the specification of both a single TN or a range of TNs. The following operation occurs both when this feature is active and when this feature is not active.
  - When a single TN is entered it must be entered as a 10-digit TN.
  - If a range of TNs is entered, only a range specified with 10 digits for both ends of the range will be supported. Otherwise, an error message shall be returned.
  - The output resulting from the VFY:CPU command will always be in 10-digit format, without regard to the value of the setting of the "administrator" control or the "non- unique" control.

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- Input Message: ALW:AMATRC: If the NPA-NXX Growth feature is active, the AMA (Automatic Message Accounting) trace (i.e. ALW:AMATRC) will only allow tracing on entered 10-digit numbers.
- Output from VFY:MLHG Input Message: The output representing DN information resulting from the VFY:MLHG input command will always be in 10-digit format. This is true whether the feature is active or not active.
- VFY:OFC input message: The vfy:ofc input message currently will accept either a 7-digit or a 10-digit originating DN (i.e. the "a" field in both the input and output messages), per the general rules for I/O messages. The corresponding DN in the output message shall be formatted as follows:
  - If the input DN was entered as a 7-digit number, the corresponding output DN shall be output as either a 7-digit DN or a 10-digit DN. If either the "ROP DISP DN 10" attribute on View 8.1 is set to print 10-digit DNs, or the switch has at least one non-unique office code, 10-digit DNs will be printed. Otherwise, 7-digit DNs will be printed.
  - If the input DN was entered as a 10-digit DN, the corresponding output DN shall be output as a 10-digit DN.
- OP:ACSR/DUMP:ACSR Output Messages: The following is supported both when this feature is active and when this feature is not active. The DN output from these messages shall always be in 10-digit format.
  - OP:ACSR (administrative I/O output message)
  - DUMP:ACSR (administrative I/O output message)
- With regard to the DN information that was input, the following administrative I/O input messages shall follow the general rules for administrative I/O input commands.
  - OP:ACSR (administrative I/O input message)
  - DEL:ACSR (administrative I/O input message)

4.3 Measurements TRFC30

Measurements TRFC30, sections 128 and 199 have been used to provide traffic data on directory numbers, and have listed the DNs as 7-digit numbers. Sections 235 and 236, corresponding respectively to sections 128 and 199, will specify the DNs in 10-digit format.

- If this feature is not active, sections 128 and 199 will continue to be used.
- If this feature is active, new sections 235 and 236 are provided to provide the directory numbers in 10-digit format.

  Recent Change Views 13.7, 13.8 and 13.10 (13.10 is new in 5E12) will be used with these new section numbers.

  OS Systems monitoring the traffic channels must be compatible with these changes.

4.4 IMLT (Integrated Mechanized Loop Test)

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The IMLT and the IMLT/ISDN will be affected by this feature.

When this feature is not active, the IMLT and the IMLT/ISDN will:

- continue to use a 7-digit DN to communicate with the switch, and
- will also accept 10-digit DNs.

When this feature is active, the IMLT and the IMLT/ISDN will need to:

- support 10-digit DNs to test DNs in non-unique office codes, and
- will be able to test directory numbers in unique NXXs by specifying either 7 or 10-digit DNs.

OS Systems providing IMLT support must be compatible with these changes.

4.5 Summary Table

The following table summarizes the above text. The entries for RC/V, Craft I/O and MLT indicate for each case whether 7 or 10 digits will be accepted by the switch. The TRFC30 row shows when the old sections will be used, and when the new sections will be used.

Capability	Feature Not Active	Feature Active		
		All NXXs Unique	At Least One NXX Non-Unique	
			To specify Unique DN	To Specify Non-Unique DN
RC/V Entry	7 or 10*	7 or 10*	7 or 10*	10*
RC/V Display	10*	10*	10*	10*
Craft I/O Entry	7 or 10*	7 or 10*	7 or 10*	10*
Craft I/O Output	7*, **	7*, **	10*	10*
TRFC30 Traffic	Sections 128 and 199	Sections 235 and 236	Sections 235 and 236	Sections 235 and 236
Integrated MLT	7 or 10	7 or 10	7 or 10	10

* Check the RC/V Reference Manual or the Craft I/O Manual for exceptions to the rule.

** A RC/V option allows the craft to force the output message to contain 10-digit DNs.

4.6 External Equipment Impacts

The following switch features/interfaces exchange directory number information with equipment located on the customer's premise or elsewhere in the switching center. If non-unique directory numbers are supported, the customer premise equipment may need to be configured or upgraded to support 10-digit directory numbers, as specified in the following text:

- COT - The LASS Customer Originated Trace feature currently prints the called number (i.e. COT originator's DN) as a 7-digit number. Under control of the field mentioned in the Craft I/O section called "ROP DISP DN 10", the called party number can be printed out as either a 7-digit DN or as a 10-digit DN. The attribute defaults to maintaining the current operation of printing 7-digit DNs, but can be changed both before this feature is activated and after this feature is activated. However, note that when this feature is active and one or more office codes are non-unique, the "ROP DISP DN 10" field no longer will affect what is printed. The customer trace output message will always print the COT originator's DN as a 10-digit DN.

- BCLID - The called party number is currently sent to the CPE as a 7-digit DN. If the 7-digit number that is currently sent is sufficient for the subscriber to uniquely define the DN, they do not need to receive 10-digit DNs, even if the office code is non-unique in the switch office. If a business customer is subsequently assigned two or more DNs with the same office code, but the two DNs are associated with different area codes, the switch can be provisioned to send 10-digit called party numbers to the

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BCLID interface, and the business customer would then be required to configure or upgrade their customer premise equipment to accept 10-digit called party numbers.

The field "BCLID DN 10" on RC/V View 4.62 controls what is sent on the BCLID interface. It defaults to sending the current 7-digit called party DN.

The ability to provision the BCLID interface to send the called party DN as a 10-digit number is available both when this feature has not been activated and after this feature is activated.

- ***NOTE:*** The CALLING party DN is already sent via the BCLID interface as a 10-digit number.

- MSS - The interface with existing MSS (Message Service System) systems is grandfathered so that existing systems that exchange 7-digit DN information with the switch may continue to do so. This is accomplished by having the switch remember the area code associated with each office code while the office codes are still unique (e.g. at retrofit). When the office codes become non-unique but the switch is still provisioned to support a 7-digit interface with the MSS, the switch will examine received office codes and prepend them with the remembered area code. It will send messages to the MSS in 7-digit format. Through this process, so long as the 7-digit number is still unique to the MSS system, the MSS system can continue to use the 7-digit DN interface.

  However, if an existing office code is also opened up on the switch in a different area code, making the existing office code non-unique (i.e. office code 555 exists in area code 630 on the switch, and then office code 555 in area code 312 is opened on the switch), if the MSS service provider wants to support lines in the new 312-555 NPA-NXX, it must exchange DNs in the full 10-digit format. This is true even if the MSS Service provider does not provide service to anyone in the original 630-555 NPA-NXX. The switch only remembers the area code that was associated with that office code value when it was unique, not the new area code, and will prepend a received 7-digit number with the wrong area code if the switch is not provisioned to accept 10-digit DNs from the MSS. Thus both the MSS CPE and the switch must be provisioned to support the exchange of 10-digit DNs.

  Similarly, a MSS service provider may want to extend their service to DNs in non-unique office codes. Using the above example, the MSS service provider already provides service to a DN in 630-555, and now also wants to provide service to a DN in 312-555. In this case the MSS CPE will also need 10-digit DNs to uniquely identify the directory number. In this case the CPE equipment connected to the switch's MSS interface needs to be configured or upgraded to exchange the DN as a 10-digit directory number, and the switch also must be provisioned to exchange DNs in 10-digit format.

  The ability to provision the MSS interface to exchange 10-digit numbers is available both when this feature has not been activated and after this feature is activated. The field "ALW DUP NXX" on RC/V View 24.7 controls whether the switch supports a 7-digit MSS interface or a 10-digit MSS interface. It defaults to supporting the current 7-digit DN interface.

  If the MSS NXXs are part of an NPA split where DNs exist on the same switch in both the old NPA and the new NPA, the DNs in the new area code will no longer be associated with the default NXX, and thus will require a 10-digit interface between the switch and the CPE.

- ACD-MIS - The PINNACLEO ACD (Automatic Call Distributor) capability exchanges DN information with customer premise equipment across two interfaces, (1) the PINNACLE Call Event Messages data link, and (2) a standard RC/V OS interface, both which are upgraded to support 10-digit DNs. These interfaces will change during retrofit to 5E12.

  Prior to retrofit, all switches that support PINNACLE ACD and are retrofitting to Software Release 5E12 should notify the AIU and MIS administrators of the date when the retrofit will occur. Notification should occur soon enough so the administrators can order the required AIU and MIS software, and plan the transition with switch personnel. The AIU and MIS administrators will need to update their respective systems to indicate that they are connected to a switch that is operating on Software

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Release 5E12. In addition, the MIS administrators will need to execute a conversion utility to update 7-digit TNs to 10-digit TNs. The update to the AIU and MIS are required whether or not this feature is activated.

- LTOLLCON - There are some applications where service providers may be delivering ANI information from originating switches directly to third party providers, possibly pay-per-view vendors, via LTOLLCON (Local Toll Connecting) trunks. Service providers need to work with the third party providers to assure the pay-per-view vendors can support the additional office codes and especially area codes which may be employed through the use of this feature. This is an unusual non-traditional interface to have with a third party vendor, so extra care should be taken to identify if this situation is occurring in your company. Since ANI is delivered as a 7-digit number, a trunk group per NPA will be required, just as it is today for switches supporting multiple area codes.

- PRI - If a PRI (Primary Rate Interface) is used to initiate calls to the switch, and both:

  - the PRI is connected to a PBX (Private Branch Exchange) or other device that is supporting multiple area codes, and

  - the PRI is provisioned to support Calling Party number screening,

  the Calling Party Number Information Element (IE) should be sent to the switch as a 10-digit number.

- ASI-Proxy - When the Subscriber ID for a line has not been provisioned, the ASI-Proxy feature defaults to sending the DN of the line to the IP (Intelligent Peripheral). Currently the DN is sent as 7 digits. If the 7 digits are ambiguous, the switch can be provisioned to send a full 10-digit DN. The IP in this case must also be provisioned/capable of accepting a full 10-digit DN. The attribute on RC/V View 8.1 called "ASISID10" controls this capability. It can only be set to send 10 digits if the NPA-NXX Growth feature is active.

- EDS - Any Electronic Directory Service AP (Application Processor) CPE (Customer Premises Equipment) supporting DNs that are assigned in NPAs other than the default NPA must send 10-digit DNs to the switch in Electronic Directory Service messages. Similarly, the EDS AP CPE must be able to accept 10-digit DNs from the switch for DNs associated with NPAs that are not the default NPA. These considerations affect the Auto Call capability, which allows the initiation of a call from the AP EDS CPE, and the Directory Query EDS feature. If the EDS NXXs are part of an NPA split where DNs exist on the same switch in both the old NPA and the new NPA, the DNs in the new area code will no longer be associated with the default NXX, and thus will require a 10-digit interface. This is similar to the interface with the MSS CPE mentioned above.

- FM (Facilities Management) TOD (Time-of-Day). Code List Names for FM - TOD (also known as TOD Group Names) prior to this feature consisted of up to eight character names. The name could be provisioned by the craft using any combination of alpha-numeric characters (i.e. numbers 0-9 or alphabetics A-Z) except they were not to start with the letter "T". If the switch was generating a default Code List Name for a TN the switch used the letter "T" followed by the 7-digit DN.

  The situation with the introduction of the NPA-NXX Growth feature is the same, except the Code List Names for TOD can be up to eleven characters long. With the introduction of this feature the switch uses the letter "T" followed by the 10-digit DN, now including the NPA of the DN, if the switch is generating a default Code List Name for a TN.

  Only default Code List Names generated by the switch are impacted by this feature. (Note, this assumes that the craft did not create any eight character Code List Names beginning with the letter "T", which were reserved for switch generated default Code List Names.) At retrofit, default eight

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character Code List Names (i.e. beginning with the letter "T") are converted to default eleven character Code List Names.

Although the switch will be supporting a name up to eleven characters, the CPE at the other end of the data link may or may not have been upgraded to support names up to eleven characters. The interface with existing FM-TOD CPE systems is being grandfathered so that existing systems that exchange eight character default Code List Names with the switch may continue to do so. This is being accomplished by having the switch remember the area code associated with each office code while the office codes are still unique (e.g. at retrofit). When the office codes become non-unique but the switch is still provisioned to support an eight character default Code List Names with the FM-TOD CPE, the switch will examine received office codes and prepend them with the remembered area code. The switch will send messages to the FM-TOD CPE in eight character default Code List Name format. Through this process, so long as the eight character default Code List Names is still unique to the FM-TOD CPE system, the FM-TOD CPE system can continue to use the eight character default Code List Names interface.

However, if an existing office code is also opened up on the switch in a different area code, making the existing office code non-unique (i.e. office code 555 exists in area code 630 on the switch, and then office code 555 in area code 312 is opened on the switch), if the FM-TOD CPE service provider wants to support lines in the new 312-555 NPA-NXX, it must exchange Code List Names in the full eleven character format. This is true even if the FM-TOD CPE Service provider does not provide service to anyone in the original 630-555 NPA-NXX. The switch only remembers the area code that was associated with that office code value when it was unique, not the new area code, and will prepend a received eight character Code List Name with the wrong area code if the switch is not provisioned to accept eleven character default Code List Names from the FM-TOD CPE. Thus both the FM-TOD CPE CPE and the switch must be provisioned to support the exchange of eleven character Code List Names.

Similarly, a FM-TOD CPE service provider may want to extend their service to DNs in non-unique office codes. Using the above example, the FM-TOD CPE service provider already provides service to a DN in 630-555, and now also wants to provide service to a DN in 312-555. In this case the FM-TOD CPE will also need eleven character Code List Names to uniquely identify the directory number. In this case the CPE equipment connected to the switch FM-TOD CPE interface needs to be configured or upgraded to exchange the Code List Name as a eleven character Code List Name, and the switch also must be provisioned to exchange eleven character Code List Names.

The ability to provision the FM-TOD CPE interface to exchange eleven character Code List Names is available both when this feature has not been activated and after this feature is activated. Recent Change attribute "ALW DUP NXX" on View 24.7 controls whether the switch supports an eight character default Code List Name FM-TOD CPE interface or a eleven character default Code List Name FM-TOD CPE interface. It defaults to supporting the current eight character Code List Name interface.

If the FM-TOD CPE NXXs are part of an NPA split where DNs exist on the same switch in both the old NPA and the new NPA, the DNs in the new area code will no longer be associated with the default NXX, and thus will require an eleven character interface between the switch and the CPE.

After reading the above discussions on impacts to the external equipment interfaces and the impacts to the OA&M (Operations, Administration and Maintenance) of the switch, these impacts should be considered with regard to a NPA split environment. Previously both the OA&M and the external connections to the switch were for the most part not affected by a NPA split since OA&M and the external switch interfaces were carried on with 7-digit DNs, and the NPA was rarely significant in these interactions. When non-unique office codes are introduced to the switch this changes. The OA&M and external interfaces now are supported with the NPA, and careful consideration must be given to each interface to determine what is needed to successfully support the NPA split, and how and when the external equipment, including both OSs and CPE, must change to support the new NPA.

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4.7 ISDN SPIDs

There are no changes to the underlying rules for provisioning USPIDs (User Service Profile Identifier) on the switch. However, note the following discussion on how USPIDs are formed, and the implications for the service provider.

A USPID (User Service Order Profile Identifier) is assigned for each USOP (User Service Order Profile) assigned on an ISDN line. The USPID, the provisioned portion of the SPID, is chosen by the service provider when the USOP is assigned to the ISDN line, and is:

1. entered via a RC View into the switch and
2. programmed into the CPE's SPID.

Each USPID MUST BE UNIQUE on the switch. For Custom ISDN, the USPID is the same as the SPID and can be from one to 10 digits long. For National ISDN, the USPID can be from one to eighteen digits long, and the SPID includes the USPID plus a two digit TID. Although the SPID can be up to twenty digits long in National ISDN, the National ISDN Council has recommended the use of a fourteen-digit SPID which provides for a 10-digit DN.

A common algorithm used by the service provider to assign USPID values, especially for Custom ISDN, produces a 10-digit USPID that includes the 7-digit DN (i.e. without the NPA). When this feature is active, depending on the information encoded in the additional 3 digits, using 7-digit DNs may no longer produce unique USPIDs. The service provider must adopt a different algorithm for creating SPIDs, taking into consideration the 10-digit limitation for Custom USPIDs, and all currently assigned Custom and National USPIDs (i.e., USPIDs already programmed in the CPE's SPID cannot be changed without also reprogramming the CPE).

Thus since the 7-digit DN is no longer a guarantee of a unique DN on the switch, service providers should examine the algorithms they use for generating SPIDs, with the expectation of changing the algorithms to insure that the SPIDs are unique.

5. ROUTING INFORMATION

"Routing Information" is defined as the digits a switch sends to the next switch, associated with a specific trunk circuit, to complete a telephone call to the next switch. The digits may be sent in the voice band on an MF (Multi-Frequency) trunk, or in a SS7 (Signaling System 7) IAM (Initial Address Message) message on a SS7 trunk.

This feature does not alter the principles or rules employed to set up a routing plan for completing calls between switches. However, if an office code has been unique on a switch, but that office code is opened up in a second area code on the same switch, the routing plan must take into account that the office code is not unique. For instance, calls may have completed to the original NPA-NXX using the last 5 digits of the dialed number. Clearly the routing digits must uniquely define the destination DN. The digits specified for routing calls to the new NPA-NXX must uniquely define the new NPA-NXX. (1) This might cause the routing digits used to reach the original NPA-NXX to change. (2) The new NPA-NXX cannot also route on the last 5 digits of the DN.

6. 10-Digit Dialing

The "Number Portability - NPA-NXX Growth" feature provides the ability for certain features, listed below, to operate properly in a dial plan that consists of 10-digit dialing, and only 10-digit dialing, where 10 digits are required to reach all directory numbers, even directory numbers on the same switch in the same area code as the calling party's directory number. In the context of this section, a dial plan that requires the subscriber to dial 10 digits for all directory numbers will be called mandatory 10-digit dialing. If only 7-digit dialing is used, or if the dial plan allows the subscriber to use either 7-digit dialing or 10-digit dialing (called

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permissive 10-digit dialing in this section), this feature is not required to support mandatory 10-digit dialing.

The ability to support mandatory 10-digit dialing is also provided under SFID 275, "10-Digit Office Dialing Plan" feature (See 4a275 for details on SFID 275.). However, the two features are compatible with each other and both may be active in a switch at the same time.

Use of any of the features in the following list requires the purchase of SFID 198 or SFID 275 in an office that has mandatory 10-digit dialing:

- ISDN Intercom
- ISDN Attendant Direct Station Select
- Series Completion to a Multi-Line Hunt Group
- Directed Call Pickup of a Pre-Stored DN
- Terminal Group Attendant
- ACD/BRCS
    - Queue Dialing
    - Agent Intercom
    - Service Observe
    - Third Party Call Control
- Remote Access, including RACF (Remote Access to Call Forwarding) and RASI(Remote Access to ASI-Proxy) (The Remote Access capability changes an announcement in the RAF and SAS frames. This requires the circuit pack supporting the announcement to be upgraded to support the new announcement.)
- Automatic Customer Station Rearrangement

When both the 10-Digit Office Dialing Plan feature and the "Number Portability - NPA-NXX Growth" feature are inactive (i.e., not purchased), the above features will not work in an office with mandatory 10-digit intra-switch dialing. If the office is in a permissive state (7 or 10-digit intra-switch dialing is allowed), the features will work correctly.

When either the "10-Digit Office Dialing Plan" feature or the "Number Portability - NPA-NXX Growth" feature is active, or both are active, the above features work correctly in an office with mandatory or permissive 10-digit intra-switch dialing.

7. FEATURE ASSIGNMENT

7.1 Feature Activation/Deactivation

To activate this feature, the ACT field for SFID 198 must be "Y" on the SFSYS form (5713-1 Record).

The NOC form now allows 8,190 NPA-NXX codes to be assigned to the switch.

Prior to setting a "non-unique" NXX, i.e., when each NXX is assigned to only one NPA, the following text describes the format of the DN sent to both the ROP and to the LASS Customer Originated Trace data

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link, and whether the craft have any control over the format of the DN sent to these devices:

- The default is to send 7-digit DNs.
- The "ROP DISP DN 10" can be set to send 10-digit DNs.
- The "ROP DISP DN 10" can continue to be reset/set to send either 7 or 10 digits.

Once a single NXX has been assigned to more than one NPA the following text describes the format of the DN sent to both the ROP and to the LASS Customer Originated Trace data link, and whether the craft have any control over the format of the DN sent to these devices:

- 10-digit DNs are sent to the aforementioned interfaces.
- The "non-unique" control is set and cannot be reset.

Thus when the first NXX is assigned to more than one NPA the "non-unique" control is set. The "non-unique" is not accessible to the craft (i.e. they cannot reset it). Also, the "non-unique" control has precedence over the "ROP DISP DN 10" attribute, so although the "ROP DISP DN 10" can be both set and reset, it's value does not control what format of DN is sent to the interfaces.

DN processing:

- If a 10-digit DN is entered on a form, the DN will be accepted even if the feature is not active.
- If a 7-digit DN is entered on a form and the NXX is assigned to only 1 NPA, the DN is accepted.
- If a 7-digit DN is entered on a form and the NXX is assigned to more than one NPA, an error condition will be reported.

8. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACBLPA	5616-2	4	17B	1.20
ACCTLPA	5623-4	4	24D	1.42
ACDTN	5631-1	4	32A	6.10
ACQS	5425	3	4Z	26.11
ACSRLPA	5959-3	6	2C	1.49
ACVTLPA	5967-3	6	10C	1.46
AMLBDSL	5447	3	4AV	21.34
ANNDG	5532	3	5AF	8.60
ANNTR	5533	3	5AG	8.62
APGFP	5620-2	4	21B	24.4
ARSFD	5608-1	4	9A	12.11
ARSLPA	5608-3	4	9C	1.21
ARSMPA	5608-4	4	9D	1.21
ARSSCRN	5608-6	4	9F	10.6
ARSTPA	5608-5	4	9E	5.21
ASILPA	5630-2	4	30B	1.61
ASPLPA	5632-2	4	31B	1.64
ATHLPA	5619-5	4	20E	1.41
BCLIDGP	5629-2	4	29B	4.62
BCLIDLPA	5629-4	4	29C	1.62
BFG	5625	4	26A	12.9
CAICOM	5984	6	3D	23.23
CARSCR	5551	3	6B	1.60
CFGGRP	5964	6	7A	12.5
CFWLPA	5614-3	4	15B	1.22
COTH	5513	3	5M	11.2
CQPARM	5640	4	32E	6.4
CWTLPA	5603-2	4	4B	1.24
DRLPA	5606-2	4	7B	1.25

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DSL	5907	5	1H	23.2
DSLAP	5963	6	6A	24.7
DSLQMON	5904	5	1E	23.17
DSLUSR	5908	5	1I	23.2
EDSLPA	5961-3	6	4C	1.38
EMRNM	5108	3	1H	4.9
EMROFC	5116	3	1P	4.9
FTRKEY	5613	4	14A	4.3
HGRPAS	5115	3	1O	4.14
IDPLPA	5601-6	4	2F	1.26
ICMGP	5960-2	6	3B	4.24
ICMLPA	5960-3	6	3C	1.45
INDIT	5309	3	3V	9.5
LDIT	5300	3	3C	9.3
LINE	5109-1	3	1I	1.6
LINEFA	5112	3	1L	1.8
LINESCRN	5416	3	4Q	26.2
LSACLPA	5970-2	6	13B	1.47
LSARLPA	5971-2	6	14B	1.48
LSSLE	5981	6	24	4.48
MCRTIDX	5304	3	3Q	10.4
MDRLPA	5624-4	4	25D	1.33
MEASSUM	5563	3	5BG	13.9
MLDIT	5300-3A/B	3	3C	9.15
MLHG	5110	3	1J	3.5
MLHLN	5111	3	1K	1.6
MSLPA	5962-3	6	5C	1.37
MSUSP	5530	3	5AD	8.13
MTNDR	5550	3	6A	1.9
MULTITN	5114	3	1N	3.3
MWLPA	5602-3	4	3B	1.27
NOC	5501	3	5A	8.2
OFCOPT	5509	3	5I	8.1
PFAINWT	5609-4	4	10D	7.4
PFALPA	5609-6	4	10F	1.28
PFASFG	5609-3A/B	4	10C	7.3
PIDEF	5117	3	1Q	4.39
PPLPA	5618-3	4	19C	1.31
PPSCRN	5618-2	4	19B	10.31
PHRASE	5534	3	5AH	8.63
PSCUG	5924	5	3E	23.10
PSMTN	5925	5	3F	23.12
PSPVC	5923	5	3D	23.11
PULPA	5605-3	4	6C	1.23
PUMPA	5605-4	4	6D	1.23
PUOFD	5605-1a	4	6A	12.13
RAR	5301	3	3F	10.10
RDIT	5300-7a	3	3H	9.9
RDTAPORT	5911A/B	5	1L	22.17
RTIDX	5303	3	3P	10.2
SCFD	5627-1	4	27A	12.51
SCLIST	5627-5	4	27E	4.2
SCLPA	5627-2	4	27B	1.51
SCMPA	5627-3	4	27C	1.51
SCTPA	5627-4	4	27D	5.51
SHTN	5902-1	5	1C	23.20
TGATTD	5611	4	12A	4.4
TGSRLPA	5607-3	4	8B	1.29
TKGRP	5202	3	2A	5.1
TLWS	5511	3	5K	14.3
TODCL	5610-2	4	11B	4.5
TODLPA	5610-3	4	11C	1.30
TODMPA	5610-4	4	11D	1.30
TODTPA	5610-5	4	11E	5.30
XAT	5909-1	5	1J	23.40

ACBLPA form (5616-2) - The 5616-2 Record contains non-mlhg line parameters for Auto Call-Back Feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

ACCTLPA form (5623-4) - The 5623-4 Record contains information needed to describe the Account Code line parameters. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

ACDTN form (5631-1) - The 5631-1 Record is used by the ACD/BRCS (Automatic Call

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Distributor/Business and Residential Custom Services) feature to define the ACD directory number or the DAA (Direct Agent Access) directory number. For 5E12 and later, added data rules to the TN field.

ACQS form (5425) - The 5425 Record defines the characteristics of an Automatic Charge Quotation Service (ACQS) establishment. For 5E12 and later, changed the valid values for TRUE BILL TN and added data rules to the TRUE BILL TN field.

ACSRLPA form (5959-3) - The 5959-3 Record defines the Automatic Customer Station Rearrangement line parameters. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

ACVTLPA form (5967-3) - The 5967-3 Record defines the per port data associated with the Attendant Control Constructed Feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

AMLBDSL form (5447) - The 5447 Record is used to collect data for OSPS external data base digital subscriber lines. For 5E12 and later, changed the valid values for PKT TN and added a data rule to the PKT TN field.

ANNDG form (5532) - The 5532 Record contains a list of inflection commands and phrases used to convert a digit string into a set of phrase identifications. For 5E12 and later, added new default data.

ANNTR form (5533) - The 5533 Record lists phrases that identify the announcement trailer. For 5E12 and later, added new default input data.

APGFP form (5620-2) - The 5620-2 Record form indicates if the customer has Trunks measurement specified. This also indicates what group types are using Facilities Management and/or Traffic Data to Customer Location capabilities. For 5E12 and later, changed the valid values for GROUP NO/GROUP NAME.

ARSFD form (5608-1) - The 5608-1 Record contains information needed to describe the Automatic Route Selection feature definition. For 5E12 and later, changed the valid values for PRIVATE DN.

ARSLPA form (5608-3) - The 5608-3 Record provides a mean to create an ARS Line (keyed by TN) form which overwrites the Default Parameters on the corresponding ARSFD form. For 5E12 and later, changed the valid values for TN and PRIVATE DN. Also added data rules to the TN field.

ARSMPA form (5608-4) - The 5608-4 Record provides a mean to create an ARS Line (MLHG/TERM) form which overwrites the Default Parameters on the corresponding ARSFD form. For 5E12 and later, changed the valid values for PRIVATE DN.

ARSSCRN form (5608-6) - The 5608-6 Record is used on a per parameter basis, an index screens out disallowed routes for the ARS feature. For 5E12 and later, added the NPA field and added a data rule to the NXX field.

ARSTPA form (5608-5) - The 5608-5 Record provides a mean to create an ARS Trunk (keyed by TGN/MEMB) form which overwrites the Default Parameters on the corresponding ARSFD forms. For 5E12 and later, changed the valid values for PRIVATE DN.

ASILPA form (5630-2) - The 5630-2 Record provides a mean to create an ASI Line (keyed by TN) form which overwrites the Default Parameters on the corresponding ASIFD form. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

ASPLPA form (5632-2) - The 5632-2 Record defines the per port data associated with the Advanced Services Platform Feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

ATHLPA form (5619-5) - The 5619-5 Record contains information needed to describe the Authorization Code line parameters. For 5E12 and later, changed the valid values for TN and added data rules to the

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TN field.

BCLIDGP form (5629-2) - The 5629-2 Record defines the group parameter data associated with a BCLID group. For 5E12 and later, added the BCLID TN 10 field.

BCLIDLPA form (5629-3) - The 5629-3 Record defines BCLID (Bulk Calling Line ID) Line Parameters. For 5E12 and later, changed the valid values for TN.

BFG form (5625) - The 5625 Record contains information for the BRCS Feature. For 5E12 and later, changed the valid values for DPU TN, PRIVATE DN, SC1 LIST, and SC2 LIST fields and added data rules to the DPU TN field.

CAICOM form (5984) - The 5984 Record contains information needed to describe ISDN Call Appearance Intercom (CA-ICOM). Used to assign an Intercom Group to call appearances on a Standard ISDN EKTS CACH terminal and to assign the Primary ISDN TN of that terminal to a position in For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

CARSCR form (5551) - The 5551 Record is used for the assignment of selective carrier screening to lines. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

CFGGRP form (5964) - The 5964 Record is used to define configuration groups for terminal assignments. For 5E12 and later, changed the valid values for PARAM and added a data rule to the ACTION field.

CFWLPA form (5614-3) - The 5614-3 Record contains non-mlhg line parameters for call forwarding feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN and FEATURE fields.

COTH form (5513) - The 5513 Record is used to gather and build data associated with cutover by thousands group. for 5E12 and later, added the NPA field and added data rules to the OFFICE CODE field.

CQPARM form (5640) - The 5640 Record is used to supply call queue information. For 5E12 and later, changed the the description for the ACD OR DAA TN field.

CWTLPA form (5603-2) - The 5603-2 Record contains non-mlhg line parameters to construct a Call Waiting feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

DRLPA form (5606-2) - The 5606-2 Record contains non-mlhg line parameters to construct a Distinctive Ringing Feature. For 5E12 and later, changed the valid values for TN and added data rules to theTN field.

DSL form (5907) - The 5907 Record is used to collect data for digital subscriber lines. For 5E12 and later, added the CUT NPA field, changed the valid values for PPB1 and PPB2 TN, PPB1, PPB2 LNR HNT and added data rules to CUT DGTS, PPB1 and PPB2 TN, and PPB1 and PPB2 LNR HNT TN fields. Also added data rules to DISCN. Display Only fields CKT NEW TN, DPKT NEW TN, ODB NEW TN, PPB1 NEW TN, and PPB2 NEW TN are added.

DSLAP form (5963) - The 5963 Record is used for defining the communication path between an application process running in the 5ESS-2000 Switch, and an application running in an application processor. For 5E12 and later, added the ALW DUP NXX field.

DSLQMON form (5904) - The 5904 Record allows for providing a list of Multi-Line Hunt Group Numbers that this DSL Monitor will Monitor. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

DSLUSR form (5908) - The 5908 Record is used to collect data for digital subscriber lines. For 5E12 and later, changed the valid values for CKT TN, DPKT TN, ODB TN, CKT MLHG TN, SERHL, DPKT MLHG TN, DPKT LNR HNT TN , ODB MLHG TN, ODB LNR HNT TN. Also added data rules to DPKT TN, DPKT

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MLHG TN, DPKT LNR HNT TN, ODB LNR HNT TN, SERHLN, CKT TN, ODB TN, CKT MLHG TN, ODB MLHG TN, and ODB LNR HNT TN fields.

EDSLPA form (5961-3) - The 5961-3 Record associates a Directory Number with an (EDS) Electronic Directory Service feature and an EDS group. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

EMRNM form (5108) - The 5108 Record is used to define the remote (Remote Site) and/or Local SM Emergency TN assignments for Remote Site Stand-Alone or SM isolation operation. For 5E12 and later, changed the valid values for ALT TN and added a data rule to the ALT TN field.

EMROFC form (5116) - The 5116 Record is used to define the AM Emergency TN alternate routing assignments for Isolation or Stand-Alone operation of SM(s) or Remote Site(s) that contain the called Emergency TN(s). For 5E12 and later, changed the valid values for ALTERNATE TN and added data rules to the ALTERNATE TN field.

FTRKEY form (5613) - The 5613 Record provides the Feature Key Function List. For 5E12 and later, changed the valid values for TN and added a data rule to the TN field.

HGRPAS form (5115) - The 5115 Record provides Hundreds Groups Assignment of the Routing SM to support Distributed Line Terminations for Phase 1 of Distributed Call Processing or of the Route Index (which defines the block of of 100 TN's reserved for a particular special Route Index). For 5E12 and later, added the NPA field and added Data Rules to the OFFICE CODE field.

ICMGP form (5960-2) - The 5960-2 Record contains information needed to describe the ISDN Intercom group parameters. For 5E12 and later, changed the valid values for PRIMARY TN.

ICMLPA form (5960-3) - The 5960-3 Record contains line parameters to construct an ISDN Intercom feature. For 5E12 and later, changed the valid values for TN and added data rules to the FEATURE field.

IDPLPA form (5601-6) - The 5601-6 Record is used when assigning ID features to non-Multi-Line Hunt lines to assign ID feature parameters to the lines if the default parameters associated with the ID feature are inappropriate or unspecified. For 5E12 and later, changed the valid values for TN.

INDIT form (5309) - The 5309 Record provides information pertaining to the disposition of incoming calls. That is, it directs incoming calls based on the trunks' directing codes to appropriate translators for either local terminating or tandem treatment. For 5E12 and later, added the BUILD 10 DIGITS and NPA fields. Also added data rules to the NPA and OFFICE CODE fields.

LDIT form (5300) - The 5300 Record defines valid dialed or inpulsed digits. For 5E12 and later, added the NPA field to the form and conflict resolution list. Also added data rules to the PORTED IN, OFFICE CODE and NXX fields.

LINE form (5109-1) - The 5109-1 Record is used to create all line records with Telephone Numbers. For 5E12 and later, changed the the TN description under the GENERAL section. Changed valid values for TN and SERHLN and added data rules to the TN field, ALT BILL TN, and SERHLN fields. Display Only field NEW TN is added.

LINEFA form (5112) - The 5112 Record contains information for Feature Assignment, keyed by TN . For 5E12 and later, changed the valid values for TN and added data rules to the TN and FEATURE fields.

LINESCRN form (5416) - The 5416 Record is used to assign a screen code and routing flags to a line or a range of lines. For 5E12 and later, changed the valid values for TRUE BILL TN.

LSACLPA form (5970-2) - The 5970-2 Record contains telephone number parameters to assign an Automatic Callback feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

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LSARLPA form (5971-2) - The 5971-2 Record contains telephone number parameters to assign an Automatic Recall feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

LSSLE form (5981) - The 5981 Record contains screening lists associated with LASS selective feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

MCRTIDX form (5304) - The 5304 Record contains options for MC Route Index Expansion. For 5E12 and later, changed the valid values for NEXT ROUTE.

MDRLPA form (5624-4) - The 5624-4 Record provides a means to create a MDR line (keyed by TN) form which overwrites the Default Parameters on the corresponding MDRFD form. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

MEASSUM form (5563) - The 5563 Record is used to define components that have been selected for measurements for some sections of the 30 minute measurements report. For 5E12 and later, added ECDN and EPCS values to the SECTION NAME field. Also changed the valid values for START1COMP.

MLDIT form (5300-3 A/B) - The 5300-3 A/B Record is used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS-2000 Switch. For 5E12 and later, added the NPA field.

MLHG form (5110) - The 5110 Record is used to create Multiline Hunt Group information. For 5E12 and later, changed the valid values for LISTED TN, SUBTN 1-8, and HIGHEST LISTED TN and added data rules to the LISTED TN, HIGHEST LISTED TN, and SUBTN 1-8 fields.

MLHLN form (5111) - The 5111 Record is used to create MLH Line Members. For 5E12 and later, changed the valid values for TN and SERHLN and added a data rule to the TERM field. Also added a data rule to the SERHLN field.

MSLPA form (5962-3) - The 5962-3 Record contains information needed to describe the Message Service line parameters. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

MSUSP form (5530) - The 5530 Record contains information needed for scan point assignments. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

MTNDR form (5550) - The 5550 Record provides assignment of a distinctive ringing pattern for Individual Lines. For 5E12 and later, changed the valid values for TN and MASTER TN fields. Also added a data rule to the TN field and MASTER TN fields. Display Only field NEXT KEY TN is added.

MULTITN form (5114) - The 5114 Record provides Multiple TN's for mlhg's. For 5E12 and later, changed the valid values for TN, SUB TN, and NEXT TN fields. Also added data rules to the TN, SUB TN and NEXT TN fields.

MWLPA form (5602-3) - The 5602-3 Record contains line parameters for Multiway calling feature. For 5E12 and later, changed the valid values for TELEPHONE NUMBER and added data rules to the TELEPHONE NUMBER field.

NOC form (5501) - The 5501 Record is used to assign NOC's and Route Indices and Charge Indices for Regular Intercept, Blank Number Intercept, Out-of- service Intercept and Denied Intercept for each local office code. For 5E12 and later, changed the NPA field to a required field, and added the BASE NPA, and UNIQUE OFFCOD fields. Also added a data rule to the OFFICE CODE field.

OFCOPT form (5509) - The 5509 Record provides the office option global parameters residing in the Central Processor. For 5E12 and later, added the ASI SID 10 and ROP DISP DN 10 fields.

PHRASE form (5534) - The 5534 Record defines and describes phrase IDs whish are provided on the DSU2-RAF. For 5E12 and later,added new default input data.

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PFAINWT form (5609-4) - The 5609-4 Record assigns an MLHG INWATS TN to an SFG via an MC Route Index on the the MCRTIDX and PFASFG forms.. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

PFALPA form (5609-6) - The 5609-6 Record provides a means to create a PFA line (keyed by TN) form which overwrites the Default Parameters on the corresponding PFAFD form. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

PFASFG form (5609-3A/B) - The 5609-3A/B Record provides PFA Simulated Facility Group definition. For 5E12 and later, changed the valid values for ATT TN and added a data rule to the ATT TN field.

PIDEF form (5117) - The 5117 Record associates a Personal Identification Number (PIN) with a line. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

PPLPA form (5618-3) - The 5618-3 Record contains non-mlh line parameters to construct an AUTOVON Precedence & Preemption feature. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

PPSCRN form (5618-2) - The 5618-2 Record contains screening information for Precedence & Preemption features. For 5E12 and later, added the NPA field and added a data rule to the OFFICE CODE field.

PSCUG form (5924) - The 5924 Record is used to assign a DSL line that has Packet Switching, to CUG (Closed User Group) . For 5E12 and later, changed the valid values for PKT TN and added data rules to the PKT TN field.

PSMTN form (5925) - The 5925 Record is used to assign Modem Pool access TNs (MLHG) to DSL lines that have Packet Switching. For 5E12 and later, PKT TN and ACCESS TNs are expanded to 10 digits. Also added data rules to the PKT TN field.

PSPVC form (5923) - The 5923 Record is used to assign PVC (Permanent Virtual Circuit) Logical Channel Numbers to DSL lines that have Packet Switching. For 5E12 and later, changed the valid values for PKT TN and added data rules to the PKT TN field.

PULPA form (5605-3) - The 5605-3 Record contains line parameters to construct a Call Pick Up feature. For 5E12 and later, changed the valid values for TN. Expanded DPU TN to 10 digits. Changed DIRECT PICKUP TN to DPU TN. Also added data rules to the FEATURE and DPU TN fields.

PUMPA form (5605-4) - The 5605-4 Record contains mlh line parameters to construct a Call Pick Up feature. For 5E12 and later, changed the valid values for DPU TN and added data rules to the DPU TN field. Added a data rule to the MLHG field.

PUOFD form (5605-1a) - The 5605-1a Record contains feature options and default parameters to construct a Call Pickup Originating feature. For 5E12 and later, changed the valid values for DPU TN and added data rules to the DPU TN field.

RAR form (5301) - The 5301 Record provides the data for the screening matrix. For 5E12 and later, added the NPA field and added a data rule to the NXX field.

RDIT form (5300-7a) - The 5300-7a Record defines valid dialed or inpulsed digits. For 5E12 and later, added the NPA field to the form and conflict resolution list. Also added data rules to the PORTED IN, OFFICE CODE, and the NXX fields.

RDTAPORT form (5911A/B) - The 5911A/B Record collects RDTA port information used at the access switch. For 5E12 and later, changed the valid values for the D CHAN TN, B1 CHAN TN, B2 CHAN TN, and PRI TN fields and added data rules to the D CHAN TN, B1 CHAN TN, B2 CHAN TN, and PRI TN fields.

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RTIDX form (5303) - The 5303 Record defines characteristics of the Route Index. For 5E12 and later, changed the valid values for NEXT ROUTE.

SCFD form (5627-1) - The 5627-1 Record defines Speed Call features. For 5E12 and later, changed the valid values for SC LIST.

SCLIST form (5627-5) - The 5627-5 Record defines subscriber Speed Call lists. For 5E12 and later, changed the valid values for SC LIST.

SCLPA form (5627-2) - The 5627-2 Record is used for assigning SC feature parameters to non-mlhg lines. For 5E12 and later, changed the valid values for SC LIST and added data rules to the SC LIST fields.

SCMPA form (5627-3) - The 5627-3 Record is used for assigning Speed Call features Parameter to mlhg lines. For 5E12 and later, changed the valid values for SC LIST.

SCTPA form (5627-4) - The 5627-4 Record is used for assigning Speed Call features Parameter to trunks. For 5E12 and later, changed the valid values for SC LIST.

SHTN form (5902-1) - The 5902-1 Record is used to specify Primary or Secondary TN that is shared by several other TNs. For 5E12 and later, changed the valid values for TN, SERHLN, and SHARELIST TNs. Also added data rules to the key TN, Shared List TN, and SERHLN fields, and Secondary Only section.

TGATTD form (5611) - The 5611 Record provides Terminal Group Attendant and Data Information. For 5E12 and later, changed the valid values for ATTENDANT TN. Also added a data rule to the ATTENDANT TN and SDN DAS fields.

TGSRLPA form (5607-3) - The 5607-3 Record provides a means to create a line (TN) parameter view via key fields, data fields, default values, display types and help messages. For 5E12 and later, changed the valid values for TN and added data rules to the TN field.

TLWS form (5511) - The 5511 Record defines each TLWS (Trunk and Line Work Station) associated with a 5ESS Switch. For 5E12 and later, changed the valid values for LOCAL TALK & MONITOR TN and added data rules to the LOCAL TALK & MONITOR TN field.

TKGRP form (5202) - The 5202 Record used to define each Trunk Group in a 5ESS-2000 Switch. For 5E12 and later, added the NPA SOURCE field.

TODCL form (5610-2) - The 5610-2 Record defines a TOD code list. For 5E12 and later, changed the valid values for CODE LIST NAME.

TODLPA form (5610-3) - The 5610-3 Record assigns a TOD code list to a line. For 5E12 and later, changed the valid values for TN and CODE LIST NAME. Also added data rules to the TN field.

TODMPA form (5610-4) - The 5610-4 Record assigns a TOD code list to a MLHG/TERM. For 5E12 and later, changed the valid values for CODE LIST NAME.

TODTPA form (5610-5) - The 5610-5 Record assigns a TOD code list to a TGN/MEMB. For 5E12 and later, changed the valid values for CODE LIST NAME.

XAT form (5909-1) - The 5909-1 Record is used to make all X.25 packet switching channel assignments on DLTU T1 and DNU-S DS1 facilities. For 5E12 and later, changed the valid values for PKT TN and LNR HNT TN. Also added data rules to the PKT TN, LNR HNT TN, BILL TN and DEN fields. Display Only field PKT NEW TN is added.

9. GLOSSARY

ACD Automatic Call Distributor

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AIU	Application Interface Unit
AP	Application Processor
ASI	Advanced Services Interface
BCLID	Bulk Calling Line Identification
CPE	Customer Premises Equipment
DN	Directory Number
IAM	Initial Address Message
IMLT	Integrated Mechanized Loop Test
IP	Intelligent Peripheral
LASS	Local Area Signaling Services
LATA	Local Access Transport Area
LTOLLCON	Local Toll Connecting Trunks
MF	Multi-Frequency
MLT	Mechanized Loop Test
MSS	Message Service System
NOC	Normalized Office Code
NPA	Numbering Plan Area
NXX	Office Code (Part Of Dialed Number)
PRI	Primary Rate Interface
RACF	Remote Access to Call Forwarding
RASI	Remote Access to ASI-Proxy
SS7	Signaling System 7
TN	Telephone Number
USOP	User Service Order Profile
USPID	User Service Order Profile Identifier

SEC. 4A199: AMA ACCESS BILLING

1. FEATURE DESCRIPTION

Available with 5E11 and later, the AMA Access Billing feature is a secured feature using Secured Feature ID 199. The feature number is 99-CP-3818.

The AMA Access Billing feature provides the ability to identify a serving wire-center location (i.e., Vertical & Horizontal coordinate) for carrier access usage charges computation with IXC (Inter-eXchange Carrier),

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CMC (Cellular Mobile Carrier) or CNA (Connecting Network Access) handled calls originating from or terminating to a ported number. This feature adds the LRN (Local Routing Number) of the switch serving a ported DN (using an appended LNP (Local Number Portability) BAF (Bellcore AMA Format) module) to originating IXC and CMC and to terminating IXC, CMC and CNA access records generated for calls from or to a ported DN. Recording the LRN of the switch serving a ported DN (or at least the NPA-NXX digits of the LRN) in the access records, allows the billing systems to correctly identify the serving switch and compute distance based on the correct wire-center for the ported number. For ported DNs served by a RSM (Remote Switching Module), an LRN unique to the RSM may be optionally recorded to handle situations where an RSM is serving as a community dial office replacement and has a location (Vertical & Horizontal coordinate) different from that of the host switch.

Known IXC, CMC and CNA originating access AMA call codes:

IXC and CMC Originating Access AMA Call Codes	
CC063	Originating Cellular Mobile Carrier Type 2B
CC064	Originating Cellular Mobile Carrier Type 2A
CC110	Originating InterLATA Station Paid
CC111-CC114	InterLATA WATS
CC117	InterLATA CSDC
CC131	Originating PG-A
CC134	Originating FG-B
CC141	IC Number Service Call
CC149	Originating Access High Bandwidth Call (NxDS0)
CC164	ASP Call Using FGA
CC173	Private Virtual Network Non-SSP End Office
CC263	Originating Access to IEC Virtual Network

Known IXC, CMC and CNA terminating access AMA call codes:

IXC, CMC and CNA Terminating Access AMA Call Codes	
CC065	Terminating Cellular Mobile Carrier Type 1/2B
CC066	Terminating Cellular Mobile Carrier Type 2A
CC119	Terminating InterLATA
CC121	CSDC Terminating Access
CC132	Terminating PG-A
CC135	Terminating PG-B
CC150	Terminating Access High Bandwidth Call (NxDS0)
CC172	Terminating Private Virtual Network Calls
CC720	Connecting Network Access

A per-line or per-trunk group indicator is used to identify facilities serving a ported DN for the purpose of limiting the appended BAF module to only those IXC and CMC access records generated for calls from a ported DN. Lines or trunks that are members of either a Terminal Group or MLHG (Multi-Line Hunt Group) are identified as ported on a per-group basis and not on an individual facility basis.

The AMA Access Billing feature is dependent on the Basic LRN AMA feature 99-CP-3667 to provide the LNP BAF module structure. The secured feature ID for the Basic LRN AMA feature is 180. See Division 2, Section 4A180 for more information.

Scenario

The following paragraphs are an example of a scenario where this feature would append an LNP BAF module to the AMA records so that billing can be correctly calculated.

An IXC switch launches an LNP query to bypass the incumbent LEC (Local Exchange Carrier) network and terminate the call directly to the correct serving exchange in the ALEC (Alternate LEC) network. In the local network, the AMA Billing feature appends the LNP BAF module to the IXC AMA access records at both the originating end-office and the terminating LATA Access Tandem.

A. Both the calling Line A and the called Line B are ported.

   1. Line A's ported indicator is Y on the MLHLN form (5111 Record).

   2. Line B's number is in a portable NPA-NXX and LNP processing determines an LRN for Line

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B. (Line A dials Line B.)

B. The originating exchange performs digit analysis on the dialed digits (e.g., 10XXX, 1+) to determine how to route the call.

C. The switch routes the call to the IXC network based on the dialed digits.

D. The IXC exchange processes the call and determines that B is in a portable NPA-NXX.

E. The IXC exchange sends a query to the SCP (LNP-Service Control Point) based on the dialed digits.

F. The LNP-SCP sends an "Analyze_Route" response containing the LRN of the serving exchange.

G. The IXC exchange receives the LNP-SCP response and analyzes the data. The LRN is translated in a Post_Query DAS associated with the LNP trigger and an ISUP route out of the switch is determined. The dialed number is stored in the GAP parameter, the LRN is in the CDPN (Called Party Number) parameter and the FCI Translated Called Number Indicator is set to indicate an LNP query has been done (set to "translated number").

H. The call is routed to the serving exchange based on the LRN.

I. The serving exchange receives and processes the contents of the IAM message. It replaces the CDPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP and finds the subscriber on the switch.

J. The serving exchange completes the call to the subscriber.

K. The originating exchange generates a Feature Group D Originating InterLATA Station Paid AMA access record (CC110) for the IXC handled call. An LNP BAF module is appended to the IXC access record containing the LRN for Line A. In this case, the LRN is the JIP (Jurisdiction Information Parameter) of the switching module serving Line A, if populated, or the originating exchange JIP obtained from office data.

L. The terminating exchange generates a Feature Group D Terminating InterLATA AMA access record (CC119) for the IXC handled call. An LNP BAF module is appended to the IXC access record containing the LRN of the terminating exchange. Since the LNP query was performed by the IXC, the LRN of the terminating exchange is obtained from the incoming SS7 ISUP CDPN parameter.

2. FEATURE ASSIGNMENT

Figure 1 shows the assignment of PNIs (Ported Number Indicators).

2.1 Detailed Feature Specifications

Valid trunk classes of service for porting are PDID, EDSL, EDSLHM, PF, PFLASH and PFCPE.

Valid line classes of service for porting are ATND, CHGCALL, COIN, HOTMOTL, HOTPBX, INDIV, ISDN, ISDNAT, PBX, SATSTLN, TWOPTY, 2PTY, 4PFS, 4PSS, 4WINDIV, 5PTY, 8PSS and 10PTY.

For lines assigned the LTSB-1DN feature, all ports (both non-lead and lead) have the same PORTED value. Lines with LTSB-2DN feature are treated as separate DNs, each one may be marked "ported" independent of the other DN of the STSB-2DN pair.

Dependent DNs of an MDNL arrangement are considered ported when the Master DN is marked as ported (PORTED = Y).

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If an ISDN BRI terminal has appearances of two or more DNs, it may serve a mix of both ported and non-ported DNs.

The PORTED indicator of the Primary appearance of a shared DN is the same for all appearances of that shared DN.

2.2 Jurisdiction Information Parameter

A per-SM JIP (Jurisdiction Information Parameter) is provided for SMs to be used in lieu of the per-office JIP when the SM serves as a community dial office replacement with a wire-center different than that of the host office. The per-SM JIP is used in IXC/CMC/CNA Access AMA recording for calls originating or terminating to/from ported DNs on the SM. This per-SM JIP overrides the office JIP for outgoing SS7 ISUP signaling on calls originating from an SM or SMs in which it is set to a non-null value.

The LRN field of the LNP module is populated with the JIP of the originating switch. The last four digits (least significant digits) of the LRN field is filled with zeros (0) since the office JIP is only six digits long.

If the per-office JIP is not assigned in the originating office and no per-SM JIP is defined for the originating SM, then the LNP module is not generated.

Scenarios

Scenario 1:
When a switch serving as an access tandem or intermediate exchange generates an IXC or CMC originating AMA access record, the switch appends an LNP module to the access AMA record containing the LRN of the originating switch. The LRN of the originating switch may be obtained from the JIP of the received SS7 IAM. If a JIP is not available from the SS7 IAM, the LNP module is not generated or appended to the AMA access record.

The LNP module also contains a Party Identifier set to "Originating party data", an LRN Source Indicator of the Supporting Information field set to "Incoming Signaling" and a Query Status Indicator of the Supporting Information field set to "no query done". This includes IXC exchange originating access AMA records generated following processing of an AIN trigger at the intermediate switch.

Scenario 2:
When a switch serving as a terminating access tandem receives a call from an IXC/CMC or over a trunk group marked for CNA recording with an FCI parameter indicating "Translated number" and a "ported number GAP" in the SS7 ISUP IAM; the access tandem appends a terminating LNP module to the IXC/CMC/CNA terminating exchange access AMA record, if any, generated by the access tandem for the call.

The LNP module is populated with the LRN of the terminating switch received in the CDPN parameter of the SS7 ISUP IAM. Additionally, the LNP module includes a Party Identifier set to "Terminating party data", an LRN Source Indicator in the Supporting Information field set to "Incoming signaling", and a Query Status Indicator in the Supporting Information field set to "No query done".

If the access tandem does not receive an FCI parameter indicating a "Translated Number" in the SS7 ISUP IAM for the call, then the switch follows the procedures defined in this document to determine whether or not to perform an LNP query.

Scenario 3:
When the terminating access tandem receives an FCI parameter in the SS7 ISUP IAM that does not indicate "Translated number" for the call (that is, no LNP query has been performed), and the access tandem subsequently encounters an LNP trigger on the called number and performs an LNP query which results in the SCP returning an LRN for the called number; the access tandem appends a terminating LNP module to the IXC/CMC/CNA terminating exchange access AMA record, if any, generated by the access tandem for the call. The LNP module is populated regardless of whether or not the office option (FOSYS ID 665) for LNP BAF module generation is active.

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Scenario 4:
When a switch serving as a terminating office receives a call over a trunk group marked for CNA recording or a directly connected trunk from an IXC/CMC with an FCI parameter, indicating that an "LNP query was done" and a "ported number GAP" in the SS7 ISUP IAM; the switch appends a terminating LNP module to the IXC/CMC/CNA terminating access AMA record, if any, generated by the terminating switch for the call.

The LNP module is populated with the LRN of the terminating switch received in the CDPN parameter of the SS7 ISUP IAM. Additionally, the LNP module includes a Party Identifier set to "Terminating party data", an LRN Source Indicator in the Supporting Information field set to "Incoming Signaling" and a Query Status Indicator in the supporting Information field set to "No query done".

If the terminating switch receives an FCI parameter in the SS7 ISUP IAM indicating a "Translated Number" for the call, but the IAM does not contain a "ported number GAP", the switch does not generate on LNP module for the call.

Scenario 5:
When a switch serving as a terminating office receives a call over a trunk group marked for CNA recording or over a directly connected trunk from an IXC or CMC and the call is received over either an MF trunk or via SS7 without an FCI parameter indicating "Translated number", the terminating switch appends a terminating LNP module to the IXC/CMC/CNA terminating exchange access AMA record generated by the switch, if any, when the call terminates to a ported DN.

The JIP of the terminating switch is recorded in the LRN field of the LNP module. Additionally, the LNP module includes a Party Identifier set to "Terminating party data", and LRN Source Indicator in the Supporting Information field set to "Switch data" and a Query Status Indicator in the Supporting Information field set to "No query done".

2.3 Call Processing Determination of Ported Originating Terminal

The following algorithm is used during call processing when a terminal originates a call to determine if the originator is ported.

1. Is the port the correct class of service?

   ODA does not verify that all members of a TG or MLHG have valid service classes for porting.

2. Is the port in either a TG or an MLHG?

   If the port is in a group where PORTED is "Y", then the port is ported.

   If the port is in a group where PORTED is "N", then the port is not ported.

   If the port is not in either group, continue.

3. If a line or DSL, is the line/DSL individually ported? If a trunk, is the trunk group ported?

   If the line or trunk group has PORTED equal to "Y", then the port is ported.

2.4 Call Processing Determination of Ported Terminating Terminal

1. The determination of a DN as a ported number is obtained from digit analysis for NPA-NXXs marked as "ported IN" in the LDIT. If the NPA-NXX of a called number is so marked in the LDIT and the called DN is found on the switch, then it is determined to be a ported number, served by the terminating exchange.

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2. An RT_DNTRAN tuple may not exist for PBX(s) served by trunk groups. In this case, the outgoing trunk group serving the PBX is marked as serving "ported DNs" via the per-trunk group PORTED indicator.

   If a call terminates to a PBX trunk, then the same algorithm described above in "Call Processing Determination of Ported Originating Terminal" applies.

3. TRANSLATION REQUIREMENTS

See Figure 2 for the feature assignment form flow for the AMA Billing feature.

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2
IMINFO	5510	3	5J	18.1
LINE	5109-1/2/3	3	1I	1.6
MLHG	5110-1/2/3	3	1J	3.5
SHTN	5902	5	1C	23.20
TGATTD	5611	4	12A	4.4
TKGRP	5202-1/2	3	2A	5.1

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user and 4) defines the On Demand B-channel packet switching attributes of a DSL user. The PORTED field was added to indicate whether members of a given terminal group have been ported into an office via the NP feature.

IMINFO form (5510 Record) - This form is used to gather and build miscellaneous data related to a given SM. The JIP field was added to specify the ISUP parameter used, on a per-SM basis, when generating the IAM, and is used with the NP feature.

LINE form (5109 Record) - This form defines the Office Equipment Number and features for each telephone number in the 5ESS-2000 switch. The PORTED field was added to indicate whether the TN has been ported into this office via the LNP feature.

MLHG form (5110 Record) - This form is used to define Multi-line Hunt Groups. The PORTED field was added to indicate whether the MLHG has been ported into the office via the NP feature.

SHTN form (5902 Record) - This form is used to assign a Primary or Secondary TN or MLHG/TERM to ISDN Terminals. The PORTED field was added to indicate whether the associated TNs have been ported into the office via the NP feature.

TGATTD form (5611 Record) - This form is used to define information (such as attendant DN, Source Billing and SDN DAS) on a Terminal Group basis. The PORTED field was added to indicate whether members of a given terminal group have been ported into the office via the NP feature.

TKGRP form (5202 Record) - This form defines each trunk group in a 5ESS-2000 switch. The trunk information entered is information common to the entire group. Trunk information for an individual member of a group is entered on a TRUNK form. The PORTED field was added to indicate whether the TN has been ported into the office via the NP feature.

4. GLOSSARY

NP Number Portability

TN Telephone Number

JIP Jurisdiction Information Parameter

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ITEM	TYPE OF ASSIGNMENT	DESCRIPTION	FORM FIELDS	
1	PNI to PBX w/ Ported DNs	The craftsperson sets the PNIfor an MF Trunk Group. The craftsperson makes the following updateto the TKGRP form.	*1. TGN	112. PORTED=Y
	WARNING: The PORTED indicator on the trunk group view does not apply if the trunk is a member of a TG. The PORTED indicator on the TG view takes precedence over the trunk group setting.			
2	PNI to Analog Line w/ Ported DNs	The craftsperson makes the update tothe LINE form.	*1. TN = (valid DN)	125. PORTED = Y
	WARNING: The PORTED indicator on the individual line assignment views does not apply if the line is a member of either a MLHG or a TG. The PORTED indicatoron these views takes precedence over the individual setting.			
3	PNI to Analog Line w/ Ported DNs	The craftsperson makes the update tothe LINEFA form.	*1. TN = (valid DN)	44. PORTED = Y
	WARNING: The PORTED indicator on the individual DSL assignment views does not apply if the DSL is a member of either a MLHG or a TG. The PORTED indicatoron these views takes precedence over the individual setting.			
4	PNI to ISDN BRI Line w/Ported DNs	The craftsperson makes the update tothe DSLUSR form.	*1. CKT TN = (valid DN)	160. PORTED = Y
5	PNI to ISDN BRI Line w/Ported DNs	The craftsperson makes the update to the DSLUSR form.	*1. TN = (valid DN)	104. PORTED = Y
6	PNI to Secondary-Only Shared DN	The craftsperson makes the update to the SHTN form.	*1. TN = (valid secondary-only DN)	77. PORTED = Y
7	PNI to MLHG serving ported DNs	The craftsperson makes the update to theMLHG form.	*1. MLHG = (valid MLHG Number)	58. PORTED = Y
	NOTE: Setting the per-RSM JIP does not require that the NP-AMA Access Billingfeature be purchased.			
8	PNI to Terminal Group serving ported DNs	The craftsperson makes theupdate to the TGATTD form.	*1. GROUP ID = (valid TG ID)	12. PORTED = Y
9	Setting the Per-RSM LRN for AMA Billing feature			

Figure 1 ASSIGNMENT OF PORTED NUMBER INDICATORS

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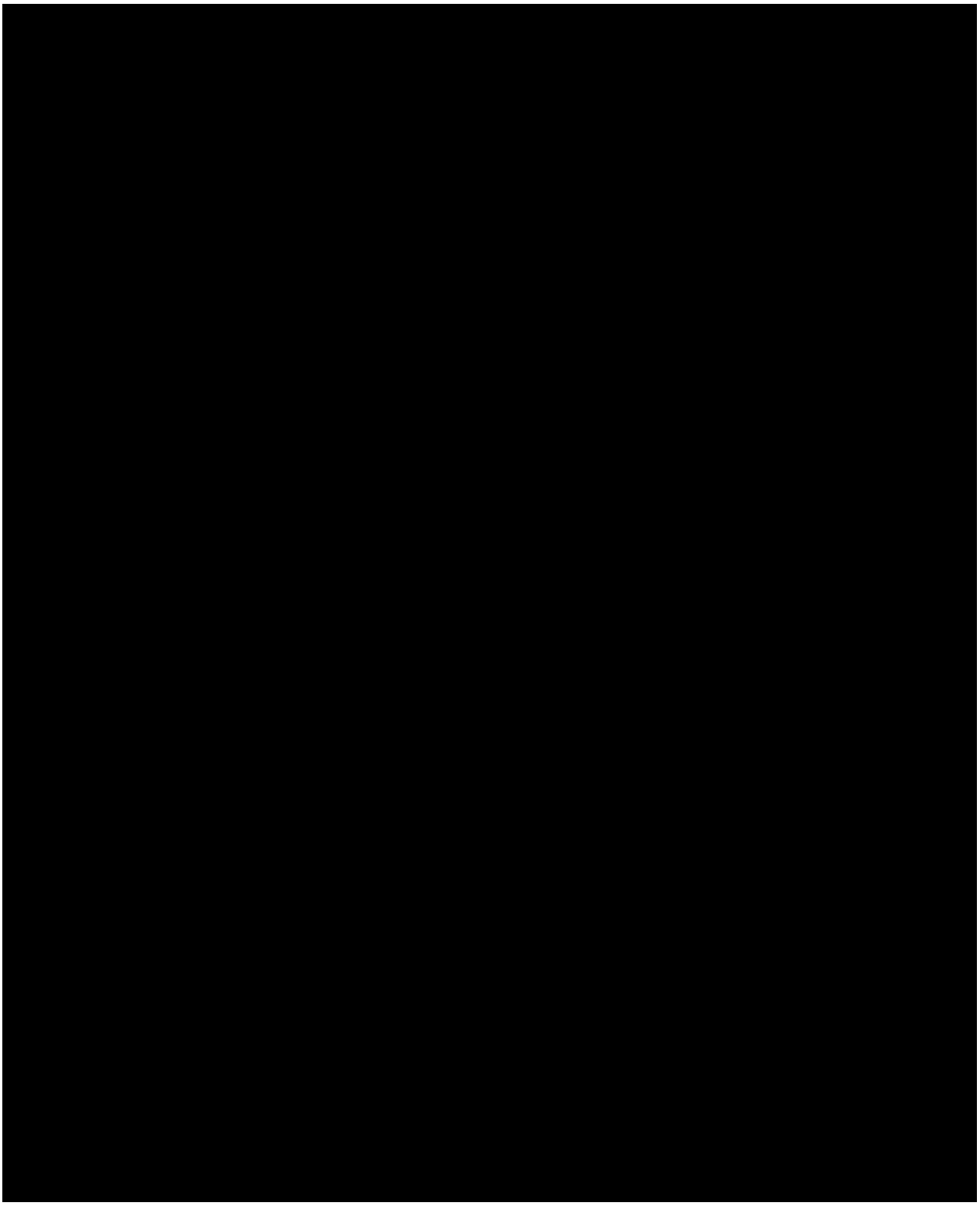

Figure 2 AMA BILLING FORM FLOW

SEC. 4A200: AUTOMATIC SPID (SERVICE PROFILE IDENTIFIER) DOWNLOAD

1. FEATURE DESCRIPTION

The Auto SPID feature is available for 5E10 and later. This feature applies to National ISDN service. The

feature number for this capability is 99-5E-3520.

The Auto SPID feature automates the ISDN installation process by sending ISDN provisioning information to the ISDN terminal equipment. This information is then used by the ISDN terminal to initialize and provide network access to an end-user. The automatic exchange of important provisioning information such as directory numbers, bearer capability and SPIDs (service profile identifiers) between the switch and CPE frees end-users from having to program these network details into their equipment. Without the Automatic SPID feature, the service provider must provide to the end-user, a unique SPID to be programmed into each terminal on the interface.

Indirectly, the feature also simplifies the provisioning process since service providers can use IOCs (ISDN order codes), i.e., packaged sets of features and the switch translations that make them work. Since features packaged with IOCs require a directory number and/or SPID to be sent to the switch, Auto SPID can send the needed information to the ISDN terminal automatically.

With the Auto SPID feature, a FIT (Fully-Initializing Terminal) is manufactured with a pre-programmed SPID. The pre-programmed SPID, called a Universal SPID, is a value recognized by the switch, prior to terminal downloading, as an indication that the switch can download the SPID(s) assigned by the telephone company to the terminal. This process makes SPID(s) and their function entirely transparent to the end-user.

Binding is the association of a terminal (TEI) with its USOP (User Service Order Profile). A FIT that supports Auto SPID initialization procedures will first request its SPID to be sent from the switch and then use it in subsequent initialization requests. For Auto SPID requests, the terminal sends in two initialization requests; one with the Universal SPID and the second with the SPID that was then sent to it from the switch. In this case, it's the second initialization request with the SPID that initiates binding. Fully-initializing terminals that do not support Auto SPID require the SPID to be programmed into the equipment manually.

For additional information, see Division 2, Section 1AM on National ISDN features.

2. FEATURE ASSIGNMENT

To activate this feature, the ACT field for SFID 200 must be set to "Y" on the SFSYS form (5713-1 Record). The value 010101010101 for the USPID field has been reserved to support this feature, therefore this value should not be entered on the DSLUSR form. In a retrofit from 5E9(2) and earlier to 5E10, if the value 010101010101 has been used, a different value must be selected and the CPE (Customer Premises Equipment) reprogrammed before this feature is activated.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2 23.8
SFSYS	5713-1	3	5AR	8.22

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user. The value 010101010101 is reserved for this feature and cannot be entered as a value in the USPID field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 200 must be set to "Y" to activate this feature.

4. GLOSSARY

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CPE	Customer Premises Equipment
FIT	Fully Initialized Terminal
SPID	Service Profile Identifier
TEI	Terminal Endpoint Identifier
USOP	User Service Order Profile
USPID	User Service Profile Identifier

SEC. 4A201: DENY AUTO CALLBACK ON INTRALATA PIC CALLS - PER CIC CONTROL

1. FEATURE DESCRIPTION

Deny Automatic Callback on IntraLATA PIC Calls - Per CIC Control is a secured feature using SFID (Secured Feature ID) 201 and must be purchased before being activated. The feature number for this feature is 99-CP-3587.A.

The Deny Automatic Callback on IntraLATA PIC Calls - Basic feature was deployed on the 5ESS-2000 Switch in a software update for the 5E10 Software Release and for the Beginning Managed Introduction of the 5E11 Software Release.

The enhanced version, Deny Automatic Callback on IntraLATA PIC Calls - Per CIC Control is being deployed in a software update for 5E10 and 5E11 Software Releases and for the Beginning Managed Introduction of the 5E12 Software Release.

The Deny Automatic Callback on IntraLATA PIC Calls - Basic feature provides blocking of AC (Automatic Callback) for intraLATA toll calls not carried by the LEC (Local Exchange Carrier) to private DNs (previous incoming call received with an indication of privacy). The Deny Automatic Callback on IntraLATA PIC Calls - Per CIC Control feature is a feature enhancement which replaces the Deny Automatic Callback on IntraLATA PIC Calls - Basic feature. When the Deny Automatic Callback on IntraLATA PIC Calls - Per CIC Control feature is installed, AC will also be allowed for calls carried by those non-LEC carriers for which there is an indication, on a per CIC (Carrier Identification Code) basis, that the blocking should not apply. AC blocking does not apply for LEC CICs. The user blocked from accessing AC is given AC Block to Private Number denial announcement and the AC Block to Private Number traffic measurement is pegged.

The Deny Automatic Callback on ICLATA feature can be overridden for a CARRIER ID by setting the AC ICLATA OVR field on the ICF form to "Y".

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 201 is set to "Y" on the SFSYS form and the OFS ID field on the FOSYS form is set to 666.

For the denial treatment, set the AC BLOCK RTI field on the LASSOP form to the Automatic Callback announcement route index.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31
ICF	5305-1/2	3	3R	10.3
SFSYS	5713-1	3	5AR	8.22

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FOSYS form (5713-2 Record) - For 5E5 through 5E8 Software Releases, the FOSYS (Feature Optioning SYStem) form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). Transparency Features have been developed to replicate features that exist on the 1A ESS Switch. Added OFS ID 666 (Deny Automatic Callback on IntraLATA PIC Calls).

ICF form (5305 -1/2 Record) - This form is used to define the characteristics of Inter-LATA (Local Access Transport Area) carriers. For 5E10 and later, added the AC ICLATA OVR field.

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. Added SFID 201 (Deny Automatic Callback on IntraLATA PIC Calls).

SEC. 4A202: LDP MULTIPLE CIC SUPPORT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-110 Long Distance Platform.*

SEC. 4A203: LDP Data Calls

1. FEATURE DESCRIPTION

This feature is documented as part of the Toll Digital Exchange Basic Call Processing for Toll 5ESS Switch features. Please see Division 2, Section 4A165 for more information on the LDP Data Calls feature.

SEC. 4A204: DECOUPLING OF AM/CM FOR CM ONLY INITIALIZATION

1. FEATURE DESCRIPTION

The Decoupling of AM/CM (Administration Module/Communication Module) for CM Only Initialization feature provides a CM only initialization to use in the manual recovery of the 5ESS Switch. This includes EAI (Emergency Action Interface) and input message control capabilities as well as recovery from the failure of the CM to initialize. For further information on this feature refer to the Lucent Technology document number *235-105-220 (Recovery) Section 11.1.4.* The procedures here can only be done when the feature SFID is active.

The feature number associated with this feature is 99-5E-3484.

SEC. 4A206: DATA ONLY FOR PRI (PRIMARY RATE INTERFACE)

1. FEATURE DESCRIPTION

The feature number for the Data Only for PRI feature is 99-5E-3780. This secured feature uses SFID (Secured Feature ID) 206 and is deployed on the 5ESS Switch in a software update for the 5E10 and later Software Releases.

This feature allows the switch operator to limit the calls coming into the switch via a PRI to only data calls, by subscription. If the PRI is provisioned to originate data calls only, an attempt to originate a voice call will be blocked and an appropriate ISDN (Integrated Services Digital Network) message will be sent back to the originating equipment clearing the call. For the purposes of this feature, only 56 kbps or 64 kbps digital data is considered to be data. A call with a Bearer Capability of voice or 3.1 kHz audio will be considered voice and will be denied origination on a data-only PRI.

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2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 206 on the SFSYS form (5713-1 Record) is set to "Y" and the TKGRP form (5202-1 Record) is provisioned.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1	3	2A	5.1

SFSYS form (5713 Record) - This form is used to enable Secured Features.

TKGRP form (5202 Record) - This form is used to define a trunk group. The trunk information that is entered on these records is information that is common to the entire group. The ALW DATA ONLY field on the TKGRP form must be set to "Y".

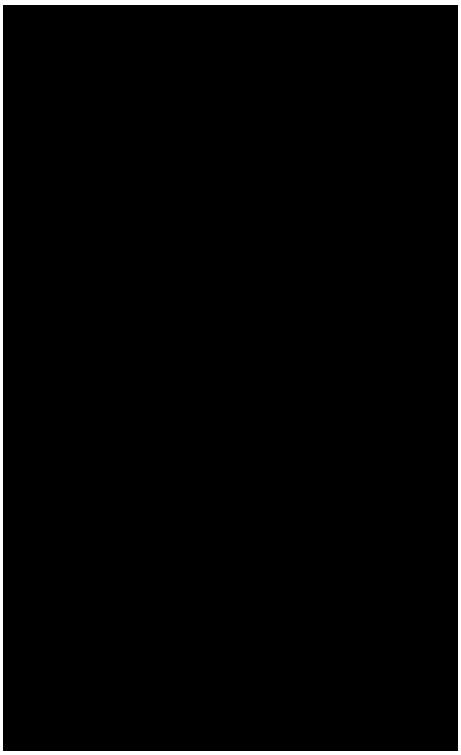

Figure 1 FORM FLOW FOR DATA ONLY FOR PRI

SEC. 4A207: Multiple ANI Processing With LDP

1. FEATURE DESCRIPTION

This feature is documented as part of the Toll Digital Exchange Basic Call Processing for Toll 5ESS Switch features. Please see Division 2, Section 4A165 for more information on the Multiple ANI Processing with LDP feature.

SEC. 4A208: CALL INFORMATION DISPLAY

1. FEATURE DESCRIPTION

The feature number for the CID (Call Information Display) feature is 99-5E-4382. This secured feature

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(SFID 208) is being deployed as a software update for the 5E10 and 5E11 Software Releases.

The feature can be used for tracing an originated ASP (Advanced Service Platform) trigger call. The tool incorporates certain existing capabilities of the 5ESS switch, while introducing new software for data collection and formatting. The trace can be set for one test line at a time and will dump the ASP query(s) and response(s) along with the digit analysis data, and routing data associated with the call.

For further feature information see ASP Release 0.1B feature document (235-190-126).

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 208 is set to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used by the SEE (SystemEquipment Engineer) to enable the feature for the operating company.The secured feature ID 208 on the SFSYS form must be set to "Y"to provide offices with control of this feature.

SEC. 4A209: REPEAT DIAL INTERWORKING with AIN ORIGINATING BUSY TRIGGER

1. FEATURE DESCRIPTION

Available with 5E11 and later, the Repeat Dial Interworking with AIN Originating Busy Trigger feature is a secured feature controlled by Secured Feature ID 209. The feature number is 99-CP-3749.

This feature provides additional capabilities on the 5ESS-2000 Switch that allow a Repeat Dial (that is, LASS Automatic Recall) activation service to be implemented after encountering an Originating AIN Busy trigger. The result is a simpler method of invoking the LASS AR (Automatic Recall) feature after the caller has dialed a number that is busy.

The purpose of the Repeat Dial feature is to enhance the functionality provided by the "Originating Busy/No Answer Office Triggers with Extended Ringing" secured feature (SFID 189). The Originating Busy/No Answer Office Triggers with Extended Ringing feature allows the SSP (Service Switching Point) to query the SCP (Service Control Point) upon detection of a user busy condition for calls originated by lines at the SSP. When a busy condition is detected, a "Busy" Query is launched and the SCP Response could reroute the call to another number or to an announcement. The ability to return the LASS Automatic Recall activation code and activate AR on behalf of the originator IS NOT allowed by SFID 189 or by existing functionality. That is the functionality enhancement provided by the Repeat Dial Interworking with Originating Busy Trigger feature, the ability of the SSP to receive and process an SCP generated Collect_Information message. The Collect_Information message contains an AR (Automatic Recall) activation code (possibly preceded by an Escape to POTS code). Option ID 524 must additionally be unlocked to allow escape from an IDP (Individualized Dialing Plan) to the ODP (Office Dialing Plan) with LASS AR. Typically, the Collect_Information message would be received after an interactive announcement session with the caller that received busy tone. The interactive announcement would explain the options available (such as, cost and "press 1 to activate AR").

Before the Feature Lock (SFID 209) that controls the Repeat Dial Interworking feature can be activated for the office, the feature lock for the Originating Busy/No Answer Office Triggers (SFID 189) must be activated. Activating and provisioning SFID 189 results in an Originating Busy Query whenever any type of originating line encounters a busy condition. SFID 209 can then be activated which allows the 5ESS-2000 Switch to receive an R0.1 Collect_Information message from the SCP. A Collect_Information message must contain an AR activation code. If the digits returned in the Collect_Information message do

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not equate to the AR activation code, the call does not invoke AR and the call is processed by error handling. The caller that encountered the busy that resulted in the Originating Busy Query must: 1) be defined with a Class of Service that allows AR to be invoked, and 2) have the ability to use LASS AR through subscription or general availability.

This feature is also dependent on the existence of active ASP functionality on the 5ESS-2000 switch. The ASP 0.1B (SFID 126) feature and the Originating Busy/No Answer Triggers with Extended Ringing (SFID 189) feature must both be unlocked (and the Originating Busy Trigger provisioned) in order to use this feature.

In addition, the existing LASS AR feature and its supporting announcements must be active on the 5ESS-2000 switch where this feature will be used. Service logic must also be available on the SCP connected to the 5ESS-2000 switch in order to control the operation of this feature.

1.1 Overview of the Repeat Dial Interworking with Originating Busy Triggers

This feature interacts primarily with the LASS AR feature in that the feature activation code that invokes AR for a given subscriber can now be delivered to the 5ESS-2000 switch in a message from an ANI SCP. This simplifies the user interface to the AR feature. After the activation code is received, it is interpreted by the switch in the same way that it would be if the subscriber had dialed it.

This feature does not alter the internal count that is kept of the number of ASP triggers that are encountered on a call (that is, the ASP serial trigger count). This feature causes this count to be reset to zero because the activation of AR represents the beginning of a new call attempt.

This feature is dependent on the existence of active ASP functionality on the 5ESS-2000 switch. The ASP 0.1B feature (SFID 126) and the Originating Busy/No Answer Triggers with Extended Ringing feature (SFID 189) must both be unlocked (and the Originating Busy trigger provisioned) in order to use this feature.

The capabilities provided by this secured feature affect several ASP areas. A brief overview of these capabilities is contained in the following paragraphs.

1.2 User Perspective

Rather than having to remember when and how to use AR (such as, remembering the activation code to dial), the Repeat Dial feature simplifies the AR activation process by providing the ability to prompt a caller if they want to make use of AR when a call they are making reaches a busy line. If they decide to use AR, then the existing AR feature can be automatically invoked for them, and they can be advised to hang up and wait for notification when the call can be completed. The existing AR feature monitors the busy line, and rings back the caller when it is no longer busy. The caller picks up their phone in response to the ring back, and the call is put through.

1.3 End-User Scenario

A typical end-user scenario involving the Repeat Dial feature would be the following:

1. Caller places a call, and an O_Called_Party_Busy trigger is detected due to the called party being busy. A Busy Query is sent to the SCP.

2. The SCP replies with a STR (Send_To_Resource) message, prompting caller to press 1 if they would like to invoke Repeat Dial.

3. Caller presses 1 to request Repeat Dial (also known as, LASS Automatic Recall). SSP sends Resource_Clear message including the caller's digit entry. (If the caller does not press any key, or presses a key other than "1", the Resource_Clear response to the SCP would reflect this. The SCP would then likely send a "Continue" message to the SSP and the caller would be given busy treatment.)

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4. Responding to the caller's request for Repeat Dial service, the SCP replies with the Collect_Information message, which includes the digits corresponding to the AR activation code (for example, "*66") in the CollectedDigits parameter. (An Escape to POTS dial code is allowed to precede the AR code in this parameter, but it must be appropriate for the line.)

5. The SSP selects the DAS associated with the originating facility, and analyzes the contents of CollectedDigits to verify that the digits represent a LASS Automatic Recall activation code (possibly preceded by an Escape to POTS).

NOTE: The SCP DAS and any DAS associated with the Originating Busy trigger are not used when interpreting the contents of the CollectedDigits parameter. If the caller's line is in an IDP (Individualized Dialing Plan), then analysis of the digits begins in the IDP. If there is no IDP, then the DAS associated with the caller's line is always used. The Multiple Rate Center features (99-5E-3192 and 99-5E-3426) which can normally alter the DAS that is used, have no impact on the DAS used for interpreting the digits in CollectedDigits.

1. Normal AR invocation occurs as if the caller had dialed the AR code.

If the called party's line has become idle before the Collect_Information message is received with the AR activation code, then the call is routed to that line immediately. If the called party's line has not become idle (that is, it is still busy), then a switch announcement can tell the caller to hangup while the AR feature monitors the line for availability. When that monitoring indicates that the called party's line has become idle, the caller is rung back, and the call is routed to the called party.

The scenario assumes that the AR feature is available to the caller, either through individual subscription to LASS AR or the AR had been made generally available in the office serving the caller. If this were not the case and invocation of AR was attempted for a line, the caller would receive an error treatment like that provided if that person had picked up their phone and dialed the AR code.

NOTE: Once an Originating Busy trigger has fired, it is not considered to be within the authority of the 5ESS-2000 switch to prevent the playing of announcements that offer AR invocation just because AR is not available to a given user. The switch is required to follow the legitimate directions provided by the SCP even when they lead inevitably to error treatment being given to the user. However, the 5ESS-2000 switch service provider does have controls available that can be used to prevent the firing of the Busy trigger, which in turn would prevent use of the Repeat Dial feature to activate AR when it is not desirable to do so. See the Inhibiting Originating Busy/No Answer Triggers (99-5E-3760) and Call Screening for ASP Originating Busy/No Answer Triggers (99-5E-3761) secured features for further information. For more information concerning these features, see Division 2, Section 4A210 and Section 4A212, respectively.

1.4 Call Processing Associated with the Repeat Dial Interworking With Originating Busy Triggers Feature

It is the receipt of the Collect_Information message associated with an ASP Originating Busy Trigger that enables the Repeat Dialing call processing.

It is also expected that an interactive announcement interaction occurs between the Busy query and the Collect_Information response, using either "Send to Resource" or "Send to Outside Resource" functionality.

2. TRANSLATION REQUIREMENTS

There are no changes/additions to any forms, fields or crosschecks required for this secured feature. The only provisioning required is on the SFSYS form, set:

- the ACT field for SFID 189 to "Y".

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- the ACT field for SFID 209 to "Y".

SEC. 4A210: ASP INHIBITING OF ORIGINATING BUSY/NO ANSWER OFFICE TRIGGERS

1. FEATURE DESCRIPTION

Available with 5E11 and later, the ASP (Advanced Services Platform) Inhibiting of Originating Busy/No Answer Office Triggers feature is a secured feature controlled by Secured Feature ID 210. The feature number is 99-5E-3760.

This feature enhances the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature (SFID 189). The Originating Busy/No Answer Office Triggers with Extended Ringing feature allows the SSP to query the SCP upon detection of a user busy or no answer condition. The provisioning for SFID 189 allowed two "office-wide " originating triggers (Busy and No Answer) to be enabled. If these triggers were enabled, then calls originated by lines at the SSP that detected user busy or no answer encountered the appropriate trigger. The intent of the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, is to provide more granular control of office-wide Originating Busy and No Answer triggers. SFID 210 provides this control on an individual line basis, on groups of lines (such as, an IDP Group, Class of Service, or Terminal Group) and on a Screening Index basis.

Three other secured features are associated with the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature (SFID 189). They are:

1. Provisioning of Originating Busy/No Answer Triggers as Subscribed Triggers (99-5E-4035)
2. Call Screening for ASP Originating Busy/No Answer Triggers (99-5E-3761)
3. Repeat Dial Interworking with ASP Originating Busy Triggers (99-CP-3749)

These secured features provide additional controls and enhancements to the Originating Busy/No Answer Office Triggers with Extended Ringing secured feature.

The functionality provided by the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature enhances the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature (SFID 189). Therefore, it is important to have basic knowledge about SFID 189 before understanding the capabilities provided by the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. Refer to Division 2, Section 4A189 for further information on SFID 189.

When SFID 189 is unlocked and provisioned, Busy and No Answer Triggers may be encountered on all calls originated by analog and ISDN lines at an SSP under most conditions. SFID 189 is enabled on an "office-wide" basis. This could result in undesired queries. For example, individual lines or an IDP Group might not want to interact with the capabilities provided by this feature. Also the switch-owner might wish to block a certain type of Screening Index from accessing the capabilities provided by SFID 189.

With the functionality provided by the SFID 210 (ASP Inhibiting of Originating Busy/No Answer Office Triggers) feature, if the analog or ISDN line encounters a busy or no answer condition, a query may not launched. If an originator is inhibited through the use of SFID 210, and encounters an active Originating Busy or No Answer Trigger, the Trigger is ignored and busy or no answer treatment is provided as appropriate.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature.

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The ACT field for SFID 210 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
DSLUSR	5908	5	1I	23.2
LINE	5109-1/2/3	3	1I	1.6
MLHLN	5111-1/2/3	3	1K	1.6
SCRIDXPA	5543	3	5AQ	8.24

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 189 and SFID 210 must be set to "Y" to enable the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature.

DSLUSR form (5908 Record) - This form has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user and 4) defines the On Demand B-channel packet switching attributes of a DSL user. The OFC OBL INH and the OFC ONA INH fields were added to inhibit triggers on an individual line basis.

LINE form (5109 Record) - This form defines the Office Equipment Number and features for each telephone number in the 5ESS-2000 switch. The OFC OBL INH and the OFC ONA INH fields were added to inhibit triggers on an individual line basis.

MLHLN form (5111 Record) - This form is used to define individual terminal numbers assigned to a specific MLHG. The OFC OBL INH and the OFC ONA INH fields were added to inhibit triggers on an individual line basis.

SCRIDXPA form (5543 Record) - This form is used to assign parameters to a line or trunk on a per screening index basis. The OFC OBL INH and the OFC ONA INH fields were added to inhibit triggers on an individual line basis.

Figure 1 ASP INHIBITING OF ORIGINATING BUSY/NO ANSWER TRIGGERS FORM FLOW

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SEC. 4A211: ASP PROVISIONING OF ORIGINATING BUSY/NO ANSWER TRIGGERS

1. FEATURE DESCRIPTION

Available with 5E12 and later, the ASP (Advanced Services Platform) Provisioning of Originating Busy/No Answer Triggers feature is a secured feature controlled by Secured Feature ID 211. The feature number is 99-5E-4035.

This feature provides the ability to associate an Originating BLNA (Busy Line/No Answer) trigger to an individual line through the assignment of an originating ASP (BRCS) Business and Residential Custom Services feature. When assigned to the line, the individual Originating BLNA trigger takes precedence over the office Originating BLNA trigger.

Three other secured features are associated with the ASP Originating Busy/No Answer Office Triggers with Extended Ringing secured feature (SFID 189). They are:

1. ASP Inhibiting of Originating Busy/No Answer Office Triggers (99-5E-3760)
2. Call Screening for ASP Originating Busy/No Answer Triggers (99-5E-3761)
3. Repeat Dial Interworking with AIN Originating Busy Trigger (99-CP-3749)

The functionality provided by the ASP Provisioning of Originating Busy/No Answer Triggers feature enhances the functionality provided by the ASP Originating Busy/No Answer Office Triggers with Extended Ringing secured feature (SFID 189). Therefore, it is important to have basic knowledge about SFID 189 before understanding the capabilities provided by the ASP Provisioning of Originating Busy/No Answer Triggers feature. Refer to Division 2, Section 4A189, for further information on SFID 189.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the ASP Provisioning of Originating Busy/No Answer Triggers feature.

The ACT field for SFID 211 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

In 5E12, new Originating BLNA triggers may be assigned by means of an ASP BRCS feature. When an ASP BRCS feature is assigned with one of the new BLNA triggers and the trigger is marked active, it has precedence over the office wide BLNA trigger defined on the OFCOPT form. Like the office BLNA triggers, the BLNA triggers defined on these two ASP forms must be defined on the NSTRIG form first.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPFD	5632-1	4	31A	12.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

ASPFD form (5632-1 Record) - This form defines various combinations of options available with ASP features. The OBL TRIG NBR, OBL TRIG ACT, ONA TRIG NBR, ONA TRIG ACT and the ONA TIMER fields were added to support the ASP Provisioning of Originating Busy/No Answer Triggers feature.

ASPLPA form (5632-2 Record) - This form defines the per port data associated with ASP features. For 5E12 and later, the OBL TRIG NBR, OBL TRIG ACT, ONA TRIG NBR, ONA TRIG ACT and the ONA TIMER fields were added to support the ASP Provisioning of Originating Busy/No Answer Triggers feature.

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ASPMPA form (5632-3 Record) - This form defines ASP Multi-Line Hunt line parameters. The Line (MLHG/Term) Parameter form is used when an ASP constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters on the ASPFD form. The OBL TRIG NBR, OBL TRIG ACT, ONA TRIG NBR, ONA TRIG ACT and the ONA TIMER fields were added to support the ASP Provisioning of Originating Busy/No Answer Triggers feature.

NSTRIG form (5324 Record) - This form identifies network service applications. Populate the trigger number that will be used for Busy/No Answer on the form.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous options and parameters. Populate the office-wide Originating BLNA parameters, ORIG BUSY TRG and ORIG NO ANS TRIG on this form. The trigger numbers must have been previously defined on the NSTRIG form.

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 189 and SFID 210 must be set to "Y" to enable the ASP Provisioning of Originating Busy/No Answer Triggers feature.

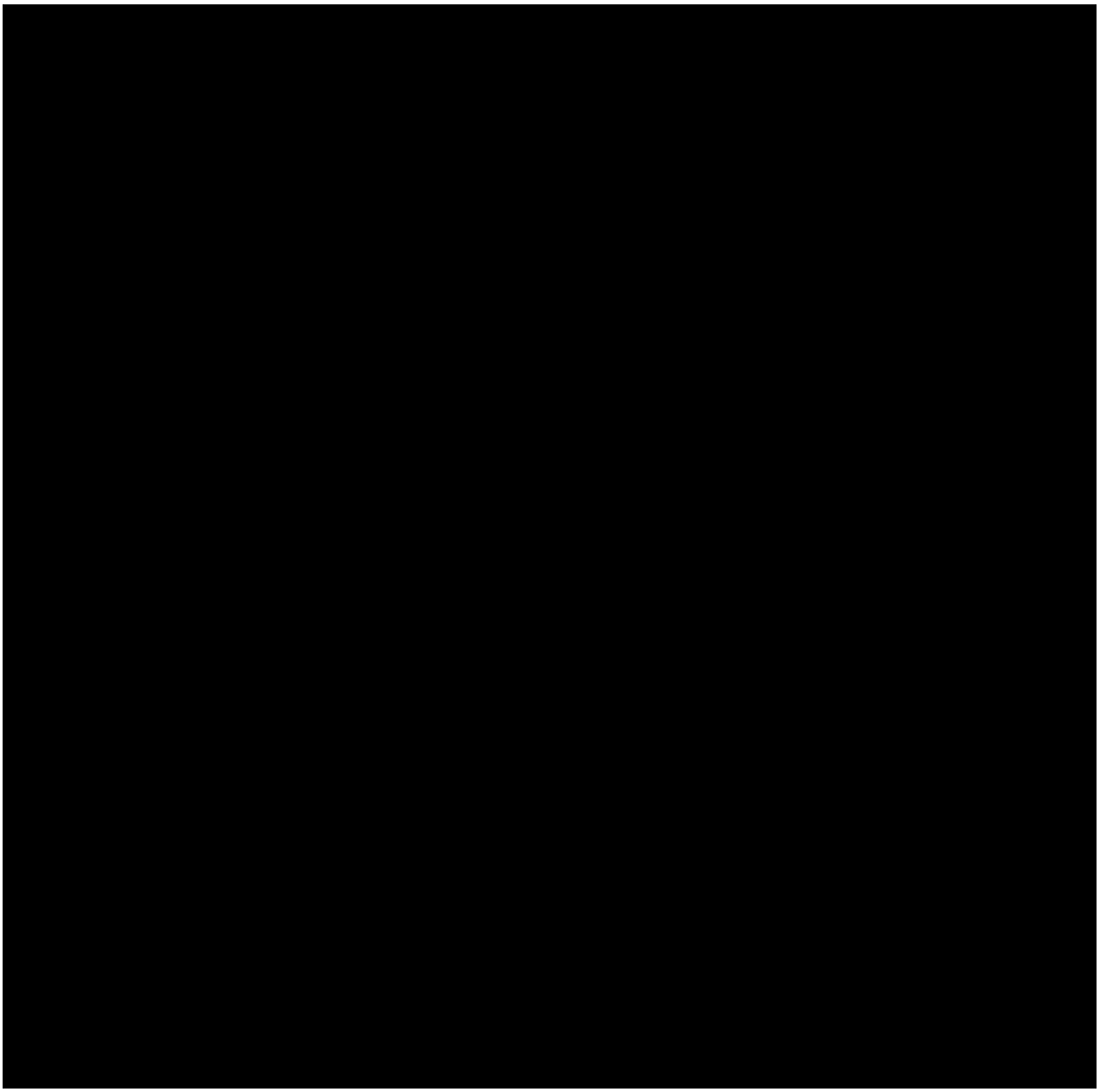

Figure 1 ASP PROVISIONING OF ORIGINATING BUSY/NO ANSWER TRIGGERS FORM FLOW

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SEC. 4A212: CALL SCREENING FOR ASP ORIGINATING BUSY/NO ANSWER TRIGGERS

1. FEATURE DESCRIPTION

Available as a 5E11 Software Update and in the Beginning Managed Introduction of the 5E12 Software Release, the Call Screening for ASP Originating Busy/No Answer Triggers feature is a secured feature (SFID 212) having feature number 99-5E-3761.

This feature enhances the functionality provided by the Originating Busy/No Answer Office Triggers with Extended Ringing secured feature (SFID 189). For more information concerning this feature, see Division 2, Section 4A189. The Originating Busy/No Answer Office Triggers with Extended Ringing feature allows the SSP to query the SCP upon detection of a user busy or no answer condition. The provisioning for SFID 189 allows two "office-wide" originating triggers (Busy and No Answer) to be enabled. If these triggers are enabled, then calls originated by lines at the SSP that detected user busy or no answer encounter the appropriate trigger.

The Call Screening for ASP Originating Busy/No Answer Triggers feature provides more granular control of Originating Busy and No Answer triggers. The capabilities of the Call Screening for ASP Originating Busy/No Answer Triggers feature (SFID 212) allows inhibit indicators to be provisioned that block (screen) office-wide Originating Busy and No Answer Triggers from being encountered. These inhibit indicators can be provisioned as follows:

- By digit string. A digit string (such as, 976) can be defined in one of the Digit Analysis tables (such as, PDIT, LDIT, and so on) to block the office-wide Busy and/or No Answer Triggers.
- By Carrier. A carrier can be defined to inhibit the office-wide Busy and/or No Answer Triggers from being encountered.
- Out-of-LATA calls. Calls made by originators that are routed outside of the LATA can be restricted from encountering the office-wide Busy and No Answer triggers. This is an office-wide restriction, and applies to all line originated calls that terminate outside the LATA.

Three other secured features are associated with the Originating Busy/No Answer Office Triggers with Extended Ringing secured feature (SFID 189). They are:

- Provisioning of Originating Busy/No Answer Triggers as Subscribed Triggers (99-5E-4035). For more information concerning this feature, see Division 2, Section 4A211.
- Inhibiting of ASP Originating Busy/No Answer Office Triggers (99-5E-3760). For more information concerning this feature, see Division 2, Section 4A210.
- Repeat Dial Interworking with ASP Originating Busy Triggers (99-5E-3749). For more information concerning this feature, see Division 2, Section 4A209.

These secured features provide additional controls and enhancements to the Originating Busy/No Answer Office Triggers with Extended Ringing secured feature.

2. FEATURE ASSIGNMENT

For the feature assignment call flow, see Figure 1.

2.1 Feature Activation

The Originating Busy/No Answer Office Triggers with Extended Ringing (SFID 189) secured feature must be enabled before the Call Screening for ASP Originating Busy/No Answer Triggers feature is enabled.

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The Originating Busy/No Answer Office Triggers with Extended Ringing (SFID 189) secured feature is activated by setting the SFID 189 ACT field on the SFSYS form (5713-1 Record) to "Y". The Call Screening for ASP Originating Busy/No Answer Triggers feature is then activated by setting the SFID 212 ACT field on the SFSYS form to "Y".

When Originating Busy/No Answer Office Triggers with Extended Ringing is enabled, Busy and No Answer Triggers applies to all calls originated by analog and ISDN lines at an SSP under most conditions. When the analog or ISDN line encounters a busy or no answer condition, a query was launched. When SFID 189 is enabled on an office-wide basis, this could result in undesired queries. To prevent these undesired queries, the Call Screening for ASP Originating Busy/No Answer Triggers provides several methods of inhibiting the office-wide Originating Busy and No Answer Triggers.

2.2 Provisioning of the Inhibit Indicators

When the Call Screening for ASP Originating Busy/No Answer Triggers feature is activated by setting the SFID 212 ACT field on the SFSYS form, inhibiting of office-wide Busy and No Answer Triggers can be provisioned for digit strings, carriers, and out-of-LATA calls as follows:

- The service provider may want to designate certain digit strings (such as, 976) from encountering the Busy and No Answer Triggers. For example, an originating line dials a 976 number and 976 is provisioned in the originator's dialing plan to inhibit Busy and No Answer Triggers. If this call results in a busy or no answer condition, then the office-wide Originating Busy or No Answer Trigger is not encountered.

  For a digit string, the field names for the inhibit indicators are INH OBL and INH ONA. These fields allow values of "Y" and "N", where the default value is "N". "N" indicates do not inhibit. The digit analysis forms that allow provisioning of these fields include, PDIT form (5300-2 Record), LDIT form (5300-3 Record), IDDD form (5307 Record), RDIT form (5300-7/8 Record), and MLDIT form (5300-3A/B Record).

  Note: Digit Strings on PDIT that can set the INH OBL and INH ONA fields to "Y" are limited to the following specific digit strings: 0-, 00, 0+, 1+, 01+, and 010.

- The service provider may want to inhibit the office-wide Busy and/or No Answer Triggers for one, some or all of the carriers in the SSP office. For example, Carrier XYZ does not want to be associated with Originating Busy and No Answer Triggers. The Carrier XYZ is provisioned on the ICF form (5305 Record) to inhibit Originating Busy and No Answer Triggers. Calls from an originating line in the SSP that route through the inhibited Carrier and encounter a busy or no answer condition are inhibited from encountering the office-wide Busy and No Answer Triggers.

  Note: Inhibiting the triggers by carrier are valid only for the last carrier used to route the call out of the SSP.

  For a specified Carrier, the field names for the inhibit indicators are OFC OBL INH and OFC ONA INH. These fields allow entries of "Y" and "N", where the default value is "N". "N" indicates do not inhibit. These fields appear on the ICF form (5305 Record).

  Note: The OFC OBL INH and OFC ONA INH fields cannot be set to "Y" if the CARRIER TYPE is "LEC" or "PSUEDO".

- The service provider may want to block Busy and No Answer Triggers for ALL calls that route outside of the LATA (such as, InterLATA, International, and so on). Two Out-of-LATA inhibit fields are provisioned on the OFCOPT form (5509 Record) or ASPOPT form (5670 Recrod) to disable, for the

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entire SSP office, office-wide Busy and No Answer Triggers. When the appropriate field is set to "Y", a call from an originating line in the SSP office that routes outside the LATA and encounters a busy or no answer condition, will ignore the office-wide Busy and No Answer Triggers. An Out-of-LATA call is determined by switch call processing in digit analysis. The Called Party digits from an originating line in the SSP are defined in digit analysis as a certain CALL TYPE. If the CALL TYPE is one that has been defined by this feature as being Out-of_LATA, then the trigger is inhibited.

Note: For inhibiting the triggers for out-of-LATA calls, it is the last call type that is used to determine if the triggers should be inhibited.

For Out-of-LATA calls, the field names for the inhibit indicators are INH OFC OBL OOL and INH OFC ONA OOL. These fields allow entries of "Y" and "N", where the default value is "N". "N" indicates do not inhibit. These fields appear on the OFCOPT form (5509 Record) for 5E11 and on the ASPOPT form (5670 Record) for 5E12 and later.

The capabilities of the Call Screening for ASP Originating Busy/No Answer Triggers feature provide inhibiting of the office-wide busy and no answer triggers. If an originator is inhibited through any one, or all of these inhibiting methods, and encounters an active Originating Busy or No Answer Trigger, the trigger is ignored and busy or no answer treatment is provided as appropriate.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPOPT	5670	4	31G	8.49
ICF	5305	3	3R	10.3
IDDD	5307	3	3T	9.6
LDIT	5300-3AB/5	3	3C	9.3
MLDIT	5300-3 A/B	3	3C	9.15
OFCOPT	5509	3	5I	8.1, 8.15
PDIT	5300-2	3	3B	9.2
RDIT	5300-7/8	3	3H	9.9

ASPOPT form (5670 Record) - This form is used to define the ASP global parameters residing in the CP. The IHN OFC OBL OOL and IHN OFC ONA OOL fields were added to support this feature in 5E12 and later.

ICF form (5305-1/2 Record) - This form is used to define the characteristics of Inter-LATA (Local Access Transport Area) carriers. The OFC OBL INH and OFC ONA INH fields were added for 5E11 and later.

IDDD form (5307 Record) - This form is used for International Direct Distance Dialing Country Access Codes. The INH OBL and INH ONA fields were added for 5E11 and later.

LDIT form (5300-3a/3b/5a/5b Record) - This form is used to define all area, office and service codes in a 5ESS-2000 Switch. The INH OBL and INH ONA fields were added for 5E11 and later.

MLDIT form (5300-3a/3b/5a/5b Record) - This form is used to define all area, office and service codes in a 5ESS-2000 Switch. This form allows multiple entries of incoming digits to be input when they have common attributes. The INH OBL and INH ONA fields were added for 5E11 and later.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The INH OFC OBL OOL and INH OFC ONA OOL fields were added to support this feature for 5E11.

PDIT form (5300-2 Record) - This form is used to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). The INH OBL and INH ONA fields were added for 5E11 and later.

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RDIT form (5300-7a/7b/8a/8b Record) - This form contains information for the translation of remaining dialed digit strings for digit analysis. The INH OBL and INH ONA fields were added for 5E11 and later.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 212 to "Y". Before activating this feature, the Originating Busy/No Answer Office Triggers with Extended Ringing secured feature must be enabled by setting the ACT field for SFID 189 to "Y".

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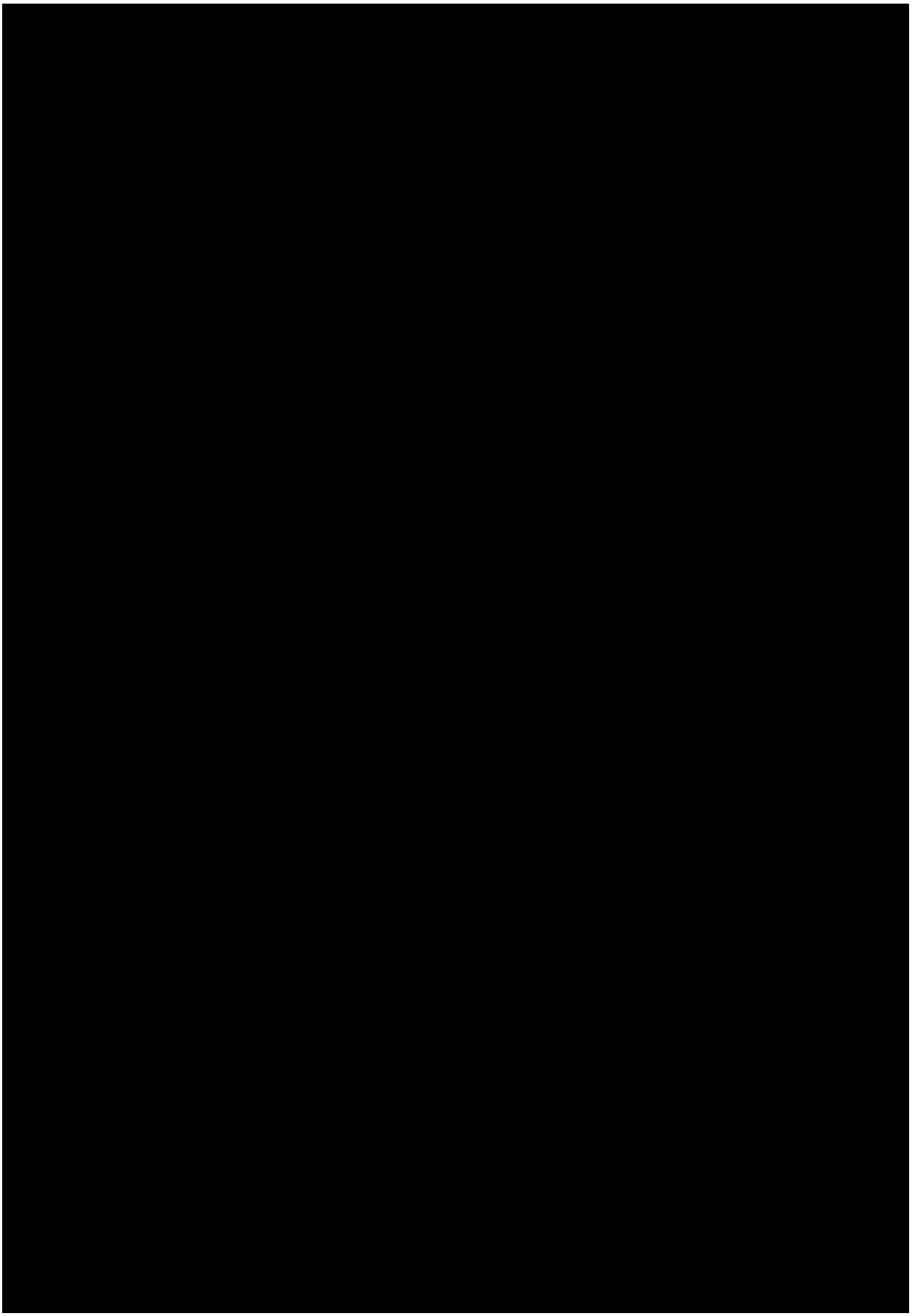

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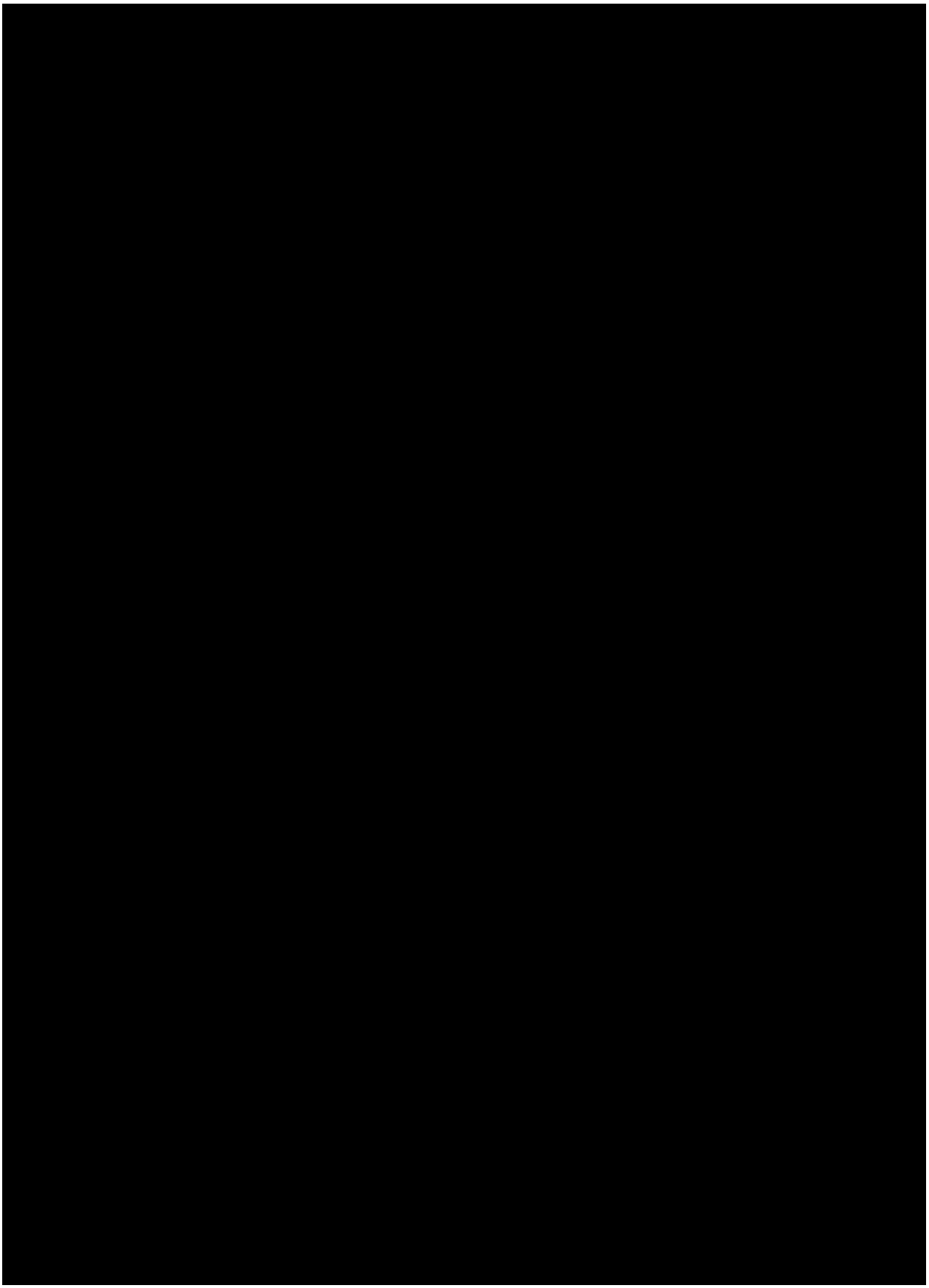

Figure 1 FORM FLOW FOR CALL SCREENING FOR ASP ORIGINATING BUSY/NO ANSWER

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TRIGGERS

SEC. 4A213: ROUTE INTERNATIONAL CALLS

1. BACKGROUND

Presently, if the service provider of a toll 5ESS-2000 Switch wishes to connect to international carriers using international signaling protocols, the SCP (Service Control Point) returns an Analyze_Route message that contains in the PrimaryCarrierID parameter, the ID of the international carrier, and also contains a CalledPartyID parameter. The NoN and Digits values in the CalledPartyID parameter are translated through digit analysis and routing. An international Code Index and Route Index from ICF (InterLATA Carrier Feature) form (5305 Record) are selected for the international operator or non-operator route.

2. FEATURE DESCRIPTION

The feature number for the Route International Calls feature is 99-5E-3968. This secured feature (SFID 213) is being deployed as a software update for the 5E10 Software Release and for the Beginning Managed Introduction of the 5E11 Software Release. The Route International Calls By Country Code feature is available to a 5ESS Switch-2000 that is configured as a toll switch.

The feature enhances the post-query ASP (Adjacent Signaling Point) routing of international calls detected by the ASP Trunk Trigger for Toll. The post-query routing enhancements allow the 5ESS-2000 toll switch service provider with the ability to provide a unique route index for both international non-operator and operator traffic for a specified carrier. This enhances the current practice of routing to the carrier through the routes provided on the ICF for international non-operator and international operator traffic.

The capabilities of this secured feature allow a 5ESS-2000 Toll Switch service provider to select, for international calls, multiple Route Indexes per Carrier. The translations in the 5ESS-2000 Toll Switch must define these route indices and point them to the appropriate trunk groups. The SCP can select these route indexes by defining them in an Analyze_Route message PrimaryTrunkGroup parameter.

When the service provider wishes to utilize the capabilities of this secured feature, it must provision in the SCP, the appropriate service logic to select a unique route for an international call. The unique route is defined in an Analyze_Route message PrimaryTrunkGroup parameter. The Analyze_Route message must also include PrimaryCarrierID and CalledPartyID parameters.

3. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 213 must be set to "Y" on the SFSYS form (5713-1 Record).

The Route International Calls By Country Code feature affects ASP call processing of an Analyze_Route message as follows:

- Check if SFID 213 is unlocked.
- If SFID 213 is unlocked, check to see if the ASP Toll bit is set on the incoming trunk group TKGRP form (5202 Record).
- If SFID 213 is active and the ASP Toll bit is "Y", then the CalledPartyID is checked to be an international type of number (defined by the CalledPartyID NoN field being set to INTL or INTL OP). If these conditions are met, then the PrimaryTrunkGroup parameter is checked for the following:
  - The Route Type must be Hunt (not MC).
  - The WATS Indicator must be NO.
  - The Outpulse Indicator must be NO.

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If these conditions are true in the Analyze_Route message, then the call proceeds through digit analysis and routing using the CalledPartyID and the PrimaryCarrierID parameters. THE INFORMATION IN THE PRIMARY TRUNK GROUP IS NOT USED TO ROUTE THE CALL AT THIS TIME! Call Processing continues up to the point where the international operator or non-operator Route Index and Code Index is selected (as defined on the ICF form). The route index defined by the PrimaryTrunkGroup parameter is inserted as an override to the ICF form Route Index and call processing resumes. The call completes to the SCP-defined route index.

It is important to note that any information defined in the AlternateTrunkGroup, SecondAlternateTrunkGroup, AlternateCarrier, or SecondAlternateCarrier parameters is discarded. The switch routes the call based on the value of the PrimaryTrunkGroup parameter returned by the SCP. The PrimaryCarrier returned from the SCP is used as the value of the carrier ID for signaling to the next switch, but is not used for routing purposes.

4. TRANSLATION REQUIREMENTS

No new fields nor data rules were added for this feature.

SEC. 4A214: TWO B-CHANNEL TRANSFER FEATURES

1. BACKGROUND

Currently, when an end-user's call over an ISDN (Integrated Services Digital Network) PRI (Primary Rate Interface) is transferred to another end user in the network over the PRI, the paths are joined at the controller, and the two B-channels remain in use for the duration of the transferred call. The two B-channels on the PRI remain held at the controller after the transfer. Thus, after a transfer, two B-channels are occupied on the PRI when neither of the users on the final connection reside on the controller.

As network operators deploy larger numbers of ISDN PRI-based controllers into their networks, the traffic-carrying capacity of the PRI becomes more important. Without this feature, the number of PRIs needed to support long duration transferred calls can be much greater than the number of PRIs required to support calls that are initially connected before transfer. In some applications the holding time of transferred calls can be 5 to 10 times the holding time of "pre-transferred" calls.

2. FEATURE DESCRIPTION

2.1 Two B-Channel Transfer on PRI

The feature number for this feature is 99-5E-3261. It is a secured feature (SFID 214) that is being deployed in the 5E13 Software Release.

This feature provides more efficient use of B-channels on a PRI after a call that has been established over a PRI has been transferred from the controller. The controller is a PBX or other intelligent peripheral.

TBCT (Two B-Channel Transfer) allows two calls over an ISDN PRI between two end-users and a controller to be transferred so that the two end-users are connected to each other, and the two B-channels on the ISDN PRI to the controller are released.

The controller, which is a PBX or other intelligent peripheral, interfaces to a 5ESS-2000 Switch over an ISDN PRI. The end users, who may be voice or data users, may be interfaced over analog or digital lines or trunks to the 5ESS-2000 Switch. The end users may also be interfaced to other switches in the network, which are interfaced to the 5ESS-2000 Switch over inter-switch trunks.

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Initially there are at least two calls over the PRI between end-users and the controller. Each call uses a B-channel on the PRI. To be eligible for TBCT, at least one of the calls must be in an answered state; it may have been initiated by the end-user or by the controller. The other call may be in an answered state, or, if initiated by the controller, it may be in a ringing state.

If the controller determines that two of the calls are to be transferred to each other, the controller sends a request for two B-channel transfer to the 5ESS-2000 Switch. The protocol is based on the Bellcore specifications in Bellcore GR-2865-CORE.

When the 5ESS-2000 Switch receives the request from the controller, it checks the validity of the message containing the request, the states of the calls to be transferred, the compatibility of the bearer capabilities of the calls, whether the PRI groups associated with the B-channels in the request are provisioned for the feature, whether the PRI groups are members of the same PRI serving group (see below for explanation of PRI serving group), whether interactions with other services or features should prohibit execution of the transfer, and other criteria. If any of the checks fail, an error message is sent to the controller, and the calls remain connected to the controller. If the checks pass, the 5ESS-2000 Switch performs the TBCT operations. The two users' calls are then connected together at the switch, and the two B-channels, which were previously occupied on the PRI by the users' calls to the controller, are released. After the transfer, the two B-channels are available for new calls to the controller. Billing for the transferred calls continues as if the transfer had not occurred.

This feature supports two B-channel transfer for data calls as well as voice calls. Bearer capabilities of speech and 3.1 kHz audio are supported. Switched Fractional DS1/NxDS0/Wideband data rate calls are not eligible for PRI TBCT. The feature provides an additional capability, which increases the size of the pool of B-channels that can be associated with a request. The multiple interface capability allows transfers between B-channels that are on different PRI groups, that is, B-channels that are associated with different D-channels. A PRI serving group is introduced with this feature. A PRI serving group consists of members, each of which is a PRI group. All members of a PRI serving group must be on the same SM (Switching Module).

This feature also provides two counters that are available to control requests and usage of the feature on a per PRI group basis. If the two B-channels are from different PRI groups, one counter is incremented -- that of the PRI group with the B-channel that requests the transfer. One counter records the number of TBCT requests per 10-second interval. If the number of TBCT requests reaches a provisionable limit within the time interval, all additional requests are denied in the current time interval. The second counter records the number of active transfers, that is, the number of transferred calls that are currently active. If the number of active transfers reaches a provisionable limit, all subsequent TBCT requests are denied. (It is also possible for the number of active transfers to exceed the limit, for example if the limit is lowered while there are active transfers on the interface.) When a sufficient number of transferred calls are cleared, such that the number of active transfers no longer equals or exceeds the limit, new TBCT requests will be allowed. An audit is provided to ensure the integrity of the active transfers counter.

Traffic measurements are provided to record feature usage on a requesting PRI group basis. The number of valid TBCT requests, the number of successful TBCT transfers, the number of overflows of the active transfers counter, and the number of overflows of the transfer requests per current interval counter are measured.

The scope of this feature is limited to the functions provided by the 5ESS-2000 Switch as a central office that serves the controller, and does not include the capability to generate the requests for TBCT when the 5ESS-2000 Switch is operated as a controller.

2.2 ISDN TBCT Notification to Controller

The feature number for this feature is 99-5E-7268. This feature is an added enhancement to the TBCT on PRI feature. It is being introduced in a 5E13 Software Update. This feature is also secured under SFID 214. With the addition of the ISDN TBCT Notification to Controller feature the customer is able to tell when a previously B-Channel transferred call is cleared. This is indicated to the controller by using a new

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NOTIFY message which is made up of notification information elements. This new PRI NOTIFY message provides the controller with a call tag for each B-channel transferred call being released. This call tag corresponds to an earlier tag received by the controller when the original transfer took place. This NOTIFY message also provides updated information of the number of active and available transfers. Informing the controller when previously PRI B-channel transferred calls are cleared enables the controller to better manage B-channels and call transfers.

3. FEATURE ASSIGNMENT

For 5E13 and later, to enable these features, 99-5E-3261 and 99-5E-7628, the ACT field for SFID 214 on the SFSYS form (5713-1 Record) must be set to "Y".

See Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9
PRIGRP	5211	3	2M	5.2
SFSYS	5713-1	3	5AR	8.22

MEASSUM form (5563) - This form is used to define components that have been selected for measurements for some sections of the 30-minute measurements report. For 5E13 and later, data rules were added.

PRIGRP form (5211 Record) - This form is used to establish the PRI GROUP and PRI TYPE for a D-Channel facility. For 5E13 and later, four new fields (TBCT ACTIVE, MAX ACT TBCT, MAX TBCT REQS, and TBCT SERV GRP) have been added to this form.

In a 5E13 Software Update, the NOTIFY CTRL field has been added to this form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 214 to "Y".

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Figure 1 FORM FLOW FOR TWO B-CHANNEL TRANSFER ON PRI

SEC. 4A216: NP - NON-CONDITIONAL 10-DIGIT TRIGGER FOR LRN

1. BACKGROUND

The functionality provided by the NP - Non-Conditional 10-Digit Trigger for LRN (Local Routing Number) feature, SFID (Secured Feature ID) 216, enhances the functionality provided by the NP -Basic LRN SFID 174. For more information on this feature, see Division 2, Section 4a174. Therefore, it is important to have a basic knowledge about SFID 174 before attempting to understand the capabilities provided by SFID 216.

Prior to unlocking the functionality provided by SFID 216, when SFID 174 was unlocked and provisioned, an LNP Trigger would not apply to a DN (Directory Number) that was provisioned in the same switch as the originator. That is, when party (A) dialed party (B) that resides in the same switch as party A, the call would route to party B without generating an LNP (Local Number Portability) query. This implies that party A's LDIT (Local Digit Interpreter Table) has been properly provisioned with an LNP TRIG NBR on the LDIT form (5300 Record).

With SFID 216 unlocked and provisioned on party B's DN, even though party B resides in the same switch as party A, an LNP query will occur. This gives control to the SCP (Service Control Point) to determine where party B truly resides.

Consult the Lucent Technologies 235-190-127 5ESS-2000 Switch Number Portability User's Guide for further information on SFID 174.

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2. FEATURE DESCRIPTION

The feature number for the NP - Non-Conditional 10-Digit Trigger for LRN feature is 99-CP-3888. This is a Secured Feature (SFID 216) that is being deployed in the 5E11 Software Update Release and in the BMI (Beginning Managed Introduction) of the 5E12 Software Release.

The intent of this feature is to enhance the functionality provided by the NP - Basic LRN Secured Feature (SFID 174). The NP - Basic LRN feature will only allow a LNP (Local Number Portability) trigger when the Dialed Digits do not translate to a line provisioned on the switch. That is, if the Dialed Digits translate to a line that is provisioned on the switch, an LNP query will not occur. All other LNP trigger conditions except the check for provisioned DN (Directory Number) remain in effect for the dialed number. The NP - Non-Conditional 10-Digit Trigger for LRN feature overrides this conditional triggering provided by the NP - Basic LRN feature.

The provisioning of SFID 216 allows an LNP query to be made regardless of whether the line is being served by the switch. This option facilitates transitioning the DN from the old service provider to the new service provider. The NP - Non-Conditional 10-Digit Trigger for LRN feature may be provisioned for individual DNs, Secondary for individual DNs, Secondary Only DNs, or for a group of DNs. DNs associated with a MLHG (Multi-Line Hunt Group or TG (Terminal Group)) may be provisioned as a group by using Global Recent Change. The Line and DSL forms may be used as long as all members have NON COND TRIG set to "Y".

3. FEATURE ASSIGNMENT

For 5E11 and later, to enable this feature, the ACT fields for SFID 174 and SFID 216 respectively on the SFSYS form (5713-1 Record) must both be set to "Y".

See Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2/23.8
LINE	5109	3	1I	1.6
MLHG	5110	3	1J	3.5
MLHLN	5111	3	1K	1.6
SFSYS	5713-1	3	5AR	8.22
SHTN	5902	5	1C	23.20

DSLUSR form (5908 Record) - This form is used to assign attributes to a user of a DSL (Digital Subscriber Line) BRI (Basic Rate Interface). For 5E11 and later, the NON COND TRIG field is being added to indicate whether or not a call to this DN requires a non-conditional query of the SCP prior to routing the call.

LINE form (5109 Record) - This form defines the office Equipment Number and features for each telephone number in a 5ESS-2000 Switch. For 5E11 and later, the NON COND TRIG field is being added to indicate whether or not a call to this DN requires a non-conditional query of the SCP prior to routing the call.

MLHG form (5110 Record) - This form is used to define Multi-Line Hunt Group parameters. For 5E11 and later, the NON COND TRIG field is used to indicate whether or not a call to this DN requires a non-conditional query of the SCP prior to routing the call. However, this is a verify only field.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular MLHG. For 5E11 and later, the NON COND TRIG field is being added to indicate whether or not a call to this DN requires a non-conditional query of the SCP prior to routing the call.

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SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 174 and 216 respectively, to "Y".

SHTN form (5902 Record) - This form is used to specify a Primary or Secondary TN (Telephone Number) that is shared by several other TNs. For 5E11 and later, the NON COND TRIG field is being added to indicate whether or not a call to this DN requires a non-conditional query of the SCP prior to routing the call.

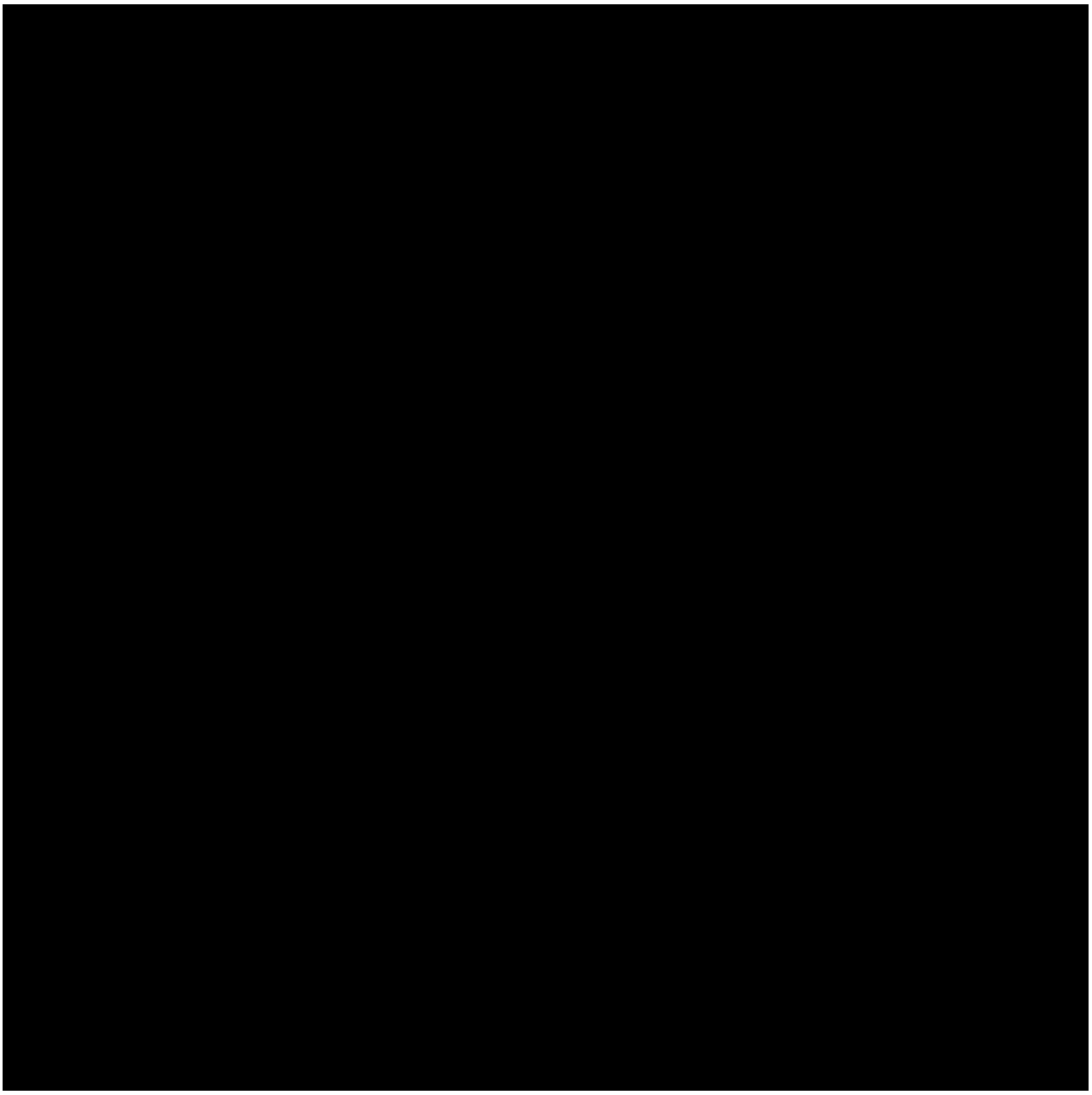

Figure 1 FORM FLOW FOR NP - NON-CONDITIONAL 10-DIGIT TRIGGER FOR LRN

SEC. 4A217: TOLL 5ESS-2000 SWITCH PLATFORM FOR MINT PROCESSING

1. FEATURE DESCRIPTION

The MINT (Multi-Vendor Intra-Network Trunk) capability extends the LDP (Long Distance Platform) functionality by defining MINTs (a MF or SS7 trunk connecting two Long Distance switches) and the new signaling/routing used to support calls that traverse them. MINT signaling, consisting of network-specific

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MINT information, is included in SS7 and MF messages.

The MINT capability can be divided into the following components which are further discussed in the next subsections.

- General MINT Capability:
  - MINT Signaling-Alpha signaling (99-5E-3782, SFID 217)
  - MINT Beta Signaling (99-5E-3782.A, SFID 247)
  - MINT Gamma Signaling (99-5E-3782.B, SFID 248)
- Terminating Network Selection Code (part of Feature 99-5E-3782)
- Route Search Limit (part of Feature 99-5E-3782)
- Satellite Circuit Processing (part of Feature 99-5E-3792)
- Reroute-on-Release (99-5E-3782.D, SFID 250)
- Reroute Queuing (99-5E-3782.C, SFID 249)
- Originating Network Selection Code (part of Feature 99-5E-3782)
- Time Dependent Routing (99-5E-3782.E, SFID 251)

1.1 General MINT Capability

The Basic MINT capability allows the LDP switch to support a trunk (MF and SS7) using MINT signaling. MINT signaling includes the addition of network-specific information shown in Figure 1. In addition, the Basic MINT capability includes:

- the ability to designate a trunk group as MINT,
- create MINT parameters/information for calls arriving over incoming NATs (Network Access Trunks),
- use of MINT signaling information to modify routing,
- modification of MINT information for incoming MINT trunk groups via trunk group options and
- interworking MINT trunks with other trunks supported by the LDP (Long Distance Platform) switch.

For incoming traffic that must be routed to a switch within the same network or between networks over MINTs, the LDP switch must populate an outgoing MINT signaling message. This applies to traffic arriving from another network (via NAT (Network Access Trunk) or MINT) and within the same network (via MINT or STINT (Standard Intra-Network Trunk)).

The LDP switch supports interfaces to multiple vendors via MINTs that use vendor-compatible signaling formats shown in Figure 1. Figure 1 summarizes the network-specific information supported in MF and SS7 MINT signaling, depending on the vendor-compatible signaling format required.

1.2 Terminating Network Selection Codes

The 5ESS-2000 LDP must add a T-NSC (Terminating Network Selection Code) to be used with MINT signaling. A T-NSC is used with both MF and SS7 signaling, and is needed for all three types of MINT

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signaling (i.e., Alpha, Beta and Gamma). Refer to Figure 1 for information on the T-NSC in the specific signaling type.

T-NSC may have a value from 0 to 999 and those Network Selection Codes are to be shared throughout the network. Other vendors may support a more limited range for their Terminating Network Selection Codes so interworking with them must be agreed upon when provisioning a trunk or switch.

When an LDP switch has the MINT features active, if a T-NSC is associated with that call, it becomes the T-NSC of Record, for that call. The T-NSC may be determined by call processing or it may be received in the incoming signaling. At any given moment, a call can have at most one T-NSC of Record. The T-NSC may be changed or overwritten but then the new value becomes the T-NSC of Record.

All calls that egress the switch over a MINT trunk must have a T-NSC.

1.3 Route Search Limits

RSL (Route Search Limit) is a capability that allows the service provider to specify the maximum number of routes that can be searched for an available route. This is useful in limiting the search to less expensive routes.

The RSL is a field in the SS7 IAM MINT signaling message (Alpha and Beta formats) that indicates how far down the route chain the switch will search. The route chain may contain non-MINT and MINT (both MF and SS7) outgoing routes. A RSL can be defined on each outgoing route and is only populated in the outgoing SS7 MINT signaling message (Alpha and Beta formats).

The maximum value the RSL may be set to 15, however, the RSL should correspond to the maximum number of routes that can be defined on a switch, plus a zero value. A zero RSL value indicates the RSL is not set and the entire route chain may be checked. The LDP switch currently support 5 routes per route chain. Other vendor switches may support a different number of routes. If the RSL is set to a value greater than the number of routes on the route chain, then the switch can only search to the end of the chain, and the higher RSL value is ignored. The LDP SCP (Service Control Point) alternate route capability can extend the number of route chains available.

Currently after a call arrives at the LDP switch, the LDP switch determines the outgoing route chain and searches for an available route. The RSL (if received) in the incoming MINT signaling message, will now be used to limit the search for available routes. The additional LDP switch actions to support the RSL capability are shown below.

- After the LDP switch determines the route chain, the route chain is searched for an available route.
  - For incoming SS7 MINT traffic using Alpha or Beta signaling formats, the LDP switch examines the RSL (received in the IAM message) to determine the maximum number of outgoing routes to search and begins the route search. For example, if the RSL is two, a maximum of two outgoing routes can be searched for availability. If the RSL is zero, the entire route chain may be searched.
  - For incoming MF MINT, SS7 MINT using Gamma format and non-MINT traffic; a RSL is not received. Therefore, the entire route chain can be searched.
- If an available route is found and it is a MINT, the outgoing MINT signaling message is routed to the next switch. The outgoing route could be a trunk supporting MINT or non-MINT signaling.
  - If the LDP switch selects an outgoing SS7 MINT (for Alpha and Beta formats), a RSL is obtained. (A RSL is assigned to each outgoing route.) The LDP switch creates an outgoing MINT IAM (Initial Address Message which includes the Route Search Limit and sends the signaling message to the next (downstream) switch.

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The downstream switch uses the Route Search Limit (received in the incoming MINT signaling) to conduct its route search.

- If the LDP switch selects an outgoing MF MINT, SS7 MINT using Gamma, or non-MINT; a Route Search Limit is not included in the outgoing signaling message.

If the LDP switch is unable to locate an available route, the LDP switch checks if queuing is inhibited for the incoming trunk group. If queuing is inhibited, a standard release message is sent to the upstream switch. If queuing is not inhibited, queuing would be attempted. See the Reroute-on-Release Section for actions taken for sending/receiving Release messages. See the Reroute Queuing Section for queue processing.

1.4 Satellite Circuit Processing

The Satellite Circuit capability allows the 5ESS-2000 Long Distance Switch to control the use of satellite circuits in routing a call over a MINT trunk. Satellite circuits are those trunks that route over satellite transmission facilities. Echo control is put in place and trunk guard timing is extended to compensate for the added round trip propagation in the signaling. While customers desire to use satellite circuits in their routing, they want the ability to limit their usage on a per call basis, due to transmission degradation. A call should never use more than one satellite circuit in its end-to-end routing.

For the MINT capability, there is a Satellite Circuit indicator specified in the MINT signaling. For an Alpha or Beta SS7 MINT trunk, it is in the IAM message. For an MF MINT trunk, or a Gamma SS7 MINT trunk, it is the second prepended digit before the CdPN.

If a call is going to be routed over a Satellite route, the LDP switch must first make sure a Satellite route has not already been used for this call.

If satellite circuits have NOT been used, the LDP switch may select a satellite circuit in its routing. If a satellite route is selected, the switch must update the appropriate satellite circuit status field for that call.

If satellite circuits have already been used in the routing of this call, the Satellite Circuit indicator will already be set and thus the LDP switch is not allowed to use them. The LDP switch must skip any satellite routes identified in the outgoing route list. The Satellite Circuit indicator is not modified and will remain set to show that a satellite route has been used.

1.5 Reroute-on-Release

The Reroute-on-Release is a capability that allows a call to be rerouted if unavailable routes are encountered in the call path. After a call arrives at a LDP switch, the LDP switch determines the outgoing route chain and searches for an available route up to the RSL. As part of existing LDP switch functionality, all possible outgoing routes out of the downstream switch office (primary and SCP alternate routes) would be searched.

- If the LDP switch is unable to locate an available route (at this downstream switch), the incoming trunk is checked to determine if queuing is inhibited. If queuing is inhibited and the call arrived over a SS7 MINT or SS7 STINT, the downstream switch sends a Release message (with Cause) to the upstream switch.

- If the upstream LDP switch receives a Release message, the Cause value is checked to determine if the "Reroute-on-Release" capability applies. That is, if the Cause value is "armed" for Reroute-on-Release. If the Cause value is "armed" for Reroute-on-Release, the upstream LDP switch continues searching its route chain for another route. This occurs independent of the original routing method used on the call (e.g., non-ASP, ASP routing).

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The following table summarizes possible Cause values used with the Reroute-on-Release capability. These are standard CCITT and ANSI Cause values and are part of the Resource Unavailable Class. The service-provider is able to provision (via Recent Change) specific "Resource Unavailable Class" Cause values that trigger the Reroute-on-Release capability. This includes the ability to turn on/off existing Cause values (within the Resource Unavailable Class) that have been provisioned.

Cause Value	Description
32	Unspecified
33	Unspecified
34	No circuit value
35	Unspecified
36	Unspecified
37	Unspecified
38	Network out-of-order
39	Unspecified
40	Unspecified
41	Temporary failure
42	Switching equipment congestion
43	User information discarded
44	Requested Circuits/Channels not available
45	Unspecified
46	Precedence call block
47	Resource Unavailable, Unspecified

1.6 Reroute Queuing

The reroute queuing capability allows the LDP switch to queue a voice call if all routes are unavailable. It is assumed that the existing Modular Queuing feature (a BRCS feature) is used as a base.

Queuing can occur on any route in the primary route chain (if no SCP alternate routes are provided). If SCP alternate routes are provided, queuing can occur on any route in the last SCP alternate route chain. Queuing can be defined on a trunk group basis and turned on/off per trunk group. If all of the routes (from the outgoing route chain) are unavailable, the call will attempt to queue.

When a call arrives at a LDP switch, all routes out of an office are searched (primary and SCP alternate routes). If the LDP switch is unable to locate an available route, the LDP switch checks the incoming trunk to determine if queuing is inhibited. If queuing is NOT inhibited, the LDP switch attempts to queue the call.

The signaling message received over the incoming MINT is checked to determine the call queuing status and the outgoing trunk is checked for queue provisioning. The call queuing status is one of the fields specified in the SS7 IAM or MF signaling message received/sent on MINTs.

- If queuing has NOT been performed (i.e., the queue indicator in the MF or SS7 MINT signaling message is set to No), the LDP switch may perform queuing when it tries to route the call. If queuing is used, the switch must update the queue indicator for the MF or SS7 IAM MINT signaling message to reflect that queuing has been used.

  All routes in the route chain can be checked to determine if queuing is assigned to an outgoing route. If an outgoing route is found in which queuing has been assigned, the call is queued. If the queue timer times out, then every route in the route chain is attempted a second time. If the call overflows the route chain the second time, the call times out.

- If queuing has already been performed for this call, the queue indicator (in the MF or SS7 IAM MINT signaling message) will already be set to Yes so the LDP switch is not allowed to queue the call. The queue indicator is not modified and will remain set to Yes. The call would undergo existing LDP switch treatment for unavailable routes.

1.7 Originating Network Selection Code

The 5ESS-2000 LDP switch must add an Originating Network Selection Code to be used with SS7 Alpha

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and Beta MINT signaling.

An O-NSC (Originating Network Selection Code) may have a value from 0 to 999 and those Network Selection Codes are to be shared throughout the network. Other vendors may support a more limited range for their O-NSC so interworking with their switches must be agreed upon when provisioning a trunk or switch.

For the initial phase of the MINT capability the O-NSC will have limited usage. When a call ingresses an LDP switch over a NAT or a STINT, it will not have an O-NSC associated with the call. However, all calls that egress the switch over an Alpha or Beta SS7 MINT use a Network Specific IAM parameter, and one of the fields in the IAM parameter that must be populated is the O-NSC. The Office Default O-NSC will be populated in the outgoing SS7 MINT signaling. The Office Default O-NSC is defined by the Service Provider using a value from 0 to 999.

For calls ingressing the switch over an Alpha or Beta SS7 MINT, which uses a Network Specific IAM parameter, the O-NSC associated with the call is the one that is received in the incoming MINT signaling. Although the LDP switch only uses an Office Default value for the O-NSC, other vendors may provide a specific O-NSC value. For that reason, if the call then egresses the switch over an Alpha or Beta SS7 MINT, the O-NSC that came across in the incoming signaling will be the one sent out, and the office default will not be used. The O-NSC will not be used by call processing at the LDP switch, but will be "passed through" from ingress to egress SS7 MINT signaling, in case it is used by another vendor's switch.

It is assumed that an O-NSC will always be received on an SS7 MINT that uses a Network Specific IAM parameter. If there is ever an erroneous case where the O-NSC is not sent over an SS7 MINT then the office default O-NSC value is used in the outgoing MINT signaling.

An O-NSC will never be received when a call ingresses the LDP switch over a NAT, an MF MINT, a STINT or an SS7 Gamma MINT. For these cases, if an O-NSC is needed for the outgoing MINT signaling, the Office Default O-NSC must be used.

1.8 Time Dependent Routing

The LDP switch with MINT feature provides switch-based TDR (Time Dependent Routing). TDR allows time-of-day/day-of-week routing pattern changes for incoming calls. TDR supports up to 16 Time-of-Day changes allowing a range of start/end times that can be provisioned. The TDR capability is separate from the ARS (Automatic Route Selection) Time-Of-Day capability and does not require ARS.

TDR is assigned to a route via the TDR form, View 10.39. If TDR is assigned, calls ingressing the LDP switch over MINT's, STINT's and/or NAT's can use TDR. The LDP switch would apply Time Dependent Routing after the switch (or SCP) determines the outgoing route index.

The SCP also has a TOD/DOY capability. As a service-provider option, the TDR function can be performed at the switch and/or SCP. If both switch-based TDR and SCP-based TOD/DOY are used, the Service Provider should use different Route Indices returned from the SCP to avoid overriding TDR processing.

2. FEATURE ASSIGNMENT

The MINT feature is being provided on the 5ESS-2000 LDP Switch for the Service Providers, craft people for the Service Providers that be the major administrators of this feature. As a result, this section is treated as a high-level view of Installation and Provisioning.

The following instructions assume that the features "5ESS-2000 Switch Long Distance Platform Basic Call Processing (Feature 99-5E-3127)" and "5ESS 2000-Switch Long Distance Platform ANI Table Processing (Feature 99-5E-3032)" are already on the switch.

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ANI Processing includes accessing the ANI Table or Carrier Table for specific treatment of the call, based on the ANI or Carrier. For the MINT features to work correctly, the following steps are to take place. The steps are separated into two categories - the data that may be provisioned before the features are activated, and the data that cannot be provisioned until after the features are activated.

2.1 Data that may be provisioned before feature activation (Figure 2):

1. Define the T-NSC's (LDPTNSC form, View 8.53). T-NSC's are shared throughout the network so care should be taken in configuring them. Every T-NSC that is to be used at this switch must have an entry in the LDPTNSC form, View 8.53.

   For each T-NSC entered, a dialing plan must be determined by specifying a DAS and a SCR. Both of those values must be populated, and must already have been defined. Both a DAS and a SCR must be populated, since that is how a T-NSC is defined. If only one of the two values were populated for a given T-NSC, then the routing of a call could vary even though the T-NSC is the same, and this contradicts the very meaning of a T-NSC. It is not required, but it is strongly recommended that a Line DAS be used when provisioning a T-NSC. A Trunk DAS may be used, but a Line DAS is recommended.

2. Populate the Office Default fields (OFCOPT form, View 8.1). Define an Office Default T-NSC and an Office Default O-NSC. Both may range from 0 to 999 and must be one of the T-NSC's defined on the LDPTNSC form,View 8.53.

   In addition, an Office Default Test T-NSC must be specified as the T-NSC to be used for Test calls. Again, it is in the range of 0-999 and must have been defined on the LDPTNSC form, View 8.53.

   Although the Office Default T-NSC and the Office Default Test T-NSC may range from 0-999, Beta MINT signaling does not support the full range of T-NSC values. If a service provider has Beta MINT's in their network, then Office Default T-NSC values should be in that more restricted range.

3. The service provider has the option to populate T-NSC's in the ANI Table. T-NSC's can be assigned to specific ANI's by using the LDP ANI Table (ANITBL form, View 8.51). The keys to the ANI Table are ANI/Carrier, so assigning a T-NSC to the ANI/Carrier pair implies the way a call would be routed for that ANI and Carrier.

   NOTE: The T-NSC in the ANI Table would only be accessed when the ANI Processing field is set to "Y" (i.e., use the ANI Table) on the TKGRP form, View 5.1. If the ANI Processing field is set to "N", then the ANI Table would not be accessed.

1. The service provider has the option to populate T-NSC's in the Carrier Table. T-NSC's can be assigned to Carriers in the LDP Carrier Table (LDPCTBL form, View 8.52). Again, assigning a T-NSC on the Carrier Table implies the way a Carrier's calls are routed through the network.

   If the ANI Processing field is set to "N", then the Carrier Table would be the first place to be searched for a T-NSC.

2. The service provider also has the option to assign T-NSC's to the Default ANI Table and Default Carrier Table.

3. There may be cases where a Service Provider wants a T-NSC value arriving on an Incoming MINT to be translated to a different T-NSC value. This option may be exercised using the TGNTNSC form, View 8.54. An incoming trunk group/T-NSC pair may be defined to map to a Translated T-NSC for all MINT calls.

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There is also the option to specify an incoming trunk group and "wildcard" T-NSC value so that every MINT call arriving over that trunk, no matter what the Incoming T-NSC value is, maps to a Translated T-NSC. The wildcard value is 1022.

4. If the service provider wants to make use of SCP queries when processing MINT calls, a T-NSC can be returned from an SCP. The T-NSC is found in the the AMA Digits Dialed WC parameter. The first three digits of this parameter is a Context ID which determines how the parameter is interpreted. The LDP NSC WC ID is an office parameter on the OFCOPT form, View 8.1. The SCP must know about the LDP NSC WC ID as well, since it is the one populating it when it wants to return a T-NSC to the LDP.

   It is important that the SCP returns T-NSC values that the LDP switch recognizes.

5. If the Time Dependent Routing feature is going to be activated, the routing tables may be provisioned before the feature is activated. For each Route Index on the RTIDX form, View 10.2, a set of time dependent routing tables may be specified on the TDR form, View 10.39. The service provider has up to 16 time slots that may map the Route Index to a new Route Index. Each time interval must be defined by a Start Day, Start Time, End Day and End Time.

   The 16 ranges are processed sequentially, so care must be taken when provisioning these tables lest a specified time slot gets overridden by a time slot that is provisioned later.

6. If the Reroute-on-Release feature is going to be used, the Cause Values on the RORLST form, View 8.55, may be activated and armed.

2.2 Data that must be provisioned after feature activation (Figure 3):

1. Activate the correct MINT Secured Feature ID's. The Basic MINT functionality is turned on with the LDP MINT SIG SFID. The LDP SFID must be activated before the LDP MINT SIG SFID may be activated. If the LDP Switch needs to interface with switches that support the Beta MINT signaling format, then the LDP BETA MINT SIG SFID must be activated. If the LDP Switch needs to interface with switches that support the Gamma MINT signaling format, then the LDP GAMMA MINT SIG SFID must be activated.

2. The Time-Dependent Routing Feature is secured with a separate feature lock (TDR SFID 251). The data for time dependent routing may be provisioned before the feature is unlocked but the tables are not accessed by call processing until the feature is unlocked.

   TDR is a separate secured feature that works not only with MINT's but with STINT's as well.

3. The Reroute Queuing feature is secured with a separate feature lock (Q_REROUTE SFID 249). This feature must be unlocked before Reroute Queuing may be assigned to a MINT trunk. (Reroute Queuing is a new type of queuing and can only be assigned to MINT trunks.)

   - ***NOTE:*** If an announcement is provisioned at the end of a route chain as error treatment, Reroute Queueing will never be performed for that route. When the last Route Index in the route chain points to an announcement trunk group, the call is considered successfully terminated when connected to the announcement after all other Route Indexes/Trunk Groups in the route chain have been hunted and busy conditions detected. Therefore, the call would never enter a Reroute Queue even if it was provisioned on a Trunk Group in the route chain. So, when Reroute Queueing is provisioned on a trunk group in the route chain, the last route in that particular route chain should not point to an announcement trunk group.

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4. The Reroute On Release feature is secured with a separate feature lock (ROR SFID 249). This feature must be unlocked before Reroute on Release processing may take place at an LDP switch.

5. For each Trunk Group (TKGRP form, View 5.1) to be used for MINT signaling, the type of MINT signaling must be specified. The choices are Alpha, Beta or Gamma. For MF signaling in this first release of the MINT Capability, the three signaling types are all the same. For SS7, Alpha signaling sends an Alpha-specific NSI parameter, Beta signaling sends a Beta-specific NSI parameter and Gamma signaling uses the same format as MF.

   If Beta MINT Signaling is selected, only T-NSC values from 0-15 may be accepted. Care must be taken when provisioning the office and the dialing plans to prevent a T-NSC value that is too large from being signaled, which could cause signaling errors.

WARNING: If trunk groups are set up as MINT's and then if the MINT Secured Feature is turned off, those trunks may still be selected via routing, but the call will fail since the signaling is incorrect. If the MINT SFID is turned off, it is recommended that the service provider remove all MINT-related trunk data from the office.

1. If the Reroute-on-Release feature is active on the switch, and the Reroute-on-Release functionality is desired on this trunk, then the QUEUE INHIBIT field must be set to "Y". This will inhibit queuing and cause a Release message to be sent immediately to the upstream switch.

   If the Reroute Queuing feature is activated, MINT trunks may now be assigned queuing.

2. When a route is specified on a switch, either using the RTIDX form, View 10.2 or the MCRTIDX form, View 10.4, the Service Provider has the option of assigning a Default T-NSC value to that route. This default value would be used if the call is about to be routed over a MINT trunk and does not already have a T-NSC of Record assigned to it. Rather than fail the call signaling, the default value is used.

3. If TDR is assigned to a route index, it will always be processed to see if there is a new route index to use. This could affect a route index returned by LDP Fixed Carrier Routing, or a route returned from the SCP, so the service provider must be aware of which routes have TDR assigned to them. Also, if the TDR Secured Feature is active, ARS processing cannot take place on the call.

4. Assign a Route Search Limit to the route. This limit is sent along in SS7 Alpha or Beta MINT signaling only, and tells the downstream switch how far down its route list it can search for an outgoing route. For the 5E12 Software Release, the 5ESS LDP can support up to 6 routes in a route list, but it is possible to define an RSL up to 15. The switch will search up to the RSL, or up to the end of the route list, whichever comes first.

NOTE: The Route Search Limit does not peg a count when the end of list is reached, and the RSL is overflowed. The LDP switch continues to peg a count when it gets to the end of the route chain, but the RSL, since it is more of an arbitrary value, does not peg a specific count.

1. When an upstream switch receives a Release message from a downstream switch on an SS7 MINT or STINT, rather than tear down the call, it may try to find an alternate route through the network, if the ROR SFID is activated.

   This feature only tries to Reroute for certain Cause values and those values are specified on the RORLST form, View 8.55. For the 16 possible Cause values that allow a reroute, the Service Provider has the option of turning each Cause value off or on.

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2. For each trunk used in routing a MINT call, the option to queue the call is provided. When a Route Index chain is searched and all routes are currently busy, or out of service, the call may be queued if the Queuing Secured Feature is active for that trunk. The only queuing that is allowed on a MINT trunk is Reroute Queuing.

   Another field assigned to the trunk is the QUEUE INHIBIT field. If the QUEUE INHIBIT field is set to "N" on the incoming trunk, then Reroute Queuing is allowed. When it is set to "Y", Reroute Queuing is inhibited. This field should be set to "Y" when the upstream switch can support Reroute-on-Release processing. This field may also be set to "Y", if the Service Provider just wants to prevent a call from queuing - regardless of whether Reroute-on-Release is present at the upstream switch.

- ***NOTE:*** For incoming MINT's, if a Carrier is included in the incoming signaling, it is not used to route the call. The T-NSC determines the dialing plan to use to route the call. If the Carrier was included in the incoming signaling, it would also be included in the outgoing signaling (as long as the outgoing signaling protocol supported it). If service providers really want the Carrier to be used in routing the call, then routing should be over STINT's and not MINT's.

There are no specific requirements with this feature to prevent a route from looping back around to an earlier switch. This must all be prevented by the correct network engineering of the switch routing algorithms.

It should be noted that when Reroute-on-Release processing is used, or if Queuing is applied, there may be additional call completion delays. This is due to extended setup times for multiple reroute attempts. Also, there are call setup timers that could expire before the call is completed. The amount of Reroute-on-Release usage must be carefully managed as part of network engineering.

2.3 Configuration of Echo Canceller for MINT Trunks

If the Echo Canceller is physically connnected to MINT trunks, it would be activated for the outgoing calls on those trunks.

- ***NOTE:*** Remember, for MINT trunks the LDP has to be set to "N" on the TKGRP form (RC/V 5.1). Generally, for non-MINT trunks to activate the echo canceller, the LDP has to be set to "Y" on the TKGRP form (RC/V 5.1).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ANITBL	5561	3	5BE	8.51
LDPCTBL	5562	3	5BF	8.52
LDPTNSC	5568	3	5BI	8.53
MCRTIDX	5304	3	3Q	10.4
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1 8.15
QUFD	5617	4	18A	12.40
RORLST	5570	3	5BK	8.55
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22
TDR	5571	3	5BL	10.39
TGNTNSC	5569	3	5BJ	8.54
TKGRP	5202	3	2A	5.1

ANITBL form (5561 Record) - The 5561 Record contains the switch based ANI table. For 5E12 and later, added the TERM NSC field.

LDPCTBL form (5562 Record) - The 5562 Record provides an LDP Carrier Table and Default Carrier

Table. For 5E12 and later, added the TERM NSC field.

LDPTNSC form (5568 Record) - The 5568 Record provides the capability for specifying or verifying a TNSC (Terminating Network Selection Code), and its associated DAS (Digit Analysis Selector) and screening index information. For 5E12 and later, this form was added to support the LDP MINT feature.

MCRTIDX form (5304 Record) - The 5304 Record contains options for MC Route Index Expansion. For 5E12 and later, the RTE SEARCH LMT and TERM NSC fields were added.

NSTRIG form (5324 Record) - The 5324 Record is used to define a network service application. For 5E12 and later, the USE CURR DAS field was added.

OFCOPT (5509 Record) - The 5509 Record provides the office option global parameters residing in the Central Processor. For 5E12 and later, the NSC WC ID, ORIG NSC, TERM NSC and TEST CALL TNSC fields were added.

QUFD (5617 Record) - The 5617 Record is used to define Modular Queuing features. For 5E12 and later, the QUEUE TYPE field has been modified to allow the additional value of "REROUTE" to support the Long Distance Platform MINT (Multi-Vendor Intra-Network Trunk) feature. Also, a new preconstructed feature "/QRERTE" for queuing coupled with reroute has been added.

RORLST (5570 Record) - The 5570 Record is used to arm various cause values associated with a resource unavailable event. For 5E12 and later, this view was added to support the MINT (Multi-Vendor Intra-Network Trunk) feature.

RTIDX (5303 Record) - The 5303 Record defines characteristics of the Route Index. for 5E12 and later, the RTE SEARCH LMT, TERM NSC, and TDR fields were added.

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. For 5E12 and later, added SFID 217, 247, 248, 249, 250, and 251.

TDR (5571 Record) - The 5571 Record is used to specify and verify time intervals and their associated substitute route indices. For 5E12 and later, this view was added to support the LDP MINT feature.

TGNTNSC (5569 Record) - The 5569 Record provides the capability for specifying or verifying a TNSC (Terminating Network Selection Code) based on an incoming TNSC over a trunk group. For 5E12 and later, this form was added to support the LDP MINT feature.

TKGRP (5202 Record) - The 5202 Record used to define each Trunk Group in a 5ESS-2000 Switch. For 5E12 and later, the MINT SIG TYPE and RERTE Q INH fields were added.

3.1 GLOSSARY

ARS - Automatic Route Selection

BRCS - Business/Residential Customer Services

IAM - Initial Address Message

LDP - Long Distance Platform

MF - Multi-Frequency (Signaling)

MINT - Multi-vendor Intra-Network Trunk

NAT - Network Access Trunk

NSC - Network Selection Code

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NSI - Network Specific IAM

RCV - Recent Change and Verify

RSL - Route Search Limit

SCP - Service Control Point

SFID - Secured Feature ID

SS7 - Signaling System Number 7

Supported Vendor-Compatible Formats

	Alpha	**Beta**	**Gamma**
MF MINT	Queuing Satellite T-NSC Called Party Number	Queuing Satellite T-NSC Called Party Number	Queuing Satellite T-NSC Called Party Number
SS7 MINT	Alpha Network-Specific IAM (Initial Address Message) Parameter includes Queuing, T-NSC, O-NSC, Route Search Limit. Called Party Number Other SS7 Parameters		Queuing Satellite T-NSC Called Party Number Other SS7 Parameters

Figure 1 VENDOR-COMPATIBLE FORMATS OF MINT SIGNALING

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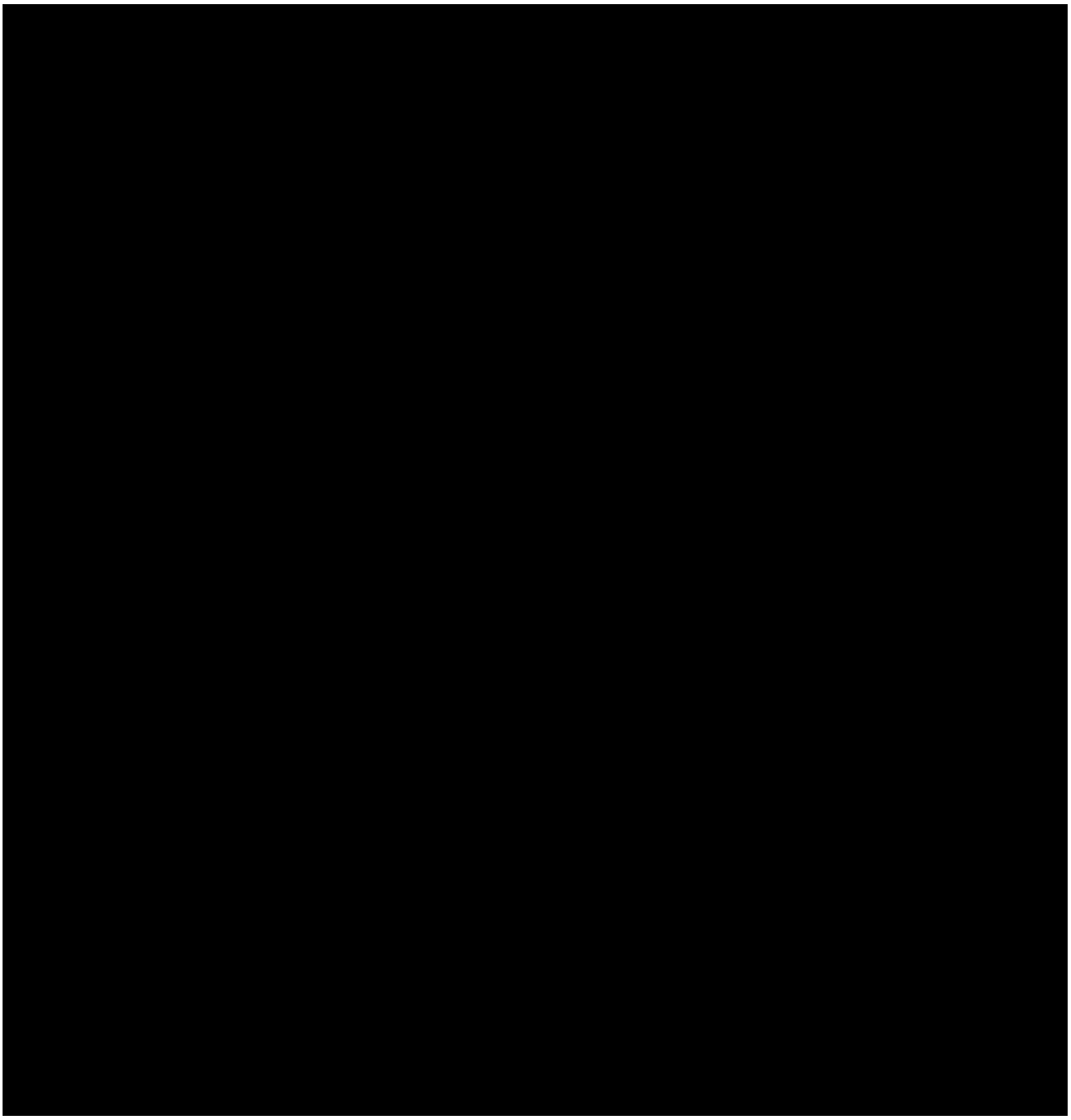

Figure 2 FORM FLOW FOR MINT DATA PROVISIONING BEFORE ACTIVATION

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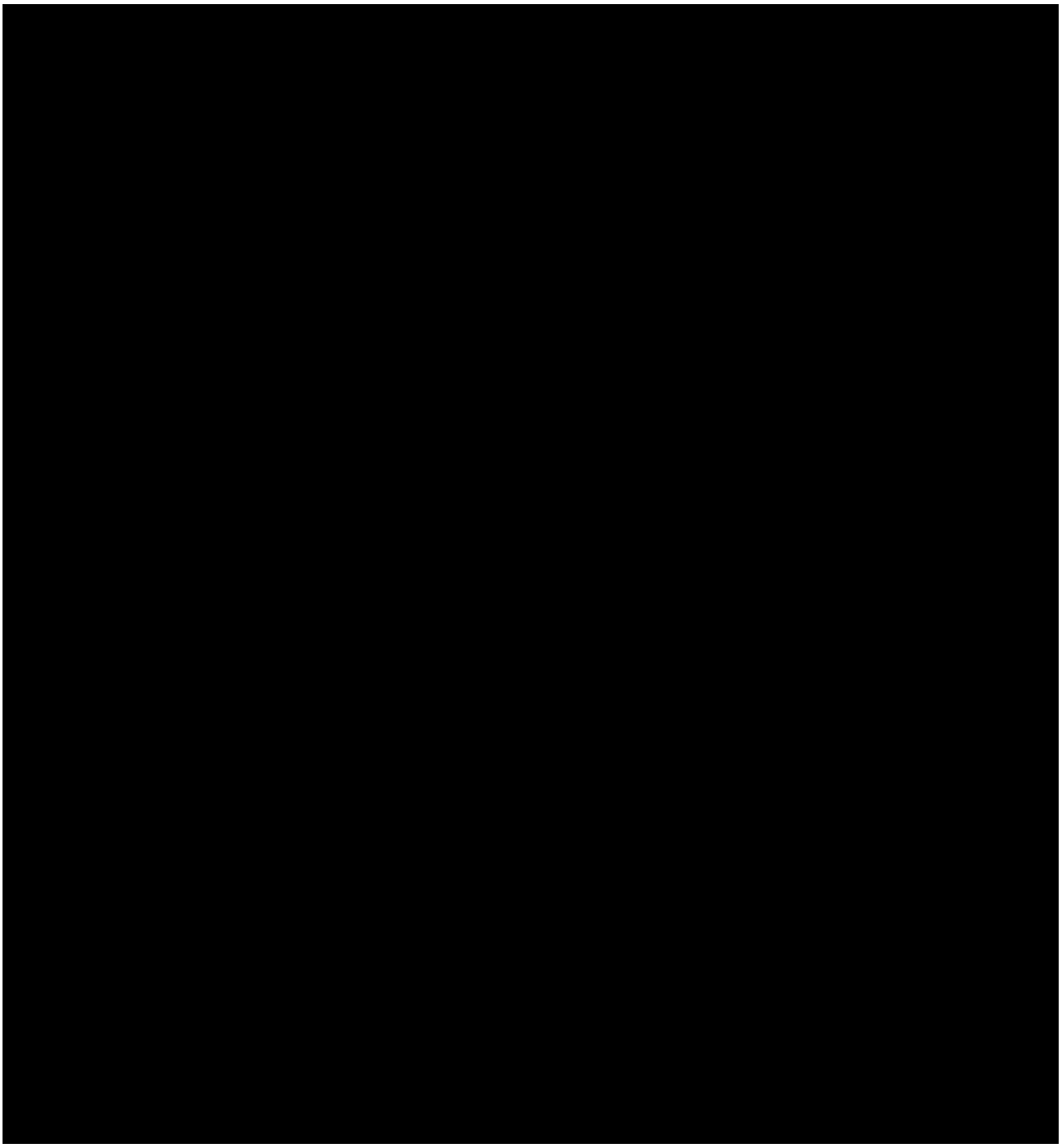

Figure 3 FORM FLOW FOR MINT DATA PROVISIONING AFTER ACTIVATION

SEC. 4A219: PRI HOTEL/MOTEL AND SELECTED CLASS OF CALL SCREENING

1. FEATURE DESCRIPTION

The PRI (ISDN (Integrated Services Digital Network) Primary Rate Interface) Hotel/Motel Selected Class of Call Screening feature is a secured feature (SFID 219) and must be purchased before being activated. The feature number for this feature is 99-5E-2488.

The feature adds two new call-by-call services to those available on the 5ESS-2000 Switch PRI.

1. Hotel/Motel service relates to calls originated from rooms at hotels and motels, which require special billing treatment.

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2. SCOCS (Selected Class of Call Screening) service, refers to a service that is used by institutions such as hospitals, dormitories, and prisons. These calls usually require special screening and operator service treatment.

2. FEATURE ASSIGNMENT

To provision features on the switch (See Figure 1):

- On the SFSYS form (5713-1 Record), SFID 219 must have the ACT field set to "Y".
- On the TKGRP form (5202 Record), establish tax or no tax status for the Hotel/Motel service using the new field HM TAX.
- On the PFASFG form (5609 Record), create an SFG using one of the two new types "HM" or "SCOCS". A billing number (SFG BILL NUM) can be associated with the SFG.
- On the MCRTIDX form (5304 Record), establish a route index which points to the SFG created above.
- On the TKEDSLD form (5209 Record), establish a BEARER CAPABILITY for the call-by-call service selected (Hotel/Motel or SCOCS).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MCRTIDX	5304	3	3Q	10.4
PFASFG	5609	4	10C	7.3
TKGRP	5202	3	2A	5.1
TKEDSLD	5209	3	2K	5.34

MCRTIDX form (5304) - The 5304 Record contains options for MC (Modular Customization) route index expansion. For 5E11 and later, added data rules to the SFG NUMBER, ANI6, and ANI7 fields.

PFASFG form (5609-3A/B) - The 5609-3A/B Record defines PFA (Private Facilities Access) SFG (Simulated Facility Group). For 5E11 and later, added two new enumerations, "HM" and "SCOCS" for the SFG TYPE field.

TKGRP form (5202-1) - The 5202-1 Record provides general trunk group information for all trunk members in a group. For 5E11 and later, added the HM TAX field.

TKEDSLD form (5902) - The 5902 Record defines data for the EDSL (Extended Digital Subscriber Line) call by Call Service Selection feature. For 5E11 and later, For 5E11 and later, added two new enumerations, "HM" and "SCOCS" for the SFG TYPE field. Added BEARER CAP and SCOCS SERVICE fields.

4. GLOSSARY

HM	Hotel Motel
ISDN	Integrated Services Digital Network
PRI	Primary Rate Interface
SCOCS	Selected Class of Call Screening

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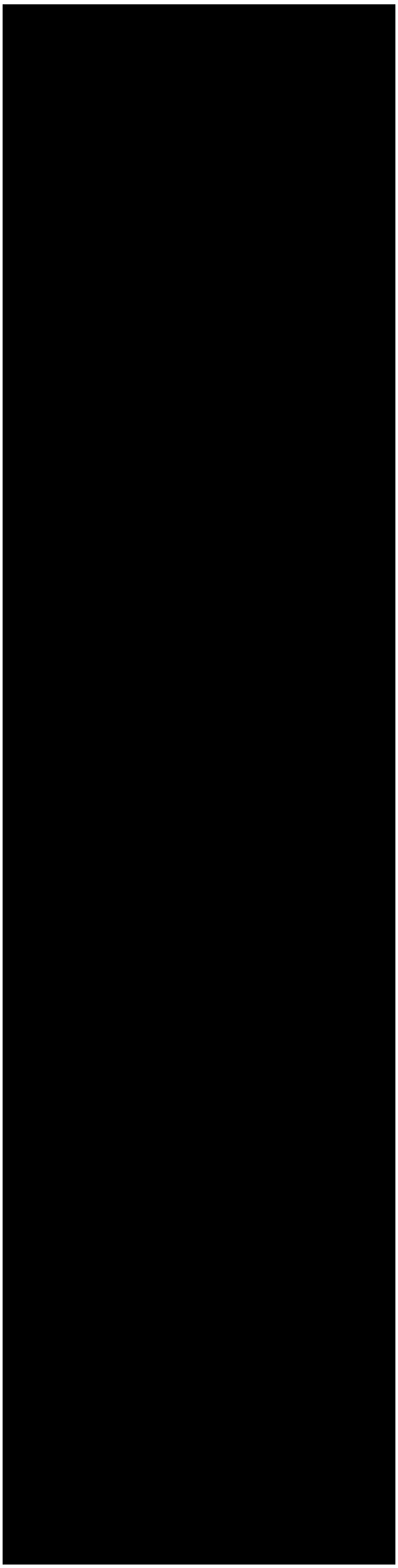

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Figure 1 FORM FLOW PRI HOTEL/MOTEL AND SELECTED CLASS OF CALL SCREENING

SEC. 4A220: CALLING NAME FOR ISDN PRI

1. FEATURE DESCRIPTION

The Calling Name for ISDN PRI (Primary Rate Interface) feature is a secured feature (SFID 220) and must be purchased before being activated. The feature number for this feature is 99-5E-2295.

The feature consists of three components as follows:

- PCN (Privacy of Calling Name) allows an originating CPE (Customer Premises Equipment) to signal on a per-call basis the presentation staus (e.g. public or private) for their calling name.

  Both flat rate and usage sensitive billing options are provided for PCN.

- CNAM (Calling Name Information Delivery) provides name information (either name characters, a private indication, or an unavailable indication) to a subscribed terminating PRI interface at the time of call setup.

  Both flat rate and useage sensitive billing options are provided for CNAM delivery.

- EDS CND (Electronic Directory Service Calling Name Display) allows an Electronic Directory Service Group Number to be associated with an ISDN PRI to allow calls originating from Class II equipment connected to the PRI to be identified with an EDS group. This allows calls terminating to ISDN BRIs (Basic Rate Interface) that are members of the same EDS group to receive calling name information via the ISDN BRI EDS feature for intra-business group PRI originated calls.

  Only flat rate billing is provided for EDS CND.

2. FEATURE ASSIGNMENT

On the SFSYS form (5713-1 Record), SFID 220 must have the ACT field set to "Y".

On the TKGRP form (5202 Record), set the CNAM ALW, CNAM AMA, PCN ALW, PCN AMA, EDS CND, and EDS GRP fields as required.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
TKGRP	5202	3	2A	5.1

TKGRP form (5202-1) - The 5202-1 Record provides general trunk group information for all trunk members in a group. For 5E11 and later, added the CNAM ALW, CNAM AMA, PCN ALW, PCN AMA, EDS CND, and EDS GRP fields to support this feature.

4. GLOSSARY

BRI - Basic Rate Interface

CPE Customer Premises Equipment

ISDN Integrated Services Digital Network

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PRI	Primary Rate Interface
CNAM	Calling Name Information Delivery
CND	Calling Name Display
EDS	Electronic Delivery Service
PCN	Privacy of Calling Name

SEC. 4A221: CODE DIVISION MULTIPLE ACCESS

1. FEATURE DESCRIPTION

For information on the CDMA (Code Division Multiple Access) feature see, Division 2, Section 8B.

SEC. 4A222: THIRD PARTY CALL CONTROL

1. FEATURE DESCRIPTION

Effective with the 5E10 Software Release, the Third Party Call Control feature is available and has feature number 99-5E-2457. This is a secured feature, which is dependent upon SFIDs (Secured Features IDs 121 and 122 and associated with SFIDs 231, 232, and 233. This feature is available with the 5E10 Software Release as a software update and in the 5E11 Software Release.

The Third Party Call Control feature allows the 5ESS Switch to receive call control information from an external host computer via the AIU (Application Interface Unit) and perform call-processing functions such as host-requested call routing, host-requested call redirection while alerting, host-requested call transfer, host-requested conference, and host-requested outbound dial. This is particularly useful to facilitate Computer-Integrated Telephony applications which involve simultaneous voice and data applications, such as order entry and customer information retrieval, or to allow for a customer's MIS (Management Information System) call center manager to redirect calls that are initially routed to the call center's pilot DN (Directory Number). The switch is required to provide the calling party's number, if available, and any other caller input (touch tone), to the customer's host computer system and in return, the switch receives routing information for the call.

Routing choices allow the system administrator to specify a 1 - 10 digit TN (Telephone Number), an ACD/BRCS (Automatic Call Distributor/Business and Residence Custom Services) call type queue ID, an ACD/BRCS vector ID, or an ACD/BRCS agent ID. Calls routed to queues, vectors or agents are considered internal ACD/BRCS transfers and are therefore not billed as separate calls. Calls routed to TNs are considered external transfers and are billed to the corresponding ACD/BRCS ACD DN as separate calls.)

This feature also allows a subscriber to interact with a host computer and use the host to establish conference calls or to perform transfers. The host can also provide call screening which makes use of call associated data (such as the Calling Party Number) and a host-resident database. The outbound dialing feature allows the host to send a command to initiate an outgoing call between an agent's telephone and an outside party. The agent would have the option to accept/reject the call origination before the call-leg to the outside party is created, insuring agent availability to handle the call.

The specific SFIDs supporting these functions include:

- Host-Requested Call Routing (SFID 222); dependent upon SFID 121,
- Host-Requested Call Redirection While Alerting (SFID 231); dependent upon SFID 122,
- Host-Requested Call Transfer/Conference (SFID 232); dependent upon SFID 122, and

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- Host-Requested Call Origination (SFID 233); dependent upon SFID 122.

The DSL (Digital Subscriber Line) using this feature must be provisioned as a ACD/BRCS Position and the agent telephone equipment must be AT&T Custom ISDN Type "B", "D", or an equivalent terminal. In addition, Link III Interface software should be loaded on the AIU to send/receive Third Party Call Control event messages between the switch and the host computer.

1.1 Host-Requested Call Routing

The Host-Requested Call Routing feature allows the host to specify a destination for an ACD call that is receiving call vectoring treatment. The destinations are directory number, queue number, vector ID or an agent ID.

The new "REQRTE" vector command is provided by this feature to allow the customer's host computer the capability to redirect an ACD DN or DAA DN call that is receiving vector treatment. Upon execution of the REQRTE vector command, the switch sends a "Routing Request" event message to the host computer through the AIU. The switch waits until it receives the "Request Route Response" event message from the AIU before it processes the next vector step. If the response is not received within a switch determined time limit, the processing continues with the vector step specified (see the CVECT form (5460 Record) for more information on the vectoring steps).

The "Request Route Response" message should contain a valid route type (e.g., D - route to DN, Q - queue call, V - branch to vector, and A - route agent) and route destination (e.g., DN, queue number, vector and vector step number, or agent ID) for redirection of the incoming call.

If the route destination is a DN, the switch sets up a connection to the DN specified in the event message. If the route destination is a queue number, the switch puts the call in the specified queue. If the route destination is an agent ID, the switch routes the call to the specified agent's position. If the route destination is a vector number/vector step, the switch continues vector processing at the vector number and vector step number specified in the event message.

1.2 Host-Requested Call Redirection

The redirection of calls while alerting allows the customer's host computer to specify a new destination for a call that is alerting at an ACD/BRCS position.

A new event message, "Redirect Alerting Call", sent from the AIU to the switch, is used to request the switch to forward a call that is alerting at an ACD/BRCS position to either a DN, a queue or an agent ID.

The following types of alerting calls may be redirected by a host request: Position DN calls, ACD hunted calls, DAA calls, ACD Agent intercom calls, ACD Agent to queue calls, ACD Service Assistant calls, and ACD Emergency calls.

If the route destination is a DN, the switch routes the call to the specified DN. If a queue number is specified, the switch translates the queue number to its associated ACD DN, and routes the call to the ACD DN. If an ACD/BRCS agent ID is specified, the switch identifies the position DN of the ACD/BRCS position that the agent is currently logged in at, and routes the call to the DN.

If the switch receives a "Redirect Alerting Call" event message for a position that has an alerting call and the position does not have a Call Forwarding Don't Answer feature assigned (other than the required /CFDARQ for ACD hunted calls), the event message is ignored. A craft assert is printed to indicate that the request was received for a position that did not have the CFDA feature assigned.

When the switch redirects the specified alerting call, it processes the call as if it were being redirected by the existing CFDA feature and uses all of the existing call forwarding no answer feature checks and restrictions.

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1.3 Host-Requested Call Transfer/Conference

The host-requested call transfer/conference feature allows automatic transfer/conference of an active call and a held call at an ACD/BRCS position.

1.3.1 Host-Requested Call Transfer

The Host-Requested Call Transfer feature provides the interface for a host computer to request a forced transfer of a held call at an ACD/BRCS position to an active call at the same ACD/BRCS agent position. A new "Transfer/Conference Position Call" event message is used to request the call transfer. The transfer call flag is set in the message sent from the AIU to the switch.

The host computer specifies these calls at the agent's position by call IDs. To complete the transfer, the switch merges the active call with the held call and then releases the merged call from the position.

1.3.2 Host-Requested Conference Call

The Host-Requested Conference Call feature provides the interface for a host computer to request a forced conference of a held call at an ACD/BRCS position with an active call at the same ACD/BRCS agent position. A new "Transfer/Conference Position Call" event message is used to request the conference call. The conference call flag is set in the message sent from the AIU to the switch.

The host computer specifies these calls at the agent's position by call IDs. To complete the conference, the switch merges the active call with the held call and forms a three-way conference. The conference will be on the call appearance of the previous held call.

The switch provides a barge-in tone to the position that is controlling the conference. While the tone is being given, the voice path may be interrupted.

1.4 Host-Requested Call Origination

The Host-Requested Call Origination feature provides the interface for a host computer to request a call to be originated from an ACD/BRCS position to either a DN, an ACD/BRCS queue or an ACD/BRCS agent position.

A new "Originate Call" event message, sent from the AIU to the switch, is used to request the call origination.

The switch selects an idle-call appearance for the primary DN on the position and provides ring-back treatment. If there are no idle-call appearances, the event message is ignored.

The switch provides auto answer treatment if the following conditions are met:

- the selected call appearance is the ACD/BRCS hunted-call appearance,
- the Auto-Answer mode is enabled,
- the terminal is in the Off-Hook, listening to silence Auto-Answer mode.

When the agent answers the alerting call (this includes the Auto-Answer case), the switch routes the call to the destination specified in the "Originate Call" event.

If there is an active call at the position and the position is provisioned with the Auto-Hold feature, after the ring-back is answered, the switch puts the active call on Hard-Hold. The switch sends the "Call Hold" event to the AIU, with On-Hold specified and the reason set to Auto-Hold.

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If the position does not have the Auto-Hold feature, the existing active call will be dropped when the ring-back is answered. The switch will send the "Call Disconnected" event to the AIU for the dropped call.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDTN	5631-1	4	32A	4.15
CVECT	5460	3	4BH	21.41
DSLUSR	5908	5	1I	23.2
SFSYS	5713-1	3	5AR	8.22

ACDTN form (5631-1 Record) - This form is used by the ACD/BRCS feature to define the ACD directory number or the DAA directory number for the ACD/BRCS position. A VECTOR ID number must be established for this feature for the TN and associated with the "REQRTE" vector command code on a DVECT form.

CVECT form (5460 Record) - This form is used to define Call Vectoring steps that determine how an incoming call is to be treated while waiting for a CACD (Commercial Automatic Call Distributor) agent. The VECTOR ID and associated "REQRTE" vector command code must be specified in the CMD CD field for this feature.

DSLUSR form (5908 Record) - This form is used to define DSL parameters. The ACD POS NUM field must be set to identify the ACD/BRCS position. Note that the "Transfer/Conference" feature requires that the ACD/BRCS Position be assigned an appropriate Multi-Way feature. (A Multi-Way feature is required for an ACD/BRCS position.) Also note that the "Redirect Alerting Call" feature requires that a Call Forwarding Don't Answer feature (in addition to the required /CFDARQ for ACD hunted calls) be assigned to the ACD/BRCS Position in order for the feature to work.

SFSYS form (5713-1 Record) - This form is used to enable secured features for an entire 5ESS Switch of selected Switching Modules. The ACT fields for SFIDs 121, 122, 222, 231, 232, and 233 must be set to "Y" to activate this feature.

Figure 1 THIRD PARTY CALL CONTROL FORM FLOW

SEC. 4A223: 15 DIGIT INTERNATIONAL DIRECT DISTANCE DIALING

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1. FEATURE DESCRIPTION

15 Digit IDDD (International Direct Distance Dialing) secured feature is available for 5E10 and later. The feature number for this capability is 99-5E-1262.

Due to an increased demand for telecommunications services, countries around the world are experiencing a shortage of telephone numbers. To address this problem, the international standards body ITTU-T (International Telecommunications Union - Telecommunication Standardization Sector) has recommended an expansion of the allowed maximum length of international numbers from 12 to 15 digits. This feature expands the allowed maximum length from 12 to 15 digits.

Prior to this feature, international numbers consisted of a CC (Country Code) of 1 - 3 digits, plus an NN (National Number) 9 - 11 digits. The CC plus NN combination was restricted to 12 digits. This feature allows the CC plus NN combination to be a maximum of 15 digits. The CC portion will remain 1 - 3 digits.

- ***NOTE:*** International numbers do not include dialing prefixes such as 01 or 011. In addition, they do not include CACs (Carrier Access Codes) such as 10288 or 1010288. Therefore, this feature does not change the way prefixes are handled.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for this feature.

This feature is a secured feature and must be purchased by the office. To activate this feature, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record).

The following functional areas are impacted by this feature:

- Office Dialing Plan

  The valid range of values for the maximum and minimum number of digits expected was expanded on the IDDD form (5307 Record).

- Private Dialing Plan

  The allowed maximum number of incoming digits specified on the Private Network Dialing Plan on the PNDP form (5608-10/11 Record) was expanded.

- BRCS

  The valid range of values for fields which could require international 15-digit numbers were expanded on the Private Facilities Group PFAGPA form (5609-5 Record). The range of values was expanded for the following:

  - Number of digits to collect before starting Overlap Outpulsing
  - Number of digits to collect
  - Maximum number of digits to collect
  - Minimum number of digits to collect
  - X Digits
  - Y Digits
  - Nth position

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- Application Processors

  The IDDD15 ALW field on the DSL Application Processor Communication Data DSLAP form (5963 Record) indicates whether the switch generates the existing format or the extended format messages for MDR needed to accommodate the expanded range of CC plus NN digits.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLAP	5963	6	6A	24.7
IDDD	5307	3	3T	9.6
PFAGPA	5609-5	4	10E	7.1
PNDP	5608-10/11	4	9J	9.21
SFSYS	5713-1	3	5AR	8.22

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP (Application Processor) with the 5ESS Switch. The IDDD15 ALW field was added to indicate if the expanded format or existing format for MDR is used.

IDDD form (5307 Record) - This form is used for IDDD (International Direct Distance Dialing) Country Access Codes. The minimum and maximum number of expected digits were increased for the 15-digit international numbers.

PFAGPA form (5609-5 Record) - This form is used to define the group information for PFA (Private Facilities Access). The valid entries for the following fields were increased to handle 15-digit international numbers: OVLP DIGS, NUMB DIGS, MAX DIGS, MIN DIGS, X DIGS, Y DIGS, and NTH POS.

PNDP form (5608-10/11 Record) - This form is used to provide private digit analysis of both public and private numbers for PNDPs (Private Network Dialing Plans). The valid entries in the following fields were expanded to support 15-digit international numbers: INCOMING DIGITS, NBR DIGITS, and CONFLICT RESOLUTION TABLE NBR DIGITS.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 223 must be set to "Y" to activate this feature.

4. GLOSSARY

AP	Application Processor
CAC	Carrier Access Codes
CC	Country Code
CCITT	International Telephone and Telegraph Consultative Committee
IDDD	International Direct Distance Dialing
ITTU-T	International Telecommunications Union - Telecommunication Standardization Sector
NN	National Number
PFA	Private Facilities Access
PNDP	Private Network Dialing Plans

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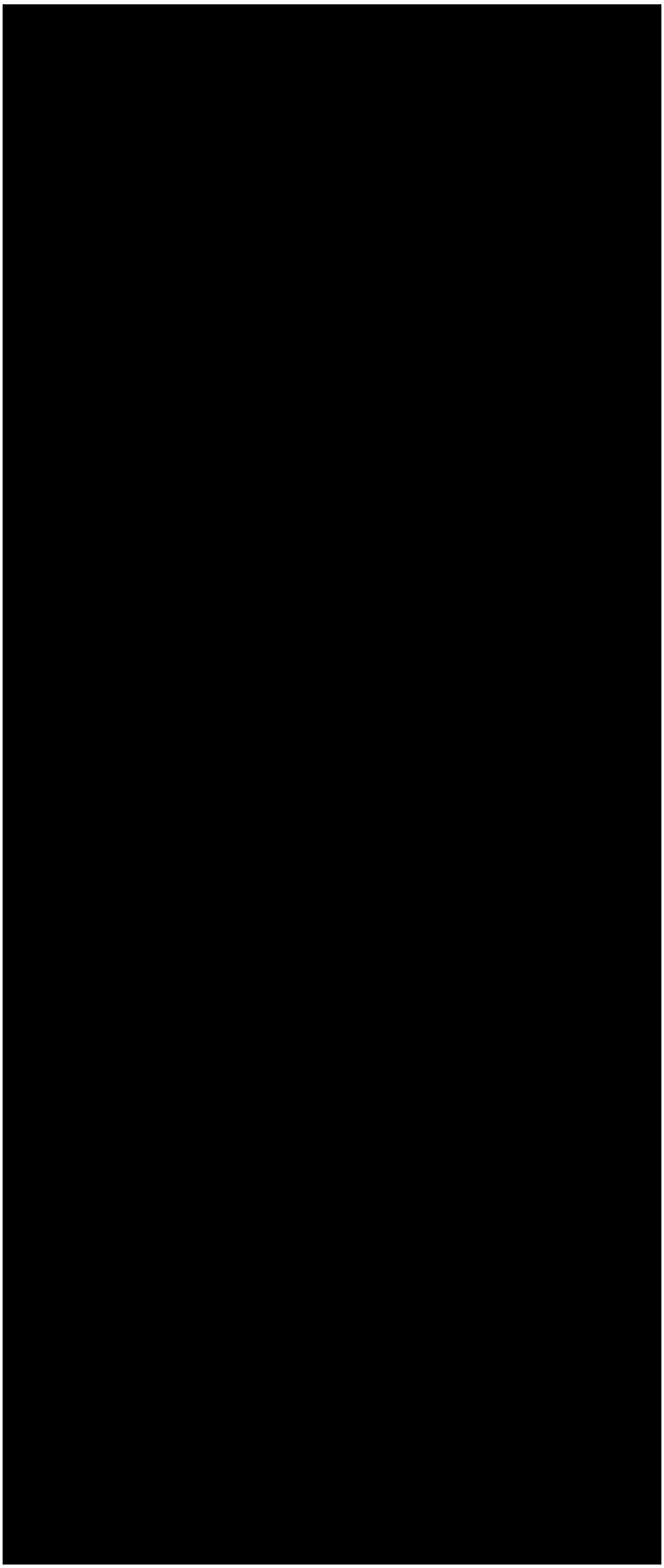

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Figure 1 E.164 COMPLIANCE FOR 15 DIGIT IDDD

SEC. 4A224: PROTOCOL HANDLER FOR ASYNCHRONOUS TRANSFER MODE (PHA)

1. FEATURE DESCRIPTION

The PHA (Protocol Handler for Asynchronous Transfer Mode) feature provides an interconnect vehicle between multiple PSU (Packet Switching Unit) communities to effectively realize a single large PSU complex. It is used as a transport mechanism only. The PHA feature is available for 5E10 and later. The feature number for this capability is 99-5E-1600A.

PHA is a secured feature (SFID 224), which supports the CDMA (Code Division Multiple Access) feature, but it is not dependent on CDMA. For a CDMA Service Provider, this feature allows a Frame Relay PH (Protocol Handler) in one PSU to communicate with a PHV (Protocol Handler for Voice) in another PSU. The PSUs used for CDMA are treated as a network, and a unique PSU CA (Community Address) is defined for a PSU in this PSU network.

PHAs are equipped in pairs with each PHA controlling a channel. Each channel is a separate physical path. Each pair of channels, an active channel and a standby channel, are considered a PSU Link. Both the active and standby channel transport data, however, only the active channel communicates with the Packet Bus. Figure 1 shows the concepts of the channel and link architecture for the PHA.

2. FEATURE ASSIGNMENT

To provision PHA, the data needs to define the PSU community address for the PSU, the physical PHA Protocol Handlers, PSU links, and PHA channels. The capability to define PSU community address to a PSU is extended to any PSU (not just for a PSU equipped with a PHA) within a 5ESS-2000 Switch.

The PHA is a transport device only. CDMA uses the PHA to transfer packets from a FRPH (Frame Relay Protocol Handler) in one PSU to a PHV (Protocol Handler for Voice) in another PSU. (For more information on the CDMA feature for 5E10 and later, see Division 2, Section 8B.)

The PHA board is assigned a position within a PSU shelf. Since a PHA resides in a PSU, it is identified as another PH type through a new CLI value. No new circuit type and definitions are needed. A new hardware type SMPHA1 defines the PHA board.

2.1 PSU Link

The PHA is composed of two channels, an active channel and a standby channel. A channel group is associated with each channel on each PSU. The PSU Link is defined on the PSU Link Assignment form, PSULNK (5057 Record).

2.2 PSU Community

The PHA transfers the packets using the PSU network. PSUs using PHAs are connected by a Point-to-point PSU connection.

For point-to-point configurations, the network must be completely connected via PSU links. As the number of PSUs to be interconnected rises, the central ATM (Asynchronous Transfer Mode) fabric architecture becomes more attractive.

A unique number (1-255) is assigned to each PSU in a PSU network and is called a PSU CA (Community Address). The CAs are specified on the EQPSU form. See Figure 2 for a sample PHA network.

2.3 Provisioning PHA

See Figure 3 for feature assignment form flow for PHA feature.

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PHA is a secured feature and must be purchased before provisioning can take place. Once the feature is purchased, the ACT field for SFID 224 is set to "Y" on the SFSYS form (5713-1 Record).

The office parameters for congestion level thresholds and the type of ATM layer are specified on the OFCOPT form (5509 Record).

A PSU and SHELF 0 on SM "X" and SM "Y" are provisioned on the EQPSU form (5741 Record). The PSU and SHELF must be made operational. The COM ADDR field specifies the CA assigned to this PSU. The CON TYPE field specifies if the PSU is a point-to-point. The PSU TYPE must be "PSU2".

New PHAs are provisioned on the EQPSUPH form (5742 Record). The CLI value for the PHA is assigned on this form.

The PSU link is assigned to the "near" and "far" SMs on the PSULNK form (5057 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSU	5741	8	22	22.2
EQPSUPH	5742	8	23	22.4
OFCOPT	5509	3	5I	8.1
PSUGP	5949	5	3J	22.16
PSULNK	5057	7	2A	22.22
SFSYS	5713-1	3	5AR	8.22

EQPSU form (5741 Record) - This form is used to define the PSUs equipped on a 5ESS-2000 Switch. The PSU with PHAs is provisioned on this form. The fields COM ADDR and CON TYPE were added to support the PHA feature. Note that the CON TYPE field was moved to the PSULNK field for 5E11 and later.

EQPSUPH form, (5742 Record) - This form defines the Packet Switching Unit Protocol Handlers equipped on the 5ESS-2000 Switch. The PHA CLI value was added to the PH CLI field to support the PHA feature.

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The CONG1 QCAP, CONG2 QCAP, and ATM LAYER office parameters were added to support the PHA feature.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit). The AVAILABLE PHA1 field indicates a Recent Change Verify field. It is a display only field for ODA. A new PH TYPE, "PHA1" was added to support the PHA feature.

PSULNK form (5057 Record) - This form is used to define links between packet switching units using protocol handlers for the Asynchronous Transfer Mode. This new form for 5E10 and later supports the PHA feature.

4. GLOSSARY

ATM	Asynchronous Transfer Mode
CA	Community Address
CDMA	Code Division Multiple Access
FRPH	Frame Relay Protocol Handler
PH	Protocol Handler

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PHA	Protocol Handler for Asynchronous Transfer Mode
PHV	Protocol Handler for Voice
PSU	Packet Switching Unit

Figure 1 PHA ARCHITECTURE

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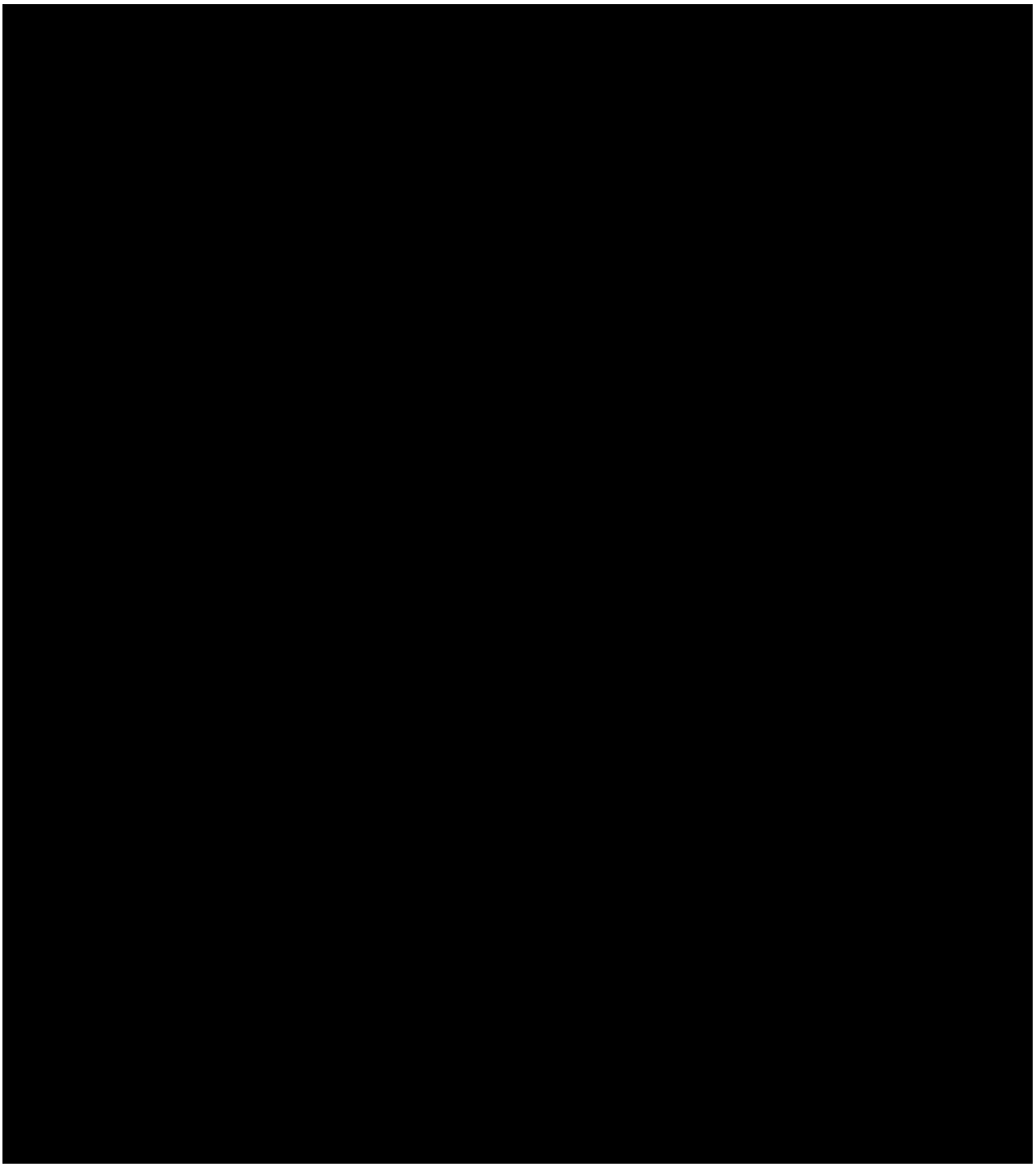

Figure 2 SAMPLE PHA NETWORK

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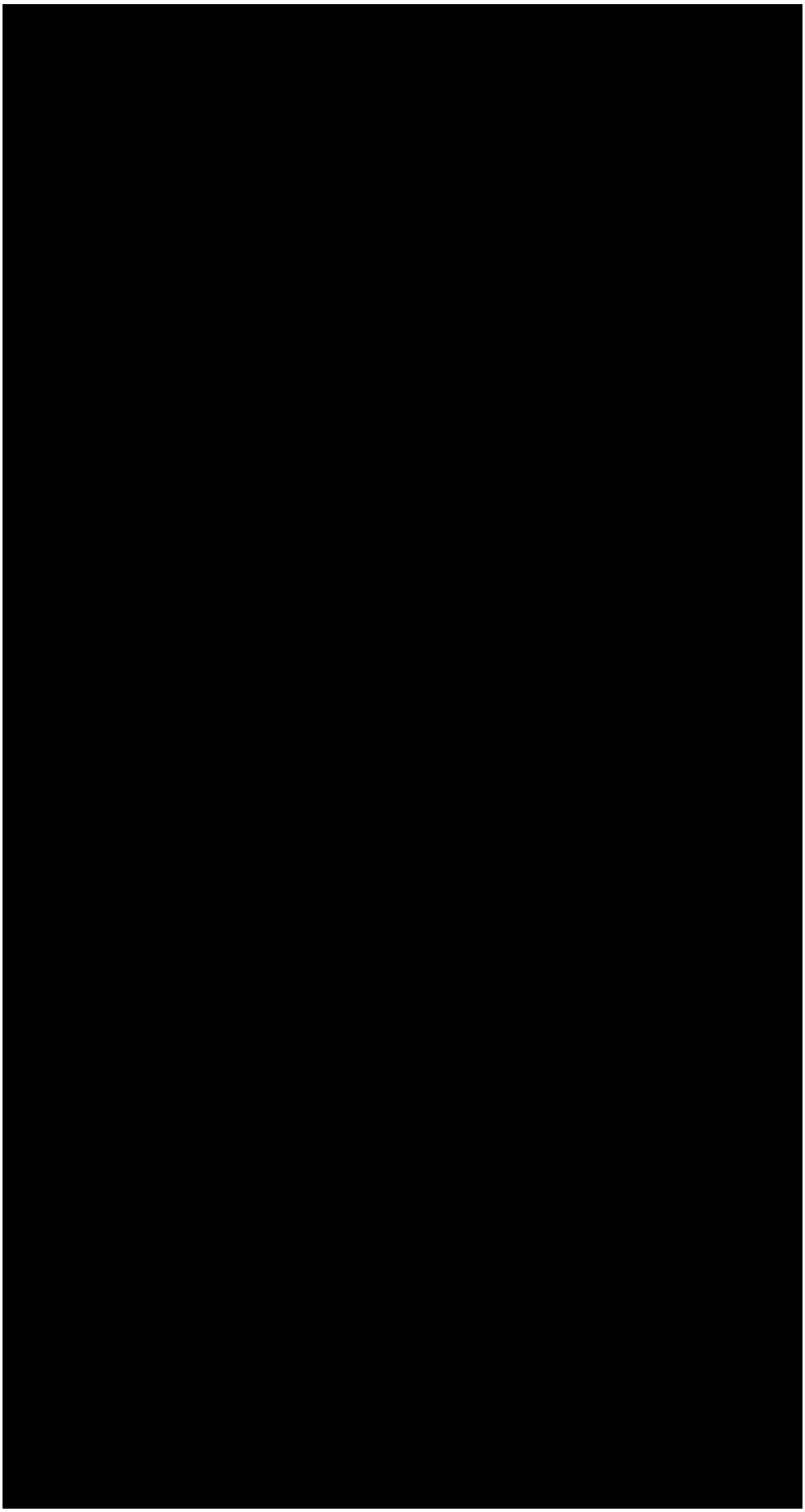

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Figure 3 PHA FEATURE FORM FLOW

SEC. 4A225: NATIONAL ISDN BRI FEATURES FOR 5E10

1. NI-3 BRI FEATURES

The National ISDN Release 3 BRI features are available for 5E10 and later. See Division 2, Section 1AM on National ISDN features for the provisioning information for these features. A brief description of the NI-3 BRI features follows.

2. NI-3 NON-INITIALIZING TERMINALS

The Non-Initialing Terminals feature is available for 5E10 and later. It adds to the current level of support for NIT (Non-Initializing Terminals) on a Standard ISDN interface. Before 5E10, NITs were only supported for Packet-mode calls. This feature adds support for Circuit-mode calls, and adds the capability of using a NIT with a Permanent Virtual Circuit. The feature number for this capability is 99-5E-2273. For information on how to provision this feature, see Division 2, Section 1AM on National ISDN Features.

3. NI-3 DEFAULT SERVICES USOP

The Default Service USOP (User Service Order Profile) feature provides a method of provisioning a minimum set of services on a National ISDN BRI interface to serve terminals which do not associate themselves with any other USOP on the interface. The feature number for this capability is 99-5E-2273. For information on how to provision this feature, see Division 2, Section 1AM on National ISDN Features.

4. NI-3 BRI VERIFICATION

The NI-3 BRIV (National ISDN Basic Rate Interface Verification) feature provides the capability to identify the Office Equipment connected to a Standard ISDN BRI access line. The NI-3 BRIV feature can be accessed by dialing an access code from an ISDN terminal connected to a Standard ISDN BRI access line provisioned for Circuit-Switched access (voice or data). NI-3 BRIV provides the installation and maintenance personnel of a Telephone Company the ability to retrieve the OE (Office Equipment) identification value, which identifies the termination of the ISDN interface in use, right from the customer premises. When a test call is placed to NI-3 BRIV, the OE identification value is displayed which identifies the termination of the ISDN interface from where the test call originated. The feature number for this feature is 99-5E-1221. For information on how to provision this feature, see Division 2, Section 1AM on National ISDN Features.

5. NI-3 ISDN CALLING NAME FOR BRI

I-CNAM (ISDN Calling Name for BRI) Feature provides for Calling Name Delivery and Calling Name Identification Services (Name/Number Privacy features) as part of the National ISDN-3 feature set. I-CNAM has a feature number of 99-5E-2264. For information on how to provision this feature, see Division 2, Section 1AM on National ISDN Features.

6. NI-3 CFPF CALL FORWARDING OVER PRIVATE FACILITIES

The NI-3 CFPF (National ISDN-3 Call Forwarding over Private Facilities) feature, (with feature number 99-5E-2269) is available with the 5E10 and later Software Releases.

CFPF allows a call with the CSV (Circuit Switched Voice) CT (Call Type) to be forwarded to an on- or off-network remote DN over the private/public facilities indicated during the activation request in a National ISDN-3 environment from NI-3 compatible CPE (Customer Premises Equipment). For information on how to provision this feature, see Division 2, Section 1AM on National ISDN Features.

SEC. 4A226: ADVANCED SERVICES PLATFORM BRCS/OHD INTERWORKING

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EXTENSIONS

1. BACKGROUND

ASP (Advanced Services Platform) Release 0.1B as implemented for 5E9(1) and later software releases prohibited assignment of BRCS (Business and Residential Customer Services) features and an OHD (Off-Hook Delay) trigger to the same line. The release of the following secured features allowed the interaction of the ASP OHD trigger with certain BRCS and line features that are critical to residential service offerings:

- ASP BRCS/OHD Interworking (for more information on this feature, see Division 2, Section 4A137).
- ASP LASS/OHD Interworking (for more information on this feature, see Division 2, Section 4A137).
- ASP Interactions with Accounts and CPN/BN (for more information on this feature, see Division 2, Section 4A150).

2. FEATURE DESCRIPTION

The ASP BRCS/OHD Interworking Extensions is a secured feature using SFID (Secured Feature ID) 226 and must be purchased before being activated. The AT&T feature number for this feature is 99-5E-2343.

Available with 5E10 and later, this feature extends the interaction of the ASP OHD trigger to an additional set of BRCS and line features, building on the existing set of secured features listed above.

This feature allows the interactions of ASP OHD triggers and the following switch based features:

- BRCS Features
  - Call Pickup - Basic
  - Home Intercom and Single Line Variety Package
  - Message Service System
  - Speed Calling
- Line Features
  - Denied Origination and Termination
  - Direct Connect
  - MDNL (Multiple DNs per Line with Distinctive Ringing)
  - Series Completion Hunting

These additional interactions are available to analog subscribers for R0 and R0.1 protocol, National ISDN subscribers for R0.1 protocol only and are not extended to any other type of originator that may have an OHD trigger provisioned.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

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For this secured feature to be activated the following fields on the SFSYS form (5713-1 Record) must be set:

- The base 5E9.1 ASP Rel 0.1B feature must be activated by setting the SFID 126 ACT field to "Y".
- The ASP BRCS/OHD Interworking and ASP LASS/OHD Interworking secured features must be activated by setting the SFID 137 ACT field to "Y".
- The ASP BRCS/OHD Interworking Extensions secured feature must be activated by setting the SFID 226 ACT field to "Y"
- If this feature is to operate on NISDN originations, the ASP Interworking with NISDN and ISAT secured must be activated by setting the SFID 139 ACT field to "Y".

SEC. 4A227: ASP CALL ROUTING PARAMETERS

1. FEATURE DESCRIPTION

This feature provides additional information for Advanced Services Platform Response messages. Specifically, 2 response messages, Analyze_Route and Forward_Call have additional parameters added. These parameters are:

- Redirecting Party ID parameter added to the Forward Call Message.
- Redirection information parameter added to the Analyze, Route, and Forward Call messages.
- Carrier Usage parameter added to the Analyze, Route, and Forward Call messages.

The AT&T Feature Number for this secured feature is 99-5E-2651. This feature is available for 5E10 and later.

The redirecting parameters are being added to provide additional call history information. The carrier usage parameter provides greater flexibility in routing Inter-Lata calls. These parameters may be used for any ASP based service. In addition, these parameters can be used for Personal Communications Services.

2. TRANSLATION ASSIGNMENT

To activate this secured feature, the ACT field for SFID 227 on the SFSYS form (5713-1 Record) must be set to "Y". Activating this feature allows the carrier usage parameter to be processed. SFID 227 activates the carrier usage part of this feature only, it does not effect the redirection information or the redirecting party ID parameters. If SFID 227 is not activated and the carrier usage parameter is received, it will be ignored.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 227 must be set to "Y" to activate this feature.

SEC. 4A229: AIN SSP SEND TO OUTSIDE RESOURCE (LOCAL)

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1. BACKGROUND

On the 5ESS Switch, announcements played using the existing Send To Resource capability are stored in the DSU2-RAF (Digital Service Unit Model 2 - Recorded Announcement Facility) on customized announcement boards as phrases. Phrases stored on the boards can be combined into announcements using Recent Change. Announcements can be created or modified only if they can be constructed of phrases already stored on the boards. New phrases can be stored by ordering new boards with the existing and new phrases burned into their EEPROMs.

2. FEATURE DESCRIPTION

Available with 5E10 and later, AIN (Advanced Intelligent Network) SSP (Service Switching Point) STOR (Send To Outside Resource (Local)) has AT&T feature number 99-5E-2357. This feature is a secured feature with SFID (Secured Feature ID) 229 and must be purchased before being activated.

The AIN SSP STOR (Local) capability addresses the need for an increased number of AIN customized announcements and the need for a shorter and easier means of creating announcements. It provides the capability for the SSP (Service Switching Point) to perform the STOR operation when the IP (Intelligent Peripheral) is local to the SSP, that is, when it is directly connected via National/Custom ISDN PRI (Primary Rate Interface)

The SCP (Service Control Point) is allowed to instruct the switch to access an IP which can act as an announcement service, text-to-speech service and collection of digits, and FlexParameter platform. Such an IP would have an announcement capacity much greater than 512 announcements that the DSU-2 currently provides, and would also allow for very fast creation or modification of announcements.

In addition to providing voice announcements and digit collection, the IP can provide other services such as text to speech, voice recognition, etc., which the SCP can invoke using the new STOR operation.

When a Send To Resource message containing a Destination Address Parameter (referred to as an STR(E) (A Send To Resource message containing a DAP (Destination Address Parameter)) message), is received by the switch, the switch connects the user to the IP indicated by this parameter. Information in the STR Parameter Block is forwarded to the IP to convey the SCP's instructions. The IP plays the announcement as indicated by the SCP instructions. This information is included in a FACILITY message sent from the IP to the SSP, which is sent by the SSP in a Call_Info_From_Resource message to the SCP. SCP service logic uses the information collected to determine what operation to perform on the user's subscription data (i.e. Activate Call Routing Schedule 2), as well as whether further IP interaction is necessary. If more information is needed from the user, the SCP will send the SSP a Call_Info_To_Resource message, which the SSP sends to the IP as a FACILITY message containing further instructions. This sequence continues until the IP's involvement is no longer necessary. At that point the SCP sends a Cancel_Resource message to the SSP, which clears the STR-connection to the IP. The SCP then indicates the final disposition of the call.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
IMINFO	5510	3	5J	8.27, 10.2, 11.1, 18.1
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

IMINFO form (5510 Record) - This form is used to gather and build miscellaneous customer data related to a given SM (Switching Module). The new field STOR UTD LIMIT was added to specify the maximum percentage of UTDs Universal Tone Decoders) that may be used by the this feature.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous options and

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parameters. The new fields TSTRC and TDISC were added to specify the maximum duration of an STR connection and to specify the maximum amount of time the switch will wait for the IP to send the disconnect message after a facility message with a Cancel IP was sent from the SSP to the IP, respectively.

SFSYS form (5713-1 Record) - This form is used to enable Secured Features. The SFID 229 ACT field on the SFSYS form must be set to "Y" to activate this feature for the office. The Advanced Services Platform secured feature must also be purchased and activated to implement this feature. The SFID 126 ACT field on the SFSYS form must be set to "Y" to activate the Advanced Services Platform feature. For more information on this feature, see Division 2, Section 4A126.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The new fields IP TRK and IP MEAS were added to indicate that the Trunk Group is an IP interface and is eligible to participate in the STR(E) operation and to indicate whether IP measurements will be taken for the Trunk Group, respectively.

4. GLOSSARY

AIN	Advanced Intelligent Network
DAP	Destination Address Parameter
DSU2	Digital Service Unit Model 2
IP	Intelligent Peripheral
ISDN	Integrated Services Digital Network
PRI	Primary Rate Interface
RAF	Recorded Announcement Facility
SCP	Service Control Point
SFID	Secured Feature ID
SM	Switching Module
SSP	Service Switching Point
STOR	Send To Outside Resource
STR	Existing Send To Resource
STR(E)	A Send To Resource message containing a DAP (Destination Address Parameter)
UTD	Universal Tone Decoders

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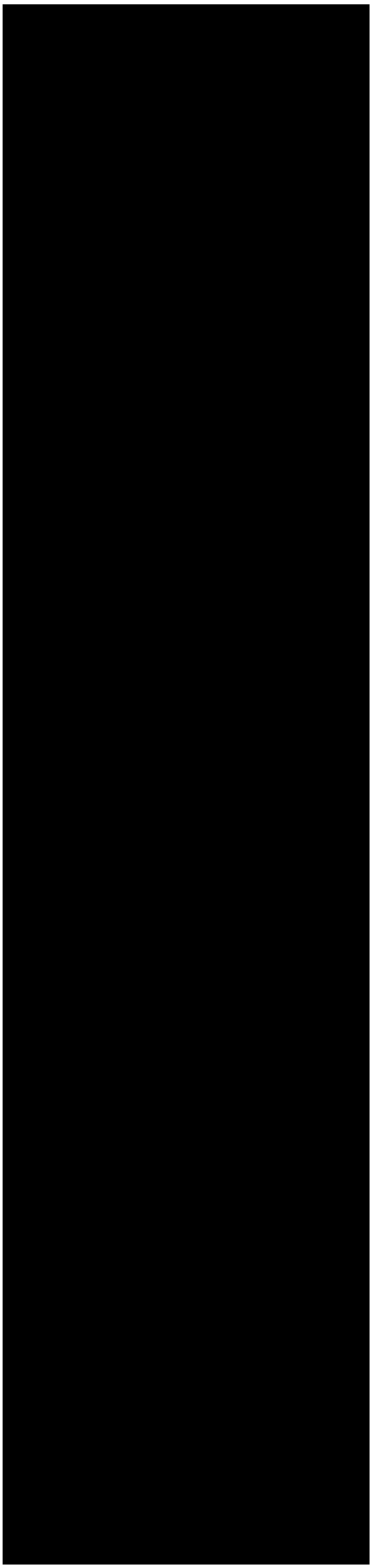

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Figure 1 AIN SSP STOR FORM FLOW

SEC. 4A230: TRUNK LINE WORK STATION METALLIC TEST CAPABILITY USING SUBSCRIBER LINE AND INSTRUMENT MEASUREMENTS-2

1. FEATURE DESCRIPTION

The feature number for the TLWS Test Capability is 99-5E-2444. This feature is available with 5E10 and later Software Releases. It implements SLIM2 (Subscriber Line and Instrument Measurements-2). SLIM2 provides electrical testing capabilities via the Trunk and Line Work Station for analog and digital subscriber lines. SLIM2 measurements include the following for both the SM and SM-2000:

- analog characteristics
- voltage
- insulation resistance
- capacitance
- off-hook tests (analog only)

SLIM2 is designed as an addition or an alternative to the ALIT (Automatic Line Insulation Testing) and DCTU (Directly Connected Test Unit).

Access to the metallic network is achieved via the MMSU (Modular Metallic Service Unit) or the 5E10 CSU (Combined Services Unit) equipped with the TN1422 circuit pack. Note that the MLT (Mechanized Loop Test) cannot access the SLIM2 to use it in an integrated MLT configuration. MLT functions can be performed via the non-integrated LTS (Loop Test System) by way of an SN107 "no test" trunk interface.

1.1 Operator and Routine Modes

The SLIM2 feature can be executed in either of two modes types: "Operator" or "Routine". In the Operator Mode, test execution is directly controlled from a TLWS terminal and requires subscriber participation. The tests can be split into a group that requires subscriber participation and a group that can be executed without the subscriber's knowledge. Test results will always be returned as numerical values to the initiating terminal. In this mode, the operator may make an audio connection (talk and monitor) to a craft/subscriber if the subscriber has to participate in the test.

The SLIM2 Routine Mode is a secured feature (SFID 230) and allows a variety of options and schedules for test execution. Execution of test sessions are scheduled from a controlling terminal via Recent Change. On the scheduled date and time, testing will be initiated and supervised by the central control. The test sessions may be scheduled for execution once or on a periodic basis.

To operate the SLIM2 feature in the Operator mode, the SLTHRS (SLIM Threshold List) form (5554-1/2 Record) must be entered and SLIM2 testing is limited to the DEFAULT values defined on the SLTHRS form. To operate the SLIM feature in the Routine mode, SFID 230 must be activated which allows the threshold values to be modified. Figure 1 illustrates the provisioning sequence for the Routine Mode of operation. Figure 2 illustrates the LTP provisioning sequence

1.2 Logical Test Ports

For the Operator Mode, two LTPs (i.e., trunk members) are required for a trunk group which routes to a SLIM2 unit one for communication to the SLIM2 and one for the LUT (Line Under Test). For the Routine Mode, three LTPs are required one for communication to the SLIM2, a second one for the LUT, and a third one to setup another metallic path for the next LUT on the list.

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1.3 Route Indexes

All SM types (local, host, remote) which have one or two MMSUs with at least one SLIM2 circuit assigned requires a unique SLIM ROUTE INDEX. Each of these indices are associated with a unique Port Group (valid range from 0 - 3617). Three LTPs must exist for every SLIM2 circuit marked equipped and operational. If the SLIM ROUTE INDEX is 0, there is no SLIM equipped for this SM; however, there can be metallic access if the SM has metallic access via the MTIB to another SM that is equipped with SLIM2.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
Equipment Assignment	N/A	8	1	N/A
EQMMSP	5750	8	25	20.7
IMINFO	5510	3	5J	8.27
LINE	5109	3	1I	1.5
MLHLN	5111	3	1K	1.6
MTBCOMP	5556	3	5BB	14.17
SFSYS	5713-1	3	5AR	8.22
SLJOB	5555	3	5BA	14.16
SLLEN	5548	3	5AX	14.13
SLSESS	5556	3	5BB	14.17
SLTHRS	5554-1/2	3	5AZ	14.15
SLTSET	5549	3	5AY	14.14
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

Equipment Assignment - This section of the documentation provides CLI values for all affected forms. The TN1422 circuit pack is used to provide SLIM2 functionality.

EQMMSP form (5750 Record) - This form is used to define equipped packs on a Modular Metallic Service Unit. A pack type was added for the SLIM2 feature.

IMINFO form (5510 Record) - This form is used to define miscellaneous data related to a given SM. The SLIM ROUTE INDEX field and data rules were added.

LINE form (5109 Record) - This form is used to define line parameter information. The PSLIM (Prohibit SLIM) field was added to define whether the SLIM2 feature is allowed. Added data rules to identify the allowed CLASS OF SERVICE for the PSLIM feature ("INDIV", "TWOPTY", "2PTY", "4PSS", "5PTY", "10PTY", "COIN", "CHGO", "PBX", "HOTMOTL", "HOTPBX" and "ATND").

MLHLN form (5111 Record) - This form is used to define multi-line hunt members. The PSLIM field and data rules were added.

MTBCOMP form (5557 Record) - This new form is used to hold the metallic test compensation values for lines. These values are used during SLIM2 testing to remove (compensate) resistance and capacitance resulting from the metallic connections and line unit in order to achieve a true measurement of the subscriber's line and instrument. There is no corresponding Recent Change view for this form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. An SFSYS form must exist with SFID ACT 230 set to "Y" to activate the SLIM2 Routine Mode test routine.

SLJOB form (5555 Record) - This new form is used to define test jobs for scheduled SLIM2 Routine Mode test sessions.

SLLEN form (5548 Record) - This new form is used to define the range of subscriber office equipment numbers that are to be tested in the SLIM2 Routine Mode test session.

SLSESS form (5556 Record) - This new form is used to define the schedule for test jobs that will be executed in the SLIM2 Routine Mode test session.

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SLTHRS form (5554-1/2 Record) - This new form is used to define the threshold values for the various tests performed during SLIM2 Routine Mode and Operator Mode test sessions. The SLIM2 feature in Operator Mode always requires a THRESHOLD LIST ID of 0, as only the default values are executed for Operator Mode.

SLTSET form (5549 Record) - This new form is used to define the types of tests that are to be performed during a SLIM2 Routine Mode test session.

TKGRP form (5202 Record) - This form is used to define trunk group parameters for all trunk types. The "LTPSLIM" trunk class was added to the TRKCLS field for LTPs.

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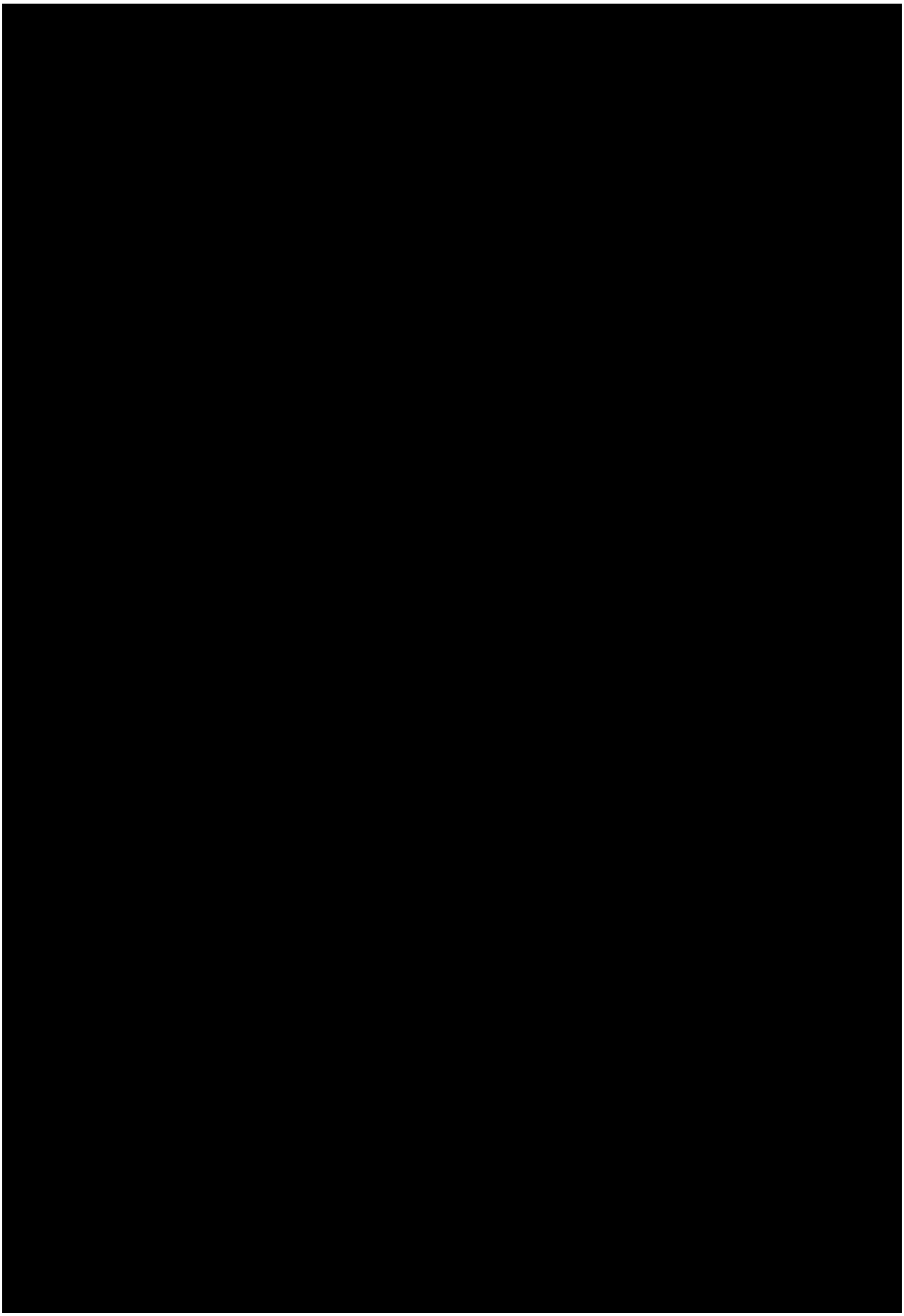

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Figure 1 SLIM ROUTINE MODE PROVISIONING SEQUENCE

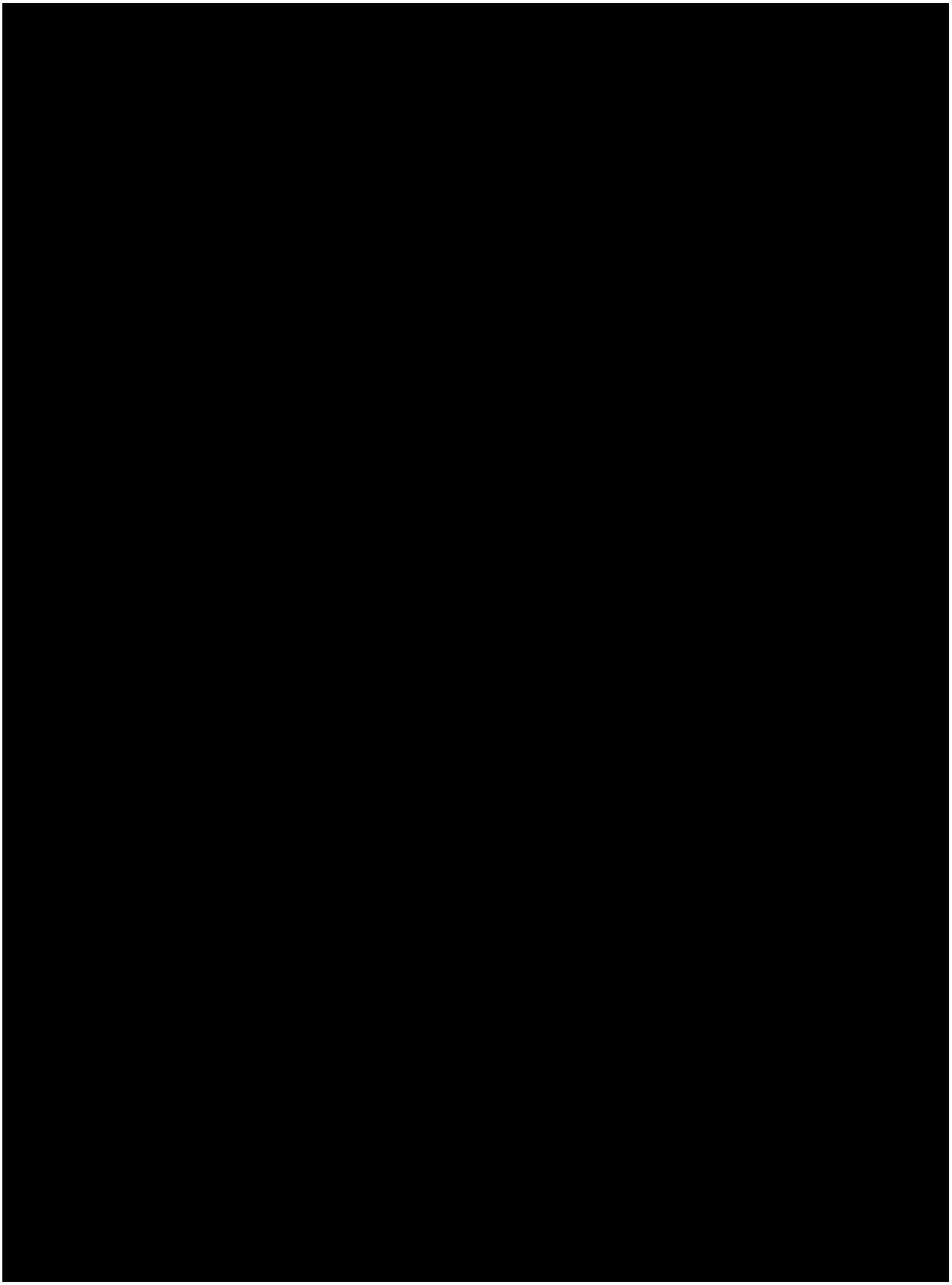

Figure 2 SLIM EQUIPMENT AND LTP PROVISIONING SEQUENCE

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SEC. 4A234: SWITCH VERIFICATION FOR MULTIPLE DIRECTORY NUMBER

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-118-100 Recent Change Procedures and References - Verify Multiple Directory Numbers Feature Document.*

SEC. 4A235: TOLL DIGITAL EXCHANGE ANI TABLE PROCESSING

1. FEATURE DESCRIPTION

The TDX (Toll Digital Exchange) ANI (Automatic Number Identification) Table Processing feature is part of the Toll Digital Platform Feature set. See Div. 2 Sec 4A165 (Toll Digital Exchange Basic Call Processing For Toll 5ESS Switch) for details.

SEC. 4A236: AIN TOLL FREE PHASE 1

1. FEATURE DESCRIPTION

The AIN (Advanced Intelligent Network) Toll Free feature is a secured feature SFID 236 and must be purchased before being activated. The feature number for this feature is 99-5E-3151.

Available with 5E10 and later, the AIN Toll Free feature provides an AIN based Toll Free Service utilizing the ASP (Advanced Services Platform) Toll Free capability. The AIN Toll Free feature allows any number to be marked as a Toll Free number, thereby eliminating the restriction of using numbers such as, 800, 888, or 877. The capabilities of the AIN Toll Free feature are intended to provide Toll Free Services under AIN that are as transparent as possible to those currently provided today through the Intelligent Network SSP800 feature.

Consult Section 3.8.13, AIN Toll Free Phase 1, of the 235-190-126 ASP Feature Document for further information.

2. FEATURE ASSIGNMENT

See Figure 1 for the form flow for the AIN Toll Free Phase 1 feature.

On the SFSYS form (5713-1 Record RC/V 8.22), SFID 236 must have the ACT field set to "Y".

On the NSTRIG form (5324 Record RC/V 9.35), set the ASP TOLLFREE field as required.

On the ICF form (5305 -1/2 Record RC/V 10.3), set ASP TF CDI and ASP TF RTI as required.

The existing SSPANN form (5535 Record RC/V 10.17), is used to provision the data to route to the 13A announcement.

The FIXRT form (5301-1 Record RC/V 10.1) no longer requires an entry with FIXED ROUTE TYPE equal to "NSANNC" for an SSP office. However it must be provisioned if routing to a RAF/SAS is desired.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FIXRT	5301-1	3	3G	10.1
ICF	5305-1/2	3	3R	10.3
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1, 8.15
SSPANN	5535	3	5AI	10.17

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FIXRT form (5301-1 Record) - The 5301-1 Record is used to define Routing and Charging treatment of Fixed Route Types.

The data rule for FIXRT ROUTE TYPE of "NSANNC" was changed.

ICF form (5305 Record) - The 5305 Record is used to allow the craft to assign elements for interLata carriers.

The ASP TF CDI and ASP TF RTI fields were added to support this feature.

NSTRIG form (5324 Record) - The 5324 Record identifies a network service application.

The ASP TOLL FREE field was added to support this feature.

OFCOPT form (5509 Record) - **OFCOPT form (5509)** - The 5509 Record provides the office option global parameters residing in the CP (Central Processor).

The data rule to ASP OFC to support this feature was added.

SSPANN form (5535 Record) - The 5535 Record defines SSP (Service Switching Point) announcement codes. These codes are used by call processing to determine the announcement route.

Although there are no modifications to the form, ASP will utilize the ANNC RTI to route to a 13A (or equivalent) announcement.

4. GLOSSARY

AIN - Advanced Intelligent Network

ASP - Advanced Services Platform

CP	Central Processor
DN	Directory Number
IEC	Interexchange Carrier
LEC	Local Exchange Carrier
ODA	Office Data Administration
SSP	Service Switching Point

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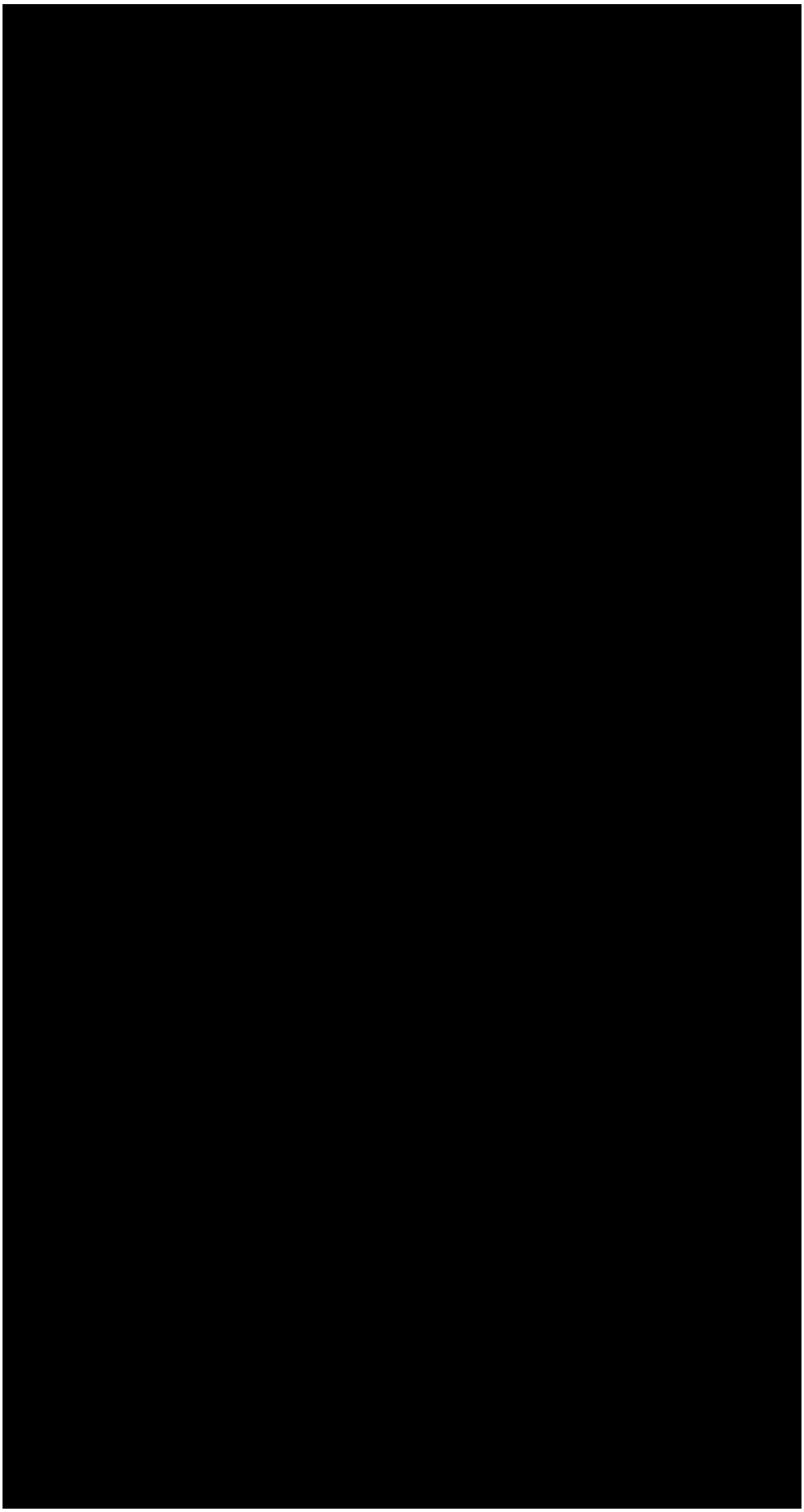

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Figure 1 FORM FLOW FOR AIN TOLL FREE PHASE 1

SEC. 4A237: ASP INTERWORKING WITH CIRCUIT SWITCHED DATA

1. FEATURE DESCRIPTION

The ASP (Advanced Services Platform) Interworking with CSD (Circuit Switched Data) feature is a secured feature SFID 237 for 5E10 and later, and must be purchased before being activated. The feature number for this feature is 99-5E-2949.

The ASP Interworking with CSD feature provides the ability for a CSD call placed by an originator to encounter an ASP trigger. When an ASP trigger, with a SERVICE ALWD of "CSD" or "BOTH", is encountered, either through a CSD called place from an ASP subscribed originating trigger (except OHI (Off Hook Immediate)) to a 3/6/10- digit trigger or TAT (Terminating Attempt Trigger), an R0.1 Query is launched. For a TAT to be encountered for CSD, the TAT DN itself must support the bearer capability of the call.

1.1 Processing of a CSD Call, Incoming Treatment (User Perspective)

Without this feature, CSD calls can not successfully encounter ASP triggers. When the ASP Interworking with CSD feature is activated, Circuit Switched Data access to all types of ASP triggers is allowed. If a call with a bearer capability of either 56kbps or 64kbps (indicating a circuit-switched data call) that arrives at the switch over a line or trunk facility whose class of service is allowed to encounter a particular type of ASP trigger and

- the trigger is detected
- the trigger indicates AIN Rel 0.1
- the SERVICE ALWD field on the NSTRIG form (5324 Record, RC/V View 9.35) indicates either "CSD" or "BOTH"

then the appropriate Query is sent following existing query rules with the inclusion of the new appropriate Bearer Capability value.

For data calls encountering CDP (Customized Dialing Plan Trigger) and FCD (Feature Code Dialing Trigger) triggers which are configured to collect digits from the caller, redirect procedures are invoked for Custom ISDN line, and information request procedures are invoked for a national ISDN line.

For a custom ISDN CSD call origination where the user dials an FCD (Feature Code Dialing Trigger) or CDP (Customized Dialing Plan Trigger) access code (ACTION is "ASPNORM" or "ASPVAR"), the 5ESS-2000 Switch invokes custom ISDN supplementary signaling services by sending the CPE (Customer Premises Equipment) a REDIRECT message followed by an INFO message with a Signal IE of "Dial Tone On". The CPE provides a display to let the user know he/she may continue dialing the digits to follow the access code. For further information, consult the Custom BRI (Basic Rate Interface) Specification Manual (235-900-343) Network Layer Supplementary Data Services.

For a national ISDN CSD call origination where the user dials an FCD or CDP access code (ACTION is "ASPNORM" or "ASPVAR"), the 5ESS-2000 Switch invokes information request procedures by including an information request IE to request an additional address "ASPNORM" or undefined "ASPVAR" digits, in addition to a Signal IE of "Recall Dial Tone On" in an INFO or SETUP_ACK message, depending on whether call is using enbloc or overlap signaling. The CPE provides a display to let the user know he/she may continue dialing the digits to follow the access code. For further information, consult the NISDN BRI Specification (235-900-341) Network Layer Supplementary Services Manual.

For additional information, consult the Advanced Services Platform Release 0.1B 235-190-126 document

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1.2 Processing of a CSD Call, Terminating Treatment (User Perspective)

For calls with a data bearer capability, all ASP responses are processed under existing requirements except for STR (Send To Resource) for switch-based announcements.

The routing number contained in the Called Party ID parameter received from the SCP (Service Control Point) for an ASP data call is translated in the post-query DAS (Digit Analysis Selector). The post-query DAS can be the value in the OFCOPT form (5509 Record, RC/V View 8.1) SCP DAS field, the originator's DAS, or the DAS defined in the POST QUERY DAS on the NSTRIG form (5324 Record, RC/V View 9.35). See the Lucent 235-190-126 document for further information on the hierarchy associated with post-query DAS selection.

The RTI (Route Index) appropriate for the call's bearer capability (that is, the DATA RI) is used rather than the normal RI used for voice calls for hunt type routing. Standard error treatment is provided if the Data RTI is not populated.

2. FEATURE ASSIGNMENT

2.1 SFSYS

On the SFSYS form (5713-1 Record), SFID 237 must have the ACT field set to "Y".

2.2 NSTRIG

A new field (SERVICE ALWD) is defined on the NSTRIG form (5324 Record, RC/V View 9.35). When the ASP Interworking with CSD feature is activated, a value for the SERVICE ALWD field can be entered for any R0.1 ASP trigger. The SERVICE ALWD field can have a value of "VOICE", "CSD", or "BOTH". When an ASP trigger, with a SERVICE ALWD of "CSD" or "BOTH", is encountered, either through a CSD call placed from an ASP subscribed originating trigger (except OHI) to a 3/6/10-digit or TAT , an R0.1 Query is launched. For a TAT to be encountered for CSD, the TAT DN itself must support the bearer capability of the call.

The SERVICE ALWD entry determines whether the trigger is allowed for voice calls, data calls, or both.

This field defaults to "VOICE" if the APPLICATION is "ASP". The field defaults to blank if the APPLICATION is not "ASP".

For Trigger Numbers indicating the ASP R0 protocol, the SERVICE ALWD field can not be changed and always indicates "VOICE". For applications other than "ASP", the SERVICE ALWD field must be blank.

If the ASP Interworking with CSD feature is locked, then the SERVICE ALWD field can not be changed from "VOICE".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPFD	5632-1	4	31A	12.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
IDDD	5307	3	3T	9.6
LDIT	5300-3/5	3	3C	9.3
MLDIT	5300-3A/B	3	3C	9.15
NSTRIG	5324	3	3AK	9.35
PDIT	5300-2	3	3B	9.2
RDIT	5300-7/8	3	3H	9.9

NSTRIG form (5324 Record) - The 5324 Record identifies a network service application.

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The SERVICE ALWD field was added to support the ASP Interworking with CSD feature.

Data rules to support this feature were added to the following forms and fields

FORM	RECORD	FIELD
ASPFD	5632-1	OHI TRIG NBR
ASPLPA	5632-2	OHI TRIG NBR
ASPMPA	5632-3	OHI TRIG NBR
IDDD	5307	DFLT RT
LDIT	5300-3/5	DFLT RT
MLDIT	5300-3A/B	DFLT RT
PDIT	5300-2	DFLT RT
RDIT	5300-7/8	DFLT RT

4. GLOSSARY

AIN	Advanced Intelligent Network
ASP	Advanced Services Platform
BRI	Basic Rate Interface
CDP	Customized dialing Plan Trigger
CPE	Customer Premises Equipment
CSD	Circuit Switched Data
DAS	Digit Analysis Selector
FCD	Feature Code Dialing Trigger
ISDN	Integrated Services Digital Network
OHI	Off Hook Immediate
RTI	Route Index
SCP	Service Control Point
SFID	Secured Feature ID
STR	Send To Resource
TAT	Termination Attempt Trigger

SEC. 4A238: AUTOMATIC ASSOCIATION OF DEFAULT SERVICE

1. FEATURE DESCRIPTION

The Automatic Association of Default Service feature provides for automatically assigning a default service profile to newly created National and custom ISDN DSL (Digital Subscriber Lines) at the time the OE (Originating Equipment Number) and other necessary per-line parameters are entered to create the DSL. This feature is an ISDN Basic Rate Interface feature available on both the SM and SM-2000 processors. This secured feature is available for 5E10 and later. The feature number for Automatic Association of Default Service is 99-5E-2271.A.

This automatic assignment of a default service profile can be overridden on a per-line basis by specifying a default service group, or by specifying "NONE", when the DSL is provisioned.

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Default service enables the DSL to provide dial tone and a minimum set of services to terminals on that DSL which could not normally access other services on that DSL. Service provider personnel must provision a common default service profile in the switch and must designate it as the one to be automatically associated with newly created DSLs (See Feature Assignment below).

This feature is built upon the "default service" capability on ISDN lines. ISDN service must be implemented on the switch. For National ISDN DSLs, the 5E10 features, "Non-initializing Terminals" (99-5E-2273) and "Default Service Profile" (99-5E-2271), must also be installed. For more information on these two features, see Division 2, Section 1AM.

2. FEATURE ASSIGNMENT

2.1 Feature Activation/Deactivation

To activate this feature, the ACT field for SFID 238 must be "Y" on the SFSYS form (5713-1 Record). In addition, a default service group must be assigned in the DFLT SRV field on the ISDNOPT form (5941 Record). The default service group must be defined on the DFLTSRV form (5974 Record).

DFLTSRV form: This form allows the user to assign a default service group name. For 5E10 and later, the value "NONE" cannot be entered as a group name. With this feature, "NONE" becomes a reserved keyword. It is used for default service provisioning on the DSL form.

ISDNOPT form: The DFLT SRV field assigns the name of the default service group that will be assigned to a custom or standard DSL if the DFLT SRV field on the DSL form (5907 Record) is not entered.

DSL form: The DFLT SRV field is used to specify the default service group to be used by terminals on the DSL. The value of "NONE" for the DFLT SRV field indicates no default service.

2.2 New Starts and Large Terminal Growth

For New Start offices or Large Terminal Growth, if SFID 238 is "Y" on SFSYS, and a default service group is assigned in the DFLT SRV field on the ISDNOPT form, then every valid DSL which does not have the DFLT SRV field entered on the DSL form will be assigned the default service group from the ISDNOPT form. Either "NONE" or a valid value must be entered for a valid DSL that should not have default service group.

2.3 Interactions

With the addition of the Automatic Association of Default Service feature, it is possible to assign both a circuit default TN user service and default service to a DSL. However, even though both are assigned, only the circuit default TN service can be used by the end-user. Previously, provisioning blocked the simultaneous assignment of the two services.

2.4 Recent Change Provisioning

The following is the Recent Change provisioning sequence for the Automatic Association of Default Service feature.

1. Activate Feature ID 238 on 8.22.
2. Build 23.15 for default service to be assinged to new DSLs when the DFLT SRV field is "blank" on 23.2 or 23.8. The word "NONE" cannot be part of the name.
3. Enter the default service name in the DFLT SRV field on 8.1.
4. On 23.2 and 23.8 - for inserts only - enter one of the following:
   - 1 - 7 alphanumeric characters

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- "NONE" indicating no default service
- "blank" allows Automatic Association of Default Service Defined on 8.1.

The following summarize the action that is taken when DFLT SRV field is "blank":

- When this automatic association feature is not active or active but not assigned 8.1, "blank" indicates no default service, i.e., "NONE".
- When this automatic association feature is active and assigned on 8.1 and DSL is an invalid DSL, "blank" indicates no default service, i.e. "NONE".
- When this automatic association feature is active and assigned on 8.1 and DSL is a valid DSL, "blank" automatically assigns the default service group to the DSL.

3. TRANSLATION REQUIREMENTS

No new or modified forms for this feature. See Division 2, Section 1AM for translation requirements for Non-initializing Terminals and Default Service Profile.

SEC. 4A239: ASP SELECTIVE NPA DELETION

1. BACKGROUND

Prior to this feature, when the SCP (Service Control Point) returns a ten-digit CalledPartyID, a global office field (INH SCP NPA DEL on the EQIM form) is used to determine if ten or seven digits should be presented to digit analysis. The "Y" or "N" setting of the INH SCP NPA DEL field indicates whether or not an attempt to delete the NPA (Numbering Plan Area) should occur. Use "N" if the attempt should occur, or "Y" if the attempt should not occur. When the INH SCP NPA DEL field is displayed with a value of "N", an attempt to delete the NPA is performed using the NPA Deletion Algorithm. For a ten-digit number, the NPA Deletion Algorithm deletes the NPA and seven digits are the result, if one of the following conditions are true:

1. The NPA of the ten-digit number matches the NPA specified in the IMPLD NPA field of the OFCOPT form.
2. The NPA of the ten-digit number matches the NPA specified on either the NONE or 1+ IMPLIED NPAS entry on the LDIT form for the NXX. For example, the CalledPartyID field contains "7089715767". If the NPA was not deleted by step 1 of this list, then LDIT "971" entry is read and if the NONE or 1+ IMPLIED NPAS field entry is "708", then "708" is stripped from the ten-digit number and seven digits are presented to digit analysis.
3. The NONE or 1+ IMPLIED NPAS entry on the LDIT form for the NXX digits of the ten-digit number specify AMB (Ambiguity) and the NPA of the ten-digit number matches the NPA of the originator. For example, the CalledPartyID Digits field contains "7089715767". If the NPA was not deleted by step 1 or 2 of this list, and if either the NONE or 1+ IMPLIED NPAS field entry for the LDIT "971" digits is defined as "AMB", then "708" is compared to the NPA digits of the ASP trigger originator, and if a match is detected, "708" is stripped from the ten-digit number.

2. FEATURE DESCRIPTION

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The feature number for the ASP (Advanced Service Platform) Selective NPA (Numbering Plan Area) Deletion feature is 99-5E-3886. This secured feature (SFID 239) is being deployed as a software update for the 5E11 Software Release and for the Beginning Managed Introduction of the 5E12 Software Release.

The intent of the ASP Selective NPA deletion feature is to enhance the current post query digit analysis and screening processing of a ten-digit National or Subscriber CalledPartyID. The following enhancements provides:

- A new option field that allows the SSP (Service Switching Point) to select whether or not the ten-digit CalledPartyID should be initially tried in digit analysis as a ten-digit number or if an attempt to delete the NPA should be made, provide digit analysis with a seven-digit number.
- Perform digit analysis again on the digits to determine if the initial pass through digit analysis fails. When a digit analysis failure occurs on a ten-digit number, attempt to delete the NPA digits, as appropriate, and try seven digits. For an initial digit analysis failure on a seven-digit number, the original ten-digit number is used for the second attempt through digit analysis.
- Perform digit analysis and screening again on the digits, if the initial pass through screening fails. When a screening failure occurs and ten-digits are associated with the call, attempt to delete the NPA digits, as appropriate, and send seven digits back to digit analysis. For an initial screening failure with an associated seven-digit number, the original ten-digit number is used for the second attempt through digit analysis and screening.

The functionality provided by the ASP Selective NPA Deletion feature supersedes the current treatment of ten-digit CalledPartyIDs with a NoN of National or Subscriber.

3. FEATURE ASSIGNMENT

To enable this feature, first, the ASP R0.1A SFID (Secured Feature ID) 51 must be unlocked by setting the ACT fields for SFID 51 to "Y", and then the SFID 239 can be unlocked by also setting the ACT field for the SFID 239 to "Y". Both fields can be set on the SFSYS form (5713-1 Record).

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. The SFID 51 and SFID 239 should be set to "Y" to activate this secured feature.

No new fields nor data rules are being added for this feature.

SEC. 4A240: LINE BLOCKING ENHANCEMENT FOR ISVM (INTERSWITCH VOICE MESSAGING)

1. BACKGROUND

Currently for a direct call to an ISVM (Interswitch Voice Messaging) VMS (Voice Messaging System), if CPN (Calling Party Number) Privacy is activated, the subscriber is routed to a default message with a prompt to enter the 10-digit number associated with the mailbox. One of the intents of this feature is to enable residential, small business, and work-at-home customers to retrieve their voice messages more efficiently by not having to re-enter their DNs (Directory Numbers) upon direct dialing the VMS from a Private DN associated with the mailbox.

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Phase 1 of this feature (99-5E-3270-A) provides a per switch basis of activation of this feature as described above with the OFID (Option Feature System ID) in 5E10.

2. FEATURE DESCRIPTION

The feature number for the Line Blocking Enhancement for ISVM feature is 99-5E-3270. This secured feature uses SFID (Secured Feature ID) 240 and is deployed on the 5ESS switch in a software update for the 5E11 Software Release and later.

The Line Blocking Enhancement for ISVM delivery feature is an enchancement to the MSS (Message Service System) feature that will allow the CPN of any call either direct or forwarded to be presented to the VMS across the API (Applications Processor Interface) Link even when privacy is activated for the CPN. This feature will override privacy for CPN for calls originating on the same switch as well as for calls arriving via CCS7 (Common Channel Signaling, CCITT Version 7) from different switches. This applies only to VMSs and MSCs (Message Service Centers) setup for ISVM.

3. FEATURE ASSIGNMENT

For 5E10 (phase 1), to enable this feature, the ACT field for SFID 240 on the SFSYS form and the optioning number 669 on the FOSYS form is set to "Y".

For 5E11 and later, to enable this feature, the ACT field for SFID 240 and the ACT field for the optioning number 669 on the FOSYS form is set "Y" or use the MLHG form (5110-1 Record) for MSC provisioning.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MLHG	5110-1	3	1J	3.5

MLHG form (5110-1 Record) - This form is used to create Multiline Hunt Group infomation. Added the new field CPN OVRIDE PRVCY to support the Line Blocking Enhancement for Interswitch Voice Messaging feature.

5. GLOSSARY

API	Application Processor
CCS7	Common Channel Signaling, CCITT Ver.7
CPN	Calling Party Number
DN	Directory Number
ISVM	Interswitch Voice Messaging
MLHG	Multiline Hunt Group
MSC	Message Service Center
OFID	Option Feature System ID
VMS	Voice Messaging System

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Figure 1 FORM FLOW FOR LINE BLOCKING ENHANCEMENT FOR ISVM

SEC. 4A241: AIN SEND TO OUTSIDE RESOURCE REMOTE

1. BACKGROUND

On the 5ESS Switch, announcements played using the existing Send To Resource capability are stored in the DSU2-RAF (Digital Service Unit Model 2 - Recorded Announcement Facility) on customized announcement boards as phrases. Phrases stored on the boards can be combined into announcements using Recent Change. Announcements can be created or modified only if they can be constructed of phrases already stored on the boards. New phrases can be stored by ordering new boards with the existing and new phrases burned into their EEPROMs.

The AIN SSP STOR (Send to Outside Resource) (Local) (for more information on this feature, see Division 2, Section 4A229) capability addresses the need for an increased number of AIN customized announcements and the need for a shorter and easier means of creating announcements. It provides the capability for the SSP (Service Switching Point) to perform the STOR operation when the IP (Intelligent Peripheral) is local to the SSP, that is, when it is directly connected via National/Custom ISDN PRI (Primary Rate Interface)

The SCP (Service Control Point) is allowed to instruct the switch to access an IP which can act as an announcement service, text-to-speech service and collection of digits, and FlexParameter platform. Such an IP would have an announcement capacity much greater than 512 announcements that the DSU-2 currently provides, and would also allow for very fast creation or modification of announcements.

In addition to providing voice announcements and digit collection, the IP can provide other services such as text to speech, voice recognition, etc., which the SCP can invoke using the new STOR operation.

When a Send To Resource message containing a Destination Address Parameter (referred to as an STR(E) (A Send To Resource message containing a DAP (Destination Address Parameter)) message), is received by the switch, the switch connects the user to the IP indicated by this parameter. Information in

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the STR Parameter Block is forwarded to the IP to convey the SCP's instructions. The IP plays the announcement as indicated by the SCP instructions.

2. FEATURE DESCRIPTION

Available with the 5E11 Software Update and later Software Releases, the AIN Send To Outside Resource Remote feature is a secured feature using SFID (Secured Feature ID) 241 and must be purchased before being activated. The feature number for this feature is 99-5E-3620.

This feature provides the capability for SSPs that are not directly connected to the IP the ability to access the IP using ISUP (ISDN User Part) signaling over trunks connected to the SPP where the IP is located.

Therefore, this feature allows the customer who does not have an IP connected to the SSP to use the Send to Outside Resource Remote capabilities. That is, customers who plan to use the Send to Outside Resource capabilities do not need to have an IP attached to every SSP. This feature eliminates the need for multiple IP's since the other SSPs can access the IP remotely.

This feature will also address the need for an increased number of AIN customizable announcements and the need for a shorter and easier means of creating announcements by allowing the SCP to instruct the switch to access a remote IP which can act as an announcement platform.

This feature provides:

- service providers the ability to develop applications using capabilities such as announcements, text-to-speech, and voice recognition through service circuits accessible on the IP.
- an increased number of AIN customizable announcements.
- a means of creating announcements by allowing the SCP to instruct the switch to access a remote IP which can act as an announcement platform.
- elimination of a need for each SSP in the users network to have their dedicated IP.
- access by multiple switches to external IP announcements.
- for a greater expanded announcement set (via IP), with facility for creation/change.
- use of ISUP signaling (via existing trunks) to reach remote switch where IP is directly connected.

3. FEATURE ASSIGNMENT

This is a secured feature, therefore, before it can be activated the ACT field for SFID 241 on the SFSYS form (5713-1 Record) must be set to "Y". In addition, the AIN SSP Send To Outside Resource (Local), feature must be activated by setting the ACT field for SFID 229 on the SFSYS form to "Y". (For more information on this feature, see Division 2, Section 4A229).

The STR(E) capabilities specified in this feature are not provisioned against any particular line or trunk. The STR(E) capability is available on an office-wide basis when the feature is activated. When the feature is activated, STR(E) capabilities may be invoked for any call once it has encountered an ASP (Advanced Services Platform) trigger and Queries an SCP. The STR(E) capabilities are invoked on a call-by-call basis by the service logic resident at the Service Control Point.

ISUP connections from the local SSP to the remote SSP are provisionable and manageable through existing capabilities. PRIs which are to be used to connect to IPs will be provisioned as IP Interfaces.

An end-to-end ISUP connection is required between the Local and Remote SSPs.

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4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable Secured Features. This feature is activated by setting the ACT field for SFID 241 on the SFSYS form (5713-1 Record) to "Y". In addition, the AIN SSP Send To Outside Resource (Local) feature must be activated by setting the ACT field for SFID 229 on the SFSYS form to "Y". (For more information on this feature, see Division 2, Section 4A229).

5. GLOSSARY

AIN	Advanced Intelligent Network
ASP	Advanced Services Platform
DAP	Destination Address Parameter
DSU2-RAF	Digital Service Unit Model 2-Recorded Announcement Facility
IP	Intelligent Peripheral
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
PRI	Primary Rate Interface
SCP	Service Control Point
SSP	Service Switching Point
STOR	Send To Outside Resource
STR(E)	A Send To Resource message containing a DAP

SEC. 4A242: VIRTUAL PRIVATE NETWORK - LDP

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-110 Long Distance Platform.*

SEC. 4A243: CARRIER ROUTING / CALL PROCESSING BY FACILITY PRESENCE

1. FEATURE DESCRIPTION

Carrier Routing / Call Processing by Facility Presence is a secured feature using SFID (Secured Feature ID) 243 and must be purchased before being activated. The feature number for this feature is 99-5E-3970.

This feature is being deployed on the 5ESS-2000 Switch in a software update for the 5E11 Software Release and for the Beginning Managed Introduction of the 5E12 Software Release.

The Carrier Routing/Call Processing by Facility Presence feature provides a new trigger on a 5ESS-2000 Switch that is configured as a toll switch. The term "Toll Switch" is used to define a 5ESS-2000 Switch that is configured as an Access Tandem or Interexchange Carrier switch. The functionality provided by

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the new "Carrier Routing" Trigger provides the ability to launch an ASP R0.1 Info_Collected Query at the Toll Switch for designated carriers. Incoming traffic to the Toll Switch can detect this Carrier Routing Trigger when the following conditions are met:

- The incoming trunk group is provisioned to allow Carrier Triggers
- A Carrier ID is received in the trunk signaling or is provisioned on the trunk group
- The signaled or derived Carrier ID is provisioned with an ASP R0.1 Trigger number.

When these conditions are satisfied, an ASP R0.1 Info Collected Query is launched.

The Carrier Routing Feature provides an ASP trigger in the Toll Switch which allows a toll provider to query the SCP database and provide a variety of services, such as:

- Route selected calls for the carrier
- Screen calls for the carrier based on ANI.

This feature is supported on the 5ESS-2000 Switch, the CDX and VCDX platforms for both the SM and SM-2000.

2. FEATURE ASSIGNMENT

For form flow see Figure 1. The activation of this feature is dependent on SFID 126 being active.

To enable this feature, the ACT field for SFID 243 is set to "Y" on the SFSYS form.

Define the Trigger Number on the Carrier. The ICF form is used to provision the carrier on the trigger. For the Feature Group D Carrier, set the ASP TRG NBR field to a valid R0.1 trigger that has been defined on the NSTRIG form.

Allow the Trunk to Access the Carrier Trigger. In order for the carrier tigger to be detected, the incoming two-way trunk group must have the permission set to use the trigger. On the TKGRP form, for the "LATA" or "TTOLLCON" trunk group, set the CARRIER TRIG field to "Y".

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ICF	5305-1/2	3	3R	10.3
TKGRP	5202	3	2A	5.1
SFSYS	5713-1	3	5AR	8.22

ICF form (5305 -1/2 Record) - This form is used to define the characteristics of Inter-LATA (Local Access Transport Area) carriers. For 5E11 and later, added the ASP TRIG NBR field.

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. This feature is a secured feature and is activated by setting the ACT field for SFID 243 to "Y" on the SFSYS form (5713-1 Record).

TKGRP form (5202 Record) - The 5202 Record is used to define each Trunk Group in a 5ESS-2000 Switch. For 5E11 and later, added the CARRIER TRIG field.

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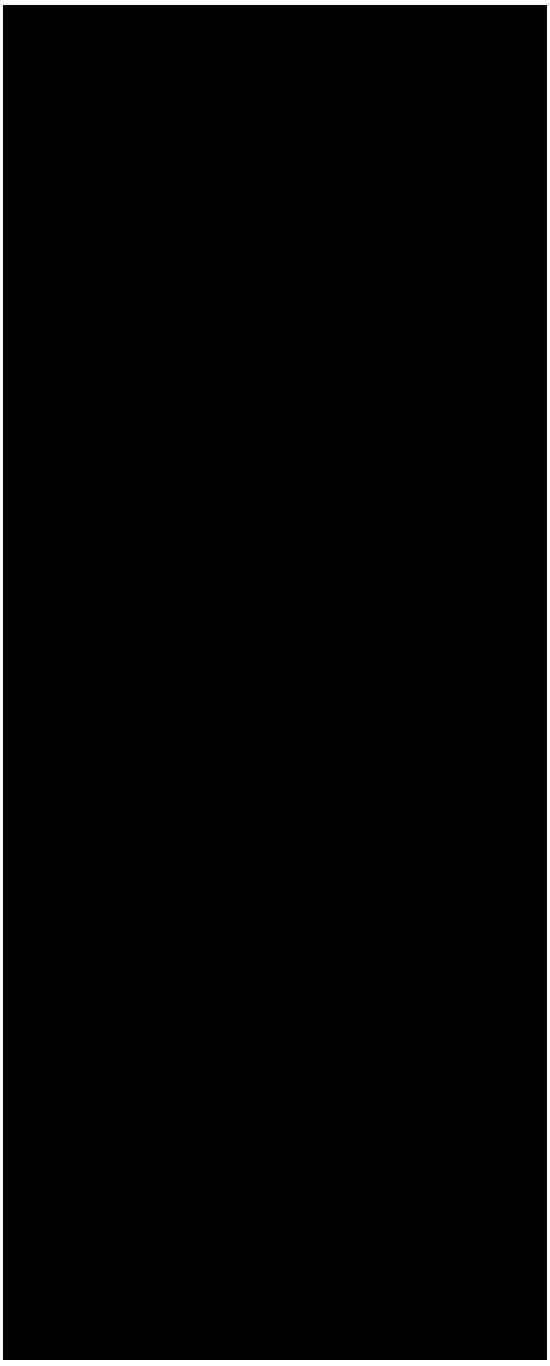

Figure 1 FORM FLOW FOR CARRIER ROUTING / CALL PROCESSING BY FACILITY PRESENCE

SEC. 4A244: MODIFIED REDIRECTING NUMBER ORIGINATION ON PRI

1. FEATURE DESCRIPTION

The Modified RN (Redirecting Number) Origination on PRI (Primary Rate Interface) is a secured feature (SFID 244) that is being deployed as a 5E11 Software Release and for the BMI (Beginning Managed Introduction) of the 5E12 Software Release. The feature number for this feature is 99-5E-4046.

This feature maps the originating PRI RN IE(s) (Interexchange) into:

- SS7 OCN (Signaling System 7 Original Called Number), RN, and RI (Route Index) parameters of the SS7 IAM (Initial Address Message) for SS7 calls

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- ATP (Access Transport Parameter) in the IAM
- RN IE(s) of the BRI (Basic Rate Interface) SETUP for BRI calls on the same switch

With this feature, it is possible to discard and screen the numbers in the RN IE(s), and also bill the originating PRI call to the number in the RN IE (if there are two PRI RN IEs, the number in the second RN IE will be used).

This feature also applies to all PRI B-channel trunk groups in the office for custom and national ISDN (Integrated Services Digital Network) PRIs.

The functionality of this feature is operational on both classic SMs (Switching Modules) and SM2000 switches.

2. FEATURE ASSIGNMENT

For 5E11 and later, to provision this feature:

- Set the ACT field for SFID 244 on the SFSYS form (5713-1 Record) to "Y".
- For PRI originations the following fields must be set on the TKGRP form (5202 Record) accordingly:
  - In order to bill the call to the number in the PRI RN IE, the RN BILLING field must be set to "Y".
  - In order to screen the number in the PRI RN IE, the RN SCRN field must be set to "Y".
  - In order to discard the number in the PRI RN IE, the RN DISC field must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the Modified RN Originator on PRI feature, the ACT field for SFID 244 must be set to "Y".

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form. Added the RN SCRN, RN DISC, and the RN BILLING fields.

SEC. 4A245: RTCD (REAL TIME CALL DETAIL) PLATFORM/APPLICATION

1. FEATURE DESCRIPTION

Available as a Software Update to 5E13, the RTCD (Real Time Call Detail) feature has feature numbers 99-5E-3784, 99-5E-3784.B, and 99-5E-4387 and uses SFID (Secured Feature ID) 245.

There are 3 parts of the RTCD (Real Time Call Detail) feature.

The RTCD Application feature (99-5E-3784) provides the capability for each 5ESS-2000 Long Distance Platform switch in the path of a call to generate a RTCD record containing information collected during the life of the call. Changes to support this part of the feature were made in 5E12.

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The RTCD Platform feature (99-5E-3784.B) allows the RTCD records the ability to be transmitted off the switch in near real time (within 10 seconds of call disconnect) via an Ethernet interface to a collector system. Changes to support this part of the feature were made in 5E12.

The 5ESS Long Distance Platform RTCD Enhancement Package-A (99-5E-4387), extends the capabilities provided by feature number 99-5E-3784 (RTCD Application for the 5ESS-2000 Switch LDP). The enhancements are available as a Software Update to 5E13 and build upon the RTCD Application and Platform feature capabilities developed in 5E12.

NOTE: The RTCD feature can only be turned on after the 5E13 Software Update is installed.

1.1 RTCD Application and Platform feature

The RTCD feature adds the capability to the LDP (Long Distance Platform) 5ESS-2000 Switch to generate per call information in the form of RTCD records. The RTCD feature also adds the capability to the LDP to transmit these records from the switch in near real time via a standard data interface.

Service providers using the RTCD feature may use the records for subscriber billing, network planning and maintenance, and rapid fraud detection.

Service providers will recognize much of the initial content of the RTCD records as being similar to that delivered in AMA (Automatic Message Accounting) records, such as calling number, called number, answer time, and carrier connect time.

While AMA records are usually only generated at the first switch in a provider's network, sufficient for subscriber billing, RTCD records may be generated on a per trunk group basis anywhere in a service provider's network. A service provider may decide to activate the RTCD feature nominally on all NATs (Network Access Trunks) for those calls entering their network, but will occasionally activate the RTCD feature on their INTs (Intra Network Trunks) to pinpoint network problems. Other network providers may elect to have the RTCD feature active all the time on all of their toll trunk groups.

For those service providers currently using AMA, the RTCD feature does not affect the ability of the LDP 5ESS-2000 Switch to format and generate AMA records. Both AMA and RTCD could be active for the same calls.

Figure 1 shows the RTCD delivery architecture at a high level.

The RTCD records generated by the 5ESS-2000 Switch are transmitted from the switch via an Ethernet interface to a local Data Server where they are stored on disk and transmitted to a downstream Data Manager. The office will have its local Data Server in a "duplex" configuration (two Hubs and two Data Servers as shown in Figure 1).

The lines with arrows are trunk groups which could carry a mixture of voice and circuit switched data calls. The service provider can activate the RTCD feature on any toll trunk group. When a call enters the LDP 5ESS-2000 Switch via a trunk group with the RTCD feature active, the switch generates a RTCD record when the call disconnects, and transmits the record out of the switch via an Ethernet link. Barring unusual conditions (SM in stand-alone, Ethernet link unavailable, etc.), the switch transmits the RTCD record within ten seconds after the call disconnects, even during the busy hour. The switch does not retain a copy of the RTCD record once the record is transmitted to the Data Server.

Each LDP 5ESS-2000 Switch using the RTCD feature will equip one SM-2000 with a MHEIB (Message Handler Ethernet Interface Board). This SM-2000 is referred to in this document as the GBSM (Global Billing SM). The GBSM provides the termination of the Ethernet link at the switch side. The GBSM receives RTCD records generated by the various SMs in the office, including itself, and transmits the records to the outside world via the Ethernet link and TCP/IP protocol. RTCD messages transmitted via this interface will be sent utilizing the GDI (Generating System to Data Server Interface) protocol. Due to the volume of messages produced by this feature, the QLPS (Quad-Link Packet Switch) is required. Switches with more than one SM-2000 will already have need of the QLPS, regardless of the RTCD

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feature. The Ethernet links from the Data Server to the Data Manager will use Data Server to DDI (Data Processing Management System Interface) protocol utilizing FTP (File Transfer Part).

1.2 RTCD Enhancement Package

The enhancements are outlined below:

- Support for RTCD recording on calls originating on EDSLHM (Extended Digital Subscriber Loop Hotel/Motel) trunks. EDSLHM is the name given to a trunk that enters the 5ESS Switch from a hotel or motel, and which uses the PRI (Primary Rate Interface) version of ISDN signaling.
- Recording of network information (Terminating Switch, etc.) not otherwise available at the recording office.
- Permitting the service provider the option of generating additional records to capture information from the SCP (Service Control Point) transaction(s), especially when more than one SCP transaction is triggered for the call.

  The option is exercised through the use of a new office parameter (which determines how a SCP-generated AMAslpID is to be interpreted), and on a per-transaction basis by having the SCP return an AMAslpID parameter in a response message.

  A maximum of six RTCD records can be generated per call at a given office, if this option is exercised on all six SCP transactions in addition to the RT_05 record.
- Simplifying the task of correlating all RTCD records generated for any given call, regardless of what office produced each record and regardless of how many records per call are generated at a specific office.
- Expanding the set of measurements and I/O messages provided, thereby enhancing the operations component of the feature.

Other than these enhancements, the RTCD feature will operate as currently provided in the 99-5E-3784 version of the feature.

2. FEATURE ASSIGNMENT

Activation of this feature requires that growth procedures for adding the ethernet link must be executed. In addition, RTBM (Real Time Billing Memory) must be properly configured. Once this has been done, the feature can be activated by the following sequence below and in Figure 2.

- On the SFSYS form (RC/V view 8.22) activate SFID 245.
- On the OFCOPT form (RC/V view 8.1) enter the desired value in the RTCD ALM, SCP TREC and RTCD OFC fields.
- On the TKGRP form (RC/V view 5.1) enter "Y" in the RTCD REQ field for all trunk groups that need RTCD.

3. TRANSLATIONREQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ENETLINK	5827	8	67	19.21

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ENETPIPE	5826	8	66	19.20
EQMH	5856	8	58	19.13
EQIM	5700-1	8	2	18.1
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-5	3	2A	5.1

ENETLINK form (5827 Record) - This form defines the ethernet links connected to a MH (Message Handler). This view was added to support the RTCD feature.

ENETPIPE form (5826 Record) - This form defines the ethernet pipes connected to a MH (Message Handler). This view was added to support the RTCD feature.

EQMH form (5856 Record) - This form defines the equipage information for the message handler in an SM-2000 processor. The MH field display type has been modified from a verify only field to a key field to support the RTCD feature.

EQIM form (5700-1 Record) - The form defines Switching Module Equipage Assignments. The BILL SM field was added to support the RTCD feature.

OFCOPT form (5509 Record) - This form supplies various miscellaneous office options and parameters. The BILL SM, RTCD OFC, and RTCD ALM fields are added to support the RTCD feature. The SCP TREC field was added to support the RTCD Enhancement Package-A feature.

SFSYS form (5713-1 Record) - This form is used to activate Secured Features. The SFID 245 option should be set to "Y" to activate this feature.

TKGRP form (5202-5 Record) - This form defines parameters for each Trunk Group in a 5ESS Switch. The RTCD REQ field was added to support the RTCD feature.

4. GLOSSARY

DDI	Data Server to DPMS Interface
EDSLHM	Extended Digital Subscriber Loop (a trunk class for
FTP	File Transfer Part
GBSM	Global Billing Switching Module
GDI	Generating System to Data Server Interface
INTs	Intra-Network Trunks
IP	Intelligent Peripheral or Internet Protocol
ISDN	Integrated Digital Services Network
LDP	Long Distance Platform
MHEIB	Message Handler Ethernet Interface Board
NATs	Network Access Trunks
ODA	Office Data Assembler
PRI	Primary Rate Interface
QLPS	QLPS QGP Link
RC	Recent Change 5ESS-2000 Switch Software Subsystem

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RTBM	Real Time Billing Memory
RTCD	Real Time Call Detail
SCP	Service Control Point
SFID	Secured Feature Identification ("245" for RTCD)
SM	Switching Module
TCP	Transmission Control Protocol/Internet Protocol

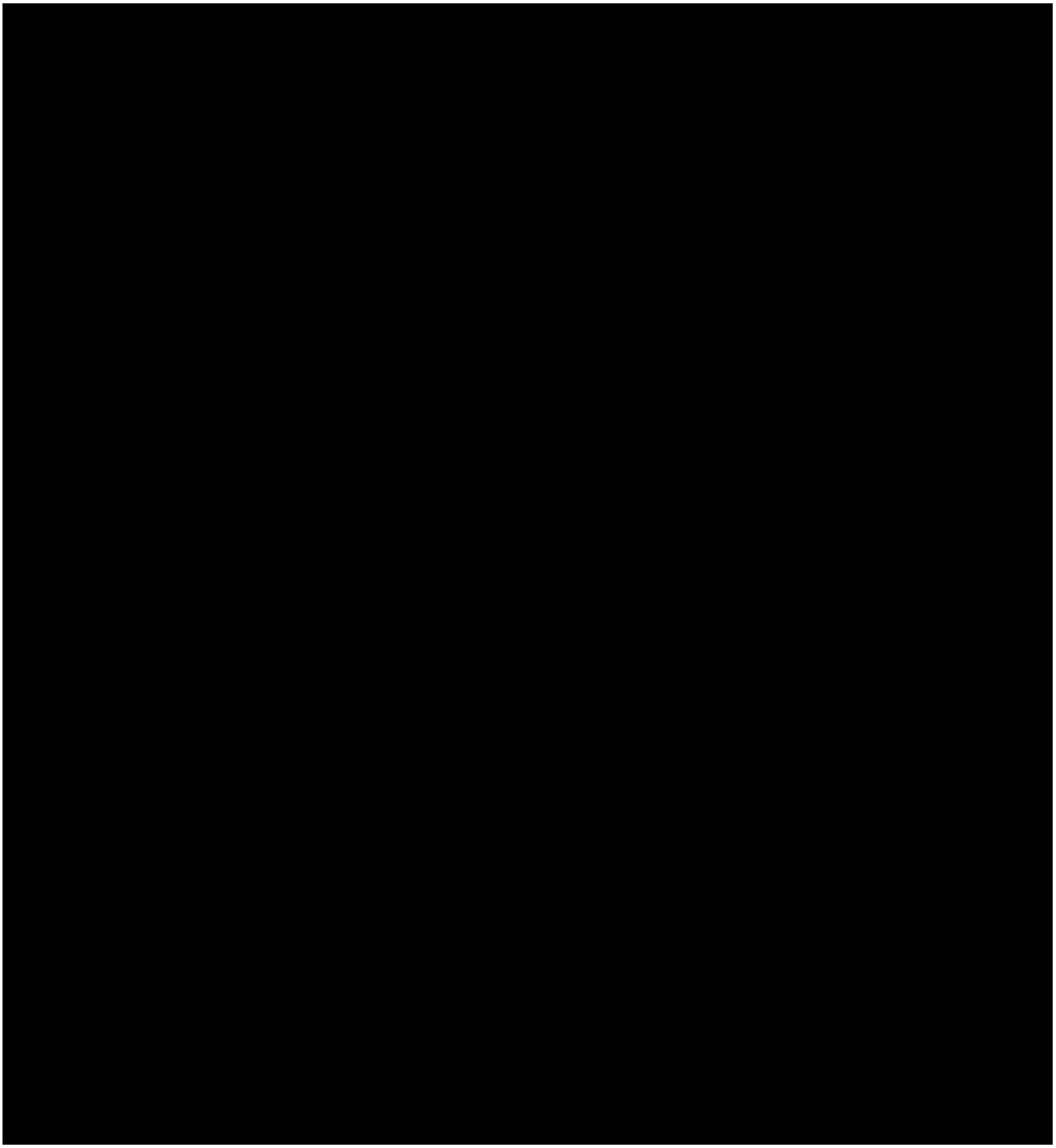

Figure 1 RTCD RECORD DELIVERY ARCHITECTURE

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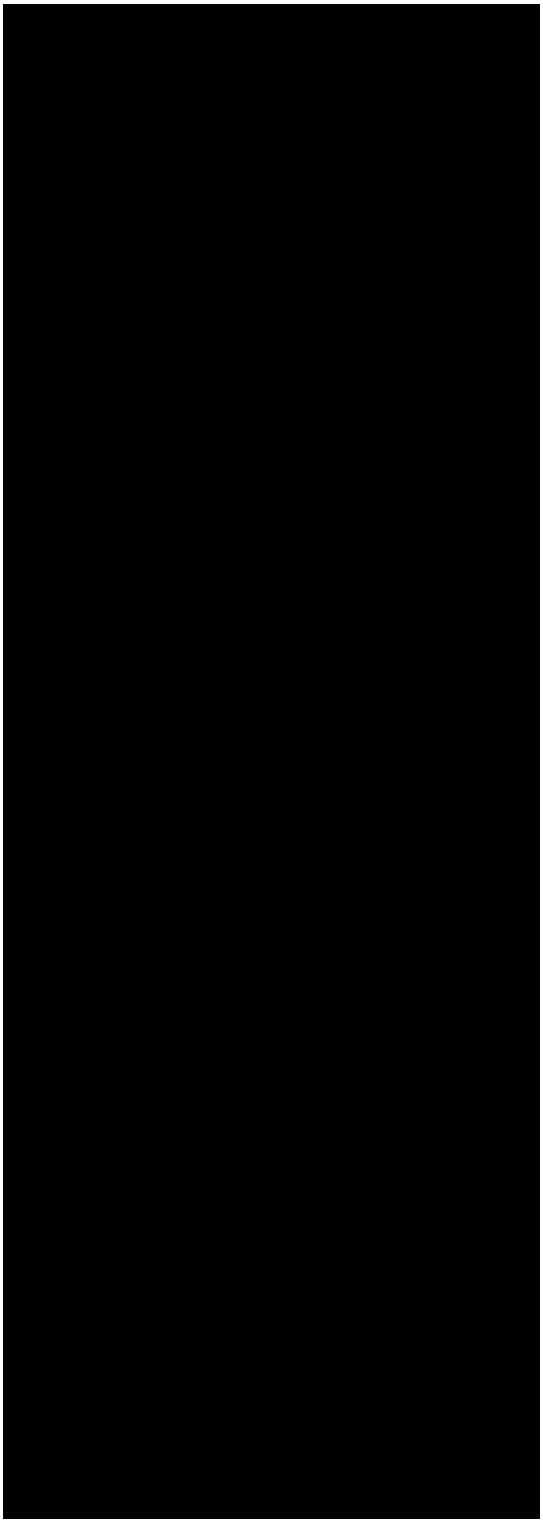

Figure 2 FORM FLOW FOR RTCD (REAL TIME DETAIL) PLATFORM

SEC. 4A246: TELEPHONE STATUS MONITORING AND SELECT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

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SEC. 4A247: MINT BETA SIGNALING

1. FEATURE DESCRIPTION

This feature is documented as part of the base MINT (Multi-Vendor Intra-Network Trunk) feature. Please see Division 2, Section 4A217 for more information on the base MINT feature (TOLL 5ESS Switch Platform for MINT Processing).

SEC. 4A248: MINT GAMMA SIGNALING

1. FEATURE DESCRIPTION

This feature is documented as part of the base MINT (Multi-Vendor Intra-Network Trunk) feature. Please see Division 2, Section 4A217 for more information on the base MINT feature (TOLL 5ESS Switch Platform for MINT Processing).

SEC. 4A249: MINT REROUTE QUEUEING

1. FEATURE DESCRIPTION

This feature is documented as part of the base MINT (Multi-Vendor Intra-Network Trunk) feature. Please see Division 2, Section 4A217 for more information on the base MINT feature (TOLL 5ESS Switch Platform for MINT Processing).

SEC. 4A250: MINT REROUTE ON RELEASE

1. FEATURE DESCRIPTION

This feature is documented as part of the base MINT (Multi-Vendor Intra-Network Trunk) feature. Please see Division 2, Section 4A217 for more information on the base MINT feature (TOLL 5ESS Switch Platform for MINT Processing).

SEC. 4A251: MINT TIME DEPENDENT ROUTING

1. FEATURE DESCRIPTION

This feature is documented as part of the base MINT (Multi-Vendor Intra-Network Trunk) feature. Please see Division 2, Section 4A217 for more information on the base MINT feature (TOLL 5ESS Switch Platform for MINT Processing).

SEC. 4A252: AIN ANNOUNCEMENT ID EXPANSION

1. FEATURE DESCRIPTION

The feature number for AIN (Advanced Intelligent Network) Announcement ID Expansion Feature is 99-5E-3569. This secured feature is available for 5E12 and later Software Releases.

This feature increases the number of announcement IDs from 255 to 65535. This increase in announcement IDs allows service providers to offer more customized announcement sets to their end-customers.

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 252 is set to "Y" on the SFSYS form.

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When the feature has been enabled, AIN Announcement ID Expansion can be provisioned on the ANNTR form (5533 Record) or SSPANN form (5535 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNTR	5533	3	5AG	8.62
SSPANN	5535	3	5AI	10.17

ANNTR form (5533 Record) - This form lists phrases that identify announcement trailer. Changed TRAILER ID valid values from 1 - 255 to 1 - 65535 for 5E12 and later Software Releases to support this feature.

SSPANN form (5535 Record) - This form is used to specify a failure announcement code and either the route index to an announcement trunk group to be used to supply the appropriate message or pointers to customized header and trailer announcements. Changed CUST TRLID valid values from 1 - 255 to 1 - 65535 for 5E12 and later Software Releases to support this feature.

Figure 1 FORM FLOW FOR AIN ANNOUNCEMENT ID EXPANSION

SEC. 4A254: RESTRICT USAGE OF ASP TRIGGERS

1. FEATURE DESCRIPTION

The feature number for the Restrict Usage of ASP (Advanced Service Platform) Triggers feature is 97-5E-3846. This feature is being controlled by the secured feature ID 254 and is being deployed as a software update for the 5E11 Software Release and for the Beginning Managed Introduction of the 5E12

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Software Release.

NOTE: This feature depends on SFID 126 which must be purchased to achieve the base ASP feature.

This feature allows a new ASP customer to purchase all of the ASP 0.1B triggers (Unrestricted ASP - Feature ID 254), or to separately purchase the following groups of ASP triggers (controlled by SFIDs 255, 256, and 257) without being required to purchase all other ASP triggers:

- ASP Subscribed Originating Line Triggers (Feature ID 255):
  - Off Hook Delay
  - Off Hook Immediate
  - Feature Code Dialing
  - Custom Dialing Plan
  - Trunk Seizure Trigger (Private EAMF (Equal Access Multifrequency))
  - SIT (Shared Inter-Office Triggers) - options 1, 3, 4
  - PRI (Primary Rate Interface) Triggers (B-Channel Seizure)
- ASP Dialing Plan Triggers (Feature ID 256):
  - 3/6/10-Digit Triggers
  - N11
  - SIT (Shared Inter-Office Trigger) - option 2
- ASP Termination Attempt Triggers (Feature ID 257):

Other ASP triggers not noted in the above groups are secured under existing secured feature locks and are not altered by this feature nor secured by this feature. These ASP triggers continue to be secured under their individual secured locks and are not affected by the presence and state of the new feature locks introduced by this feature. These other ASP triggers are shown here for reference:

- ASP Originating Busy/No Answer Office Triggers
- Local Number Portability Triggers
- AIN (Advanced Intelligent Network) Toll Free Triggers
- IDP (Individual Dialing Plan) ANI (Automatic Number Identification) Table Triggers
- Network Element Signaling Services
- Trunk Triggers for Toll
- Carrier Triggers (Carrier Routing Call Processing by Facility)
- VPN (Virtual Private Network) Triggers (VPN Phase 1)

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2. FEATURE ASSIGNMENT

If a customer has purchased ASP R0.1B (SFID 126 unlocked, the purchase of SFID 254 will provide all features offered by SFIDs 255, 256, and 257. However, if the customer prefers to purchase the triggers separately, SFID 126 must be purchased first before purchasing SFIDs 255, 256, and/or 257. SFIDs are activated by setting the ACT field to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate SFID 254, SFID 126 and 254 must be set to "Y".

4. GLOSSARY

AIN - Advanced Intelligent Network
ANI - Automatic Number Identification
ASP - Advanced Services Platform
EAMF - Equal Access Multifrequency
IDP - Individual Dialing Plan
PRI - Primary Rate Interface
RBOC - Regional Bell Operating Company
SIT - Shared Inter-Office Triggers
VPN - Virtual Private Network

SEC. 4A255: ASP ORIGINATING TRIGGERS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4A256: ASP DIAL PLAN TRIGGERS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4A257: ASP TERMINATING TRIGGERS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4A258: NATIONAL ISDN CALL PARK

1. FEATURE DESCRIPTION

Available with 5E12 and later, National ISDN Call Park (99-5E-3796) is a secured feature which uses Secured Feature ID 258. This feature allows the subscriber to interrupt voice on an active call without the call being cleared. The call gets parked against the subscriber's DN (Directory Number) or another DN in

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the subscriber's terminal group. The subscriber who parked the call (or another party) can then retrieve the call from the same terminal or from a different terminal in the same terminal group.

National ISDN Call Park consists of the following capabilities:

- Directed Call Park - parks calls against any DN in a subscriber group, including their own.
- Answer Back - reestablishes communications with calls parked against any DN in a subscriber group, including their own.
- Ring-back - alerts the parking party and reestablishes the call between the parking party and the parked party if the parked call is not established within a specified time interval.
- Call Park Reroute - reroutes parked party to an attendant defined for a terminal group if a ring-back call does not get answered after 30 seconds, or if ring-back does not occur after 3 attempts.

This feature is only available on the National ISDN Basic Rate, but the feature interfaces with analog users and custom BRI (Basic Rate Interface) users. Secured Feature ID 124 (99-5E-1140) provides Analog and Custom ISDN Call Park operation. The platforms are compatible. Non-National ISDN users may retrieve calls parked by National ISDN users and National ISDN users may retrieve calls parked by non-National ISDN users provided they are in the same terminal group and have the Call Park feature assigned.

National ISDN Call Park applies only to circuit-switched voice calls (for example, speech or 3.1 -kHz audio) on a BRI.

2. FEATURE ASSIGNMENT

To enable this feature, SFID 258 on the SFSYS form (5713-1 Record) must have ACT set to "Y". In addition, National ISDN Call Park features will have to be assigned to the line before use.

See Figure 1 for National ISDN Call Park form flow.

NOTE: In order to both park and retrieve calls, two National ISDN Call Park features need to be assigned to a line: one feature DPARK (Directed Park) to park calls and one feature ANSBACK (Answer Back) to retrieve calls.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5
PDIT	5300-2	3	3B	9.2
PUOFD	5605-1a/b	4	6A	12.13
SFSYS	5713-1	3	5AR	8.22
SRVCDESC	5985	6	27A	8.32

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) user terminal buttons. An ACTION field form check was modified to allow ANSBACK and DPARK for STD (Standard) digital subscriber lines.

PDIT form (5300-2 Record) - The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). The "ANSBACK" enumeration was added to the ACTION field.

PUOFD form (5605-1a/b Record) - This form is used to define a number of separate but related features by selecting various feature options for CPUO (Call Pickup Originating). Reference to Division 2, Section 4A258 was added to INITIATE enumerations "ANSBACK" and "DPARK". Data rules were added for INITIATE enumerations "BPARK" and "RTRV".

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SFSYS form (5713-1 Record) - This form is used by the System Equipment Engineer to enable the feature for the operating company. SFID 258 must have the field ACT set to "Y" to enable the feature.

SRVCDESC form (5985 Record) □ This form is used to override the default service descriptions. Enumerations "ANSBACK" and "DPARK" were added to the ACTION field.

4. GLOSSARY

BRI	Basic Rate Interface
ISDN	Integrated Services Digital Network

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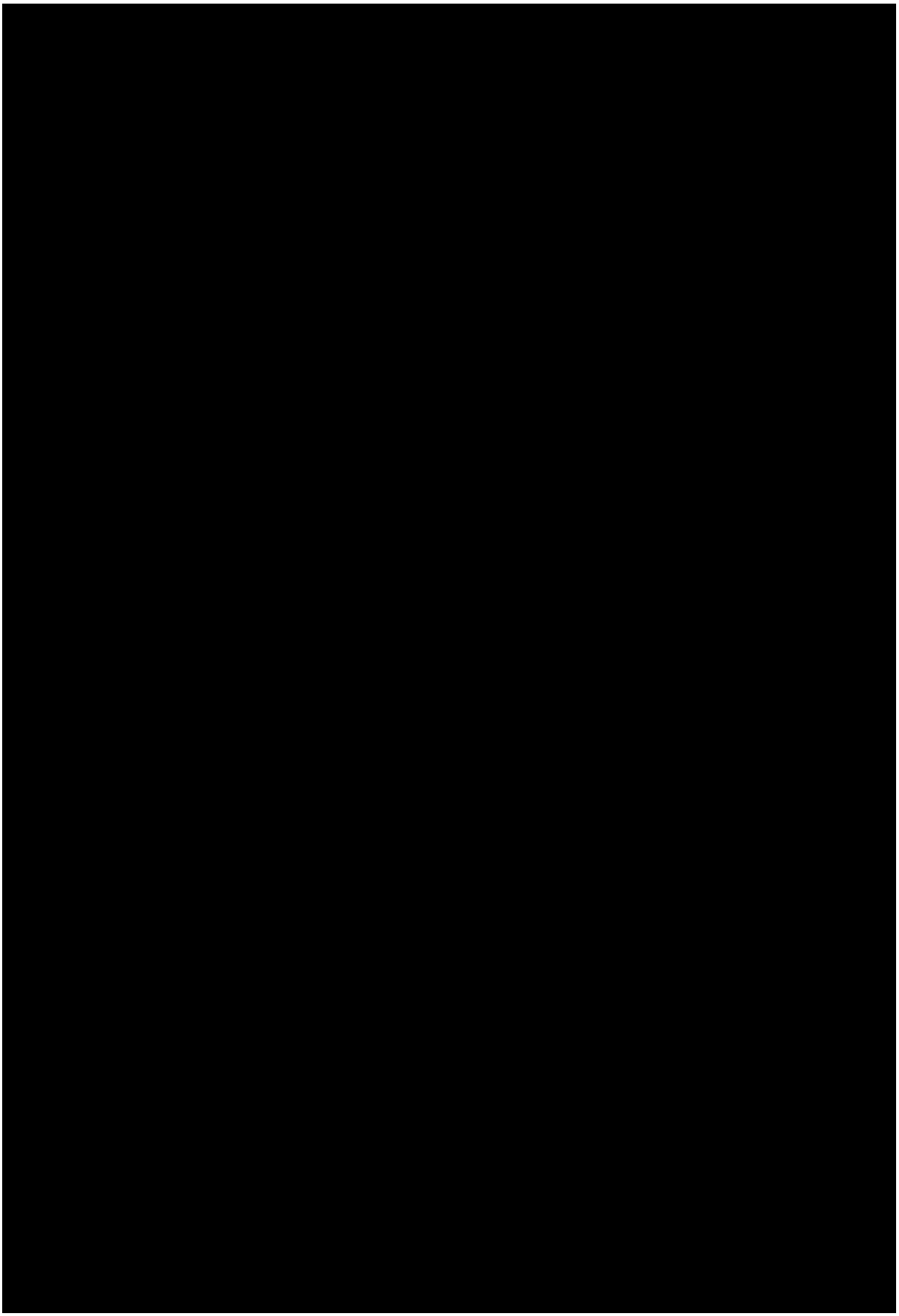

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Figure 1 FORM FLOW FOR NATIONAL ISDN CALL PARK

SEC. 4A259: SWITCHED BASED TDMA VOCODERS

1. FEATURE DESCRIPTION

The feature number for the Switched Based TDMA (Time Division Multiple Access) Vocoders feature is 99-5E-3395. This is a Secured Feature (SFID 259) that is being deployed as a 5E12 Software Update and for the BMI (Beginning Managed Introduction) of the 5E13 Software Release.

This feature supports the TDMA Vocoder Relocation capability being added to the AUTOPLEX system. Switched Based TDMA Vocoders provides the TDMA vocoders from the switch instead of the cell site. TDMA Vocoder Relocation is available to TDMA wireless service providers using Series II cell sites equipped with EDRU (Enhanced Digital Radio Units).

The TDMA VIS (Vocoder in the Switch) Feature uses mostly the same 5ESS-2000 Switch's resources as CDMA (Code Division Multiple Access) does, including the PSU2 (Packet Switch Unit 2), FRPH (Frame Relay Protocol) PH4 (Protocol Handler), DFMP (Data Fanout Multiple PIDB (Peripheral Interface Data Bus)) or DF2 (Data Fanout 2), PHV4 (Protocol Handler for Voice 4), and PHA (Protocol Handler for Asynchronous). Note that the ECU (Echo Cancellation Unit) is not required for TDMA VIS. Feature assignment information for these are provided under CDMA. See Division 2, Section 8b. The TDMA VIS call flow is the same as CDMA's call flow (see section 4.8.2.13) in the 5ESS-2000 Switch, except that only PHV4s can be used and handoffs are semisoft or hard, and never soft.

This feature is a software feature which makes use of the packet switching capabilities of the 5ESS-2000 Switch. Switch Based TDMA Vocoders creates "packet pipes" of 1 DS0 in size which connect the PSU (Packet Switching Unit) of the 5ESS-2000 Switch to the EDRU of the cell site. Each packet pipe carries 3 voice channels. The TDMA voice packets are delivered to vocoders located within the PSU. The vocoders will support either the ACELP (Algebraic Code Excited Linear Predictive) or VSELP (Vector Sum Excited Linear Predictive) vocoding algorithms used for TDMA service.

2. FEATURE ASSIGNMENT

The DCS (Digital Cellular Switch) feature is required for TDMA VIS. It is a secured feature, therefore the ACT field for SFID 130 must be set to "Y" on the SFSYS form (5713-1 Record) before the TDMA VIS feature can be activated. The SFID 259 on the SFSYS form (5713-1 Record) must be set to "Y".

To further provision this feature:

- Define a Speech Handler trunk group with SERV TYPE of ACELP or VSELP on the TKGRP form.
- Insert a PHV4 on a PSU on the EQPSUPH form.
- Insert Speech Handler trunk members with OE referencing the PHV4 on the TRUNK form.
- Update any global parameters associated with this feature (if needed). This is done on the TDMAOPT form.

See provisioning form flow on Figure 1.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TDMAOPT	5572	3	5BM	8.56
TKGRP	5202	3	2A	5.1

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SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for both SFID 130 and SFID 259 to "Y", respectively.

TDMAOPT form (5572 Record) - The TDMAOPT form provides the capability for specifying or verifying the global parameters for TDMA. This form is newly added to support this feature.

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS-2000 Switch. Data rules updated to include ACELP and the VSELP for SERV TYPE field on Speech Handler (SPCHNDLR) trunks.

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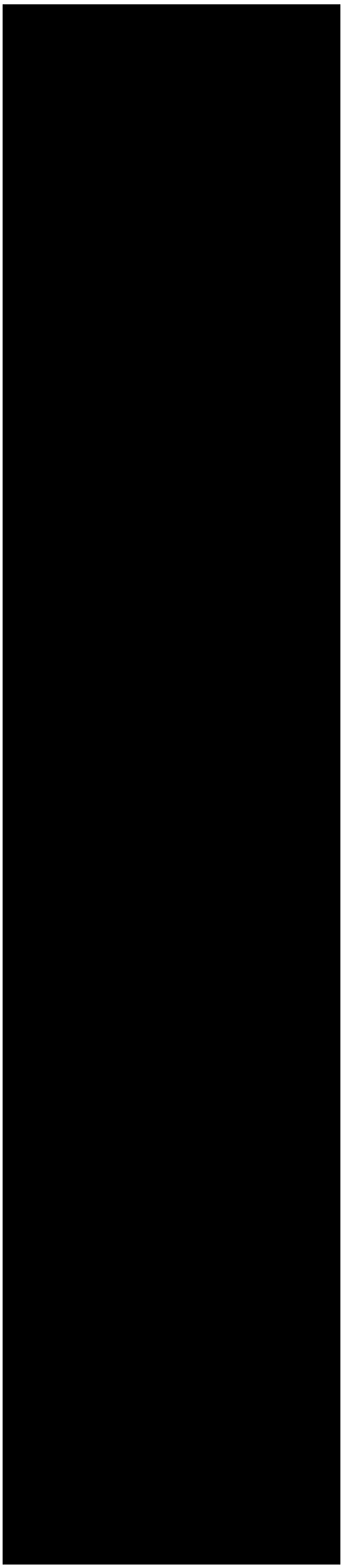

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Figure 1 FORM FLOW FOR SWITCHED BASED TDMA VOCODERS

SEC. 4A260: COMMON CHANNEL SIGNALING PROTOCOL MONITORING

1. FEATURE DESCRIPTION

Available for the 5E12 Software Release and 5E13 BMI (Beginning Managed Introduction), the CCS (Common Channel Signaling) Protocol Monitoring feature is Secured Feature (SFID 260). The feature number for this feature is 99-5E-3114.B.

CCS Protocol Monitoring provides an on-demand request to monitor Common Channel Signaling System 7 protocol messages for both the CNI (Common Network Interface) and PSU (Packet Switch Unit) platforms. The protocols supported are ISUP (Integrated Services - User Part) and TCAP (Transaction Capabilities Application Protocol). The raw hexadecimal output is provided as well as an English translation of the messages captured.

1.1 ISUP Monitoring

CCS Protocol Monitoring provides the capability to monitor inbound and outbound ISUP messages. A CCS Protocol Monitoring command is issued for a particular called or calling number. Once an IAM (Initial Address Message) with a specific called/calling number (inbound or outbound) is detected Protocol Monitoring starts recording messages. Subsequent messages for the call are matched based on the OPC (Origination Point Code)-DPC (Destination Point Code)-CIC (Carrier Identification Code) values from the IAM. The session ends when one of the ISUP termination messages for CCS Protocol Monitoring is encountered. The termination messages are: RLC (Release Complete), GRA (Group Reset Acknowledgement), UCIC (Unequipped Circuit Idetification Code).

CCS Protocol Monitoring also detects a Glare situation for an ISUP call. If two IAMs with matching OPC-DPC-CIC values but in opposite directions are recorded, Glare has occurred at the SM.

A limitation for ISUP is that CCS Protocol Monitoring captures and records ISUP messages in the SMs before they are sent to the CNI/PSU platform. In case of CNI outbound messages the SLS value is changed in the CNI before the message is sent out to the network. CCS Protocol Monitoring does not have access to this changed value. Hence the SLS (Signalling Link Selection) is marked as "Unavailable" for CNI outbound ISUP messages in the translated output.

Examples of CCS Protocol Monitoring commands specific to ISUP:

1. Monitor on Called number, direction=transmitted

   exc:pmccs,isup,called=a,dir=xmt

   Monitoring starts when an outbound IAM with Called number, "a" is detected.

2. Calling number, direction=received

   exc:pmccs,isup,calling=b,dir=rcv

   Monitoring starts when an inbound IAM with Calling number, "b" is detected.

3. exc:pmccs,isup,calling=b,dir=rcv,dur=30

   Same as example 2. except that the session will timeout if not completed within 30 seconds.

4. exc:pmccs,isup,called=a,dir=xmt,repeat=1

   Same as exapmle 1. except that a second session will start after the first one completes. This is due to the "repeat" option.

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1.2 TCAP Monitoring

For TCAP, CCS Protocol Monitoring provides a capability that records all messages related to a TCAP query transaction or global title routed unidirectional TCAP message for the following applications: NS800, CNAM, ASP, AINR0D1, ISVM, and LASS.

TCAP monitoring is performed on a transaction basis (i.e, a monitor session starts with the first message of a TCAP transaction and continues until the transaction has ended). In general, a TCAP transaction begins with a Query message, is continued with any number of Conversation messages, and ends with a Response message. The exception to this is the Unidirectional message which is the first and only message of the transaction.

For transactions which are initiated by the switch (transmit direction), messages can be monitored by matching on information in either the SCCP (Signaling Channel Connection Part) layer of the message or a combination of the SCCP and TCAP layers of the message. For transactions which are received by the switch (receive direction), messages can only be monitored by matching on information in the SCCP layer of the message. Note that matching is performed on the first message of the transaction, and if it is successful, all messages associated with the transaction are monitored.

Matching criteria and message layer are specified as command line options on the EXC:PMCCS,TCAP input message

The input command requires that either Called or Calling digits are specified along with a choice of Called Party Translation Type, Called Party Subsystem Number, or Calling Party Subsystem Number. The direction of the message can also be specified (transmit, receive, or both - defaults to both) along with the layer of the message that is being used to match the digit information (SCCP or TCAP - defaults to SCCP). All of the criteria specified in the input command must match the message content in order to monitor the transaction.

For the following input message example:

exc:pmccs,tcap,called=630713,cgsn=250,layer=sccp;

Query or Unidirectional messages which contain both a Called Party Number (as Global Title Translation digits in the Called Party Address) of 630713XXXX and a Calling Party Subsystem Number of 250 will be matched and begin a monitoring session. Messages which contain a point code in the Called Party Address (rather that global title digits) and a Calling Party Subsystem Number of 250 will not match.

In general, transactions which are initiated by craft test query functionality are not monitored. The exception to this is the AIN0.1 test query functionality (TST:ASPTQ) which is supported by the protocol monitoring functionality.

A monitored TCAP message which is received on a PSU platform may differ in content at the MTP (Message Transport Part) and SCCP layers than the actual message that was received on the SS7 link, though they will be identical from a functional perspective. Because the PSU processes the MTP and SCCP layers of the message and passes a summary of this information to the SM along with the actual TCAP message content, the SM must then reconstruct the MTP and SCCP layers for messages that are being monitored. The specific scenario is related to a Called Party Address or a Calling Party Address which contains a point code format. Point codes can be encoded in two different formats.

1. The Address contains
    - Address Length
    - Adress Indicator
        - subsystem number present

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- point code present
- no global title
- route on point code/subsystem number
- national standard

- Subsystem Number
- Point Code

2. The Address contains
   - Address Length
   - Adress Indicator
     - subsystem number present
     - point code not present
     - no global title
     - route on point code/subsystem number
     - national standard
   - Subsystem Number
   - no Point Code

For format 2, because there is no point code present (though the address indicator states to route on point code), the Destination Point Code (for Called Party Address) or the Originating Point Code (for Calling Party Address) is to be used. Though formats 1 and 2 are encoded differently, they are identical functionally, as they will be routed in identical fashion by the network.

Because the PSU to SM interface does not distinguish between these two formats, messages are always reconstructed using format 1.

2. FEATURE ASSIGNMENT

2.1 Secured Feature

The CCS Protocol Monitoring feature is a secured feature. The ACT field for SFID 260 must be set to "Y" on the SFSYS form (5713-1 Record to activate this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 260 must be set to "Y" to enable the CCS Protocol Monitoring feature.

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SEC. 4A262: INTERNALLY BRIDGED DUAL SERVICES, PACKAGE 1

1. FEATURE DESCRIPTION

Available for the 5E11 Software Release and later, the IBDS (Internally Bridged Dual Services) Package 1 feature is Secured Feature (SFID 262). The feature number for this feature is 99-5E-3338.

The 1-TN LTSB (Line Time Slot Bridging) feature (99-5E-0531) for lines was available in the 5E5 Software Release. (For more information on the LTSB feature, see Division 2, Section 1AC). For 5E11 and later Software Releases, 1-TN LTSB for lines was enhanced to include more BRCS and Series Completion features. In addition, 1-TN LTSB functionality along with the added BRCS features was added for Multi-line Hunt lines. (These features are not allowed for 2-TN LTSB service.)

1.1 BRCS Features

The following features were added for 1-TN LTSB for lines:

- Call Forwarding: Busy Line and Don't Answer
- Display Feature Per-Call Privacy
- Incoming Line Identification
- Message Service System

1.2 Line Features

The following features were added for 1-TN LTSB for lines:

- Series Completion

NOTE: Series Completion for lines is allowed by removing a restriction.

1.3 Multi-line Hunt Lines

The following features were added for 1-TN LTSB for Multi-line Hunt lines:

NOTE: Series Completion is also available with 1-TN LTSB for Multi-line Hunt line, but no restrictions were removed to support it.

- Call Forwarding
- Display Feature -Per Call Privacy
- Incoming Line Identification
- LASS Selective Call Acceptance
- LASS Selective Call Forwarding
- LASS Selective Call Rejection
- LASS Selective Call Distinctive Alert
- LASS Automatic Callback

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- LASS Automatic Recall
- Message Service System
- Multiway Calling
- One-Two-Digit Speed Calling

2. FEATURE ASSIGNMENT

2.1 Secured Feature

The IBDS Package 1 feature is a secured feature. The ACT field for SFID 262 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

2.2 Line

The BRCS features that were added for IBDS Package 1 should be assigned on the LINEFA form (5112 Record), the CLUSTR form (5600 Record) or the BFG form (5625 Record). Series Completion is also allowed for lines and is assigned on the LINE form. To assign 1-TN LTSB to a line, see Division 2, Section 1AC.

2.3 Multi-line Hunt Line

To assign 1-TN LTSB to a multi-line hunt line, the ASSOC OE TYPE and NUMBER field must be entered on the MLHLN form (5111 Record). The BRCS features that were added for IBDS Package 1 should be assigned on the MLHLNFA form (5113 Record), the CLUSTR form, or the BFG form. Series Completion for 1-TN LTSB is also available for Multi-line Hunt lines and is assigned on the MLHLN form.

See Figure 1 and Figure 2 form flows for assigning IBDS Package 1 features to a line or multi-hunt group with LTSB features assigned.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109-1/2/3/4	3	1I	1.5, 1.6
MLHLN	5111-1/2/3/4	3	1K	1.6
SFSYS	5713-1	3	5AR	8.22

LINE form (5109-1/2/3/4 Record) - This form is used to assign the office EN (Equipment Number) and features for each TN (Telephone Number). Data rules were added to support the enhancement of BRCS features to be assigned to 1-TN LTSB. A form check was removed to allow Series Completion for lines.

MLHLN form (5111-1/2/3/4 Record) - This form is used to assign the individual Terminal Numbers assigned to a particular MLHG. The ASSOC OE TYPE, NUMBER, and IALT fields were added for the IBDS Package 1 feature for 5E11 and later.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 262 must be set to "Y" to enable the Internally Bridged Dual Services Package 1 feature.

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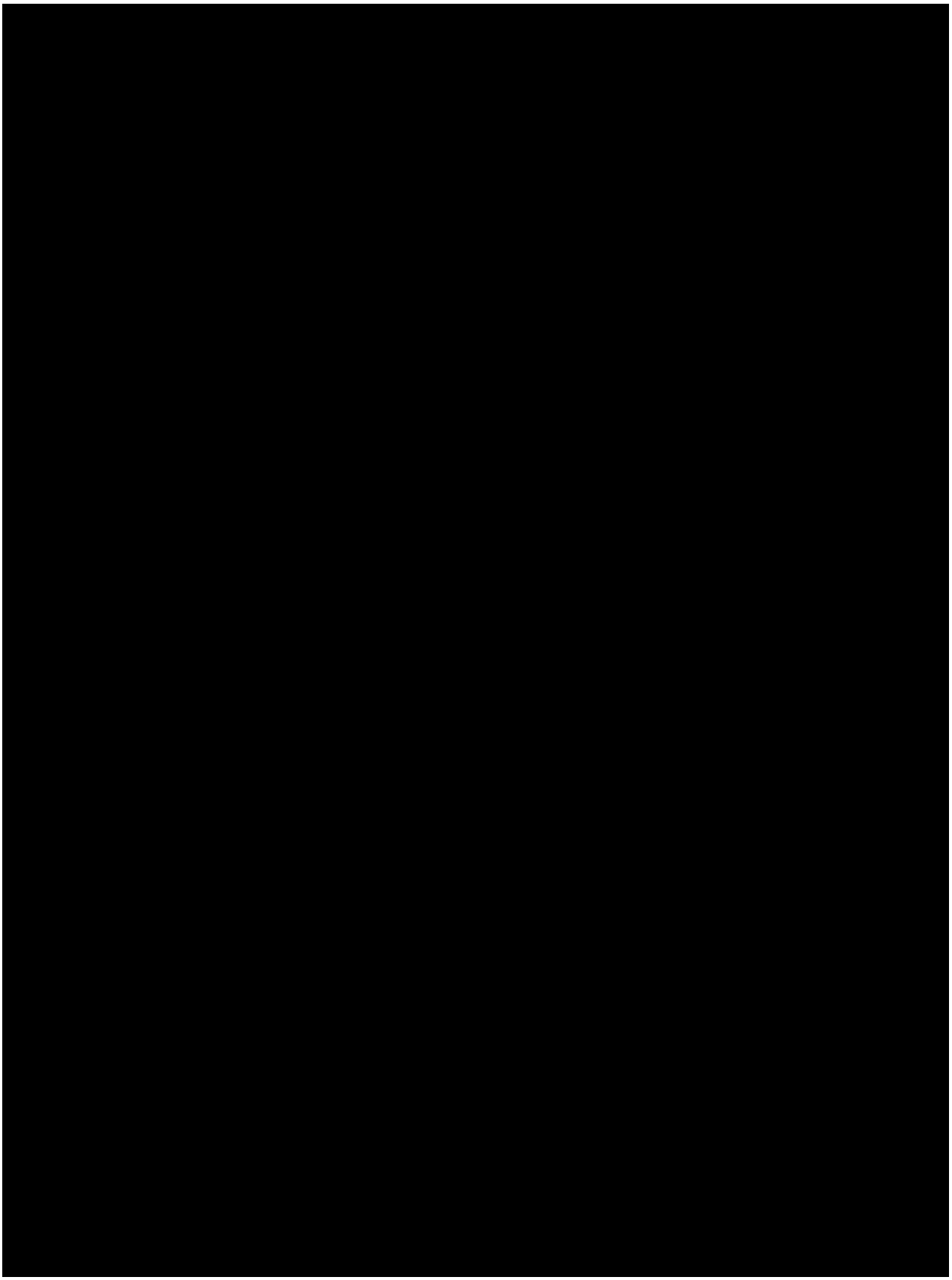

Figure 1 FORM FLOW FOR IBDS PACKAGE 1 FEATURES ASSIGNED TO A LINE

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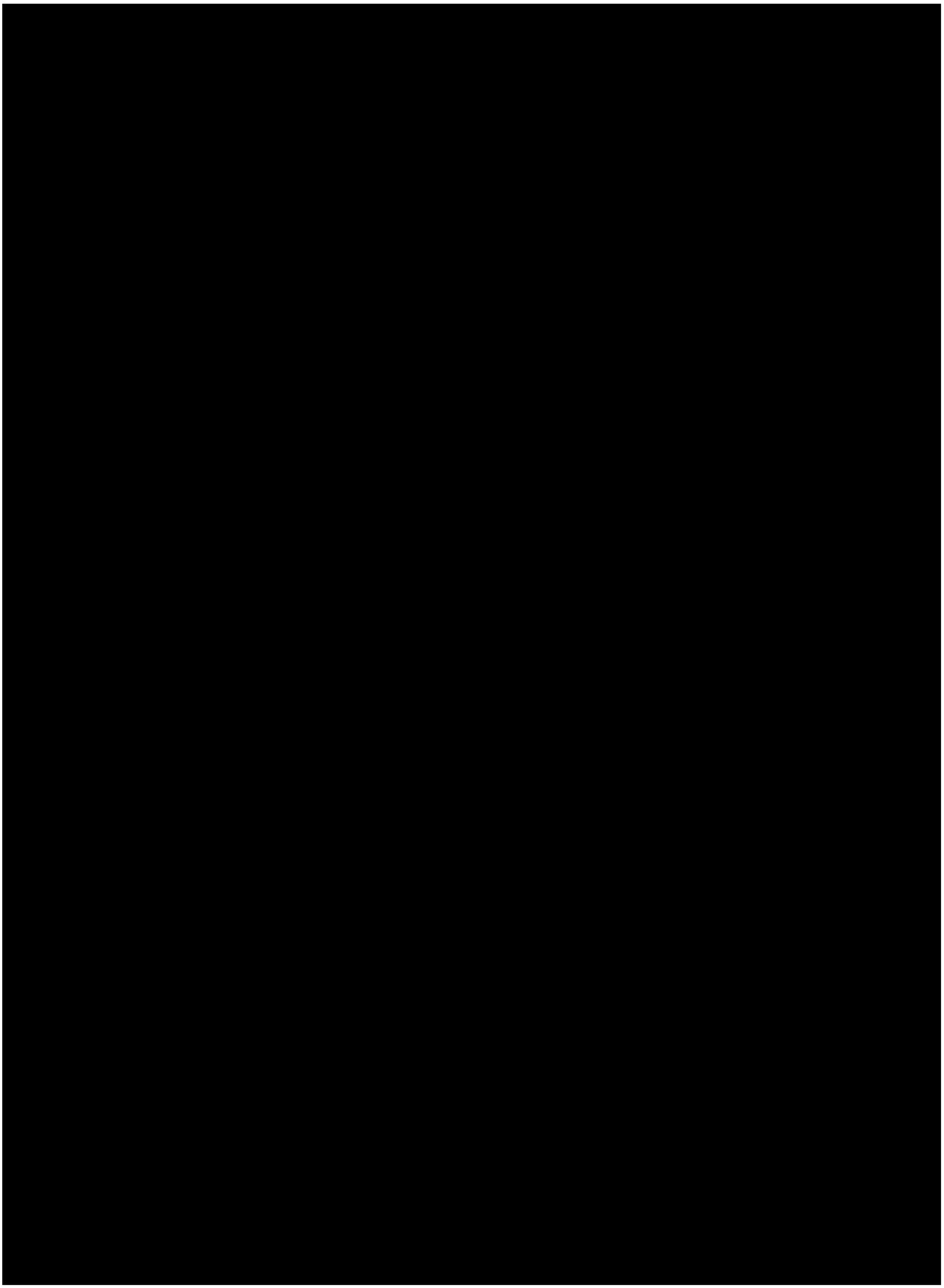

Figure 2 FORM FLOW FOR IBDS PACKAGE 1 FEATURES ASSIGNED TO MULTI-LINE HUNT GROUP

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SEC. 4A263: INTERNALLY BRIDGED DUAL SERVICES, PACKAGE 2

1. FEATURE DESCRIPTION

Available for the 5E12 and later Software Releases, the IBDS (Internally Bridged Dual Services) Package 2 feature is a secured feature (SFID 263). The feature number for this feature is 99-5E-3739.

The 1-TN LTSB (Line Time Slot Bridging) feature (99-5E-0531) for lines was available in the 5E5 Software Release. (For more information on the LTSB feature, see Division 2, Section 1AC.) The IBDS Package 2 feature enhances the IBDS Package 1 feature with additional BRCS features. (See also Division 2, Section 4A262 on the IBDS Package 1 feature.) (These features are not available for 2-TN LTSB service.)

With the IBDS Package 2 feature, the following features are available for 1-TN LTSB:

- Call Waiting features
  - Dial Call Waiting
  - Call Waiting Originating
- LASS COT (Customer Originated Trace)
- DR (Distinctive Ringing)
- IDP (Individualized Dialing Plan)
- MDR (Message Detail Recording)
- PFA (Private Facilities Access) without queueing
- TGSR (Terminal Group Station Restriction)

In addition, the Calling Identity Delivery feature is available, but only for the LINE form.

2. FEATURE ASSIGNMENT

The IBDS Package 2 is a secured feature. Therefore, the ACT field for SFID 263 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature. In addition, the IBDS Package 2 feature depends on the IBDS Package 1 feature, therefore, the ACT field for SFID 262 must also be set to "Y" on the SFSYS form.

Queueing is not allowed for PFA for IBDS Package 2. If parameters QUEUE ALLOWED or PRIORITY QUEUE are set to "Y" on the PFAFD form, then they must be overridden by the parameters QUEUE ALLOWED or PRIORITY QUEUE on the BFG (5625 Record) or PFALPA (5609-6 Record) or PFAMPA (5609-7 Record) forms, which must be "N" for the IBDS Package 2 feature.

See Figure 1 and 2 form flows for assigning IBDS Package 2 features to a line or multi-line hunt group with LTSB features assigned.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109-1/2/3/4	3	1I	1.5, 1.6
MLHLN	5111-1/2/3	3	1K	1.6
SFSYS	5713-1	3	5AR	8.22

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LINE form (5109-1/2/3/4 Record) - This form is used to define the office EN (Equipment Number) and features for each TN (Telephone Number) in the switch. Data rules were added to allow the new BRCS features for IBDS Package 2 features.

MLHLN form (5111-1/2/3 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG. Data rules were added for the IBDS Package 2 feature for 5E12 and later.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 263 must be set to "Y" to enable the Internally Bridged Dual Services Package 2 feature. Since this feature depends on the IBDS Package 1 secured feature, the ACT field for SFID 262 must also be set to "Y".

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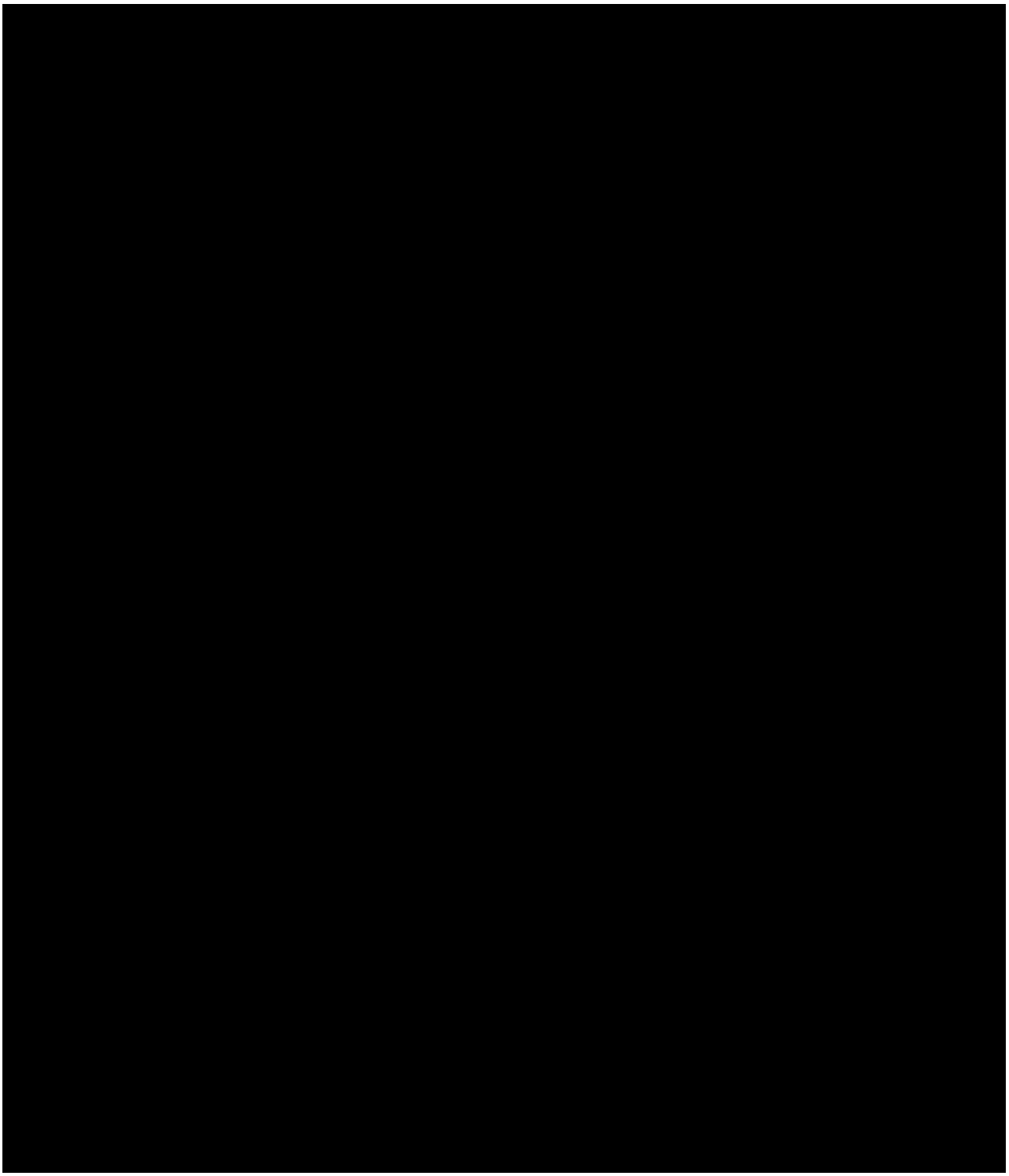

Figure 1 FORM FLOW FOR IBDS PACKAGE 2 FEATURES ASSIGNED TO A LINE

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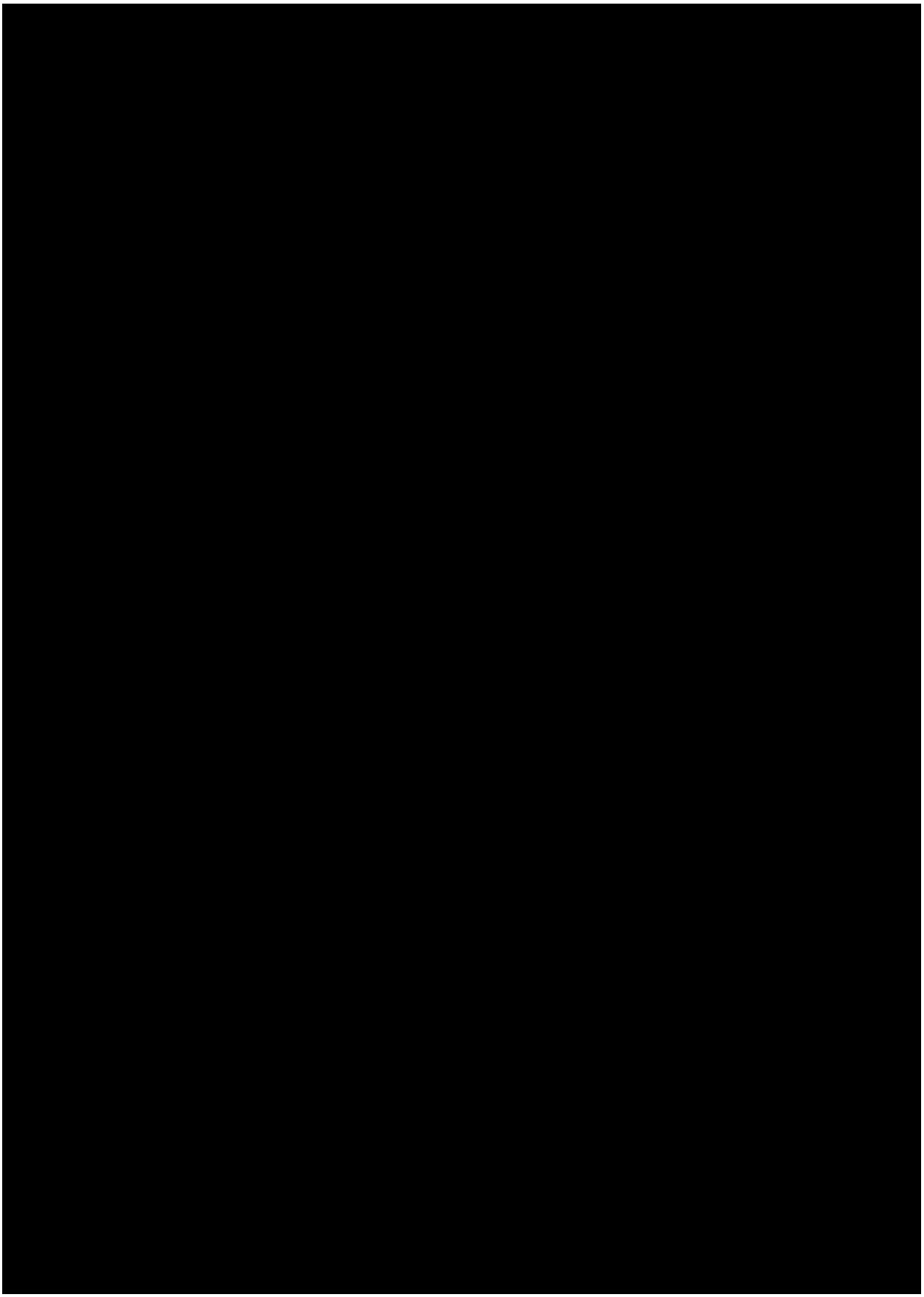

Figure 2 FORM FLOW FOR IBDS PACKAGE 2 FEATURES ASSIGNED TO A MULTI-LINE HUNT

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GROUP

SEC. 4A264: TELEPHONE STATUS MONITOR AND SELECT

1. FEATURE DESCRIPTION

Telephone Status Monitor and Select is a secured feature using SFID (Secured Feature ID) 264 and must be purchased before being activated. The feature number for this feature is 99-5E-4001.

This feature is being deployed on the 5ESS-2000 Switch in a software update for the 5E12 Software Release and for the Beginning Managed Introduction of the 5E13 Software Release.

TSMS (Telephone Status Monitor and Select) allows a user with an ISDN telephone (secretary) to monitor the status of other ISDN and analog telephones (managers) using a SINGLE feature button for each telephone being monitored. Multiple telephones may be monitored by a single telephone but each requires a separate TSMS indicator on the monitoring telephone. The focus of this feature is to monitor the telephone status as opposed to individual call appearances. Regardless of the number of ISDN call appearances or directory numbers assigned to a monitored telephone, the single TSMS indicator on the monitoring telephone responds to the status indications from any call appearance on the monitored telephone.

This feature allows a secretary or a backup secretary to know the status of the monitored party and to "promptly" answer any ringing incoming calls regardless of the status of the monitored telephone. An alert ring may optionally be provisioned to audibly alert the secretary of an incoming call. Using the transfer feature in conjunction with the "built-in" speed dial "select" capability of the TSMS feature button, the monitoring party may easily transfer calls, pick up calls, or dial to the monitored party.

2. FEATURE ASSIGNMENT

For form flow see Figure 1. The activation of this feature is dependent on SFID 264 being active.

To enable this feature, the ACT field for SFID 264 is set to "Y" on the SFSYS form.

Provision the monitoring terminal as follows:

- On the CFGGRP form, designate a TSM feature button, enter a new feature name or the wild card feature in the FEATURE field, and enter TSM in the ACTION field.
- On the TELMON form, enter the the TN of the monitoring terminal in the MONITORING TN field and the monitored terminals in the TN fields.

  The DSS field indicates that the terminal is provisioned for the DSS capability via the TSM feature buttons.

  The RING field indicates if the monitoring terminal gets audible alerted when an incoming call alerts at the monitored terminal on a per TSM/DSS feature button basis.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
CFGGRP	5964	6	7A	12.5
DSLUSR	5908	5	1I	23.2, 23.8
LINE	5109-1	3	1I	1.6
MLHLN	5111	3	1K	1.6
SHTN	5902	5	1C	23.20
TELMON	5932	5	3M	23.24

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CFGGRP form (5964 Record) - The 5964 Record is used to define configuration groups for terminal assignments. For 5E12 and later, added the TSM enumeration to the ACTION field valid entries.

DSLUSR form (5908 Record) - The 5908 Record is used to collect data for digital subscriber lines. For 5E12 and later, added Recent Change only fields MONITORED TN and MONITORING TN.

LINE form (5109-1 Record) - The 5109-1 Record is used to create all line records with Telephone Numbers. For 5E12 and later, added Recent Change only field MONITORED TN.

MLHLN form (5111 Record) - The 5111 Record is used to create MLH Line Members. For 5E12 and later, added Recent Change only field MONITORED TN.

SHTN form (5902-1 Record) - The 5902-1 Record is used to specify Primary or Secondary TN that is shared by several other TNs. For 5E12 and later, added Recent Change only field MONITORED TN.

TELMON (5932 Record) - The 5932 Record is used to specify the telephone numbers which are being monitored by this ISDN line. For 5E12 and later, added this form to support the Telephone Monitor and Select feature.

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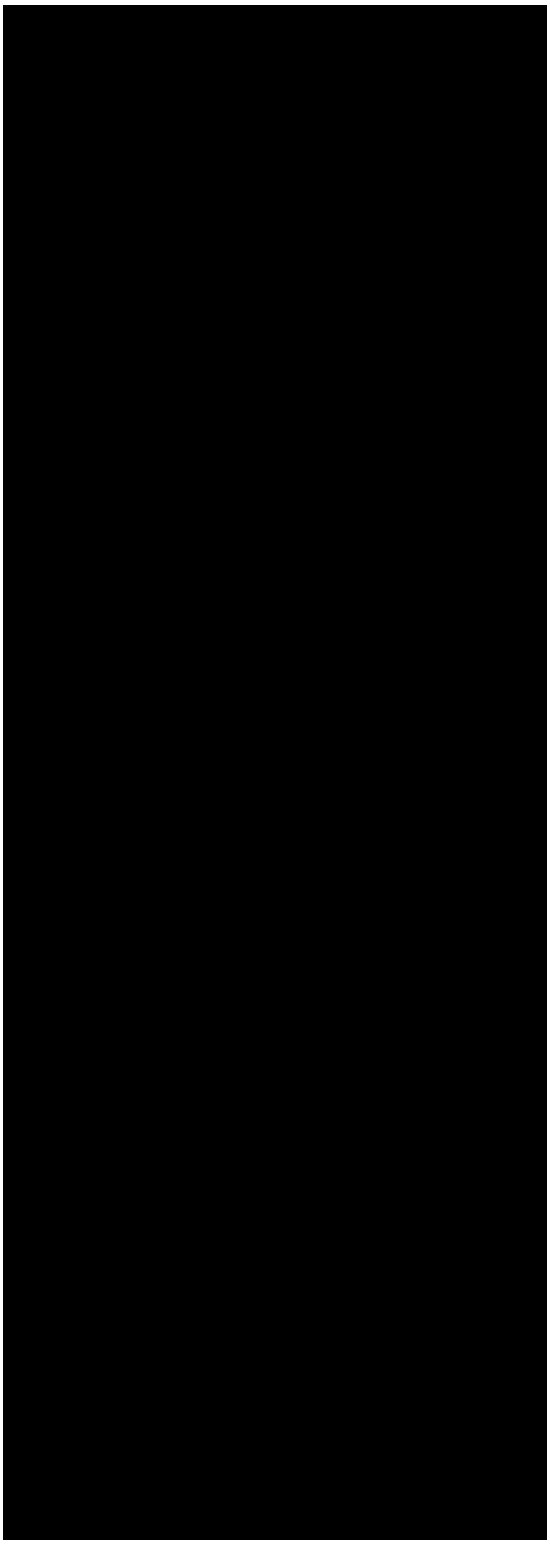

Figure 1 FORM FLOW FOR TELEPHONE STATUS MONITOR AND SELECT

SEC. 4A266: PROHIBIT REX ON BRI LINES PER OFFICE

1. FEATURE DESCRIPTION

The Prohibit REX on BRI Lines per Office feature is available as a 5E11 Software Update. It provides the capability to enable and disable REX (Routine Exercise) on a per office basis. The secured feature ID for

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this feature is 266.

Also available as a 5E11 Software Update is the capability to enable and disable REX per individual line. That feature has secured feature ID 267 (see Division 2, Section 4A267).

- ***NOTE:*** If the PREX ON BRI is set to "Y" on the ISDNOPT form, REX is prohibited for all ISDN lines in the office, regardless of how PREX on the DSL form is set.

However, if PREX is set to "Y" on the DSL form for some ISDN lines and if PREX ON BRI on the ISDNOPT form is set to "N", the DSLs having PREX set to "Y" on the DSL form will have REX prohibited.

The feature number for both features is 99-5E-2864.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ISDNOPT	5941	5	5B	8.1
SFSYS	5713-1	3	5AR	8.22

ISDNOPT form (5941 Record) - This form is used to define parameters for ISDN lines. Added the PREX ON BRI (Prohibit REX on BRI) field to indicate whether (Yes/No) REX is prohibited in the office.

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features.

SEC. 4A267: PROHIBIT REX ON BRI LINES PER DSL LINE

1. FEATURE DESCRIPTION

The Prohibit REX (Routine Exercise) on BRI per DSL Line feature is available as a 5E11 Software Update. It provides the capability to enable and disable REX on an individual DSL (Digital Subscriber Line). The secured feature ID for this feature is 267.

Also available as a 5E11 Software Update is the capability to enable and disable REX per office. That feature has secured feature ID 266 (see Division 2, Section 4A266).

- ***NOTE:*** If the PREX ON BRI is set to "Y" on the ISDNOPT form, REX is prohibited for all ISDN lines in the office, regardless of how PREX on the DSL form is set.

However, if PREX is set to "Y" on the DSL form for some ISDN lines and if PREX ON BRI on the ISDNOPT form is set to "N", the DSLs having PREX set to "Y" on the DSL form will have REX prohibited. The feature number for both features is 99-5E-2864.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5900	5	1H	23.2
SFSYS	5713-1	3	5AR	8.22

DSL form (5900 Record) - This form is used to define parameters for DSLs. Added the PREX field to indicate whether (Yes/No) REX is prohibited for the DSL.

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features.

SEC. 4A268: 2-SIMULTANEOUS VOICE CALLS ON BRI

1. FEATURE DESCRIPTION

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The 2-Simultaneous Voice Calls on BRI (Basic Rate Interface) is a secured feature (SFID 268) that is being deployed as a 5E11 Software Release. The feature number for this feature is 99-5E-3974.

This feature adds the capability for two simultaneous voice call-type calls to be active from a single TEI (Terminal Endpoint Identifier) to the current capabilities specified for basic call control applied at the National (Standard) ISDN Basic Rate user-network interface. A voice call-type call is any call signaled with a bearer capability of either "speech" or "3.1 kHz audio". A basic assumption for this feature is that there is a single intelligence, either human or machine, that is controlling both B-channels.

Telcordia Technologies specifications allow this capability and other switch vendors to have the capability on the BRI, leading CPE (Customer Premises Equipment) vendors to build applications which support this functionality. However, the current implementation of the BRI on the 5ESS Switch does not allow this capability.

Examples of the applicability of this feature are:

- A single user could have a voice call in progress and at the same time place a 3.1 kHz audio (e.g., modem or Group III fax) call.
- A single terminal device could support two active voice calls, such as an ISDN phone and an analog phone attached to an ISDN terminal adapter.

NOTE: The Lucent Technologies ISDN 7500 and 8500 series CPEs are not compatible with this feature. If the feature is enabled and the CPE tries to utilize both B-channels simultaneously, only 1 path is actually cut through to the handset. The user must hit the HOLD button to alternate between calls so that only 1 B-channel is actually utilized.

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 268 is set to "Y" on the SFSYS form.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908	5	1I	23.2
SFSYS	5713-1	3	5AR	8.22

DSLUSR form (5908 Record) - This form is used to define the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the 2-Simultaneous Voice Calls on BRI feature, the ACT field for SFID 268 must be set to "Y".

SEC. 4A269: ALTERNATE LOCAL SERVICE PROVIDER ROUTING

1. FEATURE DESCRIPTION

Available for the 5E12 Software Release and later, the ALSPR (Alternate Local Service Provider Routing) feature is Secured Feature ID 269. The feature number for this feature is 99-CP-4031.

This feature provides alternate local service providers with the following routing, signaling and billing capabilities for certain types of Intra-LATA local calls.

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- Assignment of PLC (Presubscribed Local Carrier) to an Alt LSP (Alternate Local Service Provider) customer line, and allows the service provider to mark an Alt LSP customer line as an unbundled line.
- Routes 0- local calls originated from an Alt LSP customer line to a designated Alt LSP destination which is likely to be an operator platform.
- Routes 0+7/10 digit Intra-LATA local calls from an Alt LSP customer line to an Alt LSP operator platform.
- Routes 411 and [NPA]-555-1212 Intra-LATA local calls from an Alt LSP customer line to an Alt LSP switch for forwarding to a DA (Directory Assistance) platform.
- Routes 611 and 811 Intra-LATA local calls from an Alt LSP customer line to an Alt LSP switch for forwarding to an Alt LSP services platform.
- Routes (None+/1+) 7/10 digit Intra-LATA local non-operator assisted calls from an Alt LSP customer line to an Alt LSP destination either directly or through an Access Tandem as FGD (Feature Group D) or FGC (Feature Group C) calls.

2. FEATURE ASSIGNMENT

2.1 Secured Feature

The Alternate Local Service Provider Routing feature is a secured feature. The ACT field for SFID 269 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

See Figure 1 and Figure 2 form flow diagrams for assigning the Alternate Local Service Provider Routing feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDTN	5631-1	4	32A	6.10
DSLUSR	5908	5	1I	23.2, 23.8
ICF	5305-1/2	3	3R	10.3
IDPGP	5601-4	4	2D	9.10
LINE	5109-1/2/3/4	3	1I	1.5, 1.6
MLHLN	5111-1/2/3	3	1K	1.6
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1	3	2A	5.1

ACDTN form (5631-1 Record) - This form is used by the ACD/BRCS (Automatic Call Distributor/Business and Residential Custom Services) feature to define the ACD directory number or the DAA (Direct Agent Access) directory number. The PLC and UNBUNDLED fields and their associated data rules were added to support the ALSPR feature for 5E12 and later.

DSLUSR form (5908 Record) - This form is used to collect data for digital subscriber lines. The PLC and the UNBUNDLED fields and their associated data rules were added to support the ALSPR feature for 5E12 and later.

ICF form (5305-1/2 Record) - This form is used to allow craft to assign elements for interLATA and intraLATA carriers. Various route index, signal type, code index, and conversion telephone number fields and their associated data rules have been added to support the ALSPR feature for 5E12 and later.

IDPGP form (5601-4 Record) - This form defines the options associated with IDPs (Individualized Dialing Plans). The GROUP PLC and the GROUP UNBUNDLED fields and their associated data rules were added to support the ALSPR feature for 5E12 and later.

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LINE form (5109-1/2/3/4 Record) - This form is used to define the office EN (Equipment Number) and features for each TN (Telephone Number) in the switch. The PLC and the UNBUNDLED fields and their associated data rules were added to support the ALSPR feature for 5E12 and later.

MLHLN form (5111-1/2/3 Record) - This form is used to define the individual terminal numbers assigned to a particular MLHG. The PLC and the UNBUNDLED fields and their associated data rules were added to support the ALSPR feature for 5E12 and later.

OFCOPT form (5509 Record) - This form provides the office option global parameters residing in the central processor. Added a crosscheck to the ICLATA SCD IND field for 5E12 and later.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 269 must be set to "Y" to enable the ALSPR feature for 5E12 and later.

TKGRP form (5202-1 Record) - This form provides general trunk group information for all trunk members in a group. The PLC and the UNBUNDLED fields and associated data rules were added to support the ALSPR feature for 5E12 and later.

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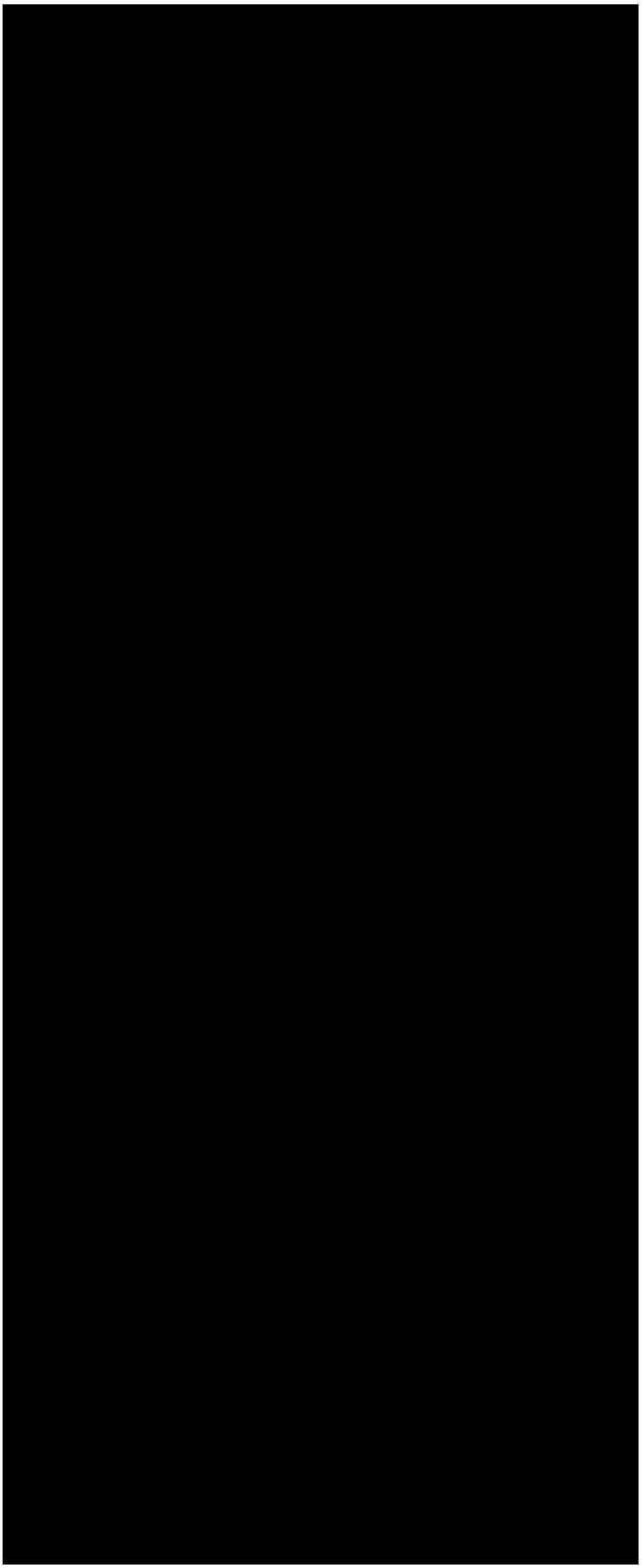

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Figure 1 PLC CARRIER ATTRIBUTES ON THE ICF FORM

Figure 2 ALSPR FEATURES ASSIGNED TO A LINE, TRUNK, OR IDP GROUP

SEC. 4A270: VPA EXPANSION PACKAGE A

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-110 Long Distance Platform.*

SEC. 4A271: DNIS II

1. FEATURE DESCRIPTION

DNIS (Dialed Number Identification Service) II is a secured feature using SFID (Secured Feature ID) 271 and must be purchased before being activated. The feature number for this feature is 99-5E-4208.A.

This feature is being deployed on the 5ESS-2000 Switch in a software update for the 5E12 Software Release and for the Beginning Managed Introduction of the 5E13 Software Release.

The DNIS II feature provides the ability to deliver the original dialed digits to a PBX (Private Branch Exchange) from the 5ESS-2000 Switch. The PBX uses this information for further call processing and routing. This feature allows the PBX to receive the original digits that the caller dialed and to use this information to route the call to the called party.

The DNIS identifies the dialed toll free number to call centers, allowing toll free information (e.g., up to ten digits of the actual dialed or translated 8XX number) to be displayed at a terminating PBX. This feature increases customer information retrieval for call centers, expanding the value of toll free service to service

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providers and end users.

2. FEATURE ASSIGNMENT

For 5E13 and later, to activate this feature, set the ACT field for SFID 271 on the SFSYS form (5713-1 Record) to "Y". When the feature is activated:

- Populate the trigger numbers to be used for DNIS on the NSTRIG form (5324 Record) using the trigger as the key and set the DNIS field to "Y".
- Set the DNIS USER field on the TKGRP form (5202 Record) to "Y".

See Figure 1 for provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
NSTRIG	5324	3	3AK	9.35
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

NSTRIG form (5324 Record) - This form is used identify a network service application. For 5E13 and later, the DNIS field and its associated data rules were added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 271 must be set to "Y" to enable the DNIS II feature for 5E13 and later.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. For 5E13 and later, the DNIS USER field and its associated data rules were added.

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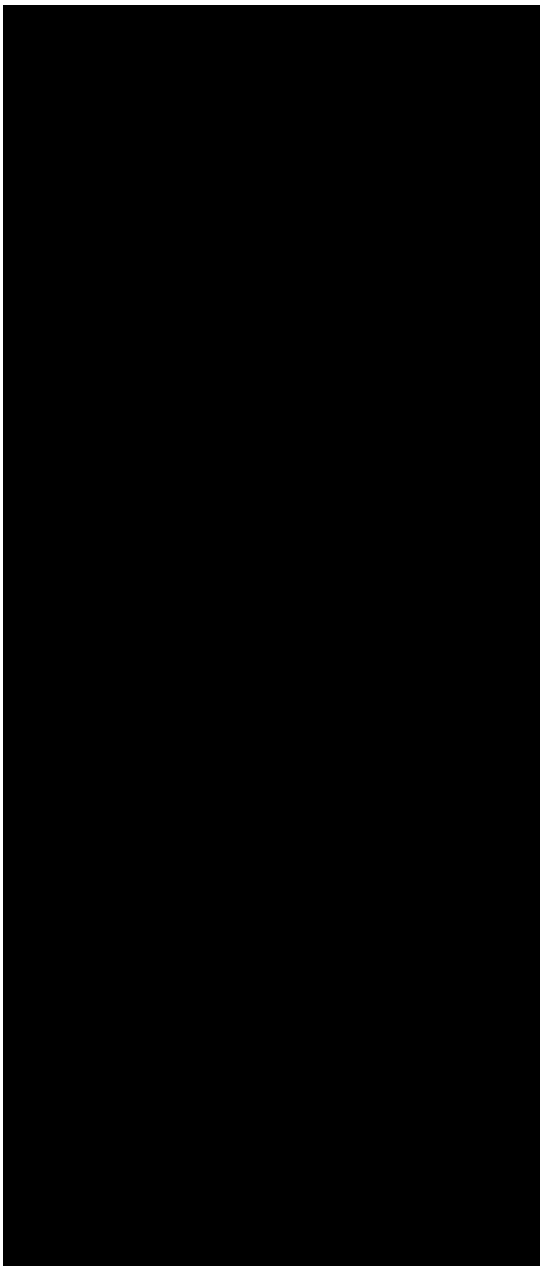

Figure 1 FORM FLOW FOR DNIS II

SEC. 4A272: DIRECT ACCESS LINKS

1. FEATURE DESCRIPTION

The DAL (Direct Access Links) feature is a secured feature that is being introduced as a Software Update in the 5E12 Software Release. This feature uses SFID (Secured Feature ID) 272 and has feature number 99-5E-4307.

The DAL feature provides the ability to allow direct access between a PBX (Private Branch Exchange) and a service provider's network. Direct Access Links are trunks that provide a direct access connection between a toll network and a PBX or other type of key system. This direct interface supports two-way trunks or incoming trunks from the PBX using either MF (Multifrequency), DTMF (Dual Tone Multifrequency), or Q.931 over PRI (Primary Rate Interface) signaling. A "PF" (Private Facility) type of trunk class is assigned to a DAL trunk group.

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Prior to the capabilities provided by this feature, if a PBX wished to directly connect a trunk group to a toll 5ESS Switch, a loop around configuration was used. That is, the PBX trunk group terminated to the "local" side of the toll 5ESS Switch on the PF trunk group, and was looped around to the "toll" side on a trunk group with a terminating LATA trunk class.

The DAL feature allows a Private Facility PBX trunk group to be terminated to the "toll" side of the 5ESS Switch. This feature also allows a DAL field to be set on the DAL trunk group. When this field is enabled, every call that originates on a member of the DAL trunk group launches an ASP (Advanced Services Platform) Info_Collected Query after collecting a variable number of digits from 1 to 32. The collected digits are entered into the CollectedDigits parameter of the Info_Collected Query. After receiving the Info_Collected Query, the SCP (Service Control Point) defines the treatment that should be applied to the call (i.e., play an announcement, route the call, etc.). A specific DAL billing record is created after the query and response.

The users of the DAL feature are callers from the stations connected to the PBX being served by a DAL connection. Although the DAL feature does not introduce a new dialing plan, it supports the dialing pattern used by the PBX customers. Some typical dialing patterns for DAL users are as follows:

- Authorization code + PN (Packet Network) + DN (Destination Number) sequence,
- DN + prompt for account code,
- DN + account code stored on the trunk group.

For any dialed digit string, all of the dialed digits from the DAL user are stored in the CollectedDigits parameter of the Info_Collected Query. The SCP parses the digit string to determine authorization codes, PINs (Personal Identification Numbers), account codes, and DNs.

When the DAL feature is activated, certain features may be provisioned on a DAL trunk group and others may not. Additional features that may be provisioned on a DAL trunk group include the RTCD (Real Time Call Detail) Platform/Application and CPN SCRN (Calling Party Number Screening) features.

Those features that may not be provisioned on a DAL trunk group when the DAL feature is activated include the following:

- BRCS (Business and Residential Custom Services) features,
- VPN (Virtual Private Network),
- Centrex features.

There are trunk member characteristics necessary for the DAL feature. The members of a DAL trunk group can be defined as digital or analog trunk members on the TRUNK form (5204 Record). Normal values for digital and analog trunk members can be defined for a DAL trunk group. The only field on the TRUNK form that has specific requirements for a DAL trunk member is the IN START DIAL field. (For more detailed information on the IN START DIAL field, see Division 3, Section 2C.)

1.1 Call Processing

DAL call processing is initiated when a member of a DAL trunk group (i.e., a trunk group that has the DAL ACCESS field on the TKGRP form (5202 Record) set to "Y") is seized by the PBX. The appropriate start signal is applied (as defined by the IN START DIAL field on the TRUNK form) to the PBX. An OHD (Off Hook Delay) Trigger is detected and up to 32 digits are collected from the PBX. The DAL feature allows the OHD trigger to be detected for both circuit-switched voice and data calls. The ASP Interworking Circuit-Switched Data feature (SFID 237) must be purchased and active to allow an OHD trigger to be detected on a circuit-switched data call. The interdigit timing value applied during digit collection of a

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DAL-originated call is the existing Critical Timer value derived from the Trunk Class, Start Signal, and Signal Type. No digit analysis is done on the collected digits.

2. FEATURE ASSIGNMENT

To activate this secured feature:

- Set the ACT field for SFIDs 126 and 272 respectively on the SFSYS form (5713-1 Record) to "Y". Since the DAL feature depends on the ASP Release O.1B secured feature (SFID 126), SFID 126 must be activated first.
- Set the TRK DIR, TRKCLS, INPULSING, and TRIG NBR fields on the TKGRP form (5202 Record). (The trigger number entered in the TRIG NBR field must also be entered on the NSTRIG form (5324 Record) with the APPLICATION field set to "ASP" and the AIN REL field set to "R0D1".)
- Set the DAL ACCESS field on the TRGRP form to "Y". To implement the DAL feature functionality, the DAL ACCESS field must be set only after the TRK DIR, TRKCLS, INPULSING, and TRIG NBR fields have been set.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFIDs 126 and 272 respectively, must be set to "Y" to activate the DAL feature for 5E12 and later.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E12 and later, the DAL ACCESS field and its associated data rules were added.

4. GLOSSARY

ASP	Advanced Services Platform
BRCS	Business and Residential Custom Services
CPN SCRN	Calling Party Number Screening
DAL	Direct Access Links
DTMF	Dual Tone Multifrequency
MF	Multifrequency signaling
OHD	Off-Hook Delay
PBX	Private Branch Exchange
PF	Private Facility
PRI	Primary Rate Interface
RTCD	Real Time Detail Platform/Application
SCP	Service Control Point

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VPN Virtual Private Network

SEC. 4A273: CALL FORWARD ON TRUNKS

1. FEATURE DESCRIPTION

The Call Forward on Trunks feature is a secured feature (SFID 273) deployed with the 5E13 Software Release and available as a 5E11 and later Software Update. The feature number for this feature is 99-5E-4029.

This feature provides a "call forwarding busy trunk" capability from a trunk to any public number in the network. Forwarding of calls will take place in the event that all trunks in the trunk group are busy or out of service.

Without this feature, when a trunk group is busy or out of service, an incoming call routed to the designated trunk group receives a busy tone, or, in order to avoid a busy condition, the Next Route Index field can be used to route the call to another trunk group. A total of six route indexes can be provisioned to reroute the call to an alternate trunk group in the event that the original trunk group is busy.

The Call Forward on Trunks feature provides the capability to reroute the call to another DN (Directory Number) instead of rerouting it to another trunk group. This provides increased probability of having the call completed successfully.

Effective with the 5E14 software release, the provisioning of this feature was redesigned to simplify provisioning. For example, prior to 5E14, the TN used as the Call Forward TN is defined by using a combination of the PREFIX DIGITS and NEXT ROUTE fields and the NOC (Normalized Office Code) from the NOC form. Note that this is not typically how the PREFIX DIGITS and NEXT ROUTE field are used. To eliminate this confusion, for 5E14 and later this feature was redesigned by adding a new TN field to the RTIDX form to avoid having to to use the PREFIX DIGITS and NEXT ROUTE fields. The 5E13 and earlier and 5E14 and later provisioning steps are presented below.

For 5E13 and earlier, the following steps are used to provision this feature:

1. Set the ACT field for SFID 273 on the SFSYS form (5713-1 Record) to "Y".
2. From the NOC form (5501 Record), obtain the NOC number of the TN being used.
3. On the RTIDX form:
    1. enter a new route index in the ROUTE INDEX field,
    2. ROUTE TYPE = "DNTRAN",
    3. PREFIX DIGITS = last 4 digits of the TN,
    4. NEXT ROUTE = the NOC number from the NOC form,
    5. CI ROUTE TYPE = "NMFAIL" (5E12 and earlier),
    6. CI ROUTE TYPE = "CALLFORWARD" (5E13 and later).
4. Find the route index that points to the trunk group that is to have the "Call Forwarding on Trunks" feature. Use that route index to access the RTIDX form. Set the NEXT ROUTE to the route index in step 3.

At this point, the feature is set up. Any calls encountering a "trunk group busy" condition for the trunk

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group in step 3, will be routed to the TN defined in step 4.

See Figure 1 for the 5E13 and earlier form flow.

For 5E14 and later, the following steps are used to provision this feature:

1. Set the ACT field for SFID 273 on the SFSYS form (5713-1 Record) to "Y".
2. On the RTIDX form:

a. set ROUTE TYPE to "DNTRAN",

b. set CI ROUTE TYPE to "CALLFORWARD",

c. enter the desired TN in the TN field.

See Figure 2 for the 5E14 and later form flow.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22

RTIDX form (5303) - This form is used to define characteristics of the Route Index. For 5E11 and later, added data rules to the CI ROUTE TYPE, TRUNK GROUP NUMBER, and ROUTE TYPE fields.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 273 to "Y".

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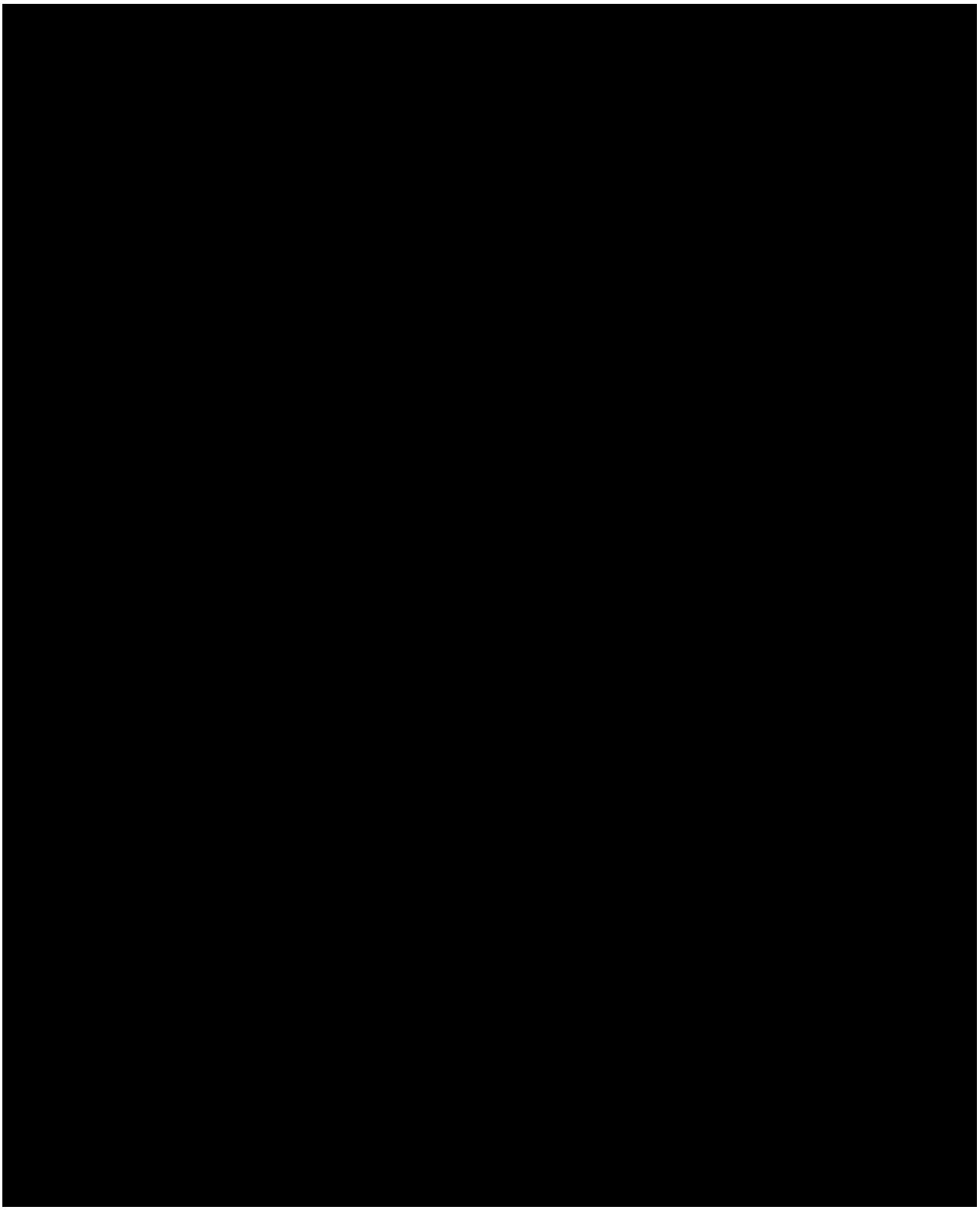

Figure 1 FORM FLOW FOR CALL FORWARD ON TRUNKS - 5E11 - 5E13 SOFTWARE RELEASES

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Figure 2 FORM FLOW FOR CALL FORWARD ON TRUNKS - 5E14 AND LATER SOFTWARE RELEASES

SEC. 4A274: SIGNALING SYSTEM 7 F-LINKS

1. BACKGROUND

Prior to the 5E12 Software Release, the 5ESS-2000 Switch would communicate through the CNI (Common Network Interface) signaling platform as shown in Figure 1. Originally, A-links were installed to communicate to the home STP (Signal Transfer Point) pair. Some telephone companies deployed E-links for enhanced signaling network reliability and increased network routing efficiency.

Some customers, however, wanted the capability to directly connect their 5ESS-2000 Switch to other switches or databases. To achieve this through the CNI signaling platform, customers had to provision this link connection as A-links.

2. FEATURE DESCRIPTION

This feature (SS7 F-Links) modifies the CNI signaling platform to allow the customer to provision the link connection as F-links. In addition, additional requirements allow for the provisioning of alternate routing of F-link traffic into the backbone network upon F-link set failure. Figure 2 illustrates the signaling connections introduced by this feature.

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The SS7 F-Links feature (99-CP-3627) is a secured feature (SFID 274).

Signaling operates the same for F-links as for A-links and E-links. This includes:

- Strategies for alternate routing
- Signaling link management
- Congestion control capabilities
- Signaling route management
- Changeover procedures, which are invoked when:
  - One link of an F-linkset fails, is blocked, or inhibited. Changeover is performed to another in-service link in the linkset.
  - An F-link set fails. Changeover is performed to the next available alternate route as provisioned.
- Changeback procedures, which are invoked when at least one link of an F-linkset is restored, unblocked, or uninhibited. Changeback is performed on the reactivated link(s) in the linkset.

3. FEATURE ASSIGNMENT

The SS7 F-links feature is a Recent Change only feature. There are no ODA impacts.

This feature is provisioned the same way as the E-links and the A-links (see Reference Manual 235-190-120 Issue 10.00B). The only thing added with this feature is a new Link Type (F-LINK). In addition to what is found in the Reference Manual, the following are the applicable provisioning rules:

- Before an F-linkset can be provisioned as an alternate signaling route for a destination point code, the E-Link Access and Alternate A-Link Set feature (SFID 131) must be activated.
- Activate the secured feature by setting the ACT field for SFID 274 on Recent Change View 8.22 to "Y".

Other Recent Changes Views impacted by this feature are:

VIEW NUMBER AND FIELD NAME	DESCRIPTION
15.2 LINK TYPE	The type of link used for signaling between a 5ESS-2000 Switch and a signaling point.
15.9 PRI ROUTE	The linkset number for primary route based on the routing level.
15.9 ALT1 ROUTE	The linkset number for alternate 1 route based on the routing level.
15.9 ALT2 ROUTE	The linkset number for alternate 2 route based on the routing level.
15.18 PRI ROUTE	The linkset number for primary route based on the routing level.
15.18 ALT1 ROUTE	The linkset number for alternate 1 route based on the routing level.
15.18 ALT2 ROUTE	The linkset number for alternate 2 route based on the routing level.

4. TRANSLATION REQUIREMENTS

Translation requirements are the same for F-links as for E-links. To see the E-link requirements, see Division 9, Section 1A of the TG.

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Figure 1 SUPPORTED SS7 SIGNALING CONNECTIONS BEFORE THIS FEATURE

Figure 2 SUPPORTED SS7 SIGNALING CONNECTIONS AFTER THIS FEATURE

SEC. 4A275: FEATURE INTERACTIONS WITH 10-DIGIT OFFICE DIALING PLAN

1. FEATURE DESCRIPTION

The Feature Interactions with 10-Digit Office Dialing Plan feature is available as a software update to 5E12, and for deployment as part of 5E13 Software Releases. This is a secured feature using SFID 275 and must be purchased before being activated. The feature number for this feature is 99-5E-4510.

- ***NOTE:*** This feature is also available in 5E10 and 5E11, but with less functionality, as listed in the table of features below.

The Feature Interactions with 10-Digit Office Dialing Plan feature provides the ability for certain features, listed below, to operate properly in a dial plan that consists of 10-digit dialing, and only 10-digit dialing, where 10 digits are required to reach all directory numbers, even directory numbers on the same switch in the same area code as the calling party's directory number. If only seven-digit dialing is used, or if the dial plan allows the subscriber to use either seven-digit dialing or 10-digit dialing (called permissive 10-digit dialing in this section), this feature is not required. In the context of this section, a dial plan that requires the subscriber to dial 10 digits for all directory numbers will be called mandatory 10-digit dialing.

If the "Number Portability - NPA-NXX Growth" feature is active (Secured Feature ID 198), that feature provides the equivalent functionality (in addition to other functionality) and this feature is not required.

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However, the two features are compatible with each other and both may be active in a switch at the same time.

Use of any of the features in the following list requires the purchase of SFID 198 or SFID 275 in an office that has mandatory 10-digit dialing:

- ISDN Intercom
- ISDN Attendant Direct Station Select
- Series Completion to a Multi-Line Hunt Group
- Directed Call Pickup of a Pre-Stored DN
- Terminal Group Attendant
- ACD/BRCS
  - Queue Dialing
  - Agent Intercom
  - Service Observe
  - Third Party Call Control
- Remote Access, including RACF (Remote Access to Call Forwarding) and RASI (Remote Access to ASI-Proxy). The Remote Access capability changes an announcement in the RAF and SAS frames. This requires the circuit pack supporting the announcement to be upgraded to support the new announcement.
- Automatic Customer Station Rearrangement (See footnote 1)

NOTE: These features are not supported prior to the 5E12 release of this feature.

When both the Feature Interactions with 10-Digit Office Dialing Plan feature and the "Number Portability - NPA-NXX Growth" feature are inactive (i.e., not purchased), the above features will not work in an office with mandatory 10-digit intra-switch dialing. If the office is in a permissive state (7 or 10-digit intra-switch dialing is allowed), the features will work correctly.

When either the "Feature Interactions with 10-Digit Office Dialing Plan" feature or the "Number Portability - NPA-NXX Growth" feature is active, or both are active, the above features work correctly in an office with mandatory or permissive 10-digit intra-switch dialing.

2. FEATURE ASSIGNMENT

This is a secured feature and is activated by setting the ACT field for SFID 275 on the SFSYS form (5713-1 Record) to "Y". No forms were modified or added to support this feature.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 275 to "Y".

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SEC. 4A276: NP SERVICE PROVIDER PORTABILITY AMA ENHANCEMENTS

1. FEATURE DESCRIPTION

The feature number for the NP (Node Processor) Service Provider Portability AMA (Automatic Message Accounting) feature is 99-CP-4322. This Secured Feature (SFID 276) is being deployed as a Software Update for 5E11.

There are three AMA functions that are included in this feature. The first function is provided in Phase 1 (99-CP-4322) and the remaining two functions in Phase 2 (99-CP-4322.A). However, since operating companies may not require all three functions in their network, each function is controlled via independent office options (e.g. OFID (Office Option ID) bits or per-office parameters). The three functions are packaged under a single Secured Feature lock which must be purchased and activated before any/all of these functions can be activated in the switch. The three AMA functions covered by this feature are as follows:

- Attach an originating party LNP (Local Number Portability) BAF (Bellcore AMA Format) module (MOD 720) to all AMA records generated for calls originating from (or forwarding from) "ported" DNs (Directory Numbers). The LNP module should contain the LRN (Local Routing Number) (at least the NPA-NXX (Numbering Plan Area-Office Code) digits) of the originating switch or Switching Module (5ESS only). This applies to AMA records for:
  - local and non-IXC (Inter Exchange Carriers) toll handled calls including LEC (Local Exchange Carrier) handled 800/888 calls
  - all supplementary service feature usage (e.g., USTWC (Usage Sensitive Three-Way Calling), LASS (Local Area Signaling Services) AR/AC (Automatic Recall/Automatic Callback), CFV (Call Forwarding Variable), etc.)
  - all ASP (Advanced Services Platform) (a.k.a., AIN (Advanced Intelligent Network)) AMA records for OHDs (Off-Hook Delays), OHI (Off-Hook Immediate), ONA (Originating No answer), and OCPB (Originating Called Party Busy) applied to the originating ported DN, and
  - all daily aggregate AMA records for services subscribed to a ported DN (e.g., LASS SLE (Screen List Editing), ICLID (Individual Calling Line Identification), BCLID (Bulk Calling Line Identification), and CNAM (Calling Name) records).

This function is intended to be performed at the serving end-office for the ported DN but also applies to "originating" type AMA records (e.g., 800/888 records) generated at subsequent exchanges in the call path.

- Attach a terminating party LNP BAF module (MOD 720) to all terminating AMA records generated for calls terminating to "ported" DNs. The LNP module should contain the LRN (at least the NPA-NXX digits) of the terminating switch or Switching Module (5ESS only). This applies to AMA records for:
  - INWATS (Inward Wide Area Telecommunications Service),
  - ASP TAT (Terminating Attempt Trigger) AMA SC221 records,
  - PBX (Private Branch Exchange) DID (Direct Inward Dialing), and
  - any other terminating event type records.

- Generate a new "default" flat rate AMA record using either Structure Code 001 or Structure Code 500

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and a Call Code of 721 "LNP DFR" for line originations and private facility trunk originations (e.g. PBX trunk groups) when an NP query is performed at the originating switch and when no other AMA record is already being generated for the call. This should apply to "flat rate" local calls when full detail recording is not in use. The generation of this "default" flat rate record is controllable on a per-office basis either for all calls for which an NP query is performed by the originating end-office (unconditional option) or only for calls for which an LRN was returned in the NP response message (conditional option).

2. FEATURE ASSIGNMENT

To enable this feature the following must be done:

- the ACT fields for SFID 199 and SFID 276 are set to "Y" on the SFSYS form (5713-1 Record)
- the ACT fields for OFID 704 and OFID 705 on the FOSYS form (5713-2 Record) must also be set to "Y", and
- the PORTED field on the LINE form (5109 Record) must be set to "Y".

See form flow on Figure 1 for further provisioning.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
LINE	5109	3	1I	1.5, 1.6
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. To use this feature, the ACT fields for OFID 704 and OFID 705 must be set to "Y" on this form.

LINE form (5109 Record) - The LINE form defines the office Equipment Number and features for each telephone number in a 5ESS Switch. The PORTED field must be set to "Y".

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. Two new fields (DFLT FLAT RATE and DFR STRCT CODE) were added to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 199 and SFID 276 to "Y".

4. GLOSSARY

AC	Automatic Callback
AIN	Advanced Intelligent Network
AMA	Automatic Message Accounting
AR	Automatic Recall
ASP	Advanced Services Platform
BAF	Bellcore Communication Research

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BCLID	Bulk Calling Line Identification
CFV	Call Forward Variable
CNAM	Calling Name
DID	Direct Inward Dialing
DN	Directory Number
ICLID	Individual Calling Line Identification
INWATS	Inward Wide Area Telecommunications Service
IXC	Inter Exchange Carriers
LASS	Local Area Signaling Services
LEC	Local Exchange Carriers
LNP	Local Number Portability
LRN	Local Routing Number
NP	Node Processor
NPA	Numbering Plan Area
OCPB	Originating Called Party Busy
OFID	Office Option Identification
OHD	Off-Hook Delay
OHI	Off-Hook Immediate
ONA	Originating No Answer
PBX	Private Branch Exchange
SLE	Screen List Editing
TAT	Terminating Attempt Trigger
USTWC	Usage Sensitive Three-Way Calling

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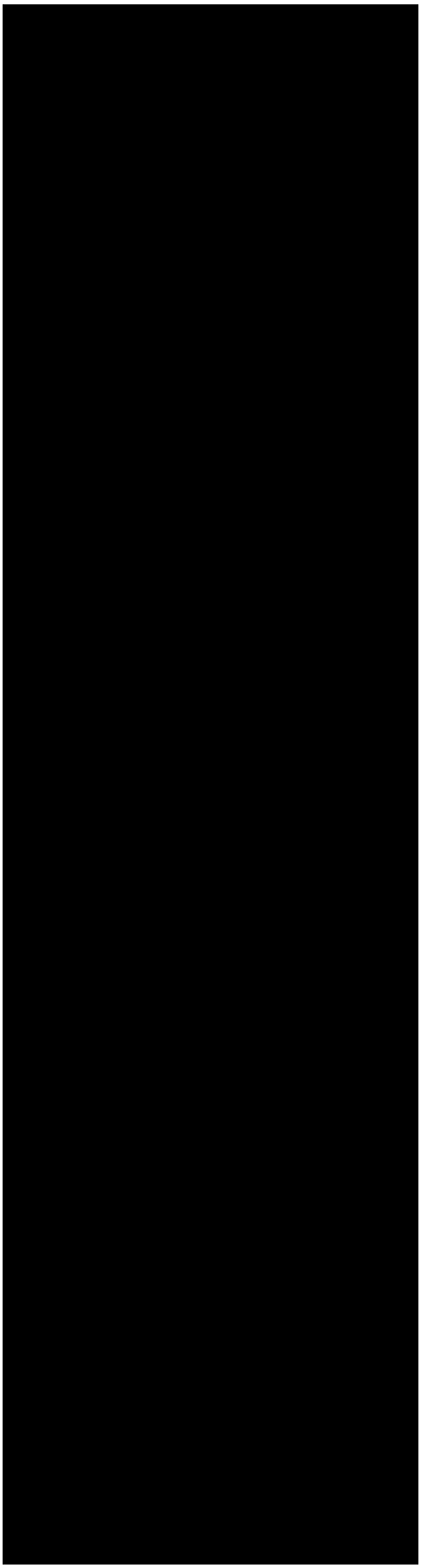

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Figure 1 FORM FLOW FOR NP SERVICE PROVIDER PORTABILITY AMA ENHANCEMENTS

SEC. 4A277: VOICE FREQUENCY DATA ENHANCEMENT

1. FEATURE DESCRIPTION

The Voice Frequency Data Enhancement feature is available as a software update to 5E11 and 5E12, and for deployment as part of 5E13 Software Releases. This is a secured feature using SFID 277 and must be purchased before being activated. The feature number for this feature is 99-5E-4413.

Prior to the implementation of this feature, the 5ESS-2000 Switch supported the TR-303 interface specification hybrid signaling standard, which uses both in-band robbed bit and out-of-band (i.e., over the TMC (Timeslot Management Channel)) signaling to convey supervisory and signaling information between the RDT (Remote Digital Terminal) and 5ESS-2000 Switch. In the robbed bit mode of operation, the least significant bit of the 8 bits for each DS0 (Digital Signal Level 0) is overwritten every 6th DS1 (Digital Signal Level 1) frame with a bit which can be decoded over a number of frames to convey signaling or supervisory information. This hybrid signaling standard is employed for analog circuit switched services on the IDCU (Integrated Digital Carrier Unit) TR-303 platform and on the DNU-S (Digital Networking Unit - SONET) TR-303 platform beginning in 5E12. The use of robbed bit signaling has been shown to degrade the performance of voice band data modems.

This feature will enhance the TMC message set to contain additional TMC messages that will be used to eliminate the use of DS0 robbed bit signaling in the path between the RDT and switch once a call has been set up. In other words, it will allow a given DS0 to use the clear channel mode of operation. These new TMC messages will be used to transition between robbed bit mode and clear channel mode for each individual call. This new messaging scheme is inter-operable with RDTs that do not support these new messages. This new messaging scheme will be supported in the Lucent SLC-2000 Access System DLC (Digital Loop Carrier) Subsystem Software Release 4.06.00 (known as Software Release 4.6).

- ***NOTE:*** The SLC (Subscriber Loop Carrier)-2000 Access System provides the functionality of a TR-303 RDT. This new messaging scheme will NOT be supported on Lucent's SLC 96 and SLC Series 5 DLC systems.

This feature is operational on the IDCU TR-303 platform in 5E11 and on both the IDCU and DNU-S TR-303 platforms in 5E12. When activated, this feature applies to all analog calls to/from single party POTS (Plain Old Telephone Service) Lines, WATS (Wide Area Telephone Service) Lines, and Ground Start PBX (Private Branch Exchange) Lines.

2. FEATURE ASSIGNMENT

This is a secured feature and is activated by setting the ACT field for SFID 277 on the SFSYS form (5713-1 Record) to "Y". No forms were modified or added to support this feature.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 277 to "Y".

4. GLOSSARY

DLC - Digital Loop Carrier

DNU-S Digital Networking Unit - SONET

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DS0 Digital Signal Level 0

DS1 Digital Signal Level 1

IDCU Integrated Digital Carrier Unit

PBX - Private Branch Exchange

POTS Plain Old Telephone Service

RDT Remote Digital Terminal

SLC Subscriber Loop Carrier

TMC Time Slot Management Channel

WATS Wide Area Telephone Service

SEC. 4A278: LOCAL TRUNK BILLING ENHANCEMENTS

1. BACKGROUND

Due to the increase in local service competition created by the Telecommunications Act of 1996, local service provider's tariffs need to be changed. A set of AMA billing options are now needed to identify calls for which mutual compensation is owed.

2. FEATURE DESCRIPTION

The Local Trunk Billing Enhancements feature is a secured feature (SFID 278), is available as a software update for the 5E11 and 5E12 software releases and is included in the 5E13 and later software releases. This feature has feature number 99-5E-4498.

The Local Trunk Billing Enhancements feature (99-5E-4498) allows Module 104 to be appended to AMA records for inter-office calls. One instance of Module 104 is appended for the originating trunk of the leg of the call represented in the AMA record, another for the terminating trunk.

This feature applies to LASS (Advanced Services Platform) and non-Operator Services Position System (OSPS) AMA.

This feature does not apply to direct line to line calls (as no trunks are involved), OSPS, packet, LASS (Local Area Signaling Services) event records, or to AMA records for non-call-related events (such as Time of Day, Automatic Customer Station Rearrangement, aggregate AMA recording, Computer Access Restriction, Customer Originated Trace).

This feature does not apply to MDR (Message Detail Recording), except the associated MDR via a RAO (Revenue Accounting Office).

This feature does not apply to calls involving originating or terminating trunks when the trunk group fields in the call record are not set.

For calls or legs of calls either originating from and/or terminating to a trunk, and for which an existing AMA billing record is produced on the originating line or trunk, this feature adds the following functionality when the TRUNK filed on the OFCOPT form is set:

- For Line to Trunk Calls, module 104 will be appended. Character 1 will be 0 (padding), characters 2-5 will contain the outgoing trunk group number and characters 6-9 will contain the outgoing trunk group

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member, provided the outgoing trunk field is populated in the call record.

- For Trunk to Line Calls, module 104 will be appended. Character 1 will be 0 (padding), characters 2-5 will contain the incoming trunk group number and characters 6-9 contain the incoming trunk group member, provided the incoming trunk group field is populated in the call record.
- For Trunk to Trunk Calls, two module 104's will be appended:
  - In one module 104, character 1 will be 0 (padding), characters 2-5 will contain the incoming trunk group number and characters 6-9 will contain the incoming trunk group member provided the incoming trunk group field is populated in the call record.
  - In the second module 104, character 1 will be 0 (padding), characters 2-5 will contain the outgoing trunk group number and characters 6-9 will contain the outgoing trunk group member, provided the outgoing trunk group field is populated in the call record.

This functionality is supported on the CDX (Compact Digital Exchange) Switch and on the VCDX (Very Compact Digital Exchange) Switch

The operation of these features applies to either the SMs or SM-2000 processors.

The AMA record format is enhanced with module(s) appended for line to trunk, trunk to trunk, trunk to line calls or legs of calls, except when the call record fields of incoming and/or outgoing trunk groups are not populated. One module 104 is appended for each originating or terminating trunk involved in the call or leg of the call, if the TRUNK field is set to "Y" on the OFCOPT form, and Secured Feature ID 278 is unlocked. Two module 104s are appended when the call is a trunk to trunk call, and therefore has both an incoming and outgoing trunk, and if the TRUNK field is set to "Y" on the OFCOPT form, and Secured Feature ID 278 is unlocked. Again, this last statement applies except for cases noted when the call record fields of incoming and/or outgoing trunk groups are not populated.

3. FEATURE ASSIGNMENT

This is a secured feature and is activated by setting the ACT field for SFID 278 on the SFSYS form (5713-1 Record) to "Y". The TRUNK filed on the OFCOPT form must then be set to "Y" to specify that the trunk module should be appended to AMA records in the office.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The TRUNK field and a data rule were added for the Local Trunk Billing Enhancements feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 278 to "Y".

SEC. 4A279: GOVERNMENT EMERGENCY TELECOMMUNICATIONS SERVICE HIGH PROBABILITY OF COMPLETION

1. BACK GROUND

The OMNCS (Office of the Manager, National Communications System) has been charged by the White

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House with providing a survivable and enduring telecommunications capability for the purposes of NS/EP (National Security and Emergency Preparedness). To this end, a set of switch-based and Advanced Intelligent Network features have been requested to provide a HPC (High Probability of Completion) for critical users of the PSTN (Public Switch Telephone Network) before, during and after a national security emergency. A National Security Emergency is an occurrence, including natural disaster, military attack, technological emergency, or other emergency which degrades or threatens the security of the United States.

The HPC Network Capability is applied during call setup, and is intended to provide enhanced call completion capabilities to authorized GETS (Government Emergency Telecommunications Service) users during times of network stress and/or congestion.

GETS is an evolving service which allows authorized government users to gain access to enhanced call completion features. In its current form, GETS capabilities are offered in the networks of AT&T, MCI, and Sprint. A user dials 1-710-NCS-GETS to place a GETS call, which causes the call to complete to one of the IXC (Inter-Exchange Carrier) networks, where authentication via PIN code and collection of the final routing number are performed. Within the IXC network, GETS calls are provided with special treatment to assure a high probability of completion.

Starting in 1995, GETS has been introduced into Local Exchange Carrier networks using AIN (Advanced Intelligent Network) 0.1 capabilities. The 710-NCS-GETS number is defined as a DNT (Dialed Number Trigger), and causes a query to be launched. The SCP's (Service Control Point) routing instructions include the same DN (Directory Number), and a set of three Carriers which the SSP (Service Switching Point) attempts to use hierarchically.

During severe stress conditions the completion of a call is influenced by blocking due to lack of circuits in trunk groups, or due to network management controls that may be implemented by the network operators. GETS service defines a set of features that allow these specially identified users to bypass network control restraints and queue for trunk circuits to become available thereby increasing the probability of the call completion.

2. FEATURE DESCRIPTION

Available with 5E13 and later, the Government Emergency Telecommunications
Service High Probability Of Completion Secured Feature has feature number 99-5E-3945 and uses SFID (Secured Feature ID) 279.

The requirements defined in this document are applicable to the 5ESS-2000 Switch, CDX, and VCDX product lines. They may be used as a basis for other switching products but not all requirements may be applicable.

The use of HPC Network Capabilities is restricted in the United States and U.S. Territories to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be co-ordinated with the OMNCS at the following address:

Office of the Manager
National Communication System
Attn: GETS Program Office
701 South Courthouse Rd
Arlington, VA, 22204-2198
email: gets@ncs.gov

2.1 Overview

From a User perspective, this capability provides the ability for a GETS call to be recognized as such, and paves the way for other GETS-related capabilities to provide additional call completion services. The User

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is not aware of the operation of this capability other than through the need to dial the GETS access number (1-710-NCS-GETS). Once recognized as a HPC call, the user may become aware of other GETS capabilities which operate on the call, such as Trunk Queuing.

2.2 Operational User

The operational user is expected to be a government authorized GETS user placing a call during a period of local, regional, or national emergency. While not necessarily sophisticated in telecommunications, the user will have a working knowledge of how to place a GETS call, and of what treatment to expect, such as long delays and multiple announcements/tones due to queuing, and the need to authenticate and provide the "true" destination address.

2.3 End User Scenarios - A Simple GETS Call

This capability is invoked when a caller originates a call and dials a number of the form 710-NXX-XXXX, typically 710-NCS-GETS. This capability detects such originations and marks them as GETS-HPC calls, whether at the originating EO (End Office), or at a Local Tandem. Once the call has been marked HPC, other GETS-HPC capabilities will provide trunk queuing, network management exemption, etc., to attempt to give the HPC call a higher probability of completion than non-GETS traffic during times of natural disaster or local or national emergency, when network congestion is likely. In normal practice, an AIN SDS (Specific Digit String) trigger, known as a DNT, is also assigned to the GETS number. This allows AIN-based capabilities such as Alternate Routing and Network Busy event detection to aid in the processing of the GETS call. (Note however that it is not required to have an AIN trigger assigned to the GETS number.)

Typical processing for a HPC call, after origination in a LEC (Local Exchange Carrier) End Office, is for the call to be routed to one of three IXCs (AT&T, MCI, or Sprint). Within the IXC network, the caller is prompted for an authorization code and destination address. Once the caller is authenticated, the IXC routes the call to the Local Exchange serving the true destination, and that LEC completes the call. At this time, all HPC calls are completed via an IXC, even when they are to be completed to a destination within the originating LATA (Local Access & Transport Area).

2.4 End User Scenarios - GETS interactions with ASP Dialed Number Triggers and Network Busy

A GETS user places a call to 1-710-NCS-GETS. This number is assigned as a DNT, causing a Query to be launched to the serving SCP. Service logic at that SCP processes the call, and returns a message to the switch composed of a Routing Component and a Request Component. The Routing Component contains instructions to complete the call to the dialed number (710-NCS-GETS), using a list of three IXCs. The Request Component contains a NEL (Next Event List) with the Network Busy Event armed. (In this example, a Request Component is received which arms the Network Busy event. While receipt of this component is not a mandatory part of GETS service, it may be received in order to provide the GETS Retry capability).

When attempting to complete the call, the SSP determines that the direct trunk group associated with IXC 1 is busy, and overflows to the indirect (via Access Tandem) route. An outgoing trunk is seized, but at the AT (Access Tandem) no trunks are available to IXC 1. The AT sends the SSP a release message with Cause value indicating a Network Busy condition. The SSP invokes Enhanced Alternate Carrier Routing, and overflows to IXC 2, skipping any remaining routes associated with IXC 1 since the Network Busy condition was detected remotely.

All members of the direct Trunk Group to IXC 2 are busy, but the Trunk Group has a HPC queue assigned to it. The call is placed in queue, but does not receive an idle trunk before timing out of the queue. The call overflows to the the indirect route via an AT. No idle trunks to the AT are found, so ACR (Alternate Carrier Routing) is invoked leading the switch to attempt routing via IXC 3.

When attempting IXC 3, the SSP determines that all trunks in the direct route to IXC 3 are busy, and that a

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HPC queue is assigned to the Trunk Group. The call is placed in queue, but does not receive an idle trunk before timing out of the queue. The call overflows to the the indirect route via an AT. No idle trunks are available to the AT, but a HPC queue is assigned and the call is placed in queue. While in queue, a trunk becomes idle and the call is routed to the AT. However, at the AT, no idle trunks to IXC 3 are found. The AT sends the SSP a release message with Cause value indicating Network Busy. The SSP invokes EACR (Enhanced Alternate Carrier Routing), skipping any additional routes associated with IXC 3 since the Network Busy condition was detected remotely, and there are no more carriers to try. Because the Network Busy event is armed, the SSP sends a Network Busy message to the serving SCP reporting the Network Busy event and asking for additional instructions.

The SCP instructs the switch to attempt routing to the same DN, with the same carrier set. This time, though, the SSP finds a member of the direct TG (Trunk Group) to IXC 1 available, and completes the call to IXC 1. Within IXC 1's network, additional GETS capabilities are invoked to authenticate the caller and collect the destination address, and to complete the call using GETS features within the IXC network to provide a high probability of completion.

2.5 End User Scenarios - HPC Trunk Queuing

The HPC TQ (HPC Trunk Queuing) capability allows end users HPC calls to be placed in a HPC trunk group queue when trunk facilities are not available to complete the call.

When a HPC call is made by the end user the call will either complete, be placed in a HPC trunk queue, or receive final call treatment.

The end user may encounter one or more of the following events in a HPC call attempt.

- An idle trunk group member is seized and the HPC call successfully completes.
- When a HPC call is placed in the HPC TQ queue, the end user may hear a HPC TQ announcement stating the HPC call has been queued.
- An end user's previously queued call may successfully complete.
- If the call is not abandoned by the user, their HPC call may queue multiple times in an attempt to complete the call.
- If all attempts to complete the HPC call fail, an end user may receive final call treatment of either reorder tone or an all circuits busy announcement.
- If an end user abandons a HPC queued call, the HPC TQ call ends.

3. FEATURE ASSIGNMENT

3.1 HPC Assignment in Digit Analysis Tables

Assignment of GETS HPC to an address is conceptually very simple. Once it has been determined how the address will be defined as HPC - whether at the 3-digit level on the NPA for all addresses within the NPA, at the 6-digit level on the NPA-NXX for all addresses with the NPA-NXX, or on a specific 10-digit address - it is only necessary to go to the appropriate form and mark the GETS HPC field as "Y" and set the NBR OF DIGITS field to 10. No other changes (other than unlocking the GETS feature) are needed for calls to the address(es) to receive HPC treatment. It may also be desirable to provision an ASP DNT at the same time as the GETS service is being provided.

3.2 GETS HPC Assignment in LDIT (Figure 1)

This scenario describes how to define a GETS-HPC number. Assume for this example that the number is 710-NCS-GETS, and the decision is made to assign GETS HPC at the 3-digit NPA level.

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To activate this feature, the ACT field for SFID 279 must be "Y" on the SFSYS form (5713-1 Record).

It is highly likely that an ASP 3/6/10 Digit Trigger will also be defined against the GETS number using the TRIG NBR field, and a corresponding NSTRIG form entry, and that Default Routing will be assigned using the DFLT RT field.

For all DASs that could reach the GETS number, determine the LDITs used by the DASs.

Assigning GETS HPC can be done at the NPA and NPA-NXX level using LDIT form. Update the translations for the LDITs determined from the above step. These translations should not be changed except to mark the GETS HPC field to "Y" (assuming that the number already has the correct CALL TYPE, TYP CI CALL, etc).

3.3 GETS HPC Assignment in RDIT (Figure 1)

Assigning GETS HPC at the 7-, 8-, 9-, or 10-digit level is done on appropriate RDIT forms, and is performed in a manner similar to the LDIT example given above.

Another possible provisioning scenario would be to have the 3/6/10 Digit Trigger defined at the RDIT level and the GETS HPC indicator defined at the LDIT level.

3.4 GETS HPC Assignment in INDIT (Figure 1)

Assigning GETS HPC for dialing plans associated with incoming trunks can be done on appropriate INDIT forms in a manner similar to the LDIT example given above.

3.5 HPC Trunk Queuing - Scenario 1 (Figure 2)

In this scenario the end user has requested the Telco to provide the /HPCTQ feature on trunk group 20. Trunk group 20 has a trunk class of IC (Interexchange Carrier).

To activate this feature, the ACT field for SFID 279 must be "Y" on the SFSYS form (5713-1 Record).

The customer may first wish to customize trunk queuing announcements using the QUGPA form as shown in Figure 2.

Preconstructed feature /HPCTQ is assigned to trunk group 20 using the TKGRP form. The switch comes with the preconstructed feature already created and defined.

3.6 HPC Trunk Queuing - Scenario 2 (Figure 3)

In this scenario the end user has requested the Telco to construct a HPC trunk queuing feature and assign the feature to trunk group 9. Trunk group 9 has a trunk class of LTOLLCON (Local Toll Connecting).

Constructed feature HPCTQC is created and defined using the QUFD form.

The feature may be defined as shown in Figure 3.

All other fields on this form do not apply for HPC Trunk Queueing and are given default values.

Constructed feature HPCTQC is then assigned to trunk group 9 using the TKGRP form as shown in Figure 3.

All other fields on this form do not apply for HPCTQ and may be given default values.

The assignments will successfully complete and the trunk will have HPC TQ capabilities.

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4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
INDIT	5309	3	3V	9.5
LDIT	5300	3	3C	9.3
MLDIT	5300-3a	3	5C	9.15
OFCOPT	5509	3	5I	8.1 8.15
QUFD	5617-1a	4	18A	12.40
RDIT	5300-7a	3	3H	9.9
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

INDIT (5309 Record) - The 5309 Record provides information pertaining to the disposition of incoming calls. That is, it directs incoming calls based on the trunks' directing codes to appropriate translators for either local terminating or tandem treatment. The GETS HPC field was added to support the GETS HPC feature. This feature was first made available in the 5E13 Software Release.

LDIT (5300 Record) - The 5300 Record defines valid dialed or inpulsed digits. The GETS HPC and CONFLICT RESOLUTION GETS HPC fields were added to support the GETS HPC feature. This feature was first made available in the 5E13 Software Release.

MLDIT (5300-3 A/B Record) - The 5300-3 A/B Record is used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS-2000 Switch. The GETS HPC field was added to support the GETS HPC feature. This feature was first made available in the 5E13 Software Release.

OFCOPT (5509 Record) - The 5509 Record provides the office option global parameters residing in the Central Processor. The IAM CRM PRIOR field was added to support the GETS HPC feature. This feature was first made available in the 5E13 Software Release.

RDIT (5300-7a Record) - The 5300-7a Record defines valid dialed or inpulsed digits. The GETS HPC and CONFLICT RESOLUTION GETS HPC fields were added to support the GETS HPC feature. This feature was first made available in the 5E13 Software Release.

QUFD (5617-1a Record) - The 5617 Record is used to define Modular Queuing features. The QUEUE TYPE field has been modified to allow the additional value of "HPCOHQ" to support the GETS HPC feature. Two new preconstructed features "/HPCQ15" and "/HPCQ30" for queuing coupled with "HPCOHQ" have been added for GETS HPC. This feature was first made available in the 5E13 Software Release.

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. For 5E13 and later, added SFID 279.

TKGRP (5202 Record) - The 5202 Record used to define each Trunk Group in a 5ESS-2000 Switch. For 5E12 and later, added Data Rules to the QUEUE ALLOWED field to support the GETS HPC feature.

4.1 GLOSSARY

5ESS-2000 - No. 5 Electronic Switching System 2000

AIN - Advanced Intelligent Network

ARS - Automatic Route Selection

BRCS - Business & Residential Customer Services

CDX - Compact Digital Exchange

DAS - Digit Analysis Selector

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DNT - Dialed Number Trigger

EACR - Enhanced Alternate Carrier Routing

EO - End Office

EP - Emergency Preparedness

FSD - Feature Specification Document

HPC - High Probability of Completion

HPCTQ - High Probability of Completion Trunk Queue

IAM - Initial Address Message

IC - Interexchange Carriers

ICX - Carrier Index

ISUP - Integrated Services Digital Network User Part

IXC - Inter-Exchange Carrier

LATA - Local Access & Transport Area

LEC - Local Exchange Carrier

MCI - Malicious Call Identification

MF - Multi-Frequency

MFR - Multi-Frequency Ringing

NCS - National Commmunications System

NEL - Next Event List

NPA - Numbering Plan Area

OMNCS - Office of the Manager - National Communications System

PSTN - Public Switched Telephone Network

RC - Recent Change

RCV - Recent Change & Verify

SCP - Service Control Point

SDS - Software Development System

SFID - Special Feature ID

SS7 - CCITT Signaling System No. 7

SS7 - Signaling System 7

SSP - Service Switching Point

TG - Trunk Group

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TGN - Trunk Group Number

TGSR - Terminal Group & Station Restriction

TQ - Trunk Query

VCDX - Very Compact Digital Exchange

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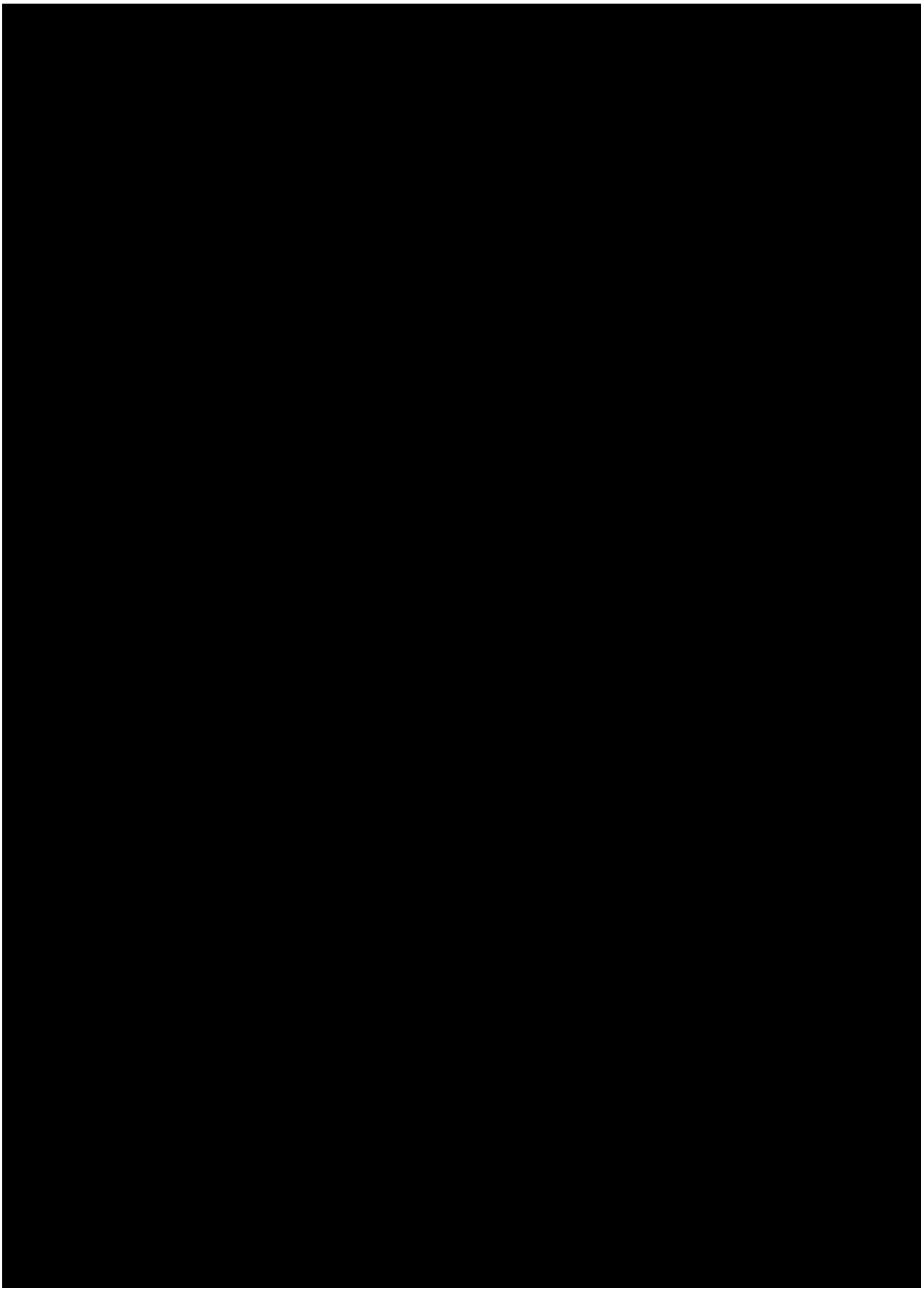

Figure 1 FORM FLOW FOR GETS HPC ASSIGNMENT FOR LDIT, RDIT, AND INDIT

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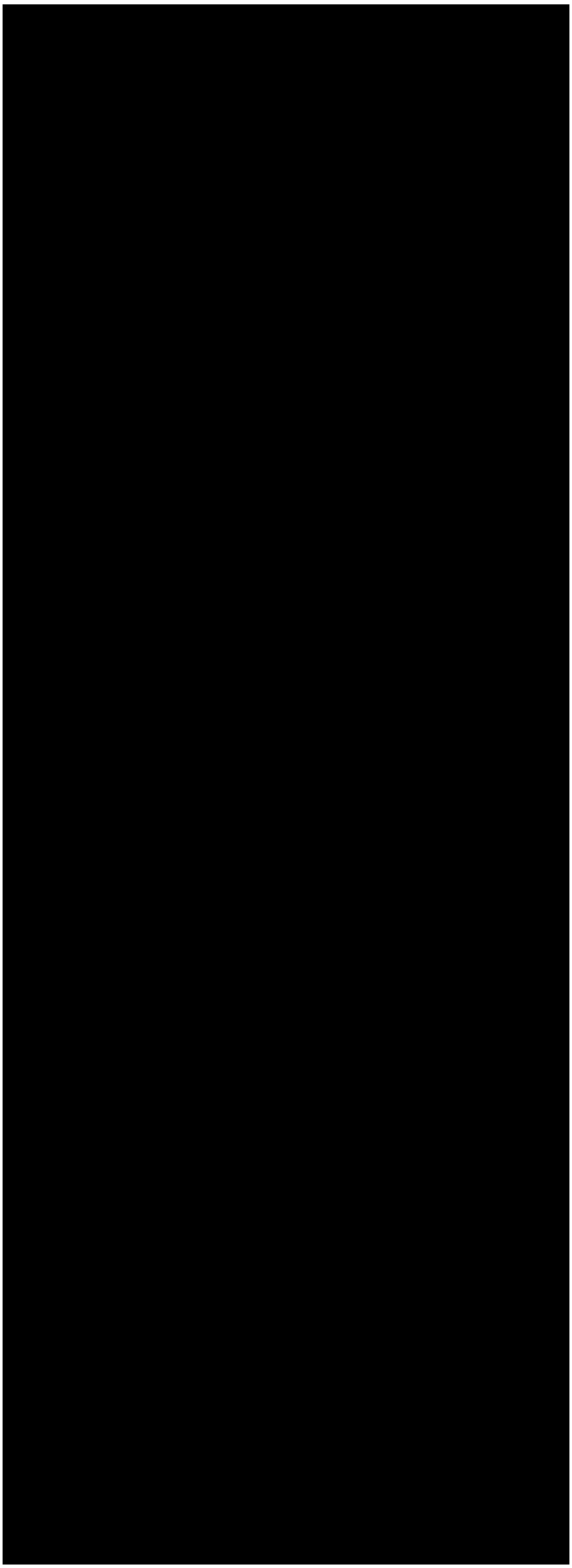

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Figure 2 FORM FLOW FOR HPC TRUNK QUEUING SCENARIO 1 - PRECONSTRUCTED QUEUE FEATURE

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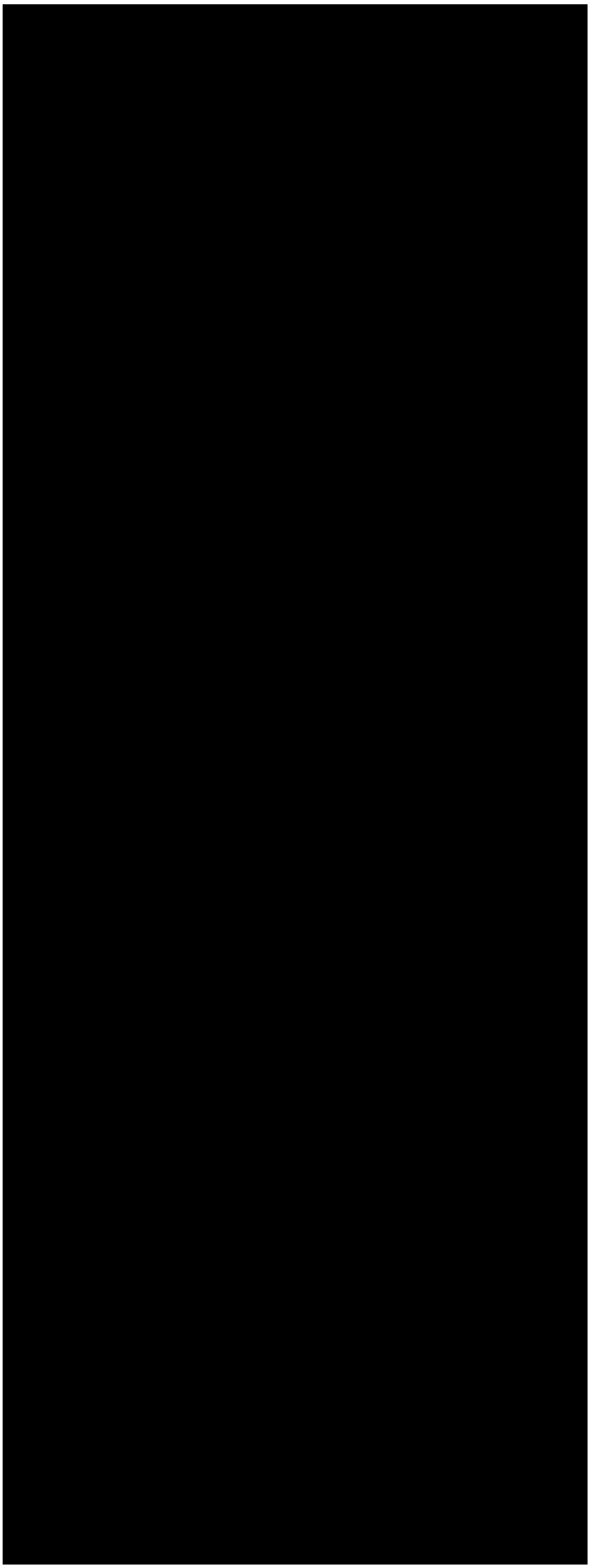

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Figure 3 FORM FLOW FOR HPC TRUNK QUEUING SCENARIO 2 - PRECONSTRUCTED QUEUE FEATURE

SEC. 4A280: INTERNALLY BRIDGED DUAL SERVICE - PACKAGE 3

1. FEATURE DESCRIPTION

The IBDS (Internally Bridged Dual Service) - Package 3 feature is a Secured Feature (SFID 280) that is being made available in the 5E13 Software Release. The feature number for this feature is 99-5E-4184.

The IBDS feature interaction modifications are an enhancement to the current 5ESS-2000 Switch One-TN (Telephone Number) LTSB (Line Time Slot Bridging) feature. This enhancement will allow certain features to be assigned to and used on One-TN LTSB lines. These features are not allowed for Two-TN LTSB service. The features are as follows:

- ACCT (Account Codes) (ACCTFD form)
- ARS (Automatic Route Selection) (ARSFD form)
- ASI (Advanced Services Interface) Proxy (ASIFD form)
- ATH (Authorization Codes) (ATHFD form)
- BCLID (Bulk Calling Line ID) (BCLIDFD form)
- CWD (Call Waiting Deluxe) (CW DELUXE = "Y" on CWTFD form)
- Direct Connect (NO DIAL = "Y" on LINE form)
- Private Facility Access with Queueing (QUEUE ALLOWED and PRIORITY QUEUE = "Y" on PFAFD form)
- TOD (Time of Day) (TODFD form)

This feature does not change the current originating COS (Class of Service) requirements for LTSB lines. The switch allows LTSB service only on lines with an "INDIV" originating COS.

The IBDS Package 3 feature depends on the IBDS Package 2 (SFID 263) feature and IBDS Package 2 depends upon IBDS Package 1 (SFID 262). For further information on the Package 1 and Package 2 features, see Division 2, Section 4a262 and Division 2, Section 4a263, respectively.

2. FEATURE ASSIGNMENT

For 5E13 and later, to provision this feature:

- Activate the SFIDs 262, 263, and 280 on the SFSYS form, by setting the respective ACT fields to "Y".
- Setup a line having One-TN LTSB on the LINE form.
- Setup MLHG (Multi-line Hunt Group) line having One-TN LTSB on MLHLN form.
- Assign any of the Package 3 features to the LINEFA form or MLHLNFA form for a cluster or BFG (BRCS (Business and Residential Custom Services) Feature Group).

For provisioning, see form flow on Figure 1.

3. TRANSLATION REQUIREMENTS

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New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LINE	5109	3	1I	1.6
MLHLN	5111	3	1K	1.6
SFSYS	5713-1	3	5AR	8.22

LINE form (5109 Record) - The LINE form defines the office Equipment Number and features for each telephone number in a 5ESS Switch. Data rules were added for the ASSOC OE field.

MLHLN form (5111 Record) - The MLHLN form defines the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group. Data rules were added for the ASSOC OE field.

SFSYS form (5713-1 Record) - This form is used to activate SFIDs (Secured Features IDs). This feature is activated by setting the ACT fields for SFIDs 262, 263, and 280 to "Y".

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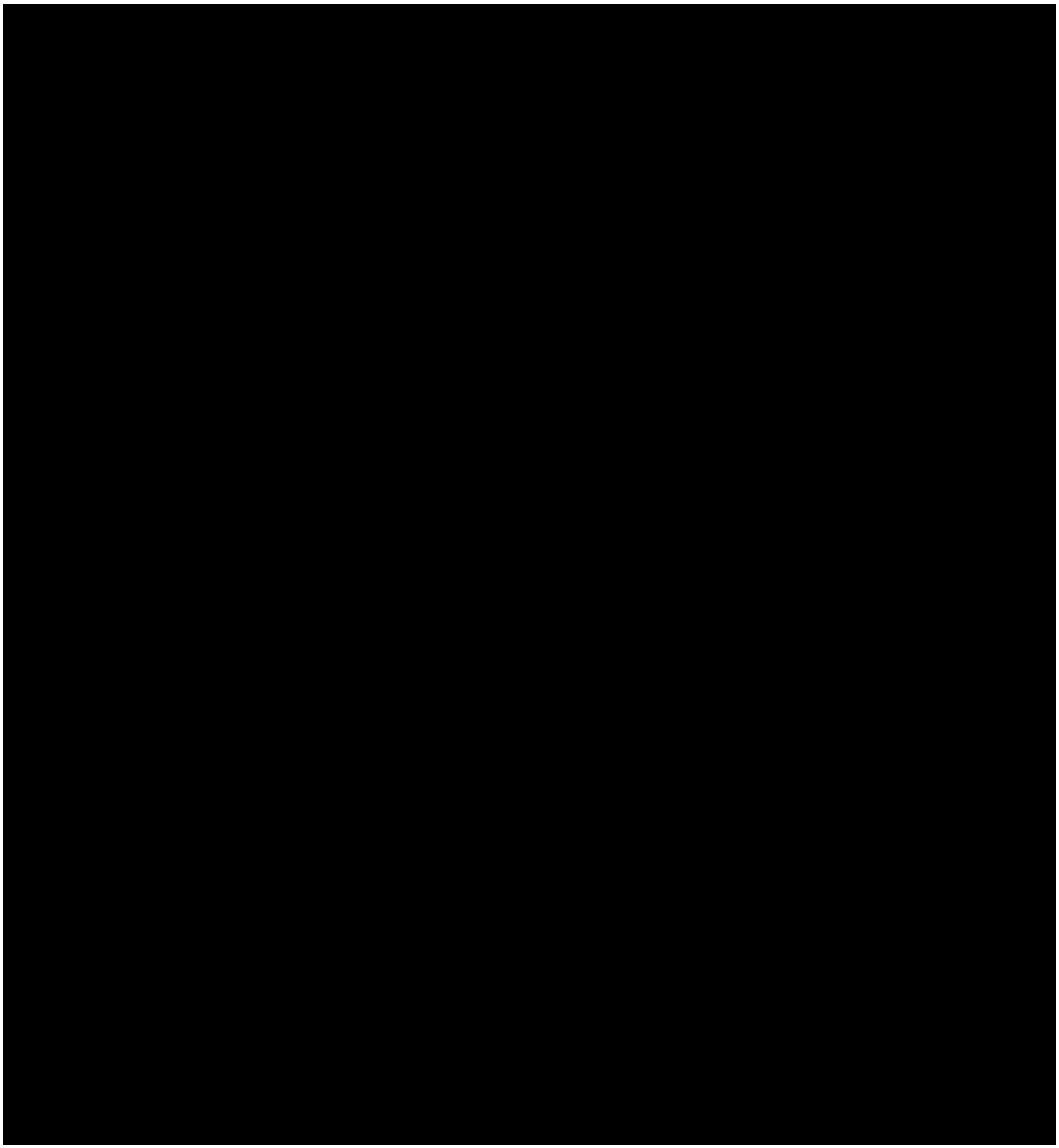

Figure 1 FORM FLOW FOR INTERNALLY BRIDGED DUAL SERVICE - PACKAGE 3

SEC. 4A282: II DIGITS SCREENING

1. FEATURE DESCRIPTION

Available as a 5E13 Software Update, the II Digits Screening feature is a secured feature using SFID (Secured Feature ID) 282. The feature number for this feature is 99-5E-4299. This feature expands the information screening capability. It allows for selective information (II) digit screening based on incoming trunk group and two digits. With this feature, incoming calls are routed based on information digits as allowed or disallowed on a trunk group basis, in order to handle calls without ANI (Automatic Number Identification), i.e., casual calls.

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The II Digits Screening feature can be used for fraud prevention. For example, calls with a coin indication in the information digits to 8XX numbers can be restricted. This feature ensures the service providers' ability to offer the best in long distance class of service.

2. FEATURE ASSIGNMENT

To provision this secured feature:

- Set the ACT field for SFIDs 165 and 282 respectively on the SFSYS form (5713-1 Record) to "Y". This feature is dependent on the Toll Digital Exchange Basic Call Processing feature (SFID 165). (For more information regarding this feature, see Division 2, Section 4a165.)
- Set the LDP field on the TKGRP form (5202 Record) to "Y".
- Set the II DIGITS and TGN fields on the IIDIGTBL form (5573 Record) as required.
- Set the II SCREEN field to "Y" on either the ANITBL form (5561 Record) or the LDPCTBL form (5562 Record).

See Figure 1 for provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANITBL	5561	3	5BE	8.51
IIDIGTBL	5573	3	5BN	8.57
LDPCTBL	5562	3	5BF	8.52
SFSYS	5713-1	3	5AR	8.22

ANITBL form (5561 Record) - This form contains the switch-based ANI Table. The ANI Table contains ANIs designating special treatment when a match occurs with an ANI associated with an incoming LDP (Long Distance Platform) call based on the option set, which is defined on this form. Added the II SCREEN field.

IIDIGTBL form (5573 Record) - This form contains information for call processing to route the call. A II Digits Screen bit is added to each entry of the ANI Table and LDP Carrier Table. When this II Digits Screen bit is set and a match occurs with the call's II digits and incoming trunk group, the call is routed based on the option set in this form. This is a new form added to support this feature.

LDPCTBL form (5562 Record) - This form contains the switch-based LDP Carrier Table. The LDP Carrier Table contains LDPs designating special treatment when a match occurs with an LDP associated with an incoming LDP call based on the option set, which is defined on this form. Added the II SCREEN field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFIDs 165 and 282 respectively to "Y". This feature is dependent on the Toll Digital Exchange Basic Call Processing feature (SFID 165).

SEC. 4A283: ABILITY TO STOP RST:TRK

1. FEATURE DESCRIPTION

The Ability to Stop a Restore Trunk feature is a secured feature available as a software update to 5E12, and for deployment as part of 5E13 Software Releases. This feature uses SFID (Secured Feature ID) 283 and has feature number 99-5E -3954.

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This secured feature provides the craft with the ability to stop the restoral of trunks and leave the trunks in a known out-of-service status without waiting for the restoral to complete. The new input message has the format of STP:RST,TRK. The user can specify what trunk to use by indicating the trunk group, trunk group and member number, equipment number, or process ID (Identification) of the restoral job. This command stops a restoral request on a trunk that is entered erroneously. The active restoral job is aborted and then a job to remove the trunks into an out-of-service status occurs.

Situations arising in an office where an incorrect restoral command is issued can cause service inconsistencies until these trunks can be returned to the proper out-of-service status. In cases where large numbers of trunks are erroneously specified can take an undesirably long time. This command is used to request that the restoral process be stopped as soon as the craft determines that it is incorrect, and then the effects are reversed.

2. FEATURE ASSIGNMENT

On the SFSYS form (5713-1 Record), SFID 283 must have the ACT field set to "Y".

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 283 must be set to "Y" on this form.

SEC. 4A284: RECOVERY FROM ALTERNATE BOOT DISK

1. FEATURE DESCRIPTION

The Recovery from Alternate Boot Disk feature is available with the 5E13 and later Software Releases. This feature provides the capability to recover a 5ESS-2000 Switch from a remote monitoring site, such as the SCC (Switching Control Center), from a disk other than the primary and secondary boot disks.

This feature is a secured feature (SFID 284) which the switch owner must purchase before it can be activated.

The feature number for this feature is 99-5E-2406.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	None.
SFSYS	5713-1	3	5AR	8.22

ECDOPT form (5706 Record) - This form is used to define all options in the AM (Administration Module) for initial offices. To activate the Recovery from Alternate Boot Disk feature, the ALT BOOT DSK field was added which must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. SFID 284 must be set to "Y" to enable the Recovery from Alternate Boot Disk feature.

SEC. 4A285: CDMA DATA SERVICES - PACKET MODE

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1. FEATURE DESCRIPTION

The CDMA (Code Division Multiple Access) Data Services - Packet Mode feature is a secured feature (SFID 285) that is available in the 5E15 Software Release. The feature number is 99-5E-4076.

This feature allows service providers to offer packet mode data services such as E-mail, database access, file transfer, etc. It allows a cellular/PCS (Personal Communication Services) subscriber to send and receive data using a MS (Mobile Station), for example a laptop computer, that conforms to IS-657 and IS-707 standard. The IS-657 or IS-707 standard specifies a packet data bearer service for communication between a mobile station and IWF (Interworking Function).

2. FEATURE ASSIGNMENT

To enable this feature, the ACT fields for SFID 221 and SFID 285 must be set to "Y", respectively, on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for both SFID 221 and SFID 285, respectively, to "Y".

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. Added data rules to the TRK CLS field.

SEC. 4A286: TDMA DATA SERVICES-Circuit Mode

1. FEATURE DESCRIPTION

The TDMA (Time Division Multiple Access) Data Services feature is a secured feature (SFID 286) that is being deployed as a 5E13 Software Update. The feature number for this feature is 99-5E-3576.

This feature provides TDMA mobile users access to existing asynchronous modems and Group-3 fax machines in the PSTN (Public Switched Telephone Network).

TDMA voice circuits cannot carry voice band modem tones, so this feature allows for the TDMA air interface to carry the data in a digital form to an interworking function that generates the modem tones for communication through the PSTN.

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 286 is set to "Y", and the ACT field for SFID 259 must be blank or "N", on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5602	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 286 to "Y". The ACT field for SFID 259 must be set to "N" or be left blank.

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TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. Data rules were added to the TRKCLS field.

SEC. 4A287: 5ESS-2000 LDP MINT Expansion Package A

1. FEATURE DESCRIPTION

The 5ESS-2000 LDP (Long Distance Platform) MINT (Multi-vendor Intra-Network) Expansion Package A feature is a secured feature (SFID 287) that is being introduced in the 5E13 Software Release. The feature number for this feature is 99-5E-4311.

This feature is intended for use by a service provider, not an end user. This feature works in conjunction with general MINT capability, implemented under feature number 99-5E-3782, to expand the 5ESS-2000 LDP Switch's functionality by:

a. providing additional call termination information for all trunks supported by the LDP Switch,

b. providing the flexibility to designate any LDP trunk as a trunk which is egressing a customer defined network boundary,

c. providing a wider range (0-63) of T-NSC (Terminating Network Selection Code) values for the BETA signaling format,

d. providing Reroute on Release Ingress Facilities functionality for PRI (Primary Rate Interface), Private Facilities and DAL (Direct Access Link) trunks,

e. providing a modified Cause Value on a per trunk group basis.

For more information on general MINT capability, refer to Division 2, Section 4A217.

2. FEATURE ASSIGNMENT

To enable this feature, set the ACT field for SFID 287 and SFID 165 to "Y" on the SFSYS form (5713-1 Record). In order to have the expanded Reroute on Release Ingress Facilities functionality, set the ACT field for SFID 250 to "Y".

To allow provisioning, specify the LDP OFFICE ID on the OFCOPT form (5509 Record).

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MCRTIDX	5304	3	3Q	10.4
OFCOPT	5509	3	5I	8.1
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

MCRTIDX form (5304 Record) - This form is used to define MC (Modular Customization) route indices in a 5ESS-2000 Switch. A data rule for the TERM NSC field was modified to expand the field's range from 0-15 to 0-63.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters for a 5ESS-2000 Switch. The LDP OFFICE ID and NST ALL fields were added to this view.

RTIDX form (5303 Record) - This form is used to define route indices in a 5ESS-2000 Switch. A data rule for the TERM NSC field was modified to expand the field's range from 0-15 to 0-63.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by

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setting the ACT field for SFIDs 287 and 165 to "Y". Set the ACT field for SFID 250 to "Y" if the expanded Reroute on Release Ingress Facilities functionality is desired.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The NETWORK IND, DAL EGRESS, and LINE BUSY fields were added to this form as well as new data rules.

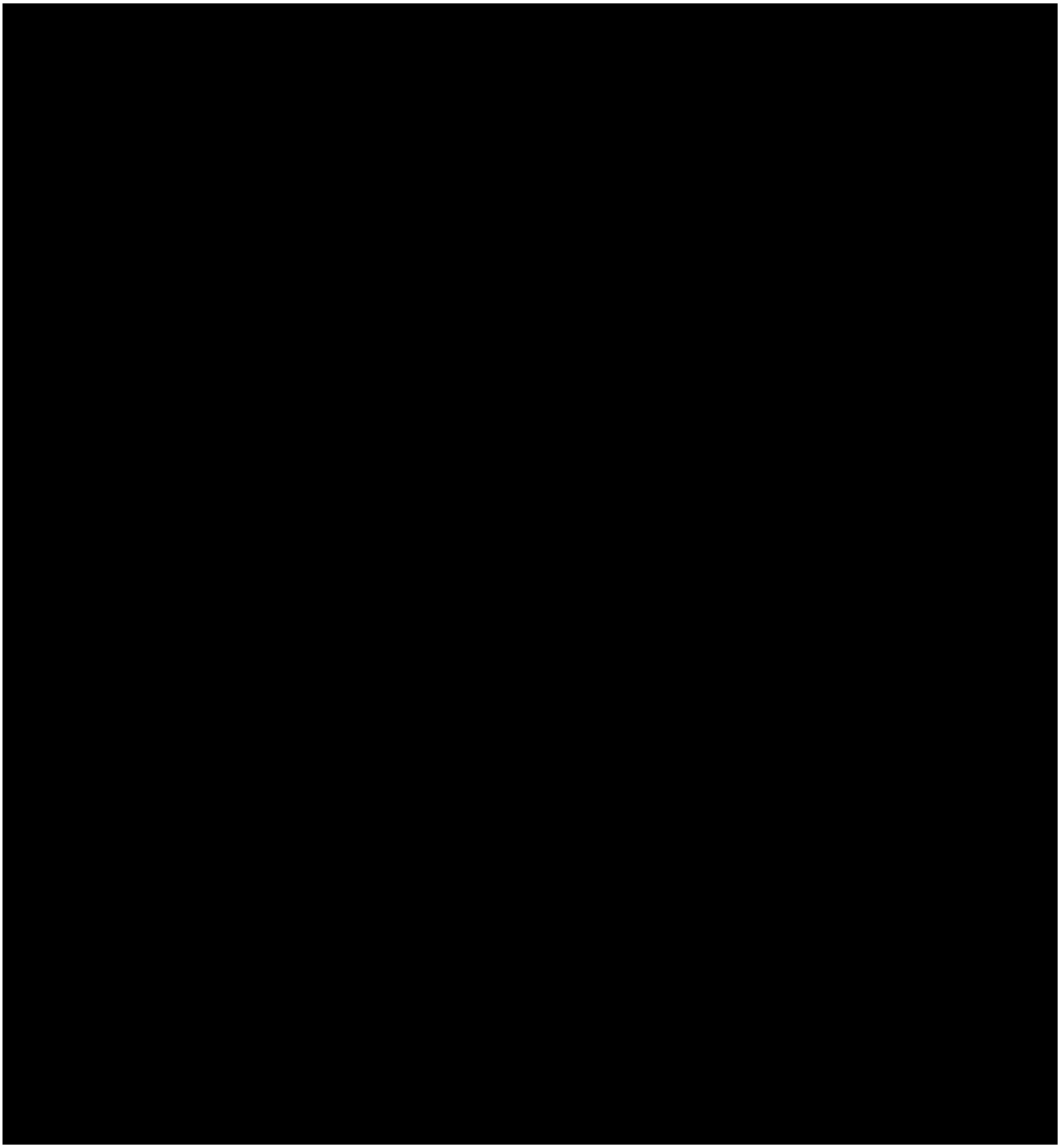

Figure 1 FORM FLOW FOR 5E13 AND LATER LDP MINT EXPANSION PACKAGE A

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SEC. 4A289: ROUTING ENHANCEMENTS

1. INTRODUCTION

The feature number for the Routing Enhancements feature is 99-5E-4187. This is a secured feature (SFID 289) that is being deployed as a Software Update for 5E14 Software Release.

The Routing Enhancements feature provides two main capabilities:

- a new RTI (Route Index) List conatining up to 16 routes.
- an increase in the number and range of RTIs.

2. FEATURE DESCRIPTION - RTI LIST

This enhancement will allow the end-user to "chain together" a list of RTIs. The route list consists of a key-list RTI and up to fifteen additional RTIs that are linked together by virtue of their position in a route index list. The position of the RTI in the list is used to specify the sequence in which the RTIs are searched for a non-busy route during routing. When a route index list is being used, the "Next RTI" on RC View 10.2 (RTIDX form) will NOT be used to determine the next route.

A route index list is created by entering the RTIs, with the key-list RTI first, on a RC View 10.40 (RTLIST form). When an RTI is entered, the RTI and some if its major attributes are displayed on one screen for ease of administration. The RC View 10.40 is used to enter the route index list only. The major attributes continue to be entered on RC View 10.2.

RTI = Route Index; the first RTI is the key-list RTI. The RTIs on this view (10.40) can be added, deleted, or updated. This is the only enterable column on this screen.

The remaining columns are display only. Values are obtained from the RC View 10.2 that has a key RTI that matches the same value as the RTI in this view.

2.1 Feature Overview - Route Index List

End user refers to the operational users of Routing Enhancements which are the recent change personnel that input the RTIs in the Recent Change View 10.2.

The end-user builds the route index list through recent change screens. The end user first provisions one key-list RTI per route index list, which is the first RTI in the route index list. A key-list RTI is unique in that it can only be assigned once per switch as a key-list RTI in any route index list. The end user can then provision up to fifteen non-key-list RTIs in the same route index list.

If call processing reaches the last RTI in the list without finding an idle trunk group, call processing tries queuing or Final Route Trigger, if active, before sending the call to final treatment.

- Position in the list is critical because the RTIs will be attempted in the order that they appear in the route index list.
- The same RTI can be assigned as a non-key-list RTI in other RTI lists (only once per individual list).
- Each RTI in the list must also be provisioned on a RC View 10.2 as the key RTI. All required fields on the RC View 10.2 must be populated. The "Next RTI" field is ignored when a list is present since the presence of a list supersedes the "Next RTI".

2.2 Feature Operation □ Route Index List

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With the Route Index List feature active, the service provider will observe the following actions:

- All call processing up to routing is unchanged by this feature.
- Call processing will add a new check before attempting a route in the RC View 10.2. The new check will determine if an RTI has been assigned as a key RTI of a list.
- If yes, routing returns the key-list RTI for routing the call. Routing proceeds though the list checking each RTI in order. For each RTI, call processing finds the RC View 10.2 that has a key RTI with the same value and looks up the assigned trunk group. If the assigned trunk group is idle, the call is routed over that group. If an idle trunk group is not found, call processing proceeds to the next RTI in the list and finds the RCView 10.2 that has a key RTI with the same value as the non-key RTI and looks up the assigned trunk group. If call processing reaches the last RTI in the list without finding an idle trunk group, call processing will\ try reroute queuing or FR Trigger, if they are active, before sending the call to final treatment.
- In all cases, the "Next RTI" field on RC View 10.2 is ignored.
- If no, current call processing continues, that is, routing proceeds through the RTIs using the current "Next RTI" field from one RC View 10.2 to the next RTI until an idle trunk is found or the call\ is routed to an announcement or other terminating treatment.

2.3 Feature Interaction □ Route Index List

- AMA: If AMA is active, an AMA record is generated as usual at call disconnect. There is no impact to the contents of any AMA record.
- RTCD: If RTCD is active, a RTCD record will be generated as usual at call disconnect. The RTI used to route the call will be reported.
- TDR (Time Dependent Routing): If TDR is active, the LDP switch would potentially alter the RTI from digit analysis by reading the TDR table. The Route Index List feature proposed here applies to the RTI returned from the TDR table, that is, the TDR occurs before the route index list is used.
- ROR (Reroute on Release): If ROR is active and the call is released back to the switch, the next RTI in the list shall be the starting point for proceeding through the list until a idle trunk is found or the call is\ routed to an announcement or other terminating treatment.
- SCP Alternate Routes: The route index list can apply to the RTIs returned by the SCP or derived by ASP.
- Reroute Queuing: If reroute queuing is active, reroute queuing sends the call back to the first RTI with queuing active and camp on. If the timing expires, the call will proceed through the route index list from the point of queuing to the last RTI and then to FR Trigger if active.
- FR Trigger: If Final Route Trigger is active, it is performed before final treatment, which occurs after all the RTIs in the route index list have been tried.
- NELS (Network Busy and BLNA): When the NetworkBusy query is used or a Busy Line No Answer is detected by the SCP, the route list used is this route list, when it has been provisioned. Network Busy and BLNA will function as they do today when being returned from the SCP.
- MINT - Route Search Limit: When the MINT route search limit has been set and the route index list feature is provisioned, the MINT route search limit takes precedence over the route index list. This is to say that the route search limit will limit the number of RTIs checked even when a route index list is being used. Route search limit is used to limit the number of RTIs tried per switch.

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3. FEATURE DESCRIPTION - INCREASED NUMBER OF ROUTE INDICIES

The maximum number of supported RTIs in 5E12 is 4095(to go beyond 3617 RTIs, the Increased Number of Trunk Groups feature is required). This enhancement will allow the maximum number of RTIs to be 16,382. This gives the network administrators increased flexibility in the sequence in which the trunk groups are searched. This feature does not add new trunks, instead it gives the ability to refer to the same trunk group with many different RTIs. This capability is especially important when using the "Next RTI" feature in that there will be the ability to have multiple different trunk group sequences available.

The increase in the number of RTIs affects both voice and data route indices.

The Lucent Technologies version of the trunk group parameter fields in R0.1 TCAP messages does not return a five digit RTI. This means that RTIs available on the switch can not be returned by the SCP. The interface will be modified to support 5-digit RTIs to fully support this capability.

4. FEATURE ASSIGNMENT

4.1 Activation

The Routing Enhancements feature is a secured feature and is activated by setting the ACT field for SFID 289 to "Y" on the SFSYS form (RC View 8.22).

4.2 Installation of Route Index List

- All RTIs in the list and the key-list RTI must first be defined on the RC View 10.2.
- Insert the 10.40 (RTLIST form) with the key-list RTI in key field RTIDX. Field ROUTE INDEX LIST row one should be the key-list RTI. Enter up to 15 addiitional RTIs in rows 2-16. For a final route treatment of announcement or busy tone, the last RTI entered should point to either an announcement trunk group or 10.2 (RTIDX form) field ETYP of BUSY.
- All attributes defined on the RC/V 10.2 apply except for the "Next RTI" field. The "Next RTI" field (field #6) will not be used if this feature is active.
- Routing via the key-list RTI is accomplished by populating the RTI in digit analysis (RC Views 9.2 - 9.9) or Time Dependent Routing (RC View 10.39).

4.3 Installation of Inceased Numbre of Route Indices

Change RC View 8.1 (OFCOPT form) field MAX RTIDX to 16382. The operational user can then enter an RTI up to the value of 16,382 on Recent Change View 10.2 (RTIDX form). After the RTI has been established, the user can then use that RTI value on any of the Recent Change Views listed which has an RTI field.

SEC. 4A290: ROUTING ENHANCEMENT: FINAL ROUTE TRIGGER

1. FEATURE DESCRIPTION

The feature number for the Routing Enhancement: Final Route Trigger feature is 99-5E-4187A. This is a secured feature (SFID 290) that is being deployed as a Software Update for 5E14 Software Release.

The Routing Enhancement: Final Route Trigger feature adds the option to query an AIN (Advanced Intelligent Network) SCP (Service Control Point) when a route index list is exhausted. The service provider can then control subsequent treatment of the call through logic at the SCP. The SCP can return a new routing number, private route, etc., or simply direct the switch to tear down the call. This will be accomplished by creating a new AIN trigger called FR Trigger (Final Route Trigger). The FR Trigger will be

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associated with the RTI (Route Index) using Recent Change/Verify. The FR Trigger will create a "networkBusy" TCAP (Transaction Capability Application Protocol) message to query the SCP when the very last route index that can be attempted is unavailable.

With the Final Route Trigger feature active and the FR Trigger provisioned, call processing will add a new check before release of the call is performed. This check will determine if a FR Trigger has been identified for the last route (RTI). If the FR Trigger has been defined, the switch initiates a transaction with the AIN SCP, providing information relevant to the call such as calling party number, called party number, and bearer capability to the SCP. The SCP could return Analyze Route, NEL (Next Event List), Continue, STR (Selective Trunk Reservation), STOR (Send to Outside Resource), or Disconnect to the SSP which controls subsequent call processing. The new query message called Network Busy message utilizes the Network Busy format.

This feature is dependent on the following two features:

- Advanced Services Platform (SFID 126),
- and ASP Interworking with Circuit Switched Data (SFID 237) for "data" calls to function with the FR Trigger.

1.1 Call Processing

The Final Route Trigger capability will create and launch an AIN SCP query before the call is given final treatment.

Any "voice" (3.1kHz or speech) or "data" call shall be eligible to encounter the FR Trigger. Data calls are supported by ASP only when SFID 237 is unlocked.

The FR Trigger capability is active when:

- the proper SFIDs have been set,
- the FR Trigger has been populated on RTIDX form (5303 Record) for the RTI,
- and the trigger number associated with the FR Trigger has been defined on NSTRIG form (5324 Record) with the AIN REL field set to "R0D1" and the application set to "ASP".

When the FR Trigger is active and the last route on the last route list is busy, prior to the final treatment of a call, the switch will launch the FR Trigger. One way to determine the RTI for the last route is when the ROUTE TYPE on the RTIDX form (5303 Record) is "REORDER" or "BUSY".

The FR Trigger is ignored when it is encountered on any RTI except the very last RTI to be checked before the call goes to reorder. The FR Trigger can be provisioned only on the last RTI, however, RTIs returned from the SCP are not bound by switch provisioning, therefore, it is possible to receive a RTI from the SCP that has been provisioned with a FR Trigger, even when it is not the last RTI to be tried. The FR Trigger is launched only when it is on the very last RTI to be checked before going to reorder.

When the FR Trigger has been encountered, if

- the trigger is not found on the NSTRIG form (5324 Record),
- OR the protocol has changed since the trigger was provisioned (no longer R0D1),
- OR the application is not ASP,

the switch shall issue the appropriate assert and the call will receive final treatment. No query is made to the SCP.

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When EACR (Enhanced Alternate Carrier Routing) is provisioned on the switch, all EACR processing is performed before the FR Trigger is fired. The FR Trigger is fired only on the very last RTI being tried. It is possible with EACR active to never hit the RTI that has the FR Trigger attached to it. This happens when the call has left the originating long distance switch and been released back. With EACR, all remaining RTIs for the carrier are skipped and the next carrier is tried. This applies to all ASP routes, including the final SCP supplied route. All EACR processing must occur before the FR Trigger can be fired.

All routes returned via ASP alternate routing shall be tried before the FR Trigger is launched. The FR Trigger is only fired when the very last RTI of the very last route chain is tried. This means that all the ASP alternate routes have already been tried and all were busy before the FR Trigger is fired.

The switch shall invoke the Final Route Trigger capability when the incoming trunk is:

- a Long Distance Platform processed trunk (LDP is "Y" on the TKGRP form (5202 Record)),
- a MINT trunk (MINT SIG TYPE is non-blank on the TKGRP form (5202 Record)),
- a Direct Access Link (DAL) trunk (DAL ACCESS is "Y" on the TKGRP form (5202 Record)).

The Network_Busy Event in a Next Event List can be armed before the FR Trigger is encountered.

If the switch encounters the FR Trigger, then the switch will not provide a busy indication or reorder to the originating access, and must send a networkBusy query message to the SCP. When the final route points to an announcement, the call is considered successfully routed, therefore the trigger does not fire.

Prior to sending the networkBusy query to the SCP, the SSP will check for ACG (Automatic Call Gapping) controls and will send a query only if it is not blocked by ACG (i.e., either no matching ACG control is in effect or, if ACG controls are in effect, the GapInterval timer has expired and has not been restarted). No pre-query ACG controls should be applied prior to launching the Query message. Calls blocked by an ACG control will follow normal ACG processing.

When the T1 timer expires, and the SSP has not received a reply from the SCP, the switch will peg the "Signaling Failure - Timeout at SSP" measurement and send a Report Error message indicating Response_Message_Timer_Expired to the SCP. This message will be in a unidirectional package if the SSP had sent a Query to the SCP. This message will be in a Response package if the SSP had sent a Conversation to the SCP. In addition, the SSP will provide treatment as if a "Disconnect" message were received.

The FR Trigger may only be fired once per call with a single SSP.

2. FEATURE ASSIGNMENT

To provision this feature:

- Since this feature is dependent upon the Advanced Services Platform feature (SFID 126), it must first be activated by setting the ACT field for SFID 126 on the SFSYS form (5713-1 Record) to "Y".
- The Routing Enhancement: Final Route Trigger feature can only then be activated by setting the ACT field for SFID 290 to "Y".
- Find or provision a trigger using the NSTRIG form with the APPLICATION field set to "ASP" and the AIN REL set to "R0D1".
- Provision the FNL RT TRIG NBR field on the RTIDX form.
- Optional: Add an RTI containing the Final Route Trigger to the RTLIST form as the last RTI.

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3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
RTIDX	5303	3	3P	10.2
RTLIST	5574	3	5BO	10.40
SFSYS	5713-1	3	5AR	8.22

RTIDX form (5303 Record) - This form is used to create and administer Route Indices in a 5ESS Switch. A Route Index determines a network path, typically used to complete a call or route to error treatment when the call is unable to complete. For 5E14 and later added a new field, FNL RT TRIG NBR.

RTLIST form (5574 Record) - The RTLIST form allows the end-user to "chain together" a list of RTIs. For 5E14 and later added a new field, FNL TRIG.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for both SFID 126 and SFID 290 to "Y", respectively.

SEC. 4A291: DENY TRANSFER OF DIGIT SCREENED CALLS

1. BACKGROUND

This feature is composed of two phases. The feature number for Phase 1 (version 1) is 99-5E-4369.A. The Phase 1 version will be deployed as a 5E12 Software Update until Phase 2 can be delivered. This version (version 2) is composed of hard coded international codes. The switch will have hard coded what dialed digit sequences that would be viewed as international destinations by this feature. The following are the affected call types that will be considered international:

- 01+ or 011+ calls
- 00+ or 00- calls
- 809 area code calls
- 0+ or 0- calls to an outside operator

The feature number for Phase 2 (version 2) is 99-CP-4369 and is also being deployed as a 5E12 Software Update Release feature to replace the Phase 1 functionality. Once Phase 2 is purchased, the Phase 1 version should be turned off on the FOSYS form (5713-2 Record). The Phase 2 version has precedence over the Phase 1 version. That is, if Phase 2 is turned on using (OFID (Optioned Feature System ID) 712 and SFID (Secured Featured ID) 291), this feature will be used to determine if the call transfer should be denied. If Phase 2 is not turned on (either SFID 291 is off or OFID 712 is off), then the Phase 1 feature will be used, if OFID 709 is turned on.

2. FEATURE DESCRIPTION

The DTDSC (Deny Transfer of Digit Screened Calls) feature (99-CP-4369/Phase 2) is a secured feature (SFID 291) and is optionally turned on using OFID 712 on the FOSYS form. This feature will be deployed in the 5E12 Software Update Release.

The purpose of this feature is to prevent call transfer fraud when a party makes multiple call transfers (analog only) without knowledge of the owner of the line. This feature will change so that the Call Transfer feature's operator can block all transfers when either leg of the transferred call is an outgoing international destination. This feature allows the service provider the ability to provision the dialed digit sequences, international or non-international, to be denied transfers.

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3. FEATURE ASSIGNMENT

For 5E12 and later, to enable this feature, the ACT field for SFID 291 on the SFSYS form (5713-1 Record) and OFID 712 on the FOSYS form (5713-2 Record) must both be set to "Y" and OFID 709 on the FOSYS form must be set to "N". However, to use the Phase 1 feature, only OFID 709 must be set to "Y" and SFID 291 and OFID 712 must be set to "N".

Once this feature (Phase 2) has been enabled, there are several other forms that must be provisioned: PDIT (5300-2 Record), LDIT/MLDIT (5300-3/3b/5 Record), IDDD (5307 Record), and RDIT (5300-8 Record).

Particular lines on the LINE and MLHLN forms and terminal groups on the TGATTD form can be provisioned to override denials during a call transfer.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
FOSYS	5713-2	3	5AS	8.31
PDIT	5300-2	3	3B	9.2
LDIT	5300-3/3B/5	3	3C	9.3
IDDD	5307	3	3T	9.6
RDIT	5300-8	3	3H	9.9
MLDIT	5300-3	3	3AB	9.15
LINE	5109	3	1I	1.6
MLHLN	5111-1/2/3	3	1K	1.6
TGATTD	5611	4	12A	4.4

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 291 to "Y".

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. In order for this feature to be activated, the Optioned Feature ID 712 ACT field must be set to "Y".

PDIT form (5300-2 Record) - The PDIT form defines the Prefix/Feature Digit Interpreter in a 5ESS-2000 Switch. It provides information defining feature and operator access, and prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). For 5E12 and later, the DENY XFER field is being added to indicate whether or not to deny call transfer to the digit string.

LDIT form (5300-3/5 Record) - The LDIT form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS-2000 Switch. For 5E12 and later, the DENY XFER field is being added to indicate whether or not to deny call transfer to the digit string.

IDDD form (5307 Record) - The IDDD form is used for IDDD (International Direct Distance Dialing) Country Access Codes. IDDD provides the capability for Direct Distance Dialing points outside the North American Network by the customer without the assistance of an operator. For 5E12 and later, the DENY XFER field is being added to indicate whether or not to deny call transfer to the digit string.

RDIT form (5300-8 Record) - The RDIT form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request. For 5E12 and later, the DENY XFER field is being added to indicate whether or not to deny call transfer to the digit string.

MLDIT form (5300-3 Record) - The MLDIT form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS-2000 Switch. For 5E12 and later, the DENY XFER field is being added to indicate whether or not to deny call transfer to the digit string.

LINE form (5109 Record) - The LINE form defines the office Equipment Number and features for each

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telephone number in a 5ESS-2000 Switch. For 5E12 and later, the OVRD DNY XFER field is being added to indicate whether or not to allow this line to override denials during a call transfer.

MLHLN form (5111 Record) - The MLHLN form defines the individual Terminal Numbers assigned to a particular MLHG. For 5E12 and later, the OVRD DNY XFER field is being added to indicate whether or not to allow this line to override denials during a call transfer.

TGATTD form (5611) - The TGATTD form provides Terminal Group Attendant and Data Information. For 5E12 and later, the OVRD DNY XFER field is being added to indicate whether or not this terminal group allows override denials during a call transfer.

Figure 1 FORM FLOW FOR DENY TRANSFER OF DIGIT SCREENED CALLS

SEC. 4A292: SIMPLIFIED CUSTOM ISDN ATTENDANT CONSOLE

1. FEATURE DESCRIPTION

The Simplified Custom ISDN Attendant Console feature is Secured Feature ID 292. It is available for 5E12 and later. The feature number is 99-5E-4244.

Simplified Custom ISDN Attendant Service is a set of 5ESS Switch attendant features, currently only offered on the Lucent Technologies Business Communications Systems 310/311 Attendant Console, that

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are now being offered on smaller Custom ISDN Customer Premises Equipment (e.g., the Lucent BCS 8500 series, such as the models ISDN8528T or ISDN8520T).

It is intended to meet the need for a low cost Centrex Attendant Console for a target market in the Small to Medium business range with less than 500 lines.

2. FEATURE ASSIGNMENT

The provisioning sequence for this feature is identical to the present provisioning sequence for Custom ISDN Attendant, with the exception that a TERM TYPE value of "TYPED" will now be assignable to line with an attendant LCC (Line Class Code) and a CLASS of SERVICE value of "ISATND".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1h	23.2
DSLUSR	5908	5	1i	23.2
FOSYS	5713-2/3	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

DSL form (5907 Record) - This form is used to define the attributes of a DSL and it defines the attributes of the B1 and/or B2 channel of the DSL. New data rules have been added to the TERMTYP field, the D SERV field, and the DSL CLS field. If D SERV is set to "S ONLY", then DSL CLS must be set to "PP".

DSLUSR form (5908 Record) - This form is used to assign an attendant to a Station TN and Station MLHG. The TERMTYP value of "TYPED" may now be assigned to lines with an attendant LCC and a SERVCL value of "ISATND".

FOSYS form (5713-2/3 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) IDs for Special and Transparency features. The feature act ID 717 must be set to "Y" to activate the ISAT feature.

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 292 must be set to "Y" to enable the Simplified Custom ISDN Attendant Console feature.

SEC. 4A293: E911 CALL ERROR DETECTION AND ALARM

1. FEATURE DESCRIPTION

The feature number for the E911 Call Error Detection and Alarm feature is 99-5E-4621.A. This is a Secured Feature (SFID 293) that is being deployed in 5E11 and 5E12 as Software Updates.

This feature provides call error detections and alarms for the E911 feature. Errors are detected in two ways, during an E911 call and independent of E911 calls. Alarms are provided after errors are detected so that the operating companies can make corrections as soon as possible. Errors may be reported even if the error does not cause the E911 call to fail. This will prevent the E911 service from deteriorating and causing all E911 calls to fail eventually if problems are not fixed as soon as they are detected.

Independent of E911 calls, out-of-service errors associated with the E911 trunks are reported through Terminal Maintenance as soon as they go out of service.

During E911 calls, the following errors are reported if detectable:

- 911 Call Type
  - The digits "911" have been dialed but are not translated to the emergency call type, FC911.
  - Detection of this error is controlled by Optioned Feature 716. If this OFID is turned on via the

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FOSYS form (5713-2 Record), then 911 Call Type checking is inhibited. In this case, if the Call Type defined in the dialing plan for the digits "911" is NORMAL, then this will not be treated as an error condition. However, other Call Types will continue to be treated as errors.

- Partial Dial
  - Digit analysis data is set up so that more than 3 digits are expected; that is, "911" is the beginning of a longer expected string. The user does not enter any more digits and digit analysis times out when the interdigital timer expires. This causes an E911 call to fail.
- Vacant Code
  - Result of digit analysis destination type is vacant code.
- Invalid Primary PSAP (Public Safety Answering Point) DN (Directory Number)
  - Primary PSAP DN fails digit analysis.
- Invalid First Alternate PSAP DN
  - First Alternate PSAP DN fails digit analysis.
- Invalid 2nd Alternate PSAP DN
  - Second Alternate PSAP DN fails digit analysis.
- Invalid Global E911 Digit Analysis Selector (DAS)
  - The Global E911 Digit Analysis Selector points to a digit tree which is used in analyzing all the PSAP DNs, reroute DNs, and selective transfer DNs. An invalid E911 Global Digit Analysis Selector will cause all E911 routing using those DNs to fail and the originator will receive reorder.
- PSAP DN not Provisioned
  - No hundreds group data or relation RT_DNTRAN data defined for the PSAP DN.
- 100% Out-of-Service E911 Dedicated Interoffice Trunk Group
  - E911 dedicated interoffice trunk group is totally out of service.
- 100% Out-of-Service Non-Dedicated Interoffice Trunk Group
  - Non-dedicated interoffice trunk group is totally out of service.
- 100% Out-of-Service CAMA PSAP Trunk Group
  - CAMA (Centralized Automatic Message Accounting) PSAP trunk group is totally out of service.

2. FEATURE ASSIGNMENT

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For 5E11 and later, to enable this feature, the ACT field for SFID 293 on the SFSYS form (5713-1 Record) must be set to "Y". Also, the OUTAGE RPT is provided on the TKGRP form to allow the emergency services personnel to designate specific trunk groups to be monitored for 100% OOS (Out of Service) conditions.

See Figure 1 for provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate Secured Features. This feature is activated by setting the ACT field for SFID 293 to "Y".

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. For 5E11 and later, the OUTAGE RPT field is added to allow the E911 services personnel to designate specific trunk groups to be monitored for 100% OOS conditions.

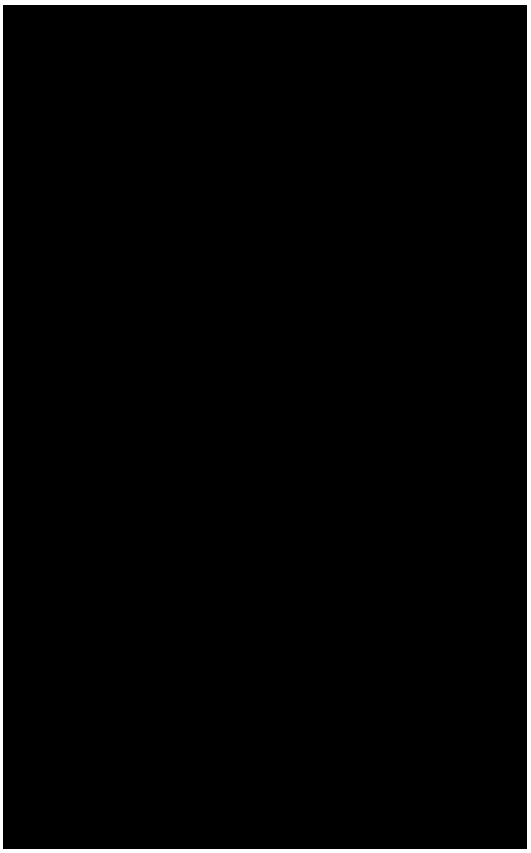

Figure 1 FORM FLOW FOR E911 CALL ERROR DETECTION AND ALARM

SEC. 4A294: ROUTE OUTAGE AML E911 CALL ERROR DETECTION AND ALARM

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and*

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Toll System Feature Document.

SEC. 4A295: ASP PERSISTENT TRANSACTIONS ENHANCEMENTS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform Document.*

SEC. 4A296: DELETE WARNING DISPLAY FOR ESSENTIAL SERVICES

1. FEATURE DESCRIPTION

Available for the 5E11 Software Release and BMI (Beginning Managed Introduction) for 5E12, the Delete Warning for Essential Services feature is Secured Feature (SFID 296). The feature number for this feature is 99-5E-3900.

This feature is used to send an error message whenever Recent Change is invoked to delete a line or trunk that is provisioned as an Essential Services line or trunk, such as fire, police, hsopital, etc., and E911. The Service Provider must first change the line or trunk from being Essential Services before deletion occurs.

When the feature is active, the status of the EL field on recent change views 1.6 (LINE form for analog lines)and 23.2 (DSLUSR form for DSLs), or the CAMA PSAP field on view 5.1 (TKGRP form for trunks), will be checked before allowing a deletion to occur.

If the field is set to "Y", the deletion will be blocked and an error message is sent indicating for which field the crosscheck failed. If the field is set to "N", the deletion will continue.

2. FEATURE ASSIGNMENT

The Delete Warning for Essential Services feature is a secured feature. The ACT field for SFID 296 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 296 must be set to "Y" to enable the Delete Warning for Essential Services feature.

SEC. 4A297: ASM (Administration Services Module) Base

1. FEATURE DESCRIPTION

Available with 5E13 and later Software Releases, the ASM Base feature (99-5E-4237) provides the basic hardware platform necessary to run ASM applications. The ASM extends the capability of the AM by providing high-speed network connections access to the 5ESS Switch. The ASM is attached to the AM through a 3B21 DSCH (Dual Serial Channel). This link, known as the DCI (DSCH Computer Interconnect), supports multiple logical channels enabling parallel operations. Once the ASM Base feature is in place, multiple applications, providing OA&M (Operations, Administration and Maintenance) enhancements, can be applied. The ASM Base feature is secured with SFID 297 and supports a wide variety of commercially available software and hardware for network access such as UUCP, and FTP with TCP/IP.

2. FEATURE ASSIGNMENT

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This feature cannot be assigned using ODA. Assignment can only be done by activating SFID 297 using Recent Change.

3. TRANSLATION REQUIREMENTS

There are no ODA translation requirements for this feature.

SEC. 4A298: WIRELESS E911

1. BACKGROUND

The existing E911 (Enhanced 911) feature (e.g., E911 Serving Switch) provides enhanced 911 service capabilities and PSAP (Public Safety Answering Point) customer services for completing and handling 911 wireline calls. E911 has the capability to selectively route a 911 call that originated from any station in the 911 service area to the correct primary PSAP that is designated to serve the originating station's location.

2. FEATURE DESCRIPTION

The feature number for the Wireless E911 feature is 99-CP-4543. This is a secured feature (SFID 298) that is being deployed as a 5E12 Software Update and for the BMI (Beginning Managed Introduction) of the 5E13 Software Release. Also, see the information in this section on OFID (Office Option Feature) 733 which is associated with the Wireless E911 feature.

This feature provides the capability to selectively route, using the Enhanced ESA (E911 Service Adjunct) system, wireless 911 calls to the appropriate PSAP based on the caller's location using the Cell Site/Sector ID. The Cell Site/Sector ID information is 10 digits and is referred to as the pANI (Pseudo ANI).

When the mobile (cellular) caller dials 911, the MSC (Mobile Switching Center) switch populates and transmits, using SS7 (Signaling System 7) signaling, information in the ISUP7 (Integrated Services - User Part) IAM (Initial Address Message) containing the caller's MDN (Mobile Directory Number), pANI, the wireless nature of the call in the OLI (Originating Line Identification), and possibly the Emergency designation in the CPcat (Calling Party Category). The pANI will be sent in either the GDP (Generic Digits Parameter) field or the CdPN (Called Party Number) field of the IAM.

The 5ESS-2000 E911 Serving Switch will detect 911 calls that are received directly, via SS7 TG (Trunk Group), from an MSC switch as an Emergency wireless call based upon the OLI and CPcat/CdPN values.

The 5ESS-2000 E911 Serving Switch (also works on small switches) will query the Enhanced ESA with a new message type (type 8) containing the pANI to obtain the ESN (Emergency Service Number). If the Wireless E911 feature is not available, the existing message type (type 1) will be used.

The ESA will return an ESN value and the existing E911 call processing will continue.

This feature depends on the existing E911 feature (SFID 61). For more infomation on the E911 feature, see Division 2, Section 1BD.

The OFID 733 (Send pANI to 8-digit PSAP) is associated with the Wireless E911 feature. When OFID 733 is active in the office, all CAMA 8-digit PSAP facilities will receive the pANI of a wireless E911 call. The pANI sent will consist of the last 7 digits. Note that the pANI is a 10-digit value in the format NPA-NXX-XXXX, where:

NPA = Numbering Plan Area
N = 2-9
XX-XXX = 0-9

The value received at the PSAP will be the NPD (Numbering Plan Digit) defined on the ESCO form (5541

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Record) followed by the NXX-XXXX of the pANI. When OFID 733 is not active, the MDN will be sent to the CAMA 8-digit PSAP.

An enhancement to the Wireless E911 feature is available as a 5E13 Software Update and BMI (Beginning Management Introduction) for 5E16. Currently, when a wireless E911 (emergency) call is received over an ISUP7 trunk at an E911 Tandem, digit analysis is by-passed and the call is routed as E911. This enhancement provides a new non-dedicated E911 trunk type (WLNONDED) to allow the service providers to designate an ISUP7 trunk group as a non-dedicated wireless E911 connection. This provisioning allows, for a wireless E911 call, the use of digit analysis for the digits in the Called Party Number field in the ISUP7 IAM (Initial Address Message) to route the call instead of by-passing digit analysis as currently done.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 61 and SFID 298 to "Y".

FOSYS form (5713-2 Record) - This form is used to activate optioned features. The Send pANI to 8-digit PSAP feature is activated by setting the ACT field for OFID 733 to "Y". SFID 61 and SFID 298 must also be set to "Y".

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form. The "WLNONDED" E911 TYPE was added for the feature enhancement.

4. GLOSSARY

BMI	Beginning Managed Introduction
CPcat	Calling Party Category
CdPN	Called Party Nuymber
E911	Enhanced 911
ESA	E911 Service Adjunct
ESN	Emergency Service Number
GDP	Generic Digits Parameter
IAM	Initial Address Message
ISUP7	Integrated Services- User Part 7
MDN	Mobile Directory Number
MSC	Mobile Switching Center
NPA	Numbering Plan Area
NPD	Numbering Plan Digit
OLI	Originating Line Identification

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pANI	Pseudo Automatic Number Identification
PSAP	Public Safety Answering Point
SS7	Signaling System 7
TG	Trunk Group

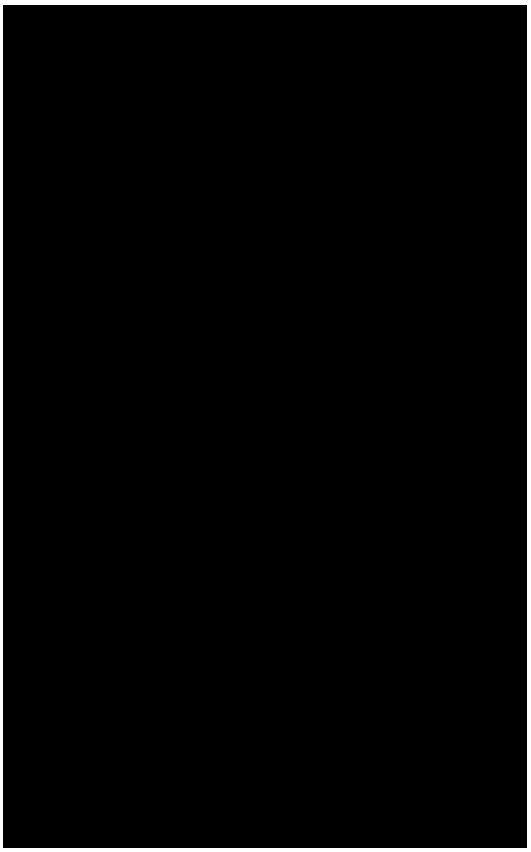

Figure 1 FORM FLOW FOR WIRELESS E911

SEC. 4A299: FGD INTERFACE TO E911

1. BACKGROUND

Current wireless growth has pushed the analog signaling of analog PSAPs (Public Safety Answering Points) for E911 service beyond the existing 4 NPD (Numbering Plan Digit) limitation. Support for the full 10-digit CPN (Calling Party Number) delivery is now required for (analog) product continuity. In addition, with the imposed requirements of FCC (Federal Communications Commission) Docket 94-102 (Phase I), there exists the further requirement of delivery of two 10-digit numbers to the PSAP. One set would provide the MDN (Mobile Directory Number) while the other, the cell site/sector information (pANI). This new analog signaling platform is referred to as "Enhanced MF Signaling" and is a standard defined in Bellcore GR-2953-CORE. This new protocol is a variation of FGD (Feature Group D).

2. FEATURE DESCRIPTION

The feature number for the FGD Interface to E911 feature is 99-5E-4484. This is a Secured Feature (SFID 299) that is being deployed as a 5E12 Software Update and for the BMI (Beginning Managed Introduction) of the 5E13 Software Release.

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This feature, in conjunction with the Wireless E911 feature (see Division 2, Section 4A298), will allow the 5ESS-2000 E911 Serving Switch to outpulse the wireless 911 caller's 10-digit MDN (Mobile Directory Number) and 10-digit pANI (Pseudo Automatic Number Identification) together to the CAMA (Centralized Automatic Message Accounting) PSAP (Public Safety Answering Point) handling the wireless 911 call. The pANI will not be available for calls that are routed off the E911 Serving Switch.

If the 911 call is wireline (not wireless), only the 10-digit ANI will be outpulsed to the CAMA PSAP handling the call.

This feature depends on the existing E911 feature (SFID 61).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 61 and 299 to "Y".

TKGRP form (5202 Record) - This form defines each Trunk Group in a 5ESS-2000 Switch. The trunk information entered is common to the entire group; trunk information for an individual member is entered on a TRUNK form. The following two fields were added for this feature:

1. ENH PSAP SIG (Enhanced Public Safety Answering Point Signaling)
2. TEN DIG ONLY (Ten Digits Only)

The ENH PSAP SIG field is required for the FGD Interface to E911 field. The TEN DIG ONLY field is optional.

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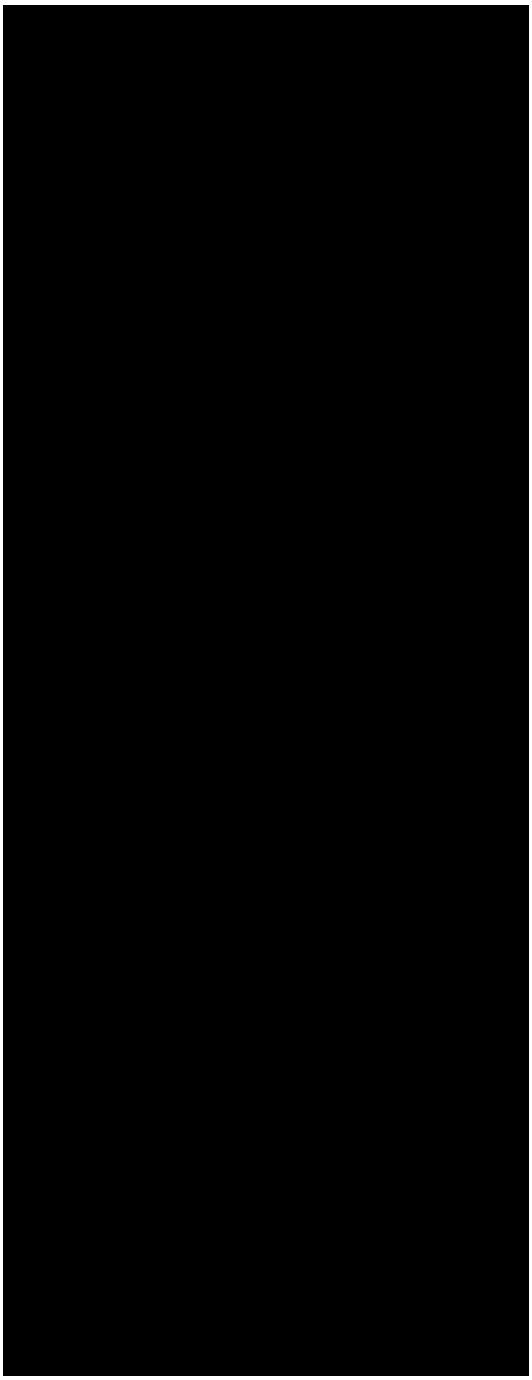

Figure 1 FORM FLOW FOR FGD INTERFACE TO E 911

SEC. 4A300: NUMBER PORTABILITY - TEST QUERY for LRN

1. FEATURE DESCRIPTION

The feature number for the Number Portability - Test Query for LRN feature, is 99-CP-4590. This is a secured feature (SFID 300) which is deployed as a Software Update for 5E11 and 5E12 Software Releases and for the BMI (Beginning Managed Introduction) of the 5E13 Software Release.

The Number Portability - Test Query for LRN feature, allows craft and maintenance personnel to verify the LRN (Location Routing Number) for an input directory number from the end office. This feature is dependent on the ASP (Advanced Services Platform) feature (SFID 126). Prior to unlocking SFID 126,

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SFID 58 and SFID 51 must be unlocked. The features are built upon one another.

This feature reduces the time required to verify the LRN. New input parameters to the existing TST:ASPTQ option are being provided to simplify the input required to verify the LRN for a specific DN (directory number). The only required input parameter for the NP version (MSGTYPE = NPINFOANAL) is a called party directory number. The option, MSGPART is not valid for NPINFOANAL. The translation type may also be entered for cases in which craft and maintenance personnel do not want to use the default value (TRANTYPE) parameter on the DSAPP form (RC/V View 8.17). For the 5E13 Software Release and later issues, the OPC (Originating Point Code) of the Calling Party Address may, also, be entered as an optional parameter.

The new TST:ASPTQNP output message is being provided to simplify output. If the directory number is ported, the LRN is returned. If there is no LRN associated with the directory number, DN NOT PORTED is returned.

Included with this feature are enhancements to the output from VFY:OFC, adding indications of PORTED IN and the NP trigger number if they apply to the verified digits. An explicit indication is given if the switch actually serves a number in a portable NXX. In addition, a new LRN keyword has been added to VFY:OFC, which allows craft personnel to verify the routing associated with an LRN, such as the one returned by TST:ASTPQ-NP. Verification of an LRN is supported for both switch triggers and LRNs from incoming SS7 trunks. A specific indication is output if the LRN is determined to be a Home LRN.

2. FEATURE ASSIGNMENT

To provision this feature:

- The correct sequence of activation is built as follows: SFID 58, SFID 51, SFID 126, SFID 174, and SFID 300.

  If these secured features are not built in this sequence, the Number Portability - Test Query for LRN feature will not perform all of its NP test-query functions.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSAPP	5537	3	5AK	8.17
SFSYS	5713-1	3	5AR	8.22

DSAPP form (5537 Record) - This form is used to specify the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks which use the CCS7 (Common Channel Signaling System 7) signaling protocols.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for both SFID 174 and SFID 326 to "Y", respectively.

SEC. 4A301: ASP NETWORK BUSY EVENT AND ENHANCED ALTERNATE CARRIER ROUTING

1. FEATURE DESCRIPTION

Available with 5E13 and later, the ASP Network Busy Event and Enhanced Alternate Carrier Routing Secured Feature has feature number 99-5E-3614 and uses SFIDs (Secured Feature ID) 301 and 302 respectively. This Feature provides two enhancements to existing ASP capabilities.

While these two enhancements are independent of each other, that is, the EACR (Enhanced Alternate

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Carrier Routing) functionality does not depend upon the Network Busy Event being armed in the NEL (Next Event List), the two capabilities do interwork. For example, if Network Busy is armed in the NEL, and because of a series of Network Busy conditions detected both locally and remotely, the SSP (Service Switching Point) reaches the end of its available routes for all parameters in the Routing Message, the Network Busy message will be sent to the SCP (Service Control Point) so that it can further instruct the switch on how to route the call.

1.1 Network Busy Event Reporting (SFID 301)

The ASP Network Busy Event capability provides a means to allow the SCP to be informed when a call has instructed the SSP to route, encounters a Network Busy condition either at the SSP or in another switch in the network, after having exhausted all routes available per the SCP's instructions. The SCP can then provide additional instructions to the SSP.

ASP Busy/No Answer Subsequent Event Detection provides the initial capability to support the Next Event List, the mechanism by which the SCP indicates to the switch the set of subsequent call processing events that should be reported back to the SCP. Included in that feature were four events:

- Term Seized
- Called Party Busy
- No Answer
- Answer

All four events are defined as OCM (Originating Call Model) events, meaning that they are detected in the half-call representing the originating facility in the call. These four events can be indicated in a Next Event List in a request component accompanying either an Analyze Route message or a Forward Call message.

NOTE: Although the TAT (Termination Attempt Trigger) is defined as a Terminating Call Model Trigger, the Forward Call reply to that trigger causes a new OCM to be created to model the redirected portion of the call.

This feature adds the Network Busy Event to the list of those supported on the 5ESS-2000 Switch. Network Busy is defined to detect all trunks busy conditions in the network during the process of routing a call. This condition can be detected at the SSP where the NEL was received, or can be detected in subsequent switches through which the call routes, and reported back to the SSP with an ISUP release message with an appropriate Cause Value. In either case, the Network Busy event is satisfied and reportable only when all routing parameters provided by the SCP have been attempted and exhausted without successfully completing the call.

A primary service driver for this feature is the GETS (Government Emergency Telecommunications Service) HPC (High Priority of Completion) Network Capability.

The description which follows is based on the GETS service, and therefore includes scenarios only involving Carrier parameters returned by the SCP. This feature provides EACR and Network Busy when the SCP provides Trunk Group parameters as well.

GETS is a feature that allows authorized government users to gain access to enhanced call completion features. In its current form, GETS capabilities are offered in the networks of AT&T, MCI, and Sprint. A user dials 1-710-NCS-GETS to place a GETS call, which causes the call to complete to one of the IXC (Inter Exchange Carrier) networks, where authentication via PIN code and collection of the final routing number are performed. Within the IXC network, GETS calls are provided with special treatment to assure a high probability of completion.

Starting in 1995, basic GETS service has been introduced into Local Exchange Carrier networks using AIN

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(Advanced Intelligent Network) 0.1 capabilities. The 710-NCS-GETS number is defined as a DNT (Dialed Number Trigger) and causes a Query to be launched. The SCP's routing instructions include the same DN (Directory Number) and a set of three Carriers which the SSP attempts to use hierarchically. This process is known as Alternate Carrier Routing. The SSP attempts to complete the call to the first carrier provided. If all outgoing facilities associated with routes to that carrier are busy on the SSP, routing overflows to the second carrier, etc.

ACR (Alternate Carrier Routing), as defined in the AIN 0.1 specification (TR-1284), only detects all trunks busy at the SSP and does not recognize the receipt of a release message with an appropriate Cause Value as an event which causes Alternate Routing to occur. Additionally, if all three carrier routes are fully busy, there is no recourse, and the call ends by completing to Reorder Tone.

The two capabilities introduced by this feature provide for more robust alternate routing to occur. With EACR, the SSP recognizes a release message with appropriate Cause Value as an event which causes Alternate Routing to occur, causing the SSP to attempt routing with the next SCP provided routing parameter. (Note that EACR is independent of the Network Busy Event being armed). With Network Busy, the SCP can include a Next Event List with the Network Busy event armed along with the Routing Component. When this event is armed, the SSP will report the Network Busy Event to the SCP when all SCP supplied routing parameters have been exhausted by ACR and EACR. This allows the SCP to take further action if all routes are busy. The expected SCP action for GETS service is to return another Routing component instructing the switch to attempt the same set of carriers again. Other services which use the Network Busy report may provide other treatment, such as providing an announcement or providing a set of different routes to attempt.

Note that this feature is not specific to GETS but is being provided as a generic AIN switch capability. As such, it is available for use for any ASP call, not just to GETS calls.

1.2 Enhanced Alternate Carrier Routing (SFID 302)

The EACR capability enhances the existing ASP Alternate Routing function. It allows a release message received from a forward switch with appropriate Cause Value to be detected as Network Busy. This causes the SSP to invoke Alternate Routing by abandoning any further attempts with the current Routing Parameter and skipping to the next Carrier or Trunk Group Parameter.

When this capability is unlocked, and when a Network Busy condition detected remotely at another switch and is reported to the SSP by way of an ISUP (Integrated Services Digital Network User Part) release message with an appropriate Cause Value, EACR is invoked to overflow to the next Routing Parameter. If overflow is not successful and if the Network Busy event is armed, then it will be reported to the SCP as described below.

If this capability is locked, then the receipt of a release message as described above does not cause ASP to attempt Alternate Routing. ASP will be unable to route the call further and Network Busy will not be reported to the SCP even if armed. Other capabilities such as Reroute on Release may apply, or the call may receive no circuits treatment.

2. FEATURE ASSIGNMENTS

These are secured features and are activated by setting the ACT field for SFID 301 and SFID 302 on the SFSYS form (5713-1 Record) to "Y". On the SREINCR form (5547 Record) set the SOFTWARE RESOURCE field to "ASPTP". See Figure 1.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
SFSYS	5713-1	3	5AR	8.22
SREINCR	5547	3	5AW	8.40

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SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. For 5E13 and later, added SFID 301 and 302.

SREINCR (5547 Record) - The 5547 Record is used to maintain per MODULE incremental global parameters. For 5E13 and later the ASPTP enumeration was added to the SOFTWARE RESOURCE field.

4. GLOSSARY

AIN	Advanced Intelligent Network
DN	Directory Number
DNT	Dialed Number Trigger
EACR	Enhanced Alternate Carrier Routing
HPC	High Probability of Completion
ISUP	Integrated Services Digital Network User Part
IXC	Inter-Exchange Carrier
NCS	National Communication System
NEL	Next Event List
OCM	Originating Call Model
SCP	Service Control Point
SSP	Service Switching Point

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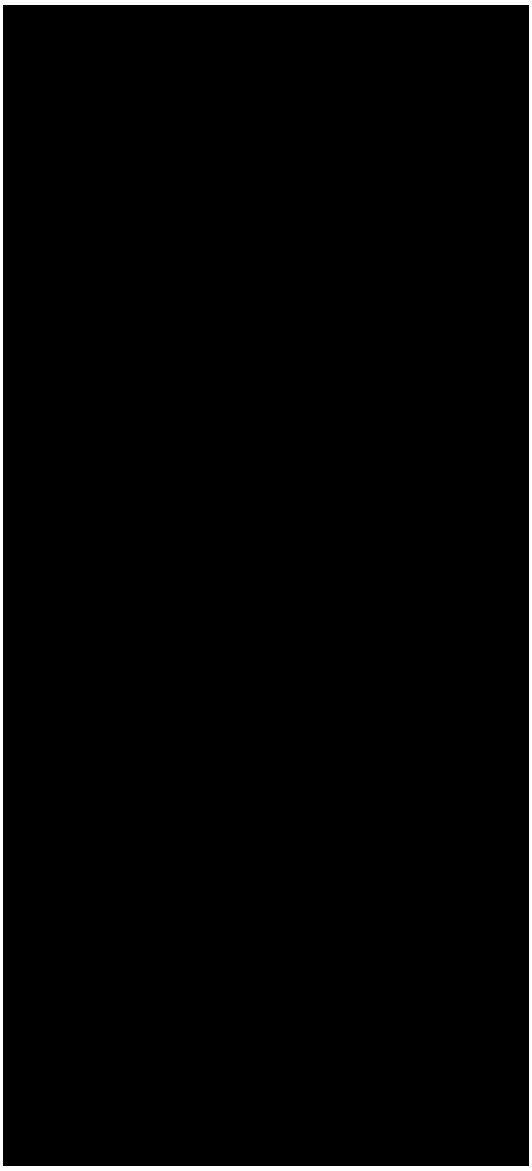

Figure 1 FORM FLOW FOR ASP NETWORK BUSY EVENT AND ENHANCED ALTERNATE CARRIER ROUTING

SEC. 4A302: ENHANCED ALTERNATE CARRIER ROUTING

1. FEATURE DESCRIPTION

The Enhanced Alternate Carrier Routing feature is part of two enhancements to existing ASP capabilities. See Division 2, Section 4A301 (ASP Network Busy Event and Enhanced Alternate Carrier Routing) for details.

SEC. 4A303: LOCAL NUMBER PORTABILITY ON THE LONG DISTANCE PLATFORM

1. BACKGROUND

LNP (Local Number Portability) gives the end-user the ability to move from one switch to another and keep their original directory number. There are three types of LNPs:

- Service portability allows a user to retain their DN (Dialed Number) after changing services (e.g., POTS (Plain Old Telephone Service) to ISDN (Integrated Services Digital Network).

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- Service provider portability allows a user to retain their DN after changing service providers.
- Geographic portability allows a user to retain their DN after changing physical locations.

The 5E11 feature, Number Portability-Basic Location Routing Number (99-CP-3169.A), supports all three types of Local Number Portabilities, with limited geographical portability (portability within the LATA (Local Access Transport Area)). However, this does not provide for portability support on the 5ESS Long Distance Switch.

2. FEATURE DESCRIPTION

The LNP on the LDP (Long Distance Platform) feature will provide LNP support on switches within the Toll Network, provided that the LNP feature is also purchased. Other LDP (Long Distance Platform) features may or may not be purchased.

On the OLDP (Originating LDP) Switch, the LNP Trigger and/or Ported In data may be provisioned, indicating that LNP processing is necessary to determine how to route the call; however, support for incoming calls with LNP information in the CCS (Common Channel Signaling) protocol will be ignored, and the call will route as usual. This is because the LRN (Location Routing Number) and/or LNP data should be derived within the Toll Network. The intermediate and terminating switches may also perform LNP queries/processing. In addition, these switches may receive and process LNP information from the incoming CCS trunk protocol.

For carrier calls, the basic LNP feature does not allow the LEC (Local Exchange Carrier) to provide the LNP processing information to the carrier. An LNP query may be encountered in the translations, but the query will not occur, with the exception of the case where geographical portability is provisioned on the dialed NPA-NXX (Numbering Plan Area - Office Code). In either case, if the call is destined for a carrier, the FCI (Forward Call Indicator) is reset, and the LRN is not forwarded to the carrier. The carrier is responsible for providing its own LNP processing within its Toll Network.

LNP on LDP will also provide the ability to interwork correctly with the LDP feature, including interactions with the AIN/CIC (Advanced Intelligent Network/Carrier Identification Code) Table fields. LNP on LDP will also support the MINT (Multi-vendor Intra-Network Trunks) feature. A new LRN DAS (Digit Analysis Selector) has been added to the T-NSC (Terminating-Network Selection Code) for LRN analysis.

This feature is a secured featured (SFID (Secured Feature ID)303) that is being deployed as a 5E13 Software Update and for the BMI (Beginning Managed Introduction) of the 5E14 Software Release. The feature number for this feature is 99-5E-3837.

3. FEATURE ASSIGNMENT

For 5E13 and later, to enable this feature, the ACT fields for SFID 303 on the SFSYS form (5713-1 Record) must be set to "Y". And since SFID 303 is dependent upon SFID 174, the ACT field for SFID 174 must also be set to "Y" on the SFSYS form. For further information on SFID 174, see Division 2, Section 4A174 in the TG5 (Translation Guide 5).

The rules and procedures for provisioning LNP triggers for the LDP switch follow the same rules as for the local 5ESS Switch offering. The only additional provisioning requirement, is to allow TYPE CI CALL of "INTER" (inter-LATA) on the LDIT, RDIT, and MLDIT forms where LNP triggers are provisioned. For LNP trigger assignments, the allowed types of Carrier Interconnect calls (TYPE CI CALL) now consist of : INTER, INTRA, NONCI, TOLL, COMP, PRIV, TCONF, and CONFL.

The 5ESS Switch Number Portability User's Guide (235-190-127) contains all the detailed information needed to provision LNP for the local 5ESS Switch, including LNP trigger assignment rules and LRN provisioning. This document also details LNP provisioning, as well as AMA (Automatic Message Accounting) provisioning rules for LNP.

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4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LDIT	5300-3	3	3C	9.3
LDPTNSC	5568	3	5BJ	8.53
MLDIT	5300-3	3	3C	9.15
RDIT	5300-7	3	3H	9.9
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

LDIT form (5300-3 Record - The LDIT form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Modified data rules for the LNP TRIG NBR, PORTED IN, and the LNP TRIG NBR and PORTED IN fields in the CONFLICT RESOLUTION ENTRIES list.

LDPTNSC form (5568 Record) - The LDPTNSC form provides the capability for specifying or verifying a TNSC (Terminating Network Selection Code) and its associated DAS (Digit Analysis Selector), and screen index information. Modified data rules for the LNP TRIG NBR, PORTED IN, and the LNP TRIG NBR and PORTED IN fields in the CONFLICT RESOLUTION ENTRIES list. Also added a new field (LRN DAS).

MLDIT form (5300-3 Record) - The MLDIT form defines all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Modified data rules for the LNP TRIG NBR and PORTED IN fields.

RDIT form (5300-7 Record) - The RDIT form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request. Modified data rules for the LNP TRIG NBR, PORTED IN, and the LNP TRIG NBR and PORTED IN fields in the CONFLICT RESOLUTION ENTRIES list.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 303 (LNP on LDP) and SFID 174 (Basic LNP) set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added data rule to the MINT SIG TYPE field.

5. GLOSSARY

AMA *Automatic Message Accounting*

AIN *Advanced Intelligent Network*

BMI *Beginning Managed Introduction*

CCS *Common Channel Signaling*

CIC *Carrier Identification Code*

DAS *Digit Analysis Selector*

DN *Dialed Number*

FCI *Forward Call Indicator*

ISDN *Integrated Service Digital Network*

LATA *Local Access Transport Area*

LDP *Long Distance Platform*

LEC *Local Exchange Carrier*

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LNP	*Local Number Portability*
LRN	*Location Routing Number*
PANI	*Pseudo Automatic Number Identification*
PSAP	*Public Safety Answering Point*
MINT	*Multi-Vendor Intra-Network Trunks*
OLDP	*Originating LDP*
POTS	*Plain Old Telephone Service*
SS7	*Signaling System 7*
TG5	*Translation Guide 5*
T-NSC	*Terminating- Network Selection Code*

SEC. 4A304: NUMBER PORTABILITY - NON-CONTITIONAL TRIGGER FOR DID TRUNKS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-127 Number Portability User's Guide.*

SEC. 4A305: GLOBAL RECENT CHANGE INTERACTION WITH LASS AR

1. FEATURE DESCRIPTION

Available for the 5E11 and 5E12 Software Releases and BMI (Beginning Managed Introduction) for 5E13, the Global Recent Change Interaction with LASS AR feature is a Secured Feature (SFID 305). The feature number for this feature is 99-5E-4437.

This feature will provide the capability to update the ARALW (Auto Recall Allowed) lines by using GRC (Global Recent Change) views.

2. FEATURE ASSIGNMENT

The Global Recent Change Interaction with LASS AR feature is a secured feature. The ACT field for SFID 305 must be set to "Y" on the SFSYS form (5713-1 Record) to activate this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 305 must be set to "Y" to enable the Global Recent Change Interaction with LASS AR feature.

SEC. 4A314: 5E ACCEPTANCE OF 1A WINK NPD AND ANI FOR 911 ROUTED CALLS

1. BACKGROUND

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Prior to this feature, when a 1A ESS office that accepts 911 hand-off from another 1A ESS office is replaced by a 5ESS office, 911 calls could not be handed off to the new 5ESS office. This is due to the 1A ESS office using PSAP (Public Safety Answering Point) signaling for hand-off and the 5ESS office using CAMA (Centralized Automatic Message Accounting)/TSPS (Traffic Service Position System) signaling.

Some 1A ESS offices have a non-standard signaling between them to hand-off 911 calls between 1A ESS offices. In the office where the 911 call originates, a terminating trunk is translated as a PSAP; however, this trunk is connected to another 1A ESS office. When seized, this second 1A ESS office sends a wink, expects KP-I-ANI-ST, and delivers the call to a 911 PSAP within the second 1A ESS office. When a 5ESS office replaces one of these second 1A ESS offices, the closest signaling to what the first 1A ESS office expects is an E911 (Enhanced 911) TYPE DIRANI. This type expects a seizure, sends off-hook, expects KP-I-ANI-ST, and delivers the call to a 911 PSAP.

2. FEATURE DESCRIPTION

Available as a 5E12 Software Update and in the Beginning Managed Introduction of the 5E13 Software Release, the 5E Acceptance of 1A Wink NPD (Numbering Plan Digit) and ANI (Automatic Numbering Identification) for 911 Routed Calls feature is a Secured Feature using SFID (Secured Feature ID) 314. The feature number for this feature is 99-5E-4657.

This feature provides the 5ESS-2000 Switch use of PSAP signaling for 911 calls. For this type of signaling, a wink instead of an off-hook is provided to the 1A ESS office, and the 5ESS office waits for a KP-NPD-ANI-ST sequence instead of a KP-I-ANI-ST sequence. The NPD digit also needs to be converted into an appropriate I-digit.

For example, starting with an idle trunk, this feature expects a seizure. The feature responds with a wink. (Normally DIRANI trunks respond with an off-hook.) This feature then expects KP-NPD-ANI-ST. The NPD is used in PSAP signaling to convey what the area code is and also whether or not the call was default routed to the PSAP. Up to four area codes can be delivered to a PSAP using the following area code and default routing encoding:

	NPD	
Area Code	**Normal E911 Routing**	**Default E911 Routing**
1	0	4
2	1	5
3	2	6
4	3	7

Therefore, if the NPD digit is 0, then normal E911 routing was used, and the 7-digit ANI is in area code 1. If the NPD digit is 6, then default routing was used, and the ANI is in area code 3.

This feature supports NPD 0 and NPD 4. If the NPD is 0 or 4, then the call identifies with the area code stored on the trunk group, and the call is delivered to the E911 PSAP with ANI. However, if the NPD is anything else, the call is delivered to the E911 PSAP without ANI. This feature does not support multiple area codes over the same incoming trunk group.

Only ISDN (Integrated Services Digital Network) and ACD (Automatic Call Distributor) PSAPs always return answer supervision when the 911 system answers. A CAMA PSAP only returns answer supervision when the FREE ANS field on the TKGRP form (5202 Record) is set to "Y" and the value in the E911 TYPE field on the TKGRP form is "1ANPD".

In order to handle 911 calls incoming to a 5ESS office from a 1A ESS office, this feature adds a new value of "1ANPD" as an allowable value for the E911 TYPE field on the TKGRP form. The "1ANPD" value indicates the non-standard PSAP type of signaling from a 1A ESS office to a 5ESS office. When activated, this feature processes 911 calls in the same way as the DIRANI case, except for sending a wink when the trunk is seized and an off-hook only when 911 answers.

3. FEATURE ASSIGNMENT

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For 5E12 and later, to enable this feature, the ACT fields for SFIDs 61 and 314 respectively on the SFSYS form (5713-1 Record) must both be set
to "Y".

After both Secured Feature IDs (61 and 314) have been set, the existing value in the E911 TYPE field on the TKGRP form can be changed to "1ANPD". When the E911 TYPE field displays "1ANPD", this feature is active.

See Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 61 and 314 respectively on the SFSYS form to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). Added new value of "1ANPD" for the E911 TYPE field on the TKGRP form.

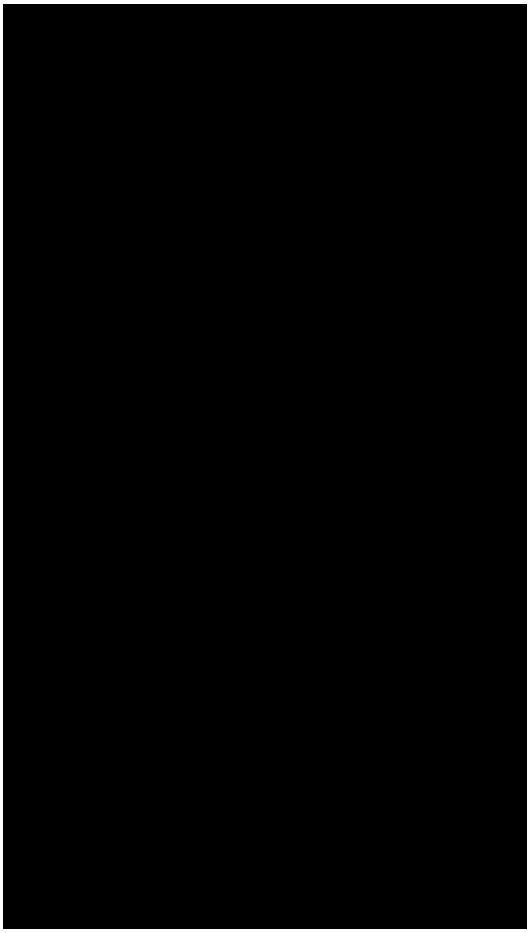

Figure 1 FORM FLOW FOR 5E ACCEPTANCE OF 1A WINK NPD AND ANI FOR 911 ROUTED CALLS

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SEC. 4A315: INCOMING/OUTGOING Trunk Group USAGE COUNTS

1. FEATURE DESCRIPTION

The Incoming/Outgoing Trunk Group Usage Counts feature is available as a 5E13 Software Update. This feature provides the capability to accumulate incoming and outgoing trunk group usage counts. This information will appear in Section 12 of the TRFC30 report.

The feature number for this feature is 99-5E-4520. This is a secured feature controlled by SFID 315. In order to enable this feature, it must be purchased and activated using the SFSYS form (5713-1 Record).

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features for an entire 5ESS Switch or for selected switching modules. The ACT field on this form for SFID 315 must be set to "Y" to enable this feature.

SEC. 4A317: PACKET PIPE ENGINEERING ENHANCEMENTS

1. FEATURE DESCRIPTION

The feature number for the PPEE (Packet Pipe Engineering Enhancements) feature is 99-5E-7854. This feature is controlled by SFID (Secured Feature ID) 317 and is being deployed for the Beginning Managed Introduction of the 5E16 Software Release.

This feature increases the number of call legs carried by a PP (Packet Pipe). The PPEE feature can be activated on an office-wide basis. Similar to the packet pipe optimization, service providers must examine their office engineering and make any necessary PP and PH4 (Protocol Handler Version 4) adjustments before activating this feature to avoid potential overloading of FRPH (Frame Relay Protocol Handler). For service providers who choose to gradually reengineer their PPs and FRPHs, a CTS settable ODBE (Office Data Base Editor) flag is provided to disable the PP RC (Recent Change) provisioning checks. It is, however, the service providers' responsibility to reengineer the PPs and FRPH to avoid overloading the FRPH. This feature is supported on the FRPH based on the PH4.

Service providers can deploy this feature in the following two ways:

- Study their current PPS and PH4s, and reengineer them before turning on this feature.
- Deploy this feature and reengineer PPs over a period of time.

The following guidelines provide information on when service providers are to reengineer.

- When RC view 5.8 (Verify Pktpipe Channel Group) displays MAX CALLS ALLOWED (i.e., maximum number of CEs that can be carried by the PPs terminating on the PH4) and TOTAL PROVISIONED (i.e., total number of CEs currently supported by PH4). If TOTAL PROVISIONED exceeds MAX CALLS ALLOWED, service providers should consider moving PPs to other PH4s or grow more PH4s. RC view 5.5 (Trunk Member) is used to do the reengineering. Since TOTAL PROVISIONED is more than MAX CALLS ALLOWED, an error is encountered while updating RC view 5.5. To resolve this error situation, an ODBE flag GLCP2DUMMY (bit 0 is used for the Packet Pipe Engineering feature and bit 2 is used for the Packet Pipe Engineering Enhancements feature) is provided. When bit 1 is set to "1", the error that could be encountered on RC view 5.5 is temporarily suppressed. This is accomplished by referring to the PPE tables that allow for fewer call legs to calculate the TOTAL

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PROVISIONED instead of the PPEE tables. Regardless of whether the bit is on or off, RC view 5.8 always displays call legs corresponding to the PPEE table when the PPEE feature is on. When reengineering is complete, the bit 1 of GLCP2DUMMY has to be set to "0".

- When RC view 5.8 displays MAX CALLS ALLOWED and TOTAL PROVISIONED calls regardless of whether or not the PPEE is activated. The total number of provisioned call legs is derived by adding the maximum number of call legs that can be carried by each PP that is assigned to the FRPH. This capability allows service providers to quickly verify whether a given FRPH is provisioned to handle less or more than the maximum allowed traffic on a FRPH.

2. FEATURE ASSIGNMENT

To activate this feature:

- set the ACT field for SFID 317 on the SFSYS form (5713-1 Record) to "Y".
- on the CDMAOPT form (5599 Record), set the KEY field to "0" and the PPEE ACT field to "Y". (The PPEE ACT field is used by this secured feature, therefore when it is set to "Y", the ACT field for SFID 317 on the SFSYS form must also be set to "Y".)

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CDMAOPT	5599	8	80	8.75
SFSYS	5713-1	3	5AR	8.22

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access). Added the PPEE ACT field and related data rules.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 317 to "Y".

SEC. 4A318: ORIGINATING SWITCH CALLING NAME

1. BACKGROUND

Currently in the United States, the Calling Name features (Analog Calling Name, 99-5E-0834, Calling Name for BRI (Basic Rate Interface), 99-5E-2264, and Calling Name for PRI (Primary Rate Interface), 99-5E-2295) provide a calling party name through a CNAM (Calling Name) TCAP (Transaction Capabilities Application Protocol) query (TR-1188) from the terminating switch to the CNAM SCP (Service Control Point). However, in Canada, the calling party name is available at the originator's switch and is sent through the network (via ISUP7 signaling for interswitch calls) to the terminating party where it can be displayed (assuming that the terminating user subscribes to Calling Name).

2. FEATURE DESCRIPTION

The Originating Switch Calling Name feature (99-5E-4684) is a secured feature that modifies the existing Calling Name features to allow an originating 5ESS-2000 Switch to provide a calling party name for each call origination (for which a calling number is available) and deliver this name to the terminating party. The name is obtained either from the switch based data or through a Calling Name TCAP query to a calling name data base. If the call is interswitch, the name is sent in the Generic Name parameter of the IAM (Initial Address Message), along with an indication of whether the name is "presentation allowed" or "presentation restricted". A calling name can also be received in a SETUP message from an originating PRI.

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At a terminating 5ESS-2000 switch, when the calling name is received (in the Generic Name parameter), it is delivered to the terminating party, assuming that the terminating party subscribes to Calling Name Delivery and the name is indicated as "presentation allowed".

When the Originating Switch Calling Name feature is active, the calling name is sent with each call origination. The 5ESS-2000 Switch Calling Name feature expects to receive the name delivered from the originator (both intraswitch and interswitch) and if the name is present in the Generic Name parameter, a query is not made when the call is being delivered to the terminating party.

If the Generic Name parameter is received without a calling name or no Generic Name parameter is received, the terminating switch could attempt to retrive the calling name through a CNAM TCAP query, provided all the necessary conditions are met (e.g., provisioned to do CNAM TCAP queries, terminating party subscriber to Calling Name Delivery, not blocked because of "presentation restrictions").

When the Originating Switch Calling Name feature is inactive, the Calling Name features work as they currently do, (i.e., no query when the call originates and a CNAM TCAP query when the call is being delivered to the terminating party) if the terminating party subscribes to CNAM.

There is also an EDS (Electronic Directory Service) feature that supplies calling name information for calls between members of the same BCID (Business Customer ID) group. EDS sends a terminating query (using the Lucent Technologies Attached Processor Interface message set) to an Attached Processor database. Where the EDS applies (same BCID) any calling name stored on the switch will be discarded and no CNAM TCAP query will be attempted; instead an EDS query will be attempted. However, for PRI and SS7 ISUP originations where the calling number is determined to be in the same BCID as the EDS subscriber, the received calling name will be used.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CNAM	5986	6	28A	4.65
LASSOP	5945	5	5F	8.21
SFSYS	5713-1	3	5AR	8.22

CNAM form (5986 Record) -The CNAM form allows calling names (corresponding to calling numbers) to be provisioned on the 5ESS-2000 Switch.

For more information on CNAM Analog Calling Name Delivery translation requirements for TCAP queries see Division 2, Section 4A40.

LASSOP form (5945 Record) -The LASSOP form is an ODA (Office Data Administration) input form that is used to supply global office options and parameters for the LASS features. The CNAM SRC field which is added is used to indicate whether the source for obtaining the calling name is from the SCP or from ODD stored locally on the switch.

SFSYS form (5713-1 Record) -This form is used to enable secured features. The ACT field for SFID 318 must be set to "Y" to enable this feature.

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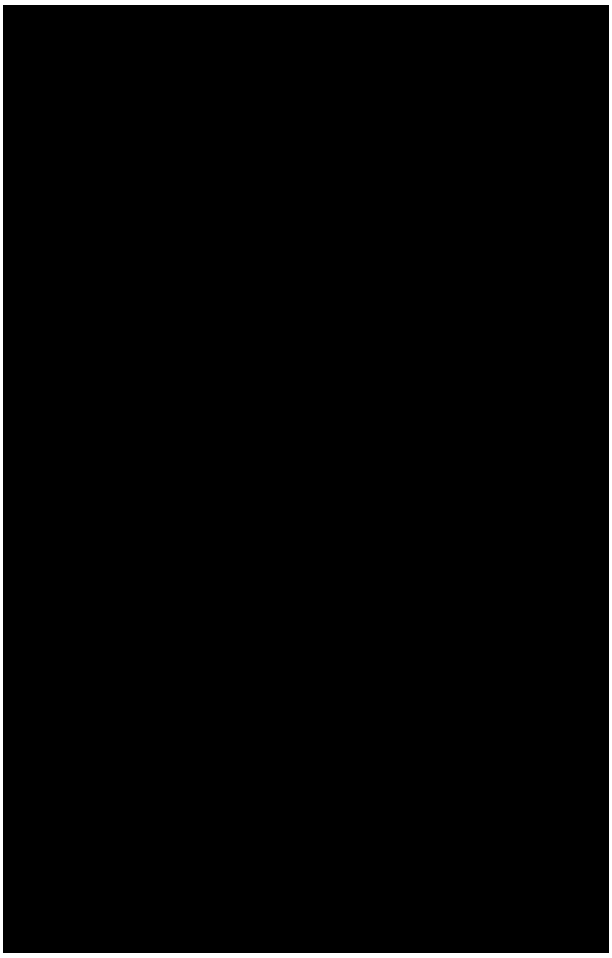

Figure 1 SCENARIO TO POPULATE ODD (OFFICE DEPENDENT DATA)

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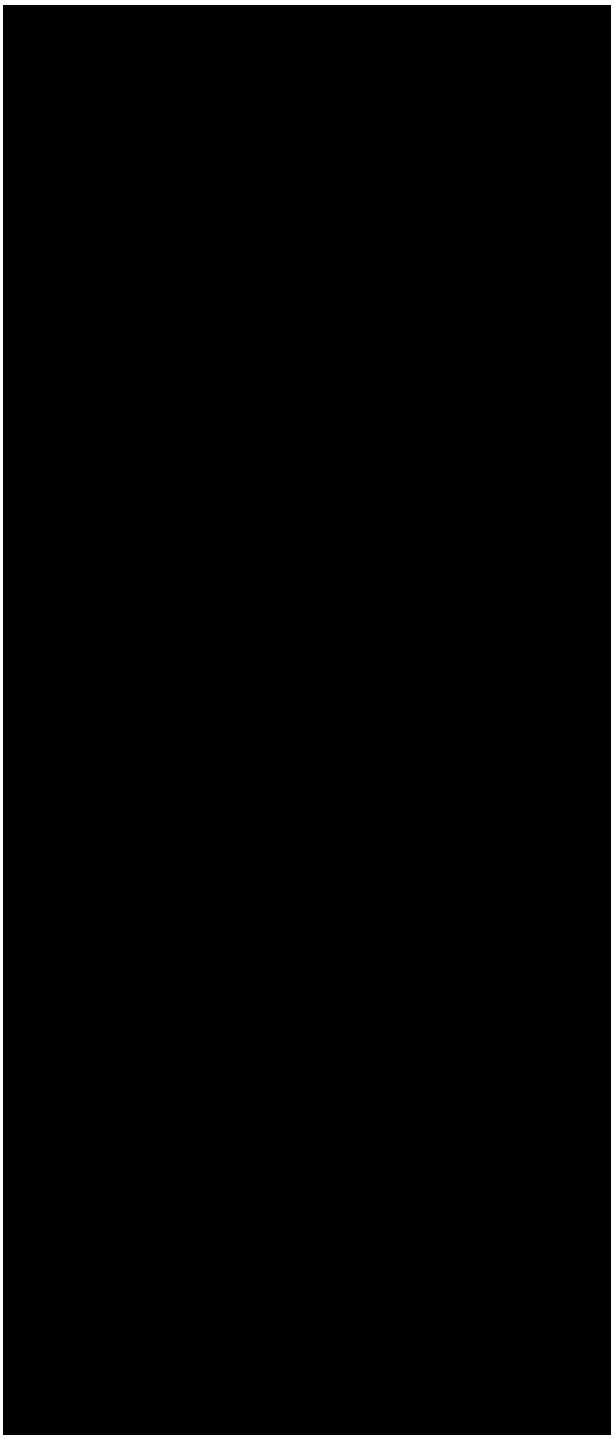

Figure 2 SCENARIO TO POPULATE ODD AND CHOOSE ODD FOR SOURCE OF DATA

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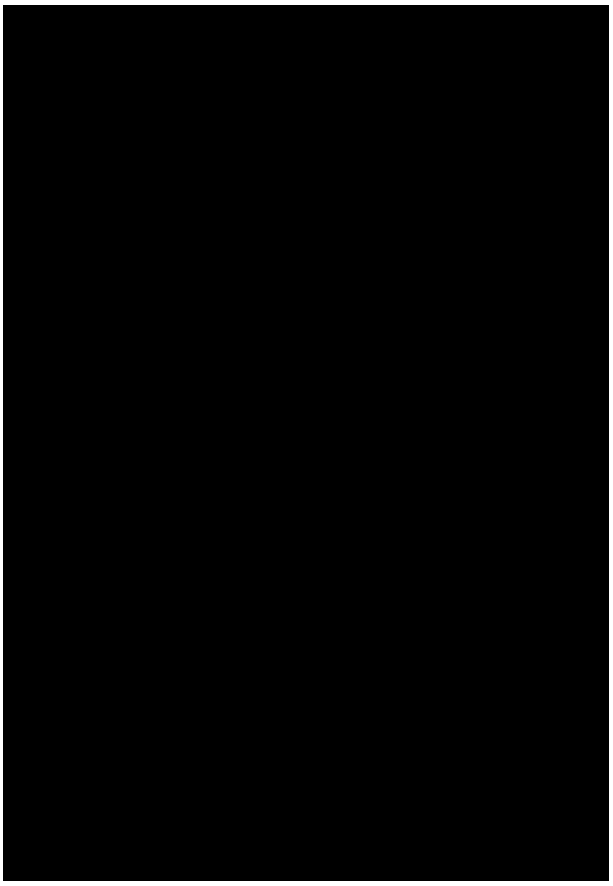

Figure 3 SCENARIO TO CHOOSE SCP FOR SOURCE OF DATA

SEC. 4A319: NP SERVICE PROVIDER PORTABILITY AMA ENHANCEMENTS II

1. BACKGROUND

The Illinois Number Portability Generic Requirements do not include the functionality to append an originating party LNP (Local Number Portability) module at a terminating network switch. For companies that record FG-D (Feature Group D Carrier Interconnect) terminating IXC (Inter Exchange Carrier) access records (Structure Code 615/Call Code 119), Connecting Network Access records (Structure Code 625/Call Code 720), or Cellular Mobile Carrier access records (Structure Code 625/Call Code 66 or 65), the ability to identify the originating network for the call, is critical to insure accurate and timely AMA (Automatic Message Accounting) record exchange between companies, for mutual compensation and to facilitate verification of meet-point billing, by the serving local provider. For non-ported numbers, the NPA-NXX (Numbering Plan Area-Office Code) of the calling party number can be used to derive this information. However, for ported originating numbers, the LRN (Location Routing Number) of the originating switch must be used for this identification.

Therefore, AMA access recordings made at a terminating network switch should include an originating party LNP module when the calling party number is ported. The originating LRN should be generated at the originating switch based on a line attribute and passed forward through SS7 (Signaling System 7) ISUP (ISDN (Integrated Services Digital Network) User Part) signaling via the JIP (Jurisdiction Information Parameter).

It should be noted that current Number Portability requirements call for the originating/forwarding switch's master LRN to be sent forward in an SS7 ISUP IAM (Initial Address Message) for all calls originating/redirecting from an NP (Number Portability) capable switch and not just for calls from ported numbers. It is highly desirable that sending the originating switch's LRN in the JIP be cut back to only calls from actual ported originating lines or business groups.

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2. FEATURE DESCRIPTION

The NP Service Provider Portability AMA Enhancements II feature is a Secured Feature (SFID 319) that is being made available as a Software Update to 5E11. The feature number for this feature is 99-CP-4388.A. This feature is applicable to the 5ESS-2000 Switch, 5ESS-2000 Switch CDX (Compact Digital Exchange), and 5ESS-2000 Switch VCDX (Very Compact Digital Exchange) in the LEC (Local Exchange Carrier) market.

The AMA function associated with this feature is the Originating Party LNP Module on Terminating Access Records. This function is aimed at terminating networks that need to perform settlements for mutual compensation with an interconnected network. In order to exchange AMA billing records for settlements, the identity of the serving originating network must be known. For a ported originating DN (Directory Number), the NPA-NXX of the originating number will not identify the true originating network.

When this function is active, attach an originating party LNP BAF (Bellcore AMA Format) module (MOD 720) to all terminating access records. For example:

- FG-B (Feature Group-B)
- FG-D (Feature Group-D)
- CNA (Connecting Network Access)
- CMC (Cellular Mobile Carrier) Type 2A or 2B

The LNP module should contain the LRN (at least the NPA-NXX digits) of the originating switch as received in the incoming SS7 JIP. If no JIP is received, then no LNP module will be generated for the originating party.

3. FEATURE ASSIGNMENT

To enable this feature, the ACT fields for SFID 199 and SFID 319 must be set to "Y" on the SFSYS form (5713-1 Record).

To turn on the generation of an originating LNP Module (720) for terminating access AMA records when a JIP is received in incoming signaling, the ACT field for OFID (Office Option ID) 724 must be set to "Y" on the FOSYS form (5713-2 Record).

4. TRANSLATION REQUIREMENTS

No new fields or data rules added for this feature.

5. GLOSSARY

AMA - Automatic Message Accounting
ASP - Advanced Services Platform
BAF - Bellcore AMA Format
CAMA - Centralized Automatic Message Accounting
CDX - Compact Digital Exchange
CMC - Cellular Mobile Carrier
CNA - Connecting Network Access
DN - Directory Number
FG-B - Feature Group-B Carrier Interconnect
FG-D - Feature Group-D Carrier Interconnect
IAM - Initial Address Message
ICC - Overseas International Control Central Operators

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ISDN - Integrated Services Digital Network
ISUP - ISDN User Part
IXC - Inter Exchange Carrier
JIP - Jurisdiction Information Parameter
LEC - Local Exchange Carrier
LNP - Local Number Portability
LRN - Location Routing Number
MF - Multi-Frequency
MLHG - Multi-line Hunt Group
NLBF - National LNP Billing Forum
NP - Number Portability
NPA-NXX - Numbering Plan Area Office Code
OFID - Office Option Identification
PBX - Private Branch Exchange
PF - Private Facility
SM - Switching Module
SS7 - Signaling System 7
VCDX - Very Compact Digital Exchange

SEC. 4A320: FEATURE DEPLOYMENT VIA THE DATA SERVICES MODULE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-145 OneLink Manager (TM) ASM User's Guide.*

SEC. 4A321: AMA RECORDING FOR RESALE AND UNBUNDLING

1. FEATURE DESCRIPTION

The AMA (Automatic Message Accounting) Recording for Resale and Unbundling feature is a secured feature (SFID 321) that is being deployed as a 5E12 and 5E13 Software Update and for 5E14 in the BMI (Beginning Managed Introduction) Software Release. The feature number for this feature is 99-5E-4482.

This feature provides additional billing information for resale and unbundled lines. The additional billing information includes records or modules for all originations and terminations to an RU (Resale or Unbundled) line. (Note: Resale lines are separate and distinct from Unbundled lines and only combined for simplicity. Where the treatment for each type is different, these differences will be noted.) Each line will be identified by a line attribute (resale, unbundled, or native) and office parameters will control the originating and terminating recording of AMA for each type of line.

It should be noted that the feature is not only applicable to analog lines, but to ISDN (Integrated Services Digital Network) lines, trunk groups, multiline hunt groups, and terminal groups as well.

1.1 Definitions

Context ID — an attribute on any facility that is marked native, resale, or unbundled.

Native — any line that has service provided by the Switch Owner and does not fall under the Resale or Unbundled category.

Resale — any line that is leased by another local service provider under the terms specified by a switch owner.

Unbundled — any line that is purchased by another local service provider under the terms specified by a switch owner. Unbundled is very similar to Resale. However, the two can have different billing arrangements between entities.

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Service Group the service groups defined in this feature are a group of facilities that have the same service such as a terminal (CENTREX (Centralized Telephone Communications Exchange Service)) group, multiline hunt group, PRI (Private Rate Interface), PBX (Public Branch Exchange), service groups, and multi-party lines.

The following table lists the new or existing call type codes or module codes used by this feature.

Call Type Codes and Modules

Number	Type	Title	Description
125	Module	Timing	New Timing Module appended
126	Call Type	Originating	New Originating Call Type created when office option is set and no other AMA recording is otherwise created.
128	Call Type	Terminating	New Terminating Call Type created when office option is set and no other AMA recording is otherwise created.
338	Module	Service Provider	New Service Provider Information Module that for this feature will only contain information on the resale or unbundled status of the line.

The following table lists the office options associated with this feature. These options affect calls to/from RU lines that do NOT generate AMA call records based on the Charge Index. Any call or any activity involving an RU line that generates an AMA record should have the appropriate modules appended.

OFFICE OPTIONS

IDENTIFIER	VALUES	DESCRIPTION
UO (Unbundled Originating)	YES/No	YES=Create Call Type Code 126 and append module NO=No Record Created (default)
UT (Unbundled Terminating)	YES/No	YES=Create Call Type Code 128 and append module NO=No Record Created (default)
RO (Resale Originating)	YES/No	YES=Create Call Type Code 126 and append module NO=No Record Created (default)
RT (Resale Terminating)	YES/No	YES=Create Call Type Code 128 and append module NO=No Record Created (default)
RUSC (Resale and Unbundled Structure Code Option	YES/No	LONG(YES)=Use Structure Code 0001 SHORT(NO)=Use Structure Code 0500 (default)

The following table summarizes the operation of this feature when an AMA call record is normally generated or the office option is set to generate an AMA call record.

CONTEXT ID AND MODULES

Call Type	Context ID	New Record*	Timing Module 125	LSPI Module 338 ***	Comments
Originating	Native**	No	No	No	No new recording done for native lines.
Originating	Unbundled	126	Yes	Yes	LSPI and Timing Modules.

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Originating	Resale	126	No	Yes	No timing Module is required for Resale.
Terminating	Native**	No	No	No	No new recording done for native lines.
Terminating	Unbundled	128	Yes	Yes	LSPI and Timing Modules.
Terminating	Resale	128	No	Yes	No Timing Module is required for Resale.

*New Record is only created when no other AMA record is created for the call.

** An Intra-Switch call between a Native line and a Unbundled or Resale line will have records created and modules appended based on the Unbundled or Resale side of the call.

*** Any call or any activity from RU or to RU lines such as feature activation or deactivation should have the LSPI module appended.

2. FEATURE ASSIGNMENT

For 5E12 and later, to provision this feature:

- Set the ACT field for SFID 321 on the SFSYS form (5713-1 Record) to "Y".
- Activate Recording Options on the OFCOPT form (5509 Record) (RC/V (Recent Change and Verify) 8.1):
  - RO (Resale Origination) Recording option - Turn on the generation of AMA recording and appending of the EBAF (Extended Bellcore AMA Format) module for a call or activity from a resold line via ORIG RESOLD field.
  - UO (Unbundle Origination) Recording option - Turn on the generation of AMA recording and appending of the EBAF module for a call or activity from an unbundled service group member via ORIG UNBUNDLED field.
  - RT (Resale Termination) Recording option - Turn on the generation of AMA recording and appending of the EBAF module for a call or activity to a resold service group member via TERM RESOLD field.
  - UT (Unbundle Termination) Recording option - Turn on the generation of AMA recording and appending of the EBAF for a call or activity from an unbundled line via the TERM UNBUNDLED field.
  - Activate long structure code RUSC (Resold/Unbundled Structure Code) option - Set RUSC to long via the UNBLD/RESLD SC field. The structure code 001 will be used with a forced AMA recording. The default structure code is 500.
- The resold or unbundled context identifiers can be assigned to any DN (Directory Number) associated with:
  - an Analog line via the LINE form (5109 Record) or MLHLN form (5111 Record) (RC/V 1.6 and 1.8)
  - ISDN BRI (Basic Rate Interface) user via the SHTN form (5902 Record) (for secondary only) (RC/V 23.20), or the DSLUSR form (5908 Record) (RC/V 23.2 and 23.8)
  - Terminal Groups via the TGATTD form (5611 Record) (RC/V 4.4), and Trunk Groups via the

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TKGRP form (5202 Record) (RC/V 5.1).

- Multiline Hunt Group via the MLHG form (5110 Record) (RC/V 3.5).

- All the party lines that share the same port should have the same value for context identifier, however, this rule will not be enforced by RC or ODA (Office Data Administration System).
- This feature does not support Packet or On Demand B Channel TNs (Telephone Numbers).
- For Lines assigned the 1TN-LTSB (1TN - Line Time Slot Bridging) feature, all ports (both non-lead and lead) must have the same context identifier value. This also is not being enforced by RC or ODA.

The following table gives the call processing precedence of CONTEXT IDs which are not "N" (5E12 and 5E13), or "NATIVE" (5E14).

CONTEXT ID not N/NATIVE	Overrides
Group	Members
Terminal Group	MLHG

There are variations in the CONTEXT ID based upon generics:

Valid CONTEXT ID Entries	
5E12 and 5E13	**5E14**
N	NATIVE
R	RESOLD
U	UNBUNDLED

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
DSLUSR	5908	5	1I	23.2
LINE	5109	3	1I	1.6
MLHG	5110	3	1J	3.5
MLHLN	5111	3	1K	1.8
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22
SHTN	5902	5	1C	23.20
TGATTD	5611	4	12A	4.4
TKGRP	5202	3	2A	5.1

DSLUSR form (5908 Record) - The DSLUSR form defines the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. Added the CONTEXT ID field.

LINE form (5109 Record) - The LINE form defines the office Equipment Number and features for each telephone number in a 5ESS Switch. Added the CONTEXT ID field.

MLHG form (5110 Record) - This form is used to define a Multi-Line Hunt Group. Added the CONTEXT ID field.

MLHLN form (5111 Record) - The MLHLN form defines the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group. Added the CONTEXT ID field.

OFCOPT form (5509 Record) - The OFCOPT form supplies various miscellaneous office options and parameters. Added the ORIG UNBUNDLED, ORIG RESOLD, TERM UNBUNDLED, TERM RESOLD, and UNBLD/RESLD SC field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the AMA

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Recording for Resale and Unbundling feature, the ACT field for SFID 321 must be set to "Y".

SHTN form (5902 Record) - The SHTN form assigns a Primary or Secondary TN or MLHG/TERM to ISDN Terminals. A telephone number which appears on more than one terminal is called a Shared TN or MLHG/TERM. Shared TNs or MLHG/TERMs are divided into Primary and Secondary TNs or MLHG/TERMs. Added the CONTEXT ID field.

TGATTD form (5611 Record) - This form is used to define information (such as attendant DN, Source Billing, and SDN DAS) on a Terminal Group basis. Added the CONTEXT ID field.

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form. Added the CONTEXT ID field.

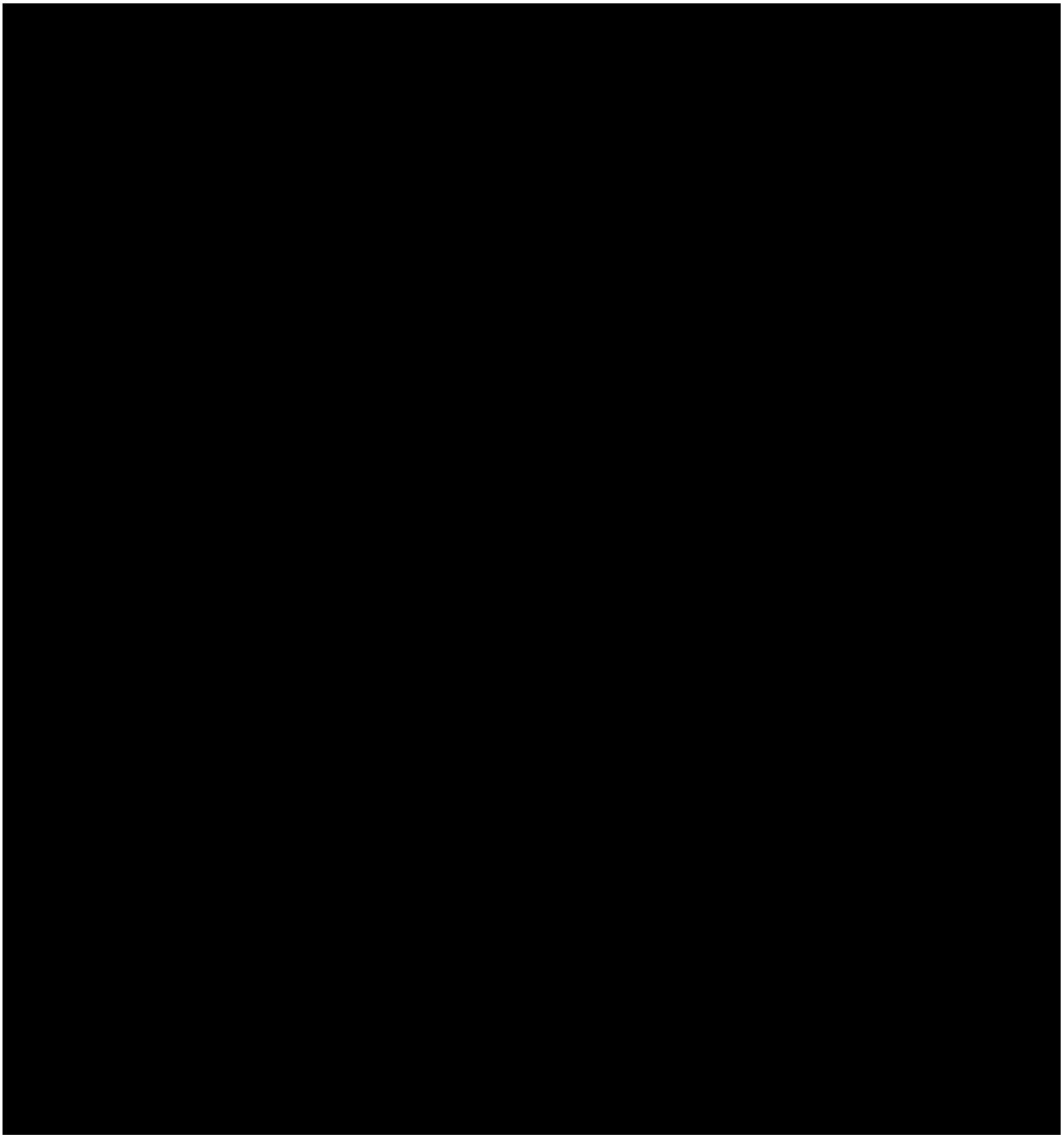

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Figure 1 FORM FLOW FOR AMA RECORDING FOR RESALE AND UNBUNDLING

SEC. 4A322: Recent Change Front End to the ASM (Administration Services Module)

1. FEATURE DESCRIPTION

Available with 5E13 and later Software Releases, the RC (Recent Change) Front End to ASM feature (99-5E-4095) enables processing for the following RC applications on the ASM:

- RC text interface (APPTEXT)
- RC menu interface (APPRC)
- RCOS interface (RCmaccntl)

This provides increased RC throughput and faster response time for users executing these applications on an ASM.

This feature is secured with SFID (Secured Feature ID) 322. The ASM Base feature is required in order to apply this feature. The ASM Base feature is secured by SFID 297. Information regarding the ASM Base feature, SFID 297, can be found in Division 2, Section 4A297.

2. FEATURE ASSIGNMENT

This feature cannot be assigned using ODA. Assignment can only be done by setting ACT to "Y" for SFIDs 322 and 297 using Recent Change.

3. TRANSLATION REQUIREMENTS

There are no ODA translation requirements for this feature.

SEC. 4A324: LISTING SERVICES - INTERNATIONAL DA

1. FEATURE DESCRIPTION

The LS (Listing Services) - International DA (Directory Assistance) feature is a secured feature (SFID 324) using feature number 98-5E-4562. This feature is being deployed on the 5ESS Switch in a 5E12 Software Update.

This feature expands the existing LSCC (Listing Services Call Completion) with SS7 (Signaling System 7) Redirection features to allow the international listed number to be handled properly by the OSPS-TA (Operator Services Position System-Toll and Assistance) and the OSPS-LS (OSPS-Listing Services) for IDA (International Directory Assistance) and IDACC (International Directory Assistance Call Completion) calls. Changes are made to the handling of these calls in both OSPS-TA and OSPS-LS environments.

1.1 Call Processing Impact

There is no impact on Call Processing until the Listing Services - International DA feature is activated.

1.2 LS International DA Feature Treatment - OSPS-TA Office

This section describes the LS International DA feature treatment provided to IDA and IDACC calls handled in an OSPS - TA office.

1.2.1 Feature Activation

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OSPS provides an activation parameter to control the application of LS International DA feature treatment within an OSPS-TA office. In addition, three new parameters are added to the DACCTRT form (6412 Record) to support this feature (see the TRANSLATION REQUIREMENTS section).

NOTE: The National DA 00 - LSCC with SS7 Redirection feature must be active before this feature can be activated.

1.2.2 Call Completion to an International Number

On an OSPS originated call in which the caller has accepted the call completion offer provided in the OSPS-LS office, call completion takes place at the OSPS-TA office. The international listed number to which call completion takes place is passed from OSPS-LS to OSPS-TA in a Release Message with instructions for Re-route to New Destination (i.e., call completion). The NATURE OF ADDRESS field is set to differentiate NANP (North American Numbering Plan) from international destination numbers.

OSPS-TA extracts the listed number from the message, considering the number to be the forward number for the call completion call. When OSPS-TA receives a Release Message with instructions for Re-route to New Destination, validation of the call to the listed number is performed using automated sequence call handling treatment.

When a forward number or billing number error is encountered on an IDACC call, OSPS-TA routes the call to the operator. This ensures that the caller has access to the listed number in the event that the listed number was not saved by the caller because the call completion offer was accepted.

1.3 LS International DA Feature Treatment - OSPS-LS Office

This section describes the LS International DA feature treatment provided to IDA and IDACC calls handled in an OSPS - LS office.

1.3.1 Feature Activation

OSPS provides an activation parameter to control the application of LS International DA feature treatment within an OSPS-LS office.

1.3.2 Receipt of an LAC or Normal Transfer Request CPDL Message

This feature allows the OSPS-LS to accept international listed numbers via an LAC (Listing Access Complete) or a transfer request CPDL (Call Processing Data Link) message. These numbers are differentiated from NANP listed numbers by a leading zero prepended to the listed/referral number.

1.3.3 Receipt of a Foreign DA Operator Transfer Request CPDL Message

This feature allows the OSPS-LS to accept a new foreign DA operator transfer request CPDL message. A new Ring/No Answer timer module 821 is appended to the normal transfer request CPDL message to allow for the OSPS-LS MECH (More Efficient Call Handling) IDA capability.

The OSPS-LS MECH IDA capability builds upon the existing OSPS-TA MECH capability to provide a means of saving IDA operator work time on IDA calls that require a foreign DA operator to be accessed to retrieve listing services.

This capability is required for those listing searches requiring that a foreign DA operator be accessed. This capability releases the DA operator until OSPS receives an answer, a busy signal via SS7, or encounters a routing problem for which the OSPS receives an explicit indication (i.e., not network announcements) or until the Ring/No Answer timer expires (assuming the timer had been requested with a non-zero value in the Ring/No Answer timer module).

NOTE: It is strongly recommended that the Ring/No Answer timer module 821 in the foreign DA

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operator transfer request CPDL message contain a non-zero Ring/No Answer timer value. In the presence of certain features in other network elements, it becomes possible that no other network element may be monitoring the duration of an unanswered call. If the OSPS's monitoring is not enabled by receiving a non-zero value for the Ring/No Answer timer, then the call could be allowed to continue indefinitely without ever completing.

1.4 Announcements

There are five new announcements associated with this feature. They are:

- Announcement 384 - The OSPS-TA plays this announcement to reprompt the caller for a card number if the PL card is not allowed for the dialed DA destination number.
- Announcement 385 - The OSPS-TA plays this termination announcement and disconnects the call on the last attempt if the PL card is not allowed for the dialed DA destination number.
- Announcement 386 - The OSPS-LS plays this announcement after receiving a foreign DA operator transfer request CPDL message to inform the caller to hold for a foreign DA operator.
- Announcement 387 - The OSPS-LS plays this announcement if there is no available MECH IDA conference operator(s) after the foreign DA operator answers the call.
- Announcement 388 - The OSPS-LS plays this announcement to inform the foreign DA operator to hang up if the back party goes on-hook before a MECH IDA conference operator is available and the foreign DA operator still remains off-hook.

2. FEATURE ASSIGNMENT

For 5E12 and later, to activate this feature, the ACT field for SFID 324 on the SFSYS form (5713-1 Record) must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DACCTRT	6412	3	4DK	27.88
FTPARM	6424	3	4DY	8.41
SFSYS	5713-1	3	5AR	8.22

DACCTRT form (6412 Record) - This form is used for specifiying data for CICADA call completion. For 5E12 and later, the DIOR DACC ALLOW field and related data rule, and the PL CARD ALLOW and RTRS INTL IND fields were added to support this feature.

FTPARM (6424 Record) - This form is used for specifying, updating and/or verifying OSPS options. For 5E12 and later, the INTL DA TA ACT and INTL DA LS ACT fields and related data rules were added to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 324 to "Y".

4. GLOSSARY

CPDL	Call Processing Data Link
DA	Directory Assistance
IDA	International Directory Assistance

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IDACC	International Directory Assistance Call Completion
LAC	Listing Access Complete
LS	Listing Services
LSCC	Listing Services Call Completion
MECH	More Efficient Call Handling
NANP	North American Numbering Plan
OSPS	Operator Services Position System
SS7	Signaling System 7
TA	Toll and Assistance

SEC. 4A325: CITY CODE ROUTING ON INTERNATIONAL CALLS

1. BACKGROUND

The providers for the City Code Routing on International Calls feature are long distance providers who pass off international calls to other carriers. These providers currently have the ability to route international calls to other carriers based on the country code. These providers are tied to a single carrier for the whole country, even though other carriers offer more compatible rates on a city basis.

Long distance service providers need the ability to route international calls not only based on the country code but also on the city code. The long distance provider passes international calls to other carriers. The 5ESS Switch, therefore, must provide the capability to route to a different trunk group or gateway based on the country code and city code combination.

2. FEATURE DESCRIPTION

Feature 99-5E-4727, City Codes Routing on International Calls, was developed to address the above needs and was issued to the service providers in 5E12 and 5E13 Software Release. That feature provided the functionality that the service providers desired. In order to allow provisioning of international calls, the LDIT form was modified as a temporary implementation.

The IDDD City Code Routing Enhancement feature (99-5E-7285) introduced an easier implementation for the country code/city code routing needs. It provides the same functionality as the original City Code Routing feature (99-5E-4727), but provisioning is done on the IDDD form (5307 Record) rather than the LDIT form. The IDDD form has always had the country code key, and for the City Code Routing Enhancement feature the new city code key was added.

There are three major advantages to using the new feature:

- The provider can use the IDDD form as they are used to doing for international provisioning.
- The provisioning is simplified; one IDDD form instance replaces the need to enter multiple Conflict List entries on the LDIT form.
- The IDDD keys explicitly show the prefix (01 or 011), country code, city code, whereas on the LDIT form these fields are provisioned as one long digit string. For example, to provision a prefix of 011, a country code of 345, and a city code of 6789 on the LDIT form, the digit string key entered on the LDIT form is 0113456789. The LDIT office record likewise will print 0113456789. There is nothing on the office record to distinguish which digits are the prefix, which digits are the country code and which

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digits are the city code digits. However, the IDDD form and the office record have separate fields for the prefix, country code and city code.

2.1 City Code Routing on International Calls

The City Code Routing on International Calls feature is deployed on the 5ESS Switch in a Software Update for the 5E12 Software Release and in the Beginning Managed Introduction of 5E13 Software Release. The feature number for this feature is 99-5E-4727. This feature is controlled by SFID (Secured Feature ID) 325.

This feature allows the long distance providers to route international calls based on the city code, in addition to the country code. The service providers are able to select the lowest cost carrier to the specific city within the country.

The functionality provided by this feature is transparent to the end users, business or residential customers. The end users utilize international dialing plans currently provided by their long distance carriers.

The long distance provider uses the LDIT (Local Digit Interpreter Table) form (5300-3 Record) to build IDDD (International Direct Distance Dialing) conflict entries to provide the ability to translate on both country code and city code. The IDDD form (5307 Record) is used for IDDD translations, but prior to feature 99-5E-7285 is restricted to country codes only. The LDIT form (5300-3 Record) is enhanced by adding IDDD translations without removing any existing functionality.

Note that the IDDD form (5307 Record) is still used for setting up data for countries not requiring further city code delineation.

2.2 IDDD City Code Routing Enhancement

The IDDD City Code Routing Enhancement feature is deployed on the 5ESS Switch in 5E14FR3 (Feature Release 3) Software Release and in the Beginning Managed Introduction of 5E15 Software Release. The feature number for this feature is 99-5E-7285. This feature is controlled by SFID (Secured Feature ID) 325. Both the base feature 99-5E-4727 and the enhancement feature 99-5E-7285 share the same SFID 325. If the service providers have already purchased the base feature (99-5E-4727), which shares the same SFID 325, they are allowed to provision the IDDD City Codes Enhancement. If the special provisioning is not done, turning SFID 325 ON results in the routing of international calls either as provisioned for the City Codes Routing feature (99-5E-4727) or as provisioned on the IDDD form, with just the country code. Using the same SFID ensures that both features (99-5E-7285 and 99-5E-4727) are compatible and can coexist. The original feature uses LDIT form Conflict Tables to provision the City Codes.

The City Codes Routing Enhancement feature adds a fourth, optional key field to the IDDD form (5307 Record). The CITY CODE key field gives the service provider the capability of creating routing translations with a finer degree of granularity than the Country Access Code provides today. By extending the translated digits strings beyond the Country Access Code, different routes can be provisioned for different cities within a country. This feature provides the capability to allow service providers to provision and route international calls based on the country and city code via the IDDD form.

Service providers who entered City Code translations using the LDIT form Conflict Entries are not able to read or update those translations using the IDDD form with this feature. Likewise, City Code translations entered from IDDD form with this feature are not readable or cannot be updated from the LDIT form. However, both types of translations can coexist in an office, and call processing is able to route calls using data inserted from either form.

Because of the previously stated advantages of the IDDD form, the provider is encouraged to provision City Code translations via feature 99-5E-7285.

3. FEATURE ASSIGNMENT

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3.1 For City Code Routing for International Calls Feature:

1. The ACT fields for SFIDs (Secured Feature ID) 325 and 223 on the SFSYS form (5713-1 Record) must be set to "Y".

2. At least three IDDD conflict rows via the LDIT form (5300-3 Record) must be populated in the following manner:

   On Screen 1

   - LDIT must be set to any LDIT used for IDDD.
   - INCOMING DIGITS must be set to 01/011 + country code/city code. The string must contain 01 or 011 and at least the country code. To utilize per city based routing, the city code must be included here as well. For example, when the country code is 89 and the city code is 204 INCOMING DIGITS must be 01189204.
   - CALL TYPE must be set to "CONFLCT".
   - NBR OF DIGITS must be blank.
   - PREFIX must be blank.
   - The rest of the fields on Screen 1 should not be populated.

   On Screen 3-10

   - NBR DIG can be 1 - 18 if feature IDDD15 (SFID 223) is active in the office, otherwise it must be 1 - 15. Conflict rows must be entered with consecutive number of digits, allowing no gaps.
   - CALL TYPE must be set to "IDDDSTS".
   - RDIT must be blank.
   - CI TYPE must be set to "IDDD".
   - CDI, DESEP, RTI are set to office specific data.
   - All data in the conflict rows, except for the NBR DIG, must be the same.

3.2 For IDDD City Code Routing Enhancement Feature:

1. The ACT field for SFID (Secured Feature ID) 325 on the SFSYS form (5713-1 Record) must be set to "Y".

2. The following restrictions exist for this feature:

   - If the CITY CODE is entered, there must also be another IDDD form having the same keys LDIT, IDDD PREFIX, and COUNTRY ACCESS CODE, but blank for CITY CODE. Note, that when the COUNTRY ACCESS CODE without the CITY CODE is inserted first, the COUNTRY ACCESS CODE only translation acts as the default route for all calls to the country which are not destined to one of the specified CITY CODE routes.
   - The CALL TYPE must be "IDDDSTS" or "IDDDTSP" when CITY CODE is entered.
   - The TYPE CI CALL must be "IDDD" when CITY CODE is entered.

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4. TRANSLATION REQUIREMENTS

4.1 For City Code Routing for International Calls Feature:

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
LDIT	5300-3	3	3C	9.3
SFSYS	5713-1	3	5AR	8.22

LDIT form (5300 Record) - The 5300-3 and 5300-5 Records are used to define all area, office and service codes (NPA, NXX, X11) in a 5ESS Switch. Any code from one to fifteen digits in length may be defined. The LDIT serves as both a "local" and "foreign" area translator.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 325 and 223 to "Y".

4.2 For IDDD City Code Routing Enhancement Feature:

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
IDDD	5307	3	3T	9.6
SFSYS	5713-1	3	5AR	8.22

IDDD form (5307 Record) - The 5307 Record is used for IDDD (International Direct Distance Dialing) Country Access Codes. IDDD provides the capability for Direct Distance Dialing points outside the North American Network by the customer without the assistance of an operator. For 5E14 and later, the CITY CODE field was added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 325 to "Y".

SEC. 4A326: NUMBER PORTABILITY - OFFICEWIDE RESERVED MARKETING

1. FEATURE DESCRIPTION

The feature number for the Number Portability - Officewide Reserved Marketing feature, formerly called the Number Portability - Cause Code 26 Error Suppression feature is 99-CP-4826. This is a secured feature (SFID 326) which is deployed as a Software Update for 5E12 and 5E13 Software Releases and for the BMI (Beginning Managed Introduction) of the 5E14 Software Release.

This feature is dependent on the NP (Number Portability) - Basic LRN (Location Routing Number) feature (99-CP-3169).

This feature provides an optional capability for inhibiting a call failure treatment for an ISUP (ISDN User Part) ANSI (American National Standards Institute) Cause Code 26 set code when a call with a Home LRN is routed to an unallocated number. Cause Code 26 is a set code in an ISUP REL (Release) message when a call is directed to a switch through its LRN; however, the DN (Directory Number) in the GAP (Generic Address Parameter) of the IAM (Initial Address Message) does not exist on the switch. This is part of the SS7 (Signaling System 7) release procedure to notify the network that a database mismatch has occurred. With this capability, a call receives unallocated number treatment, and the switch does not send an ANSI Cause Code 26 set code. In the number-pooling environment, the suppression of Cause Code 26 may be used to allow the local exchange carrier to correctly process a disconnected DN.

The default treatment for this option is to follow the treatment prior to the Number Portability feature. Previously, with the initial offering of the Number Portability - Basic LRN feature, SFID 174, 99-CP-3169A, the switch sends a Release message with an ANSI Cause Code 26 set code when an LRN-routed call

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routes to a directory number that is unallocated. The use of LRN routing to provide a solution to the number-pooling issue causes provisioning complexities not normally experienced when number pooling is not in use in the network. As an example, in the number-pooling environment, the NPA-NXX owner (code holder) may only be allowed to allocate a set of numbers in a specified range (for example, 5000 through 5999). This range is called the "block", and the service provider is called the "block holder".

The remaining portion of the NPA-NXX's 10,000 numbers may be allocated by other service providers. The provisioning difficulty comes when non-native NPA-NXXs are allocated to a block holder. All calls to non-ported numbers in the block are routed via the LRN to the block holder. If the number is truly unallocated, the switch should give the caller an unallocated number treatment. The switch can provide this function through the DN or Hundreds Group assignment of a RI (Route Index) to an unallocated number route.

The other portion of the NPA-NXX that is not part of the block is expected to receive the REL ANSI Cause Code 26 treatment, and those numbers are routed to Blank Number. Even though the switch can support what the subscriber needs, the provisioning process is a significant change to the current SOP (Service Order Process). To make matters more complex, when a subscriber within the block parts from the block holder, this subscriber should receive unallocated number treatment. All of these options make the service order flow very complex.

Number Portability calls that result in a ISUP Release Cause Code 26 can now be routed to a fixed route PFXREQD (5E11 SU), or a new fixed route MISRLRN (5E13), in an originating 5ESS Switch or intermediate 5ESS Switch. If the PFXREQD fixed route is not populated, then the call is routed to a fixed route REORDER. The fixed route PFXREQD, is an unused fixed route type in the 5E11 Software Release; it has been renamed MISRLRN in the 5E13 Software Release. In order to provide a specific announcement for Cause Code 26, FIXRT form (RC/V View 10.1) is used to populate an RTI (announcement route index) to be associated with Cause Code 26 and misrouted calls to ported numbers.

2. FEATURE ASSIGNMENT

To provision this feature:

- Since this feature is dependent upon the feature (SFID 174), it must first be activated by setting the ACT fields for SFID 174 and SFID 326 on the SFSYS form (5713-1 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FIXRT	5301-1	3	3G	10.1
SFSYS	5713-1	3	5AR	8.22

FIXRT form (5301-1 Record) - This form is used to define Routing and Charging treatment of Fixed Route Types.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for both SFID 174 and SFID 326 to "Y", respectively.

SEC. 4A327: ADSI ACKNOWLEDGMENT TIMER OPTIONAL VALUE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4A328: Support for AMADNS Billing Interface Phase 1

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1. FEATURE DESCRIPTION

The feature number for the Support for AMADNS (Automatic Message Accounting Data Networking System) Billing Interface Phase 1 feature is 99-5E-4757. This is a secured feature (SFID 328) that is being deployed as a Software Update for 5E12 and 5E13 Software Releases and for the BMI (Beginning Managed Introduction) of the 5E14 Software Release.

This feature is dependent on the ASM features, 99-5E-4327 and 99-5E-4728 being installed and active on the switch. These features provide an adjunct processor, the ASM (Administrative Service Module) that communicates with the 5ESS-2000 Switch AM (Administrative Module) over a high-speed Dual Serial Computer Interface. This feature requires the ASM. The ASM requires that the 5ESS-2000 Switch AM to be a 3B21 processor.

In order for this feature to be activated, the ASM Base feature (99-5E-4327) (SFID 297) must also be active on the switch.

This feature (99-5E-4757) provides high speed transfer of billing records from the AM to the ASM and support for the AMADNS data server application on the ASM. This feature provides shorter polling times and supports sender-initiated (switch-initiated) as well as receiver-initiated (host collector-initiated) polling.

This feature utilizes a new data link for AMA (Automatic Message Accounting). The new data link, downloads the data much faster using increased bandwidth and a more efficient protocol. The data link is a 10 Mb Ethernet link located on the ASM. Once this feature is activated, the billing data will no longer be available in AMATPS (AMA Teleprocessing System) format from the datalink on the AM. The billing data will be available in AMADNS file format from the TCP/IP (Transmission Control Protocol/Internet Protocol) ethernet link on the ASM. Once AMADNS is turned on, all primary billing data is sent to the ASM and stored in files using the AMADNS file formats on ASM disk. All host collectors must switch over to the AMADNS file transfer protocol as per Telcordia AMADNS Standard GR-1343-CORE, to receive billing data. BAF (Telcordia Technologies AMA Format) is supported for the formatting of individual AMA records regardless of AMADNS or AMATPS.

When AMADNS billing is active, AMA records are sent by the SMs to the AM as soon as the calls terminate and the records are created. The reliability of AMA data will not be compromised. Therefore, AMA data from creation in the SMs to storage on disk in the AM does not change. The AMA records are then stored in the AMA partitions on the AM disk. The AMA data is continuously polled from the AM by the ASM and transferred over the DCI (Dual Serial Channel Computer Interconnect) link. Upon receiving AMA data from the AM, the ASM sends an acknowledgement to the AM indicating that the data was successfully transferred to the ASM. Then the data is changed from primary to secondary on the AM disks. On the ASM, the data is stored as primary data in the AMADNS files.

AMADNS Data Server/Data Processing and Management System DDI (Data Server/Data Processing Management System Interface) protocol is used to transmit the files off the ASM. The files are considered primary until successfully transferred off the switch. After a successful transfer, they are marked as secondary on the ASM. If the customer is using receiver-initiated transfer, the AMADNS files remain as primary data in the ASM until requested by the Host Collector (also known as Data Manager). The AMADNS generic terminology for a Host Collector is a Data Processing Management System. For sender-initiated, the AMADNS files are created and transmitted to the downstream Host Collector as soon as the AMADNS file is triggered by a user settable parameter (for time or size). With the sender-initiated option AMADNS billing files can be sent to the Host Collector in less than 5 minutes after the call gets terminated. The files are sent over the Ethernet link using DDI over FTP (File Transfer Protocol) over TCP/IP. From the Host Collector, the data can be directed to the Billing Center. Repolling is supported for sender and receiver-initiated, but only on data marked secondary.

The throughput of the DCI link between the AM and the ASM is at least 150 kilobytes per second. This throughput is a tremendous improvement over the actual 5-6 kilobytes per second throughput on the 56 kilobit (7 Kbyte) link. Polling sessions can be reduced from hours to minutes. If the Ethernet link is down, the customers can copy the AMADNS files from the ASM disks to DAT tape (tapes cannot be written from

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the AM) or wait until the link is back in service. If the ASM is down, records continue to be stored on the AM disks until the DCI link to the ASM is reestablished. Once the link is back up the collected billing data is immediately transmitted to the ASM. In no case will AMA data be lost. As the AM disk storage does not change, engineering rules and capacities of the AM disks do not change. The ASM disks are partitioned to store a minimum of 2.5 GBs of data, primary and secondary.

The user defined data link from the Host Collector to the Ethernet hub attached to the ASM can be dial-up.

Sender-initiated transfer of data requires a link to the Host Collector that is always available. Therefore, service providers wishing to activate this option must have Ethernet connection from the ASM to the Host Collector.

2. FEATURE ASSIGNMENT

To provision this feature:

- Since this feature is dependent upon the ASM Base feature (SFID 297), it must first be activated by setting the ACT field for SFID 297 on the SFSYS form (5713-1 Record) to "Y".
- The Support for AMADNS Billing Interface-Phase 1 feature can only then be activated by setting the ACT field for SFID 328 to "Y".
- On the OFCOPT form:
  - Set the AMADNS ACTIVE field to "Y" .
  - Set the AMA METHOD field to "AMATPS" or "AMATPS1".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5i	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to define miscellaneous office options and parameters. For 5E12 and later added a new field, AMADNS ACTIVE.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for both SFID 297 and SFID 328 to "Y", respectively.

SEC. 4A330: TANDEM TO TANDEM E911

1. FEATURE DESCRIPTION

The Tandem to Tandem E911 feature is a secured feature introduced as a Software Update in 5E12 and requires that SFID 330 ACT field on the SFSYS form (5713-1 Record) be set to "Y" to activate this feature on the switch. The feature number for this feature is 99-5E-4732.

The Tandem to Tandem E911 feature provides the ability to support the transmission of information that is pertinent to an E911 (emergency) or a direct dialed PSAP call from the originating E911 tandem switch to the terminating E911 tandem switch via SS7 (ISUP7) signaling. The types of calls that require transmitting this information include:

- Emergency (911 dialed) calls that originated in a wireline network,

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- Direct dialed (anonymous) calls (caller dials PSAP DN (Directory Number)) that originated in a wireline network,
- Emergency calls that originated in a wireless network,
- Direct dialed calls that originated in a wireless network.

There are no changes to the way the Tandem to Tandem E911 feature will handle origination or routing of the call. This feature covers what happens when:

- the call is transferred by a PSAP to a PSAP served by another E911 tandem switch,
- the call is forwarded by means of Call Forwarding to another E911 tandem switch,
- or, through means of default routing, alternate routing, certain cases of selective routing or transfer, the call is routed to another E911 tandem switch.

For all cases, the information which was received by the originating E911 tandem switch should be preserved so that it can be passed on to the terminating E911 tandem switch.

This feature assumes there is a direct connection between the 5ESS E911 tandem switches. The signaling used over the trunk group is SS7. The outgoing SS7 trunk group on the Originating E911 tandem switch should have a class of service of either LTOLLCON or TTOLLCON. This feature applies only for non-carrier calls which are defined to be calls which do not contain a TNS (Transit Network Selection) (carrier code).

The incoming SS7 trunk group at the terminating E911 Ttandem will have a class of service of LTOLLCONN or TTOLLCONN, and will be defined as a new type of dedicated E911 trunk group.

For an E911 call, when the terminating E911 tandem queries the ESA and the ESN is returned, the DN carried in the CdPN IAM parameter will be used as the Primary PSAP DN, instead of the DN associated with the ESN, to route the call. This will prevent the E911 call from routing back to the first PSAP on the originating E911 tandem. All other information retrieved as part of the data associated with the ESN will be used as is currently done.

There are no changes on how to send a query to the ESA. If the Wireless E911 feature (99-CP-4543) is active in the office and the call is a wireless origination, then the MDN (Mobile Directory Number) and pANI (pseudo ANI) will be used as part of the query. The pANI provides information on the geographic location of the wireless caller. This feature does not alter how the interface to the ESA works.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for Tandem to Tandem E911 feature.

2.1 Activation of the Feature

Since Tandem to Tandem E911 feature depends on the Enhanced E911 feature (SFID 61), (for more information on this feature see Division 2, Section 1BD) SFID 61 must first be activated. The Tandem to Tandem E911 feature is enabled by setting the ACT field for SFID 330 on the SFSYS form (Record 5713-1) to "Y".

To implement the Tandem to Tandem E911 functionality at the terminating E911 tandem switch, the E911 TYPE field on the TKGRP form (Record 5202) must be set to "TNDM_TNDM".

3. TRANSLATION REQUIREMENTS

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New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to enable secured features. Since the Tandem to Tandem E911 feature depends on the Enhanced 911 feature, SFID 61 must first be activated. The Tandem to Tandem E911 feature can then be enabled by setting the ACT field for SFID 330 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group on the 5ESS-2000 Switch. The enumeration "TNDM_TNDM" was added for the E911 TYPE field.

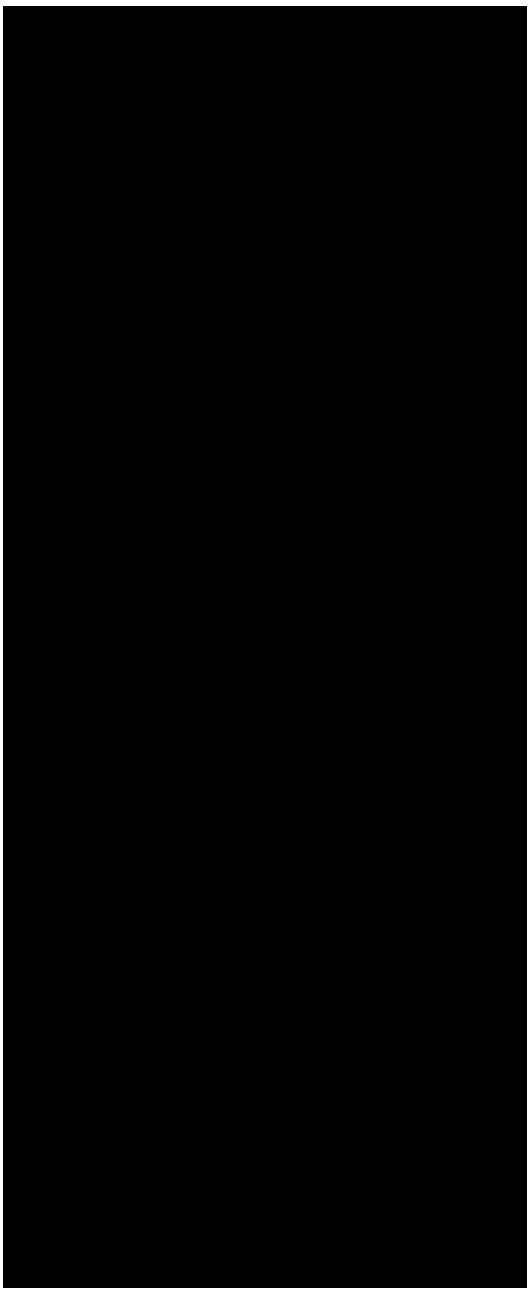

Figure 1 TANDEM TO TANDEM FORM FLOW

SEC. 4A331: TALKING CALL WAITING

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1. FEATURE DESCRIPTION

The Talking Call Waiting feature is a secured feature (SFID (Secured Feature ID)331) that is being deployed as a 5E12 and 5E13 Software Update as well as a 5E14 BMI (Beginning Managed Introduction). The feature number for this feature is 99-5E-4605. Talking Call Waiting can be used on all 5ESS-2000 Switches including CDX, VCDX, and SM-2000.

This feature provides the subscriber with a Call Waiting tone followed by the spoken name of the caller when the subscriber is busy on a stable call and a second call comes in. The spoken name is provided by an external IP (Intelligent Peripheral). Interactions with CIDCW (Caller ID on Call Waiting) and CWD (Call Waiting Deluxe) features are supported.

The Talking Call Waiting feature does not support all configurations of the ASI (Advanced Services Interface) feature. When the ASI feature is provisioned with attribute MEA (Modified Extended Access) on the ASIGP form (5630-4 Record) set to "Y", the Talking Call Waiting feature will not be provided. Standard call waiting tone will be provided without the spoken name of the call waiting party.

2. FEATURE ASSIGNMENT

For 5E12 and later, to provision this feature:

- Activate secured feature by setting the ACT field for SFID 331 on the SFSYS form (5713-1 Record) to "Y".
- Set appropriate TCW parameters on the OFCOPT form (5509 Record).
- Create a CWT (Call Waiting Terminating) feature on the CWTFD form (5603-1 Record) with INVOCATION set to "TERM", if feature doesn't already exist.
- Create a BFG (BRCS (Business and Residential Custom Services)Feature Group) with TCW set to "Y" on the BFG form (5625 Record), if BFG is to be used to assign TCW to a line.
- Assign either a CWT feature or a BFG (with a CWT feature) to the line on the LINEFA form (5112 Record), if the line does not have a CWT feature assigned yet.
- Set TCW to "Y" on the CWTLPA form (5603-2 Record), if not done before.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625-1	4	26A	12.9
CWTFD	5603-1	4	4A	12.15
CWTLPA	5603-2	4	4B	1.24
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

BFG form (5625-1 Record) - The 5625 Record contains information for the BRCS (Business and Residential Custom Services) Feature Grouping. The TCW field was added.

CWTFD form (5603-1 Record) - This form is used to define a number of separate features by selecting various feature options for Call Waiting. Added data rules and the TCW field.

CWTLPA form (5603-2) - The 5603-2 Record contains non-mlhg line parameters to construct a Call Waiting feature. The TCW field was added.

OFCOPT form (5509) - The 5509 Record provides the office option global parameters residing in the Central Processor. Added data rules and the ANS TIMER, DISC TIMER, DN1, DN2, TCW DAS, and TCW SCR fields.

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SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 331 must be set to "Y" on this form in order to enable this feature.

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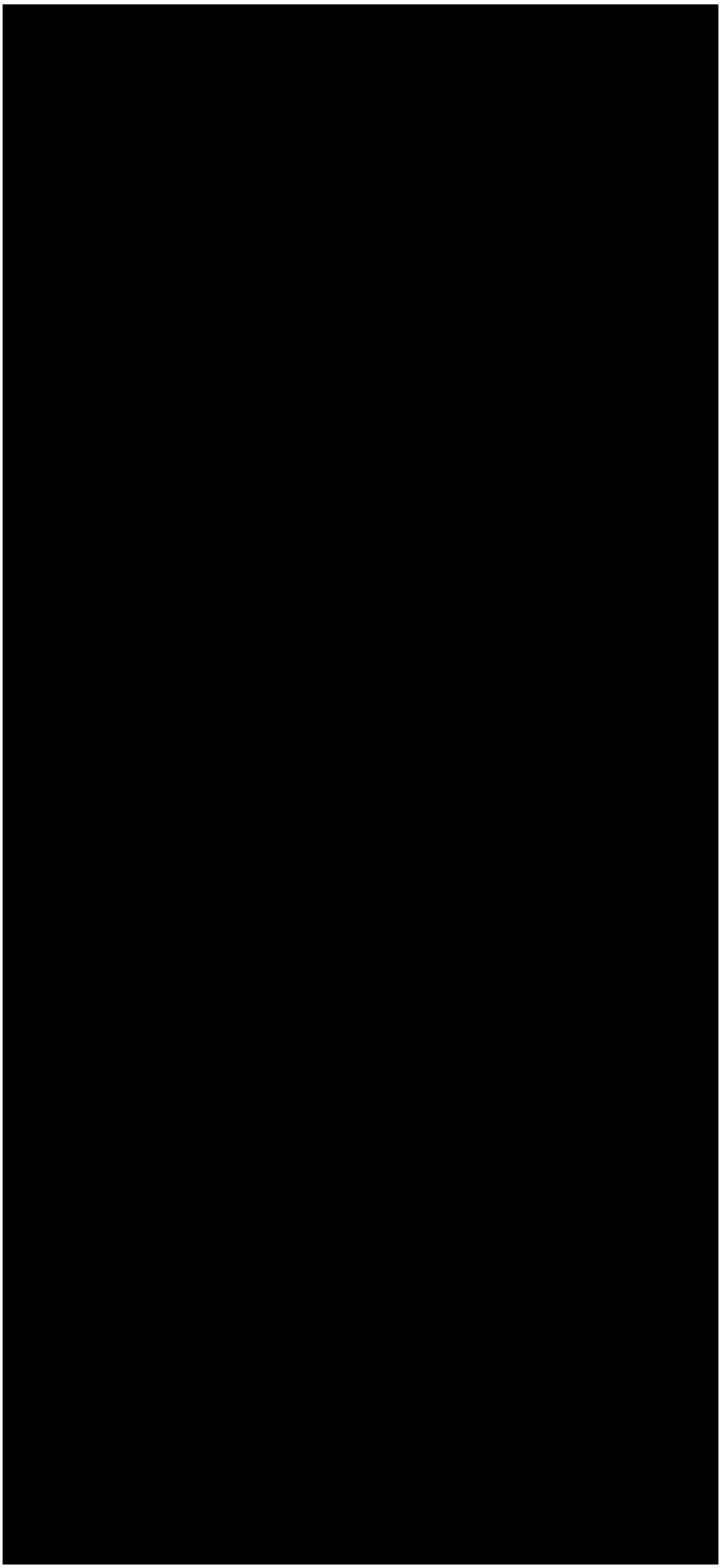

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Figure 1 FORM FLOW FOR TALKING CALL WAITING

SEC. 4A332: PAY PHONE COMPENSATION FOR TOLLFREE CALLS

1. BACKGROUND

ANI (Automatic Number Identification) causes the local switch to outpulse the identity of the originating station to CAMA (Centralized Automatic Message Accounting), TSPS (Traffic Service Position System), E911, OS (Operator Service), Access Tandem, IC (Inter-LATA carrier), or INC (International Carrier). ANI information digits are 1 or 2-digit codes that precede the 7 or 10 digit DN (Directory Number) of the calling party. One digit ANI information (ANI I) is used when a call is routed to CAMA, E911, or TSPS. Two digit ANI information (also called ANI II, II digits, or ANI pairs) are used for equal access use, when routing a call to a carrier, or to an OS system. The purpose of the ANI information digits is to provide information about the calling party DN, which is then used for billing and/or routing purposes.

All 1-digit ANI codes are hardcoded. 2-digit ANI codes can be hardcoded or assigned through Recent Change using Flexible ANI Information Digits Assignment (SFID 38) or "Flexible ANI Enhancement" (SFID 142) features. The SFID 38 feature allows the switch owner to assign ANI II DIGITS based on the RTIDX form (5303 Record), MC ROUTE INDEX field on the MCRTIDX form (5304 Record), and Class of Service of a line. The SFID 142 feature allows the switch owner to assign ANI II DIGITS based on a line's Screen Index with an associated per carrier send/no-send parameter SEND ANI II on the ICF form (5305-1/2 Record). If Flexible ANI II DIGITS are assigned in multiple forms and if they are hard-coded ANI II DIGITS, II digits are selected according to the following precedence rules (from highest to lowest):

1. Inter-LATA Restricted ANI pairs (08, 68, 78).
2. Hard-coded feature ANI pairs (e.g., SSP800).
3. Service-associated Flexible ANI pairs associated with simulated facilities (e.g., OUTWATS, SDN).
4. Service-associated Flexible ANI pairs associated with dedicated access facilities (e.g., dedicated access OUTWATS).
5. Screen Index-associated Flexible ANI pairs.
6. Class-of-service Flexible ANI pairs.
7. Hard-coded class-of-service ANI pairs, or ANI6 or ANI7 (e.g., multiparty, coin).

2. FEATURE DESCRIPTION

Available with 5E11 and later Software Releases, feature 99-5E-4868 "Pay Phone Compensation for Tollfree Calls" and feature 99-CP-4847 "Tollfree Calling Enhancement for Flexible ANI II" are combined together in this feature and can be locked and unlocked using SFID 332.

2.1 Feature Definition for 99-5E-4868

The Pay Phone Compensation for Tollfree Calls feature provides the capability to identify tollfree calls, as well as the type of pay phone originating the call, when the tollfree number is translated to a POTS number (see Figure 1). The identification of the pay phones originating a Tollfree call is achieved by associating a unique Tollfree II digits for each type of pay phone. For Tollfree calls after performing an SCP query for which the SCP has returned a POTS number (translated number) and a carrier, the switch maps the Original II digits to Tollfree II digits and signal the Tollfree II digits to the carrier, if the Tollfree II Subscription is set to "Y" for that carrier.

NOTE: Currently, Tollfree calls translated to a POTS number are sent to the carrier with II digits of 24 overriding the Original II digits, for calls originated from all types of phones, thus the carrier

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cannot determine the identity of the originating phone.The Tollfree II digits provides the identity of the originating phone to the carrier for Tollfree calls. If Tollfree II Subscription is set to "N" for the carrier, II digits of 24 are sent to the carrier. The Original II to Tollfree II mapping table may look like the following:

Original II	Tollfree II*	Type of Phone
27	XD (e.g., 25)	Network Controlled (dumb) Payphone
70	XE (e.g., 25)	COCOT (Smart Payphone)
29	XF (e.g., 25)	Inmate Phone
etc.	etc.	etc.
* Industry Assigned		

The industry has agreed that an II value of 25 should be signaled for tollfree calls that originate from a paystation and route to a carrier with a translated number.

XD, XE, and XF are II digits chosen from unused II digits 00 through 99. The switch owners need to standardize the values for XD, XE, and XF, etc., so that these II digits become uniform across the entire network. The mapping table will have any set of digits, 00 through 99 as valid entries or it may be left blank. If the valid entry is blank, no change or modifications to the number will be made based on the mapping table. The Original II to Default II mapping will be done once.

- ***NOTE:*** The switch owner identifies a network controlled phone with II of 27, a COCOT phone with II of 70, and an inmate phone with II of 29. With this feature, XD=25 means a Tollfree call from any payphone.

This feature applies to a 5ESS Switch serving as an Access Tandem or EO. In the case of an Access Tandem (Access Tandem does the SCP query), the Original II digits will be the II digits received in the signaling message from the EO where the call has originated. In the case of EO (the EO does the SCP query), the Original II digits will be the digits as determined by call processing.

This feature applies only when the Tollfree number is translated to a POTS number by the SCP. This feature applies to SSP800 (IN) Tollfree calls only. This feature does not apply to AIN (ASP) Tollfree calls.

2.2 Feature Definition for 99-CP-4847

The Tollfree Calling Enhancement for Flexible ANI II feature provides the mechanism to restrict or allow forwarding of Original II digits subsequent to SCP (Service Control Point) queries on a per carrier basis for non-translated Tollfree calls (see Figure 2). The 5ESS Switch Tandem/EO (End Office) would provide a Default II Subscription indication with a "Y" or "N" (default) value on a per carrier basis. After performing an SCP query for which the SCP has returned a carrier ID and a Tollfree number (non-translated Tollfree number), the switch checks the carrier Default II Subscription. If "N", the Original II digits are forwarded as received from the EO. If "Y", the Original II digits received from the EO are checked to determine which Default II values to forward. The Original II to Default II mapping would be recent changeable. For example, the Original II to Default II mapping table may look like the following table:

Original II	Default II*	Type of Phone
27	XA (e.g., 27)	Network Controlled (dumb) Pay phone
70	XB (e.g., 07)	COCOT (Smart Pay phone)
29	XC (e.g., 07)	Inmate Phone
etc.	etc.	etc.
* Industry Assigned		

XA, XB, and XC represent customer assignable II digits. The switch owners need to standardize the values for XA, XB, and, XC etc., so that these II digits become uniform across the entire network. The mapping table will have any II digits 00 through 99 as valid entries or left blank. If the valid entry is blank, no change or modifications to the number will be made based on the mapping table. The Original II to Default II mapping will be done once.

This feature applies to 5ESS Switch serving as an Access Tandem or EO. In the case of an Access Tandem (Access Tandem does the SCP query), the Original II digits will be the II digits received in the

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signaling message from the EO where the call has originated. In the case of EO (the EO does the SCP query), the Original II digits will be the digits as determined by call processing.

This feature applies only when the Tollfree number is not translated to a POTS number by the SCP. This feature applies to SSP800 (IN) Tollfree calls only. This feature does not apply to AIN (Advanced Intelligent Networks) (ASP) Tollfree calls.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ICF	5305-1/2	3	3R	10.3
SFSYS	5713-1	3	5AR	8.22
TFANI	5578	3	5BS	8.74

ICF form (5305-1/2 Record) - This form is used to define the characteristics of Inter-LATA (Local Access Transport Area) and Intra-LATA carriers.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 332 to "Y".

TFANI form (5578 Record) - This form is used to map Original II digits to Default II digits and Tollfree II digits.

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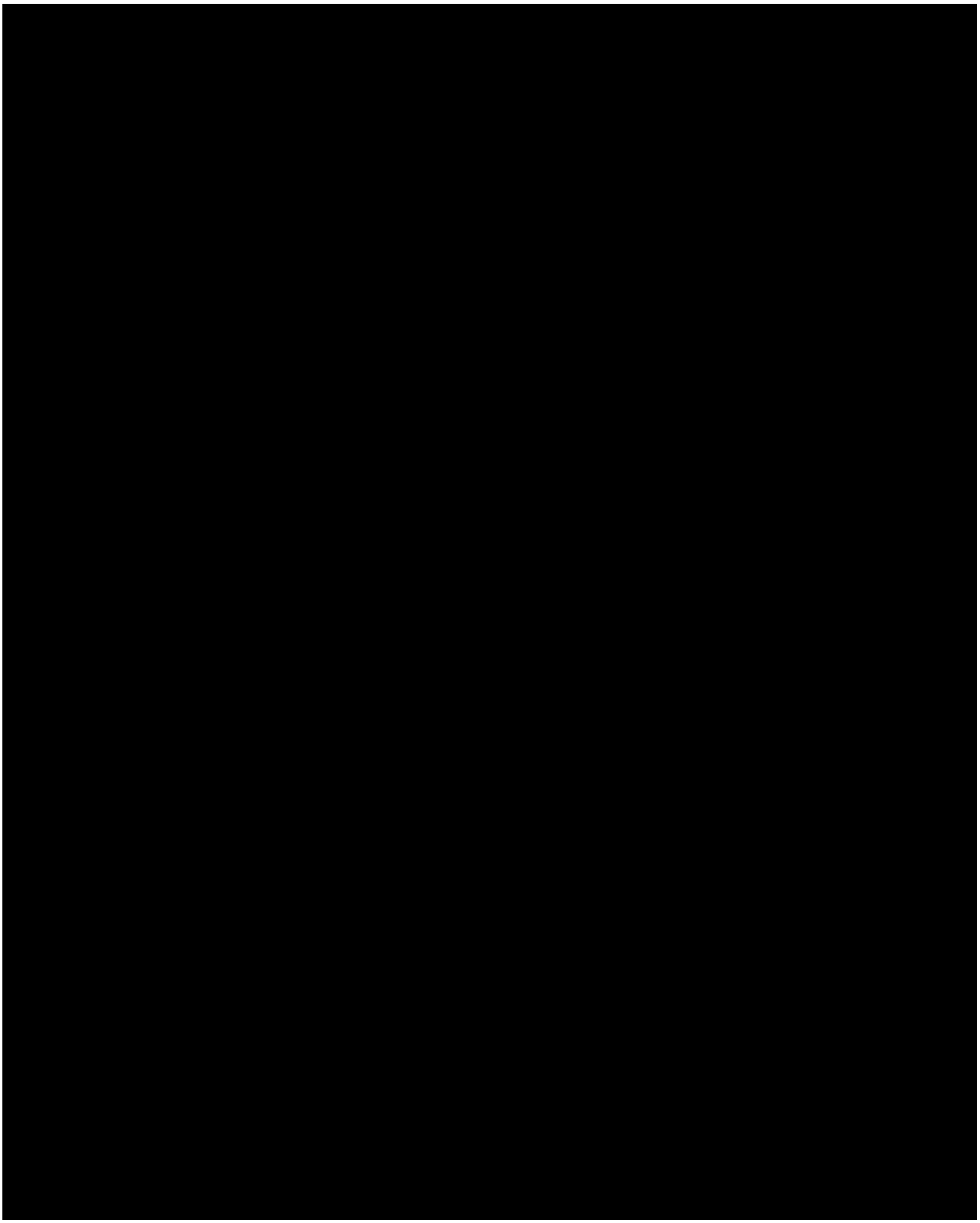

Figure 1 FEATURE 99-CP-4868, FLEXIBLE ANI 800 APPLICATION FOR CONVERTED POTS NUMBER

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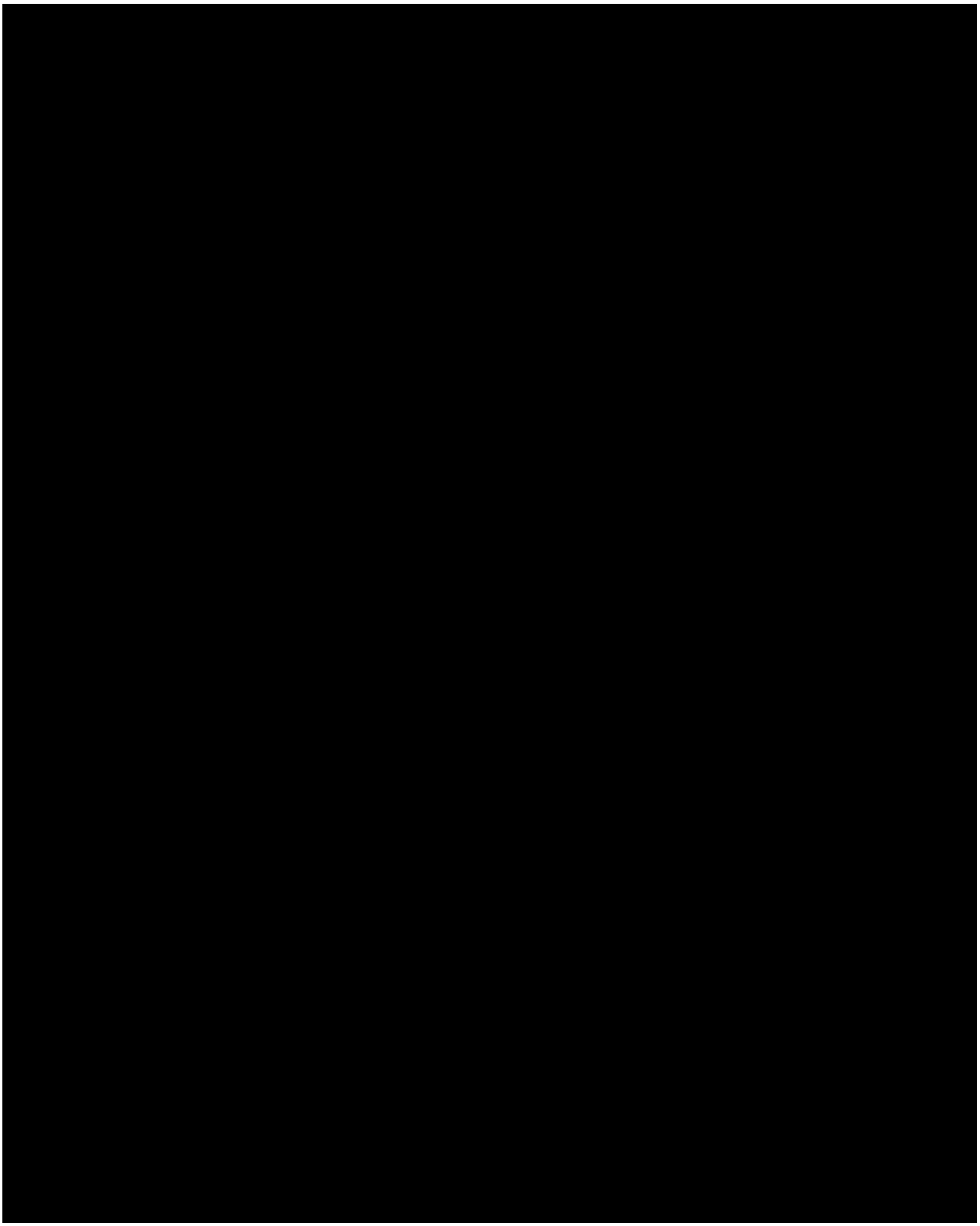

Figure 2 FEATURE 99-CP-4847, FLEXIBLE ANI 800 APPLICATION FOR NON-CONVERTED POTS NUMBER

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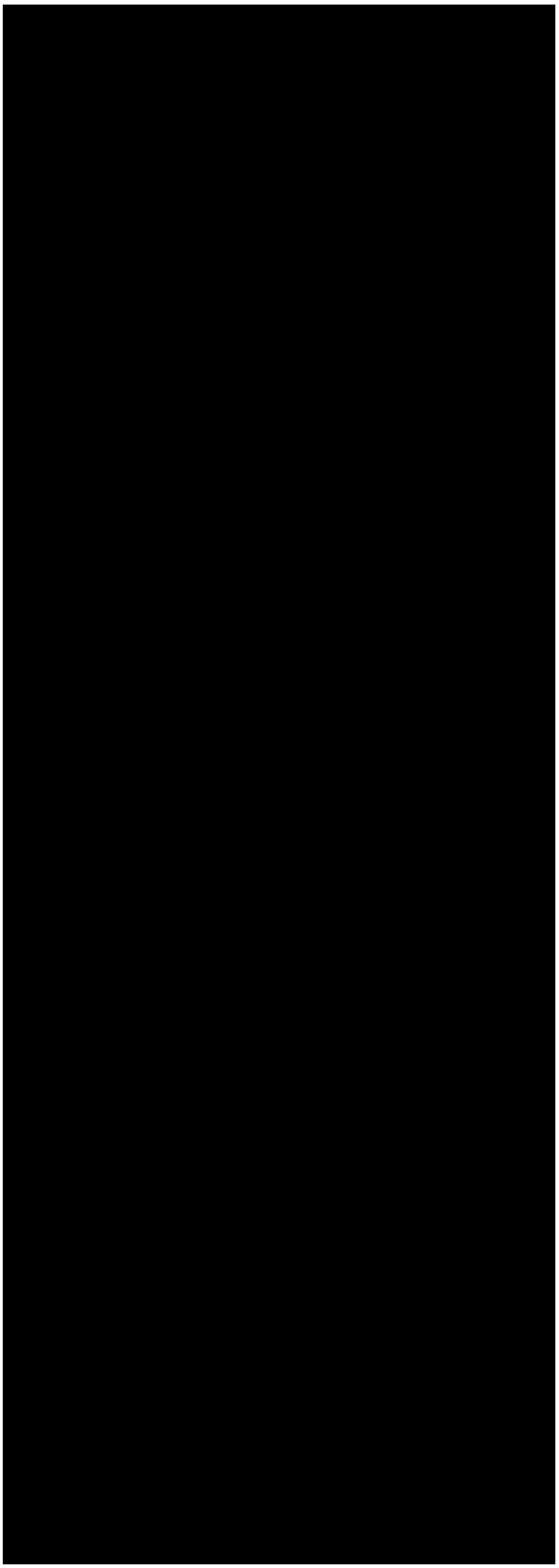

Figure 3 FORM FLOW FOR PAY PHONE COMPENSATION FOR TOLL FREE CALLS

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SEC. 4A333: ASP STOR INTERWORKING WITH ORIG BUSY LINE/NO ANSWER WITH EXTENDED RINGING

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4A335: CALL FORWARD DON'T ANSWER - RING CONTROL

1. FEATURE DESCRIPTION

Available as a 5E12 Software Update and later and in the Beginning Managed Introduction of the 5E14 Software Release, the CFDARC (Call Forward Don't Answer - Ring Control) feature is a secured feature using SFID (Secured Feature ID) 335. The feature number for this feature is 99-5E-7121.

The CFDARC feature changes the end-user interface for the CFDA (Call Forward Don't Answer) feature, so the end-user can prompt to specify the number of rings before a call is forwarded to voice mail or other locations. Currently, the end-user is prompted to enter the total number of seconds before the call is forwarded. The new Ring Control provides a new end-user interface to convert the number of rings to a CFDA TIMEOUT value in seconds.

This feature only approximates the number of rings offered to the CFDA user before forwarding the call by assuming the average ring cycle time is six seconds. The CFDARC feature is not required to keep a count of the actual number of rings offered to the CFDA user before forwarding the call.

2. FEATURE ASSIGNMENT

To activate this feature, set the ACT field for SFID 335 on the SFSYS form (5713-1 Record) to "Y".

On the following forms, respectively, set the CFDARC field to "Y":

- CFWFD form (5614-1/2 Record)
- CFWLPA form (5614-3 Record)
- CFWMPA form (5614-4 Record)

See Figure 1 for provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFWFD	5614-1/2	4	15A	12.12
CFWLPA	5614-3	4	15B	1.22
CFWMPA	5614-4	4	15C	1.22
SFSYS	5713-1	3	5AR	8.22

CFWFD form (5614-1/2 Record) - This form is used to define the Call Forwarding feature. For 5E12 and later, added data rules for the FWD CONDITION field and the new CFDARC field and its associated data rules.

CWLPA form (5614-3 Record) - This form is used to define the specific parameters assigned to a line associated with specific Call Forwarding features. For 5E12 and later, added the CFDARC field and its associated data rules.

CFWMPA form (5614-4 Record) - This form is used to define specific parameters assigned to a Multi-Line

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Hunt Line associated with specific Call forwarding features. For 5E12 and later, added the CFDARC field and its associated data rules.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate this feature, the ACT field for SFID 335 must be set to "Y".

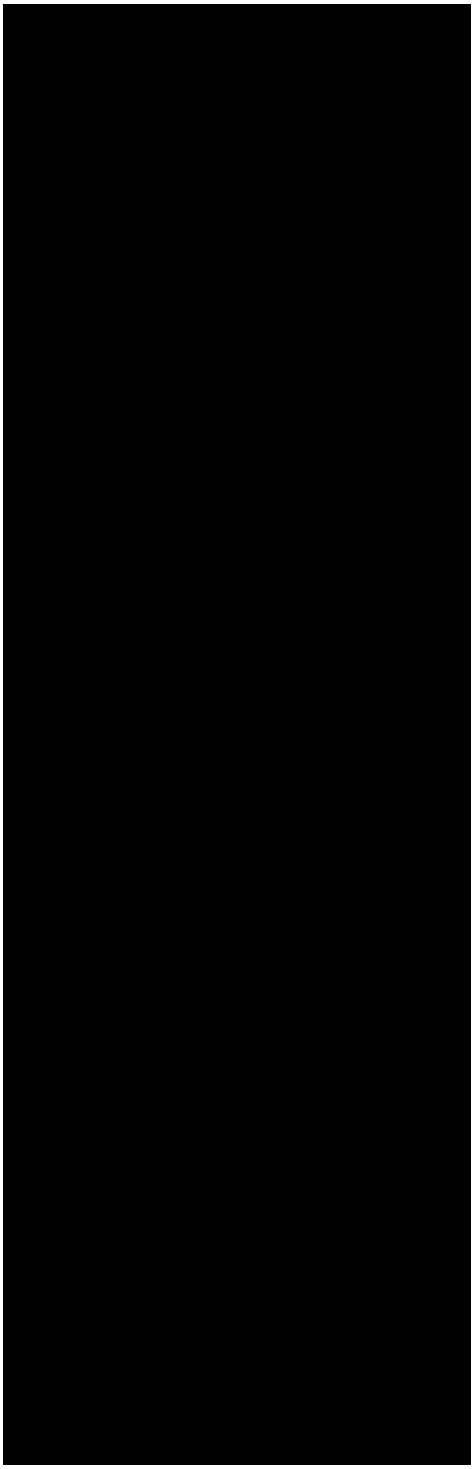

Figure 1 FORM FLOW FOR CALL FORWARD DON'T ANSWER - RING CONTROL

SEC. 4A340: TOLL-FREE TREATMENT FOR NPA 866 - 822

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1. FEATURE DESCRIPTION

Available with 5E12 and later, the Toll-Free Treatment for NPA (Numbering Plan Area) 866 - 822 feature is a secured feature using SFID 340, has feature number 99-5E-7002 and must be purchased before being activated. This feature is also dependent on the Toll Treatment for NPA 888 - Phase 1 (99-CP-3042, SFID 158).

Available with 5E12 and later, this feature provides the LEC (Local Exchange Carrier) network with an additional set of toll-free DNs (Directory Numbers) by expanding 800 toll-free service to include five more NPAs (Numbering Plan Areas): 866 855, 844, 833, and 822, besides 800, 888 and 877.

This feature is built on the existing SSP800 (Service Switching Point 800) NS (Number Service) Feature platform. As a result, all current aspects of SSP800 functionality on the 5ESS Switch apply to this feature. This includes the querying process, billing, measurements, network management, test query message, send notification, event trapping, etc.

Consistent with SSP800 requiring an interface to an SCP (Service Control Point) database, the new 866 - 822 NPA DNs also need to query the database to obtain actual routing information for a call. The interface to the SCP database is handled by CCS7 TCAP (Common Channel Signaling System 7 - Transaction Capabilities Application Protocol) either in the AM (Administrative Module) or a DLN (Direct Link Node).

The querying process occurs at the SSP (Service Switching Point) office. The SSP office may be the same office where the call originates, such as an EO (End Office), or an intermediate office, such as an AT (Access Tandem), where the call must route over trunks in order to perform the querying process. The calls may be directed to intermediate, SSP offices from End Offices that are designated as:

- EA (Equal Access) EO
- non-conforming EO using traditional signaling or
- non-conforming EO using CAMA (Centralized Automatic Message Accounting) signaling.

The only signaling difference between SSP800 and this feature is that this feature does not support 00Y translation of an 866 - 822 NPA DN as the called DN, when signaled from a non-conforming EO using traditional signaling. The AT would be unable to interpret the 00Y code as an 866 - 822 NPA DN on the receiving end as well.

Office data in intermediate and end offices must be provisioned similar to the current handling of 800 NPA DNs, except for 00Y translation, in order to recognize 866 - 822 NPA DNs as Toll-Free service calls when dialed,signaled, or received in an office. Other switching equipment interfacing with the 5ESS must be modified to support the new 866 - 822 NPA DNs. For example, the STP (Signaling Transfer Point) should add additional global title table entries to support 866 - 822 NPAs as part of valid global title digits, or the SCP database should increase its number of database entries to accept and respond to 866 - 822 NPA DN queries.

The AMA (Automatic Message Accounting) record for access charge billing is made at the SSP office, once the carrier information is provided, which is consistent with Number Services. This feature reuses the existing Number Services structure codes used for SSP800.

The existing counts for 800 Number Services on the 30-minute traffic report and the 5-minute surveillance network management report are pegged for 866 - 822 NPA DN calls. Although the count headings in these reports are unchanged, the count totals include the new 866 - 822 NPA DN calls.

The existing ACG (Automatic Call Gap) and MCG (Manual Call Gap) control installation, removal, and application procedures apply to 866 - 822 NPA DNs. This feature neither increases the maximum number of controls nor does it modify the control tables in any way.

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The SSP test query input message, TST:NS800, will accept 866 - 822 NPA DN input values and send the TCAP test queries. Using the existing test query functionality, the queries for 866 - 822 NPA DNs are sent to the SCP database and the results are displayed in output messages.

2. FEATURE ASSIGNMENT

No new provisioning is provided by this feature but the service provider must ensure that other nodes in the network will accept the new SAC code (that is, STPs (Signaling Transfer Points), SCPs (Service Control Points), switches, etc.).

When a number using the new toll free SAC is assigned, the switch will collect the digits, recognize the new SAC, use the new SAC to generate a SCP database query, recognize the responses (may include the new SAC), and route the call. In addition, the SAC may be outpulsed from a switch that is not a Service Switching Point (SSP). The SAC must be recognized and screened regardless of whether the subscriber dials the new SAC, the new SAC is returned from a database query, or the new SAC is inpulsed.

This feature is activated for the office by setting the ACT field for SFID 340 to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

This feature is a secured feature and is activated by setting the ACT field for SFID 340 to "Y" on the SFSYS form (5713-1 Record).

4. GLOSSARY

AM	Administrative Module
AMA	Automatic Message Accounting
ACG	Automatic Call Gap
AT	Access Tandem
CCS7	Common Channel Signaling System 7
CAMA	Centralized Automatic Message Accounting
DLN	Direct Link Node
DN	Directory Number
EA	Equal Access
EO	End Office
LEC	Local Exchange Carrier
MCG	Manual Call Gap
NPA	Numbering Plan Areas
NS	Number Services
SCP	Service Control Point
SSP	Service Switching Point

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STP Signaling Transfer Point

TCAP Transaction Capabilities Application Protocol

SEC. 4A341: DISTINCTIVE CALL FORWARDING ALERT

1. FEATURE DESCRIPTION

The Distinctive Call Forwarding Alert feature (99-5E-7090) is a secured feature (SFID 341) that is being deployed on the 5ESS Switch in a Software Update for 5E12 and 5E13, and in the BMI (Beginning Managed Introduction) of the 5E14 Software Release.

This feature provides a "recall dial tone" indication to an analog or ISDN (Integrated Services Digital Network) subscriber line that has a CFV (Call Forwarding Variable) type feature activated. This would be any Call Forwarding feature with the FWDCOND attribute set to "BOTH". The "recall dial tone" indication consists of three bursts of 100 milliseconds on and 100 milliseconds off, followed by a steady dial tone.

This indication reduces the number of subscriber activation attempts when the CFV type feature is already active. Similarly, this feature reduces the number of deactivation attempts when the feature is already inactive. Subscribers will feel they have better call management control and knowledge of their CFV service.

2. FEATURE ASSIGNMENT

For 5E12 and later, to provision this feature, the ACT field for SFID 341 on the SFSYS form (5713-1 Record) must be set to "Y" and depending upon whether the application is for a feature on lines, or DSLs (Digital Subscriber Line), the following forms must be populated accordingly:

- Set the CFV ALERT field on the CFWFD form (5614-1/2 Record) to "Y" when the Call Forwarding Variable Alert should be active for a particular feature. Also, when this field is set to "Y" the user receives a recall dial tone upon going off-hook and when this field is set to "N" the switch provides normal dial tone when going off-hook.
- Set the CFV ALERT field on the CFWLPA form (5614-3 Record) to "Y" when the Call Forwarding Variable Alert should be active for a particular line or DSL.
- Set the CFV ALERT field on the CFWMPA form (5614-4 Record) to "Y" when the Call Forwarding Variable Alert should be active for a particular line or DSL.

NOTE: The CFV ALERT attribute on the CFWFD form (RC View 12.12) does not invoke Distinctive Alerting for the USCF (Usage Sensitive Call Forwarding) feature. For more information on the Usage Sensitive Call Forwarding (99-5E-7082) feature, see Division 2, Section 4A544.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFWFD	**5614-1/2**	**4**	**15A**	**12.12**
CFWLPA	**5614-3**	**4**	**15B**	**1.22**
CFWMPA	**5614-4**	**4**	**15C**	**1.22**
SFSYS	5713-1	3	5AR	8.22

CFWFD form (5614-1/2 Record) - This form is used to define the CFPF feature which is to be assigned to the TNs or MLHGs which are forwarding calls over private facilities. The preconstructed feature /CFPF or

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a constructed feature with CFPF ALW set to "Y" may be used to indicate calls will be forwarded over private facilities. Added the CFV ALERT field.

CFWLPA form (5614-3 Record) - This form is used to assign a specific FORWARD TO DN and ACCT CODE or ATH CODE to a non-multiline hunt line with this call forwarding feature. Added the CFV ALERT field.

CFWMPA form (5614-4 Record) - This form is used to assign a specific FORWARD TO DN and ACCT CODE or ATH CODE to a multiline hunt line with this call forwarding feature. Added the CFV ALERT field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 518 to "Y".

SEC. 4A342: MODULE 55803 ENHANCEMENT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-110 Long Distance Platform.*

SEC. 4A343: ASP MID CALL EVENT DETECTION

1. FEATURE DESCRIPTION

The ASP (Advanced Services Platform) Mid Call Event Detection feature is being deployed as a 5E13 and 5E14 Software Update and for the BMI (Beginning Managed Introduction) of the 5E15 Software Release. This feature is associated with two independent SFIDs (Secured Feature IDs):

- SFID 343 - O_Disconnect_Called (99-5E-7115)
- SFID 345 - O_DTMF_Entered (99-5E-7115.A)

These two secured features have a dependency upon the basic ASP feature (SFID 126). For further information on this feature, see Division 2, Section 4A126.

The capabilities provided by this feature include two new events which may be specified in a NEL (Next Event List) which is included in one of the following SCP (Service Control Point) response messages:

- Analyze_Route
- Forward_Call
- Continue

The OBLNA (Originating Busy/NoAnswer Subsequent Event Detection feature (99-5E-1576A) defines the use of Next Event Lists in conjunction with Analyze_Route and Forward_Call routing responses. The Mid Call Event Detection feature builds upon the functionality provided by the OBLNA feature (although this feature is not dependent any way upon the OBLNA feature). Support for NELs in the Continue messages from the SCP is a new capability provided by the Mid Call Event Detection feature, that is used subsequent to reporting a Mid Call Event during a stable call, to re-arm Mid Call Event Detection while continuing the stable call to the current called party.

The two new events defined by this feature are as follows:

- O_Disconnect_Called

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- O_DTMF_Entered

1.1 O_Disconnect_Called

The O_Disconnect_Called event is an event that the switch can detect in the OCM (Originating Call Model) upon instructions from the SCP. The SCP uses a NEL (Next Event List), which was implemented on the 5ESS Switch for the OCM with the OBLNA feature. The SCP uses the O_Disconnect_Called event to request the switch to monitor the call when the called party hangs up. Upon the called party hanging up (going on hook), the switch reports back to the SCP (using the O_Disconnect_Called event) that the called party hung up. The SCP may then instruct the switch to play an announcement, or play an announcement and collect digits, or to route the call to another destination. The choices that the SCP makes were made available with the BLNA (Busy Line/No Answer) feature.

1.2 O_DTMF_Entered

The O_DTMF_Entered event is an event that the switch can detect (in the OCM) upon instructions from the SCP. As with the other originating events, the SCP may use a NEL containing the new O_DTMF_Entered parameter to instruct the switch to monitor for DTMF (Dual Tone Multi-Frequency) input from the calling party. The SCP may request either a specific digit string (1-4 digits in length) or "Any Digit String" of a specified (1-4 digits) length (e.g., any 2 digits, any 3 digits, ...). The use of "any single digit" is highly susceptible to "talk-off", the case when human speech is mistakenly interpreted as DTMF tones, therefore it is not recommended.

2. FEATURE ASSIGNMENT

For 5E13 and later, to provision this feature:

- Set the ACT fields for SFID 126, SFID 343, and SFID 345 on the SFSYS form (5713-1 Record) to "Y".
- To assign the inter-digit timing interval for O_DTMF_Entered Event digits collection:
  - Set the ODTMF INTERDIG TIM field to the desired number of seconds on the ASPOPT form (5670 Record).
- To specify the maximum number of universal tone decoders for the Mid Call Event feature as a percentage:
  - Set the ODTMF UTD LIMIT field to the desired percentage number on the IMINFO form (5510 Record).
- For 5E15 and later, to increase the SRE (Software Resource Engineering)the Mid Call Event feature:
  - Set the MID CALL EVENT ON field to "Y" on the ASPOPT form.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPOPT	**5670**	**4**	**31G**	**8.49**
IMINFO	**5510**	**3**	**5J**	**8.27**
SFSYS	5713-1	3	5AR	8.22

ASPOPT form (5670 Record) - This form is used to define ASP (Advanced Services Platform) office

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parameters for a switch. Added the ODTMF INTERDIG TIM field and related data rules.

IMINFO form (5510 Record) - This form is used to gather and build miscellaneous data related to a given SM. Added the ODTMF UTD LIMIT field and related data rules.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the ASP Mid Call Event Detection feature, the ACT fields for SFID 126, SFID 343, and SFID 345 must be set to "Y".

SEC. 4A344: RAW FORMATTED OUTPUT FOR OFFICE RECORDS

1. FEATURE DESCRIPTION

Raw Formatted Output for Office Records feature is a secure feature having feature number 99-5E-0013 and is available as a Software Update for 5E13 and BMI for the 5E14 Software Release and later. This feature is controlled by SFID 344 and is supported by RC (Recent Change) office records. It is used to create office records in a raw format. Each row of output in a "RAW" formatted office record is an instance of the Recent Change view associated with the form type being processed. Each row contains tab separated values associated with the fields defined for the particular Recent Change view. When using this format the output is machine readable and can be post processed more easily than the default formatting of office records.

Office records that are to be raw formatted are scheduled in either of the two following ways:
- OP:OFR:CAT=XXXX,FORMAT=RAW
- OP:OFR:FORM=XXXX,FORMAT=RAW

2. FEATURE ASSIGNMENT

This feature is activated by setting the ACT field for SFID 344 to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the Raw Formatted Output for Office Records feature, the ACT field for SFID 344 must be set to "Y".

SEC. 4A345: ASP MID CALL EVENT DETECTION O_DTMF_Entered

1. FEATURE DESCRIPTION

The ASP (Advanced Services Platform) Mid Call Event Detection O_DTMF_Entered feature (99-5E-7115.A) is a secured feature (SFID 345) that is being deployed as a 5E13 and 5E14 Software Update and a BMI (Beginning Managed Introduction) for 5E15. It is being documented along with the O_Disconnect_Called feature (99-5E-7115) (SFID 343). Please see Division 2, Section 4A343 for more information on these two features.

SEC. 4A346: NP (NUMBER PORTABILITY) - APPEND BAF MODULE 164 WITH CHARGEABLE ACCOUNT NUMBER TO THE CNA (CONNECTING NETWORK ACCESS)

1. FEATURE DESCRIPTION

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The NP - Append BAF Module 164 with CNA (Chargeable Account Number) is a secured feature (SFID 346) that is available with 5E13 and later. The feature number for this feature is 99-5E-7304.

This feature, 99-5E-7304, is being introduced in two separate phases. Phase 1 was introduced in 5E12 via a customer technical support CRAFT BWM in June of 1999. This phase 1 version is controlled by Secured Office Option (SFID 346), and places either the CHG number, CPN, or Trunk Group Billing Number in tables 13 and 14 of the base CNA AMA Structure Code. There is no type of number indication available for this table. In Phase 2 the EBAF MOD 164 will replace use of table 13 and 14 for capturing the CHG, Forwarding Party Number, or CPN when, and only when, both the SFID 346 and a new per-trunk group option are active.

2. FEATURE ASSIGNMENT

In phase 1 when the SFID 346 is enabled, all CNA BAF AMA CC720 base records will populate Table 13 and 14 of Structure Code 0625 utilizing:

- the CNA Trunk Group BN if OFID 719 is also active in the office or SM.
- the SS7 CHG or MF ANI if received.
- the SS7 CPN if CPN is received and if SS7 CHG is unavailable.
- the CNA Trunk Group BN if neither ANI/SS7 CHG nor CPN is received.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the NP - Append BAF Module 164 with Chargeable Account Number to the CNA feature, the ACT field for SFID 346 must be set to "Y".

TKGRP form (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form. For this feature, we added the CNA MOD 164 field.

SEC. 4A347: ANNOUNCEMENT ON DETECTION OF NPA SPLIT

1. BACKGROUND

Prior to this feature, customers dialing the old Numbering Plan Area Nxx-xxxx (or Nxx-xxxx) sequence were not informed by an announcement of future changes.

2. FEATURE DESCRIPTION

The Announcement on Detection of NPA (Numbering Plan Area) Split feature is a secured feature being deployed on the 5ESS Switch in a Software Update for the 5E13 Feature Release 4, 5E14 Feature Release 3, and in the BMI (Beginning Managed Introduction) of the 5E15 Software Release. This feature is controlled by SFID (Secured Feature ID) 347. The feature number is 99-5E-7247.

This feature provides additional information (i.e., announcement) to the customer during the permissive dialing sequence. It allows an announcement to be played to a caller who dials a designated digit string. The announcement informs the caller that the digit string dialed by the caller is part of NPA Split and

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requires that the call be dialed differently at some future date. The new NPA information is also part of the announcement heard by the caller.

For an office undergoing an NPA Split, there is a three to six-month permissive dialing period for the NPA Split. During this NPA Split permissive period, a called party can be dialed using the old DN (Directory Number) or the new DN. If the calling party uses the old DN, then the caller is routed to a message that reminds the caller that as of some given date, the old DN will not be accepted. After hearing this message, the caller is connected to the called party. At the end of the permissive dialing period, use of the old DN results in a connection to an announcement informing the caller that the new area code is required for completing the call. The call is terminated and the caller must hang up and redial DN to make the call.

3. FEATURE ASSIGNMENT

For 5E13 and later, to activate this feature:

- set the ACT field for SFID (Secured Feature ID) 347 on the SFSYS form (5713-1 Record) to "Y".
- set the FIXED ROUTE TYPE field to "NPA_SP" on the FIXRT form (5303-1 Record).
- activate the Announcement Digit Inflection Scheme by setting the APPLICATION field to "NPA_SP" on the following forms: (The new announcement can be provisioned by the customer using these forms.)
  1. ANNAPL form (5529 Record).
  2. ANNDG form (5532 Record).
  3. PHRASE form (5534 Record)
  4. ANNHD form (5531 Record).
     - ***NOTE:*** The HEADER ID field on this form must be "1".
- set the NPA SPLIT ANNC field to "Y" on the LDIT form (5300-3B/5B Record) and RDIT form (5300-7B/8B Record) to indicate that an NPA Split announcement is to be given.
  - ***NOTE:*** The RDIT form is optional to provision this feature.
- On the NPANXX form (5580 Record), enter the 3-digit old NPA that is being split.

See Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNAPL	5529	3	5AC	8.64
ANNDG	5532	3	5AF	8.60
ANNHD	5531	3	5AE	8.61
FIXRT	5301-1	3	3G	10.1
LDIT	5300-3B/5B	3	3C	9.3
NPANXX	5580	3	5BU	8.33
PHRASE	5534	3	5AH	8.63
RDIT	5300-7B/8B	3	3H	9.9
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

ANNAPL form (5529 Record) - This form is used to enter the SMs on which the DSU2-RAFs (Digital Service Unit Model 2-Recorded Announcement Frames) reside and the type of application announcements supported by that RAF. For 5E13 and later, a data rule was modified for the APPLICATION field to add

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"NPA_SP" valid entry, valid entry table for the APPLICATION field was modified to add "NPA_SP" valid entry, and data rules for the APPLICATION field were added.

ANNDG form (5532 Record) - This form contains a list of inflection commands and phrases used to convert a digit string into a set of phrase identifications. For 5E13 and later, the "NPA_SP" valid entry was added to the valid entries table for the APPLICATION field.

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. For 5E13 and later, the "NPA_SP" valid entry was added to the valid entry table for the APPLICATION field and a data rule associated with the "NPA_SP" valid entry for the APPLICATION field was added.

FIXRT form (5301-1 Record) - This form is used to define Routing and Charging treatment of Fixed Route Types. For 5E13 and later, the "NPA_SP" valid entry was added to the valid entries table for the FIXED ROUTE TYPE field, and data rules were added to the FIXED ROUTE TYPE field.

LDIT (5300 Record-3B/5B) - This form is used to define all area, office, and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. For 5E13 and later, the NPA SPLIT ANNC field and CONFLICT RESOLUTION ENTRIES NPA SPLIT ANNC field and related data rules were added, and a data rule was added to the CALL TYPE field.

NPANXX (5580 Record) - This form is used to map an old NPA NXX to a new NPA. This is a new form to support this feature.

PHRASE form (5534 Record) - This form defines and describes phrase IDs which are provided on the DSU2-RAF. For 5E13 and later, the "NPA_SP" valid entry was added to the valid entries table for the APPLICATION field.

RDIT form (5300-7B/8B Record) - The RDIT form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request. For 5E13 and later, the NPA SPLIT ANNC field and the CONFLICT RESOLUTION ENTRIES NPA SPLIT ANNC field were added with associated data rules, and a data rule for the CALL TYPE field was added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 347 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E13 and later, a data rule was added to the TGN field.

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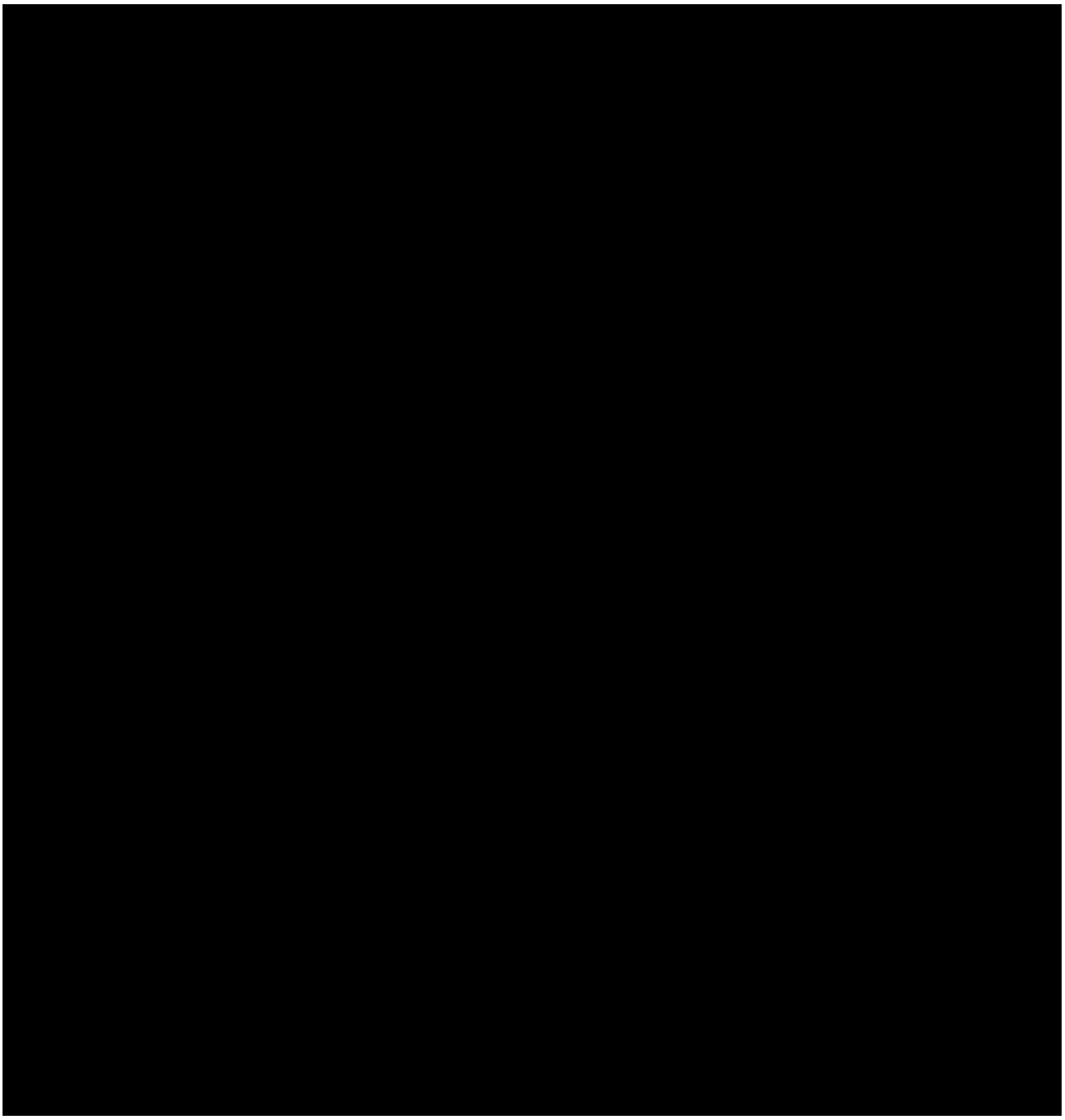

Figure 1 ANNOUNCEMENT ON DETECTION OF NPA SPLIT FORM FLOW

SEC. 4A348: LDP AMA CORRELATION MODULE

1. BACKGROUND

Prior to this feature, the 5ESS LDP (Long Distance Platform) Switch AMA (Automatic Message Accounting) Enhancement feature (99-5E-3675) provided additional AMA billing and routing information, which is appended to the AMA billing record. This information allows service providers to perform reconciliation of usage charges more easily.

The following fields have been added to the AMA recordings:

- Terminating Trunk Group

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- II/OLI (Originating Line Information) digits
  - II digits for EAMF (Equal Access Multi-Frequency)
  - OLI digits for SS7

For more information on this feature, see Division 2, Section 4A165.

2. FEATURE DESCRIPTION

The AMA Correlation Module feature is a secure feature (SFID 348) and is available as a 5E13 Software Update and generally available in 5E14 BMI (Beginning Managed Introduction). This feature introduces one new module that can be appended to the AMA records on the LDP:

AMA Correlation Module - 960

Any call on the LDP that generates an access AMA record and one or more SCP (Service Control Point) related AMA records at the same switch forces the AMA Correlation Module to be appended to the records when this feature is activated by setting the ACT field for SFID 348 to "Y" on the SFSYS form (5713-1 Record). If SFID 348 is activated, and if an LDP call generates both an LDP access AMA record and one or more ASP-related AMA records, then AMA module 960 will be appended to each record generated. For example, the absence of this module from a 710 record indicates that record can be used for both end-user billing and for access validation. The presence of this module on an 710 record suggests that the network provider ought to use the ASP-related record for end-user billing instead, reserving the 710 record for access validation purposes. The contents of the module also provide a simplified mechanism for allowing a network provider to aggregate all AMA records for that call.

Module 960 can be appended to structure code 0625 for several types of terminating access call records (call codes 710, 713, 714, 119, and 066) and to structure code 0220 (for which the call code depends on the charge index). It does not affect structure code 0625 call code 711. All of these AMA records produced at the same switch for a single call will append Module 960 containing identical information. The information in the AMA Correlation Module is as follows:

Field	Length	Value
Module Code	4 BCD char	960C
Reason Code	2 BCD char	00 (no further information)
	2 BCD char	01 (Module appended to access leg and to SCP leg records)
	2 BCD char	0C
Correlation Parameter	3 BCD char	LDP Office ID
	5 BCD char	AMA Index
	3 BCD char	Uniqueness ID
	3 BCD char	SM Number
	2 BCD char	0C

As long as Secured Feature ID 348 is not enabled, the AMA records on the LDP remains completely unchanged. All OSSs (Operational Support Systems) downstream must be upgraded to process the new modules before Secured Feature ID 348 is enabled.

3. FEATURE ASSIGNMENT

For 5E13 and later, to activate this feature:

- Set the ACT field for SFID (Secured Feature ID) 165 on the SFSYS form (5713-1 Record) to "Y" to activate the LDP base feature. For more information on this feature, see Division 2, Section 4A165.
- Set the ACT field for SFID (Secured Feature ID) 348 on the SFSYS form (5713-1 Record) to "Y".
- The AMA Enhancement feature is available when the LDP Basic Call Processing feature is activated.

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Set the TERMBILL field on the TKGRP form (5202 Record RC/V 5.1) to "Y" to activate the terminating LDP AMA record.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 348 to "Y". The base LDP feature must first be activated by setting the ACT field for SFID 165 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Set the TERMBILL field to "Y".

SEC. 4A349: TSI NAIL-UP OF CONSECUTIVE DSOs FOR DNU-S

1. FEATURE DESCRIPTION

The TSI (Time Slot Interchange) Nail-up of Consecutive DS0s (Digital Signal Level 0) for DNU-S (Digital Networking Unit - Synchronous Optical Network) feature is available as two 5E13 and later Software Updates (Feature Release 1 and 2). The feature number is 99-5E-7395. It is a secured feature with SFID 349. It is for SM-2000 only.

The purpose of this feature is to provide Intra- and Inter-SM Dual-DDS (Digital Data Service) nail-ups between:

- a TR-303 on DNU-S line and a DNU-S trunk
- a TR-303 on DNU-S line and a DLTU trunk

This feature is deployed in two phases:

- Phase 1: Intra-SM Nail-up functionality, delivered via 5E13 FR1
- Phase 2: Intra-SM and Inter-SM Nail-up functionalities, delivered via 5E13 FR2

Dual-DDS nail-ups are nail-ups in which 2 time-slots (DS0s) are used per end of the nail-up. One of the timeslots is designated as the primary and the other timeslot is designated as the secondary. The primary timeslot carries data while the secondary timeslot carries error correction information.

A Dual-DDS nail-up can be established via the LINE form (5109 Record) and the NAILUP form (5207 Record). One end of the nail-up has to be specified as a controlling OE, while the other end has to be a non-controlling OE. The customer must decide whether a TR-303 on DNU-S line or a DNU-S/DLTU trunk is a controlling one.

To accommodate this feature, the NAILUP form supports new OE combinations of:

- **A** (INEN: TR-303 on DNU-S line) and **N** (NEN: DNU-S trunk)
- **A** (INEN: TR-303 on DNU-S line) and **D** (NEN: DNU-S trunk)

NOTE: Each OE can be a Controlling or Non-Controlling OE. The OE numbers for port 1 and

port 3 on the DNU-S/DLTU trunk side have to be consecutive and in the same DS1 (Digital Signal Level 1)/DFI (Digital Facility Interface).

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109	3	1I	1.6
NAILUP	5207	3	2F	7.11
SFSYS	5713-1	3	5AR	8.22

LINE form (5109 Record) - This form is used to define telephone line parameters. For this feature, the TR303 NAILUP field must be "Y" and OE TYPE must be "A".

NAILUP form (5207 Record) - This form is used to directly link ("nail-up") two data ports. The Controlling Port is the port requesting the nailup connection; the Non-Controlling port is the port receiving the nailup connection. For this feature, the following conditions must exist:

C OE must be (the controlling "OE number")
N OE must be (the non-controlling "OE number")
SIGMODE must be "NOSIG"
HAIRPIN must be "N"
DDS must be "Y"
PATH NUM must be "2"

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features. To activate this feature, SFID ACT 349 must be "Y".

SEC. 4A361: OSPS INTERFLOW FOR OPERATOR CONFERENCES

1. BACKGROUND

The AABS-AP (Automated Alternate Billing Services - Automated Position) feature provided for the automated position. AABS-AP allowed customers to request operator assistance and provided for accessing operators when specific problem conditions arose. However, this feature did not allow Interflowing a call with a back party, forward party, and the APS (Automated Position System) connected. Because of Interflow restrictions, it was necessary to disconnect a forward party whenever the serving APS determined that it must conference an operator via Interflow to complete the handling of the call.

2. FEATURE DESCRIPTION

For 5E9(1) and later, the OSPS Interflow for Operator Conferences feature gives the ability to Interflow a conference connection from a Toll and Assist position (either an APS, a CST (Combined Services Terminal), or a VDT (Video Display Terminal)), including when a back party and a forward party are connected to the position. The feature number for this capability is 98-5E-2222.

This feature allows the Interflow of conference connections and the hand off with both back party and forward party connections without breaking the forward connection, for both operator positions and APS.

3. FEATURE ASSIGNMENT

In common with other Interflow features, both OSPSs of an Interflow pair must be on Software Releases that support the Interflow feature. This feature requires the OSPSs to be on 5E9(1) or later Software Releases.

This feature is a Secured Feature that must be purchased by the office before it can be activated on the

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switch, therefore the ACT field on the SFSYS form (5713-1 Record) for SFID (Secured Feature ID) 361 must be set to "Y". In addition, to activate or deactivate the feature once it has been purchased, the ACT field for OFS (Optioned Feature System) ID 570 must be set to "Y". on the FOSYS form (5713-2 Record).

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer the TFOS (Transparency Feature Optioning System) bits for Special and Transparency features. The ACT field for OFS ID 570 must be set to "Y" to activate this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 361 must be set to "Y" to enable this feature.

5. GLOSSARY

AABS-AP	Automated Alternate Billing Services - Automated
APS	Automated Position System
CST	Combined Services Terminal
OFS	Optioned Feature System
SFID	Secured Feature ID
TFOS	Transparency Feature Optioning System
VDT	Video Display Terminal

SEC. 4A365: OSPS CARD BASED SPEED DIALING (Phase 1)

1. FEATURE DESCRIPTION

The feature number for this capability is 98-5E-2250. Phase 2 of Card-based Speed Dialing is a secured feature and must be activated by setting SFID 365 ACT field to "Y" on the SFSYS form.

For 5E8 and later, CBSD (Card Based Speed Dialing) enables holders of CAS/NCP stored calling cards to use their own personal speed-dial codes to make card-billed calls more conveniently. The caller uses an abbreviated speed-dial code, instead of a full forward number, to specify the destination of a call. Calling card subscribers can specify as many as 20 SDCs (Speed Dial Codes) to refer to domestic or international numbers of their choice. Each code is 1- to 3-digits.

The speed-dialing data is maintained in the card validation database. When a caller makes a Speed Dial Call via an OSPS that has activated CBSD, the OSPS includes the SDC in the card validation query. Assuming that the card is valid and that the SDC is known to the card database, the card database returns the SDFN (Speed Dial Forward Number) in the "ALLOW" reply. The OSPS then uses this translated forward number to route the call.

Speed dial codes are allowed only when the OSPS performs forward number collection; therefore the feature only applies to automated sequence calls or initial calls that are originated as USA Direct or 800 calls, e.g., AATOS.

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1.1 Phase 1

This feature will be implemented in two phases. Phase 1 provides the basic speed-dialing functionality for automated card billed calls. However, in Phase 1, OHC (Operator Handled Calls) and SDAP (Speed Dial Autoprovisioning) are not supported. In Phase 1, if the reply is "SPEED DIALING NOT ALLOWED" or "INVALID SPEED CODE", the call is given an announcement informing the caller that the call cannot be completed and to hold for an operator, or to hang up now. For all other replies from the CAS/NCP database, digit analysis is performed on the forward number; and existing treatment is given to the call if the forward number is not valid, e.g. the caller will be given a termination announcement indicating that the call could not be completed as dialed and to hang up and try again. If digit analysis passes, the call is given existing treatment for any of the possible replies from the CAS/NCP database. These include "ALLOW"□just route the call, "CALLED NUMBER RESTRICTIONS"□give caller error message to press 0 for an operator or to hang up and arrange other billing, etc.

1.2 Phase 2

Phase 2 of this feature adds new functionality to allow the caller to re-enter another forward number after the card query for automated calls. For example: in Phase 2, if the reply is "SPEED IDAL NOT ALLOWED" or "INVALID SPEED CODE", the call is given an announcement informing the caller to re-enter another forward number. After the caller re-enters another forward number, if the reply is "SPEED DIAL NOT ALLOWED" or "INVALID SPEED CODE" again, the call is given an announcement informing the caller that the call cannot be completed and to hold for an operator or the hang up now.

2. FEATURE ASSIGNMENT

The following data is required for this feature.

The header IDs 192 -195 were added for Card Based Speed Dialing feature Phase 1. Announcement header IDs 196 - 199 were added for Phase 2.

The CAS (Customer Account Services) Release 3 feature must be activated on the OSPSOPT form (5424 Record). The CSD Access Code and CSD Phase 1 parameters on the OSPSOPT form must also be set.

The CAS/NCP must be able to accept AT&T CCS7 TCAP card validation queries that contain a Speed Code in place of a forward number, and the CAS/NCP must be able to map the Speed Code to a regular forward number and return the forward number to the OSPS in an AT&T CCS7 TCAP reply.

3. SCENARIOS

Phase 1:

Caller initiates an automated 800 access call.

After hearing a prompt for a forward number, the caller enters the speed dial SAC (Service Access Code) followed by an SDC (Speed-Dial Code) that has been defined by the caller for his/her AT&T calling card number (e.g., the digits *723 indicate a SAC of "*7" plus SDC of "23").

After the bong tone, the caller enters a CAS card number.

An AT&T CCS7 query is sent to the CAS/NCP with the SAC and SDC (*723 in the example) in place of a forward number.

The CAS/NCP validates the card and maps the SDC into the forward number defined by the customer. The SDFN (Speed-Dial Forward Number) is returned in the reply to the OSPS.

The OSPS performs digit analysis on the SDFN. If the number is acceptable, the call is routed when all TCS (Terminating Code Screening), TPR (Terminating Point Restrictions), and CPS (Country Paired Screening) checks are passed.

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Phase 2:

In Phase 2, a caller can initiate Speed Dialing as follows:

- by Dialing 0- or 102880- or 1+800 alternate access number, or via DIOR access to an AT&T owned OSPS and make an operator-handled, card-billed speed-dial call.
- by using the methods introduced in Phase 1.

Once the call is at an operator position the operator may enter the SD SAC and SDC using numeric or alphabetic characters. Thus, for example, the operator can enter an SDC of "DAD", which would be translated (based on the telephone keypad) to a value of "323" for use in the card validation query. This allows the caller to associate mnemonics with their SDC. The letters "Q" and "Z" would be translated as "7" and "9" respectively.

For automated calls, if a call bails out to an operator, the SD SAC and SDC are displayed at the position. (They were not displayed in Phase 1).

Phase 2 of Card-based Speed Dialing is a secured feature and must be activated by setting the SFID 365 ACT field to "Y" on the SFSYS form.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. Default input data for Announcement Header IDs 192 - 199 was added for Card Based Speed Dialing.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. Card Based Speed Dialing must be activated on a per switch basis via the CSD (Card Speed Dialing) PHASE 1 and PHASE 2 fields. Also, the access code for Card Based Speed Dialing must be entered in the CSD ACCESS CODE field.**SFSYS form (5713-1 Record)** - This form is used to activate secured features. No secured feature activation is required for Phase 1 of Card Based Speed Dialing. However for Phase 2, the secured feature ID field SFID 365 ACT should be set to "Y".

SEC. 4A373: FEATURE GROUP D INCOMING SIGNALING FOR SPECIAL APPLICATIONS - RELEASE 2

1. FEATURE DESCRIPTION

The Feature Group D Incoming Signaling for Special Applications - Release 2 feature provides the following:

- general FGD signaling access to OSPS Toll and Assistance features without the special handling for 500, 700, 800, and 900 traffic.
- activation of the Wireless Special Applications capability is now independent of the original wireless capability activation and removes the blocking and special handling for the Wireless Special Applications.
- increased screening capabilities including the determination of a service code based on the received

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ANI (Automatic Number Identification) or a Billing Directory Number.

- trunk data for the identification of the access as direct or switched.
- additional data which is supplied and written to the AMA records to allow enhanced rating and billing.

This feature is available with 5E9(1) and later. The feature number for this capability is 98-5E-2552. This is a secured feature with an SFID 373.

1.1 Access Provider

This feature provides the ability to assign an API (Access Provider Identifier) code to the incoming trunk group. The assigned API codes must be valid CIC (Carrier Identification Codes). The API is included in a new module in the RTRS (Real Time Rating System) query for real time rating, and recorded in AMA Module 931, Table 57 - Carrier Identification Code. A Mode of Access Indicator also is provided in the incoming trunk group data. It has two values, "direct" and "switched", with the default value being "switched". The Mode of Access is recorded in Table 83 along with the trunk group number in a new AMA module (303) whenever the value is "direct".

1.2 Line Screening

A new field is added to the OLS (Originating Line Screening) data for entry of an SC (Service Code). The entry of an SC for a line number requires the entry of a non-zero screen code for the same number. The Service Code (if one exists) for a call is determined from the Billing DN or received ANI using OLS. The Service Code determination depends on the OLS "double dip" capability below. Also, the incoming trunk groups should always be marked as ASRCH. When a Service Code is present on a call, it will be included in the RTRS query for real time rating in the same module as the API, and recorded in another new AMA module (131) in a new table (609). The AMA module will be appended to the AMA record only when a non-zero Service Code is present. The RTRS module is included in the RTRS query only when either an API, or SC, or both are present on the call.

An AILS (Automated Inward Line Screening) Application Indicator is added to the trunk group data. When the value is "yes" and the received ANI is not one that is served by the receiving OSPS, OLS is applied using the AILS capability. When the value is "no", the ANI does not receive OLS treatment.

The OLS "double dip" capability provides the ability to apply screening to two different numbers on a call when ANI is received.

- If an OSPS call is received on an incoming trunk group that has an assigned BILLING DN, then OLS is performed on the Billing DN first.
- If the Billing DN has an associated non-zero screen code and an SC, OLS is not performed on the ANI.
- If the Billing DN has a value of zero (0) for the screen code, and thus no SC assigned to it, or has a non-zero screen code but no SC; OLS may be performed on the received ANI.
- If the received ANI is contained in NPAMAP form (5414 Record) which is used to determine if the billing number is served by the receiving OSPS, then OLS treatment is performed on it.
- If the ANI is not contained in the NPAMAP form, which is used to determine if the billing number is served by the receiving OSPS (i.e., it is a "foreign" ANI), an assert is not generated and the application of OLS depends on the value of the AILS Application Indicator. If the value is "yes", OLS treatment is applied using AILS. If the value is "no", OLS treatment is not applied. When OLS is applied to the ANI and the Billing DN has a non-zero screen code, the screen code assigned to the ANI, if one exists, is ignored.

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1.3 Wireless and Wireline Traffic

The need to have both the WIRELESS and WIRELESS SPECIAL APPLICATIONS fields set in the OPRTK form (5417 Record) for non-Air-to-Ground, i.e. Wireless Direct incoming trunk groups, is eliminated. This feature also removes the special handling of 500, 700, 800, and 900 calls for non-Air-to-Ground traffic. In addition, it provides general direct FGD incoming signaling access to OSPS Toll and Assist functionality for wireline traffic. Two new Originating/Terminating Indicator values for wireline FGD Origination and wireline FGD Termination are defined. The Non-Wireless FGD Origination Indicator is recorded in AMA Module 931, Table 388 for all OSPS calls received on wireline FGD trunks.

1.4 Interactions with Other Features

A hard coded dialing restriction to disallow 7-digit dialing on sequence calls is not part of this feature. Sequence calls that are dialed on a 7-digit basis receive INPA treatment.

This feature continues to reject calls received on FGD trunks with signaled ANI II digits 27 indicating that the call is from a coin station.

This feature interacts with the "Feature Group D Incoming Signaling For Special Applications - Release 1" feature (see Division 2, Section 4A83), the "ACCS for 0+800 Calls From Wireless Service Providers" feature (see Division 2, Section 4A79) and the "AMA Recording of Calls From Wireless Service Providers" feature (Division 2, Section 4A104).

If TRS (Telecommunications Relay Service) traffic is combined with other traffic on a FGD trunk group and is routed to VRCP (Voice Recognition Call Processing) terminals for handling, the VRCP terminals recognize the TRS calls and transfer them to operator positions.

This feature can use the AILS feature capability.

1.5 Other Feature Group D Features

To reference other Feature Group D features see the following:

- FGD (Feature Group D) Incoming Signaling for Special Applications, Release 1: Division 2, Section 4A83.
- FGD Identification Code Expansion: Division 2, Section 3E.
- 0- Transfer Over FGD: Division 2, Section 4A102
- 800 Access Using FGD: Division 2, Section 4A288
- Specialized Handling of ANIF/ONI Calls on FGD Trunks: Division 2, Section 4A383
- FGD Direct Connect Incoming Signaling: Division 2, Section 4A379.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for this feature.

For each FGD incoming trunk group, the Service Provider must define the following information. This data may be set before the feature is turned on.

2.1 Secured Feature

The Feature Group D Incoming Signaling For Special Applications - Release 2 is a secured feature which

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is enabled by setting the ACT field for SFID 373 to "Y" on the SFSYS form (5713-1 Record RC View 8.22), and then by activating optioned feature IDs 605 and 610 on the FOSYS form (5713-2 Record RC View 8.31).

2.2 Mode of Access

Mode of Access Indicator (switched or direct) on the TKGRP form (5202 Record RC View 5.1) indicates whether the trunk group is direct connected to the traffic originator or is connected to a switched network. Also, the Access Provider Identifier (4-digit CIC (Carrier Identification Code)) identifies the source carrier for the call. It must be a valid Carrier Identification Code.

2.3 Wireline

Identify whether or not the FGD trunks accept wireline and non-TRS Toll and Assist calls on OPRTK form (5417 Record View 26.26).

The AILS Application Indicator on this form indicates whether or not to launch an AILS query when a "foreign" ANI is received. AILS should be set to "N" until the AILS feature is activated.

2.4 Line Screening

The Service Code on the LINESCRN form (5416 Record RC View 26.2) is a four digit field added to Originating Line Screening data. It may be used to identify specific services or billing arrangements based on the back number. The Service Provider also must associate the Service Code with the Access Provider Billing DN or the received ANI, as appropriate, in Originating Line Screening data. Each Service Code also must be defined in the rating and billing systems.

No external interfaces are required before this part of this feature can be used.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS		3	5AS	8.22
LINESCRN	5416	3	4Q	26.2
OPRTK	5417	3	4R	26.26
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

FOSYS form (5713-2 Record) - This form is used to administer the FOSYS (Feature Optioning SYStem) form for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). The ACT field for OFS IDs 605 and 610 must be set to "Y" to active this feature.

LINESCRN form (5416 Record) - This form is used to assign a screen code and routing flag to a line or range of lines. It supplies the SM (Switching Module) that contains a specific Numbering Plan Area/NXX's line screening data. The SERVICE CODE field was added to support this feature.

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS operator. An OPRTK form must be completed for each incoming trunk group in the office that can access the OSPS operator. The WIRELINE field indicates if wireline and non-TRS are accepted by the incoming FGD trunk group.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 373 must be set to "Y" to activate this feature.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. The mode

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of access is defined by the MAI field. The API CODE field assigns the Access Provider Identifier (4-digit CIC (Carrier Identification Code)) which identifies the source carrier for the call.

4. GLOSSARY

AILS	Automated Inward Line Screening
API	Access Provider Identifier
CIC	Carrier Identification Codes
OFS - Optioned Feature System	
OLS	Originating Line Screening
OSPS	Operator Services Position System
RTRS	Real Time Rating System
SC	Service Code
SM	Switching Module
TFOS	Transparency Feature Optioning System
TRS	Telecommunications Relay Service
VRCP	Voice Recognition Call Processing

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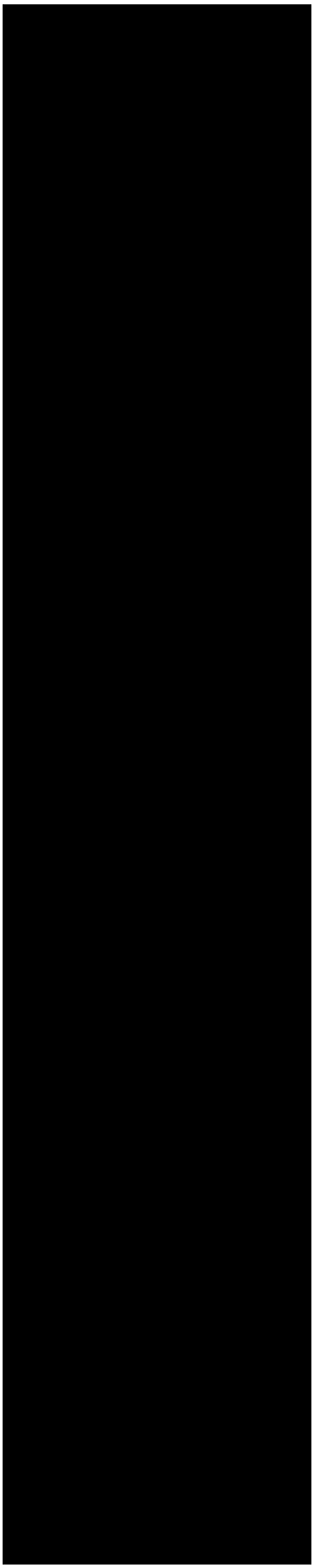

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Figure 1 FORM FLOW FOR FEATURE GROUP D INCOMING SIGNALING FOR SPECIAL APPLICATIONS - R2

SEC. 4A377: 800 ACCESS USING FEATURE GROUP D SIGNALING

1. FEATURE DESCRIPTION

This feature allows access to OSPS using Alternate Access call flows via incoming Feature Group D signaling for the following calls:

- AATLSOS (Alternate Access to Language Specific Operator Services)
- AATOS (Alternate Access to Operator Services)
- FTS/NRA (Federal Telecommunications/Number Remote Access)
- SDN/NRA (Software Defined Network/Number Remote Access)

The feature number for this secured feature is (98-5E-2667). This feature is available for 5E9(1) and later.

The purpose of the 800 Access Using Feature Group D Signaling feature is to provide the ability for an OSPS Toll and Assistance office to accept and process 800 Access calls routed to the OSPS directly from a LEC (Local Exchange Carrier) end office or access tandem office. 800 Access calls, for this feature, are defined as calls on which the caller dials an 800 number to access functionality provided by the OSPS. This feature provides the ability to accept these calls when they are signaled using MF (Multifrequency) direct connect Feature Group D signaling.

1.1 Background

Prior to this feature, 800 Access calls could be processed by the OSPS when the appropriate 800 Access features were provisioned, but only if the calls were received with Alternate Access signaling. The 800 Access features include AATOS, AATLSOS, SDN/NRA, and FTS/NRA.

With the AATOS feature the OSPS can handle calls initiated by callers who dial a 1+800 number to place alternate-billed calls. This 1+800 method of access allows callers to reach a carrier's operator system regardless of the carrier presubscription of the originating station and regardless of the availability of 10XXX or 101XXXX carrier access code dialing.

1.2 AATLSOS

The AATLSOS feature expands AATOS by providing the capability to direct incoming 1+800 calls to designated operator queues and to display a recent changeable label at position seizure. An expected application of this feature is to provide multilingual operator services by routing calls dialed to language-specific 1+800 numbers to teams of language-specific operators. Another application is the 800 Automated Collect Service feature, which routes calls dialed to a collect-specific 1+800 number to an automated position team that provides collect service.

1.3 SDN/NRA

With the SDN NRA feature, the OSPS can handle SDN initial and sequence calls. SDN callers can access the OSPS from a location not on their SDN network by dialing 1 plus a unique SDN 800 number or by the usual methods of accessing operator services, including 0+, 0, or an AATOS 800 number. To access their private software-defined network, the caller bills the call to a special SDN calling card associated with their network. The AT&T card validation database returns the routing number for accessing that network in the card validation reply. The OSPS then uses that routing number to access the network.

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1.4 FTS/NRA

The FTS NRA feature allows FTS-2000 network users to access the FTS-2000 network through the OSPS. This allows FTS callers to complete card-billed domestic and international calls through the FTS network. Similar to the SDN NRA feature, FTS callers can access the OSPS from a location not on their FTS-2000 network by dialing 1 plus a unique FTS 800 number or by the usual methods of accessing operator services, including 0+, 0-, or an AATOS 800 number. In addition, callers can access the OSPS by dialing an FTS 700 number. To access the FTS-2000 network, the caller bills the call to a special FTS calling card associated with that network, known as a "Federal Card." The AT&T card validation database returns the routing number for accessing that network in the card validation reply. The OSPS then uses that routing number to access the network. FTS callers can also place calls to domestic and international locations not on the FTS network.

1.5 Toll and Assist

The "Feature Group D Incoming Signaling for Special Applications" feature provides FGD signaling access to OSPS Toll and Assist features for Wireless and TRS (Telephone Relay Service) applications. It provides identification of wireless calls based on trunk group data and provides screening and additions to the AMA records for billing purposes. The 800 Access Using FGD Signaling feature builds on the basic FGD signaling functionality provided by the FGD Incoming Signaling for Special Applications feature. It does not require, however, that the FGD Incoming Signaling for Special Applications feature be activated.

1.6 Traffic Measurements

For 5E9(2) and later, traffic measurements changes were added to this feature. The measurement array is defined by the Measurement Label Data. Each entry in the Measurement Label Data will contain a label assigned to an index, the number of call Attempts for 800 access calls assigned to that index in the 1+800 Service designation Table, and the number of messages (billable calls) for 800 access calls assigned to that index in the 1+800 Service Designation Table.

These measurements appear in Section 196 of the Traffic 30 report. The measurement report will be a fully-printed variable-length section with a maximum length of 100 entries. An entry is printed for each index defined in the Measurement Label Data whether or not one or both of the counts for that reporting period are zero.

For each 800 access call the OSPS pegs the following counts for the measurement index value assigned in the 1+800 Designation Table to the signaled number for the call (SSC-WXY-Z or 800-NXX-XXXX).

- the number of call attempts
- the number of messages (billable calls)

These measurements are pegged for 800 access calls received with FGD signaling and with Alternate Access signaling.

This feature allows the service provider to specify, for each entry in the array:

- the label to appear with the entry
- the uniquely-signaled 800 access numbers associated with that entry

2. FEATURE ASSIGNMENT

To activate this feature, the ACT field for SFID 377 (or 288) must be set to "Y" on the SFSYS form (5713-1 Record). In addition the option feature ID, OFID 613, on FOSYS form (5713-2 must be set to "Y".

Provision additional FGD trunks as required for the additional traffic.

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Designate 800 access numbers. Add data for the 800 Access numbers to SRVDESIG form (5474 Record).

Designate the 800 Access numbers in the incoming trunk LDIT with a call type of "INWATS", "OSOINWATS", or "NS800".

For 5E9(2) and later, traffic measurements changes added to this feature introduce the MEASDSIG form (5499 Record) that allows the operating company personnel to populate indexes and labels for the Measurement Array Data. Indexes must be assigned in sequential order from 1 to 100.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
MEASDSIG	5499	3	4CY	27.71
SFSYS	5713-1	3	5AR	8.22
SRVDESIG	5474	3	4BZ	27.70

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs for Special and Transparency Features. The ACT field for OFID 613 must be set to "Y".

MEASDSIG form (5499 Record) - This form specifies information for measurement indexes and their corresponding labels. This is a new form to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 377 must be set to "Y".

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+800 calls arriving on AATOS and SDN/NRA MF trunks. The ACCESS NUMBER 800 field was added to support this feature. It is a new alternate key for entry of the last 7 digits of the 10 digit access number (The NPA is not entered).

4. GLOSSARY

AATLSOS	Alternate Access to Language Specific Operator Services)
AATOS	Alternate Access to Operator Services
FTS/NRA	Federal Telecommunications/Number Remote Access
LEC	Local Exchange Carrier
MF	Multifrequency
SDN/NRA	Software Defined Network/Number Remote Access
TRS	Telephone Relay Service

SEC. 4A380: OSPS NETWORK ACCESS INTERRUPT

1. FEATURE DESCRIPTION

The OSPS (Operator Services Position System) NAI (Network Access Interrupt) feature is a secured feature (SFID 380) that is being deployed as a 5E9.1 Software Update. The feature number is 98-5E-2604.

The NAI capability provides a long distance carrier with a means to restrict long distance service from their subscribers through interactions with a remote database. With NAI, the long distance carrier will be able to establish a restrictive criteria such as the terminating point (i.e., calls to international locations), calling

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location (i.e., cellular phone MIN(Mobile Identification Number), and expenditure thresholds in conjunction with traditional "non-payment" and "credit" reasons that can be used as the trigger points to prohibit service.

To accomplish this, the NAI capability will provide a transition from the 1LSA (1 Line Services Application) on a 1NCP (1 Network Control Point) database platform to the 2NCP database, through the 2LAC (2 Line Applications for Consumers) applications. The transition from the 1LSA to the 2LAC also includes a signaling infrastructure change that encapsulates an ANSI (American National Standards Institute) CCS7 (Common Channel Signaling 7) TCAP (Transaction Capabilities Application Part) query inside of a CCS7 TCAP query. The new signal will be used to send NAI, Card, BNS (Billed Number Screening), and combined NAI/Card and NAI/BNS queries.

Effectively, a query to a LEC LIDB (Line Information DataBase) is transported to the LIDB by way of the 2LAC. The 2LAC interrogates the query, apply any processing as applicable, and then if the request is not denied, pass the query to the LIDB in an ANSI query for validation. In the future, the creation of a new query with an encapsulated response will position the switch owner with the ability to provide services from the 2LAC application more easily.

2. FEATURE ASSIGNMENT

For 5E9.1 and later, to provision this feature the following must be done:

- Set the ACT field for SFID 380 on the SFSYS form (5713-1 Record) to "Y".
- Select the desired announcement on the ANNHD form (5531 Record).
- Specify the signaling type on the DSAPP form (5537 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
DSAPP	5537	3	5AK	8.17
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. Six new announcements (75, 2, 27, 9, 24, 7, 5, 17, 27, 1, 1, 1, and 17) were added to the PHRASE IDs that correspond to the HEADER IDs (224 - 229).

DSAPP form (5537 Record) - The DSAPP form specifies the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks which use the CCS7 signaling protocols. Added a new enumeration (ONAI) to the APPLICATION field.

OSPSOPT form (5424 Record) - The OSPSOPT form defines the global parameters for the office. New parameters for interLATA intercept call completion, and for initial treatment type for intercept call originations with signaling irregularities or invalid intercept classes was added for Intercept Services. Added the TRANS TYPE, INDET RPLY, NAI MIN QRY, SUCC QRY, NAI CARRID, NAI TIMEOUT, NAI, CARD NAI, and the BNS NAI fields.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 380 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The trunk information that is entered on this record, is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). Modified the

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DESCRIPTION section and removed a data rules for the NCD SCREENING field.

4. GLOSSARY

1LSA - The 1LSA is an application on the 1NCP data base that performs fraud checks on BNS and Card queries destined for LEC LIDBs. The 1LSA can apply controls that result in a denial response to the OSPS without initiating a query to the LEC network, or the 1LSA can reformat the request into a new query and transmit it to the LEC network. In response to a query, the 1LSA can receive a response from the LEC network and in turn will generate a reply to the OSPS that originated the query. The 1LSA only receives and generates ANSI CCS7 TCAP messages.

2LAC - The 2LAC is an application on the 2NCP that performs the same functions as a 1LSA but with NAI and CCS7 signaling enhancements. The 2LAC receives CCS7 TCAP messages from the OSPS and ANSI CCS7 TCAP messages from the LEC network. The 2LAC generates CCS7 TCAP messages to the OSPS and ANSI CCS7 TCAP messages to the LEC network. Future enhancements for TLN (Telephone Line Number) based services may also be provided from the 2NCP platform.

LEC Billing Numbers - For NAI checks to be applied on a call, the carrier must match the new NAI carrier variable and the billing must be provided by the LEC. Telecommunication cards issued by the LECs in the TLN or Revenue Accounting Office (RAO) format is one category of LEC billing. Other TLN-based forms of billing are, the called number (collect) or a different number (third number). Any card that is not found in the card recognition table process that is 14 digits in length [10-digit account number plus a 4-digit Personal Identification Number (PIN)], qualifies as LEC-billed.

0+SAB (Sub-Account Billing) is class-charged as a DDD (Direct Distance Dialed) call that qualifies for NAI when AT&T is the carrier of the call. The caller dials 0+ the number and enters a 2-digit SAC (Service Access Code) plus a 2 to 4 digit Sub-Account Number at the ACCS (Automated Calling Card Services) prompt. Other than an Originating Line Number check to determine if the calling station is eligible for SAB, NAI checks are made on the attempt.

SEC. 4A384: OSPS AUTOMATED SERVICE ACCESS PROMPTING, RELEASE 2

1. FEATURE DESCRIPTION

The OSPS ASAP R2 (Automated Service Access Prompting, Release 2) feature introduces AMA (Automated Message Accounting) and RTRS (Real Time Rating System) billing upgrades to support the initial ASAP Release 1 feature which provided the APS (Automated Position System) 0-/00- call processing functionality. The ASAP R2 feature is available for 5E9(1) and later. The feature number for this capability is 98-5E-2711

1.1 ASAP Release 1

The ASAP Release 1 feature supplied initial service functionality for 0-/00- automation and was developed exclusively on the APS. It did not require any new OSPS switch functionality. A significant aspect of the ASAP Release 1 feature is that it enabled the APS on a 0-/00- origination to provide callers with a FEM (Front End Menu), which included a prompt for call completion or transfer to an operator. If the caller requested an operator, the call was then transferred to an operator for further handling. If a caller chose call completion, then the APS attempted to collect a forward number from the caller. After the forward number had been collected, the APS then prompted the caller for a COC (Class Of Charge) to complete the call.

ASAP Release 1 service functionality did not contain the ability to allow external billing or call rating

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systems to differentiate between 0-/00- calls receiving ASAP treatment when the caller has entered the forward number, and those when the caller has not. For the service provider to be able to differentiate the charge associated with a call receiving ASAP FEM treatment and with the caller entering the forward number from those in which the caller did not, the switch needs to record additional information into the AMA record associated with the call. To be able to provide Rate Quotation Service accurately on a call, the OSPS permits operators to provide Rate Quotes with this new level of 0-/00- automation specified. To accomplish this, the interface to the RTRS (Real Time Rating System) must be modified to identify this additional level of automation. Similarly, for calls that require Rating System interaction, the RTRS interface needs to identify when this new level of automation is present.

1.2 ASAP Release 2

The ASAP R2 feature provides the OSPS with the ability, on a 0-/00- originated call, to identify ASAP (Automated Service Access Prompting) automation to the RTRS for Time and Charges, Coin, Hotel/Motel, and Purchase Limit calls. This feature also provides the OSPS with the ability, on a 0-/00- originated call, to identify in the AMA record when the customer has been offered ASAP automation via the APS, and specifies whether the customer or the operator has entered the forward number (or if no forward number was entered at all).

To accomplish the transmission of information to AMA, a new module (343) will be appended to the AMA record for all 00- calls that receive APS treatment and will indicate the Forward Number Entry.

To accomplish the transmission of information to the RTRS, a new module will be appended to the RTRS query message for all 0-/00- calls and will indicate the Automation Level and Forward Number Entry.

2. FEATURE ASSIGNMENT

The ASAP R2 is a secured feature with SFID 384 or 288, which must be activated on the SFSYS form (5713-1 Record).

In addition, two new fields are added to the OSPSOPT form (5424 Record) to support this feature. To activate the AMA option of this feature, the ASAP AMA field must be set to "Y". To activate the RTRS option, the ASAP RTRS field must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The two options for this feature, the AMA option and the RTRS option are activated on this form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 384 or 288 must be set to "Y".

4. GLOSSARY

OSPS	Operator Services Position System
AMA	Automated Message Accounting
APS	Automated Position System
ASAP R2	Automated Service Access Prompting Release 2
COC	Class Of Charge

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FEM Front End Menu

RTRS Real Time Rating System

SEC. 4A385: OSPS INMATE CALLING SERVICES

1. FEATURE DESCRIPTION

The Inmate Calling Services feature is available for 5E9(2) and later Software Releases. The ICS (Inmate Calling Services) feature provides an interface between OSPS and an EIS (External Information System) for the automated handling of calls which originate from inmate lines. The feature number for Inmate Calling Services is 98-5E-2712.

An originating line is identified as an inmate line based on the Originating Line Screen code. The 5ESS Switch OSPS establishes communication with the EIS after call arrival and, based on messages received from the EIS system, provides services such as the following:

- routing the caller to a voice trunk to the EIS,
- sending a data base query based on the number the inmate wants to call, and then forwarding the response to the EIS,
- starting to accrue billing time when the EIS indicates that it should be started and
- making an AMA record at the end of the call.

Inmate Calling Services calls are fully automated, with no operator bail-out facility.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for ICS feature.

2.1 Required External Interfaces

External Interfaces required before the feature can be used are the following:

- the Call Processing Data Links and trunking between the 5ESS Switch and the Tele-Matic system must be installed prior to activation of this feature.
- the ARU (Audio Response Unit) trunks and the CPDLs (Call Processing Data Links) between the 5ESS Switch and Tele-Matic. Use the growth procedures defined in the maintenance and growth documentation to provision ARU.
- the EISDATA form assigns the values "TMC" for Tele-Matic and "MSG SET 5" to support ICS.

2.2 Provisioning ICS

The Inmate Calling Services is a Secured Feature (SFID 385 or 288). The ACT field for SFID 385 or 288 must be set to "Y".

To provision the destination data for Listing Services calls, the SERVDEST form, (RC/V 21.53) is needed for this application. The route types supported for inmate calls are: "RIXA", "R13A", "TERM", and "REORDER".

The SERVDATA form (RC/V 21.54) assigns the service ID data needed for this application. A new PRE

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OPER EIS is supported for Inmate Calling Services with the following:

- an OSPS SVC CODE value of "SRVC7"
- the expected INITIAL ACTION is "ASKEIS".
- the INT ANNC TYPE field is populated for inmate calls. This value is the Toll & Assistance header ID ("OSPSTA 237") that is used to provide a turn-back announcement in case of a call failure before setting up to the EIS system.
- the BILLING NUMBER used for pre-paid inmate calls and associated with the Tele-Matic EIS must also be populated.

The new inmate turn-back announcement ("OSPSTA 237") and the INT ANNC TYPE HDR (on the SERVDATA form, RC/V 21.54) must be defined on the ANNHD form, RC/V 8.61. The recommended wording for OSPSTA announcement 237 is "We're sorry, the service you have requested is not available. (1/2 second pause). Please hang up". This consists of phrases 156, 157, 27, 64 which need to be assigned to ANNHD ID: "OSPSTA 237". (Note that default data has been provided for "OSPSTA 237", which consists of 156, 157, and 74.) The INT ANNC TYPE announcement is played to indicate to the Caller that the call should be attempted later.

OLS screen codes on the SCRNCODE form (RC/V 26.3) identify a line as an inmate line for domestic and/or for international forward numbers.

Use the ACDCTP form (RC/V 26.9) to define the service ID for inmate calls. A new CALL ORIGIN is introduced for inmate calls so they can be uniquely identified and assigned a service ID. For inmate calls, the OSPS ACD CALL TYPE data actually defines a service ID.

Use the OSPSOPT form view (RC/V 8.9) to activate the Inmate Calling Services feature and to define the timer values used when handling an inmate call as follows:

- the ICS EIS TIME value defines how long the OSPS waits for a message from the Tele-Matic system after receiving an off-hook on the External ARU trunk. Either a forward number check and data base query request message or a transfer request message (to end the call) is expected in this interval.
- the ICS BILL TIME value defines how long the OSPS waits for a message from the Tele-Matic system after validating the data in a forward number check and data base query request message. This time should allow for Tele-Matic to route to the desired party and verify that the call (and perhaps billing) is accepted. Either a begin billing message or a transfer request message (to end the call) is expected in this interval.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412	3	4M	26.9
ANNHD	5531	3	5AE	8.61
EISDATA	5462-1	3	4BM	21.51
OSPSOPT	5424	3	4Y	8.9
SCRNCODE	5415	3	4P	26.3
SERVDATA	5466	3	4BS	21.54
SFSYS	5713-1	3	5AR	8.22

ACDCTP/ACDPOL form (5412 Record) - This form assigns call type information for ACD (Automatic Call Distribution). The following field supports ICS.

- CALL ORIGIN - A new Call Origin value, "ORIG3", is defined for ICS.

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ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. The following phrases need to be assigned to "OSPSTA 237": 156, 157, 27, and 64.

EISDATA form (5462-1 Record) - This form defines the operational parameters for a particular OSPS EIS (External Information System). The following fields support ICS:

- VENDOR - a new vendor value, "TMC", is defined for Tele-Matic.
- MSG SET - a new message set value, "SET5" is defined for Tele-Matic.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The following fields support ICS:

- ICS - activates the ICS feature.
- ICS EIS TIME - defines the length of time OSPS waits for a message after receiving an off-hook on the external ARU.
- ICS BILL TIME - defines the length of time OSPS waits for a Begin Billing or Transfer Request signaling end of call.

SCRNCODE form (5415 Record) - This record defines billing restrictions on the back number. The following fields support the ICS feature:

- ICS TREAT - identifies this OLS code as ICS
- ICS INTL - indicates whether ICS treatment should be provided for international calls.

SERVDATA form (5466 Record) - This form is used to define EIS (External Information Systems) service parameters. The following fields support the ICS feature:

- OSPS SVC CODE - a new Service Code value "SRVC7" is defined for Tele-Matic.
- BILLING NUMER - assigns a billing number for billing of Pre-paid Inmate calls.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 385 or 288 must be set to "Y".

4. GLOSSARY

ACD	Automatic Call Distribution
ARU	Audio Response Unit
CPDL	Call Processing Data Link
EIS	External Information System
ICS	Inmate Calling Services

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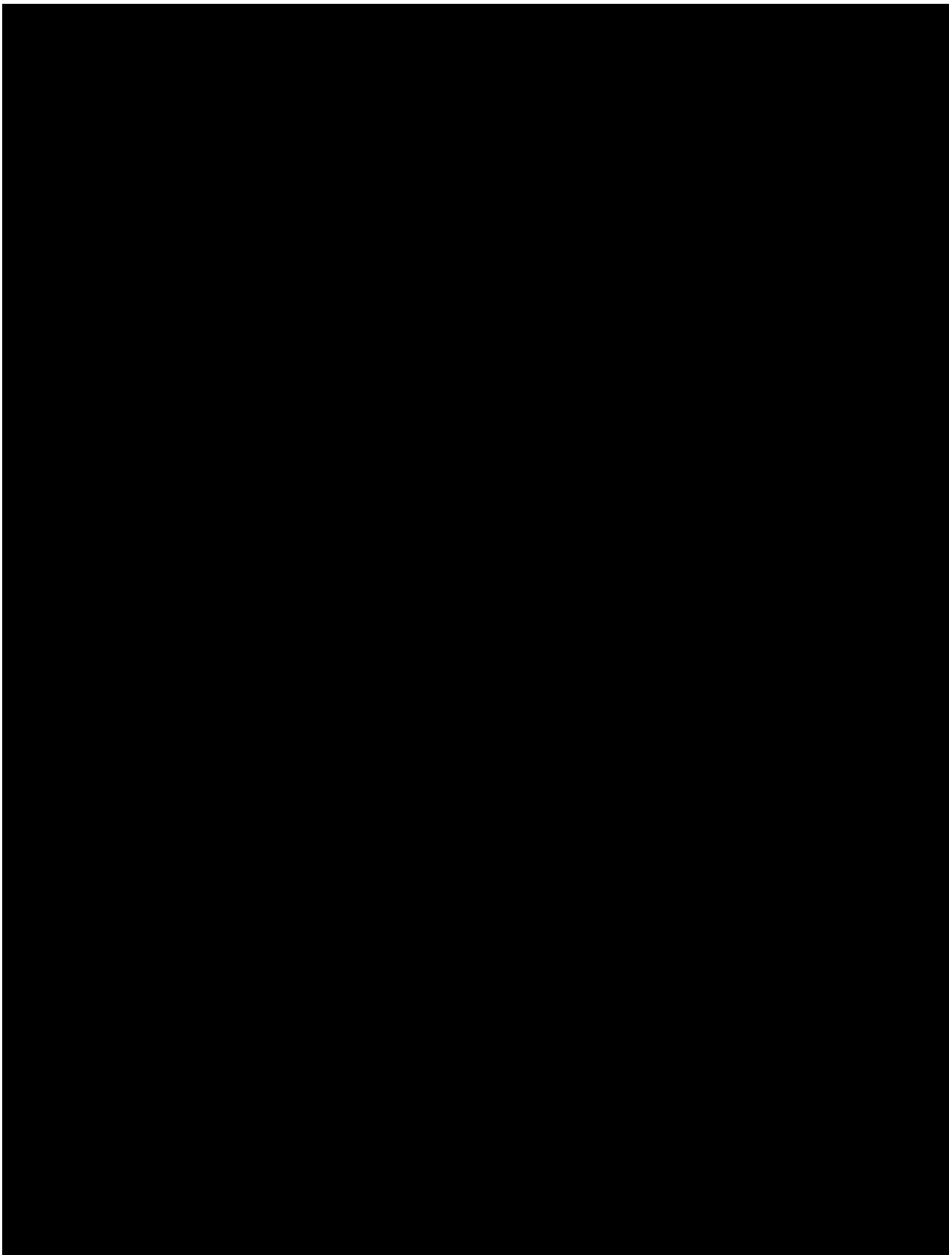

Figure 1 ICS FORM FLOW

SEC. 4A386: OSPS INTERNATIONAL BILLED NUMBER SCREENING

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1. FEATURE DESCRIPTION

Available with 5E9(2) and later, the IBNS (International Billed Number Screening) feature is a secured feature using Secured Feature ID 288 or 386 and Optioned Feature ID 620. The feature number for IBNS is 98-5E-2726. The IBNS feature alerts international operators to collect blocking on calls that are terminating to NANP (North American Numbering Plan) numbers.

When an IBNSR2 call comes to OSPS (Operator Services Position System) on AATOS (Alternate Access To Operator Services) trunks with a unique SSC WXY code, BNS (Billed Number Screening) query is performed on the called number. If the BNS results are allowed, the call is outpulsed.

If the BNS results are denied or public, either of two actions can occur. Based on the IBNSR2 CTI (Call Treatment Indicator), the call is routed to a "cuckoo tone" announcement or will request an OSPS operator be attached to the call.

If the IBNSR2 CTI indicates announcement, a "cuckoo tone" announcement is played to the international operator. If the international operator allows the "cuckoo tone" to complete, the call is automatically routed. If the operator goes to hook prior to the "cuckoo tone" completing, the call is terminated.

A non-revenue AMA (Automated Message Accounting) record is made for these calls if the BNS reply was deny or public and the called party answered. This record is also made when sampling is on regardless of the BNS reply results. A new value of 5 for IBNSR2 calls will appear in the Special Access Service Identifier Table of AMA module 170.

If the call is routed to an OSPS operator, the OSPS operator will be able to complete or reject the call. The operator is able to recognize these calls with the following position seizure displays. In the incoming call region, the call will be identified as 0+ and right below with a "BLOCK COLLECTION" display. The back number field will contain "Overseas Operator". The loop supervision area will contain a back "operator" icon, similar to an inward call. There will be an error message displayed - "Possible COLLECT CALL; COLLECT not allowed". In order to complete the call, the operator can first outpulse the call by entering "FWD#" - "SEND" or just "SEND" followed by POS REL, or outpulse after position release by entering POS REL. If it is determined that the call should not be completed, the operator may enter CANCEL CALL and POS REL. Most other keys are blocked. It is not possible to change the forward number or all the class of charge keys.

The office sending the call to the OSPS must send a 10-digit forwarding number (SSCWXYNPAZ) where SCCWXY and Z are a valid entry on the SRVDESIG form (5474 Record). This call must have a valid 7-digit ANI (Automatic Number Identification). The BNS query is performed on a 10-digit number formed from the NPA (Numbering Plan Area) number formed from the NPA in the SSCWXYNPAZ and the 7-digit ANI number. Calls with ANI failures or digit analysis failures are given reorder tone.

If IBNSR2 calls are recieved after data in the SRVDESIG form is entered, but before the feature is activated, a craft assert is generated. The assert will be 32942 - "ERROR: IBNS R@ SSC WXY = %D Z=%d signaled in when IBNSR2 feature not active" where D is the SSC WXY number and d is the Z number received.

SCENARIOS

The following are possible call scenarios.

Scenario 1:

1. IBNSR2 call is received at the OSPS.
2. A BNS query is sent and the reply analyzed.
3. If the BNS reply is allow, the call is outpulsed.

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4. No AMA record is made on this call unless sampling is on.

Scenario 2:

1. IBNSR2 call is received at the OSPS.
2. A BNS query is sent and the reply analyzed.
3. If the BNS reply is deny, the IBNSR2 CTI is examined.
4. If the IBNSR2 CTI is set to announcement, the call is routed to a "cuckoo tone" announcement.
5. The international operator has two options. a) hang up and tear down the call or b) remain on the line through the "cuckoo tone". After the tone, the call is routed to the called party. If the call is answered, a non-revenue AMA record is made.

Scenario 3:

1. IBNSR2 call is received at the OSPS.
2. A BNS query is sent and the reply analyzed.
3. If the BNS reply is public, the IBNSR2 CTI is routed to an operator.
4. If the IBNSR2 CTI is set to operator, the call is routed to an operator.
5. The operator will recognize this call from the unique display.
6. The operator may complete the call by keying forward number send, position release or by keying position release.
7. If the call is answered, a non-revenue AMA record is made.

NOTE: The operator can prevent the call from completing by pressing CANCEL CALL or POSITION RELEASE.

2. FEATURE ASSIGNMENT

See Figure 1 for the feature assignment form flow for the IBNS feature.

ANNHD form - Add phrases for new "cuckoo tone" - announcement header ID 236. The application is OSPSTA. The recommended phrases are 14066, 124, 14066, 124.

SRVDESIG form - Add the SSC WXY code associated with IBNS Release 2 calls. The Z digit must be specified as a value from 0 to 9. The service indicator is IBNS. The destination index is used for call type determination and must be a value between 1 and 4095. All other fields do not apply and should use the default values.

OSPSOPT form - The IBNS CTI (Call Treatment Indicator) field indicates whether or not an IBNSR2 call that received a DENY in response to a BNS query should go to an operator for further handling or to be routed to an announcement.

The default value is to route to an operator.

This field may be changed if it is desired to route "DENY" calls to an announcement.

FOSYS form - Activate optioned feature ID 620.

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SFSYS form - The IBNS feature is a Secured Feature. The ACT field for SFID 288 or 386 must be set to "Y" to enable thi..

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
FOSYS	5713-2	3	5AS	8.31
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22
SRVDESIG	5474	3	4BZ	27.7

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header.

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features.

OSPSOPT form (5424 Record) - This form is used for specifying, updating, and/or verifying OSPS options. The IBNS CTI field was added with a default value of OPR.

SFSYS form (5713-1 Record) - This form is used to enable Secured Features.

SRVDESIG form (5474 Record) - This form is used to determine the expected Service type for 1+8XX calls arriving on AATS and SDN/NRA MF trunks. The SSC WXY field was added to accommodate IBNS Release 2 calls.

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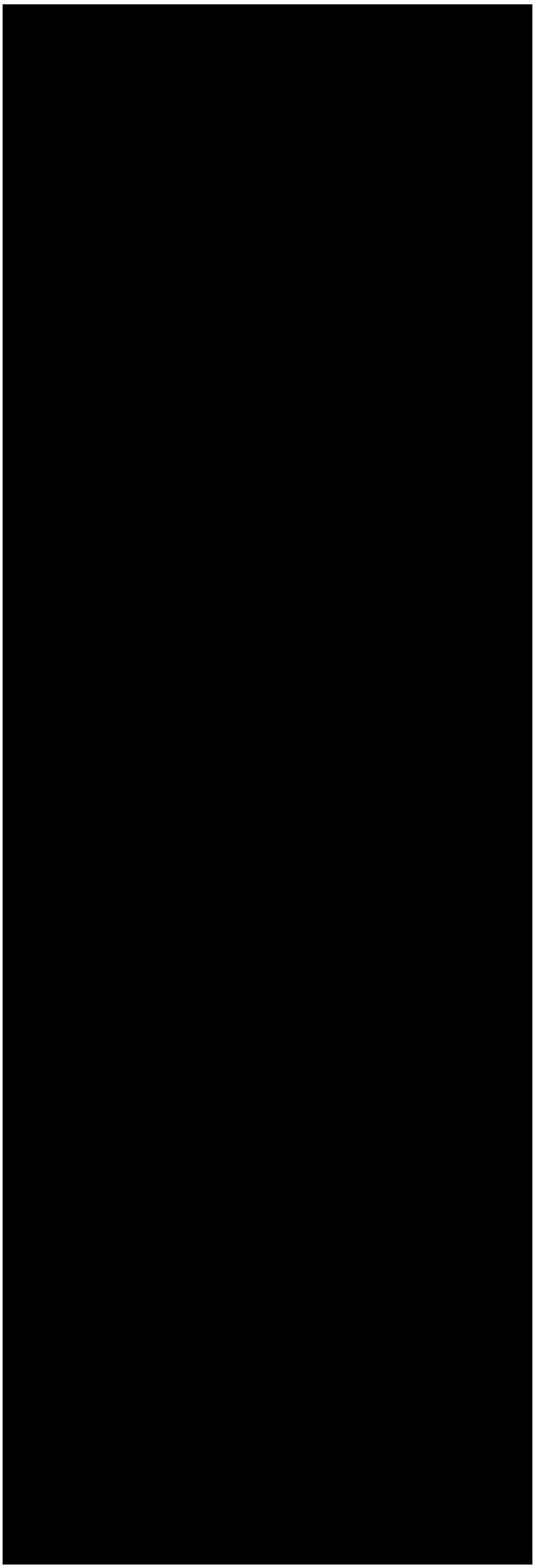

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Figure 1 FORM FLOW FOR IBNS FEATURE

SEC. 4A394: INTERFLOW: EXPANDING THE NUMBER OF INCOMING TRUNK GROUPS

1. BACKGROUND

The Interflow feature for 5E5 and later provided a mechanism for the immediate or scheduled close-down of all or individual operator serving teams at an OSPS. Interflow provides the operator service function at a receiving OSPS for all calls from a sending OSPS that belong to a specific operator serving team that has been closed at a sending OSPS. The operator service is provided at the receiving OSPS and not at the sending site; final routing, billing, and queries to data bases are still provided by the sending OSPS.

The Interflow feature prevents "double interflow", i.e., an interflow call that is being handled at a receiving OSPS is not allowed to be interflowed a second time to another receiving site. The 5E10 feature does not change this restriction.

The 5E5 Interflow feature allows for a maximum of 16 OSPS sites from which a site can receive interflow traffic and 16 OSPS sites to which a site can send interflow calls. This feature expands the number of sites from which a site can receive interflow traffic only.

2. FEATURE DESCRIPTION

The Interflow: Expanding the Number of Incoming Trunk Groups feature increases the number of incoming interflow connections from 16 to 100. For 5E10 and later, an OSPS receiving site can handle interflow traffic from up to 100 different OSPS sending sites. The number of outgoing interflow connections remains at 16.

The feature number for this capability is 98-5E-2858.

3. FEATURE ASSIGNMENT

This is a secured feature, therefore it must be activated on the SFSYS form (5713-1 Record) by setting the ACT field for SFID 394 or SFID 288 to "Y".

The additional OSPS sending sites are assigned on the INFLTAP form.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
INFLTAP	5451	3	4AZ	27.51
SFSYS	5713-1	3	5AR	8.22

INFLTAP form (5451 Record) - This form is used to define the incoming OSPS IDs and incoming trunk groups which are mapped to interflow serving teams at the receiving office. The OSPS LIST was increased from 16 to 100 to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 394 or SFID 288 must be set to "Y".

SEC. 4A395: CCS7 INCOMING SIGNALING FOR OSPS

1. FEATURE DESCRIPTION

This feature provides the OSPS with the capability to accept and process the following call types when received with intranetwork SS7 (Signaling System #7) circuit-related signaling from an AT&T 4ESS Switch:

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- 800 Access Calls

The 800 Access Calls included AATOS (Alternate Access to Operator Services), AATLSOS (Alternate Access to Language Specific Operator Services), SDN-NRA (Software Defined Network - Network Remote Access), FTS-NRA (Federal Telecommunication System - Network Remote Access), and SDAP (Speed Dialing Autoprovisioning).

- DIOR (Direct International Originations) Calls
- Inward Calls
- IBNS - R2 (International Billed Number Screening - Release 2) Calls

This feature is available for 5E10 and later. The AT&T feature number for this capability is 98-5E-2508.

Prior to this feature, these services were provided when the calls were received with MF (Multifrequency) signaling. This feature adds the capability to provide the services when the calls are received with AT&T's SS7 signaling.

This feature accomplishes the following for the above call types:

- Reduces call setup time for 800 access and IBNS-R2 calls
- Improves trunk utilization because:
  - the SS7 trunk groups between the 4ESS Switch and 5ESS-2000 Switch can be set up as 2-way trunks handling both incoming and outgoing calls
  - 800 Access, DIOR, Inward, and IBNS-R2 calls can share the same incoming trunk groups
  - trunk holding time is decreased because of the reduced setup time
- Provides the ability for OSPS to pass information from the incoming SS7 signaling to outgoing SS7 signaling
- Eliminates the need for dedicated outgoing trunks marked "satellite" for DIOR calls to Alaska and Hawaii
- Avoids double satellite hops for DIOR calls

2. FEATURE ASSIGNMENT

This feature does not affect the architecture of the AT&T STP network except that most MF trunks between the 4ESS Switches and OSPS Switches are expected to be changed to SS7 trunks. Additional signaling network traffic demands may be made on the AT&T signaling network because of additional ISDN-UP signaling messages for set up and control of 4ESS Switch to 5ESS-2000 Switch calls.

2.1 Feature Activation

This feature can be activated at a site prior to the deployment of the feature throughout the network. However, before it can be activated at any site, any additional A-links required must be deployed and the routing data in the AT&T 2STPs must be updated.

This is a secured feature, therefore, before it can be activated the ACT field for SFID 395 on SFSYS form (5713-1 Record) must be set to "Y". (Or the AT&T secured feature SFID288 must be activated.) In

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addition, the feature activation parameter, SS7 SIGNALING, on the OSPSOPT form (5424 Record) must be set to "Y" to activate this feature.

2.2 Provisioning

Based on traffic reports, traffic engineers should determine the need for

- additional A-links between the STPs and the 4ESS Switches,
- additional A-links between the OSPS Switches and the STPs, and
- possibly additional B-links (STP bridge backbone links) and C-links (mated STP cross links) between the AT&T STPs.

However, no additional A-links are expected to be necessary for this capability.

ISUP trunks carrying OSPS traffic should be provisioned as any other ISUP trunk group.

2-Way SS7 trunk groups may be specified between the 4ESS Switch and 5ESS-2000 Switch. These trunk groups may be tested in either direction. 2-Way SS7 trunk groups may be specified between the 4ESS Switch and 5ESS-2000 Switch.

Existing MF trunk groups between the 4ESS Switch and OSPS can be converted to SS7 trunks. This can be done by removing the trunks from service, updating the data appropriately using Recent Change, and then restoring them to service.

Like other SS7 trunks, data must be populated in the trunk group on the TKGRP form (5202 Record). The following table gives the trunk group data that is significant to this feature for SS7 trunks from a 4ESS Switch carrying 800 access, Inward, IBNS-R2, and DIOR calls.

Entries for SS7 Trunk Groups

Field	Value	Meaning
BLK NO ANI	"N"	Block Calls Without ANI
CCS7 TYPE	"ATT"	CCS7 Office Type
CFN RSTRCT	"Y"	Confusion Message Restriction
CH SATELLITE	As appropriate	Change indicator forSATELLITE
CONTROL TYPE	As appropriate	ISUP7 Control Type
CPN DISC	"N"	Discard the Screened Calling Party Number?
CPN SCRN	"N"	Allow Calling Party Number Screening?
DEST PT CODE	As appropriate	Destination Point Code
INPULSING	"ISUP7"	Incoming Address Signaling Type
ORIG PT CODE	As appropriate	Origination Point Code
OUTPULSING	"ISUP7" (if two way)	Outgoing Address Signaling Type
SATELLITE	As appropriate	Satellite Facilities Used
TGN	As appropriate	Trunk Group Number
TRK CLASS	As appropriate (Not IC or LATA)	Trunk Service Class
TRK DIR	"TWOWAY" or "INCOM"	Trunk Direction
UUI	"Y"	Is User-to-User Information Allowed on this Trunk?

For trunks, the CLCI TRK ID must be populated on the TRUNK form (5204 Record).

All SS7 trunks carrying incoming OSPS calls must have data populated on the OPRTK form (5417 Record). The following table shows how the various fields in that form should be entered for SS7 trunks from a 4ESS carrying 800 access, Inward, IBNS-R2, and DIOR calls and which fields are ignored. Prior to this feature, this type of data did not have to be assigned to trunk groups carrying Inward traffic. But because this feature allows SS7 trunk groups carrying Inward traffic to also to carry 800 access, IBNS-R2, and DIOR traffic, this data is required on SS7 trunks even if they only carry Inward traffic at the time. This also limits the trunks that have to be examined for OSPS traffic.

Entries For OPRTK Form

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Field	Value	Meaning
AATOS SDN NRA	Not entered	Does This Trunk Group Carry AATOS/SDN Traffic Only?
ACQS SCRN	As appropriate; ASRCH recommended	ACQS Traffic Type
AGGR ID	Ignored	Aggregator ID
AGGR INDEX	Ignored	Aggregator Index
AGGR IS CMC	Ignored	
AGGR NPA	Ignored	Aggregator NPA
AGGR NXX	Ignored	Aggregator NXX
ALLOW 7 DIGITS	As appropriate	Is 7-Digit Dialing Allowed on Automated Sequence Calls?
ALLOW AILS	As appropriate	Allow AILS queries?
ALLOW INTRA DA	"N"	Are IntraLATA Directory Assistance Calls Allowed?
ANI	Ignored	Is ANI expected on this Trunk Group?
ANSWER SUPV	Not entered	Is Returning Answer Supervision Supported?
APOS TREATMENT	As appropriate	Is Automated Position Treatment Provided on This Trunk Group?
AUTO COIN TRAF	"N"	Trunk Group Carry Automated Coin Toll Service?
CALL COMPL	"N"	Is Listing Services Call Completion Allowed?
CARR SELEC ENF	As appropriate	Is Carrier Selection Enforced?
COIN POST PAID	"N"	Trunk Group Carry Coin Postpaid Traffic?
COIN TYPE	not entered	Coin Type
COIN	"N"	Trunk Carry Coin Traffic?
DA AGGR TRK	"N"	Directory Assistance Aggregator Trunk?
EXCEPTION AREAS	"N"	Exception Area on Trunks with Calls Originating from Nonconforming End Offices?
FROM LOCAL OFC	"N"	Does This Trunk Come Directly from a Local Office?
FROM TA SYSTEM	"N"	Is Listing Services Traffic Coming From OSPS-T&A?
INTER CARR ID	AT&T	InterLATA Carrier ID
INTER FOR CC	"N"	May InterLATA Carrier be Used for Call Completion?
INTL CARR ID	AT&T	International Carrier ID
INTRA CARR ID	As appropriate	IntraLATA Carrier ID
LATA TYPE	As appropriate	Type of LATA Traffic
LSTG SVC TRAF	"N"	Is T&A Listing Services Traffic on This Trunk Group?
MECH	As appropriate	MECH Allowed for Incoming Trunk?
OL SCRN	As appropriate; ASRCH recommended	Screened Traffic Type
ORIG NPA	Ignored	Numbering Plan Area Code
OS EA SIG	Ignored	Is OS EA Operator Signaling Used?
PROTECTED NXXS	"N"	Any Protected NXX's on this Trunk Group?
SCRN INDEX	As appropriate	Screening Index
SELECTIVE OLS	"N"	Activate Selective Originating Line Screening for This Trunk?
SIG TYPE	Ignored	Signaling Type
START PULSE	Ignored	Start Pulse Type
TGN	As appropriate	Trunk Group Number
TRK TYPE	Ignored	Trunk Type
TRKCLS	Same as in TKGRP form	Trunk Class
WIRELESS SA	"N"	Activate Wireless Special Traffic for this Trunk?
WIRELESS	"N"	Do This Trunk Carry Wireless Traffic Only?
WIRELINE	Ignored	

2.3 DIOR Calls

When all DIOR calls are received from the 4ESS Switch with SS7 signaling, dedicated outgoing trunks marked "satellite" are no longer required for DIOR calls to Alaska and Hawaii.

With MF signaling, DIOR calls could be routed to the OSPS with only 7-digits because the DIOR NPA could be derived from the trunk group. With SS7 signaling, it is no longer be assumed that DIOR calls are the only calls on the trunk group and the DIOR NPA is always included in the IAM Called Party Number parameter by the 4ESS Switch.

If dedicated incoming DIOR Language trunks are not used, to route DIOR language calls to the appropriate operator team, DIOR OLS codes should be assigned based on language as well as any other existing criteria, and those OLS codes should be assigned an ACD pseudo trunk group number to be used for ACD routing. (If interflow is involved, the ACD pseudo trunk group number from the sending switch will be used on the receiving switch.) Appropriate ACD routing should then be set up based on the ACD pseudo trunk group number assigned.

If it is necessary to route DIOR 800 call completions to a unique 4ESS Switch, and dedicated incoming DIOR trunks are not used, the appropriate screening index should be assigned to the DIOR OLS codes in

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the SCROAR form (5481 Record). This screening index can then be used in the same manner as a screening index assigned to an MF DIOR trunk group.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OPRTK	5417	3	4R	26.26
OSPSOPT	5424	3	4Y	8.9
SCRNCODE	5415	3	4P	26.3
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS operator. An OPRTK form must be completed for each incoming trunk group in the office that can access the OSPS operator. New data rules for the TRKCLS and LSTG SVC TRAF fields support this feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The Incoming SS7 Signaling fields, SS7 Signaling, ACM INTL TIMER, and ACM DOMESTIC TIME, support this feature.

SCRNCODE form (5415 Record) - This record defines billing restrictions on the back number. The ACD TRK NUMBER field supports this feature. It specifies the pseudo trunk number for ACD.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 395 must be set to "Y"

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). New data rules for the BILLING DN field support this feature.

4. GLOSSARY

AATOS	Alternate Access to Operator Services
AATLSOS	Alternate Access to Language Specific
DIOR	Direct International Originations
FTS	Federal Telecommunication System
IBNS - R2	International Billed Number Screening - Release
MF	Multifrequency signaling.
NRA	Network Remote Access
OSPS	Operator Services Position System
SDAP	Speed Dialing Autoprovisioning
SDN	Software Defined Network
SS7	Signaling System #7

SEC. 4A398: OSPS AUTOMATED SERVICE ACCESS PROMPTING FOR LANGUAGE

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SPECIFIC OPERATOR SERVICES USING 129 ROUTE NUMBER.

1. FEATURE DESCRIPTION

The OSPS ASAP LSOS (Automated Service Access Prompting for Language Specific Operator Services) Using 129 Route Number feature allows routing of calls to a centralized service on a distant OSPS via the Route Number key. This feature is available for 5E9(2) and later. The feature number for this capability is 98-5E-3095.

Present methods using the forward number field lead to non-traditional forward numbers in the LDIT and the potential for fraudulent behavior. Present methods also block access to centralized services when the call originates from incoming operator express trunks.

This feature provides the ability to enter 129 ROUTE # in the ROUTE # field on the CST/VDT (Combined Services Terminal / Video Display Terminal) or at an automated position and the subsequent position release during the wait for answer or after answer by the ROUTE # connection. The back number will be signaled to the destination. The back NPA must be embedded in the ROUTE # number field in the format

129-WXY-NPAZ

where the NPA is the NPA of the back number.

The 129 ROUTE # must be a ten digit number. There is no corresponding data. 129-XXX-XXXX is the only format that is allowed and the 129 identifying digits cannot be changed. Once this feature is implemented, 129-WXY-NPAZ will no longer be allowed as a forward number!

2. FEATURE ASSIGNMENT

ASAP LSOS Using 129 Routing is a secured feature, therefore SFID 398 or 288 must be activated. In addition, this feature is also controlled by an optioned feature ID 633. To turn the feature on, OFID 633 must be activated on FOSYS form (5713-2 Record).

2.1 Feature Implementation Plan

The 129 ROUTE # must be entered on the LDIT form (5300-3/5/9 Record) with a CALL TYPE of "OPINW" or "AUTINW". The existing methods for 129-WXY-NPAZ entry must be changed. A flash cut to this feature's new method is required.

2.2 Recent Change Provisioning Information

- **WARNING:** Before changing the LDIT for the 129 #s, any use of the 129 #s in the forward number field must be eliminated. This step will break the existing functionality of entering the 129 number in the forward number field.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs) for Special and Transparency Features. The ACT field for OFID 633 must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 398 must be set to "Y"

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4. GLOSSARY

ASAP	Automated Service Access Prompting
CST	Combined Services Terminal
LSOS	Language Specific Operator Services
OFIDs	Optioned Feature System IDs
VDT	Video Display Terminal

SEC. 4A400: OSPS PURCHASE LIMITS BALANCE QUOTATION BUSINESS/RESIDENCE PROMO CARD

1. FEATURE DESCRIPTION

The PLBQ Business/Residence Promotional Card feature enhances the PLBQ (Purchase Limits Balance Quotation) - Release 2 feature to add the following functionality for the handling of business and residence promotional cards:

- Customized announcements/displays for balance quotations and disconnect warnings,
- AMA enhancements to support partial billing.

This feature is a secured feature and is available for 5E9(2) and later and has a feature number of 98-5E-3061. For more information on PLBQ Release 1 and Release 2, see Division 2, Section 4A24.

PLBQ Business/Residence Promotional Card provides enhanced balance quotation to callers using cards with Purchase Limits that are identified in the CAS (Customer Account Services) card validation query reply as being candidates for balance quotation. When the caller places an automated quotable Purchase Limit card call, and the card has a balance that is sufficient to pay for some or all of the call, the caller can hear an announcement that advises him/her of the following:

- the monetary balance available on the card,
- the length of time the call can last by applying that balance to the call, and
- a custom announcement whose content is defined by the switch owner.

These announcements are defined by the card product type which the CAS card validation database can identify to the OSPS. The call duration announcement is not included if the call is flat rated by the RTRS (Real Time Rating System). The custom announcement is selected based on the card product type; up to 30 new custom announcements may be defined. If the card does not have sufficient balance to pay for the call,

- no balance quotation announcement will be provided;
- the call will be allowed if the card has Non-Enforced Purchase Limits, or
- blocked if the card has Enforced With Disconnect or Enforced Without Disconnect Purchase Limits.

2. FEATURE ASSIGNMENT

2.1 Feature Activation

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This feature is activated by setting the ACT field for SFID 400 to "Y" on the SFSYS form (5713-1 Record). In addition, the PLBQ PROMO CARD must be set to "Y" on the OSPSOPT form (5424 Record).

The Product Type number signaled from the CAS/NCP to the OSPS during the AT&T card validation is used to determine whether customized treatment will be given to the card call. The treatment is defined on the CHBCPT form (6406 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CHBCPT	6406	3	4DE	27.61
OSPSOPT	5424	3	4Y	8.9
SFSYS	5713-1	3	5AR	8.22

CHBCPT form (6406 Record) - The 6406 Record is used to populate the Card Product Type table for the PLBQ Business/Residential Card feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 400 must be set to "Y".

4. GLOSSARY

CAS Customer Account Services

NCP - Network Control Point

PLBQ Purchase Limits Balance Quotation

RTRS Real Time Rating System

SEC. 4A402: OSPS QUIET HEAR

1. FEATURE DESCRIPTION

The OSPS Quiet Hear Service is a secured feature, therefore to activate this feature, the ACT field for either SFID 288 or SFID 402 must be "Y". In addition, the OFSID 638 is used to activate the feature on the switch. The feature number for this capability is 98-5E-3166

Available in 5E9(2) and later, the OSPS Quiet Hear Service offers enhanced sound quality to callers who originate calls in noisy environments. In the initial release of this service, Quiet Hear functionality is provided to the calling party by a USEC (Universal Services Echo Canceler) equipped on a 4ESS Switch AATOS (OSPS Alternate Access to Operator Services) trunk.

The Quiet Hear USEC (Universal Services Echo Canceler) is physically controlled by the 4ESS Switch. Prior to routing an 800 Access Call to the OSPS, the 4ESS Switch performs a variety of logical control checks to determine if the call is eligible for Quiet Hear treatment. The 4ESS Switch sets the Quiet Hear USEC to ``Echo Control Only'' if the call is not eligible for Quiet Hear treatment and sets it to ``Quiet Hear'' if it is eligible for Quiet Hear treatment. When the Quiet Hear USEC is set to ``Quiet Hear'', the call's eligibility for Quiet Hear treatment is conveyed to the OSPS either through:

- a unique Routing Number or

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- an 800 number (if Alternate Access or Feature Group D signaling is used) or through
- the FNSI (Forward Number Specific Information) parameter of the incoming AT&T CCS7 (Common Channel Signaling 7) ISUP IAM (Integrated Services User Part Initial Address Message) (if SS7 signaling is used).

During the processing of the call, the OSPS - and possibly the CAS NCP (Customer Account Services Network Control Point) - performs additional logical control checks with respect to the application of Quiet Hear treatment. The OSPS passes the Quiet Hear treatment eligibility information to a receiving 4ESS Switch during external routing. This enables the 4ESS Switch to allow the Quiet Hear USEC to remain set to ``Quiet Hear'' (if the call is eligible for Quiet Hear treatment) or to reset the Quiet Hear USEC to ``Echo Control Only'' (if the call is not eligible for Quiet Hear treatment).

The Quiet Hear USECs are positioned on the incoming AATOS trunks during the initial offering of the OSPS Quiet Hear Service. Because the Quiet Hear USECs are positioned on the incoming AATOS trunks, the OSPS Quiet Hear Service is only available to callers who place 800 Access Calls.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for the Quiet Hear Service feature.

To activate this feature one of the Secured Feature IDs (ID 288 or 402) and Optioned Feature ID 638 must be activated.

Assign Quiet Hear to the following:

- 800 Access Call Routing Number or 800 Access Number by setting the new fields QUIET HEAR TRMT and AUDIO LOGO BRAND on the SRVDESIG form (5474 Record RC/V 27.70).
- non-LEC Card's Issuer Identifier by setting the new field QUIET HEAR TRMT on the TCCID form (5454 Record RC/V 27.55.).
- domestic forward number by setting the QUIET HEAR TRMT field on the TPRNPA form (5465 Record RC/V 27.5).
- international forward number by setting the QUIET HEAR TRMT field on the TPRINTL (5464 Record RC/V 27.6).

Specify billing for the following:

- to a LEC calling card by setting the LEC CARD ALW field on the OSPSOPT form (5424 Record RC/V 8.9).
- with a Collect Class-of-Charge by setting the new field COLLECT COC ALW on the OSPSOPT form.
- with a Third Number Class-of-Charge by setting the new field THIRD NBR COC ALW on the OSPSOPT form.
- with the following Class-of- Charge designations: Paid, Hotel Room Number, DDD (Direct Distance Dialing), No Charge, and Auto Collect by setting the new field MISC COC ALW on the OSPSOPT form. This parameter is also used when external routing occurs without a Class-of-Charge.

Specify the following timing intervals:

- the time interval to apply to Timer QH-T1 which determines the length of time (in tenths of seconds) that OSPS will wait before starting to outpulse a domestic forward number after a request is made to

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play the Quiet Hear audio logo announcement. Set the new field DOM TIMER on the OSPSOPT form. For Recent Change, the default for this field should be >80 and must be updated upon receipt of this feature.

- the time interval to apply to Timer QH-T2 which determines the length of time (in tenths of seconds) OSPS will wait before starting to outpulse an international forward number after a request is made to play the Quiet Hear audio logo announcement. Set the new field INTL TIMER on RC/V 8.9. For Recent Change, the default for this field should be 80 and must be updated upon receipt of this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
FOSYS	5713-2/3	3	5AS	8.31
OSPSOPT	5424	3	4Y	8.9
SRVDESIG	5474	3	4BZ	27.70
SFSYS	5713-1	3	5AR	8.22
TCCID	5454	3	4BC	27.55
TPRINTL	5464	3	4BQ	27.6
TPRNPA	5465	3	4BR	27.5

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. The announcement header ID 148 was added to support the Quiet Hear Services feature.

FOSYS form (5713-2 Record) - For 5E9(1) and later, OFS IDs (Optioned Feature System IDs) can activate features on the switch and on a per SM basis. OFS ID 638 activates this feature.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The following fields assign the billing parameters for Quiet Hear:

- LEC CARD ALW
- COLLECT COC ALW
- THIRD NBR COC ALW
- MISC COC ALW.

The following fields specify the timers for the Quiet Hear feature: DOM TIMER and INTL TIMER.

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+800 calls arriving on AATOS and SDN/NRA MF trunks. The QUIET HEAR TRMT and AUDIO LOGO BRAND fields support the Quiet Hear Services feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 402 or SFID 288 must be set to "Y" to activate the Quiet Hear Services feature.

TCCID form (5454 Record) - The TCCID form provides identification for telephone cards other than the 14-digit LEC card. The QUIET HEAR TRMT field supports the Quiet Hear Services feature.

TPRINTL form (5464 Record) - This form provides TERM CC and ADDITIONAL DIGITS information to screen/restrict calls to specific international forward numbers or groups of numbers. It also specifies the treatment to be given to DIOR, AATOS, AATLSOS, and wireless call types to the entered international forward numbers or groups of numbers. The QUIET HEAR TRMT field supports this feature.

TPRNPA form (5465 Record) - This form defines the terminating point restrictions data for a DIOR, AATOS, AATLSOS, and wireless call with a domestic forward number. The QUIET HEAR TRMT field

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supports this feature.

4. GLOSSARY

AATOS	OSPS Alternate Access to Operator Services
CAS NCP	Customer Account Services Network Point Control
CCS7	Common Channel Signaling 7
DDD	Direct Distance Dialing
FNSI	Forward Number Specific Information
ISUP IAM	Integrated Services User Part Initial Address Message
TFOS IDs	Transparency Feature IDs
USEC	Universal Services Echo Canceler

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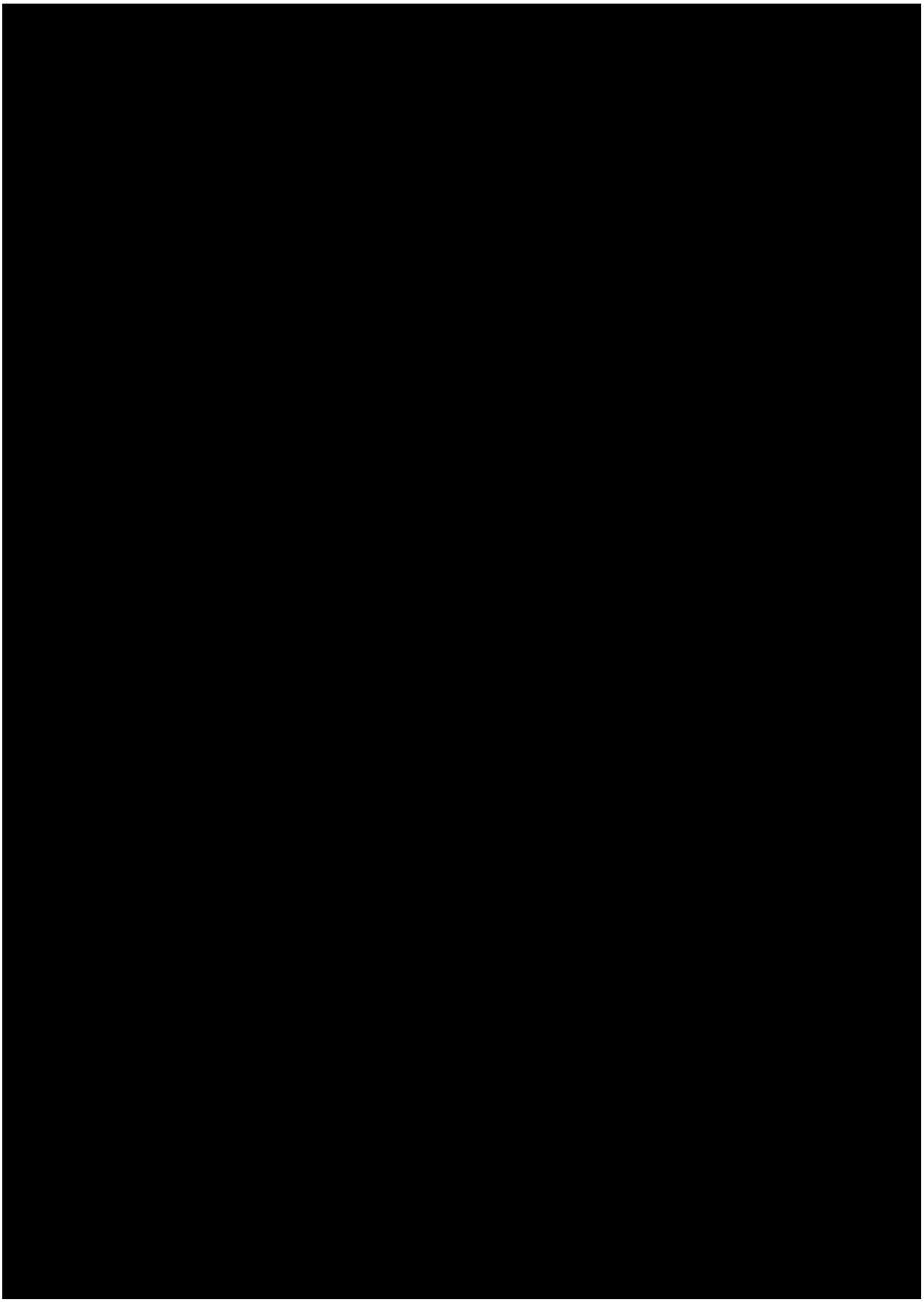

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Figure 1 FORM FLOW FOR QUIET HEAR FEATURE

SEC. 4A403: OSPS ALTERNATE ACCESS TO LANGUAGE SPECIFIC OPERATOR SERVICES - AUTOMATED ACCESS PROMPTING.

1. FEATURE DESCRIPTION

The AATLSOS - AAP (Alternate Access to Language Specific Operator Services - Automated Access Prompting) is available for 5E9(2) and later. This feature migrates the current 1-800-CALLATT calls from the 4ESS Switch to the OSPS/APS (Automated Position System) and provides the OSPS/APS with the ability to process 1-800-CALLATT calls that are currently handled by the 4ESS Switch. The feature number for this capability is 98-5E-3121.

On an AAP 1-800-CALLATT call, the OSPS

1. Provides a first attempt initial prompt menu announcement similar to the one given at the 4ESS Switch for the current 1-800-CALLATT call. The announcement informs the caller to enter one of the following optional responses:

   - 1 - For calling card or credit card call,
   - 2 - For collect call,
   - 3 - For AT&T customer services,
   - 4 - For directory assistance,
   - 5 - For a new service to be determined in the future,
   - 0 - For operator assistance.

2. Determines the treatment to be given in response to the caller's action to the prompt menu which is:

- The call will be provided the existing AATOS (Alternate Access to Operator Services) functionality and routed to an operator queue for the following conditions:
  - If the call is signaled to the OSPS without good ANI (Automatic Number Identification).
  - If the call is identified for operator handling in the Originating Line Screening table (RC/V view 26.2) or the Automated Calling Card Service Special Treatment (RC/V view 26.40)
  - If the caller presses 0, times out, or enters multiple digits without having the interdigit timeout occur on either the first or second attempt of the initial prompt,
  - If the caller fails to press a valid response at the second attempt of the initial prompt,
  - If the call bails out to an operator for some other reason (Enters 0 or times out on the subsequent forward number prompt or calling card prompt, or TCS (Terminating Code Screening), or TPRE (Terminating Point Restrictions Expansion), after the caller presses 1 at the initial prompt menu.

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- The call is processed as an AATOS originated call except with a new forward number prompt announcement if the caller presses 1 at the initial prompt menu (for either the first or second attempt).
- The call is routed to a position queue and handled the same as an 1-800-OPERATOR call if the caller presses 2 at the initial prompt menu (for either the first or second attempt). (The Service Provider will set up the ECTD (Expanded Call Type Determination) data to send the call to an AP (Automated Position) queue.)
- The call is routed to a position queue and handled based on the option selected as an AAP 1-800-CALLATT call if the caller presses 3, 4, or 5 at the initial prompt menu (for either the first or second attempt). (The Service Provider will set up the ECTD data to send the call to an AP queue.)
- A second attempt initial prompt menu announcement (similar to the first attempt announcement) will be given to the caller if the caller enters an unrecognized single digit (i.e., 7, #, *, etc.) at the first attempt initial prompt menu.

2. FEATURE ASSIGNMENT

The OSPS switch data population MUST BE co-ordinated with the availability of the data required to update the Cluster data in the AP systems for this feature.

Either SFID 403 or 288 must be activated on the SFSYS form (5713-1 Record) indicating this secured feature has been purchased. The OFID 619 on the FOSYS form (5713-2 Record) turns on this feature.

The AUTO TRMT field on the SRVDESIG form (5474 Record) specifies whether a 1-800-CALLATT call will be processed at the OSPS/APS instead of the 4ESS Switch. If AUTO TRMT is "Y" then SERVICE TYPE must be "SVC01" - "SVC41".

2.1 Recent Change Provisioning

To populate the switch Recent Change data for this feature, the following order of population to the RC/V views must be followed:

1. Populate the announcement headers 145 (for the first attempt initial prompt menu), 146 (for the second attempt initial prompt menu) and 147 (for the forward number prompt that will be used with this feature) with the appropriate phrases on views 8.61 and 8.63. The actual wording of the announcement is provided by the Service Provider.
2. Populate the call type determination information on views 26.9 and 26.10 to define the AP call types for these calls.
3. Populate the AP treatment information on view 26.26 for each trunk group handling these calls.
4. Populate the AP protocol information on view 8.9 (if this data has not already been populated on this view).
5. Populate the OSPS Service Designation information on view 27.70 for the appropriate "SSC-WXY and Z" or "800 access number" (if the data has not already been populated), and set the "AUTO TRMT" field to "Y" so the calls are recognized as AAP 1-800-CALLATT calls.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**

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FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22
SRVDESIG	5474	3	4BZ	27.70

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs) for Special and Transparency Features. The ACT field for OFID 619 must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 403 or 288 must be set to "Y".

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+800 calls arriving on AATOS and SDN/NRA MF trunks. The AUTO TRMT field supports this feature. This field specifies whether a 1-800-CALLATT call will be processed at the OSPS/APS instead of the 4ESS Switch.

4. GLOSSARY

AAP	Automated Access Prompting
AATLSOS	Alternate Access to Language Specific Operator Services
AATOS	Alternate Access to Operator Services
ANI	Automatic Number Identification
AP	Automated Position
APS	Automated Position System
ECTD	Expanded Call Type Determination
OFIDs	Optioned Feature System IDs
TCS	Terminating Code Screening
TPRE	Terminating Point Restrictions Expansion

SEC. 4A404: OSPS AUTOMATED CLOSE-END BRANDING FOR OPERATOR HANDLED CALLS

1. FEATURE DESCRIPTION

This feature is available for 5E9(2) and later. It provides an automated close-end announcement on an early position release call before outpulsing to the forward party, e.g., "Thank you for using (name)". The feature number for this capability is 98-5E-3167.

The Automated Close-End Branding for Operator Handled Calls feature provides OSPS with an automated close-end announcement capability on calls handled by operators. Prior to the activation of this feature, operators had to provide the close-end treatment verbally to callers. With this feature, close-end announcement treatment is provided automatically to calls that receive early position release treatment. Switch announcements are automatically provided after the operator has released the call for routing.

2. FEATURE ASSIGNMENT

The Automated Close-End Branding for Operator Handled Calls is secured feature with SFID 404 (or SFID 288). The Automated Close-End Branding for Operator Handled Calls is also an optioned feature with FID 639.

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Use the secured feature activation procedures to activate either SFID 404 or 288.

To activate the feature option, set the ACT field to "Y" for FID 639 on the FOSYS form.

This feature is activated on a serving team basis via the STINFO form (5402 Record) by setting the AUTO CLOSE END ANNC field to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22
STINFO	5402	3	4C	21.2

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs for Special and Transparency Features. This feature is activated by FID 639.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 404 (or SFID 288) must be set to "Y".

STINFO form (5402 Record) - The form defines the parameters for a serving team. The AUTO CLOSE END ANNC field supports this feature.

SEC. 4A405: OSPS TOLL-FREE NPA EXPANSION

1. FEATURE DESCRIPTION

The OSPS Toll-Free NPA Expansion supports SACs (Service Access Codes) other than 800. 888 is expected to be the first new SAC assigned. Calls to these new SAC codes are identified as toll-free calls and are treated like 800 calls. This feature is available for 5E10 and later. The feature numbers for this capability are 98-5E-3171 and 98-5E-3180.

This feature changes the identification of toll-free calls from a hard-coded recognition of the 800 SAC, to a data-driven recognition of 8XX SACs. The feature also makes the necessary changes to existing data tables used in OSPS features so that 8XX SACs can be supported as toll-free SACs.

Although there are no new or changed operator displays, this feature does allow the automatic display of the AUTO COLLECT class-of-charge on the entry of a toll-free forward-number by the operator or automated position.

2. FEATURE ASSIGNMENT

See Figure 1 for The Toll-Free NPA Expansion feature assignment form flow.

The OSPS Toll-Free Services NPA Expansion is a Secured feature with SFID 405. (This feature is otherwise activated if the ACT field for SFID 288 is set to "Y".) It is also an optioned feature with OFID 627. To activate the feature, both the ACT field for the SFID and OFID must be set to "Y".

NPAs that are to be given toll-free treatment are defined on the INWNPA form (6404 Record 27.72 View). An entry of 800 is pre-defined. The INWATS NPA field is used to define the new NPA of the toll-free number. The new INWATS NPA must be defined on the INWNPA form before the following forms can reference it:

- DEHNP (5431 Record)
- DEHOCSM (5496 Record)
- DNRA (6400 Record)
- SRVDESIG (5474 Record)

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A toll-free NPA of the form 8XX can be defined using the SEQREST form (5429 Record).

The global parameters for the Toll Free NPA Expansion are found under the heading "Toll-Free NPA Expansion" on the OSPSOPT form (5424 Record).

The following data changes must be made to give toll-free treatment to an additional NPA (Numbering Plan Area), such as 888.

- Insert the new NPA in the INWNPA form.
- If any direct-dialed calls (i.e., Feature Group D) use the new toll-free NPA to obtain OSPS service, update the SRVDESIG form, so these toll-free numbers have an entry.
- Also, for direct-dialed calls, the LEC Toll-free Treatment for NPA 888 Phase 1 feature must be active. This is a secured feature with SFID 158. For more information on this feature, see Division 2, Section 4A158.
- If any new toll-free numbers need to be provisioned for the DIOR Toll-Free International Service feature or the DIOR NRA (Network Remote Access), insert those numbers on the DEHOCSM and DEHNP forms.
- If the toll-free NPA code should not be allowed as a sequence number, insert an entry with that NPA on the SEQREST form.
- Define the entries for the new NPA being assigned for toll-free calling on the LDIT form (5300-3/5/9 Record). Set the call type to INWATS or NS800 (as is appropriate) for all entries with the new toll-free NPA. The LDIT can be updated to translate the NPA only or to translate as many digits as desired. For example, if only one NXX is being made available in the 888 NPA, then LDIT entries could be defined for all possible 888-NXX combinations.
- Determine if the Automated Position System is ready to have the 5ESS Switch display AUTO COLLECT on entry of a toll-free number. If desired, set the DISP AUTO COLLECT field on the OSPSOPT form to "Y".

  If AUTOCOLLECT is the only class-of-charge wanted with a non-DIOR, non-wireless call to a toll-free number, then set the ENF AUTO COLLECT to "Y". This is only allowed if DISP AUTO COLLECT is set to "Y".

  The display auto collect option modifies operator handling of a toll-free forward number. If the option is active, then OSPS automatically updates the class-of-charge displayed to the operator to AUTO COLLECT on entry of a toll-free forward number by the operator or automated position.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DEHNP	5431	3	4AF	27.85
DEHOCSM	5496	3	4CW	27.84
DNRA	6400	3	4CZ	27.87
FOSYS	5713-2	3	5AS	8.31
INWNPA	6404	3	4DD	27.72
OSPSOPT	5424	3	4Y	8.9
SEQREST	5429	3	4AD	26.41
SFSYS	5713-1	3	5AR	8.22
SRVDESIG	5474	3	4BZ	27.70

DEHNP (5431 Record) - This form specifies the toll-free number and the billing treatment that applies to it

from all DIOR originating countries or the default treatment plus per-country alternate treatments. The INWATS NPA field supports this feature.

DEHOCSM form (5496 Record) - This form specifies the SM (Switching Module) on which the billing treatment data is stored for DIOR calls to an toll-free number. The INWATS NPA field supports this feature.

DNRA form (6400 Record) - This form specifies the DIOR NRA toll-free access number, a routing number for routing the call to the NRA toll office, and up to 128 specific originating country codes that are exceptions to the default treatment. This is a new form to support the DIOR NRA feature.

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs for Special and Transparency Features. The ACT for OFID 627 must be set to "Y".

INWNPA form (6404 Record) - This new form, for 5E10 and later Software Releases, provisions NPAs (other than 800) as INWATS NPAs to allow more INWATS numbers after the exhaustion of 800 numbers.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The following fields support this feature:

- DIOR VMS FWD NBR
- DISP AUTO COLLECT
- ENF AUTO COLLECT

SEQREST form (5429 Record) - This form assigns 3-, 7-, and 10-digit telephone numbers that cannot be accessed with ACCS as an automated sequence call. The values in the RESTRICTED TN field were increased to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 405 must be set to "Y".

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+8XX calls arriving on AATOS and SDN/NRA MF trunks. The INWATS NPA field was added to support this feature.

4. GLOSSARY

ACCS	Automatic Calling Card Service
DIOR	Direct International Origination
NPA	Numbering Plan Area
NRA	Network Remote Access
SAC	Service Access Codes
SM	Switching Module

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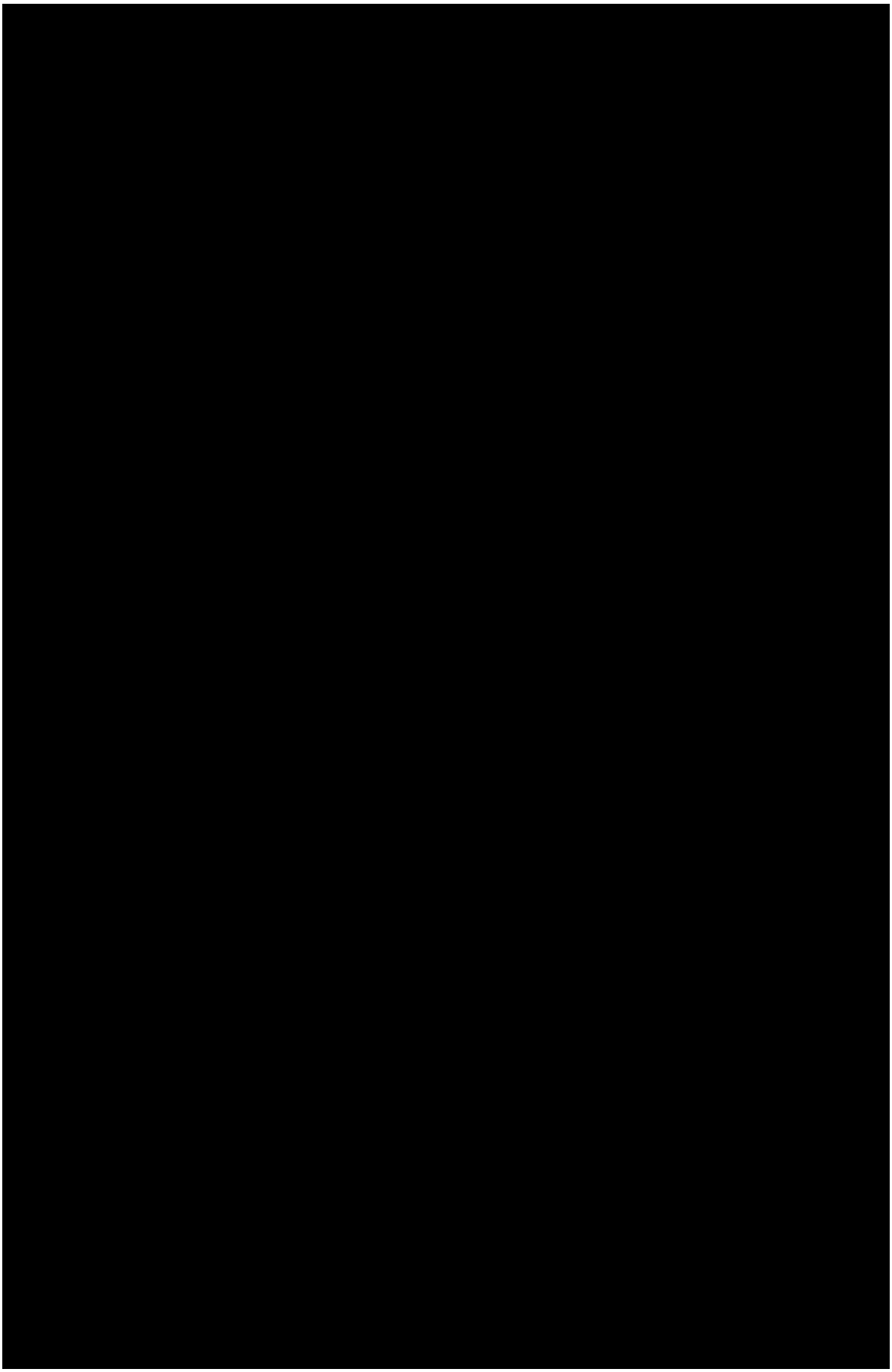

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Figure 1 FORM FLOW FOR TOLL-FREE NPA EXPANSION

SEC. 4A409: OSPS AUTOMATION OF TERMINATING CODE SCREENING/COUNTRY PAIR SCREENING OVERRIDE

1. FEATURE DESCRIPTION

The ATCO (Automation of TCS/CPS (Terminating Code Screening/Country Pair Screening) Override) feature provides automation of OSPS Toll and Assist operator's involvement during card verification with the ICVC (International Card Verification Center). This feature is available for 5E10 and later. The feature number is 98-5E-3218.

To help reduce operator worktime, this feature automates the verification process for TCS and CPS "card restricted" calls. Rather than an OSPS operator establishing the conference connection between the caller and ICVC attendant for verification procedures, the OSPS ATCO feature establishes and monitors the connection. TCS restrictions specify whether the restricted call should be sent to reorder or to an operator for handling. Only those TCS restrictions that specify "send call to operator" are candidates for ATCO processing. If the TCS restriction indicates that the call should be given "reorder", the call is processed according to existing functionality and will not be forwarded to ATCO processing.

Only those TCS/CPS "card restricted" calls that are billed to an AT&T card are referred to the ICVC and therefore, are candidates for ATCO processing. Those TCS/CPS "card restricted" calls that are billed to cards not in the AT&T CAS/NCP (Customer Account Services/Network Control Point) will proceed according to current functionality and be routed to an OSPS operator queue (with existing TCS/CPS displays) for handling.

AT&T cards such as promotional cards, prepaid cards, UNITEL cards, etc. are not appropriate to send to the ICVC for verification and neither ATCO processing nor manual verification with the ICVC is initiated. To identify this subset of AT&T cards, The ATCO feature will expand the table in the CHBCPT form (6404 Record, RC view 27.61) to include a new field for each card product type that indicates how to proceed when a TCS/CPS card restriction is encountered.

Some AT&T card accounts may have arrangements for permanent TCS override authorization to specific areas or global authorization. When the OSPS recognizes this automatic override, the restriction is overridden and the call proceeds without verification.

A person-to-person call requires an OSPS operator to complete the call. If a person-to-person call is being handled by the APS (Automatic Position System) and a "card restriction" has been encountered, the APS sends the call to an operator position for manual verification rather than sending it to the ATCO process.

Easy Reach (500 and 700) calls are not candidates for ATCO processing.

If an OSPS automated call encounters a "TCS/CPS card restriction" and the call is a candidate for ATCO processing, the call is transferred to an automated process that coordinates the ICVC verification procedure. If an OSPS operator-assisted call encounters a "TCS/CPS card restriction" and the call is a candidate for ATCO processing, a new display is given to the operator to indicate that the call is a candidate for verification automation. The operator may hand-off the call to automation processing via a special keying action or choose to keep the call at the position and coordinate the verification with the ICVC manually according to current procedures. An MLOS (Multi-Lingual Operator Services) operator may choose to handle the verification coordination so that translation can be provided during the verification.

2. FEATURE ASSIGNMENT

2.1 Feature Activation

The ATCO feature is a secured feature. To activate this feature the ACT field for SFID 409 (or SFID 288)

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must be set to "Y" on the SFSYS form (5713-1 Record).

With this feature, a new ODA form was created as an extension to the OSPSOPT form (RC view 8.9). The new OSPS Feature Parameters FTPARM form (view 8.41) provides the feature activation based on the calling and called destinations, timers for various stages of an ATCO call and the routing number to the ICVC attendant. For the ATCO feature to be activated, all of its timers and the ICVC routing number must be specified.

2.2 Card Restriction Types

The CARD RSTRCT HNDLG field was added to the CHBCPT form (6406 Record) and indicates the type of card restriction that a card product type will receive. A value of "ALLOW" indicates that verification is not needed and the restriction can be automatically overridden. "OTHBLG" indicates that verification is not needed and the restriction cannot be overridden - use other billing. "VERIFY" indicates that ATCO processing can be used to route the call to ICVC for verification.

The card product type is returned from the CAS/NCP, therefore, coordination is needed in specifying these values.

2.3 Define Announcements

Sixteen new customer defined announcements (Announcement HEADER IDs for "OSPSTA" 301 - 316) are provided for this feature. All announcements are given in English, only.

Announcement 301 is given to the caller when his/her card call is restricted by TCS/CPS and the call is going to be handled by ATCO processing for the verification. Following is recommended wording for the announcement.

- "Thank you. This call requires special billing
- approval.
- Please hold. You will hear an announcement
- or talk with a representative shortly."

Announcements 302-307 and 316 are used to pass the card number, forward number and back number to the ICVC attendant. Following is the recommended wording. Each of these announcements contains a variable indicator, phrase 16503, which announces a variable number of digits, e.g.:

- "Card number or AT&T True Choice Card
- [card number without PIN]
- Calling [NPA/NXX] or
- Calling Country [CCC],
- Number [Next digits for total of 6]
- from [NPA]
- from [first 6-digits of DIOR back number]."

The individual announcements making up this call information message follow:

Announcement 302 passes the non-Virtual card number. Following is the recommended wording for the phrase(s) and variable indicator.

- "Card number"

Announcement 303 passes the Virtual card number. Following is the recommended wording for the phrase(s) and variable indicator.

- "AT&T True Choice Card [card number
- without PIN]"

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Announcement 304 passes the domestic called number. Following is the recommended wording for the phrase(s) and variable indicator.

- "Calling [NPA/NXX]"

Announcement 305 passes the Country Code. Following is the recommended wording for the phrase(s) and variable indicator.

- "Calling Country [CCC]"

Announcement 316 passes the international-formatted number. Following is the recommended wording for the phrase(s) and variable indicator.

- "Number [Next digits for total of 6]"

Announcement 306 passes the originating NPA. Following is the recommended wording for the phrase(s) and variable indicator.

- "from [NPA]"

Announcement 307 passes the DIOR back number.

- "from [first 6-digits of DIOR back number]"

Announcement 308 is given to the ICVC attendant if the attendant enters a DTMF (Dual Tone Multifrequency) signal for "Help Message" during the Call Information Segment of the ATCO call. Following is recommended wording for the announcement.

- "To verify with caller, press 1.
- To request other billing, press 2.
- To deny call, press 3.
- To grant call, press 4.
- To connect to an operator, press zero.
- To hear the call data again, press 7.
- To repeat this help message, press star."

Announcement 309 is given to the ICVC attendant if a DTMF signal for "Help Message" has been entered during the Caller Interaction Segment of the ATCO call. Following a recommended wording for the announcement.

- "To request other billing, press pound 2.
- To deny call, press pound 3.
- To grant call, press pound 4.
- To connect to an operator, press pound zero.

  To repeat this help message, press star."

Announcement 310 is given after the ICVC attendant has signaled back to the OSPS that verification with the caller is needed and the OSPS has "unsplit" the caller. Following are some recommended wordings for the announcement.

- "Verify"
- -or-
- [tone] - Should be distinguishable from

  intrusion tone and error tone

Announcement 311 is given when the ICVC attendant signals for assistance from an OSPS operator or the

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call is bailing out to an OSPS operator due to a failure in ATCO processing. Following is a recommended wording for the announcement.

- "Please hold for further assistance."

Announcement 312 is given to the caller when the ICVC attendant has signaled back a "denial" to the OSPS. Following is a recommended wording for announcement 312.

- "We're sorry.
- This card call cannot be completed.
- Please hang up."

Announcement 313 is given to the ICVC attendant whenever the OSPS receives a DTMF response of "denial", "allow", or "other billing". Following is a recommended wording for the announcement.

- "Thank you"
- -or-
- "Acknowledged"

Announcement 314 is given to the ICVC attendant when either the CALLER SPLIT TIMER or the CALLER INTERACTION TIMER expires. This announcement warns the ICVC attendant that the call is placed on an OSPS operator queue after an additional POST WARNING TIMER expires. Following is a recommended wording for the announcement.

- [intrusion tone] (i.e., a series of 4 short

  beeps)

Announcement 315 is given to the ICVC attendant whenever an incorrect DTMF entry is received during an ATCO call. Following is a recommended wording for the announcement.

- [error tone] A pure tone of 350 or 400 Hz

  is recommended.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CHBCPT	6406	3	4DE	27.61
FTPARM	6424	3	4DY	8.41
SFSYS	5713-1	3	5AR	8.22

CHBCPT form (6406 Record) - The 6406 Record is used to populate the Card Product Type table for the PLBQ Business/Residential Card feature. For 5E10 and later, the CARD RSTRCT HNDLG field was added to support the ATCO (Automated TCS/CPS Override) feature.

FTPARM form (6424 Record) - The OSPS Feature Parameters form provides the capability for specifying OSPS feature options. The office parameters for the ATCO feature are

- DIOR TO INTL DEST
- DIOR TO DOM DEST
- NO DIOR TO INTL DEST
- NO DIOR TO DOM DEST
- ICVC TOLL-FREE NUMBER

fields and the timer fields which must be set to activate this feature. The timer fields are the following:

- CALL SETUP TIMER
- CALL SPLIT TIMER

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- INTERACTION TIMER
- POST WARNING TIMER
- FINAL DISP TIMER.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 409 must be set to "Y".

4. GLOSSARY

APS	Automatic Position System
ATCO	Automation of TCS/CPS Override
CAS	Customer Account Services
CPS	Country Pair Screening
DTMF	Dual Tone Multifrequency
ICVC	International Card Verification Center
MLOS	Multi-Lingual Operator Services
NCP	Network Control Point
TCS	Terminating Code Screening

SEC. 4A412: AUTOMATED ACCESS PROMPTING USING CPDL

1. FEATURE DESCRIPTION

The feature number for the AAP (Automated Access Prompting) using CPDL (Call Processing Data Links) feature is 98-5E-3585. This secured feature (SFID 412) is being deployed as a software update for the 5E10 Software Release.

This feature provides an interface between OSPS (Operator Service Position System) and an EIS (External Information System) adjunct based SHARP (Shared Access Resource Platform) (which consists of a CDSU (Customer Data Service Unit) and a Platform Manager) for the handling of a call which has been identified as a 1-800-CALLATT using CPDL interface call. Upon recognition of a 1-800-CALLATT using CPDL interface call, OSPS will establish communication with the CDSU via CPDL interface.

When a 1-800-CALLATT using CPDL interface call arrives at the OSPS, the OSPS will forward the call to the SHARP for processing based on switch provisioned data. The SHARP is expected to provide the 1-800-CALLATT front end menu and sub-menu to interact with the caller and allow the caller to use either DTMF digits or spoken keywords to make credit card, collect, BT3 (Bill to 3rd), operator, Person-To-Person calls, or request to be externally transferred to the customer service representatives, DA (Directory Assistance) services, or AVL (AT&T Voice Line) services.

The SHARP is expected to support Card, Collect, BT3, operator, and Person-To-Person calling using DTMF (Dual Tone Multifrequency) digits or spoken keywords (by saying calling card, collect, BT3, operator, Person-to-Person, etc.) and also support multiple digits entry by callers to make card, collect, BT3, operator, or Person-To-Person calls. Based on the caller's response at the SHARP, the SHARP is expected to send the following internal transfer requests to the OSPS:

- Card call (the OSPS will send the card call request to ACCS),

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- Collect or BT3 call (the OSPS will send Collect or BT3 call request to an Automated Position (AP)),
- Operator or Person-To-Person request call (the OSPS will send operator request or Person-To-Person request call to an operator).

The SHARP is also expected to handle external transfer requests and send the external transfer requests with either a toll free routing number or a 129 routing number to the OSPS and request the OSPS to use the above external routing number to transfer the call external to the OSPS switch. The OSPS will use the external routing number received from the SHARP to route the call.

Below is a description for the new announcements headers:

- 317 - provides the new CPDL turn-back announcement. The recommended wording - "We're sorry, the service you have requested is not available (1/2 second pause). Please hang up". This consists of phrases 156, 157, 27, 64.
- 318 - provides the initial ACCS (Automated Calling Card Service) forward number prompt when the SHARP does not pass the forward number to the OSPS. The wording to be provided by the Service Provider Technician.
- 319 - provides the forward number re-prompt on forward number failure during digit analysis checks when the forward number is entered at the initial ACCS prompt and the SHARP does not pass the forward number to the OSPS. (This is a re-prompt announcement when ONLY a forward number is entered in response to announcement 318.) The wording to be provided by the Service Provider Technician.
- 320 - provides the forward number re-prompt on forward number failure during digit analysis checks when the forward number and card number are entered at the initial ACCS prompt and the SHARP does not pass the forward number to the OSPS. (This is a re-prompt announcement when BOTH the forward number and card number are entered in response to announcement 318.) The wording to be provided by the Service Provider Technician.
- 321 - provides the forward number re-prompt on forward number failure during digit analysis checks when the SHARP passes the forward number to the OSPS. The wording to be provided by the Service Provider Technician.
- 322 - provides the forward number re-prompt on forward number failure during digit analysis checks when the SHARP passes the forward number and card number to the OSPS. The wording to be provided by the Service Provider Technician.

2. FEATURE ASSIGNMENT

Before activating this feature on the switch, the OSPS switch Software Update package and the APS Software Update package MUST BE applied, and the SHARP MUST BE available. The OSPS switch data population MUST BE coordinated with the availability of the SHARP and the data required to update the Cluster data in the APS (Automated Position System) for this feature.

To provision this feature on the switch the following must be done:

- On the SFSYS form (5713-1 Record), SFID 412 must have the ACT field for SFID 412 set to "Y".
- EISDATA form (5462-1 Record), provides the new EIS NAME, NRP for vendor platform, and MSG SET 6 to support the CPDL services.
- SERVDATA form (5466 Record), provides the service ID data needed for this application. A new PRE OPER EIS is supported for CPDL services, with an OSPS SVC CODE value of "SRVC8" and the

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expected INITIAL ACTION to ASKEIS. The INT ANNC TYPE field should be populated on this view for these calls; this value (announcement header 317) is the Toll & Assistance header ID that is used to provide a turn-back announcement in case of a call failure before setting up to the EIS system.

- ACDCTP form (5412 Record), defines the service ID for 1-800-CALLATT using CPDL interface calls. This service ID is the SRV ID for 5466.
- SERVDEST form (5476 Record), provides a mapping of a service destination to a 5ESS-2000 Switch routing type and associated routing code such as a route index.
- FTPARM form (6424 Record), defines the timers and parameters used when handling 1-800-CALLATT using CPDL interface calls.
- SRVDESIG form (5474 Record), provides the new CPDL TREATMENT that specifies whether the 1-800-CALLATT call can be supported by the CPDL Interface interacting with the NRP platform.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
EISDATA	5462-1	3	4BM	21.51
SERVDATA	5466	3	4BS	21.54
ACDCTP	5412-A/D	3	4M	26.9
SERVDEST	5467	3	4BT	21.53
FTPARM	6424	3	4DY	8.41
SRVDESIG	5474	3	4BZ	27.70

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 412 must be set to "Y".

EISDATA form (5462-1 Record) - This form defines the operational parameters for a particular OSPS EIS (External Information System).

SERVDATA form (5466 Record) - This form is used to define EIS (External Information Systems) service parameters.

ACDCTP form (5412 Record) - This form assigns call type information for ACD (Automatic Call Distribution).

SERVDEST form (5476 Record) - This form provides a mapping of a service destination to a 5ESS-2000 Switch routing type and associated routing code such as a route index.

FTPARM form (6424 Record) - The OSPS Feature Parameter form provides the capability for specifying OSPS feature options.

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+800 calls arriving on AATOS (Alternate Access to Operator Systems) and SDN/NRA (Software Defined Network/Number Remote Access) MF (Multifrequency).

4. GLOSSARY

AAP Automated Access Prompting

AATOS Alternate Access to Operator Systems

AVL AT&T Voice Line

CDSU Customer Data Service Unit

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CPDL	Call Processing Data Links
DA	Directory Assistance
DTMF	Dual Tone Multi-frequency
EIS	External Information System
OSPS	Operator Service Position System
SHARP	Shared Access Resource Platform

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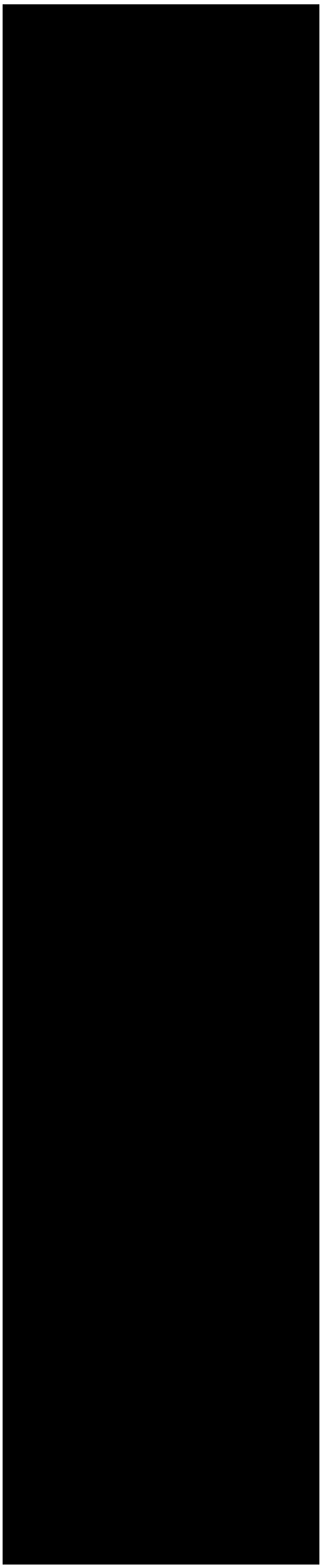

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Figure 1 FORM FLOW FOR AUTOMATED ACCESS PROMPTING USING CPDL

SEC. 4A414: OSPS AUTOMATED SERVICE ACCESS PROMPTING FOR LANGUAGE SPECIFIC OPERATOR SERVICES RATING CHANGES.

1. FEATURE DESCRIPTION

The ASAP (Automated Service Access Prompting) for LSOS (Language Specific Operator Service) RC (Rating Changes) feature is available for 5E10 and later. The feature number for this capability is 98-5E-3447. This feature provides the OSPS with the ability to differentiate the level of front-end automation provided on AATLSOS (Alternate Access to Language Specific Operator Services) calls. The rating and charging associated with the call may be changed as follows:

- designate which AATLSOS call originations should identify automation differentiation.
- charge differently by incorporating the level of automation information in the AMA (Automatic Message Accounting) record when the AP (Automated Position) provides front-end handling (ASAP Handling) on an AATLSOS call.
- identify the level of automation for AATLSOS calls which require RTRS (Real Time Rating System) interaction, such as with Purchase Limits, Hotel/Motel, and Rate Quotation calls.

See also the following ASAP features:

- AATLSOS Alternate Access Prompting; Division 2, Section 4A403 (SFID 403).
- ASAP for LSOS Using 129 Route Number; Division 2, Section 4A398 (SFID 398).
- ASAP Release 2; Division 2, Section 4A284 (SFID 284)

2. FEATURE ASSIGNMENT

This feature is dependent on ASAP Release 2 feature, therefore, SFID 384 must be activated on the SFSYS form. Also, ASAP AMA and ASAP RTR fields on the OPSPOPT form (5424 Record) must be "Y".

ASAP LSOS RC feature is controlled by a global switch parameter, as well as a secured feature activation parameter and an optioned feature parameter.

The ASAP LSOS RC feature is activated by the following:

- ASAP LSOS RC is a secured feature. Enter "Y" in the ACT field for SFID 414 on the SFSYS form (5713-1 Record).
- ASAP LSOS RC is also an optioned feature and is turned on in the switch by entering "Y" in the ACT field for OFID 657 on the FOSYS form (5713-2 Record).
- In addition, to operate this feature, the Alternate Access Service Designation Table indicates if ASAP for LSOS RC applies to the call. If this feature applies to the call, the ASAP TREATMENT field on the SRVDESIG form (5474 Record) is set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

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SFSYS	5713-1	3	5AR	8.22
SRVDESIG	5474	3	4BZ	27.70

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs) for Special and Transparency Features. The ACT field for OFID 657 must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 414 must be set to "Y"

SRVDESIG form (5474 Record) - This form is used to determine the expected service type for 1+800 calls arriving on AATOS and SDN/NRA MF trunks. The ASAP TREATMENT field supports this feature.

4. GLOSSARY

AATLSOS Alternate Access to Language Specific Operator Services

ASAP Automated Service Access Prompting

AMA Automatic Message Accounting

AP Automated Position

LSOS Language Specific Operator Service

RTRS Real Time Rating System

SEC. 4A415: OSPS RECORD AND PLAYBACK

1. FEATURE DESCRIPTION

The OSPS Record and Playback feature is an OSPS adjunct-based feature that reduces operator work time on LS/DA (Listing Services/Directory Assistance) calls by initiating the automation of the DA caller contact. This feature prompts the DA caller to speak the locality name for which a listing is desired and then to speak the desired listing name. The APS (Automated Position System) that provides this feature records the DA caller's responses, trims out initial and final silences, optionally compresses the remaining recorded speech, and plays the recording to an LS/DA operator. The feature number for this capability is 98-5E-2997.

In order for the 5ESS-2000 Switch portion of this feature to be functional, the APS portion of the feature must be purchased, loaded and activated.

2. FEATURE ASSIGNMENT

In order to activate this secured feature, the ACT field for SFID 415 on SFSYS form (5713-1 Record) must be set to "Y". This is also an optioned feature, therefore, the ACT field of OFID 659 must be set to "Y" on the FOSYS form (5713-2 Record).

The DA AUTOMATION field on the OPRTK form (5417 Record) must be set to indicate whether an LS/DA call should be routed to an automated position or to an LS/DA operator position. This route indicator is supported on a per trunk group basis.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2/3	3	5AS	8.31
OPRTK	5417	3	4R	26.26
SFSYS	5713-1	3	5AR	8.22

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FOSYS form (5713-2 Record) - This form is used to activate optioned features. The ACT field for OFID 659 must be set to "Y" to activate this optioned feature.

OPRTK form (5417 Record) - This form is used to define the common information and type of traffic over each trunk group that can access an OSPS operator. An OPRTK form must be completed for each incoming trunk group in the office that can access the OSPS operator. The DA AUTOMATION field supports this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 415 must be set to "Y" to activate this feature.

4. GLOSSARY

APS	Automated Position System
DA	Directory Assistance
LS	Listing Services

SEC. 4A417: OSPS LOCAL NUMBER PORTABILITY (LNP) - LEC Version

1. FEATURE DESCRIPTION

Available for 5E11 and later, the OSPS LNP (Local Number Portability) feature implements the use of LNP on an OSPS for both LEC (Local Exchange Carrier) (feature number 98-5E-3518) and AT&T (feature number 98-5E-3571) offices. This feature uses OSPS office data and external database queries to determine if calling numbers, called numbers, and billing numbers (e.g. calling cards, third numbers, collect numbers) should use LRNs (Location Routing Numbers) for call routing and AMA (Automatic Message Account) recording. The LRN is a 10-digit number used to identify which company is offering service to the particular number in question. Called numbers and conferenced numbers used to verify billing (e.g. third numbers) are routed using the LRN instead of the actual number when routed via SS7 (Signaling System 7).

To obtain LRNs, the LEC version of the OSPS LNP feature uses existing AIN (Advanced Intelligent Network) queries.

This section covers general feature information that is applicable to both the LEC and the AT&T versions of this feature as well as information that is specific to the LEC. Unless otherwise specified, the information is applicable to both LEC and AT&T. For AT&T specific information, refer to Division 2 Section 4A419.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow of the OSPS LNP feature.

2.1 Activation/Deactivation

FOR USE BY LEC OFFICES ONLY.

The LEC FEAT ACT field on the FTPARM form (6424 Record) is the nonsecure feature activation/deactivation parameter for the LEC OSPS LNP feature. Setting this field to "Y" activates the OSPS LNP feature for a LEC office. To allow this feature to be accessed, Secured Feature ID 417 on the SFSYS form (5713-1 Record) must also be activated. In order to deactivate this feature, set the LEC FEAT ACT field to "N".

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2.2 Direct Signaling Application

A new Direct Signaling Application type of "OLNP" (OSPS Local Number Portability) was added as an allowed key value for the DSAPP form (5537 Record).

2.3 Trunk Group Settings

Mark the affected "Trunk Group Calling LNP Source" parameter by setting the CALL LNP SRC field on the OPRTK form (5417 Record). The default value is "NOPT" which means no portability. Other allowed values are "QURY", for LNP/AIN query, and "OFCD" for use of the office data specified in the LRN PARAMETER field of this form.

When the value in the CALL LNP SRC field is "OFCD", then the LRN PARAMETER field on this form must be filled in with a 10-digit number to be used as a back number for calls coming into the trunk group.

2.4 NXXs For LNP Query

Data regarding the portability status of NXXs specified within the NPA can be inserted, updated, reviewed and/or deleted using the OLNPU form (6411 Record). This form provides for the designation of portability data for individual NXXs and ranges of NXXs.

2.5 AIN Trigger Number

FOR USE BY LEC OFFICES ONLY.

To reserve a specific AIN (Advanced Intelligent Network) trigger number to be used with OSPS for AIN LNP queries, it must first be defined on the NSTRIG form (5324 Record). It can then be assigned to the AIN TRIGGER NBR field on the FTPARM form (6424 Record).

2.6 Other Options

On the FTPARM form (6424 Record) several other options are available for both the LEC and AT&T offerings of this feature as follows:

- **TLN CARD NBR** (Telephone Line Number based 10+4 Card Number) - Enter "Y" for yes if Local Number Portability (LNP) queries are to be sent on TLN-based 10+4 card numbers, otherwise enter "N" (default value) for no.
- **THRD NBR CALLS** (Third Number Calls) - Set this field to specify when LNP queries for third number calls are to be sent. Use either "B" for BILL to send at billing validation time or "R" for ROUT to send at routing time.
- **LRN IN OTRS** (Location Routing Numbers in Operator Trouble Reports) - Specify whether the LRN is to be supplied in the OTR by entering "Y" for yes or "N" for no.
- **LRN ASSERTS** (Location Routing Numbers in Asserts) - Specify whether the LRN is to be included in assert output data by entering "Y" for yes or "N" for no.
- **DIGIT LIDB QRY** (Number of Digits in Line Interface Data Base Query Address) - Specify the number of digits, either 6 or 10, to be included in the address of an LIDB query.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
DSAPP	5537	3	5AK	8.17
FTPARM	6424	3	4DY	8.41
OLNPU	6411	3		27.34

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			4DJ	27.35
OPRTK	5417-3	3	4R	26.26
SFSYS	5713-1	3	5AR	8.22

DSAPP form (5537 Record) - This form is used to translate a direct signaling application type into a translation type and a subsystem number. This is only used by a direct signaling application providing a service unit that uses the pure CCS7 (Common Channel Signaling system 7) protocol. The value "OLNP" was added for use as a key on this view.

FTPARM form (6424 Record) - This form is used for updating the listed global parameters used in OSPS features. Added fields are as follows:

- (FOR LEC USE ONLY)
  - LEC FEAT ACT
  - AIN TRIGGER NBR
- (FOR BOTH LEC AND AT&T USE)
  - TLN CARD NBR
  - THRD NBR CALLS
  - LRN IN OTRS
  - LRN ASSERTS
  - DIGIT LIDB QRY

OLNPU form (6411 Record) - This form is used to maintain the billing validation for a specified set of NXXs in an NPA. The LNPD (Local Number Portability Database) or an alternate destination may be selected. This is a new form.

OPRTK form (5417-3 Record) - This form provides the capability for specifying or verifying access tandem incoming trunk group assignments for an OSPS Administrative Office. Added fields are CALL LNP SRC and LRN PARAMETER.

SFSYS form (5713-1 Record) - This form allows activation and deactivation of secured features. SFID 417 has been added for activation of the LEC OSPS LNP feature.

4. GLOSSARY

AIN	Advanced Intelligent Network
CCS7	Common Channel Signaling Version 7
LEC	Local Exchange Carrier
LIDB	Line Interface Data Base
LNP	Local Number Portability
LNPD	Local Number Portability Database
LRN	Location Routing Number

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ODA	Office Data Administration
OLNP	OSPS Local Number Portability
OSPS	Operator Services Position System
OTR	Operator Trouble Report
RC	Recent Change
SFID	Secured Feature Identification
SS7	Signaling System 7
TLN	Telephone Line Number

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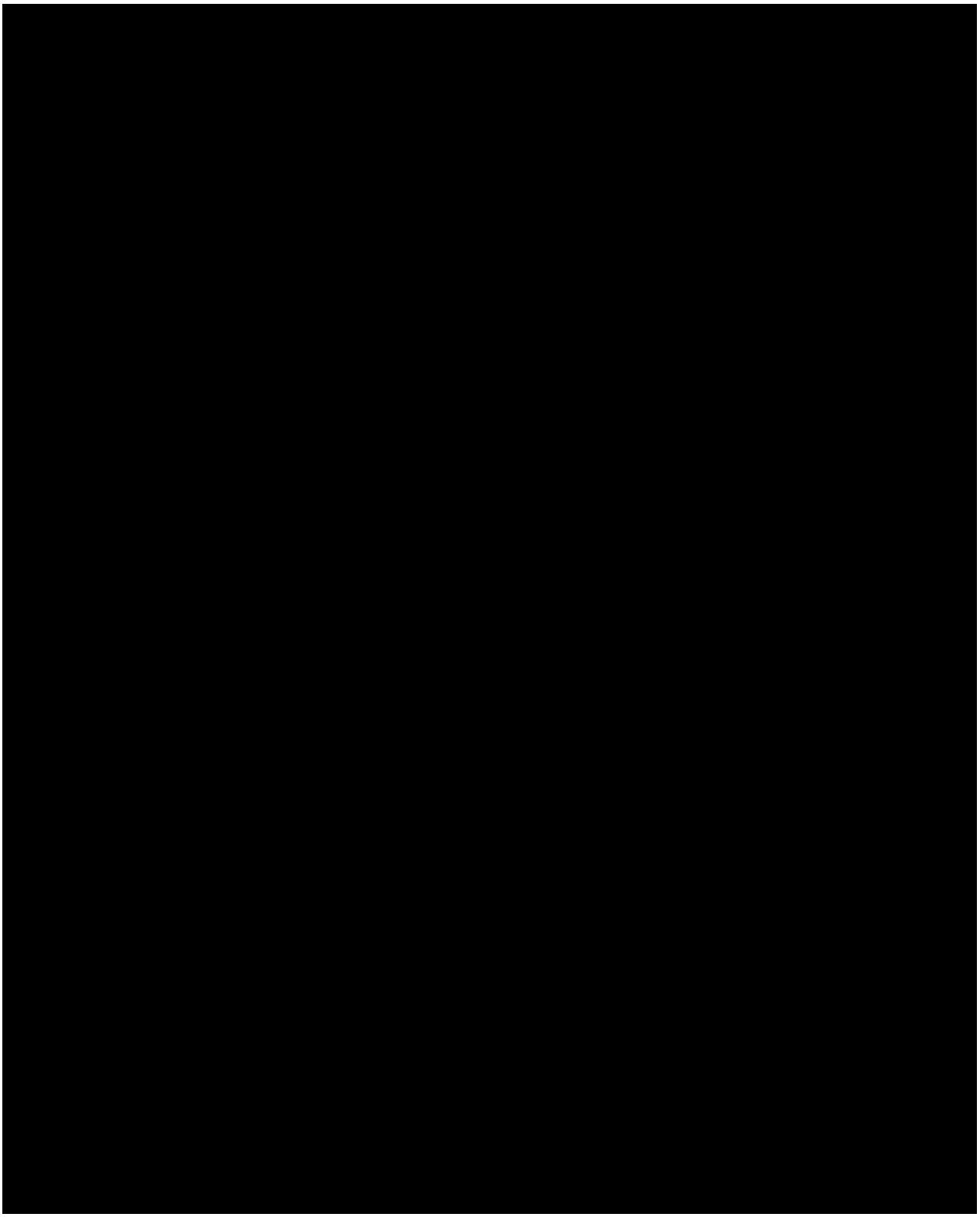

Figure 1 FORM FLOW FOR LEC OSPS LNP FEATURE

SEC. 4A418: VMS ACCESS DIALING CHANGES

1. FEATURE DESCRIPTION

Available for 5E10 and later, the VMS ADC (Voice Messaging Service Access Dialing Changes) feature

modifies several aspects of the OSPS switch treatment which is provided by the current series of VMS features.

The following enhancements are included in this feature:

- Callers are able to initiate a VMS explicit transfer request without having to first dial the # key at times when sequence dialing is allowed.
- Callers no longer have to dial the VMS Service Code when requesting an explicit transfer to VMS at times when sequence dialing is allowed.
- OSPS provides a recent-changeable interdigit timer used to determine the end of input on a caller-entered ESP (Enhanced Service Provider) Access Code.
- For non-DIOR (Direct International Origination) calls that encounter a CCS7 (Common Channel Signaling, CCITT Version 7) busy condition, callers may be transferred to the VMS automatically (the caller implicitly indicates a desire to be transferred to the VMS by staying off-hook following completion of the VMS busy prompt announcement; no other caller action is required.)
- For non-DIOR calls, callers may be prompted (with a VMS Ring/No Answer announcement) for transfer to a VMS ESP when no CCS7 indication is received that identifies the status of the destination number. With the addition of this capability, non-DIOR callers may be prompted for transfer to VMS when any of the following conditions are encountered:
  - CCS7 Busy
  - CCS7 Ring/No Answer
  - no CCS7 indication is received

NOTE: Non-DIOR callers are not prompted for transfer to VMS when CCS7 indications other than Busy or Ring/No Answer are encountered.

- On non-DIOR calls to international destination numbers, OSPS uses a new ring time-out timer to determine when to play a VMS Ring/No Answer prompt announcement.
- OSPS allows the operator to perform a VMS transfer while in the initial call class state.
- OSPS blocks the VMS transfer prompt and VMS transfer requests on calls billed to a calling card subscribed to the ESP Credit Checking feature or to a card defined as ineligible for VMS treatment in the OSPS Card Recognition table.
- OSPS blocks the VMS transfer prompt and VMS transfer requests on calls to destination numbers defined as ineligible for VMS treatment.
- OSPS provides new VMS announcements used to instruct callers of the new dialing method and to handle error conditions.
- OSPS supplies new operator displays that provide operators with information related to new VMS transfer procedures and transfer request denials.
- OSPS provides additional VMS service and per-ESP measurements.
- The type of billing record OSPS creates for the call to the VMS ESP is changed for certain types of calls. The manner in which OSPS creates an AMA record for this call is described as follows (both new and existing functionality):

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- For DIOR and Wireless originations transferred to ESP Access Code ``1'', OSPS creates a billable AMA record for the call to the ESP. The public access number of the Message Service is included as the destination number in this record. This capability currently exists and continues to be supported for DIOR and Wireless originations transferred to ESP Access Code "3".
- For Message Collect calls, OSPS creates an Auto-Collect AMA record for the call to the ESP, as is done currently.
- For all other VMS transfers, OSPS has the ability to create a billable AMA record for the call to the ESP.

This capability is controlled by two activation parameters: one for calls to domestic destination numbers and one for calls to international destination numbers. Billing changes take effect only when these parameters, referred to as the VMS Domestic Billing Changes and VMS International Billing Changes parameters, are active. These parameters have been added to the *Voice Messaging Service Interface* table thereby allowing the Service Provider to define billing for other VMS transfers on a per-ESP basis. It is not necessary for both of these parameters to be active at the same time in order to have a particular ESP.

The billable AMA record contains the destination number for which the caller would like to leave a message. It does not contain the redirection number of the associated ESP. OSPS creates the record in this manner even when the call is completed to the ESP.

VMS ADC is a secured feature. The ACT field for SFID 288 or 418 on the SFSYS form must be set to "Y" in order to use this feature.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow of the VMS Access Dialing Changes feature.

2.1 Activation/Deactivation

The VMS ACC DIAL field on the OSPSOPT form (5424 record) is the nonsecure feature activation/deactivation parameter for the VMS Access Dialing feature. Setting this field to "Y", along with activating the original VMS feature by setting the VMS ON field on the OSPSOPT form to "Y", activates the VMS Access Dialing Changes feature. To allow this feature to be accessed, one of the Secured Feature IDs, 288 or 418, must be activated. In order to deactivate the feature, set the VMS ACC DIAL field to "N".

2.2 Implicit Transfer Option

The Implicit Transfer Option is turned on by setting the IMPLCT TRANS field on the OSPSOPT form (5424 record) to "Y" and by assigning a predefined ESP access code value to the IM TR ESP AC field on the OSPSOPT form. This value is predefined using the ESPINFO form (5472 record).

2.3 Timer Values

Set the VMS AD TIMER field on the OSPSOPT form (record 5424) to the duration of time, in tenths of a second, that is desired for OSPS to wait for the user to complete entering an ESP access code. If not set, this field takes on a default value of 20. This timer is applied only when a caller requests a transfer utilizing the VMS Access Dialing Changes feature (i.e., abbreviated dialing).

Set the INTL RING TO field on the OSPSOPT form to the duration of time, in seconds, that is desired for ringing to be provided before VMS prompt treatment is applied. This field applies only to non-DIOR calls to international destination numbers. If this field is not set, it takes on a default value of 36.

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2.4 Eligibility

Use the VMSTPR form (6410 record), OSPS VMS Terminating NPA NXX Restrictions, to define NANP (North American Numbering Plan) destination numbers as ineligible for VMS treatment.

Set the VMS ELIGIBLE field on the TCCID form (5454 record) to "Y" if this card's issuer identifier is eligible for VMS treatment. Otherwise, set it to "N".

2.5 Billing

For billing of VMS transferred calls, to which the destination number is domestic, set the VMS DOM BLG field on the ESPINFO form (5472 record) to "Y" if it is desired to have OSPS create a billable AMA record. Setting this field to "Y" also means that there must be an acceptable VMS billing method available in order for the VMS transfer to be allowed.

Set the VMS INTL BLG field to "Y" if the preceding described functionality is desired for the billing of VMS transferred calls to which the destination number is international.

2.6 Announcements

Define ten new announcements using the ANNHD form (5531 record). Following are the available announcement header ID numbers and their associated events:

ID#	EVENT
323	A non-DIOR call receives busy - ***explicit*** VMS transfer request
324	A DIOR call receives busy
325	A non-DIOR call receives ringing
326	A DIOR call receives ringing
327	VMS is ***not*** allowed but, a re-prompt is provided
328	VMS is ***not*** allowed and a reprompt is not provided
329	The access code is invalid but, a re-prompt is provided - the caller has ***not*** previously dialed the # key
330	The access code is invalid but, a re-prompt is provided - the caller has previously dialed the # key
331	The access code is invalid and a re-prompt is not provided
335	A non-DIOR call receives busy - ***implicit*** VMS transfer request

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ANNHD	5531	3	5AE	8.61
ESPINFO	5472	3	4BX	27.65
OSPSOPT	5424	3	4Y	8.9
SFSYS	5731-1	3	5AR	8.22
TCCID	5454	3	4BC	27.55
VMSTPR	6410	3	4DI	27.64

ANNHD form (5531 Record) - This form contains announcement header definitions. For this feature, ten new announcement headers are provided which can be used to define new VMS announcements. No modifications to this form were necessary.

ESPINFO form (5472 Record) - This form contains information about the ESP (Enhanced Service Provider) external to the 5ESS Switch. The following fields were added: VMS DOM BLG and VMS INTL BLG.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. The following fields were added: VMS AD TIMER, INTL RING TO, IMPLCT TRANS, IM TR ESP AC. Data rules for the INTL RING TO and the IMPLCT TRANS fields have also been added.

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SFSYS form (5731-1 Record) - This form allows activation and deactivation of secured features. SFID 418 has been added for activation of the VMS Access Dialing Changes feature.

TCCID form (5454 Record) - This form is used for Telephone Credit Card (TCR) identification. The VMS ELIGIBLE field was added to this form.

VMSTPR form (6410 Record) - This is a new form form which contains the NPA, NXX and LINE information to block call terminations for Voice Message Service (VMS) calls.

4. GLOSSARY

ADC	Access Dialing Changes
AMA	Automatic Message Account
CCS7	Common Channel Signaling, CCITT version 7
DIOR	Direct International Origination
ESP	Enhanced Service Provider
NANP	North American Numbering Plan
NPA	Number Plan Area
ODA	Office Data Administration
OSPS	Office Service Position System
RC	Recent Change
RTU	Right To Use
SFID	Secured Feature Identification number
TCR	Telephone Credit Card
VMS	Voice Messaging Service

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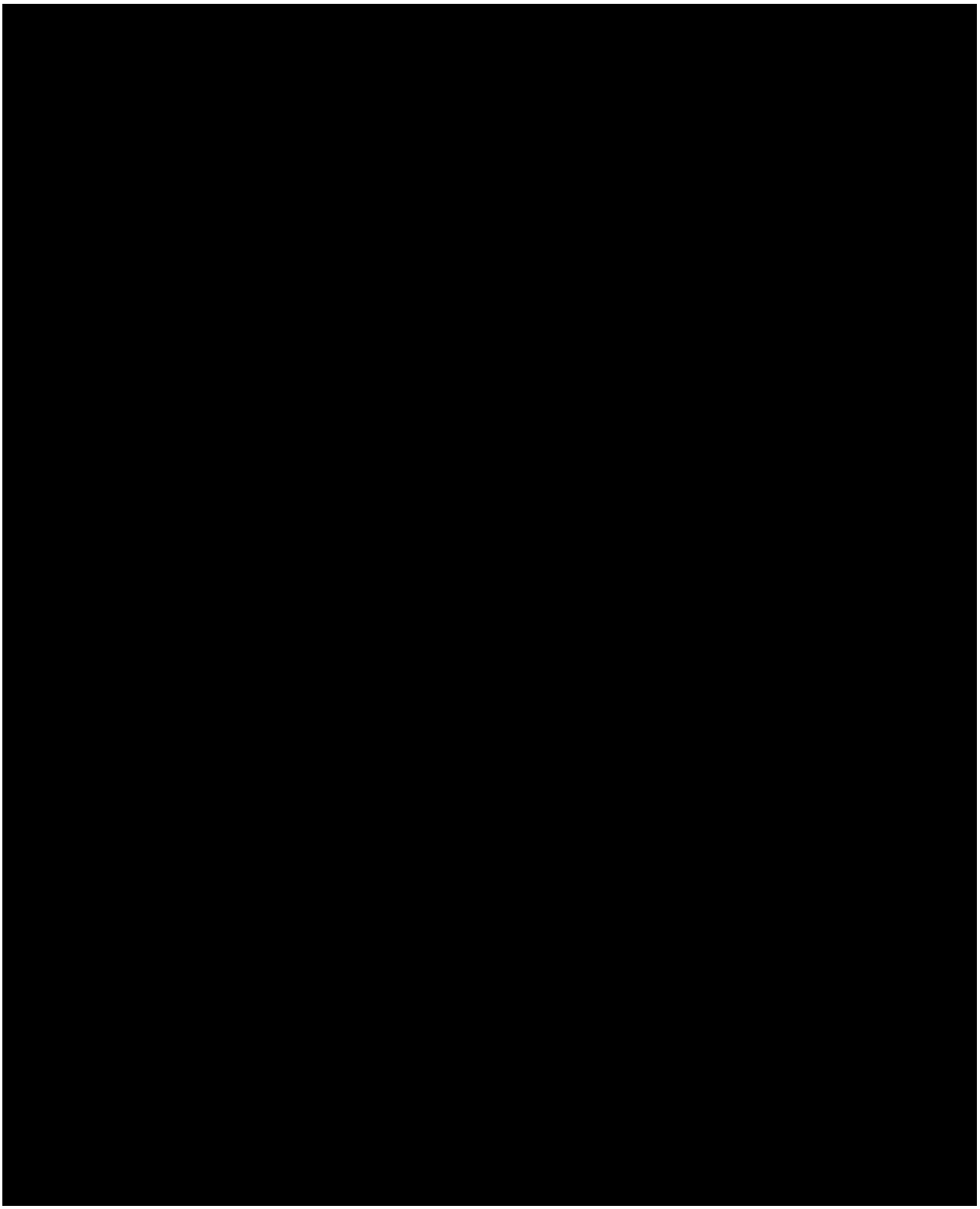

Figure 1 FORM FLOW FOR VMS ACCESS DIALING CHANGES FEATURE

SEC. 4A419: OSPS LOCAL NUMBER PORTABILITY (LNP) - AT&T Version

1. FEATURE DESCRIPTION

Available for 5E11 and later, the OSPS LNP (Local Number Portability) feature implements the use of LNP

on an OSPS for both LEC (Local Exchange Carrier) (feature number 98-5E-3518) and AT&T (feature number 98-5E-3571) offices. This feature uses OSPS office data and external database queries to determine if calling numbers, called numbers, and billing numbers (e.g., calling cards, third numbers, collect numbers) should use LRNs (Location Routing Numbers) for call routing and AMA (Automatic Message Account) recording. The LRN is a 10-digit number used to identify which company is offering service to the particular number in question. Called numbers and conferenced numbers used to verify billing (e.g., third numbers) are routed using the LRN instead of the actual number when routed via SS7 (Signaling System 7).

To obtain LRNs, the AT&T version of the OSPS LNP feature uses a new type of query, LNP.

This section covers information that is specific to the AT&T version of this feature. For general feature information that is common between both the LEC and the AT&T versions as well as LEC specific information, refer to Division 2 Section 4A417.

2. FEATURE ASSIGNMENT

Refer to Figure 1 for AT&T specific feature assignment form flow of the OSPS LNP feature. Refer to Figure 1 in Division 2 Section 4A417 for general feature assignment form flow of the OSPS LNP feature.

2.1 Activation/Deactivation

The ATT FEAT ACT field on the FTPARM form (6424 Record) is the nonsecure feature activation/deactivation parameter for the AT&T OSPS LNP feature. Setting this field to "Y" activates the OSPS LNP feature for an AT&T office. To allow this feature to be accessed, either Secured Feature ID 288 or 419 must also be activated. In order to deactivate this feature, set the ATT FEAT ACT field to "N".

2.2 Query Parameters

Update the following fields on the FTPARM form (6424 Record) for AT&T LNP:

- Set the ATT QRY TRANS (AT&T Query Translation type) field to a number from 0 to 255 to specify a unique translation type for an AT&T LNP query.
- Set the ATT QRY TIMEOUT (AT&T Query Timeout) field to a number from 1 to 8 seconds to specify when a query should time out.
- Set the ATT QRY ALM THR (AT&T Query Alarm Threshold) to a number from 0 to 100 to indicate the percentage of LNP queries that must succeed per quarter hour. When the query success rate falls below this percentage, in any quarter hour interval, an LNP Query Failure Alarm is activated.
- Set the ATT MIN THR (AT&T Minimum Threshold) to a number from 1 to 64 to specify the minimum number of queries that must be attempted per quarter hour in order to calculate the query success rate.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FTPARM	6424	3	4DY	8.41
SFSYS	5731-1	3	5AR	8.22

FTPARM form (6424 Record) - This form is used for updating the listed global parameters used in OSPS features. Added fields are as follows:

- ATT FEAT ACT
- ATT QRY TRANS

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- ATT QRY TIMEOUT
- ATT QRY ALM THR
- ATT MIN THR

SFSYS form (5731-1 Record) - This form allows activation and deactivation of secured features. SFID 419 has been added for activation of the AT&T OSPS LNP feature.

4. GLOSSARY

LEC	Local Exchange Carrier
LNP	Local Number Portability
LRN	Local Routing Number
ODA	Office Data Administration
OSPS	Operator Services Position System
RC	Recent Change
SFID	Secured Feature Identification
SS7	Signaling System 7

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Figure 1 FORM FLOW FOR AT&T OSPS LNP FEATURE

SEC. 4A420: CAS INTERNATIONAL INTERCEPT

1. FEATURE DESCRIPTION

The feature number for the CASII (CAS (Customer Account Services) International Intercept) feature is 99-5E-3834. This secured feature (SFID 420) is being deployed as a software update for the 5E10 Software Release.

The feature introduces a new card restriction type. This new restriction type, Intercept, parallels the TCS (Terminating Code Screening) and CPS (Call Progress Stopped) restrictions in screening precedence rules and in display and verification processing. An intercept indicator is stored with each card account in the CAS/NCP (Network Control Point). If the card is to be verified with the ICVC (International Card Verification Center) when a call is billed to that account, the Intercept Indicator is set in the CCIF (Calling Card InFormation) parameter of the card validation response. The CAS/NCP sets the Intercept Indicator in the CCIF parameter of the response if the flag has been set in the account and the card.

Upon the activation of the CAS International Intercept Feature, the OSPS (Operating Services Position

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System) will examine the CCIF parameter to determine if intercept applies to the call, typically to an international destination because the card has not been used recently for international calls. If intercept does apply to the call, the OSPS will provide processing for card verifications to the ICVC for ATCO (Automation of TCS/CPS Override) treatment.

For calls that are at a position, either operator or APS (Automated Position System), a warning message consistent with the TCS/CPS warning message is provided. Additionally, a new display indicator can be provided at the position to show which card restriction type applies. The restriction type can also be quoted to the ICVC attendant in the call information message.

2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for SFID 420 is set to "Y" on the SFSYS form (5713-1 Record). In addition, the following fields must be activated on the FTPARM form (6424 Record):

- INTRCPT DIOR - Set to "Y" if this feature applies for DIOR originations
- INTRCPT NDIOR - Set to "Y" if this feature applies to domestic originations
- CRD RESTR TYP - Set to "Y" if the restriction type announcement header IDs 332, 333, or 334 is to be quoted to an ATCO attendant on an automated verification call and if the new indicator will be displayed when an OSPS operator handles a restricted call. This can be activated independent of the INTRCPT DIOR and the INTRCPT NDIOR fields.

There are also external interfaces required before the feature can be used. This feature should be activated after the CAS/NCP changes have been implemented for populating the Intercept Indicator in parameter CCIF of the TCAP reply message. The new parameter value will be ignored by OSPS if it is received and this feature is not active.

There are 2 SCENARIOS:

- 0+ Call with the ATCO feature active
  - An AT&T call is made using an AT&T Card. After the forward or international forward number and card number are entered, a CAS card validation query is sent.
  - The CAS reply contains a new field in the CCIF parameter which represents the CASII indicator. If this indicator is set or if TCS/CPS restrictions are present and not overridden by the CAS reply, then this call is a candidate for ATCO treatment.
  - Since the ATCO feature is active, a call is routed to an ATCO attendant.
  - A new measurement is pegged indicating restrictions were applied because of the CASII indicator.
  - When the ATCO attendant requests the call information, a new phrase may be prefixed to the current call information announcement. The new phrase will indicate what caused the restriction 1) TCS or CPS screening 2) non-use or 3) TCS/CPS with non-use.
  - The new phrase is only prefixed if the card restriction type quotation parameter is set on the FTPARM form (6424 Record).
  - If the ATCO attendant presses #0 for operator assistance, an OSPS operator is attached to the call.
  - Upon position seizure, if the card restriction type quotation parameter is set, then a new indicator identifying the cause of the restriction is displayed on the operator's terminal. The restriction may

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be caused by 1) TCS or CPS screening 2) non-use or 3) TCS/CPS.

- The rest of the call is handled according to operator practices for TCS/CPS restricted calls, i.e. early position release is not allowed because of the restriction.

- 0- call with the ATCO feature active

  - The caller dials 0- to request operator assistance. The operator enters a valid forward/international forward number and Calling Card number. A CAS card validation query is sent.

  - The CAS reply contains a new field in the CCIF parameter which represents the CASII indicator. If this indicator is set or if TCS/CPS restrictions are present and not overridden by the CAS reply, then this all is a candidate for ATCO treatment.

  - If the card restriction type parameter is set, a new indicator is displayed to the operator identifying the cause of the restriction. The restriction may be caused by 1) TCS or CPS screening 2) non-use or 3) TCS/CPS with non-use.

  - Since the ATCO feature is active, a message is given to the operator that auto verification is allowed.

  - The operator enters TRANS 4 SEND.

  - The call is released from the position and routed to an ATCO attendant.

  - When the ATCO attendant requests the call information, a new phrase is prepended indicating the cause of the TCS/CPS restriction. The new phrase is prepended if the CAS International Intercept indicator is set and the global parameter (Card restriction type quotation) is active for the call.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FTPARM	6424	3	4DY	8.41
SFSYS	5713-1	3	5AR	8.22

FTPARM form (6424 Record) - This record provides the capability for specifying, updating, and/or verifying OSPS feature options.

SFSYS form (5713-1 Record) - This form is used by the SEE (System Equipment Engineer) to enable the feature for the operating company. The secured feature ID 420 on the SFSYS form must be set to "Y" to provide offices with control of this feature.

4. GLOSSARY

APS	Automated Position System
ATCO	Automation of TCS/CPS Override
CAS	Customer Account Services
CCIF	Calling Card Information
CPS	Call Progress Stopped

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ICVC	ICVC - International Card Verification Center
NCP	Network Control Point
OSPS	Operating Services Position System
SEE	System Equipment Engineer
TCS	Terminating Code Screening

SEC. 4A428: RATE FOR FLAT AND MEASURED SERVICE

1. FEATURE DESCRIPTION

The feature number for the Rate for Flat and Measured Service is 98-5E-3991. This secured feature (SFID 288) is being deployed as a software update for the 5E11 Software Release.

This feature provides the OSPS (Operator Services Position System) with the ability to supply rating information to the T&A operator for both Flat and Measured services during rate quotations. In areas where the tariffs allow for both Flat and Measured services, the RTRS (Real Time Rating System) returns to the OSPS the rates for both types of services.

After the caller has indicated which type of service plan they subscribe to, the operator can choose the correct set of rates to quote to the caller. If only one type of service is tariffed, the RTRS returns the rates for that service only. Since this feature only handles the rate quotation of one flat and one measured service plan, the OSPS is unable to handle rate quotations to areas where multiple measured services have been tariffed. In this situation, the RTRS notifies the OSPS that multiple measured services apply and does not return rating information for measured services. However, if a flat service is also tariffed for that area, the RTRS does return the associated information for the flat service. When multiple measured services apply, the OSPS provides a display to the operator informing them of this condition. The operator will then need to consult an alternative source to obtain rating information for these multiple measured services.

This feature requires changes in the signaling interface between the OSPS and RTRS. The signaling needs to be modified to handle the returning of call rating information for both flat and measured services during rate quotations. Additionally, this feature modifies the T&A operator display so that rating information for both services can be displayed during rate quotations.

This feature only modifies rate quotations for 1+ DDD calls for non-coin/non-ACQS station originations. Rate quotations for other calls will continue to use the existing rate quote functionality that provided rating information for one service type (i.e. flat services). Additionally, other real-time rated calls in the OSPS are not modified by this feature. Those calls will continue to use the existing rating interface for flat services and will not support measured services.

2. FEATURE ASSIGNMENTS

To activate this feature:

- set the ACT field for one of the following to "Y" on the SFSYS form (5713-1 Record)
  - ASAP (Automated Service Access Prompting) Secured Feature ID (428)

    Secured Feature ID (288)

- set the ACT field for the optioning number 674 to "Y" on the FOSYS form (5713-2 Record)

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3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Transparency and Special features and as feature options to control various aspects of feature operation. TFOS ID 674 on this form must be set to "Y" to activate this feature.

SFSYS form (5713-1 Record) - This form is used by the SEE (System Equipment Engineer) to enable the feature for the operating company. The secured feature ID 288 on the SFSYS form must be set to "Y" to provide offices with control of this feature.

4. GLOSSARY

ASAP Automated Service Access Prompting OSPS Operator Service Position System

RTRS Real Time Rating System

SEE System Equipment Engineer

TFOS Transparency Feature Optioning System

SEC. 4A449: OSPS NPA CODE EXPANSION FOR BLV

1. FEATURE DESCRIPTION

The OSPS (Operator Services Position System) NPA (Numbering Plan Area) Code Expansion for BLV (Busy Line Verification) feature is a secured feature (SFID 449) that is available as a 5E11 Software Update. The feature number for this feature is 98-5E-4281.

This feature allows a switch owner to determine whether or not BLV is permitted to the full range of NPAs and LNP (Local Number Portability) LRNs (Location Routing Numbers).

This feature also provides the following data enhancements to allow an OSPS to perform BLV operations for all NANP (North American Numbering Plan) numbers served by the switch:

- BLV data will be expanded to allow 800 verifiable NPAs. If the switch handles portable numbers in an LNP environment, the first six digits of the LRN will be used in place of the NPA-NXX (Numbering Plan Area Office Code) in the BLV data tables.
- A Route Code is associated with each NPA for which BLV is permitted. The range of the Route Code, currently 1 through 199, will be increased to 1 through 999.
- The data dependence between the BLV NPA, on the BLVNPA form (5441 Record) and on RC/V (Recent Change and Verify) 27.10, and the BLV exclusion table, on the BLVEX form (5442 Record), and the RC/V 27.11, is being removed with this feature, so that any number can be included in the BLV exclusion table independently of the data contained in the BLV NPA table.

2. FEATURE ASSIGNMENT

The provisioning of this feature is as follows:

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- Set the ACT field for SFID 449 on the SFSYS form (5713-1 Record) to "Y".
- Set the ACT field for OFID 720 on the FOSYS form (5713-2 Record) to "Y".
- Insert or update the ENHBLV form (6435 Record).
- On the BLVNPA form (5441 Record), define the lines that can be verified for an NPA-NXX code.
- On the BLVEX form (5442 Record), define the lines that will be excluded from verification for an NPA-NXX code.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BLVEX	5442	3	4AQ	27.11
ENHBLV	6435	3	4EH	27.12
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). Transparency Features have been developed to replicate features that exist on the 1A ESS Switch. To activate the OSPS NPA Code Expansion for BLV feature for an office, the ACT field for OFID 720 on this form must be set to "Y".

BLVEX form (5442 Record) - This record contains information regarding the lines excluded from verification for an NPA-NXX code. For 5E11 and later, added a data rule to the NPA field.

ENHBLV form (6435 Record) - This record provides the capability for specifying the LRN or NPA, the route code, and NXX or range of NXXs. This is a new form to support this feature.

SFSYS form (5713-1 Record) - This form is used to enable secured features. To activate the OSPS NPA Code Expansion for BLV feature, the ACT field for SFID 449 on this form must be set to "Y".

SEC. 4A450: FLEXIBLE AUTOMATED CALL TYPE DETERMINATION

1. BACKGROUND

OSPS (Operator Services Position System) ACD (Automatic Call Distributor) Call Type Determination is used when OSPS requires handling by an operator, an AP (Administration Processor), or an external service platform to continue processing a call. In order to determine which operator, AP, or external service platform should provide initial handling for the call, OSPS assigns an ACD call type to these calls based on a primary set of ACD call characteristics and optionally a secondary set of ACD call characteristics. The following primary ACD call characteristics are used whenever selecting an ACD call type:

- Call Origin (e.g., Inward, Intermediate Switching Point, and XFER)
- Dialed Prefix (e.g., 0+, 0M, and 1+)
- Carrier of a Call (e.g., IC, LEC, and UNKNOWN)
- Originating Station (i.e., COIN or NONCOIN)
- OSPS ID

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An ACD call type is initially selected using Basic ACD Call Type Determination on the basis of a call's primary ACD call characteristics. If desired, an alternate ACD call type may be selected using the output of Basic ACD Call Type Determination and the call's secondary ACD call characteristics. The following secondary ACD call characteristics may be used in selecting an ACD call type:

- Incoming Trunk Group
- Destination Code Index

The use of these secondary ACD call characteristics, called ECTD (Expanded ACD Call Type Determination), provides greater granularity in selecting an ACD call type, and allows the service provider to indirectly include additional factors which may be derived from these secondary ACD call characteristics (e.g., language code, toll-free access number, and DIOR country code and carrier). However, the use of these secondary ACD call characteristics has certain limitations:

- As ISUP signaling becomes more prevalent in the network, trunking has less significance, since the trunk groups are often shared by calls having vastly differing call characteristics. Therefore, the use of trunk group in selecting an ACD call type has decreasing value.
- When using both secondary ACD call characteristics (trunk group and destination code index) in OSPS ACD Call Type Determination, the current design of office data often requires the service provider to define handling in a manner that is inefficient and data intensive (and therefore expensive and difficult to maintain).

2. FEATURE DESCRIPTION

The feature number for the Flexible Automated Call Type Determination feature is 98-5E-4668. This is a Secured Feature (SFID 450) that is being deployed in the 5E13 Software Release.

This feature introduces several new factors into the OSPS ACD call type determination process, and modifies the process of OSPS ACD call type determination to provide greater flexibility. When FACT (Flexible Automated Call Type) Determination is performed, it is done instead of ECTD. The new factors in OSPS ACD call type determination include:

- Access Number (includes 8XX type and SSC-WXYZ type access numbers)
- Originating NPA (Numbering Plan Area)-NXX
- Originating LRN (Local Routing Number)
- ANI (Automatic Number Identification) II Digits or OLI (Originating Line Identity) Digits
- OLS (Originating Line Screening) Code
- DIOR (Direct International Originations) Carrier
- Carrier Identification Code
- Account Owner
- Language Code

FACT Determination is intended to provide capabilities that are inclusive of those provided in Expanded ACD Call Type Determination. Therefore, in addition to the secondary ACD call characteristics mentioned above, this feature allows the usage of incoming trunk group and destination code index in OSPS ACD call type determination using FACT Determination. The output of FACT Determination is the same as that

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of Expanded ACD Call Type Determination (i.e., FACT Determination results in the selection of a call type or an APOS call type, and a display index). Upon completion of FACT Determination, OSPS routes the call to a position or external service platform as is done prior to this feature. OSPS also provides the appropriate displays on seizure based on the display index.

3. FEATURE ASSIGNMENT

For 5E13 and later, to enable this feature, the ACT fields for SFID 450 on the SFSYS form (5713-1 Record) must be set to "Y".

See Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDCTP	5412	3	4M	26.9
FLEXACD	6434	3	4EG	26.8
FTPARM	6424	3	4DY	8.41
SFSYS	5713-1	3	5AR	8.22

ACDCTP form (5412 Record) - This form assigns call type information for the OSPS ACD. For 5E13 and later, added new field (ACDEXPRESSION).

FLEXACD form (6434 Record) - This form provides the ability to specify OSPS call queues based on various call characteristic parameters. For 5E13 and later, this is a new form.

FTPARM form (6424 Record) - This record provides the capability for specifying, updating, and/or verifying OSPS feature options. For 5E13 and later, two new fields (FLEXACDFEATACT and MAXCTDLEVELS) are being added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 450 to "Y".

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Figure 1 FORM FLOW FOR FLEXIBLE AUTOMATED CALL TYPE DETERMINATION

SEC. 4A505: NUMBER PORTABILITY □ VERIFY OFFICE FOR LRNS

1. FEATURE DESCRIPTION

The feature number for Number Portability - Verify Office for LRNs (Location Routing Numbers) is 99-CP-4346. This secured feature (SFID 505) is being deployed as a 5E14 Software Release.

For more information concerning this feature, see document 235-190-127 (*Number Portability Users Guide).*

The purpose of the Number Portability - Verify Office for LRNs feature is to support verification of the switch NP (Number Portability) routing information and recognition of LRNs in the routing tables. The existing VFY:OFC capability for verification of office routing translations was enhanced as part of the NP - Test Query development, but still requires multiple input messages to completely verify routing for a ported number. In addition, the enhancement for NP Test Query does not output several items related to NP (for example, Geographic Portability indications and trigger-related attributes).

This feature modifies VFY:OFC capabilities to allow craft to:

A. Verify a port (DN/TG/MLHG/PORT) dialing or receiving specific digits (DIG) - the switch provides the outgoing routing information or terminating NOC (NPA-NXX) information, along with any NP-related information associated with the dialed digits.

   1. If the dialed digits are served by this switch (and its Non-Conditional 10-Digit Trigger [NCDT] is not set), an indication that the switch serves this line, plus the associated NOC and NCDT indicator setting will be output.

   2. If the dialed digits are not served by this switch (or has an NCDT set), and an active LNP Trigger is associated with the dialed digits, an NP TCAP Query will be sent to the NP SCP

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associated with the LNP Trigger. Information related to the response will be output in another output segment, indicating the response was:

- the original dialed number (not ported),
- a new number (the LRN of a ported number), or
- a query failure.

B. Verify routing of an arbitrary LRN by using the same input message as in item (A) Above, but included an LRN parameter as input - the switch will provide the same type of output as in item (A) above, but will use the input LRN rather than query an NP SCP for the LRN.

C. Verify routing of an SS7 trunk group (TG) receiving an LRN and the PORTED DN parameter representing a ported number - the switch will provide either the outgoing routing information (for non-Home LRNs) or NOC information (Home LRNs).

The new LRN-related verifications support the GEOPORT indicator and special LRN-screening-based route selection.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable Secured System Optional Features for an entire 5ESS Switch or for selected Switching Modules. The ACT field for SFID 505 must be set to "Y" on the SFSYS form to enable this feature.

SEC. 4A506: DRM-2000

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-150 Application and Platform Documents - DRM-2000.*

SEC. 4A507: ASP TERMINATING BUSY/NO ANSWER TRIGGERS AND SUBSEQUENT EVENT DETECTION

1. BACKGROUND

Prior to this feature, ASP (Advance Services Platform) Release 0.1B provided the SCP (Service Control Point) with the ability to specify one or more routes (i.e. Carrier/DN (Directory Number) or Route Index) which the switch used to complete the call. The SCP-supplied routing information is hierarchical in that an alternate routing process was used to attempt each route in turn until an idle facility was found over which the call could complete. Once the SCP supplied the switch with routing data, its involvement in the call was over. If the switch could not find an idle route from the set of routes supplied, the call completed to reorder. Additionally, if the call was completed over an idle route, and the terminating station was busy or rings without being answered, alternate routing could not redirect the call.

The ASP Originating Busy/No Answer Subsequent Event Detection feature allows the SCP to continue its involvement on a call by indicating that it is interested in being notified if certain call processing events occur while the switch completes the call. A request component which contains an NEL (Next Event List) is

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sent to the SSP (Service Switching Point) with the routing component. The NEL indicates events in which the SCP is interested. In the following list, the ASP Originating Busy/No Answer Subsequent Event Detection feature allowed for the detection of the first four events and the ASP Network busy and Enhanced Alternate Carrier Routing feature allowed for the detection of the fifth (and last) event:

- O_Term Seized - (an EDP-N (Event Dectection Point-N))
- O_Called_Party_Busy - (an EDP-R)
- O_No_Answer - (an EDP-R)
- O_Answer - (an EDP-N)
- Network_Busy (an EDP-R)

When the SCP included a request component, including an NEL indicating the events in which it was interested, the switch maintained the TCAP (Transaction Capabilities Application Part) transaction with the SCP and informed the SCP of when the requested condition(s) occurred. If the condition corresponding to an indicated event occurred and was a notification event, the SSP (Service Switching Point) informed the SCP that the event occurred and continued processing the call. If the condition corresponding to an indicated event occurred and was a request event, the SSP informed the SCP that the event occurred, and the SCP could then return additional routing instructions to the switch or could play a final interactive announcement. The SSP would also inform the SCP when none of the events which it had "armed" in the NEL could occur. For example, the No Answer event was armed and the Answer occurred.

2. FEATURE DESCRIPTION

Available as a 5E14 Software Update and in the Beginning Managed Introduction of the 5E15 Software Release, the ASP Terminating Busy/No Answer Triggers and Subsequent Event Detection feature is a secured feature using Secured Feature ID (SFID) 507. The feature number is 99-5E-4132.

This feature is dependent on the ASP Release 0.1B secured feature (see Division 2, Section 4A126), which must also be purchased and activated. The Terminating Busy/No Answer Subsequent Triggers and Event Detection feature provides incremental functionality to that provided in the ASP Release 0.1B feature and the ASP Busy/No Answer Subsequent Event Detection feature.

This feature enhances the 5ESS Switch with the following three new major pieces of functionality:

- Terminating Busy/No Answer Subscribed Triggers - Provides the ability to assign the following subscribed triggers to terminating DNs and to have a call encounter them upon termination when the appropriate condition is detected:
  - T_Busy TDP (Trigger Detection Point)
  - T_No_Answer TDP
- Terminating Subsequent Event Detection NELs - Provides the ability for the SCP to return a NEL and to indicate the following additional events when sending an Authorize_Termination or Offer_Call message to complete the call to the terminating DN:
  - Term_Resource_Available (an EDP-N (Event Dectection Point-N))
  - T_Busy (an EDP-R)
  - T_Answer (an EDP-N)

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- T_No_Answer (an EDP-R)

NOTE: The T_Busy EDP-R is only allowed in a request component which accompanies an Auth_Term message, not when accompanying an Offer_Call message.

- Offer_Call and Display - The Offer_Call message allows the call to be delivered to the busy line following the T_Busy EDP or TDP. Offer Call is used whenever the T_Busy EDP or TDP is encountered and the line has some form of call waiting feature assigned. For analog lines with call waiting assigned, the Offer_Call response allows the call to proceed and encounter switch-based call waiting. For ISDN lines, the line would need to have the Additional Call Offering feature assigned for the Offer Call response to be used. Offer_Call also provides interworking with Caller ID on Call Waiting.

  In addition, the Offer_Call message supports the display text parameter. This allows for the displaying of display text on ISDN and analog CPEs (Customer Premise Equipment). This feature also supports the display text parameter in the Authorize_Termination message for ISDN. Currently, the display text parameter is only supported for analog lines using the Authorize_Termination message.

This feature introduces multiple transactions. Prior to the introduction of this feature, multiple simultaneous transactions were handled by multiple processes; one for each open transaction. This feature handles multiple transactions from a single process and introduces a modified transaction manager which handles these transactions as well as enhances the TCAP transaction.

3. FEATURE ASSIGNMENT

Since this feature is dependent on the ASP Release 0.1B Base feature (SFID 126), to activate the feature, the ACT fields for SFIDs 126 and 507 respectively on the SFSYS form (5713-1 Record) must both be set to "Y".

See Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPFD	5632-1	4	31A	12.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
ASPOPT	5670	4	31G	8.49
SFSYS	5713-1	3	5AR	8.22

ASPFD form (5632-1 Record) - This form defines various combinations of options available with the ASP feature. For 5E14 and later, the TBL TRIG NBR, TBL TRIG ACT, TNA TRIG NBR, TNA TRIG ACT, and TNA TIMER fields and related data rules were added.

ASPLPA form (5632-2 Record) - This form is used to define ASP line parameters. For 5E14 and later, the TBL TRIG NBR, TBL TRIG ACT, TNA TRIG NBR, TNA TRIG ACT, and TNA TIMER fields and related data rules were added.

ASPMPA form (5632-3 Record) - This form is used to define ASP Multi-Line Hunt line parameters. For 5E14 and later, the TBL TRIG NBR, TBL TRIG ACT, TNA TRIG NBR, TNA TRIG ACT, and TNA TIMER fields and related data rules were added.

ASPOPT form (5670 Record) - This form is used to define ASP (Advanced Services Platform) office parameters for a switch. For 5E14 and later, the TERM NO ANS TIME field was added.

SFSYS Form (5713-1 Record) - This form is used to activate secured features. This feature is activated

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by setting the ACT fields for SFIDs 126 and 507 respectively, to "Y".

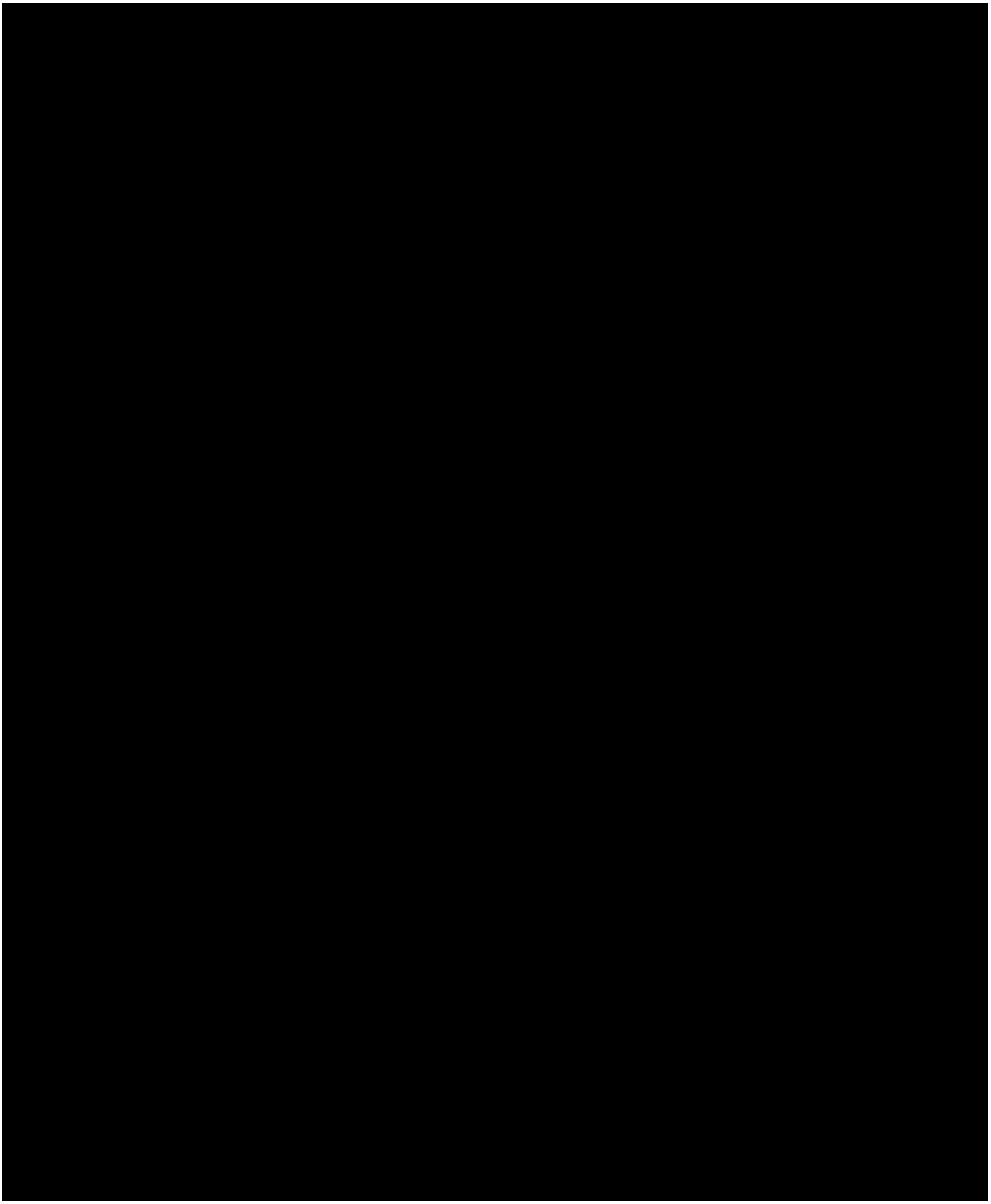

Figure 1 FORM FLOW FOR ASP TERMINATING BUSY/NO ANSWER TRIGGERS AND SUBSEQUENT EVENT DETECTION

SEC. 4A508: ASP DISPLAY ON BRI

1. FEATURE DESCRIPTION

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For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4A509: CALEA (Communications Assistance for Law Enforcement Act) AND CALEA ENHANCEMENTS FOR DIAL OUT CDC AND CCC FEATURES

1. FEATURE DESCRIPTION

Calea Core Capability

The feature number for the CALEA (Communications Assistance for Law Enforcement Act) Core Feature is 99-5E-4275. This secured feature (SFID 509) is available for the 5E14 Software Release.

The CALEA Core feature provides compliance to the Communications Assistance for Law Enforcement Act of 1994 for 5ESS Switches providing service to wireline subscribers. The CALEA Act requires that a telecommunications service provider be able to support lawful surveillance of the traffic in its network. CALEA requires that two levels of surveillance be supported:

- Level I: Provides call progress data after cut-through for all of the subject's calls and call progress data for all calls redirected by the subject. Call content is not provided.
- Level II: Provides call progress data and all call content. It is equivalent to Level I plus call content. This is intended to satisfy a Title III court order which specifically authorizes the surveillance of call content for the subject's calls and for all calls redirected by the subject.

The CALEA Core feature provides this functionality for both circuit-switched and packet-switched calls. The CALEA Core feature includes the 5ESS Switch functionality necessary to access and deliver call data and call content to a Law Enforcement Agency and the functionality necessary to administer surveillances and provision and maintain Call Content Channels, Call Data Channels, and Packet Data Channels.

CALEA - TCP/IP Suite Functionality

The core protocol suite includes the TCP (Transmission Control Protocol), UDP (User Datagram Protocol), the IPV4 (Internet Protocol Version 4), and the ICMP (Internet Control Message Protocol). The application program interface will be provided in the form of sockets. The first application to use the platform feature will be CALEA Core (99-5E-4275) to route surveillance information to a Law Enforcement Agency.

See (LEA (Law Enforcement Agency) Interface specification 235-900-500 for more information.

CALEA - TCP/IP DSL Access via X.25/X.75

The Core TCP/IP Access via X.25/X.75/X.75' feature allows a Core TCP/IP Platform application on the 5ESS Switch to interface with a remote host over a BRI (Basic Rate Interface) or T1, using LAPB (Link Access Procedures - Balanced) as the Layer 2 protocol and X.25 or X.75/X.75' as the Layer 3 protocol. For the X.25 interface, the 5ESS Switch will act as the DCE (Data Circuit Terminating Equipment) while the remote host will act as the DTE (Data Terminal Equipment). PVCs (Permanent Virtual Circuits) will be utilized; SVCs (Switched Virtual Circuits) are not required.

The CALEA feature will be the first application to use the Core TCP/IP Access via X.25/X.75/X.75' feature. The CALEA application requires the use of TCP/IP/X.25 over BRI, TCP/IP/X.25 over T1 (i.e. TCP/IP over XAT), TCP/IP/X.75 over T1, and TCP/IP/X.75' over T1 to transport CDC (Call Data Content) messages and PDC (Packet Data Channel) messages from the 5ESS Switch to Law Enforcement Agency Monitoring Stations. With the CALEA feature, CDC messages are generated in the subject's SMP (Switching Module Processor). PDC messages are generated in the subject's PH (Protocol Handler). The Core TCP/IP Suite Functionality For CALEA feature is utilized to encapsulate these messages into TCP/IP messages, which are then sent to the PH serving the interface between the 5ESS Switch and the Law Enforcement Agency (i.e., the delivery PH).

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In the delivery PH, the CALEA Core TCP/IP Access via X.25/X.75/X.75' feature provides the software to encapsulate the TCP/IP messages into X.25, X.75, or X.75' messages, as determined by provisioning, and transport these messages over the X.25 PVC, XAT PVC, X.75 PVC, or X.75' PVC to the designated Law Enforcement Agency. For the BRI interface, PVCs may be assigned to the B-channel. RC/V for this feature will block provisioning of the PVC to the D-channel.

For the BRI B-channels, the dedicated interface supports a signaling rate of 64 kbps. For the XAT (X.25 Access over a T1 facility) B-channels, the dedicated interface supports a provisionable signaling rate of either 56 kbps or 64 kbps. For the X.75/X.75' interface, the dedicated interface support a signaling rate of 56 kbps.

This feature is developed for the PH3 and the PH4 on an ISDNPH image. RC/V blocks the provisioning of this feature on a PH2 for X.75/X.75' interfaces. No other features are blocked.

The end users of this feature are:

- the CALEA application on the 5ESS Switch which sends TCP/IP messages to the delivery PH; and
- the Law Enforcement Agency Monitoring Stations which receive the TCP/IP messages over the X.25 interface, the XAT interface, or the X.75/X.75' packet network.

CALEA PUNCH LIST

This feature (99-5E-7599) provides additional capabilities which are beyond those provided by the CALEA Core Capabilities (99-5E-4275) and is available with the 5E15 Software Release and requires the ACT field for SFID 509 be set to "Y" on the SFSYS form.

The CALEA Punch List capabilities include:

- Conference Party Change: reports the addition or removal of one or more conference call participants by their call identity(ies), party identity(ies), or both when independently or in any combination. (Hold, Join, or Drop)
- Connection: reports the addition of one or more participants to an existing conference call. (Join)
- Connection Break: reports when one or more participants are removed from an existing conference call. (Hold or Drop)
- Dial Digit Extraction: reports dialed digits when a call is connected to another TSP (Telecommunications Service Provider) service for processing and routing.
- Network Signal: reports signals generated or sent by the IAP (Intercept Access Point) switch to the subject using the facilities under surveillance.
- Subject Signal: reports signals to control a feature or service operation.

2. FEATURE ASSIGNMENT

Procedures necessary to provision the CALEA feature are available in the "5ESS Switch Lawfully Authorized Electronic Surveillance Network Provisioning, Troubleshooting, and Maintenance" (235-200-400) document.

To enable this feature, the ACT field for SFID 509 must be set to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

Calea Core Capability				

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Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	None
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

ECDOPT form (5706 Record) - This form reflects the current hardware configuration of the system and describes the attributes and status of all processor and peripheral hardware entered into the UNIX-RTR (Real Time Reliable) Operating System, formerly DMERT (Duplex Multiple Environment Real Time). The fields on this form indicate which items are equipped and, in some cases, the type of equipment used. In effect, this form links the 5ESS to the UNIX-RTR Operating System. Added TTY information for CALEA.

OFCOPT form (5509 Record) - The 5509 Record provides the office option global parameters residing in the CP (Central Processor). The CALEA SM field was added to support this feature.

SFSYS form (5713-1 Record) - The 5713-1 Record is used to activate secured features. This feature is activated by setting the ACT field for SFID 509 to "Y".

TKGRP form (5202 Record) - The 5202 Record is used to define each Trunk Group in a 5ESS Switch. The CALEA field was added to support this feature.

Calea - TCP/IP Suite Functionality

Form Name	Record Number	Division	Section	RC View
IPINTF	5988	5	3O	33.2
IPPROC	5987	5	3N	33.1
IPROUT	5989	5	3P	33.3

IPINTF form (5988 Record) - The 5988 Record provides the capability to provision up to five IP addresses and subnet masks, and associated IP, TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) parameters to a internet interface (SM or PH). This form was created to support the CALEA TCP/IP Core feature.

IPPROC form (5987 Record) - The 5987 Record provides the capability to provision up to five IP addresses and subnet masks, and associated IP, TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) parameters to a processor (SM or PH). This form was created to support the CALEA TCP/IP Core feature.

IPROUT form (5989 Record) - The 5989 Record provides the capability to provision an IP gateway between an external IP destination and a local IP interface. This form was created to support the CALEA TCP/IP Core feature.

Calea - TCP/IP DSL Access via X.25/X.75

Form Name	Record Number	Division	Section	RC View
PSPVC	5923	5	3D	23.11
X75PVC	5926	5	3G	5.13

PSPVC form (5923 Record) - The 5923 Record is used to assign PVC (Permanent Virtual Circuit) Logical Channel Numbers to DSLs (Digital Subscriber Lines) that have Packet Switching. The "INET" enumeration was added to the FCL TYPE field.

X75PVC form (5926 Record) - The 5926 Record is used to assign PVC (Permanent Virtual Circuit) Logical Channel Numbers to X.75P and X.75 packet switching trunks. The "INET" enumeration was added to the FCL TYPE field.

Calea Punch List

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1, 8.15

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OFCOPT form (5509 Record) - The 5509 Record provides the office option global parameters residing in the CP (Central Processor). Under the CALEA field group the ADMIN ACCESS and TD LIMIT fields were added to support this feature.

4. FEATURE DESCRIPTION

CALEA Enhancement for Dial Out CDC and CCC Capability (99-5E-8221)

The feature number for the CALEA (Communications Assistance for Law Enforcement Act) Enhancement for Dial Out CDC (Call Data Channel) and CCC (Call Content Channel) Feature is 99-5E-8221, and is available with the 5E16(2) Software Release. This feature is an enhancement to the Core CALEA (99-5E-4275) and the CALEA Punch List features (99-5E-7599) described above.

The CALEA Enhancement for Dial Out CDC and CCC feature provides alternative provisioning as an enhancement to the CALEA-CORE feature. This enhancement uses Dial Out CDC and CCC connections whenever the user makes or receives a call.

For CDC Dial Out, the capability of using SVCs (Switched Virtual Circuits) to send CDC (not PDC (Packet Data Channel)) messages to law enforcement collection facilites is added. The SVC connection is established from an XAT (X-25 packet switching Access on T1 facilities) PH (Protocol Handler) logical channel emulating an X.25 DTE (Data Terminal Equipment) to a local LEA (Law Enforcement Agency) facility via a BRI (Basic Rate Interface) or XAT termination. The SVCs are originated on a XAT PH channel group member PSUEN (Packet Switching Unit Equipment Number) where the 5ESS switch emulates a DTE to establish the X.25 packet call. The destination address of the X.25 packet call originated by the emulated DTE can route using the local packet network or X.75/X.75 network. The X.25 destination address is specified by the application. Note that X.25 SVC packet standards are supported on local (BRI/XAT) and X.75/X.75 interfaces.

For CCC Dial Out, the connection is established to a local LEA with POTS (Plain Old Telephone Service) or ISDN (Integrated Services Digital Network) BRI/PRI termination. The CCC connection can also be established to a remote LEA over SS7 (Signaling System7), MF (Multi-Frequency) or PRI (Primary Rate Interface) trunks over the PSTN (Public Switched Telephone Network). This feature supports combined, separate, and mixed delivery modes.

5. FEATURE ASSIGNMENT

Provisioning of this capability is the same as for the Core CALEA feature.

6. TRANSLATION REQUIREMENTS

CALEA Enhancements

Form Name	Record Number	Division	Section	RC View
IPINTF	5988	5	3O	33.2
XAT	5909	5	1J	23.40

IPINTF form (5988 Record) - This form was created to support the Core CALEA TCP/IP Core feature. Modified the OE field to allow the "U" value.

XAT form (5909 Record) - This form is used to provision T1 facilities (digital lines and trunks) with X.25 Packet Switching services on a subscription basis using Q.931 signaling. Modified the OE to allow the "U" value and added data rules to support this new OE.

7. GLOSSARY

BRI Basic Rate Interface

CALEA Communications Assistance for Law Enforcement Act

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DMERT	Duplex Multiple Environment Real Time
LEA	Law Enforcement Agency
IAP	Intercept Access Point
ICMP	Internet Control Message Protocol
IP	Internet Protocol
IPV4	Internet Protocol Version 4
LAPB	Link Access Procedures - Balanced
SFID	Secured Feature ID
TCP	Transmission Control Protocol
TSP	Telecommunications Service Provider
UDP	User Datagram Protocol
XAT	X.25 Access over a T1 facility

SEC. 4A512: FGD Cut Through Enhancements

1. FEATURE DESCRIPTION

The feature number for the FGD (Feature Group D) Cut Through Enhancements feature is 99-5E-4632. This is a secured feature (SFID 512) that is being deployed as a 5E13 Software Update and for the BMI (Beginning Managed Introduction) of the 5E14 Software Release.

This feature is dependent on the LDP Basic Call Processing (99-5E-3127) feature (SFID 165), which allows optional tandem routing of LDP cut through calls. For more information on the LDP Basic Call Processing feature, please see Division 2, Section 4A165.

A secured feature allows an FGD Cut Through Call to be switched to another carrier without first collecting digits for the call. The 99-5E-4632 feature allows the provisioner of an LDP (Long Distance Platform) switch to specify on a carrier basis that a FGD Cut Through Call (MF (Multi-Frequency)or ISUP (Integrated Services-User Part)) is to be routed to another carrier to collect called party digits. The switch uses the tandem Cut Through RTI (Route Index) / CDI (Code Index) specified for the carrier to route the call to the designated carrier, if LDP Tandem Cut Through is indicated on the ICF form (5305 Record). Otherwise, a digit collector is attached at the current LDP switch, and the called party is connected locally.

1.1 Call Scenario

The following is a typical scenario of the usage of this feature:

- A user picks up the phone and dials 10[1]XXX#.
- The Equal Access End Office identifies the call as a carrier cutthru call and routes the call out of the end office towards the dialed carrier.
- At the LDP switch, the Information Digits and Automatic Numbering Identification ([OLI or II] +ANI) digits are stored.
- The cutthru call is identified, and assuming the FGD Cut Through Enhancements feature is activated,

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the ICF form (5305 Record) is read.

- If the TANDEM CUT flag is set for the given carrier, the TANDEM CUT CDI and TANDEM CUT RTI data from the ICF form (5305 Record) is copied, other appropriate data in the route request is set, and the call (bypassing digit analysis at this switch) is routed.
- It is assumed that once the call reaches the distant switch, that a receiver will be attached to collect the actual called party digits.

If the dowstream switch is a 5ESS-2000 Switch, and the LDP feature is not activated (SFID 165), the call will be terminated, as cutthru calls are not supported on a 5ESS-2000 Switch without LDP.

2. FEATURE ASSIGNMENT

To provision this feature:

- Since this feature is dependent upon the LDP Basic Call Processing (SFID 165) feature, it must first be activated by setting the ACT field for SFID 165 on the SFSYS form (5713-1 Record) to "Y".
- The FGD Cut Through Enhancements feature can only then be activated by setting the ACT field for SFID 512 to "Y".
- Populate the ROUTE INDEX field on the RTIDX form (5303 Record)
- Populate the LDP tandem cut through information for each carrier. On the ICF form:
  - Set the TANDEM CUT field to "Y".
  - Set the TANDEM CUT RTI field to the appropriate value.
  - Set the TANDEM CUT CDI field to the appropriate value.

NOTE: The egressing trunk from the LDP switch must be an IC trunk. If this trunk is an ISUP7 trunk, the LDP indicator on RC view 5.1 must be set to "Y" or the call will fail.

See provisioning form flow on Figure 1.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ICF	5305	3	3R	10.3
OFCOPT	5509	3	5i	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

ICF form (5305 Record) - The Carrier Administration form is used to define the characteristics of Inter-LATA (Local Access Transport Area) and Intra-LATA carrier. Each carrier is defined as either a feature group B or D carrier along with a carrier type, access method, and other routing information. All carriers used for carrier interconnect subscriber access in an office, including the Local Exchange Carrier (LEC), must be defined. The TANDEM CUT, TANDEM CUT CDI, and TANDEM CUT RTI fields have been added to this form to support the FGD Cut Through Enhancements feature.

OFCOPT form (5509 Record) - This form is used to define miscellaneous office options and parameters. For 5E13 and later, added a data rule to the PRODUCT field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by

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setting the ACT fields for both SFID 165 and SFID 512 to "Y", respectively.

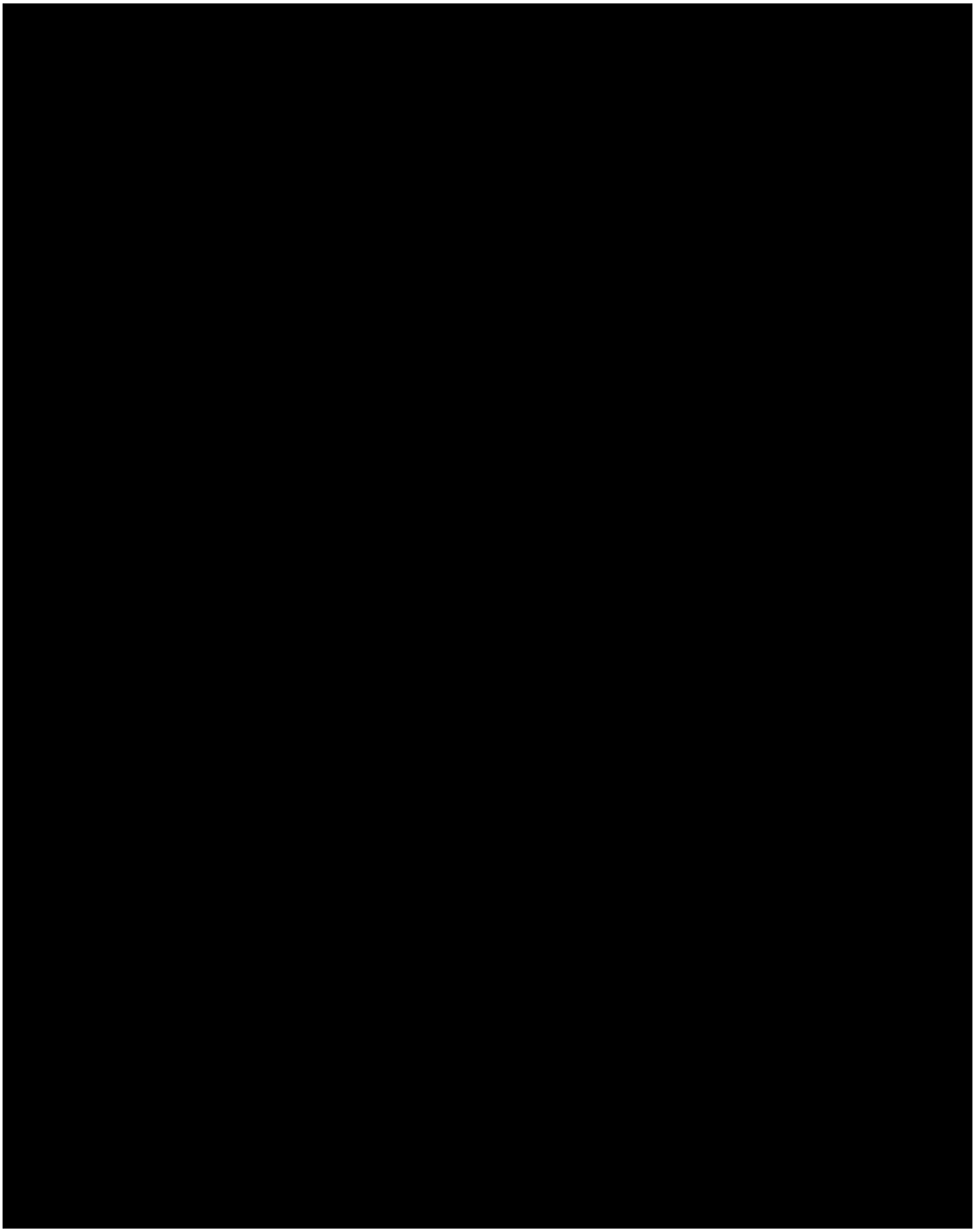

Figure 1 FORM FLOW FOR FGD CUT THROUGH ENHANCEMENTS

SEC. 4A513: PINNACLE THIRD PARTY CALL CONTROL ENHANCEMENTS 1

1. FEATURE DESCRIPTION

The PINNACLE Third Party Call Control Enhancements 1 feature is available as a 5E13 Software Update and in the Beginning Managed Introduction of the 5E14 Software Release. It is a secured feature using SFID (Secured Feature ID) 513. The feature number for this feature is 99-CP-4574.

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This feature enhances the functionality of the current Link III/Third Party Call Control feature. The PINNACLE ACD reports the following agent states over the Event Link to the ACD (Automatic Call Distributor) Interface Unit:

- Login/Logout
- Make Busy
- Agent Ready
- Agent Closed

The enhancement enables a Computer Telephony application to change the agent state by issuing a command to the AIU (Application Interface Unit) over the Link III interface. The AIU formats the command for the 5ESS-2000 Switch Third Party Call Control Enhancements 1 feature which changes the agent to the desired state.

2. FEATURE ASSIGNMENT

To activate this feature, the ACT fields for SFIDs 123 and 513 respectively on the SFSYS form (5713-1 Record) must both be set to "Y".

3. TRANSLATION REQUIREMENTS

There are no new or modified forms for this feature, however, the SFSYS form is used to activate this feature.

ODA Form				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 123 and 513 respectively, to "Y".

SEC. 4A516: ASP DEFAULT ROUTING FOR R0.1 OHD TRIGGERS

1. FEATURE DESCRIPTION

The ASP (Advanced Services Platform) Default Routing for R0.1 OHD (Off-Hook Delay) Triggers feature is available with 5E14 and later Software Releases. This is a secured feature (SFID 516) which must be activated prior to using this capability. SFID 126, the base Advanced Services Platform feature, must also be activated.

The ASP Default Routing for R0.1 OHD Triggers feature provides the ability for OHD calls to be routed even when the switch has not received valid routing information from the SCP (Service Control Point). OHD Default Routing can be provisioned on any line or trunk that can be assigned an OHD trigger via BRCS feature provisioning. Examples of when the switch provides default routing are when any of the following events occur during an OHD query:

- the query is blocked by Automatic Call Gapping or hardware failures,
- the query T1 timer expires before a response is received, or
- a fatal application or protocol error is detected/received in response to the OHD query.

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When OHD Default Routing is provisioned on a line/trunk and a condition occurs which triggers default routing, the switch will attempt to route the call using the dialed digits and the DAS (Digit Analysis Selector) assigned to the line/trunk.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPFD	5632-1	4	31A	12.64
ASPLPA	5632-2	4	31B	1.64
ASPMPA	5632-3	4	31C	1.64
ASPTPA	5632-4	4	31D	5.64
SFSYS	5713-1	3	5AR	8.22

ASPFD form (5632-1 Record) - This form is used to define various combinations of options available with the ASP. The OHD DFLT ROUTE field was added with related data rules.

ASPLPA form (5632-2 Record) - This form is used to define the per port data associated with the ASP. The OHD DFLT ROUTE field was added with related data rules.

ASPMPA form (5632-3 Record) - This form is used to define ASP Multi-Line Hunt line parameters. The OHD DFLT ROUTE field was added with related data rules.

ASPTPA form (5632-4 Record) - This form is used to define parameters to trunks if the default parameters on the ASPFD form are inappropriate or unspecified. The OHD DFLT ROUTE field was added with related data rules.

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features. The ACT field for SFID 516 must be set to "Y" on the SFSYS form to enable this feature.

SEC. 4A517: AIN FURNISH AMA INFORMATION

1. FEATURE DESCRIPTION

The AIN (Advanced Intelligent Network) Furnish AMA (Automatic Message Accounting) Information feature is available with 5E14 and later Software Releases.

The AIN Furnish AMA Information feature allows service specific AMA data to be passed from a SCP (Service Control Point) to the switch and be appended to certain AMA records generated by the switch. The Furnish_AMA_ Information component will be accepted in any AIN response that can contain routing and billing information. These AIN responses include:

- Analyze_Route,
- Forward_Call,
- Auth_Term,
- Continue,
- Disconnect,
- Offer_Call,

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- Send_To_Resource (for final announcements).

The Furnish_AMA_Information component can contain two parameters, the "AMABAFModules" parameter which contains one or more AMA modules in BAF format, and the "AMASetHexABIndicator" parameter, which contains a flag set by the SCP when the "AMABAFModules" parameter contents are suspected to have errors. The Furnish_AMA_Information component is only accepted by the switch when an "AMASlpI" is also present in the routing message. This causes the switch to generate an AMA record with Structure Code 0220 or 0221. The AMA modules from the Furnish_AMA_Information component are appended to the AMA record before the Final (Trailer) Module 000. The Furnish_AMA_Information modules are not interpreted in any way by the switch.

To support this feature, a new Software Resource parameter, "FRNAMA", is implemented. Software Resources are maintained on the SREINCR form (5547 Record).

The feature number for this feature is 97-5E-4000.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
SREINCR	5547	3	5AW	8.40

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features. The ACT field for SFID 517 must be set to "Y" on the SFSYS form to enable this feature.

SREINCR form (5547 Record) - This form is used to increase engineering software resource (memory) parameters per SM (Switching Module) for new start and/or retrofit offices. A software resource is defined as a dynamic ODD (Office Dependent Data) data structure, or data block, required to provide the necessary memory to support various service requirements. With retrofit to the 5E14 Software Release, and with SFID 126 set to "Y" on the SFSYS form, the software resource of "FRNAMA" supports this feature. If routine system messages indicate that more software resources are required to support this feature, the SREINCR form is used to increment the resource.

SEC. 4A518: AR/AC DESTINATION POINT CODE

1. FEATURE DESCRIPTION

The AR/AC (Automatic Recall/Automatic Callback) Destination Point Code feature is available in a 5E13 Software Update and in the Beginning Managed Introduction of the 5E14 Software Release. The feature number for this feature is 99-5E-7118.

This feature changes how the Terminating Scanning Response messages are routed via the SS7 (Signaling System 7) network. Currently, the TCAP (Transaction Capabilities Application Part) Terminating Scanning Idle Response and Terminating Scanning Timer Expired Response messages are global titles routed to the originating switch. When this feature is enabled, the terminating switch will route the messages using point code routing.

The AR/AC Destination Point Code feature also enhances the basic AR/AC feature such that if Terminating Scanning is requested by the originating switch, the point code and subsystem number of the AR/AC originating switch (received in the AR/AC TCAP messages from the originating switch) are stored, along with the platform point code associated with the platform (e.g., GSM/PSU (Global Switching Module/Packet Switch Unit), CNI (Common Network Interface)) through which the message was received. These point codes and subsystem numbers are used for Point Code routing of AR/AC TCAP messages sent to the originating AR/AC switch during the AR/AC Terminating Scanning session. Subsequent Terminating

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Scanning Idle Response messages will now be point code routed instead of global title routed. Note that even if this feature is not enabled and Originating Scanning is requested, the TCAP Originating Scanning Busy/Idle Response messages sent from the far switch will be point code routed as it is currently done. This feature only modifies the Terminating Scanning procedures. The TCAP messages impacted are the:

- Terminating Scanning Idle Response, and
- Terminating Scanning Timer Expired Response.

1.1 SCENARIO - AR/AC Activation Requesting Terminating Scanning

NOTE: The only change to the AR/AC functionality in the following scenario, as a result of this feature, is in steps 5 and 6.

1. An originating switch invokes AR/AC which results in sending an AR/AC Initial TCAP Query towards a 5ESS Switch which has the AR/AC Destination Point Code feature 99-5E-7118 enabled.
2. The terminating destination number (DN) on the terminating switch is busy so a busy indication is sent in the Initial Query Response which is point code routed to the originating switch.
3. The originating switch requests the terminating switch to scan the terminating DN for an idle status by sending a global title routed TCAP Terminating Scanning Request Query.
4. The terminating switch replies with a point code routed Terminating Scanning Conversation message indicating it will perform terminating scanning.
5. If the terminating DN becomes idle before the terminating scanning timer has expired, the terminating switch responds to the originating switch with a Terminating Scanning Idle Response message. With this feature enabled, the message will be point code routed. If the feature is not enabled, the message will be global title routed.
6. If the terminating DN does not become idle before the terminating scanning timer expires, the Terminating Scanning Timer Expired Response message would be sent to the originating switch. With this feature enabled, the response message will be point code routed. If the feature is not enabled, the message will be global title routed.
7. From this point on the call will continue processing as normal. No other changes are impacted by this feature.

2. FEATURE ASSIGNMENT

For 5E13 and later, the only provisioning required to activate this feature is to set the ACT field for SFID 518 on the SFSYS form (5713-1 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 518 to "Y".

SEC. 4A520: RELEASE LINK FOR TOLL - ANSI STANDARD PROTOCOL AND TOPS NONSTANDARD PROTOCOL

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1. RELEASE LINK FOR TOLL

1.1 Feature Description

Available as a 5E14 Beginning Managed Introduction, the Release Link for Toll feature uses OFS ID (Optioned Feature System ID) 788. The feature number for this feature is 99-5E-4687.

The Release Link for Toll feature offers two signaling interface options; ANSI (American National Standards Institute) standard signaling and TOPS (Operating System for DMS (Data Management System)) nonstandard signaling.

The ability to provide release link signaling allows minimization of both incoming and outgoing facilities to OSPS (Operator Services Position System) sites. Additional trunks to handle Directory Assistance call completion would not be necessary if they had the ability to provide release link signaling (i.e., the call transport function could be relegated back to the originating central office or originating toll office where the trunk facilities already exist).

1.2 Feature Assignment

For 5E14 and later, to activate this feature, the ACT field for OFS ID 788 on the FOSYS form (5713-2 Record) must be set to "Y". (See Figure 1 for the feature assignment form flow .)

1.3 Translation Requirements

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. This feature is activated by setting the ACT field for OFS ID 788 to "Y".

2. RELEASE LINK FOR TOLL - ANSI STANDARD PROTOCOL

2.1 Feature Description

Available as a 5E14 Beginning Managed Introduction, the Release Link for Toll - ANSI Standard Protocol feature is a secured feature using SFID (Secured Feature ID) 520. The feature number for this feature is 99-5E-4687.

This feature uses elements of the generic RTP (Release to Pivot) procedure to provide release link signaling over SS7 (Signaling System Number 7) ISUP (Integrated Services Digital Network User Part) trunks between a 5ESS-2000 Switch and an Operator System site. This allows Directory Assistance calls to use nondedicated SS7 trunks.

The following elements of the generic RTP procedure are used by this feature:

- A switch (Releasing Switch), after receipt of an incoming ISUP IAM (Initial Address Message) message with a RCP (Redirect Capability Parameter), and after some internal processing (may return ACM (Address Complete Message) and/or ANM (Answer Message) ISUP messages), releases the call back to the previous (Pivot) switch with RI (Redirection Information) in the ISUP REL (Release Message) message for routing to a new destination.

- The process described for the Releasing Switch enables the Pivot Switch to terminate the initial call and route a new call directly to the number supplied by the Releasing Switch as an alternative to having the Releasing Switch route the call.

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- There could also be one or more Intermediate Switches between the Pivot and Releasing Switches which would transparently pass the new parameters in the IAM and REL messages.

For the Release Link for Toll Office application using ANSI standard protocol, the Releasing Switch is an Operator Systems Switch (providing Directory Assistance with the Release Link RTP capability) and the Pivot Switch is a 5ESS-2000 Originating Toll Office Switch receiving a request for Directory Assistance (e.g., 411, 555-1212, NPA (Numbering Plan Area)-555-1212). The RI information in the REL message consists of the RN (Redirection Number) parameter (containing the number as determined by the Operator System Directory Assistance).

2.2 Feature Assignment

See Figure 1 for the feature assignment form flow for the Release Link for Toll - ANSI Standard Protocol feature.

To activate this feature, the ACT fields for SFIDs 165 and 520 respectively on the SFSYS form (5713-1 Record) must both be set to "Y".

2.3 Translation Requirements

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
LDIT	5300-3B	3	3C	9.3
MLDIT	5300-5B	3	3C	9.15
RDIT	5300-8B	3	3H	9.9
RTIDX	5303-2	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-3	3	2A	5.1

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. The Release Link for Toll feature is activated by setting the ACT field for OFS ID 788 on the FOSYS form (5713-2 Record) to "Y".

LDIT form (5300-3/5/9 Record) - This form is used to define all area, office and service codes in a 5ESS-2000 Switch. For 5E14 and later, added a data rule associated with the "CONFLCT" entry for the CALL TYPE field and added the REL LINK field and its associated data rules.

MLDIT form (5300-3/5/9 Record) - This form is used to define all area, office and service codes in a 5ESS-2000 Switch. For 5E14 and later, added a data rule associated with the "CONFLCT" entry for the CALL TYPE field and added the REL LINK field and its associated data rules.

RDIT form (5300-7/8 Record) - This form contains information for the translation of remaining dialed digit strings for digit analysis. For 5E14 and later, added data rules associated with the "CONFLCT" entry for the CALL TYPE field and added the REL LINK field and its associated data rules.

RTIDX form (5303 Record) - This form is used to define the route indexes for routing a call. For 5E14 and later, added the REL LINK TYPE field and its associated data rules.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 165 and 520 respectively, to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. For 5E14 and later, added the REL LINK INIT field.

3. RELEASE LINK FOR TOLL - TOPS NONSTANDARD PROTOCOL

3.1 Feature Description

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Available as a 5E14 Beginning Managed Introduction, the Release Link for Toll - TOPS Nonstandard Protocol feature is a secured feature using SFID (Secured Feature ID) 521. The feature number for this feature is 99-5E-4687.

This feature uses the protocol developed by Nortel to provide release link signaling with a similar functionality as the Release Link for Toll - ANSI Standard Protocol feature using dedicated SS7 trunks. In the TOPS nonstandard protocol, the differences from ANSI standard protocol include the following:

- The IAM is sent to the Operator Services switch with no special signaling (no RCP (Redirect Capability Parameter or equivalent)).
- The RI is carried in different parameters in the REL message. The SAP (Service Activation Parameter) and GAP (Generic Address Parameter) are used for the Nortel version, instead of the RN parameter.
- Since dedicated trunks are used, the Nortel version does not lend itself to being used with an Intermediate Switch between the Pivot and Releasing Switches.

3.2 Feature Assignment

See Figure 1 for the feature assignment form flow for the Release Link for Toll - TOPS Nonstandard Protocol feature.

To activate this feature, the ACT fields for SFIDs 165 and 521 respectively on the SFSYS form (5713-1 Record) must both be set to "Y".

3.3 Translation Requirements

See the ODA forms described in Translation Requirements for ANSI standard protocol. The same modified ODA forms apply to TOPS nonstandard protocol.

4. GLOSSARY

ANSI - American National Standards Institute

ACM	Address Complete Message
AMA	Automatic Message Accounting
ANM	Answer Message (SS7 ISUP message)
GAP	Generic Address Parameter
IAM	Initial Address Message
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
OFS-ID	Optioned Feature System ID
OSPS	Operator Services Position System
RCP	Redirect Capability Parameter
REL	Release Message
RI	Redirection Information

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RN	Redirection Number
RTP	Release to Pivot
SAP	Service Activation Parameter
SFID	Special Feature ID
SS7	Signaling System 7
TOPS	Operating System for DMS (Data Management System)

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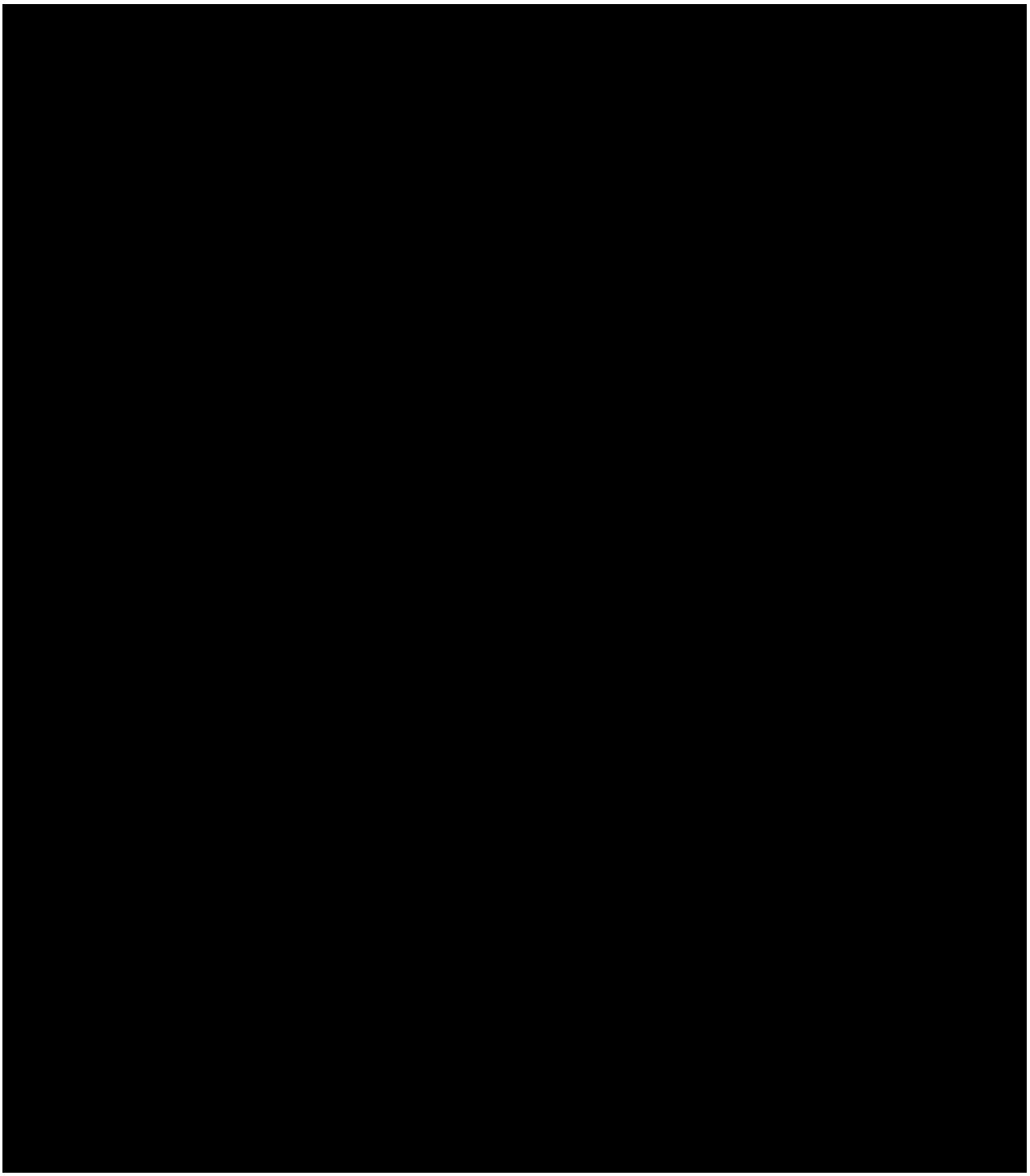

Figure 1 FORM FLOW FOR RELEASE LINK FOR TOLL - ANSI STANDARD PROTOCOL AND TOPS NONSTANDARD PROTOCOL

SEC. 4A521: RELEASE LINK FOR TOLL - TOPS NONSTANDARD PROTOCOL

1. FEATURE DESCRIPTION

For detailed information on the Release Link for Toll - TOPS Nonstandard Protocol feature, see Division 2, Section 4A520.

SEC. 4A522: SS7 PSU MTP ROUTING ENHANCEMENTS

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1. FEATURE DESCRIPTION

The SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP (Message Transfer Part) Routing Enhancement feature is a secured feature (SFID 522) that is available with the 5E15 Software Release. The feature number is 97-CP-4246.A.

This feature adds the CNI (Common Network Interface) functionality to the PSU platform that allows the customer to define routing data which no longer requires full point code definitions. The MTP is able to route to a specific network(most significant 8 bits of the point code), a Cluster within the network (basically the most significant 16 bits of the point code), and to the current routing mechanism (full member routing using all bits of the point code). Additional, TYMSG (TTY Message Subsystem) facilities are being added to support the routing methods as well as route management procedures.

The customer is able to define up to an additional 15 alias point codes to the GSM (Global Switch Module). These point codes are associated with ISUP (ISDN (Integrated Service Digital Network) User Part) trunk groups only. ISUP calls can be handled using any of the 16 bit point codes, but other switch functions and applications must use the primary GSM point code.

2. FEATURE ASSIGNMENT

For 5E14 and later, to enable this feature, the ACT field for SFID 522 on the SFSYS form (5713-1 Record) must be set to "Y". Once the SFSYS form is updated, there are two different provisioning sequences:

Data Link to Trunk Group Sequence:

- Define GSM on the CCGSM form (6008 Record).
- Add Bunny-Hop using the MDLNK form (6009 Record).
- Update GSM parameters on the CC7PR form (6001 Record).
- Define GSM Data Rate timers on the CCPDL form (6002 Record).
- Define Link Set on the LNKSET form (6003 Record).
- Create combined link sets on the CLKSET form (6005 Record).
- Associate a link set to a GSM/DPC (Destination Point Code) on the PC form (6006 Record).
- Create link set members on the CCLNK form (6004-1/2 Records).
- Use GSM's OPC (Origination Point Code) and DPC (Destination Point Code) from the PC form on the TKGRP form (5202 Record), then add trunk members on the TRUNK form (5204 Record).

SCCP (Signaling Connection Control Part) Sequence:

- Grow/Degrow a SCCP GSM on the CCNET form (6010 Record).
- Specify parameters for the SCCP GSM on the CCSPR form (6011 Record).
- Specify a primary and backup GSM-DPC-SSN (Sub-System Number) destination on the CCPBD form (6012 Record).
- Specify the global title translation treatment for the data located in the called party address, on the CCTT form (6014 Record).
- Specify the global title translation group mask for the incoming digit strings on the CCSGT form (6015

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Record).

- Maintain the digit strings for global title translations on the CCTGM form (6013 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CC7PR	6001	9	10A	16.2
CCGSM	6008	9	10H	16.1
CCLNK	6004	9	10D	16.6
CCPBD	6012	9	10M	16.22
CLKSET	6005	9	10E	16.7
CLU	6020	9	10T	16.9
LNKSET	6003	9	10C	16.5
MDLNK	6009	9	10J	16.17
NID	6019	9	10S	16.8
OFCOPT	5509	3	5I	8.1
PC	6006	9	10F	16.10
SFSYS	5713-1	3	5AR	8.22

CC7PR form (6001 Record) - This form is used to specify and update the GSM CCITT7 (International Telegraph and Telephone Consultative Committee - Common Channel Signaling System Number 7), office parameters and MTP Level 3 timers. Added the X-LIST and the LOW PRI SRST fields.

CCGSM form (6008 Record) - This form is used to specify data used for the global switching module. Added a data rule to the GSM field, and added the ALIAS PC field.

CCLNK form (6004 Record) - This form is used to display the CCS7 (Common Channel Signaling System Number 7) link sets and members. Modified the valid entries for the MEMBER field, added a data rule to the GSM field, and modified a data rule for the LINK SET field.

CCPBD form (6012 Record) - This form is used to define the primary and backup destinations for SCCP signaling. Added data rules to the DPC PRIMARY and DPC BACKUP fields.

CLKSET form (6005 Record) - This form is used to define the link sets that comprise the combined link set. Added a data rule to the GSM field.

CLU form (6020 Record) - This form is used to define MTP cluster route sets. New section to support this feature.

LNKSET form (6003 Record) - This form is used to define CCS7 signaling sets. Added the LINK TYPE field, and added a data rule to the APC field.

MDLNK form (6009 Record) - This form is used to specify the message delivery link and the bunny-hop PH (Prototol Handler). Added data rules to the SM field.

NID form (6019 Record) - This form is used to define MTP network route sets. New section to support this feature.

OFCOPT form (5509 Record) - This form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. It is required at the time of initial translations for all offices. Added a data rule to the COMMON CHAN SIG field.

PC form (6006 Record) - This form is used to specify the point code and alternate link set routing. Added data rules to the POINT CODE field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 522 to "Y".

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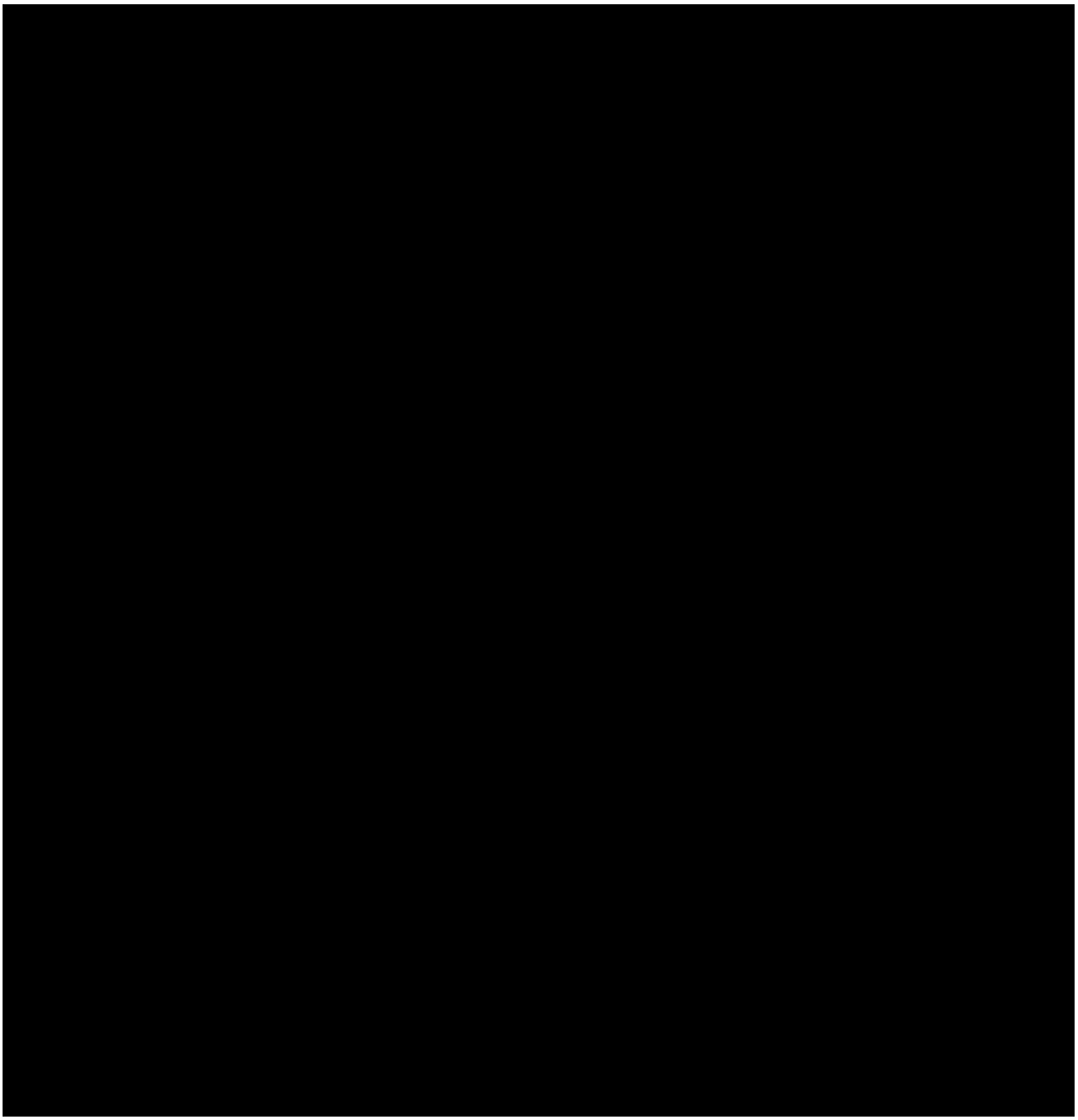

Figure 1 FORM FLOW FOR SS7 PSU MTP ROUTING ENHANCEMENTS FEATURE DATA LINK TO TRUNK GROUP PROVISIONING SEQUENCE

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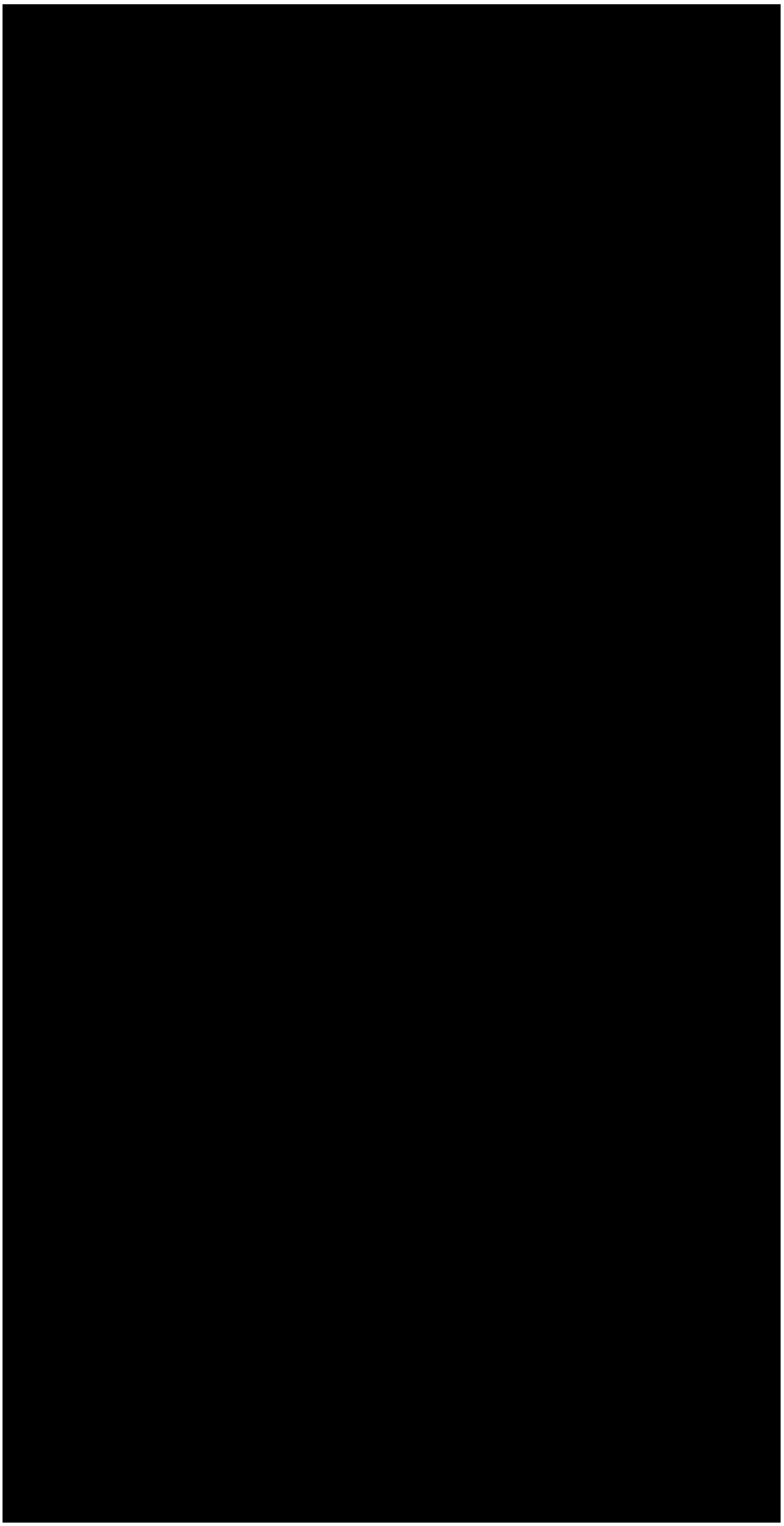

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Figure 2 FORM FLOW FOR SS7 PSU MTP ROUTING ENHANCEMENTS FEATURE SCCP PROVISIONING SEQUENCE

SEC. 4A523: IMPROVED RC VERIFY

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-040-100 □ (OAM) Planning Guide for Feature ID 99-5E-4093.*

SEC. 4A524: LD CIC AT TERMINATING TANDEM

1. FEATURE DESCRIPTION

The LD (Long Distance) CIC (Carrier Identification Code) at Terminating Tandem feature is a call processing secured feature that is available as a 5E14 Software Update and in the Beginning Managed Introduction of the 5E15 Software Release. The feature number is 99-5E-7242.

This feature allows a CIC to be re-populated in the IAM (Initial Address Message) on the terminating side of a call prior to the actual termination of the call at the end office. It allows a service provider of a terminating tandem switch to specify, on a trunk group basis, whether or not the carrier identified for a call should be sent to the terminating end office in the CICP (Carrier Identification Code Parameter) of the outgoing IAM that is sent from the terminating tandem switch.

The feature optionally passes the CIC to the terminating end office from the terminating access tandem switch on a trunk group basis. The incoming trunk group at the terminating tandem must be an MF (Multi-Frequency) or CCS7 (Common Channel Signaling, CCITT (International Telegraph and Telephone Consultative Committee) Version 7) IC (Inter-exchange) trunk, and the egressing trunk at the terminating tandem must be a CCS7 TTOLL_CONN trunk.

2. FEATURE ASSIGNMENT

Prior to activating this feature, the 5ESS Switch must be acting as a terminating tandem in the network. For 5E14 and later, activate this feature as follows:

- set the ACT field for SFID 524 on the SFSYS form (5713-1 Record) to "Y".
- set the SEND LD CIC field to "Y" on the TKGRP form (5202 Record) for the outgoing trunk group at the terminating tandem switch.
- set the SIGNALING PROTOCOL field to "TRAD" on the RTIDX form (5303-1 Record) for the incoming trunk group.
- set the TRKCLS field to "IC" on the TKGRP form (5202 Record) for the trunk used to ingress (enter) the terminating tandem switch.

See provisioning form flow on Figure 1.

The LD CIC at Terminating Tandem feature provides the following capabilities when all of the conditions to activate the feature are met:

- The egressing IAM will include a carrier identification parameter that will be populated with the CARRIER ID of the trunk group used to ingress the terminating tandem switch on the TKGRP form (5202 Record).
- If the CIC was populated by the SCP, this feature will not overwrite this value. This is because population of the CIC from the SCP takes priority over a CIC populated by this feature.

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3. CALL PROCESSING

To implement this feature, the items described for ingressing and egressing the terminating access tandem are required.

3.1 MF and CCS Ingressing the Terminating Access Tandem

When the LD CIC at Terminating Tandem feature is activated, and the incoming trunk group is an IC trunk group, the carrier for the call defined on the incoming trunk group will be populated in the structure sent to the TTP (Terminating Terminal Process) in the route request.

For those calls where an ASP (Advanced Services Platform) query is invoked at the incoming IC trunk, and the ASP reply results in a different carrier, the carrier returned from the ASP reply is the carrier sent to the TTP for inclusion in the outgoing IAM.

3.2 CCS Egressing the Terminating Access Tandem

The carrier identified at the ingressing terminating access tandem trunk is sent to the terminating end office under the following conditions:

- the egressing CCS trunk is a TTOLL_CONN trunk.
- the LD CIC at Terminating Tandem feature is activated.
- the SEND LD CIC field defined on egressing TTOLL_CONN trunk on the TKGRP form (5202 Record) is set to "Y".
- the far class of service is "IC".
- the carrier in the trunk termination message is not NULL.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the LD CIC at Terminating Tandem feature, the ACT field for SFID 524 must be set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E14 and later, the SEND LD CIC field and related data rules were added.

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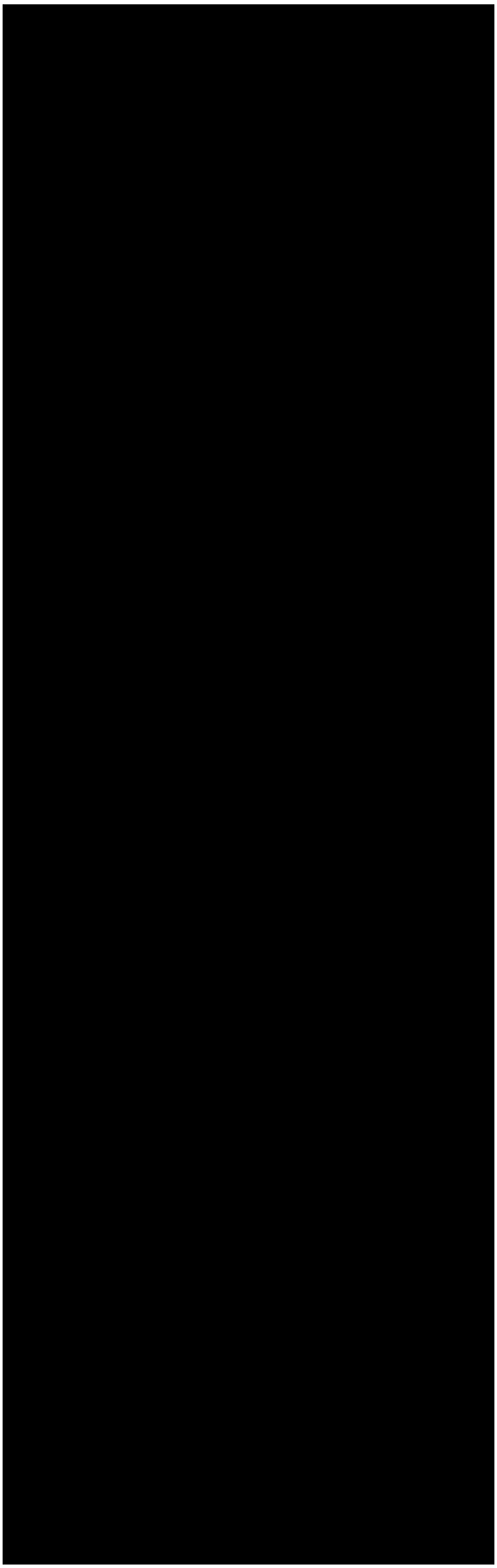

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Figure 1 LD CIC AT TERMINATING TANDEM FORM FLOW

SEC. 4A525: Distinctive Remote Module

1. BACKGROUND

Additional information for this feature is available in the DRM (Distinctive Remote Module) Users Guide (235-200-150).

This feature is intended to serve in those applications in which the customer's business conditions do not easily support the back-hauling of any voice or user data traffic to the host office, but requires administration of service in that remote location via a local, integrated OAM&P (Operation, Administration, Maintenance and Provisioning) interface. To address this goal, the capability to remote an SM-2000 from a host 5ESS-2000 office while minimizing the cost of the required facilities is developed in this feature.

The DRM feature addresses that configuration of the network for which all voice and user data traffic at the remote is essentially confined within the area near the remote switching equipment. Any other traffic, voice or user data between the DRM and the host office or any other cp-node is transferred over interoffice trunks. The DRM provides integrated OAM&P while also providing modular, non-integrated call processing capability. This feature introduces the concept of a call processing node, or cp-node, and a virtual switch, in the sense that it is administered as a part of a host switch (the "virtual switch"), but otherwise functions like an independent switch (the "cp-node"). As a result, DRM may be deployed in the same manner as other remotes provided they do not share hardware with any other network elements and are not part of a cluster, but can share administrative and maintenance functions and resources in order to minimize the cost of these to the customer.

1.1 The Virtual Switch

This Feature Description introduces the concept of a "virtual switch". A virtual switch is a self-sufficient set of resources that the service provider can utilize to provide telephony services. A virtual switch is subsequently made up of the set of resources that call processing software sees and interfaces with, the "cp-node", and the set of resources that maintenance sees and interfaces with, the "m-node". These are just concepts to treat resources making up a switch as the functions they perform and without regard to the organization or location of the hardware used to provide these functions. (See "The CP-Node" and "The M-Node" sections below).

Because the ideal maintenance interface to the maintenance technician makes the set of resources appear to be centrally located and accessible, the image of the switch that this customer sees, the Virtual Switch, should make the set of cp-nodes and m-nodes look like a single interface and single switch. This implies the following:

- Consolidated Generic Retrofit
- Consolidated Software Update
- Common set of Trunk and Line Work Stations (TLWS) and STLWS (Supplementary TLWS)
- Common recovery procedures
- Common Set of OSs, OS Links, and craft IO
- Alarm consolidation

A Virtual Switch can have common resource pools that are shared across cp-nodes and m-nodes, as we will show. This further implies that a given implementation of any cp-node or m-node may include a resource that can be accessed and therefore shared by other nodes on the virtual switch.

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1.2 The CP Node

A cp-node is also occasionally referred to as a "call processing island" or "call processing node". This refers to the idea that the cp-node appears to be a separate island of resources to call processing code and data. That is, resources that cannot cross switch boundaries -- i.e., cannot extend between physical switches -- similarly cannot cross CP Node boundaries. A list of examples (by no means exhaustive) of resources that are unique to a cp-node, and therefore cannot be shared between cp-nodes are:

- Dialing (Numbering) Plans
- NOCs
- Point Codes
- Site IDs
- Cluster IDs
- Sets of terminals
- Sets of trunks
- Port-related hardware

There are also resources that can be shared either physically or by emulation across cp-nodes. Examples of these are:

- OS Data Links
- Trunk and Line Work Stations
- Craft Terminals

In a 5ESS-2000 Switch, a cp-node may be a switching module, or it may be part of a module, a set of modules, or even an entire multi-module 5ESS-2000 Switch. Eventually, it may be engineered as just a set of hardware and software resources that appear to be a separate switch, but the important aspect is that it is defined by the operational features and capabilities it supports. Because of this, a cp-node is defined by the data describing it, and while it is really a set of many kinds of partitioned data, it can be thought of as a set of lines and trunks that look like a single switch to the users of the switch. In this particular implementation of the DRM feature, for example, a DRM is a cp-node.

1.3 The M Node

Maintenance features may have different limitations from call processing features, and because of this, the boundaries of a Maintenance Node, or "m-node", may not be coincident with those of call processing or, therefore, any cp-nodes. In other words, the boundaries describing a cp-node and the boundaries describing a particular m-node may be different. Testing circuits, metallic access networks, and other maintenance resources may be limited by electrical and other hardware restrictions, such as not being able to share test circuits across these boundaries. However, because these limits are often different from those imposed by call processing data and other resources, a cp-node need not be the same lines, trunks and other resources defined by maintenance islands.

The set of resources to perform maintenance functions and the ports which can make use of these resources is referred to as a maintenance node, or "m-node". In the case of metallic testing, this is referred to as a "metallic m-node", and in the case of digital testing, this is referred to as a "digital m-node". Note that in this particular feature, and in 5E14, a metallic m-node corresponds to a site ID, whereas digital

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m-nodes correspond to cp-nodes. This is ONLY because a DRM in this feature is a cp-node and also has a site ID. For example, if we shared digital testing resources across all cp-nodes making up the virtual switch, we could form a single digital m-node across the entire 5ESS-2000 Switch. Conversely, if we shared a single SM across multiple customers with multiple, independent corresponding ODDs and corresponding base and control numbers specifying these ODDs, we could have multiple cp-nodes within that single SM.

Examples of those resources that should not be shared among m-nodes are:

- Metallic Access Networks and Test Circuits (cannot be shared among metallic m-nodes)
- Digital Test Circuits, such as ISTF (Integrated Services Test Function) and TTF (Transmission Test Facility/Function) (cannot be shared among digital m-nodes)
- Sufficiently Segregated Measurements to allow proper engineering and monitoring of these nodes.

1.4 The Element Manager and Element Manager Phase Zero

The concept of the Element Manager is one widely discussed in the industry. The EM (Element Manager) encompasses a far-reaching set of functionalities to manage and administer switching resources in order to provide a central interface. In this release of the DRM feature, a minimal set of Element Manager functionalities is provided and runs on the ASM (Administrative Services Module) platform base. This minimal set of Element Manager functionalities is referred to as "Element Manager Phase Zero", or "EM-0", and is one of many applications running on the ASM. Note that future implementations of the Element Manager may run on any processor, or even multiple processors. One intent of the DRM feature is to describe the telephony switch architecture in terms of the software functionalities, and NOT as necessarily running on or coupled with a particular platform, processor, or hardware unit. In this instance, EM-0 may likely run as an application on the ASM, but this is NOT a requirement.

Essentially, the function of the EM-0 is to provide a means of interacting with the various cp-nodes (call processing node) and m-nodes (maintenance node) as if they constituted a single switch. A switch made up of multiple entities, each of which can provide call processing and maintenance functionalities autonomously or together, but which appears to be a single switch interface to the user is the Virtual Switch. In this way, the EM-0 acts as a sort of "traffic cop", shuttling command requests and data to and from the appropriate cp-nodes and m-nodes. To do this, the EM-0 must have a simple database that allows it to know which cp-nodes and m-nodes contain resources, such as test equipment or lines and trunks. It must also know if some additional information is needed, for instance, to be able to determine the location of resources. The intent of the DRM feature is to provide an EM-0 that will allow graceful access to cp-nodes making up the virtual switch, and yet minimize the impact of the craft interface to the individual cp-nodes.

1.5 The DRM

A DRM is a cp-node consisting of a single SM and a single point code. A call outside the cp-node is therefore an inter-switch call, regardless of the hardware it may use. In this particular instance, i.e., this feature implementation, a DRM is also a single m-node. In other words, the DRM is a separate set of hardware resources with some shared software resources that provide the integrated interface for OAM&P, and therefore has a single site code. Examples of these resources that are shared across the entire switch and therefore between the rest of the switch and the DRM are TTY terminals, OS datalinks, etc..

Note that there is no necessary relationship between a cp-node and a LATA. Just as a switch may cross LATA boundaries, a cp-node may or may not cross LATA boundaries. The 5ESS-2000 Switch currently supports up to 16 point codes, and a point code cannot cross cp-node boundaries. A DRM that functions as a cp-node will have a single point code, while the host switch on which the DRM homes is a cp-node that can have more than one point code. These restrictions arise from the fact that a given SM can have only one PSU, and a given PSU can have only one point code. Again, this is an implementation choice of this feature, but these concepts can eventually be extended to a virtual switch composed of many cp-nodes

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of different implementations, all coordinated by and interfaced with the Element Manager function.

- ***NOTE:*** that in this feature, 99-5E-3850, the supported platform consists of:

  - a 3B21-based host 5ESS-2000 Switch, referred to for the sake of convenience in this feature as cp-node 0,

  - an adjunct processor provided by the ASM, (which in turn provides processing for cp-nodes and any applications that may need it, such as EM-0 -- see below).

  - A limited additional set of Element Manager functionalities running as an application on the ASM platform, this set being referred to as "Element Manager Phase Zero", or, more succinctly, "EM-0", and craft maintenance terminals connected to the ASM,

  - the DRM, based on an enhanced version of the original VCDX feature, consisting of a DRM SM and a DRM AM, (referred to in this particular feature implementation, for convenience, as "cp-node-1")

  - and a data connection consisting of the links from the DRM to the EM-0 running on the ASM.

Later instances of this architecture may include any number of cp-nodes and m-nodes, and may include configurations that have any combination of zero or more DRMs or 5ESS-2000 Switches with a very wide range of line sizes and geographical deployments.

An architectural diagram showing the structure of the DRM is shown in Figure 1.

1.6 The Distributed AM

The distribution of functionalities that were once the sole responsibility of a single Administrative Module (AM) in the 5ESS allows this task load to be shared among processors -- not only by the various switching modules themselves, but also among similar processors that provide Administrative functionalities in intelligent perpipherals, such as the DRM. The DRM has a co-located administrative module processor. In the case of the VCDX, from which the DRM is derived, this processor performs similar functions as an AM performs in a 5ESS-2000 Switch, and also provides a workstation interface for performing various maintenance and administrative functions. In the DRM, the processor performs administrative functions as well, and the primary location for a workstation terminal is generally on the host (the host called, by convention in this feature, "cp-node 0") AM (made up of the 3B21 and using the ASM as an applications processor) in the central host office.

Some DRM administrative functions themselves are performed by the local DRM AM. The ability of these processors to share the administrative functions and grow processing power as the switch grows in size allows the AM functions to be distributed and able to grow. Because of this minimization of a processing "bottleneck", intelligent cp-nodes like the DRM will eventually allow the 5ESS-2000 Switch to grow much larger and span much greater geographical distances. The decoupling of the various cp-nodes and m-nodes will also allow the provisioning of heterogeneous clusters of autonomous switching nodes which appear to the user to be a single switch. This has the advantage of allowing distributed call processing, but with an integrated OAM&P interface which can be accessed by terminals in other local or remote locations, such as at the host. This set of distributed resources that make up this entity is called the Virtual Switch, whose Administrative Module functionality is distributed.

1.7 Summary

Finally, where a cp-node is the set of resources that is visible to call processing software, and an m-node is the set of resources that behaves and looks like a separate switch to maintenance software, the set of all resources that looks like a switch to the users of the switch for call processing, operations, administration, maintenance and provisioning, is a "virtual switch". In other words, as far as the users are concerned, this

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is the switch, regardless of what hardware is used to provide that functionality. The situation is possible, therefore, where a single maintenance node subtends multiple cp-nodes, providing support for resources that look to software like multiple call-processing entities or even switches. Further, since the cp-nodes and m-nodes are largely decoupled and networked by a data backbone, introduction of a new node into a network for the virtual switch may be largely automated. A new node would be connected to the backbone, and the smaller amount of data that the virtual switch needs to know about this new node can be requested and exchanged by the EM-0 and cp-node, resulting in a type of "plug and play" operation for extending the modular virtual switch.

In summary, the set of resources that maintenance software sees is the "m-node", the set of resources that call processing software sees is the "cp-node", and the combination of these entities that the customer sees and interfaces with is the "virtual switch". In this release of the DRM, the EM-0 will provide this integrated interface to the Virtual Switch, with the idea of later extending this ability to combine current implementations of 5ESS-2000 Switches or DRMs or other telecommunication nodes into larger and larger 5ESS virtual switches while preserving an integrated interface.

1.8 The DRM in The Network

The DRM provides the ability to remote an SM-2000 to beyond distances that are attainable by existing EXM-2000/TRCU2/TRCU3 systems. The distances to which existing remotes (EXM-2000, RSM, MMRSM) are controlled, is by the limits imposed by echo path delay. The DRM, having no need to backhaul voice of such limited paths, thus provides the capability to have a point of presence at a remote site while still being associated with a distant host 5ESS-2000 Switch which thus provides integrated control and OA&M support. This is a capability that the existing VCDX does not support. This feature will redefine the boundaries of a host 5ESS-2000 Switch, since its subtended appendages can be virtually anywhere.

The following section provides a synopsis for the feature:

- LNP (Local Number Portability) Features is supported on DRM (Distinctive Remote Module).
- Each DRM has its own site ID, Packet Switch Number, Point Code, and self-contained islands of Conference Circuits, Announcements, SFG (Simulated Facility Group), Test and Service Circuits.
- The DRM does not share hardware (conference ckts, MMSU (Modular Metallic Service Unit), TTF) with the host switch or with any other DRM. Each DRM is a universe of its own, as provisioned with its own set of "global resources" and is independent of the host switch from a call processing perspective.
- This DRM is a US product only with a planned availability with 5E14 BMI (Beginning Managed Introduction).

2. FEATURE DESCRIPTION

The feature number for Distinctive Remote Module Special Feature is 99-5E-3850. This secured feature is available for the 5E14 BMI release.

This feature provides the customer additional capability, that of operating an SM that is remotely located without expensive umbilicals. The DRM coexists with other 5ESS-2000 remotely located switch modules (those remotely located using the TRCU2 (Transmission Rate Conversion Unit model 2) or TRCU3 (Transmission Rate Conversion Unit Model 3), RSMs (Remote Switching Module) or ORMs (Optical Remote Switching Module). The functionality and capacity of the existing 5ESS-2000 Switch are not impacted or modified by the introduction of this feature.

At the DRM switch, all line-to-line calls are intra-switch, in the conventional sense. All outgoing calls from DRM to other network elements, including the host, are carried on inter-switch trunks. Figure 1 shows a high level view of the architecture of the DRM.

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2.1 User Scenario

From a call processing point of view, a DRM is effectively a separate self-contained switch with its own unique:

- SS7 (Signaling System 7) OPC (Originating Point Code)
- Service & Test Circuits
- SID (Site ID) & CLID (Cluster ID)
- RAX (Rate Center)
- DAS (Digit Analysis Selector)
- Screening Indexes
- RIs (Route Indexes) & TGNs (Trunk Group Numbers)
- NPA (Numbering Plan Area)/NXX (Office Code (Part Of Dialed Number))

2.2 Service Provider Perspectives

The office craft personnel is able to attain manual control of the DRM-2000 as is currently applicable to existing remotely located switch modules. Furthermore, the craft person is able to, unambiguously, determine whether an SM-2000 is subtended as a DRM-2000 or as an EXM-2000. Since the DRM cannot share testing resources with the host switch, the fundamental change in testing scenarios is to hunt only these local resources, and if such resources cannot be found locally, provide failure/blockage treatment in the same way that the host switch would provide such treatment were that resource not available to the host switch.

The primary reason for not sharing metallic testing facilities is the high probability of a test circuit path in a DRM metallic network exceeding the 3000-ohm electrical distance limitation.

The primary reason for not sharing digital testing facilities (ISTF, Bit Error Rate and Errored Blocks testing) is the high probability of introducing additional hunted digital paths and the variability introduced into such testing.

The primary reason for not sharing digitally-emulated analog testing (TTF, noise, loss testing) is the lack of a circuit-switched testing path to the host switch and, again, the introduction of additional hunted paths through the network to provide a test path.

The installation and provisioning of a DRM in a network requires provisioning of the data network providing the interface between the host equipment where the element manager functionality resides and the remote DRM equipment. While every effort has been made to allow as much latitude as possible for the customer, and to describe this network in terms of minimial requirements and the immediate interfaces to the EM-0 running on the ASM and to the DRM, there is also a minimal description of at least one basic configuration. The aim of this is to support the idea of a common and standardized interface for a switching network as well as the availability of a "complete solution" where needed.

2.3 Data Administrative Perspective

The ODD on each cp-node is a separate ODD. There is therefore no conflict between these ODDs. SM numbers must be unique across the entire virtual switch -- i.e., each cp-node must have its own set of unique SM numbers.

DRM-2000 is in a unique circumstance of being administered as part of a host office from an OA&M

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perspective, and yet treated as an independent office from a call processing perspective - the concept of a pseudo-switch is applicable.

2.4 Provisioning Perspective

DRM is provisionable across the full range of capability consisting of the minimum core system required to set up communication links between the host switch, and the full capability of a remotely located SM-2000.

The ASM co-located with the 5ESS 3B21D/CM2 (which constitutes the AM of cp-node 0) supports the provisioning of one to the maximum of fifteen DRMs. See architecture diagram Fig., 1.

Test circuits, Announcement Systems, SFGs, 3-Way and 6-Way conferencing capabilities are supported locally in the DRM. These facilities will not be globally hunted, the DRM is enabled to point to itself in allocating these resources.

All trunks on the DRM-2000 are locally hunted and support communications with adjacent network elements as well as the host switch. Because the DRM-2000 behaves as an independent office, trunks to the host office are treated as inter-office trunks (supporting SS7 signaling). Thus these host office to DRM-2000 trunks are not inter-module in the traditional usage - an inter-module trunk originates and terminates on the same switch.

2.5 Trunk and Line Testing Scenario

Like other remotes, a DRM has a separate Site ID.

The DRM must have a "Test Circuit Island" - no global test circuits can be used, since there are no network timeslots for backhauling circuit-switched traffic and no hardware can be shared.

Due to the fact that the DRM is a self-contained metallic m-node, as well as a self-contained digital m-node, all testing resources -- test circuits, paths, etc., -- are local to the DRM to test lines and trunks on that DRM. A top-level interface provided by the simple Element Manager functionality will allow selection and access of the cp-node/m-node of the DRM. After this selection has been made, testing features and scenarios are unchanged.

2.6 Network Impacts

Points of presence of the DRM are expected to be diverse, ranging from the in-state deployment to deployments which project the DRM to distances of up to 2000 miles away from the host office, and thus potentially spanning multiple states. In this sense, the DRM will stretch the geographical limits of a single 5ESS-2000 Switch. The remotely located switch module is capable of reporting its status, routinely or on demand, or off-load archived information to the host switch on reestablishing any lost connections from the host. In other words, the DRM is another type of module of the 5ESS-2000 Switch, like an ORM, an RSM, or EXM, etc., but with enhanced ability to operate at extended distances away from the host, and ability to provide call processing service autonomously.

2.7 Security Issues

Local access to the DRM, at the point of presence, is via existing procedures used with respect to RSMs, ORMs, and EXM-2000s. Key entrance, coded locks or dial-up authorization is supported. Thus it is required that any craft action on the switch be on the basis of some level of authorization.

Because of the expected long distances between a host office and the DRM-2000 subtended from it, normal dispatch will not assure speedy maintenance when needed. Access to local maintenance assets must be developed/provided by the service provider. This will not be unlike any other remote vehicle, and while such manual intervention is expected to be rare, it must be considered as a possibility.

Furthermore, the DRM feature is available on a right-to-use basis relying on a charge on initial deployment

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of the DRM feature.

3. FEATURE ASSIGNMENT

Procedures necessary to grow a DRM to the Switching Complex are available in the DRM growth section of the DRM User's Guide (235-200-150).

To enable this feature, the ACT field for SFID 525 must be set to "Y" on the SFSYS form (5713-1 Record).

See Figure 2 for DRM provisioning form flow.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	
EQCORE	5701	8	3	17.1 17.14
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

ECDOPT form (5706 Record) - The 5706 Record is used to define Core Unit Assignment in a 5ESS-2000 Switch office. For 5E14 and later, the DRM, ADDL SERIAL PORTS, VIOP/PC SLOT/P, VIRTUAL DEVICE CONTROLLER and VIRTUAL DEVICE TYPE fields are added to this form.

EQCORE form (5701 Record) - The 5701 Record is used define Core Unit Assignment in a 5ESS Switch office. For 5E14 and later the DRM field was added to this form.

OFCOPT form (5509 Record) - The 5509 Record is used to define the various miscellaneous office options and parameters. For 5E14 and later the VIRTUAL SWITCH, ALARM OUTPUT OPT, ALARM INPUT OPT, and ALARM DURATION fields are added. Also, the DRM enumeration was added to the PRODUCT field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 525 to "Y".

5. GLOSSARY

5.1 Acronyms

ACD Automatic Call Distributor

ASM Administrative Services Module

BMI Beginning Managed Introduction

BRCS Business and Residential Customer Services

CAMA Centralized Automatic Message Accounting

CLID Calling Line Identification

CM2 Communication Module 2

CMP Communication Module Processor

DAS Digit Analysis Selector

DN Directory Number

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DRM	Distinctive Remote Module
ESA	Enhanced Service Adjunct
EXM	Extended Switch Module as in EXM-2000
FGB	Feature Group - B
FGD	Feature Group - D
IMT	Inter-Module Trunk
ISDN	Integrated Services Digital Network
ISTF	Integrated Services Test Function
LATA	Local Access and Transport Area
LNP	Local Number Portability
MMRSM	Multi-Module Remote Switching Module
MMSU	Modular Metallic Service Unit
NOC	Normalized Office Code
NPA	Numbering Plan Area
NTSs	Network Time Slots
NXX	Office Code (Part Of Dialed Number)
OA&M	Operation, Administration and Maintenance
OAM&P	Operation, Administration, Maintenance and Provisioning
ODA	Office Data Assembler
ODD	Office Dependent Data
OPC	Operator Position Terminal
ORM	Optical Remote Switching Module
PSU	Packet Switch Unit
RAX	Rate Area Exception
RC	Recent Change
RISLU	Remote Integrated Services Line Unit
RSM	Remote Switching Module
RTA	Routing And Terminal Allocation Subsystem
SFG	Simulated Facility Group
SFID	Special Feature ID
SID	Station Identification

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SM	Switch Module
SMP	Switch Module Processor
SS7	Signaling System 7
STLWS	Supplementary Trunk And Line Work Station
TGN	Trunk Group Number
TGSR	Terminal Group and Station Restriction
TLWS	Trunk Line Work Station
TRCU2	Transmission Rate Conversion Unit Model 2
TRCU3	Transmission Rate Conversion Unit Model 3
TSI	Time Slot Interchanger
TTF	Transmission Test Facility/Function
VCDX	Very Compact Digital Exchange
VPA	Voice Path Assurance

5.2 Definitions

Back-Haul Teletraffic that is transported over the umbilical links between a host switch and any remotely located switch module (EXM-2000, ORM, RSM, MMRSM) is said to be back-hauled. This provides a distinction between voice traffic on the umbilical link, and host-remote voice traffic over trunks. In the context of the DRM feature, no voice or data traffic is back-hauled over the umbilicals, which are for control data only.

Element Manager In the context of the DRM feature, this is the software entity that coordinates the maintenance technician interface to make the collection of cp-nodes look and behave to the technician from the OAM&P perspective as though they constituted a single switch. The set of Element Manager functionalities implemented in this capability is referred as "Element Manager Phase 0" or just "EM-0" ("ee-emm zero"). This is what provides the "integrated maintenance" look and feel to the OAM&P technician -- i.e., the "virtual switch".

Critical Unit A Critical Unit is one whose outage will result in a major loss of functionality of the system dependent on that unit. For DRM, this would correspond to duplex TSI or SMP outage. Craft orders to remove the last circuit element are denied.

Min-mode This term refers to a minimum equipped working configuration of a system, or refers to a minimum working configuration under failure conditions.

CP-Node A cp-node, also occasionally referred to as a "call processing island" or "call processing node", refers to a separate group or "island" of resources to call processing code and data. That is, resources that cannot cross switch boundaries -- i.e., cannot extend between physical switches -- similarly cannot cross CP Node boundaries.

M-Node Maintenance features may have different limitations from call processing features, and because of this, the boundaries of a Maintenance Node, or "m-node", may not be coincident with those of call processing or, therefore, any cp-nodes. Testing circuits, metallic access networks, and other maintenance resources may be limited by electrical

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and other hardware restrictions, such as not being able to share test circuits across these boundaries. However, because these limits are often different from those imposed by call processing data and other resources, a cp-node need not be the same lines, trunks and other resources defined by maintenance islands. The set of resources to perform maintenance functions and the ports which can make use of these resources is referred to as a maintenance node, or "m-node". In the case of metallic testing, this is referred to "metallic m-node", and in the case of digital testing, this is referred to as a "digital m-node". Note that in this DRM feature (99-5E-3850), the DRM constitutes a single cp-node as well as a single metallic m-node and single digital m-node, all of which happen to be comprised of the same set of resources, but that may not be true of future implementations or features.

Virtual Switch — The Virtual Switch is the interface to the user of the switch - - generally maintenance technicians and other personnel that deal with the switch as a hardware entity -- that appears to be a single, integrated switch, regardless of the actual hardware configuration or number of hardware units which make it up. This is in contrast to the ideas of cp-nodes and m-nodes, which comprise the actual hardware units and resources making up a single component of the virtual switch. This Feature Description introduces the concept of a "virtual switch". A virtual switch is a self-sufficient set of resources that the service provider can utilize to provide telephony services. A virtual switch is subsequently made up of the set of resources that call processing software sees and interfaces with, the "cp-node", and the set of resources that maintenance sees and interfaces with, the "m-node".

Umbilical — A facility used to remote a network element from a host entity, the remotely located network element could be an RSM, ORM, EXM, RISLU, etc.. In the case of this feature (99-5E-3850), the DRM, the umbilical usually referred to between the DRM and the host entity is that which connects the DRM AM to the EM-0 (running on the ASM in this implementation), and therefore to the other cp-nodes in the virtual switch. That umbilical is implemented as a connection over a data network.

Isolation — Isolation refers to any loss of communication between a network element and a host entity, and therefore the network element and the rest of the network. In the context of this feature, the DRM (99-5E-3850), there are three notable types of isolation:

- Isolation of the virtual switch from OSs ("OS Isolation")
- Isolation of the Element Manager from a given cp-node, and hence, of that cp-node from the virtual switch (the cp-node in this case is said to be "EM Isolated"),
- Isolation of the DRM AM from the DRM SM

Since this capability will treat the DRM as a single unit, it will not deal with the third case of isolation within the DRM, isolation of the DRM AM from the DRM SM.

EM Isolation — The state of loss of communication with the DRM AM, which provides administrative functions for the DRM. This state does not affect call processing, only administrative access to the DRM from the Element Manager functionality. Also see "Isolation".

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Figure 1 5ESS CP-NODE CLUSTER

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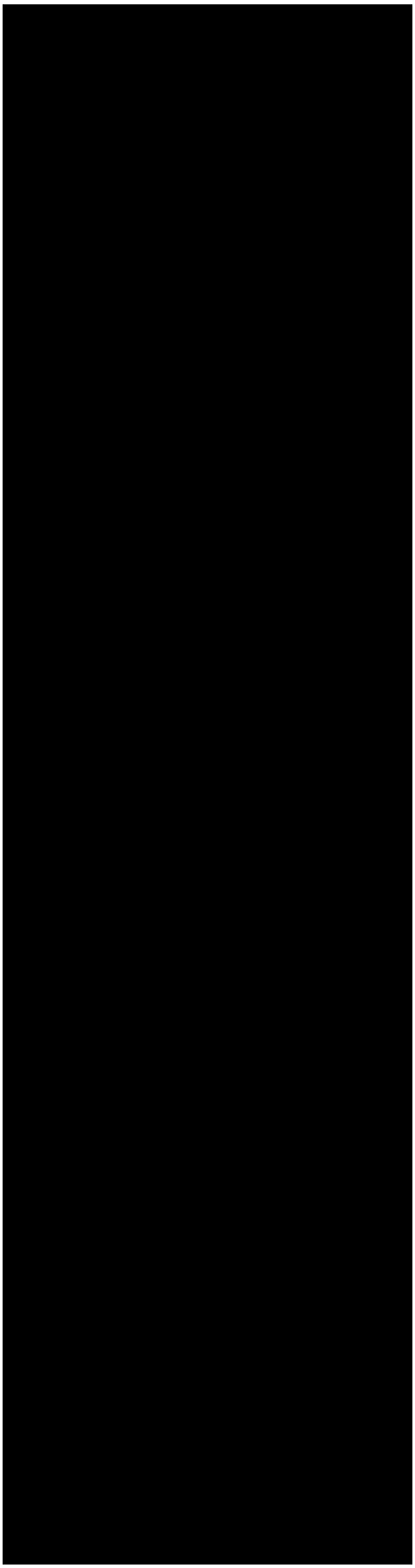

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Figure 2 DRM PROVISIONING FORM FLOW

SEC. 4A526: Forwarded Call - Call Screening

1. BACKGROUND

With a TAD (Telephone Answering Device), a called party is able to listen to a caller leaving a message, without the caller knowing. Also, the called party has the option of picking up the call anytime while the call is connected to the TAD. This capability was previously unavailable to VMS (Voice Message System) subscribers.

Prior to the introduction of the FCCS (Forwarded Call - Call Screening) feature, once a call forwarded from a subscriber's line to a VMS there was no way of monitoring and/or intercepting the call. The called party would have to wait until the calling party finished leaving their message, then dial into voice mail and retrieve the message in order to know who called.

2. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the FCCS feature, feature number 99-5E-2652, provides VMS subscribers with the TAD functionality of listening to, without the callers knowledge, and answering a call while the caller is leaving a message. With this feature, a VMS subscriber is able to listen to a call that has forwarded to a VMS without the caller's knowledge. Also, the subscriber is able to then pick up the call if they so choose.

The FCCS feature can only be used with individual analog lines that have an auto-activated CFDA (Call Forward Don't Answer) or CFBL (Call Forward Busy Line) feature assigned. This feature is designed to be used for calls forwarding to a VMS. It is a secured feature which can be defined as part of a CF feature or it can be assigned separately to a line that has a CF (Call Forward) feature. Once assigned to a line, the subscriber activates and deactivates it by dialing the CS (Call Screening) activation and deactivation access codes.

2.1 Forwarded Call Screening with Announcements -- 99-5E-7614

Effective with the 5E16 and later Software Releases, this feature provides call screening subscribers with announcements, rather than confirmation tones, when they activate or deactivate the call screening feature. By using announcements rather than tones, subscribers are less likely to be confused when they activate or deactivate the call screening feature. This feature is activated by the same SFID 526 used to enable the base Forwarded Call - Call Screening feature.

This feature requires that either Call-Forwarding Busy Line or Call-Forwarding Don't Answer be active on the subscriber's line. Two new Fixed Route Indices, defined on the FIXRT form (5301 Record), are introduced to support this feature:

- "CSACT" - FCCS Activation confirmation announcement
- "CSDCT" - FCCS Deactivation confirmation announcement

After assigning the CS Feature Access Codes and Feature Actions in the IDP, the new announcements are assigned an activation/deactivation index and are recorded with the desired messages by the switch owner.

3. FEATURE ASSIGNMENT

For 5E14 and later, to enable this feature, the ACT field for SFID 526 on the SFSYS form (5713-1 Record) must be set to "Y". Refer to Figure 1 for FCCS provisioning form flow.

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4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CFWFD	5614-2	4	15A	12.12
CFWLPA	5614-3B	4	15B	1.22
CFWMPA	5614-4	4	15C	1.22
FIXRT	5301	3	3G	10.1
IDPDCA	5601-1, 5601-2	4	2B	9.13
LINEFA	5112	3	1L	1.8, 1.11, 1.12
MLHLNFA	5113	3	1M	1.8, 1.11, 1.12
OFCOPT	5509	3	5I	8.1
PDIT	5300-2	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22

CFWFD form (5614-2 Record) - This form contains the feature options and default parameters needed to construct a Call Forwarding feature. For 5E14 and later, the FCCS OPT field was added to this form.

CFWLPA form (5614-3B Record) - This form is used to define individual line parameter information for a Call Forwarding feature. For 5E14 and later, the FCCS OPT field was added.

CFWMPA form (5614-4 Record) - This form is used to define the MLHG (MultiLine Hunt Group) parameter information for a Call Forwarding feature. For 5E14 and later, the FCCS OPT field was added as display only.

IDPDCA form (5601-1 and 5601-2 Record) - This form is used to define the dial codes associated with an IDP (Individualized Dialing Plan). For 5E14 and later, two values, "CSACT" and "CSDCT" were added for the ACTION field.

LINEFA form (5112 Record) - This form is used for BRCS (Business and Residence Custom Service) feature assignment. It is keyed by telephone number. For 5E14 and later, data rules were added.

MLHLNFA form (5113 Record) - This form is used for BRCS (Business and Residence Custom Service) feature assignment. It is keyed by MLHG group and member numbers. For 5E14 and later, data rules were added.

OFCOPT form (5509 Record) - This form defines all of the global parameters used in the office. For 5E14 and later, the T SCREEN and CS MONITOR fields were added.

PDIT form (5300-2 Record) - This form is used for defining and modifying prefix, operator and feature access dialing codes. For 5E14 and later, two values, "CSACT" and "CSDCT", were added for the ACTION field.

FIXRT form (5301 Record) - This form is used to define routing and charging treatment of fixed route types in a 5ESS Switch. For 5E16 and later, to support the Forwarded Call Screening with Announcments feature (99-5E-7614), two fixed route values, "CSACT" and "CSDCT" were added.

SFSYS form (5731-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field to "Y" for SFID 526.

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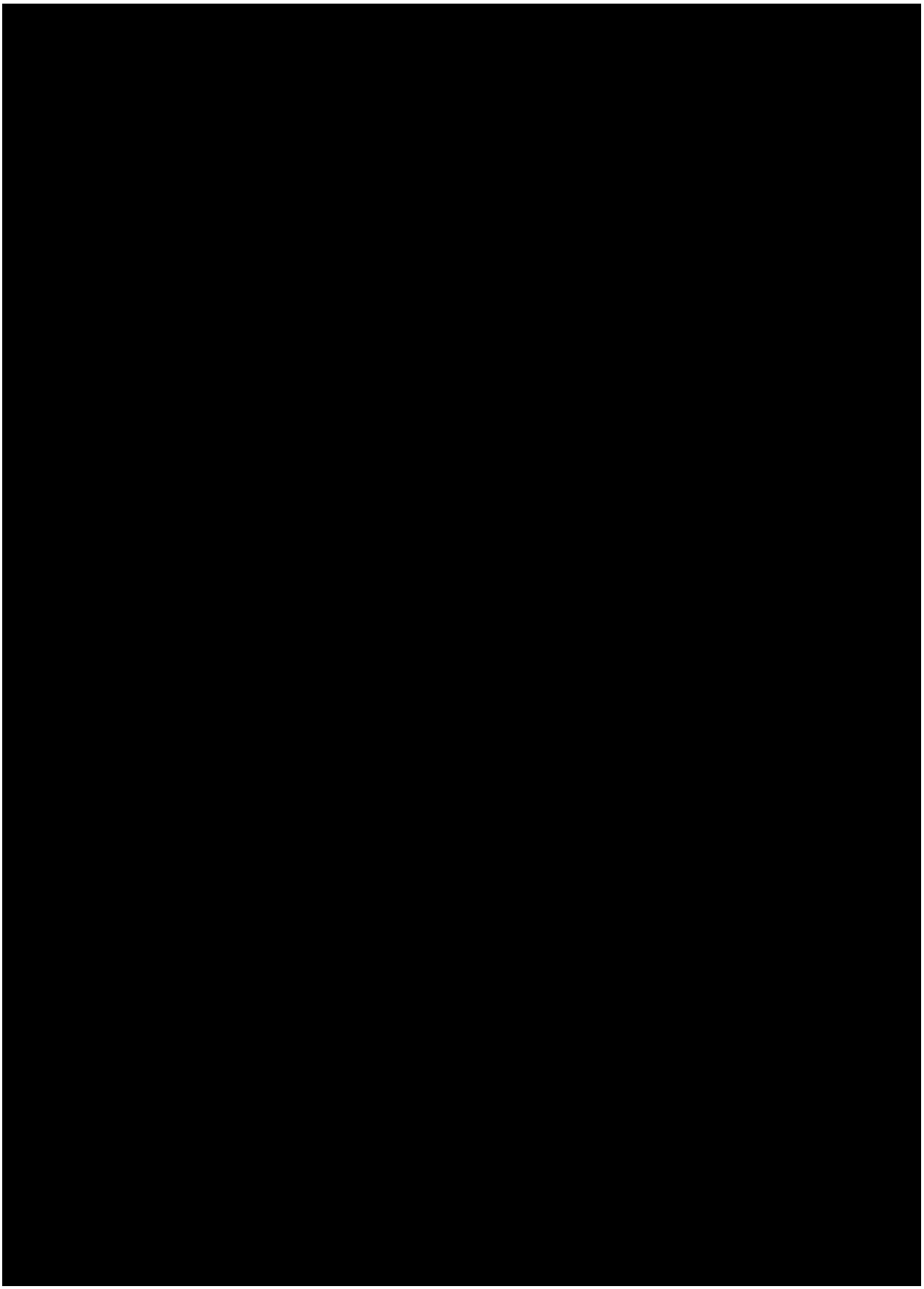

Figure 1 Forwarded Call - Call Screening

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SEC. 4A527: VERIFY OFFICE CAPABILITY FOR LONG DISTANCE PLATFORM

1. FEATURE DESCRIPTION

The Verify Office Capability for LDP (Long Distance Platform) feature is available as a 5E14 FR1 (Feature Release 1) and with the 5E15 Software Release. This is a secured feature, SFID 527, which must be activated prior to use. The feature number for this feature is 99-5E-4284.

This feature provides LDP switch owners with the ability to verify provisioned routing information for LDP and MINT (Multi-farious Intra-Network Trunk) trunks. This feature allows a technician to enter a "VFY:OFC" command at the MCC (Maintenance Control Center) specifying a LDP or MINT trunk as the incoming trunk along with dialed digits to generate an output message containing routing information on the ROP (Read Only Printer) and the MCC for the simulated call. As with other verify office operations, this operation does not generate an actual call. If an SCP (Service Control Point) query is encountered for the verify request on a LDP/MINT trunk, the trigger number and trigger type are output without executing the actual query. If a LNP query is encountered on the LDP/MINT trunk, the query is processed and post-query information is output. To provide the new functionality, several new input and output parameters were added to the verify office input and output messages function. See the Input/Output Manuals.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate this feature, the ACT field for secured feature 527 must be "Y". This capability is invoked on an office-wide basis. If the SFID 527 has been activated, the "VFY:OFC" command will process the new parameters for the LDP platform. SFID 527 must be active in order to enter or receive any of the new input/output parameters. If the SFID 527 is not active, a verify request on LDP/MINT trunks will result in an error message.

SEC. 4A528: ASP TOLL FREE SERVICE INTERACTION WITH FLEXIBLE ANI

1. FEATURE DESCRIPTION

The ASP (Advanced Services Platform) Toll Free Service Interaction with Flexible ANI (Automatic Number Identification) feature is a secured feature (SFID 528) that is being deployed on the 5ESS Switch in a Software Update for 5E14 and in the 5E13 Software Release. The feature number for this feature is 99-5E-7302.

Prior to this feature, the "Flexible ANI" features on the 5ESS Switch were not interacting with ASP. If customers are choosing to implement "Toll Free" service using ASP triggers (or AIN Toll Free Service), Toll Free calls from Pay Phones must be allowed.

This feature provides the functionality required for Pay Phone Compensation for Toll Free Calls and Enhancements to the Flexible ANI feature (SFID 332). For more information on this feature, see Division 2, Section 4A322.

This feature will interact with the following "Flexible ANI" features:

- Flexible ANI Information Digits Assignment (SFID 38). For more information on this feature, see Division 2, Section 4A38.
- Flexible ANI Enhancements (SFID 142). For more information on this feature, see Division 2, Section 4A142.

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- Tollfree Calling Enhancement for Flexible ANI and Pay Phone Compensation for Toll Free Calls (SFID 332).

1.1 Call Processing Impacts

AIN Toll Free Calls:

When an ASP TF (Transparency Features) routing response (e.g., Analyze Route message) is received without a CPST (Charge Party Station Type) parameter, indicating the SCP (Service Control Point) has not translated the dialed Toll Free number, then if this feature is unlocked (SFID 528) and the AIN TF Pay Phone Compensation TFOS ((Transparency Feature Optioning System) bit (OFID 745)) is set to yes, the switch invokes feature 99-5E-4847 (Toll Free Calling Enhancement for Flexible ANI) (SFID 142). Invoking this feature, derives Flexible ANI II and perform Default II Pay Phone Compensation mapping. The result will be the new ANI II/OLI (Originating Line Identity) digits which will be used in outgoing signaling.

When an ASP TF routing response (Analyze Route message) is received with a CPST parameter set to "24", an indication that the SCP has translated the dialed Toll Free number, then if this feature is unlocked (SFID 528) and the AIN TF Pay Phone Compensation TFOS bit (OFID 745) is set to yes, the 5ESS Switch will invoke feature 99-5E-4868 (Pay Phone Compensation for Toll Free Calls) (SFID 332). Invoking this feature, derives Flexible ANI II digits, and then performs Pay Phone Compensation mapping. In this case, however, if the Flexible ANI II digits are not mapped, the switch will use a value of 24.

When an ASP routing response (Analyze Route message) is received with a CPST parameter set to a value other than 24, the 5ESS Switch will not derive Flexible ANI II digits or perform Pay Phone Compensation. In this case, the switch is assuming that the Flexible ANI and Pay Phone Compensation feature functionality has been incorporated into the SCP application logic.

Non-Toll Free AIN Calls:

For non-Toll Free AIN calls, the 5ESS will NOT invoke the Flexible ANI feature if the SCP returns a CPST parameter in the routing message. If no CPST parameter is included, then the switch will invoke the Flexible ANI feature if this feature (ASP Toll Free with Flexible ANI) is unlocked (SFID 528) and the TFOS bit (OFID 744) is set to "Yes".

2. FEATURE ASSIGNMENT

The provisioning of this feature is as follows:

- Set the ACT fields for SFID 126, SFID 332, and SFID 528, on the SFSYS form (5713-1 Record) to "Y".
- Set the ACT fields for OFID 744 and OFID 745, on the FOSYS form (5713-2 Record) to "Y".

No other forms are impacted by this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). Transparency Features have been developed to replicate features that exist on the 1A ESS Switch. To activate the ASP Toll Free with Flexible ANI feature for an office, the ACT fields for OFID 744 and OFID 745, must be set to "Y" on this form.

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SFSYS form (5713-1 Record) - This form is used to enable secured features. To activate the ASP Toll Free with Flexible ANI feature, the ACT fields for SFID 126, SFID 332, and SFID 528, must be set to "Y" on this form.

SEC. 4A529: CALEA PHASE III
LAES DIALED DIGIT EXTRACTION CAPABILITY

1. CALEA PHASE III

1.1 FEATURE DESCRIPTION

The feature number for the CALEA (Communications Assistance for Law Enforcement Act) Phase III Feature is 99-5E-4920. This secured feature (SFID 529) is available for the 5E14 release.

The CALEA - Core feature provides compliance to the Communications Assistance for Law Enforcement Act of 1994 for 5ESS Switches providing service to wireline subscribers. CALEA requires that a telecommunications service provider be able to support lawful surveillance of the traffic in its network.

A LEA (Law Enforcement Agency), in the course of normal operations, may have the need to conduct a lawfully authorized surveillance of the communications service subscriber, known as a subject. Once a court order authorizing the surveillance is issued, the LEA, with cooperation of the telecommunications service provider, may use a specified unobtrusive means of monitoring calls to and from the subject. Prior to this feature a loop around trunk was used as the means to monitor a AMPS (Advanced Mobile Phone Service) subject's call as if it were a wireline subject's call. However, as telecommunications services become more sophisticated, it becomes more difficult to provide some desired capabilities using traditional methods such as loop around trunks. Compared to loop around trunks, voice/conversion CCC (Call Content Channel) monitoring using TSI (Time Slot Interchange) bridging provides a much more flexible approach to monitor a call. CALEA's immediate need for the bridging capability prompts this upgrade of the current surveillance capability. This feature provides the 5ESS Switch DCS (Digital Cellular Switch) bridging capability for monitoring of a subject's circuit switched voice call content which is sent over a 5E trunk, call content channel, to an external hardware delivery facility. The CCC interface is used to carry the subject and the non-subject call content via the bridge in the speech-path. The delivery facility delivers the call contents to the monitoring agency. Since CCC interface is a trunk interface, the hardware requirements are the same as regular outgoing trunks. For DLTU (Digital Line Trunk Unit), DFI (Digital Facilities Interface) and DNU (Digital Network Unit), the standard procedures shall be followed. Through ECP/DCS (Digital Cellular Switch) data link protocol, the ECP directs the 5E DCS how to apply bridging on a per call basis to a particular subject's call. The bridge is setup, moved and torn down at different stages of a monitored call. This feature has a dependency on the call content monitoring capabilities of the 5ESS Switch Wireline "CALEA-Core (99-5E-4275)" feature.

1.2 FEATURE ASSIGNMENT

Procedures necessary to provision CALEA Wireless are available in the "5ESS Switch FLEXENT/AUTOPLEX System 1000 Wireless Applications" manual (235-100-200) document.

To enable this feature, the ACT field for SFID 529 must be set to "Y" on the SFSYS form (5713-1 Record).

1.3 TRANSLATION REQUIREMENTS

Calea Core Capability				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - The 5713-1 Record is used to activate secured features. This feature is activated by setting the ACT field for SFID 529 to "Y".

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TKGRP form (5202 Record) - The 5202 Record is used to define each Trunk Group in a 5ESS Switch. The CALEA field Data Rules are modified to support this feature.

2. LAES DIALED DIGIT EXTRACTION CAPABILITY

2.1 FEATURE DESCRIPTION

The feature number for the LAES (Lawfully Authorized Electronic Surveillance) Dialed Digit Extraction Capability Feature is 99-5E-7623. This feature is made available with 5E15 FR 3.

LAES DDE (Dialed Digit Extraction) Capability allows the FBI to monitor the digits dialed by a subject after the call is cut through. It enhances the capabilities of the CALEA Phase III feature. CALEA Phase III allowed for call content monitoring, and DDE adds the capability to monitor any digits entered after the call is cut through. The DCS (Digital Cellular Switch) will report the collected digits to the ECP (Executive Cellular Processor) via a new message, LAES_DIGITS_X.

Digit extraction can be used by itself, which is called "level 1" surveillance, or it can be used in conjunction with a "level 2" surveillance, which would be content monitoring and digit extraction. It is also possible to have a "level 2" without DTMF (Dual Tone Multi-Frequency) extraction, which would be just plain content monitoring. This feature provides this functionality which complies with the CALEA Third Report and Order (FCC 99-230).

This feature is turned on via a proprietary Recent Change View.

3. GLOSSARY

AMPS	Advanced Mobile Phone Service
CALEA	Communications Assistance for Law Enforcement Act
CCC	Call Content Channel
DCS	Digital Cellular Switch
DFI	Digital Facilities Interface
DLTU	Digital Line Trunk Unit
DNU	Digital Network Unit
LEA	Law Enforcement Agency
SFID	Secured Feature ID

SEC. 4A530: 1000 Block Number Pooling Using Number Portability

1. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the 1000 Block Number Pooling Using Number Portability feature, feature number 99-5E-7210, builds upon the existing 5ESS Switch implementation of the Number Portability feature. In a number portability environment, thousand block number pooling allows for sharing of CO (Central Office) NXX codes among multiple SPs (Service Providers) serving the same rate area. All ten thousand TNs within each NXX Code continue to be associated with the same rate area designation, but can be distributed among multiple SPs at the thousand block (NXX-X) level. Examples of uses for thousand blocks include POTS (plain old telephone service), Centrex, DID (Direct Inward Dialing), wireless service, facsimile, and coin phones.

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In a pooling environment, sharing of CO NXX codes is accomplished by designating one SP as the code holder for that CO code. Any other SP sharing that office code is designated as a block holder. There may be many block holders but only one code holder per office code (NPA-NXX) and the code holder may also be a block holder. This feature provides a mechanism by which an SP can designate a switch as a code holder, a block holder or both. This feature also provides a method for an SP to designate, per switch, which blocks can be used for number assignment (RESERVED) and which blocks cannot be used (PORTED OUT). Further, with this feature, an SP can designate hundreds groups and individual TNs as RESERVED or PORTED OUT. These lower level designations are used in providing the correct terminating treatment for misrouted LRN (Local Routing Network) calls to a hundreds group.

This feature is secured with feature ID 530, which is dependent upon SFID 174. In order to provision this feature, the ACT field for SFIDs 530 and 174 must be "Y". There are two OFIDs (optioned feature IDs) associated with this feature: OFID 955 and OFID 956. In order to enable the call processing capabilities, OFID 955, on the FOSYS form, must be activated. If it is desired to override the ported restriction, OFID 956 must be activated.

2. FEATURE ASSIGNMENT

Refer to the "PROVISIONING FORM FLOW FOR 1000 BLOCK NUMBER POOLING USING NUMBER PORTABILITY" diagram for feature assignment procedures.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDTN	5631	4	32A	6.10
EQCORE	5701	8	3	17.14
FOSYS	5510-1	2 3	4B0 5AS	8.31
HGRPAS	5115	3	1O	4.14
NOC	5501	3	5A	8.2
NPOOL	5177	3	1AF	1.7
SFSYS	5713-1	2 3	4A0 5AR	8.22

ACDTN form (5631 Record) - This form is used by the ACD/BRCS (Automatic Call Distributor/Business and Residential Custom Services) feature to define the ACD directory number or the DAA (Direct Agent Access) directory number. A cross check was added for the TN field.

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments in a 5ESS Switch office such as the Message Interface Control Unit, the Time Multiplexed Switch and the Message Interface Control Unit Subunits. Cross checks have been added for the VCDX and DRM fields.

FOSYS form (5510-1 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate this feature, the ACT field for OFID 955 must be set to "Y". When suppression of the ported out restriction is desired, then the ACT field for OFID 956 must be "Y".

HGRPAS form (5115 Record) - This form is used to assign a routing module and/or a route index for a hundreds group. The PORTED OUT field was added to this view.

NOC form (5501 Record) - This form is used to associate a NOC (Normalized Office Code) with each OFFICE CODE and NPA (Numbering Plan Area) code. The OFFICE CODE is commonly referred to as the "NXX" which is the three digits after the NPA (commonly referred to as the "area code"). In addition, this form is used to assign Routing and Charging Intercept Treatment. The NOT CODE HOLDER field and the THOUSANDS GROUP STATUS field group, including the PORTED OUT 0 through PORTED OUT 9 fields, were added.

NPOOL form (5177 Record) - This form is allows the craft to insert, review, update, and delete ported or

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reserved individual TNs. This view is new for this feature.

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 530 has been implemented to secure this feature. The ACT must be "Y" for this SFID in order to provision this feature.

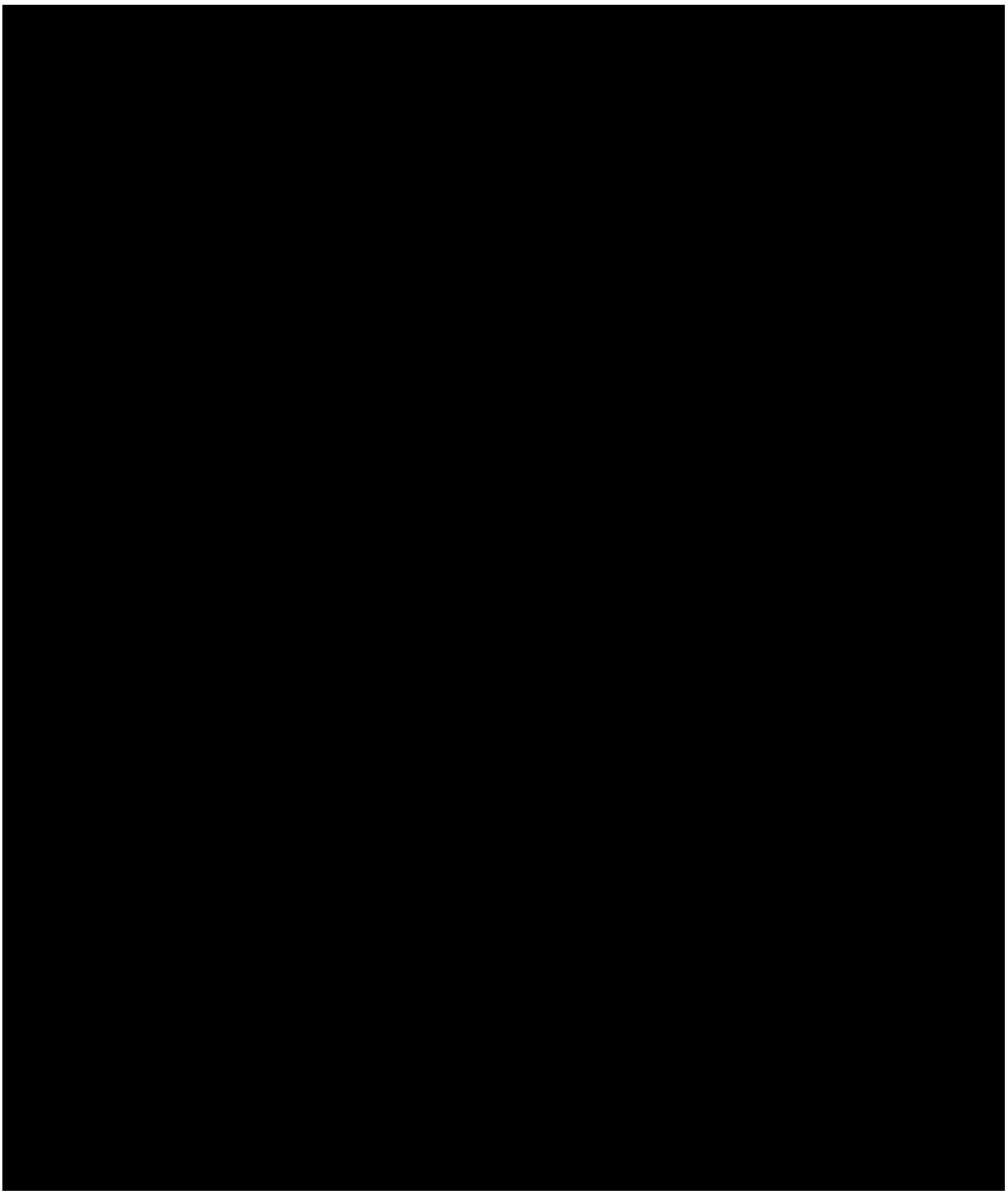

Figure 1 PROVISIONING FORM FLOW FOR 1000 BLOCK NUMBER POOLING USING NUMBER PORTABILITY

SEC. 4A532: TCP/IP INTERFACE FOR TRAFFIC MEASUREMENTS

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1. FEATURE DESCRIPTION

The feature number for the TCP/IP Interface for Traffic Measurements feature is 99-5E-7133. This feature is controlled by SFID (Secured Feature ID) 532 and is being deployed for the BMI (Beginning Managed Introduction) of the 5E15 Software Release.

This feature introduces the NM (Network Management) and TRFM (Traffic Measurements) data transfer over the TCP/IP (Transmission Control Protocol/Internet Protocol) link and is an optional feature for offices where the customer wants to reduce the time it takes to teleprocess (download) the Network Management and Traffic Measurements data off the 5ESS Switch to an OSS (Operational Support System) processing center.

This feature provides the following:

- Enable TCP/IP transfer of Traffic Measurement and Network Management data from the switch to remote systems - NDC OS (Network Data Collection Operations System) and NTM OS (Network Traffic Management Operations System).
- BX.25 (Bell System Version of X.25 Protocol) transfer of traffic measurement and network management data from the switch to a remote system (NDC and NTM OS) is also supported.
- For Network Management, extend the scheduling of trunk groups from 500 to 2000 when a direct link exists.
- Allow a direct link to the NTM OS, separate from the NDC link.
- Modified message header for messages between the SPCS (Stored Control Program System) and NTM-OS/NDC-OS sent only via TCP/IP link.

The NM and TRFM data from the holding buffers located in the 3B21D AM (Administration Module) is transmitted via the ASM (Administrative Services Module) to the OSSes via the TCP/IP connection. TCP/IP connectivity to the ASM combined with the ASM's high speed DCI (Dual Channel Interconnect) to the 3B21D is used to transfer the Network Management and Traffic Measurements data outside the 5ESS Switch. The data transfer is performed over an Ethernet Link. The TRFM and NM data related to the DRM (Distinctive Remote Module) are transferred to the OSS via the ASM. Customers who need to use the "old connection" over the BX.25 Protocol will be able to do so.

The format of the overall header of the traffic data to be transmitted over TCP/IP link must contain SPCS (Stored Program Control System) CLLI (Common Language Location Identifier) Code. This format remains unchanged for BX.25 link. SPCS CLLI Code is the overall header field and contains the 11-character ASCII (American Standard Code For Information Interchange) CLLI code that is unique to a SPCS. The following Traffic Measurements Report types are transmitted:

- TRFC30 report,
- Hourly data, and
- Daily data (plant measurements).

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 532 on the SFSYS form (5713-1 Record) must be set to "Y".
- The TRFM RNM OPT field on the OFCOPT form (5509 Record) can then be changed from "NONE" to

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"TRFM" or "RNM" or "BOTH".

- The TRFM RNM OPT field on the ECDOPT form (5706 Record) can then be changed from "NONE" to "TRFM" or "RNM" or "BOTH".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	NA
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

ECDOPT form (5706 Record) - This form is applicable to (and required for) all offices. It is required to translate all options in the AM (Administration Module) for initial offices. For 5E15 and later the new field TRFM RNM OPT was added.

OFCOPT form (5509 Record) - This form is used to define miscellaneous office options and parameters. For 5E15 and later two fields, TRFM RNM OPT and LOC IDENT CODE were added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 532 to "Y".

SEC. 4A533: CNA CC720 MODIFICATION

1. FEATURE DESCRIPTION

The feature number of the CNA (Connecting Network Access) CC720 Modification feature is 99-5E-7486. This feature is a secured feature with SFID 533 and is available with the 5E14FR2 and later Software Releases.

This feature provides an option for recording a CIC (Carrier Identification Code) in Table 57 of the CNA AMA (Automatic Message Accounting) records. With this feature active, when a CNA CC720 record is generated, the IC (Interexchange Carrier)/INC (International Carrier) Prefix (reference LSSGR Table 57) is populated with the CIC present in the TNS (Transit Network Selector) parameter received in the incoming SS7 (Signaling System 7) ISUP (ISDN User Part) IAM (Initial Address Message) message for an incoming call. This feature is optioned on a per-switch basis.

2. FEATURE ASSIGNMENT

The CNA CC720 Modification feature depends on the NP - Basic AMA feature (99-CP-3667, SFID 180). For more information on this feature, see Division 2, Section 4A180.

To provision this feature:

- activate the NP - Basic AMA feature by setting the ACT field for SFID 180 to "Y" on the SFSYS form.
- activate the CNA CC720 Modification feature by setting the ACT field for SFID 533 to "Y" on the SFSYS form.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

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SFSYS form (5713-1 Record) - This form is used by the SEE (Lucent Technologies System Equipment Engineer) to enable Secured Features for an entire 5ESS Switch or for selected Switching Modules.

SEC. 4A534: ASP AMA RECORDING FOR ABANDONED STOR CONNECTIONS

1. FEATURE DESCRIPTION

The feature number of this feature is 99-5E-7404. This feature is a secured feature with SFID 534 and is available with the 5E13FR3, 5E14FR2 and later Software Releases. The AMA Recording for Abandoned STOR Connections fASP eature is a Billing/ASP feature that supports the recording of the duration of the interactions between the IP (Intelligent Peripheral) and the caller on calls abandoned by the caller during the STOR connection. This feature allows the switch to create an AMA record for calls that allow the caller to interact with an IP, but do not actually route.

When this feature is activated, the 5ESS Switch will create a "special" AMA Structure Code (SC) 220 record for the Originating Call State Model or an AMA SC 221 record for the Terminating Call State Model to record the IP duration in a Module 290 when a local or remote STOR connection is established due to a STOR message containing an AMAMeasure parameter indicating "destinationSSP" and either one of the following conditions is satisfied:

1. the caller abandons while the STOR connection is established and before the Resource_Clear message is sent to the SCP (Service Control Point).

2. the caller abandons after a Resource_Clear has been sent to the SCP but before the reply from the SCP is received.

   or

3. the caller abandons after a Resource_Clear message has been sent and the T1 timer expires without receiving a reply from the SCP.

In general, this record is generated whenever the call has not advanced to a state where the SCP was able to respond with an AMAslpID parameter.

Since the call for which this record was produced did not complete, the Elapsed Time field is set to zeros as is the Terminating NPA and Terminating Number field of the SC 220. The Service Logic Identification field is set to 900000050 as an indicator that this record was forced out by this feature. The Call Type of this record is 047. All other fields are populated according to normal billing practices. The Resource Timing Module (290) is appended to the record. All fields of the 290 module are populated according to normal billing practices.

If this feature is not activated, the IP duration time would not be contained in an AMA billing record for those calls which established either a local or remote STOR connection, but did not advance beyond the Resource_Clear message.

2. FEATURE ASSIGNMENT

AMA Recording for Abandoned STOR Connections is a secured feature having SFID (Secured Feature ID) 524. This feature depends on the AIN (Advanced Intelligent Network) SSP (Service Switching Point) STOR (Send To Outside Resource (Local)) secured feature. For more information on this feature, see Division 2, Section 4A229.

Before the AMA Recording for Abandoned STOR Connections feature can be activated, the AIN SSP STOR (Local) feature must be active by setting the ACT field for SFID 229 to "Y" on the SFSYS form. The AMA Recording for Abandoned STOR Connections feature is then activated by setting the ACT field for SFID 534 to "Y" on the SFSYS form.

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3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used by the SEE (Lucent Technologies System Equipment Engineer) to enable Secured Features for an entire 5ESS Switch or for selected Switching Modules. To activate the ASP AMA Recording for Abandoned STOR Connections feature, the ACT field for SFID 229 and 534 must be set to "Y" on the SFSYS form.

SEC. 4A535: MDR/CW/CF INTERACTION ENHANCEMENT (FAX RING)

1. FEATURE DESCRIPTION

1.1 Feature Overview

Available with 5E14 and later Software Releases, the MDR (Multi-Distinctive Ringing)/CW (Call Waiting/CF (Call Forwarding) Interaction Enhancement (FAX Ring) feature is assigned feature number 99-5E-4923.

This feature allows subscribers with both the MDR feature and the CWT (Call Waiting Terminating) feature to better manage their incoming calls. MDR subscribers with two DNs (Directory Numbers) often associate a "FAX line" with one of the DNs. When an incoming call is made to the FAX line, subscribers do not want call waiting tones applied for the duration of that call. The call waiting tone will interfere with the FAX transmission and can possibly cause the call to disconnect or garble the FAX transmission. Similarly, subscribers do not want calls to the FAX line DN to cause the switch to apply call waiting if there is an active call up on the subscribers line. The current switch operation for MDR and CWT does not allow an option to suppress call waiting tones based on the called DN. This feature allows the switch to suppress call waiting for incoming calls based on the DN that was called. The subscriber can designate either the Master or the Dependent(s) DN such that when there is an active call to that DN, the switch will not apply call waiting tone treatment even though CWT is assigned to the subscriber.

MDR subscribers with FAX line service on one of the DNs, often subscribe to a voice mail service as well. To prevent FAX calls from being forwarded, via CFBL (Call Forwarding Busy Line) and CFDA (Call Forwarding Don't Answer), to the voice mail system, this feature provides an option to restrict calls to either the Master DN or all Dependent DNs from being forwarded via CFBL or CFDA.

2. FEATURE ASSIGNMENTS

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record). See figure 1 illustrates the form flow for this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
BFG	5625	4	26A	12.9
CWTFD	5603-1A/B	4	4A	12.15
CWTLPA	5603-2	4	4B	1.24
CWTMPA	5603-3	4	4C	3.24
CFWFD	5614-1/2	4	15A	12.12
CFWLPA	5614-3	4	15B	1.22
CFWMPA	5614-4	4	15C	1.22
SFSYS	5713-1	3	5AR	8.22

BFG form (5625) - This form is used to specify and construct BFGs (BRCS Feature Group) for use when assigning subscriber features to analog lines or ISDN terminals. BFG is designed to assist the switch owner in the conservation of Switching Module memory and the improvement of Recent Change response time, and it cannot be used with trunks. For 5E14, added new fields INH CW MASTER and INH CW

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DEPEND. For 5E15, added new field INHIBIT MDNL CW.

CWTFD form (5603-1A/B) - This form is used to define a number of separate features by selecting various feature options for Call waiting. For 5E14, added new fields INH CW MASTER and INH CW DEPEND. For 5E15, added new field INHIBIT MDNL CW.

CWTLPA form (5603-2) - This form is used to define specific parameters assigned to every non-Multi-Line Hunt line assigned with a specific constructed Call Waiting feature. For 5E14, added new fields INH CW MASTER and INH CW DEPEND. For 5E15, added new field INHIBIT MDNL CW.

CWTMPA form (5603-3) - This form is used to define specific parameters assigned to every Multi-Line Hunt line associated with a specific constructed Call Waiting feature. For 5E14, added new fields INH CW MASTER and INH CW DEPEND. For 5E15, added new field INHIBIT MDNL CW.

CFWFD form (5614-1/2) - This form is used to allow calls completing to a customer's Directory Number to be redirected to another number. It is used to define a number of separate, but related features, by selecting various feature options for Call Forwarding. For 5E14, added new fields INH CF MASTER and INH CF DEPEND. For 5E15, added new field INHIBIT MDNL CF.

CFWLPA form (5614-3) - This form is used to define parameters for a constructed Call Forwarding Feature that will be assigned to lines (which are not multi-line hunt group lines). For 5E14, added new fields INH CF MASTER and INH CF DEPEND. For 5E15, added new field INHIBIT MDNL CF.

CFWMPA form (5614-4) - This form is used to define specific parameters assigned to every Multi-Line Hunt Line assigned a specific constructed Call Forwarding feature. It is required only if the default parameters assigned on the CFWFD form are inappropriate. For 5E14, added new fields INH CF MASTER and INH CF DEPEND. For 5E15, added new field INHIBIT MDNL CF.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 535 to "Y".

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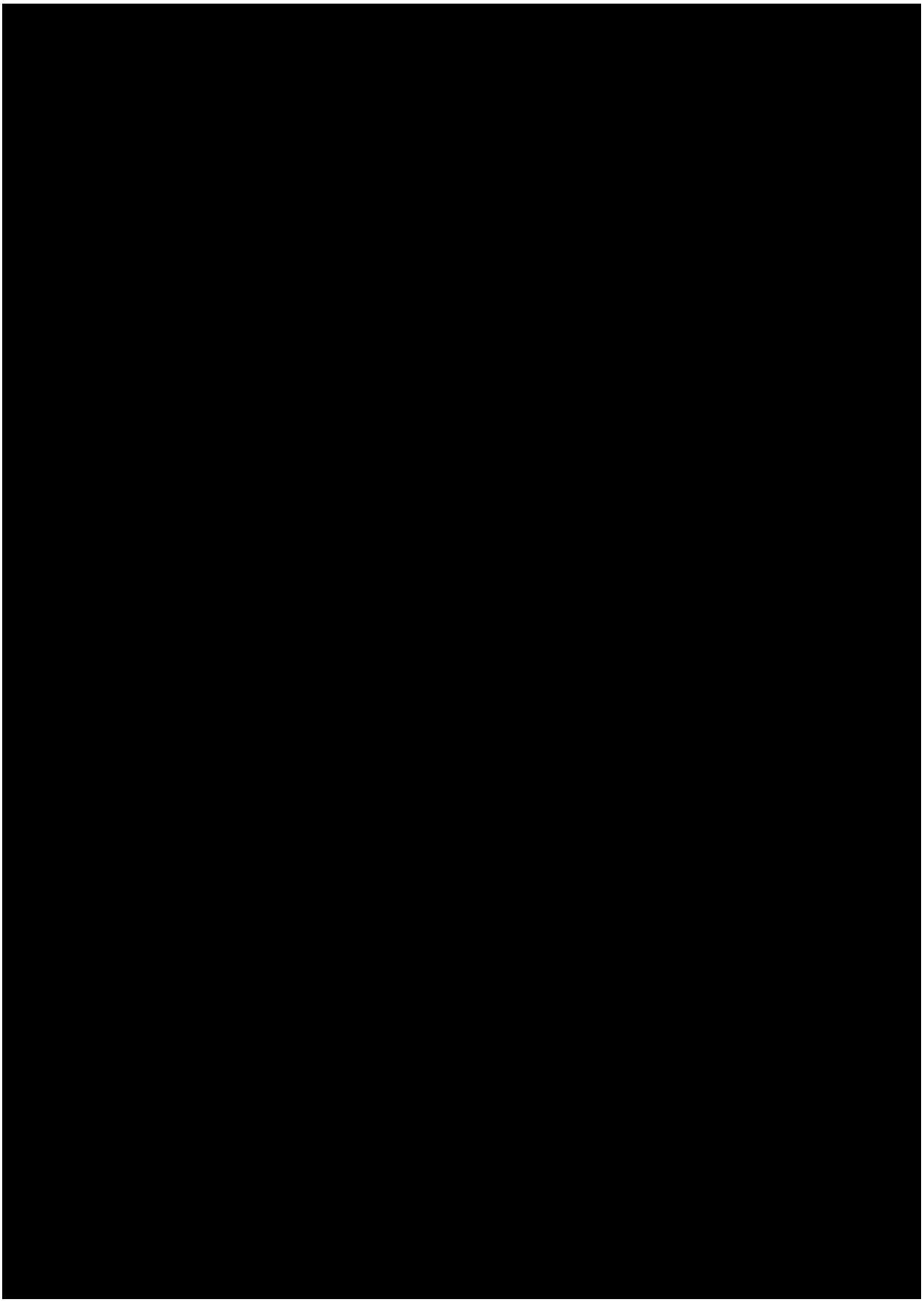

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Figure 1 FEATURE ASSIGNMENT

SEC. 4A537: 60 Minute Traffic Reporting Option

1. FEATURE DESCRIPTION

The feature number for the 60 Minute Traffic Reporting feature is 99-5E-7112. This is a secured feature (SFID 537) that is being deployed for the BMI (Beginning Managed Introduction) of the 5E14 Software Release.

TRFC30 (30-minute Traffic) Section 12 Report provides the Switch Administration with all the data relating to the trunk group's performance. The standard interval for TRFC30 report is 30 minutes. With the introduction of feature 99-5E-7112, the customer will be able to change the interval for collection of data to 60 minutes. The ACT field for SFID 537 must be set to "Y" before this interval can be changed.

This feature adds two new measurements to the TRFC30 Section 12 Report:

- the number of trunks that have In-Service status during the interval,
- and the number of trunks that have Out-of-Service status during the interval.

A new field for the trunk group name is also added to this report. This additional information on the TRFC30 report gives administration an easy way for identifying trunk groups not only by numbers, but also by the names. The two new measurements and the Trunk Group Name field added to the Section 12 report will not be secured.

This feature depends on two features - Release Link Trunk-Toll (99-5E-4687) and Flexible Alerting (99-5E-4572A) for the report layout. There is also a dependency between this feature and the TRFC30 30 to 60 Minute Collection (SFID 164) feature. If one of the SFIDs (537 or 164) is "Y", the other has to be "N".

2. FEATURE ASSIGNMENT

To provision this feature:

- The 60 Minute Traffic Reporting Option feature can be activated by setting the ACT field for SFID 537 to "Y", and the ACT field for SFID 164 to "N".
- Once this feature is activated the length of the interval can be changed via the MSTMCI field on the Measurements Parameters (MSPAR) Recent Change View 13.1.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 537 to "Y".

SEC. 4A538: TYPE 1/2A/2B CMC ID ENHANCEMENT

1. BACKGROUND

CMC (Cellular Mobile Carrier) IDs are used to identify CMCs for billing purposes. Prior to the introduction of this feature, the AMA Capabilities For Type 2A CIs (Cellular Interconnections) feature supported a maximum of 60 CMC IDs. Because LECs (Local Exchange Carriers) are using the AMA Capabilities For

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Type 2A CIs feature not only when connecting to CMCs, but also when connecting to CLECs (Competitive LEC), a need for an increased maximum of supported CMC IDs has resulted.

2. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the Type 1/2A/2B CMC ID Enhancement feature, feature number 99-5E-7381, extends the capabilities of the following features:

- AMA Capabilities For Type 2A CIs - 99-5E-1081, see Division 2 Section 4A128 for details of this feature.
- AMA Capabilities for Type 2A CMC Interconnectons via SS7 - 99-5E-2540, see Division 2 Section 4A160 for details of this feature.
- AMA Capabilities For Type 1 Cellular Access - 99-5E-2725, see Division 2 Section 4A167 for details of this feature.

by supporting a maximum of 1,023 CMC IDs. This increased number of CMC IDs allows greater flexibility in efficiently recording accurate access charges for usage of CMC interconnections over SS7/ISUP trunks, Type 2A and Type 2B trunks.

This feature, along with the three features mentioned previously, supports up to 1,023 CMC IDs for:

- Type 1 WSP (Wireless Service Provider) AMA recording over PF (Private Facilities) trunks
- Type 2A and 2B Cellular Interconnections for MF trunks
- Type 2A and 2B Cellular Interconnections for SS7 trunks

3. FEATURE ASSIGNMENT

Since this is a secured feature which builds on previously released secured features (as mentioned in the FEATURE DESCRIPTION section), the SFIDs for those features along with the SFID for this feature must all be enabled by setting the ACT field to "Y" on the SFSYS form (5713-1 Record). Please refer to the following table for SFID settings:

SFID	FEATURE
538	99-5E-7381
128	99-5E-1081
160	99-5E-2540
167	99-5E-2725

There is no special provisioning for this feature other than setting up the SFIDs as shown. This feature simply allows CMC ID values of up to 1,023 for the other three features mentioned in this document. Please refer to the footnotes for documentation sections of the other features to find specific provisioning information.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 538 must be set to "Y" along with SFIDs 128, 160, and 167.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk

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information that is entered on this record is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

SEC. 4A539: PROXY DATABASE PHASES I AND II - PROXY DATABASE

1. FEATURE DESCRIPTION - PROXY DATABASE PHASE I - PROXY DATABASE

Available with 5E15 and later Software Releases, the Proxy Database component of the Proxy Database Phase 1 feature (99-5E-7127) provides faster 5ESS database access by supporting a full copy of the 5ESS Switch SODD (Static Office Dependent Data) on the ASM (Administrative Services Module). This feature does not impact ODA or Recent Change operations. Proxy Database Phase 1 - Proxy Database is secured with SFID 539 which is dependent on SFID 297, the ASM Base feature. For information on the ASM Base feature, refer to Division 2, Section 4A297.

2. PROXY DATABASE PHASE I FEATURE ASSIGNMENT

This feature cannot be assigned using ODA. Assignment can only be done by activating SFID 539 using Recent Change. This feature is dependent upon the ASM Base feature (99-5E-4237), which is secured by SFID 297.

3. PROXY DATABASE PHASE I TRANSLATION REQUIREMENTS

There are no ODA translation requirements for this feature.

4. FEATURE DESCRIPTION - PROXY DATABASE PHASE II - PROXY DATABASE

Available with the 5E16(2) FR2 (Feature Release 2) and later Software Releases, the Proxy Database Phase II - Proxy Database feature (feature number 99-5E-8401) enhances the capabilities of the Proxy Database Phase I - Proxy Database feature (feature number 99-5E-7127). The Proxy Database Phase II feature allows update type of operations (i.e., insert, update, and delete) on "high runner" RC (Recent Change) views being performed on the ASM (Administrative Services Module) against the Proxy database, and then syncing the data modifications to the 5ESS-2000 Switch. This significantly increases the RC/V throughput possible for these views, in addition to the RC/V read performance obtained for all RC/V views provided by the Proxy Database II feature (99-5E-8401).

The Proxy Database Phase II - Proxy Database feature (99-5E-8401) introduces the initial environment to support a copy of the 5ESS ODD (Office Dependent Data) on the ASM processor.

This feature provides a high speed access to RC data which in turn, enables the service provider to both process more recent changes and submit more verifies to the switch. Up to sixty percent of the recent change activity can be attributed to verify activity. Increasing the verify ability of the switch leads to the following:

- a better shadow database for those customers having CONNECTVU-ATP (Automatic Translation and Provisioning)
- service providers being allowed to extend verify abilities further into their internal processing organizations.

  Due to the bottleneck that may occur in the RC processes, most service providers only allow a select group of people to verify the switch data. Removing the bottleneck, more verify operations can be performed allowing better accuracy of data that had previously not been checked against the actual data in the switch.

  Specifically, for CONNECTVU-ATP users, the accuracy of the shadow database improves due to the ability to issue verifies to synchronize the database for views related to the view when Recent Change is performed.

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5. PROXY DATABASE PHASE II FEATURE ASSIGNMENT

This feature cannot be assigned using ODA. Assignment can only be done by activating SFID 539 using Recent Change. The Proxy Datatbase Phase II feature is dependent on the ASM Base feature (99-5E-4237), which is secured by SFID 297 and Recent Change on the ASM which is secured by SFID 322 (99-5E-4095).

6. PROXY DATABASE PHASE I TRANSLATION REQUIREMENTS

There are no ODA translation requirements for this feature.

SEC. 4A540: EASY ACCESS TO VOICE MAIL

1. FEATURE DESCRIPTION

The EAVM (Easy Access to Voice Mail) feature is a secured feature (SFID 540) that is available with the 5E15 Software Release. The feature number for this feature is 99-5E-7284.

This feature allows MSS (Message Service System) and ISVM (Interswitch Voice Messaging) subscribers to retrieve messages at their home telephone line by simply dialing an access code (a number between 1 to 7 digits long (usually 2 digits)), determined by the provider of the service, instead of a 7 or 10 digit access number. The feature will automatically be available to all MSS/ISVM subscribers once it has been enabled for the office. Service providers have the ability to deny the EAVM feature on a line or feature basis.

1.1 Call Processing Impacts

The EAVM access code will only be defined in the ODP (Office dialing Plan) as such lines with an IDP (Individualized Dialing Plan) and lines that are members of a terminal group will not receive EAVM service. Although the EAVM ALW parameter on the MSLPA form (5962-3 Record) or RC/V (Recent Change and Verify) view 1.37 may be set to "Y" for lines with IDPs, or lines in terminal groups, no EAVM service will be received by these lines. There will be no RC (Recent Change), ODA (Office Data Administration), PRL (Population Rule Language), or Call Processing checks to prevent the EAVM ALW parameter from being set to "Y" for lines with IDP or lines in terminal groups.

2. FEATURE ASSIGNMENT

The provisioning of this feature is as follows:

- Set the ACT field for SFID 540 on the SFSYS form (5713-1 Record) to "Y".
- Set the ACT field for OFID 954 on the FOSYS form (5713-2 Record) to "Y".
- Create or update the MSS/ISVM feature on the MSFD form (5962-1 Record).
- Define an access code on the PDIT form (5300-2 Record) for the wild card feature, /MS*, with the ACTION set to "EAVMUSE".
- Assign CFDA (Call Forwarding Don't Answer or CFBL (Call Forwarding Busy Line) feature via LINEFA form (5112 Record).
- Set the EAVM ALW field to "Y" on the MSLPA form (5962-3 Record) for lines, and on the MSMPA form (5962-4 Record) for MLHGs (Multiline Hunt Groups).

See Figure 1 for a form flow of the feature.

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3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31
MSFD	5962-1	6	5A	12.37
MSLPA	5962-3	6	5C	1.37
MSMPA	5962-4	6	5D	1.37
PDIT	5300-2	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). Transparency Features have been developed to replicate features that exist on the 1A ESS Switch. To activate the Easy Access to Voice Mail feature for an office, the ACT field for OFID 954 on this form must be set to "Y".

MSFD form (5962-1) - This form is used to define the various combinations of options associated with the MSS (Message Service System). Added the EAVM ALW field.

MSLPA form (5962-3) - The 5962-3 Record contains information needed to describe the Message Service line parameters. Added the EAVM ALW field.

MSMPA form (5962-4) - This form is used when assigning MSS (Message Service System) features to Multi-Line Hunt lines, and to assign MSS feature parameters to the lines if the default parameters of the MSFD form are inappropriate or unspecified. Added the EAVM ALW field.

PDIT form (5300-2 Record) - This form defines the PDIT (Prefix/Feature Digit Interpreter) in a 5ESS Switch. It provides information defining feature and operator access, and prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). Digit analysis for all line originated calls in a 5ESS Switch starts in PDIT. At least the first digit of every valid dialable code must be represented in PDIT. Added a new enumeration (EAVMUSE) to the ACTION field.

SFSYS form (5713-1 Record) - This form is used to enable secured features. To activate the Easy Access to Voice Mail feature, the ACT field for SFID 540 on this form must be set to "Y".

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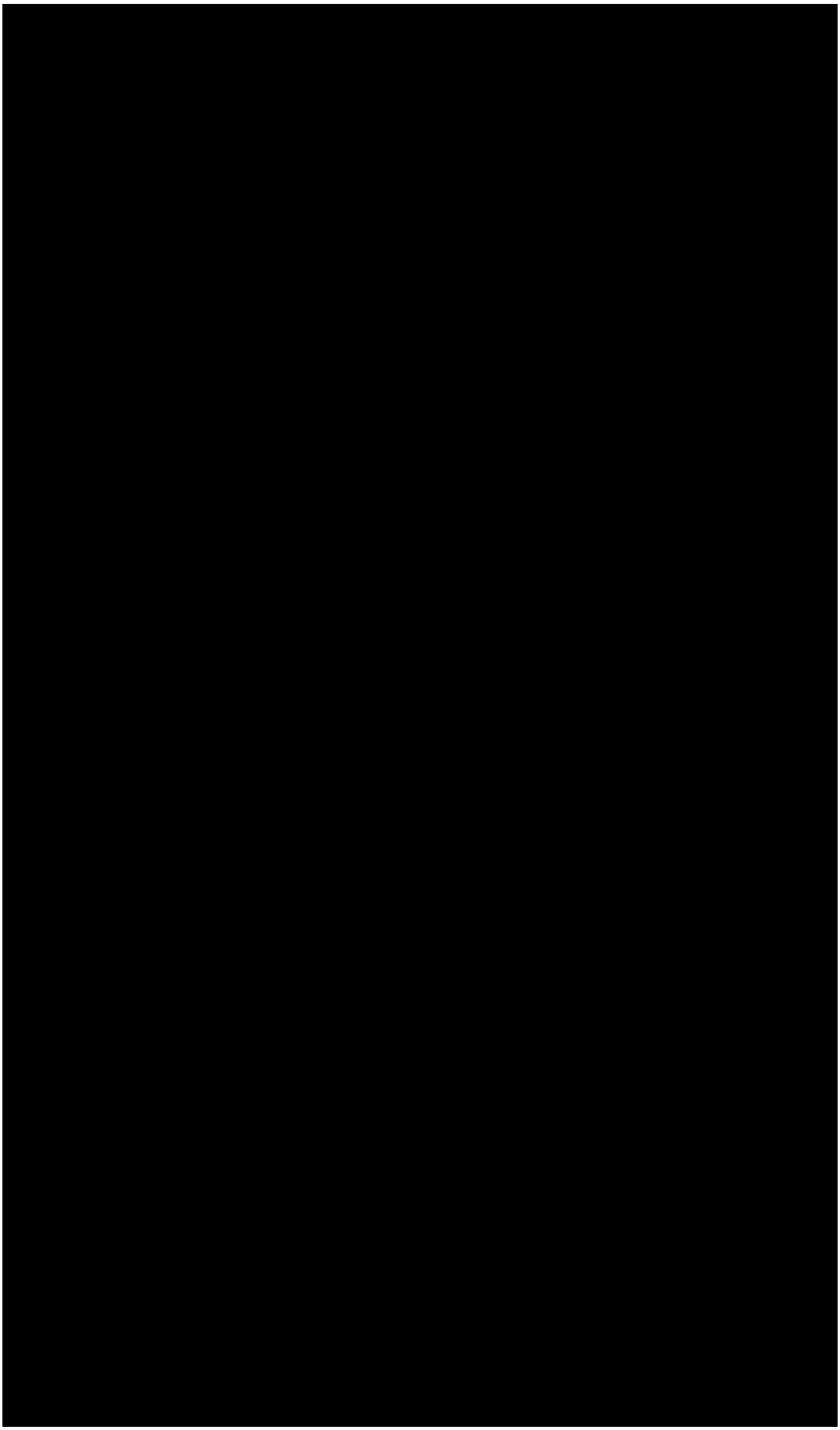

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Figure 1 FORM FLOW FOR EASY ACCESS TO VOICE MAIL

SEC. 4A542: 64KBPS X.75/X.75 TRUNK GROUP

1. BACKGROUND

Prior to the introduction of this feature, the 5ESS Switch supported 56kbps data rate service for X.75 (Inter-LATA)/X.75 (Intra-LATA) ISDN (Integrated Services Digital Network) trunk groups. The SF (Superframe) was used for the DS1 (Digital Signal Level 1 (1.544mbps)) signal. When the SF was used, the 8th bits of the 6th and 12th frames of each SF were robbed to be used for loop-testing/signaling purposes. Therefore, all the 8th bits were not used for data transmission. The data rate was 56kbps.

2. FEATURE DESCRIPTION

The 64kbps X.75/X.75 Trunk Group feature is available as 5E13 and 5E14 Software Updates, and in the Beginning Managed Introduction of the 5E15 Software Release. The feature number is 99-5E-7021. This feature allows the 5ESS Switch to increase the ISDN X.75/X.75 trunk data rate from 56kbps to 64kbps in accordance with the GR-301-CORE standards. In order to achieve 64kbps, the ESF (Extended Superframe) DS1 signal is implemented via the B8ZS signal, which provides the clear channel.

To set the data rate to 64kbps for the trunk groups and all features that use the robbed 8th bits of the trunks for signaling and/or any other OA&M purpose is rearranged by using other channels/trunks. To realize the 64kbps trunk transmission between the 5ESS Switch and another end equipment, if the other end equipment is not the 5ESS Switch, it must comply with the X.75 and GR-301-CORE standards.

3. FEATURE ASSIGNMENT

For 5E13 and later, to activate this feature:

- set the ACT field for SFID 542 on the SFSYS form (5713-1 Record) to "Y".
- on the TKGRP form (5202), for a TRKCLS of "X75" or X75P", set the DATA RATE field on the TKGRP form to "64K". The DATA RATE field on the TKGRP form is used by the 64Kbps X.75/X.75 Trunk Group feature which is a special feature that must be activated before the DATA RATE field may be set to "64K".

4. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate the 64Kbps X.75/X.75 Trunk Group feature, the ACT field for SFID 542 must be set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E13 and later, data rules associated with the "X75" valid entry were added for the TRKCLS field, and data rules were added for the DATA RATE field.

TRUNK form (5204 Record) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E13 and later, data rules were added for the TGN field.

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SEC. 4A543: DA Custom Branding by Account Owner

1. FEATURE DESCRIPTION

The DA Custom Branding by Account Owner feature is being deployed on the 5ESS Switch in a Software Update for the 5E13 Feature Release 3, 5E14 Feature Release 2, and in the BMI (Beginning Managed Introduction) of the 5E15 Software Release. The feature number for this feature is 98-5E-7232. This feature is controlled by SFID (Secured Feature ID) 543 and OFID (Optioned Feature ID) 970.

This feature builds on the original DA (Directory Assistance) Custom Branding feature (98-5E-2056) where calls requesting DA for a distant city are usually transported by an IC (Interexchange Carrier) to a LEC (Local Exchange Carrier) for listing, retrieval and announcement. Some ICs request that the LEC play an IC branding announcement at the beginning of the call. The original feature allows a LEC to front-end brand the DA call.

The DA Custom Branding by Account Owner feature will provide the OSPS (Operator Services Position System) owner with the ability to specify which announcement header will be played to brand a call that has arrived at an OSPS providing DA service. This is done according to the AO (Account Owner), if any, received in the OLNS (Originating Line Number Screening) reply on the calling number.

There is no impact on the switch until this secure feature has been purchased and activated.

If an Account Owner has been returned in an OLNS (Originating Line Number Screening) reply on a call that has arrived at an OSPS performing DA, the OSPS plays a branding announcement to the caller. The OSPS uses the Account Owner on the call to look up which announcement header should be played as the branding announcement in a new table that relates the Account Owner to the announcement header. That announcement header is played to brand the call.

If an Account Owner is not returned in the OLNS reply or no OLNS query was made, this feature does not play a branding announcement. This allows the original DA Custom Branding feature to be used as it works today to play a branding announcement.

If an Account Owner is returned in an OLNS reply and the Account Owner is not present in the new table, the OSPS prints an assert and does not play a branding announcement. This allows the original DA Custom Branding feature to be used as it works today to play a branding announcement.

2. FEATURE ASSIGNMENT

- To provision this feature, set the AOWNER and HEADER ID fields on the AOWNER form (6446 Record).
- The ACT field for SFID (Secured Feature ID) 543 on the SFSYS form (5713-1 Record) must be set to "Y".
- The ACT field for OFID (Optioned Feature ID) 970 on the FOSYS form (5713-2 Record) must be set to "Y".

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3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
AOWNER	6446	3	4ES	21.28
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

AOWNER form (6446 Record) - The AOWNER form (6446 Record) provides DA (Directory Assistance)

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custom branding by account owner information. Two new fields, ACCOUNT OWNER AND HEADER ID are added for 5E13 and later.

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for special and transparency Features. To activate this feature, the ACT field for OFID 970 must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 543 to "Y".

SEC. 4A544: Usage Sensitive Call Forwarding (USCF)

1. BACKGROUND

Prior to the introduction of this feature, the only option for call forwarding usage available to customers was to subscribe in advance and pay a flat rate. With this option, the feature remained assigned to the line whether it was activated or not. The rate charged for the service was the same for all subscribers regardless of usage frequency.

2. FEATURE DESCRIPTION

Available with 5E15 and later Software Releases, the USCF feature, feature number 99-5E-7082, provides another option for call forwarding usage which accommodates on demand requests for the service. This feature allows a customer to activate and deactivate the BRCS (Business and Residence Custom Services) CFV (Call Forwarding Variable) feature on their analog line as needed. The customer is charged per use of the USCF feature. When the feature is deactivated, it is removed from the line.

3. FEATURE ASSIGNMENT

Follow these steps to assign this feature:

- On the SFSYS form (5731-1 Record) set ACT to "Y" for SFID 544.
- On the CFWFD form (5614-1/2 Record), define a USCF feature setting the following fields as indicated:
  - FWD COND = "BOTH"
  - ACT TYPE = "CDDNCA" or "CDCA1A"
  - DACT TYPE = "CODE"
  - CFPF ALW = "N"
- On the OFCOPT form (5509 Record):
  - set USCF FEAT to the name of the feature (FEATURE NAME) defined on the CFWFD form
  - set USCF CFV ALERT to "Y" or "N" according to whether or not the base station should receive "recall Dial Tone" when going off-hook when USCF is active.
- On the LINE form (5109 Record):
  - set USCF ALW to "Y" or "N" to allow or disallow the use of the USCF feature for a specified line

NOTE: When this field is left blank, it is defaulted to "Y", provided the criteria, as set forth by the data rules, is met. See Division 3 Section 1I for USCF ALW data rules.

NOTE: The CFV ALERT attribute on the CFWFD form (RC View 12.12) does not invoke

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Distinctive Alerting for the USCF feature. For more information on the Distinctive Call Forwarding Alert feature (99-5E-7090) feature, see Division 2, Section 4A341.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFWFD	5614-1/2	4	15A	12.12
LINE	5109	3	1I	1.6
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

CFWFD form (5614-1/2 Record) - This form is used to define call forwarding features. New cross checks were added for fields FWD CONDITION, ACT TYPE, DACT TYPE and CFPF ALW. Refer to Section 3 and Division 4, Section 15A for details.

LINE form (5109 Record) - This form is used to define office equipment numbers and features for each TN (Telephone Number) in a 5ESS Switch. The USCF ALW and USCF ACT fields were added to this form.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. The USCF FEAT and USCF CFV ALERT fields were added to this view.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To enable this feature, the ACT field for SFID 544 must be set to "Y".

SEC. 4A545: PACKET DRIVER SOLUTION SUMMARY ALARM STATUS

1. FEATURE DESCRIPTION

Available with 5E14FR2, the Packet Driver Solution Summary Alarm Status feature is a secured feature with SFID 545 and feature number 99-5E-7332. The Packet Driver Solution Summary Alarm Status feature allows the office maintenance personnel to see the summary alarms generated from both the 5ESS circuit switch and the Packet Driver by accessing a common high level status page. On the ASM graphical user interface page, this feature displays the cause of the alarm and the alarm level for the 5ESS Switch or Packet Driver Solution. On the 5ESS AM (Administrative Module) MCC (Master Control Console), this feature displays critical indicators and audible alarms. The operations user can use the high level status page to transfer to the native display of the system causing the alarm condition. Once connected to the circuit or packet system, the user can access the alarm reporting capabilities of that system, gather further details of the resource that is causing the alarm, and initiate procedures that lead to clearing the alarm. The alarm also causes a message to be printed on the 5ESS ROP. For an alarm initiated in the 5ESS Switch, the ROP message indicates the cause of alarm and alarm level. If the alarm is initiated on the packet driver, the alarm message indicates that it was originated on the packet driver and will give the alarm level, but it will not indicate the source of the alarm. The ROP message is monitored by the fault operations systems and is used to trigger the alarm remotely. This feature is a secured feature and is available with 5E14F2 and later Software Releases.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used by the SEE (Lucent Technologies System Equipment Engineer) to enable secured features for an entire 5ESS Switch or for selected Switching Modules. To activate the Packet Driver Solution Summary Alarm Status feature, the ACT field for SFID 545 must be set to "Y" on the SFSYS form.

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SEC. 4A546: ASP TERMINATING TRUNK GROUP TRIGGER

1. BACKGROUND

The Terminating Trunk Group Trigger secured feature is controlled by Secured Feature ID 546, and is being deployed on the 5ESS Switch in a software update for the 5E15 Software Release and in the Beginning Managed Introduction of the 5E16 Software Release. The Lucent Technologies feature number for Terminating Trunk Group Trigger is 99-5E-7588.

2. FEATURE DESCRIPTION

This section defines the capabilities of the ASP Terminating Trunk Group Trigger feature that is enabled by SFID ID 546. The ASP R0.1B (SFID 126) secured feature must be enabled before SFID 546 can be activated.

The ASP Terminating Trunk Group Trigger feature allows the 5ESS to provide an ASP trigger for calls terminating to designated Private Facility and Primary Rate Interface trunk groups.

Before this feature, there were no ASP triggers that could be assigned to PF (Private Facility) and PRI (Primary Rate Interface) trunk groups and be encountered when calls try to terminate to the trunk group. There are of course ASP originating triggers, such as DNTs (Dialed Number Trigger), that could be defined against the digits associated with the PF or PRI trunk group. A DNT can provide a triggering mechanism to an SCP (Service Control Point) database, but a DNT does not provide terminating trigger functionality to a PF or PRI trunk group, that a TAT provides for line terminations. A TAT on a line can provide services such as Call Screening and Calling Name that cannot be provided by a DNT. Since PF and PRI trunk groups represent terminations on the switch (their digits are defined as NOCs (Normalized Office Code) in digit analysis and they terminate to line views), Call Screening and Calling Name services could be extended to this type of terminating interface. But, TATs (Termination Attempt Trigger) can only be assigned to lines and be encountered when a termination is attempted to the line.

The TGT (Trunk Group Trigger) is the terminating trigger for PF and PRI trunk groups and provides TAT-like functionality.

The "ASP Terminating Trunk Group Trigger" feature provides incremental functionality to that provided in Advanced Services Platform 0.1B with the Terminating Attempt Trigger (TAT). Existing functionality allows the assignment of the TAT trigger only to DNs (Directory Numbers) associated with equipped lines.

This feature extends that capability to private trunk groups (for example, PBX's) with the new TGT which is assignable to private facility and PRI trunk groups.

When a call is routed and encounters a trunk group on which the new TGT is assigned, a Termination Attempt query is sent to the SCP, thus enabling invocation of services on behalf of the PBX.

This feature also provides the ability to monitor for NetworkBusy, TBusy, T_NoAnswer, T_Answer and Term_Resource_Available conditions when an Authorize_Termination is received in response to the Termination_Attempt query for TGT triggers. And it provides the ability to monitor for NetworkBusy, T_NoAnswer, T_Answer, and Term_Resource_Available conditions when an OfferCall is received in response to a T_Busy message.

3. OPERATION OF THE ASP TERMINATING TRUNK GROUP TRIGGER FEATURE

3.1 Overview

The ASP TGT represents another step in controlling the terminating interface with ASP functionality. Prior to the development of this feature, ASP control of the terminating interface was provided through:

- TAT. Part of base ASP 0.1, TATs are assignable to line and MLHG (Multi Line Hunt Group)

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terminations. The trigger is detected prior to seizing the line or hunting for a MLHG member.

- NBE (ASP Network Busy Event), a secured feature. A NBE is armed through an SCP NEL (Next Event List) on behalf of an originating portion of the ASP call. A NBE is detected when the terminating facilities attempting to complete the call are determined to be either remotely or locally "busy".

- EACR (ASP Enhanced Alternate Routing), a secured feature. The EACR functionality enhances the base ASP Alternate Routing functionality. The base ASP Alternate Routing functionality occurs during post-query processing of an ASP call, and uses the routes supplied in the ASP routing message or overflows to switch-based carrier selection. If a remote network busy condition occurs, the call would not be routed. EACR allows a continuation through the available routes when a remote network busy is detected.

  - ***NOTE:*** that NBE and EACR can be combined to further enhance post-query facility selection.

- ASP OBLNA (Originating Busy Line NoAnswer), two secured features. The OBLNA features provide allowed lines in the SSP; 1. switch-based Office-wide and individual subscriber Busy and No Answer triggers 2. SCP controlled NEL events that can monitor for Busy, No Answer, Answer, and Seizure. The OBLNA functionality is monitoring for events (such as, busy) on behalf of the originating line or the redirecting party.

- ASP TBLNA (Terminating Busy Line NoAnswer), a secured feature. The TBLNA feature provides switch-based Busy and No Answer triggers and SCP controlled NEL events for allowed line terminations. The SCP NEL events can monitor the terminating line interface for Busy, No Answer, Answer, and Resource Available. The TBLNA functionality is applied on behalf of the terminator of the call.

The following summarizes the above list:

- TAT - line trigger. Provisioned on, and encountered on behalf of, the terminator prior to termination

- NBE - SCP requested event. Armed on behalf of a trigger detected on the originating side of the call or redirecting leg.

- EACR - enhancement to the existing ASP Altermate Routing mechanism

- OBLNA - switch-based and office-wide triggers, and SCP requested events provisioned for the office or on an origination line, or armed on behalf of the originating line or redirecting party.

- TBLNA - switch-based triggers and SCP requested events provisioned

The new TGT provides TAT-like control to terminating PF, PRI, and PBXDID trunk groups.

The Terminating Trunk Group Trigger (TGT) is detected in the Null state of the Terminating Call Model prior to determining the physical port to which the incoming call will be connected. Like TAT triggers, the TGT trigger is considered an office trigger in the sense that the originator need not be provisioned (subscribe) to the TGT to encounter it. However, it is considered a subscribed trigger in the sense that the party (ie, PBX) associated with the TGT will subscribe to the service provided by the TGT.

4. FEATURE ASSIGNMENT

The ASP Terminating Trunk Group Trigger Feature (SFID 546) is activated on SFSYS form. The activation of this feature is dependent on SFID 126 (ASP R0.1B) being active. The TGT trigger can be assigned to trunks with the following Classes of Service: "PF", "PFITT", "PFLASH", "EDSL", "EDSLHM" and "PBXDID". The feature is provisioned by assigning a /ASPTERM feature to member 1 of the trunk group using

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TRUNKFA form. On the ASPTPA form, set the TGT TRIG NBR to an ASP R0.1 trigger and set TRIG ACT equal to "Y". Set DFLT ROUTE to "Y" or "N", depending on whether or not you want default routing to be activated.

5. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPFD	5632-1	4	31A	12.64
ASPOPT	5670	4	31G	8.49
ASPTPA	5632-4	4	31D	5.64
SFSYS	5713-1	3	5AR	8.22

ASPFD form (5632-1) - The 5632-4 Record is used to define various combinations of options available with the ASP (Advanced Services Platform) feature. The TGT TRIG NBR, TGT TRIG ACT, and TGT DFLT ROUTE fields are added.

ASPOPT form (5670) - The 5670 Record is used to set the ASP office parameters for the office. the OHI OHD TAT TGT and CRIT OHI OHD TAT TGT fields are added.

ASPTPA form (5632-4) - The 5632-4 Record is used to assign ASP feature parameters to trunks if the default parameters of the ASPFD form (5632-1 Record) are inappropriate or unspecified. The TGT TRIG NBR, TGT TRIG ACT, and TGT DFLT ROUTE fields are added.

SFSYS form (5713) - The 5113 Record is used to enable secured features. Added SFID 546.

6. GLOSSARY

ASP	Advanced Services Platform
DN	Dialed Number Trigger
EACR	Enhance Alternate Routing
MLHG	Multi Line Hunt Group
NBE	Network Busy Event
NEL	Next Event List
NOC	Normalized Office Code
OBLNA	Originating Busy Line No Answer
PF	Private Facility
PRI	Primary Rate Interface
SCP	Service Control Poin
TAT	Termination Attempt Trigger
TBLNA	Terminating Busy Line No Answer
TGT	Trunk Group Trigger

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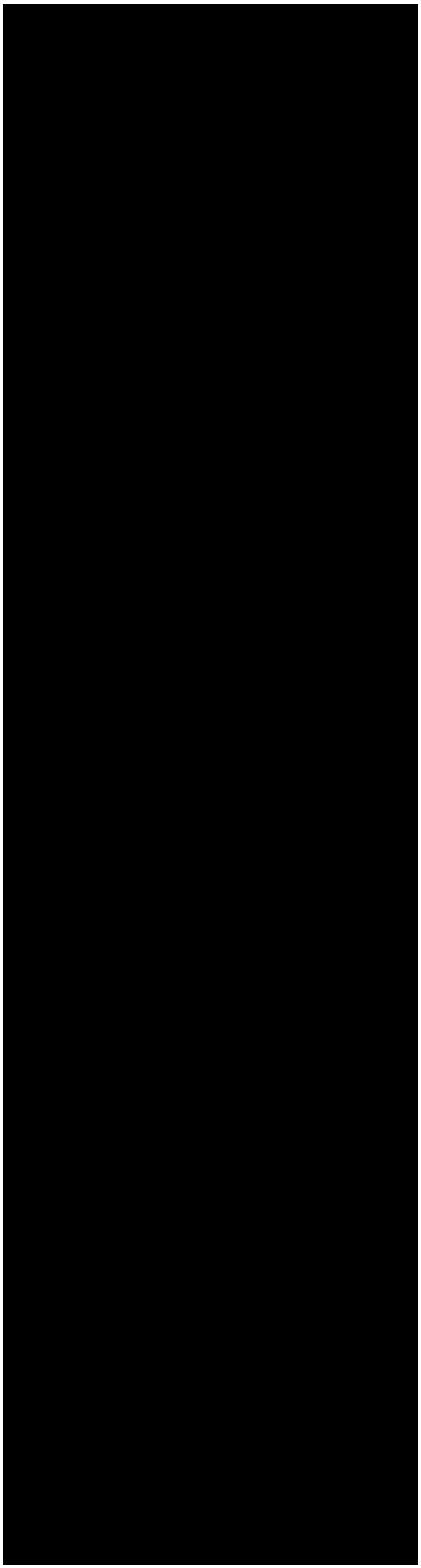

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Figure 1 FORM FLOW FOR TERMINATING GROUP TRIGGER

SEC. 4A549: AUDIBLE CALLING NAME ON *69 (AUTOMATIC CALLBACK)

1. FEATURE DESCRIPTION

The Audible Calling Name on *69 (Automatic Callback) feature is a secured feature (SFID 549) that also uses OFS ID 971. This feature is being deployed on the 5ESS Switch in a Software Update for the 5E14 Feature Release 3 and in the BMI (Beginning Managed Introduction) of the 5E15 Software Release. The feature number is 99-5E-7495.

This feature modifies the existing 2-Level AC (Automatic Callback) feature. When the Audible Calling Name on *69 feature is active and an end-user with access to 2-Level AC dials the 2-Level AC access code or depresses the ISDN (Integrated Services Digital Network) feature button for AC, the user hears the name associated with the last incoming call, followed by the existing initial 2-Level AC announcement. The name is provided by an IP (Intelligent Peripheral). All 2-Level AC invocations, for which the last calling DN (Directory Number) would be included in the initial DSU2-RAF/SAS (Digital Service Unit Model 2 - Recorded Announcement Frame/Service Announcement System) announcement (i.e., not applicable when the DN is marked private or is not present), result in the switch initiating a call to the IP DN with the DN of the last incoming call (from the Incoming Line History Block) as the calling party number. This call results in a talk path being set up to an IP, which has a Calling Name feature assigned and which speaks the name (received in an incoming message from the switch over the BRI or PRI) associated with the DN of the last incoming call, and then immediately releases the call. After the release is detected, 2-Level AC proceeds with the existing 2-Level initial announcement followed by the existing 2-Level AC processing.

If the Audible Calling Name on *69 feature is active when the user activates the AC feature, the switch initiates a call to an IP. The switch also sends that IP the calling name of the last incoming call to the user. Using that information, the IP does a text-to-speech conversion, so that when the talk path is established between the user and the IP, the IP can send an announcement to the user that includes a spoken version of the calling name. The IP then disconnects, and the user receives the existing AC treatment. During the call to the IP, the switch keeps track of an answer timer (i.e., the amount of time the switch should wait for the IP to answer) and a disconnect timer (i.e., the amount of time the switch should wait for the IP to disconnect).

2. FEATURE ASSIGNMENT

For 5E14 and later, to provision the Audible Calling Name on *69 (Automatic Callback) feature:

- activate the feature by setting the ACT field for SFID 549 to "Y" on the SFSYS form (5713-1 Record).
- enable the feature for the office by setting the ACT field for OFID 971 to "Y" on the FOSYS form (5713-2 Record).
- define Audible Calling Name by populating the following fields on the LASSOP form (5945 Record) in the order listed:

  IP DN

  IP SCR

  IP DAS

- adjust timer values by populating the following fields on the LASSOP form:

  IP ANS TIMER

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IP DISC TIMER

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LASSOP	5945	5	5F	8.21
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

LASSOP form (5945 Record) - This form is used to supply global office options and parameters for the LASS features. The IP DN, IP DAS, IP SCR, IP ANS TIMER, and IP DISC TIMER fields and related data rules were added to support this feature.

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. This feature is enabled for the office by setting the ACT field for OFS ID 971 to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 549 to "Y".

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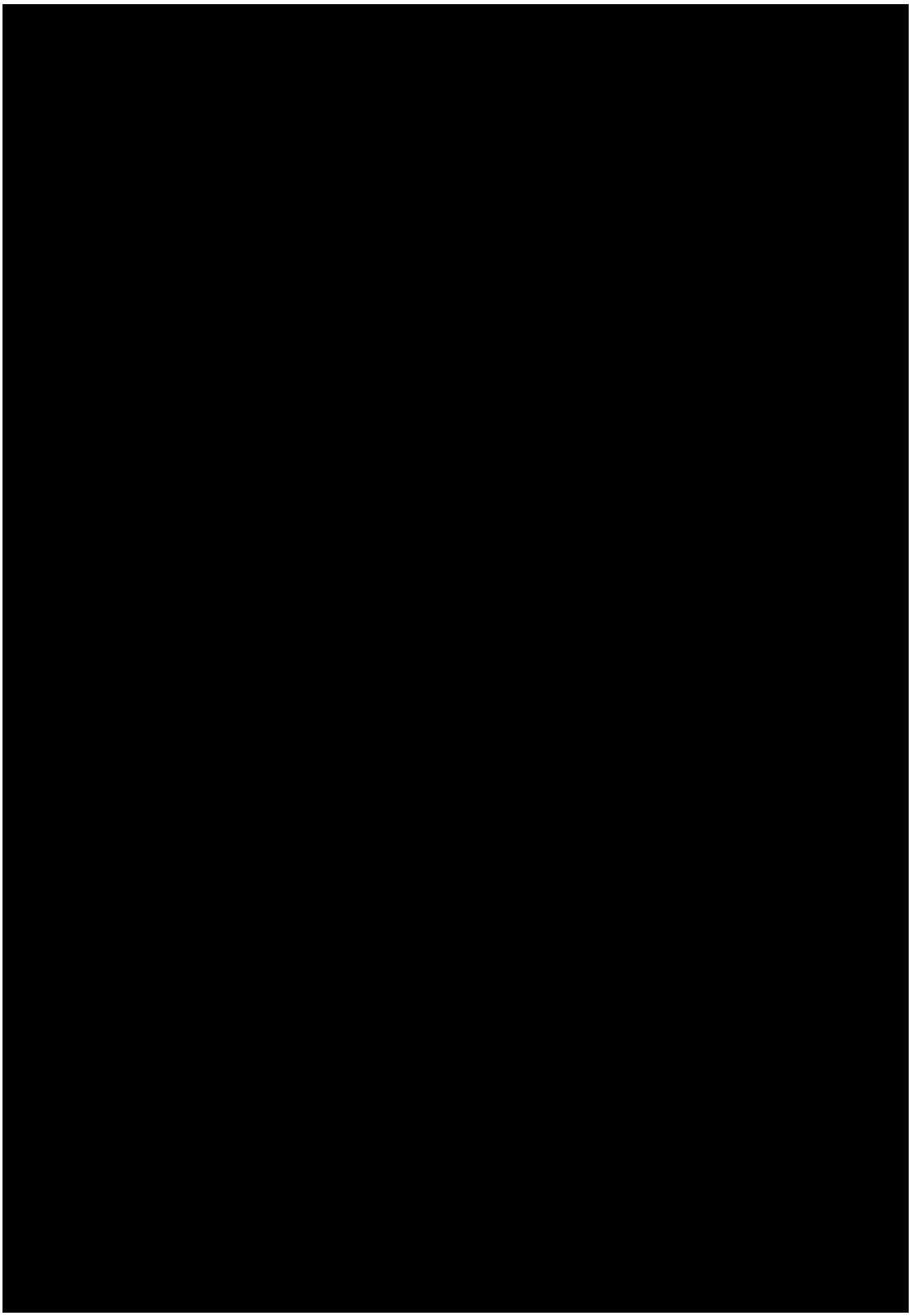

Figure 1 FORM FLOW FOR AUDIBLE CALLING NAME ON *69 (AUTOMATIC CALLBACK)

SEC. 4A550: PBX CALLING ID

1. FEATURE DESCRIPTION

The PBX (Private Branch Exchange) Calling ID feature is a secured feature (SFID 550) that is available in

5E14 FR3 (Feature Release 3) and 5E15 BMI (Beginning Managed Introduction). The feature number for this feature is 99-5E-7431.

Currently, there is no CPN (Calling Party Number) associated with a call origination from a PF (Private Facility) MF/DTMF (Multifrequence/Dual Tone Multifrequency) trunk.

The PBX Calling ID feature permits the use of the (existing) MAIN DN field on the TKGRP form (5202 Record) (Recent Chance view 5.1), which is currently only used for PRI originations, to also be used as the CPN for originations from an associated Private Facility MF/DTMF Trunk Group.

This CPN is used for delivery to Calling Number Delivery subscribers, and to be placed in the Calling Party Number parameter in an outgoing SS7 trunk, and for all feature interactions where a Calling Party Number is used (e.g., ASP and LASS features). Existing PRI (Primary Rate Interface) procedures for determining whether the Presentation of the CPN is Restricted or Allowed will be used. These procedures are summarized as follows:

- If the CPNP (Calling Party Number Presentation) feature is not active, the PRIVACY field on the TKGRP form or the DN PRIVACY field (if set to YES) on the OFCOPT form (5509 Record), or RC (Recent Change) view 8.1, is used.
- If the CPNP feature is active, the privacy can be set using a Screening Index assigned to the Trunk Group along with the PRIVACY field on the SCRIDXPA form (5543 Record), or RC view 8.24, or if the PRIVACY field is not set, the DN PRIV field on the OFCOPT form is used.
- If the MAIN DN field is not populated for a Private Facility Trunk Group, no Calling Party Number will be associated with call originations from that Trunk Group (PBX Calling ID feature that has no impact on call originations from the Trunk Group).

NOTE: When the call goes out over an SS7 ISUP trunk, (e.g., to a E911 tandem (see Division 2, Section 1BD for information on the Enhanced 911 Emergency Service feature) population of the Calling Party Number parameter is covered by the following: When the PBX Calling ID feature is enabled, using SFID 550, and a call is originated from a Private Facility trunk (PF, PFLASH, PFITT) with a non-blank MAIN DN, and the call is routed out of the switch on an outgoing SS7 trunk, a Calling Party Number parameter is included in the outgoing IAM message with the MAIN DN coded in the Address signal subfield. For more complete information, see the *LASS Feature Document 235-190-130.*

2. FEATURE ASSIGNMENT

For 5E14 and later, to provision this feature:

- Activate the feature by setting the ACT field for SFID 550 on the SFSYS form (5713-1 Record) to "Y".
- To provision the PBX Calling ID feature for a Private Facility trunk (having trunk class of "PF", "PFLASH", or "PFITT") connected to a PBX:
  - On the TRGRP form, assign the PBX DN (Directory Number) at the MAIN DN field with NPANXXXXXX format, where NPA is a Numbering Plan Area code (N is 2-9 and A,P,X is 0-9).
- To mark the assigned PBX DN as "public":
  - If the CPNP feature is not active
    - Set the DN PRIVACY field to "N" on the OFCOPT form.

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- Set the the PRIVACY field to "N" on the TKGRP form.

- If the CPNP feature is active:

  - Set the PRIVACY field to "N" on the SCRIDXPA form (for screening index corresponding to the given trunk group), or

  - If the PRIVACY field on the SCRIDXPA form is not set (or no form entry exist for the screening index corresponding to the given trunk group), the DN PRIVACY field on the OFCOPT form should be set to "N".

- To mark the assign PBX DN number to "private":

  - If the CPNP feature is not active

    - Set the DN PRIVACY field to "Y" on the OFCOPT form, or

    - Set the the PRIVACY field to "Y" on the TKGRP form.

  - If the CPNP feature is active:

    - Set the PRIVACY field to "Y" on the SCRIDXPA form (for screening index corresponding to the given trunk group), or

    - If the PRIVACY field on the SCRIDXPA form is not set (or no form entry exist for the screening index corresponding to the given trunk group), the DN PRIVACY field the OFCOPT form should be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 550 must be set to "Y" on this form in order to enable this feature.

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. Data rules were added to the TRK CLS field.

SEC. 4A551: FLEXIBLE DIALED NUMBER INFORMATION SERVICE

1. FEATURE DESCRIPTION

Available with the 5E14 Feature Release 3, the Flexible DNIS (Dialed Number Information Service) feature is a secured feature (SFID 551) and is dependent on DNIS II (Transport of Original Dialed Number) feature (SFID 271). For more information concerning this feature, see Division 2, Section 4A271. For additional information also refer to the Lucent Technology document number *235-200-110 Long Distance Platform Document.*

The Flexible DNIS feature enhances the Phase II DNIS feature known as "Transport of Original Dialed Number" (Feature Number 99-5E-4208.A). The Flexible DNIS feature works with the AIN 0.1 protocol to

expand AIN Toll-Free services. The feature allows the LDP (Long Distance Platform) switch to identify the contents of a AIN 0.1 GAL (Generic Address List) parameter value contained in an SCP (Service Access Point) TCAP (Transaction Capabilities Application Part) response message as DNIS digits. These DNIS digits are then forwarded through the network and delivered to its associated PBX (Private Branch Exchange). The Flexible DNIS feature is not available for NS800 triggers and its associated AIN 0.0 protocol.

A call reaches the originating LDP switch over a trunk specified to handle DNIS calls. The call is discovered to be an AIN Toll Free and DNIS call (ASP TOLLFREE = "Y" and DNIS = "Y" on the NSTRIG form ((Record 5324) (Recent Change view 9.35)). An AIN 0.1 query is launched and the original dialed number is preserved while the switch awaits a response from the SCP. The SCP performs a lookup in its database and finds the routing number and associated DNIS value. The database DNIS value may be one of the following:

- Original Dialed Number used in query.
- Portion of the Original Dialed Number.
- Entire replacement of Original Dialed Number.
- Nothing, (i.e. No value to be returned in the response).

If the SCP obtains a non-blank DNIS value, it will place the DNIS value in a Generic Address List GAP with a Type of Address of "00000000". Then along with the routing number, the SCP will send these parameters in an Analyze Route message to the querying switch. The 5ESS-2000 receives the Analyze Route message and if the Generic Address List GAP containing DNIS is present in the message, the 5ESS will use this value as the DNIS digits. If the Generic Address List GAP for DNIS is not included in the message, the previously stored Original Dialed Number will be used as the DNIS digits.

If DNIS USER = "Y" on the TKGRP form ((Record 5202) (Recent Change view 5.1)) for the outgoing trunk, the originating switch is also the terminating switch and the DNIS digits are outpulsed to the PBX. If desired, the DNIS digits may be modified using the RTIDX form ((Record 5303) (Recent Change view 10.2)) Prefix/Delete fields before signaling to the PBX.

If DNIS USER = "N" on the TKGRP form ((Record 5202) (Recent Change view 5.1)) for the outgoing trunk, the DNIS digits are stored in the Generic Address Parameter (GAP) with Type of Address = "00000000" and passed to the next switch. This happens in succession until the final switch is reached. Once the final outgoing trunk is selected at the final switch, if DNIS USER = "Y", the DNIS digits are copied into the Called Party Number (CdPN) and outpulsed to the PBX. If desired, the DNIS digits may be modified by using the RTIDX form ((Record 5303) (Recent Change view 10.2)) Prefix/Delete fields before signaling to the PBX.

2. FEATURE ASSIGNMENT

For 5E14 and later, to provision this feature:

- Activate the DNIS II (Transport of Original Dialed Number) feature by setting the ACT field for SFID 271 on the SFSYS form (5713-1 Record) to "Y".
- Activate the Flexible DNIS feature by setting the ACT field for SFID 551 on the SFSYS form (5713-1 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to enable secured features. Before this feature can be

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activated, the DNIS II (Transport of Original Dialed Number) feature must be activated by setting the ACT field for SFID 271 to "Y" on this form. The ACT field for SFID 551 must be set to "Y" on this form in order to enable the Flexible DNIS feature.

SEC. 4A552: ECHO CANCELLATION FOR CDMA

1. FEATURE DESCRIPTION

The Echo Cancellation for CDMA (Code Division Multiple Access) feature is a secured feature (SFID 552) that is available with the 5E15 Software Release. The feature number for this feature is 99-5E-7183.

This feature provides echo cancellation functionality for EVRC (Enhanced Variable Rate Coding) and 13Kbps vocoders on PHV4 (Protococol Handler for (packetized) Voice - Version 4). The need to equip external echo cancellers is eliminated with this feature. Echo Cancellation for CDMA will only be activated on PHV4s that support CDMA 13K and EVRC calls.

The EC (Echo Canceller) on a PHV4 is designed to the ITU-T G.168 Recommendation. It supports up to a 64ms echo path delay. It does not support tone disabling or acoustic echo control.

This feature also provides service providers a capability to set the value gain or loss of the PCM (Pulse Code Modulation) input, and/or output of the vocoder on a per office basis for CDMA 13K and EVRC calls. The gain or loss of the PCM input and/or output is basically the volume level of the voice in a receive or send direction from the vocoder. The volume level can be provisioned in a range of +12db to -12db and is independent of Echo Cancellation being on or off.

2. FEATURE ASSIGNMENT

The provisioning of this feature is as follows:

- Set the ACT fields for SFID 221, and SFID 552 respectively, on the SFSYS form (5713-1 Record) to "Y".
- Use the CDMAOPT form (5599 Record) to update any of the CDMA Tuning Parameters.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CDMAOPT	5599	8	80	8.75
SFSYS	5713-1	3	5AR	8.22

CDMAOPT form (5599 Record) - This view controls the parameters for the echo cancellation feature. New form for this feature.

SFSYS form (5713-1 Record) - This form is used to enable secured features. To activate this feature the ACT field for SFID 552 must be set to "Y" on this form.

SEC. 4A553: USAGE SENSITIVE SIX-WAY CALLING

1. FEATURE DESCRIPTION

The USSWC (Usage Sensitive Six-Way Calling) feature is a secured feature using SFID (Secured Feature ID) 553. This feature is being deployed on the 5ESS Switch for the BMI (Beginning Managed Introduction) of the 5E15 Software Release. The feature number is 99-5E-7598.

The USSWC feature is operationally identical to the Multiway Conference Calling Six-Way line feature. This

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feature allows customers to activate and deactivate the BRCS (Business and Residence Custom Services) Six-Way Calling feature when needed without having to subscribe in advance. End users who decide they have a need to engage more than one party on a call can use this feature to activate conferencing for a single call. The activation involves entering the USSWC access code either right after going off-hook before dialing the first party or after engaging the first party by flashing, and then entering the USSWC acccess code.

The end users of this feature are residential or small business analog customers who do not typically have a need for the Multiway Conference Line feature, but do on occasion have a need to use conferencing on a sporadic or spur-of-the-moment basis. This feature meets the needs of the target end user who is familiar with the USTWC (Usage Sensitive Three-Way Calling) feature, but who also has a need to control adding more than one party to a call without resorting to call chaining.

This is a usage sensitive calling feature provisioned as an office feature with associated control over AMA (Automatic Messaging Accounting) recording similar to the USTWC feature. The office is provided with sufficient six-port conference circuits to meet the combined traffic of USSWC and other features using six-port conference circuits during the busy hour.

2. FEATURE ASSIGNMENT

For 5E15 and later, to provision the Usage Sensitive Six-Way Calling feature:

- Activate the feature by setting the ACT field for SFID 553 to "Y" on the SFSYS form (5713-1 Record).
- Set the ACTION field to "MWSOH" on the PDIT form (5300-2 Record) for the dial code action used by the feature. Other valid dial code actions used by this feature are "MWITD" and "MWSPL".
- Activate the feature on the OFCOPT form (5509 Record) to turn the feature on or off for the entire office in the order listed:
  - set the USSWC FEAT (Usage Sensitive Six-Way Calling Multiway feature name) field to "/MWUSSWC". This field stores the USSWC Multiway feature name if the feature is enabled in the office. If left blank, the feature is not active in the office.
  - set the USSWC ACT (Usage Sensitive Six-Way Calling AMA (Automatic Message Accounting) activation record) field to "Y" if USSWC AMA activation records should be made in the office when USSWC calls are made.
  - set the USSWC CHRG (Usage Sensitive Six-Way Calling AMA charge record) field to "Y" if USSWC AMA charge records should be made in the office when USSWC calls are made.
- On either the LINE form (5109-4 Record) or the MLHLN form (5111-4 Record), activate or deactivate the feature for an individual line.

NOTE: The feature can be activated or deactivated for an entire office or for an individual line. The OFCOPT form is used to turn the feature on or off for the entire office. The USSWC ALW field on the LINE or MLHLN form is used to activate or deactivate the feature for an individual line. Therefore, if the feature for the entire office is turned off, a value of "Y" in the USSWC ALW field will not activate the feature.

See Figure 1 for provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**

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BFG	5625	4	26A	12.9
CFGGRP	5964	6	7A	12.5
CLUSTR	5600	4	1A	12.2
LINE	5109-4	3	1I	1.6
MLHLN	5111-4	3	1K	1.6
MWFD	5602-1/2	4	3A	12.19
OFCOPT	5509-4	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22
TKGRPFA	5206	3	2E	5.4
TRUNKFA	5205	3	2D	5.11

BFG form (5625 Record) - This form is used to specify and construct BFGs (BRCS (Business and Residence Customer Service) Feature Groupings) for use when assigning subscriber features to analog lines or ISDN terminals. For 5E15 and later, a data rule was added to the FEATURE field to support this feature.

CFGGRP form (5964 Record) - This form is used to assign BRCS feature actions to CPE (Customer Premises Equipment) terminal buttons. For 5E15 and later, a data rule was added to the FEATURE field to support this feature.

CLUSTR form (5600 Record) - This form allows the terminal group to be assigned to the attendants and/or source party by grouping features together under a CLUSTER NAME. For 5E15 and later, a data rule was added to the FEATURE field to support this feature.

LINE form (5109-4 Record) - This form is used to define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch office. For 5E15 and later, the USSWC ALW field and related data rules were added to support this feature.

MLHLN form (5111-4 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG (Multi-Hunt Line Group). For 5E15 and later, the USSWC ALW field and related data rules were added to support this feature.

MWFD form (5602-1/2 Record) - This form is used to define many of the Add-On and conferencing features and to define how call processing is affected by customer attempts to flash or disconnect while holding, adding, or transferring calls. For 5E15 and later, to support this feature, data rules were added to the FEATURE NAME, HOLD ORIG PTY, HOLD ADDED PTY, 3WAY ORIG PTY, 3WAY ADDED PTY, XFER ORIG PTY, XFER ADDED PTY, XFER PTYS PRES fields and to the MULTIWAY CONTROL field for the "3WAY" and "NWAY" valid entries.

OFCOPT form (5509-4 Record) - This form is used to supply various miscellaneous office options and parameters. The USSWC FEAT, USSWC ACT, and USSWC CHRG fields and related data rules were added to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 553 to "Y".

TKGRPFA form (5206 Record) - This form is used to assign the terminal group to a trunk group (source party). For 5E15 and later, a data rule was added to the FEATURE field to support this feature.

TRUNKFA form (5205 Record) - This form defines information for Feature Assignment keyed by TRKGRP and TKMEMB. For 5E15 and later, a data rule was added to the FEATURE field to support this feature.

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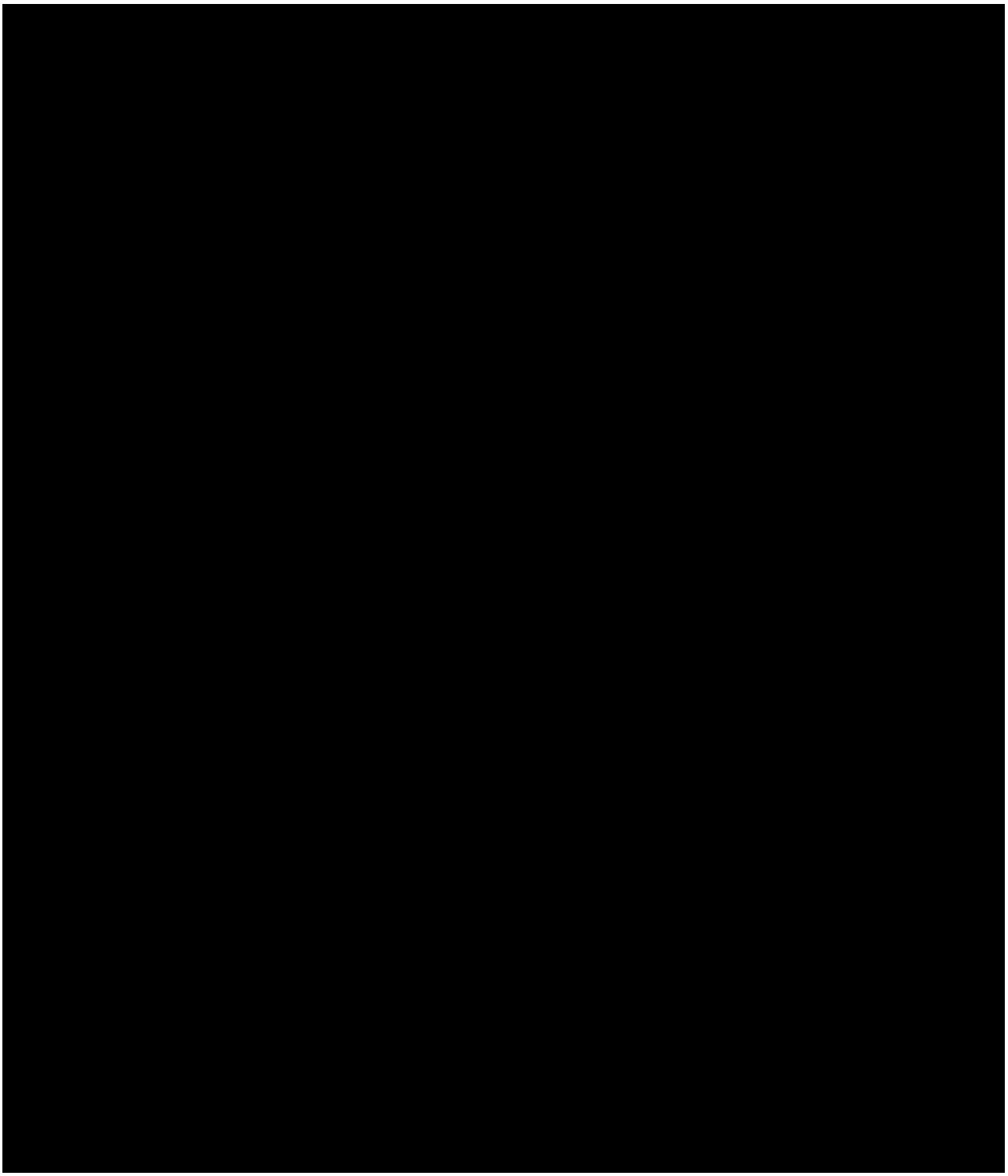

Figure 1 FORM FLOW FOR USAGE SENSITIVE SIX-WAY CALLING

SEC. 4A555: DIAL CODE TERMINAL MAKE BUSY FOR MLHGs

1. FEATURE DESCRIPTION

The Dial Code Terminal Make Busy for MLHGS (Multiline Hunt Groups) feature is a secured feature using SFID (Secured Feature ID) 555. This feature is available with the 5E15 Feature Release 1 and later Software Releases. The feature number is 99-5E-7116.

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This feature allows analog MLHG members to use dial codes to activate and deactivate the following huntkeys without having to assign scan points (hardware):

- MMB (Member Make Busy) huntkey - Allows a MLHG member to make itself unavailable for calls that would otherwise terminate to that member. MMB huntkeys allow members to make themselves unavailable for calls to hunted DNs only, or for calls to their individual nohunt DNs only, or for calls to both hunted and nohunt DNs.
- GMB (Group Make Busy) - Allows an entire MLHG (all members) to be made unavailable for calls to hunt DNs that would otherwise terminate to members within the MLHG.
- STH (Stop Hunt) - Allows additional control over which members of a MLHG are hunted. When a call to a hunt DN encounters a member with a STH huntkey active, the switch offers the call to that member if idle, but does not hunt beyond that member.

With this feature, an analog MLGH member can either use the ODP (Office Defined Dial Codes) to activate/deactivate the MMB, GMB, and STH huntkeys or they can set up their own IDPs (Individual Dial Codes) to activate or deactivate these three huntkeys. The function of the GMB for a MLHG, and the MMB and STH huntkeys for a MLHG member is the same whether the huntkey is activated/deactivated via scan points or dial codes. The Dial Code Terminal Make Busy for MLHGs feature allows activation/deactivation of these three huntkey types by either scan point or dial code, and not both at the same time. This feature does not allow an analog MLHG member to be in a MMB or subgroup if it uses dial codes to change the activation state of the MMB huntkey.

2. FEATURE ASSIGNMENT

For 5E15 and later, to provision the Dial Code Terminal Make Busy for MLHGs feature:

- activate the feature by setting the ACT field for SFID 555 to "Y" on the SFSYS form (5713-1 Record).
- set the DC MKB field to "Y" on the MLHLN form (5111 Record) to allow Dial Code Make Busy.
- set the CALL TERM TYPE field on the MKBCTT form (5119 Record) to "HUNT", "NONHUNT", or "BOTH" to set the call termination type.
- to provision the feature action, set the ACTION field to one of the following values on either the IDPDCA form (5601 Record) or the PDIT form (5300 Record):
  - "ACTGMB"
  - "ACTMMB"
  - "ACTSTH"
  - "DCTGMB"
  - "DCTMMB"
  - "DCTSTH"
- set the ACTION field on the IDPDCA form (5601-1/2 Record) or the PDIT form (5300 Record) to one of the values listed for the PDIT form in order to provision the feature action for an IDP.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

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Form Name	Record Number	Division	Section	RC View
IDPDCA	5601	4	2B	9.13
MLHLN	5111-2	3	1K	1.6
PDIT	5300	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22

IDPDCA (5601 Record) - This form defines the dialed codes associated with IDPs. For 5E15 and later, six valid entries were added to the ACTION field to support this feature.

MLHLN form (5111-2 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG (Multi-Hunt Line Group). For 5E15 and later, the DC MKB field and related data rules were added to support this feature.

PDIT form (5300 Record) - This form defines the Prefix/Feature Digit Interpreter in a 5ESS Switch. It provides information defining feature and operator access, and prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). For 5E15 and later, data rules and six valid entries were added to the ACTION field to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 555 to "Y".

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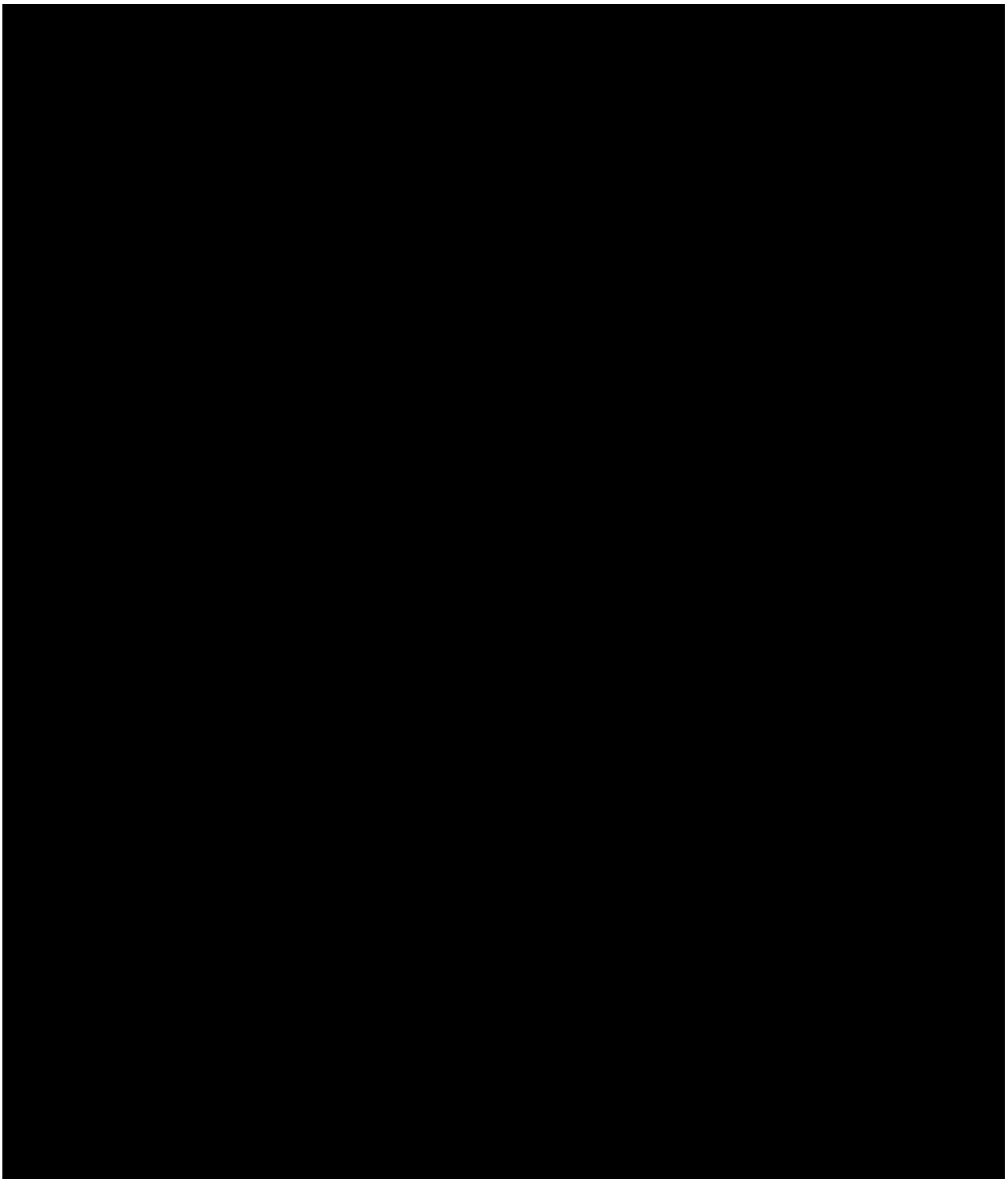

Figure 1 DIAL CODE TERMINAL MAKE BUSY FOR MLHGs

SEC. 4A556: II (Interexchange Identification)/OLI (Originating Line Identifier) Delivery for National ISDN PRI (Primary Rate Interface)

1. BACKGROUND

Prior to the introduction of this feature, PrePaid Card platforms were connected to the 4ESS Switch via Proprietary AT&T PRI. In order to keep up with the demand for this PrePaid Card service, the platforms were migrated to the 5ESS Switch. Upon doing so, it was also determined that the II/OLI information

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needed to be passed from the 5ESS to its PrePaid Card platform.

2. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, this feature provides the ability for the 5ESS Switch to send the II/OLI information to an external platform that is connected to it by a National PRI trunk group. Although this feature was initially planned to be used with the PrePaid Card service, it can be used by any terminating CPE with a PRI interface to receive the OLI on a call by call basis. The feature number for this feature is 99-5E-7469 and is only for terminating PRI. In order to utilize this functionality, SFID 556 must be activated.

3. FEATURE ASSIGNMENT

Set the ACT field to "Y" for SFID 556 on the SFSYS form. Set PASS OLI to "Y" on the TKGRP form.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202-7	3	2A	5.1
SFSYS	5713-1	3	5AR	8.22

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on this form is information that is common to the entire group. The PASS OLI field was added to this form.

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 556 has been implemented to secure this feature. The ACT field must be "Y" for this SFID in order to provision this feature.

SEC. 4A557: CDP TRIGGER ON PRI TRUNKS

1. FEATURE DESCRIPTION

The CDP (Customized Dialing Plan) Trigger on PRI (Primary Rate Interphase) Trunks feature is a secured feature with SFID (Secured Feature ID) 557 and feature number 99-5E-7578.

The CDP access code trigger is a digit string defined with a trigger number and an ASP (Advanced Services Platform) action. The trigger number is necessary to define query protocol information while the ASP action identifies the ASP digit collection method. When an IDP (Individualized Dialing Plan) customer goes off-hook and dials the CDP access code, depending on the digit collection method defined (normal, variable, immediate), a normal number of digits are collected and verified, a variable amount of digits are collected without verification, or no digits are collected before the query is launched. Analog lines and PF (Private Facility) trunk groups can be assigned CDP trigger functionality.

This feature extends this functionality to allow assigning CDP to PRI (Primary Rate Interphase) trunks.

2. FEATURE ASSIGNMENT

This feature is a secured feature (SFID 557) which depends on SFID 254 or 255 (for more information, see Division 2, Section 4A254).

To provision this feature:

- On the SFSYS form (Record 5713-1)
  - set ACT SFID 254 or 255 to "Y"

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- set ACT SFID 577 to "Y".

- Assign an ASP CDP feature to a PRI trunk group that has no member yet from the TKGRPFA form (Record 5206). The ASP feature will be assigned to all members added to this trunk group from the TRUNK form (Record 5204).

  or

- Assign an ASP CDP feature to an individual PRI trunk member from the TRUNKFA form (Record 5205).
- Update the ASP CDP feature by modifying or adding the CDP trigger from the ASPTPA form (Record 5632-4).

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 524 must first be set to "Y" before this feature is enabled by setting the ACT field for SFID 557 to "Y" on this form.

SEC. 4A558: TCW - INTER-LATA CALL ENHANCEMENTS

1. BACKGROUND

The TCW (Talking Call Waiting) feature is an option on the terminating call waiting features that modifies the call waiting operation so that:

1. when CIDCW (Calling Identity Delivery on Call Waiting) is not assigned, rather than having the switch provide the call waiting tone, the switch briefly connects the TCW subscriber to an IP (Intelligent Peripheral) for an announcement, and

2. when CIDCW is assigned, in addition to the switch providing the SAS (Subscriber Alerting Signal) plus CAS (CPE (Customer Premise Equipment) Alerting Signal) tones, the switch also briefly connects the TCW subscriber to an IP (Intelligent Peripheral) for an announcement if an acknowledgment signal from the CPE is not received. The announcement provides the TCW subscriber with the name of the call waiting party. If CIDCW is not assigned, the call waiting tone is provided by the IP as part of the announcement.

For the Call Waiting features with distinctive call waiting tones, since an IP provides the call waiting tone, and the IP is not notified that the encountered feature is one of the distinctive call waiting features, the distinctive tones are not provided by the IP. In this case, only the single call waiting tone is expected for the first TCW alert. However, for the re-alert, the TCW subscriber receives switch based distinctive call waiting tones.

If the subscriber with TCW also has the CIDCW and/or CWD (Call Waiting Deluxe) feature, the switch provides these features with the CW tone, which then provides a visual display on the subscriber's CPE. If the switch does not receive an indication that the CPE is ready to receive the display information, the TCW feature is invoked and the name is spoken to the TCW subscriber. Since the switch has already provided the call waiting tone as part of the SAS+CAS signal offering the display information to the CPE, when the switch connects to the IP it is expected that the IP will speak only the name of the waiting party rather than providing a call waiting tone followed by the spoken name of the waiting party.

These requirements assume the DNs (Directory Numbers) on the terminating switch directly providing

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access to the IP, are provisioned with the appropriate terminating Calling Name Delivery feature.

2. FEATURE DESCRIPTION

The TCW (Talking Call Waiting) - Inter-LATA (Local Access and Transport Area) Call Enhancements feature (99-5E-7604) allows Inter-LATA IP calls to be routed to an office wide carrier and/or suppresses the billing record generation for all calls to the IP.

It is a secured feature (SFID (Secured Feature ID) 558) that is available as a 5E14 FR3 (Feature Release 3) and 5E15 BMI (Beginning Managed Introduction). This feature is dependent upon the base feature, Talking Call Waiting (99-5E-4605). For more information on the base feature, see Division 2, Section 4A331.

3. FEATURE ASSIGNMENT

For 5E14 and later, to provision this feature:

- Activate secured feature by setting the ACT field for SFID 331 on the SFSYS form (5713-1 Record) to "Y".
- Activate secured feature by setting the ACT field for SFID 558 on the SFSYS form (5713-1 Record) to "Y".
- On the OFCOPT form (5509 Record):
  - Set the TCW SUPPRESS AMA field to "Y".
  - Set the TCW CARRID field to any valid value.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509) - The 5509 Record provides the office option global parameters residing in the Central Processor. Added the TCW SUPPRESS AMA and TCW CARRID fields and associated data rules.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 331 and 558 must be set to "Y", respectively, on this form in order to enable this feature.

SEC. 4A559: DA AUTOMATIC POSITION RELEASE

1. FEATURE DESCRIPTION

The DA (Directory Assistance) Automatic Position Release feature is a secured feature (SFID 559) that also uses OFS ID 977. This feature is being deployed on the 5ESS Switch in a Software Update for 5E14 Feature Release 3. The feature number is 98-5E-7188.

This feature provides for automatically releasing an LS (Listing Services)/DA operator position in the case when a calling party hangs up while connected to a LS/DA operator position.

NOTE: This functionality does not apply to calls involving Listing Services call completion.

1.1 Scenarios

The following are scenarios for this feature:

- A listing services call comes up at an operator position. The caller decides to go on-hook. The operator position is automatically released.
- A listing services call comes up at an operator position. The operator is then conferenced with another operator. The caller decides to go on-hook. The operator position is not automatically released. The operator has to manually release the position.

2. FEATURE ASSIGNMENT

For 5E14 and later, to provision the DA Automatic Position Release feature:

- activate the feature by setting the ACT field for SFID 559 to "Y" on the SFSYS form (5713-1 Record).
- enable the feature for the office by setting the ACT field for OFID 977 to "Y" on the FOSYS form (5713-2 Record).

3. TRANSLATION REQUIREMENTS

Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. This feature is enabled for the office by setting the ACT field on this form for OFS ID 977 to "Y".

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field on this form for SFID 559 to "Y".

SEC. 4A560: ADVANCED SERVICES PLATFORM EXTENDED TSTRC TIMER

1. FEATURE DESCRIPTION

The feature number for the ASP (Advanced Services Platform) Extended TSTRC Timer feature is 99-5E-7568. This feature is controlled by SFID (Secured Feature ID) 560 and is being deployed for the BMI (Beginning Managed Introduction) of the 5E15 Software Release on the 5ESS, CDX (Compact Digital Exchange), and VCDX (Very Compact Digital Exchange) platforms.

With the ASP (Advanced Services Platform) STOR (Send To Outside Resource) features, a timer called TSTRC (Timer, Send to Resource Connection) controls the length of time that a caller may be connected to an AIN (Advanced Intelligent Network) IP (Intelligent Peripheral). This timer currently takes its value from a single 5ESS office option field, which can range up to 60 minutes.

Service providers would like the ability to extend the length of the TSTRC timer to a maximum of 300 minutes, and would also like the ability to have the timer value for a given IP connection be specified by a parameter in the STR (Send To Resource) message.

This feature extends the length of the TSTRC timer to a maximum of 300 minutes. The new range of the parameter is 1 to 300 minutes, with the default of 6 minutes. The value of zero is allowed, indicates no timing is to be done, and is used effectively to disable the timer.

This new functionality is controlled by SFID 560. The Recent Change and Verify crosschecks prohibit the

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provisioning of the TSTRC value to greater than 60 when this feature is locked, and also ignores the valid TSTRC parameter in the STR message if this feature is locked. SFID 560 depends on the original STOR local feature SFID 229.

This feature is not directly visible to the end user, except that it can be used to shorten or lengthen the total duration of an STR connection.

This feature provides the following two capabilities:

- The maximum value of the TSTRC field on the ASPOPT form (5670 Record) is increased to a maximum of 300 minutes (the current value is 0 - 60).

- Allow the addition of a new TCAP (Transaction Capabilities Application Part) parameter, TSTRCTimer, in the STR message. When the STR message contains a DestinationAddress parameter (indicating than an IP connection is to be established) and when the TSTRCTimer parameter is also present, then the TSTRC timer value used for the connection is that of the TSTRCTimer parameter.

  If the TSTRCTimer parameter is not present in an STR message which contains a DestinationAddress parameter, or if it is present but out of range, then this error shall be treated as a fatal "Unexpected Data Value" error, and shall be reported to the SCP according to existing practice, and the call is killed.

  If the valid TSTRCTimer parameter is included in an STR message which does not contain a DestinationAddress parameter, then it is ignored.

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT fields for SFIDs 229 and 560 on the SFSYS form (5713-1 Record) must be set to "Y".

- The TSTRC field on the ASPOPT form (5670 Record) can then be changed to a value between 0 and 300.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASPOPT	5670	4	31G	8.49
SFSYS	5713-1	3	5AR	8.22

ASPOPT form (5670 Record) - This form is applicable to (and required for) all offices. It is required to translate all options in the AM (Administration Module) for initial offices.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 229 and 560 to "Y".

SEC. 4A561: RATE AREA EXCHANGE INCREASE

1. FEATURE DESCRIPTION

1.1 Feature Overview

Available with 5E15 and later Software Release, the RAX (Rate Area Exchange) Increase feature is assigned feature number 99-5E-7473.

NAR customers, CLECs (Competitive Local Exchange Carriers) and ILECs (Incumbent Local Exchange

Carriers), are using 5ESS Switches to service lines in broader areas than originally designed, areas that diverge in how dialed digits are processed. As a result, the number of RAXs allowed in the ODD (Office Dependent Data) must increase from the current value of 99 to 999 to support this growth. The RAX, in conjunction with the LCC (Line Class Code), determines the DAS (Digit Analysis Selector) and screening information used to interpret dialed digits for routing and charging phone calls.

2. FEATURE ASSIGNMENTS

To enable this feature, the ACT field for SFID 561 must be set to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
AMLBDSL	5447	3	4AV	21.34
BFG	5625	4	26A	12.9
DFLTSRV	5974	6	17A	23.15
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2
LCC	5306	3	3S	4.1
LINE	5109	3	1I	1.6
MLHG	5110	3	1J	3.5
MLHLN	5111	3	1K	1.6
NOC	5501	3	5A	8.2
SFSYS	5713-1	3	5AR	8.22
XAT	5909	5	1J	23.40

AMLBDSL form (5447 Record) - This form is used to collect data for OSPS/CACD (Centrex Automatic Call Distribution) packet switching DSL (Digital Subscriber Lines). Increased the RAX field enumeration from 99 to 999.

BFG form (5625 Record) - This form is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. BFG is designed to assist the switch owner in the conservation of Switching Module memory and the improvement of Recent Change response time, and it cannot be used with trunks. Increased the RAX field enumeration from 99 to 999.

DFLTSRV form (5974 Record) - This form allows unknown CPE (Customer Premises Equipment) on a DSL (Digital Subscriber Line) subscribing to Default Service to originate ACSR, BRI Test Line, BRIV (Basic Rate Interface Verification), Repair (611), Access to 108 Test Line, Business Office (811), and Emergency (911) calls. Increased the RAX field enumeration from 99 to 999.

DSL form (5907 Record) - This form has two major purposes: 1) it defines the attributes of a DSL, and 2) it defines the attributes of the B1 and/or B2 channel of the DSL. New data rules apply to Standard BRIs where "STD" is entered in the DSL CLS field. Increased the RAX field enumeration from 99 to 999.

DSLUSR form (5908 Record) - This form is used to define the TN and other information for a DSL user. This includes circuit switching (voice and data) attributes. Two new fields were added to support PCS. The PASC (PCS Access Service on a C-Interface) field was added to indicate if ISDN/PCS Interworking is allowed by entering "PCSI" (PCS/ISDN Interworking). The second field added for ISDN/PCS Interworking is ALT to indicate whether the DSL user is allowed to comply with a request for an ALT. Increased the RAX field enumeration from 99 to 999.

LCC form (5306 Record) - This form is used to define each LCC (Line Class Code) in a 5ESS Switch. A Telephone Number and a Line Equipment Number provide an LCC and Rate Area number. These two inputs are used to access routing and service information contained on this form. Increased the RAX field enumeration from 99 to 999.

LINE form (5109 Record) - This form defines the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch. Increased the RAX field enumeration from 99 to 999.

MLHG form (5110 Record) - This form is used to define Multi-Line Hunt Group information. The 5110-2

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Record is used to define MUPH (Multiple Position Hunt) for nondata link attendant console positions. Increased the RAX field enumeration from 99 to 999.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular MLHG. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. Every MLHG Number assigned on the MLHLN form must be defined on the MLHG form (5110-1/2/3 Record). Increased the RAX field enumeration from 99 to 999.

NOC form (5501 Record) - This form is used to associate a NOC (Normalized Office Code) with each OFFICE CODE and NPA (Numbering Plan Area) code. The OFFICE CODE is commonly referred to as the "NXX" which are the 3-digits after the NPA (commonly referred to as the "area code"). In addition, this form is used to assign Routing and Charging Intercept Treatment. Each type of Intercept (Regular, Blank Number, Out-of-Service and Deny Termination) is assigned a Route Index and Charge Index per NXX. Increased the RAX field enumeration from 99 to 999.

SFSYS form (5713 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 561 to "Y".

XAT form (5909 Record) - This from is used to provision T1 facilities (digital lines and trunks) with X.25 Packet Switching services on a subscription basis using Q.931 signaling. When this form is entered, ports are defined for each channel of the T1 facility selected for packet switching. Increased the RAX field enumeration from 99 to 999.

SEC. 4A563: ASP MONITOR FOR BRI AND MULTILINE HUNT GROUP

1. FEATURE DESCRIPTION

The ASP Monitor for BRI (Basic Rate Interface) and MLHG (MultiLine Hunt Group) feature is a secured feature (SFID 563) that is available with the 5E15 FR1 (Feature Release 1) and later Software Releases. The feature number for this feature is 99-5E-3158.

This feature allows the user to monitor idle/busy status for BRI lines and MLHGs. It is an enhancement of the base ASP feature (for more information, see Division 2, Section 4A51 and/or Division 2, Section 4A126) which monitors the idle/busy status for the analog lines.

The ASP Monitor for BRI and MLHG feature also allows for existing Monitor operations on individual analog lines to accept terminating features such as CWT (Call Waiting Terminating) and SC (Series Completion) when the OFID (Optioned Feature System ID) 973 is set.

2. FEATURE ASSIGNMENT

For 5E15 FR1 and later, to activate this feature, the ACT field for SFID 563 on the SFSYS form (5713-1 Record) must be set to "Y". Also, the ACT field for the OFID 973 on the FOSYS form (5713-2 Record) must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFIDs (Optioned Feature System IDs) for Special and Transparency Features. The ACT field for OFID 973 must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 563 must be set to "Y" on this form in order to enable this feature.

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SEC. 4A564: DAS INCREASE

1. FEATURE DESCRIPTION

The DAS (Digit Analysis Selector) Increase feature is a secured feature (SFID 564) that is available with the 5E15 and later Software Releases. The feature number for this feature is 99-5E-7475.

The purpose of this feature is to provide the ability for the 5ESS Switch to support multiple rate centers.

In order to do this, the DAS value on the forms, where used, was increased. Currently, the DAS values are 0-99, or 1-99. This feature increases these values to 0-254, or 1-254.

2. FEATURE ASSIGNMENT

For 5E15 and later, to activate this feature, the ACT field for SFID 564 on the SFSYS form (5713-1 Record), must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACDTN	5631-1	4	32A	6.10
ASPOPT	5670	4	31G	8.49
CONV	5300-4	3	3D	9.4
DAS	5300-1	3	3A	9.1
ESN	5540	3	5AN	9.40
IIDIGTBL	5573	3	5BN	8.57
LASSOP	5945	5	5F	8.21
LCC	5306	3	3S	4.1
LDPCTBL	5562	3	5BF	8.52
LDPTNSC	5568	3	5BI	8.53
LOCSCRN	5545	3	5AU	8.26
NSTRIG	5324	3	3AK	9.35
OFCOPT	5509	3	5I	8.1,8.15
OSPSDSL	5411	3	4L	21.30
OSPSOPT	5424	3	4Y	8.9
PFASFG	5609-3	4	10C	7.3
RASRTI	5538	3	5AL	10.19
SFSYS	5713-1	3	5AR	8.22
STINFO	5402	3	4C	21.2
TGATTD	5611	4	12A	4.4
TKGRP	5202	3	2A	5.1
TODCL	5610-2	4	11B	4.5

ACDTN form (5631-1 Record) - This form is used by the ACD/BRCS (Automatic Call Distributor/Business and Residential Custom Services) feature to define the ACD directory number or the DAA (Direct Agent Access) directory number. For more information on this secured feature, ACD/BRCS and ACD/BRCS Interworking II, see Division 2, Section 4A121. Modified the valid entry for the DAS field.

ASPOPT form (5670 Record) - This form is used to set the ASP (Advanced Services Platform) office parameters for the office. Modified the valid entry for the SCP DAS field.

CONV form (5300-4 Record) - This form is used to associate an LDIT (Local Digit Interpreter Table) call type with a code conversion number. Modified the valid entry for the DAS field.

DAS form (5300-1 Record) - This form is used as an office record and as a source document for data entry into the DAS form. Modified the valid entry for the DIGIT ANALYSIS SELECTOR field.

ESN form (5540 Record) - This form serves two purposes. First, it is used to define an ESN (Emergency Service Number), a set of telephone numbers for the emergency services a 911 caller may require. Second, it is used to define SM (Switching Module) standalone data, and serves as a set of emergency numbers for a 911 call that arrives at an SM unable to communicate with the CMP (Communication Module Processor). Modified the valid entry for the DAS field.

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IIDIGTBL form (5573 Record) - This form contains information needed to route a call. Modified the valid entry for the DAS field.

LASSOP form (5945 Record) - This form is an ODA (Office Data Administration) input form that is used to supply global office options and parameters for the LASS (Local Area Signaling Services) features. Modified the valid entry for the IP DAS field.

LCC form (5306 Record) - This form is used to define each LCC (Line Class Code) in a 5ESS Switch. Modified the valid entry for the DIGIT ANALYSIS SELECTOR field.

LDPCTBL form (5562 Record) - This form provides an LDP (Long Distance Platform) Carrier Table and Default Carrier Table. Modified the valid entry for the DAS field.

LDPTNSC form (5568 Record) - This form provides the capability for specifying or verifying a TNSC (Terminating Network Selection Code), and its associated DAS (Digit Analysis Selector), and screening index information. Modified the valid entry for the LRN DAS, and the DAS fields.

LOCSCRN form (5545 Record) - This form is used to screen the NPA (Numbering Plan Area) and Office Codes (NXX) for long distance calls. Modified the valid entry for the DAS field.

NSTRIG form (5324 Record) - This form identifies a network service application. It contains alternate STP (Service Transfer Point) network addressing, and information for the switch owner's selectable service key. Modified the valid entry for the POST QUERY DAS field.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Modified the valid entry for the DAS, E911 DAS, LTP DAS, RDTA DAS, CST DAS, SCP DAS, SCP 800 DAS, and the TCW DAS fields.

OSPSDSL form (5411 Record) - This form assigns OSPS (Operator Services Position System) circuits to line card ports. Modified the valid entry for the DAS field.

OSPSOPT form (5424 Record) - This form defines the OSPS (Operator Services Position System) office option global parameters. Modified the valid entry for the AIS DAS, SDN DAS, and the BLV DAS fields.

PFASFG form (5609-3 Record) - This form is used to define SFG (Simulated Facility Groups) which allow controlling access to physical groups such as lines, trunks, and special circuits. Modified the valid entry for the LINE DAS and the TRK DAS fields.

RASRTI form (5538 Record) - This form is used to define the routing used by RAS (Remote Access Service) from an RADN (Remote Access DN) to the DSU2-RAF-DTA that corresponds with a specified home switch. Modified the valid entry for the DAS field.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT field for SFID 564 must be set to "Y" on this form in order to enable this feature.

STINFO form (5402 Record) - This form provides information about a serving team. Modified the valid entry for the DIG ANALYSIS SEL and the SEC DIG ANALYSIS SEL fields.

TGATTD form (5611 Record) - It is used to define information (such as attendant DN, Source Billing, and SDN DAS) on a Terminal Group basis. Modified the valid entry for the SDN DAS field.

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. Modified the valid entry for the DAS, LRN DAS, SDN DAS fields.

TODCL form (5610-2 Record) - This form is used to define the TOD (Time Of Day) activities that will occur on a particular line, terminal, or trunk group at a specified time. Modified the valid entry for the DAS field.

SEC. 4A565: AMA MODULE 104 DIRECTION INDICATOR

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1. BACKGROUND

Local provider's tariffs needed to be changed due to the Telecommunications Act of 1996 that endorsed local competition and a significant increase in the number of service providers in various markets.

Prior to this feature, AMA (Automatic Message Accounting) recording capability for operator calls such as 0- , 0+ and directory assistance were blocked from the local end office. Since an alternative routing to multiple operator services can be provided in the end office, there existed a need to provide AMA recording for these type of calls.

A set of billing options is necessary to record calls from one network to another network in order to identify calls on which mutual compensation is owed. The additional trunk information on the AMA recording will assist the compensation settlement.

The Local Trunk Billing Enhancements feature (99-5E-4498 (SFID 278)) appended a trunk module to the existing AMA records for inter-office calls but did not have the direction indicator in the trunk module 104.

2. FEATURE DESCRIPTION

Available with the 5E14FR3 software update and 5E15 BMI (Beginning Management Introduction), the AMA Module 104 Direction Indicator feature is a secured feature with SFID (Secured Feature ID) 565 and feature number 99-5E-7500. This feature depends on feature 99-5E-4498 (SFID 278). For more information concerning this feature, see Division 2, Section 4A278.

The AMA Module 104 Direction Indicator feature adds the incoming and outgoing direction indicator to the trunk module 104. Table 244 is Incoming/Outgoing trunk facility identification where the first character in this table is used for the trunk direction indicator. The value 1 indicates incoming trunk group and 2 indicates outgoing trunk group.

3. FEATURE ASSIGNMENT

This feature is a secured feature (SFID 565) which depends on the Local Trunk Billing Enhancements feature (99-5E-4498 (SFID 278)).

To provision this feature:

- On the SFSYS form (Record 5713-1)
  - set ACT SFID 278 to "Y" to enable the Local Trunk Billing Enhancements feature.
  - set ACT SFID 565 to "Y" to enable the AMA Module 104 Direction Indicator.
  - set ACT SFID 281 to "Y" to enable the Operator and Directory Assistance Billing for Unbundled Local Switching feature.
- On the OFCOPT form (Record 5509):
  - set OPER to "Y" to turn on the AMA recording for operator services and directory assistance calls.
  - set TRUNK to "Y" to turn on appending the trunk module to the AMA recording for inter-office calls.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

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SFSYS form (5713-1 Record) - This form is used to activate secured features. To enable this feature, the ACT field for SFID 565 must be set to "Y" after the ACT field for SFID 278 is to "Y" on this form.

SEC. 4A566: CUSTOMER RECENT CHANGE INPUT FOR CRITICAL TRANSLATIONS PROTECTION

1. FEATURE DESCRIPTION

Please see Division 2, Section 1BY - RC TRANSLATIONS PROTECTION FOR HIGHLY CRITICAL ELEMENTS.

SEC. 4A567: VOICE TELEPHONY OVER ATM FEATURES

1. ATM GLOBAL ROUTING AND SIGNALING

1.1 FEATURE DESCRIPTION

The feature number for the ATM Global Routing and Signaling feature is 99-5E-8018 (originally 99-5E-7554). This feature is controlled by SFID (Secured Feature ID) 567 and is made available with the 5E15 Feature Release 1.

The ATM Global Routing and Signaling feature is one of the component features for the 7R/E Packet Solutions 3.0n ATM Transport Solution to provide VTOA (Voice Telephony over ATM (Asynchronous Transfer Mode)) in the North American Region.

This feature provides enhancements to the circuit switched routing functionality at the OPS (Originating Packet Switch) to support the following connectivity:

- IC trunk to ATM Packet.
- LTOLL trunk to ATM Packet.
- TTOLL trunk to ATM Packet.
- LATA trunk to ATM Packet.

This feature also provides enhancements to the circuit switched routing functionality at the TPS (Terminating Packet Switch) switch to support the following connectivity:

- ATM Packet to IC trunk.
- ATM Packet to LTOLL trunk.
- ATM Packet to TTOLL trunk.
- ATM Packet to LATA trunk.
- ATM Packet to ANNCMT trunk.
- ATM Packet to RAFDTA trunk.
- ATM Packet to INTRCPT trunk.

One of the significant components of feature 99-5E-7554 is the capability to allow independent call control for ATM packet calls using the PSU, or CNI (SS7 and/or CCS7) platform. To provide this functionality, the new BICC (Bearer Independent Call Control) protocol is supported by the PSU (Packet Switch Unit) and

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DLN (Direct Link Node) message delivery subsystems. In addition, independence between the IWG (Inter-Working Gateway) TP (Terminal Process) (also referred to as BRR, or Bearer TP) and the call control TP is provided. This feature also administers the hunting status of CICs (Call Instance Codes) for all originating and terminating ATM packet calls.

NM (Network Management) allows assignment and application of TGCs (Trunk Group Controls) to BICC groups and disallows TGCs for service groups. A new NM control, Immediate ReRoute, is introduced by this feature and is applicable to BICC and circuit trunk groups. NM also provides one new H-interval measurement report for BICC groups (BICCMEAS). A BICC group is a trunk group that uses the BICC protocol. A BICC group has a unique TG identifier in the range, 7000 to 7999.

This feature also provides the initialization and recovery of the new CMP (Communication Module Processor) dynamic data for ATM packet calls.

The 99-5E-8018 (originally 99-5E-7554) feature interfaces with the following features:

- DNU-S STS1e interface using the Sapphire protocol (99-5E-7556),
- BICC Call Processing (99-5E-7555.A) , and
- Terminal Maintenance and SS7 and/or CCS7 Signaling (99-5E-7555.C).

All of the above features (Core VTOA) are defined and controlled by SFID 567.

1.2 FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 567 on the SFSYS form (5713-1 Record) must be set to "Y".
- Enable the SM-2000s in the office for CIC block distribution on the CICDIST form (5217 Record). It is important for the service provider to allow as many SM-2000s as possible before any BICC group is inserted. This may improve performance though it is not required for feature assignment.
- Define a BICC group on either the TKGRP form (5202 Record) or the BICCGRP form (5216 Record). For a BICC Group defined the TGN key field and the BICC GRP field should be equal and in the range of 7000 to 7999. The BICCGRP form can also be used to provision a BICC service group.
- Define a Service TGN on the TKGRP form (5202 Record) that points to a BICC GRP. The Service TGN has no members and is defined solely for the purpose of providing the ability to differentiate services when routing over the BICC GRP.
- On the RTIDX form (5303 Record) or the MCRTIDX form (5304 Record), define a Route Index to point directly to the BICC GRP (7000 - 7999) or a Service TGN (1 - 4000) which points to a BICC GRP. There can be multiple Service TGNs pointing to the same BICC GRP. By defining multiple RTIs that point to multiple Service TGNs that point to the same BICC GRP, service providers are able to attach services to BICC Groups that are currently attached to Circuit TGNs.
- As long as there is one SM-2000 provisioned with IWG resources, the CICs can be distributed to a SM-2000 on this switch.
- The service provider determines how many CICs are needed to be inserted for each BICC GRP created on the BICCGRP form or the TKGRP form. The TOTAL CICs and a BASE CIC are specified on the CICDEF form (5218 Record). CICs are stored in blocks of 128, and are evenly distributed across the CIC enabled SM-2000 modules, specified earlier on the CICDIST form (5217 Record).

1.3 TRANSLATION REQUIREMENTS

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New and Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
BICCGRP	5216	3	2S	5.71
CICDEF	5218	3	2U	5.72
CICDIST	5217	3	2T	5.70
MCRTIDX	5304	3	3Q	10.4
RTIDX	5303	3	3P	10.2
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

BICCGRP form (5216 Record) - The Bearer Independent Connection Control Group form is used to insert, update, review and delete BICC Group translations. The BICCGRP form is added as of 5E15 Feature Release 1 to support the ATM Global Routing and Signaling feature.

CICDEF form (5218 Record) - The BICC Group CIC Definition form is used to insert, update, review and delete Packet Call Instance Codes (CICs). This form internally associates a CIC block index to the PCI (Packet Point Code Index) of the BICC GRP. In addition, a BASE CIC is provisioned for each BICC GRP. The CICDEF form is added as of 5E15 Feature Release 1 to support the ATM Global Routing and Signaling feature.

CICDIST form (5217 Record) - The Call Instance Code Distribution form is used to specify SM-2000 modules in an office for CI block distribution. The CIC Distribution form is added as of 5E15 Feature Release 1 to support the ATM Global Routing and Signaling feature.

MCRTIDX form (5304 Record) - The MCRTIDX (Modular Customization Route Index) is similar to the Route Index defined on the RTIDX form (5303 Record). The MCRTIDX form (5304 Record), however, allows additional information that is required for ARS (Automatic Route Selection) and sometimes used for PFA (Private Facility Access).

RTIDX form (5303 Record) - The RTIDX form (5303 Record) is used to define each Route Index in a 5ESS Switch. The record is intended to be used as an office record and as a source document for data entry into the RTIDX form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 567 to "Y".

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. BICC GRP field was added for 5E15 and later.

2. 7R/E PACKET SOLUTIONS 3.0N ATM TRANSPORT SOLUTION - BICC CALL PROCESSING

2.1 FEATURE DESCRIPTION

The feature number for the 7R/E Packet Solutions 3.0n ATM Transport Solution - BICC Call Processing feature is 99-5E-8018 (originally 99-5E-7555.A). This feature is made available in the 5E15 Feature Release 1 and in the BMI (Beginning Managed Introduction) of the 5E16 Software Release. Although the feature number has been changed, only the hardware used has changed. The signaling has changed from IPDC (Internet Protocol Device Control) to Sapphire.

This feature, along with features 99-5E-8018, 99-5E-8020, and 99-5E-8019 (originally 99-5E-7554, 99-5E-7556, 99-5E-7555.C, and 99-5E-7555.B) allows the switch owner to use ATM packet technology for bearer paths between switches.

SFID (Secured Feature ID) 567 is used to secure the VTOA Base functionality. When this SFID is off, outgoing BICC calls are not allowed in the routing software of the OPS (Originating Packet Switch). At the TPS (Terminating Packet Switch), SFID 567 must be on before incoming BICC IAMs (Initial Address

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Messages) are processed.

The ISUP7 (ISDN User Part (SS7 trunk signaling)) Circuit Trunk is a base line (or reference point) for the functionality that is duplicated by the ATM (Asynchronous Transfer Mode) packet connection. The ATM packet connection can be set up with TRK CLASS values of either LTOLL or TTOLL.

Calls may come in on an IC trunk and go out towards another ES (Edge Switch). Other calls are routed directly from the OPS to the TPS. Interactions with query responses at the OPS may result in an IAM message going out with specialized parameter contents.

Calls coming into an EO (End Office) can be routed directly to another EO/AT (Access Tandem) switch. The ATM Packet connectivity duplicates an LTOLL circuit trunk.

For EA (Equal Access) calls, the TPS may be an Access Tandem switch. From the TPS, the call can go to the carrier on an IC trunk. This trunk configuration uses GR-394 signaling specifications on the BICC connection.

When a call is rejected by the TPS, the cause may be armed by Reroute on Release. The route chain is advanced and another far destination is chosen for the new route attempt.

The 99-5E-7555.A feature provides signaling enhancements to basic ISUP for the BICC protocol call processing functionality at the OPS switch for the following connectivity:

- IC trunk to ATM Packet.
- LTOLL trunk to ATM Packet.
- TTOLL trunk to ATM Packet.
- LATA trunk to ATM Packet.

Call processing functionality is provided at TPS switch for the following connectivity:

- ATM Packet to IC trunk.
- ATM Packet to LTOLL trunk.
- ATM Packet to TTOLL trunk.
- ATM Packet to LATA trunk.
- ATM Packet to ANNCMT trunk.
- ATM Packet to RAFDTA trunk.
- ATM Packet to INTRCPT trunk.

This feature provides UNI (User to Network Interface) 4.0 Control of ATM Packet Bearer Path where the Connection SM is different from the Control SM. The IWG software will implement the UNI 4.0 finite state machine and protocol stack. When failure events occur, causes will be sent in the BICC REL message showing the nature of the failure. Failure events may or may not involve the ATM packet. When they do, the UNI 4.0 RELEASE cause is mapped to the BICC cause.

Call processing supports Reroute on Release functionality at the OPS switch. The first attempt may go out on an ATM Packet, but the next attempt may or may not involve an ATM packet. Call processing supports Reroute on Release functionality at the TPS switch. The first attempt is used to get the IWG SM to correspond with the chosen circuit, but the second route attempt will not have a choice for the connection

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SM.

An interface is provided for NM (Network Management) controls applied to BICC ATM calls. Playing an announcement for NM treatment, is done at the TPS switch. Some NM functionality applied to the call is part of feature 99-5E-7554.

Measurements are provided for BICC call processing related events. This includes collection of the counts in a 15 minute, 30 minute, and 24 hour interval. BICC related events are identified and implemented in measurements.

The 99-5E-7555.A feature provides for the BICC process to own a call record in the control SM and interface with billing software to generate the desired AMA (Automatic Message Accounting) records at the TPS switch. AMA software is enhanced to reference the ATM packet connections instead of the trunk group/member number in the AMA output. This enhancement assures that the following are done:

- Charge index driven billing records at OPS or TPS switch.
- Billing records specified by LATA (Local Access And Transport Area) trunks at the TPS.
- Enhanced fields in CNA/CMC (Customer Name And Address Records/Customer Measurements Collection) billing records for LTOLL or TTOLL trunks.

The Call Trace mechanism describes ATM Packet connectivity when a trace is requested for the circuit end of an ATM Packet call. At the OPS switch, the circuit side will be specified and traced to the ATM bearer appearance in the IWG. At the TPS switch, the outgoing circuit side will be specified and traced to the ATM bearer path on the IWG.

The ISUP protocol monitor is enhanced to support BICC and BICC specific parameters and to display the larger values for BICC CICs.

The vfy:ofc mechanism is enhanced to report routing results for a BICC call origination. It also allows for reporting that a circuit call origination routed to a BICC Group.

This feature provides for both intra-processor and inter-processor audit operations of call processing related dynamic data. Overload and recovery actions accommodate BICC call activity.

2.2 FEATURE ASSIGNMENT

There are no special steps required to provision this feature.

2.3 TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9

MEASSUM form (5563 Record) - The MEASSUM (Measurement Collection Summary) form (5563 Record) is available with 5E11 and later Software Releases. It is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Components are defined as the entity to be measured; components can be at the end product level (AIU, DNU-S, SS7 PSU, etc.) or subassemblies (i.e., packs, lines, DPIDB, etc.).

3. 7R/E PACKET SOLUTIONS 3.0N ATM TRANSPORT SOLUTION - BICC TERMINAL MAINTENANCE AND CCS7 SIGNALING

3.1 FEATURE DESCRIPTION

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The feature number for the BICC Terminal Maintenance and CCS7 Signaling feature is 99-5E-8019 (originally 99-5E-7555.C). This feature is available as a Software Update to the 5E15 FR2.5PSAX Software Release and is part of the 7R/E Packet Solutions 3.0n ATM Transport Solution Software Release. Feature number 99-5E-8019 retests this feature in the7R/E 5ESS Switch environment.

This feature, along with features 99-5E-8018 (originally 99-5E-7554, 99-5E-7555.A), 99-5E-7555.B, and 99-5E-8010 (originally 99-5E-7556) allow the switch owner to use ATM packet technology for bearer paths between switches. SFID (Secured Feature ID) 567 is used to secure the VTOA Base functionality.

Unlike ISUP, BICC CICs (Call Instance Codes) do not correspond to specific hardware ports on a switch. A Call Instance Code is a software mechanism used to manage ATM packet calls that are BICC signaled. An idle CIC is allocated for use by each VTOA call, so a unique CIC is associated with each outgoing/incoming call routed via an IWG. 7R/E Packet Solutions 3.0n ATM Transport Solution only supports a maximum of 65K CICs per BICC group.

The BICC CIC maintenance feature provides the interface between the BICC protocol and BICC CIC maintenance in the 7R/E Packet Solutions 3.0n ATM Transport Solution PSM (Packet Switching Module). This feature provides the majority of the maintenance functions that currently exist on ISUP (ISDN User Part) trunks.

This feature provides the TM (Terminal Maintenance) functionalities that are needed to support the initial offering of VTOA. The TM functionalites provided are:

- BICC CIC Status Administration which includes the following:

    1. RMV/RST of BICC CIC. Unlike ISUP, BICC RMV/RST sends no signaling to the far-end. Additional qualifiers, other than ucl, are not allowed in the BICC RMV/RST command. The OOS (Out of Service), CADN (Circuit Administration) state is the default state for all manually removed BICC CICs. OOS, CCSINIT (CCS Initialization Process) is the state of manually restored BICC CICs until a reset message is sent. CICs are then marked IS (In-Service).
    2. Query status of a BICC CIC or a group of BICC CICs.
    3. Stop/Query information on BICC groups.
    4. RMV/RST of BICC CIC to and from CADN.

- BICC Signaling Maintenance.

    1. BICC can receive group messages that contain up to 256 individual messages and send group messages that contain 128 individual messages.
    2. Process incoming group messages (CGB (Call Instance Code Group Blocking Message), CGU (Call Instance Code Group Unblocking Message), GRS (Group Reset)) , RSC (Reset Circuit) messages, and unequipped CIC (UCIC) messages.
    3. Send GRS messages and RSC messages.
    4. Included is the maintenance functionality to enable the product to send blocking during SM (Switching Module) impairment scenarios where a large number of BICC CICs are not reachable. BICC does not support single block/unblock messages. Sends CGU when recovering from the SM impairment events.

- BICC MDII (Machine Detected Inter-Office Irregularities) Reporting. BICC uses the existing MDIIs.
- BICC Test Calls.

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- IWG Loopback Test.
- Call Monitoring of BICC Groups. This includes the ability to monitor the BICC call processing messages.

4. 7R/E CCS MAINTENANCE TOOLS FOR BICC TERMINAL MAINTENANCE

4.1 FEATURE DESCRIPTION

The feature number for the 7R/E CCS Maintenance Tools for BICC Terminal Maintenance feature is 99-5E-7555.D. This feature is made available with 5E15 Feature Release 3.

This feature enchances the CCS maintenance capabilities of VTOA to include the following:

- Incoming BICC circuit query.
- Outgoing demand BICC CIC query.
- Outgoing periodic BICC CIC query.
- Provide mechanism to send blocking/unblocking messages for BICC CICs.
- End-to-end and IWG loopback test calls.

Bearer Independent Call Control CIC Query is a BICC inter-office auditing mechanism that is used to check and correct (if needed) the status of one or both ends of a set of BICC CICs. It can be run periodically or on demand. BICC CIC Query (BQ) is analogous to ISUP CQ (Circuit Query Request) for BICC.

In 5E15 FR3, the BICC CIC Query provides the following enhanced BQ capabilities:

- By an entire office - manually.
- By a OPC/DPC - manually.
- By a BG (BICC Group) - manually.
- By a BGMN (BICC Group Member Number) or BGMN Range - manually.
- By an entire office scheduled once daily - automatic.

There are also two ways that a running outgoing BQ can be halted:

- By stopping a currently running request.
- By aborting the process of the currently running task.

The automatic BICC CIC Query mechanism may be turned on and off. It is possible to query which BICC CIC Query requests are currently being run using the command, OP:JOBSTATUS. Incoming CQM (Circuit Query Message) requests are expected from the CNI and PSU. The expected reply is a CQR (Circuit Query Response) message containing the current CIC states.

4.2 FEATURE ASSIGNMENT

There are no special steps required to provision this feature.

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4.3 TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5I	8.1, 8.15
TKGRP	5202	3	2A	5.1

OFCOPT form (5509 Record) - This form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The subheading ISUP CKT QRY OPTIONS has been renamed ISUP/BICC QRY OPTIONS. The field, CQ START TIME has been renamed CQ/BQ START TIME for 5E15 and later.

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The field TRUNK QUERY, has been renamed CQ/BQ ALW for 5E15 and later.

5. 7R/E PACKET SOLUTIONS 3.0N ATM TRANSPORT SOLUTION VTOA CAUSE VALUE MAPPING

5.1 FEATURE DESCRIPTION

The Cause Value Mapping featuure is being made available with the 5E15 Feature Release 3 Software Update. The feature number for this feature is 99-5E-7942.

Currently when a UNI (User to Network Interface) release cause value is received, its value is mapped to one of five fixed BICC cause values; due to a change in protocol standards this feature provides the following functionality:

- Expands the number of BICC categories from five to six.
- Provides customers the flexibility to provision UNI release cause values to specific BICC values via recent change. The default values shall be the UNI-to-BICC mapping values as they currently exist.

5.2 FEATURE ASSIGNMENT

The UNI cause values and BICC categories are mapped to the BICC cause values.

- If no entry is specified by the customer, then the default values hard cod! ed in a Call Processing code are assigned. A tuple in the relation is created when the craft assigns a non default value to one of 6 BICC categories or performs UNI-to-BICC mapping.

5.3 TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
UNI2BCAU	5589	3	5CF	8.43

UNI2BCAU form (5589 Record) - This form provides the customer with the capability to enter the desired BICC causes from the UNI release cause categories. This form is newly created to support the Cause Value Mapping feature.

6. PROCESSING BICC USER PART UNAVAILABLE

6.1 FEATURE DESCRIPTION

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The feature number for the Processing BICC User Part Unavailable feature is 99-5E-7905. This feature is made available in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

This feature allows support of the UPU (User Part Unavailable) indication from the MTP (Message Transfer Protocol) for BICC. This does not directly apply to UPU support for ISUP (ISDN User Part).

The BICC UPU feature provides the following functionalities at the 7R/E 5ESS Switch:

- Send a BICC UPU in response to a BICC message received, if BICC is not provisioned - PSU (Packet Switch Unit) only.
- Process a BICC UPU received, marking the remote point code unavailable for any subsequent call attempts.
- If the 7R/E 5ESS Switch receives a BICC UPU indication from a point code P and later receives a valid BICC message from point code P, the BICC user part shall be marked available. The first valid BICC message and subsequent messages from point code P shall be processed appropriately by the 7R/E 5ESS Switch.
- If an unsolicited UPU indication is received from a point code P, either while the 7R/E 5ESS Switch is not provisioned for BICC or while point code P is not provisioned for BICC, the UPU indication shall be dropped.
- Stable calls between point code P and the 7R/E 5ESS Switch shall remain up after receipt of a BICC UPU MTP message from point code P until the call is released.
- Transient calls between the 7R/E 5ESS Switch and a point code P shall be handled normally after receipt of a BICC UPU MTP message from point code P.
- Unacknowledged maintenance messages and in-progress test calls between the 7R/E 5ESS Switch and a point code P shall be handled normally after receipt of a BICC UPU MTP message from point code P.
- If the system has received a BICC UPU indication from a point code P, the system shall not attempt to route subsequent calls to point code P via any BICC group(s) until the user part has been marked available.

Terminal Maintenance Interaction:

- BICC CIC statuses shall not change upon receipt of a BICC UPU message from point code P.
- Once a BICC UPU message has been received from a point code P, all pending and subsequent circuit query messages shall be denied until the user part is again available. Each denied message shall be reported on to the customer appropriately.

Input/Output Messages:

- A ROP message shall be printed if a BICC UPU MTP message is received from point code P along with a major alarm.
- A ROP message shall be printed when a point code P notifies the 7R/E 5ESS Switch that the BICC user part is available at point code P.
- An input message shall be provided to display the BICC user part status to a point code P (for example, OP:UPART:PC=P;). The displayed statuses shall include normal/available, and unavailable.
- An input message shall be provided to clear the BICC user part status to a point code P (for example,

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CLR:UPART:PC=P;), therefore marking the point code available.

6.2 FEATURE ASSIGNMENT

There are no special steps required to provision this feature.

SEC. 4A568: COMMERCIAL CREDIT CARD ALTERNATE ACCESS METHODS

1. BACKGROUND

With existing OSPS (Operator Services Position System) features, a customer desiring to bill their call to a card can provide the card number and PIN (Personal Identification Number) or 4-digit expiration date to the OSPS through either automated or operator handling. The OSPS then sends this information, along with other call information, to a database for card validation using a TCAP (Transaction Capability Application Part) query. The database responds to the OSPS with a TCAP reply containing information about the validity of the card and potentially other information. If the card is valid, the OSPS completes the call, provides an AMA (Automatic Message Accounting) record for the call, and provides sequence call handling. If the card is not valid, the OSPS provides appropriate error handling.

At least some commercial credit card vendors or card issuing banks require that additional information for card validation be obtained from the customer. The OSPS, with either automated or operator handling, collects the card number and 4-digit expiration date, and then routes the call to a card verification platform. The platform and/or other network switches complete all further processing on the call, including card validation and call routing.

2. FEATURE DESCRIPTION

The Commercial Credit Card Alternate Access Methods feature is available with the 5E14 FR3 (Feature Release). The feature number for this feature is 98-5E-7680.

This feature provides an alternative method for validating commercial credit cards. It is an alternative to the existing methods of validation using a SS7 (Signaling System 7) TCAP (Transaction Capability Application Part) query or using manual validation. This feature is not related to alternative methods of accessing an OSPS.

This feature does not affect initial OSPS call handling. Calls are routed to OSPS automated or operator handled the same as they would be without this feature. And, billing information is collected the same as it would be without this feature. This includes collection of card numbers and associated PINs or expiration dates.

If the caller requests billing of the call to a card that is type designated in OSPS data, as requiring external routing for card verification, this feature provides the call routing. Such cards are referred to as ERV (External Routing for Verification) cards. The OSPS only allows commercial credit cards in OSPS data to be designated as ERV cards.

Once all call information is collected, if the call is billed to an ERV card, and the call is being handled by an automated position or by an operator, the automated position or operator transfers the call to the OSPS system and is released from the call.

Likewise, if the call is being handled by a SAS (Service Announcement System), the SAS is removed from the call. The OSPS then routes the call without card validation to a recent changeable toll-free routing number using SS7 ISUP (Integrated Service Digital Network User Part) signaling. The card number and PIN or expiration date and other call information are included in the signaling. During the routing, the calling party is split from the connection so that any network noise or announcements can not be heard.

The call is expected to be routed through a toll switch which passes the call information to a card

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verification platform using Q.931 signaling. When the platform receives the call, it is expected to return "answer". Upon receiving "answer", the OSPS unsplits the calling party. The platform then requests any additional required information from the caller and validates the card.

If the card is not valid, the platform provides appropriate error treatment including an announcement. If reprompting is provided, only card types that can be validated by the platform can be accepted. If the card is still not valid, the platform provides a billing record for an uncompleted call, if appropriate, and releases the call.

If the card is valid, the platform completes the call. The call is expected to remain "hairpinned" through the card verification platform.

If the called party disconnects first, the platform provides TRD (Timed Release Disconnect) timing. When TRD expires or the calling party disconnects, whichever occurs first, the platform provides the billing record for the call and releases the call back to the OSPS.

If the OSPS receives a "release" from the terminating connection after "answer", and prior to "calling party release", it does not do TRD timing but instead makes an AMA record for a completed call to the platform's toll-free routing number, and releases the originating connection. The same treatment is provided independent of the call disposition at the platform - invalid card, unanswered call, answered call(s), etc. The OSPS does not accept a "#" for a sequence call.

If the calling party disconnects first, the OSPS detects this, releases the terminating connection, and makes an AMA record for a completed call to the platform's toll-free routing number. The OSPS does not time for flashes even if the call is originated on an operator trunk with operator hold. Any calling party on-hook longer than a "hit", is treated as a disconnect. Upon receiving calling party release, the platform releases the connections and makes an appropriate billing record.

If sequence call handling is provided, it is provided by the card verification platform. That is, after the platform routes the call, it monitors for "#" while awaiting answer and also monitors for "#" during TRD timing. If the caller enters a "#", the platform collects a new called number, revalidates the card, and sets up a new call. The OSPS is unaware of the sequence call.

Because call control does not return to the OSPS after card validation, no features requiring OSPS service after call routing can be applied to the call. This includes personal service, T&C (Time and Charges) service, Quantum service, DACC (Directory Assistance Call Completion), and prompting or routing for VMS (Voice Messaging Service). The OSPS treats an ERV card as an unrecognized card type on automated Quantum calls and does not allow an operator to enter an ERV card on a Quantum call. It also specifically disallows a person and T&C service on calls billed to ERV cards. The OSPS does not indicate in the outgoing signaling that it is available for DACC and does not monitor for VMS service requests.

Also, because the call must be routed from the platform after card validation, the call cannot have been routed to a called party from the OSPS prior to routing to the platform. An operator is not allowed to enter an ERV card after the call has been routed to the called party. This situation could occur either because the operator manually routed the call or because the call was originally billed as collect and the called party requested an operator. Similarly, if the current billing method is an ERV card, the operator is not allowed to manually route to the called party.

Automated inward validation of commercial credit cards is not allowed even without this feature. This feature prevents operator entry of ERV cards on operator-handled inward seizures as well, because the call would not return to the operator if it were routed for external verification.

Because OSPS does not allow a transfer of an operator-initiated call, billing of operator-initiated calls to ERV cards is not allowed.

3. FEATURE ASSIGNMENT

The provisioning of this feature is as follows:

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- Set the ACT fields for SFID 568 on the SFSYS form (5713-1 Record) to "Y".

  NOTE: If this feature is not active, calls are processed as it would without this feature, except if a card designated with an ERV signaling type is entered. If a card with an ERV signaling type is entered while the feature is inactive and all checks pass such that a validation query would be sent, no query shall be sent but instead the card shall be treated as if a "deny-ineligible CCC card" reply had been received in reply to a CAS validation query.

  The craft can prevent this situation from occurring by activating the feature prior to specifying an ERV signaling type and, if it is necessary to deactivate the feature, by removing the ERV signaling type prior to deactivating the feature.

- Set the ACT fields for OFID 974 on the FOSYS form (5713-2 Record) to "Y".

- For 5E14 and later, on the FTPARM form (6424 Record), set the VER ROUTING NBR field to a valid value.

- For 5E15 and later, on the TCCATTR form (5473 Record) or the FTPARM form, set the VER ROUTING NBR field to a valid value.

NOTE: Ths last two items are set when the SIGNALING TYPE is "ERV".

3.1 Call Scenario

1. Caller reaches an OSPS by dialing 1-800-CALLATT, 0+, 01+, 0-, 00-, appropriate number from overseas for a DIOR (Direct International Originations) call, etc.
2. OSPS, an ASP (Automated Position System), or an operator provides standard initial processing.
3. Caller/operator enters called number (if not entered during initial dialing as with a 0+ call) and enters a card number with a PIN or expiration date.
4. OSPS recognizes the card number entered as a card type requiring routing to an external platform verification.
5. If an operator or APS is handling the call, they transfer the call to the OSPS switch when the back number, called number, card number, and expiration date are available.
6. The OSPS splits the caller so they cannot hear or be heard.
7. The OSPS routes the call to the appropriate routing number for the card verification platform. Included in the outgoing IAM (Initial Address Message) are the back number, original called number, card number, and card expiration date.
8. The card verification platform interacts with the caller to collect any additional information required to validate the card, and then validates it.
9. If it is valid, the platform routes the call and provides the billing record.
10. Upon call completion OSPS generates a standard toll-free AMA record.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

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FTPARM	6424	3	4DY	8.41
TCCATTR	5473	3	4BY	27.56
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) IDs for Special and Transparency Features. To activate this feature set the ACT field for OFID 974 to "Y".

FTPARM form (6424 Record) - This form provides the capability for specifying, updating, and/or verifying OSPS (Operator Services Position System) feature options. Added the VER ROUTING NBR field.

SFSYS form (5713-1 Record) - This form is used to enable secured features. To activate this feature the ACT field for SFID 552 must be set to "Y" on this form.

TCCATTR form (5473 Record) - This form defines the attributes for a card type. It is used to group a set of card attributes together so that particular groups of attributes can be associated with a particular card or cards that are identified via the Card Identification Tables. Added the VER ROUTING NBR field and associated data rules.

SEC. 4A569: VOICE TELEPHONY OVER ATM ASYNCHRONOUS TRANSFER MODE LOCAL SERVICES

1. FEATURE DESCRIPTION

The VTOA LS (Voice Telephony Over ATM Asynchronous Transfer Mode Local Services) feature, feature number 99-5E-8020, allows end-users to place voice calls over ATM packet networks. This feature is available with 5E15 and later software releases. It is transparent to end-users; end-users are given no indication that their calls are going over ATM packet networks. VTOA applies to public network inter-switch calls only; intra-switch calls are not affected. This feature extends the call processing capabilities provided by the VTOA Call Processing using PSAX as IWG (Inter Working Gateway) feature (99-5E-8018). This feature adds support for line and certain trunk originated calls.

A call originating from a circuit line or trunk first goes through existing 5ESS switch digit analysis which yields a route index. When this route index is marked with a BICC (Bearer Independent Call Control) trunk group number, the call is routed over ATM packet networks. When the route index is marked with a circuit trunk group number, the call is routed over a circuit trunk using the existing procedure.

Incoming ATM packet calls are also supported by the VTOA LS feature. These incoming packet calls are allowed to encounter terminating feature(s) on the VTOA. Incoming packet calls may terminate locally on the VTOA, or they may be redirected to another switch as a result of terminating feature invocation such as Call Forwarding, Call Transfer, or Terminating Access Trigger. Incoming ATM packet calls that are redirected to another switch by another feature may, in some cases, be allowed to complete over ATM packet networks (ATM-to-ATM routing) wherever possible, or they may go over circuit trunks (ATM-to-Circuit routing). This feature is secured with secured feature ID 569.

1.1 ORIGINATING LINE TREATMENT

The following originating line classes of service are supported by this feature:

10PTY ten-party line

2PTY two party MFR line

4PFS four-party fully selective line

4PSS four-party semi-selective line

4WIRE_INDV four wire individual line

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5PTY	five-party line
8PSS	eight-party semi-selective line
ATTENDANT	attendant line
CHGACALL	charge-A-call phone
COIN	coin phone
HOTMOTL	special line termination at hotel or motel equipment
INDVDL	individual line
ISATND	ISDN attendant line
ISDN	Integrated Services Digital Network line
PBX	line to a Private Branch Exchange
TWOPTY	two-party line
PBXHOTMOT	special PBX line termination to hotel or motel equipment

Calls originating from a line with an non-supported class of service utilize circuit routing.

1.2 ORIGINATING TRUNK TREATMENT

The following originating trunk classes of service are supported by this feature:

PF	BRCS Private Facility trunk
PFLASH	BRCS Private Facility Flash Repeating trunk
PFITT	BRCS Private Facility Inter-tandem trunk
EDSL	EDSL trunk
EDSLHM	EDSL trunk with hotel/motel to TSPS

Calls originating from a trunk with an non-supported class of service utilize circuit routing.

1.3 TERMINATING LINE TREATMENT

The following terminating line classes of service are supported by this feature:

10PTY	ten-party line
2PTY	two party MFR line
4PFS	four-party fully selective line
4PSS	four-party semi-selective line
4WIRE_INDV	four wire individual line
5PTY	five-party line

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8PSS	eight-party semi-selective line
911	emergency bureau line
ATTENDANT	attendant line
CHGACALL	charge-A-call phone
COIN	coin phone
HOTMOTL	special line termination at hotel or motel equipment
INDVDL	individual line
ISATND	ISDN attendant line
ISDN	Integrated Services Digital Network line
PBX	line to a Private Branch Exchange
TWOPTY	two-party line
PBXHOTMOT	special PBX line termination to hotel or motel equipment

A call routing over an ATM attempting to terminate to a line with a non-supported class of service receives no circuits available treatment.

1.4 TERMINATING TRUNK TREATMENT

The following terminating trunk classes of service are supported by this feature:

AIS	Automatic Intercept System trunk
ANNCCMNT	Local announcement trunk
PF	BRCS Private Facility trunk
PFLASH	BRCS Private Facility Flash Repeating trunk
PFITT	BRCS Private Facility Inter-tandem trunk
EDSL	EDSL trunk
EDSLHM	EDSL trunk with hotel/motel to TSPS
PBXDID	Private Branch Exchange inward dialing

A call routing over an ATM attempting to terminate to a line with a non-supported class of service receives no circuits available treatment.

2. TRANSLATION REQUIREMENTS

To activate this feature, ACT must be "Y" for SFID 569 and 567. No further translations are required to provision this feature. This feature requires a BICC group. Please refer to Division 2, Section 4A567 for translation requirements of BICC groups.

New and Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - The Secured Feature System Assignment form is used to activate secured features. This feature is activated by setting the ACT field for SFIDs 569 and 567 to "Y".

SEC. 4A570: Proxy Database Phase 1 - Recent Change and SQUAL

1. FEATURE DESCRIPTION

Available with 5E15 and later Software Releases, the Recent Change and SQUAL component of the Proxy Database Phase 1 feature (99-5E-7127) impacts the Recent Change interface only. It is secured with SFID 570 and along with the Proxy Database component, SFID 539, provides enhanced performance and increased speed of Recent Change operations, read, verify and query.

Also, a high speed generalized RC (Recent Change) query capability for the RC database using SQUAL is implemented. Further information can be found in the RC Procedures Manual, 235-118-251.

2. FEATURE ASSIGNMENT

This feature cannot be assigned using ODA. This feature can only be assigned by using Recent Change to activate SFID 570.

When SFID 570 is activated, the following SFIDs must also be activated:

- 297 - ASM (Administrative Services Module) Base feature (99-5E-4237). Refer to Division 2 Section 4A297 for further information on this feature.
- 539 - Proxy Database Phase 1 - Proxy Database (99-5E-7127). Refer to Division 2 Section 4A539 for further information on this feature.
- 322 - Recent Change Front End on the ASM (99-5E-4095). Refer to Division 2 Section 4A322 for further information on this feature.

3. TRANSLATION REQUIREMENTS

There are no ODA translation requirements for this feature.

SEC. 4A571: Proxy Database Phase 1 - User Defined Database

1. FEATURE DESCRIPTION

Available with 5E15 and later Software Releases, the User Defined Database component of the Proxy Database Phase 1 feature (99-5E-7127) enables data storage in a user defined database which resides on the ASM (Administrative Services Module). Access to user defined data is accomplished through the implemenation of an SQL (Structured Query Language) interface over a TCP/IP based network. This component of the Proxy Database Phase 1 feature is secured with SFID 571. There is does no impact to ODA.

2. FEATURE ASSIGNMENT

This feature cannot be assigned using ODA. This feature can only be assigned by using Recent Change to activate SFID 571.

When SFID 571 is activated, SFID 297 for the ASM (Administrative Services Module) Base feature (99-5E-4237) must also be activated. Refer to Division 2 Section 4A297 for further information on this feature.

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3. TRANSLATION REQUIREMENTS

There are no ODA translation requirements for this feature.

SEC. 4A572: ASP Unrestricted FCD Trigger

1. BACKGROUND

This feature applies to the 5ESS Switch, 5ESS Switch CDX (Compact Digital Exchange) and the 5ESS Switch VCDX (Very Compact Digital Exchange). It does not apply to the 5ESS LDP (Long Distance Platform). Before this feature, the existing FCD trigger is "restricted" in the sense that it can only be encountered from lines and PF (Private Facility) trunks that have an ASP originating feature assigned. It is beneficial for service providers to have, in additional to the existing restricted version of the FCD trigger, an "unrestricted" FCD trigger where assignment becomes unnecessary.

2. FEATURE DESCRIPTION

Available with 5E15 and later Software Releases, the ASP Unrestricted FCD Trigger feature, feature number 99-5E-7618, allows every line/PF-trunk in a Public Office Dialing Plan to access AIN services made possible by unrestricted FCD triggers. In addition, the feature provides the capability of blocking selected (unrestricted FCD) triggers by those users who show no interest in using specific services and do not want to access them by inadvertently dialing the trigger code. The types of line/PF-trunk that can originate calls to Unrestricted FCD triggers are the same as those that can be provisioned to originate calls to encounter the (existing restricted) FCD triggers. However, unlike the existing restricted FCD trigger, the Unrestricted FCD trigger will not be recognized if the protocol associated with the trigger is ASP Rel 0.

3. FEATURE ASSIGNMENT

For 5E15 and later, to enable this feature, the ACT field for SFID 572 on the SFSYS form (5713-1 Record) must be set to "Y".

- SFSYS form:
  - SFID 126 for ASP feature and SFID 572 must both be set to "Y".
- PDIT form:
  - FEATURE = /*
  - CALL TYPE = FEATURE
  - ACTION = ASPDNC, ASPNORM, or ASPVAR
  - TRIG NUM must be entered and must match a corresponding TRIG NUM on the NSTRIG form where APPLICATION = ASP and AIN REL is ROD1
- LINE form, MLHLN form, DSLUSR form, TKGRP form:
  - If URT FCD BLK is set to "Y", then this TN, CKTTN, MLHG TN, or TGN cannot invoke an FCD code. If URT FCD BLK is set to N, then individual FCD codes can be blocked for this TN/CKTTN on the LNBLKCOD form and for the PF trunk group on TKBLKCOD form.
  - In addition, TRKCLS on the TKGRP form must be set to "PF", "PFITT", or "PFLASH".

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Refer to Figure 1 for provisioning form flow.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
DSLUSR	5908	5	1I	23.2
LINE	5109	3	1I	1.6
LNBLKCOD	5649	4	31H	4.40
MLHLN	5111	3	1K	1.6
PDIT	5300-2	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22
TKBLKCD	5275	3	2X	5.65
TKGRP	5202	3	2A	5.1

DSLUSR form (5908) - The 5908 Record is used to collect data for digital subscriber lines. For 5E15 and later, added the URT FCD BLK and BLK LN CODE fields.

LINE form (5109-1) - The 5109-1 Record is used to create all line records with Telephone Numbers. For 5E15 and later, added the URT FCD BLK and BLK LN CODE fields.

LNBLKCOD form (6949) - The 6949 Record provides analog and ISDN circuit TNs the capability of blocking selected (unrestricted FCD) triggers by those users who show no interest in using specific services and do not want to access them by inadvertently dialing the trigger code. This is a new form for 5E15.

MLHLN form (5111) - The 5111 Record is used to create MLH Line Members. For 5E15 and later, added the URT FCD BLK and BLK LN CODE fields.

PDIT form (5300-2 Record) - This form is used for defining and modifying prefix, operator and feature access dialing codes. For 5E15 and later, changed the data rules that support the "ASPDNC", "ASPNORM", and "ASPNORM" enumerations for the ACTION field.

SFSYS form (5713) - The 5113 Record is used to enable secured features. Added SFID 572.

TKBLKCD form (5275) - The 5275 Record provides private facility trunk groups the capability of blocking selected (unrestricted FCD) triggers by those users who show no interest in using specific services and do not want to access them by inadvertently dialing the trigger code.

TKGRP form (5202) - The 5202 Record used to define each Trunk Group in a 5ESS Switch. For 5E15 and later, added the URT FCD BLK and field.

5. GLOSSARY

ASP	Advanced Services Platform
FCD	Feature Code Dialing
ISDN	Integrated Services Digital Network
PF	Private Facility
SFID	Secured Feature ID
TN	Telephone Number

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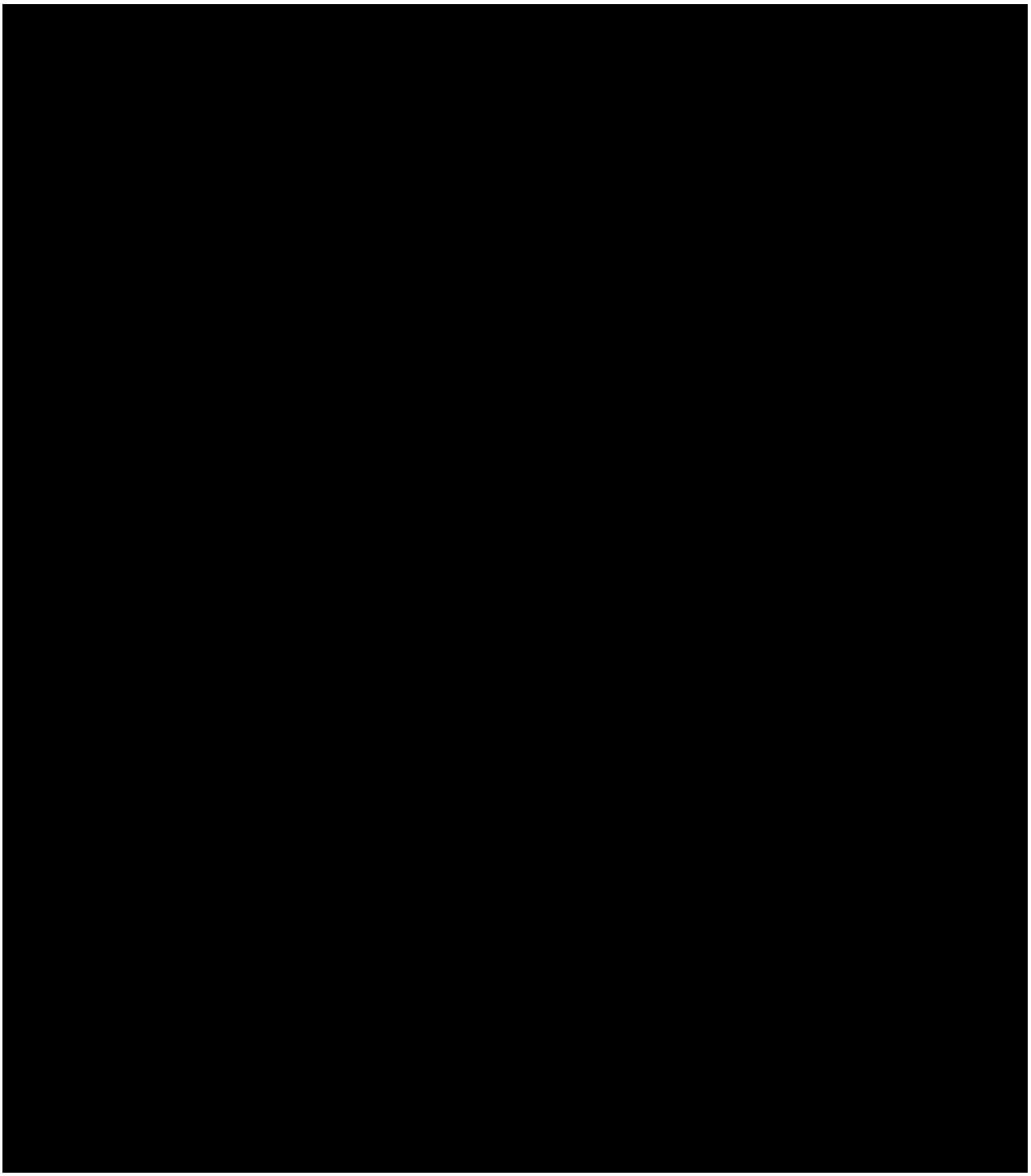

Figure 1 FORM FLOW FOR ASP UNRESTRICTED TRIGGER

SEC. 4A573: NON-RESTRICTIVE ANI OVER PRIVATE FACILITIES

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4A575: LTSB INTERWORKING WITH HOME INTERCOM

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1. FEATURE DESCRIPTION

The feature number for the LTSB (Line Time Slot Bridging) Interworking with Home Intercom feature is 99-5E-7178. This feature is controlled by SFID (Secured Feature ID) 575 and is made available with 5E15 Feature Release 2 and in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

LTSB allows OTC (Operating Telephone Companies) to offer business and residential customers an off-premise extension for a single DN (Directory Number) (one-DN LTSB) or bridging of two DNs (two-DN LTSB).

The LTSB Interworking with Home Intercom feature allows either the lead or the non-lead line of a one-DN LTSB to invoke a Home Intercom/Single Line Variety Package service.

The Home Intercom/Single Line Variety Package includes:

- Basic Home Intercom allows a user to dial their own DN and hang up after receiving the busy tone. After the phone is hung up, the switch applies the distinctive ringing pattern to the 1-DN LTSB extensions on both lines.
- Home Intercom Code Dialing allows a user to dial a HI (Home Intercom) code instead of dialing their own DN to generate ringing on the 1-DN LTSB extensions on both lines.
- Selective Intercom Dialing allows users to make a Home Intercom call with one of four distinctive ringing patterns (ringing pattern A, B, C, or G) by dialing a dial code which corresponds to the desired ringing pattern.
- Selective Call Transfer allows a user with an established call to an outside party to alert another user on the same line to take the call.
- Dialable Hold allows users to place an outside call on hold, go on-hook, and then retrieve it from the same or another extension on that same line.

The switch need only recognize flashes, for Home Intercom services, from either the LTSB Lead or Non-Lead line only when one of the lines is off-hook and the other is on-hook and idle.

If Dialable Hold has been invoked by either the Lead or Non-Lead line and either of these lines goes off-hook prior to the switch applying Dialable Hold ring-back, the following happens:

- If the line that goes off hook is the line that invoked Dialable Hold, the switch establishes a connection between the held party and the LTSB line.
- If the line that goes off hook is not the line that invoked Dialable Hold, the switch does not establish a connection between the held party and the LTSB line, but instead gives the line busy tone to indicate that the other line is busy and cannot be bridged on.

When an LTSB line answers the ringback from a SCT (Selective Call Transfer), it becomes the "controller" of the SCT. If the LTSB SCT controller, while in private consultation, is barged in on by the other LTSB line and the controller disconnects, the disconnect is treated as a flash leaving the LTSB line that barged into the call connected to the external party. In addition, only the LTSB SCT controller can end private consultation with a flash, a flash from the other LTSB line is ignored.

Recent Change allows an LTSB line to be assigned a Home Intercom feature. Recent Change also allows a line with a Home Intercom feature to be made an LTSB line(s). This feature is not available to two-DN LTSB lines.

This feature (99-5E-7178) depends on the IBDS (Internally Bridged Dual Service) Package 3 feature (99-5E-4184) (SFID 280).

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2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFIDs 280 and 575 on the SFSYS form (5713-1 Record) must be set to "Y".
- Activate/deactivate LTSB/HI feature for a line by assigning a Home Intercom feature to a line using either the LINEFA, BFG, or the CLUSTR form.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
BFG	5625	4	26A	12.9
CLUSTR	5600	4	1A	12.2
LINE	5109	3	1I	1.6
LINEFA	5112	3	1L	1.8,1.11
SFSYS	5713-1	3	5AR	8.22

BFG form (5625 Record) - The BFG (BRCS Feature Group Construction) form is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN (Integrated Services Digital Network) terminals. The BFG form is designed to assist the switch owner in the conservation of Switching Module memory and the improvement of Recent Change response time, and it cannot be used with trunks.

CLUSTR form (5600 Record) - The CLUSTR form defines a cluster of BRCS (Business and Residence Custom Services) feature names.

LINE form (5109 Record) - The LINE form defines the Office Equipment Number and features for each TN (Telephone Number) in a 7R/E 5ESS Switch.

LINEFA form (5112 Record) - The LINEFA form assigns up to 48 BRCS (Business and Residence Custom Services) Features to a specific customer Telephone Number.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFIDs 280, and 575 to "Y".

SEC. 4A577: PER USE TWC THREE WAY CALLING WITH CALL TRANSFER

1. BACKGROUND

The originator of a three way call controls the call. Without the Per Use TWC (Three Way Calling) With Call Transfer feature, when a three way call is established using a USTWC (Usage Sensitive Three Way Calling) feature, the originator must remain on the call in order to maintain the connection between the other two parties. Once the originator disconnects from the call, all parties are disconnected.

2. FEATURE DESCRIPTION

The Per Use TWC with Call Transfer feature, feature number 99-5E-7502, enhances the capabilities of existing USTWC features by providing a transfer option. This allows the controller of a per use or usage sensitive three way call to disconnect while leaving the other two parties connected on the call. Existing USTWC features which are supported include:

- Access Code USTWC (99-5E-1230)
- SUSTWC (Spontaneous USTWC) (99-CP-2530)

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- Access Code Option For Spontaneous USTWC (99-5E-4381)

These existing features provide Per Use Three Way Calling capability. The transfer option, provided by the Per Use TWC with Call Transfer feature, transfers call control from the originator to one of the remaining two parties when the originator disconnects during a Per Use Three Way call.

NOTE: The original controller continues to be billed until all parties disconnect.

End users for this feature would typically be residential or small business subscribers. Coin lines and Charge-A-Call lines are not supported by this feature. The end users' CPE must have switch hook flash capability. The controller can accomplish a transfer when:

- at least one of the two remaining party's phone lines resides in the same 5ESS Switch as the controller's phone line, or
- the controller was called by the first remaining party using an incoming trunk to the 5ESS Switch serving the controller's phone line.

Though, it cannot always be known whether remaining parties are connected using lines or trunks.

This feature enhancement is available with 5E15 and later releases. It is secured with SFID 577. This feature requires at least one other USTWC feature to be active.

3. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 577 on the SFSYS form (5713-1 Record) must be "Y".
- The ACT field for either SFID 106 or SFID 156 on the SFSYS form must be "Y"
- Assign to an individual line using the LINE form (5109 Record):
  - USTWC ALW XFER must be "Y", and
  - USTWC ALW or SUBSCR USTWC must be "Y".
- Assign to a multiline hunt line using the MLHLN form (5111-1/2/3 Record):
  - USTWC ALW XFER must be "Y", and
  - USTWC ALW or SUBSCR USTWC must be "Y".

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109	3	1I	1.6
MLHLN	5111-1/2/3	3	1K	1.6
SFSYS	5713-1	3	5AR	8.22

LINE form (5109 Record) - The LINE form is used to define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch. The USTWC ALW XFER field has been added.

MLHLN form (5111-1/2/3 Record) - The MLHLN form is used to define the individual Terminal Numbers that are assigned to a particular MLHG (Multiline Hunt Group). The USTWC ALW XFER field has been

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added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 577 to "Y".

SEC. 4A578: VISUAL CALL PICKUP

1. BACKGROUND

Currently, the Call Pickup feature is provided by two separate modular features, CPUO (Call Pickup Originating) and CPUT (Call Pickup Terminating). A customer can subscribe to either one or both features.

The CPUO feature allows a station user to answer a call that has terminated (i.e., ringing/alerting) to another station in the defined call pickup group. A pickup group is a number of subscribers that share the same pickup queue. Here, the terms group and queue are synonymous. Both analog and ISDN (Integrated Services Digital Network) terminals can belong to the same pickup group. A call pickup is accomplished by dialing a pickup access code or pressing a call pickup feature button while the called station is being rung. If more than one station/call in the group is being rung, the call that has been ringing the longest is picked up first. Once a call is picked up, the ringing on the original called station stops and the call is dequeued from the call pickup queue. The CPUO is a per terminal feature. A terminal can subscribe up to a maximum of 4 pickup groups/queues each with its own access code or feature button.

The CPUT feature allows a call terminated to a station to be picked up by another station user in the same defined call pickup group. The CPUT is a per DN (Directory Number) feature. When a call terminates to a station with CPUT feature, the station starts ringing, as well as, the call is placed in the pickup queue so that other group members can pick up the call while the call is ringing. When the call is picked up by another member, the ringing stops and the call is dequeued from the pickup queue.

The CPUO feature is defined in PUOFD form. The CPUT feature is defined in the PUTFD form. The Call Pickup Line Parameters for both CPUO and CPUT are defined in PULPA and PUMPA forms. The CPUO and CPUT feature attributes for a line can also be defined in the DSL and DSLUSR forms and in the BFG form. The Call Pickup features (CPUO and/or CPUT) are assigned to a line on the LINEFA form.

The Visual Call Pickup feature is being implemented as an enhancement to the existing Call Pickup features.

2. FEATURE DESCRIPTION

The feature number for the Visual Call Pickup feature is 99-5E-2551. This feature is an ISDN only feature. This feature is controlled by SFID (Secured Feature ID) 578 and is made available with 5E15 Feature Release 2 and in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

The Visual Call Pickup feature allows ISDN users with call pickup feature buttons to have their terminal notified whenever there are calls ringing in their pickup groups/queues that they are allowed to pickup. Once the terminal is notified, the pickup feature button lamp starts flashing at the ISDN station. The ISDN station user can then press the feature button or dial the access code to pickup the call. Once a call is picked up, the original called station for that call stops ringing.

When there are no calls ringing in the call pickup group/queue another de-notification is sent to the ISDN stations to turn the feature button lamp off.

The call pickup notifications will only be sent to the ISDN terminals (Custom and National) in the pickup group. No visual notification is sent to analog stations. However, visual notifications will be sent to ISDN stations for calls ringing on any other terminal (analog or ISDN), and visually notified calls can be picked up by any other terminals (analog or ISDN) within the pickup group.

Since an ISDN station can have up to 4 pickup feature buttons, up to 4 notification options may be

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assigned, one for each pickup group/queue that the station may pick up from. That is, notification messages to turn the feature button lamp on or off will be on a per pickup group/queue basis.

The Visual Call Pickup feature applies to Call Pickup Originating feature that has a Call Pickup Queue associated with it. The VCP feature does not apply to Directed Call Pickup with/without Barge-In features.

3. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID and 578 on the SFSYS form (5713-1 Record) must be set to "Y".
- The fields, NOTIFY 1, NOTIFY 2, NOTIFY 3, and NOTIFY 4 must be set to "Y" on the PULPA, or PUMPA forms.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PULPA	5605-3	4	6C	1.23
PUMPA	5605-4	4	6D	1.23
SFSYS	5713-1	3	5AR	8.22

PULPA form (5605-3 Record) - The PULPA form is used to define specific parameters assigned to every non-Multi-Line Hunt Group line associated with a specific constructed call pickup feature. The NOTIFY 1, NOTIFY 2, NOTIFY 3, and NOTIFY 4 fields have been added.

PUMPA form (5605-4 Record) - The PUMPA form is used to define specific parameters assigned to every Multi-Line Hunt Group line associated with a specific constructed call pickup feature. The NOTIFY 1, NOTIFY 2, NOTIFY 3, and NOTIFY 4 fields have been added.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 578 to "Y".

SEC. 4A579: TALKING CALL WAITING WITH CALLER ID

1. FEATURE DESCRIPTION

The feature number for the Talking Call Waiting with Caller ID feature is 99-5E-7728. This feature is controlled by SFID (Secured Feature ID) 579 and is being deployed in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

This feature is an enhancement to the base Talking Call Waiting feature (99-5E-4605) that is controled by SFID 331. For more information on the base feature see Division 2, Section 4A331.

This capability (99-5E-7728) provides the subscriber the voiced name of the call waiting party even if the caller ID information was provided to the subscriber. Without this feature, the voiced name is provided via TCW only if the ACK (acknowledgement) was not received from the CPE (Customer Premise Equipment). If the ACK was not received from the CPE, the caller ID information is not sent to the subscriber.

2. FEATURE ASSIGNMENT

To provision this feature:

- Set the ACT fields for SFID 331, to "Y" on the SFSYS form (5713-1 Record) to activate the base Talking Call Waiting feature.

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- Set the ACT fields for SFID 579 to "Y" on the SFSYS form (5713-1 Record) to activate the Talking Call Waiting with Caller ID feature.

There are no new forms or new fields added for this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 331, SFID 579 to "Y".

SEC. 4A584: AIN OPERATOR SERVICES TRIGGER

1. FEATURE DESCRIPTION

The feature number for the AIN (Advanced Intelligent Network) Operator Services Trigger feature is 99-5E-7517. This feature is controlled by SFID (Secured Feature ID) 584 and is being deployed for the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

This feature applies to the 5ESS Switch, 5ESS CDX (Compact Digital Exchange) Switch, the 5ESS VCDX (Very Compact Digital Exchange) Switch, and the 7R/E PLS 4.0 Platform. This feature is not supported on the 5ESS LDP (Long Distance Platform).

Currently, the 5ESS Switch does not have the mechanism to allow operator requested calls (0- and 0+ calls) to encounter a true Operator Services trigger as defined in GR-1298-CORE. With the absence of this true Operator Services trigger, service providers have been simulating this trigger for "0-" operator requested calls by using a DNT (Dialed Number Trigger). This simulated trigger processing however, does not support the Operator Services Trigger processing defined in GR-1298-CORE. That is, it does not provide a unique Trigger Criteria type in the message that is sent from the SSP (Service Switching Point) to the SCP (Signaling Control Point). This work-around also does not support the "0+" operator requested calls.

The purpose of this feature is to provide an Operator Services Trigger as defined by Telcordia GR-1299-CORE. Operator Services Triggers are encountered based on a prefix dialed by the customer before the main digit string, or based on the Nature of Number field of the Called Party ID parameter returned in an SCP/Adjunct Response message. There are two new Trigger Criteria types, ZeroPlus and ZeroMinus. The new trigger is detected via a trigger number on the PDIT form. The switch allows this trigger number to be provisioned only for Operator type calls. A call is considered an Operator Services type call if either the PREFIX field on the PDIT form is "0+", or the CALL TYPE field is "OPER" or "IDDDOPER".

This feature does not support the detecting of OS triggers on incoming ISUP trunks. This feature only encounters OS Triggers on line originations and line-like trunk originations. This feature is applicable only to those offices which have unlocked ASP (Advanced Services Platform) Rel 0.1B.

Typically, the end user for this feature is a telephone caller that has placed a telephone call with 0- or 0+ prefix and has encountered an OS Trigger in the SSP. The caller may then be offered an AIN service or an AIN service may be provided on the caller's behalf by the service provider.

This feature does not limit calls that encounter OS triggers to be routed to operator service trunks only. This feature supports any routing that the SCP instructs the SSP to do via the Analyze_Route message. Therefore, it is possible for services to be built where routing is to a line termination, a PF trunk, IC trunk, etc.

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Line owners can subscribe to alternate operator services (i.e., OS services other than the traditional OS service given by their Service Provider). In addition, the line owner can subscribe to alternate operator services based on Time of Day or Day of Week. The OS triggers in the SSP are office wide and are not on a subscription basis. Therefore, the subscription data would reside in the SCP. When a caller originates a 0-/0+ call from an SSP office that has this feature unlocked and the OS Trigger active, the SSP sends a query to the SCP for further instructions when the OS Trigger is encountered.

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT fields for SFID 584 and either SFID 254 or 256 on the SFSYS form (5713-1 Record) must be set to "Y".
- The OS TRIG INH field on the SCRIDXPA form (5543 Record) can then be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PDIT	5300-2	3	3B	9.2
SCRIDXPA	5543	3	5AQ	8.24
SFSYS	5713-1	3	5AR	8.22

PDIT form (5300-2 Record) - This form is used to define the Prefix/Feature Digit Interpreter in a 5ESS Switch. A new field PREFIX TRIG NBR is added for 5E16 and later.

SCRIDXPA form (5543 Record) - This form is used to assign parameters to a line or trunk on a per screening index basis. A new field OS TRIG INH is added for 5E16 and later.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 584 and either 254 or 256 to "Y".

SEC. 4A585: FURNISH AMA RECORDING FOR ABANDONED STOR CONNECTIONS

1. FEATURE DESCRIPTION

The feature number for the Furnish AMA (Automatic Message Accounting) Recording for Abandoned STOR (Send to Outside Resource) Connections feature is 99-5E-7787. This feature is controlled by SFID (Secured Feature ID) 585 and is being deployed in the 5E15 FR2 (Feature Release 2) Software Release.

This feature provides a slightly different AMA recording mechanism than the one provided in the ASP (Advanced Services Platform) AMA Recording for Abandoned STOR Connections feature (99-5E-7404). Instead of an AMA record with a "dummy" AMAslpID value of 900000050, which depends on a receipt of an AMAMeasure parameter, this feature provides an "abandoned" AMA record independent of the presence of an AMAMeasure parameter. When this feature is unlocked, the presence of the AMAslpID and the absence of the AMAMeasure parameter cause an AMA record to be generated with the received AMAslpID value. In addition, other AMA parameters which were received with the STOR message are also recorded, (e.g., AlternateBillingIndicator, Furnish_AMA data, etc.). For more information on the ASP feature (99-5E-7404), see Division 2, Section 4A534.

This capability (99-5E-7787) produces an AMA record for a STOR connection when the caller abandons during the IP (Internal Protocol) operation when the STOR message contains an AMAslpID but does not contain an AMAMeasure parameter.

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The AMA record contains the AMAslpID provided in the STOR message, and records other AMA-related parameters included in that message. In addition, the duration of the IP connection is measured and recorded in a module 290, appended to the base AIN (Advanced Intelligent Network) structure.

AMA OSs (Operating Services) should be able to accept an AIN AMA record with a 0-duration connect time, an arbitrary AMAslpID values (e.g. not the 900000050 "dummy" value used by 99-5E-7404 for abandoned calls), and a module 290 appended, as well as other "normal" AIN AMA tables and modules, including those provided by the Furnish AMA capability.

AIN SCPs (Service Control Points) should be able to support sending the Furnish_AMA_Info component together with a STOR message. This is done in order to append SCP-supplied modules to the end of the record produced by the switch when the caller abandons an IP connection.

2. FEATURE ASSIGNMENT

To provision this feature:

- Set the ACT fields for SFID 126, to "Y" on the SFSYS form (5713-1 Record) to activate the base ASP feature.
- Set the ACT fields for SFID 229 to "Y" on the SFSYS form (5713-1 Record) to activate the AIN (Advanced Intelligent Network) Send To Outside Resource (local) feature.
- Set the ACT fields for SFID 585 to "Y" on the SFSYS form (5713-1 Record) to activate this feature. This feature is dependent upon SFID 126 and SFID 229.

NOTE: The ACT field for SFID 516 must be set to "Y" in order for Furnish_AMA to receive a STOR message. However, SFID 585 is not dependent on SFID 516. If SFID 585 is unlocked and SFID 516 is locked, you can still get abandoned STOR records, but any Furnish_AMA in the STOR message is ignored.

There are no new forms or new fields added for this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 126, SFID 229, and SFID 585 to "Y".

SEC. 4A586: DIRECT CALL TRANSFER TO VOICE MAIL

1. FEATURE DESCRIPTION

The feature number for the Direct Call Transfer to Voice Mail feature is 99-5E-7812. This feature is controlled by SFID (Secured Feature ID) 586 and is made available in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

The DTVM (Direct Call Transfer to Voice Mail) feature is a call transfer feature that enables a call to transfer directly to the desired calling party's Voice Mail box.

After a call from caller A has been answered by an ISDN (Integrated Services Digital Network) or Analog terminal C (e.g., secretary), the DTVM feature enables the terminal to transfer this call directly to the Voice Mail box of the desired party (B) using the DN (Directory Number) provisioned as the CFBL (Call Forward Busy Line) DN associated with line B. (It is assumed that the CFBL DN is B's Voice Mail DN.) The call is

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routed as a forwarded call to the Voice Mail System with no indication given to B's terminal, e.g., ping ring) with the forward to DN as party B and calling party number of caller A. If no CFBL DN is assigned to line B, the call is treated as a call from caller A to line B.

It is assumed that the Voice Mail user is on the same switch as the ISDN terminal with the Direct Transfer feature button so that the CFBL DN of the Voice Mail user can be determined.

DTVM is supported for voice call transfer only.

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 586 on the SFSYS form (5713-1 Record) must be set to "Y".
- The pre-constucted feature name is "/MWDTVM" on the MWFD form.
- Assign actions, feature buttons, and dial access codes:

    1. For the office dialing plan, CALL TYPE must be set to "FEATURE", FEATURE must be set to "/MWDTVM", ACTION must be set to "DTVMCF", "DCDTVM" on the PDIT form.
    2. For the individual dialing plan, FEATURE must be set to "/MWDTVM", ACTION must be set to "DTVMCF", "DCDTVM" on the IDPDCA form.
    3. For Configuration Group Definition, FEATURE must be set to "/MWDTVM", ACTION must be set to "DTVMCF", DCDTVM" on the CFGGRP form.

- The TN or CKTN must be defined on the LINE form or the DSLUSR form with a LCC/RAX value that corresponds to one of following CLASS OF SERVICE on the LCC form - "INDIV" or "ISDN".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CFGGRP	5964	6	7A	12.5
DSLUSR	5908	5	1I	23.2, 23.8
IDPDCA	5601	4	2B	9.13
LINE	5109	3	1I	1.6
MWFD	5602	4	3A	12.19
PDIT	5300	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) user terminal buttons.

DSLUSR form (5908 Record) - This form defines the associated TN(s) and status of a DSL user, the circuit switching (voice and data) attributes, the D-channel packet switching attributes, and the On Demand B-channel packet switching attributes of a DSL user.

IDPDCA form (5601 Record) - This form is used to define the dialed codes associated with IDPs (Individualized Dialing Plans).

LINE form (5109 Record) - The LINE form defines the Office Equipment Number and features for each TN (Telephone Number) in a 7R/E 5ESS Switch.

MWFD form (5602 Record) - This form is used to define many of the Add-On and conferencing features used in other switching systems (e.g., Call Hold, Three-Way Calling, Six-Port Conferencing, and Call

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Transfer). It is also used to define how call processing will be affected by customer attempts to flash or disconnect while holding, adding, or transferring calls.

PDIT form (5300 Record) - The purpose of the PDIT form is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table) form.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 586 to "Y".

SEC. 4A587: SIMULTANEOUS RINGING

1. FEATURE DESCRIPTION

The feature number for the Simultaneous Ringing feature is 99-5E-7457. This feature is controlled by SFID (Secured Feature ID) 587 and is available in 5E16(2) and later Software Releases.

Simultaneous Ringing is a switch based feature that allows a subscriber to receive a call at up to five different locations. A call coming into the user's DN (Directory Number) alerts up to five DNs simultaneously. A DN which has this feature assigned is recognized as the PDN (Pilot Directory Number). The PDN is the main directory number that calls are placed to. The user can define a list which associates up to four other DNs with the PDN. The other DNs in this list are recognized as MDNs (Member Directory Numbers) and create a Simultaneous Ringing group. When a call comes into the PDN, the PDN and all associated MDNs receive alerting. The first DN that is answered is connected to the calling party and alerting stops at all DNs in the group.

A subscriber activates and deactivates this feature by using dial codes either from the PDN or a remote DN. With the base feature (99-5E-7457), the MDN list could only be edited from the PDN. However, available as a Software Update for the 5E16(2) and 5E17(1) 5ESS Switch Software releases, and in the BMI (Beginning Managed Introduction) of 5E18(1) 5ESS Switch Software release, an enhancement is introduced. This enhancement allows the MDN list to be modified from any DN using the RAS (Remote Access Service) functionality. The end user dials a RADN (Remote Access DN) from any touch tone line. After dialing the RADN, the user dials their home phone number (PDN), a PIN (Personal Identification Number), and then the feature code to edit the MDN list. From this point on the switch provides the appropriate Simultaneous Ringing announcements and user interfaces as if the user had entered the MDN list editing access code from their home DN. The remote access parameter on the LINE form, or RC (Recent Change) Views 1.8 or 1.11, must be set to "Y" in order for the user to have remote access to the MDN list editing capability. This feature enhancement is not controlled by a secured feature, but is dependent upon the base functionality, thus the Secured Feature ID 587 must be activated before the feature enhancement is activated.

A PDN that has the Simultaneous Ringing feature active is considered busy when, the PDN and all associated MDNs are either busy on a call, or currently alerting with a Simultaneous Ringing call. A call directly to an individual MDN alerts only at that MDN. An MDN in one Simultaneous Ringing group may be designated as the PDN for another Simultaneous Ringing group. Calls to a Simultaneous Ringing group are allowed to alert a second level of Simultaneous Ringing groups, however the proliferation is stopped before a third level of Simultaneous Ringing groups are alerted on the same switch. Subscribers to this feature need to be aware of the effect of answering machines. When an answering machine or voice mail answers a simultaneous ringing call, the caller is connected to the answering machine that answers first, the caller may not realize that it may not be an answering machine associated with the number dialed (PDN). The answer could be from a machine associated with one of the MDNs, but if the caller does not listen closely to the greeting message, or the greeting message is a generic message that just indicates something like "please leave a message", the caller may leave a message at an MDN's answering machine. Subscribers need to be aware of this impact and adjust the ring counters or answer timers such that the answering machine the subscriber would like to use for Simultaneous Ringing calls has the shortest timer or ring counter. The number of rings or the length of the answer timer for answering machines need to be considered. If an answering machine has a short timer or a small number for its ring

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counter, it may answer the call before all DNs have a chance to alert, or may cause the DNs to only alert for a short period of time. The Simultaneous Ringing feature is not part of a Cluster or BFG (BRCS (Business Resident Customer Service) Feature Grouping).

The PDN can be a residential or Centrex analog line. The PDN must be a dialable DN and not a software created DN. The PDN can not be associated with a MLHG (Multiline Hunt Group) member, a multi-party line, a coin phone, PSAP (Public Safety Answering Point), Attendant (analog), a shared analog DN, or a secondary only DN.

If the PDN and all MDNs are busy, then busy is returned to the calling party. However, if an MDN is not on the same switch as the PDN and there is no ISUP (Integrated Services User Part) connectivity then the calling party is given audible ringing treatment.

Emergency Override calls takes precedence over Simultaneous Ringing calls. When the PDN is busy an Emergency Override call barges in, and when the PDN is idle, only it is alerted. MDNs are not alerted.

When an MDN is determined to be a 900, 976, 800, 888, or N11 call then termination to that MDN is avoided.

2. FEATURE INTERACTIONS

2.1 Directed Call Pickup

When a call arrives at an idle PDN or idle MDN, the call may be answered by another station via Directed Call Pickup. If a user with Directed Call Pickup tries to pick up a call at a PDN or MDN that has already been answered, barge-in alert tone is provided, and a three-way call is established.

2.2 Precedence and Preemption

When a Precedence and Preemption call arrives at the PDN and it is idle it shall alert the PDN and all the MDNs if the Simultaneous Ringing feature is active. When a Precedence and Preemption call arrives at the PDN and it is busy: If the incoming call has higher precedence then it shall be connected to the PDN. If the incoming call has equal or lower precedence then the rules for Simultaneous Ringing apply.

2.3 Call Screening Interactions

Call attempts to the PDN from parties specified on a Selective Call Rejection list are prevented from terminating to the PDN and MDNs, and are instead routed to an announcement that informs the caller that their call is not presently being accepted by the called party. Call attempts to the PDN from parties specified on a Selective Call Acceptance list will alert the PDN if it is idle and all idle MDNs when the Simultaneous Ringing feature is active. Call attempts from parties not specified on a Selective Call Acceptance list will be rejected.

3. FEATURE ASSIGNMENT

To provision this feature:

- Set ACT to "Y" for SFID 587 on the SFSYS form (5713-1 Record).
- Define activation and deactivation access codes. For ODP (Office Dialing Plan) use the PDIT form (53002 Record). For IDP (Individual Dialing Plan) use the IDPDCA form (56011 and 56012 Records).
- Define a Simultaneous Ringing feature using the SRFD form (5650 Record).
- Assign the Simultaneous Ringing feature /SRG1 to a TN using the LINEFA form (5121 Record).
- Define a Simultaneous Ringing TN list using the SRDN form (5651 Record).

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- Assign actions and dial access codes:

  1. For the office dialing plan, CALL TYPE must be set to "FEATURE", FEATURE must be set to "/SRG*", ACTION must be set to "SRGACT", "SRGDCT", "SRGSYM", and "SRGNOSYM" on the PDIT form.

  2. For the individual dialing plan, FEATURE must be set to "/SRG*", ACTION must be set to "SRGACT", "SRGDCT", "SRGSYM", and "SRGNOSYM" on the IDPDCA form.

- The TN or CKTN must be defined on the LINE form or the DSLUSR form with a LCC/RAX value that corresponds to one of following CLASS OF SERVICE on the LCC form - "INDIV".

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNHD	5531	3	5AE	8.61
IDPDCA	5601	4	2B	9.13
LINE	5109	3	1I	1.6
PDIT	5300	3	3B	9.2
PHRASE	5534	3	5AH	8.63
SFSYS	5713-1	3	5AR	8.22
SRFD	5650	4	31I	12.65
SRDN	5651	4	31J	1.65

ANNHD form (5531 Record) - This form lists the phrases, in the required order, to be associated with an announcement header. For 5E16(2) and later, information is added to the table under the PHRASES field to support the Simultaneous Ringing enhancement feature.

IDPDCA form (5601 Record) - This form is used to define the dialed codes associated with IDPs (Individualized Dialing Plans).

LINE form (5109 Record) - The LINE form defines the Office Equipment Number and features for each TN (Telephone Number) in a 7R/E 5ESS Switch.

PDIT form (5300 Record) - The purpose of the PDIT form is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table) form.

PHRASE form (5534 Record) - This form defines and describes phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Function) Announcement Storage circuit packs for each application (see Division 8, Section 36 for required pack assignments). For 5E16(2) and later, information is added to the table under the LANGUAGE CODE field to support the Simultaneous Ringing enhancement feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 587 to "Y".

SRFD form (5650 Record) - This form provides the ability to define Simultaneous Ringing features.

SRDN form (5651 Record) - This form provides the ability to edit a list of MDNs (Member Directory Numbers) that are associated with a specific TN. A list of up to four MDNs is allowed.

SEC. 4A588: CALL TRANSFER CUSTOM DISPLAY ENHANCEMENT AND CALL TRANSFER ILHB ENHANCEMENT

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1. FEATURE DESCRIPTION

This section contains the descriptive software related information for feature number 99-5E-8315, CTCDE (Call Transfer Custom Display Enhancement), and related feature number 99-5E-8315.A, Call Transfer ILHB (Incoming Line History Block) Enhancement.

Secured Feature Identifier (SFID) 588 controls activation or deactivation of the Call Transfer Custom Display Enhancement feature.

Secured Feature Identifier (SFID) 667 controls activation or deactivation of the Call Transfer ILHB Enhancement feature.

Each SFID can be activated independently of the other. Both SFIDs can be controlled on a per-switch or per-SM (Switching Module) basis.

To activate the secured feature ID, unlock the security lock by setting the ACT (or ACTIVE for RC) field for SFID 588 or 667 to "Y", on the SFSYS form (5713-1 Record) or RC/V (Recent Change/Verify) View 8.22, Secured Feature Upgrade. A password from the Lucent Technologies Secured Feature Administrator is required. For more information, refer to Routine Operations and Maintenance Procedures, 235-105-210.

These two Call Transfer enhancement features are available in 5E16(2) BMI and later software releases.

The CTCDE feature is only applicable to transferred-to parties that are Custom ISDN (Integrated Service Digital Network) lines.

The Call Transfer ILHB Enhancement feature is supported by analog or ISDN transferred-to lines.

Once SFID 588 is activated, the CTCDE feature is implicitly assigned to a Custom ISDN line having access to a Line Identification feature which is also marked to allow Display. The transferring line must be assigned a valid Multiway feature to effect the transfer.

Once SFID 667 is activated, the Call Transfer ILHB Enhancement feature is implicitly assigned to an analog or ISDN line (the transferred-to line and the transferring line) that has one or more of the LASS AC (Local Area Signaling Service) (Automatic Callback), COT (Customer Originated Trace), or one of the LASS Selective features (e.g. Selective Call Rejection) assigned. The transferring line must also be assigned a valid Multiway feature to effect the transfer.

The Call Transfer Custom Display Enhancement feature allows a Custom ISDN user to receive and display information regarding the transferred party's name and DN (Directory Number) as well as the transferring party's name and DN during call scenarios where a valid transfer has been performed. This is accomplished using modified ISDN display data which indicates both the transferred DN (new data, contained in the redirection information element) and the transferring DN (existing data, contained in the calling DN information element). Previously, the display information for this case would only have shown a "calling DN", and that DN would be set equal to the transferring DN. By altering the display data, the identity of the transferred party is preserved and is displayed to the transferred-to party.

- The transferred caller can be associated with any line or trunk origination.
- The transferring caller can be any analog or ISDN line.
- The transferred-to party must be a Custom ISDN line (including Custom ISDN Attendant).
- The transferring party and the transferred-to party must be on the same switch.

The Call Transfer ILHB (Incoming Line History Block) Enhancement feature utilizes the DN of a transferred caller as the target DN when the transferred-to party initiates Automatic Callback, Customer Originated Trace, or Screen List Editing. This is accomplished by populating the LASS ILHB with the transferred DN

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(versus the transferring DN). This allows the transferred-to party to use the transferred DN when activating LASS AC (to initiate a callback), COT (to initiate a call trace), or a LASS Selective feature (to add the last incoming call DN to a valid screening list). The transferred-to party can be any analog or ISDN line.

1.1 Call flow

For CTCDE, display information provided to a Custom ISDN end-user is modified as described in the following call scenario:

Party A calls Party B, and Party B subsequently transfers the call to Party C. With CTCDE, the display information provided to Party C includes both the transferring party's DN (that is, Party B's DN) as well as the transferred party's DN (that is, Party A's DN). The assignment of CTCDE enables the additional display of Party A's DN, and indicates that it is furnished as the result of a transfer. The added display information is carried in the existing "redirection" parameter which is modified for use by this feature. In addition to the DN information, CTCDE can also support display of the related name information, provided the proper Line Identification feature (with Calling Name) is provisioned against the transferring and transferred-to party's line.

For Call Transfer ILHB Enhancement, the contents of the analog or ISDN end-user's LASS ILHB is modified as illustrated by the following scenario:

Party A calls Party B, and Party B subsequently invokes a transfer to Party C. The value of the LASS ILHB for Party C is set to Party A's DN. This allows AC, COT, or a LASS Selective feature to be invoked by Party C using Party A's DN (that is, the transferred party's DN) as the target.

In either case above, the Call Transfer operation can be "explicit" or "implicit", as defined by the particular Multiway feature in use.

This is not a transparency feature.

1.2 Benefits

With the CTCDE feature, the transferred party's DN is displayed as well as the DN of the transferring party. Previously, a transferred-to user or terminal was only provided with information regarding the transferring party (as if the transferring party were the actual calling DN). This behavior results in the "masking" of the transferred party's identity which is not desirable. CTCDE allows both the transferred and transferring DNs to be displayed, providing more accurate and complete identification in those cases where a transfer is involved with the incoming call.

Call Transfer ILHB Enhancement makes it possible for the end-user to invoke the LASS AC, COT, or a LASS Selective feature using the value of the transferred party's DN as the target DN. This allows the callback, trace, or list editing entry to identify the transferred party rather than the transferring party. This is especially important for LASS COT, when a nuisance or threat call needs to be accurately identified.

1.3 Differences

The ISDN Q.931 Display Field Information Element is modified to support CTCDE by including additional "redirection" display information (that is, the transferred DN). A new redirection reason for the ICI (ISDN Call Identification) parameter of "Tfr" (Transfer) is also added to indicate that the display data is related to a call transfer operation.

For Call Transfer ILHB Enhancement, the population of the LASS ILHB is modified to use the transferred party's DN in a transfer scenario.

1.4 Feature operations

This feature does not impact existing operations. No switch personnel or subscriber actions are associated

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with this feature aside from those described in the "Feature Description" and the "Call Flow" sections above. For RCV operations only, after SFID 588 or SFID 667 has been activated, the CTE ALLOC field need to be set to "Y" on Recent Change View 8.1..

1.5 Dependencies

CTCDE functionality is dependent on the Multiway feature with the transfer option being assigned to the transferring user (Party B). The Line Identification feature must be assigned to the transferred-to user (Party C), and Party C must also have Display enabled. Transmission of Calling Name would require both Party B and Party C to subscribe to a Line Identification feature that supports Calling Name.

Likewise, Call Transfer ILHB Enhancement functionality is dependent on the Multiway feature with the transfer option being assigned to the transferring user (Party B) and one or more of the LASS features Automatic Callback, Customer Originated Trace, or one of the LASS Selective features being assigned to the transferred-to user (Party C). Party B must also have access to a valid LASS feature that utilizes ILHB data in its processing.

Note: For either CTCDE or Call Transfer ILHB Enhancement, the transferring party and the transferred-to party must reside on the same switch.

1.6 Incompatibilities

- The CTCDE feature supports valid transfers only (that is, redirections resulting from Call Transfer or Three-way Conference operation).
- The CTCDE feature does not support calls transferred outside the transferring party's switch.
- The CTCDE feature does not support CSD (Circuit Switched Data) calls since the Call Transfer feature is not currently supported for CSD.
- The CTCDE feature does not support Call Transfers performed via any analog or Custom ISDN Conference feature where four (4) or more parties are involved in the call.
- CTCDE does not apply to two incoming calls or two outgoing calls that are transferred together by a user.
- For the case of one outgoing and one incoming call that are transferred together, the CTCDE display data is provided only to the outgoing call party.
- Call transfers to Simultaneous Ringing subscribers are not supported for the CTCDE display enhancements, as the required call display information is not available. However transfers from these same subscribers are supported, as they appear to the switch as legitimate call transfers.
- The propagation of the original calling DN information is not supported for multiple Call Transfer scenarios.

1.7 Interactions

- When the transferred-to party subscribes to both Calling Number and Calling Name (and the transferring party also subscribes to Calling Name), the switch sends both calling number and calling name for the transferred party and transferring party. It is up to the end-user's CPE (Customer Premises Equipment) to determine how to properly display all of this information to the end-user.
- There are no new CTCDE requirements related to analog Line Identification features. Only the transferring party DN information and transferring name are displayed for the case where the transferred-to party is an analog line.

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- There is no change to the operation of BCLID (Bulk Calling Line Identification). When a call is transferred to a BCLID customer, the DN of the transferring party (and not the transferred party) appears as the originating DN in the BCLID message.
- There is no change made to voice mail operation. When a transferred call is forwarded to a MSS (Message Service System) (i.e. voice mail), the transferring party's number (and not the transferred party's DN) will be sent to the MSS.
- When a call is transferred within a network that supports PP (Precedence and Preemption) (for example, the Autovon network), any display information specific to Precedence and Preemption that is currently provided to a transferred-to party's display is maintained. Any information provided by the CTCDE feature would be in addition to that.
- For a call involving both Call Transfer and Call Forwarding, one or both cases of redirection may be indicated in the display information provided depending upon the detailed call scenarios.

1.8 Customer premises equipment

For CTCDE, Party A (the transferred party) and Party B (the transferring party) may be either analog or ISDN (that is, Custom or National). Party C (the transferred-to party) must be a Custom ISDN station set. However, no such interface restrictions exist for Party C when supporting the Call Transfer ILHB Enhancement feature.

1.9 Additional information

- No operational support systems are impacted by this feature.
- No unique hardware considerations are associated with this feature. However, certain transfer scenarios require access to switch-based conference circuits.
- No transition considerations are associated with this feature.
- No new or changed assignment rules are associated with this feature.
- No new or changed validation guidelines are associated with this feature.
- This feature does not impact measurements.
- No changes are made to billing as a result of this feature. AMA (Automatic Message Accounting) records are generated for each leg of the call transfer. Any billing for the transferred leg is associated with the transferring party.
- This feature does not impact maintenance.
- There are no related features.
- Some exceptions to industry standards may apply since CTCDE applies to Custom ISDN lines.
- No unique isolation constraints are associated with this feature.

2. FEATURE ASSIGNMENT

There are provisioning requirements in addition to the respective SFID activation for each Call Transfer enhancement feature.

(This paragraph applies to RC only) The "CTE ALLOC" field is added to the OFCOPT form (5509

Record); (RC/V 8.1) and must be set to "Y". This field indicates whether the required dynamic data has been allocated for the Call Transfer Custom Display Enhancement and/or the Call Transfer ILHB Enhancement feature. This field can only be set to "Y", when SFID 588 and/or 667 are activated.

An existing switch software resource, "ORIGINFO", is used by these transfer enhancement features and is defined on the SREINCR form (5547 Record), RC/V 8.40. This software resource may be engineered, if required, using the 8.40 view, in accordance with existing procedures specific to this RC view.

For the CTCDE feature (99-5E-8315), the end customer needs to have:

- A valid Multiway feature with the "transfer" option set for the transferring party. This includes any constructed or pre-constructed Multiway feature with the "TRANSFER" field set to "ALW".
- Line Identification feature (with or without Calling Name) assigned to the transferred-to party. Transferred-to party must have Display enabled (DISPLAY set to "Y" on 23.2 RC/V). When supporting transmission of Calling Name data, the transferring party must also subscribe to Calling Name.

For the Call Transfer ILHB Enhancement feature (99-5E-8315.A), the end customer needs to have:

- A valid Multiway feature with the transfer option set for the transferring party. This includes any constructed or pre-constructed Multiway feature with the "TRANSFER" field set to 'ALW'.
- One or more of the LASS features (COT, AC, or one of the LASS Selective features) assigned to the transferred-to party. The LASS features may be either generally available or subscription-based to utilize the new ILHB value provided by this feature.
- Any valid LASS feature that uses ILHB for its processing assigned to the transferring party. This design requirement is needed to enable the switch to copy ILHB data between the parties involved in the call transfer. Access to the LASS feature can be satisfied on a generally available or subscription basis.

There are no specific provisioning changes introduced for the Multiway, Line Identification, LASS COT/AC or any of the LASS Selective features. Existing provisioning rules continue to apply.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
SREINCR	5547	3	5AW	8.40

(RC Only) OFCOPT Form (5509 Record) This form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The "CTE ALLOC" field was added for RC only.

SREINCR form (5547 Record) - This form is used to increase engineering software resource (memory) parameters per SM (Switching Module) for new start and/or retrofit offices. Added a new value (ORIGINFO) to the SOFTWARE RESOURCE field.

SEC. 4A589: ESN (Emergency Service Number) Expansion for E911

1. FEATURE DESCRIPTION

The ESN Expansion for E911 feature is a secured feature that is being deployed for the 5E16 BMI (Beginning Managed Introduction) Software Release. The feature number for this feature is 99-5E-7667.

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The ESN Expansion for E911 feature increases the maximum amount of emergency service numbers allowed in an office from 1023 to 15999. This allows customers to increase emergency service resources for a given area.

2. FEATURE ASSIGNMENT

The ESN Expansion for E911 feature is secured by SFID 589. Prior to utilizing this feature, the E911 base feature must be active by setting ACT to "Y" for SFID 61 on the SFSYS form (5713-1 Record). (For more detailed information on the E911 base feature, see Division 2, Section 4A61.) In order to assign ESN values greater than 1023, ACT must be "Y" for both SFID 61 and SFID 589.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ESCO	5541	3	5AO	9.41
ESN	5540	3	5AN	9.40
SFSYS	5713-1	3	5AR	8.22

ESCO form (5541 Record) - The ESCO form is used to retrieve an ESN, an NPD (Numbering Plan Digit), and a selective routing indicator, based on the originating calling area of a 911 call arriving at an E911-serving office. For 5E16 and later software releases, additional values of 1024 - 15999 have been added for the ESN field.

ESN form (5540 Record) - The ESN form is used to define an ESN (Emergency Service Number), and it is used for defining SM standalone data. For 5E16 and later software releases, additional values of 1024 - 15999 have been added for the ESN field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field to "Y" for SFIDs 61 and 589, respectively.

SEC. 4A590: TALKING CALL WAITING - DISTINCTIVE CALL WAITING TONES

1. FEATURE DESCRIPTION

The TCW (Talking Call Waiting) - Distinctive Call Waiting Tones feature is a secured feature (SFID (Secured Feature ID) 590) that is being deployed for the BMI (Beginning Managed Introduction) of the 5E16 Software Release. The feature number for this feature is 99-5E-7752.

The TCW with Distinctive Call Waiting Tones feature provides the TCW subscriber with distinctive call waiting tones, when appropriate. Distinctive call waiting tones may or may not be provided to the TCW subscriber depending on the following:

- whether CWD (Call Waiting Deluxe) and/or CIDCW (Caller ID on Call Waiting) are also provisioned on the DN (Directory Number).
- whether only the basic TCW feature (SFID 331) is active or the TCW with Distinctive Call Waiting Tones feature (SFID 590) is also active.

When only the basic TCW feature (99-5E-4605) is active, for the Call Waiting features with distinctive call waiting tones, since an IP (Intelligent Peripheral) provides the call waiting tone and the IP is not notified that the encountered feature is one of the distinctive call waiting features, the distinctive tones are not provided by the IP; just the single call waiting tone is expected for the first TCW alert. However, for the re-alert, the TCW subscriber receives 5ESS Switch-based distinctive call waiting tones. If CIDCW and/or CWD are also provisioned on the DN, the switch usually provides the call waiting tones as part of the SAS+CAS (Subscriber Alerting Signal+CPE Alerting Signal) alerting, so distinctive call waiting tones are provided as part of the first alerting even without this feature (99-5E-7752) being active.

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When the TCW with Distinctive Call Waiting Tones feature (99-5E-7752) is also active, for the Call Waiting features with distinctive call waiting tones (except when CIDCW and/or CWD are also provisioned on the DN), additional DNs are provided on the switch to be used to notify the IP that a distinctive call waiting tone is to be provided to the subscriber before voicing the "name information". When the IP receives the call on one of these additional DNs, it provides the appropriate distinctive call waiting tone associated with that DN. However, for the re-alert, the TCW subscriber receives switch-based distinctive call waiting tones. If CIDCW and/or CWD are also provisioned on the DN, the switch provides the call waiting tones as part of the SAS+CAS alerting, so distinctive call waiting tones are provided as part of the first alerting by the switch.

The TCW with Caller ID feature (99-5E-7728) is a secured option on the existing TCW feature (99-5E-4605), SFID 331. The TCW with Caller ID feature provides the subscriber the voiced name of the call waiting party even if the caller ID information was provided to the subscriber. Without feature 99-5E-7728, the voiced name is provided via TCW only if the ACK (Acknowledgement) is not received from the CPE (Customer Premises Equipment). If the ACK is not received from the CPE, the caller ID information is not sent to the subscriber.

When the subscriber with TCW also has the CIDCW and/or the CWD feature, the switch attempts to provide those features which provide a visual display on the subscriber's CPE. Since the switch has already provided the call waiting tone as part of the SAS+CAS signal offering the display information to the CPE, when the switch connects to the IP, the IP speaks only the name of the waiting party (rather than providing the call waiting tone followed by the spoken name of the waiting party).

These feature requirements assume that the DNs on the terminating switch directly providing access to the IP are provisioned with the appropriate terminating Calling Name Delivery feature.

2. FEATURE ASSIGNMENT

The TCW - Distinctive Call Waiting Tones feature is a secured feature, and therefore must be activated for the switch to allow the feature to be used in the office. However, prior to activating this feature, the Talking Call Waiting feature (SFID 331) must first be activated. (For more detailed information on the TCW feature, see Division 2, Section 4A331.)

For 5E16 and later, there are two scenarios for activating this feature.

2.1 Scenario 1 - Prior to Provisioning the Feature Parameters on the OFCOPT Form

To activate this feature using Scenario 1:

- Set the ACT field to "Y" for SFIDs 331 and 590, respectively on the SFSYS Form (5713-1 Record).
- Set the following feature parameters on the OFCOPT form (5509 Record):
  - DNB
  - DNC
  - DNG

NOTE: (See Division 3, Section 5I for the data rules applicable to the DNB, DNC, and DNG fields.)

2.2 Scenario 2 - After Provisioning the Feature Parameters on the OFCOPT Form

To activate this feature using Scenario 2:

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- Set the following feature parameters on the OFCOPT form (5509 Record):
  - DNB
  - DNC
  - DNG

NOTE: (See Division 3, Section 5I for the data rules applicable to the DNB, DNC, and DNG fields.)

- Set the ACT field to "Y" for SFIDs 331 and 590, respectively on the SFSYS Form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - The OFCOPT form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. For 5E16 and later, the DNB, DNC, and DNG fields and related data rules were added to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field to "Y" for SFIDs 331 and 590, respectively.

SEC. 4A592: FCCS (FORWARDED CALL - CALL SCREENING) ENHANCEMENT

1. FEATURE DESCRIPTION

The feature number for the FCCS (Forwarded Call - Call Screening) Enhancement feature is 99-5E-7831. This feature is controlled by SFID (Secured Feature ID) 592 and is being deployed for the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

This feature incorporates several new enhancements to the CS (Call-Screening) feature (99-5E-2652). For more information on the CS feature, see Division 2, Section 4A526. This enhancement also builds upon Call Screening with Announcement feature (99-5E-7614) and provides a CS announcement to be heard (if available) when CS is activated on a line, by using the appropriate dial code where CF (Call Forwarding) is already active. Otherwise only a conformation tone is heard to indicate CS was made active. For more information on the CS with Announcement feature, see also Division 2, Section 4A526.

Another CS announcement is heard when CS is made inactive. And different announcement in the form of a warning message is added for the case where CS is made active on a line where CF is not active.

In addition, the user is allowed to activate and deactivate CFDA (Call Forwarding Don't Answer) and CFBL (Call Forwarding Busy Line) using dial codes.

Another enhancement provided by this feature (99-5E-7831) is the inclusion of the CFDA-RC (Call Forwarding Don't Answer Ring Control) feature (99-5E-7121). This enhancement allows the user to specify through a dial-code, the approximate number of times their phone should ring before the call is forwarded to a VMS (Voice-Mail System). For more information on this feature, see Division 2, Section 4A335.

Finally, a user with the FCCS feature now has the ability to use the same access code for changing the CFDA ringing cycle or the activating/deactivating CFDA/CFBL as a user without the FCCS feature.

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2. FEATURE ASSIGNMENT

To provision this feature:

- Set the ACT fields for SFID 526 to "Y" on the SFSYS form (5713-1 Record) to activate the base FCCS feature.
- Set the ACT fields for SFID 592 to "Y" on the SFSYS form (5713-1 Record) to activate the enhancement FCCS feature.
- On the PDIT form (5300-2 Record) (RC/V (Recent Change/Verify) 9.2), associate a dial code with on of the following five ACTION(s), when FEATURE is the wildcard feature /CF*:
  - BSYACT
  - BSYDCT
  - CSTOG
  - DAACT
  - DADCT
  - CFDATCH
- On the IDPDCA form (5601-1 Record) (RC/V 9.13), associate a dial code with on of the following five ACTION(s), when FEATURE is the wildcard feature /CF*:
  - BSYACT
  - BSYDCT
  - CSTOG
  - DAACT
  - DADCT
  - CFDATCH
- On the CFWFD form (5614-1 Record) (RC/V 12.12), set the fields as follows:
  - Set ACT TYPE to "AUTO" or "CODE".
  - Set DACT TYPE to "CODE" or "NONE".
  - Set FCCS OPT to "Y".

For a particular telephone number, provision the above feature using the LINEFA/CLUSTR forms (5112/5600 Records) (RC/Vs 1.8/12.2). If necessary, the DEFAULT PARAMETERS on the CFWFD form (can be overridden using the CFWLPA form (5614-3 Record) (RC/V 1.22).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record**	**Division**	**Section**	**RC View**

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	Number			
CFWFD	5614-1	4	15A	12.12
CFWLPA	5614-3	4	15B	1.22
CFWMPA	5614-4	4	15C	1.22
FIXRT	5301-1	3	3G	10.1
IDPDCA	5601-1	4	2B	9.13
PDIT	5300-2	3	3B	9.2
SFSYS	5713-1	3	5AR	8.22

CFWFD form (5614-1 Record) - The Call Forwarding feature allows calls completing to a customer's DN (Directory Number) to be redirected to different DN. This form is used to define a number of separate, but related features, by selecting various feature options for Call Forwarding. Added data rules to the FCCS OPT field.

CFWLPA form (5614-3 Record) - This form defines parameters for a constructed Call Forwarding feature that will be assigned to lines (which are not multi-line hunt group lines). This record is required only if the default parameters assigned on the CFWFD (Call Forwarding Feature Definition) form are inappropriate. Added data rules to the FCCS OPT field.

CFWMPA form (5614-4 Record) - This form is used to define specific parameters assigned to every Multi-Line Hunt Group assigned a specific constructed Call Forwarding feature. It is required only if the default parameters assigned on the CFWFD form are inappropriate. Added the FCCS OPT field as a No Change field.

FIXRT form (5301-1 Record) - This form is used to define Routing and Charging treatment of Fixed Route Types. Added three new enumerations (CSACT, CSDCT, and CSFAIL), and data rules to the FIXED ROUTE TYPE field.

IDPDCA form (5601-1 Record) - It is used to define the dialed codes associated with IDPs (Individualized Dialing Plans). Added data rules to the ACTION field.

PDIT form (5300-2 Record) - This form is used to define the Prefix/Feature Digit Interpreter in a 7R/E 5ESS Switch. Added data rules to the ACTION field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFIDs 526 and SFID 592 to "Y".

SEC. 4A593: AIN Ping Ring in a Forward Call Message

1. FEATURE DESCRIPTION

The AIN (Advanced Intelligent Network) Ping Ring in a Forward Call Message (99-5E-7825) feature is being deployed as a 5E15 FR2 Software Update and in the Beginning Managed Introduction of the 5E16 Software Release. This feature is a Call Processing Secured Feature controlled by SFID 593. This feature is dependent on ASP 0.1B, SFID 126.

The AIN Ping Ring in a Forward Call Message feature provides a Ping Ring to AIN customers that receive a Forward Call message. The SCP (Service Control Point) provides a ping ring indicator in the Forward_Call message by using a new value (068) in the PassiveLegTreatment parameter. When the Forward Call message is received with this value, it is an indication to ping ring the customer that detected the ASP terminating trigger. When the SFID 593 is unlocked, the SSP (Service Switching Point) will accept the new PassiveLegTreatment parameter value of 068 in a Forward Call message. A Forward Call with this parameter value can be received after the following:

- A TAT Query.
- A TBusy Query.
- A TNoAnswer Query.

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- A Resource Clear message (following one of the above queries).
- A TBusy event message.
- A TNoAnswer event message.

A Forward Call message is sent by the SCP to indicate a new destination to forward the call to, on behalf of a customer in an SSP that detected an AIN terminating trigger.

When the PassiveLegTreatment parameter value of 068 is received, functionality of this feature is enabled and the following occurs:

1. Validation of the Forward Call message is performed. The Forward Call message may be routed via Trunk Group parameters and digit analysis may not be performed for the call. If public routing is being used, the dialing plan may not successfully translate the forwarded call to the DN (Directory Number). So, successful digit analysis is not a prerequisite to ping ring the customer as it is for switch based CFV (Call Forwarding Variable).
2. For an analog port. The busy/idle port status is read. If the port is busy, then no ping ring is applied. If the port status is idle, then ping ring is applied.
3. For an ISDN port. Regardless of the port status, the ping ring code set is sent to the ISDN station set.
4. For both the analog and ISDN ports, the ping ring applied will be applied in the same manner as the ping ring applied via the CFV feature.

With the exception of ISDN ATND, the same originating and terminating Class of Services supported for TAT are supported for this feature.

This new AIN Ping Ring in a Forward Call Message ping ring feature will be available to the existing list of Class of Services that can be defined as terminating ASP (Advanced Services Platform) triggers.

The following is an example of the call flow:

- Analog phone B is assigned a TAT.
- Line A dials Line B and the TAT fires.
- A Termination Attempt query is launched.
- The SCP responds with a Forward_Call message that includes a PassiveLegTreatment parameter with the ping ring value set.
- The Forward Call message is received at the SSP and then the port status is read for Line B.
- Line B is idle, so ping ring is applied to Line B, and the call completes.

Note that if Line B was an ISDN phone, the port status is NOT read and ping ring is applied via the D-channel to Line B.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate/deactivate secured features. For this feature,

SFID 593 must be activated. This feature depends on SFID ASP 0.1B, SFID 126. Also see the Note above for additional feature requirements.

SEC. 4A594: CODE CONVERSION EXPANSION FOR N11

1. FEATURE DESCRIPTION

The feature number for the Code Conversion Expansion for N11 feature is 99-5E-7878. This feature is controlled by SFID (Secured Feature ID) 594 and is made available with 5E15 Feature Release 3 and in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

This feature allows the 5ESS Switch to implement a new 711 Code Conversion Type. Currently, several N11 Codes are supported in the 5ESS Switch Office Dialing Plan by defining a special Call Type that allows Code Conversion to occur. This Code Conversion allows a new seven or ten digit (maximum of fifteen) number to be substituted for the N11 digits. The current codes that are supported are 411, 611, 811, and 911. There is an additional need to support the 711 Code.

The currently supported N11 Call Types are defined in the office dialing plan with the service provider's desired routing information. When routing is attempted for the call, the attributes on the LDIT form or the RDIT form are used. After LDIT/RDIT, the call proceeds to a Code Conversion Table (CONV form), where a new digit string is substituted for the dialed N11 string. The call proceeds to routing with the routing attributes found in LDIT.

When there is no digit analysis performed on the new digit string, the call cannot encounter 800 triggers, ASP triggers, or any other capabilities defined for the new digit string.

The following are capabilities provided by this secured feature:

- A new CALL TYPE, "RELAY" is added to the LDIT/MLDIT/RDIT forms to support 711.
- This new CALL TYPE "RELAY" is defined on the CONV form.
- A new field, DA CONV TN on the CONV form, specifies if digit analysis is done on the digit string used as the replacement digits for the dialed 711 digits, or is provided the existing treatment.

2. FEATURE ASSIGNMENT

To provision this feature:

- The ACT field for SFID 594 on the SFSYS form (5713-1 Record) must be set to "Y".
- Define the new CALL TYPE as "RELAY" on the CONV form.
- Activate the digit analysis for the dialed 711 digits by setting the DIG ANAL ON CONV TN field on the CONV form to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CONV	5300-4	3	3D	9.4
LDIT	5300-3	3	3C	9.3
RDIT	5300-7/8	3	3H	9.9
SFSYS	5713-1	3	5AR	8.22

CONV form (5300-4 Record) - This form is used to associate a Local Digit Interpreter Table call type with

a code conversion number.

LDIT form (5300-3 Record) - This form is used to define all area, office and service codes (NPA, NXX, X11, etc.,) in a 5ESS Switch. Any code from one to fifteen digits in length may be defined. The LDIT serves as both a "local" and "foreign" area translator.

RDIT form (5300-7/8 Record) - The RDIT input form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 594 to "Y".

SEC. 4A595: RC SECURITY FOR VIEW AND CLASS WITH LOGIN ID

1. BACKGROUND

The traditional security interface to RC provided restricted access to RC view modification by TTY (Teletypewriter) ID and by RC view class. RC permissions for each TTY were entered using an MML (Man Machine Language) interface which required octal or hexadecimal input of a binary string. The RC verbose mode output reports users by TTY, rather than by and individual ID.

2. FEATURE DESCRIPTION

The RC Security for View and Class with Login ID feature is a secured feature (SFID 595) that is available with the 5E15 Feature Release 3 and in the Beginning Managed Introduction of the 5E16 Software Release. The feature number is 99-5E-7951.

This feature allows an administrator to set RC security permissions at both the view and class level. The security administrator can also assign permissions to individuals and track RC entries made by individuals, rather than by TTY. Additionally, individual login IDs can be grouped, so that permissions can be established for a group of employees, rather than separately for each individual in a group.

The RC Security for View and Class with Login ID feature provides new and enhanced functionality in three areas of RC security that allows better control and monitoring of RC activity. This feature provides the ability to:

- set permissions by RC view.
- create a RC Security Group that allows TTYs and logins to share RC permissions.
- allow RC security based on Authority Management logins.
- allow for user friendly input of access values.
- allow the RC verbose mode to track RC activity using an Authority Management login instead of a TTY.

Prior to this feature, RC offered update security at a menu class level. A menu class is the set of all views on a x.0 menu (that is, the set 28.1, 28.2, 28.3, 28.4, and 28.5). Permissions are customer-changeable on a per TTY(3B) or per login ASM (Administrative Services Module) basis through the "set:rcaccess" command. Once set, the permissions allow access to the entire class of views. This feature provides the ability to set RC permissions for individual views in addition to the entire class.

With the addition of per view permissions, the process to update the security for each TTY/login increases in time and complexity. To alleviate the need to assign the same set of permissions to a number of TTYs and/or logins, this feature adds the ability to create a "RC Security Group." This group has a set of

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permissions assigned to it and allows TTYs and logins to be added to the group, so that the TTYs and logins have the same permissions assigned to the RC Security Group.

Authority Management allows input commands to be restricted and logged on a per login basis. However, because RC security is on a per TTY basis, when an Authority Management user begins a RC session, the RC activity is tracked by the TTY, not the login. This feature allows the Authority Management login to be included in all RC verbose mode output messages, allowing RC operations to be logged by login. For more information related to this feature, see the following documents:

- 235-118-251 - Recent Change Procedures
- 235-600-700 - Input Messages
- 235-600-750 - Output Messages
- 235-105-210 - Routine Operations and Maintenance
- 235-200-145 - 5ESS Switch One Link Manager Administration Services Module User's Guide

Only the functionality included in this secured feature that relates to RC security groups, assignment of access by views, and Authority Management logins are denied if SFID 595 is not allowed for the office. All other functionality (that is, assignment of access to classes above 32 and the new access syntax in the "set:rcaccess" Input Message) is allowed for all 5ESS Switch offices.

3. FEATURE ASSIGNMENT

For 5E15 and later, to activate this feature, set the ACT field for SFID 595 on the SFSYS form (5713-1 Record) to "Y".

- ***NOTE:*** This feature does not depend on the Authority Management (Command Restriction feature), but use of the Authority Management login ID permission capability provided by this feature does depend on having the Authority Management feature present and active on the Switch. Authority Management login IDs entered for this feature are verified against the 5ESS Switch's existing Authority Management (Command Restriction feature) login set.

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 595 to "Y".

SEC. 4A596: TRUNK GROUP REGISTER EXPANSION

1. BACKGROUND

Prior to this feature, trunk group measurements were provided with single precision in the TG section.

2. FEATURE DESCRIPTION

The Trunk Group Register Expansion feature, feature number 99-5E-7780, is available with 5E15 and later software releases. It introduces a new section, TGN, to the TRFC30 traffic measurements report and is secured by SFID (Secured Feature ID) 596.

This new TGN section consists of the same set of rules and counters as the pre-existing TG section (section numbers 12 and 41). However, the new TGN section provides counts with double the precision

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that the TG section provides. The TGN section also allows component selectivity. While the TG section continues to be supported, only one of these sections, TGN or TG, is allowed for collection at a time.

Other reports and sections which use data from the TG section, now use data from the TGN section when SFID 596 is active. These sections are as follows:

- DSNTG, Section 48 - DSN/AUTOVON Trunk Group
- PSTG, Section 92 - Packet Switching Trunk Group
- ISUP, Section 120 - ISDN User Part Measurements

The implementation of this feature does not affect NM (Network Management). Since NM uses the traffic macros associated with section 12 (single precision) this section continues to be supported, even while SFID 596 is active.

3. FEATURE ASSIGNMENT

To provision this feature, the ACT field for SFID and 596 on the SFSYS form (5713-1 Record) must be set to "Y". Upon initial activation of SFID 596, a list of components chosen for collection is created for the TGN section. This list remains intact when the SFID is deactivated and reactivated. While SFID 596 is active, use of the TG section is inhibited. Deactivating SFID 596 inhibits the use of section TGN.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 596 to "Y".

SEC. 4A597: CSI DEFAULT HANDLING FOR THE LDP FEATURE

1. BACKGROUND

Prior to this feature, when an IAM (Initial Address Message) was received at the Originating LDP (Long Distance Platform) office and the CSI (Carrier Selection Information) parameter was not present in the IAM, the Dialing Indicator field of the Originating LDP AMA (Automatic Message Accounting) record (structure code 710) would show a value of 8 "NO CAC, NoPresub.stat,NoPresb.ind.sent".

2. FEATURE DESCRIPTION

The feature number for the Carrier Selection Information Default Handling for the Long Distance Platform Feature is 99-5E-8022. This feature is controlled by SFID (Secured Feature ID) 597 and is made available as a Software Update for 5E14, 5E15 and in the BMI (Beginning Managed Introduction) of the 5E16 Software Release.

With the Carrier Selection Information Default Handling for the Long Distance Platform Feature when an IAM is received at the Originating LDP office and the CSI parameter is not present in the IAM, the Dialing Indicator field of the Originating LDP AMA record (structure code 710) will show a value of 6 "CAC,Presub.cust,Presub.ind.sent".

3. FEATURE ASSIGNMENT

To provision this feature, the ACT field for SFID and 597 on the SFSYS form (5713-1 Record) must be set

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to "Y".

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 597 to "Y".

SEC. 4A598: EXPANDED VIRTUAL TERMINAL ACCESS FOR ASM

1. FEATURE DESCRIPTION

The Expanded Virtual Terminal Access for ASM (Administrative Service Module) feature (99-5E-7890) is being deployed for the Beginning Managed Introduction of the 5E16 Software Release. This is a secured feature controlled by SFID 598.

This feature provides TTY (Teletypewriter) services over the Dual Serial Channel allowing users on the ASM to access shell environments on the 3B. The enhancements for this feature include the following:

- Expanded VTTY (Virtual Terminal) - Eight VTTYs are provisioned as part of the ASM base configuration. This enhancement allows expanding VTTYs beyond eight as a secured feature. This is made available through SFID 598. A maximum of 32 VTTYs are allowed for 3B21/DRM AM.

- VTTY Usage Report - A report is generated on VTTY status, resource type, controller information, and device details. This is a tool that users on the ASM run to report VTTY usage, availability, configuration, and limits. The tool, in turn, executes the respective program on 3B and sends the result to the ASM. The node and the number of VTTYs available for the node are also displayed by this tool.

- Network Terminal Sessions - The number of Network Terminal Sessions supported by this feature increases from 48 to 100. This limit is based on solaris tunable parameter for the number of psuedo TTYs defined in the /etc/system file. This allows 100 simultaneous VTTY sessions across all nodes at any point of time.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) -This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 598 to "Y".

SEC. 4A599: G.168-2000 COMPLIANCE AND ACOUSTIC ECHO CANCELLATION ON PHV5

1. FEATURE DESCRIPTION

The G.168-2000 Compliance and Acoustic Echo Cancellation on PHV5 (Protocol Handler for Voice - Version 5) feature is a secured feature (SFID 599) that is made available with the 5E16 and later Software Releases. The feature number for this feature is 99-5E-7872.

This feature provides the following Echo Cancellation functionality for CDMA (Code Division Multiple Access):

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- ***Electrical Echo Cancellation*** is compliant to the G.168-2000 Standard with a maximum tail delay of 64 milliseconds. It is heard by the local user due to poor impedance at equipment interface points (hybrids). This results in a portion of the transmitted signal being reflected back toward the source.

  - ***NOTE:*** EC (Echo Cancellation) capability currently exists on a PHV4, but it is not compliant to the G.168-2000 standard. Due to memory constraints and processor speed issues, the PHV4 EC functionality will not be compliant to the G.168-2000 standard and is unchanged by this feature.

- ***Acoustic Echo Cancellation*** has a maximum tail delay of two times the system delay between the PHV5 and the mobile. It is produced when sound from a mobile station's speaker is acoustically fed into the mobile station's microphone. This leakage or "acoustic coupling" between the speaker and microphone of the mobile phone is due to the inadequate isolation between the receiver and the transmitter. As the handset size is reduced, it is more difficult to provide this isolation. The result of the inadequate isolation is that the far-end user hears an echo of themselves.

- ***Automatic Gain Control*** is the functionality that boosts low signal levels coming from the network to compensate for the surrounding noise. It can also be used to reduce extremely high speech signal levels.

- ***Noise Suppression*** is the functionality that reduces the background noise found in the "reverse link" mobile speech path environment. It is important to note that while CDMA EVRC (Enhanced Variable Rate Coding) and 13K mobiles already provide this functionality, Noise Suppression will also be implemented in the PHV5 vocoders.

- ***Noise Compensation*** is the application of a gain to the "forward link" speech path proportional to the noise level found in the "reverse-link" direction.

1.1 Definitions

- *Tail delay* is the round trip delay measured from the PHV's echo canceller to the landline receiver, to the transmission conversion equipment (local switching equipment makes this 4-to-2-wire conversion), and back to the PHV's echo canceller. On a mobile to PSTN (Public Switched Telephone Network) call through a PHV, the tail delay would equal the sum of the delay from the PHV to the hybrid and the delay from the hybrid back to the PHV.

- A *hybrid* converts a four-wire connection (separate transmit and receive circuits) to a two-wire connection (transmit and receive on the same wire pair). Ordinary telephone sets are two wire.

- The *reverse link* is the signal transmitted from a mobile station to a base station (mobile to cell). This link is also known as the uplink.

- The *forward link* is the signal transmitted from a base station to a mobile station (cell to mobile). This link is also known as the downlink.

2. FEATURE ASSIGNMENT

To activate this feature:

- Activate the CDMA (Code Division Multiple Access) feature by setting the ACT field for SFID 221 on the SFSYS form (5713-1 Record) to "Y". For more information on this feature see Division 2, Section 4A221.

- Activate the Echo Cancellation for CDMA (Code Division Multiple Access) feature by setting the ACT field for SFID 552 on the SFSYS form (5713-1 Record) to "Y". For more information on this feature see

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Division 2, Section 4A552.

- Activate this feature by setting the ACT field for SFID 599 on the SFSYS form (5713-1 Record) to "Y".
- Update any Echo Cancellation fields on the CDMAOPT form (5599 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CDMAOPT	5599	8	80	8.75
SFSYS	5713-1	3	5AR	8.22

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for the CDMA feature. Added the NE SPCH DET TH, AGGR ADPT RATE, NRML ADPT RATE, AGGR NLP TH, NRML NLP TH, DBL-TALK CTRL, AC ECHO CTRL, REV LINK AGC, FRWD LINK AGC, REV LINK NS, and REV LINK NC fields and associated data rules.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 221, SFID 552, and SFID 599 to "Y".

SEC. 4A600: USE OF NPA FOR E911 DEFAULT ROUTED CALLS

1. BACKGROUND

Currently, when a wireline E911 call is default routed at an E911 Tandem switch to an Enhanced MF (Multifrequency) CAMA (Centralized Automatic Message Accounting) PSAP (Public Safety Answering Point) or ISDN PSAP due to the caller's ANI (Automatic Number Identification) not being available (e.g. not 10 digits), the digit string "000-911-0TTT" (where TTT represents the ESCO (Emergency Service Central Office) is sent instead of the ANI. For a wireless E911 call, when the MDN (Mobile Directory Number) and/or P-ANI (Pseudo ANI) are not available, the "000-911-0TTT" digit string(s) is sent, instead of the ANI and/or P-ANI, to an Enhanced MF CAMA PSAP. For an ISDN PSAP, only one "000-911-0TTT" digit string is sent.

2. FEATURE DESCRIPTION

Available with the 5E15 FR3 Release and 5E16 BMI (Beginning Management Introduction) the Use of NPA for E911 Default Routed Calls feature has feature number 99-5E-8007 (originally 99-5E-7667). This feature is a secured feature controlled by SFID (Secured Feature ID) 600 and modifies the "000-911-0TTT" digit string by replacing the "000" digits of the string with the 3 digits from the HOME NPA field on OFCOPT form (5509 Record) (RC View 8.1). If the HOME NPA field is not populated, the existing "000-911-0TTT" digit string will be used as currently done.

3. FEATURE ASSIGNMENT

The Use of NPA for E911 Default Routed Calls feature is dependent on the Enhanced 911 feature (see Division 2, Section 1BD). Therefore, SFID 61 must first be activated on the SFSYS form. The Use of NPA for E911 Default Routed Calls feature is then activated by setting the ACT field for SFID 600 to "Y" on the SFSYS form.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

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SFSYS form (5713-1 Record) - This form is used to activate secured features. ACT must be "Y" for SFIDs 61 and 600.

SEC. 4A601: BILLING AND COMPTROLLERS

1. BACKGROUND

Traditionally, a call that is not directly connected to an inter-exchange carrier is considered to route via a tandem switch; otherwise, it is considered a direct connection. Prior to this feature, the routing indicator in the AMA (Automatic Message Accounting) originating access record and the AMA terminating access record were controlled by the call path. The routing indicator value could not be set by the data. It was not a translation-driven value. The billing for calls traversing directly between inter-exchange carriers and end offices are not duration or distance-sensitive, but the billing for calls traversing via tandem office are both duration and distance-sensitive. The Billing and Comptrollers feature allows the routing indicator to be controlled by a data attribute on the trunk group or by the path actually traveled.

2. FEATURE DESCRIPTION

The feature number for the Billing and Comptrollers feature is 99-5E-7984. This feature is controlled by SFID (Secured Feature ID) 601 and is made available with the 5E15 Feature Release 3.

This feature allows an option to record the routing indicator on the AMA record either according to the provisioning of trunk group or according to the call path that is actually traveled.

The Routing Indicator field (BAF (Bellcore AMA Format Table 59) is used by the 5ESS Switch to indicate the type of routing used to deliver traffic between the IC/INC (Inter-exchange Carrier/International Carrier) and the LEC's (Local Exchange Carrier's) end office. It indicates direct or tandem connection to and from ICs/INCs over LEC facilities. The criteria to set this value is determined by the call path that is actually traversed.

The Billing and Comptrollers feature uses the ROUTE IND (Route Indicator) field on the incoming trunk group or the outgoing trunk group to determine the value of the routing indicator. It is used for the criteria to determine whether to use the call path or the value of the ROUTE IND field. It also determines the value of the routing indicator.

3. FEATURE ASSIGNMENT

To activate this feature:

- Set the ACT field to "Y" for SFID 601 on the SFSYS Form (5713-1 Record).
- Set the ROUTE IND field to "DIRECT" or "TANDEM" on the TKGRP form (5202 Record).

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field to "Y" for SFID 601.

TKGRP form (5202 Record) - The TKGRP form is used to define each Trunk Group in a 5ESS Switch. For 5E15 and later, added the ROUTE IND field.

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SEC. 4A602: 7R/E PACKET SOLUTIONS 4.0N ATM TRANSPORT SOLUTION

1. BACKGROUND

Although the Port Maintenance (99-5E-7879), the Fault Management (99-5E-7880), the System Integrity (99-5E-7881), and the Call Processing (99-5E-7882) features were originally viewed as separate features, however, since they are so intertwined, they are being documented together. These features are associated with SFID (Secured Feature ID) 602. All four features are available with the 5E16 and later Software Releases.

2. FEATURE DESCRIPTION

2.1 Port Maintenance (99-5E-7879)

This feature provides the PM (Port Maintenance) functionality on the 7R/E 5ESS Switch to support the ATM (Asynchronous Transmit Mode) LAG (Line Access Gateway) and ATM TAG (Trunk Access Gateway) through the MGP (Media Gateway Proxy). The line types covered for this feature are POTS (Plain Old Telephone Service) Analog, POTS MLHG (Multi-Line Hunt Group), POTS Coin line, and ISDN (Integrated Services Digital Network) BRI (Basic Rate Interface). The trunk types supported by this feature are ISDN PRI (Primary Rate Interface) D-channels (signaling) and B-channels (bearer) and SS7 (Signaling System No.7) bearer channels.

The plan for line units (LAG) is to use the same application pack that is used in an AMAS (AT&T Maintenance & Analysis System) Remote Terminal in an integrated digital loop carrier system (TR-303 interface) for analog lines and ISDN BRIs (U-interface). The trouble detection mechanisms and the ISDN protocols for the analog lines and BRIs are expected to be comparable to those provided in an AMAS remote terminal.

The plan for trunk units (TAG) is to use a PSAX 2300 to terminate trunking facilities. In this release, the PSAX supports 2 types of trunks; PRI trunks and CCS7 bearer trunks. CCS7 (Common Channel Signaling 7) signaling does not exist on the PSAX but existing PSU (Packet Switch Unit) and CNI (Common Network Interface) signaling links are used for ATM CCS7 bearer trunks. For PRI trunks, the PSAX terminates the PRI D-channel LAPD (Link Access Protocol D) protocol to the far end so all call signaling is performed through the PSAX.

The 7R/E 5ESS virtual trunk design is based on the capabilities of the PSAX 2300 and its CG (Connection Gateway) API (Application Programming Interface) (also called Sapphire) language. The capabilities of the PSAX 2300 affect the 7R/E 5ESS packet trunk design.

The functionality impacted by this design include:

- PSA (Port Status Administration),
- PSA I/O,
- CCS Maintenance,
- Port Fault Handling,
- Line Testing,
- Trunk Testing,
- SMP Full and Selective Initialization,
- Port Ownership,
- Port Conditioning,

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- RTA, and
- Audits.

2.2 Fault Management (99-5E-7880)

This section provides the Fault Management philosophy for PS R4.0. Circuit side maintenance is provided by the existing 7R/E 5ESS management infrastructure. The ASM (Administration Services Module) capabilities are extended to include management of the MGP (Media Gateway Proxy). The ASM at a minimum has to report failure and alarm information on the MGP. It also decides what manual actions are available on this MGP. Packet side maintenance actions are reported to native EMS (Element Management Systems). Real time fault management activities are handled by the individual components. The actions taken that affect SMP (Switch Module Processor) call processing are reported to the MGP via IPDC (Internal Protocol Device Control) , (LAG (Line Access Gateway)) or Sapphire (TAG (Trunk Access Gateway)). The following list summarizes the fault management activities:

1. **PSAX-IWG (Inter-Working Gateway):** The PS 3.0 design is covered in SRQ109: Integrated VTOA (Voice Telephony Over ATM (Asynchronous Transfer Mode)) for NAR (PS3.0).

2. **PSAX-IWU (Inter-Working Unit):** This component autonomously switches around failures and report state changes and alarm information on hardware circuit packs to the NavisCore. It reports virtual port state changes, and ATM interface failures to the MGP via Sapphire messages. (Note: Port state changes are handled by the Port Maintenance Area.) The MGP uses call processing "heartbeats" to verify whether or not PSAX-IWU call processing is up and running. For PAG, there are specific PAG functions that lead to specific requirements, (e.g., in case of SMP selective initialization), the PAG packet service and stable call processing should not be affected.

3. **MGP (Media Gateway Proxy):** The MGP performs real time fault management independent from the ASM. This component reports state changes and alarm information to the ASM via SNMP traps. The ASM uses maintenance "heartbeats" to verify that the maintenance process is up and running.

4. **LAG (Line Access Gateway):** This component autonomously switches around failures, and report state changes and alarm information on hardware circuit packs to the AEM. It will report virtual port status changes to the MGP via IPDC messages.

5. **PSAX-TAG (Trunk Access Gateway):** This component autonomously switches around failures and report state changes and alarm information on hardware circuit packs to the NavisCore. It then reports virtual port state changes, DS1 (Digital Signal Level 1) facility status changes and ATM interface failures to the MGP via Sapphire messages. (Note: Port state changes are handled by the Port Maintenance Area.)

6. **P333T:** This component provides the L2 IP (Internal Protocol) switch capability required between the MGP and ASM. The ASM monitors this component via maintenance "heartbeating".

2.3 System Integrity (99-5E-7881)

SI (System Integrity) is responsible for ensuring the overall system sanity and health of a PS office. More specifically, System Integrity is responsible for initialization, EAI (Emergency Access Interface), integrity monitor, data delivery, audits, IDS (Inter-processor Data Synchronization), craft asserts, escalation, and inhibits.

2.4 Call Processing (99-5E-7882)

This feature, in and of itself, is not delivering any functionality. It was created, along with the other features documented here. The feature is actually delivering all 7R/E 5ESS call processing related work to support

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the following 7R/E Market Features:

- M01250A: Multiple CFS base for ATM
- M01252A: Packet and Circuit Interworking on a CFS for ATM
- M01253A: ATM Packet Switched Circuit Line Access (i.e. LAG)
- M01254A: ATM Packet Switched Circuit Trunk Access (i.e. TAG)
- M01255A: Subscriber Services on CFS for ATM Access

3. FEATURE ASSIGNMENT

For 5E16 and later, to provision this feature:

- Activate the feature by setting the ACT field for SFID 602 to "Y" on the SFSYS form (5713-1 Record).
- Using Recent Change View 19.13 (ODA form EQMH (Record 5856)), create the MH (Message Handler) associated with SM2000.
- Using Recent Change View 19.20 (ODA form ENETPIPE (Record 5826)), create an ethernet pipe assignment with SERV TYPE of "CFS".
- Using Recent Change View 19.21 (ODA form ENETLINK (Record 5827)), create an ethernet link assignment.
- Using Recent Change View 19.26 (ODA form EQIWG (Record 5874)), create a minimum IWU (Inter-Working Unit). This step will define the IWU without OC-3 (Optical Carrier 3) and IWU facility interfaces.
- Using Recent Change View 20.24 (ODA form EQVT (Record 5858)), equip the Virtual Tributary and Digital Signal Level 1 SONET (Synchronous Optical Network) (DS1S (Digital Signal Level 1)) on a DNU-S (Digital Network Unit - SONET).
- Using Recent Change View 19.26, update the IWU entry, growing the OC-3 datagroups (DG0 and DG1). Define the datagroups with an equipment status of Growth. Note that for IWU, the AESA will not be entered.
- Using Recent Change View 19.26, update the IWU entry, changing the equipment status of the OC-3 datagroups (DG0 and DG1) from Growth to Operational. Note that for IWU, the AESA will not be entered.
- Using Recent Change View 19.26, modify the IWU entry, updating the IWU facility interfaces.
- Using Recent Change View 50.1 (ODA form MGPGROWTH (Record 6920)), create the MGP (Media Gateway Proxy) unit.
- Create a new virtual packet line or trunk, using:
  - Recent Change Views 1.6 or 1.8 (ODA form LINE (Record 5109)) for analog lines,
  - Recent Change Views 23.2 or 23.8 (ODA form DSL (Record 5907)) for ISDN lines, or
  - Recent Change View 5.1 (ODA form TKGRP (Record 5202)), 5.2 (ODA form PRIGRP (Record 5211)for PRI), and then 5.5 (ODA form TRUNK (Record 5204)) for trunks.

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- Using Recent Change View 50.2 (ODA form MGPCOMP (Record 6921)), define the MGP component association.
- Define the MGP routing data for packet lines or trunks, using
  - Recent Change View 50.3 (ODA form MGPLINE (Record 6922)) for packet lines, or
  - Recent Change View 50.4 (ODA form MGPTRUNK (Record 6923)) for packet trunks.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1H	23.2, 23.2
DSLUSR	5908	5	1I	23.2, 23.8
ENETLINK	5827	8	67	19.21
ENETPIPE	5826	8	66	19.20
EQIWG	5874	8	82	19.26
EQVT	5858	8	60	20.24
LINE	5109	3	1I	1.8
MGPCOMP	6921	5	4B	50.2
MGPGROWTH	6920	5	4A	50.1
MGPLINE	6922	5	4C	50.3
MGPTRUNK	6923	3	4D	50.4
MLHLN	5111	3	1K	1.8
PRIGRP	5211	3	2M	5.2
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TRUNK	5204	3	2C	5.5

DSL form (5907 Record) - This form is used is used to define the attributes of a DSL. A DSL is also referred to as a BRI (Basic Rate Interface). It is used to define the attributes of the B1 and/or B2 channel of the DSL, if either or both of those channels are to be used on a Permanent Packet basis (dedicated to X.25 Packet Switching). Added a data rule to the DSL OE field.

DSLUSR form (5908 Record) - This form is used for four major purposes:

1. DSLUSR defines the associated TN(s) and status of a DSL user. The OE field on this form is the field that associates a user with a particular DSL. This DSL is defined on a DSL form (5907-1 Record) in the DSL OE field. These two fields are the only link between a DSL form and a DSLUSR form.
2. DSLUSR defines the circuit switching (voice and data) attributes of a DSL user.
3. DSLUSR defines the D-channel packet switching attributes of a DSL user.
4. DSLUSR defines the On Demand B-channel packet switching attributes of a DSL user.

Added a data rule to the EQUIPMENT field.

ENETLINK form (5827 Record) - This form is used to enable the craft to review and update the ethernet links connected to an MH (Message Handler). Added data rules to the SERV TYPE, HW ADDR 0 SIDE 0, and HW ADDR 1 SIDE 1 fields. Also changed the IP ADDR SIDE 0 and IP ADDR SIDE 1 from No-Change fields to Optional fields.

ENETPIPE form (5826 Record) - This form is used to enable the craft to review and update the ethernet pipes connected to an MH (Message Handler). Added a data rule to the SERV TYPE. Also changed the IP ADDR SIDE 0 and IP ADDR SIDE 1 from No-Change fields to Optional fields.

EQIWG form (5874 Record) - This form is used to define the units of Interworking Gateway which is the

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bridge between a Switching Module and an ATM (Asynchronous Transfer Mode) switch. Added the UNIT TYPE and CLI fields with associated data rules. Also renamed the IWG, IWG SM, IWG AISLE, IWG BAY, and IWG VERPOS fields.

EQVT form (5858 Record) - This form is used for the equipage of the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S - feature number (99-5E-1427). Added the IWU value to the APPLICATION field.

LINE form (5109 Record) - This form defines the Office Equipment Number and features for each TN (Telephone Number) in a 7R/E 5ESS Switch. Added a data rules to the ASSOC OE and OE fields.

MGPCOMP form (6921 Record) - This form is used to define a MGP (Media Gateway Proxy) component association. New form to support this feature.

MGPGROWTH form (6920 Record) - This form is used to define a MGP (Media Gateway Proxy). The MGP is associated with an SM2000 to create a packet SM (Switching Module). New form to support this feature.

MGPLINE form (6922 Record) - This form is used to add the MGP (Media Gateway Proxy) routing data for packet lines. These packet lines exist on a LAG (Line Access Gateway). New form to support this feature.

MGPTRUNK form (6923 Record) - This form is used to add the MGP (Media Gateway Proxy) routing data for a packet trunks. These packet trunks exist on a TAG (Trunk Access Gateway). New form to support this feature.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular MLHG. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. Every MLHG Number assigned on the MLHLN form must be defined on the MLHG form (5110-1/2/3 Record). Added data rules to the ASSOC OE and OE TYPE fields.

PRIGRP form (5211 Record) - This form is used for National ISDN PRI. Added data rules to the EQUIPMENT field.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. Added the VIRTUAL field and an associated data rule.

SFSYS form (5713-1 Record) - This form is used to enable secured features. Enable this feature by setting the ACT field for SFID 602 to "Y".

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 7R/E 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Trunk information that is common to the entire Trunk Group is entered on the TKGRP form (5202 Record). Added data rules to the TRKOE field.

SEC. 4A603: SS7 USING OPERATOR SERVICES

1. BACKGROUND

The OSPS (Operator Services Platform System) ANSI (American National Standards Institute) Incoming Signaling System No. 7 from End Offices feature (5E14 feature number 98-5E-4067) provided OSPS the capability to accept and process incoming signaling using ISUP (ISDN (Integrated Service Digital Network) User Part) from LEC (Local-Exchange Carrier)-owned or IC (Inter-Exchange Carrier)-owned SPCS (Stored Program Control System) Switches for both intranetworking and internetworking. The 98-5E-4067 feature does not support operator services hold (also known as connection hold) which allows the operator system to control the originating connection. This capability is only currently defined for MF (Multi-Frequency) signaling. As a result, OSPS does not provide ringback, flash, or coin control functionality on SS7 signaled

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calls. For more information on this OSPS feature, see Division 2, Section 4A463.

2. FEATURE DESCRIPTION

The SS7(Signaling System Number 7) Using Operator Services feature supports ISUP signaling for OSC/CO (Operator Services Connections for Call Originations) and for OSCs/I (Operator Services Connections for Intercept). It focuses on the signaling functions carried out by 7R/E 5ESS end offices, not the OSS (Operator Services Switch), to support operator services connections. It also addresses signaling functions for 7R/E 5ESS Tandem Switches that are not OSS's.

New ISUP functionality provided by this feature is designed to support originating operator services signaling functions such as:

- the establishment and release of the connection,
- updates of end-to-end connection information,
- connection hold, or
- network recall (flash)

With the exception of exclusion of the Charge Parameter via provisioning on RCV (Recent Change View) 10.2 (ODA form RTIDX (Record 5303)) which also impacts the inclusion of the OLI (Originating Line Information) parameter, SS7 Network Interconnect should operate as currently designed. The impact of this feature is to the ISUP signaling protocol only. So the current implementation for both MF operator calls and intercept calls handled by an MF operator will remain the same.

This feature is a secured feature (SFID 603) that is being deployed in the 5E16(2) Software Release. The feature number for this feature is 99-5E-7921.

3. FEATURE ASSIGNMENT

Although this feature provides new attributes used in provisioning, it relies heavily on existing provisioning scenarios, especially for Digit Analysis and basic SS7 ISUP signaling. The following other features are especially used in provisioning of this feature:

- The ICLATA (Intra-LATA PIC (Presubscribed Inter-LATA Carrier)) feature (99-5E-1291). For more information, see Division 2, Section 4A149.
- The ALSPR (Alternative Local Service Provider Routing) feature (99-CP-4031). For more information, see Division 2, Section 4A269.

The following views are used during provisioning of this feature:

- RC View 5.1 (ODA form TKGRP (Record 5202)).
- RC View 5.5 (ODA form TRUNK (Record 5300)).
- RC View 8.15 (ODA form OFCOPT (Record 5509)).
- RC View 8.24 (ODA form SCRIDXPA (Record 5543)).
- RC View 10.2 (ODA form RTIDX (Record 5303)).
- RC View 10.3 ((ODA form ICF (Record 5305)).
- RC View 10.10 (ODA form RAR (Record 5301)).

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3.1 Provisioning Scenarios

1. Provisioning the LEC (Local Exchange Carrier) "A" end office for connections to the LEC "A" operator switch:

   - View 10.2:
     - SIGPRO attribute for calls of this type should be set to "TRAD" (Feature Group D signaling not in use).
     - Note that when SIGPRO attribute is "TRAD", new CONNECTION HOLD and OPERATOR ACCESS attributes are not applicable. In this case, these capabilities are always enabled.
     - OPERATOR SIG attribute should be set to "MOD" to indicate that Modified NOA (Nature of Address) signaling is used.
   - On view 8.24, the RESTRICT LINE attribute should be provisioned for screening indices associated with lines requiring restricted/special treatment.
   - On view 10.10, for screening indices supporting restricted/special lines the none+ and 1+ routes should be over ridden with RTI (Routing Indices) that are provisioned to support this feature.

2. Provisioning for calls involving IXC (InterExchange Carriers)

   - View 10.2
     - SIGPRO should be set to "EA" or "INC" (Feature Group D signaling is used).
     - OPERATOR SIG should be set to "MOD" to indicate that modified NOA signaling is used.
     - OMIT CHARGE should be set to "Y", so the CHG parameter will be sent in the originating IAM (Initial Address Message) only if its DN (Directory Number) is different from the DN in the CPN (Calling Party Number) parameter.
     - If the Inter-LATA IXC (Inter-Exchange Carrier) has arranged for another carrier to route their calls, and the call will pass through an access tandem rather than on a direct route, the new CARRIER ID field should be populated. If the IXC carries its own operator calls, this field should be left blank.
     - ANI IND, CPN SUBSC and CICP SUBSC fields should be set to "Y".
   - On view 10.3, the SS7 OP CDI and SS7 OP RTI fields should be populated for 555-1212 calls..
   - On view 8.24, the RESTRICT LINE field should be provisioned for screening indices associated with lines requiring restricted/special treatment.

3. Provisioning for calls where the LEC is handling an IXC call on behalf of the IXC:

   - This scenario is identical to the second scenario, with one exception, that on view 10.2, the CARRIER ID attribute should be populated with the Carrier ID of the LEC handling the call on behalf of the IXC.

4. Provisioning when using the ICLATA (Intra-LATA PIC (Presubscribed Inter-LATA Carrier) feature:

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- The ICLATA feature allows the LEC to open up certain Intra-LATA Toll routes which were previously handled exclusively by LEC, to compete on an equal access basis between the LEC and IXCs (Inter-LATA Carriers). The ICLATA feature also allows a line to presubscribe to an IXC to carry its Intra-LATA toll calls. When ICLATA feature is activated, by setting the ACT field on RCV 8.22 (ODA form SFSYS (Record 5713-1) for SFID 149 to "Y", the following provisioning is used:

  - ICLATA calls carried by ICLATA carriers are provisioned with the SIGPRO field set to "EA" on view 10.2. All the provisioning of the new fields introduced with this feature is identical to second scenario (for calls involving IXC).

  - Intra-LATA Toll calls carried by the LEC are provisioned with the SIGPRO field set to "TRAD" on view 10.2. All the provisioning of the new fields introduced with this feature is identical to first scenario (the LEC "A" end office for connections to the LEC "A" operator switch).

5. Provisioning when using the ALSPR feature:

   - The ALSPR feature allows a line to presubscribe to an alternate local service provide, and then allows 0-, 0+7/10D, 411, (NPA)-555-1212, 611, 811 and non-operator handled (None+/1+) 7/10 digit Intra-LATA local calls to have separate routes than if the local exchange company routed the call. For feature 99-5E-7921 to use the ALSPR feature, this feature must be activated by setting the ACT field on RCV 8.22 to "Y" for SFID 269. Then all provisioning described in second scenario applies to this scenario.

6. Provisioning when the 7R/E 5ESS Switch is used by a LEC that has made arrangements to use another LEC's operator services switch:

   - One LEC may make arrangements to send its operator services traffic to another LEC's operator services switch. The originating LEC would be provisioned for this feature just as a LEC switch is provisioned when it is sending traffic to its own operator services switch in the first scenario. This kind of call uses traditional signaling, and thus the operator services switch will not receive either the SS7 TNS (Transit Network Selection) parameter, or the SS7 CICP (Carrier Identification Code Parameter) that is provided in equal access signaling, and that allows the operator services switch to be identified by signaling who the owner of the call is. If dedicated trunks are used to carry this traffic, the operator services switch can identify this traffic. Alternatively, a LIDB (Line Information DataBase) type query could be launched at the operator services switch with the key being either the Calling Party DN (Directory Number) or the Charge Number DN.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ICF	5305	3	3R	10.3
LDIT	5300-3	3	3C	9.3
MLDIT	5300-3	3	3C	9.15
OFCOPT	5509	3	5I	8.15
RDIT	5300-7	3	3H	9.9
RTIDX	5303	3	3P	10.2
SCRIDXPA	5543	3	5AQ	8.24
SFSYS	5713-1	3	5AR	8.22

ICF form (5305 Record) - This form is used to define the characteristics of Inter-LATA (Local Access

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Transport Area) and Intra-LATA carriers.

LDIT/MLDIT form (5300-3 Record) - This form is used to define all area, office, and service codes (NPA, NXX, X11, etc.) in a 7R/E 5ESS Switch.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices.

RDIT form (5300-7 Record) - This form contains information for the translation of remaining dialed digit strings for digit analysis. Added new value, "NORM555", to the CALL TYPE and CONFFLICT RESOLUTION CALL TYPE fields. Also added a data rule to the REL LINK field.

RTIDX form (5303 Record) - This form is intended to be used as an office record and as a source document for data entry into the RTIDX form. A Route Index is the output from a Rate and Route Table and is used to define the routing of a call. Added the OMIT CHARGE, OPERATOR SIG, OPERATOR ACCESS, CONNECTION HOLD, and CARRIER ID fields.

SCRIDXPA form (5543 Record) - This form is used to assign parameters to a line or trunk on a per screening index basis.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 603 to "Y".

SEC. 4A604: PRI CALLING NAME FOR THE CANADIAN MARKET

1. FEATURE DESCRIPTION

The PRI (Primary Rate Interface) Calling Name for the Canadian Market feature is a Call Processing Special Feature, which is controlled by Secured Feature ID 604. It is being deployed in the 5E15 Software Release and in the BMI (Beginning Managed Introduction) of the 5E16 Software Release. The feature number is 99-5E-8051.

The PRI Calling Name Display for the Canadian Market feature will:

- Provide an office option controlled by an SFID (604) that, when set (activated), and the B channel trunk group has the capability allowed, the switch provides the CPN (Calling Party Name) information in the Display IE (Information Exchange).
- Provide an office option controlled by an SFID that, when set (activated), and the B channel trunk group does not have the capability allowed, the switch will provide the calling party name information in the Facility IE.
- When this SFID is not set (default) the CPN is provided in the Facility IE.

The feature only provides the name for calls leaving the switch. The feature does not allow the switch to process an incoming Q.931 SETUP message with a proprietary coding for the name delivery.

The feature only supplies the name in the proprietary coding in the Originating Switch Calling Name environment. For calls terminating requiring a name query, the name is delivered after the initial delivery of the Q.931 SETUP method via the standard format (a Q.931 Facility message with a Facility IE containing the name in ASN.1 (AT&T Switched Network.1) coding).

2. FEATURE ASSIGNMENT

After activating the SFID 604, the capability is allowed on a per B channel trunk group basis via the RCV (Recent Change View) 5.1 (TRUNK GROUP) field "DISP CNTRL". A value of "Y" activates the feature and causes the proprietary method to replace the standard method for name delivery. The default value of "N"

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continues to provide the name in the standard delivery method. The "DISP CNTRL" field can be set to "Y" for both Custom and Standard (National) PRIs.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 603 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The DISP CNTRL field was added.

SEC. 4A607: DOUBLE PSU PACKET BUS

1. CROSS REFERENCE

This section has been moved to Division 2, Section 7BK.

SEC. 4A608: FAULT MANAGEMENT LOGGING INTERFACE (ROP TO NFM) VIA TCP/IP INTERFACE

1. FEATURE DESCRIPTION

For information concerning this feature, refer to the *Onelink Manager ASM User's Guide*, Lucent Technologies document 235-200-145.

SEC. 4A609: EXTERNAL INTERFACE INFRASTRUCTURE EXPANSION

1. FEATURE DESCRIPTION

The External Interface Infrastructure Expansion feature is being deployed on the 5ESS Switch in a Software Update for the 5E15 FR4 Software Release and with ASM (Administrative Services Module) Release 5.0. This feature is a secured feature, that is controlled by Secure Feature ID 609. The feature number is 99-5E-7886. For additional information on this feature refer to the Lucent Technology document number *235-200-145 OneLink Manager (TM) ASM User's Guide.*

This feature provides for the delivery of 5ESS Switch MDII (Machine Detected Interoffice Irregularity) messages, to external systems, over a TCP/IP (Transmission Control Protocol/Internet Protocol) based interface. This machine-to-machine interface allows these 5ESS Switch-originated messages to be transmitted from the ASM to a receiving OSS (Operation Support System) over a high-speed data network.

In addition to the interface functionality, this feature also provides for an enhanced ASM logging infrastructure that covers the following ASM log types: DLOG (Debug Logs), ELOG (Error Logs), PLOG (Performance Logs), ROPLOG (ROP Logs), SNMP (Simple Network Management Protocol Logs), SECLOG (Security Log) for the GUI (Graphical User Interface), and any new ASM-controlled log types, including those generated by third party products such as RCC (Reliable Cluster Computing). With ASM Release 5.0, the definition of the ORLOG (Output Report Log) now covers what was included in the ROPLOG in previous ASM releases for the purposes of querying.

1.1 Interface Operation

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MDII (Machine Detected Interoffice Irregularities) messages are generated on the 5ESS Switch and delivered to the ASM from the AM (Administrative Module) over DCI (Dual serial channel Computer Interconnect) links. The ASM has the ability to store these messages and make them available to external users. This feature makes these messages available to an external OSS (Operational Support System) on a continuous real time basis.

To receive the MDII messages provided by this feature, an external system needs to make a connection, using TCP/IP, to the ASM. This TCP/IP connectivity is made through an Ethernet interface provided on the ASM. Once a connection is established and active, data is transmitted unidirectionally from the ASM to the OSS. This feature automatically provides for the delivery, to the receiving OSS, of heartbeat messages on a regular basis over this interface. This feature also permits all of the nodes serviced by the ASM (5ESS Switch and up to 15 DRMs (Digital Rights Managements)) to be supported by this interface. At the time the OSS establishes an interface connection, the OSS specifies, to the ASM, which node data (one of the 16) is to be provided over that connection. Once that connection is established, only data from the desired node is provided over that connection. In addition to this single node reporting mode, this feature allows the OSS to specify, at time of interconnection establishment, that data on all nodes should be reported over the connection. In this mode, the message data from all nodes are combined and transmitted over the same TCP/IP connection.

1.2 External Interface Specification

Information on how OSSs can connect to this interface is described in the Lucent Technology document number *235-200-145 OneLink Manager (TM) ASM User's Guide.*

1.3 ASM Command Changes

Users of ASM scripts that access ASM log files need to take into account ASM command and log file changes that arise as a result of the new logging infrastructure for ASM 5.0. Users can consult ASM manual pages for more information on these changes. The following are a list of the commands and their usage.

- dslogcfgtbl Command
  - The dslogcfgtbl is a new command, which is a part of the ASM 5.0 logging infrastructure. This command allows users to change parameters of logging configuration.
- dslogstat Command
  - The dslogstat is a new command that is a part of the ASM 5.0 logging infrastructure. This command provides the status of all log types supported by ASM.
- dslogview Command
  - The dslogview is a new command, which is a part of the ASM 5.0 logging infrastructure. This command allows users to view log messages from multiple log files as one stream. This command allows users to have a super view of multiple log files, i.e., records from multiple log files merged together as one stream.
- dsdlstat Command
  - The dsdlstat command is an existing command used to report the status of all ASM connected OSS data links that use a TCP/IP interface. With this feature, this command continues to provide all of its current functionality. However, when connections to an OSS are present, DCI channel information display for this interface application will indicate that it does not use a DCI channel.

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- dsosdatalink Command
  - The dsosdatalink command is an existing command that activates, deactivates, or prints the activation status of ASM connected OSS Data links. With this feature, this command continues to provide all of its current functionality. However, when connections to an OSS are present, DCI channel information display for this interface application will indicate that it does not use a DCI channel.

2. FEATURE ASSIGNMENT

To use this feature, the ASM (Administrative Services Module) must be running on release ASM5.0 or later.

This feature is provided as a secure feature controlled by Secure Feature ID 609. To activate this feature, the ACT field on the SFSYS form (5713-1 Record) must be set to "Y" for SFID 609.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 609 to "Y".

SEC. 4A610: INCREASED ASM DISK SPACE FOR AMADNS

1. FEATURE DESCRIPTION

The Increased ASM Disk Space For AMADNS (Automatic Message Accounting Data Network Service) feature is being deployed in the 5E15 FR4 5ESS Switch Software Release and ASM release 5. This feature is a secured feature, that is controlled by Secure Feature ID 610. The feature number is 99-5E-7851. For additional information on this feature refer to the Lucent Technology document number *235-200-145 OneLink Manager (TM) ASM User's Guide.*

2. FEATURE ASSIGNMENT

To use this feature, the ASM (Administrative Services Module) must be running on release ASM5.0 or later.

This feature is provided as a secure feature controlled by Secure Feature ID 610. To activate this feature, the ACT field on the SFSYS form (5713-1 Record) must be set to "Y" for SFID 610.

This feature provides an expanded filesystem of 20 GBytes for billing data. It is only supported on HA ASM configurations and requires three disks in each of the ASM's two external disk units. Growth of the billing filesystem provided by this feature is performed with the dsfsconfig command. The command on the ASM is: dsfsconfig /bafblks. See the ASM Users Guide for further information on dsfsconfig, and the man page for dsfsconfig on the ASM itself.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 610 to "Y".

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SEC. 4A613: ON-HOOK DATA TRANSMISSION WITHOUT POWER RING

This section has been moved to Division 2, Section 4B1008.

SEC. 4A619: CNI NETWORK ID EXPANSION

1. FEATURE DESCRIPTION

Available in 5E16(1), the CNI Network ID Expansion Feature has feature number 99-5E-8175 and is a secure feature (SFID 619). This feature increases the limit of non-local SS7 network IDs for the CNI signaling platform to 64. Prior to this feature only 24 non-local network IDs could be provisioned on the RC/V 15.12 for CNI SS7 Network Routing. Due to the increase in SS7 connectivity between service providers, the limit is no longer sufficient. Increased AM PAS (Protected Application Segment) memory was allocated in 5E16(1) to allow the CNI SS7 Routing data tables to increase in size. Enough memory was allocated to allow for up to 64 SS7 network IDs with cluster and/or full point code routing.

The CNI Network ID Expansion Feature is secured via Secure Feature ID 619. Customers are required to activate the secure feature ID on RC/V 8.22 in order to provision greater than 24 Network IDs via the RC/V 15.12.

2. FEATURE ASSIGNMENT

Since the CNI database is not supported by the 5ODA, all CNI provisioning must be performed using 5ESS Recent Change (refer to Division 9, Sections 1 and 2 for CNI Recent Change information).

SEC. 4A622: CNI/PSU SUPPORT FOR 128K ISUP TRUNKS

1. FEATURE DESCRIPTION

The CNI/PSU (Common Network Interface/Packet Switching Unit) Support for 128k ISUP (ISDN (Intergrated Services Digital Network) User Part) Trunks feature is a secured feature (SFID 622) that is being made available with the 5E15 FR 5 (Feature Release 5) Software Release. The feature number for this feature is 99-5E-8110.

This feature expands the number of ISUP Trunks that can be equipped in offices served by the CNI/PSU platforms to 128K in 5e16 BMI (Beginning Managed Introduction). Currently, there is a 92K limit on the number of ISUP trunks being equipped in an office. In order to actually exceed 92K ISUP trunks in an office the office requires TAGs (Trunk Access Gateways) or must have a Non-Squared TSI (Time Slot Interchange) configuration (i.e. Causes blocking of some trunks).

With this feature more than 100,000 (up to 128,000) ISUP trunks can be equipped in an office.

This feature does not increase the CNI capacity. If there is a CNI in the office then it will not be allowed to pass 100,000 trunks even when this feature is active.

2. FEATURE ASSIGNMENT

The only provisioning needed for this feature is to set the ACT field for SFID 622 to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

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SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 622 to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added a data rule to the DEST PT CODE and PLATFORM fields.

SEC. 4A625: HARD-TO-REACH

1. FEATURE DESCRIPTION

The HTR (Hard-To-Reach) feature is a secured feature (SFID 625) available with the 5E16.2 and later Software Releases. The feature number is 99-5E-8028.

The Hard-To-Reach capability is used by NM (Network Management) Personnel to initiate and monitor specific destinations which are experiencing call completion problems. It allows NM Personnel to create a list of destinations (1-10 digit number and/or 4-digit carrier ID) which would then be monitored using Network Management measurements. By analyzing those measurements, NM Personnel could then take appropriate action to control traffic to destinations deemed HTR by adding the HTR option to existing NM Trunk Group Controls.

The following existing Trunk Group Controls (both manual and automatic) have the HTR option added:

- CANT (Cancel To)
- CANF (Cancel From)
- SKIP
- RR (Re-Route)
- TR (Trunk Reservation)
- ACC (Automatic Congestion Control)

The assignment of a destination to the Hard-To-Reach list is initiated via the NM I/O at the switch site or remotely via the Network Management OS (Operation System). The Trunk Group Controls MML (Machine to Machine Language) (onsite I/O) and NMOS (Network Management Operations System) messages are modified to add the HTR options. The maximum number of HTR entries activated at any one time is 128.

Examples of HTR matching:

In order to determine if a destination is Hard-To-Reach, the destination will be checked against entries in the Hard-To-Reach list. If the destination matches an entry then it will be deemed Hard-To-Reach. It is possible for a destination to match multiple entries on the HTR List. To handle this, matching is based on the most specific code then the carrier.

In order to better explain how the matching is done, the following examples are shown:

Hard-To-Reach List

Entry	HTR Code	HTR Carrier
1	630	
2	630979	
3	630	0288
4		0288
5	713949	0731

1. Destination(Code=630979XXXX, Carrier=731)

   There will be a match on HTR List Entry #2.

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2. Destination (Code=630224XXXX, Carrier=731)

   There will be a match on HTR List Entry #1.

3. Destination (Code=702431XXXX, Carrier=288)

   There will be a match on HTR List Entry #4.

4. Destination (Code=630979XXXX, Carrier=288)

   There will be a match on HTR List Entry #2.

5. Destination (Code=630949XXXX, Carrier=288)

   There will be a match on HTR List Entry #3.

6. Destination (Code=713949XXXX, Carrier=731)

   There will be a match on HTR List Entry #5

7. Destination (Code=713949XXXX, Carrier=288)

   There will be a match on HTR List Entry #4.

8. Destination (Code=713949XXXX, Carrier=732)

   There will be no match found.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 625 to "Y".

SEC. 4A626: CODE SPECIFIC REROUTE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-400 Feature Descriptions.*

SEC. 4A627: INCREASED TERMINAL SESSIONS FOR READ ONLY RC ON ASM

1. FEATURE DESCRIPTION

The Increase Terminal Sessions for Read Only RC on ASM feature is being deployed in the 5E15 5ESS Switch Software Release. This feature is a secured feature, that is controlled by Secure Feature ID 627. The feature number is 99-5E-8271. For additional information on this feature refer to the Lucent Technology document number *235-200-145 OneLink Manager (TM) ASM User's Guide.*

This feature is used for extending the number of APPTEXT RC/V (Recent Change/Verify) sessions a customer can execute concurrently. This is done by providing Proxy DB (Database) verify only APPTEXT Recent Change sessions. This type of Recent Change session does not utilize the same 5ESS resources

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as a conventional APPTEXT Recent Change session. This allows the current maximum Recent Change session limit to be extended.

2. FEATURE ASSIGNMENT

In order to activate this feature the ACT field for SFID 627 on the SFSYS form (5713-1 Record) must be set to "Y". This feature also requires that the office be equipped with an ASM (Administrative Services Module) and is dependent upon the following ASM applications:

- Recent Change Front-end on ASM (SFID = 322), (Ssee Division 2, Section 4A322),
- Proxy ODD 5ESS Proxy Database (SFID = 539), (see Division 2, Section 4A539), and
- Proxy ODD Recent Change and Squal, only if SQUAL queries is performed (SFID = 570), (see Division 2, Section 4A570).

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 627 to "Y".

SEC. 4A628: TCP/IP SECURITY ENHANCEMENTS FOR CALEA

1. FEATURE DESCRIPTION

The TCP/IP Security Enhancements for CALAE (Communications Assistance for Law Enforcement Act) feature is a secured feature associated with SFID 628 and OFID (Option Feature ID) 708. It is being deployed in the 5E15 FR 5 (Feature Release 5) Software Release. The feature number for this feature is 99-5E-8199.

This feature provides a set of security measures that are enhancements to the CALEA-CORE feature (99-5E-4275). For information on the Core feature, see Division 2, Section 4A509. These security measures are implemented in the 5ESS-2000 Switch, specifically, in the PHs (Protocol Handlers) where the X.25 PVC (Permanent Virtual Circuits) are provisioned and terminated for the use of CALEA CDC (Call Data Channel) or PDC (Packet Data Channel). These measures are the implementation of rules that take advantage of the unidirectional nature of CALEA TCP/IP (Transmission Control Protocol/Internet Protocol) messaging. If any violations of the rules are detected, reports are sent to the CALEA ROP (Read Only Printer). In addition, fault recovery actions are triggered that operates on the HDLC (High Level Data Link) channel that supports the X.25 PVC.

2. FEATURE ASSIGNMENT

The only provisioning needed for this feature is, the ACT field for SFID 628 must be set to "Y" on the SFSYS form (5713-1 Record) to activate the feature and, the ACT field for OFID 708 must be set to "Y" on the FOSYS form (5713-2 Record) to turn the feature on and off.

For detailed information concerning this feature, see the *5ESS Switch Lawfully Authorized Electronic Surveillance Provisioning, Troubleshooting, and Maintenance Guide* (235-200-400) document.

SEC. 4A631: EAI VIA ASM

1. FEATURE DESCRIPTION

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The EIA (Emergence Access Interface) on ASM (Administation Services Module) feature is a Secured Feature associated with with SFID 631. It is being deployed in the 5E15 FR 5 (Feature Release 5) Software Release. The feature number for this feature is 99-5E-8144.

Currently, EAI information including PRMs (Performance Report Messages) are displayed on the MCC (Master Control Center), and EAI pokes are processed when the EAI page is active via two-way communication over an asynchronous RS232 (one of the standard interfaces between a computer) interface. This information is also sent to an external OSS (Operating Support System) via the SCCS (Software Configuration Control System) interface which is a synchronous BX.25 (A CCITT communications protocol) interface.

With the EAI on ASM feature, the information sent and received via the SCCS interface over a virtual channel 1, as well as any login and password information, is provided over an asynchronous RS232 interface using a spare port on the UN597 MTTYC (Maintenance Teletype Controllers) circuit pack.

There are two MTTYCs in the 3B21D (the AM). The spare port ASMSP (ASM Service Port) from each of the MTTYCs is connected via a Terminal Server to the ASM, and then to an OSS. ASMSP should not show up as a device to RTR (Real-Time Reporting). A Duplex ASM has two Terminal Servers. Each MTTYC connects to a different Terminal Server. An OSS such as NFM (Network Fault Manager) can access this additional interface via the ASM. The access from the OSS to the ASM is done using the TCP/IP (Transmission Control Protocol/Internet Protocol) interface. This feature works on both the Simplex ASM and the Duplex ASM, and provides an interface consistent with the interface currently available for DRM (Digital Rights Management). The legacy SCCS interface is not being changed.

2. FEATURE ASSIGNMENT

The feature has no ODA impact, therefore no provisioning is needed.

SEC. 4A632: DIGITAL TRUNK INTERFACE FOR TAU

1. FEATURE DESCRIPTION

The feature number for the Digital Trunk Interface for TAU (Test Access Unit) feature is 99-5E-8050. This feature is controlled by SFID (Secured Feature ID) 632 and is made available with the 5E15 FR 5 (Feature Release 5) Software Release.

This feature provides the support of Test Access Unit AC (Alternating Current) Jacks via digital trunks from the 5ESS Switch. The AC Jacks are used to get access to any trunk or line on the switch via an AC coupled (tones, voice) connection. The jack access can be used with portable test equipment to source tones, to measure tones, or to send and receive voice transmissions. The access is set up via TLWS (Trunk Line Work Station) commands or via a directly signaled call on the jack interface.

The Test Access Unit AC Jacks currently are connected via analog trunk(SN-104)interfaces to the switch. The test equipment generates and receives analog signals. Therefore when digital trunks are assigned to serve AC Jacks, an appropriate signaling converter or channel bank must be provided between the switch trunk port and the Test Access Unit.

2. FEATURE ASSIGNMENT

To activate this feature:

- Set the ACT field to "Y" for SFID 632 on the SFSYS Form (5713-1 Record).
- Assignment of AC-JACK equipment number:
  - Define a new trunk group on RCV (Recent Change View) 5.1 (TKGRP form (5202 Record)) with TRK CLASS equal "ACJCK".

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- Define a new trunk member on RCV 5.5 (TRUNK form (5204 Record)) with TEN entered for analog trunks, DEN entered for Digital Equipment Trunks, or NEN entered for Digital Networking unit Trunks.

- Assign the appropriate trunk (TEN, DEN or NEN) on RCV 14.3 view (TLWS form (5511 Record)) as AC JACK 1 OE or AC JACK 2 OE.

- When AC JACK 1 OE and AC JACK 2 OE types equal "T", the AC JACK 1 OE number is used with Service Group 0 of the Trunk Unit, and the AC JACK 2 OE number is used with Service Group 1 of the Trunk Unit. Any other configurations with "D", "N", or "T" types for AC JACK 1/2 OE fields can be used without any restrictions.

2.1 AC JACK setup procedure

- AC Jack Connection for DLTU (Digital Line and Trunk Unit):

  - The DEN is entered on the TLWS Form, it is brought out to the STP (Signaling Transfer Point) Trunk Jack PNL (Panel) by X-connecting the T/R/T1/R1 from the E&M channel packs, which are put in the respective channels of the D4 Channel Bank. The D4 Channel Bank is connected to the DFI (Digital Ficility Interface) of the DLTU via T1 links.

- AC Jack Connection for DNU-S (Digital Networking Unit - SONET):

  - The NEN is entered on the TLWS Form, it is brought out to the STP Trunk Jack PNL by X-connecting the T/R/T1/R1 from the E&M channel packs, which are put in the respective channels of the D4 Channel Bank. The D4 Channel Bank is connected to the DDM2K via T1 links. DDM2Ks are connected to DNU-S via STM-1 (Synchronous Transport Mode 1) links. It breaks the STE (Signaling Terminal Equipment) into 28 DS1s (Digital Signal level 1).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1
TLWS	5511	3	5K	14.3
TRUNK	5204	3	2C	5.5

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field to "Y" for SFID 632.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added two data rules to the TRKCLS of "ACJCK".

TLWS form (5511 Record) - This form defines each TLWS (Trunk and Line Work Station) associated with a 5ESS Switch. An MCC (Master Control Center) TLWS is required in every 5ESS Switch and must be defined on this form. Changed the field names of AC-JACK 1 TEN and AC-JACK 2 TEN to AC-JACK 1 OE and AC-JACK 2 OE, respectively.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. Modified a data rule for the NEN equipment type.

SEC. 4A633: DIGITAL CELLULAR SWITCH CRITICAL ALARMS IMPROVEMENT

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1. BACKGROUND

Prior to this feature, for the DCS (Data Control System) there was not an alarm to indicate trunk problems. The craft did not know when there was a problem due to the lack of alarms and messages to the ROP (Read Only Printer).

2. FEATURE DESCRIPTION

The Provide Critical Alarm When Trunks Outside of the DCS is Lost feature is a secured feature (SFID 633) that is made available with the 5E16(1) FR 2 (Feature Release 2) Software Release, and is associated with feature number 99-5E-7970.

The DCS detects, isolates, and provides a critical alarm, and a message to the ROP, when trunk interfacing with the DCS goes OOS (Out Of Service). The ROP message indicates at minimum the following:

- Type of trunk OOS condition is detected on (Digital, Analog, Optical)
- Date and time stamp
- Alarm level (e.g. critical)
- SM alarm occurred on
- Peripheral alarm occurred on
- Indication of what caused the alarm

There is alarm and ROP indications for the following cases:

- Autoplex PSTN (Public Switch Telephone Network)
- Non-Autoplex PSTN
- Other Vendor's APX (Autoplex) Switch
- Cell site-1
- Cell site-2
- PBX (Private Branch Exchange)
- VMS (Virtual Memory operation System)
- IS634 (Interim Standard 634) Base Station
- IWF (Inter-Working Function)

3. FEATURE ASSIGNMENT

To activate this secured feature. the ACT field for SFID 633 on the SFSYS form must be set to "Y".

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

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SFSYS form (5713-1 Record) - This form is used to activate secured features. ACT must be "Y" for SFID 633.

SEC. 4A635: VOICE AND DATA CHANNEL COUNTS

1. FEATURE DESCRIPTION

The Voice and Data Channel Counts feature (97-5E-8312) is a secured feature (SFID 635) that is made available with the 5E17 Software Release.

This feature provides a mechanism for tracking the number of PHV (Protocol Handler for Voice) voice and data channels provisioned in an office verses the number of PHV voice/data channels purchased or licensed. If the RCV (Recent Change and Verify) blocking functionality has been activated, once the number of provisioned channels reaches a threshold of 80% of the total Channels licensed, a warning will be given to the customer. Also, if the blocking functionality has been activated, when the number of provisioned channels reaches 100% of the total licensed, the customer is not allowed to provision the PHV channels until the total licensed limit has been updated by Lucent personnel.

2. FEATURE ASSIGNMENTS

2.1 Data Provisioning

Inserts, updates, and deletes will ONLY be allowed for RC. This form can only be reviewed by ODA.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
VDCHN	5918	5	3W	22.32

VDCHN form (5918 Record) - This form is used to display all Recent Change transactions on view 22.32. This is a new form that supports this feature.

SEC. 4A662: CM3 TMS Fabric Expansion

For information concerning this feature, see Division 2, Section 7BO.

SEC. 4A663: CM3 TMS Fabric Expansion

For information concerning this feature, see Division 2, Section 7BO.

SEC. 4A664: CM3 TMS Fabric Expansion

For information concerning this feature, see Division 2, Section 7BO.

SEC. 4A666: NxTMS TRAFFIC MEASUREMENTS

1. FEATURE DESCRIPTION

The NxTMS (N times TMS (Time Multiplexed Switch)) Traffic Measurements feature is being deployed in the 5E16(2) Software Release. The feature number for this feature is 99-5E-8259.

This feature introduces the functionality which allows collection of traffic data for Network Time Slot attempts. It also collects mismatches per originating SM (Switching Module) - terminating SM pair. It formats and report that data on the appropriate newly created 30 minute report section 149, called MTSM (Matrix Time Slot Measurements.

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The introduction of the base NxTMS feature (99-5E-4104) requires that the switch be engineered in such a way as to be used to its fullest extent. For example, maintaining proper call load distribution among the SMs (Switching Modules) and SM2000s in an NxTMS office with N greater than 1 is requested. For proper switch engineering, the data related to the call load distribution is needed, and should be supplied by traffic measurements. This data must be collected prior to activating the 99-5E-4104 feature. The existing measurements such as Network Time Slot Occupancy and Network Time Mismatch are reported per SM and does not show the call load distribution to other SMs.

To address the need of additional data needed for NxTMS switch engineering, the additional "matrix" measurements are introduced. These kind of measurements allow the user to get the information about the traffic between any part of SMs in the switch, while taking into account the direction of the traffic (SM x -> SM y traffic is generally different from SM y -> SM x traffic).

2. FEATURE ASSIGNMENT

The only provisioning needed for this feature is:

- Activate SFID 666 by setting the ACT field on the SFSYS form (5713-1 Record) to "Y".
- Select components to be collected using RC/V (Recent Change/Verify) views 13.7 and 13.8 (no existing ODA forms).
- Allow TRFC30 section 149 for collection using the ALW:TRFC30,CLCT,MTSM; command.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9
SFSYS	5713-1	2	4A0	8.22

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Components are defined as the entity to be measured; components can be at the end product level (AIU, DNU-S, SS7 PSU, etc.) or subassemblies (i.e., packs, lines, DPIDB, etc.). Added the MTSM section name.

SFSYS form (5713-1 Record) - This form is used to enable secured features. SFID 666 ACT must be set to "Y" to enable this feature.

SEC. 4A667: CALL TRANSFER/COT/AC ENHANCEMENTS

1. FEATURE DESCRIPTION

For information on this feature refer to Division 2, Section 4A588.

SEC. 4A669: PATCH SPACE RECOVERY TOOL

1. FEATURE DESCRIPTION

The PSR (Patch Space Recovery) Tool feature (99-5E-8278) is made available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. This feature is a secured featured controled by SFID 669.

The primary objective of the Patch Space Reccovery Tool feature is to aid in the extension of the life of the 5E16(2) Software Release. Historically, the fragmentations of the patch space and the exhaustion of patch holes in the IM.out has limited the life cycle of a release. This feature addresses this issue by

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"de-fragmentation" of IM.out patch, consolidating remaining patches in several larger holes.

The new IM.out(s) built on the disk and the memory of the SM(s) (Switching Modules) are updated using the ISD (Interim Split Duplex) mechanism. This mechanism requires that the SM(s) of an office are simplex for a short duration while a retrofit-like procedure is executed to offline pump the SM(s) and switch the SM(s) to run on the new image. Since this procedure requires the SM(s) to be simplexed, it is desirable that the procedure be done infrequently (no more than once a year).

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 669 to "Y".

SEC. 4A670: SAAL SS7 HIGH SPEED SIGNALING LINKS

1. FEATURE DESCRIPTION

The SAAL (Signaling Link ATM Adaptation Layer) SS7 High Speed Signaling Links feature is a secured feature (SFID 670) that is available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. The feature number is 99-5E-7451.

Telephony service providers are deploying new CCS (Common Channel Signaling) applications which are resulting in a need for higher capacity signaling networks. Examples of these applications are intelligent network services such as LNP (Local Number Portability), wireless services such as PCS (Personal Communications Services), and emerging technologies such as VOIP (Voice Over Internet Protocol). Additionally, traffic growth is also expected in the traditional existing services such as 800/888 toll free data base service, intraLATA (Local Access And Transport Area) class services, and advanced IN (Intelligent Network) services.

As the need for higher capacity in the signaling networks increases, a means for higher capacity transport between network nodes must also be provided. The industry solution for meeting the capacity needs of the future signaling networks is the replacement of the low speed 56Kb/s signaling links with higher speed and capacity signaling links. These HSLs (High Speed Links) implement ATM (Asynchronous Transfer Mode) at the data link layer and utilizes an entire DS1 (Digital Signal Level 1) physical transport facility.

This feature introduces the HSL stack components to the 7R/E 5ESS GSM (Global Switching Module) architecture. New to the GSM is the T1/ATM physical layer and the SAAL (Signaling Link ATM Adaptation Layer) protocol layer for use as a high speed signaling link. Additionally, the existing MTP (Message Transfer Part) layer 3 was modified to support the B-MTP3 standard specifications. The functionality required of each principal layer and sublayer are:

- **Physical Layer** - The physical layer provides a means for the ATM cells to be transmitted and is to be implemented as a DS1 (1.544 Mb/s). The ATM cells are mapped directly into the ESF (Extended Superframe Format) DS1 frame payloads. The actual data rate is 1.536 Mb/s, which is 1.544Mb/s less the DS1 framing overhead.

- **ATM Layer** - ATM is implemented directly above the physical layer providing the signaling data link function. It is a packet-oriented data transfer and networking protocol using an asynchronous time division multiplexing technique. The information flow is organized into 53 octet cells with 5 octets of header and 48 octets of payload. Although the ATM protocol allows for multiple "virtual" paths and channels, the HSL feature implements it as a direct point-to-point virtual channel between two CCS nodes over a dedicated DS1 transmission link.

- **SAAL Layer** - The SAAL (Signaling ATM Adaptation Layer) enhances the services provided by the

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ATM layer so as to support the specific functions required by CCS signaling, such as the reliable transfer of signaling messages between two signaling points. A signaling message delivered by the higher SS7 protocol layers is transferred over the signaling link as a variable length SAAL PDU (Protocol Data Unit). The SAAL Layer is composed of 4 sublayers or modules:

- *AAL5 (ATM Adaption Layer 5)* - This sublayer supports the capabilities necessary to meet the upper layer data transfer needs. It provides the transport of variable length frames (from 1 to 65,535 octets in length) with error detection capabilities and interfaces to the ATM layer.

- *SSCOP (Service Specific Connection Oriented Protocol)* - This sublayer provides a generic, reliable data transfer service for different AAL interfaces defined by the SSCF (Service Specific Coordination Function). The maximum sized PDU that is supported is 4096 octets in length.

- *SSCF (Service Specific Coordination Function)* - This sublayer maps the services of SSCOP of the SAAL to MTP Level 3. It also communicates with the LM (Layer Management) functional entity for proper operation of the signaling link.

- *SAAL Layer Management* - This sublayer performs a coordination function between system management and the SAAL. This includes error processing, measurements, and determination of link quality during proving and normal operation.

- **Signaling Network Layer** - MTP3 (Message Transfer Part Layer 3) provides the transport functions and procedures that are common to, and independent of, the operation of individual signaling links. Minor changes are needed to the MTP3 layer to support the expansion of message sequence numbers to accommodate the longer sequence numbers used by SAAL relative to those used for MTP2-based 56-Kb/s signaling links.

2. FEATURE ASSIGNMENT

For 5E16 and later, the provisioning rules for this feature are as follows:

- Phase 1:

  - Insert a new physical PH31 and update the EQSTAT to "O" on the EQSUPH form (5742 Record) RC/V (Recent Change View) 22.4.

  - Assign the PH31 to an unused logical channel group on the PSUGP form (5949 Record) RC/V 22.16.

    - ***NOTE:*** The GRP TYPE field is NULL since no applications exist for this channel group yet.

- Phase 2:

  - Create a High Speed Link Parameter on the SAALPRM form (6017 Record) RC/V 16.27.

  - Create a PSU PIPE on a PH31 on the PSUPIPE form (5990 Record) RC/V 22.25.

  - Create a SAAL High Speed Link on the SAALHSL form (6016 Record) RC/V 16.26.

3. TRANSLATION REQUIREMENTS

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New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CCLNK	6004	9	10D	16.6
CLKSET	6005	9	10E	16.7
EQPSUPH	5742	8	23	22.4
LNKSET	6003	9	10C	16.5
PSUGP	5949	5	3J	22.16
PSUPIPE	5990	5	5O	22.25
SAALHSL	6016	9	10V	16.26
SAALPRM	6017	9	10W	16.27

CCLNK form (6004 Record) - This form is used to define the CCS7 (Common Channel Signaling 7) link sets and members.

CLKSET form (6005 Record) - This form is used to define the link sets that comprise the combined link set.

EQPSUPH form (5742 Record) - This form is used to define the PSU (Packet Switching Unit) PHs (Protocol Handlers) equipped in the 7R/E 5ESS Switch.

LNKSET form (6003 Record) - This form is used to define CCS7 signaling link sets.

PSUGP form (5949 Record) - This form is used to specify the PH type for a defined logical channel group on a PSU shelf.

PSUPIPE form (5990 Record) - This form is used to define a PSU Pipe consisting of a T1 or E1 facility terminating on a PH. This is a new form created to support this feature.

SAALHSL form (6016 Record) - This form is used to define the Signaling Link ATM links. This is a new from created to support this feature.

SAALPRM form (6017 Record) - This form is used to define values of a High Speed Signaling Link parameter set. This is a new form created to support this feature.

SEC. 4A671: ASSERT MNEMONICS ON THE ROP

1. FEATURE DESCRIPTION

The Assert Mnemonics on the ROP (Read Only Printer) feature (99-5E-7853) is a secured feature (SFID 671) and is made available with the 5E16(2) Software Release.

This feature allows assert names to be printed on the ROP in addition to the usual assert numbers. This feature is supported in OSDS (Operating System for Distributed Switching) environments on the AM (Administration Module), CMP (Communication Module Processor) and SMs (Switching Modules) only.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Added the PRINT ASSERT NAME field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 671 to "Y".

SEC. 4A674: RC/V SECURITY LOGGING AND VERBOSE ENHANCEMENTS

1. FEATURE DESCRIPTION

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The RC/V (Recent Change/ Verify) Security Logging and Verbose Enhancements feature (99-5E-8297) is a secured feature (SFID 674) that is made available with the 5E17(1) Software Release. This feature is dependent upon the RC Security feature (99-5E-7951). For more information on the 99-5E-7951 feature, see Division 2, Section 4A595.

This feature expands the verbose output associated with RC/V security logging. This feature also allows the RC administrator to review actions by users, and reduce the impact of RC user errors on network functionality. This is done by allowing tracking of errors and targeting training to correct repeated errors.

The verbose function (rcverbose) is already available as an option on the RC/V Menu Interface and the RC/V Text Interface on the 5ESS Switch. The option can be invoked from either interface. When the verbose option is turned on, additional information is provided on the ROP (Read Only Printer). With this feature and the RC Security Feature (99-5E-7951), the ROP displays more data on RC/V update and delete operations (i.e., the old data and new data of RC/V operations).

A ROP example with VERBOSE set to "Yes" is:

- S570-71 02-05-20 09:56:58 000742 RCVY A0 t9.0-2r20 M RCV SUCCESS RC_PARAM UPDATED LABA0 TERM-ID = ttyv

A ROP example with Authority Management login is:

- S570-71 02-05-20 09:56:58 000742 RCVY A0 t9.0-2r20 M RCV SUCCESS RC_PARAM UPDATED LABA0 AUTHLOGIN = gfd

A ROP example with RC/V Verbose Enhancements is:

- S570-71 02-05-20 09:56:58 000742 RCVY A0 t9.0-2r20 M RCV SUCCESS RQUFD UPDATED /QTRB TERM-ID = tty1 AUTHLOGIN = gfd

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT fields for SFID 595 and SFID 674 to "Y".

SEC. 4A678: FORWARDED CALL - CALL SCREENING ANNOUNCEMENT MODIFICATION

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-400 Feature Description Document.*

SEC. 4A682: HIGH CAPACITY APT ENHANCEMENTS

1. FEATURE DESCRIPTION

The High Capacity APT (Automatic Progression Testing) Enhancements feature (99-5E-8390) is a secured feature (SFID 682) that is made available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. For more information see Division 2, Section 2AD (99-5E-8150 feature).

This feature extends the APT enhancements introduced with the APT Enhancements feature (99-5E-8150)

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in order to increase trunk testing capacity for Large Tandem 5E16(2) configurations.

The APT Enhancements feature (99-5E-8150) introduced Sequential and Full algorithms. The High Capacity APT feature extends that capability by adding two other algorithms that allow more efficiency and productivity from APT.

The new APT algorithms being added by this feature are:

- *Test one only* - APT selects a trunk on a DS1 (Digital Signal Level 1) that has not been tested in this cycle, is not busy, and has not been manually removed from service. It then runs the provisioned operational test for that trunk. If the test passes or fails, APT moves on to the next DS1.
- *Stop on success* - APT will select a trunk on a DS1 that has not been tested in this cycle, is not busy, and has not been manually removed from service. It then runs the provisioned operational test for that trunk. If the test passes, APT moves on to the next DS1. If the test fails, another trunk on the same DS1 is selected and the operational test for it is run. The failure case continues until all the trunks on the DS1 have been exhausted or until one passes.
- *None* - APT should not perform any tests on a DS1.

With these new algorithms the emphasis is different. Instead of incrementally testing each trunk, the idea is to get coverage of the office by visiting and testing at least one trunk on each DS1 before starting over again. The reason for this is that most of the time a DS1 carries the same type of trunk and adjacent trunks on the same DS1 which do not operationally fail independently. So, the value in sequentially testing adjacent trunks on the same DS1 has little return.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 682 to "Y".

Other than the SFSYS form, there is no other ODA impacts to this feature.

SEC. 4A684: SIP FOR PACKET TRUNKING

1. FEATURE DESCRIPTION

The SIP (Session Initiation Protocol) for Packet Trunking feature is a secured feature (SFID 684) that is available with the 5E16(2) FR 3 (Feature Release 3) and later Software Releases. The feature number is 99-5E-8382. For other information on this feature refer to the Lucent Technology document number *235-190-400 Feature Descriptions Document.*

This feature adds a SIP packet trunking interface to the 5ESS Switch. The feature allows the 5ESS Switch to operate as a gateway for interworking from the TDM (Time Division Multiplexing)-based PSTN (Public Switched Telephone Network) trunks to next-generation IP (Internet Protocol) network virtual trunks. It interworks with any current circuit signaling protocol, such as SS7 (Signaling System 7) ISUP (Integrated Services User Part), MF (Multi-Frequency), or DTMF (Dual Tone Multi-Frequency), with SIP trunk signaling over IP networks.

The SIP signaling protocol for telephony is the packet signaling protocol used to establish calls using the OIU-IP (Optical Interface Unit - Internet Protocol).

The SIP for Packet Trunking feature contains:

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- two new protocol handlers for setting up the SIP signaling connection,
- a new lower layer transport protocol, SCTP (Stream Control Transmission Protocol), and
- integrated OA&M (Operations, Administration, Maintenance) and provisioning using the conventional 5ESS Switch interfaces.

1.1 Call Processing Impacts

This feature is very similar to the OIU IP feature; for call processing the primary difference is that SIP signaling is used as an alternative to BICC signaling. As a result, the call processing requirements are very similar.

- On the OPS (Originating Packet Switch), the Secured Feature ID for SIP must be enabled before the call is routed using the SIP packet components. When the SFID is not enabled, the next non-SIP RTI (Route Index) must be used to route the call. This is not considered overflow; therefore, the Overflow Peg Counts for the SIP Trunk Groups are not incremented.
- Call Processing/Routing supports the use of all IP bearer networks equipped in the office.
  - The OIU IP feature added support for the possibility that a service provider would need to route bearer traffic over multiple bearer networks in response to IP signaling messages (up to 512 networks simultaneously). For example, a service provider might use one network to carry internal traffic, and another network to carry traffic destined for other carriers.

    In addition, SIP is not inherently limited to supporting only IP bearer networks. SIP is bearer independent, and it is possible that other network types (e.g., ATM (Asynchrous Transfer Mode), AAL1 (ATM Adaptation Layer 1), or ATM AAL5) will need to be supported in the future.
- Call processing supports the voice packetization intervals supported by the switch's packet interfaces.
  - Currently, the OIU-IP supports packetization intervals of 10 mSec, 20 mSec, and 30 mSec.
- For the outgoing bearer stream of a call (from the OFI (Optical Facility Interface) to the far office), call processing uses the voice packetization interval provisioned on the bearer network used for the call. For originating calls, this value is put into the SDP MIME (Multipurpose Internet Mail Extension) portion of the INVITE message. For terminating calls, this value is put into the SDP MIME portion of the 183 SESSION PROGRESS message sent after receiving the INVITE.
  - Although it is expected that all the offices within a given network will signal the same packetization interval for its sending direction, this is not required. Instead, whatever value the far office signals is acceptable as long as it is one of the supported values (10, 20, or 30 mSec).
- For the incoming bearer stream of a call (from the far office to the OFI), call processing uses the voice packetization interval signaled by the far office as long as this office supports the requested value. For originating calls, this value is found in the SDP portion of the 183 SESSION PROGRESS message received after sending the INVITE. For terminating calls, this value is found in the SDP MIME portion of the received INVITE message.
- For the incoming bearer stream of a call (from the far office to the OFI), call processing will validate that the requested voice packetization interval is in the set of packetization intervals supported by the switch. If it is not, the call will be rejected.
- Existing features that reroute released calls (such as Reroute on Release, STOR, GETS, and some

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ASP (Advanced Services Platform) features) will continue to work. If such a feature uses the release cause code of an ISUP (Integrated Services User Part) message, it will use the cause code of any embedded ISUP message. If there is no such embedded message, the feature will use the mapping provided in requirement SIPT-SIG0860.

- Existing features (such as Reroute on Release, GETS, and some ASP features) can reroute a call to the next route in the route list. For these features that route could be another SIP route, or it could be a TDM (Time Division Multiplex) route.

The following requirement covers specific features that are deployed in customers' networks that could cause an incoming SIP call to be routed out of the office using SIP. When this happens, the switch is considered to be a "Back to Back User Agent" (or B2BUA in SIP parlance), not a proxy. This means that the calls on each side of the switch are independent from a SIP signaling point of view. This is done to allow services to modify the call as appropriate (e.g., to allow call forwarding features to change the called party address).

Hence the Call ID, From, and To headers of an incoming SIP call are not required to be replicated when that call is routed out of the switch as a SIP call.

- Calls coming in to the 5ESS Switch with SIP signaling are allowed to go out on SIP signaling for the calls involving Two B Channel Transfer for PRIs (Private Rate Interfaces) and Call Forwarding on a Busy Trunk Group.

- The following check must be made before the call can be routed via packet: the call must be a circuit switched voice (CSV or 3.1 kHz voice) call. If this check is not satisfied, this SIP route in the route list will be skipped and the next route attempted. If this check is not satisfied and this is the last route in the route list, the call will be given the same treatment as if no routes were available.

  - At this time it is not expected that IP packet networks will be able to guarantee that the transmission quality of the networks (with respect to jitter and packet loss) will support the needs of circuit switched data calls. Therefore, circuit switched data calls will use an alternate route in place of a SIP route if such a route has been provisioned in the route list.

- Features interacting with SIP interoperate in a manner consistent with the interactions specified for BICC in Feature Specification Documents (FSDs) 30-09-0010 and 63-02-0115.

  - In particular, FSD 63-02-0115 has requirements covering the allowed packet group call to packet group call interactions (e.g., see R.63.02.0015-9090).

    Currently it is expected that the first application of SIP packet trunking will be in a tandem application. As a result, interactions of SIP with trunk features have a higher testing priority than interactions with line based features.

2. FEATURE ASSIGNMENT

For 5E16 and later, the provisioning rules for this feature are as follows:

Prerequisites:

- Examine office records to determine a suitable SM-2000 to serve as the SIP Global SM. The SM must be on the a PSU2 (Packet Switching Unit 2). The absolute minimum equipage required is a PSU2 with one or more shelves with DF2 (Data Fanout version 2) and at least five empty slots for installing PHs (Protocol Handlers). The PHs must be available in PSU-0 if a dual-PSUs (two PSU2s) is equipped.

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SIP cannot be provisioned on PSU-1 of a dual PSU. If there are no DF2 equipped shelves with enough empty slots, it is then necessary to order a new PSU2 shelf that has a DF2. Ideally, the SM-2000 selected should not be equipped with any trunks or lines or other call-processing roles. This reduces the chances of interferance. The SM-2000 selected could be an existing SS7 (Signaling System 7) GSM (Global Switching Module), but for additional reliability, it is recommended that the two global PSU2 functionalities are separate. If the SIP GSM goes through a full init or a duplex PSUCOM failure, calls can still be routed through SS7 when the two global PSU2 functionalities are separate.

- Examine office records to determine the SM for which SM-2000s are provisioned, with OIU-IP/OFI (Optical Interface Unit-Internet Protocol/Optical Facility Interface) protection groups to serve as IP bearer endpoints.
- Examine the office records and traffic measurements occupancy reports to determine which SM-2000s have the available capacity to serve as SIP call processing SMs.
- Identify the adjacent layer 2 switches and/or IP routers external to the 5ESS Switch that the ethernet links carrying the SIP signaling traffic will be connected to for the 5ESS Switch, as well as for the adjacent routers.
- Identify the necessary IP addresses for the 5ESS as well as for the adjacent routers. There can be a maximum of two IP addresses.
- Identify the IP addresses and SCTP ports on the other SIP-enabled switches in the network that the 5ESS will be connecting SIP calls. A maximum of two far end addresses per association are supported.
- Verify that sufficient PH hardware is available to be installed in the global PSU2and for replacement boards. The absolute minimum is two TN13 packs with LLE2 10/100 BaseT Ethernet paddleboards and three TN113 packs with no paddleboards.
- OIU-IP feature provisioning must be done. For information on this feature, see Division 2, Section 7BX.
- SFSYS form, RC/V (Recent Change View) 8.22
  - Activate the SIP feature by setting the ACT field for SFID 684 to "Y".

SIP Connectivity Provisioning:

- SIPGSM form (5880 Record), RC/V 5.80
  - Insert SIP Global SM
- EQPSUPH form (5744 Record), RC/V 22.4
  - Define a PH (Protocol Handler)
- PSUGP form (5949 Record), RC/V 22.16
  - Assign the PH Channel Group
- QPHPIPE form (5828 Record), RC/V 17.24
  - Insert QPH Pipes to QLPS network 0 & 1 (creates a GQPH channel group)

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- EQPIPE form (5544 Record), RC/V 17.20
  - Assign MH Pipes
- QGCON form (5828 Record), RC/V 17.27
  - Update GSM - Non-GSM Communication
- SIPTSMS form (5881 Record), RC/V 5.81
  - Insert Call Processing SM

Signaling Provisioning:

- SIPGSM form (5880 Record), RC/V 5.80
  - Insert SIP Global SM
- EQPSUPH form (5742 Record), RC/V 22.4
  - Define a PH (Protocol Handler)
- PSUGP form (5949 Record), RC/V 22.16
  - Assign the PH Channel Group
- PCRGRP form (5883 Record), RC/V 33.16
  - Insert Processor Group
- IPPROC form (5987 Record), RC/V 33.1
  - Assign IP Address to SM
- ETHIP form (5995 Record), RC/V 33.4
  - Insert Ethernet - IP Interface
- IPROUT form (5989 Record), RC/V 33.3
  - Insert IP routing information.
- IPPING form (5884 Record), RC/V 33.17
  - Insert Router Pinging
- SCTPPARM form (5885 Record), RC/V 33.18
  - Insert SCTP Endpoint Timers and Protocol Parameters

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- SCTPNEPD form(5886 Record), RC/V 33.19
  - Insert SCTP Near Endpoints
- SCTPFEPD form (5888 Record), RC/V 33.21
  - Insert SCTP Far Endpoints
- ASSCPARM form (5887 Record), RC/V 33.20
  - Insert SCTP Association-related Protocol Parameters
- SCTPASSC form (5889 Record), RC/V 33.22
  - Insert SCTP Association
- ASSOCSET form (5890 Record), RC/V 33.23
  - Insert SCTP Association Set
- OFCOPT form (5509 Record), RC/V 8.15
  - Update CCS Office Parameters and set HOME COUNTY CODE
- SIPTPARM form (5882 Record), RC/V 5.82
  - Insert SIP Parameters
- PKTGRP form (5219 Record), RC/V 5.71
  - Insert Packet Group
- TKGRP form (5202 Record), RC/V 5.1
  - Insert Trunk Group
- RTIDX form (5304 Record), RC/V 10.2
  - Assign Route Index

For a more detailed description of the provisioning sequences, refer to the Lucent Technology document number *235-200-118 OA&M Manual.*

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ASSCPARM	5887	5	3AI	33.20
ASSOCSE	5890	5	3AL	33.23
CMTMH	6021	9	10U	16.16

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EQCORE	5701	8	3	17.14
EQPSU	5741	8	22	22.2
EQPSUPH	5742	8	23	22.4
ETHIP	5995	5	3S	33.4
IPPING	5884	5	3AF	33.17
IPPROC	5987	5	3N	33.1
IPROUT	5989	5	3P	33.3
MEASSUM	5563	3	5BG	13.9
OFCOPT	5509	3	5I	8.1 8.15
PCRGRP	5883	5	3AE	33.16
PKTGRP	5219	5	3Z	5.71
PSUGP	5949	5	3J	22.16
PSUPIPE	5990	5	5O	22.25
QGCON	5829	8	91	17.27
QPHPIPE	5828	8	70	17.24
QTUV	NA	8	92	NA
SCTPASSC	5889	5	3AK	33.22
SCTPFEPD	5888	5	3AJ	33.21
SCTPNEPD	5886	5	3AH	33.19
SCTPPARM	5885	5	3AG	33.18
SFSYS	5713-1	3	5AR	8.22
SIPGSM	5880	5	3AB	5.80
SIPTPARM	5882	5	3AD	5.82
SIPTSMS	5881	5	3AC	5.81
SREINCR	5547	3	5AW	8.40
TKGRP	5202	3	2A	5.1

ASSCPARM form (5887 Record) - This form provides information about a set of parameters that will be used for SCTP (Scream Control Transmission Protocol) associations. This is a new form that supports this feature.

ASSOCSET form (5890 Record) - This form is used to provide information about a SCTP association set. This is a new form that supports this feature.

CMTMH form (6021 Record) - This form defines which message handler will be used for CCS (Common Channel signaling) message transport for communication between a GSM (Global Switching Module) and a NGSM (Non-GSM). Modified a data rule for the GLOBAL SM field.

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments in a 5ESS Switch office. Added a data rule to the VCDX OFFICE field.

EQPSU form (5741 Record) - This form is used to define the PSUs (Packet Switching Units) equipped in a 5ESS Switch. Added and modified data rules for the SG 0 TYPE (PSU2) field.

EQPSUPH form (5742 Record) - This form is used to define the PSU PHs (Protocol Handlers) equipped in the 7R/E 5ESS Switch. Added data rules to the PSU,PSU SHELF, and PH 31 MIN SPARE fields. Added a new value to the PH CLI field. And added the PH33 MIN SPARE field.

ETHIP form (5995 Record) - This form provides the ethernet capability to provision IP (Internet Protocol) addresses, subnet masks, and associated IP parameters to an internet interface. Replaced the GATEWAY IP ADDRESS with GATEWAY IP ADDRESS 1 and 2. And replaced the IP SUBNET MASK with IP SUBNET MASK 1 and 2.

IPPING form (5884 Record) - This form is used to manage the IP Ping Parameters. This is a new form that supports this feature.

IPPROC form (5987 Record) - This form provides the capability to provision up to five IP addresses and subnet masks, and associated IP, TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) parameters to a processor (SM or PH). Added the ICMP ERR GEN, IP. FRAGMENT, and MTU INTVL AFT FAIL fields. Also added new value to PROCESSOR TYPE field.

IPROUT form (5989 Record) - This form provides the capability to provision an IP gateway between an external IP destination and a local IP interface. Modified data rule for DEST IP ADDR field and added data

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rule to the ROUTE METRIC field.

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Added the PKTGRP and SCTP values to the SECTION NAME table. Also added a data rule to the SECTION NAME field.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Added the PRACK ENABLED and COUNTRY CODE fields.

PCRGRP form (5883 Record) - This form is used to insert, review, update, and delete the Processor Group corresponding to either one SIP PH, or to two SIP PHs that function as a serving/non-serving pair. This is a new form that supports this feature.

PKTGRP form (5219 Record) - This form is used to insert, review, update, and delete ATM (Assynchronous Transfer Mode) or IP packet groups. This form was modified to support this feature.

PSUGP form (5949 Record) - This form is used to specify the PH type for a defined logical channel group on a PSU shelf. Added the AVAILABLE PH 33 field and added a new value to PH TYPE.

QGCON form (5829 Record) - This form provides the basic description of the SM (Switching Module) side of the GQPH (Global Quad Protocol Handler) pipe connecting the QPH to the GQPH network. This is a new form that supports this feature.

QPHPIPE form (5828 Record) - This form provides the basic description of the SM side of the QLPS (Quad-Link Packet Switch) pipe connecting the QPH (QLPS Protocol Handler) to the QLPS network. Added the SERVICE TYPE field and modified data rule for PH TYPE.

QTUV form - This form is used to preserve timeslot assignment on a QTMSLINK to a QLPS board in an SM-2000 office. This is a new form that supports this feature.

SCTPASSC form (5889) Record) - This form is used to provide information about the SCTP association. This is a new form that supports the SIP feature.

SCTPFEPD form (5888 Record) - This form is used to provide information about the SCTP far endpoint. This is a new form that supports this feature.

SCTPNEPD form (5886 Record) - This form is used to provide information about the SCTP near endpoint. This is a new form that supports this feature.

SCTPPARM form (5885 Record) - This form supports the definition of SCTP endpoint parameters. This is a new form that supports this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 684 to "Y". Added SFID 684 to the table.

SIPGSM form (5880 Record) - This form is used to insert, review, update, or delete the SIP GSM (Global Switching Module). This is a new form that supports this feature.

SIPTPARM form (5882 Record) - This form is used to insert, review, update, or delete the SIP parameters. This is a new form that supports this feature.

SIPTSMS form (5881 Record) - This form is used to specify SM-2000 modules in an office for SIP call processing. This is a new form that supports this feature.

SREINCR form (5547 Record) - This form is used to increase engineering software resource (memory) parameters per SM for new start and/or retrofit offices. Added the SIPTBLK and SIPTMAP values to the SOFTWARE RESOURCE and INCREMENTAL VALUE tables.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added data

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rules to the TGN, TRKCLS, INPULSING, and BICC GRP fields. Also added the SIPT GRP field.

SEC. 4A685: IMLT ACCESS IMPROVEMENTS AND IMTL METALLIC A-LINK BLOCKAGE NOTIFICATION

1. FEATURE DESCRIPTION

This feature Consists of two parts, IMLT (Integrated Mechanized Loop Testing) Metallic Access Retry and IMLT Metallic A-Link Blockage Notification that is associated with feature number 99-5E-8393. The feature is made available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases.

Both parts are controlled by a secured feature ID (SFID 685). However, the user has the option of turning the IMLT Metalic A-Link Blockage Notification part of the feature on/off by using OFID (Option Feature ID) 1010 after SFID 685 is activated.

- IMLT Metallic Access Retry
  - IMLT Metallic Access Retry provides a retry capability in the event of a failed metallic access attempt.
  - The feature provides for an optional second attempt at metallic access after a variable delay of between 1on and sixty seconds, and for preserving information about any access failures for use in optimizing the metallic access network.

- Metallic A-Link Blockage Notification
  - Metallic A-Link Blockage Notification provides added detail to be recovered during metallic access failures, so as to provide data for switch administrators. This data allows metallic line unit access networks to be regroomed to handle maintenance loads more efficiently. The data logging mechanism is based on the BALANCE feature, which currently provides similar data for call processing attempts.

2. FEATURE ASSIGNEMENT

To provision this feature:

- Set the ACT field for SFID 685 on the SFSYS form (5713-1 Record) to "Y".
- To turn on/off IMLT Access Retry and to set the delay time for the second attempt, on the OFCOPT form (5509 Record) or RC/V (Recent Change) view 8.1, via the IMLT RETRY and IMLT RDELAY field, respectively.
- To enable/disable IMLT Metalic A-Link Blockage Notification, set the ACT field for OFID 1010 on the FOSYS form (5713-2 Record) or RC/V 8.31, to "Y".

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. Activate the IMLT Metalic A-Link Blockage

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Notification part of the feature by setting the ACT field for OFID 1010 to "Y".

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Added the IMLT RETRY and IMLT RDELAY fields.

SFSYS form (5713-1 Record) - This form is used to activate secured features. Activate this feature by setting the ACT field for SFID 685 to "Y".

SEC. 4A686: 3B21D/RTR HIGH SPEED PERFORMANCE IMPROVEMENT

1. FEATURE DESCRIPTION

The 3B21D/RTR High Speed Performance Improvement feature (99-5E-8472) is a secured feature (SFID 686) that is made available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases.

This feature reduces the AM's (Administration Module's) occupancy for AMA (Automatic Message Accounting). The main benefit is for high-speed billing. Additional benefits also include improvements for teleprocessing and tape writing. Optimizations have been identified that provide an AM occupancy reduction of 20% or more while running the LCT (Large Capactity Terminal) call model at loads of 1.6M to 2.5M BHCA (Busy Hour Call Attempts).

The changes fit into the following three categories:

- Redundant stat() function call elimination
  - In the existing AMA code, there are many places where a test is done to determine if the offline disk should be read. This is something that normally occurs only during a retrofit situation. The current code calls the UNIX RTR stat() function each time this condition needs to be tested. The optimization calls stat() once at the beginning and then reads a global variable for subsequent checks.
- Replace standard UNIX RTR open(), close(), read(), write(), and lseek() functions with optimized versions.
  - The existing AMA code uses the standard system routines to access the disk. These functions are generalized for any type of file access and therefore incur significant overhead. Given the specialized nature of the disk accesses for AMA, the standard routines have been re-written as optimized versions that perform only the tasks needed by AMA.
- Maximize number of blocks read per function invocation
  - Currently, on each entry to the AMhisp polling function, the number of blocks to be read is determined, and up to 80 blocks are read. Under lower loads, the function may determine that no blocks are available and the ASM (Administrative Services Module) is signaled to wait for 14 seconds before issuing another request. This allows the number of blocks to build up in the interim. When the calling rate reaches 1.6M BHCA, there are always blocks available for reading, but only 28 blocks are available per entry. Since blocks are always available to be read, the 14 second timer is never activated. However, it is much more efficient to process 80 blocks per function entry than to process only 28 blocks, so the AM processing time consumed per block increases substantially. To alleviate this, the function now invokes a four-second sleep if the number of blocks available is less than 80. This allows the number of blocks to build up so 80 blocks are read per function entry after the four-second sleep.

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2. FEATURE ASSIGNMENTS

To provision this feature:

- Set the ACT field for SFID 686 to "Y" on the SFSYS form (5713-1 Record) to activate this feature.
- After the SFID is turned on/off, the following command needs to be executed in order to get the process to read the new SFID value:
- STOP:EXC:DATA,ANY,FN="/no5text/prc/amhisp",UCL;

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 686 to "Y".

SEC. 4A689: TCP/IP VIA ASM FOR CRITICAL ALARM INDICATORS

1. FEATURE DESCRIPTION

The TCP/IP (Transmission Control Protocol/Internet ProtocoL) via ASM (Administrative Services Module) for CAI (Critical Alarm Indicators) feature (99-5E-8288) is a secured feature that is controlled by SFID 689. It is made available with the 5E16(2) FR 2 and later Software Releases.

The functionality covered by this feature is only a part of the functionality provided by the 5ESS SCCS (Switching Control Center System) interface. In addition to the existing BX.25 (The Bell System version of the CCITT X.25 communications protocol) interface, this feature provides the OSS (Operations Support System) with the option of receiving the CAI messages via the industrial standard TCP/IP interface.

This feature provides a TCP/IP interface to report the 5ESS and the DRM (Distinctive Remote Module) CAI information to a remote OSS. This interface provides similar capabilities as the current CAI process supported by the BX.25 connection (the SCCS interface) off the 5ESS AM (Administrative Module of the 5ESS Switch). The OSS has the choice of receiving the CAI information from the legacy BX.25 interface or from the industrial standard TCP/IP interface.

This feature is available on the ASM Model 1, 2, and 3, and is available for both ASM simplex and HA-ASM configurations.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for SFID 689 to "Y".

SEC. 4A690: ASM MODEL 1 SUPPORT EXTENSION

1. FEATURE DESCRIPTION

The ASM (Administrative Software Module) Model 1 Support Extension feature (99-5E-8392) is a secured feature using SFIDs 690 and 691, and is made available with the 5E16(2), Feature Release 2 Software Release.

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This feature allows support extension for the ASM Model 1 which is discontinued as of November 16, 2003. To download and install new post release 6.3 SWDs (Software Deliveries) for ASM Model 1 units beyond the November 16, 2003 date, one of the following two extended support options is available to purchase:

- a one-year RTU (Right-to-Use) license which has unique SFID 690, and covers the interval between November 16, 2003 and November 15, 2004.
- a two-year RTU license which has unique SFID 691, and covers the interval between November 16, 2003 and November 15, 2005.

One of the two extended support options must be purchased in order to download any SWD on ASM Model 1 after November 15, 2003. Not purchasing one of these options inhibits downloading any SWD on the ASM Model 1 after the November 15, 2003 date. In addition, no new SWD can be installed effective November 16, 2003. Customers will, however, continue to be able to backout or rollback any SWD anytime.

2. FEATURE ASSIGNMENT

This is a secured feature and requires that the ACT field for either SFID 690 or SFID 691 be set to "Y" on the SFSYS form (5713-1 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field to "Y" for either SFID 690 or SFID 691.

SEC. 4A691: ASM MODEL 1 SUPPORT EXTENSION

1. FEATURE DESCRIPTION

For information on this feature, see Division 2, Section 4A690.

SEC. 4A693: UN597-9600 BAUD ROP CAPABILITIES

1. BACKGROUND

Prior to this feature, the 9600 baud ROP could only be used with a 60-byte SCCS status record. Additionally, offices were limited to either being programmed to operate using the Recovery from Alternate Boot Disk feature, or the 9600 baud ROP (60-byte); both could not be used simultaneously within the same office.

2. FEATURE DESCRIPTION

Available in 5E16(2) FR2 (Feature Release 2)and later software releases, the UN597-9600 Baud ROP Capabilities feature is a secured feature (SFID 693) and has feature number 99-5E-8539.

The UN597-9600 Baud ROP Capabilities feature adds two additional capabilities to the 3B21D AM (Administrative Module) MTTYC (Maintenance Teletype Controller), and supports:

- 9600 Baud ROP with 20-byte Switching Control Center System (SCCS) status records.
- 9600 Baud ROP plus the Alternate Boot Disk (ABD) feature (99-5E-2406) with 60-byte SCCS status

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records.

This added functionality allows the use of a 9600 baud receive-only printer (ROP) with a 20-byte SCCS status record capability for compatibility with Network Management Administration (NMA). This feature also allows an office to use both the 9600 baud ROP and the Recovery from Alternate Boot Disk feature (99-5E-2406) simultaneously.

This feature requires that UN597 circuit packs are used for the MTTYC, set with the correct ECD (Equipment Configuration Database) UCB (Unit Control Block) equipage value. For more information about using the ECD and the UCB form, see the *ECD/SG Data Base Manual, 5E16(2) Software Release*, "Low-Level Forms," 235-600-317.

This feature is deployed on a per-office basis, does not impact existing call flow and does not impact existing operations.

For more information concerning this feature, see the *Feature Descriptions* document, 235-190-400.

The following table shows the MTTYC UCB equipage values for the 3B21D AM and their meaning.

VALUE	MEANING
0x0	SCC not equipped
0x1	SCC equipped
0x2	UN583
0x2	UN597 (to function like a UN583 base MTTYC)
0x3	UN597 (For Alternate Boot Disk (ABD) feature capability - uses 60-byte SCCS records)
0x6	UN597 (For 9600-baud ROP capability - uses 60-byte SCCS records)
0x7	UN597 (For 9600-baud ROP and ABD capability - uses 60-byte SCCS records)
0x8	UN597/UN583 SCC Compatibility Feature - uses 20-byte SCCS records.
0xe	UN597/UN583 SCC Compatibility Feature and 9600-baud ROP capability - uses 20-byte SCCS records .

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
SFSYS	5713-1	3	5AR	8.22

SFSYS form (5713-1 Record) - This form is used to activate secured' features. The ACT field for SFID 693 must be set to "Y" on the SFSYS form to make the UN597-9600 Baud ROP Capabilities feature active for the office. In addition, The Recovery from Alternate Boot Disk feature (99-5E-2406) also needs to be activated (using SFID 284) in order for these two features to operate simultaneously.

SEC. 4A697: CIC ROUTING SOLUTION

1. FEATURE DESCRIPTION

Available in 5E17(1) FR 3 (Feature Release 2)and later software releases, the CIC (Carrier Identification Code) Routing Solution feature is a secured feature (SFID 697) and has feature number 99-5E-8546.

This feature introduces a new RC/V (Recent Change/View) control "SEND CI PARAM" message to determine whether or not the CIC should be sent in the Circuit Identification parameter.

If a SETUP_S7X message is received from the ECP (Executive Control Processor), including the optional TNS (Total Network Surveillance) parameter, and the "SEND CI PARAM" field is set to "YES", the TNS parameter will be included in the outgoing IAM (Initial Address Message), if this is an International call and the 5E-DCS is connected to a TANDEM or IXC (Inter-Exchange Carrier). The Carrier Identification

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parameter will be generated using the information in the TNS, if it is a non-international call and the 5E-DCS is connected to an IXC or TANDEM switch, and sent in the outgoing IAM message.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CDMAOPT	5599	8	80	8.75
SFSYS	5713-1	3	5AR	8.22

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access) feature. Added the SEND CI PARM field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. The ACT field for SFID 697 must be set to "Y" on the SFSYS form to activate this feature.

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SEC. 4B: TRANSPARENCY FEATURES

SEC. 4B0: OFFICE OPTIONED FEATURE DESCRIPTION

1. GENERAL

Office Optioned features are features that have been developed to replicate features that exist on the 1A ESS Switch. In the past, they have sometimes been called "Field" or "Fast" features.

Figure 1 gives the Feature Name, OFS ID (Optioned Feature System ID) that corresponds to a specific Office Optioned feature, (these special feature IDs are used to activate the feature), the Software Release, the Software Update (formerly called BWM) in which the feature was implemented, and the Informational Software Update which provides feature information. The FOSYS form (5713-2 Record) is used to enable or option Office Optioned features.

See Division 3, Section 5AS for detailed information for implementing Office Optioned Features using the Special and Office Optioned Optioning System.

- ***NOTE:*** The use of OFS IDs is not limited to Office Optioned features, and not all Office Optioned features use OFS IDs.

2. ON-LINE INFORMATIONAL SOFTWARE UPDATES

Informational Software Updates, which are available on SCANS (Software Change Administration And Notification System), provide information on features which are released during a Software Update. In addition to being transmitted to users via SCANS, these Informational Software Updates can also be accessed in the 5ESS Switch electronic media documentation. The Informational Software Updates are located on the menu for 5ESS Switch documentation on-line or on CD-ROM.

FEATURE NAME	OFS ID	SOFTWARE RELEASE	SOFTWARE UPDATE / FEATURE RELEASE	INFO SOFTWARE UPDATE / FEATURE RELEASE
3-Way Reconnect Procedures (TF)	500	5E4(2)	SU 890073	SU 890059
No Data Impact		5E5	GA	GA
Multi-Way 3-Way Conference/Call Transfer B911	501	5E5	SU 900125	SU 900097
Interactions (TF)		5E6	GA	GA
No Data Impact				
Directed Call Pickup with Barge-In Assignment	502	5E5	SU 900012	SU 890050
(TF)		5E6	GA	GA
No Data Impact				
Shared DN Display with No Ringing Option (TF)	503	5E4(2)	SU 890108	-
No Data Impact		5E5	SU 890035	-
		5E6	GA	GA
Limited Intragroup ICLID (SpF)	504	5E4(2)	SU 890134	SU 890126
No Data Impact		5E5	SU 890060	SU 890053
		5E6	GA	GA
Entry of Forwarded-To-DN/IDP (TF)	505	5E4(2)	SU 900067	SU 900055
		5E5	SU 900096	SU 900086
		Not 5E6	NA	NA
Non-Alerting ISDN Shared Terminal Display Option	506	5E4(2)	SU 900010	-
(TF)		5E5	SU 900009	-
No Data Impact		5E6	GA	GA
		Not 5E7	NA	NA
Separate Call Waiting from MW Ringback	507	5E4(2)	SU 900037	SU 900028
Parameter (TF)		5E5	SU 900064	SU 900051
No Data Impact		5E6	GA	GA
Increase Number of Simultaneous Calls Forwarded	508	5E4(2)	SU 900041	-
to DID Groups (TF)		5E5	SU 900028	-

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No Data Impact		5E6	GA	GA
Fix for PFA, ARS, and VPATH (TF)	509	5E4(2)	SU 900024	-
No Data Impact		5E5	SU 900027	-
		5E6	GA	GA
Hotel Motel Mini Feature (TF)	510	5E5	SU 900065	-
No Data Impact		5E6	GA	GA
FTS2000 Office Indicator for Private MDR Record	511	5E5	SU 900068	-
Fix (TF)		Not 5E6	NA	NA
No Data Impact				
Authorization Code Interaction with Multiway Fix	512	5E4(2)	SU 910017	-
(TF)		5E5	SU 900076	-
No Data Impact		5E6	SU 900047	-
		Not 5E7	NA	NA
Restrict Initial Flash and Call Waiting Before	513	5E4(2)	SU 910019	SU 910013
Answer (TF)	5	5E5	SU 910045	SU 910028
No Data Impact	1	5E6	SU 910004	SU 910002
	4	5E7	GA	GA
Calling Party Disconnect Indication (SpF)	515	5E4(2)	SU 910027	SU 910023
No Data Impact		5E5	SU 910064	SU 910063
		5E6	SU 910077	SU 910061
		5E7	GA	GA
Transfer of Unsupervised Lines Fix (TF)	516	5E4(2)	SU 900066	-
No Data Impact		5E5	SU 900108	-
		5E6	SU 910006	-
		5E7	GA	GA
Modified Calling Line Disconnect (SpF)	517	5E5	SU 910049	SU 910029
		5E6	SU 910052	SU 910044
		5E7	GA	GA
		5E8	GA	GA
Call Transfer to Busy - Return Busy to Originator	518	5E5	SU 910045	SU 910041
(TF)		5E6	SU 910064	SU 910059
No Data Impact		5E7	GA	GA
Fix for Optioning Errors During NPA Splits (TF)	520	5E5	SU 900116	-
No Data Impact		5E6	SU 900055	-
		5E7	GA	GA
Fix to Decrease SC (Series Completion) and	521	5E5	SU 910030	SU 910019
MLHGs Post Dial Delay (TF)		5E6	SU 910032	SU 910026
No Data Impact		5E7	GA	GA
Bridging Indication to Analog Shared DN Lines	522	5E5	SU 910055	-
(TF)		5E6	SU 910069	-
No Data Impact		5E7	GA	GA
Problems with Routing Intra-LATA / Interstate Calls	523	5E4(2)	SU 910031	SU 910026
(TF)		5E5	SU 910089	SU 910080
No Data Impact		5E6	SU 910163	SU 910132
		5E7	GA	GA
Option to Prevent IDP Users from Using ODP	524	5E5	SU 910050	-
LASS Dial Codes (TF)		5E6	SU 910079	-
No Data Impact		5E7	GA	GA
Option to Provide 5E6 Functionality for Series	531	5E7	SU 920124	SU 920120
Completion and MSS Interaction (TF)		5E8	SU 920007	SU 920011
		5E9(1)	GA	GA
Limited 2 Level COT/AC (SF43)	532	5E6	SU 910014	SU 910011
See Division 2, Section 4A43	5	Not 5E7	NA	NA
	3			
	3			
POLIN (Privacy Option for Last Incoming Number)	534	5E6	SU 910004	SU 910003
(SF48),		5E7	GA	GA
See Division 2, Section 4A48				
DTA Routing of Calls Based on Attendant's LCC	535	5E7	GA	GA
(TF)				
No Data Impact				

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Customized Announcement 5E6 to 5E7 Retrofit Fix (TF) No Data Impact	536 5 3 7	5E7 Only	GA	GA
Shared DN Groups Across SM/RSM Clusters (TF) No Data Impact	538	5E6 5E7	SU 910056 GA	SU 910038 GA
MSSCF (Message Service System Call Forwarding Interaction) (TF)	539	5E6 5E7 5E8 Not 5E9	SU 910129 Retrofit Retrofit NA	SU 910124 - - NA
Transfer to ACD from ARU (SpF)	540	5E6 5E7 5E8	SU 910169 SU 920035 GA	SU 910141 SU 910004 SU 910030 GA
Calling Name Delivery (SF40) - Phase 0 See Division 2, Section 4A40	541	5E6 5E7 5E8	SU 910142 SU 920005 GA	- SU 910112 GA
Calling Name Delivery (SF40) - Phase 2 See Division 2, Section 4A40	5 4 1	5E7 5E8 5E9(1)	SU 920105 GA GA	SU 920087 GA GA
Calling Name Delivery (SF40) - Phase 2.1 See Division 2, Section 4A40	5 4 1	5E8 5E9(1)	SU 930010 GA	SU 920029 GA
ISDN Fast Transfer Enhanced Feature (TF)	542	5E8	GA	GA
Provide Redirect Display for TGSR and ACVT Enhancement for Terminating Restrictions Resulting with Reroute to a DN (TF)	543	5E6 5E7 5E8	SU 920032 SU 920056 GA	SU 920024 SU 920036 GA
Metro Hub (ELIGI) (SF60) See Division 2, Section 4A60	544	5E6 5E7	SU 910092 GA	SU 910084 GA
Option to Block the Sending of Off-Switch Calling DN Across API Link (TF) No Data Impact	545	5E6 5E7	SU 910075 GA	SU 910146 GA
LASS and Split NPA Management (SF36) See Division 2, Section 4A36	546 5 4 7 5 4 8	5E6 and 5E7 Only 5E8	SU 910133 SU 910033 NA	SU 910114 SU 910019 NA
800 Post Dial Delay MF Signaling Transmission Reduction (for End Office) (SF28) See Division 2, Section 4A28	549 5 5 6	5E6 5E7 5E8 5E9(1)	SU 930002 SU 930004 SU 920019 GA	SU 920093 SU 920136 SU 920138 SU 920025 SU 920043 GA
Charge/No Charge for UCR (Unidentified Call Rejection) Call Rej Annc (SF47) See Division 2, Section 4A47	550	5E6 5E7 5E8	SU 910163 GA GA	SU 910162 GA GA
AMA Recording of Prefixed Digits in PNDP (Private Network Dialing Plan) (TF)	551	5E6 5E7 5E8	SU 920035 SU 920081 GA	SU 920017 SU 920022 GA
OSPS LS Billing on Position Release (TF)	552	5E7 5E8	SU 920061 GA	SU 910060 GA
UCR Special Feature Option for Confirmation Announcement/Tone with the UCR Activation Dial Code (SF47)	553	5E6 5E7 5E8	SU 920057 SU 920083 GA	SU 920040 SU 920040 GA

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See Division 2, Section 4A47				
Option to Maintain the 5E6 Operation of Intraswitch Originally Called DN (OCDN) Which is Sent to VMS (Voice Mail System) (TF)	554	5E7 5E8	SU 920077 GA	SU 920065 GA
IALT (Intra-Switch Analog Line Transfer) (SF80) See Division 2, Section 4A80	555	5E7 5E8 5E9(1)	SU 920131 SU 930006 GA	SU 920102 SU 920015 GA
UCR Special Feature Option for Confirmation Announcement/Tone with the UCR Deactivation Dial Code (SF47) See Division 2, Section 4A47	557	5E6 5E7 5E8	SU 920057 SU 920083 GA	SU 920072 SU 920072 GA
Hotel/Motel Charge Table Option (TF)	558	5E8 5E9(1)	GA GA	GA GA
OSPS AIBNS (Automated Inward Billed Number Screening) (SF107) See Division 2, Section 4A107	559	5E8 5E9(1)	SU 930008 GA	SU 930004 GA
OSPS Volt Delta DA Interface (SF87) See Division 2, Section 4A87	560	5E8 5E9(1)	SU 930008 GA	SU 930006 GA
OSPS AATOS (Access To Operator Services) (TF)	561	5E8 5E9(1)	SU 920015 GA	SU 920038 GA
OSPS EABS (External Alternate Billing System) Alternate Routing (SF86) See Division 2, Section 4A86	562	5E8 5E9(1)	SU 930008 GA	SU 930010 GA
OSPS FTS (Federal Telephone System) / NRA (Network Remote Access) (SF85) See Division 2, Section 4A85	563	5E8 5E9(1)	SU 930012 GA	SU 930025 GA
OSPS Alternate Access to Language Specific Operator Services (SF84) See Division 2, Section 4A84	564	5E8 5E9(1)	SU 930010 GA	SU 930013 GA
OSPS DIOR Speed Dialing (SpF)	565	5E8 5E9(1)	SU 930012 GA	SU 930016 GA
OSPS EABS (External Alternate Billing System) - Alternate Routing Transition	566	5E8 Only 5E9(1)	SU 930008 NA	SU 930010 NA
OSPS AMA Identification of 800 Access Calls (SF112) See Division 2, Section 4A112	567	5E8 5E9(1)	SU 930019 GA	SU 930030 GA
OSPS 0+ / 1+ 500 and 1+700 Traffic Handling (SF69) See Division 2, Section 4A69	568	5E8 5E9(1)	SU 930012 GA	SU 930017 GA
DC-ACVT (Direct Connect Capability for Analog Lines through ISDN ACVT feature (SF12) See Division 2, Section 4A12	569	5E8 5E9(1) Not 5E9(2)	SU 930033 GA NA	SU 930050 SU 930059 GA NA
OSPS Interflow for Operator Conferences (SF361) See Division 2, Section 4A361	570	5E9(1)	GA	GA
OSPS CICADA Mute Back (SF115) See Division 2, Section 4A115	571	5E8 5E9(1)	SU 930015 GA	SU 930022 GA
OSPS Feature Group D Incoming Signaling for Special Applications (SF83) See Division 2, Section 4A83	572	5E8 5E9(1)	SU 930027 GA	SU 930043 GA
OSPS ACQS Rate Distinction Based on Quote Delivery (SF82) See Division 2, Section 4A82	573	5E8 5E9(1)	SU 930027 GA	SU 930039 GA
OSPS BNS (Billed Number Screening) Fraud Control (SF26) See Division 2, Section 4A26	574	5E8 5E9(1)	SU 930027 GA	SU 930045 GA
OSPS Telephone Relay Service Call Handling (SF25) See Division 2, Section 4A25	575	5E8 5E9(1)	SU 930033 GA	SU 930048 GA
POLIN (Private Option for Last Incoming Number)/CFDA (Call Forwarding Don't Answer)	576	5E8 5E9(1)	SU 930011 GA	SU 930018 GA

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Feature Interaction (SpF)				
Multi-Distinctive Ringing and Message Service System Interaction Option (TF)	577	5E8 5E9(1)	SU 930019 GA	SU 930035 GA
Revertive Ringback Announcement (TF)	578 5 7 9	5E9(1)	GA	GA
OSPS Route ACCS RAF Failures to AP (TF)	580	5E8 5E9(1)	SU 930017 GA	- GA
Limited Intra-Group ICLID (LIGI) (TF) - Call Forwarding	581	5E8 5E9(1)	SU 930026 GA	SU 930037 GA
OSPS Non-Equal Access Dummy ANI for Unitel AATOS	582	5E8 5E9(1)	SU 930032 GA	- GA
OSPS Virtual Card (SF23) See Division 2, Section 4A23	583	5E8 5E9(1)	SU 930035 GA	SU 930053 GA
OSPS AATLSOS - (Allow Sent Paid Special Feature - Phase 2)	584	5E9(1) 5E9(2)	SU 940009 GA	SU 940012 GA
OSPS AATLSOS (Allowed Sent Paid Special Feature - Phase 1) (SF84) See Division 2, Section 4A84	585	5E8 5E9(1) 5E9(2)	SU 930037 SU 930003 GA	SU 930060 SU 930002 GA
OSPS CIID - Carrier Specific Routing (SF363) See Division 2, Section 4A363	586	5E9(1)	GA	GA
PRI Echo Cancler Options	587 5 8 8	5E9(1)	GA	GA
OSPS AATOS/AATLOS Fraud Control	589 5 9 0	5E8 5E9(1)	SU 930032 GA	SU 930054 GA
Centrex Tie Line Unanswered Call Record	591	5E8 5E9(1) 5E9(2)	SU 930043 SU 940006 GA	SU 930074 SU 940007 GA
Call Park - Feature Assignment Enhancement	592	5E9(1)	GA	GA
Inhibit 800 Post Dial Delay MF Signaling Response Reduction (Access Tandem Office) (SF29) See Division 2, Section 4A29	593	5E8 5E9(1)	SU 930038 GA	SU 930065 GA
OSPS AATLSOS - (Allow Sent Paid Special Feature - Phase 2 - BNS Query Option)	594	5E9(1) 5E9(2)	SU 940009 GA	SU 940012 GA
OSPS Screening for Real Time Call Details (SF366) See Division 2, Section 4A366	595	5E9(1) 5E9(2)	SU 940008 GA	SU 940019 GA
OSPS OTR with Automated Position ID	596	5E9(1) 5E9(2)	SU 940008 GA	SU 940011 GA
OSPS Prepaid Overtime for Coin Calls (SF372) See Division 2, Section 4A327	597	5E9(1) 5E9(2)	SU 940018 GA	SU 940043 GA
Clock Synchronization Circuit	598	5E8 5E9(1) 5E9(2)	SU 940009 SU 940028 GA	- - GA
OSPS LIDB - Recognition of PSDI Value 4 (SF368) See Division 2, Section 4A368	599	5E9(1) 5E9(2)	SU 940003 GA	SU 940003 GA
OSPS Inclusion of International Called Number in LIDB Query	600	5E9(1) 5E9(2)	SU 940011 GA	SU 940025 GA
OSPS Automated Inward Line Screening - Phase 1 (SF370) See Division 2, Section 4A370	601	5E9(1) 5E9(2) 5E10	SU 940023 SU 940009 GA	SU 940071 SU 940009 GA
OSPS Inclusion of International Calling Country Code in LIDB Query	602	5E9(1) 5E9(2)	SU 940011 GA	SU 940025 GA
OSPS Allow Back Number Listing Services Calls	603	5E9(1) 5E9(2)	SU 940005 GA	- GA
OSPS Terminating Point Restriction Expansion	604	5E9(1)	SU 940023	SU 940061

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(SF371) See Division 2, Section 4A371		5E9(2)	GA	GA
OSPS Feature Group D Incoming Signaling for Special Application - Release 2 (SF373) See Division 2, Section 4A373	605	5E9(1) 5E9(2)	SU 940018 GA	SU 940048 GA
OSPS Automated Inward Line Screening - Phase 2	606	5E9(2) 5E10	SU 950009 GA	SU 950031 GA
OSPS Recall from Subscriber Deactivation (SF376) See Division 2, Section 4A376	607	5E9(1) 5E9(2)	SU 940023 GA	SU 940053 GA
COT Duplicate Activation Request Treatment	608	5E8 5E9(1) 5E9(2)	SU 940009 SU 940013 GA	SU 940010 SU 940029 GA
OSPS TCS Screen Code Expansion	609	5E9(1) 5E9(2)	SU 940020 GA	SU 940056 GA
OSPS Feature Group D Incoming Signaling for Special Application - Release 2 - AMA Option	610	5E9(1) 5E9(2)	SU 940018 GA	SU 940048 GA
Incoming Foreign Exchange Calls (Defeating Immediate Answer)	611	5E9(1) 5E9(2) 5E10	SU 940029 SU 950003 GA	SU 940080 SU 950004 GA
Screening of E911 Calls	612	5E9(1) 5E9(2)	SU 940023 GA	SU 940072 GA
OSPS 800 Access Using Feature Group D Signaling (SF377) See Division 2, Section 4A377	613	5E9(1) 5E9(2)	SU 940026 GA	SU 940075 GA
OSPS LEC Feature Group D Incoming Signaling/Special Handling of Calls (SF379) See Division 2, Section 4A379	614	5E9(1) 5E9(2) 5E10	SU 940030 SU 940009 GA	SU 940086 SU 940004 GA
OSPS Customer Controlled Reconnect to DA (SF381) See Division 2, Section 4A381	615	5E9(1) 5E9(2) 5E10	SU 940037 SU 950005 GA	SU 940105 SU 950020 GA
OSPS Forward Number Interdigit Timing Change (SF382) See Division 2, Section 4A382	616	5E9(1) 5E9(2) 5E10	SU 940034 SU 950002 GA	SU 940092 SU 940018 GA
OSPS Feature Group D Enhancements (SF383) See Division 2, Section 4A383	617	5E9(1) 5E9(2) 5E10	SU 940034 SU 950002 GA	SU 940002 SU 940019 GA
OSPS Quantum Sequence Call Handling	618	5E9(1) 5E9(2) 5E10	SU 940038 SU 940009 GA	SU 940098 SU 940008 GA
OSPS AATLSOS Automated Access Prompt	619	5E9(2) 5E10 5E11	SU 950020 SU 950006 GA	SU 950061 SU 950003 GA
OSPS International Billed Number Screening Release 2 (SF386) See Division 2, Section 4A386	620	5E9(1) 5E9(2) 5E10	SU 950002 SU 950004 GA	SU 940116 SU 940026 GA
OSPS TRP Expansion for International Numbers (SF387) See Division 2, Section 4A387	621	5E9(2) 5E10	SU 950004 GA	SU 950002 GA
OSPS ACCS for Commercial Credit Cards (SF388) See Division 2, Section 4A388	622	5E9(2) 5E10	SU 950004 GA	SU 950014 GA
Ability to Drop Fully Restricted Terminating Leg of a Multiway Call (TF)	623	5E10	GA	GA
OSPS AMA Recording of the Access ID for CAP Calls (SF392) See Division 2, Section 4A392	624	5E9(2) 5E10	SU 950007 GA	- GA
OSPS Extending Round Trip Delay for OSC (TF)	625	5E10	GA	GA
OSPS Teleconferencing Service Signaling Interface (SF391) See Division 2, Section 4A391	626	5E9(2) 5E10	SU 950010 GA	SU 950030 GA
OSPS 800 Toll Free Services NPA Expansion	627	5E10	SU 950004	SU 950012

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(SF405) See Division 2, Section 4A405		5E11	GA	GA
OSPS Option for HOTMOT Line	628	5E9(1) 5E9(2) 5E10	SU 950004 SU 950002 GA	SU 940115 - GA
OSPS Allow Leading 1 and 011 for Automated Phone Number Collection	629	5E9(2) 5E10 5E11	SU 950022 SU 950004 GA	SU 950067 SU 950001 GA
OSPS BNS Query Message Enhancements (SF630) See Division 2, Section 4A630	630	5E9(1) 5E9(2) 5E10	SU 950004 SU 950005 GA	SU 940004 SU 950017 GA
Call Forwarding Block Operator and N11 Forward to DNs Option (TF)	631	5E9(1) 5E9(2) 5E10	SU 950004 SU 950019 GA	- SU 950062 GA
OSPS 1+ Time And Charges (SF396) See Division 2, Section 4A396	632	5E9(1) 5E9(2) 5E10	SU 950007 SU 950011 GA	SU 950012 SU 950032 GA
OSPS In Language Services Call Transfer Using Route Number (SF398) See Division 2, Section 4A398	633	5E9(2) 5E10	SU 950007 GA	SU 950027 GA
OSPS Specialized AMA for 15 Digit International Numbering Plan (SF397) See Division 2, Section 4A397	634	5E10	GA	GA
OSPS Early Position Release of International Calls (SF399) See Division 2, Section 4A399	635	5E9(2) 5E10	SU 950013 GA	SU 950038 GA
OSPS AATOS Fraud Control (SF401) See Division 2, Section 4A401	636	5E9(2) 5E10	SU 950018 GA	SU 950054 GA
OSPS AATOS Fraud Control - Enhanced Screening (TF)	637	5E10	GA	GA
OSPS Quiet Hear (TF)	638	5E9(2) 5E10 5E11	SU 950020 SU 950006 GA	- SU 950003 GA
OSPS Closed End Branding for Operator Handled Calls (TF)	639	5E9(2) 5E10 5E11	SU 950021 SU 950005 GA	SU 950070 SU 950015 GA
OSPS DACC AMA Record with Operator Entered Forward Number Special Feature.	640	5E9(1) 5E9(2) 5E10 5E11	SU 950017 SU 950022 SU 950004 GA	SU 950071 SU 950071 - GA
OSPS Automation of T & A Information Special Feature	641	5E10 5E11	SU 950002 GA	SU 950022 GA
OSPS DIOR Calling Card Announcement Change Special Feature	642	5E9(2) 5E10 5E11	SU 950021 SU 950003 GA	SU 950068 SU 950005 GA
Automation of TCS / CPS Override	643	5E10	SU 960010 GA	SU 960028 GA
OSPS Quantum SDN	644	5E10 5E11	SU 960006 GA	SU 960006 GA
OSPS Quantum Calling Party Pays Air Time	645	5E10 5E11	SU 960006 GA	SU 960013 GA
E911 / TGSR Interaction Option	646	5E9(1) 5E9(2) 5E10 5E11	SU 950019 SU 960001 SU 970007 GA	- SU 950083 - GA
Option for ST on NONCI 0+	647	5E9(1) 5E9(2) 5E10 5E11	SU 950019 SU 950019 SU 960001 GA	- SU 950086 - GA
ASP IntraLATA PIC Interworking	648	5E10 5E11	SU 960005 GA	SU 960015 GA
OSPS Universal T1.5 Access Signaling Changes	649	5E11	GA	GA

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Identification of Calls Originated Through Special Access Methods	650	5E10 5E11	SU 960009 GA	SU 960025 GA
OLS Call Routing for Special Services	651	5E10 5E11	SU 960010 GA	SU 960022 GA
OSPS AATLSOS Automated Access Prompting Using CPDL	652	5E10 5E11	SU 960025 GA	SU 960046 GA
ICLID Enhancement for MLHG (SF192) See Division 2, Section 4A192	653	5E10 5E11	SU 960008 GA	SU 960026 GA
Block No ANI on Non-Equal Access Calls	654	5E10 5E11	SU 960008 GA	SU 960016 GA
OLS Routing for 0 - Calls	655	5E10 5E11	SU 960020 SU 960005	SU 960051 SU 960005
OLS Routing for 00 - Calls	656	5E10 5E11	SU 960020 SU 960005	SU 960021 SU 960005
OSPS ASAP Language Specification Operator Services	657	5E10 5E11	SU 960017 SU 960007	SU 960044 SU 960001
OSPS AATLSOS Automated Access Prompting Menu Changes - Release 2	658	5E10 5E11	SU 96A008 GA	SU 960023 GA
OSPS Record and Playback (SF415) See Division 2, Section 4A415	659	5E10 5E11 5E12	SU 960019 SU 960006 GA	SU 960052 SU 960004 GA
Remove E911 PSAP Outpulsing Delay Option	660	5E9(1) 5E9(2) 5E10 5E11	SU 950002 SU 960002 SU 960010 GA	- - SU 960031 GA
CCS7 Incoming Signaling from 4ESS for Wireless Service Providers	661	5E11	GA	GA
OSPS Bill to Third Fraud Control Based on Third Number NPA	662	5E10 5E11 5E12	SU 960016 SU 960005 GA	SU 960037 SU 960002 GA
Call Waiting with 3-Way Calling Interaction	663	5E10 5E11	SU 960023 GA	SU 960059 GA
Billing Option for Spontaneous Usage Sensitive 3-Way Calling	664	5E10 5E11	SU 960016 GA	SU 960045 GA
Local Number Portability AMA Billing	665	5E11 5E12	SU 970005 GA	- GA
Deny Automatic Callback on Intra-LATA PIC Calls (SF201) See Division 2, Section 4A201	666	5E10 5E11	SU 960020 GA	SU 960057 GA
OSPS 800 Universal International Numbering	667	5E11 5E12	SU 970008 GA	SU 970018 GA
Selective NPA Deletion for ASP Multiple Rate Center Support	668	5E10 5E11 5E12	SU 970010 SU 970016 GA	SU 970015 - GA
Line Blocking Enhancement for ISVM	669	5E10 5E11 5E12	SU 970002 SU 970003 GA	SU 970002 SU 970006 GA
OSPS 10 Digit Branding in the AABS - AAP	670	5E10 5E11 5E12	SU 960028 SU 970003 GA	SU 960077 SU 960016 GA
OSPS NPA Handling by Trunk Group	671	5E11 5E12	SU 97A008 GA	SU 970024 GA
OSPS DIOR with Commercial Credit Card Capability	672	5E11 5E12 5E13	SU 970023 SU 980005 GA	SU 970064 SU 970011 GA
OSPS LS Automated Directory Assistance	673	5E10 5E11 5E12	SU 970006 SU 970009 GA	SU 970009 SU 970025 GA
OSPS Rate Quote for Flat and Measured Services	674	5E11 5E12	SU 970016 GA	- GA
OSPS AMA - Record ANI II Digits - Interim	676	5E11 5E12	SU 970009 GA	SU 970026 GA
OSPS 0 - LEC Calls Maintenance Handling	677	5E11	-	-

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		5E12	GA	GA
Access Code Option for SUSTWC	678	5E11	SU 970026	SU 970089
		5E12	SU 970007	-
		5E13	GA	GA
OSPS DIOR 800 Services	679	5E12	SU 980021	SU 980048
		5E13	GA	GA
ADSI Acknowledgment Timer Optional Value	680	5E12	SU 980025	SU 980060
		5E13	SU 980004	-
		5E14	GA	GA
Transfer Two Outgoing ISUP?PRI Trunks Together	681	5E13	SU 020001	-
		5E14	SU 010003	SU 020017
		5E15	SU 020006	SU 010069
		5E16(1)	GA	GA
Recent Change (Hashsum Failure) Blocking Feature (TF)	692	5E10	GA	GA
ASI Proxy Option for OLHB Population Feature	693	5E9(1)	SU 950017	-
		5E9(2)	SU 950019	SU 950062
		5E10	-	-
		5E11	GA	GA
Minimize SS7 Link Downtime During Retrofit	694	5E10	SU 970006	-
		5E11	SU 970008	-
		5E12	GA	GA
Auto ISDN Line Assignment	695	5E11	SU 980013	SU 970037
		5E12	GA	GA
911 Billing for Toll Transferred Calls	696	5E10	SU 970009	SU 970011
		5E11	SU 970010	SU 970029
		5E12	GA	GA
Alternate Local Service Provide Routing	697	5E12	SU 990004	SU 990005
		5E13	GA	GA
TPCC Use IDP/ODP	698	5E10	SU 980003	SU 970018
		5E11	SU 980001	SU 970070
		5E12	GA	GA
Number Portability NPA - NXX Growth	699	5E12	GA	GA
IC (Inter-exchange Carrier) Option for Screening Enhancements to Outside Calling Area Alerting	700	5E10	SU 970011	SU 970017
		5E11	SU 970019	SU 970043
		5E12	GA	GA
OSPS 800 Peel Out for Calling Card	701	5E12	SU 980005	SU 980007
		5E13	GA	GA
OSPS PLBQ with Add-on Capability	702	5E10	SU 980003	SU 980002
		5E12	SU 980007	SU 980001
		5E13	GA	GA
OSPS Automated Sequential Card Queries	703	5E12	GA	GA
NP - Service Provider Portability AMA Enhancement (Originating) (depends on SFID 276) See Division 2, Section 4A276	704	5E11	SU 980011	SU 980023
		5E12	SU 980015	SU 980028
		5E13	GA	GA
NP - Service Provider Portability AMA Enhancement (Terminating) (depends on SFID 276) See Division 2, Section 4A276	705	5E11	SU 980011	SU 980023
		5E12	SU 980015	SU 980028
		5E13	GA	GA
OSPS CAS TCAP Query Changes Using CCC Numbers	706	5E11	SU 970024	-
		5E12	SU 970006	SU 970012
		5E13	GA	GA
OSPS CAS TCAP Query Changes Using CAS Numbers	707	5E11	SU 970024	SU 970066
		5E12	-	-
		5E13	GA	GA
TCP/IP Security Enhancements for CALEA	708	5E15 FR5	FR5	-
		5E16	GA	GA
Deny Transfer of International Calls	709	5E11	SU 970026	SU 970077
		5E12	SU 97B006	SU 970014
		5E13	GA	GA
Telcordia Technologies (Bellcore) Cause Codes and Location Values	710	5E13	GA	GA

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OSPS Acceptance of New Parameters in LIDB BNS and Card Replies	711	5E11 5E12 5E13	SU 980006 SU 980003 GA	SU 980005 SU 980003 GA
Deny Transfer of Digit Screened Calls	712	5E13	GA	GA
MCG (Manual Control Gap) Interactions with LNP	713	5E11 5E12 5E13	SU 970027 SU 980001 GA	- - GA
OSPS Credit Key Blocking for Domestic Calls	714	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 980009 SU 980009 GA
OSPS Credit Key Blocking for International Calls	715	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 980009 SU 980009 GA
E911 Call Error Detection and Alarm (SF293) See Division 2, Section 4A293	716	5E11 5E12 5E13	SU 980011 SU 980014 GA	SU 980017 SU 980022 GA
Simplified Custom ISDN Attendant	717	5E12 5E13 5E14	- - GA	- - GA
ASP CDI/RTI Ignore on LNP	718	5E11 5E12 5E13	SU 980006 SU 980007 GA	- - GA
CNA Trunk Group Billing Number	719	5E11 5E12 5E13	SU 980011 SU 980016 GA	SU 980024 SU 980024 GA
OSPS NPA Code Expansion	720	5E11 5E12 5E13	- SU 980024 GA	- SU 980063 GA
OSPS 0 - LEC Calls Maintenance Assert Handling	721	5E13	GA	GA
Abstract OSPS Enhanced AMA LS Single Record	722	5E11 5E12 5E13	SU 980007 SU 980011 GA	- - GA
Balance	723	5E11 5E12 5E13	SU 980013 SU 980017 GA	SU 980035 SU 980035 GA
NP Service Provider Portability AMA Enhancements (SF276) See Division 2, Section 4A276	724	5E11 5E12 5E13	SU 980013 SU 980017 GA	SU 980023 - GA
OSPS Flexible ANI Enhancement	725	5E11 5E12 5E13	SU 980009 SU 980014 GA	SU 980025 - GA
AATLOS - Automated Access Prompting Non-Tariffed Announcement	726	5E11 5E12 5E13	SU 980009 SU 980017 GA	SU 980026 SU 980030 GA
OSPS Billed Number Screening Call Blocking - Release 2	727	5E11 5E12 5E13	SU 980014 SU 980020 GA	SU 980036 SU 980045 GA
ASP Alternate Routing Before Announcement	729	5E13	GA	GA
Control of DACC Per LS/DA Transporting Carrier	730	5E12 5E13 5E14	SU 980025 SU 980004 GA	SU 980068 SU 980001 GA
DIOR Calling Card Restrictions to Domestic Terminations	731	5E12 5E13 5E14	SU 980025 SU 980002 GA	SU 980076 - GA
OAS Call Origination for Intertoll Trunk Calls	732	5E12 5E13 5E14	SU 990006 SU 99B006 GA	SU 990013 SU 990017 GA
Send pANI to 8-digit PSAP	733	5E12 5E13 5E14	SU 980023 SU 99A004 SU 980023	- - -
Trunk trigger for Toll	734	5E12 5E13	SU 980025 SU 980002	- -

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		5E14	GA	GA
Inhibit TGC NPA Deletion On Reroute	735	5E11	SU 990001	-
		5E12	SU 990002	-
		5E13	SU 980007	SU 980017
		5E14	GA	GA
Inhibit Flash on E911 Calls	736	5E10	-	-
No Data Impact		5E11	SU 990001	-
		5E12	SU 990007	-
		5E13	SU 980003	-
		5E14	GA	GA
Call Forward Don't Answer - Ring Control	737	5E12	SU 990004	SU 990006
		5E13	SU 990004	SU 990009
		5E14	GA	GA
30 SEC T310 Timer for PRI	738	5E11	SU 990001	-
		5E12	-	-
		5E13	SU 990005	-
		5E14	GA	GA
Use NPA to get NPD from ESCO	740	5E11	SU 990001	-
		5E12	SU 990002	-
		5E13	SU 980007	-
		5E14	GA	GA
OTR Automatic Link Restoral	741	5E12	-	-
		5E13	-	-
		5E14	GA	GA
NPA to NPD Translation Table for E911 Calls	742	5E12	SU 990009	-
		5E13	SU 990007	-
		5E14	GA	GA
Pre-query Screen for TYPE CI CALL of TCONF.	743	5E10	-	-
		5E11	SU 990003	-
		5E12	SU 990004	-
		5E13	SU 990007	-
		5E14	GA	GA
ASP Toll Free Service Interaction with Flexible ANI	744	5E13	-	-
Features		5E14	-	-
		5E15	GA	GA
ASP Toll Free Service Interaction with Flexible ANI	745	5E13	-	-
Features		5E14	-	-
		5E15	GA	GA
Call Forward Don't Answer During Ringback of a	746	5E12	□	-
Call Waiting Call		5E13	□	□
		5E14	-	□
		5E15	GA	GA
ASP/LDP Module 21 220 Record Enhancement	747	5E13	SU 990021	SU 990070
		5E14	SU 990004	SU 990014
		5E15	GA	GA
Standard PRI XMIT Progress Instead of Alerting	748	5E14	SU 990001	-
when Interworking non-ISDN		5E15	GA	GA
Selective Destination Screening for Software	749	5E11	□	□
Defined Network		5E15	GA	GA
Include CSI in IAM for ASP Calls	750	5E14	□	□
		5E15	GA	GA
Release Link for Toll (SFs 520 and 521)	788	5E14	GA	GA
See Division 2, Sections 4A520 and 4A521)				
Populate Call Type with ASP Default for Continue	948	5E13	-	-
with Slip		5E14	GA	GA
SPS ANSI Incoming Signaling System Number 7	949	5E14	-	-
from End Office				
NP - DID PBX Query Enhancement	950	5E13	FR2	FR 990025
PCN Request Handling Parameter	951	5E14	IMR 719567	IMR 719567
		5E15	GA	GA
OSPS Provide Account Owner to LSDB Feature	952	5E13	SU 0010	SU 000007

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Activation		5E14 5E15	- GA	- GA
OSPS Control of Call ID Activation	953	5E14 5E15	SU 0010 GA	SU 000007 GA
Easy Access to Voice Mail (Depend upon SFID 540. See Division 2, Section 4A540)	954	5E15	GA	GA
1000 Block Number Pooling Using Number Portability (Depends on SFID 530. See Division 2, Section 4A530)	955	5E14 5E15	FR3 GA	- GA
1000 Block Number Pooling Using Number Portability (Depends on OFID 955.)	956	5E14 5E15	FR3 GA	- GA
DA Custom Branding by Account Owner (Depends on SFID 543) (See Division 2, Section 4A543)	970	5E13 5E14 5E15	FR3 FR2 GA	FR 000011 - GA
Audible Calling Name on *69 (Automatic Callback) (Depends on SFID 549. See Division 2, Section 4A549.)	971	5E14 5E15	FR3 GA	- GA
Allow SCP DAL Carrier Compare	972	5E15	GA	GA
ASP Monitor for BRI and Multiline Hunt Group	973	5E15	FR1	-
Commercial Credit Card Alternate Access Methods	974	5E14 5E15	FR4 GA	- GA
PSAP (Public Safety Answering Point) Trunk Reports OOS BLKD When Originator Hangs Up Before PSAP	975	5E13 5E14 5E15	- - GA	- - GA
Talking Call Waiting	976	5E13	-	-
DA Automatic Position Release (Depends on SFID 559. See Division 2, Section 4A559.)	977	5E14	FR3	-
GETS (Government Emergency Telecommunications Service) Egress Queuing	978	5E15 5E16	FR3 GA	SU 010036- GA
GETS (Government Emergency Telecommunications Service) Office Queuing	979	5E15 5E16	FR3 GA	SU 010036- GA
Carrier Compare For VPN (Virtual Private Network) Depends on SFID 165 and SFID 242.	980	- - 5E16	5E14 FR6 5E15 FR2 GA	- - GA
NM 3 Digit Reroute	981	5E14 5E15 5E16(1)	- - GA	- - GA
Inhibit No Circuit Peg Counts on Final Route Type of Busy	983	5E14 5E15	IMR 720980 GA	IMR 720980 GA
NPA Split Enhancement	984	5E14 5E15 5E16(1)	SU 010002 - GA	SU 010003 - GA
LEA TPKT Inhibit	985	5E14 5E15	SU 010002 GA	- GA
Use Originators Screen Index for ANI II Digits	986	5E14 5E15	- GA	- GA
PRI Calling Party Number Presentation Indicator Exception	987	5E14 5E15	SU 010002 GA	- GA
Enhancement for Stand-Alone Routing for International	988	5E14 5E15 5E16(1)	SU 030002 SU 020008 GA	SU 010016 SU 010068 GA
Alternate ASP Algorithm used' to Delete an NPA	989	5E14 5E15 5E16(1)	SU 010003 SU 010010 GA	- - GA
256K Trunk Scaling for Mega 5ESS	990	5E16	GA	GA
Bypass Subset of Crosschecks during RCV 10.10 Screening Delete	992	5E14 5E15 5E16(1)	SU 010005 SU 010016 GA	- - GA
Listing Services for OSPS ANSI Incoming SS7 form End Offices	993	5E14 5E15	SU 010006 SU 010016	SU 990009 -

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		5E16(1)	GA	GA
Canadian 15-Digit International Direct Distance Dialed	994	5E14	SU 010008	SU 010014
		5E15	SU 010017	-
		5E16(1)	GA	GA
Precedence and Preemption Terminating Feature Selection Enhancement	996	5E15	SU 020002	-
		5E16(2)	GA	GA
Delete Network Identity Digits on PRI PLI IE	997	5E15	SU 020007	SU 020013
		5E16(2)	GA	GA
GETS Enabled Edge Switch	998	5E16(2)	GA	GA
DNIS Enhancement for Canada - Part 1	999	5E15	FR 5	-
DNIS Enhancement for Canada - Part 2	1000	5E15	FR 5	-
DNIS Enhancement for Canada - Part 3	1001	5E15	FR 5	-
PRI CBC with Blank/Zero SFG Screen Index	1003	5E14	IMR 759058	IMR 759058
		5E15	IMR 759058	IMR 759058
		5E16(1)	IMR 759058	IMR 759058
		5E16(2)	GA	GA
Inhibit Printing of FC2CF_LTM Assert	1004	5E14	SU 030001	SU 020006
		5E15	SU 020009	SU 020025
		5E16(1)	SU 020008	SU 020014
		5E16(2)	GA	GA
IAM Charge Number	1005	5E15	SU 200003	SU 200002
		5E16.1		
		5E16.2		
		5E17.1		
256 ISUP Tandem Solution	1006	5E16(2)	SU 030001	SU 020006
		5E17(1)	GA	GA
On-Hook Data Transmission without Power Ring	1008	5E15	FR4	-
		5E16	GA	GA
IMLT Metallic A-Link Blackage Notification	1010	5E16(2)	FR1	-
Inhibit CGA (Carrier Group Alarms)	1012	5E16(2)	FR1	SU 30011
SS7 Release Message	1013	5E16(2)	GA	GA

Notes:

SU - Feature available in a Software Update (Formerly called BWM).

GA - Feature available in the General Availability Software Release.

- = No Informational Software Update available.
NA - Not applicable. An optioning bit is no longer needed to option the feature. An alternative mechanism (e.g., a dedicated parameter or an option name on the options views) is now used to option the feature.

(SFxx) - Secured Feature. Optional feature that can be purchased. For more information refer to Division 2, Section 4Axx.

(SpF) - Special Feature. For more information refer to Division 2, Section 4C.
(TF) - Transparency Feature. For more information refer to Division 2, Section 4B0, Page 1.
Figure 1 OFFICE OPTIONED ID NUMBERS AND CORRESPONDING FEATURE NAMES

SEC. 4B500: 3-WAY RECONNECT PROCEDURES

1. BACKGROUND

Without this feature, a subscriber, who is attempting to set up a three-way call and receives busy or no answer for the third party, is required to flash once if the third party call is an intra-office call and to flash twice if the third party call is an inter-office call.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later, the 3-Way Reconnect Procedures feature is a Transparency Feature using

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OFS ID 500.

This feature allows the user, who fails to connect with the third party of a three-way call and receives busy or reorder, to reconnect with the original party. The user reconnects by flashing twice. The first flash connects the two original parties with the busy tone or audible ringing. The second flash removes the busy tone or audible ringing while keeping the two parties connected. The call attempt to connect with the third party can be intra-office or inter-office.

- ***NOTE:*** For Auto3way, the subscriber will have to flash to form the three-way; it will not automatically form a three-way.

- ***NOTE:*** Disconnect timing - during a three-way reconnect call, if the far party hangs up leaving the controller listening to tone, a flash from the controller will remove the tone. Independent of whether the controller is an originator or terminator, the controller will go through 10 second disconnect timing after the flash.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 500 must have field ACT on the FOSYS form (5713-2 Record) set to "Y" to activate this feature for the office.

SEC. 4B501: MULTI-WAY THREE-WAY CONFERENCE/CALL TRANSFER B911 INTERACTIONS

1. BACKGROUND

Without this feature, if a subscriber with three-way calling flashes to connect a 911 ESB (Emergency Service Bureau) as a third party, it is not possible to flash again to re-establish the three-way call.

2. FEATURE DESCRIPTION

Available with 5E5 and later, the MW (Multi-Way) Three-Way Conference Calling/Call Transfer - B911 Interaction feature is a Transparency Feature using OFS ID 501.

This feature allows a subscriber with an MW three-way calling feature to completely conference a three-way connection with a 911 ESB as the third party of an MW conference call without the assistance of an operator. Also, an MW call transfer can be completed with 911 ESB as the thrid party without the services of an operator.

2.1 Call Scenarios

This feature is implemented for Analog MW, ISDN MW, Analog Attendant MW, and ISDN Attendant. Below are examples of various call scenarios.

Conference:

1. A calls B (or B calls A)
2. A flashes, calls 911
3. A flashes, A, B and 911 form Conference

Transfer:

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1. A calls B
2. B flashes, calls 911
3. B goes on-hook, A and 911 transferred
4. 911 flashes, A hears ROH (Receiver Off Hook)
5. A goes on-hook, 911 hears low tone
6. 911 flashes, A gets ringback

Analog MW:

The controlling terminal of a call can flash to put the far party on hold, receive special dial tone, dial and terminate with 911 (third party), and flash to connect all three Parties on the MW conference call. The following call scenario demonstrates the feature operation:

If an MW controller flashes during a three-way conference (to drop the last added party - 911), the Switch will reject the request.

When the MW controller of a conference call goes on-hook without a valid transfer feature, MW will transfer 911 station and non-controlling far Party A.

If a 911 station flashes during MW three-way conference call, MW will ignore the flash.

Also, MW call transfers can be completed with 911 (as a third party) and a 911 station may force hold and ringback the non-controlling far party.

Without this feature,

- the 5ESS Switch force holds the MW controller after the controller goes on-hook while it is connected with 911. Therefore, MW call transfers are not allowed to be completed
- the 5ESS Switch, ignores the flashes after the subscriber is connected with 911. Therefore, MW three-way conference calls are not allowed to be established.

The 911 functionality overrides the MW Filtering/TGSR functions and unconditionally allows MW conference calls and call transfers to complete.

ISDN MW:

The user of an ISDN terminal can depress the conference/transfer functional button to put the non-controlling far party on soft hold, dial and terminate to 911 (third party), and then depress the conference/transfer button to form an ISDN MW conference or transfer.

The MW controller can also transfer by going on-hook during an MW three-way connection with 911 station.

When the MW controller goes on-hook or depresses the transfer button without a valid transfer feature during a conference call, MW will transfer the 911 station and non-controlling far party.

If the MW controller depresses the drop functional button to drop the last added party (911), the Switch will reject the request.

If a 911 station goes on-hook during MW three-way conference call, the 911 station is disconnected and Party A and Party B remain connected. Also, ISDN MW call transfers can be completed with 911 (third

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party) and the 911 station may force hold and ringback the non-controlling far party. The 911 functionality overrides the MW Filtering/TGSR functions and unconditionally allows MW conference calls and call transfers to complete.

Analog Attendant:

The Analog Attendant (50B Console) MW controller of a three-way conference call can depress the start functional button to put the non-controlling far party on split hold, dial and terminate with 911 (third party), depress join button to conference with 50B, or depress the transfer button to transfer the 911 and non-controlling party. After an MW transfer, the 911 station can force hold the non-controlling party.

If the analog attendant controller depresses the cancel button during a three-way connection with 911 ESB, (to drop 911) the switch will reject the request. When the Analog Attendant controller presses the release button without a valid transfer feature, MW will transfer the 911 station and Party A.

If a 911 station flashes during MW three-way conference call, MW will ignore the flash.

The 911 functionality overrides the MW Filtering/TGSR functions and unconditionally allows MW conference calls and call transfers to complete.

ISDN Attendant:

The user of an ISDN Attendant terminal can establish an MW call, then depress the conference/transfer functional button to put the non-controlling far party on spilt hold, dial and terminate with 911 (third party), and depress the conference/release button to form an ISDN Attendant MW conference or transfer.

When an MW controller presses the release button without a valid transfer feature during a conference call, MW will transfer the 911 station and the non-controlling far party.

If an MW controller depresses the cancel functional button to drop the last added party (911), the switch will reject the request.

If a 911 station goes on-hook during an MW three-way conference call, the 911 station is disconnected, and Party A and Party B remain connected.

Also, ISDN Attendant MW call transfers can be completed with 911 (third party), and the 911 station may force hold and ringback the non-controlling far party.

The 911 functionality overrides the MW Filtering/TGSR functions and unconditionally allows MW conference calls and call transfers to complete.

2.2 Additional Information About Feature Operation

On-Hook Emergency Ringbacks:

On-hook ringback can occur after an MW call transfer when the transferred far party goes on-hook after establishing a stable talking path with the 911 station. After the far party goes on-hook, the 911 station hears a muffled dial tone, also known as low-tone. If the 911 station needs to continue communicating to the far party, the station can invoke on-hook ringback by flashing the switch-hook. If the far party is on-hook, power ringing is sent to the originator's station and audible ringing is returned to the 911 station. Power ringing and audible ringing will continue until a 45-minute timeout period, the far party goes off-hook, or the 911 station goes on-hook. After a stable talking state is established, the on-hook ringback procedure can occur as many times as necessary until the 911 station goes on-hook or any single ringback period exceeds the 45-minute timeout period. If either of these conditions is met, the entire call will be torn down.

Off-Hook Emergency Ringbacks:

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Off-hook ringback can occur at any time after establishing a stable talking path with the 911 station and the transferred far party. Off-hook ringback is a 4 second burst of ROH (receiver off-hook) tone supplied to the analog far transferred party after the 911 station flashes. For ISDN CPEs, off-hook ringback is a 4 second burst of high tone supplied to the ISDN transferred far party. If the transferred far party is off-hook, ROH tone is returned to the far party and audible ringing is sent to the 911 station. When the ROH tone has timed out, the audible ringing to the station is removed, and a normal talking path is restored. This off-hook ringback procedure can occur as often as necessary during a stable call to the 911 bureau until the 911 station goes on-hook. Off-hook ringbacks can only be invoked after an MW call transfer.

Ringback Not Allowed During Three-Way Connection:

The 911 ESB is not recognized as capable of flashing during the three-way connection. Therefore, all flashes by 911 ESB will be ignored by the switch during a three-Way conference call.

Forced Hold Disallowed During MW Three-Way Connection:

The 911 ESB is not recognized as initiating a forced hold functionality during the three-way connection. Therefore, if the MW control option for the controller disconnect is to tear down the conference, then MW functionality will override the 911 functionality and allow the call transfer with 911 and non-controlling far party A.

911 Cannot Force Hold or Ringback after Transfer:

If the first leg of an MW call routes over a trunk, then the 911 station cannot force hold or ringback the transferred party. This is demonstrated by the following analog non-attendant call scenarios:

Eample 1:

1. A calls B (Trunk).
2. A flashes, calls 911.
3. A goes on-hook.
4. 911 and B are transferred.
5. 911 cannot force hold or ringback B.

Example 2:

1. A calls B (Trunk).
2. A flashes, calls 911 (Trunk).
3. A goes on-hook.
4. 911 Trunk and B Trunk are transferred.
5. 911 cannot force hold or ringback B.

911 Cannot Transfer with Ringing Party:

911 cannot be transferred with a ringing party. When 911 goes off-hook, the ringing party will stop ringing and be idled.

1. A calls B (ringing).
2. A flashes, calls 911 (ringing).

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3. 911 goes off-hook, B stops ringing and idle.

4. A goes on-hook, 911 force holds A.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 501 must have field ACT on the FOSYS form (5713-2 Record) set to "Y" to activate this feature for the office.

SEC. 4B502: DIRECTED CALL PICKUP WITH BARGE-IN ASSIGNMENT

1. BACKGROUND

Without this feature, both the originating and terminating DPU (Direct Call Pickup with Barge-In) features were commonly assigned when a subscriber wanted to use Directed Call Pickup with Barge-In Assignment.

2. FEATURE DESCRIPTION

Available with 5E5 and later, this feature is a Transparency feature using OFS ID 502.

When this feature is enabled, the originator of the DPU will not need the DPU originating feature (/CPUDO) assigned to the subscriber's line to invoke a DPU (See Division 4, Section 6A). Any subscriber in a dialing plan with a DPU dial code defined, or in a configuration group with a DPU feature button defined, can invoke the feature. Different IDPs will be required if some subscribers can use the DPU feature and others cannot. With the elimination of the DPU originating feature, the wild card feature cannot be used.

This feature change will be transparent to the subscriber since the DPU feature will operate exactly the same as in previous releases as seen by the user.

The administrative work required in assigning Directed Pickup With Barge-In to a subscriber will be half of what was required prior to this feature. Previously, both the originating and terminating DPU features were commonly assigned when a subscriber wanted to use Directed Pickup With Barge-In.

The use of an Authorization code will no longer be supported because of the elimination of the DPU origination feature.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 502 must have field ACT on the FOSYS form (5713-2 Record) set to "Y" to activate this feature for the office.

SEC. 4B503: SHARED DN DISPLAY WITH NO RINGING OPTION

1. BACKGROUND

Without this feature, the field feature ISDN MBKS (Multi Button Key Set) Display for Ringing Call Appearances Only sends display information only to the associated terminals that are audibly alerting.

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Display for shared sets is provided as follows:

ISDN MBKS Display For Ringing Call Appearances Only	
Ringing Pattern	**Display Provided**
NOR (Normal)	Yes
ABR (Abbreviated)	Yes
DEL (Delayed)	Yes (but delayed)
NON (None)	No

2. FEATURE DESCRIPTION

Even though the ISDN MBKS (Multi Button Key Set) Display For Ringing Call Appearances Only is a field feature, not all offices and users want this feature for their phone. Available with 5E4(2) and later, the Shared DN Display With No Ringing Option transparency feature uses OFS ID 503 and allows the ISDN MBKS (Multi Button Key Set) Display For Ringing Call Appearances Only feature to be made optional rather than having the feature mandatory on all phones.

This feature allows display information to be sent silently to terminals even when they are not alerting. The terminal with DEL ringing is sent display only when it rings, unless it is the lead terminal. Display for shared sets is provided as follows:

Shared DN Display With No Ringing Option	
Ringing Pattern	**Display Provided**
NOR (Normal)	Yes
ABR (Abbreviated)	Yes
DEL (Delayed)	Yes (but delayed)
NON (None)	Yes

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 503 on the FOSYS form (5713-2 Record) must be set to "Y" to activate this feature for the office.

SEC. 4B506: NON-ALERTING ISDN SHARED TERMINAL DISPLAY OPTION

1. BACKGROUND

The ISDN MBKS (Multi Button Key Set) Display For Ringing Call Appearances Only provides display information only to the associated terminals that are audibly alerting. Display for shared sets is provided as follows:

ISDN MBKS Display For Ringing Call Appearances Only	
Ringing Pattern	**Display Provided**
NOR (Normal)	Yes
ABR (Abbreviated)	Yes
DEL (Delayed)	Yes (but delayed)
NON (None)	No

The feature, Shared DN Display With No Ringing Option (see Division 2, Section 4B503), introduced a change so that display information would be provided for terminals not audibly alerting. This affected the display as follows:

Shared DN Display With No Ringing Option	
Ringing Pattern	**Display Provided**
NOR (Normal)	Yes
ABR (Abbreviated)	Yes
DEL (Delayed)	Yes (but delayed)
NON (None)	Yes

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Customers have indicated that both types of operation can be desirable.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later, the Non-Alerting ISDN Shared Terminal Display Option uses OFS ID 506 and provides offices with the option of providing display information with alerting pattern of NON. The display for non-alerting shared terminals will depend upon a OFS ID which can be set per office basis.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 506 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

To continue the Non-Alerting ISDN Shared Terminal Display Option feature operation of providing display information for non-alerting terminals, no action will need to be taken since the default is set for this capability.

To return to the ISDN MBKS (Multi Button Key Set) Display For Ringing Call Appearances Only feature operation to inhibit display information for all non-alerting shared terminals in the office, OFS ID 506 on the FOSYS form is set to "Y".

If after having returned to the the ISDN MBKS (Multi Button Key Set) Display For Ringing Call Appearances Only feature operation the office wishes to return to the Non-Alerting ISDN Shared Terminal Display Option feature operation, OFS ID 506 on the FOSYS form should be blank to allow display information for all non-alerting shared terminals in the office.

SEC. 4B507: SEPERATE CALL WAITING FROM MW RINGBACK PARAMETER

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4B508: INCREASE NUMBER OF SIMULTANEOUS CALLS FORWARDED TO DID GROUPS

1. BACKGROUND

Without this feature only 1 call-forwarded call will be directed to a DID (Direct Inward Dialing) group at a time, and all additional calls will be blocked.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later, if OFS ID 508 has the field ACT set to "Y" on the FOSYS form (5713-2 Record) so that Increase Number of Simultaneous Calls Forwarded to DID Groups is active and the forward-to party is a DID trunk, then the service class is set so that the forward-to party is a line as opposed to a trunk. The call will then be treated as an intra-office call and allow up to 99 simultaneous forwardings.

The following is a sample call scenario:

- Line A calls Line B and is forwarded to the DID trunk.

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- The DID trunk winks and goes offhook.
- Line A and the trunk should be in talking state.
- While Line A and Line B are talking, Line C calls Line B.
- Prior to activation of this feature, Line C gets blocked and receives busy tone. After application of this feature, Line C is forwarded and the trunk is alerted.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 508 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B509: FIX FOR PFA, ARS, AND VPATH

1. BACKGROUND

Originally, all Intra-LATA and Inter-LATA Simulated Facilities OUTWATS (Outward Wide Area Telecommunications Service) calls were routed to the Inter-LATA Carrier found in SFG (Simulated Facilities Group) OUTWATS data. As a result, PFA Private Facilities Access) Intra-LATA OUTWATS calls were not routing via the Intra-LATA route. Since these calls should be handled separately, mis-routed PFA Intra-LATA OUTWATS calls cause incorrect billing for the end customer and RBOC.

A Software Update was introduced to change the routing of these calls to meet the LSSGR (Local Switching System General Requirements). With this Software Update, OUTWATS Intra-LATA calls are routed to the LEC (Local Exchange Carrier), and Inter-LATA OUTWATS calls are routed to the IC (Interexchange Carrier). Although this routing change meets LSSGR requirements, this is not the most desirable routing for all OUTWATS applications. Some office configurations depend on the original routing arrangement for OUTWATS calls. For example, the field feature VPATH will not route calls correctly due to the above mentioned Software Update.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later, the Fix for PFA, ARS, and VPATH transparency feature uses OFS ID 509 to provide an option for OUTWATS Intra-LATA routing. When OFS ID 509 has field ACT set to "Y" on the FOSYS form (5713-2 Record), this feature is activated to provide the same routing of OUTWATS calls as originally available before the implementation of the above mentioned Software Update. With the feature activated, all Intra-LATA and Inter-LATA Simulated Facilities OUTWATS calls are routed to the Inter-LATA Carrier found in SFG OUTWATS data.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 509 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B510: HOTEL/MOTEL MINI FEATURE

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1. BACKGROUND

A Software Update providing a mini feature called Hotel/Motel enforces a blockage against the hotel key when the back number cannot be found in the HOTEL database. Some customers have approved of the feature while other customers do not want the blockage enforced against the Hotel key when the back number cannot be found in the HOTEL database.

2. FEATURE DESCRIPTION

Available with 5E5 and later, the Hotel/Motel Mini Feature is a Transparency Feature using OFS ID 510 and gives the customer the ability to deactivate the blockage against the hotel key. The activation/deactivation of OFS ID 510 on the FOSYS form (5713-2 Record) will activate/deactivate blockage against the key. Other aspects of the feature, ANIF (Automatic Number Identification Failure) back number retrial and billing code 64, will not be changed.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 510 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B511: FTS2000 OFFICE INDICATOR FOR PRIVATE MDR RECORD FIX

1. BACKGROUND

The MDR (Message Detail Recording) Call Event Code for Vacant Code Calls is incorrect. A call placed to a Vacant Code results in an MDR record having a Call Event Code which indicates "Incomplete - Call Failure." The Call Event Code should indicate "Incomplete - Vacant Code." As a result, it is time consuming to trace vacant code calls with the incorrect Call Event Code of call failure when it could immediately be known that the user dialed a vacant code.

2. FEATURE DESCRIPTION

Available with 5E5, FTS2000 Office Indicator for Private MDR Record Fix uses OFS ID 511 and applies to FTS2000 offices. When OFS ID 511 on the FOSYS form (5713-2 Record) is set to "S", a call placed to a Vacant Code will produce the correct MDR record having a Call Event Code indicating "Incomplete - Vacant Code".

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 511 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B512: AUTHORIZATION CODE INTERACTION WITH MULTI-WAY FIX

1. BACKGROUND

Without this feature no authorization code CDAR (Customer Dialed Account Recording) number is

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generated in the billing record for multiway calls after the second multiway call is placed. A typical scenario is: User A calls user B, and they talk and decide to add on user C. B flashes and dials 9 + 11 digits and then gets prompted for an ATH (Authorization) code. B enters the code, and the call completes to C. A, B and C are now connected. After C hangs up, the AMA (Automatic Message Accounting) record is generated and has the CDAR number associated with it as would be expected.

A and B are connected, and B flashes and dials 9 + 11 digits. In this instance B is not prompted for the AUTH code (as expected since it was already entered once), and the call completes to D. A, B and D are now connected. After D hangs up, an AMA trace record is generated. However, no CDAR number is put into the billing record. This happens also when the added leg completes to a busy phone and then calls back later.

Since operating companies cannot bill for calls that do not contain a CDAR number, the potential exists for lost revenue for the customer.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later, the Authorization Code Interaction with Multi-Way Fix feature uses OFS ID 512 on the FOSYS form (5713-2 Record) so that the ATH (Authorization) Code prompt will be allowed. Otherwise the ATH code from the previous leg call record will be copied into the current call record if dialed on a previous leg. This will insure that a CDAR will be generated for each AMA record.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. If OFS ID 512 has field ACT on the FOSYS (5713-2 Record) form set to "Y", this feature will be active for the office, and ATH (Authorization) Code prompt will be allowed. If OFS ID 512 has field ACT set to "N", the ATH code from the previous leg call record will be copied into the current call record if dialed on a previous leg.

SEC. 4B513: RESTRICT INITIAL FLASH AND CALL WAITING BEFORE ANSWER

1. BACKGROUND

Currently, the 5ESS Switch allows flashing and call waiting when a call is in a stable state. Ringing is considered a stable state for the 5ESS Switch. The 1A ESS Switch does not consider ringing to be a stable state and does not allow initial flash or call waiting before answer on intra-office calls. On outgoing calls, the 1AESS Switch optionally allows initial flash before answer and call waiting before answer. (IFBA) Initial Flash Before Answer is the first flash to set up a multiway call. An IFBA implies that the called party is ringing when the controller flashes and there are no soft held parties. If hard hold is in progress, IFBA implies that the controller has a call on hard hold, and is ringing a called party. (CWBA) Call Waiting Before Answer is alerting a busy station when the station has an unanswered call in a ringing state.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later Software Releases, this transparency feature applies to individual analog lines and analog attendants. This feature provides two independent 5ESS Switch office options to restrict initial flash and call waiting before answer on an office basis when an analog controller has a call in the ringing state:

- Intra-office option is controlled by OFS ID 513 on the FOSYS form for intra-office calls
- Inter-office option is controlled by OFS ID 514 on the FOSYS form for outgoing calls

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The two office options determine the treatment for IFBA and CWBA for intra-office and outgoing calls. The existing call defines the customer state of the controller. The far class of service defines the existing call type (intra-office or outgoing).

If the office options are set to disallow IFBA and CWBA, and if a controller with a multiway feature flashes while in the ringing state, the flash is ignored and the controller remains connected to the ringing party. If hard hold is in progress, then the flash causes the ringing call to disconnect. If a party tries to call wait a controller that has another call in the ringing state, the party will either get busy treatment or the call will be forwarded if the controller has the call forwarding busy line feature.

When the feature is deployed, it will not be active. Each option of the feature is activated by setting the appropriate OFS ID on the FOSYS form:

- The intra-office option is activated by setting the ACT field for OFS ID 513 to "Y" on the FOSYS form. Flash and call waiting before answer for intra-office calls will not be allowed.
- The inter-office option is activated by setting the ACT field for OFS ID 514 to "Y" on the FOSYS form. Flash and call waiting before answer for outgoing calls will not be allowed.

3. CALL PROCESSING SCENARIOS

The following three call scenarios illustrate how this feature affects call processing. These scenarios all involve intra-switch calls. In the case of outgoing calls, the difference would be that the inter-office option (controlled by OFS ID 514) would be checked instead of the intra-office option (controlled by OFS ID 513) to determine if IFBA and CWBA are restricted. Also, in the case of outgoing calls, if a trunk simulating answer supervision (e.g., a Foreign Exchange trunk) is used, the restrictions will not apply.

3.1 Scenario I: Direct Intra-Office Call

The first scenario describes a simple A to B intra-office call when party A either flashes or is called.

- Line A - 979-1000 : /CWT, /MW3WC
- Line B - 979-1001
- Line C - 979-1002

3.1.1 Intra-office option (OFS ID 513 ACT field) set to "Y" to disallow IFBA and CWBA.

Line A calls line B. Line B does not answer and is ringing.

- Line A flashes. The flash is ignored since the intra-office option is "Y".
- Line C calls Line A. Line A is not call waited and Line C hears the busy signal since the intra-office option is "Y".

3.1.2 Intra-office option (OFS ID 513 ACT field) set to "N" to allow IFBA and CWBA.

Line A calls line B. Line B does not answer and is ringing.

- Line A flashes. The flash is accepted and Line A receives dial tone since the intra-office option is "N".
- Line C calls Line A. Line A is call waited and Line C hears ringing since the intra-office option is "N".

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3.2 Scenario II: Hard Hold Interaction

The second scenario describes how hard hold interacts with Scenario I.

- Line A - 979-1000 : /CWT, /MW3WC, /MWCH1
- Line B - 979-1001
- Line C - 979-1002
- Line D - 979-1003

3.2.1 Intra-office option (OFS ID 513 ACT field) set to "Y" to disallow IFBA and CWBA.

Line A calls line B. B answers. Line A and Line B are talking. Line A flashes and dials the hard hold dial code (puts Line B on hard hold). Line A gets dial tone and calls Line C. Line C does not answer and is ringing.

- Line A flashes. The flash is interpreted as a disconnect since the intra-office option is "Y". Line A goes to silence and the call to C is disconnected. Line A must flash to get back dial tone.
- Line D calls Line A. Line A is not call waited and Line D hears the busy signal since a controller with hard hold in progress cannot be call waited.

3.2.2 Intra-office option (OFS ID 513 ACT field) set to "N" to allow IFBA and CWBA.

Line A calls line B. B answers. Line A and Line B are talking. Line A flashes and dials the hard hold dial code (puts Line B on hard hold). Line A gets dial tone and calls Line C. Line C does not answer and is ringing.

- Line A flashes. The flash is accepted and Line A gets dial tone since the intra-office option is "N".
- Line D calls Line A. Line A is not call waited and Line D hears busy since a controller with hard hold in progress cannot be call waited.

3.3 Scenario III: Transfer Interaction

The third scenario describes how transfer interacts with Scenario I.

- Line A - 979-1000 /CWT, /MWCTIA1
- Line B - 979-1001
- Line C - 979-1002
- Line D - 979-1003

3.3.1 Intra-office option (OFS ID 513 ACT field) set to "Y" to disallow IFBA and CWBA.

Line A calls line B. B answers. Line A and Line B are talking. Line B flashes and dials Line C. Line B disconnects to transfer Line A's call to Line C. Line C does not answer and is ringing.

NOTE: If the call from A to B is an outgoing call, then the feature restrictions will not apply after the transfer.

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- Line A flashes. The flash is ignored since the intra-office option is "Y" and Line A continues to ring C.
- Line D calls Line A. Line A is not call waited and Line D hears busy since the intra-office option is "Y".

3.3.2 Intra-office option (OFS ID 513 ACT field) set to to "N" to allow IFBA and CWBA.

Line A calls line B. B answers. Line A and Line B are talking. Line B flashes and dials Line C. Line B disconnects to transfer Line A's call to Line C. Line C does not answer and is ringing.

- Line A flashes. The flash is accepted since the intra-office option is "N" and Line A gets dial tone.
- Line D calls Line A. Line A is call waited and Line D hears ringing since the intra-office option is "N".

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 513 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate the intra-office option for this feature for the office. OFS ID 514 must have field ACT on the FOSYS form set to "Y" to activate the inter-office (outgoing calls) option for this feature.

4.1 Transparency Requirements

The following list indicates how to set the 5ESS Switch intra-office option and outgoing option for the 5ESS Switch to be transparent with other requirements:

4.1.1 5ESS Switch Transparent with the 1A ESS Switch

Set the 5ESS Switch intra-office option (OFS ID 513 ACT field) to "Y" to disallow initial flash and call waiting before answer. Set the 5ESS Switch outgoing option (OFS ID 514 ACT field) to "N" to allow or "Y" to disallow initial flash and call waiting before answer.

4.1.2 5ESS Switch Transparent with Current 5ESS Switch Software Releases

Set the 5ESS Switch intra-office option (OFS ID 513 ACT field) to "N" to allow initial flash and call waiting before answer. Set the 5ESS Switch outgoing option (OFS ID 514 ACT field) to "N" to allow initial flash and call waiting before answer.

4.1.3 5ESS Switch Transparent with the LSSGR (Local Switching System General Requirements)

Set the 5ESS Switch intra-office option (OFS ID 513 ACT field) to "Y" to disallow initial flash and call waiting before answer. Set the 5ESS Switch outgoing option (OFS ID ACT field) to "N" to allow initial flash and call waiting before answer.

SEC. 4B515: CALLING PARTY DISCONNECT INDICATION

1. FEATURE DESCRIPTION

Prior to this feature, the indication provided to an analog called party that the calling party disconnected was an open interval followed by dial tone, normally given to the line after a 10 to 12 second delay.

Available for 5E4(2) and later, Calling Party Disconnect Indication is a special feature which provides an

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indication to an analog called party as soon as the called party's switch recognizes the calling party has disconnected. The indication provided by this feature is a short open interval, that is, removal of central office battery. This indication is followed by the existing 10 to 12 second disconnect timing and then the appropriate disconnect treatment. This disconnect treatment is usually dial tone, except for Manual and Direct Connect lines which receive permanent signal treatment (re-order or announcement).

This particular application is of interest to customers that own automatic equipment which handles incoming calls (e.g. an answering machine or a key system). The immediate open interval provided by this feature will allow the automatic equipment to react sooner, thereby decreasing wasted occupancy of the line. ISDN station sets do this with standard protocol.

This feature should be activated or deactivated on a per-office basis. To activate this feature for the office, MODULE should be set to "OFC" and Feature ID 515 should be set to "S" on the FOSYS form.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 515 must be set to "S"on the FOSYS form (5713-2 Record) to activate this feature for the office.

SEC. 4B516: TRANSFER OF UNSUPERVISED LINES FIX

1. BACKGROUND

Prior to 5E6, the 5ESS Switch would allow a call over an outgoing trunk (originator is within the 5ESS Switch) to be transferred to a ringing line, which is also within the 5ESS Switch. It was also possible to have scenarios which resulted in two outgoing trunks to be transferred together. This caused problems with hung resources (conference circuits, dynamic data, trunk circuits) and Long Duration Calls in several offices.

The majority of the problems resulted from several sources:

- The 5ESS Switch could not guarantee that outgoing trunks were supervised (supervised is defined as a terminating trunk or an answered call) at the far end, and therefore, must assume that they are not. If an outgoing trunk was not supervised, the 5ESS Switch would not know when the far end would go onhook and therefore, could not allow the transfer.

- The ring timeout in the 5ESS Switch may be set to a very large value, or may not be set at all. This means that a line could possibly ring forever and tie up the resources.

The 5ESS Switch software requires that at least one end of a call be supervised before it will allow the transfer so that the resources do not get hung.

With the 5E6 Software Release, the 5ESS Switch no longer allows these types of calls to be transferred. If the customer sets up a call of this type and attempts to perform the transfer, the following will occur:

- If the customer is analog and attempts to transfer by going onhook, the call will be torn down silently.

- If the customer is ISDN (Integrated Services Digital Network) and attempts to transfer by pressing the TRANSFER button, then a TRANSFER REJECT message will be sent to the ISDN set, the TRANSFER lamp will flutter, and the call will not be transferred. Thus, ISDN transfers may be rejected if an outgoing trunk is transferred to a ringing line.

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2. FEATURE DESCRIPTION

Since some switches do not want hung conference circuits that result from unsupervised parties being transferred together, but other offices want the 1A ESS transparency, this Transparency Feature provides an option to satisfy both needs and is available for 5E4(2) and later:

- If this feature is not resident on the switch, the 5ESS Switch will only allow supervised parties to be transferred together. Therefore, two outgoing trunks, two ringing parties or an outgoing trunk and ringing line will not be transferred together.
- If this feature is resident on the switch and OFS ID on the FOSYS form is not set to "Y", the 5ESS Switch will only allow supervised parties to be transferred together. Therefore, two outgoing trunks, two ringing parties or an outgoing trunk and ringing line will not be transferred together.
- If this feature is resident on the switch and OFS ID on the FOSYS form is set to "Y", the 5ESS Switch will not allow two outgoing trunks or two ringing parties to be transferred, but an outgoing trunk will be allowed to be transferred to a ringing line.

NOTE: The transfer of outgoing trunks that are not supervised may result in the problems described above.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. MODULE is set to an SM number or "OFC" to activate the feature option for that particular SM or the entire office. In addition, OFS ID 516 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to to allow an outgoing trunk to be transferred to a ringing line.

SEC. 4B517: MODIFIED CALLING LINE DISCONNECT PROCEDURE FOR FRAUD PROTECTION

1. MCLD FEATURE DESCRIPTION

Available with 5E5 and later Software Releases, MCLD (Modified Calling Line Disconnect for Fraud Protection) modifies the treatment of disconnect. When MCLD is activated, a line that remains offhook following a called party abandon does not receive dial-tone after the delay disconnect timer has expired but receives Permanent Signal (permsig) treatment. This forces the line to go back onhook before originating another call.

The MCLD feature applies only to analog lines. MCLD does not work for coin lines, ground start lines, or ISDN lines.

1.1 Definitions

"Regular" COIN - A line with a COIN class of service.

COCOT - Customer Owned Coin Operated Telephones. These are not "regular" coin lines, but usually have an individual class of service.

Permanent Signal (permsig) Treatment - A series of signals. Typically, it is an announcement followed by ROH (receiver offhook) tone. The flexibility exists to not send the initial announcement or to send reorder. After ROH, the line is viewed by the switch as being out of service until the line goes back onhook.

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1.2 Background

Currently, an analog line can originate a call, remain offhook when the called party disconnects, and eventually receive dial-tone again without ever going onhook. With the proper type of CPE (Customer Premise Equipment), such as a call diverter or COCOTs, fraudulent calls could be originated in the above case.

1.3 MCLD Feature Assignment

The MCLD feature is activated by setting FID 517 to "S" on the FOSYS form (5713-2 Record). Refer to the ID Numbers for Transparency Features table in Division 3, Section 5AS. At this time, all analog lines receive permsig treatment unless a particular line has indicated that it will override the MCLD feature and provide dial-tone following disconnect timer expiration.

2. MCLD TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109	3	1I	1.6
MLHLN	5111	3	1K	1.6
FOSYS	5713-2	3	5AS	8.31

NOTE: The Recent Change Views impacted for 5E5 and 5E6 are 1.1, 1.2, 1.3, 1.6, 2.1, 2.2, 2.3, and 3.2. As a result of Recent Change View consolidation, the Recent Change View for 5E7 and later is 1.6.

2.1 Line Translations

LINE form (5109 Record) - This form is used to define the Office Equipment Number and features for each telephone number in a 5ESS Switch. The new field MCLD DEACT was added. This field determines if MCLD (Modified Calling Line Disconnect) is deactivated for this line when the feature is active on this SM. The MCLD feature is activated by setting FID 517 to "S" on the FOSYS form (5713-2 Record). When MCLD is active and MCLD DEACT is set to "N", this line receives Permanent Signal Treatment following expiration of the disconnect timer. When MCLD is active and MCLD DEACT is set to "Y", then this line receives dial-tone following expiration of the disconnect timer.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular MLHG (Multi-Line Hunt Group). Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. The new field MCLD DEACT was added. This field determines if MCLD is deactivated for this line when the feature is active on this SM. The MCLD feature is activated by setting FID 517 to "S" on the FOSYS form (5713-2 Record). When MCLD is active and MCLD DEACT is set to "N", this line receives Permanent Signal Treatment following expiration of the disconnect timer. When MCLD is active and MCLD DEACT is set to "Y", then this line receives dial-tone following expiration of the disconnect timer.

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for enabling or optioning Special and Transparency Features. The FID 517 on the FOSYS form must be set to "S" to enable or option the MCLD feature.

SEC. 4B518: CALL TRANSFER TO BUSY - RETURN BUSY TO ORIGINATOR

1. FEATURE DESCRIPTION

Available with 5E5 and later, the Call Transfer to Busy - Return Busy to Originator is a Transparency Feature using OFS (Optioned Feature System) ID 518. This feature allows an analog MW (Multiway) party with a valid transfer feature to transfer a held party to busy or reorder tone. After the busy/reorder tone has been applied for a predetermined time interval, the call is idled. This feature is implemented for both

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analog MW (Multiway) and analog attendant MW (including the 50B console) and applies to only intra-office calls. The transfer to busy/reorder tone is already allowed for inter-office calls. Similar to the Three-way Reconnect feature, this feature will allow a controller to make a three way connection with busy/reorder tone. If the controller of the call goes on-hook, the call is transferred to busy/reorder tone. After the busy/reorder tone has been applied for a predetermined time interval, the call is idled. The party that is transferred to busy/reorder tone cannot be call-waited. If the transferred party has a valid flash feature assigned to its line, all subsequent flashes on this line are ignored until the end of the call.

1.1 Call Transfer to Busy Line Scenario

The following end-user call transfer to busy line scenario is an example of the way the Call Transfer to Busy - Return Busy to Originator transparency feature operates:

- Party A, the controller, has a valid transfer feature assigned to the line.
- Party B has a valid flash feature and call waiting feature assigned to its line.
- Party A calls party B and party B answers.
- Party A flashes and puts party B on hold.
- Party A gets dial tone, calls party C who is busy, and hangs up.
- With this feature enabled, B is connected to busy tone for a preset interval.
- When the busy tone timer times out, the call is torn down.
- If party D call-waits party B when party B is transferred to busy tone, party D gets busy tone.
- Party B does not get call waiting tone even if it has a call waiting feature assigned.
- When party B is transferred to busy tone, its flashes are ignored until the end of the call.
- With this feature disabled, party A is rungback by party B.

The duration of the busy/reorder timer for the whole office is set using the TNTYP form (5504 Record).

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22
TNTYP	5504	3	5D	8.6

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 518 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

TNTYP form (5504 Record) - This form is used to define "ROH", "REORDER", "HIGHTONE", and "BUSY" tones.

SEC. 4B520: FIX FOR OPTIONING ERRORS DURING NPA SPLITS

1. BACKGROUND

Prior to this feature, LASS (Local Area Signaling Services) AR (Assert Range) fails during NPA (Numbering Plan Area) split.

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As a result, any LASS calls attempted where customers have started the NPA split will fail. LASS AR calls attempted, where the 5ESS Switch converted to a new NPA at the terminating end, will fail.

The following scenario illustrates the above condition:

- Office A is in area code yyy (home NPA yyy).
- Office B is in area code zzz (home NPA zzz) and formerly had area code yyy.
- STP (Signal Transfer Point) is set up to global title route either yyy nxx or zzz nxx to office B.
- Originator at office A dials nxx xxxx which is a number at office B (no answer).
- originator at office A dials *66 LASS AR.

Since the original call was dialed as 7 digits the 10 digit string needed for global title is constructed using the NPA of the home office. This causes yyy nxx xxxx to be sent to office B where a check is done on the NPA. This check fails since office B is now in area code zzz.

2. FEATURE DESCRIPTION

Available with 5E5 and later, Fix for Optioning Errors during NPA Splits feature uses OFS (Optioned Feature System) ID 520. This feature provides the capability to turn NPA checks off or on to avoid the above described condition. The ACT field for OFS ID 520 must be set to "Y" (or "N") to turn NPA checks off (or on) for LASS TCAP (Transaction Capabilities Application Protocol) messages.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 520 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B521: FIX TO DECREASE SC/MLHG POST DIAL DELAY

1. BACKGROUND

Without this enhancement for BRCS (Business and Residential Customer Services) MLHG (Multi-Line Hunt Group) and SC (Series Completion) calls, there is a delay set before ringing the port. This delay is done in cases where the customer encounters Per Call Test Failure and must be rerouted.

In addition, ISDN (Integrated Services Digital Network) console operators receive a post-dial delay on console transfers. As a result, on transfers to extensions that are in Series Completion hunting arrangements, ISATs (ISDN Attendant consoles) do not release until the call is parked (ringing or answered).

2. FEATURE DESCRIPTION

For 5E5 and later, the Fix to Decrease SC/MLHG Post Dial Delay Transparency Feature enhancement uses OFS (Optioned Feature System) ID 521 and decreases the post dialing delay for Series Completion and Multi-Line Hunt Groups. When this feature enhancement is enabled, there will no longer be a delay for per call testing. Thus, calls will reroute faster. However, upon encountering a Per Call Test Failure, the current call will not have the ability to reroute as provided without the enhancement. The port where the failure occurred will be taken out of service so that subsequent calls will reroute over the port. This is a

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necessary trade off between call completion rate and post dial delay time.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 521 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B522: BRIDGING INDICATION TO ANALOG SHARED DN LINES

1. BACKGROUND

Without this feature, no supervision indicators are provided to analog lines during call state changes when a DN (Directory Number) is shared between analog and ISDN (Integrated Services Digital Network) lines.

As a result, when a DN is shared between analog and ISDN lines, the following senario could occur:

- An incoming call to the analog line is answered at the analog set.
- The analog set puts the incoming call on hold.
- The person at the ISDN set is paged to pick up the call.
- The incoming call is answered at the ISDN set.
- The analog set is still on hold and has no indication of the ISDN set answering the call.

2. FEATURE DESCRIPTION

For 5E5 and later, the Bridging Indication to Analog Shared DN Lines feature uses OFS (Optioned Feature System) ID 522 and provides for the sending of a 150 ms open signal to the analog line when an ISDN member bridges into a shared analog line call. Activation of this feature on an entire SM (Switching Module) or an office basis is accomplished via the FOSYS form (5713-2 Record).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 522 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B523: PROBLEMS WITH ROUTING INTRALATA/INTERSTATE CALLS

1. BACKGROUND

A "CONFLICT" dial code is an NPA-NXX combination that must be routed to an InterLATA carrier when dialed by some customers but can be handled by the local exchange carrier when dialed by other customers. The Problems with Routing IntraLATA/Interstate Calls Transparency feature impacts the algorithm that resolves how to handle a call to a "CONFLICT" dial code.

The current (and continuing default) algorithm provides for multiple local routes based on originating

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service class when a 0+ prefix is dialed, but only a single local route regardless of originating service class when no prefix (None+) or a 1+ prefix is dialed.

2. FEATURE DESCRIPTION

Available with 5E4(2) and later, the Problems with Routing IntraLATA/Interstate Calls Transparency feature uses OFS (Optioned Feature System) ID 523 and brings more control and flexibility to the CONFLICT resolution algorithm. When the feature is enabled, the CONFLICT resolution algorithm used for calls dialed without a prefix (None+) and for calls dialed with a 1+ prefix will be the same as the algorithm for calls dialed with a 0+ prefix. The 0+ algorithm provides the ability for the operating company to define distinct IntraLATA routing for each of several classes of customers even if certain digit sequences (e.g., NPA-NXX) must be handled as IntraLATA calls when dialed from some customers, but as InterLATA calls when dialed from other customers.

3. FEATURE ASSIGNMENT

Prior to activating the feature, the routing of each dial code in the office defined on the LDIT form (5300-3/5 Record) with CALL TYPE as "CONFLCT" should be checked based on the action of the new algorithm. Special care should be given to the InterLATA routing for customers since this might change to IntraLATA if the routes are not correctly populated.

The Optioned Feature System provides the flexibility to:

A. enable routing 1+ and None+ calls using the 0+ algorithm by setting the ACT field to "Y" for OFS ID 523.

B. (default) use the current algorithm for routing calls by setting the ACT field to "N" for OFS ID 523.

This option can be turned on or off via the OFS ID 523 on the FOSYS form (5713-2 Record). The following is an example highlighting the impact of the feature. Assuming an NPA-NXX code was defined for a large set of customers with the CALL TYPE of "CONFLCT" on the LDIT form and an RTI (Route Index) of 1990, the CDI (Code Index) from that view could lead to the following routing through translation by RAR (Rate and Route Record) form (5301 Record) using the SCR (Screen Index) assigned to different customer segments. Each customer is assumed to have a distinct SCR.

Customer	RTI*** RAR form	CI ROUTE TYPE RTIDX form	Description
POTS	1990	STG, DTG, or OTHER**	Local routing
Coin	1991	STG, DTG, or OTHER**	Coin system
4FR	1992	STG, DTG, or OTHER**	ONI
Hotl/Motl	1993	STG, DTG, or OTHER**	TSPS-TOBIS
PFA*	1994	GENANN	Not used
ARS*	1995	GENANN	Not used

* screening index via SFG
** only one used
*** using coding index from the LDIT form and customer screening index

1. POTS (Plain Old Telephone Service) - routes as IntraLATA

2. Coin, 4FR, and Hotel/Motel - currently either route to the same place as calls from POTS, or route as InterLATA calls.

3. PFA (Private Facilities Access and ARS (Automatic Route Selection), typically WATS arrangements, route as InterLATA calls.

With the new algorithm in place, item 2 is changed so that the calls can route as before or to distinct local routes as IntraLATA calls.

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- ***NOTE:*** Prior to this feature, the ARS and PFA calls would always be InterLATA, regardless of the Route Description on Recent Change View 10.2. This is not true with the new algorithm. Instead, the field must be populated as above.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 523 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B524: OPTION TO PREVENT IDP USERS FROM USING ODP LASS DIAL CODES

1. BACKGROUND

Currently, IDP (Individualized Dialing Plan) customers are prevented from using the ODP (Office Dialing Plan) defined dialed codes for any LASS features.

2. FEATURE DESCRIPTION

For 5E5 and later, the Option to Prevent IDP Users from Using ODP LASS Dial Codes special feature makes the prevention of IDP customers from using the ODP defined dialed codes for LASS features optional.

OFS (Optioned Feature System) ID 524 is used to set the "escaped to POTS" (Plain Old Telephone Service) flag to implement the above option. The default for OFS ID 524 is "N" and which allows the LASS users in an IDP to escape to the POTS dialing plan for LASS features.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 524 must have field ACT on the FOSYS (5713-2 Record) form set to "N" which allows the LASS users in an IDP to escape to the POTS dialing plan for LASS features.

SEC. 4B531: OPTION TO PROVIDE 5E6 FUNCTIONALITY FOR SERIES COMPLETION AND MSS INTERACTION

1. FEATURE DESCRIPTION

The Option to Provide 5E6 Functionality for Series Completion and MSS Interaction feature uses OFID (Optioned Feature ID) 531. Voice Mail Systems have the option on the Recent Change Multiline Hunt Group View 3.5, CLIENT TN TYPE field, to send either the OCDN (Originally Called Directory Number) or RDN (Redirection Directory Number) to the VMS (Voice Mail System). OCDN (Originally Called DN) is the first forwarding number and RDN (Redirection DN) is the last number that forwards to the voice messaging system.

The SC (Series Completion) feature allows voice calls made to a busy directory number (DN) to be routed to another specified DN in the same 5ESS Switch office. SC is performed by a prearranged ordered DN list (linked list). SC starts with the ODMSC (Originally Dialed Member of the SC) group, and searches for an idle DN from the list of DNs until one of the following conditions is met:

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- An idle line is found.
- A DN in the list with an active busy line feature having higher precedence than SC is reached (for example, call forwarding variable (CFV)).
- The end of the linked list of DNs is reached ("regular" SC group).
- The call series completes back to the ODMSC ("circular" SC group) and finds that it is still busy.
- The call has been re-routed 16 times (exhausted SC attempts).

In 5E6(2), the Original Dialed DN delivered to the VMS was the ODMSC group (ODMSC). In 5E7, the DN in the SC list which encountered call forwarding was sent as the operationally called DN. Optioned ID 531 provides the option of either the 5E6(2) or 5E7(1) operation.

2. FEATURE ASSIGNMENT

The Option to Provide 5E6(2) Functionality for Series Completion and MSS Interaction Optioned feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 531 on the FOSYS form (5713-2 Record) to "Y".

With OFID 531:

- not active and VMS MLHG set to "OCDN" in the CLIENT TN TYPE field on the Multiline Hunt Group form, deliver ODMSC to the VMS. (Default to obtain 5E6(2) operation.)
- active and VMS MLHG set to "OCDN" in the CLIENT TN TYPE field on the Multiline Hunt Group form, deliver OCDN (first call forwarding DN) to the VMS.
- having no impact if the VMS has the CLIENT TN TYPE field set to "RDN" on the Multiline Hunt Group form, the 5ESS Switch delivers the DN of the SC list member with CF assigned to the VMS.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFID 531 on the FOSYS form (5713-2 Record) must be "Y" to enable this feature.

SEC. 4B535: DTA (DIAL THROUGH ATTENDANT) ROUTING OF CALLS BASED ON ATTENDANT'S LCC

1. BACKGROUND

On the 5ESS Switch, an attendant has the capability to pass back dial tone to the originating party on DDD (Direct Distance Dialing) calls. This allows a customer to request ESCAPE TO POTS access through the attendant and dial out of the Centrex group. However, the customer placing the DDD call is still limited by the dialing capabilities associated with their own LCC. The inability of the DTA (Dial Through Attendant) feature to transfer LCC information is even more evident when the originating customer already possesses the ability to dial out of the Centrex group.

For example, a customer site utilizing Centrex services has the stations located in its conference rooms configured such that an ESCAPE TO POTS code is accepted but only local dialing is permitted from these stations. For certain meetings in these rooms, it may be necessary to place a long distance call from one of

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these stations. Without the ability to have the DTA feature transfer the attendant dialing capability to the originator, the attendant must dial the complete number, get a stable path, and then transfer the call from the customer originating the request to the called party. This reduces the attendant's ability to process other calls since more attention is given to the originating call.

2. FEATURE DESCRIPTION

Available with 5E7 and later, the DTA (Dial Through Attendant) Routing of Calls Based on Attendant's LCC Transparency feature uses OFS (Optioned Feature System) ID 535 and allows the originator of a DTA call to receive all of the attendant's routing and screening index privileges on a per call basis after the attendant dials an access code, flashes and passes dial tone back to the originator. Therefore, a subscriber is allowed to complete dialing after the attendant selects a facility. The subscriber may complete the dialing other than station-to-station calls.

The Dial Through Attendant feature is used to provide access to certain facilities (eg. DDD (Direct Distance Dialing), private facilities, CCSA (Common Control Switching Arrangement) network) when the originator does not have access to those facilities. The originator dials the attendant and places a verbal request to the attendant for access to a given facility. The attendant then flashes to place the originator on hold and receives dial tone. The attendant then dials the appropriate access code and if the facility is available, dial tone is returned to the attendant. The attendant then goes on-hook and dial tone is transferred to the originator. This scenario requires the originator to be in the same terminal group as the attendant in order for the requester to complete the dialing of the call. If the originator is not in the same terminal group as the attendant, then the DTA feature will be aborted.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 535 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B538: SHARED DN GROUPS ACROSS SM/RSM CLUSTERS.

1. BACKGROUND

Prior to this feature, it was not possible to move ISDN (Integrated Services Digital Network) lines from local SMs (Switching Modules) to RSMs (Remote SMs) by using the RC/V (Recent Change/Verify) View 23.2. As a result, SHDN (Shared Directory Number) across an SM/RSM cluster would be blocked.

2. FEATURE DESCRIPTION

Available with 5E6 and later, this Transparency Feature uses TFOS (Transparency Feature Optioning System) ID 538 and provides the capability to allow Shared DN groups to exist across SM/RSM cluster boundaries.

This feature is enabled via the FOSYS form (5317-2 Record) by setting TFOS ID bit 538 to "S" (or setting FEATURE ID to 538 and ACTIVE to "Y" on Recent Change View 8.22).

When the feature is active, the SM/RSM cluster boundary checks are not enforced. When the feature is not active, the SM/RSM cluster boundary checks are enforced. For Shared DN members split between an HSM (Host Switching Module), an LSM, and an RSM, the following may be observed:

- On terminating or originating groups, there may be up to a one-second delay between a remote hold retrieval and the establishment of a voice path when the holder and retriever are split between an HSM/LSM and an RSM.

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- On terminating groups, there may be up to a one-second delay between a non-lead answer and the establishment of a voice path when the lead member and answering associate are split between an HSM/LSM and an RSM.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. TFOS ID 538 on the FOSYS form must be set to "S" to enable this feature.

SEC. 4B540: TRANSFER TO ACD FROM ARU

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4B541: ANALOG CALLING NAME DELIVERY

1. FEATURE DESCRIPTION

For detailed information on the Analog Calling Name Delivery - Phase 0, Phase 2 and Phase 2.1 features, see Division 2, Section 4A40.

SEC. 4B542: ISDN FAST TRANSFER ENHANCED FEATURE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

SEC. 4B543: PROVIDE REDIRECT DISPLAY FOR TGSR AND ACVT ENHANCEMENT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

SEC. 4B544: METRO HUB

1. FEATURE DESCRIPTION

For detailed information on the METRO HUB feature, see Division 2, Section 4A60.

SEC. 4B545: OPTION TO BLOCK THE SENDING OF OFF-SWITCH CALLING DN ACROSS API LINK

1. BACKGROUND

Prior to this feature, off-switch calling DNs (Directory Numbers) which were to be considered private

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information could not be blocked from being sent across API (Applications Processor Interface) links. Also, delivery of the ten digit off-switch calling DN caused a problem with VMS (Voice Mail System) machines that only looked at the last four digits of the calling DN. An option to send or block the sending of off-switch calling DNs across API links is needed.

2. FEATURE DESCRIPTION

Available with 5E6 and later, this Transparency Feature uses TFOS (Transparency Feature Optioning System) ID 545 and provides the option to send or block the sending of an off-switch calling DN (Directory Number) to an MSC (Message Service Center) across an API (Applications Processor Interface) link. When this feature is active, the sending of the off-switch calling DN across the API link will be blocked.

NOTE: The above feature option should be activated on SM(s) where the MSC MLHG (Multi-Line Hunt Group) members are assigned.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. This feature is enabled via the FOSYS form (5713-2 Record) by setting TFOS ID bit 545 to "S" (or setting FEATURE ID to 545 and ACTIVE to "Y" on Recent Change View 8.22) on a per SM (Switching Module) basis.

SEC. 4B549: 800 POST DIAL DELAY MF SIGNALING TRANSMISSION REDUCTION

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4B551: AMA RECORDING OF PREFIXED DIGITS IN PRIVATE NETWORK DIALING PLAN

1. BACKGROUND

This feature allows deleting digits on the PNDP (Private Network Dialing Plan) form (5608-10 Record) before an AMA (Automatic Message Accounting) record is generated. Currently, the digit deletion is done later on the RTIDX (Route Index) form (5303 Record) before the AMA record is generated. This causes a 1+10 or 1+7 digit call defined in the PNDP to have 001 included in the digits dialed field on the AMA record.

2. FEATURE DESCRIPTION

Available with 5E6 and later, The AMA Recording of Prefixed Digits in PNDP Transparency Feature uses OFS (Optioned Feature System) ID 551 and provides the ability to delete a 1, 01 or 011 Private Network Dialing Plan prefix from the Terminating NPA or Tandem Digits Dialed field of the AMA (Automatic Message Accounting) record for calls which route via PFA (Private Facilities Access) or ARS (Automatic Route Selection).

The feature affects the AMA records for the following call codes as required:

- Call Code 001 - Detailed Message Rate, Timed, with MBI
- Call Code 006 - Station Paid and Foreign Area Directory Assistance

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- Call Code 007 - WATS, Station Identification
- Call Code 011 - FX, Automatic Flexible Routing
- Call Code 021 - CCSA Sampling
- Call Code 032 - Tandem Tie Trunk
- Call Code 068 - WATS Billing Number
- Call Code 085 - Electronic Tandem Switching
- Call Code 099 - ETS Call Via CCSA
- Call Code 110 - InterLATA Station Paid
- Call Code 111 - InterLATA WATS, Station Detail
- Call Code 114 - InterLATA WATS, Billing Number

Currently on the 5ESS Switch, for 1+ prefix dialing, the prefix is stored in different places on the AMA records for 7 digit calls and for 10 digit calls. For 7 digit calls, when a prefix is dialed, it is stored in position 3 - 5 of the TERMINATING NPA field on the AMA record. For 10 digit calls, when a prefix is dialed, it is stored in position 1 - 2 of the TERMINATING NPA field (it has a sub field name of Overseas Expander Position).

For all of the above call codes affected by this feature except call code 32 (Tandem Tie Trunk), the terminating number is located in the fields TERMINATING NPA and TERMINATING NUMBER on the AMA record.

For call code 32 (Tandem Tie Trunk), the terminating number is in the TANDEM DIG. DIALED field of the AMA record. This is due to the different structure code of a Call Code 32 AMA record.

For 1 + 7 digit ARS private number dialed digits, this feature deletes the prefix and does not append the implied NPA to the AMA record for call codes of 021, 085, 099. The TERMINATING NPA field will be populated with "00000" in this case. For other call codes and for ARS public number dialed digits, the prefix is deleted and the implied NPA is appended to the AMA record.

For 1 + 7 dialed digit PFA calls (PFA access code + 1 + 7 digits), this feature deletes the prefix and does not append the implied NPA to the AMA record for call codes 021, 085, 099. The TERMINATING NPA field is populated with "00000" in this case. For other call codes, the implied NPA is appended to the AMA record.

Private Number dialed digits (sometimes referred to as On-Net calls) are defined on the PDNP form (5608-10/11 Record) with the CALL TYPE field set to "ON" or "OFFON". Public Number dialed digits (sometimes referred to as Off-Net) are defined on the PDNP form with the CALL TYPE field set to "OFF" or "USEOFFC".

For 1 + 10 digit calls and all call codes except 32, this feature deletes the prefix from the Overseas Expander Position subfield of the TERMINATING NPA field; all other dialed digits are stored as normal. For call code 32, the digits are stored in the TANDEM DIG. DIALED field and the prefix is deleted.

01+ and 011+ calls can be any length up to 15 digits. Only 12 digits of the dialed digit string are included in the AMA record.

2.1 Call Processing Scenarios

To illustrate how this feature affects AMA Billing, four call scenarios are included. The first example

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describes how a 1 + 10 digit PNDP call's AMA record is affected with and without the AMA Recording of Prefixed Digits in the PNDP feature functionality. The second example describes how a 1 + 7 digit PNDP Off-Net call's AMA record is affected with and without the AMA Recording of Prefixed Digits in the PNDP feature functionality. All the examples are for a 1+ prefix and call code 11. The prefix could have been 01+ or 011+ also. For brevity, only the first example shows how the terminating number is stored for call code 32.

In summary, call code 11 stores the terminating number in the TERMINATING NPA/TERMINATING NUMBER fields and call code 32 stores the terminating number in the TANDEM DIG. DIALED field.

The scenarios described below are for the following configuration:

Line A - 313-860-5000 : Node 1 of ETS Network
RNX 355-5000

Line B - 816-979-3336 : Node 2 of ETS Network
RNX 368-3336

Trunks connecting Node 1 to Node 2.

Office Dependent Data to support private network dialing between Node 1 and Node 2

The first example describes how the AMA Recording feature affects 1 + 10 digit dialing.

Scenario I: 1 + 10 digit PNDP Call □ With AMA Recording feature turned off.

Line A calls line B by dialing #8# 1 8169793336 (#8 is the ARS access code).

The AMA record for all call codes other than 32 would have the following fields populated as:

Field Name	Position	Dialed Digits	Description
TERMINATING NPA	1-2	01	Overseas expander position
	3-5	816	NPA
TERMINATING NUMBER	1-3	979	NXX
	4-7	3336	Four digit number

Call Code 32 would have the terminating number stored as follows:

Field Name	Position	Dialed Digits	Description
SIG. DIGITS IN NEXT	1-3	011	number of sig. digits in next field
TANDEM DIG. DIALED	1-11	00018169793336	Tandem digits dialed

Scenario II: 1 + 10 digit PNDP Call □ With AMA Recording feature turned on.

Line A calls line B by dialing #8# 1 8169793336 (#8 is the ARS access code).

The AMA record for all call codes other than 32 would have the following fields populated as:

Field Name	Position	Dialed Digits	Description
TERMINATING NPA	1-2	00	Overseas expander position
	3-5	816	NPA
TERMINATING NUMBER	1-3	979	NXX
	4-7	3336	Four digit number

Call Code 32 would have the terminating number stored as follows:

Field Name	Position	Dialed Digits	Description
SIG. DIGITS IN NEXT	1-3	010	Number of sig. digits in next field

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TANDEM DIG. DIALED	1-11	00008169793336	Tandem digits dialed

The second scenario describes how the AMA Recording feature affects 1 + 7 digit dialing.

Scenario III: 1 + 7 digit PNDP Off-Net Call □ With AMA Recording feature turned off.

Line A calls line B by dialing #8# 1 9793336 (#8 is the ARS access code).

The AMA record for all call codes other than 32 would have the following fields populated as:

Field Name	Position	Dialed Digits	Description
TERMINATING NPA	1-2	00	Overseas expander position
	3-5	001	NPA
TERMINATING NUMBER	1-3	979	NXX
	4-7	3336	Four digit number

Scenario IV: 1 + 7 digit PNDP Off-Net Call □ With AMA Recording feature turned on.

Line A calls line B by dialing #8# 1 9793336 (#8 is the ARS access code).

The AMA record for all call codes other than 32 would have the following fields populated as:

Field Name	Position	Dialed Digits	Description
TERMINATING NPA	1-2	00	Overseas expander position
	3-5	816	NPA
TERMINATING NUMBER	1-3	979	NXX
	4-7	3336	Four digit number

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 551 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B552: OSPS LS BILLING ON POSITION RELEASE

1. FEATURE DESCRIPTION

Available with 5E7 and later, this feature allows the OSPS (Operator Services Position System) to write 1215 AMA (Automatic Message Accounting) records on Position Release instead of on Position Seizure for Listing Services calls. Thus, an OSPS Listing Services operator has the ability to selectively bill LS (Listing Services) calls. The operator is also given the ability to block the generation of a 1215 AMA record by either depressing the Cancel Call or Emergency key on the CST/BST-LS (Combined Services Terminal / Basic Services Terminal). However, since the Emergency key is an on/off toggle, if it is toggled off (depressed twice) a record will be written.

Pseudo system hold is provided with this feature to allow the OSPS to correctly bill when the back party goes on-hook before the call has been released from the position.

1.1 Calling Scenarios

The following two scenarios will require the operator to perform an additional key stroke for Listing Services calls.

A. The caller is at a DTMF (Dual Tone Multifrequency) non-coin station and wishes to receive a listing from the EIS (External Information System) that is not billable. The listing is given verbally.

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1. [Back party] dials an LS number.
2. [OSPS] receives the call, determines it is an LS call and routes it to an LS operator. Notifies the EIS with a [Position Seizure] message.
3. [Back party] provides information to the operator for the Listing.
4. [Operator] performs the database lookup and then determines that this number is not billable. Depresses the EIS key [Listing Access Complete], gives the Listing verbally and then depresses the OSPS [Cancel Call] and [Position Release] keys.
5. [OSPS] receives the [Listing Access Complete] message from the EIS and will NOT write a 1215 AMA record for the call since the [Cancel Call] key was depressed.
6. [Back party] goes on-hook.
7. [OSPS] sends a [Disconnect] message to the EIS.

B. The caller is at a DTMF non-coin station and wishes to receive a listing from the EIS that is not billable. The listing is given via Audio Response Unit.

1. [Back party] dials an LS number.
2. [OSPS] receives the call, determines it is an LS call and routes it to an LS operator. Notifies the EIS with a [Position Seizure] message.
3. [Back party] provides information to the operator for the Listing.
4. [Operator] performs the database lookup and then determines that this number is not billable. Depresses the OSPS key [Cancel Call] followed by the EIS key [Release to Audio].
5. [OSPS] receives the [Transfer Request], signals off-hook on the external ARU trunk, and drops the operator. Sends [ARU Select] message to the EIS.
6. [EIS] receives the [ARU Select] message and responds with off-hook on the external ARU trunk.
7. [OSPS] releases the operator position, does NOT write a 1215 AMA record since the [Cancel Call] key was depressed.
8. [Back party] hears the announcement then goes on-hook.
9. [OSPS] sends a [Disconnect] message to the EIS.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22
LSTG SVC REC	5424	3	4Y	8.9

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 552 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" for all SMs to activate this feature for the office.

OSPSOPT form (5424 Record) - This form defines the OSPS office option global parameters. LSTG SVC REC is set to "Y" to activate AMA records for Listing Services calls.

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SEC. 4B554: ISVM AND MSS ENHANCEMENTS CO-EXIST

1. BACKGROUND

Prior to this enhancement, offices retrofitting to 5E7 and using MSS (Message Service System) services could experience a change in the way voice mail messages were handled. Calls that were forwarded to a subscriber with voice mail services via CCS7 trunks from another switch that supports ISVM (Interswitch Voice Mail) could be denied voice services after a retrofit to 5E7. An interim option, Option to Maintain the 5E6 Intra-switch OCDN (Originally Called DN) Operation, retained MSS functionality by setting TFOS (Transparency Feature Optioning System) ID 554 to "Y" on the FOSYS form (5713-2 Record). With this option activated, ISVM could not be implemented.

2. FEATURE DESCRIPTION

Available with 5E7 and later, this Transparency Feature enhancement requires TFOS ID 554 to be deactivated, TFOS ID 554 to be "Blank" or "N" on the FOSYS form (5713-2 Record). This feature allows ISVM and MSS services to co-exist on the same switch. When TFOS ID 554 is set to "Y", see Division 2, Section 1BG and Division 3, Section 1J.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer TFOS bits for Special and Transparency Features. TFOS ID 554 on the FOSYS form must be "Blank" or "N" to enable this feature.

SEC. 4B557: UCR (UNIDENTIFIED CALL REJECTION)

1. FEATURE DESCRIPTION

For detailed information on the UCR (Unidentified Call Rejection) feature, see Division 2, Section 4A47.

SEC. 4B562: OSPS EXCHANGE ALTERNATE BILLING SERVICES ALTERNATE ROUTING

1. FEATURE DESCRIPTION

For detailed information on the OSPS Exchange Alternate Billing Services Alternate Routing feature, see Division 2, Section 4A86.

SEC. 4B569: DIRECT CONNECT CAPABILITY FOR ANALOG LINES THROUGH ISDN ACVT FEATURE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-104 ISDN Feature Descriptions.*

SEC. 4B572: OSPS FEATURE GROUP D INCOMING SIGNALING FOR SPECIAL APPLICATIONS

1. FEATURE DESCRIPTION

For detailed information on the OSPS Feature Group D Incoming Signaling for Special Applications feature, see Division 2, Section 4A83.

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SEC. 4B575: OSPS TELEPHONE RELAY SERVICE CALL HANDLING

1. FEATURE DESCRIPTION

For detailed information on the OSPS Telephone Relay Service Call Handling feature, see Division 2, Section 4A25.

SEC. 4B576: POLIN (Privacy Option For Last Incoming Number)/CFDA (Call Forwarding Don't Answer) FEATURE INTERACTION

1. BACKGROUND

The POLIN feature, introduced in 5E6, ensures that for an inter-terminal group call, the calling party's number is not revealed and is treated as private at the terminating end regardless of whether the calling party has marked it as private. Some terminating parties however, do have the ability to override the privacy attribute as set by POLIN, and treat the calling party's number as public. An example of such a terminating case is a voice mail system. When a call is terminated to a voice mail system by either CFV (Call Forwarding Variable) or CFBL (Call Forwarding Busy Line), the calling party's number is delivered to the voice mail system regardless of the POLIN feature privacy setting. However, when a call is terminated to a voice mail system via CFDA (Call Fowarding Don't Answer), the calling party's number is not delivered.

With the POLIN/CFDA Feature Interaction option, the calling party number of an inter-terminal group call is delivered to the terminating party when it has been forwarded to by CFDA. Thus, the interaction of CFDA with POLIN is now consistent with the functionality of CFV and CFBL with POLIN.

2. FEATURE DESCRIPTION

Available in 5E8 and later, the POLIN/CFDA Feature Interaction option provides the ability for the switch to override the privacy indicator, as set by the POLIN feature, when an inter-terminal group call is forwarded via CFDA. This feature option functions only in conjunction with the POLIN feature.

With both the POLIN and the POLIN/CFDA features enabled in an office, when an inter-terminal group call terminates to a line, the privacy indicator is turned on by POLIN so that the calling party's number is not delivered. If there is no answer and CFDA is invoked, the privacy indicator is turned off by POLIN/CFDA before forwarding the call.

3. FEATURE ASSIGNMENT

The POLIN/CFDA Feature Interaction option is secured by the FOSYS (Feature Optioning System). In order to turn the option on, the ACT field for OFS ID (Optioned Feature System ID) 576 on the FOSYS form (5713-2 Record) must be set to "Y". POLIN/CFDA only impacts inter-terminal group calls on the switch when the POLIN feature is also enabled. The POLIN feature is a secured feature that is enabled by setting the ACT field for SFID (Secured Feature ID) 48 to "Y" on the SFSYS form (5713-1 Record) and by setting the ACT field for OFS ID 534 to "Y" on the FOSYS form (5713-2 Record).

- ***NOTE:*** The OFS IDs for these features are to be activated and deactivated on a per office basis. Although it is possible to activate them for each SM separately, it is not recommended. The intent of this feature is to enable/disable the revealing of telephone numbers office-wide.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
SFSYS	5713-1	3	5AR	8.22
FOSYS	5713-2	3	5AS	8.31

SFSYS form (5713-1 Record) - This form is used to enable secured features for the operating company. The ACT field for SFID 48 must be set to "Y" to enable the POLIN feature.

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FOSYS form (5713-2 Record) - This form is used to administer OFS IDs for Special and Transparency Features. The ACT field for OFS IDs 534 and 576 must be set to "Y" to enable the POLIN feature with the POLIN/CFDA Feature Interaction option for the office.

SEC. 4B577: MULTI-DISTINCTIVE RINGING AND MESSAGE SERVICE SYSTEM INTERACTION

1. BACKGROUND

On the 5ESS Switch, when a call terminates to a line with MDR (Multi-Distinctive Ringing), also called MDNL (Multiple DNs per Line), and a Call Forwarding Feature (e.g. /CFV) is assigned to the DN (base DN) that was called, the 5ESS Switch provides the DN that was called (either the Master or Dependent DN) as the base DN for the forward-to (remote) party. On the 1A ESS Switch, when calls terminating to a line with MDR are forwarded, the switch provides the Master DN as the base DN to the forward-to (remote) party.

2. FEATURE DESCRIPTION

The MDR/MSS (Multi-Distinctive Ringing and Message Service System) Interaction transparency feature provides the 5ESS Switch with the option to forward the Master DN as the forwarding party regardless of which DN (Master or Dependent) was actually called. This feature also modifies the operation of the Leave Word Calling Feature to send the Master DN to the AP (Attached Processor) if Leave Word Calling is activated on a Dependent DN.

This feature is a transparency feature with OFID 577 and is being deployed on the 5ESS Switch in a software update for the 5E8 Software Release and in the Beginning Managed Introduction of 5E9(1) Software Release. The feature number for Multi-Distinctive Ringing and Message Service System Interaction is 99-TP-1621.

3. FEATURE ASSIGNMENT

There is no impact to the switch if the Office Option ID 577 is not activated. If the ACT field for OFID 577 is set to "Y" on the FOSYS form (5713-2 Record), calls to a Dependent DN of an MDR Line that are forwarded will provide the Master DN of the MDR Line as the redirecting DN instead of the called DN. Also, Leave Word Calling will send the Master DN to the AP instead of the Dependent DN when Leave Word Calling is activated on a Dependent DN.

In an office where the MDR/MSS transparency feature is active, Line A calls Line B (Line B is an MDR Line), and the call is forwarded to a voice mail system via CFDA (Call Forwarding Don't Answer), CFBL (Call Forwarding Busy Line) or CFV (Call Forwarding Variable). If Line A dialed the Master DN of Line B, the Master DN will be sent to the voice mail as the redirecting DN. If Line A dialed a Dependent DN of Line B, the Master DN will still be sent to the voice mail as the redirecting DN.

In an office where the MDR/MSS Transparency Feature is not active, Line A calls Line B (Line B is an MDR Line), and the call is forwarded to a voice mail system via CFDA, CFBL or CFV. If Line A dialed the Master DN of Line B, the Master DN will be sent to the voice mail as the redirecting DN. If Line A dialed a Dependent DN of Line B, the dialed DN (Dependent DN) will be sent to the voice mail as the redirecting DN.

In an office where the MDR/MSS Transparency Feature is active, Line A calls Line B (Line B is an MDR Line), and Line A activates Leave Word Calling. If Line A dialed the Master DN, a Leave Word Calling message is delivered to the Master DN on the AP. If Line A dialed a Dependent DN, a Leave Word Calling message is delivered to the Master DN on the AP.

In an office where the MDR/MSS Transparency Feature is not active, Line A calls Line B (Line B is an MDR Line), and Line A activates Leave Word Calling. If Line A dialed the Master DN, a Leave Word Calling message is delivered to the Master DN on the AP. If Line A dialed a Dependent DN, a Leave Word Calling

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message is delivered to the Dependent DN on the AP.

4. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used by the SEE (Lucent Technologies System Equipment Engineer) to enable office option features for an entire 5ESS Switch or for selected Switching Modules. To activate the Multi-Distinctive Ringing and Message Service System Interaction feature, the ACT field for OFID 577 must be set to "Y" on the FOSYS form.

SEC. 4B578: REVERTIVE RINGBACK ANNOUNCEMENT

1. BACKGROUND

When a Multi-Party subscriber originates a call to another subscriber on the same local loop, the originator normally hears busy tone and must hang up so that the 5ESS Switch can "ring back" the called party on the same loop. When the called party answers, the line stops ringing and the originator goes back offhook to talk to the terminator on the same loop.

2. FEATURE DESCRIPTION

Available with 5E9(1) and later, the Revertive Ringback Announcement feature allows the Service Provider to provision an announcement using the fixed route "REVRBANN" on the FIXRT form (Record 5303-1) (10.1 Recent Change View). This announcement is played in the place of busy tone to subscribers who originate a call that is terminating to a subscriber on the same loop and requires revertive ringing to be applied to alert the other subscriber to answer the call. The announcement is intended to inform the calling party that revertive ringing is necessary and that they should hang up to allow the called party to be rung.

This option also provides for a distinctive tone (three Call Waiting beeps) to be played to the called party when they go offhook, in place of silence, before the originator of the call goes back offhook

3. FEATURE ASSIGNMENT

The Revertive Ringback Announcement feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 578 on the FOSYS form (5713-2 Record) to "Y".

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFS ID 578 on the FOSYS form must be "Y" to enable this feature.

SEC. 4B579: REVERTIVE OFFHOOK ANNOUNCEMENT

1. BACKGROUND

When a Multi-Party subscriber originates a call to another subscriber on the same local loop, the originator normally hears busy tone and must hang up so that the 5ESS Switch can "ring back" the called party on the same loop. When the called party answers, they hear silence until the originator goes back offhook to talk to the terminator on the same loop.

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2. FEATURE DESCRIPTION

Available with 5E9(1) and later, the Revertive Ringing Announcement feature is an extension to Option 578 (Revertive Ringback Announcement (see Division 2, Section 4B578)) and allows the Service Provider to provision an announcement using the fixed route REVOHANN on the 10.1 Recent Change View. This announcement is played to subscribers who go offhook after revertive ringing has been applied, in place of the distinctive tone provided by Option 578. The announcement is intended to inform the called party that a revertive ringing call is in progress, and that the calling party will go offhook shortly.

This option also provides for a distinctive tone (three Call Waiting beeps) to be played to the called party when they go offhook, in place of silence, before the originator of the call goes back offhook

3. FEATURE ASSIGNMENT

The Revertive Ringing Announcement feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 578 on the FOSYS form (5713-2 Record) to "Y".

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFS ID 578 on the FOSYS form must be "Y" to enable this feature.

SEC. 4B587: PRI ECHO CANCELER OPTIONS

1. BACKGROUND

For Primary Rate Interface (PRI) data calls, the echo canceler (if present) must be disabled. This is done at the terminating office by applying an in-band 2.1KHz tone over the B-channel for 3 seconds. This tone must not reach the far party at either end of the PRI. Option IDs 587 and 588 are created to provide an option to disable echo cancelers for PRI data calls.

2. FEATURE DESCRIPTION

For an outgoing call (PRI Terminating Terminal Process), the path is opened for 4.1 seconds after the connect message is received. For an incoming call (PRI Originating Terminal Process), the path is opened for 3.5 seconds and the tone is applied after the connect message is sent.

The PRI echo canceler controller has three modes of operation. Your configuration will determine which mode to select.

1. Mode 1 - This involves no change from the current operation. This mode provides no 5ESS Switch echo canceler control. No echo canceler disabling tone is applied and no tone blocking (delay of cut-through) is done. If echo cancelers are in the path, they must be controlled by another switch (i.e. the 4ESS Switch) or the echo cancelers must be capable of monitoring the Q.931 data to turn themselves on or off based on the call type (voice or data).

2. Mode 2 - This mode is used when the echo canceler devices can provide their own control based on Q.931 messaging. However, the PRI is connected to a Definity Switch that is still sending the disabling tone for incoming data calls. With this mode, the 5ESS Switch does tone blocking on outgoing PRI data calls only.

3. Mode 3 - This mode is used when the echo canceling control is done by the switches connected by

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the PRI. This mode requires the far switch to be able to send the disabling tone for incoming PRI data calls and block the tone on both incoming and outgoing data calls.

The modes of operation are based on two feature option parameters. On an SM (Switching Module), every PRI on that SM uses the same mode. The feature option parameters used are 587 for echo tone blocking and 588 for echo tone control. The following table maps the various feature option parameter values to the corresponding mode of operation from the three modes listed above:

OFID 587 (echo_block)	OFID 587 (echo_tone)	Mode
N	N	1
Y	N	2
Y	Y	3

3. FEATURE ASSIGNMENT

To use mode 1 (default), on each SM containing PRI trunks that are used for outgoing data calls, perform the following ODA (Office Data Administration)/Recent Change operation:

- Update the FOSYS form (5713-2 Record); RC/V (Recent Change and Verify) view 8.22 (or 8.31 for 5E9(1)).
- For FEATURE ID 587 and FEATURE ID 588, set ACT/ACTIVE field to "N".

To use mode 2, on each SM containing PRI trunks that are used for outgoing data calls, perform the following ODA/Recent Change operation:

- Update the FOSYS form (5713-2 Record); RC/V view 8.22 (or 8.31 for 5E9(1)).
- For FEATURE ID 587, set ACT/ACTIVE to "Y".
- For FEATURE ID 588, set ACT/ACTIVE to "N".

To use mode 3, on each SM containing PRI trunks that are used for data calls (incoming, outgoing, or both), perform the following ODA/Recent Change operation:

- Update the FOSYS form (5713-2 Record); RC/V view 8.22 (or 8.31 for 5E9(1)).
- For FEATURE ID 587 and FEATURE ID 588, set ACT/ACTIVE to "Y".

For each PRI B-channel trunk group that is used for data calls to a switch that may provide echo tone, set DATA CUT THRU to "DELAY". This prevents a short burst of tone from reaching the originating CPE (Customer Premise Equipment) when the terminating office has applied the tone, but the originating office has not received and processed the CONNECT message in order to open its path.

Activation of OFIDs 587 and/or 588 in an SM which services PRIs which do not have the proper echo canceler equipment causes a 3.5 second delay on incoming CSD (Circuit Switched Data) calls over the PRI or a 4.1 second delay on outgoing CSD calls.

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

SEC. 4B588: PRI ECHO CANCELER OPTIONS

For information on this feature, see Division 2, Section 4B587.

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SEC. 4B591: CENTREX TIE LINE UNANSWERED CALL RECORD

1. FEATURE DESCRIPTION

The Centrex Tie Line Unanswered Call Record feature uses OFID (Optioned Feature ID) 591. FX (Foreign Exchange) charging occurs when a PFA (Private Facilities Access) or ARS (Automatic Route Selection) call encounters a charge index with AMA TYPE of FX (AMA Call Code 011 - FX, Automatic Flexible Routing). Normally, calls encountering FX charging get simulated answer supervision for all calls. This causes AMA records to be generated for both answered and unanswered calls. Some customers prefer not to generate AMA for unanswered calls with AMA Call Code 011, thus this option was created.

1.1 Limitations and Restrictions

This option ID does not apply to ISDN Tie Tandem trunks (e.g. PRI) because of the never-provided simulated answer supervision. Regardless of the setting of option ID 591, ARS and PFA calls to ISDN tie tandem trunks start billing when the Q.931 CONNECT (answer supervision) is received. This option ID does not apply to Foreign Exchange trunks because hardware-triggered answer supervision is received on these trunks. Regardless of option ID 591, ARS and PFA calls to FX trunks start their billing cycle when the connection is made to the FX trunk and hardware answer supervision is seen.

2. FEATURE ASSIGNMENT

The Foreign Exchange, Automatic Flexible Routing option is activated by setting the ACT field for OFID (Optioned Feature System ID) 591 on the FOSYS form (5713-2 Record) to "Y".

With OFID 591 active, any ARS or PFA origination encountering AMA Call Code 011 (FX, Automatic Flexible Routing) will not generate an AMA record until "true" answer supervision is received over the tie trunk (line). Thus, unanswered calls do not generate AMA records, and answered calls start the billing when "true" answer supervision is received.

With OFID 591 not active, all ARS and PFA calls encountering AMA Call Code 011 generate an AMA record starting at the point they are connected to the outgoing tie trunk (line).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFID 591 on the FOSYS form (5713-2 Record) must be "Y" to enable this feature.

SEC. 4B592: CALL PACK - FEATURE ASSIGNMENT ENHANCEMENT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4B593: INHIBIT 800 POST DIAL DELAY MF SIGNALLING RESPONSE REDUCTION

1. FEATURE DESCRIPTION

The Inhibit 800 Post Dial Delay MF (Multi-Frequency)Signalling Response Reduction feature uses OFID (Optioned Feature ID) 593. Secured Feature ID 29, 800 Post Dial Delay MF signalling Response Reduction, is a special feature that reduces the PDD (Post-Dial Delay) for SSP 800 calls by approximately

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1.29 seconds when a 5ESS Switch acts as an AT (Access Tandem) switch and is receiving MF impulsing. This feature reduces the call setup time associated with SSP 800 calls by compressing the components that account for the processing and hand-off of data to the IC (Interexchange Carrier) office.

Some Subtending End offices to the AT have experienced SSD (Start Second Dial) wink timeout errors when the access tandem has 800 Post Dial Delay active. Some components of 800 Post Dial Delay feature causes the wink timeout, so OFID 593 was created to bypass some parts of the 800 Post Dial Delay feature. For complete details about he operation of the 800 Post Dial Delay MF signalling Response Reduction feature, please see document number 235-190-115 *Local and Toll System Feature Document*.

For complete details on the operation of the 800 Post Dial Delay MF Signalling Response Reduction feature, refer to document number 235-190-115 *Local and Toll System Feature Document*.

2. FEATURE ASSIGNMENT

The Inhibit 800 Post Dial Delay MF Signalling Response Reduction feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 593 on the FOSYS form (5713-2 Record) to "Y".

With OFID 593 and SFID 29 active:

- The delay before the AT sends the SSD wink to the EO remains 800 ms just as it is without SFID 29 active.
- The delay before the AT sends the ACK wink to the EO is 200 msec.

With OFID 593 not active and SFID 29 active:

- The delay before the AT sends the SSD wink to the EO is reduced from 800 ms down to 200 ms. This meets Bellcore requirements which specifies a wait of a minimum of 200 ms. The total post-dial delay reduction is 600 ms.
- The delay before the AT sends the ACK wink to the EO is 200 msec.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFID 593 on the FOSYS form (5713-2 Record) must be set to "Y" to enable this feature.

SEC. 4B598: CLOCK SYNCHRONIZATION CIRCUIT

1. BACKGROUND

Without this feature, customers with 5ESS Switch ORMs (Optical Remote Modules) with stand alone capability do not have the ability for the ORM to be able to derive its timing from an external source instead of from the umbilicals. This prevents the 5ESS Switch ORMs from providing external timing from a BITS clock. This condition can cause service degradation in stand alone mode.

2. FEATURE DESCRIPTION

Available with 5E8 and later, this feature provides customers who have ORMs with standalone capability the ability for an ORM to derive its timing from an external source instead of from the umbilicals. This feature enables the 5ESS Switch ORMs to provide external timing from a BITS clock via the TN2518 ORM

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CSC (ORM clock synchronization circuit) circuit pack. The TN2518 provides the interface between the customer BITS clock and the DLI (Dual Link Interface) of the MCTU2 (Module Controller/Time Slot Interchanger Unit 2). The TN2518 interface pack fits in EQL (Equipment Location) slot 120 of the MCTU2 and is cabled to the DLI. When the TN2518 is installed, the DLI diagnostics must be modified to disable the DLI diagnostics that detect slips with the Network Clock.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. This feature is a special feature and is enabled by setting the ACT field for OFS ID 598 to "Y" on the FOSYS form (5713-2 Record).

SEC. 4B605: OSPS FEATURE GROUP D INCOMING SIGNALING FOR SPECIAL APPLICATION - RELEASE 2

1. FEATURE DESCRIPTION

For detailed information on the OSPS Feature Group D Incoming Signaling for Special Application - Release 2 feature, see Division 2, Section 4A373.

SEC. 4B608: COT DUPLICATE ACTIVATION REQUEST TREATMENT OPTIONED FEATURE

1. FEATURE DESCRIPTION

Available as a Software Update for 5E8 and 5E9(1)and as BMI (Beginning Managed Introduction) for 5E9(2), COT (Customer Originated Trace) Duplicate Activation Request Treatment Optioned Feature provides the ability to have subscribers receive the COT Not Available Announcement when more than one COT Activation is attempted for a single incoming call. The present operation of the feature provides the COT Success Announcement for all subsequent activations of COT for a single incoming call.

Thus, this Option, when active, causes the COT originating subscriber to receive COT Not Available treatment when requesting a duplicate trace. The default operation, when this option is inactive, is to provide the subscriber with a success indication even though no additional trace is performed.

1.1 Scenario:

1. A 5ESS Switch has the COT feature provisioned as either generally available or available by subscription.
2. A subscriber in the office receives an incoming call, answers the call and hangs up.
3. The subscriber now goes offhook and dials the COTUSE dialcode as provisioned in the Office Dialing Plan or in an Individualized Dialing Plan that is assigned to the line.
4. The subscriber hears the COT Success announcement and hangs up.
5. The subscriber goes offhook again and dials the COTUSE dialcode a SECOND time.
6. When the COT Duplicate Activation Request Treatment Optioned Feature (Option ID 608) is DISABLED, the subscriber hears the COT Success announcement. When the feature is

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ENABLED, the subscriber will hear the COT Not Available Announcement and the COT Denied measurement counter is incremented.

2. FEATURE ASSIGNMENT

The COT Duplicate Activation Request Treatment Optioned Feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 608 on the FOSYS form (5713-2 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFS ID 608 on the FOSYS form must be "Y" to enable this feature.

SEC. 4B613: OSPS 800 ACCESS USING FEATURE GROUP D SIGNALING

1. FEATURE DESCRIPTION

For detailed information on the OSPS 800 Access Using Feature Group D Signaling feature, see Division 2, Section 4A377.

SEC. 4B620: OSPS INTERNATIONAL BILLED NUMBER SCREENING RELEASE 2

1. FEATURE DESCRIPTION

For detailed information on the OSPS International Billed Number Screening Release 2 feature, see Division 2, Section 4A386.

SEC. 4B623: ABILITY TO DROP FULLY RESTRICTED TERMINATING LEG OF A MULTIWAY CALL

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 BRCS Feature Description Document.*

SEC. 4B627: OSPS TOLL FREE NPA EXPANSION

1. FEATURE DESCRIPTION

For detailed information on the OSPS Toll Free NPA Expansionfeature, see Division 2, Section 4A405.

SEC. 4B633: OSPS IN LANGUAGE SERVICES CALL TRANSFER USING ROUTE NUMBER

1. FEATURE DESCRIPTION

For detailed information on the OSPS In Language Services Call Transfer Using Route Number feature, see Division 2, Section 4A398.

SEC. 4B646: ENHANCED 911 TERMINAL GROUP STATION RESTRICTION INTERACTION OPTION

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1. FEATURE DESCRIPTION

Available as a Software Release for 5E10 and with Beginning Managed Introduction for 5E11 and later, the Enhanced 911/TGSR (Terminal Group Station Restriction) Interaction Option feature provides the ability to restrict or allow E911 calls from lines with originating TGSR restrictions. This feature is controlled by OFID (Optioned Feature ID) 646 on the FOSYS form (5713-2 Record).

The E911/TGSR Interaction Option affects the following call scenario:

In a 5ESS Switch a line has a Terminal Group feature with originating restrictions - either semi-restricted (i.e. /TGSFA) or fully-restricted (i.e. /TGFFA).

The office translations use either Enhanced 911 or the "EMER" or 911 CALL TYPE to route 911 calls to a destination that is not a line on the switch with a 911 class of service. For example, the call may route to a PSAP (Public Safety Answering Point) via a CAMA (Centralized Automatic Message Accounting) or TSPS (Traffic Service Position System) trunk group.

The subscriber goes offhook and dials 911 (using the office dialing plan).

When ACT field for OFID 646 is set to "N" on the FOSYS form, the subscriber hears the error treatment specified by the TGSR feature because the TGSR restrictions prevent this call from completing. This is the current operation of the 5ESS Switch for this scenario.

When the ACT field for OFID 646 is set to "Y" on the FOSYS form, the call will complete to the 911 destination and TGSR checks will be overridden for this call.

This Option will allow TGSR checks to be overridden for the following types of 911 translations:

- E911 is provisioned in the 5ESS Switch (i.e. Recent Change views 9.40 and 9.41 are populated for all Digit Analysis Selectors in the office).
- The digits 911 are given a CALL TYPE of EMER or 911 on the LDIT form (5300-3 Record).

  This Option will NOT allow TGSR checks to be overridden for Automatic Recall/Automatic Callback of a 911 call. This means that if a subscriber dials 911, the TGSR checks will be overridden and the call will complete. If the subscriber then hangs up and re-originates using an Automatic Recall feature, intending to reconnect to 911, the TGSR checks for this call will not be overridden and the call will be given the error treatment specified by the subscriber's TGSR feature.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to activate/deactivate Optioned Features. Setting the ACT field for OFID 646 contols the functionality of this feature.

SEC. 4B648: ASP INTRA LATA PIC INTERWORKING

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4B653: ICLID ENHANCEMENT FOR MLHG

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1. FEATURE DESCRIPTION

For detailed information on the ICLID Enhancement for MLHG feature, see Division 2, Section 4A192.

SEC. 4B654: Block No ANI on Non-Equal Access Calls Option

1. FEATURE DESCRIPTION

Available with as a Software Update for 5E10 and BMI (Beginning Managed Introduction) for 5E11, the Block No ANI on Non-Equal Access Calls Option feature allows the Service Provider to restrict incoming non-Equal Access calls from completing if there are no Automatic Numbering Information digits provided on the call. This feature is controlled by OFS ID 654 on the FOSYS form (5713-2 Record).

The BLK NO ANI field on the TKGRP form (5202 Record) allows the Service Provider to restrict the completion of Equal Access signalling calls that do not provide ANI digits. Currently this option only affects incoming Equal Access signalling calls that have II (information digits) digits that are marked as "EABLOCK" on the EASID form (5317 Record) (RC View 9.17).

The Block no-ANI on Non-Equal Access Calls Option affects the following call scenario:

- In a 5ESS Switch an incoming trunk that has a trunk class of "LATA CONN" may carry traffic that uses Equal Access signalling or Non-Equal Access signalling.
- The incoming trunk group has the BLK NO ANI field set to "Y" on the TKGRP form.
- An incoming call is received and the II digits are not marked as "EABLOCK" on the EASID form.
- There are either NO ANI digits provided for this call, or an invalid number of ANI digits are provided, so the call is marked as non-Equal Access signalling, and a NOANI MDII is printed to the ROP.
- When the ACT filed for OFS ID 654 is "N" on the FOSYS form, the call completes to its destination.
- When the ACT field for OFS ID 654 is "Y" on the FOSYS form, the call is routed to the fixed route "ESMRT" (FIXED ROUTE TYPE field on the FIXRT form (5301-1 Record)) and announcement is provided.

2. FEATURE ASSIGNMENT

The Block No ANI on Non-Equal Access Calls Option feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 654 on the FOSYS form (5713-2 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFS ID 654 on the FOSYS form must be "Y" to enable this feature.

SEC. 4B659: OSPS RECORD AND PLAYBACK

1. FEATURE DESCRIPTION

For detailed information on the OSPS Record and Playback feature, see Division 2, Section 4A415.

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SEC. 4B660: OPTION TO REMOVE E911 PSAP OUTPULSING DELAY

1. FEATURE ASSIGNMENT

Available as a Software Update for 5E9(1), 5E9(2), 5E10, and as BMI (Beginning Managed Introduction) for 5E11, the Option to Remove E911 PSAP Outpulsing Delay feature gives Service Providers the ability to remove a delay that occurs before outpulsing digits to an E911 PSAP to allow E911 calls to complete more quickly.

The Option to Remove E911 PSAP Outpulsing Delay feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 654 on the FOSYS form (5713-2 Record) to "Y".

When a 5ESS Switch routes calls to an E911 PSAP, there is an additional 500 millisecond delay in the 5ESS Switch between the time the START signal has been received from the PSAP and the time that the 5ESS Switch will begin to outpulse digits to the PSAP. This delay is required by some E911 PSAP equipment to allow sufficient time for the PSAP to allocate tone decoder circuits to collect the digits. The 500ms delay is in addition to the normal 200-300ms required to process the START signal from the PSAP and prepare to outpulse digits.

Some PSAP equipment does not require this additional 500ms delay, and this time is unnecessarily added to the call setup time. The additional 500ms delay can be removed by activating the Option to Remove E911 PSAP Outpulsing Delay feature using OFD ID 660.

The Option to Remove E911 PSAP Outpulsing Delay affects the following call scenario:

- An E911 call is routed through a 5ESS Switch and terminates to an E911 PSAP trunk group. The trunk group member is seized and a START signal is received from the PSAP.
- When the ACT field for OFS ID 660 is set to "N" on the FOSYS form, the 5ESS Switch will wait an additional 500 milliseconds before beginning to outpulse digits to the E911 PSAP.
  - ***NOTE:*** This is the default operation of the feature.
- When the ACT field for OFS ID 660 is set to "Y" on the FOSYS form, the 5ESS Switch begins to outpulse digits to the E911 PSAP immediately.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFS ID 660 on the FOSYS form must be "Y" to enable this feature.

SEC. 4B663: CALL WAITING WITH 3-WAY CALLING INTERACTION

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4B664: BILLING OPTION FOR SPONTANEOUS USAGE SENSITIVE 3-WAY CALLING

1. FEATURE DESCRIPTION

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Billing Option for Spontaneous Usage Sensitive Three-Way Calling is a transparency feature having feature number 99-5E-3910. The feature is being deployed on the 5ESS-2000 Switch in a software update for the 5E10(1) Switch Software release.

The feature can be enabled/disabled with Office Optioned Feature System ID 664.

The Billing Option feature provides a new version of the existing call type 48 charge record. The new version provides the total elapsed time of a Spontaneous Usage Sensitive Three-Way Call, but only for those calls where all parties have reached a valid answer state. If Billing Option feature is not enabled, it has no effect on the existing operation of the call type 48 charge record.

The connect time field in this charge record is dependent on the sequence of the merge and the answer of the second leg. If the second leg of the call is answered, and then the controller flashes to form the Three-Way conference, the connect time will be the time the merge occurred.

If the controller flashes to form the 3-way conference, and then the second leg of the call is answered, the connect time will be the time the added leg answered.

The elapsed time field is the connect time minus the unmerge time. The unmerge time is when the Three-Way connector is dropped. The connector is dropped when:

- the controller goes on hook, or
- the controller flashes to drop the added party, or
- either one of the other two parties disconnects.

This feature can be deployed in the disabled state, which requires no action. The default is the disabled state.

For more information, see Div. 2, Sec. 4A156.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. This feature is enabled by setting the ACT field for FID 664 to "Y".

SEC. 4B665: LOCAL NUMBER PORTABILITY AMA BILLING

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-127 Number Portability User's Guide.*

SEC. 4B666: DENY AUTO CALLBACK ON INTRALATA PIC CALLS □ PER CIC CONTROL

1. FEATURE DESCRIPTION

For detailed information on the Deny Auto Callback on IntraLata PIC Calls - Per CIC Control feature, see Division 2, Section 4A201.

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SEC. 4B668: SELECTIVE NPA DELETION FOR ASP MULTIPLE RATE CENTER SUPPORT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4B669: LINE BLOCKING ENHANCEMENT FOR ISVM

1. FEATURE DESCRIPTION

For more information on the Line Blocking Enhancement for ISVM (Interswitch Voice Messaging) feature, see Division 2, Section 4A240.

SEC. 4B678: ACCESS CODE OPTION FOR SPONTANEOUS USAGE SSENSITIVE THREE-WAY CALLING

1. FEATURE DESCRIPTION

Available as a Software Upadate for 5E11 and 5E12 and for 5E15 BMI (Beginning Managed Introduction), the Access Code Option for SUSTWC (Spontaneous Usage Sensitive Three-Way Calling) is a special feature (OFS ID 678).

The Access Code Option for Spontaneous Usage Three-Way Calling feature allows the switch to provide recall dial tone after the initial flash and provide recall dial tone again after the access code is dialed, if the Access Code Option for SUSTWC is activated on the FOSYS form (RC/V 8.31), and an access code is defined on the PDIT form (RC/V View 9.2).

After dialing the access code, the customer can then dial as one normally would. However, if the switch does not receive an access code after the initial flash but receives any other digits, then the switch provides re-order treatment. Upon a subsequent flash, the switch reconnects the subscriber to the soft-held party; or upon disconnect, if ring-back is applicable, ring-back the soft-held party to the subscriber. The Access Code Option (OFS ID 678) also has interactions with the existing Billing Option for SUSTWC, feature number 99-5E-3910, OFS ID 664.

For more information on this feature, refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

2. FEATURE ASSIGNMENT

To activate this feature, the ACT field for OFS ID 678 must be set to "Y" on the FOSYS form (5713-2 Record)

On the PDIT form (5300-2) the following assignments are:

- set CALL TYPE to "FEATURE"
- set TYP CI CALL to "NONCI"
- set ACTION to "US3WC"
- set FEATURE to "/MWUS3WC".

3. TRANSLATION REQUIREMENTS

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New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22
PDIT	5300-2	3	3B	9.2

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 678 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

PDIT form (5300-2 Record) - This form is used to define the Prefix/Feature Digit Interpreter in a 5ESS Switch and provides information defining feature and operator access and prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table.

SEC. 4B680: ADSI ACKNOWLEDGMENT TIMER OPTIONAL VALUE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4B681: TRANSFER TWO OUTGOING ISUP/PRI TRUNKS TOGETHER

1. FEATURE DESCRIPTION

The Transfer Two Outgoing ISUP/PRI Trunks Together feature is available with the 5E10 Software Release. It is controlled by OFS ID (Optioned Feature System ID) 681.

This feature allows ISDN (Integrated Services Digital Network) lines to make two outgoing calls over trunks with either ISUP (Integrated Services User Part) signaling or service class EDSL (Electronic Documentation Service Line) PRI (Primary Rate Interface), and transfer those two calls together if at least one of the two calls is answered. This Option ID does NOT allow analog lines to transfer two outgoing ISUP/PRI trunks together.

2. FEATURE ASSIGNMENT

If the Option to Allow Custom ISDN to Transfer Two Outgoing ISUP/PRI Trunks Together is INACTIVE, when an ISDN line makes two outgoing calls over ISUP/PRI trunks, the line will NOT be able to transfer these two calls together.

If the Option to Allow Custom ISDN to Transfer Two Outgoing ISUP/PRI Trunks Together is ACTIVE, when an ISDN line makes two outgoing calls over ISUP/PRI trunks, the line WILL be able to transfer these two calls calls together if at least one of the calls is answered.

This feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 681 on the FOSYS form (5713-2 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The OFID 681 must be set to "Y" to enable this feature.

SEC. 4B692: RECENT CHANGE (HASHSUM FAILURE) BLOCKING FEATURE

1. FEATURE DESCRIPTION

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The Recent Change (Hashsum Failure) Blocking feature is available with the 5E10 Software Release. It is controlled by OFS ID (Optioned Feature System ID) 692.

Database splits may occur when the ODD (Office Dependant Data) is in hashsum failure and when Recent Change use the portion of ODD memory where the hashsum checks are failing. This feature provides the capability to inhibit Recent Change when a hashsum check failure is detected in ODD memory.

2. FEATURE ASSIGNMENT

If the OFID 692 is active, when a hashsum check failure occurs on ODD memory, Recent Change is automatically inhibited.

If the OFID 692 is not active (default), Recent Change is not inhibited when a hashsum check failure is detected in ODD memory.

The Recent Change (Hashsum Failure) Blocking Feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 692 on the FOSYS form (5713-2 Record) to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The OFID 692 must be set to "Y" to enable this feature.

SEC. 4B693: ASI-PROXY OPTION FOR OLHB POPULATION FEATURE

1. FEATURE DESCRIPTION

The ASI (Application Service Interface)-Proxy Option for OLHB (Outgoing Line History Block) Population feature, OFS (Optioning Feature System) option 693, is available for use by the ASP (Advanced Services Platform) Interface Proxy feature that is documented in Division 2, Section 4A93.

The rules associated with this capability are as follows:

- If this OFS option is set to "Y" (i.e., prevent placement in OLHB, the explicit mode access code is not placed in the OLHB when it is dialed.
- If this OFS option is set to "N" (i.e., do not prevent placement in OLHB), the explicit mode access code is placed in the OLHB when it is dialed.
- If the IP (Intelligent Peripheral) extends a call while in the explicit mode, the digits dialed by the IP are populated into the OLHB without regard to the value of the OFS option.

The setting of this OFS option is on an office wide basis. The default setting is "N".

During a RASI (Remote Access to Advance Services Interface) connection, if a valid ASI (Advanced Services Interface) explicit access code is dialed, the impact on the OLHB is determined by the OFS setting.

SEC. 4B694: MINIMIZE SS7 LINK DOWNTIME DURING RETROFIT

1. FEATURE DESCRIPTION

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The Minimize SS7 Link Downtime During Retrofit feature is available as 5E10 and 5E11 Software Updates and in the Beginning Managed Introduction of the 5E12 Software Release. This is an Office Optioned Feature with OFS ID (Office Optioned Feature System ID) number 694. The feature number is 99-5E-4193.

This feature provides the capability for controlling how SS7 signaling links behave during a retrofit, update, or LTG (Large Terminal Growth).

2. FEATURE ASSIGNMENT

The Minimize SS7 Link Downtime During Retrofit feature is secured by the FOSYS (Feature Optioning System). In order to turn the option on, the ACT field for OFS ID (Optioned Feature System ID) 694 on the FOSYS form (5713-2 Record) must be set to "Y". If OFS ID 694 is set to "Y" for any or all SMs (Switching Modules), the SS7 signaling links are only out of service during the switch forward of the AM (Administrative Module) as part of the Retrofit/Update/LTG procedure when using AM Off-Line Boot. If, however, OFS ID 694 is set to "N", no change is made in the behavior of the SS7 signaling links. The SS7 links will restore to an In-Service state upon the successful initialization of the first SM and its ability to perform call processing through the CM (Communication Module) and AM.

- ***NOTE:*** The ACT field for OFS ID 694 must be set to the desired value prior to the office's final database dump. This change impacts only CNI (Common Network Interface)-based SS7 signaling.

3. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS IDs for Special and Transparency Features. To activate this feature for any or all SMs, the ACT field for OFS ID 694 must be set to "Y".

SEC. 4B695: AUTOMATIC ISDN LINE ASSIGNMENT

1. FEATURE DESCRIPTION

The AILA (Automatic ISDN Line Assignment) is a Transparency Feature (OFID 695) that is available with 5E11 and later Software Releases. The feature number for this feature is 99-5E-3777. For more information on this feature, see Division 2, Section 1BO.

SEC. 4B696: 911 BILLING FOR TOLL TRANSFERRED CALLS

1. FEATURE DESCRIPTION

The 911 Billing for Toll Transferred Calls feature is available as 5E10 and 5E11 Software Updates and in the Beginning Managed Introduction of the 5E12 Software Release. This feature is a Call Processing Special Feature with a OFID (Optioned Feature ID) of 696. The feature number for this feature is 99-5E-4414.

Prior to this feature, when a subscriber calls an E911 PSAP (Public Safety Answering Point), and the PSAP transfers the call to a carrier, the carrier receives the billing number of the subscriber. The number is delivered as ANI (Automatic Number Identification) on a MF (Message Forwarder) trunk or in the charge number parameter for CCS7 (Common Channel Signaling, Version 7) trunks.

With this feature activated, the service provider has the office-wide option to send the billing number of the PSAP to the carrier. Only PSAP transfers which involve a carrier will be affected by this feature. Note that the calling party number parameter for CCS7 trunks will not be affected by this feature.

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. **WARNING:** If the Recent Change View 5.1 attribute billing DN is blank for a CAMA PSAP, the switch will send a null billing number when this feature is activated.

To activate this feature, OFID 696 must be enabled on the Optioned Features form (5713-2 Record).

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to activate/deactivate Optioned Features. The ACT field for OFID 696 must be set to "Y".

SEC. 4B697: ALTERNATE LOCAL SERVICE PROVIDER ROUTING

1. FEATURE DESCRIPTION

For detailed information on the Alternate Local Service Provider Routing feature, see Division 2, Section 4A269.

SEC. 4B698: PINNACLE ACD (AUTOMATIC CALL DISTRIBUTOR) TPCC (THIRD PARTY CALL CONTROL) FEATURE ENHANCEMENT

1. BACKGROUND

Currently, with the PINNACLE ACD TPCC feature, DNs received from an external host by an Originate Call and Redirect Alerting Call request are translated using the ODP (Office Dialing Plan) that is assigned to the PINNACLE ACD line.

2. FEATURE DESCRIPTION

Available with 5E11 and later Software Releases, this feature enhancement allows for DNs, received from an external host by an Originate Call and Redirect Alerting Call request, to be translated through the IDP (Individualized Dialing Plan) that is provisioned on the PINNACLE ACD line. This feature is implemented by call processing only. The only data impact is the addition of OFID 698 to enable this feature. When OFID 698 is activated (ACT = "Y"), the TPCC feature translates DNs based on the IDP. When this OFID is deactivated, DN translation takes place using the ODP.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer the OFIDs (Optioned Feature Identifiers) for the many available feature options. The ACT field for OFID 698 must be set to "Y" in order to enable this feature for the office.

SEC. 4B699: LOCAL NUMBER PORTABILITY NPA-NXX GROWTH

1. FEATURE DESCRIPTION

Although the Number Portability NPA-NXX Growth Enhancement feature uses OFID (Optioned Feature ID) 699, SFID (Secured Feature ID) 198 must be active in order for OFID 699 to have any impact. The Number

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Portability - NPA-NXX Growth feature (i.e., SFID 198) allows up to 8,190 office codes (also referred to as NXXs), populated with DNs (Directory Numbers), to be supported on each 5ESS Switch and allows DNs with the same office code, but in different NPAs (Numbering Plan Areas) to be served by the same switch.

Prior to this feature, the 5ESS Switch only supported DNs from 250 office codes, and each of these office codes had to be unique within the switch-DNs with the same office code, but in different NPAs. Unique DNs with the same office code and different NPAs were not supported by the 5ESS Switch. With the increasing frequency of NPA changes and the implementation of number portability, switches must be able to serve DNs from multiple NPAs and to serve office codes that appear in more than one NPA. Therefore, seven digits are no longer sufficient to uniquely identify a DN within a switch. The original requirement stated that SCP responses with a 7-digit Called Party Number be rejected and the call provided error treatment (reorder) when SFID 198 was active. Currently, this requirement is optional.

2. FEATURE ASSIGNMENT

The Number Portability NPA-NXX Growth Enhancement feature is activated by first setting the ACT field for SFID (Secured Feature ID) 198 to "Y" on the SFSYS form (5713-1 Record), and then setting the ACT field for OFID (Optioned Feature ID) 699 to "Y" on the FOSYS form (5713-2 Record) to "Y". (See Division 2, Section 4A198 for more detailed information on SFID 198.)

- ***NOTE:*** SFID 198 must be active for OFID 699 to have any impact.

When OFID 699:

- is not active (default) and SFID 198 is active, an SCP response with a Called Party Number parameter with a length of 7 digits completes.
- is active and SFID 198 is active, an SCP response with a Called Party Number parameter with a length of 7 digits is provided reorder.

When SFID 198 is not active, an SCP response with a Called Party Number parameter with a length of 7 digits completes regardless of the value of OFID 699.

- ***NOTE:*** This feature is an OFFICE feature, and cannot be enabled or disabled on individual SMs.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. SFID 198 must be activated before OFID 699 can be enabled (see Division 2, Section 4A198 for more detailed information on activating SFID 198). OFID 699 on the FOSYS form (5713-2 Record) must be set to "Y" to enable this feature.

SEC. 4B700: INTER-EXCHANGE CARRIER OPTION FOR SCREENING ENHANCEMENTS TO OUTSIDE CALLING AREA ALERTING

1. FEATURE DESCRIPTION

The IC (Inter-Exchange Carrier) Option for Screening Enhancements to OCAA (Outside Calling Area Alerting) feature is being deployed as a Software Update for the 5E10 and 5E11 Software Releases and for the Beginning Managed Introduction of the 5E12 Software Release. The OFS ID (Office Optioned Feature System ID) number for this feature is 700.

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The IC Option for Screening Enhancements to OCAA feature (99-CP-3441) is a call waiting feature that provides normal ringing and tones for local calls and distinctive ringing and tones for long distance calls.

This feature is an enhancement to the Call Waiting with Distinctive Tones and Distinctive Ringing for Long Distance Calls feature (99-5E-1105) (SFID 91) and provides the following changes:

- Provides screening of incoming calls over SS7 inter-exchange carrier class of service designated trunks. The 99-5E-1105 feature treated all IC calls as long distance calls.
- Allows creating a screening table for each DAS (Digit Analysis Selector) (up to 99 screening tables can be created). The switch first determines whether an incoming call is local or long distance. To do this, the service provider must create a separate NPA (Numbering Plan Area) - NXX (Office Code) local call screening table for each DAS. The NPA-NXX of each incoming call is compared against the screening table. If the NPA-NXX is included in the screening table, the call is treated as local; otherwise, the call is treated as long distance. The switch then alerts the subscriber with either ringing (for idle lines) or call waiting tones (for busy lines). The 99-5E-1105 feature allowed only one screening table per switch to be created.

  If the subscriber's line is idle, the subscriber is alerted with normal ringing if the incoming call is local, or distinctive ringing (typically three rings) if the call is long distance. The feature can also be provisioned (on a per-office basis) such that the subscriber receives normal ringing for all calls.

  If the subscriber's line is busy on another call, the subscriber is alerted with normal call waiting tone if the call is local, or distinctive call waiting tone (typically three beeps) if the call is long distance.
- Screens intra-switch calls. The 99-5E-1105 feature treated all intra-switch calls as local calls.
- Removes charge party number from being included in the decision on whether a call is long distance or local. The 99-5E-1105 feature used this parameter as part of the screening process if CPN (Calling Party Number) information was not available.
- Provides an option to treat SS7 calls where the CPN information is not available or cannot be determined as either local or long distance. The 99-5E-1105 feature treated all of these calls as long distance calls.

The feature can also be provisioned (on a per-line basis) for the following options:

- the subscriber receives distinctive tone for long distance calls and no tone for local calls,
- the subscriber receives distinctive ringing for long distance calls, but no distinctive call waiting tones,
- the subscriber receives both distinctive tone and distinctive ringing for long distance calls.

This feature was designed to treat all non SS7 (Signaling System 7) incoming inter-exchange carrier trunk calls as local. The new IC option will allow these calls to be treated as either local or long distance.

If the IC option is enabled, incoming IC calls which are not SS7, will be considered as outside the calling area (i.e., long distance).

If the IC option is disabled, incoming IC calls which are not SS7, will be considered as inside the calling area (i.e., local).

This option can be deployed in the disabled state for 5ESS Switch operation, which requires no action. The default is the disabled state.

2. FEATURE ASSIGNMENT

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To enable this feature, the ACT field for OFS ID 700 must be set to "Y" on FOSYS form (5713-2 Record).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. The ACT field for OFS ID 700 on the FOSYS (5713-2 Record) form must be set to "Y" to enable this feature in all operational SMs.

SEC. 4B704: NP - SERVICE PROVIDER PORTABILITY AMA ENHANCEMENT

1. FEATURE DESCRIPTION

For detailed information on the NP - Service Provider Portability AMA Enhancement feature, see Division 2, Section 4A276.

SEC. 4B705: NP - SERVICE PROVIDER PORTABILITY AMA ENHANCEMENT

1. FEATURE DESCRIPTION

For detailed information on the NP - Service Provider Portability AMA Enhancement feature, see Division 2, Section 4A276.

SEC. 4B708: SECURITY ENHANCEMENTS FOR CALEA

1. FEATURE DESCRIPTION

For information concerning the Security Enhancements for CALEA feature (99-5E-8199), see Division 2, Section 4A628.

SEC. 4B709: DENY TRANSFER OF INTERNATIONAL CALLS

1. FEATURE DESCRIPTION

For information on this feature refer to TG-5 (Translation Guide - 5) Division 2, Section 4A291, Deny Transfer of Digit Screened Calls.

SEC. 4B710: BELLCORE CAUSE CODES AND LOCATION VALUES

1. FEATURE DESCRIPTION

The feature number for the Bellcore Cause Codes and Location Values feature is 99-5E-3887. This feature is being deployed in the 5E13 Software Release.

This feature provides Bellcore-defined information values in standard Q.931 messages on the PRI (Primary Rate Interface) and BRI (Basic Rate Interface) under selected circumstances. The information values, called Cause Codes and Location values, indicates the reason for selected actions by the switch, and the location at which that action or reason was initiated.

The 5ESS-2000 Switch or the CPE (Customer Premises Equipment) can send or receive information about the evolution of a call with the Cause and Progress Indicator IE (Information Elements). The Cause IE describes the reason for generating certain messages, provides diagnostic information in the event of procedural errors, and indicates the location of occurrence with the LI (Location Indicator). The LI is used with both the Cause and Progress Indicator IEs. For the sake of uniformity, specific cause values and

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location indicators have been standardized so that the same cause value is used for a given condition and always sent by the Switch or the CPE at the same stage of call processing. Once standardized, these cause codes and LI values can be very useful to users. For example, if the CPE receives National cause #10, "Prefix 1 not dialed" during call origination, then the CPE can prompt the user to retry the call with "1" plus the original number. The cause value and the progress indicator can convey different meanings depending upon the location. For example, if the CPE receives cause value #17, "User busy" with the location coded "user", the CPE can determine that the call was offered at the terminating interface. However, if the location was instead coded with "public network serving the remote user", then the CPE can determine that the call was not offered to the remote interface and the cause was generated by the public network. Therefore, it is necessary that the location should be coded appropriately to indicate the location that generated the condition indicated in the cause value or progress indicator.

2. FEATURE ASSIGNMENT

For 5E13 and later, to enable this feature, the ACT field for OFID 710 on the FOSYS form must be set to "Y".

See Figure 1 for provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
SCRNRNG	5212	3	2N	7.5
TKGRP	5202	3	2A	5.1

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency features. This feature is activated by setting the ACT field for OFID 710 to "Y".

SCRNRNG form (5212 Record) - This form contains up to 20 ranges of DNs (Directory Numbers) to be used for screening CPNs (Calling Party Numbers) delivered over a PRI (Primary Rate Interface) from a PBX (Private Branch Exchange) or CPE (Customer Premises Equipment). For 5E13 and later, the PBX ID field is renamed PBX/CPE ID.

TKGRP form (5202 Record) - This form defines each Trunk Group in a 5ESS Switch. The trunk information entered is information common to the entire group. Trunk information for an individual member is entered on a TRUNK form. For 5E13 and later, the PBX ID field is renamed PBX/CPE ID.

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Figure 1 FORM FLOW FOR BELLCORE CAUSE CODES AND LOCATION VALUES

SEC. 4B712: DENY TRANSFER OF DIGIT SCREENED CALLS

1. FEATURE DESCRIPTION

For information on this feature see Division 2, Section 4A291.

SEC. 4B713: MCG (MANUAL CALL GAPPING) INTERACTIONS WITH LNP

1. BACKGROUND

Priviously, the 5ESS Switch was not compliant with Telecordia (Bellcore) GR-2936-CORE "LNP (LOCAL NUMBER PORTABILITY) CAPABILITY SPECIFICATION: SERVICE PROVIDER PORTABILITY" in regards to the handling of LNP and MCG (Manual Call Gapping). The 5ESS Switch applied the NM (Network Management) Code Controls after the LNP query was performed. This resulted in a large number of LNP queries performed for calls that would not be completed and a possibility of overloading the LNP SCP (Service Control Point) with a large number of queries.

With the implementation of option ID 713 in 5E11 and later, the 5ESS Switch is now in compliance with GR-2936 requirements [383], [384], and [385].

2. FEATURE DESCRIPTION

When option ID 713 is active, for calls encountering a LNP query (field LNP TRIG NBR populated for the LDIT form/RCV), NM code controls are applied before the query is performed. If code controls are applied

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against the dialed digits and the call is gapped, no LNP query is performed and the appropriate NM announcement (either Emergency announcement 1, Emergency announcement 2, or No circuit announcement) is supplied to the caller. If code controls are not applied against the dialed digits or are applied and not gapped, the LNP query is performed. If the LNP query response is a "CONTINUE" or "ANALYZE ROUTE" with the same CALLED PARTY NUMBER information as in the LNP query, no additional NM checks are performed (since they were previously applied). If the LNP query response is an "ANALYZE ROUTE" with a different CALLED PARTY NUMBER information as in the LNP query (a LRN (Local Routing Number) was returned), NM controls is applied against the returned digits.

When the option ID 713 is not active, LNP queried calls are handled exactly like ASP (Advanced Services Platform) queried calls. NM code controls are applied on the digits used after the query response is processed.

3. FEATURE ASSIGNMENT

The MCG Interactions with LNP feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 713 on the FOSYS form (5713-2 Record) to "Y".

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

SEC. 4B716: E911 CALL ERROR DETECTION AND ALARM

1. FEATURE DESCRIPTION

For detailed information on the E911 Call Error Detection and Alarm feature, see Division 2, Section 4A293.

SEC. 4B717: SIMPLIFIED CUSTOM ISDN ATTENDANT CONSOLE

1. FEATURE DESCRIPTION

For detailed information on the Simplified Custom ISDN Attendant Console feature, see Division 2, Section 4A292.

SEC. 4B718: ASP CDI/RTI IGNORE ON LNP

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-127 Number Portability User's Guide.*

SEC. 4B719: CNA TRUNK GROUP BILLING NUMBER

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-127 Number Portability User's Guide.*

SEC. 4B723: BALANCE

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1. FEATURE DESCRIPTION

The Balance feature (formerly known as "Identification of High Hundred Call Seconds Lines") is available with the 5E13 Software Release and as a 5E11 and 5E12 Software Update. This feature is available for the SM, SM-2000, CDX (Compact Digital Exchange), and the VCDX (Very Compact Digital Exchange) switches.

This feature provides the capability to identify blocked call information on analog line units. With the onset of high usage lines (e.g., internet services), call hold times can increase dramatically. With such long hold times, the switching system service provider may experience traffic blocking and distribution problems. Having the capability to identify the lines that are being blocked, and the lines in use which could potentially be the source of the blockage, provides information which can be used to "balance" the traffic load.

This is an optional feature with Option Feature ID Number 723. This feature is activated on the FOSYS (Special and Transparency Feature Optioning System) form by placing a "Y" in the Optioned Feature ID List for feature number 723.

Upon activating this feature, the customer must designate where the collected data is to be directed for review. The data may be directed to an existing TTY (Teletype Data Terminal) port (e.g. ROP0 printer designation), a dedicated TTY port (i.e., TTY23) or directed to a 3B log file. The dedicated TTY for this feature is TTY23 and its corresponding name is "Balance".

TTYs are defined via the DEVICE TYPE field on the ECDOPT form (5706 Record) during ODA (Office Data Administration) system initialization. For Recent Change updates, TTY updates are handled procedurally via the UNIX RTR system.

The feature number for this feature is 99-5E-4421.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	not applicable
FOSYS	5713-2	3	5AS	8.31

ECDOPT Form (5706 Record) - This form is used to define all optional features in the AM (Administration Module).

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The FID 723 must be set to "Y" to enable this feature.

SEC. 4B724: NP SERVICE PROVIDER PORTABILITY AMA ENHANCEMENTS

1. FEATURE DESCRIPTION

For information concerning the NP Service Provider Portability AMA Enhancement feature, see Division 2, Section 4A276.

SEC. 4B729: ASP ALTERNATE ROUTING BEFORE ANNOUNCEMENT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4B733: SEND PANI TO 8-DIGIT PSAP

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1. FEATURE DESCRIPTION

The Send PANI (Pseudo Automatic Number Identification)to 8-Digit PSAP (Public Safety Answering Point) feature is available as a 5E12 Software Update and with the 5E13 Software Release. The OFS ID number for this feature is 733. OFS ID 733 is dependent upon the Wireless E911 feature (SFID 298, feature number 99-5E-4543). See Division 2, Section 4A298.

This feature provides the ability to support sending the pANI to 8-Digit CAMA PSAP facilities instead of sending the MDN (Mobile Directory Number (default used as part of the Wireless 911 feature)) when the OFS ID 733 is active. The following table illustrates the functioning of this feature.

PSAP Termination			
PSAP Type	**Wireline**	**Wireless**	**OFS ID 733**
CAMA	ANI (NPD + 7-digit)	MDN (NPD + 7-digit)	N
CAMA	ANI (NPD + 7-digit)	MDN (NPD + pANI)	Y

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 733 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" which allows the ability to send the pANI to 8-Digit CAMA PSAP facilities instead of sending the MDN.

SEC. 4B734: TRUNK TRIGGER FOR TOLLS

1. BACKGROUND

The TTT (Trunk Trigger for Toll) secured feature 159 provides a new ASP (Advanced Services Platform) trigger on a 5ESS Switch that is configured as a toll switch. For more information on this feature, see Divisionn 2, Section 4A159). The new trigger generates an SCP (Service Control Point) Info_Collected Query for every call on a given toll trunk group, except when the incoming digits are 800, 888, 877, 866, 855, 844, 833, 822, and 00Y (where Y is 0-9). For the 8YY and 00Y digits, an SSP800 (Service Switching Point for basic 800 service) query is performed. The TTT feature is assigned to a LDP (Long Distance Platform) trunk of trunk class TTOLLCON by populating the TKGRP form (5202 Record) or RCV 5.1 TRIG NBR and setting ASP TOLL to "Y".

The Carrier Routing/Call Processing By Facility Presence feature 243 provides a new trigger on a 5ESS Switch that is configured as an Access Tandem or Interexchange Carrier switch. For more information on this feature, see Division 2, Section 4A243. The functionality provided by the new "Carrier Routing" Trigger provides the ability to launch an ASP R0.1 Info_Collected Query at the switch for designated carriers. Incoming traffic to the switch can detect the Carrier Routing Trigger when the following conditions are met:

- The incoming trunk group is provisioned to allow Carrier Triggers (TKGRP form or RCV 5.1 field CARRIER TRIG equal "Y").
- A Carrier ID is received in the trunk signaling or is provisioned on the trunk group.
- The signaled or derived Carrier ID is provisioned with an ASP R0.1 Trigger number (RTIDX form or RCV 10.3 field ASP TRIG NBR is populated)

When these conditions are satisfied and the dialed digits are not 8YY or 00Y, an ASP R0.1 Info Collected Query is launched. When these conditions are satisfied and the dialed digits are 8YY or 00Y, an SSP 800 query is launched.

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2. FEATURE DESCRIPTION

When OFID 734 is active, and when the requirements for either Trunk Trigger for Toll or Carrier Routing/Call Processing By Facility Presence features are met, a INFO COLLECTED query is launched for ALL calls including 8YY and 00Y.

When OFID 734 is not active, and when the requirements for either Trunk Trigger for Toll or Carrier Routing/Call Processing By Facility Presence features are met, an SSP800 query is launched for 8YY and 00Y calls.

3. FEATURE ASSIGNMENT

The Trunk Trigger for Toll Enhancement is activated by setting the ACT field for OFID (Optioned Feature System ID) 734 on the FOSYS form (5713-2 Record) to "Y".

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

SEC. 4B735: INHIBIT TGC NPA DELETION ON REROUTE

1. FEATURE DESCRIPTION

The Inhibit TGC (Trunk Group Control) NPA (Numbering Plan Area) Deletion on Reroute feature is available as a 5E11, 5E12, 5E13 Software Update and with the 5E14 Software Release. The OFSID number for this feature is 735.

RR (Reroute) is a trunk group control currently available on the 5ESS Switch via an input command. If a RR control is placed in a trunk group, the percentage of calls specified by the DRPCT (Direct Route Percentage of Traffic to Control) for a direct route and ARPCT (Alternate Route Percentage of Traffic to Control) for an alternate route will route to the trunk group specified by the VIARR (An ordered list of one to seven trunk group numbers representing the out-of-chain trunk groups).

An example of the I/O command is:

set:rr, tg=438, dprct=100, aprct=0, viato=n, alg=rglr, viarr=455, dl=all, dltype=inc (For more information, see the IMOM pages for set:rr)

If trunk group 438 is busy or out of service, the specified percentage of calls will reroute to trunk group 455. Currently, on the reroute attempt, the NPA of the original call, which is either obtained from the PREFIX DIGITS field on the RTIDX form (PREF DIG field on RCV 10.2) for the original RTI (Route Index) or the Far End NPA of the original trunk, is compared to the Far End NPA of the reroute trunk. If the two NPAs match, only 7 digits are outpulsed over the reroute trunk. If the two NPAs do not match, 10 digits are outpulsed over the reroute trunk. For example, suppose there was no prefixing or deleting from the original RTI and the Far End NPA of trunk group 438 is 816. If the Far End NPA of trunk group 455 is 816, then only 7 digits are outpulsed. If the Far End NPA of trunk group 455 is something other than 816, then 816-xxx-xxxx is outpulsed. Some switches are now expecting 10 digits and are deleting the 7 digit dialing plans. Calls that are affected by a Reroute trunk group control, may end up sending 7 digits when the far switch expects 10 digits. The result is that the rerouted calls fail. The solution was to add Software Option 735 - Inhibit TGC NPA Deletion. When this Software Option is NOT active, the switch will continue to work as it does today. With the Software Option 735 active, the switch will always send 10 digits on calls that are affected by a Reroute trunk group control. For 7 digit calls, the NPA will be prefixed. If 10 digits, the NPA will never be deleted.

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2. FEATURE ASSIGNMENT

To enable this feature, the ACT field for OFSID 735 must be set to "Y" on the FOSYS form.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 735 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" which allows the ability to Inhibit TGC NPA Deletion on Reroute.

4. GLOSSARY

NPA	Numbering Plan Area
RR	Reroute
RTI	Route Index
TGC	Trunk Group Control

SEC. 4B736: INHIBIT FLASH ON E911 CALLS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4B737: CALL FORWARD DON'T ANSWER - RING CONTROL

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-103 Business and Residence Feature Descriptions.*

SEC. 4B738: 30-SECOND T310 TIMER FOR PRI

1. FEATURE DESCRIPTION

The 30-Second T310 Timer for PRI uses OFID (Optioned Feature ID) 738. For terminating/outbound PRI calls, the 5ESS Switch transmits a Q.931 SETUP message. If a CALL PROCEEDING message is received as the first response, then Timer T310 is started and the call state transitions to the incoming call proceeding state. If no further response is received (ALERTING, PROGRESS, or CONNECT message) and Timer T310 expires, the call is released with a RELEASE message containing cause code value of 102 "recovery on timer expiration." OFID 738 makes the 30-second T310 timer an optionable change.

ISDN PRI timer T310 was hard coded as 30 seconds for international and 10 seconds for all other calls, but in 5E11(1) and later, the T310 was changed to 30 seconds for all calls. This was done because when the next switch sends an IAM (Initial Address Message), ISUP timer T7 is set waiting for an ACM (Address Complete Message) or ANS (Answer Message). The length of T7 is typically between 20 and 30 seconds. Thus, a PRI T310 timer could expire after 10 seconds and terminate the call.

After the T310 timer change was completed, some offices experienced ATO (Address Timeout) MDIIs that were previously not seen. The reason is that when a originating office calls over ISUP to a PRI terminator

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which has T310 as 30 seconds and the PRI does not receive the correct response within 20-30 seconds, the call is torn down and an ATO MDII occurs at the originating switch. If the PRI terminator had T310 as 10 seconds, the call would have been torn down after 10 seconds and no ATO MDII or other office index impacting output is seen in either office.

2. FEATURE ASSIGNMENT

The 30-Second T310 Timer for PRI feature is activated by setting the ACT field for OFID (Optioned Feature ID) 738 on the FOSYS form (5713-2 Record) to "Y".

With OFID 738:

- active, PRI terminations always have T310 timer set as 30 seconds.
- not active, PRI terminations have T310 timer set to 30 seconds for international and wireless APX (on Recent Change View 5.1, the APPLICATION field is either "INBLDG" or "IWF") calls and 10 seconds for all other calls.

NOTE: This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFID 738 on the FOSYS form (5713-2 Record) must be "Y" to enable this feature.

SEC. 4B740: USE NPA TO GET NPD FROM ESCO

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll System Feature Document.*

SEC. 4B742: NPA AND NPD TRANSLATION TABLE FOR E911 CALLS

1. FEATURE DESCRIPTION

For detailed information on the NPA to NPD Translation Table for E911 Calls feature, see Division 2, Section 4A337.

SEC. 4B743: PRE-QUERY SCREENING FOR TYPE CI CALL TCONF

1. FEATURE DESCRIPTION

Available as a Software Update for 5E10 through 5E13 and generally available for 5E14 and later, Pre-Query Screening for Type CI CALL TCONF is a special feature controlled by OFID 743. When the ACT field for OFS ID 743 is set to "N" on the FOSYS form (5713-2 Record), pre-query screening (secured feature 152) is not done for TYP CI CALL TCONF. When the ACT field for OFS ID 743 is set to "Y" on the FOSYS form and ASP (Advanced Services Platform) 3/6/10 Digit Trigger Pre-Query Screening secure feature is active (the ACT field for SFID 152 is set to "Y" on the SFSYS form (5713-1 Record)), pre-query screening is done for TYPE CI CALL TCONF.

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For more information, see the ASP (Advanced Services Platform) 3/6/10 Digit Trigger Pre-Query Screening secure feature in Division 2, Section 4A152.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. The ACT field for OFS ID 743 must be set to "Y" on the FOSYS form and ASP (Advanced Services Platform) 3/6/10 Digit Trigger Pre-Query Screening secured feature must be active (the ACT field for SFID 152 is set to "Y" on the SFSYS form (5713-1 Record)), for pre-query screening to be done for TYPE CI CALL TCONF.

SEC. 4B744: ASP TOLL FREE SERVICE INTERACTION WITH FLEXIBLE ANI FEATURES

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-127 Number Portability User's Guide,* or see Division 2, Section 4A528 of the TG-5 (Translation Guide - 5).

SEC. 4B745: ASP TOLL FREE SERVICE INTERACTION WITH FLEXIBLE ANI FEATURES

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-127 Number Portability User's Guide,* or see Division 2, Section 4A528 of the TG-5 (Translation Guide - 5).

SEC. 4B746: CALL FORWARD DON'T ANSWER DURING RINGBACK OF A CALL WAITING CALL

1. FEATURE DESCRIPTION

Available as a Software Update for 5E12, 5E13, 5E14 Software Releases and as BMI (Beginning Managed Introduction) for 5E15, the CFDA (Call Forward Don't Answer) During Ringback of a CW (Call Waiting) Call Option is controlled by OFS ID (Optioned Feature System ID) 746.

Call Forward Don't Answer After Call Waiting does not forward a Call Waiting call if the terminating party goes onhook instead of answering the Call Waiting call.

This Option, when activated, will allow the Call Forward Don't Answer feature to forward an unanswered Call Waiting Call that is ringing back the subscriber. This interaction occurs when a subscriber has a Call Forward Don't Answer feature (i.e. /CFDAAC) and a Call Waiting Terminating feature (i.e. /CWT) and the CFDA AFTER CW option on the CFWMPA form (5614-4 Record) (1.22 Recent Change View) is set to "Y".

The following scenario assumes that the analog line has a Call Waiting Terminating feature (/CWT) and a Call Forward Don't Answer feature (/CFDAAC) with CFDA AFTER CW set to "Y".

Analog line A has /CWT and /CFDAAC, and is talking to Party B. Party C calls party A, and A receives Call Waiting tone. Party A hangs up without flashing to answer the call from C. Line A now starts ringing with the call from C. If Party A does not answer the ringing call, and the Call Forward Don't Answer During Ringback of a Call Waiting Option is ACTIVE, the call from Party C will Call Forward using the /CFDAAC feature when the CFDA timer has expired.

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In the same scenario, if the Call Forward Don't Answer During Ringback of a Call Waiting Option is INACTIVE (the default case), the call from Party C continues to ring at Party A and will NOT forward.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) IDs for Special and Transparency Features. This feature is enabled by setting the ACT field for OFS ID 746 to "Y".

SEC. 4B747: ASP/LDP MODULE 21 220 RECORD ENHANCEMENT

1. FEATURE DESCRIPTION

The ASP/LDP (Advanced Services Platform/Long Distance Platform) Module 21 220 Record Enhancement feature is available with the 5E13 and later Software Releases. It is controlled by OFS ID (Optioned Feature System ID) 747.

The purpose of this feature is to address two functionalities for LDP AMA (Automatic Message Accounting) recording involving an SCP (Service Control Point) transaction. The first change modifies the manner in which the IEC/INC (InterExchange Carrier/Incoming) Prefix field of the 710 (Originating Toll), 713 VPN (Virtual Private Network), and 714 DAL (Dedicated Access Line) Call Type Records are populated for INTER and INTRA TYPE_CI Calls. The second change affects the creation of module 021 for the ASP 220 recording.

- ***NOTE:*** The capabilities provided by this OFID affects ONLY calls whose TYPE CI value is INTRA or INTER. This update does not change the rules for when ASP AMA records are produced. Normal rules apply for determining when ASP AMA records are generated. The SCP response message is expected to contain an AMAslpID parameter to get the expected results of this OFID. The AMAslpID parameter is provisionable on the SCP node.

2. FEATURE ASSIGNMENT

This feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 747 on the FOSYS form (5713-2 Record) to "Y".

- AMA 710, 713, 714

  When OFID 747 is active, the manner in which the AMA 710 Call Type IEC/INC Prefix field is populated for the INTER and INTRA TYPE CI call, and an SCP query is involved, changes as follows:

  - The IEC/INC Prefix field (table 57) of the Originating Toll AMA 710 Call type record is populated with the Carrier Identification Code in the following manner:

    - If the CIC (Carrier Identification Code) is included in the incoming signaling, then that CIC is recorded.

    - If the CIC is not included in the incoming signaling, the CIC that is populated on the incoming trunk group is recorded,

    - If the CIC is not populated on the incoming trunk group, then the CIC populated in the LDP CARRID field on the OFCOPT form (5509 Record) (RC/V (Recent Change/View) 8.1) is recorded for the 710 and 713 Call types. For 714 (DAL) Call Type, the CIC populated in the LDP CARRID field on the OFCOPT form or RC/V 8.1 is recorded.

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- When a SCP query is invoked the IEC/INC prefix field is still recorded as described above.

- Module 021

  When OFID 747 is active, module 021 is appended to the ASP 220 record under the following conditions:

  - The SCP returns an AMAslpID,
  - the call egresses the toll switch via a LATA (Local Access and Transport Area) or IC (Incoming) trunk group where LDP is set to "Y",
  - TERM BILL is set to "Y", and
  - OFID 747 is activated.

  If serial triggers are invoked which results in multiple 220 records being generated, then module 021 is appended to only the last 220 record. Note, if the response in the last SCP transaction do not contain an AMAslpID then module 021 is not present in any of the ASP 220 AMA records.

- When appended to the 220 records, module 021 populates the IEC/INC prefix field, table 57, as follows:

  - If a CIC is returned in the SCP response, then that CIC is recorded in the IEC/INC prefixed field. If values are returned in the Primary, Alternate, and Second_Alternate parameters of the SCP response message, the last CIC analyzed by call processing is recorded in the IEC/INC Prefix field.
  - If no CIC is returned in the SCP response, then the CIC included in the incoming signaling is recorded.
  - If no CIC is returned in the SCP response, and if the CIC is not included in the incoming signaling, then the CIC that is populated on the incoming trunk group(TKGRP form (5202 Record) or RC/V 5.1) is recorded. If RC/V 5.1 does not have a CIC populated for the incoming trunk group, then the Office CIC that is populated in the LDP Office Carrier Field on the OFCOPT form or RC/V 8.1 is recorded for the 710 and 713 call types. Or if TKRGP form or RC/V 5.1 does not have a CIC populated for the incoming trunk group, then the CIC that is populated in the LDP CARRID Field on the OFCOPT form or RC/V 8.1 is recorded for the 714 (DAL) Call Type.

- The carrier connect date and time fields in module 021 is populated with the date and time the Toll 5ESS Switch recognized terminating trunk seizure for MF (Multi-Frequency) connections, or the time the IAM (Initial Access Message) is forwarded for SS7 (Signaling System 7) connections.

- The Carrier Elapsed Time field (table 190) in module 021 contains the duration of the connection from Carrier Connect until circuit release.

2.1 Other important notes

The functionality provided by this OFID is for calls whose TYP CI CALL value on the LDIT form (5315 Record) or RC/V 9.25 is INTER or INTRA. If other TYP CI CALL values on this form/view (LDIT) are used with this OFID activated, i.e. OFID 747 is activated, then information recorded in the AMA can be misleading.

If an OHD (Off Hook Delay) trigger is invoked and a carrier is returned in the SCP response, but without

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returning an AMAslpID, the IEC/INC Prefix field in the 710 record will contain the carrier returned from the SCP instead of the original carrier.

If A DNT (Dialed Number Trigger) is invoked then the original carrier is recorded.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The OFID 747 must be set to "Y" to enable this feature.

SEC. 4B748: STANDARD PRI XMIT PROGRESS INSTEAD OF ALERTING WHEN INTERWORKING NON-ISDN

1. FEATURE DESCRIPTION

Available with a 5E13 and 5E14 Software Update, and 5E15 and later Software Release, the Standard PRI (Primary Rate Interface) XMIT (Transmit) Progress Instead of Alerting when Interworking non-ISDN (Integrated Services Digital Network) is a Transparency Feature using OFS (Optioned Feature System) ID 748.

When OFID 748 is active, PRI originations over a Standard PRI (the PRIGRP form (5211 Record) or RCV (Recent Change View) 5.2 for the PRI group has PRI TYPE of "STD") which terminate intra-office to an analog line causes the 5ESS Switch to send a Q.931 PROGRESS message containing a progress indicator of 1, "Call is not end-to-end ISDN and/or further call progress information may be available in-band".

When OFID 748 is not active (default), PRI originations over a Standard PRI which terminate intra-office to an analog line causes the 5ESS Switch to send a Q.931 ALERTING message containing a progress indicator of 8, "In-band information or appropriate pattern now available".

Custom PRI (the TKGRP form (5202 Record) or RCV 5.1 for the PRI group has PRI TYPE of "CUSTOM") are not affected by the status of OFID 748.

2. FEATURE ASSIGNMENT

The Standard PRI transmit PROGRESS instead of ALERTING when interworking with non-ISDN line option is activated by setting the ACT field for OFID (Optioned Feature System ID) 748 on the FOSYS form (5713-2 Record) to "Y".

NOTE: This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs (Switching Modules).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31
TNTYP	5504	3	5D	8.6

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 518 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

TNTYP form (5504 Record) - This form is used to define "ROH", "REORDER", "HIGHTONE", and "BUSY"

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tones.

There are no new fields or new forms added for this feature

SEC. 4B749: SELECTIVE DESTINATION SCREENING FOR SOFTWARE DEFINED NETWORK

1. FEATURE DESCRIPTION

Available as a Software Update for 5E11 Software Release and as BMI (Beginning Managed Introduction) for 5E15, Selective Destination Screening for Software Defined Network is controlled by OFS ID (Optioned Feature System ID) 749.

ARS (Automatic Route Selection) does not allow SDS (Selective Destination Screening) to be used on calls that are marked as using SDN (Software Defined Network). This prevents the service provider from easily screening out unwanted calls from an SDN dialing plan.

The Selective Destination Screening feature forces the Software Defined Network indicator SELECT DEST SCRN on the PNDP form (5608-10 Record) to be "N", even if the "previous" set of digits in the digit string on the PNDP form has SELECT DEST SCRN set to "Y". This means that SDS cannot be used to screen routes on SDN networks.

The following scenario assumes that the analog line has a Call Waiting Terminating feature (/CWT) and a Call Forward Don't Answer feature (/CFDAAC) with CFDA AFTER CW set to "Y".

OFS ID 749 provides the ability to use Selective Destination Screening on SDN calls. The SDN indicator, SELECT DEST SCRN, is copied from the "previous" form, meaning that if digits 1201 are marked as SDN and digits 1201555 are marked as SDS, 1201555 is also marked as SDN.

In the same scenario, if the Call Forward Don't Answer During Ringback of a Call Waiting Option is INACTIVE (the default case), the call from Party C continues to ring at Party A and will NOT forward.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) IDs for Special and Transparency Features. This feature is enabled by setting the ACT field for OFS ID 749 to "Y".

SEC. 4B750: INCLUDE CSI IN IAM FOR ASP CALLS

1. BACKGROUND

The CSI (Carrier Selection Indicator) parameter is not normally included in the IAM (Initial Address Message) for an outgoing CCS7 (Common Channel Signaling, CCITT Version 7) carrier call if the call has encountered an ASP (Advanced Services Platform) trigger. This can cause the call to fail at the carrier if the carrier requires the CSI parameter to be included for all calls.

2. FEATURE DESCRIPTION

Available as a Software Update for 5E14 Software Release and as BMI (Beginning Managed Introduction) for 5E15, the Include CSI in IAM for ASP Calls feature is controlled by OFS ID (Optioned Feature System ID) 750.

The Include CSI in IAM for ASP Calls feature provides the ability to include the CSI parameter in the IAM

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for ASP calls. The default operation will NOT include the CSI parameter for ASP calls. When the ACT field for OFS ID 750 is set to "Y" on the FOSYS form (5713-2 Record), this feature is enabled, and the CSI parameter will be included in the IAM for outgoing carrier calls that have encountered an ASP trigger.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) IDs for Special and Transparency Features. This feature is enabled by setting the ACT field for OFS ID 750 to "Y".

SEC. 4B788: RELEASE LINK FOR TOLL

1. FEATURE DESCRIPTION

For detailed information on the Release Link for Toll feature, see Division 2, Section 4A520.

SEC. 4B948: POPULATE CALL TYPE WITH ASP DEFAULT FOR CONTINUE WITH SLIP

1. BACKGROUND

Customers desired ASP (Advanced Services Platform) queries with a CONTINUE response which route intraLATA to get AMA (Automatic Message Accounting) call type of 47 (ASP default) instead of the charge index derived from digit analysis.

2. FEATURE DESCRIPTION

The Populate Call Type with ASP Default for Continue with SLIP feature uses OFID (Optioned Feature ID 948. This feature provides ASP queries with a CONTINUE response which route intraLATA to get an AMA call type of 47 (ASP default) instead of the charge index derived from digit analysis.

3. FEATURE ASSIGNMENT

The Populate Call Type with ASP Default for Continue with SLIP feature is activated by setting the ACT field for OFID (Optioned Feature ID) 948 on the FOSYS form (5713-2 Record) to "Y".

With OFID 948:

- active, call scenarios in which the first ASP query receives a CONTINUE response and the call routes intraLATA (TYPE CI CALL of either INTRA or NONCI) generates an AMA record with call type 47 (ASP default).
- not active, the same call scenario generates an AMA record with a call type associated with the digit analysis derived charge index.

NOTE: This feature is an OFFICE feature, and cannot be enabled or disabled on individual SMs.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

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FOSYS form (5713-2 Record) - This form is used to administer OFS (Transparency Feature Optioning System) IDs for Special and Transparency Features. OFID 948 on the FOSYS form (5713-2 Record) must be set to "Y" to enable this feature.

SEC. 4B950: NP - DID PBX QUERY ENHANCEMENT

1. BACKGROUND

The NP - DID PBX Query Enhancement feature is available in the 5E13FR2 Software Release. This is an Office Optioned Feature with OFID (Office Optioned Feature System ID) number 950. The feature number is 99-5E-7168.

The NP (Number Portability) - DID (Direct Inward Dialed) PBX Query Enhancement feature addresses how customers charge for NP TCAP (Transaction Capability Application Part) queries for calls to PBXs. NP TCAP queries are launched whenever the NPA-NXX of the called party DN has a NP trigger associated with it, the query had not been previously launched, and there are no translations associated with the DN (DNTRAN). For DID PBXs, a simple method of provisioning is to assign an HRI (Hundreds Group Route Index) against 100 consecutive DNs in a large PBX without building individual DNTRANS for each DN. The algorithm used to determine whether DNTRAN exists does not consider an HRI as being a DNTRAN; i.e., DNTRAN does not exist for the given DN. Because of the existing algorithm, all previously unqueried calls to a portable DID PBX DN without an individual DNTRAN but associated with an HRI will be queried.

2. FEATURE DESCRIPTION

The NP - DID PBX Query Enhancement feature

- provides an office option controlled by OFID 950 that, when set, would prevent NP queries from being launched for portable DID PBX DN associated with an HRI.
- When this OFID is not set (default), the existing NP functionality would be followed.

Typical Scenarios:

Existing (default) Functionality:

DN 630-220-0000 through DN 630-220-0099 are associated with a HRI on RC/V 4.14. 630-220 has the NP trigger associated with it.

1. Call originated to a DID PBX DN, 630-220-0001
2. Digit analysis
   A. Encounters the NP trigger on 630-220.
   B. Determines that DNTRAN doesn't exist.
   C. 630-224-0001 has a HRI, and
   D. Determines there was no previous NP query.
   E. Launches a NP query.
3. The SCP returns a CONTINUE message indicating that the DN, 630-220-0001, has no LRN associated with it.
4. The querying switch continues Digit Analysis and routes the call via the HRI from RC/V 4.14.

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5. Any AMA records associated with this call indicate that a query was launched, allowing the querying service provider to charge the originating network for the query.

NP - DID PBX Query Enhancement Functionality:

DN 630-220-0000 through DN 630-220-0099 are associated with a HRI on RC/V 4.14. 630-220 has the NP trigger associated with it. The OFID for NP - DID PBX Query Enhancement is set.

1. Call originated to a DID PBX DN, 630-220-0001.
2. Digit analysis
   A. Encounters the NP trigger on 630-220.
   B. Determines that DNTRAN doesn't exist.
   C. 630-224-0001 has an HRI.
   D. Determines there was no previous NP query.
   E. Determines that the OFID for NP - DID PBX Query Enhancement is set, and
   F. Does not launch a NP query.
3. The querying switch continues Digit Analysis and routes the call via the HRI from RC/V 4.14.

3. FEATURE ASSIGNMENT

The NP - DID PBX Query Enhancement feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 950 on the FOSYS form (5713-2 Record) to "Y". This feature must be purchased before it can be activated.

NOTE: This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate this feature, the ACT field for OFID 950 must be set to "Y".

SEC. 4B951: PCN REQUEST HANDLING PARAMETER

1. BACKGROUND

The PCN (Privacy of Calling Name) Request Handling Parameter feature is available as a 5E14 Software Update and BMI for the 5E15 Software Release. This is an Office Optioned Feature with OFS ID (Office Optioned Feature System ID) number 951.

The CNAM-P (Calling Name for PRI) secured feature (SFID 220) is based on Bellcore GR-1367. (For more information concerning this feature, see Division 2, Section 4A220.) Originally, the requirement was to release the call with cause of "requested facility not subscribed" (#50) when:

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- the SFID 220 was active
- a properly coded PCN (Privacy of Calling Name) request was received by the switch in a STANDARD FACILITY IE (Information Element) within a SETUP message
- and the customer does not subscribe to PCN (PCN ALW = "N" on the TKGRP form (5202-1 Record)).

Since the first issue, GR-1367 has been modified to provide specified treatment based on the value of the Interpretation component of the PCN request in the STANDARD FACILITY IE. Option ID 951 allows the 5ESS Switch to operate according to the updated specification.

2. FEATURE DESCRIPTION

The PCN Request Handling Parameter feature will:

- Provide an office option controlled by an OFS ID that, when set (activated), will modify the handling of a PCN request. When SFID 220 is active, a PCN request is received in a SETUP message, and PCN ALW is "N" on the TKGRP form (5202-1 Record), discard the Invoke component, log a PER (Protocol Error Record) indicating "unrecognized operation" (key=7076), and process as follows based on the Interpretation component:
  - If an Interpretation component was not received, the switch shall return a FACILITY message with a Reject component containing an Invoke-problem tag and problem value of "unrecognized operation".
  - If an Interpretation component was coded "Discard any Invoke component containing an unrecognized Operation Value", the switch shall NOT return a Reject component to the originating PRI.
  - If an Interpretation component was received coded "Discard any Invoke component containing an unrecognized Operation Value and return a Reject component", the switch shall send a FACILITY message with a Reject component containing an Invoke-problem tag and a problem value of "unrecognized operation".
  - If an Interpretation component was received coded "Clear call if any Invoke component contains an unrecognized Operation Value", the switch shall initiate call clearing and return a Reject component containing an Invoke-problem tag and a problem value of "unrecognized operation" to the originating PRI in the call clearing message (e.g. RELEASE, RELEASE COMPLETE, or DISCONNECT). The switch shall code the call clearing message with cause value #31 "normal unspecified", and a location of "public network serving the local user".
- When this OFS ID is not set (default) the existing PCN functionality would be followed. When SFID 220 is active, a PCN request is received in a SETUP message, and PCN ALW is "N" on the TKGRP form (5202-1 Record), the switch will clear the call and include a cause value of #50 "requested facility not subscribed" and a cause location of "public network serving the local user".

Sites which do not have CNAM-P active (SFID 220 no set) may want to activate Option ID 951 prior to activating CNAM-P. This will prevent individual PRI customers from experiencing loss of originating calls service if they include a PCN request within incoming Q.931 SETUP message and do not subscribe to PCN service (PCN ALW = "N" on the TKGRP form (5202-1 Record)).

Sites which currently have CNAM-P active (SFID 220 set) may want to activate Option ID 951. This will prevent individual PRI customers from experiencing loss of originating calls service if they activate the PCN feature within the PBX and begin sending a PCN request within incoming Q.931 SETUP message but do not subscribe to PCN service (PCN ALW = "N" on the TKGRP form (5202-1 Record)).

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3. FEATURE ASSIGNMENT

The The PCN Request Handling Parameter feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 951 on the FOSYS form (5713-2 Record) to "Y".

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS IDs for Special and Transparency Features. To activate this feature, the ACT field for OFS ID 951 must be set to "Y".

SEC. 4B954: EASY ACCESS TO VOICE MAIL

1. FEATURE DESCRIPTION

For detailed information on the Easy Access to Voice Mail feature, see Division 2, Section 4A540.

SEC. 4B955: 1000 Block Number Pooling Using Number Portability

1. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the 1000 Block Number Pooling Using Number Portability feature builds upon the existing 5ESS Switch implementation of the Number Portability feature. Besides requiring OFID 955 to be turned on, this feature also requires the activation of SFID 530. For further details on this feature, please refer to Division 2 Section 4A530.

2. TRANSLATION REQUIREMENTS

Refer to Division 2 Section 4A530 for detailed translation requirements information.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate this feature, the ACT field for OFID 955 must be set to "Y". When suppression of the ported out restriction is desired, then the ACT field for OFID 956 must be "Y".

SFSYS form (5713-1 Record) - This form is used to administer SFIDs for Special and Transparency Features. To provision data for this feature, the ACT field for SFID 530 must be "Y". Refer to Division 2, Section 4A530 for further Translation Requirements.

SEC. 4B956: 1000 Block Number Pooling Using Number Portability

1. FEATURE DESCRIPTION

Available with 5E14 and later Software Releases, the 1000 Block Number Pooling Using Number Portability feature builds upon the existing 5ESS Switch implementation of the Number Portability feature. OFID 956 is provided to allow the ability of overriding the ported out setting on an individual TN, a hundreds block or a thousands block. When PORTED OUT is "Y" the TN, or TNs in the associated block, are not allowed to be assigned by this office. Activating OFID 956 removes this restriction and allows assignment of TNs regardless of the PORTED OUT value. For further details on this feature, please refer to Division 2

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Section 4B955 and Division 2 Section 4A530.

2. TRANSLATION REQUIREMENTS

Refer to Division 2 Section 4A530 for detailed translation requirements information.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31
SFSYS	5713-1	3	5AR	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate the ability to override the ported out setting, the ACT field for OFID 956 must be set to "Y".

SFSYS form (5713-1 Record) - This form is used to administer SFIDs for Special and Transparency Features. To provision data for this feature, the ACT field for SFID 530 must be "Y". Refer to Division 2, Section 4A530 for further Translation Requirements.

SEC. 4B970: DA CUSTOM BRANDING BY ACCOUNT OWNER

1. FEATURE DESCRIPTION

For detailed information on the DA Custom Branding By Account Owner feature, see Division 2, Section 4A543.

SEC. 4B971: AUDIBLE CALLING NAME ON *69 (AUTOMATIC CALLBACK)

1. FEATURE DESCRIPTION

For detailed information on the Audible Calling Name on *69 (Automatic Callback) feature, see Division 2, Section 4A549.

SEC. 4B972: ALLOW SCP DAL CARRIER COMPARE

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-110 Long Distance Platform.*

SEC. 4B973: ASP MONITOR FOR BRI AND MULTILINE HUNT GROUP

1. FEATURE DESCRIPTION

For detailed information on the ASP Monitor for BRI (Basic Rate Interface) and MLHG (MultiLine Hunt Group) feature, see Division 2, Section 4A563.

SEC. 4B974: COMMERCIAL CREDIT CARD ALTERNATE ACCESS METHODS

1. FEATURE DESCRIPTION

For detailed information on the Commercial Credit Card Alternate Access Methods feature, see Division 2, Section 4A568.

SEC. 4B975: PSAP (Public Safety Answering Point) Trunk Reports OOS BLKD When Originator Hangs Up Before PSAP

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1. FEATURE DESCRIPTION

OFID 975 was added for 5E13 and later Software Releases and controls whether the switch times for 10 seconds before taking the PSAP trunk OOS BLKD. When the ACT field for OFID 975 is set to "N" on the FOSYS form (Record 5713-2), the PSAP trunk idles and goes OOS BLKD immediately after the originator disconnects. When the ACT field for OFID 975 is set to "Y" on the FOSYS form, the switch will wait for on hook from the PSAP trunk for 10 seconds when originator disconnects. If the PSAP trunk goes on hook within 10 seconds, the PSAP trunk will immediately idle, avoiding the OOS BLKD printouts. If PSAP trunk stays off hook for more than 10 seconds, the trunk will idle and go OOS BLKD.

SEC. 4B976: TALKING CALL WAITING

1. FEATURE DESCRIPTION

For detailed information on the Talking Call Waiting feature, see Division 2, Section 4A331.

SEC. 4B977: DA AUTOMATIC POSITION RELEASE

1. FEATURE DESCRIPTION

For detailed information on the DA Automatic Position Release feature, see Division 2, Section 4A559.

SEC. 4B978: GETS EGRESS QUEUING AND OFFICE QUEUING

1. BACKGROUND

One capability provided by the GETS (Government Emergency Telecommunications Service) HPC (High Probability of Completion) feature is the GETS TG (Trunk Group) Queue. GETS TG queues are individual queues which can be assigned to outgoing public trunk groups. These queues are transparent to non-GETS calls, but allow a GETS call to queue for a trunk when all members of the trunk group are unavailable.

Existing GETS TG queues must be individually assigned to trunk groups. As such, the switch-owner must identify trunks for which a GETS TG queue is appropriate, and perform the necessary Recent Change operations to assign the queue to the trunk group. These GETS TG queues may be assigned only to public facility trunk groups, and are not assignable to PF (Private Facility) trunks or PRIs (Primary Rate Interfaces).

2. FEATURE DESCRIPTION

The GETS Egress Queuing and Office Queuing feature is being deployed as a 5E15 Feature Release 3 Software Update. The feature number for this feature is 99-5E-7321. This feature is an enhancement to the GETS High Probability of Completion feature (99-5E-3945) that was deployed in the 5E13 Software Release. For more information on this base feature, see Division 2, Section 4A279.

This feature provides two enhancements to existing GETS capabilities (controled by OFIDs (Office Feature System IDs) 978 and OFID 979):

- GETS Office Queuing (OFID 979)
  - Allows the user the ability to use a switch-wide GETS Office Queuing Resource for public trunk groups. When the Office Queuing Resource is provisioned, any GETS call which is unable to hunt an idle member of an outgoing public trunk group will queue for the trunk group in the Queuing Resource if the trunk group does not have a GETS queue assigned to it.
  - This capability also provides office-wide GETS queuing without having to specifically identify and provision individual trunk groups with GETS queues.

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- GETS Egress Queuing (OFID 978)
  - This functionality allows the use of the switch-wide GETS Egress Queuing Resource for PF (Private Facility) trunk groups and PRIs (Primary Rate Interfaces). This resource is similar to that described above for use when a GETS call is hunting a public trunk group, and it operates identically. It applies when a GETS call is attempting to terminate to a PF trunk group or PRI and is unable to hunt an idle trunk member.
  - This capability also provides GETS queue coverage, on an office-wide basis, for calls attempting to terminate to a private facility. It provides a better probability of completion to a GETS call which has fought its way across a congested or damaged network so that it does not necessarily die if the outgoing PF/PRI trunk group has no idle member.

3. FEATURE ASSIGNMENT

3.1 Provisioning at a high level:

- Activate the feature by setting the ACT fields for OFIDs 978 and 979 to "Y" on the FOSYS form (5713-2 Record).
- On the QUGPA form (5617 Record):
  - Set GROUP NUMBER to 0.
  - Set GROUP TYPE to "TRK".
  - QUEUE MODULE and FEATURE NAME are required fields.
  - Set or leave blank the following optional fields:
    - OFC Q NUM TRK GRPS
    - EGR Q NUM TRK GRPS
    - OFC Q TIMEOUT
    - EGR Q TIMEOUT
    - OFC Q SIZE
    - EGR Q SIZE

3.2 GETS HPC versus GETS EQ/OQ Provisioning Differences

The GETS HPC and the GETS EQ/OQ queuing capabilities are provisioned differently. This is based on the different design and operational philosophies between the two features. As described above in the background information section, GETS HPC assigns queuing to specific trunk groups, whereas GETS EQ/OQ assigns queuing on an office-wide basis, and not to specific trunk groups.

- RCV (Recent Change View) 5.1 (ODA form TKGRP)
  - When assigning queuing to specific trunk groups for GETS HPC, the RCV 5.1 fields of "QUEUE

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ALLOWED" and "NQUEUE ACT" are set to "Y" and the "Q FEATURE" field is assigned the appropriate value.

- When assigning queuing to specific trunk groups for GETS HPC, the RCV 5.1 fields of "QUEUE ALLOWED" and "ENQUEUE ACT" are set to "Y" and the "Q FEATURE" field is assigned the appropriate value. When assigning queuing on an office-wide basis for GETS EQ/OQ, RCV 5.1 will, under most cases, not need to be provisioned. With office-wide queuing, the basic assumption is all office trunk groups are available for use. (NOTE: trunk groups must have the correct class of service. This is why specific trunk groups do not have to be provisioned for use by the feature. A new field entitled "INH EGR OFC Q" has been added which enables the user to exclude specific trunk groups from being entitled for GETS EQ/OQ. When this field is set to "N" (default), the trunk group can be entitled for either GETS EQ or OQ. When the field is set to "Y", the trunk group will not be entitled for either GETS EQ or OQ. The user only needs to exclude those trunk groups they do not want considered for use by GETS EQ/OQ. Otherwise, all trunk groups (with the correct class of service) will be considered by default. The "QUEUE ALLOWED" and "ENQUEUE ACT" are set to "N", which is the reverse of GETS HPC, and the "Q FEATURE" field is not assigned since the queuing feature is not assigned to the trunk group. (SEE NOTE UNDER PROCEDURE A FOR MORE INFO.)

- In addition to the above mentioned 5.1 fields, the trunk group must have the correct class of service for either EQ or OQ to be performed. Private Facility Egress Queuing can be performed on a GETS call terminating to a PF/PRI trunk with any of the following classes of service: PBXDID, PF, PFLASH, PFITT, EDSL, or EDSLHM. Office Queuing for Public Trunks can be performed on a GETS call attempting to egress the switch over a trunk group with any of the following classes of service: IC, LTOLLCON, TTOLLCON, or LATA. The user should ensure there are sufficient trunk groups in the office with the respective classes of service for both Egress Queuing and Office Queuing.

- A final note concerning the use of trunk groups for the two features. A trunk group can not be used for both GETS HPC and GETS EQ/OQ. It can only be used for one or the other. It is possible to provision a trunk group so it appears to qualify for use by both GETS EQ/OQ and another queuing feature, like GETS HPC. In reality, there is an order of precedence.

  If a trunk group is provisioned for a specific queuing feature (GETS HPC), the trunk group can also be provisioned for GETS EQ/OQ by setting "INH EGR OFC Q" to "N". (The default value for this field is "N", so unless the user changed it to "Y" nothing needs to be done.) However, as mentioned above, the trunk group cannot be used for both GETS EQ/OQ and another queuing feature. The specifically provisioned queuing feature will always take precedence in this situation, and consequently, the trunk group will never be used for GETS EQ/OQ. So, for clarity's sake, and ease of understanding, it is recommended when assigning queuing to the trunk group for GETS HPC or any other queuing feature, "INH EGR OFC Q" should always be set to "Y", implying its use is inhibited or disallowed for both EQ or OQ.

- As stated three paragraphs above, the only way to assign a trunk group for GETS EQ/OQ is for all the queuing-specific fields ("QUEUE ALLOWED", "ENQUEUE ACT") to be set to "N", which also includes "Q FEATURE" be blank. Then, with the office-wide queuing field set to "N" (default) which allows office-wide queuing, the trunk group will be considered for use by GETS EQ/OQ, only, and not for any other queuing feature. If the user does not want a particular trunk group available for use on an office-wide basis, even though it is not assigned for other types of queuing, the user should set this field to "Y".

- RCVs 3.40 and 7.12 (ODA form QUGPA)

  - Provisioning RCV 3.40 and 7.12 for the new GETS EQ/OQ feature is different than its

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predecessor, GETS HPC. GETS HPC assigns queuing to the trunk group, and there is a 1-to-1 relationship between a trunk group's RCV 5.1 entry and its 3.40/7.12 (modular queuing parameters) entry. Since GETS EQ/OQ employs an office-wide queuing mechanism, queuing is not assigned to the trunk group. This operational philosophy breaks the convention of the 1-to-1 relationship between a trunk group entry and a modular queuing parameter entry. Instead, the GETS EQ/OQ feature does not have to be defined for any trunk group, and only a single modular queuing parameter entry (GRPNUM = 0, GRPTYPE = "TRK") needs to be defined. Specifically, GETS EQ/OQ requires the following fields: GRPNUM = 0, GRPTYPE = "TRK", Q MODULE = user_specified, and the respective queuing data parameters for EQ and OQ, found in fields the queuing fields of screen 4 (user_specified means user will have to enter the appropriate value).

When inserting the single modular queuing parameter entry, default values are initially provided for the queuing data parameters in the Queuing fields of screen 4. (See PROCEDURE C for a list of default values.) If the user wants to specify different values than the default values presented on the view, they need to overwrite the default values with their chosen user_specified value. (See PROCEDURE C for the range of acceptable values. Also, read the NOTES under PROCEDURE C for more guidelines/restrictions concerning population of the queuing data parameters.)

- GETS EQ/OQ Feature Activation/Deactivation (RCV 8.31)

  - When activating the GETS EQ/OQ feature, a specific, orderly, sequence of steps should be followed. This sequential order of steps will help the user maintain a consistent relationship between queuing data entered on the view, and the state (on/off) of the feature capability (EQ or OQ). More precisely, whenever GETS EQ or OQ are activated with their corresponding OFIDs using RC 8.31 (GETS EQ - 978, GETS OQ - 979), their respective queuing data fields on screen 4 of either RC 3.40 or 7.12 should already have been populated with valid data. For example, if the user wants to activate OQ, they should first assign values to queuing data fields (OFC Q NUM TRK GRPS, OFC Q TIMEOUT, and OFC Q SIZE) on RC 3.40/7.12, or enter the default values presented on the view. Next they should activate the OQ OFID, number 979, on RC 8.31. An identical process should be followed to activate EQ. The user should first assign values to queuing data fields (EGR Q NUM TRK GRPS, EGR Q TIMEOUT, and EGR Q SIZE), or enter the default values presented on the view, followed by turning on the EQ OFID, number 978.

    - ***NOTE:*** The situation to avoid is having the feature capability activated by turning on the OFID "without" having the appropriate feature capability queuing data already setup. The user wants to first setup the feature capability queuing data, and then activate the feature.

  - When deactivating the GETS EQ/OQ feature, a similar sequence of steps should be followed, but in reverse. As stated above, this sequential order of steps will again help the user to maintain a consistent relationship between data entered on the view and the state (on/off) of the feature capability. Whenever GETS EQ or OQ is deactivated, the first step should be to turn off the respective OFID using RC 8.31. Next, the feature capability's respective queuing data fields on screen 4 of either RC 3.40 or 7.12, should be returned to a null value or blank. For example, if EQ is to be deactivated, the EQ OFID, number 978, should be turned off using RC 8.31, followed by setting queuing data fields (EGR Q NUM TRK GRPS, EGR Q TIMEOUT, and EGR Q SIZE) to a null value or blank using RC 3.40/7.12. Likewise for OQ, the OQ OFID, number 979, should be turned off, followed by setting queuing data fields (OFC Q NUM TRK GRPS, OFC Q TIMEOUT, and OFC Q SIZE) to null or blank. Retaining this sequence of steps will help maintain the 1-to-1 relationship between queuing data entered on RC 3.40 or 7.12 and the state (on/off) of the feature capability (EQ or OQ).

    - ***NOTE:*** NOTE: The situation to avoid is setting a feature capability's queuing data fields to blank "without" having deactivated the feature capability first. The user wants to first deactivate the feature capability by turning off the corresponding OFID, and then initialize

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the queuing data fields for that feature capability.

- **WARNING:** WARNING: The user should never try to deactivate a feature capability (EQ or OQ) by setting its respective queuing data fields to zero, null, or blank. The aforementioned process should always be used. First turn off the OFID, which deactivates the feature capability, and then initialize its queuing data fields.

- Miscelaneous

  - GETS EQ/OQ can be deployed in the disabled state for 7R/E 5ESS operation, which requires no action. The default is the disabled state. To enable or disable this feature, select from one of the detailed procedures G through H, given below. To verify the current status of a feature, use Procedure I below.

    - ***NOTE:*** GETS EQ/OQ IS BUILT UPON THE "GETS HPC" FEATURE, FEATURE NUMBER 99-5E-3945. UNDER MOST FIELD SITUATIONS, "GETS HPC" WILL BE PROVISIONED WITHIN THE SWITCH FIRST AND ITS SECURED FEATURE ID NUMBER (SFID), 279, ACTIVATED. GETS EQ/OQ WILL THEN BE PROVISIONED ON TOP OF IT, AND ACTIVATED WITH OFID 978 (EQ) AND/OR OFID 979 (OQ).

- PROCEDURE A - ENABLING OR ALLOWING A TRUNK GROUP TO BE USED FOR EQ/OQ

  - ***NOTE:*** All trunk groups will be defaulted to the correct states for GETS EQ/OQ to execute. Therefore, the user doesn't really have to provision RCV 5.1 since all trunk groups, by default, will be considered for use. "QUEUE ALLOWED", "ENQUEUE ACT", and "INH EGR OFC Q" will all default to "N", and "Q FEATURE" will default to blank, which qualifies the trunk group for GETS EQ/OQ. If queuing is not specifically assigned to the trunk group, it will be considered for use by GETS EQ/OQ.

  - There are only two conditions under which a trunk group will not be considered for use by GETS EQ/OQ. One, it is already provisioned to be used by a different queuing feature. In this case, "QUEUE ALLOWED", "ENQUEUE ACT", and "INH EGR OFC Q" will be set to "Y". "Q FEATURE" will also be assigned an appropriate queuing feature value. The second condition is where the trunk group is not being used for a different queuing feature, and the user does not want it used for GETS EQ/OQ. In this case, only "INH EGR OFC Q" will be set to "Y". Under both conditions, the trunk group does not qualify for use for GETS EQ/OQ.

  - Under normal conditions, where trunk groups default for use for GETS EQ/OQ, and the user does not want the trunk group used, they should simply set "INH EGR OFC Q" to "Y". This will probably be the most common use of RCV 5.1 for this feature. See PROCEDURE B below. Otherwise, if the user wants to change the use of the trunk group from GETS EQ/OQ to a different queuing feature, they will need to set "QUEUE ALLOWED", "ENQUEUE ACT", and "INH EGR OFC Q" to "Y", and assign the appropriate queuing feature to the "Q FEATURE" field.

    1. Select RCV 5.1 in 5E15 and later
    2. Enter "U"' for update mode.
    3. Enter the following input data:
       - TGN (key field)
    4. The following fields will be defaulted to "N". If the user wants to provision a trunk group which was previously provisioned for a different queuing feature, these fields will have to be set to "N".

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QUEUE ALLOWED
ENQUEUE ACT
INH EGR OFC Q

5. The following field will be defaulted to "blank". If the user wants to provision a trunk group which was previously provisioned for a different queuing feature, this field will have to be blank.

   Q FEATURE

6. If provisioning for EQ, make sure the following field is set to one of the following:

   "PBXDID", "PF", "PFLASH", "PFITT", "EDSL", or "EDSLHM"

7. If provisioning for OQ, make sure the following field is set to one of the following:

   "IC", "LTOLLCON", "TTOLLCON", or "LATA"

8. Enter "U" to update the form.

□ PROCEDURE B - INHIBITING OR DISALLOWING A TRUNK GROUP TO BE USED FOR EQ/OQ

1. Select RCV 5.1 in 5E15 and later.
2. Enter "U" for update mode.
3. Enter the following input data:

   TGN (field 1)

4. Change the following field to "Y".

   INH EGR OFC Q

5. If inhibiting for EQ, make sure the following field is set to one of the following:

   "PBXDID", "PF", "PFLASH", "PFITT", "EDSL", or "EDSLHM"

6. If inhibiting for OQ, make sure the following field is set to one of the following:

   "IC", "LTOLLCON", "TTOLLCON", or "LATA"

7. Enter "U" to update the form.

□ PROCEDURE C - INSERTING MODULAR QUEUING PARAMETERS FOR THE GETS EQ/OQ FEATURE

1. Select either RCV 3.40 or 7.12 in 5E15 and later.
2. Enter "I" ' for insert mode.

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3. Enter the following input data. These fields pre-exist GETS EQ/OQ.

   GRPNUM = 0
   GRPTYPE = TRK

   - ***NOTE:*** Recommended Q Module SM type is SM-2000.

   Q MODULE = (SM number, 1 - 192)

4. Enter the following input data. These fields are new for GETS EQ/OQ.

   - ***NOTE:*** These fields can only be entered when GRPNUM = 0. The following equation is presented to help guide the user in provisioning an allowable number of queue cell resources for the feature. The upper limits stated, 255 for a classic, and 4000 for SM-2000, are the maximum number of queue cell resources allowable, assuming there are NO other queuing features with queue cell resources already allocated within the SM. If queue cells resources have already been provisioned for other queuing features, then the maximum limits will be correspondingly less by the number of queue cell resources provisioned for those queuing features.

     (OFC Q NUM TRK GRPS * OFC Q SIZE) + (EGR Q NUM TRK GRPS * EGR Q SIZE) must not exceed 255 for a classic SM, or 4000 for SM2000.

   - ***NOTE:*** User can provision either EQ or OQ individually, or both at the same time. To not provision EQ, set the queuing field (EGR Q NUM TRK GRPS, EGR Q TIMEOUT, and EGR Q SIZE) to "blank". To not provision OQ, set the queuing field (OFC Q NUM TRK GRPS, OFC Q TIMEOUT, and OFC Q SIZE) to "blank".

   OFC Q NUM TRK GRPS - classic SM : 0-255, SM2000 : 0 - 500; default for classic SM is 25, SM2000 is 127
   EGR Q NUM TRK GRPS - classic SM : 0-255, SM2000 : 0 - 500; default for classic SM is 25, SM2000 is 127
   OFC Q TIMEOUT = 0 - 90; default is 15
   EGR Q TIMEOUT = 0 - 90; default is 30
   OFC Q SIZE = 0 - 255; default is 5
   EGR Q SIZE = 0 - 255; default is 5

5. If Queue Announcement is desired, enter the following input data:

   DELAY ANNOUNCEMENTS
   TYPE = NBARGE
   CYCLES = 0 to 4
   ANNPORT = Trunk equipment number
   PRIORITY ANNOUNCEMENTS
   TYPE = NBARGE
   CYCLES = 0 to 4
   ANNPORT = Trunk equipment number

6. Enter "I" to insert the form.

□ PROCEDURE D - UPDATING MODULAR QUEUING PARAMETERS FOR THE GETS EQ/OQ FEATURE

1. Select either RCV 3.40 or 7.12 in 5E15 and later.

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2. Enter "U" for update mode.

3. Enter the following input data.

   GRPNUM = 0
   GRPTYPE = TRK

4. Update the following input data.

   - ***NOTE:*** The following maximum limit must be applied when provisioning the next six fields:

     (OFC Q NUM TRK GRPS * OFC Q SIZE) + (EGR Q NUM TRK GRPS * EGR Q SIZE) must not exceed 255 for a classic SM, or 4000 for SM2000.

   - ***NOTE:*** User can provision either EQ or OQ individually, or both at the same time. To not provision EQ, set the queuing fields (EGR Q NUM TRK GRPS, EGR Q TIMEOUT, and EGR Q SIZE) to "blank". To not provision OQ, set the queuing (OFC Q NUM TRK GRPS, OFC Q TIMEOUT, and OFC Q SIZE) to "blank".

   - ***NOTE:*** The user cannot update EGR/OFC Q SIZE or EGR/OFC Q TIMEOUT if GETS EQ/OQ calls are queued. Also, the user cannot update EGR/OFC Q NUM TRK GRPS to a number than is less than the number with active calls.

     OFC Q NUM TRK GRPS = classic SM : 0-255, SM2000 : 0 - 500; default for classic SM is 25, SM2000 is 127
     EGR Q NUM TRK GRPS = classic SM : 0-255, SM2000 : 0 - 500; default for classic SM is 25, SM2000 is 127
     OFC Q TIMEOUT = 0 - 90; default is 15
     EGR Q TIMEOUT = 0 - 90; default is 30
     OFC Q SIZE = 0 - 255; default is 5
     EGR Q SIZE = 0 - 255; default is 5
     Q MODULE = (SM number, 1 - 192)
     DELAY ANNOUNCEMENTS
     TYPE = NBARGE
     CYCLES = 0 to 4
     ANNPOR = Trunk equipment number
     PRIORITY ANNOUNCEMENTS
     TYPE = NBARGE
     CYCLES = 0 to 4
     ANNPORT = Trunk equipment number

5. Enter "U" to update the form.

□ PROCEDURE E - VERIFY MODULAR QUEUING PARAMETERS FOR THE GETS EQ/OQ FEATURE

1. Select either RCV 3.40 or 7.12 in 5E15 and later.

2. Enter "U" for update mode.

3. Enter the following input data.

   GRPNUM = 0

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GRPTYPE = TRK

4. Review the fields which should be set correctly for EQ/OQ. The following possible fields could have values for GETS EQ/OQ. Their acceptable values are listed above under INSERT and UPDATE. Review the fields which should be set correctly for EQ/OQ. The following possible fields could have values for GETS EQ/OQ. Their acceptable values are listed above under INSERT and UPDATE.

   Q MODULE
   DELAY ANNOUNCEMENTS
   PRIORITY ANNOUNCEMENTS
   OFC Q NUM TRK GRPS
   EGR Q NUM TRK GRPS
   OFC Q TIMEOUT
   EGR Q TIMEOUT
   OFC Q SIZE
   EGR Q SIZE

□ PROCEDURE F - TO DELETE MODULAR QUEUING PARAMETERS FOR THE GETS EQ/OQ FEATURE

1. Select either RCV 3.40 or 7.12 in 5E15 and later.
2. Enter "D" for delete mode.
3. Enter the following input data.

   - ***NOTE:*** The user cannot remove queue data and its associated memory while GETS EQ/OQ queuing is being performed. Also, is the user wants to deactivate the GETS EQ/OQ feature capabilities, they should follow the steps outlined under "GETS EQ/OQ Feature.

     Activation/Deactivation Order

     GRPNUM = 0
     GRPTYPE = TRK

4. Enter "D" to delete the form.

□ PROCEDURE G - TO ENABLE (TURN ON) AN OPTION FEATURE ID (OFID) IN ALL OPERATIONAL SMs:

1. Select RCV 8.31 in 5E15 and later.
2. Enter "U" for update mode
3. Enter the following input data:

   FEATURE IDs 978 for Egress Queuing, & 979 for Office Queuing
   MODULE = OFC
   ACTIVE = Y
   Leave all remaining fields blank.

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4. Enter "U" to update the form.

□ PROCEDURE H - TO DISABLE (TURN OFF) AN OPTION FEATURE ID (OFID) IN ALL

1. Select RCV 8.31 in 5E15 and later.
2. Enter "U" for update mode
3. Enter the following input data:

   FEATURE IDs 978 for Egress Queuing, & 979 for Office Queuing
   MODULE = OFC
   ACTIVE = N
   Leave all remaining fields blank.

4. Enter "U" to update the form.

□ PROCEDURE I - TO VERIFY FEATURE STATUS IN ALL OPERATIONAL SMs:

1. Select RCV 8.31 in 5E15 and later.
2. Enter "R" for review mode
3. Enter the following input data:

   OPTION FEATURE ID 978 for EQ, & 979 for OQ
   MODULE = OFC

4. If field 3 (ACTIVE) is equal to "Y", then the feature capability is enabled in the Office. Otherwise, if ACTIVE is equal to "N", the the feature capability is disabled.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
QUGPA	5617	4	18B	3.40
TKGRP	5202	3	2A	5.1

FOSYS form (5713-2 Record) - This form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). Transparency Features have been developed to replicate features that exist on the 1A ESS Switch. To activate this feature set the ACT fields for OFID 978 and 979 to "Y".

QUGPA form (5617 Record) - This FORM defines the Modular Queuing parameters for a group if the default parameters associated with the Modular Queuing feature on the QUFD form (5617-1 Record) are inappropriate or unspecified. Added the OFC Q NUM TRK GRPS, EGR Q NUM TRK GRPS, OFC Q TIMEOUT, EGR Q TIMEOUT, OFC Q SIZE, and the EGR Q SIZE fields and associated data rules.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). Added the INH GETS OFC Q field and associated data rules.

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SEC. 4B979: GETS EGRESS QUEUING AND OFFICE QUEUING

1. FEATURE DESCRIPTION

The GETS (Government Emergency Telecommunications Service) Egress Queuing and Office Queuing feature (99-5E-7321) is being documented in Division 2, Section 4B978.

SEC. 4B980: CARRIER COMPARE FOR VPN

1. FEATURE DESCRIPTION

The Carrier Compare for VPN (Virtual Private Network) is an Office Optioned Feature with OFS ID (Office Optioned Feature System ID) number 980 and is available with 5E14 FR6, 5E15 FR2, and 5E16 BMI (Beginning Managed Introduction) and later Software Releases. The feature number for this feature is 99-5E-7800.

This feature enhances the process of routing calls out of an LDP (Long Distance Platform) Switch. The "carrier compare" process examines the CIC (Carrier Identification Code) returned by the AIN (Advanced Intelligent Network) SCP (Service Control Point) query and attempts to match it against the carriers provisioned on either the LDP Carrier Table form (5562 Record) or the LDP office default on the Office Parameters form (5509 Record). It is not necessary that a carrier be returned from the SCP in order to perform the carrier compare operation. If no carrier is returned from the SCP, the pre-query carrier will be used to perform the carrier compare. Note that the carrier compare enhancement only applies to "EDSL" and "EDSLHM" trunk classes.

When the CIC matches one of the carriers on either the 5562 or 5509 records, "digit routing" of the call is performed according to the CalledPartyDN.

When the returned CIC does not match one of the carriers on either the 5562 or 5509 records, then carrier routing is performed, that is, routing is based on the CARRIER ID populated on the Carrier Administration form (5305 Record).

In order to activate this feature, a new office secured feature is introduced:

- OFID 980: Carrier Compare for VPN

In addition, the following Secured Features must also be set to "Y" on the SFSYS form (5713-1 Record):

- SFID 165: Basic LDP Call Processing
- SFID 242: Basic VPN LDP Support

2. TRANSLATION REQUIREMENTS

After the above Secured Feature IDs have been activated, the feature is activated and the following forms provide the necessary data for call processing.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-21	3	5AS	8.31
ICF	5305	3	3R	10.3
LPDCTBL	5562	3	5BF	8.52
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.31

ICF form (5305 Record) - This form is used to define the characteristics of Inter-LATA (Local Access

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Transport Area) and Intra-LATA carriers.

LPDCTBL form (5908 Record) - This form provides an LDP Carrier Table and Default Carrier Table. The LDP Carrier Table applies to callers who used a carrier not shown in the ANI table or did not require ANI table processing and used a carrier that was not the home carrier ID. The default LDP Carrier Table applies to callers who used a carrier to which they have not subscribed or did not require ANI table processing and used a carrier that was not entered in the LDP carrier table.

OFCOPT form (5509 Record) - This form is used to define various miscellaneous office options and parameters and is required at the time of initial translations for all offices.

FOSYS form (5713-2 Record) - This form is used to administer OFS IDs for Special and Transparency Features. To activate this feature for any or all SMs, the ACT field for OFS ID 980 must be set to "Y".

SEC. 4B981: NM 3 DIGIT REROUTE

1. FEATURE DESCRIPTION

Available with a 5E14 and 5E15 Software Updates, and 5E16(1) and later Software Releases, the NM (Network Management) 3 Digit Reroute feature is a Transparency Feature using OFS (Optioned Feature System) ID 981.

Reroute is a NM trunk group control currently available on the 5ESS Switch. If a Reroute control is placed on a trunk group, the percentage of calls specified by the DRPCT (Direct Route Percentage) for a direct route and ARPCT (Alternate Route Percentage) for an alternate route routes to the trunk group specified by the VIARR (Via Alternate Reroute). An example of the I/O command is:

SET:RR,TG=438,DRPCT=100,ARPCT=0,VIATO=n,ALG=RGLR,VIARR=455,DL=ALL,DLTYPE=INC;

For the above example, if trunk group 438 is busy or out of service, for all dialed digits of length 7 or 10, 100% of direct calls and 0% of calls routed to this trunk group via an alternate RTI (Route Index) reroutes to trunk group 455 via a regular hunting algorithm.

Prior to this feature, NM would only attempt to reroute if the rerouted number is 7 or 10 digits. This feature was added to allow three digit numbers, e.g., 911.

With the Software Option 981 active, NM attempts to reroute 3 digit, as well as 7, and 10 digit calls.

When this Software Option is NOT active, the switch continues to work as it did previously. Reroute will only occur for 7 and 10 digits calls.

2. FEATURE ASSIGNMENT

There are no new fields or new forms added for this feature.

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs (Switching Modules).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 981 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

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SEC. 4B983: INHIBIT NO CIRCUIT PEG COUNTS ON FINAL ROUTE TYPE OF BUSY

1. BACKGROUND

Currently, when routing a call via a route index and the last route index in the chain is reached, NOCKT (no circuit) will be pegged. If the call is line originated, ORIGINAT and OUTGOING NOCKT will be pegged. If the call is trunk originated, INCOMING, TANDEM, and OUTGOING NO CKT will be pegged. Since "privately" owned trunk groups to end customers are sized by purchase agreement with that end customer, office personal cannot increase the size of the trunk group to prevent pegging of NOCKT. When NOCKT is being pegged in an office, the office personnel cannot determine if the cause is a private or public trunk group. Therefore, the NOCKT count does not accurately reflect the health of an office. Therefore, no circuit peg counts, which appear on the Traffic 30 report Section 5, Call-Type Information, and the Plant 24 Part 1B, should not include counts when a "privately" owned trunk group overflows. Therefore, no circuit peg counts.

2. FEATURE DESCRIPTION

The Inhibit No Circuit Peg Counts on Final Route Type of Busy feature is controlled by OFID 983:

- When the ACT field for OFID 983 is set to "Y" on the FOSYS form (5713-2 Record) this feature is active and prevents pegging no circuit counts when the final route type is busy treatment for route indexes pointing to ANY trunk group, public or private.

- When the ACT field for OFID 983 is set to "N" on the FOSYS form, this feature is not active and the existing no circuit functionality is followed.

When OFID 983 is active, the feature will prevent NOCKT from being pegged for a private trunk group if the route type of the of the final route index in the chain is BUSY. If the final route index is either REORDER or HUNT to an announcement trunk, NOCKT will continue to be pegged. Conversely, the feature will allow NOCKT to be pegged for a public trunk if the final route index of the route index chain is either REORDER or HUNT to an announcement trunk. If the final route index is BUSY for the public trunk, NOCKT will not be pegged.

3. FEATURE ASSIGNMENT

The Inhibit No Circuit Peg Counts on Final Route Type of Busy feature is activated by setting the ACT field for OFID (Optioned Feature System ID) 983 on the FOSYS form (5713-2 Record) to "Y".

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate this feature, the ACT field for OFID 983 must be set to "Y".

SEC. 4B984: NPA SPLIT ENHANCEMENT

1. FEATURE DESCRIPTION

The NPA Split Enhancement feature is an enhancement to the Announcement on Detection of NPA Split feature. The NPA Split Enhancement feature is also dependent on the secured feature, NPA Split Enhancement feature which is controlled by Secured Feature ID 347. The Lucent Technologies feature number for NPA Split Enhancement is 99-5E-7999. The NPA Split Enhancement feature is used in conjunction with the Announcement on Detection of NPA Split feature to provide announcement on an

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Overlay in the office's dialing plan. On Overlay DNs where 7 digit numbers encounter Number Portability processing (i.e. LNP trigger populated or a ported in NXX) and have NPA SPLIT ANNC marked as "Y" on RC View 9.3 receive a message as follows:

"The call you are making is a local ten digit call. Next time please dial the area code before the seven digit number you are calling. Your call will now be completed. This is a recording".

After the announcement is played, the call is routed to its final destination. This special announcement is generated every time a DN involved in an overlay is dialed by a customer.

While OFS ID 347 is active, all 10 digit numbers which encounter LNP triggers do not play the NPA Split Enhancement announcement.

For additional information on this feature refer to the Lucent Technology document number *235-190-115 Local and Toll Systems Features.*

2. FEATURE ASSIGNMENT

On the LDIT form (5300-3 Record) (RC View 9.3):

- The field NPA SPLIT ANNC must be set to "Y" for an announcement to be applied to this dialing sequence.
- For 7 digit dialing sequences (NXX-XXXX), the existing Implied NPA field does not need to be populated as specified by Announcement on Detection of NPA Split feature.

  All 10 digit dialing sequences (oldNPA or oldNPA-NXX) populate the new NPA on the NPANXX form (5580 Record) (RC View 8.33) to be used in the NPA Split Announcement.

On the ANNHD form (5580 Record) (RC View 8.61):

- For the header ID related to the NPA_SP application, remove the phrase which contains the variable NPA phrase. This field is not used in the NPA Split Enhancement announcement.

On the FOSYS form (5713-2 Record (RC View 8.31):

- The ACT field for OFS ID 984 (NPA Split Enhancement) needs to be activated or set to "Y".

3. FEATURE INTERACTIONS

The NPA Split Enhancement feature alterS the functionality of the Announcement on Detection of NPA Split feature to allow interaction with 7 digit LNP (Local Number Portability) DNs.

4. LIMITATIONS

Any 7 or 10 digit dialing sequence that encounters Advanced Services Platform (ASP) triggers do not invoke an NPA Split Announcement.

Because of the high penetration rate of this feature, SMs cannot handle this feature without significantly reducing the capacity of the switch. Therefore, this feature is recommended for offices which are configured with SMs (Switch Modules) of type SM-2000.

5. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

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ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate this feature, the ACT field for OFS ID 984 must be set to "Y".

SEC. 4B985: LEA TPKT INHIBIT

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-200-400 Lawfully Authorized Electronic Surveillance Provisioning, Troubleshooting, and Maintenance.*

SEC. 4B986: USE ORIGINAT0RS SCREEN INDEX FOR ANI II DIGITS

1. FEATURE DESCRIPTION

For information on this feature refer to the Lucent Technology document number *235-190-126 Advanced Services Platform, Release 0.1B.*

SEC. 4B988: ENHANCEMENT FOR STAND-ALONE ROUTING FOR INTERNATIONAL

1. BACKGROUND

For 5E9(1) and later, Local SM (Switching Module) and Remote Sites can reroute up to 500 emergency TNs (Telephone Numbers) as follows:

- A Remote Site or Local SM can reroute emergency calls when operating in the Stand-Alone call processing mode.
- Telephone Numbers not directly assigned to the Remote Site or Local SM when dialed by a subscriber served by the Remote Site or Local SM, are rerouted to a local Telephone Number or Trunk Group served by the Remote Site or Local SM.
- A local TN or Trunk Group is assigned to an equipment number (LEN (Line Equipment Number), SLEN (Slc 96 Line Equipment Number) or LCEN (Line Card Equipment Number)) on the Remote Site.

Stand-alone routing emergency TN reroute is administered via RC/V (Recent Change) 4.9/EMRNM form (5108 Record). The key EMER TN (Emergency Telephone Number) that is not served by the Remote Site or Local SM, and that is rerouted to either the local ALT TN (Alternate Telephone Number) or to an Outgoing Trunk Group when the Switching Module is in Stand-Alone mode can be of several forms:

- A single digit is usually zero, used for zero minus calls.
- A three-digit number might be a service type number such as 911.
    - If a three-digit number is to be rerouted in emergency Stand-Alone mode, the CONV form (5300-4 Record) or RC/V 9.4 must be checked to see if that three-digit number is being code converted.
    - If it is code converted, enter the CONV TN, not the three-digit number, in this field.
    - Seven- or ten-digit numbers of the type NXX-XXXX or NPA-NXX-XXXX may be also entered in this field.
    - Although International numbers may also be entered with either a 01 or 011 prefix, call processing will not reroute international calls.

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Refer to Division 3, Section 1H (5108 Record): EMERGENCY TN (REMOTE SITE/LOCAL SM) ASSIGNMENT RECORD for complete details on feature operation.

2. FEATURE DESCRIPTION

The Enhancement for Stand-Alone Routing for International feature is available with the 5E14 and later Software Releases. It is controlled by OFS ID (Optioned Feature System ID) 988.

This feature allows the switch owner to provision stand-alone routing specifically for international calls in an SM equipped with the Stand Alone option. This routing can send international traffic to different trunk groups than NAR (North American Region) traffic when in stand-alone.

3. FEATURE ASSIGNMENT

This feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 988 to "Y", on the FOSYS form (5713-2 Record).

When the feature is INACTIVE, the Stand Alone Routing software does not use the 01 and 011 dialed prefixes to determine if any Emergency Routes have been provisioned via the CONV EMRNM form (5108 Record) or RC/V 4.9 (EMERGENCY TN RC View/form). The 01 and 011 prefixes can be used on this form/view even when the Option ID is INACTIVE, but call processing does not use the data for prefixes 01 and 011 until the Option ID is activated.

When this feature is ACTIVE, the Stand Alone Routing software uses the 01 and 011 dialed prefixes to determine if any Emergency Routes have been provisioned using the EMRNM form or RC/V 4.9.

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The ACT field for OFS ID 988 must be set to "Y" to enable this feature.

SEC. 4B989: ALTERNATE ASP ALGORITHM USED TO DELETE AN NPA

1. FEATURE DESCRIPTION

Available with a 5E14 and 5E15 Software Update, and 5E16(1) and later Software Release, the Alternate ASP (Advanced Services Platform) Algorithm Used to Delete an NPA (Numbering Plan Area) feature is a Transparency Feature using OFS (Optioned Feature System) ID 989.

When the ASP Selective NPA Deletion feature (SFID 239) is active, and the SCP (Service Control Point) returns a ten-digit CalledPartyID, an attempt to delete the NPA is always made regardless of the global office field (INH SCP NPA DEL on the EQIM form/RCV 8.1). Deleting the NPA is performed using the NPA Deletion Algorithm. Office Option ID (OFID) 989 controls which algorithm is performed.

2. FEATURE ASSIGNMENT

With OFID 989 active and SFID 239 active, for a ten-digit number returned from the SCP in the CalledParty ID, the following checks are made:

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- Does the NPA of the ten-digit number match the NPA specified in the IMPLD NPA field of the OFCOPT form (5509 Record).

- Does the NPA of the ten-digit number match the NPA specified on either the NONE or 1+ IMPLIED NPAS entry on the LDIT form for the NXX. For example, the CalledPartyID field contains "7089715767". If the NPA was not deleted by step 1 of this list, then LDIT "971" entry is read, and if the NONE or 1+ IMPLIED NPAS field entry is "708", then "708" is stripped from the ten-digit number and seven digits are presented to digit analysis.

When any one of these conditions are met, the NPA Deletion Algorithm deletes the NPA and seven digits are the result.

When OFID 989 is not active, and SFID 239 is active, a ten-digit number returned from the SCP in the CalledParty ID, the following checks are made:

- Does the NPA of the ten-digit number match the NPA specified in the IMPLD NPA field of the OFCOPT form.

- The NPA of the ten-digit number matches the NPA specified on either the NONE or 1+ IMPLIED NPAS entry on the LDIT form (5300 Record) for the NXX. For example, the CalledPartyID field contains "7089715767". If the NPA was not deleted by step 1 of this list, then LDIT "971" entry is read and if the NONE or 1+ IMPLIED NPAS field entry is "708", then "708" is stripped from the ten-digit number and seven digits are presented to digit analysis.

- The NONE or 1+ IMPLIED NPAS entry on the LDIT form for the NXX digits of the ten-digit number specify AMB (Ambiguity) and the NPA of the ten-digit number matches the NPA of the originator. For example, the CalledPartyID Digits field contains "7089715767". If the NPA was not deleted by step 1 or 2 of this list, and if either the NONE or 1+ IMPLIED NPAS field entry for the LDIT "971" digits is defined as "AMB", then "708" is compared to the NPA digits of the ASP trigger originator, and if a match is detected, "708" is stripped from the ten-digit number.

When any one of these conditions are met, the NPA Deletion Algorithm deletes the NPA and seven digits are the result.

Please refer to Division 2, Section 4A239 or 235-190-126 "Advanced Services Platform, Release 0.1B" for additional information on ASP NPA deletion.

OFID 989 does not affect the algorithm used for NPA deletion when SFID 239 is not active. When SFID 239 is not active and INH SCP NPA DEL is "N", a deletion algorithm is used. When SFID 239 is not active and INH SCP NPA DEL is "Y", no NPA deletion is performed under any conditions.

There are no new fields or new forms added for this feature

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs (Switching Modules).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 989 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

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SEC. 4B990: 256K TRUNK SCALING FOR LARGE CAPACITY TANDEM

1. FEATURE DESCRIPTION

The feature number for the 256K Trunk Scaling for Large Capacity Tandem feature is 99-5E-4788. It is available with the 5E16(2) and later Software Releases. This is not a secured feature, but it is dependent upon the CNI/PSU (Common Network Interface/Packet Switching Unit) Support for 128k ISUP (ISDN (Intergrated Services Digital Network) User Part) Trunks feature (99-5E-8110) which is controlled by SFID 622 with no associated RTU (Right To Use) fee. For infomation on this feature see Division 2, Section 4A622.

In addition to a direct dependency on 99-5E-8110 (SFID 622), this feature may also require any/all of the following features for proper implementation and/or support:

- 99-5E-4104 (NXTMS CM3; (see Division 2, Section 7BO)
- 99-5E-7894 (Increased DCI Throughput); (see Division 2, Section 1CJ)
- 99-5E-7851 (Increased Disk Space for AMADNS) ; (see Division 2, Section 4A610).
- 99-5E-7451 (SAAL High Speed Signaling Data Links; see Division 2, Section 7BB).

The need for the other features is dependent upon how many trunk terminations are desired.

An underlying need for this feature is support for double precision, 32 bit trunk data collection. This underlying need is satisfied by an existing feature, Trunk Group Register Expansion, 99-5E-7780 (SFID 596). Therefore, SFID 596 is also assumed to be active. For information on this feature, see Division 2, Section 4A596.

Prior to features 99-5E-8110 and 99-5E-4788, the 5ESS Switch supported up to 100K ISUP trunk terminations, independent of the signaling platform used.

This feature is part of the LCT (Large Capacity Tandem) solution which significantly increases the total number of ISUP trunk DS0 (Digital Signal, Level 0) terminations, as well as BHCA (Busy Hour Call Attempts).

When deploying this feature, the switch may be configured as a combination circuit/packet tandem, or as an all-circuit tandem.

The LCT solution does not require any new hardware units, but does introduce office-based software scaling to accommodate the increase in trunk terminations. This scaling is largely transparent to the end-user.

Per-Trunk Group, per-SM (Switching Module), and per-hardware unit trunk capacities are not impacted and do not change as a result of this feature.

No ISUP Trunk Group or BICC (Bearer Independent Call Control) Group engineering criteria are modified by this feature.

1.1 Application

This feature applies to 5ESS Switches that support SS7 (Signaling System 7) ISUP signaling using a GSM (Global Switching Module)/ SS7 PSU (Packet Switching Unit), and a CM3 (Communications Module 3).

This feature does not apply to CDX (Compact Digital Exchange), VCDX (Very Compact Digital Exchange), or DRM (Distant Reliable Module) Switch configurations, nor does it provide trunk capacity expansion for any 5ESS Switch that uses only CNI-based SS7 signaling.

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In order to realize the maximum number of trunk terminations per office (i.e., 256K), some design constraints must be applied.

- Trunks must be provisioned on up to 23 SM-2000s equipped with a DNU-S (Digital Network Unit - Sonet) or OIU (Optical Interface Unit) trunk interface,
- SM-2000 TSIs (Time Slot Interchangers) must use "non-square engineering" (i.e., peripheral timeslots greater than network timeslots),
- CM3 must be NxTMS (N times Time-Multiplexed Switching) (where N= 3 or 4), and lastly,
- SS7 PSU must have HS-SDLs (High Speed Signaling Data Links) for SS7 signaling (when only one primary OPC (Originating Point Code) exists for the office).

Deviation from these design constraints results in a lesser trunk capacity.

1.2 Measurements (99-5E-4788.M)

The Measurements portion of this feature is controled by OFS (Optioned Feature System) ID 990 and is also made available with the 5E16(2) and later Software Releases.

An underlying need for this feature is support for double precision, 32 bit trunk data collection. This underlying need is satisfied by an existing feature, Trunk Group Register Expansion, 99-5E-7780 (SFID 596). Therefore, SFID 596 is also assumed to be active. For information on this feature, see Division 2, Section 4A596.

This feature uses a new traffic data collection section, Traffic 30 Report, Section 183 (PSUCHAN). This section is controlled by OFID 990.

When OFS ID 990 is enabled, Section 183 may be allowed for collection using existing traffic data collection procedures.

When Traffic 30 Report, Section 183 is allowed, it replaces data formerly collected in Section 193. Enabling OFS ID 990 automatically inhibits Section 193, and permits the switch owner to allow collection of Section 183.

If OFS ID 990 is disabled, then Section 183 can not be allowed.

2. FEATURE ASSIGNMENT

Provisioning for this feature is as follows:

- Activate the Measurements option by setting the ACT field for OFS ID 990 to "Y" on the FOSYS form (5713-2 Record).

3. TRANSLATION REQUIREMENTS

These are the forms that were impacted by this feature.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31
MEASSUM	5563	3	5BG	13.9
SFSYS	5713-1	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate the Measurements functionality of this feature, the ACT field for OFS ID 990 must be set to "Y".

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MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Also removed all occurences of the PSUCHAND value.

SEC. 4B992: BYPASS SUBSET OF CROSSCHECKS DURING RCV 10.10 SCREENING DELETE

1. FEATURE DESCRIPTION

Available with a 5E14 and 5E15 Software Update, and 5E16(1) and later Software Release, the Bypass Subset of Crosschecks during RCV (Recent Change View) 10.10 Screening Delete feature is a Transparency Feature using OFS (Optioned Feature System) ID 992.

When deleting RCV 10.10 [SCREENING (CHARGING)], the SCR (Screen Index) being deleted is checked if it is being used for any other views/features. Some sites have encountered long delays and DB (Database) transaction timeout errors while deleting RCV 10.10. This makes administration of this view very complicated if not impossible. This option ID was created to allow several lengthy checks during the RCV 10.10 delete operation to be bypassed, making the form delete much faster and to eliminate DB transaction timeout errors on this view.

2. FEATURE ASSIGNMENT

With OFID 992 active, while deleting RCV 10.10 (SCREENING), the Screen Index will not be checked if it is in use on the followings forms/RCV screens:

- SCRIDX form (5543 Record); RCV 8.24 (SCREENING INDEX PARAMETER ASSIGNMENT)
- OFCOPT form (5509 Record); RCV 8.1 (OFFICE PARAMETERS) field TCW SCR (Talking Call Waiting)
- ACDTN form (5631 Record); RCV 6.10 (ACD AND DAA TN ASSIGNMENT)

With OFID 992 not active, all the standard checks during RCV 10.10 (SCREENING) will be performed.

Because some checks are bypassed, after a RCV 10.10 deletion with OFID 992 active, calls using a screen index which had the RAR (Rate and Route) deleted, generates a Manual Action Assert mnemonic RTSCRNING from RTscreen.c and the call will be sent a reorder tone. Manual action will be required to determine and modify the view (either 8.24, 8.1, or 6.10) which is using the deleted screen index.

There are no new fields or new forms added for this feature

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs (Switching Modules).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 992 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B994: CANADIAN 15-DIGIT INTERNATIONAL DIRECT DISTANCE DIALED

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1. FEATURE DESCRIPTION

Available with a 5E13, 5E14, and 5E15 Software Update, and 5E16(1) and later Software Release, the Canadian 15-Digit International Direct Distance Dialed feature is a Transparency Feature using OFS (Optioned Feature System) ID 994.

Sites that use traditional signaling (non Feature Group D) for IDDD (International Direct Distance Dialed) calls may have IDDD calls fail. Changes in the Canadian 15-digit IDDD feature (99-5E-7089) resulted in the SS7 (Signaling System 7) Initial Address Message's nature of address of the called party number being coded to "international" or "international operator" based on the call type being "IDDDSTST" or "IDDDTSPS".

2. FEATURE ASSIGNMENT

When OFID 994 is active on the the FOSYS form (5713-2 Record); RC (Recent Change) view 8.31, traditional signaled IDDD calls are coded with a "National" Nature of Address.

When OFID 994 is not active, the Nature of Address is set according to the call type. In addition, when the OFID 994 is not active international operator assisted calls which are processed by OSPS will be coded as "international" Nature of Address even though they were operator assisted.

This feature is intended for use in the North American Numbering Plan Area (World Zone 1) where equal access signaling is not used, e.g., Canada. It also could be used in the Dominican Republic and the Bahamas.

There are no new fields or new forms added for this feature

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs (Switching Modules).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 994 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B996: PRECEDENCE AND PREEMPTION TERMINATING FEATURE SELECTION ENHANCEMENT

1. FEATURE DESCRIPTION

Available with a 5E15 Software Update, and 5E16(2) and later Software Release, the Precedence and Preemption Terminating Feature Selection Enhancement feature is a Transparency Feature using OFS (Optioned Feature System) ID 996.

On the ODA form PPLPA (5618 Record, the FWD IAGP PREC field, or RCV (Recent Change View) 1.31 (Precedence and Preemption Line Parameters), the FWDPREC field, these forms/views are used for Forward Intragroup Precedence. When Forward Intragroup Precedence is active (Y), an intragroup precedence call to an idle line that is not answered, this call will be forwarded to the number associated with PP (Precedence and Preemption) CFDA (Call Forwarding Don't Answer) feature of the terminating line. But for calls placed to a busy line which has the FWDCOND field on the CFWFD form (5614-1 Record) or RCV 12.12 set to "PBSY", the call will not forward and a busy tone is given.

This feature enhancement allows the call to get precedence busy call forwarding treatment. This means

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that for a call of equal or lower precedence, the call will forward. For a call of higher precedence, the call will preempt.

2. FEATURE ASSIGNMENT

An example of a precedence call from a line with Forward Intragroup Precedence active to a busy line with precedence call forwarding busy would be:

Line A has the FWDPREC field set to "Y" on the CWDFD form or RCV 1.31. Line B has a call forwarding feature with FWDCOND set to "PBSY", Line B is active on a priority call.

- With OFID 996 off:
  - If line A makes any precedence level call to line B, line A gets busy.
- With OFID 996 on:
  - If line A places a priority or routine call to line B, line A call forwards.
  - If line A places an immediate, flash or flash override call to line B, line A preempts line B.

There are no new fields or new forms added for this feature.

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs (Switching Modules).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 996 must have field ACT on the FOSYS (5713-2 Record) form set to "Y" to activate this feature for the office.

SEC. 4B997: DELETE NETWORK IDENTITY DIGITS ON PRI PLI IE

1. FEATURE DESCRIPTION

The Delete Network Identity Digits on PRI (Primary Rate Interface) PLI (Precedence Level Indication) IE (Information Element) feature is available with the 5E15 and later Software Releases. It is controlled by OFS ID (Optioned Feature System ID) 997. The feature number for this feature is 99-5E-2336.

The MLPP (Multi-Level Precedence and Preemption) on PRI feature provided the ability for the 5ESS Switch to send and receive a PLI IE in a Q.931 SETUP message. Originally, a 7 octet PLI IE was used which did not include the NI (Network Identity) digits. Bellcore T1.619 was modified to include a 2 octet NI parameter in the PLI. This feature enhancement gives the option to send a 9 octet PRI PLI IE with the Network Identity digits.

2. FEATURE ASSIGNMENT

With this feature, Delete the Network Identity digits in PRI PLI IE, is activated by OFS ID (Optional Feature ID) 997 on the FOSYS form (5713-2 Record) by setting the ACT field to "Y".

With OFS ID 997 off (default): A 9 octet PRI PLI IE with Network Identity digits which meets the standards

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is sent and received in the Q.931 SETUP message.

With OFS ID 997 on: A 7 octet PRI PLI IE without the Network Identity digits is sent and received in the Q.931 SETUP message.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The ACT field for OFS ID 997 must be set to "Y" to enable this feature.

SEC. 4B999: DNIS ENHANCEMENT FOR CANADA - PARTS 1 - 3

1. BACKGROUND

This feature provides an LDP (Long Distance Platform) Switch with the capability to deliver the originally dialed number information on calls that terminate to a PBX (Private Branch Exchange) or similar CPE (Customer Premise Equipment).

DNIS provides a way to distinguish between multiple numbers that terminate at the same PBX/CPE. The need for this service arises when telephone agents in a central location must field calls for multiple customers, each with a distinct 8XX number. The agents must be able to recognize the original dialed number in order to determine the customer for whom the call is intended.

The original dialed number is transported from the originating LDP Switch via the SS7 (Signaling System 7) GAP (Generic Address Parameter) with Type of Address = "0000000" (DIALED NUMBER 0) to the terminating switch and outpulsed to a PBX/CPE. Because the original dialed number is transported in an SS7 parameter, interswitch trunks must be ISUP7 (Integrated Services User Part 7) trunks. In Canada, the primary carrier codes is the Dialed Number GAP with a Type Of Address = "11111101" or 253 (TRANSFER NUMBER 1). Thus, using the DNIS feature in the Canadian market is difficult.

2. FEATURE DESCRIPTION

The DNIS (Dialed Number Identification Service) Enhancemdent for Canada feature is being released with the 5E15 FR 5 (Feature Release 5) and later Software Releases. This feature has three parts which are controlled by OFS (Optioned Feature System) IDs 999, 1000, and 1001. The feature number for this feature is 99-5E-8357.

2.1 Part 1

When OFID 999 is active, on incoming ISUP calls, treat a Generic Address Parameter (GAP) Type of Address value h'FD = 253 (Transfer Number 1) just as you do a Type of Address value of 0 (Dialed Number). This means the dialed digit information from an incoming IAM (Incoming Address Message) with GAP type of address of either 00 or 253 on an incoming LDP trunk is saved and passed onto an end user trunk group with DNIS USER set to "Yes" or sent over outgoing CCS7 LDP trunk in a dialed number GAP.

When the option ID is not active, current operations will be followed. Incoming IAM with a GAP type of Address 00 is saved on an LDP trunk and sent to a DNIS user or over another LDP trunk. Incoming IAM with Type of Address 253 is saved/sent to a DNIS user, but will be passed transparently over outgoing CCS7 trunk.

Secured feature 271 (DNIS) must be active in the office to take advantage of option ID 1000.

2.2 Part 2

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When OFID 1000 is active, for all outgoing ISUP calls in the office, if a Dialed DN GAP will be included in the IAM (e.g. dialed DN is present, outgoing trunk is LDP), the Type of Address of the GAP will be coded as h'FD = 253 (Transfer Number 1).

When the OFID 1000 is not active, the GAP Type of Address of a dialed number GAP will be coded as 00 (Dialed Number).

Secured feature 271 (DNIS) must be active in the office to take advantage of option ID 1000.

OFID 1000 (DNIS Enhancement for Canada - Part 2) should ONLY be activated in an office in the Canadian region which connect to other offices that expect DNIS to be passed using GAP Type of Address 253 (TRANSFER NUMBER 1).

2.3 Part 3

When OFID 1001 is active, an incoming IAM with a Dialed Number GAP can be received on non-LDP and LDP trunks. Also, an outgoing IAM with a Dialed Number GAP can be included on both non-LDP and LDP trunks.

When OFID 1001 is active, it does not modify the operation of a Dialed Number query. For the originally dialed number to be saved, the incoming trunk must be LDP and the ASP DNT/SDS trigger must have DNIS=Y on the RCV 9.35 Trigger Definition view.

When OFID 1001 is not active, existing operation will be followed. Received IAM with dialed number GAP will be saved to be passed onto a DNIS USER=Y trunk if the incoming trunk is marked LDP=Y or MINT SIG TYPE is not NULL and SFID 271 (Dialed Number Identification Service) is active. When dialed number information is available, the dialed number GAP will be included in the outgoing IAM when outgoing trunk is marked LDP=Y or MINT SIG TYPE is not NULL and SFID 271 is active. When SFID 271 is not active, the received GAP will be passed transparently from incoming CCS7 trunk to outgoing CCS7 trunk.

Secured feature 271 (DNIS) must be active in the office to take advantage of option ID 1001.

Due to possible interactions, OFID 1001 (DNIS Enhancement for Canada - Part 3) should not be active in offices with the following types of traffic:

- Offices which have SFID 298 [Wireless 911] active
- AT&T Toll offices (offices with trunks marked CCS7 TYPE TOLL on RCV 5.1)
- Offices which have SFID 218 [LN (Local Nodal) EO (End Office)] active

3. FEATURE ASSIGNMENT

The DNIS Enhancement for Canada - Part 1 is activated by setting the ACT field for OFID (Optioned Feature System ID) 999 (Part 1), 1000 (Part 2), and 1001 (part 3) on the FOSYS form (5713-2 Record) to "Y".

- ***NOTE:*** This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

4. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

SEC. 4B1000: DNIS ENHANCEMENT FOR CANADA - PART 2

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For information on this feature, see Division 2, Section 4A999.

SEC. 4B1001: DNIS ENHANCEMENT FOR CANADA - PART 3

For information on this feature, see Division 2, Section 4A999.

SEC. 4B1003: PRI CBC WITH BLANK/ZERO SFG SCREEN INDEX

1. BACKGROUND

SFG (Simulated Facility Group) is defined via RCV 7.3 (PFASFG form - Simulated Facility Groups). For SFG TYPE of 2WESSX, EDSL, EON, HM, M800, MEGACOM, OESSX, OUTWATS, SCOCS, and SDN, field SCRN IDX can be populated. For SFG TYPE OUTWATS, M800, MAGACOM, HM, and SCOCS, SCRN IDX must be populated with a value between 1 and 4095. For SFG TYPE of 2WESSX, EDSL, EON, OESSX, and SDN, SCRN index may be between 1 to 4095 or 0 for no data. When the field is 0, it is used by call processing for routing and charging of calls. Thus, the call completes according to the RCV 10.10 (RAR form - Rate and Route form) for SCR of 0 and the call fails with assert 23365 if the RCV 10.10 does not exist for SCRN IDX of 0. Specifically, the PRI CBC (Call-By-Call) feature allows an SFG to be associated with a given call type. The number of simultaneous calls of a particular type can then be limited by the SFG size.

The SFG is defined via RCV 7.3 SFG TYPE of EDSL. It has been found to be desirable to have a SCRN IDX of 0 for EDSL so that cases where the screen index is changed by an ASP query to the POST QRY SCRN IDX defined in RCV 9.35 (NSTRIG form - NETWORK SERVICES TRIGGER DEFINITION), the call's screen index will not be overwritten by the SFG SCRN IDX. However, the current operation of the switch causes the existing screen index to be changed to 0.

With this feature active and PRI CBC SFG SCRN IDX of 0, the call will complete using the previously defined screen index. With OPTION ID (OFID) 1003 active, when a call encounters an SFG which has SFG TYPE of either 2WESSX, EDSL, EON, SSX, or SDN and has SFG SCRN IDX of 0, the call will complete using the existing screen index. With OPTION ID (OFID) 1003 deactivated, when a call encounters an SFG which has SFG TYPE of either 2WESSX, EDSL, EON, OESSX, or SDN and has SFG SCRN IDX of 0, the call will attempt to complete using screen index of 0.

2. FEATURE DESCRIPTION

Available with the 5E14(1), and 5E15(1), 5E16(1), 5E16(2) 5ESS Switch Software Releases, the PRI CBC with Blank/Zero SFG Screen Index feature is controlled by OFID 1003.

The PRI CBC with Blank/Zero SFG Screen Index feature provides an office option controlled by an OFID that, when set (activated), will check the SFG SCRN INDX in mgRT_FAIL message. If it is non-zero, it will overwrite the original screen index with it. If this OFID is not set (default), the SFG SCRN INDX is not checked, the original screen index is overwritten with it directly. Sites which do not have this fix active (OFID 1003 not set) may want to activate OFID 1003. This will prevent individual PRI customers from experiencing loss of originating calls service. Sites which currently have this fix active (OFID 1003 set) may want to activate OFID 1003. This will prevent individual PRI customers from experiencing loss of originating calls service.

3. FEATURE ASSIGNMENT

To activate the PRI CBC with Blank/Zero SFG Screen Index feature, the ACT field for OFS ID 1003 must be set to "Y" on the FOSYS form (5713-2 Record).

4. TRANSLATION REQUIREMENTS

These are the forms that were impacted by this feature.

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ODA Forms				
Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFIDs for Special and Transparency Features. To activate the PRI CBC with Blank/Zero SFG Screen Index functionality of this feature, the ACT field for OFS ID 1003 must be set to "Y".

SEC. 4B1004: INHIBIT PRINTING OF FC2CF_LTM ASSERT

1. FEATURE DESCRIPTION

The Inhibit Printing of FC2CF_LTM Assert feature is available with the 5E14 and later Software Releases. It is controlled by OFS ID (Optioned Feature System ID) 1004.

This feature allows the 5ESS Switch Owner to control the printing of the assert mnemonic FC2CF_LTM assert. This assert is a manual action assert that prints on the ROP (Read Only Printer) when an auto-activated CF (Call Forward) feature FWDTODN (Forward-to-Directory Number) is invalid for a primary DN (Directory Number) or MLHG (Multi-line Hunt Group) member. The FC2CF_LTM Assert number is 22046 in 5E14 and 5E15, 22146 in 5e16(1), and 22346 in 5E16(2) and 5E17(1).

2. FEATURE ASSIGNMENT

This feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 1004 on the FOSYS form (5713-2 Record) to "Y".

With OFID 1004 active, assert mnemonic FC2CF_LTM will not print when an auto activated CF feature's forward-to-DN is invalid and the call does not forward.

With OFID 1004 inactive, assert mnemonic FC2CF_LTM will print when an auto activated CF feature's forward-to-DN is invalid and the call does not forward.

This feature is an OFFICE feature, and CANNOT be enabled or disabled on individual SMs.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The OFS ID 1004 must be set to "Y" to enable this feature.

SEC. 4B1005: IAM CHARGE NUMBER

1. FEATURE DESCRIPTION

The IAM (Initial Address Message) Charge Number feature is made available as a Software Update for 5E15, 5E16.1, 5E16.2, and 5E17.1. This feature is controlled by OFS (Optioned Feature System) ID 1005.

This feature prevents a 3 digit charge number from being sent in an outgoing IAM. If an incoming IAM has no charge number, and an ASP (Advance Services Platform) LNP (Local Number Portabilty) or SDS (Specific Digit String) trigger is encountered, and the SCP (Service Control Point) does not provide a charge number, and a charge number is derived, this feature prevents this derived charge number from being sent in an outgoing IAM, if the derived charge number is only 3 digits. This 3 digit charge number is allowed in the IAM in case some customers want to keep the existing functionality.

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Option Feature ID (OFID) 1005 is used on an office wide basis to determine whether or not to allow these 3 digit derived charge numbers. If OFID 1005 is active, the 3 digit charge number is prevented from being sent in the outgoing IAM. If OFID 1005 is inactive, existing functionality allows the 3 digit charge number to be sent in the IAM.

If the incoming IAM had a 3 digit charge number, or the SCP provides a 3 digit charge number, then the 3 digit charge number can be sent in the outgoing IAM, regardless of whether or not the OFID is active. This is the existing functionality.

2. FEATURE ASSIGNMENTS

The provisioning for this feature is as follows:

- To activate the feature:
  - Set the ACT field for OFID 1005 to "Y" on the FOSYS form (5713-2 Record) or RC/V (Recent Change View) 8.31.

- To deactivate the feature:
  - Set the ACT field for OFID 1005 to "N" on the FOSYS form (5713-2 Record) or RC/V (Recent Change View) 8.31.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 1005 must have the ACT field on the FOSYS (5713-2 Record) form set to "Y" in order to activate this feature for the office.

SEC. 4B1006: 256K ISUP TANDEM SOLUTION

1. FEATURE DESCRIPTION

The 256K ISUP (Integrated Services User Part) Tandem Solution feature is available with the 5E14 and later Software Releases. It is controlled by OFS ID (Optioned Feature System ID) 1006.

In large capacity tandem offices with over 1.6 million Busy Hour Call Attempts (BHCA) [assume 10% NS800 traffic], some TRFC30 Sections will overflow. The overflow is seen in TRFC30 section 91, Network Services (NS), section 231, Advanced Services Platform (ASP), and section 232 ASP Toll Free (ASPTF). To prevent the overflow, three new TRFC30 sections have been created and replaces the existing sections when OFS ID 1006 is active.

2. FEATURE ASSIGNMENT

This feature is activated by setting the ACT field for OFS ID (Optioned Feature System ID) 1006 on the FOSYS form (5713-2 Record) to "Y".

With OFS ID 1006 off: Existing functionality is used. The following measurements are reported via single precision counters in:

Section 91 - NS (Network Services) Free (ASPTF)
Section 231 - ASP (Advanced Services Platform)

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Section 232 - ASPTF (Advanced Services Platform Toll Free)

With OFS ID 1006 on: Existing TRFC 30 sections is not used. The following measurements are reported via double precision in new TRFC30 sections:

Section 84 - NSN (Network Services New)
Section 85 - ASPN (Advanced Services Platform New)
Section 86 - ASPTFN (Advanced Services Platform Toll Free New)

The TM OSS (Traffic Measurements Operation Support System) must be informed of the change when the OFID is activated.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS Form (5713-2 Record) - This form is used to activate and deactivate optional features. The OFS ID 1006 must be set to "Y" to enable this feature.

SEC. 4B1008: ON-HOOK DATA TRANSMISSION WITHOUT POWER RING

1. FEATURE DESCRIPTION

The feature number for the On-Hook Data Transmission without Power Ring feature is 99-5E-7686. It is controlled by OFID (Optioned Feature ID) 1008 and is made available with the 5E15 FR 4 and later Software Releases.

This feature allows sending an OSI (Open Signaling Interval) to analog CPE (Customer Premise Equipment) whenever an on-hook data transmission via FSK (Frequency Shift Keying) is involked by a subscriber feature (e.g., MSS (message Service System) or ISVM (InterSwitch Voice Messagine)). The OSI is sent when the line is on-hook and when ringing is not applied. This allows the DLCs (Digital Loop Carrier Systems), also called "SLCs" or "slicks" to establish a path to the CPE before FSK data is sent, for example, to the CPE to allow the visual MWI (Message Waiting Indicator) (e.g., lamp light) on the CPE to be lit. In cases where the DLCs do not have a path established, the data will be blocked by the DLCs and will never reach the CPE.

This feature may be configured in one of two modes:

- *"Mostly on"*
  - This mode of operation is achieved by setting a per-office parameter (OFC FSK OSI) to "Yes" (on), and then selectively inhibiting the signaling of OSI to an individual analog line (or groups of lines) via RC (Recent Change) procedures in order to set the per-line control (FSK OSI) to "No" (off).
- *"Mostly off"*
  - This mode of operation (default mode) is achieved by setting a per-office parameter (OFC FSK OSI) to "No" (off), and then selectively activating the signaling of OSI for an individual analog line (or groups of lines) via RC procedures in order to set the per-line control (FSK OSI) to "Yes" (on) as needed.

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This latter mode, "mostly off", is the recommended mode of feature operation to insure minimization of impact to lines that are not served by Univeral DLCs, or which are served by Integrated DLCs that do not need the OSI in order to insure an on-hook data transmission path (e.g., Mode I Integrated DLCs).

2. FEATURE ASSIGNMENT

To activate this feature:

- Set the ACT field to "Y" for OFID 1008 on the FOSYS form (5713-2 Record).
- For offices with most of the lines having this feature active:
  - Set the OFC FSK OSI field on the OFCOPT form (5509 Record) RC/V (Recent Change View) 8.1 to "Y".
- For offices with most of the lines having this feature inactive:
  - Set the OFC FSK OSI field on the OFCOPT form to "N".
- Activate/deactivate the feature for a specific line by setting the FSK OSI field on the LINE/MLHLN form (5109/5111 Records) or RC/V 1.8 to "Y" (activation) or "N" (deactivation). Blank values on these forms/views, indicates that the OFC FSK OSI on the OFCOPT form is a valid value for this line.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FOSYS	5713-2	3	5AS	8.31
LINE	5109	3	1L	1.8
MLHLN	5111	3	1K	1.6
OFCOPT	5509	3	5I	8.1

FOSYS form (5713-2 Record) - This form is used to enable Transparency and Special Features. The ACT field for OFID 1008 must be set to "Y".

LINE form (5109 Record) - This form defines BRCS (Business and Residence Custom Services) Features to a particular customer Telephone Number. Added the FSK OSI field and associated data rules.

MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular MLHG. Added the FSK OSI field and associated data rules.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Added the OFC FSK OSI field and associated data rules.

SEC. 4B1010: IMLT METALLIC A-LINK BLOCKAGE NOTIFICATION

For information on this feature, see Division 2, Section 4A685.

SEC. 4B1012: INHIBIT CGA (CARRIER GROUP ALARMS)

1. FEATURE DESCRIPTION

The Inhibit CGA (Carrier Group Alarms) feature is a Transparency Feature using OFS (Optioned Feature System) ID 1012 that is available with the 5E16(2) FR1 (Feature Release 1) Software Release. The feature number is 99-5E-7816.

This feature provides the 5ESS Switch with the capability to automatically inhibit or allow the reporting of

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CGAs and PM (Performance Monitoring) facility alerts on trunking facilities based on their current trunk provisioning status. The trunk provisioning status of a trunking facility refers to whether or not it has any trunk ports provisioned that are in the assigned state.

The terms "vacancy", "vacancy status", and "vacant" are generally used within the context of this document to refer to a facility's trunk provisioning status. A trunking facility is referred to as vacant if it has no assigned trunking ports provisioned, and non-vacant, if it is provisioned with at least one trunking port in the assigned state.

With reporting allowed, the reporting of CGAs and facility alerts is allowed on facilities regardless of their vacancy status.

The following list highlights the significant aspects of the feature:

- This feature is applicable for the following trunking unit/facility types:
  - DLTU (Digital Line and Trunking Unit),
  - DNU (Digital Network Unit) (DS1 (Digital Signal Level 1) only),
  - PLTU (Packet Line Trunk Unit), and
  - OIU (Optical Interface Unit) (DS1 level only)

  Note that for DNU and OIU, the feature only applies to the DS1 facility level in the hierarchical facility structure associated with the two units. Since DLTU and PLTU only support DS1 level facilities, the DS1 impact is not explicitly mentioned above but is implied. In general, unless explicitly stated otherwise, references to the word "facility" or "facilities" tend to imply DS1 level trunking facilities.
- Non-trunking facilities (RISLU (Remote Integrated Service Line Unit), EAIU (Expansion Access Interface Unit), RSM (Remote Switching Unit) etc..) are always considered to be non-vacant and therefore should be unaffected by this feature.
- Various reporting functions are impacted by this feature. When a CGA or PM event occurs on a vacant DS1 level trunking facility (with reporting inhibited), the following reporting functions are impacted:
  - The various MCC (Master Control Center) pages associated with units which support digital facilities, will not reflect any DS1 level active CGA status.
  - The Switching Module Summary Status Indicator will not have any CGA status contribution.
  - A REPT (Report) CGA message is not generated at the time of a CGA event and if the CGA persists, it is reflected in any future manual or automatic OP (OutPut) CGA output.
  - A REPT FAC (Report Facility) ALERT message is generated at the time of a PM event. However, the PM event will be identified in any future manual OP FAC request. It should be noted however, that any active CGA on the vacant facility will not be reflected in the CGA component of the OP FAC output. Additionally, the OP FAC and REPT FAC are extended to support the reporting of vacancy information (see fifth bullet below).
- With the reporting inhibited, transitions in a facility's vacancy status requires that its current CGA status be re-evaluated and the appropriate reporting actions be initiated.
- An on-demand output report as well as an automatic daily output report which identifies all vacant facilities in the office is required. Note that the reports strictly identify the vacant facilities, and do not explicitly indicate anything about the facilities inhibit status. The current setting of the global parameter

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(Glinhvfac) controlling the CGA and PM reporting for vacant facilities, must be used in combination with the vacancy report to determine a facility's inhibit status.

- The ability to inhibit or allow CGA and PM reports on vacant facilities on an office basis must be provided. Transitions from the non-inhibited reporting state to the inhibited state and vice versa must be supported.

2. FEATURE ASSIGNMENT

- To activate this feature, set the ACT field for the OFS ID 1012 on the FOSYS form (5713-2 Record) to "Y".
- To inhibit the CGA and PM reports on vacant DS1 level trunking facilities, set the INH VACANT FAC field to "Y" or "N" on the OFCOPT form (5509 Record), (RCV (Recent Change View 8.1) to activate or deactivate this capability, respectively.
- Specify the hour of the day in which the daily automatic vacancy report will be generated by setting this time on the VACANT FAC REPT TIME on the OFCOPT form.
- Define DLTU/PLTU/DNU or OIU:
  - for DLTU/DLTU2 unit go to the EQDUP form (5834 Record), RC/V view 20.4.
  - for DNU-S unit go to the EQVT form (5858 Record), RC/V view 20.24.
  - for PLTU unit go to the EQPCTT form (5871 Record), RC/V view 20.27.
  - Insert Trunk Group Member on the TRUNK form (5204 Record), RC/V view 5.5.
- Insert Trunk Group on the TKGRP form (5202 Record), RC/V view 5.1.
- Insert Trunk Group Member on the TRUNK form (5204 Record), RC/V view 5.5.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5I	8.1
FOSYS	5713-2	3	5AS	8.31

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. Added the INH VACANT FAC and VACANT FAC REPT TIME fields.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated by setting the ACT field for the OFS ID 1012 on the FOSYS form (5713-2 Record) to "Y".

SEC. 4B1013: SS7 RELEASE MESSAGE

1. FEATURE DESCRIPTION

The SS7 (Signaling System 7) Release Message feature is a Transparency Feature using OFS (Optioned Feature System) ID 1013 that is available as a 5E16(2) Software Update.

The purpose of this feature is to provide the coding of the location value in the SS7 RELease message when cause value 17 (user busy) is returned. This solution only applies to calls routed to an outgoing trunk

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(PF (Private Facility), MF (Multi-frequency), ISUP (Integrated Services User Part), or PRI (Private Rate Interface) where all members are busy and the final RTI (Route Index)) is provisioned as BUSY. When this option is OFF (Act field for OFID 1013 is set to "N" on the FOSYS form (5713-2 Record), the cause value in the SS7 RELease message is set to 17, and the location value is set to "user (0)". When this option is ON (Act field for OFID 1013 is set to "Y" on the FOSYS form), the location value is set to "local local network (2)" or "transit network (3)".

2. FEATURE ASSIGNMENTS

The provisioning for this feature is as follows:

- To activate the feature:
  - Set the ACT field for OFID 1013 to "Y" on the FOSYS form (5713-2 Record) or RC/V (Recent Change View) 8.31.

- To deactivate the feature:
  - Set the ACT field for OFID 1013 to "N" on the FOSYS form (5713-2 Record) or RC/V (Recent Change View) 8.31.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
FOSYS	5713-2	3	5AS	8.31

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 1013 must have the ACT field on the FOSYS (5713-2 Record) form set to "Y" in order to activate this feature for the office.

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SEC. 4C: SPECIAL FEATURES

SEC. 4C0: SPECIAL FEATURES

1. GENERAL

This section describes the translations needed for Special Features that are not secured and are not transparency features. In the past these features have been referred to as "Field" or "Fast" features. See Division 2, Section 4A for Special Features that are secured. See Division 2 Section 4B for Transparency Features.

The Special Features in the section are organized chronologically, e.g., Divison 2, Section 4C1 is the first special feature documented, Division 2, Section 4C2 is the second feature documented, and so on. The Table of Contents for this section lists the features first in chronological order and then in alphabetical order.

2. ON-LINE INFORMATIONAL SOFTWARE UPDATES

Informational Software Updates, which are available on SCANS (Software Change Administration And Notification System), provide information on features which are released during a Software Update. In addition to being transmitted to users via SCANS, these Informational Software Updates can also be accessed in the 5ESS Switch electronic media documentation. The Informational Software Updates are located on the menu for 5ESS Switch documentation on-line or on CD-ROM.

SEC. 4C1: TDAC (TIMING DELAY FOR ALL CALLS)

1. FEATURE DESCRIPTION

For 5E2 and later Software Releases, TDAC (Timing Delay For All Calls) was introduced to eliminate inter-digit timing and to allow overlap outpulsing for CONFLCT Call Types. Note that this does not eliminate interdigit timing in all CONFLCT Call Type instances on the LDIT form. Also, it does not allow overlap outpulsing on all CONFLCT Call Type instances on the LDIT form.

2. TRANSLATION REQUIREMENTS

The translation entries for TDAC are on the LDIT form (5300 3/5 Record). TDAC applies only to CONFLCT Call Types. The TDAC function depends upon the PREFIX and NBR OF DIGITS entries on the LDIT form. When a non-blank value of PREFIX is entered, call processing assumes that if a call is dialed matching the PREFIX value, then this call is dialed using the number of digits specified in NBR OF DIGITS field. For example:

1. An LDIT form is entered where the NBR OF DIGITS is 10, PREFIX is 1, and CONFLICT RESOLUTIONS ENTRIES are entered for 7- and 10-digit calls.

   The end user dials the following prefix:

   1+

   An end user dialing a 1+ call would be routed using the 10 (NBR OF DIGITS) digit entry; no interdigit timing would be performed and overlap outpulsing would be performed.

   0+

   Interdigit timing would occur with no overlap outpulsing.

   none+ (no prefix)

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Interdigit timing would occur with no overlap outpulsing.

This scenario assumes that 1 + 7 digit dialing does not exist for this digit string. The 0 + scenario is very similar.

2. An LDIT form is entered where the NBR OF DIGITS is 7, PREFIX is "NONE", and CONFLICT RESOLUTIONS ENTRIES are entered for 7- and 10-digit calls.

   The end user dials the following:

   none+ (no prefix)

   An end user dialing a none+ (no prefix) call would be routed using the 7 NBR OF DIGITS entry; no interdigit timing would be performed and overlap outpulsing would be performed.

   0+

   Interdigit timing would occur with no overlap outpulsing.

   1+

   Interdigit timing would occur with no overlap outpulsing.

   This scenario assumes that NONE+ 10-digit dialing does not exist for this digit string.

3. An LDIT form is entered where the NBR OF DIGITS is 7, PREFIX is not entered, and CONFLICT RESOLUTIONS ENTRIES are entered for 7- and 10-digit calls.

   The end user dials the following:

   none+

   An end user dialing a none+ call would be routed using the 7 NBR OF DIGITS entry, no interdigit timing would be performed and overlap outpulsing would be performed.

   0+

   Interdigit timing would occur with no overlap outpulsing.

   1+

   Call would be routed using the 10-digit entry (not NBR OF DIGITS), no interdigit timing would be performed, and overlap outpulsing would occur.

   This scenario assumes that NONE + 10-digit dialing and 1- plus 7-digit dialing do not exist for this digit string.

The TDAC Conflict Resolution Table in Figure 1 represents the result of dialed calls which are interpreted by an LDIT form as Conflict Resolved calls based upon the following:

- the PREFIX entry on the LDIT form;
- the NBR OF DIGITS entry on the LDIT form;
- and the actual dialed prefix by the end user.

The corresponding Recent Change View for LDIT is 9.3.

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STORED PFX (LDIT)	NBR OF DIGITS (LDIT)	DIALED PREFIX	CONFLICT RESOLVED BY
NONE	1 - 15	NONE	Prefix
		1+	Timing
		0+	Timing
1+	1 - 15	NONE	Timing
		1+	Prefix
		0+	Timing
0+	1 - 15	NONE	Timing
		1+	Timing
		0+	Prefix
NULL	1 - 15	NONE	Prefix
		1+	Prefix
		0+	Timing
NULL	NULL	any	Timing

Figure 1 TDAC CONFLICT RESOLUTION TABLE

PFX ASSIGNED (LDIT)	NBR OF DIGITS (LDIT)	PFX DIALED	NBR DIGITS DIALED	CONFLICT RESOLUTION	RESULTING CALL TREATMENT
NONE	7	NONE	7	PREFIX	1
NONE	7	1+/0+	7	TIMING	1
NONE	7	NONE	10	PREFIX	2
NONE	7	1+/0+	10	TIMING	3
NONE	10	NONE	7	PREFIX	4
NONE	10	1+/0+	7	TIMING	1
NONE	10	NONE	10	PREFIX	3
NONE	10	1+/0+	10	TIMING	3

EXAMPLE 1: Two conflict case - Two conflict resolution entries.

7/10 digit conflict for code 416.

PFX ASSIGNED (LDIT)	NBR OF DIGITS (LDIT)	PFX DIALED	NBR DIGITS DIALED	CONFLICT RESOLUTION	RESULTING CALL TREATMENT
NONE	6	NONE	6	PREFIX	5
NONE	6	NONE	7/10	PREFIX	6
NONE	6	1+/0+	7/10	TIMING	1
NONE	7	NONE	6	PREFIX	7
NONE	7	NONE	7	PREFIX	1
NONE	7	1+/0+	7	TIMING	1
NONE	7	NONE	10	PREFIX	2
NONE	7	1+/0+	10	TIMING	3
NONE	10	NONE	6/7	PREFIX	4
NONE	10	1+/0+	7	TIMING	1
NONE	10	NONE	10	PREFIX	3
NONE	10	1+/0+	10	TIMING	3

EXAMPLE 2: General conflict case - more than 2 conflict resolution entries.
6/7/10 digit conflict for code 416.

CALL TREATMENTS

1. Treatment based on 7 digit conflict entry.
2. Results in either misrouted call or vacant number error treatment. Since conflict is prefix resolved call processing collects quantity of digits specified in NBR OF DIGITS field (first 7 digits in this case). Hence if 416-220-1000 is dialed, call processing would attempt termination to 416-2201.
3. Treatment based on 10 digit conflict entry.
4. Partial dial error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (10 digits in this case). However, fewer than 10 digits are dialed.
5. Treatment based on 6 digit conflict entry.
6. Results in either misrouted call or vacant number error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (first 6 digits in this case). Hence if 416-xxxx or 416-xxx-xxxx is dialed, call processing would attempt termination to 416-xxx.

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7. Partial dial error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (7 digits in this case). However, only 6 digits are dialed.

Figure 2 TDAC CONFLICT RESOLUTION TABLE EXAMPLES

SEC. 4C2: MODIFIED CALLING LINE DISCONNECT PROCEDURE FOR FRAUD PROTECTION

This section has been moved to Division 2, Section 4B517.

SEC. 4C3: INCLUSION OF CALLED NUMBER IN LIDB PROTOCOL

1. FEATURE DESCRIPTION

For 5E6 and later Software Releases, the Called Number in LIDB (Line Information Database) Signaling Protocol feature provides the OSPS switch owner with an option to send the called number as part of the information in a LIDB card validation query. When this capability is activated, the called number is included in a LIDB card validation query whenever the called number is available and LIDB is the selected signaling type. To activate this feature for 5E6 and later, the CALLED NBR field on the OSPSOPT form (5424 Record) must be set to "Y". In addition, LIDB and EABS (Exchange Alternate Billing Services) features are required for this feature. See Division 2 Section 3I for more information on those features.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OSPSOPT	5424	3	4Y	8.9, 8.15

2.1 Translations

OSPSOPT form (5424 Record) - This form is used to define the OSPS office option parameters. Only one OSPSOPT form can be entered for an office. To activate this feature, "Y" must be entered in the CALLED NBR field.

SEC. 4C5: STAR (ENCHANCEMENTS FOR SIMULTANEOUS TRUNK CONVERSION VIA AUTOMATIC RECENT CHANGE)

1. BACKGROUND

Prior to this feature, 5ESS Switch CCS7 (Common Channel Signaling 7) conversion functions were performed manually. The enhancements, along with the STAR library program, provide an automated CCS7 conversion process. The automatic CCS7 trunk conversion process between 1A ESS switches will also be extended to any combination of 5ESS and 1A ESS Switching Systems.

2. FEATURE DESCRIPTION

Available with 5E5 and later Software Releases, the STAR Special Feature provides network service personnel with an automated process for converting PTS (Per Trunk Signaling) trunks to the CCS7 (Common Channel Signaling 7) protocol between 5ESS Switches and 1A ESS Switching systems. This automatic trunk conversion process provides positive identification of trunk members to be converted between offices, controls the passing of trunk and office information between the host and remote switches (via standard I/O channel), performs the conversion process by database manipulation, and activates all converted trunk members. The STAR feature can be applied to trunks between any combination of 1A ESS and 5ESS Switches. It allows operating telephone companies to make the conversion quickly and with the full assurance that the process will not interfere with ongoing services. The conversion is done automatically without the need for craft intervention or hands-on involvement. The conversion process can convert up to four trunk members per minute.

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5ESS Switch STAR remote functions are performed by a library program. However, prior to the enhancements provided by this feature, the library program did not have the ability to detect incoming STAR Test Calls outpulsed from the host switch. This enhancement provides two essential operations:

- Detects STAR Test Calls
- Retrieves and sends incoming trunk group and office information to the STAR library program.

3. TRANSLATION REQUIREMENTS

The following form changes apply to 5E8 and later.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LDIT	5300-3	3	3C	9.3
MLDIT	5300-3	3	3C	9.15
RDIT	5300-7/8	3	3H	9.9

3.1 Translations

The Call Type "WETESTC" is added for ODA for 5E8 and later. There are no form changes for 5E5 through 5E7. For 5E5 through 5E7, "WETESTC" must be built via Recent Change. For 5E5 through 5E7, the new destination call type is inserted when doing trunk conversion and should be deleted after conversion is completed. The STAR feature should not be operated during a retrofit or Large Terminal Growth. "WETESTC" information should be deleted when performing a retrofit or Large Terminal Growth.

LDIT form (5300-3 Record) - This form is used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Any code from one to fifteen digits in length may be defined. The LDIT serves as both a "local" and "foreign" area translator.

The LDIT (Local Digit Interpreter Table) is used for further digit interpretation. For line originated calls, the LDIT is used after the PDIT (Prefix/Feature Digit Interpreter Table). For trunk originated calls, the LDIT is used after the INDIT (Incoming Trunk Digit Preliminary Interpreter Table) when the LDIT (Y or N)? filed equals "YWETESTC" was added to the non-conflict CALL TYPE field only and is not available in the conflict resolution tables for LDIT and RDIT. "WETESTC" is the test call associated with the 5ESS Switch Library Programs.

MLDIT form (5300-3 Record) - The Multiple Local Digit Interpreter Table form is similar to LDIT but allows multiple entries of incoming digits to be input when they have common attributes. Conflict or IMPLIED NPA entries are not allowed on the MLDIT form. Entries made on the MLDIT form can only be reviewed on the MLDIT form. The 5300-3 Record incorporates both LDIT and MLDIT entries. For 5E8 and later, the enumeration "WETESTC" was added for the field CALL TYPE. "WETESTC" is the test call associated with the 5ESS Switch Library Programs.

RDIT form (5300-7/8 Record) - The RDIT input form contains information for the translation of the remaining dialed digit strings for digit analysis. The RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request. For 5E8 and later, the enumeration "WETESTC" was added to the non-conflict CALL TYPE field only and is not available in the conflict resolution tables for LDIT and RDIT. "WETESTC" is the test call associated with the 5ESS Switch Library Programs.

3.2 Translation Assignments Needed for STAR

For 5E8 and later, some translation changes are needed at the remote location before this feature can recognize a STAR test call. The following summarizes the translation changes that are needed for this feature at the remote location.

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NOTE: These translation changes must be removed after the trunk conversion.

1. Determine a STAR digit string. The first three digits in this digit string must be unique to ensure that there will be no call processing interaction with existing features or capabilities.

2. Determine the DAS (Digit Analysis Selector) associated with incoming PTS trunk group(s) to be converted. This is ascertained from the TKGRP form (5202 Record) DAS field for PTS trunk group(s) that STAR will convert.

3. Determine the INDIT (Incoming Trunk Digits) and LDIT (Local Digit) associated with incoming PTS trunk group(s) that STAR will convert. This is ascertained from the INC TRUNK PRELIMINARY DIT and LDIT fields on the DAS form (5300-1 Record) associated with the trunk group(s) that STAR will convert.

4. Enter the first three digits of the STAR digit string in the INCOMING DIGITS field on the INDIT form (5309 Record), and enter "Y" in the LDIT filed. This ensures the translation of the STAR digit string will continue in the STAR LDIT.

5. Into the key fields, LDIT and INCOMING DIGITS, on the LDIT form (5300-3 Record), enter the LDIT from the DAS form and the first three digits of the STAR digit string, respectively. Enter "WETESTC" in the CALL TYPE field, "NONCI" in the TYPE OF CI CALL field, a valid route index in the ROUTE INDEX field, and the total number of STAR DIGITS in NBR OF DIGITS field.

6. After the PTS to CCS7 conversion on all designated trunk group(s) are completed, STAR digit translations LDIT and INDIT must be removed to ensure database integrity.

SEC. 4C6: EXCESSIVE MDII ALARM

1. FEATURE DESCRIPTION

For 5E6 and later, the Excessive MDII (Machine Detected Interoffice Irregularities) Alarm feature provides the capability for an office to define the number of MDIIs within a specific time period that will set off either a major or minor alarm. The alarm notifies the maintenance craft that excessive MDIIs have occurred within a certain time interval in the office.

2. FEATURE ASSIGNMENT

This feature is assigned on the OFCOPT form (5509 Record). Three fields define the office parameters for this feature; the time interval for counting MDIIs, the MDII count threshold that will trigger the alarm, and whether the alarm should be a major alarm or a minor alarm.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1

3.1 Translations

OFCOPT form (5509 Record) - This form is used to define the office parameters. The following three fields define the office parameters for the Excessive MDII Alarm feature:

- MDII INTERVAL specifies the time interval in minutes for counting the number of MDIIs.
- MDII THRESHOLD specifies the MDII count threshold that will trigger an alarm.

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- MDII MJR ALARM specifies whether a major or minor alarm should be generated.

SEC. 4C7: ESP (ESSENTIAL SERVICE PROTECTION) BACK-LIGHTING OPTION

1. BACKGROUND

The ESP (Essential Services Protection) feature in the 5ESS Switch is used to ensure that lines designated as essential (hospital, police, fire department, etc.) receive priority originating grade service during periods of excessive overloads. This is accomplished by giving preferred treatment to lines classified as essential over the nonessential lines by the office data. The ESP feature is used to implement LOC (Line Overload Control). When a switch is overloaded by a large volume of originating traffic, nonessential subscribers receive degradation or temporary denial of service, while essential subscribers are given priority service. The ESP feature has already been available on the 5ESS Switch and can be allowed or inhibited. The default state was "inhibited" so that all lines received the same priority on origination during switch overload.

Prior to this Special Feature option, when ESP was allowed, an indicator on the MCC (Master Control Center) page 109 (OVERLOAD) was back-lit yellow and the OVERLOAD indicator in the SSA (Summary Status Area) was back-lit blue indicating an off-normal condition. This original implementation of ESP was not consistent with the guidelines for video attributes on the MCC. Back-lighting yellow normally indicates an inhibit, not an allow. The indicator on MCC page 109 that is back-lit yellow should have been back-lit white which describes a low severity off-normal condition. For offices that always want ESP inhibited, none of the lines would have been desginated as essential. Therefore, allowing ESP will have a null effect and be a low severity off-normal condition.

Some offices preferred to have ESP allowed at all times and wanted the ESP indicators on MCC Page 109 (OVERLOAD) to show an off-normal condition when ESP was inhibited. Other offices preferred not to have ESP allowed and wanted the indicators to remain as they were previously implemented (to show an off-normal condition when ESP is allowed).

2. FEATURE DESCRIPTION

Available with 5E8 and later, the ESP Back-lighting Option Special Feature provides the ability to control how ESP status is indicated on the MCC.

Under the new operation, it is now possible for an office to set ESP allowed to be the normal condition. Then when ESP is allowed, no indicators are changed since this describes the normal condition. When ESP is inhibited, an indicator on MCC page 109 is back-lit yellow and the OVERLOAD indicator in the SSA is back-lit blue. This setting alerts office personnel that an off-normal condition exists. For offices that always want ESP allowed, this is a condition which requires some action. Lines that have been designated with ESP may be impacted if an overload develops.

A new field, ESP NORM ALW, on the OFCOPT form (Record 5509) allows each office to define the normal mode of operation of ESP. The ESP indicators will then show a normal or off-normal condition based on the value of the ESP NORM ALW field and the status of ESP. This feature does not affect the operation of ESP.

The ESP NORM ALW field defaults to "N" defining the normal mode of operation of ESP to be inhibited. If ESP is then set to allow (an off-normal condition), MCC page 109 is changed as follows:

- ESP indicator is back-lit white.
- SSA OVERLOAD indicator is back-lit blue.

If allowed is the normal mode, ESP NORM ALW should be set to "Y". If ESP is then set to inhibit (an

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off-normal condition), MCC page 109 is changed as follows:

- ESP indicator is back-lit yellow.
- SSA OVERLOAD indicator is back-lit blue.

Figure 1 describes how the indicators on MCC page 109 are affected by the value of ESP NORM ALW and the status of ESP.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5I	8.1

3.1 Translations

OFCOPT form (5509 Record) - This form supplies various miscellaneous office options and parameters. A new field, ESP NORM ALW, was added to allow each office to define the normal mode of operation of ESP. The ESP indicators will then show a normal or off-normal condition based on the value of the ESP NORM ALW field and the status of ESP.

MCC DISPLAY		**ESP NORM ALW = N (inhibit is normal)**		**ESP NORM ALW = Y (allow is normal)**	
PAGE INDICATOR	**TERMINAL**		**ESP INHIBITED**	**ESP ALLOWED**	**ESP INHIBITED**
MCC PAGE 109 ESP Indicator	Color	Back-Lit White	Not Back-Lit	Not Back-Lit	Back-Lit Yellow
	Black/White	Back-Lit White	Not Back-Lit	Not Back-Lit	Back-Lit White
SSA OVERLOAD	Color	Back-Lit Blue	Not Back_lit	Not Back-Lit	Back-Lit Blue
	Black/White	Back-Lit White	Not Back-Lit	Not Back-Lit	Back-Lit White

Figure 1 ESP BACK-LIGHTING OPTION TABLE

SEC. 4C8: FTS-2000 INTERCHANGEABLE NUMBERING PLAN AREA

1. FEATURE DESCRIPTION

NPAs (Numbering Plan Area), also referred to as "area codes", were represented by 3-digit values in the following format:

- first digit: 2 - 9
- second digit: 0, 1
- third digit: 0 - 9

The pool of possible NPAs is rapidly being used up.

For 5E9(1) and later, to accommodate the need for a large pool of NPAs, the second digit was increased to 0 - 9.

1.1 Routing Calls Before INPA

A query to the NCP (Network Control Point) database at the FTS-2000 ACP (Action Point) may have resulted with the NCP returning an APN (Action Point Numbering Plan) routing number. The NCP indicated that the APN routing number was to be translated in the POTS routing domain. Both APN numbers and NANP (North American Numbering Plan) numbers cannot co-exist in the POTS routing domain. If it had been decided to egress a call with an APN routing number to a 4ESS Switch in the ASN, routing could be provisioned at the FTS-2000 egress switch to delete the APN digits and prefix NANP digits. The NANP call should have been successfully routed in the POTS routing domain (which was

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returned by the NCP) to the 4ESS switch.

1.2 Routing Calls After INPA

After INPA is provisioned, a query to the NCP database at the FTS-2000 ACP may result with the NCP returning an APN routing number. The NCP indicates that the APN routing number is to be translated in the DEV (Dedicated Egress Voice) routing domain. Both APN numbers and NANP numbers cannot co-exist in the POTS routing domain. If it is decided to egress a call with an APN routing number to a 4ESS Switch in the ASN, routing can be provisioned at the FTS-2000 egress switch to delete the APN digits and prefix NANP digits. The NANP call will be terminated at the 4ESS Switch since the 4ESS Switch will attempt to translate the NANP number in the DEV routing domain (which was returned from the NCP and passed to the 4ESS Switch).

When the digits of a call are changed from one dialing plan (APN) to another (NANP) by provisioning (deleting and prefixing of digits), a provisionable method of making corresponding changes in the routing category/dialing plan is necessary.

A RTE CAT field on the MCRTIDX form (5304 Record) provides the ability to change the routing category (i.e. POTS, Dedicated Egress, International Outbound, etc) of the call to correspond to changes made to the Called Number via deleting and prefixing of digits on this same record. The routing category is passed between toll/leased network offices in the RII (Routing Information Indicator) parameter of the CCS7 ISUP IAM. The routing category infers the dialing plan to be used. The 5ESS Switch maps the routing category to a specific DAS (Digit Analysis Selector). The 4ESS Switch maps the routing category to a specific routing domain.

If RTE CAT is set to one of the values for that field, then the routing category for the call is to be overwritten with the specified routing category.

2. FEATURE ASSIGNMENT

See Division 2, Section 3E, OSPS 5ESS Switch Enhancements for more information on the OSPS INPA feature for 5E9(1).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MCRTIDX	5304	3	3Q	10.4
OFCOPT	5509	3	5I	8.1
SPABS	5319	3	3AF	10.20
SPAENXX	5320	3	3AG	10.21
TKGRP	5202	3	2A	5.1

MCRTIDX form (5304 Record) - This form is used to determine routing for various BRCS capabilities. The RTE CAT field was added for this feature to allow the routing category for the call to be overwritten with a specified routing category.

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The field OLDEST RELEASE was added for the FTS-2000 INPA feature. This field identifies the oldest (least recent) Software Release currently being run on any switch which networks into this switch. This feature cannot be active on this switch until all the switches on the network are operating on the 5E9(1) Software Release, i.e. the entry in this field is 901.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The new field, RTE NBR PLAN, was added for the FTS-2000 INPA feature. This field indicates the type of numbering plan to use for

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directly connected incoming or two-way trunks entered in the DIR CON DN field.

The following forms were updated to reflect expanding the range of the middle digit of the NPA code from 0/1 to 0 - 9.

- SPABS form, 5319 Record
- SPAENXX form, 5320 Record

SEC. 4C9: CALLING PARTY DISCONNECT INDICATION

This section was moved to Division 2, Section 4B515.

SEC. 4C10: LIMITED INTRAGROUP INCOMING CALLING LINE IDENTIFICATION

1. FEATURE DESCRIPTION

Available with 5E5 and later, LIGI (Limited IntraGroup ICLID (Incoming Calling Line Identification)) is a Special Feature, provisionable on a per-switching-office basis and uses OFS ID 504.

For 5E5 and later, CND (Calling Number Display) is provided to ISDN lines with display capability and to analog lines with LASS features and a display unit. LIGI restricts the ICLID CND to calls within the same Centrex Business group; any call to an ICLID customer that is originated outside their Centrex business group is marked "Private". In addition, all calls to lines which do not belong to a Centrex Business group will be marked as "Private". A Centrex Business Group is defined as lines that share a common TGID (Terminal Group Identifier).

Per-call privacy and the global office parameter to disable CND take precedence over LIGI. Per-call privacy is assigned to lines with features such as /DIDNP (Per-Call TN Privacy), /DIDLX (Deluxe Display Feature), etc. The CND office parameter is the field DN PRIVACY on the OFCOPT form (5509 Record).

1.1 Calling Scenarios

Several examples of LIGI call scenarios follow. In the examples, LIGI is assumed to be enabled, and for purposes of illustration, the following lines are assumed to exist:

220-0000: ISDN with display, Terminal Group 1, /LIDLXA

220-0001: ISDN with display, Terminal Group 1, /LIDLXA

220-0002: Analog line, Terminal Group 1,

979-0000: ISDN with display, Terminal Group 2, /LIDLXA

357-0000: POTS Analog line, not in a Terminal Group

879-0000: ISDN line with display, not in a Terminal Group, /LIDLXA

220-1030: Analog line with display unit, Terminal Group 1, /LIDLXA

653-2000: Analog line with display unit, Terminal Group 3, /LICNDP, /LAC1, /LAR1

653-3000: Analog line with display unit, not in a Terminal Group, /LICNDP, /LAC1, /LAR1

Example 1:

220-0000 calls 220-0001.
The calling number is displayed at 220-0001 because both lines are members of the same terminal group.

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Example 2:

220-0000 calls 220-0001 while invoking per-call privacy.
The display on 220-0001 is marked "Private" since per-call privacy takes precedence over LIGI.

Example 3:

220-0000 calls 220-0002.
The calling number is not displayed at 220-0002 because the terminating party does not have display capability.

Example 4:

220-0000 calls 979-0000.
The display on 979-0000 is marked "Private" because the call originated from outside the called number's terminal group.

Example 5:

220-0000 calls 879-0000.
The display on 879-0000 is marked "Private" because the called number is not in a terminal group, and therefore is not part of a Centrex Business group.

Example 6:

220-0002 calls 220-0000.
The calling number is displayed at 220-0000 because both lines are members of the same terminal group.

Example 7:

357-0000 calls 220-0000.
The display on 220-0000 is marked "Private" because the the originator is not in a terminal group, and therefore is not part of a Centrex Business group.

Example 8:

220-0000 calls 220-1030.
After the first ring, the calling number is displayed at 220-1030 on the analog display unit because both lines are members of the same terminal group.

Example 9:

357-0000 calls 220-1030.
The analog display unit on 220-1030 shows "Private" because the originator is not in a terminal group, and therefore is not part of a Centrex Business group.

Example 10:

LASS auto-recall.
653-2000 calls 653-3000; the call is not answered. 653-3000 sees "Private" on the analog display unit because the lines are not in the same terminal group. 653-2000 goes on hook.

653-2000 goes off hook, dials LASS AR (auto-recall) code. 653-3000 rings and sees "Private" on the analog display unit; the call is not answered. 653-2000 goes on hook.

Example 11:

LASS auto-recall with camp-on.
653-2000 calls 653-3000; the call is not answered. 653-3000 sees "Private" on the analog display unit

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because the lines are not in the same terminal group. 653-2000 goes on hook.

653-3000 goes off-hook (becomes busy). 653-2000 goes off-hook and dials LASS AR code, receives camp-on announcement, and goes on hook.

653-3000 goes on-hook (becomes idle). 653-2000 receives ringback and sees 653-3000 on the display unit because this was the number that was originally dialed.

653-2000 goes off-hook. 653-3000 rings and sees "Private" on the analog display unit.

Example 12:

LASS auto-callback.
653-2000 calls 653-3000; the call is not answered. 653-3000 sees "Private" on the analog display unit because the lines are not in the same terminal group. 653-2000 goes on-hook.

653-3000 goes off-hook and dials LASS AC (auto-callback) code. 653-3000 sees "Private" on the analog display unit. 653-2000 rings and sees "Private" the analog display unit

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
FOSYS	5713-2	3	5AS	8.22

FOSYS form (5713-2 Record) - This form is used to administer OFS (Optioned Feature System) bits for Special and Transparency Features. OFS ID 504 must have field ACT on the FOSYSform (5713-2 Record) set to "Y" to activate this feature forthe office. LIGI is provisionable on a per-switching-office basis.

SEC. 4C11: INTERCHANGEABLE NUMBERING PLAN AREA

1. BACKGROUND

NPAs (Numbering Plan Areas), also referred to as "area codes," are represented by 3-digit values in the following format:

- first digit: 2 - 9
- second digit: 0 - 1
- third digit: 0 - 9

This pool of possible NPAs is rapidly being depleted, and a larger pool of NPAs is needed.

2. FEATURE DESCRIPTION

Available with 5E8 and later, the (INPA) Interchangeable Numbering Plan Area Special Feature has feature number 99-5E-1023. This feature accommodates the need for a larger pool of NPAs by expanding the range of the second digit of NPAs from 0 - 1 to 0 - 9.

3. TRANSLATION REQUIREMENTS

The following forms were updated to reflect expanding the range of the middle digit of the NPA code from 0 - 1 to 0 - 9.

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
CTTU	5518	3	5R	14.4
INDIT	5309	3	3V	9.5
ISDNOPT	5941	5	5B	8.1

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LASSCK	5946	5	5G	8.19
LASSPFX	5947	5	5H	8.20
LDIT	5300-3/5	3	3C	9.3
NOC	5501	3	5A	8.2
OFCOPT	5509	3	5I	8.1
ONPA	5312	3	3Y	8.8
ROTL	5512	3	5L	14.2
SCRNRNG	5212	3	2N	7.5
TKGRP	5202	3	2A	5.1
TLWS	5511	3	5K	14.3

SEC. 4C12: CONTROL OVER MF OUTPULSING LEVEL

1. BACKGROUND

Without this feature, the MF (Multifrequency) loss on trunk outpulsing is set to -10dB and is not changeable.

2. FEATURE DESCRIPTION

Available with 5E7 and later, the Control Over MF Outpulsing Level Special Feature has feature number 99-5E-1405. This feature provides control over the MF outpulsing loss on a per-trunk basis. The additional loss can be specified on the TRUNK form (5204 Record) in 1dB increments over a range of 0 to 7dB. This will provide a net loss range of
-10dB to -17dB. This feature only applies to trunks having the direction of 2-way or outgoing and outpulsing type of MF. Therefore, TRK DIR must be "2W" or "OUT" and OUTPLS type must be "MF" on the TKGRP form (5202 Record).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
TRUNK	5204	3	2C	5.5

TRUNK form (5204-1/2/3 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. A new field, MF LOSS, was added to allow for control over the MF outpulsing loss on a per-trunk basis. The MF outpulsing loss can be specified in 1dB increments over a range of 0 to 7dB. This will provide a net loss range of -10dB to -17dB.

SEC. 4C13: OSPS COMPIS CALL SERVICING INFORMATION DELIVERY PLATFORM

1. BACKGROUND

The OSPS operator terminal accesses databases via packet switching provided by the 5ESS Switch. These databases provide a variety of information to the operator. Prior to the COMPIS Call Servicing Information Delivery Platform feature, the interface between the database to the 5ESS Switch was through a DII (Direct ISDN Interface) Model 7B connected to an OSPS XDB (External Database) port. The DII interface supports either 9.6 KB or 19.2 KB. This feature replaces the DII with a ADTRAN ACT1 1241 channel bank, allowing transmission rates up to 64KB.

The AMLB (Automated Multileaf Bulletin) capability is derived from the MLB (Multi-leaf Bulletin) which was a hard copy binder containing frequently used information of an emergency or general nature such as hospital telephone numbers, emergency service telephone numbers and area codes used by the TSPS operators. The AMLB system is a computer based database system containing the same sort of information as the MLB and is accessed using the same OSPS terminals that handle Toll and Assist operator calls.

Prior to this feature, the COMPIS (Computer Information System) was co-located at each of the Toll and Assist switches. The CSIDP (Call Servicing Information Delivery Platform) special feature which replaces the COMPIS system is centrally located in Colorado with Toll and Assist sites remotely accessing the

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system through T1 lines.

2. FEATURE DESCRIPTION

For 5E8 and later, the AMLB CSIDP (Call Servicing Information Delivery Platform) special feature allows a database vendor to interface with an OSPS switch directly at rates of 64KB or 56KB. This is accomplished through an ADTRAN ACT1 1241 channel bank connected to OSPS XDB (External Database) ports (DSLs).

Because the CSIDP is being remotely connected to the switch, the DII 7B is being replaced with the ADTRAN channel bank, which has a high speed board that can run at rates up to 64KB. This feature is supported on either an ISLU (Integrated Services Line Unit) or on a RISLU (Remote ISLU). With this configuration, the number of virtual circuits over the XDB can be increased from 32 to 48.

3. FEATURE ASSIGNMENT

This special feature provides a standard X.25 interface at a rate of 56KB or 64KB. The rate of the XDB ports is assigned in the RATE field on the AMLBDSL form (5447 Record)

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AMLBDSL	5447	3	4AV	21.34

AMLBDSL form (55447 Record) - This form is used to collect data for the OSPS packet switching DSL. The RATE field allows the B1 channel of an OSPS XDB port to support rates of 56KB and 64KB on an ISLU. 64IKB or 56KB are the only rates allowed on the RISLU.

SEC. 4C14: OSPS LESSON PRESENTATION SYSTEM

1. FEATURE DESCRIPTION

The LPS (Lesson Presentation System) feature is available with 5E9(1) and later Software Releases and provides OSPS operator training for a Conversant® processor attached to the 5ESS-2000 Switch. Each Conversant LPS processor uses eight IPIBs (Intelligent Personal-computer Interface Boards) to connect to the OSPS ports on the switch. Multiple LPS processors may be installed on a switch. Operators can access training from any position by logging-in to a pre-defined training serving team which connects to the LPS processor.

The LPS feature also supports database training (e.g. COMPIS) and allows lesson updates to be electronically distributed to the offices.

A training session is established at any position by logging-in to one of the special training logins associated (via office data) with a training serving team. The switch recognizes the training login and notifies the terminal that this is a training session. The terminal then places a packet-switched call (ISDN D-channel) to the LPS processor by way of a Multi-Line Hunt Group.

When the LPS computer receives the call, it logs-in to OSPS and establishes a conference connection (via the OSPS operator-to-operator conference feature) with the originating terminal. This establishes an ISDN B-channel (voice) link between the terminal and the LPS processor, allowing LPS voice files to be played to the trainee, and trainee voice responses to be detected at the LPS system.

When the trainee plugs out at the terminal, the training session is terminated and the terminal-to-LPS links are torn down.

1.1 Hardware Resources

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An additional OSPS port is required at the ISLU for every training position.

PH3 protocol handlers are required for inter-SM packet switched calls. LPS makes use of ISDN D-channel packet switching, therefore, PH3s are needed.

Each LPS port attached to an SM uses one additional time slot when connected to a position for training.

2. FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for the LPS feature.

- The LPS training serving team is defined on the STINFO form (5402 Record).
- The operator logins used for LPS training are assigned on the OSPSOA form (5403 Record).
- The database for the training auto-login feature is defined on the OPDBPARM form (5434 Record). The TERM TYPE field should be set to "TRAINER" for the LPS feature.
- The external databases for training and the LPS serving team are defined on the OPEXTDB form (5435 Record).
- The Hundreds group for the Multi-Line Hunt Group is defined on the HGRPAS form (5115 Record).
- The Multi-Line Hunt Group for the LPS ports is defined on the MLHG form (5110 Record).
- The LPS ports are defined on RC View 21.34 (5447 Record). This record is used to collect data for OSPS external data base DSLs. The following fields were added to include the LPS port definitions for the LPS feature.
  - The LPS PORT field specifies whether this port is used by the adjunct processor of the LPS (Lesson Presentation System) feature. If so, this port cannot be used as an operator port on the switch.
  - The MLHG field specifies the D-channel packet Multi-Line Hunt Group number. This field must equal an MLHG number on the MLHG form (5110 Record). Also, this field must have a LISTED TN and HIGHEST LISTED TN entered and an MLHG feature entered which has been defined on the MLHGFD form(5604 Record) with a HUNT TYPE of "PSUCD".
  - The DPKT TERM field specifies the D-channel packet Multi-Line Hunt terminal number. This is used to uniquely identify a member in an MLHG that represents a packet end-point.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OPDBPARM	5434	3	4AI	27.30

OPDBPARM form (5435 Record) - This record defines the database and X.25 protocol parameters necessary to establish a session to an external data base operator's VDT. The parameters allow a call to be made to the database; a "virtual" event over a real "link". A TERM TYPE of "TRAINER" is required for the LPS feature.

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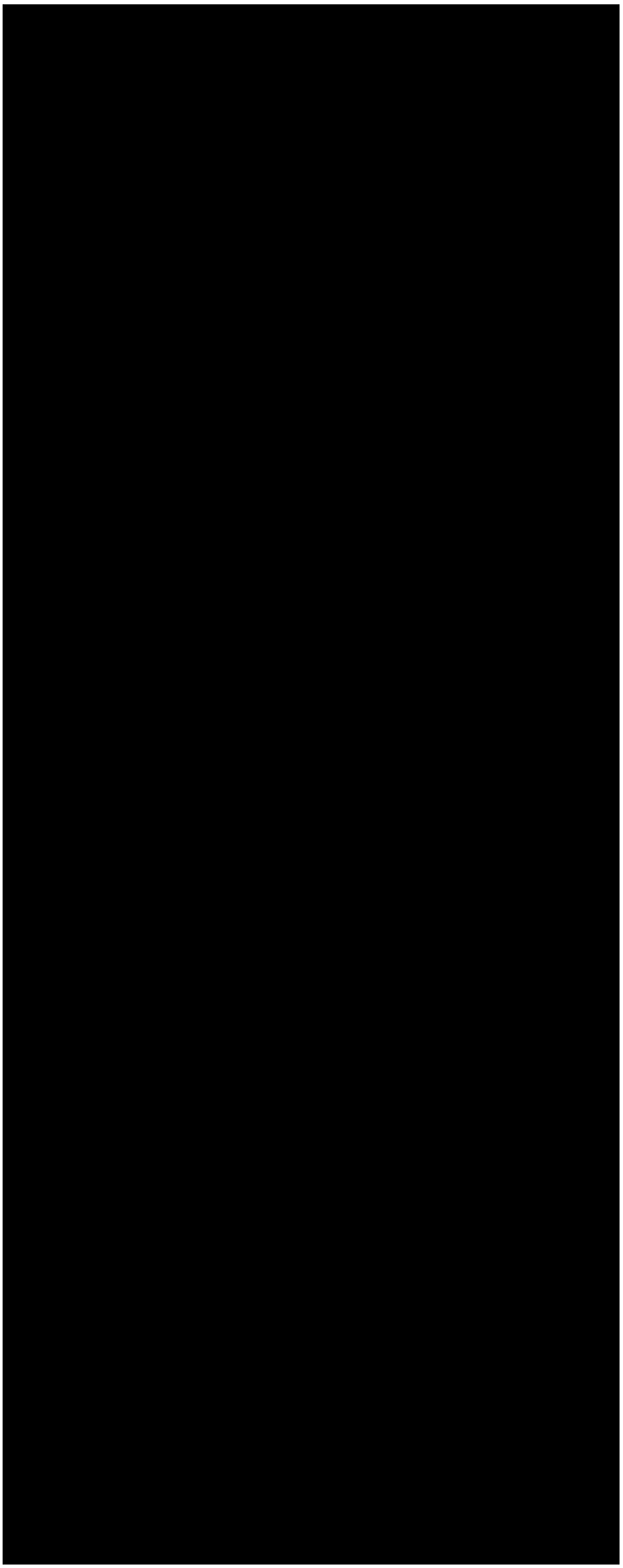

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Figure 1 LPS ASSIGNMENT FORM FLOW

SEC. 4C15: AUTOMATIC TERMINAL SETUP

1. FEATURE DESCRIPTION

The ATS (Automatic Terminal Setup) feature is available for 5E9(1) and later Software Releases. Its feature number is 99-5E-1239.

When requested by a Standard BRI (Basic Rate Interface) terminal, ATS downloads from the switch to the terminal certain parameters that are essential for terminal operation on a National ISDN (standard) BRI. A terminal can request a parameter download after initialization of layer 3, after it has been notified by the switch that a service order change has been completed, or at any other time during the life of the service when the user or repair craft deems necessary.

Parameters that are downloaded include DNs (Directory Numbers), bearer capabilities per DN, call reference busy limit per call type, DN appearance IDs, CACH EKTS (Call Appearance Call Handling Electronic Key Telephone Service) CA map per DN, intercom call appearance map per intercom group, FA/FI (Feature Activator / Feature Indicator) map, and FA/FI service descriptions.

The goal of this feature is to minimize the number of steps the user or installer must take to establish service. Downloadable and non-downloadable terminals may be mixed on an interface.

The ATS feature is available in Software Releases 5E9(1) and later in support of NI-2 (National ISDN 2) to all terminals on standard BRIs. It is not a provisionable feature, nor is it supported on the custom BRI. ATS is provided in the SM only.

2. TRANSLATION REQUIREMENTS

This feature has no data impact.

SEC. 4C16: ENHANCED INTERFACE TO MLT (MECHANIZED LOOP TESTING) FOR TESTING LINES

1. FEATURE DESCRIPTION

The Enhanced Interface to MLT for Testing Lines is a special feature which has the AT&T feature number 99-5E-1458.

Available with 5E8 and later, this special feature provides information to the IMLT-2 (Integrated MLT-2) system regarding resource blockage failure reasons preventing the setup of a complete metallic path connection to lines terminating on the 5ESS Switch or lines served by digital loop carrier systems, i.e. SLC (Subscriber Loop Carrier) systems.

This feature also changes the actions of the switch for an Integrated SLC line when the DPT (Diode Protocol Test) set fails its testing during path setup, including the bypass pair to an RT (Remote Terminal). Information is again provided to the IMLT-2 system if the new actions verify that path setup failures are occurring because of the bypass pair or the internal switch metallic network. Such information enables the IMLT-2 system to produce additional displayed codes called VER codes to the IMLT-2 user. The additional VER codes provide more detailed information on the status of the metallic path setup than what is currently being supported.

The IMLT-2 system allows the user, such as the Automated Repair Service Bureau craft, to request the testing of a line terminating on the 5ESS Switch or served on an SLC system. The request arrives at the switch in a message over a data link from the DCN (Data Communication Network). The 5ESS Switch attempts to set up the metallic path to the line being requested. This setup includes allocation and operation of the appropriate resources in the switch metallic network. Failures in path setup may occur

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because of resource contention or resources removed from service. Upon failure, the switch returns a general metallic network failure code in a response message to the IMLT-2 system. The system converts the code into a general VER code failure.

This feature returns more specific resource failure codes back to the IMLT-2 system so that the user can accurately identify the resource blockage in the network and address the problem as switch maintenance or engineering concerns. IMLT-2 system software has been modified to accept these new resource failure codes and converts them into new VER codes. The new failure codes are transparent to IMLT-2 software versions that do not support this feature or have not been modified to recognize these codes.

The failure reasons that this feature detects are as follows:

- GDXC (Gated Diode Crosspoint Compensator) unavailable which indicates that all of these hardware units are busy or out-of-service
- MA (Metallic Access) Pack unavailable which indicates that the MSU (Metallic Service Unit), non-modular or modular, switching matrix cannot interconnect the desired devices because the MA Pack is out-of-service
- MTB (Metallic Test Bus) unavailable which indicates that a specific device and the MTB serving it are busy or out-of-service
- MAB (Metallic Access Bus) Junctor unavailable which indicates that the MSU switching matrix cannot interconnect the desired devices because the MAB interconnect paths are all busy
- MTIB (Metallic Test Interconnect Bus) unavailable which indicates that the MSU switching matrices cannot interconnect the desired devices because the MTIB interconnect paths are all busy
- Protocol Circuit unavailable which indicates that the MTIB path to the Protocol Circuit is unavailable or all of the Protocol Circuit hardware units are busy or out-of-service
- DCTU (Directly Connected Test Unit) port routing failure which indicates that a DCTU port cannot be accessed, e.g. all of the PMU (Precision Measurement Units) are out-of-service
- MTB to PGTC (Pair Gain Test Controller) port unavailable which indicates that the PGTC port and the MTB serving it are busy or out-of-service
- MTB to PGTC port unequipped which indicates that there is no PGTC accessible to this DCTU
- Metallic path setup to PGTC failed for "other" reasons which indicates that the setup to a PGTC failed for reasons other than those stated in the two previous items

Path setup also involves running a set of tests, the DPT, from the MMSU (Modular Metallic Service Unit) or non-modular MSU (non-modular MSU is not supported in the 5E9(2) Software Release), to the testing equipment, DCTU, and from the MSU to the line under test to ensure the integrity of the metallic path being established; i.e., path is free of tip/ring reversals and battery/ground faults. If the requested line is served by an SLC system, a bypass pair or MTP (Metallic Test Path) is used to connect the switch to the line located at an RT. Failures, when running DPT tests toward the requested line, result in a denied request to access the metallic network and a general failure code returned in the response message sent back to IMLT-2. These actions are taken regardless whether the failure occurs externally on the MTP connection or internally within the switch metallic network.

The existing switch input message, "ALW:RTMTBOVR", overrides the failure actions for a failure on a continuity test on the connection from the MSU to the SLC line located on an RT and allows metallic path setup to continue despite possible MTP or internal switch problems.

This feature will not support the "ALW:RTMTBOVR" input message in overriding the DPT continuity test

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failures for IMLT-2 metallic path setups. The input message will be accepted, if the message is entered, but it will be ignored. The switch actions provided by this feature will be used instead. These switch actions are discussed in the next few paragraphs.

This feature changes the switch actions when a DPT test failure is encountered on a SLC line. Instead of denying metallic access and sending a failure in the response message, the switch saves the DPT test failure condition from the first DPT test and initiates another metallic path setup, except that this setup runs the DPT test toward the line only to the TBCU (Test Bus Control Unit) instead of to the RT. This second DPT test narrows down the location of the problem because the test is now being run internally in the switch.

If the second setup successfully completes, then the problem is external to the switch on the MTP connection. The switch allows metallic access, and the user may begin testing the requested line. The saved failure condition from the first DPT test is returned to IMLT-2 in the access response message. The IMLT-2 software has again been modified to accept these failure codes and converts them into new VER codes which indicate to the user that a faulty MTP exists. Again, these failure codes are transparent to IMLT-2 software versions that do not support this feature or have not been modified to recognize these codes. The following MTP failure conditions from the DPT tests are recognized by this feature:

- DPT to RT detected lack of continuity
- DPT to RT detected a short
- DPT to RT detected ground fault
- DPT to RT detected foreign voltage

Metallic resource allocation or operation failures on the second setup are handled similarly to resource failures on the first setup as described above. A failure during DPT tests on the second setup indicates that the initial test failed due to an internal switch problem within the metallic network. In this case, the failure is caused by an MTB; and the MA Pack, on which the MTB is located, has its internal failure count pegged. If this count exceeds a predetermined threshold, then the MA Pack is taken out of service by the switch.

The second DPT failure would cause metallic access to be denied as well, and a failure code indicating that the DPT to TBCU failed is returned in a response message to the IMLT-2 system. The system displays this condition as another new VER code.

2. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.This special feature is not secured or optioned.

SEC. 4C17: SPECIALIZED HANDLING FOR 700 CALLS TEST CALL

1. FEATURE DESCRIPTION

Specialized Handling of 700 Calls Test Call Feature is available for 5E8 and later. This capability does not have a feature number.

This feature permits the external vendor system providing the Specialized Handling for 700 Services (also known as Easy Reach 700) to place its associated CPDL (Call Processing Data Links) in the test state (5ESS Switch port state IS TEST) remotely. The vendor also has the capability to restore the CPDLs from test to active. In the test state, live traffic is not assigned to the CPDLs. Test calls can be placed from the 5ESS Switch and is assigned to the CPDLs that are in the test state. Test calls is identified by data entered on SERVDATA form (5466 Record) in EIS APPL CODE, the application code field. Test calls are identified by adding 512 to the desired value of this field, e.g., if the application code is 17, a test call would have the application code 529.

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2. FEATURE ASSIGNMENT

Data must be entered on the SERVDATA form to place test calls. Test calls may be placed in the following two ways.

1. A dedicated test trunk group can be defined, and/or
2. Dialed digits can be used to identify test calls on trunks carrying live traffic.

In either case, a new SVC ID, which is specified on the SERVDATA form, must be inserted with 512 added to the desired value for the application code field, EIS APPL CODE. Therefore, if the required application code value is 17, then 529 would be entered in the field to identify the call as a test call. The 5ESS Switch recognizes this as a test call and subtracts 512 from the application code before it forwards this information to the external vendor system. Call type determination information must be entered on ACDCTP/ACDPOL forms (5412-(A-F) Record) based on whether the dialed digits or incoming trunk group is used to identify the test calls. In either case, the assigned CALL TYPE must be specified as the SVC ID defined for test calls.

The external vendor system controls putting the CPDL into the test state, therefore, the EIS (External Information System) software must be installed before this feature can be used.

For more information on Specialized Handling for 700 Services, see Division 2, Section 4A69 and Section 4A89.

SEC. 4C18: ASP/SSP800 INTERWORKING

1. BACKGROUND

Prior to this feature, the interworking between ASP (Advanced Service Platform) and SSP800 (Service Switching Point) allowed the following transitions between triggers:

Trigger Transitioning	
From Trigger	**To Trigger**
SSP800	ASP
ASP	ASP

2. FEATURE DESCRIPTION

The ASP/SSP800 Interworking is a special feature having an AT&T feature number 99-5E-1150.A.

Available with 5E9(1) and later, this feature allows the following trigger transitioning:

Trigger Transitioning		
From Trigger	**To Trigger**	**To Trigger**
SSP800	ASP	
ASP	ASP	
ASP	SSP800	
*SSP800	ASP	SSP800

NOTE: *Although SSP800 to SSP800 trigger transitioning is not allowed, this special feature does allow multiple SSP800 triggers on a single call if an ASP trigger intervenes.

This feature allows the transition from ASP to SSP800 within the processing of a call. Therefore, in response to an ASP Release 0 or ASP Release 0.1 protocol query, the SCP (Service Control Point) may return a routing message specifying the use of the LEC/Pseudo Carrier and a routing number that translates to a Number Services Code (i.e., an SSP800 number). In this case, the SSP800 feature will be invoked and an SSP800 query will be sent to the appropriate SCP.

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Prior to this feature, an attempt to return such a response to an ASP query would have resulted in error treatment on the call. The ability to transition from SSP800 to ASP is an existing capability.

Except for cases specifically stated below, the individual ASP and SSP800 features continue to operate independently with no impact on each other. For a detailed description of the ASP feature, see Division 2, Section 4A51 for 5E6 - 5E8 and Divison 2, Section 4A126 for 5E9(1) and later and AT&T 235-190-125, *Advanced Services Platform, Release 0.1A* and AT&T 235-190-126, *Advanced Services Platform, Release 0.1B*. For a detailed description of the SSP800 feature, see Service Switching Point 800 Number Service Feature section of AT&T 234-190-120 *Common Channel Signaling Service Features*. For information on SSP800 translations, see Division 2, Section 1X.

The following service scenario describes a possible service which would require the functionality provided by this special feature. In this example, a family subscribes to an Outgoing Call Restriction feature which ensures that their teenage children are not allowed to dial 900 or 976 numbers. The family needs to call an 800 number to reach a department store's Customer Service. The OHD (Off-Hook Delay) trigger assigned to their line is encountered on any call origination and since the 800 digits are not provisioned to escape from ASP, the SCP is queried to determine if the call should be allowed. Upon determining that this 800 call may be made, the SCP instructs the switch to go ahead and route the call. Thus, the transition from ASP to SSP800 is required.

2.1 Serial Triggering

Serial triggering is an ASP term referring to the multiple ASP triggers that may be encountered in a single call resulting in multiple queries to the SCP. The first trigger may be any of the defined ASP subscribed or non-subscribed triggers and the subsequent (serial) triggers may be 3/6/10/N11 triggers or TATs (Terminating Attempt Triggers). See section 3 of AT&T 235-190-126 *Advanced Services Platform, Release 0.1B* for a detailed description of the ASP serial triggering.

With the release of this special feature, when SSP800 is detected on the digits specified in the routing response to an ASP query, the SSP800 trigger will also be considered a serial trigger. It is counted towards the ASP Serial Triggering limit. In addition, if SSP800 were the first trigger encountered on the call and a transition were made to ASP, it too would be counted towards the ASP Serial Triggering limit. Prior to the release of this special feature, this first SSP800 trigger would not have been counted.

If the SSP800 trigger causes the ASP Serial Triggering threshold to be exceeded, the call in progress will receive final treatment.

- ***NOTE:*** If during serial triggering a call encounters switch based call forwarding, the serial triggering count is restarted. In addition, if the call is routed to another office the serial triggering count would be restarted. This conforms to the existing ASP serial triggering behavior.

The contents of the SSP800 Query will be impacted by the previous ASP query(s) as follows:

SSP Query Impact

SSP800 Query	Populated From
Digits (Dialed)	Routing Number from ASP R0 response or Called Party ID from ASP R0.1 response
Digits (ANI)	Billing Number from ASP R0 response or AMA Charge Number from ASP R0.1 response or Billing Number associated with originator if not populated in any preceding ASP responses
Originating Station Type	Originating Station Type from ASP R0 response or Charge Party Station Type from ASP R0.1 response or

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	Originating Line Information of the originating station, if not populated in any preceding ASP responses.

The contents of the ASP Query will be impacted by the previous SSP800 query as follows:

SSP Query Impact	
ASP Query	**Populated From**
Called Party Number - ASP R0 or Called Party ID - ASP R0.1	Routing Number from SSP800 response Digits (ANI) - ASP R0 or Charge Number - ASP R0.1
Originating Station Type - ASP R0 or Charge Party Station Type - ASP R0.1	SSP800 ANI II/OLI value 24 (translated)

The ASP feature will continue to use the SCP DAS when translating the digits returned in the ASP routing response message.

2.2 Feature Interactions

No additional feature interactions, limitations or restrictions are specified by the ability to transition from ASP to SSP800. In particular, existing pre-query feature interactions, limitations and restrictions will continue to apply for the first feature (either SSP800 or ASP) encountered on the call; and existing post-query feature interactions, limitations and restrictions will continue to apply for the last feature (either SSP800 or ASP) encountered on the call.

Prior to the release of this special feature and after its release the following transitions are not allowed:

- PFA (Private Factilities Access) to ASP
- PFA to SSP800 to ASP

3. FEATURE ASSIGNMENT

Since this special feature allows the transition from ASP to SSP800, the functionality of software update BWM94-0007 for 5E9(1), which provided unconditional escape from the ASP access codes, will no longer be necessary, and it is automatically removed with the application of this special feature for 5E9(1). Instead, the SCP must be able to appropriately handle the SSP800 digits in the ASP query; either treating them as an error, providing a different routing DN in the routing response, or returning them as the routing DN in a routing response which specifies the PSEUDO/LEC (Local Exchange Carrier) carrier. (The latter case would have resulted in error treatment on the 5ESS Switch prior to release of this special feature.)

If the choice is to modify the SCP to return SSP800 as the routing DN, the necessary changes to the SCP to do this must be coordinated with the functionality present in all of the switches that it serves. Functionality in the various levels of software on 5ESS Switches and the impact of returning SSP800 as a routing DN follows:

5E8 5ESS Switch:

- If the digits dialed after the ASP access code, which are analyzed in the ASP dialing plan, do not specify an ASP trigger, no ASP query is launched.
- No SSP800 digits are sent in an ASP query, thus the SCP does not need to handle them.
- Modifying the SCP to return SSP800 as the routing DN will have no impact.

5E9(1) 5ESS Switch pre-BWM94-0007:

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- If SSP800 is dialed after an ASP access code, the SSP800 digits are sent to the SCP in the ASP query.
- The SCP would have had to have been modified to accomodate these digits. If they were not to be treated as an error, the typical solution was to return a routing response with a trunk group parameter and the SSP800 digits, resulting in no subsequent digit translation on the 5ESS Switch and the routing of the call to another switch where the SSP800 processing occurred.
- Modifying the SCP to return SSP800 as the routing DN results in reorder to users on this level of software for calls where SSP800 is dialed after an ASP access code. Thus, the changes can not be made until all switches have installed this software update.

5E9(1) 5ESS Switch post-BWM94-0007 and prior to installation of this new special feature:

- If SSP800 is dialed after an ASP access code, no ASP query is launched.
- No SSP800 digits are sent in an ASP query, thus the SCP does not need to handle them.
- Modifying the SCP to return SSP800 as the routing DN will have no impact.

5E9(1) after this special feature is installed:

- If an SSP800 number is dialed after an ASP access code, the SSP800 digits are sent to the SCP in the ASP query.
- The SCP must be modified to handle the SSP800 digits for switches updated for BWM94-0007
- Modifying the SCP to return SSP800 as the routing DN is handled by the new functionality provided by this Special Feature.

In summary, once this special feature is installed in any *one* of the switches served by an SCP, the appropriate changes need to be made to the SCP to accommodate the SSP800 digits. In general, these changes will be one of the following, depending on the mix of software on the switches and the treatment desired:

- Modify the SCP to provide error treatment or to route the call to a different DN. These changes could be made immediately with no concern for the software level on the 5ESS Switches.
- If any one of the switches are on 5E9(1) and pre-BWM94-0007, a temporary change will be required as described in section **5E9(1) 5ESS Switch pre-BWM94-0007**, where the SSP800 call would be routed to another switch.
- If none of the switches are on 5E9(1) and pre-BWM94-0007, the permanent change may be made to return a routing response, specifying the SSP800 digits as the routing DN. This assumes that any switch retrofitting from 5E8 to 5E9(1) after this point will be at a level beyond BWM94-0007.

This special feature replaces the functionality installed with BWM94-0007 for 5E9(1) which provided an unconditional escape from ASP when an SSP800 number was detected after an ASP access code (either a CDP (Customized Dialing Plan) access code or a FCD (Feature Code Dialing) access code) specifying normal digit collection. That is, prior to this special feature, when SSP800 was detected after an FCD or CDP trigger, ASP would be ignored, and an SSP800 query would be launched. With this special feature installed, dialing the SSP800 digits after an FCD or CDP trigger results in an ASP query with the SSP800 digits as the Collected Address for Release 0.1 protocol queries or Dialed Digits for Release 0 protocol queries. The SCP must now be able to handle the SSP800 digits in the ASP query.

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Escape functionality was provided in 5E9(1) for Off-Hook Delay (OHD) and Option 1 SIT (Shared Interoffice Trunk triggers and continues to operate unchanged after this Special Feature is installed.

3.1 Termination Notification

The TN for SSP800 call during serial triggering records the answer in all TNs associated with the call at the time when the answer is returned by processing an ASP STR (Send_To_Resource) request. A TN always records the first answer indication on the leg with which it is associated. Subsequent answer indications from STR processing or true call answer do not change the answer indicator or TN connect time once the initial answer has been recorded.

For calls which do not complete normally, the feature currently being invoked handles the error. No indication of the abnormal condition which ended the call is recorded in TN for previous SSP800 legs.

4. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
DSAPP	5537	3	5AK	8.17

DSAPP form (5537 Record) - This form is used to specify the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks which use CCS7 (Common Channel Signaling System 7) signaling protocols. A data rule was added for the APPLIC field.

5. GLOSSARY

ASP	Advanced Services Platform
CDP	Custom Dialing Plan
DN	Directory Number
FCD	Feature Code Dialing
LEC	Local Exchange Carrier
OHD	Off-hook Delay
PFA	Private Facilities Access
SCP	Service Control Point
SSP800	Service Switching Point
STR	Send To Resource
TAT	Terminating Attempt Trigger

SEC. 4C19: INFORMATION SERVICES GATEWAY

1. FEATURE DESCRIPTION

The ISG (Information Services Gateway) feature allows service providers to offer cellular customers access to various information services by dialing a single cellular feature code (e.g., *INFO) from a mobile phone. A voice mail storage system provides the mobile station with a voice menu from which the subscriber dials the number for the desired information (e.g., weather, sports, traffic, etc.). The feature number for this

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capability is 99-5E-2446. This feature is available in 5E9(2) and later.

A mobile station might gain access to weather information by entering a 1, sports information by entering a 2, and traffic information by entering a 3. The voice mail storage system translates the entered digit or digits into the 10-digit telephone number of the corresponding information service and transmits this information back to the AUTOPLEX system. The AUTOPLEX system then disconnects the mobile station from the voice mail system and establishes an outgoing call to the selected information service.

This 5ESS Switch feature provides three specific functions. First, the feature collects the dial tone multi-frequency digits from the voice mail system corresponding to the 10-digit telephone number of the information service provider. Second, this feature disconnects the channel to the voice mail system. Finally, this feature sends the collected DTMF (Dual Tone Multifrequency) digits to the Executive Call Processor/Access Manager for further analysis.

The ISG feature operates with the wireless/AUTOPLEX System 1000 application of the 5ESS Switch. Therefore, at least one of the wireless/AUTOPLEX System 1000 features (such as Frequency, Time, or Code Division Multiple access, or the Access Manager Communications Package) is needed.

This feature has no hardware requirements other than the typical trunk connection to the voice mail system, if not already present.

2. FEATURE ASSIGNMENT

To provision this feature, the trunk group must be provisioned as an Information Services Gateway trunk group.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1

TKGRP form (5202 Record) - This form is used todefine each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. The ISG field supports the ISG feature.

SEC. 4C20: MLHG QUEUING FOR INDIVIDUAL HUNTED TN DIALED CALLS

1. FEATURE DESCRIPTION

Available with 5E5 and later, the MLHG Queuing for Individual Hunted TN Dialed Calls feature allows a MLHG with a Modular Queuing Feature to queue an incoming call to an individual hunted TN when all terminals are busy. This option is specified through the Q INDI HNT TNS field on the MLHG form (5110 Record).

In 5E6 and later, a new ICI (Incoming Call Identification) for queuing of individual hunted TN dialed calls can be assigned to an ISAT MLHG through the HUNTING ICI list on the ICIPF form (5903 Record) and to an ISAT MLHG terminal through the ICI LIST on the DSLUSR form (5908 Record).

2. BACKGROUND

A MLHG may be assigned a Modular Queuing feature through the QFEATURE field on the MLHG form. The Modular Queuing feature is defined on the QUFD form (5617-1/2 Record) and group parameters can be specified on the QUGPA form (5617-3/4 Record).

Prior to 5E5, the Modular Queuing feature was used to queue only calls to the Listed Directory Number; the first idle terminal answered the first queued call. A call to an individual hunted TN was not queued.

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For an ISAT MLHG that was assigned a Modular Queuing feature, incoming calls were queued according to the ICIs (Incoming Call Identifiers) assigned to that MLHG. Before the 5E6 Software Release, only calls to the Listed Directory Number were queued; calls were answered, according to ICI priority and time in the queue, by the first idle terminal able to access that type of ICI. A call to an individual hunted TN was not queued.

3. TRANSLATION REQUIREMENTS

The following three forms are necessary for MLHG Queuing for Individual Hunted TN Dialed Calls translation requirements:

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
MLHG	5110-1/2/3	3	1J	3.5
ICIPF	5903	5	1D	3.43
DSLUSR	5908-1	5	1I	23.2

MLHG form (5110 Record) - For 5E5 and later, the Q INDI HNT TNS field indicates if queuing is allowed for calls to an individual hunted TN: a TN defined on a MLHLN form (5111 Record) with NONHUNT set to "N" or a CKT SWITCHING MLHG TN defined on a DSLUSR form (5908 Record) with CKT SWITCHING NONHUNT set to "N". If Q INDI HNT TNS is "Y", QUEUING ALLOWED must be "Y".

ICIPF form (5903 Record) - For 5E6 and later, the value "QUE" may be entered as a HUNTING ICI. This ICI is used to queue calls to individual hunted TNs. If one or more "QUE" ICIs is entered, the GRP NBR must be defined on a MLHG form with Q INDI HNT TNS set to "Y".

DSLUSR form (5908 Record) - For 5E6 and later, the value "QUE" may be entered in the ICI list. At least one "QUE" ICI must be entered if there is an ICIPF form where the GRP TYP field is set to "HUNT", the GRP NBR field is the same value as the CKT MLHG on the DSLUSR form and at least one "QUE" has been entered in the HUNTING ICI list.

SEC. 4C21: FULLY/SEMI RESTRICTED LINES - SPEED CALL INTERACTION

1. FEATURE DESCRIPTION

Available with 5E6 and later, the Fully/Semi Restricted Lines - Speed Call Interaction Transparency Feature allows a call originated through Speed Calling from a fully-restricted or semi-restricted line and terminating outside of the terminal group to be unblocked.

2. BACKGROUND

A line or MLHG terminal assigned a TGSR (Terminal Group Station Restriction) feature is considered to be a member of the terminal group specified on the appropriate TGSRFD form (5607-1/2 Records), TGSRLPA form (5607-3 Record), TGSRMPA form (5607-4 Record) or BFG form (5625-1/7 Records). A member of a terminal group may be limited with regard to which stations it may originate or terminate a call. A TGSR feature may define a line/MLHG terminal's origination and/or terminations to be unrestricted, semi-restricted or fully-restricted.

Unrestricted lines may originate or terminate to any station.

Semi-restricted lines may originate or terminate to any station within the terminal group, including the attendant. All other calls are blocked.

Fully-restricted lines may originate or terminate to any station within the terminal group, excluding the attendant. All other calls are blocked.

Originating and terminating restrictions are independent of each other and may be different. For example,

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a line may be fully-restricted originating and unrestricted terminating.

Currently, a fully-restricted or semi-restricted (on originations) line originating a call through Speed Calling that terminates outside of the terminal group is blocked by the TGSR feature. The Fully-Semi Restricted Lines - Speed Call Interaction Transparency Feature will allow the customer to choose, on a Speed Call list basis, whether or not to override the TGSR limitations in this case.

3. TRANSLATION REQUIREMENTS

The SCLIST (Speed Calling List) form (5627-5 Record) is necessary for Fully/Semi Restricted Lines Speed Call Interaction translation requirements. The corresponding Recent Change view for this form is 4.2.

The TGSR OV field, on the SCLIST form indicates whether or not to override originating Terminal Group Station Restrictions when originating a call using this speed call list. If ORIGINATING RESTRICTION is "FULL" or "SEMI" on the TGSRFD form (5607-1/2 Record) and a call is originated through this speed call list the call will be handled as if ORIGINATING RESTRICTION was "NONE". Calls originating outside of this speed call list will still be subject to the specified ORIGINATING RESTRICTION.

SEC. 4C22: ENTRY OF FORWARD-TO-DN/IDP INTERACTIONS

1. FEATURE DESCRIPTION

The Entry of Forward-To-DN/IDP Interactions feature will give a 5ESS Switch the option of functioning as a 1A ESS Switch. If the option of functioning as a 1A ESS Switch is chosen, then this feature will allow the end user activating call forwarding to immediately hear dial tone after entering the "escape to POTS" access code as the first digits dialed of the Forward To-DN.

In both 5E4(2) and 5E5, the feature is chosen on a per office basis using the TFOS (Transparency Feature Optioning System). In 5E6 and later, however, this option is specified on a per IDP Group basis using the IDP group parameters.

NOTE: Lucent Technologies advises using this feature on a per office basis.

2. TRANSLATION REQUIREMENTS

The following IDPGP (Individualized Dialing Plan Group Definition) form is necessary for Entry of Forward-to-DN/IDP Interaction translations requirements. The corresponding Recent Change View for this form is 9.10.

IDPGP form (5601-4 Record) is used to define the options associated with IDPs. A new field, CF DT POTS, was added to this form which specifies whether a dial tone should be returned following entry of an "escape to POTS" dial code as part of a Call Forwarding Forward-to-DN.

SEC. 4C23: CALL FORWARDING ON DIRECT CONNECT

1. FEATURE DESCRIPTION

The Call Forwarding on Direct Lines feature enables the assignment of call forwarding to direct lines. However, it must be pointed out that those call forwarding features that require a dial code to activate the feature cannot be assigned to direct connect lines. For example, /CFV cannot be assigned to direct connect lines.

For 5E5 and earlier, the Call Forwarding Feature on Direct Connect was not allowed on the 5ESS Switch. The intent of this feature is to allow the user to assign the call forwarding feature on direct connect lines as they are assigned to other lines.

2. TRANSLATION REQUIREMENTS

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The following three forms are necessary for Call Forwarding on Direct Connect translation requirements:

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
LINE	5109-1/2/3	3	1I	1.1 - 1.6
CFWFD	5614-1/2	4	15A	12.12
MLHLN	511-1/2/3	3	1K	3.2

LINE form (5109-1/2/3 Record) - Used to define the office Equipment Number and features for each telephone number in a 5ESS Switch.

CFWFD form (5614 Record) - The Call Forwarding feature allows calls completing to a customer's Directory Number to be redirected to another number. This form is used to define a number of separate, but related features, by selecting various feature options for Call Forwarding.

MLHLN form (5111-1/2/3 Record) - The MLHLN form is used to define the individual Terminal Numbers assigned to a particular Multi-Line Hunt Group. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features.

SEC. 4C24: ALTERNATE MUSIC AND ANNOUNCEMENTS FOR MLHG QUEUING

1. FEATURE DESCRIPTION

Available with 5E6 and later, the Alternate Music and Announcements for Multi-Line Hunt Group Queuing feature allows music to be heard interspersed between announcements. A modular queuing feature may have the following delay tones specified:

- INTER DELAY TONES
- POST DELAY TONES

When music is specified as an INTER DELAY TONE, the caller will hear the music interspersed between the announcements. When music is specified as POST DELAY TONE, the caller will hear the music following the last announcement until the call is dequeued or abandoned.

2. TRANSLATION REQUIREMENTS

The following four forms are necessary for Alternate Music and Announcements for MLHG Queuing translation requirements:

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
QUFD	5617-1/2	4	18A	12.40
QUGPA	5617-3/4	4	18B	3.40
TRUNK	5204	3	2C	5.5
MLHG	5110-1/2	3	1J	3.5

QUFD form (5617-1/2 Record) - The QUFD form is used to define the Modular Queuing feature. Two new fields (TGN and MEMB) have been added which indicate the trunk and the member number of the trunk to be used as a music source for music delay tones.

QUGPA form (5617-3/4 Record) - The QUGPA form not only defines queuing for MLHG's Multi-Line Hunt Groups but also defines modular Queuing to provide queuing for outgoing private facilities, either a physical Trunk Group or a Simulated Facility Group. Two new fields (TGN and MEMB) have been added which indicate the trunk and member number of the trunk to be used as a music source for music delay tones.

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TRUNK form (5204-1/2/3 Record) - The TRUNK form defines each member of a Trunk Group in a 5ESS office. A new field has been added MUSIC SOURCE which indicates whether or not this trunk can act as a source of music for modular queuing delay tones defined on the QUFD form (5617-1/2 Record) or QUGPA form (5617-3/4 Record).

MLHG form (5110 Record) - An MLHG may be assigned a Modular Queuing feature through the QFEATURE field on the MLHG form. The Modular Queuing feature is defined on the QUFD form (5617-1/2 Record) and group parameters can be specified on the QUGPA form (5617-3/4 Record).

SEC. 4C25: FACILITY RESTRICTION LEVEL

1. FEATURE DESCRIPTION

Available with 5E7 and later, the FRL (Facility Restriction Level) feature is used by the BRCS Automatic Route Selection feature. FRLs are used to restrict facility access by defining a "level" of Privilege necessary to obtain use of the facilities.

2. TRANSLATION REQUIREMENTS

The following eleven forms are modified for Facility Restriction Level translation requirements:

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ARSFD	5608-1A/1B	4	9A	12.11
ARSFRL	5608-7	4	9G	10.8
ARSGPA	5608-2	4, 9B	10.5	
ARSLPA	5608-3	4	9C	1.21
ARSMPA	5608-4	4	9D	1.21
ARSTCM	5608-8	4	9H	10.9
ARSTPA	5608-5	4	9E	5.21
ATHFCOS	5619-4	4	20D	4.19
BFG	5625-1/7	4	26A	12.9
MCRTIDX	5304	3	3Q	10.24
PNDP	5608-10/11	4	9J	9.21

ARSFD form (5608-1A/1B Records) - Is used to define various combinations of options associated with Automatic Route Selection. New FRL LINE valid entries: 0 - 16.

ARSFRL form (5608-7 Record) - Is used to define the set of Alternate Facility Restriction Levels used for an Automatic Route Selection Group. New field AFLTFRL 0 was added.

ARSGPA form (5608-2 Record) - Is used to define the group level of information required for the Automatic Route Selection capability. New FRL LINE field valid entries: 0 - 16.

ARSLPA form (5608-3 Record) - Is used when assigning ARS features to non-Multi-Line Hunt lines to assign ARS feature parameter to the lines if the default parameters of the ARSFD form are inappropriate or unspecified. New FRL LINE field valid entries: 0 - 16.

ARSMPA form (5608-4 Record) - Is used when assigning ARS features to Multi-Line Hunt line to assign ARS feature parameters to lines if the default parameters of the ARSFD (5608-1A/1B Record) are inappropriate or unspecified. New FRL LINE field valid entries: 0 - 16.

ARSTCM form (5608-8 Record) - Is used to input the FRL (Facility Restriction Levels) to be used during call processing on ARS (Automatic Route Selection) calls which originate on private trunks sending a one-digit TCM (Traveling Class Mark). New FRL LINE field valid entries: 0 - 16.

ARSTPA form (5608-5 Record) - Is used when assigning ARS features to trunks if the default parameters of the ARSFD form (5608-1A/1B) are inappropriate or unspecified. New FRL LINE field valid entries: 0 - 16. Data Rule modified.

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ATHFCOS form (5619-4 Record) - Is used to define the restriction and features associated with each FCOS (main or alternate) assigned at an authorization code group. New FRL LINE field valid entries: 0 - 16.

BFG form (5625-1/7 Records) - Is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. New FRL LINE valid entries: 0 - 16.

MCRTIDX form (5304 Record) - Is used to determine routing for various BRCS capabilities. New FRL field valid entries: 0 - 16.

PNDP form (5608-10/11 Records) - Is used to provide private digit analysis of both public and private numbers. New FRL field valid entries: 0 - 16.

SEC. 4C26: RANDOM MAKE BUSY

1. FEATURE DESCRIPTION

Available with 5E6 and later, this feature provides the ability to apply artificial busy to any number of members of an MLHG.

There are three make busy features:

MAKE BUSY FEATURES

Feature	Definition
RANDOM MAKE BUSY	This feature provides the ability to apply artificial busy to any number of members of a non-ISAT MLHG.
MEMBER MAKE BUSY	This feature allows from 1 to 32 terminals within a non-ISAT MLHG to be made busy at the same time.
POSITION MAKE BUSY	This feature allows a single terminal within an ISAT MLHG to be made busy.

Terminals are eligible for Position Make Busy and Member Make Busy make busy treatment by the three ways listed below:

- MAKE BUSY KEY - The terminal is associated with a scan point on the MLHLN form (5111-1/2/3 Record) or DSLUSR form (5908-1/2/3/4/5/6/7/8/9/10/11 Record). Turning the scan point on/off will result in turning the make busy on/off.

- MAKE BUSY SUBGROUP - The terminal is assigned to a Member Make Busy subgroup on a DSLUSR form or SHTN form 5902-1/2 Record). At least one member of the MMB subgroup is also assigned a button with an action of "BYMB". When the "BYMB" button is toggled for any terminal within the subgroup, then all terminals with the subgroup have the make busy turned on/off.

- MAKE BUSY BUTTON (NON-SUBGROUP) - The terminal does not have an MMB subgroup assigned, but one of the corresponding CFGGRP forms (5964 Record) has an action of "BYMB" Since the terminal is not part of a subgroup, toggling the feature button turns the make busy on/off for only the specific terminal. Position Make Busy buttons are also assigned in this manner, but the CFGGRP form will have an action of "BYPO". Unlike Member Make Busy and Position Make Busy, a Group Make Busy feature button always makes busy the entire group (although only terminal 1 can toggle the make busy button).

2. FEATURE ASSIGNMENT

Random Make Busy may be assigned via a scan point on the MLHLN or DSLUSR forms, via a subgroup on the DSLUSR or SHTN forms or via a feature button on the CFGGRP form with an action of "BYRB". When assigned via a scan point, all terminals within an MLHG that share that scan point will be made busy when the feature button is toggled. When assigned via a subgroup, all terminals within an MLHG that share that subgroup number will be made busy when the button is toggled. Unlike Member Make

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Busy subgroups, a Random Make Busy subgroup has a specific feature button owner even though other terminals may have Random Make Busy buttons. Only the owner may toggle the button. Only the owner light reflects the status of Subgroups. When assigned via a CFGGRP action of "BYRB" and not part of a subgroup, then toggling the feature button will make busy only that terminal. The terminal automatically owns the button.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLUSR	5908-1-11	5	1I	23.2
□	5840	8	42	□
SHTN	5902-1/2	5	1C	23.20
MLHLN	5111-1/2/3	3	1K	3.2
MKBCCT	5119	3	1AC	3.1
CFGGRP	5954	6	7A	12.5

DSLUSR form (5908 Record) - This form is used to assign digital lines. Two fields, RND MKB and RND SUBGP were added. The existing field MMB SUBGROUP was renamed to MMB SUBGP.

5840 Record - This office record is an output only record and is generated from a combination of many ODA input forms and defines all possible or available scan points that are defined as operational on the EQMSP (5750 Record) or EQMMSP (5750 Record) forms.

SHTN form (5902-1/2 Record) - This form is used to assign a Primary or Secondary TN or MLHG/TERM to ISDN Terminals. The field RND SUBGP was added and the existing field MMB SUBGROUP was renamed to MMB SUBGP.

MLHLN form (5111 Record) - This form is used to define the individual Terminal numbers assigned to a particular MLHG. The RND MKB field was added to specify a Random Make Busy scan point.

MKBCTT form (5119 Record) - This form is used to specify the call termination types for all make busy features: Random Make Busy, Member Make Busy, and Position Make Busy. It is also used to specify the owner for a Random Make Busy subgroup.

CFGGRP form (5964 Record) - This form is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) user terminal buttons. "BYRB" was added to the ACTION field to activate Random Make Busy.

SEC. 4C27: RECENT CHANGE DELAYED MESSAGE

1. BACKGROUND

The RCDM (Recent Change Delayed Message) feature reduces the amount of coordination necessary between cable splicers and RCMAC (Recent Change Memory Administration Center) personnel during cable throws. Reduced coordination results from allowing telephone activation of RCDMs by the cable splicer when the cable splicer is ready to do the cable throw. A cable throw is the TelCo activity of repairing, replacing, or adding telephone wires between the end users and the CO (Central Office).

2. FEATURE DESCRIPTION

Already available is the ability to input into translations all line changes associated with the cable throw in advance as Recent Change Delayed Messages. These delayed messages can be input, activated, deactivated, and deleted via a terminal by personnel at the CO, RCMAC, and SCC (Switch Control Center). Personnel at the CO can also obtain status on a delayed message.

For 5E7 and later, this feature provides the capability to activate RCDMs by telephone on a line defined with a COS (Class Of Service) of "activate service order". This is done by having "RCDM" as the CLASS

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OF SERVICE on an LCC form. This line could be a spare wire pair within the cable vault that is temporarily assigned this function until the cable throw is complete. Personnel at the CO can inhibit telephone activation of delayed messages. Personnel can also obtain the inhibit/allow phone activation status of RCDMs.

The line with the new COS "RCDM" will be an analog POTS line that can only originate calls (no terminations). This line will be used by the cable splicer to dial only 5-digit service order (clerk ID) numbers. Call processing will collect the 5-digit service order number (clerk ID). No digit analysis or translations are performed. Each clerk ID is associated with a specific RCDM clerk file. This file is a set of Recent Change changes to be applied and is set up the same way a Recent Change demand release file is set up (See the Recent Change Batch Manual). If no specific file of RCDMs exists for the clerk ID dialed in, a Reorder Tone is returned to the cable splicer. If telephone activation of RCDMs is not allowed or the system does not have resources to release and apply the RCDMs, a Busy Tone is returned to the cable splicer. If the request is accepted to activate the RCDMs associated with the dialed in service order, then Dial Tone is returned to the cable splicer to allow more service orders to be dialed.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
LCC	5306	3	3S	4.1
TIMING	5520	3	5T	8.5

LCC form (5306 Record) - This form is used to define each LCC (Line Class Code) in a 5ESS Switch. The CLASS OF SERVICE field is used to describe originating service and feature handling by Class of Service. The CLASS OF SERVICE enumeration "RCDM" was added. A new data rule was added to prevent many feature interactions for RCDM lines which are basic, POTS lines. A new data rule was added to insure that RCDM service class can only be assigned to analog, non-mlhg lines. A new data rule was added so that dependent DNs cannot be assigned to RCDM lines.

TIMING form (5520 Record) - This form is used to define intervals for Permanent Signal, Partial Dial, and Critical Timing in a 5ESS Switch. The SERVICE CLASS enumeration "RCDM" was added. When SERVICE CLASS is "RCDM", SIGNAL TYPE must be "DP" or "TT", START SIGNAL must be "NONE" and defaults for the other TIMING fields are given as recommended values.

SEC. 4C28: ACCOUNT CODE - TOLL DIVERSION TO AN ATTENDANT/DPAT

1. BACKGROUND

This feature adds two capabilities to the 5ESS Switch that make it compatible with two 1AESS Switch features: using an account code to override toll diversion to an attendant, and using an account code to override DPAT (Dialing Plan Access Treatment) restrictions.

1.1 Toll Diversion Override

Toll Diversion to an Attendant provides the ability to deny termination. For example, a DN (Directory Number) can be restricted from dialing any calls that begin with the 1+ prefix; when a 1+ call is dialed, it is routed to the attendant and not to the dialed DN.

On the 1A ESS Switch, when a restricted user with a toll diversion feature places a toll call using any CDAR (Customer Dialed Account Recording) access code followed by an account number, the call is allowed to continue without being diverted to an attendant. On the 5ESS Switch, when a similarly restricted user with a toll diversion feature places a toll call using any ACCT access code (the ACCT feature is equivalent to the 1A ESS Switch CDAR feature) followed by an account number, the call is diverted to an attendant. The new transparency feature allows the 5ESS Switch operation to conform to the 1A ESS Switch; it permits a call to complete without being diverted to an attendant when an ACCT access code followed by an account number has been entered.

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1.2 DPAT Override

On the 1A ESS Switch, when a user enters a CDAR access code that has an associated routing access code that is CAT (Customer Access Treatment) restricted, the CDAR access code bypasses the CAT restrictions. On the 5ESS Switch (where CAT is referred to as DPAT (Dialing Plan Access Treatment)), DPAT restrictions on the routing access code associated with the dialed ACCT access code are not bypassed. The new transparency feature allows the 5ESS Switch operation to conform to the 1A ESS Switch: DPAT restrictions for routing access codes associated with an ACCT access code can be bypassed.

2. FEATURE DESCRIPTION

For 5E9(1) and later Software Releases, the Account Code - Toll Diversion to an Attendant/DPAT feature is available as feature number 99-TP-1008.

This is a transparency feature that provides two new capabilities on the 5ESS Switch: an account code can be used 1) to override toll diversion to an attendant and 2) to bypass DPAT restrictions for the first associated code of an account use code.

3. FEATURE ASSIGNMENT

The feature is implemented on an account group basis. Two new fields on the ACCTGP form determine how each of the capabilities is to be processed by the 5ESS Switch for that account group. To allow an account code to override toll diversion to an attendant, a valid screening index must be entered on the ACCTGP form in the TOLL SI field. If TOLL SI is left blank, account codes in that account group do not override toll diversion.

Currently only an authorization code can be used to override toll diversion. To avoid affecting this operation the authorization code is checked first when both features are active. If the authorization code fails to override toll diversion, the account code is then checked.

To allow an account group to bypass DPAT restrictions for the first associated code, the field DPAT OVRD on the ACCTGP form must be set to "Y".

Only the first associated code of an account use code bypasses DPAT restrictions. More than one associated code may exist, but DPAT restrictions are checked for the subsequent associated codes.

4. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ACCTGP	5623-2	4	24B	4.21

ACCTGP form (5623-2 Record) - This form is used to define the group level information required for the Account Code capability. Two new fields were added. The TOLL SI field specifies a Toll Screening Index to override toll diversion to an attendant. The DPAT OVRD field determines if DPAT restrictions should be overridden for the group.

SEC. 4C29: ANNOUNCEMENT AS ERROR TREATMENT FOR LASS ACCESS CODES

1. BACKGROUND

Prior to this feature, if a user attempted to use a LASS (Local Area Signaling Services) feature and did not have the proper permissions to access it (e.g., the user was not paying for the LASS feature), the user would receive a reorder tone.

2. FEATURE DESCRIPTION

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Available with 5E9(1) and later, this feature is a transparency feature having Lucent Technologies feature number 99-TP-1006. This feature provides the option to route a user to reorder tone or to route the user to an uninterruptible announcement when the user dials any LASS feature access code and the LASS feature is denied to the user.

NOTE: Exception: The LASS user will be routed to the existing intercept treatment if the LASS feature is denied because of IDP (Individual Dialing Plans) restrictions, such as CAT (Customer Access Treatment) Code Restrictions.

A single announcement can be provided regardless of which LASS feature access code the user dialed. The announcement is provided as an option on a per switch basis.

The announcement as error treatment will be provided for the following LASS feature access codes:

- AC (Automatic Callback)
- AR (Automatic Recall)
- COT (Customer Originated Trace)
- SCF (Selective Call Forwarding)
- SCR (Selective Call Rejection)
- SDA (Selective Distinctive Alert)
- SCA (Selective Call Acceptance)
- CAR (Computer Access Restriction)

On the 5ESS Switch, access to the announcement capability is provided only to analog users. ISDN users will not be given the announcement.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
LASSOP	5945	5	5F	8.21

LASSOP form (5545 Record) - This form is used to supply global office options and parameters for the LASS features. The new field ERROR TREAT RTI was added.

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SEC. 5: DATA SERVICES FEATURES

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SEC. 5A: PACKET MDR

1. FEATURE DESCRIPTION

The PMDR (Packet Message Detail Recording) capability is available with 5E7 and later Software Releases. The feature is also referred to as MDR to CL (Customer Location) for packet switched data calls.

The PMDR feature is based on the existing MDR feature which generates reports for voice and circuit-switched data calls. With PMDR, customers can generate reports for packet-switched data calls. Data reports are provided for each applicable DN (Directory Number). This information can be used by customers in cost analysis and private network management.

The data calls must either originate, terminate, or both on DTE using a BRI (Basic Rate Interface) or a channel of a T1 facility, XAT (X.25 Access over T1 Facilities). PMDR supplies records for packet switched data calls on both D and B channels, including XAT.

Reports are per-call Packet MDR records that are sent over dedicated D channel X.25 data links from the 5ESS Switch to an AP (Application Processor) or a similar processor at the customer's private facilities.

The AP stores and processes the MDR records. It is external to the 5ESS Switch and may reside at the customer's location. Software development for the AP is the responsibility of AT&T Network Systems.

The 5ESS Switch collects the information for the MDR record, formats the record, and sends it over the data link. MDR information is collected when a packet-switched data virtual call is terminated, a permanent virtual circuit is interrupted (billable side provisioned with packet MDR is unplugged), at midnight for a permanent virtual circuit, or when a virtual call meets long duration crietria (e.g., a call that spans two or more consecutive midnights and uses the switched virtual circuit at the 5ESS Switch in the packet switched network).

PMDR records are applicable only to ISDN lines. If one end is not ISDN capable, modem pool usage is required; an MDR record can be generated for a digital to analog call through a modem pool.

1.1 MDR Header Information

PMDR uses the same record header format as the MDR feature. The first eight bytes of every MDR contain the standard AP header (required on all information passed between the 5ESS Switch and the AP). The AP header contains the following information:

- Switch Client (previously Session Identification)
- Business Customer Identification
- Feature Identification (previously Application Identification)
- Length

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907-1/7	5	1H	23.2
DSLUSR	5908-1/11	5	1I	23.2
XAT	5909-1/2	5	1J	23.40
MDRGP	5624-2	4	25B	24.33

Packet MDR is assigned on the DSL, XAT and DSLUSR forms and defined on the MDRGP form. All

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PMDR Groups entered must be defined on the MDRGP form.

2.1 ISDN/Packet Switching Translations

DSL form (5907-1/7 Record) - This form is used to define the attributes of a DSL (Digital Subscriber Line; also called BRI). It also defines the attributes of the B1 or B2 channel of the DSL if either or both of those channels are dedicated Permanent Packet (i.e., X.25) Switching. DSL is available with 5E5 and later Software Releases.

The PMDR fields added for this feature appear on the 5907-4 and 5907-7 Records for entries associated with PPB1 (Permanent Packet B1) and PPB2 channels.

The PMDR GRP field contains the Packet MDR Group name associated with a PPB1 or PPB2 TN. The entry can contain up to eight characters. The field is not required and does not have a default value. A PMDR GRP must be defined on the MDRGP form as MDR GROUP NAME with the PACKET MDR field entered as "Y".

Also added is PMDR ACT. An entry of "Y" or "N" determines if the Packet MDR Group is activated. This is not a required field.

The following restrictions apply: PMDR ACT must be entered if PMDR GRP is entered; PMDR ACT must not be entered if PMDR GRP is not entered; if the B1 SERV or B2 SERV field is not entered or is not "X25", PMDR GRP and PMDR ACT must not be entered.

DSLUSR form (5908-1/11 Record) - This form is used to define the associated TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

The PMDR fields added in 5E7 are the same as those on the DSL form, but can be used here to define PMDR information for a DSL TN associated with DPKT or ODB packet switching.

The PMDR GRP field indicates the Packet MDR group associated with the TN. An entry can be up to eight characters. This is not a required field. PMDR GRP must be defined on the MDRGP form. Note that when PMDR GRP is entered, the corresponding DSL form must not have the D SERV field set to "XMP".

PMDR ACT indicates the active status of the PMDR GRP. The restrictions associated with this field include the following: PMDR ACT must be entered if PMDR GRP is entered; PMDR ACT must not be entered if PMDR GRP is not entered; if the fields DPKTTN, DPKTMLHG, DPKTTERM or ODBTN are not entered, PMDR GRP and PMDR ACT must not be entered.

XAT form (5909-1/2 Record) - XAT refers to X.25 access to T1 facility DSO channels. This form is used to define ports for each channel of a T1 facility on a subscription basis using X.25 protocol. The unsubscribed channels can be used as trunk members of PRI trunk groups with the D-channel supporting Q.931 signaling and the B-channel(s) supporting CSV and CSD. T1 facility channels can be provisioned and supported like DSL Permanent Packet B-channels, which includes membership in MLHGs. XAT was added with the 5E6 Software Release.

The PMDR GRP and PMDR ACT fields were added to this form with the same restrictions between the fields as in DSL and DSLUSR; however, the following restriction applies specifically to the XAT form: if the DEN field is not entered, PMDR GRP/PMDR ACT must not be entered.

MDRGP form (5624-2 Record) - This form was added with 5E3 Software Release to define group information for the MDR feature. Group information includes MDR record types allowed and the AP to which the group is assigned. Each terminal (line or trunk) that uses MDR is assigned MDR feature identification (defined on the MDRFD form) on a LINEFA, MLHLNFA, TKGRPFA, BFG or TRUNKFA form.

For PMDR, unlike circuit MDR, the MDR feature is not used and is not assigned to the packet service

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wishing to use PMDR. An ISDN user who has circuit and packet service on a BRI, and desires circuit and packet MDR functionality, needs an MDR feature and group assigned to circuit service as well as an MDR group assigned to packet service. The MDR group can have circuit and packet options active, in which case the same group can be used.

Added to MDRGP in 5E7 are three required fields: PACKET MDR, MODEM POOL, and INTRA PB GRP fields.

An entry of "Y" or "N" in the PACKET MDR field indicates if packet users assigned to an MDR group can generate PMDR records. This field has a default value of "N". If PACKET MDR is "N", the fields MODEM POOL and INTRA PB GRP must be "N".

A "Y" or "N" in the MODEM POOL field indicates if PMDR records containing information on Modem Pool usage can be generated for packet lines in an MDR group making a call to an analog user through a modem pool. This field has a default value of "N".

INTRA PB GRP is the Intra Packet Business Group Usage Indicator. This field determines if PMDR records for intra packet business group calls can be generated. Valid entries are "Y" or "N". The default for this field is "N".

When PMDR is assigned on this form, either the PACKET MDR, ORIG PRIV, INC PRIV, or PUBLIC field must be "Y". Note that when PACKET MDR is "Y", ORIG PRIV is "N", IN PRIV is "N", and PUBLIC "N", the MDR GROUP NAME field must not be entered as MDR GROUP NAME on either the MDRFD, MDRMPA, MDRTPA, or MDRLPA form.

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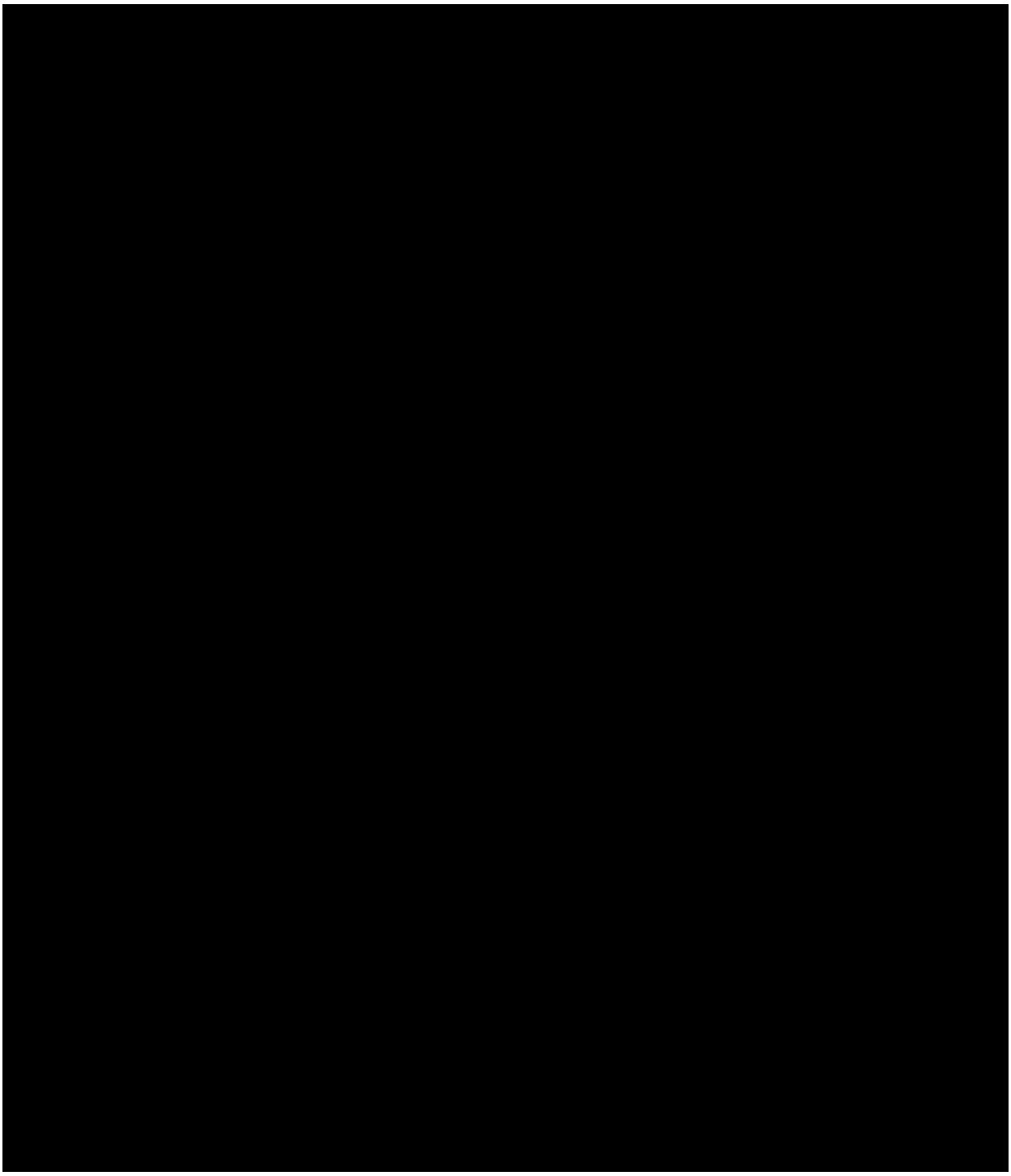

Figure 1 PACKET MDR FORM DEPENDENCIES

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SEC. 5B: ENHANCEMENTS TO X.25 PACKET SWITCHING FOR TRUSTED DTE

1. FEATURE DESCRIPTION

Enhancements to X.25 Packet Switching for Trusted DTE (Data Terminal Equipment) is available with 5E7 and later Software Releases. This feature enhances X.25 packet switching services already offered for BRI (Basic Rate Interface). It is designed to increase the efficiency of the the X.25 interface used as a Datakit-to-5ESS Switch connection.

Note that the DTE accessing the switch must be a part of the network and not CPE (Customer Premises Equipment); this type of DTE is considered "trusted." Information passed over the Datakit/5ESS Switch interface is under the control of the service provider and, therefore, considered to be accurate and reliable.

Three specific service enhancements have been added with this feature. They are:

- The calling DN is used in the AMA record rather than a provisioned number. The DTE receives the calling DN in the X.25 Call Request packet.
- A DTE generated call identifier is used for all Datakit to 5ESS Switch packet originating calls. Previously, the 5ESS Switch generated the identifier. For packet call identification and billing, the identifier is passed from the DTE to the 5ESS Switch in an X.25 Call Request packet as an ADFM (AT&T Defined Facility Marker).
- The DN Screening Indicator can be disabled. This ability was added since it is assumed that the calling DTE has already screened the Calling TN as required by standards.

Although this feature is principally used as the interface between the 5ESS and Datakit Virtual Circuit Switch located in the CO (Central Office), it works with any CO-based application that is part of the network and is under the control of the service provider. Individual subfeatures may also be of value to the service provider; for example, the use of the calling DN for billing purposes can provide additional flexibility in PBX billing.

Because of memory constraints in PH2s, this feature is only available in PH3s.

2. TRANSLATION REQUIREMENTS

Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
DSL	5907-1/2/3/4/5	5	1H	23.2

2.1 DSL Translations

DSL form (5907-1/2/3/4/5 Record) - This form is used to define DSL attributes and the attributes of the B1 or B2 channel used by the DSL. With 5E7 and later, three new fields have been added for the Enhancements to X.25 Packet Switching for Trusted DTE.

These fields are:

CALL TN
CALL I
DIS SCR

These fields appear on the 5907-4 and the 5907-7 for Permanent Packet B1 and B2 Channel assignments.

The CALL TN field determines if the Calling TN is to be used as the Billing TN in the AMA record. This is a required field with valid entries of "Y" (Yes) or "N" (No). The default value for CALL TN is "N".

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An entry of "Y" in the CALL ID field determines if the Calling ID (a DTE generated Call Identifier Indicator) is used in the AMA record. If "Y", the CALL ID is provided as an ADFM (AT&T Defined Facility Marker). This is also a required field. The default value is "N".

With the Trusted DTE feature enabled, it is assumed that the calling DTE has already screened the Calling TN. Therefore, the DIS SCR field allows a user to disable the Directory Number Screening Indicator. The DN Screening Indicator checks the Calling TN received in the Call Request Packet for the correct 11-digit format. This is a required field. Valid entries are "Y" or "N".

An entry of "Y" in any one of these fields requires an entry in the B1 SERV or B2 SERV field (on the DSL form) of "X25".

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SEC. 5C: PACKET TRUNK INTERFACE STANDARDIZATION

1. FEATURE DESCRIPTION

PTIS (Packet Trunk Interface Standardization) is available with 5E8 and later Software Releases. The PTIS feature standardizes the 5ESS Switch interfaces with X.75' and X.75 packet trunk interfaces. This enhances the interface between the 5ESS subnetwork and other vendors' subnetworks, in a multivendor ISDN/PPSN (Public Packet Switched Network) environment. The capabilities that comprise the PTIS feature are described next.

1.1 Alternate Routing Capability

Through this capability, primary and alternate route choices can be specified for destinations requiring X.75' or X.75 connections. One alternate route choice is supported through PR (Packet Routing). This alternate route index is specified the same as a primary route index would be specified, e.g, the trunk group must be an X.75, X.75' or IP trunk group. If the primary route is not available, then the alternate route will be used. The PR (Packet Routing) does not allow "chaining" of more than two routes to alternate routes per each X.75 or X.75' connection. Routes can be from X.75 or X.75' to X.75, X.75', or IP.

1.2 Call ID Utility

When receiving an X.75/X.75' CRP (Call Request Packet) over an X.75/X.75' packet trunk which does not contain the Call Identifier utility or does contain the Call Identifier utility with a Call Identifier field that is coded with all zeros, a Call Identifier will be inserted into the ACI (AT&T defined Call Identifier) facility of the CRP transmitted via the IP (Internal Protocol). The Call Identifier parameters that are inserted by the 5ESS Switch X.75/X.75' STE (Signaling Terminal) will be distinquishable over an extended period of time, e.g. 24 hours.

When receiving an IP CRP that contains an ACI facility with a Call Identifier coded in all zeros, a Call Identifier with a parameter field not coded all zeros will be inserted into the Call Identifier utility of the X.75/X.75' CRP transmitted over an X.75/X.75' packet trunk. The Call Identifier parameters that are inserted by the 5ESS Switch X.75/X.75' STE (Signaling Terminal) will be distinquishable over an extended period of time, e.g. 24 hours.

1.3 Clearing Subnetwork Identification

The CNIC (Clearing Network Identification Code) utility (implemented in 5E6) makes it possible to uniquely identify the network that initiated call clearing. In order to facilitate maintenance actions and problem localization within the network, the CSI (Clearing Subnetwork Identification) utility has been introduced to isolate the source of the premature call clearing at a subnetwork level. The CSI utility makes it possible for a network element or subnetwork initiating a clear request to be uniquely identified within the LEC network and for this identification to be passed along the subnetworks involved in the call. The CSI utility provides a capability within the LEC network analogous to that provided by the CNIC utility among networks.

1.4 Closed User Group Screening On X.75 Interfaces

This capability controls traffic (incoming and outgoing) via CUG screening on an X.75 trunk group that connects the 5ESS Switch ISDN subnetwork to another network. It is possible to configure an X.75 trunk group with up to 100 CUG IICs (International Interlock Codes). An IIC consists of a DNIC + a 16-bit interlock code. A CUG is indicated in an X.75 CRP (Call Request Packet) as an IIC.

When an X.75 trunk group is configured with CUG IICs, the 5ESS Switch X.75 STE (Signal Terminal) verifies that a CRP indicates one of the configured IICs before transmitting the X.75 CRP across the X.75 trunk group. If no IIC is present (i.e., no CUG is requested for the virtual call) or an IIC is present in the CRP but is not one of the configured IICs, the 5ESS Switch X.75 STE clears the virtual call. The 5ESS Switch X.75 STE also verifies that an X.75 CRP received from a remote X.75 STE contains one of the

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configured IICs. If no IIC is present in the received X.75 CRP or an IIC is present in the received X.75 CRP but is not one of the configured IICs, the 5ESS Switch X.75 STE clears the virtual call.

1.5 Inter-exchange Carrier Preselection Indication

IC (Inter-exchange Carrier) Preselection Indication is a service that a LEC can offer to a directly connected PSPDN (Packet Switched Public Data Network). This service enables a network, directly connected to the 5ESS Switch ISDN subnetwork via X.75, to support IC preselection for its users, even though it may not have the routing logic necessary to determine if an IC is required to complete the call. The directly connected network can pass the end user's IC preselection value in the IC Preselection Indication utility over the X.75 trunk group to the 5ESS Switch ISDN subnetwork. The 5ESS Switch subnetwork makes the determination whether an IC is needed to complete the call. If an IC is needed, the IC identified in the IC Preselection Indication utility is converted to an RPOA utility, which is then used to complete the call.

1.6 Logical Channel Numbers On X.75'

This capability assigns Logical Channel Numbers on X.75' trunk groups. This allows X.75' Logical Channel assignments to coincide with Logical Channel assignments for X.75, i.e., the provisioning of 1-way incoming / outgoing LCNs (Logical Channel Numbers) for the high range and the low range.

The PHF (Packet Handling Function), as a configuration option, selects logical channel numbers for virtual calls according to how LCN HIGH TO LOW, LOW LCN INCOMING/OUTGOING, HIGH LCN INCOMING/OUTGOING are assigned on the TRUNK form (5204-4 Record), independent of the Link Layer address A and B. The 5ESS Switch X.75' STE (Signaling Terminal) selects a logical channel number for an X.75' virtual call request transmitted over an X.75' packet trunk to the remote X.75' STE that is set on the HIGH TO LOW field on the TRUNK form.

If this capability is implemented, the logical channel assignment is the same on X.75 packet trunks and X.75' packet trunks.

1.7 Multiple X.75' Interfaces

The Multiple X.75' Interfaces capability builds on the Single X.75' Interface to a PPSN feature, and provides an enhanced inter-subnetwork interface capability. This feature includes direct X.75' connection to another ISDN switch. The other ISDN switch can either be a 5ESS Switch or another vendor's ISDN switch. A 5ESS switch must be on the 5E8 or later Software Releases, since pre-5E8 5ESS Switches do not support ISDN-to-ISDN X.75' connection. If the other switch is another vendor's ISDN switch, it must be compliant with Bellcore TR-301, Issue 2.

Before the 5E8 Software Release, only one X75' trunk group with 24 members was allowed. With 5E8 and later, up to 255 X.75' trunk groups (with 24 trunk members each) are allowed. The service provider can now offer PVCs (Permanent Virtual Circuits) which involve X.75' to X.75' connections.

1.8 Network User Identification

This feature specifies the requirements to handle the X.75/X.75' NUI (Network User Identification) utility and X.25 NUI Selection facility on the 5ESS Switch ISDN, i.e., pass, clear, or delete the NUI utility from the call set-up packet. The NUI utility is an optional network utility used to provide supplementary network user identification for charging virtual call usage. The 5ESS Switch is able to handle the NUI utility/facility for internetworking purposes.

The 5ESS Switch supports passing of the NUI utility on X.75 and X.75' trunk groups, but it does not support the NUI facility on access (BRI X.25) interfaces.

This capability specifies the decisions to be made and actions to be taken by the 5ESS Switch with respect to NUI values received from end users and other networks at the following interfaces:

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- X.25 receiving direction trunk groups;
- X.75' receiving direction trunk groups;
- X.75 receiving direction trunk groups;
- X.25 sending direction trunk groups;
- X.75 sending direction trunk groups.
- X.75' sending direction trunk groups;

The "receiving direction" indicates that the 5ESS Switch receives the call set-up packets from a DTE or an STE. The "sending direction" indicates that the 5ESS Switch receives the call set-up packets from IP and sends them to a DTE or an STE. When the 5ESS Switch receives the call set-up packets from IP on X.75/X.75' trunk groups, the 5ESS Switch converts an IP facility to the X.75/X.75' utility.

1.9 Network Utility Default Values

This capability provides the ability to change the default value for the support of each Network Utility on an X.75' Packet Trunk from "None" to "On". In 5E7 the default for placing the NUI value was after the Utility marker. For 5E8 and later, the internal default for supporting NUI before the Utility Marker was implemented.

1.10 Recognized Private Operating Agency Selection Utility on X.75

This capability provides the support of the RPOA (Recognized Private Operating Agency) Selection Utility on an X.75 trunk group. Normally, an X.75 STE deletes the (next) RPOA Selection utility from a call set-up packet before transmitting an X.75 CRP over an X.75 trunk group to another network that is identified by that RPOA. Each X.75 trunk group can be configured with two configuration option variables.

1. The first option variable specifies whether or not the RPOA Selection utility is to be deleted before transmitting an X.75 CRP over an X.75 trunk group to another network that is identified by that RPOA. The support of this configuration option allows the 5ESS ISDN subnetwork to interconnect via an X.75 trunk group with a network which requires that the RPOA Selection Utility be retained on the X.75 trunk group. It also allows the 5ESS Switch ISDN subnetwork to interconnect via an X.75 trunk group with a network that is not capable of deleting the RPOA Selection utility before transmitting an X.75 CRP over an X.75 trunk group.

2. The second option variable specifies whether or not the network is to accept an X.75 CRP from an X.75 trunk group that includes the RPOA Selection utility identifying the network receiving the X.75 CRP. This configuration option allows the 5ESS Switch ISDN subnetwork to interconnect via an X.75 trunk group with a network that is not capable of deleting the RPOA Selection utility before transmitting an X.75 CRP over an X.75 trunk group.

1.11 Transit Network Identification Unique or Shared on X.75

This capability supports a Configuration Option Parameter on an X.75 Packet Trunk that designates if the TNI (Transit Network Identification) Service Provisioned Parameter is either "Unique" or "Shared".

In most cases, a 5ESS Switch ISDN subnetwork is either an originating network or a terminating network, rather than a transit network. When the 5ESS Switch ISDN subnetwork serves as a transit network, the DNIC (Data Network Identification Code), or the INIC (ISDN Network Identification Code) must be inserted into the TNIC (Transit Network Identification Code) utility parameter field of an X.75 packet transmitted over an X.75 trunk group. For example, a 5ESS Switch ISDN subnetwork might act as a transit network if it served as an intermediate carrier for a call received over an X.75 trunk group from an IPSN

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(Independent Packet Switched Network) in the LATA and transmitted over an X.75 trunk group to an IEC (Inter-exchange Carrier) or a directly connected network (e.g. Value-Added Network) outside the LATA. (The 5ESS Switch ISDN subnetwork can also act as a transit network if it served as an intermediate carrier for a call received over an X.75 trunk group from an IEC or a directly connected network outside the LATA and transmitted over an X.75 trunk group to an ISPN in the LATA.)

Since more than one network may share the same DNIC or INIC, it is necessary to accommodate situations in which two or more networks having the same DNIC (or INIC) act as transit networks for a given virtual call.

Some implementations use the presence of duplicate TNIC utilities in an X.75 packet (i.e., presence of more than one TNIC utility in the X.75 packet with the same parameter field value) to indicate the presence of a routing problem. According to CCITT Recommendation for the X.75, an X.75 packet may contain more than one TNIC utility provided that the parameter field values in these utilities are not the same. The presence of duplicate X.75 TNIC utilities in an X.75 CRP (Call Request Packet), an X.75 CCP (Call Connected Packet) or an X.75 CLRP (Clear Request Packet) is considered an error condition. Therefore, each PHF (Packet Handling Function) must be capable of being configured as part of a network identified by a DNIC/INIC that either is shared or unique. Then, it is possible to support, by service provisioning, a configuration option parameter (on an X.75 packet trunk) that designates if the TNI service provisioned parameter (TNIC field on the ISDNOPT form) is "unique" or "shared". It is also possible, by service provisioning, to maintain a list of shared DNICs/INICs.

Whether or not the TNI parameter is "shared" or "unique", if a received X.75 CRP, X.75 CCP, or X.75 CIRP contains more than one TNIC utility (or AT&T TNIC) where the value in the parameter field does not match an entry in the list of shared DNICs/INICs, the 5ESS Switch X.75 STE should clear a virtual call request because looping may occur. The virtual call request should not be cleared if the value in the parameter field value matches an entry in the list of shared DNICs/INICs.

If the 5ESS Switch X.75 STE determines that the network is a transit network, then the STE checks for a TNIC utility with a parameter field value that matches the TNIC field on the ISDNOPT form (5941 Record) before transmitting an X.75 CRP to the remote X.75 STE over an X.75 packet trunk.

- If "SHARED" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 CRP to be transmitted contains at least one instance of a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE does not insert its TNIC value into the X.75 CRP to be transmitted.
  - if the X.75 CRP to be transmitted does *NOT* contain a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE inserts the TNIC utility into the X.75 CRP.

- If "UNIQUE" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 CRP to be transmitted contains at least one instance of a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE clears the virtual call request because looping may occur.
  - if the X.75 CRP to be transmitted does *NOT* contain a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE inserts the TNIC utility into the X.75 CRP. Switch

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1.12 X.75 Enhancements

This capability supports multiple X.75 trunk groups to a single IEC/VAN (Inter-exchange Carrier/ Value Added Network) on the same 5ESS Switch. The 5E6 Multiple X.75 Gateways feature allows the 5ESS Switch to support a single X.75 trunk group to an IEC/VAN on a 5ESS Switch. This capability does not require data support.

1.13 X.75 Trunk Group Identification

Whenever a call originating in, terminating on, or transiting through the network traverses an X.75 trunk group, the X.75 trunk group Identifier utility passes across any intervening X.75' trunk groups the identification number of the X.75 trunk over which a call enters/exits the network. This capability implements the X.75 trunk group Identifier utility, so that this information is available to another subnetwork which generates the AMA (Automatic Message Accounting) record.

1.14 Protocol Conversion Permissions

The PCP (Protocol Conversion Permissions) utility enables the 5ESS Switch ISDN subnetwork to transparently pass explicit protocol conversion permission values for an X.75'-to-X.75' transit subnetwork switching (i.e., calls that enter and exit the subnetwork on X.75' trunk groups), when real-time protocol screening is to be performed by the LEC network. The ISDN switch is not required to generate the PCP utility, nor is it required to perform real-time protocol screening.

1.15 X.75'-to-X.75' Transit Subnetwork Switching

This capability allows the 5ESS Switch ISDN subnetwork to serve as a transit (or tandem) subnetwork in the path of a packet call. This provides greater flexibility in network configuration and routing.

Call looping among the sub-networks in a LEC LATA may arise due to a combination of alternate routing and transit switching. The TSC (Transit Subnetwork Count) utility is used to detect invalid looping conditions during transit switching applications. (See the paragraphs on the ISDNOPT form for global parameters for Transit Subnetwork Switching, and the TRUNK form for CLEAR SUB NET ID.)

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ISDNOPT	5941	5	5B	8.1
RTIDX	5304	3	3Q	10.2
TKGRP	5202	3	2A	5.1
TNICLIST	5928	5	3I	5.15
TRUNK	5204	3	2C	5.5
X75CUG	5930	5	3K	5.14
X75PVC	5926	5	3G	5.13

2.1 Translations

The forms listed below give the new or changed translation information for the PTIS feature. See Figure 1 for the form flow for PTIS.

ISDNOPT (5941 Record) - This form is used to define the office parameters for and ISDN switch. Only one instance of this form can exist in an office.

- SEGMENT SIZE

  For 5E8 and later, BILLING SEGMENT SIZE was renamed to SEGMENT SIZE. The meaning of the field also changed slightly. This field specifies the office packet segment size for *Intra*network ISDN Packet Switching.

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The new SEGMENT SIZE field on the TKGRP form, which is applicable for X.75 trunk groups only, is used for *Inter*network ISDN Packet Switching.)

- SUBNET ID

  This field is the Clearing Subnetwork Identifier. When a subnetwork clears a virtual call that is active or in progress, the clearing subnetwork inserts this value in the Clearing Subnetwork Identification Utility to identify itself. This helps in problem localization and detection at a subnetwork level. This is a required field, therefore, the service provider needs to provide a value for this field by the time of retrofit.

- SUBNET CNT

  This field is the Transit Subnetwork Count. This is a threshold value that is used to detect invalid looping among the subnetwork within the LATA. It is the service provider's responsibility to ensure that the same value is provisioned for this parameter across the subnetwork. This is a required field, therefore, the service provider needs to provide a value for this field by the time of retrofit.

RTIDX (5304 Record) - If a ROUTE INDEX defined on a RTIDX form has a trunk group number defined on the TKGRP form with a TRKCLS of "X75" or "X75P" and a NEXT ROUTE entered, then the NEXT ROUTE on that RTIDX form must be defined as a ROUTE INDEX on another RTIDX form, where the trunk group number is defined on a TKGRP form with a TRKCLS set to "X75", "X75P", or "PACKET".

TKGRP (5202 Record) - The TKGRP form defines each Trunk Group in a 5ESS Switch. The trunk information that is entered on this form is information that is common to the entire group. The following fields were added for the PTIS feature.

- CUG LIST ID

  This field is used to assign a Closed User Group List to this X.75 trunk group. This field can only be entered for X.75 trunk groups. If this field is entered, the entry must be defined as a key value on the X75CUG form.

- CUG SCRN

  This field indicates if the Closed User Group Screening is enabled. This field can only be "Y" for X.75 trunk groups that are assigned a CUG LIST ID.

- ILC SCRN

  If this field is set to "ON" and the RPOA utility on this X.75 trunk is provisioned, then the packet trunk call arriving at the X.75 trunk group may be screened (depending on how the ILC field on the ISDNOPT form is entered) as an X.25 trunk group. If this field is set to "OFFTR" and the RPOA utility on this X.75 trunk is provisioned, then the switch honors the RPOA that is in the CRP regardless of the ILC field entry on the ISDNOPT form. If this field is set to "OFFDN" and both the RPOA utility and the IECP utility are not present in the CRP, then the call is routed based on the directory number in the CRP. This field is only applicable for X.75 trunk groups and must be entered for X.75 trunk groups.

- NBRPLAN

  This field identifies the X.75 or X75' native numbering plan. In 5E8, the only valid mode of interworking between numbering plans is Escape Code. The pseudo DNIC mode of interworking is no longer supported. If any office is using pseudo DNIC ("X121PD" or "E164PD"), during the retrofit to 5E8 the NBRPLAN will be set to blank. This field must be "NONE" for non-X75/X75' trunk groups.

- NUI IN VFY

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This field assigns the NUI (Network User ID) treatment for Incoming Verified Calls on X.75 trunk group. NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as it is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility. When this field is set to "DELETE", the switch removes the NUI utility from the CRP before delivering the call set-up packet. This field can only be entered for X.75 trunk groups. If this field is not entered for X.75 trunk groups, an internal default of "PASS" is automatically assigned.

- NUI IN UNVFY

  This field assigns the Network User ID treatment for Incoming Unverified Calls on X.75 trunk group. NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as it is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility. This field can only be entered for X.75 trunk groups. If this field is not entered for X.75 trunk groups, an internal default of "CLEAR" is automatically assigned.

- NUI OUT VFY

  This field assigns the Network User ID treatment for Outgoing Verified Calls on an X.75 trunk group. NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as it is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility. When this field is set to "DELETE", the switch removes the NUI utility from the CRP before delivering the call set-up packet. This field can only be entered for X.75 trunk groups. If this field is not entered for X.75 trunk groups, an internal default of "PASS" is automatically assigned.

- NUI OUT UNVFY

  This field assigns the Network User ID treatment for Outgoing Unverified Calls on X.75 trunk group. NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as it is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility. This field is only applicable for X.75 trunk groups. If this field is not entered for X.75 trunk groups, then an internal default of "CLEAR" is automatically assigned.

- SEGMENT SIZE

  This field defines the X.75 Internetwork AMA Segment Size. This field is used to determine the segment size for this X.75 trunk group internetwork virtual circuit. This value is used to determine the number of segments in AMA billing records. This field can only be entered for X.75 trunk groups. If this field is not entered for X.75 trunk groups, an internal default of 64 is automatically assigned for this trunk group.

The following checks are enforced on the TKGRP form:

- TRKCLS must be "X75"
  - if NUI IN VFY, NUI IN UNVFY, NUI OUT VFY, or NUI OUT UNVFY are entered;
  - when CUG SCRN is "Y";
  - when CUG LIST ID is entered;
  - when ILC SCRN is entered;
  - when SEGMENT SIZE is entered.

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- If TRKCLS is "X75" and CUG SCRN is "Y", then CUG or CUG OUTGOING must be "Y" or blank on each corresponding TRUNK form of that trunk group.
- X75 trunks must have IC PRESELECT entered on the TRUNK form.
- X75 Trunks must have UTILITY MARKER on the TRUNK form set to "Y" if any of the following fields are "Y":
  - TDI AFTER,
  - TDS AFTER,
  - TARIFF AFTER,
  - IN RPOA AFTER,
  - NUI AFTER,
  - OUT RPOA AFTER.

- If TRKCLS is "X75P" then:
  - trunks must have ACCESS CHAR entered on the TRUNK form.
  - if the ACCESS CHAR field on the TRUNK form is set to "N", then NUI BEFORE must be set to "N" and NUI AFTER must be set to "N" or blank on the trunk form.
  - the X.75' trunks on the TRUNK form must have UTILITY MARKER set to "Y" if any of the following fields are "Y" or blank:
    - ACCESS CHAR,
    - CLEAR SUB NET ID,
    - NUI AFTER,
    - PROTOCOL CONV,
    - TRANS SUB NET CNT,
    - X75 ID UTILITY.

- If TKCLS is "X75" or "X75P" then
  - the trunk members on the corresponding TRUNK form must have the TNIC INDICATOR entered.

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- if the LCN information fields are left blank on the TRUNK form at least one of the following fields must be entered on the TRUNK form:
  - HIGH PVC LCN,
  - LOW INCOMING LCN,
  - LOW 2 WAY LCN,
  - LOW OUTGOING LCN.
- if a ROUTE INDEX(s) defined on a RTIDX form, has a TRUNK GROUP NUMBER and NEXT ROUTE entered, then the NEXT ROUTE on this RTIDX form must be defined as ROUTE INDEX on another RTIDX form where TRUNK GROUP NUMBER is defined on a TKGRP form with TRKCLS set to "X75", "X75P", or "PACKET".
- PACKET SWITCHING and X.75'/X.75 TRUNK ONLY on the corresponding TRUNK forms must be entered.

TNICLIST (5928 Record) - This record is available for 5E8 and later. It is used to provision a list of up to 20 shared INICs/DNICs which are referenced as TNIs (Transit Network Identities) for the entire switch. The entries in this list must be unique. Only one instance of this form can exist in an office.

TNICLIST form can only be entered for offices that contain ISDN SMs, therefore at least one SM on the EQIM form (5700 Record) must have a CONFIGURATION of "LOADED".

- KEY

  This field is the designated key to the form. It must always be 0.

- INIC/DNIC

  Enter the INIC (ISDN Network Identification Code) / DNIC (Data Network Identification Code). Duplicate INIC/DNIC entries cannot be made.

TRUNK (5204 Record) - The TRUNK form is used to define each member of a Trunk Group in a 5ESS Switch Office. The information entered on this form is unique to the individual member of a trunk group. For 5E8 and later, the following fields were added for PTIS:

- CLEAR SUB NET ID

  Is the Clearing Subnetwork ID Utility supported for this X.75' trunk? This utility is used to identify the subnetwork that was responsible for clearing a virtual call due to network action. This field is only applicable for X.75' trunks and cannot be set to "Y" if UTILITY MARKER is set to "N". If this field is left blank for an X.75' trunk and the UTILITY MARKER is "Y", then an internal default of "Y" is assigned. (See also the ISDNOPT form for SUBNET ID and SUBNET CNT global parameters.)

- IC PRESELECT

  Is the IC (Inter-exchange Carrier) Pre-Select Utility Indicator enabled? If this field is "Y", then this utility, which carries an indication of a preselected IC in call requests traversing an X.75 trunk, is enabled. This field is only applicable for X.75 trunks and cannot be "Y" if UTILITY MARKER is "N". This field must be entered for X.75 trunks.

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- NUI BEFORE

  Should the NUI (Network User ID) exist before Utility Marker? This field can only be entered for X.75 or X.75' trunk group members. If this field is "Y", then NUI AFTER cannot be "Y". If this field is left blank and NUI AFTER is "N" or left blank for X.75 or X.75' trunks, then an internal default of "Y" supporting the NUI before the Utility Marker is automatically assigned. If NUI is not to be supported at all for this X.75 or X.75' trunk, then both the NUI BEFORE and NUI AFTER fields must be "N". If the trunk is an X75' trunk and the TNIC INDICATOR is "N", then NUI BEFORE and NUI AFTER must be "N". In addition, if the trunk is an X75' trunk and ACCESS CHAR is "N", then NUI BEFORE and NUI AFTER must be "N".

- NUI AFTER

  Should the NUI (Network User ID) be supported after Utility Marker? This field can only be entered for X.75 or X.75' trunk group members which have the UTILITY MARKER set to "Y". If this field is "Y", then NUI BEFORE cannot be "Y". If this field is left blank and NUI BEFORE is left blank for X.75 or X.75' trunks, then an internal default for supporting NUI before the Utility Marker will be implemented. If NUI is not to be supported at all for this X.75 or X.75' trunk, then both the NUI BEFORE and NUI AFTER fields must be "N". If the trunk is an X75' trunk and the TNIC INDICATOR is "N", then NUI BEFORE and NUI AFTER must be "N". In addition, if the trunk is an X75' trunk and ACCESS CHAR is "N", then NUI BEFORE and NUI AFTER must be "N".

- PROTOCOL CONV

  Is Protocol Conversion Permission Utility allowed on this X.75' trunk group? The purpose of this utility is to supplement the protocol information passed in the Access Characteristic utility with additional information to allow protocol screening to be performed. This utility is applicable only on X.75' trunks and cannot be set to "Y" if the UTILITY MARKER is set to "N". If this field is not entered for an X.75' trunk member and the UTILITY MARKER is not "N", then an internal default of "Y" is assigned.

- RPOA DEL SEND

  Should the RPOA be deleted by this X.75 trunk group before being sent to a remote STE? When this field is set to "N", the 5ESS Switch X.75 STE passes the RPOA Selection utility or the sequence of RPOA Selection utilities (without deletion) in the transmitted X.75 CRP. This field is only applicable for X.75 trunks. If this field is not entered for an X.75 trunk member, then an internal default of "Y"is assigned. When RPOA DEL SEND is "Y" or blank, OUT RPOA BEFORE or OUT RPOA AFTER must be "Y" or blank.

- RPOA DEL RCV

  Should the RPOA be deleted when received by this X.75 trunk group from a remote STE? When this field is set to "Y", the 5ESS Switch X.75 STE discards the RPOA Selection utility or the first RPOA Selection utility in case of a sequence of RPOA Selection utilities when it is received in an X.75 CRP, providing the contents of the RPOA parameter field identifies the network of the 5ESS Switch ISDN subnetwork. This field is only applicable for X.75 trunks. If this field is not entered for an X.75 trunk member, then an internal default of "Y" is assigned. When RPOA DEL RCV is "Y" or blank, IN RPOA BEFORE or IN RPOA AFTER must be "Y" or blank.

- TNIC CONFIG

  This field designates if the TNIC (Transit Network Identification Code) is either "UNIQUE" or "SHARED" for Transit Networks on X75 trunks. These TNIC CONFIG values are used to detect looping within the network. This field is only applicable for X.75 trunk members. The form TNICLIST contains a list of shared TNICs that are valid for this switch.

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Each X.75 trunk member may have a TNI mode of "UNIQUE" or "SHARED" or no TNI mode (blank). The TNI mode is used when the switch receives an IP Call Request Packet that contains a TNIC or ATNIC facility or a sequence of TNIC or ATNIC facilities.

The enumerations designating if the TNI is to be used in either a "unique" mode or in a "shared" mode are described as follows:

If the 5ESS Switch X.75 STE determines that the network is a transit network, then the STE checks for a TNIC utility with a parameter field value that matches the TNIC field on the ISDNOPT form (5941 Record) before transmitting an X.75 CRP to the remote X.75 STE over an X.75 packet trunk.

- If "SHARED" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 CRP to be transmitted contains at least one instance of a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE does not insert its TNIC value into the X.75 CRP to be transmitted.
  - if the X.75 CRP to be transmitted does *NOT* contain a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE inserts the TNIC utility into the X.75 CRP.
- If "UNIQUE" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 CRP to be transmitted contains at least one instance of a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE clears the virtual call request because looping may occur.
  - if the X.75 CRP to be transmitted does *NOT* contain a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE inserts the TNIC utility into the X.75 CRP.
- If "NONE" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 trunk member has no TNI and there are duplicate TNIs in the Call Request Packet (CRP), then the call is cleared. Up to seven unique TNIs may be present in the CRP. This is the mode of operation prior to 5E8.

The form TNICLIST contains a list of 0 to 20 shared TNIs that are valid for this switch. This list is not coupled with the provisioning of this attribute, however it is used when processing an incoming IP CRP as mentioned above.

- TRANS SUB NET CNT

  Should the Transit Subnetwork Count Utility be supported for X.75'? In 5E8, X.75'-to-X.75' transit subnetwork switching is supported. Call looping among subnetworks in a LEC LATA could arise due to this X.75'-to-X.75' support. The Transit Subnetwork Count utility can be used to detect invalid looping conditions during transit switching situations within the LEC network. This field is only applicable for X.75' trunks and cannot be set to "Y" if UTILITY MARKER is set to "N". If this field is left blank for an X.75' trunk and the UTILITY MARKER is "Y", then an internal default of "Y" is assigned. (See the ISDNOPT form (5941 Record) for more information on SUB NET CNT.)

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- UTILITY FLD SIZE

  Enter the X.75/X.75' Trunk Utility Facility Field Length type. The BASIC-Utility Field Size cannot exceed 63 octets and the BASIC-Facility Field cannot exceed 109 octets. The EXTENDED-Utility Field Size could exceed 63 octets and/or the EXTENDED-Facility Field could exceed 109 octets provided that the length of the combined facility and utility fields does not exceed 172 octets. If the length exceeds 172 octets, the call will be cleared.

- X75 ID

  Enter the X.75 trunk group Identification Number to uniquely identify the X.75 trunk member used in a call. The identifying number is used by the RAO (Revenue Accounting Office) to determine appropriate billing for packet calls in network configurations where the called address is not sufficient to indicate if the Inter-exchange Carrier or another X.75 connected entity is to be billed for the call. This field is only applicable for X.75 trunks. If this field is not entered for an X.75 trunk member, then an internal default of 0 is assigned.

- X75 ID UTILITY

  Is the X.75 Identification Utility supported for this X.75' trunk? This utility is used to carry the identification of X.75 trunk groups through X.75' trunks. This field is only applicable for X.75' trunks and cannot be set to "Y" if UTILITY MARKER is set to "N". If this field is not entered for an X.75' trunk member and UTILITY MARKER is "Y", then an internal default of "Y" is assigned.

X75CUG (5930 Record) - The X.75 Closed User Group Form assigns a Closed User Group International Interlock code to an X.75 trunk group. This record is available for 5E8 and later Software Releases. No more than 1600 DNIC/ICN combinations can be entered on all of the X75CUG forms in an office. If CUG LIST ID(s) has been entered on the X75CUG form, at least one SM must be defined on the EQIM form where CONFIGURATION equals "LOADED". X75CUG forms can only be entered for offices that contain ISDN SMs.

- CUG LIST ID

  This is the list ID for a list of up to 100 Closed User Group (CUG) International Interlock Codes (IICs).

- CUG LIST

  This is the list of up to 100 CUGs for this CUG LIST ID. The list consists of the DNIC (Data Network Identification Code) and ICN (International Closed User Group Number) pairs used in the establishment of a virtual call by CPE (Customer Premises Equipment) that are members of a CUG. At least one DNIC/ICN combination must be entered on this form.

  - DNIC

    Enter the Data Network Identification Code. If this field is entered, a corresponding ICN list element must be entered. Each combination of DNIC and ICN must be unique in the CUG LIST.

  - ICN

    Enter the International CUG (Closed User Group) number. If this field is entered, then the corresponding DNIC list element must be entered. Each combination of DNIC and ICN must be unique in the CUG LIST.

X75PVC (5926 Record) - For 5E8 and later, PVCs are supported between X.75' to X.75' trunk groups. The X75PVC form is used to assign PVC (Permanent Virtual Circuit) Logical Channel Numbers to X.75

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and X.75' packet switching trunks.

- FCL TYPE

  Enter the X.75' Tandem Trunk Remote Facility Type. If this field is "X75P", then the key to this form (TGN) must match a trunk group with a trunk class of "X75P". Also, LINK ID and PSN must be known when this field is "X75P". If this field is "X25", then the key to this form (TGN) must match to a trunk group with a trunk class of either "X75P" or "X75". When FCL TYPE is "X25", REMOTE TN must be entered. This field is required.

- LINK ID

  Enter the X.75' Tandem Trunk Remote Gateway Link ID. This field is used to designate the destination (remote) gateway link ID of a tandem X.75' to an X.75' trunk group PVC. This field must be known if FCL TYPE is "X75P"; otherwise, it must be blank.

- PSN

  Enter the X.75' Tandem Trunk PVC Destination Packet Switched Number. This field identifies the destination packet switch that provides an IP trunk group with another packet switching network. The destination packet switch is a switch that resides in the same an IP subnetwork as this switch. This field must be known if FCL TYPE is "X75P"; otherwise it must be blank. PSN(s) assigned on the X75PVC input form must be defined on a RTIDX form.

- REMOTE LCN

  For 5E8 and later, ACCESS LCN has been renamed REMOTE LCN.

- REMOTE TN

  For 5E8 and later, ACCESS TN has been renamed REMOTE TN. When REMOTE TN is entered, FCL TYPE must be "X25".

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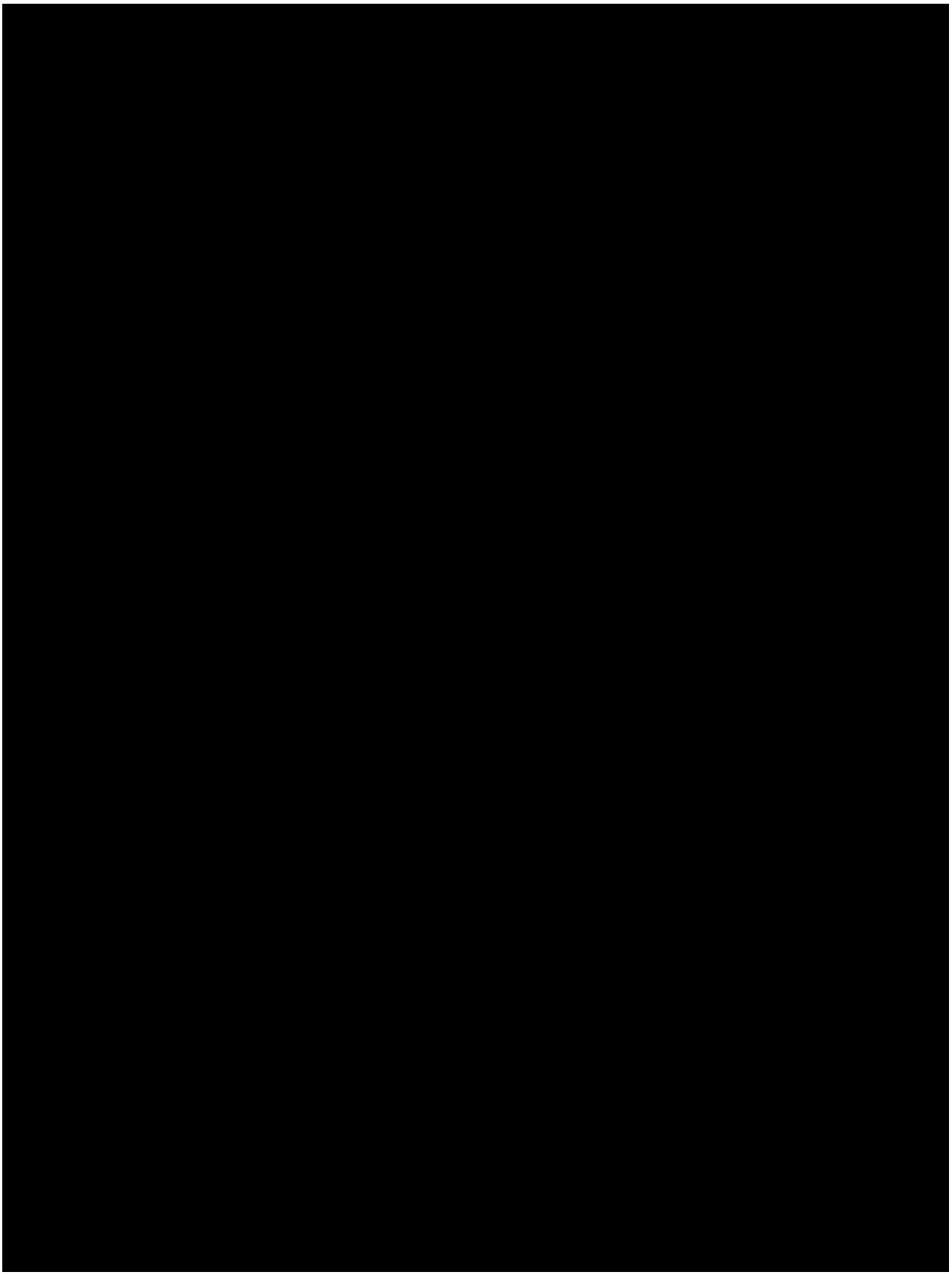

Figure 1 FORM FLOW FOR PACKET TRUNK INTERFACE STANDARDIZATION

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SEC. 5D: HIGHER INTERSWITCH DATA THROUGHPUT

1. FEATURE DESCRIPTION

For 5E9(1) and later, this feature enhances the network utility which carries Throughput Class information for both directions of transmission. It provides enhancements to the following capabilities.

1.1 Throughput Class of 19.2 kb/s on 5ESS Switch x.75/X.75' packet trunks.

Throughput class indication is a network utility that is assigned on a per X.75/X.75' trunk member basis and is used to signal Throughput Class information for packet-mode calls across X.75 and X.75' interfaces. The utility carries throughput class information for both directions of transmission.

Prior to 5E9(1), the 5ESS Switch on X.75/X.75' interfaces supported the throughput classes from 75 to 9600 b/s. This feature provides the capability to support the throughput class value of 19.2 kb/s on 5ESS X.75/X.75' packet trunks. It is supported on both PH2 and PH3 Packet Handlers.

1.2 Nonstandard Default Packet Layer Window Size values of 1 and 4 - 7 on X.25 B-channel and X.25 D-channel.

This feature extends the current range of packet layer window size values supported on X.25 B-channel and X.25 D-channel for virtual circuits (virtual calls and PVCs (Permanent Virtual Circuits)) from 2 - 3 to 1 - 7.

The packet layer window size of 2 is the CCITT standard default value. A packet layer window size value of 3 is the non-standard default value.

For 5E9(1) and later, in addition to the non-standard default window size value of 3 currently being supported, the 5ESS Switch supports non-standard default packet layer window size values of 1 and 4 - 7.

This feature requires subscription on packet service and supports this capability on PH3 Packet Handlers on both BRI and XAT (X.25 Packet Switching Channel Assignment).

1.3 Non-standard Default Packet Layer Window Size values of 1 and 4 - 7 on X.75/X.75' interfaces.

This feature extends the range of packet layer window size values supported on 5ESS Switch X.75/X.75' interfaces for virtual circuits (virtual calls and PVCs) from 2 - 3 to 1 - 7.

In addition to the non-standard default window size value of 3 currently being supported, the 5ESS Switch supports the non-standard default packet layer window size values of 1 and 4 - 7.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AMLBDSL	5447	3	4AV	21.34
DSL	5907	5	1H	23.2
DSLUSR	5908	5	5I	23.2
PSPVC	5923	5	3D	23.11
TRUNK	5204	3	2C	5.5
XAT	5909	5	1J	23.40
X75PVC	5926	5	3G	5.13

The following table indicates the forms and fields where the packet layer window size was increased from 2 - 3 to 1-7:

Form Name	Field Name

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AMLBDSL, TRUNK, PSPVC, XAT and X75PVC	SEND PKTWD, RCV PKTWD
DSL	PPB1 SEND PKTWD, PPB1 RCV PKTWD PPB2 SEND PKTWD, PPB2 RCV PKTWD
DSLUSR	DPKT SEND PKTWD, DPKT RCV PKTWD, ODB RCV PKTWD

The following table indicates the forms and fields where the throughput class default value was changed to 9600:

Form Name	Field Name
AMLBDSL and XAT	SEND TPC RCV TPC
DSL	PPB1 SEBD TOC, PPB1 RCV TPC, PPB2 SEND TPC, PPB2 RCV TPC
DSLUSR	DPKT SEND TPC, DPKT RCV TPC, ODB SEND TPC, ODB RCV TPC

The following table indicates the forms and fields where the throughput class value of 19200 was added as a valid entry:

Form Name	Field Name
SEND TPC, RCV TPC.	SEND TPC, RCV TPC

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SEC. 5E: MULTIPLE ISDN TRUNKS ON A PH3

1. FEATURE DESCRIPTION

The MITOP (Multiple ISDN Trunks on a PH3) capability enhances the PH3 (Protocol Handler 3) to support multiple ISDN packet trunk members (IP, X.75, X.75') of the same level 2 trunk class. The upper limit of trunk members supported by the PH3 for MITOP is six; however, the recommended maximum is either four X.75', four X.75, or six IP trunk members per PH3 (based on a capacity of 256 logical channels and 128 physical channels).

All ISDN trunk members on a single PH3 must have the same level 2 profile. The only ISDN trunk enumerations supported by this feature are IP, X.75 and X.75'. The trunk members can be members of different trunk groups with the same level 2 profile on the SM.

Each packet trunk member must have four contiguous timeslots assigned. This assignment should not be restricted within the range of physical time slots from 0 to 20, except that the ranges must start on the boundaries evenly divisible by four (000, 004, 008, 012, 016, and 020 are valid). A PH3 still only supports a maximum of 256 logical channels spread among the configured trunk members. If the craft configures more than four X.75, four X.75', or six IP packet trunk members on a PH3, a lack of logical channels may cause packet call blockage during heavy trunk utilization.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TRUNK	5204	3	2C	5.5

2.1 Trunk Translations

TRUNK form (5204-1/2 Record) - The Trunk form is used to define each member of a Trunk Group in a 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Trunk information that is common to the entire Trunk Group is entered on the TKGRP form (5202 Record).

For the MITOP feature, the already existing ISCN field contains added information for PH3s. The ISCN field is the Integrated Services Channel Number of a trunk.

The ISCN is a six-digit number consisting of:

INTEGRATED SERVICES CHANNEL NUMBER (ISCN)

Equipment	Format	Valid Entries
SHELF	X	0-4
CHL GRP	XX	00-15
CHL	XXX	000-127

For Packet Switched trunks (TRKCLS is "PACKET", "X75P" or "X75" on the TKGRP form), the SM entered in this field must be defined on the EQPSU form. Also, for packet switched trunks, a DEN must be entered for this TGN.

For 5E6 and earlier, the last three digits of ISCN must be 000 for trunk members with a trunk class of "PACKET", "X75P", and "X75".

For 5e7 and later, a value of 000 for the last three digits of ISCN is only required for "PACKET", "X75", and "X75P" trunks on a PH2.

For 5e7 and later, "PACKET", "X75", and "X75P" trunks on a PH3 must have the last three digits of the ISCN in the range of 000 to 020 in multiples of 4 (000,004,008,012,016,020 are valid). This allows a maximum of 6 trunk members per PH3. It is recommended to have a maximum of 4 trunk members per

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PH3 for X75 and X75P trunks. The trunk class must be the same for trunk members on a PH3.

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SEC. 5F: REMOTE PROTOCOL ACCESS

1. FEATURE DESCRIPTION

RPA (Remote Protocol Access) provides the ability to set up RDTA (Remote Digital Test Access) connections and troubleshoot customer problems on ISDN BRI (Basic Rate Interface) lines or PRI (Primary Rate Interface) packet trunks. Note that in this feature description RPA and RDTA may be used interchangeably.

RPA testing is normally done by a craft at a CSC (Customer Service Center). The CSC is a work center where protocol analysis is done. It can be located remotely from the switch and is normally configured so that it can access and be accessed by several switches. The CSC should have an OS maintenance channel to each switch and have a set of output facilities connected between a single Access Switch and CSC's protocol maintenance system.

An Access Switch is defined as a switch that is maintained by a CSC. For any switch maintained by a CSC that is not an Access Switch, communication between CSC protocol analyzers and the output facilities of the Access Switch is done usually through a circuit-switched data path through the CCS7 ISUP network; however, User-Side PRI facilities may also be used.

Several RDTA connections can be set up on a single ISDN interface (one per channel) simultaneously, if appropriate resources (both switch-based and external) are available.

1.1 ISDN PRI/ISDN Pseudo BRI Output Facilities

The service provider can provision either ISDN PRI or ISDN Pseudo BRI output facilities to connect the Access Switch with the CSC protocol analyzers. An ISDN PRI output facility will be a PODS (i.e., no BRCS features assigned and no billing capabilities) EDSL PRI facility (outgoing or two-way) with up to 23 B-channels and a D-channel that handles Q.931 signaling. An ISDN Pseudo BRI will essentially be made up of one D-channel and two B-channels. The D-channel of a Pseudo BRI will look like a B-channel (although the standard D-channel 16Kb data rate is used) since it is not connected to a PH and will not exchange any Q.931 messages between the Access Switch and the CSC.

1.2 Required Input/Output Messages

The craft at the CSC requests an RDTA connection by sending the TTY input message EXC:RDTA to the office over an OS maintenance channel. This message contains the identity of the PUT (Port Under Test), the DNs (Directory Numbers) associated with channels of the PRI or Pseudo BRI output facility, and the RDTA connection mode. If the RDTA connection is successful, the craft receives a TTY output message of EXC RDTA. An active RDTA connection is terminated when the craft sends the TTY input message STP:RDTA to the office where the RDTA connection was set up. A standard 24-hour timer may also terminate calls.

A DN on the input message represents a specific channel on an output facility between the Access Switch and the CSC. The D-channel and each B-channel of an ISDN Pseudo BRI output facility can be routed to based on a specific DN for that channel. Likewise, each B-channel of an ISDN PRI output facility can be routed to based on a specific DN for that channel. The craft can choose either type of output facility to transmit the test data to the CSC. The port type of the output facility is independent from the port type of the PUT as long as the output data rate is greater than or equal to the PUT data rate; that is, when an ISDN BRI channel is being tested, the test data can be transmitted to the CSC over an ISDN PRI output facility.

1.3 Valid Port Types

The type of ports that can be tested via an RDTA connection include:

- Circuit-switched ISDN BRI and PRI B-channels. The BRI channels may be terminated at either a U-

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or T-interface

- ISDN BRI On-demand B-channel that is packet-switched
- ISDN PRI D-channel carrying Q.931 messages
- ISDN BRI D-channel carrying Q.931 messages and X.25 packets
- Packet switched trunks including IP, X.75, and X.75'
- XAT packet-switched lines on a T1 carrier.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RDTAPORT	5911-A/B	5	1L	22.7
RDTATN	5910-A/B	5	1M	22.18
OFCOPT	5509	5	5B	8.1
EQPSUPH	5742	8	23	22.2/22.3
TKGRP	5202	3	2A	5.1

2.1 ISDN/Packet Switching Translations

RDTAPORT form (5911-A/B Record) - The RDTA Port/TN Assignment form is added with the 5E7 Software Release for the RPA feature. This form sets up the data for RPA at the Access Switch. When an RDTAPORT form is defined for an office, the fields RDTA DAS and RDTA SCRN IDX must be assigned on the OFCOPT form (5509 Record).

The RDTA OE field is the Pseudo BRI port or the PRI B-Channel port used for the RPA feature. It is a required field.

An RDTA OE TYPE of "I" followed by entries representing the SM, ISLU, LGC and LC defines a Pseudo BRI OE. This field entry must be unique and must not appear on another RDTAPORT, DSL (5907 Record), OSPSDSL (5411 Record) or DSLAP form (5962 Record).

The Pseudo BRI OE must be defined on an ISLULC form (5942 Record) with an "O" in the EQST field and a TYPE of "TLC", "ULC", "PULC" or "AULC". If RDTA OE TYPE is "I" then D CHAN TN, B1 CHAN TN and B2 CHAN TN must all be entered. PRI TN must be blank

An RDTA OE TYPE of "D" defines an EDSL PRI B-Channel consisting of an SM, DLTU, DFI, and DCHAN. The PRI OE number must be defined on a TRUNK form (5204 Record) with field BRCS set to "N". The corresponding TKGRP form (5202 Record) must have the field RDTA GRP set to "Y".

The 5911A Record is sorted by RDTA OE field. The 5910B Record contains the same information but is sorted by the CSC ID field.

The CSC ID field determines the Customer Service Center ID where RPA test equipment is located. It is a required field with a valid entry of up to 8 characters.

The PAIR field is the optional paired number for an RPA facility. There may be from 1 to 24 pairs defined. PAIR should be blank if the craft wishes not to assign a particular output facility a paired number. Pairing allows the craft to add separate pair numbers to sets of BRI or PRI pairs to allow for ease of identification when office records are printed.

The D CHAN TN field is the 7-digit TN associated with the D channel of the Pseudo BRI port. The TN must be unique within the 5ESS Switch. The first three digits of the D CHAN TN must be defined in the OFFICE CODE field on a NOC form (5501 Record).

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The B1 CHAN TN field contains the 7-digit TN associated with the B1 channel of the Pseudo BRI port. The TN must be unique within the 5ESS Switch. The first three digits of the B1 CHAN TN must be defined in the OFFICE CODE field on a NOC form.

The B2 CHAN TN field contains the 7-digit TN associated with the B2 channel of the Pseudo BRI port. The TN must be unique within the 5ESS Switch. The first three digits of the B2 CHAN TN must be defined in the OFFICE CODE field on a NOC form.

The PRI TN field contains the 7-digit TN associated with the Primary Rate Interface B channel port. The TN must be unique within the 5ESS Switch. The first three digits of the PRI TN must be defined in the OFFICE CODE field on a NOC form.

RDTATN form (5910-A/B Record) - This form is also available with the 5E7 Software Release. RDTATN is used by the operating company at the Remote Switch to document the TN of a Protocol Analyzer at the Access Switch. The 5910A Record consists of the TN, the CSC ID, the CHANNEL, and PAIR. The 5910A Record is sorted by TN. The 5910B Record contains the same information but is sorted by the CSC ID field.

The TN field associates a 7-, 10-, or 15-digit TN with a particular Pseudo BRI or PRI B-channel port that has been defined for the RDTA capability.

The CSC ID field is a required entry that determines the CSC ID where protocol analysis is done.

The CHANNEL field contains the channel that the TN is associated with. If the TN is associated with a Pseudo BRI D channel, the value must be 0. For a TN associated with a Pseudo BRI B1 channel the value entered should be 1; for a B2 channel, the value should be 2. If the TN is associated with a PRI B channel, the value should be 1 to 23 depending on the PRI B channel. This is a required field.

PAIR is an optional field containing a paired number for a RPA output facility. Pairing allows distinct pair numbers for sets of Pseudo BRI or PRI pairs and easier identification on printed office records. Valid values are 1 to 24.

2.2 Engineering Assignments Translations

EQPSUPH form (5742 Record) - This form, the Packet Switching Unit Protocol Handler Pack Equipage Record, is used to define the Packet Switching Unit Protocol Handlers equipped in a 5ESS Switch.

The BRI RDTA PIDB TS field, added with the 5E7 Software Release, represents the number of PIDB timeslots reserved for the BRI RDTA feature on the PSU Shelf. Valid entries are 2, 4, or 6.

2.3 Miscellaneous Forms Translations

OFCOPT form (5509 Record) - This form determines miscellaneous office options and parameters. It is required at the time of initial translations for all offices.

Two fields added to this form for the RPA feature are used during digit analysis. The third field determines the maximum number of RPA sessions on a switch.

The RDTA SCRN IDX field is the Screening Index used by RDTA to translate a TN for a 56Kbps or 64Kbps data call. The valid entries are 1 to 4095. RDTA SCRN IDX must be entered if an RDTAPORT (5909 Record) or RDTATN (5910 Record) is entered for this office.

The RDTA DAS field contains the Digit Analysis Selector which translates a DN from an input TTY message for RDTA. Valid entries are 1 to 99.

RDTA DAS must be entered if an RDTAPORT form (5909 Record) or RDTATN form (5910 Record) is entered for this office. This field must be defined on a DAS form (5300 Record) with the LINE DAS information entered.

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BRI MAX SESSION is the maximum number of simultaneous RPA BRI sessions allowed for any SM in this office. Valid entries are 1 to 15. If BRI MAX SESSION is entered, RDTA SCRN IDX and RDTA DAS must be entered.

2.4 Trunk Forms Translations

TKGRP form (5202 Records) - This form defines information common to a trunk group in a 5ESS Switch.

For the RPA feature, the new field RDTA GRP asks if the trunk group can be used for Remote Digital Test Access. This is a required field. Valid entries are "Y" (Yes) or "N" (No).

Figure 1 RPA FORM DEPENDENCIES

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SEC. 5G: REDEFINE PH2 ACCESS IMAGE

1. FEATURE DESCRIPTION

The PH2 Access Image Redefinition feature applies to 5E9(1) and later Software Releases. It redefines the PH2 (Protocol Handler 2) Access Image so that PH2s no longer support X.25 features. For 5E9(1) and later, the PH2 supports only ISDN Voice and Circuit Switched Data features. X.25 features require a PH3.

An Application Processor link is allowed to be on either a PH2 or PH3.

1.1 Expanded Definition

Prior to 5E9(1), a PH2 could be pumped with one of two images, the Access Image or the Gateway Image. The Access Image supported ISDN Voice, Circuit Switched Data and ISDN Access Packet (i.e., X.25, ISM (Inter-SM Nailup), Modem Pool, and XAT (X.25 Access on a T1 Carrier)). The Gateway Image supported X.75, X.75', ISM, IP (Internal Protocol), and IT (Inter-Switch Transport) functionalities.

For 5E9(1), this feature redefines the PH2A memory contents by removing all ISDN X.25 packet functionality from the Access Image for the PH2. The packet services no longer supported by the PH2 Access Image include: ISM, LAPB, X.25, Modem Pooling, and XAT. The ISM functionality now resides only within the PH2 Gateway Image and is limited to only four channels (0, 4, 8, 12); the remaining functions are supported only on PH3s.

For the limitations due to the above feature, refer to AT&T 235-190-105, Custom ISDN Features, and AT&T 235-190-110, National ISDN Feature Descriptions.

1.2 Data Implications

No new fields were added for this feature; however, data rules were modified to restrict the assignment of services on PH2s. These rules are specified in the TRANSLATION REQUIREMENTS section below.

1.3 Retrofit Considerations

Prior to an ODA retrofit to the 5E9(1) Software Release, the switch owner must identify all ISDN X.25 packet lines equipped on PH2s and move them to PH3s. This must be done prior to the final database dump. If these changes are not completed, ODA will flag unchanged lines as errors, and the retrofit will fail.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
AMLBDSL	5447	3	4AV	21.34
DSL	5107	5	1H	23.2
DSLUSR	5108	5	1I	23.2
ODBRES	5906	5	1G	23.14
XAT	5109	5	1J	23.40

AMLBDSL form (5447 Record) - This Automated Multi-Leaf Bulletin DSL form defines the DSL characteristics necessary for an OSPS VDT (Video Display Terminal) to make a packet-switched call to an external database.

For 5E9(1) and later, the SM, PSU SHELF and GRP must be defined on a PSUGP form (5949 Record) where PH TYPE is "PH3". The SM is specified in the first three digits of the LCEN on the AMLBDSL form. If an ISCN is defined on the AMLBDSL form, the SHELF and CHL GRP are the first three digits of that ISCN; otherwise, they are the first three digits of the ISCN on the corresponding OSPSDSL form (5411 Record), where the LCEN matches the LCEN of the AMLBDSL form.

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DSL form (5107 Record) - The DSL form is used to define the attributes of a DSL (Digital Subscriber Line, also called a BRI). It also defines the attributes of the B1 and B2 channels of the DSL when these channels are dedicated to Permanent Packet (X.25) Switching. DSL is available with 5E5 and later Software Releases.

For 5E9(1) and later when an ISCN is entered on the DSL form, the SM, PSU SHELF and GRP must be defined on a PSUGP form where PH TYPE is set to "PH3". On the DSL form the SM is specified in the first three digits of the OE. For D-channel packet service (DPKT TN or DPKT MLHG and TERM entered on a corresponding DSLUSR form), the SHELF and CHL GRP are specified in the first three digits of the D ISCN. For Permanent Packet B1 and B2 service, the SHELF and CHL GRP are represented by the first three digits of the PPB1 ISCN and PPB2 ISCN fields.

DSLUSR form (5108 Record) - The DSLUSR form is used to define the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, D-channel packet attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

For 5E9(1) and later when ODB ISCN1 is entered, the SM, PSU SHELF and GRP must be defined on a PSUGP form where PH TYPE is "PH3". On the DSLUSR form the SM is the first three digits of the OE; the SHELF and CHL GRP are the first three digits of ODB ISCN1.

ODBRES form (5906 Record) - The ODBRES form is used to reserve ISCNs (Integrated Services Channel Numbers) for DSL users of the ODB (On Demand B-channel) packet switching feature. A DSL user is assigned the ODB feature when an ODB TN is entered on a DSLUSR form where an ISCN is initially allocated to the user. The ISCNs reserved by this form become part of an ISCN "pool" to be accessed later for ODB assignment by Recent Change on RC view 23.2 and through the ACSR (Automatic Customer Station Rearrangement) feature.

For 5E9(1) and later, the SM, PSU SHELF and GRP must be defined on a PSUGP form where PH TYPE is "PH3". On the ODBRES form these are the SM, SHELF, and CHL GRP fields.

XAT form (5109 Record) - XAT refers to X.25 access to T1 facility DS0 channels. The XAT form is used to define ports for each channel of a T1 facility on a subscription basis using X.25 protocol. The unsubscribed channels can be used as trunk members of PRI trunk groups with the D-channel supporting Q.931 signaling and the B-channel(s) supporting CSV (Circuit Switched Voice) and CSD (Circuit Switched Data). T1 facility channels can be provisioned and supported like DSL Permanent Packet B-channels, which includes membership in MLHGs. XAT is available with 5E6 and later Software Releases.

For 5E9(1) and later when ISCN is entered, the SM, PSU SHELF and GRP must be defined on a PSUGP form where PH TYPE is "PH3". On the XAT form the SM is the first three digits of the DEN; the SHELF and CHL GRP are the first three digits of the ISCN.

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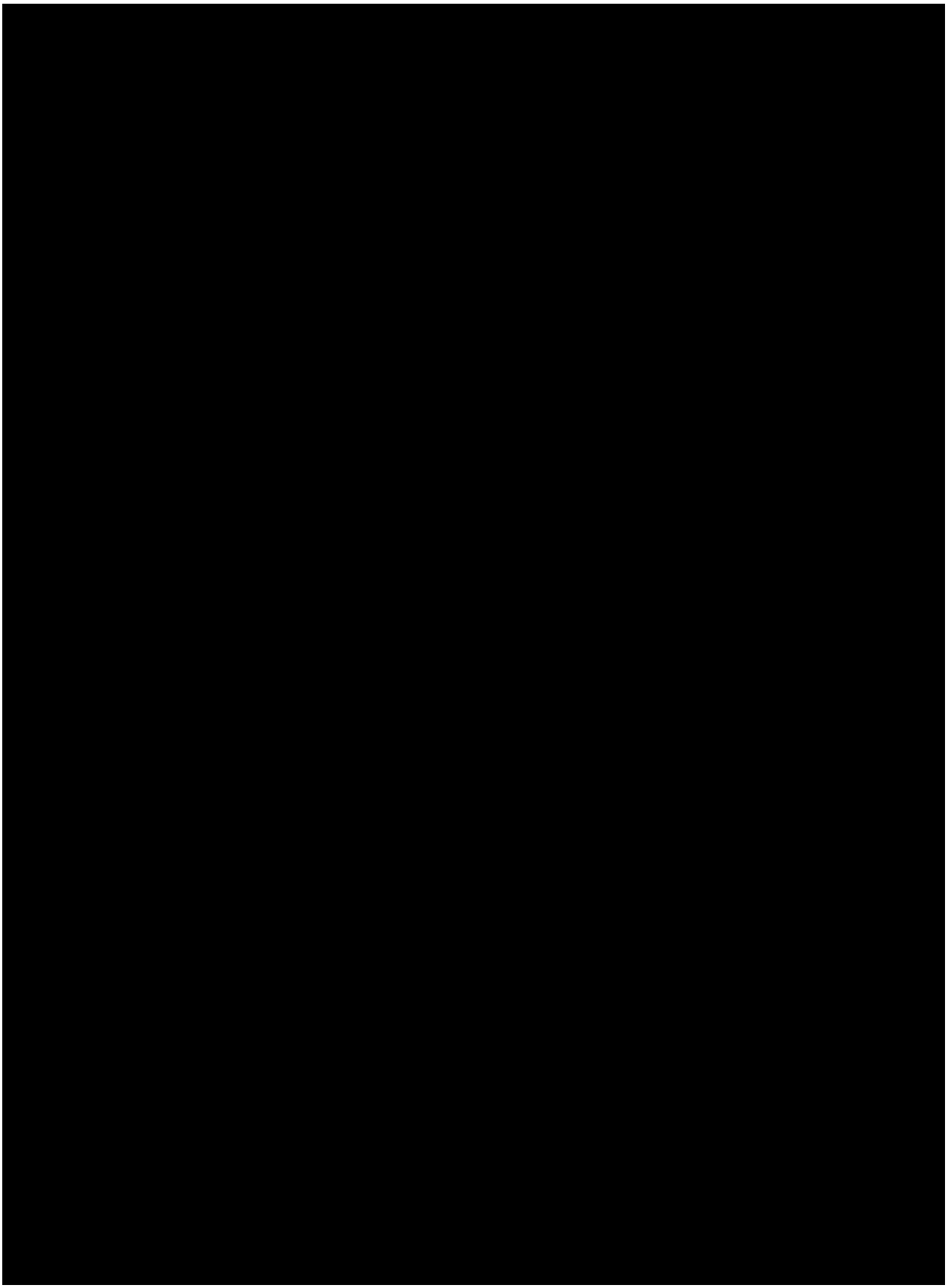

Figure 1 PH3 FORM FLOW

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SEC. 5H: LOCAL CHARGE PREVENTION

1. FEATURE DESCRIPTION

1.1 Introduction

The LCP (Local Charge Prevention) capability is available with 5E7 and later Software Releases. LCP enables subscribers to prevent their X.25 Data Terminating Equipment from being charged for virtual calls, whether outgoing or incoming. This feature helps users manage and control the cost of their X.25 packet service on the ISDN interface.

This feature applies only to virtual calls, and not to Permanent Virtual Calls.

The LCP feature is assigned on a per-user/packet-service-type basis.

1.2 Packet Mode Call Charging

A packet mode call is normally charged to the originating DN, unless the call is reverse-charged.

If the call is reverse-charged, then the network determines whether the terminating DN is subscribed to Reverse Charge Acceptance.

If the terminating DN does not subscribe to Reverse Charge Acceptance, the call is cleared and an AMA (Automatic Message Accounting) record is generated for the call at the originating interface.

If the terminating DN subscribes to Reverse Charge Acceptance, then the network offers the call to the terminating DN.

If the terminating end accepts the reverse-charged call, the call is completed and charged to the terminating DN.

If the terminating end does not accept the reverse-charged call, the call is cleared, and again an AMA record generated for the call at the originating interface.

1.3 Call Origination

This capability inserts the Reverse Charge facility into the X.25 Call Request if the user omits it. In this case, the facility field length is checked to ensure sufficient room to accommodate the Reverse Charge facility (i.e., without exceeding the 109 octet limit for the facility length). In cases where the insertion of the Reverse Charge facility field causes the facility field to exceed the 109 octet limit, the call is cleared.

In cases where the X.25 Call Request packet contains the Fast Select facility and no Reverse Charge facility is present, the inserting of Reverse Charge facility (i.e., setting of Reverse Charge bit), does not require checking of the 109 octet limit.

1.4 Call Termination

For subscribers of the LCP feature, any X.25 Incoming Calls that contain the Reverse Charge facility are cleared.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2
XAT	5909-1/2	5	1J	23.40

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2.1 ISDN/Packet Switching Translations

DSL form (5907-1/2/3/4/5/6/7 Record) - This form is used to define the attributes of a DSL (Digital Subscriber Line; also called BRI). It also defines the attributes of the B1 or B2 channel of the DSL if either or both of those channels are dedicated Permanent Packet (i.e., X.25) Switching. DSL is available with 5E5 and later Software Releases.

PPB1 LCP and PPB2 LCP were added for the LCP feature. An entry of "Y" indicates LCP is subscribed to. LCP is not allowed with Reverse Charge. If LCP is "Y", then REV CHARGE must be "N".

DSLUSR form (5908-1/2/3/4/5/6/7/8/9/10/11 Record) - This form is used to define the TN and status information of a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form will always have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

DPKT LCP and ODB LCP were added for the LCP feature. An entry of "Y" indicates LCP is subscribed to. LCP is not allowed with Reverse Charge. If LCP is "Y", then REV CHARGE must be "N".

D SERV on the corresponding DSL form must not equal "XMP" when LCP is "Y".

XAT form (5909-1/2 Record) - XAT refers to X.25 access to T1 facility DS0 channels. This form is used to define ports for each channel of a T1 facility (digital lines and trunks) on a subscription basis using Q.931 signaling. T1 facility channels can be provisioned and supported like DSL Permanent Packet B-channels, which includes membership in MLHGs. XAT was added with the 5E6 Software Release.

LCP was added for the LCP feature. An entry of "Y" indicatesLCP is subscribed to. LCP must be "N" when DEN is blank. LCPis not allowed with Reverse Charge. If LCP is "Y", then REVCHARGE must be "N".

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SEC. 5I: CONDITIONAL NOTIFICATION AND CHANNEL SELECTION

1. FEATURE DESCRIPTION

The Conditional Notification and Channel Selection feature is available with 5E8 and later Software Releases. It more closely aligns ISDN packet switching services with the Bellcore Translations Requirement TR-TSY-000268.

The feature requires a PH3 (Protocol Handler 3) to provide the following services:

- Channel Selection;
- Conditional Notification;
- Subscription to up to two On Demand B-channels per BRI (Basic Rate Interface);
- Maximum Combined Throughput parameters.

Each of these will be defined separately.

1.1 Background

Packet mode service is defined as packet data over a specific channel, e.g., packet data on the D-channel represents a packet mode service, as does packet data on an On Demand B-channel or packet data on a Permanent B1 or Permanent B2 channel. The CNCS features described in this section build on existing packet switching features. See Division 2, Section 1AB, "Enhanced B-Channel Packet Switching".

1.2 Channel Selection

The Channel Selection feature allows a packet mode user to access multiple channels on the BRI for calls to the same DN (Directory Number). This feature is also referred to as Common DN.

A user with the Channel Selection feature subscribes to packet on more than one channel (e.g., D- and B-channels, ODB and PPB channels, or two PPB channels). The CHL SEL fields for the packet services with the common DN must be set to "Y", and the corresponding TN fields for those services must contain the same directory number. Additionally, when the D-channel is accessed via a Common DN, the TCID field on the DSLUSR form determines which calls will be offered on the D-channel.

When an incoming call arrives for a common DN, the switch uses a selection algorithm to select the channel over which the X.25 call will be offered. If the D-channel is accessed via the common DN, the throughput value contained in the incoming call packet is compared to the TCID (Throughput Class Indication of D-Channel) parameter on the DSLUSR form. This parameter indicates the highest Call Packet throughput value the user is willing to accept over the D-channel. If TCID is greater than or equal to the throughput value indicated in the incoming call packet, the switch selects the D-channel.

When a user subscribes to channel selection, many facilities subscribed on a channel basis must be identical for channels assigned the common DN. For a complete list of attributes that must be common, see the CHL SEL fields in the TG-5 sections for the DSL and DSLUSR forms.

A unique DN is required for the PVC (Permanent Virtual Circuit) service. A user cannot subscribe to PVC with a common DN.

1.3 Conditional Notification

The Conditional Notification feature assigns a "Conditional Notification" class of service at a BRI for an X.25 packet call. If the switch determines that an incoming X.25 virtual call should be terminated on an inactive B-channel or over a D-channel that has no active packet logical link associated with that user, the

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switch will be able to establish a B-channel or logical link on the D-channel using Q.931 procedures on the D-channel.

For example, if the switch selects an idle On Demand B-channel, i.e., a B-channel that is not in use for circuit switched services and is available for packet, the switch notifies the called user via Q.931 signaling procedures over the D-channel. If the user accepts the call, the switch connects the B-channel and delivers the call to the user.

The user subscribes to the Conditional Notification class of service through DPKT NOTIF and/or ODB NOTIF fields set to "COND" on the DSLUSR form.

When the user subscribes to Conditional Notification on an On Demand B-channel, the T320 field on the ISDNOPT form is used to ensure that the B-channel does not stay connected and idle for a long period of time. For Conditional Notification users, T320 replaces the T3XX timer; T3XX is still available for users who do not subscribe to Conditional Notification.

If the user subscribes to "No Notification" (NOTIF set to "NO"), an X.25 call will be delivered only if the user already has an active ODB channel or D-channel packet connection; otherwise the call will be rejected.

1.4 Subscription to Two ODBs

This feature allows a user to subscribe to two On Demand B-channels and use them simultaneously for packet. Prior to 5E8, a user could subscribe to only one ODB channel.

For this feature, the ISCN field on the DSLUSR form has been renamed ISCN1, and the ISCN2 field has been added. Also, the ODB field is introduced to specify the number of On Demand B-channels to which the user subscribes.

A user who subscribes to two ODB channels must subscribe to Channel Selection for those channels.

1.5 Maximum Combined Throughput

The Maximum Combined Throughput feature allows the user to specify a maximum allowable throughput for sending and receiving. When the sum of throughputs for virtual calls exceeds either value, the channel is considered busy.

The user may specify two MCT values per DN/channel (e.g. D-channel, ODB, PPB1, PPB2, and XAT), one MCT value for the incoming direction (RCV MCT) and one value for the outgoing direction (SEND MCT). If no value has been specified by the user, the switch will not use the parameter to check for a channel-busy condition.

The switch checks for the channel-busy condition before offering an incoming call to the user or accepting a call request from the user. The switch uses the Maximum Combined Throughput parameter to check for the busy condition and to negotiate the throughput class if needed. The channel is considered busy if either direction of transmission becomes busy.

2. TRANSLATION REQUIREMENTS

Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2
ISDNOPT	5941	5	5B	8.1
XAT	5909	5	1J	23.40

DSL form (5907 Records) - This form is used to define the attributes of a DSL (Digital Subscriber Line; also called a BRI, Basic Rate Interface). It also defines the attributes of the B1 and B2 channels of the DSL when they are dedicated to Permanent Packet (X.25) switching. DSL is available with 5E5 and later

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Software Releases.

The following fields were added for the CNCS feature.

- CHL SEL (PPB1 and PPB2): The channel selection field determines whether or not a Common DN will be shared by this and at least one other channel on the DSL. Valid entries are "Y" and "N".

  When a call terminates to a Common DN, an active channel selection algorithm is performed to determine the channel on which the call will be offered.

  Either no channels or at least two channels (PPB1 CHL SEL, PPB2 CHL SEL, ODB CHL SEL, or DPKT CHL SEL) of the DSL for a user must have Channel Selection set to "Y".

  When channels share a Common DN for Channel Selection, the DN and other identical parameter values must be provisioned as described under the CHL SEL fields in the TG-5 sections for DSL and DSLUSR forms.

- SEND MCT (PPB1 and PPB2): This field specifies the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy. Valid entries: 64 - 128 kbps in increments of 8 kbps.

- RCV MCT (PPB1 and PPB2): This field specifies the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds the RCV MCT (Maximum Combined Throughput), the user is considered busy. Valid entries: 64 - 128 kbps in increments of 8 kbps.

DSLUSR form (5908 Records) - This form is used to define the TN and other information for a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form must have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

The following fields were added for the CNCS feature.

- CHL SEL (DPKT and ODB): The channel selection field determines whether or not a Common DN will be shared by this and at least one other channel on the DSL. Valid entries are "Y" and "N".

  When a call terminates to a Common DN, an active channel selection algorithm is performed to determine the channel on which the call will be offered.

  Either no channels or at least two channels (PPB1 CHL SEL, PPB2 CHL SEL, ODB CHL SEL, or DPKT CHL SEL) of the DSL for a user must have Channel Selection set to "Y".

  When channels share a Common DN for Channel Selection, the DN and other identical parameter values must be provisioned as described under the CHL SEL fields in the TG-5 sections for DSL and DSLUSR forms.

  Channel Selection may not be assigned to PVC (Permanent Virtual Circuit) service or to members of a Modem Pool Multi-Line Hunt Group.

- SEND MCT (DPKT and ODB): This field specifies the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy. Valid entries for DPKT: 16 - 32 kbps in increments of 2 kbps; for ODB: 64 - 128 kbps in increments of 8 kbps.

- RCV MCT (DPKT and ODB): This field specifies the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds

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the RCV MCT (Maximum Combined Throughput), the user is considered busy. Valid entries for DPKT: 16 - 32 kbps in increments of 2 kbps; for ODB: 64 - 128 kbps in increments of 8 kbps.

- NOTIF (DPKT and ODB): This field determines the Notification Class for D-channel and On Demand B-channel packet calls.

  If a call is routed to a channel with Conditional Notification when Layer 1 is up on the channel, but Layer 2 is down for the channel, the channel will be notified of the incoming call. The channel is notified by sending a Q.931 message on the D-channel. If the user accepts the call by responding to the Q.931 message, the switch will initiate Layer 2 setup procedures on the channel and offer the call.

  Valid entries are "COND" (Conditional Notification) and "NO" (No Notification).

  For restrictions on these and related fields, see the NOTIF field descriptions on the DSLUSR form, Division 5, Section 1I.

- TCID (DPKT): This field determines the Throughput Class Indicator for the D-channel when a Common DN accesses the D-channel. Incoming calls to the Common DN with a throughput class less than the TCID are routed to the D-channel. Valid entries are 0, 75, 150, 300, 600, 1200, 2400, 4800, or 9600 kbps.

  If 0 is entered, the TCID is not subscribed. If DPKT CHL SEL is "Y" and TCID is left blank, a value of 9600 kbps is automatically assigned by software.

- ISCN1 (ODB): For this feature the ISCN field has been renamed ISCN1. It defines the number of the first B-channel ISCN (Integrated Services Channel Number) on the PSU joined to the DSL. The DSL is connected, via a PIDB (Peripheral Interface Data Bus), to the PSU (Packet Switching Unit).

- ISCN2 (ODB): This field defines the number of the second On Demand B-channel ISCN (Integrated Services Channel Number) on the PSU joined to the DSL. The DSL is connected, via a PIDB (Peripheral Interface Data Bus), to the PSU (Packet Switching Unit).

  If ODB ISCN2 is entered, ODB must be 2. If both ODB ISCN1 and ODB ISCN2 are entered, they must reside on the same SM, PH shelf, and channel group and be unique within the SM.

- ODB (ODB): This field specifies the number of On Demand B-channels to which the user subscribes. Valid entries: 1 and 2.

  If ODB is not entered, no ODB channels are subscribed, and neither ODB ISCN1 nor ODB ISCN2 may be entered.

  If ODB is 1, one ODB channel is subscribed, and the following must be true: ODB TN or ODB MLHG and TERM must be entered; ODB ISCN1 must be entered, and ODB ISCN2 must not be entered; D SERV on the corresponding DSL form must be "SX"; and B1 SERV or B2 SERV must be "DMD".

  If ODB is 2, two ODB channels are subscribed, and the following must be true: ODB TN or ODB MLHG and TERM must be entered; ODB ISCN1 and ODB ISCN2 must be entered; PPB1 USR and PPB2 USR must be "N" or not entered; ODB CHL SEL must be "Y"; D SERV, on the corresponding DSL form, must be "SX", and B1 SERV and B2 SERV must be "DMD".

  ODB must be less than or equal to MAXB CHL.

ISDNOPT form (5941 Record) - This form is used to define a set of office parameters for an ISDN office.

The T320 timer has been added for packet switching On Demand B-channels with Conditional Notification.

T320 is an office timer, i.e. specified on an office (not user) basis, defined by Bellcore TR 268. It is used for

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B-channel access to the PH. It is started when the switch sends or receives a CONNect message or after the clearing of the last virtual circuit on the B-channel. It is canceled when a new virtual call is established or when the user initiates B-channel disconnection procedures for the B-channel. The T320 timer is applicable only when the user has subscribed to Conditional Notification. Valid entries: 20 - 60 seconds in increments of 5 seconds.

Timer T320 is not applicable when the user has subscribed to the No Notification (NOTIF set to "NO") class of service. Timer T3XX should be used when the user has subscribed to the No Notification class of service. T3XX ensures that an On Demand B-channel does not stay idle for a long period of time.

XAT form (5909 Records) - XAT refers to X.25 access to T1 facility DS0 channels. The XAT form is used to define ports for each channel of a T1 facility on a subscription basis using X.25 protocol. The unsubscribed channels can be used as trunk members of PRI trunk groups with the D-channel supporting Q.931 signaling and the B-channel(s) supporting CSV (Circuit Switched Voice) and CSD (Circuit Switched Data). T1 facility channels can be provisioned and supported like DSL Permanent Packet B-channels, which includes membership in MLHGs. XAT is available with 5E6 and later Software Releases.

Two fields were added for the CNCS feature.

- SEND MCT: This field specifies the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy. Valid entries: 64 - 128 kbps in increments of 8 kbps.

- RCV MCT: This field specifies the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds the RCV MCT (Maximum Combined Throughput), the user is considered busy. Valid entries: 64 - 128 kbps in increments of 8 kbps.

3. REFERENCES

Document 235-190-110. *5ESS Switch National ISDN Description.*

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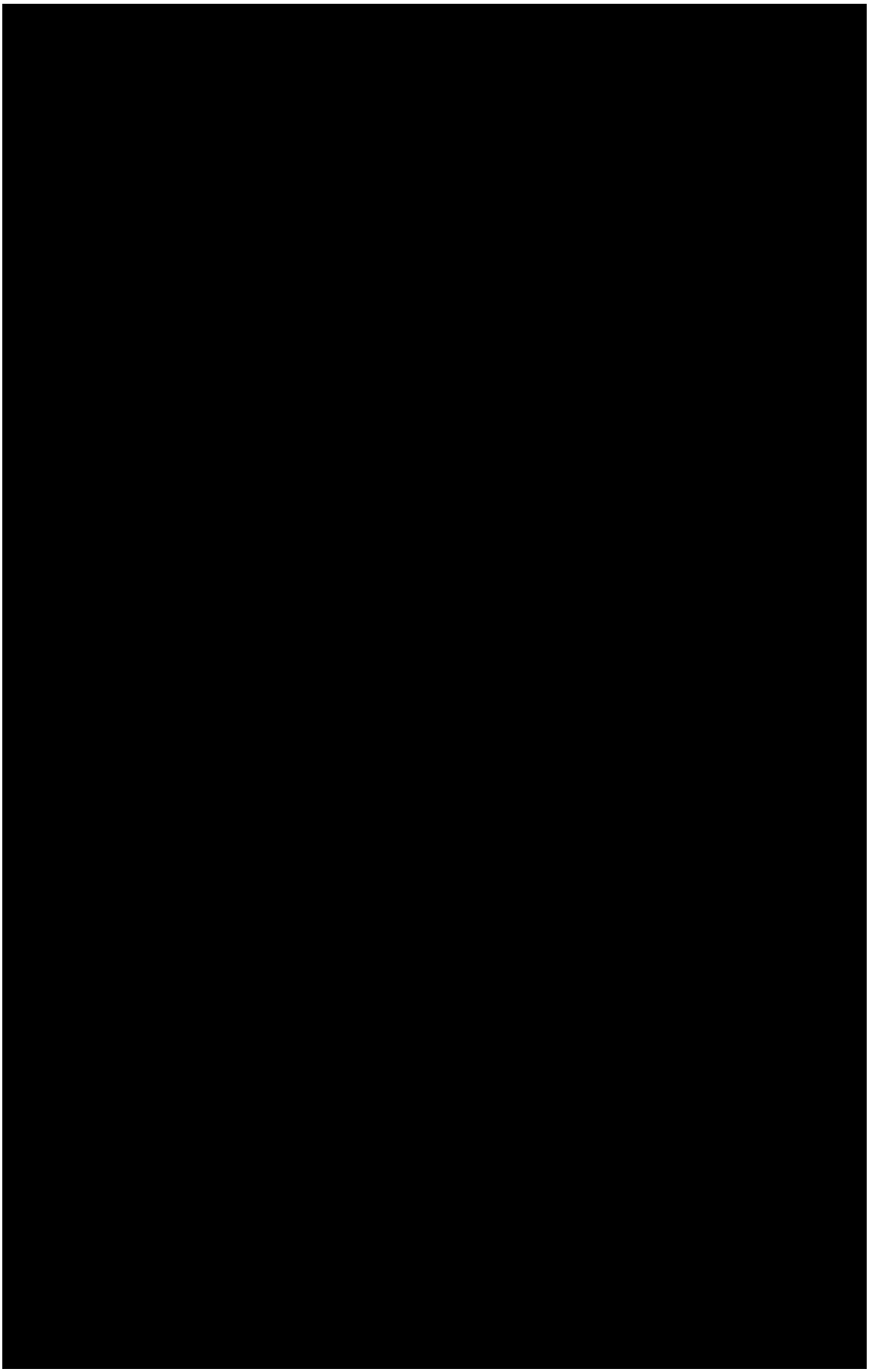

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Figure 1 CNCS FORMS

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SEC. 5J: ISDN PACKET MULTI-LINE HUNT GROUP STANDARDIZATION

1. FEATURE DESCRIPTION

The Packet Multi-Line Hunt Group Standardization feature is available with 5E8 and later Software Releases. This feature more closely aligns ISDN packet MLHGs with the Bellcore Translations Requirement TR-TSY-859.

For 5E8 a packet MLHG may contain a mixture of B-channel and D-channel members. Additionally, features that require modified translations include:

- Linear hunting;
- Deactivation of packet MLHG members for hunting;
- Busy Limit;
- Hunt Notification for CLAMN (Called Line Address Modified Notification);
- Availability of On Demand B-channels in a hunt group.

Each of these will be defined separately.

1.1 Linear Hunting

The Linear Hunting feature allows a packet Multi-Line Hunt Group to have TNs (Telephone Numbers) that serve as Linear Hunt entry points. When a Linear Hunt TN is called to access the hunt group, hunting begins at the member associated with the called TN and continues sequentially through the hunt group members until either it reaches a non-busy member, or it reaches the last member of the hunt group and all members were hunt-busy. An MLHG with this feature must have a linear hunt TN assigned to the first member of the group and may optionally have linear hunt TNs assigned to other members.

All packet hunt groups will be assigned an MLHG feature defined on an MLHGFD form with a HUNT TYPE of "PSUCD". The called number determines how the hunt will proceed.

With the Uniform Call Distribution algorithm, when the first incoming packet call is placed to the MLHG, the hunting begins with the first terminal in the group and searches sequentially through the group until either a non-busy terminal is identified, or a pass through all terminals back to the starting hunt terminal has been made and all eligible terminals were hunt-busy. Each time a hunt is completed, the next non-busy terminal is marked as the beginning hunt terminal for a subsequent call.

Note that each MLHG member is assigned a member number between 1 and 2015. These member numbers constitute the order of hunting.

1.2 Deactivation of Packet MLHG Members

Hunt terminal deactivation is a condition provided through the DEACTIVATE parameter where the terminal is temporarily removed from the hunt group without affecting other hunt terminals in the group. Deactivation affects only the hunting operation, and does not affect the ability of the terminal to originate packet calls or to terminate packet calls directed to it through a direct call. Activation restores the ability of the hunt terminal to terminate hunted calls.

This feature does not apply to modem pool members.

1.3 Busy Limit Parameter

The Busy Limit parameter represents the maximum number of concurrent incoming virtual calls a packet

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MLHG member may receive before the member is marked busy for hunting purposes. When the number of calls equals or exceeds the busy limit, the member is no longer available for hunted calls.

Only incoming X.25 virtual calls are counted against the busy limit. Calls to non-hunt DNs are included in the call count but are not restricted by the limit.

1.4 CLAMN Procedures

When a call is offered to a packet MLHG terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed. The CCITT X.25 CLAMN (Called Line Address Modified Notification) is sent from the called packet interface to the calling interface after successful completion or rejection of the call.

The CLAMN feature allows the terminating CPE or switch to return the CLAMN facility, along with a modified Called Address field that contains the non-hunt DN for the MLHG member, to the calling party.

The Hunting Notification procedure for processing the CLAMN facility and modified address is specified in the HUNT NOTIF field for the MLHG member. For an explanation of the CLAMN hunt notification options, see the HUNT NOTIF field descriptions below.

1.5 ODB in a Packet MLHG

With this feature On Demand B-channels may be assigned to a packet MLHG.

1.6 Hunt Terminals and Channel Selection

With the packet MLHG Standardization feature, an MLHG terminal may consist of multiple packet services or a single packet service.

The Channel Selection (Common DN) feature allows multiple channels on a BRI to be treated as a single packet hunt group member. The member is assigned a feasible set of channels (PPB1, PPB2, DPKT, and/or ODB) that are marked with CHL SEL fields set to "Y" and are assigned a common non-hunt DN. (For information about Channel Selection, see Division 2, Section 5I.)

A packet MLHG terminal without Channel Selection consists of a single packet service, one of the following:

- DPKT (D-Channel)
- PPB1, PPB2 (Permanent Packet on the B-Channel)
- ODB (On Demand B-channel)
- XAT (X.25 Access on a T1 Carrier)

1.7 Hunt Terminals and Conditional Notification

A packet MLHG member cannot subscribe to the "Conditional Notification" class of service. It must subscribe to the "No Notification" class of service (DPKT NOTIF and ODB NOTIF set to "NO" on the DSLUSR form).

2. TRANSLATION REQUIREMENTS

Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1H	23.2
DSLUSR	5908	5	1I	23.2

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XAT	5909	5	1J	23.40

DSL form (5907 Records) - This form is used to define the attributes of a DSL (Digital Subscriber Line; also called a BRI, Basic Rate Interface). It also defines the attributes of the B1 and B2 channels of the DSL when they are dedicated to Permanent Packet (X.25) switching. DSL is available with 5E5 and later Software Releases.

Four fields are added for each of the Permanent Packet B-channels.

- LNR HNT TN (PPB1/PPB2): The Linear Hunt TN of a Multi-Line Hunt Group member serves as a linear entry point to the MLHG. Hunting begins at the member associated with the called TN and continues sequentially through the members of the hunt group until either it reaches a non-busy member, or it reaches the last member and all hunted members were hunt-busy.

  The LNR HNT TN can be entered for an MLHG member only if a LNR HNT TN is assigned to member 1 of the hunt group. The TN must be unique within the 5ESS Switch except if the MLHG member is a multiple packet service, the TN must match the linear hunt TN of the other channels in the service, e.g. PPB1 LNR HNT TN or PPB2 LNR HNT TN on the DSL form or DPKT LNR HNT TN or ODB LNR HNT TN on the DSLUSR form.

- HUNT DEACT (PPB1/PPB2): This field determines if the MLHG member should be deactivated (marked busy) for hunted calls. A value of "Y" makes the terminal unavailable for hunted calls, while "N" indicates the Multi-Line Hunt Group member is active (available) for hunting. The deactive/active status has no effect on non-hunted calls made to the MLHG member using its individual TN.

- BUSY LIMIT (PPB1/PPB2): This field determines the busy limit for an MLHG terminal. The busy limit represents the maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included in the incoming call count but are not restricted by the busy limit. If CHL SEL is "Y", valid entries are 1 - 269; if CHL SEL is "N", valid entries are 1 - 127.

  If BUSY LIMIT is not entered for a packet MLHG terminal, the appropriate maximum value will be assigned as follows. If the DSL is on a PH2, BUSY LIMIT will equal the sum of IN LCNs plus 2W LCNs. If the DSL is on a PH3 and CHL SEL is "N", BUSY LIMIT will equal the sum of IN LCNs plus 2W LCNs. If CHL SEL is "Y", BUSY LIMIT will equal the sum of IN LCNs and 2W LCNs of all associated packet services (PPB1, PPB2, DPKT, and ODB) with CHL SEL set to "Y" for this user. When two ODB channels are provisioned, the ODB LCNs are counted twice.

- HUNT NOTIF (PPB1/PPB2): This field specifies the Hunting Notification procedure for a Multi-Line Hunt Group terminal. The HUNT NOTIF field indicates which X.25 CLAMN (Called Line Address Modified Notification) procedure is used. The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed. Valid entries are "YES", "NO", and "OLD".

  If HUNT NOTIF is "YES", The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.

  If HUNT NOTIF is "NO", The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.

  When HUNT NOTIF is "OLD", The X.25 CLAMN procedure that existed prior to the 5E8 Software

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Release is used.

HUNT NOTIF must be entered for each MLHG member. If packet service is on a PH2, HUNT NOTIF must be "OLD". If HUNT NOTIF is "YES", the non-hunt DN must be entered in the TN field.

DSLUSR form (5908 Records) - This form is used to define the TN and other information for a DSL user. This includes circuit switching (voice and data) attributes, DPKT (D-channel packet) attributes, and ODB (On Demand B-channel) attributes. This form must have a corresponding DSL form. DSLUSR is available with 5E5 and later Software Releases.

The following fields were added for the Packet MLHG feature.

- ODB MLHG and ODB TERM: These fields define the Multi-Line Hunt Group and terminal number for an On Demand B-channel MLHG member. Valid entries are 1 - 2000 for ODB MLHG and 1 - 2015 for ODB TERM.

  If these fields are entered, the following fields under the ODB (ON DEMAND B-CHANNEL) header, must be entered: ISCN1, ODB, LCC, RAX, RATE, N2, T1, T3, WNDSZ, and BAND.

  If the LOCAL SM field on the defining MLHG form is entered, the SM portion (first three digits) of the OE on this form must equal the value in the LOCAL SM field.

- ODB MLHG TN: This field specifies the non-hunt DN for an On Demand B-channel Multi-Line Hunt Group member. It must be entered for an ODB MLHG terminal when ODB CHL SEL equals "Y" or ODB HUNT NOTIF is "YES".

  When ODB CHL SEL is "N", this TN must be unique within the 5ESS Switch with the exception that it can equal the CKT TN or MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.

  When ODB CHL SEL is "Y", this TN must be unique within the 5ESS Switch with the following exceptions. It can equal the CKT TN or MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form. Also, if the MLHG member is a multiple packet service, the MLHG TN must match the non-hunt TNs on the other channels in the service, e.g. DPKT MLHG TN on the same instance of the DSLUSR form, or PPB1/PPB2 TNs on the DSL form.

- LNR HNT TN (DPKT and ODB): The Linear Hunt TN of a Multi-Line Hunt Group member serves as a linear entry point to the MLHG. Hunting begins at the member associated with the called TN and continues sequentially through the members of the hunt group until either it reaches a non-busy member, or it reaches the last member and all hunted members were hunt-busy.

  The LNR HNT TN can be entered for an MLHG member only if a LNR HNT TN is assigned to member 1 of the hunt group. The TN must be unique within the 5ESS Switch except if the MLHG member is a multiple packet service, the TN must match the linear hunt TN of the other channels in the service, e.g. PPB1 LNR HNT TN or PPB2 LNR HNT TN on the DSL form or DPKT LNR HNT TN or ODB LNR HNT TN on the same instance of the DSLUSR form.

- HUNT DEACT (DPKT and ODB): This field determines if the MLHG member should be deactivated (marked busy) for hunted calls. A value of "Y" makes the terminal unavailable for hunted calls, while "N" indicates the Multi-Line Hunt Group member is active (available) for hunting. The deactive/active status has no effect on non-hunted calls made to the MLHG member using its individual TN.

  DPKT HUNT DEACT must be "N" for Modem Pool members.

- BUSY LIMIT (DPKT and ODB): This field determines the busy limit for an MLHG terminal. The busy limit represents the maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included

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in the incoming call count but are not restricted by the busy limit. If CHL SEL is "Y", valid entries are 1 - 269; if CHL SEL is "N", valid entries are 1 - 15 for DPKT BUSY LIMIT and 1 - 127 for ODB BUSY LIMIT.

If BUSY LIMIT is not entered for a packet MLHG terminal, the appropriate maximum value will be assigned as follows. If the DSL is on a PH2, BUSY LIMIT will equal the sum of IN LCNs plus 2W LCNs. If the DSL is on a PH3 and CHL SEL is "N", BUSY LIMIT will equal the sum of IN LCNs plus 2W LCNs. If CHL SEL is "Y", BUSY LIMIT will equal the sum of IN LCNs and 2W LCNs of all associated packet services (PPB1, PPB2, DPKT, and ODB) with CHL SEL set to "Y" for this user. When two ODB channels are provisioned, the ODB LCNs are counted twice.

- HUNT NOTIF (DPKT and ODB): This field specifies the Hunting Notification procedure for a Multi-Line Hunt Group terminal. The HUNT NOTIF field indicates which X.25 CLAMN (Called Line Address Modified Notification) procedure is used. The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed. Valid entries are "YES", "NO", and "OLD".

  If HUNT NOTIF is "YES", The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.

  If HUNT NOTIF is "NO", The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.

  When HUNT NOTIF is "OLD", The X.25 CLAMN procedure that existed prior to the 5E8 Software Release is used.

  HUNT NOTIF must be entered for each MLHG member. If packet service is on a PH2, HUNT NOTIF must be "OLD". If HUNT NOTIF is "YES", the non-hunt DN must be entered in the MLHG TN field.

XAT form (5909 Records) - XAT refers to X.25 access to T1 facility DS0 channels. The XAT form is used to define ports for each channel of a T1 facility on a subscription basis using X.25 protocol. The unsubscribed channels can be used as trunk members of PRI trunk groups with the D-channel supporting Q.931 signaling and the B-channel(s) supporting CSV (Circuit Switched Voice) and CSD (Circuit Switched Data). T1 facility channels can be provisioned and supported like DSL Permanent Packet B-channels, which includes membership in MLHGs. XAT is available with 5E6 and later Software Releases.

- LNR HNT TN: The Linear Hunt TN of a Multi-Line Hunt Group member serves as a linear entry point to the MLHG. Hunting begins at the member associated with the called TN and continues sequentially through the members of the hunt group until either it reaches a non-busy member, or it reaches the last member and all hunted members were hunt-busy.

  The LNR HNT TN can be entered for an MLHG member only if a LNR HNT TN is assigned to member 1 of the hunt group. The TN must be unique within the 5ESS Switch.

- HUNT DEACT: This field determines if the MLHG member should be deactivated (marked busy) for hunted calls. A value of "Y" makes the terminal unavailable for hunted calls, while "N" indicates the Multi-Line Hunt Group member is active (available) for hunting. The deactive/active status has no effect on non-hunted calls made to the MLHG member using its individual TN.

- BUSY LIMIT: This field determines the busy limit for an MLHG terminal. The busy limit represents the

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maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included in the incoming call count but are not restricted by the busy limit. Valid entries are 1 - 127.

If BUSY LIMIT is not entered for a packet MLHG terminal, the maximum value will be assigned; BUSY LIMIT will equal the sum of IN LCNs plus 2W LCNs.

- HUNT NOTIF: This field specifies the Hunting Notification procedure for a Multi-Line Hunt Group terminal. The HUNT NOTIF field indicates which X.25 CLAMN (Called Line Address Modified Notification) procedure is used. The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed. Valid entries are "YES", "NO", and "OLD".

  If HUNT NOTIF is "YES", The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.

  If HUNT NOTIF is "NO", The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.

  When HUNT NOTIF is "OLD", The X.25 CLAMN procedure that existed prior to the 5E8 Software Release is used.

  HUNT NOTIF must be entered for each MLHG member. If packet service is on a PH2, HUNT NOTIF must be "OLD". If HUNT NOTIF is "YES", the non-hunt DN must be entered in the TN field.

3. GLOSSARY

Hunt-Busy – a condition where the switch will not offer a call to a particular hunt terminal because the terminal is busy, a switch-maintained limit on that terminal's capacity for handling calls would be exceeded, or the terminal is deemed unavailable for hunting even though the ISDN interface serving the hunt terminal may not be busy.

Non-Hunt DN – a telephone number for a specific terminal within the hunt group. If a user calls the non-hunt DN, hunting is bypassed, and the call is offered only to the called terminal.

4. REFERENCES

Document 235-190-110. *5ESS Switch National ISDN Description.*

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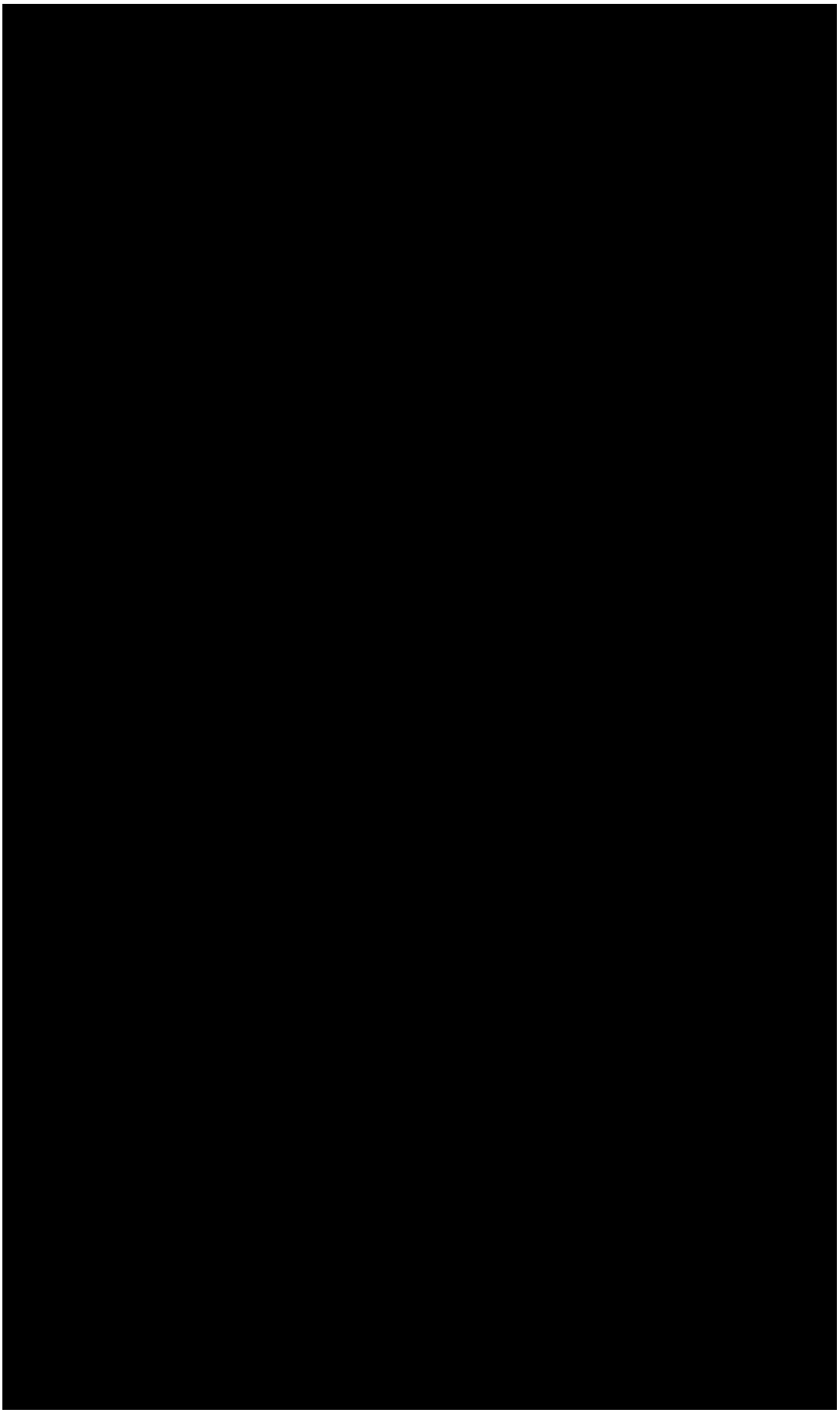

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Figure 1 MLHG STANDARDIZATION FORM DEPENDENCIES

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SEC. 5K: ISDN PACKET SWITCHED DATA BUSINESS GROUP

1. FEATURE DESCRIPTION

The ISDN PBG (Packet Business Group) feature has been enhanced with 5E8 and later Software Releases. This feature enables a service provider to construct and administer up to 100 intra-switch PBGs whose members are ISDN Packet Switched subscribers. A group identifier is assigned to each member of the group.

Each group may be defined with the following characteristics.

- The service provider can control a PBG's usage of switch resources through two limiting subscription parameters: Aggregate Number of Logical Channels and Aggregate Throughput Class. When the parameter values are equaled or exceeded, a call will be blocked or charged a premium fee if specified for the PBG.
- A billing telephone number can be used to identify the PBG in Automatic Message Accounting records.
- An intra-PBG AMA flag controls the generation of AMA records for intra-PBG packet mode calls.
- Subscription to Abbreviated Dialing is available.
- Subscription to Abbreviated Number Delivery is available.

This enhanced PBG feature makes the 5ESS Switch Packet Switched Data Business Group service compliant with the packet switching requirements provided in Bellcore TR-849, "ISDN Basic Business Group Structure."

2. FEATURE ASSIGNMENT

A user's packet service becomes a PBG member when a value is entered in the PPB1 PB GRP or PPB2 PB GRP field on a DSL form (5907 Record), the DPKT PB GRP or ODB PB GRP field on a DSLUSR form (5908 Record), the PB GRP field on an XAT form (5909 Record), or the PB GRP field on an MLHG form (5110 Record).

If a PBG assigned on a DSL, DSLUSR, or XAT form is defined on a PBGRP form with a value entered in ABBR DIAL LENGTH, LCN AGGREGATE, or TPC AGGREGATE, or with OVERFLOW TREAT set to "BLOCK" or "PREMIUM", then the service must be assigned to a PH3 protocol handler; the first three digits of the equipment number, the first digit of the ISCN, and the second two digits of the ISCN must match the SM, PSU SHELF, and GRP, respectively, on a PSUGP form (5949 Record) where PH TYPE is "PH3".

If a PBG is assigned on an MLHG form and is defined on a PBGRP form with a value entered in LCN AGGREGATE or TPC AGGREGATE, or with OVERFLOW TREAT other than "NONE", then all the MLHG members that are assigned packet service must be assigned to a PH3 on the PSUGP form.

Office parameters and PBG parameters are defined in the ISDNOPT and PBGRP forms as specified below.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ISDNOPT	5941	5	5B	8.1
PBGRP	5931	5	3L	23.16

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ISDNOPT form (5941 Record) - This form is used to define a set of office parameters that must be entered when the office is an ISDN switch.

The PBG AMA MODULE field was added for the Packet Business Group feature. This field determines if the PBG and Billing TN specified on the PBGRP form should be included in the Packet Business Group AMA records. When this field is "Y", a BILL TN must be entered on every PBGRP form.

The PBG AMA field was deleted from this form and moved to the PBGRP form.

PBGRP form (5931 Record) - This form is new and is used to define a Packet Business Group. It includes the following fields.

- PB GRP: The PB GRP number (1 - 100) identifies the Packet Business Group. It is assigned to packet services (DPKT, ODB, PPB, and XAT) and to Multi-Line Hunt Groups to indicate membership in the PBG.

  When an X.25 termination is assigned to a PB GRP on a DSL, DSLUSR, XAT, or MLHG form, the group must be defined on the PBGRP form.

- ABBR DIAL LENGTH: This field determines the number (quantity) of digits to be used for Abbreviated Dialing within the PBG. This feature allows members of the group to originate calls to other members of the group by using the last n digits of the called DN; n is specified in ABBR DIAL LENGTH and can be 1 - 6.

  When a call is originated using an abbreviated code, the switch expands the code to a full packet DN by prefixing the abbreviated digits with the corresponding prefix digits of the calling user's address. All members of the PB GRP must have the same initial digits.

  If the ABBR DIAL LENGTH is blank, abbreviated dialing cannot be used by members of the PB GRP.

  If a value is entered in ABBR DIAL LENGTH, all members of the PBG must be assigned to PH3s on the PSUGP form.

- ABBR NBR DELIVERY: This field determines if an abbreviated calling number should be delivered to the called party when one group member calls another. If Abbreviated Number Delivery is provisioned, and both the calling and called DNs have the same leading digits, then only the trailing digits of the originator's DN are placed in the Calling Address field of the Incoming Call Packet. The number of trailing digits is determined by the ABBR DIAL LENGTH field; therefore, a PB GRP that subscribes to Abbreviated Number Delivery must also subscribe to Abbreviated Dialing.

- PBG AMA: This field determines if AMA records should be generated for intra-PBG calls.

- BILL TN: This 7 - 10 digit DN is appended to the AMA records of calls for the PB GRP if PBG AMA MODULE is "Y" on the ISDNOPT form. A TN must be entered in this field when PBG AMA MODULE is "Y".

- LCN AGGREGATE: The Aggregate Logical Channel Number specifies the number (limit) of LCNs that can be simultaneously utilized by members of the PB GRP. Valid entries are 1 - 65536. When this field is entered, all members of the PBG must be assigned to PH3s on the PSUGP form.

- TPC AGGREGATE: The Aggregate Throughput Class specifies the limit in kilobits that can be simultaneously utilized by members of the PB GRP. Valid entries are 1 - 524288. When this field is entered, all members of the PBG must be assigned to PH3s on the PSUGP form.

- OVERFLOW TREAT: This field specifies the treatment that will apply to calls originated or terminated by the PB GRP when one or both of the above aggregate limits is exceeded. Valid entries are "BLOCK" (the call will be denied), "NONE" (the aggregates are not monitored, so no special call treatment is required), and "PREMIUM" (if the billable party is a member of the PBG, the AMA record

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will indicate a premium charge; otherwise, the call will be denied).

If this entry is other than "NONE", all members of the PBG must be assigned to PH3s on the PSUGP form.

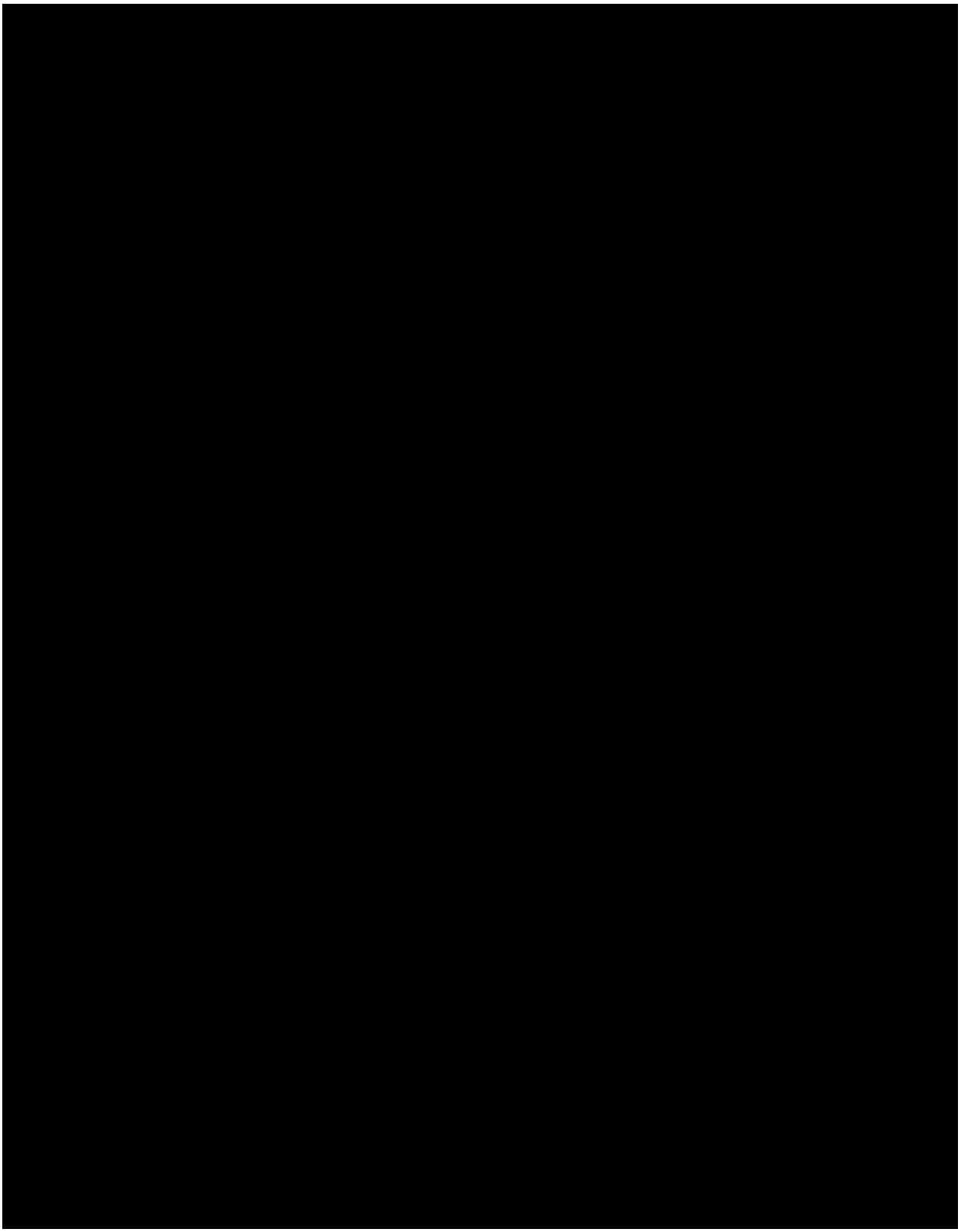

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Figure 1 PACKET SWITCHED DATA BUSINESS GROUP FORM FLOW

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SEC. 5L: PROTOCOL HANDLER 22 BASE SYSTEM

1. FEATURE DESCRIPTION

The PH22 (Protocol Handler 22) Base System feature is available with Software Release 5E14 and has feature number 97-5E-4286.

This feature provides PH22 software for initializations, removes, restores, switches and diagnostics using the CCS (Common Channel Signaling) application image (PH22 SCCS Software Image Support feature 99-5E-4302) to set up a PH22 base for other features.

2. FEATURE ASSIGNMENT

For feature provisioning, see Figure 1

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
CCLNK	6004-1/2	9	10D	16.6
EQPSU	5741-1/2	8	22	22.2
EQPSUPH	5742	8	23	22.3
PSUGP	5949	5	3J	22.16

CCLNK form (6004-1/2 Record) - the external link set member form, is used to define the CCS7 (Common Channel Signaling System No. 7) link sets and members. A data rule was modified for the GSM field.

EQPSU form (5741-1/2 Record) - The EQPSU form is used to define the PSUs equipped in a 5ESS Switch. Data rules were modified for the PSU TYPE field.

EQPSUPH form (5742 Record) - The EQPSUPH form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS Switch. The PH22 MIN SPARE field, a new PH CLI value, and new data rule were added.

PSUGP form (5949 Record) - The PSUGP form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. The AVAILABLE PH22 field and new PH TYPE valid entries were added.

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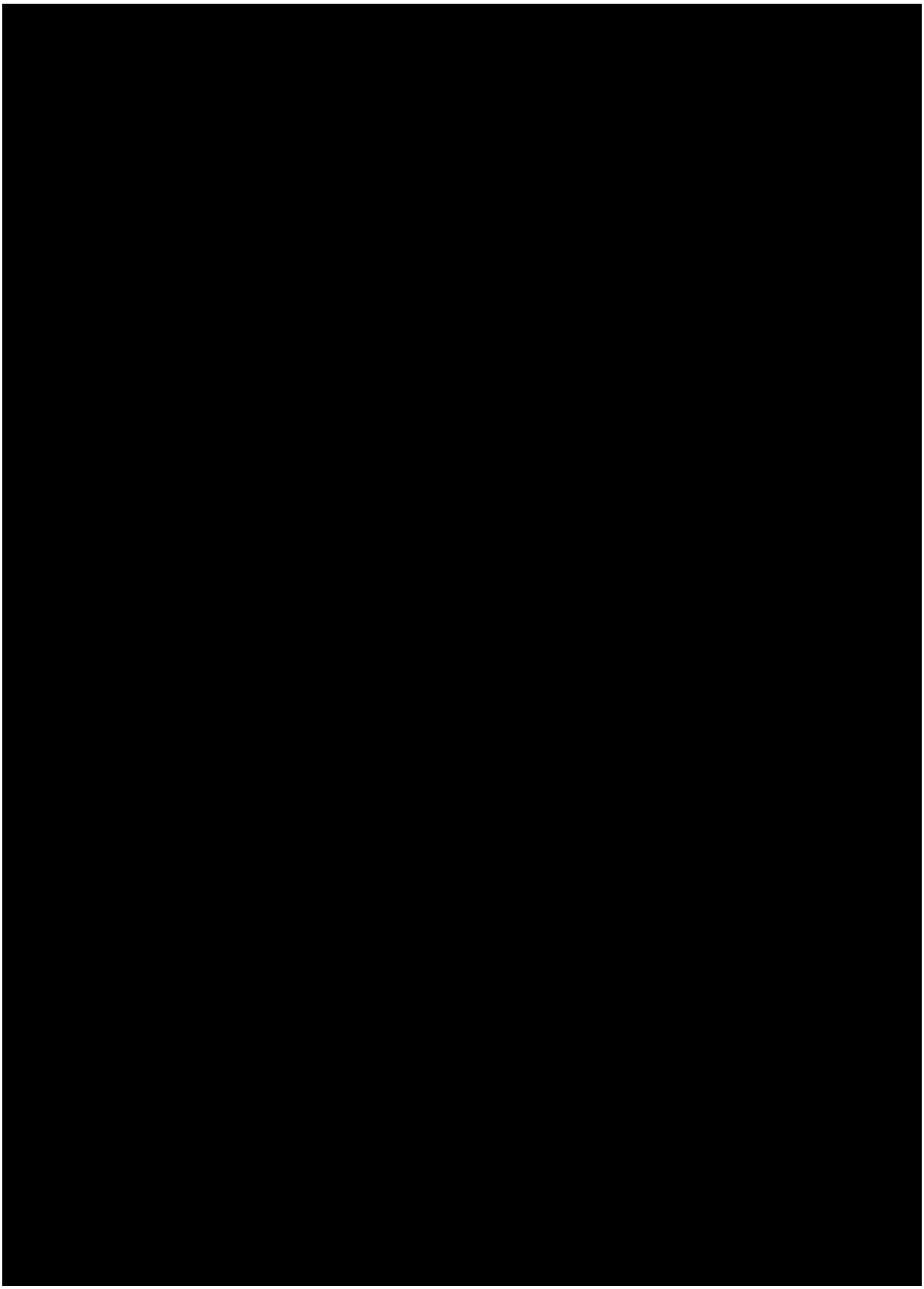

Figure 1 FORM FLOW FOR PH22 PROTOCOL HANDLER TRUNK MEMBER

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SEC. 5M: PHA2/PHE2 ON PH30

1. FEATURE DESCRIPTION

The PHA2/PHE2 (Protocol Handler A2/E2 (ATM (Asynchronous Transfer Mode)/Ethernet - version 2)) on PH30 feature is available with the 5E16 FR1 (Feature Release 1) Software Release and is associated with feature number 97-5E-7948.

The feature reuses the general purpose PH30 (TN13) family hardware platform and introduces the new PHA2 and PHE2 hardware types.

The PHA2 is a PH30 with a paddleboard attached that a future PHA2 application feature could use that would be terminating to an OC-3 (Optical Carrier - Level 3) ATM.

The PHE2 is a PH30 with a paddleboard attached that a future PHE2 application feature could use that would be terminating to an ethernet.

The PH30 is based on the dual-processor architecture that has been traditionally used in the general purpose PH family (PH3, PH6, PH22). The AP (Application) side of the PH30 is powered by the Motorola PowerPC 755 core processor and contains the various peripherals required to interact with the PSU (Packet Switching Unit) packet bus and the I/O (Input/Output) side of the PH. The I/O side uses a NP (Network Processor) implemented with FPGA (Field Programmable Gate Array) technology and is responsible for the Layer 2 protocol processing. This includes the ATM Adaptation Layer (AALO/AAL1/AAL2/AAL5) and the Ethernet MAC Layer, for the PHA2 and PHE2 respectively. This design document does not cover the software components of the NP, as that is covered in the related HSI (Hardware/Software Interface) document.

2. FEATURE ASSIGNMENT

The provisioning for this feature is as follows:

- Insert a new PHA2 and update the EQSTAT to "O" on the EQPSUPH form (5744 Record), (RCV (Recent Change View 22.4)).
- Assign a logical channel group 0. The GRP TYPE field is NULL because no application exists for this channel group.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
PSUGP	5949	5	3J	22.16

PSUGP form (5949 Record) - The PSUGP form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. Added the AVAILABLE PHA2 and AVAILABLE PHE2 fields. Also added two new enumerations (PHA2 and PHE2) to the PH TYPE field.

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SEC. 5O: 3G 1X PD SERVICES WITH MUX PDU AND 3G 1X PD SERVICES WITH 307 2 KPBS

1. FEATURE DESCRIPTION

This document contains information about two separate features that have similar functionalities which is why they are being documented together:

- 3G 1X PD Services with MUX (Multiplexer) PDU (Packet Data Unit) (99-5E-8004)
- 3G 1X PD Services with 307Kpbs (99-5E-8222)

Both these features are made available with the 5E17(1) FR 1 (Feature Release 1) and later Software Releases.

The MUX5 feature (99-5E-8004), by itself provides increase throughputs of about 10-15 percent above any of the previously supported rates - 2x, 4x, 8x, and 16x, while when used in conjunction with the 307Kpbs feature (99-5E-8222), provides increased throughputs of up to 307Kpbs in the forward direction, (i.e., 32x).

MUX5, formally referred to as RLP3E, refers to using MUXPDU formats of type 5. This MUXPDU type is used to achieve peak data throughputs of 307Kpbs, whereas MUXPDU formats of type 3(MUX3) are used to achieve peak data throughputs of 153Kpbs. MUX3 was used in the previous release of HSPD (High Speed Packet Data). Both MUX types are standardized in CDMA (Code Division Multiple Access) 2000 standards - IS2000.3.

The 307Kpbs capability, depends on MUX5 to achieve peak user data rates, OTA (Over-the-Air) of 305Kpbs, and peak data throughtputs (with header overhead) of 307Kpbs. However, the converse is not true - MUX5 does not depend on 307Kpbs.

3G-1X packet data now refers to the utilization of a Third Generation CDMA 2000 air interface using a 1.25 MHz carrier to transmit peak data throughputs of up to 307Kpbs in the forward direction, and up to 153Kpbs in the reverse direction, without packet header or payload compression. This service allows users to access IP (Internet Protocol)-based networks for a wide array of packet data applications, ranging from traditional ones - such as web browsing, e-mail, file transfer, and messaging - to applications designed for wireless - like micro-browsing, on-line trading, banking, ticketing, and other services.

Most components of these features are supported only on a PHV5/PH22 (Protocol Handler for Voice 5/Protocol Handler 22) which also supports MUX3. However, the dynamic memory allocation and de-allocation, developed by these features, is also supported on a PHV4.

These features are built on the PHV5 platform, which currently supports up to 64 calls 3G data calls, and up to 64 bursts at 16X.

The 307Kpbs rate is supported in the forward direction only. MUX5 is supported in both the forward and reverse directions for turbo and convolutional encoding.

2. FEATURE ASSIGNMENT

There is no ODA impact for either of these features.

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SEC. 5P: 3G-1X HSPD WITH SIMULTANEOUS TRANSMISSION ON FCH AND SCH

1. FEATURE DESCRIPTION

The 3G-1X HSPD with Simultaneous Transmission on F-FCH (Forward Fundamental Channel) and F-SCH (Forward Supplemental Channel) feature (99-5E-8397) is made available with the 5E17(1) FR 2 and later Software Releases.

This feature provides overall data throughput improvements against the current implementation by utilizing the F-FCH during F-SCH operations. The improved throughput is achieved through the combined F-FCH and F-SCH usages. As an example, a maximum F-SCH rate of 153.6 Kbps is improved to 163.2 Kbps with the additional 9.6Kbps on the F-FCH.

This feature is supported on both the PHV4 (Protocol Handler for Voice 4) and PHV5 platforms.

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SEC. 6: ISDN PRI (PRIMARY RATE INTERFACE) FEATURES

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SEC. 6A: PRI CALL-BY-CALL SERVICE SELECTION FOR FX FACILITY AND TIE TRUNKS

1. FEATURE DESCRIPTION

Available with 5E9(1) and later, this feature provides Call-by-Call access to non-ISDN FX (Foreign Exchange) and non-ISDN Tie trunk facilities for calls originating from or terminating to CPE (Customer Premise Equipment) connected to the 5ESS Switch by Bellcore National ISDN PRI (Primary Rate Interface) trunks on a per-call basis.

FX trunks are non-ISDN private facilities used to connect one central office (normal service area) with another central office (the foreign exchange). Tie trunks are non-ISDN private facilities used to connect a central office (normal service area) with a distant PBX. This feature allows the customer to dial a number which causes the call to be cut through the normal central office to a foreign exchange office or distant PBX, or vice versa.

Call-by-Call Service Selection allows a single PRI to provide different services with the type of service being selected on a per-call basis. Dedicated PRIs are limited to providing only one type of service. Thus, by allowing FX/Tie access through Call-by-Call services, the PRI usage is more efficient (as compared to dedicated usage).

The number of simultaneous FX or Tie facility calls over a group of PRI B-channels is controlled by assigning an SFG (Simulated Facilities Group) to the PRI trunk group. A different SFG is required for each type of service and "direction" of the SFG. For FX/Tie services, an SFG's "direction" can be incoming, outgoing, or 2-way. When the SFG is "full" (the number of calls going through an SFG equals the SFG's size), the SFG is busy and no additional calls will be allowed to route through it unless overflow SFG is specified. This SFG is used to guarantee that only a limited number of groups of PRI B-channels will be used for a specific service at one time.

2. FEATURE ASSIGNMENT

2.1 PRI origination to FX/Tie

Figure 1 represents a scenario of a call originating at a DPBX (Digital Private Branch Exchange) which is connected over a PRI to a 5ESS Switch. The 5ESS Switch routes the call to a Tie trunk or an FX facility.

- PRI CBC (Call-by-Call) origination detected from "EDSL" on TKGRP form (5202 Record).
- Access data from TKEDSLD form (5209 Record) using TGN from "EDSL"/"EDSLHM" on TKGRP form, NFSTYPE and FACILITY NBR from SETUP message.
- Use MC RTI from the TKEDSLD form to access MCRTIDX form (5304 Record).
- Use SFG NBR from the MCRTIDX form to access PFASFG form (5609-3 Record) - check the SFG TYPE ("OUTFX", "OUTTIE", "2WFX", "2WTIE") and get idle SFG.
- If SFG is not idle, use NEXT MC ROUTE INDEX from the MCRTIDX form to find overflow SFG. If no SFG available, call is terminated.
- Use RTI from PFASFG form to access FX/TIE trunk group.

2.2 FX/Tie origination to PRI

Figure 2 represents a scenario of a call originated by a calling party dialing digits local to the central office switch. The central office routes to the Tie trunk (or FX facility) to the 5ESS Switch. The 5ESS Switch sends a SETUP message to the DPBX over the PRI to terminate the call.

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- FX/Tie origination detected on "FX"/"TIE" on TKGRP form.
- Access data from TKEDSLD using TGN from "PF"/"PFLASH" on TKGRP form, FACILITY TYPE and FACILITY NBR from SETUP message.
- Do digit analysis on DIR CON DN.
- Use route index found in digit analysis to access PRI CBC trunk group.
- Determine NSFTYPE ("FX"/"TIE") from FACILITY TYPE on TKGRP form.
- Use PRI TGN from the PRI TKGRP form, NFSTYPE ("TERMFX "/"TERMTIE" from the FX/TIE TKGRP form, and FACILITY NBR from TKGRP form to access TKEDSLD.
- Use MC RTI from the TKEDSLD form to access MCRTIDX.
- Use SFG NBR from MCRTIDX form to access PFASFG - check the SFG TYPE ("INFX", "INTIE", "2WFX", "2WTIE") and get idle SFG.
- If SFG not idle, use NEXT MC ROUTE INDEX to get overflow SFG. If no SFG available, call is terminated.
- Route call over PRI to DPBX.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PFASFG	5609	4	10C	7.3
TKEDSLD	5209	3	2K	5.34
TKGRP	5202	3	2A	5.1

PFASFG form (5609 Record) - This form is used to define SFG (Simulated Facility Groups) which allow controlling access to physical groups, such as lines, trunks and special circuits. For the SFG TYPE field, the following SFG types were added:

- INFX - Incoming EDSL (Extended Digital Subscriber Line) SFG from an FX trunk
- INTIE - Incoming EDSL SFG from a Tie trunk
- OUTFX - Outgoing EDSL SFG to an FX trunk
- OUTTIE - Outgoing EDSL SFG to a Tie trunk
- 2WFX - 2-way EDSL SFG to/from an FX trunk
- 2WTIE - 2-way EDSL SFG to/from a Tie trunk

The new field RTI was added. RTI specifies the route index used to route to an FX or Tie trunk from a PRI for Call-by-Call service.

TKEDSLD form (5209 Record) - This form is used to define EDSL (Extended Digital Subscriber Line) Call-by-Call features assigned to a B-channel trunk group. The following four types were added to the NET SPEC FAC TYPE field which describes the type of EDSL Call-by-Call service to be provided:

- ORIGFX - Originating from a PRI to an FX trunk

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- ORIGTIE - Originating from a PRI to a Tie trunk
- TERMFX - Terminating from an FX trunk to a PRI
- TERMTIE - Terminating from a Tie trunk to a PRI

The field FACILITY NBR was added which indicates the facility number of the originating from / terminating to FX or Tie trunk group.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The field FACILITY TYPE was added which indicates whether a non-ISDN trunk group is FX or Tie. While this value is needed only by terminating and 2-way FX/Tie trunk groups, it may be inserted for all FX/Tie trunk groups for ease of data administration.

The field FACILITY NBR was added which identifies a single FX or Tie trunk group. For calls arriving over an FX/Tie trunk group and terminating to a PRI, this FACILITY NBR will be assigned on one or more TKEDSLD forms.

When FACILITY NBR is entered, FACILITY TYPE and DIR CON DN must also be entered. The DN that is entered in the DIR CON DN field is used in digit analysis to determine the outgoing PRI trunk group.

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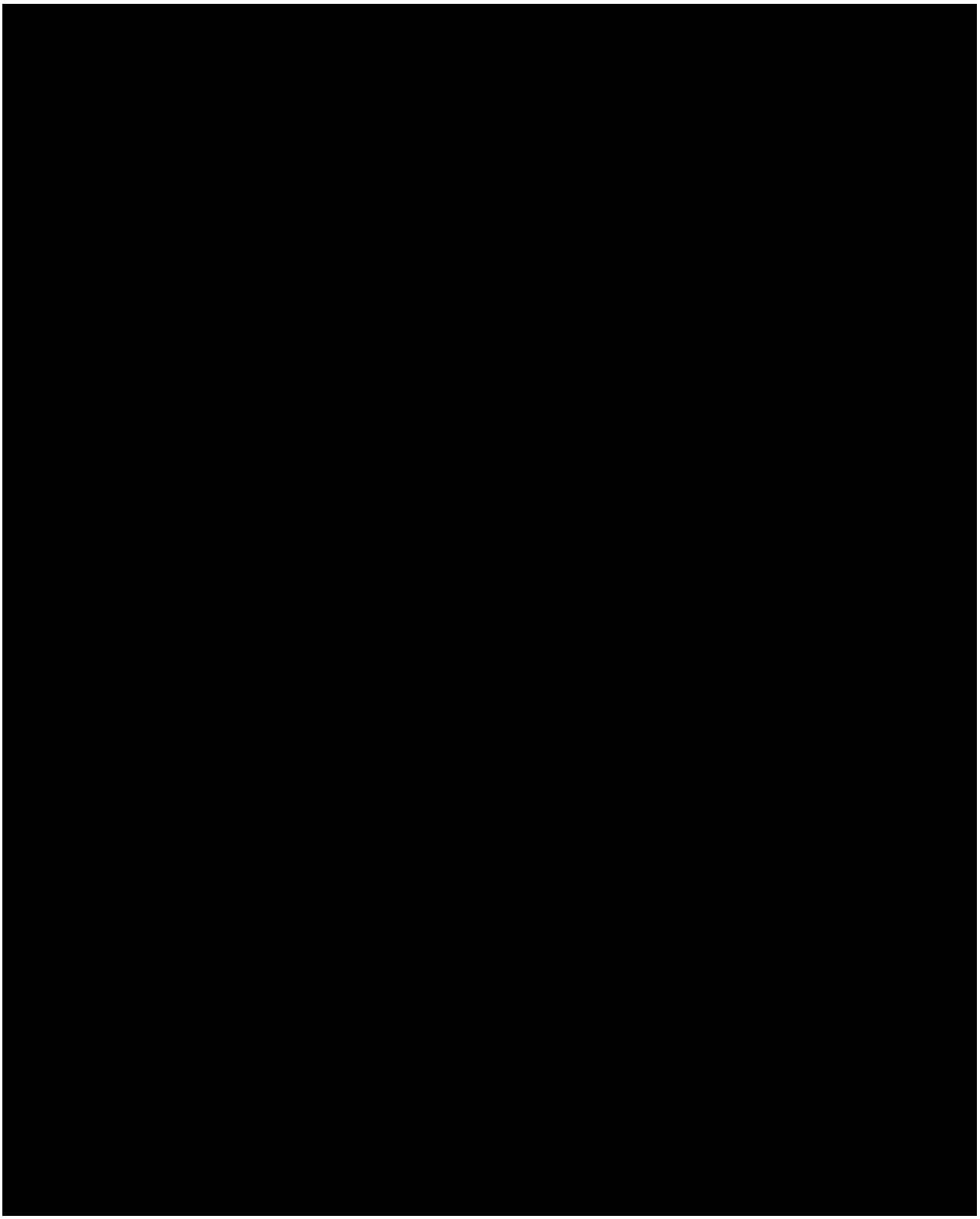

Figure 1 CALL PROCESSING PRI ORIGINATION TO FX/TIE SCENARIO

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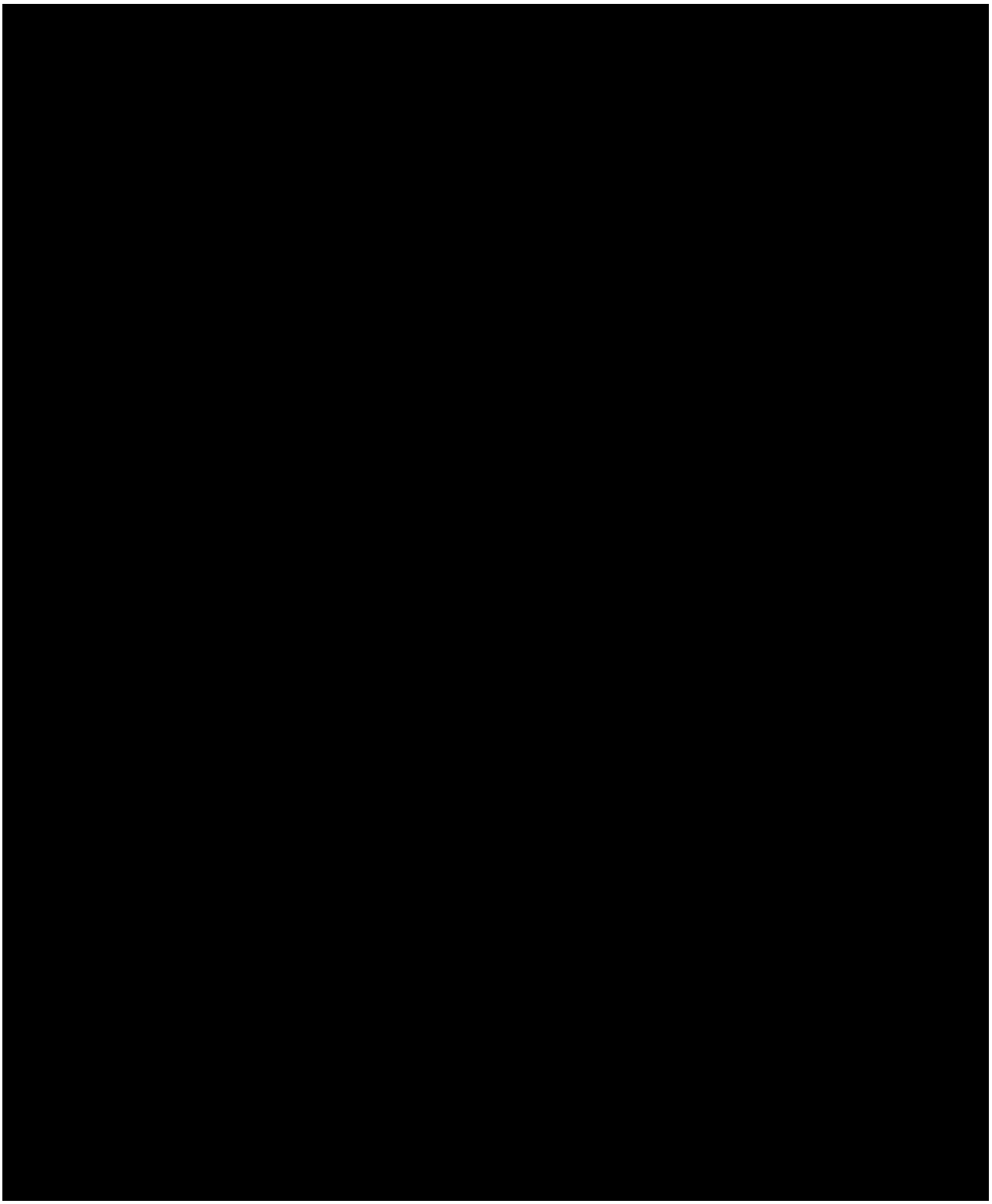

Figure 2 CALL PROCESSING FX/TIE ORIGINATION TO PRI SCENARIO

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SEC. 6B: NATIONAL ISDN PRI (PRIMARY RATE INTERFACE)

1. FEATURE DESCRIPTION

Prior to 5E9(1), the D-channel signaling entity only assigns calls to channels on the DS1 facility containing that D-channel. This is called FAS (Facility Associated Signaling) which supports the following configuration:

- 1 D-channel and up to 23 B-channels.

The 5E9(1) and later Software Releases continue to support this configuration (referred to as "AT&T Custom") which is CCITT and ANSI compatible but not compatible with the Bellcore's expansion of these standards.

For 5E9(1) and later, National ISDN PRI is available which is compatible with Bellcore current technical requirements (TR1268).

1.1 NFAS (Non-Facility Associated Signaling)

The National ISDN PRI feature allows the D-channel signaling entity to assign calls to B-channels on more than one facility (including the one containing the D-channel). This is referred to as NFAS. Specifically, National ISDN PRI supports the following PRI configurations:

- 1 D-channel and up to 23 B-channels (supports Bellcore requirements); without NFAS.
- 1 D-channel and up to 479 B-channels; with NFAS.
- 2 D-channels and up to 478 B-channels; with NFAS and D-Channel Backup.

1.2 D-Channel Backup Option

When NFAS is employed, the reliability of the signaling performance for the PRIs controlled by the D-channel may be unacceptable. The DCBU capability is suggested to improve the reliability of the D-channel control signaling.

DCBU permits continued access to the network, even if one of the D-channels fails, by transferring the signaling information to a back-up D-channel. DCBU allows a customer to designate a pair of D-channels in separate DS1 facilities as a mated pair. Both D-channels must terminate on the same SM.

1.3 PRI Group

The "PRI Group" is defined as a collection of B-channels and the controlling D-channel(s). The B-channel and D-channel trunks must be in separate trunk groups. The identification tag (i.e., number) given to the PRI GROUP does not necessarily have to be the same identification tag as the trunk group PRI GROUP. With DCBU, there are two D-channels, one Primary and one Secondary. All members of a PRI Group must terminate on the same SM. Applicable with 5E9(1) and later software releases, all new and existing PRIs must have a PRI GROUP assigned.

For more information on PRI Group, see Division 3, Section 2M.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PRIGRP	5211	3	2M	5.2
TRUNK	5204	3	2C	5.5

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PRIGRP form (5211 Record) - This form is available with 5E9(1). It is used to establish the PRI GROUP and PRI TYPE for a D-Channel facility. The PRI GROUP can be defined in the range of 1 - 4096; the PRI TYPE can be either "CUSTOM" (AT&T) or "STD" (National ISDN Bellcore Compliant). For the NFAS/DCBU feature, PRI TYPE must be "STD".

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. Two new fields were added to this form: PRI GROUP and DCHN DESG (D-Channel Designation). The DCHN DESG indicates whether the D-Channel trunk is a Primary or Secondary D-Channel for a PRI GROUP. If only one D-channel trunk is present for the PRI GROUP, the value "PRIM" is recommended. The DCHN DESG field applies to D-channel trunks that are members of a trunk group with TRKCLS on the TKGRP form (5205 Record) set to "EDSL" (Extended Digital Services Line).

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SEC. 6C: FRACTIONAL DS1/ISDN

1. FEATURE DESCRIPTION

Effective with the 5E9(1) Software Release, the Fractional DS1/ISDN Switching via PRI (Primary Rate Interface) feature provides a multibearer circuit switched service capability which allows multiple DS0 channels to be switched in increments of 64 kb/s from 128 to 1536 kb/s (NxDS0). (The value of N is the number of DS0s and can be any number from 2 to 24.) This feature supports the industry standard H0 (384 kb/s) and H11 (1536 kb/s) wideband data rates, Q.931, and ISUP (ISDN User Part) protocol procedures. (For more information on Q.931 protocol procedures see the TRUNK form, Division 3, Section 2C.) The multirate standard is also supported for all rates 128 kb/s through 1536 kb/s (in 64 kb/s increments). The 1536 kb/s rate requires the PRI to also have NFAS (Non-Facility Associated Signaling) capability. (For more information on NFAS, see Division 2, Section 6B.)

The feature provides the capability to initiate wideband calls, 128 kb/s through 1536 kb/s, by using ISDN (PRI based) premises equipment connected to either PRI or an ISUP trunk group. The dialing procedures are based on the CPE (Customer Premises Equipment) but are expected to be similar to those of a regular ISDN call set up and call release.

2. FEATURE ASSIGNMENT

The attributes assigned to PRI trunk groups need to be compatible with the functionality of the customer premises equipment.

The wideband functionality of the CPE must match the wideband parameters of data rate and TSA (Time Slot Assignment) type assigned to the access PRI. The CPEs must have the following capabilities:

- Standard Q.931 signaling messages
- Q.931 parameters/information elements needed for wideband calls
- D-channel termination
- Standard PRI interface
- Channel/rate selection capabilities

Other CPE features are optional and not required for this service.

2.1 Numbering Trunk Group Members

For PRI trunk groups, trunk member numbers must be sequential and associated with the channel numbers specified in the DEN (Digital Equipment Number. This can be summarized as: (member + 1) modulo 24 must equal channel number (DEN {7,8}). Note that "modulo 24" means: take the remainder after division by 24. The following table provides an example of the rule:

Numbering of Trunk Members of a Wideband PRI Trunk Group

Member NBR	Channel Number
0	1
1	2
.	.
.	.
.	.
23	24
24	1
25	2
.	.
.	.
.	.

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2.2 Numbering ISUP7 Trunk Group Members

For ISUP trunk groups, trunk members must also be numbered sequentially and associated with the channel numbers specified in the EN field. Also, values of CLCI TRK ID must be sequential and synchronized with the channel numbers. The following table provides an example of ISUP7 trunk group data.

Numbering of Trunk Members of a Wideband ISUP7 Trunk Group

Member NBR	Channel Number	CLCI TRK ID
0	1	101
1	2	102
.	.	.
.	.	.
.	.	.
23	24	123
24	1	124
25	2	125
.	.	.
.	.	.
.	.	.
48	24	147
.	.	.
.	.	.
.	.	.

A wideband trunk group must consist of enough members within the same facility to carry calls at the data rates that are assigned to the trunk group; this applies to both ISUP and PRI.

2.3 Trunk Group Selection Lists

TGSL (Trunk Group Selection Lists) consists of an ordered list of route index values that are entered on the RTIDX form (5303 Record). The end of each TGSL is marked by a null value in the NEXT ROUTE field. Each route index is associated with a TRUNK GROUP NUMBER value. Eight types of TGSLs are supported and are shown in Figure 1. Trunk groups that are contained in each TGSL must have characteristics that are consistent with the types of calls that use each TGSL. Figure 1 shows the allowed trunk group data for trunk groups that are contained in each of the eight types of TGSL's. An "x" indicates that trunk groups with the indicated data values are legal for the type of TGSL shown. These restrictions are only enforced by the software for the first trunk group in each TGSL, but this should be manually administered for all trunk groups.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
IDFD	5601	4	2A	12.17
ISDNOPT	5941	5	5B	8.1
RTIDX	5303	3	3P	10.2
TGSRFD	5607	4	8A	12.21
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

IDFD form (5601 Record) - This form is used to define various Individualized Dialing Plans. A data rule was added to the FEATURE NAME field to restrict the wideband trunk group to, at most, one TGSR and/or one IDP feature.

ISDNOPT form (5941 Record) - This form is used to define ISDN parameters. The T316 signaling timer field was added to define the time (in seconds) to wait for a Q.931 REST ACK (Restart Acknowledgement) message after sending a Q.931 REST (Restart) message.

RTIDX form (5303 Record) - This form is used to define the DATARATE ALT RI (Alternate Route Indexes) for data traffic based upon data rates. The following data rates were added ; 56K, R64K, 64K, 384K, 1536K, MULTIRATE. For 5E9(1) and later, assignment of alternate data route indexes for both narrow and

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wideband data rates was moved from the DTRTX form (5314 Record) to the RTIDX form.

TGSRFD form (5607 Record) - This form is used to define Terminal Group and Station Restriction features. A data rule was added to the FEATURE NAME field to restrict the wideband trunk group to, at most, one TGSR and/or one IDP feature.

TKGRP form (5202 Record) - This form is used to define each trunk group in a 5ESS Switch. The WB RATE and WB TSA TYPE fields were added to define the Wideband Data Rate and time slot assignment type (fixed, flexible, or float) transmitted by the trunk group.

TRUNK form (5204 Record) - This form is used to define each member of a trunk group in a 5ESS Switch. Data rules were added to the TGN field to support the wideband feature.

TRUNK GROUP SELECTION LISTS										
TRUNK GROUP DATA			TYPE OF TGSL							
DATA RATE	WBRATE	SPEECH	RTI*	SPEECH ALT RI	56K	R64K	64K	384K	1536K	MULTI-RATE
Null	Null	Y		X						
Null	Null	N	X							
56K	Null	N	X		X					
R64K	Null	N	X		X	X				
64K	Null	N	X		X	X	X			
64K	384K	N	X		X	X	X	X		X**
64K	1536K	N	X		X	X	X		X	X**
64K	384/1536K	N	X		X	X	X	X	X	X**
64K	MULTIRATE	N	X		X	X	X	X	X	X

Notes:

*This is the normal route index value that the TGSL used for speech and 3.1 Khz calls.

**Must be at the end of the TGSL. Calls with certain values of N are released (for example, a 384K TG and a multirate call with N not equal to 6).

Figure 1 TRUNK GROUP SELECTION LISTS TABLE

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SEC. 6D: USER-SIDE (PRI) PRIMARY RATE INTERFACE

1. FEATURE DESCRIPTION

This capability provides the software needed to implement user-side procedures of the PRI protocol and support PRIs in public networks (private trunks providing access to public facilities) and private networks.

User-Side Procedures allows different configurations of the 5ESS Switch. PRIs can be configured between two 5ESS Switches (Central Office (CO) to ISDN Private Branch Exchange (IPBX) or IPBX to IBPX), a 5ESS Switch and an Inter-exchange Carrier (IC) and a 5ESS Switch and an IPBX.

With User-Side PRI, 5ESS PBX customers are allowed switched access to public network services and facilities. PRIs must be designated as either network- or user-side (i.e., one end network, the other end user). This is handled administratively by the switch.

The User-Side PRI capability complements the 5E4(2) network-side PRI procedures implemented by the Extended Digital Subscriber Line (EDSL) call processing capability. User-Side PRI provides 64 Kbps end-to-end connectivity and a means to pass the Calling Party Number and Message-Associated-User to User Information to the terminating party.

2. TRANSLATION REQUIREMENTS

2.1 Trunk Translations

The TRUNK form (5204-1/2/3 Record) contains two new fields that indicate the protocol procedures to be used by the PRI D-channel. These fields, Q921 and Q931, determine the use of either user- or network-side procedures. For Q921, the entry "USER" indicates that user-side procedures are followed. A "NETWORK" entry indicates network-side procedures. The Q931 field uses the "SYMUSER" entry for symmetrical user-side procedures and "NETWORK" for network-side procedures.

The TKGRP form (5202 Record) has added the VOICE CUT THRU field to identify the cut through procedure for CSV calls. This field can contain one of two values, "NORMAL" or "EARLY" depending on when the path is to be cut in both directions between the originating and terminating ends. Similarly, the DATA CUT THRU field (also added in 5E6) identifies the procedure used for CSD calls and includes "NORMAL" "EARLY" and "DELAY" options for path cut through.

2.2 Miscellaneous Translations

The OFCOPT form (5509 Record) assigns office parameters and options to a 5ESS Switch. This form has added the required field, CAUSE LOC, which is used by the switch for Q.931 error analysis. An entry of "PUB" in this field indicates that the switch is deployed in a public network. An entry of "PRIV" indicates a private network.

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SEC. 6E: ACCESS TO IC SERVICE

1. FEATURE DESCRIPTION

For a 5ESS Digital Central Office (DCO) or a 5ESS Digital PBX (DPBX), the Access to IC Service capability provides the following features:

1.1 PRI Access to Selected AT&T Communications ISDN (ACI) Services via DCO.

PRI Access to ACI Services allows a Local Exchange Carrier (LEC) to provide ISDN services offered by ICs to DPBX subscribers. These services are provided via a switched access arrangement rather than a direct connect. The access arrangement for each service between the 5ESS DCO and the DPBX can be dedicated PRI channels, call-by-call service selection or call-by-call with Simulated Facility Groups (SFG).

1.2 Subscriber Loop Dialed Access to Selected IC Services via DCO.

For analog or BRI terminals on a DCO, the Subscriber Loop Dialed Access to Selected IC Services feature provides access to IC services via Common Channel Signaling System 7 (CCS7) or Equal Access Multi-Frequency (EAMF) trunks. Analog and BRI users of this feature have per-call access to the services supported.

1.3 Call-by-Call Access from 5ESS in a Private Network to IC Services.

Call-by-Call Access from 5ESS in a Private Network to IC Services can be done either by switched or direct access. Access to IC services from the PBX to an end office is done using switched access. For access through a toll office, direct connect is used. Either method can be done over PRIs using dedicated channels, call-by-call channel or call-by-call channels with SFGs.

1.4 Use of Access to IC Services with Services Developed for 5E5 and Earlier Software Releases

The Access to IC Services capability can be used with the following existing services (developed for 5E5 and earlier Software Releases) for a CO or PBX:

- SDN - The Software Defined Network service for large multi-location customers provides a virtual private network using the public-switched network. An SDN can be either a voice or data call.
- Global - Accessed using the same dialing plan as an SDN for calls routed to international destinations.
- SDS - Switched Digital Services is part of the ACCUNET family of end-to-end, full-duplex switched digital transmission facilities for 56 Kbps service, 64 Kpbs service, and 56 and 64 Kpbs International Switched Digital Service (ISDS).
- OUTWATS - Outward calling to stations in the customer's selected service area from a station associated with the access line.
- 800 - Both Basic and Inbound International 800 Services receive long-distance calls from prescribed service areas. Customers are billed on a bulk basis without charge to the call's originating party.
- LDS - IC's Long Distance Service access.
- ILDS - International LDS access.
- Equal - Allows a user to access an Inter-exchange carrier other than the pre-subscribed carrier.

Also included is Operator and Presubscribed Common Carrier. Operator Access allows a user to select

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either a Telco operator or an Inter-exchange Carrier operator (per a given call).

Below is a description of the services provided only on a PBX:

- MEGACOM - Unbanded long distance services using direct access to the 4ESS toll switch.
- MEGACOM - A dedicated service for the largest 800 service customers.
- Dial-it-Nova - A direct egress service from a 4ESS toll switch.

2. TRANSLATION REQUIREMENTS

2.1 Trunk Translations

The following fields have been added to the TKGRP form with the 5E6 Software Release for Access to IC Service.

SDN DAS contains a numerical entry (0 - 99 for 5E14 and earlier or 0 - 254 for 5E15 and later) indicating the Digit Analysis Selector (DAS) to be used for an incoming SDN call from a call-by-call group.

The DEDICATED SRV field indicates the dedicated service type used by a PRI (e.g., INWATS, M800, Megacom, OUTWATS, SDN).

The TKEDSLD form (5209 Record) has added entries in the NET SPEC FAC TYPE field for M800 (Megacom 800 Service) and SDN (Software Defined Network Service). These entries for Call-by-Call services are used in assigning multiple features to a B-channel trunk group with a TRKCLS of "EDSL" (defined on the TKGRP form).

2.2 Routing and Charging Translations

Digit analysis for access to feature and operator services is done using entries made on the Prefix/Feature Digit Interpreter (PDIT) form (5300-2 Record). Added to the ACTION field is the entry "SDNUSE" which invokes a Software Defined Network call.

2.3 Miscellaneous Translations

The AMA Call Type (AMACT) form (5506 Record) determines the call type information (e.g., account code, cellular, 411) used to generate billing records at the end of a call. For 5E6, the entry "ICVPN" has been added to the AMA CALL TYPE field to provide originating access to IC virtual private networks.

2.4 BRCS Features Translations

The Business and Residence Custom Services (BRCS) Features description has added the "SDNUSE" option to its list of dialed code Actions. These Actions define dialed codes for PDIT, Individualized Dialing Plan Dialed Code Assignment (IDPCA) and/or CFGGRP for Office Dialing Plan (ODP). SDNUSE invokes a Software Defined Network call and can be used to define dialed codes for each of the three options, ODP, IDP and feature buttons. Consult the BRCS Feature description for information on the system response and customer response.

The PFASFG form (5609-3 Record) defines a Simulated Facility Group (SFG) needed to access features, services or facilities linked to physical groups such as lines, trunks or special circuits. For 5E6, the SFG TYPES of "MEGACOM" and "MEGACOM 800" have been added. The modified entries for the SCRN INDX field on this form depend on the type of service being requested (e.g., OUTWATS, SDN, MEGACOM, etc.).

The Individualized Dialing Plan Dialed Code Assignment (IDPDCA) form (5601-1/2 Record) has added an entry of "SDNUSE" to the ACTION field. This entry is used to invoke a Software Defined Network call.

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2.5 ISDN BRCS Translations

The Configuration Group (CFGGRP) Definition form (5964 Record) has also added the "SDNUSE" entry to the ACTION field to invoke a Software Defined Network call.

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SEC. 6F: ELECTRONIC TANDEM NETWORK ON PRIMARY RATE INTERFACE

1. FEATURE DESCRIPTION

ETN (Electronic Tandem Network) on PRI (Primary Rate Interface) is available with 5E6 and later Software Releases. The feature provides ISDN PRI connectivity between two 5ESS switches acting as ETN nodes, and between 5ESS switches (including 5ESS PBXs) functioning as ETN tandem nodes and other ETN nodes that support ISDN PRI (e.g. System 85 PBX). With this type of connection, the PRI enhances the current service offerings by providing, for example, 64kbps end-to-end connectivity, and a means to pass the calling party number to the terminating party.

The ETN on PRI feature builds upon existing 5ESS Switch ETN features, extending their use to PRI trunks. These requirements do not seek to change the already implemented ETN features, but only to expand ETN availability to ETN nodes connected by PRI trunks for voice and data traffic.

This feature supports the set of existing CSV/CSD features shown below for ETS PRI trunks.

- ARS (Automatic Route Selection)
    1. FRL (Facility Restriction Level)
    2. Alternate FRLs
    3. Deluxe ARS
    4. AAR (Automatic Alter Routing)
    5. UNP (Uniform Numbering Plan)
    6. TCM (Traveling Classmark)
    7. Manual and TOD (Time of Day) Control of ARS
    8. Expensive Route Warning Tone
- Facility Management
- MDR (Message Detail Recording)
- ACA (Automatic Circuit Assurance)
- TDC (Traffic Data to Customer)

The major changes required for this expansion are:

A. Two types of B-channel access arrangements will be provided to PRI ETN customers. They are:

1. CBC (Call-by-Call Service Selection)

   This arrangement allows the 5ESS PBX to request, on a call-by-call basis, services and/or features for a particular call by populating the PRI SETUP message that is sent to another ISDN ETN node. The following information elements in the PRI SETUP message are built by the originating switch and sent to the terminating switch:

   - NSF (Network Specific Facilities) - is used to determine what type of network service (i.e. ETN, SDS, or SDN) is being requested from either an IC, TelCo, or a switch within

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its own network.

- Transit Network Selection - is used when requesting only a transmission facility from an IC through its local TelCo, no specific network service is requested, can be either voice/data.
- Bearer Capability - is used to determine whether or not voice or data is being sent and the speed at which the data is sent.
- Called Party Number - is used to determine the Called Party Number and whether it is private or public.

If ARS is assigned to a CBC PRI trunk via the TRUNKFA form (5205 Record) and the CBC feature is defined on the TKGRP form (5202 Record) with CBC equal to "Y", then ARS will be used to route calls that are marked as ETN, SDS or SDN in the NSF information element. Otherwise, ARS will not be used to route the call for the other services.

2. Dedicated Channels

By service provisioning, a customer may dedicate a single trunk group of B-channels on their PRI to a single service. In this case, there would be no need for a NSF IE to be included in the PRI SETUP message.

If ARS is assigned to a dedicated PRI trunk (defined on the TKGRP form with the DEDICATED SRV field entered), then ARS will always override the dedicated service, and route the call.

B. The existing FRL, as well as the new SHC (Satellite Hop Count) and EEICI (End to End ISDN Connectivity Indicator) are passed between ETN nodes over the PRI D-Channel in the TCM IE of the PRI SETUP message. The TCM IE is included for all PRI calls routed within the private network when the TCM IN, TCM OUT, and DEFAULT TCM fields are set to "0" and the TCM OPTION field has a value of "Y" on the ARSFD form (5608-1A/1B). Also, the INHIBIT TCM field on the TKGRP form (5202 Record) can be used to prohibit the TCM IE from being sent in the private network. Whenever a call is routed OFF-NET the TCM IE information will not be "outpulsed" as done on analog trunks.

1. The SHC (Satellite Hop Count) allows a customer to establish a maximum network limit on satellite (not to be confused with the Main/Satellite configuration) hops for all calls routed via ARS. Routing decisions at network tandem switches are based on the destination address and on the number of satellite hops used in route to that point. If the maximum permissible number of satellite hops (defined in the SAT HOP CNT field on the ARSGPA form, 5608-2 Record) has not been reached, the call will continue over either a satellite or a trunk. The treatment of the call and the satellite hop count options will be specified per ARS group (defined in the SAT HOP OPT field on the ARSGPA form) as follows:

   - STRICT: Once the SHC limit has been reached, route via a trunk (land based) if available; otherwise clear call.
   - PREF: Once the SHC limit has been reached, try to route via a trunk (land based) if available; otherwise route via satellite (air based). Currently, this option is not available and is treated the same as "ANY".
   - ANY: Use either a trunk (land based) or a satellite (air based) to route call.

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2. In completing an ARS routed call, there may arise a need for the call to be completed exclusively over PRI trunks. The EEICI will tell the 5ESS switch (based on port) which one of the three following treatments will be used for a PRI trunk:

   - REQ: Route exclusively using PRI trunks. Clear the call if PRIs are not available. For example, if the ARS route list contains both PRIs and non-PRIs the non-PRIs will be ignored.

   - PREF: Routing using PRI trunks whenever available. The use of non-PRI trunks are considered second choice, but will not prevent the call from being routed. Currently, this option is not available and is treated the same as "ANY".

   - ANY: Route using either PRI or non-PRI trunks. For example, the first idle route in the ARS route list will be selected.

     If the user subscribes to the "ANY" option of EEICI, Calling number subscribers (i.e. analog/ISDN ICLID, ISDN CPN/BN) may receive the calling party number for ETS calls. Since ARS will support a mixture of PRI and non-PRI routes, the calling party number will not always be provided. If the user subscribed to the "Required" option of EEICI, they will experience five differences: (1) the calling party number will be consistent for ETN calls to the same location, (2) the voice quality will be consistent for ETS calls to the same location, (3) Satellite Hop Count will be enforced consistently because SHC will be passed (4) enhanced 64 kbps end-to-end connectivity will be provided, (5) and the failure rate may increase because non-PRI routes are not used as an alternative.

2. FEATURE REQUIREMENTS AND RESTRICTIONS

ETN on PRI has the following restrictions:

- The Modular Queuing feature cannot be assigned to a PRI. Modular Queuing to a PRI or from a PRI is not supported.

- Modular Queuing to a non-PRI is supported as long as the EEICI option is not set to "REQ".

- The ARS feature, defined on the ARSFD form (5608-1A/1B Record), and the MDR feature, defined on the MDRFD form (5624-1 Record) are the only ETN or BRCS features that can be assigned to a PRI trunk.

- An Access Code ARS feature cannot be assigned to a PRI. Only Auto-ARS may be assigned to a PRI.

- No Incoming Private MDR records are generated from a PRI.

- The ARS port fields TCM IN, TCM OUT, and DEFAULT TCM on the ARSTPA form must be set to "0" for PRI Trunk members. The TCM IE is always sent over PRIs unless the INHIBIT TCM field on the TKGRP form is set to "Y" which blocks the TCM IE from being sent over PRIs.

- The INHIBIT TCM field on the TKGRP form should be set to "Y" for ARS SDN calls that are routed as a direct connect PRI trunk to a 4ESS Toll Switch.

- The INHIBIT TCM field on the TKGRP form should be set to "Y" to prevent asserts when all of the following conditions are met:

  1. The trunk has a TRKCL of "EDSL" or "EDSLHM" assigned on the TKGRP form.

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2. Call are routed by ARS through this PRI trunk group.

3. The far-end of the PRI trunk is connected to an Inter-Exchange Carrier.

- An ARS origination designates the type of call to be SDN through the use of the private network dialing plan by setting the ARS SDN field on the PNDP form (5608-10/11 Record) to "Y".
- The type of service cannot be designated as SDN for digit strings that are recognized using the selective destination screening feature of the private network dialing plan.
- PRIs cannot be used in a private trunks access cut-thru mode of signaling.
- Segmented signaling is not supported on a PRI trunk.

3. TRANSLATION REQUIREMENTS

The following forms are used to implement the ETN on PRI feature. See FIGURE 1 for the form flow.

3.1 Trunk Translations

TKGRP form (5202 Record) This form is used to define the PRI trunk groups. The trunk group may be dedicated to a service by entering the DEDICATED SRV field.

The INHIBIT TCM field was added to prevent the TCM IE from being sent to the terminating switch. TRUNK form (5204-1/2 Record) This form is used to define the trunk group members. TKEDSLD form (5209 Record) This form is used to define PRIs which are used on a call-by-call basis. The TGN must be defined on the TKGRP form (5202 Record), the TRKCLS must have a value of "EDSL" or "EDSLHM" and the CBC field must have a value of "Y".

3.2 Miscellaneous Translations

APCOMM form (5507 Record) This form is used to define the communication path between the 5ESS switch and the Application Processor. Available with 5E3 and 5E4(2) Software Releases. With 5E4(2) and later Software Releases the DSLAP is used to define the links.

The APPLICATION PROCESSOR field on the OFCOPT form (5509 Record) must have a value of "Y".

3.3 BRCS Translations

ARSFD form (5608-1A/B Record) This form is used to define the ARS feature. Two fields, VOICE ETE and DATA ETE were added to allow voice or data calls to be routed primarily over PRI trunks.

ARSGPA form (5608-2 Record) This form is used to define the group level information required for ARS. The SAT HOP CNT field determines how many switches may be hopped during an ARS call. The SAT HOP OPT field indicates what treatment will be given to the call when the SAT HOP CNT is exceeded.

ARSLPA form (5608-3 Record) This form is used to define the ARS individual line parameters. Two fields, VOICE ETE and DATA ETE were added to allow voice or data calls to be routed primarily over PRI trunks.

ARSMPA form (5608-4 Record) This form is used to define the ARS individual multi-line terminal parameters. Two fields, VOICE ETE and DATA ETE were added to allow voice or data calls to be routed primarily over PRI trunks.

ARSTPA form (5608-5 Record) This form is used to define the ARS individual trunk parameters. Two fields, VOICE ETE and DATA ETE were added to allow voice or data calls to be routed primarily over PRI trunks.

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ARSSCRN form (5608-6 Record) This form is used to define the ARS Screening Indexes.

ARSFRL form (5608-7 Record) This form is used to define the alternate Facility Restriction Levels.

PNDP form (5608-10/11 Record) This form is used to define the Private Network Dialing Plan. The ARS SDN field indicates whether or not the type of call is SDN.

PNINFO form (5608-12 Record) This form is used to define the error treatment used by ARS.

PNOFFON form (5608-13 Record) This form is used to convert an off-network number to an on-network number.

PNONOFF form (5608-14 Record) This form is used to convert an on-network number to an off-network number.

APCA form (5620 Record) This form is used to indicate whether or not the Business Customer has the following features: Traffic Data to Customer Location, Automatic Circuit Assurance, and Facilities Management.

APFMA form (5622 Record) This form is used to give the business customer administrative control over certain assignable features (e.g. Authorization Codes).

MDRFD form (5624-1 Record) This form is used define the Message Detail Recording feature.

MDRGP form (5624-2 Record) This form is used to define the Message Detail Recording group.

MDRCNT form (5624-3 Record) This form is used to define which business customers will receive Message Detail Recording counts on a daily basis.

MDRTPA form (5624-6 Record) This form is used to assign Message Detail Recording parameters to a specific PRI.

3.4 ISDN BRCS Translations

DSLAP form (5963 Record) This form is used to define the links between the 5ESS Switch and the AP. Available with 5E4(2) and later Software Releases.

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Figure 1 ETN ON PRI FORM FLOW

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SEC. 6G: MULTI-LEVEL PRECEDENCE AND PREEMPTION ON PRI

1. FEATURE DESCRIPTION

The MLPP (Multi-Level Precedence and Preemption) on PRI feature is available for 5E9(2) and later. The feature number for this capability is 99-5E-2336.

The MLPP on PRI feature provides the following functionalities:

- A call with a higher priority can preempt a PRI B-channel. If the preempted B-channel is needed for the subsequent connection, it is preempted for reuse. With the MLPP feature each B-channel can be marked with a precedence level. MLPP also provides the transport of precedence level across the PRI.
- The 5ESS Switch can serve:
  - as a Local Exchange serving one or more PBXs
  - as a PBX interconnected with one or more PBXs in a peer-to-peer arrangement
  - as a PBX connected to a Local Exchange
  - and as a Local Exchange connected to a Local Exchange.
- Connection arrangements are supported for the following:
  - analog line to PRI
  - BRI to PRI
  - PRI to PRI
  - PRI to DP/MF trunk
- An MLPP call can be routed over a PRI B-channel or over a DP/MF trunk depending on how the route indices are provisioned.
- The following DSN (Defense Switched Network) features are supported:
  - Precendence Access Threshold which limits the number of calls at each precedence level which can be offered to the DSN.
  - Polygrid Routing which is a robust, redundant trunking scheme, where in the limiting case, all DSN switches are interconnected with each other.

2. FEATURE ASSIGNMENT

In order for the MLPP feature to operate with the unique DSN dialing plan, a constructed BRCS feature is assigned to each end of a trunk group. This feature defines the MLPP trunk type. In addition to the existing trunk types dedicated to MLPP, three trunk types have been added for the DSN PRI application, and one additional type was added to support MLPP on PRI for commercial customers.

To analyze the called DN (Directory Number) and the precedence level, an ID (Individualized Dialing) feature must be assigned to an MLPP PRI. The assignment of the ID is allowed only if the CENTREX PRI Enhancements Secured feature (SFID 105 for 5E7 and later) has been activated.

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The four new Precedence and Preemption trunk types are available on PPFD and PPTPA forms (5618-1 and 5618-5 Records) for use on trunks with a trunk class of "EDSL". Only the "PRBL" (idle/preempt backward linear) and "PRFL" (idle/preempt forward linear) HUNT TYPEs are allowed for the new MLPP trunk types.

The MLPP trunk types cannot be assigned on the PPTPA form unless the CENTREX PRI Enhancements secured feature (SFID 105) is activated.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PPFD	5618-1	4	19A	12.31
PPTPA	5618-5	4	19E	5.31

PPFD form (5618-1 Record) - This form is used to define the Precedence and Preemption feature used in DSN (Defense Switched Network) switches to provide direct precedence dialing of calls and precedence treatment for terminating calls such as automatic preemption and the redirection of the call to an DSN (Defense Switched Network) attendant associated with the dialed line. Four trunk types were added to support the MLPP on PRI feature.

PPTPA form (5618-5) - This form is used to assign specific AUTOCON PP feature parameters to trunks. Four trunk types were added to support the MLPP on PRI feature.

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SEC. 6H: PRI B/D-CHANNEL CAPACITY EXPANSION FOR SM-2000

1. FEATURE DESCRIPTION

The PRI B/D-Channel Expansion for SM-2000 features increase the PRI (Primary Rate Interface) B- and D-channel capacities.

For the 5E10 and 5E11 Software Releases, the PRI B-Channel Capacity Expansion for SM-2000 feature (99-5E-3521) increases the maximum number of PRI B-channels on an SM-2000 to 3000 (formerly 1000 channels). The maximum number is the sum of all PRI B-channels for all PRIs terminating on a single SM-2000, regardless of the hardware terminating the PRI or the controlling D-channel.

For the 5E11 Software Release, the PRI D-Channel Capacity Expansion for SM-2000 feature increases the maximum number of PRI D-channels on an SM-2000 to 127 (formerly 31 channels). The maximum number is the sum of all PRI D-channels for all PRIs terminating on a signle SM-2000, regardless of the hardware terminating the PRI. The Feature Number for this feature is 99-5E-3452 .

For 5E12 and later, the PRI B-Channel Availability Signaling Procedures feature (99-5E-3621) increased the number of PRI B-channels on an SM-2000 to the hardware limits by removing all software limits on the maximum number of PRI B-channels (see Division 2, Section 6I).

For 5E12 and later, the PRI D-Channel Capacity Expansion for SM-2000 feature (99-5E-4373) allows the number of PRI D-channels to be defined up to the hardware limits of that SM (see Division 2, Section 6J).

These features do not change the interface or the protocol and are provided by the base software.

2. FEATURE ASSIGNMENT

The PRI B- and D-channels are assigned via the PRI GROUP field on the TRUNK form (5204 Record). For 5E10 and 5E11, the maximum number of PRI and OSPS D-Channels cannot be exceeded. For 5E12 and later, the maximum number of PRI and OSPS D-channels is driven by hardware limitations. A PRI D-Channel is one where both PRI GROUP and DCHN DESG are entered on the TRUNK form (a DEN or NEN may be used). An OSPS D-Channel is one where DEN[7,8] on the TRUNK form is 24 or 48, and TRKCLS on the corresponding TKGRP form is "IFOPER" or "IFTERM" (only DEN may be used).

For 5E10 and 5E11, if DEN[1,3] or NEN[1,3] values on the TRUNK form match the SM on the EQIM form where UNIT TYPE is an SM-2000 class processor, then the maximum number of PRI and OSPS D-Channels on the TRUNK form per SM is 640. For 5E12 and later, the maximum number of PRI and OSPS D-channels on the TRUNK form per SM is driven by hardware limits of the SM. If UNIT TYPE on the EQIM form is not "SM2000", then the maximum number of PRI and OSPS D-Channels on the TRUNK form per SM is 20.

For 5E10 and later, when TGN/MEMBs have PRI GROUP entered and DCHN DESG is blank on the TRUNK form, indicating that they are EDSL B-Channels, a maximum of 3,000 EDSL B-Channels may be assigned to an SM with an SM-2000 class processor on the EQIM form, and a maximum of 479 EDSL B-Channels otherwise. SM is found by matching DEN[1,3] or NEN[1,3] on the TRUNK form with SM on the EQIM form.

A PRI D-Channel is one where both PRI GROUP and DCHN DESG are entered on the TRUNK form (a DEN or NEN may be used). If DEN[1,3] or NEN[1,3] values on the TRUNK form match SM on the EQIM form where UNIT TYPE is an SM-2000 class processor, the maximum number of PRI D-Channels on the TRUNK form per SM cannot be exceeded as indicated:

- For 5E10 only, the maximum is 31
- For 5E11 and later, the maximum is 127
- For 5E12 and later, the maximum is driven by the hardware limitations in the SM. The hardware limitations are the number of PIDB/PCT link timeslots connected to the PSU shelf, the number of PH channels per shelf, and the number of DSOs per SM.

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If UNIT TYPE on the EQIM form is not an SM-2000 class processor, the maximum number of PRI D-Channels on the TRUNK form per SM is 20.

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SEC. 6I: PRI B-CHANNEL AVAILABILITY SIGNALING PROCEDURES

1. FEATURE DESCRIPTION

The PRI BCAS (B-Channel Availability Signaling) Procedures feature is available with the 5E12 Software Release. It provides a new maintenance capability on the National ISDN Primary Rate Interface to send SERVice and SERVice ACKnowledgement messages for B-channel "status" information. This feature is provisionable for National ISDN PRI only.

This feature significantly improves B-channel maintenance procedures for National ISDN PRI by allowing either end (central office network or the CPE (Customer Premises Equipment) end user) to notify the opposite end when the status of an individual B-channel is changed (e.g., the B-channel has been taken OOS (Out Of Service) or is ready to be brought IS (Into Service)). CPE must support BCAS signaling in order for this feature to be successfully implemented for the STD (Standard) PRI. This capability currently exists for the Custom PRI.

The feature number for this feature is 99-5E-3621.

1.1 T323 Timer

The T323 Timer limits the amount of time that the 5ESS-2000 Switch will wait for a response to a SERV message (120 seconds). A per switch parameter limits the number of times (provisionable as 1 to 4) that the 5ESS-2000 Switch will retransmit a SERV message following T323 timeouts.

Whenever the switch transitions the B-channel to OOS due to internal stimuli, the status is printed on the ROP at that time. The switch never resends a SERV message with a change status of OOS if it times out on the first attempt. Retransmissions are only performed when the switch has sent a SERV message with a change status of IS.

For more feature information, see the 5ESS-2000 Switch PRI Interface Specification (235-900-342), Issue 4.0 and GR-892-CORE, "Switching System Operations Generic Requirements for ISDN".

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ISDNOPT	5941	5	5B	8.1
PRIGRP	5211	3	2M	5.2
SREINCR	5547	3	5AW	8.40

ISDNOPT form (5941 Record) - This form is used to define options for ISDN (Integrated Services Digital Network). The RETRY SERV field was added to set the number of times a SERV message is resent or "retried" after the T323 timer has expired while waiting for a SERV ACK message.

PRIGRP form (5211 Record) - This form is used to define PRI Groups. The B CHAN SERV field was added to indicate if B-channel Service messages can be sent to a designated National ISDN PRI.

SREINCR form (5547 Record) - This form is used to increment global parameters. The "GPFTIME" software resource was added to support this and other features.

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SEC. 6J: PRI D-CHANNEL CAPACITY EXPANSION

1. FEATURE DESCRIPTION

This feature is available as 5E12 and 5E13 Software Updates. This feature removes the software limitation of 127 PRI D-channels on an SM-2000 and allows the office to provision the number of PRI D-channels up to the hardware limitations of the SM. Hardware limitations are PSU PIDB shelf timeslots, PH timeslots, and DS1 facilities within an SM.

The software limitation of 4095 PRI groups within an office is not changed. The software limitation of 479B+D or 498B+2D per PRI group is not changed. There are no changes to the RC/V Views or I/O commands for this feature. These commands will operate the same as they did before the feature was introduced with the exception that the OP: OFFNORM, PRIGRP commands prints the output in PRI group order instead of SM/PRI group order.

The feature number for this feature is 99-5E-4373.

See Division 2, Sections 6H which has been updated to reflect the limitations removed by this feature.

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SEC. 6K: PRI B-CHANNEL NEGOTIATION

1. FEATURE DESCRIPTION

PRI B-Channel Negotiation feature is available with the 5E14 and later Software Releases.

Prior to this feature, when the 5ESS switch selects a B-channel to terminate a call to a PRI (Primary Rate Interface), it indicates in the SET-UP message to the CPE (Customer Premises Equipment) that the channel is EXCLUSIVE. That tells the CPE that the call must be set up on that B-channel, and no other. With this feature, the trunk group that the PRI B-channel is in can be marked that it is available for B-channel negotiation by a new field, B CHAN NEG, on the TKGRP form. If that field is set to "Y", when the switch selects a B-channel to terminate a call on a PRI and the B CHAN NEG field is "Y", the switch will send the SET-UP message to the CPE with an indication that the channel selected is PREFERRED. This tells the CPE that it may set up the call on a B-channel different from the offered channel. The CPE's first message in response to the SET-UP message will contain the new channel it requests that the call be set-up on. The switch will attempt to complete the set-up of the call on the channel that the CPE replied with, rather than on the channel it sent in the SET-UP message. The channel requested must meet the official feature requirements (be in the same PRI group, in the same trunk group, same SM, etc.). If the B CHAN NEG field is "N", the switch will mark the channel as EXCLUSIVE in the SETUP message, and the CPE must respond to the SETUP message with the same channel as the switch offered - as is the case prior to the addition of this feature. If not, the call does not complete - as is the current procedure.

Traffic Measurements will also be run on this capability to track its usage.

The feature number for this feature is 99-CP-4748.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9
TKGRP	5200	3	2A	5.1

MEASSUM form (5563 Record) -This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. For this feature, the "BCHNEG" entry was added to allow collection of traffic measurements. If the corresponding PRI B-channel trunk group is degrown on the TKGRP form, those measurements are automatically removed.

TKGRP form (5200 Record) - This form is used to assign trunk groups for all trunk types. The B CHAN NEG field was added to enable (Yes/No) this feature.

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SEC. 6L: MLPP SUPPORT FOR ISDN CIRCUIT SWITCHED DATA CALLS

1. BACKGROUND

Before this feature, only ISDN (Integrated Services Digital Network) voice calls had the MLPP (Multi-Level Precedence and Preemption) feature capability.

2. FEATURE DESCRIPTION

The MLPP Support for ISDN CSD (Circuit Switched Data) Calls feature is made available with the 5E16(2) FR2 (Feature Release 2) and later Software Releases. The feature number for this feature is 99-5E-8404.

This feature provides support for precedence and preemption on ISDN circuit switched data calls. The feature adds the existing MLPP functionality to ISDN CSD calls. When making a CSD call, a preference level can be used. The call receives appropriate priority through the defense switched network and preempt network resources and/or busy lines as necessary to complete the call. (Refer to the 235-200-300 document, Defense Switched Network Applications for detailed information on the MLPP.)

This feature's benefits include enabling the use of a precedence level when placing ISDN CSD calls. CSD calls receive the the same priority treatment within the DSN as voice calls. An ISDN calling party has the option of using precedence by selecting a precedence level (i.e., P, I, F, FO - up to their assigned maximum precedence level) when placing a CSD call.

3. FEATURE ASSIGNMENT

There are no ODA (Office Data Administration) translation requirements for this feature.

3.1 Recent Change Provisioning

When this feature is installed, MLPP lines originating and trunks carrying CSD calls route those calls using Precedence and Preemption Screening, and share trunk groups with voice calls. If numbers dialed for CSD calls result in Destination or Code indices that are not in Precedence and Preemption Screening then these values must be added. In addition, if POTS (non-DSN network) alternative routing based on CSD bearer is used, then entries with the appropriate code and screening indices with a resulting route index of REGL must be added to Precedence and Preemption Screening.

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SEC. 6M: SS7/ISDN PRI INTERWORKING WITH T1 CAS ROUTE DIGIT

1. FEATURE DESCRIPTION

The SS7 (Signaling System 7)/ISDN (Integrated Service Digital Network) PRI (Primary Rate Interface) Interworking with T1 CAS (Channel Associated Signaling) Route Digit feature is made available with the 5E16(2) FR2 (Feature Release 2) and later Software Releases. The feature number for this feature is 99-5E-8408.

This feature provides the interworking of SS7/PRI trunks to T1 CAS trunks (primarily MF trunks) by outpulsing the route code/digit for all calls.

Within 5ESS DSN (Defense Switched Network) Switches, the route code/digit is outpulsed for all T1 CAS calls. The subscriber dialing format for the DSN is as follows for (A) + (P/S) + (1X) + (NYX) + NNX + XXXX:

- A = Access code (optional)
- P/S = Precedence or service digit (optional)
- 1X = X is the route code/digit (optional)
- NYX = Area Code (optional)

  NNX = NOC (Normalized Office Code)
- XXXX = Line number

The following route codes/digits are used for voice and data calls:

- 0 - voice call (10 if dialed)
- 1 - data call (11 if dialed)
- 5 - hotline voice call (15 if dialed)
- 6 - hotline data call (16 if dialed)

Analysis and routing processes have been modified to outpulse (outgoing) and to analyze (incoming) the route code/digit for all T1 CAS trunks. When a 5ESS DSN Switch receives an incoming call on a T1 CAS trunk, the switch routes the call based on the value of the route digit. If the route code/digit is 0 or 5 and the routing data routes the call to an outgoing SS7/PRI trunk, the switch sets up the outgoing PRI call using "speech" as the bearer capability. If the route code/digit is 1 or 6 and the routing data routes the call to an outgoing SS7/PRI trunk, the switch sets up the outgoing SS7/PRI call using "56K" as the bearer capability. If the incoming call is on a SS7/PRI trunk and routing data routes to an outgoing T1 CAS trunk, the route code/digit is outpulsed. The route code/digit outpulsed is determined by the SS7/PRI trunk bearer capability, if "speech" 0 is outpulsed, if "56K/64K" 1 is outpulsed.

This feature provides the following benefits for 5ESS DSN switches:

- The interworking of SS7/PRI trunks to T1 CAS trunks (i.e., MF trunk) within a 5ESS DSN Switch is enabled.
- The outpulsing of the route code/digit to indicate bearer capability of T1 CAS trunks eliminates the need for separate "voice" and "data" T1 CAS trunk groups.

Prior to this feature, CSD calls did not cause a route code digit of "1" to be outpulsed. This currently

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requires the receiving switches to have this provisioned in the dialing plans.

2. FEATURE ASSIGNMENT

This feature has no ODA impact, and therefore no provisioning is required.

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SEC. 7: EQUIPMENT

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SEC. 7A: COMPACT DIGITAL EXCHANGE (CDX)

1. FEATURE DESCRIPTION

Effective with the 5E9(1) Software Release, the 5ESS Switch CDX (Compact Digital Exchange) configuration is introduced. The CDX is a 5ESS Switch configuration that is particularly suited to provide telephone services to rural areas serving as few as 100 subscribers. Because it uses the same software and hardware architecture as the 5ESS Switch, it can be configured to serve up to 6,000 access lines and can be evolved into a full-sized 5ESS Switch for larger applications.

The 5ESS Switch CDX is composed of three major components:

- The Administrative Module (using the 3B21D Processor system introduced in 5E9(1)) which provides administrative and maintenance capabilities.
- The CM2C (Communications Module 2 Compact), the new hardware element (in effect, a scaled down CM2), is the core of the CDX configuration interconnecting the SMs and AM. It is limited to interfacing to a maximum of two local or host SMs because of Time Multiplexed Switch limitations.
- The Switching Modules which perform 95 percent of call processing.

The CDX configuration is limited to two SMs (local and host), four Time Multiplexed Switch Links and a maximum of six RSMs (Remote Switch Modules). The CM2C houses the CMPU (Communications Module Processing Unit).

Some examples of 5ESS configurations supported by the CDX include:

- A single switch module (the CM2C) for small line size applications (1,000-3,000 lines).
- A single switch module with a Optically Remote Module.
- Two switching modules with up to six Remote Switch Modules.

NOTE: Refer to Division 2, Section 9A for SM-2000 information regarding the CDX.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	Not applicable.
EQCORE	5701	8	3	17.1
EQIM	5700	8	2	18.1

ECDOPT form (5706 Record) - This form is used to define Administration Module options for all offices. To provision the CDX, CMTYPE must be "CM2C".

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments. To provision the CDX, the following rules apply to this form:

- TMS (Time Multiplexed Switch) CLI must be 20.
- CM VINTAGE must be 2.
- TMS CONFIGURATION must be "SNGL" (single-fabric).
- If NETWORK CLOCK UNIT CLOCK TYPE is "24CHAN2", the following conditions must be met:

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- The range of values for REFERENCE on the NCLKREF (Network Clock 2 Reference) form (5525 Record) must be 1.
- There must be at most 1 NCLKREF form where REFERENCE TYPE is "ANALOG" and the corresponding REFERENCE on this EQCORE form must be 1.
- There must be at most 2 NCLKREF forms where REFERENCE TYPE is "24CHAN2".

EQIM form (5700 Record) - This form is used to define Switching Module equipage assignments. To provision the CDX, the following conditions must be met:

- NCT EVEN LINK must be either 2 or 4
- CTS EVEN LINK must be either 2, 10, 18, 26, 34, 42, 50, or 58.
- the maximum number of EQIM forms must be equal to or less than 8.
- the maximum number of EQIM forms with SM USAGE of "IM", "HIM", "TRM" or "ORM" must be equal to or less than 2.
- the maximum number of EQIM forms with an SM USAGE of "RSM" must be equal to or less than six.

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SEC. 7B: ADMINISTRATION MODULE PROCESSOR 3B21D

1. FEATURE DESCRIPTION

Effective with the 5E9(1) Software Release, the 3B21D Processor replaces the 3B20D Processor in the AM (Administration Module) for new ship 5ESS Switch offices.

The 3B21D offers the following advantages to the 5ESS Switch customer:

- reduced floor space requirements
- capability to support larger SCSI Disk (i.e., 1 gigabyte)
- support of SCSI tape drives
- higher processor throughput and less power consumption

The 3B21D supports only SCSI disk drives and SCSI 9-track tape units; optical drives are not supported.

The 3B21D main memory store can accommodate up to 48 MB of memory with the 5E9(1) Software Release.

1.1 Minimum Configuration

The minimum 3B21D configuration for the 5ESS Switch consists of the Processor Cabinet without the growth units. (A typical 5ESS Switch is configured with two pairs of MHDs (Moving Head Disks). A pair of optional disks for SMODD/AMA (Switching Module Office Dependent Data/Automatic Message Accounting), and/or one or two optional simplex software backup disks (MHD 14 and/or MHD 15) can be added as needed.)

The basic unit can be equipped according to any of the following options:

- 30 PC slots and 2 MHD pairs
- 28 PC slots and 2 MHD pairs
- 26 PC slots and 3 MHD pairs

1.2 Growth Configuration for MHD/PC

The 3B21D processor configuration can be equipped with either one or both Growth Units. The following are examples of growth unit possibilities:

- 16 PC slots and 0 MHD (if one growth unit is used)
- 32 PC slots and 0 MHD (if both growth units are used)
- 24 PC slots and 3 MHD pairs (if both growth units are used)
- 16 PC slots and 5 MHD pairs (if both growth units are used)

Therefore, a maximum 3B21D AM configuration consists of 8 MHD pairs, by equipping the basic unit with 3 MHD pairs along with 5 MHD pairs in both the growth units.

1.3 Peripheral Cabinet

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The peripheral cabinet can accommodate a maximum of 2 SCSI 9-track tape units. The 5ESS Switch requires a Peripheral Growth Cabinet equipped with at least one SCSI 9-track tape unit.

2. TRANSLATION REQUIREMENTS

For 5E9(1) and later, the 3B21D AM is the only available processor. Its assignment is defaulted and displayed on the ECDOPT form (5706 Record) as follows:

- PROCESSOR MODEL = 3B21D
- PROCESSOR MEMORY TYPE = KLM
- PROCESSOR MEMORY SIZE = 40

As the 3B21D AM is deployed only as new ship 5ESS offices, evolution needs are not applicable. However, evolution needs and impacts must be investigated in order to meet future conversion or growth needs. There will be OS (Operating System) impacts associated with the new message formats associated with tape diagnostics.

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SEC. 7C: 5ESS-2000 VERY COMPACT DIGITAL EXCHANGE SWITCH

1. BACKGROUND

The 5ESS-2000 CDX (Compact Digital Exchange) provides call processing capabilities for a small to medium size office. The 5ESS Switch provides call processing capabilities for medium to large size offices. In situations where an RSM or ORM is not practical due to distance or other considerations, the 5ESS-2000 VCDX (Very Compact Digital Exchange) Switch provides cost effective call processing capabilities for a very small size office configuration.

2. FEATURE DESCRIPTION

Available with 5E9(2) and later, the 5ESS-2000 VCDX Switch has feature number 99-5E-1616. The 5ESS-2000 VCDX Switch provides a cost effective very small switch configuration with a line capacity from approximately 100 to 1500 lines (and may go as high as 2000 lines) and the same quality and reliability as the 5ESS Switch.

The 5ESS-2000 VCDX Switch consists of three major components:

- A simplex workstation which provides AM, CM, and CMP functionality using a 3B20 emulator.
- Only one SM (Switching Module).
- An Ethernet link which provides communication between the workstation and the SM. Call processing software runs on the SM and does not rely on the AM, CM, or CMP. Therefore, even though the workstation is simplex, call processing is not dependent on it in any way. For this reason call processing reliability and quality will be the same as the 5ESS Switch.

The VCDX office has the following equipment which is needed to connect the AWS (Administration Work Station) with the switching module.

- MCTI External Timing Reference Circuit which provides the AWS-SM with an external timing reference.
- MCTSI Clock Synchronization Circuit which is an MCTSI subunit board only usable by a VCDX (non SM-2000).
- MCTSI Ethernet Interface Board which is an MCTSI subunit board only usable by a VCDX (non SM-2000).

Memory board zero side 0 and side 1 (circuit positions 30h and 50h) cannot be populated in a VCDX office. These circuit positions are needed by the VCDX Ethernet. Circuit positions for memory boards must begin at 31h for side 0 and 51h for side 1.

3. FEATURE ASSIGNMENT

Figure 1 shows the form flow when VCDX is set to "N" on the EQCORE form. For a non-VCDX office a dgn (diagnostic) test schedule must be defined on the RXSCHD. When REMOTE SWITCHING MODULE is assigned on the EQRAU form or REMOTE MODULE assigned on the RALM form, it must be defined on the EQSITE form and EQIM form or have SM USAGE set to "RSM>", "ORM" or "TRM".

Figure 2 shows the form flow for a VCDX office and indicates a number of features which are not implemented and, therefore, blocked. When VCDX is "Y" on the EQCORE form, the fields shown in Figure 2 for the EQCORE form are automatically populated.

Only one EQIM form must be entered and UNIT TYPE must be "SMPU4", MEMORY BOARDS BRD0 CLI

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must not be entered, SM USAGE must be "IM", STAND ALONE must be "N", STAND ALONE BILLING must be "Y" and OSPS PSM must not be "Y".

On the RALM form, REMOTE SWITCHING MODULE must match the entry of SM on the EQIM form, and ALARM POINT values 0 - 3, 32 - 54 and 100 - 113 should be assigned on this form.

Since simulated facility group is not allowed in VCDX office, the PFASFG form must not be populated.

Since FTS2000 Network Management and Trunk Queuing is not allowed in a VCDX office, LN VIRT cannot be "Y" and QUEUE FEATURE cannot be entered on the TKGRP form.

Since various features such as ASP, ASI, and E911 are not allowed, the entries on the OFCOPT form shown in Figure 2 are required.

On the RXSCHD form, ENTITY must not be 0.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ECDOPT	5706	8	8	Not Applicable
EQCORE	5701	8	3	17.1
EQRAU	5705	8	7	18.1

ECDOPT form (5706 Record) - This form is used to define Administration Module options for all offices.

For 5E9(2) and later the field VCDX was added to this form. This field indicates whether or not the office is a VCDX office. To provision a VCDX office, see the data rules for the VCDX OFFICE field on this form in Division 8, Section 8.

EQCORE form (5701 Record) - This form is used to define Core Unit Assignment in a 5ESS Switch office.

For 5E9(2) and later the field VCDX OFFICE was added to this form. This field indicates whether or not the office is a VCDX office. To provision a VCDX office, see the data rules for the VCDX OFFICE field on this form in Division 8, Section 3.

EQRAU form (5705 Record) - This form is used to define the equipment status of the TMS (Time Multiplexed Switch) Link Interface Boards.

RAU VERTICAL on this form allows the new values 69, 76. The fields RAU BAY and RAU VERTICAL are required fields for 5E9(2) and later.

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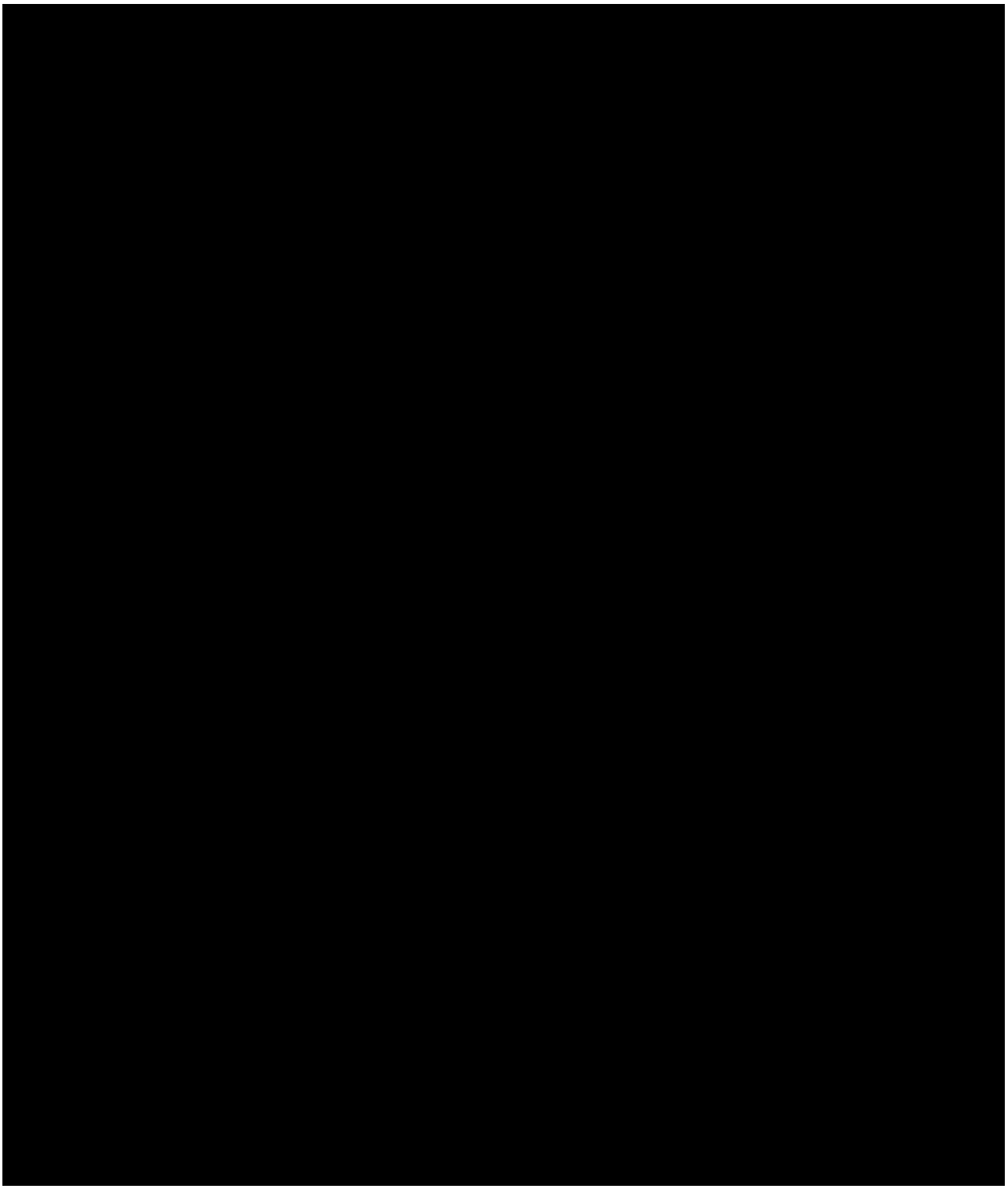

Figure 1 NON-VCDX FORM FLOW

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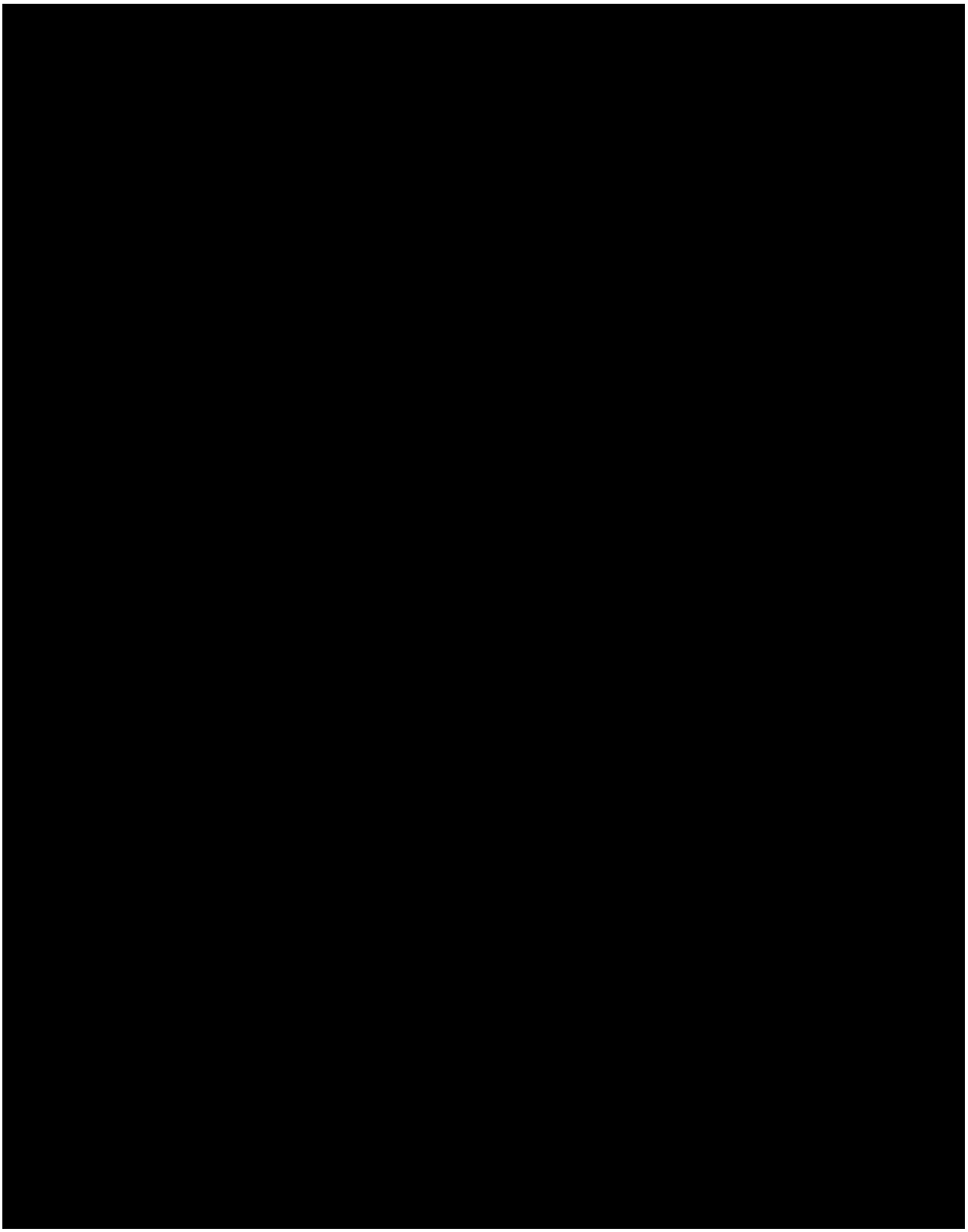

Figure 2 VCDX FORM FLOW

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SEC. 7D: LINE UNITS

1. FEATURE DESCRIPTION

The LU (Line Unit) terminates standard analog facilities to provide the local customer interface to the 5ESS Switch for single-party, multiparty, coin, and certain PBX (Private Branch Exchange) lines. Each LU is capable of terminating a maximum of 640 customers and two SGs (Service Groups) of customer interface hardware. Line Units are defined on the EQLU form (5710 Record). See Division 8, Section 10.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQLU	5710	8	9	19.1

EQLU form (5710 Record) - This form is used to define SM (Switching Module) and LU assignments.

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SEC. 7E: PIDB GROWTH CONTROL

1. FEATURE DESCRIPTION

The PIDB (Peripheral Interface Data Bus) Growth Control feature (97-5E-2678) is available with 5E9(1) (via BWM 94-0039)and later software releases.

The PIDB Growth Control feature provides the Telephone Company with the ability to grow the IDCU (Integrated Digital Carrier Unit) hardware to maximize the capability of a TR-303 RDT (Remote Digital Terminal).

By providing a means to grow the PIDB level in two TSS (Time Slot Set) increments for each IDCU on an SM, the Telephone Company has flexibility in managing the IDLC (Integrated Digital Loop Carrier) application by growing in the minimum hardware required for the specific needs.

The functionality of growing the PIDB hardware is secured and must be purchased. The regional Lucent Technologies Secured Feature Administrator must be consulted in order to obtain the necessary password on RC view 19.12 to allow the PIDBs which are needed to provide additional CCS (Centrum Call Seconds) to be grown on the IDCU.

2. FEATURE ASSIGNMENT

The assignment of PIDBs to the IDCU is done on the EQIDCU form (5846 Record) and the RC/V view (19.12). The type of PIDBs that this feature is concerned with are PIDBs of type ``DUAL''. The initial PIDB level is provided when the customer purchases the basic IDCU configuration that is represented by the NSEP (Network Switching Engineering Practice) symbol IDCU. Initially 4 PIDBs correspond to a PIDB level of four for this IDCU. Each IDCU on a given SM has a unique PIDB level assigned to allow for maximum flexibility in growing in TR-303 Large RDTs.

The initial PIDB level of four allows the Telephone Company to assign up to four (4) active PIDBs to an IDCU.

In order to provide additional CCS for the higher number of lines served by TR-303 applications, the Telephone Company must now contact the regional Lucent Technologies representative to obtain a password to activate an additional set of PIDBs for a given IDCU. A total of four PIDB groups can be assigned for a total of 16 PIDBs per IDCU.

The password is entered on the 19.12 view to activate the new PIDB group and allow the PIDBs to be "active" for the unit. The following table illustrates the three PIDB groups that require activation via this password mechanism.

5ESS SWITCH NSEP SYMBOLS FOR IDCU PIDB

PIDB NSEPs	PIDB Range
IDCU	1-4*
IDCUPB1	5-8
IDCUPB2	9-12
IDCUPB3	13-16

*First group of PIDBs included in the IDCU basic equipment package.

The PIDB Growth Control Feature has two primary users. The first is the Telephone Company switch engineering person that is responsible for configuring the IDLC (Integrated Digital Loop Carrier) lines served on a IDCU. This person is responsible for ordering the equipment with the PIDB equipage to meet the needs of a particular configuration. The 5ESS Switch NSEPs for ordering PIDB groups would be utilized in placing this request.

The second user of this feature is the Telephone Company RC/V technician who is involved in the growth of an existing system to accommodate additional IDLC lines on an IDCU. This person would utilize the password information in the MAP X field taken from a review of 19.12 and provides this information to the

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Lucent Technologies regional contact. The Lucent Technologies regional Secured Feature Administrator then provides the password for the PASSWORD field to allow the growth of additional PIDBs for expanded CCS service for that IDCU.

The following are two typical scenarios for service providers for the growth of existing service or engineering of new service for TR-303 IDLC applications on the IDCU.

1. Growth of PIDBs on existing IDCU. The Switch Engineer has determined from engineering sources (e.g. DOPS) that the number of lines served by TR-303 RDTs requires additional PIDBs to accommodate the desired CCS utilization. A review of the 19.12 view for the affected IDCU is required. For example IDCU # 1 is affected. Referencing the MAP X field on the 19.12 view, the Switch Engineer contacts the Lucent Technologies region representative to acquire the password for the desired PIDB level required for IDCU #1 using the engineering data previously established. Once the password from the region representative has been entered in the PASSWORD field on the 19.12 view the PIDB level for IDCU #1 can be increased via an update.

2. Establishing IDLC Service on a new IDCU. This scenario is very similar to the growth scenario. However, the IDCU can be ordered with the PIDB level set at the desired level and all associated fees are accounted for in the pricing of the unit. In this case the 5ESS Switch NSEPs are used in ordering this predetermined configuration. Ordering of all other IDCU hardware remains unchanged. The table above titled "5ESS SWITCH NSEP SYMBOLS FOR IDCU PIDB" provides the NSEP symbols and the associated PIDB level information

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIDCU	5846	8	48	19.12

EQIDCU form (5846 Record) - The 5846 Record is available with the 5E8 Software Release. It is used to define the IDCU (Integrated Digital Carrier Unit) and the LSI (Loop Side Interface) packs, ELI (Electric Line Interface) packs, and the PIDBs associated with the IDCU.

For 5E9(1) and later the MAP X, PIDB LIMIT, and PASSWORD fields were added to support the PIDB Growth Control feature.

4. GLOSSARY

CCS	Centrum Call Seconds
DOPS	Digital Office Provisioning System
IDCU	Integrated Digital Carrier Unit
IDLC	Integrated Digital Loop Carrier
NSEP	Network Switching Engineering Practice
ODA	Office Data Assembler
PIDB	Peripheral Interface Data Bus
RC	Recent Change
RDT	Remote Digital Terminal
SM	Switching Module

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TSS	Time Slot Set

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SEC. 7F: COMBINED SERVICES UNIT

1. FEATURE DESCRIPTION

The CSU (Combined Services Unit) feature is available with 5E10 and later and has AT&T feature number 99-5E-2636.

The Combined Services Unit provides a cost-reduced service circuit repackaging capability. This new compact shelf is targeted for smaller sites such as the VCDX (Very Compact Digital Exchange), CDX (Compact Digital Exchange), and RSM (Remote Switching Module) configurations but is also applicable to standard 5E office SMs. The repackaging combines functions of the DLTU2 (Digital Line and Trunk Unit 2), MMSU (Modular Metallic Service Unit), DSU2-SAS (Digital Service Unit - Service Announcement System), and the GDSF (Global Digital Services Facility) into one shelf, thereby eliminating three backplanes. See Figure 1.

The new shelf is compatible with existing DLTU2, DSU2-SAS and GDSUs (Global Digital Service Units) in the same office and in the same SM or in different SMs.

Although intended principally for the small site market, these sites may grow to a more standard office configuration; therefore, this unit and its global services are compatible with the same functionality provided by existing units in a standard configuration. An exception is made for the MMSU in the repackaged service circuit shelf. Similar to the remote MSU on RSM applications, the repackaged version has only one service group thereby making it incompatible with the standard MMSU which has two service groups in that SM. Therefore, if office growth to conventional configurations necessitate greater metallic services, the standard MMSU needs to be provided and the MMSU portion of the repackaged service circuit shelf will be degrown.

The CSU unit supports the following:

- up to five of either DFI2 (Digital Facility Interface 2) type circuit packs for trunking purposes,
- one GDSF circuit pack arranged to provide trunk testing and conference circuit functionality
- 400, 1200 or 2500 seconds of SAS capability,
- metallic testing by way of SLIM2 (Subscriber Line Interface Measurement 2) with optional compensator circuit pack.
- up to 64 scan points and 64 signal distribute points as typified in Figure 2.

Each unit in the compact shelf has its own power and fusing. The compact shelf contains dedicated slots, meaning certain packs must go in certain locations in the compact shelf. For example, slots 0 and 1 of the compact MMSU must contain packs 494LA and TN879B, respectively. Slots 2 - 9 can be equipped with either metallic access, scan, dist, GDXC (Gated Diode Crosspoint Compensator Pack) or SLIM2 packs while slot 10 can only be equipped with a MTIB (Metallic Test Interconnection Bus) access pack. RC/V (Recent Change and Verify) and ODA (Office Data Administration) must restrict the number and types of packs that can be grown into the compact shelf. RC/V and ODA do not refer to the pack numbers by their physical slot number. For example, physical slots 2 - 9 of the compact shelf are referred to as MMSU pack numbers 0 - 7. Figure 3 shows the packs and locations allowed in the compact shelf.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQGDSC3	5860	8	63	19.19
EQDU	5730-1	8	17	19.4
EQIM	5700	8	2	18.1

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EQLU	5710	8	9	19.1
EQMSU	5750	8	25	19.7
EQMTIB	5750	8	25	19.7
EQRA	5821	8	35	19.10

EQGDSC3 form (5860 Record) - This form defines the RAF unit and the SAS services unit. The CSU field was added to specify if a SAS unit is located on a Combined Services Unit.

EQDU form (5730-1 Record) - This form is used to define equipment location information for the Digital Line/Trunk Units. The CSU field was added to specify if a DLTU is located on a Combined Services Unit.

EQIM form (5700 Record) - This form is used to define Switching Module Equipage Assignments. Data rules for UNIT TYPE entry of "SM2000" were changed.

EQLU form (5710 Record) - This form is used to define SM and LU (Line Unit) assignments in a 5ESS Switch. Data rules were changed for the Metallic Test Bus field.

EQMSU form (5750-1 Record) - This form is used to define MSU (Metallic Service Unit) assignments from the EQMSU and the EQMSP or EQMMSP forms. The CSU field was added to specify if an MSU is located on a Combined Services Unit.

EQMTIB form (5750 Record) - This form was added for Metallic Test Interconnection Bus assignments.

EQRA form (5821 Record) - This form defines the RAF (Recorded Announcement Function) unit and the SAS (Service Announcement System) services unit. The field CSU was added which specifies if a GDSF unit is located on a Combined Services Unit.

3. GLOSSARY

CDX	Compact Digital Exchange
CSU	Combined Services Unit
DFI	Digital Facility Interface
DLTU	Digital Line and Trunk Unit
DSU	Digital Service Unit
GDSF	Global Digital Services Facility
GDSU	Global Digital Services Unit
GDXC	Gated Diode Crosspoint Compensator Pack
MMSU	Modular Metallic Service Unit
MTIB	Metallic Test Interconnect Bus
ODA	Office Data Administration
RAF	Recorded Announcement Function
RC/V	Recent Change and Verify
RSM	Remote Switching Module
SAS	Service Announcement System
SLIM2	Subscriber Line Interface Measurement 2

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VCDX Very Compact Digital Exchange

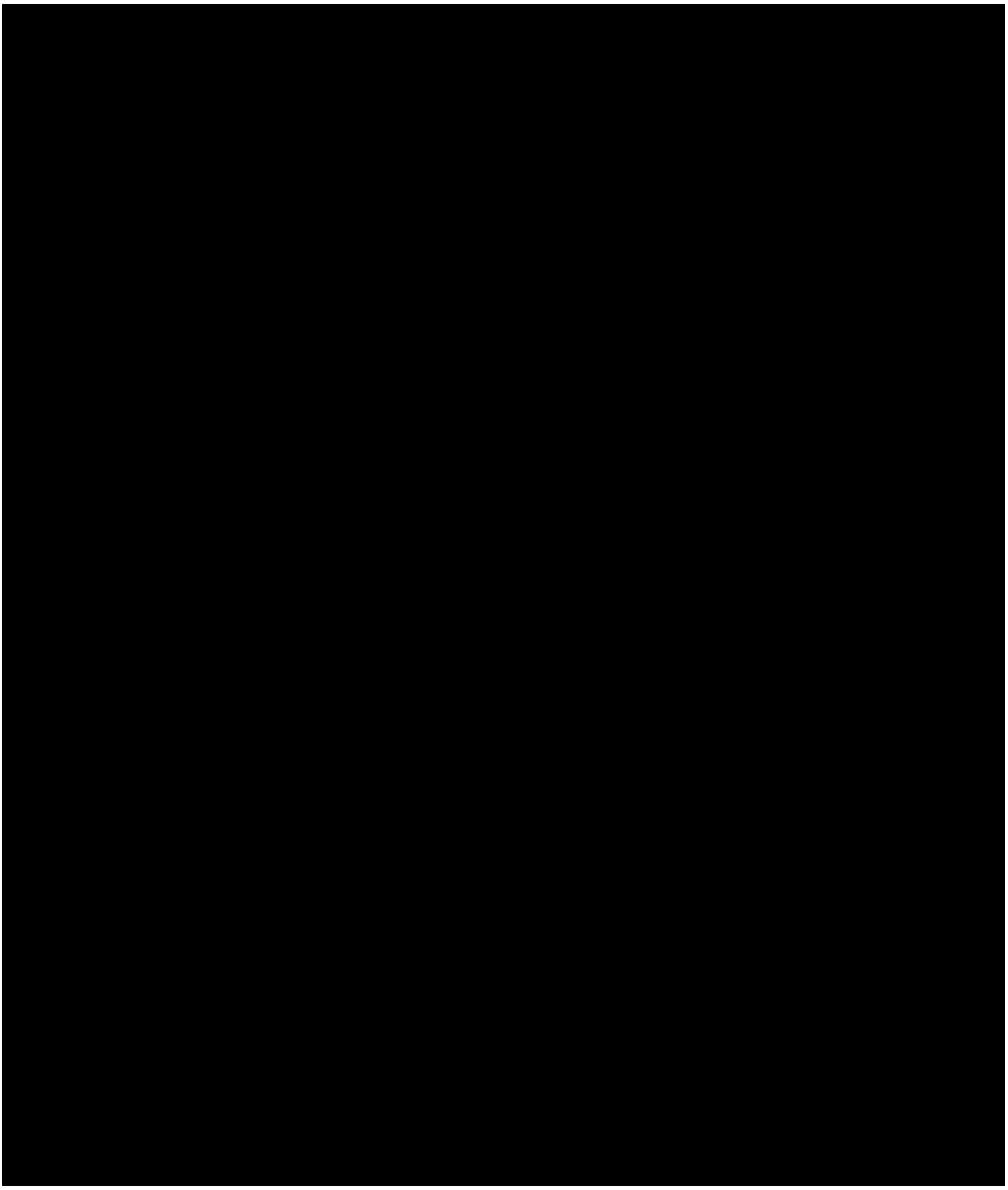

Figure 1 TYPICAL SHELF REDUCTION

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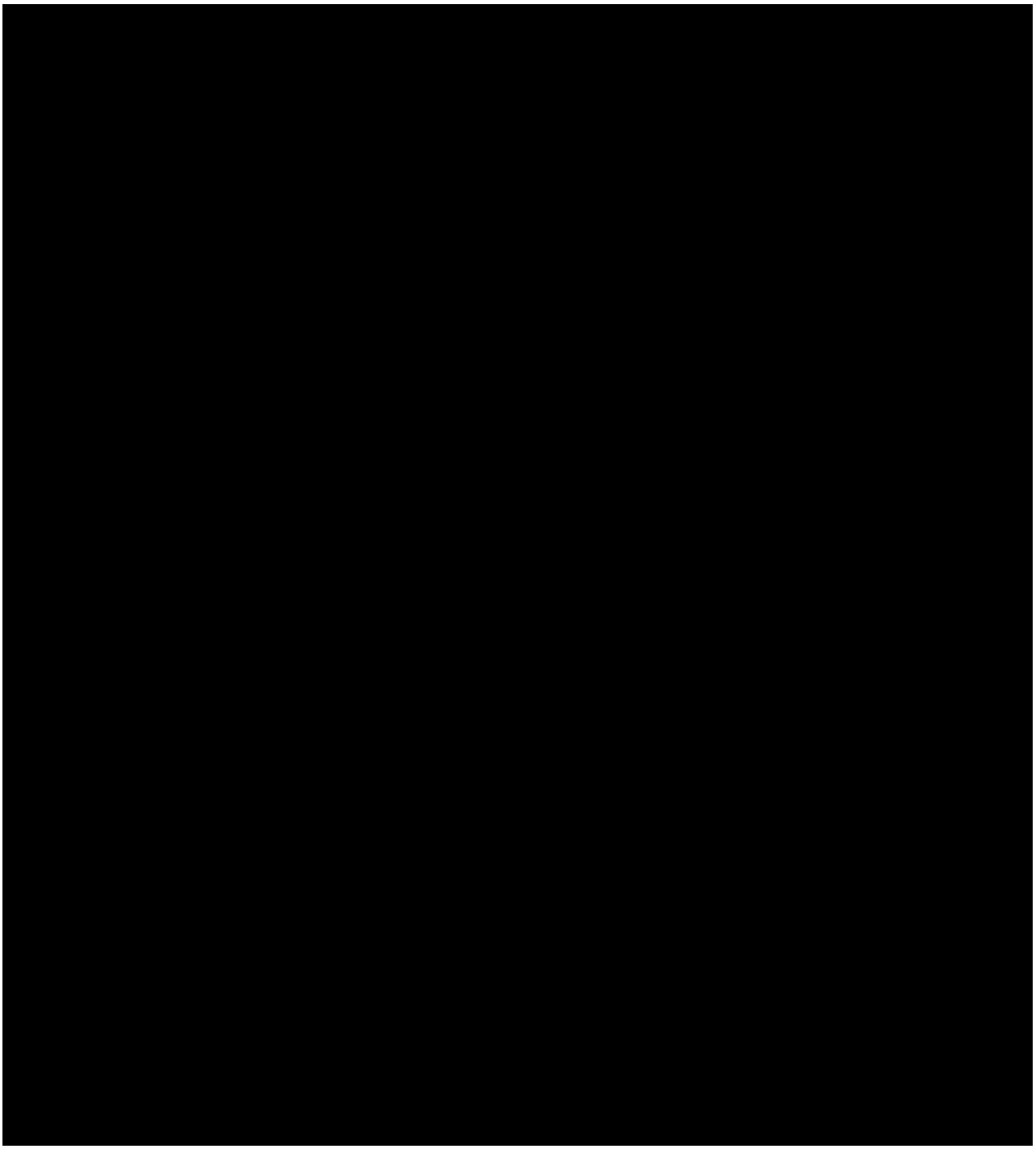

Figure 2 COMBINED SERVICES UNIT

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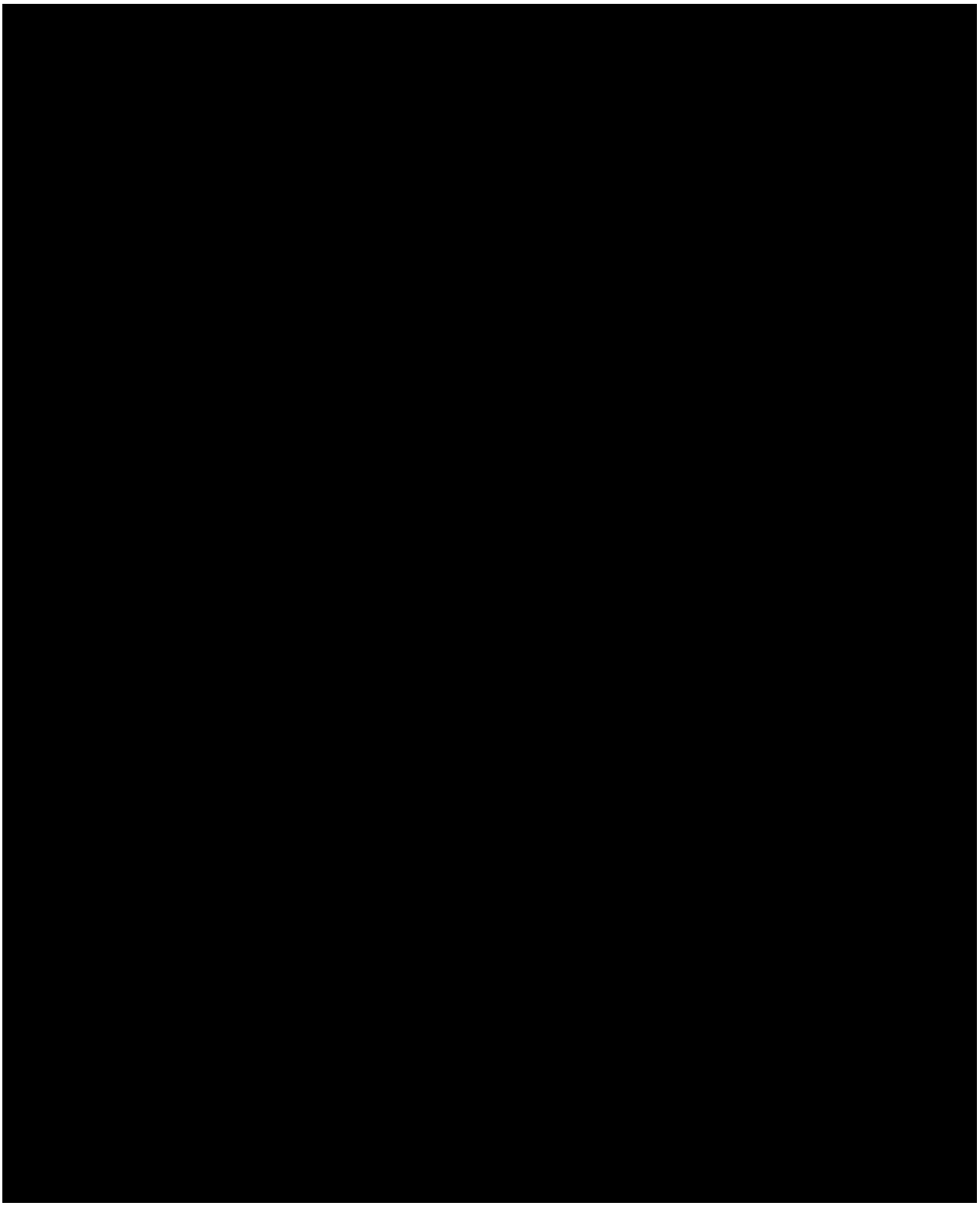

Figure 3 PACK NUMBERS AND TYPES

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SEC. 7G: GLOBAL DIGITAL SERVICES FUNCTION

1. FEATURE DESCRIPTION

The GDSF (Global Digital Services Function) feature is available with 5E10 and later Software Releases and has AT&T feature number 99-5E-1584. It is defined on the EQGDSC3 (Global Digital Service Circuit 3) form (5860 Record).

The GDSF provides a cost-reduced service circuit repackaging capability with expanded tone generators and decoders for the SM-2000. For the SM-2000, GDSF is located in the DSU3 (Digital Service Unit 3). For the SM-2000, there are 16 DSC3 slots per DSU3 with a maximum of 2 DSU3s per SM-2000.

For the SM-2000, the GDSF is defined on the EQGDSC3 form (5860 Record) equipped with a UN363 circuit pack (see Division 8, Section 63). For the SM, this functionality is provided via the CSU (Combined Services Unit) which is defined on the EQRA form (5821 Record). Typically, however, the CSU is used in a CDX (Compact Digital Exchange) or the VCDX (Very Compact Digital Exchange) applications (see Division 8, Section 35).

Engineering restrictions for both units are as follows:

SM TYPE	SHELF MOUNTING	MAXIMUM GDSFs	NUMBER OF PIDBs (Duplexed)
SM-2000	DSU3	32	4
SM	CSU	1	1 or 2

Refer to the Figures section in Divison 2, Section 7F for equippage diagrams for the CSU and the GDSU (Global Digital Service Unit).

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQDSC3	5860	8	63	19.18
Equipment Assignment	N/A	8	1	N/A

EQDSC3 form (5860 Record) - New form used to define the position of the GDSF on the GDSU3 for the SM-2000.

Equipment Assignment - This TG-5 section is used to identify CLI value information. The UN363 circuit pack information was added.

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SEC. 7H: MODULE CONTROLLER AND TSI (TIME SLOT INTERCHANGE) UNIT 3

1. FEATURE DESCRIPTION

The feature number for the MCTU3 (Module Controller and TSI (Time Slot Interchange) Unit 3) feature is 99-5E-2709. This feature is available with the 5E10 and later Software Releases for the SM (Switching Module), VCDX (Very Compact Digital Exchange), LSM (Local Switching Module), and RSM (Remote Switching Module) environments.

The MCTU3 provides a cost reduction for the core SM hardware by combining several circuit packs and reducing the MCTU2 from two shelves to one. The MCTU3 contains a new Single Board 20 Core pack which combines the two core support packs, the application pack, memory boards and an Ethernet interface pack on a single board. For cases where the Ethernet configurations are used, a paddle board is mounted to the backplane to provide for the physical Ethernet connections. A new Power pack, combined with the SN516B pack functionality, is also implemented. The unit is equipped with the TSIU3 together with existing PI, DI, DSU2 and CI circuit packs. The unit provides for only a single PI slot, thus limiting the MCTU3 to support two PSU's (PI2), which limits the number of ISDN data connections. There are two CI slots which permit a maximum of 46 PICBs. There are two DI packs which provides a total of 32 PIDBs.

The MCTU3 design is based on the SMP20 hardware and software implementation. However, enhancements inherent to the SMP40 were typically incorporated into the design for the MCTU3. The MCTU3 uses the MC68LC040 microprocessor.

The hardware development impacted by the MCTU3 consist of:

- SB20CORE core board containing all SMP functions
- Ethernet Physical interface paddle board
- Power Control and Display board
- CPI interface paddle board (for VCDX)
- Backplane to support all the circuit packs

In a VCDX (Very Compact Digital Exchange), either the TN1077E DLI (Dual Link Interface) pack or TN1077F DLI pack (which combines the VCDX clock circuit pack and the DLI function on one pack) can be used. When using an external reference, a TN1077F circuit pack must be used for the DLI. In a VCDX, a CPI paddle board is located on the backplane of the MCTU3 to provide the UART (Universal Asynchronous Receiver and Transmitter) which handles the CPI (Central Processor Intervention) messages coming from the work station. These paddle boards, one on each side, also take care of providing the DLI clock information.

The SB20CORE (Single Board 20 Core) circuit pack contains three memory SIMM (Single In-line Memory Module) slots. Initially, these slots can be populated with 32 Mbyte memory SIMMs. The SB20CORE board requires 32 Mbytes of memory to operate.

The following table lists the minimum series of (existing) circuit packs required for the MCTU3.

MCTU3 Required Circuit Packs

Circuit Pack	Code	Minimum Required
Time Slot Interchange/SP	TN1086B	Series 3
Data Interface	TN1377	Series 4
Control Interface	UN71B	Series 1
Packet Interface	TN1042B orUN395 MC5D095A1B	Series 2,, Issue 1
Data Link Interface	TN1077B	Art Master 4, Series 4
	TN1077E	Art Master 1, Series 1

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	TN1077F	Art Master 1, Series 1
Digital Service Unit	TN833	Series 1

All MCTU3 circuit packs are APR (Auto-Power Recovery) compliant, but the MCTU3 should be shipped with APR disabled. A backplane connector/strap is added to activate APR.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
Equipment Assignment	N/A	8	1	N/A
EQIM	5700	8	2	18.1

EQIM form (5700 Record) - This form is used to define Switching Module equipage assignments. The MCTU3 was added as a valid unit type and the following conditions must be met:

- DLI CLI on CONTROLER 0 and CONTROLLER 1 must be entered.
- CONFIGURATION cannot be "SM2000".
- LDSU CLI on CONTROLLER 0 and CONTROLLER 1 must be entered.
- MH0 SG0 CLI and MH0 SG1 CLI must not be entered.
- TSICOM 0 CLI and TSICOM 1 CLI must not be entered.
- SM MEMORY BRD CLIs must not be entered.
- MODULE PROCESSOR VERT must be 15, except when IMPU0 indicates the SM is the second-SM-in-a-cabinet, MODULE PROCESSOR VERT must be 41.
- NUMBER OF MEM BOARDS must be blank.
- SM USAGE can be "ORM".
- PI0EQST or PI1EQST can be entered.
- IMPU0/1 CLI values must have one or both of the following bit positions set:
  - position 18 (value of 40000h); 32 Mbytes of memory
  - position 19 (value of 80000h); 64 Mbytes of memory

When both bits are set, indicates 96 Mbytes of memory

Equipment Assignment) - This section is used to document CLI values. CLI values were added as indicated above.

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SEC. 7I: SMP23 CORE BOARD WITH DYNAMIC MEMORY

1. FEATURE DESCRIPTION

The SMP23CDM (Switching Module Processor 23 Core Dynamic Memory) board is available with 5E10 and later and has AT&T feature number 99-5E-2564. As a software update, it is available for 5E9(1) and later.

The SMP23CDM feature introduces the TN1423 core board with dynamic memory for the SM. The TN1423 replaces the TN1397 on the SMP12 and the TN1407/TN1407B) on the SMP23. For a non-SM2000, only SMP20/SMP20DC processors are available for new shipments. The new board is available for applications that need memory extension but without sufficient physical space for extra memory board (e.g., units without MEU (Memory Expansion Units). The new board requires no additional backplane changes with respect to the existing SMP23.

The new SMP23 Core/Memory Board (TN1423) contains the same functionality as the TN1407/1407B, and in addition, contains on-board DRAM (Dynamic Random Access Memory).

The SMP23CDM is still an SMP23 but has on-board memory. The amount of memory addressable by the TN1423 is 32 Mbytes. Any additional off-board memory is not addressable when MCTSI is equipped with SMP23CDM.

The MCTSI (Module Controller Time Slot Interchange) CLI value on the EQIM form (5700 Record) is affected by the introduction of the SMP23CDM. This feature uses a combination of existing values to introduce MCTSI CLI values that accommodate the two processor variations and the additional off-board memory. See Division 8, Section 1 for CLI value information.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700	8	2	18.1
Equipment Assignment	N/A	8	1	N/A

EQIM form (5700 Record) - This form is used to define Switching Module equipage assignments. If the SMP23CDM is equipped, theappropriate CLI value must be set. Refer the Division 8, Sec.1.

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SEC. 7J: SM-2000 ON VERY COMPACT DIGITAL EXCHANGE

1. BACKGROUND

Available with 5E9(2) and later, the feature 5ESS-2000 VCDX (Very Compact Digital Exchange) Switch feature provided a cost effective very small switch configuration with a line capacity from approximately 100 to 1500 lines (and as high as 2000 lines) and having comparable quality and reliability as the 5ESS Switch. For more information on this feature (AT&T feature number (99-5E-1616) see Division 2, Section 7C.

2. FEATURE DESCRIPTION

Available with 5E10 and later, the SM-2000 on Very Compact Digital Exchange has AT&T feature number 99-5E-2610. This feature provides a low cost VCDX configuration with increased line and trunk sizes provided by the SM-2000. Incorporation of the SM-2000 on the VCDX expands line capacity to approximately 10,000 lines.

The changes to the SM-2000 for VCDX are:

- No NLIs (Network Link Interface).
- The MH (Message Handler (UN538)) is replaced by the MHEIB (Message Handler Ethernet Interface Board (UN584)) to provide ethernet functionality.
- The TSICOM (Timeslot Interchange Common Pack (UM74B)) is the same used in the EXM-2000 (Extended SM-2000).
- CPI (Call Processing Intervention) functionality is implemented via an RS-232 connection on a paddle board placed on the backplane of the BSN (Bus Service Node).

3. FEATURE ASSIGNMENT

See SM-2000 on VCDX form flow in Figure 1.

4. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
EQIM	5700-1/2	8	2	18.1
EQCORE	5701	8	3	17.1

EQIM form (5700-1/2 Record) - This form is used to define Switching Module Equipage Assignments.

For 5E10 and later, VCDX is restricted for certain links. Data rules were added for this form.

EQCORE form (5701 Record) - This form is used to define Core Unit Assignment in a 5ESS Switch office.

For 5E10 and later, data rules were added to this form.

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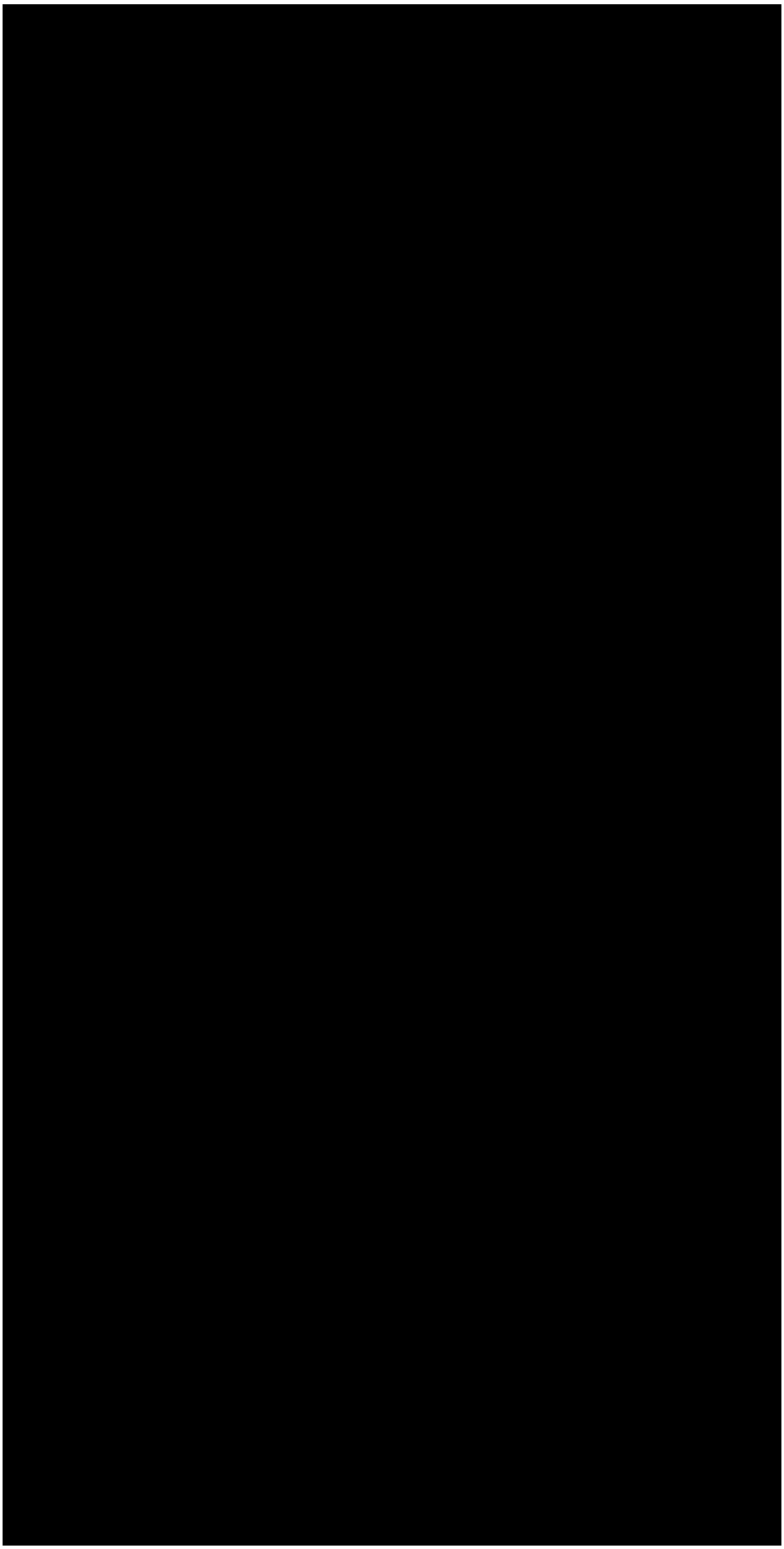

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Figure 1 SM-2000 ON VCDX FORM FLOW

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SEC. 7K: ACCESS INTERFACE UNIT - AIU

1. FEATURE DESCRIPTION

The AIU (Access Interface Unit) is available with the 5E11 Software Release. This new line access unit minimizes the common hardware thereby allowing for all common equipment to be centralized on a single COMDAC (COMmon DAta and Control) circuit, for each service group. The COMDAC provides a control interface between the SMP (Switching Module Processor) and application packs. The AIU uses front access for all cables.

In the initial AIU release, the only application packs supported are analog line packs which terminate the subscriber lines and ringing generators. Ringing is provided by two ringing generators.

As a 5E11 software update, a coin pack capability (99-5E-2758) is available. For 5E12 and later, Remote AIU (99-5E-3560) is available. See Division 2, Section 90. (Note that Remote AIU is also referred to as "Extended AIU").

1.1 AIU Traffic Measurement

The AIU feature introduces a new traffic measurement architecture for the collection of traffic data. One new ODA traffic-related form and three new Recent Change traffic-related views were introduced to support the new traffic architecture:

1. MEASSUM (Measurement Collection Summary) - (5563 Record)
2. Measurement Collection Selectivity - 13.7
3. Measurement Range Selectivity - 13.8
4. Measurement Collection Summary - 13.9

The MEASSUM form is used, along with the Recent Change views, to designate and display the components for measurement on the "30-minute" AIU (Access Interface Unit) measurement report. AIU measurements are available for the AIU as a unit ("AIU"), for an individual customer line ("AIULN"), or all or specific lines on an SM ("AIULC").

In general, if measurements are being collected for equipment that is being degrown, those measurements will automatically be removed. For example, if AIU 9 is being collected for section name AIU, and that AIU is degrown from operational, AIU 9 will no longer be collected.

The feature number for the AIU feature is 97-5E-3116.

2. FEATURE ASSIGNMENT

Three new ODA forms were created to support the initial release of the AIU: EQAIU, EQAIUP, and MEASSUM. The EQAIU and EQAIUP forms define the AIU and AIU packs, respectively. Ring Generators packs must be equipped in pairs (see the EQAIUP form). The MEASSUM form supports traffic measurement. Measurements are performed on two levels: by unit and by line (i.e., by circuit).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACOFRF	5968	6	11	12.6
EMRNM	5108	3	1H	4.9
EQAIUP	5746	8	65	20.16
EQAIU	5745	8	64	19.16

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Equipment Assignment	N/A	8	2	N/A
LCC	5306	3	3S	4.1
LINE	5109	3	1I	1.6
MEASSUM	5563	3	5BG	13.9
MLHLN	5111	3	1K	1.6
SLJOB	5555	3	5BA	14.16
SLLEN	5548	3	5AX	14.13

ACOFRF form (5968 Record) - This form is used to define the Controlling Line for an Attendent Control of Facility Restriction. The AIU was added as a valid unit associated with the TN.

EMRNM form (5108 Record) - This form is used to define Remote Site or Local SM Stand-Alone emergency TNs. The AIU was added as applicable to this feature.

EQAIUP form (5746 Record) - This new form is used to define AIU packs.

EQAIU form (5745 Record) - This new form is used to define the AIU.

Equipment Assignment - This section of the TG-5 identifies CLI values for equipment. The AIU and AIUP forms were added.

LCC form (5306 Record) - This form is used to define each Line Class Code. Data Rules were added or updated to include the AIU unit.

LINE form (5109 Record) - This form is used to define TNs. The AIU was added as a valid UNIT type and NUMBER and related data rules were added or updated.

MEASSUM form (5563 Record) - This form is used to identify components selected for traffic measurement reported on the AIU Measurements report.

MLHLN form (5111 Record) - This form is used to define Multi-Line Hunt Lines. The AIU was added as a valid unit and related data rules were added or updated.

SLJOB form (5555 Record) - This form is used to define test jobs for scheduled SLIM2 (Subscriber Line and Instrument Measurements-2) test sessions. The AIU was added as a valid unit for testing.

SLLEN form (5548 Record) - This form is used to define the range of subscriber office equipment numbers that are to be tested by the SLIM2 feature. The AIU was added as a valid unit for testing.

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SEC. 7L: VCDX CCS7 ON THE PSU

1. FEATURE DESCRIPTION

The VCDX (5ESS-2000 Switch Very Compact Digital Exchange) CCS7 (Common Channel Signaling System 7) on the PSU (Packet Switch Unit) feature has feature number 99-CP-2345.

The VCDX CCS7 on the PSU feature provides a signaling platform for SS7 (Signaling System No. 7) on an SM (Switch Module) of a VCDX. This platform consists of the first three layers of the MTP (Message Transfer Part) and the connectionless procedures of the SCCP (Signaling Connection Control Part). The MTP gives the VCDX, which acts solely as an SEP (Signaling Endpoint), the ability to send and receive MSUs (Message Signal Unit) on one SM. The SCCP gives the VCDX connectionless services sufficient to receive as an SEP SCCP MSUs that require no further Global Title translation and to send locally originated SCCP MSUs to the STP (Signaling Transfer Point) that is their first GTT (Global Title Translation) point in the signaling network. Therefore, the introduction of CCS7 on the VCDX allows features and services that require SS7 signaling to be offered to subscribers on a VCDX such that it will be transparent to these subscribers that their lines are terminated by a VCDX.

This feature integrates the SS7 signaling platform with the hardware units of the SM. The external appearance of a signaling link can be on two types of equipment:

- a channel on a T1 facility of a DFI (Digital Facility Interface) in a DLTU (Digital Line and Trunk Unit).
- a channel (DS0) on a DS1 of a VT (Virtual Tributary) on a DNU-S (Digital Networking Unit - SONET (Synchronous Optical Netowrk)).

The PH (Protocol Handler) in a PSU runs the link-level procedures that manage a signaling link. The DLTU, DNU-S and PSU are peripheral units of an SM. The SMP (Switch Module Processor) runs the signaling network management procedures of the MTP. The message-handling procedures of the SCCP execute on both the SMP and the PH.

The PSU SS7 platform is supported on both the SM and SM-2000.

2. FEATURE ASSIGNMENT

2.1 Data Link to Trunk Group

See Figure 1 for feature assignment form flow for data link to trunk group.

- Define the GSM (Global Switching Module) that supports the signaling system on the CCGSM form (6008 Record).
- The MDLNK form (6009 Record) is used to specify the message delivery link and the bunny-hop PH (a link internal to the SM where SS7 messages originate or terminate).
- The CC7PR form (6001-1/2 Record) is used to specify and update the GSM CCITT7 office parameters and MTP Level 3 timers.
- On the CCPDL form (6002 Record), specify and update the CCITT7 MTP (Message Transfer Part) Level 2 Data Link Rate timers.
- Use the LNKSET form (6003 Record) define CCS7 signaling link sets.
- On the CLKSET form (6005 Record), define combined link sets.
- Use the PC form (6006 Record) to specify the point code and alternate link set routing.

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- Create CCS7 link sets and members on the CCLNK form (6004-1/2 Record).
- Add the GSM's Originating Point Code and Destination Point Code from the PC form to the TKGRP form (5202 Record) and add trunk members to the Trunk form (5204 Record).
- Use Recent Change View 16.11 to verify CCS Channel Groups.

2.2 SCCP

See Figure 2 for feature assignment form flow for SCCP.

- Use the CCNET form (6010 Record) to grow (degrow) an SCCP GSM.
- Define the individual parameters for a SCCP GSM on the CCSPR form (6011 Record).
- On the CCPBD form (6012 Record) define the primary and backup GSM-DPC-SSN (Subsystem Number) destinations for SCCP signaling.
- Define the SCCP GTT (Signaling Connection Control Part Global Title Translation) mask for a translation group on the CCTGM form (6013 Record).
- Specify the Global Title Translation for incoming digit strings on the CCSGT form (6015 Record).
- On the CCTT form (6014 Record) define the Global Title Translation treatment for the data in the called party address.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
CC7PR	6001-1/2	9	10A	16.2
CCGSM	6008	9	10H	16.1
CCLNK	6004-1/2	9	10D	16.6
CCNET	6010	9	10K	16.20
CCPBD	6012	9	10M	16.22
CCPDL	6002	9	10B	16.3
CCSGT	6015	9	10N	16.25
CCSPR	6011	9	10L	16.21
CCTGM	6013	9	10P	16.23
CCTT	6014	9	10O	16.24
CLKSET	6005	9	10E	16.7
LNKSET	6003	9	10C	16.5
MDLNK	6009	9	10J	16.17
PC	6006	9	10F	16.10

CC7PR form (6001-1/2 Record) - This form is used to specify and update the CCITT7 office parameters and MTP level 3 timers.

CCGSM form (6008 Record) - This form is used to specify data used for the global switching module.

CCLNK form (6004-1/2 Record) - This form is used to display the CCS7 (Common Channel Signaling System No. 7) link sets and members.

CCNET form (6010 Record) - This form is used to define a signaling connection control part network.

CCPBD form (6012 Record) - This form is used to define the primary and backup destinations for SCCP signaling.

CCPDL form (6002 Record) - This form is used to specify and update the CCITT7 MTP (Message Transfer Part) Level 2 Data Link Rate timers.

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CCSGT form (6015 Record) - This form is used to maintain single fixed or primary plus secondary digit string for Global Translations.

CCSPR form (6011 Record) - This form is used to define the individual parameters for a Signaling Connection Control Part Global Switching Module.

CCTGM form (6013 Record) - This form is used to define the SCCP GTT mask for a translation group.

CCTT form (6014 Record) - This form is used to define whether the global title data in the called party address will receive Global Title Translation.

CLKSET form (6005 Record) - This form is used to define the link sets that comprise the combined link set.

LNKSET form (6003 Record) - This form is used to define CCS7 signaling sets.

MDLNK form (6009 Record) - This form is used to specify the message delivery link and the bunny-hop PH.

PC form (6006 Record) - This form is used to specify the point code and alternate link set routing.

4. GLOSSARY

CCS	Common Channel Signaling
CCS7	Common Channel Signaling System 7
DFI	Digital Facility Interface
DLTU	Digital Line and Trunk Unit
DPC	Destination Point Code
GTT	Global Title Translation
MSU	Message Signal Unit
MTP	Message Transfer Part
PH	Protocol Handler
PSU	Packet Switch Unit
SCCP	Signaling Connection Control Part
SM	Switching Module
SMP	Switching Module Processor
SS7	Signaling System No. 7
SSN	Subsystem Number
STP	Signaling Transfer Point
VCDX	5ESS-2000 Switch Very Compact Digital Exchange

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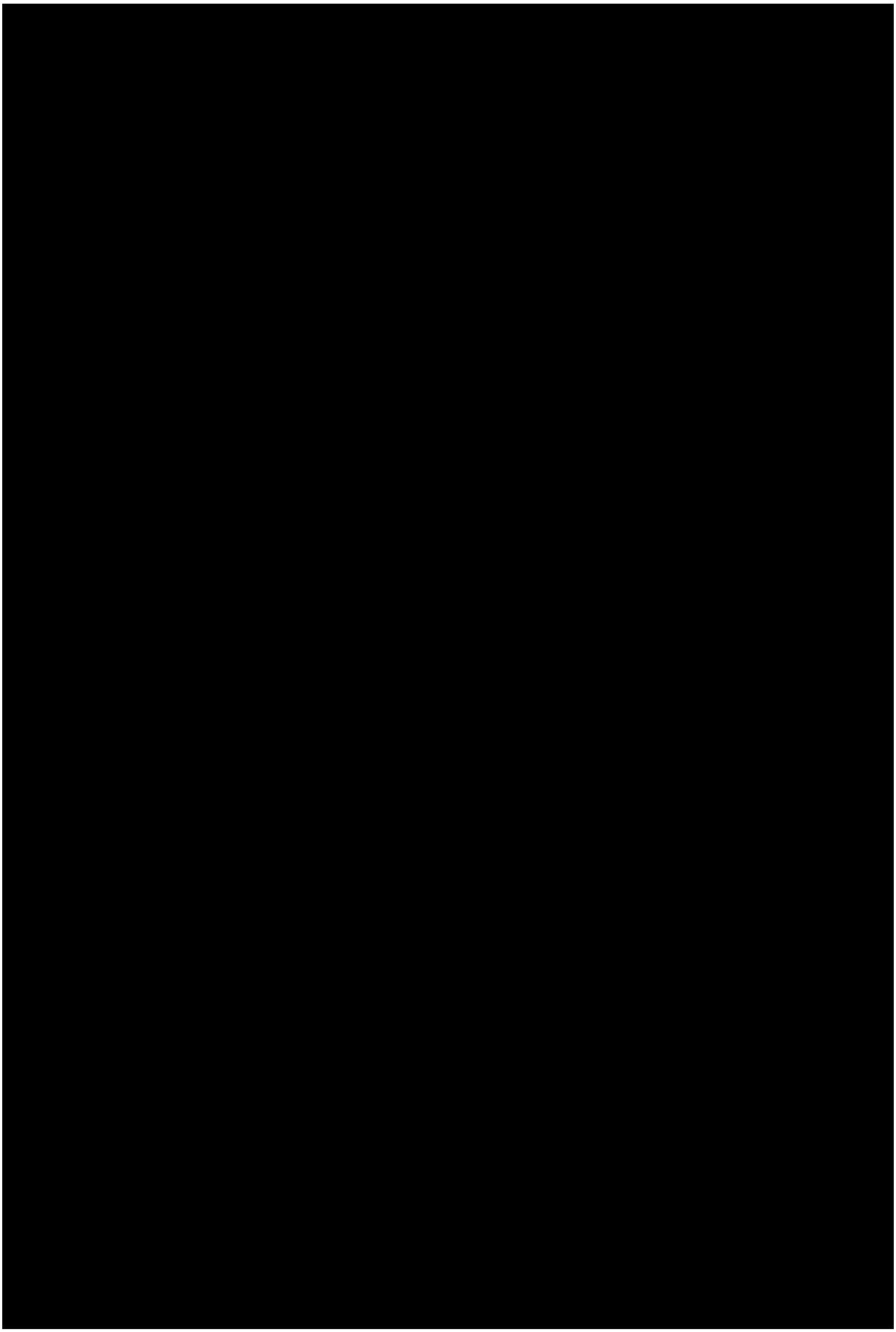

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Figure 1 FORM FLOW FOR DATA LINK TO TRUNK GROUP

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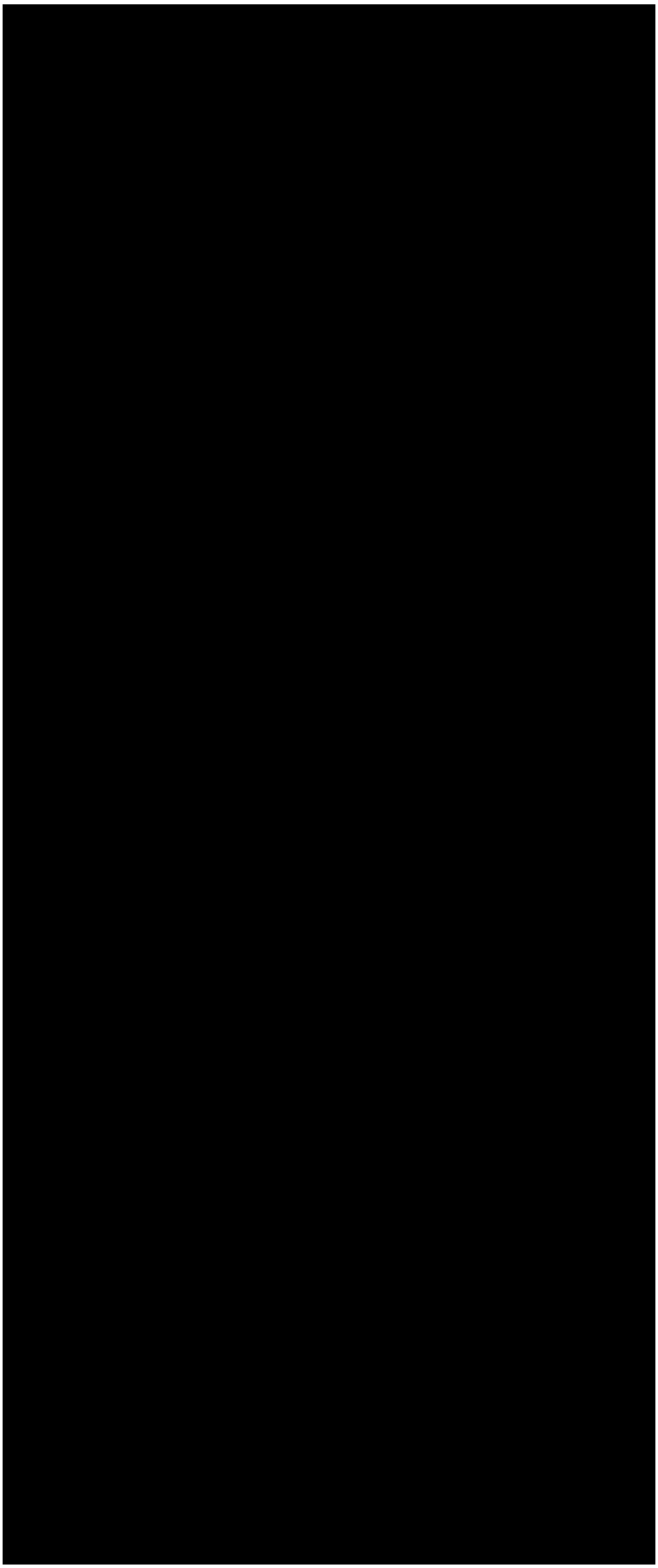

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Figure 2 FORM FLOW FOR SCCP

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SEC. 7M: PARALLEL PUMP WITH CONTROL INTERFACE 2

1. FEATURE DESCRIPTION

The Parallel Pump with CI-2 (Control Interface 2) feature is available with 5E11 and later Software Releases. This feature improves the "pump" time required to initialize an SM or an SM-2000 class processor. With this feature, a new circuit pack (UN71C) is implemented which allows the broadcasting of control signals to all ports. A faster scanning time also speeds up call processing.

The feature number for this feature is 99-5E-3055.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQCI	5848	8	50	18.2

EQCI form (5848 Record) - This form is used to define the Control Interface assignments. These assignments define PICB (Peripheral Interface Control Buses) which are used to send messages between a switching module and peripheral units. With implementation of the UN7IC circuit pack for the Parallel Pump CI2 feature, a new CLI (Change Level Indicator) value was added.

See the EQCI form in Division 8, Section 1 for CLI values.

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SEC. 7N: SFG AND NM FOR VCDX

1. FEATURE DESCRIPTION

The SFG (Simulated Facility Group) and NM (Network Management) on the VCDX (Very Compact Digital Exchange) feature is available with 5E11 and later Software Releases. The feature number for this feature is 99-5E-2962.

SFG and NM on VCDX feature provides the following functionality in a Very Compact Digital Exchange 5ESS-2000 Switch.

- APCP (Application Processor Communication Package)
- ARS (Automatic Route Selection)
- NM (Network Management)
- PFA (Private Facility Access)
- SFG (Simulated Facility Groups)
- TKQ (Modular Queueing for Trunks)

All the functionality listed above is supported on both VCDX SMs as well as VCDX SM-2000s with the exception of Network Management. NM is only supported in the VCDX SM-2000 environment.

All the functionality listed above functions in the VCDX environment when the links to the Workstation are down.

For more information concerning VCDX, see Division 2, Section 7C.

2. TRANSLATION REQUIREMENTS

There are no new fields or forms added for this feature.

3. GLOSSARY

APCP	Application Processor Communication Package
ARS	Automatic Route Selection
NM	Network Management
PFA	Private Facility Access
SFG	Simulated Facility Group
TKQ	Modular Queueing for Trunks
VCDX	Very Compact Digital Exchange

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SEC. 7O: E911 N VCDX

1. FEATURE DESCRIPTION

Available with 5E12 and later, this feature allows service providers to utilize the 5ESS-2000 Switch VCDX (Very Compact Digital Exchange)to offer E9-1-1 (Enhanced 9-1-1) service to their subscribers, without the need to trunk 9-1-1 call traffic to another provider's switch. E9-1-1 is a critical public safety feature which uses the capability of the switch and adjunct database systems to quickly route 9-1-1 callers to the public safety agency that serves them while delivering the caller's telephone number. This is especially important where central office boundaries do not coincide with public safety jurisdictions or when the emergency caller is unable to identify their location.

The VCDX platform provides a compact solution to introduce this service in rural areas, private networks, and in competitive access providers' networks.

Enhanced 9-1-1 features currently available on the 5ESS-2000 Switch which will be offered on the VCDX SM2000 and SM platforms, include: ESA (E9-1-1 Service Adjunct) interface for selective routing; alternate, default, and non-selective routing; full transfer capabilities; support for both analog and ISDN-based PSAPs (Public Safety Answering Points); and 9-1-1 call screening.

The Lucent feature number for E911 on VCDX feature is 99-5E-3341.

2. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQCORE	5701	8	3	17.1
DSLAP	5963	6	6A	24.7

EQCORE form (5701 Record) - This form is used to define the Message Interface Control Unit, Time Multiplexed Switch and Message Interface Control Unit Subunits. A data rule was added for this form.

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP (Application Processor) and the 5ESS-2000 Switch. A data rule was added for this form.

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SEC. 7P: ASP ON VCDX

1. FEATURE DESCRIPTION

Available with 5E11 and later, the ASP (Advanced Services Platform) on VCDX (Very Compact Digital Exchange) feature has feature number 99-5E-3085.

This feature provides for the full support of the ASP Release 0.1B platform (feature number 99-5E-1150) on the VCDX. This feature allows the use of the VCDX with all of the ASP 0.1B capabilities provided by the ASP platform as well as the numerous ASP additional features that build upon the ASP 0.1B platform. For more information on the ASP feature, see Division 2, Section 4A126.

Support of ASP on the VCDX platform allows the use of ASP capabilities in the single SM-2000 VCDX. Note that the ASP additional features must be purchased separately.

This feature, along with the the SS7 on PSU feature, 99-CP-2345, provides ASP-based services using the Bellcore, AIN Release 0.1 TCAP (Transaction Capabilities Application Part) protocols to query the serving SCP (Service Control Point). The AIN (Advanced Intelligent Network) Release 0 triggers and protocols support are not provided with this feature.

2. FEATURE INTERACTIONS

This feature provides support of the ASP 0.1B platform and AIN Release 0.1 protocol set only. The AIN Release 0 triggers are not be supported in with this feature. This feature will also support the numerous software updates and additional ASP features which build on the ASP 0.1B platform.

This feature requires that the SS7 interface to the VCDX, as provided by the VCDX CCS7 on the PSU (Packet Switch Unit) feature (feature number 99-CP-2345), be available on the VCDX. For more information concerning this feature, see Division 2, Section 7L.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1, 8.15

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. An enumeration was added to a data rule for this form.

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SEC. 7Q: CORE60MM BOARD WITH INTEGRATED DRAM

1. FEATURE DESCRIPTION

The CORE60MM feature is introduced with 5E12 and later Software Releases, but is available as a Software Update for 5E11 and later. This feature introduces two new processor packs that are designed to improve processor performance and provides multiple memory configurations of 64 Mbytes and 128 Mbytes of on-board DRAM (Dynamic Random Access Memory), as indicated below:

SM-2000 MCTSI equipped with UN594, 64MB on-board memory; backplane, CLI value = 45.

SM-2005 MCTSI equipped with UN588, 128MB on-board memory; backplane, CLI value = 49.

These packs are defined on the EQIM form (5700 Record) via the IMPU (Interface Module Processing Unit) field.

The feature number is 97-5E-3671.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700	8	2	18.1
Equipment Assignment	n/a	8	1	n/a

EQIM form (5700 Record) - This form is used to define SM (Switching Module) assignments. CLI values for the equipment being assigned are entered on this form.

Equipment Assignment - This TG-5 section contains CLI information.

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SEC. 7R: LOCAL DIGITAL SERVICE FUNCTION TECHNOLOGY UPGRADE ON THE NON-SM-2000 SWITCHING MODULE

1. FEATURE DESCRIPTION

This feature is available with 5E12 and later Software Releases. It provides a technology upgrade for the LDSF (Local Digital Service Function) circuit pack.

For the non-SM-2000, a new circuit pack, TN1890 (pumpable) with Auto Power Recovery, replaces the TN833. A new CLI value of 800019 hex is introduced.

The feature number for this feature is 97-5E-2895.

See also Division 2, Section 9I for information on the LDSF technology upgrade for the SM-2000.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700	8	2	18.1
Equipment Assignment	N/A	8	1	N/A

EQIM form (5700 Record) - This form is used to define the Digital Service Circuit for the SM. The CLI value is used to define the appropriate pack.

Equipment Assignment - This TG-5 section contains the CLI information.

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SEC. 7S: SMP23CDMX PROCESSOR MEMORY EXPANSION

1. FEATURE DESCRIPTION

The SMP23CDMX feature is available with the 5E12 and later Software Release as a 5E10 and 5E11 Software Update. This feature creates a version of the SMP23CDM with the ability to address memory beyond the 32MB (on the core board of the TN1423) without an MEU (Memory Expansion Unit). This capability is applicable for the SM (non-SM-2000) environment. The increase-in-addressability is achieved by adding the TN1418 (Bootstrapper) board, the TN1408(B) (Memory Controller) board, plus the expanded update bus cable set.

The feature number for this feature is 99-5E-4141.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700-1/2	8	2	18.1
Equipment Assignment	N/A	8		N/A

EQIM form (5700 Record) - This form is used to define SM (Switching Module) assignments. The IMPU field is used to define the desired memory processor circuit packs.

Equipment Assignment - This TG-5 section is used to document CLI values. Refer to Division 8, Section 1.

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SEC. 7T: PSU CAPACITY EXPANSION

1. FEATURE DESCRIPTION

The PSU (Packet Switching Unit) Capacity Expansion feature is available with the 5E12 and later Software Releases. It increases the number of time slots available between the SM-2000 Switch TSIU (Time Slot Interface Unit) and each PSU shelf from 128 to 768.

This feature provides an increase in the traffic capacity of the PSU2. This results in more circuit packs being equipped per PSU2, resulting in fewer PSU2 and SM-2000 units being equipped in an office to serve a given traffic load. With this feature, one new circuit pack is employed, the DF2 (Data Fanout 2) UN592.

The feature number for this feature is 99-5E-3411.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSU	5741-1/2	8	22	22.2
Equipment Assignment	N/A	8	1	N/A

EQPSU form (5741 Record) - This form is used to define PSUs equipped in an 5ESS-2000 Switch. Three new fields were added to define time slot information.

Equipment Assignment - This form is used to define CLI values forcircuit packs. A cli value was added for the new UN592 circuit pack.

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SEC. 7U: MCTU3 ON CM1

1. FEATURE DESCRIPTION

The MCTU3 On CM1 (Communications Module 1) feature is available with the 5E12 Software Release and as a SU (Software Update) for 5E10 and 5E11.

This feature provides the capability to equip the MCTU3 in a CM1 office. Three new circuit packs were introduced to indicate the MCTU3 core board version that allows use with a CM1: KBN20B, KBN21B, or KBN22B, replacing KBN20, 21, and 23, respectively.

The feature number for this feature is 97-5E-4169.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700	8	2	22.1
Equipment Assignment	N/A	8	1	N/A

EQIM form - This form is used to make equipment assignments and to assign CLI values. CLI values for the IMPU field on the EQIM form were updated for the MCTU3 on CM1 feature.

Equipment Assignment - This section of the TG-5 is used to document CLI values.

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SEC. 7W: 4-WIRE FXO LINE VIA DFI

1. FEATURE DESCRIPTION

The 4-Wire FXO (Foreign Exchange Office) Line Via DFI (Digital Facility Interface) is available with the 5E12 and later Software Releases and as a 5E10 and 5E11 Software Update. This feature provides a 4-wire (T1) FX (Foreign Exchange) service from a digital port on the DFI without the use of FXO type channel units. With this feature, the 5ESS-2000 Switch provides A and B bit signaling from the DFI to remote terminal FXS (Foreign Exchange Subscriber) type channel units.

The feature number for this feature is 99-5E-2536.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LCC	5306	3	3S	4.1
TIMING	5520	3	5T	8.5
LINE	5109	3	1I	1.6

LCC form (5306 Record) - The Line Class Code form is used to define the type of service classification assigned to a TN (Telephone Number) line. To activate this feature, the following field parameters must be set:

- SERVCL = "4WINDIV"
- TERM = "INDIV"

TIMING form (5520 Record) - The Digit Analysis Timing form is used to assign miscellaneous timing parameters for a TN. To activate this feature, the following field parameters must be set:

- ORIG = "4WINDIV"
- START SIGNAL = "GRND" or "LOOP"
- SIGNAL TYPE = "TT"
- CRIT = "4"
- PART DL = "20"
- PERM SIG = "20"
- OVLD PART DL = "10"
- OVLD PERM SIG = "10"

LINE form (5520 Record) - The Line form is used to define miscellaneous line parameters. To activate this feature, the following field parameters must be set:

- RTNRNG = "4W24" or "4WOFF"
- PRITYRNG = "4W1650" or"4W350"
- INSTRSIG = "GRND" or "LOOP"

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SEC. 7X: SS7 PSU MAINTENANCE/RELIABILITY ENHANCEMENTS

1. FEATURE DESCRIPTION

The feature number for the SS7 (Signaling System 7) PSU (Packet Switching Unit) Maintenance/Reliability Enhancements feature is 99-CP-4246.B. This feature is available with the 5E13 Software Release.

This feature provides three enhancements to the SS7 PSU signaling platform to achieve feature parity with capabilities offered on the CNI (Common Network Interface) signaling platform. These enhancements are as follows:

- Elimination of False Link Congestion
  - Network providers and vendors have experienced situations where a link or link set remains in service while transmitting few or no service supporting messages. The consequence of this problem is that the link or link set can become severely congested.
  - The CNI MTP (Message Transfer Part) software supports link congestion status procedures that will take a link out of service and restart it if it remains in a particular congestion level for a given time interval.
  - SS7 PSU MTP software should be enhanced to support this capability.

- Improved SLT (Signaling Link Test) Procedures
  - The SLT verifies physical link assignments, such as terminating on the correct signaling point, and can detect looped links and other irregularities in the operation of a link.
  - In the 5E11 Software Release, a feature, Improved SLT Procedures, enhanced the CNI MTP procedures to always send the same test pattern in a second SLT as was sent in the first SLT. This allows a failed link to be put into service quicker in the event that an acknowledgment to the first SLT was delayed.
  - CNI MTP Procedures were also enhanced to continue to send the SLT in the event that link congestion was encountered. Because of the SLT tests for loops and link irregularities, the test would then not fail when there is congestion on the link or processing delays.
  - SS7 PSU MTP software currently supports the ability to send the same test pattern in a second SLT as was sent in the first SLT. SS7 PSU software should be enhanced to support the sending of SLT even if the link is encountering congestion. Based on prior contractual commitments, the sending of SLT during congestion should be secured.
  - The 5ESS-2000 also allows the craft to enter an input command that inhibits/allows a periodic SLT to be run. The command should be enhanced to allow the customer to specify whether periodic SLT should be inhibited/allowed to run for a specified CCS (Common Channel Signaling) Global SM.

- SL (Signaling Link) Failure / T19 Timer Support
  - When a CNI signaling link fails, Level 3 timer T19 is started. If timer T19 expires before the link is returned to service, a report is generated to alert the craft that the link has not returned to service.
  - SS7 PSU MTP software should be enhanced to support this capability for its STPHs (Signaling Terminal Protocol Handlers).

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These enhancements are applicable to the 5ESS-2000, CDX (Compact Digital Exchange) and VCDX (Very Compact Digital Exchange) Switches.

2. FEATURE ASSIGNMENT

For 5E13 and later, to provision this feature the following steps must be done:

- Define a GSM (Global Switching Module) on the CCGSM form.
- Add Bunny-Hop using the MDLNK form.
- Update GSM parameters on the CC7PR form.
- Define GSM Data Rate Timers on the CCPDL form.
- Define Link Set on LNKSET form.
- Create Combined Link Set on the CLKSET form.
- Create Link Set Members on the CCLNK form.
- Add trunk members on TRUNK form.

See provisioning form flow on Figure 1.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
CC7PR	6001	9	10A	16.2
OFCOPT	5509	3	5I	8.15

CC7PR form (6001 Record) - This form is used to specify and update the CCITT7 office parameters and MTP level 3 timers. For 5E13 and later, 2 new fields (FALSE LINK CONG and FAILED LINK REF) are being added.

OFCOPT form (5509 Record) - This form supplies various miscellaneous office options and parameters. For 5E13 and later, one new field (FLCONG LVL 1) is being added.

4. GLOSSARY

CDX	Compact Digital Exchange
CNI	Common Network Interface
MTP	Message Transfer Part
PSU	Packet Switching Unit
SL	Signaling Link
SLT	Signaling Link Test
SS7	Signaling System 7
STPH	Signaling Terminal Protocol Handler
VCDX	Very Compact Digital Exchange

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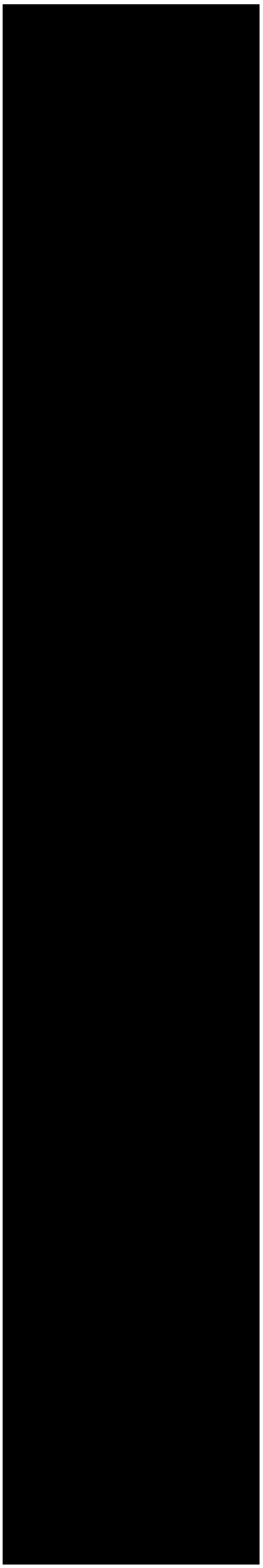

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Figure 1 SS7 PSU MAINTENANCE/RELIABILITY ENHANCEMENTS FORM FLOW

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SEC. 7Y: SS7 PSU MTP AND SCCP ROUTE VERIFICATION TESTS

1. FEATURE DESCRIPTION

The feature number for the SS7 (Signaling System 7) PSU (Packet Switching Unit) MTP (Message Transfer Part) SCCP (Signaling Connection Control Point) Route Verification Tests feature is 99-CP-4246.E. This feature is available with the 5E13 Software Release.

This feature provides the capability for craft to verify the correctness of MTP and SCCP network data thru the use of new MRVT (MTP Routing Verification Test) and SRVT (SCCP Routing Verification Test) input commands.

MTP Routing Verification Test:

The MTP Routing Verification Test is intended to specifically address the problems of administering and maintaining the SS7network. It is a means of verifying MTP routing data between SPs (Signaling Points) in an SS7 network. It confirms all MTP routes between an "initiating SP" (the initiator) and a "terminating SP" (the terminator) and reports the findings back to the initiator.

The MRVT checks the accuracy and consistency of the administrable MTP routing data at all the SPs involved in routing between a given source and a destination. Administrable routing data is "static" routing data that can be modified directly through a recent change mechanism.

SCCP Routing Verification Test:

The SCCP Routing Verification Test is an ANSI (American National Standards Institute) and ITU (International Telecommunication Union) standard OMAP (Operations Administration, Maintenance, and Provisioning) procedure that provides an SS7 protocol-defined set of procedures that are used for operation, maintenance and administration of SS7 signaling networks. The SRVT provides a mechanism for testing the SCCP GTT (Global Title Translation) data for accuracy, completeness, and consistency in the SS7 network and to sectionalize any routing problems discovered in the network.

The SRVT checks the static database SCCP routing data for a tested GT (Global Title). Static database routing data is different from dynamic routing data, which is the data that determines the routing in effect at a given time. The dynamic routing data is determined by the static routing database and the history of network outages and recoveries.

2. FEATURE ASSIGNMENT

For 5E13 and later, to provision this feature the following steps must be done:

- Define a GSM (Global Switching Module) on the CCGSM form.
- Add Bunny-Hop using the MDLNK form.
- Update GSM parameters on the CC7PR form.
- Define GSM Data Rate Timers on the CCPDL form.
- Define Link Set on LNKSET form.
- Create Combined Link Set on the CLKSET form.
- Create Link Set Members on the CCLNK form.
- Add trunk members on TRUNK form.

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See provisioning form flow on figure 1.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
CCVRT	5025	9	10R	16.4

CCVRT form (5025 Record) - This form is used as a OMAP MTP and SCCP Route Verification Test initialization/support. For 5E13 and later, this is a newly added form to support this feature.

4. GLOSSARY

ANSI	American National Standards Institute
GT	Global Title
GTT	Global Title Translation
ITU	International Telecommunication Union
MRVT	MTP Routing Verification Test
MTP	Message Transfer Part
OMAP	Operations Administration, Maintenance, and Provisioning
PSU	Packet Switching Unit
SCCP	Signaling Connection Control Point
SP	Signaling Point
SRVT	SCCP Routing Verification Test
SS7	Signaling System 7

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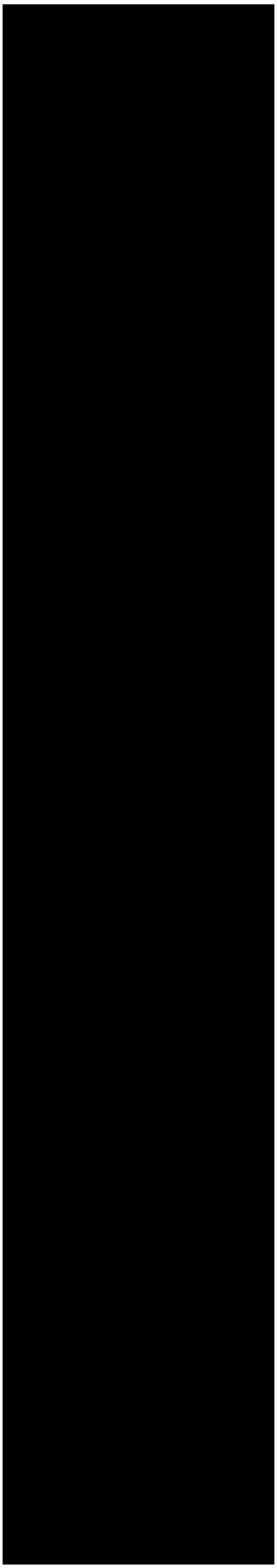

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Figure 1 SS7 PSU MTP AND SCCP ROUTE VERIFICATION TESTS FORM FLOW

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SEC. 7Z: DUAL ESA FOR E911 ON VCDX

1. BACKGROUND

Without the existing Dual ESA (E911 Service Adjunct) for E911 (Enhanced 911) feature, a single pair of E911 AP (Application Processor) data links is used to connect one ESA to a 5ESS-2000 Switch. This provides some redundancy in case of a communications failure on one link, however, it does not address a failure within the ESA or problems with both AP data links. The Dual ESA for E911 feature permits a single 5ESS-2000 Switch to interface with two ESAs for E911 selective routing service.

2. FEATURE DESCRIPTION

The Dual ESA for E911 on VCDX (Very Compact Digital Exchange) feature is available as a 5E12 Software Update. The feature number for this feature is 99-5E-4217. This feature permits a single 5ESS-2000 VCDX Switch to interface with two ESAs for E911 selective routing service. This improves the reliabilityof E911 service by allowing the use of a second pair of E911 AP links to a backup or secondary ESA. If communication with the primary ESA fails, the 5ESS-2000 VCDX Switch attempts to communicate with the secondary ESA via the second AP link pair. This prevents a failure with a single ESA (or its AP link pair) from interrupting E911 selective routing.

3. FEATURE ASSIGNMENT

For 5E12 and later, to enable this feature for VCDX, the ACT field on the SFSYS form for SFID (Secured Feature ID) 108 must be set to "Y".

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLAP	5963	6	6A	24.7
SFSYS	5713-1	3	5AR	8.22

DSLAP form (5963 Record) - This form is used to define the data links connecting an AP and the 5ESS-2000 Switch. For 5E12 and later, a data rule was removed for the SEC E911 SITE field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is activated for VCDX by setting the ACT field for SFID 108 to "Y".

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SEC. 7AA: VCDX TO 5ESS-2000 CONVERSION

1. FEATURE DESCRIPTION

The VCDX (Very Compact Digital Exchange) to 5ESS-2000 Conversion feature is being deployed as a Software Update to 5E12. The feature number for this feature is 99-5E-3849.

This feature provides a set of instructions to convert a VCDX to a 5ESS-2000 Switch with minimal call processing down time. If a VCDX on an older Software Release needs to be converted, the VCDX will need to retrofit to 5E12 before initiating the conversion procedures.

These procedures support:

- conversion to a 3B21 AM (Administration Module) with CM2 (Communication Module Model 2), and does not support conversion to a 3B20 with CM2 or conversion to a CDX (Compact Digital Exchange)
- VCDX SM (Switching Module) conversion to an LSM (Local SM), and does not support VCDX SM conversion to an RSM (Remote SM), HSM (Host SM), or TRM (Two Mile Optically Remoted Module).

These procedures do not support office growth. All planned growth including QLPS (Quad Link Packet Switch) is done after successful conversion.

For conversion procedures, see:

235-120-120-Issue 4.00 A - Very Compact Digital Exchange User's Guide, Appendix 8: VCDX to 5ESS-2000 Switch Conversion, and

SIG-C-WU-100 - 5ESS-2000 Switch Growth/Degrowth/Conversion - U.S. Software Releases, Section 9602.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQCORE	5701	8	3	17.1 17.14

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments. Added a new data rule.

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SEC. 7AB: CDX TO 5ESS-2000 CONVERSION

1. FEATURE DESCRIPTION

The CDX (Compact Digital Exchange) to 5ESS-2000 Conversion feature is being deployed as a Software Update to 5E11 and 5E12. The feature number for this feature is 99-5E-3892.

This feature provides a set of instructions to convert a CDX to a 5ESS-2000 Switch. Converting means replacing an existing CDX's CM2C with a newly installed two cabinet Dual Fabric CM2 (Communication Module Model 2).

The hardware for the new CM2 should be completely installed. The office must be running on the 5E11 or 5E12 Software Update required for this feature. The procedures follow the LTG (Large Terminal Growth) process throughout the conversion. There are certain "stop points" during the LTG that are used to integrate the new CM2 hardware and run diagnostics. This activity should be scheduled during off peak traffic times. During testing of the new CM2, the system will experience periods of simplex operation but duplex operation is attainable via the backout procedures. Cutover to the new CM2 hardware will be made to one side initially and should remain in simplex mode for 30 minutes before cutting over the other side. Continuous on-site coverage by the Operating Company is required during this phase.

For conversion procedures, see:

235-120-020-Issue 3.00 - CDX (Compact Digital Exchange) User's Guide, and

SIG-C-WU-100 - 5ESS-2000 Switch Growth/Degrowth/Conversion - U.S. Software Releases, Section 9603.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQCORE	5701	8	3	17.1 17.14

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments. Added a new data rule.

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SEC. 7AC: VCDX ADDITIONAL SERIAL PORTS

1. BACKGROUND

Additional ports for RC/V (Recent Change and Verify) and STLWS (Supplementary Trunk Line Work Stations) terminals are needed for the increased OA&M (Operations, Administration, and Maintenance) activity on the 5ESS-2000 Switch VCDX (Very Compact Digital Exchange). Without this feature, there are 6 asynchronous serial RS-232 ports available. This feature increases the number of available asynchronous serial R2-232 ports from 6 to 14. This allows the service provider to increase efficiency in assigning services.

2. FEATURE DESCRIPTION

The VCDX Additional Serial Ports feature is available as a 5E12 Software Update. The feature number for this feature is 99-5E-4085. The new port assignments made available by this feature are described in the following table.

PORT ASSIGNMENTS

S/PI NO	AW SBUS SLOT NO	SPC PORT	TTY TERMINAL	EXISTING OR NEW
0	3	Parallel	ROP0	Existing
0	3	2	TTY9	Existing
0	3	3	TTY10	Existing
0	3	4	TTY11	Existing
0	3	5	TTY12 or TTY21	Existing
0	3	6	TTY13 or TTY07	Existing
0	3	7	TTY14 or TTY43	Existing
1	1	0	TTY28 or TTY18	New
1	1	1	TTY29 or TTY19	New
1	1	2	TTY30	New
1	1	3	TTY31	New
1	1	4	TTY32	New
1	1	5	TTY33	New
1	1	6	TTY34	New
1	1	7	TTY50	New

AW = Administrative Workstation

ROP = Read Only Printer

SBUS = Small Computer Interface Bus

SPC = Serial Parallel Controller

SP/I = Serial Parallel Interface Controller

TTY = Teletype

The VCDX Additional Serial Ports feature requires the following:

- new hardware
- a second Sun Microsystems SPC (Serial Parallel Controller) card
- a second mounting bracket for the additional patch panel
- an additional cable
- additional patch panel

The new hardware can be ordered from the Lucent Technologies drawing number ED5D764-30 Group 4A. For procedural information on the installation and growth of the new hardware, see document

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235-120-120, *Administrative Workstation (AW) Serial Parallel Interface Controller (SPC) Growth*, in the *5ESS-2000 Switch VCDX User's Guide*.

To perform STLWS and RC/V growth, see also the Human Interface procedures in the *5ESS-2000 Switch VCDX User's Guide*, document 235-120-120. These procedures provide a method to grow RC/V or STLWS terminals on the 5ESS-2000 Switch VCDX.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	Not Applicable

ECDOPT form (5706 Record) - This form is used to define Administration Module options for all offices. For 5E12 and later, VCDX/SPC and VCDX/HSI Device Type Restrictions tables were added for the VCDX field, and the new field, VCDX ADDITIONAL SERIAL PORTS was added.

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SEC. 7AD: VCDX LOOP-AROUND INTRA-MODULE TRUNK

1. FEATURE DESCRIPTION

The VCDX Loop-Around Intra-Module Trunk feature is available as a 5E13 Software Update. It allows the SM-2000 Switch the capability of full interworking between local and toll software platforms and allows a call originating on a line to access long distance platform toll features such as the LDP (Long Distance Platform) ANI (Automatic Number Identification) table.

The feature number for this feature is 99-5E-4360.

2. FEATURE ASSIGNMENT

The single-SM loop-around IMT (Intra-Module Trunk) must have a network indicator of 000 populated in the first three digits of the POINT CODE field on the PC form (6006 Record).

The single-SM loop-around IMT must have its DPC (Destination Point Code) and OPC (Originating Point Code) populated in the DEST PT CODE field on the TKGRP form (5202 Record) in the format of 000sss255 or 000255sss, where :

- 000 = network indicator,
- sss = number of the switching module on which both ends of the loop-around trunk reside,
- 255 = indicates that the loop-around trunk is on a single SM.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PC	6006	9	10F	16.10
TKGRP	5202	3	2A	5.1

PC Form (6006 Record) - This form is used to define the point code and alternate link set routing for PSUs. New point codes were added for the IMT.

TKGRP Form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. New point codes were added for the IMT.

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SEC. 7AE: ISUP7 LOOP-AROUND INTRA-MODULE TRUNK

1. FEATURE DESCRIPTION

The ISUP7 (ISDN User Part 7) Loop-Around Intra-Module Trunk feature is available as a 5E13 Software Update. It allows the SM-2000 switch the capability of full interworking between local and toll software platforms and allows a call originating on a line to access long distance platform toll features such as the LDP (Long Distance Platform) ANI (Automatic Number Identification) table. This feature is applicable to the VCDX (Very Compact Digital Exchange), the CDX (Compact Digital Exchange), and all generics of the 5ESS switching module. In each of these applications, at least one SM-2000 Switch must exist. For example, with the VCDX application, one SM-2000 Switch is allowed. In the CDX application, up to 6 SM-2000 Switches are allowed. In the 5ESS-2000 application, 192 SMs (Switching Modules) are allowed, but at least one must be an SM-2000 Switch.

The feature number for this feature is 99-5E-7213.

2. FEATURE ASSIGNMENT

The single-SM loop-around IMT must have its DPC (Destination Point Code) and OPC (Originating Point Code) populated in the DEST PT CODE field on the TKGRP form (5202 Record) in the format of 000sss255 or 000255sss, where:

- 000 = network indicator,
- sss = number of the switching module on which both ends of the loop-around trunk reside,
- 255 = indicates that the loop-around trunk is on a single SM.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
TKGRP	5202	3	2A	5.1

TKGRP Form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. New point codes were added for the IMT.

- ***NOTE:*** For the ISUP7 IMT application, the PC form (6006 Record), which must be defined for the VCDX Loop-Around Intra-Module feature, is not required.

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SEC. 7AF: ADSL ON THE AIU/BROADBAND BACKPLANE FOR THE AIU

1. FEATURE DESCRIPTION

The ADSL (Asymmetric Digital Subscriber Line) on AIU (Access Interface Unit) and the Broadband Backplane for the AIU features are available as a Software Update for the 5E11, 5E12, and 5E13 Software Releases and are included in the 5E14 and later Software Releases.

ADSL Network Services on the 5ESS-2000 Switch provides more data bandwidth over existing copper loop equipment to provide more efficient transport of data traffic. It allows subscribers to send and receive data on their analog telephone line without interfering with their voice telephone service.

The following features provide this capability:

- ADSL on the AIU (99-5E-3847) provides support for ADSL APs (Application Packs) on the AIU. The OAM&P for the ADSL service is done via the Element Manager, a management system that communicates directly with the AIU, not the switching module.
- Broadband Backplane for the AIU (99-5E-4473) adds a broadband backplane to the AIU. This permits ADSL APs in the AIU to exchange information with the AFM (ATM Feeder Multiplexer) over a broadband backplane interconnection.

2. TRANSLATION REQUIREMENTS

To provide ADSL to a subscriber, the switch must be equipped with a BAIU (Broadband AIU), the BAIU must be equipped with an AFM, and the subscriber's line must be connected to an ADSL AP on a BAIU.

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AIU	5745	8	64	19.16
AIUP	5746	8	65	20.16
LINE	5109	3	1I	1.6

AIU form (5745 Record) - This form is used to define the AIU unit. The BROADBAND field was added to define whether Broadband is allowed.

AIUP form (5746 Record) - This form is used to define AIU packs. The following TYPE entries were added to support ADSL:

Valid TYPE Entries for ADSL

Entry	Definition
AIGLC	5E11-5E12 Software Update: Asymmetric Digital Subscriber line pack.
AIGLP	5E11-5E12 Software Update: ATM Feeder Multiplexer pack.
[AIUAD]SLLP	5E13 Software Update and 5E14 and later Software Releases: Asymmetric Digital Subscriber Line pack.
[AIUAF]M	5E13 Software Update and 5E14 and later Software Releases: ATM Feeder Multiplexer pack.

LINE form (5109 Record) - This form is used to define the customer subscriber line. The appropriate OE entries must be defined.

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SEC. 7AG: SS7-PSU ARCHITECTURAL ENHANCEMENTS

1. FEATURE DESCRIPTION

The SS7 - (Signaling System 7) PSU (Packet Switch Unit) Architectural Enhancements feature is available with the 5E15 Software Release. The feature number is 99-CP-4246.

This feature is one of several features that are a part of the PSU based SS7 signaling platform. Figure 1 provides a high level statement describing the function of each feature. Note that dependencies exist between these features and that SFID 522 (97-CP-4246.A) is required to achieve full functionality. Please refer to the TG-5 sections referenced in Figure 1 for more detailed information on each of these related features. The remainder of this section provides information for the 99-CP-4246 base feature.

The primary function of the 99-CP-4246 feature is to provide a messaging architecture between the NGSM-2000 (non-Global SM-2000) and GSM-2000 (Global SM-2000) to allow a NGSM-2000 SM to send/receive SS7 signaling messages to/from a Host GSM-2000. The messaging path used between the NGSM-2000 and the GSM-2000 which utilizes the QLPS (Quad-Link Packet Switch) as follows:

- For NGSM-2000 to GSM-2000, the path is SMP (Switching Module Processor -> MH (Message Handler) -> QLPS (Quad-Link Packet Switch) -> QPH (QLPS Protocol Handler) -> STPH (Signaling Terminal Protocol Handler).
- For GSM-2000 to NGSM-2000, the path is STPH -> QPH -> QLPS -> MH -> SMP.

The messaging architecture chosen for this feature leverages the MH on a SM-2000 to allow NGSMs to communicate with the GSM-2000. The (fault free) communication path is as follows:

- For NGSM to GSM-2000, the path is SMP -> MMP (Module Message Processor) -> MSCU (Message Switch Control Unit) -> QGP (QLPS Gateway Processor) -> S (Switch) -> MH -> QLPS -> QPH -> STPH.
- For GSM-2000 to NGSM, the path is STPH -> QPH -> QLPS -> MH -> S -> QGP -> MSCU -> MMP -> SMP.

It should be noted that a CNI or Island GSM (an Island GSM is a GSM that does not support NGSMs) can coexist with a Host GSM-2000 in the same office.

For provisioning information, refer to Figure 2.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CMTMH	6021	9	10U	16.16
EQPIPE	5544	8	78	17.20
EQQLPS	5854	8	56	17.19
PSULINK	5057	7	2A	22.22
QPHPIPE	5828	8	7O	17.24
TKGRP	5202	3	2A	5.1

CMTMH form (6021 Record) - This form defines which message handler will be used for CCS (Common Channel Signaling) message transport for communication between a GSM and NGSM. New form for this feature.

EQPIPE form (5544 Record)- It is used to assign QLPS (Quad-Link Packet Switch) MH (Message Handler) pipes in an SM-2000 office. Added data rule to the SM field.

EQQLPS form (5854 Record) - It is used to define a QLPS (Quad-Link Packet Switch) board. Added data

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rule to the EQSTAT field.

QPHPIPE form (5828 Record) - This form provides the basic description of the SM (Switching Module) side of the QLPS (Quad-Link Packet Switch) pipe connecting the QPH (QLPS Protocol Handler) to the QLPS network. New form for this feature.

FEATURE NUMBER	FEATURE NAME	DESCRIPTION
99-CP-4246	SS7-PSU Architectural Enhancements	Software Release: 5E15 and later. Enhances the SS7 messaging architecture within the switch so that a PSU on a Host Global SM-2000 can support the SS7 signaling to or from any SM in the office. See Division 2, Sec. 7AG.
97-CP-4246.A	SS7-PSU MTP Routing Enhancements	Software Release: 5E15 and later. Adds the CNI functionality to the PSU platform to allow routing data without full point code definitions. Allows provisioning of the primary point code plus up to 15 additional alias point codes. This is a secured feature (SFID 522). See Division 2, Section 4A522.
99-CP-4246.B	SS7-PSU Maintenance/Reliability Enhancements	Software Release: 5E13 and later. Enhances the maintenance procedures. See Division 2, Section 7X.
99-CP-4246.E	SS7-PSU MTP and SCCP Route Verification Tests	Software Release: 5E13 and later. Enhances verification of MTP and SCCP network data. See Division 2, Section 7Y.
97-CP-4246.G	SS7-PSU Call Processing Supporting TCAP	Software Release: 5E15 and later. Enhances the ISUP (Integrated Services Digital Network User Part) and TCAP (Transaction Capability Application Part) capabilities to support a Host GSM (Global Switching Module). See Division 2, Section 7AV.
97-CP-4246.H	Link/MTP Measurements For SS7/PSU	Software Release: 5E15 and later. Enhances TRFC30 measurement reports. See Division 2, Section 7AX.
97-CP-4246.I	Wireless Support of SS7/PSU	Software Release: 5E15 and later. Provides the wireless functionality interface. See Division 2, Section AY.
97-CP-4246.L	SS7-PSU Terminal Maintenance	Software Release: 5E15 and later. This feature provides enhancements to Terminal Maintenance to support the base feature. See Division 2, Section 7AW.
97-CP-4246.K	SS7-PSU Link Enhancements	Software Release: 5E14 and later. Enhances Signaling Link Selection capability. See Division 2, Sec. 7AH.
97-CP-4246.M	SS7-PSU ISUP Support	Software Release: 5E15 and later. Enhances 5ESS ISUP call processing capabilities to support message transport between a host GSM which is equipped with a PSU, and a NGSM which needs the PSU to transport messages to the network. See Division 2, Section 7AO.
97-CP-4246.N	SS7-PSU Inter/Intra Module Trunk Enhancements	Software Release: 5E15 and later. Provides provisioning capability of SS7 Intramodule trunks on 5ESS Switches using an OPC provisioned with a GSM point code and related enhancements. See Division 2, Section 7AT.
99-5E-4246/99-5E-4302	Protocol Handler 22 Base System	Software Release: 5E14 and later. Provides PH22 software forsignaling equipage. See Division 2, Section 5L.

1) The following features depend on the Protocol Handler 22 Base System (99-5E-4246/99-5E-4302) feature: 99-CP-4246, 4246.A, G, H, I, L, K, M, N.

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2) 97-CP-4246.H depends on 97-CP-4246.A.

Figure 1 SS7-PSU FEATURE LIST

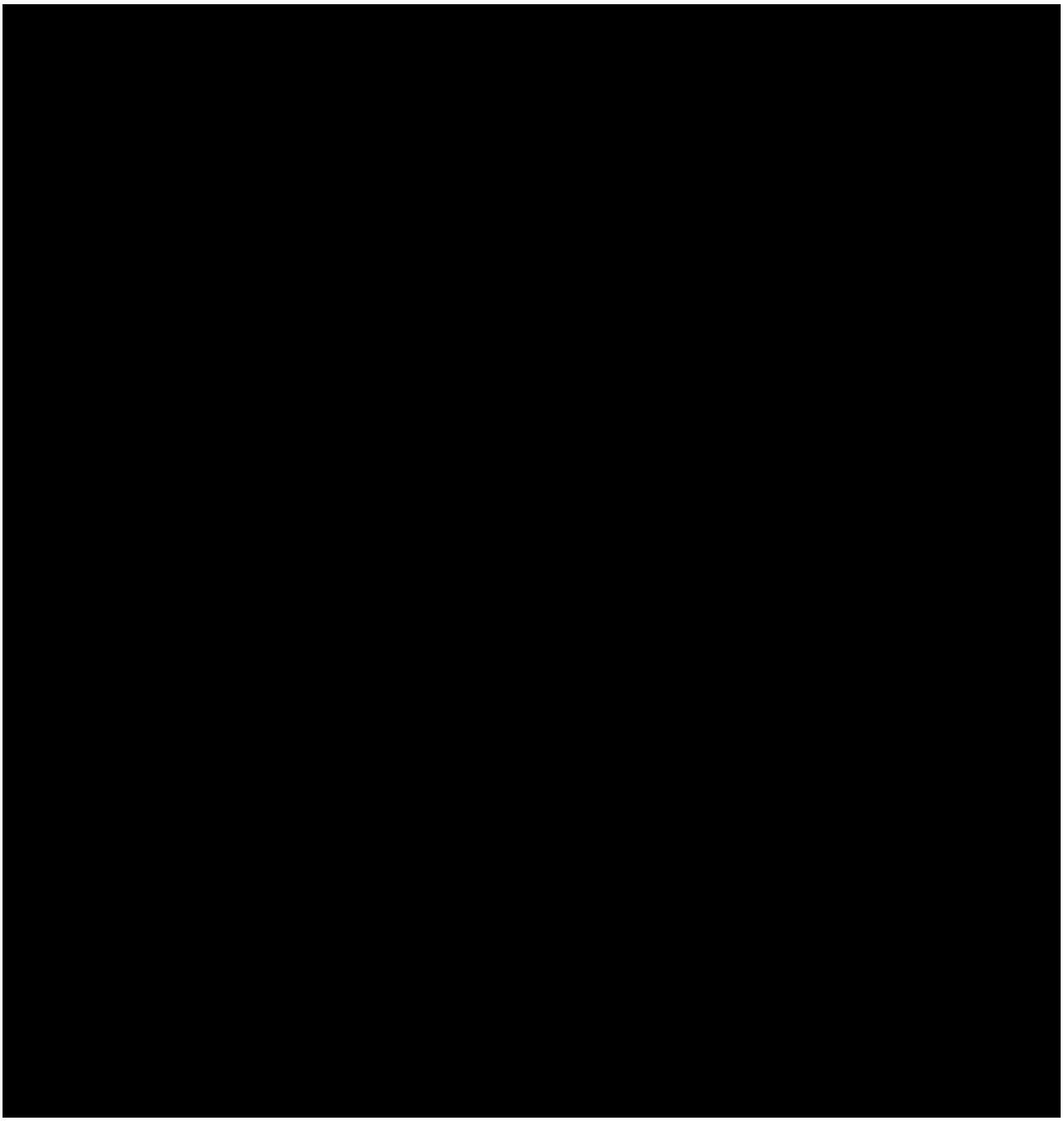

Figure 2 FORM FLOW FOR SS7 PSU ARCHITECTURAL ENHANCEMENTS FEATURE HOST GSM GROWTH PROVISIONING

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SEC. 7AH: SS7 PSU LINK ENHANCEMENTS

1. FEATURE DESCRIPTION

The SS7 (Signaling System 7) PSU (Packet Switch Unit) Link Enhancements feature is being deployed in the 5E14 Software Release. This feature is dependent upon the secured feature (SFID 175 (Expanded SLS)). For more information, see Division 2, Section 7AH. The feature number for the SS7 PSU Link Enhancements feature is 97-CP-4246.K.

This feature implements a set of enhancements. Each enhancement is described as follows:

- SLS (Signaling Link Selection) Code Expansion
  - The number of SLS codes will be expanded to those specifically using the full 8-bit SLS field in ANSI (American National Standards Institute) MSUs (Message Signal Units), or 256 SLS codes. The current 5-bit SLSs, supporting 32 SLS codes, will also continue to be supported.

    By default, 5-bit SLS codes will be used (the Expanded-SLS feature will be disabled). Either the 5 or 8 bit SLS mode can be selected on a per-GSM (Global Switching Module) basis.

    SLS code expansion will be a secured feature - that is, it will be necessary to enter a secured feature password before 8-bit SLSs can be used.

    The finer granularity allowed by 8-bit SLS codes will allow traffic distribution that is more even than is possible with the existing 5-bit SLS.

    It will not be possible to enable the 8-bit SLS mode unless all CCS (Common Channel Signaling) PHs (Protocol Handlers) are of hardware type PH22. This is necessary due to the large increase in PH memory usage necessitated by this feature. Either PH22s or PH3s can be used if the 8-bit SLS mode is not enabled (i.e., if "sls expansion" is disabled).

- Even SLS Distribution Upon Changeback
  - The international feature (i1312-145), "Even SLS Distribution Upon Changeback", is being ported to 5E14(1) from 5EE12(1) as part of this feature. When this even distribution ability is combined with the finer granularity of 8-bit SLSs, it is expected that the traffic distribution will be much more evenly distributed across the links in a linkset or combined linkset than is currently achieved in either the CNI (Common Network Interface) in the NAR markets or by the similar algorithm in the 5EE12(1) environments (where a 4-bit SLS is used in non-ANSI applications).

    Currently, in pre-5E14(1) generics, the PSU Platform CCS does not achieve even SLS distribution upon changeback. This is also true in pre-5EE12 international generics. When changeback occurs (when a signaling link becomes available), only the normal SLSs are assigned to the link coming up in the current NAR and international implementations. This simplistic treatment results in uneven SLS distributions when equipped (grown) links in a linkset or combined linkset are not all available (active). This deficit is being repaired as part of this feature (by porting the international (i1312-145) feature).

    When changeback or changeover occurs, after this feature is implemented, even distribution of the SLSs within the affected linksets and combined linksets will be achieved. Even distribution of the SLSs means that the difference between the number of current SLSs assigned to one link and the number of current SLSs assigned to any other link will differ by no more than 1. Even distribution of SLSs does not guarantee even distribution of traffic (this depends also on network engineering, including routing provisioning and usage patterns).

    Each signaling link has both "current" and "normal" SLSs. Current SLSs are what are actually used to distribute traffic - they are dynamically assigned depending on normal SLSs for that link,

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and depending on the link state and link priority. In NAR, the only priority is priority 1, so link priority does not need to be considered. Once this feature is implemented, the current SLSs will also depend on how many SLSs are assigned to each of the other links in the linkset or combined linkset of interest. The current SLSs are equal to the normal SLSs if every equipped link in the linkset or combined linkset is available. The normal SLSs are static and depend only on the number of equipped links within the linkset or combined linkset. Each time a link is inserted or deleted from a linkset or combined linkset, the normal SLSs for that linkset or combined linkset are recomputed for all members of that linkset or combined linkset.

Normal SLSs are evenly distributed within linksets for all load sharing algorithms, including ANSI (when viewing ANSI/NAR as one variation of CCITT7 (CCITT Common Channel Signaling System Number 7)). This is true in both international and NAR generics. However, the ANSI version of normal SLS distribution is different than non-ANSI for combined linksets. The current ANSI algorithm for distributing normal SLSs for combined linksets does not distribute evenly across all links in combined linksets - only within the member linksets. This is being changed as part of this feature.

For the purposes of this feature, even distribution of SLSs within a linkset or combined linkset means that each link within a linkset or combined linkset will have the same number (or differing by no more than 1) of SLSs as other links within that same linkset or combined linkset. This is what the requirements demand and the standards imply. For references, see [FSD95010027], [ANSI.111]. This results in even distribution according to bandwidth rather than according to path. Each link gets the same load and each link has the same bandwidth. The load is evenly distributed across the available bandwidth if the links are reasonably allocated to PHs. If half of the traffic is allocated within each component linkset of a combined linkset, the traffic is distributed evenly across the routes but not across the links - this is not the required manner of distribution.

- Increasing Number of Linkset Members
- Adding the Labeling of Links (A, E, or F)
- Supporting ISUP Call Throttling
  - Providing a method of throttling ISUP (ISDN (Integrated Services Digital Network) User Part) calls during unavailability or overload. This capability will be implemented in the PHs (PH3,PH22). The unavailability checked will be that of the NGSM (Non-Global Switching Module) owning the trunk involved in the call. The overload checked will be that of the trunk NGSM or congestion/overload of the path to that trunk's NGSM.

2. FEATURE ASSIGNMENT

For 5E14 and later, in order to provision this feature, there are three different types of provisioning actions that can be followed:

- Global SM Provisioning
  - This feature is dependent upon the Expanded SLS feature, therefore, before this feature can be used, the ACT field for SFID 175 on the SFSYS form (5713-1 Record) must be set to "Y". For more information, see Division 2, Section 4A175 of the TG-5 (Translation Guide 5).
- Signaling Link Provisioning
  - The CCLNK form (6004 Record) allows provisioning of 16 link members per linkset.

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- Signaling Linkset Provisioning
  - The LINK TYPE field on the LNKSET form (6003 Record) can be used to provision A/E/F links.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCGSM	6008	9	10H	16.1
CCLNK	6004	9	10D	16.6
CLKSET	6005	9	10E	16.7
LNKSET	6003	9	10C	16.5
SFSYS	5713-1	3	5AR	8.22

CCGSM form (6008 Record) - This form is used to specify data used for the global switching module. Added the EXPANDED SLS field.

CCLNK form (6004 Record) - This form is used to display the CCS7 (Common Channel Signaling System No. 7) link sets and members. Added a data rule to the GSM field.

CLKSET form (6005 Record) - This form is used to used to define the link sets that comprise the combined link set. Modified the VALID ENTRIES section for the MEMBER field.

LNKSET form (6003 Record) - This form is used to define CCS7 signaling sets. Added the LINK TYPE field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature is dependent upon the Expanded SLS feature, therefore the ACT field for SFID 175 must be set to "Y" before this feature can be activated.

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SEC. 7AI: PSU RELIABILITY ENHANCEMENTS

1. FEATURE DESCRIPTION

This feature will be released in two phases. The first phase, PSU (Packet Switch Unit) Critical Unit, will be available in the Beginning Managed Introduction of the 5E14 Software Release. The second phase, CCS (Common Channel Signaling) PH (Protocol Handler) Soft Switch, will be available in a 5E14 Software Update. The PSU Reliability Enhancements feature has feature number 99-5E-4553.

There are PSU applications that can be considered critical to call processing. Examples are PSUs that are used for Wireless and CCS applications. If PSUs in these applications duplex fail, there will be little call processing in that SM (Switching Module).

This feature introduces the concept of the PSU being designated a Critical Unit, similar to the MCTSI (Modular Controller Time Slot Interchange Unit). If a PSU is designated a critical PSU, the PSU is considered critical to the operation of the SM, and PSU fault recovery uses different strategies to restore service to the PSU. When a fault occurs on this PSU, fault recovery has more control over MCTSI/PSU configurations in order to try to find a working combination, and prevent the PSU from duplex failing. If these steps fail to restore service to the PSU, fault recovery escalates to one or more SM initializations attempting to restore PSU service.

Designating a PSU as a Critical Unit also allows the office technicians to use Force commands on PSU Service Groups. This allows customers to have more control over PSU configurations and a mechanism to prevent thrashing. The Force commands work similar to those used for the MCTSI.

If the PSU is not designated a Critical PSU, PSU fault recovery works as it currently does, which means that the PSU could duplex fail under severe fault conditions. The EQPSU (Packet Switching Unit Equipage) form defines whether or not a PSU is designated as a Critical PSU.

Phase Two of the PSU Reliability feature also provides soft switches for CCS PH applications. "Soft" means that the switch is not disturbing to customers, subscribers, or external equipment. With the introduction of CCS PH soft switch, PH soft switch will now be supported on all PH types. Because CCS PHs can now be soft-switched, CCS PHs will now be restored to the active state, instead of the standby state. Restoring CCS PHs to the active state allows CCS PHs to have Routine Exercises (REXs) performed on them the same way as non-CCS PHs, ensuring that REX runs on all PH types.

2. FEATURE ASSIGNMENT

Activation of this feature is dependent upon whether or not the PSU is considered critical for this SM. To activate this feature, the CRIT PSU field on the EQPSU form (5741-1/2) must be set to "Y".

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQPSU	5741-1	8	22	22.2

EQPSU (5741-1/2) - This form is used to define PSUs equipped in a 5ESS-2000 Switch. For 5E14 and later, the CRIT PSU field and its data rule were added.

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SEC. 7AJ: TNM INTERFACE ON VCDX

1. FEATURE DESCRIPTION

The TNM (Total Network Management) Interface on VCDX (Very Compact Digital Exchange) feature is being deployed for the BMI (Beginning Managed Introduction) of the 5E14 Software Release. The feature number is 99-5E-3397.

One of the functions of the TNM is to support the SCCS (Switching Control Center System) interface. The TNM Interface on VCDX feature provides the 5ESS Switch VCDX AW (Administrative Workstation) with a simplex TNM interface. This new TNM interface provides the capability to remotely monitor and administer the 5ESS Switch VCDX from a centralized location along with other VCDX and non-VCDX 5ESS Switches. This feature enhances network reliability center offerings.

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	Not Applicable

ECDOPT form (5706 Record) - This form is used to define Administration Module options for all offices.

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SEC. 7AK: CMP Memory Expansion

1. FEATURE DESCRIPTION

For 5E13 and earlier, a standard CM2 is comprised of a core board (TN1800) and one auxiliary memory board (TN1369, with a CLI value of 01). Effective with the 5E14 Software Release, the CMP Memory Expansion (99-5E-4918) feature is available which requires two TN1369s. Although this feature also provides the option of equipping a third TN1369 (with a CLI value of 0d), a third board is not required for the 5E14 Software Release.

CAUTION: Note that **before performing the** retrofit procedure from 5E13 to 5E14, the CMP is **required to be equipped with at least two TN1369 boards - with a CLI value of 05.** Note also that no ODA checks (i.e., error messages) are provided to test for the second TN1369 during the retrofit. To implement this feature, a new field, NUMBER OF MEM BOARDS, is added to the EQCORE form (5701 Record). In addition, two new CLI values are implemented. (For reference, the 5E13 and earlier information is also shown below.)

- 5E13 and earlier: CLI 01, TN1800, plus 1 TN1369, J5D010AF-1, L4 or J5D020AF-2, L5
- 5E14: CLI 05, TN1800, plus 2 TN1369s, J5D010AF-2, L1A, L2B, L5A, L8
  NOTE: Two TN1369s must be equipped prior to retrofitting to 5E14.
- 5E14: CLI d, TN1800, plus **Three TN1369s** (but not a requirement for 5E14), J5D010AF-2, L1A, L2B, L5A, L8

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQCORE	5701	8	3	17.11/17.14 17.16/17.17

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments. A new field, NUMBER OF MEM BOARDS, was added to define the appropriate number of memory boards, as follows:

2 = 1 TN1800, plus 2 TN1369s (CLI = 05)

3 = 1 TN1800, plus 3 TN1369s (CLI = d); allowed
but not required (available for future development).

Notes:

1. Although the CM2 is translated on the EQCORE form, the documentation for the CLI information for this update is noted on the **EQPC** form in the CLI Table (see Division 8, Section 1).
2. For Recent Change, this entry is translated on RC view 17.14 by setting PC TYPE to "CMP", and entering the appropriate CLI value as indicated above.

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SEC. 7AL: FLEXIBLE ASSIGNMENT OF DCTU PORTS TO MMSU SHELVES

1. FEATURE DESCRIPTION

The Flexible Assignment of DCTU (Directly Connected Test Unit) Ports to MMSU (Modular Metallic Service Unit) Shelves feature is available with the 5E14 and later Software Releases. This feature provides additional MTIB paths to enhance availability of test setups in the MMSU. To reduce blockage caused by a lack of MTIB access to an otherwise available DCTU port, the following capabilities are provided:

- direct access to a DCTU port (not involving an MTIB) by every MMSU Half-Shelf
- a more flexible means to distribute DCTU ports among MMSUs
- access to using a Pair Gain Test Controller with minimal need for MTIBs

This capability is provided via a new metallic test bus cable capable of allowing each DCTU PMU port to access up to four MA (Metallic Access) packs (one MA pack on each shelf of an MMSU), where all shelves are within one service group, and where each MA pack is in the same relative board position on each shelf to relieve MTIB blockage. Thus, previously, only 1 DCTU/PMU port connected to 1 MA circuit pack via an MTB was allowed. With this feature, 1 DCTU/PMU port can be connected to (up to) 4 MA circuit packs, via a 1-to-4 fan-out MTB.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQMSU	5750	8	25	19.7
EQPMU	5752	8	27	20.9

EQMSU form (5750 Record) - This form is used to define MSU Metallic Service Unit) assignments. A new field, FLEX DCTU CON, was added to indicate if the Flexible Directly Connected Test Unit Connection to the MSU is enabled.

EQPMU form (5752 Record) - This form is used to define PMUs (Precision Measurement Units) associated with the DCTU. Twelve new MTB fields were added to the existing 4 MTB fields. The MTB A0, B0, C0, and D0 are input fields. The remaining twelve MTB fields provide display-only, system-calculated data based on entries entered in the MTB A0, B0, C0, and D0 fields.

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SEC. 7AM: AM/CMP MEMORY MINING

1. FEATURE DESCRIPTION

The AM (Administrative Module/Communications Module Processor) Memory Mining feature is available with 5E14 and later Software Releases. This feature re-engineers appropriate software configurations to more effectively utilize AM and CMP memory.

The feature number for this feature is 97-5E-4722.

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SEC. 7AN: GLOBAL MESSAGING SERVER

1. FEATURE DESCRIPTION

The Global Messaging Server (GMS) feature (previously named CM3 (Communication Module Model 3)) is being deployed in the 5E15 Software Release. The feature number for this feature is 99-5E-3228.

The purpose of this feature is to replace the Communication Modules, CM1 (Communication Module 1), CM2 (Communication Module 2), CM2C/CDX (Communication Module 2 Compact/Compact Digital Exchange) of the 5ESS Switch.

The GMS feature provides all of the functionality of an existing CM2, including:

- Dual Serial Channel Interface to the AM (Administration Module)
- Network Clock Distribution Function
- NCT/NCT2 Link Interconnections to SM-2000s (Switching Modules 2000)
- Equivalent TMS (Time Multiplexed Switch) functionality Between NCT Links
- TMS Controller functionality
- NCT Link Control Time Slot processing
- CPI (Central Processor Intervention) to the SM-2000s for Low-Level Reset and Hardware Control
- Message Switch functionality for 192 Odd and 192 Even 48 Kb/s Control Timeslots between SM-2000 SMs (Switching Modules) and to/from AM and All Other Messaging Endpoints of the CM2/CM2C/CDX
- CMP (Communications Module Processor) Functionality
- QLPS (Quad Link Packet Switch) functionality for Packet Switching of Message Pipes from the SM-2000 Message Handlers
- QLPS to AM or QLPS to Message Switch Interconnectivity Similar to the QGP (QLPS Gateway Processor) Function
- 32 Timeslot Pump Capability to the SM-2000s Similar to the PPC (Pump Peripheral Controller) Circuit on CM2

In addition, the GMS feature supports the following new functionality:

- 100 Mb/s dual Ethernet interface for connection to AM-2000 or ATM switch controllers
- Increased packet switch fabric (up to 1536 timeslots for SM-2000 message pipes and up to 512 timeslots for gateway links)
- Increased PPC (Pump Peripheral Controller) (up to 64 timeslot pump channels per even/odd fabric, as well as multiple pump streams)
- Increased termination capacity (up to at least 250K network timeslots)
- Increased message switch messaging capacity (up to at least 3 million BHCs (Busy Hour Calls), contingent upon additional switch evolution work to support 3 million BHCs)
- Optional equipage of network clock oscillators

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- ATM (Asynchronous Transfer Mode) center stage capability
- ATM DACS (Digital Access and Cross Connect System), ATM interworking, and ATM Switched Virtual Circuit call processing support

See Figure 1 for the GMS architecture.

1.1 Power PC Technology

The GMS is the first use of the Power PC processor in the 5ESS Switch. Current Power PC processors targeted for this project meet and exceed the projected processor real-time need of the GMS, and as the Power PC evolves, the GMS will be able to take advantage of real-time improvements of the processors' evolution. The Power PC processor also support hardware fault detection mechanisms.

1.2 Processor and Memory Growth

The GMS utilizes a single processor message switch. The decision to utilize a single processor message switch was made based on the real-time capacity of the PowerPC processor and its life-cycle stage, as well as hardware concerns such as COGS, real-estate, and power consumption.

Real-time and memory growth are provided by a redesign of the processor board.

2. FEATURE ASSIGNMENT

In order to provision the GMS feature:

- EQCORE form (5701 Record)
  - Set CM VINTAGE to 3 (for GMS).
  - Set VCDX OFFICE to "N".
  - Set MSGS CLI to 0.
  - Set both LI CLI and MI CLI to 0.
  - Set the NETWORK CLOCK UNIT CLI to 0.
  - Set CLOCK TYPE to "NCLK3" or "SANC3".
  - Set OSC TYPE to "CM3HI"
  - Set AUTO SYNC to "Y".
  - Set NC REF STAB to any valid value.
- EQCM3 form (5867 Record)
  - Set EQSTAT to "O".
- NCLKREF form (5525 Record)
  - Set CLOCK TYPE to "NCLK3" (when EQSTAT is set to "O".
  - Set CLOCK TYPE to "SANC3" (when EQSTAT is set to "G" or "U".

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- EQTMS form (5866 Record)
  - Set FABRIC TYPE to "DUAL" (for GMS).
  - Set CLI to 500.
  - Set EQSTAT for SHELF 0 (under SHELF EQUIPAGE - CM3) to "O".
- EQTMSLINK form (5851 Record)
  - Set LINK to a number between 4 and 371 (for GMS).
  - Set LINK TYPE to "NCT2" (when TRCU FIRST PATH HOST TYPE or TRCU NEXT PATH HOST TYPE on the EQTRCUPATH form (5814 Record) is "TRCU3".
  - Set LINK TYPE to "NCT1" (when TRCU FIRST PATH HOST TYPE or TRCU NEXT PATH HOST TYPE on the EQTRCUPATH form (5814 Record) is not "TRCU3".
  - Set QLI CLI to 0.
  - Set EQSTAT to "O".
- EQIM (5700 Record)
  - Set UNIT TYPE to "SM2000" or "SM2005", or set SM USAGE to "RSM" (for GMS).
- OFCOPT (5509 Record)
  - Set COMMON CHAN SIG to "PSU".
- EQQLPS (5854 Record)

  NOTE: Submit 4 EQQLPS forms, one per side, one per QLPS NETWORK.
  - Set TMS CONFIGURATION to "DUAL".
  - Set STARTING QTMSLINK network 0 to 372.
  - Set STARTING QTMSLINK network 1 to 373.
  - Set EQUIPMENT STATUS to "O".
  - Set CLI to 0.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	N/A
EQCM3	5867	8	71	N/A
EQCORE	5701	8	3	17.16
EQIM	5700	8	2	18.1
EQPC	5703	8	5	17.2 17.14
EQPIPE	5544	8	78	17.20

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EQQLPS	5854	8	56	17.19
EQNLI	5853	8	55	18.16
EQTMS	5866	8	69	17.11
EQTMSLINK	5851	8	53	17.12
NCLKREF	5525	3	5Y	17.4

ECDOPT form (5706 Record) - This form is applicable to (and required for) all offices. It is required to translate all options in the AM (Administration Module) for initial offices. Added data rules to the CM TYPE, QGWP, and RPCN000,320 fields.

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments. Added the MSGS CLI, MSGS IPDGN FILE, MSGS APDGN FILE, MSGS IP FILE, MSGS AP FILE, MSGS ROM FILE, NC REF STAB, IPDGN FILE, APDGN FILE, IP FILE, AP FILE, ROM FILE, S0OSC0TBO, S0OSC1TBO, S1OSC0TBO, S1OSC1TBO, NC SYNC, CORE fields and data rules to the VCDX OFFICE, CM2 COMPACT, CM VINTAGE, CLOCK TYPE, OSC TYPE, and AUTO SYNC fields.

EQCM3 form (5867 Record) - This form was created to assist in the population of GMS-dependent data on other forms. This is a new form to support the GMS feature.

EQIM form (5700 Record) - This form is used to define Switching Module Equipage Assignments. Added data rules to the SM, SM USAGE, NCT EVEN LINK, and UNIT TYPE fields.

EQNLI form (5853 Record) - This form is used to define the NLI (Network Link Interface) which terminates the NCT2 (Network Control and Timing Links 2) from the SM-2000 (Switching Module-2000) TSI (Time Slot Interchanger) to the TMSU (Time Multiplexed Switch Unit) of the CM2 and GMS. For the SM-2000, the NLI is an optical interface; for the EXM-2000, the NLI is an electrical interface. Added data rules to SM, and TMS LINK 0.

EQPC form (5703 Record) - This form is used to define Peripheral Controller Configuration Data. The population of this form will be handled/built in forward mapping. Added data rules to the QLPS NETWORK field.

EQPIPE form (5544 Record) - This form is used to assign QLPS (Quad-Link Packet Switch) MH (Message Handler) pipes in an SM-2000 office. The population of this form will be handled/built in forward mapping. Added data rules to the QLPS NETWORK field.

EQQLPS form (5854 Record) - This form is used to define a QLPS (Quad-Link Packet Switch) board. It is required for 24-channel exterior references for NCLK2 (clock type of "24CHAN2" on the EQCORE input form). Four of these forms are needed for GMS. Added data rules to the ONTC SIDE, and TMS CONFIGURATION fields.

EQTMS form (5866 Record) - This form is used to modify the data for this unit and to support the GSM. This form was introduced to separate all the TMS information from the Core equipment information that is found on the EQCORE form. This is a new form for 5E15 and later.

EQTMSLINK form (5851 Record) - The Time Multiplexed Switch Link Equipage form replaces the EQORMLINK form (5813 Record) for 5E9(2) and later for assignment of the ORM (Optical Remote Module) and EXM-2000 TMS link interfaces and associated TRCUs. Added the LINK TYPE field and added data rules to the QLI CLI, LINK, and the LINK TYPE fields.

NCLKREF form (5525 Record) - This form is used to define the exterior references for the NCLK2 (Network Clock Model 2) or NCLK3 (Network Clock Model 2). Added the CLOCK TYPE field and added data rules for the fields REFERENCE and REFERENCE TYPE.

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Figure 1 5ESS SWITCH ARCHITECTURE

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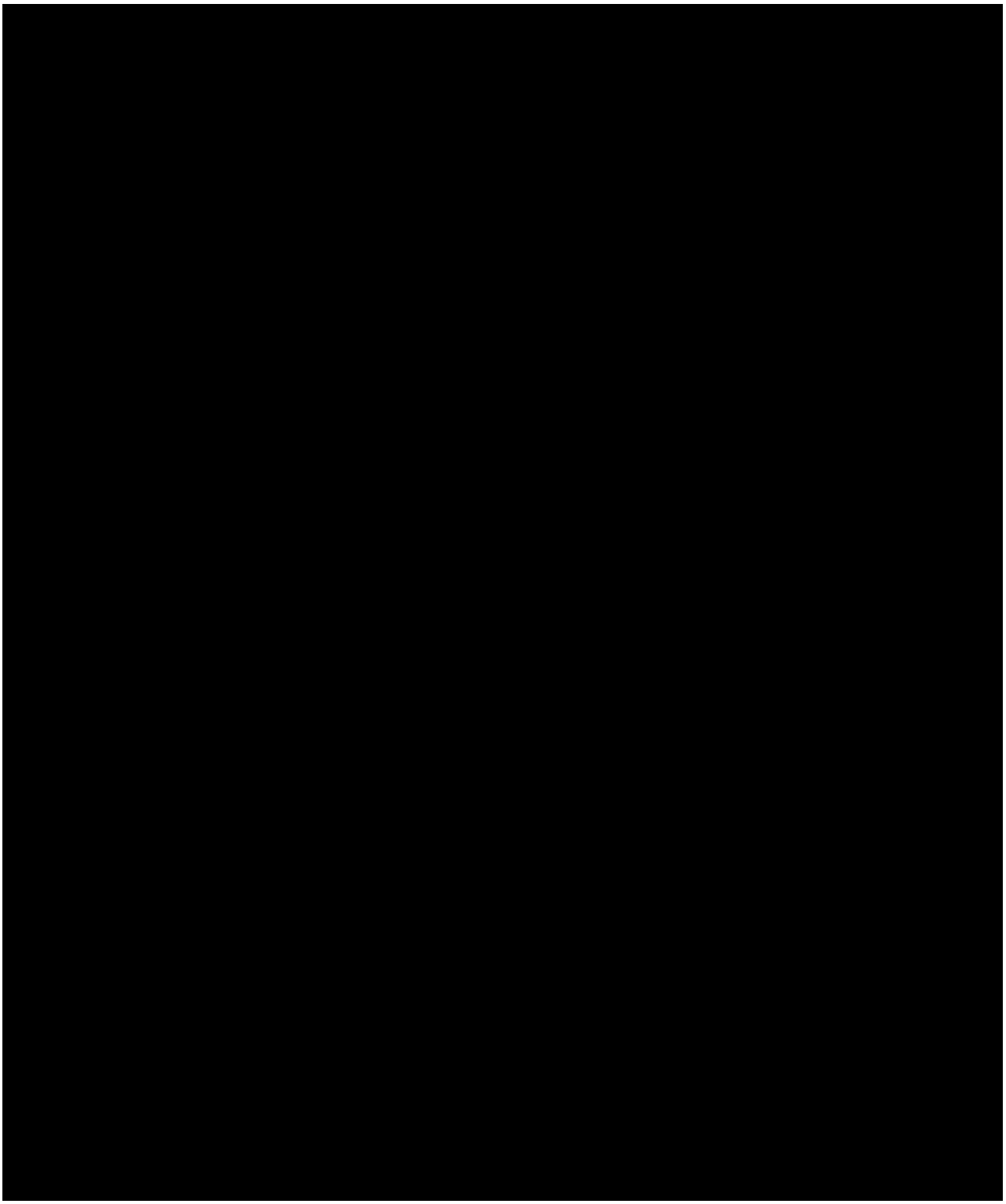

Figure 2 FORM FLOW FOR GLOBAL MESSAGING SERVER

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SEC. 7AO: SS7 PSU ISUP SUPPORT

1. BACKGROUND

Prior to this feature, an SS7 (Signaling System No. 7) PSU (Packet Switch Unit) supported the signaling needs of ISUP (Integrated Services Digital Network User Part) trunks and certain TCAP (Transaction Capabilities Application Part) services local to the GSMs (Global Switching Modules). Examples of where this was beneficial include the VCDX (Very Compact Digital Exchange) Switch and remote switching modules. NGSMs (Non-Global Switching Modules) in the 5ESS Switch and the CDX (Compact Digital Exchange) Switch continued to rely on the CNI (Common Network Interface) signaling platform for CCS (Common Channel Signaling) message support. This feature lifts the ISUP trunk group restriction for limiting members to the GSM.

2. FEATURE DESCRIPTION

The SS7 PSU ISUP Support feature is being deployed in the BMI (Beginning Managed Introduction) of the 5E15 Software Release. The feature number is 97-CP-4246.M.

This feature enhances 5ESS ISUP call processing capabilities to support message transport between a host GSM which is equipped with a PSU, and a NGSM which needs the PSU to transport messages to the network. The SS7 PSU ISUP Support feature builds upon the base SS7 PSU Architectural Enhancements feature (97-CP-4246) that provides an internal CMT (CCS Message Transport) architecture allowing one GSM (i.e., host GSM) to support the signaling needs of NGSMs. (See Division 2, Section 7AG for more detailed information on the base feature upon which the SS7 PSU ISUP Support feature builds.) This feature provides the following enhancements to call processing software for functional parity between CNI and SS7 PSU signaling platforms:

- Switching Module (Global and Non-Global) selection of CMT to host GSM
- Handling of ISUP calls when CMT to/from a host GSM is unavailable
- Throttling of calls when CMT overload is detected

The enhancements provided by this feature are applicable to the 5ESS and CDX Switches.

3. FEATURE ASSIGNMENT

Trunks within the SS7 PSU trunk group can be provisioned on any SM (Switching Module) on the TRUNK form (5204 Record) as long as CMT connectivity is provisioned between the SM and the GSM using the CMTMH form (6021 Record) or the MDLNK form (6009 Record). For 5E15 and later, to provision this feature the following steps must be done:

- Define the GSM on the CCGSM form (6008 Record). (For more detailed information, see the base feature, SS7 PSU Architectural Enhancements, in Division 2, Section 7AG.)
- Create the CMT path between the SM and GSM using the CMTMH form (6021 Record).
- Insert the SS7 ISUP trunk member on an ISUP trunk group using the TRUNK form (5204 Record) on any SM.

  - ***NOTE:*** The insert is successful as long as there is a CMT path between the SM and the GSM.

- Create an ISUP local trunk group or global trunk group using the TKGRP form (5202 Record).
- Insert ISUP trunk members on the TRUNK form.

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See provisioning form flow on Figure 1.

4. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
OFCOPT	5509	3	5I	8.15
TKGRP	5202	3	2A	5.1

OFCOPT form (5509 Record) - This form supplies various miscellaneous options and parameters. For 5E15 and later, added data rules for the COMMON CHAN SIG and OPC fields.

TKGRP form (5202 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. For 5E15 and later, added a data rule for the ORIG PT CODE field.

5. GLOSSARY

CCS	Common Channel Signaling
CDX	Compact Digital Exchange
CMT -	CCS Message Transport Connectivity
CNI	Common Network Interface
GSM	Global Switch Module
ISUP	Integrated Services Digital Network User Part
NGSM	Non-Global Switching Module
PSU	Packet Switching Unit
SM	Switching Module
SS7	Signaling System No. 7
TCAP	Transaction Capability Application Part

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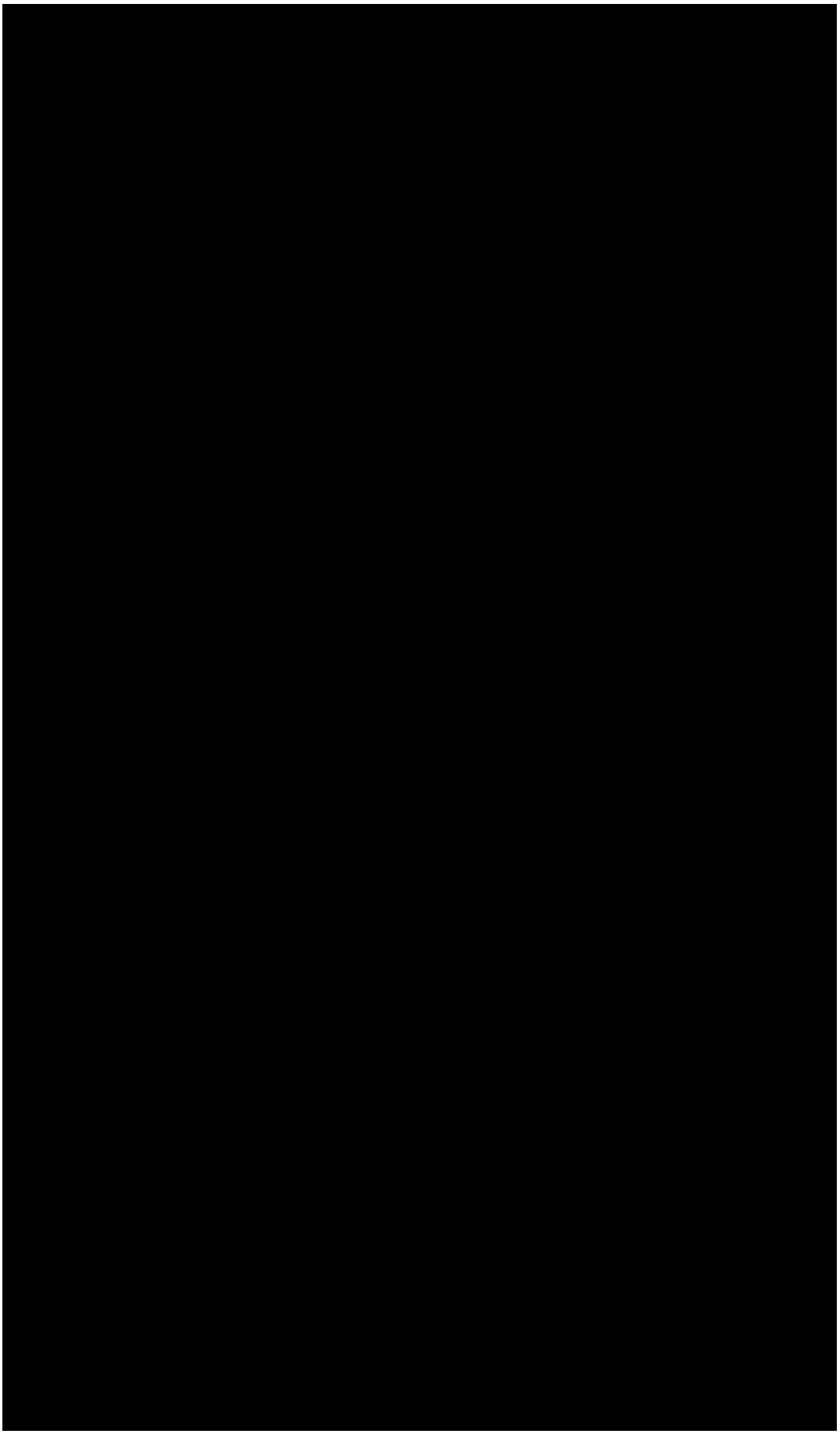

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Figure 1 SS7 PSU ISUP SUPPORT FORM FLOW

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SEC. 7AP: MSM on PLTU

1. FEATURE DESCRIPTION

The MSM (Multi Service Module) on PLTU (PCT (Peripheral Control and Timing) Line and Trunk (virtual)) feature is available with the 5E15 Software Release.

The MSM on PLTU feature allows customers, as of the 5E15 software release, to install a PCTFI (PCT Facility Interface), connecting the SM-2000 TSI (Time Slot Interchange) directly to a "loosely coupled" facility transport unit, termed the PCTFI-TE (PCTFI-7R/E PD).

- ***NOTE:*** Note that the feature name, "MSM on PLTU," is only significant in an historic sense. The terminology originally used to describe the 5ESS adjunct unit was "multi-service-module" (MSM) and was in use when this feature was named. The MSM name has since been dropped from the 5ESS vocabulary and has been supplanted by the 7R/E Packet-Driver The PCTFI-TE is the multiplexing interface between a high bandwidth carrier and the PCTFI. Although the PCTFI itself is not specific to any one PCTFI-TE, this feature specifically provides connectivity between the SM-2000 TSI and a multiplexer board, the PCTMUX (PCT Multiplexer Board), installed in the PortMaster IV-portion of a 7R/E-PD.

The PCT links are equipped as active/standby pairs, with each side consisting of a PLI (Peripheral Link Interface) paddle-board on the backplane of the TSIU4 and two fibers terminated at the 7R/E-PD on a single PCTMUX. The PCT link hardware is provided with full switch maintenance software support, including MCC (Master Control Center) status displays and I/O messages; initialization, fault recovery, interrupt administration, and manual and automatic reconfiguration and diagnostics. The 7R/E-PD is "loosely coupled" in that the switch is responsible for maintenance only as far as the PCTMUXs terminating the links, and is not responsible for the internals of the 7R/E-PD. Hardware and software interfaces between the switch and the 7R/E-PD are intentionally kept to a minimum, via otherwise unused overhead bytes on the PCT links. The hardware architecture is depicted in Figure 1, "PCT Facility Interface Connecting a 7R/E-PD to the SM-2000".

The definition of PCT provides frames at 8KHz with 1024 total bytes carrying 960 payload bytes. Thus, along with full support for the PCT link, the customer is provided with the ability to "grow" up to 28 digital T1 trunk tributaries onto the links. These PCTFI tributaries and their associated ports and trunks are provided with terminal maintenance software support consistent with the architectural partitioning of responsibility between the 7R/E-PD and the switch. Included are a simple one-level, three-state approach to carrier alarms; TLWS (trunk and Line work Station) and I/O messages for PCTFI-based trunks and OEs; port status administration; and fast inhibit of trunk routing upon automatic determination of a tributary-affecting failure. Trunk ports on these tributaries are addressed via a new OE, the PLTEN (PCT Line and Trunk unit Equipment Number).

Finally, to support trunk calls carried over the PCT link interface, the customer will be provided with hundred-call-seconds and traffic measurement functionalities and a new call trace view showing the PCTFI hardware elements in the path.

2. FEATURE ASSIGNMENT

See Figure 2.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
EQPCTP	5870	8	74	20.17
EQPCTT	5871	8	75	20.27
EQPLTU	5869	8	73	19.24
OFCOPT	5509	3	5I	8.1, 8.15
TRUNK	5204	3	2C	5.5

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EQPCTP form (5870 Record) - This form is used to provide PCT Link Pack information. This is a new form created to support this feature.

EQPCTT form (5871 Record) - This form is used to provide PCT Link Tributary information. This is a new form created to support this feature.

EQPLTU form (5869 Record) - This form is used to define equipment location information for the PCT line/trunk units. This is a new form created to support this feature.

OFCOPT form (5509 Record) - This form provides the office option global parameters to define equipment. The CGA BUNDLE field was added to support this feature.

TRUNK form (5204 Record) - This form is used to define characteristics of individual trunks. The letter "F" was added to the TRKOE field to support this feature.

4. GLOSSARY

MCC	Master Control Center
MSM	Multi Service Module
PCT	Peripheral Control and Timing
PCTFI	PCT Facility Interface
PCTFI-TE	PCTFI-7R/E PD
PCTMUX	PCT Multiplexer Board
PLI	Peripheral Link Interface
PLTEN	PCT Line and Trunk Unit Equipment Number
PLTU	PCT Line and Trunk Unit
TLWS	Trunk and Line Work Station
TSI	Time Slot Interchange

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Figure 1 PCT FACILITY INTERFACE CONNECTING A 7R/E-PD TO THE SM-2000

Figure 2 FORM FLOW FOR MSM ON PLTU

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SEC. 7AS: SEMI-INTEGRATED NO TEST TRUNK

1. BACKGROUND

Prior to the introduction of this feature, the NTT (No Test Trunk) capability is provided via trunks equipped on the analog trunk unit using circuit pack SN107. The NTT is used to provide both a signaling interface to request test access to a 5ESS Switch subscriber line and provide the metallic connection between the Line Testing Operation System and the subscriber loop through the metallic test network of the 5ESS Switch MMSU (Modular Metallic Services Unit).

For related information, see the feature section for Local Test Desk in Division 2, Section 2E.

2. FEATURE DESCRIPTION

The Semi-Integrated No Test Trunk feature (99-5E-7303) is available with 5E15 and later Software Releases. This feature provides the capability to support the NTT without requiring the use of an analog trunk unit and its associated circuit pack (SN107). This is achieved by using an external signaling converter which is connected to the 5ESS Switch via a T1 digital facility interface. There is no operational differences between analog-based or T1 digital-based test trunks as a result of this feature. This feature provides the capability to assign a control channel to the appropriate DS0 (channel 1) and DS1 (channel 25) T1 digital facility, assign NTT test trunks to remaining DS0/DS1 channels on that T1, process the signals received from the test trunks, and control the test trunk's state. Note that if DS0 channel 1 is assigned, MTBs can only be assigned to Outgoing and Incoming Test channels 2 - 13 (14 - 26 cannot be assigned at all). Similarly, if the DS1 channel 25 is assigned, MTBs can only be assigned to channels 26 - 37 (38 - 48 cannot be assigned at all). More detailed data rules for digital test trunks are found on the TKGRP form for the TRKCLS of "TSTK".

To implement this feature, two new fields (MTB0 and MTB1) were added to the TRUNK form (5204-6 Record) and related data rules were added for the TKGRP form (5202 Record).

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
NTTU	5590	3	5BW	14.24
TKGRP	5202	3	2A	5.1
TRUNK	5204-6	3	2C	5.5

NTTU form (5590 Record) -This form is used to define an NTT unit and MTB (Metallic Test Bus) pairs reserved for each testing trunk connected to NTT unit. This is a new form that supports this feature.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Data rules for the TRKCLS of "TSTK" were updated to implement this feature.

TRUNK form (5204-6 Record) - This form is used to define each member of a Trunk Group. Two new Digital Test Trunk fields (MTB0 and MTB1) were added to define the Metallic Test Bus 0 and 1. These fields increased the record to six pages. When these fields are entered, the DEN (Digital Equipment) or the NEN (DNU-S) field must be entered. Note that MTB0 and MTB1 for analog trunks continue to be defined on the EQTUP form (5720 Record/20.2).

- ***NOTE:*** Software Release: 5E15 and later. This feature creates output for the "NTTU" on the 5842/5842A Record for the CIRCUIT TYPE and CIRCUIT REFERENCE NUMBER entries. (See Division 8, Section 44.)

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SEC. 7AT: SS7 PSU IMT

1. BACKGROUND

Prior to this feature, an ISUP (Integrated Services Digital Network User Part) call placed over an SS7 (Signaling System Number 7) loop around trunk, otherwise known as SS7 IMT (Intramodule ISUP Trunk), required the use of two switching modules and an active CNI (Common Network Interface) platform in order to complete the call. For an SS7 IMT, the OPC (Originating Point Code) was provisioned with the CNI point code while the DPC (Destination Point Code) was encoded with a special format "000XXXYYY" for conveying the originating SM (Switching Module) "XXX" and the terminating SM "YYY" of the trunk group.

The requirement of two distinct SMs, however, blocked the VCDX (Very Compact Digital Exchange) platform from deploying loop around trunks since the VCDX consisted of a single SM. The Single SM Loop Around Trunks feature (99-5E-4360) introduced changes to support SS7 intramodule trunks on the VCDX switch. For the SS7 intramodule trunk group, the OPC was provisioned with the Global SM point code while the DPC was encoded with another special format, "000SSS255" or "000255SSS", for conveying the SM "SSS" of the trunk group.

2. FEATURE DESCRIPTION

The SS7 PSU IMT feature is assigned feature number 97-CP-4246.N and is available with the 5E15 Software Release.

This feature allows the customer to provision SS7 Intramodule trunks on 5ESS Switches using an OPC, provisioned with a GSM (Global Switching Module) point code and the same DPC encoding format provided by the Single SM Loop Around Trunks feature (99-5E-4360).

In addition, this feature creates a new message flow for handling SS7 Intermodule trunks associated with a GSM. Instead of sending ISUP messages through the CNI platform between originating and terminating SMs, this new mechanism sends them directly (via OSDS (Operating System for Distributed Switching) messaging) between the originating and terminating SMs.

The trunk group's OPC is used to differentiate between the two SS7 Intermodule trunk mechanisms. When the OPC is provisioned with the CNI point code, an Intermodule trunk group is referred to as a CNI IMT and the CNI platform is a participant in the ISUP message flow. Similarly, when the OPC is provisioned with a GSM point code, the Intermodule trunk group is referred to as a SS7 PSU IMT, and the new direct message flow between SMs is used.

3. FEATURE ASSIGNMENT

When provisioning the PSU IMT trunk group on the TKGRP form (5202 Record), provisioning of the CMT path on the CMTMH form (6021 Record)/MDLNK form (6009 Record) is not required. On the TKGRP form, the first three digits of the DEST POINT CODE equal to "000" indicates an IMT trunk group.

4. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5l	8.1, 8.15

OFCOPT (5509 Record) - This form provides the office option global parameters to define equipment. For 5E15 and later, data rules associated with the "PSU" valid entry were modified for the COMMON CHAN SIG field to support this feature.

5. GLOSSARY

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CNI	Common Network Interface
DPC	Destination Point Code
GSM	Global Switching Module
IMT	Intramodule or Intermodule ISUP Trunk
ISUP	Integrated Services Digital Network User Part
OPC	Originating Point Code
OSDS	Operating System for Distributed Switching
PSU	Packet Switch Unit
SM	Switching Module
SS7	Signaling System Number 7
VCDX	Very Compact Digital Exchange

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SEC. 7AU: SOFTWARE TRANSITIONS AND AFT

1. FEATURE DESCRIPTION

The Software Transitions and AFT (Apptext Forward Translator) feature is available with the 5E15 Software Release. The feature number for this feature is 99-5E-7356.

The 5E15 Retrofit Capability provides necessary functionality to transition the 5ESS Switch and the 5ESS VCDX (Very Compact Digital Exchange) Switch transparently across a Software Release Retrofit from 5E14 to 5E15. This is the case no matter which of the following retrofit method is used:

- Traditional BREV (Base Relation Evolution), in which the ODD/ECD data is dumped to tape, evolved at Lucent and shipped to the office via tape.
- NBR (Network Based Retrofit in which the ODD/ECD is dumped to the ASM, transmitted to Lucent across a network, evolved and transmitted back.
- OSDE (On-Site Data Evolution) in which the evolution is done on the customer's own ASM.
- 5E15 SRU (Software Release Update)
- 5E15 LTG (Large Terminal Growth)

This feature also provides two procedures for the 5ESS VCDX Switch:

- 5E14 to 5E15 Software Release Retrofit
- 5E15 SRU (Software Release Update)

Neither Network Based Retrofit nor On-Site Data Evolution Retrofits will be supported on the VCDX. The standalone VCDX switches will continue to use the DBR (Disk-Based Retrofit) procedure developed for 5E14 retrofits. This will be expanded this year to include both the Sparc-5 and Netra-T platforms.

This effort includes testing and ensuring satisfactory procedural documentation for both platforms. The DRM (Distinct Reliable Module) feature is developed separately under its own feature number. While the retrofit of the DRM's 5ESS node (CP-Node 0) will be primarily the same as a stand-alone 5ESS OSDE retrofit, the VCDX node(s) will be updated using procedures different from that used in standalone VCDX offices. These nodes will be updated via a VCDX OSDE process, rather than a DBR method.

The 5E15(1) Retrofit feature will not be responsible for development of any of the DRM specific functionality required for 5E15 for either the 5ESS or VCDX nodes. Note however, that all development work will be designed to support the DRM, where possible, although it will not be tested for functionality in a DRM environment.

For the 5E14 to 5E15 Software Release Retrofit, the 5E15(1) Retrofit feature provides the following:

- Operational Retrofit
- ECD Evolution
- ODD Verification
- OFFRCR (Not applicable for VCDX offices or for OSDE)
- OSPS Retrofit Data Evolution (Not provided for VCDX offices)

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- RC Evolution and POSTRCR
- Memory Forecasting for Retrofit
- Database Retrofit Preconditioning Check
- On-Switch HW Checks and ECD Audit
- PRL for BREV Critical Checks
- RCOS Apptext Forward Translator
- CORC Evolution/Reapplication

1.1 Operation Retrofit

The operational retrofit feature provides the overall software, procedures, and tools required to successfully transition an office from one release to the next release. It provides a software-driven sequence of steps to guide the office through a smooth transition, and includes mechanisms to update the ASM, and any generic-dependent ASM applications. For 5E15, the feature supports retrofits using a traditional tape-based procedure, NBR, OSDE, and DBR (for VCDX), as well as tape-based SRU and LTG transitions. Note that for VCDX DBR, both the SPARC-5 and Netra-T platforms will be included.

Note that for offices equipped with an ASM (whether performing traditional NBR, or OSDE retrofits), there will be a minimal, separate SU level to be tracked, akin to that used to track the minimum SU level for 3B-resident software. Offices equipped with an ASM, therefore, will be instructed (via retrofit notes or some other mechanism) to ensure that they are on both the minimum 5E SU and minimum ASM SU prior to attempting a retrofit.

1.2 ECD Evolution

For 5E14 to 5E15 Database Retrofit, this capability will provide the ability to evolve the retrofit office's ECD database from the format of Software Release 5E14 to a format that is functionally equivalent to the 5E14 software release and compatible with the 5E15 software.

1.3 ODD Verification

The BREV (Base Relation EVolution) process will be used to create the evolved ODDs for retrofit. The BREV process does the evolution of the ODD by mapping the base relations from one software release to another.

ODD Verification will verify the sanity of the ODDs produced by BREV's evolution of the retrofit office's ODD from the format of Software Release 5E14 to a format that is equivalent to the 5E14 software release and compatible with the 5E15 software. For all retrofits (other than OSDE), the ECD and ODD databases are evolved at the 5ODA (5ESS Office Data Administration) production site using the ODD and ECD evolution processes. For OSDE retrofits the evolution will be done at the customer site, with a trial run 14 days before and within 4 days before the retrofit.

1.4 OFFRCR (Not applicable for VCDX offices or for OSDE)

Since the evolved RCs must be reapplied as soon as possible to minimize customer impact, an office retrofitting using the traditional BREV retrofit or NBR has an option to reapply most of their RCs off-site at the 5ODA site before the retrofit to reduce the number of RCs to be processed on switch by POSTRCR. This off-site reapplication is done with the OFFRCR tool.

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1.5 OSPS Retrofit Data Evolution (Not provided for VCDX offices)

There are nine OSPS supported class-21 RC Views which must be restored back to the switch right after the retrofit initialization on the new software release to prevent the OSPS offices from having serious service impacts on the OSPS serving team and interflow configurations. The OSPS Evolution process will evolve those class-21 RCs at the base relation level.

The OSPS Evolution process will evolve those class-21 RCs at the base relation level. During the off-line pump, the evolved SM logfile will be reapplied through logfile pump. The evolved AM and CMP logfiles will be reapplied through the Rollforward process.
The nine OSPS RCs are also logged separately at the view level, in the same manner as all other RCs are double-logged for RC Evolution. They will not be reapplied by POSTRCR or OFFRCR in the normal case, but are evolved by RC Evolution into a separate output file so that they can be reapplied by POSTRCR as a recovery procedure. These nine OSPS views are denoted by "OSPS" in the supported view lists in the 5E15 FSD.

1.6 RC Evolution and POSTRCR

While the ODD and ECD dumped databases are off the switch for evolution, the RCs and CORCs performed in the retrofitting office will be saved and evolved for use in updating the ODDs after the ODDs are evolved to the new software release.

The saved CORCs will be evolved into an intermediate format by the CORC evolution process which runs on the old (5E14) software release. The evolved CORCs will then be reapplied by the CORC reapplication process which runs on the new software release after the switch is initialized on the evolved ODD.

All of the RCs are saved, however, in general the RCs that change global parameters or change equipment are not supported for RC Evolution. A table of the Recent Change Views supported for evolution is presented in the Retrofit FSD.

The RC evolution process which runs on the old software release will evolve the supported RC views into the 5E15 ODIN string-wad format, which is an ASCII data string with fill characters. The evolved RCs will be converted to a binary format and reapplied via POSTRCR after the switch is initialized on the new software release.

1.7 Memory Forecasting for Retrofit

The Memory Forecasting tool predicts AM, CMP and SM memory usage for the retrofit. It can be run as a stand-alone tool or invoked indirectly by the command, "BKUP:ODD:ODDEVOL,TOGENERIC=151" which, in turn, calls the Retrofit Pre-conditioning check in the correct manner to kick off Memory forecasting.

1.8 Database Retrofit Preconditioning Check

The Retrofit Pre-conditioning check function will verify if the ECD Audit, Memory Forecasting, Hardware Checks, maintenance mode AM offline boot, and BREV Critical Checks have been run and that no errors are present. If errors are found by these audits, the database dump will fail. In the case of traditional retrofit, this will prevent the ODD from being written to tape. In the case of NBR and OSDE, the ODD will not be transferred to the ASM.

1.9 On-Switch HW Checks and ECD Audit

The 5E15 On-Switch Hardware Checks and On-Switch ECD Audit provide software checks that identify new hardware required for 5E15 and identify any ECD errors which might jeopardize retrofit.

The On-Switch Hardware Check tool utilizes RLhwchks poprules that contains checks specific to a release. As part of the generic retrofit release criteria, DBretrochk will check for the existence of the On-Switch

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binary errlog file. If the errlog file does not exist, is out of date, or is NOT of zero length then the preconditioning retrofit process will abort.

1.10 PRL for BREV Critical Checks

The BREV Critical Check tool uses the SODD audit tools to verify selected retrofit critical data conditions for relations and global parameters to ensure the integrity of the ODD.

1.11 RCOS Apptext Forward Translator

The RCOS AFT feature provides a temporary RC/V text interface software translation mechanism that allows the service provider to continue sending RCs to the 5ESS Switch following retrofit, even though the supporting RCOS remains on the previous software release. This tool is in use until the applicable OS software is updated to the 5E15 software release.

1.12 CORC Evolution/Reapplication

Information for this section is included in the section on "RC Evolution and POSTRCR" above.

2. FEATURE ASSIGNMENT

No special provisioning required for this feature.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RETINFO	5845	8	47	NA

RETINFO Form (5845 Record) - This form provides an ordering mechanism for Disk Configurations and Optional Disk Layouts in a retrofitting office. For 5E15 and later, added a data rule to the HARDWARE PLATFORM field.

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SEC. 7AV: SS7/PSU CALL PROCESSING SUPPORTING TCAP

1. BACKGROUND

The SS7 (Signaling System 7) PSU (Packet Switch Unit) Call Processing Supporting TCAP feature (97-CP-4246.G) is available with the 5E15 and later Software Releases. It is one of a set of features implemented to support the 5E15 SS7/PSU Architectural Enhancements (99-CP-4246) feature (see Division 2, Sec. 7AG). The purpose of the 97-CP-4246.G feature is to enhance TCAP (Transaction Capability Application Part) capabilities to support a Host GSM (Global SM).

Prior to 5E15, an SS7-PSU was able to support the signaling needs of ISUP trunks and certain TCAP services local to the GSM. Non-global switching modules in the 5ESS and CDX Switches continued to rely on the CNI signaling platform for CMT (CCS (Common Channel Signaling) Message Transport). The 5E15 base (99-CP-4246) architecture feature defines an internal CMT architecture allowing an SS7-PSU on a GSM to support the SS7 signaling needs of non-global SMs. In doing so, the GSM is now referred to as a Host GSM.

2. FEATURE DESCRIPTION

Building upon the base feature 99-CP-4246, the 97-CP-4246.G feature provides a number of call processing enhancements that are required in order for an SS7-PSU to support the signaling needs of other SMs in the office. For 5E15 and later, the 97-CP-4246.G feature allows TCAP communication between a NGSM (Non-GSM) and a GSM. The enhancements to the existing call processing software include:

1. ISUP Enhancements

   - Handling of ISUP calls when CMT within GSM is unavailable
   - Throttling of calls when CMT overload for GSM is detected

2. TCAP Enhancements

   - Handling of TCAP queries when CMT is unavailable
   - Throttling of TCAP queries when CMT overload is detected
   - Handling of TCAP queries when Host GSM is unavailable
   - Throttling of TCAP queries when Host GSM is experiencing overload
   - Prior to 5E15, TCAP services supported by the SS7 PSU signaling platform local to a GSM included:
     - LASS (Local Area Signaling Services)
     - NS800 (Number Service 800)
     - ISVM (Inter-Switch Voice Messaging)
     - CNAM (Analog Calling Name Display)
     - ASP 0.0 and 0.1 (Advanced Services Platform)

   This feature allows these same services to send/receive TCAP messages on non-global SMs to/from a Host GSM.

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3. SCCP Enhancements

   - New command OP:CCS, TPC that reports the translation point codes for a specified derived translation type that has been provisioned in a GSM

TCAP support on a PSU was introduced to the VCDX switch in the 5E13 Software Release. The OP:TPC enhancement is a new enhancement applicable to the VCDX Switch. The enhancements listed above are applicable to the SM-2000 and CDX Switches. The OP:CCS, TPC input and output messages are also applicable to the VCDX Switch.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCSTCAP	5567	3	5BH	8.42
CMTMH	6021	9	10U	16.16
TKGRP	5202	3	2A	5.1

CCSTCAP form (5567 Record) - This form provides the capability to determine, on a per SM basis, whether a TCAP application will use CNI or a particular GSM for its SS7 signaling message transport.

The PLATFORM is used to indicate whether CNI (enter "0") or GSM (enter 1 - 192) is being used.

CMTMH form (6021 Record) - This is a new 5E15 form used to define the message handler used for CMT for communication between a GSM and a NGSM.

Prior to this feature, TCAP applications on all NGSMs were restricted to selecting CNI as the signaling platform. With this feature, for TCAP applications selecting a GSM platform (CCS Message Transport), connectivity must be provisioned between the SM and the GSM on this form (see Division 2, Section 7AG for details on creating the CMT path). Note that when the TCAP applicaton is being used (i.e., APPLICATION field is entered), this form cannot be deleted.

- When CM VINTAGE on the EQCORE form is 2, the MH SM 1 entered on the CMTMH form must be defined on EQPIPE forms for both QLPS NETWORK 0 and QLPS NETWORK 1.

TKGRP form (5202 Record) - This form is used to define trunk group parameters. The following data rule was added to support this feature:

- The LOCAL SM entered, must have a matching GLOBAL SM and NON GLOBAL SM on the CMTMH form.

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SEC. 7AW: SS7 PSU TERMINAL MAINTENANCE SUPPORT

1. BACKGROUND

Prior to 5E14, an SS7 PSU was able to support the signaling local to the Global SM GSM (Global Switching Module). Examples where this was beneficial include the VCDX Switch (5ESS Switch Very Compact Digital Exchange) and SM's (Switching Modules) EXM (Extended Switch Module) ORM (Optically Remote SM). SMs without PSUs (Packet Switching Modules) in the 5ESS Switches continued to rely on the CNI (Common Network Interface) signaling platform for CCS (Common Channel Signaling) message transport. In 5E14SU, feature 97-CP-4246 (SS7 PSU Architectural Enhancements) defines an internal CCS message transport CMT (CCS Message Transport) architecture allowing an SS7 PSU on a Global SM to support the SS7 signaling needs of non-global SMs. In doing so, the Global SM is now referred to as a Host GSM.

2. FEATURE DESCRIPTION

Terminal Maintenance Support for SS7/PSU (Packet Switch Unit) feature is available with the 5E15 Software Release. The feature number is 97-CP-4246.L.

This feature is one of several features that is responsible for achieving CNI (Common Network Interface) parity on the PSU based SS7 signaling platform.

Terminal Maintenance Support for SS7 PSU feature is responsible for the building upon feature 97-CP-4246, a number of enhancements are needed to the existing terminal maintenance software in order for an SS7 PSU to support the messages needed to and from other SMs in the office. We need to support ISUP (Integrated Services Digital Network User Part) trunks on NGSMs (Non-Global Switching Module), and send blocking (BLO) and unblocking (UBL) when NGSM transitions to/from SM/CMT isolation. The MCAH (CCS7 Message Consolidation Achnowledgement Handler) mechanism that is being restructured in International will be ported back to US as part of our feature. Included with this will be new data relations and trigger functions. We will also be porting CADN (Circuit Administration) audits.

This feature is planned for and is applicable to the 5ESS and VCDX switches. This feature has a high dependency on the International "Base ISUP National CCS Maintenance Scaling" feature.

3. FEATURE ASSIGNMENT

No Feature Assignment information at this time.

4. TRANSLATION REQUIREMENTS

No Translation Requirements at this time.

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SEC. 7AX: LINK/MTP MEASUREMENTS FOR SS7 PSU ENHANCEMENT

1. FEATURE DESCRIPTION

The Link/MTP (Message Transfer Part) Measurements for SS7 PSU (Packet Switch Unit) Enhancements feature is available with the 5E15 Software Release. The feature number is 97-CP-4246.H.

This feature is one of several features that are responsible for achieving CNI (Common Network Interface) parity on the PSU based SS7 signaling platform.

The Link/MTP Measurements for SS7 PSU Enhancement feature is responsible for the modification and development of TRFC30 Reports for Service Providers with SM-based SS7 signaling on the PSU platform. These reports provide Service Providers with data regarding the performance of the signaling link sets and the network as a whole. The feature is targeted for the 5E15 BMI release and will include the following enhancements:

- The modification of TRFC30 Section 193 - PSUCHAN (Packet Switch Unit Channel) Measurements. Modifications to this report allow for the actual QPH pipe number instead of the physical channel number.
- The addition of the ERRS counter on TRFC30 Section 230 - MTP Signaling Link. This new count provides the number of seconds in which an error was received on the signaling link.
- The creation of TRFC30 Section 203 - SLS (Signaling Link Set) Performance. This report contains data regarding the signaling link sets such as link set type, available links, unavailable links and the duration of signaling link set unavailability.
- The creation of TRFC30 Section 204 - SNP (Signaling Network Performance). This report contains data regarding the signaling network performance such as APC isolations, link set failures, link set congestion, changeovers and alternate routing transitions.

2. FEATURE ASSIGNMENT

The modification of TRFC30 Section 193 - PSUCHAN. Modifications to this report allow for the actual QPH pipe number instead of the physical channel number.

The addition of the ERRS counter on TRFC30 Section 230 - MTP Signaling Link. This new count provides the number of seconds in which an error was received on the signaling link.

The creation of TRFC30 Section 203 - SLS performance. This report contains data regarding the signaling link sets such as link set type, available links, unavailable links and the duration of signaling link set unavailability.

The creation of TRFC30 Section 204 - SNP. This report contains data regarding the signaling network performance such as APC isolations, link set failures, link set congestion, changeovers and alternate routing transitions.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report.

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SEC. 7AY: WIRELESS SUPPORT OF SS7/PSU

1. FEATURE DESCRIPTION

The Wireless Support of SS7/PSU (Signaling System No. 7/Packet Switch Unit) feature is available with the 5E15 Feature Release 1 and later Software Releases. The feature number is 97-CP-4246.I.

This feature supports wireless call processing using SS7/PSU signaling links to/from the ECP (Executive Cellular Processor) via a host GSM (Global Switching Module) in new start 5ESS Switch DCS (Digital Cellular Switch) offices only. Prior to this feature, the 5ESS Switch DCS communicated via a common channel signaling link to/from the ECP. Call processing, status, and error messages are sent between the 5ESS Switch and the ECP on this link. For North American Region offices, the link is composed of a Data Link Node on a CNI (Common Network Interface) ring. This feature allows for the ECP signaling link to be connected to a host GSM instead of the CNI ring. Communication between the 5ESS Switch DCS and the ECP is over SS7/PSU signaling links between the Switch Modules and the host GSM.

The Wireless Support of SS7/PSU feature modifies the wireless call processing code in the 5ESS Switch DCS to allow communication to/from the ECP when the office is configured with SS7/PSU signaling links via a GSM. This feature does not affect existing 5ESS Switch DCS (CNI) offices that retrofit to the 5E15 Software Release.

2. FEATURE ASSIGNMENT

For 5E15 and later, provision the Wireless Support of SS7/PSU feature according to the steps listed.

- At the 5ESS Switch DCS, provision SS7 data links to the ECP.
- Populate the LNKSET form to provision SS7 data links.
- Set the COMMON CHAN SIG field to "PSU" or "ALL" on the OFCOPT form (5509 Record) to provision the AMPS DCS global switching module for this feature.
  - ***NOTE:*** The COMMON CHAN SIG field on the OFCOPT form cannot be set to "CNI" to provision this feature.
- For Wireless support of SS7/PSU for Compact Digital Exchange or the 5ESS Switch, populate the AMPS DCS GSM field on the APXPARM form with a valid GSM value defined on the CCGSM form (see Division 7, Section1A, for more detailed information).

See provisioning form flow on Figure 1.

3. TRANSLATION REQUIREMENTS

ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
APXPARM	5050	7	1A	8.28

APXPARM (5050 Record) - This form is used to administer global parameters that are required when a 5ESS Switch is functioning as a DCS in a cellular network. For 5E15 and later, added the AMPS DCS GSM field and related data rules.

4. GLOSSARY

AMPS	Advanced Mobile Phone Service
CDX	Compact Digital Exchange
CNI	Common Network Interface

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DCS	Digital Cellular Switch
ECP	Executive Cellular Processor
GSM	Global Switching Module
PSU	Packet Switch Unit
SS7	Signaling System No. 7

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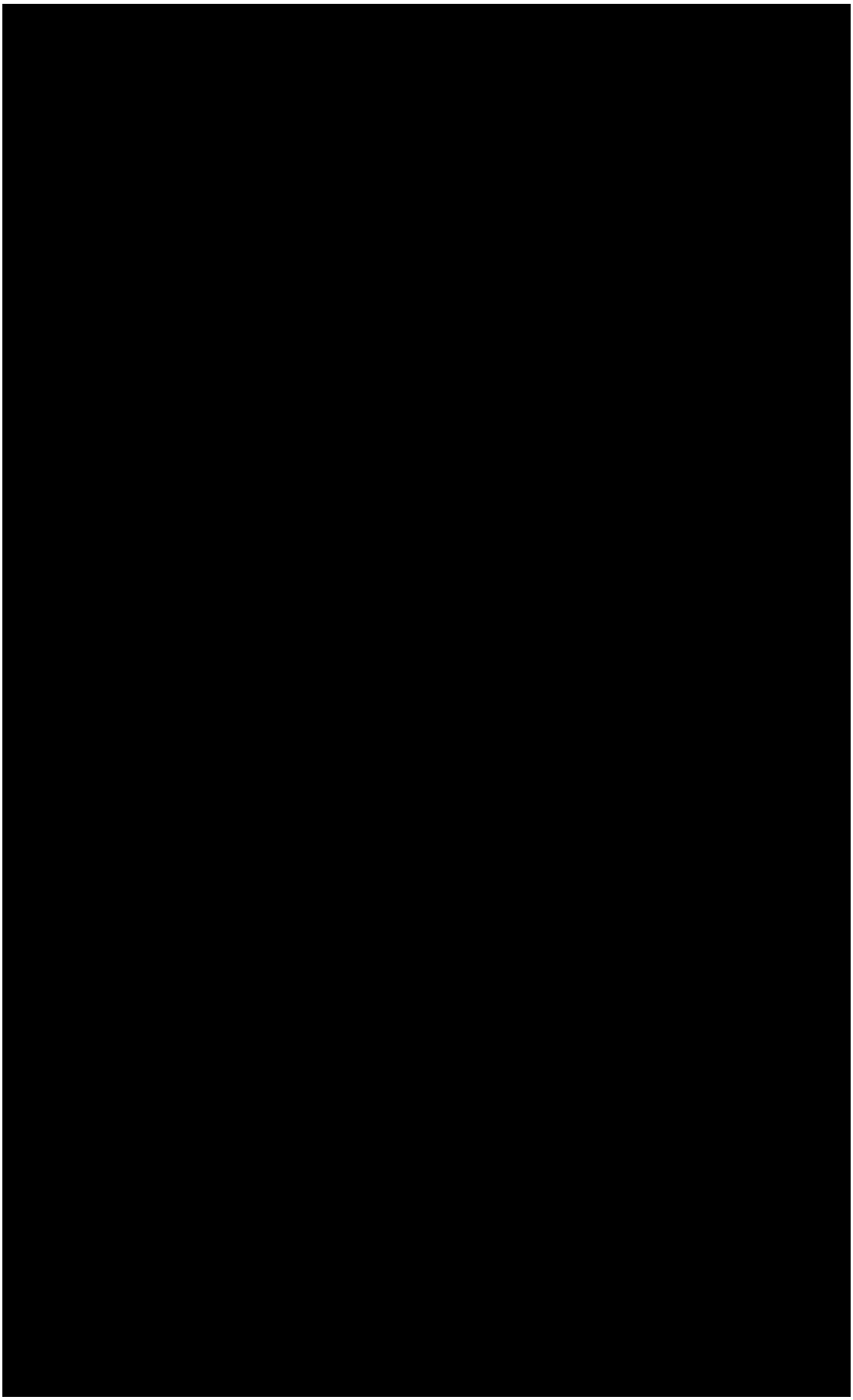

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Figure 1 WIRELESS SUPPORT OF SS7/PSU FORM FLOW

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SEC. 7AZ: DLTU EXTERNAL ECHO CANCELLATION

1. FEATURE DESCRIPTION

The DLTU (Digital Line and Trunk Unit) External Echo Cancellation feature is available in the 5E14FR3 (Feature Release 3). The feature number is 99-5E-7296.

This feature provides the capability for each 5ESS Switch equipped with DLTU(2) units in the path of a call, to perform echo cancellation on a per call basis. In order for the external echo cancellers to provide per call control, the 5ESS Switch must send messages to the external echo canceller frame to tell it when to turn the echo cancellers on or off.

The STS I (Synchronous Transport Signal - 1) External Echo Cancellation (5E13) feature (99-5E-3487) is the base feature for the DLTU External Echo Cancellation feature. For information on the base feature, see Division 2, Section 9P.

2. FEATURE ASSIGNMENT

For 5E14 and later, to provision this feature:

- Insert a DLTU on the EQDU form (5730-1 Records):
  - TYPE must be set to "DLTU24" or "DLTU48".
- Insert a DFI on the EQDUP form (5730-2 Record):
  - TYPE FAC fields FAC 0 and FAC 1 must be set to "T1CHNL", and APPLFAC fields for FAC 0 and FAC 1 must be blank.
- On the ENETPIPE form (5826 Record), set the fields as follows:
  - ENET PIPE is defaulted to 0.
  - Set MH to 2.
  - Set EIB TYPE to "MHEIB".
  - Set SERV TYPE to "EEC".
  - Set DUPLEX HUB to "Y" (for duplex configuration).
  - Set MANAGED HUB to "Y" (managed configuration) or "N" (unmanaged configuration).
  - Set the EIB and HUB IP ADDRs according to the value of DUPLEX HUB (these fields may or may not be required based upon the value of DUPLEX HUB and MANAGED HUB).
- On the ENETLINK form (5827 Record), set the fields as follows:
  - ENET LINK is defaulted to 0.
  - Set ENET LINK NBR to any valid value.
  - Set MH to 2.
  - Set SERV TYPE to "EEC".

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- Set DUPLEX to "N".
- SND PORT and RCV PORT will automatically be set the same based upon the value of SERV TYPE.
- All IP ADDRs will be set based upon SERV TYPE and ENET LINK NBR.
- All HW ADDRs must be entered.

- Insert a FAC2EEC form (5873 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
FAC2EEC	5873	8	81	19.27

FAC2EEC form (5873 Record) - The Facility to External Echo Cancellation form is used to associate a 24 channel DFI (Digital Facility Interface) or DFI-2 on a DLTU or DLTU (2) with a DS1 (Digital Signal 1) port on a particular QECLI (Quad Echo Canceller Line Interface) pack on an EEC (External Echo Canceler). This is a new form that supports this feature.

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SEC. 7BA: SS7 PSU CONVERSION

1. FEATURE DESCRIPTION

The SS7 (Signaling System 7) PSU (Packet Switching Unit) Conversion feature is available with the 5E15 FR2 (Feature Release 2) and the 5E16 BMI (Beginning of Managed Introduction) Software Releases. The feature number for this feature is 99-CP-4916.

The purpose of this feature is to provide the capability for converting an SS7 signaling platform from a CNI (Common Network Interface) to a Host GSM (Global Switching Module).

The conversion is broken down into four phases:

1. **Host GSM Installation Phase**

   During this phase a Host GSM that is eventually used as the primary SS7 platform is provisioned in the office with MTP/SCCP (Message Transport Part/Signaling Connection Control Part) routing data obtained from the CNI. There are two CNI-to-PSU conversion options (with sub-options) that the customer must consider at this time:

   - The *Dual Links* method of conversion defines a new equal or lower priority route terminating to the Host GSM. If the links to the Host GSM are defined at the adjacent STP (Signal Transfer Point) as a lower priority route, the key concept with the conversion is that, when the higher priority routes to the CNI platform are removed from service, the adjacent STP re-routes the MSU (Message Signaling Unit) traffic over the lower priority route to the Host GSM platform. Note that for this option to work successfully, the adjacent STP vendor must be able to support alternate routing for an APC (Adjacent Point Code), also referred to as higher/lower cost routing.

     It may also be possible for the adjacent STP to define the links to the Host GSM as having an equal priority as that of the CNI links. This would define the Host GSM links as a component member of a CLS (Combined Linkset) and the STP would "loadshare" the inbound 5ESS MSU traffic on both platforms. Thus if this scenario is used, the Host GSM links could not be made available to the STP until the end of the Pre-Cutover phase to avoid having the adjacent STP send inbound traffic to the Host GSM platform. Additionally, for this scenario, the adjacent STP must be capable of defining two link sets to the same APC.

     There are two sub-options which must also be considered with the Dual Links method:

     - If the Host GSM is installed new to the office, it is provisioned with a new PC (Point Code) which is required to be different from the CNI OPC (Origination Point Code). New signaling links members, LS (Linkset) and/or CLS (Combined Linkset) routing are provisioned between the adjacent STP office and the Host GSM. The routing data at the adjacent STP office then defines this new PC as a lower priority alternate route for the CNI OPC and any of its alias OPCs. ISUP (ISDN (Intergrated Services Digital Network) User Part) test trunks are also temporarily "grown in" prior to the cutover so that all CMT (CCS (Common Channel Signaling) Message Transport) path provisioning and MTP network routing can be correctly validated.

     - If an existing Host GSM is to be used (if using an Island GSM, it must first be converted to a Host GSM), it either assumes the primary and alias OPCs of the CNI, or it assigns the primary and alias OPCs of the CNI as Host GSM alias OPCs. Having an existing Host GSM assume the primary OPC of the CNI requires all of its applications (ISUP, TCAP (Transation Capability Application Part)) to be first moved to the CNI platform for the conversion. If the Host GSM is assigned the CNIs primary and

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alias OPCs as alias OPCs, the alias OPC feature must be unsecured (the ACT field for that Secured Feature ID must be set to "N" on the SFSYS form (5712-1 Record)) at the time of the conversion. This option also requires the adjacent STP to provision the existing Host GSM OPC as a lower priority route for the CNI OPC.

- The *Swing Links* method of conversion requires the use of a time slot cutover device, such as a DACS (Digital Access and Cross-Connect System) to "swing" existing SS7 links from the CNI platform over to the PSU platform. The key concept of this option is that the conversion is transparent to the adjacent STP office. Additionally, this method is the only option available for the wireless DCS office because the ECP (Executive Cellular Processor) supports the definition of only a single CLS to the MSC (Message Service Center). Again, there are two sub-options which must also be considered:

  - If the Host GSM is installed new to the office, it is provisioned with a new PC (Point Code) which is required to be different from the CNI OPC. However, since the adjacent STP is not aware of this OPC, the Host GSM requires temporary signaling links to be provisioned either as F-Links to the CNI, or to test equipment such as the Tekelec MGTS (Message Generator And Traffic Simulator). This is needed to verify the MTP/SCCP routing and ISUP handling of the Host GSM before it enters the Pre-Cutover Phase.

  - If an existing Host GSM is being used, most likely the only reason for using this method is that the adjacent STP vendor does not support alternate routing for the APC. The same issues apply as with the Dual Links method. The Host GSM either assumes the primary and alias OPCs of the CNI, or it assigns the primary and alias OPCs of the CNI as Host GSM alias OPCs.

2. **Pre-Cutover Mode Phase**

During this phase the office is conditioned for the actual cutover, which takes place in the next phase. The service provider performs a Recent Change update (view 8.15) to change the "CUTOVER MODE" parameter (Display Only field for ODA) to "PRECUT", the "HOST PLAT 1" parameter to the CNI platform (0), and the "HOST PLAT 2" parameter to the target Host GSM platform (GSM number). With this Recent Change update, call processing still transmits all CNI defined outbound ISUP and TCAP traffic over the CNI platform. Any application defined for an existing Island or Host GSM platform is unaffected.

ISUP trunk data currently defined to use the CNI platform is then populated from the AM to the Host GSM and the CCS PHs (Protocol Handlers). The other actions performed here depends on the GSM installation option that was previously chosen.

- If the Host GSM was installed new to the office, it is now re-assigned the same primary and alias point codes as the CNI platform. Note that when this is done, any active SS7 signaling test links "grown in" as part of Host GSM installation will fail due to the periodic SLT (Signaling Link Test). A solution is to inhibit the SLT at both ends of each SS7 link. For the Dual Links method, coordinated DPC (Destination Point Code)/linkset changes must also be made at the STP to coincide with the new primary OPC and the Host GSM SS7 links removed from service to prevent them from carrying inbound (from STP) traffic before the next phase (Cutover Mode) is started.

- If an existing Host GSM is being used (or it was converted from an Island GSM) the customer must decide if the Host GSM's primary point code is retained or not.

  - If the Host GSM's primary OPC is being retained, the CNI primary and alias point codes

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are assigned as alias point codes on the Host GSM. Note that the alais OPC feature must be unsecured (the ACT field for that Secured Feature ID must be set to "N" on the SFSYS form (5712-1 Record)) at this time.

- If the Host GSM's primary OPC is not being retained, then all ISUP trunks using the Host GSM's SS7 PSU must be moved to the CNI (that is, "degrown", then "grown" back with OPC equal to CNI point code) and all TCAP (Transaction Capabilities Application Part) applications on the Host GSM must have their platform set to CNI. This is done so that the GSM can change its primary OPC without experiencing a loss of ISUP/TCAP traffic.

- A third alternative is to re-assign the Host GSM's primary OPC as an alias OPC, and then assign the CNI's primary OPC as the Host GSM's primary OPC (likewise for any CNI alias OPC as Host GSM alias OPC). There is significant potential for service interruption with this alternative and coordination with adjacent signaling points to reconfigure links/linksets is required.

3. **Cutover Phase**

The actual flash cutover of signaling traffic from the CNI platform to the Host GSM platform takes place during this phase. The action performed here also depends on the conversion option that was previously chosen.

- If the Dual Links method is being used, then all of the SS7 signaling links to both platforms are affirmed to be in service. The service provider performs a Recent Change update (view 8.15) to change the "CUTOVER MODE" parameter (Display Only field for ODA) to "POSTCUT". With this Recent Change update, call processing begins transmitting all CNI defined outbound ISUP and TCAP traffic over the Host GSM (as specified in the "HOST PLAT 2" parameter of RCV view 8.15). All CNI defined inbound ISUP and TCAP traffic will still be received solely over the CNI platform because of the primary routing condition at the adjacent STP. Next, all of the SS7 signaling links terminating to the CNI platform are then removed from service. Alternate routing at the adjacent STP will then reroute the CNI defined inbound ISUP and TCAP traffic to the Host GSM SS7 signaling links.

- If the Swing Links method is being used, the time slot cutover device is used at this time to "swing" the links from the CNI platform to the Host GSM platform. First, approximately half of the signaling links terminating on the CNI platform are "moved" to the Host GSM. As soon as these links come in service on the Host GSM, all CNI defined inbound ISUP and TCAP traffic is "load shared" over both the CNI and the Host GSM platforms by the adjacent STP. Each platform sends the SS7 traffic to the appropriate SM (Switching Module) for processing. The service provider then performs a Recent Change update (view 8.15) to change the "CUTOVER MODE" parameter (Display Only field for ODA) to "POSTCUT". With this Recent Change update, call processing begins transmitting all CNI defined ISUP and TCAP outbound traffic over the Host GSM (as specified in the "HOST PLAT 2" parameter of RCV view 8.15). Inbound ISUP and TCAP traffic is still "load shared" over both the CNI and the Host GSM platforms. At this point, the remaining signaling links on the CNI platform are "moved" to the Host GSM. All inbound/outbound SS7 traffic is now being supported by the Host GSM platform.

4. **Post-Cutover Phase**

Executing this phase commits the office to use the Host GSM instead of CNI.

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Once a service-provider determined "soak interval" of the new GSM platform is completed, the internal ISUP and TCAP data is modified to indicate the Host GSM as the primary platform. A SODD (Static Office Dependent Data) audit is then requested to validate the data population that was made in the previous phases. The office is removed from cutover mode by performing a Recent Change update (view 8.15) to change the "CUTOVER MODE" parameter (Display Only field for ODA) to "NONE". With this Recent Change update, call processing goes back to transmitting all ISUP and TCAP traffic using the platform specified in the internal data.

The service provider can then "degrow" the CNI software and hardware. If cutover was facilitated by each platform having its own links, the adjacent STP needs to update its routing tables to make the Host GSM links the primary (first choice) route for the OPC. Note that once the Post-Cutover phase has been completed and the office is removed from cutover mode, re-activation of CNI as the primary signaling platform is not desirable, but can still be done by reversing the steps of the cutover procedure. However, there are service-provider issues that must be considered when using the procedures to unwind the conversion. These issues relate to interval of time between the conversion and the backout and the amount of new RCV (Recent Change and Verify) activity that has taken place during this interval. Examples are new and deleted trunk members, MTP routing data, etc., which would have been done in relation to the Host GSM platform.

2. FEATURE ASSIGNMENT

For 5E15 FR2 and later, to activate this feature, the ACT field for SFID 563 on the SFSYS form (5713-1 Record) must be set to "Y". Also, the ACT field for the OFID 973 on the FOSYS form (5713-2 Record) must be set to "Y".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCLNK	6004	9	10D	16.6
OFCOPT	5509	3	5I	8.1
TKGRP	5202	3	2A	5.1

CCLNK form (6004 Record) - This feature provides the capability to satisfy Bellcore generic requirements for provisioning of DNU-S VT facilities (DS1). Modified a data rule for the GSM field.

OFCOPT form (5509 Record) - This form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. Added the Display Only fields CUTOVER MODE, HOST PLAT 1, and HOST PLAT 2.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). Added the Display Only field, PLATFORM.

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SEC. 7BB: SAAL SS7 HIGH SPEED SIGNALING LINKS

This section has been moved to Division 2, Section 4A670.

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SEC. 7BC: HIGH AVAILABILTY ASM

1. FEATURE DESCRIPTION

The High Availability ASM (Administrative Switching Module) feature is available with the 5E15 and later Software Releases. The feature number is 99-5E-7564.

This feature is the ASM Base functionality to introduce and take advantage of new hardware configurations. A newer Sun processor than the existing ASM along with increased storage and external terminal servers are used in a duplex configuration to provide greater availability than a single processor by using application failover, shared/mirrored disk space, redundant hardware and other high availability techniques. This work implements the operation, administration, maintenance and provisioning of the dual-processor configuration as well as a single processor configuration. Also supported is the existing configuration and an enhanced version of the existing configuration.

No ODA forms are changed or modified to support this feature.

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SEC. 7BD: EDGE TO EDGE ROUTING

1. FEATURE DESCRIPTION

The feature number for the Edge to Edge Routing feature is 99-5E-7683. This feature is being deployed in the 5E15 FR2 (Feature Release 2) Software Release.

This feature provides network capabilities and operations support to route calls from the OES (Originating Edge Switch) to a TES (Terminating Edge Switch). Currently, edge-to-edge routing is accomplished by routing calls through the 4ESS network.

The new capabilities that are being added for the Edge-To-Edge Routing feature include the following:

1. The TES now has the ability to identify and process APN (Action Point Numbers) calls that are identified as being in a "private" numbering plan, either coming on an IC (Incoming) trunk from a 4ESS Switch, or from a 5ESS OES Switch.

2. The TES also now has the ability to identify and process calls with a Pseudo or LEC (Local Exchange Carrier) type, and process them using a local EON (End Office Nodal) DAS (Digit Analysis Selector).

3. The 5ESS OES/TES Switch combination has the ability to perform a Reroute-on-Release from the TES to the OES, and add a "TTA Avoidance" feature code to an existing SAP (Service Access Point) parameter in the subsequent IAM (Initial Address Message) sent to the 4ESS Switch, or create a SAP parameter with a "TTA Avoidance" feature code, if one does not exist. This "TTA Avoidance" feature code tells the 4ESS network to complete the call using the 4ESS network, and avoid trying to complete the call through the 5ESS edge network. When the "TTA Avoidance" feature code is added to an existing SAP parameter, it must be added at the end of the SAP parameter.

4. This feature populates a carrier ID in all calls egressing the 5ESS OES, whether the call is to be upchained/routed to the 4ESS or the 5ESS TES. The precedence of carrier determination is as follows:

   - Carrier is Returned in an Analyze Route reply for a SA (Service Activation) OHD (Off-Hook Delay) or ADL V (AT&T Digital Link V) OHD trigger.

   - Carrier is Received in incoming IAM signaling

   - Carrier is taken from carrier ID on RC/V (Recent Change and Verify) 5.1

   - Carrier is taken from global office default on RC/V 8.1

5. This feature controls the usage of EON Suppression when leaving the AT&T network. The EON Suppression field is a bit on RC/V 10.2 that controls the sending of AT&T proprietary parameters. There are 2 cases as follows:

   - For ADL V calls, if EON Suppression equals "Y", the Charge Number parameter in the ISUP IAM is populated from the originating TG (Trunk Group) BN (Billing Number) instead of just being dropped when EON CN (Charge Number) Suppression is active. If the TG BN is not populated, the ISUP (ISDN (Intergrated Services Digital Network) User Part) Charge Number parameter should be populated with zeros with Nature of Address indicator set to "ANI not available or not provided". When EON CN Suppression is not active, the Charge Number in the ISUP IAM contains the Charge Number returned in the Analyze_Route message.

   - For Traffic Transition Phase I Switched Access Calls, and for TES switch calls, the following

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parameters are not sent in the IAM:

- OLI,
- Charge,
- APP with AT&T proprietary context,
- GAP (Generic Address Parameter) with a type address of dialed number,
- GAP with an address of "LANI",
- AP with AT&T proprietary parameters, and
- CICP (Carrier Identification Code Parameter).

2. FEATURE ASSIGNMENT

There are no new forms or new fields added for this feature.

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SEC. 7BE: DISK RECONFIGURATION AND GROWTH-STANDING

1. FEATURE DESCRIPTION

The Disk Reconfiguration and Growth-Standing feature is being deployed for the Beginning Managed Introduction of the 5E16 Software Release. The feature number is 99-5E-7721.

This feature provides the ability to replace the current optional disk configuration with a disk configuration that has more system storage capacity and to modify the AMA (Automatic Message Accounting) storage ratio on optional disk pairs.

Moving Head Disks are reconfigured to provide greater system storage capacity. Each disk configuration requires a minimum number of disk pairs. In some cases, additional disk pairs can be added (i.e., disk growth) to increase the AMA data storage capacity of the office. Disk growth is limited by the maximum number of disk pairs that the disk configuration supports.

2. FEATURE ASSIGNMENT

There is no special provisioning required for this feature.

3. TRANSLATION REQUIREMENTS

There are no new forms or new fields added for this feature.

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	N/A
OFCOPT	5509	3	5I	8.15

ECDOPT form (5706 Record) - This form is used to define Administration Module options for all offices. For 5E16 and later, the valid entry "21 (non-entry)" was modified for the DISK CONFIG field to change the applicability of the Software Release and the valid entry "22 (non-entry)" was added for the DISK CONFIG field.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. For 5E16 and later, a data rule was modified for the ODD DISK SIZE field to change the applicability of the Software Release.

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SEC. 7BF: SS7 PSU SIGNALING MONITOR

1. FEATURE DESCRIPTION

The SS7 (Signaling System 7) PSU (Packet Switch Unit) Signaling Monitor feature is available with the 5E16 and later Software Releases. The feature number is 97-CP-7525.

This feature defines a new SS7 PSU link monitoring tool that can be used to report SS7 MTP (Message Transport Part) signaling messages being received over GSM (Global Switching Module) link(s). The tool also reports informative indicators regarding GSM link failure/restoration.

Also, this feature is a CNI (Common Network Interface) parity feature that defines a new input command (OP:CCS,MON), and two new output reports. The input command can be used to request that the link monitor be turned on or off. It may also be used to determine the status of the monitor for specific link(s). When the monitor is on, events associated with signaling links, triggers reports that are not normally output. Turning the monitor off inhibits new events from generating output. The status reports whether the monitor is currently on or off.

2. TRANSLATION REQUIREMENT

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LNKSET	6003	9	10C	16.5

LNKSET form (6003 Record) - This form is used to define CCS7 (Common Channel Signaling 7) signaling link sets. Modified the valid entry for the LINK SET NAME field.

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SEC. 7BG: RECENT CHANGE CRITICAL INDICATORS FOR SS7 PSU

1. FEATURE DESCRIPTION

The Recent Change Critical Indicator for SS7 (Signaling System 7) PSU (Packet Switch Unit) feature is available with the 5E15 Feature Release 1 and 5E16 BMI (Beginning Managed Introduction)Software Releases. The feature number is 97-CP-7828.

This feature is intended for additional protection of data available on the Recent Change and Verify views related to signaling associated with the GSM (Global Switching Module)
and the SS7 PSU (Signaling System 7 Packet Switching Unit PSU) in a 5ESS Switch.

The new protection mechanism used on the specified forms are based on a new critical data indicator field that is being added to each form/view involved. This critical data indicator field allows the customer to mark a form/view as critical for SS7 PSU functionality usage. This protects the form/view from human errors which can result when deleting or updating the data accidentally.

When there is a need to update (or delete) any data on the form/view marked as critical, then the critical data indicator field must be changed to "N" first before any update (or delete) operation can be completed.

2. FEATURE ASSIGNMENT

For 5E15 and later, to provision this feature:

- Set the CRIT IND field to "Y" on any of the forms/views listed in the table below.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCGSM	6008	9	10H	16.1
CCLNK	6004	9	10D	16.6
CCNET	6010	9	10K	16.20
CCPBD	6012	9	10M	16.22
CCSGT	6015	9	10N	16.25
CCSPR	6011	9	10L	16.21
CCTGM	6013	9	10P	16.23
CCTT	6014	9	10O	16.24
CLKSET	6005	9	10E	16.7
CLU	6020	9	10T	16.9
CMTMH	6021	9	10U	16.16
LNKSET	6003	9	10c	16.5
MDLNK	6009	9	10J	16.17
NID	6019	9	10S	16.8
PC	6006	9	10F	16.10
SAALHSL	6016	9	10V	16.26
SAALPRM	6017	9	10W	16.27

CCGSM form (6008 Record) - This form is used to specify data used for the global switching module. One CCGSM is entered for each office, up to a maximum of 16 per SM. Added the CRIT IND field.

CCLNK form (6004 Record) - The external link set member form, is used to define the CCS7 (Common Channel Signaling System No. 7) link sets and members. Added the CRIT IND field.

CCNET form (6010 Record) - The SCCP (Signalling Connection Control Part) network definition form was added to support the VCDX SS7 on the PSU feature. For more information concerning this feature, see Division 2, Section 7L. Added the CRIT IND field.

CCPBD form (6012 Record) - The SCCP (Signaling Connection Control Part) Primary/Backup Destination Record is used to define the primary and backup destinations for SCCP signaling. Added the

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CRIT IND field.

CCSGT form (6015 Record) - The SCCP (Signaling Connection Control Part) Single Global Translation form is used to maintain the single fixed or primary plus secondary digit string for Global Translations. Added the CRIT IND field.

CCSPR form (6011 Record) - The SCCP (Signalling Connection Control Part) parameter definition form is used to define individual parameters for a SCCP GSM (Global Switching Module). Added the CRIT IND field.

CCTGM form (6013 Record) - The SCCP (Signalling Connection Control Part) Translation Group Mask form defines the SCCP GTT (Signaling Connection Control Part Global Title Translation) mask for a translation group. Added the CRIT IND field.

CCTT form (6014) - The SCCP (Signalling Connection Control Part) Translation Table form is used to define whether the global title data in the called party address will receive Global Title Translation or Point Code Extraction treatment. Added the CRIT IND field.

CLKSET form (6005) - This form is used to define the link sets that comprise the combined link set. Added the CRIT IND field.

CLU form (6020 Record) - This form is used to define the MTP (Message Transport Part) cluster route sets that supports the SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP Routing Enhancements feature. Added the CRIT IND field.

CMTMH form (6021 Record) - This form defines which message handler will be used for CCS (Common Channel signaling) message transport for communication between a GSM (Global Switching Module) and a NGSM (Non-GSM). Added the CRIT IND field.

LNKSET form (6003 Record) - This form is used to define CCS7 signaling link sets. Added the CRIT IND field.

MDLNK form (6009 Record) - This form is used to specify and update the message delivery link and the "bunny-hop" PH (a link internal to the SM where SS7 messages originate or terminate). Added the CRIT IND field.

NID form (6019 Record) - This form is used to define the MTP (Message Transport Part) network route sets that supports the SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP Routing Enhancements feature. Added the CRIT IND field.

PC form (6006 Record) - This form is used to specify the point code and alternate link set routing for PSUs (Packet Switching Units). Added the CRIT IND field.

SAALHSL form (6016 Record) - This form defines the OXU (Optical Extended Control and Data Unit) hardware on an SM (Switching Module). Added the CRIT IND field.

SAALPRM form (6017 Record) - This form is used to define values of a High Speed Signaling Link Parameter Set. Added the CRIT IND field.

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SEC. 7BH: PSU CA EXPANSION

1. FEATURE DESCRIPTION

The PSU (Packet Switch Unit) CA (Community Address) Expansion (99-5E-8012) feature is available with 5E14 FR4 and 5E16 and later Software Releases. This feature allows more than 255 PSU community addresses in a wireless network to support soft handoff. This feature introduces a new sub-network concept where up to 254 PSU community addresses are logically grouped together (community address 0 and 255 are reserved. Frames that are destined for a different sub-network will be sent to a Gateway PHA (Protocol Handler ATM (Asynchronous Transfer Mode)) and the Gateway PHA routes the frames to the appropriate PSU in the destination sub-network. Each Gateway PHA can be assigned to only a unique sub-network combination (i.e., 0/1). Also, the community address of the Gateway PHA should not be reused in any PSU sub-network. As a result, the total number of PSUs in an entire wireless network is (number of sub-networks x (254 - total number of Gateways)). This feature cannot be activated until the PSUs are connected in an ATM (Asynchronous Transfer Mode) multipoint environment.

2. FEATURE ASSIGNMENT

Before populating the PSUGW form, gateway PHA (PHA1) must be defined on the EQPSUPH form (5742 Record). Then, Gateway PHA must be provisioned on the PSULNK form (5057 Record) as follows:

1. enter the NEAR COM ADDR/NEAR SM/NEAR PSU fields; NEAR COM ADDR must not be equal to the COM ADDR on the PSULNK form.

2. FAR COM ADDR/FAR SM/FAR PSU must be blank, and

3. the CON TYPE field must be "ATMGW".

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQPSUPH	5742	8	23	22,2
PSUGW	5991	5	3Q	22.26
PSULNK	5057	7	2A	22.22

EQPSUPH form (5742 Record) - This form is used to define PSU Protocol Handler units. To support this feature, the existing CLI value of 10 hex, used for the PHA1 CDMA (TN1845) pack, must be defined. For 5E16 and later, the PSU field and related data rules were added to support the Double PSU Packet Bus feature (see Division 2, Section 4A607).

PSUGW form (5991 Record) - This is a new form to support the PSU CA Expansion feature. It is used to assign a gateway community address to a PSU. To activate this feature, the FEATURE ACTIVE field must be set to "Y". For 5E16 and later, the valid entries for the PSU field were added to support this feature.

PSULNK form (5057 Record) - This form is used to define links between PSUs using PHA1s for either intra-switch or inter-switch links. A new valid entry of "ATMGW" was added for the CON TYPE field. For 5E16 and later, the valid entries for the NEAR PSU and FAR PSU fields were added to support the Double PSU Packet Bus feature (see Division 2, Section 4A607).

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SEC. 7BJ: MCC LOGIN PROTECTION

1. BACKGROUND

Prior to this feature (5E15 and earlier), the MTTY did not require a password to login, and the only authentication available was authority checking based on terminal restrictions.

2. FEATURE DESCRIPTION

The MCC (Maintenance Control Console) Login Protection feature is available with the 5E15 Feature Release 4. The feature number for this feature is 99-5E-7895.

This feature provides login/password on the MTTY (Maintenance Teletypewriter) during normal system operations. The MTTY is used as the MCC and EAI (Emergency Action Interface). Users must first login on the MTTY with a login and password before they can enter any commands or perform any operations on the MTTY. Once a user successfully logs in, the user has the same capabilities on the MTTY as they currently have.

This feature supports a maximum of 1,023 user logins and passwords to allow different users to have their own unique login and password. The user login and password for the MTTY are administered via the Command Restriction feature's administrative commands as is done for the other terminals.

Login administration can be handled remotely from the SCCS (Switching Control Center System). This administration includes resetting or changing passwords, modifying password aging duration, and turning the terminal timeout on and off. This feature allows for a timeout screen lock.

3. FEATURE ASSIGNMENT

3.1 Overview

Once the feature is activated, the existing login and password data associated with the Command Restrictions capability is downloaded to the MTTYC (MTTY Controller (UN597)). The downloaded data is an indicator to the MTTYC that the 5ESS Switch is configured with the MTTY lock capability. The MTTYC honors a request to manually lock the MTTY via a new poke from the EAI page or take action to automatically lock the MTTY following an ECD (Equipment Configuration Database) defined period of keyboard inactivity. Once in a locked state, access to the MTTY is blocked until a user successfully logs in. With a successful login, the MTTY is returned to a state of normal operation with access to DAP (Display Administration Process) display pages, EAI, and craft commands.

3.2 Feature Activation

Feature activation begins by enabling the feature in the ECD. The next step is to populate the Command Restrictions Authority file with user records. Feature activation only indicates if the office is capable of using the feature; it does not solely indicate whether the feature is on. With an activated feature, user records in the Authority file are used to determine if the feature is on or off. For example:

- Feature activated in the ECD:
  - No Authority file - the feature is off.
  - Authority file has terminal records only - the feature is off.
  - Authority file has one or more user records - the feature is on.
- When the feature is not activated in the ECD, the feature is off and the Authority file is not considered.

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When the feature is activated and the feature is off, the MTTY does not have the locking capability. Conversely, when the feature is activated and the feature is on, the MTTY does have the locking capability.

3.3 MTTY Lock

Once the feature is activated and on, there are only two ways the MTTY can be locked. The MTTY can be locked by manually executing the Lock MTTY poke on the EAI page. This causes the MTTY to lock immediately. Enabling the keyboard inactivity timeout can also be used to automatically lock the MTTY. The automatic lock capability would cause the MTTY to lock automatically after a set period of time of keyboard inactivity. If the feature is activated and on, and the keyboard inactivity timeout is disabled, then the MTTY would never lock automatically. The only way the MTTY could be locked in this case would be via the manual Lock MTTY poke on the EAI page.

Assuming the feature is activated and on, and the MTTY is locked, the only way the MTTY can be unlocked is by a user with a login and password in the Authority file or with a level 52 or higher boot. In the case of a boot, the MTTY remains unlocked during the switch initialization interval. At the conclusion of the switch initialization interval, the keyboard inactivity timeout value takes effect. If there is no keyboard inactivity value, then the MTTY does not lock without manual intervention. If there is a keyboard inactivity timeout value, then the MTTY locks after that timeout interval expires assuming no one has touched the MTTY keyboard.

The following conditions do not affect the lock state of the MTTY:

- level 51 system-initializations
- port-switches
- craft-initializations
- offline-boot.

In any of these cases, if the MTTY is locked before the condition, it remains locked afterward. Likewise, if the MTTY is unlocked prior to the condition, the MTTY remains unlocked afterward.

During new installations, conversions, retrofits, or any other time where intermittent access to the MTTY is necessary, it is recommended that if the feature is activated and on, that the MTTY terminal inactivity timeout value be set to zero, thereby preventing the MTTY from locking automatically. The user still has the flexibility to lock the MTTY by using the poke on the EAI when necessary.

This feature provides the capability to lock the MTTY on an office basis and not for an individual user. For example, if user "A" is currently accessing the MTTY and then the keyboard inactivity timeout kicks in, or even if the user used the quick lock poke to lock the MTTY, any user with a login/password may now log on the MTTY. The MTTY is not reserved for a particular user (for example, user "A") after the MTTY is locked.

4. TRANSLATION REQUIREMENTS

There are no new or modified forms for this feature.

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SEC. 7BK: DOUBLE PSU PACKET BUS

1. FEATURE DESCRIPTION

The Double PSU (Packet Switching Unit) Packet Bus feature for CDMA (Code Division Multiple Access) or TDMA (Time Division Multiple Access) is made available with the 5E16 FR 2 (Feature Release 2) Software Release. The feature number is 99-5E-7797. The following list includes separate SFIDs (Secured Feature IDs) for the number of SMs (Switching Modules 2000) that are required:

- □ SFID 636 □ Dual PSU RTU feature for 1 SM
- □ SFID 637 □ Dual PSU RTU feature for 2 SMs
- □ SFID 638 □ Dual PSU RTU feature for 3 SMs
- □ SFID 639 □ Dual PSU RTU feature for 4 SMs
- □ SFID 640 □ Dual PSU RTU feature for 5 SMs
- □ SFID 641 □ Dual PSU RTU feature for 6 SMs
- □ SFID 642 □ Dual PSU RTU feature for 7 SMs
- □ SFID 643 □ Dual PSU RTU feature for 8 SMs
- □ SFID 644 □ Dual PSU RTU feature for 9 SMs
- □ SFID 645 □ Dual PSU RTU feature for 10 SMs
- □ SFID 646 □ Dual PSU RTU feature for 11 SMs
- □ SFID 647 □ Dual PSU RTU feature for 12 SMs
- □ SFID 648 □ Dual PSU RTU feature for 13 SMs
- □ SFID 649 □ Dual PSU RTU feature for 14 SMs
- □ SFID 650 □ Dual PSU RTU feature for 15 SMs
- □ SFID 651 □ Dual PSU RTU feature for 16 SMs
- □ SFID 652 □ Dual PSU RTU feature for 17 SMs
- □ SFID 653 □ Dual PSU RTU feature for 18 SMs
- □ SFID 654 □ Dual PSU RTU feature for 19 SMs
- □ SFID 655 □ Dual PSU RTU feature for 20 SMs
- □ SFID 656 □ Dual PSU RTU feature for 21 SMs
- □ SFID 657 □ Dual PSU RTU feature for 22 SMs
- □ SFID 658 □ Dual PSU RTU feature for 23 SMs
- □ SFID 659 □ Dual PSU RTU feature for 24 SMs
- □ SFID 660 □ Dual PSU RTU feature for 25 SMs

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Before the Double PSU Packet Bus feature can be turned on for up to 25 SMs via RC/V (Recent Change/View) 8.22, the SFID must be turned on. RC blocks the Double PSU Packet Bus feature from being turned on if the SFID is off. CDMA or TDMA must be turned on before the Double PSU Packet Bus feature is used.

To add Double PSU to additional SMs after the first SFID has been used, another SFID will be needed for the new total number of SMs.

1.1 Traffic Measurements (TRFM)

The TRFM part of this feature enables maintenance of CDMA and TDMA reports on the second PSU in the case when two PSUs are on one Switching Module. The proper handling of these reports on the second PSU involves the following:

- PSU number must appear on the layout of the report.
- MML commands should have a parameter to indicate PSU number.
- Proper interface with Recent Change views must be ensured.
- Key for sections must handle two PSUs.
- Additional handling should be provided for collecting and processing data from both PSUs.

The following sections of the TRFC30 (Traffic Measurements Report 30) is impacted by this feature.

- ECPSRVT (Executive Cellular Processor Service Type), Section Number 247.
- PSUCHAN (Packet Switch Unit Channel Measurements), Section Number 193.

2. FEATURE ASSIGNMENT

For 5E16(2) and later, to provision this feature:

- Grow the second PSU by setting the PSU field to "1" on Recent Change (RC) View 22.2 (or EQPSU Form, 5741 Record).
- Grow in shelves for the second PSU on RC View 22.3 (or EQPSUPH Form, 5742 Record).
- Grow in PH's for the second PSU on RC View 22.4 (or EQPSUPH Form, 5742 Record).
- Assign channel groups for the second PSU on RC View 22.16 (or PSUGP Form, 5949 Record).
- If a trunk member is desired, insert the trunk member on RC View 5.5 (TRUNK Form, 5204 Record).
- If a PSU link is desired, insert the link on RC View 22.22 (PSULNK Form, 5057 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSU	5741	8	22	22.2
EQPSUPH	5742	8	23	22.3, 22.4
MEASSUM	5563	3	5BG	13.9
PSUGP	5949	5	3J	22.16
PSULNK	5057	7	2A	22.22

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EQPSU form (5741 Record) - This form is used to define the PSUs equipped on a 5ESS Switch. The PSU field and related data rules were added to support this feature.

EQPSUPH form, (5742 Record) - This form defines the Packet Switching Unit Protocol Handlers equipped on the 5ESS Switch. The PSU field and related data rules were added to support this feature.

MEASSUM (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Components are defined as the entity to be measured; components can be at the end product level (AIU, DNU-S, SS7 PSU, etc.) or subassemblies (i.e., packs, lines, DPIDB, etc.). For 5E16 and later, added data rules to the SECTION NAME field.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU. Valid entries were modified and a data rule was added for the PSU field to support this feature.

PSULNK form (5057 Record) - This form is used to define links between packet switching units using protocol handlers for the Asynchronous Transfer Mode. Valid entries were modified for the NEAR PSU and FAR PSU fields to support this feature.

4. GLOSSARY

CDMA	Code Division Multiple Access
PSU	Packet Switching Unit
SM-2000	Switching Module 2000
TDMA	Time Division Multiple Access

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SEC. 7BL: INCREASE AM PAS MEMORY BY 6MB

1. FEATURE DESCRIPTION

The Increase AM (Administrative Module) PAS (Protected Application Segment) Memory by 6MB feature is being deployed for the Beginning Managed Introduction of the 5E16 Software Release. The feature number is 99-5E-8021. This feature increases memory size of the AM PAS memory to 6MB.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ECDOPT	5706	8	8	Not Applicable
OFCOPT	5509	3	5I	8.1, 8.15

ECDOPT form (5706 Record) - This form is used to define Administration Module options for all offices. For 5E16 and later, the Valid AM ODD MEMORY SIZE Entries table was updated, and data rules were added for the AM ODD MEMORY SIZE field.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. For 5E16 and later, the Valid AM ODD MEMORY SIZE Entries table was updated.

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SEC. 7BM: PSU PACKET BUS DELAY CHARACTERIZATION

The PSU Packet Bus Delay Characterization feature (99-5E-7678.A) is no longer supported by Lucent Technologies. It was determined that the most effective occupancy measurement could be provided by a direct measurement to the packet bus as provided by the Packet Bus Occupancy feature (99-5E-8275). Please see your Lucent representative for details.

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SEC. 7BN: SS7-PSU REMOVE ROUTING DATA FROM DEDICATED HOST GSM

1. FEATURE DESCRIPTION

The SS7-PSU (Signaling System 7-Packet Switching Unit) Remove Routing Data from Dedicated Host GSM (Global Switching Module) feature is being made available with the 5E15 FR 5 (Feature Release 5) Software Release. The feature number is 97-CP-8002.

Although offices usually only have one Host GSM per office, this feature allows multiple Host GSMs to be marked as dedicated, in each office.

It should be noted that any routing data that was populated on a Host GSM before it was marked as dedicated, remains there until the end customer either:

- Manually moves all the routing data (using RC/V (Recent Change View) 4.14 to change the routing SM for all hundred groups that route on a dedicated GSM) or
- Request that the data be moved (using the LDM (Large Data Migration) tool).

Preventing routing data from being populated or moving Routing Data from a dedicated Host GSM does not mean that no call processing will take place on that GSM. It means that no hundreds group routing will take place on a dedicated GSM. Data used for other features, such as Line and Trunk Queuing or data populated on CIC (Carrier Identification Code) modules can still exist on a dedicated Host GSM, and can be used for call processing.

2. FEATURE ASSIGNMENT

To activate this feature:

- Insert a GSM with the DEDICATED field set to "Y" on the CCSGM form (6008 Record) when the following conditions are met:
  - There is no hundreds group routing data on this HOST GSM (on HGRPAS form (5115 Record); RC/V (Recent Change View) 4.14.
  - LDIT is not populated on this HOST GSM (on the SMLDIT form (5315 Record); RC/V 9.25.
  - CIC is not distributed on thisHOST GSM (on the CICDIST form (5217 Record); RC/V 5.70.
- Define GSM as a Host GSM by inserting a form on the CMTMH (6021 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CCGSM	6008	9	10h	16.1

CCGSM form (6008 Record) - This form is used to specify data used for the global switching module. Added the DEDICATED field.

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SEC. 7BO: CM3 TMS FABRIC EXPANSION

1. FEATURE DESCRIPTION

The CM3 (Communication Module Model 3) TMS (Time Multiplexed Switch) (also known as "NxTMS where "N" equals the number of TMS fabric pairs) Fabric Expansion is a secured feature (SFIDs 662, 663, and 664 and is being deployed in the 5E16(2) Software Release. The feature number for this feature is 99-5E-4104.

The CM3 TMS Fabric Expansion feature provides greater TMS fabric capacity by adding TMSFPs (TMS fabric pairs) to the CM3 configuration. This also increases internal connectivity among multiple SM2000s in an office .

The CM3 TMS Fabric Expansion feature enables a large tandem 5ESS Switch by increasing the number of trunk terminations in a switch. The MCTU-based SM is limited to NxTMS capacity where "N" equals 1. The SM-2000 may be configured to NxTMS, where "N" is greater than 1. The CM3 is configured to use additional TMS shelf units (CMU2s and TMSU4s) located in growth cabinets, for connecting SM-2000s to more fabric pairs through the SM's NCT2 links. Beginning with the 5E16(2) software release, the CM3 accommodates up to 4 TMS fabric pairs (TMSFP). Each TMSFP is duplex (exists on each ONTC side) and consists of one even and one odd TMS fabric. The CM3 TMS may be expanded either by growing TMSFPs (including a CMU2 and optional TMSU4 shelves) or by growing TMSU4 shelves on existing TMSFPs.

Conversion from CM2 to CM3 is already supported and will continue to be supported; however, growth from 1xTMS to NxTMS is specified in this feature as part of the conversion.

This feature is dependent on the GSM (Global Messaging Server) feature (99-5E-3228) (previously named CM3 (Communication Module Model 3)) which was deployed in the 5E15 Software Release. This feature also supports SMs but only on TMSFP0 (Time Multiplexed Switch Fabric Pair 0).

The maintenance and diagnostic differences between the base CM3 and the 1xTMS product offerings from a capacity and size point of view are very little. Specifically, the CM3 base feature did not require the use of fabric subgroups for reliability and diagnostics, whereas the CM3 TMS Fabric Expansion feature (including 1xTMS) requires these capabilities. Since the deployment of the CM3 TMS Fabric Expansion feature, the 1xTMS configuration will subsequently be used for all future smaller offices, and the CM3 base product offering will no longer be available.

To increase the termination capacity of the CM3, additional dual fabric frames can be added and the system can have up to four (with values of N being 1, 2, 3, or 4) dual fabrics. The resulting architecture is referred to as the NxTMS architecture. The Message Switch, NCC (Network Communication Controller), and Oscillator hardware is available only in the base frame. Therefore, the Control Time Slots from each SM must be routed to the base frame.

The functionalities of QLPS (Quad Link Packet Switch) and CPI (Central Processor Intervention) are provided in each fabric, but only the QLPS in the base frame is physically connected to the Message Switch. The QLPS hardware exists in each frame; however, the CM3 TMS Fabric Expansion feature only uses the QLPS in the base frame. There is also a test function available to each fabric.

In the NxTMS configurations, only SM2000s are allowed connectivity via NCT2 (Network Control and Timing Link 2) links. Up to 23 SM2000s (all of which) may be connected as host or local SM2000s to the several TMSs within the office.

This feature does not provide any increase in call capacity or messaging capacity for the 5ESS Switch. It does provide an increase in termination capacity based on the number of additional TMS fabrics that are equipped. This equates to an increase in NCT ports, an increase in trunk capacity or line capacity, and an increase in erlang capacity of the switch. The TMS fabric is a 193x192 space switch, with 193 input ports and 192 output ports.

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Each port supports 256 timeslots. An NCT2 link uses 2 adjacent ports. However, not all 193 ports can be used for NCT2 links. The CM3 reserves 9 ports for its foundation functions. Port 0 is used for idle code generation. Port 1 is used for the DMI (Desktop Management Interface) interface with the message switch and carries the CTS (Control Time Slot) and pump timeslots. Six ports are reserved for QTMSLNKs to the QLPS, of which only four are used in the CM3 TMS Fabric Expansion feature. Finally, Port 192 is used for a test/diagnostic function. The remaining 184 physical ports on each TMS fabric are available for NCT links carrying user traffic.

The full base CM3 or 1xTMS consists of an odd and an even TMS fabric each supporting 184 NCT links or equivalently, 94208 (2*184*256) network timeslots. To compute Erlang capacity, two paths through the TMS are required for each call. This assumes the link facilities have a nominal average loading of 70% to account for headroom and peaking effects, and a full base CM3 or 1xTMS.

Feature Operations

NxTMS connectivity is described at a high level. Please refer to *Hardware Description*, 235-100-200, for more information.

NxTMS connectivity (with N equal to 1):

This configuration is the base configuration of a CM3. NxTMS connectivity, with N equal to 1, supports up to 23 SM-2000s, with each SM-2000 having 4 NCT2 link pairs.

- 23 SM-2000s
- 8 NCT2 links per SM-2000, where 4 links go to each fabric
- 2 TMS links per NCT2
- 1 TMS link per port
- 23 * (8/2) * 2 = 184 ports

NxTMS connectivity, with N equal to 1, services ~98K trunk terminations. Assuming a square TSI, this maps into the number of trunk terminations supported on the switch.

- 2 fabrics
- 184 ports per fabric
- 256 timeslots per port
- 256*184*2 = 98,042

Note that if there are fewer SM-2000s, each SM-2000 can have more NCT2 link pairs. SMs (non-SM-2000s) are supported in NxTMS offices and, unlike SM-2000s, can only be connected to TMSFP 0. SMs and SM-2000s remoted via TRCU2s use NCT1 links. All other SM-2000s use NCT2 links.

NxTMS connectivity (with N greater than 1):

- 3 TMSFPs
- 2 fabrics per TMSFP
- 184 ports per fabric
- 256 timeslots per port

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- 3*256*184*2 = >282Kports

Switch personnel are responsible for repair of a TMS fabric. These procedures are documented in: *Corrective Maintenance*, 235-105-220, *Hardware Change Procedures-Growth*, 235-105-231, and *Hardware Change Procedures-Degrowth*, 235-105-331.

2. FEATURE ASSIGNMENT

In order to provision the CM3 TMS Fabric Expansion feature:

- This is a secured feature (SFIDs 662, 663, and 664) and a right-to-use (RTU) fee must be paid to Lucent Technologies before enabling information is provided. Once this feature is available on the switch, the TMS SHELF (RC/V view 17.11) insert, TMS LINK (RC/V view 17.12) eqstat update, G->S, S->O, and NLI LINK (RC/V view 18.16) insert will be blocked for N > 1 if the SFIDs are not activated.

  The SFIDs are 662 for N=2, 663 for N=3, and 664 for N=4. To activate the secured feature IDs (SFIDs), the service provider unlocks the security lock by populating RC/V view 8.22 SECURED FEATURE UPGRADE. A password from the Lucent Technologies Secured Feature Administrator is required. For more information, refer to *Routine Operations and Maintenance Procedures*, 235-105-210.

- The EQTMS form (5866 Record), RC (Recent Change) view 17.11, has been modified to allow provisioning TMS 1-3. Previously, TMS NBR (currently, renamed TMSFP NUM) had to be 0, now it is open up for the user to enter from 0-3 in a CM3 office. When provisioning a new TMS, SHELF 0 has to be added first. When degrowing a TMS, SHELF 0 has to be the last one to be remove. TMS 0, SHELF 0 cannot be degrown, it has to be operational.

- The provisioning for the EQTMSLINK form (5851 Record) (RC view 17.12), and the EQNLI form (5853 Record) (RC view 18.16), mostly remains the same as it was for the CM3 feature. When provisioning these two forms, users need to enter the TMS NBR (currently, renamed TMSFP NUM) which has the range from 0-3 and it must exist on the EQTMS form.

- On the EQNLI form, secondary NLI (Network Link Interface) growth/degrowth for CM3 office no longer needs to be sequential.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQCORE	5701	8	3	17.1
EQNLI	5853	8	55	18.16
EQTMS	5866	8	69	17.11
EQTMSLINK	5851	8	53	17.12
EQIM	5700	8	2	18.1
OFCOPT	5509	3	5I	8.1
SFSYS	5713-1	3	5AR	8.22

EQCORE form (5701 Record) - This form is used as an Office Record for those 5ESS Switch offices that are not utilizing an Operational Support System (e.g., RMAS) for generation of Office Records. Added a data rule to the CM VINTAGE field.

EQNLI form (5853 Record) - This form is used to define the NLI (Network Link Interface) which terminates the NCT2 (Network Control and Timing Links 2) from the SM2000 (Switching Module 2000) TSI (Time Slot Interchanger) to the TMSU (Time Multiplexed Switch Unit) of the CM2 and GMS. For the SM-2000, the NLI is an optical interface; for the EXM-2000, the NLI is an electrical interface. Added the TMSFP NUM field and 2 data rules, 2 data rules to the EVEN NLI field, and modified 2 data rules for the

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TMS LINK 0 field.

EQTMS form (5866 Record) - This form is used to modify the data for this unit and to support the GSM. This form was introduced to separate all the TMS information from the Core equipment information that is found on the EQCORE form. Changed the key field name from TMS NBR to TMSFP NUM. Added a data rule to the BAY field and modified a data rule for the TMSFP NUM field.

EQTMSLINK form (5851 Record) - The Time Multiplexed Switch Link Equipage form replaces the EQORMLINK form (5813 Record) for 5E9(2) and later for assignment of the ORM (Optical Remote Module) and EXM-2000 TMS link interfaces and associated TRCUs. Added the TMSFP NUM field and related data rules. Also modified 4 data rules for the LINK field.

OFCOPT form (5509 Record) - This form is provided as a reproducible form that may optionally be used. However, if this record is requested in the ODA data base using "records" command, the screen image of the input form will be printed instead of the tabularized record. Added the TMS HUNT field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. To activate SFID 663, 664, or 665, the ACT field for the particular SFID is set to "Y".

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SEC. 7BP: CLASSIC SM ON CM3

1. FEATURE DESCRIPTION

The Classic SM (Switching Module) on CM3 (Communication Module Model 3) feature is being deployed in the 5E15 FR 5 (Feature Release 5) Software Release. The feature number for this feature is 99-5E-8079.

This feature is an extension of the original CM3 Base feature that uses SM2000s. For more information on the base CM3 feature, see Division 2, Section 7AN.

The Classic SM on CM3 feature allows SMs to be equipped in a NAR (North American Region) or INTL (International) CM3 office. The CM2 to CM3 conversion procedures provide CM2 offices with SMs that can be converted to CM3 hardware, allowing the SMs to remain intact.

This feature further provides the following:

- procedures for SMs to be grown/degrown into/from a CM3 office,
- the ability to evolve the ODD (Office Dependent Data) database from CM2 containing SMs and CM3s, and
- a new paddle board for terminating NTC1 (Network Control and Timing) interfaces (SMs) to a CM3. Inherited with the support of SMs is the support of TRCU1 (Transmission Rate Converter Unit 1), TRCU2 (for ORMs (Optically Remote Modules)), EXMs (Extended Switching Modules) with TRCU2, DLTU (Digital Line and Trunk Unit) and DLTU2 (for RSMs (Remote Switching Modules)) on CM3.

2. FEATURE ASSIGNMENT

There is no specific provisioning needed for this feature. See the provisioning for the base CM3 feature found in Division 2, Section 7AN.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQIM	5700	8	2	18.1
EQTRCUPTH	5814	8	38	17.23

EQIM form (5700 Record) - This form is used to define Switching Module Equipage Assignments. Modified the generic for a data rule for UNIT TYPE from 5E15 to 5E16(2).

EQTRCUPTH form (5814 Record) - This form is used to define the path between the host and remote TRCU for a TRCU model 1, TRCU model 2, or TRCU model 3, in the SM, SM2000 or SM2005 unit types. Removed a data rule for the HOST TYPE field.

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SEC. 7BQ: OIU (OPTICAL INTERFACE UNIT) OC-3 - NAR

1. FEATURE DESCRIPTION

The OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature is being deployed in the 5E16(2) Software Release. The feature number for this feature is 99-5E-7140.

The purpose of the OIU feature is to provide a high speed/capacity SONET (Synchronous Optical Network) facility interface for the 5ESS 2000. It supports an optical interface whereas the current DNU-S (Digital Network Unit-SONET) product only supports an electrical interface. It also supports the high speed interface PCT (Peripheral, Control and Timing) Link to the 5ESS 2000 TSI (Time Slot Interchange). Therefore, the OIU will only be supported by SM-2000.

2. FEATURE ASSIGNMENT

Feature Provisioning:

- When provisioning an OIU on the EQOIU form (5760 Record); RC/V (Recent Change View) 19.28:
  - the AIP (Any Media Interface Platform) specified must exist on the EQAIP form (5765 Record); RC/V 19.27.

- When provisioning an OFI (Optical Facility Interface) , also referred to as the PG (Protection Group), on the EQOIUP form (5761 Record); RC/V 20.28:
  - the OIU specified must exist on the EQOIU form; RC/V 19.28. The first PCT (Peripheral, Control and Timing) Link for the OFI is required on insert and must be in growth state.

- When provisioning an STE (SONET Terminating Equipment) on the EQOSTE form (5762 Record); RC/V 20.29:
  - the PG specified must exist on the EQOIUP form (RC/V 20.28), and the EQSTATs of the STE cannot be higher than the EQSTATs of the first PCT link for the PG. This view cannot be deleted while HVCs (High-Level Virtual Containers) are assigned on the EQHVC form (5763 Record); RC/V 20.30.

- When provisioning an HVC on the EQHVC form; RC/V 20.30:
  - the STE specified must exist on EQOSTE form; RC/V 20.29, and the EQSTAT of the HVC cannot be higher than the EQSTATs of the STE. This view cannot be deleted while LVCs (Low-Level Virtual Containers) are assigned on the EQLVC form; RC/V 20.31.

- When provisioning an LVC on the EQLVC form (5764 Record); RC/V 20.31:
  - the HVC specified must exist on the EQHVC form; RC/V 20.30, and the EQSTAT of the LVC cannot be higher than the EQSTAT of the HVC. This view cannot be deleted while channels on the container are in use.

The OIUPM (RC/V 20.32) and CGATIME forms (RC/V 20.33) are used to define PM (Performance Monitoring) groups and CGA (Carrier Group Alarm) groups respectively for OIU facilities used on the EQOSTE, EQHVC, and EQLVC forms. These forms/views do not have to be provisioned. Office defaults have been defined that will be used if no PM group or CGA group is explicitly assigned to an OIU facility. If a PM group is defined it can only be used for the facility type specified by the field CKT TYPE. Currently, all

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OIU SONET CGA groups can be used for all OIU SONET facilities, and all non-SONET CGA groups can be used for all OIU CNTRS (Containers).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCLNK	6004	9	10D	16.6
CGATIME	5766	3	5CB	20.33
EQAIP	5765	8	90	19.27
EQHVC	5763	8	88	20.30
EQLVC	5764	8	89	20.31
EQOIU	5760	8	85	19.28
EQOIUP	5761	8	86	20.28
EQOSTE	5762	8	87	20.29
MEASSUM	5563	3	5BG	13.9
NAILUP	5207	3	2F	7.11
OFCOPT	5509	3	5I	8.1
OIUPM	5767	3	5CC	20.32
PRIGRP	5211	3	2M	5.2
TRUNK	5204	3	2C	5.5

CCLNK form (6004 Record) - This form is used to define the CCS7 (Common Channel Signaling System No. 7) link sets and members. Modified the OE type table to add the OIU value ("O"). Also added data rules to the OE field.

CGATIME form (5766 Record) - This form is used to define alarm ON/OFF conditions of Alarm Indication Signals, Local Alarms, and Remote Alarms on all OIU (Optical Interface Unit) facilities. New form to support this feature.

EQAIP form (5765 Record) - This form is used to define assignments and location for AIP (Any Media Interface Platform) units. New form to support this feature.

EQHVC form (5763 Record) - This form is used to insert, review, update, and delete HVCs (High Level Virtual Containers). New form to support this feature.

EQLVC form (5764 Record) - This form is used to insert, review, update, and delete LVCs (Low Level Virtual Containers). New form to support this feature.

EQOIU form (5760 Record) - The OIU (Optical Interfce Unit) form is used to define assignments and location of an OIU. New form to support this feature.

EQOIUP form (5761 Record) - The Optical Facility Interface Pack form is used to insert, review, update, and delete OFI (Optical Facility Interface) packs and PCT Links. New form to support this feature.

EQOSTE form (5762 Record) - This form is used to insert, review, update, and delete OIU STE (SONET (Synchronous Optical Network) Terminating Equipment) facilities. New form to support this feature.

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Added the OIU value to the SECTION NAME field. Also removed all occurrences of the PBRTT value.

NAILUP form (5207Record) - This form contains data to directly link ("nailup") two ports. Modified the C OE to add the OIU value ("O").

OFCOPT form (5509 Record) This form is used to supply various miscellaneous office options and parameters. Added the OFC SWITCH INT field.

OIUPM form (5767 Record) - The OIU Performance Monitoring form is used to insert, review, update, and delete PM (Performance Monitoring) groups which define performance monitoring thresholds for OIU transport facilities. New form to support this feature.

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PRIGRP form (5211 Record) - This form is used to assign calls to channels on the DS1 facility containing that D-channel. Added the new unit type (OIU) to the equipment type table. Also added data rules to the SM and EQUIPMENT fields.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. Added data rules to the TRKOE, for type "F" and "O", and to the ICHN DESG fields.

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SEC. 7BR: ADDITIONAL TIME SLOT MEASUREMENTS

1. FEATURE DESCRIPTION

The Additional Time Slot Measurements feature is being deployed in the 5E16(2) Software Release. The feature number for this feature is 99-5E-7855.

This feature introduces a new TSM (Time Slot Measurements) section of TRFC30 (30 Minute Traffic Report) report to monitor the efficiency of current TSI (Time Slot Interchanger) engineering. Section TSM (150) has six measurements (three new and three existing), that are collected on a per SM (Switching Module) or CMP (Communication Module Processor) basis, and reported on a per SM basis.

The following fields are provided in the new TSM (150) section:

- SM - Switching Module Number
- NTSATT - Number of network time slot attempts. This is the number of times attempts are made, by a given SM, to use network time slots to originate calls, regardless whether or not the attempt is successful.. The wide-band call attempts are counted as one attempt, regardless of the number of network time slots requested.
- NTSOVL - Number of network time slot overflows. This is a number of times attempts are made, by a given SM, to use network time slots to originate calls, and these attempts are not successful, due to lack of free network time slots. The wide-band call overflows are counted as one overflow, regardless of number of network time slots requested.
- BNTSMTU - Network Time Slots Maintenance Usage. This measurement provides the usage generated when network time slots are busy for any other reason than the call traffic.
- BNTSMSM - Number of Network Time Slot Mismatches. This is the number of times we are unable to acquire two corresponding network timeslots. Timeslot mismatch is pegged both on the originating and terminating SM. If the path is intra-SM, the single SM is pegged twice. This is consistent between CM2 (Communication Module 2) and CM3 (Communication Module 3). Since calls on an intra-SM path do not require matching timeslots, mismatch in this situation means that less than two timeslots are idle. This counter is an TRFC30 report counter (section 4 (SAD (Software Administration and Distribution)), and it is added to this new TRFC30 report section 150 (TSM) to keep all the network time slot related measurements in one place.
- BNTSUSG - Network Time Slots Usage. This measurement provides the usage generated when network time slots are busy for any reason. The count includes CTS (Control Time Slot) usage, both traffic and maintenance usage of NCT time slots, and usage from all nailed-up time slots associated with a given SM. This counter is an existing TRFC30 report counter (section 7 (TD), counter NTSUSG), and it is added to this new TRFC30 report section 150 (TSM) to keep all the network time slot related measurements in one place.
- BNTSOCC - Network Time Slots Occupancy. This is the number, in percent, of peak network time slots occupancy of all 100 second periods during the TRFC30 interval. This counter is an existingTRFC30 report counter (section 83 (MOD1), counter NTSOCC), and it is added to this new TRFC30 report section 150 (TSM) to keep all the network time slot related measurements in one place.

2. FEATURE ASSIGNMENT

To provisioning this feature for ODA, on the MEASSUM form (5563 Record), set the following fields accordingly:

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- SECTION NAME = TSM
- START1COMP = SM number
- ROP may be set to enable or disable components for ROP reporting purposes when SECTION NAME is "TMS".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
MEASSUM	5563	3	5BG	13.9

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Added the new value "TSM" to support this feature. And also added a form check to the DEST SM field.

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SEC. 7BU: INDICATOR FOR SS7-PSU SIGNALING LINK

1. FEATURE DESCRIPTION

The Indicator for SS7-PSU (Signaling System #7-Packet Switching Unit) Signaling Link feature is being deployed in the 5E16(2) Software Release. The feature number for this feature is 97-CP-8058.

This feature provides an indication on the DNU-S (Digital Network Unit-Sonet) and DLTU MCC (Master Control Center) pages when a facility contains at least one channel with an SS7 link. The MCC pages affected are the 1512 page for DNU-S and the 1120 - 1122 pages for the DLTU. The indication is a "$" (i.e., SS7) next to the facility indicator. There is a new relation created on a per facility basis to indicate the presence of this link.

Several MCC pages are modified to display the text "$=SS7" in the following circumstances:

- When an SS7 link is assigned to a T1 facility terminating on a DFI, the corresponding MCC page 1120 - 1122 pre-pends in real time, the "$" character to the "FAC" field to convey that the facility supports an SS7 signaling link.
- When the last SS7 link is removed from the T1 facility terminating on a DFI, the corresponding MCC page removes in real time, the "$" from the "FAC" field to convey that the facility no longer supports an SS7 signaling link.
- The DNU-S DS1 (Digital Signal Level 1) facilities' MCC page 1512 also displays the text "$=SS7" to convey that a DNU-S DS1 facility marked with a "$" indication supports at least one SS7 signaling link.
- When the first SS7 link is assigned to a DS1 facility terminating on a DNU-S, the corresponding MCC page 1512 pre-pends in real time, the "$" character to the "FAC" field to convey that the facility supports an SS7 signaling link.
- When the last SS7 link is removed from a DS1 facility terminating on a DNU-S, the corresponding MCC page 1512 removes in real time, the "$" character from the "FAC" field to convey that the facility no longer supports an SS7 signaling link.

2. FEATURE ASSIGNMENT

This feature has no ODA impact, and therefore no provisioning is needed.

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SEC. 7BV: 128 MB MEMORY CIRCUIT PACK FOR SM-2000

1. FEATURE DESCRIPTION

The 128 MB (Megabyte) Memory Circuit Pack for SM-2000 feature (99-5E-7932) is made available with the 5E16(2) and later Software Releases.

The 128 Mbytes Memory Board feature (99-5E-7932) provides additional DRAM (Dynamic Random Access Memory) for SM-2000. With this feature, both SM-2000 (SMPU4 and SMPU5) units dynamic memory spectrum is extended to support larger field generics.

The SM-2000 SMPU4 unit that has four memory slots per side can now be configured with maximum 384 Mbytes of addressable memory. This is achieved on the SMPU4 by having 64 Mbytes on a core processor board (UN560,UN593, and UN594), two 128 Mbytes (TN1816) memory boards, and one 64 Mbyte (TN1806) memory board.

The SM-2000 SMPU5 unit that has two memory slots per side can be configured with maximum of 384 Mbytes of addressable memory. This is achieved on the SMPU5 by having 128 Mbytes on the core processor board (UN588), and two 128 Mbytes (TN1816) Memory boards.

The 128 Mbyte memory boards may be freely mixed with the existing 32 and 64 Mbyte memory boards in the same SM-2000.

For all SMPU4 and SMPU5 configurations see tables below. The UN593 core board is an INTL only pack. The UN540(B) pack has no memory. The UN560, UN593, and UN594 have 64MB of memory. The UN588 has 128MB of memory but can only be used in an SMPU5 unit.

SM-2000 SMPU4 MEMORY CONFIGURATIONS WITH UN540(B) CORE BOARD

5E16(2)/5EE16(1) SM-2000 SMPU4 MEMORY EQUIPAGE

MEMORY SLOT 0	MEMORY SLOT 1	MEMORY SLOT 2	MEMORY SLOT 3	TOTAL MEGABYTES
TN1816	EMPTY	EMPTY	EMPTY	128
TN1685	TN1816	EMPTY	EMPTY	160
TN1806	TN1816	EMPTY	EMPTY	192
TN1685	TN1685	TN1685	TN1816	224
TN1685	TN1806	TN1816	EMPTY	224
TN1685	TN1685	TN1806	TN1816	256
TN1806	TN1806	TN1816	EMPTY	256
TN1816	TN1816	EMPTY	EMPTY	256
TN1685	TN1685	TN1816	TN1816	320
TN1685	TN1806	TN1816	TN1816	352
TN1806	TN1806	TN1816	TN1816	384
TN1816	TN1816	TN1816	EMPTY	384

SM-2000 SMPU4 MEMORY CONFIGURATIONS WITH UN560/UN593/UN594 CORE BOARD

5E16(2)/5EE16(1) SM-2000 SMPU4 MEMORY EQUIPAGE

MEMORY SLOT 0	MEMORY SLOT 1	MEMORY SLOT 2	MEMORY SLOT 3	TOTAL MEGABYTES
TN1816	EMPTY	EMPTY	EMPTY	192
TN1685	TN1685	EMPTY	EMPTY	224
TN1685	TN1685	TN1685	EMPTY	256
TN1806	TN1816	EMPTY	EMPTY	256
TN1685	TN1806	TN1816	EMPTY	288
TN1685	TN1685	TN1685	TN1816	320
TN1685	TN1685	TN1806	TN1816	320
TN1806	TN1806	TN1816	EMPTY	320
TN1816	TN1816	EMPTY	EMPTY	320
TN1685	TN1806	TN1806	TN1816	352
TN1685	TN1685	TN1816	TN1816	384
TN1806	TN1816	TN1816	EMPTY	384

SM-2000 SMPU5 MEMORY CONFIGURATIONS WITH UN560/UN593/UN594 CORE BOARD

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5E16(2)/5EE16(1) SM-2000 SMPU5 MEMORY EQUIPAGE		
MEMORY	MEMORY	TOTAL
SLOT 0	SLOT 1	MEGABYTES
TN1816	EMPTY	192
TN1685	TN1816	224
TN1806	TN1816	256
TN1816	TN1816	320

SM-2000 SMPU5 MEMORY CONFIGURATIONS WITH UN588 CORE BOARD

5E16(2)/5EE16(1) SM-2000 SMPU5 MEMORY EQUIPAGE		
MEMORY	MEMORY	TOTAL
SLOT 0	SLOT 1	MEGABYTES
TN1816	EMPTY	256
TN1685	TN1816	288
TN1806	TN1816	320
TN1816	TN1816	384

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
VDCHN	5918	5	3W	22.32

EQIM form (5700 Record) - This form is used to define Switching Module Equipage Assignments. Added a data rule to the UNIT TYPE field.

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SEC. 7BW: GLOBAL DIGITAL SERVICES FUNCTION MODEL 2

1. FEATURE DESCRIPTION

The (GDSF2) Global Digital Services Function Model 2 feature (99-5E-8024) is made available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases.

This feature is being implemented on the UN590 pack for NAR (Northern American Region). The GDSF provides 3 and 6 port conferencing (CONF), digital line and trunk test capability (ISTF (Integrated Services Test Facility)), analog line and trunk test capability (TTF (Transmission Test Function) and TTF2 (Transmission Test Facility 2)), and C5 (CCITT (International Telegraph and Telephone Consultative Committee) No. 5 Signaling Circuit) signaling. The GDSF can be equipped in either a DSU3 (Digital Service Unit 3) unit in an SM-2000 or a CSU (Combined Services Unit) in an SM.

This feature builds upon the GDSF base feature. For more information on GDSF, see Division 2, Section 7G.

2. FEATURE ASSIGNMENT

There is no provisioning specific to this feature.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
EQGDSC3	5860	8	63	19.19

EQGDSC3 form (5860 Record) - This form is used to define the GDSF (Global Digital Service Function) on the DSU3 for the SM and the SM-2000 class processor. Added data rules to the CLI field.

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SEC. 7BX: OIU - IP (OPTICAL INTERFACE UNIT - INTERNET PROTOCOL)

1. FEATURE DESCRIPTION

The OIU- IP (Optical Interface Unit - Internet Protocol) feature is being deployed in 5E16(2) Feature Release 3. The feature number for this feature is 99-5E-8308.

The OIU - IP feature introduces a new architecture for the packet trunking IP application for the 5ESS Switch. This feature enables customers to position the 5ESS Switch as a gateway to the NGN (Next Generation Network).

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ALRMLVLS	5769	3	5CD	8.29
BEARERNET	5935	5	3AM	33.15
CGATIME	5766	3	5CB	20.33
ENETPIPE	5826	8	66	19.20
EQAIP	5765	8	90	19.27
EQHVC	5763	8	88	20.30
EQOIU	5760	8	85	19.28
EQOIUP	5761	8	86	20.28
EQOSTE	5762	8	87	20.29
FIXRT	5301-1	3	3G	10.1
IPPROC	5987	5	3N	33.1
LTGCADN	5222	3	2Z	5.76
LTGPCI	5221	3	2Y	5.75
MCRTIDX	5304	3	3Q	10.4
MEASSUM	5563	3	5BG	13.9
OFCOPT	5509	3	5I	8.1
OIUPM	5767	3	5CC	20.32
RTIDX	5303	3	3P	10.2
RTLIST	5574	3	5BO	10.40
TKGRP	5202	3	2A	5.1

ALRMLVLS form (5769 Record) - This form is used to review and update alarm threshold levels. New form to support this feature.

BEARERNET form (5935 Record) - This form is used to insert, review, update and delete bearer networks. New form to support this feature.

CGATIME form (5766 Record) - This form is used to define alarm ON/OFF conditions of Alarm Indication Signals, Local Alarms, and Remote Alarms on all OIU (Optical Interface Unit) facilities. For 5E16(2) and later, modified the GENERAL section.

ENETPIPE form (5826 Record) - This form is used to enable the craft to review and update the ethernet links connected to an MH (Message Handler). For 5E16(2) and later, a data rule was added to the SERV TYPE field.

EQAIP form (5765 Record) - This form is used to define assignments and location for AIP (Any Media Interface Platform) units. For 5E16(2) and later, modified the GENERAL section.

EQHVC form (5763 Record) - This form is used to insert, review, update, and delete HVCs (High Level Virtual Containers). For 5E16(2) and later, modified the GENERAL section.

EQOIU form (5760 Record) - The OIU (Optical Interfce Unit) form is used to define assignments and location of an OIU. For 5E16(2) and later, modified the GENERAL section.

EQOIUP form (5761 Record) - The Optical Facility Interface Pack form is used to insert, review, update, and delete OFI (Optical Facility Interface) packs and PCT Links. For 5E16(2) and later, modified the GENERAL Section to include information on the OIU-IP feature, added the BNID, MAX ENG TS, and CP

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INHIBIT fields and related data rules, added a data rule to the SERVICE TYPE field, and added data rules and modified valid entries for the PACK TYPE field.

EQOSTE form (5762 Record) - This form is used to insert, review, update, and delete OIU STE (SONET (Synchronous Optical Network) Terminating Equipment) facilities. For 5E16(2) and later, modified the GENERAL section.

FIXRT form (5301-1 Record) - This form is used to define Routing and Charging treatment of Fixed Route Types. For 5E16(2) and later, added the "OGTGDSF" valid value for the FIXED ROUTE TYPE field.

IPPROC form (5987 Record) - This form provides the capability to provision up to five IP addresses and subnet masks, and associated IP, TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) parameters to a processor (SM or PH). For 5E16(2) and later, added valid entries to include OIU and feature entries , a warning, and data rules for the PROCESSOR TYPE field, added the OVLD TRIG and PM GROUP fields and related data rules, added valid entries for the QUALIFIER 2 and QUALIFIER 3 fields, and added valid entries to the UDP START PORT field.

LTGCADN form (5222 Record) - This form is used for the Large Terminal Growth for IVTOA (Integrated Voice and Telephony Over ATM (Asynchronous Transfer Mode)) feature. For 5E16(2) and later, added the PKT GRP field to replace the BICC GRP field.

LTGPCI form (5221 Record) - This form is used for the Large Terminal Growth for IVTOA (Integrated Voice and Telephony Over ATM (Asynchronous Transfer Mode)) feature. For 5E16(2) and later, added the PKT GRP field to replace the BICC GRP field.

MCRTIDX form (5304 Record) - This form allows additional information that is required for ARS (Automatic Route Selection) and sometimes used for PFA (Private Facility Access). For 5E16(2) and later, updated the valid entries for the TRUNK GROUP NUMBER field.

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. For 5E16(2) and later, added "BEARERNET", "IPOIU", and "PKTZ" valid entries and data rules for the SECTION NAME field, and updated the valid entries table for the START1COMP, START2COMP, and START3COMP fields.

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. For 5E16(2) and later, added the following fields:

- COMFORT NOISE GEN
- OPS APM TIMER
- TPS APM TIMER
- INTG IDENTIFIER
- OIU TDM CHBLK CNT
- OIU TDM CHBLK LMT
- OIU IP CHBLK CNT
- OIU IP CHBLK LMT

OIUPM form (5767 Record) - The OIU Performance Monitoring form is used to insert, review, update, and delete PM (Performance Monitoring) groups which define performance monitoring thresholds for OIU transport facilities. For 5E16(2) and later, modified the GENERAL section.

RTIDX form (5303 Record) - This form is used to define each Route Index in a 5ESS Switch. For 5E16(2)

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and later, updated valid entries for the TRUNK GROUP NUMBER field.

RTLIST form (5574 Record) - This form allows for a list of route indicies to be linked or chained together for the purposes of searching for a non-busy route. For 5E16(2) and later, updated valid entries for the TGN field.

TKGRP (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E16(2) and later:

- added the PKT GRP field and related data rules
- added the "OGTGDSF" valid entry and a data rule for the TRKCLS field
- added the DIFF SERV field and associated valid entries.
- added valid entries for the TGN field (5202-1 Record) and modified the TGN field for the 5202-1 Record.

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SEC. 7BY: PHA2 PSU TO PSU CONNECTIVITY

1. FEATURE DESCRIPTION

The PHA2 (Protocol Handler for ATM (Asynchronous Transfer Mode) 2) PSU (Packet Switching Unit) to PSU Connectivity feature (99-5E-8048) is made available with the 5E17(1) FR 1 (Feature Release 1) and later Software Releases.

This feature provides transport of CDMA (Code Division Multiple Access) traffic between PSUs as it is provided by the existing PHA. It also provides additional OA&M (Operations, Administration & Maintenance) capabilities, and the ability to directly connect more than 254 PSUs. The details of the capabilities supported by this feature are presented in the following:

- The transport protocol stack supported by this feature is identical to the protocol stack supported on PHA1.
- PHA2 does not support point-to-point connections (i.e connecting two PHA2 or a PHA2 and PHA1 directly with optical fiber). The PHA2 must always be connected to an ATM Switch.
- The PHA2 for this feature supports all the PHA1 OA&M capabilities and additional capabilities such as performance monitoring of the ATM connections between PSUs with PHA2s. Both VP (Virtual Path) and VC (Virtual Connection) performance monitoring is supported. The performance monitoring is not supported between a PSU with PHA2 and another PSU with PHA1. This feature also supports both standard and enhanced loopback tests for both VPC (Virtual Path Connection) and VCC Virtual Channel Connection).
- Ability to interconnect two PSUs with Virtual Channel Connections as opposed to the VP connections between two PSUs with PHA1, or two PSUs one with PHA2 and another with PHA1.
- This feature allows PSUs in two different subnets to be connected directly using VCC when deployed either with the PHA1 GW (Gateway) (PSU Community Address Expansion feature - 99-5E-8012) or DLCI (Data Link Connection Identifier) Expansion feature (PSU Connectivity Enhancements feature - 99-5E-8048.A).

This feature supports the following ATM connection types

- Intra-Subnet Connections
  - VPC between a PSU with PHA2 and another PSU with PHA1
  - VPC or VCC between any two PSUs with PHA2
- Inter-Subnet Connections
  - VP connection to a GW (only allowed if PHA1 GW feature is activated)
  - VCC between PSU with PHA2 (only allowed if PHA1 GW or DLCI Expansion feature is activated)

This feature provides provisioning capabilities to choose the type of connection to be used per intra-subnet basis, inter-subnet basis, and also for an individual intra or inter-subnet connection

The PHA2 for this feature sets the VPI and VCI values as specified in the following table

Type of PSU Connection	ATM Connection Type	VPI and VCI Values
Intra-subnet	High Priority Virtual Path	VPI = 2 * Far PSU CA
PSU Connections	Low Priority Virtual Path	VPI = 2 * Far PSU CA + 1

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	High Priority Virtual Channel	VPI = Provisioned VPI for High Priority VCC
		VCI = Far PSU CA + 64
	Low Priority Virtual Channel	VPI = Provisioned VPI for Low Priority VCC
		VCI = Far PSU CA + 64
Inter-subnet	Virtual Path	VPI = 2 * GW CA
PSU Connections	to Gateway PHA	
	Virtual Channel	VPI = Provisioned VPI for the Subnet
		VCI = Far PSU CA + 64

2. FEATURE ASSIGNMENT

Provisioning information is as follows:

- Set the ACT field for SFID 221 (CDMA) to "Y" on the SFSYS form (5713-1 Record).
- Insert a PSU Common Controller and SHELF 0 on the EQPSU form (5741 Record). COM ADDR must be inserted to be used later.
- Define an ATM link on the ATMLNK form (5592 Record).
- On the EQPSUPH form (5742 Record), insert a PHA2 on the designated SM/PSU/PSUSHELF/POSITION with CLI set to 1000 and the EQSTAT set to "G". SWITCHING MODULE and PSU must be the same values used when inserting a PSU on the EQPSU form.
- On the CDMAOPT form (5599 Record), set the SUBNET ID as a default Near Subnet ID for an office.
- Activate this feature on the PSUGW form (5991 Record).

  - ***NOTE:*** The insertion of the CDMAOPT and PSUGW forms are only necessary if connecting to PSUs in different subnetworks.

- Insert the INTERPSU form (5993 Record) using the SM, PSU, and LINK values from the ATMLNK form (5592 Record).
- Insert the INTRAPSU form (5992 Record) using the SM, PSU, and LINK values from the ATMLNK form (5592 Record).

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Div.	Sec.	RC View
ATMLNK	5592	5	5P	22.27
CDMAOPT	5599	8	80	8.75
INTERPSU	5993	5	3X	22.30
INTRAPSU	5992	5	3W	22.29
MEASSUM	5563	3	5BG	13.9
PSUGW	5991	5	3Q	22.26
PSUPM	5998	5	3AA	22.31

ATMLNK form (5592 Record) - This form allows a user to define and specify parameters for an ATM link. This is a new form that supports this feature.

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access) feature. Added the SEND VC RDI and SUBNET ID fields. Also added data rules to these fields.

INTERPSU form (5993 Record) - This form allows users to define and specify parameters needed for inter-network PSU connectivity. This is a new form that supports this feature.

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INTRAPSU form (5992 Record) - This form allows users to define and specify parameters needed for intra-network PSU connectivity. This is a new form that supports this feature.

MEASSUM form (5563 Record) - This form is used to display the components that have been selected for measurements for some sections of the 30 minute measurements report. Added the ATMLNK and ATMQOSPS values to the SECTION NAME table and associated data rule.

PSUGW form (5991 Record) - This form allows a user to assign a gateway community address to each PSU. This is a new form that supports this feature.

PSUPM form (5998 Record) - This form is used to define the parameters used in a session in order to monitor the performance of the ATM connection for this feature. This is a new form that supports this feature.

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SEC. 7BZ: CNI/PSU SUPPORT FOR 128K ISUP TRUNKS

This feature has been moved toDivision 2, Section 4A622.

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SEC. 7CA: GROWABLE CMP MEMORY

1. FEATURE DESCRIPTION

The Growable CMP Memory feature is made available with the 5E16(2) FR1 (Feature Release 1) and later Software Releases. The feature number for this feature is 99-5E-8351.

This feature provides an engineerable-sized CMP ODD (Communications Module Processor Office Dependent Data) with commands to grow the amount of available ODD on the required first and second auxiliary boards as well as an optional third memory board.

The Growable CMP Memory feature creates variable-sized ODDs for the CM2 (Communications Module 2) and CM3 CMPs, in order to reduce the average (CM2) CMP ODD allocation so that 5E16(2) offices normally fit into the 51MB (TN1800 core plus two TN1369 memory boards), which is required for 5E15. Rather than a smaller fixed-size ODD, this feature produces ODDs engineered as required by the input, as is done currently for the SMs (Switching Modules). Growth of the CMP ODDs must therefore be supported to allow offices the ability to increase beyond their initial spare allocation.

In order to cover all possibilities, installation and diagnostics of the third memory board must be possible in 5E14 and 5E15 to provide for any offices, which require the third memory board in order to retrofit to 5E16(2). This means the ODD evolution must be able to recognize this situation and adjust the relevant ODD values (e.g. physical memory size) accordingly.

Because of the extent of porting from the SM procedures, and the CM2/CM3 commonality (i.e., to reduce the development complexity), two aspects, which are not required by the external needs are implemented. They are Dynamic ODD growth and CM3-CMP ODD growth (static and dynamic). In addition to implementing the ODD growths, the OP:ODD command needs to be enhanced to indicate the unallocated memory available for use.

Growth of the third memory board as an optional entity for use in the current generic seems to require a new procedure, as well as some new administration of switch variables. It must be determined if two or three memory boards are required in an office. The growth of the third memory board via RC must indicate that the additional memory is available for ODD growth to use. All this must of course be done through Global Parameters; CMP Critical Information cannot be used for this purpose, nor can subsystem .data, as these cannot be altered by an ODD backup. Similarly, all Critical Information data relating to ODDs and memory boards must be scrubbed to be sure that it remains accurate, is deleted, is moved to control ODD, or is derived at runtime from [CMP] ODD.

2. FEATURE ASSIGNMENT

This feature has no ODA impact, and therefore no provisioning is required.

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SEC. 7CB: LARGE CAPACITY SWITCH CLASS 4/5

1. FEATURE DESCRIPTION

The Large Capacity Switch Class 4/5 feature is made available with the 5E16(2) FR1 (Feature Release 1) and later Software Releases. The feature number for this feature is 99-5E-8336.

This feature depends on the CM3(Communication Module Model 3) TMS (Time Multiplexed Switch) (also known as "NxTMS" where "N" equals the number of TMS fabric pairs) Fabric Expansion feature, 99-5E-4103, which involves SFIDs (Secured Feature IDs) 662, 663, and 664 which are required to grow the additional CM3 growth cabinets. (For more information on the CM3 TMS Fabric Expansion feature, see Division 2, Section 7BO.)

This feature supports two distinct offerings of a Class 4/5 Switch. They are Line Intensive and Trunk Intensive using CM3/PSU-SS7 based, available in 5E16(2) FR1 release. There are two options:

- Option 1: SM-2000 (Switching Module-2000) Only - New Start and Conversion (3 TMSFPs)
  - Trunk Intensive: 20K-40K + 170K-190K
  - Line Intensive: 180K Lines + 75K-100K Tandem Trunks
- Option 2: SM and SM-2000 Mixed - Conversion (2 TMSFPs)
  - <= 90 SMs. New tandem trunks placed on SM-2000s
    - Trunk Intensive: 20K-40K Lines + < 160K Tandem Trunks
    - Line Intensive: 180K Lines + 75K-100K Tandem Trunks

The LCS solution uses existing 5ESS components and builds upon the Large Capacity Tandem capability. The LCS solution makes use of the CM3 NxTMS which allows the number of line/trunk terminations and the Busy Hour Call Attempts (BHCA) to be scaled to a higher level than previously possible.

The LCS solution includes existing line and trunk features (including tandem features provided with LCT) and the 5ESS Long Distance Platform (LDP) features.

2. FEATURE ASSIGNMENT

This feature has no ODA impact, and therefore no provisioning is required.

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SEC. 7CC: AUTOPLEX WIRELESS TRUNKS ON OIU

1. FEATURE DESCRIPTION

The AUTOPLEX (Lucent Registered Trademark for its Cellular Switching Systems) Wireless Trunks on OIU (Optical Interface Unit) feature is being deployed in the 5E17(1) FR 2 (Feature Release 2) and later Software Releases. The feature number for this feature is 99-5E-8117. This feature is built upon the base OIU- OC-3 (Optical Carrier Level 3) NAR (North American Region) feature. For more information on the base feature see Division 2, Section 7BQ.

The AUTOPLEX Wireless Trunks on OIU feature provides the OIU with an OC3 interface to the AMPS (Advanced Mobile Phone System) customers, and was developed with the following configuration in mind:

- OIU (SONET (Synchronous Optical Network), OC-3, 24 channel) for CDMA (Code Division Multiple Access) only. This feature uses unidirectional APS (Automatic Protection Switching) , double-board double fiber, and has no need for more than 4500 AFAC (AUTOPLEX Facility) IDs (Identifications). Only PHV4 (Protocol Handler for Voice Version 4) and later is supported. OIU does not have internal echo cancellers. The recommended configuration for OIU Wireless is to use PHVs with internal echo cancellers, such as PHV4 and PHV5. NOTE: This does not preclude the use of external echo cancellers or the use of PHV1, PHV2, or PHV3. However, these configurations were not specifically verified.
- The feature supplies optical OC-3 connection from DCS (Digital Cellular Switch) to a SONET ADM (Add/Drop Multiplexer).
  - generally, this will be SM (Switching Module)-OIU-ADM-SONET ring
  - anything beyond SM is optical interface
- Anything external to the OIU that wants to connect optically must do so via SONET ring.

This feature does not provide any additional message control mechanisms between the 5ESS and the ECP if an OIU status change (e.g., remove/restore links) causes excessive message generation. Present overload control is used.

2. FEATURE ASSIGNMENT

The only provisioning specific to ODA is to set the new field, AFAC ID, (if needed) on the EQLVC (5764 Record) to a valid value.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDSC3	5852	8	54	19.18
EQLVC	5764	8	89	20.31
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

EQDSC3 form (5752 Record) - This form is used to define the DSC3 unit to provide the LDSUF (Local Digital Services Unit Function) to expand tone generators and decoders required for the expanded capacity of the SM-2000. Added a data rule to the EQSTAT field.

EQLVC form (5764 Record) - This form is used to insert, review, update, and delete LVCs (Low Level Virtual Containers). Added the AFAC ID field and associated data rules.

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TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added data rules to the TRKCLS field of type "BCM", "DSC", and "PPMEM". Also added a data rule to the DCS TRK field.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. Added data rules to the TRKOE field the the "O" type.

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SEC. 7CD: PHV6 (PROTOCOL HANDLER FOR VOICE - 6)

1. FEATURE DESCRIPTION

The PHV6 (Protocol Handler for Voice - 6) feature is being deployed in the 5E18(1) and later Software Releases. The feature number for this feature is 99-5E-8434.

PHV6 is a new downloadable vocoder board that reduces COGS (Cost of Goods Sold) and increases the capacity of the CDMA (Code Division Multiple Access) 5ESS DCS (Digital Cellular Switch) for NAR (North American Region) and INTL.(International) PHV6s which supports 128 voice only calls. No low/high speed data calls are supported.

This feature introduces a new PHV hardware - PHV6, which has a new DSP (Digital Signal Processor) microprocessor that is based on an Agere DSP 16411. The Agere DSP 16411 provides larger SRAM (Static Random Access Memory) 160Kwords/DSP core) than DSP 16410. One of the most important reasons for the DSP upgrade is to enable the PHV6 to have a combined DSP image which supports QCELP13K, EVRC (Enhanced Variable Rate Codec), and SMV (Selectable Mode Vocoder) Codecs. These images has new echo cancellation options (128ms v.s. defaulted 64ms) for all 128 voice channels during a three way handoff. The PHV6 also supports new Enhanced PSU2 (i.e., PSU2E) platforms. However, PHV6 does not support any high or low speed circuit/packet switch data application that PHV5 currently support, nor will ISLP (Inter System Link Protocol)/A5 functionality be supported.

New hardware is added:

- The PHV6 adds an VISA128 external SRAM for future feature use. The VISA128 external SRAM is configured solely for VISA FPGA (Functional Programmable Gate Array) to use.

2. FEATURE ASSIGNMENT

Provisioning for this feature is as follows:

- On the EQPSUPH form (RC (Recent Change) view 22.4), insert a new physical PHV6 and update EQSTAT to "O".
- On the PSUGP form (RC view 22.16), assign a logical channel group 0 to be a Speech Handler Channel Group. The GRP TYPE field is NULL because no applications exist for this channel group yet.
- On the TKGRP form (RC view 5.1), create a Speech Handler trunk group (no members exist yet so no tuple will be put into RLpsu_trkg) with SERV TYPE equal to "SME13".
- On the TRUNK form (RC view 5.5), create a Speech Handler trunk group member using an OE (Office Equipment) number which designates logical channel group 0, channel member 0.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CDMAOPT	5599	8	80	8.75
EQPSU	5741	8	22	22.2
EQPSUPH	5742	8	23	22.4
PSISM	5920	5	3A	22.13
PSUGP	5949	5	3J	22.16
TKGRP	5502	3	2A	5.1

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access) feature. Added the PHV6 ECHO PATH DELAY field.

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EQPSU form (5741 Record) - This form is used to define the PSUs equipped in a 5ESS Switch. Modified a data rule under the PSU TYPE field.

EQPSUPH form (5742 Record) - This form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS Switch. Added the PHV6 MIN SPARE field and associated data rule. Also added the PHV6 value to the table for PH CLI.

PSISM form (5920 Record) - This form is used to define a dedicated path from an ISCN (Integrated Services Channel Number) in one SM (Switching Module) to an ISCN in another SM. Modified 1 data rule under the ISCN field.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. Added the AVAILABLE PHV6 field and a new value to the PH TYPE field. Also added data rules to the PH TYPE field.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added a new value and data rule to the SERV TYPE field.

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SEC. 7CE: PSU2E PF3/CF3

1. FEATURE DESCRIPTION

The PSU2E (Packet Switch Unit version 2 Enhanced) PF3/CF3 (Packet Fanout Version 3/Control Fanout Version 3) feature (99-5E-8013) is made available with the 5E18(1) and later Software Releases.

In the current PSU2 architecture, the Protocol Handlers have access to only a half duplex 100 Mb/s PB (Packet Bus). The PB limitation imposes a restriction on the number of PHs (PHVs (Protocol Handlers for Voice), Data PHs, FRPHs (Frame Relay Packet Handlers), and PHAs (Protocol Handler for Asynchronous Transfer Mode) handling voice and data. This packet bus constraint puts a limitation on the capacity (number of voice and data calls) that the SM2K can handle.

The current PSU2 can handle about 1000 erlangs of voice traffic (which translates to about 36000 Busy hour call of CDMA (Code Division Multiple Access) calls (mobile to mobile and land to mobile calls at 100 second holding time) irrespective of the PHV and DSP (Digital Signal Processor) technology or density. In other words, the current PSU2 will not be able to fully take advantage of the PHV advances beyond PHV4 or PHV5 (i.e., only 15 PHV5 can reside on a PSU2 due to the PB limitation).

Moreover, the current PSU2 bus can not handle adequate number of 3G_1X HSPD (High Speed Packet Data) calls.. Because the PSU2 is limited by its PB capacity, the engineering of the PSU2 with both HSPD and voice service can be very cumbersome since data burst may adversely impact the quality of the voice calls that is taken place in the same PSU2 bus.

Given the above limitations, the present PSU2 has been upgraded.

The PSU2E (Enhanced PSU2 with PF3/CF3) was developed as a base for all SM/PSU capacity increase present and future needs. The PSU2E is introduced as replacement of PSU2 to increase the SM2K call capacity when deployed with the CORE700 processor(1). The PSU2e feature increases the packet bus capacity up to 8 Gb/sec (assuming the PHs have the capability to transmit and receive at this rate) from the exiting 100 Mb/sec half duplex. This is accomplished with new packet and control fanout circuit boards, PF3 and CF3.

The PSU2E PF3/CF3 feature increases the overall capacity of the Packet Bus that forms the backbone of the PSU (Packet Switch Unit). The capacity improvement is accomplished by shifting the architectural paradigm of the PSU from that of a hub-based interconnect (only one element of the PSU can utilize the bus at any given point in time) to one that is switch-based (all elements of the PSU are simultaneously able to communicate with other elements). Hence, increasing the capacity of the PSU.

The new PF3 (Packet Fanout) and CF3 (Control Fanout) circuit boards increases the Packet Bus throughput from the existing 100 Mb/s half duplex to a maximum of 8 Gb/s (assuming the PH can transmit/receive at 100 Mb/s.) Each shelf has the capacity to handle a load of 1.6 Gb/s.

2. FEATURE ASSIGNMENTS

In order to provision this feature, set the various fields as follows:

- EQPSU form (5741 Record), insert a new tuple
  - SWITCHING MODULE = 001
  - PSU = 0
  - SG 0 TYPE = PSU2E
  - SG 1 TYPE = PSU2E
  - INTF TYPE = PICB

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- EQPSUPH form (5742 Record), insert a new tuple
  - SWITCHING MODULE = 001 (SWITCHING MODULE on EQPSU form)
  - PSU = 0 (PSU on EQPSU form)
  - PSU SHELF = 0
  - EQST = O
  - PH CLI = 10000
- PSUGP form (5949 Record), insert a new tuple
  - SM = 001 (SWITCHING MODULE on EQPSU form)
  - PSU = 0 (PSU on EQPSUPH form)
  - PSU SHELF = 0 (PSU SHELF on EQPSUPH form)
  - GRP = 0
  - PH TYPE = PHA2
- ATMLNK form (5592 Record), insert a new tuple
  - SM = 001 (SWITCHING MODULE on EQPSU form)
  - PSU = 0 (PSU on EQPSUPH form)
  - LINK = 01
  - SHELF of CHAN 1 = 0 (PSU SHELF on EQPSUPH form)
  - POSITION of CHAN 1 = 0 (PH on EQPSUPH form)
  - CHL GRP of CHAN 1 = 0 (GRP on PSUGP form)
  - CON TYPE of CHAN 1 = ATMNET

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSU	5741	8	22	22.2
PSUGP	5949	5	3J	22.16

EQPSU form (5741 Record) - This form is used to define the PSUs equipped in a 5ESS Switch. Added the INTF TYPE field and change the PSU field to be represented in two fields (SG 0 TYPE, and the SG 1 TYPE). Added data rules to the PSU, SG 0 TYPE, SG 1 TYPE, and SHLF SIDE 0 CLI fields.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. Added data rules to the SM field.

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SEC. 8: WIRELESS

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SEC. 8A: DCS (DIGITAL CELLULAR SWITCH)

1. FEATURE DESCRIPTION

For 5E9(1) and later, a wireless service provider can use a 5ESS Switch as a DCS (Digital Cellular Switch) in a cellular network. It replaces or coexists with Definity G2 DCSs in the APX-1000 system, offering higher call capacity with improved performance and better reliability. Configured with a CNI (Common Network Interface) ring, the 5ESS Switch communicates with the ECP (Executive Cellular Processor) through CCS7 messaging.

The initial application of the feature is only for wireless networks; it does not offer combined wireless and wireline operations.

For a diagram of a 5ESS Switch in the APX-1000 network see Figure Figure 1 .

The 5ESS Switch provides a trunk interface to Radio Cell sites, PSTN (Public Switched Telephone Network), DCSs in the same MTSO (Mobile Telephone Switching Office), and other MTSOs.

The wireless call processing decisions are made by the ECP complex, the overall processor in the Autoplex-1000 system. The ECP CDN (Call Processing Database Node) acts as the central controller for each mobile call and provides instructions to all the Autoplex entities (e.g., DCS, Cell Site, additional DCSs) involved in the call.

Incoming signals on PSTN or inter-DCS trunks are translated to ECP-5E data link messages and transmitted via CCS7 signaling to the ECP complex. Conversely, the ECP complex provides instructions for connecting trunks, outpulsing digits, testing trunks, handling port status inquiries, removing and restoring trunks, etc., to the 5ESS Switch over the same data link. Message acknowledgements, message failures, status changes, additional requests, etc., are exchanged throughout the course of the call. The 5ESS Switch also can perform the maintenance functions like trunk testing, trunk removal and restoral, from the TLWS (Trunk Line Work Station). In all cases, the ECP will be informed about the status of the trunks.

The 5ESS Switch is not required to maintain subscriber information. The subscriber data is kept in the ECP and will be provisioned via the ECP administrative interface. The 5ESS Switch is required to support the administration of the following:

- Cell Site I trunks
- Cell Site II trunks
- Inter-DCS trunks
- Special routing loop around trunks
- Mobile to mobile loop around trunks
- ICOS (Increased Court Ordered Surveillance) loop around trunks
- Inter-vendor trunks
- Dedicated Switch Connections
- PSTN trunks
- VMS (Voice Message System) trunks
- PBX trunks

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- PSTN trunks
- CCS7 signaling links between the ECP and the DCS
- Trunk Test definition and scheduling

2. FEATURE ASSIGNMENT

Trunks assigned to a DCS trunk group (DCS TRK is "Y" on the TKGRP form) must be provisioned beginning with member number 1. Member number 0 cannot be assigned in a DCS trunk group.

For every digital trunk (DEN entered on the TRUNK form) within a DCS trunk group, an AFAC ID must be entered on the EQDUP form.

2.1 Secured Feature ID

The DCS feature is secured. Before the feature can be provisioned, the ACT field for SFID 130 must be set to "Y" on the SFSYS form.

2.2 Cell Site 1 Trunk Group

A Cell Site 1 trunk group is defined on a TKGRP form as shown in Figure Figure 2 .

2.3 Cell Site 2 Trunk Group

A Cell Site 2 trunk group is defined on a TKGRP form as shown in Figure Figure 3 .

The difference between Cell Site 1 and Cell Site 2 trunk groups is the optional continuity test. The continuity test is available for Cell Site 1 trunks only.

2.4 Inter-DCS or Looparound Trunk Group

An Inter-DCS or looparound trunk group must be defined on a TKGRP form as shown in Figure 4 .

VMS trunks are treated as Inter-DCS trunks.

2.5 Inter-Vendor Trunk Group

An Inter-Vendor trunk group is defined on a TKGRP form as shown in Figure 5 .

2.6 Dedicated Switch Connection Trunk Group

A DSC (Dedicated Switch Connection) trunk group is defined as a nailup trunk group on a TKGRP form as shown in Figure 6 .

The DSC carries the signaling links between the Cell Sites and the ECP Complex. The DSC NUM on the NAILUP form marks the nailup as a DSC.

2.7 Digit Analysis

Digit analysis is not performed on DSCs, Cell Site, or Inter-Vendor trunks but is performed only on IDCS or looparound trunks. The CALL TYPE on the LDIT or RDIT form must be "ECP".

Digit analysis for incoming DCS calls is handled almost completely by the ECP. The 5ESS Switch performs digit analysis on only the first two digits to determine if the call is a test call.

2.8 DCS/ECP CCS7 Signaling Link

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When a 5ESS Switch is used as a DCS in an AUTOPLEX system, it interfaces with the ECP via the CNI ring using A-Links. If ISUP signaling is used to communicate between the DCS and another switch, the DCS must also interface via the CNI ring with adjacent (home) STPs using A-Links, and optionally with non-adjacent STPs using E-Links.

Both the DCS and ECP must be assigned unique Point Codes and CLLI (Common Language Location Identifier) codes that will identify them in CCS7 network communications. These appear on views in the sample CNI translations in Figure 8 .

Translations for the DCS/ECP A-Links and other CCS7 needs must be defined according to the guidelines that follow. Since CNI translations are entered on the switch (cannot be entered through the ODA system), the minimum set of input views included here and in Figure 8 refer to Recent Change views.

- The 5ESS Switch CNI information must be defined on View 15.1, Office Identification Data. The OFFICE ID on this view must match the OFFICE ID on Views 8.1 (OFCOPT form) and 8.28 (APXPARM form).

- Data links for the A-Link pair (0 and 1) between the DCS and ECP must be defined on View 15.2, Link Information. The FAR END PNT CODE on this view must match the ECP POINT CODE on View 8.28 (APXPARM form). Refer to Figure 8 for additional restrictions.

  Since an insert of View 15.2 places the links in an unavailable state, the view must be updated to make the links available.

- SS7 routing data must be defined on Views 15.12 (network), 15.9 (cluster), and 15.18 (member). The 15.18 View is only added if member routing is used.

- Subsystem numbers for message routing must be assigned on View 15.10 (Susbsystem Information). Subsystem 235 is used for ECP communication and is mandatory. Subsystem 3 is used for ISUP messaging and is required only if the DCS will communicate with ISUP signaling, through an STP (Signal Transfer Point), to another switch.

- The global title translation type 256 must be defined on View 15.11. The PC1 and PC2 fields on this view must match the ECP POINT CODE on View 8.28 (APXPARM form).

If the DCS will support ISUP signaling, the corresponding A-Links, and optionally the E-Links, must be defined. The CNI E-Link feature is an optional routing alternative required only if the service provider desires alternate routing of messages over E-Links to non-adjacent STPs. It is not used for messages routed over A-Links to adjacent (home) STPs. See Division 9, Section 1, for information about the E-Link feature.

2.9 Automatic Trunk Test Scheduler

For 5E9(1) and later, ATTS (Automatic Trunk Test Scheduler) is provided to schedule the automatic execution of specific types of test calls on outgoing trunks.

Scheduling is accomplished by creating and maintaining a set of "sessions" in an 8-week "schedule" through input forms. ATTS supports up to 20 schedules that can run concurrently. The entries in these schedules correspond to scheduled sessions, where each session contains a single trunk group to be tested. The ATTS sequentially cycles through the test sessions.

To define ATTS sessions, the following steps (Figure 7) are required.

- Assign an ATTTN (Automatic Trunk Test Table Number) on the TKGRP form for the trunk group to be tested. This ATTTN must match the AUTOMATIC TRUNK TEST TABLE NUMBER on an AUTO form (5505 Record). The signaling type for the trunk group must be valid for the scheduled test.

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- Enter an ATSPARM form to define parameters and options that control the ATTS test session within the schedule. (One ATSPARM form must be entered for each unique SCHEDULE that appears on ATSDATA forms.)

- Enter ATSDATA forms to define test sessions within the schedule that will be invoked by ATTS. The session performs automated trunk testing over a specific range of equipped members of a specified trunk group.

  Test sessions within the same ATTS schedule cannot overlap. The START HOUR and START MINUTE of one ATSDATA form cannot be less than the STOP HOUR and STOP MINUTE of another ATSDATA form defined for the same SCHEDULE, WEEK, and DAY.

A sesson always stops at its assigned stop time, or earlier if all trunk group members have been tested.

ATTS schedule sessions can be linked together in a "chain". A session with a "chain" flag starts as soon as the prior one ends, provided the stop time of the first session exactly matches the start time of the second session.

A trunk group can be tested over two or more sessions if it is too big to be tested in one session. This is done by providing start and end member numbers to the testing session. Testing over the range is completed only if time permits.

The ATTS scheduler can be set to attempt an immediate single retry on an aborting trunk test with the RETRY ON ABORT field on the ATSPARM form. The default status of this option is "N": aborting trunks are not retried.

The scheduler can also be set to attempt an immediate single retest of failing trunks with the RETEST ON FAILURE field on the ATSPARM form. The default status of this option is "N": failing trunks are not retested.

Trunks are tested in member number order. Busy trunks or a busy responder in the far exchange are skipped for later retry. Scheduled time permitting, the system iterates over the member number list, attempting to test trunks previously skipped. The maximum number of iterations is controlled by the MAX LOOPS field on the ATSPARM form.

Each ATTS is activated and deactivated with the ST:ATTS and STOP:ATTS input commands on the switch, e.g. ST:ATTS,SCHED=A starts schedule A, and STOP:ATTS,SCHED=A,UCL stops schedule A.

2.10 Network Management

Network Management controls do not apply to DCS traffic. The NM controls are not turned off at the craft interface for DCS trunks, but NM is not supported.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
APXANNC	5051	7	1B	10.38
APXPARM	5050	7	1A	8.28
ATSDATA	5052	7	1C	14.9
ATSPARM	5053	7	1D	14.10
DCSDT	5054	7	1E	14.11
DCSTT	5055	7	1F	14.12
EQDUP	5730	8	17	20.4
LDIT	5300-3/5	3	3C	9.3
MLDIT	5300-3	3	3C	9.15
NAILUP	5207	3	2F	7.11
RDIT	5300-7/8	3	3H	9.9
SFSYS	5713	3	5AR	8.22

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TIMING	5520	3	5T	8.5
TKGRP	5202	3	2A	5.1

APXANNC form (5051 Record) - This form, which is new for 5E9(1) and later, is used to associate an identification number from the ECP (Executive Cellular Processor) to a route index for an announcement. This form is populated when the switch is serving as a DCS (Digital Cellular Switch) in a cellular network.

APXPARM form (5050 Record) - This form, which is new for 5E9(1) and later, is used to administer global parameters that are required when a 5ESS Switch is functioning as a DCS in a cellular network.

ATSDATA form (5052 Record) - This form, which is new for 5E9(1) and later, is used to provide data that defines a test session within a schedule. Each session is invoked by the ATTS (Automatic Trunk Testing Scheduler) to perform automated trunk testing over a specified range of equipped members in a trunk group.

ATSPARM form (5053 Record) - This form, which is new for 5E9(1) and later, is used to define parameters and options that control an ATTS test session on a per schedule basis.

DCSDT form (5054 Record) - This form, which is new for 5E9(1) and later, is used to define digital tests for an automatic trunk test table. The digital test result threshold specified on this form will be used to define the pass/marginal/fail criteria for the tests.

DCSTT form (5055 Record) - This form, which is new for 5E9(1) and later, is used to define transmission tests for an automatic trunk test table. Tone measurement thresholds and noise or return loss thresholds defined on this form will be used to define the pass/marginal/fail status for the test calls.

EQDUP form (5730 Record) - This form is used to define the equipment location information for the DLTU (Digital Line/Trunk Unit) DFI (Digital Facility Interface) Pack Number.

For 5E9(1) and later, two AFAC ID fields were added, one for Facility 0 and one for Facility 1. These DCS Facility Identifier fields are used to communicate maintenance information to the ECP complex for the facility of a DFI.

LDIT form (5300-3/5 Record) - This form is used to interpret incoming digits. For line-originated calls, the LDIT is used after the PDIT; for trunk-originated calls, the LDIT is used after the INDIT when the LDIT(Y or N)? field is "Y" (Yes) on the INDIT form.

For 5E9(1) and later, the CALL TYPE field was modified to add the value "ECP" for mobile-originated calls on a 5ESS Switch serving as a DCS (Digital Cellular Switch) for an ECP (Executive Cellular Processor).

NAILUP form (5207 Record) - This form is used to define a dedicated path through the switch from one transmission facility to another.

For 5E9(1) and later, the field DSC NUM was added. This field specifies the Dedicated Switch Connection number between a cell site and the ECP (Executive Cellular Processor) complex.

RDIT form (5300-7/8 Record) - This form is used to translate remaining dialed digit strings for digit analysis. It translates digits collected but not translated in LDIT.

For 5E9(1) and later, the CALL TYPE "ECP" was added for mobile-originated calls on a 5ESS Switch serving as a DCS for an ECP.

SFSYS form (5713 Record) - This form is used to enable Secured Features.

For the DCS feature, the ACT field for SFID 130 must be set to "Y".

TIMING form (5520 Record) - This form is used to define intervals for Permanent Signal, Partial Dial, and Critical Timing in the switch.

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For 5E9(1) and later, the TRUNK CLASS value "IDCS" was added for Inter-DCS trunks. Recommended and default timing values are specified in the form description in Division 3, Section 5T.

TKGRP form (5202 Record) - This form is used to define a trunk group. Trunk information entered on these records is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

For 5E9(1) and later, the CELLULAR DATA fields DCS TRK, DCS RETRY, DCS DIGCNT, CONT TEST, and DCS NOTIFY were added to this form. Also, new values were introduced for the following fields: HUNT TYPE, TRKCLS, INPULSING, and OUTPULSING.

The DCS TRK field indicates if the trunk group contains Digital Cellular Switch trunks. For these trunk groups, DCS RETRY determines if a retry should be attempted on a trunk in the group, DCS DIGCNT specifies the number of incoming digits for a DCS trunk, and DCS NOTIFY determines if a notification from the ECP is required.

The CONT TEST field specifies if a continuity test should be run on a DCS Cell Site 1 trunk. If this option is set, the DCS will perform a continuity check each time a trunk in the group is seized.

New HUNT TYPES added for this feature are "GUCD" (Forward Circular Sequential), "BGUCD" (Backward Circular Sequential), and "UCD" (Uniform Call Distribution).

The following new TRKCLSs were added:

- "CST1" - DCS Cell Site 1 trunks.
- "CST2" - DCS Cell Site 2 trunks.
- "DSC" - DCS Dedicated Switch Connections.
- "IDCS" - Inter-DCS (Digital Cellular Switch) or loop-around trunks.
- "IVTRK" - DCS Inter-Vendor trunks.

The INPULSING and OUTPULSING fields were modified to include the new value "DCS" (Digital Cellular Switch).

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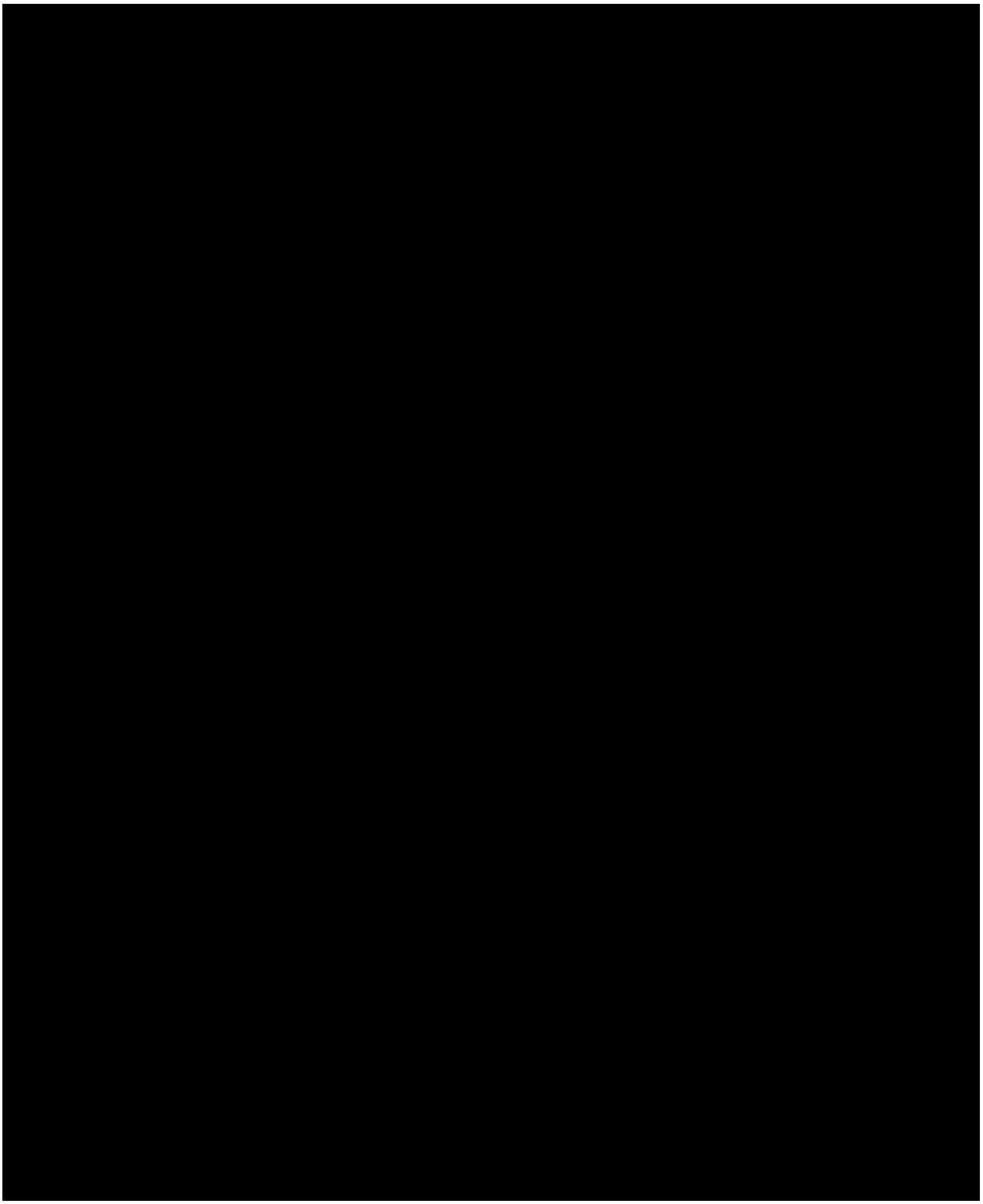

Figure 1 5ESS SWITCH AS A DCS IN A CELLULAR NETWORK

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Figure 2 CELL SITE 1 TRUNK GROUP FORM FLOW

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Figure 3 CELL SITE 2 TRUNK GROUP FORM FLOW

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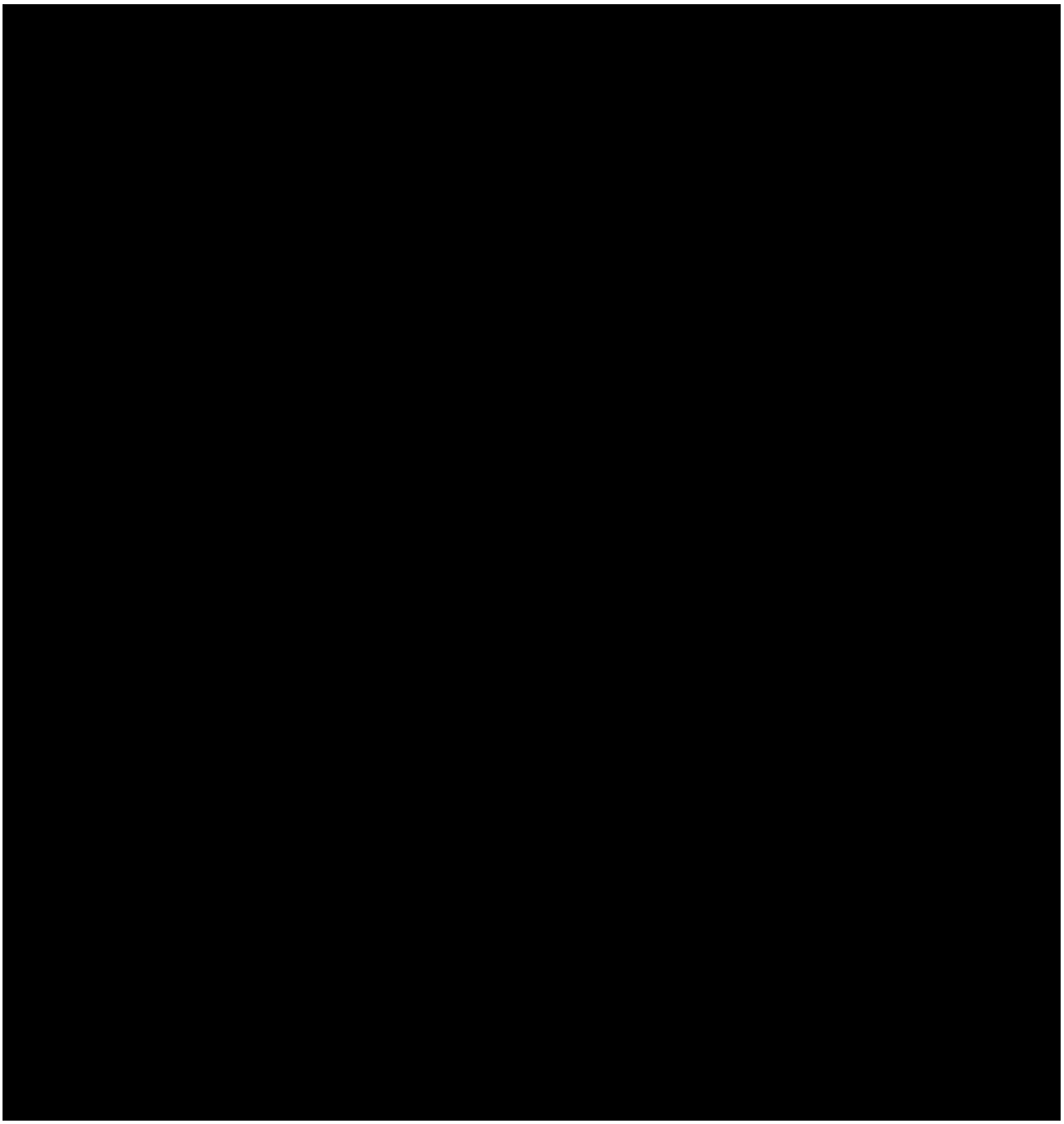

Figure 4 INTER-DCS OR LOOPAROUND TRUNK GROUP FORM FLOW

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Figure 5 INTER-VENDOR TRUNK GROUP FORM FLOW

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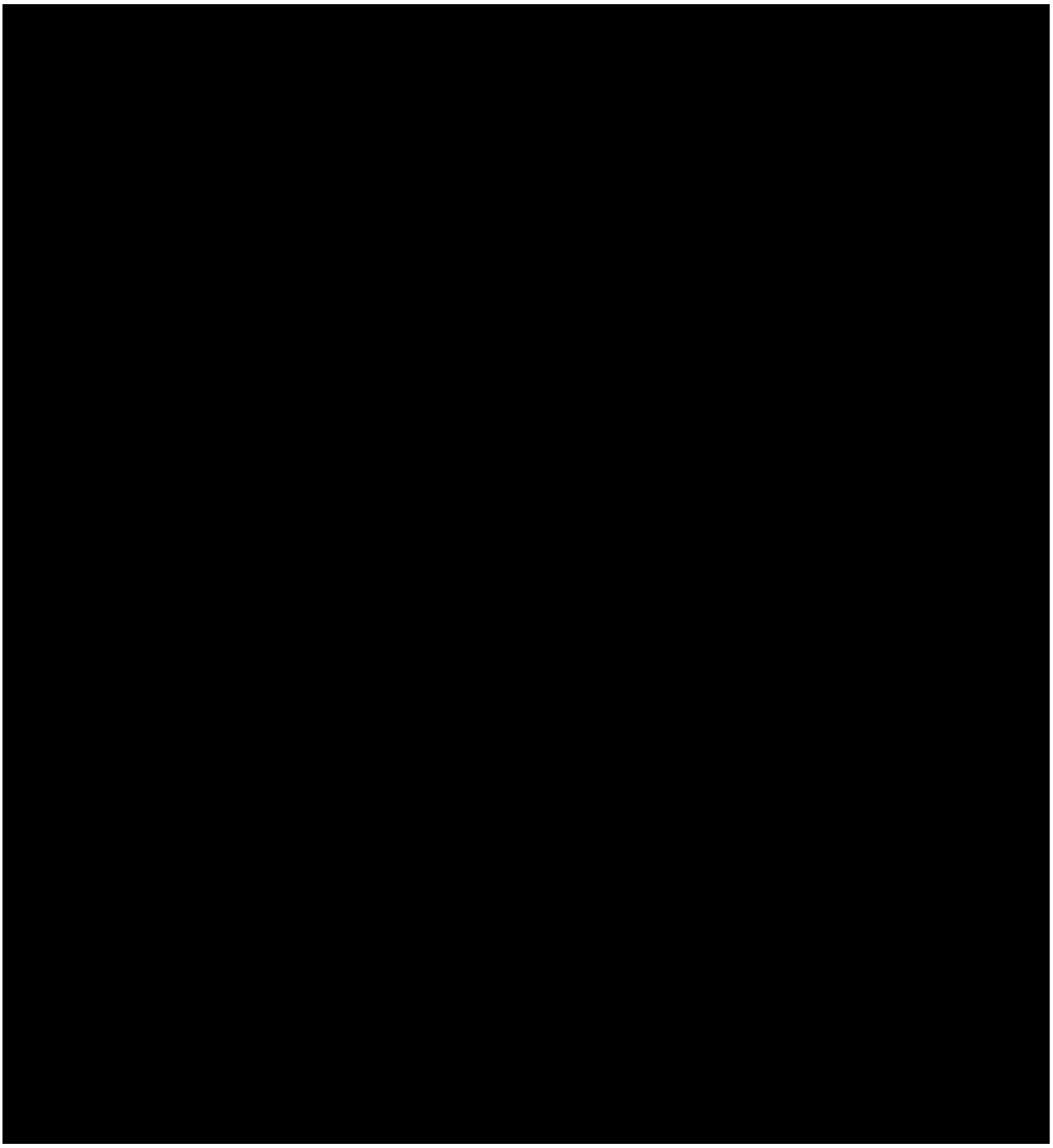

Figure 6 DSC TRUNK GROUP FORM FLOW

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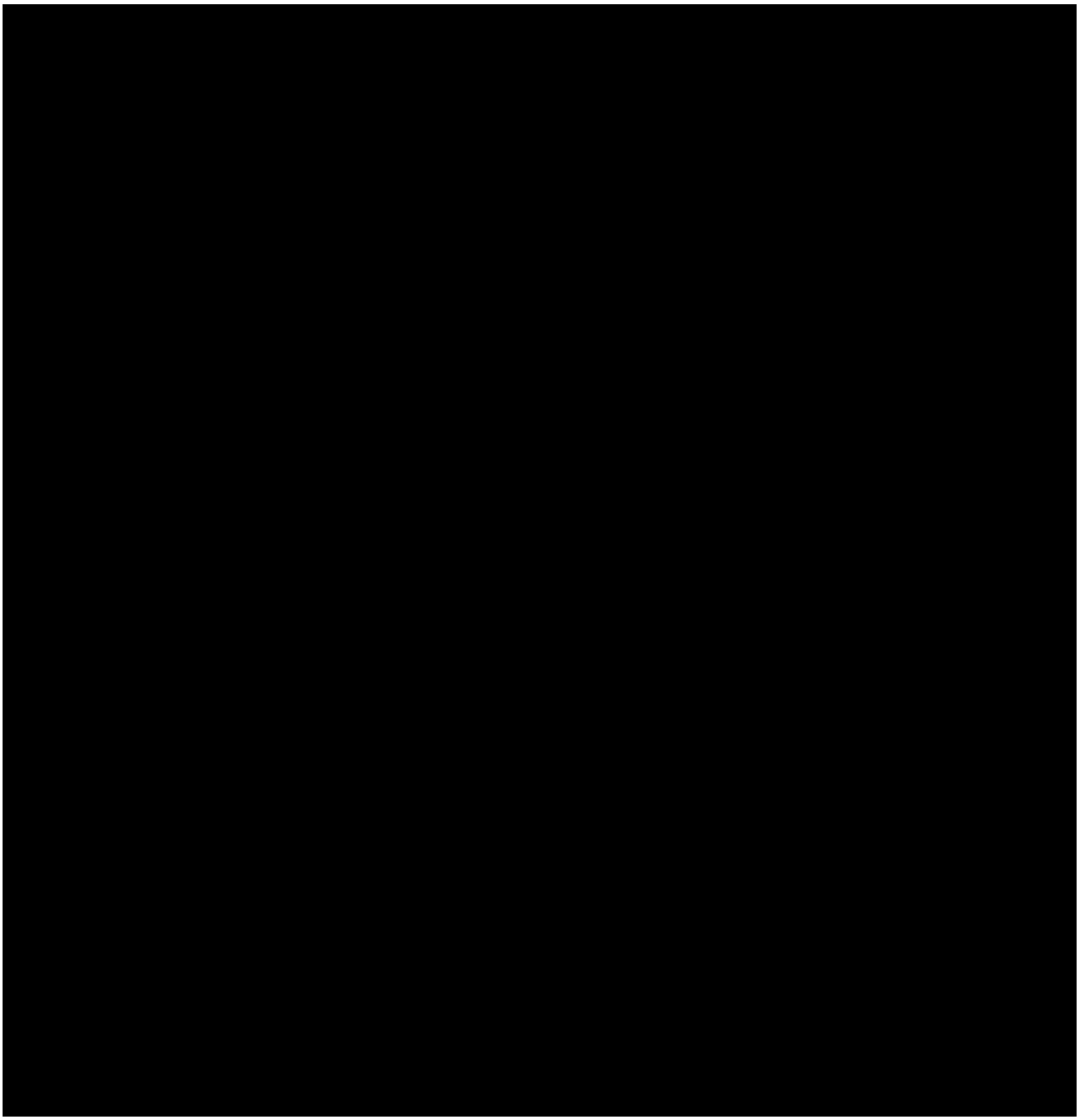

Figure 7 ATTS FORM FLOW

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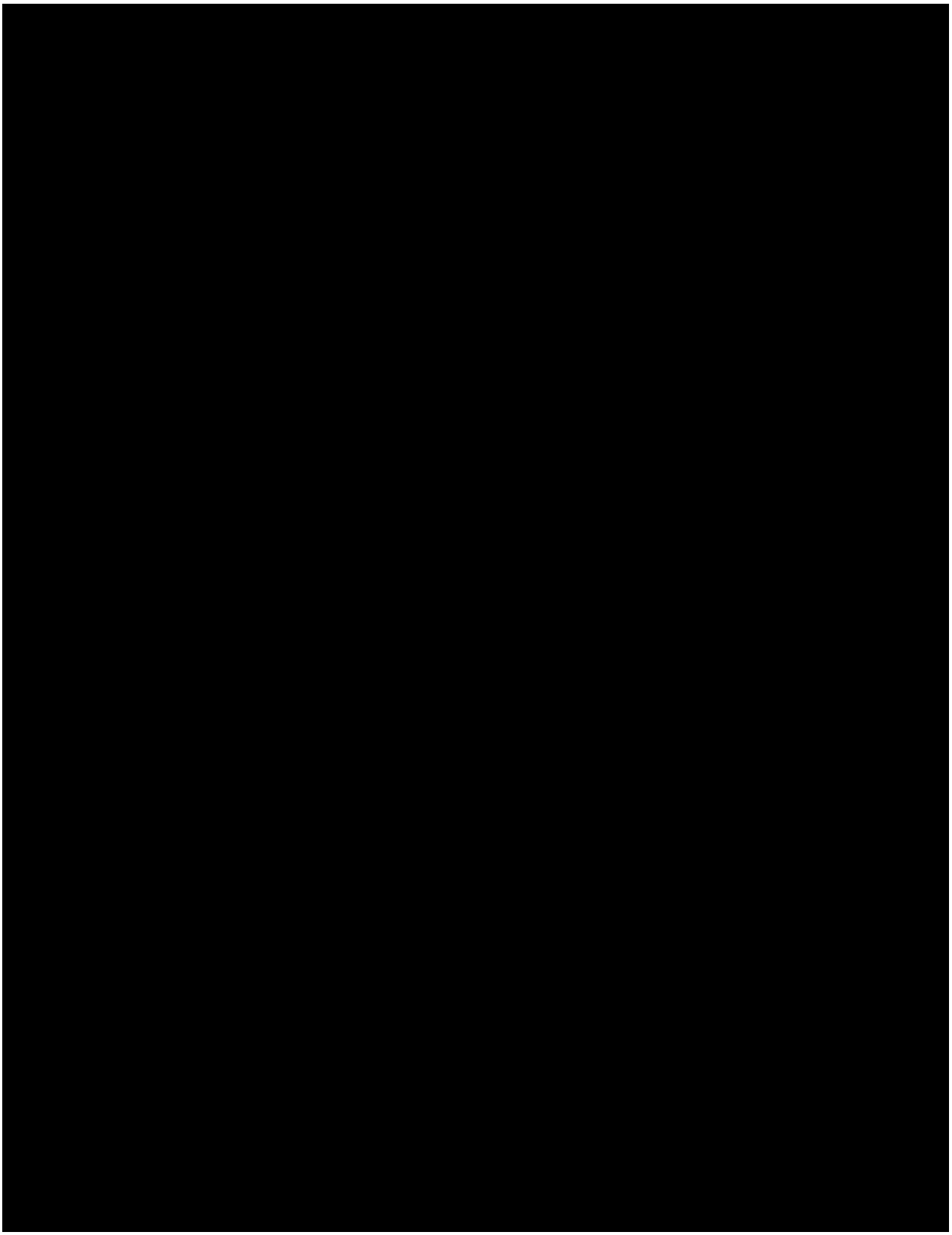

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Figure 8 CNI FORM FLOW

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SEC. 8B: CODE DIVISION MULTIPLE ACCESS

1. FEATURE DESCRIPTION

CDMA (Code Division Multiple Access) is a 5E10 feature which builds on the DCS (Digital Cellular Switch) application initially offered in the 5E9(1) Software Release. It provides the 5ESS Switch the necessary hardware fabric and associated software to interconnect customers who use analog cellular phones, TDMA (Time Division Multiple Access) or digital CDMA handsets with the PSTN (Public Switched Telephone Network), as well as, other switching offices within the DCS network. The Lucent Technologies feature number for this capability is 99-5E-1600.

1.1 Technology Overview

CDMA is one of three multiple access schemes used to divide the radio frequency spectrum between CS (Cell Site) and MS (Mobile Stations) for cellular telephone service. The other two access methods are FDMA (Frequency Division Multiple Access) and TDMA (Time Division Multiple Access).

CDMA uses spread-spectrum technology, in which the radio signals associated with a call are spread across a single broad frequency spectrum and differentiated from other calls in that spectrum by assigning a unique code to each call's signal. At the receiving end (MS or CS), the specific call's signal is isolated by decoding the full received signal using the code assigned to that call's signal. All other noises or signals associated with calls that don't match the assigned code are ignored.

The CDMA frequency access method allows the service provider to reuse the same frequencies in adjacent cells as opposed to having cells spaced far enough apart to avoid co-frequency interference which is required by the other two access schemes. This benefit, along with other advantages, allows CDMA to provide a 10-fold capacity improvement in the frequency spectrum over the other two access methods.

With more efficient usage of the frequency spectrum, along with other advantages such as voice clarity and security, wireless providers can fulfill the access demand for service especially during high usage periods, such as rush-hour.

1.2 CDMA Call Flow Functionality in the 5ESS Switch

An MS (cell) originated CDMA call terminates to a packet pipe which consists of 2- to 8- DFI channels that terminate to a FRPH (Frame Relay Protocol Handler). The FRPH is a PH4 in the PSU-2 (Packet Switch Unit -2) hardware. The FRPH transports the encoded and compressed voice via the packet bus to the PHV1 or PHV2 (Protocol Handler for Voice) in the PSU-2 hardware.

The PHV1 or PHV2 can receive packets from multiple cell sites during a soft handoff via separate FRPH's. A soft handoff is a process that takes advantage of CDMA technology and allows a call to be handled by multiple cell sites so the best signal strength may be used for a given call. The function of the PHV1 or PHV2 is to select the "best" packet, convert the variable-length packets into 64 Kbps Circuit Switched PCM (Pulse Code Modulated) voice, and send it via a time slot to the PSTN (Public Switched Telephone Network).

In the reverse direction, the PCM voice is received at the PHV1 or PHV2 from the PSTN through the TSI (Timeslot Interchanger) and converted into variable-length packets. The PHV1 or PHV2 then sends the packets to multiple cell sites through the FRPH and DFI terminating each cell site's packet pipe.

The actual wireless call processing decisions are made by the ECP (Executive Control Processor) complex. Incoming signals on PSTN or inter-DCS trunks are transmitted to ECP complex. The ECP complex provides instructions for connecting trunks, outpulsing digits, etc. to the 5ESS Switch.

2. FEATURE ASSIGNMENT

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See Figure 1 for feature assignment form flow for the CDMA feature.

The CDMA feature impacts the following data areas:

- Secured Features
- Hardware
- Trunks
- Office Options

2.1 Secured Features

The DCS feature is required for CDMA. It is a secured feature, therefore the ACT field for SFID 130 must be set to "Y" on the SFSYS form (5713-1 Record) before the DCS feature can be activated.

The CDMA feature is also a secured feature. To activate CDMA, the ACT field for SFID 221 must be set to "Y" on the SFSYS form.

2.2 Hardware

CDMA requires the following new hardware:

- Packet Switching Unit 2
- Protocol Handler 4
- ECU (Echo Cancellation Unit) and the associated ECB (Echo Cancellation Boards) The new hardware are compatible with both the Switching Module and Switching Module 2000.
- DFMP (Data Fanout Multiple PIDB)
- PHV1 or PHV2

2.3 Protocol Handlers for CDMA

Unlike other access schemes (FDMA, TDMA) which use circuit switching between the cell sites and network switching offices, CDMA uses voice packets which terminate on the 5ESS Switch over a packet pipe. The packet pipe terminates on new Packet Switching Hardware. See Figure 3 for the Packet Pipe form flow.

The new PH is used to provide the following protocol handler functions needed to support CDMA:

- FRPH (Frame Relay Protocol Handler) - Transfers packets from/to cell sites via the CDMA packet pipe to/from the Speech Handler via the PSU-2 packet bus.
- PHV (Protocol Handler for Voice) (Also referred to as Speech Handler) - Provides functionality to convert between voice packets used by CDMA cell sites, and 64 kbs CSV (Circuit Switched Voice) used by the PSTN. The PHV1 is a speech handler with an 8 KB vocoder. The PHV2 is a speech handler with a 13 KB vocoder.

The CDMA feature allows switching within an SM. The PHA secured feature allows inter-SM switching. (See Division 2, Section 8C for more information on the PHA feature.)

On the EQPSUPH form, the appropriate PH CLI must be assigned to PH4s used for CDMA applications.

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Also, the PH4 MIN SPARE indicates the number of PH4 spares; the PHV1 and PHV2 MIN SPARE fields indicate the number of spare protocol handlers for voice.

On the PSUGP form, three new PH TYPEs were added. "PH4" was added for the PH4 used for FRPH (Frame Relay Protocol Handler). "PHV1" and "PHV2" were added for protocol handlers for voice.

2.4 Trunks

There are 3 different types of trunk groups required to handle CDMA calls.

1. Packet Pipe Member trunk groups with a trunk class of "PPMEM"
2. Packet Pipe trunk groups with the trunk class of "PKTPIPE"
3. Speech Handler trunk groups with a trunk class of "SPCHNDLR"

2.5 Packet Pipe Member Trunk Group

The channels on the digital facility associated with a particular PPMEM (Packet Pipe Member) are also trunks and are known as PPMEM Members. Each PPMEM or trunk is one of the DS0s (64Kbps or 56 Kbps channels) on the digital facility that terminates at a cell site. Since PPMEM is a trunk it also has a trunk group and member number. However, the PPMEM trunk group is a different trunk group from the PKTPIPE trunk group. A Packet Pipe Member trunk group can only be made up of PPMEM trunks. However, a PPMEM trunk group can support PPMEM for multiple Packet Pipes.

The following must be entered on the TKGRP form for PPMEM trunks:
- DATARATE must be 56K or 64K
- DCS TRK must be "N"
- INPULSING must be "PP"
- OUTPULSING must be "PP"
- TRK DIR must be "2W"
- TRKCLASS must be "PPMEM"

2.6 Packet Pipe Trunk Groups with FRPH

The Packet Pipe trunk assignments for FRPH define the specific PH channels that terminate a packet pipe of DS0 channels from the cell sites. A packet pipe consists of from 1 to 8 DS0 channels (DFI channels). A minimum of 1 to a maximum of 8 packet pipe member trunks must be assigned. The members making up a particular packet pipe may be in different trunk groups but they must be on the same DFI facility.

Packet Pipe Trunk Groups require the following entries on the TKGRP form (5202 Record):
- DCS TRK must be "Y"
- INPULSING must be "PP"
- OUTPULSING must be "PP"
- TRKCLASS must be "PKTPIPE"
- TRK DIR must be "2W"

On the TRUNK form (5204 Record)
- TRKOE (the OE type) must be "U"
- TRKOE (the OE number) for UEN must be
- entered with SM, PSU, PH Shelf,
- PH CHL GRP, and PH CHL.

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2.7 Speech Handler Trunk Groups with PHV

PHV1 or PHV2 trunks provide the ports that interface with the FRPH. The PHV1 or PHV2 contains 12 ports, each capable of terminating a packetized voice connection. See Figure 2 for Speech Handler form flow.

The following should be entered on the TKGRP form for PHV1 or PHV2 Trunks:

- DCS TRK must be "Y"
- DCS RETRY must be "Y"
- IAPT must be "N"
- SERV TYPE must be "VOICE"
- TRK DIR must be "2W"
- TRKCLASS must be "SPCHNDLR"

On the TRUNK form:

- TRKOE (the OE type) must be "U"
- TRKOE (the OE number)for UEN must be entered for SM, PSU, PH Shelf, PH CHL GRP, and PH CHL GRP.

2.8 Office Options

The Vocoder must be specified on the OFCOPT form as either 8 KBPS or 13 KBPS. The reverse voice quality threshold must be specified.

With 5E13 and later, CDMA DTMF Tone Programmability is provided by the OVERRIDE, LENGTH ON, and LENGTH OFF fields. The ability to set the on and off lengths at the PHV to 200 ms on and 50 ms off allows the voice messaging system to correctly detect mobile originated DTMF tones.

PP IDLE (Packet Pipe Idle timer), PER RATE, and PER THRESH (Protocol Error Record Rate and Threshold) fields were added to the ISDNOPT form to support the CDMA feature.

Also, a new test type was added to the ATSPARM form (5053 Record) for the Speech Handler trunk PCM loop back test. Also, the new test type was added to the AUTO form (5505 Record), which is used to define transmission tests for an automatic trunk test table.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
Equipment Assignment	-	8	1	-
ATSPARM	5053	7	1D	14.10
AUTO	5505	3	5E	14.1
EQDUP	5730	8	17	20.4
EQECSU	5743	8	62	19.15
EQIM	5700	8	2	22.1
EQPSU	5741	8	22	22.2
EQPSUPH	5742	8	23	22.3 22.4
ISDNOPT	5941	5	5B	8.1
OFCOPT	5509	3	5I	8.1
PSUGP	5949	5	3J	22.16
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

Equipment Assignment - This section gives the CLI (Change Level Indicators for 5ESS Switch Equipment. The new CLI values for CDMA are listed under the appropriate equipment form.

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ATSPARM form (5053 Record) - This form defines the parameters and options that control ATTS (Automatic Trunk Test Scheduler) test session on a per schedule basis. For the CDMA feature, the "SHCT" TEST TYPE was added to support Speech Handler trunk PCM look back testing.

AUTO form (5505 Record) - This form is used to define the ATTTN and their associated test lines. For the CDMA feature, the "SHCT" AUTOMATIC PROGRESSION TEST TYPE was added to support Speech Handler trunk PCM look back testing.

EQDUP form (5730 Record) - This form defines the equipment location information for the Digital Trunk Units. The FAC0/1 Echo Canceller Packs fields support the CDMA feature for Echo Cancellers.

EQECSU form (5743 Record) - This form defines the characteristics of an Echo Canceler Unit.

EQIM form (5700 Record) - This form defines Switching Module equipage assignments. The MCTSI (Module Controller/ Timeslot Interchange) Unit Package Interface is defined in the PI SG0/SG1 TYPE fields.

EQPSU form (5741 Record) - This form defines the PSUs equipped on a 5ESS Switch. The SG 0 and SG 1 CLI values must be entered.

EQPSUPH form, (5742 Record) - This form defines the Packet Switching Unit Protocol Handlers equipped on the 5ESS Switch. The PH4 MIN SPARE and the PHV1 and PHV2 MIN SPARE fields support the CDMA feature.

ISDNOPT form (5941 Record) - This form defines the office parameters that must be entered when the office is an ISDN switch. The PP IDLE, PER RATE, and PER RATE THRESH fields were added to the Packet Switching parameters for the CDMA feature.

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The PHV (Protocol Handlers for Voice) fields support the CDMA feature.

With 5E13 and later, CDMA DTMF Tone Programmability is provided by the OVERRIDE, LENGTH ON, and LENGTH OFF fields.

PSUGP form (5949 Record) - This form specifies the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. AVAILABLE PH4, PHV1, and PHV2 fields are Recent Change only verify fields displaying the number of available channel groups for protocol handlers for voice. The new PH TYPEs "PH4", "PHV1", and "PHV2" were added to support the CDMA feature for protocol handlers for voice.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The "PPMEM", "PKTPIPE", and "SPCHNDLR" trunk classes were added to support the CDMA feature. Also PP signaling was added to INPULSING and OUTPULSING fields.

The SERV TYPE field was added to indicate the type of service for Trunk Groups with a TRKCLS of "SPCHDLR".

TRUNK form (5204 Record) - The trunk form defines each member of a Trunk Group in a 5ESS-2000 Switch Office. The "U" TRKOE for equipment type and TRKOE number was added to support the CDMA feature. Also, the Packet Pipe Member Trunk fields support Packet Pipe Trunks for CDMA.

4. PROTOCOL HANDLER FOR ASYNCHRONOUS TRANSFER MODE (PHA)

The PHA secured feature supports the CDMA feature. For more information on PHA, see Division 2, Section 4A224.

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5. 13 KB/S VOCODER

For 5E10 and later, in addition to the 8 KB/S vocoder, the 13 KB/S vocoder was added to support CDMA. The PH (Protocol Handler) type for the 13 KB/S vocoder is "PHV2" (Protocol Handler for Voice 2). The PH type for the 8 KB/S vocoder is "PHV1". Protocol Handler types are assigned on the PSUGP form, 5949 Record.

6. GLOSSARY

ATTS	Automatic Trunk Test Scheduler
CDMA	Code Division Multiple Access
CS	Cell Site
CSV	Circuit Switched Voice
DCS	Digital Cellular Switch
ECB	Echo Cancellation Boards
ECP	Executive Control Processor
ECU	Echo Cancellation Unit
FDMA	Frequency Division Multiple Access
FRPH	Frame Relay Protocol Handler
MCTSI	Module Controller/ Timeslot Interchange
MS	Mobile Stations
PCM	Pulse Code Modulated
PH4	Protocol Handler 4
PHV	Protocol Handlers for Voice
PSTN	Public Switched Telephone Network
PSU	Packet Switching Unit
PSU-2	Packet Switch Unit - 2
TDMA	Time Division Multiple Access
TSI	Timeslot Interchanger

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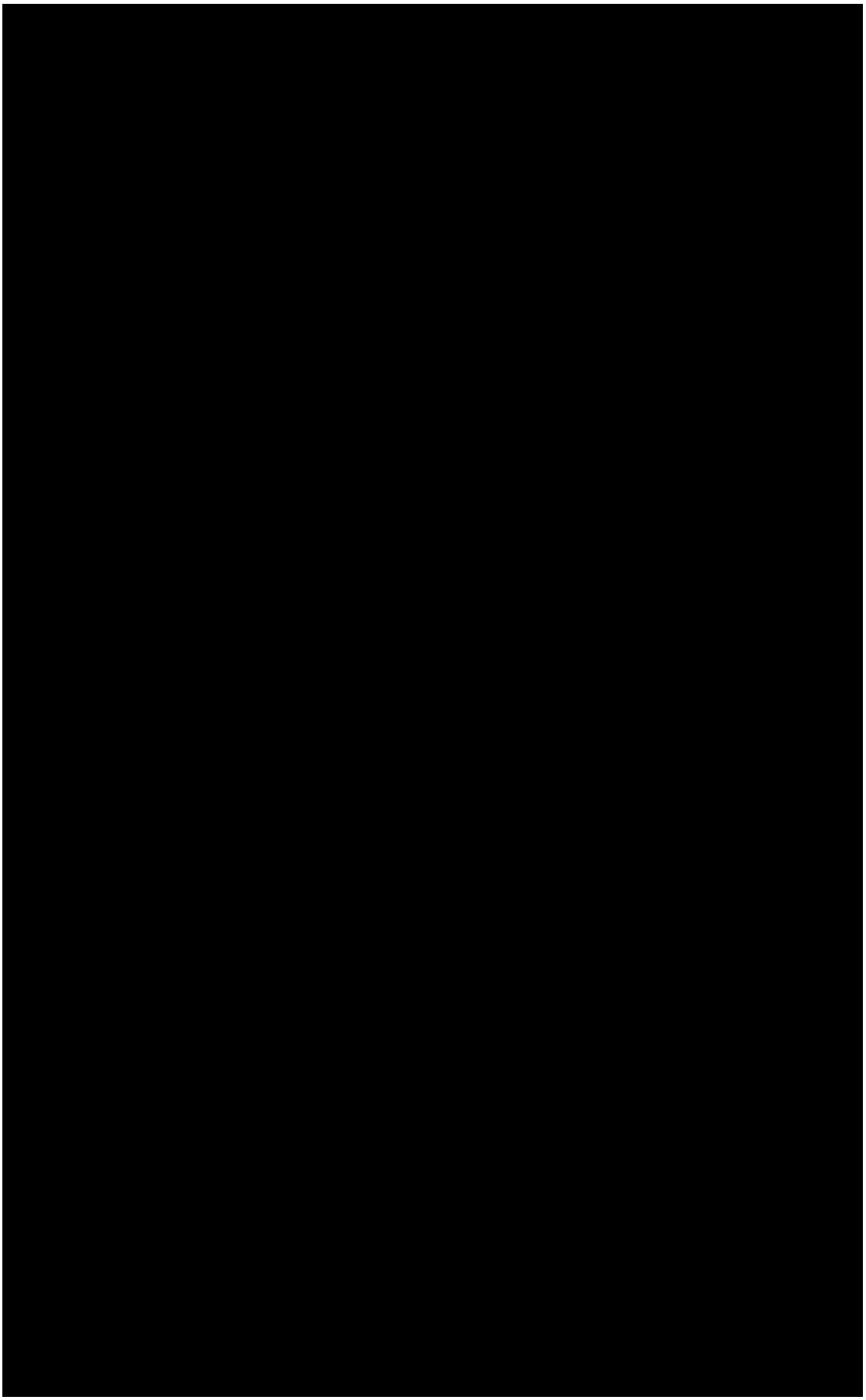

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Figure 1 CDMA FEATURE FORM FLOW

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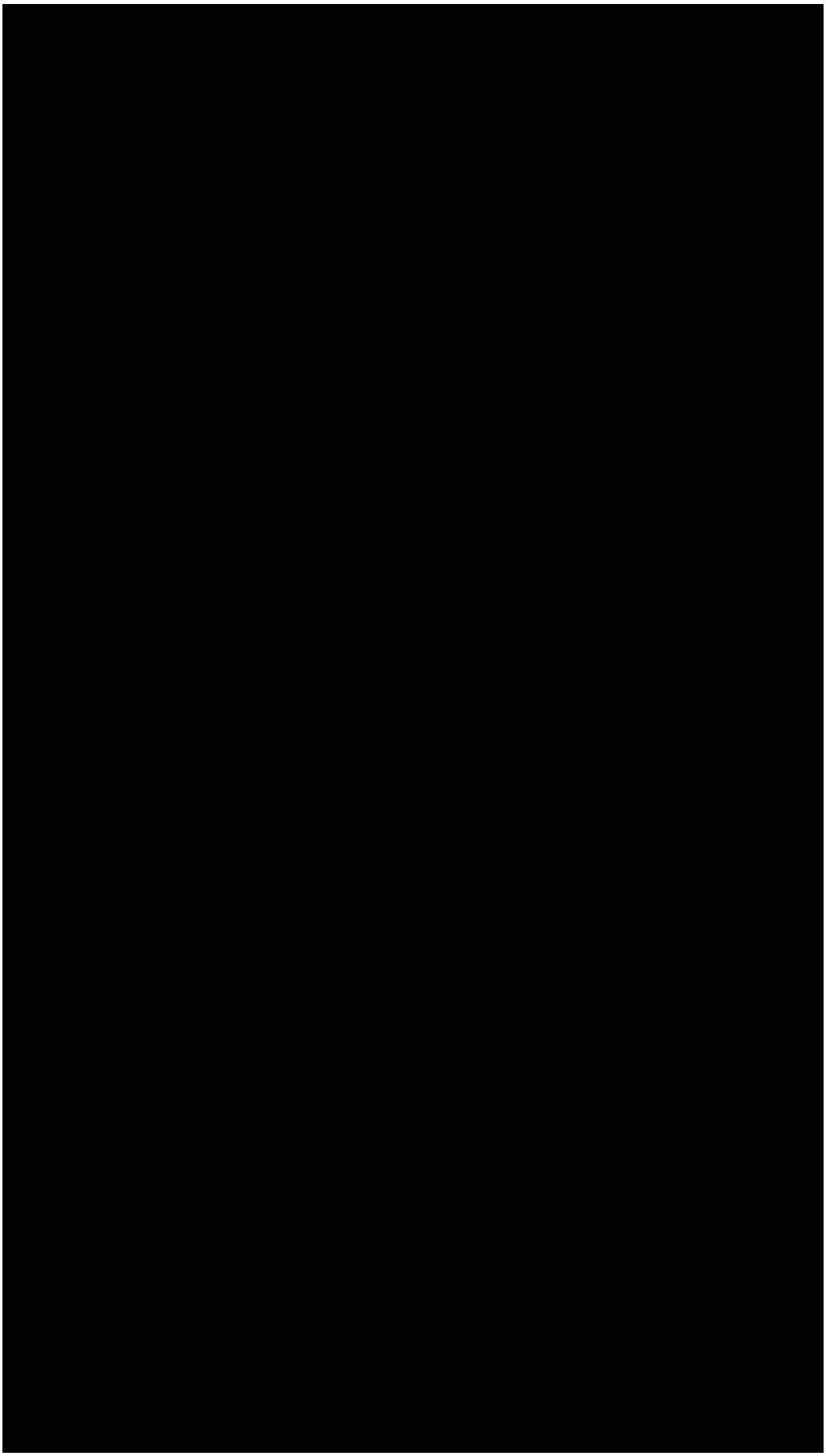

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Figure 2 SPEECH HANDLER FORM FLOW

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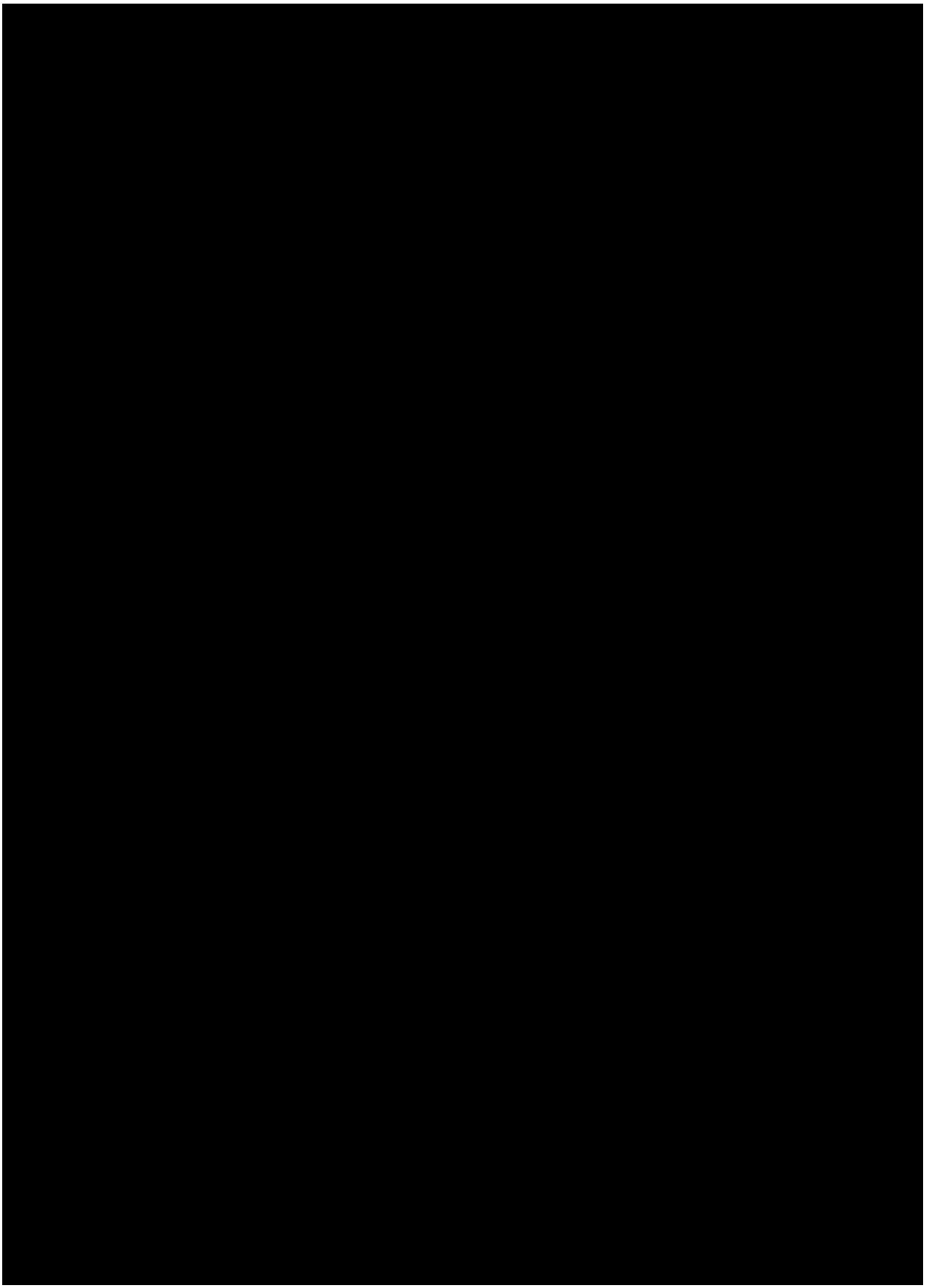

Figure 3 PACKET PIPE FORM FLOW

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SEC. 8C: INTER-MSC TANDEM SUPPORT FOR INTERNATIONAL CALLS

1. FEATURE DESCRIPTION

This feature allows the mobile subscriber to make international calls the same way as calls within the North American numbering plan are made.

The Inter-MSC (Mobil Switching Centers) Tandem Support for International Calls provides digit outpulsing in the format: Mobile Number, PIC (Primary Carrier) and Called Number information on a standard T1 Facility (information digits are used to indicate the dialed prefix). This is what is used for routing tandem calls between MSCs where billing must be done based on the mobile number and the subscriber's PIC used to route the call.

The Inter-MSC Tandem outpulsing format currently provides 10 called number digits. This is sufficient for North American Numbering Plan calls, but does not provide enough digits to handle international numbers. This feature increases the number of digits supported initially to 12 for international numbers (minus prefix), and will subsequently expand the allowed number of digits to 15. The feature modifies the Inter-MSC Tandem format to allow an international number to be specified as the called number.

Introduction of the Inter-MSC Tandem Support for International Calls is in two phases. The first, supporting 12 digits as a 5E10 SU, and the second phase supporting 15 digits as a 5E11 SU. The feature number for this capability is 99-5E-3334.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS- 2000 Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). The valid entries for DCS DIGCNT were changed to 1 - 28.

3. GLOSSARY

MSC Mobil Switching Centers

PIC Primary Carrier

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SEC. 8D: EXTENDED SOFT HAND-OFF THROUGH A MULTIPOINT ATM NETWORK CONNECTION

1. FEATURE DESCRIPTION

The Extended Soft Hand-Off Through a Multipoint ATM (Asynchronous Transfer Mode) Network Connection feature (99-5E-3081) is available with the 5E11 and later Software Releases. (A "soft" hand-off refers to the hand-off of a call between two cells (i.e., the primary and secondary) where the mobile is simultaneously transmitting to, and receiving from, both cells. A "hard" hand-off refers to the hand-off of a call between the two cells where the mobile stops transmitting to one cell before switching to the next).

NOTE: The 99-5E-3081 feature builds upon the 99-5E-3082 feature (Interswitch Soft Hand-Off) introduced for 5E10 and later. See Division 2, Section 8E. Both features are dependent upon the PHA (Protocol Handler for Asynchronous Transfer Mode) special feature; see Division 2, Section 4A224.

The 99-5E-3081 feature provides a means for interconnecting large numbers of PSUs (Packet Switching Units) to the 5ESS-2000 Switch. Without this feature, a service provider with a small number of PSUs can connect PSUs directly to each other with point-to-point connections. However, as the number of CDMA (Code Division Multiple Access) cells and PSUs increase, the number of point-to-point connections increase exponentially resulting in increased complexity. This feature provides the capability to increase the number of cells and PSUs by interconnecting PSUs through an ATM switch using a smaller number of PHAs than would be needed for point-to-point connections.

2. FEATURE ASSIGNMENT

To use this feature, the service provider must provision an ATM Switch and a PHA (Protocol Handler for ATM) to terminate the ATM link on the PSU of the 5ESS-2000 Switch. If the service provider currently uses PHAs to directly interconnect PSUs through point-to-point connections, the service provider may elect to re-use or re-deploy PHAs to terminate the ATM link and reduce the number of PHAs required.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PSULNK	5057	7	2A	22.22

PSULNK form (5057 Record) - This form is used to define links between PSUs using PHAs (Protocol Handlers for AMT). The CON TYPE field was moved to this form from the EQPSU form (5741-1/2 Record). CON TYPE is used to indicate whether the connection terminates to a point-to-point PSU link or to a point-to-multipoint ATM configuration.

4. GLOSSARY

ATM	Asynchronous Transfer Mode
CDMA	Code Division Multiple Access
PHA	Protocol Handlers for Asynchronous Transfer Mode
PSU	Packet Switching Unit

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SEC. 8E: INTERSWITCH SOFT HAND-OFF

1. FEATURE DESCRIPTION

The Interswitch Soft Hand-Off feature (99-5E-3082) is available with the 5E10 and later Software Releases. It enhances the delivery of CDMA (Cell Division Multiple Access) services by improving the quality and grade of service between large areas (such as cities, MTAs (Major Trading Areas) and/or BTAs (Basic Trading Areas)) to be comparable to the quality and grade of service that exists between smaller areas (such as suburbs or counties). The Interswitch Soft Hand-off feature provides for "seamless" CDMA service between PSUs (Packet Switching Units) of different 5ESS-2000 Switches as calls are "handed-off" between cells served by the switches. (A "soft" hand-off refers to the hand-off of a call between two cells (i.e., the primary and secondary) where the mobile is simultaneously transmitting to, and receiving from, both cells. A "hard" hand-off refers to the hand-off of a call between the two cells where the mobile stops transmitting to one cell before switching to the next).

The Interswitch Soft Hand-Off feature provides the capability to inter-connect PSUs (Packet Switching Units) of different 5ESS-2000 Switches, in either of two ways:

- PSU point-to-point (PSU link-to-PSU link)
- PSU point-to-Multipoint ATM (Asynchronous Transfer Mode) Network Connection

NOTE: The PHA (Protocol Handler for Asynchronous Transfer Mode) feature must be purchased to support the Interswitch Soft Hand-Off feature. See Division 2, Section 4A224.

2. FEATURE ASSIGNMENT

The service provider must physically interconnect the various PSUs of the 5ESS-2000 Switch.

3. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PSULNK	5057	7	2A	22.22

PSULNK form (5057 Record) - This form is used to define links between packet switch units using PHAs (Protocol Handlers for ATM (Asynchronous Transfer Mode)). The LINK TYPE field was added to this form to support the Interswitch Soft Hand-Off feature. When the PHAs are being used in a PSU "point-to-point" configuration, the LINK TYPE field defines whether the far PSU community address is in "this" office ("INTRA"), or another office ("INTER"). When the PHA is being used for the PSU "point-to-multipoint ATM" configuration, the LINK TYPE field must be "INTER" whether the link is carrying intra-office traffic, inter-office traffic, or both.

4. GLOSSARY

ATM	Asynchronous Transfer Mode
BTA	Basic Trading Area
CDMA	Cell Division Multiple Access
MTA	Major Trading Area
PHA	Protocol Handlers for Asynchronous Transfer Mode
PSU	Packet Switching Unit

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SEC. 8F: PHV3 - DOWNLOADABLE PROTOCOL HANDLER FOR VOICE

1. FEATURE DESCRIPTION

Available as a software update for 5E11 and later, the PHV3 (Downloadable Protocol Handler for Voice) feature has feature number 99-5E-3359. This feature advances the vocoding power and flexibility of the 5ESS-2000 Switch. The PHV3 is a platform which supports multiple vocoding algorithms, even for multiple air interface standards.

The PHV3 feature allows the 5ESS DCS (Digital Cellular Switch) to offer new PHV (PHV3) using RAM (Random Access Memory) based DSP (Digital Signal Processor) vocoders that allows vocoder and echo canceler algorithms to be downloaded during the PHV initialization. The PHV3 feature increases the number of voice channels provided per PHV circuit pack from the 12 voice channels on the PHV1 and PHV2 to 16.

The PHV3 feature can support any vocoding algorithm through Software Release 5E13. The 5ESS-2000 Switch store all available vocoding algorithms. The service provider assigns each PHV3 a particular vocoding algorithm.

This feature does not require any operation on the part of the wireless subscriber. This feature is user transparent.

2. FEATURE ASSIGNMENT

Activation of this feature is dependent on the activation of the AMPS and CDMA features. To activate these feature, the ACT fields for SFID 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y". See Figure 1 for the provisioning form flow for this feature.

For more information concerning the CDMA feature and additional provisioning information, see Division 2, Section 8B.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSUPH	5742	8	23	22.3
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1-8	3	2A	5.1
TRUNK	5204-1/2/3	3	2C	5.5

EQPSUPH form (5742 Record) - This form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS-2000 Switch. The PHV3 MIN SPARE field and a data rule for the PH CLI field were added for this form.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. The PH TYPE "PHV3" and data rules were added.

SFSYS form (5713-1 Record) - This form is used to enable secured features.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. Enumerations and data rules were added for field SERV TYPE. A data rule was added for field TRKCLS.

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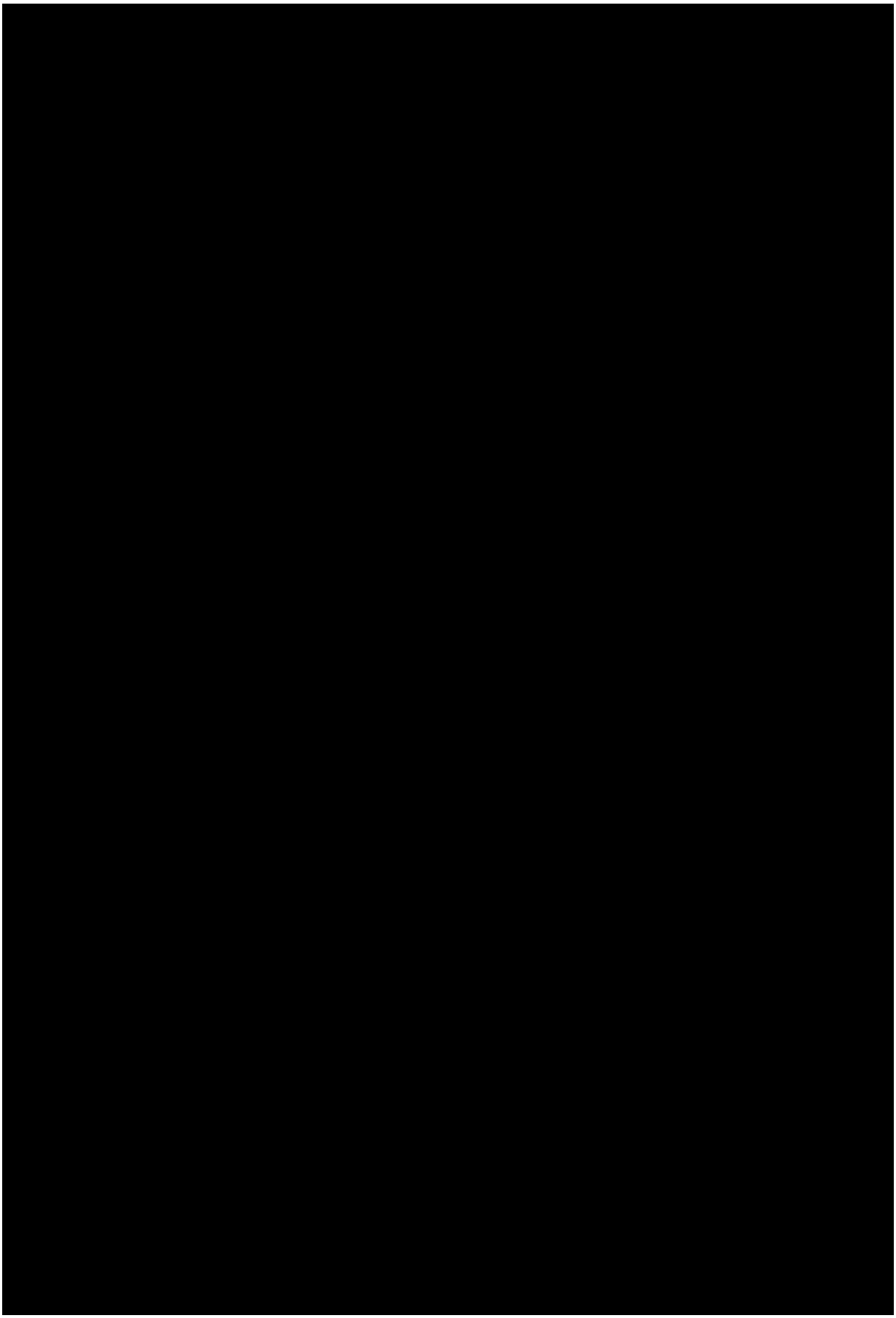

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Figure 1 FORM FLOW FOR PHV3 SPEECH HANDLER TRUNK MEMBER

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SEC. 8G: CDMA EVRC (ENHANCED VARIABLE RATE CODING)

1. FEATURE DESCRIPTION

Available as a software update for 5E11 and later, the CDMA EVRC (Enhanced Variable Rate Coding) feature has feature number 99-5E-3474. The CDMA Enhanced Variable Rate Coding feature defines a new enhanced 8 kbps vocoding algorithm adopted for CDMA voice services. The EVRC algorithm provides voice quality comparable to the present 13 kbps CDMA vocoding algorithm.

The EVRC provides the ability to maintain the voice quality provided by the 13 kbps algorithm but captures the spectrum and facility efficiencies of an 8 kpbs coder.

The EVRC algorithm can be deployed in the same office and onto the same PSU2 as the other CDMA algorithms.

2. FEATURE ASSIGNMENT

Activation of this feature is dependent on the activation of the AMPS and CDMA features. To activate these features, the ACT fields for SFID 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y". For more information on the CDMA feature and provisioning information, see Division 2, Section 8B.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1-8	3	2A	5.1

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. A data rule was added for PH TYPE.

SFSYS form (5713-1 Record) - This form is used to enable secured features.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The enumeration "EVRC" and data rules were added for field SERV TYPE.

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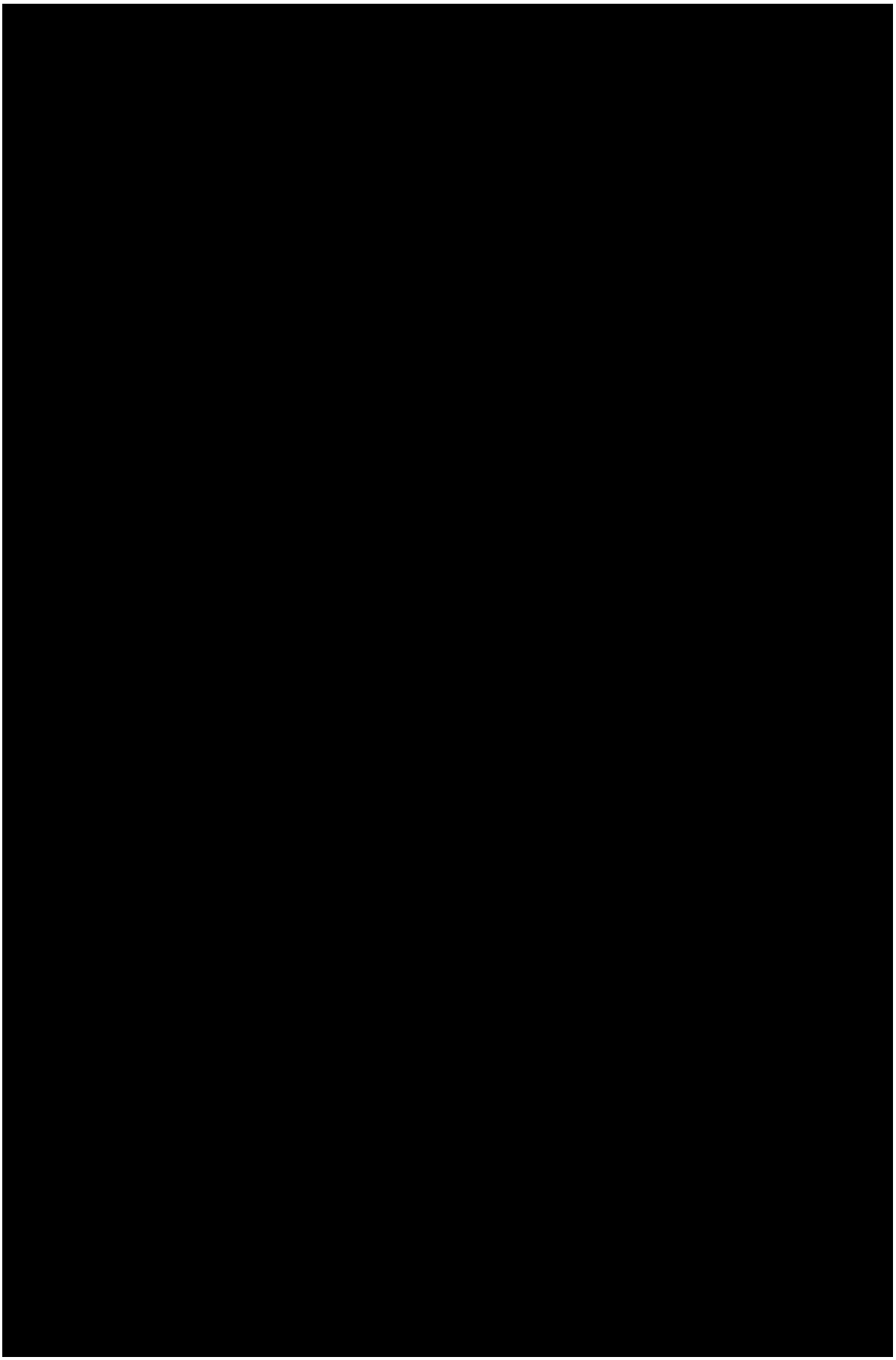

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Figure 1 FORM FLOW FOR CDMA EVRC

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SEC. 8H: IS41 INTER-SYSTEM HARD HANDOFF

1. FEATURE DESCRIPTION

The IS41 Inter-System Hard Handoff for the TDMA (Time Division Multiple Access) Circuit-Mode Data call is assigned feature number 99-5E-4491. This feature is available with 5E14 and later Software Releases. IS41 Inter-System Hard Handoff feature is dependent upon the TDMA Circuit Mode Data Service and the Switch Base TDMA Vocoder feature. The switch operator is able to have ISLP trunks provisioned in an office without Recent Change or software checking.

The new ISLP (Inter-System Link Protocol) trunk type is needed to support the inter-DCS (Digital Cellular Switch) or inter-MSC (Mobile Switching Center) TDMA Circuit Mode Data Service. To provide the IS41 Inter-System Hard Handoff for TDMA Circuit Mode Data Service, 5E-DCS requires ISLP PH (Inter-System Link Protocol Handler) in addition to the hardware already used for TDMA Circuit Mode Data Service. ISLP PH is a PHV4 (Protocol Handler Voice 4) which provides rate adaptation from the low speed air interface data rate (8Kbps, 14.4Kbps, etc.,) to the higher speed inter-system DS0 rate of a T1 or E1 carrier (56Kbps). ISLP will use the Packet Pipe model for the semipermanent connection. A new ISLP channel group is introduced in the PSU to support the ISLP trunk.

The ISLP trunk is a 56Kbps clear channel trunk carrying the data packets used over the air interface. The ISLP DS0 can be viewed as a member trunk of ISLP and it is a semipermanent connection of the ISLP trunk from DFI (Digital Facility Interface) or DNU-S (Digital Network Unit - SONET) to the ISLP PH.

The IS41 Inter-System Hard Handoff feature utilize the existing IFRBC (ISDN Frame Relay Bearer Channels) interface with the IWF (Inter-Working Function).

A new ISLP Terminal Process is created for the AMPS (Advanced Mobile Phone System) call processing that communicates with ISLP PH. The PSTN (Public Switch Telephone Network) anchor switch is the switch that maintains the connection to the PSTN trunk. The IWF (Inter-Working Function) anchor switch is the switch that maintains the connection to the IWF. When a mobile station moves from one cell site to another cell site, the DCS that anchors PSTN or IWF does not change for the duration of a call. The ECP (Executive Cellular Processor) sends messages to setup the ISLP trunk as well as the ADT (Autoplex Data Trunk) in the new serving DCS, then the ECP instructs the anchor DCS to switch from the SVC-ADT path to the SVC-ISLP path which is S-type handoff.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT fields for SFID 221 and 259 must be set to "Y" to activate this secured feature.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch.

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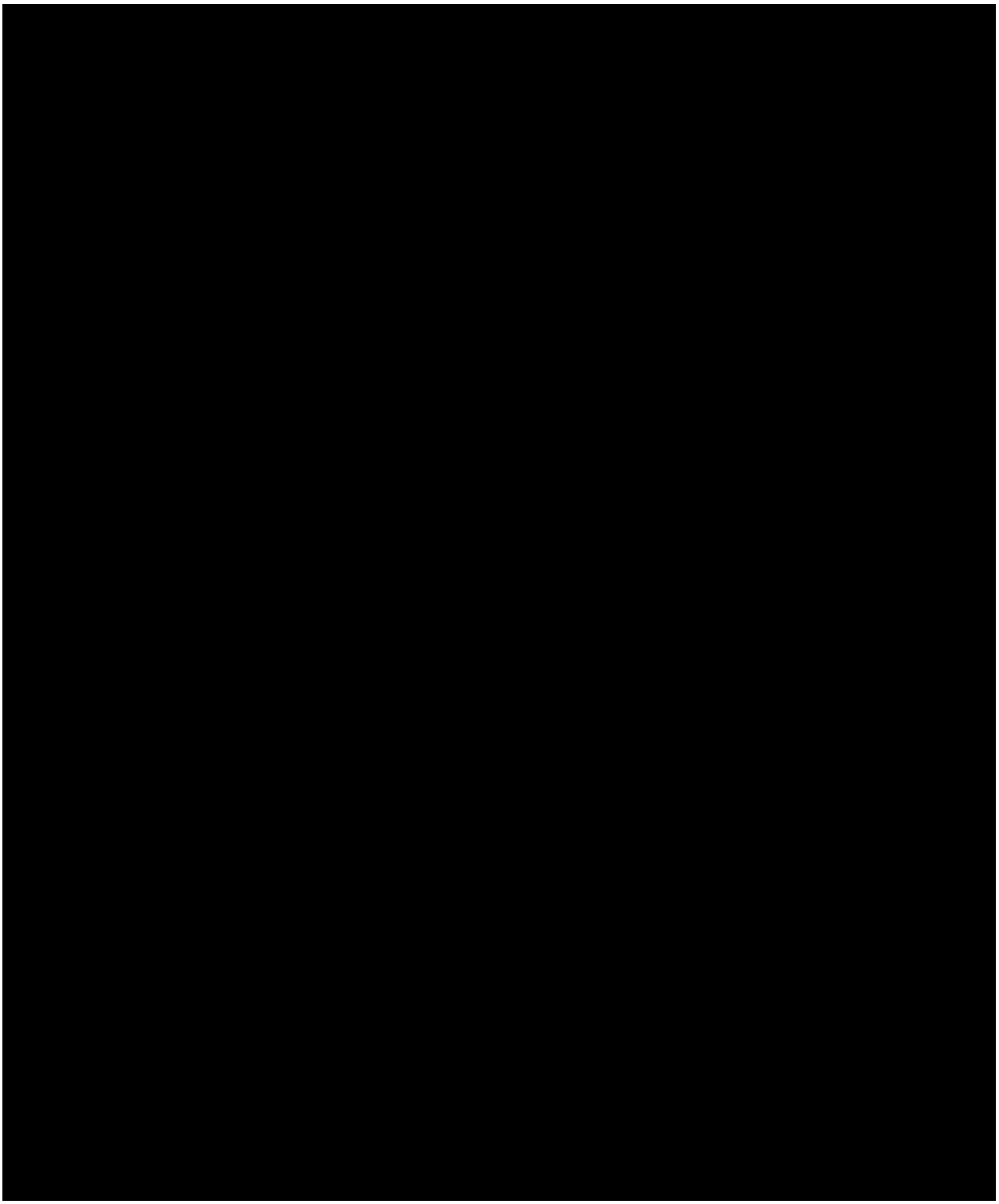

Figure 1 IS41 INTER-SYSTEM HARD HANDOFF FORM FLOW 5E14 AND LATER

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SEC. 8I: IS634 A5 INTERFACE

1. FEATURE DESCRIPTION

The IS634 A5 Interface is assigned feature number 99-5E-4979 and is available as a Software Update for the 5E14 and later Software Releases. The A5 feature provides connectivity to IS634 compliant base stations for CDMA (Code Division Multiple Access) Circuit-Mode Data Calls. IS634 compliant base stations perform decoding of the RLP (Radio Link Protocol) in the base station. Lucent Technologies Proprietary Cells rely upon the 5E-DCS (Digital Cellular Switch) to perform RLP related processing. Thus, the data received over the A5 Interface can be relayed directly to the IWF (Inter-Working Function) without further processing that is required for Lucent Technologies calls.

The A5 Interface will be supported through the use of an ISLP (Inter-System Link Protocol) trunk with an A5 Class-of-Service. ISLP trunks are being introduced in the IS41 Intersystem Hard Handoff Feature (Division 2, Section 8H). The A5 Interface feature requires the presence of the ISLP PH (Protocol Handler) and its associated OA&M (Operation, Administration and Maintenance), Packet Services, and Provisioning functionality. The A5 Interface feature is therefore dependent on the IS41 Inter-System Hard Handoff feature to deliver this functionality.

This feature will also utilize the functionality provided by the CDMA Circuit-Mode Data feature related to the connection with the IWF via the SVC (Switched Virtual Circuits). The primary differences in call routing will be the connection of these SVCs to the A5 trunks instead of the ADTs (Autoplex Data Trunks) used to connect to the Lucent Technologies Cells.

In addition to call originations and terminations for IS634 compliant base stations, this feature will provide capability for the following types of Intra-DCS handoffs:

IS634 Base Station - IS634 Base Station,

IS634 Base Station - Lucent Series 2 Cell,

and Lucent Series 2 Cell - IS634 Base Station.

Requests for A5 service will be received from the ECP (Executive Cellular Processor) via the A_INTF_REQ message. This message was initially added by the A2 feature which serviced IS634 CDMA voice traffic. This message will be reused to setup asynchronous data and fax calls by the A5 feature.

1.1 FEATURE ASSIGNMENT

See Figure 1 for feature assignment form flow for this feature.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ATSDATA	5052	7	1C	14.9
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

ATSDATA form (5052 Record) - This form is used to provide data that defines a test session in a certain test schedule to be invoked by ATTS (Automatic Trunk Testing Scheduler) for the purpose of performing automated trunk testing over a specific range of equipped members of a specified trunk group.

SFSYS form (5713-1 Record) - This form is used to enable secured features. The ACT fields for SFIDs (Secured Feature IDs) 221 and 259 must be set to "Y" to activate this secured feature.

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TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added the A5 entry to the TKCLS field.

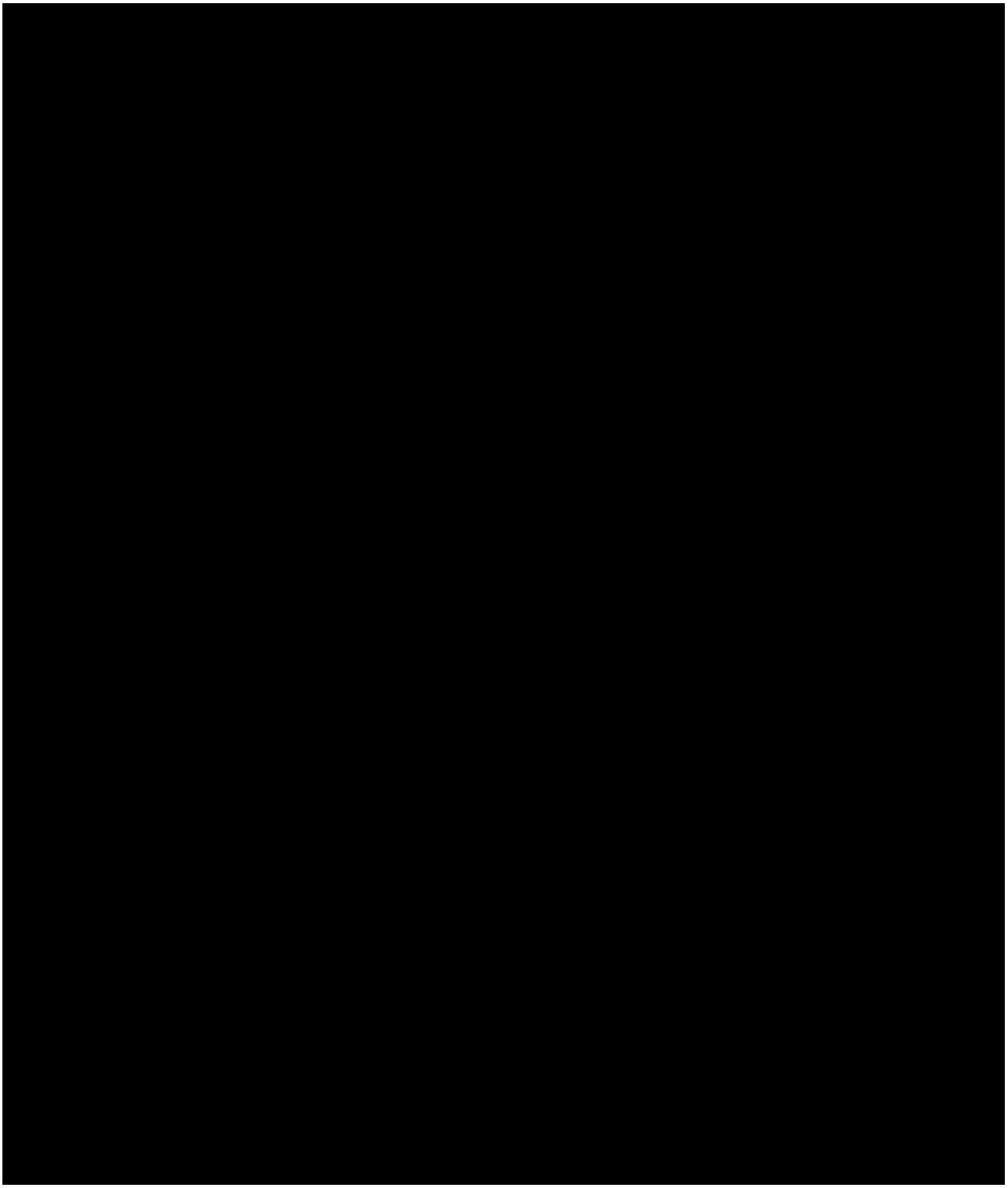

Figure 1 IS634 A5 INTERFACE FORM FLOW 5E14 AND LATER SOFTWARE RELEASES

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SEC. 8J: PHV4 - DOWNLOADABLE PROTOCOL HANDLER FOR VOICE 4

1. FEATURE DESCRIPTION

Available as a Software Update for 5E11 and later, the PHV4 (Downloadable Protocol Handler for Voice) feature has feature number 99-5E-3412. This feature advances the vocoding power and flexibility of the 5ESS-2000 Switch.

The Protocol Handler for Voice 4 (PHV4) provides 32 speech vocoders per circuit board, double the capacity of the PHV3. Like the PHV3, the PHV4 is a downloadable platform which will support multiple vocoding algorithms, even for multiple air interface standards.

The PHV4 feature allows the 5ESS DCS (Digital Cellular Switch) to offer new PHV (PHV4) using RAM (Random Access Memory) based DSP (Digital Signal Processor) vocoders that allow vocoder and echo canceler algorithms to be downloaded during the PHV initialization. The PHV4 feature increases the number of voice channels provided per PHV circuit pack from the 12 voice channels on the PHV1 and PHV2 to 32.

By deploying the PHV4 in combination with PSU2 units equipped with the PSU (Packet Switching Unit) Capacity Expansion feature (99-5E-3411), the traffic capacity of the PSU2 is more than triple the capacity of the 5E10 PSU2 configurations. This means a savings of PSU2 units deployed and SM-2000s deployed.

It will also be possible to mix PHV1, PHV2, PHV3 and PHV4 circuit packs in the same PSU2 unit.

The PHV4 feature can support any vocoding algorithm through Software Release 5E13. The 5ESS-2000 Switch stores all available vocoding algorithms. The service provider assigns each PHV4 a particular vocoding algorithm.

This feature does not require any operation on the part of the wireless subscriber. This feature is user transparent.

2. FEATURE ASSIGNMENT

Activation of this feature is dependent on the activation of the AMPS and CDMA features. To activate these features, the ACT fields for SFID 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y". See Figure 1 for the provisioning form flow for this feature.

For more information concerning the CDMA feature and additional provisioning information, see Division 2, Section 8B.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQPSUPH	5742	8	23	22.3
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1-8	3	2A	5.1

EQPSUPH form (5742 Record) - This form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS-2000 Switch. The PHV4 MIN SPARE field and a data rule for the PH CLI field were added for this form.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU shelf. The field AVAILABLE PHV$ was added to this form. The PH TYPE "PHV4" and data rules were added.

SFSYS form (5713-1 Record) - This form is used to enable secured features. Activation of this feature is

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dependent on the activation of the AMPS and CDMA features. To activate these feature, the ACT fields for SFID 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. Enumerations and data rules were added for field SERV TYPE. A data rule was added for field TRKCLS.

Activation of this feature is dependent on the activation of the AMPS and CDMA features. (Special feature IDs 130, and 221.)

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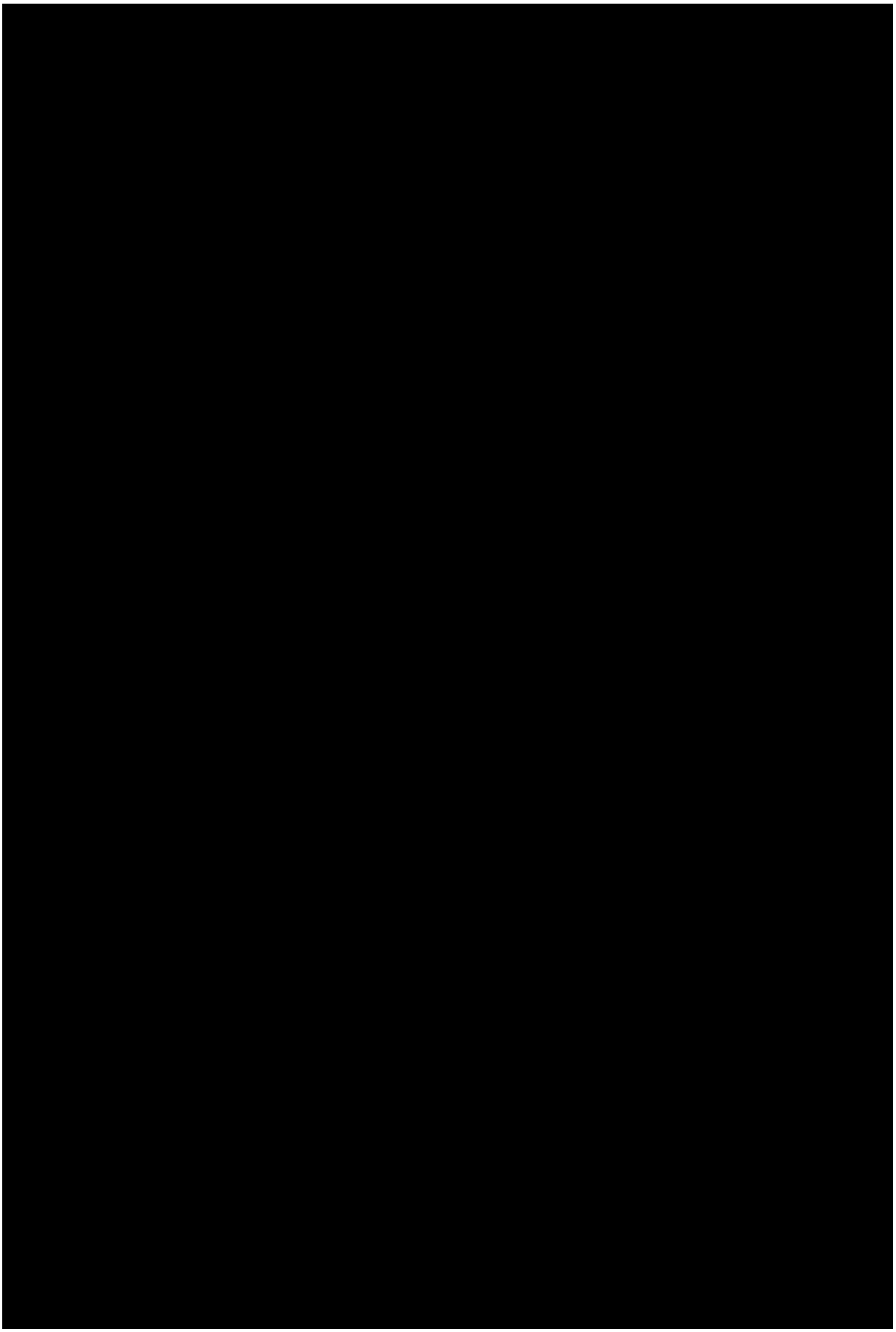

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Figure 1 FORM FLOW FOR PHV4 SPEECH HANDLER TRUNK MEMBER

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SEC. 8L: WIRELESS TRUNKS ON DNU-S

1. FEATURE DESCRIPTION

The Wireless Trunks on the DNU-S (Digital Networking Unit - SONET (Synchronous Optical Network)) feature is available as a 5E13 Software Update. Prior to this feature, the DNU-S did not support the termination of Autoplex trunks. Autoplex trunks currently terminate on a DLTU (Digital Line Trunk Unit).

This feature provides a high-capacity trunk interface on the 5ESS-2000 Switch that is compatible with a SONET interface. The DNU-S can support up to 12 STSX-1 links, and each STSX-1 electrical interface conforms to the SONET standard. The STSX-1 link has a data rate of 51.84 Mb/s and supports up to 672 DS0 channels formatted as 28 Virtual Tributaries (i.e., VT1.5). A VT1.5 can accommodate one DS1. With the implementation of this feature, the following trunk types are supported by DNU-S:

- Inter-Vendor
- Autoplex PSTN
- Inter-DCS
- Loop-Around
- Packet Pipe Member
- Frame Relay Bearer Channel
- ISDN PRI (interface with IWF)
- Inter-Vendor Base Station
- ECP-DCS SS7 Link

The feature number for this feature is 99-5E-3553.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDUP	5730	8	17	20.4
EQVT	5858	8	60	20.24
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

EQDUP Form (5730 Record) - This form is used to define Digital Line and Trunk Units.

The following data rule was added:

- AFAC IDs must be unique across EQDUP and EQVT forms in an office.

EQVT Form (5858 Record) - This form is used to define the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S.

For this feature, a new field, AFAC ID, was added to define a wireless trunk.

The following data rules were updated and/or added to include the DNU-S VT:

- When an AFAC ID is entered, APPLICATION TYPE must be "TRUNK".

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- AFAC IDs must be unique across EQDUP (5730 Record) and EQVT forms in an office.
- DNU-S VTs with trunks assigned to autoplex (wireless) facilities must have an EQDSC3 form (5852 Record) with the EQSTAT attribute set to "O" for the associated SM.

TKGRP Form (5202 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The following data rules were added:

- the following existing TRKCLS entries are now valid entries for wireless trunks terminating on a DNU-S: "A2", "BCM", "CST1", "CST2", "DSC", "IDCS", "IVTRK", "LTOLLCON", "PPMEM",
- if "PPMEM" is entered, an AFAC ID must be entered on all corresponding EQDUP or EQVT forms for the respective DEN or NEN populated on the associated TRUNK form,
- if DCS TRK is "N", and TRKCLS is not equal to "BCM" or "PPMEM", and TRK DIR is not equal to "SGNL" on a TKGRP form, AFAC ID must not be entered for all corresponding EQDUP or EQVT forms,
- if DCS TRK is "Y", an AFAC ID must be entered on all corresponding EQDUP or EQVT forms for the respective DEN or NEN populated on the associated TRUNK form,
- if TRKCLS of "BCM" or "PPMEM" is entered and associated SVCs have DCS TRK of "Y" on the TKGRP form, an AFAC ID must be entered on all corresponding EQDUP or EQVT forms for the respective DEN or NEN populated on the associated TRUNK form.

TRUNK Form (5204 Record) - This form is used to define each Trunk Group in a 5ESS-2000 Switch. The following data rule was added:

- if at least two PSU PIPE MEMBER TRUNKS row entries are entered, the DEN or NEN trunk members entered must all reside on the same facility.

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SEC. 8M: AMPS IN-BUILDING AMPS/PRI/PRA INTERWORKING

1. FEATURE DESCRIPTION

Available as a 5E14 Software Update, the AMPS (Advanced Mobile Phone System) In-Building AMPS/PRI/PRA (Primary Rate Interface/Primary Rate Access) Interworking feature has feature number 99-5E-4375. This feature provides the direct interworking between the CDMA (Code Division Multiple Access) wireless call and the PBX (Private Branch Exchange) wireline call. This provides wireline users with CDMA wireless call capability.

AMPS In-Building AMPS/PRI/PRA Interworking is an AUTOPLEX domestic and international feature which provides the ability to connect CPE (Customer Premises Equipment), such as PBX or other equipment compatible with ISDN (Integrated Services Digital Network) PRI/PRA specifications, directly to the AUTOPLEX MSC (Mobile Switching Center).

This feature supports both the United States ISDN PRI and the International ISDN PRA. The PRI/PRA interface trunks are used for general call processing purposes, including routing calls directly from a mobile subscriber to the CPE and from the CPE to a mobile subscriber without the need to go through the PSTN (Public Switched Telephone Network).

2. FEATURE ASSIGNMENT

Activation of this feature is dependent on the activation of the Digital Cellular Switch feature and the CDMA or TDMA (Time Division Multiple Access) VIS (Vocoder in Switch) feature. To activate these features, the ACT fields for SFIDs 130 and 221 (for CDMA) or 259 (for TDMA VIS) respectively must be set to "Y". See Figure 1 for the provisioning form flow for this feature.

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

SFSYS form (5713-1 Record) - This form is used to activate secured features. Activation of this feature is dependent on the activation of the DCS and the CDMA or TDMA VIS features. To activate these features, the ACT fields for SFIDs 130 and 221 (CDMA) or 259 (TDMA VIS) on the SFSYS form must be set to "Y".

TKGRP form (5202) - This form is used to define each Trunk Group in a 5ESS Switch. For 5E14 and later, valid entries and data rules for the APPLICATION field were added.

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Figure 1 AMPS ON PRI/PRA IN-BUILDING FORM FLOW

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SEC. 8N: CDMA IS-53A PREFERRED LANGUAGE

1. FEATURE DESCRIPTION

This section describes the CDMA IS-53A Preferred Language (5E13) feature and the CDMA IS-53A Preferred Language, Phase 1 Enhancement (5E15 and later) feature.

1.1 CDMA IS-53A Preferred Language

The CDMA (Code Division Multiple Access) IS-53A Preferred Language feature is assigned feature number 99-5E-4651.

This feature allows a mobile subscriber to subscribe to a preferred language for network services. The subscriber can choose a preferred language by dialing a feature code. The service provider specifies the languages which are supported on a per system basis. When the mobile subscriber accesses a network service involving language, (e.g., a recorded announcement) the network provides the service in the subscribers preferred language, if it has the capability to do so. If the provider does not support the subscribers preferred language then it provides the services in the default language chosen by it.

This feature is limited to the support of the following four preferred languages applicable to the NAR market.

- English
- French
- Mandarin
- Cantonese

1.2 CDMA IS-53A Preferred Language, Phase 1 Enhancement

The IS-53A Preferred Language, Phase 1 Enhancement feature is being deployed for 5E15 and later. The feature number for this feature is 99-5E-7290.

The IS-53A Preferred Language, Phase 1 Enhancement feature allows a mobile subscriber to receive a 5E-DCS (Digital Cellular Switch) provided recorded announcement in the preferred language of their choice. Upon receipt of a message from the ECP (Executive Cellular Processor) requesting an announcement to be played to the mobile, the 5E-DCS examines the optional preferred language parameter and determines whether this language is currently defined on the 5E-DCS. If so, the 5E-DCS plays the recorded announcement in the requested language. If the language requested is not defined on the 5E-DCS, the announcement is played in the default language which is defined on 5E-DCS by the service provider.

This feature follows the TR45 standard. Currently, approximately 61 languages are defined, with the possibility of defining up to 255 different languages. For the phase 1 Enhancement, the 5E-DCS will support any 4 languages out of the 61 or 255 as mentioned above.

2. FEATURE ASSIGNMENT

For 5E13 and later, the provisioning rules for this feature are as follows:

- Insert an APPLICATION of type "VARRAF" on the ANNAPL form.
- Insert a PHRASE ID on the PHRASE form.
- Insert a HDR ID on the ANNHD form.

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- Insert a ROUTE TYPE on the FIXRTRAF form.
- Set or change the value of the DEFAULT LANGUAGE field on the APXPARM form.
- Insert a ECP INDEX on the APXANNC form.

3. TRANSLATION REQUIREMENTS

3.1 CDMA IS-53A Preferred Language

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ANNAPL	5529	3	5AC	8.64
ANNHD	5531	3	5AE	8.61
APXANNC	5051	7	1B	10.38
APXPARM	5050	7	1A	8.28
FIXRTRAF	5058	7	1H	8.68
PHRASE	5534	3	5AH	8.63

ANNAPL form (5529 Record) - This form is used to enter the SMs (Switching Modules) on which the DSU2-RAF (Digital Service Unit Model 2 - with Recorded Announcement Functions) reside and the type of application announcements supported by that DSU2-RAF. Added the enumeration value, VARRAF, and added a data rule to the APPLICATION field.

ANNHD form (5531 Record) - This form lists the phrases, in the required order, associated with an announcement header. The Non-English Announcement phrases must be entered on this form under the same announcement header ID as English phrases, but with the Language Application Identifier also assigned on the LANGTBL form (5483-Record). Added the enumeration value, VARRAF, and added a data rule to the APPLICATION field.

APXANNC form (5051 Record) - The 5051 Record provides mapping between ECP (Executive Control Processor) announcement identification numbers and 5ESS Switch route indices. Added the ROUTE TYPE field and its related data rules.

APXPARM form (5050 Record) - This record is used to associate an identification number from the ECP (Executive Cellular Processor) to a route index for an announcement. Added the LANGUAGE CODE field and its related data rules.

FIXRTRAF form (5058 Record) - This form is used to assign recorded announcement data to fixed route types. New form created for 5E13 to support this feature. New form added to support the CDMA IS-53A Preferred Language feature.

PHRASE form (5534 Record) - This record defines and describes phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Function) Announcement Storage circuit packs for each application (see Division 8, Section 36 for required pack assignments). Added the LANGUAGE CODE field and the enumeration value, VARRAF to the APPLICATION field.

3.2 CDMA IS-53A Preferred Language, Phase 1 Enhancement

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
FIXRTRAF	5058	7	1H	8.68
PHRASE	5534	3	5AH	8.63

FIXRTRAF form (5058 Record) - This form is used to assign recorded announcement data to fixed route types. The LANGUAGE CODE valid entry was expanded to 1 - 255.

PHRASE form (5534 Record) - This record defines and describes phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Function) Announcement Storage circuit

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packs for each application. Added data rules for the APPLICATION and LANGUAGE CODE fields. New form created for 5E15 to support this feature.

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SEC. 8P: TANDEM CALL OVER ISUP TRUNK

1. FEATURE DESCRIPTION

The feature, Tandem Call Over ISUP Trunk delivers the software changes needed to handle the Hop Counter Parameter, Carrier Identification Code, Carrier Selection, and the Transit Network Selection in ISUP (ISDN (Integrated Services Digital Network) User Part) messages. The feature number for this feature is 99-5E-4400. The feature is being deployed as a Software Update for the 5E12 Software Release and the BMI (Beginning Managed Introduction) of the 5E13 Software Release.

Currently the Autoplex System 1000 supports incoming ISUP calls for local terminations but blocks tandem calls. This feature provides the enhanced SS7 (Signaling System 7) signaling procedures to interconnect incoming ISUP calls to outbound ISUP or outbound MF (Multi-Frequency) trunks, but does not provide full ISUP tandem functionality, since some of the ISUP parameters are not sent through the MSC (Mobile Switching Center).

To provide ISUP tandem functionality the MSC would need to pass all ISUP parameters received from an incoming IAM (Initial Address Message) on to the next office transparently, except for the signaling information. With the Tandem Over ISUP feature, the 5ESS Switch DCS (Digital Cellular Switch) will see two calls, an incoming ISUP call and an outgoing ISUP or MF call. For this feature, the 5ESS Switch DCS is enhanced to send to the ECP (Executive Control Processor) and receive from the ECP the following additional ISUP parameters:

- Hop Counter,
- Carrier Identification Code,
- Carrier Selection Information,
- Transit Network Selection.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record). Added one new form check for this feature.

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SEC. 8R: VOCODER HUNTING ENHANCEMENTS

1. BACKGROUND

Prior to this feature, RTA (Routing and Terminal Allocation) used the SMIM (Switch Maintenance for the Switching Module) connectivity to return the next PSU (Packet Switch Unit) connected to the Packet Pipe. If that PSU did not support the requested service handler type, it was skipped and the next connected PSU was read until three connected PSUs were read. If this resulted in no trunk groups being found, a second attempt was made for two more connected PSUs. With this feature, only PSUs that support the requested service type are read.

2. FEATURE DESCRIPTION

The Vocoder Hunting Enhancements feature is available with the 5E15 Software Release. The feature number is 99-5E-7412.

When a wireless call must leave a 5ESS Switch, the ECP (Executive Control Processor) identifies a list of outgoing trunk groups to be hunted. The ECP knows the identity and status of the trunk groups. Unlike outgoing trunk groups, the ECP does not keep track of the service handler trunk groups. Therefore, when a service handler request is received by RTA, RTA must get a list of service handler trunk groups to hunt. This feature does not involve hunting the vocoder trunk groups. It is an enhancement to the way the trunk group list (i.e., a listing of vocoder trunk groups to hunt) is formed.

Vocoders (i.e., service handlers because this feature includes ADT (AMPS Data Trunk) - AMPS (Advanced Mobile Phone Service) Data Trunks) are a limited pooled resource. Limited because not all service handler trunk groups can be hunted for each call and pooled because there is a busy overflow from one trunk group to another. All members of a service handler trunk group are of the same service type (i.e., 8K, 13K, EVRC, Data, etc.) and must be in the same PSU. This feature improves the formation of the list of service handler trunk groups because it avoids reading the database for PSUs that do not support the requested service type. It also increases the number of service handler trunk groups that are put into the list from 4 to 7.

3. TRANSLATION REQUIREMENTS

There are no new fields or new forms added for this feature.

4. GLOSSARY

ADT	AMPS Data Trunk
AMPS	Advanced Mobile Phone Service
ECP	Executive Cellular Processor
PSU	Packet Switch Unit
RTA	Routing and Terminal Allocation
SMIM	Switch Maintenance for the Switching Module

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SEC. 8S: AUTOPLEX FACILITY IDENTIFIER (AFACID) EXPANSION

1. FEATURE DESCRIPTION

The Autoplex Facility Identifier Expansion feature is being deployed as a Software Update to the 5E14 Software Release. The feature number for this feature is 99-5E-7382. The Autoplex Facility Identifier Value Expansion Phase II is being deployed for the BMI (Beginning Managed Introduction) of the 5E15 Software Release. The feature number for this feature is 99-5E-7382.A.

AFAC ID (Autoplex Facility Identifier (previously called Advanced Mobile Phone Service Facility Identifier)) is a number used to distinguish DS1(s) (Digital Signal Level 1 (1.544 Mbps Synchronous Channel On A T1 Facility)) associated with Autoplex facilities (example: a DS1 to Cell Site) from DS1(s) associated with non-Autoplex facilities (example: a DS1 to a PBX (Private Branch Exchange)). If an alarm occurs on an Autoplex DS1 facility, the DCS (Digital Cellular Switch) will notify the ECP (Executive Cellular Processor) with a message containing the AFAC ID. The ECP will remove the facility and any associated trunks from its inservice list.

The AFAC ID assignment to a DS1 currently allows the user to see the status of the DS1 with the assigned AFAC ID on the ECP Display Page (DSP) 2143. Currently the highest AFAC ID value that can be assigned in the EQDUP form (5730 Record) is 1023. The current number of DS1s that can be equipped is higher that 1023. In order to maintain this OA&M (Operation, Administration and Maintenance) capability, the AFAC ID number has to go up in-line with the latest highest equipped value. Because the DCS can now support a large number of DS1s, this feature, 99-5E-7382, expands the AFAC ID from its current value of 1023 to 4080. The feature 99-5E-7382.A expands the value from 4080 to 4500. The first phase of this feature (99-5E-7382), being deployed as a 5E14 SU (Software Update) will increase the highest value from 1023 to 4080. Phase II of this feature (99-5E-7382.A) will increase the highest value from 4080 to 4500.

2. FEATURE ASSIGNMENT

This feature is an OA&M special feature and its use is not restricted by purchase arrangements.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDUP	5730	8	17	20.4
EQVT	5858	8	60	20.24

EQDUP form (5730 Record) - The Digital Line/Trunk Unit Pack Equipage form is used to define the Switching Module, equipment location information for the Digital Line/Trunk Units and the Digital Facility Interface Pack Number.

EQVT form (5858 Record) - The DNU-S (Digital Networking Unit - SONET) Virtual Tributary (SM-2000)-EQVT form is used for the equipage of the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S.

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SEC. 8T: FLEXANT A2 INTERFACE DATARATE ENHANCEMENTS

1. FEATURE DESCRIPTION

The Flexant A2 Interface Datarate Enhancements feature is available with the 5E13FR1 (Feature Release 1). The feature number for this feature is 99-5E-7423.

This feature allows the service provider the ability to assign "56K" or "64K" datarates for IS-634 A2 Interface trunks. These new trunks were introduced by the IS-634 A2-Interface feature (97-5E-3457), which is the base feature for the Flexant A2 Interface Datarate Enhancements feature. For more information on the base feature, see Division 2, Section 4A191.

2. FEATURE ASSIGNMENT

The primary enhancement element of this feature is that, prior to this feature, the DATA RATE field on the TKGRP form (5202 Record) only accepted a value of "56K", while this feature allows a value of "64K" also.

To insert a new A2 trunk group, on the TKGRP form:

- Set TRK DIR to "2W".
- Set HUNT TYPE to "2WF".
- Set TKCLS to "A2".
- Set INPULSING to "DCS".
- Set OUTPULSING to "DCS".
- Set DCS TRK to "Y".
- Set DATA RATE to "56K", or "64K".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added a data rule to the TKCLS field for the "A2" class.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. Added data rules to the DEN and NEN fields.

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SEC. 8U: DECOUPLE COMMON CHANNEL SIGNALING FROM GLOBAL SM INITIALIZATIONS

1. FEATURE DESCRIPTION

The Decouple CCS (Common Channel Signaling) from Global SM (Switching Module) Initializations feature (99-5E-7428) builds upon the 5E15 SS7 (Signaling System 7) - PSU (Packet Switch Unit) Architectural Enhancements feature (99-CP-4246) which provides an internal CCS message transport architecture - see Division 2, Section 7AG.

The Decouple CCS from Global SM Initializations feature provides the capability to maintain signaling links and CMT (CCS Message Transport) connectivity during a Selective Initialization of a Host GSM. It also reduces signaling link downtime during a Full Initialization of a Host GSM (Global SM). If a TMH (Transfer Message Handler) is provisioned in the Host GSM that is initializing, CMT connectivity downtime between the Host GSM and each NGSM (Non-Global SM) is minimized during a Full Initialization only when a second TMH is provisioned.

This feature also implements a CCS-preserving GR (Generic Retrofit) sequence, which reduces signaling link downtime for a primary Host GSM and each Island GSM in an office during GR. As part of this sequence, a GR office configuration check is executed. This check examines CCS static data in each GSM and selects a primary Host GSM in the office. The primary Host GSM is selected based on the Host GSM servicing the most number of trunks and CCS applications in the office. This check also rates the configuration of each Host GSM in the office. The rating of each GSM in the office is reported through an output message. This message displays the GSM number, PSU number and office equipment number for each signaling link set member associated with that GSM. This message also states whether the GSM is a supported configuration for Retrofit. This will also warn the customer of any potential link congestion or if there is a possibility for DPC (Destination Point Code), cluster or network isolation during Retrofit. If it is determined that potential link congestion to each DPC, cluster and/or network may occur during Retrofit, the message will also state the maximum link capacity that will result during Retrofit. This will be a percentage greater than 0% and less than 50%. A best attempt is made to reduce signaling link downtime for other Host GSMs in the office. If a TMH is provisioned in the primary Host GSM, CMT connectivity downtime between the primary Host GSM and each NGSM is minimized during GR only when a second TMH is provisioned.

The CMTMH form (6021 Record) provides the option to provision a second TMH to add message transport capacity and enhance reliability of the CMT path between the GSM and its NGSMs to facilitate load-share of CCS messages between GSM and NGSMs in an office.

As a part of this feature, the capability to terminate SDLs (Signaling Data Links) on Non-Global SMs will be provided to allow service providers to optimize the configuration of signaling links terminating on a Host GSM to maximize SS7 reliability. This capability allows customers to provision SDLs on any SM-2000 or non-SM-2000 with the "Loaded" or "Signaling" software configuration.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCLNK	6004	9	10D	16.6
CMTMH	6021	9	10U	16.16
EQCORE	5701	8	3	17.14

CCLNK form (6004 Record) - This form is used to specify data used for the GSM. The following data rule was added:

- An SM defined on this form must be defined on the EQIM form with CONFIGURATION set to "LOADED", "SM2000", or "SIGNALING".

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CMTMH form (6021 Record) - This 5E15 form is used to define the message handler used for CCS (Common Channel Signaling) message transport for communication between a GSM and NGSM. This form supports the functionality implemented in support of the 99-CP-4246 feature. The MH SM 1 and MH SM 2 fields provide the capability to specify the CMT SM used for communication between the NGSM and GSM. Numerous data rules were added to support this modification (see the form section).

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments in a 5ESS Switch office. The following data rule was added to support this feature:

- For 5E15 and later, when CM VINTAGE is 2 and NON GLOBAL SM on the CMTMH form (6021 Record) does not have an SM-2000 class processor on the corresponding EQIM form, there must be EQPC forms entered on SIDE 0 and SIDE 1 with PC NO. set to 32 and EQSTATUS set to "O".

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SEC. 8V: ONE-WAY AUDIO DETECTION TOOL - PHASE 2

1. FEATURE DESCRIPTION

The One-Way Audio Detection Tool Phase 2 feature is available with the 5E15 Feature Release 1. The feature number is 99-5E-7463.A.

The second phase of this feature provides a tool to simulate sending voice over a Speech Handler trunk. The new PVELBK (PHV (Protocol Handler) Voice Encoding Loopback) test is similar to the existing 102-LB (102-Loopback) test. The PVELBK test simulates voice by sending 404hz and 1004hz tones simultaneously from the GDSF/TTF (Global Digital Service Function/Transmission Test Facility), and the 102-LB test uses a single 1004hz tone and loops the signal received back. The PVELBK test sends the PCM (Pulse Code Modulation) tones to the PHV vocoder which encodes the signal into CDMA (Code Division Multiple Access) packets that are looped back into the vocoder for decoding into PCM tones before being sent back to the GDSF/TTG for analysis. The test analyzes the results and gives a Pass or Fail assessment. This test is run on a trunk labeled OOS (Out-of-Service) and it preserves the timeslots used while the trunk is IS (In-Service).

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AUTO	5505	3	5E	14.1
DCSTT	5055	7	1F	14.12

AUTO form (5505 Record) - This form is used to define the ATTTN and its associated test lines. For 5E14 and earlier, and for 5E15 and later, data rules were added for the AUTOMATIC PROGRESSION TEST TYPE field.

DCSTT form (5055 Record) - This form is used to define transmission tests for an automatic trunk test table. Tone measurement thresholds and noise or return loss thresholds defined on this form is used to define the pass/marginal/fail status for the test calls. For 5E15 and later, "PVELBK" was added to the Valid Entries table for the TEST TYPE field.

3. GLOSSARY

ATTTN	Automatic Trunk Test Table Number
CDMA	Code Division Multiple Access
GDSF	Global Digital Service Function
IS	In-Service
OOS	Out-of-Service
PCM	Pulse Code Modulation
PVELBK	Protocol Handler Voice Encoding Loopback

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SEC. 8W: FORWARD TRAFFIC CHANNEL DTMF FOR CDMA EVRC

1. FEATURE DESCRIPTION

NOTE: AS OF 5E16 FR1, THIS FEATURE IS NO LONGER SUPPORTED.

The Forward Traffic Channel DTMF (Dual Tone Multi-Frequency) for CDMA (Code Division Multiple Access) EVRC (Enhanced Variable Rate Coding) feature is available with the 5E15 FR1 (Feature Release 1). The feature number for this feature is 99-5E-7512.

This feature has three components. First, it provides reliable detection and subsequent transmission of DTMF tone signals using FDTMF sent burst or send continuous DTMF signals. Second, it provides the SP (Service Providers) the ability to select EVRC DSP (Digital Signal Process) features via RC/V (Recent Change/Verify) on an office wide basis. Third, it provides the SP the ability to turn on and off the 13K/EVRC TTY/TDD (Teletypewriter/Terminal Device for Deaf) feature via RC/V on an office wide basis.

Currently, DTMF Tone Signaling for CDMA EVRC exists in the Reverse Traffic Channel, but not in the Forward Traffic Channel. The ANSI/TIA/EIA-95-B standards support DTMF Tone Signaling both in the Forward Traffic Channel and Reverse Traffic Channel.

This feature implements DTMF Tone Signaling in CDMA air-interface with EVRC vocoders in the Forward Traffic Channel for WLL (Wireless Local Loop) and mobile subscribers.

It assures reliable detection of DTMF within the DCS (Digital Cellular Switch) and subsequent transmission of DTMF Tone Signals using the Forward Traffic Channel Send Burst DTMF Message or the Start/Stop Continuous DTMF Tone Order with Layer 3 Acknowledgement from the Cell site for EVRC vocoder.

On the subscriber side, the RAT (Radio Access Terminal) is needed to support receipt of Forward Traffic Channel signaling Message Send Burst DTMF or Start/Stop Continuous Tone Order providing Layer 3 Acknowledgement to the Cell site and generate the corresponding tones locally.

FDTMF is driven by the ECP on a per call basis. The feature also provides office-wide Recent Change control over the tones-on length and off-length that are indicated in the burst DTMF Message Send to the mobile for tone generation.

FDTMF is supported by both PHV3 and PHV4 with EVRC vocoders.

TTY/TDD capability provides office-wide Recent Change control over turning on and off the TTY/TDD capability of the vocoder for CDMA 13K and EVRC calls.

The following four CDMA 16.1 features impact DSP images downloaded in to DSPs on PHV3 (Protocol Handler for Voice 3) and PHV4:

1. EVRC Modifications for TTY/TDD,
2. 13K Modifications for TTY/TDD,
3. EC (Echo Cancellation) on PHV4, and
4. FDTMF (Forward DTMF) Signaling for EVRC

Due to DSP memory limitations both on PHV3 and PHV4, all the features cannot be supported simultaneously. The following table presents the combination of features that are being supported.

Vocoder Type	PVH3	PVH4
13K	TTY/TDD	TTY/TDD and EC
EVRC	TTY/TDD and FDTMF	TTY/TDD and FDTMF (default), or TTY/TDD and EC, or

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		FDTMF and EC

For PHV4 only, the Service Provider is provided the ability via Recent Change to choose the combination of features on an office-wide basis. Changes to the feature selected triggers automatic downloading of DSPs through selective initialization of the PH (Protocol Handler). Stable calls are preserved, if possible. New vocoder capability may not immediately be available to the stable calls after an update.

The downloading of vocoders is completed in 30 minutes after the changes to the feature selected.

2. FEATURE ASSIGNMENT

In order to provision this feature, set the following fields on the CDMAOPT form (5599 Record) accordingly:

- To utilize the CDMA Forward DTMF feature:
  - Change the EVRC IMAGE field to a value 0 or 2.
  - Change the FWD LEN ON field to a value 95, 150 through 350 by 50 milliseconds.
  - Change the FWD LEN OFF field to a value 60, 100 through 200 by 50 milliseconds.
- To turn on the TTY/TDD feature:
  - Change the EVRC IMAGE field to a value 0 or 1.
  - Change the TTY/TDD ACT field to "Y".
- To turn on the EC feature:
  - Change the EVRC IMAGE field to a value 1 or 2.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
CDMAOPT	5599	8	80	8.75

CDMAOPT form (5599 Record) - This form is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 4A552. Added the OVERRIDE, EVRC IMAGE, TTY/TDD ACT, FWD LEN ON, and FWD LEN OFF fields.

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SEC. 8X: SIGNALING ONLY GSM (GLOBAL SWITCHING MODULE)

1. FEATURE DESCRIPTION

Available with 5E15 Feature Release 3 and with 5E16 and later Software Releases, the Signaling Only Global SM (99-5E-7776) feature allows the Wireless customer who uses PSUs (Packet Switch Units) for SS7 signaling to choose a MRC (Maximum Reliable Configuration) for the Global SM. A new field, MAX REL CONFIG was added to the APXPARM form (5050 Record) to define whether this feature is used. When the MRC feature is activated (set to "Y"), non-signaling hardware will not be allowed on the Global SM. Thus, when this feature is activated, non-signaling equipment, defined on the following forms, must not be defined for the corresponding Global SM:

EQLU (19.1)
EQTU (19.2)
EQDU (19.4)
EQDNU-S (19.14)
EQAIU (19.16)
EQPLTU (19.24)

When this feature is activated, the GSM will be reserved for signaling only, thereby isolating it from possible failures due to call processing functions. When the MRC is not chosen, the GSM can be used just like any other SM for call processing.

To support this feature, the following CLI value information must be defined on the EQPSUPH form:

- CLI must be 2800 hex, with circuit board TN1873, 16-Megabyte (type PH22) with a PSU TYPE of "PSU1" or "PSU2".

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSUPH	5742	8	23	22.8
APXPARM	5050	7	1A	8.28

APXPARM form (5050 Record) - This form is used to administer global parameters that are required when a 5ESS Switch is functioning as a digital cellular switch in a cellular network. A new field, MAX REL CONFIG, was added to activate (Y/N) this feature.

EQPSUPH form (5742 Record) - This form is used to define the Packet Switch Unit for the Protocol Handler. The existing 16-megabyte TN1873 pack with a CLI value of 2800 is required to support this feature.

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SEC. 8Y: DYNAMIC ALLOCATION OF VOCODERS ON PHV5

1. BACKGROUND

Prior to this feature, service providers monitored vocoder usage and made manual adjustments to obtain the correct vocoding algorithm when there were changes in the traffic pattern. This feature eliminates the need for such manual changes.

2. FEATURE DESCRIPTION

The Dynamic Allocation of Vocoders on PHV5 (Protocol Handler for Voice 5) feature is made available with the 5E16(1). This feature uses feature number 99-5E-7807.

This feature:

- provides the capability of call-by-call selection of vocoder algorithms for either the CDMA (Code Division Multiple Access) or TDMA (Time Division Multiple Access) vocoder pools.
- supports selection of 13 Kbps QCELP (Qualcomm Code-Book Excited Linear Prediction)and EVRC (Enhanced Variable Rate Coding) vocoders for CDMA, and selection of ACELP (Algebraic Code Excited Linear Predictive) algorithm vocoders for TDMA.

- ***NOTE:*** This feature only supports CDMA. It does not currently support the TDMA (TACVS) channel group. References to TDMA (TACVS) appear in this document as it may potentially be supported for future use. In light of this, it is important to note that TACVS is currently not provisionable as part of the Dynamic Allocation of Vocoders on PHV5 feature or any other feature.

3. FEATURE ASSIGNMENT

Activation of this feature is dependent on the activation of the DCS (Digital Cellular Switch) feature (SFID 130).

- ***NOTE:*** This feature only supports CDMA. It does not currently support the TDMA (TACVS) channel group. References to TDMA (TACVS) appear in this document as it may potentially be supported for future use. In light of this, it is important to note that TACVS is currently not provisionable as part of the Dynamic Allocation of Vocoders on PHV5 feature or any other feature.To provision this feature, the following must be done in the order listed:

- Activate the DCS feature by setting the ACT field for SFID 130 to "Y" on the SFSYS form (5713-1 Record). DCS is a secured feature that is required for CDMA, and TDMA VIS (Vocoder in the Switch), and therefore must be activated on the SFSYS form.
- Activate either the CDMA feature (SFID 221) or the Switched-Based TDMA Vocoders feature (SFID 259) by setting the ACT field for SFID 221 or SFID 259 to "Y" on the SFSYS form.
- Define a Speech Handler trunk group with a SERV TYPE of "CEV13" for CDMA or "TACVS" for TDMA on the TKGRP form (5202 Record).

4. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
OFCOPT	5509	3	5I	8.1, 8.15
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

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OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. For 5E16 and later, the SEC VOC ALG field and related data rules were added.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switch Unit) shelf. For 5E16 and later, a data rule was modified to add the "CEV13" and "TACVS" SERV TYPEs and related "PHV5" PH TYPEs to the valid entries table for the PH TYPE field.

SFSYS form (5713-1 Record) - This form is used to activate secured features. Activation of this feature is dependent on the activation of the DCS feature (SFID 130) and the CDMA (SFID 221) or the TDMA VIS feature (SFID259). This feature is activated by setting the ACT fields for both SFIDs 130 and 221 or 259 to "Y" respectively.

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 7R/E 5ESS Switch. For 5E16 and later, modified a data rule for the TGN field and added the following for the SERV TYPE field:

- "CEV13" and "TACVS" to the SERV TYPE Valid Entries table.
- "CEV13" and "TACVS" SERV TYPEs, and related PH TYPE entries to the Valid PH TYPE Entries table.
- data rules.

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SEC. 8Z: CDMA 3G-1X HIGH SPEED PACKET DATA SERVICES

1. FEATURE DESCRIPTION

The feature number for the CDMA (Code Division Multiple Access) 3G-1X High Speed Packet Data Services feature is 99-5E-4779 and is made available with 5E15 Feature Release 3. This feature is dependent on the CDMA Data Services - Packet Mode feature (99-5E-4076) which is controlled by SFID (Secured Feature ID) 285. See Division 2 Section 4A285 for more information.

The CDMA 3G-1X High Speed Packet Data services feature (99-5E-4779) provides a subscriber the ability to transmit bursts of data up to a raw speed of 153.6 Kpbs over a packet data network via the CDMA 3G-1X air interface. Prior to this feature, CDMA data services were limited to raw speeds of 9.6 Kpbs and 14.4 Kbps. The HSPD (High Speed Packet Data) feature enables mobile users with laptop computers or other data devices conforming to the TIA/EIA/IS707A-1 standard to access various data applications, such as Internet Access, Database Access, E-mail, File Transfer at higher speeds. These applications may reside on existing or custom designed data networks. The 3G-1X HSPD services are bi-directional and apply to both cellular and PCS systems.

1.1 HSPD Traffic Measurements

Another functionality of the CDMA 3G-1X High Speed Packet Data Services feature is the creation of the new HSPD Traffic Measurements report. This report provides measurements for CDMA 3G-1X High Speed Packet Data Trunk Groups. The following counters are provided in the new HSPD TRFM report:

- FBATT (Forward Burst Attempts) - the number of times the forward backlog threshold is exceeded and the subsequent FS_FSCH_REQ message sent to the Anchor Cell (forward direction burst request) requesting a burst. This counter is provided for the following rates: 19.2 kbps, 38.4 kbps, 76.8 kbps, 153.6 kbps and the total (TOTAL) of all Forward Burst Attempts is counted.

- FBBLK (Forward Burst Blocked) - the number of times forward burst attempts were blocked. A forward burst attempt is only to be counted once as blocked. A forward burst attempt is blocked when a sent FS_FSCH_REQ message does not result in a burst in the forward direction. This counter is provided for the following rates: 19.2 kbps, 38.4 kbps, 76.8 kbps, 153.6 kbps and the total (TOTAL) of all Forward Burst Blocked is counted.

- RBATT (Reverse Burst Attempts) - the intersection of this row and the requested discrete data burst rate column is pegged each time a valid FS_RSCH_REQ message is received. The requested discrete data burst rate is the received Maximum Reverse Cell Data Rate Supported parameter value mapped to its discrete data burst rate. This counter is provided for the following rates: 19.2 kbps, 38.4 kbps, 76.8 kbps, 153.6 kbps and The total (TOTAL) of all FS_RSCH_REQ messages is counted.

- RBBLK (Reverse Bursts Blocked) - the intersection of this row and the TOTAL column is pegged each time the DPH (Data Priority High) cannot accept an incoming reverse burst request at the minimum allowed discrete data burst rate of 19.2 kbps. In this case, the invoked FS_RSCH_RESP message is sent to the Cell with the Maximum Reverse DCS Data Rate Supported parameter having a value of 15 (0 kbps). This counter is provided only for the TOTAL.

The following enhancements are provided to the existing ECPSRVT (Executive Cellular Processor Service Type) TRFM report:

- Service type 23 - CDMA 3G-1X HSPD Service (C1XHSPDSIP)

- Service type 24 - CDMA 3G-1X HSPD CDPD Service (C1XHSPDCDPD)

ECPSRVT report should be accessed by the unique component ID call equipment number consisting of Switching Module, Packet Switching Unit and the Service Type.

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2. FEATURE ASSIGNMENT

2.1 CDMA 3G-1X HSPD

The information that follows represents Recent Change provisioning for SVC (Switched Virtual Circuit) -> FRBC (Frame Relay Bearer Channel) and 3G1XPD (High Speed Data) trunks. The equipment needed for each Recent Change view described is also provided.

- Equipment Needed: SM2K - On theTrunk Group View 5.1, define FRBC Trunk Group.
- On the Trunk Member View 5.5:
  - Equipment Needed: BCM Trunks, PH4 (Protocol Handler 4) - enter 1 - 16 FRBC trunk members on PH4 (IFRPH (ISDN Frame Relay Protocol Handler)).
  - Equipment Needed: FRBC Trunks - enter up to 239 SVCs per FRBC.
- Equipment Needed: SM2K - On the Trunk Group View 5.1, define 3G1XPD trunk group.
- Equipment Needed: PHV4 (Protocol Handler Voice version 4) - On the Trunk Member View 5.5, enter 1 - 20 3G1XPD trunk members on PHV4 (3G1XD Channel Group).

2.2 HSPD Traffic Measurements

The Recent Change provisioning for the HSPD Traffic Measurements functionality of this feature is provided using the following RC views:

- On the Measurement Collection Selectivity View 13.7, for the new HSPD traffic measurements the following fields are used:
  - SECTION NAME = HSPD
  - START1COMP = High Speed Data Trunk Group or blank
  - START2COMP = blank
  - START3COMP = blank
  - DEST SM = blank

All valid components for this combination are displayed on the COMPONENT COLLECTION LIST in the ID field where the service provider can decide if the specific component should be taken into collection or not by specifying the appropriate value in the COLLECT field of this list. The customer can also decide whether to generate the report on the ROP or not by specifying the appropriate value in the ROP field of the list.

- On the Measurement Range Selectivity view 13.8 for the new HSPD traffic measurements the following fields are used:
  - SECTION NAME = HSPD
  - START1COMP = High Speed Data Trunk Group or blank
  - END1COMP = High Speed Data Trunk Group or blank
  - START2COMP = blank

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- END2COMP = blank
- START3COMP = blank
- END3COMP = blank
- DEST SM = blank
- COLLECT = blank
- ROP = blank

- On the Measurement Collection Summary View 13.9 for the new HSPD traffic measurements the following fields are used:
  - SECTION NAME = HSPD
  - START1COMP = High Speed Data Trunk Group or blank
  - START2COMP = blank
  - START3COMP = blank
  - DEST SM = blank

The ODA provisioning for this feature is as follows:

- The ACT field for SFID 285 on the SFSYS form (5713-1 Record) must be set to "Y".
- SECTION NAME must be set to "HSPD" on the MEASSUM form.
- The TGN entered in the START1COMP field on the MEASSUM form should match the TGN on the TKGRP form with the TRKCLS set to "3GPD".

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ATSDATA	5052	7	1C	14.9
MEASSUM	5563	3	5BG	13.9
OFCOPT	5509	3	5I	8.1, 8.15
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202	3	2A	5.1

ATSDATA form (5052 Record) - This form is used to provide data that defines a test session in a certain test schedule to be invoked by ATTS (Automatic Trunk Testing Scheduler) for the purpose of performing automated trunk testing over a specified range of equipped members for a specified trunk group. Added a data rule to the TGN field.

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Components are defined as the entity to be measured; components can be at the end product level (AIU, DNU-S, SS7 PSU, etc.) or subassemblies (i.e., packs, lines, DPIDB, etc.). Added a data rule to the SECTION NAME field.

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and

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parameters. The OFCOPT form is required at the time of initial translations for all offices. Added two new fields (PER 3G RATE and PER 3G THRESHOLD) to support this feature.

SFSYS form (5713-1 Record) - This form is used to activate secured features. This feature requires the ACT field for SFID 285 to be set to "Y".

TKGRP form (5202 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Added the following information:

- data rules to the TGN field.
- "3GPD" to the valid entries table for the TRKCLS field.
- "3G1XPD" to the valid entries table for the SERV TYPE field.
- data rules to the TGN, TRK DIR, TRKCLS, and SERV TYPE fields.
- data rules to the TRKCLS field for the "3GPD" and "FRBC" valid entries.

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SEC. 8AA: CNI CONVERSION TO SS7 IN A WIRELESS ENVIRONMENT

1. FEATURE DESCRIPTION

The feature number for the CNI (Common Network Interface) Conversion to SS7 (Signaling System 7) In Wireless Environment feature is 99-5E-7673 and is made available with 5E15 SU (Software Update) 10. The feature number for SS7 PSU (Packet Switching Unit) Conversion for Landline is 99-CP-4916 (see Division 2, Section 7BA for more information).

The CNI to PSU Signaling Platform Conversion feature will allow existing 7R/E 5ESS offices including those supporting wireless applications, whose current SS7 signaling needs are supported by a CNI, to be converted to a PSU-based SS7 signaling platform on a Host GSM (Global Switching Module).

The CNI to PSU conversion has four main phases:

- Host GSM Installation or Growth
  - During this phase a Host GSM is provisioned and may be installed new to the office or an existing Island GSM may be converted to a Host GSM.

- Pre-Cutover Mode
  - During this phase the office is conditioned for the actual cutover taking place in the next phase.
  - This phase introduces new software that will allow the Host GSM to have the same primary and alias point codes which reside on the CNI platform

- Cutover Mode
  - Actual cutover of signaling traffic takes place during this phase. Two methods are available to accomplish the cutover. The swing link method and the dual link method. Wireless will execute the swing link procedure to physically "move" signaling links between signaling platforms. This may require the use of a time slot cutover device, such as a DACS (Digital Access and Cross-Cutover System) to "swing" existing SS7 links from the CNI platform over to the PSU platform. The Swing Link method is the only option available for the Wireless DCS (Digital Cellular Switch) office because the ECP (Executive Cellular Processor) supports the definition of only a single Combined Link Set to Mobile Switching Center.

- Post-Cutover Mode
  - Executing this phase will commit the office to use the Host GSM instead of CNI.

- If the office supports wireless applications, by converting signaling links between the DCS and the ECP, the DCS signaling platform must be changed from the CNI to the Host GSM. On the DIGITAL CELLULAR SWITCH PARAMETERS Recent Change View (8.28), modify the AMPS DCS GSM field from "0" to the target Host GSM number.

- At this point, both the CNI and Host GSM signaling platforms are handling wireless traffic. Since the cutover mode is POSTCUT and the DCS platform is specified as the Host GSM, all outbound traffic will utilize the Host GSM platform, but inbound traffic may be received by either the CNI or Host GSM platforms, according to ECP load-sharing algorithms.

- When the 7R/E 5ESS is a digital cellular switch serving an executive cellular processor in a wireless configuration, further testing is required. Specifically the following additional actions are required:

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- Monitor the ECP MCRT page 2141,X (where X is the DCS number) and verify the SS7 connection between the CNI and the ECP is active.
- Monitor the 5ESS and ECP ROPs for a loss of heartbeat messages, noted by the critical alarm message: REPT DCS-ECP COMMUNICATION LOST.
- If the office administrators have a set of typical wireless test calls, they should be executed. This could include verification of voice quality of mobile to mobile, mobile to messaging system, mobile to landline termination, landline origination to mobile, via ISUP (ISDN User Part) trunks.

- Based upon the analysis of CCS (Common Channel Signaling) processing for wireless applications, one of the following actions must be taken:
  - If no problems are found, or problems detected are not deemed to be directly related to the conversion process, CONTINUE the procedure, after resolving pertinent issues.
  - If unexplained call disruption has occurred, a backout of the conversion process should be considered using the CNI to Host GSM Signaling Platform Conversion - Backout Procedure. To perform the proper level of backout, the following state information should be noted: POSTCUT state with partial Host GSM CSSLK access available and the Host GSM is the current wireless DCS. This is a "safe stopping point" in the conversion process. Although data is not in its final state, all SS7 signaling traffic is now being handled exclusively by the Host GSM, and an emergency backout is possible at any time.

The related hardware is as follows:

- The Host GSM is an SM-2000 equipped with a PSU2.
- All CCS protocol handlers (QPH, STPH) on a Host GSM must be equipped with PH22 hardware on the PSU2-0 DF2 shelves. PH22s are used to control the SS7 data link protocol.

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SEC. 8AB: PHV5 - DOWNLOADABLE PROTOCOL HANDLER FOR VOICE 5

1. FEATURE DESCRIPTION

Available with 5E16.1 and later software releases, the PHV5 (Downloadable Protocol Handler for Voice 5) feature, feature number 99-5E-7537, introduces a new PHV hardware platform with increased capacity to handle voice and data simultaneously. The PHV5 is a downloadable vocoder board that reduces COGS (Cost of Goods Sold) and increases the capacity of CDMA (Code Division Multiple Access) 5ESS DCS (Digital Cellular Switch) systems. The PHV5 can support up to 64 usable vocoders for voice and up to 32 low speed data calls simultaneously, or it can support up to 64 high speed data channels. PHV5 supports all the features that are currently supported on PHV4. Refer to Division 2, Section 8J for further information on PHV4. A downloadable PHV5 supports 13K and EVRC vocoder algorithms. It also supports a multi-integrated test system.

2. FEATURE ASSIGNMENT

PHV5s are assigned on a per call basis and should be treated as a single pool of vocoder servers across all PSU2s (Packet Switch Unit 2). If possible, it is recommended that PHV5s be distributed across multiple PSU2s.

PHV5s can be mixed in the same PSU2 shelf with all other PHVs. DF2 must be used on all PSU2 shelves equipped with PHV5 hardware.

Activation of this feature is dependent on the activation of the AMPS and CDMA features. To activate these features, the ACT fields for SFID 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y". See Figure 1 for the provisioning form flow for this feature.

For more information concerning the CDMA feature and additional provisioning information, see Division 2, Section 8B.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPSUPH	5742	8	23	22.3, 22.4
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1/8	3	2A	5.1

EQPSUPH form (5742 Record) - This form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS Switch. The PHV5 MIN SPARE field, a value of 20 and a data rule for the PH CLI field were added to this form.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU shelf. The field AVAILABLE PHV5 was added to this form. A PH TYPE value of "PHV5" and data rules were added.

SFSYS form (5713-1 Record) - This form is used to enable secured features. Activation of the PHV5 feature is dependent on the activation of the AMPS and CDMA features. To activate these features, the ACT fields for SFID 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y".

TKGRP form (5202-1/8 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The range for the channel component of TRKOE NUMBER field was expanded to 000 - 095.

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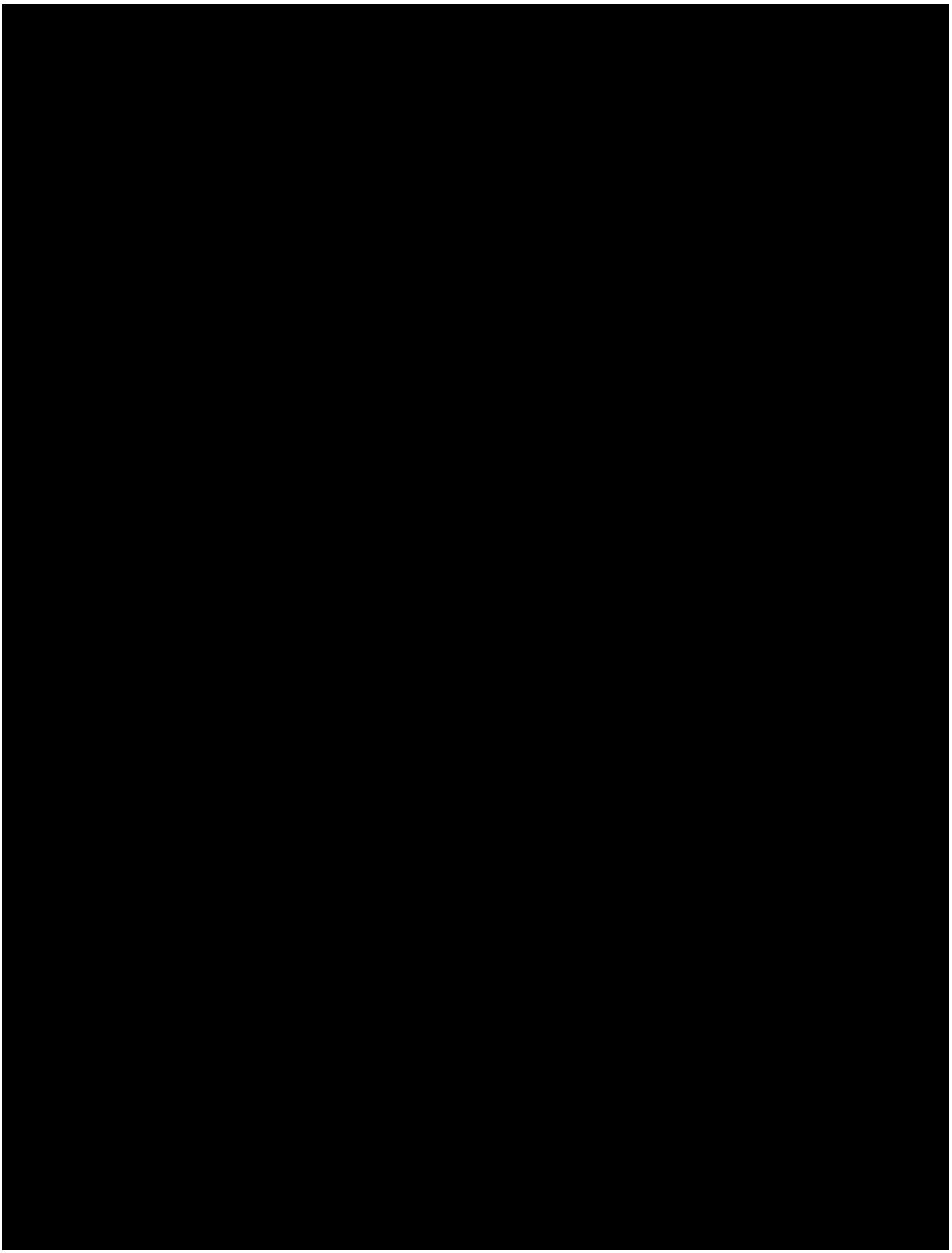

Figure 1 FORM FLOW FOR PHV5 SPEECH HANDLER TRUNK MEMBER

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SEC. 8AC: PCF ON PHE2

1. FEATURE DESCRIPTION

Available with 5E16 FR 3 (Feature Release 3) and later Software Update, the PCF (Packet Control Function) on PHE2 (PH30 (Protocol Handler) with Ethernet Link) feature extends the 5EDCS (5ESS Switch DCS (Digital Cellular Switch)) Wireless Network to a PDSN (Packet Data Serving Node) cloud over a 100 Mbps Ethernet link. This PDSN cloud connects to an IP (Internet Protocol) network. The feature number is 99-5E-7868.

The connection between the PCF and the PDSN cloud is the R-P (Radio Protocol) interface. The R-P interface signaling and bearer connection traffic are carried over the Ethernet link as IP encapsulated data in Ethernet frames. The 5EDCS supports multiple PCFs.

The PCF is introduced on a PHE2. The PCF on PHE2 feature introduces the PHE2 hardware. The PHE2 has an Ethernet Paddle board which provides one Ethernet link, a NP (Network Processor), an AP (Applications Processor), and memory. The PHE2 channel group is an ETH (Ethernet).

The ECP/5EDCS (Executive Cellular Processor/5EDCS) signaling for packet data services calls remains unchanged for setting up and clearing ADTs/HSPD (AMPS (Advanced Mobile Phone System) Data Trunks/High Speed Packet Data) trunks. The ECP/5EDCS signaling for the PCF trunks is the same signaling as for the setting up and tearing down of the FR SVCs (Frame Relay Switched Virtual Circuits). As for FR SVCS, the ECP provides a TG (Trunk Group) list to the 5EDCS to hunt in a SETUP_SVC_X message. This TG list can now be an all PCF TG list, or a mix of PCF TGs and FR SVC TGs.

The goal is to use the PCFPH (PCF assigned to a PHE2) for all new packet customers. The IFRPH is being used for previous established packet data customers and for circuit mode data customers. The PCFPH is to coexists with the IFRPH (Frame Relay Protocol Handler).

The PCF sets up and tears down sessions between the MS (Mobile Station) and the PDSN. These sessions can be opened and closed. Open sessions are either active or dormant. An open active session requires switch PSU2 (Packet Switch Unit) PH and Packet Bus resources for connecting a Cell to the PDSN for the session. A transition of an open active session to an open dormant session, releases these switch resources connecting a Cell to the PDSN for the session.

However, the PCF must maintain information about a session when a session goes dormant. This open dormant session information retained must be sufficient to reactivate an open dormant session to the open active session state. This session reactivation can be initiated by the session MS (by the ECP) or the session PDSN (by the PCF). When a session is reactivated, the session transitions from the open dormant state to the open active state. An open session can have a number of these open active - open dormant transitions throughout the "lifetime" of the session. The R-P standards also allow for a session closure. When the "lifetime" of a session expires from the R-P protocol perspective or as commanded by the ECP or the session PDSN, the session is closed and all of its resources are released including LLCR (Link Layer Connection Record) memory, A10 connection data, and the switch ADT/HSPD connection resources.

The PCF performance is in terms of active calls and dormant calls. Active calls require PHV/DPH (Protocol Handler Voice/Data PH) PSU2 Packet Bus connections to the PCF. Dormant calls require PCF memory. Since the PCF is introduced without a PCF TP (Terminal Process) per session and communicates mostly with the APX (Application Processor) TP, the PCF is mostly not subject to the SMP (Switching Module Processor) BHCA (Busy Hour Call Attempts). However, the packet zone reconnects for dormant sessions do impact the available SM2K BHCA. With the PCF TP removed from the SM2K, the PCF choke points then become the PSU2 Packet Bus (100 Mbps) and the Ethernet Link (100 Mbps).

When the PCF is introduced, the active calls have a 50 second hold time. This leads to a direct SM2K BHCA choke point with the PCF TP in the SM2K (SM2000). With the PCF TP removed from the SMP, this hold time would still indirectly impact the PCF active calls, since the SMP is involved with setting up and tearing down the ADT/HSPD 1/2 call of each active connection. When the PCF TP is in the SMP, the SMP

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as the choke point and not the PSU2 Packet Bus.

The PCF has the following interfaces:

- internal communications with the APX TP. This communication is accomplished by primitive communications
- an internal data path connection through the PSU2 PB (Packet Bus) with ADTs on PHVs and HSPD trunks on DPHs.
- Network - introduces external R-P communications over a full duplex 100 Mbps Ethernet Link. The R-P signaling traffic introduces UDP (User Datagram Protocol). The Ethernet link introduces the PHE2.
- the R-P interface. This consists of the A11 signaling used to setup and to tear down A10 connections over the Ethernet link between the PCF and the PDSN.
- the R-P interface introduces IP, UDP, GRE (Generic Routing Encapsulation), ARP (Address Resolution) on the 5EDCS to the CDMA (Code Division Multiple Access) Data Services features. The GRE carries the bearer traffic.
- PCF to many (up to 1024) PDSNs connections.

2. FEATURE ASSIGNMENT

To provision this feature the following steps must be followed:

- Define the PHE2 on the EQPSUPH form; RCV (Recent Change View) 22.4.
- Reserve Channel Groups on the PSUGP form; RCV 22.16.
- Assign Internet Protocol Processors on the IPPROC form; RCV 33.1.
- Insert an Internet Protocol Interface for Ethernet on the ETHIP form; RCV 33.4.
- Define the PDSN Configuration on the PDSNCNFG form; RCV 34.3.
- Assign a PCF on the PCFPDSN form; RCV 34.2.
- Insert PCF office parameters on the PCFOPT form; RCV 34.1.
- Insert a trunk group on TKGRP form; RCV 5.1.
- Insert PCF trunk member on the TRUNK form; RCV 5.5.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ATSDATA	5052	7	1C	5.11
EQPSUPH	5742	8	23	22.3, 22.4
ETHIP	5996	5	3S	33.4
IPINTF	5988	5	3O	33.2
IPPROC	5987	5	3N	33.1
IPROUT	5989	5	3P	38.3
PCFOPT	5996-1	5	3T	34.1
PCFPDSN	5996-2	5	3U	34.2
PDSNCNFG	5887	5	3V	34.3
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

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ATSDATA form (5052 Record) - This form is used to provide data that defines a test session in a certain test schedule to be invoked by ATTS (Automatic Trunk Testing Scheduler) for the purpose of performing automated trunk testing over a specific range of equipped members of a specified trunk group. Modified a data rule for the TGN field.

EQPSUPH form (5742 Record) - This form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS Switch. The PHV5 MIN SPARE field, a value of 20 and a data rule for the PH CLI field were added to this form. Added a data rule for the SM field and modified a data rule for the PSU field.

ETHIP form (5995 Record) - This form provideS the ethernet capability to provision IP addresses, subnet masks, and associated IP parameters to an internet interface. New form to support this feature.

IPINTF form (5988 Record) - This form provides the capability to provision up to five IP addresses and subnet masks, and associated IP parameters to an internet interface. Modified a data rule for the GATEWAY IP ADDRESS field.

IPPROC form (5987 Record) - This form provides the capability to provision up to five IP addresses and subnet masks, and associated IP, TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) parameters to a processor (SM or PH). Added the REFRESH INTRVL and CLEANUP INTRVL fields. Also modified data rules for the PROCESOR TYPE field.

IPROUT form (5989 Record) - This form provides the capability to provision an IP gateway between an external IP destination and a local IP interface. Modified a data rule for the INTERFACE NAME field.

PCFOPT form (5996-1 Record) - This form is used to assign office-wide PCF parameters. New form to support this feature.

PCFPDSN form (5996-2 Record) - This form provides the capability to provision a PDSN (Packet DataServing Node) IP address to PCF. New form to support this feature.

PDSNCNFG form (5997 Record) - This form is used to assign PDSN configuration parameters. New form to support this feature.

TKGRP form (5202-1/8 Record) - This form is used to define each Trunk Group in a 5ESS Switch. The range for the channel component of TRKOE NUMBER field was expanded to 000 - 095. Added data rules to the TRKCLS field.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. Modified and added a data rule for the TRKOE field.

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SEC. 8AD: CDMA Frame Relay on PH22 (Protocol Handler) - FRPH (Frame Relay Protocol Handler) on PH22

1. FEATURE DESCRIPTION

Available with 5E16.1 and later software releases, the CDMA Frame Relay on PH22 - FRPH on PH22 feature , feature number 99-5E-7741, adds existing FRPH and IFRPH (ISDN Frame Relay Protocol Handler) application software, that is currently on the PH4 platform, to the PH22 platform. The PH22 platform supports 64 time slots or ports when equipped with FRPH or IFRPH channel groups. This reduces Cost of Goods for CDMA applications by enabling more time slot connections per PSU shelf. This feature is supported only on a PSU2 which is equipped with a DF2 on the PSU shelf where these PH22 channel groups are equipped.

2. FEATURE ASSIGNMENT

Activation of this feature is dependent upon activation of the AMPS and CDMA features. To activate these features, the ACT field for SFIDs 130 and 221 on the SFSYS form (5713-1 Record) must be set to "Y". Refer to figure 1, the form flow for CDMA Frame Relay on PH22 (Protocol Handler) - FRPH (Frame Relay Protocol Handler) on PH22 for provisioning details.

For more information concerning the CDMA feature and additional provisioning information, see Division 2, Section 8B.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQPSU	5741-1/2	8	22	22.2
EQPSUPH	5742	8	23	22.4
PSUGP	5949	5	3J	22.16
SFSYS	5713-1	3	5AR	8.22
TKGRP	5202-1/8	3	2A	5.1
TRUNK	5204	3	2C	5.5

EQPSU form (5741-1/2 Record) - This form is used to define the PSUs equipped in a 5ESS Switch and to reserve a pool of dedicated peripheral timeslots for the exclusive use of the PSUs equipped in a 5ESS Switch. Data rules were added to this form.

EQPSUPH form (5742 Record) - This form is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS Switch. Data rules were added to this form.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU shelf. Data rules for PH22 usage were added to this form

SFSYS form (5713-1 Record) - This form is used to enable secured features. Activation of this feature is dependent on the activation of the AMPS and CDMA features. To activate these features, set ACT to "Y" for SFIDs 130 and 221 on the SFSYS form (5713-1 Record).

TKGRP form (5202-1/8 Record) - This form is used to define each Trunk Group in a 5ESS Switch. Data rules were added to this form.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Data rules for PH22 usage were added to this form.

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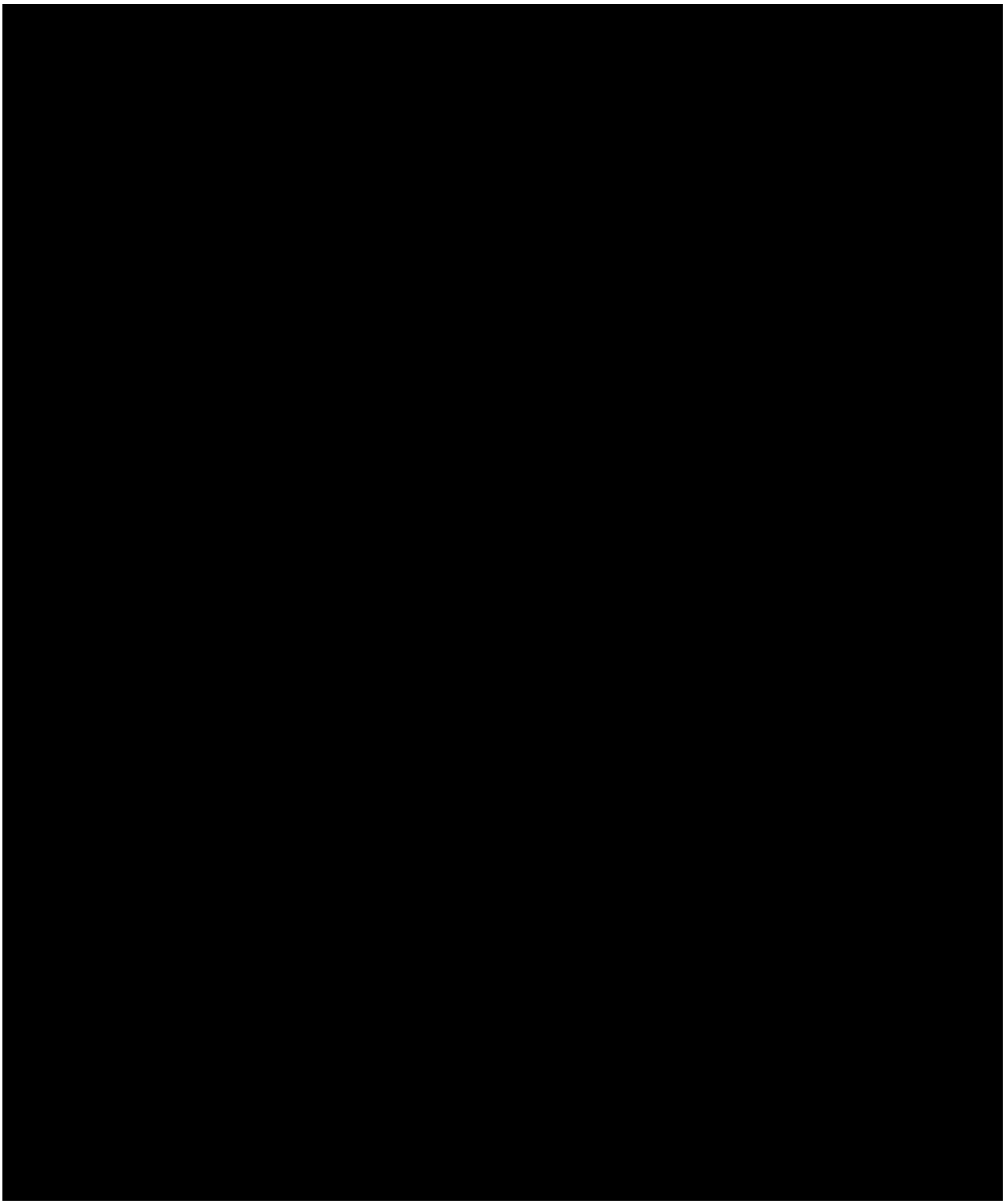

Figure 1 FORM FLOW FOR CDMA FRAME RELAY ON PH22 (PROTOCOL HANDLER) - FRPH (FRAME RELAY PROTOCOL HANDLER) ON PH22

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SEC. 8AE: 256K TRUNK SCALING FOR LARGE CAPACITY TANDEM

1. FEATURE DESCRIPTION

For information on this feature refer to Division 2, Section 4B990.

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SEC. 8AF: OXU CABINET RENUMBERING

1. FEATURE DESCRIPTION

The OXU (Optical Extended Unit) Cabinet Renumbering feature (99-5E-7953) is made available with the 5E16(2) Software Release. This feature builds upon the base OXU feature. For more information on the base feature, see Division 2, Section 9V.

This feature uses alphabetical Bay numbers if peripherals are connected to the Primary OXUs. An OXU can be configured as either "Primary" or "Secondary". A Primary OXU handles the fan and fuse alarms of the peripheral unit it supports. The MCTSI (Module Controller/Time Slot Interchange) handles the fan and fuse alarms for the peripheral units if the OXU is Secondary.

Currently, the TLP (Trouble Locating Procedure) indicates printing out the Primary OXU number and the BAY number of the peripheral unit. The OXU Cabinet Renumbering feature is changing this. However, instead of printing the OXU number and the BAY number, the TLP now prints out the LTP (Logical Test Port) number (bay) with an alphabetical character, if the OXU is Primary.

The following table describes how to translate from the primary cabinet type and cabinet number to the real location of the suspected faulty pack. If the primary OXU is OXU2 and the cabinet number is 205, the actual location is LTP cabinet number F05 for the SM (Switching Module) of the unit under test.

PRIMARY OXU	NUMERICAL CABINET NUMBER	NEW CABINET NUMBER
OXU1	0xx,1xx,2xx	Axx,Bxx,Cxx
OXU2	0xx,1xx,2xx	Dxx,Exx,Fxx
OXU3	0xx,1xx,2xx	Gxx,Hxx,Jxx
OXU4	0xx,1xx,2xx	Kxx,Lxx,Mxx
OXU5	0xx,1xx,2xx	Nxx,Pxx,Qxx
OXU6	0xx,1xx,2xx	Rxx,Sxx,Txx
OXU7	0xx,1xx,2xx	Uxx,Vxx,Wxx
OXU8	0xx,1xx,2xx	Xxx,Yxx,Zxx

If, as in the example, the Primary OXU is OXU1 and the cabinet number is 105, the location of the suspected faulty circuit pack is in SM 30, LTP cabinet B05.

As for ODA (Office Dependent Data) and RC/V (Recent Change/Verify), the form/view must accept alphabetical characters on the bay fields instead of the numeric number only.

	ALLOWED BAY VALUE COMBINATIONS		
PRIMARY UNIT	00 - 14	00 - 04	00 - 08
0	0	1	2
1	A	B	C
2	D	E	F
3	G	H	J
4	K	L	M
5	N	P	Q
6	R	S	T
7	U	V	W
8	X	Y	Z

For example, when PRIMARY UNIT is 1 on the EQXCDU form (RC/V 18.19), BAY can be A00 - A14, B00 - B04, or C00 - C08. The value in the PRIMARY UNIT field on this form/view determines the alowable value for the BAY field.

2. FEATURE ASSIGNMENT

Provisioning data for these expanded ranges only need to follow existing provisioning documentation with the exception of allowing the expanded ranges (described above).

3. TRANSLATION REQUIREMENTS

These are all of the forms impacted by the renumbering expanded range.

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New And Modified ODA Forms				
Form Name	**Record Number**	**Div.**	**Sec.**	**RC View**
EQAIU	5745	8	64	19.16
EQDCLU	5810	8	30	19.6
EQDCTU	5751	8	26	19.9
EQDSC3	5852	8	54	19.18
EQGDSC3	5860	8	63	19.19
EQIDCU	5846	8	48	19.12
EQISLU	5731	8	18	22.5
EQLU	5710	8	9	19.1
EQMSU	5750	8	25	19.7
EQPSU	5741	8	22	22.2
EQRA	5821	8	35	19.10
EQTU	5720-1	8	13	19.2
EQXCDU	5832	8	84	18.19

EQAIU form (5745 Record) - This form is used to define the AIU (Access Interface Unit) (see Division 2, Section 7K). Added a data rule to the INTF UNIT field.

EQDCLU form (5810 Record) - This form is used to define equipment information for the DCLU (Digital Carrier Line Unit). Added a data rule to the INTF UNIT field.

EQDCTU form (5751 Record) - This form provides metallic access testing capabilities to users via a CRT (Cathode Ray Tube) at the TLWS (Trunk and Line Work Station). Added a data rule to the INTF UNIT field.

EQDSC3 form (5852 Record) - This form is used to define the DSC3 unit to provide the LDSUF (Local Digital Services Unit Function) to expand tone generators and decoders required for the expanded capacity of the SM-2000. Added a data rule to the INTF UNIT field.

EQGDSC3 form (5860 Record) - This form is used to define the GDSF (Global Digital Service Function) on the DSU3 for the SM and the SM-2000 class processor. Added a data rule to the INTF UNIT field.

EQIDCU form (5846 Record) - This form is used to define the IDCU (Integrated Digital Carrier Unit) and the LSI (Loop Side Interface) packs, ELI (Electric Line Interface) packs, and the PIDBs (Peripheral Interface Data Buses) associated with the IDCU. Added a data rule to the INTF UNIT field.

EQISLU form (5731 Record) - This form is used to define ISLU (Integrated Services Line Unit) assignments in a 5ESS Switch. Added a data rule to the INTF UNIT field.

EQLU form (5710 Record) - This form is used to define SM (Switching Module) and LU (Line Unit) assignments in a 5ESS Switch. Added a data rule to the INTF UNIT field.

EQMSU form (5750 Record) - This form is used to define MSU (Metallic Service Unit) assignments from the EQMSU and the EQMTIB (5E10 and later), EQMSP or EQMMSP forms. Added a data rule to the INTF UNIT field.

EQPSU form (5741 Record) - This form is used to define the PSUs equipped in a 5ESS Switch. Added a data rule to the INTF UNIT field.

EQRA form (5821 Record) - This form defines the RAF (Recorded Announcement Function) unit, and the SAS (Service Announcement System) services unit. If a RAF unit is defined on this form, then a corresponding EQRAP form (5822 Record) must be defined for the RAF circuit packs. Added the INTF UNIT field and a data rule to this field.

EQTU form (5720-1 Record) - This form is used to define Trunk Unit Assignments. Added a data rule to the INTF UNIT field.

EQXCDU form (5832 Record) - This form is used to define the Extended Control and Data Unit. Added data rules to the PRIMARY UNIT field.

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SEC. 8AG: RNC HOMED VOICE/DATA CALLS

1. FEATURE DESCRIPTION

The RNC (Radio Network Controller) Homed Voice/Data Calls feature (99-5E-8283) is made available with the 5E17(1) FR 1 (Feature Release 1) and later Software Releases.

This feature provides the 5ESS-DCS (Digital Cellular Switch) portion of the functionality needed for the Wireless Core IP R20 (20.1 for Voice/Packet Data) MSC (Message Service Center) architecture that is equipped with RNC. Using an ATM (Asynchronous Transfer Mode) switch, traffic (voice, circuit data, and packet data) from the BTS (Base Transceiver Station) terminates on the RNC. Traffic frames are routed between the RNC(s) and the 5ESS PSU(s) (Packet Switching Unit) based on the community address information. Data frame selectors and voice frame selectors are in the same global (soft handoff) address space. For voice and circuit data calls, the FS (Frame Selector) and vocoder will always reside in the 5ESS PSU.

For packet data calls the PCF (Packet Control Function) resides on ether the RNC or in the stand-alone IWF (Inter-Working Function) off the DCS. The FS/RLP (Frame Selector/Radio Link Protocol) functionalities can be either on the RNC or the IWF.

Note that in the normal situation the PP (Packet Pipe) typically terminates on the 5ESS-DCS FRPH (Frame Relay Protocol Handler), and hunting for the PHV (Protocol Handler for Voice) starts in the PSU that the PP terminated on. Therefore, for the case where the BTS is homed on the RNC; the ECPC (Executive Cellular Processor Complex) will have to send the SH_REQ_X message to 5ESS-DCS with PP Trunk Group/Member=0/0 as well as the community address of the PSU. 5ESS PSU will start hunting for a PHV starting with the PSU identified in the SH_REQ_X message.

Once the PHV is selected on the 5E-DCS, the DLCI (Data Link Connection Identifier) information is passed, in the SH_ASGN_X message, back to the ECP to be eventually made available to the BTS. The address (DLCI) for the FS is received by the BTS gateway on the RNC in the TPU (Traffic Processing Unit) shelf. The BTS gateway evaluates the address and establishes a bearer path to the PSU gateway in the RNC. From the PSU gateway, the address is used to set up the bearer path from the RNC through the center stage ATM switch to the PHA (Protocol Handler for ATM) on the 5ESS PSU. The 5ESS PSU on the DCS accepts the bearer connection using the normal inter-PSU processing.

From 5E-DCS perspective, the RNC is equivalent to a 5E-PSU. It is expected that the RNCs and the 5E-PSUs are all interconnected by their shared (soft hand-off) community address space using ATM PVC connections. The RNC needs to interoperate with 5E-PSUs. In order to achieve this, the RNC has to implement the interface for soft hand-off similar to the 5ESS Switch functionalities being implemented as part of the PSU to PSU Connectivity feature and the PHA2 Connectivity Enhancement feature. The RNC feature mirrors these functionalities on the CoreIP MSC architecture. For more information on the PSU to PSU Connectivity feature, see Division 2, Section 7BY.

R20 Packet Core Growth System Architecture document (ARD-0130) describes the architecture needs and the derived architectural design (i.e., the Hardware and Software architecture) for this feature.

2. FEATURE ASSIGNMENT

There is no ODA impact.

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SEC. 8AH: MEASUREMENTS FOR PCF ON PHE2

1. FEATURE DESCRIPTION

The Measurements for PCF (Packet Control Function) on PHE2 (Protocol Handler Ethernet 2) feature (99-5E-8173) is made available with the 5E17(1) FR 2 and later Software Releases.

This feature creates two new traffic 30 sections: PHE and PCF. PCF trunk group traffic contributes to selected counters on the following existing traffic 30 sections:

- 12 (TG)
- 212 (TGN)
- 15 (PROC)
- 22 (SMS)
- 244 (HSPD)
- 247 (ECPSRVT)

2. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
MEASSUM	5563	3	5BG	13.9

MEASSUM form (5563 Record) - This form is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Added the PCF and PHE values to the SECTION NAME field and associated data rules.

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SEC. 8AI: PCF SECURITY ON PHE2

1. FEATURE DESCRIPTION

The PCF (Packet Control Function) Security on PHE2 (Protocol Handler Ethernet 2) feature (99-5E-8494) is made available with the 5E17(1) FR 2 and later Software Releases. This feature is a NAR (North American Region) RC (Recent Change) only feature. It builds upon the base PCF on PHE2 feature. For more information on the base feature see, Division 2, Section 8AC.

This feature bounds the number of PHE2s in the office that can be provisioned. For this purpose, the PCF Security on PHE2 feature introduces three Recent Change global fields. These fields are PCF PHE LIMIT, PCF PHE PROV, and PCF PHE PSWD.

2. FEATURE ASSIGNMENT

The *PCF PHE2 LIMIT* field defines the maximum number of PCF PHE2s that may be provisioned in the office. The value is administered only on the equivalent RC (Recent Change) view 34.1, and is stored in a global parameter in the ODD (Office Dependant Data). For ODA, the value is no-change and is used to preserve the value of the global over a LTG (Large Terminal Growth).

The *PCF PHE PROV* field defines the number of PCF PHE2s provisioned in the office. The value is administered only on the equivalent RC view 34.1, and is stored in a global parameter in the ODD. For ODA, the value is no-change and is used to preserve the value of the global over a LTG.

The *PCF PHE PSWD* is no-change for ODA. It is used only by Recent Change when an office wishes to change the PCF PHE2 LIMIT value via view 34.1. PCF PHE2 LIMIT can be updated only when a valid PCF PHE PSWD is entered in 34.1 (the password obtained from Customer Technical Support).

For further provisioning information for this feature see the base feature at Division 2, Section 8AC.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
PCFOPT	5996	5	3T	34.1

PCFOPT form (5996 Record) - This form is used to assign office-wide PCF parameters. Added the PCF PHE2 LIMIT, PCF PHE2 PROV, and PCF PHE2 PSWD fields. These fields are all no change fields.

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SEC. 8AJ: GSM ESCALATION STRATEGY MODIFICATIONS

1. BACKGROUND

Wireless DCS (Digital Cellular Switch) offices have been experiencing total loss of CCS (Common Channel System) functionality (yielding an outage of the entire mobile complex), when such functionality is provided on a PSU (Packet Switch Unit) signaling platform on a GSM (Global Switching Module). Such GSMs can be provisioned in a dedicated mode, where the only hardware provisioned on the GSM is used explicitly by the CCS signalling platform (suggested configuration), or an integrated mode, where additional hardware is provisioned on the GSM to support CDMA (Code Division Multiple Access) or general trunking needs. The CCS signaling outages recorded were primarily in integrated GSM environments, due to recovery of extraneous hardware (not CCS-related), which lead to an SM (Switching Module) full initialization or otherwise affected CCS operation.

2. FEATURE DESCRIPTION

The purpose of the feature is to modify PSU/SM (Packet Switching Unit/SM) fault recovery strategies to avoid the disruption of CCS Connectivity when possible, and to restore CCS Connectivity whenever it is lost (all of these actions are related to a global SM PSU signaling platform only).

This feature will increase the availability of CCS functionality supported on a PSU signaling platform on a GSM in a DCS. Minimally acceptable CCS functionality includes signaling link access from the DCS to the ECP (Executive Cellular Processor) and to STPs (Signaling Transfer Points) providing access to the PTSN (Public Telephone Switching Network), as well as the ability to transport CCS messages from the GSM to any SM in the DCS for processing; total failure of CCS functionality effectively causes call processing in the parent MSC (Mobile Switching Center) to cease.

Techniques utilized by high-level escalation strategies provided by this feature include:

- Override peripheral hardware recovery that would result in a GSM full initialization, if minimal CCS functionality is still available (such an initialization would result in a total CCS loss for several minutes).
- If minimal CCS functionality on a GSM becomes unavailable, new GSM-wide strategies will be spawned to hasten the recovery of such functionality, which is critical to MSC operation. Due to the impact of CCS signaling on the office, quicker/more drastic recovery actions (including possible GSM full initialization) are merited.
- To better isolate PSU shelf problems without affecting CCS operation, shelf removals are allowed on a PSU, which has been provisioned as a critical unit.
- The use of all new GSM escalation strategies in an MSC is optional (the service provider will be able to enable/disable the feature via recent change controls).

Though primarily intended to address the interactions of non-CCS hardware recovery in integrated GSM environments, reliability has also been enhanced in dedicated GSMs, and applies to both critical/non-critical unit designations associated with resident PSUs (to address growth situations).

The GSM (Global Switching Module) Escalation Strategy Modifications feature (99-5E-8505) is made available with the 5E16(1) FR 4 and later Software Releases.

3. FEATURE ASSIGNMENT

In a DCS, this feature may be activated/deactivated by a single recent change update, at the service provider's discretion. This feature is only available in digital cellular switch (DCS) configurations.

4. TRANSLATION REQUIREMENTS

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New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
OFCOPT	5509	3	5l	8.15

OFCOPT form (5509 Record) - This form is used to supply various miscellaneous office options and parameters. Added the GSM ESCALATION field and associated data rules.

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SEC. 8AK: PCF ON PHE2 STANDARDS ENHANCEMENTS

1. FEATURE DESCRIPTION

The PCF (Packet Control Function) on PHE2 (Protocol Handler Ethernet 2) Standards Enhancements feature (99-5E-8481) is made available with the 5E17(1) FR 3 and later Software Releases. This feature is a NAR (North American Region) RC (Recent Change) only feature. It builds upon the base PCF on PHE2 feature. For more information on the base feature see, Division 2, Section 8AC.

This feature updates the base PCF on PHE2 feature (99-5E-7868). The following updates are driven by the IS-835-B (3GPP2 P.S0001-B) and the 3GPP2 A.S0017-0 documents. The standards introduce the NVSE (Normal Vendor/Organization Specific Extension), and have renamed the VOSE (Vendor/Organization Specific Extension) as the Critical VOSE. The recent standards have changed the Active Time parameter Type/Sub-Type values and the Cell Identifier (type 2) parameter field meaning.

2. FEATURE ASSIGNMENT

To allow the PCF PHE2 to be compatible for the current standard version and the previous version, two new global fields are added. These are the CELL INFO ORDER and the ACT TIME PARM (Connection Time In Seconds) fields. The setting of theses fields allow sending the Active Time parameter Type/Sub-Type as per IS-835 or as per IS-835-B. This also allows sending the BSID (Base Station Identification Number) parameter Cell Identifier (type 2) as per IS-835 or as per IS-835-B.

The CELL INFO ORDER field setting determines the placement of the Cell_Id and the Cell_Face fields in the BSID parameter. The ACT TIME PARM (Connection Time IN Seconds) field setting determines the Type and Sub-Type fields used to send the Active Time (Connection Time In Seconds) parameter.

For further provisioning information for this feature see base feature at Division 2, Section 8AC.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC Viewm**
PCFOPT	5996	5	3T	34.1

PCFOPT form (5996 Record) - This form is used to assign office-wide PCF parameters. Added the CELL INFO ORDER and ACT TIME PARM fields.

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SEC. 8AL: 3G-1X HSPD PERFORMANCE FOR CHATTY APPLICATIONS

1. FEATURE DESCRIPTION

The 3G-1X HSPD Performance for Chatty Applications (99-5E-8398) is made available with the 5E17(1) FR 3 and later Software Releases.

This feature is based on the PCF on PHE2 (99-5E-7868) and Measurement for PCF on PHE2 (99-5E-8173) features. For more information on these features see, Division 2, Section 8AC and Division 2, Section 8AH, respectively. This feature (99-5E-8398) improves the performance of 3G-1X Packet Data services by using system resources effectively.

There is a special class of packet data service: chatty application that presents a challenge for system resource optimization. The characteristic of chatty application is psuedo-periodical packet arrival with inter-arrival time of seconds to tens of seconds. Applications that fall into this category are:

- heartbeat message for "always-on" access, and
- weather/traffic information, or stock updates.

Typically they are of best-effort nature and the traffic is extremely low, the system-wise packet data inactivity timer often leads to the unnecessary waste of system resource.

A per-call throughput-driven algorithm is designed to determine when to release a chatty application (i.e., push the Chatty application dormant mode without FCH allocation). The purpose of this feature is to proactively manage the system resource based on each application's usage of the system. Therefore, it can reduce system resource usage (presumably caused by the chatty application) and support higher rate for other data users.

In addition to choosing chatty applications for release, a more general inactivity timer method is developed to adjust the inactivity timer based on a packet inter-arrival time and the cost of reactivation. The general idea is to increase the inactivity timer if the packet inter-arrival time is big, and to decrease the inactivity timer if the packet inter-arrival time is small. This method is referred to as the packet-driven timer adaptation.

2. FEATURE ASSIGNMENTS

For provisioning information for this feature see the base feature at Division 2, Section 8AC.

3. TRANSLATION REQUIREMENTS

New or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC Viewm**
PCFOPT	5996	5	3T	34.1

PCFOPT form (5996 Record) - This form is used to assign office-wide PCF parameters. Added the INIT TIMER, INACT TIME, REACT COST, LOCAL MARGIN, INTER ARRIVAL, and STEP DOWN SIZE fields.

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SEC. 8AM: 3G-1X HSPD IMPROVED SCHEDULING

1. FEATURE DESCRIPTION

The 3G-1X HSPD (High Speed Packet Data) Improved Scheduling feature (99-5E-8399) is made available with the 5E17(1) FR 3 and later Software Releases.

This feature is a data performance improvement feature that allows for forward burst rate upgrades and downgrades in the middle of a burst in progress, as well as a finer level of timing granularity for forward burst requests. This facilitates more efficient use of OTA (Over the Air) resources, by reducing the amount of time it takes to make forward burst upgrades and downgrades.

This feature is applicable to PHV4s (Protocol Handler for Voice 4s) and PHV5s only.

2. FEATURE ASSIGNMENTS

There is no ODA impact for this feature, therefore there is no needed provisioning.

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SEC. 9: SM-2000 FEATURES

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SEC. 9A: 5ESS-2000 SWITCH

1. FEATURE DESCRIPTION

1.1 SM-2000 Architecture

The feature number for the SM-2000 is 99-5E-1433. This feature is available for 5E9(2) and later Software Releases as part of SN-2000 (Service Net 2000).

The main characteristics of this platform are high bandwidth networking, distributed intelligence with unified control, and flexible upgrade and service provisioning. The designation "2000" indicates compatibility with SONET (Synchronous Optical NETwork), or SDH (Synchronous Digital Hierarchy), the international version of SONET.

The SM-2000 architecture introduces a higher capacity/faster TSI. This allows for more LUs (Line Units) to be connected to a single SM (e.g., from 8 LUs for an SM to 43 LUs for an SM-2000).

The SM-2000 is configured with and operates with existing SMs. Figure 1 provides a high level view of the SM-2000 architecture.

The SM-2000 has a fixed floor plan arrangement with the SMC (Switching Module Controller) numbered 000, and the LTPs (Line Trunk Peripherals) numbered 001 to 014, 100 to 104, and 200 to 208. An SM-2000 and an SM cannot be mixed in the same aisle as the cabinets are different heights. See Figure 2.

1.2 SM-2000 Supported Units

Following are the SM-2000 supported units for the domestic customer:

- ASU
- DCTU
- DLTU2
- DNU-S
- DSU3-DSC3/LDSF
- LU3
- MMSU
- PGTC
- TRCU2
- Analog Trunk (5E10)
- GDSC3 (5E10)
- RAF (5E10)

These peripheral units can mount in LTP cabinets 001 to 014, 100 to 104, or 200 to 208. They cannot be equipped in the SMC cabinet (bay 000) of an SM-2000. As shown in Figure 2, an SM-2000 consists of an SMC cabinet and a maximum of 28 LTPs. As shown in Figure 3, the SM-2000 SMC cabinet introduced the following new units:

- Modular Fuse Filter Unit
- TSIU4 (Time Slot Interchange Unit Model 4)
- Fan Unit
- SMPU4 (Switching Module Processor Unit Model 4)

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- DSU3 (Digital Services Unit Model 3)

Provided below is an overview of each of these new units (excluding the Fan and Modular Fuse Filter units). Also discussed are associated new features including the QLPS (Quad Link Packet Switch), the optically remote EXM-2000 (EXtended SM-2000), DNUS (Digital Networking Unit - SONET), and related support peripherals. Figure 6 provides a basic data flow of the translations required for the SM-2000 and the EXM-2000. The respective sections below provide reference for more detailed information.

1.3 TSIU4 (Time Slot Interchange Unit Model 4)

The TSI in an SM has a fixed allocation of 512 peripheral-side TSs and 512 network-side TSs. When the number of peripheral-side time slots is equal to the number of network-side time slots, the TSI is described as a square TSI. The SM is equipped with, and engineered as, a square TSI that allows for square and non-square engineering.

The TSI section of TSIU4 is divided into sections, called "Slices" (i.e., TSIS). Each module controller can be equipped with a minimum of 1 and a maximum of 10 TSIS circuit packs. Each TSIS can process 3,072 time slots. Refer to the EQTSI form (5850 Record), Division 8, Section 52, and the EQDI form (5849 Record), Division 8, Section 51 for more information.

1.4 Time Slot Interchange

The TSI provides a maximum of 40 TSI ports of 768 TS each. Not all of these time slots may be used due to constraints on the link interfaces. All interfaces to the TSI are via the TSI links. No special "side ports" such as the LDSU Bus reside in the existing TSI. All TSI links are treated identically by the TSI hardware, with the exception of three of the TSI links on the first TSIS (TSI Slice) circuit pack. These TSI ports receive special attention for the extraction and insertion of the CTSs (Control Time Slots). These TSI links are assigned as the primary links to the CM (Communications Module) and the MCP (Messaging Control and Pump) link to the SMP. The internal organization of the TSI breaks down into the TSICOM (TSI COMmon) circuit pack and up to 10 TSIS circuit packs. The TSICOM provides the control interface to the SMP and is responsible for the synchronization timing for the SM. Each TSIS circuit pack can terminate 4 TSI ports. The modular construction of the TSI permits the TSI to be partially equipped initially and later expanded (by adding TSISs) when the need for additional time slots occurs. The three types of hardware which the TSI Links interface to are:

- network side interfaces
- peripheral side interfaces
- the SMP

At least one TSIS board is required for each SM-2000. Each TSI board equipped must be grown sequentially.

1.5 Data Expansion (DX)

The DX (Data EXpansion), the equivalent of the DI for the SM-2000, connects Peripheral Units, terminates 24 PIDBs, and provides a connection to the TSI. Unlike the DI boards, the DX is a standard board which inserts through the front of the TSI unit. These boards are part of the TSI failure group and are not cross-coupled to the two sides of the TSI. A maximum of six DX boards may be equipped in each module controller, providing a total of 144 (6 x 24) duplicated data ports (PIDB terminations) per SM.

1.6 SMP40 Processor/SMPU4 Unit

The SMP40 Processor (Switching Module Processor MC68040), located in the SMPU4 Unit, is the primary

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intelligence of an SM. It controls the TSIU (Time slot Interchange Unit), the peripheral units, and all communications with the rest of the 5ESS-2000 Switch. It is equipped to accommodate the expanded capacity provided by the SM-2000 configuration. It is a two-shelf unit consisting of two MCs (Module Controllers)□MC 0 and MC 1 (also known as Side 0/1 or Service Group 0/1)□ both located in the SMC cabinet. The circuit packs equipped in MC 0 are duplicated in MC 1. The module controllers operate in an active/standby mode.

The software designation for the SM-2000 is "SM2000". Switching modules are defined on the EQIM form (5700 Record). The SM USAGE on the EQIM form is used to define whether the SM or SM-2000 is a local, host, remote, optical, or two-mile optically remote SM. An optically remote SM-2000 is referred to as "EXM-2000", but its usage is defined on the EQIM form as "ORM" the same as defining an optically remote SM. With SM-2000, there are now four 5ESS software configurations: Basic, Standard, Loaded and SM-2000, also defined on the EQIM form.

The memory boards for the SM-2000 SMP40 are 32 MB each, with space for 4 boards in the unit (and room for growth). The APC (Application Controller) provides the Sub Unit Interface Bus and the Serial TSI Control Link. This APC board also interfaces to a TSI link (the MCP link) and distributes its data to the MHs (Message Handlers). Since the TSI, APC, and MHs on a given side of the SMP are always in the same failure group, there is no need to cross couple between them. Refer to the EQIM form (5700 Record), Division 8, Section 2, for all SMPU translation information.

1.7 Digital Services Circuit 3 (DSC3)

The DSC3 is a new LDSUF (Local Digital Service Unit Function) equipped in the SM-2000 configuration to provide more tone generators and decoders. This is accomplished by equipping several service groups of the DSC3 in the SM-2000, providing approximately four times more service circuits. Each DSC3 circuit pack comprises a service group and has four duplex PIDBs for a total of 128 time slots of data and a duplex PICB for control. Comparably, the DSC handles 32 time slots.

The growth of DSC3s may be done individually. A minimum configuration consists of 2 DSC3s. The DSU3 shelf can support up to 18 DSC3s. The DSC3 uses PIDBs that occupy the same time slots as do existing peripheral time slots. Each circuit pack is powered separately via an on-board power converter. The DSC3 unit does not support DSC circuit packs.

The DSC3 processes the incoming data from the four PIDBs. The control interface from the SMP is provided by the PICB.

Refer to the EQDSC3 form (5852 Record), Division 8, Section 54.

1.8 Quad-Link Packet Switch (QLPS)

An SM communicates with the AM (Administrative Module), the CMP (Communications Module Processor) and other SMs through the CTS (Control Time Slots). In an SM-2000 the messaging capacity of the CTSs may not be sufficient to handle all of the messages between the SM-2000 and the AM, CMP, SMs, and other SM-2000s. If the CTSs to an SM-2000 are not sufficient to handle all message traffic, an optional QLPS network may be equipped in the 5ESS-2000 Switch. Up to 64 SM-2000s can be defined per QLPS network. Figure 4 provides a sample QLPS-SM-2000 configuration. For more information on QLPS, see Division 2, Section 9D and Division 3, Section 5AT.

1.9 Digital Networking Unit - SONET (DNU-S)

The Digital Networking Unit - SONET is a new SM-2000 hardware peripheral designed to take advantage of the large time slot capacity of the SM-2000. It resides in the 5ESS-2000 and is controlled entirely from the 5ESS-2000 switch.

The primary function of the DNU-S is to terminate SONET facilities and to convert data and signaling information between the SONET format and the SM-2000 PCT (Peripheral Control and Timing) link format.

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Figure 5 provides an illustration of the SM-2000 links to the DNU-S. For more information on DNU-S, see Division 2, Section 9C.

1.10 EXM-2000

The EXM-2000 (EXtended SM-2000), is an optically remoted SM-2000 that provides the capability to deliver SM-2000 functionality at a remote location, similar to the functionality provided by the ORM (Optically Remote Module) for the SM. It is remoted from a CM2 using QLIs (Quad Link Interfaces), NCT (Network Control and Timing) link-formatted fiber optics, and existing TRCU2 (Transmission Rate Converter Unit Model 2) equipment. Consistent with Release 1 of SM-2000, EXM-2000 supports analog lines (LU3), digital trunks (DLTU2 for low speed interfaces, and DNU-S for SONET high speed interface), and DSC3. Metallic testing, scanning and distribution functions are provided by the MMSU/DCTU systems which are needed for the normal operation of the EXM-2000. If an EXM-2000 is isolated from the host switch, Stand Alone call processing functionality is an option. An EXM-2000 accommodates up to 6 TRCU2 shelves. See the EQTMSLINK form (5851 Record), Division 8, Section 53.

1.11 NCT/NCT2 Links

An NCT link is used to connect an SM and the EXM-2000 to the CM2. The NCT2 (Network Control and Timing Link 2) link is used to connect an SM-2000 to the CM2 (CM1 is not allowed). An NCT2 link is a 64 MB optical link that carries 512 time slots between an SM-2000 and the CM2. The number of NCT2 links between an SM-2000 and the CM2 can be engineered, but are always engineered in pairs. A minimum of two duplicated NCT2 links between an SM-2000 and the CM2 is required. An NCT2 link is also used to terminate a QLI2 (Quad Link Interface Model 2) in the CM2. Refer to the EQNLI form (5853 Record), Division 8, Section 55, for translation information.

1.12 SM-2000 Capacities

The following summarize the capacities for the hardware components.

- The TSI may grow to a maximum size of one TSICOM and 10 TSI Slices.
- Four CI slots allow a maximum of 92 PICBs in the SM.
- Six DX slots allow a maximum of 144 PIDBs in the SM.
- Four memory slots allow a maximum of 128 MB RAM in the SM with 32 Mbyte boards.
- Two MH slots are allowed.

2. TRANSLATION REQUIREMENTS

New And Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACOFRF	5968	6	11	12.6
EMRNM	5108	3	1H	4.9
EQCI	5848	8	50	18.2
EQCMTRCU	5812	8	32	17.18
EQCORE	5701	8	3	17.1
EQDCLP	5810	8	30	20.6
EQDCTU	5751	8	26	19.9
EQDI	5849	8	51	18.3
EQDSC3	5852	8	54	19.18
EQDU/ EQDUP	5730	8	17	19.4 20.4
EQGDSC3	5860	8	63	19.18
EQIM	5700	8	2	18.1
EQLU	5710	8	9	19.1
EQLUP	5711	8	10	20.1

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EQMSU/ EQMMSP	5750	8	25	20.7
EQNLI	5853	8	55	18.16
EQPMU	5752	8	27	20.9
EQRA	5821	8	35	19.10 20.22
EQTMSLINK	5851	8	53	17.1
EQTU	5720	8	13	19.2
EQTSI	5850	8	52	18.17
LINE	5109	3	1I	1.5
MDFTA	5502	3	5B	14.6
MEASLU	5539	3	5AM	13.6
MLHG	5110	3	1J	3.5
MLHLN	5111	5	1K	1.6
PFASFG	5609	4	10C	1.28
SREINC	5547	3	5AW	8.40
TKGRP	5200	3	2A	5.1

ACOFRF form (5968 Record) - The ISDN Control of Facilities Feature Attributes form was modified for the expansion of the Equipment Number format (from 0 - 7 to 000 - 042) for the LEN.

EMRNM form (5108 Record) - The Emergency TN (Remote Site/Local SM) form is used to define Remote Site or Local SM Stand Alone emergency Telephone Numbers. A data rule was added for an SM with more than 10 emergency TNs.

EQCI form (5848 Record) - The Equipment Control Interface form is used to define PICB assignments. The number of CIs are increased from two available in the SM to four available in the SM-2000. Each CI provides 23 PICBs for a total of 92 per SM-2000.

EQCMTRCU form (5812 Record) - The Equipment Transmission Rate Converter Unit form is used to define the physical location of the TRCUs for up to two ORMs. An SM field was added to define either a TRCU for the SM or a TRCU for the SM-2000.

EQCORE form (5701 Record) - The Core Units form was modified to add data rules for the CM VINTAGE field for SM-2000.

EQDCLP form (5810 Record) - The Digital Carrier Line Unit Pack Equipage form is used to terminate remote terminals. A FACILITY ID field was added to (optionally) provide a description for these units.

EQDCTU form (5751 Record) - The Directly Connected Test Unit form is used to provide metallic access testing capabilities. The EQLBAY field was expanded to define either an SM or an SM-2000.

EQDI form (5740 Record) - The Data Interface form is used to define additional PIDB assignments. The number of DIs are increased from two to six. Each DI provides 24 PIDBs for a total of 144 per SM-2000.

EQDSC3 form (5852 Record) - The Local Digital Service Circuit 3 form is used to define the DSC3 unit for the SM-2000.

EQDU/EQDUP (5730 Record) - The Digital Line/Trunk Unit/Digital Line/Trunk Unit Pack Equipage forms were modified to define an SM-2000.

EQGDSC3 form (5860 Record) - The Global Digital Service Circuit 3 form is used to define the position of the DSC3 on the DSU3 for the SM-2000.

EQIM form (5700 Record) - The Switching Module Equipage form is used to define SM assignments. The SMPU MODEL NUMBER field was changed to UNIT TYPE and an enumeration added to define the SM-2000. New CLI value fields were added for MH, TSICOM, TSIS, and memory boards for the SM-2000 and SM Memory Configuration values were added for SM-2000.

EQLU form (5710 Record) - The Line Unit number was expanded to define up to 43 line units. The CONTROL GROUP, CONTROL PORT, DATA GROUP, DATA PORT and EQUIPMENT BAY fields were expanded for SM-2000.

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EQLUP form (5711 Record) - The Line Unit number was expanded to define up to 43 line units.

EQMSU/EQMMSP form (5750 Record) - The Metallic Service Unit Equipage form was modified to expand the CONTROL GROUP and EQUIPMENT BAY fields for SM-2000.

EQNLI form (5853 Record) - The Equipment Network Link Interface Growth (SM-2000) form is used to define optical link interfaces to the TSI (Time Slot Interchange) link.

EQPMU form, (5752 Record) - The Precision Measurement Unit form was modified to add the LO DPN field. A data rule for ORMs was added.

EQRA form, (5821 Record) - The Recorded Anouncement Function form is used to define the RAF unit and the SAS (Service Announcement System) services unit. Capability to specify SM-2000 was added.

EQTMSLINK form (5851 Record) - The Time Multiplexed Switch Link Equipage form replaces the EQORMLINK form (5813 Record) for 5E9(2) and later for assignment of the ORM (Optical Remote Module) and EXM-2000 TMS link interfaces and associated TRCUs.

EQTU form (5720 Record) - The Trunk Unit Equippage form is used to define Trunk Unit Assignments. Capability to specify SM-2000 was added.

EQTSI form (5850 Record) - The Equipment Time Slot Interchange form was implemented to define the TSI unit to provide the duplex interface to a pair of NLIs and/or a simplex interface to a DX.

LINE form (5109 Record) - The Line form was modified to accommodate the expansion of the Equipment Number format (from 0 - 7 to 000 - 042) for the LEN.

MDFTA form (5502 Record) - The Main Distributing Frame Test Trunk Assignment Record form was modified for the expansion of the Equipment Number format (from 0 - 7 to 000 - 042) for the LEN.

MEASLU form (5539 Record) - The LU/(R)ISLU Measurements form supports the Load Administration Measurements feature. The UNIT N0 field was expanded to accept up to 43 units.

MLHG form (5110 Record) - The Multi-Line Hunt Group form was modified to add data rules to restrict the QFEATURE size, except for SM-2000.

MLHLN form (5111 Record) - The Multi-Line Hunt Group Member form was modified for the expansion of the Equipment Number format (from 0 - 7 to 000 - 042) for the LEN.

PFASFG form (5609 Record) - The Simulated Facility Group Form is used to define SFGs which allow controlling access to physical groups such as lines, trunks, and special circuits. Added data rule to restrict QFEATURE size, except for SM-2000.

TKGRP form (5200 Record) - The Trunk Group form was modified to add data rules to restrict the QFEATURE size, except for SM-2000.

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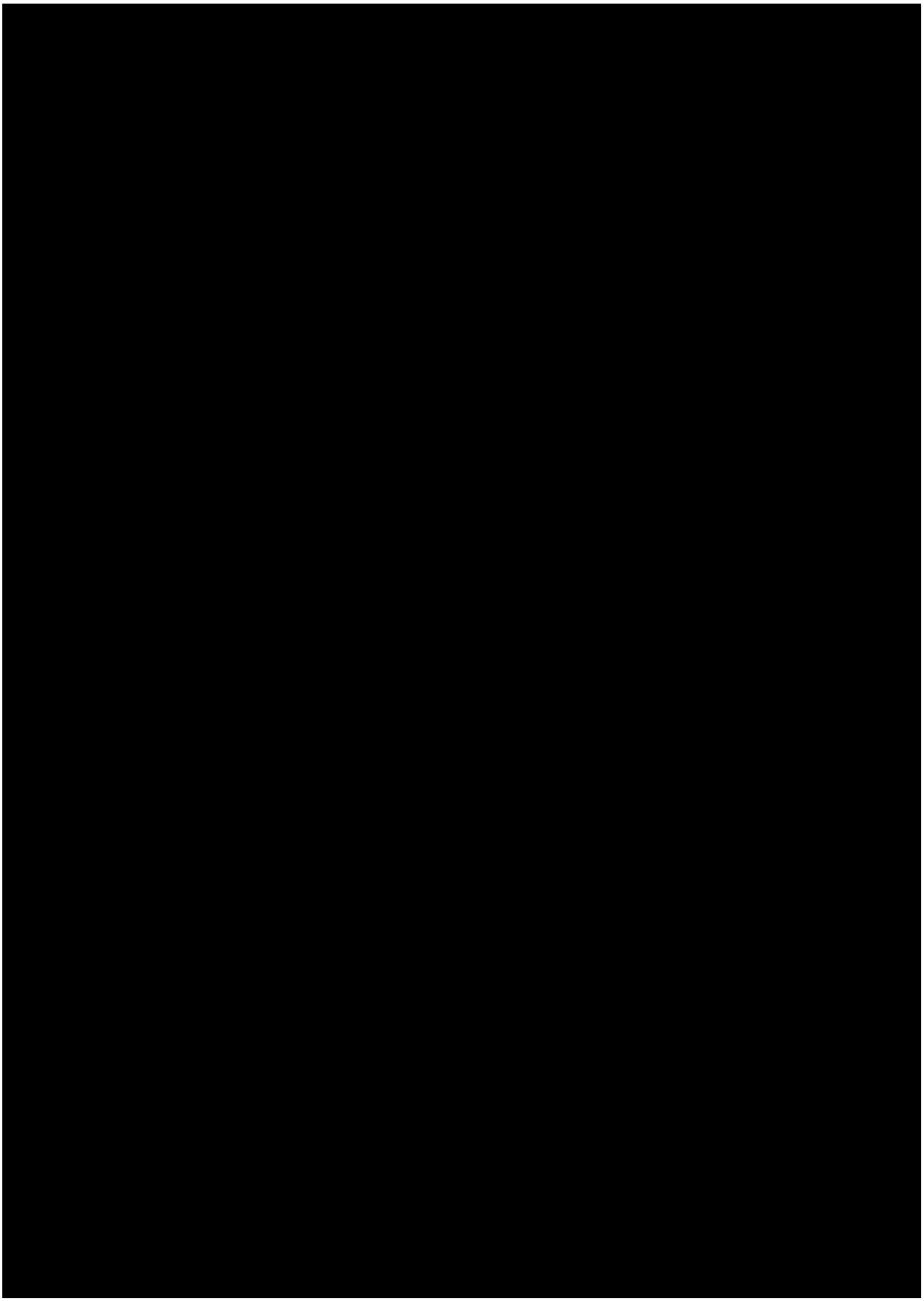

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Figure 1 SM-2000 HIGH LEVEL ARCHTECTURE

Figure 2 SM-2000 FLOOR PLAN (MAXIMUM)

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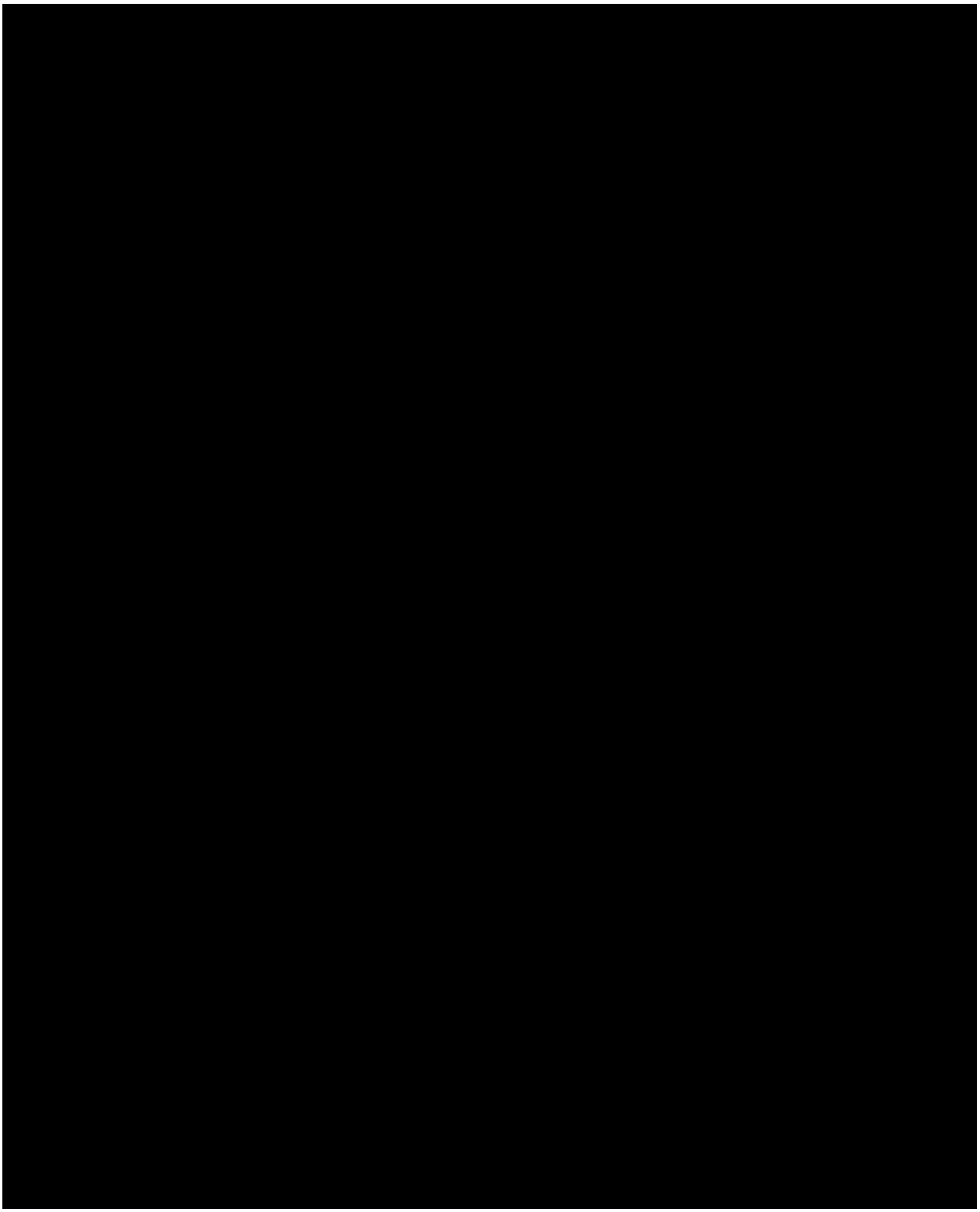

Figure 3 SM-2000 SMC CABINET UNIT

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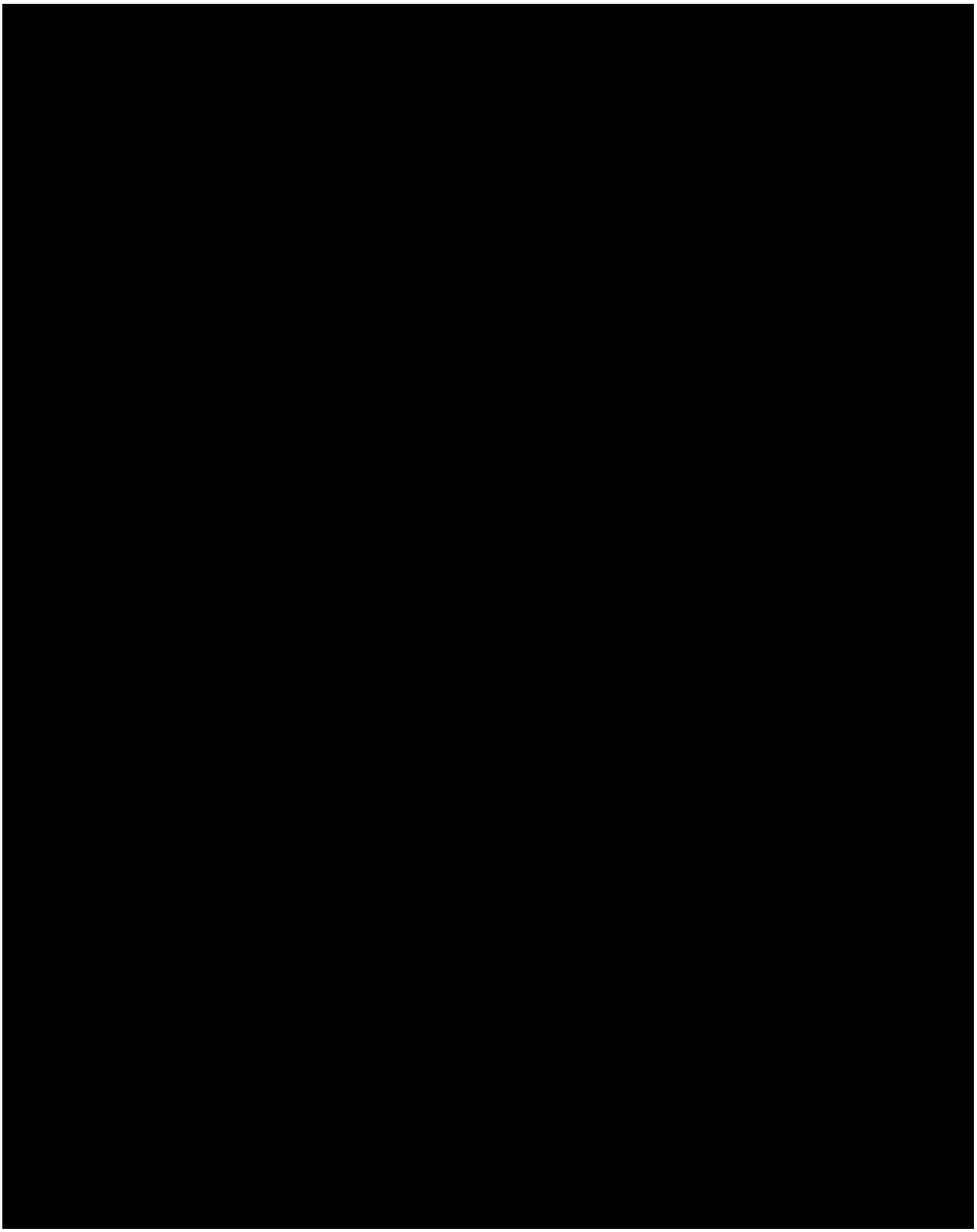

Figure 4 SM-2000 QUAD LINK PACKET SWITCH NETWORK

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Figure 5 SM-2000 LINKS TO THE DNU-S (MAXIMUM)

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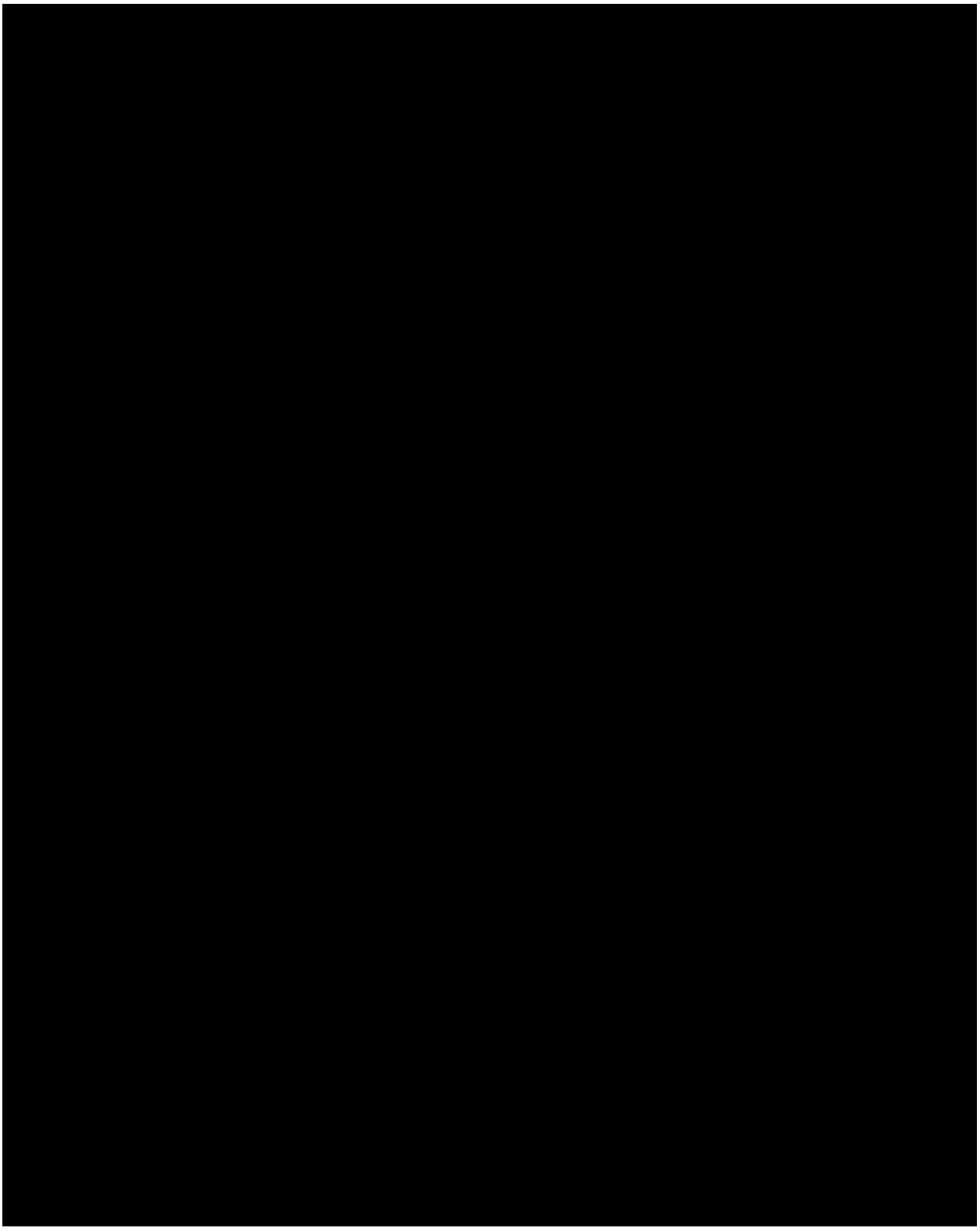

Figure 6 SM-2000 DATA FLOW WITH EXM-2000

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SEC. 9B: INTEGRATED DIGITAL SERVICES NETWORK ON SM-2000

1. FEATURE DESCRIPTION

The Integrated Digital Services Network on SM-2000 feature (AT&T feature number 99-5E-1590) is available with the 5E10 and later software release.

This feature supports all operational capabilities associated with the Integrated ISDN (Services Digital Network) feature set on the SM-2000. Full ISDN functionality including BRI (Basic Rate Interface), PRI (Primary Rate Interface), and Packet support is provided. All Custom and National ISDN feature offerings are available on the SM-2000. This includes the wideband switching capabilities provided by the Fractional DS1 Switching via PRI Access feature (AT&T feature number 99-5E-1336).

2. FEATURE ASSIGNMENT

The operational characteristics of the ISDN features found on the SM do not change when they are migrated to the SM-2000 from a user's perspective.

The customer continues to be able to define BRI, PRI and Packet interfaces, as well as assign, update and delete ISDN features and capabilities to those interfaces through Recent Change.

The Integrated Digital Services Network on SM-2000 feature is dependent of the Switching Module - 2000 (SM-2000), Release 1 feature (AT&T feature number 99-5E-1427).

This feature requires the presence of the ISDN related hardware found on today's SM (ISLU, PSU...) as needed.

PRI and Packet trunking capabilities are available on the DNU-S (Digital Networking Unit - SONET) per this feature.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSLAP	5963	6	6a	24.7
EQDUP	5730	8	17	20.4
EQIM	5700-1/2	8	2	18.1
EQPSU	5741	8	22	22.2
EQVT	5858	8	60	20.24
MEASLU	5539	3	5am	13.6
MLHG	5110	3	1j	3.5
NAILUP	5207	3	2f	7.11
PRIGRP	5211	3	2m	5.2
PSCUG	5924	5	3e	23.10
PSUGP	5949	5	3j	22.16
RDTAPORT	5911A/B	5	1l	22.17
SREINCR	5547	3	5aw	8.4
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5
XAT	5909-1/2	5	1j	23.40

DSL form (5841 Record) - The 5907 Record series has two major purposes.

First, it is used to define the attributes of a DSL. A DSL is also referred to as a BRI (Basic Rate Interface). Second, it is used to define the attributes of the B1 and/or B2 channel of the DSL. if either or both of these channels are to be used on a Permanent Packet basis (dedicated to X.25 Packet Switching).

Changed Data Rule for the MTERM field so that it applies to 5E9(1) through 5E9(2).

DSLAP form (5963 Record) - This is used to define the data links connecting an AP (Application Processor) and the 5ESS Switch. Each AP is connected to one ISDN SM with DSL data links.

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Increased the number of links from 10 to 30.

A data rule was added to the General Description and the DATA LINK field.

EQCORE form (5701 Record) - The 5701 Record is used to define Core Unit Assignments in a 5ESS Switch office. It is intended to be used as an Office Record for those 5ESS Switch offices that are not utilizing an Operational Support System (e.g., RMAS) for generation of Office Records.

A data rule was added to the VCDX OFFICE field.

EQDUP form (5730 Record) - The 5730 Record was split into two records: 5730-1 for the EQDU form and 5730-2 for the EQDUP form. These forms are used to define equipment location information for the Digital Line/Trunk Units.

A data rule was added to the SM field.

EQIM form (5700-1/2 Record) - The 5700-1/2 Records are used to define Switching Module Equipage Assignments.

A data rule was added to UNIT TYPE and PI SG0 & PI SG1 TYPE fields.

EQPSU form (5741 Record) - The Packet Switching Unit Equipage Record is used to define the PSUs equipped in a 5ESS Switch. It is also used to reserve a pool of dedicated peripheral timeslots for the exclusive use of the PSU equipped in a 5ESS Switch.

Data rules were added to the PSU TYPE, and DI1 PSU TSIU TIMESLOTS fields.

EQVT form (5858 Record)- The Digital Networking Unit SONET Virtual Tributary (SM-2000) form is used for the equipage of the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S. This form supports the DNU-S feature.

Added data rules to ZCS and VT EQSTAT fields.

MEASLU form (5539 Record) - This form supports the LU/ISLU Load Administration Measurements feature.

A data rule was added to the UNIT TYPE field.

MLHG form (5110 Record) - This form is used to define Multi-Line Hunt Group information.

Added data rules to the MLHG field.

NAILUP form (5207 Record) - The NAILUP form contains data to directly link ("nailup") two ports.

A data rule was added to the C OE field.

PRIGRP form (5211 Record) - This record is available for the 5E9(1) and later Software Releases. Prior to 5E9(1), the D-channel signaling entity only assigns calls to channels on the DS1 facility containing that D-channel. This is called FAS (Facility Associated Signaling) which supports 1 D-channel and up to 23 B-channels.

The 5E9(1) and later Software Releases continue to support this configuration (referred to as "AT&T Custom") which is CCITT and ANSI compatible but not compatible with Bellcore's expansion of these standards.

For 5E9(1) and later, National ISDN PRI is available which is compatible with Bellcore's current technical requirements (i.e., TR1268).

The DLTU, DFI and FAC fields are replaced with the EQUIPMENT field. This modification allows the

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assignment of DNU-S facilities to a PRI group.

The valid entries for the PRI GROUP field were changed.

PSCUG form (5924 Record) - The PSCUG form is used to assign DSLs (Digital Subscriber Lines), that have Packet Switching, to a Closed User Group.

A data rule is added to the PKT TN field.

PSUGP form (5949 Record) - This form is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf.

Data rules are added to the PH TYPE, and PSU fields.

RDTAPORT form (5911A/B Record) - This form is used to set up the data for the RPA (Remote Protocol Access) feature at the Access Switch. The Access Switch is defined as a switch that is maintained by a CSC (Customer Service Center). The CSC is a work center where protocol analysis is done.

The valid entries and the data rules for the RDTA OE field were changed to include DNU-S OEs.

SREINCR form (5547 Record) - The SREINCR form is implemented to facilitate efficient utilization of memory per SM or SM-2000. A software resource is defined as a dynamic ODD (Office Dependent Data) data structure, or data block, required to provide the necessary memory to support various service requirements.

New entries were added to the SOFTWARE RESOURCE field.

Data rules were added to the SOFTWARE RESOURCE and INCREMENTAL VALUE fields.

TKGRP form (5202 Record) - The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

Data rules were added to the DATA RATE, TRKCLS, TGN, RDTA GRP, and WB RATE fields.

TRUNK form (5204 Record) - The trunk form defines each member of a Trunk Group in a 5ESS-2000 Switch Office. The NEN for digital trunks is assigned on this form.

Valid entries to the PRI GROUP field were changed.

Data rules were added to the PRI GROUP, NEN, MEMB, and DEN fields.

XAT form (5909-1/2 Record) - This form is used to provision T1 facilities (digital lines and trunks) with X.25 Packet Switching services on a subscription basis using Q.931 signaling.

The DEN field is replaced with the OE field to support the DNU-S capability.

Data rules were added to the OE, PKT TN, and RATE fields.

4. GLOSSARY

Acronyms used in this section are expanded below.

AP	Application Processor
CSC	Customer Service Center
DFI	Digital Facility Interface
DLTU	Digital Line And Trunk Unit

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DNUS	Digital Networking Unit - SONET
DSL	Digital Subscriber Line
FAS	Facility Associated Signaling
ISDN	Integrated Services Digital Network
ODA	Office Data Assembler
ODD	Office Dependent Data
PH	Protocol Handler
PRI	Primary Rate Interface
PSU	Packet Switching Unit
RC	Recent Change Subsystem
RPA	Remote Protocol Access
VT	Virtual Tributary

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SEC. 9C: DIGITAL NETWORKING UNIT - SONET

1. FEATURE DESCRIPTION

DNU-S (Digital Networking Unit - SONET) is available for 5E9(2) and later. The feature number for this capability is 99-5E-1427. A glossary of acronyms is provided at the end of this section.

The primary function of the DNU-S is to terminate SONET facilities to an SM-2000 and to convert data and signaling information between the SONET format and the SM-2000 PCT (Peripheral Control and Timing) link format. All data control information is passed between the DNU-S and the SM-2000 over PCT links. A PCT link is an optical TDM (Time Division Multiplexed) serial interface.

The DNU-S is a peripheral unit that may only reside on an SM-2000. It is a high capacity digital trunk termination vehicle which can support up to 8064 trunks via a SONET STS-1 interface. The STS-1 (Synchronous Transport Signal) is the basic SONET building block and implies a rate and a format. It is not a transmission medium.

The DNU-S interface to the SM-2000 TSI (Time Slot Interchange) is via optical PCT links. These links are 65.536 Mb/s and are used instead of the PIDB (Peripheral Interface Data Block) and the PICB (Peripheral Interface Control Block) interfaces currently utilized by SM-2000 peripherals.

The DNU-S interface to the network is via electrical STS-1 (STSX-1) links. (STSX-1 is defined as the STS-1 electrical interface.) This interface is a standard SONET interface and is compatible with transmission equipment that supports the STS-1 interface, including the DACS IV-2000 (Digital Access and Cross Connect System IV-2000) and the DDM-2000 (Dual Digital Multiplexer - 2000).

Initially, the DNU-S is capable of supporting 12 STSX-1 high speed trunk interfaces. Each STSX-1 can support 672 DS0s (Digital Signal Level 0).

DNU-S has two data groups. One data group is grown in first. The second group is only grown when more capacity is needed.

The STSX-1 interface is made up of the following layers:

- STE (SONET Termination Equipment) facility which combines the section and line layers. The STE represents the termination of the Section and Line on the DNU-S. The STSX-1 interface carries a single STS-1.

- STS-1 represents the termination of the STS-1 path on the DNU-S. The STS-1 carries up to 28 VT1.5s (Virtual Tributaries). VT1.5 is the Virtual Tributary version that is supported by DNU-S.

- VT1.5 is a 1.728 Mb/s facility which carries one DS1. The VT1.5 tributaries consist of asynchronous mapped DS1s in a floating mode of operation. The TMUX (Transmission Multiplexer) circuit pack maps the 28 possible VT entries into a SONET STS1 signal format of seven groups of four. The 28 VT entries in this field are organized into those groups. See the VT field on the EQVT form in Division 8, Section 60, for provisioning the VT1.5 tributaries.

- DS1S (Digital Signal Level 1 SONET) is similar to the existing DS1 facilities. It is a 1.544 Mb/s facility which carries up to 24 DS0s (64Kb/s).

The STE, STS-1, VT1.5 and DS1 can each be considered a separate "facility". Each of these facilities can have failures and thus have performance monitoring and alarms associated with them.

See Figure 1 for a simplified block diagram of DNU-S in relationship to 5ESS-2000 Switch components. See Figures 2 and 3 for simplified block diagrams of the DNU-S architecture.

The DNU-S architecture consists of the following:

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- SLI (STS-1 Link Interface) - Each SLI terminates one STSX-1 link. The SLI paddle board is a passive circuit containing a splitting transformer for coupling the received STSX-1 signal to two SFI circuit packs and another transformer that couples the STSX-1 transmit signal from two SFIs to the facility.

- SFI (STSX-1 Facility Interface) - Two SFI packs are equipped in each DNU-S data group, which are designated as "mates". Each SFI pack pair implements a duplicated electrical interface for six STSX-1 links, directing each of the six STSX-1 links to either its service TMUX or the spare TMUX.

- TMUX (Transmission Multiplexer) - The DNU-S may be equipped with up to 14 TMUX packs (two of which are spares). The TMUX performs the format conversion of data between one STSX-1 link and 14 BPIDBs (Bi-Peripheral Interface Data Bus) structures, which includes the mapping of data time slots between the two formats and signaling bit format conversion.

- CD (Common Data) - The DNU-S is equipped with either two or four CD packs with two packs equipped in each data group. Two packs in each group are designated as "mates" or a pair. For example, CD00 and CD01 would be denoted as mates as would the CD10 and CD11 combination. The mate CDs in each data group operate in active/standby mode and are responsible for terminating up to six duplicated PCT links. Side 0 for each duplicated link terminates on one CD while side 1 terminates on the other CD. The CDs terminate PCT links and perform rate conversion. They also perform the selection and multiplexing/demultiplexing functions associated with passing data and control information between the PCT links and internal interfaces with other packs in the unit.

- COT (Common Optical Termination) - The COT terminates optical fibers for one side of the duplex PCT link and performs optical-to-electrical and electrical-to-optical conversion of data and control information after it has been received from the PCT link interface in the SM-2000.

- CC (Common Control) - The two CC circuit packs in the DNU-S implement a duplex unit controller that operates in active/standby mode. The CC circuit packs perform the following functions:

  - terminate messaging and control channels originating from the SMP (Switching Module Processor) via the PCT links and the CD circuit packs

  - supervise unit initialization, maintenance and diagnostics

  - implement and handle the control interfaces to all the circuits in the DNU-S

  - store CC and TMUX control programs in flash memory.

2. FEATURE ASSIGNMENT

See Figure 4 for feature assignment form flow for the DNU-S feature.

2.1 DNU-S Translation Forms

The five forms which support this feature to provision the MH, DNU-S, STE, VT, and performance monitoring for the STE, VT, and DS1S facilities are the following:

- Message Handler - The **EQMH** form allows the provisioning of an additional Message Handler on an SM-2000 SM. Both of the MH sides must be operational prior to the Message Handler's use by a DNU-S. The Message Handler provides communication to the DNU-S.

- DNU-S - The **EQDNUS** form enables the provisioning of the Digital Networking Unit SONET. Translations for the CC and CD, two Data Groups, PCT LINK, STSX-1 Facility Interface and the spare and service TMUX Boards are defined on this form. Note that the Message Handler 1 is not present on this form. It is allocated during the ODA and RC/V processes.

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- STE - The **EQSTE** form is used to define the STE and STS facilities for the DNU-S. The STE on this form has a one-to-one correspondence with the TMX NUMBER on the EQDNUS form.

- VT (Virtual Tributary) - The **EQVT** form equips the VT, DS1S (Digital Signal Level 1 SONET) facility, and Digital Signal Level 0 channels on a DNU-S. The STS on this form has a one-to-one correspondence with the PCTLINK on the EQDNUS form.

- Performance Monitoring - The **DNUPM** form provides Performance Monitoring for the STE, VT and DS1S facilities. Standard data, the preconstructed performance monitoring groups, are provided by the ODA process for each installing 5E9(2) and later office, and also for all offices that retrofit to 5E9(2) and later Software Releases.

- TSI Board (Time Slot Interchange) - EQTSI form predefines the TSI board. The TSI Board must be predefined before it can be assigned on DNU-S.

2.2 Network Equipment Number

Once all the necessary hardware is defined and operational, NENs (Network Equipment Numbers) may be assigned to trunks on the TRUNK form (5204 Record). The NEN is made up of the following components:

- Switching Module
- DNU-S
- Data Group
- STS
- VT
- Digital Signal Level 0

NOTE: For 5E13 and later, the VT field was split into two fields, VT GROUP and VT MEMBER and the NEN OE expands from 10 to 11 digits. This change was made to comply with Bellcore generic requirements for SONET VT facilities. For more detailed information, see Division 2, Section 9Q.

The associated TKGRP must have one of the following TRKCLS values supported by DNU-S:

- AIS
- ANNCMNT
- AUXTRNK
- BUSYVFY
- BVINTOLL
- BVTOLLCM
- CAMA
- CAMAANI
- CAMAONI
- CAMOPKEY
- CAMOPTLK
- DIOR
- EISTRK
- FIOPR
- FOPRI
- IC
- LATA
- LTOLLCON
- PBXDID
- PF
- PFCPE
- PFITT

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- PFLASH
- PRINTOLL
- RECCMPL
- RMSD3
- SCINTOLL
- SERVICE
- SES
- SPAB800
- SPAM800
- SPAMEG
- SPAWATS
- TOLLOPER
- TOPAS
- TTOLLCON

A QTY value up to 24, which is entered on the TRUNK form, is provided for the NEN for ease of insertion of multiple TRUNK members.

The NAILUP form was modified to include a type of "N" and an NEN for the CONTROLLING and NON-CONTROLLING OE type and OE number.

2.3 Carrier Group Alarm

The CGA (Carrier Group Alarm) is associated with the VT/DS1 and the STE/STS facilities. Included in the CGA data is a hash index into an internal terminal maintenance data structure. The hash index is automatically assigned during the RC/V and ODA processing. Many type of facilities use a hash index for facilities on IDCU, DLTU, DCLU, and DNU-S See Division 8, Sections 17, 30, 49, 59, or 60 for an explanation of the hash indexes.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
APHSS	5620-4	4	21D	24.12
DNUPM	5951	5	5L	20.25
EQDCLP	5810	8	30	19.6 20.6
EQDI	5849	8	51	18.3
EQDNUS	5855	8	57	19.14
EQDUP	5730	8	17	19.4 20.4
EQIFAC	5847	8	49	20.23
EQIM	5700	8	2	18.1
EQMH	5856	8	58	19.13
EQNLI	5853	8	55	18.16
EQSTE	5857	8	59	20.12
EQVT	5858	8	60	20.24
IMTRK	5210	3	2L	5.46
NAILUP	5207	3	2F	7.11
OFCOPT	5509	3	5I	8.1 8.15
OSPSSMINF	5476	3	4CB	none
PMTHRESH	5948	5	5I	22.15
QUFD	5617-1	4	18A	12.40
QUGPA	5617-3/4	4	18B	3.40
TKGRP	5202	3	2A	5.1
TRUNK	5204	3	2C	5.5

DNUPM form (5951 Record) - This form is used to define the performance monitoring thresholds for DS1,

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VT, and STE facilities.

EQDI form (5849 Record) - This form defines the Data Interface for the SM-2000. The TSI BOARD and TSI SLOT entries cannot be duplicated on EQDNUS, EQNLI, or EQDI forms.

EQDNUS form (5855 Record) - This form is used to define equipage information for the DNU-S on an SM-2000.

EQIM form (5700 Record) - The form defines Switching Module equipage Assignments. UNIT TYPE must be "SM2000" for DNU-S.

EQMH form (5856 Record) - This form defines the equipage information for the message handler in an SM-2000 to communicate with the DNU-S.

EQNLI form (5853 Record) - This form defines the Network Link Interface for the SM-2000. The TSI BOARD and TSI SLOT entries cannot be duplicated on EQDNUS, EQNLI, or EQDI forms.

EQSTE form (5857 Record) - This form defines the STS and STE facilities on the DNU-S.

EQVT form (5858 Record) - This form defines the equipage of the Virtual Tributary and the Digital Signal Level 1 SONET on a DNU-S. Twenty DS0s are automatically equipped for DS1S.

NAILUP form (5207 Record) - This form is used to assign data to directly link two ports. The CONTROLLING or NON-CONTROLLING type should be "N" for DNU-S.

OFCOPT form (5509 Record) - This form is used to define the various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices. The FI SWITCH INT field supports the DNU-S feature. This field specifies the minimum interval in days that REX (Routine Exercise) is permitted to run without switching the STSX-1 Facility Interfaces. The MAX NO THR GRPS field refers to the sum of the number of DNUPM forms plus the PMTHRESH forms per office. The maximum number of DNUPM forms is 50 per SM. The PM TIME and FAC PM ENABLE fields applies to the DNU-S as well as DLTU and IDCU.

TRUNK form (5204 Record) - The trunk form defines each member of a Trunk Group in a 5ESS-2000 Switch Office. The NEN for digital trunks is assigned on this form.

3.1 NEN

The NEN was added to data rules involving DENs and TENs of the following forms:

Form	Record
APHSS	5620-4
IMTRK	5210
NAILUP	5207
OFCOPT	5509
OSPSSMINF	5476
QUFD	5617-1
QUGPA	5617-3/4
TKGRP	5202

3.2 Carrier Group Alarm Hash Index Forms

The Carrier Group Alarm hash index is constructed from the following forms:

- EQDCLP (not associated with DNU-S)
- EQDUP (not associated with DNU-S)
- EQIFAC (not associated with DNU-S)
- EQSTE
- EQVT

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4. GLOSSARY

Acronyms used in this section are expanded below.

BPIDB - Bi-Peripheral Interface Data Bus

CC - Common Control

CD - Common Data

CGA - Carrier Group Alarm

COT - Common Optical Termination

DACS IV-2000 - Digital Access and Cross Connect System IV-2000

DDM-2000 - Dual Digital Multiplexer - 2000

DS0 - Digital Signal Level 0

DS1S - Digital Signal Level 1 SONET

NEN - Networking Equipment Numbers

PICB - Peripheral Interface Control Block

PIDB - Peripheral Interface Data Block

PLI - Peripheral Link Interface

REX - Routine Exercise

SFI - STSX-1 Facility Interface

SLI - STS-1 Link Interface

SMP - Switching Module Processor

STE - SONET Termination Equipment

STS-1 - Synchronous Transport Signal

STSX-1 - STS-1 Electrical Interface

TDM - Time Division Multiplexed

TMUX - Transmission Multiplexer

TSI - Time Slot Interchange

VT - Virtual Tributary

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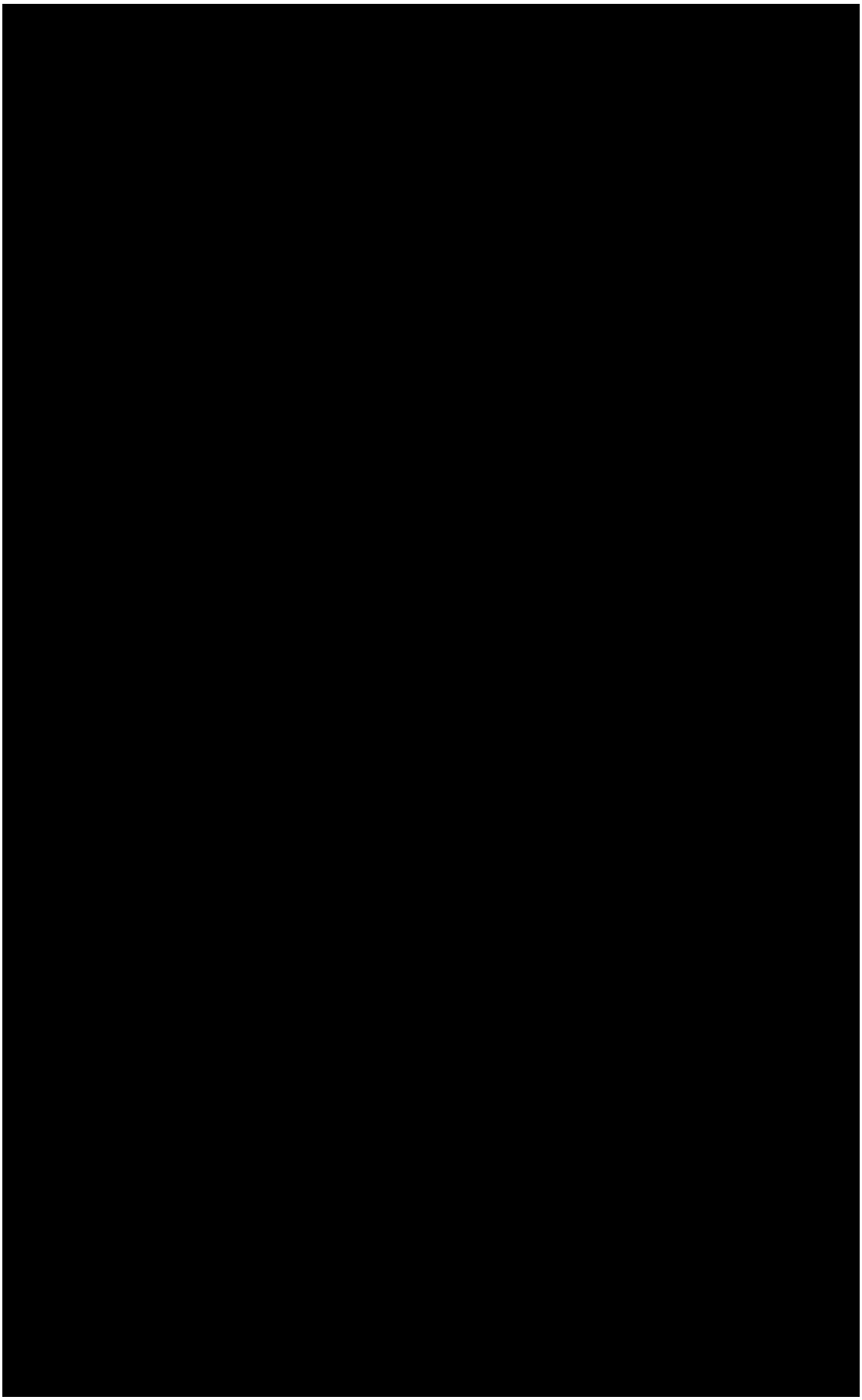

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Figure 1 SIMPLIFIED BLOCK DIAGRAM OF DNU-S AND SM-2000 COMPONENTS

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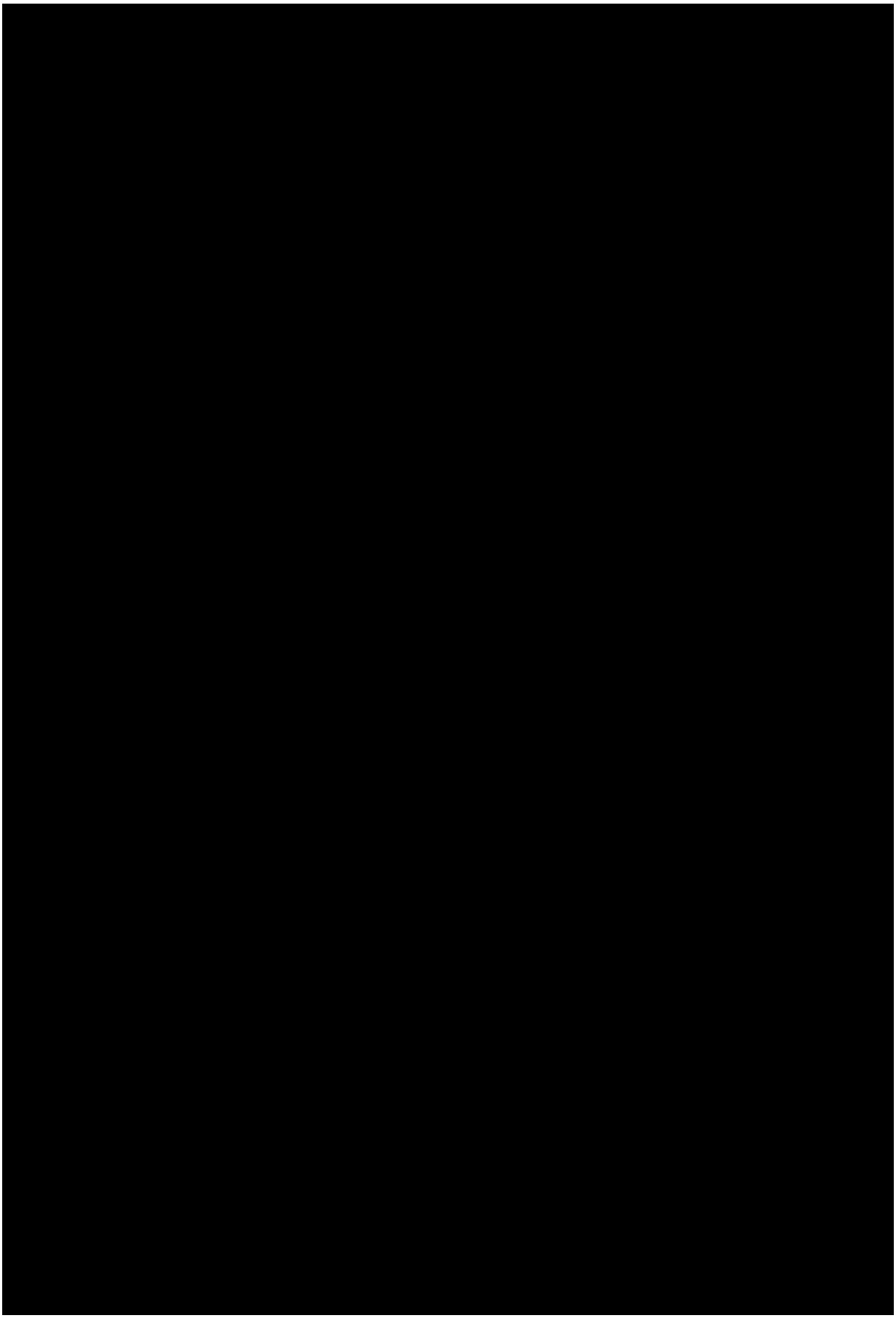

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Figure 2 DIAGRAM OF DNU-S ARCHITECTURE

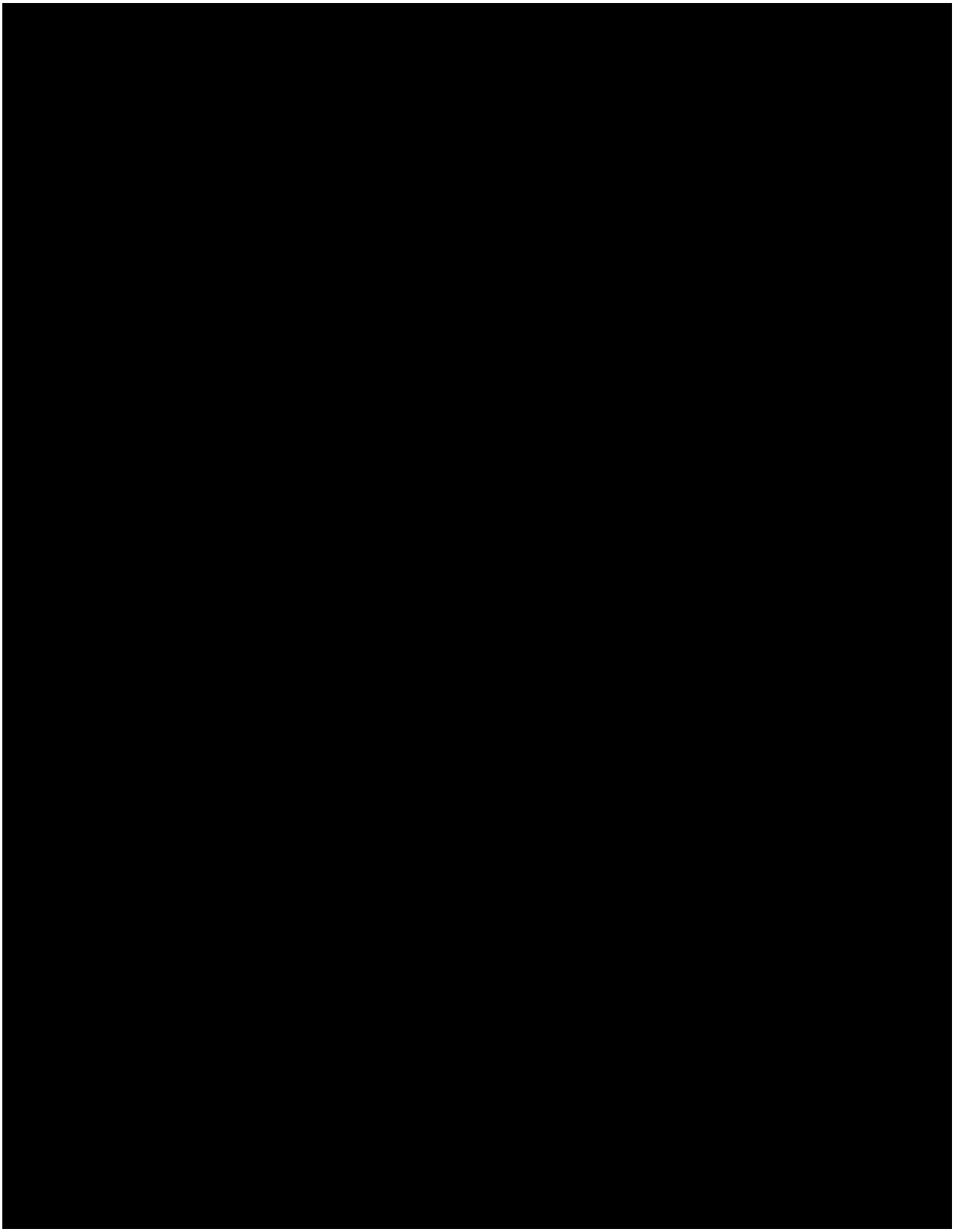

Figure 3 SIMPLIFIED BLOCK DIAGRAM OF DNU-S ARCHITECTURE

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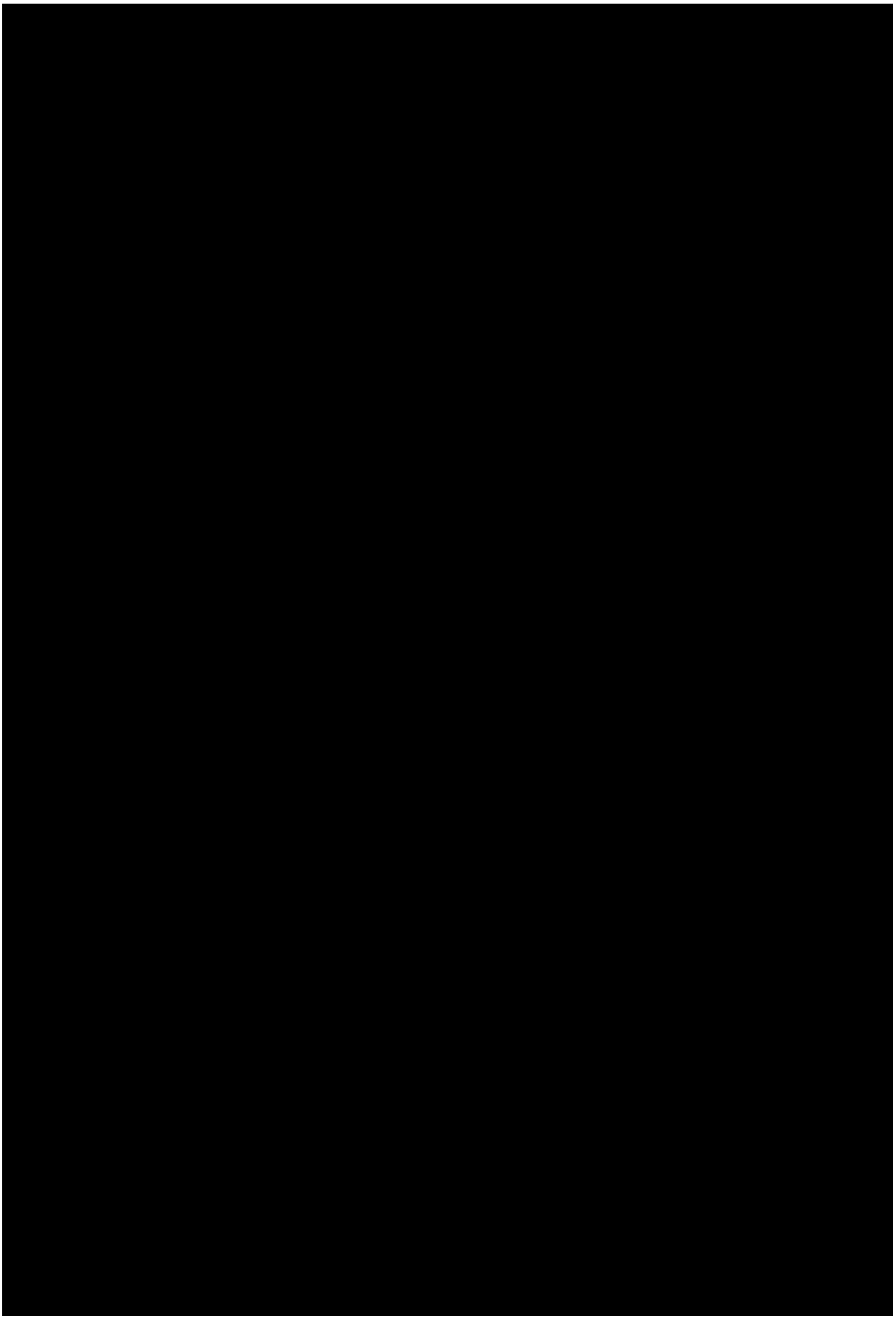

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Figure 4 FORM FLOW FOR DNU-S

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SEC. 9D: QUAD-LINK PACKET SWITCH NETWORK

1. FEATURE DESCRIPTION

The feature number for the QLPS (Quad-Link Packet Switch) Network feature is 99-5E-1475. This feature is available for 5E9(2) and later Software Releases as part of SN-2000 (Service Net 2000).

The QLPS Network is an optional hardware overlay that provides high bandwidth message transport between SM-2000s and between SM-2000s and existing processors □ SMs, AM, FPC (Foundation Peripheral Controller), CMP (Communication Module Processor), and DLN (Direct Link Node). Figure 1 describes the architecture of the QLPS Network. (See the Glossary in this section for a definition of the hardware components.)

An SM-2000 Message Handler pipe is a high bandwidth path for message transport between a QLPS QTMSLNK (a port connection on the QLPS board of the TMS (Time Multiplex Switch)) and a given QLPS endpoint, that is, an MH (Message Handler) in an SM-2000. It is a physical path that sustains HDLC (High Level Data Link Control) traffic from the QLPS to the MH. When an SM-2000 Message Handler pipe is assigned, the operational software determines what resources are available for the pipe: QTMSLNKs, HDLC channels on the QTMSLNKs, and timeslots on the QTMSLNKs.

In the first release of the QLPS Network feature, the following characteristics apply:

- □ QLPS consists of two networks (0 and 1).
- □ Each network has exactly two QLPS boards, one board on each ONTC (Office Network and Timing Complex), also called TMS, side.
- □ Each board uses four TMS links (fabric ports) for the QLPS connection. These are referred to as QTMSLNKs. The QTMSLNKs for a network must be identical on the two ONTC sides.
- □ Each QTMSLNK has 256 timeslots through the TMS. 32 of the 256 timeslots are reserved for side ports. Thus, 224 timeslots are available for MH pipes on each of the four QTMSLNKs.
- □ Each QLPS has four side ports, one on each QTMSLNK. In Release 1, two side ports are used for metallic connections to QGPs (Quad-Link Gateway Processors); the other two are reserved for future use.
- □ QLPS pipes contain 14 timeslots to an SM-2000 MH.
- □ A pipe is assigned first to a QTMSLNK and then to an HDLC channel on that QTMSLNK. Each QTMSLNK has 32 HDLC channels (0 - 31); HDLC channel 0 is used by the hardware, and channel 31 is used for side ports, leaving channels 1 - 30 to be assigned to MH pipes.
- □ There are 30 channels per QTMSLNK for pipe assignment and four QTMSLNKs per QLPS, giving 120 channels or 120 pipes per QLPS. Thus, in Release 1, QLPS (MH) pipes may be established for a maximum of 120 endpoints. total of 128??> MH endpoints, allowed only for SM-2000s, may be assigned numbers 1 - 192. QGP endpoints are automatically assigned numbers 193 and 194 when the QGP is grown in.

In CM2 offices a new peripheral processor is available. Called a QGP (Quad-Link Gateway Processor), this processor connects to the QLPS to provide a high bandwidth message transport for SM-2000s. The QGP provides the interface between the QLPS and existing processors. For Release 1, an office may have 0, 2, or 4 QGPs.

1.1 QLPS Configurations

Four QLPS configurations are supported.

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- No QLPS / No QGP
- 4 QLPSs / No QGP
- 4 QLPSs / 2 QGPs
- 4 QLPSs / 4 QGPs

2. FEATURE ASSIGNMENT

Office Data provisioned for this feature (Figure 2) supports the QGP and QLPS hardware and defines MH pipes, QLPS network endpoints, and inter-connectivity between endpoints.

2.1 QGP Definition

An office may have 0, 2, or 4 QGPs. Each QGP must be defined on an EQPC form with PC NO 32 or 33.

QGPs are equipped in pairs, one on each side of the MSGS (Message Switch). When the first pair is defined, PC NO. must be 32 for both SIDE 0 and SIDE 1; for the second pair, PC NO. must be 33 for both sides.

2.2 QLPS Definition

The QLPS configurations supported in Release 1 of this feature allow an office to have 0 or 4 QLPS boards. Each must be defined on an EQQLPS form (5854 Record) which assigns the board to a QLPS Network. Additionally, this form assigns the board to an ONTC (TMS) side and determines the TMS Links the board will use for message transmission.

2.3 MH Pipe and Endpoint Definition

Each MH (Message Handler) pipe is defined on an EQPIPE form (5544 Record), which assigns the pipe to a QLPS network and identifies the SM-2000 endpoint.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQPC	5703	8	5	17.2 17.14
EQPIPE	5544	3	5AT	17.20
EQQLPS	5854	8	56	17.19

EQPC form (5703 Record) - This form is used to define Peripheral Controllers. For 5E9(2) and later, the PC NO values 32 and 33 were added to define QLPS Gateway processors.

EQPIPE form (5544 Record) - This form is new for 5E9(2) and later. It is used to assign QLPS MH (Message Handler) pipes in an SM-2000 office.

EQQLPS form (5854 Record) - This form is new for 5E9(2) and later. It is used to define a QLPS board.

4. GLOSSARY

HDLC □ High Level Data Link Control.

MH □ The MH (Message Handler) resides in an SM-2000 and provides for message transfer between an SM-2000 and the QLPS hardware.

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NCT □ An NCT (Network Control and Timing) link has 256 time slots and runs at a rate of 32.768 Mb/s. The number of NCT links required can vary from two to four in groups of two (00 - 03).

NCT2 □ An NCT2 link has 512 time slots and runs at a rate of 65.536 Mb/s. The number of NCT2 links required can vary from two to twenty-four in groups of two (00 - 23).

NLI □ The NLI (Network Link Interface) manages the interfaces between an SM-2000 and the NCT2 links. They are optionally equipped in groups of two, from two to eight for Release 1. Each NLI provides for one NCT2 link connection.

ONTC □ Office Network and Timing Complex, also known as the TMS.

Pipe □A pipe is a high bandwidth path for message transport between a QLPS QTMSLNK and a given QLPS endpoint (an MH in an SM-2000). It is a physical path capable of sustaining HDLC traffic from the QLPS, through the TMS, the NLI, the TSI and the APC, to the MH.

QGL □ A QGL (QLPS/QGP Link) is an electrical connection between a QGP and QLPS. Each QGP on an MSGS has four QGL connections, one to each QLPS.

QGP □ The QGP is an MSGS (Message Switch) subdevice that provides for message transport between the MSCU (Message Switch Control Unit) and QLPS hardware. None, one, or two QGPs may be equipped per MSGS, depending on office traffic characteristics.

QLI2 □ The QLI2 (Quad-Link Interface Model 2) circuit pack plugs into the CM2 (Communications Module Model 2) and provides the NCT2 interface between the CM2 and SM-2000. QLI2s plug into any existing QLI slot in the TMS except for the FLI (Foundation Link Interface) slot. CM2s equipped with QLI2s support both Single Fabric and Dual Fabric configurations.

QTMSLNK □ A port connection on the QLPS board of the TMS. Each QLPS board has four QTMSLNKs.

SMP □ Switch Module Processor.

TMS □Time Multiplex Switch, also known as the ONTC.

TMSLINK □ Time Multiplex Switch Link.

TSI □ Time Slot Interchanger.

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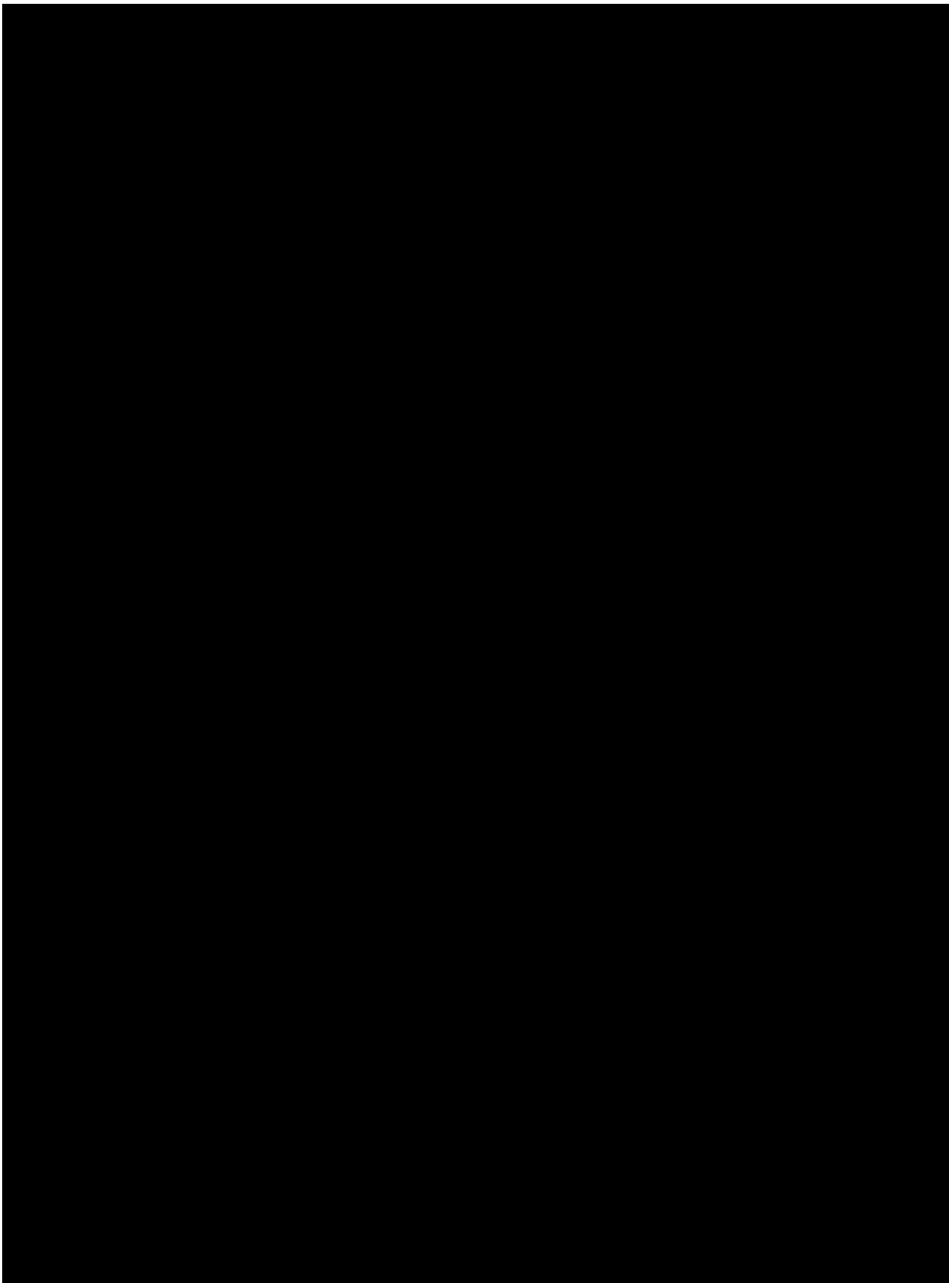

Figure 1 QLPS NETWORK ARCHITECTURE (TWO QGP CONFIGURATION)

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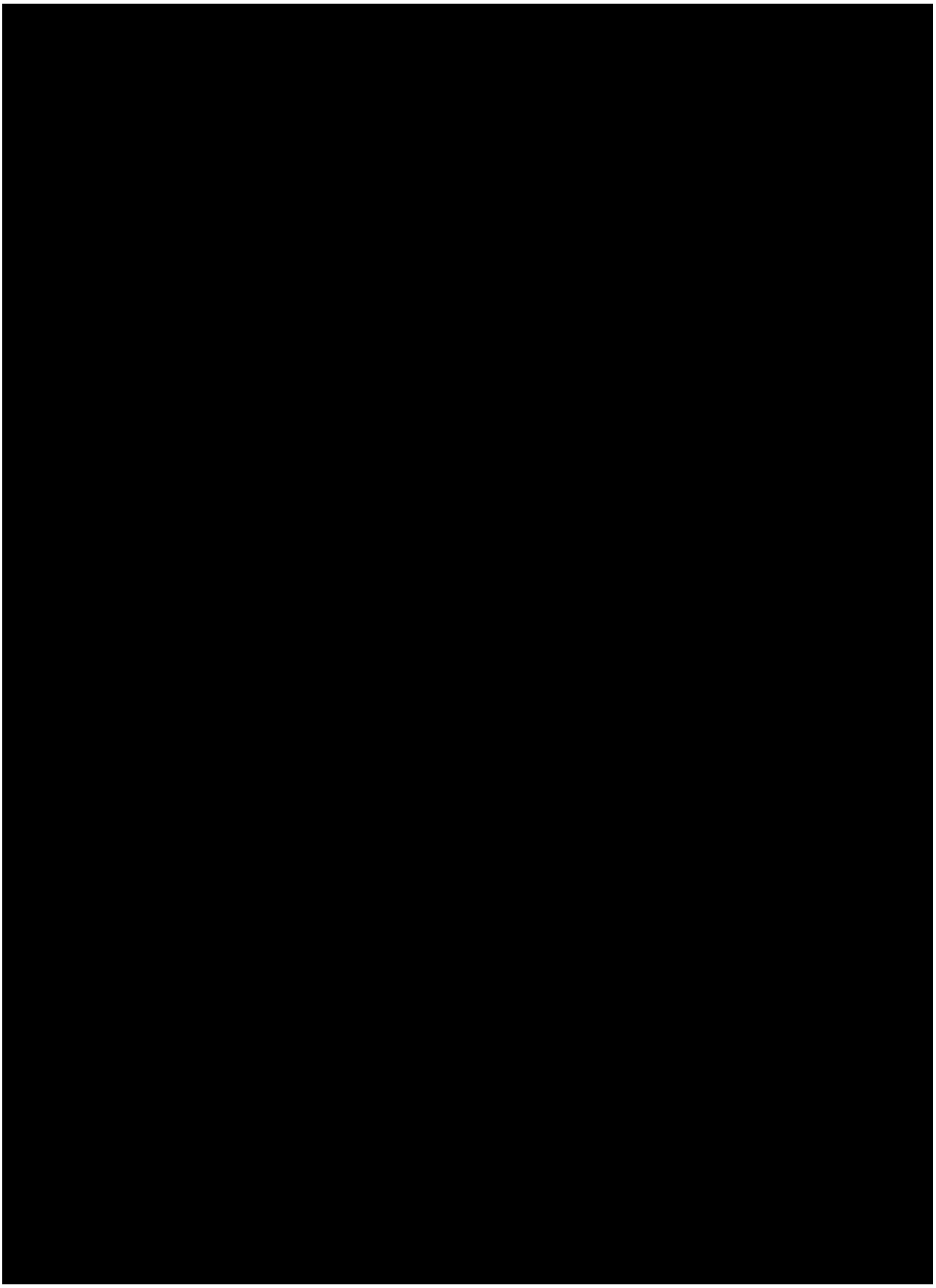

Figure 2 QLPS FORM FLOW

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SEC. 9E: INTEGRATED DIGITAL SERVICES NETWORK HARDWARE ON SM-2000

1. INTEGRATED DIGITAL LOOP CARRIER (IDLC) ON THE SWITCHING MODULE - 2000 (SM-2000)

1.1 Feature Definition

The IDLC (Integrated Digital Loop Carrier) on the Switching Module - 2000 (SM-2000) has an AT&T feature number 97-5E-1614 and is available with 5E10 and later Software Releases.

This feature provides the ability to groom DS0s (One 64 Kilobit Per Second Channel Of A T1 Line) between the TR-008, TR-303, and PUB43801 interfaces on the SM-2000. The TR-008 Interface provides POTS (Plain Old Telephone Service) and other switched services via SLC (Subscriber Loop Carrier) 96 carrier systems, SLC Series 5 carrier systems Feature Package B, and the SLC 2000 Access System. The PUB43801 Interface allows the routing of non-switched and non-locally switched services towards D4/D5 channel banks or towards DACS (Digital Access And Cross Connect System) 1, II, or IV. The TR-303 96 Line RT (Remote Terminal) Interface provides POTS and other switched services, and ISDN capabilities to customers terminating on SLC Series 5 carrier systems FP303 RTs. The TR-303 Large RT Interface provides the same functions as the TR-303 96 Line RT, but expands the number of allowed lines on the interface from 96 to 2048.

1.2 User Operation

This feature provides the same IDCU functionality and operations on the SM-2000 that are found on the SM. From the user perspective, IDCU oriented services will operate the same as on an SM.

Assignment of the IDCU hardware on the switch is made through Recent Change. No new IDCU hardware is required for this unit to operate on the SM-2000.

1.3 Other Features Required

The Integrated Digital Loop Carrier on the SM-2000 feature is dependent on the Switching Module - 2000 (SM-2000), Release 1 feature (AT&T feature number 99-5E-1427).

1.4 Specific Hardware Requirements

This feature requires an IDCU unit on the SM where the service is desired.

2. ISLU2 ON THE 5ESS-2000

2.1 Feature Definition

The ISLU2 on the 5ESS-2000 feature (AT&T feature number 97-5E-1614) is available with 5E10 and later Software Releases.

The ISLU2 feature is a new 5ESS 2000 Switch line unit which supports digital (U) and (T) interfaces on an SM and an SM-2000. The ISLU2 line packs do not fit in the ISLU shelf but are functionally equivalent. ISLU line packs do not fit in the ISLU2 line shelf. The hardware for the ISLU2 includes a new wide line shelf and new wide common shelf. Other unit hardware needed are a new wide fan unit and a wide "blank" air plenum.

The ISLU2 also supports exchange technician-initiated enhanced-sparing of individual digital (U) 2-wire line circuits. Digital T line circuits can not be spared. Four circuits can be actively spared per unit.

There are 8 separate line circuits per U & T line pack. Each line circuit can be assigned to a customer separately. Failures on a single line can be isolated and spared independently of the other line circuits within the pack. The exchange technician will be able to perform operations both on a pack level affecting

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all 8 assigned lines or individual circuits affecting just one line circuit.

An ISLU2 can physically terminate up to 1024 digital (U or T) interfaces. Traffic and blocking considerations must be engineered and will limit the maximum physical configuration. Preliminary engineering studies indicate that the practical maximum for domestic calling patterns is around 768 line circuits per ISLU2 unit.

2.2 User Operation

User operations change from those used with today's ISLU due to the repackaging of the line circuits onto packs of 8. The exchange technician can perform operations both on a pack level affecting all assigned lines, or individual circuits on the pack affecting just one line circuit.

For pack replacement, all line circuits on the pack must be removed from service and placed into an out-of-service state. In general, one line circuit will be determined to be faulty and marked out of service. When the line pack is to be physically replaced, the other seven circuits must be removed from service also. The removals can be performed individually with seven additional line circuit removals followed by a pack removal request OR a single line pack removal request can be performed which will remove the remaining active line circuits and the line pack. These requests can be done either conditionally or unconditionally.

Once a line circuit has been denoted as faulty and line pack replacement cannot be performed immediately, the exchange technician has the ability to perform a line circuit spare operation on U type circuits. Up to 4 active spares may be simultaneously active in a ISLU.

2.3 Other Features Required

The predominate usage of the ISLU2 occurs on the SM-2000. The nature of an ISDN line requires that a packet switch unit be available on the same SM. Therefore, using the ISLU2 on an SM-2000 requires the ISDN on the 5ESS-2000 Using the PSU2, PI2, and PH4" feature (AT&T feature number 97-5E-2215). This feature provides the SM-2000 with a new packet switching unit.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ACOFRF	5968	6	11	12.6
DSL	5907	5	1H	23.2, 23.8
DSLAP	5963	6	6A	24.7
DSLUSR	5908	5	1I	23.2, 23.8
EMRNM	5108	3	1H	4.9
EMROFC	6116	3	1P	4.9
EQIDCU	5846-1/2	8	48	19.12
EQISAP	5824	8	24	22.8
EQISLU	5731	8	18	22.5
EQRA	5821	8	35	19.10
EQRISLU	5732	8	19	22.9
ISLULB	5952	5	5M	22.21
LCC	5306	3	3S	4.1
LINE	5109-1/2/3	3	1I	1.6
MDFTA	5502	3	5B	14.6
MLHG	5110	3	1J	3.5
MLHLN	5111	3	1K	3.2
NAILUP	5207	3	2F	7.11
ODBTS	5905	5	1F	23.13
OFCOPT	5509	3	5I	8.1, 8.15
RDTAPORT	5911A/B	5	1L	22.17
RTERM	5174-1/2/3/4	3	1S	18.15
TRUNK	5204	3	2C	5.5

ACOFRF form (5968 Record) - The 5968 Record is used to assign the Controlling Line for an Attendant Control of Facility Restriction.

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The Equipment Number field is expanded to 11 digits for ISDN Network Hardware on an SM-2000.

DSL form (5907 Record) - The 5907 Record series has two major purposes.

First, it is used to define the attributes of a DSL. A DSL is also referred to as a BRI (Basic Rate Interface). Second, it is used to define the attributes of the B1 and/or B2 channel of the DSL, if either or both of those channels are to be used on a Permanent Packet basis (dedicated to X.25 Packet Switching).

DSL OE Type of "M" is no longer supported. DSL OE Type of "K" was added and allows for 10 digits, G type was increased to 11 digits

Data Rules are added to the DSL OE, D TIMESLOT, and QTR TS fields.

DSLAP form (5963 Record) - The 5963 Record is used to define the data links connecting an AP (Application Processor) and the 5ESS Switch. Each AP is connected to one ISDN SM or SM-2000 with DSL data links.

The LCEN field is no longer supported and is replaced by the OE field.

DSLUSR form (5908 Record) - The 5908 Record has four major purposes: 1) defines the associated TN and status of a DSL user, 2) defines the circuit switching attributes of a DSL user, 3) defines the D-Channel packet switching attributes of a DSL user, and 4) defines the On Demand B-channel packet switching attributes of a DSL user.

OE Type of "M" is no longer supported. DSL OE Type of "K" was added and allows for 10 digits, G type was increased to 11 digits

EMRNM form (5108 Record) - The 5108 Record is used to define Remote Site or Local SM Stand-Alone emergency Telephone Numbers. For 5E5 and later, Remote Site refers to an RSM, ORM (Optically Remote Module), TRM (Two-Mile Optically Remote Module), and for 5E9(2) and later, an EXM-2000 (Optically Remote SM-2000).

Data rules were added ALT TN field.

EMROFC form (5116 Record) - For 5E5 and later, the AM can reroute up to 500 emergency calls that terminate on any SM or Remote Module that has gone into Stand-Alone mode. Calls originated outside an isolated module to an Emergency TN within the module is rerouted using the data on this form.

For 5E6 and later, the rerouting is accomplished in the CMP (Communication Module Processor) rather than in the AM.

Data rules were added ALTERNATE TN field.

EQIDCU form (5846-1/2 Record) - This form is used to define the IDCU (Integrated Digital Carrier Unit) and the LSI (Loop Side Interface) packs, ELI (Electric Line Interface) packs, and the PIDBs (Peripheral Interface Data Buses) associated with the IDCU.

Valid entries for EQL BAY, CTRL GROUP, DI/PSU SHLF, and PIDB/DFPOS fields were changed.

EQISAP form (5824 Record) - This form is used to define ISLU (Integrated Services Line Unit) or RISLU (Remote Integrated Services Line Unit) analog circuit packs. The circuit packs that can be defined using this form are MAN (Metallic Access Network), RG (Ringing Generator) and HLSC (High Level Service Circuits). If the ISLULC (ISLU Line Card Assignment) form (5942 Record) is equipped with analog Z-Cards or digital U-Cards, the EQISAP form must be assigned with ISMAN (Integrated Services Metallic Access Network) and ISHLSC (Integrated Services High Level Services Circuit) Circuit Pack Types.

Valid entries for (R)ISLU TYPE and (R)ISLU NUMBER were changed to support the ISLU2.

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EQISLU form (5731 Record) - The 5731 Integrated Service Line Unit Equipage Record and EQISLU form are available with the 5E3 and later Software Releases. They are used to define ISLU (Integrated Services Line Unit) assignments in a 5ESS Switch.

For every unique combination of Switching Module and PSU Shelf on the EQISLU form (5731 Record), there must be an EQPSUPH form (5742 Record) with a corresponding Switching Module and PSU Shelf.

The UNIT TYPE field was added to support the ISLU2.

Valid entries for ISLU NUMBER, CONTROL GROUP, EQUIPMENT BAY, and DATA GROUP were changed.

EQRA form (5821 Record) - The Recorded Announcement Function Capability performs independent playback of pre-recorded, variable length and variable content announcements. The dial-through capability receives and detects Touch-Tone signals.

The EQRA form defines the RAF (Recorded Announcement Function) unit, and the SAS (Service Announcement System) services unit. If a RAF unit is defined on this form, then a corresponding EQRAP form (5822 Record) must be defined for the RAF circuit packs.

Valid entries for CONTROL GROUP, DATA GROUP, DATA PORT, and EQUIPMENT BAY were changed.

EQRISLU form (5732 Record) - The EQRISLU form (Remote Integrated Services Line Unit Equipage (5732 Record)) is used to define Remote Integrated Services Line Unit assignments in a 5ESS Switch.

Data rules are added to the GENERAL description and the EQUIPMENT BAY field.

ISLULB form (5952 Record) - The 5952 Integrated Services Line Unit 2 Line Board Record is used to define the Line Boards equipped in an ISLU-2.

This form supports the ISLU2.

LCC form (5306 Record) - The 5306 Record is used to define each LCC (Line Class Code) in a 5ESS Switch. A Telephone Number and a Line Equipment Number provide an LCC and Rate Area number. These two inputs are used to access routing and service information contained on this form.

Data rules were added to the CLASS OF SERVICE field.

LINE form (5109-1/2/3 Record) - This form defines the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch.

Changed the Valid OE TYPE and NUMBER entries. OE TYPE of "M" is no longer supported. The "G" type is changed from 10 to 11 digits.

Added data rules to the TN, NUMBER, PTY, COIN, and LCC fields.

MDFTA form (5502 Record) - This form is used for IMLT-2 (Integrated Mechanized Loop Testing) with a DFTAC (Distributing Frame Test Access Circuit). The MDFTA is used to define the connection between the DFTAC and the MDF (Main Distributing Frame) TTC (Test Trunk Circuit) as well as the DFTAC LTP (Logical Test Port) and the LEN of the dedicated line from the DFTAC to an LU (Line Unit).

Changed the Valid OE TYPE and NUMBER entries. OE TYPE of "M" is no longer supported. The "G" type is changed from 10 to 11 digits.

MLHG form (5110 Record) - This form is used to define Multi-Line Hunt Group information and define MUPH (Multiple Position Hunt) for nondata link attendant console positions.

Added data rule to the MLHG and FEATURE GROUP A fields.

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MLHLN form (5111 Record) - This form defines the individual Terminal Numbers assigned to a particular MLHG. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. Every MLHG number assigned on the MLHLN form must be defined on the MLHG form (5110-1/2/3 Record).

Changed the Valid OE TYPE and NUMBER Entries. OE TYPE of "M" is no longer supported. The "G" type is changed from 10 to 11 digits.

Added data rules to the MFRI and SM REROUTE fields.

NAILUP form (5207 Record) - The NAILUP form contains data to directly link ("nailup") two ports. The Controlling Port is the port requesting the nailup connection; the Non-Controlling port is the port receiving the nailup connection. The nailup connection assigns a semi-permanent path through the SM (or the SM and the CM) between a port on one piece of peripheral equipment to a port on another piece of peripheral equipment.

Changed the Valid C OE (Type) and C OE (Number) entries. OE TYPE of "M" is no longer supported. The G type was changed from 10 to 11 digits.

ODBTS form (5905 Record) - This form is used to reserve DPIDB (Directly connected Peripheral Interface Data Bus) time slots for DSL (Digital Subscriber Line) users with the ODB (On-demand B-channel Packet Switching) feature.

The entry of "ISLU2" was added to the UNIT TYPE entries.

Valid entries for UNIT were changed to 0 - 42.

OFCOPT form (5509 Record) - The OFCOPT form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices.

New BRI TYPE entries "I2TCKT" and "I2UCKT" were added.

RDTAPORT form (5911A/B Record) - This form is used to set up the data for the RPA (Remote Protocol Access) feature at the Access Switch. The Access Switch is defined as a switch that is maintained by a CSC (Customer Service Center). The CSC is a work center where protocol analysis is done.

The definition for RDTA OE Type of "D" is changed. RDTA OE Type of "K" and "N" were added.

Data rules were added to the RDTA OE field.

RTERM form (5174-1/2/3/4 Record) - The RTERM form (5174 Record) is used by the switch owner to define all remote terminals connected to the IDCU (Integrated Digital Carrier Unit) equipment. Two types of RTs (remote terminals) can be connected to an IDCU: TR008 and TR303.

Valid entries for UNIT NUMBER was changed to 0 - 42.

Data rules are added to GENERAL and RT INTERFACE and CHANNEL UNIT fields.

TRUNK form (5204 Record) - This form is used to define each member of a Trunk Group in a 5ESS Switch office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Trunk information that is common to the entire Trunk Group is entered on the TKGRP form (5202 Record).

Changed the VALID TRKOE TYPE and NUMBER Entries. OE TYPE of "M" is no longer supported. The "G" type is changed from 10 to 11 digits.

4. GLOSSARY

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Acronyms used in this section are expanded below.

AP	Application Processor
BRI	Basic Rate Interface
CSC	Customer Service Center
CMP	Communication Module Processor
DACS	Digital Access And Cross Connect System
DFTAC	Distributing Frame Test Access Circuit
DI	Data Interface
DSO	One 64 Kilobit Per Second Channel Of A T1 Line
ELI	Electric Line Interface
IDLC	Integrated Digital Loop Carrier
IDCU	Integrated Digital Carrier Unit
IMLT	Integrated Mechanized Loop Testing
LSI	Loop Side Interface
LTP	Logical Test Port
MAN	Metallic Access Network
MDF	Main Distributing Frame
IOP	Input/Output Processor
ISDN	Integrated Services Digital Network
ISLU2	Integrated Services Line Unit - 2
PIDB	Peripheral Interface Data Bus
POTS	Plain Old Telephone Service
RPA	Remote Protocol Access
RSM	Remote Switching Module
RT	Remote Terminal
SLC	Subscriber Loop Carrier
TTC	Test Trunk Circuit

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SEC. 9F: SMP60 (CORE60) - ENHANCED SWITCHING MODULE PROCESSOR FOR SM-2000

1. FEATURE DESCRIPTION

The Enhanced SMP60 (Switching Module Processor 60) for SM-2000 is available with 5E10 and later Software Releases. It is also referred to as the CORE60 board.

The SMP60/CORE60 processor board provides improved processor performance over the SMP40/CORE40 board.

The feature number is 95-5E-2422.

1.1 User Specified Variables

The operation of the switching module equipped with the SMP60/CORE60 processor will not be materially different from the operations of SM-2000 Release 1. The SMP60/CORE60 circuit pack designation is UN560.

1.2 Other Features Required

The customer must have SM-2000 offices or new office starts to use this feature. The feature is also applicable to HSM-2000, EXM-2000 and CDX-2000.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	RC View	Division	Section
EQIM	5700-1/2	18.1	8	2

EQIM form (5700-1/2 Record) - The 5700-1/2 Records are used to define Switching Module Equipage Assignments. Added a data rule to the UNIT TYPE field requiring BRD0 CLI for CONTROLLER 0 and 1 to be entered for UNIT TYPE of "SM2000".

EQUIPMENT ASSIGNMENT - This section provides a listing of ODA forms and associated CLI values. CLI values to support the SMP60/CORE60 core processor board were added.

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SEC. 9G: HOST SM-2000

1. FEATURE DESCRIPTION

The Host SM-2000 feature is available with 5E10 and later and has AT&T feature number 99-5E-1591. This feature expands the number of remote SMs that can be linked to a Host SM-2000. The number of RMS that a single HSM (Host SM) can host is increased from a ratio of 1:5 to 1:30. A single HSM-2000 may terminate 24 channel umbilicals or 30 channel umbilicals, but not both.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDU/ EQDUP	5730	8	17	19.4 20.4
EQIM	5700	8	2	18.1
RSMLNK	5517	3	5Q	18.5 18.9

EQDU/EQDUP form (5730 Record) - This form is used to define the SM and Digital Line/Trunk Unit information. A data rule was added to the SM field to specify "HOST" as a value for DFI USAGE.

EQIM form (5700 Record) - This form is used to define SM equipage assignments. A data rule was added to the SM-2000 UNIT TYPE field to specify "HIM" as a valid SM USAGE for an SM-2000.

RSMLNK form (5517 Record) - This form is used to define the assignment of the umbilical links between the HIM (Host SM) and the RSM (Remote SM). Information was added to the General section to describe the Host SM-2000 and a data rule was added to the HOST field.

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SEC. 9H: SWITCHING MODULE PROCESSOR UNIT 5 - (SMPU5)

1. FEATURE DESCRIPTION

The SMPU5 is referred to as the SM-2005 unit. It is available with 5E11 and later Software Releases. The SM-2005 unit contains SMP (Switching Module Processor) circuit packs. It is an enhancement of the SM-2000 unit. The following summarizes the primary differences between the SM-2000 and the SM-2005.

- The SM-2000 unit accommodates a larger number of peripheral equipment than other SM types; the DSU3 shelf is external to the SM-2000 unit; the SM-2000 has four memory board slots.
- The SM-2005 unit is redesigned to consolidate the SMP unit into a more compressed design; up to 6 LDSC3/GDSC3 boards are accommodated in this unit, thus eliminating the DSU3 shelf; the SM-2005 has two memory board slots.

The SM-2005 development consists of three fundamental pieces:

- a new backplane which physically integrates the DSC3 boards into the SM-2005 unit,
- an upgraded APC (Application Controller) pack,
- the consolidation of the power supplies and the control/display function into a single board.

The feature number for the SM-2005 feature is 99-5E-3227.

2. FEATURE ASSIGNMENT

The SM-2005 is defined on the EQIM form (5700 Record).

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDSC3	5852	8	54	19.18
EQGDSC3	5860	8	63	19.19
EQIM	5700	8	2	18.1
Equipment Assignment	N/A	8	1	N/A

EQDSC3 form (5852 Record) - This form is used to define the DSC3 unit which provides the LDSUF (Local Digital Services Unit Function) providing tone generators and decoders required for the expanded capacity of the SM-2000. The UNIT OFFSET field was expanded from 0 - 17 to 0 - 23. For SM-2005, UNIT OFFSET must be greater than 17.

EQGDSC3 form (5860 Record) - This form is used to define the GDSF (Global Digital Service Function) on the DSU3 for the SM and the the SM-2000. A maximum of 1 DSU3 is allowed per SM and 2 per SM-2000 unit). The UNIT OFFSET field was expanded from 0 - 17 to 0 - 23. For the SM-2005, UNIT OFFSET must be greater than 17.

EQIM form (5700 Record) - This form is used to define the SM and the SM-2000. Unit Type of "SM2005" was added for the SM-2005 unit.

Equipment Assignment - This section of the TG-5 identifies CLI values for equipment. CLI information for the SM-2005 was added.

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SEC. 9I: LOCAL DIGITAL SERVICE FUNCTION TECHNOLOGY UPGRADE ON THE SM-2000 SWITCHING MODULE

1. FEATURE DESCRIPTION

This feature is available with 5E12 and later Software Releases. It provides a technology upgrade for the Local Digital Service Function (LDSF) circuit pack for the SM-2000.

A new circut pack, UN590 (pumpable) is introduced which replaces the UN363. A new CLI value of 0000001 hex, is introduced.

The feature number for this feature is 97-5E-2894.

See also Division 2, Section 7R for information on the LDSF technology upgrade for the SM.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQDSC3	5852	8	54	19.18
Equipment Assignment	N/A	8		N/A

EQDSC3 form (5852 Record) - This form is used to define the Digital Service Circuit for the SM-2000. The CLI value field is used to define the pack identification.

Equipment Assignment - This TG-5 section contains the CLI information.

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SEC. 9J: TR-303 INTERFACE ON THE DNU-S (DIGITAL NETWORKING UNIT - SYNCHRONOUS OPTICAL NETWORK)

1. FEATURE DESCRIPTION

The TR-303 Interface on the DNU-S (Digital Networking Unit - Synchronous Optical Network) feature is available with 5E12 and later Software Releases. It provides the capability to assign a TR-303 RDT (Remote Digital Terminal) to DS1 facilities terminating on a DNU-S (contained with a EC-1). This feature provides the same set of TR-303 services on the DNU-S as are provided on the IDCU (Integrated Digital Carrier Unit), with the exception of DS1 maintenance capabilities, PLS (Protection Line Switching) and Hairpins.

(This feature does not provide the TR-008 or PUB-43801 functionality found on the IDCU, since DNU-S does not support the TR-008 interface.)

Service activation is done exactly the same as for TR-303 lines on an IDCU. The only difference is that a new OE (Office Equipment) type ("A") and Equipment Number ("INEN") are implemented. Line maintenance capabilities for lines on the TR-303 DNU-S interface are identical to the IDCU. This includes TLWS (Trunk and Line Work Station) testing, MLT testing, DSL Performance Monitoring, DSL digital testing, and craft I/O.

The feature number for this feature is 99-5E-2466.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DLS	5900	5	1H	23.8
DLSLUSR	5908	5	1I	23.2/23.8
EMRNM	5108	3	1H	4.9
EMROFC	5116	3	1P	4.9
EQVT	5858	8	3S	20.24
LINE	5109	3	1I	1.6
MEASSUM	5563	3	5BG	13.7/13.8
MISLINK	5637	4	32B	6.11
MLHLN	5111	3	1K	1.6
MTNDR	5550	3	6A	1.9
NAILUP	5207	3	2F	7.11
ODBCTUR	5915	5	1N	23.19
RTERM	5174	3	1S	18.15
SLJOB	5555	3	5BA	14.16
SLLEN	5551	3	5AX	14.13
TRUNK	5504	3	2C	5.5

DSL form (5900 Record) - This form is used to define the attributes of a DSL (Digital Subscriber Line). OE type of "A" was added for the TR-303 DNU-S feature.

DSLUSR form (5908 Record) - This form is used to define the TN(s) associated with the DSL user. The OE on this form associates a user with a particular DSL assigned from the DSL form. OE type of "A" was added for the TR-303 DNU-S feature.

EMRNM form (5108 Record) - This form is used to define Remote Site or Local SM Stand-Alone emergency telephone numbers. Data rules were added to include the OE type of "A" for the TR-303 DNU-S feature.

EMROFC form (5116 Record) - This form is used to define emergency telephone numbers which can be re-routed to other SMs or RSMs. Data rules were added to include the OE type of "A" for the TR-303 DNU-S feature.

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EQVT form (5858 Record) - This form is used to define the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S. The APPICATION TYPE field was added to support the TR-303 DNU-S feature.

LINE form (5109 Record) - This form is used to define the OE number and features for each TN (Telephone Number) in a 5ESS Switch. OE type of "A" and data rules were added for the TR-303 DNU-S feature.

MEASSUM form (5563 Record) - This form is used to define traffic measurements for specified units. Valid entries and data rules were added for the TR-303 DNU-S feature.

MISLINK form (5637 Record) - This form is used to define MIS LINK assignments which provide the capability to provision a MIS (Management Information System) SM Event Link for ACD/BRCS on all valid DSLs. OE type of "A" and data rules were added for the TR-303 DNU-S feature.

MLHLN form (5111 Record) - This form is used to define the individual Terminal Numbers assigned to a particular MLHG. OE type of "A" and data rules were added for the TR-303 DNU-S feature.

MTNDR form (5550 Record) - This form is used to define the individual TNs with Distinctive Ringing. OE type of "A" and data rules were added for the TR-303 DNU-S feature.

NAILUP form (5207 Record) - This form is used to directly link ("nailup") two ports. OE type of "A" was added for the TR-303 DNU-S feature.

ODBCTUR form (5915 Record) - This is a **NEW** form introduced to support the TR-303 DNU-S feature. It is used to reserve cut through time slots for DSL users with the On-Demand B-Channel Packet Switching feature.

RTERM form (5174 Record) - This form is used to define remote terminals connected to the IDCU (Integrated Digital Carrier Unit), or, effective with 5E12 and later Software releases, the DNU-S (Digital Networking Unit - SONET). Two types of remote terminals can be connected to an IDCU: TR-008 and TR-303. The DNU-S is applicable only to the TR-303. Added new valid entries for the UNIT TYPE and UNIT NUMBER fields for the TR-303 on DNU-S feature.

SLJOB form (5555 Record) - This form is used to define the test jobs for scheduled SLIM2 (Subscriber Line and Instrument Measurements-2) test session. This form relates test sets, threshold lists, equipment numbers, etc., to be tested and the types of lines to be allowed to be tested. OE type of "A" and data rules were added for the TR-303 DNU-S feature.

SLLEN form (5551 Record) - This form is used to define the range of subscriber office equipment numbers that are to be tested by the SLIM2 feature. OE type of "A" and data rules were added for the TR-303 DNU-S feature.

TRUNK form (5204 Record) - This form is used to define trunk parameters. Added a data rule for the "NEN" equipment type.

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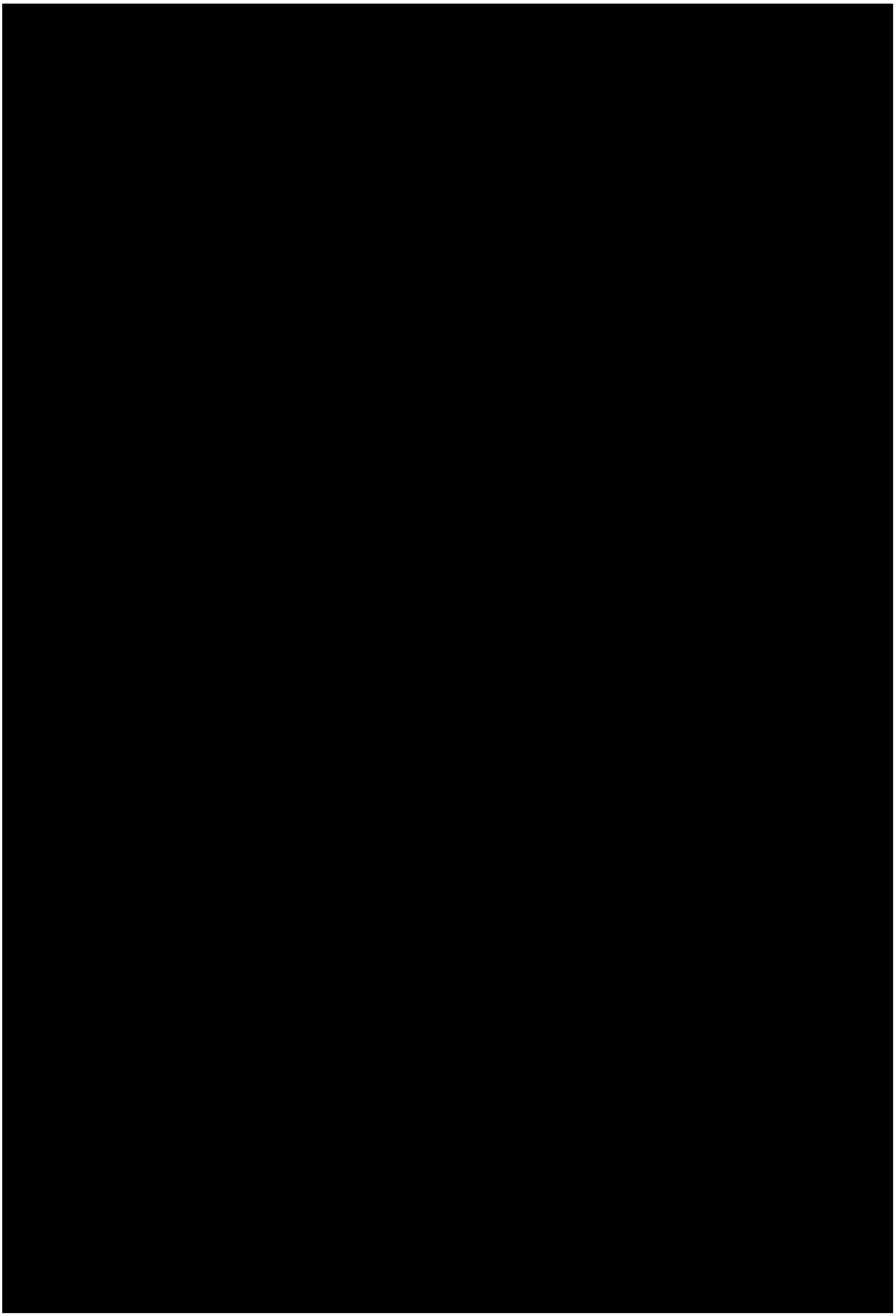

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Figure 1 PROVISIONING SEQUENCE FOR TR303 RDT ON A DNU-S

Figure 2 RESERVING ODB TIME SLOTS ON THE PSU SHELF

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SEC. 9K: ISDN U-INTERFACE ON AIU

1. FEATURE DESCRIPTION

This features adds ISDN (Integrated Services Digital Network) capability for the AIU (Access Interface Unit) using the BRI (Basic Rate Interface) U-Interface. This feature does not support the BRI T-Interface.

The feature number for this feature is 99-5E-2855.

2. TRANSLATIONS REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DSL	5907	5	1H	23.8
DSLAP	5963	6	6A	24.7
DSLUSR	5908	5	1I	23.2/23.8
EQAIU	5745-1/2	8	64	19.16
EQAIUP	5746	8	65	20.16
EQIDCU	5846	8	48	19.12
EQISLU	5731	8	18	22.5
MEASSUM	5563	3	5BG	13.7/13.8
MISLINK	5637	4	32B	6.11
ODBTS	5905	5	1F	23.13
RDTAPORT	5911-A	5	1L	22.17

DSL form (5900 Record) - This form is used to define the attributes of a DSL (Digital Subscriber Line). Added OE type of "E".

DSLAP form (5963 Record) - This form is used to define the DSL Application Pack. Added OE type of "E" and data rules, and valid entries for the REL PIDB field.

DSLUSR form (5908 Record) - This form is used to define the TN(s) associated with the DSL user. The OE on this form associates a user with a particular DSL assigned from the DSL form. Added OE type of "E".

EQAIU form (5745-1/2 Record) - This form is used to define AIU (Access Interface Unit) equipment. A new application board was added to provide the ISDN U-Interface lines.

EQAIUP form (5746 Record) - This form is used to define AIU packs. Added one field: SEAL CUR. The SEAL CUR field defines whether the sealing current will be sent to the line from the ANSI U-Interface non-remote power application pack.

EQIDCU form (5846 Record) - This form is used to define IDCU (Integrated Digital Carrier Unit) units. Data rules were added to the IDCU, and PIDB TYPE fields.

EQISLU form (5731 Record) - This form is used to define ISLU (Integrated Services Line Unit) assignments. Data rules were added to the PIDB TYPE field.

MEASSUM form (5563 Record) - This form is used to define traffic measurements for specified units. Added new valid entries: "ADPIDB" and "APSODB" and data rules for AIU-ISDN.

MISLINK form (5637 Record) - This form is used to define MIS (Management Information System) Links to provision an MIS system. OE type of "E" and data rules were added. Added valid entries to the DPIDB field.

ODBTS form (5905 Record) - This form is used to reserve DPIDB (Directly connected Peripheral Interface Data Bus) time slots for DSL (Digital Subscriber Line) users with the ODB (On-demand B-Channel Packet Switching) feature. Added "AIU" as a valid entry type and valid entries and data rules for the DPIDB field.

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RDTAPORT form (5911-A Record) - This form is used to define the remote digital test access port and TN assignment. Added OE value of "E" and data rules.

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SEC. 9L: SS7-PSU ON SM/EXM-2000

1. FEATURE DESCRIPTION

The CCS7-PSU on SM/EXM-2000 (Switching Module/Extended Switching Module - 2000) feature is available for 5E12 and later Software Releases. It provides an SM-based SS7 (Signaling System 7) signaling interface for the 5ESS-2000 Switch (SMs and SM-2000s). This interface is used for SS7 signaling during normal operation when communication exists with the host 5ESS-2000 Switch in addition to stand-alone operation (if provisioned).

Prior to this feature, all switching modules send their SS7 signaling messages to the CNI (Common Network Interface) signaling platform for message transport to the SS7 network. In the unlikely event that the switching module would lose connection to the CM (Communication Module), SS7 call processing would be interrupted due to a lack of direct signaling communication through the CM and the AM (Administrative Module) to the CNI platform.

With this feature, the existing trunk query provided by the CNI Ring to send messages was replaced by a circuit query. Essentially, this feature enhanced the 5E11 ISUP trunk query capabilities to offer more flexibility (in both manual and automatic requests) as well as to report more information. (The term "circuit query" is used to align this enhancement with Bellcore terminology.) Two new fields were added to the OFCOPT form to allow customer specified query intervals.

Each SM-based signaling interface has its own unique SS7 point code and connects to the SS7 network through dedicated signaling links. As configured, each SM-based signaling interface appears to the SS7 network as a unique signaling end point, although physically they are part of a single 5ESS-2000 Switch. With this feature, in addition to the ANSI (American National Standards Institute) format, point codes can now be defined in the AT&T format. In addition, the CCTT form (6014 Record) was modified to allow Remote Global Title Translations to occur by specifying a direct TCAP Translation Type to a DPC (Destination Point Code).

A new form, CCSTCAP (5567 Record), was introduced to provide the capability to determine, on an SM/EXM-2000 basis, whether a TCAP (Transaction Capability Application Part) application can use the CNI (Common Network Interface) or a particular GSM (Global Switching Module) for its SS7 message transport. Note that this feature provides an SM-based SS7 signaling interface which supports ISUP trunks and TCAP services provisioned to use the interface on the SM (any SM type). The following provisioning sequence should be followed:

- The customer provisions an ISUP trunk group to use it for SS7 message transport by setting the ORIG PT CODE field on the TKGRP form (5202 Record) to match the OPC (Originating Point Code) field on the CCGSM form (6008 Record).
- The customer provisions a TCAP service (only NS800, LASS, ISVM, ACND, ASP, AIND01) to use an SS7 PSU on the CCSTCAP form (5567 Record). All originating queries for the service provisioned will use the SS7 PSU for message transport.

The SS7 PSU provides an alternative (to CNI) signaling interface on the SM in 5E12. Applications such as ISUP and TCAP services can be provisioned to use it or continue to send their messages to CNI for transport to the SS7 network. The TCAP applications that are currently supported are provided on the CCSTCAP form (where PLATFORM can be set to non-zero).

Three new traffic measurements were added to support this feature:

- PC (Point Code)
- SCCP (Signaling Connection Control Port) for SM-2000s.

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- SL (Signaling Link)

These measurement capabilities were added to the MEASSUM form.

The feature number for this feature is 99-5E-3114.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCGSM	6008	9	10H	16.1
CCPBD	6012	9	10M	16.22
CCSGT	6015	9	10N	16.23
CCSTCAP	5567	3	5BH	8.42
LNKSET	6003	9	10C	16.5
MEASSUM	5563	3	5BG	13.8/13.7
OFCOPT	5559	3	5I	8.15
PC	6006	9	10F	16.5
CCTT	6014	9	10O	16.24

CCGSM form (6008 Record) - This form is used to define data used for the global switching module. New point codes were added to support this feature.

CCPBD form (6012 Record) - This form is used to define the primary and backup destinations for SCCP signaling. New point codes were added to support this feature.

CCSGT form (6015 Record) - This form is used to maintain the single fixed or primary plus secondary digit string for Global Translations. New point codes were added to support this feature.

CCSTCAP form (6567 Record) - This new form is used to define the CCS Platform (Common Network Interface or Global Switching Module) and the type of Application for its SS7 signaling message.

LNKSET form (6003 Record) - This form is used to define CCS7 signaling link sets. New point codes were added to support this feature.

MEASSUM form (5563 Record) - This form is used to define traffic measurements for specified units. Valid entries and data rules for the new measurement types "PC", "SCCP", and "SL" were added. A new field, ROP (Receive Only Printer) was added to allow craft to select measurement types for printing (added also to Recent Change Views 13.7/13.8).

OFCOPT form (5559 Record) - This form is used to define office parameters. Two new fields were added. The CQM RSND (Circuit Query Message Re-Send) field is used to define the circuit query re-send timer value in seconds (from 10 - 15). The CQ START TIME field is used to specify the hours past midnight that the daily automatic office wide circuit query will start (from 0 to 23 hours; blank indicates that Circuit Query is not activated).

PC form (5006 Record) - This form is used to define point code and alternate link set routing. New point codes were added to support this feature.

CCTT form (6014 Record) - This form is used to define whether the global title data in the called party address willreceive Global Title Translation or Point Code Extractiontreatment. Added the Remote Global Title Translations DPC.

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SEC. 9M: 4-WIRE LINE ON DNU-S

1. FEATURE DESCRIPTION

Available with 5E12 and later, the 4-Wire Line on DNU-S (Digital Network Unit - SONET) feature provides the ability to provision a DNU-S digital port with the 4WINDIV class of service. The 4WINDIV class of service allows a TN (Telephone Number) or MLHG (Multi-Line Hunt Group) number to be provisioned on a DNU-S digital port. BRCS (Business/Residence Custom Services) features (i.e., Call Forwarding Busy Line - All Calls or Individual Dial Plan Intercom Dialing) can also be provisioned to the TN or MLHG number.

This feature provides equivalent functionality to the existing 4-Wire Lines on DFI (Digital Facility Interface).

The feature number for the 4-Wire Line on DNU-S is 99-5E-3611.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
LINE	5109-1	3	1I	1.1
MLHLN	5111-1	3	1K	1.6

LINE form (5109-1 Record) - This form is used to define the TN associated with the 4-Wire Line on DNU-S NEN (Networking Equipment Number).

MLHLN form (5111-1 Record) - This form is used to define the MLHG member associated with the 4-Wire Line on DNU-S NEN.

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SEC. 9N: TRCU3 - OPTICALLY REMOTED SM-2000

1. FEATURE DESCRIPTION

The TRCU3 - Optically Remoted SM-2000 feature (99-5E-3404) is available as a software update to 5E12 and for deployment as part of 5E13 Software Release.

This feature provides the capability to remote an EXM-2000 (Extended Switch Module - 2000) via the TRCU3 (Transmission Rate Converter Unit 3). The TRCU3 is a new unit that is replacing the discontinued TRCU2. It provides additional functionality specifically by providing a direct termination of NCT/NCT2 (Network Control and Timing) links from the 5ESS-2000 Switch. The TRCU3 unit shelf accommodates two OC-3/OC-12 service groups, each made up of new NCT/NCT2 function packs and a complement of DDM-2000 circuit packs (system controller (1), overhead controller (1), time generation system (2), and Optical Line Interface (2)). The NCT/NCT2 function packs provide the capability to terminate NCT/NCT2 signals from the Communications Module mapping it into STS-1 (Synchronous Transport Level) SONET (Synchronous Optical Network) for transmission to the OLIU (Optical Link Interface) OC-3/OC-12. The NCT/NCT2 function packs in the TRCU3 will occupy the DS3 function pack slot. Two new TRCU3 function packs will be provided as follows:

- An NCT2 function pack terminating one NCT2 link per board for EXM-2000.
- An NCT function pack terminating one NCT link per board for ORM.

This provides the capability to remote Switching Modules, SMs, and SM-2000, over SONET .

From the switch perspective, the integrated TRCU3/DDM-2000 is transparent. The NCT/NCT2 link is virtually connected across this interface to the NLI (Network Link Interface) or DLI (Dual Link Interface) at the far end. Externally, the TRCU3 unit has the attributes of a new multiplexor unit which must support interactions with the existing Transmission Operations Systems.

2. FEATURE ASSIGNMENT

Two forms support the TRCU3 hardware. The EQCMTRCU form is used for the provisioning of each TRCU3/TRCU2 shelf and the EQTRCUPTH form is used for provisioning each TRCU path between the host TRCU and the remote TRCU. See Figure 1.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	RC View	Division	Section
EQCMTRCU	5812	17.18	8	32
EQTMSLINK	5851	17.12	8	53
EQTRCUPTH	5814-1/2/3	17.23	8	38
Equipment Assignment	Not Applicable	Not Applicable	8	1

EQCMTRCU form (5812 Record) - This form is used to define the physical location of the TRCU (Transmission Rate Converter Unit). The TRCU TYPE field is modified to accept a new value "TRCU3".

EQTMSLINK form (5851 Record) - This form is used to translate the TMS (Time Multiplexed Switch) links for the ORM (Optical Remote Module), the SM-2000, and the EXM-2000 (SM-2000 ORM). A new no change field, TRCU PATH, has replaced fields TRCCKT, TRCUNUM and TRCCLI to implement the TRCU3 feature. The fields TRCCKT, TRCUNUM and TRCCLI are deleted and moved to the EQTRCUPTH form.

EQTRCUPTH form (5814-1/2/3 Record) - This form is used to define the path between the host and remote TRCU for a TRCU model 1, TRCU model 2, or TRCU model 3, in the SM or SM-2000 class processors. This is a new form to support the TRCU3 feature.

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EQUIPMENT ASSIGNMENT - This section describes the CLI assignments for various input forms. Added new CLI values for the EQTRCUPTH form.

4. GLOSSARY

DDM	Dual Digital Multiplexer
DLI	Dual Link Interface
DS3	Digital Signal Level 3
NCT	Network Control and Timing Signal
NCT2	Network Control and Timing Signal Type 2
NLI	Network Link Interface
OLIU	Optical Line Interface Unit
ORM	Optically Remote Switching Module
SM	Switching Module
SONET	Synchronous Optical Network
STS	Synchronous Transport Level

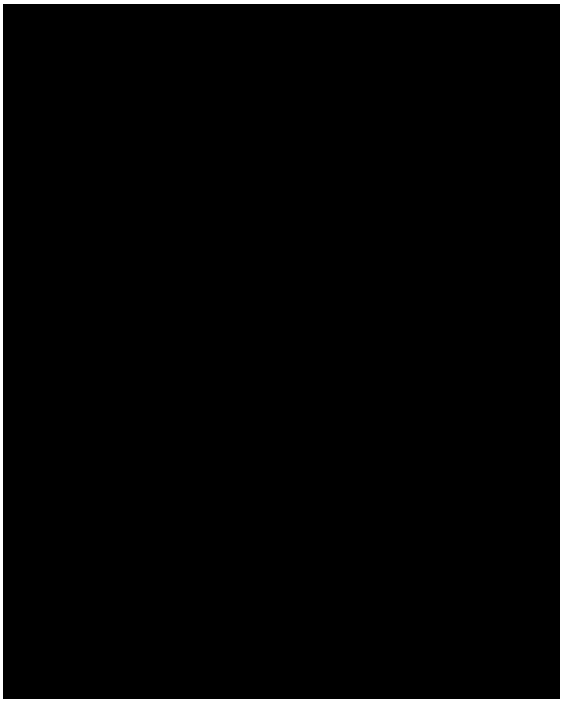

Figure 1 FORM FLOW FOR TRCU3 PROVISIONING

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SEC. 9O: REMOTE (EXTENDED) ACCESS INTERFACE UNIT

1. FEATURE DESCRIPTION

The Remote AIU (Access Interface Unit) feature is available as a 5E12 and later Software Update. This feature provides the capability to configure a remote location for an AIU unit from an SM-2000 Switch.

Within the 5ESS-2000 Switch user interface, the UNIT TYPE for remote AIU appears as "EAIU" which means "Extended" AIU. This terminology is used to refer to the NAR (North American Region) remote AIU application. For the NAR application, the AIU can be configured adjacent to and/or in a remote site location, whereas in the International application, a remote location is typically used.

The NAR Remote AIU has the following characteristics:

- can be remoted over a DLTU2/DFI2 TI facility or a DNU-S facility,
- uses an E1 facility interface instead of PICB/PIDB,
- uses MH Time Slots for the communication channel,
- uses standard AIU application packs,
- test pack capability,
- capacity of 512 lines without test pack; 480 lines with test pack.

The AIU requires 64 Time Slots per PIDB pair (must be grown as pairs) per unit. The RAIU requires 32 Time Slots per PIDB (can be grown individually).

The feature number for this feature is 99-5E-3560. (For more information on the AIU, see Division 2, Section 7K.)

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
Equipment Assignment	Not applicable.	8	1	Not applicable.
EQAIU	5745	8	64	19.16
EQAIUP	5746	8	65	20.16
EQVT	5858	8	60	20.24
MTBCOMP	5557	3	5BC	14.18
ODBTS	5905	5	1F	23.13
PSU Time Slot Assignment	Not applicable.	2	1BK	Not applicable.
RISITE	5940	5	5A	22.11
RPMA	5957	5	5N	22.24
TKGRP	5202	3	2A	5.1

Equipment Assignment - This TG-5 section documents CLI values for all equipment. New CLI values were added for the Remote AIU feature for the EQAIU and EQAIUP forms.

EQAIU form (5745 Record) - This form is used to define the AIU (Access Interface Unit). The following fields were added to support the Remote AIU feature:

- AIU TYPE
- AIU SIZE

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- RCOMDAC1 EXT REF
- SITE ID
- CBL SERIES
- CBL DISTANCE
- TEST TYPE 0
- TEST TYPE 1
- TRANSPORT TYPE
- DLTU/DNUS
- PK/DG
- FAC/STS
- VT
- EQSTAT

The following fields were modified:

- PIDB TYPE
- DI
- PIDB/PSU SHLF

EQAIUP form (5746 Record) - This form is used to define AIU Application Packs. AIU Test Pack capability was added with the implementation of the RAIU feature.

EQVT form (5858 Record) - This form is used to define the Virtual Tributary and the DS1 (Digital Signal Level 1) on a DNU-S (Digital Networking Unit - Sonet). Two AIU APPLICATION TYPES were added: "AIUC" and "AIUD".

MTBCOMP form (5557 Record) - This form is used to define the SLIM2 (Subscriber Line and Instrument Measurements-2) metallic testing compensation values. With the implementation of the Remote AIU feature, the SM and UNIT NUMBER fields were added as an enhancement to support the AIU and future capabilities. In addition, the naming conventions for the compensation values were modified on the screen format.

ODBTS form (5905 Record) - This form is used to reserve DPIDB (Directly connected Peripheral Interface Data Bus) time slots for DSL (Digital Subscriber Line) users with the ODB (On-demand B-channel Packet Switching) feature. A data rule for the UNIT TYPE field was modified to include reference to the AIU.

PSU Time Slot Assignment - This TG-5 section discusses requirements for time slot assignment. The Required PIDB Time Slots by Unit table (Figure 2) was updated to include information for the Remote AIU.

RISITE form (5940 Record) - This form is used to define site configurations for Remote Pheripheral Alarms. This form was previously used to define Remote ISLUs. Effective with the 5E12 Software Release, the name of this form was changed from Remote Integrated Services Sites and can now be used to define remote AIU units. The ALARM SM field name was renamed SM; the ALARM RISLU field was renamed RP NO (Remote Peripheral Number).

RPMA form (5957 Record) - The Remote Peripheral Site Miscellaneous Alarms form is available for 5E12 and later. This new form defines information about RPMA scan points.

TKGRP form (5202 Record) - The Trunk Group form is used to define information common to an entire trunk group. A data rule for the "LTPSLIM" trunk class was updated to define requirements for assignment of a SLIM RI on the EQAIUP form.

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SEC. 9P: STS-1 EXTERNAL ECHO CANCELLATION

1. FEATURE DESCRIPTION

The STS-1 (Synchronous Transport Signal - 1) External Echo Cancellation feature is available for 5E13 and later Software Releases. The feature number is 99-5E-3487. This feature provides the capability for each 5ESS-2000 Long Distance Platform Switch equipped with DNU-S's (Digital Networking Unit - SONETs (Synchronous Optical Networks)) to perform broadband echo cancellation on an external echo canceler on a per call basis. In order to provide per call control of the external echo cancelers on the echo cancellation equipment, the 5ESS-2000 Switch must send messages to the external echo cancelers' frame to tell it when to turn the echo cancelers on and off.

When a call enters the service provider's network, the 5ESS-2000 Long Distance Platform Switch detects whether the call is a voice or data call. This is done by reading the parameters in the call setup message. The switch sends a message to the external echo cancelers' frame via TCP/IP (Transmission Control Protocol/Internet Protocol) to turn off echo cancellation for the call if the switch determines that the call is a data call. In addition, the echo cancelers are turned off if the call is a voice band call utilizing a modem.

2. FEATURE ASSIGNMENT

For 5E13 and later, see Figure 1 for the provisioning form flow.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
DNU2EEC	5861	8	68	19.22
ENETLINK	5827	8	67	19.21
ENETPIPE	5826	8	66	19.20
EQIM	5700	8	2	18.1
OFCOPT	5509	3	5I	8.1
TRUNK	5204	3	2C	5.5

DNU2EEC form (5861 Record) - This form is used to associate STS-1s on a DNU-S with STS-1s on an External Echo Canceler. This is a new form added for 5E13.

ENETLINK form (5827 Record) - This form is used to define the ethernet links connected to a MH (Message Handler). The value for the ENET LINK NBR field increased from 0 to 0 - 69. The SERV TYPE field was modified from a no change field to a required field. The NUM PORT field changed from a modifiable field to a no change field. Both the HW ADDR 0 SIDE 1 and HW ADDR 1 SIDE 1 fields are no longer required fields.

ENETPIPE form (5826 Record) - This form is used to define the ethernet pipes connected to a MH (Message Handler). The SERV TYPE field was added. The EIB IP ADDR 0, EIB IP ADDR 1, HUB IP ADDR 0, and HUB IP ADDR 1 fields were changed from modifiable to no change fields. The values for SND PORT and RCV PORT were modified from 1983 to 1500 or 1983.

EQIM form (5700 Record) - This form is used to define SM (Switching Module) equipage assignments. The EEC SM field was added.

OFCOPT form (5509 Record) - This form is used to define office parameters. The EEC ACT field was added.

TRUNK form (5204 Record) - This form is used to define trunk parameters. Added the EEC ACTIVE no change field.

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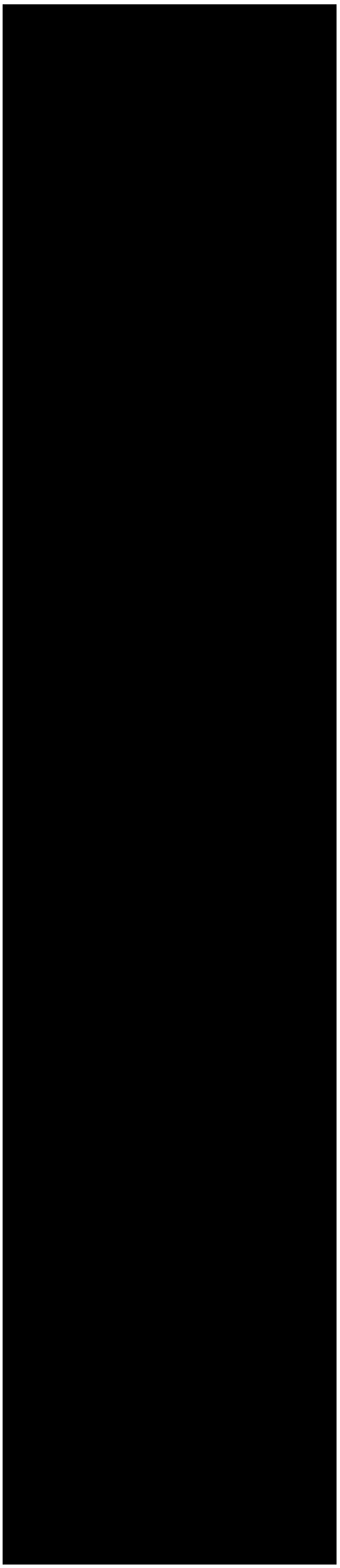

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Figure 1 FORM FLOW FOR STS-1 EXTERNAL ECHO CANCELLATION

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SEC. 9Q: DNU-S VT GROUP NUMBER

1. FEATURE DESCRIPTION

The DNU-S (Digital Networking Unit - SONET) VT (Virtual Tributary) Group Number feature is available with 5E13 and later Software Releases. This feature only affects customers with DNU-S equipment.

This feature provides the capability to satisfy Bellcore generic requirements for provisioning of DNU-S VT facilities (DS1). The intent of the requirement and this feature is to provide a standardized numbering scheme for all switch owners implementing a SONET interface. To implement this feature:

- the existing VT field was split to form two new fields: VT GROUP and VT MEMBER,
- the NEN OE field was expanded from 10 to 11 digits,
- the valid entry range for the STS field was modified,
- a new OE subfield, STE (SONET Termination Equipment), was introduced (coincident with this feature).

This change occurs as part of a retrofit to 5E13 and is not optioned and/or secured in any way aside from retrofit. The new numbering scheme is "equivalent" in overall capacity to the old scheme in that 28 distinct tributaries are still supported (28 VTs versus 7 VT Groups with 4 VT Members each).

The specific forms/fields affected are identified below. Also see the EQVT form (5858 Record) which provides a conversion cross reference for the VT field versus the VT GROUP and VT MEMBER fields.

The feature number for this feature is 99-5E-4424.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
AIU	5745	8	64	19.16
CCLNK	6004	9	10D	16.6
EQSTE	5857	8	59	20.12
EQVT	5858	8	60	20.24
LINE	5109	3	1I	1.1
MLHLN	5111	3	1K	1.6
NAILUP	5207	3	2F	7.11
PRIGRP	5211	3	2M	5.2
RDTAPORT	5911	5	1L	22.17
RTERM	5174	3	1S	18.15
TRUNK	5204	3	2C	5.5
XAT	5909	5	1J	23.40

AIU form (5745 Record) - This form is used to define AIU equipment. Removed the VT field and added the FAC/STE, STS, VTG, and VTM fields and related data rules.

CCLNK form (6004 Record) - This form is used to define the external link set member for the CCS7 (Common Channel Signaling System No. 7). The NEN format was modified for the new VT numbering scheme.

EQSTE form (5857 Record) - This form is used to define the STE facility in the DNU-S. The valid entry range for the STE field was modified from 0 - 5 to 1 - 6.

EQVT form (5858 Record) - This form is used to define Virtual Tributary and DS1S (Digital Signal Level 1 SONET) facilities on a DNU-S. The VT field was replaced with the VT GROUP and VT MEMBER fields; added the STE field.

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LINE form (5109 Record) - This form is used to define Office Equipment numbers (OE NUMBER) and features for a telephone line. The NEN OE was modified.

MLHLN form (5111 Record) - This form is used to define an individual Terminal Number assigned to a Multi-Line Hunt Group. The NEN OE was modified.

NAILUP form (5207 Record) - This form is used to define data to directly link two ports. The NEN OE was modified.

PRIGRP form (5211 Record) - This form is used to define Primary Rate Interface Group channels. The NEN OE was modified.

RDTAPORT form (5911 Record) - This form is used to define data for Remote Digital Test Access Port protocols. The NEN OE was modified.

RTERM form (5174 Record) - This form is used to define Remote Terminals. The UNIT TYPE and RT FAC TERMINATION fields were modified.

TRUNK form (5204 Record) - This form is used to define each member of a trunk group. The NEN OE format was modified.

XAT form (5909 Record) - This form is used to define T1 facilities (digital lines and trunks) with X.25 Packet Switching services on a subscription basis using Q.931 signaling. The NEN OE format was modified.

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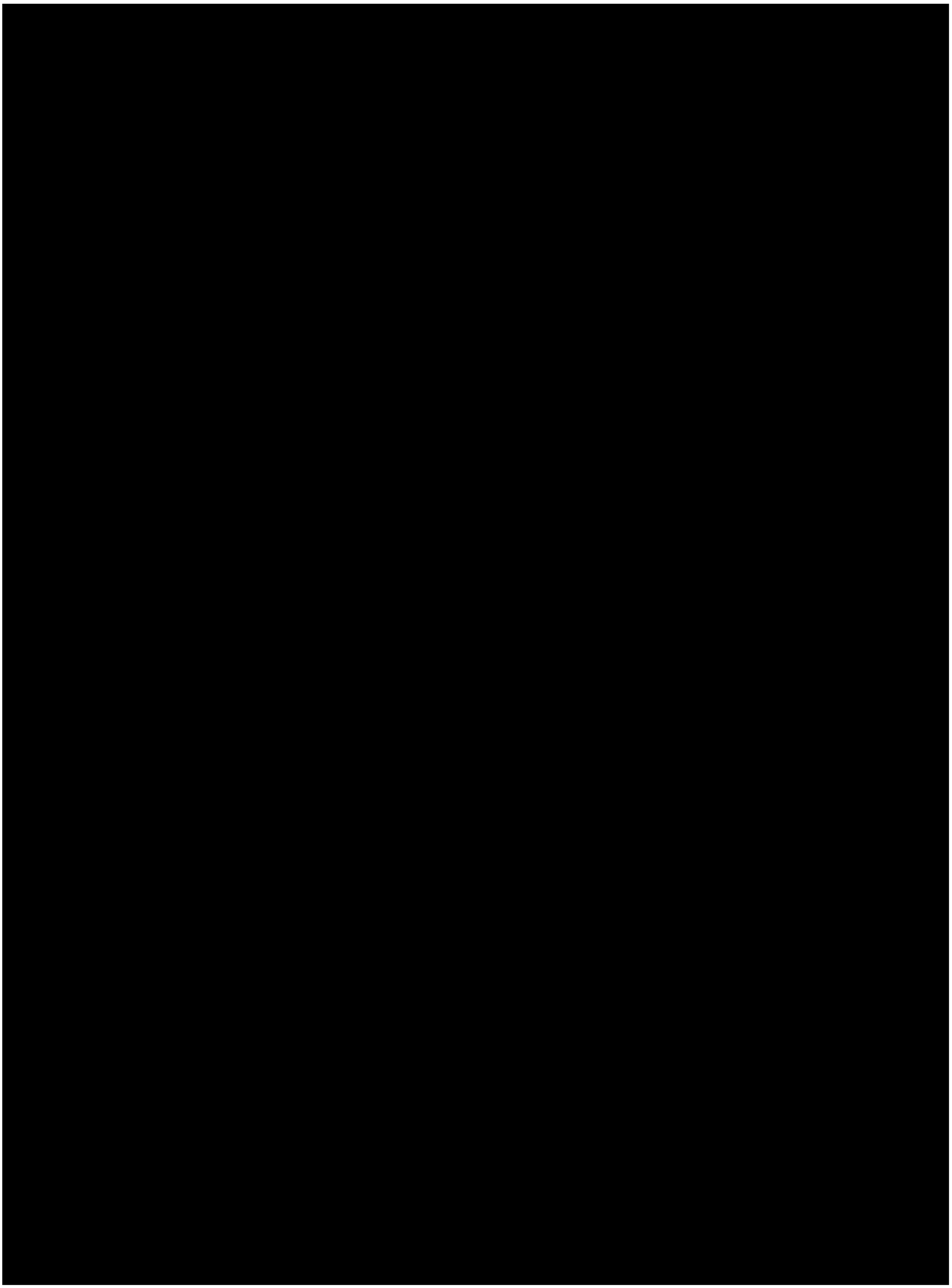

Figure 1 FORM FLOW FOR DNU-S VT GROUP NUMBER

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SEC. 9R: DNUS-S PATH TRACE

1. FEATURE DESCRIPTION

The DNU-S (Digital Networking Unit - SONET) Path Trace feature is available with 5E13 and later Software Releases. It provides the capability to provision fixed length transmission character strings so that the receiving STS (Synchronous Transport Signal) PTE (Path Terminating Equipment) can verify its continued connection to the intended transmitting STS PTE.

The feature number for this feature is 99-5E-4425.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQSTE	5857-1/2	8	59	20.12

EQSTE form (5857 -1/2 Record) - This form is used to define the STE (SONET Termination Equipment) and STS equipment in the DNU-S. Two fields were added (TRANSMIT and EXPECTED) to allow up to 62 characters to be provisioned to provide end-to-end verification of the STS-1 (Synchronous Transport Signal Electrical-1) path. The record was split into two pages to accommodate this change.

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SEC. 9S: REMOTE SWITCHING MODULE ON DIGITAL NETWORKING UNIT - SONET

1. FEATURE DESCRIPTION

The RSM (Remote Switching Module) on DNU-S (Digital Networking Unit - SONET (Syncronous Optical Networking) feature is available as a 5E13 Software Update. This feature provides the capability to support a non-SM-2000 RSM via a DNU-S on a Host SM-2000. This feature only applies to DNU-S units that utilize the STS (Syncronous Transport Signal) facility interface, not the OFI (Optical Facility Interface). This feature also implements an enhanced circuit pack, KTU1-B, which is a technology upgrade over the previous issue (KTU1).

The feature number for this feature is 99-5E-4209.

2. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
RSMLNK	5517	3	5Q	18.5
EQVT	5858	8	60	20.24

RSMLNK form (5517 Record) - This form is used to define the assignment of the Umbilical Links between the HSM (Host Switching Module) and the RSM. For this feature, a UNIT TYPE field was added to define either a DLTU or a DNU-S; three new fields were added (STS, VTG, and VTM) to support the DNU-S, and three FAR END fields were modified to support the DNU-S.

For the DNU-S case, the following fields are affected:

- HOST (UNIT TYPE) = "DNUS"
- STE = 1 - 6
- STS = 1
- DG = 0 - 1
- VTG = 1 - 7
- VTM = 1 - 4

A corresponding EQVT form must be defined.

For the DLTU case, the following fields are affected:

- HOST (UNIT TYPE) = "DLTU"
- DLTU = 0 - 5
- DFI = 1 - 10
- FAC = 0 - 1

EQVT form (5858 Record) - This form is used to define the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S. For this feature, a new transport APPLICATION TYPE of "RSM" was added to carry the signaling for the RSM umbilicals. The following data conditions must exist:

- VT MODE must be "DMI"

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- FRAME must be "ESF"
- ZCS must be "N"

NOTE: When "RSM" is not entered, VT MODE must be "RB".In addition, the SM, DNUS, DATA GROUP, STE, and STS values must be defined on a corresponding EQSTE form (5857 Record).

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SEC. 9T: MULTIPLEX ACCESS INTERFACE UNIT (XAIU)

1. BACKGROUND

The local AIU (Access Interface Unit) as originally designed (see Division 2, Section 7K) requires one pair of cables per PI (Peripheral Interface) attached to the COMDAC (Common Data and Control Circuit), and one pair of cables per PICB (Peripheral Interface Control Bus). A typical AIU with two PIDBs (Peripheral Interface Data Buses) on each COMDAC requires 12 cables between the AIU and the MCTSI (Module Controller/Time Slot Interchange) (2 COMDACS with one pair of PICB cables and two pairs of PIDB cables each). If the AIU is in a cabinet with six units total, the cabinet requires 72 CB/PIDB (Control Bus\Peripheral Interface Data Bus) cables. At the SMP (Switching Module Processor) end, an SM-2000 might have 5 cabinets attached to it, for a total of 360 PICB/PIDB cables.

A typical PICB/PIDB cable takes about 10-15 minutes to install, due to the need to route the cable through cable ducts, find the attachment location by counting pins on connectors, and tying and binding the cable to other cables. On average, several minutes more are required per cable, to debug the installation. A typical cabinet requires approximately 18 hours just for the installation of the PICB/PIDB cabling (72 cables at 15 minutes per cable).

In addition, the number of cables arriving at the MCTSI makes cable routing difficult and error-prone, and makes installing cable duct covers very difficult. A similar problem exists at factory system test, where the cabinet must be cabled to test equipment.

The number of cables can be dramatically reduced by using a fiber-optic link between the MCTSI and the AIU. The XAIU (MultipleX AIU) feature, previously known as MPLI (Multi-Peripheral Link Interface) replaces these cables. This feature can reduce the manufacturing interval as well as the required installation resources.

2. FEATURE DESCRIPTION

2.1 99-5E-4596

The XAIU (MultipleX Access Interface Unit) feature is available in the 5E14 and later Software Releases. The feature number for this feature is 99-5E-4596.

The XAIU is designed to resolve the PICB/PIDB cable problem for local AIUs installed on the SM-2000 Switch. It takes the place of the existing PICB/PIDB AIU in the local office, reducing the cabling to each cabinet, and allowing a greater distance (up to 2000 feet) between the AIU and the SM-2000.

The XAIU feature introduces two new units to the system:

- PDXU - The PDXU (PCT (Peripheral Control and Timing) Data Exchanger Unit) is made up of two PCTDX (PCT Data Exchanger) circuits. The PCTDX contains one PLI (Peripheral Link Interface) paddle board, the PCT Fiber, and one FCD (Fiber Common Data).

- XAIU - The XAIU uses the same shelf as the RAIU (Remote Access Interface Unit). The difference between the RAIU and the XAIU is in the cabinet. The XAIU cabinet adds two new packs at the bottom of the cabinet beside the fan unit, or at the top of a cabinet that has some empty shelf locations.

To terminate the fiber optic cables, a new pack, the FCD, will be introduced which terminates the PCT fibers from the SM-2000 and distributes the data to each shelf in the cabinet. The cabling from th FCD to each shelf in the cabinet can be installed at the factory, with every cabinet having the same cabling.

The XAIU reuses the existing PLI paddle board that is used in the DNU-S (Digital Networking Unit -

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System) application . The FCD board is a simplified version of the CD (Common Data) pack in the DNU-S, and QCOMDAC (Quad PIDB COMDAC) that terminates the cables from the FCDs is a simplified version of the RCOMDAC (RAIU COMDAC) with the T1/E1 frames removed. The use of the PCT link limits XAIU to the SM-2000 platform only, since classic SMs (Switching Modules) do not support PCT links.

The software impact occurs in two areas:

- maintenance of the new fiber optic link, termed the PDXU (PCT Data EXchanger Unit) and
- new code to allow the AIU to be supported on a PCT link.

Although XAIU is a Central Office vehicle, XAIU call processing software reuses some RAIU/EAIU software, since control of the COMDAC is done via the MH (Message Handler) rather than using PICB control. However, the XAIU and RAIU differ in the way that per-call signaling is done. The XAIU uses A-D bit signaling for call processing signals (offhook, etc.,) because the PCT link provides a full 16 bit path to th SI (System Integrity Subsystem). The RAIU uses message based signaling for call signals because the T1/E1 facilities support only eight bits per channel, not enough to support additional signaling information.

XAIU will support two fiber pairs per cabinet with each fiber carrying either a full PCT (768 time slots, or 24 time slot groups at 32 time slots per group) or one-half PCT (384 time slots, or 12 time slot groups at 32 time slots per group).

Six configurations are envisioned: half-PCT configurations with two, three, four, and six XAIUs, a full-PCT configuration with six AIUs, and a four cabinet with two full PCTs. The shelves in the half-PCT configurations are all cabled with two TSGRPs (Time Slot Groups) to each COMDAC, with unused TSGRPs available to be connected to an adjacent unfilled frame. These configurations are expected to be the most common needs of our customers.

XAIU Configuration Table

Configuration	Fiber Link	AIUs/ Cabinet	Line Concentration	Call Volume
Low traffic 5E14 and later	Two half-PCTs	6	approx. 5:1	7 CCS or less
Medium 1 (Option 2) traffic 5E14 FR 6, 5E15 FR2 and later 99-5E-7727	Two half-PCTs	4	approx. 3.3:1	12 CCS or less
Medium (Option 1) traffic 5E14 FR3, 5E15 BMI and later 99-5E-7726	Two full PCTs	6	approx. 2.5:1	14 CCS or less
High traffic 5E14 and later	Two full PCTs	4	approx. 1.7:1	21 CCS or less

Note that each configuration is pre-wired at the factory to gain installation and cost benefits; therefore, there is a fixed mapping of the time slot groups on the PCT Links to the XAIU shelves. The fixed mapping means that each shelf has an upper limit on the TSGRPs that serve it. The architecture supports the ability to have the pre-wired TSGRPs only partially equipped, which may be useful to marketing.

Overall, the XAIU replaces all the PICB/PIDB cables to an entire cabinet with two fiber pairs. Installation time for the PICB/PIDB cables to a cabinet can be reduced to approximately 10 minutes, and office installation time can be significantly reduced. It should be noted that some time is still required for the installation of MTBs (Metallic Test Buses) and any external Ring Generator connections. Reduction of the PICB/PIDB connection time makes the most dramatic improvement, and thus is the only connection time being considered as part of this feature. For additional architecture information on the XAIU, please refer to AIU ADS (Access Interface Unit Architecture Design Specification).

2.2 99-5E-7726 Medium Option 1

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For 5E14 FR 3 and later, the Medium Option 1 configuration was added. Refer to the above XAIU Configuration Table for configuration values.

2.3 99-5E-7727 □ Medium Option 2

For 5E14 FR 6 and 5E15 FR2 and later, the Medium Option 2 configuration was added. Refer to the above XAIU Configuration Table for configuration values.

2.4 99-5E-7571 □ XAIU Broadband

For 5E15 FR2 and later, the Broadband capability was added for the XAIU. To achieve this capability, the BROADBAND field on the EQAIU form (5745-3 Record) must be set to "Y".

3. FEATURE ASSIGNMENT

For 5E14 and later, to provision this feature:

- □ Insert the PDXU form (see Figure 1) or to delete this form (see Figure 2).
- □ Insert the XAIU form (see Figure 3) or to delete this form (see Figure 4).

4. TRANSLATIONS REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQAIU	5745-3	8	64	19.16
EQPDXU	5868	8	72	19.23

EQAIU form (5745-1/2 Record) - This form is used to define AIU (Access Interface Unit) equipment. Added the XAIU CONFIG, PDXU, SHELF, TSGRP LIMIT, PASSWORD, and the (XAIUTSGRP) EQSTAT fields and the related data rules.

EQPDXU form (5868 Record) - This form is used to define the PDXU (PCT Data Exchanger Unit). This is a new form added to support this feature.

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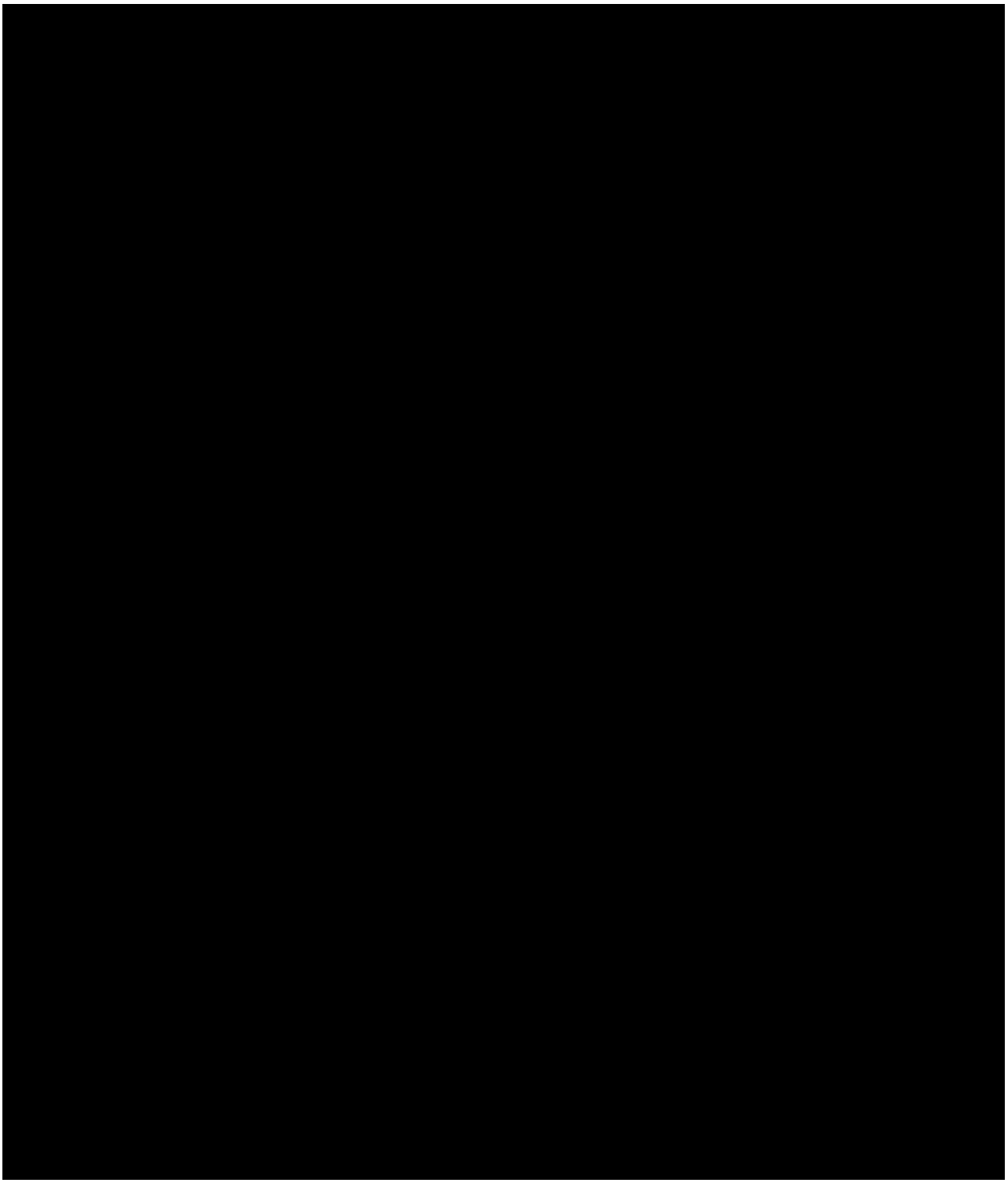

Figure 1 FORM FLOW FOR XAIU FEATURE PCT DATA EXCHANGER UNIT INSERT PROCEDURE

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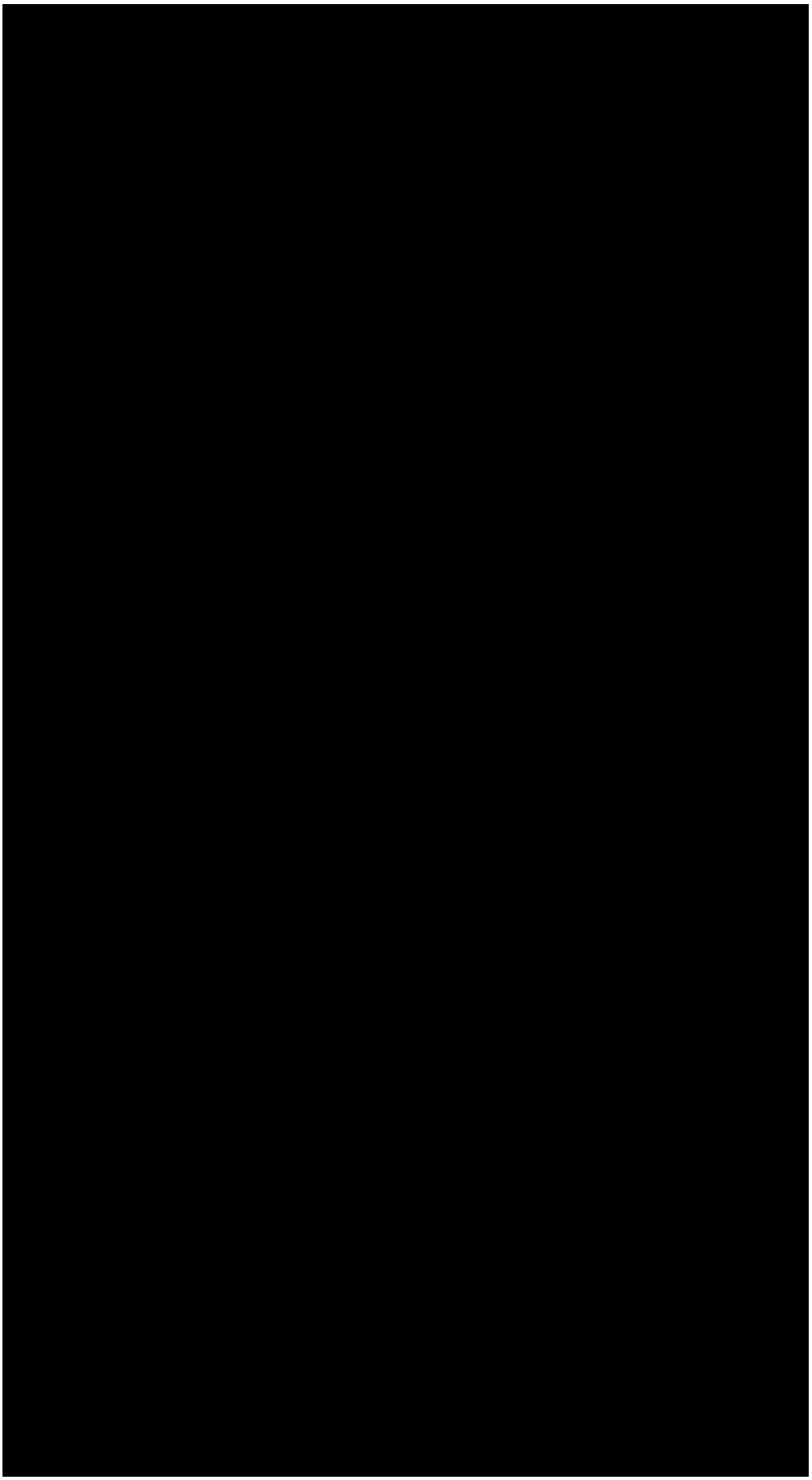

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Figure 2 FORM FLOW FOR XAIU FEATURE PCT DATA EXCHANGER UNIT DELETE PROCEDURE

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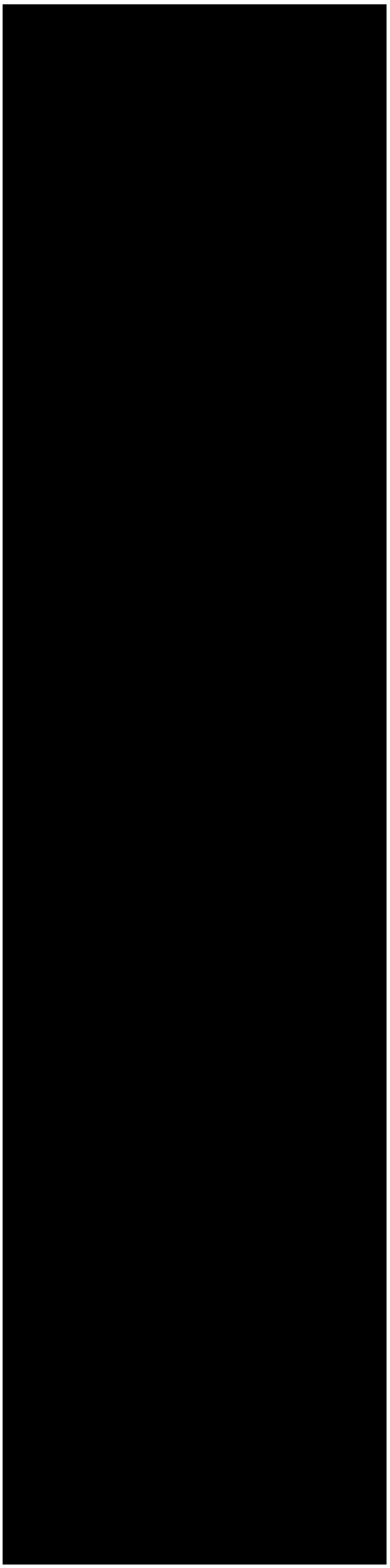

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Figure 3 FORM FLOW FOR XAIU FEATURE XAIU INSERT PROCEDURE

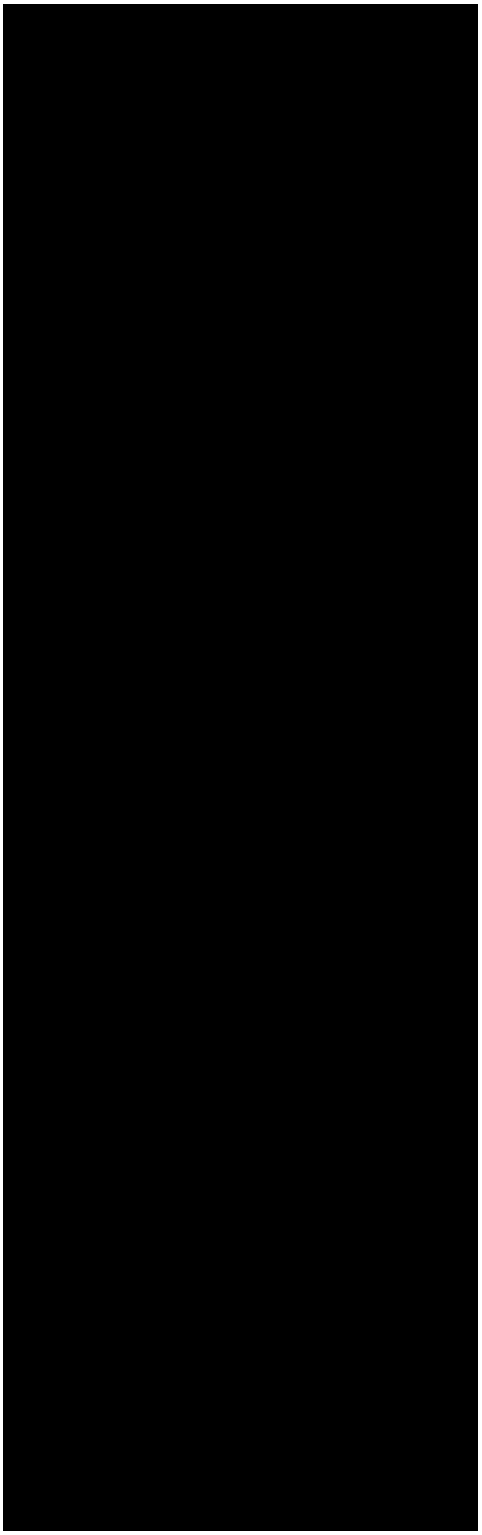

Figure 4 FORM FLOW FOR XAIU FEATURE XAIU DELETE PROCEDURE

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SEC. 9U: SUPPORT BOTH TAP AND MTB CONNECTIONS ON EAIU

1. FEATURE DESCRIPTION

The Support Both TAP (Test Access Pack) and MTB (Metallic Test Bus) Connections on EAIU (Extended Access Interface Unit) feature is available with the 5E14 Feature Release 4 Software Release. It is effective for 5E12 and later. This feature provides the capability to provide a line testing configuration for EAIUs (remoted) that supports the assignment of both a MTB from the host MMSU (Modular Metallic Service Unit) to the EAIU and a TAP (Test Access Pack) located in the EAIU. Prior to this feature, TEST TYPE of "M" (Metallic Test Bus) was restricted from assignment on the EQAIU form (5745 Record). This feature removes that restriction.

The feature number for this feature is 99-5E-7657.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQAIU	5745	8	64	19.16

EQAIU form (5745 Record) - This form is used to define AIU units. A data rule was modified to allow TEST TYPE of "M" which was previously restricted.

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SEC. 9V: OPTICALLY EXTENDED CONTROL AND DATA UNIT

1. FEATURE DESCRIPTION

1.1 OXU

Available with 5E15 and later Software Releases, the OXU (Optically eXtended control and data Unit) feature (99-5E-4288) provides the ability to connect peripheral units to an SM-2000 using PIDBs (Peripheral Interface Data Buses) and PICBs (Peripheral Interface Control Buses) via optical links. The primary reason for optical links is to enable the SM-2000 to be located at a distance of more than the PIDBs/PICBs limited range of 28 feet. With this feature it is now possible to connect peripheral units up to 2000 feet from the SMC (Switching Module Controller) cabinet of the SM-2000. This allows peripheral units from several SMs to remain in their existing location to be reconnected onto an SM-2000 class processor. The SM-2000 supports up to eight OXUs.

To implement this feature, two new units are introduced:

- Application Controller Expansion Unit - EQAPCX (5831 Record) provides the OXU APCO (Application Controller Board Optical Extension) between the SM and the SM-2000.
- Extended Control and Data Unit - EQXCDU (5832 Record) duplicate, single shelf unit which provides PICB/PIDB access between the SM and the SM-2000 via optical PCT (Peripheral Control and Timing) links to the PLI/TSI (Peripheral Link Interface/Time Slot Interface unit) up to 2000 feet.

Both of these forms introduced new CLI (Change Level Indicator) values. The EQAPCX form has one CLI field for the UN651 board. The EQXCDU form has 4 CLI fields for the UN599 board. See the Equipment Assignment section, Division 8, Section 1.

Twenty ODA forms were modified to add a new INTF UNIT (Interface Unit) field to assign the OXU. The valid entry range for this field is 0 - 8; 0 indicates non-OXU. Note that on five of these forms (indicated below) the INTF UNIT field is a non-entry, display only field for both RC (Recent Change) and ODA (Office Data Administration).

EQAIU
EQCI
EQDI
EQDCLU/EQDCLP
EQDCTU
EQDS (display only)
EQDSC3
EQDUP
EQFIU (ODA only; display only)
EQIDCU
EQISLU
EQISTF (display only)
EQLU
EQMSU
EQPSU
EQRA
EQRCLK (display only)
EQRISLU (display only)
EQTU
EQGDSC3

The following data rules highlight the interaction restrictions between the EQXCDU form and existing

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equipment forms:

- The SM/INTF UNIT/DATA GRP combinations entered on any of the modified equipment forms mentioned above must be defined on a EQDI form or a EQXCDU form, and
- The EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on the equipment form (e.g., "O" is greater than "G" which is greater than "U").
- When INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

Except for the above restrictions, existing provisioning rules apply.

1.2 Scaling of DLTU1 and DCLU Units

Relocating DLTU1s (Digital Line Trunk Units 1) and DCLUs (Digital Carrier Line Units) from SMs to OXUs present special challenges in that prior to this feature, these units were not SM-2000 supported. Part of the OXU feature is to provide support of these units for SM-2000 and to increase the number of units (scaling) which can be supported. These modifications were implemented in two steps, affecting two software releases. SM-2000 support was made available in 5E14 as a Software Update (SU #00-0009) to enable DLTU1 and DCLU units to be supported on the SM-2000 platform. This means that the DLTU1 and DCLU units are supported on SM-2000 in 5E14 with valid entries of 0 - 5 and 0 - 7, which allows 6 DLTU1s and 8 DCLUs. Scaling of these units, that is, increasing the number of units supported, was implemented with the 5E15 BMI (Beginning of Managed Introduction) with valid entries of 0 - 11 and 0 - 15, respectively, allowing 12 and 16 units supported. (Note that the screen field size for the DLTU and DCLU entries may vary. On some screens, the DLTU and/or DCLU fields are 2-digit fields, while on others the field size is 3-digits. Nonetheless, the valid values are 0 - 7 and 0 - 15, respectively.)

After a retrofit to 5E15, the DLTU1 will still share resources with the DLTU2. Therefore, with the maximum limits scaled upward, all 12 units can be DLTU1, all 12 units can be DLTU2s (no fully loaded with DFI2s), or the sum of DLTU1 plus DLTU2 must be no more than 12 per SM-2000. The maximum number of T1 facilities supported per SM-2000 remains at 120.

The scaling expanded the valid entry range on fifteen ODA forms with DEN/SLEN (Digital Equipment Number)/SLC Line Equipment Number) equipment number fields that allow DLTU1 and DCLU equipment assignments. As mentioned above, the valid entry range was increased as follows:

- DLTU/DEN from 0 - 5 to 00 - 11
- DCLU/SLEN from 0 - 7 to 00 - 15

The DLTU segment of the DEN field entry range was expanded on the following forms:

CCLNK
EQAIU
EQDCLU/EQDCLP
EQDSX
EQDU/EQDUP
PRIGRP
RSMLNK
XAT

The DCLU segment of the SLEN field entry range was expanded on the following forms:

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SLCCU
SLCRT
EQDCLU/EQDCLP

There is a secondary impact of the scaling of the DEN and/or SLEN unit numbers on the following forms:

LINE
MLHLN
TRUNK
NAILUP

NOTE: Additional Notes:

a. On the EQRISLU form which is applicable only to SMs, the DLTU range will be limited to 0 - 5.
b. On the RSMLNK form, the value of Near End DLTU will be limited to 0 - 5 while the Far End DLTU assignment supports the 0 - 11 range; Near End entries apply only to SMs while Far End entries may correspond to SM-2000 or SM processors.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
CCLNK	6004	9	10D	16.6
EQAIU	5745	8	64	19.16
EQAPCX	5831	8	83	18.18
EQCI	5848	8	50	18.2
EQDCLU/ EQDCLP	5810	8	30	19.6
EQDCTU	5751	8	26	19.9
EQDI	5849	8	51	18.3
EQDS	5740	8	21	19.5
EQDSC3	5852	8	54	19.18
EQDSX	5721	8	14	Not Applicable
EQDU/ EQDUP	5730-1/ 5730-2	8	17	19.4/20.4
EQFIU	5753	8	28	20.4
EQGDSC3	5860	8	63	19.19
EQIDCU	5846	8	48	19.12
EQISLU	5731	8	18	22.5
EQISTF	5823	8	37	19.11
EQLU	5710	8	9	19.1
EQMSU	5750	8	25	19.7
EQPSU	5741	8	22	22.2
EQRA	5821	8	35	19.10
EQRCLK	5723	8	16	8.11
EQRISLU	5732	8	19	22.9
EQTU	5720	8	13	19.2
EQXCDU	5832	8	84	18.19
LINE	5109	3	1I	1.1
MLHLN	5111	3	1K	1.6
PRIGRP	5211	3	2M	5.2
RSMLNK	5517	3	5Q	18.5
SLCRT	5106	3	1F	18.10
SLCCU	5107	3	1G	18.11
TRUNK	5204	3	2C	5.5
NAILUP	5207	3	2F	7.11
XAT	5909	5	1J	23.40
Equipment Assignment	N/A	8	1	N/A

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SEC. 9W: PCT INTERFACE TO THE IWG

1. FEATURE DESCRIPTION

The PCT (Peripheral Control and Timing) Interface to the IWG (Inter-Working Gateway) feature is made available for the 7R/E PLS (Packet Local Solution) Release 3.0 and 5E15 Feature Release 1. The feature number is 99-5E-7556. This feature allows customers to connect PCT links on a SM-2000 to a PCT-EC (Echo Cancellation) card on an IWG. The IWG provides the conversion of the TDM (Time Division Multiplex) circuits to/from the ATM (Asynchronous Transfer Mode) Virtual Circuits. A new PCT-EC card was developed to interface to the 5ESS Switch over the standard PCT links. The 5ESS Switch has a new virtual peripheral unit called the IWG interface.

This maintenance feature provides the following:

- (De)growth of the IWG Interface, IWGLI (Inter-Working Gateway Link Interface), and MHEIB (Message Handler Ethernet Interface Board).
- Full and Selective initialization of the IWG Interface and IWGLI.
- Fault recovery and reporting of the IWG Interface, and ethernet link.
- Diagnostics of the IWG Interface and IWGLI.
- MCC (Master Control Center) pages, and maintenance status of the IWG Interface, IWGLI, and MELNK (Message Handler Ethernet Link).
- ASM (Administrative Services Module) GUI (Graphical User Interface) page which also provides the maintenance status of the IWG Interface, IWGLI, and MELNK. It also displays OC-3 (Optical Carrier 3) routing status (blocked or unblocked).
- IPDC (Internet Protocol Device Control) message processing, based on IPDC verision 0.15.
- Interface to call processing for PCT link time slot hunting and 0C3 link selection.
- Audits for data being introduced for the new peripheral.

In addition to this feature, the following features are needed to provide IVTOA (Integrated Voice Telephony over ATM):

- 99-5E-7554, ATM Global Routing and Signaling
- 99-5E-7555.A, BICC (Bearer Independant Call Control) ATM Call Processing
- 99-5E-7555.B, PLS (Packet Local Solution) OAM&P (Operations, Administration, Maintenance and Provisioning) Interface via OLM/ASM (OneLink Manager/Administrative Services Module)
- 99-5E-7555.C, Terminal Maintenance and CCS7 Signaling (Common Channel Signaling, CCITT Version 7)

The PCT Interface to the IWG feature depends on the infrastructure provided by the GUI Interface for the DNU-S (Digital Network Unit-SONET) and DLTU (Digital Line and Trunk Unit) feature (99-5E-7391).

2. FEATURE ASSIGNMENT

The EQIWG form (5764 Record) supports the PCT Interface to the IWG feature. To activate this feature, grow an IWG on the EQIWG form. No other feature activation is needed.

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3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ENETLINK	5827	8	67	19.21
ENETPIPE	5826	8	66	19.20
EQDI	5849	8	51	18.3
EQIM	5700	8	2	18.1
EQIWG	5874	8	82	19.26

ENETLINK form (5827 Record) - This form is used to define the ethernet links connected to a MH (Message Handler). For 5E15 and later, the "VTOA" valid entry and a data rule were added to the SERV TYPE field.

ENETPIPE form (5826 Record) - This form is used to define the etherniet pipes connected to a MH. For 5E15 and later, the "VTOA" valid entry and a data rule were added to the SERV TYPE field.

EQDI form (5849 Record) - This form is used to define the Data Interface for the SM-2000. For 5E15 and later, a data rule was added to the TSI BOARD field.

EQIM form (5700 Record) - This form is used to define Switching Module equipage assignments. For 5E15 and later, a new header IWG OPTIONS and new field VTOA SM field were added to support the PCT Interface to the IWG feature.

EQIWG form (5874 Record) - This form is used to define the units of IWG (Inter-Working Gateway) which is the bridge between a SM and an ATM (Asynchronous Transfer Mode) switch. For 5E15 and later, this new form was added to support the PCT Interface to the IWG feature.

4. GLOSSARY

ASM	Administrative Services Module
ATM	Asynchronous Transfer Mode
DLTU	Digital Line and Trunk Unit
DNU-S	Digital Network Unit-SONET
GUI	Graphical User Interface
IPDC	Internet Prot
IVTOA	Integrated Voice Telephony over ATM
IWG	Inter-Working Gateway
IWGLI	Inter-Working Gateway Link Interface
MCC	Master Control Center
MELNK	Message Handler Ethernet Link
MH	Message Handler
MHEIB	Message Handler Ethernet Interface Board
0C3	Optical Carrier 3
OLM	OneLine Manager

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PCT	Peripheral Control and Timing
PLS	Packet Local Solution
SM	Switching Module
TDM	Time Division Multiplex

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SEC. 9X: SET GLOBAL DSN BIT AND TEST DSN FOR VCDX

1. FEATURE DESCRIPTION

The Set Global DSN (Digital Switch Network) BIT and Test DSN for VCDX (Very Compact Digital Exchange) feature is available for 5E13 and later Software Releases. The feature number is 99-5E-4673. This feature allows an SM-2000 VCDX to be provisioned as a DSN office, and verification of DSN functionality on a loaded SM-2000 VCDX. The feature provides the following MLPP (Multi-Level Precedence Preemption)/DSN features:

- PAT (Precedence Access Threshold)
- Individual Dialing Plan to support the MLPP feature
- Routing to Access Lines and PBX (Private Branch Exchange) trunks (assuming the MLPP feature is assigned)
- Speed Calling/Abbreviated Dialing to Make MLPP Calls
- Authorization and Account Code Dialing to Make MLPP Calls
- MLPP Screening - map precedence levels, and route code valued and destinations to desired treatment for specified classes of users (using screening index)
- Dual Homing - support a PBX homed to two different DSN offices
- DSN AMA (Automatic Message Accounting) - precedence level recorded
- DSN MDR (Message Detail Recording) - precedence level recorded
- Tones and Announcements - PAT limitation, blocked precedence, unauthorized precedence, preemption tone, and blocked preemption
- MLPP feature on 2-wire lines, 4-wire lines, custom ISDN (Integrated Services Digital Network) lines, and 4-wire E&M trunks
- COI (Community of Interest) - groupings of MLPP users for purposes of screening MLPP calls with regard to allowed precedence levels and calling areas
- Support of MLHGs with the MLPP feature assigned (analog and custom ISDN) - queuing and preemption interactions
- Hotline Service
- Support for the MLPP feature on trunks, including interswitch trunks and PBX trunks (i.e., trunk types - TIERNID, TIEPNID, VONPNID, VONRNID, NONRCD, EORNID, EOPNID, SATPID, SATNID) - precedence level signaling, friendly and preemptive hunting, and preemption
- Support for MLPP on PRI (Primary Rate Interface) and MLPP on SS7 (Signaling System 7) trunks
- Support for ISAT (Integrated Services Attendant) Interactions with MLPP - MLPP queuing, MLPP displays, in addition to the non-DSN ISAT feature (e.g., busy verify, attendant recall, etc.)

In addition, this feature provides MLPP versions of the following features:

- Call Forwarding
- Call Pickup

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- Multi-Way Calling, including Call Hold, Transfer, and Conference Calling
- Distinctive Ringing
- Custom ISDN features - Shared DN (Destination Number), Multiple Call Appearance, Displays, Distinctive Ringing, and Feature Button Origination
- DSM Measurements

This feature does not provide POLYGRID Routing and the DSN Network Management features.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQCORE	5701	8	3	17.1

EQCORE form (5701 Record) - This form is used to define Core Unit Assignments in a 5ESS Switch office such as the Message Interface Control Unit, the Time Multiplexed Switch and the Message Interface Control Unit Subunits. It is intended to be used as an Office Record for those 5ESS Switch offices that are not utilizing an Operational Support System (e.g., RMAS) for generation of Office Records. For 5E13 and late, a data rule was modified for the VCDX OFFICE field pertaining to the DSN OPTION field on the OFCOPT form (5509 Record).

3. GLOSSARY

3.1 Acronyms

AMA	Automatic Message Accounting
COI	Community of Interest
DN	Directory Number
DSN	Digital Switch Network
ISAT	Integrated Services Attendant
ISDN	Integrated Services Digital Network
MDR	Message Detail Recording
MLHG	Multi-Line Hunt Group
MLPP	Multi-Level Precedence Preemption
PAT	Precedence Access Treshold
PBX	Private Branch Exchange
PRI	Primary Rate Interface
SS7	Signaling System 7
VCDX	Very Compact Digital Exchange

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SEC. 9Y: DNU-S Support for B-Synchronous DS1 Mapping to VT1.5

1. BACKGROUND

Prior to this feature, only A-Synchronous DS1 virtual tributary mapping was supported.

2. FEATURE DESCRIPTION

Available with the 5E13 and later Software Releases, the DNU-S Support for B-Sync DS1 Mapping to VT1.5 B-Synchronous mapping to the VT1.5 (99-5E-4151) feature provides B-Synchronous mapping capability. To support this feature, a new valid entry, "BSYNC", was added to the VT TYPE field on the DNU-S Virtual Tributary form (5858 Record). See Division 8, Section 60.

- ***NOTE:*** If VT TYPE is "BSYNC", the far end and any network elements along the path, must also be setup/compatible with "BSYNC".

3. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms				
Form Name	**Record Number**	**Division**	**Section**	**RC View**
EQVT	5858	8	60	20.24

EQVT form (5858 Record) - This form is used for equipage of the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S. A new value entry of "BSYNC" was added for the VT TYPE field.

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SEC. 9AA: EAIU/RAIU EMERGENCY STAND ALONE CAPABILITY

1. FEATURE DESCRIPTION

Available with 5E15, Feature Release 3 and later Software Releases, the EAIU/RAIU Emergency Stand Alone Capability (99-5E-7682) feature allows the AIU to process 911 calls when the AIU is in a stand alone mode. A new field was added to the AIU form to indicate if the feature is activated. If the new field, EMERG STAND ALONE, is set to "Y", AIU TYPE must equal "EAIU".

Operation in stand alone mode is accomplished with the BZ-RS (BZ-Remote Survivability) hardware. The BZ-RS is housed in a Miscellaneous Cabinet with the two Primary T1s from the switch terminating on it, and two other primary T1s going from it to the RCOMDACs in the EAIU. If the RCOMDACs detect that communication on BOTH primary T1/E1s has been lost, the BZ-RS will take control over the E/RAIU. When the BZ-RS has detected that T1/E1 communication has been restored, it will relinquish control back to the SM.

This feature requires and is limited to the following:

- an ASM (Administrative Services Module) must be present in the host office
- the ASM must be running software version 4.0.36 or greater
- only newly added EAIUs are supported, that is, no conversion is available.
- only POTS loop-start calls are supported.

2. TRANSLATION REQUIREMENTS

New Or Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
EQAIU	5745	8	64	19.16

EQAIU form (5745 Record) - This form is used to define AIU units. A new field, EMERG STAND ALONE, was added to activate this feature.

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SEC. 10: ATM TRANSPORT SOLUTION FEATURES

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SEC. 10A: DIRECT CONNECT IWG CALL CONTROL

1. FEATURE DESCRIPTION

The Direct Connect IWG Call Control feature has feature number 99-5E-8268 and is being deployed for the Beginning Managed Introduction in the 5E15 FR4.3 Software Release.

The Direct Connect IWG Call Control feature provides a method of sending Sapphire message via out-of-band signaling links between a PSM (Packet SM) and its associated IWGs (Inter-Working Gateway(s)). An out-of-band signaling link is one that is separate from the voice or bearer path, compared with an in-band signaling link where the signals and bearer share the same path. With this feature, no single point of failure causes an IWG to lose its call control links. Two cards - an ENET (Ethernet) card and an RTS (Route Server Module) card - are added to the IWG slot layout for this feature.The call control links go from the PSM (one physical link per MCTSI side via the MHEIB) to the MH Hub associated with the MCTSI side. From each MH Hub, one physical link goes directly to an IWG CPU card associated with the MH Hub, and another physical link goes to an ENET card now placed in the IWG. Spanning trees are used to determine which (if any) link using the ENET card is active. The new cards decrease the maximum capacity available per IWG to 2688 DS0s. Also associated with this feature are some minor changes in the 5ESS provisioning of the call control IP and MAC addresses.

2. FEATURE ASSIGNMENT

The 5ESS provisioning of VTOA Ethernet connections uses two concepts: an MEPIPE, provisioned on RC/V View 19.20 (ODA form ENETPIPE (5826-1/2 Record), is the link from the MCTSI to the MH Hub for that MCTSI and an MELNK, provisioned on RC/V View 19.21 (ODA form ENETLINK (5827-1/2 Record), which is the link from the PSM to the IWG. One MEPIPE needs to be provisioned for each MCTSI on a PSM. One MELNK needs to be provisioned for each IWG supported by the PSM. The MELNK carries the call control messages between the PSM and the IWG. For each PSM, the two Ethernet Interface Board (EIB) IP addresses on RC/V view 19.20 shall be different. The SM's secondary IP addresses shall be provisioned on the IWG at the other end of the MELNK. For RC/V View 19.21, IP address 0 for both Sides 0 and 1 shall be the same. On RC/V View 19.21, IP address 1 for both Sides 0 and 1 shall be the same. IP address 0 shall be different than IP address 1 on RC/V View 19.21 and shall be different than the IP addresses on RC/V View 19.20 for the same PSM. The IP addresses in this requirement shall be used for testing, but may differ in customer networks. The Verified IP addresses are provisioned according to the scheme specified in Table 1 of Figure 2. The Verified IP addresses are provisioned on the 5ESS according to the scheme specified in Table 2 of Figure 3.

Each MELNK is assumed to use the primary link between the active MCTSI side and the IWG. Upon failure of an MEPIPE between an MHEIB and a Hub (including either end), the SM's MCTSI's will do a side switch. At the IWG end of the MELNK, Sapphire call control messages would be received by the same CPU but through its secondary link. Alternatively, if the active IWG CPU fails, the call control messages would then be transmitted via the other IWG CPU via the secondary link to the same MCTSI side - no MCTSI side switch would be involved in an IWG CPU failure. All the other IWG on the same PSM is not impacted. If an ENET or RTS card failed carrying active Sapphire traffic, the call control messages would then be transmitted via the primary link through the appropriate MH Hub to the MCTSI. QOS not a consideration. An MCTSI side switch will occur only when either the last IWG fails or the associated MH Hub fails.

Verified IP Addressing Scheme

Table 1 of Figure 2 details the IP addressing and PVC numbering conventions to be tested for this feature. See also Figure 1 for an example. Figure 1 also depicts the subnet relationships listed in the rightmost column of Table 1 of Figure 2. Subnet A is for the direct links (including the PSM's and MH Hub's IP addresses). The secondary links are constructed using a VPN (Virtual Private Network) setup by the RTS (Route Server) card placed in the IWG by this feature. For the VPN, subnet B is for the RTS card's IBM (In-band Management) interface - the portion of the VPN between the RTS card and the IWG CPU.

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Subnet C is for the RTS card's Ethernet interface - the portion of the VPN between the RTS card and the ENET card.

Figure 1 provides an IP addressing scheme example, showing the Subnets given in Table 1 of Figure 2. Subnet A is for the direct links (including the PSM's and MH Hub's IP addresses). The secondary links are constructed using a VPN (Virtual Private Network) setup by the RTS (Route Server) card placed in the IWG by this feature. For the VPN, subnet B is for the RTS card's IBM (In-band Management) interface - the portion of the VPN between the RTS card and the IWG CPU. Subnet C is for the RTS card's Ethernet interface - the portion of the VPN between the RTS card and the ENET card.

Table 2 of Figure 3 indicates how some of the entries in Table 1 of Figure 2 should be used for provisioning Ethernet Pipes and Links on RC/V Views 19.20 and 19.21. This numbering scheme is required only for verifying the system - the requirement is stated in more general terms to allow customer flexibility. This feature modifies the 5ESS IP addressing provisioning rules to allow more flexibility in assigning IP addresses to the IWGs, PSMs and the MH-Hubs.

3. TRANSLATION REQUIREMENTS

New and Modified ODA Forms

Form Name	Record Number	Division	Section	RC View
ENETPIPE	5826-1/2	8	66	19.20
ENETLINK	5827-1/2	8	67	19.21

Figure 1 IP ADDRESSING SCHEME EXAMPLE

Component	IP Address / Bit Mask	Notes - Possible Formula Values for Last Octet	S U

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			B N E T
Call Control IP Addresses			
MH Hub 0	10. OFFC#. SM#. 1 /24		**A**
MH Hub 1	10. OFFC#. SM#. 2 /24		**A**
PSM - MHEIB - SIDE 0	10. OFFC#. SM#. 5 /27		**A**
PSM - MHEIB - SIDE 1	10. OFFC#. SM#. 33 /27		**A**
IWG Switch IP	10. OFFC#. SM#. ((IWG# + 2) * 3) /27	.6, .9, .12, .15, .18, .21 / 255.255.255.224	**A**
IWG CPU 1 (Slot 16)	10. OFFC#. SM#. ((IWG# + 2) * 3) + 1 /27	.7, .10, .13, .16, .19, .22 / 255.255.255.224	**A**
IWG CPU 2 (Slot 17)	10. OFFC#. SM#. ((IWG# + 2) * 3) + 2 /27	.8, .11, .14, .17, .20, .23 / 255.255.255.224	**A**
IWG RTS Ethernet Interface	10. OFFC#. SM#. (IWG# + 40) /27	.40, .41, .42, .43, .44, .45 /255.255.255.224	**C**
IWG RTS In-Band Interface (Router)	10. OFFC#. SM#. (IWG# * 32) + 65 /27	.65, .97, .129, .161, .193, .225 /255.255.255.224	**B**
IWG ibm (In-Band Management)	10. OFFC#. SM#. (IWG# * 32) + 66 /27	.66, .98, .130, .162, .194, .226 /255.255.255.224	**B**
OA&M (EMS + MIBC) IP Addresses			
EMS - AQV Server	10. 254. 1. 1 /24		
MIBC Ethernet Interface	10. 254. 1. 2 /24		
MIBC RTS ATM Interface (Router)	10. OFFC#. SM#. (IWG# * 32) + 67 /27	.67, .99, .131, .163, .195, .227 /255.255.255.224	
Note: OFFC# = 1 - 250; IWG# = 0 - 5; SM# = 1 - 192			

Table 1 - Verified IP Addressing. This scheme will be used for testing purposes to verify a multioffice configuration. Customer IP addressing schemes may differ.
Figure 2 VERIFIED IP ADDRESSING SCHEME

RC/V 19.20 (MEPIPE) Assignment Rules - red entries can be found in the Verified IP Addressing table.	
RC/V 19.20 Field Name	**Field Entry**
RC 19.20 IP ADDR 0 - EIB	PSM - MHEIB- SIDE 0
RC 19.20 IP ADDR 1 - EIB	PSM - MHEIB- SIDE 1
RC 19.20 HW ADDR 0 - EIB	MAC Address provided by system software
RC 19.20 HW ADDR 1 - EIB	MAC Address provided by system software
RC 19.20 IP ADDR 0 - HUB	MH Hub 0
RC 19.20 IP ADDR 1 - HUB	MH Hub 1
RC 19.20 HW ADDR 0 - HUB	MAC Address from Hub 0 console interface
RC 19.20 HW ADDR 1 - HUB	MAC Address from Hub 1 console interface
RC/V 19.21 (MELNK) Assignment Rules - red entries can be found in the Verified IP Addressing table.	
RC/V 19.21 Field Name	**Field Entry**
RC 19.21 IP ADDR 0 - SIDE 0	IWG Switch IP
RC 19.21 IP ADDR 1 - SIDE 0	IWG ibm (In-Band Management)
RC 19.21 HW ADDR 0 - SIDE 0	IWG CPU 0's MAC address - from AQV or IWG Console interface
RC 19.21 HW ADDR 0 - SIDE 1	IWG CPU 1's MAC address - from AQV or IWG Console interface
RC 19.21 IP ADDR 0 - SIDE 1	IWG Switch IP
RC 19.21 IP ADDR 1 - SIDE 1	IWG ibm (In-Band Management)
RC 19.21 HW ADDR 1 - SIDE 0	IWG RTS card's MAC address - from AQV or IWG Console interface
RC 19.21 HW ADDR 1 - SIDE 1	IWG RTS card's MAC address - from AQV or IWG Console interface

Table 2 - RC/V 19.20 and 19.21 Field Entries.
Figure 3 RC/V 19.20 AND 19.21 FIELD ENTRIES

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SEC. 10B: TRAFFIC MEASUREMENTS AND NETWORK MANAGEMENT FOR PLS4.0

This section has been removed from the TG-5.

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SEC. 10D: PSAX SEPARATE BICC TIMERS

This section has been removed from the TG-5.

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DIV. 3: TRANSLATION ADMINISTRATION

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SEC. 1: LINE FORMS

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SEC. 1D: 5104 RECORD
MULTI-LINE HUNT GROUP INDEX

1. GENERAL

The 5104 Office Record is used by the customer to administer Multi-Line Hunt Group Number assignments. The Multi-Line Hunt Group Index is not used for data entry purposes. The 5104 Record provides a list of the assigned as well as the spare Multi-Line Hunt Group numbers that correspond to the data submitted on the Multi-Line Hunt Group input form. There are two types of Multi-Line Hunt Group: Regular and Circle. This form maintains a summary of the current state of all groups and the Listed Telephone Number.

Service order activity will gradually cause some groups to become idle, as PBXs are disconnected or reassigned to care for their growth. It is the responsibility of the Network Administrator to prepare and maintain this form. This form should be kept as an office record and is not used in the ODA process.

2. FORM ENTRIES

2.1 MLHG

Description: Enter the Multi-Line Hunt Group Number.
Valid Entries: 1 - 999

2.2 LISTED DIRECTORY NUMBER

Description: Enter the Telephone Number. If the Multi-Line Group has Terminal Numbers associated with it instead of Directory Numbers, enter the Terminal Number. Terminal Numbers may range from 1-999.
Valid Entries:

- TN: 10 digits
- TERMNIAL: 1 - 999

2.3 REMARKS

Description: The remarks space can be used for any additional comments desired such as name of customer, description of telephone number, etc.

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SEC. 1E: 5105 RECORD
SLC-96 ALARM TYPE ASSIGNMENT FORM - SLCALM

1. GENERAL

The SLCALM form is available with 5E5 and later Software Releases. It assigns SLC-96 alarms to nine-digit 5ESS Switch distribute points as part of the Integrated SLC Alarm Reporting feature. For 5E8 and later, the CRITICAL field is used if IDCU (Integrated Digital Carrier Unit) equipment is assigned for a TR303 RT (Remote Terminal). For more information on IDCU, see the EQIDCU form (5846 Record), the EQIFAC form (5847 Record), and the RTERM form (5174 Record).

The feature provides the FMAC (Facility Maintenance Administration Center) with the ability to directly receive and view integrated SLC system alarms via six distribute points, one scan point and bay-level relay connections to E2A telemetry equipment. Currently, non-integrated SLC system alarms are generated in the same manner. Also, the one scan point is assigned on this form in order to sense an Alarm Cut Off from the FMAC.

In addition, each integrated SLC remote terminal needs to be assigned to a corresponding distribute point; this enables the FMAC to identify which remote terminal is associated with the detected alarm. These assignments are made on the SLCRT form (5106 Record).

Each remote terminal is connected to a DCLU (Digital Carrier Line Unit) in an SM. Non-integrated SLC alarms use a COT (Central Office Terminal) interface between the remote terminal and the DCLU. Since there is no COT interface in integrated systems, the MMSU (Modular Metallic Service Unit) provides this function, and provides communication between the 5ESS Switch and the FMAC.

The MMSU houses Signal Distributor and Scanner circuit packs that contain up to 32 distribute or scan points. The distribute points are used to transmit the SLC alarms to the E2A telemetry equipment via relay closure; the E2A equipment then transmits the alarms to the FMAC.

There are six alarms and six status indicators that are shared by all SLC systems monitored at the FMAC. The six corresponding distribute points are: MAJOR ALARM, MINOR ALARM, POWER MISCELLANEOUS, NEAR END, FAR END and CARRIER LINE FAILURE. A total of N+6 distribute points are required where "N" is the number of integrated SLC carrier systems in the switch office. Distribute and scan points that are assigned on this form must be unique.

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.14.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *FMAC

Description: Enter the value that represents the corresponding Facility Maintenance Administration Center.

Required Field.
Default: 0
Valid Entries: 0

2.3 #MAJOR

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Description: Enter a distribute point number for the MAJOR alarm type.

This distribute point causes the MAJOR alarm indicator to light at the FMAC when this type of alarm is detected in the corresponding remote terminal. It is assigned in the format below.

Required Field.
Valid Entries: a distribute point number in the following format.

Valid MAJOR Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

2.4 #MINOR

Description: Enter a distribute point number for the MINOR alarm type. This distribute point causes the MINOR alarm indicator to light at the FMAC when this type of alarm is detected in the corresponding remote terminal. It is assigned in the format below.

Required Field.
Valid Entries: a distribute point number in the following format.

Valid MINOR Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

2.5 #POWER MISCELLANEOUS

Description: Enter a distribute point number for the POWER MISCELLANEOUS alarm type. This distribute point causes the POWER MISCELLANEOUS alarm indicator to light at the FMAC when this type of alarm is detected in the corresponding remote terminal. It is assigned in the format below.

Required Field.
Valid Entries: a distribute point number in the following format.

Valid POWER MISC Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

2.6 #NEAR END

Enter a nine-digit distribute point for the NEAR END alarm type. This distribute point causes the NEAR END alarm indicator to light at the FMAC when this type of alarm is detected in the corresponding remote terminal. It is assigned in the format below.

Required Field.

Valid NEAR END Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.

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0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

2.7 #FAR END

Description: Enter a distribute point number for the FAR END alarm type. This distribute point causes the NEAR END alarm indicator to light at the FMAC when this type of alarm is detected in the corresponding remote terminal. It is assigned in the format below.

Required Field.
Valid Entries: a distribute point number in the following format.

Valid FAR END Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

2.8 #CARRIER LINE FAILURE

Description: Enter a distribute point number for the CARRIER LINE FAILURE alarm type. This distribute point causes the CARRIER LINE FAILURE alarm indicator to light at the FMAC when this type of alarm is detected in the corresponding remote terminal. It is assigned in the format below.

Required Field.
Valid Entries: a distribute point number in the following format.

Valid CARRIER LINE FAIL Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

2.9 CRITICAL

Description: Enter a distribute point number for the CRITICAL alarm type.

Software Release: 5E8 and later
Valid Entries: A distribute point number in the following format.

Valid CRITICAL Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
0-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Distribute Point Number.

Data Rules:

For 5E8 and later, if RT INTERFACE on the RTERM form (5174 Record) is "TR303", the CRITICAL field must be entered.

2.10 #ALARM CUT OFF

Description: Enter a scan point number for the ALARM CUT OFF alarm type. This scan point is used to

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sense an alarm cut off from the FMAC. It is assigned in the format below.

Required Field.
Valid Entries: a scan point number in the following format.

Valid ALARM CUT OFF Entries

Entry	Description
1-192	SM.
0-1	MSU/MMSU.
0-1	Service Group.
00-31	Modular MSU Board Number.
00-15	Regular (non-modular) MSU Board Number.
00-31	Scan Point Number.

```
slcalm                    5ESS Switch
5105                OFFICE DATA ADMINISTRATION
              INTEGRATED SLC-96 ALARM TYPE ASSIGNMENT
*1. FMAC   0

            DISTRIBUTE POINTS                SCAN POINTS
#2. MAJOR             002112011     #8. ALARM CUT OFF    007112017
#3. MINOR             003112012
#4. POWER MISC          004112013
#5. NEAR END           005112014
#6. FAR END            006112015
#7. CARRIER LINE FAIL     006112016
```

Figure 1 SAMPLE SLCALM FORM 5E5 SOFTWARE RELEASE

```
slcalm                    5ESS Switch
5105                OFFICE DATA ADMINISTRATION
              INTEGRATED SLC-96 ALARM TYPE ASSIGNMENT
*1. FMAC   0

            DISTRIBUTE POINTS                SCAN POINTS
#2. MAJOR             001000102        #9. ALARM CUT OFF 007000508
#3. MINOR             002000203
#4. POWER MISC          003000304
#5. NEAR END           004000405
#6. FAR END            005000406
#7. CARRIER LINE FAIL     006000507
 8. CRITICAL           007010131
```

Figure 2 SAMPLE SLCALM FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 1F: 5106 RECORD
SLC-96 REMOTE TERMINAL FORM - SLCRT

1. GENERAL

The 5106 Record is available with 5E2 and later Software Releases. It is used to define assignments for the Integrated SLC-96 (Subscriber Loop Carrier-96) Remote Terminals.

The Integrated SLC-96 feature interfaces the SLC-96 Remote Terminal directly to the 5ESS Switch via a DCLU (Digital Carrier Line Unit) in a Switching Module. Each S-DFI (SLC Data Facility Interface) on the DCLU provides a direct digital interface for a T1 digital carrier line connected to a SLC-96 Remote Terminal. This direct connection to the 5ESS Switch eliminates the need for a COT (Central Office Terminal).

The SLC-96 Remote Terminal is that part of the digital subscriber system that is remote from the 5ESS Switch and is connected to it by T1 lines. An Integrated SLC-96 may operate in one of two modes: Mode 1 or Mode 2. Mode 1 provides no concentration at the Remote Terminal and provides up to 96 subscribers access to the 5ESS Switch via five T1 lines (four active and one standby or protection line), where each T1 line has 24 channels. Mode 2 provides 2:1 concentration at the Remote Terminal so that up to 96 subscribers share access to 48 chan- nels to the 5ESS Switch via three T1 lines (two active and one standby).

The SLC-96 Remote Terminal consists of two banks/shelf groups. Each bank may be operated in either Mode 1 or Mode 2. A SLC-96 bank consists of two shelves. Bank zero (shelf group AB) consists of shelves A and B, and bank one (shelf group CD) consists of shelves C and D. If bank zero is operated in Mode 2 (concentrated), then there is a T1 line from Shelf A of the Remote Terminal to an S-DFI in a DCLU. If bank one is operated in Mode 2, then there is a T1 line from Shelf C. Shelves B and D will not have T1 lines in these cases. When a bank is operated in Mode 1 (unconcentrated), then each equipped shelf, A, B, C or D, has a T1 line from the Remote Terminal to its own S-DFI of the DCLU. The protection line (standby T1 line) also requires an S-DFI and may serve any one of the shelves or shelf groups when the assigned T1 line of that shelf/bank is not functioning.

Each shelf of the Remote Terminal contains 12 CUs (Channel Units). Different types of CUs are used for different types of subscribers (e.g., single or multiparty, coin). The CUs are defined on the SLCCU form (5107 Record).

When a telephone number (or Multi-Line Hunt Group member) assigned on the LINE (or MLHLN) form is associated with a SLEN (SLC Equipment Number), the following correspondence must exist on the SLCRT form: The IM/DCLU/RT values of the NUMBER (of the LINE Form) must be defined on an SLCRT form, and the SLEN LINE NO value must be assigned to an appropriate SLCRT SHELF with its STATUS set to "O" (operational).

NOTE: The 5161-1 Record referenced on the SLCRT form is an output only record which retrieves data from the SLCCU, SLCRT, LINE, and MLHLN forms.

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

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Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 *DCLU

Description: Enter the Digital Carrier Line Unit number containing the S-DFI (SLC Digital Facility Interface) to which the T1 line from the Remote Terminal is assigned.

Required Field.
Valid Entries:
- 5E14 and earlier: 0 - 7
- 5E15 and later: 0 - 15

2.4 *REMOTE TERMINAL

Description: Enter the Remote Terminal number of the Integrated SLC-96. A fully equipped DCLU can support a maximum of six Remote Terminals.

Required Field.
Valid Entries: 1 - 6

2.5 SLC ID NUMBER

Description: Enter the identification number for the Integrated SLC-96. This number is not used for call processing, but is used administratively as an identifier for Recent Change/Verify. SLC identification numbers may not be duplicated on either the SLCRT form or the DCLU5RT form (5118 Record).

Required Field.
Valid Entries: 1 - 9999

2.6 TBCU MTB

Description: Enter the number of the Metallic Test Bus which provides metallic access for testing purposes to the subscriber lines of the Integrated SLC-96. This MTB is associated with a TBCU (Test Bus Control Unit). Up to twenty Remote Terminals which are collocated may be assigned to the same TBCU MTB; MTBs may not have more than twenty RTs assigned to them through the SLCRT and DCLU5RT forms. Each Remote Terminal location requires a unique TBCU MTB.
Valid Entries: The 9-digit MTB is assigned in the following format.

TBCU MTB

Equipment		**Format**	**Non-Modular MSU**	**Modular MSU**
Switching Module	SM	XXX	1-192	1-48 (CM 1) 1-192 (CM 2)
Metallic	MSU	X	0-1	0-1
Service	SVG	X	0-1	0-1
Board	BRD	XX	00-15	00-31
Bus	BUS	XX	00-14	00-14

Metallic Test Bus Point 15 of every MACC pack is reserved for general internal MSU and MMSU diagnostics. Protocol test or diode resistor tests are included in general internal diagnostics.

Data Rules:

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The number entered in this field must be defined on the EQTBCU form (5811 Record).

For 5E9(1) and later, if the MTB pack resides on an ORM, RSM, or TRM, the SLCRT and the MTBs must share the same SITE ID (assigned on the EQIM form). In addition, if this is a remote SITE ID (does not reside in the local office), the MTBs must reside on the Common Resource Module (denoted by MASTER MODULE on a corresponding EQSITE form). This rule does not apply to co-located ORMs/TRMs sharing resources (as switch processing does not distinguish between co-located ORMs/TRMs and non-co-located ORMs/TRMs).

2.7 SLC ID DPN

Description: This field is used to assign a distribute point to a corresponding remote terminal as part of the Integrated SLC-96 Alarm Reporting feature. The feature uses these distribute points to allow the FMAC (Facility Maintenance Administration Center) to detect alarms in Integrated SLC-96 systems.

Refer to the SLCALM form (5105 Record) for more information concerning the Integrated SLC-96 Alarm Reporting feature.

Software Release: 5E5 and later
Valid Entries: The nine-digit distribute point is assigned in the following format:

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31 (Regular MSU)
			00-15 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

2.8 MODE

Description: For each equipped shelf of the Integrated SLC-96 Remote Terminal, enter the mode.

Shelf A always requires an entry. If Shelf B is equipped, its mode must be the same as the mode for Shelf A. If Shelf D is equipped, its mode must be the same as the mode for Shelf C. The mode must not be entered for unequipped shelves or for the Protection Line.

Valid STATUS Entries

Entry	Description
UNCONC	Unconcentrated.
CONC	Concentrated.

Data Rules:

This field must be "UNCONC" if CU TYPE on the SLCCU form is "DID" or "SPOTS". See the following Channel Unit Position to Shelf table.

Channel Unit Position	SLCRT Shelf
1 - 24	A
25 - 48	B
49 - 72	C
73 - 96	D

2.9 STATUS

Description: For each equipped shelf of the Integrated SLC-96 Remote terminal, enter the appropriate equipment status.

Valid STATUS Entries

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Entry	Description
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid.

If the MODE for the shelf has an entry, then a STATUS entry is required. If the MODE for the shelf does not have an entry, then a STATUS entry is not allowed.

2.10 S-DFI

Description: Enter the SLC-96 Digital Facility Interface number of the DCLU assigned to the T1 line. An S-DFI is required for all shelves of a SLC-96 Remote Terminal which are equipped and have an entry of "UNCONC" in the MODE field. If the Mode is "CONC", an S-DFI is allowed and required only for shelves A and C if equipped, and only assign an S-DFI to Shelf B if this shelf's status is "O" (operational). Also, if a Protection Line is equipped for the Integrated SLC-96, an S-DFI is required.
Valid Entries: 0 - 29

Data Rules:

S-DFIs assigned on this form must be defined on the EQDCLP form (5810 Record) and must be unique per SM and DCLU.

2.11 PWR MISC MAJ

Description: Is the Power Miscellaneous alarm a major alarm? If the Power Miscellaneous alarm for this remote terminal signals a loss of commercial power, the alarm is a major alarm (enter "Y"). If it is a minor alarm, enter "N".

Software Release: 5E4(2) and later
Default: N
Valid Entries: Y, N

2.12 MTP PROTOCOL

Description: Is the diode protocol to be executed on the Metallic Test Pair between the remote terminal and the Test Bus Control Unit?

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

```
slcrt                    5ESS Switch          _
5106,5161-1              OFFICE DATA ADMINISTRATION
                       SLC-96 REMOTE TERMINAL

* 1. SM            001              20. PWR MISC MAJ  N
* 2. DCLU           4               21. MTP PROTOCOL  N
* 3. REMOTE TERMINAL 06
  4. SLC ID NUMBER   0008
  5. TBCU MTB       111002414
  6. SLC ID DPN     111002230
```

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```
BANK  SHELF      MODE      STATUS    S-DFI
 0      A      7. UNCONC   8. 0     9. 28
 0      B     10. UNCONC  11. 0    12. __
 1      C     13. ______  14. _    15. __
 1      D     16. ______  17. _    18. __
                PROTECTION LINE    19. __
```

Figure 1 SAMPLE SLCRT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 1G: 5107 RECORD
SLC-96 CHANNEL UNIT FORM - SLCCU

1. GENERAL

The 5107 Record is used to define the assignment of SLC (Subscriber Loop Carrier) - 96 Channel Units to equipped shelves of a Integrated SLC-96 Remote Terminal.

The combination of information entered on this record becomes the Integrated SLEN (SLC-96 Line Equipment Number) which is assigned to a customer instead of a regular LEN (Line Equipment Number). The SLEN format is:

SLEN (SLC-96 LINE EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Carrier Line Unit	DCLU	X	0 - 7 (5E14 and earlier)
		XX	0 - 15 (5E15 and later)
Remote Terminal	RT	XX	01 - 6
Line	LINE	XX	01 - 96

The availability of lines 01 - 96 are dependent on the equipage of the channel units defined on this form.

The Remote Terminal which is defined on the SLCRT form (5106 Record) consists of a maximum of four shelves, A, B, C and D. Each shelf has twelve channel unit plug-in positions which house a variety of channel unit types, depending on the type of service required. Channel unit types are either dual, which can terminate two customer lines, or single, which can terminate one customer line. The channel unit plug-in slots are numbered in pairs so that Shelf A has pairs 1/2 through 23/24, Shelf B has pairs 25/26 through 47/48, Shelf C has pairs 49/50 through 71/72, and shelf D has pairs 73/74 through 95/96. If the channel unit type is dual, both numbers of the pair are available for assignment. If the channel unit type is single, only the odd number of the pair is used.

Channel units may be defined on the 5107 Record only for shelves which are defined as operational on the SLCRT form.

The following rules apply to the channel unit plug-in positions of the Remote Terminal shelves:

- Dual channel units may be used in any plug-in position of either a Mode 1 or 2 shelf (concentrated or unconcentrated).
- Single channel units may be used in any plug-in position of a Mode 1 shelf (unconcentrated).
- Single channel units may be used only in the rightmost four plug-in positions of a Mode 2 shelf (concentrated). These shelf positions are:

Shelf A	17/18, 19/20, 21/22, 23/24
Shelf B	41/42, 43/44, 45/46, 47/48
Shelf C	65/66, 67/68, 69/70, 71/72
Shelf D	89/90, 91/92, 93/94, 95/96

Ground Start assigned to a SLEN on the LINE or MLHLN form (5111 Record) is dependent on the Channel Unit Type. Figure 1 relates CU TYPE to services and the associated Class Of Service.

If the channel unit type is "FXS" or "FXSLS" and the OE type is "S", the value of the GST (Ground Start) field on the LINE or MLHLN form is dependent on the channel unit type value. "FXS" requires GST set to "Y"; "FXSLS" requires GST set to "N".

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For 5E8 and later, Muli-line hunt members assigned on the MLHLN form to IDCU equipment defined on the RTERM form (RT INTERFACE set to "TR008") must have the GST field on the MLHLN form set as follows: "FXS" requires GST set to "Y"; "FXSLS" and "SP" requires GST set to "N".

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *INTERFACE MODULE

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

2.3 *DCLU

Description: Enter the Digital Carrier Line Unit number.
Valid Entries:

5E14 and earlier: 0 - 7
5E15 and later: 0 - 15

2.4 *REMOTE TERMINAL

Description: Enter the SLC-96 Remote Terminal number.
Valid Entries: 1 - 6

2.5 CHANNEL UNITS

Description: Enter the Channel Unit type assigned to each plug-in position of the SLC-96 Remote Terminal.

Valid CHANNEL UNITS Entries

Entry	Description
COIN	Coin.
DFXS	Software Release: 5E9(2) and later. Dual FX Plugs.
DID	Direct Inward Dialing Dual Channel.
DIDDPT	Single Channel Direct Inward Dialing for SLC-96 Remote Terminals.
FXS	Foreign Exchange Ground Start.
FXSLS	Foreign Exchange Loop Start.
FSR	Multi-Frequency Ringing.
MP	Multi Party.
SF1	Software Release: 5E9(1) Only. Dual FX Plugs.
SP	Single Party.
SPOTS	Super Plain Old Telephone Service.
SSV00	Generic Nonswitched Special Services for nail-up only.
SSV10	Generic Nonswitched Special Services for nail-up only.

Data Rules:

The LCC/RAX combination assigned on the LINE or MLHLN form must be defined on the LCC form with an associated service class that matches the channel unit type on the SLCCU form. Please refer to Figure 2 for the required correspondence.

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If "DID" or "DIDDPT" are entered, a SLC-96 equipment number (SLEN) must be defined on the TRUNK form (5204 Record). For 5E9(1) and later, note that the nailup of "DID" trunks or "DIDDPT" trunks is not supported.

Telephone numbers assigned on the LINE form that are associated with a SLEN must correspond to a channel unit position with a known value defined on the SLCCU form. Note that the LINE NO values of the NUMBER [7, 8] entry are determined by the CU type value. Both LINE NO (POS) values in the pair are assignable for CU types of "SP," "MP," "SPOTS," "FXS," "FXSLS," "FSR," "DFXS," (5E9(2 and later)) or "SF1," (5E9(1)). Only the lower (odd) numbered LINE NO value is assignable for CU types of "COIN," "FXS," "FXSLS," "SSV00," or "SSV10."

Refer to the table below for the relationship between channel unit type and line number. The CU type is the channel unit type from the SLCCU form and the LINE NO is the seventh and eighth digits of the NUMBER value from the LINE form.

CU TYPE	LINE NO
1	01,02
2	03,04
3	05,06
.	.
.	.
.	.
46	91,92
47	93,94
48	95,96

MLHG/TERMs assigned on the MLHLN form that are associated with a SLEN (SLC Equipment Number) must correspond to a channel unit position with a known value defined on the SLCCU form. Note that the MLHLN NO values of the NUMBER [7, 8] entry are determined by the CU type value. Both MLHLN NO (POS) values in the pair are assignable for CU types of "SP," "MP," "SPOTS," "COIN," "FXS," "FXSLS," "FSR," "DFXS," (5E9(2) and later) or "SF1," (5E9(1)). Only the lower (odd) numbered LINE NO value is assignable for CU types of "COIN," "FXS," "FXSLS," "SSV00," or "SSV10."

The relationship between channel unit type and MLHG/TERMs number is the same as the relationship between channel unit type and LINE number shown in the table above.

If remote terminals are assigned on the SLCCU form, where one or more CU TYPE values (channel unit type) are

- "SPOTS"
- "DID"
- "DFXS" (5E9(2) and later)

the corresponding SLCRT shelf must have a MODE of "UNCONC". See the following Channel Unit Position to Shelf table.

Channel Unit Pos	SLCRT Shelf
1-24	A
25-48	B
49-72	C
73-96	D

SLC96 Mode II does not support "SPOTS" or "DID" cards.

SLCCU forms with a CU TYPE set to "SF1" or "DFXS" indicate that this CU TYPE is used by the Dual FX Plugs Special Feature. It is a secured feature and must be purchased by the office before the "SF1" (5E9(1)) or "DFXS" (5E9(2) and later) CU TYPE can be used. An SFSYS form must exist with SFID 144 ACT set to "Y".

* Note: CUTYPE valid for 5E1, Issue 2, Release 3 and earlier Software Releases.

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** Note: Class of Service SLENs on TKGRP Form.

CU TYPE	CUSTOMER LINES	SERVICE	CLASS OF SERVICE SLENS ON LINE FORM	CLASS OF SERVICE SLENS ON MLHLN FORM
SP	2	SINGLE PARTY	INDIV B911 CHGCALL	INDIV B911 CHGCALL ATD
MP	2	2, 4, 8PTY	INDIV TWOPTY 4PSS 4PFS 8PSS	INDIV TWOPTY 4PSS 4PFS 8PSS
COIN	1	COIN	COIN PBX	COIN PBX
FXS	1	NON-DID PBX	PBX HOTPBX	PBX HOTPBX ATD
FXSLS	1	WATS	INIDV HOTMOTL	INDIV HOTMOTL
SPOTS	1	SINGLE PARTY NON-DID PBX WATS	INIDV B911 CHGCALL PBX HOTPBX HOTMOTL	INDIV B911 CHGCALL PBX HOTPBX HOTMOTL ATD
FSR	2	5PTY COIN, NON-DID, SINGLE PARTY, ALL ARE MFR LINES	INDIV 5PTY COIN HOTPBX	5PTY PBX HOTPBX
DID DIDDPT		DID DUAL CHANNEL; SINGLE CHANNEL DID FOR SLC-96	PBXDID*	
SF1 DFXS		DUAL FX PLUGS	INDIV HOTPBX HOTMOTL PBX	INDIV HOTPBX HOTMOTL PBX ATD

*Note: Class of Service SLENs on TKGRP form.

Figure 1 CHANNEL UNIT TYPES AND RELATED SERVICE AND CLASS OF SERVICE

FORM	LCC FORM SERVICE CLASS	SLCCU FORM CHANNEL UNIT TYPE
MLHLN	INDIV	SP, MP, SPOTS, FSR, FXSLS, SSV00, SSV10, SF1, DFXS
	CHGCALL	SP, SPOTS, SV00, SSV10
	TWOPTY	MP, SSV00, SSV10
	4PFS, 4PSS, 8PSS	MP, SSV00, SSV10
	5PTY	FSR, SSV00, SSV10
	HOTPBX	FXS, FSR, SPOTS, SSV00, SSV10, SF1, COIN, DFXS
	HOTMOTL	SPOTS, FXSLS, SSV00, SSV10, SF1, DFXS
	PBX	FXS, SPOTS, SSV00, SSV10, COIN, FSR, SF1, DFXS
	COIN	COIN, SSV00, SSV10
	B911	SP, SPOTS, SSV00, SSV10
	ATD	FXS, SP, SPOTS, SF1, DFXS

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LINE	INDIV	SP, MP, SPOTS, FSR, FXSLS, SSV00, SF1, COIN, DFXS
	CHGCALL	SP, SPOTS, SV00, SSV10
	TWOPTY	MP, SSV10
	4PFS, 4PSS, 8PSS	MP, SSV10
	5PTY	FSR, SSV10
	HOTPBX	FXS, FSR, SPOTS, SSV10, SF1, DFXS
	HOTMOTL	SPOTS, FXSLS, SSV10, SF1, DFXS
	PBX	FXS, SPOTS, SSV10, COIN, FSR, SF1, DFXS
	COIN	COIN, FSR, SSV10
	B911	SP, SPOTS, SSV10

Figure 2 REQUIRED CORRESPONDENCE BETWEEN SERVICE CLASS AND CHANNEL UNIT TYPE

slccu 5ESS Switch _
(5107) OFFICE DATA ADMINISTRATION
SLC-96 CHANNEL UNIT ASSIGNMENT
* 1. INTERFACE MODULE ___
* 2. DCLU _
* 3. REMOTE TERMINAL __ 4. CHANNEL UNITS

-----SHELF A-----			-----SHELF B-----			-----SHELF C-----			-----SHELF D-----		
row	POS	CU TYPE	row	POS	CU TYPE	row	POS	CU TYPE	row	POS	CU TYPE
1.	1/2	_____	13.	25/26	_____	25.	49/50	_____	37.	73/74	_____
2.	3/4	_____	14.	27/28	_____	26.	51/52	_____	38.	75/76	_____
3.	5/6	_____	15.	29/30	_____	27.	53/54	_____	39.	77/78	_____
4.	7/8	_____	16.	31/32	_____	28.	55/56	_____	40.	79/80	_____
5.	9/10	_____	17.	33/34	_____	29.	57/58	_____	41.	81/82	_____
6.	11/12	_____	18.	35/36	_____	30.	59/60	_____	42.	83/84	_____
7.	13/14	_____	19.	37/38	_____	31.	61/62	_____	43.	85/86	_____
8.	15/16	_____	20.	39/40	_____	32.	63/64	_____	44.	87/88	_____
9.	17/18	_____	21.	41/42	_____	33.	65/66	_____	45.	89/90	_____
10.	19/20	_____	22.	43/44	_____	34.	67/68	_____	46.	91/92	_____
11.	21/22	_____	23.	45/46	_____	35.	69/70	_____	47.	93/94	_____
12.	23/24	_____	24.	47/48	_____	36.	71/72	_____	48.	95/96	_____

Figure 3 SAMPLE SLCCU FROM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 1H: 5108 RECORD
EMERGENCY TN (REMOTE SITE/LOCAL SM)
ASSIGNMENT RECORD - EMRNM

1. GENERAL

The 5108 Record is used to define Remote Site or Local SM Stand-Alone emergency Telephone Numbers. For 5E5 and later, Remote Site refers to an RSM (Remote Site Module), ORM (Optically Remote Module), TRM (Two-Mile Optically Remote Module), or for 5E9(2) and later, an EXM-2000 (Optically Remote SM-2000).

When a Remote Site or Local SM goes into the Stand-Alone mode, it can still process calls that originate or terminate on it. Emergency numbers that terminate outside the Remote Site or Local SM can be assigned alternate routing to designated lines or trunks on the Remote SM or Local SM on this form.

1.1 Emergency Number Rerouting

For 5E9(1) and later, Local SM and Remote Sites can reroute up to 500emergency calls as follows. A Remote Site or Local SM can reroute emergency calls when operating in the Stand-Alone call processing mode. Telephone Numbers not directly assigned to the Remote Site or Local SM, when dialed by a subscriber served by the Remote Site or Local SM, are rerouted to a local Telephone Number or Trunk Group served by the Remote Site or Local SM. A local TN or Trunk Group is assigned to an equipment number (LEN, SLEN or LCEN) on the Remote Site.

1.2 Rerouting to Intermodule Trunk Groups

For 5E5 and later, Telephone Numbers can be alternately routed to an Intermodule Trunk Group that spans two SMs within the same office. Refer to Division 2, Section 1N.

If a range of TNs is entered in the EMER TN field and the OUTPULSED DIGITS field is blank and the RI field is entered, then the dialed digits will be outpulsed over the trunk.

1.3 Rerouting Incoming Calls

A Remote Site can have incoming and outgoing message trunks which are physically located on the remote module. These local trunks will be designated with an equipment number on that Remote Site. Calls originating at the Remote Site on an incoming trunk will also reroute during Stand-Alone if the called number is defined on this form. A special case occurs when less than seven incoming digits are destined for a telephone served by the 5ESS Switch, i.e., the office code is defined as a NOC in the 5ESS Switch. In this case, the 5ESS Switch will reconfigure the incoming digits to seven or ten digits so only one EMER TN needs to be defined for both line and trunk originations. The Telephone Number will not be reconfigured if its normal destination is outside of the 5ESS Switch, that is, it is not destined for either the host or its remote locations.

1.4 Rerouting to a Local Trunk Group

An alternative to rerouting to a local line is to reroute to a local trunk. This is accomplished by entering the appropriate Route Index and the digits to be outpulsed over the Trunk Group. The digits entered in OUTPULSED DIGITS are subject to digit deletion and prefixing by the Route Index translations. A Trunk Group designated as either local or global may be used; however, at least one trunk member must be equipped on the Remote Site.

1.5 Stand-Alone Feature

When the Remote Site loses communication with the host 5ESS Switch, the reroute of these emergency numbers is automatic as long as the particular Remote Site has the Stand-Alone feature. This

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Stand-Alone feature is designated on an EQSITE form (5722 Record), for the particular Remote Site.

For 5E5 and later Software Releases, if more than 10 Emergency TNs are defined for an SM entered in the LOCAL SM field, then the STAND ALONE field on the EQIM form must be "Y". Up to 10 Emergency TNs may be defined for an SM entered in the LOCAL SM even if the SM does not have the stand-alone option (STAND ALONE field on the EQIM form is "N").

1.6 Stand-Alone Announcement

If the Remote Site is equipped with a Stand-Alone announcement, then all dialed numbers that terminate outside the Remote Site will get the Stand-Alone announcement when the Remote Site goes into Stand-Alone mode except the emergency numbers specified on this form.

1.7 EMROFC Form (5116 Record)

The EMROFC form defines alternate routing for calls that originate outside an isolated Local SM (or Remote Site) when those calls would normally route to an Emergency Number on the SM or Remote Site.

For 5E5, the AM (for 5E6 and later, the CMP (Communication Module Processor)) can reroute up to 500 emergency numbers throughout the office.

For information on the EMROFC form, see Division 3, Section 1P.

1.8 Recent Change View

The corresponding Recent Change View for this form is 4.9.

View 4.9 corresponds to both the EMRNM form (5108 Record) and EMROFC form (5116 Record). When REMOTE SITE is 1 - 174 on View 4.9, it refers to the EMRNM form; when REMOTE SITE is 0, it refers to the EMROFC form.

2. FORM AND RECORD ENTRIES

2.1 (*) REMOTE SITE

Description: Enter the Remote Site number.
Valid Entries: 1 - 174

Data Rules:

Either this field or the LOCAL SM field must be entered.

The REMOTE SITE number must be defined on the EQSITE form with the STAND ALONE PURCHASED? field equal to "Y".

If more than 10 EMRNM forms are entered, STAND ALONE PURCHASED? must be set to "Y" on the corresponding EQSITE form.

If a REMOTE SITE corresponds to an ORM or TRM site (defined on the EQIM form) and has STAND ALONE PURCHASED? set to "N" on the EQSITE form, the ALT TN field must be entered on this EMRNM form.

When TN(s) are assigned a Remote Site and are defined on the MLHLN form, with equipment numbers on SM(s) at the REMOTE SITE, this is an extraneous condition as there is no need to reroute calls from within the SM to these Multiline Hunt Group lines.

2.2 (*) LOCAL SM

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Description: Enter the Local Switching Module number.
Valid Entries: 1 - 192

Data Rules:

Either this field or the REMOTE SITE field must be entered.

For 5E5 and later, the SM value entered must be defined on an EQIM form with an SM USAGE value of "IM" or "HIM".

For 5E9(2) and later, if any Local SM is assigned to more than 10 Emergency TNs, STAND ALONE on the EQIM form must be "Y" and UNIT TYPE must be "SM2000".

2.3 * EMER TN

Description: Enter the Emergency Telephone Number that is not served by the Remote Site or Local SM and that will be rerouted to either the local ALT TN or to an Outgoing Trunk Group when the Switching Module is in Stand-Alone mode.

A single digit is usually zero, used for zero minus calls. A three-digit number might be a service type number such as 911. If a three-digit number is to be rerouted in emergency Stand-Alone mode, the CONV form (5300-4 Record) must be checked to see if that three-digit number is being code converted. If it is code converted, enter the CONV TN, not the three-digit number, in this field. Seven- or ten-digit numbers of the type NXX-XXXX or NPA-NXX-XXXX may be also entered in this field. International numbers may also be entered with either a 01 or 011 prefix. The field PREFIX is used for international numbers where a prefix is required.

For 5E5 and later, if Stand-Alone is available on the Remote Site or Local SM, then a range of Telephone numbers may be entered for an Emergency Number. Each entry in the emergency routing list is either a TN or a range of TNs that need to have the same alternate routing treatment when a switching module is isolated from the host 5ESS Switch.

To specify a range of telephone numbers, use the wild-card character (*). Possible entries using the wild-card character are as follows:

- 0
- XXX
- XXX-XXXX
- XXX-XXX-XXXX
- XXXXX-XXX-XXX-XXXX
- XXX-XX**
- XXX-****
- ***-****
- XXX-XXX-XX**
- XXX-XXX-****
- XXX-***-****
- *****-***-***-****

The X is a value 0-9. The wild-card (*) character matches any dialed digit at that position.

When determining the order of precedence for matching emergency routing TNs, if an exact match fails on the entire TN, then partial matches are attempted with wild-card digits (*) in the hundreds group, in the whole office code, in the entire area code, and lastly for all 15 digits.

A range of telephone numbers specified with a wild-card character must not overlap another range of telephone numbers for a remote site or local SM in this relation. If an overlap occurs and the modules in stand-alone are connected by IMTs, a routed number that is overlapped would appear to terminate in both

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modules. This would result in the number looping through all the members of the IMT group until it is blocked.

After a call has been routed to a fixed route or announcement trunk, reorder is given instead of emergency routing. For example, this would occur when a mis-dialed call to an unassigned TN accesses the routing module for that number. Calls to the Operator or 911 that would have terminated to announcement because of stand-alone condition are allowed to emergency alternate route.

Stand-Alone Test Lines allow testing of emergency number rerouting for an RSM/ORM/SM site when the RSM/ORM/SM site is not in stand-alone mode. The lines must have an LCC (Line Class Code) with a SERVICE CLASS of "SATSTLN" and a TERMINATING TREATMENT of "INDIV". When conducting the stand-alone rerouting test from the RSM/ORM/SM site, the lines may be used to originate and dial each of the emergency numbers which is normally rerouted during stand-alone operation.
Valid Entries:

- 5E9(1) and earlier: 1 - 15 digits (0 - 9, "#", or "*")
- 5E9(2) and later: 1 - 15 digits (0 - 9, or "*")

Data Rules:

For 5E9(1) and later, if a wild-card character "*" is entered, the corresponding LOCAL SM must have STAND ALONE set to "Y" on the EQIM form.

Emergency TNs assigned to Local SM values must have the SM value defined on the EQIM form with SM USAGE equal to "IM" or "HIM".

2.4 PREFIX

Description: Enter the prefix dialed with the Emergency TN. For zero minus calls, enter "NONE". For 01 prefixed international calls, enter 0. For 011 prefixed international calls, enter 1.
Default: "NONE"
Valid Entries: 0, 1, and "NONE"

Data Rules:

PREFIX is required if an EMER TN is specified.

2.5 ALT TN

Description: Enter the Alternate Telephone Number to which customers will be routed when they dial the Telephone Number entered in the EMER TN field.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The Telephone Number must be assigned to a Local SM or Remote Module associated with a Remote Site which is also assigned on the LINE, DSL, MTNDR or MLHLN forms. The seven-digit number must also be associated with an equipment number (i.e., LCEN, LEN or SLEN) where the SM value is defined as the particular Remote Site or Local SM.

Either this field or the RI field must be entered.

For 5E9(1) and later, when Alternate Emergency TN(s) are specified on the EMRNM input form, these ALT TNs must be defined on either the DSLUSR (as CKT TN or CKT MLHG TN), LINE, MLHLN, or the

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MTNDR input form with the following restrictions:

- The LCC/RAX must correspond to one of the following Terminating Treatments, defined on the LCC form:
  - "PARTY" or "INDIV" for TNs on the LINE, MTNDR forms
  - "INDIV" for CKT TNs on the DSLUSR forms
  - "INWATS" or "MLHG" for TNs on the MLHLN forms or CKT MLHG TNs on the DSLUSR forms.

- 2) The intercept field ICP must equal "N"
- 3) Equipment Number must be entered on the DSLUSR, LINE or the MLHLN form.
- 4) For the MTNDR form, ICP and INWATS must be "N".

When RSM Alternate Emergency TN(s) are specified on an EMRNM input form and are assigned on the MTNDR input form; the SM portion of the associated OE NUMBER on the associated LINE form, where OE TYPE is equal to "A", "C", "E", "G", "L" or "S", must equal any of the RSM(s) at this EMRNM entry's REMOTE SITE.

When the Alternate Emergency TN(s) are specified on the EMRNM input form with LOCAL SM entered, and the LOCAL SM is defined on an EQIM form with STAND ALONE set to "N", the ALT TNs must be defined on either the LINE, MTNDR or the DSLUSR input form (as CKT TN) with the following restrictions:

- The LCC/RAX must correspond to one of the following Terminating Treatments, defined on the LCC form:
  - "PARTY" or "INDIV" for TNs on the LINE, MTNDR forms or
  - "INDIV" for CKT TNs on the DSLUSR forms

- Equipment Number must be submitted on the DSLUSR or the LINE form. Also, the OE TYPE must equal "A", "C", "E", "G", "L" or "S" on the LINE form.
- The INWATS field must equal "N" on MTNDR form.
- The intercept field (ICP) must equal "N"

- ***NOTE:*** For TNs defined on the MTNDR form the Terminating treatment and the OE TYPE are determined from the LINE form associated with this MTNDR form. The ICP field is on the MTNDR form.

When Alternate Emergency TN(s) are specified on an EMRNM input form with a known REMOTE SITE and are assigned on the LINE input form, the SM portion of the associated Number on the LINE form, where OE TYPE is equal to: "A", "C", "E", "G", "L" or "S", must equal one or all of the SM(s) at this EMRNM entry's REMOTE SITE.

When ALT TN(s) are specified on the EMRNM input form and are assigned on the MLHLN input form; then the SM portion of the associated NUMBER on the MLHLN form, where OE TYPE is equal to: "A", "C", "E", "G", "L" or "S", must equal one or all of the SM(s) at this EMRNM entry's REMOTE SITE.

When RSM Alternate Emergency TN(s) are specified on an EMRNM form and are assigned on the DSLUSR input form (as CKT TN or MLHG TN), the SM portion of the associated OE on the DSLUSR form

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must equal an RSM at this EMRNM entry's RSM SITE.

For 5E12 and later, if the first 3 digits of the 7-digit ALT TNs on the EMRNM form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit ALT TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.6 RI

Description: Enter the Route Index associated with the Outgoing Trunk Group to which customers will be routed when they dial the Telephone Number entered in the EMER TN field.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The associated Trunk Group may be local or global, but at least one trunk member must be equipped on this Remote Site or Local SM. That is, the trunk member must have an equipment number where the associated SM value is defined as one of the modules at the Remote Site or Local SM. The route index entered must be defined on an RTIDX form (5303 Record).

For 5E5 and later, if this field is entered, then the ALT TN field must not be entered. If this field and the LOCAL SM field are entered, the STAND ALONE field on the EQIM form must be "Y".

For 5E9(1) and later, if an RI is assigned for a REMOTE SITE or LOCAL SM, the RI value must be defined on an RTIDX form.

2.7 OUTPULSED DIGITS

Description: If a Route Index is entered in the RI field, enter the number to be outpulsed over the Trunk Group. The digits are subject to digit deletion and prefixing that is defined for the Route Index.
Valid Entries: 1 - 15 digits

Data Rules:

If this field is entered, the RI field must be entered.

```
emrnm                    5ESS Switch          _
(5108)              OFFICE DATA ADMINISTRATION
          EMERGENCY TN (REMOTE SITE/LOCAL SM) ASSIGNMENT

(*)1. REMOTE SITE     034
(*)2. LOCAL SM        ___
 *3. EMER TN         5230000
  4. PREFIX          NONE
  5. ALT TN          5231234
  6. RI              ____
  7. OUTPULSED DIGITS _________________
```

Figure 1 SAMPLE EMRNM FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
emrnm                    5ESS Switch          _
```

```
                    OFFICE DATA ADMINISTRATION
(5108)         EMERGENCY TN (REMOTE SITE/LOCAL SM) ASSIGNMENT

(*)1. REMOTE SITE     ___
(*)2. LOCAL SM        ___
  *3. EMER TN         _________________
  *4. PREFIX          ____
    5. ALT TN         __________
   6. RI              ____
   7. OUTPULSED DIGITS _________________
```

Figure 2 SAMPLE EMRNM FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1I: 5109-1/2/3/4 RECORD TELEPHONE NUMBER FORM - LINE

1. GENERAL

The 5109-1/2/3/4 Records are available with 5E2 and later Software Releases. These records define the Office Equipment Number and features for each TN (Telephone Number) in a 5ESS Switch.

The 5109 printout and the 5109-1 Record contain identical data for all assigned TNs. The 5109-1 prints all TNs (including unassigned) within a hundreds group if at least one TN within the hundreds group is assigned. The 5109 Record prints only those TNs that are assigned to Equipment Numbers or Route Indexes on the LINE and/or MLHLN (5111 -1/2/3 Record) input forms. The 5109-2 and 3, supplements to the 5109-1, lists all 5109-1 TNs with optional supplemental data.

The 5109-2 and 5109-3 Records define supplemental line information not included on the Telephone Number Record. The 5109-1 Record is based on data from both the LINE and MLHLN input forms. The 5109-2/3 Record contains data from both the LINE and MLHLN input forms.

Supplemental information that is entered on the 5109-2/3 Record is referenced from the 5109-1 Record. For ease in use, on initial forms preparation, it is suggested that these records be dedicated by 100s groups. That is, each page of the record would be dedicated to a group of 25 contiguous TNs, four pages per 100 numbers.

1.1 TNs

A TN is a 7-digit number consisting of an NXX and any number from 0000 - 9999. For 5E3 through 5E11 and later, the TN format is XXXXXXX, where X is a number from 0 - 9. For 5E12 and later, the TN format is XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9. This format supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198. There is no restriction on the assignment of TNs in the 5ESS Switch.

Unassigned TNs must not be submitted to the 5ODA data base. They are automatically routed to blank number intercept.

1.2 Hunting Arrangements - Series Completion And MLHG

The 5ESS Switch offers two types of hunting arrangements: Series Completion and MLHG. Lines assigned to Series Completion are hunted by TN while lines assigned to an MLHG are hunted by Terminal Number. (See Business and Residential Non-Modular Features, 235-190-102, for more information and recommendations for using the Series Completion Feature.) The following considerations should normally be used when making assignments for for hunting arrangements for Series Completion or MLHG.

Series Completion

- NON-PBX Class Of Service customers with sixteen or less lines. (Eight or less lines are normally recommended.)
- Low traffic usage.
- Does not require rapid connect time to the called party.
- PBX Class Of Service customers with five or less lines and no special features, e.g., End Hunt or Make Busy Keys.

MLHG

- NON-PBX Class Of Service customers with nine or more lines.

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- PBX Class Of Service customers with six or more lines.
- PBX Class Of Service customers with special features, e.g., End Hunt or Make Busy Keys.
- Any Class Of Service customers requiring Hunt.
- INWATS.

1.3 Essential Lines

TNs that require Essential Service Protection, which is part of the Overload Control Capability, must be assigned to a LEN, SLEN, MEN, or GEN designated as Essential. When a 5ESS Switch is in an overload condition and the Overload Control is turned on, then all lines designated as Essential Lines have the Essential Service Protection feature and receive priority origination scanning.

There is no limit on the quantity of LENs, SLENs, GENs, or MENs that can be assigned as Essential Lines with the following exception:

To make sure there is no internal blocking on origination scanning, there should be only one LEN assigned with the EL field set to "Y" from a group of four LENs that share the same first 7 digits of their LEN. Example:

External LEN breakdown					
SM	LU	CONC	SWG	SW	LEV
1-192	0-7	0-9	0-1	0-7	0-3

There are four Level values 0 through 3 for a given 7-digit value of SM/LU/CONC/SWG/SW. Only one of the four LEVs should have the EL field set to "Y".

LEN	00	1	3	0	0	4	0
LEN	00	1	3	0	0	4	1
LEN	00	1	3	0	0	4	2
LEN	00	1	3	0	0	4	3

It is recommended that Essential Lines be distributed evenly across the Line Equipment Numbers. Care should be given to assign to an Essential Line, only those customers that actually require Essential Service Protection.

1.4 Loop-Start Lines

Most customer lines are loop-start lines that generate an origination by closing the path between the tip and ring at the station set (forming a loop). Scanning is done at the Central Office by applying a voltage between the tip and ring and sensing the loop current flow produced by the customer line origination.

1.5 Ground-Start Lines

Ground-Start lines (e.g., coin-first coin phones and PBX-CO trunks) generate an origination by grounding the ring conductor at the station set. Scanning is done at the Central Office by applying a voltage with respect to ground on the ring conductor and sensing the current flow in the ring conductor produced by the customer line origination. Since certain PBXs interpret a ground on the tip conductor to mean something else (disconnect, etc.), the tip conductor at the Central Office is disconnected during scanning on Ground-Start Lines. The tip conductor is disconnected under software control in the 5ESS Switch. Thus, any Line Equipment Number may be assigned as Ground Start. Ground Start should be entered as an equipment option in the GST field.

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1.6 Entry Restrictions for Coin Lines

For TNs assigned as coin lines, entries are restricted in the following fields:

Entry Restrictions for Coin Lines

Entry	Restrictions
COIN	must be SPP, CF, or DTF
DNYBY	must be "N"
NO DIAL	must be "N"
SERHLN	must be blank
RTI	must be blank
FLS	must be "N"
SUSO	must be "N"
SLEEVE	must be blank
MAKE	must be blank
ALT	must be blank
RINGBACK	must be "N"
STATMON	must be "N"
OE TYPE	Software Release: 5E8 and later As provisioned: LEN, SLC, GEN, MEN (5E8-5E9(2)), AIU.
BRCS	must be "N"

1.7 Entry Restrictions for Party Lines

For TNs assigned with party Classes Of Service (TWOPTY, 4PFS, 4PSS, 8PSS, 5PTY, 10PTY) and non-MFR Individual Lines (MFRI of "N" and PTY of 0-9, T or R), entries are restricted in the following fields:

Entry Restrictions for Party Lines

Entry	Restrictions
COIN	must be "N"
GST	must be "N"
DNYROH	must be "N"
FLS	must be "N"
DNY	must be "N"
MAKE	must be blank
SLEEVE	must be blank
RINGBACK	must be "N"
STATMON	must be "N"
OE TYPE	Software Release: 5E8 and later As provisioned: LEN, SLC, GEN, MEN (5E8-5E9(2)), AIU

Additional restrictions for multi-party TNs that are non-MFR Individual. Class Of Service of 4PSS, 4PFS, 8PSS, 5PTY, 10PTY. PTY of 0-9 and MFRI of "N".

Entry Restrictions for Party Lines

Entry	Restrictions
NO	must be "N"
SERHLN	must be blank
SUSO	must be "N"
SUST	must be "N"

Restrictions on line equipment related options for all TNs that share either a LEN, SLEN,GEN, or MEN with a 2-party or multi-party Class Of Service. The following equipment options must remain the same value for all TNs that share the same LEN, SLEN,GEN, or MEN: GST, TSTLINE, RANGE, LNEQCLSS.

1.8 LEN Restrictions for Dedicated Lines

When defining a LEN for a dedicated line, the following fields should be populated:

Dedicated Line LEN Restrictions

Field	Entry Required
PTY	I
CIDIAL	DENY
TTC	Y
BRCS	N
FGA	N
FLS	N

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SUSO	Y
DNY ROH	N
COMPL	N
SLUS	N
DTLBILL	N
TRAFFIC	N
DNY BV	N
SERHLN	BLANK
NO DIAL	N

1.9 Recent Change View

The corresponding Recent Change View for this form is 1.1.

2. FORM ENTRIES - 5109-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number, Office Name and NXX for all TNs on that page.

2.2 *TN

Description: The local Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

A Dial Tone Delay Alarm (External Sanity Monitor) is required in all offices. Two TNs are required, one of which must be denied origination (SUSO is "Y").

Also, SUST must be "N", PTY must be "I", and a NUMBER, where OE TYPE is "C" or "L", must be specified.

- ***NOTE:*** The External Sanity Monitor has been discontinued and is no longer required after 1990.

For 5E6 and later, when both TN and SERHLN are entered, a corresponding LCC form (5306 Record) must have TERMINATING TREATMENT set to "INDIV" or "INWATS" and CLASS OF SERVICE set to "INDIV", "B911", "PBX" or "ATND".

When TN has an LCC/RAX combination with a Service Class of "B911" on the LCC form and a Series Completing Hunt to Number, the SERHLN value on this form must have an LCC/RAX combination with a Service Class of "B911".

For 5E8(1) and later, TNs assigned an Advanced Service Interface feature via the LINEFA, CLUSTR, or BFG form can not have the NO DIAL field on the LINE form set to "MAN".

For 5E9(1) and later, when the TN on the LINE form has a corresponding CLASS OF SERVICE of "MODEM" on the LCC form, it cannot also be assigned an ARS (Automatic Route Selection) feature on either the LINEFA form, the BFG form, or an associated CLUSTR form. Also the QUEUE ALLOWED field cannot be set to "Y" on the ARSLPA, BFG, or ARSFD forms.

TNs defined on an IMINFO form (5510 Record) or a COTH form (5513 Record) must have a PRECUT STATUS of "ACTIVE".

For 5E9(1) and later, when TNs defined on the LINE form have an LCC/RAX combination defined on the

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LCC form with a TERMINATING TREATMENT of "ASIRA", the following LINE form fields must be set:

- OE TYPE/NUMBER must be null
- SUST must be "N"
- DNY BV must be "N"
- SHARED must be "N"

For 5E9(1) and later, when TN(s) appear on the LINE form where the COIN field is not equal to "N", the corresponding LCC form CLASS OF SERVICE must be "COIN" or "CHGCALL".

For 5E9(1) and later, when TN(s) on the LINE form have their COIN feature set to "SPP" or "DTF" or "CF", the associated LCC/RAX combination must correspond a Service Class of "COIN" or "CHGCALL" on the LCC form.

For 5E9(1) and later, when TNs defined on the input line form have an LCC/RAX combination assigned on the LCC form that is associated with a SERVICE CLASS equal to "LTPCLBCK", the input TSTLINE field must equal a value of "Y".

If two-party or multi-party TN(s) defined on the LINE input form, are associated with a unique NUMBER, where OE TYPE is equal to "A", "C", "G", "L", "M" or "S", but the Tip or Ring assignment (for 2-party) or the PTY is 1-9, 0 and MFRI is "N", then the assignment (for 2-party MFR or multi-party) can not be duplicated.

TN(s) on the LINE input form that specify Single Party lines (PTY is "I" and MFRI is "N") or Multifrequency Ringing Individual lines (PTY is 1-9, 0 and MFRI is "Y"), can not have a common OE NUMBER, where OE TYPE is equal to "A", "C", "E", "G", "L", or "S".

The following TN(s) on the LINE form have the MFRI field set to "Y" or the LCC/RAX combination on the LINE form matches a LCC/RAX with an associated CLASS OF SERVICE value of "2PTY", "5PTY" or "10PTY" on the LCC form identifying a MFR type of line. All MFR lines must have OE TYPE on the LINE form set to "A", "C", "G", "L" or "S" (Note: "A", "G" or "S" is not valid for "2PTY" and "10PTY") and the first three digits of NUMBER must be defined on an IMINFO form with MFR FREQUENCY CLASS equal to "HAR", "DEC" or " SYN".

If a TN or MLHG/TERM defined on the LINE or MLHLN form with an OE TYPE of "A", "C", "E", "G", "L", or "S" and NUMBER combination, then it can not be duplicated between Individual MFR or non-MFR lines (PTY is "I" and MFRI is "N" or PTY is 1-9, 0 and MFRI is "Y") or duplicated between an Individual line (MFR or non- MFR) and a multi-party line (PTY set to 1 - 9, 0, "T", "R" and MFRI is "N").

When TNs are defined on the LINE form with PTY set to "T", "R", "1 - 9", "0" and MFRI set to "N", then the LCC/RAX combination must be associated with the appropriate Service Class/Terminating Treatment combination on the LCC form. OE TYPE must also equal "A", "C", "E", "G", "L" or "S".

Service Class/Terminating Treatment Combinations

PTY	SERVICE CLASS	TERM TREATMENT
T or R	TWOPTY	PARTY
1 - 4	4PSS,4PFS,8PSS, 2PTY,5PTY,10PTY	PARTY
5	8PSS,5PTY,10PTY, 2PTY	PARTY
6 - 8	2PTY,8PSS,10PTY	PARTY
9,0	2PTY,10PTY	PARTY

For 5E10 and later, when the TN(s) appear on the LINE form with a matching TN(s) on the LINEFA form with an ASP FEATURE or a CLUSTER containing an ASP feature assigned, and on the associated ASPFD or ASPLPA form an OHD TRIG NBR or TA TRIG NBR has been entered, the corresponding NSTRIG form SERVICE ALWD must not be "CSD".

For 5E12 and later, if the first 3 digits of the 7-digit TN(s) on the LINE/MLHLN form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7- digit TN(s) must be a 10-digit TN with the NPA/OFFICE

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CODE defined on the NOC form.

For 5E12 and later, the TN(s) entered on the LINE form, the NXX (the first 3 digits of a 7-digit TN) or the NPA/NXX combination (the first 6 digits of a 10-digit TN) must be defined as OFFICE CODE or NPA/OFFICE CODE, respectively, on the NOC form.

For 5E12 and later, TNs on different LINE forms cannot be duplicated.

For 5E12 and later, if the TNs on the LINE form have SERHLN entered, the equivalent 10-digit SERHLN cannot equal the equivalent 10-digit TN on the same LINE form.

2.3 #RAX

Description: Enter the Rate Area Exchange center number. This field is used to identify "rate centers" that are established by tariffs for routing and charging. It is used in association with the SCREENING INDEX and DAS (Digit Analysis Selector) fields on the LCC form (5306 Record). Note that this field is the same (functionally) as the RATE AREA field on the LCC form.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

For 5E4(2) and later, an individual line or a line assigned in a Series Completion chain may have a RAX/LCC combination defined on a LCC form with a TERMINATING TREATMENT of "INWATS"

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.4 #LCC

Description: The Line Class Code. This entry determines the class of service and terminating treatment. Along with the RAX entry, this entry also determines the Digit Analysis Selector used for routing and charging of calls.

Required Field
Valid Entries: 3 characters

Data Rules:

When the line is assigned an LCC/RAX combination defined on an LCC form where the Service Class is "CALLBK", the following fields on this form must be set as specified:

- OE TYPE must be:
  - "C", "L", "S", or "G";

    "M" (5E8 through 5E9(2) only),

    "E" (5E11 and later)

- SUSO must be "Y";
- for 5E7 and later, TTC must be "Y".

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- for 5E9(1) and later, LOCAL TALK & MONITOR TN on the TLWS form (5511) must be entered for this TN.

For 5E10 later, when Telephone Number(s) on the LINE form have an LCC/RAX combination that appears on the LCC form with a Service Class of "LTPCLBCK", the following restrictions must hold:

- OE TYPE must be:
  - "C", "L", "S", or "G";

    "M" (5E8 through 5E9(2) only),

    "E" (5E11 and later)

    "A" (5E12 and later)

- TN must not be defined as MASTER TN on the MTNDR form.
- The LINE form must have the following values:

  SHARED must be "N"

  NO DIAL must be "N"

  DNY ROH must be "N"

  SERHLN must be unknown

  DNY BV must be "N"

  TRAFFIC must be "N"

  DTLBILL must be "N"

  FGA must be "N"

  SLUS must be "N"

  COMPL must be "N"

  SUSO must be "Y"

For 5E7 and later, if the corresponding LCC form has CLASS OF SERVICE of "RCDM", the following fields must be set as specified:

- AC ALW must not be entered or equal "N",
- ANI7 must equal "N",
- AR ALW must not be entered or equal "N",
- ASSOC OE TYPE/NUMBER must not be entered
- BRCS must equal "N",
- CIDIAL must equal "DENY",
- COMPL must equal "N",
- COT ALW must not be entered or equal "N",
- DNY BV must equal "N",
- DNY ROH must equal "N",
- DTLBILL must equal "N",

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- EL must equal "N",
- FGA must equal "N",
- FLS must equal "Y",
- GNDREF must equal "N",
- ICP must equal "N",
- LNEQ must equal "N",
- MAKE BUSY KEY must not be entered,
- MFRI must equal "N",
- NO DIAL must equal "N",
- PCP ALW must not be entered or equal "N",
- PRIVACY must equal "N",
- PTY must equal "I",
- RANGEX must equal "N" or "NONE",
- SCA GA ALW must not be entered or equal "N",
- SCF GA ALW must not be entered or equal "N",
- SCR GA ALW must not be entered or equal "N",
- SDA GA ALW must not be entered or equal "N",
- SERHLN must not be entered,
- SHARED must equal "N",
- SLEEVE LEAD CKT must not be entered,
- SLUS must equal "N",
- SUSO must equal "N",
- SUST must equal "Y",
- TRAFFIC must equal "N",
- TRC must equal "N",
- TSTLINE must equal "N"

2.5 OE TYPE

For 5E12 and later, this field has been renamed OE. For information, see the OE field description.

2.6 NUMBER

For 5E12 and later, this field has been renamed OE. For information, see the OE field description.

2.7 OE

Description: This field has an entry for TYPE and an entry for NUMBER. This field is used in conjunction with the OE NUMBER field to define Equipment Types and Numbers (see the OE TYPE and the OE NUMBER tables below).

OE TYPE was added to this form, effective with the 5E3 and later to accommodate the addition of 4-Wire Analog Lines (TEN) and 4-Wire Digital Lines (DEN).

When defining a dedicated line LEN, refer to the DEDICATED LINE LEN RESTRICTIONS in this section.

TYPE:

Valid OE TYPE Entries

Entry	Definition
A	Software Release: 5E12 and later. TR-303 on DNU-S (INEN). See Division 2, Secton 9J. Software Release: 5E13 and later. See Division 2, Section 4A349 for TSI Nail-Up of Consecutive DS0s For DNU-S.
C	The TN is associated with ISLU Line Card Equipment Number and Number field must contain an 8-digit equipment number.
D	The TN is associated with a 4-wire Digital Equipment Number and Number field must contain an 8-digit

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	DEN. Software Release: 5E15 and later The DEN was expanded to 10-digits.
E	Software Release: 5E11 and later: The TN is associated with an AIU (Access Interface Unit).
G	Software Release: 5E8 and later. The TN is associated with an IDCU (Integrated Digital Carrier Unit) Equipment Number and Number field must contain a 10-digit equipment number (GEN) for a remote terminal or a PUB43801. For 5E10 and later a 11-digit equipment number is required.
L	The TN is associated with an analog-type Line Equipment Number and Number field which must contain an 8-digit LEN for 5E9(1) and earlier and a 10-digit LEN for 5E9(2) and later.
N	Software Release: 5E12 and later. The TN is associated with a 4-wire line on DNU-S Network Equipment Number and Number field must contain a 10-digit NEN. Software Release: 5E13 and later. The VT (Virtual Tributary) field defined on the EQVT form (5858 Record) was split which resulted in an 11-digit NEN.
O	Software Release: 5E16 and later. OIUEN (Optical Interface Unit Equipment Number)
S	The TN is associated with SLC-96 Equipment Number and Number field must contain an 8-digit SLEN. Software Release: 5E15 and later. The SLEN was expanded to 10-digits.
T	The TN is associated with a 4-wire analog Trunk Equipment Number and Number field must contain a 7-digit TEN.

Data Rules:

If BRCS Features are specified, either the OE Type must be entered or ICP must be "Y".

If OE TYPE is entered, then OE NUMBER and PTY (party) must entered.

If OE TYPE is "D", "N", "O", or "T"

- PTY must be "I"
- CLASS OF SERVICE must be "4WINDIV" on the corresponding LCC form (where LCC and RAX match the LCC and RAX on this form)
- When the OE TYPE on a LINE form is equal to "D", "N", "O", or "T", the SM referenced in the OE NUMBER cannot be an SM where the EQIM form has a value for CONFIGURATION which does not support 4-wire lines.
- For 5E8 and later, MFRI, FGA, BUSY MONITOR, and ANI7 must be "N" on this LINE form; SERHLN, ATT MLHG, and RBV TGN must be blank.

If "A", "C", "E", "G", "L", or "S" is entered; the CLASS OF SERVICE on the corresponding LCC form cannot be equal to any of the following: "4WINDIV", "ISATND", "ISDN", "TAOPER" or "XDB". The LCC form corresponds to this form if the LCC and RAX match.

5E8 and later:

When Telephone Number(s) are assigned on the LINE input form with OE TYPE set to "S" (SLEN) and have a SLC Channel Unit Type of "COIN" defined on the SLCCU form, and the LCC form which corresponds to this LINE form has an LCC-CLASS OF SERVICE of either "INDIV" or "PBX", the Channel Unit Type/CLASS OF SERVICE combination requires that the CLSS field be set to "Y" on the LINE form.

5E9(1) and later:

Telephone Number(s), assigned on the LINE input form to IDCU equipment (OE TYPE is equal to "G" or "M"), must have the proper RTERM Channel Unit to LCC-Service Class correspondence. The LCC/RAX

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combination assigned on the LINE form must be defined on the LCC form with an associated Service Class that matches the CUXX/YY type on the RTERM input form. Errors will be reported for RTERM forms where RT INTERFACE is "TR008". Refer to the following Table for the required correspondence:

LCC TO RTERM CORRESPONDENCE

LCC SERVICE CLASS	RTERM CU XX/YY
COIN	COIN, FSR, SSV00, SSV10
PBX, HOTPBX	FXS, FSR, SPOTS, SF1*, DFXS*
HOTMOTL	FXSLS, SPOTS, SF1*, DFXS*, SSV00, SSV10
B911, CHGCALL	SP, SPOTS, SSV00, SSV10
INDIV	FXSLS, SP, SPOTS, FSR, MP, SF1*, DFXS*, SSV00, SSV10
4PFS, 4PSS, 8PSS	MP, SSV00, SSV10
TWOPTY	MP, SSV00, SSV10
5PTY	FSR, SSV00, SSV10

*Note: SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

Telephone Number(s), assigned on the LINE input form to SLEN equipment (OE TYPE is equal to "S"), must have the proper SLC Channel Unit to LCC-CLASS OF SERVICE correspondence. The LCC/RAX combination assigned on the LINE form must be defined on the LCC form with an associated CLASS OF SERVICE that matches the CU TYPE on the SLCCU input form. Refer to the following Table for the required correspondence:

LCC CLASS OF SERVICE TO SLCCU CU TYPE

LCC SERVICE CLASS	SLCCU CU TYPE
COIN	COIN, FSR, SSV10
PBX	COIN, FXS, FSR, SPOTS, SSV10, SF1*, DFXS*
HOTPBX	FXS, FSR, SPOTS, SSV10, SF1*, DFXS*
HOTMOTL	FXSLS, SPOTS, SSV10, DFXS
B911, CHGCALL	SP, SPOTS, SSV10
INDIV	COIN, FSR, FXSLS, MP, SP, SPOTS, SSV00, DFXS
4PSS, 4PFS, 8PSS, TWOPTY	MP, SSV10
5PTY	FSR, SSV10

*Note: SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

When Telephone Number(s) are assigned on the LINE input form to NUMBER(S) where OE TYPE is equal to "S", and is defined on the SLCCU form as being associated with a Channel Unit type equal to "SF1" (5E9(1)), or "DFXS" (5E9(2) and later), and the CLASS OF SERVICE on the associated LCC form is "INDIV", the GST (Ground Start) on the LINE form must be "N".

When Telephone Numbers(s) are assigned on the LINE input form to NUMBER(S) where OE TYPE is equal to "G" or "M", that are defined on the RTERM form as being associated with a Channel Unit type equal to "SF1" (5E9(1)), or "DFXS" (5E9(2) and later), and the CLASS OF SERVICE on the associated LCC form is "INDIV", the GST (Ground Start) on the LINE form must be "N".

When Telephone Number(s) are assigned on the LINE input form to NUMBER(S), where OE TYPE is equal to "S", and are defined on the SLCCU form as being associated with a Channel Unit type equal to "FSR", "FXSLS", "MP", or "SP", the value of the GST (Ground Start) field on the LINE form must be "N".

5E11 and later:

If "E" is entered:

- TYPE on the EQAIUP form (5746 Record) must be "AIZLP" or "AICLP".
- the associated NUMBER must be specified in the AIU format and TYPE on the EQAIUP form (5746 Record) must be "AIZLP" or "AICLP".
- CLASS of SERVICE cannot be "2PTY", "4PSS", "4PFS", "8PSS", "5PTY", "10PTY", or "TWOPTY".

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When OE TYPE is "C", "E", or "L", OE NUMBER(s) cannot be duplicated on the MLHLN form.

If the OE TYPE is "L", NUMBER(s) cannot be assigned to the LINE form and the MLHLN form. NUMBER(s) are mutually exclusive on these forms. If CLASS OF SERVICE on the associated LCC form is "B911", OE TYPE must be "C", "E", "L", or "S".

If the OE is in PUB43801 format, the RT must be defined on an EQIFAC form (5847 Record).

The ASSOC OE TYPE on the LINE form must be blank as LTSB (Line Time Slot Bridging) is not allowed on PUB43801.

If OE TYPE is "G" and in the RT format, the RTs must be defined on the RTERM form (5174 Record) with RT INTERFACE equal to "TR008" or "TR303".

If OE TYPE is a "G" unit that has a TR008 RT defined on the RTERM form, the SM/IDCU/RT values of the NUMBER must be defined on an RTERM form and the GEN and MEN LINE NO. value must be assigned to an appropriate IDCU DIGRP with its STATUS equal to "O" (operational).

For 5E9(2) and later, if Telephone Numbers(s) assigned on the LINE input form are assigned to NUMBER(s), where OE TYPE is set to "G" that are defined on a RTERM form as being associated with a Channel Unit typeset to "FSR", "FXSLS", "MP", or "SP", the value of the Ground Start field (GST) on the LINE form must be "N".

If OE TYPE is a "G" or "M" unit that has a TR008 RT defined on the RTERM form, the LCC/RAX combination assigned on the LINE form must be defined on the LCC form with an associated Service Class that matches the CU (Channel Unit) types on the RTERM form.

If OE TYPE is a "G" or "M" unit that has a TR008 RT defined on the RTERM form, the OE NUMBER must correspond to a CU (Channel Unit) position with a known value defined on the RTERM form. The last two digits of the LINE NO. are determined by the CU value (xx/yy), where xx is in the odd number range of 01-95 and yy is xx + 1. Note that both LINE NO. (POS) values in the pair are assignable for CU xx/yy type equal to "FSR", "MP", "SP", "SSV00", "SSV10", "SF1" (5E9(1)), "DFXS" (5E9(2) and later) or SPOTS". Only the lower (odd) numbered LINE NO. value is assignable for CU xx/yy type equal to "COIN", "FXS", or "FXSLS".

5E13 and later:

If "E" is entered:

- OE TYPE of "N" must be defined on the EQVT form,VT EQSTAT and DS1S EQSTAT must be "O", and APPLICATION TYPE must be "TRUNK".

5E16 and later:

When OE type is "Y" on this form, SERV TYPE must be "CFS" on the ENETLINK form (5827 Record) for SM of OE number.

NUMBER:

Description: The Office Equipment Number.

Valid Entries: in one of the following formats.
For 5E9(2) and earlier, an 8- or 10-digit number
For 5E10 and later, a 10- or 11-digit number

If OE TYPE is "A", the INEN Equipment Number consists of:

TR-303 on DNU-S, Type A - 5E12 and later		

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Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	LINE	XXXX	0001-2048

If OE TYPE is "C", this ISLU Line Card Equipment Number consists of:

OE NUMBER, TYPE C

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7
Line Group Controller	LGC	XX	00 - 15
Line Card	LC	XX	00 - 31

The ISLU Line Card must be defined on an ISLULC form (5942 Record) with EQST set to "O" and TYPE set to "ZLC".

If OE TYPE is "D", this 4-wire Digital Equipment Number consists of:

OE NUMBER, TYPE D

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Line Trunk Unit	DLTU	X	0 - 5 (5E14 and earlier)
		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	DCHAN	XX	01 - 24
			01 - 48 (5E5 and later)

When the DCHAN entered is greater than 24, the FAC InD on the EQDUP form (5730 Record) must be 3.

If OE TYPE is "E", this AIU Equipment Number consists of:

OE NUMBER, TYPE E - 5E11 and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	AIU	XXX	000 - 042
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 31
			Coin 00 - 15

If OE TYPE is "G", this IDCU Equipment Number residing on a Remote Terminal consists of:

OE NUMBER, TYPE G - Remote Terminal (5E9(2) and earlier)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

OE NUMBER, TYPE G - Remote Terminal (5E10 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	XX	00 - 42
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

If OE TYPE is "G", this IDCU Equipment Number residing on a PUB43801 consists of:

OE NUMBER, TYPE G - PUB43801

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7 5E9(2) and earlier

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		XX	00 - 42 (5E10 and later)
DS1	DS1	XX	51 - 90
Line	LINE	XXXX	0001 - 0024

If OE TYPE is "L", this Line Unit Equipment Number consists of:

OE NUMBER, TYPE L

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7 (5E9(1) and earlier)
		XXX	000 - 042 (5E9(2) and later)
Concentrator	CONC	X	0 - 9
Switch Group	SWG	X	0 - 1
Switch	SW	X	0 - 7
Level	LEV	X	0 - 3

If OE TYPE is "N", this is the 4-wire Line on DNU-S. The DNU-S Networking Equipment Number consists of:

OE NUMBER, TYPE N (5E12 and earlier)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Networking Unit - SONET	DNU-S	X	0 - 7
Data Group	DG	X	0 - 1
Synchronus Transport Signal	STS	X	0 - 5
Virtual Tributary	VT	XX	01 - 28
Digital Signal Level 0	DS0	XX	01 - 24

OE NUMBER, TYPE N (5E13 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
SONET Termination Equipment	STE	X	1-6
Synchronous Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1-7
Virtual Tributary Member	VTM	X	1-4
Digital Signal Level 0	DS0	XX	01-24

When OE is "O", this is the 4-wire Line on OIU. The OIUEN Equipment Number consists of:

OE NUMBER, TYPE "O" - (5E16 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
ProtectionGroup	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

If OE TYPE is "S", this SLC Equipment Number consists of:

OE NUMBER, TYPE S

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Carrier Line Unit	DCLU	X	0 - 7 (5E14 and earlier)
		XX	00 - 15 (5E15 and later)
Remote Terminal	RT	XX	01 - 06

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Line	LINE	XX	01 - 96

The RT value defined on the MLHLN form must correspond to an RT assigned on the SLCRT form (5106 Record).

If OE TYPE is "T", this 4-wire analog Trunk Equipment Number consists of:

OE NUMBER, TYPE T

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Trunk Unit	TU	XX	00 - 07
Service Group	SVG	X	0 - 1
Pack	PACK	X	0 - 7
Circuit	CKT	X	0 - 3

If OE TYPE is a "G" or "M" unit that has a TR303 RT defined on the RTERM form (5174 Record), the RT EQSTAT on the RTERM must be "O" or "G".

If OE TYPE is a "G" or "M" unit that has a TR303 RT defined on the RTERM form, the assigned line value (OE NUMBER [7,10] for "G"; OE NUMBER [7,8] for "M") must not exceed the RT LINE SIZE on the RTERM form.

If OE TYPE is a "G" or "M" that has a TR303 RT defined on the RTERM form, the SM/IDCU/RT assigned values for (OE NUMBER [1,6] must have corresponding SM/UNIT NUMBER/RT EX values assigned on an RTERM form.

For 5E9(1) and later, when Telephone Numbers(s) are assigned on the LINE input form(s) to IDCU equipment (OE TYPE is equal to "G" or "M"), the following OE NUMBER(s) must correspond to a Channel Unit position (i.e., CU XX/YY) with a value defined on the RTERM form. Note that the last two digits of the LINE NO. are determined by the CU XX/YY value (where XX is in the odd number range of 01-95 and YY is XX + 1). Both LINE NO. (POS) values in the pair are assignable for CU XX/YY type equal to "FSR", "MP", "SP", "SSV00", "SSV10", "SF1" (5E9(1)), "DFXS" (5E9(2) and later), or "SPOTS". Only the lower (odd) numbered LINE NO. value is assignable for CU XX/YY type equal to "COIN", "FXS" or "FXSLS". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

OE NUMBER TO RTERM CORRESPONDENCE

OE	RTERM
NUMBER[1, 3]	SM
NUMBER[4, 4]	UNIT NUMBER
NUMBER[5, 6]	RT EX
NUMBER[7, 8]	For OE TYPE equal to "M"
NUMBER[7, 10]	For OE TYPE equal to "G": POS value for CU XX/YY type equal to FSR, MP, SP, SPOTS, COIN, FXS, FXSLS, SSV00, SSV10, SF1*, DFXS*

*Note: SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

For 5E9(1) and later when Telephone Number(s) are assigned on the LINE input form and are associated with a SLC equipment number (SLEN), the NUMBER must correspond to a Channel Unit Position with a known value defined on the SLCCU form. Note that LINE NO. values of the NUMBER[7,8] entry are determined by the CU TYPE value. Both LINE NO. (POS) values in the pair are assignable for CU TYPE equal to "SP", "MP", "SPOTS", "FSR", "SF1" (5E9(1)) or "DFXS" (5E9(2) and later). Only the lower (odd) numbered LINE NO. value is assignable for CU TYPE equal to "COIN", "FXS", "FXSLS", "SSV00" or "SSV10".

SLEN TO SLCCU CORRESPONDENCE

SLEN	SLCCU
NUMBER[1, 3]	SM
NUMBER[4, 4]	DCLU
NUMBER[5, 6]	REMOTE TERMINAL
NUMBER[7, 8]	POS value with CU TYPE equal to a value SP, MP, COIN, FXS, FXSLS, FSR, SPOTS, SSV00, SSV10, SF1, DFXS

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*Note: SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

For 5E8 through 5E9(2), TNs (Telephone Numbers) that have ports with OE TYPE set to "G" or "M" on the LINE form(s) which identify IDCU PUB43801 equipment by defining a DS1 value of 51 - 90 in OE NUMBER positions 5-6, the SM/IDCU/DS1 value assigned to the LINE OE NUMBER must have a related EQIFAC form having SM/IDCU/LSI/IFAC NUM with PUB43801 equal to "Y" and EQSTAT equal to "O".

For 5E10 and later, TNs (Telephone Numbers) that have ports with OE TYPE set to "G" on the LINE form(s) which identify IDCU PUB43801 equipment by defining a DS1 value of 51 - 90 in OE NUMBER positions [5 - 6], the SM/IDCU/DS1 value assigned to the LINE OE NUMBER must have a related EQIFAC form having SM/IDCU/LSI/IFAC NUM with PUB43801 set to "Y" and EQSTAT set to "O".

The LINE form(s) associated with OE TYPE and NUMBER on an MDFTA form must have the indicated fields populated as follows:

- BRCS must equal "N"
- COIN must equal "N"
- COMPL must equal "N"
- DNY BV must equal "N"
- DNY ROH must equal "N"
- DTLBILL must equal "N"
- FGA must equal "N"
- FLS must equal "N"
- GST must equal "N"
- NO DIAL must equal "N"
- PALIT must equal "Y"
- PSLIM must equal "Y"
- PTY must equal "I"
- SERHLN is null
- SLUS must equal "N"
- SUSO must equal "Y"
- TRAFFIC must equal "N"
- TSTLINE must equal "N"
- TTC must equal "Y"

For 5E10 and later, when OE NUMBER is blank,

- PTY must be blank
- PSLIM must be "Y"

2.8 RTI

Description: The Route Index number used for all calls terminating to the TN. A Route Index is required for any TN whose terminating calls reroute to an Announcement, Tone, PBX DID (Direct-In-Dial) or Trunk Group.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

If an entry is made in this field, then the values entered in the following fields must be:

ALT BILL TN is not entered

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- ANI7 is "N"
- ICP is "N"
- MFRI is "N"
- OE TYPE/NUMBER is not entered
- PTY is not entered
- SERHLN is not entered

For 5E3 and later, if the OE TYPE and NUMBER fields are not entered and the ICP field is "N", then this field and/or the TEST CODE field must be entered.

All Route Index entries specified on the LINE form must be defined on the RTIDX form (5303 Record). The RTI entered on the LINE form will be replaced by that on the RAR form unless "REGL" is entered in the RTI field of the RAR form.

5ESS Switch reconstructs a 7-digit TN for either a line or trunk originated call terminating to a line which is a defined with a Route Index. When the Route Index is defined on the RTIDX form (5303 Record), deleting and prefixing of digits should be based on the reconstructed 7-digit TN.

For 5E9(1) and later, if RTI and TEST CODE are entered, then RTI must be defined as a ROUTE INDEX on an RTIDX form (5303 Record) with ROUTE TYPE set to "HUNT".

2.9 MLHG/TERM

Description: Not for ODA input. These fields represent a listing of all assigned TNs. Entries are printed, or entered, only for TNs assigned to MLHGs on the MLHLN form (5111 Record). This information is the same as that defined on the 5111-1/2 Records which are keyed by the MLHG/TERM combination.

The following entries are for record purposes only and do not appear on the LINE input form. These entries are generated by ODA when output is requested using the "records" command. An entry will appear whenever a telephone number has an associated entry on one of the forms below.

MLHG - TERM
These two entries represent the MLHG and Terminal Number entered on the MLHLN form.

MLHG - TYPE
These two entries represent the MLHG entered on the MLHG input form and the Hunt Type entered on the MLHGFD form.

HRTI - TYPE
These two entries represent the Hundreds Group Route Index Number entered on the HGRPAS form; TYPE will always be HRTI.

2.10 PTY

Description: The Party position or identifier of TNs.
Default: I
Valid Entries:

Valid PTY Entries

Entry	Definition
I	Individual (single party)
T	Tip (Second party on a two-party line)
R	Ring (First party on a two-party line)
1-8	Standard (NON-MFRI) 4 and 8 Multi-party Service
1-9, 0	MFR Multi-party service with MFRI set to "N" and CLASS OF SERVICE set to "5PTY" or "10PTY" on the LCC form (5306 Record). Party position 10 is represented by 0.

Data Rules:

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The MFR (Multi-Frequency Ringing) feature provides varied ringing frequencies over five frequencies and three frequency classes for either bridged or divided ringing (See Figure 4). This feature allows full selectivity on ringing through one of five frequency selections always using bridged ringing.

When an MFR line is assigned to a Line Unit (analog subscriber assigned a LEN), the Line Unit must be a Model 2 and all associated HLSC (High Level Service Circuits) on the EQLUP form (5711 Record) must be the MFR HLSC types. Also, MFR lines must be assigned to an SM with a valid MFR FREQUENCY CLASS specified on the IMINFO form (5510 Record).

When an MFR line is assigned to a DCLU Integrated SLC digital subscriber, then the customer LCC Service Class is restricted to 5PTY or INDIV and the party value must be 1-4 and use the SLC Channel Unit Type of FSR assigned on the SLCCU form. The frequency is provided based on a switch option of the Channel Unit.

Individual MFR lines are customers with an Individual CLASS OF SERVICE ("INDIV", "PBX", "HOTPBX", "COIN" or "SATSTLN") and may have any frequency or wiring configuration allowed with multi-party MFR lines when MFRI is "Y".

For MFR multi-party service, MFRI must be "N" and the CLASS OF SERVICE on the associated LCC form must be "5PTY" or "10PTY".

For MFR 2-party service, MFRI must be "N" and the CLASS OF SERVICE on the associated LCC form must be "2PTY". One customer must be a Tip side frequency and the other a Ringside frequency.

MFR Individual Service with MFRI set to "Y" and CLASS OF SERVICE on the LCC form is "INDIV", "PBX", "HOTPBX", "COIN" or "SATSTLN".

NOTE: The mixture of Touch Tone and Dial Pulse is not recommended for multi-party lines. Touch Tone fraud cannot determine customer originator for multi-party lines.

Ten-party lines combine one of the five frequency selections with divided ringing.

MFR lines do not interfere or relate to 2, 4, or 8 party non-MFR subscribers.

If CLASS OF SERVICE on the associated LCC form is "B911", PTY must be "I".

For 5E10 and later:

- Regular 2-party (PTY is "T" or "R") or MFR 2- party/multi-party (PTY is 1-9, 0 and MFRI is "N") LINE form entries must have the same values assigned to their TSTLINE and/or RANGEX input fields. The Telephone Numbers that share the same NUMBER, where OE TYPE is equal to "A", "C", "E", "G", "L" or "S", must have these features remain a constant value.

- Regular 2-party (PTY is "T" or "R") or MFR 2- party/multi-party (PTY is 1-9, 0 and MFRI is "N") LINE form entries must have the same values assigned to their respective Essential Line (Essential Service Protection) field. The value of EL must remain constant for all TN values on the LINE form that share the same NUMBER, where OE TYPE is equal to "A", "C", "G", "L" or " S".

- Two-party or multi-party TN(s) defined on the LINE input form that are associated with a unique NUMBER, where OE TYPE is equal to "A", "G" or "S", but the Tip or Ring assignment (for 2-party) or the PTY is 1-8 and MFRI is "N" assignment (for multi-party) can not be duplicated.

- LINE input forms that specify Single Party Remote Terminal lines (PTY is "I" and MFRI is "N") or Multifrequency Ringing Individual lines (PTY is 1-5 and MFRI is "Y"), require Equipment Numbers that are not duplicated as an OE NUMBER on any LINE form where the associated OE TYPE is equal to "A", "G" or "S".

- Multi-party lines (PTY is 1-8 and MFRI is "N") assigned to a NUMBER on the LINE form, where OE

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TYPE is equal to "A", "G" or "S", can not mix both Touchtone and Dialpulse between the TN(s).

- 2-party (PTY is "T" or "R") or multi-party (PTY is 1-8 and MFRI is "N") LINE form entries can not have different values assigned to their TSTLINE and/or RANGEX input fields. The Telephone Numbers that share the same NUMBER, where OE TYPE is equal to "A", "G" or "S" , must have these features remain a constant value.

- TN(s) that are multiparty (PTY is "T", "R 170 or 1-9, 0) on the LINE form and are assigned to a NUMBER, where OE TYPE is equal to "A", "C", "E", "G", "L" or "S", with the CARRIER GRP AL M feature; the CARRIER GRP ALM value must remain constant for all multiparty TN(s) that share the same NUMBER.

- 2-party lines (PTY is "T" or "R") or multi-party lines (PTY is 1-9, 0 and MFRI is "N") that share the same unique NUMBER on the LINE form, where OE TYPE is equal to "A", "C", "G", "L" or "S", must have the option of GNDREF remain the same value.

- When PTY is blank, PSLIM must be "Y".

Multi-party lines which share the same equipment must have the same class of service. Multi-party lines (PTY set to "T", "R", 1-9, or 0 and MFRI set to "N") that share the same unique NUMBER on the LINE form, with OE TYPE of "C", "G", " L" or "S", the CLASS OF SERVICE defined by the lines LCC and RAX on the LCC form must remain constant for all TN(s) which are assigned to the given NUMBER.

2.11 MFRI

Description: Will Multi-Frequency Ringing Individual be activated? An entry is required for all LINE entries.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For customers requiring Multi-Frequency Ringing and their CLASS OF SERVICE on the LCC form is one of the following: "INDIV", "PBX", "HOTPBX", "COIN", or "SATSTLN", then this field must be "Y".

When MFRI is "Y":

- a corresponding PTY value of 1 - 9, 0 is required to produce the correct ringing,

- OE TYPE must be "A", "C", "E", "G", "L", or "S".

When MFRI is "N" and PTY is 0 - 9, this Multi-party line cannot have BRCS.

MFRI must be "N" for all non-MFR customers and for MFR two-party and Multi-party customers with CLASS OF SERVICE "2PTY", "5PTY", "10PTY".

MFR lines of "5PTY" may be inhibited from revertive type calls if MFR REVERTIVE MANUAL is "Y" on the OFCOPT. If this item is "Y", then all Multi-party MFR customers that attempt to make revertive type calls must go through an operator to complete their call.

For 5E14 and later, when MFRI is "Y", OE TYPE must be "A", "C", "G", "L", or "S".

2.12 CIDIAL

Description: Enter the Carrier Interconnect Dialing Permissions.

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Valid CIDIAL Entries	
Entry	**Definition**
ALLOW	The customer is allowed to dial an FGD CAC (Carrier Access Code) or use a PIC (Pre-subscribed InterLATA Carrier) Identification Number, if one is assigned, when making a Carrier Interconnect call.
DENY	The customer is not allowed to dial an FGD CAC.
REQ	The customer is required to dial an FGD CAC when making a Carrier Interconnect call.
TALLOW	Same as ALLOW, but used for a CI test line only.
TDENY	Same as DENY, but used for a CI test line only.
TREQ	Same as REQ, but is used for CI test lines only.

Data Rules:

For 5E8 and later, an entry is valid only for OE TYPE of "L", "S", "G" or "M".

When this field is blank, the CIDIAL field is automatically assigned "ALLOW"

For 5E9(1) and later, lines that require carrier access code dialing, PIC is not allowed.

2.13 PIC

Description: The Pre-subscribed InterLATA Carrier Identification Number for this TN.
Valid Entries:
- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

For 5E8 and later, this entry is valid when OE TYPE is "L", "S", "G", or "M", and CIDIAL is not "REQ" or "TREQ".

For 5E8 and later, PIC must equal CARRIER ID on an ICF form (5305 Record), with the ICF form's FEAT GRP equal to "D".

2.14 PTC

Description: The Pre-subscribed Intra-LATA Toll Carrier Identification Number for this TN. The PTC field is used by the Intra-LATA PIC capability. For more information on the Intra-LATA PIC capability, see Division 2 Section 4A149.

Software Release: 5E9(1) and later
Valid Entries: 0 - 9999

Data Rules:

When RTI is entered, PTC must not be entered.

The PTC field on the LINE form is used by the ICLATA special feature, which is a secured feature that must be purchased by the office before this field can be entered. The SFID 149 ACT field must be set to "Y", before PTC can be entered.

2.15 PLC

Description: Enter the PLC (Presubscribed Local Carrier) code. The PLC field supports the Alternate Local Service Provider Routing feature. For more information on the Alternate Local Service Provider Routing feature, see Division 2, Section 4A269.

Software Release: 5E12 and later.

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Valid Entries: Blank, or 0 - 9999.

Data Rules:

PLC must not be entered if RTIDX is entered on the RTIDX form (5303 Record).

The PLC field on the LINE form must be defined as the CARRIER ID on the ICF form with FEAT GRP equal to "D".

2.16 UNBUNDLED

Description: Has this line been unbundled from the LEC?

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

If UNBUNDLED is "Y", then PLC must be entered.

UNBUNDLED must "N" if RTIDX is entered on the RTIDX form (5303 Record).

ORIG/TERM FEATURES

The following fields (Section 2.17 - Section 2.33) determine the use of originating and/or terminating features on a TN.

2.17 TTC

Description: Will Touch-Tone calling be activated? "N" is entered for dial pulse calling.

Required Field.
Default: N
Valid Entries: Y, N

2.18 BRCS

Description: Will Business and Residence Custom Services be activated?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

An entry is required if the TN is assigned one or more BRCS features on the LINEFA form.

The assigned features are given unique Feature Names on the LINEFA form (5112 Record). The TNs assigned any BRCS features must be assigned to a LEN, SLEN, GEN, or MEN and the Class Of Service must not be any of the two party or multiparty Class Of Service values.

For 5E6 - 5E8, if this line is dedicated to ASP (Advanced Services Platform; previously PVN, Private Virtual Network) via the default ASP DAS by having DIGIT ANALYSIS SELECTOR on the LCC form (5306 Record) equal to PVN DAS on the OFCOPT form (5509 Record), then BRCS must be "N" and ASSOC OE must not be entered.. If the line is dedicated to ASP via a virtual ASP DAS by having DIGIT ANALYSIS SELECTOR on the LCC form equal to a DAS whose functionality is similar to the PVN DAS on the OFCOPT form, then BRCS should be "N". See the ASP DIALING PLAN section in the ASP feature

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description, Division 2, Sections 4A51 and 4A126, for further details on the dangers of assigning BRCS features to lines dedicated to ASP services.

2.19 EL

Description: Will the TN receive Essential treatment? Essential Line treatment provides origination priority when the office is in an overload state and the Overload Control Program is activated. Essential Service can be provided for TNs assigned to a LEN, SLEN, GEN, MEN,or (R)ISLU-Z card designated as Essential.

No special dedicated equipment arrangement is required for Integrated SLC (SLENs), GENs, MENs or (R)ISLU-Z lines. Lines assigned to LENs have specific dedicated equipment arrangements to prevent blocking when lines assigned essential service attempt to originate calls.

It is recommended that at most one line requiring Essential Service be assigned to LEV 0-3 for a given SM, LU, CONC, SWG, and SW.

If this recommendation is not used, blocking could occur when lines assigned Essential Service attempt to originate. Refer to section Section 1.3 .

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OE TYPE is equal to "L", only one equipment NUMBER in a group of four NUMBERS which share a common SM/LU/GRID/SWG/SW value can have EL set to "Y".

2.20 FGA

Description: Will Feature Group A be activated? FGA is an access arrangement that provides line-terminated end-to-end InterLATA (Local Access and Transport Area) service.

Required Field.
Valid Entries: Y, N

Data Rules:

If this field is "Y", the following must be true:

OE TYPE is "A", "C", "E", "G", "L", or "S"

PTY is "I"

COIN is "N"

NO DIAL is not "MAN"

MAN MESG REGISTER is not entered

If FGA is "Y", originating and terminating call record information is always on the AMA tape, regardless of other charging options.

2.21 FLS

Description: Will free terminating service be activated? If "Y", all calls to the associated TN are free, i.e., no billing charge. This feature is not applicable to Coin, 2-Party or Multi-Party Lines.

Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then OE NUMBER and PTY must be entered.

2.22 SUSO

Description: Will Originating Service be denied/suspended? If "Y", the TN associated with the LEN, SLEN, GEN, or MEN cannot originate any calls. This feature is not applicable to Coin or Multi-Party Lines.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CLASS OF SERVICE on the associated LCC form is "B911", SUSO must be "Y".

This field must be "N" if 2 PARTY ANI is "N" on the associated IMINFO form and the CLASS OF SERVICE is either "2PTY" or "TWOPTY" on the associated LCC form. This form corresponds with the IMINFO form if the first 3 digits of the OE field match the SWITCHING MODULE field on the IMINFO form. This form corresponds with the LCC form if LCC/RAX fields match.

2.23 DNY ROH

Description: Will Deny Receiver Off Hook tone be activated? This feature is not applicable to 2-Party or Multi-Party Lines.

With fixed route types, the fixed route must first point to an announcement. Deny ROH treatment will then be given after the announcement.

Required Field.
Default: N
Valid Entries: Y, N

2.24 PALIT

Description: Will Prohibit Automatic Line Insulation Testing be activated? An entry of "N" indicates that testing allowed.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

PALIT is "N" if the TN defined on the LINE form has a CLASS OF SERVICE of "INDIV", "TWOPTY", "2PTY", "4PSS", "5PTY", "10PTY", "COIN", "CHGCALL", "PBX", "HOTMOTL", "HOTPBX", or "ATND" defined on the LCC form.PALIT must be "Y" for all other CLASS OF SERVICE entries. If this field is "Y", then OE NUMBER and PTY must be entered.

If the OE TYPE/NUMBER assigned on the LINE form is assigned to a remote terminal on an RTERM form where RT INTERFACE is set to "Y" and FTTH ENABLED is set to "Y", PALIT and PSLIM" must be "Y".

- **WARNING:** If the line is associated with a universal SLC, even though the CLASS OF SERVICE is in the valid range, PALIT must by "Y". Disregarding this warning may result in damage to the SLC

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Central Office Terminal and inaccurate test results.

2.25 PSLIM

Description: Should Subscriber Line and Instrument Measurement testing be prohibited?

Software Release: 5E10 and later
Valid Entries: Default: N
Valid Entries: Y, N

This field supports the SLIM2 feature. For more information, See Division 2, Section 4A230.

Data Rules:

If PSLIM is "N", NUMBER and PTY must be entered.

If PSLIM is "N", CLASS OF SERVICE on the LCC form be must "INDIV", "TWOPTY", "2PTY", "4PSS", "5PTY", "10PTY", "COIN", "CHGCALL", "PBX", "HOTMOTL", "HOTPBX", or "ATND".

If RT INTERFACE is set to "TR008" and FTTH ENABLED is set to "Y" on the RTERM form, PSLIM must be "Y".

2.26 COMPL

Description: Will Complaint Observing be activated? Complaint Observing is used for customers who question their message-rate bills. When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this line. The only difference between this field and the other line type study indicators is the designation set in the AMA record. COMPL is set by Recent Change after the office is cutover.

Required Field.
Default: N
Valid Entries: Y, N

2.27 SLUS

Description: Will Subscriber Line Usage be activated? When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this line. The only difference between this field and the other line type study indicators is the designation set in the AMA record. SLUS is set by Recent Change after the office is cutover.

Required Field.
Default: N
Valid Entries: Y, N

2.28 DTLBILL

Description: Will Optional Detail Bill be activated? When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this line. The only difference between this field and the other line type study indicators is the designation set in the AMA record. OPT DET Bill is set by Recent Change after the office is cutover.

Required Field.
Default: N
Valid Entries: Y, N

2.29 TRAFFIC

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Description: Will a Traffic Study be activated? Traffic Study is typically used for coin lines. When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this line. The only difference between this field and the other line type study indicators is the designation set in the AMA record. Traffic Study is set by Recent Change after an office is cutover.

Required Field.
Default: N
Valid Entries: Y, N

2.30 SUST

Description: Will Terminating Service be denied/suspended? This feature is not applicable to Multi-Party Lines.

Required Field.

Default: N
Valid Entries: Y, N

Data Rules:

If CLASS OF SERVICE on the associated LCC form is "B911", SUST must be "N".

2.31 ICP

Description: Will terminating calls be routed to Regular Intercept?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ICP is activated, entries are required in the TN, RAX, and LCC fields. ICP may be "Y" in two cases: either with an equipment assignment or without. If it is desired to route terminating calls to Regular Intercept and still maintain the equipment assignment, then the line is translated as usual with the appropriate OE TYPE/NUMBER association, for 5E3 and later.

If equipment is not assigned to this TN, then OE TYPE (for 5E3 and later) should be "ICP".

For 5E8 and later, if OE TYPE is blank and ICP equals "N", either RTI or TEST CODE must be entered.

2.32 DNY BV

Description: Will Deny Busy Verify be activated? This feature is not applicable to Coin, 2-Party of Multi-Party Lines.

Required Field.
Default: N
Valid Entries: Y, N

2.33 TRC

Description: Will Call Tracing be activated? When Call Trace is in effect, it is used to trace all incoming calls to the customer's TN and types a record on the Maintenance TTY. TRC is set by Recent Change after the office is cutover.

Required Field.

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Default: N
Valid Entries: Y, N

EQUIP

The following fields (Section 2.34 - Section 2.39) determine the use of specialized equipment assignments for a TN.

2.34 COIN

Description: Requirements for Coin lines.

Required Field.
Default: N
Valid Entries:

Valid COIN Entries

Entry	Definition
CF	Coin First
DTF	Dial Tone First
SPP	Semi-Postpay Coin DTF
N	No Requirement

Data Rules:

Coin lines must have "SPP", "DTF", or "CF" in this field.

If CLASS OF SERVICE on the associated LCC form is "B911", COIN must be "N".

COIN cannot be "SPP" on LINE forms where the CONTROLLING OE-types/numbers, defined on the NAILUP input form have CONTROLLING OE-type equal to "A", "G" or "S".

For 5E10 and later, COIN cannot be "SPP" on LINE forms where the CONTROLLING OE-types/numbers, defined on the NAILUP input form have NON-CONTROLLING OE-type equal to "G", or "S".

COIN cannot be "SPP" on LINE forms where the NON-CONTROLLING OE-types/numbers, defined on the NAILUP input form have NON-CONTROLLING OE-type equal to "A", "G" or "S".

For 5E10 and later, COIN cannot be "SPP" on LINE forms where the NON-CONTROLLING OE-types/numbers, defined on the NAILUP input form have NON-CONTROLLING OE-type equal to "G", or "S".

For 5E11 and later, if a COIN line is associated with an OE TYPE of "E", the NUMBER (SM, AIU, PACK) combination must be equipped with a TYPE of "AICLP" on the EQAIUP form.

2.35 GST

Description: Is this line a Ground-Start line (e.g., coin-first coin lines and PBX-CO trunks)? Ground-Start lines are explained in the GENERAL section of this form.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

GST assigned to a SLEN, MEN, or GEN, is dependent on the Channel Unit Type. If CUTYPE is "FXS", then the associated SLEN, GEN, or MEN must have GST of "Y". If CUTYPE is "FXSLS", then the associated SLEN, GEN, or MEN must have GST of "N". For Channel Unit Type assignments, see the SLCCU form (5107 Record).

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GST assigned to Coin must comply to the following restrictions: if Coin is "SPP", then GST must be "N"; if Coin is "DTF", then GST must be "N"; if Coin is "CF", then GST must be "Y".

GST should not be assigned to a SLC Carrier that contains a SPOT card. The SPOT card can switch loop or Ground Start automatically; therefore, GST should be "N".

2.36 TSTLINE

Description: Has a LEN, SLEN, GEN, MEN, DEN, TEN or LCEN been put into service while the 5ESS office is in the pre-cutover mode. This would be an exception to a group of lines in an SM that has been set to a Pre-Cutover status of INACTIVE. This is normally done for test lines - not live customers. It is recommended that all lines submitted at time of SLATTS be set to "Y". When this field has a value of "N", refer to IMINFO form (5510 Record) and COTH form in for Pre- and Post-Cutover (5513 Record) status of all TNs in the office.
Default: N

Valid entries Y, N

Data Rules:

If a 2-TN LTSB group is defined (refer to Division 2, Section 1AC), then the value of this field must be the same on both LINE forms that are completed.

2.37 GNDREF

Description: An earth Ground Reference. GNDREF is set up by connecting the Tip Scan resistor to ground during all stages of a call. This is necessary on certain types of equipment to prevent clicking and cut off. A comprehensive list of affected equipment can be found in the compatibility tables in document 235-700-100 (*5ESS Switch Interface/Compatibility Guide*) , however some common circuits requiring a "Y" option are listed here for convenience.

- Pair Gain lines that are connected to Universal (non-integrated) SLC with FXO Channel Units for 2-Wire Foreign Exchange Office service (2FXO-SD-3C326 Loop or Ground Start).
- T-Carrier with FXO Channel Units (SD-3C326 Loop or Ground Start).

CAUTION: When this option is set to "Y" and there is a cable extending outside the serving office that is connected to the Line Equipment Number appearance of the line, transmission may be unacceptable due to unbalance and ground hum. To resolve this, the GNDREF option should be "N" and a Ground Reference Circuit (SD-5D044) connected which will provide a reference to ground during off hook call states. (The 5ESS Switch provides a ground reference during on hook call states for Ground-Start Lines. If a Loop Start Line requires a ground reference during on hook call states, see the Line Class Code description for PBX service class.)"

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If GNDREF is "Y", OE TYPE must be "C" or "L".

NOTE: When the line is assigned to a AIU/RAIU, OE TYPE must be "E".

2.38 RANGEX

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Description: Is this line Range Extended from a Central Office? This includes all Line Equipment Numbers that are connected to E Type repeaters, non-integrated Subscriber Loop Carriers, and Metallic Facilities Terminals with gain.

For hardware requirements, please refer to the Interface/Compatibility Guide (235-700-100).

Required Field.
Default:

For 5E9(1) and earlier: N
- For 5E9(2) and later: NONE

Valid Entries:
- For 5E9(1) and earlier: Y, N
- For 5E9(2) and later: See table below.

Valid Entries:

Valid RANGEX Entries 5E9(2) and Later

Entry	Definition
EXT	Externally provided range extension. (Equivalent to "Y" in prior Software Releases.) Sets the balnet to 900+2; applies a Tip-Ground reference during all on-hook states. The Tip-Ground state allows the AUA39 (used in Universal SLC central office terminal systems) to work without requiring the setting of the GNDREF = "Y" option.
NONE	No range extension. (Equivalent to "N" in prior Software Releases.) Sets balnet based on whether the line is in a loaded or unloaded state.

Data Rules:

For 5E9(1) and earlier, if "Y" is entered, OE TYPE must be "C" or "L".

For 5E9(2) and later, if "EXT" is entered, OE TYPE must be "C" or "L".

NOTE: When the line is assigned to a AIU/RAIU, OE TYPE must be "E".

2.39 LNEQ

Description: The Line Equipment Class. All TNs assigned to Line Equipment Numbers that are associated with customers on local Tip and Ring cable must have an entry of "N" (Normal).

All TNs associated with Line Equipment Numbers on the Line Unit that connect to certain pair gain systems must have an entry of "I" (Incompatible). An entry of "I" inhibits the Fabric exerciser program from testing the associated Line Equipment Number.

Pair gain equipment is normally connected to a carrier system that requires Ground Start or FXO (Foreign Exchange Office) circuit packs with Ground-Start Option.

Required Field.
Default: N
Valid Entries:

Valid LNEQ Entries

Entry	Definition
1	Software Release: 5E12 SU and later; 5E14 BMI. Class 1: Assigned to a AIU/RAIU (Access Interface Unite/Remote AIU). Supports the DCX/AIU Per-Line Impedance feature.
I	Incompatible Equipment. (NOTE: This entry appears in Recent Change as "LNSKIP".)
N	Normal Equipment. (NOTE: This entry appears in Recent Change as "STDEQ".)

Data Rules:

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When this field is not "N", OE TYPE must be "C" or "L".

When "1" is entered,
OE TYPE must be "E".

the SM, AIU, PACK combination on the EQAIUP form must be equipped with a TYPE of "AIZLP" and both COIN and GST on the Line form must be "N".

2.40 RMK

Description: Remarks entered for administrative purposes.
Valid Entries: 1 - 16 alphanumeric characters

2.41 SUPPL

Description: An indication that supplementary information for the TN is contained on one or both Supplementary Telephone Number Records, 5109-2 Record and/or 5109-3 Record.

Valid SUPPL Entries

Entry	Definition
2	One or more of the items on the 5109-2 Record is equal to a non-default value.
3	One or more of the items on the 5109-3 Record is equal to a non-default value.
5	One or more of the items on both the 5109-2 Record and the 5109-3 Record are equal to non-default values.

3. FORM ENTRIES - 5109-2 RECORD

3.1 BASE AND CONTROL, OFFICE

Enter the Base and Control Number and Office Name.

3.2 (*) INDEX KEY

Description: The Telephone Number.
Valid Entries: 7 digits, 0 - 9

3.3 SERHLN

Description: The Series Completing to TN. For a TN that is part of a Series Completion Group, this entry represents the TN that is to be hunted to.

- ***NOTE:*** Call processing for Series Completion hunts linked-list DNs until an idle line is found, or 16 Series Completion attempts have been made.

Valid Entries:

- For 5E11 and earlier: 7-digit number, 0 - 9
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

If the LCC form (5306 Record) has a CLASS OF SERVICE value of "4PFS", "4PSS", "8PSS", "5PTY", "10PTY", "COIN", "CHGCALL" or "ISDN", SERHLN should be blank.

A line dedicated to ASP services should not be entered as part of a Series Completion Group. When SERHLN is entered and PVN ALW is set to "Y", the DIGIT ANALYSIS SELECTOR on the corresponding LCC form (5306 Record) cannot be the same as PVN DAS on the OFCOPT form (5509 Record)and should not be equal to a DAS equivalent in functionality to the PVN DAS (i.e., a virtual ASP DAS).

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For 5E6 and later, the Series Completion feature has been expanded to support BRI lines for CSV calls. Also for 5E6, SERHLN cannot be entered when ASSOC OE is known or when ICP is "Y".

When SERHLN is entered, it cannot equal the TN field and PVN ALW must be "N".

For 5E6 - 5E10, when ASSOC OE is entered, SERHLN cannot be entered.

For 5E11 and later, the SFID 262 ACT field on the SFSYS form (5713-1 Record) must be "Y" before SERHLN can be entered if ASSOC OE is entered.

For 5E6 - 5E8, when TN has an LCC/RAX combination that shows Service Class of "B911" on the LCC form and also has a Series Completing Hunt to Number, the SERHLN value on this form must have an LCC/RAX combination with a Service Class of "B911".

For 5E7 and later, a maximum of 512 TN(s) can Series Complete to a single TN defined in SERHLN on various input forms.

For 5E8 only, the SERHLN cannot be a Standard BRI line, an analog line shared to a Standard BRI, or a Secondary Only TN associated with a Standard BRI. That is, the SERHLN may not be defined as a CKT TN or CKT SWITCHING MLHG TN on a DSLUSR form when DSL CLS is "STD" on the corresponding DSL form. It may not be defined as a TN on a LINE or MLHLN form if the TN or MLHG is a key on an SHTN form, and a shared list entry on that form is defined on a DSLUSR form with DSL CLS "STD" on the corresponding DSL form. It may not be defined as a Secondary Only key TN on an SHTN form where any shared list entry is defined on a DSLUSR form with DSL CLS "STD" on the corresponding DSL form.

For 5E7 and later, the TN(s) on the LINE input form where SERHLN is entered, must have a corresponding LCC input form with the following restrictions:

- TERMINATING TREATMENT must be equal to "INDIV", or "INWATS" and
- CLASS OF SERVICE must equal to "INDIV", "B911", "PBX", "HOTPBX", "HOTMOTL", or "ATND".

For 5E9(1) and later, TN(s) on the LINE form that have Series Completion allowed (SERHLN is known). One of the following conditions must be satisfied:

- When SERHLN matches a TN on the LINE form, ICP(intercept) must be "N".
- When SERHLN matches a TN on the LINE form with ICP(intercept) equal to "N", LCC/RAX must match LCC/RAX on the LCC form with a TERMINATING TREATMENT equal to "INWATS", "PARTY", "RI" or "INDIV".
- When SERHLN matches a CKT TN on the DSLUSR form, ICP(intercept) must be "N".
- When SERHLN matches a CKT MLHG TN on the DSLUSR form, ICP(intercept) must be "N".
- When SERHLN matches a TN on the MLHLN form, ICP(intercept) must be "N".
- When SERHLN matches a TN on the MLHLN form with ICP(intercept) equal to "N", LCC/RAX must match LCC/RAX on the LCC form with a TERMINATING TREATMENT equal to "INWATS" or "MLHG".
- When SERHLN matches an STN on the SHTN form with SMLHG/SMEMB unknown and STN does not match TN in row 1 of the SHARED LIST, ICP(intercept) must be "N".
- When SERHLN matches an STN on the SHTN form with SMLHG/SMEMB known and SMLHG/SMEMB does not match MLHG/MEMB in row 1 of the SHARED LIST, ICP(intercept) must be "N".

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- The SERHLN assigned on the LINE form must be defined on a different LINE, MLHLN, DSLUSR, SHTN or as LISTED TN on the MLHG form.

3.4 ALT BILL TN

Description: The alternate TN to be billed. ALT BILL TN should be different from the key TN.

Valid ALT BILL TN Entries

Entry	Definition
NXXXXXX	Where NXX is a valid Office Code defined on a NOC input form.
NPANXXXXXX	Any 10-digit number is accepted. Normal expected values are valid NPA and NXX codes.
ZXXXXXX	Where Z is 0 or 1; this identifies the Alternate Billing Number being used for OUTWATS billing purposes. An HNPA is allowed when used for AMA or ANAC purposes.

Data Rules:

For 5E12 and later, ALT BILL TN(s) on the LINE form that have an NXX value (the first 3 digits of a 7-digit TN) or an NPA/NXX combination value (the first 6 digits of a 10-digit TN) defined as OFFICE CODE or NPA/OFFICE CODE, respectively, on the NOC form of this office, are valid only if billing to NXX codes served by other offices is allowed or if the first digit of the NXX code is 0 or 1 showing OUTWATS billing.

3.5 NO DIAL

Description: The type of No Dial Service used.
Default: N
Valid Entries:

Valid NO DIAL Entries

Entry	Definition
N	No Dial Service, does not apply.
MAN	Manual Line Service, normally a one party line with manual operation and is used for handicapped subscribers. Manual originating lines will route the same as if they had dialed an "0-" call.
HOT	Hotline or Direct Connection. Values "HOT" and "MAN" are not applicable to Coin or Multi-Party type of lines.

Data Rules:

For 5E6 - 5E8, if "HOT" is specified and PVN ALW is "N", then the field HOT LINE TN is required.

For 5E6 - 5E8, if "HOT" is specified and PVN ALW is "Y", then this line is direct-connected to ASP services, so HOT LINE TN cannot be entered and the corresponding LCC form (5306 Record) must have a CLASS OF SERVICE of "INDIV" and a DIGIT ANALYSIS SELECTOR set to PVN DAS on the OFCOPT form (5509 Record).

For 5E5 and later, when NO DIAL is "MAN", a Call Forwarding feature (defined on a CFWFD form, 5614 Record) cannot be assigned to this line. When NO DIAL is "HOT" and a call Forwarding feature has been assigned to this line, then on the CFWFD form ACT TYPE must be set to "AUTO" and FWD COND cannot be set to "DBSY", "DIDL" or "DBTH".

For 5E7 and later, when NO DIAL is "HOT" or "MAN", SUSO must be "N".

For 5E9(1) and later, if USTWC ALW is "Y", then CLSS, NO DIAL, and SHARED must be "N".

3.6 HOT LINE TN

Description: The TN terminated to for lines with Hot Line Service. This feature is not applicable to Coin or Multi-Party Lines.

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Valid Entries: Up to 15 digits, containing the PFX, NPA, NXX, and 4-digit TN.

If the TN is assigned a BRCS Precedence and Preemption feature, enter 1 to 15 digits of 0 to 9, *, #, F, O, I or P.

The HOTLINE TN format can be either as listed below or a PP feature code followed by Intercom digit string.

CALL TYPE	PP FEATURE CODE	ROUTE CODE	AREA CODE	SWITCH CENTER	LINE NO.
ROUTINE	X	(1X)	(NPA)	(NXX)	XXXX
PRE-CEDENCE	XP	(1X)	(NPA)	(NXX)	XXXX
PRE-CEDENCE	XP				XXXX

Note: P is any digit or F, O, I, P.

Data Rules:

For 5E6 - 5E8, this field must contain an entry when the NO DIAL field is "HOT" and PVN ALW is "N". This field cannot be entered when NO DIAL is "HOT" and PVN ALW is "N" or when NO DIAL is "N" or "MAN".

3.7 TEST CODE

Description: This field associates a special type of line test with a local 7-digit Telephone Number.

Valid TEST CODE Entries

Entry	Definition
100	100 Test Calls.
101	101 Test Calls - General Access TN.
IC1	101 Test Call for Work Station Number 1.
IC2	101 Test Call for Work Station Number 2.
IC3	101 Test Call for Work Station Number 3.
IC4	101 Test Call for Work Station Number 4.
IC5	101 Test Call for Work Station Number 5.
IC6	101 Test Call for Work Station Number 6.
IC7	101 Test Call for Work Station Number 7.
IC8	101 Test Call for Work Station Number 8.
IC9	101 Test Call for Work Station Number 9.
IC10 - IC32	Software Release 5E9(1) and later. 101 Test Call for Work Station Number 10 - 32.
102	102 Test Calls.
103	Software Release: 5E9(1) and later. Incoming 103 Test Line.
104	104 Test Calls.
105	105 Test Calls.
106	106 Test Calls for Defense Switched Network offices only.
BRITL	Software Release: 5E7 and later. BRI (Basic Rate Interface) Dial Up Test Line. For information about BRITL, see Division 2, Section 2U.
BBRITL	Software Release: 5E7 and later. Billed BRI (Basic Rate Interface) Dial Up Test Line. For information about Billed BRITL, see Division 2, Section 2U.
CATL	Software Release: 5E9(1) and later. Incoming Code Answer Test Line.
CSTL	Coin Station Test Line.
INV	ISTF (Integrated Services Test Function) Inverted Loopback test.
LTD	Local Test Desk.
NINV	ISTF Non-Inverted Loopback test.
OCTL	Open Circuit Test Line.
PB	Permanent Busy.
ROTL	Remote Office Test Line.
SYN	Synchronous Test.
THRU	Software Release: 5E9(1) and later. Incoming Test Call to be handled by hardware outside the switch.

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Data Rules:

When a value is entered in the TEST CODE field, thus defining a TN as a Test Line:

- The LCC and RAX assigned to the Test Line must have a Service Class and Terminating Treatment of "TEST" on the LCC form;
- The OE TYPE and NUMBER fields must be blank.

If TEST CODE is "INV", "100", "102", "104", "105", "ROTL", or "LTD", an entry is required in the RTI (Route Index) field.

If TEST CODE is "BRITL", "BBRITL", "OCTL", "PB", "SYN", "101", or "IC1-9", the RTI (Route Index) field must be blank.

If TEST CODE is "100", "102", "104", "105", "ROTL", "LTD", or "CSTL", the RTI field must have a numeric value from 1 - 999.

A terminating test line ("10x", "PB", or "SYN") must be defined in the office as TEST CODE or as a CALL TYPE on an RDIT (5300-7/8 Record), LDIT (5300-3/5 Record), or MLDIT form (5300-3 Record).

Test Codes "IC1" through "IC8" correspond to the associated WSN (Work Station Number) on the TLWS form (5511 Record) that is equipped with a Talk and Monitor telephone line. The Talk and Monitor phone numbers must be defined on either the LINE or MLHLN form. If Multiple WSNs are equipped, the MLHG arrangement is recommended.

For 5E3 and later, if the OE TYPE and NUMBER fields are not entered and the ICP field is "N", then this field and/or the RTI must be entered.

For 5E9(2) and later, if "INV" or "NINV" are entered and a RTI is also entered, the RTI must be defined as a ROUTE INDEX on a RTIDX form with a TRUNK GROUP NUMBER assigned. The TRUNK GROUP NUMBER must be defined as a TGN on a TKGRP form with a TRKCLS of "LTPISTFL" or "LTPISTFX".

3.8 ANI7

Description: Is Automatic Number Identification 7 available on this line? If "Y" is entered in this field, the ANI information digit 7 will be outpulsed to operator services or to an IC (InterLATA Carrier). Also, if "Y" is entered, the ANI information digit is outpulsed to a CAMA or TSPS operator before the billing DN. The operator can then do a database lookup to see how the call should be handled.

Required Field.
Default: N
Valid Entries: Y, N

3.9 TR303 NAILUP

Description: Is this line to be provisioned as a TR303 Nailup?

If this field is set to "Y", the switch will not attempt to provision Line Termination parameters in the RT (remote terminal). It is expected that the line termination information will be connected using the information provided on the NAILUP form (5207 Record). If the field is set to "N", the switch will provision the Line Termination parameters in the RT. The line can then be used for normal switched services, or as a nailup by populating the NAILUP form.

Software Release: 5E8 and later
Valid Entries: Y, N
Default Value: N

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Data Rules:

TR303 NAILUP can only be "Y" when OE TYPE is "G" and the OE is in RT format (not PUB43801 format).

For 5E13 and later, TR303 NAILUP can only be "Y" when OE TYPE is "A" or "G" and the OE is in RT format (not PUB43801 format).

If TR303 NAILUP is "Y", COIN must be "N", GST must be "N" and either PTY must be "I" or MFRI must be "Y".

If NAILUP is "Y", the LCC/RAX combination assigned on the LINE form must not have a CLASS OF SERVICE of "COIN" on the corresponding LCC form.

When CONTROLLING OE-types/numbers, defined on the NAILUP input form with CONTROLLING OE-type equal to "A" or "G" , and DDS is equal to "Y" and are associated with an RTERM form where RT INTERFACE is "TR303", the corresponding LINE form must have the TR303 NAILUP field set to "Y".

NON-CONTROLLING OE-types/numbers, defined on the NAILUP input form with NON-CONTROLLING OE-type equal to "A", "G", or "M", and DDS equal to "Y" are associated with an RTERM form where RT INTERFACE is "TR303", the corresponding LINE form must have the TR303 NAILUP field set to "Y".

3.10 BUSY MONITOR

Description: Can the TN entered for this line be monitored by the Busy Lamps of an ISDN Attendant MLHG?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E5 and later, if BUSY MONITOR is "Y", an OE TYPE and ATT MLHG must be entered and the associated CLASS OF SERVICE on the LCC form must be "INDIV".

An ISDN Attendant MLHG can busy monitor a Hundreds Group (TNs that share the same first five digits) only if those TNs that can be busy monitored do not physically terminate to more than 12 processors (SM and/or AM) other than the Routing Module for the Hundreds Group. There can be 13 processors if one of them is the Routing Module for the Hundreds Group. Routing Modules are assigned on the HGRPAS form (5115 Record). Entering a LISTED TN on an MLHG form causes the AM to be counted as one of the processors.

The following TNs can be included in the Hundreds Group, if the BUSY MONITOR field on the form is set to "Y":

- A TN from a LINE form
- A TN from a MLHLN form
- A CKT TN from a DSL form
- A CKT TN from a DSMLHLN form
- A LISTED TN from a MLHG form
- A TN (key) from a SHTN form.

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The following physical terminations can be included in the Processor count, if the BUSY MONITOR field on the form is set to "Y":

- The first three digits (SM) of the OE NUMBER from a LINE form
- The first three digits (SM) of the OE NUMBER from a MLHLN form
- The first three digits (SM) of the LCEN from a DSL form
- The first three digits (SM) of the LCEN from a DSMLHLN form
- A LISTED TN from a MLHG form will cause the AM to be counted
- The first TN in the SHARED LIST on a SHTN form has three possible cases:
  - If the TN matches the CKT TN on a DSL form, then the corresponding first three digits (SM) of the LCEN on that DSL form will be counted;
  - If the TN matches the CKT TN on a DSMLHLN form, then the corresponding first three digits (SM) of the LCEN on that DSMLHLN form will be counted;
  - If the MLHG and TERM NBR match the CKT MLHG and CKT TERM on a DSMLHLN form, then the corresponding first three digits (SM) of the LCEN on that DSMLHLN form will be counted.

3.11 ATT MLHG

Description: The Attendant MLHG that controls the TN defined on this form.

Software Release: 5E5 and later
Valid Entries: For 5E14 and earlier: 1 - 2000

For 5E15 and later: Blank or 1 - 8191

Data Rules:

The ATT MLHG must have a CLASS OF SERVICE of "ISATND" or "ATND" defined on the LCC form (5306 Record). If this field is entered, the MLHG must be defined on the associated MLHG form (5110-1 Record). If the associated MLHG form has a HUNT TYPE other than "ISAT", BUSY MONITOR must be "N".

For 5E8 and later, if ATT MLHG is entered, RBV TGN must not be entered.

3.12 RBV TGN

Description: Enter the number of the incoming trunk group used to Remote Busy Verify the TN (DN) of this form. This TGN allows an ISAT (ISDN Attendant) on another 5ESS Switch to Busy Verify this DN, if the TGN is associated with an analog TN.

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

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If RBV TGN is entered, ATT MLHG must not be entered, and BUSY MONITOR must be "N".

If RBV TGN is entered, there must be a corresponding TKGRP form (5202 Record) with that TGN defined, and that TKGRP form must have TRKCLS set to "ATNDVFY", and TRK DIR must be "INC". Also, for the TGN on the TKGRP form, there must be at least one corresponding TRUNK form (5204 Record) with QTY entered.

3.13 SA TST ROUTE

Description: Will a test line be used to test the Emergency TNs defined on the EMROFC form (5116 Record). SDA TST ROUTE defines the type of Stand Alone testing used for Emergency TN routing. A call originating from this test line to an Emergency Office TN is treated as though the SM or RSM where the called number terminates is in the Stand Alone or Isolation mode. The call is then rerouted according to data entered on the EMROFC form. If "N" is entered, this test line is used to test the SM or RSM Emergency TNs defined on the EMRNM form (5108 Record). A call originated from this test line to an Emergency TN is treated as though the SM or RSM where the test line is physically located is in the Stand-Alone or Isolation mode and the call is rerouted according to the data entered on the EMRNM form.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

All Stand Alone Test Lines must be assigned an LCC with a Service Class of "SATSTLN" and a Terminating Treatment of "INDIV".

When SA TST ROUTE is "Y", OE TYPE must be "A", "C", "E", "G", "L", or "S".

3.14 RSM REROUTE

Description: Is the RSM Reroute Stand-Alone capability activated? This field is used for record purposes only. RSM REROUTE is defined on the MLHLN form (5111-2 Record).
Valid Entries: Y, N

BASIC 911 ESB

The following fields (Section 3.15 - Section 3.17) determine the capabilities of a 911 Emergency Service Bureau located in and served by a local 5ESS Switch.

3.15 RINGBACK

Description: Can the ESB attendant initiate the Basic 911 Emergency Service Bureau Ringback capability? This field can be set to "Y" only if the 911 Emergency Bureau is located and served by the local 5ESS Switch. The ESB attendant can initiate ringback to the calling party which is in either an on-hook or off-hook condition. Ringback is initiated by a flash (200-1100 milliseconds) on 911 calls originating from a Local Individual, Coin, 2-Party or Multi-Party Line.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field contains a value of "Y", then the associated Line Class Code - Service Class must be "B911".

3.16 STATMON

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Description: Should the Basic 911 Emergency Service Bureau Status Monitoring capability be activated? This field can be "Y" only if the 911 Emergency Bureau is located and served by the local 5ESS Switch. The 5ESS Switch sends calling line status indication to the ESB attendant via DC signaling and/or the presence or absence of low tone. Status is sent if the caller goes on-hook and is capable of being force held or if caller being forced held returns off-hook. Figure 3 gives conditions for various "Y" and "N" instances of STATMON and TONDET.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", the associated LCC must be "B911".

3.17 TONDET

Description: Is the 911 Service Bureau capable of detecting low tone? An entry of "Y" means that the 911 Service Bureau has a low tone decoder operating and should be sent low tone by the 5ESS Switch. TONDET should be "N" if the 911 Service Bureau cannot detect low tone.

- ***NOTE:*** If either STATMON or TONDET is "N", the 5ESS Switch returns normal battery polarity if the originator is "onhook" and reverse battery if the originator is "offhook". Figure 3 gives conditions for various "Y" or "N" instances of STATMON and TONDET.

Default: N
Valid Entries: Y, N

4. FORM ENTRIES - 5109-3 RECORD

4.1 BASE AND CONTROL, OFFICE

Enter the Base and Control Number and Office Name.

4.2 INDEX KEY

Description: The TN.
Valid Entries: 7 digits, 0 - 9.

4.3 MESG REGISTER

Description: For TNs requiring a Message Register, enter the Miscellaneous Equipment assignment.
Valid Entries: The Miscellaneous Equipment entry is an 8-digit number consisting of the SM, MSU, SVG, BRD and DPN. See the table below for the correct format

For offices with CM1 (Communication Module 1) valid entries for SM are 1 - 48.

For offices with CM2 (Communication Module 2), valid entries are 1 - 192.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

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Data Rules:

The same Message Register can be assigned to more than one line when the RAX/LCC combination entered has a Class of Service on the LCC form (5306 Record) of "HOTPBX" or "HOTMOTL".

Message Register lines cannot be Feature Group A.

4.4 SLEEVE LEAD CKT

Description: For TNs that require a Sleeve Lead, enter the Miscellaneous Equipment Number. This feature is not applicable to Coin, 2-Party or Multi-Party Lines.
Valid Entries: The Miscellaneous Equipment entry is an 8-digit number consisting of the SM, MSU, SVG, BRD and DPN. See the table below for the correct format.

For offices with CM1, valid entries for SM are 1 - 48.

For offices with CM2, valid entries are 1 - 192

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DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

4.5 MAKE BUSY KEY

Description: For TNs that require a Remote Make Busy Key assignment, enter the Miscellaneous Equipment Number. This field is not applicable to Coin, 2-Party or Multi-Party Lines.
Valid Entries: The Miscellaneous Equipment entry is an 8-digit number consisting of the SM, MSU, SVG, BRD and SPN. See the table below for the correct format.

For offices with CM1, valid entries for SM are 1 - 48.

For offices with CM2, valid entries are 1 - 192.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-30

4.6 STOP HUNT KEY

Description: The Stop Hunt Key Miscellaneous Equipment Number that has been defined on the MLHLN

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form. This field is for 5109-3 Record purposes only.

4.7 CARRIER GRP ALM

Description: The Carrier Group Alarm Scan Point assigned to the carrier system of this line. Do not use a Carrier Group Alarm Scan Point for lines with a SLEN (Integrated SLC Line Equipment Number). Refer to Division 8, Section 1 for procedures to obtain these assignments.
Valid Entries: The Scan Point Number is contained in a 9-digit Miscellaneous Equipment number that also consists of the SM, MSU, SVG, and BRD. See the table below for the correct format.

For offices with CM1, valid entries for SM are 1 - 48.

For offices with CM2, valid entries are 1 - 192.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-30

Data Rules:

All lines that are assigned to the same carrier system must share the same Scan Point Number which is defined on the CGASP form (5514 Record). For 5E9(1) and later, the ACTION on the CGASP form must be set to "CON".

4.8 SHARED

Description: Is this line a primary shared TN or does it share a given TN with one or more ISDN Lines or Terminals?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", this TN must appear on the SHTN form (5902 Record) in the key TN field. If "N", this TN cannot appear on the SHTN form.

If "Y" is entered, the associated CLASS OF SERVICE for this line must be "INDIV" on the LCC form and the Switching Module (first three digits in the NUMBER field) that this line terminates to must be defined on the EQIM form with "LOADED" entered in the CONFIGURATION field.

4.9 PRIVACY

Description: Is all-call privacy in effect? All-call privacy allows the calling party to prevent TN information to be displayed to the called party for all calls. All-call privacy can be deactivated on a per-call basis by entering a "Y" in the TN PRIVACY field on the DISPFD form (5965 Record) and assigning a dialed code.

For 5E6 and later, this field is optional. If this field is set to "Y", the presentation status of the calling number will be private. When this field is set to "N", the presentation status of the calling number is public.

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If the CPNP (Calling Party Number Presentation) feature has not been purchased (FID 50 on the SFSYS form (5713-1 Record) is not set to "S"), a blank PRIVACY field will default to "N". When the CPNP feature has been purchased (FID 50 on the SFSYS form (5713-1 Record)is set to "S"), a blank PRIVACY field will remain blank allowing the presentation status to be determined by either the PRIVACY field on the SCRIDXPA form (5543 Record) or the DN PRIVACY field on the OFCOPT form (5509 Record).

For 5E6 and later, the precedence for determination of call privacy is dependent on the purchase of the CPNP special feature. When the CPNP special feature has not been purchased, the precedence hierarchy is:

1. If DN PRIVACY on the OFCOPT form is "Y", the calling party number presentation status is private.
2. If DN PRIVACY on the OFCOPT form is "N", the calling party number presentation status is determined by the PRIVACY field on this form.

When the CPNP special feature has been purchased, the precedence hierarchy is:

1. If PRIVACY on this form has been entered, it is used to determine the calling party number presentation status.
2. If PRIVACY on this form has not been entered, but an SCRIDXPA form has been entered for the SCREENING INDEX assigned to the LCC form whose LCC and RAX are assigned to this form, then that SCRIDXPA form may be used. If PRIVACY on the SCRIDXPA form has been entered, then that value is used to determine the calling party number presentation status.
3. If PRIVACY on the SCRIDXPA form has not been entered, or no corresponding SCRIDXPA form was found, then DN PRIVACY on the OFCOPT form will be used to determine the calling party number presentation status.

Software Release: 5E4(2) and later
Default: N
Valid Entries: Y, N

4.10 OVRD DNY XFER

Description: This field was added to allow lines to override the "Deny Transfer of Digit Screened Calls" feature. For more information on this feature, see Division 2, Section 4a291.

Software Release: 5E12 and later
Valid Entries: Required.
Default Value: N
Valid Entries: Y, N

Data Rules:

When OVRD DNY XFER is set to "Y", this indicates that this line is allowed to override denials during a call transfer.

When the OVRD DNY XFER field is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y".

LASS FEATURES

Fields Section 4.11 - Section 4.20 determine which LASS (Local Area Signaling Service) features are available for the TN. LASS features are available with 5E5 and later Software Releases.

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Refer to Division 2, Section 1Y for more information on LASS.

4.11 AC ALW

Description: Is the LASS Automatic Callback feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV", "ATND", "ISATND", or "PBX", then ODA will assign a "Y" in this field. Otherwise, a value of "N" will be assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "INDIV", "ISATND", "ISDN", "PBX" or "4WINDIV".

For 5E6 and later, if the TN is assigned a LASS Automatic Callback feature on the LINEFA, BFG, or associated CLUSTR form, AC ALW may not be "N".

4.12 AR ALW

Description: Is the LASS Automatic Recall feature allowed on this line.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

A value of "Y" indicates that this line is allowed access to this feature.

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV", "ATND", "ISATND", or "PBX", then ODA will assign a "Y" in this field. Otherwise, a value of "N" will be assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "INDIV", "ISATND", "ISDN", "PBX" or "4WINDIV".

For 5E6 and later, if the TN is assigned a LASS Automatic Recall feature on the LINEFA, BFG, or associated CLUSTR form, AR ALW may not be "N".

4.13 COT ALW

Description: Is the LASS Customer Originated Trace feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

A value of "Y" indicates that this line is allowed access to this feature.

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV", "ATND", "ISATND", or "PBX", then ODA will assign a "Y" in this field. Otherwise, a value of "N" will be assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "INDIV", "ISATND", "ISDN", "PBX" or "4WINDIV".

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For 5E6 and later, if the TN is assigned a LASS Automatic Customer Originated Trace feature on the LINEFA, BFG, or associated CLUSTR form, COT ALW may not be "N".

4.14 PCP ALW

Description: Is LASS ICLID (Individual Calling Line Identification) Per-Call Privacy feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

PCP general availability may be allowed or denied via the LASSFA form (5973 Record) and the SCRIDXPA form (5543 Record).

For the CLASS OF SERVICE on the LCC form of
- "2PTY" (5E6 and later),
- "4WINDIV",
- "ATND",
- "B911",
- "CHGCALL",
- "COIN" (5E6 and later),
- "HOTMOTL" (5E6 and later),
- "HOTPBX" (5E6 and later),
- "INDIV",
- "ISATND",
- "ISDN",
- "LTPCLBCK" ("CALLBK" in 5E8 and earlier),
- "PBX",
- "SATSTLN", and
- "TWOPTY" (5E6 and later),

the following conditions apply:

- If PCP ALW is left blank, then ODA will assign a "Y" to PCP ALW. Otherwise, a value of "N" is assigned.

- If PCP ALW equals "Y", then the TN on this form must have an LCC/RAX value that corresponds to one of the above CLASSes OF SERVICE.

In addition, for 5E6 - 5E8, the CLASSes OF SERVICE
- "2PTY",
- "CHGCALL",
- "COIN",
- "HOTMOTL",
- "HOTPBX", and
- "TWOPTY",

are valid only when the office has purchased the Calling Party Number Presentation secured feature, and the SFSYS form (5713-1 Record) has secured feature ID 50 set to "Y".

For 5E9(1) and later, TNs (Telephone Numbers) on a LINE form or CKT TNs (Circuit Telephone Numbers) on a DSLUSR form that have a PCP ALW value of "Y", must also be defined on the LINE form or DSLUSR form with a LCC/RAX value that corresponds to one of the following CLASS OF SERVICE on the LCC form:

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- "ATND",
- "B911",
- "LTPCLBCK",
- "CHGCALL",
- "COIN",
- "4WINDIV",
- "HOTMOTL",
- "HOTPBX",
- "INDIV",
- "ISATND",
- "ISDN",
- "PBX",
- "SATSTLN",
- "TWOPTY",
- "2PTY",

Additionally, the following CLASS OF SERVICEs are valid only when the SFSYS form has SFID 50 ACT set to "Y":

- "CHGCALL",
- "COIN",
- "HOTMOTL",
- "HOTPBX",
- "TWOPTY",
- "2PTY"

4.15 SCA GA ALW

Description: Is the Generally Available LASS Selective Call Acceptance feature available to this user?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV" or "PBX", then ODA assigns a "Y" in this field. Otherwise, a value of "N" is assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", "4WINDIV" or "PBX".

4.16 SCF GA ALW

Description: Is the Generally Available LASS Selective Call Forwarding feature available to this user?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV" or "PBX", then ODA assigns a "Y" in this field. Otherwise, a value of "N" is assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", "4WINDIV" or "PBX".

4.17 SCR GA ALW

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Description: Is the Generally Available LASS Selective Call Rejection feature available to this user?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV" or "PBX", then ODA will assign a "Y" in this field. Otherwise, a value of "N" will be assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", "4WINDIV" or "PBX".

4.18 SDA GA ALW

Description: Is the Generally Available LASS Selective Distinctive Alert feature available to this user?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", or "PBX", then ODA will assign a "Y" in this field. Otherwise, a value of "N" will be assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", or "PBX".

4.19 ALT LANG

Description: Should the alternate language DSU2-RAF LASS announcements be used? This field supports the Alternate Language LASS Announcement feature, for more information on this feature see Division 2, Section 4A119.

Software Release: 5E8 and later
Default: N
Valid Entries: Y, N

Data Rules:

When ALT LANG is set to "Y", two FIXRT forms must be defined: one with "ALSLE" entered in FIXED ROUTE TYPE and one with "AL2LVL" entered in FIXED ROUTE TYPE.

LINE forms with an ALT LANG field set to "Y" indicate that the Alternate Language LASS Announcement Special Feature is to be used. It is a secured feature and must be purchased by the office before this field can be set to "Y". An SFSYS form must exist with SFID 119 ACT set to "Y".

4.20 UCR

Description: Is Unidentified Call Rejection assigned? When UCR is set to "Y", all calls to this line that are marked with a presentation status of private will be rejected without alerting the called party. Rejected calls will be routed to an uninterruptible announcement by means of the FIXRT form (Record 5301-1) with FIXED ROUTE TYPE of "UCRDENY".

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

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Data Rules:

SFID 47 must be set to "S" (SFID 47 must have ACT set to "Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record) before UCR can be set to "Y".

UCR must be "N" when OE TYPE and NUMBER have not been entered.

When UCR is "Y", SHARED must be "N".

For 5E6 and later, UCR can be set to "Y" only when the TNs on this form have the LCC and RAX defined on an LCC form where CLASS OF SERVICE is "INDIV", "4WINDIV" or "PBX".

5. FORM ENTRIES - 5109-4 RECORD

5.1 BASE AND CONTROL, OFFICE

Enter the Base and Control Number and Office Name.

5.2 INDEX KEY

Description: The TN.
Valid Entries: 7 digits, 0 - 9.

LTSB

The following fields (Section 5.3 - Section 5.8) define LTSB (Line Time Slot Bridging) requirements. LTSB provides a software emulation of traditional metallically bridged two-party lines and off-premise extensions. A complete explanation of the feature and its associated translation requirements appears in Division 2, Section 1AC of this Guide. A member of an LTSB group cannot be a member of any other multi-party service. LTSB is available with 5E5 and later.

For 5E8 and later, LTSB is allowed with IDCU lines. When LTSB is used for IDCU lines, the OE must be in RT format, that is, LTSB is not allowed when the OE is in PUB43801 format (DS1 segment of the OE).

For 5E7 and later, IALT (Intra-Switch Analog Line Transfer) provides the ability to duplicate the line data associated with a TN, including per-line BRCS features, on an associate (new) OE number. The duplicate data assignment helps to minimize any outage associated with a move of analog OE numbers on a 5ESS Switch. This is a no change field. Provisioning of this feature is done via Recent Change. For more information, see Division 2, Section 4A80.

5.3 ASSOC OE TYPE

For 5E12 and later, this field has been renamed ASSOC OE. For information, see the ASSOC OE field description.

5.4 NUMBER

For 5E12 and later, this field has been renamed ASSOC OE. For information, see the ASSOC OE field description.

5.5 ASSOC OE

Description: This field has an entry for TYPE and an entry for NUMBER. The Associate Office Equipment indicates the port of the companion member in a 1-TN LTSB group or a 2-TN LTSB group. The port of the other member is entered in the TYPE and NUMBER fields on this LINE form.

Software Release: 5E12 and later

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Valid Entries: **TYPE:**

The valid entries for this field are dependent upon the value entered in the ASSOC OE field.

If "A" is entered in the ASSOC OE TYPE field, then the entry in this field will be comprised of:

Valid TYPE Entries

Entry	Definition
A	Software Release: 5E12 and later. TR303/DNUS equipment number (INEN). See Division 2, Section 9J. Software Release: 5E13 and later. TSI Nail-Up of Consecutive DS0s for DNU-S. See Division 2, Section 4A349.
C	For a port that resides on Z-card within an ISLU (Integrated Services Line Unit) or within a RISLU (Remote Integrated Services Line Unit)
E	Software Release: 5E11 and later. The TN is associated with an AIU (Access Interface Unit).
G	Software Release: 5E8 and later. For a port that resides on IDCU Equipment with a 10-digit equipment number (GEN) for a remote terminal or a PUB43801.
L	For a port that resides on a Line Unit.
S	For a port that resides on an Integrated or Universal SLC (Subscriber Line Carrier).

NUMBER:

LINE EQUIPMENT NUMBER, TYPE "A"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Network Unit-Synchronous Optical Unit	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Remote Line	LINE	XXXX	0001-2048

If "A" is entered in the ASSOC OE TYPE field on the LINE or MLHLN, form(s) then the SM, DNUS, and RT values assigned to OE NUMBER[1,6] must correspond to the SM, UNIT NUMBER[2,2], and RT EX values assigned on any RTERM form.

If "C" is entered in the ASSOC OE TYPE field, then the entry in this field will be comprised of:

LINE EQUIPMENT NUMBER, TYPE "C"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Line Unit	LU	X	0-7
Line Group Controller	LGC	XX	00-15
Line Card	LC	X	00-31

If "C" is entered in the ASSOC OE TYPE field and a 1-TN LTSB group is being defined, then the SM, LU, LGC and LC values must match, respectively, the SM, (R)ISLU, LGC and POS values on an ISLULC form (5942 Record). Additionally, the POS value in the LINE CARDS list must have the corresponding TYPE set to "ZLC" or "SZLC" and the EQST field set to "O".

If "E" is entered in the ASSOC OE TYPE field, this AIU Equipment Number consists of:

OE NUMBER, TYPE E

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	AIU	XXX	000 - 104
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 31
			Coin 00 - 15

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When ASSOC OE TYPE is "E", and 1-TN LTSB is assigned (no second LINE form with an OE TYPE and NUMBER to match this ASSOC OE TYPE and NUMBER exists), then TYPE on the EQAIUP form (5746 Record) must be "AIZLP" or "AICLP".

If "G" is entered in the ASSOC OE TYPE field, this IDCU Equipment Number residing on a Remote Terminal consists of:

OE NUMBER, TYPE G - Remote Terminal

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7 (5E10 and earlier)
		XX	00 - 42 (5E11 and later)
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

When Telephone Numbers(s) are assigned on the LINE input form(s) to IDCU equipment where ASSOC OE is entered assigning 1-TN LTSB to this TN and "G" is entered in the ASSOC OE TYPE field, the ASSOC OE NUMBER(s) must correspond to a Channel Unit position (i.e., CU XX/YY) with a value defined on the RTERM form. Note that the last two digits of the LINE NO. are determined by the CU XX/YY value (where XX is odd number range of 01-95 and YY is an even number of XX + 1). Both LINE NO. (POS) values in the pair are assignable for CU XX/YY type equal to "FSR", "MP", "SP", "SPOTS", "SF1" (5E9(1)), "DFXS" (5E9(2) and later), "SSV00" or "SSV10". Only the lower (odd) numbered LINE NO. value is assignable for CU XX/YY type equal to "COIN", "FXS" or "FXSLS". Errors will be reported for RTERM forms where RT INTERFACE equal to "TR008".

OE NUMBER TO RTERM CORRESPONDENCE

OE	RTERM
NUMBER[1, 3]	SM
NUMBER[4, 4]	UNIT NUMBER
NUMBER[5, 6]	RT EX
NUMBER[7, 8]	For OE TYPE equal to "M"
NUMBER[7, 10]	For OE TYPE equal to "G": POS value for CU XX/YY type equal to FSR, MP, SP, SPOTS, COIN, FXS, FXSLS, SSV00, SSV10

*Note: SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

If "L" is entered in the ASSOC OE TYPE field, then the entry in this field will be comprised of:

LINE EQUIPMENT NUMBER, TYPE "L"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Line Unit	LU	X	0 - 7 (5E9(1) and earlier)
		XXX	000 - 042 (5E9(2) and later)
Concentrator	CON	X	0-9
Switch Group	SWG	X	0-1
Switch	SW	X	0-7
Level	LEV	X	0-3

If "L" is entered in the ASSOC OE TYPE field and a 1-TN LTSB group is being defined, then the SM and LU values must match, respectively, the SWITCHING MODULE and LINE UNIT values on an EQLUP form (5711 Record). Additionally, the CON value must match an LU GRID X value (X = 0 to 9) with an EQUIPMENT STATUS of "G" or "O".

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If "M" is entered in the ASSOC OE TYPE field, this IDCU Equipment Number residing on a Remote Terminal consists of:

OE NUMBER, TYPE M - Remote Terminal

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7
Remote Terminal	RT	XX	01 - 31
Line	LINE	XX	01 - 99

When Telephone Numbers(s) are assigned on the LINE input form(s) to IDCU equipment where ASSOC OE is entered assigning 1-TN LTSB to this TN and "M" is entered in the ASSOC OE TYPE field, the ASSOC OE NUMBER(s) must correspond to a Channel Unit position (i.e., CU XX/YY) with a value defined on the RTERM form. Note that the last two digits of the LINE NO. are determined by the CU XX/YY value (where XX is odd number range of 01-95 and YY is an even number of XX + 1). Both LINE NO. (POS) values in the pair are assignable for CU XX/YY type equal to "FSR", "MP", "SP", "SPOTS", "SF1" (5E9(1)), "DFXS" (5E9(2) and later), "SSV00" or "SSV10". Only the lower (odd) numbered LINE NO. value is assignable for CU XX/YY type equal to "COIN", "FXS" or "FXSLS". Errors will be reported for RTERM forms where RT INTERFACE equal to "TR008".

OE NUMBER TO RTERM CORRESPONDENCE

OE	RTERM
NUMBER[1, 3]	SM
NUMBER[4, 4]	UNIT NUMBER
NUMBER[5, 6]	RT EX
NUMBER[7, 8]	For OE TYPE equal to "M"
NUMBER[7, 10]	For OE TYPE equal to "G": POS value for CU XX/YY type equal to FSR, MP, SP, SPOTS, COIN, FXS, FXSLS, SSV00, SSV10

*Note: SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

If "S" is entered (representing an Integrated SLC number) in the ASSOC OE TYPE field, then the entry in this field will be comprised of:

Integrated SLC EQUIPMENT NUMBER, TYPE "S"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Carrier Line Unit	DCLU	X	0-7
Remote Terminal	RT	XX	01-32
Line	LINE	XX	01-96

The RT value may only exceed 6 if the Integrated SLC is defined on a DCLURT form (5118 Record).

If "S" is entered in the ASSOC OE TYPE field and a 1-TN LTSB group is being defined, then the SLC must be defined on the SLCRT form (5106 Record) and the SLCCU form (5107 Record). The SM, DCLU and RT values must match the SM, DCLU and REMOTE TERMINAL values on a SLCRT form, respectively, and match the INTERFACE MODULE, DCLU and REMOTE TERMINAL values on a SLCCU form, respectively. Additionally, the LINE value must match a POS value, in the CHANNEL UNITS list of the SLCCU form, where a CU TYPE is entered.

Data Rules:

If either the ASSOC OE or the NUMBER field have an entry, then both fields must have an entry.

If the LEAD PORT or MAN EXCL field is set to "Y", then the ASSOC OE TYPE and NUMBER fields must have entries.

There are numerous fields, on the LINE form, that are affected by entries being made in the ASSOC OE

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and NUMBER fields. If entries are made in the ASSOC OE and NUMBER fields, then the following conditions apply:

- OE TYPE/NUMBER must be entered
- OE TYPE/NUMBER must not be the same as ASSOC OE
- OE TYPE must be "A", "C", "E", "G", "L", or "S" for LTSB.
- if OE TYPE is "G", the OE NUMBER must not be in a PUB43801 format
- COIN must be "N" (LTSB only supports service classes of "INDIV", "TWOPTY", "2PTY"
- GNDREF must be "N"
- ATT MLHG must not be entered
- RBV TGN must be entered
- CARRIER GRP ALM must be entered
- The AC ALW and AR ALW fields will be assigned a value of "N".
- The CIDIAL field must be set to "ALLOW", "DENY" or "REQ".
- The SLEEVE LEAD CKT field must not have an entry.
- The FGA, BUSY MONITOR and SHARED fields must be set to "N".
- For 5E12 and earlier, NO DIAL must be "N".

The combination of entries in the ASSOC OE and NUMBER fields must not be duplicated in the ASSOC OE and NUMBER fields on any other LINE form.

When TN(s) are assigned on the LINE form with an ASSOC OE entry that assigned 1-TN LTSB to a TN (1-TN LTSB means that there is not a second LINE form with an OE TYPE and NUMBER to match this ASSOC OE and NUMBER) and the ASSOC OE is "S" which corresponds to a SLC equipment number (SLEN), the ASSOC OE NUMBER must correspond to a Channel Unit Position with a known value defined on the SLCCU form. Note that LINE NO. values (last two digits of the NUMBER field on the LINE form) are determined by the CU TYPE value. Both LINE NO. (POS) values in the pair are assignable for CU TYPE equal to "SP", "MP", "SPOTS", "FSR", "SF1" (5E9(1)) or "DFXS" (5E9(2) and later). Only the lower (odd) numbered LINE NO. value is assignable for CU TYPE equal to "COIN", "FXS", "FXSLS", "SSV00" or "SSV10".

5E5 and later:

When LINE forms have 1-TN LTSB (Line Time Slot Bridging) assigned and a corresponding LINEFA form has BRCS FEATURES assigned, the following features are allowed if they have the correct options or parameter values required by the 1-TN case of LTSB.

BRCS Features - 5E5 and later

Feature	Form	Field Entries
Call Forwarding Using Call Forwarding Variable	CFWFD	FORWARD CONDITION = "BOTH"
Call Waiting Terminating with Flash Allowed	CWTFD	INVOCATION = "TERM" FLASH ON FORWARD = "Y"
Multi-Way Calling not invoked by Call Pickup Terminating	MWFD	
One and Two-Digit Speed Calling that is	SCFD	SC SHARED = "Y"

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Shared		

BRCS Features - 5E6 and later

Feature	Form	Field Entries
LASS Automatic Callback	LSACFD	
LASS Automatic Recall	LSARFD	
LASS Selective Call Acceptance	LSCAFD	
LASS Selective Call Forwarding	LSCFFD	
LASS Selective Call Rejection	LSCRFD	
LASS Selective Distinctive Alerting	LSDAFD	

If ASSOC OE is entered:

- ATT MLHG must not be entered.
- OE TYPE must be "C", "E", "G", or"L".

5E6 and later:

If ASSOC OE TYPE is entered, then AC ALW and AR ALW must be "N".

- ***NOTE:*** The last two digits of the LINE NO are determined by the CU value (xx/yy), where xx is in the odd number range of 01-95 and yy is xx + 1. Note that both LINE NO. (POS) values in the pair are assignable for CU xx/yy type equal to "FSR", "MP", "SP", "SSV00", "SSV10" "SF1" (5E9(1)), "DFXS" (5E9(2) and later) or SPOTS". Only the lower (odd) numbered LINE NO. value is assignable for CU xx/yy type equal to "COIN", "FXS", or "FXSLS".

5E8 and later:

If ASSOC OE is entered, RBV TGN must not be entered.

The ASSOC OE TYPE on the LINE form must be blank as LTSB (Line Time Slot Bridging) is not allowed on PUB43801. If OE TYPE is equal to a "G" or "M" unit which has TR008 RTs defined on the RTERM form (5174 Record), the ASSOC OE (TYPE/NUMBER) must correspond to a CU (Channel Unit) position with a known value defined on the RTERM form.

5E9(1) and later:

When a TN is defined on a LINE form with an ASSOC OE TYPE and NUMBER specified for LTSB (Line Time Slot Bridging), and a second LINE form with an OE TYPE and NUMBER which matches the ASSOC OE TYPE and NUMBER from the first LINE form, 2 TN LTSB is assigned to both lines. The AC ALW and AR ALW fields on either of these LINE forms must not have an entry of "Y". Neither LASS Auto Callback or LASS Auto Recall is supported for 2-TN LTSB lines.

5E11 and later:

When ASSOC OE is entered, CARRIER GRP ALM cannot be entered.

The ASSOC OE TYPE and NUMBER on the LINE form must not match an OE TYPE and NUMBER on the MLHLN form.

When LINE and/or MLHLN forms have an ASSOC OE TYPE and NUMBER for LTSB entered, the same ASSOC OE TYPE and NUMBER cannot be duplicated on two or more forms. Each ASSOC OE TYPE and NUMBER must be unique.

When a TN(s) is defined on a LINE form with an ASSOC OE TYPE and NUMBER entered assigning 1-TN Line Time Slot Bridging (LTSB) to this TN and the corresponding LINEFA form has one or more of the following BRCS features entered, SFID 262 ACT must be set to "Y" on the SFSYS form since 1-TN LTSB assigned with these BRCS features is a secured feature (IBDS, Package 1).

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The BRCS features for this secured feature are the following:

BRCS Features

Feature	Form	Field Entries
Call Forwarding: Busy Line and Don't Answer	CFWD	FWD CONDITION = "BUSY" or "IDLE"
Incoming Line Identification	LIDFD	CNAM,, CALL NBR DELIV PRIM,, or CALL NBR DELIV ALL = "Y"
Message Service System	MSFD	
Display Feature Per-Call Privacy	DISPFD	TN PRIV = "Y"

When LINE forms have an LTSB (1-TN Line Time Slot Bridging) feature assigned (an ASSOC OE TYPE and NUMBER were entered), the SFID 262 ACT field on the SFSYS form must be set to "Y" before the SERHLN field can be entered since the Series Completion with 1-TN LTSB is a secured feature.

5E12 and later:

For a TN(s) defined on a LINE form, when an ASSOC OE is entered assigning a 1-TN LTSB, and the corresponding LINEFA form has one or more of the following BRCS features assigned, the 1-TN LTSB with these features is the secured feature, IBDS (Internally Bridged Dual Services), Package 2. Therefore, SFID 263 ACT field on the SFSYS form must be set to "Y". In addition, the 1-TN LTSB with IBDS, Package 1 is a secured feature, which is required for IBDS, Package 2 features. Therefore, SFID 262 ACT field must be set to "Y" before the SFID 263 ACT field can be set to "Y".

Valid BRCS Features

Feature	Form	Entries
Dial Call Waiting Call Waiting Originating	CWTFD	INVOCATION= "CODE", "ORIG", or "TERM", and CW DELUXE="N", and FLASH ON FORWARD="Y".
LASS Customer Originating Trace	LSCOTFD	
Distinctive Ringing	DRFD	
Individualized Dialing Plan	IDFD	
Message Detail Recording	MDRFD	
Private Facilities Access without Queueing	PFAFD	
Terminal Group Station Restriction	TGSFRFD	

1-TN LTSB with the Calling Identity Delivery on the Call Waiting feature is part of the IBDS, Package 2 feature which is a secured feature. Therefore, when a LINE form has LTSB assigned, the SFID 263 ACT field on the SFSYS form must be set to "Y" before CID CW can be set to "Y" on the LINE form.

Queueing is not allowed for 1-TG LTSB. For a TN(s) defined on a LINE form with an ASSOC OE entered, which is assigned 1-TN LTSB and a PFA (Private Facility Access) feature is assigned on the corresponding LINEFA form, then QUEUE ALLOWED or PRIORITY QUEUE must be "N" on the BFG and PFALPA forms. In addition, QUEUE ALLOWED or PRIORITY QUEUE must be "N" on the PFAFD form, unless these parameters are overridden on the corresponding BFG or PFLPA forms. For 5E13 and later, when the ACT field for SFID 280 on the SFSYS form is set to "Y", queueing is allowed, (i.e., QUEUE ALLOWED and PRIORITY QUEUE can be "Y").

5E13 and later:

The following checks for SFID 280 are related to the IBDS3 (Internally Bridged Dual Service - Package 3) feature. For more information on this feature, see Division 2, Section 4a280.

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If the ASSOC OE on the LINE form is entered, NO DIAL must "N", unless the ACT field for SFID 280 on the SFSYS form is set to "Y". If SFID 280 is set to "Y", ASSOC OE can be "HOTN".

The ACT field for SFID 280 on the SFSYS form must be set to "Y" when the TNs defined on a LINE form with the ASSOC OE TYPE and NUMBER entered, assigning 1-TN or 2-TN LTSB (Line Time Slot Bridging) to the TN, and the corresponding LINEFA form has one or more of the following BRCS features entered:

Valid BRCS Features

Feature	Form
Account Codes	ACCTFD
Automatic Route Selection	ARSFD
Advanced Services Interface	ASIFD
Authorization Codes	ATHFD
Bulk Calling Line Identification	BCLIDFD
Call Waiting Deluxe	CWTFD (CW DELUXE = "Y"
Time of Day	TODFD

When a LINE form(s) has the ASSOC OE entered that matches an OE on another LINE form, this assigns 2-TN LTSB (Line Timeslot Bridging). When 2-TN LTSB is assigned, the NO DIAL field on the same LINE form must be set to "N".

5E15 and later:

The following checks for SFID 575 are related to the LTSB Interworking with Home Intercom feature. For more information on this feature, see Division 2, Section 4A575.

When the TN is defined on a LINE form with ASSOC OE TYPE and NUMBER entered, assigning 1-TN LTSB (Line Time Slot Bridging) to the TN and this TN is also assigned Home Intercom as a BRCS feature on a corresponding LINEFA, CLUSTR , or BFG form, then the ACT field for SFID 575 on the SFSYS form must be set to "Y".

When the ACT field for SFID 575 on the SFSYS form is set to "Y", the ACT field for SFID 280 must also be set to "Y", since the LTSB Interworking with Home Intercom feature depends on the IBDS (Internally Bridged Dual Service) Package 3 feature.

5E16 and later:

When ASSOC OE is entered, OE TYPE must be "A", "C", "E", "G", "L", "S", or "Y" for LTSB.

5.6 LEAD PORT

Description: Is the port defined in the OE TYPE and NUMBER fields the lead port for this LTSB group? If a 1-TN LTSB group is being defined, this field must be "Y". If a 2-TN LTSB group is being defined, which requires two LINE forms, one and only one of the forms can have this field must be "Y".

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

5.7 IALT

Description: Is Intra-switch Analog Line Transfer active? This field is a no change field and defaults to "N". For more information, see Division 2, Section 4A80.

WARNING: The IALT feature is not supported during a retrofit. Before a retrofit can be performed, IALT procedures must be complete, and IALT must be "N" on Recent Change View 1.6.

Software Release: 5E7 and later

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Required Field.
Default: N

5.8 MAN EXCL

Description: Can the ports defined in the OE TYPE/NUMBER combination and the ASSOC OE TYPE/NUMBER combination exercise the Manual Exclusion feature? The Manual Exclusion feature is only applicable to 1-TN LTSB groups. The value entered in this field applies to both members of the group. The Manual Exclusion feature is also not applicable to 2-TN LTSB groups. The value entered in this field, on both of the LINE forms required, must be set to "N".

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

4-WIRE SPECIFICATIONS

The following fields Section 5.9 - Section 5.13 are used in DSN (Defense Switched Network) offices. DSN is set by an entry of "Y" the DSN OPTION field on the OFCOPT form (5509 Record). An entry in these fields is only valid for lines that have a CLASS OF SERVICE (LCC form) of "4WINDIV". These fields should be entered only when OE TYPE is "D", "N" or "T".

5.9 ROUTINE RINGING

Description: The type of routine ringing desired for 4-wire access lines.

Valid ROUTING RINGING Entries

Entry	Definition
4WOFF	Offhook alerting
4W24	2-second offhook, 4-second onhook

Data Rules:

For 5E4(2) and later, if CONFERENCE BRIDGE is "Y", then ROUTINE RINGING must be "4WOFF".

5.10 PRIORITY RINGING

Description: The type of priority ringing desired for 4-wire access lines.

Valid PRIORITY RINGING Entries

Entry	Definition
4WOFF	Offhook alerting
4W350	Simple wink - 350ms offhook, 350ms onhook, offhook
4W1650	Continuous 1650ms offhook, 350ms onhook

Data Rules:

For 5E4(2) and later, if CONFERENCE BRIDGE is "Y", then PRIORITY RINGING must be "4W350".

5.11 AUDIBLE RINGING

Description: Does the 4-wire subscriber line equipment provide its own audible ring?
Default: N
Valid Entries: Y, N

5.12 INC. START SIGNAL

Description: The type of incoming start signal required for 4-wire subscriber lines.
Default: DIALTONE

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Valid Entries:

Valid INC. START SIGNAL Entries

Entry	Definition
DIAL TONE	Dial Tone.
GRND	Software Release: 5E10 and later. Ground Start Supervision FX Trunk. See the 4-Wire on Lines on DFI feature, Division 2, Section 7W.
LOOP	Software Release: 5E10 and later. Loop Start Supervision FX Trunk. See the 4-Wire on Lines on DFI feature, Division 2, Section 7W.
WINK	Wink Start
WNKDT	Wink Start and Dial Tone

Data Rules:

If CONFERENCE BRIDGE is "Y", then INC. START SIGNAL must be either "WINK" or "WNKDT".

5.13 CONFERENCE BRIDGE

Description: Is the 4-wire subscriber line a conference bridge connection?
Default: N
Valid Entries: Y, N

Data Rules:

If CONFERENCE BRIDGE is "Y", then PRIORITY RINGING must be "4W350".

5.14 ASP ALW

Description: Is this line allowed to originate ASP (Advanced Services Platform; previously PVN, Private Virtual Network) calls via an ODP Feature/Prefix Code trigger?.

Software Release: 5E6 through 5E8
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PVN OFC on the OFCOPT form (5509 Record) is set to "NONE", then this office does not support ASP, and PVN ALW must be "N". PVN ALW may be set to "Y" only if the corresponding LCC form (5306 Record) has a CLASS OF SERVICE of "INDIV" or "ATND".

If PVN ALW is "Y" and NO DIAL is "HOT", then this line is direct-connected to ASP services, and the corresponding LCC form (5306 Record) must have a CLASS OF SERVICE of "INDIV" and a DIGIT ANALYSIS SELECTOR set to PVN DAS on the OFCOPT form (5509 Record).

A line dedicated to ASP services should not be entered as part of a Series Completion Group. When PVN ALW is set to "Y" and SERHLN is entered, then the DIGIT ANALYSIS SELECTOR on the corresponding LCC form (5306 Record) cannot be PVN DAS on the OFCOPT form (5509). Likewise, DIGIT ANALYSIS SELECTOR should not be a DAS equivalent in functionality to the aforementioned PVN DAS (i.e., a virtual ASP DAS).

5.15 SCD SCRNING

Description: This field is set to "Y" by Recent Change if at least one carrier has requested SCD Screening for this line. SCD Screening is a function of the Selective Carrier Denial feature which is available in 5E5 and later Software Releases.

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5.16 CLSS

Description: Is the Calling Line Side Supervision active on this line? If "Y" is entered, the calling party will detect a battery reversal upon called party answer, and another battery reversal (returning to normal state) upon called party disconnect. This field is used by the CLSS (Calling Line Side Supervision) feature. CLSS is a secured feature, and must be purchased before it can be assigned.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The SFID 63 ACT field on the SFSYS form must be set to "Y" before CLSS can be set to "Y".

If CLSS is set to "Y" and the LCC/RAX is defined on an LCC form where CLASS OF SERVICE is "INDIV" or "PBX", which qualifies the line for use of LASS GA (Generally Available) features, then the LINE form must have AC ALW, AR ALW, COT ALW, PCP ALW, SCA GA ALW, SCF GA ALW, SCR GA ALW and SDA GA ALW all set to "N" since lines subscribing to CLSS are not compatible with LASS GA features.

If CLSS is set to "Y", this requires that LCC/RAX be defined on an LCC form where CLASS OF SERVICE is "INDIV", "PBX" or "HOTPBX".

CLSS may only be "Y"when:

- OE TYPE/NUMBER is entered.
- ASSOC OE TYPE is not entered.
- BUSY MONITOR is "N".
- SHARED is "N".
- BRCS is "N".
- AC ALW, AR ALW, COT ALW, PCP ALW, SCA GA ALW, SCF GA ALW, SCR GA ALW, and SDA GA ALW are blank or "N".

5.17 MCLD DEACT

Description: Is MCLD (Modified Calling Line Disconnect Procedure for Fraud Protection) deactivated for this line when it is active on this SM?

The MCLD feature is enabled by setting FID 517 to "S" on the FOSYS form (5713-2 Record).

When MCLD is enabled and MCLD DEACT is set to "N", this line will receive Permanent Signal Treatment following expiration of the disconnect timer. This will force the line to go back onhook before originating another call. When MCLD is enabled and MCLD DEACT is set to "Y", this line will receive dialtone following expiration of the disconnect timer.

The MCLD feature applies only to analog lines. For more information, see Division 2, Section 4C.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If OE TYPE and NUMBER have not been entered, then MCLD DEACT must be "N".

5.18 BLK 1PLUS

Description: Enter the type of blocking treatment for this line.

Software Release: 5E6 and later
Required Field.
Default: NONE
Valid Entries:

Valid BLK 1PLUS Entries

Entry	Definition
FULL	Full 1+blocking will be provided for this line. Full blocking will block all 1+ calls except those to an operator.
SPLIT	Split 1+blocking will be provided for this line. Split blocking will block Feature Group D CAC 1+ calls if the carrier dialed is not the pre-subscribed carrier, but will allow 1+ calls to an operator.
NONE	No blocking treatment will be provided for this line.

Data Rules:

If OE TYPE and NUMBER have not been entered, then BLK 1PLUS must be "NONE".

If BLK 1PLUS equals either "FULL" or "SPLIT", the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV", "PBX", "HOTPBX", "HOTMOTL", "COIN", "ATND", "ISDN", "ISATND", or "SATSTLN".

5.19 LONG DST DR

Description: Is distinctive ringing supplied for long distance calls? This field supports the Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls secured feature. For more information on this feature, see Division 2 Section 4A91.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a secured feature that must be purchased by the office before the LONG DST DR field can be changed from its default value on either the LINE, MLHLN, or DSLUSR forms. The SFID 91 ACT field on the SFSYS form (5713-1 Record) mustbe set to "Y", before the LONG DST DR field can be set to "Y".

If the LINE, MLHLN, and/or DSLUSR forms have LONG DST DR set to "Y", the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "ATND", "INDIV", "ISATND", "ISDN", or "PBX".

USTWC

The following fields Section 5.20 - Section 5.22 are used for the secured feature Usage Sensitive 3-Way Calling. For more information concerning this feature, see Division 2, Section 4A156.

5.20 USTWC ALW

Description: Is Usage Sensitive 3-way calling allowed?

Software Release: 5E8 and later

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Valid Entries: Y, N

Data Rules:

If USTWC ALW is "Y", then CLSS, NO DIAL, and SHARED must be "N".

If USTWC ALW is set to "Y" on the LINE and/or MLHLN forms, then the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV" or "PBX".

5.21 SUBSCR USTWC

Description: Is this line subscribed to USTWC (Usage Sensitive Three-Way Calling)? This field supports Spontaneous USTWC feature, which is a secured feature (SFID 156). For more information on this feature, see Division 2, Section 4A156.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then:
- CLSS must be "N"
- NO DIAL must be "N"
- SHARED must be "N"

If "Y" is entered for this field on the the LINE and/or the MLHLN form, the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV" or "PBX".

5.22 USTWC ALW XFER

Description: Allow Usage Sensitive Three Way Calling with Call Transfer? This field supports the Per-Use Three Way Calling with Call Transfer feature. This feature is a secured feature. For more information, refer to Division 2, Section 4A577.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When USTWC ALW XFER is "Y", USTWC ALW or SUBSCR USTWC must be "Y"

When USTWC ALW XFER is "Y", ACT field must be "Y" for SFID 577 on the SFSYS form (5713-1 Record).

5.23 CID CW

Description: Assign Calling Identity Delivery on Call Waiting? For more information about this field, see Division 2, Section 4A133, which describes the Calling Identity Delivery on Call Waiting secured feature. This feature requires the purchase and activation of the secured feature Switch-To-CPE Analog Off-Hook FSK Data Interface with the ACT field for SFID 140 set to "Y" on the SFSYS form. For more information about this feature, see Division 2, Section 4A140.

Software Release: 5E9(1) and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If CID CW is "Y", then BRCS must be "Y".

The ACT field for SFID 133 on the SFSYS form (5713-1 Record) must be set to "Y" before CID CW can be set to "Y".

If a TN has CID CW set to "Y" on this form, then the TN must

- be assigned a Call Waiting Terminating feature defined on the CWTFD form with INVOCATION set to "TERM"
- be assigned a Line Identification feature defined on the LIDFD form with OUTGO CLD LINE ID set to "N" and CALL NBR DELIV PRIM, CALL NBR DELIV ALL, or CNAM set to "Y"
- have appropriate features assigned on the LINEFA, CLUSTR, or BFG form.

If CID CW is "Y", the LCC and RAX must be defined on an LCC form with CLASS OF SERVICE of "ATND", "INDIV", "4WINDIV" or "PBX".

NUMBER PORTABILITY

The following fields (Section 5.24 - Section 5.25) were added to accommodate local number portability. This is a secured feature with SFID 199. For more information on Number Portability, see Division 2, Section 4A174.

5.24 LRN INDEX

Description: Enter the index into the LRNINDEX form (5328 Record) for Local Number Portability. LRNs are used to route DNs that have been ported into the office from other switches. AN LRN uniquely identifies an office and rate center. This field supports the Local Number Portability secured feature (SFID 174). For more information concerning this feature, see Division 2, Section 4A174.

Software Release: 5E11 and later
Valid Entries: 1 - 127

Data Rules:

When a TN is assigned on a LINE form and LRN INDEX is entered, then the LRN INDEX must also be entered on the LRNINDEX form (5328 Record).

5.25 PORTED

The PORTED field is used to indicate whether the TN has been ported into this office via the LNP (Local Number Portability) feature. The indicator is used by call processing to determine whether or not to generate an LNP BAF (Bellcore AMA Format) module for originating and terminating IXC access records.

This field was added for the AMA Billing feature. For more information on AMA Billing, see Division 2, Section 4A199.

5.26 NON COND TRIG

Description: The NON COND TRIG field is used to indicate whether or not a call to this DN requires a non-conditional query of the SCP (Service Control Point) prior to routing the call.

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Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When SERHLN exists, NON COND TRIG must be "N".

When ICP is "Y", NON COND TRIG must be "N".

When NON COND TRIG is "Y":

- the ACT field for SFID 216 must be set to "Y" on the SFSYS form, and if SFID 216 is set to "Y", SFID 174 must also be set to "Y"
- the CLASS OF SERVICE and TERMINATING TREATMENT on the LCC form should be as follows:
  - Valid CLASS OF SERVICE
    - "10PTY", "2PTY", "4PFS", "4PSS", "5PTY", "8PSS", "ATND", "CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN", "TWOPTY", "4WINDIV"
  - Valid TERMINATING TREATMENT
    - "INDIV", "INWATS", "MLHG", "PARTY"

ADVANCED SERVICES PLATFORM

The following fields (Section 5.27 - Section 5.28) were added to accommodate the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. This is a secured feature with SFID 210. For more information on this feature, see Division 2, Section 4A210.

5.27 OFC OBL INH

Description: The OFC OBL INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by individual lines. It indicates whether the ASP Office Originating Busy Line Office Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating Busy Line Office Trigger is inhibited.

This field was added for the ASP Inhibiting of Originating Busy/No Answer Office Triggers. For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, Section 4A210.

Required Field.

Data Rules:
When the inhibiting feature has not been purchased, OFC OBL INH must be "N".

5.28 OFC ONA INH

Description: Description: The OFC ONA INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by

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individual lines. It indicates whether the ASP Office Originating No Answer Office Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating No Answer Office Trigger is inhibited.

This field was added for the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, Section 4A210.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC ONA INH must be "N".

5.29 URT FCD BLK

Description: Should all Unrestricted FCD Codes be blocked from this TN?

- ***NOTE:*** On the LINE, MLHLN, and DSLUSR forms this URT FCD BLK field is intended for use on individual or line attendant lines only.

This field was added for the ASP Unrestricted FCD Trigger feature. For more information, see Division 2, Section 4A572.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The secured feature ASP Unrestricted FCD Code Triggers must be purchased before URT FCD BLK can be changed to "Y" on the LINE form, therefore the ACT field for SFID 572 on the SFSYS form must be "Y".

For 5E15 and later, when the LINE form has "Y" entered in the URT FCD BLK field, a corresponding LCC form must have "INDIV" or "ATND" entered in the CLASS OF SERVICE field. LCC corresponds with a LINE form when the LCC and RAX fields match.

5.30 BLK LN CODE

Description: This is a text only field that indicates if a LNBLKCOD form exists for this TN.

This field was added for the ASP Unrestricted FCD Tigger feature. For more information on, see Division 2, Section 4A572.

Software Release: 5E15 and later

5.31 INHIBIT DEL

Description: Should the deletion of this line be inhibited?

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

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NOTE: INHIBIT DEL must be set to "N" before deletion is allowed.

Data Rules:

When INHIBIT DEL field is "Y", OE or RTIDX must be entered.

5.32 CONTEXT ID

Description: This field is used to indicate whether or not a line is set to "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E13: N
- For 5E14 and later: NATIVE

Valid Entries:

Valid CONTEXT ID Entries

Entry for 5E12, 5E13	Entry for 5E14 and later	Description
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the LINE form, the ACT field for SFID (Secured Feature ID) 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

When the CONTEXT ID field is set to "R" or "RESOLD" or, "UNBUNDLED" on the LINE form, there must be an LCC form (5306 Record) where the RAX and LCC has the CLASS OF SERVICE set to one of the following:

- ATND
- CHGCALL
- COIN
- HOTMOTL
- HOTPBX
- INDIV
- ISDN
- ISATND
- PBX
- TWOPTY
- 2PTY

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- 4PFS
- 4PSS
- 4WINDIV
- 5PTY
- 8PSS
- 10PTY

USAGE SENSITIVE CALL FORWARDING

The following fields (Section 5.33 - Section 5.34) were added to accommodate the Usage Sensitive Call Forwarding feature. This feature is secured with SFID 544. Refer to Division 2, Section 4A544 for further details pertaining to this feature.

5.33 USCF ALW

Description: Allow Usage Sensitive Call Forwarding on the specified line?

Software Release: 5E15 and later
Default: Y
Valid Entries: Blank, Y, or N

NOTE: When this field is left blank, it is defaulted to "Y" provided the following data rules are met. Otherwise, it is populated with "N".

Data Rules:

When USCF ALW is "Y",

- SHARED must be "N",
- CLSS must be "N",
- NO DIAL must be "N",
- ASSOC OE must not be entered.
- RAX and LCC must be defined on the LCC form with CLASS OF SERVICE equal to "INDIV", "4WINDIV" or "PBX".

5.34 USCF ACT

Description: Is Usage Sensitive Call Forwarding active on this line?

Software Release: 5E15 and later
No change field.
Default: N
Valid Entries: Y or N

USAGE SENSITIVE SIX-WAY CALLING

The USSCW ALW field was added to accommodate the Usage Sensitive Six-Way Calling feature. This is a

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secured feature with SFID 553. For more information on this feature, see Division 2, Section 4A553.

5.35 USSWC ALW

Description: Should Usage Sensitive Six-Way Calling be allowed? The USSWC ALW field verifies whether or not the Usage Sensitive Six-Way Calling feature is allowed on a specified line. No entry is required; this is an optional field. For more information on this feature, see Division 2, Section 4A553.

Software Release: 5E15 and later
Default: Blank
Valid Entries: Blank, or enter Y or N

Data Rules:

When USSWC ALW is "Y":

- RTI must not be entered
- COIN must be "N"
- NO DIAL must be "N"
- TEST CODE must not be entered
- SA TST ROUTE must be "N"
- SHARED must be "N"
- CLSS must be "N"

4-PARTY SEMI-SELECTIVE SERVICE

PARTY NUMBER	RINGING METHOD	RINGING CODE (see Note)
1	Ring to Ground	1
2	Tip to Ground	1
3	Ring to Ground	2
4	Tip to Ground	2

4-PARTY FULL SELECTIVE (4FS)

PARTY NUMBER	RINGING - METHOD & POLARITY	RINGING CODE (see Note)	REVERTIVE ASSIGNMENT CODE
1	Ring to Ground (-)	1	2
2	Tip to Ground (-)	1	3
3	Ring to Ground (+)	1	4
4	Tip to Ground (+)	1	5

8-PARTY FULL SELECTIVE (8FS)

PARTY NUMBER	RINGING - METHOD & POLARITY	RINGING CODE (see Note)	REVERTIVE ASSIGNMENT CODE
1	Ring to Ground (-)	1	2
2	Tip to Ground (-)	1	3
3	Ring to Ground (+)	1	4
4	Tip to Ground (+)	1	5
5	Ring to Ground (-)	2	6
6	Tip to Ground (-)	2	7
7	Ring to Ground (+)	2	8
8	Tip to Ground (+)	2	9

NOTE:

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Code 1 - 2 Sec. ringing followed by 4 Sec. silence

Code 2 - 1 Sec. ringing followed by 1 Sec. silence

1 Sec. ringing followed by 3 Sec. silence

Figure 1 ASSOCIATION OF PARTY NUMBER TO RINGING SELECTION

On-Hook Data Transmission

5.36 FSK OSI

Description: This field is used to indicate the per-line control of sending the OSI (Open Signaling Interval).

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

For 5E15 and later:

- When GST is "Y", FSK OSI must be "N".
- When FSK OSI is "Y", the LCC and RAX on the LCC form (5306 Record) must have CLASS OF SERVICE equal to "ATND" or "INDIV".
- When FSK OSI is set to "Y", the ACT field for SFID 613 on the SFSYS form (5713-1 Record) must also be set to "Y".

MULTIPLE WORK STATION NUMBERS
With Multiple WSNs 1, 2, 3, and 4, the TLWS form would be submitted with four entries with a Talk and Monitor (T&M) phone assigned to WSN 1, 3, and 4. Note that WSN=1 is the MCC/TLWS; WSN 2=SCC/TLWS; WSN 3 and 4=Supplemental TLWSs

TLWS Form (5511 Record)

WSN	T&M TN	TN
1	357-9234	357-9900
2	-	357-9901
3	357-9235	357-9903
4	357-9236	357-9904

LINE Form (5109 Record)

TEST CODE
101
IC1
IC3
IC4

MLHG Form (5110 Record)

MLHG	LISTED TN
500	357-9234

MLHLN Form (5111 Record)

MLHG	TERM	TN
500	001	357-9234
500	002	357-9235
500	003	357-9236

The assignment of TNs to Terminals on the MLHLN form should be made so that Terminal 1 is highest priority, Terminal 2 is the next highest, etc.

Figure 2 5ESS SWITCH EQUIPPED WITH MULTIPLE WORK STATIONS

CALLING PARTY RECEIVING STATE CHANGE TO	STATMON	TONDET	SIGNAL SENT TO 911 BUREAU	
			BATTERY POLARITY	LOW TONE
ONHOOK	Y	Y	N/C	APPLIED
ONHOOK	Y	N	NORMAL	APPLIED
ONHOOK	N	Y	NORMAL	APPLIED

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ONHOOK	N	N	NORMAL	APPLIED
OFFHOOK	Y	Y	N/C	REMOVED
OFFHOOK	Y	N	REVERSE	REMOVED
OFFHOOK	N	Y	REVERSE	REMOVED
OFFHOOK	N	N	REVERSE	REMOVED

Figure 3 CONDITIONS ASSOCIATED WITH 911 EMERGENCY SERVICE BUREAU CAPABILITIES

LCC/CLASS OF SERVICE	LINE/MLHLN PTY	LINE/MLHLN MFRI
4PFS	1-4 (LINE only)	N
4PSS	1-4 (LINE only)	N
8PSS	1-8 (LINE only)	N
5PTY	1-5 (LINE only)	N
10PTY	1-9,0 (LINE only)	N
INDIV	I	N
INDIV	1-9,0	Y
2PTY	1-9,0 (LINE only)	N
TWOPTY	T,R (LINE only)	N
COIN	1-9,0 (LINE only)	Y
COIN	-	N
PBX	1-9,0	Y
PBX	I	N
HOTPBX	1-9,0	Y
HOTPBX	I	N

Figure 4 CONDITIONS ASSOCIATED WITH 911 ESB CAPABILITIES

PARTY VALUE LINE/MLHLN PTY	FREQUENCY CLASS ON IMINFO FORM FOR ANALOG LINES		
	HARMONIC IMINFO-HAR	SYNCHROMONIC IMINFO-SYN	DECIMONIC IMINFO-DEC
1,6	33.3	30	30
2,7	50	42	40
3,8	66.6	54	50
4,9	16.6	66	60
5,0	25	20	20

PARTY VALUE LINE/MLHLN PTY	FREQUENCY VALUES FOR ISLC-96 LINES		
	HARMONIC	SYNCHROMONIC	DECIMONIC
1	25	30	30
2	33.3	42	40
3	50	54	50
4	16.7	20	20

Figure 5 LINE PARTY VALUE TO MULTI-FREQUENCY RINGING FREQUENCY

```
line                    5ESS Switch
SCREEN 1 OF 4           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

*1. TN  ___________      13. EL    N   TERM FEATURES     33. LNEQ N
   NEW TN ___________     14. FGA   N   24. SUST  N
#3. RAX  __              15. FLS   N   25. ICP   N
#4. LCC  ___             16. SUSO  N   26. DNY BV N
 5. OE   _ ____________  17. DNY ROH N  27. TRC   N
 8. RTI  _____           18. PALIT N
 9. PTY  I               19. PSLIM N       EQUIPMENT
10. MFRI N               20. COMPL N   28. COIN   N
                         21. SLUS  N   29. GST    N
ORIG FEATURES            22. DTLBILL N 30. TSTLINE N
11. TTC  N               23. TRAFFIC N 31. GNDREF  N
12. BRCS N                             32. RANGEX  NONE
```

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```
line                    5ESS Switch
SCREEN 2 OF 4           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

        MISC FEATURES           45. RMK          _________________
34. SERHLN      __________        46. SA TST ROUTE N
   BCK LNK      ___
36. ALT BILL TN __________          BASIC 911 ESB
37. NO DIAL      N              47. RINGBACK N
38. HOT LINE TN _________________   48. STATMON  N
39. TEST CODE   ______           49. TONDET   N
40. BUSY MONITOR N
41. ATT MLHG    ____
42. RBV TGN     ____
43. ANI7        N
44. TR303 NAILUP N
```

```
line                    5ESS Switch
SCREEN 3 OF 4           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

    SCAN & DIST. POINTS       LASS FEATURES          LTSB/IALT
50. MESG REGISTER  _________  57. AC ALW     _  68. ASSOC OE  _ ____________
51. SLEEVE LEAD CKT _________  58. AR ALW     _  71. LEAD PORT N
52. MAKE BUSY KEY  _________  59. COT ALW    _      IALT      N
53. CARRIER GRP ALM _________  60. PCP ALW    _  73. MAN EXCL  N
                          61. SCA GA ALW _
54. SHARED       N          62. SCF GA ALW _       4-WIRE SPECIFICATIONS
55. PRIVACY      _          63. SCR GA ALW _  74. ROUTINE RINGING   _____
56. OVRD DNY XFER N         64. SDA GA ALW _  75. PRIORITY RINGING  ______
                          65. ALT LANG   N  76. AUDIBLE RINGING   _
                          66. UCR        N  77. INC. START SIGNAL _________
                          67. UCR ACTIVE N  78. CONFERENCE BRIDGE _
```

```
line                    5ESS Switch          _
SCREEN 4 OF 4           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

   SCD SCREENING _              USTWC                ASP
80. CLSS         N        89. USTWC ALW    _       95. OFC OBL INH N
81. MCLD DEACT   N        90. SUBSCR USTWC N       96. OFC ONA INH N
82. BLK 1PLUS    NONE
```

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83. LONG DST DR N 91. CID CW N MONITORED TN _
84. CIDIAL _____ 98. INHIBIT DEL N
85. PIC ____ NUMBER PORTABILITY 99. CONTEXT ID NATIVE
86. PTC ____ 92. LRN INDEX ___
87. PLC ____ 93. PORTED-IN AMA N
88. UNBUNDLED N 94. NON COND TRIG N

Figure 6 SAMPLE LINE FORM 5E14 SOFTWARE RELEASE

line 5ESS Switch
SCREEN 1 OF 5 OFFICE DATA ADMINISTRATION
(5109) TELEPHONE NUMBER

*1. TN _____ 13. EL N TERM FEATURES 33. LNEQ N
NEW TN _____ 14. FGA N 24. SUST N
#3. RAX ___ 15. FLS N 25. ICP N
#4. LCC ___ 16. SUSO N 26. DNY BV N
5. OE _ _____ 17. DNY ROH N 27. TRC N
8. RTI _____ 18. PALIT N
9. PTY I 19. PSLIM N EQUIPMENT
10. MFRI N 20. COMPL N 28. COIN N
21. SLUS N 29. GST N
ORIG FEATURES 22. DTLBILL N 30. TSTLINE N
11. TTC N 23. TRAFFIC N 31. GNDREF N
12. BRCS N 32. RANGEX NONE

line 5ESS Switch
SCREEN 2 OF 5 OFFICE DATA ADMINISTRATION
(5109) TELEPHONE NUMBER

MISC FEATURES 45. RMK _____
34. SERHLN _____ 46. SA TST ROUTE N
BCK LNK ___
36. ALT BILL TN _____ BASIC 911 ESB
37. NO DIAL N 47. RINGBACK N
38. HOT LINE TN _____ 48. STATMON N
39. TEST CODE _____ 49. TONDET N
40. BUSY MONITOR N
41. ATT MLHG ____
42. RBV TGN ____
43. ANI7 N
44. TR303 NAILUP N

line 5ESS Switch
SCREEN 3 OF 5 OFFICE DATA ADMINISTRATION
(5109) TELEPHONE NUMBER

SCAN & DIST. POINTS LASS FEATURES LTSB/IALT
50. MESG REGISTER _____ 57. AC ALW _ 68. ASSOC OE _ _____
51. SLEEVE LEAD CKT _____ 58. AR ALW _ 71. LEAD PORT N
52. MAKE BUSY KEY _____ 59. COT ALW _ IALT N

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```
53. CARRIER GRP ALM _________  60. PCP ALW    _  73. MAN EXCL  N
                    61. SCA GA ALW _
54. SHARED       N          62. SCF GA ALW _       4-WIRE SPECIFICATIONS
55. PRIVACY      _          63. SCR GA ALW _  74. ROUTINE RINGING   _____
56. OVRD DNY XFER N         64. SDA GA ALW _  75. PRIORITY RINGING  ______
                    65. ALT LANG   N  76. AUDIBLE RINGING   _
                    66. UCR        N  77. INC. START SIGNAL _________
                    67. UCR ACTIVE N  78. CONFERENCE BRIDGE _
```

```
line                    5ESS Switch
SCREEN 4 OF 5           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

   SCD SCREENING _           USTWC              ASP
80. CLSS         N     89. USTWC ALW      _   96. OFC OBL INH N
81. MCLD DEACT   N     90. SUBSCR USTWC   N   97. OFC ONA INH N
82. BLK 1PLUS    NONE  91. USTWC ALW XFER N   98. URT FCD BLK N
83. LONG DST DR  N                        BLK LN CODE _
84. CIDIAL       ______ 92. CID CW N
85. PIC          ____                     MONITORED TN _
86. PTC          ____    NUMBER PORTABILITY  101. INHIBIT DEL  N
87. PLC          ____  93. LRN INDEX     ___ 102. CONTEXT ID   NATIVE
88. UNBUNDLED    N     94. PORTED-IN AMA N
                   95. NON COND TRIG N   USAGE SENSITIVE SIX WAY CALLING
                                  103. USSWC ALW _
```

```
line                    5ESS Switch       _
SCREEN 5 OF 5           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

USAGE SENSITIVE CALL FORWARDING
104. USCF ALW _
   USCF ACT N
```

Figure 7 SAMPLE LINE FORM 5E15 SOFTWARE RELEASE

```
line                    5ESS Switch
SCREEN 1 OF 5           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

*1. TN    ___________      13. EL     N   TERM FEATURES      33. LNEQ N
   NEW TN ___________      14. FGA    N   24. SUST   N
#3. RAX   ___             15. FLS    N   25. ICP    N
#4. LCC   ___             16. SUSO   N   26. DNY BV N
 5. OE    _ ____________  17. DNY ROH N   27. TRC    N
 8. RTI   _____           18. PALIT  N
 9. PTY   I               19. PSLIM  N      EQUIPMENT
```

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```
10. MFRI   N            20. COMPL   N    28. COIN    N
                    21. SLUS    N    29. GST     N
ORIG FEATURES           22. DTLBILL N    30. TSTLINE N
11. TTC  N              23. TRAFFIC N    31. GNDREF  N
12. BRCS N                          32. RANGEX  NONE
```

```
line                    5ESS Switch
SCREEN 2 OF 5           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

        MISC FEATURES           45. RMK          ____________________
34. SERHLN      __________        46. SA TST ROUTE N
   BCK LNK      ___
36. ALT BILL TN ___________          BASIC 911 ESB
37. NO DIAL      N              47. RINGBACK N
38. HOT LINE TN ___________________  48. STATMON  N
39. TEST CODE   ______           49. TONDET   N
40. BUSY MONITOR N
41. ATT MLHG    ____
42. RBV TGN     ____
43. ANI7        N
44. TR303 NAILUP N
```

```
line                    5ESS Switch
SCREEN 3 OF 5           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

    SCAN & DIST. POINTS       LASS FEATURES          LTSB/IALT
50. MESG REGISTER  __________  57. AC ALW     _  68. ASSOC OE  _ ____________
51. SLEEVE LEAD CKT __________  58. AR ALW     _  71. LEAD PORT N
52. MAKE BUSY KEY  __________  59. COT ALW    _      IALT      N
53. CARRIER GRP ALM __________  60. PCP ALW    _  73. MAN EXCL  N
                        61. SCA GA ALW _
54. SHARED       N          62. SCF GA ALW _       4-WIRE SPECIFICATIONS
55. PRIVACY      _          63. SCR GA ALW _  74. ROUTINE RINGING   _____
56. OVRD DNY XFER N         64. SDA GA ALW _  75. PRIORITY RINGING  ______
                        65. ALT LANG   N  76. AUDIBLE RINGING   _
                        66. UCR        N  77. INC. START SIGNAL _________
                        67. UCR ACTIVE N  78. CONFERENCE BRIDGE _
```

```
line                    5ESS Switch
SCREEN 4 OF 5           OFFICE DATA ADMINISTRATION
(5109)                  TELEPHONE NUMBER

   SCD SCREENING _          USTWC              ASP
80. CLSS         N      89. USTWC ALW      _   96. OFC OBL INH N
81. MCLD DEACT   N      90. SUBSCR USTWC   N   97. OFC ONA INH N
82. BLK 1PLUS    NONE   91. USTWC ALW XFER N   98. URT FCD BLK N
83. LONG DST DR  N                          BLK LN CODE _
```

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84. CIDIAL _____ 92. CID CW N
85. PIC ____ MONITORED TN _
86. PTC ____ NUMBER PORTABILITY 101. INHIBIT DEL N
87. PLC ____ 93. LRN INDEX ___ 102. CONTEXT ID NATIVE
88. UNBUNDLED N 94. PORTED-IN AMA N
95. NON COND TRIG N USAGE SENSITIVE SIX WAY CALLING
103. USSWC ALW _

---

line 5ESS Switch _
SCREEN 5 OF 5 OFFICE DATA ADMINISTRATION
(5109) TELEPHONE NUMBER

USAGE SENSITIVE CALL FORWARDING
104. USCF ALW _
USCF ACT N

ON-HOOK DATA TRANSMISSION
107. FSK OSI _

Figure 8 SAMPLE LINE FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 1J: 5110-1/2/3/4 RECORD MULTI-LINE HUNT GROUP FORM - MLHG

1. GENERAL

The 5110-1/2/3/4 Record is available with 5E2 and later Software Releases, and is used to define Multi-Line Hunt Group information. The 5110-2 Record is used to define MUPH (Multiple Position Hunt) for nondata link attendant console positions.

1.1 MLHG Feature Assignment

Multi-Line Hunt Group features are to be assigned to Multi-Line Hunt Groups not individual lines. They cannot be assigned to the CLUSTR (5600 Record), LINEFA (5112 Record), MLHLNFA (5113 Record) or TRUNKFA (5205 Record) forms.

1.2 Circuit Switching Hunt Types

The 5ESS Switch offers four types of hunting within a Multi-Line Hunt Group: Regular Hunt, Circle Hunt, Uniform Call Distribution, and Multiple Position Hunt.

Regular Hunt is an arrangement in which hunting begins with the Start Hunt Terminal Number and continues sequentially through the last terminal number in the Multi-Line Hunt Group.

Circle Hunt is an arrangement in which hunting begins with the Terminal Number associated with the called number, and continues sequentially through the last terminal number in the Multi-Line Hunt Group. Hunting resumes starting with Terminal Number 1, and continues through the Terminal Number preceding the Start Hunt Terminal Number.

Uniform Call Distribution is an arrangement in which hunting begins when the main Directory Number of a UCD hunt group is dialed. For example, if a call is directed to the main Directory Number, a hunt for an available member would start at the "start hunt member". This is UCD hunt. However, when a Directory Number of a member of a UCD hunt group is dialed, a Circular Hunt starting at the dialed member is made and the UCD hunt is not used. For example, if a call is directed to a member of the UCD hunt group, the UCD function recognizes that the call is not directed to the main Directory Number of the group, and therefore, it does not start the hunt at the "start hunt number"; instead the hunt starts at the member of the dialed Directory Number.

Multiple Position Hunt is an arrangement in which hunting begins when a subgroup Directory Number is dialed. A subgroup is one of the six possible Directory Numbers in a MUPH group of a nondata link attendant console in a Multi-Line Hunt Group. MUPH uses a two stage hunt to complete a call. The first stage of hunting, which begins with the start hunt position, is a circular search for an idle console (position) in the hunt group. The second stage of hunting is a sequential search for an idle line of matching Call Type (subgroup) assigned to that console. Once an idle console (position) with an idle line of the desired Call Type is found using the two stage hunt, the call is then completed. MUPH only allows one call at a time to complete to an idle console.

1.3 Packet Switching Hunt Types

The 5ESS Switch offers two types of hunting for Packet MLHGs. For 5E3 and later, the primary hunt method assigned to all Packet MLHGs is "PSUCD" (Uniform Call Distribution). For 5E8 and later, packet MLHG members may optionally be assigned Linear Hunt TNs as entry points for linear hunting into the MLHG.

With the UCD algorithm, the first member of the MLHG is designated as the start hunt member when the switch is initialized or when the MLHG is created. Hunting begins with this member when the first incoming packet call is placed to the MLHG. When an idle member is found, a start hunt member for the next call is selected via a "pre-hunt". This start hunt member is the first non-busy hunt group member that

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is a successor to the hunt group member to which the call was offered. When a subsequent hunt call is made, the UCD hunting algorithm begins at this member. The member may become busy in the interim; for example, enough non-hunted calls to the member or enough originations from the member could have made the member busy for hunting. In this case, hunting would proceed to find the next non-busy member in the normal manner.

The Linear Hunt algorithm for packet MLHGs is similar to the Regular Hunt type for circuit MLHGs. The linear hunt begins with the start hunt terminal and continues sequentially through the last terminal number of the MLHG.

1.4 RSM Stand-Alone Announcements

The Remote Switching Module Stand-Alone Announcement capability provides the RSM with the ability to connect a stand-alone announcement to RSM customers. The type of announcement machines the customer can use are those which are commercially available to connect to the RSM by using lines (LENs) as opposed to a 13A Recorded Announcement machine mounted on a Trunk Unit.

Each port of the announcement machine connects to one line (LEN) on a Line Unit. The lines of this announcement group must be defined as a "local" Multi-Line Hunt Group (each member is assigned to the same SM). The number of simultaneous announcements which can be given is equal to the number of members (terminals) in the MLHG.

The Stand-Alone Announcement is routed to only when RSM goes into Stand-Alone mode. It is not available for general announcement use.

The 5ESS Switch provides these line side RSM announcements on a barge-in basis. Some commercially available announcement machines may have their own non-barge in option which is implemented by not answering the "call" to the announcement port until the beginning of the announcement.

The 5ESS Switch does not provide a forced disconnect treatment for what looks like a standard call to a line. If a subscriber should refuse to go on-hook, then the particular announcement port that the customer is connected to will be indefinitely busy. Some commercially available announcement machines have their own time disconnect option based on the customer exceeding some given number of cycles of the announcement.

A call through a Line Unit has the possibility to be blocked, due to the nature of the space division line concentrator. The subscriber would receive reorder instead of the Line Side Stand-Alone Announcement. To minimize the possibility of line concentrator blocking, it is recommended that the switch owner spread the actual LEN assignment of the MLHG Terminal Number over several Line Concentrators within the RSM.

When all lines in the MLHG, RSM Line Side Stand-Alone Announcement are busy, then reorder instead of busy tone will be provided.

1.5 Initial Offices

For initial offices only, an MLHG must have at least one member defined on an MLHLN (5111 Record), OSPSDSL (5411 Record) or DSMLHLN (5901 Record) form. If the definition is on the MLHLN form, the TERM field must be entered.

If the definition is on the OSPSDSL form: "XDB" must be entered in the SERVICE CLASS field; the MLHG entered in the DSL NAME ID field; and an MLHG member number entered in the DSL NAME RL field. An associated MLHGFD form (5604 Record) must exist with a HUNT TYPE of "PSUCD".

If the definition is on the DSMLHLN form, then the CKT TERM or PKT TERM fields must be entered.

1.6 Release Link Trunks

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RLTs (Release Link Trunks) are provided between a main switch and branch switches to enable the attendant to implement Centralized Attendant Services. The 5ESS Switch can function as either a main or a branch switch. Refer to Division 2, Section 1AI, for more information on CAS/RLS.

1.7 Recent Change View

The corresponding Recent Change View for this form is 3.5.

2. FORM ENTRIES - 5110-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and Office Name.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

When assigning Multi-Line Hunt Group Numbers, entries exceeding 999 are not recommended until the range of 1 - 999 is completely exhausted.

When the MLHG has been defined as a Modem Pool Group by entering a value for MPTYPE (excluding "BILL" and "NOBILL") and a CLASS OF SERVICE of "MODEM" on the corresponding LCC form (5306 Record), the matching MLHLN forms (5111 Record) must have CIDIAL set to "REQ".

For 5E15 and later, ACT must be "Y" for SFID 351 in order for MLHG numbers to be in the range of 2001 - 8191.

2.3 # MLHG FEATURE

Description: Enter the Multi-Line Hunt Feature Name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The feature name must be defined on a corresponding MLHGFD form (5604 Record) either as a preconstructed or switch owner constructed feature.

2.4 LISTED TN

Description: Enter the listed Telephone Number of the MLHG.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The LISTED TN must be entered when HUNT TYPE on the MLHGFD form is "REG", "HTC", or "UCD".

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For 5E3 and later, it must also be entered when HUNT TYPE is "PSUCD", or "PMHG".

For "REG", "HTC", "PRRG", and "PMHG" the Telephone Number entered here must also be entered in the TN field of the MLHLN form (5111-1 Record) for Terminal 1 of this MLHG. For "UCD" and "PSUCD" the Telephone Number entered here must be unique, i.e., the LISTED TN must not be defined on any LINE (5109 Record), MLHLN (5111 Record), DSMLHLN (5901 Record), DSL (5900 Record) or PSMTN (5925 Record) forms.

An entry is prohibited when Hunt Type is "MUPH" or "ISAT".

If a Packet Switching group is being defined, enter the lowest TN that will serve as a Group Hunt number.

The NXX must be defined as an OFFICE CODE on a NOC form (5501 Record).

For 5E12 and later, if the first 3 digits of the 7-digit LISTED TNs on the MLHG form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, LISTED TN must be a 10- digit TN with the NPA/OFFICE CODE defined on the NOC form.

WARNING: For the LISTED TN(s) on MLHG, there must be at least one corresponding member on the MLHLN form or the TN may not be entered onone or more of the following input forms:

- ACDTN
- ACQS
- AMLBDSL
- DSL
- DSLUSR
- LINE
- MLHG
- MLHLN
- MTNDR
- MULTITN
- PSMTN
- RDTAPORT
- SHTN or
- XAT

2.5 HIGHEST LISTED TN

Description: If more than a single TN is to be used as a Group Hunt number, enter the highest TN. This field is used only if the Multi-Line Hunt Group is a Packet Switching group.

NOTE: This field in Recent Change is LAST LISTED TN.

Software Release: 5E3 and later
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

If only one Group Hunt number is desired, this field may be left blank or the same value specified for LISTED TN may be entered. The HIGHEST LISTED TN must have the same office code and be greater than the LISTED TN.

For 5E8 and later, if HIGHEST LISTED TN is entered, CLIENT TN TYPE cannot be entered.

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For 5E12 and later, if the first 3 digits of the 7-digit HIGHEST LISTED TNs on the MLHG form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, or the NOC form does not exist, HIGHEST LISTED TN must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, when the MLHG forms have an entry for LISTED TN and HIGHEST LISTED TN. These TNs must have the same value for NPA and NXX.

For 5E12 and later, when the MLHG forms have an entry for LISTED TN and HIGHEST LISTED TN. HIGHEST LISTED TN must be greater than LISTED TN.

2.6 GROUP TRC

Description: Should call trace be activated for the LISTED TN and SUB TNs of a "UCD", "ISAT", or "MUPH" group? When call trace is activated, it is used to trace all incoming calls to the LISTED TN or SUB TNs of the MLHG. For each call, a record is printed on the Maintenance TTY.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

GROUP TRC can be set to "Y" only when the corresponding MLHGFD form (5604 Record) has HUNT TYPE set to "UCD", "ISAT", or "MUPH".

2.7 # RAX

Description: Enter the Rate Center that should be used for routing and charging. The Rate Area and Line Class Code assignment designates which Digit Analysis Selector will be used for routing and charging of calls.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.8 GROUP MAKE BUSY KEY

Description: If the Multi-Line Hunt Group is equipped with a Group Make Busy Key, enter the Miscellaneous Equipment Number.
Valid Entries: Standard format for a Scan Point Number.

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)

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Scan Point Number	SPN	XX	00-30

Data Rules:

For 5E3 and later, Group Make Busy is not allowed on Packet Switching MLHGs; therefore, if HUNT TYPE is set to "PSUCD" on the corresponding MLHGFD form (5604 Record), then the GROUP MAKE BUSY KEY field must not be entered.

2.9 OVERFLOW PEG COUNT REG

Description: If the Multi-Line Hunt Group is equipped with a Remote Message Register to record group overflow, enter the Miscellaneous Equipment Number. When equipped, this register will record overflow when an all Terminal Busy Condition is encountered.

The Distribute Point Number of a register keeps track of calls into an MLHG that deny service (given a busy tone) because all terminals in the group are in use. This register is used as a measurement tool to tell when to add more MLHG members.
Valid Entries: Standard format for a Distribute Point Number.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

If this field has an entry, then OVFLWREG on the associated MLHGFD form must have a value of "Y".

2.10 LOCAL SM

Description: Enter the Switching Module Number for local operation of SM if all members of a Multi-Line Hunt Group are assigned to equipment numbers (LEN, SLEN or LCENs) that are defined on the same Module. A "local" MLHG is a group where each member is assigned to the same Switching Module.

Software Release: 5E5 and later
Valid Entries: 1 - 192

Data Rules:

For 5E5 and later, if a QUEUING FEATURE is entered, it is recommended that the LOCAL SM value equal the QUEUE MODULE value on the corresponding QUFD form (5617 Record) or QUGPA form (5617 Record).

If the Multi-Line Hunt Group is global, this field must be blank. (A "global" MLHG is a group that has its members associated with equipment numbers that are spread over two or more Switching Modules.)

The SM entered must be defined on the EQIM form (5700-1/2 Record).

2.11 SM SA ANNC

Description: Is the Switching Module to provide the Line Side Module Stand-Alone Announcement capability?

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Only one Multi-Line Hunt Group per Module site can have the Line Side Stand-Alone Announcement capability. This feature also takes precedence over a 13A Recorded Announcement if both are specified on a given Switching Module.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then the LOCAL SM field must be entered.

The following restrictions apply to the Module Stand-Alone Announcement MLHG and associated terminals:

The MLHG must be local to the Module; LOCAL SM field must equal the Switching Module that all the MLHG terminals are assigned to.

Only one MLHG per Remote Module can have SM SA ANNC field equal to "Y".

The MLHG FEATURE must be defined on an MLHGFD form (5604 Record) with a HUNT TYPE of "UCD" (Uniform Call Distribution).

Each of the individual terminals defined on the MLHLN form (5111 Record) for this Multi-Line Hunt Group must be assigned with the following restrictions:

- FLS (Free service) must equal "Y".
- SUSO (Deny Origination) must equal "Y".
- No custom calling features allowed; BRCS must equal "N".
- OE TYPE must equal "C", "L", or "E" (5E11 and later).
- PTY must equal "I" (Individual) and MFRI must equal "N". Remote Module Line Side Announcement is incompatible with Multi-Frequency Ringing.

2.12 # FEATURE GROUP A

Description: Are the members of this MLHG Feature Group A? FGA (Feature Group A) is an access arrangement to provide line-terminated end-to-end InterLATA (Local Access and Transport Area) service. All members of an MLHG must be either FGA, or non-FGA.

Required Field.
Default: N
Valid Entries: N, Y

Data Rules:

All members of an MLHG with FGA equal to "Y" must have the same signaling type (TTC equal to "Y" or "N").

If Feature Group A (FGA) is set to "Y", every associated MLHLN form must have its OE TYPE set to "C", "L" or "S".

For 5E3 and later, if the Class of Service on the LCC form (5306 Record) is "4WINDIV", then the Feature Group A value must be "N".

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2.13 FIRST PREEMPT MEMB

Description: This field is associated with an AUTOVON (Automatic Voice Network). The AUTOVON interface capability is defined using the BRCS feature, Precedence and Preemption. If this MLHG is Preemptable, enter the First Preemptable Multi-Line Hunt Group Member.
Valid Entries: 1 - 2015

Data Rules:

The MLHG is Preemptable if the associated MLHGFD is defined with a Hunt Type of "PRRG". When an MLHG is Preemptable, each terminal in the MLHG must have a Precedence and Preemption BRCS feature assigned and must be either preemptable or non-preemptable as specified on the PPMPA form (5618-4 Record) or as a default parameter on the PPFD form (5618-1 Record). All terminals which are less than the value entered in FIRST PREEMPT MEMB, must be specified as non-preemptable. All terminals which are equal to or greater than the value, must be specified as preemptable.

If a Modem Pool Group is being defined, which is indicated by an entry in the MPTYPE field on this form, then this field must be left blank.

If a Packet Switching Group (DSL members) is being defined, which is indicated by a HUNT TYPE of "PSUCD" on the MLHGFD form, then this field must be left blank.

2.14 REMARKS

Description: Remarks entered for administrative purposes.
Valid Entries: 1 - 16 characters

3. FORM ENTRIES - 5110-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name.

SUBGROUP TNs

At least one of the following SUBTN fields must be entered when an associated HUNT TYPE of "MUPH" or "ISAT" is defined on an MLHGFD form. A maximum of 6 subgroups (SUBTN1-6) are allowed for MUPH hunting and a maximum of 8 subgroups (SUBTN1-8) are allowed for ISAT hunting. These subgroup TNs must be unique within the 5ESS Switch, therefore, they have no associated equipment.

3.2 SUBTN 1-8

Description: Enter a main telephone number for the subgroup.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

SUBTN7 and SUBTN8 are only used for ISAT hunt groups.

If one or more SUBTN is entered, then the LISTED TN field must be

Multiple Position Hunt allows a maximum of 16 positions with a maximum of 32 lines per console (see Figure 1). A console can have up to six subgroups; there are six members in the first two subgroups and

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five members in the remaining four subgroups. MUPH requires subgroup Telephone Numbers which are identified with the appropriate entire MUPH subgroup.

If a Modem Pool group is being defined, SUBTNs must not be specified.

For 5E12 and later, if the first 3 digits of the 7-digit SUBTN[x]s (where x = 1-8) on the MLHG form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, SUBTN[x] must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, the SUBTN[x]s (where X = 1-8) on the MLHG form must have a NXX and/or NPA/NXX combination that is an OFFICE CODE and/or NPA/OFFICE CODE combination on a NOC form.

NOTE: Position 1, Subgroup 6 only has four members.

3.3 STATS 24HRS

Description: Should the reinitialization period for the ISAT (ISDN Attendant) Offered Load Statistics be 24 hours? An entry of "Y" indicates that a 24 hour time period has been selected to reinitialize the ISAT load statistics. An entry of "N" indicates that a 30 minute time period has been selected.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

If STATS 24HRS is "Y" then HUNT TYPE must be "ISAT" on the corresponding MLHGFD form.

ISAT CONFIGURATION

Fields Section 3.4 - Section 3.7 refer to Recent Change Display Only fields.

3.4 CONFIG1

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. For an ISAT MLHG the Recent Change field displays a CONFIG GRP name.

3.5 CONFIG2

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. For an ISAT MLHG the Recent Change field displays a CONFIG GRP name.

3.6 CONFIG3

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. For an ISAT MLHG the Recent Change field displays a CONFIG GRP name.

3.7 CONFIG4

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. For an ISAT MLHG the Recent Change field displays a CONFIG GRP name.

MONITORING OPTION

The fields (Section 3.8 - Section 3.10) are used for Monitoring Options.

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3.8 # BUSY MONITOR

Description: Can the LISTED TN for this MLHG be monitored by the Busy Lamps of an ISDN Attendant MLHG?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E4(2) and later, if BUSY MONITOR is set to "Y", then MLHG FEATURE must be defined on an MLHGFD form where HUNT TYPE is "HTC", "PMHG", "REG", or "UCD".

For 5E5 and later, if BUSY MONITOR is "Y", the ATT MLHG field must be entered.

An ISDN Attendant Multi-Line Hunt Group can busy monitor a Hundreds Group (Telephone Numbers that share the same first five digits) only if those Telephone Numbers that can be busy monitored do not physically terminate to more than 12 processors (SMs and/or AM). Entering a LISTED TN on an MLHG form causes the AM to be counted as one of the processors.

The following Telephone Numbers can be included in the Hundreds Group, if the BUSY MONITOR field on the form is set to "Y":

- a TN from a LINE form;
- a TN from a MLHLN form;
- a CKT TN from a DSL form;
- a CKT TN from a DSMLHLN form;
- a LISTED TN from an MLHG form;
- a TN (key) from a SHTN form (5902 Record).

The following physical terminations can be included in the Processor count, if the BUSY MONITOR field on the form is set to "Y":

- the first three digits (SM) of the OE NUMBER from a LINE form;
- the first three digits (SM) of the OE NUMBER from a MLHLN form;
- the first three digits (SM) of the LCEN from a DSL form;
- the first three digits (SM) of the LCEN from a DSMLHLN form;
- a LISTED TN from an MLHG form will cause the AM to be counted;
- The first TN in the SHARED LIST on a SHTN form has three possible cases:
  - If the TN matches the CKT TN on a DSL form, then the corresponding first three digits (SM) of the LCEN on that DSL form will be counted;
  - If the TN matches the CKT TN on a DSMLHLN form, then the corresponding first three digits (SM) of the LCEN on that DSMLHLN form will be counted;

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- If the MLHG and TERM NBR match the CKT MLHG and CKT TERM on a DSMLHLN form, then the corresponding first three digits (SM) of the LCEN on that DSMLHLN form will be counted.

3.9 ATT MLHG

Description: Enter the Attendant MLHG that can control the MLHG defined on this form.

Software Release: 5E5 and later
Valid Entries: For 5E14 and earlier: 1 - 2000

For 5E15 and later: Blank or 1 - 8191

Data Rules:

The ATT MLHG must have a service class of "ISATND" or "ATND" defined on the LCC form (5306 Record).

If this field is entered, the ATT MLHG must be defined on an MLHG form (5110 Record). The MLHG form must contain an MLHG FEATURE defined with a HUNT TYPE of "ISAT" or "MUPH" on an MLHGFD form (5604 Record). If the associated MLHG form has a HUNT TYPE other than "ISAT", BUSY MONITOR must be "N".

Any MLHG group controlled by an Attendant MLHG must have an MLHG FEATURE associated with a HUNT TYPE other than "ISAT" or "MUPH" on an MLHGFD form (5604 Record). For 5E7 and later if HUNT TYPE is "HTC", "REG", or "PMHG", then the first member of the MLHG (MLHG MEMBER 1) may not be assigned an ATT MLHG or RBV TGN on the DSLUSR or MLHLN form.

For 5E8 and later, if ATT MLHG is entered, RBV TGN must not be entered.

3.10 RBV TGN

Description: Enter the number of the incoming trunk group used to Remote Busy Verify the LISTED TN (DN) of this form. This TGN allows an ISAT (ISDN Attendant) on another 5ESS switch to Busy Verify this DN if the TGN is associated with a LISTED TN.

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If RBV TGN is entered, ATT MLHG must not be entered, BUSY MONITOR must be "N", LISTED TN must be entered, HIGHEST LISTED TN must not be entered, and SUBGROUP TNs: SUBTN1 must not be entered.

If RBV TGN is entered, there must be a corresponding TKGRP form (5202 Record) with that TGN defined, and that TKGRP form must have TRKCLS set to "ATNDVFY", and TRK DIR must be "INC". Also, for the TGN on the TKGRP form, there must be at least one corresponding TRUNK form (5204 Record) with QTY entered.

If RBV TGN is entered, MLHG FEATURE must equal FEATURE NAME on a corresponding MLHGFD form. The MLHGFD form must not have HUNT TYPE set to "MUPH", "ISAT" or "PSUCD".

3.11 PB GRP

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Description: The PB GRP field applies to the Packet Switching Data Business Group Service feature. This feature enables a customer to set up and administer intraswitch PBGs (Packet Business Groups) by assigning a PBG number to each X.25 termination to distinguish between intragroup calls and other calls on the AMA billing record. If a PB GRP number is entered in this field, a value should be entered in the LISTED TN field; this will assign an MLHG to a PBG.

Software Release: 5E5 and later
Valid Entries: 1 - 100

Data Rules:

Leave this field blank if this MLHG is not a member of a PBG. If this field has an entry, then the HUNT TYPE on the corresponding MLHGFD (5604 Record) form must be "UCD" or "PSUCD".

PB GRP must be defined on a PBGRP form (5931 Record).

For 5E9(1) and later, if PB GRP is entered, and the MLHG FEATURE assigned on this form is defined on an MLHGFD form with a HUNT TYPE of "UCD", then MPTYPE must be entered on this form.

3.12 BCLID MLHG ID

Description: Enter a two-character number to be sent as part of the BCLID (Bulk Calling Line Identification) message to the CPE. This number helps identify the Multi-Line Hunt Group customers generating the BCLID message when more than one BCLID customer is coming to the same AP (Application Processor) or CPE. This number is not unique among BCLID customers; if the customer so chooses, the same BCLID MLHG ID can be used for two different MLHG numbers. If no BCLID MLHG ID is defined, no MLHG ID is provided in BCLID messages (see Division 2, Section 1Y for more information about BCLID).

Software Release: 5E8 and later
Valid Entries: 00 - 99

4. FORM ENTRIES - 5110-3 RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name.

QUEUING

The fields (Section 4.2 - Section 4.4) are used to control call queuing for MLHGs.

4.2 Q INDI HNT TNS

Description: Is queuing allowed for calls to individual hunted TNs? (An individual hunted TN is defined as TN on an MLHLN form (5111 Record) with NONHUNT set to "N" or is defined as CKT SWITCHING MLHG TN on a DSLUSR form (5908 Record) with CKT SWITCHING NONHUNT set to "N".)

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Q INDI HNT TNS may be "Y" only when QUEUING ALLOWED is "Y".

For 5E6 and later, if Q INDI HNT TNS is "Y", then the corresponding MLHGFD form must have BEARER

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set to "VOICE" and HUNT TYPE set to any value other than "MUPH".

For 5E6 and later, if Q INDI HNT TNS is "Y" and the corresponding MLHGFD form has HUNT TYPE "ISAT", then MLHG must appear as GRP NBR on an ICIPF form (5903 Record) where GRP TYP is "HUNT" and at least one of the HUNTING ICI values is "QUE".

4.3 QUEUING ALLOWED

Description: Is queuing allowed? This field provides the ability to temporarily remove QUEUING ALLOWED from a terminal without deleting its internal data structure.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If a Modem Pool group is being defined, this field must be "N".

If this field is "Y", then a Queuing Feature name must be defined on the QUFD form (5617 Record).

If MPTYPE is known, this field must be "N".

4.4 QFEATURE

Description: Enter the Modular Queuing Feature name.
Valid Entries: 1 - 8 characters

Data Rules:

The Modular Queuing Feature Name must not be the same name as the Multi-Line Hunt Group Feature Name.

The QFEATURE name should be defined on the QUFD form (5617-1/2 Record). The MLHG should also be defined on the QUGPA form (5617 Record) with the QUGPA FEATURE NAME the same as this field. If the field is entered, then the MLHG FEATURE must be defined on an MLHGFD form (5604 Record) with a HUNT TYPE of "HTC", "ISAT", "PMHG", "UCD", or "MUPH".

If a Modem Pool Group is being defined, which is indicated by an entry in the MPTYPE field on this form, then this field must not be entered.

If a QFEATURE is assigned on this MLHG with a HUNT TYPE other than "ISAT" on the MLHGFD form, the QFEATURE must be defined on a QUFD form with a THRESHOLD TYPE set to "T" or blank.

For 5E9(1) and later, when QFEATURE is defined on a QUFD form that has a value entered in the QMON THRESHOLD field, then the MLHG must appear as a MONITORED MLHG on at least one DSLQMON form (5904 Record).

For 5E7 and later, if a QFEATURE on this MLHG form is assigned to the same QUEUE MODULE on a QUFD form (5617-1/2 Record) or a QUGPA form (5617-3/4 Record), the QUEUE SIZE must not exceed 255 per QUEUE MODULE if (for 5E9(2) and later) the corresponding EQIM form (5700 Record) (where SM matches QUEUE MODULE) has UNIT TYPE set to a value other than "SM2000". Queue Size is the sum of the BASIC SIZE + EXTENDED SIZE + ROUTINE SIZE + PRIORITY SIZE on the QUFD or QUGPA forms for each of the QFEATUREs assigned to the same QUEUE MODULE.

For 5E9(2) and later, if QFEATURE is entered and has a HUNT TYPE of "ISAT" on the corresponding MLHGFD form, then corresponding ICIPF forms with GRP TYP of "HUNT" must have the PRIO field entered for every ICI or TGN field entered. A MLHF form corresponds with a MLHGFD form if FEATURE

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matches the FEATURE NAME on the MLHGFD form.

MODEM POOLING

The fields (Section 4.5 - Section 4.8) define parameters for an ISDN Modem Pool Group.

4.5 MPTYPE

Description: This field is used to specify the primary attribute of a Modem Pool group. If the Modem Pool members (modems and terminal adaptors) are owned by the switch owner, then enter the baud rate to be used by every modem in the group.

If the Modem Pool members are owned by a private customer who is billed on a usage basis for the Modem Pool equipment, enter the value "BILL". If the Modem Pool members are owned by a private customer who is billed on a flat rate (e.g., period of time) basis for the Modem Pool equipment, enter the value "NOBILL".

Software Release: 5E3 and later
Valid Entries: 300, 1200, 2400, 4800, 9600 (bps);
- BILL, NOBILL

Data Rules:

If this field is entered, then MAINT and MPPFX fields must be entered.

If this field is entered, other field values must be set according to the following table.

Field	Value
QUEUING FEATURE	blank
QUEUE MASTER SWITCH	N
LISTED TN	a valid entry
HIGHEST LISTED TN	blank
FIRST PREEMPT MEMB	blank
MAINT	a valid entry
MPPFX	a valid entry
MPIDP	a valid entry
AP SITE ID	a valid entry
BCID1-6	a valid entry

For 5E6 and later, if MPTYPE is entered, and MLHG FEATURE matches FEATURE NAME on the MLHGFD form, then BEARER must be "VOICE" on the MLHGFD form.

4.6 MPPFX

Description: This field specifies a dialing sequence that instructs the modem to begin dialing. The sequence is determined by the modem manufacturer, therefore, every modem in a Modem Pool group must be from the same manufacturer.

Any printable keyboard character is acceptable with the exception of using the CONTROL key in combination with any other key. Certain keyboard characters have special meaning for the ODA software. Please refer to Division 1, Section 7, Figure 2 "5ODA Data Entry Control Characters", for a list of these characters. If the dialing sequence is a single character and that character is in the aforementioned list, enter a space before or after the character. This will remove the special meaning from the character.

Software Release: 5E3 and later
Valid Entries: 1 - 5 characters

4.7 MAINT

Description: Will the switch owner have the responsibility of maintaining the modems and terminal

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adaptors in the Modem Pool? If the equipment is owned by the switch owner, then enter "Y" to indicate that the switch owner will maintain the equipment.

If the equipment is owned by a private customer, but the switch owner will perform the maintenance, enter the value "Y".

If the equipment is owned by a private customer, and the private customer will perform the maintenance, enter a value of "N".

Software Release: 5E3 and later
Valid Entries: Y, N

4.8 MPIDP

Description: Does the office where the group resides support 4-digit dialing to any modem pool member in this modem pool group?

Software Release: 5E4(2) and later
Valid Entries: Y, N

Data Rules:

An entry in this field is permitted only if MPTYPE is known.

RELEASE LINK

The fields (Section 4.9 - Section 4.10) are for Release Link Trunks.

4.9 RLT TYPE

Description: Enter the type of Hold for this trunk.

Required Field.
Default: NONE
Valid Entries:

Valid RLT TYPE Entries

Entry	Definition
NONE	This trunk is not an analog senderized FX trunk appearing as line. Therefore, it cannot be a RLT.
PERM	This RLT is not released when the terminating port answers (the attendant maintains control over the call with 50B or ISDN type consoles).
TEMP	This RLT is released when the terminating port answers (the attendant does not have control over the call).

4.10 RLT FLASH

Description: Should the branch switch send flashes for called party disconnect? "Y" is used if the main switch is a 5ESS with ISDN or status lamps consoles. "N" is used if the main switch is a 5ESS Switch with 50B consoles. When the field is "N", the branch switch will send flashes for called party answer and calling party disconnect.

There is limited signaling between a branch and the main location. Because 50B and ISDN attendant type consoles can only recognize a flash as called party answered this value is set at the branch to control the type of flashes sent to the main switch.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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The field must be "Y" when RLT TYPE is "PERM".

MESSAGE SERVICE CENTER

The following fields (Section 4.12 - Section 4.15) are used for the MSC (Message Service Center) feature. Entries here will determine if the MLHG is an MSC. If the AP SITE ID and/or any of the BCID 1 through BCID 6 fields are entered, then the MLHG must be defined on the MSGP form (5962-2 Record) in the MSG SRV CNTR field. These fields are available in 5E4(2) and later Software Releases.

The CN-ISVM (CENTREX Network - Interswitch Voice Messaging) feature only supports a "Deluxe" MSC (Message Service Center): this requires an API (Application Processor Interface) link. Although a basic MSC could receive voice mail, interswitch MWI (Message Wait Indication) will not work on a basic MSC. For more information on CN-ISVM feature, see Division 2, Section 4A182.

4.11 MSC

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. The Recent Change display only field indicates whether an MLHG is a Message Service Center.

4.12 BCID SCRNING

Description: Is business customer ID screening allowed for this MSC? This field was added with the ISVM (Inter-Switch Voice Messaging) feature (see Div.2, Sec. 1BG). ISVM allows VM service providers to offer voice messaging on an inter-switch basis; however, since ISVM does not support the concept of inter-switch business groups, inter-switch calls would fail this check. For ISVM subscribers, an entry of "N" indicates that the call is forwarded to the MSC without BCID screening.

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

If BCID SCRNING is entered, CLIENT TN TYPE must be entered. Both BCID SCRNING and CLIENT TN TYPE must be entered to allow entries for AP SITE ID and BCID(1-6). When BCID SCRNING is "Y", at least one BCID (1-6) must be entered.

When BCID SCRNING is "N", AP SITE ID must be entered.

4.13 CLIENT TN TYPE

Description: Enter the Client telephone number type. This field was added with the ISVM (Inter-Switch Voice Messaging) feature (see Div. 2, Sec. 1BG). An entry of OCDN represents the Original Called Directory Number. RDN is the Redirecting Directory Number. Only a group DN and the dependent DNs of an MSC MLHG can be assigned a CLIENT TN TYPE. This option is not assigned on a per-member basis.

Software Release: 5E7 and later.
Valid Entries:

Valid CLIENT TN TYPE Entries

Entry	Definition
OCDN	Original Called Directory Number
RDN	Redirecting Directory Number

Data Rules:

If CLIENT TN TYPE is entered, BCID SCRNING must be entered. Both CLIENT TN TYPE and BCID SCRNING must be entered to allow entries for AP SITE ID and BCID[1-6].

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When CLIENT TN TYPE is "RDN", AP SITE ID must be entered.

CLIENT TN TYPE cannot be entered when HIGHEST LISTED TN, SUBTN1 or MPTYPE are entered.

When CLIENT TN TYPE is entered, no SUBTNs can be entered.

When CLIENT TN TYPE is entered and the associated HUNT TYPE is "REG", or "HTC" on the MLHGFD form, the correspodning MLHG member 1 defined on either the MLHLN (5111 Record) or DSLUSR form (5908 Record) must have NONHUNT set to "N".

4.14 AP SITE ID

Description: Enter an Application Processor Identification number.

Software Release: 5E4(2) and later
Valid Entries: 1 - 255

Data Rules:

If an MLHG has been assigned as a Message Service Center Group, (indicated by entering a value for AP SITE ID or BCID[1-6]), then:

- if AP SITE ID is entered, a HUNT TYPE of "UCD", "REG", "MUPH", "PMHG" or "HTC" must be assigned on the corresponding MLHGFD form (5604 Record).
- if AP SITE ID is blank and BCID[1-6] is entered, a HUNT TYPE of "UCD", "REG", "HTC", "PMHG" or "ISAT" must be assigned on the corresponding MLHGFD form.

The AP SITE ID must be defined on the DSLAP form (5963 Record).

If the MLHG entry on this form appears in the MSG SRV CNTR field on a MSGP form where DELUXE is "Y", then the AP SITE ID must have an entry.

4.15 INTRA SW OCDN

Description: Is the DN passed to the VMS (Voice Messaging Service) the first DN the call terminates to on this switch (an intra-switch OCDN)? An entry of "N" indicates that the originally dialed DN will be sent to the VMS even if that DN is on another switch (an inter-switch OCDN). The name of this field was changed to INTRA SW DN for 5E9(2) and later, because it can now be used for CLIENT TYPEs of OCDN (Original Called Directory Number) and RDN (Redirecting Directory Number). See INTRA SW DN for valid entries and data rules.

4.16 INTRA SW DN

Description: Should the Intra-switch Directory Number send the VMS the inter-switch DN (OCDN or RDN) or the intra-switch DN (OCDN or RDN). When set to "Y", this allows the delivery of the Near Switch on-switch OCDN or RDN delivery to the VMS. When this field is set to "Y", it blocks the inter-switch OCDN or RDN delivery from a Far Switch and allows the ISVM feature to be assigned to subscribers on the Near Switch with the VMS. ISVM does not have the requirements for BCID (Business Customer ID) and BCID Screening at the Message Service Group (MSG MLHG) and eliminates the need for screening for a BCID on the subscriber's line assignment for MWI (Message Waiting Indicator) activation and deactivation. This option is assignable on a per Message Service Center Group basis. When set to "N", this allows the delivery of Far Switch OCDN or RDN for ISVM subscribers. This allows the delivery of the correct redirecting number to the VMS for off-switch ISVM Subscribers. This option is assigned on a per Message Service Group basis.

When set to "N", this allows the delivery of Far Switch OCDN or RDN for ISVM subscribers. This allows

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the delivery of the correct redirecting number to the VMS for off-switch ISVM Subscribers. This option is assigned on a per Message Service Group basis.

Note, the TFOS 554 bit is a per-switch option that controls whether OCDN is to be sent or not. When this bit is set to "Y", it overrides the current INTRA SW DN = "N" and disallows the inter-switch signaling of the OCDN or RDN and only presents the information equivalent to INTRA SW DN = "Y" information for all Message Service Groups on the Switch.

If both INTRA SW DN = "Y" and INTRA SW DN = "N" Message Service Groups are desired on the same switch, set the TFOS 554 bit to "N". When the TFOS 554 bit is set to "Y", INTRA SW DN is effectively set to "Y" or ignored.

Whether OCDN or RDN is sent is controlled by CLIENT TN TYPE field on the MULTITN form (5114 Record). This field applies to CLIENT TN TYPE of "OCDN" and "RDN".

For more information concerning this feature, see Division 2, Section 1BG.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E7 - 5E9(1), if INTRA SW OCDN is "Y", then BCID SCRNING must be "N".

For 5E9(2) and later, if AP SITE ID is not entered, INTRA SW OCDN must be "Y".

4.17 BCID 1 - 6

Description: Enter a Business Customer Identifier.

Software Release: 5E4(2) and later
Valid Entries: 1 - 65535

Data Rules:

The entry in this field must appear as an entry in the BCID field on an MSGP form.

An MLHG is assigned as a Message Service Center Group when a value for AP SITE ID or BCID is entered. When AP SITE ID is blank, and BCID is entered, a HUNT TYPE of "UCD", "REG", "HTC", or "ISAT" must be assigned on the corresponding MLHGFD form.

If an MLHG has been assigned as a Message Service Center Group, (indicated by entering a value for AP SITE ID or BCID[1-6]), then:

- if AP SITE ID is entered, a HUNT TYPE of "UCD", "REG", "MUPH", "PMHG" or "HTC" must be assigned on the corresponding MLHGFD form (5604 Record).
- if AP SITE ID is blank and BCID[1-6] is entered, a HUNT TYPE of "UCD", "REG", "HTC", "PMHG" or "ISAT" must be assigned on the corresponding MLHGFD form. For 5E7 and later if the HUNT TYPE is "ISAT", then on this MLHG form BCID SCRNING must be "Y" and CLIENT TN TYPE must be "OCDN".

4.18 DELAY RING

Description: Should power ringing of the MSC be delayed for 2 seconds? The DELAY RING field is used to indicate whether the power ringing of the MSC MLHG is to be delayed for 2 seconds so that the

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AP/VMS (Application Processor/Voice Messaging Service) has time to process the call history information sent from the switch. An entry of "N" indicates do not delay power ringing. The DELAY RING field was added in order to provide the capability of delaying the power ringing of the MSC MLHG.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then AP SITE ID must be entered.

4.19 CPN OVRIDE PRVCY

Description: The CPN OVRIDE PRVCY field is used to indicate whether or not to override a privacy indication of the CPN (Calling Party Number) for both direct and forwarded calls and deliver the CPN in the CHI (Call History Information) message to the AP (Applications Processor) when this MSC (Message Service Center) is setup for ISVM (Interswitch Voice Messaging). This field supports the Line Blocking Enhancement for ISVM secured feature, see Division 2, Section 4A240.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

For 5E11 and later, if the AP SITE ID(s) assigned on the MLHG form (5110-1 Record) have CPN OVRIDE PRVCY equal to "Y", then ISVM must be "Y" on the corresponding DSLAP form.

For 5E11 and later, if CPN OVRIDE PRVCY is "Y" then BCID SCRNING must be entered and BCID SCRNING must be "N" and INTRA SW DN must be "N".

ENHANCED 911

The following fields (Section 4.20) are used for the E911 (Enhanced 911) feature.

4.20 E911 PSAP

Description: Is this an E911 Public Safety Answering Point? This field applies to the secured feature, ISDN PSAP Support. For information on the feature, see Division 2, Section 4A114.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field can be "Y" only if the ISDN PSAP Support secured feature has been purchased; SFID 114 ACT must be set to "Y" on the SFSYS form (5713-1 Record).

When E911 PSAP is "Y", then:

- QFEATURE, MPTYPE, AP SITE ID, and BCID[1-6] cannot be entered;
- MLHG FEATURE must be defined on an MLHGFD form with HUNT TYPE set to "HTC", "REG", or "UCD" and with BEARER set to "VOICE"; and

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- the MLHG cannot contain analog members; therefore, no analog members may be defined for this MLHG on the MLHLN form.

4.21 LNR HNT TN

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. For Packet MLHGs the Recent Change field displays the optional Linear Hunt Telephone Number assigned to member 1 of the MLHG.

4.22 LNR COUNT

Description: This field is not used by ODA but appears on the form for consistency with Recent Change View 3.5. For Packet MLHGs the Recent Change field displays the number of Linear Hunt TNs assigned to members of the MLHG.

NUMBER PORTABILITY

This field group was added to support the Number Portability features.

4.23 PORTED

Description: The PORTED field is used to indicate whether the MLHG has been ported into this office via the LNP (Local Number Portability) feature. When this field is set to "Y", all members of the MLHG are considered ported for AMA access billing purposes.

This indicator is used by call processing to determine whether or not to generate an LNP BAF (Bellcore AMA Format) module for originating and terminating IXC access records.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

4.24 NON COND TRIG

Description: The NON COND TRIG field is used to indicate whether or not a call to this DN requires a non-conditional query of the SCP (Service Control Point) prior to routing the call.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NON COND TRIG is "Y", then:

- the ACT field for SFID 216 must be set to "Y" on the SFSYS form, and if SFID 216 is set to "Y", SFID 174 must also be set to "Y"
- at least one TN must be specified in the LISTED TN, HIGHEST LISTED TN, or SUBTN fields
- SERHLN on the MLHLN form must be blank
- SERHLN on the DSLUSR form must be blank
- SERHLN on the SHTN form must be blank

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- HUNT TYPE must be "HTC", "ISAT", "MUPH", "REG", or "UCD" on the MLHGFD form

For each MLHG form where NON COND TRIG is "Y", the corresponding MLHG Terminal 1 must have CLASS OF SERVICE and TERMINATING TREATMENT on the LCC form within the set listed below.

MLHG Terminal 1 can be found on either the MLHLN form or as CKT MLHG and CKT TERM on the DSLUSR form. To obtain the corresponding LCC form, match the LCC/RAX (for MLHLN) or CKT LCC/CKT RAX (for DSLUSR).

- Valid CLASS OF SERVICE
  - "10PTY", "2PTY", "4PFS", "4PSS", "5PTY", "8PSS", "ATND", "CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN", "TWOPTY", "4WINDIV"

- Valid TERMINATING TREATMENT
  - "INDIV", "INWATS", "MLHG", "PARTY"

4.25 CONTEXT ID

Description: This field is used to indicate whether or not a multiline hunt group is set to "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E12 and 5E13: N
- For 5E14: NATIVE

Valid Entries:

Valid CONTEXT ID Entries

Entry for 5E12, 5E13	Entry for 5E14 and later	Description
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

For 5E12 and later:

When the CONTEXT ID field is set to "R" or "RESOLD" or ,"U" or "UNBUNDLED" on the MLHG form, the ACT field for SFID 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the MLHG form, there must be a MLHGFD form (5604 Record) with HUNT TYPE set to "HTC", "ISAT", "MUPH", "PMHG", "REG", or "UCD".

POSITION NUMBERS	SUBGROUP NUMBERS					
	1	2	3	4	5	6
1	1-6	7-12	13-17	18-22	23-27	28-31

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2	32-37	38-43	44-48	49-53	54-58	59-63
3	64-69	70-75	76-80	81-85	86-90	91-95
4	96-101	102-107	108-112	113-117	118-122	123-127
5	128-133	134-139	140-144	145-149	150-154	155-159
6	160-165	166-171	172-176	177-181	182-186	187-191
7	192-197	198-203	204-208	209-213	214-218	219-223
8	224-229	230-235	236-240	241-245	246-250	251-255
9	256-261	262-267	268-272	273-277	278-282	283-287
10	288-293	294-299	300-304	305-309	310-314	315-319
11	320-325	326-331	332-336	337-341	342-346	347-351
12	352-357	358-363	364-368	369-373	374-378	379-383
13	384-389	390-395	396-400	401-405	406-410	411-415
14	416-421	422-427	428-432	433-437	438-442	443-447
15	448-453	454-459	460-464	465-469	470-474	475-479
16	480-485	486-491	492-496	497-501	502-506	507-511

Figure 1 MULTIPLE POSITION HUNT SUBGROUP MEMBERS

	5E2	5E3	5E4(2) and Later
LCC TT	For hunting terminals, use "MLHG". For Inwats terminals, use "I". For non-hunt terminals, use "INDIV". LCCs can be mixed within any given MLHG.	Use "MLHG" or "I". Must be the same for all terminals.	Same as 5E3
I	If all members of MLHG are I, set MLHG attribute I to "Y". If members of the MLHG are mixed (i.e., some are I and some are hunting terminals), set MLHG attribute I to "N".	Set MLHG attribute I to "Y". (Note: all MLHG members must be I). Set MLHG attribute I to "N" when members are not I. (Note: members cannot be mixed.) Use View 3.3 or Record 5114 to assign a multiple DN. Set attribute I to "Y".	Same as 5E3. Plus: I can be provided by assigning an LCC with with TT of I to an individual line on View 1.1 or Record 5109. The Individual Line can be part of a Series Hunt.
O	Provide outdials by assigning to Terminals 3001 through 3999. Requires hunt type "R", "HTC", or "UCD." Requires LCC with TT equal to "INDIV".	Provide by assigning to Terminals 3001 through 3999. Requires hunt type of "R"	"HTC" or "UCD". Requires LCC with TT equal to "MLHG" or "INWATS".
N	Provide non-hunt with LCC TT of "INDIV".	Provide by setting N to "Y" on View 3.2 or Record 5111-1. Use View 3.3 or Record 5114 to assign a multiple DN. Set attribute N to "Y".	Same as 5E3.

Inwats Simulated Facilities Requirements: An SFG is required for special billing and/or to limit the number of calls to an Inwats number. Follow these steps:

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1. Use Recent Change View 7.3 or Record 5609-3 to provision the SFG.
2. Use RC View 10.4 or Record 5304 to provision the MCRI.
3. Use RC View 7.4 or Record 5609-4 to associate the Inwats DN with the MCRI.

Figure 2 MLHG DIFFERENCES

```
mlhg                        5ESS Switch
SCREEN 1 OF 3           OFFICE DATA ADMINISTRATION
(5110-1/2/3)            MULTILINE HUNT GROUP

*1. MLHG                ____        13. REMARKS _________________
#2. MLHG FEATURE        ________
 3. LISTED TN           __________      ATTENDANT TNs
 4. HIGHEST LISTED TN   __________  14. SUBTN1 __________
 5. GROUP TRC           N        15. SUBTN2 __________
#6. RAX                 __       16. SUBTN3 __________
 7. GROUP MAKE BUSY KEY _________  17. SUBTN4 __________
 8. OVERFLOW PEG COUNT REG _______  18. SUBTN5 __________
 9. LOCAL SM            ___      19. SUBTN6 __________
10. SM SA ANNC          N            ISAT ONLY TNs
11. FEATURE GROUP A     N        20. SUBTN7 __________
12. FIRST PREEMPT MEMB  ____     21. SUBTN8 __________
```

```
mlhg                        5ESS Switch
SCREEN 2 OF 3           OFFICE DATA ADMINISTRATION
(5110-1/2/3)            MULTILINE HUNT GROUP

22. STATS 24HRS N   27. BUSY MONITOR  N          MODEM POOLING
                28. ATT MLHG    ____        35. MPTYPE ______
 ISAT CONFIGURATION 29. RBV TGN     ____        36. MPPFX  _____
   CONFIG1 _________ 30. PB GRP     ___         37. MAINT  _
   CONFIG2 _________ 31. BCLID MLHG ID __       38. MPIDP  _
   CONFIG3 _________
   CONFIG4 _________          QUEUING          RELEASE LINK
                32. Q INDI HNT TNS  N       39. RLT TYPE  NONE
                33. QUEUING ALLOWED N       40. RLT FLASH N
                34. QFEATURE    ________
```

```
mlhg                        5ESS Switch      _
SCREEN 3 OF 3           OFFICE DATA ADMINISTRATION
(5110-1/2/3)            MULTILINE HUNT GROUP

 MESSAGE SERVICE CENTER  52. DELAY RING     N  59. CONTEXT ID N
   MSC          _      53. CPN OVRIDE PRVCY N
42. BCID SCRNING  _
```

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43. CLIENT TN TYPE ____ ENHANCED 911
44. INTRA SW DN N 54. E911 PSAP N
45. AP SITE ID ___
46. BCID1 _____ LNR HNT TN _
47. BCID2 _____ LNR COUNT _
48. BCID3 _____
49. BCID4 _____ NUMBER PORTABILITY
50. BCID5 _____ 57. PORTED N
51. BCID6 _____ 58. NON COND TRIG N

Figure 3 SAMPLE MLHG FORM 5E12 - 5E13 SOFTWARE RELEASES

mlhg 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5110-1/2/3) MULTILINE HUNT GROUP

*1. MLHG ____ 13. REMARKS _____
#2. MLHG FEATURE _____
3. LISTED TN _____ ATTENDANT TNs
4. HIGHEST LISTED TN _____ 14. SUBTN1 _____
5. GROUP TRC N 15. SUBTN2 _____
#6. RAX __ 16. SUBTN3 _____
7. GROUP MAKE BUSY KEY _____ 17. SUBTN4 _____
8. OVERFLOW PEG COUNT REG _____ 18. SUBTN5 _____
9. LOCAL SM ___ 19. SUBTN6 _____
10. SM SA ANNC N ISAT ONLY TNs
11. FEATURE GROUP A N 20. SUBTN7 _____
12. FIRST PREEMPT MEMB ____ 21. SUBTN8 _____

mlhg 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5110-1/2/3) MULTILINE HUNT GROUP

22. STATS 24HRS N 27. BUSY MONITOR N MODEM POOLING
28. ATT MLHG ____ 35. MPTYPE _____
ISAT CONFIGURATION 29. RBV TGN ____ 36. MPPFX _____
CONFIG1 _____ 30. PB GRP ___ 37. MAINT _
CONFIG2 _____ 31. BCLID MLHG ID __ 38. MPIDP _
CONFIG3 _____
CONFIG4 _____ QUEUING RELEASE LINK
32. Q INDI HNT TNS N 39. RLT TYPE NONE
33. QUEUING ALLOWED N 40. RLT FLASH N
34. QFEATURE _____

mlhg 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5110-1/2/3) MULTILINE HUNT GROUP

MESSAGE SERVICE CENTER 52. DELAY RING N 59. CONTEXT ID NATIVE
MSC _ 53. CPN OVRIDE PRVCY N

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42. BCID SCRNING _
43. CLIENT TN TYPE ____ ENHANCED 911
44. INTRA SW DN N 54. E911 PSAP N
45. AP SITE ID ___
46. BCID1 _____ LNR HNT TN _
47. BCID2 _____ LNR COUNT _
48. BCID3 _____
49. BCID4 _____ NUMBER PORTABILITY
50. BCID5 _____ 57. PORTED-IN AMA N
51. BCID6 _____ 58. NON COND TRIG N

Figure 4 SAMPLE MLHG FORM 5E14 SOFTWARE RELEASES

mlhg 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5110-1/2/3) MULTILINE HUNT GROUP

*1. MLHG ____ 13. REMARKS _____
#2. MLHG FEATURE _____
3. LISTED TN _____ ATTENDANT TNs
4. HIGHEST LISTED TN _____ 14. SUBTN1 _____
5. GROUP TRC N 15. SUBTN2 _____
#6. RAX ___ 16. SUBTN3 _____
7. GROUP MAKE BUSY KEY _____ 17. SUBTN4 _____
8. OVERFLOW PEG COUNT REG _____ 18. SUBTN5 _____
9. LOCAL SM ___ 19. SUBTN6 _____
10. SM SA ANNC N ISAT ONLY TNs
11. FEATURE GROUP A N 20. SUBTN7 _____
12. FIRST PREEMPT MEMB ____ 21. SUBTN8 _____

mlhg 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5110-1/2/3) MULTILINE HUNT GROUP

22. STATS 24HRS N 27. BUSY MONITOR N MODEM POOLING
28. ATT MLHG ____ 35. MPTYPE _____
ISAT CONFIGURATION 29. RBV TGN ____ 36. MPPFX _____
CONFIG1 _____ 30. PB GRP ___ 37. MAINT _
CONFIG2 _____ 31. BCLID MLHG ID __ 38. MPIDP _
CONFIG3 _____
CONFIG4 _____ QUEUING RELEASE LINK
32. Q INDI HNT TNS N 39. RLT TYPE NONE
33. QUEUING ALLOWED N 40. RLT FLASH N
34. QFEATURE _____

mlhg 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5110-1/2/3) MULTILINE HUNT GROUP

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```
 MESSAGE SERVICE CENTER     52. DELAY RING       N    59. CONTEXT ID NATIVE
   MSC           _        53. CPN OVRIDE PRVCY N
42. BCID SCRNING   _
43. CLIENT TN TYPE ____       ENHANCED 911
44. INTRA SW DN    N       54. E911 PSAP N
45. AP SITE ID     ___
46. BCID1          _____       LNR HNT TN _
47. BCID2          _____       LNR COUNT  _
48. BCID3          _____
49. BCID4          _____     NUMBER PORTABILITY
50. BCID5          _____    57. PORTED-IN AMA N
51. BCID6          _____    58. NON COND TRIG N
```

Figure 5 SAMPLE MLHG FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 1K: 5111-1/2/3 RECORD MULTI-LINE HUNT GROUP TERMINAL RECORD - MLHLN

1. GENERAL

The 5111-1/2/3 Record, available with 5E2 and later Software Releases, defines the individual Terminal Numbers assigned to a particular MLHG. Each MLHG/Terminal Number must be assigned an equipment number and specific options and features. Every MLHG Number assigned on the MLHLN form must be defined on the MLHG form (5110-1/2/3 Record).

MLHLN contains Terminal Numbers that are associated with a given MLHG. The 5111-2/3 Record defines supplemental information that is not included on the 5111-1 Record.

1.1 Line Assignments

The assignment of lines to an MLHG is normally determined by the following:

- Non-PBX Class Of Service customers with nine or more lines.
- PBX Class Of Service customers with six or more lines.
- PBX Class Of Service customers with special features, e.g., End Hunt or Make Busy Keys.
- Any Class Of Service customers requiring Circle Hunt, Uniform Call Distribution Hunting, or Multiposition Hunting.
- INWATS.

1.2 LEN/SLEN Assignments

Every MLHG Terminal Number must be assigned a LEN or SLEN. For 5E3 and later, the RAX/LCC combination must be defined on an LCC form (5306 Record) with a TERMINATING TREATMENT of "MLHG" or "INWATS".

1.3 Billing

Lines within an MLHG can be billed to a Group Billing Number, or can be individually billed by Terminal Number.

1.4 Outdial Terminals

Outdial Terminals can be entered on the MLHG form with a terminal number in the range 3001 - 3999. Outdial Terminals are only allowed in Hunt Groups with a HUNT TYPE of "REG", "UCD" or "HTC" as indicated on an MLHGFD form (5604 Record).

1.5 Ground-Start Lines

Most customer lines are loop-start lines that generate an origination by closing the path between the tip and ring at the station set (forming a loop). Scanning is done at the Central Office by applying a voltage between the tip and ring and sensing the loop current flow produced by the customer line origination.

Ground-Start lines (e.g., coin-first coin phones and PBX-CO trunks) generate an origination by grounding the ring conductor at the station set. Scanning is done at the Central Office by applying a voltage with respect to ground on the ring conductor and sensing the current flow in the ring conductor produced by the customer line origination. Since certain PBXs interpret a ground on the tip conductor to mean something else (disconnect, etc.), the tip conductor at the Central Office is disconnected during scanning on

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Ground-Start lines. The tip conductor is disconnected under software control in the 5ESS Switch. Thus, any Line Equipment Number may be assigned as Ground Start. Ground-Start should be entered as an equipment option in the GST field.

1.6 Essential Service Protection

TNs that require Essential Service Protection, which is part of the Overload Control Capability, must be assigned to a Line Equipment Number designated as Essential. When a 5ESS Switch is in an overload condition and the Overload Control is turned on, then all lines designated Essential Lines have the Essential Service Protection feature and would receive priority origination scanning.

There is no limit on the quantity of LENs or SLENs that can be assigned as Essential Lines except for the following restriction:

To make sure there is no internal blocking on origination scanning, there should be only one LEN assigned with the EL field equal to Y from a group of four LENs that share the same first seven digits of their LEN. Example:

External LEN breakdown					
SM	LU	CONC	SWG	SW	LEV
1-192	0-7	0-9	0-1	0-7	0-3

There are four level values 0 through 3 for a given 7-digit value of SM/LU/CONC/ SWG/SW. Only one of the four LEVs should have the EL field equal to "Y".

LEN	00	1	3	0	0	4	0
LEN	00	1	3	0	0	4	1
LEN	00	1	3	0	0	4	2
LEN	00	1	3	0	0	4	3

It is recommended that Essential Lines be distributed evenly across the Line Equipment Numbers. Care should be given to assign to an Essential Line only those customers that actually require Essential Service Protection.

1.7 Recent Change Records

For 5E7 and 5E8, the corresponding Recent Change Office records for this form are 5111 and 5111A. The Recent Change 5111 Record defines the individual Terminal Numbers assigned to a particular MLHG with a terminal number in the range of 1 - 2015. The Recent Change 5111A Record defines the Outdial Terminals that can be entered on the MLHG form with a terminal number in the range 3001 - 3999. The ODA 5111 Record defines the 1 - 2015 and 3001 - 3999 terminal numbers.

1.8 Recent Change View

The corresponding Recent Change View for this form is 3.2 for 5E2 - 5E6, or 1.6 for 5E7 and later.

2. FORM ENTRIES - 5111-1 Record

2.1 BASE AND CONTROL, ESS UNIT

Enter the 6-character Base and Control Number, Office Name and MLHG number.

2.2 MEMBER INFORMATION

The information contained in these columns is data that is unique to each Terminal Number in the MLHG. This form contains entries for individual terminals of the group. Common group information is entered on the MLHG form.

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2.3 *MLHG

Description: The Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

Entries exceeding 999 are not allowed until positions 1 through 999 have been assigned.

For 5E5 and later, if both this field and the ATT MLHG field are entered, the MLHG must be defined in the MLHG field of an MLHG form such that the MLHG FEATURE is defined on an MLHGFD form that is neither "ISAT" nor "MUPH".

For 5E9(1) and later, when Multiline Hunt Terminals defined on MLHLN forms where MEMB equals 1, are assigned a Call Forwarding Variable Feature or a Call Forwarding Variable Data Feature on the MLHLNFA form, the associated MLHG must be assigned a MLHG FEATURE which is defined on a MLHGFD form that has CF VARIABLE set to "Y".

For 5E12 and later, when the MLHG/TERM(S) on the MLHLN form has an OE Type of "A" or "G", the CLASS OF SERVICE on the corresponding LCC from must not equal "4WINDIV", "TAOPER" or " XDB".

2.4 *TERM

Description: The MLHG Terminal Number.
Valid Entries: 1 - 2015 or 3001 - 3999 (Outdial Terminals Only)

Data Rules:

With 5E4(2) and later, Outdial Terminals cannot be assigned to MLHGs where the HUNT TYPE on the MLHGFD form (5604 Record) is "MUPH".

Terminal Number 1, the main member of the group, must always be defined for each MLHG. Entries exceeding 999 are not allowed until positions 1 through 999 have been assigned.

Because of memory constraints, it is recommended that for 5E2 and later that Terminal Number entries exceeding 32 are not assigned until positions 1 through 32 have been assigned. This recommendation doesn't apply when the HUNT TYPE is "MUPH" on the MLHGFD form.

MLHG members defined on the MLHLN form with an LCC/RAX combination must match an LCC/RAX combination with an associated SERVICE CLASS of "INDIV", "HOTMOTL", "HOTPBX", "PBX", "B911", "CALLBK" for 5E6 or "LTPCLBK" for 5E7 and later, "ATND", "4WINDIV", "MODEM" on the LCC form.

If a TN or MLHG/TERM defined on the LINE or MLHLN form with an OE TYPE ("C", "E", "G", "L", or "S") and NUMBER combination, it cannot be duplicated between Individual MFR or non-MFR lines (PTY is "I" and MFRI is "N" or PTY is 1-9, 0 and MFRI is "Y") or duplicated between an Individual line (MFR or non-MFR) and a multi-party line (PTY set to 1-9, 0, "T", "R", and MFRI is "N").

For 5E9(1) and later, when MLHG/TERMs defined on the MLHLN form have a TN specified and an LCC/RAX combination defined on the LCC form with a TERMINATING TREATMENT of "ASIRA", the following MLHLN form fields must be set:

- OE TYPE/NUMER must be null
- DNY BV must be "N"
- SHARED must be "N"

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For 5E9(1) and later, when Multiline Hunt Group Terminals defined on MLHLN forms where TERM equals 1, are assigned a Call Forwarding Busy Feature, Call Forwarding Data Busy Feature, Call Forwarding Precedence Busy Feature, or Call Forward Precedence Calls When Busy Feature on the MLHLNFA form, the associated MLHG must be assigned a MLHG FEATURE which is defined on a MLHGFD form that has CF BUSY set to "Y".

For 5E12 and later, if the MLHG/TERMs on the MLHLN form have SERHLN entered and TN entered, the equivalent 10-digit SERHLN cannot equal the equivalent 10-digit TN on the same MLHLN form.

2.5 #RAX

Description: The Rate Center to be used for routing and charging.
Valid Entries:

- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.6 #LCC

Description: The Line Class Code indicating the class of service for a Terminal Number.
Valid Entries: 3 alphanumeric characters

Data Rules:

A modem that is a member of a Modem Pool group must have a LINE CLASS CODE with a CLASS OF SERVICE of "MODEM" and a TERMINATING TREATMENT of "INDIV" defined on an LCC form.

When CLASS OF SERVICE is "MODEM" on the LCC form, the following fields on this form must be "N": TST LINE, GNDREF, LNEQ, and SHARED.

For 5E7 and 5E8, when the MLHG member is assigned an LCC/RAX combination defined on an LCC form where the Service Class is "CALLBK", the following fields on this form must be set as specified:

- OE TYPE must be:

  "C" or "L";

- SUSO must be "Y"; and
- TTC must be "Y".

For 5E9(1) and later, when the MLHG member is assigned an LCC/RAX combination defined on an LCC form where the Service Class is "LTPCLBCK", the following fields on this form must be set as specified:

- OE TYPE must be:

  "C","E" (5E11 and later), or"L";

- SUSO (Denied Origination) must be "Y";

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- TTC must be "Y";
- DNY ROH must be "N";
- DTLBILL must be "N"; and
- COMPL must be "N".

2.7 OE TYPE

Description: A composite line type consisting of all the Equipment Types and Numbers (LEN/SLEN/TEN/DEN/NEN, etc.). This field is necessary for the 4-wire Analog Lines (TEN), 4-Wire Lines on DNU-S (NEN) as of 5E11 and later and 4-wire Digital Lines (DEN) fields added to the MLHLN form with the addition of the DSN (Defense Switched Network), and 4-wire Lines on OIU (Optical Interface Unit) as of 5E16..

Software Release: 5E3 and later
Valid Entries:

Valid OE TYPE Entries

Entry	Definition
A	Softwre Release: 5E12 and later. TN associated with a 10-digit INEN for TR-303 on DNU-S.
C	TN associated with an 8-digit ISLU (ISDN Line Unit).
D	TN associated with an 8-digit, 4-wire DEN (Digital Equipment Number). Software Release: 5E15 and later. The DEN was expanded to 10-digits.
E	Software Release: 5E11 and later: TN associated with an 12-digit AIU (Access Interface Unit).
G	Software Release: 5E8 and later. TN associated with a GEN (GAMA IDCU equipment number); see NUMBER field for details.
L	TN associated with an 8-digit analog LEN (Line Equipment Number).
M	Software Release: 5E8 - 5E9(2). TN associated with an 8-digit IDCU MEN (IDCU equipment number).
N	Software Release: 5E12 and later. TN associated with a 10-digit, 4-Wire Line on DNU-S NEN (Network Equipment Number). Software Release: 5E13 and later. The VT (Virtual Tributary) field defined on the EQVT form (5858 Record) was split which resulted in an 11-digit NEN.
O	Software Release: 5E16 and later. OIUEN (Optical Interface Unit Equipment Number)
S	TN associated with a 7-digit SLEN (SLC-96) Equipment Number. Software Release: 5E15 and later. The SLEN was expanded to 10-digits.
T	TN associated with a 7-digit, 4-wire analog TEN (Trunk Equipment Number).

Data Rules:

If CLASS OF SERVICE on the associated LCC form is "B911", OE TYPE must be "C", "E", "L", or "S".

When "C", "E", "L", or "S" is entered, CLASS OF SERVICE on the associated LCC form cannot be "4WINDIV", "ISATND", "ISDN", "TAOPER" or "XDB".

For 5E7 and later, if OE TYPE is equal to "L", and EL (Essential Line for the Essential Service Protection feature) is set to "Y", only one unique NUMBER in a group of four NUMBER(s) that share a common SM/LU/GRID/SWG/SW value can have EL set to "Y".

For 5E8 and later:

Data rules are listed under the specific enumeration heading as follows:

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D or T:
If OE TYPE is "D" or "T", the SM referenced in the OE NUMBER cannot be configured as "BASIC". The SM's corresponding EQIM form must have CONFIGURATION set to "STANDARD" or "LOADED" because a Basic SM cannot be assigned 4-wire lines. For 5E9(2) and later, refer to the table of Configurations for Facilities and Application in Division 8, Section 2 for correct configurations for OE TYPE "D", "N" or "T".

M or G:
If "G" or "M" is entered, the MLHG/MEMB is assignedto IDCU equipment. If the RT INTERFACE is set to "TR008" on the corresponding RTERM form (5174 Record), then the last digits of the OE NUMBER must correspond to the Channel Unit position (i.e., CU XX/YY) defined on the RTERM form. The forms correspond when the OE NUMBER corresponds to the designated fields on the RTERM form. (See format for OE NUMBERs of TYPE "M" and "G".) Note that the last two digits of the OE NUMBER are determined by the CU XX/YY value (where XX is an odd number range of 01-95 and YY is an even number of XX + 1). Both the values in the pair are assignable if CU XX/YY TYPE on the RTERM form is set to

- "DFXS"(5E9(2) and later)
- "FSR"
- "MP"
- "SF1" (5E9(1))
- "SP"
- "SPOTS"
- "SSV00"
- "SSV10"

Only the lower (odd) numbered value is assignable if the CU XX/YY TYPE set to

- "COIN"
- "FXS"
- "FXSLS"

For example:

COMPARISION OF RTERM CU WITH OE NUMBER

RTERM CUXX/YY	LAST DIGITS OF OE NUMBER FOR TYPE "M"	LAST DIGITS OF OE NUMBER FOR TYPE "G"
CU0102	01, 02	0001, 0002
CU0304	03, 04	0003, 0004
CU0506	05, 06	0005, 0006
CU0708	07, 08	0007, 0008
.	.	.
.	.	.
.	.	.
CU9394	93, 94	0093, 0094
CU9596	95, 96	0095, 0096

NOTE: "SF1" applies to 5E9(1) and "DFXS" applies to 5E9(2) and later; both indicate Dual FX Plugs.

If "G" or "M" is entered, then the SM, IDCU, and RT values of the NUMBER field must be defined on an RTERM form; and if the "TR008" is entered in the RT INTERFACE field on the RTERM form, then the GEN or MEN LINE NO values must be assigned to an appropriate IDCU DIGRP with its STATUS set to "O" for operational.The following values must correspond.

LAST DIGITS OF OE NUMBER FOR TYPE "M"	LAST DIGITS OF OE NUMBER FOR TYPE "G"	DIGRP	DIGRP STATUS
01-24	0001-0024	A	EQSTATA = "O"
25-48	0025-0048	B	EQSTATB = "O"
49-72	0049-0072	C	EQSTATC = "O"
73-96	0073-0096	D	EQSTATD = "O"

If "G" or "M" is entered, and the MLHG is assigned to IDCU equipment defined on the RTERM form with

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"TR008" entered in the RT INTERFACE field and a Channel Unit Type set to "SP" or "FXSLS", then the value of the GST (Ground Start) field on this form must be "N".

If "G" or "M" is entered and "TR008" is entered in the RT INTERFACE field on the corresponding RTERM form, the MLHG must have the proper RTERM Channel Unit to LCC-Service Class correspondence. The LCC/RAX combination assigned on the MLHLN form must be defined on the LCC form with an associated CLASS OF SERVICE that matches the CUXX/YY type on the corresponding RTERM form. Refer to the following Table for the required correspondence:

LCC TO RTERM CORRESPONDENCE

LCC CLASS OF SERVICE	RTERM CU XX/YY
4PFS, 4PSS, 8PSS	MP, SSV00, SSV10
5PTY	FSR, SSV00, SSV10
B911	SP, SPOTS , SSV00, SSV10
CHGCALL	SP, SPOTS, SSV00, SSV10
COIN	COIN, SSV00, SSV10
HOTMOTL	SPOTS, FXSLS, SSV00, SSV10 SF1 (5E9(1) only) DFXS (5E9(2) and later)
HOTPBX	FXS, FSR, SPOTS, SSV00, SSV10 SF1 (5E9(1) only) DFXS (5E9(2) and later)
INDIV	SP, MP, SPOTS, FSR, FXSLS, SSV00, SSV10 SF1 (5E9(1) only) DFXS (5E9(2) and later)
PBX	FXS, SPOTS, FSR, SSV00, SSV10 SF1 (5E9(1) only) DFXS (5E9(2) and later)
TWOPTY	SP, MP, SSV00, SSV10

- ***NOTE:*** SF1 applies to 5E9(1) and DFXS applies to 5E9(2) and later; both indicate Dual FX Plugs.

When MLHG are being associated with a Channel Unit type equal to "SF1", or "DFXS", and the CLASS OF SERVICE on the associated LCC form is "INDIV", the GST (Ground Start) on the MLHLN form must be "N".

S:
If "S" is entered and the MLHG is defined on the SLCCU form as being associated with a Channel Unit type equal to "FXSLS", the value of the GST (Ground Start) field on the MLHLN form must be "N".

For 5E7 and later, if "S" is entered, the MLHG is assignedto SLEN equipment and must have the proper SLC Channel Unit to LCC-Service Class correspondence. The LCC/RAX combination assigned on the MLHLN form must be defined on the LCC form with an associated CLASS OF SERVICE that matches the CU TYPE on the SLCCU input form. Refer to the following table for the required correspondence:

LCC TO SLCCU CORRESPONDENCE

LCC CLASS OF SERVICE	SLCCU CU TYPE
4PFS, 4PSS, 8PSS	MP, SSV00, SSV10
5PTY	FSR, SSV00, SSV10
ATND	FXS, SP, SPOTS, DFXS
B911	SP, SPOTS , SSV00, SSV10
CHGCALL	SP, SPOTS, SSV00, SSV10
COIN	COIN, SSV00, SSV10
HOTMOTL	SPOTS, FXSLS, SSV00, SSV10, DFXS
HOTPBX	FXS, FSR, SPOTS, SSV00, SSV10, DFXS
INDIV	COIN, SP, MP, SPOTS, FSR, FXSLS, SSV00, SSV10 , DFXS
PBX	COIN, FXS, SPOTS, FSR, SSV00, SSV10, DFXS
TWOPTY	SP, MP, SSV00, SSV10

For 5E8 and later, if "S" is entered,and COIN is defined on the corresponding SLCCU form (5107 Record), and, in addition, either "INDIV" or "PBX" is entered in the CLASS OF SERVICE field on the corresponding LCC form, then this Channel Unit Type/CLASS OF SERVICE combination requires CLSS set to "Y" on this form.

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For 5E9(1) and later, if "S" is entered and "DFXS" is entered as a CU TYPE on the corresponding SLCCU form, and in addition, the CLASS OF SERVICE on the associated LCC form is "INDIV", then GST (Ground Start) on this form must be "N".

E:
If "E" is entered, the associated NUMBER must be specified in the AIU format and TYPE on the EQAIUP form (5746 Record) must be "AIZLP" or "AICLP".

N or O:

For 5E13 and later, if "N" is entered, the OE NUMBER must be defined on the EQVT form, VT EQSTAT and DS1S EQSTAT must be "O" and APPLICATION TYPE must be "TRUNK". The associated EQVT form may be found by matching OE NUMBER[1,3] with EQVT SM, OE NUMBER[4] with EQVT DNUS, OE NUMBER[5] with EQVT DATA GROUP, OE NUMBER[6] with EQVT STE, OE NUMBER[7] with EQVT STS, OE NUMBER[8] with EQVT VT GROUP, and OE NUMBER[9] with EQVT VT MEMBER.

2.8 NUMBER

Description: Enter the OE NUMBER.

Software Release: 5E3 and later
Valid Entries: If OE TYPE is "L", the NUMBER field is the Line Equipment Number and consists of:

OE NUMBER, TYPE L

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7
		XXX	000 - 042 (5E9(2) and later)
Concentrator	CONC	X	0 - 9
Switch Group	SWG	X	0 - 1
Switch	SW	X	0 - 7
Level	LEV	X	0 - 3

If OE TYPE is "S", this is SLC-96 Equipment Number and consists of:

OE NUMBER, TYPE S

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Carrier Line Unit	DCLU	X	0 - 7
		XX	0 - 15 (5E15 and later)
Remote Terminal	RT	XX	1 - 32
Line	LINE	XX	1 - 96

For the 5E3 Software Release, the valid range for RT is 1 to 6.

Additionally, the RT value defined on the MLHLN form must correspond to an RT assigned on the SLCRT form.

If OE TYPE is "D", this is the 4-wire Digital Equipment Number.

OE NUMBER, TYPE D
Software Release: 5E5 and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Line Trunk Unit	DLTU	X	0 - 5
		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	1 - 10
Digital Channel	DCHAN	XX	1 - 48

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If OE TYPE is "N", this is the 4-wire Line on DNU-S. The DNU-S Networking Equipment Number consists of:

OE NUMBER, TYPE N (5E12 and earlier)			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Digital Networking Unit - SONET	DNU-S	X	0 - 7
Data Group	DG	X	0 - 1
Synchronus Transport Signal	STS	X	0 - 5
Virtual Tributary	VT	XX	01 - 28
Digital Signal Level 0	DS0	XX	01 - 24

When the DCHAN entered is greater than 24, the FAC IND on the EQDUP form must be 3.

OE NUMBER, TYPE N (5E13 and later)			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Digital Networking Unit - SONET	DNU-S	X	0 - 7
Data Group	DG	X	0 - 1
SONET Equipment Termination	STE	X	1 - 6
Synchronus Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1 - 7
Virtual Tributary Member	VTM	X	1 - 4
Digital Signal Level 0	DS0	XX	01 - 24

If OE TYPE is "T", this 4-wire analog Trunk Equipment Number consists of:

OE NUMBER, TYPE T Software Release: 5E5 and later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Trunk Unit	TU	XX	0 - 7
Service Group	SVG	X	0 - 1
Pack	PACK	X	0 - 7
Circuit	CKT	X	0 - 3

If OE TYPE is "C", this ISLU Line Card Equipment Number consists of:

OE NUMBER, TYPE C Software Release: 5E5 and later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7
Line Group Controller	LGC	XX	00 - 15
Line Card	LC	XX	00 - 31

For a Modem Pool member, the modem and terminal adaptor must be on the same SM. Therefore, the SM entered in this field, which is for the analog port for a modem, must be the same as the SM entered in the LCEN field, which is for the digital port for the terminal adaptor mate, on the DSMLHLN form.

If OE TYPE is "M", this IDCU Equipment Number consists of:

OE NUMBER, TYPE M Software Release: 5E8 - 5E9(2)			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	001 - 192
Integrated Digital Carrier Unit	IDCU	X	0 - 7

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Remote Terminal	RT	XX	01 - 31
Line	LINE	XX	01 - 99

If OE TYPE is "G", this IDCU Equipment Number consists of:

OE NUMBER, TYPE G Software Release: 5E9(2) and earlier			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	001 - 192
Integrated Digital Carrier Line Unit	IDCU	X	0 - 7
Remote Terminal	RT	XX	1 - 31
Line	LINE	XXXX	0001 - 2048

OE NUMBER, TYPE G Software Release: 5E10 and Later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	001 - 192
Integrated Digital Carrier Line Unit	IDCU	XX	00 - 42
Remote Terminal	RT	XX	1 - 31
Line	LINE	XXXX	0001 - 2048

If OE TYPE is "E", this AIU Equipment Number consists of:

OE NUMBER, TYPE E Software Release: 5E11 and Later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Unit Number	AIU	XXX	000 - 042
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 31
			Coin 00 - 15

For 5E12 and later:

If OE is "A", the INEN Equipment Number consists of:

TR303 on DNU-S, Type A Software Release: 5E12 and Later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Unit Number	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	LINE	XXXX	0001-2048

For 5E16 and later:

When OE is "O", the OIUEN Equipment Number consists of:

OE NUMBER, TYPE "O" - (5E16 amnd later)			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
Protection Group	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

When OE TYPE is "D", "N", "O", or "T", MFRI, FGA, BUSY MONITOR, and ANI7 must be "N" on this form; SERHLN, ATT MLHG, and RBV TGN must be blank.

When OE TYPE is "D", "N", "O", or "T", PTY must be "I".

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2.9 TN

Description: A unique Telephone MLHG/Terminal Number
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9
- and X is 0 - 9

Data Rules:

If the MLHG's HUNT TYPE, defined on the MLHGFD form (5604 Record), is "REG" for regular, or "HTC" for Circle Hunt, then the TN field is a required entry for Terminal Number 1 and must equal the entry in LISTED TN on the MLHG form.

Non-Hunt Terminals including Outdial Terminals may or may not have a TN. If no TN is assigned, it is not possible to terminate to this member.

If the member is the modem component of a Modem Pool member (as opposed to the terminal adaptor component), then this is a non-hunt number. This non-hunt number is used solely for Terminal Maintenance on Modem Pool members.

The TN field must be entered and must also be defined on the TLWS form as LOCAL TALK & MONITOR LINE, if MLHLN form entry has an LCC/RAX combination that appears on the LCC form with a Service Class value of "CALLBK" for 5E6 or "LTPCLBCK" for 5E7 and later.

2.10 PTY

Description: A party value that determines the ringing frequency of the customer's telephone. The MFR (Multi-Frequency Ringing) feature allows MLHG members to maintain a Class Of Service of "INDIV", "PBX" or "HOTPBX".

Required Field.
Default: I
Valid Entries:

Valid PTY Entries

Entry	Definition
T	Tip
R	Ring
I	Individual Line (non-MFR)
0 - 9	Individual MFR line (MRFI must be "Y")

Data Rules:

With 5E3 and later, if the CLASS OF SERVICE on the LCC form is "4WINDIV", then the PTY value must be "I". PTY also must be "I" if OETYPE is "D", "N" or "T".

For 5E10 and later, if PTY is blank, PSLIM must be "Y".

2.11 MFRI

Description: Multi-Frequency Ringing-Individual provides varied ringing frequency over five frequencies and three frequency classes, allowing for either bridged or divided ringing. See Figure 2.
Default: N
Valid Entries: Y, N

Data Rules:

An entry of "Y" is required for MFR type lines. When MFRI is "Y", then PTY must equal a value of 0 - 9

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corresponding to the correct frequency ringing; and OE TYPE must be "C", "S", or "L".

When MFRI is "Y" and OE TYPE is "G", PTY must be 1 through 5.

When MFRI is "Y" and OE TYPE is "S", PTY value must be between 1 and 4.

Also, all analog lines with MFRI equal to "Y" must have a CLASS OF SERVICE of "INDIV", "PBX" or "HOTPBX" on the LCC form. However, all SLC-96 lines (OE TYPE is "S") with MFRI equal to "Y" must have a CLASS OF SERVICE of "INDIV", only. Furthermore, SLC-96 lines should not be assigned tip-side MFR party values (PTY must be 1 - 4, only).

For 5E10, when MFRI is "Y", OE Type must be "C", "L", "S", "M" or "G".

For 5E11, when MFRI is "Y", OE TYPE must be "C", "E", "G", "L" or "S".

For 5E12 and later, when MFRI is "Y", OE TYPE must be "A", "C", "E", "G", "L" or "S".

For 5E10 and later, when Multiline Hunt Group Terminal(s) on the MLHLN form have the MFRI field set to "Y" which identifies an MFR type of line, all MFR lines must have a NUMBER on the MLHLN form, where OE TYPE is equal to "A", "C", "G", "L" or "S", as defined on the Switching Module with MFR Frequency Class equal to "HAR", "DEC" or "SYN" on the IMINFO Record.

2.12 CIDIAL

Description: The Carrier Interconnect Dialing Permissions.
Default: ALLOW
Valid Entries:

Valid CIDIAL Entries

Entry	Definition
ALLOW	The customer can dial an FGD CAC (Carrier Access Code) or use a PIC (Pre-subscribed InterLATA Carrier) Identification Number, if one is assigned, for Carrier Interconnect calls.
DENY	The customer cannot dial an FGD CAC. To make CI calls, the line must be assigned a PIC.
REQ	The customer must dial an FGD CAC for Carrier Interconnect calls.
TALLOW	Same as "ALLOW", but used for a CI test line only.
TDENY	Same as "DENY", but used for a CI test line only.
TREQ	Same as "REQ", but used for CI test lines only.

Data Rules:

This entry is valid only for ENTYPE of "LEN" or "SLC" and with 5E3 and later, with OE TYPE of "L" or "S". When this field is blank, the CIDIAL entry automatically assigns the ALLOW value.

For 5E9(1) and later, if "REQ" or "TREQ" are entered, then PTC must not be entered.

2.13 PIC

Description: The Pre-subscribed InterLATA Carrier Identification Number.
Valid Entries:

- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

When CIDIAL is "REQ" or "TREQ" (lines that require an FGD CAC), leave this field blank. When CIDIAL is "DENY" or "TDENY" (lines that prohibit an FGD CAC), PIC is a required entry.

For 5E8 and later, PIC must equal CARRIER ID on an ICF form, with the ICF form's FEAT GRP equal to "D".

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2.14 PTC

Description: Enter the PTC (Presubscribed IntraLATA Toll Carrier) identification number. The PTC field was added to support the ICLATA (InterLATA Carrier's IntraLATA) Secured Feature. For more information on the ICLATA feature, see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 9999 or leave blank

Data Rules:

When the PTC field is used, an SFSYS form must exist with the ACT field for SFID 149 field set to "Y".

2.15 PLC

Description: Enter the PLC (Presubscribed Local Carrier) code. The PLC field supports the Alternate Local Service Provider Routing feature. For more information on the Alternate Local Service Provider Routing feature, see Division 2, Section 4A269.

Software Release: 5E12 and later.
Valid Entries: Blank, or 0 - 9999.

Data Rules:

The PLC field on the MLHLN form must be defined as CARRIER ID on the ICF form with FEAT GRP equal to "D" .

2.16 UNBUNDLED

Description: Has this line been unbundled from the LEC?
Software Release: 5E12 and later
Default Value: N
Valid Entries: Y, N

Data Rules:

If UNBUNDLED is "Y", then PLC must be entered.

ORIGINATION FEATURES

The following fields (Section 2.17 - Section 2.28) determine the Origination Features and options associated with an MLHG TN.

2.17 TTC

Description: Touch-Tone requirements.
Default: N
Valid Entries: Y, N

2.18 BRCS

Description: Are specific Business and Residence Custom Services assigned to this line?
Default: N
Valid Entries: Y, N

Data Rules:

An entry of "Y" is required if the MLHG/TERM or TN is assigned one or more BRCS on the MLHLNFA

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form.

The assigned features are given unique Feature Names on the MLHLNFA form (5113 Record).

For 5E6 -5E8, if this line is dedicated to ASP (Advanced Services Platform; previously PVN, Private Virtual Network) via the default ASP DAS by having DIGIT ANALYSIS SELECTOR on the LCC form (5306 Record) equal to PVN DAS on the OFCOPT form (5509 Record), then BRCS must be "N". If the line is dedicated to ASP via a virtual ASP DAS by having DIGIT ANALYSIS SELECTOR on the LCC form equal to a DAS whose functionality is similar to PVN DAS on the OFCOPT form, then BRCS should be "N". See the ASP DIALING PLAN section of the ASP Feature Description (Division 2, Sections 4A51 and 4A126) for further details on the dangers of assigning BRCS features to lines dedicated to ASP services.

2.19 EL

Description: Will Essential Service Protection be assigned to a LEN or SLEN? This option is part of the Overload Control Capability. Essential Service Protection provides origination priority when the office is in an overload state and the Overload Control Program is activated. Essential Service can be provided for TNs assigned to a LEN, SLEN, or (R)ISLU-Z card designated as Essential.

No special dedicated equipment arrangement is required for SLC-96 (SLENs) or (R)ISLU-Z lines. Lines assigned to LENs have specific dedicated equipment arrangements to prevent blocking when lines assigned essential service attempt to originate calls.

It is recommended that at most one line requiring Essential Service be assigned to LEV 0-3 for a given SM, LU, CONC, SWG, and SW.

If this recommendation is not used, blocking could occur when lines assigned Essential Service attempt to originate. Refer to section Section 1.6 .
Valid Entries: Y, N

2.20 FLS

Description: Will free terminating service be activated?
Default: N
Valid Entries: Y, N

2.21 SUSO

Description: Will Deny or Suspend Originating Service be activated?
Default: N
Valid Entries: Y, N

Data Rules:

If CLASS OF SERVICE on the associated LCC form is "B911", SUSO must be "Y".

If CLASS OF SERVICE is "2PTY" or "TWOPTY" on the associated LCC form (5306 Record), and 2 PARTY ANI is "N" on the associated IMINFO form (5510 Record), then SUSO must be "N"."N" must be entered in this field if "N" is entered in the 2 PARTY ANI field on the associated IMINFO form, and either "2PTY" or "TWOPTY" is entered in the CLASS OF SERVICE field on the associated LCC form.

2.22 DNY ROH

Description: Will Deny Receiver Off-Hook tone be activated?
Default: N
Valid Entries: Y, N

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2.23 PALIT

Description: Will Automatic Line Insulation Testing be prohibited? An entry of "N" indicates that testing is allowed).
Default: N Valid Entries: Y, N

Data Rules:

PALIT can be "Y" or "N" if the MLHG/TERM is defined on an MLHLN form with a CLASS OF SERVICE of "INDIV" defined on an LCC form. PALIT must be "Y" for any other CLASS OF SERVICE.

- **WARNING:** If the line is associated with a universal SLC, even though the CLASS OF SERVICE is "INDIV", PALIT must be be "Y". Disregarding this warning may result in damage to the SLC Central Office Terminal and inaccurate test results.

For 5E7 and later, if "N" is entered (Automatic Line Insulation Test is allowed), then "INDIV", "PBX", "HOTMOTL", "HOTPBX" or "ATND" must be entered in the CLASS OF SERVICE field on the LCC form with an associated LCC/RAX combination.

2.24 PSLIM

Description: Should Subscriber Line and Instrument Measurement testing be prohibited?

This field supports the Trunk Line Workstation Metallic Test Capability feature. See Division 2, Section 4A230.

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

Data Rules:

If PSLIM is "N", the LCC/RAX combination and CLASS OF SERVICE on the LCC form must be "INDIV", "PBX", "HOTMOTL", "HOTPBX" or "ATND".

If RT INTERFACE is set to "TR008" and FTTH ENABLED is set to "Y" on the RTERM form, PSLIM must be "Y".

If OE is not entered, PSLIM must be "Y".

2.25 COMPL

Description: Will Complaint Observing be activated? COMPL is used for customers who question their message-rate bills. After the office is cut over, COMPL is set by Recent Change. This feature is initialized by ODA. When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this Multi-Line Hunt line. The only exception is when the call encounters a Charge Index defined with an AMA Call Type of "FREE".

The only difference between this field and the other line type study indicators is the designation set in the AMA record.
Default: N
Valid Entries: Y, N

2.26 SLUS

Description: Will Subscriber Line Usage be activated? After the office is cut over, SLUS is set by Recent Change. This feature is initialized by ODA.

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When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this Multi-Line Hunt line. The only exception is when the call encounters a Charge Index defined with an AMA Call Type of "FREE".

The only difference between this field and the other line type study indicators is the designation set in the AMA record.
Default: N
Valid Entries: Y, N

2.27 DTLBILL

Description: Will Optional Detail Bill be activated? After the office is cut over, OPT DET BILL is set by Recent Change. This feature is initialized by ODA.

When "Y" is entered, a detailed AMA record is generated on all originating answered and unanswered calls from this Multi-Line Hunt line. The only exception is when the call encounters a Charge Index defined with an AMA Call Type of "FREE".

The only difference between this field and the other line type study indicators is the designation set in the AMA record.
Default: N
Valid Entries: Y, N

2.28 TRAFFIC

Description: Will Traffic Study be activated? TRAFFIC is used typically for coin lines. TRAFFIC is initialized by ODA. After the office is cut over, TRAFFIC is set by Recent Change.

When "Y" is entered, a detailed AMA is generated on all originating answered and unanswered calls from this Multi-Line Hunt line. The only exception is when the call encounters a Charge Index defined with an AMA Call Type of "FREE".

The only difference between this field and the other line type study indicators is the designation set in the AMA record.
Default: N

Valid Entries Y, N

TERMINATING FEATURES

The following fields (Section 2.29 - Section 2.31) determine the Terminating Features and options associated with an MLHG TN.

2.29 ICP

Description: Will Intercept be activated? This field is required for routing terminating calls to Regular Intercept. If ICP is "Y", the MLHG/Terminal Number must be associated with a unique telephone number in the TN field. All calls terminating to this TN are rerouted to Regular Intercept.
Default: N
Valid Entries: Y, N

Data Rules:

A "Y" in this field requires an entry in fields RAX and LCC. ICP may be "Y" in two cases: either with an equipment assignment or without. If it is desired to route terminating calls to Regular Intercept and still maintain the equipment assignment, then the MLHG/TERM is translated with an appropriate ENTYPE of LEN or SLC with the 5E2 Software Release or with an OE TYPE of "L" or "S" with 5E3 and later. If

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equipment is not to be assigned to this terminal, then enter "ICP" in ENTYPE.

2.30 DNY BV

Description: Will Deny Busy Verification be activated?
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "Y" if the TN defined on this form has an associated CLASS OF SERVICE of "MODEM" on an LCC form.

2.31 NONHUNT

Description: Is this terminal a Non-Hunt Terminal? Non-hunt allows a line in an MLHG to receive direct calls that do not hunt if the called line is busy.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Non-hunt TNs may be assigned to terminals within an MLHG with the following guidelines:

- Any terminal may be assigned a non-hunting TN.
- A non-hunting TN may be assigned the series completion feature.

Non-hunt TNs interact with the group features in the following ways.

- The group CFV (Call Forwarding Variable) has no effect on the non-hunt TN. If CFV is active for the group, calls to the non-hunt TN are not forwarded as a result of the group CFV.
- The group and member make-busy keys have no effect on the non-hunt TN. If the make-busy keys are operated, calls can still complete to the non-hunt TN.

If NONHUNT is "Y", then the associated TERMINATING TREATMENT on the LCC form must be "MLHG" or "INWATS". All non-outdial terminals with this field set to "Y" must have a TN entered. All outdial terminals must have this field set to "Y".

If NONHUNT is "Y", then the MLHG FEATURE on the MLHG form must be defined on an MLHGFD form with HUNT TYPE equal to "HTC", "UCD", "REG" or "PMHG".

EQUIPMENT

The following fields (Section 2.33 - Section 2.37) refer to equipment types and options used for lines assigned to an MLHG.

2.32 TRC

Description: Description: Will Call Tracing be activated? TRC is initialized by ODA. After the office is cut over, TRC is set by Recent Change.
Default: N

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Valid Entries: Y, N

2.33 GST

Description: Is this a Ground-Start line? Refer to 1.5 under the GENERAL section of this form for more information on Ground-Start lines.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E7 and later, if MLHGs and TERMs on the MLHLN form have a matching LCC/RAX combination on an LCC form, and the associated LCC form has a CLASS OF SERVICE of "MODEM", then "N" must be entered in the GST field.

2.34 TST LINE

Description: Will a LEN, SLEN, DEN, TEN or LCEN be put into service during the Pre-Cutover mode? Refer to the IMINFO form (5510 Record) and the COTH form (5513 Record) for Pre- and Post-Cutover status of all TNs in the office. This would be an exception to a group of lines in an SM that has been set to a Pre-Cutover status equal to INACTIVE. This is normally done for test lines - not a live customer.
Default: N
Valid Entries: Y, N

2.35 GNDREF

Description: Is this LEN associated with FX line,Pair Gain, T-carrier or certain Range extended lines? Some common circuits requiring a "Y" option are listed here for convenience. A comprehensive list of affected equipment can be found in the 5ESS Switch Technical Specification 235-900-101.

- Pair Gain lines that are connected to Universal (nonintegrated) SLC-96 with FXO Channel Units for 2-Wire Foreign Exchange Office service (2FX0-SD-3C326 Loop or Ground Start).
- T-Carrier with FX0 Channel Units (SD-3C326, SD-3C126 Loop or Ground Start).

Software Release: 5E3 and later
Default: N
Valid Entries: Y, N

Data Rules:

If GNDREF is "Y", OE TYPE must be "C" or "L".

2.36 RANGEX

Description: Is this line Range Extended from a Central Office? Range Extended lines are those LENs that are connected to an external Range Extension device such as MFT J99343AC, J99343AJ or Larraine CEF6, or equivalent located outside the Central Office.

For hardware requirements, refer to the Interface/Compatibility Guide (235-700-100).

Required Field.
Default:

For 5E9(1) and earlier: N
- For 5E9(2) and later: NONE

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Valid Entries:
- For 5E9(1) and earlier: Y, N
- For 5E9(2) and later: See table below.

Valid Entries:

Valid RANGEX Entries

Entry	Definition
EXT	Externally provided range extension
INT	Internally provided range extension (LU4 only)
NONE	No range extension
PBX	PBX/short loop range extension value (LU4 only)

Data Rules:

For 5E9(1) and earlier, if RANGEX is "Y", OE TYPE must be "C" or "L".

For 5E9(2) and later:

If "EXT" is entered, OE TYPE must be "C" or "L".

If "INT" or "PBX" is entered:

- OE TYPE must be "L",
- LINE UNIT TYPE on the EQLUP form (5711 Record) must be "4AN1" for LU4.

2.37 LNEQ

Description: Line Equip Class to inhibit Fabric Exerciser.

Software Release: 5E3 and later
Default: N
Valid Entries: N (Normal), I (Incompatible)

Data Rules:

LNEQ values other than N require an OE Number of "C" or "L".

MISCELLANEOUS FEATURES

The following fields (Section 2.38 - Section 2.39) include other features and options available to MLHG TNs. These features are continued under MISCELLANEOUS FEATURES Continued in the explanations for Record 5111-2.

2.38 SERHLN

Description: A TN associated with an MLHG Terminal which is part of a Series Completion Group to be hunted to. This TN must be defined on a LINE, MLHG or another MLHLN form.

NOTE: Series Completion hunts linked-list DNs until an idle line is found, or 16 Series Completion attempts have been made.

Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9
- and X is 0 - 9

Data Rules:

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If this field is entered, the TN field must be entered and NONHUNT must be "Y". If this field completes to a TN on an MLHG or another MLHLN form, then the associated MLHGFD form must have INWATS equal to "N".

The associated CLASS OF SERVICE on the LCC form must not be "INDIV". The TN field must be defined.

For 5E3 and later, if the associated CLASS OF SERVICE on the LCC from is "4WINDIV" or "MODEM", then this field must be blank.

For 5E6 - 5E8, a line dedicated to ASP services should not be entered as part of a Series Completion Group. When SERHLN is entered and PVN ALW is set to "Y", the DIGIT ANALYSIS SELECTOR on the corresponding LCC form (5306 Record) cannot be equal to PVN DAS on the OFCOPT form (5509)and should not be equal to a DAS equivalent in functionality to the PVN DAS (i.e., a virtual ASP DAS).

With 5E6 and later, the Series Completion feature supports BRI lines for CSV (Circuit-Switched Voice) calls. When SERHLN is entered, NONHUNT must be "Y" and TN must be entered. The TN field cannot be the same as SERHLN. The ICP field must be "N".

For 5E7 and later:

A maximum of 512 TNs can Series Complete to a single TN defined in SERHLN on the input forms of LINE, MLHLN, DSLUSR or SHTN.

If this field is entered, and SERHLN is defined as a TN on another MLHLN or LINE form, then the corresponding LCC form for SERHLN must have a CLASS OF SERVICE equal to

- "2PTY"
- "4PSS"
- "4PFS"
- "5PTY"
- "8PSS"
- "10PTY"
- "ATND"
- "B911"
- "HOTMOTL"
- "HOTPBX"
- "INDIV"
- "PBX"
- "TWOPTY"

and TERMINATING TREATMENT must NOT be "AGING".

If SERHLN is entered, a corresponding LCC input form must have TERMINATING TREATMENT set to "INWATS" or "MLHG" and CLASS OF SERVICE must not be set to "MODEM" or "CALLBK".

For 5E8 only, the SERHLN cannot be a Standard BRI line, an analog line shared to a Standard BRI, or a Secondary Only TN associated with a Standard BRI. That is, the SERHLN may not be defined as a CKT TN or CKT SWITCHING MLHG TN on a DSLUSR form when DSL CLS is "STD" on the corresponding DSL form. It may not be defined as a TN on a LINE or MLHLN form if the TN or MLHG is a key on an SHTN form, and a shared list entry on that form is defined on a DSLUSR form with DSL CLS "STD" on the corresponding DSL form. It may not be defined as a Secondary Only key TN on an SHTN form where any shared list entry is defined on a DSLUSR form with DSL CLS "STD" on the corresponding DSL form.

For 5E8 and later, if SERHLN is entered, one of the following conditions must be satisfied:

1. The SERHLN assigned on MLHLN form must have "N" entered in ICP, and the LCC/RAX must match LCC/RAX on LCC form with a TERMINATING TREATMENT of "INWATS" or "MLHG".

2. The SERHLN matches a CKTTN on DSLUSR form with ICP set to "N".

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3. The SERHLN matches a CKT MLHG TN on DSLUSR with ICP set to "N".

4. The SERHLN must be defined on LINE (as TN) with ICP set to "N" and the LCC/RAX must match LCC/RAX on LCC form with a TERMINATING TREATMENT set to "INWATS", "PARTY", "RI", or "INDIV".

5. The SERHLN matches an STN on SHTN form where the SMLHG/SMEMB is not entered and STN does not match the TN in ROW 1 of the SHARED LIST, with ICP = "N".

6. The SERHLN matches a STN on SHTN form where SMLHG/SMEMB is entered, SMLHG/SMEMB does not match the SMLHG/SMEMB in the first rose of the SHARED LIST, and with ICP set "N".

7. The SERHLN assigned on MLHLN form must be defined on the LINE, MLHLN, DSLUSR, SHTN forms or as LISTED TN on MLHG form.

2.39 ALT BILL TN

Description: An Alternate Bill-To Telephone Number used when billing is charged to another line.
Valid Entries: A 7-digit number if calls are to be billed to an alternate number within the local office; a 10-digit number if calls are to be billed to an alternate number outside the local 5ESS office, or a 7-digit 0/1XX-XXXX number for OUTWATS billing purposes.

The TN entered must be in one of the following formats:

Valid ALT BILL TN Entries

Entry	Definition
NXXXXXX	Where NXX is a valid Office Code defined on a NOC input form.
NPANXXXXXX	Any 10-digit number is accepted. Normal expected values are valid NPA and NXX codes.
ZXXXXXX	Where Z is 0 or 1; this identifies the Alternate Billing Number being used for OUTWATS billing purposes. An HNPA is allowed when used for AMA or ANAC purposes.

Data Rules:

If the ALT BILL TN is blank, then a 10-digit Billing Number is built automatically based on the following input conditions:

- If the MLHLN TN field is submitted with a local 7-digit Telephone Number, this optional TN plus its associated NPA is stored at the Billing Number for the MLHG Terminal Number.

- If the optional MLHLN TN field is also blank for this MLHG Terminal Number, the MLHG's HUNT TYPE (defined on the corresponding MLHGFD form), the LISTED TN of the MLHG and MUPH SUBTNs from the MLHG form and the Terminal Number of this MLHG determine the Billing Number.

Case 1 The MLHG's HUNT TYPE from the corresponding MLHGFD form equals "REG" or "HTC". The Billing Number that is stored in memory corresponds to the MLHLN TN value assigned to the (main member) lead terminal of this MLHG. The associated NPA is added on to form a 10-digit number. Note that Lead Terminal Number 1 is required to have the optional TN assigned for "REG" and "HTC" HUNT TYPEs.

Case 2 The MLHG's HUNT TYPE from the corresponding MLHGFD form equals "MUPH" and one or more of the six optional SUBTNx entries are submitted on the associated MLHG form. The Billing Number for the MLHG Terminal Number is constructed from the appropriate SUBTNx (x is 1 - 6) 7-digit TN with added NPA value. The appropriate SUBTNx entry is found from the MUPH Position/Terminal Number/SUBTN value correspondence table described in the MLHG form description. Each of the 511 MUPH Terminal Numbers is associated with a particular SUBTNx value (x is 1 - 6).

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Case 3 The MLHG's HUNT TYPE from the corresponding MLHGFD form equals "UCD" and the Terminal 1 (Main Terminal Number of Group) is being built. The Billing Number is constructed from the LISTED TN 7-digit value defined on the corresponding MLHG form plus the TNs NPA value.

Case 4 The MLHG's HUNT TYPE from the corresponding MLHGFD form equals "UCD" and the Terminal Number being built does not equal 1. The Billing Number constructed for this terminal is the same Billing Number that was constructed for Terminal 1 of the MLHG. (Note that this Billing Number uses the result from above Case 3 or the MLHLN TN is known value case, which ever applies to the Terminal Number 1.)

2.40 SUPPL

Description: An indication that supplementary information for the MLHG/TERM is contained on the 5111-2. This field applies only to the 5111-1 Office Record.

Valid SUPPL Entries

Entry	Definition
blank	There is no associated 5111-2 record entry.
2	One or more of the input items on the 5111-2 record is equal to a non-default value.

3. FORM ENTRIES - 5111-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the 6-character Base and Control number, Office Name and the MLHG number.

3.2 INDEX KEY

Description: The MLHG and Terminal Number for which supplementary information is required. Not required for ODA input.

Note: A corresponding 5111-1 Record is required.

MISCELLANEOUS FEATURES Continued

The following fields (Section 3.3 - Section 3.10) include other features and options available to MLHG TNs.

3.3 NO DIAL

Description: The type of NO DIAL Service used.

Valid NO DIAL Entries

Entry	Definition
N	No Dial Service does not apply.
MAN	Manual Line Service is normally a one-party line with manual operation for use of handicapped subscribers. Manual originating lines route the same as if they had dialed a 0- call. When NO DIAL is "MAN", a Call Forwarding feature (defined on a CFWFD form, 5614 Record) cannot be assigned to this line.
HOT	Hot Line or Direct Connection.

Data Rules:

If NO DIAL is "HOT" or "MAN", then SUSO (deny origination) must be "N".

For 5E6 - 5E8, if "HOT" is specified and PVN ALW is set to "N", then the input field HOT LINE TN is required.

For 5E6 - 5E8, when "HOT" is specified and PVN ALW is "Y", then this line is direct-connected to ASP services, so HOT LINE TN cannot be entered and the corresponding LCC form (5306 Record) must have a CLASS OF SERVICE of "INDIV" and a DIGIT ANALYSIS SELECTOR equal to PVN DAS on the

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OFCOPT form (5509 Record.

If a CFWFD form (5614 Record) has been assigned to this line, then on the CFWFD form, ACT TYPE must be set to "AUTO" and FWD COND cannot be set to "DBSY", "DIDL" or "DBTH".

3.4 HOT LINE TN

Description: These columns identify the TN to be terminated to for MLHG/TERM having Hot Line Service. Valid Entries: A 7-, 10-, or 11- or 15-digit Hot Line TN. 15 digits (0 - 9, *, #, F, O, I, P) can be entered when MLHG/TERM is assigned a BRCS Precedence and Preemption feature.

HOTLINE TN can be in one of the formats below or listed as a PP feature code followed by Intercom digit string.

CALL TYPE	PP FEATURE CODE	ROUTE	AREA CODE	SWITCH CENTER	LINE #
ROUTINE	X	(1X)	(NPA)	(NXX)	XXXX
PRE-CEDENCE	XP	(1X)	(NPA)	(NXX)	XXXX
PRE-CEDENCE	XP				XXXX

Note: P is any digit or F, O, I, P.

Data Rules:

For 5E6 - 5E8, this field must contain an entry when the NO DIAL field is "HOT" and PVN ALW is "N". This field cannot be entered when NO DIAL is "HOT" and PVN ALW is "N" or when NO DIAL is "N" or "MAN".

3.5 SM REROUTE

Description: Stand-Alone Reroute for MLHG Members. Stand-Alone is allowed on any SM type.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

An entry of "Y" is valid only when both of the following conditions apply:

- The MLHG is global, i.e., members of the MLHG have their associated equipment numbers (LEN, SLEN or LCENs) spread over two or more SMs.
- At least one of the SMs with MLHG Members must be defined on an EQIM form and the STAND ALONE field on the EQIM form must be "Y", if the REMOTE SITE field is "IM" or "HIM", or, if the REMOTE SITE field is "ORM", "TRM" or "RSM", the STAND ALONE PURCHASED? field must equal "Y" on the EQSITE form where the REMOTE SITE value equals the REMOTE SITE value on the EQIM form.

An entry of "Y" allows intramodule calls to MLHG members on the local module to be completed when the module loses the communication link with the host office and is in Stand-Alone mode. The call is rerouted to an available MLHG member assigned to the module in Stand-Alone. If this field is "Y", then a TN must be defined in the TN field.

Although members of an MLHG can be assigned across several SMs in the host and over multiple modules, calls reroute only to members of the MLHG that are assigned to the module which is in the Stand-Alone mode. See Figure 1.

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For 5E8 and later, if "Y" is entered then:

- ICP must be "N".
- a value of "INWATS" or "MLHG" must be entered in the TERMINATING TREATMENT field on the LCC form with the associated LCC/RAX combination.

For 5E10 and later, when Multiline Hunt Group Member(s) are defined on the MLHLN form with SM REROUTE equal to "Y", at least one other member of the MLHG must be assigned to an SM with the Stand-Alone Call Processing feature. The SM value of the associated NUMBER on the MLHLN form, where OE TYPE is equal to:

- "C"
- "E" (5E11 and later)
- "G"
- "L"

or

- "S"

must match an SM on the EQIM form where STAND ALONE is set to "Y" or where STAND ALONE PURCHASED is set to "Y" on the associated EQSITE form.

3.6 ANI7

Description: Is Automatic Number Identification 7 available on this line? ANI7 provides the ability to outpulse the ANI information digit 7 to a CAMA or TSPS operator before the billing DN. This enables the operator to do a data base lookup to see how the call should be handled.

Software Release: 5E2 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, if ANI7 is "Y", OE TYPE must be known.

3.7 TR303 NAILUP

Description: Is this line to be provisioned as a nailup for IDCU TR303 RT (Remote Terminals)?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then

- OE TYPE must be entered and must be "M" or "G" (RT lines).
- GST must be "N".
- PTY must be "I" or MFRI must be "Y".

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- the LCC/RAX combination assigned on the LINE/MLHLN form must NOT have a CLASS OF SERVICE of "COIN" on the corresponding LCC form.

If the CONTROLLING OE-types/numbers defined on the NAILUP input form with CONTROLLING OE-type equal to "A", or "G", and DDS equal to "Y" are associated with an RTERM form where RT INTERFACE is "TR303", then the corresponding MLHLN form must have the TR303 NAILUP field set to "Y".

Also, if the NON-CONTROLLING OE-types/numbers, defined on the NAILUP input form with NON-CONTROLLING OE-type equal to "A", or "G", and DDS equal to "Y" are associated with an RTERM form where RT INTERFACE is "TR303", then the corresponding MLHLN form must have the TR303 NAILUP field set to "Y".

3.8 BUSY MONITOR

Description: Can the TN entered for this MLHG can be monitored by the Busy Lamps of an ISDN Attendant MLHG?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E5 and later, if BUSY MONITOR is "Y", OE TYPE and ATT MLHG must be entered and the associated CLASS OF SERVICE on the LCC form must be "INDIV".

For the 5E4(2) Software Release, if BUSY MONITOR is "Y", a TN, OE TYPE and ISAT GRP must be entered and the associated CLASS OF SERVICE on the LCC form must be "INDIV".

BUSY MONITOR must be "N" for TERM number 1 of an MLHG.

An ISDN MLHG can busy monitor a Hundreds Group (TNs that share the first five digits) only if those TNs that can be busy monitored do not physically terminate to more than 12 processors (SMs and/or AM). Entering a LISTED TN on an MLHG form causes the AM to be counted as one of the processors.

The following TNs can be included in the Hundreds Group, if the BUSY MONITOR field on the form is set to "Y":

- a TN from a LINE form
- a TN from an MLHLN form
- a CKT TN from a DSL form
- a CKT TN from a DSMLHLN form
- a LISTED TN from an MLHG form
- a TN (key) from a SHTN form.

The following physical terminations can be included in the Processor count, if the BUSY MONITOR field on the form is set to "Y":

- the first three digits (SM) of the OE

  NUMBER from a LINE form

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- the first 3 digits (SM) of the OE NUMBER from an MLHLN form
- the first 3 digits (SM) of the LCEN from a DSL form
- the first 3 digits (SM) of the LCEN from a DSMLHLN form
- a LISTED TN from an MLHG form causes the AM to be counted
- the first TN in the SHARED LIST on a SHTN form has three possible cases:
  - if the TN matches the CKT TN on a DSL form, then the corresponding first 3 digits (SM) of the LCEN on that DSL form are counted;
  - if the TN matches the CKT TN on a DSMLHN form, then the corresponding first 3 digits (SM) of the LCEN on that DSMLHLN form are counted;
  - if the MLHG and TERM NBR match the CKT MLHG and CKT TERM on a DSMLHLN form, then the corresponding first 3 digits (SM) of the LCEN on that DSMLHLN form are counted.

3.9 ATT MLHG

Description: The Attendant MLHG that can control the terminal defined on this form.

Software Release: 5E5 and later
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

The ATT MLHG must have a CLASS OF SERVICE "ISATND" or "ATND" defined on the LCC form (5306 Record).

If this field is entered and TERM is 0001, the MLHG must be defined on an MLHG form with ATT MLHG equal to the ATT MLHG on this form.

For 5E7 and later, if ATT MLHG is entered and TERM is 0001 (Terminal 1 of this Multi-Line Hunt Group), the feature assigned on the corresponding MLHGFD form cannot have a HUNT TYPE of "HTC", "REG", or "PMHG".

For 5E8 and later, if ATT MLHG is entered, RBV TGN must not be entered.

3.10 RBV TGN

Description: Enter the number of the incoming trunk group used to Remote Busy Verify the TN (DN) of this form. This TGN allows an ISAT (ISDN Attendant) on another 5ESS Switch to Busy Verify this DN if the TGN is associated with a TN (DN).

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

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If RBV TGN is entered, ATT MLHG must not be entered, TN must be entered, and BUSY MONITOR must be "N".

If RBV TGN is entered, there must be a corresponding TKGRP form (5202 Record) with that TGN defined, and that TKGRP form must have TRKCLS set to "ATNDVFY", and TRK DIR must be "INC". Also, for the TGN on the TKGRP form, there must be at least one corresponding TRUNK form (5204 Record) with QTY entered.

If RBV TGN is entered, MLHG must equal MLHG on a corresponding MLHG form. That MLHG form must have MLHG FEATURE equal to FEATURE NAME on a corresponding MLHGFD form, which in turn must not have HUNT TYPE set to "MUPH", "ISAT", or "PSUCD".

If RBV TGN is entered and TERM is 0001 (Terminal 1 of this Multi-Line Hunt Group), the feature assigned on the MLHGFD form cannot have a HUNT TYPE of "HTC", "REG", or "PMHG".

BASIC 911 ESB

The following fields (Section 3.11 - Section 3.13) determine service capabilities for ESB (Emergency Service Bureau) and Basic 911. ESB lines must be marked as denied origination. ESB Attendants can transfer an incoming Basic 911 call to the proper agency via an ordinary POTS two-way line.

The ESB has forced disconnect on all Basic 911 calls and automatic forced hold capability for all Basic 911 call originated from local individual, coin, 2-party or multi-party sources.

The ESB can be set up as a single individual line, as Series Completion or as an MLHG with a minimum of two lines. The recommended ESB arrangement is MLHG with a single main Directory Number for the group.

3.11 RINGBACK

Description: BASIC 911 - ESB ringback capability. An ESB attendant can initiate ringback to a calling party who is in an on-hook or an off-hook condition by a flash (200 - 1100 milliseconds) on 911 calls originating from a local individual, coin, 2-party or multi-party line. This field can be set to "Y" only when the 911 ESB is located in and is served by the local 5ESS Switch.

Required Field.
Default: N
Valid Entries: Y, N

3.12 STATMON

Description: BASIC 911 - ESB Status Monitoring capability. The 5ESS sends calling line status indication to the ESB attendant via DC signaling and/or the presence or absence of low tone. Status is sent if the caller goes on-hook and is capable of being force held or if caller being forced held returns off-hook. This field can be "Y" only when the 911 ESB is located in and served is by the local 5ESS Switch.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y" then the associated Line Class Code - Service Class must be "B911".

3.13 TONDET

Description: Is the 911 ESB capable of detecting low tone? An entry of "Y" means that the 911 Service Bureau has a low tone decoder operating. TONDET should be "N" if the 911 Service Bureau cannot

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detect low tone.

Required Field.
Default: N
Valid Entries: Y, N

SCAN AND DISTRIBUTE POINTS

The following fields (Section 3.14 - Section 3.19) list the miscellaneous equipment numbers required to activate specialized features for MLHG lines.

3.14 MESG REGISTER

Description: A Message Register Distribute Point number associated with Hotel/Motel service.
Valid Entries: The Message Register Distribute Point Number consisting of

DISTRIBUTE POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Distribute Point Number	DPN	XX	00 - 31

Data Rules:

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.

Message Register lines cannot be Feature Group A.

3.15 SLEEVE LEAD CKT

Description: A Telephone Terminal Number that requires a Sleeve Lead, such as Hotel/Motel Registers, Remote and MLHG Overflow Registers.
Valid Entries: A Miscellaneous Equipment Number consisting of

DISTRIBUTE POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Distribute Point Number	DPN	XX	00 - 31

Data Rules:

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.

3.16 MAKE BUSY KEY

Description: A Telephone/Member Number that requires a Remote Make Busy Key assignment.
Valid Entries: A Miscellaneous Equipment Number consisting of

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SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

Data Rules:

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.

This field cannot be entered if the MLHG form has HUNT TYPE equal to "MUPH".

The individual TN is only allowed to have one TN associated with the Scan Point Number, although the MLHG can have up to 32 terminals sharing one Scan Point Number for Make Busy Keys. Each Terminal is assigned to the same Scan Point Number for this application.

3.17 RND MKB

Description: This field is used to assign a scan point number to a Random Make Busy Key. When the scan point is toggled on, artificial busy will be applied to all terminals assigned to this scan point.
Valid Entries: A scan point equipment number consisting of the following:

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

Data Rules:

RND MKB can be entered only if OE TYPE and NUMBER are also entered.

RND MKB can be entered only if TERM is 1 - 2015 (not on an Outdial terminal).

This field cannot be entered if the MLHG form has HUNT TYPE equal "MUPH".

3.18 STOP HUNT KEY

Description: Circuit designation for a Stop Hunt Key.
Valid Entries: A Miscellaneous Equipment Number consisting of

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

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Data Rules:

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.

This field cannot be entered if the MLHG form has HUNT TYPE equal to "MUPH".

3.19 DC MKB

Description: Should this analog Multiline Hunt Group member have dial codes for Make Busy? This DC MKB (Dial Code Make Busy) field indicates whether or not this analog Multiline Hunt Group member can have dial codes to enable Make Busy. This field supports the Dial Code Terminal Make Busy for MLHGs feature. For more information on this feature, see Division 2, Section 4A555.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When DC MKB is "Y":

- RND MKB must not be entered.
- STOP HUNT KEY must not be entered.
- SHARED must be "N".
- MAKE BUSY KEY must not be entered.
- TERM must be from 1 - 2015.

For 5E15 and later:

- When DC MKB is entered on this form, the ACT field on the SFSYS form (5713-1 Record) for SFID (Secured Feature ID) 555 must be set to "Y". (For more detailed information on the Dial Code Terminal Make Busy for MLHGs feature, see Division 2, Section 4A555.)
- One of the following two conditions must exist:
  - When DC MKB is entered and TERM is "1", GROUP MAKE BUSY KEY on the MLHG form (5110 Record) must not be entered; or
  - When GROUP MAKE BUSY KEY is entered on the MLHG form (5110 Record), a corresponding MLHLN form (5111 Record) must exist with DC MKB set to "N" when TERM is "1".
- When DC MKB is set to "Y", TERM must have a HUNT TYPE of "HTC", "REG", or "UCD" on the MLHGFD form (5604 Record).

4. FORM ENTRIES - 5111-3 RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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4.2 INDEX KEY

These columns define the MLHG and Terminal Number for which supplementary information is required. Not required for ODA input.

SCAN AND DISTRIBUTE POINTS Continued

The following field lists the miscellaneous equipment numbers required to activate specialized features for MLHG lines.

4.3 CARRIER GRP ALM

Description: The Carrier Group Alarm Scan Point Number assigned to the carrier system of this line.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

Data Rules:

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.

Do not use a Carrier Group Alarm Scan Point for lines with a SLEN (Integrated SLC 96 Line Equipment Number).

All lines assigned to the same carrier system must share the same Scan Point Number which is defined on a CGASP form (5514 Record). For 5E9(1) and later, ACTION on the CGASP form must be "CON".

Refer to Division 8, Section 1 for procedures to obtain these assignments.

4.4 SHARED

Description: Is this terminal a primary Shared Terminal or does this terminal share a TN with one or more ISDN Lines or Terminals?

Software Release: 5E4(2) and later
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", the associated CLASS OF SERVICE on the LCC form must be "INDIV" and the SM that this Terminal terminates to must be defined on the EQIM form with "LOADED" entered in the CONFIGURATION field.

If this field is "Y", this Terminal must appear on a SHTN form (5902 Record) in the key TN field. If "N", this Terminal cannot appear on a SHTN form.

For 5E11 and later, if this field is "Y", then OE TYPE must be specified.

4.5 PRIVACY

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Description: Is all-call privacy in effect? All-call privacy allows the calling party to prevent TN information from being displayed to the called party for all calls. All-call privacy can be deactivated on a per-call basis by entering a "Y" in the TN PRIVACY field on the DISPFD form and assigning a dialed code.

For 5E6 and later, this field is optional. If this field is set to "Y", the presentation status of the calling number will be private. When this field is set to "N", the presentation status of the calling number is public. If the CPNP (Calling Party Number Presentation) feature has not been purchased (FID 50 on the SFSYS form (5713-1 Record) is not set to "S"), a blank PRIVACY field will default to "N". When the CPNP feature has been purchased (FID 50 on the SFSYS form (5713-1 Record)is set to "S"), a blank PRIVACY field will remain blank allowing the presentation status to be determined by either the PRIVACY field on the SCRIDXPA form (5543 Record) or the DN PRIVACY field on the OFCOPT form (5509 Record).

For 5E6 and later, the precedence for determination of call privacy is dependent on the purchase of the CPNP special feature. When the CPNP special feature has not been purchased, the precedence hierarchy is:

1. If DN PRIVACY on the OFCOPT form is "Y", the calling party number presentation status is private.
2. If DN PRIVACY on the OFCOPT form is "N", the calling party number presentation status is determined by the PRIVACY field on this form.

When the CPNP special feature has been purchased, the precedence hierarchy is:

1. If PRIVACY on this form has been entered, it is used to determine the calling party number presentation status.
2. If PRIVACY on this form has not been entered, but an SCRIDXPA form has been entered for the SCREENING INDEX assigned to the LCC form whose LCC and RAX are assigned to this form, then that SCRIDXPA form may be used. If PRIVACY on the SCRIDXPA form has been entered, then that value is used to determine the calling party number presentation status.
3. If PRIVACY on the SCRIDXPA form has not been entered, or no corresponding SCRIDXPA form was found, then DN PRIVACY on the OFCOPT form will be used to determine the calling party number presentation status.

Software Release: 5E4(2) and later
Default: N
Valid Entries: Y, N

4.6 OVRD DNY XFER

Description: This field was added to allow lines to override the Deny Call Transfer feature.

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

When OVRD DNY XFER is set to "Y", this indicates that this line is allowed to override denials during a call transfer.

When the OVRD DNY XFER field is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y".

LASS FEATURES

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The following fields (Section 4.7 - Section 4.10) determine if LASS (Local Area Signaling Service) features are activated for this line. LASS is described in detail in Division 2, Section 1Y. LASS features are available with 5E5 and later.

4.7 AC ALW

Description: Is the LASS Automatic Callback feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If this field is blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "ISATND", "ATND", "PBX", or "4WINDIV", then ODA assigns a "Y" in this field. Otherwise, a value of "N" is automatically assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "INDIV", "ISATND", "ISDN", "PBX" or "4WINDIV".

For 5E6 and later, if the MLHG/TERM is assigned a LASS Automatic Callback feature on the MLHLNFA, BFG, or associated CLUSTR form, AC ALW may NOT be "N".

4.8 AR ALW

Description: Is the LASS Automatic Recall feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "ISATND", "ATND", "PBX", or "4WINDIV", then ODA assigns a "Y" in this field. Otherwise, a value of "N" is automatically assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "INDIV", "ISATND", "ISDN", "PBX" or "4WINDIV".

For 5E6 and later, if the MLHG/TERM is assigned a LASS Automatic Recall feature on the MLHLNFA, BFG, or associated CLUSTR form, AR ALW may not be "N".

4.9 COT ALW

Description: Is the LASS Customer Originated Trace feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "ISATND", "ATND", "PBX", or "4WINDIV", then ODA assigns a "Y" in this field. Otherwise, a value of "N" is automatically assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "INDIV", "ISATND", "ISDN", "PBX" or "4WINDIV".

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For 5E6 and later, if the MLHG/TERM is assigned a LASS Customer Originated Trace feature on the MLHLNFA, BFG, or associated CLUSTR form, COT ALW may not be "N".

4.10 PCP ALW

Description: Is the LASS ICLID (Individual Calling Line Identification) Per-Call Privacy feature allowed on this line?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "ISATND", "ATND", "PBX", "4WINDIV", "B911", "CALLBK" for 5E6 or "LPTCLBK" for 5E7 and later, "SATSTLN", or "CHGCALL", then ODA assigns a "Y" in this field. Otherwise, a value of "N" is automatically assigned.

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be "ATND", "B911", "CALLBK" for 5E6 or "LPTCLBK" for 5E7 and later, "CHGCALL", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN" or "4WINDIV".

For 5E6 and later:
"Y" may be entered for the additional classes of service: "TWOPTY", "HOTMOTL", "COIN", or "2PTY".

When left blank, this field will be treated as having a value of "Y" for the following additional classes of service: "TWOPTY", "HOTMOTL", "COIN", or "2PTY".

PCP general availability may be allowed or denied via the LASSFA form (5973 Record) and the SCRIDXPA form (5543 Record).

If MLHG/TERMs on an MLHLN form or CKT MLHG/TERMs on a DSLUSR form have a PCP ALW value of "Y", the MLHG/TERM or CKT MLHG/TERM must also be defined on the MLHLN form or DSLUSR form with an LCC/RAX value that corresponds to one of the following CLASS OF SERVICEs on the LCC form (5306 Record): "ATND", "B911", "CALLBK" for 5E6 or "LTPCLBK" for 5E7 and later, "CHGCALL", "COIN", "4WINDIV", "HOTMOTL", "INDIV", "ISATND", "ISDN", "PBX, "SATSTLN", "TWOPTY", or "2PTY".

The CLASS OF SERVICEs "COIN", "HOTMOTL", "TWOPTY", and "2PTY" are valid only when the office has purchased the Calling Party Number Presentation secured feature, the SFSYS form (5713-1 Record) has Secured Feature ID 50 set to "S" or "Y".

4.11 ALT LANG

Description: Should the alternate language DSU2-RAF LASS announcements be used? This field supports the Alternate Language LASS Announcement feature, for more information on this feature see Division 2, Section 4A119.

Software Release: 5E8 and later
Default: N
Valid Entries: Y, N

Data Rules:

If ALT LANG is set to "Y", then two FIXRT forms must be defined: one with "ALSLE" entered in FIXED ROUTE TYPE and one with "AL2LVL" entered in FIXED ROUTE TYPE.

MLHLN forms with an ALT LANG field set to "Y" indicate that the Alternate Language LASS Announcement Special Feature is to be used. It is a secured feature and must be purchased by the office

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before this field can be set to "Y". An SFSYS form must exist with SFID 119 ACT set to "Y".

LTSB

The following fields (Section 4.12 - Section 4.17) define LTSB (Line Time Slot Bridging) requirements for 5E11 and later.

LTSB provides a software emulation of traditional metallically bridged two-party lines and off-premise extensions. A member of an LTSB group cannot be a member of any other multi-party service. For more information, see Division 2, Section 4A263.

4.12 ASSOC OE TYPE

For 5E12 and later, this field has been renamed ASSOC OE. See ASSOC OE for more information.

4.13 NUMBER

For 5E12 and later, this field has been renamed ASSOC OE. See ASSOC OE for more information.

4.14 ASSOC OE

Description: This field has an entry for TYPE and an entry for NUMBER. The Associate Office Equipment indicates the port of the companion member in a 1-TN LTSB group. The port of the lead member is entered in the OE on this MLHLN form.

Software Release: 5E11 and later
Valid Entries: **TYPE:**

Valid ASSOC OE Entries

Entry	Definition
A	Software Release: 5E12 and later. TR303/DNUS equipment number (INEN).
C	For a port that resides on Z-card within an ISLU (Integrated Services Line Unit) or within a RISLU (Remote Integrated Services Line Unit).
E	Software Release: 5E11 and later. The TN is associated with an AIU (Access Interface Unit).
G	For a port that resides on IDCU Equipment with a 10-digit equipment number (GEN) for a remote terminal or a PUB43801.
L	For a port that resides on a Line Unit.
O	Software Release: 5E16 and later. OIU (Optical Interface Unit Equipment Number)
S	For a port that resides on an Integrated or Universal SLC (Subscriber Line Carrier).

The following valid entries for the number portion of the ASSOC OE field are dependent upon the type value entered in the preceeding table.

If "A" is entered in the ASSOC OE TYPE field, this TR303/DNUS Equipment Number consists of the following:

NUMBER:

Valid ASSOC OE NUMBER Entries, TYPE A

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Network Unit-Synchronous Optical Unit	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Remote Line	LINE	XXXX	0001-2048

If "A" is entered in the ASSOC OE TYPE field on the DSL, DSLUSR, LINE, MLHLN, TRUNK or MISLINK

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form(s) then the SM, DNUS, and RT values assigned to OE NUMBER[1,6] must correspond to the SM, UNIT NUMBER[2,2], and RT EX values assigned on any RTERM form.

- ***NOTE:*** DSL/DSLUSR/MISLINK OE ports must be located on equipment identified on an RTERM form where RT INTERFACE is "TR303".

If "C" is entered in the ASSOC OE TYPE field, this Line Equipment Number consists of the following:

Valid ASSOC OE NUMBER Entries, TYPE C

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Line Unit	LU	X	0-7
Line Group Controller	LGC	XX	00-15
Line Card	LC	X	00-31

If the ASSOC OE TYPE is "C", which corresponds to an ISLU Line Card Equipment Number, then the ASSOC OE NUMBER assigned on the MLHLN form must have a corresponding line card assignment on the ISLULC form with an EQST of "O" and a TYPE of either "ZLC" or "SZLC".

If "E" is entered in the ASSOC OE TYPE field, this AIU Equipment Number consists of the following:

Valid ASSOC OE NUMBER Entries NUMBER, TYPE E

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Analog Interface Unit	AIU	XXX	000 - 042
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 31

If the ASSOC OE TYPE is "E", then the ASSOC OE NUMBER must be shown as equipped with a TYPE of "AIZLP" on the EQAIUP form.

If "G" is entered in the ASSOC OE TYPE field, this IDCU Equipment Number residing on a Remote Terminal consists of the following:

Valid ASSOC OE NUMBER Entries NUMBER, TYPE G

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	XX	00 - 42
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

If the ASSOC OE TYPE is "G" (the ASSOC OE is assigned to IDCU equipment), then the following ASSOC OE NUMBER(s) must correspond to a Channel Unit position (i.e., CU XX/YY) with a known value defined on the RTERM form.

- ***NOTE:*** The last two digits of the ASSOC OE NUMBER are determined by the CU XX/YY value (where XX is an odd number range of 01-95 and YY is an even number of XX + 1). Both the ASSOC OE NUMBER (10,11) line values in the pair are assignable when CUXX or CUYY type is "FSR", "MP", "SP", "SSV00", "SSV10", "DFXS", or "SPOTS". Only the lower (odd) numbered ASSOC OE NUMBER value is assignable when CU XX/YY type is "COIN", "FXS", or "FXSLS". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

ASSOC OE NUMBER

OE	RTERM
NUMBER(1,3)	SM
NUMBER(4,5)	UNIT NUMBER
NUMBER(6,7)	RT EX
NUMBER(8,11)	For OE TYPE = "G": POS value for CU XX/YY type = "FSR", "MP", "SP", "SPOTS", "FXSLS", "SSV00", "SSV10", "DFXS".

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OE (Originating Equipment) ports with OE (and/or ASSOC OE) TYPE of "G" on the DSL, DSLUSR, LINE, MLHLN, TRUNK or MISLINK form(s) which have SM/IDCU/RT values assigned to OE NUMBER(1,7) must correspond to the SM/UNIT NUMBER/RT EX values assigned on any RTERM form.

- ***NOTE:*** DSL/DSLUSR/MISLINK OE ports must be located on equipment identified on an RTERM form where RT INTERFACE is "TR303".

If "L" is entered in the ASSOC OE TYPE field, this Line Equipment Number consists of the following:

Valid ASSOC OE NUMBER Entries, TYPE L

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Line Unit	LU	XXX	000 - 042
Concentrator	CON	X	0-9
Switch Group	SWG	X	0-1
Switch	SW	X	0-7
Level	LEV	X	0-3

When TRKOE TYPE is "O" (OIU), this OIU Equipment Number consist of:

TRKOE NUMBER, TYPE O - Equipment

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
Performance Montoring Group	PG	XX	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container	LVC GRP	X	1 - 4
Channel	CH	XX	01 - 28

If "L" is entered in the ASSOC OE field and a 1-TN LTSB group is being defined, then the SM and LU values must match, respectively, the SWITCHING MODULE and LINE UNIT values on an EQLUP form (5711 Record). Additionally, the CON value must match an LU GRID X value (X = 0 to 9) with an EQUIPMENT STATUS of "G" or "O".

If the ASSOC OE TYPE is "L" and corresponds to an LEN (Line Equipment Number), the ASSOC OE NUMBER must be shown as equipped on the EQLUP form.

If "S" is entered in the ASSOC OE TYPE field, this Integrated SLC Equipment Number consists of the following:

Valid ASSOC OE NUMBER Entries, TYPE S

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Carrier Line Unit	DCLU	X	0-7
Remote Terminal	RT	XX	01-32
Line	LINE	XX	01-96

The ACT field on SFID 262 on the SFSYS form must be set to "Y" before the ASSOC OE TYPE/NUMBER are entered.

When MAN EXCL field is "Y", then the ASSOC OE field must be entered.

If ASSOC OE is entered, then the following conditions apply:

- AC ALW and AR ALW must be "N"
- ATT MLHG must not be entered

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- BUSY MONITOR must be "N"
- CARRIER GRP ALARM cannot be entered
- CIDIAL must be "ALLOW", "DENY" or "REQ"
- CLSS must be "N"
- GNDREF must be "N"
- if OE TYPE is "G", OE TYPE must not be in PUB43801 format
- For 5E11 and 5E12, NO DIAL must be "N"
- OE TYPE and NUMBER must be entered
- OE TYPE and NUMBER must not be the same as ASSOC OE TYPE and NUMBER
- OE TYPE must be "A", "C", "E", "G", "L" or "S" for LTSB (5E12 and later)
- OE TYPE must be "C", "E", "G", "L" or "S" for LTSB (5E11 only)
- RBV TGN must not be entered
- SHARED must be "N"
- SLEEVE LEAD CKT must not be entered

When MFRI is "Y" and ASSOC OE TYPE is "G", then PTY must be 1 - 5.

When an MLHLN form has the 1-TN LTSB assigned, a corresponding MLHLNFA form may have one or more of the following BRCS features assigned if the SFID 262 ACT field on the SFSYS form is set to "Y".

Valid BRCS Features

Feature	Form	Field
Call Forwarding	CFWFD	FORWARD CONDITION= "BUSY",, "IDLE",, or "BOTH".
Display Feature - Per Call Privacy	DISPFD	TN PRIVACY="Y".
Incoming Line Identification	LIDFD	CNAM,, CALL NBR DELIV PRIM,, CALL NBR DELV ALL= "Y".
LASS Selective Call Acceptance	LSCAFD	
LASS Automatic Callback	LSACFD	
LASS Selective Call Distinctive Alert	LSDAFD	
LASS Selective Call Forwarding	LSCFFD	
LASS Automatic Recall	LSARFD	
LASS Selective Call Rejection	LSCRFD	
Message Service System	MSFD	
Multi-Way Calling	MWFD	CALL PICKUP ENTRY POINT="N".
One- Two-Digit Speed Calling	SCFD	SC SHARED="Y".

When an MLHG/TERM(s) is assigned on the MLHLN form(s) where ASSOC OE is entered assigning 1-TN LTSB to this MLHG/TERM:

- the corresponding MLHGFD form must have HUNT TYPE of "REG", "HTC", or "UCD". The MLHLN

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form corresponds with the MLHG form if the MLHG fields match. The MLHG form corresponds with MLHGFD form if the MLHG FEATURE field on the MLHG form matches the FEATURE NAME on the MLHGFD form.

- ASSOC OE TYPE and NUMBER on these MLHLN forms must not match an OE TYPE and NUMBER on a different MLHLN form.
- ASSOC OE TYPE and NUMBER on the MLHLN form must not match the OE TYPE and NUMBER on a LINE form.
- When LINE and/or MLHLN forms have an ASSOC OE TYPE and NUMBER for LTSB entered, the same ASSOC OE TYPE and NUMBER cannot be duplicated on two or more forms. Each ASSOC OE TYPE and NUMBER must be unique.

5E12 and later:

The 1-TN LTSB with IBDS Package 1 is a Secured Feature which is required for the IBDS Package 2 features. Therefore, the ACT field for SFID 262 must be set to "Y" before the SFID 263 ACT field can be set to "Y".

When an MLHLN form has the 1-TN LTSB assigned, a corresponding MLHLNFA form may have one or more of the following BRCS features assigned if the SFID 263 ACT field on the SFSYS form is set to "Y".

Valid BRCS Features

Feature	Form	Field
Call Waiting with Dial Call Waiting and Call Waiting Originating	CWTFD	INVOCATION="CODE" or "FLASH",, FLASH ON FORWARD= "Y",, CW DELUXE="N"
LASS Customer Originated Trace	LSCOTFD	
Distinctive Ringing	DRFD	
Individualized Dialing Plan	IDFD	
Message Detail Recording	MDRFD	
Private Facilities Access	PFAFD	
Terminal Group Station Restriction	TGSRFD	

Queueing is not allowed for 1-LTSB. For a MLGH TERM(s) defined on an MLHLN form with an ASSOC OE entered, which is assigned 1-TN LTSB and a PFA (Private Facility Access) feature is assigned on the corresponding MLHLNFA form, then QUEUE ALLOWED or PRIORITY QUEUE must be "N" on the BFG and PFAMPA forms. In addition, QUEUE ALLOWED or PRIORITY QUEUE must be "N" on the PFAFD form, unless these parameters are overridden on the corresponding BFG or PFAMPA forms. For 5E13 and later, when the ACT field for SFID 280 on the SFSYS form is set to "Y", queueing is allowed, (i.e., QUEUE ALLOWED and PRIORITY QUEUE can be "Y").

5E13 and later:

The following checks for SFID 280 are related to the IBDS3 (Internally Bridged Dual Service - Package 3) feature. For more information on this feature, see Division 2, Section 4a280.

The ACT field for SFID 280 on the SFSYS form must be set to "Y" when the MLHG/TERMs are defined on a MLHLN form with the ASSOC OE TYPE and NUMBER entered, (assigning 1-TN LTSB (Line Time Slot Bridging) to the MLHG/TERM), and the corresponding MLHLNFA form has one or more of the following BRCS features entered:

Valid BRCS Features

Feature	Form

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Account Codes	ACCTFD
Automatic Route Selection	ARSFD
Advanced Services Interface	ASIFD
Authorization Codes	ATHFD
Bulk Calling Line Identification	BCLIDFD
Time of Day	TODFD

When the ACT field for SFID 280 on the SFSYS form is set to "Y", the ACT field for SFID 263 on the same form must also be set to "Y".

If the ASSOC OE on the MLHLN form is entered, NO DIAL must be "N", unless the ACT field for SFID 280 on the SFSYS form is set to "Y". If SFID 280 is set to "Y", ASSOC OE can be "HOTN".

5E16 and later:

When ASSOC OE is entered, OE TYPE must be "A", "C", "E", "G", "L", "S", or "Y" for LTSB.

When ASSOC OE is "Y" (VEN), NUMBER must be sm[001 - 192] line [00001 - 28800].

4.15 LEAD PORT

Description: The OE is always the lead port for this LTSB group. This is a no change field. For more information, see Division 2, Section 4A80.

Software Release: 5E11 and later

4.16 IALT

Description: Is Intra-Switch Analog Line Transfer active? This field is a no change field and defaults to "N".

Software Release: 5E11 and later

4.17 MAN EXCL

Description: Can the ports defined in the OE TYPE/NUMBER combination and the ASSOC OE TYPE/NUMBER combination exercise the Manual Exclusion feature? The value entered in this field applies to both members of the group.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If MAN EXCL is "Y", ASSOC OE TYPE and NUMBER must be entered.

4-WIRE SPECIFICATIONS

The following fields (Section 4.18 - Section 4.22) are available in 5E3 and later Software Releases. They are used in DSN (Defense Switched Network) offices (indicated by the DSN OPTION field on the OFCOPT form being set to "Y"). An entry in these fields is only valid for lines that have a CLASS OF SERVICE (LCC form) of "4WINDIV". These fields may only be entered when OE TYPE is "D", "N" or "T".

4.18 ROUTINE RINGING

Description: The type of Routine Ringing for 4-wire access lines.

Valid ROUTINE RINGING Entries

Entry	Definition
4WOFF	Off-hook alerting
4W24	2-seconds off-hook, 4 seconds on-hook)

Data Rules:

For 5E4(2) and later, if CONFERENCE BRIDGE is "Y", ROUTINE RINGING must be "4WOFF".

4.19 PRIORITY RINGING

Description: The type of Priority Ringing for 4-wire access lines.

Valid PRIORITY RINGING Entries

Entry	Definition
4WOFF	Off-hook alerting
4W350	Simple wink, 350ms on-hook/off-hook
4W1650	Continuous 1650ms off-hook/350ms on-hook

Data Rules:

For 5E4(2) and later, if CONFERENCE BRIDGE is "Y", PRIORITY RINGING must be "4W350".

4.20 AUDIBLE RINGING

Description: Does the 4-wire subscriber line equipment provide its own Audible Ring?
Default: N
Valid Entries: Y, N

4.21 INC. START SIGNAL

Description: The Incoming Start Signal for 4-wire subscriber lines.
Default: DIALTONE
Valid Entries:

Valid INC. START SIGNAL Entries

Entry	Definition
WINK	Wink Start
WNKDT	Wink Start and Dial Tone
DIALTONE	Dial Tone

Data Rules:

If CONFERENCE BRIDGE is "Y", then INC. START SIGNAL must be either "WINK" or "WNKDT".

4.22 CONFERENCE BRIDGE

Description: Is the 4-wire subscriber line a conference bridge connection?
Default: N
Valid Entries: Y, N

4.23 PVN ALW

Description: The name of this field was changed to ASP ALW in 5E8. This field name applies to 5E6 - 5E7. See ASP ALW for usage information.

4.24 ASP ALW

Description: Is this line allowed to originate ASP (Advanced Services Platform; previously PVN, Private Virtual Network) calls using an ODP Feature/Prefix Code trigger? (This field was called PVN ALW for 5E6 - 5E7).

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Software Release: 5E6 - 5E8
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

An entry of "Y" indicates the line is allowed to originate such ASP calls while "N" indicates the line is not allowed to originate such ASP calls.

If PVN OFC on the OFCOPT form (5509 Record) is set to "NONE", then this office does not support ASP and PVN ALW must be "N".PVN ALW may be set to "Y" only if the corresponding LCC form (5306 Record) has a CLASS OF SERVICE of "INDIV", "ISDN" or "ATND".

If PVN ALW is "Y" and NO DIAL is "HOT", then this line is direct-connected to ASP services and the corresponding LCC form (5306 Record) must have a CLASS OF SERVICE of "INDIV" and a DIGIT ANALYSIS SELECTOR equal to PVN DAS on the OFCOPT form (5509 Record).

A line dedicated to ASP services should not be entered as part of a Series Completion Group. When PVN ALW is set to "Y" and SERHLN is entered, then the DIGIT ANALYSIS SELECTOR on the corresponding LCC form (5306 Record) cannot be equal to PVN DAS on the OFCOPT form (5509). Likewise, DIGIT ANALYSIS SELECTOR should not be equal to a DAS equivalent in functionality to the PVN DAS (i.e., a virtual ASP DAS).

4.25 SCD SCRNING

Description: This field is set to "Y" by Recent Change if at least one carrier has requested SCD (Selective Carrier Denial) Screening for this line. SCD Screening is a function of the SCD feature.

Software Release: 5E5 and later

4.26 CLSS

Description: Does this line subscribe to Calling Line Side Supervision? If "Y" is entered, the calling party will detect a battery reversal upon called party answer, and another battery reversal (returning to normal state) upon called party disconnect. This field is used by the CLSS (Calling Line Side Supervision) feature. CLSS is a Secured Feature, and must be purchased before it can be assigned.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

FEATURE ID 63 on the SFSYS form must be set to "S" before CLSS can be set to "Y".

If CLSS is set to "Y", and the LCC/RAX is defined on an LCC form where CLASS OF SERVICE is "INDIV" or "PBX", which qualifies the line for use of LASS GA (Generally Available) features, then the MLHLN form must have AC ALW, AR ALW, COT ALW and PCP ALW all set to "N" since lines subscribing to CLSS are not compatible with LASS GA features.

If CLSS is set to "Y", this requires that LCC/RAX be defined on an LCC form where CLASS OF SERVICE is "INDIV", "PBX" or "HOTPBX".

When CLSS is Y:

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- OE TYPE and NUMBER must be entered
- BUSY MONITOR must be "N"
- SHARED must be "N"
- BRCS must be "N"
- AC ALW, AR ALW, COT ALW, and PCP ALW must be blank or "N"

4.27 MCLD DEACT

Description: Is MCLD (Modified Calling Line Disconnect Procedure for Fraud Protection) deactivated for this line when it is active on this SM?

The MCLD feature is enabled by setting FID 517 to "S" on the FOSYS form (5713-2 Record).

When MCLD is enabled and MCLD DEACT is set to "N", this line will receive Permanent Signal Treatment following expiration of the disconnect timer. This will force the line to go back onhook before originating another call. When MCLD is enabled and MCLD DEACT is set to "Y", this line will receive dialtone following expiration of the disconnect timer.

The MCLD feature applies only to analog lines. For more information, see Division 2, Section 4C.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OE and TYPE/NUMBER have not been entered, then MCLD DEACT must be "N".

4.28 BLK 1PLUS

Description: Enter the type of blocking on a line if the office has the 1+ Blocking / 1+ split Blocking special feature.

Software Release: 5E7 and later
Required Field.
Default: NONE
Valid Entries:

Valid BLK 1PLUS Entries

Entry	Definition
FULL	Block all 1+ dialing
SPLIT	Block FGD CAC 1+ if the carrier dialed is not the pre-subscribed carrier.
NONE	No blocking for 1+ on the line

Data Rules:

If OE TYPE and NUMBER are not entered, BLK 1PLUS must be "NONE".

If BLK 1PLUS is set to either "FULL" or "SPLIT", the LCC and RAX fields must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV", "PBX", "HOTPBX", "HOTMOTL", "COIN", "ATND", "ISDN", "ISATND", or "SATSTLN".

4.29 LONG DST DR

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Description: Is distinctive ringing supplied for long distance calls?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E8 and later, the Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before the LONG DST DR field can be changed from its default value on either the LINE, MLHLN, or DSLUSR forms. Before "Y" can be entered the ACT field for SFID 91 set to "Y" on the SFSYS form (5713-1 Record).

USTWC

The fields in Section 4.30 through Section 4.32 define Usage Sensitive Three Way Calling Special Features and options.

4.30 USTWC ALW

Description: Is Usage-Sensitive Three-Way Calling allowed?

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then:

- CLSS must be "N".
- NO DIAL must be "N".
- SHARED must be "N".
- the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV" or "PBX".

4.31 SUBSCR USTWC

Description: Is this line subscribed to USTWC (Usage Sensitive Three-Way Calling)? This field supports Spontaneous USTWC feature, which is a secured feature (SFID 156). For more information on this feature, see Division 2, Section 4A156.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then:

- CLSS must be "N".
- NO DIAL must be "N".

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- SHARED must be "N".

If the LINE and/or MLHLN forms have SUBSCR USTWC set to "Y" the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV" or "PBX".

4.32 USTWC ALW XFER

Description: Allow Usage Sensitive Three Way Calling with Call Transfer? This field supports the Per-Use Three Way Calling with Call Transfer feature. This feature is a secured feature. For more information, refer to Division 2, Section 4A577.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When USTWC ALW XFER is "Y", USTWC ALW or SUBSCR USTWC must be "Y".

When USTWC ALW XFER is "Y", ACT field must be "Y" for SFID 577on the SFSYS form (5713-1 Record).

4.33 LRN INDEX

Description: Enter the index into the LRNINDEX form (5328 Record) for Local Number Portability. LRNs are used to route DNs that have been ported into the office from other switches. An LRN uniquely identifies an office and rate center. This field supports the Local Number Portability secured feature (SFID 174). For more information concerning this feature, see Division 2, Section 4A174.

Software Release: 5E11 and later
Valid Entries: 1 - 127

Data Rules:

When a Multiline Hunt Group Terminal is assigned on an MLHLN form with LRN INDEX entered, the LRN INDEX must also be entered on the LRNINDEX form (5328 Record).

4.34 NON COND TRIG

Description: The NON COND TRIG field is used to indicate whether or not a call to this DN requires a non-conditional query of the SCP (Service Control Point) prior to routing the call. This is a no change field.

Software Release: 5E11 and later

ADVANCED SERVICES PLATFORM

The following fields (Section 4.35 - Section 4.36) were added to accommodate the ASP Inhibiting of Originating Busy/No Answer Triggers with Extended Ringing feature. This is a secured feature with SFID 210. For more information on this feature, see Division 2, Section 4A210.

4.35 OFC OBL INH

Description: The OFC OBL INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by individual lines. It indicates whether the ASP Office Originating Busy Line Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating Busy Line Trigger is inhibited.

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This field was added for the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, Section 4A210.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC OBL INH must be "N".

4.36 OFC ONA INH

Description: The OFC ONA INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by individual lines. It indicates whether the ASP Office Originating No Answer Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating No Answer Office Trigger is inhibited.

This field was added for the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, Section 4A210.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC ONA INH must be "N".

4.37 URT FCD BLK

Description: Should all Unrestricted FCD Codes be blocked from this TN?

NOTE: On the LINE, MLHLN, and DSLUSR forms this URT FCD BLK field is intended for use on individual or line attendant lines only.

This field was added for the ASP Unrestricted FCD Trigger feature. For more information, see Division 2, Section 4A572.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The secured feature ASP Unrestricted FCD Code Triggers must be purchased before URT FCD BLK can be changed to "Y" on the MLHLN form, therefore the ACT field for SFID 572 on the SFSYS form must be "Y".

For 5E15 and later, when the MLHLN form has "Y" entered in the URT FCD BLK field, a corresponding LCC form must have "INDIV" or "ATND" entered in the CLASS OF SERVICE field. LCC corresponds with a MLHLN form when the LCC and RAX fields match.

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For 5E15 and later, when the MLHLN forms have "Y" entered in the URT FCD BLK field, a corresponding LNBLKCOD form cannot be entered. LNBLKCOD corresponds with MLHLN form when the TNs match.

4.38 BLK LN CODE

Description: This is a text only field that indicates if a LNBLKCOD form exists for this TN.

This field was added for the ASP Unrestricted FCD Trigger feature. For more information on, see Division 2, Section 4A572.

Software Release: 5E15 and later

4.39 INHIBIT DEL

Description: Should the deletion of this line be inhibited?

Software Release: 5E13 and later
Required Field.
Default: N

NOTE: INHIBIT DEL must be set to "N" before deletion is line oallowed.
Valid Entries: Y, N

Data Rules:

When INHIBIT DEL field is "Y", OE or RTIDX must be entered.

4.40 CONTEXT ID

Description: This field is used to indicate whether or not a multiline hunt group is set to "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E12 and 5E13: N
- For 5E14: NATIVE

Valid Entries:

Valid CONTEXT ID Entries

Entry for 5E12, 5E13	Entry for 5E14 and later	Description
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

For 5E12 and later:

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the MLHLN form, the ACT field for SFID 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the MLHLN form, there must be an LCC form (5306 Record) where the RAX and LCC has the CLASS OF SERVICE set to

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one of the following:

- ATND
- CHGCALL
- COIN
- HOTMOTL
- HOTPBX
- INDIV
- ISDN
- ISATND
- PBX
- TWOPTY
- 2PTY
- 4PFS
- 4PSS
- 4WINDIV
- 5PTY
- 8PSS
- 10PTY

USAGE SENSITIVE SIX-WAY CALLING

The USSWC ALW field was added to accommodate the Usage Sensitive Six-Way Calling feature. This is a secured feature with SFID 553. For more information on this feature, see Division 2, Section 4A553.

4.41 USSWC ALW

Description: Should Usage Sensitive Six-Way Calling be allowed? The USSWC ALW field verifies whether or not the Usage Sensitive Six-Way Calling feature is allowed for a specified line. No entry is required; this is an optional field. For more information on this feature, see Division 2, Section 4A553.

Software Release: 5E15 and later
Default: Blank
Valid Entries: Blank, or enter Y or N

Data Rules:

When USSWC ALW is "Y":

- CLSS must be "N"
- NO DIAL must be "N"

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- SHARED must be "N"

On-Hook Data Transmission

4.42 FSK OSI

Description: This field is used to indicate the per-line control of sending the OSI (Open Signaling Interval).

Software Release: 5E15 and later
Valid Entries: Y, N, or blank

Data Rules:

For 5E15 and later:

- When GST is "Y", FSK OSI must be "N".
- When FSK OSI is "Y", the LCC and RAX on the LCC form (5306 Record) must have CLASS OF SERVICE equal to "ATND", "INDIV", or "PBX"..
- When FSK OSI is set to "Y", the ACT field for SFID 613 on the SFSYS form (5713-1 Record) must also be set to "Y".

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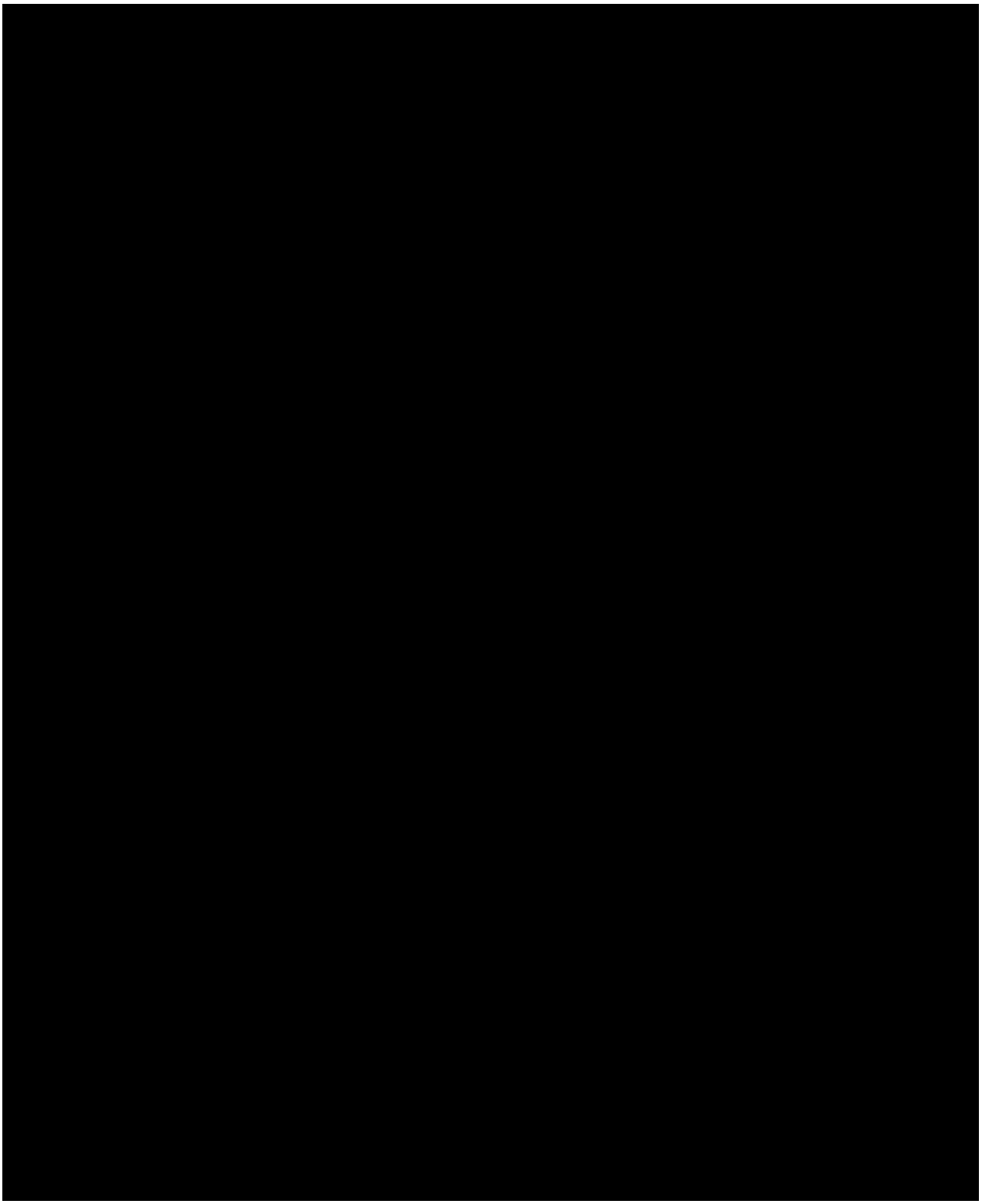

Figure 1 PARTY VALUE/MULTI-FREQUENCY RINGING FEATURE

MLHLN PTY	FREQUENCY CLASS ON IMINFO FORM		
	HARMONIC HAR	SYNCHROMONIC SYN	DECIMONIC DEC
1,6	33.3	30	30
2,7	50	42	40
3,8	66.6	54	50
4,9	16.6	66	60
5,0 (0 IS PTY10)	25	20	20

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PTY values 1-5 are ring-side frequencies 1-5.

PTY values 6-9,0 are tip-side frequencies 1-5.

PARTY VALUE LINE/MLHLN PTY	FREQUENCY CLASS VALUES FOR ISLC-96 LINES		
	HARMONIC	SYNCHROMONIC	DECIMONIC
1	25	30	30
2	33.3	42	40
3	50	54	50
4	16.7	20	20

NOTE: Party values 1-4 are ring-side frequencies and are provided based on an option switch of the Frequency Selective Ringing (FSR) Channel Unit.

Figure 2 TYPICAL REMOTE MODULE/SA REROUTE FOR MLHG MEMBERS

```
mlhln                    5ESS Switch
SCREEN 1 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

*1. MLHG  ____          15. UNBUNDLED N   25. SLUS    N
*2. TERM  ____                            26. DTLBILL N
#3. RAX   __          ORIG. FEATURES      27. TRAFFIC N
#4. LCC   ___          16. TTC     N
 5. OE    _ _________   17. BRCS    N
 8. TN    __________    18. EL      N
 9. PTY   I           19. FLS     N
10. MFRI  N           20. SUSO    N
11. CIDIAL ALLOW       21. DNY ROH N
12. PIC   ____         22. PALIT   N
13. PTC   ____         23. PSLIM   N
14. PLC   ____         24. COMPL   N
```

```
mlhln                    5ESS Switch
SCREEN 2 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

TERM. FEATURES           MISC. FEATURES
28. ICP     N      37. SERHLN     __________
29. DNY BV  N          BCK LNK    ___
30. NONHUNT N      39. ALT BILL TN __________
31. TRC     N      40. NO DIAL     N
   EQUIPMENT       41. HOT LINE TN _________________
32. GST     N      42. SM REROUTE  N
33. TSTLINE N      43. ANI7        N
34. GNDREF  N      44. TR303 NAILUP N
35. RANGEX  NONE   45. BUSY MONITOR N
36. LNEQ    N      46. ATT MLHG    ____
                   47. RBV TGN     ____
```

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```
mlhln                    5ESS Switch
SCREEN 3 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

BASIC 911 ESB                  58. SHARED       N
48. RINGBCK N                  59. PRIVACY      _
49. STATMON N                   60. OVRD DNY XFER N
50. TONDET  N
      SCAN & DIST. POINTS
51. MESG REGISTER  _________
52. SLEEVE LEAD CKT _________
53. MAKE BUSY KEY  _________
54. RND MKB        _________
55. STOP HUNT KEY  _________
56. CARRIER GRP ALM _________
57. RMK            ___________________
```

```
mlhln                    5ESS Switch
SCREEN 4 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

 LASS FEATURES              4-WIRE SPECIFICATIONS          USTWC
61. AC ALW   _          72. ROUTINE RINGING  _____    82. USTWC ALW    _
62. AR ALW   _          73. PRIORITY RINGING  ______   83. SUBSCR USTWC N
63. COT ALW  _           74. AUDIBLE RINGING  _
64. PCP ALW  _           75. INC. START SIGNAL _________ 84. LRN INDEX    ___
65. ALT LANG N           76. CONFERENCE BRIDGE _         NON COND TRIG N

         LTSB            SCD SCRNING _
66. ASSOC OE  _ ____________ 78. CLSS       N
   LEAD PORT _           79. MCLD DEACT  N
   IALT      _           80. BLK 1PLUS   NONE
71. MAN EXCL  N           81. LONG DST DR N
```

```
mlhln                    5ESS Switch          _
SCREEN 5 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

     ASP
```

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86. OFC OBL INH N
87. OFC ONA INH N

MONITORED TN _
89. INHIBIT DEL N
90. CONTEXT ID NATIVE

Figure 3 SAMPLE MLHLN FORM 5E14 SOFTWARE RELEASE

mlhln 5ESS Switch
SCREEN 1 OF 5 OFFICE DATA ADMINISTRATION
(5111-1/2/3) MULTILINE HUNT GROUP TERMINAL

*1. MLHG ____ 15. UNBUNDLED N 25. SLUS N
*2. TERM ____ 26. DTLBILL N
#3. RAX ___ ORIG. FEATURES 27. TRAFFIC N
#4. LCC ___ 16. TTC N
5. OE _ _____ 17. BRCS N
8. TN _____ 18. EL N
9. PTY I 19. FLS N
10. MFRI N 20. SUSO N
11. CIDIAL ALLOW 21. DNY ROH N
12. PIC ____ 22. PALIT N
13. PTC ____ 23. PSLIM N
14. PLC ____ 24. COMPL N

mlhln 5ESS Switch
SCREEN 2 OF 5 OFFICE DATA ADMINISTRATION
(5111-1/2/3) MULTILINE HUNT GROUP TERMINAL

TERM. FEATURES MISC. FEATURES
28. ICP N 37. SERHLN _____
29. DNY BV N BCK LNK ___
30. NONHUNT N 39. ALT BILL TN _____
31. TRC N 40. NO DIAL N
EQUIPMENT 41. HOT LINE TN _____
32. GST N 42. SM REROUTE N
33. TSTLINE N 43. ANI7 N
34. GNDREF N 44. TR303 NAILUP N
35. RANGEX NONE 45. BUSY MONITOR N
36. LNEQ N 46. ATT MLHG ____
47. RBV TGN ____

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```
mlhln                    5ESS Switch
SCREEN 3 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

BASIC 911 ESB              58. RMK      _________________
48. RINGBCK N              59. SHARED     N
49. STATMON N               60. PRIVACY    _
50. TONDET  N              61. OVRD DNY XFER N
    SCAN & DIST. POINTS
51. MESG REGISTER  _________
52. SLEEVE LEAD CKT _________
53. MAKE BUSY KEY  _________
54. RND MKB        _________
55. STOP HUNT KEY  _________
56. DC MKB         N
57. CARRIER GRP ALM _________
```

```
mlhln                    5ESS Switch
SCREEN 4 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

 LASS FEATURES            4-WIRE SPECIFICATIONS          USTWC
62. AC ALW  _          73. ROUTINE RINGING  _____    83. USTWC ALW    _
63. AR ALW  _          74. PRIORITY RINGING _______  84. SUBSCR USTWC  N
64. COT ALW _          75. AUDIBLE RINGING  _       85. USTWC ALW XFER N
65. PCP ALW _          76. INC. START SIGNAL _________
66. ALT LANG N         77. CONFERENCE BRIDGE _      86. LRN INDEX ___

        LTSB           SCD SCRNING _            NON COND TRIG N
67. ASSOC OE  _ ____________ 79. CLSS       N
   LEAD PORT _         80. MCLD DEACT  N
   IALT      _         81. BLK 1PLUS   NONE
72. MAN EXCL  N        82. LONG DST DR N
```

```
mlhln                    5ESS Switch        _
SCREEN 5 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

      ASP
88. OFC OBL INH N
89. OFC ONA INH N
90. URT FCD BLK N
   BLK LN CODE _

   MONITORED TN _
93. INHIBIT DEL  N
94. CONTEXT ID   NATIVE
```

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USAGE SENSITIVE SIX WAY CALLING
95. USSWC ALW _

Figure 4 SAMPLE MLHLN FORM 5E15 SOFTWARE RELEASE

```
mlhln                    5ESS Switch
SCREEN 1 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

*1. MLHG  ____          15. UNBUNDLED N   25. SLUS   N
*2. TERM  ____                            26. DTLBILL N
#3. RAX   ___          ORIG. FEATURES     27. TRAFFIC N
#4. LCC   ___          16. TTC    N
 5. OE    _ _____________  17. BRCS   N
 8. TN    ____________     18. EL     N
 9. PTY   I              19. FLS    N
10. MFRI  N              20. SUSO   N
11. CIDIAL ALLOW         21. DNY ROH N
12. PIC   ____           22. PALIT  N
13. PTC   ____           23. PSLIM  N
14. PLC   ____           24. COMPL  N
```

```
mlhln                    5ESS Switch
SCREEN 2 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

TERM. FEATURES           MISC. FEATURES
28. ICP    N      37. SERHLN     ___________
29. DNY BV N         BCK LNK    ___
30. NONHUNT N      39. ALT BILL TN ___________
31. TRC    N      40. NO DIAL    N
   EQUIPMENT      41. HOT LINE TN _________________
32. GST    N      42. SM REROUTE  N
33. TSTLINE N     43. ANI7       N
34. GNDREF  N     44. TR303 NAILUP N
35. RANGEX  NONE  45. BUSY MONITOR N
36. LNEQ   N      46. ATT MLHG   ____
                  47. RBV TGN    ____
```

```
mlhln                    5ESS Switch
SCREEN 3 OF 5          OFFICE DATA ADMINISTRATION
(5111-1/2/3)         MULTILINE HUNT GROUP TERMINAL

BASIC 911 ESB            58. RMK        _________________
48. RINGBCK N            59. SHARED     N
49. STATMON N             60. PRIVACY    _
50. TONDET  N            61. OVRD DNY XFER N
    SCAN & DIST. POINTS
```

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51. MESG REGISTER _____
52. SLEEVE LEAD CKT _____
53. MAKE BUSY KEY _____
54. RND MKB _____
55. STOP HUNT KEY _____
56. DC MKB N
57. CARRIER GRP ALM _____

---

mlhln 5ESS Switch
SCREEN 4 OF 5 OFFICE DATA ADMINISTRATION
(5111-1/2/3) MULTILINE HUNT GROUP TERMINAL

LASS FEATURES 4-WIRE SPECIFICATIONS USTWC
62. AC ALW _ 73. ROUTINE RINGING _____ 83. USTWC ALW _
63. AR ALW _ 74. PRIORITY RINGING _____ 84. SUBSCR USTWC N
64. COT ALW _ 75. AUDIBLE RINGING _ 85. USTWC ALW XFER N
65. PCP ALW _ 76. INC. START SIGNAL _____
66. ALT LANG N 77. CONFERENCE BRIDGE _ 86. LRN INDEX ___

LTSB SCD SCRNING _ NON COND TRIG N
67. ASSOC OE _ _____ 79. CLSS N
LEAD PORT _ 80. MCLD DEACT N
IALT _ 81. BLK 1PLUS NONE
72. MAN EXCL N 82. LONG DST DR N

---

mlhln 5ESS Switch _
SCREEN 5 OF 5 OFFICE DATA ADMINISTRATION
(5111-1/2/3) MULTILINE HUNT GROUP TERMINAL

ASP ON-HOOK DATA TRANSMISSION
88. OFC OBL INH N 97. FSK OSI _
89. OFC ONA INH N
90. URT FCD BLK N
BLK LN CODE _

MONITORED TN _
93. INHIBIT DEL N
94. CONTEXT ID NATIVE

USAGE SENSITIVE SIX WAY CALLING
95. USSWC ALW _

Figure 5 SAMPLE MLHLN FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 1L: 5112 RECORD
FEATURE ASSIGNMENT TELEPHONE NUMBER FORM - LINEFA

1. GENERAL

The 5112 Record is available with 5E2 and later Software Releases, and defines BRCS (Business and Residence Custom Services) Features to a particular customer Telephone Number.

The LINEFA form assigns up to 48 BRCS Features to a specific Telephone Number. Each feature name can be either a unique feature name or CLUSTER NAME. CLUSTER NAMEs must be defined on the CLUSTR form (5600 Record) where they are expanded into 2 - 16 unique feature names. The total number of unique feature names on this form and associated CLUSTR forms, must not exceed 48.

With 5E6 and later Software Releases, Speed Call (Abbreviated Dialing) features are assigned separately from IDP (Individualized Dialing Plan) features. Prior to this disassociation, a line can be assigned an IDP feature with a Speed Call feature which counts as one feature for that line. However, after a retrofit from the 5E5 Software Release to the 5E6 Software Release, this line may have as many as three features: an IDP feature and up to two SC (Speed Call) features depending on whether or not one-digit or two-digit Speed Call has been assigned.

This may raise the count of Terminal features for that line above the maximum of thirty features. A line only may be assigned up to thirty Terminal features, therefore, use discretion with a LINEFA form that has more than twenty-eight Terminal features (IDP feature included) at the time of retrofit. If the feature count is greater than thirty after retrofit, the SC1 (one-digit Speed Call) feature, if it has been assigned, will be canceled. If SC1 has not been assigned, then SC2 (two-digit Speed Call) will be canceled. If both features have been assigned to this line, both may be canceled.

Wild Card feature Names of the format /AA* (AA equal to alphabetic) are not allowed to be assigned to a Telephone Number on the LINEFA form.

1.1 Recent Change View

The corresponding Recent Change Views for this form are 1.8, 1.11, and 1.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The TN value must be assigned on the LINE form (5109-1/2/3 Record). The TN defined on the LINE form must have its associated BRCS attribute set to "Y", and must be assigned to a LEN or SLEN.

The /LIRDAMU, /LIRDNMU, and /LIRMDU preconstructed features which were created to support the Calling Name Delivery feature were not available for the 5E7 Software Release.

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See Div 5, Sec 1C, 1. General, for features allowed on SHTN secondary only lines.

If TNs on this form are assigned HI (Home Intercom) feature(s) on the LINEFA, BFG, or an associated CLUSTR form, then the TN must also be defined on the LINE form (HI feature can be assigned only to ANALOG lines).

For 5E7 and later, if TNs have a Forward to Telephone Number assignment on the CFWLPA form or CFWFD form's default parameters equal to the same TN, there must be an IDP feature assigned to the TN for the Call Forwarding feature to allow forwarding to itself.

For 5E8 and later, TNs assigned an Advanced Service Interface feature via a LINEFA form with R set to "Y", indicating that Remote Access Services (RAS) are desired, and the FEATURE is defined on a CFWFD form; the corresponding CFWFD form must have an ACT TYPE of "CDDN", "CDDNC", "CDDNCA", "CDCA1A" or "CODE" and a DACT TYPE of "CODE".

For 5E10 and later, when TN(s) appear on the LINEFA form with an ASP feature either assigned on the LINEFA or corresponding CLUSTR form, the ASP feature is defined on a ASPFD or ASPLPA form with OHD TRIG NBR entered. The TN is either defined on a LINE form or on a DSLUSR form as CKT TN where DSL CLS on the corresponding DSL form is "STD". Therefore, the only other BRCS features allowed to be assigned to the line are features defined on the ASPFD form with CONTROL equal to "TERM" and those defined on the following forms where the appropriate secured feature(s) has been purchased and corresponding SFID(s) are set to "Y" on the SFSYS form:

- ☐ The Advanced Service Platform (ASP) BRCS/OHD Interworking SFID 137 ACT equals "Y"
  - ☐ CFWFD with FWD COND equals "BUSY", "IDLE", "BOTH", "DBSY", "DIDL" or "DBTH"
  - ☐ CWTFD with INVOKE equals "TERM"
  - ☐ DISPFD
  - ☐ LIDFD
  - ☐ LSACFD
  - ☐ LSARFD
  - ☐ LSCAFD
  - ☐ LSCARFD
  - ☐ LSCFFD
  - ☐ LSCOTFD
  - ☐ LSCRFD
  - ☐ LSDAFD
  - ☐ MWFD with CONTROL not equal to "CODEALT"
- ☐ Additional ASP OHD Interactions with Account Code and CPN/BN SFID 150 ACT equals "Y"
  - ☐ ACCTFD
  - ☐ CPNBNFD
  - ☐ RNDFD

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- ASP Network Element Services Signaling (NESS) SFID 185 ACT equals "Y"
  - ASPFD with CONTROL equals "NESS"
- ASP BRCS/OHD Interworking Extensions SFID 226 ACT equals "Y"
  - HIFD
  - MSFD
  - PUOFD with INITIATE equals "IPRDQ"
  - PUTFD with FEATURE FUNCTION equals "CALPU"
  - SCFD

For 5E12 and later, TNs on different LINEFA forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the LINEFA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, if the TN(s) on the LINEFA form are assigned a Call Pickup Originating feature with DPU TN assignment, defined on the PULPA form or the BFG form, the Call Pickup Originating feature initiated by Predesignated Pickup Group, Directed Pickup, Code Calling or Loud Speaker Paging does not need such an assignment.

For 5E16 and later, if the TN(s) are assigned to the Direct Call Transfer to Voice Mail feature on either the LINEFA form, BFG form, or an associated CLUSTR form, then the ACT field for SFID 586 must be set to "Y" on the SFSYS form.

2.3 BFGN

Description: Enter the BFGN (BRCS Feature Grouping Name).

Refer to the BRCS Feature Description (Division 2, Section 1U) for the restrictions concerning BFG Names.

Software Release: 5E4(2) and later
Valid Entries: 1 - 7 alphanumeric characters.
- The optional SUFFIX is a number between
- 1 - 9.

Data Rules:

The BFGN entered must be defined on a BFG form (5625 Record) as either a SELECTION BFGN or an UNIQUE BFGN.

If a SELECTION BFGN without a SUFFIX is entered, in the BFGN field on the LINEFA form, the best fit selection process is attempted.

If a specific SELECTION BFGN and SUFFIX is entered in the BFGN field on this form and the LINEFA

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feature list is empty, all of the features defined by that SELECTION BFGN and SUFFIX combination will be assigned to the subscriber's line. If the LINEFA feature list contains features that are not defined as part of the BFGN and SUFFIX features, these undefined features will be assigned to the line outside of the BFGN.

If a UNIQUE BFGN is entered in the BFGN field and the LINEFA feature list is empty, all of the features defined by that UNIQUE BFGN will be assigned to the subscriber's line. If the LINEFA feature list contains features that are not defined as part of the UNIQUE BFGN features, these undefined features will be assigned to the outside of the BFGN.

Features assigned to subscribers can be a combination of features defined by a BFGN and the features indicated on the LINEFA form. If a specific SELECTION BFGN and SUFFIX or UNIQUE BFGN is entered, it is not necessary to enter features on the LINEFA. If the BFGN entered is a UNIQUE BFGN, a SUFFIX cannot be entered.

Subscribers that have any of the following BRCS Features with the AC (Authorization Code) field set to "Y" on the LINEFA form, will always fail to select a BFG with the matching feature. This use of the Authorization Code is not supported by the BFG capability.

- Account Code
- Attendant (ACVT)
- Authorization Code
- Distinctive Ringing
- Individualized Dialing
- Message Detail Recording
- Multi-Way Call
- Terminal Group and Station Restriction

For 5E14 and later, when BFGN is known and it has a CF (Call Forwarding) feature assigned in the FEATURE LIST on the BFG form where FCCS OPT on either the CFWFD form or the CFWLPA form for the corresponding CF feature is "Y", the following must be true:

- SHARED must be "N"
- SERHLN must be unknown
- ASSOC OE must be unknown

- this TN must be defined on the LINE form
- LINE CLASS CODE and TERMINATING TREATMENT must both be "INDIV" on the LCC form
- this TN must not be defined on the MLHLN form

FEATURE LIST

Fields Section 2.4 -Section 2.8 refer to the Feature List, consisting of up to 48 Feature/Cluster names with the associated initial Activity Status, Master Override Status, Authorization Code and Remote Access Services feature settings.

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2.4 FEATURE

Description: Enter the Feature or Cluster name.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

If the feature name used in one of the 48-Feature List rows is a cluster name that is defined on the CLUSTR input form, then fields A and M should be set to "Y" to pass level 1 and 2 error checks. The actual activity status for each feature name assigned to the CLUSTER name is defined on the CLUSTR input form and Master Override Status will be initialized to "Y".

If CKT TNs on DSLUSR form and/or TNs on LINE forms are assigned SC (Speed Call) feature(s) on either the LINEFA, BFG or an associated CLUSTR form, then the TN must also be defined on the LINE or DSLUSR form with an LCC/RAX value that corresponds to a CLASS OF SERVICE of "4WINDIV", "INDIV", "PBX", "ATND", "TWOPTY", "HOTMOTL", "MODEM", "ISDN", "ISATND" on the LCC form.

For 5E12 and later, the following assigments are not premitted if the LINEFA form(s) contain features that can only be assigned to DSLUSR form CKT TN(s) where the corresponding DSL form (DSLUSR form OE matches the DSL form DSL OE) has a DSL CLS of "STD", and these LINEFA form(s) were defined as a DSLUSR form CKT TN where the corresponding DSL form has a DSL CLS which is not "STD", or as a LINE form TN or as a Secondary Only TN on a SHTN form.

If the features were assigned via a BFG or CLUSTR form then the key to that form is included. See the TG-5 (DSL form attribute DSL CLS) for the types of features that can only be assigned to "STD" DSLs.

For 5E12 and later, the following LINEFA form(s) contain features that can not be assigned to:

- A DSLUSR form CKT TN where the corresponding DSL form DSL CLS is set to "STD" (DSLUSR form OE matches the DSL form DSL OE).
- A Primary analog TN, which is shared with a "STD" DSLUSR. This is a LINE form TN which is also a Key TN and matches the entry in the SHARED LIST ROW 1 TN field on a SHTN form, where TN or MLHG/TERM NBR entries in the SHARED LIST (rows 2 through 32) match a DSLUSR form CKT TN or CKT MLHG/CKT TERM where the DSL CLS on the corresponding DSL form is "STD".
- A Secondary ONLY TN, which is shared with an "STD" DSLUSR. This is a SHTN form Key TN that does not match the entry in the SHARED LIST ROW 1 TN, but where TN or MLHG/TERM NBR entries in the SHARED LIST (rows 1 through 32) match DSLUSR form CKT TN or CKT MLHG/CKT TERM where the DSL CLS on the corresponding DSL form is "STD".

The form header has the name of the type of form where the match was found with the LINEFA form that was in error. If the features were assigned via a BFG or CLUSTR form, then the key to that form is included. See the TG5 (DSL form, attribute DSL CLS) for the types of features which cannot be assigned to "STD" DSLs or Primary analog TN(s) shared to "STD" DSLs.

For 5E12 and later, if the following LINEFA form(s) contain ISDN Intercom Features (ICMFD form) that cannot be assigned to "STD" DSLs (DSLUSR forms where the DSL CLS is set to "STD" on the corresponding DSL form, DSLUSR form OE matches DSL form DSL OE) unless there is an entry in the EKTS field of "CACH" for the DSLUSR form, the DSLUSR form(s) which these LINEFA form(s) are associated with (LINEFA form TN matches DSLUSR form CKT TN) did not have a value of "CACH" entered in the EKTS field.

If the features were assigned via a BFG or CLUSTR form then the key to that form is included. See the TG-5 (DSL form, attribute DSL CL in Division 5, Section 1HS) for the types of features that cannot be assigned to "STD" DSLs.

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For 5E12 and later, if the following LINEFA form(s) contain features that can only be assigned to:

- "STD" DSLUSR forms (DSLUSR forms where the DSL CLS is set to "STD" on the corresponding DSL form, DSL OE matches DSLUSR form DSLUSR OE) or
- Shared analog LINE forms (LINE forms where SHARED is set to "Y" and the TN is also the Key TN on a corresponding SHTN form which is a Primary shared to STD DSLs only).

And these LINEFA forms are defined for lines on:

- DSLUSR forms where the corresponding DSL CLS was not "STD" or
- Shared analog LINE forms (LINE forms where SHARED is set to "Y" and the TN is also the Key TN on a corresponding SHTN form which is a Primary shared to non STD DSLs) or
- LINE forms with SHARED set to "N" or
- Secondary Only TNs on SHTN forms.

The form where the TN match was found is indicated. If the features were assigned via a BFG or CLUSTR form then the key to that form is included. See the TG-5 (DSL form, attribute DSL CLS in Division 5, Section 1H) for the types of features that can ONLY be assigned to "STD" DSLs or Shared analog lines to STD DSLs.

For 5E14 and later, when FEATURE contains a CF (Call Forwarding) feature or a cluster which includes a CF feature in the FEATURE LIST on the CLUSTR form and FCCS OPT on either the CFWFD form or the CFWLPA form for the corresponding CF feature is "Y", the following must be true:

- SHARED must be "N"
- SERHLN must be unknown
- ASSOC OE must be unknown

- this TN must be defined on the LINE form
- LINE CLASS CODE and TERMINATING TREATMENT must both be "INDIV" on the LCC form
- this TN must not be defined on the MLHLN form

2.5 A

Description: Is the BRCS feature initially active? This is the Activity Status.

For new (initial) 5ESS Switch offices built by 5ODA this field is in the initial Activity Status of the given feature assigned to a terminal. For retrofit office runs by 5ODA, this field represents the current or present active/inactive state of the feature.
Valid Entries: Y, N

Data Rules:

If the FEATURE NAME used in the FEATURE LIST is a real feature name (not a cluster name), then the value of the ACTIVITY STATUS for this FEATURE NAME is based on the following conditions:

If the FEATURE NAME is defined on a ACBFD (5616-1 Record) or ARSFD form (5608-1A/1B Record), then the ACTIVITY STATUS must equal "Y".

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If the FEATURE NAME is defined on a CFWFD (5614-1/2 Record), CWTFD (5603-1 Record), DRFD (5606-1 Record), PUOFD (5605-1 Record), PUTFD (5605-2 Record) or TGSRFD form (5607-1/2 Record) with the ACT TYPE equal to "AUTO", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on a TODFD form (5610-1 Record) with the CUSTOMER ACTIVATION equal to "N", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on a IDFD form (5601 Record) with CUST ACT/DEACT IDP equal to "N", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on a MWFD form (5602-1/2 Record) with the ACT/INACT OPTION equal to "ALWACT" or "INACT1CA", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on a CFWFD form with the ACT TYPE equal to "CODE", "CDDN", "CDDNC", or "CDDNCA", then the ACTIVITY STATUS must equal "N".

If the FEATURE NAME is defined on a MWFD form with the ACT/INACT OPTION equal to "ACT1CA", then the ACTIVITY STATUS must equal "N".

If the FEATURE NAME is defined on a CWTFD, DRFD, or TGSRFD form with the ACT TYPE equal to "CODE" and the DACT TYPE equal to "AUTO", then the ACTIVITY STATUS must equal "N".

2.6 M

Description: Is the feature on? This is the Master Override Status.

This is a software switch under the control of the 5ESS Switch owner, that provides the ability to temporarily remove a BRCS feature from a terminal without physically deleting any of the internal data structures associated with the feature.

When the Master Override Status is "Y", the initial (or current) Activity Status, A, determines whether the feature gets control. If the Master Override Status is "N", the terminal will be treated as if the feature were never assigned.

M should be equivalent to "Y" for all new 5ODA offices and "Y" or "N" for 5ODA retrofit purposes.
Valid Entries: Y, N

2.7 AC

Description: Is the Authorization Code Feature required?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

If AC is "Y" on this form or on an associated CLUSTR form, then exactly one Authorization Code feature (defined on an ATHFD form) must exist on a LINEFA, BFG, or associated CLUSTR form assigned to the TN.

If AC is "Y", and the corresponding feature is neither an ATH feature defined on an ATHFD form nor a cluster name, then the feature must be entered on the ATHFCOS form (5619-4 Record) for the CSV ATH Group associated with this TN. The CSV ATH Group is specified on the ATHLPA, BFG, or ATHFD form. For 5E6 and later, the feature must also be entered on the ATHFCOS form for the CSD ATH Group.

If the corresponding feature is a CLUSTR Name, then each feature with AC of "Y" on the CLUSTR form (5600 Record) must exist on the ATHFCOS form for the CSV ATH Group, and for 5E6 and later the CSD

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ATH Group, corresponding to the ATH feature entered on this or the CLUSTR form.

AC must be "N" when an ACSR, ACVT, BCLID, CPNBN, DISP, EDS, HI, Feature Button ICM, LID, MS, or RND feature is assigned in the FEATURE field. If FEATURE is a cluster that contains any of these features, the corresponding AC field(s) must be "N" on the CLUSTR form.

2.8 R

Description: Are RAS (Remote Access Services) requested on the feature?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

The only feature supported by RAS in 5E5 is RACF (Remote Access Call Forwarding). If "Y" is entered, the associated CFWFD form (5614-1/2 Record) must have DACT TYPE set to "CODE", and ACT TYPE set to "CDDN", "CDDNC", CDDNCA", or "CDCA1A"; for 5E6 and later ACT TYPE may also be "CODE".

```
linefa                    5ESS Switch          _
(5112)                OFFICE DATA ADMINISTRATION
                  TELEPHONE NUMBER FEATURE ASSIGNMENT

* 1. TN  __________       2. BFGN  _______ _
                        5. FEATURE LIST
   6.              12.             18.             24.
row FEATURE  A M AC R  FEATURE  A M AC R  FEATURE  A M AC R  FEATURE  A M AC R
 01 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 02 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 03 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 04 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 05 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 06 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 07 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 08 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 09 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 10 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 11 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
 12 _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _ _______ _ _ _  _
```

Figure 1 SAMPLE LINEFA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1M: 5113 RECORD
FEATURE ASSIGNMENT MULTI-LINE HUNT GROUP AND TERMINAL NUMBER FORM - MLHLNFA

1. GENERAL

The 5113 Record is available with 5E2and later Software Releases, and assigns BRCS (Business and Residence Custom Services) features to a particular customer Multi-Line Hunt Group/Terminal combination.

The MLHLNFA form assigns up to 48 BRCS features to a specific MLHG/Terminal combination. Each feature name in the MLHG/Terminal combination can be either a unique feature name or a CLUSTER NAME. CLUSTER NAMEs must be defined on the CLUSTR form (5600 Record) where they are expanded into 2 - 16 unique feature names. The total number of unique feature names on this form and associated CLUSTR forms must not exceed 48.

On the MLHLNFA form, an MLHG member may be assigned no more than 30 features from the following list: CFW, LID, EDS, DR, MS, PP, PUT, TGSR. For 5E7 and later, CPNBN, LSCA, LSCF, LSCR, and LSDA features are included. For 5E8 and later, BCLID and RND features are also included.

Wild Card feature Names of the format /AA* (AA equal to alphabetic) are not allowed to be assigned to a MLHG/TERM on the MLHLNFA form.

1.1 Disassociation of Speed Call and IDP Features

With 5E6 and later Software Releases, Speed Call (Abbreviated Dialing) features are assigned separately from IDP (Individualized Dialing Plan) features. Prior to this disassociation, a line can be assigned an IDP feature with a Speed Call feature which counts as one feature for that line.

This may raise the count of Terminal features for that line above the maximum of thirty features. A line only may be assigned up to thirty Terminal features, therefore, use discretion with a MLHLNFA form that has more than twenty-eight Terminal features (IDP feature included) at the time of retrofit. If the feature count is greater than thirty after retrofit, the SC1 (one-digit Speed Call) feature, if it has been assigned, will be canceled. If SC1 has not been assigned, then SC2 (two-digit Speed Call) will be canceled. If both features have been assigned to this line, both may be canceled.

1.2 Recent Change View

The corresponding Recent Change Views for this form are 1.8, 1.11 and 1.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

The MLHG Number must be assigned on the MLHLN form (5111-1/2 Record). The MLHG defined on the

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MLHLN must have its associated BRCS attribute set to "Y" and must be assigned to a LEN or SLEN.

For 5E12 and later, if the MLHG/TERM(s) on the MLHLNFA form are assigned a Call Pickup Originating feature with DPU TN assignment, defined on the PUMPA form or the BFG form, the Call Pickup Originating feature initiated by Code Calling, Loud Speaker Paging, Predesignated Pickup Group or Directed Pickup does not need such an assignment.

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Terminal (Member) Number.
Valid Entries:
- 1 - 2015
- 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The TERM Number must be assigned on the MLHLN form (5111-1/2 Record). The TERM assigned on the MLHLN must have its associated BRCS attribute set to "Y" and assigned to a LEN or SLEN.

For 5E8 and later, MLHGs/TERMs assigned an Advanced Service Interface feature via a MLHLNFA form with R set to "Y" indicating that RAS (Remote Access Services) are desired, and the FEATURE is defined on a CFWFD form; the corresponding CFWFD form must have an ACT TYPE of "CDDN", "CDDNC", "CDDNCA", "CDCA1A" or "CODE" and a DACT TYPE of "CODE".

For 5E9(1) and later, when MLHG/TERM on the MLHLNFA form is assigned a Bulk Calling Line Identification Feature (as defined on the BCLIDFD form) and has a TERM entry greater than 1, there must be either a TN entry on the associated MLHLN form or a (CKT) MLHG TN entry on the associated DSLUSR form and the NONHUNT field on the associated form must be "Y".

For 5E10 and later, when the MLHG/TERM(s) appears on the MLHLN form with a matching MLHG/TERM(s) on the MLHLNFA form with an ASP FEATURE or a CLUSTER containing an ASP feature assigned, and on the associated ASPFD or ASPLPA form an OHD TRIG NBR or TA TRIG NBR has been entered, the corresponding NSTRIG form SERVICE ALWD must not be "CSD".

For 5E10 and later, when MLHG/TERM(s) appear on the MLHLNFA form with an ASP feature either assigned on the MLHLNFA or corresponding CLUSTR form, the ASP feature is defined on a ASPFD or ASPLPA form with OHD TRIG NBR entered.The MLHG/TERM is either defined on a MLHLN form or on a DSLUSR form sa CKT MLHG/TERM where DSL CLS on the corresponding DSL form is "STD". Therefore, the only other BRCS features allowed to be assigned to the line are features defined on the ASPFD form with CONTROL equal to "TERM" and those defined on the following forms where the appropriate secured feature(s) has been purchased and corresponding SFID(s) are set to "Y" on the SFSYS form:

- The Advanced Service Platform (ASP) BRCS/OHD Interworking SFID 137 ACT equals "Y"
  - CFWFD with FWD COND equals "BUSY", "IDLE", "BOTH", "DBSY", "DIDL" or "DBTH"
  - CWTFD with INVOKE equals "TERM"
  - DISPFD
  - LIDFD
  - LSACFD
  - LSARFD

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- LSCAFD
- LSCARFD
- LSCFFD
- LSCOTFD
- LSCRFD
- LSDAFD
- MWFD with CONTROL not equal to "CODEALT"

- Additional ASP OHD Interactions with Account Code and CPN/BN SFID 150 ACT equals "Y"
  - ACCTFD
  - CPNBNFD
  - RNDFD

- ASP Network Element Services Signaling (NESS) SFID 185 ACT equals "Y"
  - ASPFD with CONTROL equals "NESS"

- ASP BRCS/OHD Interworking Extensions SFID 226 ACT equals "Y"
  - HIFD
  - MSFD
  - PUOFD with INITIATE equals "IPRDQ"
  - PUTFD with FEATURE FUNCTION equals "CALPU"
  - SCFD

2.4 BFGN

Description: Enter the BFGN (BRCS Feature Grouping Name).

Refer to the BFG Feature Definition (Division 2, Section 1U) for the restrictions concerning BFG Names.

Software Release: 5E4(2) and later
Valid Entries: 1 - 7 alphanumeric characters.
- The optional SUFFIX is a number between
- 1 - 9.

Data Rules:

The BFGN entered must be defined on a BFG form (5625 Record) as either a SELECTION BFGN or an

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UNIQUE BFGN.

If a SELECTION BFGN without a SUFFIX is entered in the BFGN field on this form, the best fit selection process is attempted.

If a specific SELECTION BFGN and SUFFIX is entered in the BFGN field on this form and the MLHLNFA feature list is empty, all of the features defined by that SELECTION BFGN and SUFFIX combination will be assigned to the subscriber's line. If the MLHLNFA feature list contains features that are not defined as part of the BFGN and SUFFIX features, these undefined features will be assigned to the line outside of the BFGN.

If a UNIQUE BFGN is entered in the BFGN field on the MLHLNFA form and the MLHLNFA feature list is empty, all of the features defined by that UNIQUE BFGN will be assigned to the subscriber's line. If the MLHLNFA feature list contains features that are not defined as part of the UNIQUE BFGN features, these undefined features will be assigned to the line outside of the BFGN.

Features assigned to subscribers can be a combination of features defined by a BFGN and the features indicated on the MLHLNFA form. If a specific SELECTION BFGN and SUFFIX or UNIQUE BFGN is entered, it is not necessary to enter features on the MLHLNFA. If the BFGN entered is a UNIQUE BFGN, a SUFFIX cannot be entered.

Subscribers that have any of the following BRCS features, with the AC (Authorization Code) field set to "Y" on the MLHLNFA form, will always fail to select a BFG with the matching feature. This use of the Authorization Code is not supported by the BFG capability.

- Account Code
- Attendant (ACVT)
- Authorization Code
- Distinctive Ringing
- Individualized Dialing
- Message Detail Recording
- Multi-Way Call
- Terminal Group and Station Restriction

For 5E14 and later, when BFGN is known and it has a CF (Call Forwarding) feature assigned in the FEATURE LIST on the BFG form, the FCCS OPT field on the CFWFD form for the corresponding CF feature must be "N".

FEATURE LIST

Fields Section 2.5 -Section 2.9 refer to the Feature List, which consists of up to 48 Feature/Cluster names with the associated initial Activity Status, Master Override Status, Authorization Code and Remote Access Services feature settings.

2.5 FEATURE

Description: Enter the feature or cluster name.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

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If the feature name used in one of the 48 Feature List rows is a cluster name that is defined on the CLUSTR input form, then fields A and M should be set to "Y" to pass level 1 and 2 error checks. The actual Activity Status for each feature name is defined on the CLUSTR input form and Master Override Status will be initialized to "Y".

For 5E14 and later, when FEATURE contains a CF (Call Forwarding) feature or a cluster which includes a CF feature in the FEATURE LIST on the CLUSTR form, the FCCS OPT field on the CFWFD form, for the corresponding CF feature, must be "N".

2.6 A

Description: Is the BRCS feature initially active? This is the Activity Status.

For a new (initial) 5ESS Switch built by ODA, this field is in the initial Activity Status of the given feature assigned to a terminal. For retrofit office runs by ODA, this field represents the current or present active/inactive state of the feature.
Valid Entries: Y, N

Data Rules:

If the FEATURE NAME used in the FEATURE LIST is a real feature name (not a cluster name), then the value of the ACTIVITY STATUS for this FEATURE NAME is based on the following conditions:

If the FEATURE NAME is defined on the ACBFD (5616-1 Record) or ARSFD form (5608-1A/1B Record), then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on the CFWFD (5614-1/2 Record), CWTFD (5603-1 Record), PUOFD (5605-1 Record) or TGSRFD form (5607-1/2 Record) with the ACT TYPE equal to "AUTO", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on the TODFD form (5610-1 Record) with the CUSTOMER ACTIVATION equal to "N", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on the IDFD form (5601 Record) with CUST ACT/DEACT IDP equal to "N", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on the MWFD form (5602-1/2 Record) with the ACT/INACT OPTION equal to "ALWACT" or "INACT1CA", then the ACTIVITY STATUS must equal "Y".

If the FEATURE NAME is defined on the CFWFD form with the ACT TYPE equal to "CODE", "CDDN", "CDDNC", or "CDDNCA", then the ACTIVITY STATUS must equal "N" .

If the FEATURE NAME is defined on the MWFD form with the ACT/INACT OPTION equal to "ACT1CA", then the ACTIVITY STATUS must equal "N".

If the FEATURE NAME is defined on the CWTFD or TGSRFD form with the ACT TYPE equal to "CODE" and the DACT TYPE equal to "AUTO", then the ACTIVITY STATUS must equal "N".

2.7 M

Description: Is the feature on? This is the Master Override Status.

This is a software switch under the control of the 5ESS Switch owner, that provides the ability to temporarily remove a BRCS feature from a terminal without physically deleting any of the internal data structures associated with the feature.

When the Master Override Status is "Y", the initial (or current) Activity Status, A, determines whether the feature gets control. If the Master Override Status is "N", the terminal will be treated as if the feature were

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never assigned. M should be equivalent to "Y" for all new 5ODA offices and "Y" or "N" for 5ODA retrofit purposes.

NOTE: Each unique feature name (not cluster name) must correspond to a BRCS feature name that is defined on one BRCS feature Definition forms described in Division 4.

Valid Entries: Y, N

2.8 AC

Description: Is the Authorization Code feature required?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

If AC is "Y" on this form, a BFG form, or on an associated CLUSTR form for one or more BRCS features, then exactly one Authorization Code feature (defined on an ATHFD form) must exist on an MLHLNFA, BFG, or associated CLUSTR form assigned to the MLHG/TERM.

If MLHG/TERM(s) have the AC field set to "Y" for one or more FEATUREs on the MLHLNFA form, BFG form, or an associated CLUSTR form; then all of these specific FEATUREs must exist on the ATHFCOS form for the CSV ATH GROUP NAME, which is defined on an ATHMPA, BFG or ATHFD form associated with this MLHG/TERM. In addition, the feature must also be entered on the ATHFCOS form for the CSD ATH GROUP.

If the corresponding feature is a CLUSTR name, then each feature with AC of "Y" on the CLUSTR form (5600 Record) must exist on the ATHFCOS form for the ATH GROUP, and for 5E6 and later the CSD ATH Group, corresponding to the ATH feature entered on this or the CLUSTR form.

AC must be "N" when an ACVT, BCLID, CPNBN, DISP, EDS, LID, MS, or RND feature is assigned in the FEATURE field. If FEATURE is a cluster, then for any of these features that appear in the cluster, the corresponding AC field(s) must be "N" on the CLUSTR form.

2.9 R

Description: Are RAS (Remote Access Services) requested on the feature?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If "Y" is entered, the associated CFWFD form (5614-1 Record) must have ACT TYPE set to "CDDN", "CDDNC", "CDDNCA", "CDCA1A", or "CODE", and the DACT TYPE set to "CODE".

```
mlhlnfa                    5ESS Switch     _
(5113)                OFFICE DATA ADMINISTRATION
          MULTILINE HUNT GROUP TERMINAL FEATURE ASSIGNMENT
* 1. MLHG   0035
* 2.TERM   0014
3. BFGN   CTX0006 _          6. FEATURE LIST
   8.             14.            20.            26.
row FEATURE  A M AC R  FEATURE  A M AC R  FEATURE  A M AC R  FEATURE  A M AC R
 01 /CFV     Y N N  N  _________ _ _ _  _  _________ _ _ _  _  _________ _ _ _  _
 02 /ACBC    Y N N  N  _________ _ _ _  _  _________ _ _ _  _  _________ _ _ _  _
```

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```
03 /CWC1    Y N N  N _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
04 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
05 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
06 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
07 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
08 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
09 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
10 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
11 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
12 _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _ _________ _ _ _ _
```

Figure 1 SAMPLE MLHLNFA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 1N: 5114 RECORD
MULTIPLE TNs FOR MULTILINE HUNT GROUPS FORM - MULTITN

1. GENERAL

The 5114 Record is available with 5E3and later Software Releases. It is used to assign additional Telephone Numbers to a MLHG Main TN, MLHG Subgroup TNs or a MLHG Member.

MULTITN forms must not be assigned to MLHG's that have a HUNT TYPE of "PSUCD" or "PMHG" on the MLHGFD form. The MLHG must not be a Modem Pool Group (the MPTYPE field must be blank on the MLHG form).

To link a MULTITN form to a UCD (Uniform Call Distribution) MLHG main TN, the MULTITN form must be assigned with the SUBTN and TERM fields blank. The corresponding MLHG form must have a value entered in the LISTED TN field.

To link a MULTITN form to an MLHG Subgroup TN, the MULTITN form must be assigned with the MLHG and SUBTN fields entered and the TERM field must be blank.

To link a MULTITN form to an MLHG Member, the MLHG and TERM fields must be entered and the SUBTN field must be blank. The corresponding MLHLN form must have a TN assigned and the ICP field must not be "Y". The corresponding MLHLN form must not have a Class Of Service of "TWOPTY", "4PSS" or "8PSS". Outdial MLHG Members may not be assigned on the MULTITN form.

With 5E6 and later Software Releases, distinctive ringing may be applied to analog MLHG terminals that have multiple TNs.

NOTE: Distinctive ringing may only be applied to Hunt Groups which have a HUNT TYPE of "REG", "HTC", or "UCD" on the associated MLHGFD form (5604 Record).

See Division 2, Section 4A for more information on Multi-Distinctive Ringing II.

1.1 Recent Change View

The corresponding Recent Change/ Verify view is 3.3.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TN

Description: Enter the TN (Telephone Number). The Telephone Number entered here must not be defined on any other Line Assignment form.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E12 and later, TNs on different MULTITN forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the MULTITN form are equivalent to an OFFICE

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CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, a 7-digit TN or NEXT TN on the MULTITN form must have the first 3 digits defined as OFFICE CODE on the NOC form. Also, the first 6 digits of a 10-digit TN or NEXT TN on the MULTITN form must be defined as NPA and OFFICE CODE on the NOC form.

2.3 MLHG

Description: Enter the Multiline Hunt Group Number. This Multiline Hunt Group Number must be defined on an MLHG form.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

2.4 TERM

Description: If this MULTITN form is to be linked to a MLHLN form, enter the appropriate MLHG Terminal Number. If this MULTITN form is to be linked to a Listed TN for an MLHG or linked to a MLHG Subgroup TN, leave this field blank.
Valid Entries: 1 - 2015

2.5 SUBTN

Description: If this MULTITN form is to be linked to an MLHG Subgroup TN, enter the 7-digit SUBTN number from the MLHG form. If this MULTITN form is to be linked to a Listed TN for an MLHG or linked to an MLHG Terminal, leave this field blank.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E12 and later, if the first 3 digits of the 7-digit SUBTNs on the MULTITN form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit SUBTN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.6 INWATS

Description: Is this TN INWATS?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If INWATS is "Y", then NONHUNT and ICP must be "N".

2.7 NONHUNT

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Description: Is this TN a Non-Hunt line?

Required Field.
Default: N

Data Rules:

NONHUNT must be "N" for Subgroup TNs and for Lead Terminals (TERM = 1). If NONHUNT is "Y", then INWATS and ICP must be "N".

2.8 ICP

Description: Is this is an Intercept TN? ICP is used to route terminating calls to Regular Intercept.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ICP is "Y" then NONHUNT and INWATS must be "N".

2.9 TRC

Description: Does this TN require a Call Trace?

Required Field.
Default: N
Valid Entries: Y, N

2.10 NEXT TN

Description: This field identifies the next TN for this Listed TN, Subgroup TN or Terminal TN.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E12 and later, if the first 3 digits of the 7-digit NEXT TNs on the MULTITN form are equivalent to an OFFICE CODE on the NOC form, but there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7- digit NEXT TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.11 MDN RING

Description: Enter the ringing pattern assigned to the dependent TN.

Software Release: 5E6 and later
Required Field.
Default: A
Valid Entries:

Valid MDN RING Entries

Entry	Definition
A	Repeated pattern of 2 seconds on and 4 seconds off, (normal ringing pattern).
B	Repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.

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C	Repeated pattern of 0.3 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on followed by 4 seconds off.
E	Repeated pattern of 0.3 seconds on, 0.2 seconds off, 1 second on, 0.2 seconds off, 0.3 seconds on followed by 4 seconds off.

- ***NOTE:*** The Multi-Distinctive Ringing II feature is secured and can only be assigned to Analog Hunt Groups. ISDN Hunt Groups will receive Ringing Pattern A. Since, multiple TNs assigned to "MUPH" MLHG lines do not have access to distinctive ringing, MDN RING must be set to "A" for MLHG's which have an associated MLHGFD form with HUNT TYPE set to "MUPH".

Lines with class of service "FC 4WIRE INDIV" are not supported.

MESSAGE SERVICE CENTER

The CLIENT TN TYPE field was added with the ISVM (Inter-Switch Voice Messaging) feature (see Div. 2, Sec. 1BG). This feature enhances the components of the MSS (Message Service System) to offer VM service across switches.

2.12 CLIENT TN TYPE

Description: Enter the client telephone number type. This field allows VM (Voice Messaging) users to choose which DN, either the OCDN (Originally Called Directory Number) or the RDN (Redirecting DN), is sent to the VM system. The RDN is the DN of the last forwarding party before a call terminates.

Only a group DN and the dependent DNs associated with the group can be assigned a CLIENT TN TYPE. This option is not assigned on a per-member basis. This field was added with the ISVM (Inter-Switch Voice Messaging) feature which is described in Div. 2, Sec. 1BG.

Software Release: 5E7 and later
Valid Entries:

Valid CLIENT TN TYPE Entries

Entry	Definition
OCDN	Originally Called Directory Number
RDN	Redirecting Directory Number

Data Rules:

When SUBTN is entered, CLIENT TN TYPE cannot be entered. When CLIENT TN TYPE is entered, TERM must not be entered or must be 1, and NONHUNT must be "N".

---

multitn 5ESS Switch _
5114 OFFICE DATA ADMINISTRATION
MULTIPLE TNs FOR MULTILINE HUNT GROUPS

* 1. TN 4548938 MESSAGE SERVICE CENTER
2. MLHG 0023 11. CLIENT TN TYPE RDN
3. TERM ____
4. SUBTN _____
5. INWATS N
6. NONHUNT N
7. ICP N
8. TRC N
9. NEXT TN _____
10. MDN RING A

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Figure 1 SAMPLE MULTITN FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
multitn                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5114)           MULTIPLE TNs FOR MULTILINE HUNT GOUPS

*1. TN      __________     MESSAGE SERVICE CENTER
#2. MLHG     ____          11. CLIENT TN TYPE ____
 3. TERM     ____
 4. SUBTN    __________
 5. INWATS   N
 6. NONHUNT  N
 7. ICP      N
 8. TRC      N
 9. NEXT TN  __________
10. MDN RING A
```

Figure 2 SAMPLE MULTITN FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1O: 5115/5115A/5115B RECORDS HUNDREDS GROUP(S) ASSIGNMENT FORM - HGRPAS

1. GENERAL

The HGRPAS form is available in 5E2 and later Software Releases and is used to assign a routing module and/or a route index for a hundreds group. A hundreds group is a set of 7-digit telephone numbers which have the first five digits in common. The first three common digits are referred to as the office code, which is defined in the OFFICE CODE field on a NOC form (5501 Record), the fourth common digit as the thousands digit and the fifth common digit as the hundreds digit. The range of telephone numbers 456-7800 to 456-7899 is an example of a hundreds group.

1.1 Routing Module

When an SM (Switching Module) is designated as the routing module for a particular hundreds group, the designated SM will have the terminating line information for all "defined" telephone numbers within the hundreds group. A listing of "defined" telephone numbers will appear later in this section. Call processing will use the routing module when routing to a telephone number served by this 5ESS Switch. The complete listing of designated routing modules is stored in each SM. When an SM has a call originating on either a line or a trunk, if after digit analysis and screening the determination is to route to a local office code, the SM will determine which SM is the routing module for the hundreds group of the called telephone number. The originating SM will then send a message to the SM that is the routing module requesting the information for terminating a call to the specific telephone number. If the telephone number is defined with a physical port, a path will be set up between the originator and the SM where the physical port resides. The terminating SM may be the originating SM, the routing SM or another SM.

1.2 Remote Modules

In 5E5 and later Software Releases, a remote module can be a routing module under given conditions to be explained later.

1.3 Route Index

When a route index is entered for a particular hundreds group, that indicates the call should not route to a physical line but rather the call routes to a trunk group defined for the route index. Whenever an entire hundreds group is used for one PBX-DID route, the route index entered on this form eliminates submitting one hundred LINE forms (5109-1 Record). The use of this form can therefore save substantial memory and real time used for call processing. Reconstruction to a 7-digit number is still done when the route index is entered here instead of on individual LINE forms.

When a telephone number, within a hundreds group assigned a route index on a HGRPAS form, must be routed in a manner different than the rest of the hundreds group, then the telephone number must be "defined" on a form that allows such definitions. The associated route index on the "defining" form will take precedence over the route index assignment on the HGRPAS form while the remainder of the hundreds group without "defining" forms will continue to apply the route index on the HGRPAS form.

A hundreds group may be assigned both a routing module and a route index. An example of this application is a PBX where the majority of the DNs in the hundreds group are served from the PBX but a few DNs physically terminate in the 5ESS. For this case, the physical terminations would take precedence over the route index. 5ESS Switch call processing will first use the routing module to check if the called DN terminates in the 5ESS Switch Office. If not found, the route index will be used to route the call to a trunk group for termination to the PBX. This call processing functionality applies to both circuit and packet hundreds groups.

The use of 5ESS Switch call processing in this manner can eliminate cumbersome digit analysis tables when DNs in a hundreds group are randomly assigned between switch entities as would be the case in

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the above 5ESS Switch/PBX illustration. However, it is important to note that other considerations such as vacant code treatment must be taken into account which could preclude the use of this functionality. In the above example, the PBX is assumed to provide vacant code treatment if the called DN is not a working DN in the PBX.

1.4 Routing Modules Assigned Via Algorithms

The ODA process allows the customer to assign a routing module and/or a route index to any quantity of hundreds groups within the 5ESS Switch. It is not required that the customer enter a HGRPAS form for every hundreds group. The ODA process will apply a series of algorithms to assign a routing module to those hundreds groups that did not receive an assignment on a HGRPAS form. The algorithms pertain strictly to hundreds groups that have telephone numbers specified on "defining" forms. The algorithms do not assign or alter route indexes.

In 5E5 and later Software Releases, the algorithms changed substantially as did the definition of which SMs are eligible to be a routing module. The algorithms determine all the hundreds groups that have defined telephone numbers but are without a customer-assigned routing module. The algorithms then determine all the SMs that are eligible to be a routing module. An operational host SM can always be an eligible routing module.

The RM RTG RSTRCT field on the OFCOPT form (5509 Record) is used to indicate the usage of remote modules (ORM, RSM, TRM) as routing modules. If the field is set to "Y", then an operational remote module may be a routing module if and only if all of the defined telephone numbers within the hundreds group physically reside in the same Remote Site. The Remote Site is specified in the REMOTE SITE field on an EQIM form (5700-1 Record).

If the RM RTG RSTRCT field on the OFCOPT form is set to "N", then an operational remote module may be a routing module regardless of the physical location of the members of the hundreds group.

The assignment process has three major goals:

A. To select a remote module to be the routing module when all or the preponderance (depending on the value in the aforementioned RM RTG RSTRCT field) hundreds group members reside within the same Remote Site. This reduces the routing load on host SMs and avoids the duplication of terminating data on a host SM and a remote SM.

B. To select a routing module (in the host SM case) that has the greatest number of hundreds group members residing in it. When the routing module is also the module where the termination resides, one less SM is involved in the call processing which reduces inter-SM communication and saves real time.

C. To balance the quantity of hundreds groups across the eligible SMs.

An overview of the algorithms that ODA applies for assigning hundreds groups to routing modules follows. There are two distinct sets of algorithms; the choice is entirely dependent on the value in the RM RTG RSTRCT field on the OFCOPT form. Both sets of algorithms observe a "limit". The limit is essentially the quotient of the quantity of hundreds groups and the quantity of eligible SMs. The limit thus serves to balance the loading of hundreds groups across the eligible SMs.

If the value in the field is set to "N", then a remote module can be a routing module regardless of the physical terminations of the members of the hundreds group. In this case, the algorithm has three steps:

- The routing modules indicated on the HGRPAS forms are honored, regardless of any exceeding of the "limit";
- Remaining (unassigned) hundreds groups are assigned to the eligible SM, which is below the limit, where the most terminations within the hundreds group reside;

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- Remaining hundreds groups are assigned to the SM with the fewest hundreds groups already assigned to it.

If the value in the RM RTG RSTRCT field is set to "Y", then a remote module can be a routing module if and only if all the terminations within the hundreds group reside within the SM or the remote cluster. In this case, the algorithm has five steps:

- The routing modules indicated on the HGRPAS forms are honored, regardless of any exceeding of the "limit";
- A hundreds group with all its terminations on a single remote cluster will be assigned to the SM within the cluster that has the most terminations within the hundreds group, provided that the SM is below the limit;
- Hundreds groups with host SM terminations will be assigned to that SM, provided that the SM is below the limit;
- A hundreds group with all its terminations on a single remote cluster that was not assigned in Step 2 (because of limit violations) will be assigned to another SM within the cluster if the SM is below the limit;
- Those hundreds groups that were not assigned in the first four steps will be assigned to the host SM with the fewest hundreds groups already assigned to it.

NOTE: The default value of "Y" is normally used in order to prevent Remote Modules from containing Routing Data for Local Modules. When a Remote Module is isolated and contains Routing Data for a Local Module, Digit Analysis cannot be completed for any call needing the Routing Data in the Remote Module.

1.5 Packet Routing

Two additional changes available in 5E5 and later Software Releases are a Packet Routing Module and a SAVE field. The SAVE field is used to indicate which Circuit Routing Module and/or Packet Routing Module customer assignments are to be saved across Retrofit and Large Terminal Growth procedures.

In the 5E5 Software Release, an eligible circuit routing module is one that is defined on an EQIM form with the SM USAGE field set to "IM", "HIM", "ORM", "TRM" or "RSM" and the EQSTATUS field set to "O". An eligible packet routing module is one that is defined on an EQIM form with the SM USAGE field set to "IM", "HIM", "ORM", "TRM" or "RSM", the EQSTATUS field set to "O" and the CONFIGURATION field set to "LOADED". The selection of a remote module as a routing module is dependent upon the value entered in the RM RTG RSTRCT field on the ODAOPT form.

The 5ODA algorithms are only applied to telephone numbers that are defined within the 5ESS Switch. If the HGRPAS form is used to assign only a route index to a hundreds group, but there are not any defined telephone numbers within the hundreds group, the algorithms will not assign a routing module to the hundreds group.

In the 5E5 Software Release, the following form fields are used to define telephone numbers that are in hundreds groups assigned (by the customer or 5ODA) a circuit routing module:

CIRCUIT ROUTING MODULE	
Form (Record)	**TN**
ACQS (5425)	QUOTE TN (last seven digits, only if the AUTO QUOTE field is set to "Y")
DSLUSR (5908)	CKT TN
DSLUSR (5908)	MLHG TN (under CKT SWITCHING heading)

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LINE (5109)	TN
MLHG (5110)	LISTED TN
MLHG (5110)	HIGHEST LISTED TN (and all telephone numbers between the LISTED AND HIGHEST LISTED TNs)
MLHG (5110)	SUBTN(1-8) (for TNs defined on a MLHG form, the HUNT TYPE of the MLHG, as defined on a MLHGFD form (5604 Record) must not be set to "PSUCD")
MLHLN (5111)	TN
MTNDR (5550)	TN
MULTITN (5114)	TN
PSMTN (5925)	ACCESS TN
SHTN (5902)	TN (only if TN does not equal the first TN in the SHARED LIST)

In the 5E5 Software Release, the following form fields are used to define telephone numbers that are in hundreds groups assigned (by the customer or 5ODA) a packet routing module:

PACKET ROUTING MODULE	
Form (Record)	**TN**
AMLBDSL (5447-1)	PKT TN
DSL (5907)	TN (under the PERMANENT PACKET B1 heading)
DSL (5907)	TN (under the PERMANENT PACKET B2 heading)
DSLUSR (5908)	DPKT TN
DSLUSR (5908)	MLHG TN (under the D-CHANNEL PACKET SWITCHING heading)
DSLUSR (5908)	ODB TN
MLHG (5110)	LISTED TN
MLHG (5110)	HIGHEST LISTED TN (and all telephone numbers between the LISTED AND HIGHEST LISTED TNs; the HUNT TYPE of the MLHG

In 5E5 and later Software Releases, the 5115 Record lists, for each hundreds group used in the 5ESS Switch, a circuit routing module and/or a packet routing module and/or a route index. Additionally, a SAVE field (to be explained subsequently) appears.

The 5115A Record lists, by SM, all the hundreds groups which use that SM as a circuit routing module.

The 5115B Record lists, by SM, all the hundreds groups which use that SM as a packet routing module.

1.6 Recent Change View

The corresponding Recent Change view for this form is 4.14.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

2.3 * OFFICE CODE

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Description: Enter the Office Code.

Required Field.
Valid Entries: 000 - 999

Data Rules:

If the first digit of OFFICE CODE is 0 or 1 then no PKT SM field can be entered.

For 5E12 and later, when the OFFICE CODE and/or NPA/OFFICE CODE combinations are assigned on the HGRPAS input form, they must be defined on the NOC form.

For 5E12 and later, if the HGRPAS forms have an OFFICE CODE defined and there are multiple NOC forms with the same value for OFFICE CODE, NPA will also have to be defined on the HGRPAS form.

2.4 * THOUSANDS DIGIT

Description: Enter the fourth digit of the telephone numbers that comprise the hundred group.

Required Field.
Valid Entries: 0 - 9

2.5 HUNDREDS DIGIT

Description: The fifth digit of the telephone numbers that comprise the hundred group are pre-filled on the HGRPAS form and the 5115 office record.
Valid Entries: 0 - 9

Data Rules:

For 5E12 and later, Route Indexes that are assigned to particular Hundreds Group values on the HGRPAS form for the associated Numbering Plan Area Code, Office Code and Thousands Digit combination, must be defined on the RTIDX input form.

2.6 CKT SM

Description: Enter the Switching Module that will serve as the circuit routing module for the hundreds group. Refer to the GENERAL section to determine which telephone numbers are appropriate for a circuit routing module.

Software Release: 5E5 and later.
Valid Entries: 1 - 192

2.7 PKT SM

Description: Enter the Switching Module that will serve as the packet routing module for the hundreds group. Refer to the GENERAL section to determine which telephone numbers are appropriate for a packet routing module.

Software Release: 5E5 and later.
Valid Entries: 1 - 192

Data Rules:

For 5E9(2) and later, when SM's are defined as PKT SM (packet routing SMs) on the HGRPAS form, then the corresponding EQIM form must have a CONFIGURATION value which supports Packet Switching.

2.8 ROUTE INDEX

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Description: Enter the route index value to be applied for calls terminating to the telephone numbers within the hundreds group.

For 5E5 and later Software Releases, this field has meaning only for circuit telephone numbers, as opposed to packet telephone numbers.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

  For 5E13 and later: 1 - 16382

Data Rules:

For 5E5 and later Software Releases, if a HGRPAS form is submitted, then at least one CKT SM or PKT SM or ROUTE INDEX must be entered.

The route index entry must be defined on an RTIDX form (Record 5303).

2.9 PORTED OUT

Description: Is this hundreds group ported out?

When PORTED OUT is left blank, the value is inherited from the corresponding PORTED OUT field on the NOC form. Otherwise, "Y" indicates that this hundreds group is ported out and "N" indicates that it is reserved.

Software Release: 5E14 and later
Valid Entries: Y, N, or blank

Data Rules:

- When PORTED OUT *X* is "Y" (where *X* is 0-9), ROUTE INDEX *X* must not be entered .
- At least one CKT SM, PKT SM, ROUTE INDEX or PORTED OUT value must be entered.
- When any PORTED OUT field is entered, ACT must equal "Y" for SFID 530 on the SFSYS form.

2.10 SAVE

Description: The field is used to indicate that the circuit routing module or packet routing module or both, that are assigned to a particular hundreds group, are to be saved for an office undergoing a Retrofit or a Large Terminal Growth procedure. During the Retrofit or Large Terminal Growth procedures, 5ODA will apply the algorithms, explained in the GENERAL section, that assign routing modules to hundreds groups. An entry in the SAVE field can only be made during a Retrofit or Large Terminal Growth Procedure. The SAVE field must not have an entry for a new office. The 5ODA algorithms will respect the assignments indicated on HGRPAS forms in a new office.

The field is directly related to the HUNDREDS GROUP SM ROUTING ASSIGNMENT field on the ODAOPT form (5523 Record). The HUNDREDS GROUP SM ROUTING ASSIGNMENT field offers the user three options for preserving routing module assignments across Retrofits and Large Terminal Growth procedures. The three choices are:

- REALLOCATE: 5ODA will apply the series of algorithms to every hundreds group in the 5ESS Switch. 5ODA will completely ignore the existing routing module assignments.

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- PARTIAL: 5ODA will apply the series of algorithms only to those hundreds groups that are associated with either no entry or an entry of "NONE" in the SAVE field on HGRPAS forms. If the SAVE field has an entry of "CKT", "PKT" or "BOTH", the existing assignment will be preserved.

- PRESERVE: 5ODA will not apply the series of algorithms to any hundreds groups in the 5ESS Switch regardless of the SAVE entries on HGRPAS forms. Every existing assignment will be preserved.

The user, through the combination of the SAVE field on the HGRPAS form and the HUNDREDS GROUP SM ROUTING ASSIGNMENT field on the ODAOPT form, can control which routing module assignments (if any) are to be retained across a Retrofit or Large Terminal Growth procedure.

Software Release: 5E5 and later.
Valid Entries:

Valid SAVE Entries

Entry	Definition
CKT	Save the circuit routing module (CKT SM).
PKT	Save the packet routing module (PKT SM).
BOTH	Save the circuit (CKT SM) and packet routing (PKT SM) modules.
NONE	Do not save the circuit (CKT SM) or packet routing (PKT SM) modules; not entering a value has the same result.

Data Rules:

If "CKT" is entered in this field, then the corresponding CKT SM must have an entry.

If "PKT" is entered in this field, then the corresponding PKT SM must have an entry.

If "BOTH" is entered in this field, then the corresponding CKT SM and PKT SM must have entries.

For 5E12 and later, if the SAVE field on the HGRPAS form, is set to "CKT", "PKT" or "BOTH", and the ROUTING ASSIGNMENT field on the ODAOPT form is equal to "REALLOCATE" or "PRESERVE", the SAVE field will be ignored.

```
hgrpas                  5ESS Switch
SCREEN 1 OF 2             OFFICE DATA ADMINISTRATION
(5115/5115A/5115B)      HUNDREDS GROUP(S) ASSIGNMENT

(*)1. NPA          ___
 * 2. OFFICE CODE    ___
 * 3. THOUSANDS DIGIT _
```

```
hgrpas                  5ESS Switch        _
SCREEN 2 OF 2             OFFICE DATA ADMINISTRATION
(5115/5115A/5115B)      HUNDREDS GROUP(S) ASSIGNMENT

HUNDREDS DIGIT  CKT SM     PKT SM     ROUTE INDEX      SAVE

    0       4. ___     14. ___     24. ____     34. ____
    1       5. ___     15. ___     25. ____     35. ____
    2       6. ___     16. ___     26. ____     36. ____
    3       7. ___     17. ___     27. ____     37. ____
    4       8. ___     18. ___     28. ____     38. ____
    5       9. ___     19. ___     29. ____     39. ____
```

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```
6       10. ___    20. ___    30. ____    40. ____
7       11. ___    21. ___    31. ____    41. ____
8       12. ___    22. ___    32. ____    42. ____
9       13. ___    23. ___    33. ____    43. ____
```

Figure 1 SAMPLE HGRPAS FORM 5E12 AND 5E13 SOFTWARE RELEASES

```
hgrpas                    5ESS Switch
SCREEN 1 OF 2               OFFICE DATA ADMINISTRATION
(5115/5115A/5115B)          HUNDREDS GROUP(S) ASSIGNMENT

(*)1. NPA          ___
 * 2. OFFICE CODE    ___
 * 3. THOUSANDS DIGIT _
```

```
hgrpas                    5ESS Switch          _
SCREEN 2 OF 2               OFFICE DATA ADMINISTRATION
(5115/5115A/5115B)          HUNDREDS GROUP(S) ASSIGNMENT

HUNDREDS DIGIT  CKT SM     PKT SM      ROUTE INDEX    PORTED OUT    SAVE

    0       4. ___   > 14. ___   > 24. _____   > 34. _     > 44. ____
    1       5. ___     15. ___     25. _____     35. _       45. ____
    2       6. ___     16. ___     26. _____     36. _       46. ____
    3       7. ___     17. ___     27. _____     37. _       47. ____
    4       8. ___     18. ___     28. _____     38. _       48. ____
    5       9. ___     19. ___     29. _____     39. _       49. ____
    6      10. ___     20. ___     30. _____     40. _       50. ____
    7      11. ___     21. ___     31. _____     41. _       51. ____
    8      12. ___     22. ___     32. _____     42. _       52. ____
    9      13. ___     23. ___     33. _____     43. _       53. ____
```

Figure 2 SAMPLE HGRPAS FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 1P: 5116 RECORD
EMERGENCY OFFICE TN ASSIGNMENT FORM - EMROFC

1. GENERAL

The 5116 Record is available with 5E2 and later Software Releases.

For 5E4(2) and earlier Software Releases, Remote Site refers to an RSM (Remote Switching Module). For 5E5 and later, Remote Site refers to an RSM, ORM (Optically Remote Module), or TRM (Two-Mile Optically Remote Module).

For 5E4(2) and earlier, the AM (Administrative Module) can reroute up to 100 emergency calls that terminate on any SM (Switching Module) or RSM (Remote Switching Module) that has gone into isolation (Stand-Alone). Calls originated outside an isolated module to an Emergency Office TN within the module will be rerouted using the data input on this form.

For 5E5 and later, the AM can reroute up to 500 emergency calls that terminate on any SM or Remote Module that has gone into Stand-Alone. Calls originated outside an isolated module to an Emergency TN within the module will be rerouted using the data on this form.

For 5E6 and later, the rerouting is accomplished in the CMP (Communication Module Processor) rather than in the AM.

Calls to emergency numbers that originate from a customer assigned to a switching module that is in Stand-Alone or isolation must be rerouted based on data input on an EMRNM form (5108 Record).

For 5E5 and later, if a range of TNs is entered in the EMER TN field and the OUTPULSED DIGITS field is left blank and the RI field is entered, then the dialed digits will be outpulsed over the trunk.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.9.

View 4.9 corresponds to both the EMRNM form (5108 Record) and EMROFC form (5116 Record). When REMOTE SITE is 1 - 174 on View 4.9, it refers to the EMRNM form; when REMOTE SITE is 0, it refers to the EMROFC form.

2. FORM AND RECORD ENTRIES

2.1 * EMERGENCY TN

Description: Enter the required Emergency Telephone Number. This is the number served by a particular Local SM or Remote Module designated as an emergency number requiring rerouting if the SM or Remote Module is in Stand-Alone operation.

Normal expected values are 7- or 10-digit numbers of the type NXX-XXXX or NPA-NXX-XXXX.

If a three-digit code is to be rerouted, the CONV form (5300-4 Record) must be checked to see if the three-digit code is being converted. If it is code converted, enter the converted telephone number instead of the three digit-code.

For 5E5 and later, if stand-alone is available on the Remote Site or Local SM, then a range of Telephone Numbers may be entered for an Emergency Number. Each entry in the emergency routing list is either a TN or a range of TNs that need to have the same alternate routing treatment when a switching module is isolated from the host 5ESS Switch.

To specify a range of telephone numbers, use the wild-card character (*). Possible entries using the

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wild-card character are as follows:

- 0
- XXX
- XXX-XXXX
- XXX-XXX-XXXX
- XXXXX-XXX-XXX-XXXX
- XXX-XX**
- XXX-****
- ***-****
- XXX-XXX-XX**
- XXX-XXX-****
- XXX-***-****
- XXXXX-***-***-****

The X is a value 0-9. The wild-card (*) character matches any dialed digit at that position.

When determining the order of precedence for matching emergency routing TNs, if an exact match fails on the entire TN, then partial matches are attempted with wild-card digits (*) in the hundreds group, in the whole office code, in the entire area code, and lastly for all 15 digits.

A range of telephone numbers specified with a wild-card character must not overlap another range of telephone numbers for a remote site or local SM in this relation. If an overlap occurs and the modules in stand-alone are connected by IMTs, a routed number that is overlapped would appear to terminate in both modules. This would result in the number looping through all the members of the IMT group until it is blocked.

After a call has been routed to a fixed route or announcement trunk, reorder is given instead of emergency routing. For example, this would occur when a mis-dialed call to an unassigned TN accesses the routing module for that number. Calls to the Operator or 911 that would have terminated to announcement because of stand-alone condition are allowed to emergency alternate route.

Stand-Alone Test Lines allow testing of emergency number rerouting for an RSM/ORM/SM site when the RSM/ORM/SM site is not in stand-alone mode. The lines must have an LCC (Line Class Code) with a SERVICE CLASS of "SATSTLN" and a TERMINATING TREATMENT of "INDIV". When conducting the stand-alone rerouting test from the RSM/ORM/SM site, the lines may be used to originate and dial each of the emergency numbers which is normally rerouted during stand-alone operation.

Required Field.

Valid Entries:
- 5E9(1) and earlier: 1 - 15 digits (0 - 9, "#", or "*")
- 5E9(2) and later: 1 - 15 digits (0 - 9 or "*")

2.2 * PREFIX

Description: Enter the dialed prefix digit.

Required Field.
Valid Entries: 0, 1, or "NONE"

2.3 ALTERNATE TN

Description: Enter a Alternate Telephone Number to which the calling customer will be routed.
Valid Entries:

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- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

For 5E3 and earlier, the ALTERNATE TN must be defined on a LINE (5109 Record) or MLHLN form (5111 Record). For 5E4(2) only, it must be defined on a LINE or MLHLN form, or as a circuit switched voice TN on a DSL (5900 Record) or DSMLHLN form (5901 Record). For 5E5 and later, it must be defined on a LINE or MLHLN form, or as a CKT TN or MLHG TN on the DSLUSR form (5908 Record).

The Telephone Number must be associated with an equipment number, i.e., LCEN, LEN, or SLEN, located on another Local SM or Remote Module in the office.

When the ALTERNATE TN is entered, ROUTE INDEX and OUTPULSED DIGITS must be blank.

For 5E10 and later, ALTERNATE TN(s) assigned on the EMROFC form, must be defined on either the LINE or MLHLN forms with an associated NUMBER, where OE TYPE is equal to "A", (5E12 and later) "C", "E" (5E11 and later),"G", "L" or "S"; or on a MLHG form as a LISTED TN or on the DSLUSR form (as CKT TN or CKT SWITCHING MLHG TN) where the OE is entered.

For 5E12 and later, if the first 3 digits of the 7-digit ALTERNATE TNs on the EMROFC form are equivalent to an OFFICE CODE on the NOC form, but there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit ALTERNATE TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.4 ROUTE INDEX

Description: Enter the Route Index associated with the Outgoing Trunk Group to which calling customers will be routed when they call the Telephone Number entered in the EMERGENCY TN field. The physical trunk(s) must be located in a different switching module than the one in which the emergency number normally terminates.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The value entered in this field must be defined on the RTIDX form.

For 5E4(2) and earlier, if an entry is made in this field, OUTPULSED DIGITS must be entered and ALTERNATE TN must be blank.

For 5E5 and later, if this field is entered, the ALTERNATE TN field must be blank.

2.5 OUTPULSED DIGITS

Description: If a Route Index is entered in the ROUTE INDEX field, enter the digits to be outpulsed over the Trunk Group. The digits are subject to digit deletion and prefixing that is defined for the Route Index.
Valid Entries: 1 - 15 digits.

Data Rules:

If this field is entered, the ROUTE INDEX field must be entered and the ALTERNATE TN field must be

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blank.

```
emrofc                    5ESS Switch          _
(5116)                OFFICE DATA ADMINISTRATION
                   EMERGENCY OFFICE TN ASSIGNMENT


* 1. EMERGENCY TN      6448733
* 2. PREFIX            NONE

  3. ALTERNATE TN      7278732

  4. ROUTE INDEX       ____
  5. OUTPULSED DIGITS  _________________
```

Figure 1 SAMPLE EMROFC FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
emrofc                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5116)                EMERGENCY OFFICE TN ASSIGNMENT

*1. EMERGENCY TN _________________
*2. PREFIX       ____

 3. ALTERNATE TN ___________

 4. ROUTE INDEX       ____
 5. OUTPULSED DIGITS _________________
```

Figure 2 SAMPLE EMROFC FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1Q: 5117 RECORD
PERSONAL IDENTIFICATION DEFINITION FORM - PIDEF

1. GENERAL

The 5117 Record is available with 5E5 and later Software Releases. The form is used to define the PIN (Personal Identification Number) used by RAS (Remote Access Services) to verify a customer's access to RAS for a particular TN.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.39.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the local telephone number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

If the PIN will be used for the ACSR (Automatic Customer Station Rearrangement) feature, the TN must be defined as a CKT TN on the DSLUSR form. If it will be used for RACF (Remote Access to Call Forwarding), the TN must be defined on the LINE, MLHLN, DSLUSR, or SHTN form.

The TN must be defined on one of the following forms:

For 5E7 only, ACQS, DFLTSRV, DSLUSR (CKT TN or MLHG TN), LINE, MLHG, MLHLN, MTNDR, MULTITN, PSMTN, RDTAPORT, or SHTN form.

For 5E8 and later, ACQS, DSLUSR (CKT TN or MLHG TN), LINE, MLHG, MLHLN, MTNDR, MULTITN, PSMTN, RDTAPORT, or SHTN form.

If the TN is defined on a LINE form, and the corresponding LCC form (5306 Record) has TERMINATING TREATMENT set to "RAPVN", a PIDEF form cannot be entered for that LINE form.

For 5E12 and later, TNs on different PIDEF forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the PIDEF form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, the TN(s) on a PIDEF form must have a corresponding TN defined on a ACQS, DSLUSR (CKT TN or MLHG TN), LINE, MLHG, MLHLN, MTNDR, MULTITN, PSMTN, RDTAPORT, or SHTN form.

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2.3 PIN

Description: Enter the Personal Identification Number.
Valid Entries: 0000 - 9999

```
pidef                    5ESS Switch
(5117)                OFFICE DATA ADMINISTRATION
                   PERSONAL IDENTIFICATION DEFINITION

*1. TN  3457687
 2. PIN 1212
```

Figure 1 SAMPLE PIDEF FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
pidef                    5ESS Switch
                      OFFICE DATA ADMINISTRATION
(5117)                PERSONAL IDENTIFICATION DEFINITION

*1. TN  __________
 2. PIN ____
```

Figure 2 SAMPLE PIDEF FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1S: 5174-1/2/3/4 RECORD
REMOTE TERMINAL (TR303/TR008) - RTERM

1. GENERAL

The RTERM form (5174 Record) is available with the 5E8 and later Software Releases. It is used by the switch owner to define all remote terminals connected to IDCU (Integrated Digital Carrier Unit) equipment. For 5E12 and later, this form can also be used for remote terminals connected to DNU-S (Digital Networking Unit - Sonet equipment. Two types of RTs (remote terminals) can be connected to an IDCU: TR008 and TR303; however, only the TR303 is applicable to a DNU-S. Effective with the 5E12 Software Release, the screen format was modified to allow additional alarms.

1.1 TR008 RT

A TR008 RT can handle up to 96 analog lines, and from 1 to 5 IFACs (IDCU Facilities) can be connected to a TR008 RT. After a TR008 RT is in and "operational" state, IDCU analog ports can be assigned on the LINE (5109 Record), MLHLN (5111 Record), and TRUNK (5204 Record) forms.

When Telephone Number(s) are assigned on the LINE or MLHLN input forms to IDCU equipment (OE TYPE of "G") the following correspondence must hold on the RTERM input form: the SM/IDCU/RT values of the NUMBER must be defined on an RTERM form and the GEN LINE NO. value must be assigned to an appropriate IDCU DIGRP with its STATUS set to "O" for operational. Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

GEN LINE NO to RTERM Form Correspondence

GEN LINE NO.	RTERM
NUMBER[1,3]	SM
NUMBER[4,5]	UNIT NUMBER
NUMBER[6,7]	RT EX
NUMBER[8,11]	DIGRP - STATUS
0001-0024	A O
0025-0048	B O
0049-0072	C O
0073-0096	D O

1.2 TR303 RT

Some TR303 RTs can handle up to 2048 analog and ISDN lines and from 2 to 28 IFACs can be connected to a TR303 RT. After a TR303 RT is in an "operational" state, the IDCU analog ports can be assigned on the LINE, MLHLN and TRUNK forms, and, IDCU ISDN ports can be assigned on the DSL (5902 Record) and DSLUSR (5908 Record) forms.

All IDCU equipment in an office must use the same OE TYPE (Office Equipment Type). There are two IDCU OE types. OE TYPE of "M" is associated with either an analog or ISDN IDCU Equipment Number with an OE SIZE of 08. OE TYPE of "G" is associated with either an analog or ISDN IDCU equipment number with an OE SIZE of 10. Additional information on OE TYPE can be found in sections where equipment assignments are made (e.g., LINE form (5109 Record). For additional information on OE SIZE, see the OFCOPT form (5509 Record).

1.3 EQIDCU Requirements

When an RTERM form is entered, the related IDCU equipment must be defined on an EQIDCU form (5846 Record). For more information on the EQIDCU form, see Division 8, Section 48.

1.4 EQIFAC Requirements

Any IFAC equipment defined on the RTERM form must be defined on an EQIFAC form (5847 Record). IFAC positions consist of 0-19 for LSI 0 and 20-39 for LSI 1. The PUB43801 field must be set to "N". For more information on the EQIFAC form, see Division 8, Section 49.

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For DNU-S, an associated EQVT form (5858 Record) must be defined. See also the UNIT TYPE field for more detailed data rules.

1.5 Recent Change View

The corresponding Recent Change View for this form is 18.15.

2. FORM ENTRIES - 5174-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the identification number of the Switch Module.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For each RTERM form, wher the UNIT TYPE is equal to "IDCU", there must be a corresponding EQIDCU form with matching SM and UNIT NUMBER fields.

For 5E9(2) and later, each value of SM entered on the RTERM form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports IDCU (Integrated Digital Carrier Units).For the CONFIGURATION that supports IDCU see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks). The following applications define the possible LLCB assignments:

LLCB			
Form	**SM**	**SHELF CHL GRP**	**Increment**
AMLBDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	OE[1,3]	PPB1 ISCN[1,3]	by 1 for each PPB1 ISCN defined.
		PPB2 ISCN[1,3]	by 1 for each PPB2 ISCN defined.
		D ISCN[1,3]	by 1 if a matching DSLUSR form is not found
DSLUSR	OE[1,3]	D ISCN[1,3] on the corre- sponding DSL form	by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered.
			by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
		ODB ISCN1[1,3] ODB ISCN2	by 1 if only ODB ISCN1 is entered.
			by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
DSLAP	LCEN[1,3]	ISCN[1,3]	by 1 for each unique LCEN/ISCN combination.
MISLINK	OE[1,3]	SHELF and CHL GRP	by 1 for each MISLINK form.
OSPSDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined.
			by 1 for each unique OSPSDSL form.
RTERM RT INTERFACE is "TR303"	SM	ISCN[1,3]	by 2 for each TMC PRI ISCN and each TMC NPRI ISCN entry.
			by 3 for each EOC PRI ISCN and each EOC NPRI ISCN entry.

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TRUNK Where TRKCLS is "IFOPER", "IFTERM" or "EDSL"	DEN[1,3]	ISCN[1,3]	1 for each unique TRUNK form.
XAT	DEN[1,3]	ISCN[1,3]	by 1 for each unique XAT form.

2.3 * UNIT TYPE

Description: Enter the type of host peripheral unit connected to the remote terminal.

Required Field.
Default:

5E8 - 5E11: IDCU
- 5E12 and later: none

Valid Entries:
- 5E8 - 5E11: IDCU
- 5E12 and later: IDCU or DNUS

Data Rules:

When "DNUS" is entered and RT INTERFACE is "TR303", an associated EQVT form (5858 Record) must be defined. All RTFACTRM FACs defined on the RTERM form must exist on an EQVT form with the appropriate APPLICATION TYPE. If the FAC is in position #1 or its position is assigned as the EOC/TMC BKUP RT TERM on the RTERM form, the FAC must have an associated EQVT form with an APPLICATION TYPE of "TR303CTRL". All other FACs on the RTERM form must have an associated EQVT form with an APPLICATION TYPE of "TR303". (The SM, UNIT NUMBER, and FAC of the RTERM form are used to access the associated EQVT form.

For 5E12, the FAC is constructed as "xyzz" where:
- x = EQVT.DATA GROUP
- y = EQVT.STS
- z = EQVT.VT

For 5E13 and later, the FAC is constructed as "abcde" where:
- a = EQVT.DATA GROUP
- b = EQVT.STE
- c = EQVT.STS
- d = EQVT.VT GROUP
- e = EQVT.VT MEMBER

2.4 * UNIT NUMBER

Description: Enter the unit number.

Required Field.
Valid Entries:
- For 5E9(2) and earlier: 0 - 7
- For 5E10 - 5E11: 0 - 42
- For 5E12 and later:
- 0 - 7 (DNUS)
- 0 - 42 (IDCU)

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Data Rules:

For each RTERM form, there must be a corresponding EQIDCU form with matching SM and UNIT NUMBER fields.

Equipment Bay and Vertical Position values must be unique within an SM for an assigned UNIT NUMBER.

2.5 * RT EX

Description: Enter the remote terminal external number.

Required Field.
Valid Entries:
- 5E11 and earlier: 1 - 31
- 5E12 and later:
- 1 - 31 (IDCU)
- 1 - 99 (DNUS)

2.6 # RT INTERFACE

Description: Enter the remote terminal interface type.

Required Field.

Valid RT INTERFACE Entries

Entry	Description
TR008 or TR0	Analog remote Terminal.
TR303 or TR3	Analog and ISDN remote terminal.

Data Rules:

TR303 and TR008 remote terminals must be unique for any SM, UNIT NUMBER, and/or PROT LINE fields.

For 5E9(1) only, the channel units on each RTERM forms where RT INTERFACE is "TR008" are divided into 3 blocks, each with 16 consecutive channel units (CU 01/02 to CU 31/32, CU 33/34 to CU 63/64, and CU 65/66 to CU 95/96). If any one or all of the channel units on the same block have an entry, the whole block is considered assigned. For the RTERM forms where RT INTERFACE is "TR303" and RT LINE SIZE is entered the number of assigned blocks for each RTERM form is calculated as (RT LINE SIZE - 1)/32 + 1. The total number of assigned blocks from all the RTERM forms on the same SM must not be greater than 128.

TR303 - When "TR303" is entered:

- all TR008 IFACs must be blank.
- SHELF A, B, C, and D IFACs must be blank.
- PROVISION RT, ACKTIMER, NO RETRANS, UNACK FRAMES, and ACTIVITY TIMER must be entered.
- TMC PRI/NPRI ISCNs or EOC PRI/NPRI ISCNs can be entered only when RT EQSTAT is "O".
- ISCNs from TMC PRI/NPRI and EOC PRI/NPRI must have unique values.
- the SLCALM form (5105 Record) must have a value in the CRITICAL field.

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For all TR303 remote terminals, OEs can be assigned to the RT only if the TR303 is equipped (i.e, RT EQSTAT must equal "O" or "G"). In addition, OEs assigned to any TR303 must never have the assigned line value exceed the RT LINE SIZE on the related RTERM form. (The line value is OE NUMBER[8,11] for an OE TYPE of "G".) Originating Equipment (OE) with OE TYPE of "G" on the DSL, DSLUSR, LINE, MLHLN, TRUNK or MISLINK form(s) must have SM/IDCU/RT values assigned to OE NUMBER[1,7] which correspond to the SM, UNIT NUMBER, and RT EX values assigned on an RTERM form where RT INTERFACE is "TR303".

For 5E9(2) and later, each value of SM entered on an RTERM form which has RT INTERFACE set to "TR303" must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports TR303 Remote Terminals. For the CONFIGURATION that supports TR303, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

- for 5E10 and later, INH DSL MAINT must be entered.

For 5E10 and later, when NON - CONTROLLING or CONTROLLING OE - types/numbers defined on the NAILUP input form with CONTROLLING OE-type equal to "G" and DDS equal to "Y" are associated with an RTERM form where RT INTERFACE is "TR303",

- the corresponding MLHLN form must have the TR303 NAILUP field set to "Y".
- the corresponding LINE form must have the TR303 NAILUP field set to "Y".

For 5E10 and later, when MLHG/TERM(s) on the MLHLN form have OE TYPE set to "G" or "A", the CLASS OF SERVICE on the corresponding LCC form can not be equal to any of the following:

- 4WINDIV,
- TAOPER,
- or XDB.

The SM/IDCU/RT values found in the OE NUMBER[1,7] will point to an RTERM form with RT INTERFACE set to "TR303".

TR008 - When "TR008" is entered:

- RT EQSTAT and RT LINE SIZE must not be entered.
- PWR ALM CLASS must not have "CRIT" entered.
- DIGRP A MODE and IFAC must be entered.
- DIGRP A EQSTAT must be either "O" or "G".
- if DIGRP A MODE has
  - "CONC" entered, then DIGRP B MODE must have "CONC" entered, and DIGRP B IFAC must not be entered.
  - "UNCONC" entered, then DIGRP B MODE must not have "CONC" entered.
- if DIGRP B MODE is
  - not entered, then DIGRP B EQSTAT and IFAC must not be entered.

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- entered, then DIGRP B EQSTAT must be "G" or "O".
- "UNCONC", then DIGRP B IFAC must be entered.

- if DIGRP B, C, or D EQSTAT is operational, then DIGRP A EQSTAT must be operational.
- if DIGRP C MODE is
  - "CONC", then DIGRP D MODE must have "CONC" entered. Also, DIGRP D IFAC must not be entered, and DIGRP C EQSTAT must have "G" or "O" entered.
  - "UNCONC", then DIGRP D MODE must not have "CONC" entered.
  - entered, then DIGRP C IFAC must be entered.

- if DIGRP C MODE is @dash2 = not entered, then DIGRP C EQSTAT and IFAC must not be entered.
- if DIGRP D MODE is
  - entered, then DIGRP C MODE must be entered, and DIGRP D EQSTAT must be "G" or "O".
  - not entered, then DIGRP D EQSTAT and IFAC must not be entered.
  - "UNCONC", then DIGRP D IFAC must be entered.

- FTTH ENABLED (Fiber To The Home Enabled) must be entered. When "TR008" is entered, and FTTH ENABLED is set to "Y",
  - PALIT on the corresponding LINE form (5109 Record) or MLHLN form (5111 Record) must be "Y".
  - PSLIM on the corresponding LINE form (5109 Record) or MLHLN form (5111 Record) must be "Y".

- ENV ALM1 CLASS, ENV ALM1 COND, ENV ALM2 CLASS, and ENV ALM2 COND must not be entered.
- all TR303 IFACs must not be entered.
- SIGMODE on the Nailup form (5207 Record) must be "A", "AB" or "NOSIG".

For 5E10 and later, when MLHG/TERM(s) on the MLHLN form have OE TYPE set to "G", the CLASS OF SERVICE on the corresponding LCC form can not be equal to any of the following:
- 4WINDIV,
- ISATND,
- ISDN,
- TAOPER or
- XDB.

The SM/IDCU/RT values found in the OE NUMBER[1,7] will point to an RTERM form with RT INTERFACE set to "TR008".

2.7 # RT SID

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Description: Enter the remote terminal source identifier.

Required Field.
Valid Entries: 1 - 9999

Data Rules:

The RT SID assigned on this form must be unique to an office.

SIDs (Site Identification Numbers) cannot be duplicated on RTERM and/or SLCRT forms. Each SID number must be unique across all SMs.

2.8 RT MTB

Description: Enter the Remote Terminal Metallic Test Bus.
Valid Entries: a 9-digit MTB number in the following format.

MTB (METALLIC TEST BUS) NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
RT Metallic Test Bus	RT MTB	XX	00-14

Data Rules:

The RT MTB defined on this form must be defined on the EQTBCU form (5811 Record).

The RT MTB defined on this form must be unique.

The RT MTB defined on this form must have a METALLIC SERVICE UNIT assigned on either the EQMSP or EQMMSP forms (5750 Record).

The RT MTB defined on this form must have an MACC (Metallic Access Circuit Pack) assigned on either the EQMSP or EQMMSP forms (5750 Record).

An RT MTB cannot have more than 20 RT assignments.

The MTB pack resides upon an ORM, RSM or TRM. The RTERM and the MTBs must share the same SITE ID (on EQIM form). In addition, if this is a remote SITE ID (i.e., it does not reside in the local office), the MTBs must reside on the Common Resource Module (denoted by MASTER MODULE on corresponding EQSITE form).

- ***NOTE:*** This rule does not apply to co-located ORMs or TRMs.

2.9 RT ID DPN

Description: Enter the Remote Terminal Identification Distribute Point Number.
Valid Entries: a 9-digit Distribute Point Number in the following format.

DPN (DISTRIBUTE POINT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
RT Distribute Point Number	RT ID DPN	XX	00-31

Data Rules:

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When RT ID DPN is entered, RT MTB must be entered.

All RT ID DPN assignments must be unique on each SM.

2.10 PWR ALM CLASS

Description: Enter the Power Alarm Classification.

Valid PWR ALM CLASS Entries

Entry	Description
MINOR or MI	Minor alarm classification.
MAJOR or MA	Major alarm classification.
CRIT or C	Critical alarm classification.

Data Rules:

When RT INTERFACE is "TR008", PWR ALM CLASS must not have "CRITICAL" entered.

2.11 PROT LINE

Description: Enter the Protection Line IFAC for the RT.
Valid Entries: 0 - 39

Data Rules:

When RT INTERFACE is "TR303", PROT LINE, if known, must equal an IFAC value.

2.12 CKT TST MTH

Description: Enter the Circuit Test Method.

Default: NONE

Valid CIRCUIT TEST METHOD Entries

Entry	Description
RTU or R	Remote Test Unit.
DIODE or D	Diode Test Method.
SHORT or S	Short Test Method.
NONE or N	None.

Data Rules:

When CKT TST MTH is entered and is not "NONE", RT MTB must be entered.

When CKT TST MTH is not entered or is "NONE", RT MTB must not be entered.

2.13 BER THRES

Description: Enter the Bit Error Ratio threshold for the DS1 protection switch.
Default: 4
Valid Entries: 4 - 7

Data Rules:

For RTs on an IDCU, BER THRES must be entered.

2.14 SUP METHOD

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Description: Enter the Suppression Method for the remote terminal.

Valid SUP METHOD Entries

Entry	Description
blank	Software Release: 5E12 and later DNU-S.
TR8ZC	IDCU to TR008, ZCS mode. This mode is used in TR008 RTs that are remoted over 24-channel facilities which require ZCS. These 24-channel facilities include: Fs, ZCS, CCS, and 4K data links.
TR8B8	IDCU to TR008, B8ZS mode. This mode is used in TR008 RTs that are remoted over 24-channel facilities which require B8ZS. These 24-channel facilities include: Fs, B8ZS, CCS, and 4K data links.
303ZC	IDCU to TR303, ZCS mode. This mode is used in TR303 RTs that are remoted over 24-channel facilities which require ZCS. These 24-channel facilities include: Fe, ZCS, CCS, and 4K data links.
303B8	IDCU to TR303, B8ZS mode. This mode is used in TR303 RTs that are remoted over 24-channel facilities which require B8ZS. These 24-channel facilities include: Fe, B8ZS, CCS, and 4K data links.

- ***NOTE:*** As with all transmission facility connections, the SUP METHOD must be consistent across all equipment used throughout the connection from the RT to the 5ESS Switch. For example, if an RT has a SUP METHOD set to "ZCS" or "B8ZS", the type of transmission equipment used (e.g., T1 line repeaters, multiplexers, and fiber links) must be compatible (and optioned) with ZCS or B8ZS signaling, respectively, as well as the 5ESS Switch.

Data Rules:

When RT INTERFACE is "TR008", SUP METHOD must be "TR8ZC" or "TR8B8".

When RT INTERFACE is "TR303", SUP METHOD must be "303ZC" or "303B8.

When RT INTERFACE is "TR303", and DSL assignments are planned, SUP METHOD must be "303B8".

The SUP METHOD is defined for a "TR303" or "TR008" RT, must have IFACs of the same SUP METHOD assigned on the EQIFAC form.

2.15 RT VENDOR

Description: Enter the remote terminal vendor name.
Valid Entries: 1 - 25 characters

TR303 REMOTE TERMINAL

The following fields (Section 2.16 - Section 2.21) define status and alarm class parameters for the TR303 RT.

2.16 RT EQSTAT

Description: Enter the equipment status of the TR303 remote terminal.

Valid RT EQSTAT Entries

Entry	Description
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

When RT INTERFACE is "TR303", RT EQSTAT must be entered.

When RT INTERFACE is "TR303" and RT EQSTAT is "O", TMC PRI/NPRI ISCNs and EOC PRI/NPRI ISCNs must be entered.

When RT INTERFACE is "TR303", EOC/TMC BKUP must be entered when RT EQSTAT is "G" or "O".

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When RT INTERFACE is "TR303", the RT EQSTAT assigned on this form must have IFACs of equal or higher EQSTAT values assigned on the EQIFAC form.

2.17 RT LINE SIZE

Description: Enter the Remote Terminal Line Size.
Valid Entries: 1 - 2048

Data Rules:

When RT INTERFACE is "TR303", RT LINE SIZE must be entered.

If RT LINE SIZE is greater than 99, the OE SIZE on the OFCOPT form must be set to 10.

Any OE numbers assigned to a TR303 RT must not have the assigned line value exceed the RT LINE SIZE defined on this form.

2.18 ENV ALM1 CLASS

Description: This identifies the Environmental Alarm 1 Classification.

Software Release: 5E10 - 5E11
Valid Entries:

Valid ENV ALM1 CLASS Entries

Entry	Description
MINOR or MI	Minor alarm classification.
MAJOR or MA	Major alarm classification.
CRIT or C	Critical alarm classification.

Data Rules:

For TR008, ENV ALM1 CLASS must be blank.

For TR303, ALM1 CLASS and ALM1 COND must be entered when either one is entered.

2.19 ENV ALM1 COND

Description: Enter the Environmental Alarm 1 Condition. The information entered will be output (printed or displayed on a terminal) to provide the site of the TR303 RT and the problem type (e.g., power) which triggered the alarm.

Software Release: 5E10 - 5E11
Valid Entries: 1 - 25 characters

Data Rules:

For TR008, ENV ALM1 COND must be blank.

For TR303, ALM1 CLASS and ALM1 COND must be entered when either one is entered.

2.20 ENV ALM2 CLASS

Description: Enter the Environmental Alarm 2 Classification.

Software Release: 5E10 - 5E11
Valid Entries:

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Valid ENV ALM2 CLASS Entries	
Entry	**Description**
MINOR or MI	Minor alarm classification.
MAJOR or MA	Major alarm classification.
CRIT or C	Critical alarm classification.

Data Rules:

For TR008, ENV ALM2 CLASS must be blank.

For TR303, ALM2 CLASS and ALM2 COND must be entered when either one is entered.

2.21 ENV ALM2 COND

Description: Enter the Environmental Alarm 2 Condition.

Software Release: 5E10 - 5E11
Valid Entries: 1 - 25 characters

Data Rules:

For TR008, ENV ALM2 COND must be blank.

For TR303, ALM2 CLASS and ALM2 COND must be entered when either one is entered.

2.22 TR303 BK OUT

Description: This field is used by Recent Change only.

2.23 INH DSL MAINT

Description: Should DSL (Digital Line Subscriber) maintenance be disabled for ISDN loopback test, ISDN corrupt CRC test, and ISDN Performance Monitoring? This field applies to IDCU TR303 Remote Terminals only.

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

Data Rules:

When RT INTERFACE is "TR008", this field must be blank.

When RT INTERFACE is "TR303", this field must be entered.

ENVIRONMENTAL ALARMS (ENVALM)

2.24 CLASS

Description: This field defines the alarm classification.

Software Release: 5E12 and later
Valid Entries: Minor, Major, Critical

2.25 CONDITION

Description: This field can be used for remarks about the alarm.

Software Release: 5E12 and later

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Valid Entries: 25 characters or less

3. FORM ENTRIES - 5174-2 RECORD

TR008, SHELVES A - D

The following fields (Section 3.1 - Section 3.4) are used to designate the MODE, EQSTAT, CLI and IFAC for shelves A through D for the TR008 RT.

3.1 MODE

Description: Enter the mode of the remote terminal.
Default: UNCONC
Valid Entries:

Valid MODE Entries

Entry	Description
CONC or C	Concentrated.
UNCONC or U	Unconcentrated.

Data Rules:

When RT INTERFACE is "TR008", the following conditions apply:

- MODE and IFAC are required and must be entered on Shelf A.
- EQSTAT must be either "O" or "G" and must be entered on Shelf A.
- if MODE on Shelf A is "CONC",
  - then MODE on Shelf B must be "CONC".
  - IFAC on shelf B must be blank.
- if MODE on Shelf A is "UNCONC", then MODE on Shelf B must be "UNCONC or unknown."
- if MODE on Shelf C is "CONC", then MODE on Shelf D must be "CONC".
- if MODE on Shelf C is "UNCONC", then MODE on Shelf D must be "UNCONC or unknown."
- if MODE on Shelf B, C or D is not entered, then EQSTAT and IFAC on Shelf B, C or D must not be entered, respectively.
- if MODE on Shelf B, C or D is entered, then EQSTAT on Shelf B, C or D must be "G" or "O", respectively.
- if MODE on Shelf B and D is "UNCONC", then IFAC on Shelf B and D must be entered, respectively.
- if Shelf B, C, or D is "O", then EQSTAT on Shelf A must be "O".
- if MODE on Shelf C is "CONC", then IFAC on Shelf D must be blank.
- if MODE on Shelf C is entered, then IFAC on Shelf C must be entered.
- if MODE on Shelf D is entered, MODE on Shelf C must be entered.

When MODE of SHELF A/C is set to "CONC", then the first/last 48 lines (24 channel units), i.e. CU0102 thru CU4748/CU4950 thru CU9596, share the time slots on the IFAC A/C. Each IFAC only has 24 (0 - 23)

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time slots available. Each channel unit entered on the RTERM form where there is a corresponding NAILUP form will have one or two time slots reserved (depending on the value of PATH NUM on the NAILUP form). If the channel unit entered on the RTERM form has no matching NAILUP form, and is a TR008 Mode-II special channel unit (unit type is "COIN", "FXS", "FXSLS", "DIDDPT", "SPOTS", "DID", "SSV00", or "SSV10") the channel unit will also have one time slot reserved. The total number of reserved time slots on the same IFAC can not be greater than 24.

3.2 EQSTAT

Description: Enter the state of the equipment.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Description
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

When RT INTERFACE is "TR008", the EQSTAT assigned on this form must have IFACs of equal or higher EQSTAT values assigned on the EQIFAC form.

3.3 CLI

Description: Enter the Change Level Indicator value for shelves A through D.
Default: 0
Valid Entries: 0 - 7FFFFFFF

Data Rules:

The correct CLI value is 00000000 for DIGRP A/B/C/D CLI.

3.4 IFAC

Description: Enter the IDCU Facility Connection number.
Valid Entries: 0 - 39

Data Rules:

Shelves A, B, C, and D IFACs and PROT LINE must have unique values entered.

If an IFAC position (0-19 for LSI 0, and 20-39 for LSI 1) is specified, EQSTAT and LSI must be defined on the EQIFAC form.

If the OE on a DSL form is defined on a TR303 remote terminal, then the DS1, PPB1 DS1 and/or PPB2 DS1 entered on the DSL form corresponds with the IFAC entered in the RT IFAC TERMINATION list on the RTERM form with ROW RT TERM equal to the DS1, PPB1 DS1 and/or PPB2 DS1. Also, this IFAC can not equal PROT LINE on this same RTERM form.

Also if the OE on an MISLINK form, the OE is defined on a TR303 remote terminal, then the DS1 entered on the MISLINK form corresponds with the IFAC entered in the RT IFAC TERMINATION list on the RTERM form with ROW RT TERM equal to the DS1. Also, this IFAC can not equal PROT LINE on this same RTERM form.

REMOTE TERMINAL (TR008) CHANNEL UNIT TYPES

The following field (Section 3.5) is used to designate up to forty-eight Channel Unit Types that terminate

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on Shelves A through D, for Channel Units CU 01/02 through CU 95/96 for the TR008 RT. The channel units are chosen to match the type of service provided.

3.5 CHANNEL UNIT: 01/02 - 95/96

Description: For Shelves A through D, enter the Channel Unit Types.

Valid CU TYPE Entries

Entry	Dual or Single	Description
COIN	Single	GS (CF) or LS (DTF) coin.
DID	Dual	Dual DID channel CU for TR008 RTs.
DIDDPT	Single	Single channel DID CU for TR008 RTs.
FSR	Dual	Multi-frequency Ringing 5PTY or Individual.
DFXS	Dual	Software Release: 5E9(2) and later. Dual FX Plugs.
FXS	Single	FX ground start for PBX applications.
FXSLS	Single	FX loop start for WATS applications.
MP	Dual	Multi-party.
SF1	Dual	Software Release: 5E9(1) Only. Dual FX Plugs.
SP	Dual	Single party loop start.
SPOTS	Dual	Special POTS - loop and ground start for Individual, PBX or WATS applications.
SSV00	Dual	Generic non-switched special services for nailup only.
SSV10	Dual	Generic non-switched special services for nailup only.

When SPOTS type channel units are assigned to TR008 mode 2 RT, the concentration ratio increases. If 12 SPOTS channel units are assigned, any SP type card on this digroup will no longer have dialtone. The table below shows how the concentration ratio increases with the assignments of SPOTS channel cards per TR008 mode 2 digroup:

Number of SPOTS cards	Available DS1 Timeslots for other type of channel units
0	24
1	22
2	20
3	18
4	16
5	14
6	12
7	10
8	8
9	6
10	4
11	2
12*	0*

* When 12 SPOTS channel units are assigned to a TR008 digroup, there will be no more DS1 timeslots for other type of channel units such as SP. If there are SP cards assigned, they will not have dialtone.

Data Rules:

If Shelf A is "G" or "O", CU 01/02 through CU 23/24 may have equipment entered. If Shelf "B" is "G" or "O", CU 25/26 through 47/48 may have equipment entered. If Shelf C is "G" or "O", CU 49/50 through 71/72 may have equipment entered. If Shelf D is "G" or "O", CU 73 through 96 may have equipment entered.

When CU types from 25 to 48 are entered, IFAC of Shelf B must be entered or MODE of Shelf A must be "CONC".

When CU types from 49 to 72 are entered, IFAC of Shelf C must be entered and MODE of Shelf C must be entered.

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When CU types from 73 to 96 are entered, IFAC of Shelf D must be entered or MODE of Shelf C must be "CONC".

When any CHANNNEL UNIT types from 01 to 24 are "SF1" (5E9(1)) or "DFXS" (5E9(2) and later) then MODE of DIGRP A must be "UNCONC".

When any CHANNNEL UNIT types from 25 to 48 are "SF1" (5E9(1)) or "DFXS" (5E9(2) and later) then MODE of DIGRP B must be "UNCONC".

When any CHANNNEL UNIT types from 49 to 72 are "SF1" (5E9(1)) or "DFXS"5E9(2) and later) then MODE of DIGRP C must be "UNCONC".

When any CHANNNEL UNIT types from 73 to 96 are "SF1" (5E9(1)) or "DFXS"5E9(2) and later) then MODE of DIGRP D must be "UNCONC".

RTERM forms with a UNIT TYPE of "IDCU" and CU XX/YY values (where XX ranges from 01-95, and YY ranges from 02-96) set to "SF1"(5E9(1)) or "DFXS"(5E9(2) and later) indicate that this CU TYPE is used by the Dual FX Plugs Special Feature. It is a secured feature and must be purchased by the office before the "SF1" (5E9(1)) or "DFXS"(5E9(2) and later) CU TYPE can be used. An SFSYS form must exist with SFID 144 ACT field set to "Y".

NON-CONTROLING and CONTROLLING OE-types/numbers defined on the NAILUP form, which have a corresponding ILEN defined on a RTERM form with CU XX/YY set to "DID" or "DIDDPT", indicate the trunk is a DID trunk. The nailup of DID trunks is not supported. The corresponding ILEN on a RTERM form is found by matching the first three digits of OE on the NAILUP form to the SM, the fourth and fifth digits of OE to the UNIT NUMBER, and the sixth and seventh digits of OE to the RT EX. The matching channel unit (CU XX/YY) is found by matching the tenth and eleventh digits of OE, when OE TYPE = "G", to XX in CU XX/YY where the value of YY is XX + 1.

5E10 and later:

When Telephone Number(s) assigned on the LINE form is assigned to IDCU equipment (OE TYPE is equal to "G"), the Telephone Number must have the proper RTERM Channel Unit to LCC-Service Class correspondence. The LCC/RAX combination assigned on the LINE form must be defined on the LCC form with an associated Service Class that matches the CUXX/YY type on the RTERM input form. Errors will be reported for RTERM forms where RT INTERFACE is "TR008". Refer to the following Table for the required correspondence:

RTERM Channel Unit to LCC-Service Class correspondence.

LCC SERVICE CLASS	RTERM CU XX/YY
COIN	COIN, FSR, SSV00, SSV10
PBX, HOTPBX	FXS, FSR, SPOTS, DFXS, SSV00, SSV10
HOTMOTL	FXSLS, SPOTS, DFXS, SSV00, SSV10
B911, CHGCALL	SP, SPOTS, SSV00, SSV10
INDIV	FXSLS, SP, SPOTS, FSR, MP, DFXS, SSV00, SSV10
4PFS, 4PSS, 8PSS	MP, SSV00, SSV10
TWOPTY	MP, SSV00, SSV10
5PTY	FSR, SSV00, SSV10

When Telephone Numbers(s) are assigned on the LINE form to NUMBER(S) where OE TYPE is equal to "G", that are defined on the RTERM form as being associated with a Channel Unit type equal to "SP" or "FXSLS", the value of the GST (Ground Start field) on the LINE form must be "N". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

When Telephone Numbers(s) are assigned on the LINE or MLHLN input form(s) to IDCU equipment (OE TYPE is equal to "G"), the OE NUMBER(s) must correspond to a Channel Unit position (i.e., CU XX/YY) with a known value defined on the RTERM form. Note that the last two digits of the LINE NO. are determined by the CU XX/YY value (where XX is odd number range of 01-95 and YY is XX + 1). Both LINE NO. (POS) values in the pair are assignable for CU XX/YY type set to

- FSR,

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- MP,
- SP,
- SSV00,
- SSV10,
- DFXS, or
- SPOTS.

Only the lower (odd) numbered LINE NO. value is assignable for CU XX/YY type set to "COIN", "FXS" or "FXSLS". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

OE to RTERM Correspondence

OE	RTERM
NUMBER[1,3]	SM
NUMBER[4,5]	UNIT NUMBER
NUMBER[6,7]	RT EX
NUMBER[8,11]	For OE TYPE set to "G": POS value for CU XX/YY type = COIN, DFXS, FSR, FXS, FXSLS, MP, SP, SPOTS, SSV00, SSV10

When ASSOC OE TYPE equals "G", Telephone Numbers(s) assigned on the LINE input form(s) with a known ASSOC OE entry that assigned 1-TN LTSB to this TN, the ASSOC OE NUMBER(s) must correspond to a Channel Unit position (i.e., CU XX/YY) with a known value defined on the RTERM form. Note that the last two digits of the LINE NO. are determined by the CU XX/YY value (where XX is odd number range of 01-95 and YY is an even number of XX + 1). Both LINE NO. (POS) values in the pair are assignable for CU XX/YY type set to
"FSR",
"MP",
"SP",
"SPOTS",
"DFXS",
"SSV00", or
"SSV10".
Only the lower (odd) numbered LINE NO. value is assignable for CU XX/YY type set to "COIN", "FXS" or "FXSLS". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

OE to RTERM Correspondence

OE	RTERM
NUMBER[1,3]	SM
NUMBER[4,5]	UNIT NUMBER
NUMBER[6,7]	RT EX
NUMBER[8,11]	For OE TYPE set to "G": POS value for CU XX/YY type = FSR, MP, SP, SPOTS, COIN, FXS, FXSLS, SSV00, SSV10, DFXS

When TGN/MEMB(s) are assigned on TRUNK form(s) with a known value for TRKOE where type equals "G", (For equipment number(s) on the RTERM form) the TRKOE(s) must correspond to a Shelf Channel Unit position (i.e., CU XX/YY) value of "DID," or "DIDDPT," defined on the RTERM form(s) where RT INTERFACE is "TR008". Note that line number values of the TRKOE[10,11] (for TRKOE type of "G,") are determined by the CU XX/YY value (where XX is odd number range of 01-95 and YY is XX + 1). Both line number values (i.e., 01 and 02) are assignable for CU XX/YY type set to "DID,". Only the lower (odd) numbered line number value is assignable for CU XX/YY type set to "DIDDPT,". Errors will only be reported for RTERM forms where RT INTERFACE is "TR008".

TRKOE to RTERM Correspondence

TRKOE	RTERM
TRKOE[1,3]	SM
TRKOE[4,5]	IDCU
TRKOE[6,7]	REMOTE TERMINAL
TRKOE[10,11]	For TRKOE type = "G": line value for CU XX/YY = "DID," or "DIDD PT,"

When Telephone Numbers(s) are assigned on the LINE input form to NUMBER(S) where OE TYPE is

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equal to "G", that are defined on the RTERM form as being associated with a Channel Unit type equal to "DFXS", and if the CLASS OF SERVICE on the associated LCC form is "INDIV", the GST (Ground Start) field on the LINE form must be "N". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

For 5E10 and later, Multiline Hunt Group Member(s) assigned on the MLHLN input form to IDCU equipment (OE TYPE is equal to "G") must have the proper RTERM Channel Unit to LCC-Service Class correspondence. The LCC/RAX combination assigned on the MLHLN form must be defined on the LCC form with an associated Service Class that matches the CUXX/YY type on the RTERM input form. Errors will be reported for RTERM forms where RT INTERFACE is "TR008". Refer to the following Table for the required correspondence:

RTERM Channel Unit to LCC-Service Class Correspondence

LCC SERVICE CLASS	RTERM CU TYPE
INDIV	SP, MP, SPOTS, FSR, FXSLS, SSV00, SSV10, DFXS
CHGCALL	SP, SPOTS, SSV00, SSV10
TWOPTY	SP, MP, SSV00, SSV10
4PFS, 4PSS, 8PSS	MP, SSV00, SSV10
5PTY	FSR, SSV00, SSV10
HOTPBX	FXS, FSR, SPOTS, SSV00, SSV10, DFXS
HOTMOTL	SPOTS, FXSLS, SSV00, SSV10, DFXS
PBX	FXS, SPOTS, FSR, SSV00, SSV10, DFXS
COIN	COIN, SSV00, SSV10
B911	SP, SPOTS , SSV00, SSV10

When Multiline Hunt Group Member(s) are assigned on the MLHLN input form to IDCU equipment (OE TYPE is equal to "G"), which are defined on the RTERM form as being associated with a Channel Unit type equal to "SP" or "FXSLS", the value of the GST (Ground Start) field on the MLHLN form must be "N". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

For 5E10 and later, when Multiline Hunt Group Member(s) are assigned on the MLHLN input form to IDCU equipment (OE TYPE is equal to "G"), which are defined on the RTERM form as being associated with a Channel Unit type equal to "DFXS", and if the CLASS OF SERVICE on the associated LCC form is "INDIV", the GST (Ground Start) field on the MLHLN form must be "N". Errors will be reported for RTERM forms where RT INTERFACE is "TR008".

4. FORM ENTRIES - 5174-3 RECORD

FTTH RESISTOR VALUES

The following fields (Section 4.1 - Section 4.10) are used to enable the TR008 FTTH (Fiber To The Home) Resistor Values and to designate the minimum and maximum resistor values, in K-Ohms, for the TIP-RING R1, TIP-GROUND R2, and RING-GROUND R3 for nine testing conditions. These fields are automatically defaulted for TR303 and TR008, but are used for TR008 only.

4.1 FTTH ENABLED

Description: Is Fiber to the Home Enabled?
Default: Y
Valid Entries: Y, N

Data Rules:

When FTTH is enabled, all FTTH minimum and maximum resistor values must be entered.

When RT INTERFACE is "TR008", and FTTH ENABLED is set to "Y", PALIT on the corresponding LINE or MLHLN form must be set to "Y".

4.2 PHASE 1 DT FIBR GOOD

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Description: Enter the minimum and maximum resistor values (in K-Ohms) for Phase 1 Distant Terminal, Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.3 NO DTM AND FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for No Drop Test Module and Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.4 DROP TEST OK AND FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for Drop Test OK and Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.5 NO RINGER AND FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for No Ringer and Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.6 DROP FAILS FEMF/LKG AND FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for Drop Fails Foreign Electromotive Force or Leakage, and Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.7 RECVR OFF HOOK AND FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for Receiver Off Hook and Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.8 HAZ VOLT DETCTD AT DT AND FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for Hazardous Voltage Detected At Distant Terminal and Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.9 PHASE 1 RT FIBR GOOD

Description: Enter the minimum and maximum resistor values (in K-Ohms) for Phase 1 Remote Terminal, Fiber Good for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below following the FIBR OUT OF FRAME field.)
Valid Entries: 1 - 9999

4.10 FIBR OUT OF FRAME

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Description: Enter the minimum and maximum resistor values (in K-Ohms) for Fiber Out of Frame for TIP-RING R1, TIP-GRND R2, and RING-GRND R3.
Default: (see default table below)
Valid Entries: 1-9999

Default Values:

Fiber To The Home Resistor Values in k-Ohms

Test Condition	Tip-Ring R1		Tip-Grnd R2		Ring-Grnd R3	
	Min	Max	Min	Max	Min	Max
Phase 1 Dt Fibr Good	0015	0024	0084	0096	0084	0096
No DTM and Fibr Good	0034	0044	0084	0096	0084	0096
Drop Test OK and Fibr Good	0024	0034	0084	0096	0084	0096
No Ringer and Fibr Good	0044	0054	0084	0096	0084	0096
Recvr Off Hook and Fibr Good	0064	0074	0084	0096	0084	0096
Haz Volt Detctd At Dt and Fibr Good	0074	0086	0084	0096	0084	0096
Phase 1 RT Fibr Good	0086	0096	0084	0096	0084	0096
Fibr Out of Frame	2500	9999	0084	0096	0084	0096

5. FORM ENTRIES - 5174-4 RECORD

TR303

The following field provides 28 rows for defining IFAC positions for a TR303 RT.

5.1 RT IFAC TERMINATION

Description: 5E12 and later, the name of this field was changed to RT FAC TERMINATION (RTFACTRM). See RT FAC TERMINATION (RTFACTRM) for usage information.

5.2 RT FAC TERMINATION

Description: For 5E12 and later, this field name was changed from RT IFAC TERMINATION to RT FAC TERMINATION. Enter up to 28 FACs (facility positions) terminating on the remote terminal in the RT TERM IFAC field for rows 1 - 28 in the following formats.
Valid Entries:

- 5E11 and earlier: 0 - 39 (IDCU)

- 5E12:
- IDCU: 0 - 39
- DNUS:
- 0 - 1 (DG)
- 0 - 5 (STS)
- 1 - 28 (DSL)

5E13 and later:

- IDCU: 0 - 39
- DNUS:
- 0 - 1 (DG)
- 1 - 6 (STE)
- 1 (STS)
- 1 - 7 (VTG)
- 1 - 4 (VTM)

Data Rules:

When RT INTERFACE is "TR303", RT TERM row 1 must be entered.

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When RT INTERFACE is "TR303", RT TERM row 1 must not equal PROT LINE.

All IFACs must be unique for any SM, UNIT NUMBER combinations on all RTERM forms. The IFAC/FAC may be TR008 IFAC A-D, PROT LINE, or TR303 RT FAC TERMINATION.

If IFAC is between 0 and 19, EQIFAC LSI must be zero and IFAC should match row. If IFAC is between 20 and 39, EQIFAC LSI must be one and should match row.

Each IFAC can have up to 24 (0 - 23) time slots assigned.

TMC AND EOC

The following fields (Section 5.3 - Section 5.4) define the TMC AND EOC (TIME SLOT MANAGEMENT CHANNEL AND EMBEDDED OPERATIONS CHANNEL). These channels provide management and control functions using the LAPD (Link Access Protocol - Level D) parameters. Additional information about the LAPD parameters can be found in the *ISDN BRI Interface Specification (235-900-321).*

There are two sets of TMC and EOC channels - primary and backup. They provide the link between the remote terminal, IDCU, and the PSU. The link between the RT and the IDCU is provided by the first row of the RT IFAC TERMINATION list (i.e., the IFAC entered in the first row carries the primary EOC/TMC channels). The row of the RT IFAC TERMINATION list which is pointed to by the EOC/TMC BKUP RT TERM field contains the backup EOC/TMC channels. These time slots are fixed as referenced in the Pre-Assigned EOC/TMC Assignments table below.

The links between IDCU and the PSU are assigned via the ISCN/DPIDB/TIME SLOT fields. Time slots are either assigned by customer, in which case the DPIB must be assigned, or they are generated by the software. For TR303 ISCN is always a required field.

Following are the TMC/EOC channel assignments automatically assigned by software for both the first and backup channels.

Pre-assigned EOC, TMC, and GUARD TIMESLOTS

SUPPRESSION METHOD	DS1 TIMESLOT FOR EOC	DS1 TIMESLOT FOR TMC	DS1 GUARD TIMESLOT
303ZC	11	23	0, 10, 22
303B8	11	23	NA

5.3 EOC/TMC BKUP RT TERM

Description: This field defines the remote terminal termination for the backup EOC/TMC (the IFAC entered in this field is the backup EOC/TMC). This field is for TR303 remote terminals terminating on an IDCU only.

Required Field.
Default: 3
Valid Entries: 2 - 28

Data Rules:

EOC/TMC BKUP RT RTERM must be entered when RT EQSTAT is "G" or "O".

EOC/TMC BKUP RT RTERM must identify the RT TERM ROW of an IFAC which has been entered.

The IFAC specified in the EOC/TMC BKUP RT RTERM field must not be the same IFAC specified in the PROT LINE field.

5.4 PROVISION RT

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Description: Is the remote terminal provisioned by the switch? Enter "N" if it is provisioned by an outside source. This field is for TR303s terminating on an IDCU only.

Required Field.
Default: Y
Valid Entries: Y, N

TMC/EOC LAPD PARAMETERS

The following fields (Section 5.5 - Section 5.10) define TMC/EOC LAPD (Link Access Protocol - Level D) parameters for transferring data from the switch to the TR303 remote terminal.

5.5 ACKTIMER

Description: This field defines the Acknowledgement Timer (in milliseconds) for transmitter frame T200. This is the Layer 2 Acknowledgement Timer. It identifies the number of milliseconds the switch will wait for an acknowledgement signal before a frame will be retransmitted.

Required Field.
Default: 150
Valid Entries: 100 - 350 (milliseconds) in increments of 50

5.6 NO RETRANS

Description: This field defines the number of retransmissions threshold. Enter the number of retransmissions for frame N200.

Required Field.
Default: 3
Valid Entries: 1 - 10

5.7 UNACK FRAMES

Description: This is the Layer 2 Window Size. It defines the number of retransmissions that can be queued before an unacknowledgement signal is required. Enter the number of retransmissions for unacknowledged frames.

Required Field.
Default: 7
Valid Entries: 1 - 7

5.8 SAPI0 FRAME SIZE

Description: This is the maximum I-field size for SAPI0. It defines the maximum size frame for SAPI0 (Service Access Point Identifier 0) that can be sent on the DS1 link between the RT and IDCU equipment. This is the maximum I-field size for SAPI0.

Required Field.
Default: 32
Valid Entries: 32

5.9 SAPI1 FRAME SIZE

Description: This is the maximum I-field size for SAPI1. It defines the maximum size frame for SAPI1 (Service Access Point Identifier 1) that can be sent on the DS1 link between the RT and IDCU equipment. This is the maximum I-field size for SAPI1.

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Required Field.
Default: 256
Valid Entries: 256

5.10 ACTIVITY TIMER

Description: This is the Link Assurance Timer. It identifies how often, in seconds, the switch will wait to check the DS1 link when there is no activity on the link.

Required Field.
Default: 10
Valid Entries: 10, 20, or 30

ISCN/DPIDB/TIME SLOT

The following fields (Section 5.11 - Section 5.14) define the Primary and Non-Primary TMC (Time Slot Management Channels) and EOC (Embedded Operations Channels).

These fields define the channel used to report the originations for non-ISDN locally switched calls and to assign a time slot for all locally switched calls and for non-provisioned ISDN B channels.

In order to set up a Channel from the protocol handler to the remote terminal, the ISCN (Integrated Services Channel Number), DPIDB, and the DPIDB time slot are used together to define the Primary (TMC PRI) and Non-Primary (TMC NPRI) Time Slot Management Channels and the Primary (EOC PRI) and Non-Primary (EOC NPRI) Embedded Operations Channels.

The following information applies to this field group.

- Each ISCN must have the proper Packet Switching Unit shelf assigned on the EQIDCU form. The PSU shelf specified by the first digit of the ISCN on the RTERM form must be defined on the EQIDCU form with a PIDB TYPE of "PSU".
- DPIDBs which carry TMC and EOC channels defined on this form must also be defined on an EQIDCU form (5846 Record) with a corresponding PIDB NO. and PIDB TYPE must be set to "PSU".
- The total number of time slot assignments/reservations per DPIDB must not exceed 32 slots; assigned from the RTERM, ODBTS (5905 Record), and DSL (5907 Record).
- SM/ISCN assignments (the first, and, second and third digits), must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form (5949 Record).
- Each ISCN entry must have the first character of the ISCN (the SHELF value) assigned on an EQPSUPH form (5742 Record) on the same SM with a matching PSU SHELF.
- Assignment of the ISCN is required if RT INTERFACE is "TR303"; RT EQSTAT must be either "G" or "O".
- All ISCNs must follow the ISDN rules for ISCNs. These include no mixing of ISCNs from other BRI or PRI DSLs in the same SM and no duplication of ISCNs.
- On an IDCU, the ISCNs for EOC and TMC require full time slots; thus each entry must be a multiple of four.
- The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

  AMLBDSL

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DSL

DSLAP

DSLUSR

MISLINK

ODBRES

OSPSDSL

RTERM

XAT

with all TRUNK forms which have a TRKCLS of:

"EDSL"

"IFTERM"

"IFOPER"

However, they can not have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of

"PACKET"

"PKTPIPE"

"SPCHNDLR"

"X75"

"X75P"

Each ISCN entry (TMC PRI, TMC NPRI, EOC PRI or EOC NPRI ISCN(s) on the RTERM form must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

The ISCN must be a unique value within an SM. ISCNs cannot be duplicatedon one or more of the following forms:

- AMLBDSL
- CCLNK

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- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

If an SM/ISCNs combination has been assigned,
then the corresponding combination of SM, PSU, PSU SHELF and GRP must be entered on the PSUGP form.

5.11 TMC PRI

Description: This field defines the Primary Time Slot Management Channel. This channel is used to transmit operations, administration, maintenance and provisioning messages between the IDCU and the TR303 RT. Enter the ISCN, DPIDB, TIME SLOT for the Primary TMC.

Valid TMC PRI Entries

Entry	Description
	ISCN
0 - 4	Position 1, PSU shelf.
00 - 15	Position 2-3, Channel group.
000 - 127	Position 4-6, PH channel, in multiples of 4.
12 - 22 or blank	DPIDB. If blank, switch will select the DPIDB.
0 - 31 or blank	TIME SLOT. If blank, switch will select the time slot.

Data Rules:

If the TMC PRI DPIDB is entered, a corresponding PIDB NO. must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

5.12 TMC NPRI

Description: Enter the ISCN, DPIDB, and TIME SLOT for the Non-Primary TMC.

Valid TMC NPRI Entries

Entry	Description
	ISCN
0 - 4	Position 1, PSU shelf.
00 - 15	Position 2-3, Channel group.
000 - 127	Position 4-6, PH channel, in multiples of 4.
12 - 22 or blank	DPIDB. If blank, switch will select the DPIDB.
0 - 31 or blank	TIME SLOT. If blank, switch will select the time slot.

Data Rules:

If the TMC NPRI DPIDB is entered, a corresponding PIDB NO. must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

5.13 EOC PRI

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Description: This field defines the Primary Embedded Operations Channel. This channel is used to transmit operations, administration, maintenance and provisioning messages between the IDCU and the PSU for the TR303 RT. Enter the ISCN, DPIDB, and TIME SLOT for the Primary EOC.

Valid EOC PRI Entries

Entry	Description
	ISCN
0 - 4	Position 1, PSU shelf.
00 - 15	Position 2-3, Channel group.
000 - 127	Position 4-6, PH channel, in multiples of 4.
12 - 22 or blank	DPIDB. If blank, switch will select the DPIDB.
0 - 31 or blank	TIME SLOT. If blank, switch will select the time slot.

Data Rules:

If the EOC PRI DPIDB is entered, a corresponding PIDB NO. must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

5.14 EOC NPRI

Description: Enter ISCN, DPIDB, and TIME SLOT for the Non-Primary EOC.

Valid TMC PRI Entries

Entry	Description
	ISCN
0 - 4	Position 1, PSU shelf.
00 - 15	Position 2-3, Channel group.
000 - 127	Position 4-6, PH channel, in multiples of 4.
12 - 22 or blank	DPIDB. If blank, switch will select the DPIDB.
0 - 31 or blank	TIME SLOT. If blank, switch will select the time slot.

Data Rules:

If the EOC NPRI DPIDB is entered, a corresponding PIDB NO. must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

```
rterm                    5ESS SWITCH
SCREEN 1 OF 6              OFFICE DATA ADMINISTRATION
(5174-1/2/3/4)             REMOTE TERMINAL

*1. SM          ___          13. SUP METHOD _____
*2. UNIT TYPE    IDCU        14. RT VENDOR  ________________________
*3. UNIT NUMBER  __
*4. RT EX        __                TR303 REMOTE TERMINAL
#5. RT INTERFACE _____         15. RT EQSTAT     _
#6. RT SID ____              16. RT LINE SIZE  ____
 7. RT MTB       __________     17. ENV ALM1 CLASS _____
 8. RT ID DPN    __________     18. ENV ALM1 COND  ________________________
 9. PWR ALM CLASS _____         19. ENV ALM2 CLASS _____
10. PROT LINE    __           20. ENV ALM2 COND  ____________________
11. CKT TST MTH  NONE               TR303 BK OUT
12. BER THRES    4             22. INH DSL MAINT  _
```

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```
rterm                        5ESS SWITCH
SCREEN 2 OF 6              OFFICE DATA ADMINISTRATION
(5174-1/2/3/4)           REMOTE TERMINAL (TR008)

            SHELF A        SHELF B    SHELF C        SHELF D
MODE      23. UNCONC      27. ______  31. ______     35. ______
EQSTAT    24. O           28. _       32. _          36. _
CLI       25. 00000000    29. _______ 33. _______    37. _______
IFAC      26. __          30. __      34. __         38. __
```

```
rterm                        5ESS SWITCH
SCREEN 3 OF 6              OFFICE DATA ADMINISTRATION
(5174-1/2/3/4)           REMOTE TERMINAL (TR008)

      SHELF A          SHELF B          SHELF C          SHELF D
39. CU 01/02 ______ 51. CU 25/26 ______ 63. CU 49/50 ______ 75. CU 73/74 __
40. CU 03/04 ______ 52. CU 27/28 ______ 64. CU 51/52 ______ 76. CU 75/76 ______
41. CU 05/06 ______ 53. CU 29/30 ______ 65. CU 53/54 ______ 77. CU 77/78 ______
42. CU 07/08 ______ 54. CU 31/32 ______ 66. CU 55/56 ______ 78. CU 79/80 ______
43. CU 09/10 ______ 55. CU 33/34 ______ 67. CU 57/58 ______ 79. CU 81/82 ______
44. CU 11/12 ______ 56. CU 35/36 ______ 68. CU 59/60 ______ 80. CU 83/84 ______
45. CU 13/14 ______ 57. CU 37/38 ______ 69. CU 61/62 ______ 81. CU 85/86 ______
46. CU 15/16 ______ 58. CU 39/40 ______ 70. CU 63/64 ______ 82. CU 87/88 ______
47. CU 17/18 ______ 59. CU 41/42 ______ 71. CU 65/66 ______ 83. CU 89/90 ______
48. CU 19/20 ______ 60. CU 43/44 ______ 72. CU 67/68 ______ 84. CU 91/92 ______
49. CU 21/22 ______ 61. CU 45/46 ______ 73. CU 69/70 ______ 85. CU 93/94 ______
50. CU 23/24 ______ 62. CU 47/48 ______ 74. CU 71/72 ______ 86. CU 95/96 ______
```

```
rterm                        5ESS SWITCH
SCREEN 4 OF 6                OFFICE DATA ADMINISTRATION
(5174-1/2/3/4)               REMOTE TERMINAL (TR008)

                  FIBER TO THE HOME RESISTOR VALUES IN K-OHMS
 87. FTTH ENABLED N                TIP-RING R1  TIP-GRND R2 RING-GRND R3
                                   MIN   MAX    MIN   MAX    MIN   MAX
 88. PHASE 1 DT FIBR GOOD          0015  0024   0084  0096   0084  0096
 95. NO DTM AND FIBR GOOD          0024  0034   0084  0096   0084  0096
102. DROP TEST OK AND FIBR GOOD    0024  0034   0084  0096   0084  0096
109. NO RINGER AND FIBR GOOD       0044  0054   0084  0096   0084  0096
116. DROP FAILS FEMF/LKG AND FIBR GOOD   0054  0064   0084  0096   0084  0096
123. RECVR OFF HOOK AND FIBR GOOD  0064  0074   0084  0096   0084  0096
130. HAZ VOLT DETCTD AT DT AND FIBR GOOD 0074  0086   0084  0096   0084  0096
137. PHASE 1 RT FIBR GOOD          0086  0096   0084  0096   0084  0096
144. FIBR OUT OF FRAME             2500  9999   0084  0096   0084  0096
```

```
rterm                        5ESS SWITCH
SCREEN 5 OF 6              OFFICE DATA ADMINISTRATION
(5174-1/2/3/4)           REMOTE TERMINAL (TR303)

            151. RT IFAC TERMINATION (RTIFACTRM)
```

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```
 ROW          ROW          ROW          ROW
RT TERM  IFAC   RT TERM  IFAC   RT TERM  IFAC   RT TERM  IFAC
1    __      8    __     15    __     22    __
2    __      9    __     16    __     23    __
3    __     10    __     17    __     24    __
4    __     11    __     18    __     25    __
5    __     12    __     19    __     26    __
6    __     13    __     20    __     27    __
7    __     14    __     21    __
28   __
```

```
rterm                          5ESS SWITCH _
SCREEN 6 OF 6                    OFFICE DATA ADMINISTRATION
(5174-1/2/3/4)                 REMOTE TERMINAL (TR303)

TIME SLOT MANAGEMENT CHANNEL (TMC) AND EMBEDDED OPERATIONS CHANNEL (EOC)
160. EOC/TMC BKUP RT TERM 03 ISCN     DPIDB  TIME SLOT
161. PROVISION RT     Y        168. TMC PRI  ______     __      __
                          172. TMC NPRI ______     __      __
TMC/EOC LAPD PARAMETERS          176. EOC PRI  ______     __      __
162. ACKTIMER       150          180. EOC NPRI ______     __      __
163. NO RETRANS     03
164. UNACK FRAMES    7
165. SAPI0 FRAME SIZE 32
166. SAPI1 FRAME SIZE 256
167. ACTIVITY TIMER  30
```

Figure 1 SAMPLE RTERM FORM 5E10-5E11 SOFTWARE RELEASES

```
rterm                        5ESS SWITCH
SCREEN 1 OF 7                  OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5)               REMOTE TERMINAL

*1. SM          ___            13. SUP METHOD _____
*2. UNIT TYPE   ____           14. RT VENDOR  _____________________________
*3. UNIT NUMBER  __
*4. RT EX        __                TR303 REMOTE TERMINAL
#5. RT INTERFACE  _____          15. RT EQSTAT     _
#6. RT SID       ____          16. RT LINE SIZE  ____
 7. RT MTB       __________        TR303 BK OUT
 8. RT ID DPN    __________     18. INH DSL MAINT  _
 9. PWR ALM CLASS _____
10. PROT LINE    __
11. CKT TST MTH  NONE
12. BER THRES    4
```

```
rterm                        5ESS SWITCH
SCREEN 2 OF 7                  OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5)             REMOTE TERMINAL (TR303)

                  19. ENVIRONMENTAL ALARMS (ENVALM)
```

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ROW ALARM CLASS	COND	ROW ALARM CLASS	COND
1 _____	_____	8 _____	_____
2 _____	_____	9 _____	_____
3 _____	_____	10 _____	_____
4 _____	_____	11 _____	_____
5 _____	_____	12 _____	_____
6 _____	_____	13 _____	_____
7 _____	_____	14 _____	_____

---

rterm 5ESS SWITCH
SCREEN 3 OF 7 OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5) REMOTE TERMINAL (TR008)

	SHELF A	SHELF B	SHELF C	SHELF D
MODE	>26. UNCONC	30. _____	34. _____	38. _____
EQSTAT	27. O	31. _	35. _	39. _
CLI	28. 00000000	32. _____	36. _____	40. _____
IFAC	29. __	33. __	37. __	41. __

---

rterm 5ESS SWITCH
SCREEN 4 OF 7 OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5) REMOTE TERMINAL (TR008)

SHELF A	SHELF B	SHELF C	SHELF D
>42. CU 01/02 _____	54. CU 25/26 _____	66. CU 49/50 _____	78. CU 73/74 _____
43. CU 03/04 _____	55. CU 27/28 _____	67. CU 51/52 _____	79. CU 75/76 _____
44. CU 05/06 _____	56. CU 29/30 _____	68. CU 53/54 _____	80. CU 77/78 _____
45. CU 07/08 _____	57. CU 31/32 _____	69. CU 55/56 _____	81. CU 79/80 _____
46. CU 09/10 _____	58. CU 33/34 _____	70. CU 57/58 _____	82. CU 81/82 _____
47. CU 11/12 _____	59. CU 35/36 _____	71. CU 59/60 _____	83. CU 83/84 _____
48. CU 13/14 _____	60. CU 37/38 _____	72. CU 61/62 _____	84. CU 85/86 _____
49. CU 15/16 _____	61. CU 39/40 _____	73. CU 63/64 _____	85. CU 87/88 _____
50. CU 17/18 _____	62. CU 41/42 _____	74. CU 65/66 _____	86. CU 89/90 _____
51. CU 19/20 _____	63. CU 43/44 _____	75. CU 67/68 _____	87. CU 91/92 _____
52. CU 21/22 _____	64. CU 45/46 _____	76. CU 69/70 _____	88. CU 93/94 _____
53. CU 23/24 _____	65. CU 47/48 _____	77. CU 71/72 _____	89. CU 95/96 _____

---

rterm 5ESS SWITCH
SCREEN 5 OF 7 OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5) REMOTE TERMINAL (TR008)

FIBER TO THE HOME RESISTOR VALUES IN K-OHMS

		TIP-RING R1		TIP-GRND R2		RING-GRND R3	
		MIN	MAX	MIN	MAX	MIN	MAX
>90. FTTH ENABLED	Y						

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```
 91. PHASE 1 DT FIBR GOOD              0015  0024   0084  0096   0084  0096
 98. NO DTM AND FIBR GOOD              0034  0044   0084  0096   0084  0096
105. DROP TEST OK AND FIBR GOOD        0024  0034   0084  0096   0084  0096
112. NO RINGER AND FIBR GOOD           0044  0054   0084  0096   0084  0096
119. DROP FAILS FEMF/LKG AND FIBR GOOD   0054  0064   0084  0096   0084  0096
126. RECVR OFF HOOK AND FIBR GOOD       0064  0074   0084  0096   0084  0096
133. HAZ VOLT DETCTD AT DT AND FIBR GOOD 0074  0086   0084  0096   0084  0096
140. PHASE 1 RT FIBR GOOD              0086  0096   0084  0096   0084  0096
147. FIBR OUT OF FRAME                2500  9999   0084  0096   0084  0096
```

```
rterm                        5ESS SWITCH
SCREEN 6 OF 7                  OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5)             REMOTE TERMINAL (TR303)

                  154. RT FAC TERMINATION (RTFACTRM)
  ROW              ROW              ROW              ROW
RT TERM   FAC    RT TERM   FAC    RT TERM   FAC    RT TERM   FAC
   1      ____      8      ____      15     ____      22     ____
   2      ____      9      ____      16     ____      23     ____
   3      ____     10      ____      17     ____      24     ____
   4      ____     11      ____      18     ____      25     ____
   5      ____     12      ____      19     ____      26     ____
   6      ____     13      ____      20     ____      27     ____
   7      ____     14      ____      21     ____      28     ____
```

```
rterm                        5ESS SWITCH     _
SCREEN 7 OF 7                  OFFICE DATA ADMINISTRATION
(5174-1/2/3/4/5)             REMOTE TERMINAL (TR303)

    TIME SLOT MANAGEMENT CHANNEL (TMC) AND EMBEDDED OPERATIONS CHANNEL (EOC)
>163. EOC/TMC BKUP RT TERM 03                  ISCN     DPIDB  TIME SLOT
 164. PROVISION RT        Y        172. TMC PRI  ______     __      __
                                   176. TMC NPRI ______     __      __
  TMC/EOC LAPD PARAMETERS          180. EOC PRI  ______     __      __
 165. ACKTIMER        150          184. EOC NPRI ______     __      __
 166. NO RETRANS      03
 167. UNACK FRAMES    7
 168. SAPI0 FRAME SIZE 32
 169. SAPI1 FRAME SIZE 256
 170. ACTIVITY TIMER  30
```

Figure 2 SAMPLE RTERM FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1W: 5161-1 RECORD
SLC-96 OFFICE EQUIPMENT RECORD

1. GENERAL

The 5161-1 Record is available with the 5E2 and later Software Releases. It contains data for individual, 2-party and special service lines terminating on Integrated SLC-96 remote terminals. The 5161-1 Record is an ODA output-only Record. The following input forms provide data to this record.

- SLCCU - SLC-96 Channel Unit Assignment Form
- SLCRT - SLC-96 Remote Terminal Form
- LINE - Telephone Number Line Form
- MLHLN - MLHG Line Form

The SLCCU form provides the SM, DCLU, RT, and LINE numbers that represent the specific Integrated SLEN (SLC-96 Line Equipment Number) entries based on the equipped channel Unit Types.

The following channel Unit Types and services are supported in 5E1, Issue 2, Release 2 Software Releases:

CU TYPE	CHANNELS	SERVICE
DUAL - SP	2	Single party
DUAL - MP	2	2, 4, 8 party
DUAL - PCFSR	2	5PTY or Single party MFR (Multi-Frequency Ringing).
SINGLE - COIN	1	Coin
SINGLE - FXS	1	Non-DID PBX
SINGLE - FXSLS	1	WATS

Each equipped dual channel unit provides two SLEN entries, and each equipped single channel unit provides one SLEN entry on the 5161-1 Record. A SLC-96 remote terminal consists of a maximum of 96 lines and connects to a Digital Carrier Line Unit in the 5ESS Switch via a variable number of T1 lines determined by the mode configuration. 5E1, Issue 2, Release 2 Software Releases support Mode 1 (unconcentrated) or Mode 2 (concentrated) remote terminals. A SLEN (SLC-96 Line Equipment Number) is described as follows:

SM	DCLU	RT	LINE
1 - 192	0 - 7	1 - 6	01 - 96

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 - 48. Offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.

The mode for each SLEN is generated from the SLCRT input form. Figure Figure 1 shows the relationship between shelf modes and line assignments.

The LINE or MLHLN input forms provide the remaining data for each SLEN if assigned to a Telephone Number.

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

The office Base and Control Numbers and the Office Name are specified on each record.

2.2 SM

Description: This field contains the Switching Module number. For offices equipped with CM1

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(Communication Module 1) valid entries are 1 - 48. For offices equipped with CM2 (Communication Module 2), valid entries are 1 - 192.
Valid Entries: 1 - 192

2.3 DCLU

Description: This field contains the Digital Carrier Line Unit number.
Valid Entries: 0 - 7

2.4 RT

Description: This field contains the Remote Terminal.
Valid Entries: 1 - 6

2.5 LINE

Description: This field contains the line number. Dual channel units terminate two customers lines (i.e., lines 1/2, 3/4, etc.). Single channel units terminate one customer line. In this case the odd numbered line is used (1, 3, etc.) and the even numbered line is unused. Refer to Figure 1 for LINE to SHELF correspondence.

2.6 CUTYPE

Description: This field contains the channel unit type.

Valid CUTYPE Entries

Entry	Definition
COIN	Coin.
FXS	Foreign Exchange Ground Start.
FXSLS	Foreign Exchange Loop Start.
SP	Single Party.
MP	Multi-Party.

2.7 MODE

Description: This field contains the mode of the serving remote terminal shelf group. Modes cannot be mixed within a shelf group.

Valid MODE Entries

Entry	Definition
UNCONC	Mode 1.
CONC	Mode 2.

SLC-96

The following fields will contain data for each SLEN assigned to a working SLC-96 Telephone Number as indicated by an entry on either the LINE or MLHLN input form.

2.8 LCC

Description: This field contains the Line Class Code, which specifies the Class of Service. LCCs are described on the 5306 Record.
Valid Entries: 3 alphanumeric characters

2.9 RAX

Description: This field contains the Rate Center used for routing and charging.
Valid Entries:

For 5E14 and earlier: 1 - 99

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For 5E15 and later: 1 - 999

DIRECTORY NUMBERS

These fields (Section 2.10 - Section 2.11) are used to define the Telephone Number or numbers assigned to each SLEN.

2.10 INDIV TN OR RING PARTY 1

Description: This field contains the seven-digit Telephone Number assigned to an individual line or the ring party of a 2-party line or a Multi-Line Hunt line. Each SLEN assigned to 4 or 8 party service has "refer to 5161-2" in this field. A 5161-2 Record is generated for each SLEN assigned to 4 or 8 party service.
Valid Entries: 7 digits

2.11 TIP PARTY 2

Description: This field contains the seven-digit Telephone Number assigned to the tip party of a 2-party line.
Valid Entries: 7 digits

2.12 MLHG

Description: This field contains the Multi-Line Hunt Group number if the line is a member of a Mult-Line Hunt Group.
Valid Entries: 1 - 2000

2.13 MEMB

Description: This field contains the MLHG member number if the line is a member of a Multi-Line Hunt Group.
Valid Entries: 1 - 2015 or

- 3001 - 3999 (Outdial Terminals Only)

2.14 REMARKS

Description: This field contains the remarks indicated on either the LINE or MLHLN input form.

For 5E2 and later, if PTY is "I" on the LINE form, or if PTY is 1 - 4 and MFRI (Multi-Frequency Ringing Individual) is "Y", or if only one Telephone Number entry on the LINE form with PTY of "T" or "R" is present for a given Line Equipment Number, then this is the remark from the LINE form. If both PTY is "T" and "R" are present for a given LEN, then this is the remark from the LINE form for the TN entry on the Line form with PTY of "R".

SHELF GROUP	SHELF	SHELF
AB	A	1 - 24
AB	B	25 - 48
CD	C	49 - 72
CD	D	73 - 96

UNCONCENTRATED

SHELF GROUP	SHELF	SHELF
AB	A, B	1 - 48
CD	C, D	49 - 96

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CONCENTRATED

Figure 1 INTEGRATED SLC-96 RELATIONSHIP OF SHELVES AND LINES

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SEC. 1X: 5161-2 RECORD
SLC-96 OFFICE EQUIPMENT RECORD - 4 AND 8 PARTY

1. GENERAL

The 5161-2 Record is available with the 5E1 and later Software Releases. This record is used to define the Telephone Numbers of a 4 or 8 party Integrated SLC-96 SLEN (Line Equipment Number).

The 5161-1 Record is used to define individual, 2 party or special service lines.

The 5161-2 Record is not intended for ODA input, and therefore has no unique ODA form associated with it. The following input forms provide data to this record:

- SLCCU-SLC-96 Channel Unit Assignment Form
- LINE-Telephone Number Form

The SLCCU form provides the IM, DCLU, RT and LINE numbers that represent the specific Integrated SLEN entries based on the equipped channel unit types.

The following channel unit type is supported multi-party service:

CU TYPE CHANNELS SERVICE

DUAL - MP 2 2, 4, 8 party

Each equipped dual channel unit provides two SLEN entries on the 5161-2 Record.

A SLC-96 Remote Terminal consists of a maximum of 96 lines and connects to a Digital Carrier Line Unit in the 5ESS Switch via a variable number of T1 lines determined by the mode configuration. 5E1 and later Software Releases supports MODE 1 (unconcentrated) or MODE 2 (concentrated) Remote Terminals. A SLEN is described as follows:

- SM DCLU RT LINE

- 1-192 0-7 1-6 01-96

For 5E2, Issue 2 and later Software Releases, offices equipped with CM1 (Communication Module 1) valid entries for SM are 1-48. Offices equipped with CM2 (Communication Module 2), valid entries are 1-192.

The mode for each SLEN is generated from the SLCRT input form. Figure 1 shows the relationship between shelf modes and line assignments.

The LINE input forms provide the remaining data for each SLEN if assigned to a Telephone Number.

2. RECORD ENTRIES

2.1 BASE AND CONTROL GROUP, ESS UNIT

The office base and control group numbers and the office name are specified on each record.

2.2 SM

Description: These columns contain the Switching Module number.
Valid Entries:

- CM1 (Communication Module 1): 1 - 48

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- CM2 (Communication Module 2): 1 - 192

2.3 DCLU

Description: These columns contain the Digital Carrier Line Unit number.
Valid Entries: 0 - 7

2.4 RT

Description: These columns contain the Remote Terminal.
Valid Entries: 1 - 6

2.5 LINE

Description: These columns contain the line number assigned to 4 or 8 party service.

2.6 TELEPHONE NUMBERS

Description: These columns are used to define the Telephone Number or numbers assigned to each SLEN serving 4 and 8 party lines.

2.7 PARTY 1 to PARTY 8

These columns contain the seven digit Telephone Number assigned to each of the party lines.

UNCONCENTRATED		
SHELF		
GROUP	SHELF	LINES
AB	A	1-24
AB	B	25-48
CD	C	49-72
CD	D	73-96

CONCENTRATED		
SHELF		
GROUP	SHELF	LINES
AB	A,B	1-48
CD	C,D	49-96

Figure 1 INTEGRATED SLC96 RELATIONSHIP OF SHELVES AND LINES

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SEC. 1Y: ESS 5171-1 RECORD
OFFICE EQUIPMENT RECORD - 1 AND 2 PARTY

1. GENERAL

The 5171-1 Record is used to define the office Line Unit equipment assignments for Telephone Numbers. This Record is used in offices providing 1- and 2-party service for both MFR (Multifrequency Ringing) and non-MFR customers. The 5171-2 Record is used in offices providing 4- and 8- party service and 5- and 10- party Multi-Frequency Ringing. The 5171-1 Record is not intended for ODA input, but does correspond to entries on the LINE and MLHLN input forms. The EQLU and EQLUP forms define the valid Line Units and associated LENs that are equipped in the office.

A 5ESS Switch Office containing one Switching Module requires 32 5171-1 Records to define the Office Equipment.

An Office Equipment location is described as follows:
- Switching Module - XXX
- Line Unit - X
- Concentrators - X
- Switch Group - X
- Switch - X
- Level - X

The 5ESS Switch offers four concentration ratios for line equipment. They are 4:1, 6:1, 8:1, and 10:1. These ratios are applied based on the number of grids equipped in a Line Unit. 10:1 concentration ratio is available with 5E3 and later Software Releases.

Valid XXXX Entries

Entry	Definition
EQUIPPED CONCENTRATORS	CONCENTRATION RATIO
0-9	10:1
0-7	8:1
0-5	6:1
0-3	4:1

A 5ESS Switch office may not mix concentration ratios. However, a Host 5ESS Switch office may have a different Concentration Ratio than the RSM (Remote Service Module). With 5E3 and later Software Releases, Concentrators 8 and 9 are only valid for LU3 Line Units with Line Unit Type of 3AA1.

2. FORM ENTRIES

2.1 BASE AND CONTROL, OFFICE

Description: Enter the Base and Control number and Office Name on each page of the record.

2.2 SM

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

2.3 LINE UNIT

Description: Enter the Line Unit number.
Valid Entries: 0 - 7

2.4 CONC

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Description: Enter the Conc number.
Valid Entries: 0 - 9

2.5 SWITCH GROUP

Description: Enter the Switch Group Number.
Valid Entries: 0 - 1

2.6 SWITCH

Description: The Switch number is pre- printed on the ESS 5171-1 Record.
Valid Entries: 0 - 7

2.7 LEVEL

Description: The level number is pre- printed on the ESS 5171-1 Record.
Valid Entries: 0 - 3

2.8 LCC

Description: The LCC (Line Class Code) is a 3-character alphanumeric that describes the class of service of a Telephone Number. LCC's are described on the ESS 5306 Record.
Valid Entries: 3 characters

2.9 RAX

Description: Enter the Rate Area that should be used for routing and charging.
Valid Entries:

For 5E14 and earlier: 1 - 99

For 5E15 and later: 1 - 999

2.10 DIRECTORY NUMBERS

Description: These columns are used to define the Telephone Number(s) associated with each Line Equipment Number. Enter the 7-digit Telephone Number assigned to one of the following types of lines:

INDIV TN or Ring Party 1:

- Single party line (MFR or non-MFR):
  - MFRI is "Y" and PTY is 1 - 9, 0
  - MFRI is "N" and PTY is "I"
- Two party line-Ring (MFR or non-MFR):
  - MFRI is "N" and PTY is "R"
  - MFRI is "N" and PTY is 1 - 5 and LCC/RAX corresponds to a LCC form with Class Of Service equal to "2PTY".

TIP PARTY 2:

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- Two party non-MFR where MFRI is "N" and PTY is "T" and the LCC/RAX corresponds to a LCC input form with Class Of Service equal to "2PTY".
- Two party MFR where MFRI is "N" and PTY is 6 - 9, 0 and the LCC/RAX corresponds to a LCC form with Class Of Service equal to "2PTY".

If the LEN value is associated with one of the following multiparty Class Of Service, then this field indicates the flag name "MULTPTY" and a corresponding 5171-2 Record is generated showing all TNs that share the same LEN:

Multiparty Class Of Service

LCC Form Class Of Service	Multiparty Type
4PFS	4-party fully selective
4PSS	4-party semi selective
8PSS	8-party semi selective
5PTY	5-party MFR (ringside only)
10PTY	10-party MFR

2.11 MLHG

Description: This entry is the MLHG number taken from the MLHLN (Multi-Line Hunt Group Member) form.

2.12 MEMB

Description: This entry is the Member Number taken from the MLHN form. If the Member Number also has a Telephone Number assigned, the TN must be entered in the Party 1 field.

2.13 REMARKS

Description: This field corresponds to the RMK input on the LINE and MLHLN input forms. Print any 16 characters for the following cases:

- If a LEN is assigned on the MLHLN form, then Remarks corresponds directly to RMK input field.
- If a LEN is assigned on LINE form and MFRI is "N", and PTY is "I", then Remarks corresponds directly to RMK input field.
- If an LEN is on the LINE form and MFRI is "Y", and PTY is 1 - 9, 0 (MFR Individual Line), then Remarks corresponds directly to RMK input field.
- If an LEN is on the LINE form and PTY is "T" or "R", but only one of the Telephone Numbers of the 2-parties is assigned, then the Remarks corresponds directly to that assigned Tip or Ring entry.
- If an LEN is on LINE form and MFRI is "N", and PTY is 1 - 9, 0 and LCC/RAX corresponds to Class Of Service equal to "2PTY" (2-party MFR) but only one of the tipside or ringside frequency customers is assigned to the LEN, then the Remarks correspond directly to that entry.
- If an LEN is on the LINE input form and Class Of Service is 2-party (MFR or non-MFR), and both Tip and Ring parties are assigned, then the Remarks field will correspond to the RINGSIDE Telephone Number RMK field.

Remarks will not be printed by 5ODA for multiparty (MFR or non-MFR) entries.
Valid Entries: 1 - 16 characters

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SEC. 1Z: ESS 5171-2 RECORD
OFFICE EQUIPMENT RECORD - 4 AND 8 PARTY AND 5 AND 10 PARTY MFR

1. GENERAL

The ESS 5171-2 Record is used to define the office equipment assignments for Telephone Numbers. This record is used in offices providing 4- and 8- party and 5- and 10- party service. The 5ESS 5171-1 Record is used in offices providing 1- and 2- party service. The 5ESS 5171-2 Record is not intended for ODA input, and therefore has no unique ODA form associated with it.

A 5ESS office containing one Switching Module will require 64 ESS 5171-2 Records to define the office equipment.

An Office Equipment location is described as follows:

- Switching Module - XXX
- Line Unit - X
- Concentrator - X
- Switch Group - X
- Switch - X
- Level - X

The 5ESS offers three concentration ratios for line equipment. They are 4:1, 6:1, and 8:1. These ratios are applied based on the number of concentrators equipped in a Line Unit.

EQUIPPED CONCENTRATORS	CONCENTRATION RATIO
0-7	8:1
0-5	6:1
0-3	4:1

A 5ESS Office may not mix concentration ratios. However, a Host 5ESS office may have a different Concentration Ratio than the RSM (Remote Service Module).

Telephone Numbers that require Essential Service Protection, which is part of the Overload Control Capability, must be assigned to a Line Equipment Number that has been designated as Essential. When a 5ESS office is an overload condition and the Overload Control is turned on, then all lines designated Essential Lines have the Essential Service Protection feature and would receive priority origination scanning.

There is no limit on the quantity of LENS or particular LEN values that can be assigned as Essential Lines except for the following restriction:

To make sure there is no internal blocking on origination scanning, there should be only one LEN assigned, EL equal to "Y" Yes from a group of four LENs that share the same first seven digits of their LEN. Example:

External LEN breakdown

SM	LU	CONC	SWG	SW	LEV
1 -192	0 -7	0 - 7	0 - 1	0 - 7	0 - 3

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There are four level values 0 through 3 for a given 7-digit value of SM/LU/CONC/SWG/SW. Only one of the four LEVs should have EL equal to "Y".

LEN	00	1	3	0	0	4	0
LEN	00	1	3	0	0	4	0
LEN	00	1	3	0	0	4	2
LEN	00	1	3	0	0	4	3

It is recommended that Essential Lines be distributed evenly across the Line Equipment Numbers. Care should be given to assign to an Essential Line only those customers that actually require Essential Service Protection.

Most customer lines are loop-start lines that generate an origination by closing the path between the tip and ring at the station set (forming a loop). Scanning is done at the Central Office by applying a voltage between the tip and ring and sensing the loop current flow produced by the customer line origination. Ground Start lines (e.g., coin-first coin phones and PBX-CO trunks) generate an origination by grounding the ring conductor at the station set. Scanning is done at the Central Office by applying a voltage with respect to ground on the ring conductor and sensing the current flow in the ring conductor produced by the customer line origination. Since certain PBX's interpret a ground on the tip conductor to mean something else (disconnect, etc.), the tip conductor at the Central Office is disconnected during scanning on Ground Start Lines. The tip conductor is disconnected under software control in the 5ESS. Thus, any Line Equipment Number may be assigned as Ground Start. Ground Start should be entered as an equipment option on the ESS 5100-1 Record.

2. FORM ENTRIES

2.1 BASE AND CONTROL, OFFICE

Enter the Base and Control number and Office Name on each page of the record.

2.2 SM

Description: Enter the Switching Module number.
Valid Entries:
- For CM1: 1 - 48
- For CM2: 1 - 192

2.3 LINE UNIT

Description: Enter the Line Unit number.
Valid Entries: 0 - 7

2.4 CONC

Description: Enter the Concentrator number.
Valid Entries: 0-7.

2.5 SWITCH GROUP

Description: Enter the Switch Group number.
Valid Entries: 0 - 1

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2.6 SWITCH

Description: Enter the Switch number taken from the ESS 5171-1 Record for the corresponding multiparty TN entry and is printed on the ESS 5171-2 Record.
Valid Entries: 0 - 7

2.7 LEVEL

Description: Enter the Level number taken from the ESS 5171-1 Record for the corresponding multiparty TN entry and is printed on the ESS 5171-2 Record.
Valid Entries: 0 - 3

2.8 TELEPHONE NUMBERS

Description: These columns are used to display the Telephone Numbers associated with each Office Equipment Location.

2.9 REMARKS

Description: This field may be used to record short comments which consists of alphanumeric and blanks.

These columns are not populated from input form - for machine owner use only.

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SEC. 1AA: 5172-1 RECORD
LINE CARD EQUIPMENT NUMBER RECORD

1. GENERAL

The 5172-1 Record is available with 5E4(2) and later Software Releases. It is an ordered listing of LCENs (Line Card Equipment Numbers) that reside on a RISLU (Remote Integrated Services Line Unit) or an ISLU (Integrated Services Line Unit). The only LCENs that appear on this Record are those that are defined on an ISLULC form (5942 Record). Only operational Line Cards have entries; a Line Card is operational if the EQST field on the ISLULC form has an entry of "O" (Operational).

For the 5E4(2) Software Release, LCENs are assigned on the following forms:

- DSL (5900-1 Record)
- DSLAP (5963 Record)
- DSMLHLN (5901-1 Record)
- LINE (5109-1 Record)
- MLHLN (5111-1 Record)
- OSPSDSL (5411 Record)

An OSPSDSL form may have up to two LCENs (LCEN and MATE LCEN).

For 5E5 and later Software Releases, LCENs are assigned on these same forms with the following exception: the DSL form (5907-1 Record) and DSLUSR form (5908-1 Record) replace the DSL form (5900-1 Record) and DSMLHLN form (5901-1 Record).

The LCEN is comprised of a SM (Switching Module), (R)ISLU, LGC (Line Group Controller) and Line Card. The first three digits of the LCEN are the SM, the next digit is the (R)ISLU, the next two digits are the LGC and the last two digits are the Line Card value. The SM, (R)ISLU and LGC numbers are located in the upper right-hand corner of the record.

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 SM

Description: Switching Module number.
Valid Entries: 1-192

2.3 (R)ISLU

Description: (Remote) Integrated Services Line Unit number.
Valid Entries: 1-7

2.4 LGC

Description: Line Group Controller number.
Valid Entries: 01 - 15

2.5 LINE CARD

Description: Values 00 - 31 are preprinted on the record.

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2.6 FORM

Description: This column contains the names of the forms used to assign lines to operational ISLU Line Cards. Valid form names are: DSL, DSLAP, DSLUSR (5E5 and later Software Releases), DSMLHLN (5E4(2) Software Release), LINE, MLHLN and OSPSDSL.

2.7 KEY1

Description: The KEY1 column contains the value of the first key field on the corresponding form listed in the FORM column. The following field values may appear:

- CKT TN on the DSL form (optional key - 5E4(2) Software Release)
- DSL OE on the DSL form (5E5 and later Software Releases)
- AP SITE ID on the DSLAP form
- CKT TN on the DSLUSR form (optional key - 5E5 and later Software Releases)
- CKT MLHG on the DSMLHLN form (optional key - 5E4(2) Software Release)
- TN on the LINE form
- MLHG on the MLHLN form.

No value exists for OSPSDSL since its only key field is LCEN which is already included on this Record.

2.8 KEY2

Description: The KEY2 column contains the value of the second key field on the corresponding form listed in the FORM column. The following field values may appear:

- PKT TN on the DSL form (optional key - 5E4(2) Software Release)
- DPKT TN on the DSLUSR form (optional key - 5E5 and later Software Releases)
- CKT TERM on the DSMLHLN form (optional key - 5E4(2) Software Release)
- TERM on the MLHLN form.

2.9 KEY3

Description: The KEY3 column contains the value of the third key field on the corresponding form listed in the FORM column. The following field values may appear: PKT MLHG on the DSMLHLN form (optional key - 5E4(2) Software Release) and ODB TN on the DSLUSR form (optional key - 5E5 and later Software Releases).

2.10 KEY4

Description: The KEY4 column contains the value of the fourth key field on the corresponding form listed in the FORM column. The following field values may appear: PKT TERM on the DSMLHLN form (optional key - 5E4(2) Software Release) and CKT MLHG on the DSLUSR form (optional key - 5E5 and later Software Releases).

2.11 KEY5

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Description: This column is available with 5E5 and later Software Releases. The KEY5 column contains the value of the fifth optional key field (CKT TERM) on the DSLUSR form.

2.12 KEY6

Description: This column is available with 5E5 and later Software Releases. The KEY6 column contains the value of the sixth optional key field (DPKT MLHG) on the DSLUSR form.

2.13 KEY7

Description: This column is available with 5E5 and later Software Releases. This column contains the value of the seventh optional key field (DPKT TERM) on the DSLUSR form.

2.14 REMARKS

Description: This column contains remarks entered in the RMK field on the form listed in the FORM column. When the OSPSDSL form is listed, the value of the SERVICE CLASS field on the OSPSDSL form will appear in this column.

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SEC. 1AB: 5173 RECORD
TELEPHONE NUMBER ASSIGNMENT RECORD

1. GENERAL

The 5173 Record is an output only record that is used to list all the TNs (Telephone Numbers) assigned in the office. The list is sorted by the TN values.

2. RECORD ENTRIES

2.1 TELEPHONE NUMBER

Description: This field contains the TN.

2.2 TN TYPE

Description: This field specifies if the telephone number is used for circuit ("CKT") or packet ("PKT") service or for both circuit and packet ("BOTH").

2.3 FORM

Description: This field identifies the form on which the telephone number is defined: ACQS, AMLBDSL, DSL, DSLUSR, LINE, MLHG, MLHLN, MTNDR, MULTITN, PSMTN, SHTN, or XAT.

2.4 KEYFIELDS

Description: This field contains the key fields from the form on which the telephone number appears. The keys for each form are listed in the following table.

Form Name	Key Fields
ACQS	NPA + NXX + BEGLINE + ENDLINE (Optional)
AMLBDSL	LCEN
DSL	DLSOE
DSLUSR	CKT TN or CKT MLHG/TERM DPKT TN or DPKT MLHG/TERM ODBTN or ODB MLHG/TERM
LINE	TN
MLHG	MLHG
MLHLN	MLHG/TERM
MTNDR	TN
MULTITN	TN
PSMTN	PKT TN
SHTN	TN MLHG/TERM NBR
XAT	PKT TN PTK MLHG/TERM NBR

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SEC. 1AC: 5119 RECORD
MAKE BUSY CALL TERMINATION TYPES - MKBCTT FORM

1. GENERAL

The 5119 Record is available with 5E6 and later Software Releases. The MKBCTT form (Make Busy Call Termination Types) is used to specify the call termination types (hunt only, nonhunt only or both) that are affected by a particular make busy type and scan point, subgroup or terminal:

- **RANDOM MAKE BUSY -** This feature provides the ability to apply artificial busy to any number of members of a non-ISAT MLHG.
- **MEMBER MAKE BUSY -** This feature provides the ability to apply artificial busy to 1 to 32 terminals within a non-ISAT MLHG.
- **POSITION MAKE BUSY** - This feature allows a single terminal within an ISAT MLHG to be made busy.

It is also used to specify the owner for a RMB subgroup. If a particular MMB (Member Make Busy) RMB (Random Make Busy) or PMB (Position Make Busy) feature does not have this form filled out, then the feature is assumed to apply to hunted call terminations only.

This form has a quintuple key set, of which three are entered. The MLHG and make busy feature type are always entered, while one of the following is entered: SPN, SUBGP, TERM.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.9.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MLHG

Description: This field is used to enter the Multi-Line Hunt Group Number to which the CALL TERM TYPE will apply.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * MKB TYPE

Description: This field is used to enter the type of Make Busy features to which the CALL TERM TYPE will apply.

Valid MKB TYPE Entries

Entry	Definition
MEMBER	Member Make Busy.
POSITION	Position Make Busy.
RANDOM	Random Make Busy.

Data Rules:

When MKB TYPE of "POSITION" is entered, the TERM must be entered (SPN and SUBGROUP cannot

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be used).

2.4 (*) SPN

Description: This field is used to enter the scan point which is used as a Make Busy Key.
Valid Entries: A scan point number consisting of:

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001 - 192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

Data Rules:

When this optional key is entered it must be assigned at least once as one of the following:
LINE form: MAKE BUSY KEY, RND MKB
MLHLN form: MAKE BUSY KEY, RND MKB
DSLUSR form: RMB, RND MKB

2.5 (*) SUBGP

Description: This field is used to enter the Make Busy Subgroup Number.
Valid Entries: 1 - 255

Data Rules:

When this optional key is entered it must be assigned at least once as one of the following:
DSLUSR form: MMB SUBGP, RMB SUBGP
SHTN form: MMB SUBGP, RMB SUBGP

2.6 (*) TERM

Description: This field is used to enter the MLHG Terminal.
Valid Entries: 1 - 2015

Data Rules:

When this optional key is entered it must be assigned to the following:
DSLUSR form: CKT TERM

2.7 CALL TERM TYPE

Description: This field is used to enter the type of call terminations.
Default: HUNT
Valid Entries:

Valid CALL TERM TYPE Entries

Entry	Definition
HUNT	Calls to hunted DNs that attempt to terminate to a terminal affected by the Make Busy will be treated as if the terminal were busy.
NONHUNT	Call to nonhunted DNs that attempted to terminate to a terminal affected by the Make Busy will be treated as if the terminal were busy.
BOTH	Calls to hunted & nonhunted DNs that attempt to terminate to a terminal affected by the Make Busy will be treated as if the terminal were busy.

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Data Rules:

When two or more Make Busy keys, subgroups or buttons affect a single terminal, only one of the make busy features is allowed to affect nonhunt call termination type (CALL TERM TYPE equals "NONHUNT" or "BOTH"), the other make busy features must affect only hunt call termination types (CALL TERM TYPE equal "HUNT").

2.8 RND OWNER

Description: This field is used to enter the MLHG member which owns a Random Make Busy subgroup's activation/deactivation button.
Valid Entries: 1 - 2015

Data Rules:

A RND OWNER can be entered only when the MKB TYPE is "RANDOM" and a SUBGP has been entered.

MLHG and RND OWNER must be defined as CKT MLHG and CKT TERM on a DSLUSR form. The RND SUBGP on the DSLUSR form must equal SUBGP on MKBCTT form. CONFIG GRP on DSLUSR must be defined on a CFGGRP form with at lease one ACTION equal "BYRB". A RMB subgroup owner must be in the subgroup and have a RMB button.

```
mkbctt                    5ESS Switch          _
(5119)                OFFICE DATA ADMINISTRATION
                  MAKE BUSY CALL TERMINATION TYPES

  *1. MLHG          45
  *2. MKB TYPE      MEMBER
(*)3. SPN           001000301
(*)4. SUBGP         ___
(*)5. TERM          ____
   6. CALL TERM TYPE HUNT
   7. RND OWNER     ____
```

Figure 1 SAMPLE MKBCTT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 1AF: 5177 RECORD
NUMBER POOLING FOR INDIVIDUAL TN - NPOOL

1. GENERAL

1.1 Number Pooling Definition

The Number Pooling for Individual TN form allows the craft to insert, review, update, and delete ported or reserved individual TNs.

1.2 Recent Change View

The corresponding Recent Change View for NPOOL is 1.7.

2. FORM ENTRIES - 5177 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 TN

Description: The TN field is used to enter an individual telephone number.

Software Release: 5E14 and later
Valid Entries: A 7 or 10 digit telephone number of the form *XXXXXXX* or *NXXXXXXXXX* where *N* is a number from 2 to 9 and *X* is a number from 0 to 9.

Data Rules:

- ACT must be "Y" for SFID 530 and for SFID 174 on the SFSYS form.
- TN must have a valid NXX, NPA and/or OFFICE CODE that is defined on the NOC form.
- When TN is 7 digits and the first 3 digits are equal to an OFFICE CODE that is defined on more than one NOC form, a 10 digit TN must be used.
- When either VCDX OFFICE or DRM is "Y" on the EQCORE form, the number of NPOOL forms cannot exceed 8,000.
- When both VCDX OFFICE and DRM are "N" on the EQCORE form, the number of NPOOL forms cannot exceed 800,000.

2.3 PORTED OUT

Description: Is this telephone number ported out?

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

---

npool 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5177) NUMBER POOLING FOR INDIVIDUAL TN

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*1. TN _____
2. PORTED OUT N

Figure 1 SAMPLE NPOOL FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 2: TRUNK FORMS

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SEC. 2A: 5202-1/2/3/4/5/6/7/8/9 RECORD TRUNK GROUP FORM - TKGRP

1. GENERAL

1.1 Trunk Group Definition

The 5202 Records are used to define each Trunk Group in a 5ESS Switch. The trunk information that is entered on these records is information that is common to the entire group. Trunk information for an individual member is entered on a TRUNK form (5204 Record).

1.2 Common Channel Signaling

CCS (Common Channel Signaling) is available with 5E3 and later Software Releases. CCS is identified on a trunk group basis by the INPULSING or OUTPULSING fields equal to "CCIS6" (Domestic North American version) or "ISUP7" (CCIT No. 7 ISDN User Part), unless the trunk group is for SIP-T packet groups, in this case even though it has INPULSING/OUTPULSING set to ISUP7, it does not signal via CCS7.

For 5E7 and later, CCS trunks with INPULSING and/or OUTPULSING equal to "CCIS6" or "ISUP7" require the DEN, TEN or (for 5E9(2) and later) NEN fields to be entered on the corresponding TRUNK form.

1.3 Trunk Classes

For 5E4(2) and later, the following trunk classes were added to the 5202-1 Record: "FIOPR", "FOPRI", "FOPRT", "RAFANNC", "RAFDTA", "RAFCTR", "TCIKT", and "TCITT". Additionally, the TRK DIR value "RAF" was added for the recorded announcement function. These values are for the OSPS (Operator Services Position System) toll and assistance feature.

For 5E4(2) and later, two new trunk classes, "TOPAS" and "RMSD3", were added to the 5202-1 Record. The new values are for toll offices that employ the TOPAS (Testing, Operations, Provisioning and Administration System) Operations System.

For 5E5 and later, the "RAFDTA" trunk class can be used with RACF (Remote Activation of Call Forwarding) and ACSR (Automatic Customer Station Rearrangement).

For 5E5 and later, two new trunk classes, "IFOPER" and "IFTERM", were added for the EDSLs (PRI) of the OSPS Interflow capability. "IFOPER" defines an outgoing Interflow trunk, and "IFTERM" defines an incoming Interflow trunk.

For 5E6 and later, the "RAFDTA" trunk class can be used for ASP (Advanced Services Platform; previously PVN, Private Virtual Network) services and LASS Selective Features.

1.4 EDSL

The EDSL (Extended Digital Subscriber Line) feature is available with 5E4(2) and later Software Releases. EDSL B-channels and D-channels are assigned to trunks with an "EDSL" or "EDSLHM" service class and a Trunk Direction of incoming, outgoing or 2-Way. EDSL features can be assigned on a dedicated basis or Call-by-Call basis. An EDSL B-channel Trunk Group may contain B-channels from more than one T1 facility and Switching Module.

EDSL D-channels will also be assigned to trunks with an EDSL service class and a Trunk Direction of "SGNL". D-channel trunks are nailed-up trunks and are not hunted. D-channels must be in a separate Trunk Group from the B-channels. D-channels are defined on the TRUNK form with 24 or 48 entered in the last two digits of the DEN. B-channels are defined with 01 - 23 as the last two digits of the DEN.

Data Rules:

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For 5E12 and later, when TRK DIR is "SGNL", all EDSL/PRI fields must not be entered.

1.5 Release Link Trunks

RLTs (Release Link Trunks) are provided between a main switch and branch switches to enable the attendant to implement Centralized Attendant Services. The 5ESS Switch can function as either a main or a branch switch. See Division 2, Section 1AI for more information on CAS and RLTs.

1.6 CCS7

CCS7 (Common Channel Signaling System Number 7) trunks are trunks which have INPULSING/OUTPULSING equal to "ISUP7", unless the trunk group is for SIP-T packet groups, in this case even though it has INPULSING/OUTPULSING set to ISUP7, it does not signal via CCS7. When installing CCS7 trunks which connect two networks, for example a LEC (Local Exchange Carrier) and a long distance carrier, the following unenforced rules apply.

The TO (Toll Office) must have a TRKCLS of "LATA". A TO is any switch within an IC (InterLATA Carrier) or INC (International Carrier) network.

"LATA" trunks can connect to LEC switches which are either EO (End Office) or AT (Access Tandem) switches. AT switches allow calls to be distributed to or concentrated from appropriate EO(s). The EO or AT end must have a TRKCLS of "IC". An EO or AT is any switch that is within the LEC network.

"IC" trunks can connect to far switches which may be any one of the following carrier types: IC, INC or Consolidated Carrier. Use of these TRKCLS values, for trunks that cross the network boundary, is necessary to utilize the ISDN ISUP7 protocol for internetwork operations.

- ***NOTE:*** CCS7 does not apply to trunk groups associated with SIP-T packet groups , even though they have INPULSING/OUTPULSING set to ISUP7.

1.7 X.75 Gateway

The X.75 Gateway to Public Data Networks with X.121/E.164 Interworking feature, available with 5E6 and later Software Releases, provides X.75 gateway on the switch to interconnect to packet Interexchange carriers (interLATA traffic) and to independent operating companies' packet switch networks (intraLATA traffic). A maximum of 255 X.75 trunk groups may exist at one time. Each X.75 trunk group may contain at most twenty-four trunk members.

1.8 X.75' Packet Trunks

The X.75' packet trunk interface allows a 5ESS Switch owned by a LEC (or similar operating company environment) to connect with a PPSN (Public Packet Switched Network) owned by the same LEC where both switches exist in the same LATA (or in similarly restricted geographical regions of local control). Each 5ESS Switch can access the PPSN by either a direct X.75' interface or via an IP trunk group to another 5ESS Switch that has an X.75' interface.

For 5E8 and later, a maximum of 255 X.75' trunk groups may exist at one time. Each trunk group may have at most twenty-four trunk members.

1.9 Recent Change View

The corresponding Recent Change View for TKGRP is 5.1.

2. FORM ENTRIES - 5202-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and Office Name on each record.

2.2 * TGN

Description: Enter the number of the Trunk Group being defined.
Valid Entries: Specifies the number of trunk groups being defined.

- For 5E14 and earlier: 1 - 4000
- For 5E15(1) and 5E16(1): 1 - 4000, or 7000 - 7999 for BICC group
- For 5E16(2) and later: 1 - 4000

- Maximum number of trunk groups assigned per SM is 120.
- Maximum number of trunk groups with TRKCLS of PACKET is 16.
- Maximum number of trunk groups with TRKCLS of "X75" or "X75P" is 255.
- Maximum number of trunk groups assigned per SM-2000 without QLPS is 120.
- Maximum number of trunk groups assigned per SM-2000 with QLPS is 2000.
- Maximum number of trunk groups assigned per SM-2000 with QLPS is 4000 when using the Increased Number of Trunk Groups (SFID 172) secured feature that has been purchased using the Secured Feature Upgrade View (8.22).
- Maximum number of trunks groups associated with SIP-T (Session Initiation Protocol for Telephones) Packet Groups is 1000.

*RESTRICTED USAGE: Not supported by EADAS. WARNING: Your OS (Operation System) may not support this feature resulting in a loss of Traffic 30 Measurements. This feature was intended for independent LECs only.

Data Rules:

Trunk Groups of Network Management concern, those monitored by the EADAS/NM system, must be numbered less than 1024.

The maximum number of trunk groups that can be assigned to a Switching Module is 120.

For 5E10 and later:

When TGN/MEMB(s) are assigned to a Time of Day Feature on either the TRUNKFA form or an associated CLUSTR form, the Trunk Group (TGN) must also be defined on the TKGRP form with a TRKCLASS of "LATA", "PF", or "PFLASH".

If the TGN is on an ARSTPA form, or if it isassigned an ARS (Automatic Route Selection) feature on either the TRUNKFA form or the TKGRPFA form or an associated CLUSTR form, then all following conditions must hold true:

- The associated TRKCLS on the TKGRP form must be entered as "LATA".
- TGN/MEMB/FEATURE must be defined on ARSTPA where (FRL LINE is set to 16 and DIAL PLAN is set to "ODP") or (FRL LINE not entered, TCM IN not entered and DIAL PLAN is set to "ODP") .
- If ARSTPA form is not found, then the FEATURE must be defined on ARSFD where (FRL LINE is set

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to 16 and DIAL PLAN is set to "ODP") or (FRL LINE not entered, TCM IN not entered and DIAL PLAN is set to "ODP") .

- The FEATURE must be defined on ARSFD where ENTRY is set to "AUTO".

For 5E13 and later:

When TGN(s), defined on the TKGRP form, have TRKCLS set to "IC" or "LTOLLCON", the QUEUE FEATURE entered on the TKGRP form must be defined on a QUFD form and the associated QUEUE TYPE must be "HPCOHQ".

When TGN(s), defined on the TKGRP form, has SVC GRP set to "RAS" and ROUTE INDEX on the RTIDX form matches a ROUTE INDEX on the FIXRT form and ROUTE TYPE is set to "2LEVEL", "ACSR", "SLE", or "NPA_SP", then a ANNAPL form must exist with APPLICATION set to "2LEVEL", "ACSR", "LASS", or "NPA_SP".

For 5E15 and later:

When TGN is 7000 - 7999 or 1 - 4000 (for 5E16(2) and later):

- BICC GRP must be equal to TGN.
- The ACT field for SFID 567 on the SFSYS form (5713 Record) must be set to "Y".

When TGNs, defined on the TKGRP form, have a TRKCLS of "3GPD", all corresponding trunk members of this trunk group on the TRUNK form must have a UEN specified.

When TGNs are defined on the TKGRP form with TRKCLS equal to "3GPD", the ACT field for SFID 285 on the SFSYS form (5713 Record) must be set to "Y". This TRKCLS value is used for the CDMA (Code Division Multiple Access) Cellular Packet Data Services secured feature.

When trunk members are defined on the TRUNK form (5204 Record) with a TRKOE where OE TYPE is equal to "U", all associated trunk groups on the TKGRP form (5202 Record) must have a TRKCLS of "A5", "ADT", "PKTPIPE", "FRBC", "IS41", "SPCHNDLR", "3GPD", and "SVC".

When TGN with a known BICC GRP on the TKGRP form uses PSU platform, then GSM derived from the ORIG PT CODE must be entered either as a GLOBAL SM on the CMTMH form or a SM on the MDLNK form, and all SM2K MODULE on the CICDIST form must be entered either as NON GLOBAL SM on the CMTMH form or SM on the MDLNK form.

When TGN with a known BICC GRP on the TKGRP form uses PSU platform, then GSM derived from the ORIG PT CODE must be entered on the CCGSM form as a Host GSM.

When TGN with a known BICC GRP on the TKGRP form uses CNI platform, then DLN on the OFCOPT form must be set to "Y".

For 5E16(1) and later:

- When TGNs are defined on the TKGRP form with TRKCLS equal to "3GPD", then all trunk members on the TRUNK form (5204 Record) must have a TRKOE entered where the OE TYPE is equal to "U" and:
  - the OE corresponds to a Protocol Handler Logical Channel Group with a GRP TYPE of "PHV4" (for 5E15 only) or "PHV5" on the PSUGP form (5949 Record).
  - the last two digits of the OE must be from 0 to 19

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Each Service Group (Trunk Group) associated with a BICC Packet Group (defined on the PKTGRP form (5219 Record), must have a DAS assigned on the TKGRP form. Each DAS must have an LDIT assigned on the DAS form (5300 Record) and each SM2K MODULE from the CICDIST form (5217 Record) with the above LDITs must be defined on the SMLDIT form (5315 Record).

2.3 GROUP SIZE

Description: This field indicates the number of members in the Trunk Group. It appears for administrative purposes on the record but is not entered on the form.

Data Rules:

For 5E5 and later, the maximum number of members allowed in a Packet Switch trunk group (TRKCLS "PACKET") is 32.

The maximum number of members allowed in an X.75 or X.75' trunk group (TRKCLS "X75P" or "X75") is 24.

2.4 # TRK DIR

Description: Enter the Trunk Direction for each Trunk Group.

Required Field.

Valid TRK DIR Entries

Entry	Definition
2W	Two Way.
ANN	Announcement.
INC	Incoming.
LTP	Logical Test Port Trunk Group. Specify this Trunk Direction for all Logical Test Port Trunk Groups (TRKCLS begins with "LTP").
OUT	Outgoing.
RAF	Software Release: 5E4(2) and later. Recorded Announcement Function.
SGNL	Software Release: 5E4(2) and later. EDSL (Extended Digital Subscriber Line) D-channel signaling for ISDN.

Data Rules:

For 5E4(2) and later, if the INPULSING or OUTPULSING field has a value of "CCIS6" or "ISUP7", TRK DIR must be entered as "2W", "INC", or "OUT".

2W:
Packet-Switched trunks, TRKCLS of "PACKET" or "X75P", must have a Trunk Direction of "2W".

If "2W" is entered and TRKCLS is NOT one of the following:

- "CST1"
- "CST2"
- "DSC"
- "IDCS"
- "IVTRK"
- "PKTPIPE"
- "PPMEM"
- "SPCHNDLR"

and

- if HUNT TYPE is not "PSUCD", then FAR END NPA must be entered.

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- for 5E10 and later:
  - DAS cannot be entered.
  - SCR must be entered.

If "2W" is entered, CAMA PSAP is "N", and TRKCLS is NOT
- "CST1"
- "CST2"
- "DSC"
- "PKTPIPE"
- "PPMEM"
- "SPCHNDLR"

then HUNT TYPE must not be "ANN", "FIFO" or "PRFF".

When TRK DIR is "2W", INPULSING and OUTPULSING must be
- "CCIS6"

When TRK DIR is "2W", INPULSING and OUTPULSING must be
- "CCIS6"
- "DCHN"
- "DCS"
- "DP"
- "ISUP7"
- "MF"
- "RPEO"
- "RPTO"
- "TT"
- or blank.

For 5E9(1) and later, if TRK DIR is "2W" and TRKCLS is not "CST1", "CST2", "DSC", "IDCS", or "IVTRK", and HUNT TYPE is not "PSUCD", then FAR END NPA must be entered.

For 5E10 and later:
If "2W" is entered,

- and INPULSING is NOT

  "ISUP7"

  "CCIS6"

  and TRKCLS is NOT:

  "CST1"

  "CST2"

  "DSC",

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"PKTPIPE"

"PPMEM"

"SPCHNDLR"

then GLARE ACTION must be "ALLCTRL" or "NONECTRL"

- and TRKCLS is not

"DSC"

"PACKET"

"X75"

"X75P"

"SPCHNDLR"

then OUTPULSING must be entered.

ANN:
The TRK DIR must be "ANN" for each TGN that matches an RTIDX form's TGN (where that RTIDX form's route index matches a route index on an OSPSCT form [5404 Record]). The TRK DIR entry must be "RAF" if the "RAFEN" field on the TRUNK form is defined.

For 5E6 and later, if the CMD CD field of the CVECT form (5460 Record) is "MUSIC", "DISC", "PROMPT" or "ANNOUNC", then ARG1 on the CVECT form may equal a ROUTE INDEX on the RTIDX form (5303 Record), the TRUNK GROUP NUMBER on the RTIDX form must equal TGN on a TKGRP form and TRK DIR must equal "ANN" on that TRGRP form.

If MUSIC RI on the STINFO form (5402 Record) equals the ROUTE INDEX on the RTIDX form, then TRK DIR must equal "ANN" on the corresponding TKGRP form.

If corresponding TGNs on the TRUNK form have a value in MAXCALLS field, then the TGNs on this form which equal the TGN on the TRUNK form must have TRK DIR equal to "ANN".

INC:
For 5E9(1) and later, when TRK DIR is "INC", INPULSING must be

- "CCIS6"
- "DCHN"
- "DCS"
- "DP"
- "ISUP7"
- "MF"
- "RPEO"
- 169RPTO"
- "TT"
- or blank.

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OUT:

When TRK DIR is "OUT", OUTPULSING must be

- "CCIS6"
- "DCHN"
- "DCS"
- "DP"
- "ISUP7"
- "MF"
- "RPEO"
- "RPTO"
- "TT"
- or blank.

For 5E9(1) and later,
if "OUT" if entered, thenIN START DIAL cannot be entered.

For 5E9(2) and later, if "OUT" is entered, and TRKCLS equal to "TSTK", and at least one Trunk Member is defined on the TRUNK form, then all TGN/MEMB(s) must have OUT START DIAL set to "WINK" or unknown.

For 5E10 and later, when TRK DIR is "OUT", FAR END NPA must be entered.

For 5E10 and later, if TRK DIR is "OUT" and HUNT TYPE is

- 2WB
- 2WF
- BGUCD
- GUCD
- MLIDL (5E13 and later)
- PRFL
- PRBL
- UCD

then DCS TRK must be "Y".

For 5E15 and later, when TRK DIR is "OUT", and TRKCLS is not "ADT" or "3GPD", FAR END NPA must be entered.

RAF:

If "RAF" is entered, then

- CARRIER ID must not be entered
- HUNT TYPE must be "FIFO"

SGNL:

If "SGNL" is entered, then:

- BILLING DN must be unknown.
- DATA RATE must be known.
- all EDSL/PRI TRUNKS fields must use the default values.

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- GLARE ACTION must not be entered.
- HUNT TYPE must be unknown.
- both INPULSING and OUTPULSING must be "DCHN".
- SCR and ATTTN must be blank.
- TRKCLS must be "EDSL", "IFOPER" or "IFTERM".
- STD RN SRC must be "N".
- Members of the trunk group cannot have the DEN from the TRUNK form entered as C OE or NC OE on an associated NAILUP form.

For 5E10 and later, when TGN(s) are assigned to a PRI (Primary Rate Interface) on the TKGRP form where TRKCLS is equal to "EDSL", "IFOPER" or "IFTERM" and TRK DIR is equal to "SGNL" (the PRI D channel), there is a limit of 31 D-Channel PRIs (TGN/MEMB(s) on the TRUNK form) on SM values (DEN[1,3] or NEN[1,3] on the TRUNK form) that match EQIM SM and have a UNIT TYPE of SM2000, and a limit of 20 PRIs on an SM that does not have a UNIT TYPE of SM2000 on the EQIM form.

For 5E11 and later, when TRK DIR is not "INC" or "2W", CNA OPTION must be "NONE" on this form.

For 5E12 and later, when TRK DIR is "INC", "SGNL", or "LTP", the following RI intercept treatments, assigned on the NOC form (5501 Record), are not valid: REG ICPT RI, BLANK NBR RI, OOS RI, and DENIED TERM RI.

2.5 HUNT TYPE

Description: The HUNT TYPE determines how the Trunk Group will be searched for an available trunk.

For Two-Way trunk groups, it is necessary that the near-end trunk group and the far-end trunk group hunt from opposite ends of their respective trunk group to minimize the glare condition. For example, if the near-end trunk group has a HUNT TYPE of "2WF", the far-end trunk group must have a HUNT TYPE of "2WB".

Valid HUNT TYPE Entries

Entry	Definition
2WF	Two-Way Forward hunt. Trunks will be hunted in numerically ascending order.
2WB	Two-Way Backward hunt. Trunks will be hunted in numerically descending order.
ANNC	Announcement Trunk hunt. A TRKCLS of "ANNCMNT" must be used with this HUNT TYPE.
BGUCD	Software Release: 5E9(1) and later. Backward Circular Sequential. The start hunt member is the last selected member -1. Hunting then continues through the trunk members in a backward direction using circular hunting to the lowest member, then starting over at the highest member. The hunt continues in this manner until an idle member is found or all members are found busy.
FIFO	First-In, First-Out hunt. Used for Outgoing and Logical Test Port Groups except DC Jacks and Callback to Trunk and Line Work Stations. FIFO is also required for Callback to TLWS.
GUCD	Software Release: 5E9(1) and later. Forward Circular Sequential hunt. The start hunt member is the last selected member +1. Hunting then continues through the trunk members in a forward direction using circular hunting to the highest member, then starting over at the lowest member. The hunt continues in this manner until an idle member is found or all members are found busy.
MLIDL	Software Release: 5E13 and later. Most Idle - Least Idle trunk hunting. The number of trunks associated to a trunk group, where the HUNT TYPE equals "MLIDL", cannot exceed 192 members.This entry supports the Trunk Group Hunt Sequence Enhancements feature. For more information, see Division 2, Section 1BT.
PRFF	Idle/preempt First-in First-out hunt. Used for preemptable Outgoing Trunk Groups associated with DSN (Defense Switched Network). The DSN (Defense Switched Network) capability is defined using the BRCS

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	feature, Precedence and Preemption. See the 5618 Records.
PRBL	Idle/preempt Backward Linear hunt. Used for preemptable Two-Way Trunk Groups associated with DSN (Defense Switched Network). The DSN (Defense Switched Network) capability is defined using the BRCS feature, Precedence and Preemption. See the 5618 Records.
PRFL	Idle/preempt Forward Linear hunt. Used for preemptable Two-Way Trunk Groups associated with DSN (Defense Switched Network). The DSN (Defense Switched Network) capability is defined using the BRCS feature, Precedence and Preemption. See the 5618 Records.
PSUCD	Software Release: 5E3 and later. Packet Switching Uniform Call Distribution.
UCD	Software Release: 5E9(1) and later. Uniform Call Distribution. The start hunt member is randomly selected, then hunting continues through the trunk members in a forward direction using circular hunting to the highest member, then starting over at the lowest member. The hunt continues in this manner until an idle member is found or all members are found busy.

To improve memory utilization the Recent Change system defines an additional set of HUNT TYPE values for Large Trunk Groups, groups exceeding 192 members. HUNT TYPES from either set may be entered on Recent Change View 5.1; Recent Change will automatically convert between the sets depending on the number of members (see conversions below). ODA does not allow the Large Trunk Group HUNT TYPEs to be entered, but automatically makes the distinction internally based on number of members.

In Digital Cellular Switch trunk groups (DCS TRK is "Y"), trunk member 0 cannot be assigned; therefore, large DCS trunk groups are those exceeding 191 members. Also, since DCS trunks are global trunks, DCS trunk hunting is performed in the AM (Administrative Module).

Large Trunk Group Hunt Types

Small Group (ODA and Recent Change)	Large Group (Recent Change Only)
2WF	LGFD
2WB	LGBD
BGUCD	LBGUCD
GUCD	LUCD
PRFL	PLFL
PRBL	PLBL
PRFF	PLFF
PSUCD	PSLGUCD
UCD	LGUCD

Data Rules:

For 5E9(1) and later, with the exception of E911 CAMA PSAP, "CST1", "CST2", and "DSC" trunk groups, two-way trunk groups may not have a HUNT TYPE of "ANN", "FIFO", or "PREF".

Incoming Trunk Groups do not require a HUNT TYPE entry.

If TRK DIR is "SGNL", the field must not be entered.

Two-Way EDSL and EDSLHM trunks require a HUNT TYPE of
- "2WB"
- "2WF"
- "PRBL" (5E9(2) and later)
- "PRFL" (5E9(2) and later)
- "UCD" (5E9(1) and later)
- "BGUCD" (5E9(1) and later)
- "GUCD" (5E9(1) and later)
- "MLIDL" (5E13 and later)

If the TRKCLS is "IFOPER", then HUNT TYPE must not be entered.

Two-Way CCS trunks where the INPULSING or OUTPULSING field equals "CCIS6" or "ISUP7" must have a HUNT TYPE of
- "2WB"

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- "2WF"
- "BGUCD" (5E9(1) and later.)
- "GUCD" (5E9(1) and later.)
- "UCD" (5E9(1) and later.)

For 5E9(1) and later, TRK DIR must be "2W". when HUNT TYPE is:

- "2WB"
- "2WF"
- "BGUCD"
- "GUCD"
- "MLIDL"
- "PRBL"
- "PRFL"
- "UCD"

PSUCD:

When HUNT TYPE is "PSUCD":

- TRKCLS of "PACKET"

  "X75"

  or

  "X75P"must be used.

- INPULSING and OUTPULSING fields must be blank.

- At least one EQPSUPH form (5742 Record) must have an entry of "O" in the EQST field.

For 5E9(2) and later, each TRUNK form with a corresponding HUNT TYPE of "PSUCD" on the TKGRP form, must have a matching EQIM form with the value entered in the CONFIGURATION field of the EQIM form must support packet switching and packet switched trunks for the associated SM. For the CONFIGURATION that supports this TRKCLS value,see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2. The matching TKGRP form is found by matching TGN on the TRUNK form to TGN on the TKGRP form. The matching EQIM form is found by matching the first three digits of the known DEN, LTP, NEN, SLEN, TEN, or TRKOE from the TRUNK form to IM (Interface Module) on the EQIM form.

2.6 SCR

Description: Enter the Screening Index Number to be used for routing and charging of calls.
Valid Entries: 1 - 4095

Data Rules:

A Screening Index is required for all Two-Way and Incoming Trunk Groups.

All combinations of CODE INDEX from one or more LDIT (5300-3/5 Record), RDIT (5300-7/8 Record), INDIT (5309 Record), or MLDIT forms (5300-3 Record), and SCR from the TKGRP form must have corresponding RAR form entries for CDI, SCR, and "NONE" for PFX.

2.7 GLARE ACTION

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Description: Will the switch yield if a glare condition occurs on a trunk in this trunk group? When the near end switch and far end switch simultaneously seize a two-way trunk, the trunk experiences a glare condition. One of the switches must give up ("yield") the trunk and find another. The GLARE ACTION field determines how this (the near end) switch will act when it detects glare.

For 5E6 and later, one of the following values must be entered in the GLARE ACTION field.

Valid GLARE ACTION Entries - 5E6 and later

Entry	Definition
ALLCTRL	All near end switch trunks have control; the far end switch always yields.
NONECTRL	The near end switch always yields; far end switch trunks have control.
ODDEVEN	For use with CCS7 trunks only. Control is determined by an ODD/EVEN algorithm that compares the Origination Point Code of the near end switch to the Destination Point Code of the far end switch. The switch with the greatest Point Code controls trunks with even numbered Circuit Identification Codes (defined in the CLCI TRK ID field on the associated TRUNK form) and yields on those with odd numbered CICs; the other switch controls trunks with odd CICs and yields on those with even CICs.

Data Rules:

Since Glare Action applies only to Two-Way trunks, TRK DIR must be "2W" when GLARE ACTION is entered.

For 5E6 and later, for CCS7 trunks (INPULSING or OUTPULSING equal to "ISUP7"), GLARE ACTION must be "ALLCTRL", "NONECTRL" or "ODDEVEN".

WARNING: If GLARE ACTION for CCS7 trunks is set to "ALLCTRL" or "NONECTRL", the connecting office must be on the 5E6 or later Software Release.

GLARE ACTION may not be entered for CCS trunks that have INPULSING or OUTPULSING entered as "CCIS6".

It must be entered as "ALLCTRL" or "NONECTRL" for trunks with INPULSING or OUTPULSING other than "ISUP7" or "CCIS6".

For trunk groups with TRKCLS "X75" or "X75P", GLARE ACTION must be "ALLCTRL". For 5E7 and later, GLARE ACTION must be "ALLCTRL" when TRKCLS is "PACKET". For packet switching trunk groups (IP, X.75 or X.75P) GLARE ACTION is not used. Glare conditions on two-way packet switching trunks do not occur because of the assignment of Logical Channel Numbers (up to 128 per trunk member). Both the near end and far end Logical Channel Numbers are provisioned by the craft and prevent glare conditions from occurring.

2.8 DAS

Description: Enter the Digit Analysis Selector to be used for routing and charging of calls.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

A DAS is required for all Two-Way and Incoming Trunk Groups, except when the TRKCLS is "IFTERM"; then, the DAS field must not be entered.

If incoming or 2-way trunk group(s) are assigned on the TKGRP form with a DAS (Digit Analysis Selector) then the DAS must be defined on the DAS form (5300-1 Record). The DAS can only be defined as a LINE DAS for trunks with a corresponding TRKCLS value of

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- "EDSL"
- "EDSLHM"
- "LATA"
- "PF"
- "PFITT"
- "PFLASH"

Otherwise, the DAS must be defined as a TRUNK DAS.

It is recommended that if TRKCLS is "LTPOGTC", "LTPROTL", "LTPCLBCK", or "LTPDFTAC", this DAS should point to a DAS form (5300-1 Record) assigned an LDIT that is populated in every SM where the LTP resides. An LDIT is populated on SMs through the SMLDIT form (5315 Record).

When the specified DAS is the same as PVN DAS on the OFCOPT form (5509 Record), then this trunk group is dedicated to ASP (Advanced Services Platform; previously PVN, Private Virtual Network) and must have TRKCLS set to one of the following values: "EDSL", "PF", "PFLASH", "PFITT". If a trunk group is assigned to a DAS similar in functionality to the PVN DAS, then it should have TRKCLS set to one of the following values: "EDSL", "PF", "PFLASH", "PFITT".

Each DAS assigned on the TKGRP form assigns an LDIT (via the LOCAL DIT field on the corresponding DAS form) to one or more SMs (via the first three digits of the TEN, DEN, or (for 5E9(2) and later) NEN field on all associated TRUNK forms). Each LDIT assigned in this way, and its associated SMs, must be defined on the SMLDIT form.

2.9 # TRKCLS

Description: This field defines the type of traffic carried over the Trunk Group. The 5ESS Switch may be used as a combination Local/Toll Office. Local traffic will be carried over certain Trunk Groups and toll traffic will be carried over others.

Required Field.

Valid Entries for the TRKCLS field are divided into three tables: Local Office Traffic, Toll Office Traffic, and Logical Test Ports. The first table applies to Trunk Groups that carry local office traffic. Refer to Figure 1 for applicable Address Signal and Start Dial Combinations.

Valid TRKCLS Entries (Local Office Traffic)

Entry	Definition
3GPD	Software Release: 5E15 and later High Speed Data Trunks
ACJCK	AC Jack Termination on Trunk and Line Work Station. Refer to Division 2, Section 2H, "Trunk and Line Work Station Access Unit."
ADT	Software Release: 5E12 and later. AUTOPLEX Data Trunk. This TRKCLS supports the CDMA Data Services and the TDMA Data Services - Circuit Mode features. For more information, see Division 2, Section 4A280 and Division 2, Section 4A286, respectively.
AIS	Outgoing to AIS (Automatic Intercept Service).
ATNDVFY	Software Release: 5E8 and later. Remote Busy Verify. Allows the ISDN Attendant the ability to verify lines on remote Switches by way of BVTs (Busy Verify Trunks). The lines on the remote Switch may be busy verified only if they are associated to an incoming ISAT BVT.
ANNCMNT	Outgoing to An Announcement.
A2	Software Release: 5E13 and later. IS-634 A2 Interface. Provides a connection for the OVBS (Other Vendor Base Station) capability. See Division 2, Section 4A191.
A5	Software Release: 5E14 and later. IS-634 A5 Interface. For more information, see Division 2, Section 8I.
BCM	Software Release: 5E12 and later. (Frame Relay) Bearer Channel Member. This TRKCLS supports the CDMA Data Services and

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	the TDMA Data Services - Circuit Mode features. For more information, see Division 2, Section 4A280 and Division 2, Section 4A286, respectively.
BUSYVFY	Incoming From a 3C Type Switchboard or TSPS Operator For Busy Line Verification.
CAMA	Outgoing CAMA Trunks to the Serving CAMA office. Specify this Trunk Class for trunks outgoing to an ANAC (Automatic Number Announcement Circuit).
CST1	Software Release: 5E9(1) and later. Autoplex Cell Site 1 trunk.
CST2	Software Release: 5E9(1) and later. Autoplex Cell Site 2 trunk.
DSC	Software Release: 5E9(1) and later. Autoplex Dedicated Switch Connections.
EDSL	Extended Digital Subscriber Line trunk.
EDSLHM	EDSL trunk for Hotel/Motel TSPS service.
EISTRK	Software Release: 5E6 and later. Outgoing trunk to an EIS (External Information System). The discussion of the translations for an EIS trunk is in Division 2, Section 3C.
FRBC	Software Release: 5E12 and later. Frame Relay Bearer Channel. This TRKCLS supports CDMA Data Services - Circuit Mode feature. For more information, see Division 2, Section 4A280,,
IC	Software Release: 5E10 and later. Carrier Trunk.
IDCS	Software Release: 5E9(1) and later. Autoplex Inter-DCS (Digital Cellular Switch) or loop-around trunks.
ISLPM	Software Release: 5E14 and later. ISLPM supports the IS-41 Inter-System Hard Handoff feature and the IS-634 A5 Inter-Vendor feature. For more information, see Division 2, Section 8H.
IS41	Software Release: 5E14 and later. IS41 supports the IS-41 Inter-System Hard Handoff feature. For more information, see Division 2, Section 8H.
IVTRK	Software Release: 5E9(1) and later. Autoplex Inter-Vendor trunks.
LTOLLCON	Local Office End of a Toll Connecting Trunk Incoming, Outgoing or Two-Way.
LTPS96TF	Remote terminal diagnostics.
OGTGDSF	Software Release 5E16(2) and later. Logical Test Port Type that corresponds to GDSF (w/TTF) equipment.
OTOTK	Office-to-Office Test Trunk. Refer to Division 2, Section 2G, for description and requirements.
PACKET	Two-Way Packet-Switched (Internal Protocol) trunks.
PBXDID	Outgoing For PBX Direct-In-Dial.
PCF	Software Release 5E16 FR3 and later. Packet Control Function.
PF	Private Facility Trunks. Incoming, Outgoing, or Two-Way.
PFITT	Private Facility Intertandem Trunks.
PFLASH	Private Facility Trunks with Flash repeating capability. Used for Incoming, Outgoing or Two-Way private trunks.
PFCPE	Private Facility Customer Premise Equipment Trunks, for outgoing trunks to customer premises.
PPMEM	Software Release 5E10 and later. Packet pipe member. This TRKCLS supports CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.
PKTPIPE	Software Release: 5E10 and later. Packet pipe. This TRKCLS supports CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.
RECCMPL	Recording Completing; Outgoing to a 3C Type Switchboard.
RECCMPL	Recording Completing; Outgoing to a 3C Type Switchboard.
SERVICE	Telephone Company Service Facilities (e.g. 411, 611, 811).
SES	Service Evaluation Trunks.
SPCHNDLR	Software Release 5E10 and later. Speech Handler. This TRKCLS supports CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.
SVC	Software Release 5E12 and later. (Frame Relay) Switched Virtual Circuit. This TRKCLS supports the CDMA Data Services and the TDMA Data Services - Circuit Mode features. For more information, see Division 2, Section 4A280 and Division 2, Section 4A286, respectively.
TOLLOPER	Incoming From a 3C Type Toll Switchboard Operator.
TSPS	Outgoing to TSPS Operator Positions.
TSTK	Local Test Desk Test Trunk, incoming or outgoing. Refer to the Division 2, Section 2E ("Local Test

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	Desk") and Section 2N ("Coin Station Test Lines").
X75	Software release: 5E6 and Later. Provides X.75 gateway on the switch to interconnect to packet Interexchange carriers (interLATA traffic) and to independent operating companies' packet switch networks (intraLATA traffic).
X75P	Software Release: 5E5 and later. Two-Way X.75' trunk group connecting this 5ESS Switch to a PPSN Switch within the same LATA.

Data Rules for Local Office TRKCLSs:

3GPD:

- When TRKCLS is "3GPD":
  - the ACT field for SFID 285 on the SFSYS form (5713-1 Record) must be set to "Y". This TRKCLS value is used for the CDMA (Code Division Multiple Access) Cellular Packet Data Services secured feature. (For more information on this feature, see Division 2, Section 4A285.)
  - TRK DIR must be "2W" or "OUT".
  - and TRK DIR is "2W", INPULSING must be "DCS".
  - and TRK DIR is "OUT", INPULSING must be unknown.
  - OUTPULSING must be "DCS".
  - FAR END NPA must not be entered
  - DCS RETRY must be "Y".
  - DCS TRK must be "Y".
  - PBX/CPE ID must not be entered
  - DAS must not be entered.
  - SCR must not be entered.
  - GLARE ACTION must be "NONECTRL".
  - BRCS must be "N".
  - VPA TYPE must be "NOVPA".
  - HUNT TYPE must be known.
- For each trunk group of TRKCLS "3GPD", all trunk members for this trunk group must reside on the same Switching Module/PSU (Packet Switch Unit).

ACJCK:
When TRKCLS is "ACJCK", trunk group members must be analog trunks; a value must be entered in the TEN field on the member's TRUNK form. CIRCUIT TYPE on the associated EQTUP form (5720 Record) must be "TRK4EM" (4-wire E&M).

ACJCK trunks must be incoming and must have MF INPLS.

FAR END NPA must not be entered.

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For 5E15 FR1 and later, when TRKCLS is "ACJCK":

- AC-JACK 1 OE or AC-JACK 2 OE must be defined on the TLWS form.
- an analog trunk assignment (TEN) or a digital trunk assignment (DEN or NEN) must exist on the TRUNK form (5204 Record).

ADT:
When TRKCLS is "ADT",

- OUTPLS must be "DCS"
- SERV TYPE must be "DATA".
- TRK DIR must be "2W" or "OUT".
- DCS TRK must be "Y"
- DAS must not be entered
- SCR must not be entered
- FAR END NPA must not be entered
- BRCS must be "N"
- DCS RETRY must be "Y"
- PBX ID must not be entered
- GLARE ACTION must not be entered
- VPA TYPE must be "NOVPA" or must not be entered
- HUNT TYPE must be entered.

When TRKCLS is "ADT" and TRK DIR is "2W", INPLS must be "DCS". When TRKCLS is not "ADT" or "SPCHNDLR", SERV TYPE must be "NOSERV".

When TRK DIR is "OUT" and TRKCLS is not "ADT", FAR END NPA must be entered.

When TRK DIR is "2W", CAMA PSAP is "N" and TRKCLS is, not "ADT", "BCM", "CST1", "CST2", "DSC", "FRBC", "PKTPIPE", "PPMEM", "SPCHNDLR" or "SVC", HUNT TYPE, must not be "ANN", "FIFO" or "PRFF".

For 5E13 and later, when TRKCLS is "ADT", the ACT field for SFID 215, SFID 285, or SFID 286 on the SFSYS form that are included in the switch must be set to "Y", while the other SFIDs ACT fields are set to "N".

For 5E14 and later, when TRKCLS is "ADT", all trunk members of this trunk group on the TRUNK form (5204 Record), must have a TRKOE entered with an OE that has a channel assignment in the range of 64 to 95 (channel is the last three digits of the OE). When this OE corresponds to a Protocol Handler Logical Channel Group with a PH TYPE of "PH4" on the PSUGP form (5949 Record), the PH channel assignment is limited to 64 thru 69. When the OE corresponds to a Protocol Handler Logical Channel Group with a PH TYPE of "PHV5" on the PSUGP form, the PH channel assignment is limited to 64 thru 95.

AIS:

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A HUNT TYPE of "FIFO" and a TRK DIR of "OUT" must be used with this Trunk Class.

ANNCMNT:
For 5E6 and later when TRKCLS is "ANNCMNT", if the trunk group is a Global Announcement TGN that is entered in the GL ANN TG field of another TKGRP form, it may not have trunks defined on the TRUNK form.If the trunk group is a Global Announcement TGN but is not entered in the GL ANN TG field of any other TKGRP form, then it must have at least one trunk defined on the TRUNK form. A Global Announcement trunk group is defined on the TKGRP form with TRKCLS set to "ANNCMNT" and with GL ANN TG and LOCAL SM left blank; the TGN appears on an RTIDX form with a ROUTE INDEX that is defined on a FIXRT form with FIXED ROUTE TYPE set to "RSMSA".

For 5E8 and later when a member of an "ANNCMNT" trunk group has a TEN assigned on the TRUNK form, CIRCUIT TYPE must be "TRK4EM" (4-wire E&M) on the corresponding EQTUP form.

For 5E9(2) and later, the "ANNCMNT" TRKCLS requires a TEN (Trunk Equipment Number), a DEN (Digital Equipment Number) or a NEN (Networking Equipment Number) assignment on the associated TRUNK form(s).

For 5E12 and later, when TRKCLS is "ANNCMNT", HUNT TYPE must be entered.

ATNDVFY:

- If TRKCLS is "ATNDVFY", then the following fields must be "N":

- ASP ORIG,
- BRCS,
- CAMA PSAP,
- CFN RSTRCT,
- LN CRIT Q,
- LN VIRT,
- LS DLY ANS,
- NI ANNC,
- NI IW REL,
- PRIVACY,
- RLT FLASH,
- SATELLITE,
- UNRES EA

- If TRKCLS is "ATNDVFY", the following fields must be not be entered:

- BILLING DN,
- DATA RATE,
- DEST PT CODE,
- DSN ACT ID,
- HUNT TYPE,
- HUNT TYPE,
- NEND CLLI,
- ORIG PT CODE,
- PBXDID,
- VPA RATE

- CCS7 TYPE must be "BELLCORE" or not entered;

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- COIN, SHUTTLE, TRUNK QUERY, and XLT TEST must be "N" or not entered;
- FREE ANS must be "Y";
- LN TYPE must be "NONE";
- SVC GRP must be "NOANNC";
- TRK DIR must be "INC" or "OUT";
- VPA TYPE must not be entered or it must be "NOVPA";
- the corresponding APGFP form (5620-2 Record), where TKGRP TGN equals APGFP GROUP NO/GROUP NAME, must have NUTS/LUTS ACTIVE equal "N".
- If TRKCLS is "ATNDVFY" and TRK DIR is "INC":
  - INPLS must be "MF";
  - ISAT MLHG, INSEP, and DIR CON DN cannot be entered;
  - one TRUNK form must exist with the key TGN that matches the TGN on this TKGRP form. On that TRUNK form:

- TEN or DEN must be entered;
- IDLE STATE must be "ON";
- IN START DIAL must be "WINK";
- OUT START DIAL must not be entered;
- EXT GUARD TIMING and ANSWER DELAY
- TIMING must be "N" or not be entered.

- If TRKCLS is "ATNDVFY" and TRK DIR is "OUT":
  - OUTPLS must be "MF".;
  - ISAT MLHG must be entered.;
  - AML PERCENT and QUEUE FEATURE must not be entered.;
  - ENQUEUE ACT must be "Y" or not entered;.
  - one TRUNK form must exist with the key TGN that matches the TGN on this TKGRP form. On that TRUNK form:

- TEN or DEN must be entered;
- IDLE STATE must be "ON";
- IN START DIAL must not be entered;
- OUT START DIAL must be "WINK";
- EXT. GUARD TIMING and ANSWER DELAY
- TIMING must be "N" or not be entered.

For 5E15 and later, when TRKCLS is "ATNDVFY", CQ/BQ ALW must be "N" or not entered.

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A2:

For 5E13 and later, when TRKCLS is "A2",

- SFID 191 must be activated.
- all corresponding trunk members of the respective trunk group must have a DEN or NEN specified.
- IN START DIAL and OUT START DIAL (on the TRUNK form) must not be entered
- an ATSDAT form must not be entered
- TRKCLS must not be "A2", when FAR E911 is "Y"
- the following TKGRP fields must be:
  - TRK DIR must be 2W
  - DCS TRK must be "Y"
  - FAR END NPA must not be entered
  - PBX/CPE ID must not be entered
  - VPA TYPE must not be entered or must be entered as "NOVPA"
  - DAS must not be entered
  - SCR must not be entered
  - INPULSING must be DCS
  - OUTPULSING must be DCS
  - GLARE ACTION must not be entered
  - DATA RATE must be "56K" or "64K".

A5:

For 5E14 and later, when TRKCLS is "A5",

- DAS must not be entered
- SCR must not be entered
- GLARE ACTION must not be entered
- VPA TYPE must be "NOVPA", or not be entered
- DCS TRK must be "Y"
- DCS RETRY must be "Y"
- PBX/CPE ID must not be entered
- TRK DIR must be "2W"

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- FAR END NPA must not be entered
- DATARATE must not be entered
- IAPT must be "Y"
- ATTN must be "0"
- INPLS must be "NOSIGNAL"
- OUTPLS must be "NOSIGNAL"

When the TGN field on the TKGRP form matches the TGN field on the TRUNK form, and TRKCLS field is "A5" on the TKGRP form, IN START DIAL must not be entered on the TRUNK form.

When the TGN field on the TKGRP form matches the TGN field on the TRUNK form, and TRKCLS field is "A5" on the TKGRP form, OUT START DIAL must not be entered on the TRUNK form.

For 5E18 and later, when TRKCLS is "A5", "ADT", or "IS41", all corresponding trunk members of these trunk groups (on the TRUNK form (5204 Record)) must have a TRKOE entered where the OE TYPE is "U" and the OE corresponds to a Ptotocol Handler Logical Channel Group with a PH TYPE of "PHV4" or "PHV5" on the PSUGP form (5949 Record).

BCM:
For 5E12 and later, when TRKCLS is "BCM",

- TRK DIR must be "2W"
- DCS TRK must be "N"
- DAS must not be entered
- SCR must not be entered
- INPLS must be "FRBC"
- OUTPLS must be "FRBC"
- FAR END NPA must not be entered
- BRCS must be "N"
- PBX ID must not be entered
- HUNT TYPE must not be entered
- GLARE ACTION must not be entered
- VPA TYPE must be "NOVPA" or must not be entered
- DATA RATE must be "56K" or "64K"

When TRKCLS is "BCM" or "FRBC", INPULSING must be "FRBC" and OUTPULSING must be "BC".

For 5E13 and later, when TRKCLS is "BCM" and associated SVCs have DCS TRK of "Y" on the TKGRP form, an AFAC ID must be entered on all the corresponding EQDUP, EQVT, or EQLVC forms for the respective DEN, NEN, or OIUEN populated on the associated TRUNK form.

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- EQDUP forms:
  - If FAC IND is 0 or 1, AFAC ID FAC 0 must be entered.
  - If FAC IND is 3, and the channel number (the last two digits of the DEN on the TRUNK form) is less than 25, AFAC ID FAC 0 must be entered;
  - If FAC IND is 3, and the channel number is greater than 24, AFAC ID FAC 1 must be entered.
- EQVT and EQLVC forms:
  - AFAC ID must be entered.

BUSYVFY:
BUSYVFY trunks must be incoming.

INPLS is required for BUSYVFY trunks.

For 5E10 and later, FAR END NPA must not be entered.

CAMA:
CAMA trunks must have the following:
- FREE TERM must be entered
- HUNT TYPE must be "FIFO"
- OUTPLS must be entered
- OUTPL REQ must be "Y"
- SIGNAL must not be entered
- TRK DIR must be "OUT"

For 5E9(2) and later, if a DEN or NEN is entered on the TRUNK form and the corresponding TKGRP form has TRKCLS of "CAMA", then SUPV on the TRUNK form must be "EM2" or not entered.

CST1:
When TRKCLS is "CST1":

- INPLS must be "DCS"
- OUTPLS must be "DCS"
- DCS TRK must be "Y"
- DCS RETRY must be "N"
- VPA TYPE must be "NOVPA" or blank
- When the TGN on this form matches the TGN on the TRUNK form, then on the TRUNK form:
  - IN START DIAL must not be entered
  - OUT START DIAL must not be entered
- the ACT field for SFID ACT 130 on the SFSYS form must be "Y".

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CST2:
When TRKCLS is "CST2":

- INPLS must be "DCS"
- OUTPLS must be "DCS"
- DCS TRK must be "Y"
- DCS RETRY must be "N"
- VPA TYPE must be "NOVPA" or blank
- When the TGN on this form matches the TGN on the TRUNK form, then on the TRUNK form:
  - IN START DIAL must not be entered
  - OUT START DIAL must not be entered
- SFID ACT 130 on the SFSYS form cannot be "N".

DSC:
When TRKCLS is "DSC":

- DCS TRK must be "Y"
- DCS RETRY must be "N"
- VPA TYPE must be "NOVPA" or not entered.
- When the TGN on this form matches the TGN on the TRUNK form, then on the TRUNK form:
  - IN START DIAL must not be entered
  - OUT START DIAL must not be entered
  - The trunk must be a digital trunk; that is, a value must be entered in the DEN field
- SFID ACT 130 on the SFSYS form cannot be "N".
- For 5E9(2) and later, if "DSC" is entered, then DSC NUM must be entered on the NAILUP form(5207 Record).A trunk assigned to the controlling port on a NAILUP form cannot belong to a DSC trunk group unless a value is entered in the DSC NUM field on the corresponding NAILUP form. Forms correspond when DEN on the TRUNK form matches the equipment number portion of the C OE on the NAILUP form, and the TRKCLS on the corresponding TKGRP form is "DSC".

For 5E17 and later, when TRKCLS is "DSC" or "IVTRK", all trunks in the trunk group must be digital, (i.e., DEN, NEN, OIUEN, or DCS TRK must be entered on all associated TRUNK forms).

EDSL:
Each trunk belonging to this trunk group must be defined with a DEN on a TRUNK form. If the group's TRK DIR is "SGNL", an ISCN must also be entered on the TRUNK form.When TRKCLS is not "EDSL" or "EDSLHM", all EDSL/PRI TRUNKS fields must use the default values.

For5E6 and later, when DLTU TYPE is "DLTU24" or "DLTU48" on the EQDU form and the corresponding TKGRP form has TRKCLS of "EDSL", "IFOPER" or "IFTERM", and the following are true:

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- INPLS or OUTPULSING is "DCHN",
- TRK DIR is "2W", "INC" or "OUT",

then DATA RATE on the TKGRP form must be "56K", "R64K", "64K" or must not be entered. The EQDU form is found by matching SM and DLTU NUMBER with the first 3 digits and 4th digit respectively of DEN on the TRUNK form.

For5E6 and later, when DLTU TYPE is "DLTU24" or "DLTU48" on the EQDU form and the corresponding TKGRP form has TRKCLS of "EDSL", "IFOPER" or "IFTERM", and the following are true:

- INPLS or OUTPULSING is "DCHN",
- TRK DIR is "SGNL",

then DATA RATE on the TKGRP form must be entered. The EQDU form is found by matching SM and DLTU NUMBER with the first 3 digits and 4th digit respectively of DEN on the TRUNK form.

If TRKCLS is "EDSL" or "EDSLHM" and TRK DIR is "2W", then HUNT TYPE must be

- "2WB"
- "2WF"
- "PRBL" (5E9(2) and later)
- "PRFL" (5E9(2) and later)
- "BGUCD" (5E9(1) and later)
- "GUCD" (5E9(1) and later)
- "UCD" (5E9(1) and later)
- "MLIDL" (5E13 and later)

For 5E9(1) and later:

See "IFOPER" for 5E9(1) and later data rule for LLCB assignments.

For 5E9(2) and later:

If the TRUNK GROUP NUMBER entry on the ROUTE INDEX form matches the TGN entry on the TRUNK GROUP form where TRKCLS is set to "EDSL" or "EDSLHM", the TRK DIR on the TRUNK GROUP form must not be set to "SGNL".

For 5E10 and later:
If "EDSL" is entered,

- DATA RATE must be entered or DATA RATE and WB RATE must be entered.
- the associated MEMBs on the TRUNK form must have the required entry for DEN or NEN.
- and on the TRUNK form:

  ANSWER DELAY TIMING must be "N"

  or not entered

  EXT. GUARD TIMING must be "N"

  IN START DIAL must not be entered

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OUT START DIAL must be not be entered

SUPV must be "EM2" or not entered

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

EDSLHM:
Each trunk belonging to this trunk group must be defined as a B-channel with a DEN entered on a TRUNK form; the last two digits of the DEN must be in the range 1 - 23 or 25 - 47.

For 5E6 and later, if the DLTU TYPE is "DLTU24" or "DLTU48" on the corresponding EQDU form, then the DATA RATE on this form must be "56K", "R64K", "64K" or not entered for a TRKCLS of "EDSLHM".

If TRKCLS is "EDSL" or "EDSLHM" and TRK DIR is "2W", then HUNT TYPE must be
- "2WB"
- "2WF"
- "PRBL" (5E9(2) and later)
- "PRFL" (5E9(2) and later)
- "BGUCD" (5E9(1) and later)
- "GUCD" (5E9(1) and later)
- "UCD" (5E9(1) and later)
- "MLIDL"

When DLTU TYPE is "DLTU24" or "DLTU48" on the EQDU form; the corresponding TKGRP form has TRKCLS of "EDSL", "EDSLHM", "PFLASH", "PFITT" or "PF"; and an ASP feature has been assigned on the TRUNKFA or TKGRPFA forms or within a CLUSTER; then DATA RATE must not be entered.A corresponding EQDU form is found by matching the SM and DLTU NUMBER on the EQDU form with the first 3 digits and the 4th digit respectively of the DEN on the TRUNK form (5204 Record).

When "EDSLHM" is entered:

- DATA RATE must be entered or DATA RATE and WB RATE must be entered.
- a B channel must be assigned on the TRUNK form.
- associated MEMBs on the TRUNK form must have the required entry for DEN or NEN.
- a DEN entered on the TRUNK form and a PRI GROUP entered on the TRUNK form that has a PRI TYPE of "CUSTOM" on the associated PRIGRP form, the last two digits of the DEN(s) on the TRUNK form must be in the range of 1 - 23 or 25 - 47, representing a B channel.

  - ***NOTE:*** An asterisk (*) preceding a DEN specifies that it was generated automatically from the TRUNK form because QTY was greater than 1.

- on the TRUNK form:

  ANSWER DELAY TIMING must be "N" or not entered

  EXT. GUARD TIMING must be "N"

  IN START DIAL must not be entered

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OUT START DIAL must be not be entered

SUPV must be "EM2" or not entered

FRBC:

When TRKCLS is "FRBC",

- TRK DIR must be "2W"
- DCS TRK must be "N"
- DAS must not be entered
- SCR must not be entered
- INPLS must be "FRBC"
- OUTPLS must be "FRBC"
- FAR END NPA must not be entered
- BRCS must be "N"
- PBX ID must not be entered
- HUNT TYPE must not be entered
- GLARE ACTION must not be entered
- the following must be true for all corresponding trunk members of this trunk group:
  - TRKOE TYPE on the TRUNK form is "U"
  - TRKOE NUMBER on the TRUNK form corresponds to a Protocol Handler Logical Channel Group where PH TYPE on the PSUGP form is "PH4" or "PH22"
- and PH TYPE on the PSUGP form is "PH4", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 015 for all corresponding trunk members of this trunk group.
- and PH TYPE on the PSUGP form is "PH22", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 063 for all corresponding trunk members of this trunk group.
- the total number of SVC (Switched Virtual Circuit) trunks assigned to FRBC trunks on a given PH must not exceed 239.
- PHs (Protocol Handlers) are assigned to "FRBC" trunks. For PH4, a given PH may support at most 16 trunks via the "FRBC" trunks assigned on the TRUNK form (5204 Record).For PH22, a given PH may support at most 64 trunks via the "FRBC" trunks assigned on the TRUNK form.

For 5E16(1) and later, for every TKGRP with TRKCLS equal to "FRBC", all trunk members of the trunk

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group on the TRUNK form (5204 Record), must have a TRKOE entered where the OE TYPE is "U" and the OE corresponds to a Protocol Handler Logical Channel Group with a PH TYPE of "PH4" or "PH22" on the PSUGP form (5949 Record).

When HUNT TYPE is not entered and TRKCLS is not "FRBC" or "PKTPIPE", FCS and PROT VIOL must not be entered.

When HUNT TYPE is not entered and TRKCLS is not "FRBC", SABM must not be entered.

IDCS:
When TRKCLS is "IDCS":

- TRK DIR must be "2W"
- DCS TRK must be "Y"
- INPLS must be "MF" or "TT"
- OUTPLS must be "MF" or "TT"
- GLARE ACTION must be "ALLCTRL" or "NONECTRL"
- HUNT TYPE must be entered.
- SPEECH TRMTS must be "N"
- VPA TYPE must be "NOVPA" or blank
- The following fields must be blank: SCR, PBX ID, FAR END NPA
- A TIMING form (5520 Record) must be defined with a SERVICE CLASS of "IDCS"
- SFID ACT 130 on the SFSYS form cannot be "N".

ISLPM:

For 5E14 and later, when TRKCLS is "ISLPM",

- DAS must not be entered
- SCR must not be entered
- GLARE ACTION must not be entered
- VPA TYPE must be "NOVPA" or not be entered
- DATA RATE must be "56K"
- HUNT TYPE must not be "NONE"
- FAR END NPA must not be entered
- PBX/CPE ID must not be entered
- DCS TRK must be "N"
- TRK DIR must be "2W"
- INPLS must not be "NOSIGNAL"

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- OUTPLS must not be "NOSIGNAL"
- SERV TYPE must be "NOSERV"
- DCS RETRY must be "N"

When the TGN field on the TKGRP form matches the TGN field on the TRUNK form, and TRKCLS field is "ISLPM" on the TKGRP form, IN START DIAL must not be entered on the TRUNK form.

When the TGN field on the TKGRP form matches the TGN field on the TRUNK form, and TRKCLS field is "ISLPM" on the TKGRP form, OUT START DIAL must not be entered on the TRUNK form.

IS41:

For 5E14 and later, when TRKCLS is "IS41",

- DAS must not be entered
- SCR must not be entered
- GLARE ACTION must be "ALLCTRL" or "NONECTRL"
- VPA TYPE must be "NOVPA" or not be entered
- FAR END NPA must not be entered
- DCS TRK must be "Y".
- DCS RETRY must be "Y"
- PBX/CPE ID must not be entered
- TRK DIR must be "2W"
- HUNT TYPE must be "2WB", 2WF", "ANNC", "BGUCD", "FIFO", "GUCD", "MLIDL", or "UCD".
- SERV TYPE must be "NOSERV"
- INPLS must not be entered
- OUTPULSING must not be entered

When the TGN field on the TKGRP form matches the TGN field on the TRUNK form, and TRKCLS field is "IS41" on the TKGRP form, IN START DIAL must not be entered on the TRUNK form.

When the TGN field on the TKGRP form matches the TGN field on the TRUNK form, and TRKCLS field is "IS41" on the TKGRP form, OUT START DIAL must not be entered on the TRUNK form.

IVTRK:
When TRKCLS is "IVTRK":

- DAS must not be entered
- DCS TRK must be "Y"
- DCS RETRY must be "N"

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- FAR END NPA must not be entered
- GLARE ACTION must be "ALLCTRL" or "NONECTRL"
- HUNT TYPE must be entered.
-
- INPLS must be "DCS"
- OUTPLS must be "DCS"
- PBX ID must not be entered
- SCR must not be entered
- SPEECH TRMTS must be "N"
- TRK DIR must be "2W"
- VPA TYPE must be "NOVPA" or blank

When the TGN on this form matches the TGN on the TRUNK form, then on the TRUNK form:
- IN START DIAL must not be entered
- OUT START DIAL must not be entered

The trunk must be a digital trunk; that is, a value must be entered in the DEN field

SFID ACT 130 on the SFSYS form cannot be "N".

LTOLLCON:
Specify this Trunk Class for DDD Access, Toll Completing and Interoffice (Class 5 to Class 5) trunks. DDD Access Trunks are trunks from a Class 5 to a Toll Office which carry noncoin toll traffic. Recording and timing are done at the local office. Operator assistance is never required. Toll Completing Trunks are trunks from a toll office to a Class 5 office. This Trunk Class may also be used for RSMs.

For 5E6 and later, if DLTU TYPE on the corresponding EQDU form (5730 Record) is "DLTU24" or "DLTU48" and the INPLS or OUTPULSING field on this form is "MF", then DATA RATE on this form must be "56K" or not entered. The EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit of the DEN, respectively, on the TRUNK form.

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

For 5E12 and later, when TRKCLS is "LTOLLCON", HUNT TYPE must be entered.

OGTGDSF:
For 5e16(2) and later, when TRKCLS is "OGTGDSF", a FIXRT form must exist with FIXED ROUTE TYPE set to "OGTGDSF".

OTOTK:
A HUNT TYPE of "FIFO" and a TRK DIR of "OUT" must be used with this Trunk Class.

When TRKCLS is "OTOTK", trunk group members must be analog trunks; a value must be entered in the TEN field on members' TRUNK forms.

PACKET:

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If "PACKET" is entered:

- COIN must be "N" or not entered
- DATA RATE must be "56K" or "64K"
- DSN ARC ID must be 0 or not entered
- ENQUEUE ACT must be unknown or "N"
- FAR END LATA must equal 0 or not entered
- FAR END NXX must not be entered
- HUNT TYPE must be "PSUCD"
- GLARE ACTION must be "ALLCTRL"
- MK BUSY must be "N" or not entered
- MAKE BUSY KEY must not be entered
- NEXT PSN must be entered
- PACKET trunks must be two-way.
- PBX ID must not be entered
- RETRY must be "N"
- RLT FLASH must be "N"
- RLT TYPE must be "NONE"
- SATELLITE must be "N"

For this Trunk Class, a DEN and ISCN must be defined on the TRUNK form. An IP (Internal Protocol) trunk group connecting this 5ESS Switch to another 5ESS Switch can have a maximum of 32 members on a trunk group. An IP trunk group connecting this 5ESS Switch to a 1PSS can have a maximum of 8 members in a trunk group. For 5E5 and later Software Releases, if "PACKET" is entered in the TRKCLS field and "SGNL" is entered in the TRK DIR field, then an entry is required in the ISCN field of the corresponding TRUNK form.

For 5E5 and later, a maximum of 16 trunk groups can be assigned with a TRKCLS of "PACKET".

For 5E6 and later, IN START DIAL and OUT START DIAL must not be entered on the member TRUNK forms.

For 5E8 and later, when "PACKET" trunks are assigned to an SM that supports packet switching, a value must be entered in the PSN field on the ISDNOPT form (5941 Record); that PSN must be different than the NEXT PSN on the TKGRP form. In addition, the value entered in the CONFIGURATION field of the EQIM form must support packet switching and packet switched trunks for the associated SM. (Other SM/TRUNK GROUP combinations may also meet these criteria.) For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E9(1) and later, if the TRUNK GROUP NUMBER defined on an RTIDX input form has TRKCLS set to "X75", "X75P", or "PACKET" on the associated TKGRP form, then at least one TRUNK input form must be defined for the associated TKGRP form.

For 5E10 and later:

- When "PACKET" is entered, FAR END NPA must not be entered.
- When TGNs are defined with a TRKCLS of

  "PACKET"

  "X75"

  "X75P"

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1. there can be a maximum of 25 TGNs with these TRKCLSs per SM, where SM is DEN[1,3] or NEN[1,3] on the corresponding TRUNK form.
2. the DEN or NEN field must be defined on the corresponding TRUNK form(s).

- all members of this Trunk Group must be assigned on the same Switching Module (the first three digits of DEN or NEN on the TRUNK form).
- TRUNK forms which have a TRKCLS of "PACKET" can not have a Protocol Handler (the first three characters of the ISCN)which are mixed with Protocol Handlers from other BRI or PRI DSLs in the same SM. The following "PACKET" TRUNK forms cannot have common a Protocol Handler with the following forms:

  CCLNK

  DSLUSR

  MDLNK

  MISLINK

  PSULNK

  QPHPIPE

  TRUNK

  XAT

PCF:
5E16 FR3 and later

When the TGN on this form matches the TGN on the TRUNK form, then on the TRUNK form:

- IN START DIALand OUT START DIAL must not be entered

When TRKCLS is "PCF":

- DAS, SCR, FAR END NPA, PBX/CPE ID, GLARE ACTION, and DATA RATE must not be entered
- BRCS must be "N".
- VPA TYPE must be "NOVPA" or must not be entered.
- HUNT TYPE must be entered.
- INPULSING must be "PCF".
- OUTPULSING must be "PCF".

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- DCS TRK and DCS RETRY must be "Y".
- TRK DIR must be "TWOWAY".
- There must be a trunk member 1 on the TRUNK form (5204 Record) with MEMB equal 1 defined.
- The first seven digits of the TRKOE must match to SM, PSU, SHELF, and CHANNEL GROUP on at least one ETHIP form (5995 Record).
- For a given combination of the first seven digits of the TRKOE (SM, PSU, SHELF, and CHANNEL GROUP) there can be a maximum of 10 trunk groups.
- For a given combination of the first seven digits of the TRKOE (SM, PSU, SHELF, and CHANNEL GROUP) there can be a maximum of 8000 TRUNK forms (5204 Record).
- The CDMA (Code Division Multiple Access) (cellular packet) Data Services feature must be purchaased (Secured Feature ID 285).

When TRKCLS is "PCF" and DCS TRK is "Y", HUNT TYPE must be "2WB", "2WF", "UCD", "GUCD", or "BGUCD".

For every Trunk Group with TRKCLS equal to "PCF", all trunk members of the trunk group on the TRUNK form (5204 Record), must have a TRKOE entered where the OE TYPE is "U" and the OE corresponds to a Protocol Handler Logical Channel Group with a PH TYPE of "PHE2" on the PSUGP form (5949 Record).

For each Trunk Group with TRKCLS equal to "PCF", the trunk members on the TRUNK form (5204 Record) must have a TRKOE entered with an OE TYPE of "U", and TRKOE must be the same for all members of the trunk group.

PF:
Private Facility Customer Premise Equipment trunks (Recorded Telephone Dictation, Radio Paging, Code Calling and Loud Speaker Paging) can be set up with or without sleeve lead supervision. "PF" is used for CPEs that do not require sleeve lead supervision. Use the "PFCPD" for the sleeve lead applications. When "PF" is used for CPE trunks, the following fields must be entered:

- SUPV must be "RB" on the TRUNK form.
- IN START DIAL and OUT START DIAL must be blank on the TRUNK form.
- TRK DIR must be "OUT".
- OUTPLS must be "TT" or "DP".
- These trunks usually have CUT THRU equal to "Y". For 5E6 and later Software Releases, "PFCPE" must be used for all Private Facility Customer Premise Equipment trunks.

For 5E14 and later, when TRKCLS is "PF", "PFLASH", or "PFITT", and MAIN DN is entered, the ACT field for SFID 550, on the SFSYS form (5713-1 Record), must be set to "Y".

PFITT:
This Trunk Class is used with trunk groups between tandem offices with trunks owned or leased by the customer. This Trunk Class cannot be assigned cut-through outpulsing, thus, the value entered in the CUT THRU field must be "N".

"PFITT" trunks must have TRK DIR of
- "2W" "INC" or

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- "OUT"

If the trunk group is Outgoing or Two-Way, TRK DIR is "OUT" or "2W", the OUTPULSING signaling can be "DP", "MF", or "TT". For 5E6 and later, it may also be "ISUP7".

If the TRK DIR is "INC" or "2W", the INPULSING signaling can be "DP", "MF" or "TT".

For 5E10 and later, incoming PFITT trunks require INPULSING of
- "DP"
- "ISUP7"
- "MF"
- "NONE" or
- "TT"

PFCPE:
Private Facility Customer Premise Equipment trunks (Recorded Telephone Dictation, Radio Paging, Code Calling and Loud Speaker Paging) can be set up with or without Sleeve lead supervision. A TRKCLS of "PFCPE" is used for all Private Facility Customer Premise Equipment trunks which require sleeve lead supervision. "PF" is used for Customer Premise Equipment trunks that do not have sleeve lead supervision. For all CPE trunks:

- SUPV must be "RB" on the TRUNK form.
- IN START DIAL and OUT START DIAL must be blank on the TRUNK form.
- TRK DIR must be "OUT".
- OUTPLS must be "TT" or "DP".
- These trunks usually have CUT THRU equal to "Y".
- If the trunks have sleeve lead supervision, the SLVD SPN field on the TRUNK forms must be defined. (The Sleeve Lead scan points are specified for each trunk of the Trunk Group on the TRUNK form.) For the "PFCPE" Trunk Class, each trunk member defined on the TRUNK form must have a TEN entered.
- For 5E7 and later, a TEN, DEN, or (for 5E9(2) and later) NEN must be entered on the corresponding TRUNK form.

PFLASH:
For 5E9(1) and later, outgoing "PFLASH" trunks require a HUNT TYPE value, and an OUTPLS of "DP", "MF" or "TT".

Incoming "PFLASH" trunks require INPLS of "DP", "MF", "TT" or "NONE".

If "PFLASH" is entered, TRK DIR must be "INC".

PKTPIPE:
"PKTPIPE", "PPMEM", and "SPCHNDLR" trunk classes support the CDMA (Code Division Multiple Access) feature. This is a secured feature, therefore ACT must be "Y" for SFID 221 on the SFSYS form (5713 Record) before "PKTPIPE" can be entered.

When TRKCLS is "PKTPIPE":

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- The following fields must be set as indicated:
  - BRCS must be "N"
  - DCS TRK must be "Y"
  - DCS RETRY must be "N"
  - INPLS must be "PP"
  - OUTPLS must be "PP"
  - TRK DIR must be "2W"
  - VPA TYPE must be "NOVPA" or not entered

- all corresponding trunk members of this trunk group must have at least:

  - for 5E10 and 5E11, two row entries completed in the PACKET PIPE MEMBER TRUNKS list on the TRUNK form (5204 Record).

  - for 5E12, one to eight row entries completed in the PACKET PIPE MEMBER TRUNKS list on the TRUNK form (5204 Record).

- all corresponding trunk members of this trunk group (on the TRUNK form), must have a TRKOE where:

  - OE TYPE is "U"

  - OE channel assignment is in the range of 00 - 11 (channel is the last two digits of the OE)

  - OE corresponds to a Protocol Handler Logical Channel Group with a PH TYPE of "PH4"or "PH22" on the corresponding PSUGP form

    The TRUNK form corresponds to the PSUGP form when

    digits 1 - 3 of the TRKOE match SM entry of PSUGP

    digit 4 matches the PSU

    digit 5 matches PSU SHELF entry

    digits 6 - 7 match GP GRP entry.

- PKTPIPE trunks cannot havea Protocol Handler (the fourth to sixth character of the TRKOE on the TRUNK form) WHICH is also assigned to other BRI or PRI DSLs in the same SM. The "PKTPIPE" TRUNK forms cannot have a common Protocol Handler with the following forms.

  CCLNK

  DSLUSR

  MDLNK

  MISLINK

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PSULNK

QPHPIPE

XAT

and the following must NOT be entered:
- DAS
- FAR END NPA
- GLARE ACTION
- HUNT TYPE
- PBX ID
- SABM
- SCR

PHs (Protocol Handlers) are assigned to Packet Pipe trunks. The total number of Packet Pipe Member trunks assigned to these Packet Pipe trunks must not exceed 64. A given PH may support at most 64 Packet Pipe Member trunks via the Packet Pipe trunks.

For 5E13 and later, when TGNs are defined on the TKGRP form with a TRKCLS of "PKTPIPE" and the MEMBs assigned to the TGN on the TRUNK form have 9 or more rows entered on the PSU PIPE MEMBER TRUNKS list, the Packet Pipe Enhancements secured feature must be purchased. A SFSYS form must exist with SFID 317 ACT set to "Y".

PPMEM:
"PKTPIPE", "PPMEM", and "SPCHNDLR" trunk classes support the CDMA (Code Division Multiple Access) feature. This is a secured feature, therefore the ACT field for SFID 221 must be set to "Y" on the SFSYS form (5713 Record) before "PKTPIPE" can be entered.

For 5E10 and later, if "PPMEM" is entered:
- BRCS must be "N"
- DATA RATE must be "56K" or "64K"
- DCS TRK must be "N"
- DCS RETRY must be "N"
- INPLS must be "PP"
- OUTPLS must be "PP"
- TRK DIR must be "2W"
- VPA TYPE must be "NOVPA" or not entered**.**

and the following must NOT be entered:
- DAS
- FAR END NPA
- GLARE ACTION
- HUNT TYPE
- SCR

If "PPMEM" is entered, then:

- all corresponding trunk members of this trunk group (on the TRUNK form), must have a DEN

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specified. In addition the values of IN START DIAL and OUT START DIAL on the TRUNK form (5104 Record) must be null.

- Corresponding EQDUP forms are found by first finding all TRUNK forms where a DEN is entered and TGN on the TRUNK form matches TGN on the TKGRP form. There is one EQDUP form for each DFI pack that the trunks are assigned to. The SM, DLTU and DFI PACK NBR on the EQDUP form matches the SM, DLTU and DFI (first 6 digits of the DEN) on the TRUNK form.
  - If FAC IND is 0 or 1 on the EQDUP form, then AFAC ID FAC 0 must be entered.
  - If FAC IND is 3 and the channel number (the last 2 digits of the DEN on the TRUNK form) is less than 25, then AFAC ID FAC 0 must be entered.
  - If FAC IND is 3 and the channel number is greater than 24, then AFAC ID FAC 1 must be entered.

For 5E13 and later, if "PPMEM" is entered:

- an AFAC ID must be entered on all corresponding EQDUP, EQVT, or EQLVC forms for the respective DEN, NEN, or OIUEN populated on the associated TRUNK form.

- EQDUP forms:
  - If FAC IND is 0 or 1, AFAC ID FAC 0 must be entered.
  - If FAC IND is 3, and the channel number (the last two digits of the DEN on the TRUNK form) is less than 25, AFAC ID FAC 0 must be entered;
  - If FAC IND is 3, and the channel number is greater than 24, AFAC ID FAC 1 must be entered.

- EQVT and EQLVC forms:
  - AFAC ID must be entered.

SERVICE:
This Trunk Class may only be specified if the Trunk Group terminates to a local service facility and outpulsing of digits is not required. If digits are to be outpulsed to the service facility, do not use this Trunk Class.

SPCHNDLR:
"PKTPIPE", "PPMEM", and "SPCHNDLR" trunk classes support the CDMA (Code Division Multiple Access) feature. This is a secured feature, therefore the ACT field for SFID 221 must be set to "Y" on the SFSYS form (5713 Record) before "PKTPIPE" can be entered.

If "SPCHNDLR" is entered:
- BRCS must be "N"
- DCS RETRY must be "Y"
- DCS TRK must be "Y"
- IAPT must be "N"
- SERV TYPE must be 8K, 13K, or
- (for 5E11 and later) "EVRC"
- , or (for 5E12 and later) "ACELP", "VSELP"
- TRK DIR must be "2W"

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- VPA TYPE must be "NOVPA" or not entered.

If "SPCHNDLR" is entered the following fields must NOT be entered:

- DAS
- FAR END NPA
- GLARE ACTION
- INPLS
- OUTPLS
- PBX ID
- SCR

If "SPCHNDLR" is entered:

- A maximum of 10 separate Trunk Groups of TRKCLS "SPCHNDLR" may have trunk members assigned to a given PSU (Packet Switching Unit).
- all trunk membersfor this Trunk Group must reside on the same PSU.
- all corresponding trunk members of this trunk group (on the TRUNK form), must have a TRKOE entered with a OE TYPE of "U".
  - In addition, for 5E10, the entry on the PSUGP form (5949 Record) that corresponds to the Protocol Handler Logical Group must have a GRP TYPE of "PHV1" or "PHV2" corresponding to SERV TYPE of "8K" or "13K" respectively (on the TKGRP form).
  - in addition, for 5E11 and later, the last two digits of the OE must be in a specific range, dependent upon the type of Protocol Handler for which the specific trunk resides.

	OE Digit Entries
PH TYPE	**OE[7,8]**
PHV1	00 - 11
PHV2	00 - 11
PHV3	00 - 15
PHV4	00 - 31

- TRUNK forms which have a TRKCLS of "SPCHNDLR" defined on the TKGRP form can not have a Protocol Handler (the fourth to sixth characters of the TRKOE) which is also assigned to other BRI or PRI DSLs in the same SM. "SPCHNDLR" TRUNK forms cannot have common Protocol Handlers with the following forms:

  CCLNK

  DSLUSR

  MDLNK

  MISLINK

  PSULNK

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QPHPIPE

TRUNK

XAT

SES:
Service Evaluation is a required feature in all local offices which serve more than 3000 lines. In offices which serve less than 3000 lines, this feature is optional. The SES Trunk Group can have a maximum of 4 members which are called Voice Monitor Links. The first Member, defined on a TRUNK form, must be 1.

SVC:

For 5E12 and later, when TRKCLS is "SVC",

- TRK DIR must be "2W"
- DAS must not be entered
- SCR must not be entered
- INPLS must not be entered
- OUTPLS must not be entered
- FAR END NPA must not be entered
- BRCS must be "N"
- PBX ID must not be entered
- GLARE ACTION must not be entered
- VPA TYPE must be "NOVPA" or must not be entered.
- HUNT TYPE must be entered.

When TRKCLS is "SVC" and DCS TRK is "Y", DCS RETRY must be "Y".

For 5E13 and later, when TRKCLS is "SVC" and DSC TRK is "Y", the ACT field for SFID 215, SFID 285, or SFID 286 on the SFSYS form that are included in the switch should be set to "Y", while the other SFIDs ACT fields are set to "N".

TOLLOPER:
For 5E12 and later, when TRKCLS is "TOLLOPER", TRK DIR must be "INC".

TSPS:
If TRKCLS is "CAMA" or "TSPS", then TSPS TYPE must be entered.

If "TSPS" is entered, then:
- the trunks must be outgoing
- the trunks must have a FIFO HUNT TYPE
- MF OUTPLS is required
- OUTPL REQ must be entered
- and an entry is required in the following fields:

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- AUDIBLE
- COINRTN INT
- COINRTN FNL
- COINRTN INT
- FREE TERM.

TSTK:
For 5E14 and earlier:
When TRKCLS is "TSTK", trunk group members must be analog trunks; a value must be entered in the TEN field on the members' TRUNK forms.

For 5E15 and later:
When TRKCLS is "TSTK", trunk group members can be either analog (TEN) or digital (DEN).

When TRKCLS is "TSTK" and TRK DIR is "OUT", and TEN is entered,

- HUNT TYPE must be "FIFO"
- OUTPULSING must be blank

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 1 or 25,

- OUT START DIAL on the TRUNK form must be "IMED"
- TRK DIR on the TKGRP form must be "OUT"
- MTB0 and MTB1 on the TRUNK form must not be entered
- HUNT TYPE on the TKGRP must not be entered
- OUTPULSING on the TKGRP form must be "MF".

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 2-13 or 26-37 on the TRUNK form,

- TRK DIR on the TKGRP form must be "OUT" or "INC".
- MTB0 and MTB1 must be entered.

When DEN dchan is set to 1 and there are TGN/MEMBS defined on the TRUNK form with DEN dchan set to 2 - 13, with TRKCLS of "TSTK" on the associated TKGRP form, the DEN dchan that is set to 1 must also have a TRKCLS of "TSTK" on the associated TKGRP form.

When DEN dchan is set to 25 and there are TGN/MEMBS defined on the TRUNK form with DEN dchan set to 26 - 37, with TRKCLS of "TSTK" on the associated TKGRP form, the DEN dchan that is set to 25 must also have a TRKCLS of "TSTK" on the associated TKGRP form.

When TGN/MEMBs defined on the TRUNK form with DEN dchans set to 14 - 24 or 38 - 48, with a TRKCLS of "TSTK" on the associated TKGRP form, these channels cannot be assigned to digital test trunks.

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 1 on the TRUNK form, DENs dchans 14 - 24 cannot be assigned on the CCLNK, LINE, MLHLN, TRUNK or XAT forms.

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 25 on the TRUNK form, DENs dchans 38 - 48 cannot be assigned on the CCLNK, LINE, MLHLN, TRUNK or XAT forms.

When TGN/MEMBs defined on the TRUNK form have the DEN dchan (D-channel) set to 1, TRKCLS of

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"TSTK" , and DEN dchans 2 -13 assigned on the CCLNK, LINE, MLHLN, TRUNK or XAT forms, these DENs must also have a TRKCLS of "TSTK"

When TGN/MEMBs defined on the TRUNK form have the DEN dchan (D-channel) set to 25, TRKCLS of "TSTK" , and DEN dchans 26 - 37 assigned on the CCLNK, LINE, MLHLN, TRUNK or XAT forms, these DENs must also have a TRKCLS of "TSTK"

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 2 - 13 on the TRUNK form,

- DEN dchan 1 must be assigned to a MEMB on the TRUNK form.

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 26 - 37 on the TRUNK form,

- DEN dchan 25 must be assigned to a MEMB on the TRUNK form.

When TRKCLS is "TSTK" and the DEN dchan (D-channel) is set to 2-13 or 26-37 on the TRUNK form, and TRK DIR is "OUT"

- HUNT TYPE must be "FIFO"
- OUT START DIAL on the TRUNK form must be "WINK" or blank
- OUTPULSING on the TKGRP form must be "MF" or blank.

X75:
A maximum of 255 TKGRP forms can be entered with this trunk class. Each trunk group may contain at most twenty-four trunk members; each member number must be in the range 0 - 23.

X75 trunk group members may reside on different non-remoted SMs (SM USAGE on EQIM is "IM" or "HIM"). If an X.75 trunk group resides on a remoted SM (SM USAGE on EQIM is "TRM", "ORM" or "RSM"), then all members of the trunk group must reside on the same SM.

On the corresponding TRUNK forms (5204 Record) IDLE STATE must be "ON", EXT GUARD TIMING and ASWER DELAY TIMING must be "N" or left blank, and IN START DIAL and OUT START DIAL must not be entered.

X75 trunks must have entries in the following fields:
- BRCS must be "N"
- DATA RATE must be 56K
- FAR END LATA must not be entered
- GLARE ACTION must be "ALLCTRL"
- HUNT TYPE must be "PSUCD"
- INPLS must be "NONE"
- INSEP must be blank
- OUTPLS must be "NONE"
- REMOTE DNIC must be 1 - 9999
- SATELLITE must be "N"
- TRK DIR must be "2W"

and
- IC PRESELECT and TNIC INDICATOR
- on the TRUNK form (5204 Record)

PBX ID must not be specified when TRKCLS is "X75".

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VPA TYPE must be unknown or "NOVPA" when TRKCLS is "X75".

For 5E8 and later, NBR PLAN must be "X121" or "E164".

- ILC SCRN must be entered.

For 5E8 and later, if a ROUTE INDEX defined on the RTIDX form (5303 Record) has a TRUNK GROUP NUMBER and a NEXT ROUTE entered, and the TRUNK GROUP NUMBER is defined on the TKGRP form with a TRKCLS of "X75P" or "X75", then the NEXT ROUTE on that ROUTE INDEX form must be defined as the ROUTE INDEX on another RTIDX form where the TRUNK GROUP NUMBER is defined on the TKGRP form with a TRKCLS set to "X75P", "X75", or "PACKET".

For 5E9(1) and later, if the TRUNK GROUP NUMBER defined on an RTIDX input form has TRKCLS set to "X75", "X75P", or "PACKET" on the associated TKGRP form, then at least one TRUNK input form must be defined for the associated TKGRP form.

For 5E10 and later:
If "X75" is entered:

- FAR END NPA must not be entered.
- X75 trunks cannot have an ISCN SHELF andform can not have an ISCN SHELF and CHL GRP (the first three characters of the ISCN) which are mixed with Protocol Handlers from other BRI or PRI DSLs in the same SM. The "X75" TRUNK forms cannot have a common SHELF and CHL GRP with the following forms:

  CCLNK

  DSLUSR

  MDLNK

  MISLINK

  PSULNK

  QPHPIPE

  XAT

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

For 5E13 and later, when TRKCLS is "X75" or "X75P", DATA RATE must be "56K" or "64K".

X75P:
X75P trunk group members may reside on different non-remoted SMs (SM USAGE on EQIM is "IM" or "HIM"). If an X.75' trunk group resides on a remoted SM (SM USAGE on EQIM is "TRM", "ORM" or "RSM"), then all members of the trunk group must reside on the same SM.

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For 5E8 and later, a maximum of 255 TKGRP forms can be entered with this trunk class. Each trunk group may contain at most twenty-four trunk members; each member number must be in the range 0 - 23.

When TRKCLS is "X75P" then:
- COIN must be "N" or not entered
- DATA RATE must be 56K
- DSN ARC ID must be 0 or not entered
- ENQUEUE ACT must "N" or not entered
- FAR END LATA must equal 0 or not entered
- FAR END NXX must not be entered
- GLARE ACTION must be "ALLCTRL"
- HUNT TYPE must be "PSUCD"
- INSEP must be blank
- MK BUSY must be "N" or not entered
- MAKE BUSY KEY must not be entered
- PBX ID must not be entered
- RLT FLASH must be N
- RLT TYPE must be NONE
- SATELLITE must be "N"
- TRK DIR must be "2W"
- VPA TYPE must be blank or "NOVPA"

and
- TNIC INDICATOR and ACCESS CHAR
- on the TRUNK form (5204 Record) must have an entry.

For 5E6 and later, when TRKCLS is "X75P", fields on the member TRUNK forms must be set as follows:

- ANSWER DELAY TIMING must be "N" or not entered
- EXT GUARD TIMING must be "N" or not entered
- IDLE STATE must be "ON"
- IN START DIAL must not be entered
- OUT START DIAL must not be entered

For 5E8 and later, NBR PLAN must be "X121" or "E164".

For 5E8 and later, if "X75P" is entered, and if "Y" is entered in the following fields or the following fields are not entered on the TRUNK form (5204 Record):
- ACCESS CHAR
- TRANS SUB NET CNT
- CLEAR SUB NET ID

then the X75' trunks must have UTILITY MARKER set to "Y" on the TRUNK form.

For 5E9(1) and later, if the TRUNK GROUP NUMBER defined on an RTIDX input form has TRKCLS set to "X75", "X75P", or "PACKET" on the associated TKGRP form, then at least one TRUNK input form must be defined for the associated TKGRP form.

For 5E10 and later:

- When TRKCLS is "X75P", FAR END NPA must not be entered.

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- When a TGN is defined on a TKGRP input form with TRKCLS set to "X75" or "X75P", at least one MEMB must be defined on a TRUNK form with the first three digits of DEN or NEN matching an SM defined on an EQIM input form where SM USAGE equals "RSM", "ORM", or "TRM". All MEMBs associated with this TGN must have the same first three digits of DEN or NEN.
- "X75P" trunks cannot have an ISCN SHELF andCHL GRP (the first three charactersof the ISCN) which are mixed with Protocol Handlers from other BRI or PRI DSLs in the same SM. The following "X75P" TRUNK forms cannot have common SHELF and CHL GRP.

  AMLBDSL

  CCLNK

  DSL

  DSLAP

  DSLUSR

  MDLNK

  MISLINK

  ODBRES

  OSPSDSL

  PSISM

  PSULNK

  QPHPIPE

  RTERM

  XAT

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must not be "NONE" on this form.

General:
For 5E6 and later, TRKCLS must be "PACKET", "X75P" or "X75" if at least one of the following fields is entered on the TRUNK form (5204 Record): OCU LOOPBACK, CSU LOOPBACK, LAPB ADDR, WINDOW SIZE, RETRANS N2, ACK TIME T1 and IDLE TIME T3. TRKCLS must be "X75P" or "X75" if LINK ID or HIGH PVC LCN is entered on the TRUNK form.

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If OUTPULSING or INPULSING is entered as "CCIS6", then TRKCLS must be "LTOLLCON", "TTOLLCON", "PRINTOLL", "SCINTOLL", "BVINTOLL", or "BVTOLLCM", and BRCS must be "N".

When a trunk group is entered on an ARSTPA form with QUEUE ALLOWED "Y", the TRKCLS on this form must be "PF", "PFITT", "PFLASH" or "EDSL".

For 5E4(2) and later, if trunks in this group are assigned a Precedence and Preemption feature on the TRUNKFA form or associated CLUSTR form, then the TRKCLS entered here must agree with the DSN (Defense Switched Network) TRUNK TYPE on the PPFD (5618-1 Record) or PPTPA (5618-5) form as follows. If TRUNK TYPE is "OFFNET", "TIEPNID", "TIERNID", or "VONPNID", then TRKCLS must be "LTOLLCON". If TRUNK TYPE is "SATINID" or "SATPID", TRKCLS must be "PBXDID"; and if TRUNK TYPE is "VONRNID", TRKCLS must be "LTOLLCON", "PF", "PFITT", or "PFLASH".

For 5E10 and later,the following forms:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- RTERM
- XAT

along with all TRUNK forms which have a TRKCLS of "EDSL", "IFTERM" or "IFOPER" defined on the TKGRP form can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM. However, they cannot have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from CCLNK forms,

- MDLNK forms,
- PSISM forms,
- PSULNK forms, or
- TRUNK forms which have a TRKCLS of
- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

defined on the TKGRP form.

Each Switching Module (SM) can have up to 5 PSU SHELFs. On the EQIM form, when UNIT TYPE is not "SM2000" each PSU SHELF can be assigned up to (32 times X) timeslots for the following table of applications. (Note: X represents the number of PIDBs, 0 to 4, provisioned per shelf.)

For 5E10 and later, the following data rule is not executed on an SM-2000, because provisioning of nailed-up timeslots is not required on an SM-2000. Each DI (Data Interface) in a SM can have a maximum of 256 nailed-up timeslots reserved for the application in the following table. These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the following applications. Note that a D channel only takes a quarter of a time slot.

The time slots are reserved for the following applications:

Timeslots Reserved for Applications

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on

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	TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

The following data rule is not executed on an SM-2000, provisioning of nailed-up time slots is not required on an SM-2000.On a PSU1 , each Data Interface in a SM can have a maximum of 128 nailed-up time slots reserved for the following applications:

Timeslots Reserved for Applications

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

These time slots can be reserved by entering the rows RPTSS0 to RPTSS7 on the EQPSU form. The quantity of time slots reserved (i.e. the number entered) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D channel only takes a quarter of a time slot.

Also, the reserved time slots must be entered such that for any given SHELF, (defined by the first digit of ISCN field or by the SHELF field on the MISLINK form), the time slots assigned to that SHELF must not be duplicated in the same vertical (column) position if they appear in more than one row (RPTSS0 through RPTSS7).

The following Trunk Class entries apply to Trunk Groups which carry toll office traffic. Refer to Figure 2 for applicable Address Signal and Start Dial combinations.

Valid TRKCLS Entries (Toll Office Traffic)

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Entry	Definition
AUXTRNK	Toll to Special Services. Outgoing.
BVINTOLL	Busy Verification on Intertoll Trunks. Outgoing.
BVTOLLCM	Busy Verification on Toll Completing Trunks. Outgoing.
BUSYVFY	Busy Verification on Primary Intertoll Trunks. Incoming.
CAMOPKEY	Outgoing CAMA Operator Keying Trunks.
CAMOPTLK	Outgoing CAMA Operator Talking Trunks.
CAMAONI	Incoming CAMA, Operator Number Identification.
CAMAANI	Incoming CAMA, Automatic Number Identification.
DIOR	Software Release: 5E6 and later. Direct International Originations.
FIOPR	Software Release: 5E4(2) and later. Intermediate Switch Point for incoming operator trunks.
FOPRI	Software Release: 5E4(2) and later. Intermediate Switch Point for outgoing operator trunks to OSPS.
FOPRT	Software Release: 5E4(2) and later. Intermediate Switch Point for outgoing operator trunks to TSPS.
FXROTL	Foreign Exchange line from a nearby Central Office to a toll or tandem office having no Directory Numbers. Used for ROTL in the toll or tandem office. Refer to Division 2, Section 2I.
IC	Interexchange Carrier Trunks. Incoming, Outgoing or Two-Way for direct connection between an AT (Access Tandem) and a Carrier.
IFOPER	Software Release: 5E5 and later. Originating end of an OSPS EDSL (PRI) trunk, defined on the originating OSPS Interflow switch.
IFTERM	Software Release: 5E5 and later. Terminating end of an OSPS EDSL (PRI) trunk, defined on the receiving end OSPS Interflow switch.
INAISTRK	Software Release: 5E6(2) and later. Listing Services incoming Automatic Intercept System trunk.
LATA	Intertoll Trunks from a LATA.
PRINTOLL	Primary Intertoll Connecting Trunks. Incoming, Outgoing, or Two-Way. For use by AT&T.
RAFANNC	Software Release: 5E4(2) and later. Recorded announcement function frame.
RAFCTR	Software Release: 5E4(2) and later. RAF coin tone receiver.
RAFDTA	Software Release: 5E4(2) and later. RAF dial-through announcement.
SCINTOLL	Secondary Intertoll Connecting Trunks. Incoming, Outgoing, or Two-Way.
SPAB800	Software Release: 5E5 and later. Special Access Basic 800 Service.
SPAM800	Software Release: 5E5 and later. MEGACOM 800 Service, a volume discount service.
SPAMEG	Software Release: 5E5 and later. MEGACOM Service is a volume discount service.
SPAWATS	Software Release: 5E5 and later. Special Access WATS (Wide Area Telecommunications Service).
TCIKT	Software Release: 5E4(2) and later. OSPS transfer CAMA incoming keying trunks.
TCITT	Software Release: 5E4(2) and later. OSPS transfer CAMA incoming talking trunks.
TTOLLCON	Toll Connecting Trunk. Incoming, Outgoing, or Two-Way. Used in an AT (Access Tandem) office for trunk groups from end offices or other tandems. Also used by Long Distance Platform feature (SFID 165) for trunks between two toll switches.

Data Rules for Toll Office TRKCLSs:

AUXTRNK:
Applications include: Rate and Route Trunks One-Way from the 5ESS Switch toll office to cord switchboards or desks through which Rate and Route operators are reached; Directory Assistance Trunks, One-Way from the 5ESS Switch toll office to a No. 5 ACD through which Directory Assistance operators are reached. A HUNT TYPE of "FIFO" and a TRK DIR of "OUT" must be used with this Trunk Class.

BVINTOLL:

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A HUNT TYPE of "FIFO" and a TRK DIR of "OUT" must be used with this Trunk Class.

BVTOLLCM:
A HUNT TYPE of "FIFO" and a TRK DIR of "OUT" must be used with this Trunk Class.

BUSYVFY:
BUSYVFY trunks must be incoming.

INPULSING is required for BUSYVFY trunks.

For 5E10 and later, FAR END NPA must not be entered.

CAMAANI:
For 5E6 and later, when TRKCLS is "CAMAANI", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "CAMAONI".

CAMAANI trunks must be incoming and the following apply:

- INPULSING must be entered
- ORIG NPA must be entered
- OFFCODE 1 must be entered

CAMA trunk office codes must be entered in sequential order. The office codes associated with CAMA trunks cannot be duplicated.

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

CAMAONI:
For 5E6 and later, when TRKCLS is "CAMAONI", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "CAMAONI".

For 5E11 and later, when TRKCLS is "CAMAONI":

- TRK DIR must be "INC".
- INPULSING must be specified.

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

CAMOPKEY:
This Trunk Class is used in conjunction with Trunk Class "CAMOPTLK" to establish the CAMA Operator Trunks which carry CAMA ONI traffic. A CAMA Operator connection consists of a Keying Trunk used to key the calling number into the CAMA office and a Talking Trunk over which the CAMA operator is able to obtain the calling number. Each Trunk Class (CAMOPKEY or CAMOPTLK) requires a separate One-Way Outgoing Trunk Group. These Trunk Groups must have the same number of members. A HUNT TYPE of "FIFO" and a TRK DIR of "OUT" must be used with this Trunk Class.

For 5E6 and later, when TRKCLS is "CAMOPKEY", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "CAMAONI".

For 5E7 and later, trunk members of a trunk group with a TRKCLS of "CAMOPKEY" or "TCIKT" must reside on the same Switching Module as the trunk member that has the TALKING TRUNK TGN and MBR NO entered, i.e. the first three digits of the DEN, TEN, or (for 5E9(2) and later) NEN must be the same.

CAMOPTLK:

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These Trunks are associated with CAMA Operator Keying Trunks. See above description for CAMOPKEY Trunk Class.

For 5E7 and later, trunk members of a trunk group with a TRKCLS of "CAMOPTLK" or "TCITT", must reside on the same Switching Module as the trunk member that has the KEYING TRUNK TGN and MBR NO entered, i.e. the first three digits of the DEN, TEN, or (for 5E9(2) and later) NEN must be the same.

DIOR:
"DIOR" must have an associated OPRTK form (5417 Record) with an entry of "Y" in the DIOR NPA field and an entry from 100 to 199 in the ORIG NPA field. Other restrictions are explained on that form.

For 5E8 and later, if "DIOR", "FIOPR", "FOPRI", or "INAISTRK" is entered, the members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports incoming AIS trunks. For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E10 and later, if "DIOR" is entered and TRK DIR is "INC", then FAR END NPA must not be entered.

FIOPR:
TGNs that are defined with a TRKCLS of "FIOPR" must have a corresponding OPRTK form (5417 Record) defined; they must have a TIMING form (5520 Record) defined with matching TGNs and a SERVICE CLASS of "FIOPR".

A TGN defined with a TRKCLS of "FIOPR" must have INPULSING set to "MF" or "DP". It must have a corresponding OPRTK form (5417 Record); it must also have a TIMING form (5520 Record) with matching TGN and a SERVICE CLASS of "FIOPR".

For 5E8 and later, if "DIOR", "FIOPR", "FOPRI", or "INAISTRK" is entered, the members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports incoming AIS trunks. For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

FOPRI:
For 5E8 and later,if "DIOR", "FIOPR", "FOPRI", or "INAISTRK" is entered, the members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports incoming AIS trunks. For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

IC:
Used for direct connections with a Carrier, except when the Trunk Group is outgoing to an Operator Service Position use TSPS for Trunk Class, or when the Trunk Group is outgoing to a FGB (Feature Group B) Carrier requesting ANI use CAMA for Trunk Class. For carrier calls in an EAEO (Equal Access End Office) which route via an Access Tandem (i.e., they are not directly connected to the Carrier), the Trunk Class of "LTOLLCON" should be used.

For 5E6 and later Software Releases, if the TRKCLS is "IC" and the Trunk Group is Outgoing or Two-Way (TRK DIR "OUT" or "2W"), the OUTPULSING signaling may be "MF", "CCIS6", or "ISUP7". If the TRK DIR is "INC" or "2W", the INPULSING signaling may be "MF", "CCIS6", or "ISUP7".

- ***NOTE:*** FGB signaling with ANI is not valid on a tandem connection.

When TRKCLS is "IC", CARRIER ID must be entered, and for 5E8 and later, FEAT GRP must be entered.

For 5E6 and later, if DLTU TYPE on the corresponding EQDU form (5730 Record) is "DLTU24" or "DLTU48" and the INPULSING or OUTPULSING field on this form is "MF", then DATA RATE on this form must be "56K" or not entered. The EQDU form is found by matching the SM and the DLTU NUMBER with the first 3 digits and the 4th digit of the DEN, respectively, on the TRUNK form.

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For 5E6 and later, when TRKCLS is "IC", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "INVNODIG".

IFOPER:
Note that there is a limit of 20 PRIs to an SM, although this limit may be lower due to traffic engineering constraints.

If "IFOPER" is entered in the TRKCLS field,

- then on the corresponding TRUNK forms: DEN must be specified; the SUPV, IN START DIAL, and OUT START DIAL fields must be blank; and the EXT GUARD TIMING and ANSWER DELAY TIMING fields must be "N" or blank.

- for 5E7 and later, if "IFOPER" is entered and it is assigned to a B-channel (for a B-channel, the last 2 digits of the DEN are in the range of 1-23 or 25-47), then a corresponding OSPSOP form must be entered, where the DEN of the corresponding TRUNK form (TGN on this form matches TGN on the TRUNK form) matchesthe DEN on the OSPSOP form.

- and if "SGNL" is entered in the TRK DIR field, each member of the trunk group must be a D-channel. On the corresponding TRUNK forms, the ISCN and PSCLI fields must be specified, and the last two digits of the DEN field must be 24 or 48.

- and if "OUT" is entered in the TRK DIR field, then each member of that trunk group must be a B-channel. On the corresponding TRUNK forms the last two digits of the DEN field must be in the range 1 to 23 or 25 to 47.

- for 5E6 and later, and if the DLTU TYPE is "DLTU24" or "DLTU48" on the corresponding EQDU form(5730 Record), the INPULSING or OUTPULSING field on this form is "DCHN", and TRK DIR is "2W", "INC", or "OUT", then DATA RATE on this form must be "56K", "R64K", "64K", or not entered. If "DLTU24" or "DLTU48" is entered in DLTU TYPE on the corresponding DLTU form (5730 Record), "DCHN" is entered in the INPULSING or OUTPULSING field on this form, and TRK DIR is "SGNL", then the DATA RATE field on this form must not be entered. The corresponding EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit respectively of the DEN on the TRUNK form (5204 Record).

- For 5E8 and later, OSPS PSM field on the EQIM form must be "Y"for Switching Modules in which Interflow pseudo operator trunks are located. Therefore, if "IFOPER" is entered, then OSPS PSM must be "Y" on the EQIM form(s) corresponding to the Switching Modules (SMs) in which the "IFOPER" trunks are located.

Navigation help: TRUNK forms assign trunk group members (TGN on the TRUNK forms matches the TKGRP TGN) to SMs and trunk equipment. The SM part of the DEN (first three digits) on the TRUNK forms point to the SM on an EQIM form.

- for 5E9(2) and later, the trunk members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports incoming AIS trunks. For the CONFIGURATION that supports this TRKCLS value,see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E10 and later:
If "IFOPER" is entered:

- the associated MEMBs on the TRUNK form must have the required entry for DEN.

- and have TGN/MEMBs on the TRUNK form whose DEN[1,3] or NEN[1,3] values match an SM on the EQIM form with UNIT TYPE of SM2000, is not allowed.

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- on the TRUNK form:

  ANSWER DELAY TIMING must be "N" or not entered

  EXT. GUARD TIMING must be "N"

  IN START DIAL must not be entered

  OUT START DIAL must bE

  SUPV must be "EM2" or not entered

For 5E9(1) and later: each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks).

For 5E11 and later, when TRKCLS is "IFOPER" and TRK DIR is "OUT", OUTPULSING must be "DCHN".

The following applications define the possible LLCB assignments. These application cannot use more than 384 LLCBs.

LLCB Assignments

Form	SM SHELF CHL GRP	LLCB Count
AMLBDSL	SM is the first three digits of LCEN SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of PPB1 ISCN.	The count is incremented by 1 for each PPB1 ISCN defined.
DSL	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of PPB2 ISCN.	The count is incremented by 1 for each PPB2 ISCN defined.
DSL	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of D ISCN.	If a matching DSLUSR form is not found the count is incremented by 1.
DSLAP	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 1 for each unique OE/ISCN combination.
DSLUSR	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of D ISCN on the corresponding DSL form.	The count is incremented by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered. The count is incremented by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
DSLUSR	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of ODB ISCN1 and/or ODB ISCN2.	The count is incremented by 1 if only ODB ISCN1 is entered. The count is incremented by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
MISLINK	SM is the first three digits of OE SHELF and CHL GRP are the SHELF and CHL GRP fields, respectively.	The count is incremented by 1 for each MISLINK form.
OSPSDSL	SM is the first three digits of LCEN. SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined. Otherwise, the count is incremented by 1 for each unique OSPSDSL form.
RTERM	Where RT INTERFACE is "TR303" SM is SM SHELF/CHL GRP is the first three digits of TMC PRI ISCN, TMC NPRI ISCN,	The count is incremented by 2 for each TMC PRI ISCN and for each TMC NPRI ISCN entry. The count is incremented by 3 for each EOC PRI

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	EOC PRI ISCN or EOC NPRI ISCN.	ISCN and for each EOC NPRI ISCN entry.
TRUNK	TRKCLS equals to "IFOPER", "IFTERM" or "EDSL" on the TKGRP form. SM is the first three digits of DEN or NEN SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 1 for each unique TRUNK form.
XAT	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 1 for each unique XAT form.

IFTERM:
Note that there is a limit of 20 PRIs to an SM, although this limit may be lower due to traffic engineering constraints.

If "IFTERM" is entered in the TRKCLS field, then on the corresponding TRUNK forms: DEN must be specified; the SUPV, IN START DIAL, and OUT START DIAL fields must be blank; and the EXT GUARD TIMING and ANSWER DELAY TIMING fields must be "N" or blank.

For 5E6 and later, if the DLTU TYPE is "DLTU24" or "DLTU48" on the corresponding EQDU form (5730 Record), the INPULSING or OUTPULSING field on this form is "DCHN", and TRK DIR is "2W", "INC", or "OUT", then DATA RATE on this form must be "56K", "R64K", "64K", or not entered. If "DLTU24" or "DLTU48" is entered in DLTU TYPE on the corresponding DLTU form (5730 Record), "DCHN" is entered in the INPULSING or OUTPULSING fields on this form, and TRK DIR is "SGNL", then the DATA RATE field on this form must not be entered. The corresponding EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit respectively of the DEN on the TRUNK form (5204 Record).

If "SGNL" is entered in the TRK DIR field, each member of the trunk group must be a D-channel. On the corresponding TRUNK forms, the ISCN and PSCLI fields must be specified, and the last two digits of the DEN field must be 24 or 48.

If "INC" is entered in the TRK DIR field, then each member of that trunk group must be a B-channel. On the corresponding TRUNK forms the last two digits of the DEN field must be in the range 1 to 23 or 25 to 47.

For 5E6 and later, if TRKCLS is "IFOPER" or "IFTERM", there must be a corresponding INFLTADP form (5452 Record) where DCHTGN or BCHTGN in the OSPS LIST equals TGN on this TKGRP form.

See "IFOPER" for 5E9(1) and later data rule for LLCB assignments.

For 5E10 and later:
If "IFTERM" is entered, then:

- the associated MEMBs on the TRUNK form must have the required entry for DEN.
- and have TGN/MEMBs on the TRUNK form whose DEN[1,3] or NEN[1,3] values match an SM on the EQIM form with UNIT TYPE of SM2000, is not allowed.
- on the TRUNK form:

  ANSWER DELAY TIMING must be "N" or not entered

  EXT. GUARD TIMING must be "N"

  IN START DIAL must not be entered

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OUT START DIAL must be entered

SUPV must be "EM2" or not entered

INAISTRK:
For 5E6(2) and later, if TRKCLS is "INAISTRK" then the following conditions must be met.

- The following fields must be "N":

ACP SDN

AUDIBLE

BARGE IN

BRCS

BW LAMP

COINRTN FNL

COINRTN INT

CUT THRU

FREE ANS

FREE TERM

HOLD BUSY

INC TND WINK

INTER SM TRK

LN VIRT

LS DLY ANS

OUTPLS REQ

PRIVACY

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RETRY

SATELLITE

SDN STAT GRP

TRUNK QUERY

UNRES EA

XLT TEST

- The following fields must not be entered if "INAISTRK" is entered:

BUSY LAMP

CARRIER ID

CYCLES

DATA RATE

DSN ARS ID

ENQUEUE ACT or it must be "N"

FAR END LATA

FAR END NPA

FAR END NXX

FEND CLLI

HUNT TYPE

LOCAL RSM

MAKE BUSY KEY

NEND CLLI

NEXT PSN

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ORIG LATA

PBX ID

SIGNAL

TRUNK CHAR

TSPS TYPE

VPA RATE

WARN THRESH

- If the following fields are entered they must be "NONE":

  OUTPULSING

  RLT TYPE

- The following fields must be "NONE":

  LN TYPE

  NCD SCREENING

- CCS7 TYPE must be "BELLCORE".
- DIR CON DN must be 6, 7, or 8 for incoming seizure only trunks.
- INPULSING must be "NONE", "MF" or "DP".
- SVC GRP must be "NOANNC".
- TRK DIR must be "INC".
- VPA TYPE must not be entered, or VPA TYPE is "NOVPA".

If TRKCLS is "INAISTRK" on the TKGRP form, the following forms are affected:

- APGFP form:

  The corresponding APGFP form is found by matching GROUP NO/GROUP NAME of APGFP with TGN of TKGRP form and GROUP/FACILITY TYPE of APGFP form must be "TRKG".

  - NUTS/LUTS ACTIVE on the APGFP form must be "N".
  - SHT THRESHOLD on the APGFP form must be 0.

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- LHT THRESHOLD on the APGFP form must be 0.

- TRUNK form:

  The corresponding TRUNK form is found by matching the TGN value with the TGN value on this form.

  If the trunk members on a TRUNK form belong to a trunk group which has a TRKCLS value of "INAISTRK", the members must not be assigned to an SM on an EQIM form with a CONFIGURATION of "BASIC". Also, if the INPULSING field on the TKGRP form is equal to "NONE", then the associated TRUNK form(s) must have IN START DIAL set to "DIRC". Conversely, if the INPULSING field on this form is not equal to "NONE", then the associated TRUNK form(s) cannot have IN START DIAL set to "DIRC".

  If TRK DIR on the TKGRP form is equal to "OUT", then the associated TRUNK form(s) must have IN START DIAL set to "DIRC", "IMED", "WINK" or "DLAY".

  The associated TRUNK form(s) must not have OUT START DIAL set to "STOP".

  Also, the associated TRUNK forms must have ANSWER DELAY TIMING set to "N".

- TIMING form:

  At least one TIMING form must be submitted with a SERVICE CLASS of "INAISTRK". SIGNAL TYPE on the TIMING form equals the INPULSING on the TKGRP Form and START SIGNAL on the TIMING form equals the IN START DIAL on the TRUNK form.

For 5E8 and later, if "DIOR", "FIOPR", "FOPRI", or "INAISTRK" is entered, the members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports incoming AIS trunks. For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E15 and later, when TRKCLS is "INAISTRK", CQ/BQ ALW must be "N".

LATA:
Used by an Interexchange Carrier switch on Incoming or Two-Way Trunk Groups from an Equal Access End Office or Access Tandem. Also used by the Interexchange Carrier for CMC (Cellular Mobile Carrier) Trunk Groups. If any Trunk Group is defined with this Trunk Class, the Fixed Route Type of "ESMRT" must be defined on the FIXRT form (5301-1 Record). For 5E5 and later, an entry of "LATA" requires an entry of "Y" in the OFFICE TYPE field of the OFCOPT form (5509 Record) indicating that this is a Toll office. For 5E6 and later, if the Trunk Group is Outgoing or Two-Way, TRK DIR is "OUT" or "2W", the OUTPULSING signaling may be "MF", "CCIS6", or "ISUP7". If the TRK DIR is "INC" or "2W", the INPULSING signaling may be "MF", "CCIS6", or "ISUP7"

For 5E6 and later, if DLTU TYPE on the corresponding EQDU form (5730 Record) is "DLTU24" or "DLTU48" and the INPULSING or OUTPULSING field on this form is "MF", then DATA RATE on this form must be "56K" or not entered. The EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit of the DEN, respectively, on the TRUNK form.

For 5E6 and later, when TRKCLS is "LATA", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "ESMRT".

PRINTOLL:
For use by AT&T only. Specify this Trunk Class for trunks that interconnect two toll offices. All Primary Intertoll Trunks can carry the Ring Forward and Ring Back Signals. For 5E5 and later, an entry of "PRINTOLL" requires an entry of "Y" in the OFFICE TYPE field of the OFCOPT form (5509 Record) indicating that this is a Toll office.

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For 5E6 and later, if DLTU TYPE on the corresponding EQDU form (5730 Record) is "DLTU24" or "DLTU48" and the INPULSING or OUTPULSING field on this form is "MF", then DATA RATE on this form must be "56K" or not entered. The EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit of the DEN, respectively, on the TRUNK form.

RAFANNC:
For 5E6 and later, the TKGRP form with a TRKCLS of "RAFANNC" cannot be assigned AOCs (Announcement Only Channels) with RAFs that have a RAF SERVICE TYPE of "DTA" or "CTR" unless the AOC field has a value of "Y" on the EQRA form (5821 Record).

For 5E8 and later, when TRKCLS is "RAFANNC":
- QUEUE FEATURE cannot be entered
- RETRY must be "N"
- SVC GRP must be "AOC" or "DA"

RAFCTR:
For 5E5 and later, when the TRKCLS is "RAFCTR", and RAF EN is entered on the TRUNK form, then the RAF ENs must be assigned according to the stuffing patterns shown on the 5271-4 Record. See Division 3, Section 2Q, for more information on stuffing patterns.

For 5E8 and later, when TRKCLS is "RAFCTR":
- ENQUEUE ACT must not be "Y"
- QUEUE FEATURE must not be entered
- PBX ID must be unknown (5E9(1) and later)
- SVC GRP must be "COIN"
- TRK DIR must be "RAF"

RAFDTA:
For 5E5 and later, when the TRKCLS is "RAFDTA", and RAF EN is entered on the TRUNK form, then the RAF ENs must be assigned according to the stuffing patterns shown on the 5271-4 Record. See Division 3, Section 2Q, for more information on stuffing patterns.

For 5E8 and later, when TRKCLS is "RAFDTA":
- PBX ID must be unknown (5E9(1) and later)
- RETRY must be "N"
- SVC GRP must be
- "ACCS"
- "ACSR"
- "ASP"
- "RAS"

If TRKCLS is "RAFDTA" and SVC GRP is "ACCS", then QUEUE ALLOWED must be "Y".

SPAB800:
Special Access Basic 800 service allows calls that terminate at a 5ESS Toll Switch to be routed to the customer's PBX over a dedicated trunk group. The called party will be billed for the call.

SCINTOLL:
These trunks interconnect the 5ESS Switch toll office with a manual switchboard or TSPS. The 5ESS Switch toll office and the switchboard or TSPS are of equal class and are associated as a single unit.

Secondary Intertoll Trunk applications include:

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- Toll Tandem Trunks One-Way from a switchboard or TSPS to the 5ESS Switch toll office.
- OA (Operator Assistance) and LW (Leave Word) Trunks One-Way from the 5ESS Switch toll office to an OA or LW operator at a switchboard or TSPS.
- Residual Trunks One-Way from the 5ESS Switch to a switchboard are used by the originating operator to reach another operator to assist in call completion.
- Delayed Call Trunks are used by a TSPS operator to reach both the calling and called parties by establishing two separate connections through the serving 5ESS Switch toll office. The called and calling parties are joined at the TSPS through the delayed call trunk circuit which has two separate and distinct incoming trunk appearances in the 5ESS Switch toll office.

For 5E6 and later, if DLTU TYPE on the corresponding EQDU form (5730 Record) is "DLTU24" or "DLTU48" and the INPULSING or OUTPULSING field on this form is "MF", then DATA RATE on this form must be "56K" or not entered. The EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit of the DEN, respectively, on the TRUNK form.

SPAM800:
MEGACOM 800 is similar to the Special Access Basic 800 service except that the customer must supply the direct connection to the 5ESS Toll Switch. The called party will be billed for the call.

SPAMEG:
MEGACOM is similar to WATS service except that there is no subscription to a band and the customer must supply the direct connection to the 5ESS Toll Switch. The 5ESS Switch will process the call like a WATS band 6 call. For this Trunk Class, the SPA BILL DN and SPA SUPV fields must be entered.

SPAWATS:
Special Access WATS is similar to regular switched WATS except Special Access WATS allows a customer's PBX (digital or analog) to connect directly to the 5ESS Toll Switch via a T1 carrier. Special Access WATS customer's calls will be incoming to the 5ESS Toll Switch via this dedicated trunk group. The 6th digit of the SPA BILL DN will determine the customer's subscribed band number. For this Trunk Class, the SPA BILL DN and SPA SUPV fields must be entered.

TCIKT:
TGNs defined with a TRKCLS of "TCIKT" must have a TCITG form (5422 Record) defined with matching TGNs.

For 5E7 and later, trunk members of a trunk group with a TRKCLS of "CAMOPKEY" or "TCIKT" must reside on the same Switching Module as the trunk member that has the TALKING TRUNK TGN and MBR NO entered, i.e. the first three digits of the DEN, TEN, or (for 5E9(2) and later) NEN must be the same.

TCITT:
TGNs defined with a TRKCLS of "TCITT" must have a TCITG form (5422 Record) defined with matching TGNs.

For 5E7 and later, trunk members of a trunk group with a TRKCLS of "CAMOPTLK" or "TCITT" must reside on the same Switching Module as the trunk member that has the KEYING TRUNK TGN and MBR NO entered, i.e. the first three digits of the DEN, TEN, or (for 5E9(2) and later) NEN must be the same.

For 5E8 and later, each member of this trunk group is defined as MEMB on a TRUNK form where KEYING TRUNK TGN and KEYING TRUNK MBR NO are entered. The keying trunk must be defined as TGN and MEMB on another TRUNK form.

For 5E9(1) and later, "TCITT" trunk group members must be defined with REMOVE TRUNK set to "Y" on the TRUNK form when the trunk is located on an SM for which the EQIM form has STAND ALONE set to "Y" or the associated EQSITE form (5722 Record) has STAND ALONE PURCHASED set to "Y".

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TTOLLCON:
Specify this Trunk Class for DDD Access and Toll Completing Trunks. DDD Access Trunks are trunks from a Class 5 to a toll office which carry non-coin toll traffic. Also specify this Trunk Class for trunks at an Access Tandem or local tandem switch for trunks from a class 5 office or another tandem. Also specify this Trunk Class for the trunks between two Long Distance Platform switches using the LDP feature (SFID 165 on the SFSYS form set to "Y"). Recording and timing are done at the local office. Operator assistance is never required. Toll Completing Trunks are trunks from a toll office to a Class 5 office. This Trunk Class may also be used for RSMs.

For 5E6 and later, when TRKCLS is "TTOLLCON" and TRK DIR is "2W", OUTPULSING must be "MF", "DP", "TT", "CCIS6", or "ISUP7".

For 5E6 and later, if DLTU TYPE on the corresponding EQDU form (5730 Record) is "DLTU24" or "DLTU48" and the INPULSING or OUTPULSING field on this form is "MF", then DATA RATE on this form must be "56K" or not entered. The EQDU form is found by matching the SM and DLTU NUMBER with the first 3 digits and the 4th digit of the DEN, respectively, on the TRUNK form.

For 5E11 and later, when TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

For 5E13 and later, when TRKCLS is "TTOLLCON", QUEUE FEATURE is known, and LN TYPE is "NONE" or is unknown on the TKGRP form, the QUEUE TYPE must be set to "REROUTE" or "HPCOHQ" on the corresponding QUFD form. QUEUE FEATURE on the TKGRP form matches FEATURE NAME on the QUFD form.

General:
For 5E6 and later Software Releases, if the RAF TYPE on the 5271-4 Record is "ANN", "CTR" or "DTA", the associated TKGRP form must have a TRKCLS with a value of "RAFANNC", "RAFCTR" or "RAFDTA", respectively.

If OUTPULSING or INPULSING is entered as "CCIS6", then TRKCLS must be "LTOLLCON", "TTOLLCON", "PRINTOLL", "SCINTOLL", "BVINTOLL", or "BVTOLLCM", and BRCS must be "N".

For 5E4(2) and later, if trunks in this group are assigned a Precedence and Preemption feature on the TRUNKFA form or associated CLUSTR form, then the TRKCLS entered here must agree with the DSN (Defense Switched Network) TRUNK TYPE on the PPFD form (5618-1 Record) or PPTPA form (5618-5 Record) as follows. If TRUNK TYPE is "NONRCD" or "RCD", TRKCLS must be "PRINTOLL"; if TRUNK TYPE is "EOINID", "EOPNID", or "EORNID", then TRKCLS must be "TTOLLCON".

The following Trunk Class entries apply to Trunk Groups which are used as Logical Test Ports. Logical Test Ports identify the existence and location of specific types of test equipment such as ALIT Circuits, DC Jacks, TTF Circuits, etc. The Software Release uses these LTPs to establish connections between a testing facility and a line or trunk to be tested.

Valid TRKCLS Entries (Logical Test Ports)

Entry	Definition
LTPALIT	Logical Test Port for the Automatic Line Insulation Test Circuit. Refer to Division 2, Section 2A, "Automatic Line Insulation Testing (ALIT)."
LTPCLBCK	Logical Test Port for Remote Call Back to the TLWS (Trunk and Line Work Station). Also used for IMLT-2 Callback Route.
LTPDCJCK	Logical Test Port for DC Jacks on the Trunk and Line Work Station. Refer to Division 2, Section 2H, "Trunk and Line Work Station Test Access Unit."
LTPDCTU	Logical Test Ports for the DCTU (Directly Connected Test Unit). Refer to Division 2, Section 2J, which describes the DCTU feature.
LTPDFTAC	Logical Test Port required for the DFTAC (Distributing Frame Test Access Controller) circuit of the integrated MLT-2 feature. Refer to Division 2, Section 2S, "Integrated Mechanized Loop Testing System (IMLT-2)."
LTPDGTTF	Logical Test Port required for Diagnostics using the TTF (Transmission Test Facility). Refer to Division 2, Section 2L, "Channel Circuit Diagnostics."

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LTPELSTF	Software Release: 5E3 and later. Logical Test Port required for Electronic Loop Segregation using the TTF. Refer to Division 2, Section 2P, "Electronic Segregation (ELS)."
LTPICTC	Logical Test Port for Incoming Test Call, e.g. 100, 102, or 105 Test Lines or Station Ringer. Refer to Division 2, Section 2D, "Terminating Test Lines,," and Section 2F, "Station Ringer Touch-Tone Tests (SRTT)."
LTPISTFL	Software Release: 5E3 and later. Logical Test Port for the DSU2 Integrated Services Test Function Loopback. Refer to Division 2, Section 2C, "Outgoing Transmission Test Calls."
LTPISTFX	Software Release: 5E3 and later. Logical Test Port for the DSU2 Integrated Services Test Function Transmission. Refer to Division 2, Section 2B, "Automatic Progression Testing (APT),," and Section 2C, " Outgoing Transmission Test Calls."
LTPMSU	Logical Test Port for the Metallic Access Junctors on the Metallic Service Unit. Refer to Division 2, Section 2A, "Automatic Line Insulation Testing (ALIT),," and Section 2H, "Trunk and Line Work Station Test Access Unit (TLWS)."
LTPOGTC	Logical Test Port for Outgoing Test Call Originated from a Trunk and Line Work Station. Refer to Division 2, Section 2B, "Automatic Progression Testing (APT),," and Section 2C, "Outgoing Transmission Test Calls."
LTPOTOTF	Software Release: 5E3 and later. Logical Test Port for Office-to-Office Testing using the TTF. Refer to Division 2, Section 2G, "Office-To-Office Testing (OTO)."
LTPROTL	Logical Test Port for Incoming Calls Originated from a Remote Office Test Line. Refer to Division 2, Section 2I, "Remote Office Test Line (ROTL)."
LTPSLIM	Software Release: 5E10 and later. Subscriber Line and Instrument Measurement Test LTP. Refer to Div. 2, Section 4A230.
LTPS96TF	Software Release: 5E3 and later. Logical Test Port required for SLC96 Remote Terminal Diagnostics. Refer to Division 2, Section 2L, "Channel Circuit Diagnostics."
LTPWSTTF	Logical Test Port for Interactive Trunk and Line Work Station Testing Using the TTF. Refer to Division 2, Section 2H, "Trunk and Line Work Station Test Access Unit."
RMSD3	Software Release: 5E4 and later. Digital Test Access Trunk connected from a 5ESS Switch to a RMS-D3 test device over a T1.
TOPAS	Software Release: 5E4 and later. Digital Test Access Trunk connected from a 5ESS Switch to an RMS-D3 test device over a T1. This is only used when a Trunk Group with a TRKCLS of "RMSD3" cannot be used.

Data Rules for Logical Test Port TRKCLSs:

LTPCLBCK:
For 5E6 and later, when the TRKCLS is "LTPCLBCK", NEND CLLI must not be entered, INC TND WINK must be "N", TRUNK QUERY and XLT TEST must not be entered or must be entered as "N", and VPA TYPE must not be entered or must be "NOVPA".

For 5E7 and later, when TRKCLS is "LTPCLBCK", a FIXRT form must exist with FIXED ROUTE TYPE set to "CALLBACK".

For 5E9(1) and later, if "LTPCLBCK" or "LTPDFTAC" is entered, and if one or more corresponding TRUNK forms are entered, then one of those TRUNK forms must be defined with MEMB set to 0.

For 5E15 and later, CQ/BQ ALW must not be entered or must be entered as "N" for LTPCLBCK trunks.

LTPDFTAC:
For 5E9(1) and later, if "LTPCLBCK" or "LTPDFTAC" is entered, and if one or more corresponding TRUNK forms are entered, then one of those TRUNK forms must be defined with MEMB set to 0.

LTPICTC:
For 5E6 and later, if an RTIDX form has TRUNK GROUP NUMBER assigned to the TKGRP form with TRKCLS equal to "LTPICTC", the following fields on the RTIDX form should be assigned as shown:
- ROUTE TYPE equals "HUNT" or "TEST",

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- DIGITS TO BE DELETED equals 0,
- PREFIX DIGITS not entered,
- ANI OUTPULSING equals "N",
- OVERLAP OUTPULSING equals "N",
- SIGNALING PROTOCOL equals "TRAD", and
- CI ROUTE TYPE equals "OTHER",

In addition, for 5E7 and later, the value of NEXT ROUTE must not be entered, or if a NEXT ROUTE is entered, it must point to a RTIDX form with ROUTE TYPE of "REORDER".

For 5E6 and later, when TRKCLS is "LTPICTC", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "ICTSTCL".

LTPISTFL:
For 5E6 and later, when TRKCLS is "LTPISTFL", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "ISTFLB".

For 5E7 and later, when TRKCLS is "LTPISTFL" and assigned to a ROUTE INDEX on the RTIDX form, the ROUTE INDEX (RTI on the LINE form) must be assigned to a TN on a LINE form. The value of the TEST CODE field must be either "INV" or "NINV".

For 5E9 and later, when TRKCLS is "LTPISTFL" or "LTPISTFX" and assigned to a ROUTE INDEX on the RTIDX form, the ROUTE INDEX (RTI on the LINE form) must be assigned to a TN on a LINE form. The value of the TEST CODE field must be either "INV" or "NINV".

LTPISTFX:
For 5E6 and later, when TRKCLS is "LTPISTFX", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "ISTFXMIT".

For 5E9 and later, when TRKCLS is "LTPISTFX" or "LTPISTFL" and assigned to a ROUTE INDEX on the RTIDX form, the ROUTE INDEX (RTI on the LINE form) must be assigned to a TN on a LINE form. The value of the TEST CODE field must be either "INV" or "NINV".

LTPOGTC:
For 5E7 and later, when TRKCLS is "LTPOGTC", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "APT".

LTPROTL:
For 5E3 and later, when the TRKCLS is "LTPROTL", TRUNK CHAR, FEND CLLI, and NEND CLLI must not be entered. FREE ANS and INC TND WINK must be "N". TRUNK QUERY and XLT TEST must not be entered or must be entered as "N". VPA TYPE must not be entered or must be entered as "NOVPA". For 5E6 and later, SVC GRP must be entered as "NOANNC".

For 5E10 and later, every 5 Trunk Group members that are assigned a Logical Test Port (LTP) on the TRUNK form(s) and are associated with a TRKCLS of "LTPS96TF", "LTPROTL", and "LTPDGTTF" on the TKGRP form(s) for a particular SM, there must exist a corresponding TTF responder board defined on the EQDSP form(s) for the SM. This 5 to 1 ratio must be maintained for the proper operation of the trunk groups.

For 5E15 and later, CQ/BQ ALW must not be entered or must be entered as "N" for LTPROTL trunks.

LTPS96TF:
FIXRT form must exist with FIXED ROUTE TYPE set to "S96CTST".

For 5E10 and later, every 5 Trunk Group members that are assigned a Logical Test Port (LTP) on the TRUNK form(s) and are associated with a TRKCLS of "LTPS96TF", "LTPROTL", and "LTPDGTTF" on the TKGRP form(s) for a particular SM, there must exist a corresponding TTF responder board defined on the EQDSP form(s) for the SM. This 5 to 1 ratio must be maintained for the proper operation of the trunk

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groups.

LTPSLIM:
For 5E12 and later, the IM specified in the LTP on the trunk form must be equipped with an MMSU (Modular Metallic Service Unit) containing a SLIM pack on the EQMMSP form (5750 Record) for the IM value, or the TGN must have a Route Index on the RTIDX form (5303 Record) that matches a SLIM RI on the EQAIUP form (5746 Record).

LTPWSTTF:
For 5E6 and later, when TRKCLS is "LTPWSTTF", at least one FIXRT form must exist with FIXED ROUTE TYPE set to "INTTF".

RMSD3:
A maximum of three Trunk Groups with TRKCLS of "RMSD3" are allowed.

For 5E9(1) and later, if "RMSD3", "TOPAS", or "TSTK" is entered, then "ON" must be entered in the IDLE STATE fieldon the corresponding TRUNK form (5204 Record).

For 5E9(2) and later, an SM assigned on the EQIM form must have a CONFIGURATION that supports "RMSD3". For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E15 and later, when TRKCLS is RMSD3 or TOPAS, then CQ/BQ ALW must be blank.

TOPAS:
Only one Trunk Group with TRKCLS of "TOPAS" is allowed.

For 5E9(1) and later, if "RMSD3", "TOPAS", or "TSTK" is entered, then "ON" must be entered in the IDLE STATE fieldon the corresponding TRUNK form (5204 Record).

For 5E15 and later, when TRKCLS is RMSD3 or TOPAS, then CQ/BQ ALW must be blank.

TSTK:
For 5E9(1) and later, if "RMSD3", "TOPAS", or "TSTK" is entered, then "ON" must be entered in the IDLE STATE fieldon the corresponding TRUNK form (5204 Record).

2.10 CARRIER ID

Description: Enter the InterLATA Carrier ID.
Valid Entries:
- 5E9(1) and later:
- 0 - 9999

Data Rules:

It is required when TRKCLS is "IC". It is also required when the Trunk Group is an LTP type used for IMLT-2 Callback when a carrier is needed for routing the Callback Telephone Number (when the subsequent Type of CI Call is other than NONCI, INTRA or PRIV). In this case, the Trunk Class is "LTPCLBCK" and is pointed to by the Fixed Route Type of "CALLBACK". In all other cases, leave this field blank.

CARRIER ID cannot be entered on TKGRP forms with TRKCLS of "LTOLLCON", "PRINTOLL", "SCINTOLL" or "TTOLLCON" unless OSPS TA is "Y" on the OSPSOPT form.

CARRIER ID can only be entered if TRKCLS is one of the following:
- "IC"
- "LATA"(5E10 and later)

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- "LTOLLCON"
- "LTPCLBCK"
- "LTPDFTAC"
- "LTPPROTL"
- "PRINTOLL"
- "SCINTOLL"
- "TSPS".
- "TTOLLCON"

For 5E3 and later, if the CARRIER ID is specified for a TRKCLS of "LTPDFTAC", "LTPCLBCK" or "LTPROTL", then a BILLING DN must be entered. If the CARRIER ID is not specified, the BILLING DN must not be entered.

For 5E8 and later, when CARRIER ID is entered:

- FEAT GRP must be entered;
- CARRIER ID should equal CARRIER ID on an ICF form,and
- FEAT GRP should equal the ICF form's FEAT GRP.

For 5E15 and later, when CARRIER ID is entered, TRKCLS must be "CAMA", "LATA", "LTOLLCON", "LTPCLBCK", "LTPDFTAC", "LTPROTL", "PF", "PRINTOLL", "SCINTOLL", "TSPS", or "TTOLLCON".

2.11 FEAT GRP

Description: Enter the Feature Group for the CARRIER ID. (See Division 2, Section 1AY for information about Feature Groups B and D.)

Software Release: 5E8 and later
Valid Entries:

Valid FEAT GRP Entries

Entry	Definition
B	Feature Group B Carrier
D	Feature Group D Carrier

Data Rules:

When FEAT GRP is entered, CARRIER ID must be entered.

If CARRIER ID and FEAT GRP are entered the CARRIER ID and FEAT GRP must be defined on the ICF form (5305 Record).

For 5E11 and later, when FEAT GRP is "B" or "D", CNA OPTION must be "NONE"

2.12 # FREE ANS

Description: Should Answer Supervision be returned, for billing purposes, on the trunk group for calls to a free line or trunk. "Y" must be entered for trunk groups directly connected to a carrier and for trunk groups which handle carrier traffic and serve offices with free line service.

- ***NOTE:*** A PBX or end-office off the 5ESS Switch does not receive answer supervision when routing to TSPS (0+ or 0- calls). when FREE ANS is "N" (the default). With FREE ANS set to "Y", the off-hook from the TSPS to request ANI is sent back as answer supervision.

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Required Field.

- ***NOTE:*** In some cases there are other vendor switches that require answer supervision to maintain the talk path even though the call is free. For E911 calls where there is a ISUP (Integrated Services User Part) trunk origination at the E911 tandem, FREE ANS should be set to "Y" on the incoming ISUP trunk to ensure that answer supervision is sent back to the originating switch.

Default: N
Valid Entries: Y, N

Data Rules:

If the TRK DIR is "RAF", this entry must be "N".

If TRKCLS is "RMSD3" or "TOPAS" this entry must be "N".

2.13 # INC TND WINK

Description: This field is used only in an AT (Access Tandem) to specify whether or not the first wink from an International Carrier should be passed to the EAEO (Equal Access End Office). At the AT, on an Incoming or Two-Way Trunk Group from an EAEO, enter "Y" (Yes) if the EAEO is programmed to recognize, and therefore expects, the first wink back on an International Carrier Interconnect call. (If the originating EAEO is a 5ESS Switch, this will be specified with EXTRA START WINK equal to "Y" on the OFCOPT form [5509 Record].) In all other cases, (e.g., the EAEO does not expect the wink, this is not an AT, etc.), enter "N".

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the TRK DIR is "RAF", INC TND WINK must be "N".

If TRKCLS is "RMSD3" or "TOPAS", INC TND WINK must be "N".

2.14 ATTTN

Description: Enter the ATTTN (Automatic Trunk Test Table Number), defined on a Trunk Group basis.
Valid Entries: 1 - 999

Data Rules:

If ATTTN is entered,a corresponding AUTO form is required where the entry in the ATTTN field on the TKGRP form equals the AUTOMATIC TRUNK TEST TABLE NUMBER entry on the AUTO form.

When ATTTN is entered for a trunk group with An ATTTN value may be entered only for the following TRKCLSs:

- "ATNDVFY"
- "CAMA"
- "CST1"
- "CST2"
- "EDSL"
- "EDSLHM"
- "FOPRI"
- "FOPRT"
- "IC"
- "IFOPER"

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- "IDCS"
- "IVTRK"
- "LATA"
- "LTOLLCON",
- "PBXDID"
- "PF"
- "PFLASH"
- "PFITT"
- "PRINTOLL"
- "SCINTOLL"
- "SPCHNDLR"
- "TSPS"
- "TTOLLCON"

The following TRKCLS values normally require an ATTTN value if the corresponding TRK DIR is "OUT" or "2W":

- "ATNDVFY"
- "CAMA"
- "EDSL"
- "EDSLHM"
- "FOPRI"
- "FOPRT"
- "IC"
- "IFOPER"
- "LATA"
- "LTOLLCON"
- "PBXDID"
- "PF"
- "PFITT"
- "PFLASH"
- "PRINTOLL"
- "SCINTOLL"
- "TSPS"
- "TTOLLCON

For 5E4(2) and later, an ATTTN that is entered for a non-CCS trunk group (OUTPULSING other than "ISUP7" and "CCIS6") may not have an AUTOMATIC PROGRESSION TEST TYPE of "CONT" on the AUTO form.

For the TRKCLS of "TSPS" which terminates on an OSPS "FIOPR" TRKCLS, the test numbers associated with that ATTTN must adhere to the format (10x, 958-10x, or 959-10x) that is defined on the AUTO form (5505 Record). The ATTTN field must not be entered if TRK DIR is "INC", "ANN", "SGNL", or "RAF", or if TRKCLS is not listed above.

An ATTTN may be assigned to outgoing OSPS EDSL (PRI) B-channel trunk groups (TRKCLS of "IFOPER" and TRK DIR of "OUT"). The ATTTN field must be left blank for OSPS EDSL (PRI) D-channel trunk groups (TRKCLS "IFOPER" or "IFTERM" and TRK DIR "SGNL") and incoming OSPS EDSL B-channel trunk groups (TRKCLS "IFTERM" and TRK DIR "INC").

For 5E9(1) and later, when ATTTN is entered for a trunk group with TRKCLS "IFOPER", "EDSL", or "EDSLHM", an associated AUTO form must be entered; the AUTOMATIC PROGRESSION TEST TYPE on the AUTO form must be "INV", "NINV", or blank.

For 5E9(1) and later, when ATTTN is entered for a DCS (Digital Cellular Switch) trunk group (DCS TRK is

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"Y"), the following rules apply.

- If the trunk group is CCS (OUTPULSING is "CCIS6" or "ISUP7"), an AUTOMATIC PROGRESSION TEST TYPE entered on the corresponding AUTO form must be "CONT", "PB", "105", or "NINV".
- The AUTOMATIC PROGRESSION TEST TYPE on the AUTO form may be "102LB" only if TRKCLS on this form is "CST2" or "IVTRK".
- If the trunk group has TRKCLS set to "CST2" or "IVTRK", AUTOMATIC PROGRESSION TEST TYPE on the AUTO form must be "102LB" or "NINV".If the test is "NINV", the NINV TYPE TEST field on the AUTO form must be blank.
- If the trunk group has TRKCLS set to a value other than "CST2" or "IVTRK", and AUTOMATIC PROGRESSION TEST TYPE on the AUTO form is "NINV", then NINV TYPE TEST must be entered on that form.
- If the trunk group has TRKCLS set to "CST1", AUTOMATIC PROGRESSION TEST TYPE on the AUTO form must be 105, and the 105 TYPE TEST field on the AUTO form must be blank.
- If the trunk group has a TRKCLS other than "CST1", and AUTOMATIC PROGRESSION TEST TYPE is 105 on the corresponding AUTO form, a value must be entered in 105 TYPE TEST field on the AUTO form.
- if ATTN is entered, DCS TRK is "Y", and
  - AUTOMATIC PROGRESSION TEST TYPE is 105 on the corresponding AUTO input form, then a DCSTT form (5055 Record) must be entered with the same ATTN value and TEST TYPE of 105. The ATTTN field on the TKGRP form corresponds to AUTOMATIC TRUNK TEST TABLE NUMBER on the AUTO form and to ATTTN on the DCSTT form.
  - AUTOMATIC PROGRESSION TEST TYPE is "102LB" on the corresponding AUTO form, then a corresponding DCSTT form must be entered with the same ATTN value and TEST TYPE of "102LB". ATTTN corresponds to the AUTOMATIC TRUNK TEST TABLE NUMBER on the AUTO form and to ATTTN on the DCSTT form.
  - and AUTOMATIC PROGRESSION TEST TYPE is "NINV" on the AUTO form, then a DCSDT form must be entered with the same ATTN value. ATTTN corresponds to the AUTOMATIC TRUNK TEST TABLE NUMBER on the AUTO form and to ATTTN on the DCSDT form.

For 5E9(1) and later, if a CCS trunk group (INPULSING or OUTPULSING is "CCIS6" or "ISUP7") has DCS TRK set to "N", then if an AUTOMATIC PROGRESSION TEST TYPE is entered on a corresponding AUTO form, it must be "CONT" or "PB".

For 5E12 and later, when ATTTN is not entered and TRKCLASS is not "SPCHNDLR", IAPT must be "Y".

2.15 TERA RCVY

Description: TERA (Trunk Error Analysis) provides analysis of call irregularities and maintenance events (Trunk Facility Operational Test and Circuit Diagnostic Test results) having a high probability of errors resulting from trunk or service circuit failures.

MDII (Machine Detected Inter-Office Irregularities) are analyzed by two methods. Peer Group analysis recognizes when a member in a group of equipment is experiencing a significantly higher error rate than other members of the equipment group. Quick Check analysis recognizes consecutive errors on a particular circuit.

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Upon failing analysis, recovery action is taken on the circuit.

Software Release: 5E3 and later
Valid Entries:

Valid TERA RCVY Entries

Entry	Definition
NOA	No action taken; no report is generated; and trunk is not removed from service.
RMV	Removes the trunk which failed analysis without performing an operational test.
RPT	No recovery action beyond reporting that a trunk has received an excessive number of MDIIs.
TST	Operational test may be performed when a trunk reaches MDII. "TST" is only valid when an entry has been made in the ATTTN field.

Data Rules:

If a value is entered in the ATTTN field and the TERA RCVY field is left blank, TERA RCVY will be defaulted to the "TST" value.

If both the ATTTN and TERA RCVY fields are left blank, TERA RCVY will be defaulted to the "RPT" value.

If TRK DIR is "RAF", then this field must be "NOA".

2.16 # IAPT

Description: Should Automatic Progression Testing be inhibited when an ATTTN is specified?

Required Field.
Valid Entries: Y, N

Data Rules:

If ATTTN is left blank, IAPT must be "Y".

For 5E11 and later:
"Y" must be entered if:

- if ATTTN is not entered and TRKCLS is not "SPCHNDLR".
- if DCS TRK is "Y" and TRKCLS is not "SPCHNDLR".

2.17 CALLMON INH

Description: Inhibit call monitor testing?

Software Release: 5E9(1) and later.
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If IAPT is "Y", then CALLMON INH must be Y.

2.18 INSEP

Description: Enter the Incoming Separation Class Number. This entry is applicable for the Division of Revenue Feature and must be specified on the 5308 Record.
Valid Entries: 1 - 255

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Data Rules:

An INSEP is required for all Two-Way and Incoming Trunk Groups.

If INSEP is assigned, it must be defined on the Traffic Separation Cell Grouping, TRFSEP form (5308 Record).

INSEP 0 is used by the Software Release whenever no INSEP is provided by the incoming line or trunk translations. INSEP 63 is used by the Switch for calls that are not applicable to DOR (i.e. busy, reorder etc.). These values (0, 63) should not be assigned.

2.19 INPULSING

Description: Enter the Pulsing Type on Incoming or Two-Way Trunk Groups.

Valid INPULSING Entries

Entry	Definition
CCIS6	CCIS6 Signaling.
DCHN	Software Release: 5E3 and later. D-channel signaling for DSLs. This value is used for TRKCLSs of "EDSL", "EDSLHM", "IFOPER" and "IFTERM" and only under certain conditions. See Figures 1 and 2 for acceptable entry details.
DCS	Software Release: 5E9(1) and later. Autoplex Digital Cellular Switch.
DP	Dial Pulse
ISUP7	ISDN CCITT7 Signaling. Warning: For incoming ISUP7 trunks at an Originating Access Tandem office or at an Originating Toll office that handles international traffic, the CKT CODE must be defined on a CKTCODE (5311 Record) form and populated in a RTIDX (5303 Record) form. This rule applies in 5E6 and later Software Releases. It is not RC/ODA enforceable.
MF	Multifrequency
NONE	No inpulsing. Used only for Direct Connect Trunks, therefore, a number must be specified in DIR CON DN.
PP	Software Release: 5E10 and later. Packet Pipe signaling for CDMA (Code Division Multiple Access). For more information on CDMA, see Division 2, Section 8B.
RPEO	Revertive Pulsing End Office
RPTO	Revertive Pulsing Tandem Office
TT	Touch Tone.

Data Rules:

If TRKCLS is "X75", "X75P", or "PACKET", INPULSING must not be entered.

DP: If "DP" is entered in the INPULSING field, then neither "D0M" nor "D0P" may be entered in the TRK TYPE field of the corresponding OPRTK form (5417 Record).

For 5E6 and later, when TRKCLS is "PF" and TRK DIR is "INC" or "2W", INPULSING must be "DP", "MF", "TT", "NONE", or "ISUP7". ISUP7 can only be assigned if trunks are a part of a Leased Network with LN TYPE set to a value other than blank or "NONE".

CCIS6 or ISUP7 (non-SIP-T)
For 5E7 and later, CCS trunks with INPULSING and/or OUTPULSING equal to "CCIS6" or "ISUP7" require the the DEN or TEN fields, or for ISUP7 only (5E9(2) and later), the NEN field entered on the corresponding TRUNK form.

For 5E7 and later, if the CCS Trunk Groups (INPULSING/OUTPULSING is "CCIS6" or "ISUP7") have the VPA RATE set to 12, 50, or 100, then all the corresponding trunks assigned on the TRUNK form must be physically located on a Switching Module equipped with a local DSU2 (Digital Service Unit 2) or DSC3 (Digital Service Circuit 3) Tone Transceiver. The TRUNK TEN, DEN, or NEN value must have the SM value defined on an EQDS2P form (5740 Record) with at least one DSC TYPE list entry equal to "LDSU2TX", or on at least one EQDSC3 form (5852 Record) with a non-zero value entered in the TONE XCVRS field.

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For 5e9(1) and later, if the CCS Trunk Groups defined on the TKGRP form with either or both of the INPULSING/OUTPULSING fields equal to "CCIS6", and they share the same FEND CLLI value; then all of the Trunk Group Members defined on the TRUNK form for these same TGN values must have their CLCI TRK ID entered and the value must be unique in the range 0 - 9999.

For 5E9(2) and later, if "CCIS6" is entered, the trunk group members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports CCIS6 signaling. For the CONFIGURATION that supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E15 and later, when INPULSING/OUTPULSING fields show CCS signaling CQ/BQ ALW, XLT TEST, VPA RATE, and VPA TYPE fields must all be set to known values.

For 5E16(2) and later, when INPULSING or OUTPULSING is set to "ISUP7", LOCAL SM and ORIG PT CODE is entered, and no matching OPC or ALIAS PC can be found on the CCGSM form (6008 Record), then one of the following conditions must exist:

- OPC from the OFCOPT form (5509 Record) where the COMMON CHAN SIG is set to "ALL" or "CNI" must match ORIG PT CODE from the TKGRP form (5202 Record) or,
- ALIAS POINT CODE form the ALIASPC form must match the ORIG PT CODE.

MF:
If TRKCLS is "RMSD3" or "TOPAS", this field must be "MF".

PP:
For 5E10 and later, if "PP" is entered, a TRKCLS of "PKTPIPE" or "PPMEM" must be entered.

RP:
Restrictions for RP trunks are as follows:

- Trunk Group must be One-Way.
- Trunks must be digital.
- When designated "RPEO" address signal, Outgoing Trunk Groups must terminate to an End Office and Incoming Trunk Groups must originate from an End Office.
- When designated "RPTO" address signal, Outgoing Trunk Groups must terminate to a Tandem Office and Incoming Trunk Groups must originate from a Tandem Office.
- IN START DIAL must be "IMED" and OUT START DIAL must be null on the TRUNK form.
- TRKCLS must be "LTOLLCON".
- For 5E10 and later, TGNs on the TKGRP form that have INPULSING and/or OUTPULSING of "RPEO" or "RPTO", and have TGN/MEMBs on the TRUNK form whose DEN[1,3] values match SM on the EQIM form with UNIT TYPE of SM2000, is not allowed.

TT:
INPULSING can be Touch Tone ("TT") only if TRKCLS is
- "LTOLLCON"
- "PF"
- "PFITT"
- "PFLASH"
- "SPAB800"
- "SPAM800"

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- "SPAMEG"
- "SPAWATS"
- "TTOLLCON"

2.20 OUTPULSING

Description: Enter the Pulsing Type on Outgoing and Two-Way Trunk Groups.

Valid OUTPULSING Entries

Entry	Definition
CCIS6	CCIS6 Signaling.
DCHN	Software Release: 5E3 and later. D-channel signaling for DSLs. This value is used for TRKCLSs of "EDSL", "EDSLHM", "IFOPER", and "IFTERM", only under certain conditions. See Figures 1 and 2 for acceptable entry details.
DCS	Software Release: 5E9(1) and later. Autoplex Digital Cellular Switch.
DP	Dial Pulse.
ISUP7	ISDN CCITT7 Signaling.
MF	Multifrequency.
NONE	No outpulsing. This value can only be used if TRK DIR is "OUT" and TRKCLS is "LTOLLCON" or "TTOLLCON".
PP	Software Release: 5E10 and later. Packet Pipe signaling for CDMA (Code Division Multiple Access). For more information on CDMA, see Division 2, Section 8B.
RPEO	Revertive Pulsing End Office.
RPTO	Revertive Pulsing Tandem Office.
TT	Touch Tone. This value can only be used if TRKCLS is "PBXDID".

Data Rules:

If TRKCLS is "X75", "X75P", or "PACKET", OUTPULSING must not be entered.

For 5E6 and later, when TRKCLS is "PF" and TRK DIR is "OUT" or "2W", OUTPULSING must be "DP", "MF", "TT", "NONE", or "ISUP7". ISUP7 can only be assigned if trunks are a part of a Leased Network with LN TYPE set to a value other than blank or "NONE".

TRKCLS of PF and PFLASH can use an OUTPULSING value of "TT" or "DP" when CUT THRU is "Y".

CCIS6 or ISUP7:
For 5E7 and later, CCS trunks with INPULSING and/or OUTPULSING equal to "CCIS6" or "ISUP7" require the the DEN or TEN fields or for ISUP7 only (5E9(2) and later), the NEN field entered on the corresponding TRUNK form.

For 5E6 and later, if GLARE ACTION is "ODDEVEN", then OUTPULSING must be "ISUP7".

For 5E7 and later, if the CCS Trunk Groups (INPULSING/OUTPULSING is "CCIS6" or "ISUP7") have the VPA RATE set to 12, 50 or 100, then all the corresponding trunks assigned on the TRUNK form must be physically located on a Switching Module equipped with a local DSU2 (Digital Service Unit 2) or DSC3 (Digital Service Circuit 3) Tone Transceiver. The TRUNK TEN, DEN, or NEN value must have the SM value defined on an EQDS2P form (5740 Record) with at least one DSC TYPE list entry equal to "LDSU2TX", or on at least one EQDSC3 form (5852 Record) with a non-zero value entered in the TONE XCVRS field.

For 5E9(1) and later, if the CCS Trunk Groups defined on the TKGRP form with either or both of the INPULSING/OUTPULSING fields equal to "CCIS6", and they share the same FEND CLLI value; then all of the Trunk Group Members defined on the TRUNK form for these same TGN values must have their CLCI TRK ID entered and must be unique in the range 0 - 9999.

For 5E9(2) and later if "CCIS6" is entered, the trunk group members must be assigned to an SM on an EQIM form with a CONFIGURATION which supports CCIS6 signaling. For the CONFIGURATION that

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supports this TRKCLS value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E11 and later, if "CCIS6" is entered, LOCAL RSM must not be entered.

For 5E12 and later, when INPULSING/OUTPULSING equals "ISUP7" showing CCS7 signaling, thus both the DEST PT CODE and ORIG PT CODE entries must be entered.

PP:
For 5E10 and later, if "PP" is entered, a TRKCLS of "PKTPIPE" or "PPMEM" must be entered.

RP:
Restrictions for RP trunks are as follows:

- Trunk Group must be One-Way.
- Trunks must be digital.
- When designated "RPEO" address signal, Outgoing Trunk Groups must terminate to an End Office and Incoming Trunk Groups must originate from an End Office.
- When designated "RPTO" address signal, Outgoing Trunk Groups must terminate to a Tandem Office and Incoming Trunk Groups must originate from a Tandem Office.
- IN START DIAL must be null and OUT START DIAL must be "IMED" on the TRUNK form.
- TRKCLS must be "LTOLLCON".
- For 5E10 and later, TGNs on the TKGRP form that have INPULSING and/or OUTPULSING of "RPEO" or "RPTO", and have TGN/MEMBs on the TRUNK form whose DEN[1,3] values match SM on the EQIM form with UNIT TYPE of SM2000, is not allowed.

TT:
For 5E10 and later, OUTPULSING may be "TT" only if TRKCLS is:
- "IDCS"
- "LTOLLCON"
- "PBXDID"
- "PF"
- "PFCPE"
- "PFITT"
- "PFLASH"
- "TTOLLCON"

2.21 # SATELLITE

Description: Does this Trunk Group use Satellite facilities?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TRKCLS is "RMSD3" or "TOPAS", then this field must be "N".

2.22 # HOLD BUSY

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Description: For certain Outgoing Secondary Intertoll Trunks, the trunk is "held busy" until an on-hook is received from the terminating trunk. Is this condition required? (This feature applies to Toll applications only.)

Required Field.
Default: N
Valid Entries: Y, N

2.23 FAR END NPA

Description: Specify the terminating NPA for Outgoing and Two-Way Trunk Groups. This field is required for the Network Management Trunk Group Control Feature.
Valid Entries: 200 - 999

Data Rules:

If this is an Originating Screening Office for INWATS, i.e., ORIG SCREEN OFF equals "Y" on the OFCOPT form, then FAR END NPA must also be specified for Incoming Trunk Groups for the following set of conditions:

- ORIG SCREEN OFF or SERV SWITCH PT? on the OFCOPT form (5509 Record) is set to "Y"
- TRK DIR is set to "INC"
- and TRKCLS is *NOT* one of the following:

  "ACJCK",

  "BUSYVFY"

  "DIOR"

  "INAISTRK"

  "LTOLLCON"

  "RMSD3"

  "TOPAS"

  "TSTK"

For an SSP (Service Switching Point) office (SERV SWITCH PT equals "Y" on the OFCOPT form) and/or an OSPS office, the FAR END NPA must be specified for Incoming and Two-Way SSP trunk groups (including those with a TRKCLS of "FIOPR"). In addition, for 5E5 and later, the FAR END NPA must be entered when SERV SWITCH PT on the OFCOPT form is "Y", TRK DIR on this form is "INC", and TRKCLS is not "DIOR", "TOPAS", nor "RMSD3", nor, for 5E7 and later, "INAISTRK".

NOTE: A single 5ESS Switch may not provide both OSO (Originating Screening Office) and SSP (Service Switching Point) services at the same time.

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If TRKCLS is "ANNCMNT", "RMSD3" or "TOPAS", this field must not be entered.

If TRKCLS is "DIOR", this field must be equal to the NM DEFAULT NPA on the OFCOPT form (5509 Record).

For 5E9(1) and later, if TRK DIR is "2W" and TRKCLS is not "CST1", "CST2", "DSC", "IDCS", or "IVTRK", then SCR and FAR END NPA must be entered.

When TRK DIR is "2W" and HUNT TYPE is not "PSUCD", FAR END NPA must be entered.

For 5E10 and later, FAR END NPA must be entered for all outgoing trunks if TRKCLS is NOT "PKTPIPE" or "PPMEM".

2.24 LOCAL SM

Description: If the Trunk Group defined on this form is "local" within a Switching Module, that is, all its members are assigned equipment numbers (TENs or DENs) in the same SM, then enter the 3-digit SM number in this field. The SM may be a remote module, e.g., an RSM or ORM; or it may be an SM in the host office. This feature allows more efficient call processing of local Trunk Groups.

This feature allows more efficient call processing of local trunk groups.

This field can also be used to provide additional alternate routes in a route list.

Software Release: 5E5 and later
Valid Entries: 1 - 192

Data Rules:

When the LOCAL SM is entered, it must be defined on an EQIM form.

If the Trunk Group is "global", that is, its members have equipment numbers in different SMs, then leave this field blank.

It must also be blank for CCS trunk groups (INPULSING or OUTPULSING is "CCIS6" or "ISUP7"), Logical Test Port trunks (TRKCLS is "LTP"), and Outgoing CAMA operator trunks (TRKCLS is "CAMOPKEY" or "CAMOPTLK").

An SM number must be entered in this field when a value is entered in GL ANN TG.

For 5E7 and later, if this field is entered, all members of the trunk group assigned on the TRUNK form must have their associated SMequipment value (the first three digits of the TEN, DEN, or (for 5E9(2) and later) NEN field) equal to the numeric SM value entered in this field.

For 5E11 and later, when VCDX OFFICE is set to "Y" on the EQCORE form and TRKCLS on the TKGRP form (5202-1/2 Record) is not in the table below, then LOCAL SM on the TKGRP form must be known.

LOCAL SM Entries	
Software Release: 5E11 and later	
Data Condition	**Trunk Group Definition**
TRKCLS[1,3] = "LTP"	Local Test Port Trunk
TRKCLS = "EDS" and RDTA GRP = "Y"	Extended Digital Subscriber RDTA Trunk TRKCLS = "INAISTRK"
TRKCLS = "RMSD3"	TAT connected to RSM-D3 Trunk
TRKCLS = "TOPAS"	Test Access Trunk - TOPAS Interface

2.25 GL ANN TG

Description: When the Trunk Group defined on this form is a local announcement group (TRKCLS is "ANNCMNT" and LOCAL SM is entered), then the number of a global announcement trunk group must be entered in this field. The local announcements will be used in place of the global announcements.

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Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The GL ANN TG must be different than the TGN defined on this form. It must be an announcement trunk group defined on another TKGRP form with TRK DIR equal to "ANN" and with LOCAL SM and GL ANN TG left blank.

No route index is allowed to point to the local announcement trunk group. The route index must reference the global announcement trunk group entered in the GL ANN TG field. Calls originated in the SM (or RSM Site) and destined for the global announcement group will terminate to the local group and use the SM's (RSM Site's) version of the announcement.

No more than one local trunk group may be defined with the same GL ANN TG in any given SM or Remote Site. Although a specific GL ANN TG value can be assigned on more than one TKGRP form, the combined LOCAL SM and GL ANN TG fields must be unique on each form. Further, the LOCAL SM must be defined on an EQIM form; when a REMOTE SITE is specified on that form, the combined SM and REMOTE SITE must be unique.

For engineering considerations concerning local announcement trunk groups, see the RSM Stand-Alone Call Processing feature section in Division 2, Section 1C, of this guide. Also see the Multimodule RSM Stand-Alone Call Processing and Billing section in Division 2, Section 1J, for a discussion of local trunk groups at an MMRSM site.

For 5E11 and later, GL ANN TG may be entered only when the LOCAL RSM is entered.

2.26 BRCS

Description: Will BRCS features be assigned to this Trunk Group?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, a Feature Assignment Trunk Group form, TKGRPFA (5206 Record), must be completed for this Trunk Group.

If TRKCLS is "EDSL", "EDSLHM", "IFOPER", "IFTERM", "RMSD3" or "TOPAS", then this field must be "N". If TRK DIR is "ANN" or "LTP", this field must be "N". For CCS trunks, this field must be "N".

For 5E6 and later, BRCS must equal "N" when INPULSING or OUTPULSING is "ISUP7", LN TYPE is "N" and TRKCLS is not "LTOLLCON".

For 5E6 and later, if this trunk group is dedicated to ASP (Advanced Services Platform) via the default ASP DAS by having DAS equal to PVN DAS on the OFCOPT form (5509 Record), then BRCS must be "N" here and on the corresponding TRUNK form.. If the trunk is dedicated to ASP via a virtual ASP DAS by having a DAS whose functionality is similar to PVN DAS on the OFCOPT form, then BRCS should be "N". See the ASP DIALING PLAN section in the ASP feature description, Division 2, Sections 4A51 and 4A126, for further details on the dangers of assigning BRCS features to trunks dedicated to ASP services.

2.27 TOPAS TP NBR

Description: This field is the TOPAS (Testing, Operations, Positioning and Administration) Operations System TP (Test Position) Number. The field is used by Recent Change only and cannot be accessed by ODA.

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PACKET NETWORK TRUNKING

2.28 PKT GRP

Description: The PKT GRP field is used to specify the Packet Group Number. This field was added to support the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. For more information, see Division 2, Section 7BX.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 7000 - 7999

Data Rules:

For 5E16(2) and later, when PKT GRP is entered:

- TRKCLS must be "LTOLLCON" or "TTOLLCON"
- TRK DIR must be "2W"
- INPULSING must be "ISUP7"
- OUTPULSING must be "ISUP7"
- GLARE ACTION must be "ODDEVEN"
- HUNT TYPE must be "2WB" or "2WF"
- DAS must be entered
- SCR must be entered
- LOCAL SM must not be entered
- VPA TYPE must be "NOVPA" or must not be entered
- VPA RATE must be 0 or must not be entered
- CFN RSTRCT must be "N"
- E9111 TYPE must be "NONDED"
- LDP must be "N"
- ASP TOLL must be "N"
- CARRIER TRIG must be "N"
- TRIG NBR must not be entered
- ASP ORIG must be "N"
- UNRES EA must be "N"
- LN TYPE must be "NONE" or must not be entered
- AUD RNG must be "N"
- LS DLY ANS must be "N"

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- ☐ MAKE BUSY KEY must not be entered
- ☐ PRIVACY must be "N"
- ☐ MAI must be "S"
- ☐ API CODE must not be entered
- ☐ CT FOR DT must be "N"
- ☐ REL LINK INIT must be "N"
- ☐ BRCS must be "N"
- ☐ INC TND WNK must be "N"
- ☐ SEND LD CIC must be "N"
- ☐ XLT TEST must be "N"
- ☐ RERTE Q INH must be "N"
- ☐ QUEUE ALLOWED mustt be "N"
- ☐ DCS' TRK must be "N"
- ☐ AML PERCENT must not be entered
- ☐ IAPT must be "Y"
- ☐ WB RATE must not be entered
- ☐ SS7 ISUP OPER must be "N"
- ☐ PBX/CPE ID must not be entered
- ☐ DSN ARC ID must be 0 or must not be entered
- ☐ SHUTTLE must be "N"
- ☐ BUSY LAMP must not be entered
- ☐ BW LAMP must be "N"
- ☐ WARN THRESH must not be entered
- ☐ RTCD REQ must be "N"
- ☐ FAR END LATA must be 0 or must not be entered
- ☐ COIN must be "N" or must not be entered
- ☐ TERA RCVY must be "NOA"
- ☐ INTER SM TRK must be "N"
- ☐ OUTAGE RPT must be "N"
- ☐ MINT SIG TYPE must not be entered

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- TRK ICI must not be entered
- MBG ID must not be entered
- SPEECH TRMTS must be "N"
- ISAT MLHG must not be entered
- RCD 3PT1 ITC must not be entered
- AML ALARM must be "MAJOR"
- SATELLITE must be "N"
- ATTN must not be entered
- CQ/BQ ALW must be "N"

For 5E16(2) and later, when PKT GRP is not entered, DIFF SERV must not be entered.

For 5E16(2) FR 3 and later, when PKT GRP is entered, BICC GRP and SIPT GRP must not both be "Y".

2.29 BICC GRP

Description: As of the 5E16(2) release, the BICC GRP field is replaced with the PKT GRP field on this form (see the PKT GRP field for usage information). The BICC GRP field is used to specify the bearer path for packet switched calls. This field was added to support the ATM Global Routing and Signaling feature (99-5E-7554). This feature is made available in 5E15 Feature Release 1. For more information, see Division 2, Section 4A257.

Software Release: 5E15 and later
Valid Entries: Blank, Y, N

Data Rules:

When BICC GRP is not entered:

- If INPULSING or OUTPULSING is "ISUP7", then VPA TYPE must be entered with a value other than "NOVPA".
- If INPULSING and OUTPULSING are not "ISUP7", then VPA TYPE must not be entered or must equal "NOVPA".
- If INPULSING or OUTPULSING equals "ISUP7", TRUNK QUERY, XLT TEST, VPA RATE, and VPA TYPE fields must all be entered.

When BICC GRP is entered:

- TRKCLS must be "LTOLLCON" or "TTOLLCON".
- TRK DIR must be "2W".
- INPULSING must be "ISUP7".
- OUTPULSING must be "ISUP7".
- GLARE ACTION must be "ODDEVEN".

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- HUNT TYPE must be "2WB", or "2WF".
- DAS must be entered.
- SCR must be entered.
- LOCAL SM must not be entered.
- VPA TYPE must be "NOVPA" or must not be entered.

BICC GRP can only be entered when the ACT field for SFID 567 or SFID 684 on the SFSYS form (5713-1 Record) is set to "Y".

Each BICC GRP entered has to be defined as a valid TGN.

When BICC GRP is entered, trunk members are not allowed on the TRUNK form in the MEMB field for this TGN.

The number of BICC GRP entered must not exceed the maximum number of BICC GRP for an office (256).

When TGN and BICC GRP are equal, the DEST PT CODE and the ORIG PT CODE pair must be unique between all BICC Groups.

For a given BICC GRP, the BICC Group and the Service Group forms must all have the same values of HUNT TYPE, FEND CLLI, NEND CLLI, DEST PT CODE, and ORIG PT CODE.

For 5E16(2) FR 3 and later, when BICC GRP is "Y" (DEST PT CODE and ORIG PT CODE entered), and SIPT GRP is "N" (DEST PT CODE and ORIG PT CODE entered) for a given TGN, the PKTGRP form (5219 Record) must be defined as a BICC Packet Group.

When BICC GRP is "Y", SIPT GRP must be "N" and SIPT GRP is "Y", BICC GRP must be "N".

2.30 SIPT GRP

Description: This field specifies whether or not the packet group (PKT GRP) defined on the PKTGRP form (5219 Record) is a SIP Packet Group. This field supports the SIP for Packet Trunking feature. For more information see Division 2, Section 4A684.

Software Release: 5E16(2) FR 3 and later
Valid Entries: Blank, Y, N

Data Rules:

When SIPT GRP is "Y", HUNT TYPE must be "2WF", and DEST PT CODE and ORIG PT CODE must not be entered.

2.31 DIFF SERV

Description: This field specifies the Diff Serv Code Point. The DIFF SERV field supports the OIU - IP (Optical Interface Unit - Internet Protocol feature. This feature is made available in 5E16 Feature Release 3. (See Division 2, Section 7BX.)

Software Release: 5E16(2)
Valid Entries: Blank, or enter hexadecimal number 0 - 3f

When PKT GRP is not entered, DIFF SERV must not be entered.

3. FORM ENTRIES - 5202-2 RECORD

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3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 * TGN

Description: Enter the number of the Trunk Group being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

3.3 TRUNK CHAR

Description: Enter the Common Language Circuit Identifier which represets the Trunk Group characteristics. Valid entries are any alphanumeric characters or dashes to define the trunk type, pulsing type and direction, etc.

Software Release: 5E3 and later
Valid Entries:

TRUNK CHAR Format

Character Positions	Location
1, 2	Traffic Class
3, 4	Office Class
5, 6	Traffic Use
7 - 13	Trunk Type Modifier
14, 15	Pulsing Type and Direction

3.4 FEND CLLI

Description: Enter the Far-end Common Language identifier for the trunk group.

The RNMC (Remote Network Management Center) automatically queries the 5ESS Switch for the FEND CLLI and uses this field to determine trunk group far-end locations in order to perform Network Traffic Management Activities. Therefore, it is important that this field be populated accurately for all trunk groups.

The format for Far End CLLI is as follows PPPPSSBBEEE, where PPPP is place, SS is state, BB is the building, and EEE is the entity.

Example: CHCGILMOCG0.

FEND CLLI Format

Character Positions	Location	Example
1 - 4	Place	CHCG (Chicago)
5, 6	State	IL (Illinois)
7, 8	Building	MO (Monroe)
9 - 11	Entity	CG0 (Control Group 0)

Software Release: 5E3 and later
Valid Entries: 11 alphanumeric characters

Data Rules:

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An entry must be made if XLT TEST is set to "Y". A valid entry must be made for all CCIS6 trunk groups.

For more detailed information on Common Language Location Identifiers, see Practice 795-100-100.

3.5 PBX/CPE ID

Description: This field contains the numerical identifier for a PBX or class II CPE located at the far end of a trunk group. For each trunk group connected to the same PBX or class II, the PBX/CPE ID must be the same. The PBX/CPE ID and trunk group number should be entered on the PBXID form (5213 Record). This form contains a list of PBX/CPE IDs already assigned, the trunk group they have been assigned to and an indication whether or not CPNs are to be screened for PRIs.
Valid Entries: 1 - 4095

Data Rules:

When CPN SCRN is "Y", then PBX ID must be entered.

PBX ID may also be entered if the far end is connected to some other type of CPE (Customer Premise Equipment) instead of a PBX. As with a PBX, the PBX ID must be entered when the CPE is to transmit a CPN that will be screened.

3.6 REMARKS

Description: These columns may contain any remarks deemed locally necessary.
Valid Entries: 1 - 16 characters

OPERATOR TRUNKS

These fields (Section 3.7 - Section 3.13) define the features assigned to Operator Trunks and are only required for the following Operator Type Trunk Classes: "AIS", "CAMA", "RECCMPL", "SERVICE", and "TSPS".

3.7 OUTPL REQ

Description: Is outpulsing required?
Valid Entries: Y, N

Data Rules:

Outpulsing is not required on a Recording-Completing Operator Trunk Group or Service Circuits.

An entry is permitted only for operator trunks.

3.8 AUDIBLE

Description: Should audible ring be returned to the calling party on an operator connection? Audible ring is normally required on a Recording-Completing Trunk Group, or a Service Trunk if the Service Trunk terminates at a Switchboard.
Valid Entries: Y, N

Data Rules:

An entry is permitted only for operator trunks.

If the TRK DIR is "RAF", this entry must be blank or "N".

3.9 SIGNAL

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Description: This field defines the type of Operator Signaling.

Valid SIGNAL Entries

Entry	Definition
WINKONLY	Provide ringback signal on non-Coin Operator Trunks.
INBAND	Provide coin control and ringback signals on Coin Operator Trunks.
EXINBND	Expanded Inband; provide operator released and operator attached signals in addition to coin control and ringback signals on Coin Operator Trunks.

Data Rules:

If TRKCLS is "AIS", "CAMA" or "SERVICE", then this field must be blank.

If TRK DIR is "RAF", SIGNAL must be blank.

3.10 FREE TERM

Description: Are calls over this trunk free, i.e. no billing? Free Terminating service on an Operator Trunk Group is determined by an entry of "Y" or "N". An entry is permitted only for Outgoing Trunk Groups which have coin origination and terminate at an operator. A "Y" in this field, for coin originated traffic, will initiate coin return. For shared trunk groups where traffic is both coin and non-coin, and a billing record is desired for the non-coin traffic, this entry should be "N". Coins in this case are returned by defining a code index for free coin calls on the RAR form (5301 Record).
Valid Entries: Y, N

Data Rules:

If the TRK DIR is "RAF", this entry must be blank or "N". If TSPS TYPE is "DACHARG", then this field must be "N".

3.11 COINRTN INT

Description: Will Initial Coins be returned?
Valid Entries: Y, N

Data Rules:

An entry is required for Recording Completing and TSPS trunks and prohibited for all other trunk types.

If TRK DIR is "RAF", this entry must be blank or "N".

3.12 COINRTN FNL

Description: Will Final Coins be returned?
Valid Entries: Y, N

Data Rules:

An entry is required for Recording Completing and TSPS trunks and prohibited for all other trunk types.

If the TRK DIR is "RAF", this entry must be blank or "N".

3.13 TSPS TYPE

Description: This field defines the type of traffic being carried over the TSPS Trunk Group.

Valid TSPS TYPE Entries

Entry	Definition
COMBINED	Combines all Call Types (0+, 1+, 0-) but having separate Trunk Groups for Coin and Non-Coin Traffic. 0+, 0-: Coin only to TSPS; 0+, 0-, 1+: Non-Coin only to TSPS.
SUPERCOMB	Combines all Call Types (0+, 1+, 0-) in a single Trunk Group. For both Coin and Non-Coin

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	Traffic.
DACHARG	Directory Assistance Charging.

Data Rules:

If TRK DIR is "RAF", this field must be blank.

ANNC TRUNKS

These fields (Section 3.14 - Section 3.21) define the features assigned to Announcement Trunks.

3.14 CYCLES

Description: This field defines the number of times an announcement is to be given.

An entry is required for announcement trunks.
Valid Entries: 0 - 7

Data Rules:

If CYCLES is 0, then the BARGE IN field must not be "Y".

If TRK DIR is "RAF", this field must be blank. If TRKCLS is not "ANNCMNT", this field must not be entered.

For 5E6 and later, if "MUSIC" is entered in the CMD CD field on a corresponding CVECT form (5460 Record), then CYCLES must equal 0, and BARGE IN must equal "Y". The RTIDX form equals the TGN on this form. If "DISC", "ANNOUNC" or "PROMPT" is entered in the CMD CD field on the corresponding CVECT form, then CYCLES cannot equal 0. CYCLES is "1" for "PROMPT". See Division 2, Section 3B for translation information on Call Vectoring.

MUSIC RI on the STINFO form (5402 Record) corresponds to ROUTE INDEX on the RTIDX form, where TRUNK GROUP NUMBER on RTIDX form corresponds to the TGN on this form.

3.15 BARGE IN

Description: Will the announcement barge in? When an announcement barges in, the originating party begins hearing the announcement immediately. When BARGE IN is "N", and AUD RNG is set to "Y", audible ring is given until the beginning of the message cycle is received. If "N" is entered in AUD RING, then silence is heard until the beginning of the message cycle.
Valid Entries: Y, N

Data Rules:

An entry is required for announcement trunks. If TRKCLS is not "ANNCMNT", this entry must not be entered.

If the TRK DIR is "RAF", this entry must be blank or "N".

If this field is "Y", then "N" must be entered in the AUD RNG field.

For 5E6 and later, if "MUSIC" is entered in the CMD CD field on a corresponding CVECT form (5460 Record), then CYCLES must equal 0, and BARGE IN must equal "Y". See Division 2, Section 3B for translation information on Call Vectoring.

3.16 AUD RNG

Description: Should audible ring be given to the originating party when waiting for the beginning of the message cycle on a non-barge-in announcement? An entry is required for announcement trunks.

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Software Release: 5E4(2) and later
Valid Entries: Y, N

Data Rules:

If an "N" is entered in the BARGE IN field, then "Y" (Yes) is normally entered in this field except when the announcement is used for Local Coin Overtime Prompt.

If TRK DIR is "RAF", AUD RING must be either "N" or not entered. If TRKCLS is not "ANNCMNT", AUD RING must not be entered.

15A Announcement trunks are allowed to have AUD RNG set to "N".

3.17 SVC GRP

Description: This field indicates the type of RAF announcement the trunk is routing. It only applies to trunks terminating at a DSU2-RAF.

Software Release: 5E5 and later
Required Field.
Default: NOANNC
Valid Entries:

Valid SVC GRP Entries

Entry	Definition
ACCS	OSPS Automated Calling Card Service.
ACSR	Automatic Customer Station Rearrangement.
ASP	Software Release: 5E8 and later. Advanced Services Platform.
COIN	OSPS Automatic Coin Service.
DA	OSPS Directory Assistance.
NOANNC	No Announcement assigned to the Trunk Group.
RAS	Remote Access Service.

Data Rules:

If the TRKCLS is "RAFDTA", "RAFANNC", or "RAFCTR", a corresponding SVC GRP must be entered. Also, the associated ROUTE INDEX (defined on the RTIDX form) must be assigned a specific FIXED ROUTE TYPE defined on an associated FIXRT form (5301 Record). The dependencies are:

TRKCLS	SVC GRP	FIXED ROUTE TYPE	QUEUE ALLOWED
RAFDTA	ACCS	ROACCS	Y
	RAS	2LEVEL	N
	ACSR	RAS or ACSR	N
	RAS	(See Data Rules)	N
	ASP	NSANNC (5E9(2) and earlier)	N
	RAS	ACSR	N
	RAS	SLE	N
RAFANNC	DA	OSPSDA	N
	DA	OSPSEIS	N
RAFCTR	COIN	ROCOIN	N

- ***NOTE:*** The SVC GRP of "RAS" must be entered when the trunk group is supporting:

  - LASS SLE (Screen List Editing) announcements.
  - RACF (Remote Activation to Call Forwarding) announcements.
  - Any combination of RACF, LASS and ACSR announcements.

When the trunk group is supporting RAS announcements (and its combinations), the associated route

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index, defined on the RTIDX form (5303 Record), must be assigned to the ANNC RTI on the RASRTI form (5538 Record).

If TRKCLS is not "RAFDTA", "RAFANNC", or "RAFCTR", then SVC GRP must be "NOANNC".

For 5E9(2) and later, the following SVC GRP values can not be members of more than one trunk group:
- "ACCS"
- "AOC"
- "COIN"
- "DA"

Also,RAF (Recorded Announcement Function) circuits in these service groups must be located in Switching Modules (SMs) with a LOADED configuration (CONFIGURATION is "LOADED" on the corresponding EQIM form). To find the corresponding EQIM form, TGN points to TGN on the TRUNK Form, and the SM part of TRUNK RAF EN (first three digits) points to EQIM SM.

3.18 MAXCALLS

Description: Enter the maximum number of calls allowed to concurrently connect to this music or announcement port at the same time.

- ***NOTE:*** When a blank is entered for an announcement trunk, call processing will allow 32 concurrent connections to the trunk.

Software Release: 5E6 and later
Valid Entries: 0 - 60

Data Rules:

If TRKCLS is not "ANNCMNT", then MAXCALLS must be blank.

3.19 RETRY

Description: Should the switch software retry when it fails to connect to an announcement port?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TRKCLS is not "ANNCMNT", then RETRY must be "N".

3.20 CASCADING

Description: Does the trunk group use the 15A Cascading Announcement secured feature? For trunk groups connected to the cascading announcement circuits, the calls are routed to the announcement that plays next, thereby minimizing the delay between the camp-on to the announcement trunk and the actual connection to the announcement. This field supports the 15A Announcement secured feature. For more information on this feature, see Division 2, Section 4A118.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y,N

Data Rules:

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15A Announcement is a secured feature and must be purchased by the Office before the 15A Announcement data can be assigned. Therefore, "Y" cannot be entered until the ACT field for SFID 118 on the SFSYS form has been set to "Y".

If "Y" is entered, then:
- BARGE IN must be "N"
- CYCLES must be 1
- MAXCALLS must be 60
- TRKCLS must be "ANNCMNT"

If "Y" is entered, all the corresponding TGN/MEMB(s) defined on TRUNK form(s) must have MAXCALLS set to 60 or not entered.

15A Announcement trunks are allowed to have the AUD RNG field on this form set to "N".

3.21 RAF MBRS

Description: This field displays the number of RAF trunk members (as opposed to SAS trunk members) that are in the announcement trunk group. This field cannot be entered. For more information on the SAS (Service Announcement System) feature, see Division 2, Section 3 J.

Software Release: 5E9(2) and later.
Default: 0
Valid Entries: 0 - 4095

CAMA TRUNKS

These fields (3.22 - 3.23) define Incoming CAMA ONI and ANI Trunk Groups for combined Local/Toll operation.

3.22 ORIG NPA

Description: Enter the Originating NPA (Numbering Plan Area).
Valid Entries: 200 - 999

Data Rules:

An entry is required in this field for an Incoming CAMA Trunk Group.

For 5E7 and later, a value must be entered in this field for a dedicated E911 incoming trunk group (E911 TYPE is "DED", "DIRANI", or "DIRNOANI") if its TRKCLS is "CAMAANI". The ORIG NPA field is used by E911 call processing when the ORIG NPA field is sent to the ESA (E911 Service Adjunct) in the query for the ESN (Emergency Service Number).

3.23 OFFCODE 1-8

Description: Up to eight originating Office Codes (NXX) may be associated with each Incoming CAMA Trunk Group. Enter the first to eighth Office Code in these columns. Office Codes must be entered in sequential order.
Valid Entries: 3 digits, each in the range 0 - 9

Data Rules:

For 5E7 and later, a dedicated E911 incoming trunk group (E911 TYPE is "DED", "DIRANI", or "DIRNOANI") with TRKCLS "CAMAANI" must have one OFFCODE entered; this OFFCODE is not used in

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E911 call processing.

4. FORM ENTRIES - 5202-3 RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

4.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

MISCELLANEOUS FEATURES

These fields (4.3 - Section 4.20) concern direct connect trunks, originating private trunk billing, and OSPS Listing Services.

4.3 DATA RATE

Description: This field identifies the data rate the trunk group is capable of handling for an interswitch ISDN data call. Data trunks are interoffice digital trunks designated to transmit data to/from ISDN CPE (Customer Premise Equipment). For 5E11 and later, also see special considerations below for the interaction between the DATA RATE and DFI MODE when PRI D-channel trunk members are assigned to both DFIs and DNU-S units.

MF (Multifrequency) trunks can carry either voice or data, but not both. If OUTPULSING or INPULSING is "MF" and a DATA RATE of 56K is assigned, only data can be carried on this trunk group; voice cannot be carried on an MF trunk that has a data rate assigned.

CCS7 and EDSL trunks can carry both voice and data. If OUTPULSING or INPULSING is "ISUP7", or if TRKCLS is "EDSL" and TRK DIR is not "SGNL", then both voice and data can be carried on the same trunk when a data rate is assigned.

Software Release: 5E3 and later
Valid Entries:

Valid DATA RATE Entries

Entry	Definition
56K	For any trunk able to carry 56 kb/s data calls.
R64K	For any trunk able to carry restricted 64 kb/s data calls.
64K	For any trunk able to carry 64 kb/s data calls.

Valid DATA RATE Entries for PACKET Trunks (5E5 and later)

Entry	Definition
56K	Provided when a D3/D4 channel bank is used.
64K	Provided when a direct T1 carrier connection between two 5ESS Switches is used.

Data Rules:

When DATA RATE is entered, and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", "TTOLLCON",

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"IC", or "LATA", then TRK DIR must be "2W", "INC" or "OUT".

DATA RATE must not be entered if TRK DIR is "RAF" or if TRKCLS is "RMSD3" or "TOPAS". It must be entered if TRK DIR is "SGNL".

For 5E5 and later, when TRKCLS is "PACKET") (an IP trunk group), DATA RATE must be "56K" or "64K"; when TRKCLS is "X75P", it must be "56K". For 5E6 and later, when TRKCLS is "X75", DATA RATE must be "56K".

For 5E7 and later, DATA RATE may be entered only if TRKCLS is one of the following:

- "CST1"
- "CST2"
- "DSC"
- "EDSL"
- "EDSLHM"
- "IC"
- "IDCS"
- "IFOPER"
- "IFTERM"
- "IVTRK"
- "LATA"
- "LTOLLCON"
- "PRINTOLL"
- "SCINTOLL"
- "TTOLLCON"
- "PACKET"
- "PF"
- "PFITT"
- "PFLASH"
- "X75"
- "X75P"
- "PPMEM" (5E10 and later)

For 5E10 and later, when TGN/MEMBs are defined on the TRUNK form that have a DATA RATE value entered on its associated TKGRP form, and the TRKCLS on the TKGRP form is either

- "EDSL"
- "EDSLHM"
- "IFTERM", or
- "IFOPER",

and the DEN field is entered on the TRUNK form, this DATA RATE value must correspond with a DFI MODE entered on the EQDUP form according to the following table:

Corresponding DFI MODES

DATA RATE	DFI MODE
56K	D4, FEB7, 64K, FE8Z, D464, OR FE64
R64K	D464, FE64, 64K OR FE8Z
64K	FE8Z OR 64K

For 5E10 and later, Packet Pipe Member ("PPMEM") trunk class is valid for the following data rates and dfi modes:

DATA RATE	DFI MODE
56K	D4, FEB7, D464, FE8Z

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64K	D464, FE8Z

For 5E11 and later, when PRI D-channel trunk members are assigned to both DFIs and DNU-S units, special consideration must be made to the interaction between the DATA RATE and DFI MODE. When assigning TGN/MEMBs with a TRK DIR of "SGNL" (PRI D-channel trunk assignment), the signaling on this type of trunk is done via HDLC (High Level Data Link Control) encoding. If the trunk is a NEN, the DATA RATE field determines whether the HDLC encoded data is inverted or non-inverted. Valid DATA RATE and HDLC encoding entries for PRI D-channel trunks assigned to a DNU-S are as follows:

ENTRY	HDLC ENCODING
56K	Inverted
R64K	Inverted
64K	Non-Inverted

Caution must be exercised whenever PRI D-channel trunk members within the same trunk group are assigned to both DNU-S and DFI circuits. The DFI MODE controls the HDLC encoding for PRI D-channel trunks assigned to DFIs. The DATA RATE is only used for DNU-S trunk groups. Whenever mixing trunk members on both DFIs and DNU-S, the following combinations are allowed.

DFI MODE	DATA RATES
D4	56K
FEB7	56K
D464	56K or R64K
FE64	56K or R64K
64K	64K
FE8Z	64K

For 5E13 and later, when DATA RATE is "64K" for a TRKCLS value of "X75" or "X75P" on this form, the ACT field for SFID (Secured Feature ID) 542 on the SFSYS form (5713-1 Record) must be set to "Y". Since the DATA RATE value of "64K" on this form is used by the 64Kbps X.75/X.75 Trunk Group special feature, SFID 542 must be activated before the DATA RATE may be set to "64K" (see Division 2, Section 4A542).

For 5E13 and later, DATA RATE may be entered only if TRKCLS is one of the following:

- "A2"
- "BCM"
- "CST1"
- "CST2"
- "DSC"
- "EDSL"
- "EDSLHM"
- "IC"
- "IDCS"
- "IFOPER"
- "IFTERM"
- "IVTRK"
- "LATA"
- "LTOLLCON"
- "OTOTK"
- "PRINTOLL"
- "SCINTOLL"
- "TTOLLCON"
- "PACKET"
- "PF"
- "PFITT"
- "PFLASH"
- "X75"
- "X75P"
- "PPMEM"

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4.4 INVERSION

Description: Should this packet pipe use inverted data? The INVERSION field is used to indicate if the packet pipe uses inverted data. This is decided on a trunk group basis and is sent to the PH4 on initialization of packet pipes.

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TRKCLS is "PKTPIPE", INVERSION must be "Y"

When TRKCLS is "ATMPP", INVERSION must be "N".

When TRKCLS is not "A5", "FRB"', "IS41" or "PKTPIPE", INVERSION must be "N".

When TGNs are defined on the TKGRP form with a TRKCLS of "PKTPIPE" and the MEMBs assigned to the TGN on the TRUNK form have 9 or more rows entered on the PSU PIPE MEMBER TRUNKS list on the TRUNK form, the Packet Pipe Enhancements secured feature must be active with the SFID 317 ACT field set to "Y" on the SFSYS form (5713-1).

When the SFID 317 ACT field is set to "Y" on the SFSYS form (5713-1), the Packet Pipe Enhancements secured feature is active:

- For PSUGP forms representing PH4s which have exceeded their capacity for CDMA trunk routing, the count of Packet Pipe trunks which use this PH4 may not exceed 32.
- When no Trunk Groups have been provisioned with SERV TYPE of "ACELP" or "VSELP", the number of calls the PH4 can handle many not exceed 85.
- When one or more Trunk Groups have been provisioned with SERV TYPE of "ACELP" or "VSELP", the number of calls the PH4 can handle many not exceed 90.
- The number of possible CDMA calls is dependent upon the presence of Trunk Group SERV TYPEs of "8K", "13K", "ACELP", "DATA", "EVRC", or "VSELP" in the switch, the DATA RATE of the Packet Pipe Member trunks which point to this PH4.
- TRUNK forms which are associated with the above PSUGP forms (the first six digits of the TRKOE on the TRUNK form match the SM, PSUSHELF, and CHANNEL GROUP of the PSUGP) specify Packet Pipe Trunks.

4.5 WB RATE

Description: Enter the wideband data rate transmitted by this trunk group for wideband calls. Wideband data rates reflect different multiples of DS0 channels at 64Kb/s each.

Software Release: 5E9(1) and later
Valid Entries:

Valid WB RATE Entries

Entry	Definition
384K	Trunk group designated to carry 384 kb/s wideband data calls. Uses 6 DS0 channels.
1536K	Trunk group designated to carry 1536 kb/s wideband data calls. Uses 24 DS0 channels.
384/1536K	Trunk group designated to carry 384 kb/s or 1536 kb/s wideband data calls.
MULTIRATE or M	Trunk group designated to carry multirate wideband data calls. Uses 2 to 24 DS0 channels, depending upon the needs of the call.

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Data Rules:

Because WB RATE is a secured feature, this field may not be entered unless an SFSYS form (5713-1 Record) exists with SFID 125 set to "Y".

If WB RATE is "MULTIRATE", WB TSA TYPE must be entered.

If WB RATE is entered and OUTPULSING is "ISUP7", GLARE ACTION must be "ALLCTRL" or "NONECTRL", and WB TSA TYPE must be "FLOAT" or must not be entered.

If WB RATE is entered, the TGN defined on this form can only have, at most, one TGSR and/or one IDP feature assigned to it on the TRUNKFA form, or associated CLUSTR form.

If WB RATE is entered:

- DATA RATE must be "64K",
- DEDICATED SRV, ENQUEUE ACT, LOCAL SM, and QUEUE FEATURE must not be entered,
- HUNT TYPE must be "2WF" or "2WB",
- LN TYPE must be "NONE" or not entered,
- RDTA GRP must be "N" or not entered,
- TRK DIR must be "2W",
- TRKCLS must be "IC", "LTOLLCON", "EDSL", or "TTOLLCON", and
- both INPULSING and OUTPULSING must be either "ISUP7" or "DCHN".

When WB RATE is entered for a trunk group, each member defined on the TRUNK form must have a matching EQDUP form (5730 Record) where the FAC 0 DFI MODE or FAC 1 DFI MODE is "FE8Z".

For 5E10 and later, when Wideband trunk members residing in the same trunk group that are within the same wideband trunk block and have a DEN assigned, they must be assigned to the same SM, DLTU, DFI, FAC, and PRI GROUP. Note that only EDSL wideband trunk members can have an associated PRI GROUP. Therefore, the PRI GROUP must not be entered for ISUP7 wideband trunk members.

4.6 WB TSA TYPE

Description: Enter the Wideband Time Slot Assignment Type.

Three types of Wide Band Time Slot Assignments are allowed for wideband capable trunk groups. If the WB RATE field is entered and the WB TSA TYPE field is left blank, a "fixed" time slot assignment is used. The "fixed" time slot assignment scheme is the default.

The WB TSA TYPE field is used in conjunction with the HUNT TYPE field to determine if forward or backward hunting should be accomplished. Wideband capable trunk groups using ISUP7 signaling can only use a wideband hunt type that is fixed (i.e., leave the WB TSA TYPE blank) or "FLOAT". Wideband capable PRI trunks (i.e., TRKCLS of "EDSL" on the TKGRP form), can use all three wideband hunt types.

All channels must be contained within a single facility and a single wideband trunk group.

Software Release: 5E9(1) and later
Valid Entries:

Valid WB TSA TYPE Entries

Entry	Definition
blank	Fixed wideband time slot assignment. When the WB RATE field is entered and WB TSA TYPE is left blank, calls will start on certain "fixed" time slots (or channels) within a wideband trunk block: slots 1, 7, 13, and 19). With fixed hunting, a call will not skip intermediate trunk members. Therefore, if a wideband call needs 6 DS0 channels to attain the data rate of 384Kbps, and the call setup process selects channel 7, then channels 7, 8, 9, 10, 11, and 12 will be used. Note that fixed hunting only supports calls using 6 DS0 channels (384Kb/s) or 24 DS0 channels (1.536Mb/s).
FLEX or FLE	Flexible wideband time slot assignment. A WB TSA TYPE entry of "FLEX" allows wideband calls to select any trunk member as the first channel used. The time slots chosen can also be selected with gaps in the sequence. Therefore, if a wideband call hunts channel 12, it may also hunt channels 14 and 17.
FLOAT or FLO	Floating wideband time slot assignment A WB TSA TYPE entry of "FLOAT" allows wideband calls to be started on any channel within the wideband trunk block but demands that the trunk channels be selected in a contiguous manner.

Data Rules:

If WB TSA TYPE is entered, WB RATE must be "MULTIRATE".

4.7 DIR CON DN

Description: This field is used for Direct Connect trunks which are Incoming or Two-Way.

This field also has specific considerations for the PRI Call By Call Service Selection For FX/Tie feature for 5E9(1) and later:

- For calls originating on an FX/Tie that terminate to a DPBX via a PRI, this field must be populated with a 1 to 15-digit DN. For these calls, digit analysis is not performed on any called digits. To determine the DPBX's PRI trunk group, digit analysis is instead performed on the digits entered in this field. A route index is then obtained that points to the desired PRI.
- Digits entered in this field could be any digit strings currently defined in the digit analysis tables (LDIT, RDIT, INDIT) that have a route index pointing to the PRI trunk group.
- A 7-digit DN may also be entered. This DN would be defined on a LINE form with an assigned route index that points to the PRI trunk group.
- Digits entered as DIR CON DNs are not outpulsed to the DPBX. The only functionality for these digits is to determine the route index that points to the DPBX's PRI trunk group.

Valid Entries: 1 - 15 digits predetermined for this Trunk Group. DIR CON DNs are typically 1, 3, 7, 8, 10, 11-digit or IDDD DNs.

Data Rules:

The IN START DIAL on the TRUNK form (5204-1 Record) must be "DIRC" for all trunk members of this Trunk Group. It may be used for incoming calls on FX Trunks. If this field has an entry, the Trunk Group being defined must have: INPULSING equal to "NONE"; TRK DIR equal to "2W" or "INC"; and TRKCLS must be "PF", "PFLASH" or "LTOLLCON". The appropriate Trunk Class combined with a START SIGNAL of "DIRC" and a SIGNAL TYPE of "NONE" must be specified on the TIMING form (5520 Record).

For 5E9(1) and later, when DIR CON DN is entered, TRKCLS must be "PF", "PFLASH", "PFITT" or "LTOLLCON".

When DIR CON DN is specified, TRKCLS is not "INAISTRK", FACILITY TYPE is "TIE", and CUT THRU is "N" or blank, INPULSING must be "NONE", "DP", "MF", or "TT", or not entered.

When DIR CON DN is specified, TRKCLS is not "INAISTRK", and either FACILITY TYPE is not "TIE" or

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CUT THRU is "Y", INPULSING must be "NONE" or not entered.

4.8 FACILITY TYPE

Description: Enter the facility type of FX/Tie trunk.

Software Release: 5E9(1) and later
Valid Entries:

Valid FACILITY TYPE Entries

Entry	Definition
FX or F	Foreign Exchange
TIE or T	Tie trunk group

Data Rules:

If FACILITY TYPE is entered, TRKCLS must be "PF" or "PFLASH".

4.9 FACILITY NBR

Description: Enter the facility number to identify the FX or Tie trunk group.

Software Release: 5E9(1) and later
Valid Entries: 1 - 99999

Data Rules:

If FACILITY NBR is entered, FACILITY TYPE and DIR CON DN must be entered.

If FACILITY NBR is entered, API CODE must not be entered.

4.10 RTE NBR PLAN

Description: Enter the numbering plan type to use for the direct connect DN, if the DIR CON DN field is entered. This field is used to identify the numbering plan as a private numbering plan, as the North American Numbering plan, or as an international numbering plan. This field is used by the public and private switched networks to identify the type of translation to apply to the address digits.

Software Release: 5E9(1) and later
Valid Entries:

Valid RTE NBR PLAN Entries

Entry	Definition
APN	Action Point Numbering Plan for private numbering plans.
INTL	International Numbering Plan.
NANP	North American Numbering Plan.

Data Rules:

If RTE NBR PLAN is entered, DIR CON DN must be entered.

4.11 BILLING DN

Description: This field associates a Billing Directory Number with an originating private Trunk Group which has a Trunk Class of "LATA", "PF" or "PFLASH".
Valid Entries: 7 digit TN; or

- 10 digit TN (NPAXXXXXXX)
- where NPA is: 200 - 999

Data Rules:

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BILLING DN is also used to associate a billing number with an originating CMC (Cellular Mobile Carrier) Trunk Group. An entry is required if both CMC and BILL TRKGRP equal "Y". The Billing DN entered is expected to be 10 digits and a limit of 60 unique billing numbers may be used for CMC.

For 5E3 and later, BILLING DN may be used for Trunk Groups with a Trunk Class of "PFITT". With DSN (Defense Switched Network) offices (DSN OPTION field set to "Y" on the OFCOPT form), a Billing DN may be associated with Trunk Groups with a Trunk Class of "LTOLLCON", "PRINTOLL" or "TTOLLCON".

For 5E4(2) and later, BILLING DN may be entered only if TRKCLS is "LTOLLCON" "PF", "PFITT", "PFLASH", "PRINTOLL", "EDSL", "EDSLHM", "TTOLLCON", "LTPCLBCK", "LTPROTL", or "LTPDFTAC". For 5E5 and later, BILLING DN may also be entered when TRKCLS is "LATA". For 5E8 and later, BILLING DN may also be entered when TRKCLS is "PBXDID".

For 5E4(2) and later, BILLING DN must be entered for Trunk Groups with a TRKCLS of "EDSL" or "EDSLHM" and a TRK DIR of "INC" or "2W".

For 5E7 and later, a BILLING DN should be entered for CAMA PSAP trunk groups (CAMA PSAP is "Y"); otherwise, calls routed from this trunk group through an IDP will not be billed properly.

For 5E11 and later:
When BILLING DN is entered, TRKCLS must be "CAMAANI", "CAMAONI", "EDSL", "EDSLHM", "IC", "LATA", "LTOLLCON", "LTPCLBCK", "LTPDFTAC", "LTPROTL", "PBXDID", "PF", "PFITT", "PFLASH", "PRINTOLL", "TOLLCON", "X75", "X75P" of "INC", or "2W".

4.12 LS DLY ANS

Description: Should answer supervision be relayed to the originating office? This field is used by OSPS Listing Services. If it is set to "Y", answer supervision is relayed upon receipt of a billing indicator from an external vendor system. If it is set to "N", answer supervision is relayed upon operator position seizure.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

4.13 MLT ISLC OPT

Description: Is the enhanced signal provided on the "No Test" trunk for non-integrated Mechanized Loop Test System? If "N" is entered the basic signal is provided. This field supports the Improved DLC Status Indications to MLT feature. The enhanced signal provides two new combinations of ring ground/tone signal in order to provide and identify the status of "DN is ISLC (Integrated Subscriber Loop Carrier) with Carrier Alarm" and "DN is ISLC Test Pair is Busy" on top of the basic "DN is on Intercept" status. This field supports the Improved DLC Operational Status Indications feature. For more information on this feature, see Division 2, Section 2V.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then
- TRKCLS must be "TSTK"
- TRK DIR must be "INC"

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4.14 FGD CIC SZ

Description: Enter the expected size for the incoming CIC for two-way or incoming TTOLLCON, LTOLLCON, or LATA trunk classes. If this field is not entered, a 3 digit CIC is allowed.

Software Release: 5E9(1) and later
Valid Entries:

Valid FGD CIC SZ Entries

Entry	Definition
BOTH or B	Three or four digit CIC expected.
FOUR or F	Four digit CIC expected.

Data Rules:

If FGD CIC SZ is entered, TRK DIR must be "2W" or "INC", and TRKCLS must be "TTOLLCON","LTOLLCON" or "LATA".

4.15 SPEECH TRMTS

Description: Havespeech treatments been assigned to this trunk group? ISDN routing and digit analysis require "speech" and 3.1 kHz audio bearer capability calls to be routed differently. 3.1 kHz calls equate to voiceband data, e.g., facsimile and modems. It is important to maintain the integrity of the bit stream for 3.1 kHz audio calls, therefore, no "speech" treatments should be applied to a 3.1 kHz audio call. This field should be set to "Y" if the trunk group has speech treatments assigned to ensure that 3.1 kHz audio calls will NOT be routed over the speech trunk groups. No data checks are made to verify that the trunk group actually has "speech" treatments. However, by setting this field to "Y" the trunk group is restricted to carrying only "speech" calls.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DATA RATE is entered, SPEECH TRMTS must be "N".

4.16 EON MC RI

Description: Proprietary field.

4.17 RERTE Q INH

Description: Should re-route queuing be inhibited? The RERTE Q INH field is used to indicate if the call can attempt to queue or if it should send the release message back to the upstream switch. A value of N indicates that queuing is not inhibited and the call will attempt to queue. A value of Y indicates that queuing is inhibited, and a release message will be sent back to the upstream switch. For more information, see Div. 2 Sec. 4A217.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When RERTE Q INH is "Y", TRKCLS must be "TTOLLCON".

4.18 CNA MOD 164

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Description: Is the ability to record the Chargeable Account Number in an appended BAF module 164 active?

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

Data Rules:

When CNA MOD 164 is "Y", then CNA OPTION must not be "NONE".

4.19 CALEA

Description: The CALEA field was added to support the CALEA (Communication Assistance for Law Enforcement Act) feature, both wireline and wireless applications. The CALEA field is used to indicate whether the trunk group is reserved for CALEA or not. If "Y", all trunk members are for CALEA use. If "N", all trunk members are not for CALEA use.

Is this trunk group supporting the Communications Assistance for Law Enforcement Act?

For more information see Division 2, Section 4A509 for the wireline application or Division 2, Section 4A529 for the wireless application.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When CALEA is "Y":

- TRK DIR must be "OUT"
- HUNT TYPE must be "UCD"
- OUTPLSING must not be entered or "NONE"
- INPLSING must not be entered or "NONE"
- TRKCLS must be "PF"
- ATTN must not be entered
- When CALEA is "Y" and DCS TRK is "N" LOCAL SM must be entered.

When trunk groups are defined with CALEA set to "Y", the corresponding trunk group members must NOT have an OUT START DIAL entered.

The wireline application, CALEA Core, is secured and must be purchased by the office before the CALEA field on the TKGRP form can be set to "Y". A SFSYS form must exist with SFID 509 ACT set to "Y".

The wireless application, CALEA Phase III, is also secured and must be purchased by the office before CALEA is set to "Y" and DCS TRK is set to "Y". A SFSYS form must exist with SFID 529 ACT set to "Y".

When TGNs are assigned on the TKGRP form with CALEA equal to "Y" and DCS TRK equal to "Y", the MEMBs of the matching TGNs on the TRUNK form must be on the same SM; (SM is the first three digits of the DEN or NEN).

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4.20 REL LINK INIT

Description: Is the trunk group allowed to initiate release link processing? This field is used to indicate whether or not the trunk group is eligible for release link processing.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When REL LINK INIT is "Y":

- TRKCLASS must be "LATA" , "TTOLLCON", "PF", "PFITT", PFLASH", "EDSL", or "EDSLHM"
- TRK DIR must be "INC" or "2W"
- and TRKCLASS is "LATA" or "TTOLLCON", then INPULSING must be "ISUP7" or "MF"

When REL LINK INIT is "Y", the ACT field on the SFSYS form (5713-1 Record) for SFID 520 or SFID 521 must be set to "Y". In addition, since SFIDs 520 and 521 depend on the Long Distance Platform Basic Call Processing for Toll feature, the ACT field on the SFSYS form for SFID 165 must also be set to "Y".

4.21 SEND LD CIC

Description: Send Long Distance Carrier ID Code to terminating end office? The SEND LD CIC field was added to support the LD CIC (Long Distance Carrier Identification Code) in Terminating Tandem feature. This field is used for the outgoing trunk group to indicate whether or not the carrier ID of the trunk group used to ingress the switch is sent, in the carrier identification parameter, over the outgoing trunk group to the terminating end office.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The SEND LD CIC field is used by the LD CIC at Terminating Tandem special feature and must not be entered unless the SFSYS form (5713-1 Record) has ACT set to "Y" for SFID 524. (For more information on this feature, see Division 2, Section 4A524.)

When SEND LD CIC is "Y":

- TRK DIR must be "OUT" or "2W"
- TRKCLS must be "TTOLLCON"
- OUTPULSING must be "ISUP7"

4.22 ROUTE IND

Description: The ROUTE IND (Route Indicator) field is used to establish the proper AMA (Automatic Message Accounting) call record. This field was added to support the Billing and Comptrollers feature (99-5E-7984). This feature is made available in 5E15 Feature Release 3. For more information, see Division 2, Section 4A601.

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Software Release: 5E15 and later
Valid Entries:

Valid ROUTE IND Entries

Entry	Definition
D	Direct
T	Tandem

PFA TRUNK FEATURES

The fields (Section 4.23 - Section 5.3) apply to Private Facility Access trunks.

4.23 BUSY LAMP

Description: Enter the nine-digit DPN (Distribute Point Number) associated with the Busy Lamp. A Busy Lamp is associated with a customer Trunk Group. It is located on the customer premises and is turned on under the following conditions:

- when the MAKE BUSY KEY has been turned on. The BUSY LAMP is under switch control and shows the status of the Make Busy Key.
- when the trunk group BUSY LAMP feature indicates, on a private facility group basis, when the facility group is entirely in use. The feature is applicable when private facilities are provided with access on a dial-up or an ARS ARS (Automatic Route Selection) basis. The switching system activates a light on the customer premises to indicate when all trunks are busy in a private facility gorup. There is one lamp per private facility group.

Distribute Point consists of:

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Distribute Point Number	DPN	XX	00 - 31

Data Rules:

This entry must be blank if the TRK DIR is "RAF".

This entry must be blank if TRKCLS is "RMSD3" or "TOPAS".

4.24 MAKE BUSY KEY

Description: The Trunk Group Make Busy Key is associated with a customer Trunk Group. The Make Busy Key is located on the customer premises and is provided to enable the customer to make their private Trunk Group in an all-members-busy condition by activating the key. Enter the nine-digit Scan Point Number associated with the Make Busy Key.

Scan Point Number consists of:

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1

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Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

Data Rules:

This entry must be blank if the TRK DIR is "RAF".

This entry must be blank if TRKCLS is "RMSD3" or "TOPAS".

5. FORM ENTRIES - 5202-4 RECORD

5.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

5.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

PFA TRUNK FEATURES

5.3 CUT THRU

Description: Is Cut-Thru to a trunk active on this Trunk Group?
Valid Entries: Y, N

Data Rules:

A trunk with cut-thru active may only be accessed by a line or trunk using a PFA or ARS feature.

- ***NOTE:*** No entry is treated exactly like the value "N". A value of "Y" applies only to trunks with TRKCLS set to "PF", "PFLASH" or "PFCPE", and applies to all trunks in the group.

When this field is "Y", the OUTPULSING field must be "TT" or "DP.

This entry must be blank or "N" if the TRK DIR is "RAF".

For 5E6 and later, when CUT THRU is "Y": if TRK DIR is "2W" or "OUT", OUTPULSING must be "TT" or "DP"; if TRK DIR is INC, OUTPULSING must be blank.

LATA/TTOLL

The fields (Section 5.4 - Section 5.7) apply to toll trunk groups from a LATA (Local Access and Transport Area) and AMA capabilities for Cellular Mobile Carrier interconnections.

5.4 CMC

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Description: Is this a CMC (Cellular Mobile Carrier) Trunk Group?
Default: N
Valid Entries: Y, N

Data Rules:

When CMC is "Y", TRKCLS must equal "LATA", "TTOLLCON" (for 5E9(1) and later) or "PF". When BILLING DN is entered and BILL TRKGRP is "Y", CMC must be "Y".

CMC must be "Y" when CMC ID is defined.

5.5 CMC ID

Description: CMC ID is the Cellular Mobile Carrier Identification number. It can be entered by the user or left blank, in which case ODA will automatically generate a value when CMC is "Y".

Software Release: 5E9(1) and later
Valid Entries:
- For 5E9(1) through 5E13: 1 - 60
- For 5E14 and later: 1 - 1023

Data Rules:

When CMC ID is entered, CMC must be "Y".

When CMC is "Y", BILL TRKGRP is "Y", BILLING DN is known and TRKCLS is "LATA", CMC ID must be 1 - 60.

When CMC ID is greater than 60, ACT must be "Y" on the SFSYS form for SFIDs 128, 160, 167 and 538.

For 5E13 and earlier, a maximum of 60 CMC IDs is allowed per office.

For 5E14 and later, a maximum of 1023 CMC IDs is allowed per office.

5.6 ORIG CMC

Description: Enter the billing type for originating CMC (Cellular Mobile Carrier) calls. This field supports the AMA Capabilities for Type 2A and Type 2B CMC Interconnections secured features (SFID 128 and 160, respectively). For more information on these features, see Division 2, Sections 4A128 and 4A160.

Software Release: 5E9(1) and later
Valid Entries:

Valid ORIG CMC Entries

Entry	Definition
2A	AMA (Automatic Message Accounting) for Type 2A Cellular Interconnection. Connections to a land-based tandem switch, local or access. Provides connections to and from co-located lines in the tandem, inter-Lata carriers, and other CMCs having terminations within the LATA.
2B	AMA for Type 2B Cellular Interconnection. Connections to a telephone company end office. Provides connections only to and from terminals served by the end office, including lines, private trunks and other CMCs having terminations within the switch itself.
T1	Software Release: 5E10 and later. AMA for Type 1 Cellular interconnection. The trunk direction can be either 2-way ("2W") or outgoing ("OUT"). This value supports the AMA Capabilities for Type 1 Cellular Access. For more information on this feature, see Division 2, Section 4A167.

Data Rules:

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ORIG CMC must not be entered unless the SFSYS form (5713-1 Record) has ACT set to "Y" for SFID 128 or SFID 160.

When ORIG CMC is "2A":
- BILLING DN must be entered
- CMC must be "Y"
- OUTPULSING must be "MF" or "ISUP7"
- TRK DIR must be "OUT" or "2W"
- TRKCLS must be "TTOLLCON"

If "2B" is entered:
- BILLING DN must be entered
- CMC must be "Y"
- OUTPULSING must be "MF" or "ISUP7"
- TRK DIR must be "OUT" or "2W"
- TRKCLS must be "TTOLLCON"

"2B" is associated with Type 2B Cellular Interconnections special feature. This feature is secured and must be purchased by the office before this field can have a value of "2B", i.e., the ACT field for SFID 160 must be "Y" on the SFSYS form (5713-1 Record).

If TERM CMC is entered and OUTPULSING is "ISUP7", SFID 160 must be activated.

For 5E11 and later, when ORIG CMC is "2A", "2B", "T1", CNA OPTION must be "NONE" on this form.

5.7 TERM CMC

Description: Enter the billing type for terminating CMC (Cellular Mobile Carrier) calls.

Software Release: 5E9(1) and later
Valid Entries:

Valid TERM CMC Entries

Entry	Definition
2A	AMA for Type 2A Cellular Interconnection. See description in ORIG CMC above.
2B	AMA for Type 2B Cellular Interconnection. See description in ORIG CMC above.
T1	Software Release: 5E10 and later. AMA for Type 1 Cellular interconnection. The trunk direction can be either 2-way ("2W") or Incoming ("INC"). This value supports the AMA Capabilities for Type 1 Cellular Access. For more information on this feature, see Division 2, Section 4A167.

Data Rules:

TERM CMC must not be entered unless the SFSYS form (5713-1 Record) has ACT set to "Y" for SFID 128.

If "2A" is entered:
- BILLING DN must be entered
- CMC must be "Y"
- INPULSING must be "MF" or "ISUP7"
- TRK DIR must be "INC" or "2W"
- TRKCLS must be "TTOLLCON"

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If "2B" is entered:
- BILLING DN must be entered
- CMC must be "Y"
- INPULSING must be "MF"or "ISUP"
- TRK DIR must be "INC" or "2W"
- TRKCLS must be "TTOLLCON"

"2B" is associated with Type 2B Cellular Interconnections special feature. This feature is secured and must be purchased by the office before this field can have a value of "2B", i.e., the ACT field for SFID 160 must be "Y" on the SFSYS form (5713-1 Record).

If TERM CMC is entered and INPULSING is "ISUP7", SFID 160 must be activated.

For 5E11 and later, when TERM CMC is "2A", "2B", "T1", CNA OPTION must be "NONE" on this form.

For 5E11 and later, when TERM CMC is "T1":

- TRKCLS must be "PF".
- CMC must be "Y".
- BILLING DN must be entered.
- TRK DIR must be "INC" or "2W".
- INPULSING must be "MF".

LATA TRUNKS

The fields (Section 5.8 - Section 5.12) apply to toll trunk groups from a LATA (Local Access and Transport Area).

5.8 BLK NO ANI

Description: Should calls received on this Trunk Group without ANI (Automatic Number Identification) be blocked? This field is used by an Interexchange Carrier switch on calls direct from an Equal Access End Office or via an Access Tandem with Equal Access Signaling.
Valid Entries: Y, N

Data Rules:

If "Y" is entered, TRKCLS must be "LATA".

The Fixed Route Type of "ESMRT" will be invoked during call processing to block the call. See the FIXRT form (5301-1 Record).

5.9 BILL TRKGRP

Description: Should a billing record be made for Trunk Groups with TRKCLS set to "LATA"?
Valid Entries: Y, N

Data Rules:

If "Y" is entered and CMC equals "Y", then an entry must be made in BILLING DN.

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5.10 # NCD SCREENING

Description: Enter the Screening type for Network Call Denial. This field is used by Interexchange Carrier switches to screen the calling number and block calls to the Carrier's network if the originator is a nonpaying customer. Common Channel Signaling is used via the STP/NCP (Signal Transfer Point / Network Control Point) to determine nonpayers. Therefore, if screening is used, COMMON CHAN SIG must equal "Y" on the OFCOPT form. This field was originally created to support the NCD (Network Call Denial) feature. However, the feature that is now available for use has been renamed NAI (Network Access Interrupt). This field activates the NAI feature on a per trunk group basis if SFID (Secured Feature ID) 380 is activated. For more information on the NAI feature, see Division 2, Section 4A380.

Required Field.
Default: NONE
Valid Entries:

Valid NCD SCREENING Entries

Entry	Definition
NONE	No screening.
MAP	Screen calls for NCD with LATA mapping. Valid for Trunk Groups with TRKCLS set to "CAMAANI". If "MAP" is entered, ORIG LATA must have an entry.
NOMAP	Screen calls for NCD without LATA mapping. Valid for Trunk Groups with TRKCLS set to "LATA".

Data Rules:

If any TGN is defined with the values "MAP" or "NOMAP", the Fixed Route Type of "NCD" must be defined on the FIXRT form.

If the TRK DIR is "RAF", this entry must be "NONE".

5.11 ORIG LATA

Description: This field associates an Originating LATA identification with an Incoming CAMAANI Trunk Group when Network Call Denial Screening is required. In this case, NCD SCREENING equals "MAP". The Trunk Class of CAMAANI would be used at the Interexchange Carrier on direct Trunk Groups originating at nonconforming end offices. (For conforming offices, i.e., Equal Access End Offices, the Trunk Groups incoming to the Carrier, either directly or via an Access Tandem, would have a Trunk Class of "LATA" with NCD SCREENING equal to "NOMAP" or "NONE" and this field left blank.)

For calls from these nonconforming end offices, even if the originator would have been determined to be a nonpayer, blocking must not occur when the originating and terminating LATA is the same. The ORIG LATA value will be compared to a TERM LATA value specified on the LDIT form (5300-3/5) for certain Call Types. If the values are equal, then NCD Screening will not be done.
Valid Entries: 2 - 15

Data Rules:

If the TRK DIR is "RAF", this entry must be blank.

5.12 UTT

Description: Is this a utility telemetry trunk? This field is used for the Suppressed Ringing secured feature. For more information concerning this feature, see Division 2, Section 4A186.

Software Release: 5E9(2) and later
Required.
Default: N
Valid Entries: Y, N

Data Rules:

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When UTT is "Y",

- TRK DIR must be "INC",
- TRKCLS must be "LATA",
- INPULSING must be "MF",
- BRCS must be "N".

When TGNs are defined on this form with UTT set to "Y", the associated TRUNK form(s), found by matching TGN entries, must have IN START DIAL set to "WINK" and BRCS set to "N".

The Suppressed Ringing secured feature must be purchased and the SFID 186 ACT field set to "Y" before the UTT field can be set to "Y".

When TGNs defined on the TKGRP form with UTT set to "Y" and no UTTKGRP defined, then the TGNs will have the following default parameters assigned:

- CTI DIG = 70
- ST = 0
- STP = 50
- ST2P = 100
- MAX CALL TIME = 20

To change these defaults, a UTTKGRP form must be defined for the TGNs.

CCS TRUNKS

The following fields (Section 5.13 - Section 5.18) are available with 5E3 and later Software Releases, and are valid only with CCS (Common Channel Signaling) trunk groups.

5.13 TRUNK QUERY

Description: This field has been replaced by CQ/BQ ALW.

5.14 CQ/BQ ALW

Description: Should the circuit trunk query/BICC group query (5E15 and later) interoffice audit be allowed to run on this CCS trunk group?
Valid Entries: Y, N

Data Rules:

If the TRK DIR is "RAF", this entry must be blank or "N".

For 5E9(2) and later, if "Y" is entered then INPULSING or OUTPULSING must be "CCIS6" or "ISUP7".

For 5E15 and later:

- CQ/BQ ALW must be blank for RAF trunks.
- When CQ/BQ ALW is set to "Y", then the INPULSING or OUTPULSING value must be set to "ISUP7".

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- When BICC GRP is entered and is not equal to TGN, CQ/BQ ALW must be "N".

5.15 XLT TEST

Description: Should the translation test interoffice audit be run for this CCS trunk group?
Valid Entries: Y, N

Data Rules:

If the TRK DIR is "RAF", this entry must be blank or "N".

5.16 NEND CLLI

The format for Near End Common Language Location Identifier is as follows. As an example, CHCGILMOCG0 meets the field specifications.

NEND CLLI Field Format

Character Positions	Information	Example
1 - 4	Place	CHCG (Chicago)
5 - 6	State	IL (Illinois)
7 - 8	Building	MO (Monroe)
9 - 11	Entity	CG0 (Control Group 0)

Data Rules:
A valid non-blank entry must be entered for all CCIS6 Trunk Groups. If XLT TEST is "Y", then this field must be entered. This field must not equal FEND CLLI.

For more detailed information on Common Language Location Identifiers, see Practice 795-100-100.

If the TRK DIR is "RAF", this entry must be blank.

5.17 VPA RATE

Description: Indicates the amount of time spent to conduct the VPA (Voice Path Assurance) Test. The following values are valid with CCS trunks. For non-CCS trunk groups leave blank.

Data Rules:

If VPA TYPE is set to "NOVPA", then VPA RATE must be set to 0.

The VPA test requires tone transceiver circuits to be defined in the DSU (Digital Services Unit) in each SM (Switching Module) that contains members of CCS trunk groups. For CCS trunks where the INPULSING and OUTPULSING fields are set to "CCIS6" or "ISUP7" and the VPA RATE is set to 12, 50 or 100, the corresponding trunks assigned on the TRUNK forms must be physically located on an SM (Switching Module) that is equipped with a local DSU2 Tone Transceiver. The TEN (Trunk Equipment Number) or the DEN (Digital Equipment Number) value must have the SM value defined on the Digital Service Unit Pack Equipage form, EQDS2P form (5740 Record), with at least one DSC TYPE list entry equal to "LDSU2TX", or for 5E9(2) and later, at least one EQDSC3 (Local Digital Service Circuit 3) form (5852 Record) with non-zero TONE XCVRS entered.

Valid VPA RATE Entries

Entry	Definition
0	0% VPA test not done.
12	VPA test done 12.5% of the time.
50	VPA test done 50% of the time.
100	VPA test done 100% of the time.

If the TRK DIR is "RAF", this entry must be blank.

If both the INPULSING and OUTPULSING fields are blank, or if either field contains a value other than

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"CCIS6" or "ISUP7", then VPA RATE must be blank or 0.

5.18 VPA TYPE

Description: This field determines the type of Voice Path Assurance test to be performed on this trunk group. It indicates what type of switch (2-wire or 4-wire) is connected at the far-end of the trunk.
Default: NOVPA

- ***NOTE:*** The ICL (Inserted Connection Loss) is the signal loss of the circuit referenced to the nominal impedance of the offices which the circuit interconnects. This reflects all gains or losses from the originating switch's outgoing appearance through the circuit to the outgoing appearance of the terminating switch with the circuit terminating in the nominal office impedance.

For 5E5 and later, the VPA TYPE entry indicates what type of switch (2-wire or 4-wire) is connected at the near end and the far end of the trunk. For example, "4W2WL0" indicates the 5ESS Switch on the near end is a 4-wire switch and the switch at the far end is a 2-wire switch. A 5ESS Switch may be indicated as a 2-wire switch, if it is emulating a 2-wire switch.
Valid Entries:

Valid VPA TYPE Entries
(5E5 and later)

Entry	Definition
NOVPA	VPA test is not run for this Trunk Group.
4W4WL0 (4WICL0)	4-wire switch at the near-end and 4-wire switch at the far-end of the trunk ICL = 0dB. (See the Note below this table.)
4W4WL1 (4WICL1)	ICL = 0.1 - 0.8 dB
4W4WL2 (4WICL2)	ICL = 0.9 - 1.7 dB
4W4WL3 (4WICL3)	ICL = 1.8 - 2.9 dB
4W2WL3 (2WICL4)	4-wire switch at the near-end and 2-wire switch at the far-end of the trunk ICL = 0.0 - 4.0 dB
4W2WL4 (2WICL5)	ICL = 4.1 - 5.5 dB
4W2WL5 (2WICL6)	ICL = 4.1 - 5.5 dB HI LOSS
2W4WL0	2-wire switch at the near-end and 4-wire switch at the far-end of the trunk ICL = 0 dB
2W4WL1	ICL = 0.1 - 0.8 dB
2W4WL2	ICL = 0.9 - 1.7 dB
2W4WL3	ICL = 1.8 - 2.9 dB
2W2WL3	2-wire switch at the near-end and 2-wire switch at the far-end of the trunk ICL = 0.0 - 4.0 dB
2W2WL4	ICL = 4.1 - 5.5 dB
2W2WL5	ICL = 4.1 - 5.5 dB HI LOSS

- ***NOTE:*** Data Rules:

  - when INPULSING or OUTPULSING is "ISUP7", VPA TYPE must be entered with a value other than "NOVPA";
  - when INPULSING or OUTPULSING is "CCIS6", VPA TYPE must be entered as "4W4WL0", "4W4WL1", "4W4WL2", "4W4WL3", "4W2WL3", "4W2WL4" or "4W2WL5";
  - when neither INPULSING nor OUTPULSING is "CCIS6" or "ISUP7", VPA TYPE must be entered as "NOVPA" or must not be entered;
  - when TRKCLS is "RMSD3" or "TOPAS", VPA TYPE must be entered as "NOVPA" or must not be entered.

CCITT7

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The fields (Section 5.19 - Section 5.25) apply to CCS7 trunk groups.

5.19 DEST PT CODE

Description: An entry in this field indicates the signaling point for which the CCS message is intended. For the AT&T Communications Network, a point code will be assigned by the CCIS Network Administration Center for each switch. For other networks using the T1 CCS standards for System 7, this will be a 9-digit decimal number. For 5E13 and later, the ISUP7 Loop-Around Intra-Module Trunk feature was added (see Division 2, Section 7AE and the IMT valid entry table below).

The following is the format of DEST PT CODE for AT&T Communications offices:

DEST PT CODE Format for AT&T Communications Offices

Subfield	Valid Entries
Network Indicator	000 - 255
Cluster Region	00 - 31
Cluster Type	0 - 7
Cluster Member	000 - 255

The following is the format of DEST PT CODE for other networks:

DEST PT CODE Format for other networks

Subfield	Valid Entries
Network Indicator	000 - 255
Cluster Region and Type	000 - 255
Cluster Member	000 - 255

The following is the format of DEST PT CODE for an intermodule trunk:

DEST PT CODE Format for an intermodule trunk

Subfield	Valid Entries
Network Indicator	000
Near SM Number	1 - 192
Far SM Number	1 - 192

The following is the format of DEST PT CODE for an intra-module trunk:

Valid IMT Entries - 5E13 and later - SM-2000 Only

Definition	Format	Valid Entries
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

Data Rules:

This field is required for CCS trunks with signaling type "ISUP7"; for non-CCS trunk groups leave blank.

If the TRK DIR is "RAF", this entry must be blank.

For 5E8 and later, if the OPC (Originating Point Code) field on the OFCOPT form indicates the office is using the T1 CCS format, the DEST PT CODE on this form must be in the T1 CCS format.

If the OPC field on the OFCOPT form indicates that the office is using the AT&T format, then the DEST PT CODE must be in the correct format based on the first three digits of the OPC field. If those digits are 236 or 254, the DEST PT CODE must be in AT&T format, otherwise the T1 CCS format will be used.

For 5E9(1) and later:

If DEST PT CODE specifies an inter-office trunk, then the OPC on the OFCOPT form (5509 Record) must be entered.

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If the OPC on the OFCOPT form is entered and indicates the office is in the AT&T format, but the Network ID (the first 3 digits) of the DEST PT CODE do not match the Network ID of the OPC, then the DEST PT CODE values must be in the T1 CCS format.

For 5E11 and later, when VCDX OFFICE is set to "Y" on the EQCORE form, and DEST PT CODE on this form is entered, the corresponding POINT CODE on the PC form must also be entered.

For 5E12 and later, when DEST PT CODE is known and in the IMT format, the seventh, eighth, and nineth digits of DEST PT CODE must not be equal to the fourth, fifth, and sixth digits of the DEST PT CODE.

For 5E14 and later:

DEST PT CODE cannot equal either the OPC on the CCGSM form or the ALIASPC from the APCLIST on the CCGSM form for the same GSM.

When DEST PT CODE is entered, one of the following matches must exist:

- a matching POINT CODE on the PC form,
- a matching CLUSTER on the CLU form and CLUSTER is defined as the concatenation of attributes NETWORK and CLUSTER, or
- a matching NETWORK on the NID form.

For 5E15 and later:

When the first three digits of DEST PT CODE on the TKGRP form are not equal to "000", the number of SS7 trunks supported by an Island GSM (GSM on the CCGSM form is not defined as a GLOBAL SM on the CMTMH form or only one GLOBAL SM is defined for this GSM) cannot exceed 65,536 and the number of SS7 trunks supported by a Host GSM (GLOBAL SM is defined more than once on the CMTMH form for this GSM) cannot exceed 128,000.

5.20 ORIG PT CODE

Description: An entry in this field indicates the signaling point which is the source of the CCS message. It has the same format as the DEST PT CODE and will be assigned in the same manner. ORIG PT CODE cannot be equal to DEST PT CODE. An Originating Point Code identifies an entire office, therefore, all CCS trunks defined in this office with an ORIG PT CODE entered must have the same value entered in this field.

- ***NOTE:*** Care must be taken to ensure that the Originating Point Code assigned to all trunk groups matches the Originating Point Code in the CNI equipment data which can only be defined on Recent Change View 15.1. Failure to do so could result in a substantial amount of Recent Change effort.

Valid Entries: 9 digits

- Digits for AT&T:
- [236,254][00-31][0-7][000-255]
- Digits for non-AT&T:
- [001-235,237-253,255][000-255][000-255]

Data Rules:

This field is required for CCS trunks with signaling type "ISUP7"; for non-CCS trunks leave blank.

For 5E9(1) and later:

A non-ATT office which has COMMON CHAN SIG on the OFCOPT form, may have only one Origination

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Point Code for its CCS7 Trunk Groups. Thus, ORIG PT CODE on the TKGRP form must be the same on all TKGRP forms where it has been entered and it must match the OPC on the OFCOPT form.

If the TRK DIR is "RAF", this entry must be blank.

If the OPC on the OFCOPT form indicates the office is using the AT&T format, then all the ORIG PT CODE values must be in the AT&T format.

If OPC on the OFCOPT form is blank and the ORIG PT CODE indicates the office is using the format for:

- T1 CCS, then the corresponding DEST PT CODE values must also be in the T1 CCS format.
- AT&T,the corresponding DEST PT CODE value must be in the correct format based on the first 3 digits. If those digits are 236 or 254 and match the first 3 digits of the corresponding ORIG PT CODE, then the DEST PT CODE must be in the AT&T format.
- AT&T, but the Network ID (the first 3 digits of the DEST PT CODE) do not match the Network ID of the ORIG PT CODE, then the corresponding DEST PT CODE value must be in the T1 CCS format.

If OPC on the OFCOPT form indicates the office is using the AT&T format and COMMON CHAN SIG is also entered on the OFCOPT form, then all the ORIG PT CODE values that do not equal the OPC on the OFCOPT form, must match an alias point code for NI LATA Routing in AT&T network. They are used for Network Interconnect messages only. The alias point codes are identical to the CNI data structure.

For 5E11 and later, the OPC entered this form must match the OPC entered on the CCGSM form.

For 5E12 and later, when the ORIG PT CODE and DEST PT CODE specify different networks in the first three digits of the point code, the DEST PT CODE must be in the ANSI format, and the fourth, fifth, and sixth digits of the DEST PT CODE must be between 0 and 255.

For 5E14 and later, ORIG PT CODE must match an OPC or ALIAS PC on the CCGSM form for a GSM or ALIAS POINT CODE on the ALIASPC form.

For 5E15 and later, when ORIG PT CODE and LOCAL SM are both entered on this form, the ORIG PT CODE entered on the TKGRP form must match the OPC entered on the CCGSM form.

5.21 CONTROL TYPE

Description: Enter the Control Type (Transfer Prohibit Action). CONTROL TYPE is used when an outgoing ISUP7 trunk is selected to route out of an office but the associated SS7 dynamic routing (i.e., signaling link, signal transfer point, etc.) to the far point code is marked TFP (Transfer Prohibited). Before attempting to re-route to the next route, CONTROL TYPE is checked to determine whether to skip the current trunk and attempt a re-route on an alternate route, or if the call should be canceled without attempting a re-route.

The setting for CONTROL TYPE should be based on the network topology. The decision for setting CONTROL TYPE is up to the data administrator. Several possible scenarios are described below that can be used as guidelines for determining how CONTROL TYPE should be set.

1. CONTROL TYPE should be set to "CANCEL", if the far office only uses ISUP7 trunks, but the ISUP7 trunks are inaccessible due to a failure. Under these circumstances, calls should not be rerouted because the far switch cannot accept incoming calls via ISUP7 trunks. Rerouting such calls could possibly cause congestion on the indirect routes.
2. CONTROL TYPE should be set to "SKIP", if the available alternate routes do not use ISUP7 signaling. Although the far office is not accessible using ISUP7 trunks, non-ISUP trunks may be able to reach the far office and complete the call.

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3. CONTROL TYPE should be set to "SKIP", if dual tandems are connected to a far office. Although the first tandem may not be able to reach the far office via ISUP, the second tandem may be able to. Or, the second tandem may have non-ISUP signaling which is capable of routing the traffic.

Software Release: 5E8 and later
Valid Entries:

Valid CONTROL TYPE Entries

Entry	Definition
SKIP	Skip this trunk and attempt a re-route on the alternate route.
CANCEL	Do not attempt any reroutes. Cancel the call.

Data Rules:

CONTROL TYPE must be entered for outgoing ISUP7 trunks.

CONTROL TYPE must not be entered for non-ISUP7 outgoing trunks.

5.22 CCS7 TYPE

Description: Enter the ISUP7 Protocol Type indicator. This is used by call processing software to trigger network specific handling of certain ISUP7 messages and parameters.

A value of "ATT" indicates that an RII (Routing Information Indicator) and DLDN (Dialed Directory Number) will be sent if known. It also means the CPN parameter will be handled as the billing number if the network is operating in "old" mode.

A value of "BELLCORE" means that ISUP7 messages and parameters will be handled as specified by Bellcore. For example, the CPN and CHG parameters will be sent when known. Also, the OLI (Originating Line Identity) parameter, when known, will be sent with a value showing the service ID of the call. It also means the FAC REJ message will not be sent when MA-UUI is dropped. RBOC network-specific handling of parameters occurs when CCS7 TYPE is set to "BELLCORE".

Generally, all trunk groups that are in a local exchange carrier environment are populated with a value of "BELLCORE". Conversely, all trunk groups that are in the AT&T environment are populated with a value of "ATT" except "LTOLLCON" trunks that have a value of "BELLCORE".

Software Release: 5E6 and later
Default: For 5E7 and later: BELLCORE
Valid Entries:

Valid CCS7 TYPE Entries

Entry	Definition
BELLCORE	Software Release: 5E7 and later Handle ISUP7 parameters as specified by Bellcore.
ATT	Software Release: 5E7 and later Handle ISUP7 parameters as specified by AT&T.

Data Rules:

For 5E7 and later, if TRKCLS is "LATA" or "IC", CCS7 TYPE must be "BELLCORE".

"ATT" must be entered if the Network Indicator portion of the ORIG PT CODE is 254.

5.23 RCD 3PT1 ITC

Description: Recode "3.1kHz Audio" Bearer Capability. Enter the bearer capability ("SPEECH" or "3PT1KHZ") to be sent out for outgoing ISUP7 calls with a bearer capability equal to "3.1kHz audio". (See Division 2, Section 1W for more information on this capability.)

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RCD 3PT1 ITC only applies to calls that have the following conditions:

- the bearer capability of the outgoing call is 3.1kHz audio,
- this is an originating end office serving a non-ISDN originator or a local tandem which received the call via an incoming inband signaling speech trunk, and
- an outgoing ISUP7 trunk was selected.

If no value has been defined, the RCD 3PT1 ITC field on the OFCOPT form (5509 Record) will determine the bearer capability value to be sent out.

Software Release: 5E8 and later
Valid Entries:

Valid RCD 3PT1 ITC Entries

Entry	Definition
SPEECH or S	Recode to "speech"
3PT1KHZ or 3	Send out as is, i.e. 3.1kHz audio

Data Rules:

RCD 3PT1 ITC must not be entered for Non-ISUP trunks, for One-Way Incoming ISUP7 trunks, or if this is a TOLL office.

5.24 ISUP MLD

Description: Is the ISUP MLD (Message Loop Detection) active? This field is used to activate and deactivate the ISUP-MLD capability on a per-SS7 trunk group basis. The ISUP MLD and MAX HOP CNT fields have been added to support the ISUP Message Loop Detection feature. If this field is not entered, ISUP MLD is set to "Y" for SS7 trunks when the feature is purchased. For more information on this feature, see Division 2, Section 4A163.

Software Release: 5E11
Valid Entries: Y, N

Data Rules:

If "Y" is entered:
- MAX HOP CNT must be entered
- OUTPULSING must be "ISUP7"

The ISUP MLD and MAX HOP CNT fields on the TKGRP form are used by the ISUP Multiple Loop Detection Special Feature. It is a secured feature that must be purchased by the office before the ISUP MLD may be "Y" or MAX HOP CNT may be entered. The ACT field for SFID 163 must be set to "Y" on an SFSYS form (5713-1 Record).

5.25 MAX HOP CNT

Description: Enter the maximum number of SS7 interexchange circuits allowed per ISUP call. ISUP MLD SS7 Interexchange Hop Counter is assignable on a per SS7 trunk group basis. The initial value must be greater than the maximum number of circuits that would normally be used to complete the call. The ISUP MLD and MAX HOP CNT fields have been added to support the ISUP Message Loop Detection feature. For more information on this feature, see Division 2, Section 4A163.

Software Release: 5E11 and later.

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Valid Entries: 1 - 20

Data Rules:

The ISUP MLD and MAX HOP CNT fields on the TKGRP form are used by the ISUP Multiple Loop Detection Special Feature. It is a secured feature that must be purchased by the office before the ISUP MLD may be "Y" or MAX HOP CNT may be entered. The ACT field for SFID 163 must be set to "Y" on an SFSYS form (5713-1 Record).

If "ISUP7" is entered in OUTPLS and MAX HOP CNT is not entered, 20 will automatically be entered in MAX HOP CNT.

5.26 PLATFORM

Description: This field indicates whether or not the platform is CNI or PSU. This is a display only field for ODA.

Software Release: 5E15 and later

When the number of ISUP trunks on both PSU and CNI platforms exceed 100,000, the ACT field for SFID 622 on the SFSYS form (5713-1 Record) must be set to "Y", and there should not be any ISUP trunks on a CNI platform in that office. More than 256,000 ISUP trunks on PSU platform is not allowed.

CENTREX NETWORK

The following fields (Section 5.27 - Section 6.4) support the CENTREX Network secured features. For more information on CENTREX Network see Division 2, Section 4A181, Division 2, Section 4A182, and Division 2, Section 4A183.

5.27 MBG ID

Description: Enter the MBG (Multi-switch Business Group) Identifier associated with this trunk group. This trunk group is dedicated to MBG call traffic. If this field is entered, then MBG network specific information is included in the outgoing SS7 IAM message. If this field is not entered then the trunk group is not associated with an MBG.

Software Release: 5E9(2) and later.
Valid Entries: 2 - 65535

Data Rules:

If MBG ID is entered, then

- the MBG must be defined on the MBG form (5633 Record) and CNS on that form must be set to "Y".
- the SFID 183 ACT field must be set to "Y" on the SFSYS form (5713-1 Record). The MBG ID field on the TKGRP form is used by the CENTREX Network Special secured feature, which must be purchased by the office before the MBG ID field can have an entry.

For 5E12 and later, when MBG ID is entered and OUTPULSING is not "ISUP7":

- TRKCLS must be "EDSL" or "EDSLHM".
- VPN ACCESS must be "Y".

6. FORM ENTRIES - 5202-5 RECORD

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6.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

6.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

CENTREX NETWORK

6.3 OVFL MC RTIDX

Description: The Overflow MC Route Index is used to re-route overflow MBG calls to the PSTN (Public Switched Telephone Network).

Software Release: 5E9(2) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If this field is entered, then

- MBG ID must be entered
- it must be defined as MC ROUTE INDEX on an MCRTIDX form (5304 Record)

6.4 TRK ICI

Description: The Trunk ICI (Incoming Call Identifier) is used to identify the off-net trunk type incoming to the MBG network. This information is converted to the appropriate ICI and displayed on the terminal of the ISAT (ISDN attendant) for the called party.

Software Release: 5E9(2) and later.
Valid Entries:

Valid TRK ICI Entries

Entry	Definition
FTS	Identify trunk group as an FTS-2000 (Federal Telecommunications System 2000) trunk group.
FX	Identify trunk group as an FX (Foreign Exchange) trunk group.
TIE	Identify trunk group as a TIE trunk group.

CCS7 EQUAL ACCESS

The following CCS7 EQUAL ACCESS fields (Section 6.5 - Section 6.10) are available with 5E6 and later Software Releases.

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6.5 CPN RSTRCT

Description: Calling Party Number Restriction. Should this field prevent the Calling Party Number from being transmitted to the next office in the CCS7 ISUP7 IAM (Initial Address Message)?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field is used only when TRKCLS is "LATA". If TRKCLS is not "LATA", CPN RSTRCT must be "N".

If OUTPULSING is not "ISUP7", then CPN RSTRCT must be "N".

6.6 CHG RSTRCT

Description: Charge Number Restriction. Should this field prevent the Charge Number from being transmitted to the next office in a CCS7 ISUP7 IAM (Initial Address Message)?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field is used only when TRKCLS is "LATA". If TRKCLS is not "LATA", CHG RSTRCT must be "N".

If OUTPULSING is not "ISUP7", then CHG RSTRCT must be "N".

6.7 ATP IC RSTRCT

Description: Should the passing/accepting of the ATP (ISUP7 Access Transport Parameter) be prohibited?

If "N" is entered the ATP will be passed or accepted by the switch.

The ATP may be included in any of the following ISUP7 messages: IAM (Initial Address Message), ACM (Address Complete Message), ANM (Answer Message), CPG (Call Progress Message), or REL (Release Message).

- ***NOTE:*** This field is only used by the operational software at network boundaries. Therefore, this field should be optioned for trunks with a TRKCLS of "LATA" or "IC".

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ATP IC RSTRCT is "Y", INPULSING and OUTPULSING must be "ISUP7".

If ATP IC RSTRCT is "Y", TRKCLS must be "LATA" or "IC".

If TRKCLS is "LATA", then UUI IC RSTRCT and ATP IC RSTRCT must be equal.

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6.8 UUI IC RESTRCT

Description: Should the passing/accepting of the UUI (User to User Information Parameter) be prohibited?

If "N" is entered the UUI will be passed/accepted by the switch.

User to User Information Signaling transfer allows ISDN customers to exchange user data transparently through the network, in the UUI of an ISUP7 message, during call setup and call clearing.

The UUI may be included in any of the following ISUP7 messages: IAM (Initial Address Message), ACM (Address Complete Message), ANM (Answer Message), CPG (Call Progress Message), or REL (Release Message).

NOTE: This field is only used by the operational software at network boundaries. Therefore, this field should be optioned for trunks with a TRKCLS of "LATA" or "IC".

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If UUI IC RSTRCT is "Y", INPULSING and OUTPULSING must be "ISUP7".

If UUI IC RSTRCT is "Y", then TRKCLS must be "LATA" or "IC".

If TRKCLS is "LATA", then UUI IC RSTRCT and ATP IC RSTRCT must be equal.

6.9 NI ANNC

Description: If a call cannot be routed to a valid destination from an IXC (Inter-exchange Carrier), should inband tone be applied?

If "N" is entered, a CCS7 Release Message with a cause of no route to destination (3) will be sent to the preceding exchange instead of busy tone.

The value entered in this field will be checked by the operational software for called number screening failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call route consists only of ISUP7 trunks.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

6.10 NI IW REL

Description: If a call cannot be routed to a valid destination from an IXC (Inter-exchange Carrier), should a network interconnect interworking release message be sent? If "Y" is entered, a CCS7 Release Message with a cause of no route to destination (3) will be sent to the preceding exchange; otherwise, a busy tone will be sent.

The value entered in this field will be checked by the operational software for called number screening

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failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call route consists of a combination of ISUP7 trunks interworked to other signal protocol trunks (e.g., MF).

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

NI IW REL may be "Y" only if INPULSING and OUTPULSING are "ISUP7", and TRKCLS is "IC".

MODULAR QUEUING TRUNKS

The following fields (Section 6.11 - Section 6.13) are used for Modular Queuing trunks.

6.11 QUEUE ALLOWED

Description: Is queuing allowed for this Trunk Group?
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the Queue Feature name must be defined on a QUFD form (5617-1 Record).

For 5E5 and later, if TRKCLS is "RAFDTA" and SRV GRP is "ACCS", QUEUE ALLOWED must be "Y"; if TRKCLS is "RAFDTA" and SRV GRP is some other value, QUEUE ALLOWED must be "N". See Data Rules under the SRV GRP field for allowable SRV GRP values on RAFDTA trunk groups.

If the TRKCLS is "RAFANNC" or "RAFCTR", then QUEUE ALLOWED must be "N" or blank.

If this field is "Y", then TRK DIR must be "2W", "OUT" or "RAF" and the QUEUE FEATURE field must be entered.

If Ringback queuing is allowed for this trunk group, TRK DIR must have a value of "OUT".

For 5E6 and later, if QUEUE ALLOWED is "Y" and LN TYPE is "NONE" or is not entered, then TRKCLS must be "PF", "PFITT", "PFLASH", "RAFDTA", "BVTOLLCM", or "BVINTOLL".

For 5E13 and later, when QUEUE ALLOWED is "Y" and LN TYPE is "NONE" or not entered, TRKCLS must be "BVINTOLL","BVTOLLCM", "IC", "LATA", "LTOLLCON", "PF", "PFITT", "PFLASH", "RAFDTA", or "TTOLLCON".

For 5E13 and 5E14, when QUEUE ALLOWED is "Y", TRKCLS must be "BVINTOLL", "BVTOLLCM","IC", "EDSL", "LATA", "LTOLLCON", "PF", "PFITT", "PFLASH", "RAFDTA", or "TTOLLCON".

NOTE: For 5E15 and later, when Egress Queuing is being provisioned, TTRKCLS must be "PBXDID", "PF:, "PFLASH", "PFITT", "EDSL", or "RDSLHM" and when Office Queuing is being provisioned, TRKCLS must be "IC", "LTOLLCON:, "TTOLLCON", or "LATA"

6.12 ENQUEUE ACT

Description: Will queuing be allowed on the Trunk Group? This field enables or disables queuing for the trunk group. Also, it enables or disables queuing for the AP Facilities Management feature. If this field is

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left blank, it will be set to a "Y" by ODA. If ENQUEUE ACT is set to "N" and the queuing feature has been assigned, queuing will not be allowed on the trunk group.
Valid Entries: Y, N

Data Rules:

If the TRK DIR is not "2W" or "OUT", this field must be blank.

If TRKCLS is "RMSD3" or "TOPAS", this field must be blank.

For 5E6 and later, this field is used differently for Leased Networks. Entering "N" for this field may still allow queuing for critical users in the LN.

6.13 QUEUE FEATURE

Description: Name of the Queue feature assigned to this Trunk Group. The feature must be defined on a QUFD form (5617-1,2 Record).
Valid Entries: 1 - 8 characters

Data Rules:

If TRKCLS is "RMSD3", "TOPAS", "RAFANNC" or "RAFCTR", this field must be blank.

For 5E5 and later, if TRKCLS is "RAFDTA" and SVC GRP is "ACCS", then this field must be entered.

For 5E7 and later when TRKCLS is "EDSL", the QUEUE FEATURE entered in this field must be defined on a QUFD form where QUEUE TYPE is "OFFHK".

For 5E9(2) and later, if a QFEATURE on this MLHG form is assigned to the same QUEUE MODULE on a QUFD form (5617-1/2 Record) or a QUGPA form (5617-3/4 Record), the QUEUE SIZE must not exceed 255 per QUEUE MODULE if the corresponding EQIM form (5700 Record), where SM matches QUEUE MODULE, has UNIT TYPE set to a value other than "SM2000". Queue Size is the sum of the BASIC SIZE + EXTENDED SIZE + ROUTINE SIZE + PRIORITY SIZE on the QUFD or QUGPA forms for each of the Q FEATURES assigned to the same QUEUE MODULE.

When QUEUE FEATURE is known on the TKGRP form and the QUEUE TYPE is set to "HPCOHQ" on the corresponding QUFD form, the GETS High Probability of Call Completion Secured Feature must be purchased by the office. A SFSYS form must exist with SFID 279 ACT set to "Y".

For 5E13 and 5E14, when TRKCLS is "IC", "LATA" or "LTOLLCON", QUEUE FEATURE is known, and LN TYPE is "NONE" or is unknown on the TKGRP form, the QUEUE TYPE must be set to "HPCOHQ" on the corresponding QUFD form. QUEUE FEATURE on the TKGRP form matches FEATURE NAME on the QUFD form.

- ***NOTE:*** For 5E15 and later, Private Facility Egress Queuing can be performed on a GETS call terminating to a PF/PRI trunk with any of the following classes of service: PBXDID, PF, PFLASH, PFITT, EDSL, or EDSLHM. Office Queuing for Public Trunks can be performed on a GETS call attempting to egress the switch over a trunk group with any of the following classes of service: IC, LTOLLCON, TTOLLCON, or LATA. The user should ensure there are sufficient trunk groups in the office with the respective classes of service for both Egress Queuing and Office Queuing.

6.14 INH GETS OFC Q

Description: This field is used to determine whether or not calls to a particular Trunk Group are allowed or excluded from using the GETS Queuing resource.

Software Release: 5E15 and later

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Default: N
Valid Entries: Y, N

Data Rules:

For 5E15 and later, when INH GETS OFC Q is "Y", TRKCLS must be "EDSL", "EDSLHM", "IC", "LATA", "LTOLLCON", "PBXDID", "PF", "PFITT", "PFLASH", or "TTOLLCON".

DSN TRUNKS

The following fields (Section 6.15 - Section 6.17) are applicable to DSN (Defense Switched Network) trunk groups, available with 5E3 and later Software Releases. If entries are made in these fields, then the DSN OPTION field on the OFCOPT form must be set to "Y".

6.15 DSN ARC ID

Description: Enter the ID of the ARC (Alternate Route Cancellation) Control Table entry associated with this trunk group. ARC ID entries are defined on the DSNCO form (5618-8 Record).
Valid Entries: 0 - 63

Data Rules:

If the office is not a DSN office, DSN ARC ID must be 0 or blank.

If TRK DIR is "RAF", this field must be 0 or blank.

For 5E7 and later, if TRKCLS is "INAISTRK", the field must be blank; if TRKCLS is "PACKET" or "X75P", it must be 0 or blank.

For 5E8 and later, if TRKCLS is "ATNDVFY", DSN ARC ID must be blank.

6.16 SHUTTLE

Description: Should the office verify that the call is originated and terminated on two distinct trunk groups? This is used in DSN (Defense Switched Network) offices on trunk groups between switches that support dual homed PBXs or End Offices.
Default: N
Valid Entries: Y, N

Data Rules:

If SHUTTLE is "Y", then HUNT TYPE must be "2WF", "2WB", "PRFL" or "PRBL".

If TRK DIR is "RAF", SHUTTLE must be either "N" or not entered.

6.17 MLPP STAGE

Description: The MLPP (Multi-level Precidence and Preemption) STAGE field is used to designate an MLPP SS7 (Signaling System 7) trunk group as either a Stage 1 or Stage 2 trunk group.
Valid Entries:

MLPP STAGE Valid Entries

Entry	Definition
STAGE[1]	The Stage 1 Protocol send/receives the PP Level in the Calling Party Category.
STAGE[2]	The Stage 2 Protocol send/receives the PP Level in the MLPP Precedence Parameter.

Data Rules:

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When MLPP STAGE is entered:

- WB RATE must not be entered.
- TRK DIR must be "2W".
- HUNT TYPE must be "PRBL", "PRFL".
- TRKCLS must be "LTOLLCON", "PRINTOLL", or "TTOLLCON".
- INPULSING must be "ISUP7" and OUTPULSING must be "ISUP7".
- CCS7 TYPE must be "BELLCORE".

IMMEDIATE START ANNOUNCEMENT

The following field activates the Immediate Start Announcement Interface for PINNACLE ACD (Automatic Call Distributor) feature.

6.18 IMM START ANN

Description: Is this an Immediate Start Announcement trunk group? This field supports the Immediate Start Announcement Interface for PINNACLE ACD feature. See Division 2, Section 1BX.

Software Release: 5E12 SU and later.
Default: N
Valid Entries: Y, N

Data Rules:

When IMM START ANN is "Y",
- TRKCLS must be "LTOLLCON"
- AUD RNG must be "Y"
- TRK DIR must be "OUT"
- HUNT TYPE must be "FIFO"
- INPULSING must be either blank or "NONE"
- OUTPULSING must be "MF"
- CASCADING must be "Y"
- MAXCALLS must be blank
- CYCLES must be blank.

6.19 RTCD REQ

Description: The RTCD REQ field is used to indicate whether or not RTCD (Real Time Call Detail) billing records are generated for this trunk group.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12, when RTCD REQ is "Y", TRKCLS must be "EDSL", "IC", "LATA", "PF", or "TTOLLCON".

For 5E12 and later, when RTCD REQ is "Y", ENET LINK NBR must be defined on an ENETLINK form where SERV TYPE equals "RTCD".

For 5E13 and later, when RTCD REQ is "Y", TRKCLS must be "EDSL", "EDSLHM", "IC", "LATA", "PF", or

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"TTOLLCON".

EDSL/PRI TRUNKS

The following fields (Section 6.20 - Section 7.23) are applicable to EDSL (Extended Digital Subscriber Line) Trunk Groups. If entries are made in these fields, the TRKCLS entered must be "EDSL" or "EDSLHM".

If TRK DIR is "SGNL", then the PIC, CI DIAL, STA ID, UUI and CODE SET7 fields must be blank and the CBC field must be "N". If the TRKCLS is not "EDSL" or "EDSLHM", then the PIC, CI DIAL, STA ID, UUI and CODE SET7 fields must be blank, and the CBC field must be "N" or blank.

6.20 STA ID

Description: This field pertains to the delivery of the station ID or CPN (Calling Party Number) and applies to outgoing and two-way PRI (Primary Rate Interface) trunk groups only. It does NOT apply to incoming PRI trunk groups.

Software Release: 5E4(2) and later
Valid Entries: TRAN

Data Rules:

This field has an interaction with the CPN BN OPT field. The CPN BN OPT field has precedence over STA ID.

If the CPN BN OPT field is set to "NONE", and this field is set to "TRAN", the station ID, also referred to as the CPN (Calling Party Number), will be delivered over this PRI. The number will only be delivered over the PRI if made available by the originating station.

If the station ID is marked private, this field has an interaction with the PRI PRVT field on the LASSOP (5945 Record) form. If the PRI PRVT field is set to "Y", the number will be sent marked private. If PRI PRVT is set to "N", the station ID will not be sent.

If the CPN BN OPT field is set to "NONE", and this field is blank, the station ID will not be delivered over the PRI. In this case, the PRI PRVT field on the LASSOP form is not used.

Refer to Division 2, Section 1BL on Privacy Features for additional information.

6.21 UUI

Description: Can the Trunk Group send/receive User-to-User Information? UUI will only be passed if both the originating and terminating trunks allow UUI.

Software Release: 5E4(2) and later
Valid Entries: Y, N

Data Rules:

If this field is blank, the field defaults to "N".

6.22 CODE SET7

Description: The value "CODE7" indicates that the Trunk Group can send/receive CODESET 7 information. This is associated with UUI. If this field is blank, the Trunk Group cannot send/receive CODESET 7.

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Software Release: 5E4(2) and later
Valid Entries: CODE7

6.23 SDN DAS

Description: Enter the DAS (Digit Analysis Selector) to be used for SDN Call-by-Call.

Software Release: 5E6 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Population of this attribute with a non-null value is optional. If the SDN dialing plan cannot be included in the DAS (also on this form), then SDN DAS will be used as an alternate DAS.

6.24 CBC

Description: Is the Call-by-Call feature available for this Trunk Group? The Call-by-Call feature allows a group of trunks to be assigned multiple features on a per call basis.

Software Release: 5E4(2) and later
Default: N
Valid Entries: Y, N

Data Rules:

CBC must be "N" or blank when DEDICATED SRV is entered. Call-by-Call SFGs are assigned on the TKEDSLD form (5209 Record).

6.25 DEDICATED SRV

Description: Enter the PRI dedicated service type.

Software Release: 5E6 and later
Valid Entries:

Valid DEDICATED SRV Entries

Entry	Definition
I800	International 800 Service
ILDS	International Long Distance Service and World Zone 1 calls outside of the continental U.S.
INWATS	INWATS Service
MEGACOM	MEGACOM Service
M800	MEGACOM 800 Service
NOVA	Dial-it NOVA Service
OUTWATS	OUTWATS
SDN	Software Defined Network Service for non-ACP

Data Rules:

A value can only be entered in this field when the TRKCLS is "EDSL" or "EDSLHM" and the TRK DIR is not "SGNL".

When DEDICATED SRV is entered, CBC must be blank or "N" and ACP SDN must be blank or "N".

ETN (Electronic Tandem) or SDN (Software Defined Network) traffic can be routed over dedicated PRI facilities if the call originated from an ETS (Electronic Tandem Switch) node.

6.26 VOICE CUT THRU

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Description: This field identifies the cut through procedure to be used for Circuit-Switched Voice calls.

The cut through option to be used for a call is determined by the cut through option in the office at the originating end of the call.

Cutting through in the backward direction allows the originating end to hear tones and announcements received from the terminating end.

Cutting through in the forward direction allows the originating end to speak/send data and be heard/received at the terminating end.

There is no delayed cut through option for CSV calls.

Software Release: 5E6 and later
Required Field.
Default: NORMAL
Valid Entries:

Valid VOICE CUT THRU Entries

Entry	Definition
NORMAL	Normal cut through procedures. The path is cut in the backward direction when the call originates. The path is cut in both directions when the terminating end answers and all appropriate protocol messages have been received at the originating end.
EARLY	Early cut through procedures. The path is cut in both directions when the call originates.

Data Rules:

In a private office, the "EARLY" option is usually used. If the "NORMAL" option is used, then the originating caller may not be able to dial digits in response to tones and announcements.

In a public office the "NORMAL" option will usually be used. If the "EARLY" option is used, a private office connected to a public office via the PRI could commit fraud when a call originates in the public office and terminates in the private office. The private office could effect this fraud by failing to send select protocol messages, resulting in a talking path established and put into use without billing being generated.

If TRKCLS is not "EDSL" or "EDSLHM", then VOICE CUT THRU must contain the default value of "NORMAL".

6.27 DATA CUT THRU

Description: This field identifies the cut through procedure to be used for Circuit-Switched Data calls.

The cut through option to be used for a call is determined by the cut through option in the office at the originating end of the call.

Cutting through in the backward direction allows the originating end to hear tones and announcements received from the terminating end.

Cutting through in the forward direction allows the originating end to speak/send data and be heard/received at the terminating end.

Software Release: 5E6 and later
Required Field.
Default: NORMAL
Valid Entries:

Valid DATA CUT THRU Entries

Entry	Definition
NORMAL	Normal cut-thru procedures. The path is cut in the backward direction when the call originates. The

	path is cut in both directions when the terminating end answers and all appropriate protocol messages have been received at the originating end.
EARLY	Early cut-thru procedures. The path is cut in both directions when the call originates.
DELAY	Delayed cut-thru procedure. The path is cut through in both directions, but only after the terminating end answers and all appropriate protocol messages have been received at the originating end.

Data Rules:

In a private office, the "EARLY" option is usually used. If the "NORMAL" option is used, then the originating caller may not be able to dial digits in response to tones and announcements.

In a public office the "DELAY" or "NORMAL" option is usually used. If the "EARLY" option is used, a private office connected to a public office via the PRI could commit fraud when a call originates in the public office and terminates in the private office. The private office could effect this fraud by failing to send select protocol messages, resulting in a talking path established and put into use without billing being generated.

The "DELAY" option is used to prevent fraud which may occur if the "NORMAL" option is used. When a public office uses the "NORMAL" option, then a private office connected to the public office via the PRI could commit fraud when a call originates in the public office and terminates in the private office. The private office could effect this fraud by failing to send select protocol messages, resulting in a talking path established and put into use without billing being generated. Since not all appropriate protocol messages would have been received, the path is cut-thru only in the backward direction (originating end can receive but cannot send), which is sufficient only for One-Way data transmission from the private office to the public office.

If data rate is not entered, the DATA CUT THRU must be the default value of "NORMAL".

If TRKCLS is not "EDSL" or "EDSLHM", the DATA CUT THRU must contain the default value of "NORMAL".

6.28 APPLICATION

Description: This field specifies that a PRI (Primary Rate Interface) is being used for an application that requires special handling of the PRI. When a PRI B-channel is connected to an IWF (Inter-Working Function) or INBLDG (In-Building) as part of the architecture of the CDMA Voice or TDMA VIS (Vocoder in Switch), APPLICATION should be set to "IWF" or "INBLDG". For more information on this feature, see Division 2, Section 4A280.

Software Release: 5E12 and later.
Valid Entries:

Valid APPLICATION Entries - 5E12 - 5E13

Entry	Definition
IWF	Inter-Working Function

Valid APPLICATION Entries - 5E14 and later

Entry	Definition
Blank	Not Used
IWF	Inter-Working Function
INBLDG	In-Building Application

Data Rules:

When APPLICATION is "IWF",

- TRKCLS must be "EDSL" or "EDSLHM"
- TRK DIR must not be "SGNL"
- VOICE CUT THRU must be "EARLY"

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- BRCS must be "N"
- and if DCS TRK is "Y", DCS RETRY must be "Y".

When TGNs are defined on this form with TRKCLS of "EDSL" or "EDLSHM" and APPLICATION of "IWF", each corresponding D-channel trunk member that is signaling for the associated B-channels of this trunk group (on TRUNK form) must have Q921 PROC and Q931 PROC assigned as "NETWORK".

NOTE: For 5E12 and later, when "IWF" is entered for a DEN on the TRUNK form, the values of FAC 0 EC CLI and FAC 1 EC CLI on the EQDUP form must be 0.

For 5E14 and later, for B-channels, when APPLICATION is "INBLDG" or "IWF":

- TRKCLS must be "EDSL" or "EDSLHM"
- DCS TRK must be "Y" and DCS RETRY must be "N".

For 5E14 and later, for D-channels, when TRKCLS is "EDSL" or "EDSLHM", and TRK DIR is not "INC", "OUT", or "2W":

- APPLICATION must not be entered
- DCS TRK must be "N"
- HUNT TYPE must be blank
- DCS RETRY must be "N".

For 5E14 and later, when the APPLICATION field is "INBLDG", the ACT field on the SFSYS form (5713-1) for SFID 221 (for CDMA) or SFID 259 (for TDMA VIS) must be set to "Y". In addition, since SFIDs 221 and 259 depend on the DCS (Digital Cellular Switch) feature, the ACT field on the SFSYS form for SFID 130 must also be set to "Y".

6.29 MAIN DN

Description: This field contains a default directory number that should be used when a user-provided CPN is discarded or when the user does not provide a CPN on Circuit-Switched Voice and Circuit-Switched Data calls.

MAIN DN should only be populated when the far office is a PBX (Private Branch Exchange) and the near office is a public switch (central office or toll office). MAIN DN should be filled with the main directory number of the PBX or some other number which can be called.

Software Release: 5E6 and later
Valid Entries: a 10-digit directory number in the form NPANXXXXXX
- where NPA is: 200 - 999

Data Rules:

If MAIN DN is entered, then TRK DIR must be set to "2W" or "INC". If TRKCLS is not "EDSL" or "EDSLHM", then MAIN DN cannot be entered.

6.30 CPN BN OPT

Description: This field indicates the CPN/BN (Calling Party Number/Billing Number) option subscribed to

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by a PRI. This option specifies whether the CPN and BN should be delivered for Circuit-Switched Voice or Circuit-Switched Data calls. This option is assigned at the near end switch and depends on the number that the far end switch wishes to receive.

Software Release: 5E6 and later
Required Field.
Default: NONE
Valid Entries:

Valid CPN BN OPT Entries

Entry	Definition
NONE	No CPN/BN option on this PRI. Neither CPN nor BN is sent on outgoing calls.
CPNONLY	CPN only option. Only the CPN will be sent. If the CPN is not available, no number is sent.
CPNPREF	CPN preferred option. The CPN is sent if it is available, otherwise, the BN is sent if it is available. If neither the CPN or the BN is available, then no number is sent. The Billing Number may be populated with XXX-000-0000 (where XXX is the far end NPA of the incoming trunk) depending on the type of call and what information is received about the calling party.
BNONLY	BN only option. Only the BN is sent. If it is not available, then no number is sent. The Billing Number may be populated with XXX-000-0000 (where XXX is the far end NPA of the incoming trunk) depending on the type of call and what information is received about the calling party.
BNPREF	BN preferred option. The BN is sent if it is available, otherwise, the CPN is sent if it is available. If neither the CPN or the BN is available, then no number is sent. The Billing Number may be populated with XXX-000-0000 (where XXX is the far end NPA of the incoming trunk) depending on the type of call and what information is received about the calling party.
CPNUP	Only the CPN is sent, if it is available, and the CPN will be considered user-provided and not screened. This option should be used on PRIs where the near office is a PBX and the far office is a public switch (central office or toll office). If the CPN is not available then no number is sent.

Data Rules:

In a private network (PBX to PBX), the "BNONLY" option should not be assigned to PRIs connecting the private switches for customers that want to receive the calling party number from both callers within the private network and callers outside of the private network. See Table 1 for a description of how to assign CPN BN OPT for different switch configurations interconnected via PRIs. If TRKCLS is not "EDSL" or "EDSLHM", the CPN BN OPT must contain the default value of "NONE". If a value other than "NONE" is entered, then TRK DIR must be set to "2W" or "OUT".

6.31 PRIV OVER

Description: May private DNs be sent over a PRI? Private DNs should not be sent from a public switch (central office or toll office) to a private network switch (PBX) except in special cases where the PBX has agreed not to send the number to the terminating party. To block private numbers from being sent over a PRI, set PRIV OVER to "N". To allow private numbers to be sent over a PRI, set PRIV OVER to "Y".

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then TRK DIR must be set to "2W" or "OUT".

If TRKCLS is not "EDSL" or "EDSLHM", then PRIV OVER must contain the default value of "N".

If "Y" is entered, CPN BN OPT must not be "NONE".

NOTE: PRIV OVER is not used in conjunction with STA ID, only with CPN BN OPT. If PRI OVER is set to "Y", CPN BN OPT must be set to other than "NONE".

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6.32 CPN SCRN

Description: Should a user-provided CPN be screened on incoming calls over this PRI for Circuit-Switched Voice and Circuit-Switched Data calls?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

CPNs received in a public switch (PBX) may or may not be screened. When CPN SCRN is set to "Y", then the PBX ID field (also on this form) must be entered. The PBX ID value must appear on a SCRNRNG form (5212 Record) which will define the valid DNs that CPN will be screened against. If "Y" is entered, then TRK DIR must be set to "2W" or "INC".

CPNs received in a private switch should not be screened since they may have already been screened by a public switch and since the CPN could have come from anywhere in the public network. CPNs received in a public switch from another public switch should not be screened for the same reason.

Figure 3 contains suggested CPN SCRN assignments for different switch configurations interconnected via PRIs.

If TRKCLS is not "EDSL" or "EDSLHM", then CPN SCRN must contain the default value of "N".

6.33 CPN DISC

Description: Should a user-provided CPN be discarded and replaced with a network provided CPN when certain criteria are met during incoming calls over this PRI for Circuit-Switched Voice and Circuit-Switched Data calls? These criteria are met when a user-provided CPN is screened and fails, or when a user-provided CPN is not screened.

When CPN DISC is set to "N", the user-provided CPN is never discarded and is used as the CPN. When CPN DISC is set to "Y" and the above-mentioned criteria met, then the user-provided CPN will be discarded and replaced with a network-provided DN (if one is available). This network-provided DN should be entered as the MAIN DN.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

User-provided CPNs on calls to public switches (central office or toll office) from private switches (PBX) should be discarded if screening fails or is not done.

User-provided CPNs on calls to public switches from another public switch should not be discarded, because they should not be screened.

User-provided CPNs on calls to private switches from public switches or another public switch should not be discarded, because they should not be screened.

Figure 3 contains suggested CPN DISC assignments for different switch configurations interconnected via PRIs.

If TRKCLS is not "EDSL" or "EDSLHM", then CPN SCRN must be "N". If "Y" is entered, then TRK DIR

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must be set to "2W" or "INC".

6.34 INHIBIT TCM

Description: Should the TCM (Traveling Class Mark) be inhibited from being sent to the far-end switch for calls routed by ARS over a PRI trunk? If "Y", the TCM will not be sent; if "N", it will be sent.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

NOTE: The TCM will always be sent for calls routed by ARS over a PRI. This field should be set to "Y" when all of the following conditions are met to prevent an assert:

- The trunk is a PRI (TRKCLS = "EDSL" or "EDSLHM).
- The calls are routed by ARS over the PRI.
- An Interexchange Carrier is at the far-end of the PRI.
- The calls are leaving the private network (off-net).

6.35 RDTA GRP

Description: Is this trunk group a Remote Digital Test Access trunk group? RDTA uses the Remote Protocol Access feature to set up a connection on an ISDN line or trunk which is then used for testing.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If RDTA GRP is "Y", then

- the following fields on the TKGRP form must have these entries:

  BRCS must be "N"

  CBC must be "N"

  DATA RATE must be entered

  INSEP must be blank

  PBX ID must not be entered

  PRIVACY must not be "Y"

  TRK DIR must be "2W" or "OUT"

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TRKCLS must be "EDSL"

- and TRK DIR is "OUT", GLARE ACTION and BILL DN must not be entered.
- and TRK DIR is "2W", GLARE ACTION must be "ALLCTRL" or "NONECTRL".
- all corresponding TRUNK forms must have a BRCS entry of "N" and their DENs entered on the RDTAPORT form with the OE NUMBER field containing an OE TYPE of "D".
- the value of this TGN must not be entered on any MCRTIDX form (5304 Record) or any RTIDX form (5303 Record) as TRUNK GROUP NUMBER.

For 5E10 and later, when the TGN/MEMB(s) defined on the TRUNK form have RDTA GRP set to "Y" on its associated TKGRP form, BRCS must be set to "N" on the TRUNK form, and the value of DEN or NEN on the TRUNK form must be entered on an RDTAPORT form (as OE NUMBER) where OE TYPE is set to "D" or "N", respectively.

6.36 E911 CPN

Description: If this is an "EDSL" or "EDSLHM" trunk group, will it use the Calling Party Number instead of the trunk billing number for E911 queries? "Y" indicates that the Calling Party Number will be used; "N" indicates that the trunk billing number will be used.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When E911 CPN is "Y", TRK DIR must be "INC" or "2W", and TRKCLS must be "EDSL" or "EDSLHM".

7. FORM ENTRIES - 5202-6 RECORD

7.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

7.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

EDSL/PRI TRUNKS

7.3 CI DIAL

Description: Enter the Carrier Interconnect Dialing Permissions for this Trunk Group. If this field is left

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blank, the value "ALLOW" will be placed in the 5ESS Switch memory.

Software Release: 5E4(2) and later
Valid Entries:

Valid CI DIAL Entries

Entry	Definition
ALLOW	Indicate that the customer is allowed to dial an FGD CAC (Carrier Access Code), or use a PIC (Presubscribed InterLATA Carrier) identification number if one is assigned, when making a Carrier Interconnect call.
DENY	Indicates that the customer is not allowed to dial a CAC. To make CI calls, the line must be assigned a PIC.
REQ	Indicates that the customer is required to dial a CAC when making a Carrier Interconnect call.
TALLOW	Same as ALLOW, but is used for a CI test line only.
TDENY	Same as DENY, but is used for a CI test line only.
TREQ	Same as REQ, but is used for a CI test line only.

7.4 PIC

Description: Enter the Presubscribed InterLATA Carrier ID to be assigned to this Trunk Group.

Software Release: 5E4(2) and later
Valid Entries:

For 5E9(1) and later: 0 - 9999

Data Rules:

If TRKCLS is "EDSL" and TRK DIR is "OUT", then this field must be blank.

For 5E9(2) - 5E11, if PIC is entered with a TRKCLS of either "EDSL" or "EDSLHM" and TRK DIR is not "SGNL", then the PIC must be defined on the IFC form as a CARRIER ID.

For 5E12 and later, when TKGRP forms have a TRKCLS of either "EDSL" or "EDSLHM", a TRK DIR that is not "SGNL", and the PIC field is entered, the PIC must be defined on the ICF form as CARRIER ID with FEAT GRP equal to "D".

7.5 PTC

Description: Enter the Presubscribed Intra-LATA Toll Carrier. The PTC field supports the Intra-LATA PIC secured feature. For more information on the Intra-LATA PIC feature see Division 2, Section 4A149.

Software Release: 5E9(1) and later
Valid Entries: 0 - 9999

Data Rules:

ICLATA is a secured feature that must be purchased by the office before the field can be entered, therefore the ACT field for SFID 149 must be set to "Y", before PTC can be entered.

7.6 PLC

Description: Enter the PLC (Presubscribed Local Carrier) code. The PLC field supports the Alternate Local Service Provider Routing feature. For more information on the Alternate Local Service Provider Routing feature, see Division 2, Section 4A269.

Software Release: 5E12 and later.
Valid Entries: Blank, or 0 - 9999.

Data Rules:

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When PLC is entered, UNBUNDLED must be "Y".

When GRP TYPE is "SGNL", all the fields for the EDSL/PRI TRUNKS must not be entered and PLC must not be entered. UNBUNDLED must also be "N".

When PLC is entered, TRKCLS must be "EDSL" or " EDSLHM".

The PLC field on the TKGRP form must be defined as CARRIER ID on the ICF form with FEAT GRP equal to "D" .

7.7 UNBUNDLED

Description: Has this line been unbundled from the LEC?

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

When UNBUNDLED is "Y", PLC must be entered.

When GRP TYPE is "SGNL", UNBUNDLED must be "N".

When UNBUNDLED is "Y", TRKCLS must be "EDSL" or " EDSLHM".

7.8 DIR CON IC

Description: Is this PRI directly connected to an Inter Exchange Carrier?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y,N

Data Rules:

When DIR CON IC is entered and TRKCLS is "EDSL" or "EDSLHM", TRK DIR must be "INC", "OUT" or "2W".

Before the DIR CON IC field can be set to "Y", the InterLATA Carrier's InterLATA Capability secured feature or the Alternate Service Provider secured feature or the InterLATA Carrier's InterLATA Capability secured feature must be purchased and the SFID 149 ACT field or the SFID 269 ACT field must be set to "Y" on the SFSYS form.

7.9 CPN BILLING

Description: Is Calling Party Number allowed to be used as billing number? The CPN BILLING field was added to support the CPN (Calling Party Number) Billing on PRI special feature. This field indicates whether the CPN (Calling Party Number) provided from the far office in the SETUP message over a PRI should be used as the billing number in the AMA record. The default option is to use the BILLING DN assigned to the trunk group in the AMA record. The CPN must pass screening before it is used in the AMA record.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

"N" must be entered if TRKCLASS is not "EDSL" or "EDSLHM".

WARNING: If CPN BILLING is "Y" and CPN SCRN is "N", screening of the Calling Party Number is not be performed.

7.10 ALLOW AMA

Description: Should AMA recording be allowed? The ALLOW AMA field is used to specify whether AMA recording is inhibited or allowed for unconnected unanswered calls. An unconnected unanswered call occurs when the calling party abandons the call before the called party answers. This field applies only to wideband calls.

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

Data Rules:

When ALLOW AMA is "Y", WB RATE must be entered.

7.11 ALW DATA ONLY

Description: Restrict origination to data calls only? The ALLOW DATA ONLY field is used to indicate whether a PRI trunk has restricted origination to data calls only. The ALW DATA ONLY field was added to support the Data Only PRI feature. This feature was first made available in a 5E10 Software Update. For more information on this feature, see Division 2, Section 4A206.

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ALW DATA ONLY is "Y", DATA RATE must be entered.

The Allow Data Only On This PRI Trunk feature is a Secured Feature that must be purchased by the office before data can be entered and/or changed for the ALW DATA ONLY field on the TKGRP form. The SFID 206 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before the ALW DATA ONLY field can be set to "Y".

7.12 STD RN SRC

Description: Are the PRI RN IE(s) (Primary Rate Interface Redirecting Number Information Elements) populated from SS7 ISUP OCN (Original Called Number), RN (Redirecting Number) and RI (Redirection Information) parameters? This field supports the Redirecting Number for PRI secured feature (SFID 161). For more information on this feature, see Division 2, Section 4A161.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered:

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- UUI must be "Y"
- TRKCLS must be "EDSL" or "EDSLHM"

When TRK DIR is "SGNL", STD RN SRC must be "N".

7.13 RN SCRN

Description: This field indicates whether a Redirecting Number should be screened against a range(s) of numbers associated with the PRI (Primary Rate Interface) on originations, over the PRI for circuit switched voice, and circuit switched data calls. When an RN is received in the SETUP message on originations over a PRI, this indicator specifies whether it should be screened or not. Screening for the RN is similar to that of a user-provided CPN (Calling Party Number).

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When RN SCRN is "Y":

- NPA SOURCE must be entered.
- PBX/CPE ID must be entered.
- PBX ID must match the PBX ID on the SCRNRNG form (5212 Record).

When RN SCRN, RN DISC, or RN BILLING is "Y":

- TRRKCLS must be "EDSL" or "EDSLHM".
- TRK DIR must be "INC" or "2W".
- the ACT field for SFID 244 on the SFSYS form (5713-1 Record) must also be set to "Y".

7.14 RN DISC

Description: This field indicates whether a Redirecting Number should be discarded. If RN DISC is set to "Y", only the number received in the PRI RN IE that is not screened, or is screened and fails screening, will be discarded. If RN DISC is "N", the number in the PRI RN IE will not be discarded.

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

7.15 RN BILLING

Description: This field indicates whether a Redirecting Number should be used as a billing DN(Directory Number). If RN BILLING is set to "Y", and the number in the PRI RN IE passes screening (or is not screened with a 7 or 10 digit RN), the call will be billed against the number in the RN IE. If RN BILLING is set to "Y", and the number does not pass screening, the CPN billing will apply, if set. If RN BILLING is not set or is set to "N", existing PRI billing applies.

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Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

7.16 HM TAX

Description: Is there a tax for Hotel/Motel calls?

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When HM TAX is "Y" and TRKCLS is "EDSL", CBC must be "Y".

The ISDN PRI Hotel/Motel and Selected Class of Call Screening feature is a Secured Feature that must be purchased by the office before the HM TAX field on the TKGRP form can be set to "Y". A SFSYS form must exist with SFID 219 ACT set to "Y".

7.17 CNAM ALW

Description: Is Calling Name Delivery for PRI allowed? This field supports the Calling Name for ISDN PRI secured feature (SFID 220). For more information on this feature, see Division 2, Section 4A220.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When CNAM ALW is "N", CNAM AMA must be "FLATRATE".

When CNAM ALW is "Y", TRK DIR must be "2W" or "OUT".

7.18 CNAM AMA

Description: Enter the Calling Name Billing option. This field supports the Calling Name for ISDN PRI secured feature (SFID 220). For more information on this feature, see Division 2, Section 4A220.

Software Release: 5E11 and later.
Required Field.
Default: FLATRATE
Valid Entries:

Valid CNAM AMA Entries

Entry	Definition
FLATRATE	Flatrate-rate billing
USAGESEN	Usage sensitive billing

Data Rules:

When CNAM AMA is "USAGESEN", a 10-digit BILLING DN must be entered.

7.19 PCN ALW

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Description: Is privacy of Calling Name allowed? This field supports the Calling Name for ISDN PRI secured feature (SFID 220). For more information on this feature, see Division 2, Section 4A220.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When PCN ALW is "N", PCN AMA must be "FLATRATE".

When PCN ALW is "Y", TRK DIR must be "2W" or "INC".

7.20 PCN AMA

Description: Enter the Privacy of Calling Name billing option. This field supports the Calling Name for ISDN PRI secured feature (SFID 220). For more information on this feature, see Division 2, Section 4A220.

Software Release: 5E11 and later.
Required Field.
Default: FLATRATE
Valid Entries:

Valid PCN AMA Entries

Entry	Definition
FLATRATE	Flatrate-rate billing
USAGESEN	Usage sensitive billing

Data Rules:

When PCN AMA is "USAGESEN", a 10-digit BILLING DN must be entered.

7.21 EDS CND

Description: Is Electronic Directory Service Calling Name Delivery allowed? This field supports the Calling Name for ISDN PRI secured feature (SFID 220). For more information on this feature, see Division 2, Section 4A220.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When EDS CND is "Y", TRK DIR must be "2W" or "OUT".

When EDS CND is "Y", EDS GRP must be entered.

7.22 EDS GRP

Description: Enter the Electronic Directory Service group name. This field supports the Calling Name for ISDN PRI secured feature (SFID 220). For more information on this feature, see Division 2, Section 4A220.

Software Release: 5E11 and later.
Valid Entries: 1 to 8 characters

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Data Rules:

When the TKGRP form has an entry in the EDS GRP field, a corresponding EDSGP form must exist where EDS GRP matches the EDS GRP on the TKGRP form.

The Calling Name for ISDN PRI is a Secured Feature that must be purchased by the office before the following TKGRP form field names CNAM ALW, CNAM AMA, PCN ALW, PCN AMA or EDS CND can be changed from their default values or an entry can be made in the EDS GRP field. A SFSYS form must exist with SFID 220 ACT set to "Y".

7.23 NPA SOURCE

Description: The NPA SOURCE field is used to indicate the numbering plan area code source of the CPN (Calling Party Number) to the PRI (Primary Rate Interface) trunk originating software. The NPA SOURCE is used on PRI trunk originations when the CPN is 7 digits and the NXX of the CPN is non-unique. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later.
Valid Entries:

Valid NPA SOURCE Entries

Entry	Definition
BASENPA	use the base numbering plan area
CPN10DIGITS	the CPN on the incoming PRI trunk must always be 10 digits
FENPA	use the far end numbering plan area

Data Rules:

When CPN SCRN is "Y", NPA SOURCE must be entered.

When NPA SOURCE is "FENPA", FAR END NPA must be entered.

When RN SCRN is "Y", NPA SOURCE must be entered.

7.24 B CHAN NEG

Description: Is the "negotiation" of the B-channel allowed? This field allows the user to be connected to a different B-channel than the one offered when the 5ESS Switch offers a call over an ISDN PRI interface. For more information on this feature, see Division 2, Section 6K.

Software Release: 5E14 and later.
.
Default: N
Valid Entries: Y, N

7.25 PASS OLI

Description: Should the Originating Line Information be passed with the SETUP message to this termination?
Required

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When PASS OLI is "Y", TRKCLS must be "EDSL" or "EDSLHM".

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When PASS OLI is "Y", ACT must be "Y" for SFID 556 on the SFSYS form.

When PASS OLI is "Y", DCHAN DESIG on the TRUNK form must not be entered.

7.26 DISP CNTRL

Description: The DISP CNTRL field is used to define whether or not Calling Name is delivered using the Meridian NI-1 format Display Information Element instead of the Standard NI-3 Facility Information Element. This field supports the PRI (Primary Rate Interface) Calling Name for the Canadian Market feature. For more information on this feature, see Division 2, Section 4A604.

Software Release: 5E16 and later.
.
Default: N
Valid Entries: Y, N

Data Rules:

When DISP CNTRL is "Y", TRKCLS must be "EDSL" or "EDSLHM".

7.27 SN TRK

Description: Proprietary field.

SSP800 TRUNKS

The following fields (Section 7.28 - Section 7.30) are available for 5E4(2) and later Software Releases, and are valid only with SSP (Service Switching Point) trunk groups. SSP trunks must have a TRK DIR of "INC" or "2W".

7.28 FAR END LATA

Description: An entry in this field provides the identity of the FAR END LATA. This designation is required for SSP (Service Switching Point) trunk groups. For non-SSP trunk groups, leave this field blank.
Valid Entries: 0 or 100 - 999

7.29 FAR END NXX

Description: An entry in this field provides the identity of the FAR END NXX code. This designation is required for SSP (Service Switching Point) trunk groups which serve a single NXX code.
Valid Entries: 200 - 999

Data Rules:

If this field is entered, then FAR END NPA and FAR END LATA must be entered. If the trunk group connects to an office which serves more than one NXX code, leave this field blank. For non-SSP trunk groups, leave this field blank.

7.30 COIN

Description: Is the SSP (Service Switching Point) traffic on the trunk group entirely COIN originated?

Data Rules:

If a "Y" is entered in this field, then FAR END LATA and FAR END NPA must be entered. If TRK DIR is "RAF", COIN must be either "N" or not entered.

RELEASE LINK

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The fields (Section 7.31 - Section 7.32) apply to Release Link trunk groups.

7.31 RLT TYPE

Description: Enter the type of Hold for this trunk.

Required Field.
Default: NONE
Valid Entries:

Valid RLT TYPE Entries

Entry	Definition
NONE	This trunk is not a RLT.
PERM	This RLT is not released when the terminating port answers (the attendant maintains control over the call with 50B or ISDN type consoles).
TEMP	This RLT is released when the terminating port answers (the attendant does not have control over the call after answer).

Data Rules:

When the value in this field is "PERM" or "TEMP", then TRK DIR must be "INC" or "2W" depending if this switch is at the main or branch of the Attendant arrangement.

When the value in this field is "PERM" or "TEMP", then TRKCLS must be "PFLASH", CUT THRU must be "N" or not entered, TRK DIR must be "2W", BRCS must be "Y" and INPULSING must be "TT".

When the value in this field is "PERM" or "TEMP" and TRK DIR is "2W", then on the associated TRUNK form(s) IN START DIAL must be "DLTN" and "OUT" START DIAL must be blank (Tie Trunk at a branch).

When the value in this field is "PERM" or "TEMP" and TRK DIR is "INC" and INPULSING is "DP", "MF", "TT", then on the associated TRUNK form(s) OUT START DIAL must be blank (Tie Trunk at a main).

When the value in this field is "PERM" or "TEMP" and TRK DIR is "INC" and INPULSING is "NONE", then on the associated TRUNK form(s) IN START DIAL must be "DIRC" and OUT START DIAL must be blank (FX Trunk at a main).

When the value of this field is "PERM" or "TEMP" and TRK DIR is "2W" and BRCS is "Y", then BRCS multiway features as defined on the MWFD form (5602 Record) and BRCS call waiting features defined on the CWTFD form (5614 Record) with INVOCATION of "ORIG" may be assigned to the trunk on a TKGRPFA form (5206 Record) or TRUNKFA form (5205 Record). Specific call waiting parameters may be specified on the CWTTPA form (5603-4 Record).

7.32 RLT FLASH

Description: Will a branch switch send flashes for called party disconnect? If RLT FLASH is "N", a branch switch will send flashes only for called party answer and calling party disconnect. This is used if the main switch is a 5ESS Switch with 50B or ISDN consoles.

There is limited signaling between a branch and the main location. Because 50B and ISDN attendant type consoles can only recognize a flash as called party answered, this value is set at the branch to control the type of flashes sent to the main switch.

Required Field
Default: N
Valid Entries: Y, N

Data Rules:

It can only be "Y" if RLT TYPE is "PERM".

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MORE MISCELLANEOUS FEATURES

The following fields (Section 7.33 - Section 8.10) support miscellaneous features.

7.33 ACP SDN

Description: Is this a dedicated incoming trunk group to an SDN (Software Defined Network) at an ACP (Action Control Point)? Only a 5ESS Switch ACP (ACT PT SDN on the OFCOPT form is "Y") will be allowed to have "Y" entered in this field.
Default: N
Valid Entries: Y, N

Data Rules:

When this field is "Y", TRK DIR must be "INC" or "2W", TRKCLS must be "CAMAANI", "CAMAONI", "EDSL", "LATA" or "PF", BRCS must be "N" and CBC must be "N".

When this field is "Y" and the TRKCLS is "PF", then the ANI field on the TRUNK form must be "Y".When this field is "Y" and TRKCLS is "PF" or "EDSL", then a 10-digit BILLING DN must be entered.

This field must be blank or "N" when DEDICATED SRV is entered.

For 5E6 and later, ACP SDN must be "N" when LN TYPE contains a value other than NULL.

CCS (Common Channel Signaling) may not have ACP SDN entered as "Y". If INPULSING or OUTPULSING is entered as "ISUP7" or "CCIS6", ACP SDN must not be entered or must be entered as "N".

7.34 SDN STAT GRP

Description: Is a SGD (Station Group Designator) to be forwarded from the originating PBX to the 5ESS Switch ACP in the Software Defined Network? The SGD is a digit at the end of the dialed digit string that indicates the group where the station belongs.

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then TRKCLS must be "PF" and ACP SDN must be "Y".

7.35 SPA BILL DN

Description: Enter a 10-digit Special Access Customer billing telephone number. This field must be entered only for Special Access WATS and MEGACOM Trunk Groups (TRKCLS of "SPAWATS" or "SPAMEG") that are incoming to this office from a customer's PBX. This billing number is used to identify the service subscribed to by the Special Access customer.

Software Release: 5E5 and later
Valid Entries: a 10-digit telephone number NPA-0/1XY-XXXX.

SPA BILL DN Format

For Special Access WATS (TRKCLS of "SPAWATS")

Digits	Value
1 - 3	NPA of the customer
4	0 - no intrastate service is allowed 1 - full intrastate service is allowed

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5	Reserved for future use
6	0 - no interstate service is allowed 1 - 6 - the interstate service band subscribed to by the customer
7 - 10	0 - 9. Used with the NPA to identify the customer.

SPA BILL DN Format
For MEGACOM Service (TRKCLS of "SPAMEG")

Digits	Value
1 - 3	NPA of the customer
4	0 - no intrastate service is allowed 1 - full intrastate service or permissive in-state routing is allowed. In-state routing allows a customer to place calls to NPAs within the same state as the customer premises as long as the calls do not originate from stations within that state.
5	9 - indicates that the customer has signed a letter of agreement for permissive in-state routing 0 - indicates no in-state routing
6	6 - indicates that interstate service band 6 is allowed.
7	0 - 9. Service mode identifier.
8 - 10	0 - 9. Used with the NPA to identify the customer.

Data Rules:

The NPA entered for this SPA Billing TN must be defined on a SPABS form (5319 Record).

7.36 SPA SUPV

Description: Will answer supervision be returned on this Special Access WATS or MEGACOM trunk group?

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

This field must be entered only for Special Access WATS and MEGACOM Trunk Groups (TRKCLS of "SPAWATS" or "SPAMEG"). This field must be entered for a Special Access WATS trunk group (TRKCLS of "SPAWATS"). This field must be "Y" for a MEGACOM trunk group (TRKCLS of "SPAMEG").

8. FORM ENTRIES - 5202-7 RECORD

8.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

8.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

MORE MISCELLANEOUS FEATURES

8.3 ANI6

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Description: Should the ANI6 digits 6 or 06 be outpulsed? ANI6 indicates to the operator system that calls may require special screening. This capability provides the ability based on the originating Trunk Group or OUTWATS SFG to optionally outpulse ANI6 digits when making an OUTWATS SFG call or a trunk origination when the trunk class of service is "PF", "PFITT", "PFLASH". Traditionally, ANI6 indicates that the call is from a Hotel/Motel customer.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

If ANI6 is "Y": ANI7 must not be "Y"; TKRKCLS must be "PF", "PFITT", or "PFLASH"; TRK DIR must be "INC" or "2W"; and DATA RATE must not be entered.

8.4 ANI7

Description: Should the ANI7 digits 7 or 07 be outpulsed? ANI7 indicates to the operator system that calls may require special screening. Traditionally, ANI7 indicates that the call is from a coin phone.

This capability provides the ability based on the originating Trunk Group or OUTWATS SFG to optionally outpulse ANI7 digits when making an OUTWATS SFG call or a trunk origination when the trunk class of service is "PF", "PFITT", "PFLASH".

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

If ANI7 is "Y":

- ANI6 must not be "Y"
- TKRKCLS must be "PF", "PFITT",or "PFLASH"
- TRK DIR must be "INC" or "2W"
- DATA RATE must not be entered.

8.5 ANI TYPE

Description: This field is not used at this time and therefore no data can be entered. It may be used in a later software release.

8.6 PRIVACY

Description: Is the received directory number private? This field is an all-call privacy indicator. All-call privacy allows the calling party to prevent TN information from being displayed to the called party for all calls. This privacy may be deactivated by dialed code on a per call basis.

This field also applies to Network Interconnect calls entering an Access Tandem Office. When a call (and its billing number) arrives at an Access Tandem on an EAMF trunk and is routed out on a CCS7 trunk, the PRIVACY field determines whether the AT will mark the billing number's CCS7 presentation parameter "private".

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This field also applies to an EDSL/PRI call.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

8.7 INTER SM TRK

Description: Is the trunk group an intermodule trunk group?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the intermodule trunks must be defined on the IMTRK form (5210 Record).

For more information on intermodule trunking, refer to the Inter-Module Trunking feature description in Division 2, Section 1N.

If "Y" is entered and DEST PT CODE is known, then DEST PT CODE must be in Intermodule Trunk format.

For 5E7 and later, if "Y" is entered and INPULSING or OUTPULSING is equal to "ISUP7", then the MEMBs of the matching TGNs on the TRUNK form must be on the same SM; SM is the first three digits of the TEN, DEN, or (for 5E9(2) and later) NEN.

INTER SM TRK must be "N" when TRKCLS is "INAISTRK".

8.8 MAI

Description: Enter the MAI (Mode of Access Indicator) which is used to indicate whether FGD (Feature Group D) access is "switched" or "direct". The MAI field supports the OSPS Feature Group D Incoming Signaling for Special Applications, Release 2 feature. For more information on this feature see Division 2, Section 4A373.

Software Release: 5E9(1) and later.
Required Field.
Default: S
Valid Entries:

Valid MAI Entries

Entry	Definition
D	Direct - trunk group is connected directly to traffic originator.
S	Switched - trunk group is connected to a switched network.

8.9 API CODE

Description: Enter the API (Access Provider Identifier) code for a Feature Group D trunk group. The API CODE field supports the Feature Group D Incoming Signaling for Special Applications, Release 2 feature. For more information on this feature see Division 2, Section 4A373.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 9999

Data Rules:

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API CODE must not be entered if FACILITY NBR is entered.

8.10 ASI PROXY

Description: Is the trunk group capable of carrying ASI Proxy traffic?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ASI PROXY equals "Y",

- TRKCLS must be "PFLASH", TRK DIR must be "OUT", and OUTPULSING must be "TT";
- All associated TRUNK forms must have OUT START DIAL equal to either "IMED" or "WINK";
- The associated RTIDX form (having TRUNK GROUP NUMBER defined on this TKGRP form) must have ROUTE TYPE equals "HUNT".

ISDN ATTENDANT

The following fields (Section 8.11 - Section 8.14) are applicable to ISDN Attendant trunk groups, available with 5E4(2) and later Software Releases.

8.11 MK BUSY

Description: Is Selective Customer Control of Facilities is on? This feature allows the attendant to deny access to a privately owned trunk group by making the trunk group busy.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(1) and later, MK BUSY must be blank if TRKCLS is "RMSD3" or "TOPAS".

For 5E11 and later, when MK BUSY is "Y":

- ISAT MLHG must be entered.
- MAKE BUSY KEY must not be entered.

8.12 BW LAMP

Description: Are trunk group busy warning lamp(s) provided for this group on the attendant's console? If "Y" is entered, the lamp will light whenever the threshold of idle members in a Trunk Group is less than or equal to the threshold value entered in the WARN THRESH field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then ISAT MLHG must be entered.

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8.13 ISAT MLHG

Description: Enter the ISDN Attendant MLHG that can busy monitor this trunk group.
Valid Entries: For 5E14 and earlier: 1 - 2000

For 5E15 and later: Blank or 1 - 8191

Data Rules:

If an ISAT MLHG is entered, it must be defined on a MLHG form with a MLHG FEATURE associated with a HUNT TYPE of "ISAT".

8.14 WARN THRESH

Description: Indicate the threshold of members of this group that must be idle at any given time before the trunk group busy warning lamp(s) will light at the attendant's console.
Valid Entries: 0 - 1952

LEASED NETWORK

The following Leased Network fields (Section 8.15 - Section 8.18) are available with 5E6 and later Software Releases. For more information on the Leased Network feature, see Division 2, Section 1O.

8.15 LN TYPE

Description: The LN TYPE indicates if the trunk group is on a Leased Network and if it queries the NCP (Network Control Point) database for routing and charging information for incoming calls. Enter the LN (Leased Network) Trunk Type.
Default: NONE
Valid Entries:

Valid LN TYPE Entries

Entry	Definition
QRY	A Leased Network trunk that queries the NCP database.
NOQRY	A Leased Network trunk that does not query the NCP database.
IMT	A Leased Network Inter-Machine trunk, a trunk that connects two switches within the Leased Network.
NONE	Not a Leased Network trunk.

Data Rules:

When LN TYPE is "QRY", the following restrictions apply:

- If QUEUE ALLOWED is "Y", TRKCLS must be "PF", "PFLASH", "LATA", "TTOLLCON" or "EDSL".
- If TRKCLS is "PF" or "EDSL", then BILLING DN must be 10 digits.
- If OUTPULSING or INPULSING is "ISUP7", then TRKCLS must be "LATA", "PF" or "TTOLLCON", and BRCS must be "Y".
- If OUTPULSING or INPULSING is "DP", "MF", "TT", "RPEO" or "RPTO", then TRKCLS must be "PF", "PFLASH", "LATA" or "CAMAANI", and BRCS must be "Y".
- When TRK DIR is "INC", and INPULSING is not entered or is entered as "DCHN" or "NONE", then TRKCLS must be "EDSL", and BRCS must be "Y".
- When TRK DIR is "OUT", and OUTPULSING is not entered or is entered as "DCHN" or "NONE", then TRKCLS must be "EDSL", and BRCS must be "Y".
- When TRK DIR is "2W", and INPULSING or OUTPULSING is not entered or is entered as "DCHN" or "NONE", then TRKCLS must be "EDSL", and BRCS must be "Y".

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When LN TYPE is "NOQRY", the following restrictions apply:

- If QUEUE ALLOWED is "Y", TRKCLS must be "EDSL", "PFLASH" or "PF".
- If OUTPULSING or INPULSING is "DP", "MF", "TT", "RPEO" or "RPTO", then TRKCLS must be "PF" or "PFLASH", and BRCS must be "Y".
- When TRK DIR is "INC", and INPULSING is not entered or is entered as "DCHN" or "NONE", then TRKCLS must be "EDSL", and BRCS must be "Y".
- When TRK DIR is "OUT", and OUTPULSING is not entered or is entered as "DCHN" or "NONE", then TRKCLS must be "EDSL", and BRCS must be "Y".
- When TRK DIR is "2W", and INPULSING or OUTPULSING is not entered or is entered as "DCHN" or "NONE", then TRKCLS must be "EDSL", and BRCS must be "Y".

When LN TYPE is "IMT", the following restrictions apply:

- If QUEUE ALLOWED is "Y", TRKCLS must be "PFITT".
- If OUTPULSING or INPULSING is entered as "ISUP7", then TRKCLS must be "PFITT", and BRCS must be "Y".
- If OUTPULSING or INPULSING is "DP", "MF", "TT", "RPEO" or "RPTO", then TRKCLS must be "PFITT", and BRCS must be entered as "Y".

When LN TYPE is "NONE" or is not entered, the following restrictions apply:

- If OUTPULSING or INPULSING is "ISUP7", then TRKCLS must be "TTOLLCON", "PRINTOLL", "SCINTOLL", "BVINTOLL", "BVTOLLCM", "IC", or "LATA", and BRCS must be "N".

LN TYPE cannot be "NOQRY" when OUTPULSING or INPULSING is "ISUP7".

When the following restrictions on the TKGRP form refer to an assigned ATH (Authorization Code) feature or ARS feature, they imply assignment on a TRKGRPFA, TRUNKFA or CLUSTR form. Parameter values for these forms are defined on either the associated feature definition (FD) form or a parameter (PA) form. BRCS parameter forms override feature definition forms. An "EDSL" trunk group and its member trunks can be assigned ATH (Authorization Code) features only if the trunk group is a Leased Network group that does not query a Network Control Point database (LN TYPE "NOQRY").

When a Leased Network trunk group (LN TYPE "QRY", "NOQRY" or "IMT"), or one of its members, is assigned both an ATH (Authorization Code) feature and an MDR feature, the ATH FOR MDR on the associated ATHTPA or ATHFD form must be "N".

When a trunk group that does not belong to a Leased Network (LN TYPE "NONE" or blank), is assigned an MDR (Message Detail Recording) feature, the TRKCLS on this form may not be "LATA" or "CAMAANI".

When a trunk group belongs to a Leased Network (LN TYPE "QRY", "NOQRY" or "IMT"), and has INPULSING "ISUP7", then it must have at least one trunk assigned on the TRUNK form. The trunk group or one of its members must be assigned an ARS feature, and the TCM IN field on the associated ARSTPA or ARSFD form must be left blank. Similarly, if the trunk group has OUTPULSING "ISUP7", the TCM OUT field must be blank. If the LN TYPE is "QRY, the DIAL PLAN field on the ARSTPA or ARSFD form must be "ODP".

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When an "EDSL" trunk group is not a Leased Network group (LN TYPE "NONE" or blank), and the group or one of its member trunks is assigned an ARS feature, the QUEUE ALLOWED field on the associated ARSTPA or ARSFD form must be "N".

When a trunk group is assigned an ARS feature, and the QUEUE ALLOWED field on the associated ARSFD form is "Y", the TRKCLS on this form must be "PF", "PFLASH", "PFITT", "EDSL", "LATA", "CAMAANI" or "TTOLLCON".

When a trunk group or one of its members is assigned an ARS feature, and the QUEUE ALLOWED field on the associated ARSTPA or ARSFD form is "Y", then:

- if the trunk group's TRKCLS is "EDSL", it must be a Leased Network access trunk group (LN TYPE "QRY" or "NOQRY").
- if the TRKCLS is "LATA", "CAMAANI" or "TTOLLCON", the LN TYPE must be "QRY".

When a trunk group or one of its members is assigned an ARS feature, and the trunk group has LN TYPE:

- "NONE" (or blank), then the TRKCLS must be "PF", "PFITT", "PFLASH", "EDSL" or "EDSLHM".
- "QRY", then the TRKCLS must be "PF", "PFLASH", "LATA", "CAMAANI", "EDSL", or "TTOLLCON".
- "NOQRY", then the TRKCLS must be "PF", "PFLASH" or "EDSL".

When a trunk group has LN TYPE "QRY" or it has LN TYPE "IMT" with INPULSING "ISUP7", then if the trunk group or one of its members is assigned an ARS feature, the CSV ARS GRP must not be entered on the corresponding ARSTPA or ARSFD form. Also, the trunk group and its members may not be assigned an ATH feature.

When a trunk group has LN TYPE "QRY" and is assigned an ARS feature, the following fields on the ARSTPA or ARSFD form must be entered as "N": ALT FRL, RLT FRL IND and RLT AMA IND. The Leased Network ACP retrieves this information from the NCP.

When a trunk group has LN TYPE "QRY", TRK DIR "INC" or "2W", and for 5E8 and later, INPULSING other than "ISUP7" and "CCIS6", then it must have at least one trunk member defined on the TRUNK form. There must be one TIMING form with the trunk group's TRKCLS and INPULSING and the trunk's IN START DIAL.

When an "EDSL" trunk group has LN TYPE "NOQRY", and TRK DIR "INC" or "2W", it must have at least one trunk member defined on the TRUNK form. There must be one TIMING form with SERVICE CLASS "EDSL", START SIGNAL "NONE" and SIGNAL TYPE "DCHN".

When LN TYPE is "QRY", "NOQRY", or "IMT", the trunks in this trunk group may not reside on an SM with a basic configuration, i.e. for each trunk in this group, the first three digits of the TEN, DEN, SLEN, or (for 5E9(2) and later) NEN on the TRUNK form must be an SM defined on an EQIM form where the CONFIGURATION field is not "BASIC".

8.16 LN VIRT

Description: Is this a Leased Network virtual on-net trunk group?

Required Field.
Default: N

Data Rules:

For virtual on-net calls, the Leased Network Trunk type must be "QRY". If LN VIRT is "Y", LN TYPE must

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be "QRY".

8.17 LN GROUP

Description: This field is the Leased Network group name, used to define a set of ARS (Automatic Route Selection) Groups which share a Trunk Group, in particular, an LN CCS7 interoffice trunk group.
Valid Entries: 1 to 8 characters

Data Rules:

If an LN GROUP is entered, it must be defined on an LNARSGD form (5214 Record).

For LN trunk groups that query the NCP (Network Control Point) and for LN interoffice trunk groups with CCS7 inpulsing, LN GROUP must be entered. That is, if LN TYPE is entered as "QRY", or if LN TYPE is entered as "IMT" with INPULSING "ISUP7", LN GROUP must be entered.

If LN TYPE is entered as "IMT" and the associated INPULSING is not "ISUP7", or if LN TYPE is entered as "NOQRY" or is not entered, LN GROUP must not be entered.

8.18 LN CRIT Q

Description: Will an outgoing trunk group support critical user queuing? The field is used in call processing only when the incoming trunk is defined as a Leased Network trunk. "Y" indicates that a Leased Network incoming trunk may queue for this trunk only if the incoming trunk is defined as a Leased Network critical user, i.e. FRL (Facility Restriction Level) is 14. "N" indicates that all Leased Network incoming trunks may queue for this trunk.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When LN CRIT Q is entered as "Y", QUEUE FEATURE must be entered, and both QUEUE ALLOWED and ENQUEUE ACT must be "Y".

When LN CRIT Q is "Y", QUEUE FEATURE must be defined on a QUFD form (5617-1 Record) with QUEUE TYPE "OFFHK".

ENHANCED 911

The following fields (Section 8.19 - Section 8.30) apply only to the E911 feature. For information regarding E911, see Division 2, Section 1BD.

8.19 E911 TYPE

Description: Enhanced 911 Trunk Type. This field describes the kind of E911 support this Trunk Group will provide.

Software Release: 5E7 and later
Required Field.
Default: NONDED
Valid Entries:

Valid E911 TYPE Entries

Entry	Definition
NONDED	Non-dedicated trunk group. E911 calls incoming over this trunk group will be counted against the E911 trunk SFG limit. The E911 TRK SFG is specified on the OFCOPT form (5509 Record) and defined on the PFASFG form (5609-3 Record).

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PBXNONDED	Non-dedicated PBX trunk group. E911 calls incoming over this trunk group will be counted against the E911 line SFG limit. The E911 LN SFG is specified on the OFCOPT form and defined on the PFASFG form.
DED	E911 dedicated trunk group.
DIRANI	E911 dedicated direct connect trunk group with ANI. The dialed digits are not transmitted.
DIRNOANI	E911 dedicated direct connect trunk group without ANI. Neither the dialed digits nor the ANI digits are transmitted.
1ANPD	E911 trunk type that handles 911 calls incoming to a 5ESS Switch from a 1A ESS Switch.
TNDM_TNDM	E911 dedicated tandem to tandem trunk. TNDM_TNDM assigned to an incoming ISUP7 TG at the terminating E911 Tandem Switch allows the called DN (in the ISUP7 IAM) to be used for routing to the Primary PSAP.
WLNONDED	Non-dedicated wireless E911 trunk type to allow an ISUP7 trunk group as a non-dedicated wireless E911 connection. This provisioning allows, for a wireless E911 call, the use of digit analysis for the digits in the Called Party Number field in ISUP7 IAM (Initial Address Message) to route the call instead of by-passing digit analysis.

Data Rules:

When E911 TYPE is "DED", "DIRANI", or "DIRNOANI", TRK DIR must be "INC" and ESCO must be entered.

When E911 TYPE is "DIRANI" or "DIRNOANI", TRKCLS must be "CAMAANI"; members of the trunk group may not have an IN START DIAL of "DIRC" on the TRUNK form.

For 5E11 and later, if E911 TYPE is "DED", "DIRANI" or "DIRNOANI", it is recommended that AML ALARM be set to "CRITICAL".

When E911 TYPE is "DED", TRKCLS must be "CAMAANI", "LTOLLCON", or "TTOLLCON". If TRKCLS is "LTOLLCON" or "TTOLLCON", INPULSING must be "ISUP7".

For 5E12 and later:

- When E911 TYPE is "1ANPD", "DED", "DIRANI", or "DIRNOANI", TRK DIR must be "INC" and ESCO must be entered.
- When E911 TYPE is "1ANPD", "DIRANI", or "DIRNOANI", TRKCLS must be "CAMAANI".
- When E911 TYPE is "1ANPD", "DIRANI", or "DIRNOANI", and CH IN START is "Y", IN START DIAL must not be "DIRCON".
- When TRK DIR is not "2W", "OUT", or "ANN", or TRK DIR is "INC" and E911 TYPE is not "1ANPD", "DED", "DIRANI", "DIROANI", or TNDM_TNDM then AML PERCENT must not be entered.

When E911 is TNDM_TNDM:

- TRK DIR must be "INC",
- TRKCLS must be "LTOLLCON" or "TTOLLCON",
- INPULSING must be "ISUP7",
- ESCO must be entered.

The SFID 330 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before the E911 TYPE field can be set to "TNDM_TNDM".

Tandem to Tandem E911 is a secured feature requiring that the ACT field for SFID 330 be set to "Y" on the SFSYS form (5713-1 Record) to enable the feature. The ACT field for SFID 61 must be set to "Y" to

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activate the Enhanced E911 secured feature before the ACT field for SFID 330 can be set to "Y".

For 5E13 and later:

When E911 TYPE is "WLNONDED",

- TRKCLS must be "LTOLLCON" or "TTOLLCON".
- INPULSING must be "ISUP7", "NONE", or not entered.
- OUTPULSING must be "ISUP7", "NONE", or not entered.

When E911 TYPE is "WLNONDED" and OUTPULSING is "NONE" or not entered, INPULSING must be "ISUP7".

When E911 TYPE is "WLNONDED" and INPULSING is "NONE" or not entered, OUTPULSING must be "ISUP7".

The SFID 298 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before the E911 TYPE field on the TKGRP can be set to "WLNONDED".

8.20 ESCO

Description: Emergency Service Central Office Number. This field identifies the originating office or calling area of an E911 caller. It is used to retrieve an ESN (Emergency Service Number) which determines routing and selective transfer information for the E911 call.

When a 911 call arrives at the E911-serving office on a trunk group not assigned an ESCO, the call is associated with an ESCO from the DAS form (5300-1 Record).

Software Release: 5E7 and later
Valid Entries: 1 - 999

Data Rules:

ESCO must be defined on an ESCO form (5541 Record).

8.21 CAMA PSAP

Description: Is this Trunk Group a link to a CAMA PSAP (Centralized Automatic Message Accounting Public Safety Answering Point)?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When CAMA PSAP is "Y", other fields on this TKGRP form must be set according to the following table.

Field Name	Entry
ABND TIMER	must be entered
BILLING DN	should be entered
BW LAMP	"N" or blank
CAMA PSAP	"Y"
COIN	"N" or blank
CUT THRU	"N" or blank
DATA RATE	blank
E911 TYPE	"NONDED"

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ENQUEUE ACT	"Y" or blank
ESCO	blank
FAR END LATA	blank
HUNT TYPE	"2WF", "2WB", or "FIFO"
INPULSING	"TT"
INTER SM TRK	"N"
ISAT MLHG	blank
LN TYPE	"NONE" or blank
OUTPULSING	"MF"
PBX ID	blank
QUEUE ALLOWED	"N" or blank
QUEUE FEATURE	blank
RLT TYPE	"NONE"
TRK DIR	"2W"
TRKCLS	"PFLASH"
UNRES EA	"N"
WINK START	must be entered

If "Y" is entered, then:

- each trunk in this trunk group must be defined on a TRUNK form with ANI set to "N", IN START DIAL "DLTN", OUT START DIAL "WINK", IDLE STATE "ON", and ANSWER DELAY TIMING "N" or blank.
- the members of the trunk group may be assigned IDP, MW, and SC features via a TRUNKFA, TKGRPFA, or associated CLUSTR form; they may not be assigned ARS, ATH, ACCT, PFA, PP, MDR, TGSR, or TOD features. For an explanation of feature interactions on PSAP trunks, see "E911 Emergency Service" in the ***5ESS Switch Local and Toll System Features*** document, 235-190-115.

When CAMA PSAP is "Y" and a value is entered in the ATTTN field, then ATTTN must match the AUTOMATIC TRUNK TEST TABLE NUMBER on an AUTO form (5505-1/2 Record) where AUTOMATIC PROGRESSION TEST TYPE is "PB", the PERMANENT BUSY test value is 8, and other test values are blank.

8.22 ENH PSAP SIG

Description: The Enhanced Public Safety Answering Point Signaling field indicates whether or not the trunk designated as a CAMA (Centralized Automatic Message Accounting) PSAP uses enhanced CAMA signaling.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ENH PSAP SIG is "Y", CAMA PSAP must be "Y".

When ENH PSAP SIG is "Y", the ACT fields for both SFID 61 and SFID 299 on the SFSYS form must be "Y".

When ENH PSAP SIG is set to "Y" and ATTTN matches the AUTOMATIC TRUNK TEST TABLE NUMBER on the AUTO form, AUTOMATIC PROGRESSION TEST TYPE must be "PB", PERMANENT BUSY TEST must be "48", and all other test values on this AUTO form must be blank.

When ENH PSAP SIG is "N", CAMA PSAP is "Y", and ATTTN matches the AUTOMATIC TRUNK TEST TABLE NUMBER on the AUTO form, the AUTOMATIC PROGRESSION TEST TYPE must be "8", and all other test values must be blank on this AUTO form.

8.23 TEN DIG ONLY

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Description: The Ten Digit Only field is used to support the Wireless E911 feature. See Division 2, Section 4A298.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When TEN DIG ONLY is "Y", ENH PSAP SIG must be "Y".

8.24 PSAP RERTE TN

Description: Public Safety Answering Point Reroute Telephone Number. This field is a 7- or 10-digit telephone number used to reroute calls that terminate to a busy PSAP. A PSAP may be busy because of traffic or because the customer or PSAP has activated a make busy key assigned to the PSAP trunk group.

The MAKE BUSY KEY, PSAP RERTE TN, and RERTE ACT fields determine whether or not call forwarding options will be assigned to the PSAP trunk group. Three options are available.

- Night service and/or power failure call forwarding only. This feature forwards calls to the RERTE TN only if a scan point specified in the MAKE BUSY KEY is activated due to night service or a PSAP power failure. To provision this feature a 7- or 10-digit telephone number must be entered in the RERTE TN field, a scan point number must be entered in the MAKE BUSY KEY field, and RERTE ACT must be "N".

- Traffic-busy forwarding only. This feature forwards calls to the RERTE TN only if the PSAP is traffic-busy. To provision this feature, a 7- or 10-digit telephone number must be entered in the RERTE TN field, the MAKE BUSY KEY field must be blank, and RERTE ACT must be "Y".

- Night service/power failure and traffic-busy forwarding. This feature forwards calls to the RERTE TN if either the scan point specified in the MAKE BUSY KEY is activated (night service or power failure), or the PSAP is traffic-busy. To provision this feature a 7- or 10-digit telephone number must be entered in the RERTE TN field, a scan point number must be entered in the MAKE BUSY KEY field, and RERTE ACT must be "Y".

These features take precedence over E911 alternate routing. If the switch attempts but fails to complete an E911 call to the primary PSAP (specified in the caller's ESN form), it determines if it should route to the PSAP RERTE TN. If rerouting fails or is not required, the switch then routes to an alternate PSAP TN specified in the ESN form.

Software Release: 5E7 and later
Valid Entries: 7 or 10 digits

Data Rules:

PSAP RERTE TN is only applicable for trunk groups with CAMA PSAP set to "Y". When PSAP RERTE TN is entered, CAMA PSAP must be "Y".

8.25 RERTE ACT

Description: Reroute Activation. Is reroute allowed for a busy PSAP? If this field is "Y", the PSAP RERTE TN will be used if a call terminates to a busy PSAP.

Software Release: 5E7 and later

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field is applicable only for trunk groups where CAMA PSAP is "Y" and PSAP RERTE TN is entered. When RERTE ACT is "Y", PSAP RERTE TN must be entered.

8.26 WINK START

Description: Wink Start Timer. This field indicates the number of seconds the switch will wait for the PSAP to send a start outpulsing signal (a wink). The recommended value for this field is 16.

If CAMA PSAP is "Y" and WINK START is not entered, the software will set WINK START to 16.

Software Release: 5E7 and later
Valid Entries: 4 - 20 (seconds)

Data Rules:

This field is only applicable for trunk groups with CAMA PSAP set to "Y". When WINK START is entered, CAMA PSAP must be "Y".

8.27 ABND TIMER

Description: This field indicates the number of seconds the switch will keep the PSAP ringing after the caller abandons a 911 call. The recommended value for this field is 18.

If CAMA PSAP is "Y" and ABND TIMER is not entered, the software will set ABND TIMER to 18.

Software Release: 5E7 and later
Valid Entries: 0 - 31 (seconds)

Data Rules:

This field is only applicable for trunk groups with CAMA PSAP set to "Y". When ABND TIMER is entered, CAMA PSAP must be "Y".

8.28 BCLID FEATURE

Description: Enter the BCLID (Bulk Calling Line ID) feature name. (See Division 2, Section 1Y for more information on BCLID)

Software Release: 5E8 and later
Valid Entries: 1 - 8 characters

Data Rules:

If this field is entered:

- TRKCLS must be "EDSL", "EDSLHM", "PBXDID", "PF", "PFLASH", or "PFITT", and
- BILLING DN must be 10 digits long.

BCLID FEATURE must be entered if BILLING DN is entered and TRKCLS is "PBXDID".

If this field is entered, then:

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- this feature must be defined as a feature on the BCLIDFD form,and
- if BCLID GRP is not entered, then BCLID GRP on the BCLIDFD form must be specified.

8.29 BCLID GRP

Description: Enter the BCLID (Bulk Calling Line ID) group name.

Software Release: 5E8 and later
Valid Entries: 1 - 8 characters

Data Rules:

If BCLID GRP is entered then BCLID FEATURE must be entered.

If BCLID GRP is entered, then it must match a BCLID GRP entry on the BCLIDGP form (5629-2 Record).

8.30 OUTAGE RPT

Description: This field allows the emergency service personnel the ability to designate specific trunk groups to be monitored for 100% OOS (Out of Service) conditions.

Software Release: 5E11 and later
Valid Entries: Y, N

Data Rules:

When OUTAGE RPT is "Y", the ACT field on the SFSYS form (5713-1 Record) must be "Y" for SFID 293 or SFID 294.

PACKET SWITCHING

The following fields (Section 8.31 - Section 8.33) define Packet Switching trunk attributes.

8.31 NBR PLAN

Description: The NBR PLAN field indicates the Numbering Plan Mode of the X.75 and X.75' interfaces. For 5E6, NBR PLAN replaces the X75P MODE field.

Software Release: 5E6 and later
Required Field
Default: NONE

- ***NOTE:*** For 5E8 and later, the only valid mode of interworking between numbering plans is Escape Code.

Valid Entries:

Valid NBR PLAN Entries

Entry	Definition
X121 or X	Software Release: 5E8 and later Indicates that X.121 is the native numbering plan and that the escape code mode of operation is in use.
E164 or E	Software Release: 5E8 and later. Indicates that E.164 is the native numbering plan and that the escape code mode of operation is in use.
NONE	Trunks that are neither X75 nor X75' must have this value.

Data Rules:

If TRKCLS is not "X75" or "X75P", then X75P MODE must be "NONE".

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For 5E8 and later, if TRKCLS is "X75" or "X75P", then NBR PLAN must be "X121" or "E164".

8.32 NEXT PSN

Description: Enter the PSN (Packet Switch Number) of the next switch which is directly connected to this switch via an IP (Internal Protocol) trunk group. Only one IP trunk group can connect two switches, therefore, the PSN entered in this field must not be assigned to another IP trunk group. The PSN entered in this field must not be the PSN of this switch which is defined on the ISDNOPT form (5941 Record) in the PSN field.

Software Release: 5E5 and later
Valid Entries: 1 - 255

Data Rules:

This field must be entered when TRKCLS is "PACKET", otherwise, this field must be blank.

8.33 PKT MODULE

Description: This field appears only on the Recent Change view and identifies the Switching Module where packet switching trunk members reside. For non-packet switching trunk groups, PKT MODULE should be set to zero.

Packet switching trunk groups have TRKCLS set to "PACKET", "X75", or "X75P". For "PACKET" trunk groups, all trunk members must reside on the same SM, and PKT MODULE must contain the SM number.

For "X75" and "X75P" trunk groups, if the trunk members reside on more than one non-remote SM, PKT MODULE must be zero. If an "X75" or "X75P" trunk group contains trunk members on a remote SM, then all trunk members must reside on that SM, and PKT MODULE must be set to the SM number.

LEVEL 2 THRSH

The following fields (Section 8.34 - Section 8.36) are valid with 5E5 and later Software Releases. These fields contain the threshold values used by Level 2 error handling for X.75' and IP trunk groups. These fields must be entered when the TRKCLS is "PACKET" or "X75P".

8.34 FCS

Description: Indicate the threshold value for the ratio of frames received with a bad FCS (Frame Check Sequence) to the total number of frames received.
Valid Entries: 0 - 5

8.35 SABM

Description: Indicate the threshold value for the maximum number of SABM (Set Asynchronous Balanced Mode) frames received in a 30-second period.
Valid Entries: 0 - 10

8.36 PROT VIOL

Description: Indicate the threshold value for the maximum number of Level 2 protocol violations detected in a 30-second period.
Valid Entries: 0 - 100

9. FORM ENTRIES - 5202-8 RECORD

9.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and Office Name on each record.

9.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

X.75 TRUNKS

The following fields (Section 9.3 - Section 9.11) define X.75 trunk groups.

9.3 REMOTE DNIC

Description: Enter the Data Network Identification Code to be associated with the remote end of this X.75 trunk group. Packet routing is based on the RPOA DNIC if the RPOA utility is present in the route request message. If the utility is not present, packet routing is based on the called address.

Software Release: 5E6 and later
Valid Entries: 1 - 9999

Data Rules:

If "X75" is not entered, REMOTE DNIC must be left blank.

9.4 SEGMENT SIZE

Description: Enter X.75 Internetwork AMA Segment size. This field is used to determine the number of segments in AMA billing records. This field can only be entered for X.75 trunk groups. If this field is not entered for X.75 trunk groups, a default value of 64 will be automatically assigned to this trunk group.

Software Release: 5E8 and later
Valid Entries: 16, 64, 128 or 256 (octets)

Data Rules:

If SEGMENT SIZE is entered, TRKCLS must be "X75".

9.5 CUG LIST ID

Description: Enter the X.75 CUG (Closed User Group) List ID. This field is used to assign a Closed User Group List to this X.75 trunk group and can only be entered for X.75 trunk groups.

Software Release: 5E8 and later
Valid Entries: 1 - 1600

Data Rules:

If CUG LIST ID is entered, TRKCLS must be "X75".

If CUG LIST ID is entered on the TKGRP form, then it must be defined on the X75CUG form (5930

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Record).

9.6 CUG SCRN

Description: Is X.75 CUG (Closed User Group) screening allowed?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CUG SCRN is "Y", then:

- TRKCLS must be "X75", and
- CUG LIST ID must be entered.

If TGN/MEMB(s) defined on the TRUNK form (5204 Record), correspond to a TGN defined on the TKGRP form where TRKCLS is "X75" and CUG SCRN is "Y", then CUG or CUG OUTGOING must be "Y" or unknown on the TRUNK form.

9.7 ILC SCRN

Description: Enter the type of screening for X.75 IntraLATA Competition. If this field is set to "ON" and the RPOA (Registered Private Operating Facility) utility on the X.75 trunk is provisioned, then the packet trunk call arriving at the X.75 interface may be screened (depending on how the ILC field on the ISDNOPT form (5941 Record) is entered) as an X.75 interface. If this field is set to "OFFTR" and the RPOA utility on this X.75 trunk is provisioned, then the switch will honor the RPOA that is in the CRP (Call Request Packet) regardless of the ILC field entry on the ISDNOPT form. If this field is set to "OFFDN" and both the RPOA utility and the IECP utility are not present in the CRP, then the call is routed based on the directory number in the CRP.

Software Release: 5E8 and later
Valid Entries:

Valid ILC SCRN Entries

Entry	Definition
ON	ILC Screening is active and TR301 compliant.
OFFTR	ILC Screening is inactive and TR448 compliant.
OFFDN	ILC Screening is inactive and is not TR448 Compliant.

Data Rules:

ILC SCRN may only be entered if TRKCLS is "X75".

9.8 NUI IN VFY

Description: Enter the treatment for X.75 Packet Switching NUI (Network User ID) incoming verified calls. The NUI provides the supplementary network user identification for charging the virtual call usage. When this field is set to "PASS" the switch will transmit the CRP (Call Request Packet) as is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility. When this field is set to "DELETE", the switch removes the NUI utility from the CRP before delivering the call set-up packet. If this field is not entered for X.75 trunk groups (TRKCLS is "X75"), an internal default of "PASS" is automatically assigned.

Software Release: 5E8 and later
Valid Entries:

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Valid NUI IN VFY Entries	
Entry	**Definition**
CLEAR or C	Clear the packet call containing the NUI ID.
DELETE or D	Delete the NUI ID.
PASS or P	Pass the NUI ID.

Data Rules:

If NUI IN VFY, NUI IN UNVFY, NUI OUT VFY, or NUI OUT UNVFY is entered, TRKCLS must be "X75".

9.9 NUI IN UNVFY

Description: Enter the treatment for X.75 Packet Switching NUI (Network User ID) incoming unverified calls. The NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility.

If this field is not entered for X.75 trunk groups, an internal default of "CLEAR" is automatically assigned.

Software Release: 5E8 and later
Valid Entries:

Valid NUI IN UNVFY Entries	
Entry	**Definition**
CLEAR or C	Clear the packet call containing the NUI ID.
PASS or P	Pass the NUI ID.

Data Rules:

If NUI IN VFY, NUI IN UNVFY, NUI OUT VFY, or NUI OUT UNVFY is entered, TRKCLS must be "X75".

9.10 NUI OUT VFY

Description: Enter the X.75 Packet Switching NUI (Network User ID) treatment for outgoing verified calls. The NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as it is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility. When this field is set to "DELETE", the switch removes the NUI utility from the CRP before delivering the call set-up packet.

If this field is not entered for X.75 trunk groups (TRKCLS is "X75"), an internal default of "PASS" is automatically assigned.

Software Release: 5E8 and later
Valid Entries:

Valid NUI IN VFY Entries	
Entry	**Definition**
CLEAR or C	Clear the packet call containing the NUI ID.
DELETE or D	Delete the NUI ID.
PASS or P	Pass the NUI ID.

Data Rules:

If NUI IN VFY, NUI IN UNVFY, NUI OUT VFY, or NUI OUT UNVFY is entered, TRKCLS must be "X75".

9.11 NUI OUT UNVFY

Description: Enter the treatment for X.75 Packet Switching NUI (Network User ID) outgoing unverified calls. The NUI provides supplementary network user identification for charging the virtual call usage. When this field is set to "PASS", the switch transmits the CRP (Call Request Packet) as is. When this field is set to "CLEAR", the switch clears the CRP containing the NUI utility.

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If this field is not entered for X.75 trunk groups (TRKCLS is set to "X75"), then an internal default of "CLEAR" is automatically assigned.

Software Release: 5E8 and later
Valid Entries:

Valid NUI IN UNVFY Entries

Entry	Definition
CLEAR or C	Clear the packet call containing the NUI ID.
PASS or P	Pass the NUI ID.

Data Rules:

If NUI IN VFY, NUI IN UNVFY, NUI OUT VFY, or NUI OUT UNVFY is entered, TRKCLS must be "X75".

CELLULAR DATA

The following fields (Section 9.12 - Section 9.20) define data for the Digital Advanced Mobile Phone Service feature.

9.12 DCS TRK

Description: Is this a DCS (Digital Cellular Switch) trunk group?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

IF SFID ACT 130 on the SFSYS form is "N", DCS TRK cannot be "Y".

If DCS TRK is "Y":

- then HUNT TYPE must be

  "2WB"

  "2WF"

  "ANN"

  "BGUCD"

  "GUCD" or

  "MLIDL" "UCD"

  or not entered.

- and INPULSING is "TT", DCS DIGCNT must be entered. If DCS TRK is "Y" and INPULSING is not "TT", DCS DIGCNT may not be entered.

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- the AFAC ID must be entered on all corresponding EQDUP, EQVT, or EQLVC forms for the respective DEN, NEN, or OIUEN (TRKOE with TRKOETYPE = "0") populated on the associated TRUNK form.
  - EQDUP forms:
    - If FAC IND is 0 or 1, AFAC ID FAC 0 must be entered.
    - If FAC IND is 3, and the channel number (the last two digits of the DEN on the TRUNK form) is less than 25, AFAC ID FAC 0 must be entered.
    - If FAC IND is 3, and the channel number is greater than 24, AFAC ID FAC 1 must be entered.
  - EQVT and EQLVC forms:
    - AFAC ID must be entered.

For 5E10 and later, if DCS TRK is "Y" and TRKCLS is not "SPCHNDLR", then IAPT must be "Y".

For 5E12 and later:

If DCS TRK is "Y", then ISUP MLD must be "N".

When DCS TRK is "Y" and TRKCLS is "A5", "ADT", "IDCS", "IS41", "IVTRK", "SVC", or "3GPD", HUNT TYPE must be "2WB", "2WF", "ANNC", "'BGUCD", "FIFO", "GUCD", "MLIDL", or "UCD".

When DCS TRK is "Y" and TRKCLS is not "A5", "ADT", "IDCS", "IS41", "IVTRK", "SVC", or "3GPD", HUNT TYPE must be "2WB", "2WF", "ANNC", "'BGUCD", "FIFO", "GUCD", "MLIDL", or "UCD".

For 5E13 and later,

- if DCS TRK is "N" and TRKCLS is not equal to "BCM" or "PPMEM", and TRK DIR is not equal to "SGNL" on a TKGRP form, AFAC ID must not be entered for all corresponding EQDUP or EQVT forms.
- if DCS TRK is "Y", an AFAC ID must be entered on all corresponding EQDUP or EQVT forms for the respective DEN or NEN populated on the associated TRUNK form.

For 5E14 and later,

- When DCS TRK is "Y" and TRKCLS is "IS41", then DCS RETRY must be "Y".

  When DCS TRK is "N", TRKCLS is not equal to BCM, ISLPM, or PPMEM

9.13 DCS RETRY

Description: Should a retry be attempted on a trunk in this DCS trunk group?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

IF SFID ACT 130 on the SFSYS form is "N", DCS RETRY cannot be "Y".

9.14 DCS DIGCNT

Description: This field specifies the number of incoming digits for a DCS trunk. For 5E10 and later the valid entries are changed to support the Inter-MSC Tandem Support for International Calls feature. For more information on this feature, see Division 2, Section 8C.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E9(1) - 5E9(2): 1 - 26
- For 5E10 and later: 1 - 28

Data Rules:

IF SFID ACT 130 on the SFSYS form is "N", DCS DIGCNT must be blank.

If DCS TRK is "Y" and

- INPULSING is "TT", then DCS DIGCNT must be entered.
- INPULSING is not "TT", then DCS DIGCNT must not be entered.

9.15 CONT TEST

Description: Should a continuity test be run on a DCS Cell Site 1 trunk?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TRKCLS is not "CST1", CONT TEST must be "N".

9.16 SERV TYPE

Description: Enter the type of service for this trunk group with a TRKCLS of "SPCHNDLR" (speech handler for CDMA trunks). This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.

Software Release: 5E10 and later.
Required Field.
Default: NOSERV
Valid Entries:

Valid SERV TYPE Entries

Entry	Definition
3G1XPD	Software Release 5E15 and later. 3G-1X High Speed Data trunk groups.
8K	Software Release: 5E10 and later. 8K voice service for SPCHNDLR trunk groups.
13K	Software Release: 5E10 and later. 13K voice service for SPCHNDLR trunk groups.
ACELP	Software Release: 5E12 and later.

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	Algebraic Code Excited Linear Predictive Algorithm Vocoder for SPCHNDLR trunk groups.
CEV13	Software Release: 5E16(1) and later. CDMA EVRC and 13K Vocoder.
DATA	Software Release: 5E12 and later. This trunk group is being used for AUTOPLEX data.
EVRC	Software Release: 5E11 and later. Enhanced Variable Rate Coding for SPCHNDLR trunk groups.
NOSERV	No service is provided by the trunk
TACVS	Software Release: 5E16(1) and later. TDMA ACELP and VSELP Vocoder.
VSELP	Software Release: 5E12 and later. Vector Sum Excited Linear Predictive Algorithm Vocoder for SPCHNDLR trunk groups.

Data Rules:

When TRKCLS is "SPCHNDLR", SERV TYPE must be:

For 5E10: "8K", or "13K"

For 5E11: "8K", "13K", or "EVRC",

For 5E12: "8K", "13K", "ACELP", "EVRC", or "VSELP"

For 5E10 and 5E11, "NOSERV" must be entered if TRKCLS is not "SPCHNDRL".

For 5E12 and later:

- When SERV TYPE is "DATA", TRKCLS must be "ADT".
- When TRKCLS is "ADT", SERV TYPE must be "DATA".
- When TRKCLS is not "ADT" or "SPCHNDLR", SERV TYPE must be "NOSERV".

For 5E15 and later:

- when TRKCLS is not "3GPD", "ADT", "PCF", or "SPCHNDLR", SERV TYPE must be "NOSERV".
- when TRKCLS is "3GPD", SERV TYPE must be "3G1XPD".

Speech Handler Trunk group members must have a corresponding PSUGP form or the corresponding PSUGP form must have a PH TYPE (on PSUGP) which is appropriate for the value of SERV TYPE (on TKGRP). The following table defines the PH TYPEs (on PSUGP) which are valid for each value of SERV TYPE (on TKGRP).

Valid PH TYPE Entries

SERV TYPE	PH TYPE
8K	PHV1, PHV3, PHV4
13K	PHV2, PHV3, PHV4
ACELP	PHV4
CEV13	PHV5
DATA	PHV1, PHV2, PHV3, PHV4
EVRC	PHV3, PHV4
SME13	PHV6
TACVS	PHV5
VSELP	PHV4

PHV1s, PHV2s, PHV3s, and PHV4s, for 5E12 are exclusively used for Speech Handler trunks via UEN assignment on the TRUNK form (TRKOE where OE TYPE is equal to "U");

For 5E13 and later, when the Packet Pipe Enhancements secured feature has been purchased, a SFSYS form exists with SFID 317 ACT set to "Y". The PSUGP form represents PH4sand PH22s. The PH4 or

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PH22 must not exceed its capacity for CDMA trunk routing. The count of Packet Pipe Member trunks assigned to all Packet Pipe trunks which use a PH4 may not exceed 32. The count of Packet Pipe Member trunks assigned to all Packet Pipe trunks which use a PH22 may not exceed 64. However, when no Trunk Groups have been provisioned with SERV TYPE of "ACELP" or "VSELP", the number of CDMA calls the PH4 or the PH22 can handle must not exceed 84 . Also, when one or more Trunk Groups have been provisioned with SERV TYPE of "ACELP" or "VSELP", the number of CDMA calls the PH4 can handle may not exceed 90 and the number of CDMA calls the PH22 can handle must not exceed 240.

The number of possible CDMA calls is dependent upon the presence of Trunk Group SERV TYPEs of "8K", "13K", "ACELP", "DATA", "EVRC" or "VSELP" in the switch, the DATA RATE of the Packet Pipe Member Trunks and the number of Packet Pipe Member trunks which point to this PH4 or PH22. See Division 2, Section 4a317 for more information on the Packet Pipe Enhancements feature.

For 5E15 and later, when unique PHs (OE [1-6]) are assigned to a different TRKCLS and/or SERV TYPE, a given PH must be assigned to the same TRKCLS and SERV TYPE when the PH TYPE is a PHV (i.e., any of the various Protocol Handler for Voice PH TYPEs) assigned on the TRUNK form (5204 Record) with an OE TYPE equal to "U".

- ***NOTE:*** The TRKCLS values "SVC" and "ADT" are excluded. SVCs must be assigned to a logical PH Channel with a "FRBC" trunk, and ADTs must be assigned to a logical PH Channel group with existing "SPCHNDLR" trunks.

For 5E16(1) and later:

- when TRKCLS is "SPCHNDLR", SERV TYPE must be "8K", "13K", "ACELP", "CEV13", "EVRC", "TACVS", or "VSELP".

- when SERV TYPE is "ACELP", "TAVCS", or "VSELP", the ACT field for SFID 259 on the SFSYS form (5713-1 Record) must be set to "Y". The "ACELP", "TACVS", and VSELP" SERV TYPEs support the Switch Based TDMA Vocoders feature and are used exclusively for TDMA Vocoder services (see Division 2, Section 4A259).

For 5E18(1) and later, when SERV TYPE is "SME13", PH TYPE on the PSUGP form (5949 Record) must be "PHV5" or "PHV6".

- ***NOTE:*** A SERV TYPE of "TACVS" is not currently supported. The valid entry "TACVS" for the SERV TYPE field may potentially be supported for future use.

9.17 DCS NOTIFY

Description: Is a notification from the ECP (Executive Cellular Processor) required? This field cannot be entered. It will be automatically entered as follows:

- This field is automatically set to "Y" if TRKCLS is

  "CTS1"

  "CST2"

  "IVTRK",

  "PKTPIPE"

  "SPCHNDLR"

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Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

9.18 ISG

Description: Is this an Information Services Gateway Trunk? This field supports the Information Services Gateway feature. For more information on this feature, see Division 2, Section 4C19.

Software Release: 5E9(2) and later.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, TRKCLS must be "IDCS".

9.19 ICOS TRK

Description: The ICOS TRK field indicates whether or not this trunk group will support ICOS (Increased Court Ordered Surveillance) traffic.

Software Release: 5E11 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When ICOS TRK is "Y", TRKCLS must be "IDCS".

9.20 FAR E911

Description: Is far end of DCS trunk dedicated for E911 traffic?

Software Release: 5E10 and later.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then:
- DCS TRK must be "Y"
- OUTPLS must be "MF"
- TRKCLS must not be
- "CST1"
- "CST2"
- "DSC"
- "IDCS"
- "IVT"
- TRKCLS must not be

ADV SVC PLATFORM

The following fields (Section 9.21 - Section 9.26) are applicable to ASP (Advanced Services Platform;

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previously PVN, Private Virtual Network), available with 5E6 and later Software Releases.

9.21 TRIG NBR

Description: Enter the Network services trigger number.

Software Release: 5E9(1) and later
Valid Entries: 1 - 255

Data Rules:

If TRIG NBR is entered, TRKCLS must be "LATA", "LTOLLCON", "PRINTOLL", or "TTOLLCON", and TRK DIR must be "2W" or "INC".

TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form.

For 5E12 and later, when TRIG NBR is not entered and MBG TRANSPORT is "Y":

- LDP must be "Y".
- INPULSING or OUTPULSING must be "ISUP7".
- TRKCLS must be "LATA".

9.22 UNRES EA

Description: Will ASP originations on this trunk group be using only EA (Equal Access) signaling with unrestricted dialing (i.e., it might not conform to standard EA signaling rules)? This field must be set to "Y" to handle ASP calls originated from a customer PBX, since the PBX may not have included the necessary prefix digits (such as 1+ or 011).

Furthermore, this field may be used to identify ASP calls over interoffice trunks. See Division 2, Sections 4A51 and 4A126 for more information.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PVN OFC on the OFCOPT form (5509 Record) is set to "NONE", then this office does not support ASP, and UNRES EA must be "N".

9.23 ASP TOLL

Description: Should all calls incoming over this toll trunk group generate an OHD (Off-Hook Delay) SCP Info_Collected query? This field is used with the ASP Trunk Trigger for TOLL secured feature. For more information concerning this feature, see Division 2, Section 4A159.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ASP TOLL is "Y":

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- TRIG NBR must be entered,
- TRKCLASS must be "TTOLLCON",
- INPLS must be "ISUP7".

For every TRIG NBR on the TKGRP form where ASP TOLL is "Y", there must be a corresponding TRIG NBR entered on a NSTRIG form where AIN REL is "R0D1".

9.24 IP TRK

Description: Is this an Intelligent Peripheral Trunk? This field indicates that the Trunk Group is an Intelligent Peripheral Interface and is eligible to participate in the (STR(E)) Send To Resource External operation. This field supports the AIN SSP STOR (Send To Outside Resource (Local)) secured feature. For more information on this feature, see Division 2, Section 4A229.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When IP TRK is "Y", TRKCLASS must be "EDSL" if ASPTOLL is "Y".

Since the STOR (Send To Outside Resource) feature requires that the office have ASP functionality before STOR data can be assigned, IP TRK must be "N" until ASP OFC on the OFCOPT has been set to "SSP".

Since STOR (Send To Outside Resource) is a secured feature and must be purchased by the office before STOR data can be assigned, IP TRK must be "N" until SFID 126 ACT and SFID 229 ACT on the SFSYS form have been set to "Y".

9.25 IP MEAS

Description: Are Intelligent Peripheral Measurements to be taken? This field indicates whether per-IP measurements shall be taken for the Trunk Group that is designated as an IP. This field supports the AIN SSP STOR (Send To Outside Resource (Local)) secured feature. For more information on this feature, see Division 2, Section 4A229.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When IP MEAS is "Y", IP TRK must be "Y".

Since the number of trunk groups marked for measurement for the STOR (Send To Outside Resource) feature must not exceed 25, the number of TKGRP forms where IP MEAS is "Y" must not exceeded 25.

9.26 CARRIER TRIG

Description: Will the trigger number defined on the ASP TRIG NBR field of the ICF form be used for the Carrier Routing by Facility Presence feature? This field supports the Carrier Routing / Call Processing by Facility Presence Special Feature. For more information on this feature see Division 2, Section 4A243.

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Software Release: 5E11 and later.
Default: N
Valid Entries: Y, N

Data Rules:

Carrier Routing/Call Processing by Facility Presence is a secured feature that must be purchased by the office before CARRIER TRIG on the TKGRP form can be set to "Y". A SFSYS form must exist with SFID 243 ACT set to "Y".

9.27 CUT THRU TRIG

Description: The CUT THRU TRIG field is used to specify the Long Distance Platform cutthrough trigger number.

Software Release: 5E13 and later.
Valid Entries: 1 - 255

Data Rules:

When CUT THRU TRIG is entered,

- LDP must be "Y".
- TRKCLS must be "LATA".
- TRIG NBR must be defined on a NSTRIG form where APPLICATION equals "ASP" and AIN REL equals "ROD1".

9.28 URT FCD BLK

Description: Should all Unrestricted FCD Codes be blocked from this trunk group?

This field was added for the ASP Unrestricted FCD Trigger feature. For more information, see Division 2, Section 4A572.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When URT FCD BLK is "Y", TRKCLS must be "PF", "PFITT" or "PFLASH".

The secured feature ASP Unrestricted FCD Code Triggers must be purchased before URT FCD BLK can be changed to "Y" on the TKGRP form, therefore the ACT field for SFID 572 on the SFSYS form must be "Y".

When URT FCD BLK is "Y" on the TKGRP form, then the corresponding TGN cannot be used on the TKBLKCD form.

LOCAL NUMBER PORTABILITY

The following fields (Section 9.29 - Section 9.32) apply to LNP (Local Number Portability) secured feature (SFID 174) available with 5E11 and later Software Releases. For more information on this feature, see Division 2, Section 4A174.

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9.29 LRN DAS

Description: Enter the LRN DAS (Local Routing Number Digit Analysis Selector) which is used to specify the digit analysis selector used when analyzing the LRN (Local Routing Number) received in the IAM (Initial Address Message) of an incoming ISUP7 trunk. The SIG PNUM and LRN DAS fields have been added to support the LNP (Local Number Portability) feature. For more information on this feature, see Division 2, Section 4A174.

Software Release: 5E11 and later.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

The Local Number Portability feature is a secured feature that must purchased, and the SFID 174 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field is entered.

When this field is entered, LRN DAS must be entered on the DAS form (5300-1 Record).

When this field is entered, The corresponding DAS form must have LOCAL DIT entered. Also LOCAL DIT must be defined as LDIT on the corresponding SMLDIT form (5315 Record) for every operational SM in the office. This must be accomplished by entering an SMLDIT form with this LDIT value as the key and by entering each operational SM (as defined on EQIM forms where EQSTATUS is "O") into the LIST OF SWITCHING MODULES. The following is a list of SMs which have not been entered into the LIST OF SWITCHING MODULES on the appropriate SMLDIT form.

9.30 SIG PNUM

Description: Is the ported DN signaled on outgoing CCS7 trunks using normal ISUP signaling? Normally, the LRN (Location Routing Number) method expects to signal the LRN in the Called Party Number parameter of the IAM (Initial Address Message). The LRN is a 10-digit number that uniquely identifies a switching office and rate center. The SIG PNUM and LRN DAS fields have been added to support the LNP (Local Number Portability) feature. For more information on this feature, see Division 2, Section 4A174.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, OUTPLS must be "ISUP7".

9.31 CNA OPTION

Description: Enter the Connecting Network Access AMA recording option. The CNA OPTION field is used for incoming or two-way trunks to indicate whether or not CNA (Connecting Network Access) AMA records should be generated for incoming calls on the trunk group. For more information on this feature, see Division 2, Section 4A180.

Software Release: 5E11 and later.
Required Field.
Default: NONE
Valid Entries:

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Valid CNA OPTION Entries	
Entry	**Definition**
COND	CNA AMA records should only be generated for incoming calls which result in a LNP (Local Number Portability) SCP (Service Control Point) database query.
UNCOND	CNA AMA records should only be generated for all calls incoming over the trunk group.
NONE	CNA AMA records should not be generated for incoming calls over the trunk group.

Data Rules:

The Number Portability - Basic LRN AMA feature is a secured feature. This feature must be purchased and SFID 180 ACT set to "Y" on the SFSYS form (5713-1 Record) before "COND" or "UNCOND" can be entered in this field.

For 5E11 and later, when LDP is "Y", CNA OPTION must be "NONE" on this form.

When TRKCLS is not "CAMAANI", "CAMAONI", "EDSL", "LTOLLCON", "TTOLLCON", "X75", or "X75P", CNA OPTION must be "NONE" on this form.

When TRK DIR is not "INC" or "2W", CNA OPTION must be "NONE" on this form.

When FEAT GRP is "B" or "D", CNA OPTION must be "NONE".

9.32 PORTED

Description: The PORTED field is used to indicate whether the TN has been ported into this office via the NP feature. The indicator is used by call processing to determine whether or not to generate an NP BAF (Bellcore AMA Format) module for originating and terminating IXC access records.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

When PORTED is "Y", TRKCLS must be "PBXDID", "PF", "PFLASH", "PFCPE", "EDSL" or "EDSLHM".

LONG DISTANCE PLATFORM

Prior to 5E12, this was the TOLL DIGITAL EXCHANGE field group, the field group name was changed to LONG DISTANCE PLATFORM.

The following fields are applicable to LDP (Long Distance Platform), available with 5E10 and later Software Releases. For more information on this feature, see Division 2, Section 4A235.

9.33 TDX

Description: With 5E12 and later, this field name is changed to LDP. The TDX field indicates whether this trunk is part of a LDP network. Is this a LDP Trunk?

Software Release: 5E10 through 5E11.
Default: N
Valid Entries: Y, N

Data Rules:

The TDX field on the TKGRP form is used by the Toll Digital Exchange Special Feature in a LDP office. It is a secured feature that must be purchased by the office before the field can be set to "Y". An SFSYS form must exist with SFID 165 ACT set to "Y".

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For 5E11, when TDX is "Y", CNA OPTION must be "NONE" on this form.

When TDX is "Y":
- ASP TOLL must be "N"
- CMC must be "N"
- LN TYPE must be "NONE"
- NCD SCRN must be "NONE"
- TRKCLS must be "IC"
- "LATA",
- or "TTOLLCON"

- and TRKCLS is "IC",
  - TRK DIR must be "OUT" or "2W".
  - OUTPULSING must be "ISUP7" or "MF"

- and TRKCLS is "LATA" or "TTOLLCON", TRK DIR must be "INC", "OUT" or "2W".
- and TRKCLS is "LATA"
  - and TRK DIR is "INC" or "2W", INPULSING must be "ISUP7" or "MF".
  - and TRK DIR is "OUT" or "2W", OUTPULSING must be "ISUP7" or "MF".

- and TRKCLS is "TTOLLCON"
  - and TRK DIR is "INC" or "2W", INPULSING must be "ISUP7".
  - and TRK DIR is "OUT" or "2W", OUTPULSING must be "ISUP7".
  - TERM BILL must be "N".

When TDX on the TKGRP form is "Y", then TDX CARRID on the OFCOPT form must be entered . Also the TDX CARRID on the OFCOPT form must be defined on the ICF form with the corresponding FEAT GRP equal to "D".

When TDX on the TKGRP form is "Y", then there must exist an ANITBL form with NPA equal to "000", NXX equal to "000" and LINE equal to "0000".

When TGN(s), defined on TKGRP form(s), do not have a LN TYPE entered or have LN TYPE entered as "NONE" and TDX is entered as "N", if the TGN is on an ARSTPA form, or if it is assigned an Automatic Route Selection (ARS) Feature on either the TRUNKFA form or the TKGRPFA form or an associated CLUSTR form, the associated TRKCLS on the TKGRP form must be entered as "PF", "PFITT", "PFLASH", "EDSL", or "EDSLHM".

When TGN(s), defined on TKGRP form(s), do not have a LN TYPE entered or have LN TYPE entered as "NONE" and TDX entered as "Y", if the TGN is on an ARSTPA form, or if it is assigned an Automatic Route Selection (ARS) Feature on either the TRUNKFA form or the TKGRPFA form or an associated CLUSTR form, then all following conditions must hold true:

- The associated TRKCLS on the TKGRPform must be entered as "LATA".
- TGN/MEMB/FEATURE must be defined on ARSTPA where (FRL LINE equals 16 and DIAL PLAN

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equals "ODP") or (FRL LINE not entered, TCM IN not entered and DIAL PLAN equals "ODP") .

- If ARSTPA form is not found then the FEATURE must be defined on ARSFD where (FRL LINE equals 16 and DIAL PLAN equals "ODP") or (FRL LINE not entered, TCM IN not entered and DIAL PLAN equals "ODP") .
- The FEATURE must be defined on ARSFD where ENTRY equals "AUTO".

9.34 LDP

Description: Prior to 5E12, this was the TDX field. With 5E12 and later, this field name was changed to LDP. The LDP field indicates whether this trunk is part of a LDP network. Is this a LDP Trunk?

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

Data Rules:

The LDP field on the TKGRP form is used by the Toll Digital Exchange Special Feature in a LDP office. It is a secured feature that must be purchased by the office before the field can be set to "Y". An SFSYS form must exist with SFID 165 ACT set to "Y".

For 5E12 and later, when LDP is "Y", CNA OPTION must be "NONE" on this form.

For 5E12 and later, when LDP on the TKGRP form is "Y", there must be two LDPCTBL forms. One of the LDPCTBL forms must have LDP CARRIER set to 10000 with CARRIER PRESUBSCD equal to "Y" and the second LDPCTBL form must have LDP CARRIER set to 10000 with CARRIER PRESUBSCD equal to "N".

When LDP is "Y":
- ASP TOLL must be "N"
- CMC must be "N"
- LN TYPE must be "NONE"
- NCD SCREENING must be "NONE"
- TRKCLS must be "IC"
- "LATA",
- or "TTOLLCON"

- and TRKCLS is "IC",
  - TRK DIR must be "OUT" or "2W".
  - OUTPULSING must be "ISUP7" or "MF".
- and TRKCLS is "LATA" or "TTOLLCON", TRK DIR must be "INC", "OUT" or "2W".
- and TRKCLS is "LATA",
  - and TRK DIR is "INC" or "2W", INPULSING must be "ISUP7" or "MF".
  - and TRK DIR is "OUT" or "2W", OUTPULSING must be "ISUP7" or "MF".
- and TRKCLS is "TTOLLCON",

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- and TRK DIR is "INC" or "2W", INPULSING must be "ISUP7".
- and TRK DIR is "OUT" or "2W", OUTPULSING must be "ISUP7".
- TERM BILL must be "N".

When LDP on the TKGRP form is "Y", then TDX CARRID on the OFCOPT form must be entered . Also the TDX CARRID on the OFCOPT form must be defined on the ICF form with the corresponding FEAT GRP equal to "D".

When LDP on the TKGRP form is "Y", then there must exist an ANITBL form with NPA equal to "000", NXX equal to "000" and LINE equal to "0000".

When a TGN(s), defined on a TKGRP form(s), does not have a LN TYPE entered or have LN TYPE entered as "NONE" and LDP is entered as "N", if the TGN is on an ARSTPA form, or if it is assigned an Automatic Route Selection (ARS) Feature on either the TRUNKFA form or the TKGRPFA form or an associated CLUSTR form, the associated TRKCLS on the TKGRP form must be entered as "PF", "PFITT", "PFLASH", "EDSL", or "EDSLHM".

When a TGN(s), defined on a TKGRP form(s), does not have a LN TYPE entered or have LN TYPE entered as "NONE" and LDP entered as "Y", if the TGN is on an ARSTPA form, or if it is assigned an Automatic Route Selection (ARS) Feature on either the TRUNKFA form or the TKGRPFA form or an associated CLUSTR form, then all following conditions must hold true:

- The associated TRKCLS on the TKGRPform must be entered as "LATA".
- TGN/MEMB/FEATURE must be defined on ARSTPA where (FRL LINE equals 16 and DIAL PLAN equals "ODP") or (FRL LINE not entered, TCM IN not entered and DIAL PLAN equals "ODP") .
- If ARSTPA form is not found, then the FEATURE must be defined on ARSFD where (FRL LINE equals 16 and DIAL PLAN equals "ODP") or (FRL LINE not entered, TCM IN not entered and DIAL PLAN equals "ODP") .
- The FEATURE must be defined on ARSFD where ENTRY equals "AUTO".

For 5E15 and later, when LDP is "N", and DAL ACCESS is "Y", the ACT field for SFID 126, and SFID 272 on the SFSYS form must be "Y".

9.35 PASS ANI

Description: The PASS ANI field is used to indicate whether to pass the ANI (Automatic Number Identification) when egressing the LDP (Long Distance Platform) network on a LATA (Local Access Transport Area) MF (Multi-Frequency) trunk to a LEC (Local Exchange Carrier) or PBX (Private Branch Exchange).

Software Release: 5E13 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When PASS ANI is "Y",

- LDP must be "Y",

- TRKCLS must be "Y", and
- OUTPULSING must be "MF".

9.36 ANI PROCESS

Description: Should routing be based on the ANI table?

Software Release: 5E10 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When ANI PROCESS is "Y", LDP must be "Y".

The ANI PROCESS field on the TKGRP form is used by the Toll Digital Exchange with ANI Table Processing Special Feature in a LDP (Long Distance Platform) office. It is a secured feature that must be purchased by the office before the field can be set to "Y". An SFSYS form must exist with SFID 165 ACT and SFID 235 ACT set to "Y".

For 5E15 and later, when ANI PROCESS is "Y", TRKCLS must be "EDSL", "EDSLHM", "LATA", or "PF".

9.37 TERM BILL

Description: Should this LDP trunk have an AMA billing record produced at the terminating LDP office?

Software Release: 5E10 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When TERM BILL is "Y":
- LDP must be "Y"
- FREE TERM must be "N"

9.38 MINT SIG TYPE

Description: MINT (Multi-vendor Intra-Network Trunk) signaling type that will be used by all trunk group members. For more information, see Div. 2 Sec. 4A217.

Software Release: 5E12 and later.
Valid Entries:

Valid MINT SIG TYPE Entries

Entry	Definition
ALPHA	Signaling used over MINT's that have the MINT SIG field set to ALPHA. The ALPHA SS7 signaling format populates a new Network-Specific IAM (Initial Address Message) parameter that contains the following information: queue indicator, T-NSC, O-NSC and route search limit. The T-NSC and O-NSC fields are larger than the fields used by BETA MINT signaling. For ALPHA MF signaling, the queue indicator, satellite indicator and T-NSC are prepended to the Called Party Number digit string.
BETA	Signaling used over MINT's that have the MINT SIG field set to BETA. The BETA SS7 signaling format populates a new Network-Specific IAM parameter that contains the following information: queue indicator, T-NSC, O-NSC and route search limit. For BETA MF signaling, the queue indicator, satellite indicator and T-NSC are prepended to the Called Party Number digit string.
GAMMA	Signaling used over MINT's that have the MINT SIG field set to GAMMA. The GAMMA (MF and

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	SS7) signaling format prepends queue indicator, satellite indicator and T-NSC to the Called Party Number digits.
blank	Empty field.

Data Rules:

When MINT SIG TYPE is entered,

- TRKCLS must be "TTOLLCON".
- INPULSING and OUTPLSING must be "ISUP7" or "MF".
- ASP TOLL must be "N",
- CCS7 TYPE must be "BELLCORE",
- LDP must be "N",
- DCS TRK must be "N",
- LN TYPE must be "NONE" or must not be entered,
- ASP CARR TRIG must be "N",
- TRIG NBR must not be entered.
- LRN DAS must not be entered.

When RTE SEARCH LMT is entered on the RTIDX form, OUTPULSING must be "ISUP7" and MINT SIG TYPE must be "ALPHA" or "BETA" on the corresponding TKGRP form.

When TERM NSC is known on the RTIDX form, MINT SIG TYPE must be known on the TKGRP form. In addition, when MINT SIG TYPE is "BETA" on the corresponding TKGRP form, TERM NSC must be between 0 and 15 on the RTIDX form.

When MINT SIG TYPE is set to "ALPHA" on the TKGRP form, the MINT- ALPHA feature must be purchased by the office. A SFSYS form must exist with SFID 217 ACT set to "Y".

When MINT SIG TYPE is set to "BETA" on the TKGRP form, the MINT- ALPHA and the MINT-BETA features must be purchased by the office. A SFSYS form must exist with SFID 217 ACT and SFID 247 ACT set to "Y".

When MINT SIG TYPE is set to "GAMMA" on the TKGRP form, the MINT- ALPHA and the MINT-GAMMA features must be purchased by the office. A SFSYS form must exist with SFID 217 ACT and SFID 248 ACT set to "Y".

When MINT SIG TYPE and QUEUE FEATURE are known on the TKGRP form, the QUEUE TYPE must be set to "REROUTE" on the corresponding QUFD form.

The TGN entered on the TGNTNSC form must be defined on the TKGRP form with INPULSING set to "MF" or "ISUP7" and MINT SIG TYPE is known.

When TRUNK GROUP NUMBER is entered on the RTIDX form, and OUTPULSING is "MF" and MINT SIG TYPE is entered on the corresponding TKGRP form, SIGNALING PROTOCOL must be "TRAD" on the RTIDX form.

When TRUNK GROUP NUMBER is entered on the RTIDX form, and OUTPULSING is "ISUP7" and MINT SIG TYPE is entered on the corresponding TKGRP form, SIGNALING PROTOCOL must not be "FGB" on the RTIDX form.

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When MINT SIG TYPE is entered LN TYPE must be "NONE".

When MINT SIG TYPE is known on the TKGRP form, the Basic LDP (Long Distance Platform) feature must be purchased by the office. A SFSYS form must exist with SFID 165 ACT set to "Y".

9.39 NETWORK IND

Description: The NETWORK IND field specifies whether or not the trunk group crosses a network boundary. This field is one of the criteria for determining if the NST (SS7 Network Specification Termination) parameter is sent back on an incoming trunk. For more information, see Division 2, Section 4A287.

Software Release: 5E13 and later.
Valid Entries:

Valid NETWORK IND Entries

Entry	Definition
ON	The outgoing trunk is within the network.
OFF	The outgoing trunk crosses a network boundary.
blank	Empty field.

Data Rules:

When NETWORK IND is entered, only one of the following must be true: MINT SIG TYPE must be entered, DAL ACCESS must be "Y", DAL EGRESS must be "Y", VPN ACCESS must be "Y", or LDP must be "Y".

9.40 ACCT PROMPT

Description: The ACCT PROMPT field provides the Long Distance Platform (LDP) Account Code prompt type for incoming or two-way trunk groups where the LDP Account Code feature is active for the 400Hz Carrier Tone feature. ACCT PROMPT and CT FOR DT fields were added to support the 400Hz Carrier Tone feature. This feature was first made available in a 5E13 Software Update. For more information on this feature see Division 2, Section 4A165.

Software Release: 5E13 and later
Default: GLOBAL
Valid Entries:

Valid ACCT PROMPT Entries

Entry	Definition
ANNC	SAS (Service Announcement System) announcement.
BEEP2	Prompt of two audible beeps.
CARRIER	400Hz carrier tone.
GLOBAL	Use prompt specified by ACCTPROMPT on the OFCOPT form.

Data Rules:

When ACCT PROMPT is not "GLOBAL", ANI PROCESS must be Y.

For 5E13 later, when the TKGRP forms have ACCT PROMPT set to CARRIER, the CARRIER TONE on the OFCOPT form must be set to "Y".

For 5E13 later, when the TKGRP forms have ACCT PROMPT set to "ANNC", exactly one FIXRT form must exist with FIXED ROUTE TYPE set to "TACCT".

9.41 CT FOR DT

Description: Activation status for carrier tone to be applied instead of dial tone for an incoming or a two-way trunk group. Should 400Hz carrier tone be provided for dial tone?

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Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

Data Rules:

When CT FOR DT is "Y", TRKCLS must be "IC", "LAT", "PF", "PFITT", "PFLASH", or "TTOLLCON".

When CT FOR DT is "Y", TRK DIR must be "TWOWAY" or "INCOM".

For 5E13 and later, when the TKGRP forms have CT FOR DT set to "Y", the CARRIER TONE field on the OFCOPT form must be set to "Y".

10. FORM ENTRIES - 5202-9 RECORD

10.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

10.2 * TGN

Description: Enter the number of the Trunk Groups being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

LONG DISTANCE PLATFORM

10.3 PREF NPA

Description: The PREF NPA field allows the user the ability to choose whether to prefix the NPA designated on the incoming trunk group, the NPA of the incoming ANI or neither to a seven-digit number incoming to the switch on a LATA class trunk group.

Software Release: 5E12 and later.
Valid Entries: Valid Values: Blank, ANI, or FAR

Data Rules:

When PREF NPA is entered,

- VPN ACCESS must be "N".
- TRKCLS must be "EDSL", "EDSLHM", "LATA", or "PF".
- LDP must be "Y".

When PREF NPA is "FAR" FAR END NPA must be entered.

When VPN ACCESS is "Y" PREF NPA must be blank.

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AML

The following fields (Section 10.4 - Section 10.5 11.15) support Automatic Maintenance Limits.

10.4 AML PERCENT

Description: The Automatic Maintenance Limit Percent is the percentage of trunks within a Trunk Group that can be removed from service automatically by the 5ESS Switch. Prior to 5E4(2) the customer could not specify the AML Percent; the AML Percent was determined by algorithms. The algorithms are still applied if the customer does not wish to override them by specifying a value in the AML PERCENT field. The algorithms are as follows (TG QTY represents the quantity of members in a Trunk Group):

- If TG QTY is 1, then AML PERCENT is 0.
- If TG QTY is between 2 and 16, then AML PERCENT is (TG QTY + 3) divided by 4.
- If TG QTY is greater than 16, then AML PERCENT is (TG QTY + 23) divided by 8.

NOTE: Remainders are ignored by the algorithms.

If the algorithm result is satisfactory, do not enter a value in the AML PERCENT field.

This field is used only if TRK DIR is "2W" "ANN" or "OUT". In addition, for 5E11 and later, TRK DIR is "INC" and E911 TYPE is "DED", "DIRANI" or "DIRNOANI".

Software Release: 5E4(2) and later
Valid Entries: 0 - 100 or blank.

Data Rules:

If TRKCLS is "EDSL" or "EDSLHM" and TRK DIR is "2W" or "OUT", then AML PERCENT must be set to 100.

If TRKCLS is "IFOPER", entry in this field is optional and may be a value from 0 to 100.

AML PERCENT can be specified only if TRK DIR is "2W", "ANN" or "OUT", or for 5E11 and later, TRK DIR is "INC" and E911 TYPE is "DED", "DIRANI", or "DIRNOANI".

When TRKCLS is "ATNDVFY" and TRK DIR is "OUT", AML PERCENT cannot be entered.

10.5 AML ALARM

Description: Enter the AML (Automatic Maintenance Limit) Alarm level. This field allows for AML alarm levels to be set.

Software Release: 5E11 and later.
Required Field.
Default: MAJOR
Valid Entries:

Valid AML ALARM Entries

Entry	Definition
CRITICAL	CRITICAL alarm level
MAJOR	MAJOR alarm level
MINOR	MINOR alarm level

Data Rules:

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The (E911) Trunk Failure Alarms feature is a secured feature that must be purchased by the office before AML ALARM may be changed from "MAJOR" to either "CRITICAL" or "MINOR". The ACT field for SFID 193 must be set to "Y" on the SFSYS form (5713-1 Record).

It is recommended that AML ALARM be set to "CRITICAL", if E911 TYPE is "DED", "DIRANI" or "DIRNOANI".

VIRTUAL PRIVATE NETWORK

The fields Section 10.6 - Section 10.7 apply to Virtual Private Network/

10.6 VPN ACCESS

Description: The VPN ACCESS field indicates that a particular trunk is part of a VPN (Virtual Private Network).
Default: N
Valid Entries: Y, N

For 5E11 and later, when VPN ACCESS is "Y" and TRIG NBR is entered:

- BRCS must be "N".
- TRKCLS must be "EDSL" or "EDSLHM".

For 5E11 and later, when VPN ACCESS is "N" and TRIG NBR is entered, TRKCLS must be "LATA", "LTOLLCON", "PRINTOLL", or "TTOLLCON".

For 5E15 and later, when VPN ACCESS is "N", DAL ACCESS is "Y", and TRIG NBR is entered, TRKCLS must be "LATA", "LTOLLCON", "PRINTOLL", or "TTOLLCON".

For 5E11 and later, when VPN ACCESS is "N" and TRIG NBR is not entered, LDP must be "Y".

10.7 MBG TRANSPORT

Description: The MBG TRANSPORT field is used to indicate whether or not MBG (Multi-switch Business Group) information will be transported between an EO (End Office) and VPN (Virtual Private Network) switches. MBG information is required for making VPN-MBG calls.
Default: N
Valid Entries: Y, N

W

DAL/SPECIAL PBX

The fields Section 10.8 - Section 10.12 apply to Direct Access Links.

10.8 DAL ACCESS

Description: Is this a Direct Access Link trunk group? (For more information, see Division 2, Section 4A272.)

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

Data Rules:

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For 5E12 and later:

When VPN ACCESS is "N", TRIG NBR is entered and DAL ACCESS is "N", TRKCLS must be "LATA", "LTOLLCON", "PRINTOLL", or "TTOLLCON".

When DAL ACCESS is "Y":

- TRK DIR must be "2W" or "INC",
- TRKCLS must be "EDSL", EDSLHM, or "PF",
- CMC must be "N",
- ASP TOLL must be "N",
- CARRIER TRIG must be "N",
- VPN ACCESS must be "N",
- BRCS must be "N",
- TRIG NBR must be entered.

When DAL ACCESS is "Y" and TRKCLS is "PF", INPULSING must be "MF" or "TT".

Direct Access Link is a secured feature requiring that the ACT field for SFID 272 be set to "Y" on the SFSYS form (5713-1 Record) to activate the feature. The ACT field for SFID 126 must also be set to "Y" to activate the ASP Release 0.1B secured feature before the ACT field before SFID 272 can be set to "Y".

When the TKGRP form (5202 Record) has DAL ACCESS set to "Y" and TRIG NBR entered, then the TRIG NBR must be defined on the corresponding NSTRIG form (5324 Record) with APPLICATION set to "ASP" and AIN REL set to "R0D1".

For 5E15 and later:

When DAL ACCESS is "Y" and LDP is "N", TRIG NBR must be entered.

When DAL ACCESS is "Y" and LDP is "Y", TRIG NBR must not be entered.

When DAL ACCESS is "Y" and LDP is "Y", CUT THRU TRIG must not be entered.

When DAL ACCESS is "Y", LDP is "Y", and TRKCLS is "PF",

- BILLING DN must be 10 digits long.
- BILLING DN must be NXXXXXXXX where N=2-9 and X=0-9.

When DAL ACCESS is "Y", LDP is "Y", TRKCLS is "PF", and CARRIER ID is entered, FEAT GRP must be "D".

When DAL ACCESS is "Y", LDP is "Y", TRKCLS is "EDSL" or "EDSLHM", INPULSING must be "DCHN".

When DAL ACCESS is "Y", LDP is "Y", and TRKCLS is "EDSL" or "EDSLHM", FAR END NPA must be entered.

When DAL ACCESS is "Y", the ACT field for SFID 165 and SFID 10, on the SFSYS form must also be "Y".

10.9 DAL EGRESS

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Description: Is this an egressing DAL trunk? For more information, see Division 2, Section 4A287.

Software Release: 5E13 and later.
Default: Y
Valid Entries: Y, N

Data Rules:

When DAL EGRESS is "Y", TRKCLS must be "EDSL", "EDSLHM", "PF", "PFITT", or "PFLASH".

When DAL EGRESS is "Y", LN TYPE must be "NONE".

When DAL EGRESS is "Y", TRK DIR must be "2W" or "OUT".

When DAL EGRESS is "Y" and TRKCLS is "PF", "PFITT", or "PFLASH", "OUTPULSING" must be "MF" or "TT".

When DAL EGRESS is "Y", SFID 287 ACT must be "Y" on the SFSYS form (5713-1 Record).

10.10 LINE BUSY

Description: Is line busy treatment provided for a call when all trunks are busy? For more information, see Division 2, Section 4A287.

Software Release: 5E13 and later.
Default: Y
Valid Entries: Y, N

Data Rules:

When LINE BUSY is "Y", TRKCLS must be "EDSL", "EDSLHM", "PF", "PFITT", or "PFLASH".

When LINE BUSY is "Y", LN TYPE must be "NONE".

When LINE BUSY is "Y", TRK DIR must be "2W" or "OUT".

When LINE BUSY is "Y" and TRKCLS is "PF", "PFITT", or "PFLASH", OUTPULSING must be "MF" or "TT".

When LINE BUSY is "Y", the ACT field for SFID 250 must be "Y" on the SFSYS form (5713-1 Record).

10.11 SPECIAL PBX

Description: The Special PBX field is used to identify whether or not to send the DNIS (Dialed Number Identification Services) protocol to the PBX (Private Branch Exchange). This is to distinguish PBXs that can only accept the standard protocol, versus the DNIS protocol.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, when SPECIAL PBX is "Y":

- TRKCLS must be "EDSL", "EDSLHM", "PF", "PFITT", or "PFLASH".
- TRK DIR must be "2W" or "OUT".

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- CUT THRU must not be entered or be "N".

When SPECIAL PBX is "Y" and TRKCLS is "'PF", "PFTT", or "PFLAS", OUTPULSING must be "'MF" or "T".

When SPECIAL PBX is "Y" and TRKCLS is "'EDSL" or "EDSLHM",, or "PFLAS", CPN BN OPT must not be "NONE".

When SPECIAL PBX is "Y" and TRKCLS is "'EDSL" or "EDSLHM",, or "PFLAS", CPN BN OPT must not be "NONE".

10.12 DNIS USER

Description: The DNIS USER field is used to identify whether or not the trunk is a DNIS subscribed trunk for the Transport of Original Dialed Number feature.

Software Release: 5E13 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When DNIS USER is "Y", TRKCLS must be "EDSL", "EDSLHMPF", or "PF".

When DNIS USER is "Y", TRK DIR must be "OUT" or "2W".

10.13 CONTEXT ID

Description: This field is used to indicate whether or not a trunk group is set to "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E12 and 5E13: N
- For 5E14: NATIVE

Valid Entries:

Valid CONTEXT ID Entries

Entry for 5E12, 5E13	Entry for 5E14 and later	Description
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

For 5E12 and later:

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the TKGRP form, TRKCLS must be "EDSL", "EDSLHM", "PBXDID", "PF", "PFCPE", "PFITT", or "PFLASH".

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the TKGRP form, the ACT field for SFID (Secured Feature ID) 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

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END OFFICE NODAL

10.14 EON BILLING DN

Description: Proprietary field.

10.15 EON NBR PLAN

Description: Proprietary field.

10.16 EON PRIVACY

Description: Proprietary field.

10.17 EON PREFIX NPA

Description: Proprietary field.

10.18 EON INH TERM CBC

Description: Proprietary field.

SWITCHED ACCESS

10.19 SA TRIG NBR

Description: Proprietary field.

10.20 ACC ID

Description: Proprietary field.

10.21 SA ORIG REC

Description: Proprietary field.

10.22 SA TERM REC

Description: Proprietary field.

LOCAL TRUNKS ADDRESS SIGNAL AND START DIAL COMBINATIONS

TRUNK CLASS	DESCRIPTION	TRUNK DIR.	ADDRESS SIGNAL		START DIAL		IDLE
			IN	OUT	IN	OUT	
ACJCK	AC Jack termination to Trunk and Line Work Station	INC	MF	-	-	-	ON
AIS	Outgoing to AIS	OUT	-	MF	-	WS	ON
ANNCMNT	Outgoing to Announcements	ANN	-	-	-	-	ON
ATNDVFY	Remote Busy Verify	INC	MF	-	WINK	-	ON
		OUT	-	MF	-	WINK	ON
BUSYVFY	Incoming Busy Verification	INC	DP/MF	-	WS	-	ON
CAMA	Outgoing CAMA Trunks - to Serving office	OUT	-	MF/DP	-	WS/ID/DD	ON
EDSL	Extended Digital Subscriber Line trunks	INC	DCHN	NONE	-	-	ON
		OUT	NONE	DCHN	-	-	ON
		2W	DCHN	DCHN	-	-	ON
		SGNL	DCHN	DCHN	-	-	ON
EDSLHM	Extended Digital Subscriber Line trunks for Hotel/Motel TSPS	INC	DCHN	NONE	-	-	ON
		2W	DCHN	DCHN	-	-	ON

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	services						
EISTRK	OSPS EIS TRUNK	OUT	NONE	NONE	NONE	NONE	ON
FIOPR	Intermediate Switching Point for Operator Trunks	INC	MF	-	WS	-	ON
FOPRI	Outgoing Operator Trunks to OSPS	OUT	-	MF	-	WS	ON
FOPRT	Outgoing Operator Trunks to TSPS	OUT	-	MF	-	WS	ON
IC	Interexchange Carrier Trunks	2W	MF	MF	WS	WS	ON
		INC	MF	-	WS	-	ON
		OUT	-	MF	-	WS	ON
		2W	ISUP7	ISUP7	-	-	ON
		INC	ISUP7	-	-	-	ON
		OUT	-	ISUP7	-	-	ON
INTRCPT (Future)	Outgoing to Operator Intercept	OUT	-	-	-	-	ON
LTOLLCON	Toll connecting to a Toll office other Class 5 office	INC	MF	-	DD/WS/DT	-	ON
		INC	DP	-	DD/WS/ ID/DT	-	ON
		OUT	-	MF	-	WS/DD	ON/OF F
		OUT	-	DP	-	ID/WS/DD	ON/OF F
		2W	MF	MF	WS/DT	WS	ON
		INC	NONE		DC		ON
		2W	NONE	MF	DC	WS	ON
		INC	RPEO	-	ID	-	
		INC	RPTO	-	ID	-	
		OUT	-	RPEO	-	ID	
		OUT	-	RPTO	-	ID	
		OUT	-	CCIS6/ ISUP7	-	-	ON
		INC	CCIS6/ ISUP7	-	-	-	ON
		2W	CCIS6/ ISUP7	CCIS6/ ISUP7	-	-	ON
OTOTK	Office-to-Office	OUT	-	DP/MF	-	ID/WS	ON
PACKET	Packet Switch EO Trunks	2W	-	-	-	-	ON
PBXDID	Outgoing Direct In-Dial to PBX-CO	OUT	-	DP/TT	-	ID/WS/DD	ON/OF F
PF/PFLASH	Private Facility without Flash and with Flash	INC	DP/TT		ID/WS/DD DT/GS/LS		ON
			MF		WS/DD/DT GS/LS		ON
		INC	NONE		DC	GS/LS/NO	ON
		OUT		DP/TT		ID/WS/ DD/ST/ GS/LS	ON
				MF		WS/DD/ST GS/LS	ON
		2W	DP/TT	DP/TT	ID/WS/ DD/DT	ID/WS/ DD/ST	ON
			MF	MF	WS/DD/DT	WS/DD/ST	ON
		2W	DP/MF/TT	DP/MF/TT	GS	GS	ON
		2W	DP/MF/TT	DP/MF/TT	LS	LS	ON
		2W	NONE	DP/MF/TT	DC	GS/LS	ON
PFLASH	Private Facility with Flash (When used for E911 CAMA PSAP Trunks)	2W	TT	MF	DT	WS	ON
PFCPE	Private Facility Customer Premise Equipment	OUT		DP/TT		ID/WS/ DD/ST	ON
PFITT	Private Facility Intertandem Trunks	INC	DP/TT	-	ID/WS DD/DT	-	ON
			MF		WS/DD/DT	-	ON
		OUT	-	DP/TT	-	ID/WS/DD	ON
				MF	-	WS/DD	ON
		2W	DP/TT	DP/TT	ID/WS/	IS/WS/DD	ON

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					DD/DT		
			MF	MF	WS/DD/DT	WS/DD	ON
PPMEM	Packet Pipe Member	2W	PP	PP	NONE	NONE	ON
PKTPIPE	Packet Pipe	2W	PP	PP	NONE	NONE	ON
RECCMPL	Outgoing Recording Completing Operator Trunk	OUT	-	-	-	-	ON
SPCHNDLR	Speech Handler	2W	NONE	NONE	NONE	NONE	ON
SERVICE	TELCO Special Services	OUT	-	-	-	-	ON
SES	Service Evaluation Trunks	OUT	-	-	-	-	ON
TOLLOPER	Incoming from a 3C type Toll Switchboard Operator	INC	MF	-	WS	-	ON/OFF
TSPS	Outgoing to TSPS	OUT	-	MF	-	WS	ON
TSTK	Local Test Desk Interface	INC	MF	-	-	-	ON
		OUT	-	-	-	-	ON X75 (See PACKET)
X75P	Packet Switching on X.75' trunks	2W	-	-	-	-	ON

MF = Multifrequency,
DD = Delay Dial,
TT = Touch Tone,
ST = Stop,
DP = Dial Pulse,
DT = Dial Tone,
DC = Direct Connect,
NONE = No Inpulsing,
WS = Wink Start,
RPEO = Revertive Pulsing End Office,
GS = Ground Start,
ID = Immediate Dial,
RPTO = Revertive Pulsing Tandem Office,
LS = Loop Start,
NO = No Start Dial

Figure 1 LOCAL TRUNKS ADDRESS SIGNAL AND START DIAL COMBINATIONS

TOLL TRUNKS ADDRESS SIGNAL AND START DIAL COMBINATIONS

TRUNK CLASS	DESCRIPTION	TRUNK DIR.	ADDRESS SIGNAL		START DIAL		IDLE STATE
			IN	OUT	IN	OUT	
AUXTRNK	Auxiliary Service	OUT	-	-	-	WS	ON
BVINTOLL	Outgoing Busy Verification Primary Intertoll	OUT	-	MF	-	WS/DD	ON
		OUT	-	DP	-	ID/WS	ON
		OUT	-	CCIS6/ ISUP7	-	-	ON
BVTOLLCM	Outgoing Busy Verification Toll Completing	OUT	-	MF	-	WS/DD	ON/OFF
		OUT	-	DP	-	ID/WS	ON
		OUT	-	CCIS6/ ISUP7	-	-	ON
BUSYVFY	Incoming Busy Verification Primary Intertoll	INC	MF		WS/DD		ON
		INC	DP		ID		ON
CAMOPKEY	CAMA Operator Keying Trunk	OUT	-	MF	-	WS	ON
CAMOPTLK	CAMA Operator Talking Trunk	OUT	-	-	-	-	ON
CAMAONI	Incoming CAMA Trunks - ONI	INC	MF	-	WS	-	ON
		INC	DP	-	ID/WS	-	ON
CAMAANI	Incoming CAMA Trunks - ANI	INC	MF	-	WS	-	ON
		INC	DP	-	ID/WS	-	ON
DIOR	Direct International Origination	INC	MF	-	WS	-	ON
FXROTL	Foreign Exchange lines for Toll/Tandem offices with no Directory Numbers	INC	-	-	-	-	ON

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IC	Interexchange Carrier Trunks	2W	MF	MF	WS	WS	ON
		INC	MF	-	WS	-	ON
		OUT	-	MF	-	WS	ON
IFOPER	Outgoing OSPS PRI B Channel	OUT	-	DCHN	-	-	ON
	Outgoing OSPS PRI D Channel	SGNL	DCHN	DCHN	-	-	ON
IFTERM	Incoming OSPS PRI B Channel	INC	DCHN	-	-	-	ON
	Incoming OSPS PRI D Channel	SGNL	DCHN	DCHN	-	-	ON
INAISTRK	Incoming automatic intercept system trunk	INC	NONE	-	DIRC	-	ON
		OUT			DIRC		ON
					IMED		ON
					WINK		ON
					DLAY		ON
LATA	Intertoll Trunks from a LATA	2W	MF	MF	WS	WS	ON
		INC	MF		WS		ON
PRINTOLL	Primary Intertoll	INC	MF	-	WS/DD	-	ON
		INC	DP	-	ID	-	ON
		OUT	-	MF	-	WS/DD	ON
		OUT	-	DP	-	ID/WS/DD	ON
		2W	MF	MF	WS	WS	ON
		2W	MF	MF	DD	DD	ON
		2W	MF	DP	WS	ID	ON
		2W	MF	DP	WS	WS	ON
		2W	DP	DP	ID	ID	ON
		OUT	-	CCIS6/ ISUP7	-	-	ON
		INC	CCIS6/ ISUP7	-	-	-	ON
		2W	CCIS6/ ISUP7	CCIS6/ ISUP7	-	-	ON
RAFANNC	Recorded Announcement Function	RAF	-	-	-	-	ON
RAFCTR	RAF Coin Tone Receiver	RAF	-	-	-	-	ON
RAFDTA	RAF Dial Through Announcement	RAF	-	-	-	-	ON
RMSD3	TAT connected to an RMSD3	INC	MF	-	WS	-	ON
SCINTOLL	Toll Tandem	INC	MF	-	WS	-	ON
	Operator Assistance to Switchboard	OUT	-	-	-	WS	ON
	Operator Assistance to TSPS	OUT	-	MF	-	WS	ON
	Residual	OUT	-	-	-	WS	ON
	Delay Call	INC	MF	-	WS	-	ON
		OUT	-	CCIS6/ ISUP7	-	-	ON
		INC	CCIS6/ ISUP7	-	-	-	ON
		2W	CCIS6/ ISUP7	CCIS6/ ISUP7	-	-	ON
SPAB800	Special Access Basic 800 Service	2W	DP/MF/TT	DP/MF/TT	DD/ID/WS	DD/ID/WS	ON
		OUT	-	DP/MF/TT	-	DD/ID/WS	ON
SPAM800	MEGACOM 800 Service	2W	DP/MF/TT	DP/MF/TT	DD/ID/WS	DD/ID/WS	ON
		OUT	-	DP/MF/TT	-	DD/ID/WS	ON
SPAMEG	MEGACOM Service	2W	DP/MF/TT	DP/MF/TT	DT/ID/WS	ID/WS	ON
		INC	DP/MF/TT	-	DT/ID/WS	-	ON
SPAWATS	Special Access WATS	2W	DP/MF/TT	DP/MF/TT	DT/ID/WS	ID/WS	ON
		INC	DP/MF/TT	-	DT/ID/WS	-	ON
TCIKT	OSPS Transfer CAMA Incoming Keying Trunks	INC	MF	-	WS	-	ON
TCITT	OSPS Transfer CAMA Incoming Talking Trunks	INC	MF	-	WS	-	ON
TOPAS	TAT connected to TOPAS	INC	MF	-	WS	-	ON
TTOLLCON	Toll connecting to a Local Office	2W	MF	MF	DD/WS/DT	WS	ON
		INC	MF	-	DD/WS/DT	-	ON
		OUT	-	MF	-	WS/DD	ON/OFF

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		OUT	-	DP	-	ID/WS	ON
		OUT	-	CCIS6/ ISUP7	-	-	ON
		INC	CCIS6/ ISUP7	-	-	-	ON
		2W	CCIS6/ ISUP7	CCIS6/ ISUP7	-	-	ON

MF= Multifrequency,
DP = Dial Pulse,
WS = Wink Start,
ID = Immediate Dial,
DD = Delay Dial,
DT= Dial Tone

Figure 2 TOLL TRUNKS ADDRESS SIGNAL AND START DIAL COMBINATIONS

CPN/BN OPTIONS FOR SWITCH CONFIGURATIONS INTERCONNECTED VIA PRIs

NEAR OFFICE SWITCH	FAR OFFICE SWITCH	CPN SCRN	CPN DISC	CPN BN OPT					
				NONE	CPNONLY	CPNPREF	BNONLY	BNPREF	CPNUP
Public	Private	Y/N	Y	x	x	x	x	x	
Public	Public	N	N	x	x	x	x	x	
Private	Private	N	N	x	x	x	x	x	
Private	Public	N	N	x					x

Figure 3 CPN/BN OPTIONS FOR SWITCH CONFIGURATIONS INTERCONNECTED VIA PRIs

---

```
tkgrp                    5ESS Switch
SCREEN 1 OF 14           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

*1. TGN          ____      13. TERA RCVY  ___     20. HOLD BUSY    N
#2. TRK DIR      ____      14. IAPT       Y       21. FAR END NPA  ___
 3. HUNT TYPE    _____     15. CALLMON INH Y      22. LOCAL SM     ___
 4. SCR          ____      16. INSEP      ___     23. GL ANN TG    ____
 5. GLARE ACTION _______   17. INPULSING  _____   24. BRCS        N
 6. DAS          __        18. OUTPULSING _____       TOPAS TP NBR __
#7. TRKCLS       _______   19. SATELLITE   N
 8. CARRIER ID   ____
 9. FEAT GRP     _
10. FREE ANS     N
11. INC TND WINK N
12. ATTTN        ___
```

```
tkgrp                    5ESS Switch
SCREEN 2 OF 14           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

26. TRUNK CHAR _________________      OPERATOR TRUNKS        ANNC TRUNKS
27. FEND CLLI  ____________     30. OUTPL REQ  _       37. CYCLES    _
28. PBX/CPE ID ____             31. AUDIBLE    _       38. BARGE IN  _
29. REMARKS    _________________ 32. SIGNAL    _______  39. AUD RNG   _
                    33. FREE TERM  _       40. SVC GRP   NOANNC
                    34. COINRTN INT _      41. MAXCALLS  __
```

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```
                    35. COINRTN FNL _       42. RETRY    N
                    36. TSPS TYPE  _________ 43. CASCADING N
                                    RAF MBRS  0
```

```
tkgrp                    5ESS Switch
SCREEN 3 OF 14             OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

 CAMA TRUNKS          MISCELLANEOUS FEATURES        65. FGD CIC SZ   ____
45. VALNPA ___   54. DATA RATE    ____            66. SPEECH TRMTS  N
46. VALNXX1 ___  55. INVERSION    N               67. EON MC RI    _____
47. VALNXX2 ___  56. WB RATE      _________       68. RERTE Q INH   N
48. VALNXX3 ___  57. WB TSA TYPE  _____           69. CNA MOD 164   N
49. VALNXX4 ___  58. DIR CON DN   _______________ 70. CALEA        N
50. VALNXX5 ___  59. FACILITY TYPE ___            71. REL LINK INIT N
51. VALNXX6 ___  60. FACILITY NBR  _____          72. SEND LD CIC   N
52. VALNXX7 ___  61. RTE NBR PLAN  ____           73. SS7 ISUP OPER N
53. VALNXX8 ___  62. BILLING DN    __________
            63. LS DLY ANS    N
            64. MLT ISLC OPT  N
```

```
tkgrp                    5ESS Switch
SCREEN 4 OF 14             OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

   PFA TRUNK FEATURES
74. BUSY LAMP    _________
75. MAKE BUSY KEY _________
76. CUT THRU     _
```

```
tkgrp                    5ESS Switch
SCREEN 5 OF 14             OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

 LATA/TOLL TRUNKS          CCS TRUNKS              CCITT7
77. CMC      N        86. TRUNK QUERY _        91. DEST PT CODE _________
78. CMC ID   ____     87. XLT TEST    _        92. ORIG PT CODE _________
79. ORIG CMC __       88. NEND CLLI   _____________ 93. CONTROL TYPE ______
80. TERM CMC __       89. VPA RATE    ___      94. CCS7 TYPE    BELLCORE
                  90. VPA TYPE    NOVPA      95. CFN RSTRCT   N
    LATA TRUNKS                          96. RCD 3PT1 ITC _______
81. BLK NO ANI   _                       97. ISUP MLD     _
82. BILL TRKGRP  _                        98. MAX HOP CNT  __
83. NCD SCREENING NONE
84. ORIG LATA    __
85. UTT          N
```

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```
tkgrp                    5ESS Switch
SCREEN 6 OF 14          OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

    CENTREX NETWORK          MODULAR QUEUING TRUNKS       115. RTCD REQ N
 99. MBG ID       _____    108. QUEUE ALLOWED _
100. OVFL MC RTIDX _____   109. ENQUEUE ACT   _
101. TRK ICI      ___      110. QUEUE FEATURE _________

  CCS7 EQUAL ACCESS            DSN TRUNKS
102. CPN RSTRCT    N       111. DSN ARC ID __
103. CHG RSTRCT    N       112. SHUTTLE    N
104. ATP IC RSTRCT N       113. MLPP STAGE ______
105. UUI IC RSTRCT N
106. NI ANNC       N       IMMEDIATE START ANNOUNCEMENT
107. NI IW REL     N       114. IMM START ANN N
```

```
tkgrp                    5ESS Switch
SCREEN 7 OF 14          OFFICE DATA ADMINISTRATION
(5202)              TRUNK_GROUP (EDSL/PRI TRUNKS)

116. STA ID       ____       128. CPN SCRN      N  140. CI DIAL    _______
117. UUI          _          129. CPN DISC      N  141. PIC       ____
118. CODE SET7    _____      130. INHIBIT TCM   N  142. PTC       ____
119. SDN DAS      __         131. RDTA GRP      N  143. PLC       ____
120. CBC          N          132. E911 CPN      N  144. UNBUNDLED  N
121. DEDICATED SRV _______   133. CPN BILLING   N  145. DIR CON IC N
122. VOICE CUT THRU NORMAL   134. ALLOW AMA     N  146. HM TAX     N
123. DATA CUT THRU  NORMAL   135. ALW DATA ONLY N  147. CNAM ALW   N
124. APPLICATION  ______     136. STD RN SRC    N  148. CNAM AMA   FLATRATE
125. MAIN DN      __________ 137. RN SCRN       N  149. PCN ALW    N
126. CPN BN OPT   NONE       138. RN DISC       N  150. PCN AMA    FLATRATE
127. PRIV OVER    N          139. RN BILLING    N  151. EDS CND    N
```

```
tkgrp                    5ESS Switch
SCREEN 8 OF 14          OFFICE DATA ADMINISTRATION
(5202)              TRUNK_GROUP (EDSL/PRI TRUNKS)

152. EDS GRP   ________
153. NPA SOURCE ___________
154. B CHAN NEG N
155. PASS OLI   N
```

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```
tkgrp                    5ESS Switch
SCREEN 9 OF 14         OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

   SSP800 TRUNKS       MORE MISCELLANEOUS FEATURES       ISDN ATTENDANT
156. FAR END LATA ___   161. ACP SDN      N          173. MK BUSY     N
157. FAR END NXX  ___   162. SDN STAT GRP N          174. BW LAMP     N
158. COIN         N     163. SPA BILL DN  _____      175. ISAT MLHG   ____
                        164. SPA SUPV     N          176. WARN THRESH ____
   RELEASE LINK         165. ANI6         N
159. RLT TYPE  NONE     166. ANI7         N              LEASED NETWORK
160. RLT FLASH N        168. PRIVACY      N          177. LN TYPE   NONE
                        169. INTER SM TRK N          178. LN VIRT   N
                        170. MAI          S          179. LN GROUP  ________
                        171. API CODE     ____       180. LN CRIT Q N
                        172. ASI PROXY    N
```

```
tkgrp                    5ESS Switch
SCREEN 10 OF 14        OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

       ENHANCED 911          191. BCLID FEATURE ________
181. E911 TYPE     NONDED     192. BCLID GRP     ________
182. ESCO          ___
183. CAMA PSAP     N          PACKET SWITCHING
184. ENH PSAP SIG  N          193. NBR PLAN NONE
185. TEN DIG ONLY  N          194. NEXT PSN ___
186. PSAP RERTE TN _____
187. RERTE ACT     N           LEVEL 2 THRSH
188. WINK START    __         195. FCS      _
189. ABND TIMER    __         196. SABM     __
190. OUTAGE RPT    _          197. PROT VIOL ___
```

```
tkgrp                    5ESS Switch
SCREEN 11 OF 14        OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

     X.75 TRUNKS
198. REMOTE DNIC   ____
199. SEGMENT SIZE  ___
200. CUG LIST ID   ____
201. CUG SCRN      N
202. ILC SCRN      _____
203. NUI IN VFY    ______
204. NUI IN UNVFY  _____
205. NUI OUT VFY   ______
206. NUI OUT UNFVY _____
```

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```
tkgrp                    5ESS Switch
SCREEN 12 OF 14        OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

     CELLULAR DATA          ADV SVC PLATFORM          NUMBER PORTABILITY
207. DCS TRK    N        216. TRIG NBR     ___    224. LRN DAS      __
208. DCS RETRY  N          217. UNRES EA     N     225. SIG PNUM     N
209. DCS DIGCNT __         218. ASP ORIG     N     226. CNA OPTION   NONE
210. CONT TEST  N          219. ASP TOLL     N     227. PORTED-IN AMA N
211. SERV TYPE  NOSERV     220. IP TRK       N
    DCS NOTIFY N           221. IP MEAS      N
213. ISG        N          222. CARRIER TRIG  N
214. ICOS TRK   N          223. CUT THRU TRIG ___
215. FAR E911   N
```

```
tkgrp                    5ESS Switch
SCREEN 13 OF 14        OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

  LONG DISTANCE PLATFORM             AML           VIRTUAL PRIVATE NETWORK
228. LDP          N       237. AML PERCENT ___      239. VPN ACCESS    N
229. PASS ANI     N       238. AML ALARM   MAJOR    240. MBG TRANSPORT N
230. ANI PROCESS  N
231. TERM BILL    N
232. MINT SIG TYPE _____
233. NETWORK IND  ___
234. ACCT PROMPT  GLOBAL
235. CT FOR DT    N
236. PREF NPA     ___
```

```
tkgrp                    5ESS Switch        _
SCREEN 14 OF 14        OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

  DAL/SPECIAL PBX                END OFFICE NODAL
241. DAL ACCESS  N          247. EON BILLING DN  ___________
242. DAL EGRESS  N          248. EON NBR PLAN    ____
243. LINE BUSY   N          249. EON PRIVACY     N
244. SPECIAL PBX N          250. EON PREFIX NPA  N
245. DNIS USER   N               EON CBC         N
                         EON SDN BN     __________
246. CONTEXT ID NATIVE           EON SDN NBR PLAN ____
                         EON MEG DAS    __
                         EON MEG BN     __________
                         EON MEG NBR PLAN ____
```

Figure 4 SAMPLE TKGRP FORM 5E14 SOFTWARE RELEASE

```
tkgrp                    5ESS Switch
```

```
SCREEN 1 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

*1. TGN          ____       13. TERA RCVY   ___      20. HOLD BUSY    N
#2. TRK DIR      ____       14. IAPT        Y        21. FAR END NPA  ___
 3. HUNT TYPE    _____      15. CALLMON INH Y        22. LOCAL SM     ___
 4. SCR          ____       16. INSEP       ___      23. BICC GRP     ____
 5. GLARE ACTION _________  17. INPULSING   _____    24. GL ANN TG    ____
 6. DAS          ___        18. OUTPULSING  _____    25. BRCS         N
#7. TRKCLS       _________  19. SATELLITE   N        TOPAS TP NBR __
 8. CARRIER ID   ____
 9. FEAT GRP     _
10. FREE ANS     N
11. INC TND WINK N
12. ATTTN        ___
```

```
tkgrp                   5ESS Switch
SCREEN 2 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

27. TRUNK CHAR _________________     OPERATOR TRUNKS          ANNC TRUNKS
28. FEND CLLI  _____________     31. OUTPL REQ   _       38. CYCLES    _
29. PBX/CPE ID ____              32. AUDIBLE     _       39. BARGE IN  _
30. REMARKS    ___________________ 33. SIGNAL     _________  40. AUD RNG   _
                                   34. FREE TERM   _       41. SVC GRP   NOANNC
                                   35. COINRTN INT _       42. MAXCALLS  __
                                   36. COINRTN FNL _       43. RETRY     N
                                   37. TSPS TYPE   _________ 44. CASCADING N
                                                             RAF MBRS  0
```

```
tkgrp                   5ESS Switch
SCREEN 3 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

  CAMA TRUNKS          MISCELLANEOUS FEATURES       66. FGD CIC SZ    ____
46. VALNPA  ___   55. DATA RATE     ____             67. SPEECH TRMTS  N
47. VALNXX1 ___   56. INVERSION    N                68. EON MC RI     _____
48. VALNXX2 ___   57. WB RATE      _________        69. RERTE Q INH   N
49. VALNXX3 ___   58. WB TSA TYPE  _____            70. CNA MOD 164   N
50. VALNXX4 ___   59. DIR CON DN   _________________ 71. CALEA        N
51. VALNXX5 ___   60. FACILITY TYPE ___             72. REL LINK INIT N
52. VALNXX6 ___   61. FACILITY NBR  _____           73. SEND LD CIC   N
53. VALNXX7 ___   62. RTE NBR PLAN  ____            74. ROUTE IND     ______
54. VALNXX8 ___   63. BILLING DN    __________      75. SS7 ISUP OPER N
                  64. LS DLY ANS    N
                  65. MLT ISLC OPT  N
```

```
tkgrp                   5ESS Switch
```

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```
SCREEN 4 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

    PFA TRUNK FEATURES
76. BUSY LAMP    _________
77. MAKE BUSY KEY _________
78. CUT THRU     _
```

```
tkgrp                   5ESS Switch
SCREEN 5 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

 LATA/TOLL TRUNKS            CCS TRUNKS              CCITT7
79. CMC     N         88. CQ/BQ ALW _          93. DEST PT CODE _________
80. CMC ID  ____      89. XLT TEST  _          94. ORIG PT CODE _________
81. ORIG CMC __       90. NEND CLLI ___________  95. CONTROL TYPE ______
82. TERM CMC __       91. VPA RATE  ___          96. CCS7 TYPE   BELLCORE
                  92. VPA TYPE  NOVPA        97. CFN RSTRCT   N
    LATA TRUNKS                           98. RCD 3PT1 ITC _______
83. BLK NO ANI   _                        99. ISUP MLD     _
84. BILL TRKGRP  _                        100. MAX HOP CNT  __
85. NCD SCREENING NONE                          PLATFORM    ___
86. ORIG LATA    __
87. UTT          N
```

```
tkgrp                   5ESS Switch
SCREEN 6 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

    CENTREX NETWORK         MODULAR QUEUING TRUNKS
102. MBG ID       _____   111. QUEUE ALLOWED _
103. OVFL MC RTIDX _____  112. ENQUEUE ACT   _
104. TRK ICI      ___     113. QUEUE FEATURE _________
                  114. INH GETS Q    N
 CCS7 EQUAL ACCESS
105. CPN RSTRCT    N          DSN TRUNKS
106. CHG RSTRCT    N      115. DSN ARC ID __
107. ATP IC RSTRCT N      116. SHUTTLE    N
108. UUI IC RSTRCT N      117. MLPP STAGE ______
109. NI ANNC       N
110. NI IW REL     N
```

```
tkgrp                   5ESS Switch
SCREEN 7 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

IMMEDIATE START ANNOUNCEMENT
118. IMM START ANN N
```

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119. RTCD REQ N

---

tkgrp 5ESS Switch
SCREEN 8 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP (EDSL/PRI TRUNKS)

120. STA ID ____ 132. CPN SCRN N 144. CI DIAL _____
121. UUI _ 133. CPN DISC N 145. PIC ____
122. CODE SET7 _____ 134. INHIBIT TCM N 146. PTC ____
123. SDN DAS ___ 135. RDTA GRP N 147. PLC ____
124. CBC N 136. E911 CPN N 148. UNBUNDLED N
125. DEDICATED SRV _____ 137. CPN BILLING N 149. DIR CON IC N
126. VOICE CUT THRU NORMAL 138. ALLOW AMA N 150. HM TAX N
127. DATA CUT THRU NORMAL 139. ALW DATA ONLY N 151. CNAM ALW N
128. APPLICATION _____ 140. STD RN SRC N 152. CNAM AMA FLATRATE
129. MAIN DN _____ 141. RN SCRN N 153. PCN ALW N
130. CPN BN OPT NONE 142. RN DISC N 154. PCN AMA FLATRATE
131. PRIV OVER N 143. RN BILLING N 155. EDS CND N

---

tkgrp 5ESS Switch
SCREEN 9 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP (EDSL/PRI TRUNKS)

156. EDS GRP _____
157. NPA SOURCE _____
158. B CHAN NEG N
159. PASS OLI N

---

tkgrp 5ESS Switch
SCREEN 10 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

SSP800 TRUNKS MORE MISCELLANEOUS FEATURES ISDN ATTENDANT
160. FAR END LATA ___ 165. ACP SDN N 177. MK BUSY N
161. FAR END NXX ___ 166. SDN STAT GRP N 178. BW LAMP N
162. COIN N 167. SPA BILL DN _____ 179. ISAT MLHG ____
168. SPA SUPV N 180. WARN THRESH ____
RELEASE LINK 169. ANI6 N
163. RLT TYPE NONE 170. ANI7 N LEASED NETWORK
164. RLT FLASH N 172. PRIVACY N 181. LN TYPE NONE
173. INTER SM TRK N 182. LN VIRT N
174. MAI S 183. LN GROUP _____
175. API CODE ____ 184. LN CRIT Q N
176. ASI PROXY N

---

tkgrp 5ESS Switch

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```
SCREEN 11 OF 15          OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

       ENHANCED 911          195. BCLID FEATURE ________
185. E911 TYPE    NONDED       196. BCLID GRP    ________
186. ESCO         ___
187. CAMA PSAP    N            PACKET SWITCHING
188. ENH PSAP SIG  N           197. NBR PLAN NONE
189. TEN DIG ONLY  N           198. NEXT PSN ___
190. PSAP RERTE TN __________
191. RERTE ACT    N             LEVEL 2 THRSH
192. WINK START   __           199. FCS      _
193. ABND TIMER   __           200. SABM     __
194. OUTAGE RPT   _            201. PROT VIOL ___
```

```
tkgrp                    5ESS Switch
SCREEN 12 OF 15          OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

     X.75 TRUNKS
202. REMOTE DNIC  ____
203. SEGMENT SIZE ___
204. CUG LIST ID  ____
205. CUG SCRN     N
206. ILC SCRN     _____
207. NUI IN VFY   ______
208. NUI IN UNVFY _____
209. NUI OUT VFY  ______
210. NUI OUT UNFVY _____
```

```
tkgrp                    5ESS Switch
SCREEN 13 OF 15          OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

    CELLULAR DATA          ADV SVC PLATFORM          NUMBER PORTABILITY
211. DCS TRK    N          220. TRIG NBR     ___     229. LRN DAS      ___
212. DCS RETRY  N          221. UNRES EA     N       230. SIG PNUM     N
213. DCS DIGCNT __         222. ASP ORIG     N       231. CNA OPTION   NONE
214. CONT TEST  N          223. ASP TOLL     N       232. PORTED-IN AMA N
215. SERV TYPE  NOSERV     224. IP TRK       N
   DCS NOTIFY N            225. IP MEAS      N
217. ISG        N          226. CARRIER TRIG  N
218. ICOS TRK   N          227. CUT THRU TRIG ___
219. FAR E911   N          228. URT FCD BLK   N
```

```
tkgrp                    5ESS Switch
SCREEN 14 OF 15          OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP
```

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```
 LONG DISTANCE PLATFORM            AML          VIRTUAL PRIVATE NETWORK
233. LDP          N      242. AML PERCENT ___      244. VPN ACCESS    N
234. PASS ANI     N      243. AML ALARM   MAJOR    245. MBG TRANSPORT N
235. ANI PROCESS  N
236. TERM BILL    N
237. MINT SIG TYPE _____
238. NETWORK IND  ___
239. ACCT PROMPT  GLOBAL
240. CT FOR DT    N
241. PREF NPA     ___
```

```
tkgrp                    5ESS Switch        _
SCREEN 15 OF 15          OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

 DAL/SPECIAL PBX                 END OFFICE NODAL
246. DAL ACCESS  N          252. EON BILLING DN  ___________
247. DAL EGRESS  N          253. EON NBR PLAN    ____
248. LINE BUSY   N          254. EON PRIVACY     N
249. SPECIAL PBX N          255. EON PREFIX NPA  N
250. DNIS USER   N          256. EON INH TERM CBC N

251. CONTEXT ID NATIVE          SWITCHED ACCESS
                        257. SA TRIG NBR ___
                        258. ACC ID      ___
                        259. SA ORIG REC ON
                        260. SA TERM REC OFF
```

Figure 5 SAMPLE TKGRP FORM 5E15 SOFTWARE RELEASE

```
tkgrp                    5ESS Switch
SCREEN 1 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

*1. TGN          ____       13. TERA RCVY   ___      20. HOLD BUSY    N
#2. TRK DIR      ____       14. IAPT        Y        21. FAR END NPA  ___
 3. HUNT TYPE    _____      15. CALLMON INH Y        22. LOCAL SM     ___
 4. SCR          ____       16. INSEP       ___      23. PKT GRP      ____
 5. GLARE ACTION _________  17. INPULSING   _____    24. GL ANN TG    ____
 6. DAS          ___        18. OUTPULSING  _____    25. BRCS         N
#7. TRKCLS       _________  19. SATELLITE   N        TOPAS TP NBR __
 8. CARRIER ID   ____
 9. FEAT GRP     _                          PACKET NETWORK TRUNKING
10. FREE ANS     Y                          27. DIFF SERV __
11. INC TND WINK N
12. ATTTN        ___
```

```
tkgrp                    5ESS Switch
```

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```
SCREEN 2 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

28. TRUNK CHAR _________________      OPERATOR TRUNKS          ANNC TRUNKS
29. FEND CLLI ____________      32. OUTPL REQ  _        39. CYCLES    _
30. PBX/CPE ID ____           33. AUDIBLE    _        40. BARGE IN  _
31. REMARKS   ___________________ 34. SIGNAL    _________  41. AUD RNG   _
                    35. FREE TERM  _        42. SVC GRP   NOANNC
                    36. COINRTN INT _       43. MAXCALLS  __
                    37. COINRTN FNL _       44. RETRY     N
                    38. TSPS TYPE  __________ 45. CASCADING N
                                    RAF MBRS  0
```

```
tkgrp                   5ESS Switch
SCREEN 3 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

 CAMA TRUNKS          MISCELLANEOUS FEATURES       67. FGD CIC SZ   ____
47. VALNPA ___   56. DATA RATE     ____            68. SPEECH TRMTS  N
48. VALNXX1 ___  57. INVERSION     N               69. EON MC RI    _____
49. VALNXX2 ___  58. WB RATE       __________       70. RERTE Q INH   N
50. VALNXX3 ___  59. WB TSA TYPE   _____            71. CNA MOD 164   N
51. VALNXX4 ___  60. DIR CON DN    _________________ 72. CALEA        N
52. VALNXX5 ___  61. FACILITY TYPE ___             73. INTRA MARKET  N
53. VALNXX6 ___  62. FACILITY NBR  _____           74. REL LINK INIT N
54. VALNXX7 ___  63. RTE NBR PLAN  ____            75. SEND LD CIC   N
55. VALNXX8 ___  64. BILLING DN    ___________     76. ROUTE IND     ______
            65. LS DLY ANS    N              77. SS7 ISUP OPER N
            66. MLT ISLC OPT  N
```

```
tkgrp                   5ESS Switch
SCREEN 4 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

    PFA TRUNK FEATURES
78. BUSY LAMP    __________
79. MAKE BUSY KEY __________
80. CUT THRU     _
```

```
tkgrp                   5ESS Switch
SCREEN 5 OF 15          OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

 LATA/TOLL TRUNKS            CCS TRUNKS              CCITT7
81. CMC      N         90. CQ/BQ ALW _          95. DEST PT CODE __________
82. CMC ID   ____      91. XLT TEST  _          96. ORIG PT CODE __________
83. ORIG CMC __        92. NEND CLLI ____________  97. CONTROL TYPE ______
84. TERM CMC __        93. VPA RATE  ___        98. CCS7 TYPE    BELLCORE
                  94. VPA TYPE  NOVPA       99. CFN RSTRCT   N
```

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```
    LATA TRUNKS                      100. RCD 3PT1 ITC _______
85. BLK NO ANI   _                   101. ISUP MLD    _
86. BILL TRKGRP  _                    102. MAX HOP CNT  __
87. NCD SCREENING NONE                        PLATFORM    ___
88. ORIG LATA    __
89. UTT          N
```

```
tkgrp                    5ESS Switch
SCREEN 6 OF 15         OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

    CENTREX NETWORK         MODULAR QUEUING TRUNKS
104. MBG ID       _____   113. QUEUE ALLOWED _
105. OVFL MC RTIDX _____  114. ENQUEUE ACT   _
106. TRK ICI      ___     115. QUEUE FEATURE _________
                          116. INH EGR OFC Q N
 CCS7 EQUAL ACCESS
107. CPN RSTRCT   N           DSN TRUNKS
108. CHG RSTRCT   N       117. DSN ARC ID __
109. ATP IC RSTRCT N      118. SHUTTLE    N
110. UUI IC RSTRCT N      119. MLPP STAGE _______
111. NI ANNC      N
112. NI IW REL    N
```

```
tkgrp                    5ESS Switch
SCREEN 7 OF 15         OFFICE DATA ADMINISTRATION
(5202)                  TRUNK_GROUP

IMMEDIATE START ANNOUNCEMENT
120. IMM START ANN N

121. RTCD REQ N
```

```
tkgrp                    5ESS Switch
SCREEN 8 OF 15         OFFICE DATA ADMINISTRATION
(5202)            TRUNK_GROUP (EDSL/PRI TRUNKS)

122. STA ID       ____      134. CPN SCRN     N  146. CI DIAL   ______
123. UUI          _         135. CPN DISC     N  147. PIC       ____
124. CODE SET7    _____     136. INHIBIT TCM  N  148. PTC       ____
125. SDN DAS      ___       137. RDTA GRP     N  149. PLC       ____
126. CBC          N         138. E911 CPN     N  150. UNBUNDLED  N
127. DEDICATED SRV _______  139. CPN BILLING  N  151. DIR CON IC N
128. VOICE CUT THRU NORMAL  140. ALLOW AMA    N  152. HM TAX     N
129. DATA CUT THRU  NORMAL  141. ALW DATA ONLY N  153. CNAM ALW   N
130. APPLICATION  ______    142. STD RN SRC   N  154. CNAM AMA   FLATRATE
131. MAIN DN      _________ 143. RN SCRN      N  155. PCN ALW    N
132. CPN BN OPT   NONE      144. RN DISC      N  156. PCN AMA    FLATRATE
```

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133. PRIV OVER N 145. RN BILLING N 157. EDS CND N

---

tkgrp 5ESS Switch
SCREEN 9 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP (EDSL/PRI TRUNKS)

158. EDS GRP _____
159. NPA SOURCE _____
160. B CHAN NEG N
161. PASS OLI N
162. DISP CNTRL N
163. SN TRK N

---

tkgrp 5ESS Switch
SCREEN 10 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

SSP800 TRUNKS MORE MISCELLANEOUS FEATURES ISDN ATTENDANT
164. FAR END LATA ___ 169. ACP SDN N 181. MK BUSY N
165. FAR END NXX ___ 170. SDN STAT GRP N 182. BW LAMP N
166. COIN N 171. SPA BILL DN _____ 183. ISAT MLHG ____
172. SPA SUPV N 184. WARN THRESH ____
RELEASE LINK 173. ANI6 N
167. RLT TYPE NONE 174. ANI7 N LEASED NETWORK
168. RLT FLASH N 176. PRIVACY N 185. LN TYPE NONE
177. INTER SM TRK N 186. LN VIRT N
178. MAI S 187. LN GROUP _____
179. API CODE ____ 188. LN CRIT Q N
180. ASI PROXY N

---

tkgrp 5ESS Switch
SCREEN 11 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

ENHANCED 911 199. BCLID FEATURE _____
189. E911 TYPE NONDED 200. BCLID GRP _____
190. ESCO ___
191. CAMA PSAP N PACKET SWITCHING
192. ENH PSAP SIG N 201. NBR PLAN NONE
193. TEN DIG ONLY N 202. NEXT PSN ___
194. PSAP RERTE TN _____
195. RERTE ACT N LEVEL 2 THRSH
196. WINK START __ 203. FCS _
197. ABND TIMER __ 204. SABM __
198. OUTAGE RPT _ 205. PROT VIOL ___

---

tkgrp 5ESS Switch

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```
SCREEN 12 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

      X.75 TRUNKS
206. REMOTE DNIC  ____
207. SEGMENT SIZE  ___
208. CUG LIST ID  ____
209. CUG SCRN      N
210. ILC SCRN     _____
211. NUI IN VFY   ______
212. NUI IN UNVFY  _____
213. NUI OUT VFY  ______
214. NUI OUT UNFVY _____
```

```
tkgrp                     5ESS Switch
SCREEN 13 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

     CELLULAR DATA          ADV SVC PLATFORM          NUMBER PORTABILITY
215. DCS TRK    N          224. TRIG NBR     ___    233. LRN DAS      ___
216. DCS RETRY  N          225. UNRES EA     N      234. SIG PNUM     N
217. DCS DIGCNT __         226. ASP ORIG     N      235. CNA OPTION   NONE
218. CONT TEST  N          227. ASP TOLL     N      236. PORTED-IN AMA N
219. SERV TYPE  NOSERV     228. IP TRK       N
    DCS NOTIFY N           229. IP MEAS      N
221. ISG        N          230. CARRIER TRIG  N
222. ICOS TRK   N          231. CUT THRU TRIG ___
223. FAR E911   N          232. URT FCD BLK   N
```

```
tkgrp                     5ESS Switch
SCREEN 14 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

  LONG DISTANCE PLATFORM            AML          VIRTUAL PRIVATE NETWORK
237. LDP          N       246. AML PERCENT ___      248. VPN ACCESS    N
238. PASS ANI     N       247. AML ALARM   MAJOR    249. MBG TRANSPORT N
239. ANI PROCESS  N
240. TERM BILL    N
241. MINT SIG TYPE _____
242. NETWORK IND  ___
243. ACCT PROMPT  GLOBAL
244. CT FOR DT    N
245. PREF NPA     ___
```

```
tkgrp                     5ESS Switch      _
SCREEN 15 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP
```

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```
 DAL/SPECIAL PBX              END OFFICE NODAL          SWITCHED ACCESS
250. DAL ACCESS  N       256. EON BILLING DN  __________ 261. SA TRIG NBR ___
251. DAL EGRESS  N       257. EON NBR PLAN    ____       262. ACC ID       0
252. LINE BUSY   N       258. EON PRIVACY     N          263. SA ORIG REC ON
253. SPECIAL PBX N       259. EON PREFIX NPA  N          264. SA TERM REC OFF
254. DNIS USER   N       260. EON INH TERM CBC N         265. OLI SCRN    0

255. CONTEXT ID NATIVE
```

Figure 6 SAMPLE TKGRP FORM 5E16(1) SOFTWARE RELEASE

```
tkgrp                    5ESS Switch
SCREEN 1 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

*1. TGN          ____      13. TERA RCVY   ___     20. HOLD BUSY    N
#2. TRK DIR      ____      14. IAPT        Y       21. FAR END NPA  ___
 3. HUNT TYPE    _____     15. CALLMON INH Y       22. LOCAL SM     ___
 4. SCR          ____      16. INSEP       ___     23. GL ANN TG    ____
 5. GLARE ACTION _______   17. INPULSING   _____   24. BRCS        N
 6. DAS          ___       18. OUTPULSING  _____       TOPAS TP NBR __
#7. TRKCLS       _______   19. SATELLITE   N
 8. CARRIER ID   ____                        PACKET NETWORK TRUNKING
 9. FEAT GRP     _                        26. PKT GRP   ____
10. FREE ANS     Y                        27. BICC GRP  _
11. INC TND WINK N                        28. SIPT GRP  _
12. ATTTN        ___                      29. DIFF SERV __
```

```
tkgrp                    5ESS Switch
SCREEN 2 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

30. TRUNK CHAR _________________     OPERATOR TRUNKS         ANNC TRUNKS
31. FEND CLLI  ____________      34. OUTPL REQ   _       41. CYCLES    _
32. PBX/CPE ID ____              35. AUDIBLE     _       42. BARGE IN  _
33. REMARKS    _________________ 36. SIGNAL      ________  43. AUD RNG   _
                                 37. FREE TERM   _       44. SVC GRP   NOANNC
                                 38. COINRTN INT _       45. MAXCALLS  __
                                 39. COINRTN FNL _       46. RETRY     N
                                 40. TSPS TYPE   _______ 47. CASCADING N
                                                     RAF MBRS  0
```

```
tkgrp                    5ESS Switch
SCREEN 3 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

 CAMA TRUNKS         MISCELLANEOUS FEATURES       69. FGD CIC SZ   ____
49. VALNPA  ___   58. DATA RATE    ____             70. SPEECH TRMTS  N
50. VALNXX1 ___   59. INVERSION   N                71. EON MC RI     _____
```

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```
51. VALNXX2 ___   60. WB RATE      _________      72. RERTE Q INH   N
52. VALNXX3 ___   61. WB TSA TYPE  _____          73. CNA MOD 164   N
53. VALNXX4 ___   62. DIR CON DN   _______________ 74. CALEA       N
54. VALNXX5 ___   63. FACILITY TYPE ___          75. INTRA MARKET  N
55. VALNXX6 ___   64. FACILITY NBR _____         76. REL LINK INIT N
56. VALNXX7 ___   65. RTE NBR PLAN ____          77. SEND LD CIC   N
57. VALNXX8 ___   66. BILLING DN  __________     78. ROUTE IND     ______
            67. LS DLY ANS    N             79. SS7 ISUP OPER N
            68. MLT ISLC OPT  N
```

```
tkgrp                    5ESS Switch
SCREEN 4 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

    PFA TRUNK FEATURES
80. BUSY LAMP    _________
81. MAKE BUSY KEY _________
82. CUT THRU     _
```

```
tkgrp                    5ESS Switch
SCREEN 5 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

 LATA/TOLL TRUNKS            CCS TRUNKS              CCITT7
83. CMC      N         92. CQ/BQ ALW _          97. DEST PT CODE _________
84. CMC ID   ____      93. XLT TEST  _          98. ORIG PT CODE _________
85. ORIG CMC __        94. NEND CLLI _____      99. CONTROL TYPE ______
86. TERM CMC __        95. VPA RATE  ___        100. CCS7 TYPE    BELLCORE
                  96. VPA TYPE  NOVPA       101. CFN RSTRCT   N
    LATA TRUNKS                          102. RCD 3PT1 ITC _______
87. BLK NO ANI   _                       103. ISUP MLD     _
88. BILL TRKGRP  _                        104. MAX HOP CNT  __
89. NCD SCREENING NONE                          PLATFORM    ___
90. ORIG LATA    __
91. UTT          N
```

```
tkgrp                    5ESS Switch
SCREEN 6 OF 15           OFFICE DATA ADMINISTRATION
(5202)                   TRUNK_GROUP

    CENTREX NETWORK          MODULAR QUEUING TRUNKS
106. MBG ID       _____    115. QUEUE ALLOWED _
107. OVFL MC RTIDX _____   116. ENQUEUE ACT   _
108. TRK ICI      ___      117. QUEUE FEATURE _________
                       118. INH EGR OFC Q N
  CCS7 EQUAL ACCESS
109. CPN RSTRCT    N           DSN TRUNKS
110. CHG RSTRCT    N       119. DSN ARC ID __
111. ATP IC RSTRCT N       120. SHUTTLE    N
```

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112. UUI IC RSTRCT N 121. MLPP STAGE _____
113. NI ANNC N
114. NI IW REL N

---

tkgrp 5ESS Switch
SCREEN 7 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

IMMEDIATE START ANNOUNCEMENT
122. IMM START ANN N

123. RTCD REQ N

---

tkgrp 5ESS Switch
SCREEN 8 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP (EDSL/PRI TRUNKS)

124. STA ID ____ 136. CPN SCRN N 148. CI DIAL _____
125. UUI _ 137. CPN DISC N 149. PIC ____
126. CODE SET7 _____ 138. INHIBIT TCM N 150. PTC ____
127. SDN DAS ___ 139. RDTA GRP N 151. PLC ____
128. CBC N 140. E911 CPN N 152. UNBUNDLED N
129. DEDICATED SRV _____ 141. CPN BILLING N 153. DIR CON IC N
130. VOICE CUT THRU NORMAL 142. ALLOW AMA N 154. HM TAX N
131. DATA CUT THRU NORMAL 143. ALW DATA ONLY N 155. CNAM ALW N
132. APPLICATION _____ 144. STD RN SRC N 156. CNAM AMA FLATRATE
133. MAIN DN _____ 145. RN SCRN N 157. PCN ALW N
134. CPN BN OPT NONE 146. RN DISC N 158. PCN AMA FLATRATE
135. PRIV OVER N 147. RN BILLING N 159. EDS CND N

---

tkgrp 5ESS Switch
SCREEN 9 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP (EDSL/PRI TRUNKS)

160. EDS GRP _____
161. NPA SOURCE _____
162. B CHAN NEG N
163. PASS OLI N
164. DISP CNTRL N
165. SN TRK N

---

tkgrp 5ESS Switch
SCREEN 10 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

SSP800 TRUNKS MORE MISCELLANEOUS FEATURES ISDN ATTENDANT

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```
166. FAR END LATA ___   171. ACP SDN      N          183. MK BUSY     N
167. FAR END NXX  ___   172. SDN STAT GRP N          184. BW LAMP     N
168. COIN         N     173. SPA BILL DN  __________  185. ISAT MLHG   ____
                        174. SPA SUPV     N          186. WARN THRESH ____
   RELEASE LINK         175. ANI6         N
169. RLT TYPE  NONE     176. ANI7         N               LEASED NETWORK
170. RLT FLASH N        178. PRIVACY      N          187. LN TYPE   NONE
                        179. INTER SM TRK N          188. LN VIRT   N
                        180. MAI          S          189. LN GROUP  ________
                        181. API CODE     ____       190. LN CRIT Q N
                        182. ASI PROXY    N
```

```
tkgrp                       5ESS Switch
SCREEN 11 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

       ENHANCED 911          201. BCLID FEATURE ________
191. E911 TYPE    NONDED      202. BCLID GRP    ________
192. ESCO         ___
193. CAMA PSAP    N           PACKET SWITCHING
194. ENH PSAP SIG N           203. NBR PLAN NONE
195. TEN DIG ONLY N           204. NEXT PSN ___
196. PSAP RERTE TN __________
197. RERTE ACT    N            LEVEL 2 THRSH
198. WINK START   __          205. FCS      _
199. ABND TIMER   __          206. SABM     __
200. OUTAGE RPT   _           207. PROT VIOL ___
```

```
tkgrp                       5ESS Switch
SCREEN 12 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

     X.75 TRUNKS
208. REMOTE DNIC  ____
209. SEGMENT SIZE ___
210. CUG LIST ID  ____
211. CUG SCRN     N
212. ILC SCRN     _____
213. NUI IN VFY   ______
214. NUI IN UNVFY _____
215. NUI OUT VFY  ______
216. NUI OUT UNFVY _____
```

```
tkgrp                       5ESS Switch
SCREEN 13 OF 15          OFFICE DATA ADMINISTRATION
(5202)                    TRUNK_GROUP

    CELLULAR DATA         ADV SVC PLATFORM        NUMBER PORTABILITY
```

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217. DCS TRK N 226. TRIG NBR ___ 235. LRN DAS ___
218. DCS RETRY N 227. UNRES EA N 236. SIG PNUM N
219. DCS DIGCNT __ 228. ASP ORIG N 237. CNA OPTION NONE
220. CONT TEST N 229. ASP TOLL N 238. PORTED-IN AMA N
221. SERV TYPE NOSERV 230. IP TRK N
DCS NOTIFY N 231. IP MEAS N
223. ISG N 232. CARRIER TRIG N
224. ICOS TRK N 233. CUT THRU TRIG ___
225. FAR E911 N 234. URT FCD BLK N

---

tkgrp 5ESS Switch
SCREEN 14 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

LONG DISTANCE PLATFORM AML VIRTUAL PRIVATE NETWORK
239. LDP N 248. AML PERCENT ___ 250. VPN ACCESS N
240. PASS ANI N 249. AML ALARM MAJOR 251. MBG TRANSPORT N
241. ANI PROCESS N
242. TERM BILL N
243. MINT SIG TYPE _____
244. NETWORK IND ___
245. ACCT PROMPT GLOBAL
246. CT FOR DT N
247. PREF NPA ___

---

tkgrp 5ESS Switch _
SCREEN 15 OF 15 OFFICE DATA ADMINISTRATION
(5202) TRUNK_GROUP

DAL/SPECIAL PBX END OFFICE NODAL SWITCHED ACCESS
252. DAL ACCESS N 258. EON BILLING DN _____ 263. SA TRIG NBR ___
253. DAL EGRESS N 259. EON NBR PLAN ____ 264. ACC ID 0
254. LINE BUSY N 260. EON PRIVACY N 265. SA ORIG REC ON
255. SPECIAL PBX N 261. EON PREFIX NPA N 266. SA TERM REC OFF
256. DNIS USER N 262. EON INH TERM CBC N 267. OLI SCRN 0

257. CONTEXT ID NATIVE

Figure 7 SAMPLE TKGRP FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 2B: 5203 RECORD
TRUNK TRANSMISSION CLASS RECORD - TRKCL

1. GENERAL

The 5203 Record is used to determine the value of digital loss to be inserted on each connection through the 5ESS Switch. The far end offices which interface with the 5ESS Switch operate under various configurations and operating levels. To interface properly, the 5ESS Switch must insert a specified amount of digital loss dependent upon the type of connecting offices and trunks. The 5203 Record has been designed to provide the necessary data to the 5ESS Switch so that the proper loss can be inserted. Transmission levels may be affected by office options POFFLOSS or CPE and line option ELSLOSS.

1.1 Transmission Class

The key to this record is the Transmission Class. Each Transmission Class uniquely defines a specific set of characteristics that apply to various trunks in the office. The following is a suggested procedure for engineering the data required on the 5203 Record.

A. Construct a table listing all possible configurations of the 5ESS Switch with its far end offices.

B. The Trunk to Line Digital Loss and Trunk to Trunk Digital Loss tables, in Figure 1 and Figure 2 respectively, provide applicable data for Far End Transmission Level Point, Near End Transmission Level Point, Trunk Type and Far Office Toll Class.

C. Assign a Transmission Class starting at 1 for each unique set of characteristics. This Transmission Class may then be used as input to the Trunk Member information on the 5204 Record.

The values entered on this form should be determined by customer (operating company) engineers. The information contained in this section is provided to aid the customer engineer in setting the values of these fields to obtain the desired digital loss insertion characteristics for each trunk transmission class. Specific values for each of these fields are suggested for an application with no special transmission requirements.

1.2 Recent Change View

The corresponding recent change view for this form is 5.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TRANSMISSION CLASS

Description: Enter the Transmission Class Number. Transmission Class is required for all Trunk Types including Announcement Trunks and Test Trunks. Transmission Class is not required for AC Jack assignments or Trunk Group members with a LTP (Logical Test Port) specified.

Required Field.
Valid Entries: 1 - 99

2.3 FAR END TRANSMISSION LEVEL POINT

Description: Enter the Transmission Level Point of the far end office. This is used to determine the digital loss to be inserted toward the line on trunk to line connections.

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An exception to this is that ISDN lines, including OSPS attendants, never receive digital loss except for conference connections.

Figure 1 shows the Trunk to Line digital loss as a function of the far end type.

Far end transmission level point also affects the far to near digital loss pad during transmission tests. See Figure 2 .

Deviations from recommended values may be necessary based on individual Transmission requirements.

Required Field.

Valid FAR END TRANSMISSION LEVEL POINT Entries

Entry	Definition
N2	Far end office is analog Toll/Tandem for trunks using digital facilities.
N3	Far end office is digital Toll/Tandem for trunks using digital facilities.
0	Far end office is Local/Tandem for trunks using digital facilities.
3	Software Release: 5E3 and later. All far-end connections, for trunks using analog facilities.Also for digital trunks connecting to a PBX.
5	Far end office is No. 1 Trunk Concentrator for trunks using digital facilities.

2.4 NEAR END TRANSMISSION LEVEL POINT

Description: Enter the Transmission Level Point of the near end office.

The near end TLP (Transmission Level Point) is used to determine loss only on trunk-trunk connections. The valid values of near end TLP are TLP0 and TLPN3. If both trunks have a near end TLP of TLPN3, no digital loss is inserted in either direction. If either trunk in the connection has near end TLP set to TLP0, loss may be inserted when connecting a digital trunk to an analog trunk. The amount of loss is a function of trunk type and far end toll class. See FAR OFFICE TOLL CLASS for details. The suggested value for near end TLP is TLP0 for all trunks in a local 5ESS Switch and for trunks that carry only local traffic in a local/toll 5ESS Switch. It is suggested that near end TLP be set to TLPN3 for all trunks in a toll 5ESS Switch and for trunks that carry at least some toll traffic in a local/toll 5ESS Switch. The amount of loss inserted is a function of TRUNK TYPE and FAR OFFICE TOLL CLASS (see Figure 3).

Required Field.

Valid NEAR END TRANSMISSION LEVEL POINT Entries

Entry	Definition
0	For trunks in a local 5ESS Switch office, or, trunks which carry local traffic *only* in a local/toll 5ESS office.
N3	For trunks performing both local and toll functions in a local/toll 5ESS office, or, trunks performing toll *only* functions in a local/toll 5ESS office.

2.5 TRUNK TYPE

Description: TRUNK TYPE is used in conjunction with FAR OFFICE TOLL CLASS in determining loss on trunk-trunk connections when either trunk has a NEAR END TLP equal to TLP0. See FAR OFFICE TOLL CLASS for details. TRUNK TYPE has two valid values: DIGITAL and ANALOG.

It is recommended that trunks that use digital facilities throughout be set to DIGITAL and trunks that use analog facilities be set to ANALOG.

Valid TRUNK TYPE Entries

Entry	Definition
ANALOG	A trunk that uses Analog facilities.Also for digital trunks connecting to a PBX.
DIGITAL	A trunk that uses Digital Transmission facilities.

2.6 FAR OFFICE TOLL CLASS

Description: Enter the Toll Class of the far end office.

FAR OFFICE TOLL CLASS is used in conjunction with TRUNK TYPE to determine loss only on

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trunk-trunk connections when either trunk has its NEAR END TLP set to TLP0. FAR OFFICE TOLL CLASS is a numerical value, 0 - 5, that identifies toll class of the far end office. 5 - denotes local or tandem. This should also be used for tie trunks when the 5ESS Switch is being used as a PBX. 1, 2, 3, 4 - denotes toll office. The table in Figure 2 gives the digital loss that is inserted in trunk-trunk connections when either trunk has a NEAR END TLP other than TLPN3

Required Field.

Valid FAR OFFICE TOLL CLASS Entries

Entry	Definition
1 - 4	Toll Offices
5	Local or Tandem offices and is also valid for tie trunks when the 5ESS Switch is being used as a PBX.

TRUNK TO LINE DIGITAL LOSS FOR 5E3 AND LATER SOFTWARE RELEASES

FAR END TLP	N3	N2	N1	0	1	2	3	4	5
LOSS (dB)	6	5	4	3	2	1	0	7	8

The above table show the digital loss inserted in the direction from the trunk to the line as a function of far end transmission level point.

Figure 1 TRUNK TO LINE DIGITAL LOSS

NEAR END TLP	TRUNK TYPE	FAR END TLP			
		N3	**N2**	**0**	**5**
0	ANALOG	0	0	0	8
	DIGITAL	6	N/A	3	8
	COMBINED	6	5	3	8
N3	ANALOG	6	6	6	8
	DIGITAL	6	N/A	6	8
	COMBINED	6	6	6	8

The above table reflects the far to near digital loss pad for transmission tests.

Figure 2 FAR TO NEAR DIGITAL LOSS PAD FOR TRANSMISSION TESTS

			TO FAR OFFICE TOLL CLASS			
			LOCAL (TOLL CLASS = 5)		TOLL (TOLL CLASS = 1 - 4)	
			ANALOG	**DIGITAL/COMB**	**ANALOG**	**DIGITAL/COMB**
FROM FAR OFFICE TOLL CLASS	**LOCAL**	**ANALOG**	0	0	0	0
		DIGITAL	3	0	3	0
	TOLL	**ANALOG**	0	0	0	0
		DIGITAL	6	0	0	0

The above table shows the digital loss inserted in trunk-trunk connections when either trunk has a near end transmission level point other than TLPN3.

Figure 3 TRUNK TO TRUNK DIGITAL LOSS

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SEC. 2C: 5204 RECORD
TRUNK FEATURES AND ASSIGNMENTS RECORD - TRUNK

1. GENERAL

The 5204 Record is used to define each member of a Trunk Group in a 5ESS Switch Office. The trunk information that is entered on this record is unique to the individual member of a Trunk Group. Trunk information that is common to the entire Trunk Group is entered on the TKGRP form (5202 Record).

1.1 CCS Trunks

When members of CCS (Common Channel Signaling) trunk groups are added to an SM (Switching Module), that SM must have tone transceivers defined in its DSU (Digital Services Unit). The TEN (Trunk Equipment Number), the DEN (Digital Equipment Number), or the NEN (Networking Equipment Number) value must have an SM value defined on an EQDS2P form (5740 Record) with at least one TYPE in the DIGITAL SERVICE CIRCUITS list equal to "LDSU2TX".

1.2 Equipment Numbers

A trunk must be assigned one of the following: a TEN (Trunk Equipment Number), DEN (Digital Equipment Number), SLEN (SLC Line Equipment Number), LTP (Logical Test Port) number, TRKOE (Trunk Office Equipment) Type, NEN (Networking Equipment Number) and Number for IDCU (Integrated Digital Carrier Units or RAF EN (Recorded Announcement Function Equipment Number). The trunk may not be assigned more than one of these equipment numbers.

1.3 TEN Assignments

Trunk Equipment Numbers represent individual trunk circuits on an analog trunk unit. A trunk unit consists of two Service Groups (0 and 1) with each Service Group having eight pack positions (0 to 7) equipped with up to eight circuit packs of various types. Each circuit pack has four circuits with the exception of the LTD (Local Test Desk) test trunk pack which has only two circuits. Analog trunk circuits are engineered in such a manner as to spread trunks of a given type across as many trunk units as possible. This is done to ensure maximum reliability when assigning trunks to particular Trunk Groups. Therefore, the following recommended guidelines are offered when arranging trunk groups:

- Spread the trunks of a given Trunk Group across as many trunk units as possible.
- Within a trunk unit, spread trunks across both Service Groups as evenly as possible.
- Within a Service Group, spread trunks across as many circuit packs (of the same type) as evenly as possible. It is also recommended that if an analog Trunk Group has ten or more members in it, the trunks should be spread equitably among the SMs. The following is an example of the recommended spread. If you have 3 SMs, SM1, SM2 and SM3 and a total of 72 trunks, then trunk members 0, 3, 6, ..., 69 should be assigned to SM1, trunk members 1, 4, 7, ..., 70 should be assigned to SM2 and trunk members 2, 5, 8, ..., 71 should be assigned to SM3. This will allow equal traffic over all SMs, rather than heavy traffic on one or two SMs and very little traffic on the remaining SMs.

1.4 Fractional DS1/ISDN PRI Interface

Effective with the 5E9(1) Software Release, the Fractional DS1/ISDN Switching Via PRI (Primary Rate Interface) feature was introduced. This feature provides the capability to initiate wide band calls, 128 kb/s through 1536 kb/s, using ISDN (PRI-based) customer premises equipment connected to either a PRI or a ISUP trunk group. A wide band trunk group must have sufficient members defined in each wide band trunk block to carry the wide band traffic intended for the trunk group. (A wide band trunk block is defined as a set of trunk members from a single trunk group that are assigned to the same T1 facility.) For

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example, a 384K wide band data rate requires at least 6 trunk block members; a 1536K and 1536K wide band data rate requires at least 24 members, etc. (See Division 2, Section 6C for a more detailed discussion of this feature.)

1.5 DEN Assignments

A DEN (Digital Equipment Number) represents an individual channel on a DFI (Digital Facility Interface) pack. The DFIs are mounted on DLTUs (Digital Line and Trunk Units) which are normally spread over several SMs in the office. A trunk unit consists of six DLTUs (0 to 5) per SM with each DLTU equipped up to ten DFIs (1 to 10). Effective with 5E14 and later, SM-2000 is supported. Effective with 5E15 and later, the number of DLTUs supported is 12 (0 to 11). Each DFI connects to a particular T1 Carrier facility and consists of 24 channels (1 to 24). Therefore, the spreading of DFI channels within a Trunk Group is limited to those DFIs connecting to one or more T1 facilities serving a particular destination. When more than one T1 span serves a particular destination, the spans should be assigned to DFIs on different DLTUs.

It is also recommended that if more than one T1 span is used for a particular Trunk Group, the trunks should be spread equitably among the SMs. The following is an example of the recommended spread. If you have 3 SMs, SM1, SM2 and SM3 and a total of 72 trunks, then trunk members 0, 3, 6, ..., 69 should be assigned to SM1, trunk members 1, 4, 7, ..., 70 should be assigned to SM2 and trunk members 2, 5, 8, ..., 71 should be assigned to SM3. This will allow equal traffic over all SMs, rather than heavy traffic on one or two SMs and very little traffic on the remaining SMs.

Care must be taken to use only "trunk" DFIs when assigning DENs. These DFIs are defined by an entry of "T" in the USAGE field of the EQDUP form (5730 Record).

For 5E4(2) and later, if the TRKCLS field on the TKGRP form (5202-1 Record) is "RMSD3", then the 24 DENs in the group should be on the same DFI.

For 5E5 and later, a DFI-2 (Digital Facility Interface-2) is available. The DFI-2 will allow two T1 lines to terminate on the DLTU2 (Digital Line and Trunk Unit-2). The two T1 lines will be specified as Facility 0 and Facility 1 on the EQDUP form. Facility 0 is determined by entering a DEN with a Digital Channel number of 1 to 24. Facility 1 is determined by entering a DEN with a Digital Channel Number of 25 to 48. It is recommended to spread DEN assignments across DFIs.

For 5E9(2) and later, if "RMSD3" is entered in the TRKCLS field on the TKGRP form and DENs assigned on the TRUNK form, the members on the trunk form must be assigned on the same SM, DLTU, and DFI and assigned sequentially on all DCHANS 01-24 or 25-48.

For 5E10 and later, when TGN/MEMBs are defined on the TRUNK form with a DEN assigned and have a TRKCLS equal to "EDSL", "IFOPER", or "IFTERM" on the corresponding TKGRP form, the value of DFI MODE on the associated EQDUP form must be "D4", "FEB7", "FE8Z", "64K", "D464", or "FE64".

1.6 SLEN Assignments

An Integrated SLEN (SLC Equipment Number) represents a PBXDID trunk termination on an Integrated SLC Remote Terminal. For information about SLEN assignment see the SLCCU form (5107 Record).

1.7 NEN Assignments

For 5E9(2) - 5E12, the NEN (Networking Equipment Number) is a 10-digit OE for digital trunks on the DNU-S (Digital Networking Unit - SONET). The NEN is composed of the Switching Module number, the DNU-S number, the Data Group number, the STS (Synchronous Transport Signal), the VT (Virtual Tributary), and the DS0 (Digital Signal Level 0). For more information on the DNU-S, see Division 2, Section 9C. See Division 8, Section 60 (EQVT form) for correlation between DNUS - TMUX Virtual Tributary number as assigned in 5ESS Switch and the VT1.5's position within the SONET Virtual Tributary Groups.

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For 5E13 and later, the numbering scheme for the VT was modified to an 11-digit NEN for the DNU-VT Group Number feature (see Division 2, Section 9Q) and the NEN field on this form.

1.8 TRKOE Assignments

Effective with 5E8 and later, Trunk Office Equipment assignments were added to support IDCU (Integrated Digital Carrier Unit) RTs (Remote Terminals). The TRKOE field is a two segment field which specifies the equipment type and the equipment number. TRKOE TYPE "G" signifies an IDCU unit with a 10-digit equipment number (GEN) for a remote terminal. TRKOE TYPE "M" signifies an analog IDCU unit with an 8-digit equipment number (MEN) for a remote terminal.

1.9 LTP Assignments

Logical Test Port trunks are software-only trunks and, as such, require entries in the following columns of the 5204 Record: Trunk Group Number, Member Number, and Logical Test Port.

Logical Test Ports identify the existence and location of specific types of test equipment such as ALIT circuits, DC Jacks, TTF circuits, etc. The operational software uses these LTPs to establish connections between a testing facility and a line or trunk to be tested. Refer to Division 2, Section 2, for a description of and requirements for each LTP function.

1.10 RAF EN Assignments

A RAF EN (Recorded Announcement Function Equipment Number) represents an individual channel on a DSU2 RAF (Digital Service Unit 2 Recorded Announcement Function). Each DSU2 may be equipped with a maximum of 4 RAFs and up to 2 DSU2 units may be equipped with RAFs per SM. 32 channels may be assigned per RAF with just ANN (Announcement) channels. 20 channels may be assigned per RAF with DTA (Dial Through Announcement) channels, or RAFs with CTR (Coin Tone Receiver) channels. ANN, DTA, and CTR channels may not be mixed within an RAF.

For 5E6 and later, if "Y" is entered in the AOC field on the corresponding EQRA form (5821 Record), then a maximum of 32 AOCs (Announcement Only Channels) may be assigned per DTA or CTR RAF.

RAF DTA/CTR channels require a staggered assignment pattern which will enable 3 DTA/CTR RAFs to only use a total of 2 time slots at any one time, so that available resources are efficiently used.

Channels defined on the same SM and RAF must be assigned to the same Trunk Group. It is recommended that if any channels on a RAF are assigned, then all channels on the RAF be assigned. See Division 3, Section 2Q (5271-4 Record), when assigning announcement trunks to RAF channels.

1.11 EDSL Trunks

For EDSL (Extended Digital Subscriber Line) trunk groups with TRKCLS set to "EDSL" or "EDSLHM" on a TKGRP form, a DEN should be defined on this form with "ON" entered in the IDLE STATE field and the SUPV, IN START DIAL, OUT START DIAL, EXT. GUARD TIMING and ANSWER DELAY TIMING fields not entered.

1.12 DSL

For 5E4(2), all DSLs assigned to the same combination of SM (first three digits of an LCEN/DEN), PSU SHELF (first digit of an ISCN) and DSL GROUP (second and third digits of an ISCN) must have the same data rate. The following table shows which forms allow the definition of a DSL; which fields define the combination of SM, PSU SHELF, and DSL GROUP; and which data rates are permissible.

FORM	FIELDS	DATA RATE
AMLBDSL	LCEN, B1 ISCN	64KB (Notes 1, 2)
DSL	LCEN, D ISCN	16KB (Note 1)
	LCEN, B1 PKT ISCN	56KB or 64KB (Note 3)

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	LCEN, B2 PKT ISCN	56KB or 64KB (Note 4)
DSLAP	LCEN, ISCN	16KB (Note 1)
DSMLHLN	LCEN, D ISCN	16KB (Note 1)
	LCEN, B1 PKT ISCN	56 or 64KB (Note 3)
	LCEN, B2 PKT ISCN	56 or 64KB (Note 4)
OSPSDSL	LCEN, ISCN	16KB (Note 1)
PSISM	SM, ISCN	64KB (Note 1)
	MATE SM, MATE ISCN	64KB (Note 1)
TRUNK	DEN, ISCN	56KB (Notes 1, 5)
	DEN, ISCN	56KB, 64KB (Notes 1, 6)
	DEN, ISCN	56K, R64KB, 64KB (Notes 1, 7)

- ***NOTE:*** 1. The data rate is pre-set by 50DA.
- ***NOTE:*** 2. SERVICE CLASS on the OSPSDSL form, with matching LCEN, must be "XDB".
- ***NOTE:*** 3. Selected in B1 PKT RATE field.
- ***NOTE:*** 4. Selected in B2 PKT RATE field.
- ***NOTE:*** 5. If TRKCLS on TKGRP form is "X75" or "X75P".
- ***NOTE:*** 6. If TRKCLS on TKGRP form is "PACKET".
- ***NOTE:*** 7. If TRKCLS on TKGRP form is "EDSL".

1.13 Logical Channel Numbers

LCNs (Logical Channel Numbers) are defined on this form for X.75P and X.75 trunks. LCNs represent SVCs (Switched Virtual Circuits) and/or PVCs (Permanent Virtual Circuits) which are used to connect CPE devices with each other in order to transmit packet switched data.

Each B-channel can define 127 possible LCNs for the purpose of establishing simultaneously active SVCs (Switched Virtual Circuits) and/or PVCs (Permanent Virtual Call/Circuits). The circuits are used to connect CPE devices with each other in order to transmit Packet-Switched Data.

SVCs exist only for the period of the call. The CPE device and the PH must interact, through CCITT specified packet communication, to set up each call, and clear the SVC after each call.

A PVC exists between CPE devices until the customer deems otherwise. There is no need to set up each call or to clear the PVC after each call.

There is a system limitation of 128 simultaneously active SVCs and/or PVCs for each PH. Congestion on the network, due to contention for available SVCs or PVCs, is handled through CCITT specified procedures, which will be explained later.

There are four categories of LCNs (PVCs and SVCs). A PVC is a permanent, two-way connection between CPE devices. An incoming SVC can only receive incoming data. A two-way SVC can transmit outgoing data or receive incoming data. An outgoing SVC can only transmit outgoing data. The terms incoming and outgoing are used from the perspective of the PH.

The CCITT has specified a required order of assigning the four categories of LCNs.

The lowest numbers (1 to x) can be used for the PVCs, if the customer wishes to have PVCs. The HIGH PVC LCN field (Highest PVC LCN) indicates the highest numbered LCN that is a PVC. For example, if the HIGH PVC LCN field is 7, that means that LCNs 1 through 7 are PVCs.

The next highest range of numbers for LCNs belongs to the incoming only SVCs. This range is indicated in the LOW INCOMING LCN field (Lowest Incoming LCN) and the HIGH INCOMING LCN field (Highest Incoming LCN).

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The next highest range of numbers for LCNs belongs to the two-way SVCs. This range is indicated in the LOW 2W LCN field (Lowest Two-Way LCN) and the HIGH 2W LCN field (Highest Two-Way LCN).

The highest range of numbers for LCNs belongs to the outgoing only SVCs. This range is indicated in the LOW OUTGOING LCN field (Lowest Outgoing LCN) and the HIGH OUTGOING LCN field (Highest Outgoing LCN).

As an example, an ISCN (Integrated Services Channel Number) could define its 127 associated LCNs as follows:

HIGH PVC LCN = 7 (LCNs 1 to 7 are PVCs)

LOW INCOMING LCN = 8 HIGH INCOMING LCN = 15 (LCNs 8 to 15 are incoming SVCs)

LOW 2W LCN = 16 HIGH 2W LCN = 100 (LCNs 16 to 100 are two-way SVCs)

LOW OUTGOING LCN = 101 HIGH OUTGOING LCN = 127 (LCNs 101 to 127 are outgoing SVCs)

If PVCs are not desired, LCN 1 is available for an incoming SVC.

If PVCs and incoming SVCs are not desired, LCN 1 is available for a two-way LCN.

If PVCs, incoming SVCs, and two-way SVCs are not desired, LCN 1 is available for outgoing LCNs.

The CCITT, to minimize call collisions, has specified that a CPE device should start its search algorithm for an available LCN (SVCs only) with a two-way SVC or outgoing SVC. The PH should start its search algorithm with the highest numbered SVC that is in a ready state.

Either the HIGH PVC LCN field or the LOW INCOMING LCN and HIGH INCOMING LCN field combination or the LOW 2W LCN and HIGH 2W LCN field combination, or the LOW OUTGOING LCN and HIGH OUTGOING LCN field combination must be entered. If this is not done, there will not be any LCNs to carry packets.

1.14 E911 CAMA PSAP Trunks

Trunks that belong to an E911 CAMA PSAP trunk group (CAMA PSAP set to "Y" on the TKGRP form) must be defined on this form with IN START DIAL "DLTN", OUT START DIAL "WINK", IDLE STATE "ON", and ANSWER DELAY TIMING "N" or not entered.

If a CAMA PSAP trunk is defined with a TEN that matches the equipment number (INTERFACE MODULE, TRUNK UNIT, SERVICE GROUP, AND PACK POSITION) on an EQTUP form, and the CIRCUIT TYPE on the EQTUP form is "TRKLO" or "TKLOTOL", then TRK DIR on the TKGRP form must be "2W". When other applications use circuits "TRKLO" or "TKLOTOL", TRK DIR on the TKGRP form must be "OUT".

1.15 Recent Change View

The corresponding Recent Change View for this form is 5.5.

2. FORM ENTRIES - 5204-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *TGN

Description: Enter the Trunk Group Number.

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Required Field.
Valid Entries: 1 - 4000

Data Rules:

Trunk Group numbers exceeding 999 are allowed only when all numbers in the range of 1 to 999 has been completely exhausted.

All DSU2-RAF ports (channels) on the same DSU2-RAF must be assigned to the same TGN (Trunk Group Number) on TRUNK forms, with the following one exception, the AOC (Announcement Only Channels) on DTA or CTR RAFs as defined on the EQRA form may be assigned to a different trunk group.

When MUSIC RI on the STINFO form (5402 Record) has an entry and/or "MUSIC", "PROMPT", "DISC" or "ANNOUNC" is entered in the CMD CD field with an ARG1 on the CVECT form (5460 Record), then TGN must equal the TRUNK GROUP NUMBER on an RTIDX form where ROUTE INDEX on the RTIDX form equals MUSIC RI on the STINFO form and/or ARG1 on the DVECT form. In addition, the first member, MEMB, must equal 0 on this form. Also, TRK DIR must equal "ANN" on the corresponding TKGRP form, where TGN on the TKGRP form equals TGN on this form.

For TGN/MEMB with a SLEN entry (representing Digital Carrier Line Unit equipment) and a TRKOE TYPE of "G" or "M" (representing IDCU equipment), the TGN must be defined on the TKGRP form withthe following attributes set as indicated:

- CUT THRU must be blank or "N",
- DAS must be blank,
- DATARATE must be blank,
- HOLD BUSY must be "N",
- INPULSING must be blank,
- OUTPULSING must be "DP" or "TT",
- SCR must be blank,
- TRKCLS must be "PBXDID",
- TRK DIR must be "OUT", and
- VPARATE must be blank.

- when TGN/MEMBs are defined with DEN assigned on this form, and TRKCLS is "X75" or "X75P" and DATA RATE is "56K" on the TKGRP form (5202 Record), then FAC 0 DFI MODE or FAC 1 DFI MODE (whichever is appropriate) on the EQDUP form (5730-2/3/4/5 Record) must be entered with one of the following values:
  - "64K"
  - "D4"
  - "D464"
  - "FE8Z"
  - "FE64"
  - "FEB7"

- when TGN/MEMBs are defined with DEN assigned on this form, and TRKCLS is "X75" or "X75P" and DATA RATE is "64K" on the TKGRP form (5202 Record), then FAC 0 DFI MODE or FAC 1 DFI MODE (whichever is appropriate) on the EQDUP form (5730-2/3/4/5) must be "64K" or "FE8Z".

- when TGN/MEMBs are defined with NEN entered on this form, and TRKCLS is "X75" or "X75P" and

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DATA RATE is "64K" on the TKGRP form (5202 Record), then ZCS on the EQVT form (5858 Record) must be "N".

2.3 *MEMB

Description: Enter the number of the member within the Trunk Group.

Required Field.
Valid Entries: 0 - 1951

Data Rules:

For 5E3 and later, a QTY entry plus the MEMB must not be greater than 1951.

Trunk members in a Packet Switched trunk group (TRKCLS is "PACKET" or "X75P" on the TKGRP form) should be assigned contiguously.

For 5E5 and later, the maximum number of members allowed in a Packet Switched IP trunk group (TRKCLS is "PACKET" on the TKGRP form) is 32.

The maximum number of members allowed in an X.75P trunk group (TRKCLS is "X75P" on the TKGRP form) is 24.

The maximum number of members allowed in an X.75 trunk group (TRKCLS is "X75P" or "X75" on the TKGRP form) is 24.

All members of a Packet Switched IP trunk group (TRKCLS is "PACKET" on the TKGRP form) must reside on the same SM.

Members of an X.75P or X.75 trunk group may reside on different nonremoted SMs (SM USAGE on EQIM form is "IM" or "HIM"). When members of an X.75P or X.75 trunk group reside on a remoted SM (SM USAGE ON EQIM form is "ORM", "TRM" or "RSM"), all members of the trunk group must reside on the same SM.

For 5E6 and later, if MUSIC RI on the STINFO form (5402 Record) has an entry and/or "MUSIC", "PROMPT", "DISC", or "ANNOUNC" is entered in the CMD CD field with ARG1 on the CVECT form (5460 Record), the first member, MEMB, must equal 0 on this form and TGN must equal the TRUNK GROUP MEMBER on an RTIDX form (5303 Record) where ROUTE INDEX on the RTIDX equals MUSIC RI on the STINFO form and/or ARG1 on the CVECT form. Also, TRK DIR must equal "ANN" on the corresponding TKGRP form, where TGN on the TKGRP form equals TGN on this form.

For 5E9(1) and later, the following rules are associated with assignment of members in a wide band trunk group:

- TGNs entered on this form where WB RATE is equal to "MULTIRATE" on the TKGRP form need to be assigned to at least two trunk members within each wideband trunk block to achieve the full data rate desired.

- TGNs entered on this form where WB RATE set to "1536K" or "384/1536K" on the TKGRP form need to be assigned, at minimum, a full wideband trunk block (24 TGN/MEMBs defined on the TRUNK form) to achieve the full data rate desired.

- TGNs defined on the TKGRP form where WB RATE is "384K" need to be assigned at least 6 trunk members within each wideband trunk block (6 TGN/MEMBs defined on the TRUNK form) to achieve the full data rate desired.

- At most, one TGSR and/or one IDP feature can be assigned to a wideband (assigned on the TKGRP

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form) trunk group member.

- TGNs entered on this form with "WB RATE" entered on a corresponding TKGRP form must have a matching EQDUP form (5730 Record) where the corresponding FAC 0 DFI MODE or FAC 1 DFI MODE (which ever is appropriate) is "64K" or "FE8Z".
- TGNs entered on this form with a corresponding TKGRP form with WB RATE entered and TRKCLS set to "EDSL" must have a matching PRIGRP form (5211 Record) within a wideband trunk block where PRI TYPE is "STD".
- TGNs entered on this form with "WB RATE" entered on a corresponding TKGRP form within the same wideband trunk block must be assigned to the same SM, DLTU, DFI, FAC, and PRI GROUP.
- TGNs entered on this form with "WB RATE" entered on a corresponding TKGRP form must have their DEN values defined on the TRUNK form such that (DEN{7,8} modulo 24) must equal ((MEMB+1) modulo 24). Note that "modulo 24" means: take the remainder after division by 24. The following table provides an example of this rule:

Numbering of Trunk Members of a Wideband Trunk Group

Member NBR	Channel Number
0	1
1	2
.	.
.	.
.	.
23	24
24	1
25	2
.	.
.	.

For ISUP trunk groups, trunk members must also be numbered sequentially and associated with the channel numbers specified in the DEN field. Also values of CLCI TRK ID must be sequential and synchronized with the channel numbers. The following table provides an example of ISUP7 trunk group data.

Numbering of Trunk Members of a Wide Band
ISUP7 Trunk Group

Member NBR	Channel Number	CLCI TRK ID
0	1	101
1	2	102
.	.	.
.	.	.
.	.	.
23	24	123
24	1	124
25	2	125
.	.	.
.	.	.
.	.	.
48	24	147
.	.	.
.	.	.
.	.	.

2.4 QTY

Description: The QTY (Quantity) field specifies the number of trunks to be inserted. It allows up to 24 trunks to be defined at one time.

Software Release: 5E3 and later
Required Field.
Default: 1
Valid Entries: 1 - 24

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Data Rules:

A QTY greater than 1 may be specified only for trunks that have TEN DEN, or NEN equipment numbers. Beginning with corresponding field values in the form, ODA assigns sequential Trunk Group MEMB (Member Numbers), TENs/DENs/NENs (Equipment Numbers), and CLCI TRK ID (Common Language Identity Numbers) to the new trunks.

The last trunk in the series is assigned a MEMB number equal to the sum of the MEMB field plus the QTY field minus 1, a number that must not exceed 1951. Equipment numbers are assigned to successive circuits (for TENs) or channels (for DENs/NENs). For example: after a trunk with a DEN is assigned to the last channel in a DFI, the next trunk is assigned to the first channel in the following DFI. When the DFI is the last in the DLTU, the trunk is assigned to the first DFI channel of the next DLTU.

If QTY is greater than 1, it must not be great enough that DEN increments the SM. Equipment numbers assigned as a result of the QTY field must be on the same Switching Module: the QTY field must not be a value that will cause the SM to be incremented, e.g., a trunk with DEN 00151024 cannot have QTY greater than 1 since the second trunk would have to be assigned to SM 002 (DEN = 00200101).

When computing the DEN field, ODA checks the EQDU form (5730 Record) to determine whether the maximum number of channels is 24 or 48. If an EQDU form is not found, ODA assumes 24 channels unless the channel number entered on the form is greater than 24; then it assumes 48.

The following example shows two TRUNK forms with QTY greater than 1. Although ODA expands the forms to eight entries on the Office Record, updates and changes must be made to the two original input forms.

FORM ENTRIES

TGN	MEMB	QTY	TEN/DEN	CLCI TRK ID
7	2	3	0020001	
19	0	5	00100647	75

OFFICE RECORD

TGN	MEMB	QTY	TEN/DEN	CLCI TRK ID
7	2	3	0020001	
7	3	3	0020002	
7	4	3	0020003	
19	0	5	00100647	75
19	1	5	00100648	76
19	2	5	00100701	77
19	3	5	00100702	78
19	4	5	00100703	79

When QTY is greater than 1, the following fields must not be entered:

LOGICAL TEST PORT
- RAF EN
- SLEN
- CGASPN
- OTODPN1
- OTODPN2
- OTODPN3
- OTODPN4
- SLVLD SPN
- ISCN
- KEYING TRUNK TGN
- KEYING TRUNK TGN NO
- TALKING TRUNK TGN
- TALKING TRUNK MBR NO
- BAND
- PRIMARY SL GROUP

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- PRIMARY SL MEMB
- PRIMARY SL VLINK
- MATE SL GROUP
- MATE SL MEMB
- MATE SL VLINK

Also, when QTY is greater than 1, the following fields must have values as listed:

- BRCS: N
- Q921 PROC: NETWORK
- Q931 PROC: NETWORK

For 5E4(2) and later, if the TRKCLS field on the TKGRP form (5202-1 Record) is "RMSD3", the Trunk Group must have exactly 24 members. Therefore, QTY should be set to 24.

For 5E4(2) and later, if the TRKCLS field on the TKGRP form (5202-1 Record) is "TOPAS", the Trunk Group must have no more than 5 members. Therefore, QTY should be 5 or less.

For 5E9(2) and later, when QTY is greater than 1, it must not be great enough that NEN increments the SM, i.e. if the 4 - 8 digits of the NEN is 71528, then the the 9 - 10 digits of the NEN plus the entry in QTY minus 1 (QTY - 1) must not be greater than 24. (If NEN[4,8] = 71528, then NEN[9,10] + (QTY - 1) or = 24)

2.5 TRKOE

Description: This is a two-segment field consisting of the trunk equipment type and equipment number. The first segment specifies the equipment type. The second segment specifies the trunk originating equipment number.

Software Release: 5E8 and later.
Valid Entries:

Valid TRKOE Equipment Type Entries

Entry	Definition
G	Software Release: 5E8 and later. The TN is associated with IDCU TRKOE and the number segment must contain a 10-digit equipment number (GEN) for an RT. Software Release: 5E10 and later. an 11-digit equipment number is required.
M	Software Release: 5E8 - 5E9(2). The TN is associated with IDCU TRKOE and the number segment must contain an 8-digit equipment number (MEN) for an RT.
O	Software Release: 5E16(2) and later. OIUEN (Optical Interface Unit Equipment Number)
U	Software Release: 5E10 and later. The TN is associated with IDCU TRKOE and the number segment must contain an 10-digit equipment number (UEN) for Packet Pipe or Speech Handler trunks. This value supports the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B
F	Software Release: 5E15 and later. TRUNK/PLTU equipment number PLTEN (PCT (Peripheral Control and Timing) Line and Trunk Unit Equipment Number). This value supports the MSM (Multi-Service Module) on PLTU (PCT Line and Trunk Unit) feature. For more information on this feature, see Division 2, Section7AP.
U	Software Release 5E16(2) and later. Packet Pipe or Speech Handler trunks (UEN).
V	Software Release: 5E16(2) and later. Virtual Equipment Number.

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When TRKOE TYPE is "G", this IDCU Equipment Number residing on an RT consists of:

TRKOE NUMBER, TYPE G - Remote Terminal

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	XX	00 - 42
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

When TRKOE TYPE is "M", this IDCU Equipment Number residing on an RT consists of:

TRKOE NUMBER, TYPE M - Remote Terminal

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7
Remote Terminal	RT	XX	01 - 31
Line	LINE	XX	01 - 99

When TRKOE TYPE is "O", this OIUEN Equipment Number consists of:

TRKOE NUMBER, TYPE O - Equipment

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
Protection Group	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

When TRKOE TYPE is "U" (UEN), TRKOE NUMBER for Packet Pipe or Speech Handler trunks consists of the following:

TRKOE NUMBER, TYPE U - Packet Pipe or Speech Handler Trunks

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001 - 192
Packet Switch Unit	PSU	X	0 - 1
Shelf	SHELF	X	0 - 4
Channel Group Number	CHGRP	XX	00 - 15
Channel Number	CHANNEL	XXX	000 - 095

TRKOE NUMBER, TYPE F - TRUNK/PLTU equipment number PLTEN (PCT (Peripheral Control and Timing) Line and Trunk Unit Equipment Number).

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001 - 192
PCT Line and Trunk Unit	PLTU	XXX	000 - 035
PCT Facility Interface	PCTFI	X	0 - 2
Tributary	TRIB	XX	01 - 28
Channel Number	CHAN	XX	01 - 24

For 5E16(2) and later, if OE is set to "UEN", this OE Number consists of:

OE Number, Type U (5E16(2) and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Packet Switching Unit	PSU	X	0 - 1
Shelf	SH	X	0 - 4
Channel Group	CHGRP	XX	01 - 15
Channel	CHAN	XXX	001 - 127

Data Rules:

When SLEN is entered, TRKOE must not be entered.

When TRKOE is entered, all other equipment types must not be entered (TEN, DEN, SLEN, LTP and RAF EN).

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When a TGN/MEMB is assigned on the TRUNK form to an SLEN (representing DCLU equipment) or to a TRKOE with a type of "G" (representing IDCU equipment), the TGN defined on the TKGRP form must be associated with the attributes defined as follows:

- CUT THRU must be "N" or not entered
- DAS must not be entered
- DATARATE must not be entered
- HOLD BUSY must be "N"
- INPULSING must not be entered
- OUTPULSING must be "DP" or "TT"
- SCR must not be entered
- TRK DIR must be "OUT"
- TRKCLS must be "PBXDID"
- VPARATE must not be entered

TRKOE TYPE "U":
When TRKOE TYPE is "U",

- IDLE STATE must be "ON".
- the following must not be entered:

  BAND

  IN START DIAL

  CGASPN

  OTODPN1

  OTODPN2

  OTODPN3

  OTODPN4

  OUT START DIAL

  Primary and/or Mate CC1S6 link-pairs

- the following must be "N" or not entered:

  ANSWER DELAY TIMING

  BRCS

  EXT. GUARD TIMING

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- the Originating Equipment Numbers must be unique. I.e, the Originating Equipment number must not be duplicated on another TRUNK form.
- all associated trunk groups on the TKGRP form (5202 Record), must have a TRKCLS of "AS", "ADT", "PKTPIPE", "FRBC", "IS41", "SPCHNDLR", "3GPD", "SVC", or "PCF".
- OE TYPE cannot be duplicated on more than one TRUNK form.

When TRKOE TYPE is "U", TRKCLS on the TKGRP form (5202-1/2/3/4/5/6/7/8/9 Record) is "FRBC" and PH TYPE on the PSUGP form (5949 Record) is "PH4", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 015 for all corresponding trunk members of this trunk group.

When TRKOE TYPE is "U", TRKCLS on the TKGRP form (5202-1/2/3/4/5/6/7/8/9 Record) is "FRBC" and PH TYPE on the PSUGP form (5949 Record) is "PH22", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 063 for all corresponding trunk members of this trunk group.

For 5E16(2) and later, when TRKOE is "U", each UEN must be uniquely assigned.

TRKOE TYPE "F":

- When QTY is greater than 1, it must not be great enough that a TRKOE TYPE of "F" increments the SM.
- When TRKOE TYPE is "F" and SUPV is entered, SUPV must be "EM2" or "RB".
- When SLEN is known or TRKOE TYPE is "A", "F", or "G", then CGASPN must not be entered.
- When ISCN is entered, DEN, NEN or TRKOE TYPE "F", "O", or "V"must be entered.
- When PRI GROUP is entered, DEN, NEN or TRKOE TYPE "F", "O", or "V" must be entered.
- When IN START DIAL or OUT START DIAL is "GRND" or "LOOP", DEN, NEN or TRKOE TYPE "F" or "O"must be entered.

TRKOE TYPE "O":

For 5E16(2) and later, when TRKOE is "O", and SUPV is entered, SUPV must be "RB".

For 5E16(2) and later, TRKOE must have a matching OIU SM, OIU, PROTECTION GRP, HVC, VT GROUP, and VT MEMBER on the EQLVC form (5763 Record).

When DCHN DESG is entered and TRKOE is "O", the last two digits of TRKOE must be 24.

5E17(1) and later:

When TRKOE is "O" (OIUEN):

- and the DCS TRK is "N", TRKCLS is "BCM", "ISLPM", or "PPMEM", and TRK DIR is a value other than "SGNL" on the TRKGRP form, then the AFAC ID must be entered on the EQLVC form (5764 Record).
- and TRKCLS is set to "A2" and DATA RATE is "64K" on the TKGRP form, then ZCS on the EQLVC form must be "N".

TRKOE TYPE is "V":

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TRKOE NUMBER, TYPE V - VEN
(5E16(2) and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001 - 192
Facility	FAC	XXXX	0001 - 1008

For 5E16(2) and later:

When TRKOE TYPE is "V", SERV TYPE must be "CFS" on the ENETLINK form (5827 Record) for SM of TRKOE NUMBER.

All members of the Trunk Group must have either a virtual ("V") or non-virtual TRKOE TYPE.

When TRKOE TYPE is "V" (VEN), the TRKCLS on the TRKGRP form (5202 Record) must be as follows:

- "BVINTOLL",
- "BVTOLLCM",
- "EDSL",
- "EDSLHM",
- "IC",
- "LATA",
- "LTOLLCON",
- "PF",
- "PFITT"
- "PRINTOLL",
- "SCINTOLL", or
- "TTOLLCON".

When TRKOE TYPE is "V" (VEN), INPULSING and OUTPULSING on the TKGRP for (5202 Record) must be "DCHN", or "ISUP7".

When QTY is greater than 1 and TRKOE is known, TRKOE must be "F", "M", "O", or "V".

When SLEN is known or TRKOE type is "A", "F", "G", or "O", CGASPN must not be known.

2.6 TEN

Description: Enter the Trunk Equipment Number representing a specific Analog Trunk Circuit located on a Trunk Unit. Refer to Division 3, Section 2G, Trunk Equipment Number (5271-1 Record), to identify the restrictions for trunk assignments.
Valid Entries: a 7-digit TEN equipment number

TEN (TRUNK EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module (See Note)	SM	XXX	1-48 (CM1) 1-192

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			(CM2)
Trunk Unit	TU	X	0-7
Service Group	SVG	X	0-1
Pack	PACK	X	0-7
Circuit	CKT	X	0-3

- ***NOTE:*** The number of SMs that can be provisioned on the switch is dependent on whether the switch is equipped with a CM1 or CM2 Communications Module.

When assigning TENs, certain Trunk Classes specified on the TKGRP form require Trunk Circuit Types as follows:

TRUNK CLASS	TRUNK CIRCUIT TYPE
ACJCK	4W E&M
ANNCMNT	4W E&M
TSTK	LTD Test Trunk
OTOTK	2W Loop Supv Outgoing
SES	2W Loop Supv Outgoing
BTBTK	2W Loop Supv Outgoing

The following Analog Trunk Packs have 4 circuits per pack except the LTD Test Trunk which has 2 circuits per pack.

ANALOG TRUNK PACKS	
SN 102	2-wire Loop Supv Outgoing
SN 103	2-wire Loop Supv Incoming
SN 104	4-wire E&M
SN 105	2-wire E&M
SN 107	LTD Test Trunk
SN 112	Toll 2-wire Loop Supv Outgoing
SN 113	Toll 2-wire Loop Supv Incoming
SN 114	Toll 4-wire E&M
SN 115	Toll 2-wire E&M

Analog and Digital Trunks may be assigned in the same Trunk Group.

Data Rules:

For 5E9(1) and later when a TEN is entered on a TRUNK form, the corresponding TKGRP form cannot have a value entered in the DATA RATE field.

2.7 DEN

Description: For a Digital Trunk, enter the Digital Equipment Number. Refer to Division 3, Section 2H, Digital Equipment Number (5271-2 Record), to identify the restrictions for digital trunk assignments.
Valid Entries: an 8-digit DEN

DEN (DIGITAL EQUIPMENT NUMBER)			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Digital Line Trunk Unit	DLTU	X	0 - 5 (5E14 and earlier)
		XX	0-11 (5E15 and later)
Digital Facility Interface	DFI	XX	01-10
Digital Channel	PACK	XX	01-48

Data Rules:

When the DCHAN entered is greater than 24, the FAC IND on the EQDUP (5730 Record) form must be 3.

Analog and Digital Trunks may be assigned in the same Trunk Group.

For Packet Switched trunks (TRKCLS is "PACKET", "X75", or "X75P" on the TKGRP form) the SM entered

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in this field must be defined on the EQPSU form.

All members of a Packet Switched IP trunk group (TRKCLS is "PACKET" on the TKGRP form) must reside on the same SM.

Members of an X.75 or X.75P trunk group may reside on different nonremoted SMs (SM USAGE on EQIM is "IM" or "HIM"). When members of an X.75 or X.75P trunk group reside on a remoted SM (SM USAGE on EQIM is "ORM", "TRM" or "RSM"), all members of the trunk group must reside on the same SM.

When the trunk belongs to a trunk group defined with TRKCLS "EDSL" or "EDSLHM" on the TKGRP form, the DEN cannot be entered as C OE or NC OE on a NAILUP form (5207 Record).

For 5E9(1) and later, when a DEN is entered on a TRUNK form, and the DLTU is defined on an EQDU form (5730 Record) where DLTU TYPE is not "DLTU24" or "DLTU48", then the corresponding TKGRP form cannot have a value entered in the DATA RATE field.

For 5E9(2) and later, if "RMSD3" is entered in the TRKCLS field on the TKGRP form and DEN is entered, the members on the trunk form must be assigned on the same SM, DLTU, and DFI and assigned sequentially on all DCHANS 01-24 or 25-48.

For 5E13 and later, when DEN is entered on this form, and the TKGRP form (5202 Record) has TRKCLS set to "A2" and DATA RATE is set to "56K", DFI MODE on the EQDUP form (5730 Record) must be "D4", "FEB7", "FE8Z", "FE", "64K", or "FE64".

For 5E13 and later, when DEN is entered on this form, and the TKGRP form (5202 Record) has TRKCLS set to "A2" and DATA RATE is set to "64K", DFI MODE on the EQDUP form (5730 Record) must be "64K" or FE8Z".

For 5E13 and later, office to office distribute points must be assigned to analog or digital trunks.

WARNING: It is recommended that office to office trunks and their associated distribute points be located on the same SM.

2.8 NEN

Description: Enter the NEN (Networking Equipment Number) for a DNU-S (Digital Networking Unit - SONET).

Software Release: 5E9(2) and later.
Valid Entries:
- 5E12 and earlier: 10-digit NEN
- 5E13 and later: 11-digit NEN

NEN (Networking Equipment Number) - 5E12 and earlier

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
Synchronous Transport Signal	STS	X	0-5
Virtual Tributary	VT	XX	01-28
Digital Signal Level 0	DS0	XX	01-24

NEN (Networking Equipment Number) - 5E13 and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
SONET Termination Equipment	STE	X	1-6

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Synchronous Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1-7
Virtual Tributary Member	VTM	X	1-4
Digital Signal Level 0	DS0	XX	01-24

Data Rules:

If QTY is greater than 1, it must not be great enough that the NEN increments the SM. Therefore, if the number representing DNU-S, DG, STS, and VT in the NEN format above is 71528, then the digits entered for DS0 in the NEN format above plus digits entered for QTY minus 1 cannot be greater than 24, (i.e., DS0 + QTY - 1 25).

The NENs (Networking Equipment Numbers) must be uniquely assigned on the TRUNK form. Trunks must have one and only one of the following entered TEN, DEN, NEN, SLEN, TRKOE, LTP or RAF EN.

DNU-S trunks do not require CGASPN assignments. Therefore, if NEN is entered, CGASPN cannot be entered.

If either IN START DIAL or OUT START DIAL is "GRND" or "LOOP", then DEN or NEN must be entered.

If REMOVE TRUNK is set to "Y", then TEN, DEN, or NEN must be entered.

TKGRP(s) having members with a NEN or a DEN (5E13 and later) defined must have TRKCLS equal to one of the following:

- "A2"
- "ACJCK"
- "AIS"
- "ANNCMNT"
- "ATNDVFY"
- "AUXTRNK"
- "BCM"
- "BUSYVFY"
- "BVINTOLL"
- "BVTOLLCM"
- "CAMA"
- "CAMAANI"
- "CAMAONI"
- "CAMOPKEY"
- "CAMOPTLK"
- "CST1"
- "CST2"
- "DIOR"
- "DSC"
- "EDSL"
- "EDSLHM"
- "EISTRK"
- "FIOPR"
- "FOPRI"
- "IC"
- "IDCS"
- "INAISTRK"
- "ISLPM"
- "IVTRK"
- "LATA"
- "LTOLLCON"
- "OTOTK"

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- "PACKET"
- "PBXDID"
- "PF"
- "PFCPE"
- "PFITT"
- "PFLASH"
- "PRINTOLL"
- "RECCMPL"
- "RMSD3"
- "SCINTOLL"
- "SERVICE"
- "SES"
- "SPAB800"
- "SPAM800"
- "SPAMEG"
- "SPAWATS"
- "TOLLOPER"
- "TOPAS"
- "TSPS"
- "TTOLLCON"
- "X75"
- "X75P"

If DEN or NEN is entered and the corresponding TKGRP form has TRKCLS of "CAMA", then SUPV on the TRUNK form must be "EM2" or not entered.

If NEN is entered, then OUTPULSING must not be equal to "RPTO"on the corresponding TKGRP form.

If a NEN has been assigned on the TRUNK form, then an associated VT must exist on the EQVT form with VT EQSTAT and DS1S EQSTAT both set to "O".

For 5E12 and earlier, the associated EQVT form may be found by matching the following:

- the first three digits of the NEN

  with EQVT SM,

- the fourth digit of the NEN

  with EQVT DNUS,

- the fifth digit of the NEN

  with EQVT DATA GROUP,

- the sixth digit of the NEN

  with EQVT STS and

- the seventh and eighth digits of the NEN

  with EQVT VT.

For 5E13 and later, the associated EQVT form may be found by matching the following:

- the first three digits of the NEN

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with EQVT SM,

- the fourth digit of the NEN

  with EQVT DNUS,

- the fifth digit of the NEN

  with EQVT DATA GROUP,

- the sixth digit of the NEN

  with EQVT STE,

- the seventh digit of the NEN

  with EQVT STS,

- the eighth digit of the NEN

  with EQVT VT GROUP, and

- the ninth digit of the NEN

  with EQVT VT MEMBER.

For 5E10 and later, when EQUIPMENT TYPE is "DNUS", the corresponding eight left most digits of NEN on the TRUNK form must be entered in the PRIGRP form FACILITY LIST as SM, EQUIPMENT NUMBER[1,1], EQUIPMENT NUMBER[2,2], EQUIPMENT NUMBER[3,3], and EQUIPMENT NUMBER[4,5] respectively.

For 5E10 and later, wideband trunk members residing in the same trunk group that are within the same wideband trunk block must be assigned to the same type of equipment (i.e. they must all have a DEN assigned, or they must all have a NEN assigned on the TRUNK form).

TGN/MEMBs defined on the TRUNK form whose corresponding TKGRP form has WB RATE entered are considered to be wideband trunk members. A wideband trunk block is 24 consecutive wideband trunk members. Trunk block 0 is members 0 thru 23 defined on the TRUNK form. Trunk block 1 is members 24 thru 47 defined on the TRUNK form, and so on.

For 5E10 and later, wideband trunk members with an entry for NEN must have their NEN values defined on the TRUNK form such that (NEN[9,10] modulo 24) equals ((MEMB+1) modulo 24). (Note, the result of modulo division is the remainder when dividing two integer values.)

For example, if this trunk block begins with MEMB set to "0" (i.e. the first member of wideband trunk block 1), then MEMB "0" must have the last two digits of the NEN set to "01". MEMB 1 must have the last two digits of its NEN set to "02" ... and MEMB 23 must have the last two digits of its NEN set to 24.

For 5E10 and later, wideband trunk members residing in the same trunk group that are within the same wideband trunk block and have a NEN assigned, must be assigned to the same SM, DNUS, DG, STS, VT, and PRI GROUP (SM, DNUS, DG, STS and VT are represented on the TRUNK form by NEN[1,8]).

For 5E10 and later, when TGN/MEMBs on the TRUNK form have an entry for NEN, PRI GROUP entered and DCHN DESG left blank (defining an EDSL B- channel trunk), if the two right-most digits of NEN, entered on the TRUNK form, are set to 24 and the PRI GROUP, entered on the TRUNK form, is defined on a PRIGRP form, the PRI TYPE, on the PRIGRP form, must be set to "STD".

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For 5E10 and later, any TGN(s) assigned on the TKGRP form with a TRKCLS equal to "EDSLHM" must have a B channel assigned on the TRUNK form. Trunk group members that have a TRKCLS equal to "EDSLHM" on the TKGRP form, a NEN entered on the TRUNK form, and a PRI GROUP entered on the TRUNK form that has a PRI TYPE of CUSTOM on the associated PRIGRP form, the last two digits of the NEN(s) on the TRUNK form must be in the range of 01-23, representing a B channel.

For 5E12 and later, if the NEN is being equipped for the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S (Digital Networking Unit - SONET), the associated VT must be defined on the EQVT form (5858 Record) with VT EQSTAT and DS1S EQSTAT set to "O" and APPLICATION TYPE set to "TRUNK". The associated EQVT form is found by matching NEN[1,3] with EQVT SM, NEN[4] with EQVT DNUS, NEN[5] with EQVT DATA GROUP, NEN[6] with EQVT STS and NEN[7,8] with EQVT VT.

For 5E13 and later, when NEN is entered on this form, and the TKGRP form (5202 Record) has TRKCLS set to "A2" and DATA RATE is set to "64K", ZCS on the EQVT form (5858 Record) must be "N".

For 5E15 and later, when BTBDIST1 is entered and DEN or NEN is entered, SUPV must be "RB", IDLE STATE must be "ON", and OUT START DIAL must be "WINK".

2.9 SLEN

Description: Trunks can be assigned an Integrated SLEN (SLC Line Equipment Number).

Software Release: 5E6 and later
Valid Entries: an 8-digit SLEN

SLEN (SLC LINE EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Carrier Line Unit	DCLU	X	0-7 (5E14 and earlier)
		XX	0-15 (5E15 and later)
Remote Terminal	RT	XX	01-06
Line Number	LN	XX	01-96

Data Rules:

A trunk needs to be assigned a SLEN if it is a DID (Direct Inward Dialing) facility terminating on an Integrated SLC remote terminal. A DID facility is a one-way trunk with loop reverse battery signaling supporting either dual-pulse or dual-tone multi-frequency outpulsing. If a SLEN is entered on this form, a TKGRP form (5202 Record) must be entered for this trunk with a TRKCLS of "PBXDID", a TRK DIR of "OUT", HOLD BUSY "N", and OUTPULSING set to "DP" or "TT".

The SLEN must be defined on a SLCCU form (5107 Record) and a SLCRT form (5106 Record). The CU TYPE for the corresponding line must be "DID" or "DIDDPT".

2.10 LTP

Description: For a software-only Trunk, enter the Logical Test Port Number. Refer to Division 8, Section 1 for procedures to obtain these assignments. Refer to Division 2 for a description of and requirements for Logical Test Port assignments.
Valid Entries: a 6-digit LTP Number

LTP (LOGICAL TEST PORT NUMBER)

Equipment	Valid Entries
Switching Module	1-192
Logical Test Port	000-255

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Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

For 5E10 and later, the Switching Module(s) specified in the logical test port number must be equipped with transmission test facilities on the EQDSP form with a DSU TYPE of "TTFPROC", or on the EQGDSC3 form with a CONFIGURATION of 2, 5 or 8 on SM2000 or a CONFIGURATION of 2, 5, 7 or 8 on SM.

2.11 RAF EN

Description: Enter the Recorded Announcement Function Equipment Number.

Software Release: 5E3 and later
Valid Entries: a 6-digit RAF EN

RAF EQUIPMENT NUMBER (RAF EN)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Recorded Announcement Function	RAF	X	0-7
Channel	CHAN	XX	01-31

Data Rules:

This field must be entered if "RAF" is entered in the TRK DIR field on the TKGRP form.

If QTY is greater than 1, an entry in this field is not permitted.

For 5E6 and later, if RAF EN is entered on the TRUNK form, then RAF (Recorded Announcement Function) trunk assignments for DTA (Dial Through Announcement) channels or CTR (Coin Tone Receiver) channels must follow an assignment pattern as explained in Division 8, Section 35, and shown on the RAF Equipment Number form (5271-4 Record).

For 5E6 and later, when RAF EN is assigned to a trunk group where TRKCLS on the corresponding TKGRP form is "RAFDTA" and SVC GRP is

- "ACCS",
- "AOC",
- "COIN", or
- "DA",

then the SM (first three digits of the RAF EN) must be defined as a loaded SM on the EQIM form (CONFIGURATION is "LOADED").

For 5E9(1) and later, if RAF EN is entered, do not enter a CLCI TRK ID.

For 5E9(2) and later, RAF or SAS units with SVC GRPs of

- "ACCS",
- "AOC",
- "COIN", or
- "DA",

on the TKGRP form, either all SVC GRPs must be the same or they must be one of the following two valid combinations:

- if "ACCS" is entered for a SVC GRP on the TKGRP form for the unit, then all TKGRP forms associated with this unit have "ACCS" or "ACCS" and "AOC" entered for the SVC GRP.

- if "AOC" is entered for the SVC GRP on the TKGRP form for the unit, then all TKGRP forms

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associated with this unit must have

"AOC",

"AOC" and "ACCS", or

"AOC" and "COIN"

entered in the SVC GRP field.

- if "COIN" is entered for the SVC GRP on the TKGRP form for the unit, then all TKGRP forms associated with this unit must have "COIN" or "COIN" and "AOC" entered in the SVC GRP field.
- if "DA" is entered for the SVC GRP on the TKGRP form for the unit, then all TKGRP forms associated with this unit must have "DA" entered in the SVC GRP field.

A SVC GRP for a RAF or SAS unit is found by matching SWITCHING MODULE on the EQRA form to the first three digits of RAF EN on the TRUNK form and UNIT NUMBER on the EQRA form to the fourth digit of RAF EN on the TRUNK form. The desired TKGRP form is then found by matching TGN on the TRUNK form to TGN on the TKGRP form.

For each RAF EN on a TRUNK form that has a match on an EQRA form where UNIT TYPE is "SAS", there must be a CHANNEL assigned on the EQRA form.

2.12 TRANS CLASS

Description: Enter the Transmission Class Number. This number represents the Trunk Type, the Transmission Level, and the Toll Class of the Trunk Member.
Valid Entries: 1 - 99

Data Rules:

If a value is entered in this field, the value must also appear in the TRANSMISSION CLASS field on the TRKCL form (5203 Record).

For 5E4(2) and later, if the TRKCLS field on the TKGRP form (5202-1 Record) is "RMSD3" or "TOPAS", the TRUNK TYPE field on the corresponding TRKCL form (5203 Record) must be "DIGITAL".

This field must not be entered if RAF EN is entered.

For 5E6 and later, if "LTP", "ACJCK", "RAFCTR", "RAFDTA", or "RAFANNC" is entered in the TRKCLS field on the TKGRP form, then the TRANS CLASS field must be blank; for 5E8 and later, TRANS CLASS must also be blank if TRKCLS is "TSTK".

2.13 SUPV

Description: This field defines the type of supervision for the trunk.

Valid SUPV Entries

Entry	Definition
RB	Reverse Battery. Required for Loop Incoming, Outgoing or Test Trunks.
EM2	Required for E&M type trunks when Type 2 signaling or Type 1 for digital trunks is desired. Ground on SB Lead originates at the Trunk Circuit.
EM3	Required for E&M type trunks when Type 3 signaling is desired. Ground on SB Lead originates at the Signaling circuit.
EM4	Software Release: 5E7 and later.

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	E&M option 4.
EM5	Software Release: 5E7 and later. E&M option 5.

Data Rules:

For DENs and LTPs, this field should be left blank; a value of "EM2" will be automatically assigned.

For 5E8 and later, if SLEN is entered or if TRKOE TYPE is "G" or "M", SUPV must be "RB".

2.14 IDLE STATE

Description: This field defines the condition of a trunk when it is in an idle state. Onhook is defined as battery on the ring, while Offhook is defined as battery on the tip.

If dial pulse terminating channel units are used for CCS7 trunks, IDLE STATE should be offhook. Not using "OFF" in such a connection could result in a poorer quality transmission path.

Required Field.
Default: ON
Valid Entries:

Valid IDLE STATE Entries

Entry	Definition
ON	Onhook
OFF	Offhook

Data Rules:

When dial pulse terminating Channel Units are used for CCS7 trunks, this field should be set to "OFF".

2.15 IN START DIAL

Description: This field describes the signal transmitted from the 5ESS Switch office to indicate when dialing will commence on Incoming or Two Way Trunk Groups.

For FX trunks, IN START DIAL should be "GRND" rather than "LOOP". Ground start FX trunks are able to detect supervision. Loop start FX trunks cannot detect or return supervision, and the trunk will not be released on unanswered calls.

Valid IN START DIAL Entries

Entry	Definition
IMED	Immediate Dial.
WINK	Wink Start Signaling.
DLAY	Delay Dial.
DLTN	Dial Tone.
DIRC	Incoming Direct Connect Trunks.
GRND	FX trunk with Ground Start supervision.
LOOP	FX trunk with Loop Start supervision.
WNKDT	Software Release: 5E3 and later. Wink Start and Dial Tone.
ANSDTONE	Software Release: 5E4(2) and later. Answer Supervision/Dial tone. This value provides answer supervision along with dial tone start signal on incoming trunks when the 5ESS Switch is configured as a PBX.

Data Rules:

If this field equals "DIRC", then the DIR CON DN field of the associated TKGRP form must contain a valid Telephone Number. Additionally, if this is an FX trunk with a TRKCLS of "PF" or "PFLASH", then OUT START DIAL must equal "GRND" or "LOOP" and it must have a DEN (Digital Equipment Number).

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For 5E8 and later, if SLEN is entered or if TRKOE TYPE is "G" or "M", IN START DIAL must be blank.

For private facility trunks that are not CPE or FX and have a TRKCLS of "PF" or "PFLASH" entered on the TKGRP form, if the CUT THRU field on the TKGRP form is "Y" on the outgoing end of the trunk, then the following is a list of valid combinations of OUT START DIAL and IN START DIAL values.

OUT START DIAL (Outgoing End)	IN START DIAL (Incoming End)
IMED	DLTN
WINK	WINK
WINK	WNKDT

The recommended arrangement of start signals for cut-through operation is an OUT START DIAL value of "IMED" on the outgoing end and an IN START DIAL of "DLTN" on the incoming end.

When "WNKDT" is entered, the TRKCLS field the TRKCLS must be "TTOLLCON", "PF", or "PFLASH".

If PVN ALW on the corresponding TKGRP form (5202 Record) is set to "Y", then IN START DIAL cannot be "DIRC", "GRND", or "LOOP".

For 5E7 and later, IN START DIAL must be blank when TRK DIR is "OUT" on the corresponding TKGRP form.

For 5E7 and later, when TRKCLS on the corresponding TKGRP form is "INAISTRK":

- IN START DIAL must be "DIRC", "IMED", "WINK", or "DLAY". If INPULSING on the TKGRP form is "NONE", IN START DIAL must be "DIRC"; if INPULSING is not "NONE", IN START DIAL must not be "DIRC".
- a TIMING form (5520 Record) must exist where SERVICE CLASS is "INAISTRK", SIGNAL TYPE matches the value of the INPULSING field on the TKGRP form, and START SIGNAL matches the value of the IN START DIAL field on this TRUNK form.

2.16 OUT START DIAL

Description: This field describes the signal received from the far-end office to indicate when dialing will commence. It is defined for all Outgoing or Two Way Trunks. It is also defined for Incoming only trunks when IN START DIAL equals "DIRC" and the Trunk Class of the associated Trunk Group is "PF" or "PFLASH".

Valid OUT START DIAL Entries

Entry	Definition
IMED	Immediate Dial
WINK	Wink Dial
DLAY	Delay Dial
STOP	Immediate Dial with Stop/Go. Used for Outgoing Trunks to a Tandem Office (Step-By-Step or Register-Only Tandem Offices) or to any office that does not have Immediate Dial Pulse Receiver capability.
GRND	FX trunk with Ground Start supervision
LOOP	FX trunk with Loop Start supervision

Data Rules:

For 5E6 and later, if this trunk connects to an EIS (External Information Systems), then no entry is allowed in OUT START DIAL on this form. EIS trunks have a TRKCLS entry of "EISTRK" on the TKGRP form.

If OUT START DIAL equals "GRND", IN START DIAL must equal "GRND" or "DIRC" or must not be entered. If OUT START DIAL equals "LOOP", IN START DIAL must equal "LOOP" or "DIRC" or must not be entered. No entry in both cases applies to Outgoing only trunks. If "GRND" or "LOOP" is specified here, the trunk must have a DEN (Digital Equipment Number).

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When OUT START DIAL is "GRND", the "A" signaling bit will always be set to 1 causing a false indication of off-hook while testing with the TLWS (Trunk and Line Work Station).

For 5E6 and later, if this trunk is a member of a Trunk Group defined on the TKGRP form with TRKCLS "PF", "PFLASH", or "PFCPE" and CUT THRU set to "Y", then OUT START DIAL must be "IMED", "WINK", "GRND", "LOOP", or blank.

For 5E7 and later, if this trunk is a member of a Trunk Group defined on a TKGRP form with TRKCLS "INAISTRK", OUT START DIAL must not be "STOP".

For 5E8 and later, if SLEN is entered or if TRKOE TYPE is "G" or "M", OUT START DIAL must be "WINK", "DLAY", or "IMED".

2.17 CGASPN

Description: Enter the Carrier Group Alarm Scan Point Number assigned to the carrier system of this trunk. All trunks assigned to the same carrier system must share the same Scan Point Number and be defined with a TEN (Trunk Equipment Number). Refer to Division 8, Section 1, for procedures to obtain these assignments.
Valid Entries: 9 digits in the following format

CGASPN (CGA Scan Point Number)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-30

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

For 5E9(1) and later, if CGASPN is entered then the corresponding CGASP form must have "CON" entered in the ACTION field.

2.18 OTODPN

The fields OTODPN1, OTODPN2, SLC OTODPN3, and SLC OTODPN4 that appear after the CGASPN field on Screen 1 of the form are documented under the section for the 5204-2 Record.

2.19 CLCI TRK ID

Description: Enter the Common Language Trunk Identifier. This entry is required for all CCS trunks.
Valid Entries: 0 - 9999

Data Rules:

If the trunk members are CCS7 trunks (INPULSING/OUTPULSING equals "ISUP7" on the TKGRP form), then each trunk must have a unique CLCI TRK ID for a given OPC/DPC combination on the TKGRP form.

If the trunk members are CCIS6 trunks (INPULSING/OUTPULSING equals "CCIS6" on the TKGRP form), then each trunk on which the interoffice translation test audit may be run must have a unique CLCI TRK ID. (The corresponding TKGRP form will have an entry in the NEND CLLI field.)

For 5E9(1) and later:

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- Do not enter a CLCI TRK ID if RAF EN is entered.

- Wide band ISUP trunk group members that belong to the same wideband trunk block must have consecutive CLCI TRK ID values entered.When defining wideband ISUP trunk group members within a wideband trunk block, the CLCI TRK ID values entered must be defined in a consecutive manner beginning with the first member defined in the wideband trunk block. Wide band TGN/MEMBs belong to an ISUP trunk group if they have an entry in the WB RATE field on the corresponding TKGRP form and an OUTPLS entry of "ISUP7". A wideband trunk block consists of 24 consecutive wideband trunk members. Trunk block 0 corresponds with members 0 - 23 defined on the TRUNK form. Trunk block 1 corresponds with members 24 - 47 defined on the TRUNK form, and so on.

2.20 BRCS

Description: Does the trunk have BRCS (Business and Residence Custom Services) features assigned?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E3 and later, if QTY is greater than 1, then BRCS must be "N".

If BRCS is set to "Y", the associated TRUNKFA form (5205 Record) is required to assign the actual BRCS feature names to the given TGN/member combination.

For most situations, all trunks in a particular Trunk Group will be assigned the same set of BRCS features or there will not be any feature name assigned at all. The recommended method of data entry for this case is to set the BRCS field on the TKGRP form to "Y" and make one corresponding TKGRPFA form (5206 Record) entry that defines all of the BRCS feature names that are common to all members of the Trunk Group. The corresponding trunk forms would have the BRCS field set to "N" by default.

If a particular Trunk Member is assigned a different set of BRCS features than the majority of the Trunk Members, then set the BRCS field to "Y" and assign the feature names on the TRUNKFA form. It is important to remember that the TRUNKFA Feature Names take precedence over TKGRPFA Feature Names if both forms are present for the same Trunk Group.

Both DEN and TEN type trunks may be associated with BRCS. LTP type trunks may never be associated with BRCS either here or via the TKGRP forms.

For 5E4(2) and later, if the TRKCLS field on the TKGRP form (5202-1 Record) is "RMSD3", "TOPAS", "EDSL" or "EDSLHM", then BRCS must be "N".

For 5E6 and later, if this trunk is dedicated to ASP (Advanced Services Platform) via the default ASP DAS by having DAS on the corresponding TKGRP form (5202 Record) equal to PVN DAS on the OFCOPT form (5509 Record), then BRCS must be "N". If the trunk is dedicated to ASP via a virtual ASP DAS by having DAS on the TKGRP form equal to a DAS whose functionality is similar to PVN DAS on the OFCOPT form, then BRCS should be "N". See the ASP DIALING PLAN section in the ASP feature description, Division 2, Sections 4A51 and 4A126, for further details on the dangers of assigning BRCS features to trunks dedicated to ASP services.

2.21 SLVD SPN

Description: Sleeve Lead Scan Point is associated with the PFA (Private Facilities Access) BRCS feature. The scan point is used to monitor customer premise equipment for the PFA feature.
Valid Entries: See the following format for a Scan Point Number.

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SLVD SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-30

Data Rules:

The following trunk restrictions must be followed:

- The trunk type must be an analog TEN value.
- If a sleeve lead is required for control of Supervision, then the associated TRKCLS value on the corresponding TKGRP form must equal "PFCPE" which designates that customer premise equipment is present and requires Sleeve Lead Supervision. Therefore, every trunk in a Trunk Group with TRKCLS set to "PFCPE" requires this entry. The physical trunk does not have to be assigned any BRCS features.
- SUPV must equal "RB".
- The TRK DIR field on the TKGRP form must be "OUT".
- The IN START DIAL and OUT START DIAL fields must be blank.
- If Sleeve Lead Supervision is not required for the Customer Premise Equipment, the Trunk Group should have TRKCLS set to "PF" and this field should not be entered.

With 5E3 and later Software Releases, if QTY is greater than 1, then an entry in this field is not permitted.

2.22 REMOVE TRUNK

Description: Does this trunk have to be removed and busied during module stand-alone operation?

Software Release: 5E4(2) and later
Default: N

Data Rules:

If "Y" is entered in this field, then an entry is required in either the TEN or DEN fields.

Also, if "Y" is entered, the TRKCLS field on the corresponding TKGRP form must have an entry of "TCITT", "FIOPR", or "DIOR".

If this field is "Y", the STAND ALONE field must be set to "Y" on the associated EQIM form (5700-1/2 Record) or the STAND ALONE PURCHASED? field must be set to "Y" on the associated EQSITE form (5722 Record).

2.23 ISCN

Description: Enter the Integrated Services Channel Number of this Trunk.

Software Release: 5E3 and later
Valid Entries: See the following format for an ISCN Number.

ISCN consists of:

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INTEGRATED SERVICES CHANNEL NUMBER (ISCN)		
Equipment	**Format**	**Valid Entries**
SHELF	X	0-4
CHL GRP	XX	0-15
CHL	XXX	0-127

Data Rules:

If this field is entered, then DEN must also be entered.

If QTY is greater than 1, then an entry in this field is not permitted.

An ISCN must be a unique value within a given SM. ISCNs cannot be duplicatedon one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

Enter PH Channel 0 for interswitch trunks and EDSL D-channels. The entire Protocol Handler is dedicated to these facilities, so they can only have one channel assigned and that channel has to be PH Channel 0.

If the trunk defined on this form is assigned an ISCN, the trunk must be a PRI or packet switching trunk, indicated on the TKGRP form with a TRKCLS of "EDSL", "IFOPER", or "IFTERM" and TRK DIR of "SGNL", or with a TRKCLS of "PACKET", "X75P", or "X75".

Trunks belonging to a trunk group that has a TRKCLS of "PACKET", "X75", or "X75P" cannot have combinations of ISCN SHELF and CHL GRP entries that duplicate those for the same SM on AMLBDSL, DSL, DSLAP, DSLUSR, ODBRES, OSPSDSL, RTERM, or XAT forms, or on TRUNK forms where TRKCLS is "EDSL", "IFTERM", or "IFOPER".

For Packet Switched trunks (TRKCLS is "PACKET", "X75P" or "X75" on the TKGRP form), the SM entered in this field must be defined on the EQPSU form. Also, for packet switched trunks, a DEN must be entered for this TGN.

For 5E7 and later, a value of 000 for the last three digits of ISCN is only required for "PACKET", "X75", and "X75P" trunks on a PH2.

For 5E7 and later, "PACKET", "X75", and "X75P" trunks on a PH3 must have the last three digits of the ISCN in the range of 000 to 020 in multiples of 4 (000,004,008,012,016,020 are valid). This allows a maximum of 6 trunk members per PH3. It is recommended to have a maximum of 4 trunk members per

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PH3 for X75 and X75P trunks. The trunk class must be the same for trunk members on a PH3.

For 5E16(2) and later, when ISCN is entered, DEN must be known, NEN must be known, or TRKOE type must be "F" ,"'O" or "V".

2.24 PSCLI

Description: Enter the protocol software change level indicator.

Software Release: 5E5 and later
Valid Entries: PSIFO

Data Rules:

This field is used only for OSPS EDSL D-channels and is required when the corresponding TKGRP form has a TRKCLS of "IFTERM" or "IFOPER" and a TRK DIR of "SGNL".

2.25 INHIBIT DEL

Description: This field is used to indicate whether or not deletion is inhibited for this trunk member.

Software Release: 5E13 and later
Valid Entries: Y, N

- ***NOTE:*** INHIBIT DEL must be set to "N" before deletion of this trunk member will be allowed.

2.26 LEAST IDLE

Description: Is this a trunk member of a trunk group having a HUNT TYPE of "MLIDL" (Most Idle - Least Idle) as belonging to one of two subgroups, either the most idle trunk queue or the least idle trunk queue?

A trunk must be assigned to one, and only one, of these two subgroups before it can be hunted using MLIDL trunk hunting. For more information, see Division 2, Section 1BT.

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

- ***NOTE:*** "Y" is for trunk member hunted on a least idle basis, "N" is for trunk member hunted on a most idle basis.

Data Rules:

When LEAST IDLE is set to "Y" on a TRUNK form the HUNT TYPE on the related TKGRP form must be "MLIDL". The TRUNK form and the TKGRP form are related through the TGN attribute.

2.27 OTODPN 1

Description: If the trunk is associated with Office-to-Office Testing, assign two distribute points, one for OTODPN 1 and one for OTODPN 2, from the same distribute pack.

It is recommended that the Loop Outgoing Trunks (SN102) and their associated Distribute Points selected for Office-to- Office Testing be located in the same Switching Module. This would reduce real time delay caused by message communication between SMs.

Refer to Division 8, Section 1, for procedures to obtain these assignments.

A digital trunk interface, in conjunction with an IAD (Integrated Analog to Digital Converter) or D4 channel

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bank, serves as a replacement for the SN102 OTO (Office to Office) analog trunk circuit in the new office supporting 5E13 and beyond. For more information, see Division 2, Section 1BZ.

Software Release: 5E3 and later
Valid Entries: See the following format for a Distribute Point Number.

DISTRIBUTE POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-30

Data Rules:

With 5E3 and later Software Releases, if QTY is greater than 1, then an entry in OTODPN 1 is not permitted.

For 5E13 and later:

- Office to Office distribute points must be assigned to analog or digital trunks.
- When OTODPN1 and DEN are entered, then SUPV must be "RB", IDLE START must be "ON" and OUT START DIAL must be "WINK".
- When OTODPN1 and TEN are entered, then SUPV must be "RB", IDLE START must be "ON" and OUT START DIAL must be "WINK" or "IMED".

WARNING: It is recommended that office to office trunks and their associated distribute points be located on the same SM.

2.28 OTODPN 2

Description: If the trunk is associated with Office-to-Office Testing, assign two distribute points, one for OTODPN 1 and one for OTODPN 2, from the same distribute pack. Refer to Division 8, Section 1, for procedures to obtain these assignments.

Software Release: 5E3 and later
Valid Entries: See the following format for a Distribute Point Number.

DISTRIBUTE POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-30

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in OTODPN 2 is not permitted.

2.29 SLC OTODPN 3

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Description: If the trunk is associated with Office-to-Office testing of Integrated SLC, assign two additional distribute points, one for SLC OTODPN 3 and one for SLC OTODPN 4. If possible, all four distribute points should be assigned from the same distribute pack. All four points MUST be assigned on the same Switching Module.

Refer to Division 8, Section 1, for procedures to obtain these assignments.

Software Release: 5E3 and later
Valid Entries: See the following format for a Distribute Point Number.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-30

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in SLC OTODPN 3 is not permitted.

- ***NOTE:*** All members, of any given Trunk Group for Office-to-Office test, must be assigned the same number of Office-to-Office distribute points. Trunk Groups with four distribute points may be used for Integrated SLC Office-to-Office testing. Only trunks with four distribute points may be used for Integrated SLC Office-to-Office testing.

2.30 SLC OTODPN 4

Description: If the trunk is associated with Office-to-Office testing of Integrated SLC, assign two additional distribute points, one for SLC OTODPN 3 and one for SLC OTODPN 4. If possible, all four distribute points should be assigned from the same distribute pack. All four points MUST be assigned on the same Switching Modules.

Refer to Division 8, Section 1 for procedures to obtain these assignments.

Software Release: 5E3 and later
Valid Entries: See the following format for a Distribute Point Number.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-30

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in SLC OTODPN 4 is not permitted.

- ***NOTE:*** All members, of any given Trunk Group for Office-to-Office test, must be assigned the same number of Office-to-Office distribute points. Trunk Groups with four distribute points may be used for any Office-to-Office testing. Only trunks with four distribute points may be used for Integrated SLC Office-to-Office testing.

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CAMA OPERATOR TRUNKS

These fields (Section 2.31 - Section 2.35) are used to associate Incoming CAMA ONI (Operator Number Identification) Trunks. A CAMA Operator Trunk consists of a Keying Trunk which is used to key the calling number into the CAMA Office and a Talking Trunk which is used to obtain the calling number from the calling party.

2.31 TRAF SAMPLED

Description: Is traffic sampling desired? Traffic Sampling for incomplete (unanswered) CAMA calls may be specified on an Incoming CAMA Trunk in a 5ESS Switch Toll Office. This condition will be indicated in the study indicator of the billing record.
Valid Entries: Y, N

2.32 KEYING TRUNK TGN

Description: If the trunk being defined is a Talking Trunk, enter the Trunk Group Number of the associated Keying Trunk.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

If both KEYING TRUNK TGN and KEYING TRUNK MBR NO fields are entered, then the combination of these two fields must be unique.

2.33 KEYING TRUNK MBR NO

Description: If the trunk being defined is a Talking Trunk, enter the Member number of the associated Keying Trunk.
Valid Entries: 0 - 1951

Data Rules:

Trunk members exceeding 999 are allowed only if the range 0 to 999 has been exhausted.

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

If both KEYING TRUNK TGN and KEYING TRUNK MBR NO fields are entered, then the combination of these two fields must be unique.

2.34 TALKING TRUNK TGN

Description: If the trunk being defined is a Keying Trunk, enter the Trunk Group Number of the associated Talking Trunk.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

Trunk Group Numbers exceeding 999 are allowed only if the range 1 to 999 has been completely exhausted.

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

If TALKING TRUNK TGN and TALKING TRUNK MBR NO fields are entered and the TRKCLS field has a value of "CAMOPKEY" or "TCIKT" on the associated TKGRP form, the combination of the two fields must be unique.

If this field is entered, the TALKING TRUNK MBR NO field must be entered.

2.35 TALKING TRUNK MBR NO

Description: If the trunk being defined is a Keying Trunk, enter the Member number of the associated Talking Trunk.
Valid Entries: 0 - 1951

Data Rules:

Trunk members exceeding 999 are allowed only if the range 0 to 999 has been exhausted.

If TALKING TRUNK TGN and TALKING TRUNK MBR NO fields are entered and the TRKCLS field has a value of "CAMOPKEY" or "TCIKT" on the associated TKGRP form, combination of the two fields must be unique.

If this field is entered, the TALKING TRUNK TGN field must be entered.

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

EDSL/PRI TRUNKS

The following fields (Section 2.36 - Section 2.39) define the protocol procedures to be used by ISDN PRI trunks.

2.36 PRI GROUP

Description: This field indicates the PRI GROUP number that this trunk member is associated with. The six left-most digits of DEN and 0 (if the two right-most digits of DEN are 1 - 24) must be defined in the PRI GRP FACILITY LIST as SM/DLTU/DFI/FAC. The six left-most digits of DEN and 1 (if the two right-most digits of DEN are 25-48) must be defined in the PRIGRP FACILITY LIST as SM/DLTU/DFI/FAC.
Valid Entries:

- For 5E9(2) and earlier: 1 - 4096
- For 5E10 and later: 1 - 4095

Data Rules:

For 5E9(2) and earlier, if PRI GROUP is entered, DEN must be entered.

For 5E10 and later, if PRI GROUP is entered, DEN or NEN must be entered.

PRI GROUP must be entered, when TRKCLS on the corresponding TKGRP form is "EDSL" or "EDSLHM".

If an EDSL or EDSLHM B-Channel trunk (PRI GROUP entered and DCHN DESG is blank) is defined with the two right-most digits set to 24 or 48, the PRI GROUP must be defined on a PRIGRP form (5211 Record) with PRI TYPE set to "STD".

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If an EDSL or EDSLHM B-channel trunk is defined, there must exist another TRUNK form with the same PRI GROUP and DCHN DESG entered (EDSL D-Channel).

For 5E10 and later, the maximum number of PRI and OSPS D-Channels can not be exceeded. A PRI D-Channel is one where both PRI GROUP and DCHN DESG are entered on the TRUNK form (a DEN or NEN may be used). An OSPS D-Channel is one where DEN[7,8] on the TRUNK form is 24 or 48, and TRKCLS on the corresponding TKGRP form is "IFOPER" or "IFTERM" (only DEN may be used). If DEN[1,3] or NEN[1,3] values on the TRUNK form match SM on the EQIM form where UNIT TYPE is an SM-2000 class processor, then the maximum number of PRI and OSPS D-Channels on the TRUNK form per SM is 640. If UNIT TYPE on the EQIM form is not "SM2000", then the maximum number of PRI and OSPS D-Channels on the TRUNK form per SM is 20.

For 5E10 and later, when TGN/MEMBs have PRI GROUP entered and DCHN DESG is blank on the TRUNK form, indicating that they are EDSL B-Channels, a maximum of 3,000 EDSL B-Channels may be assigned to an SM with an SM-2000 class processor on the EQIM form, and a maximum of 479 EDSL B-Channels otherwise. The maximum can not be exceeded. SM is found by matching DEN[1,3] or NEN[1,3] on the TRUNK form with SM on the EQIM form.

The maximum number of PRI D-Channels can not be exceeded. A PRI D-Channel is one where both PRI GROUP and DCHN DESG are entered on the TRUNK form (a DEN or NEN may be used). If DEN[1,3] or NEN[1,3] values on the TRUNK form match SM on the EQIM form where UNIT TYPE is an SM-2000 class processor, the maximum number of PRI D-Channels on the TRUNK form per SM cannot be exceeded as indicated:

- For 5E10 only, the maximum is 31
- For 5E11 and later, the maximum is 127

If UNIT TYPE on the EQIM form is not an SM-2000 class processor", the maximum number of PRI D-Channels on the TRUNK form per SM is 20.

The PRI GRP and eight left most digits of the OE on the TRUNK from where TRKOE OE TYPE is "O" must be entered on the PRIGRP form FACILITY LIST as SM, EQUIPMENT NUMBER, respectively, with EQUIPMENT TYPE set to "OIU".

For 5E16 and later, when PRI GROUP is entered, DEN, NEN, or OIUEN must be entered.

2.37 DCHN DESG

Description: This field indicates whether or not the D-Channel trunk is a Primary or Secondary D-channel for a PRI GROUP. If only one D-channel trunk is present for the PRI GROUP, the value "PRIM" is recommended. This field is applicable to "EDSL" D-channel trunk members only.

Software Release: 5E9(1) and later
Valid Entries:

Valid DCHN DESG Entries

Entry	Definition
PRIM	Primary.
SEC	Secondary.

Data Rules:

If DCHN DESG is entered, ISCN, PRI GROUP, Q921 PROC and Q931 PROC must be entered, QTY must be 1 and the two right-most digits of DEN must be 24 or 48.

If DCHN DESG is not entered, Q921 PROC and Q931 PROC must not be entered.

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DCHN DESG must be entered when, TRKCLS on the corresponding TKGRP form is "EDSL" and TRK DIR must be "SGNL".

If two TRUNK forms are defined for the office with the same PRI GROUP and DCHN DESG entered, one TRUNK form must have DCHN DESG set to "PRIM" and the other with DCHN DESG set to "SEC" and the PRI GROUP must be defined on a PRIGRP form (5211 Record) with PRI TYPE set to "STD". There can exist, at most, two TRUNK forms with the same value for PRI GROUP and with DCHN DESG entered for the office.

For 5E10 and later, when DCHN DESG is entered, the last two digits of NEN must be 24.

For 5E10 and later, when DCHN DESG is entered, the last two digits of DEN must be either 24 or 48.

2.38 Q921 PROC

Description: This attribute indicates which Q.921 protocol procedures are to be used by this PRI D-channel. This field applies to D-channel trunks that are members of a trunk group with TRKCLS on the TKGRP form (5202 Record) set to "EDSL" (Extended Digital Services Line). For all other trunk types, this field must be blank.

Required Field for 5E8 and earlier.
Default: For 5E8 and earlier: NETWORK
Valid Entries:

Valid Q921 PROC Entries

Entry	Definition
NETWORK	Network Side procedures
USER	User Side procedures

Data Rules:

On a given PRI, one end must be designated as User Side while the other end must be designated as Network Side.

If Q921 PROC is "USER", then on the associated TKGRP form, TRKCLS must be "EDSL" and the last two digits of DEN (DEN[7,8]) must be either 24 or 48.

If Q921 PROC is "U", then QTY must be 1.

2.39 Q931 PROC

Description: This attribute indicates which Q.931 protocol procedures are to be used for PRI CSV and CSD calls associated with the PRI D-channel. This field applies to D-channel trunks that are members of a trunk group with TRKCLS on the TKGRP form (5202 Record) set to "EDSL" (Extended Digital Services Line). For all other trunk types, this field must be blank.

Required Field for 5E8 and earlier.
Default: For 5E8 and earlier: NETWORK
Valid Entries:

Valid Q931 PROC Entries

Entry	Definition
NETWORK	Network Side procedures
SYMUSER	User Side procedures

Data Rules:

If Q921 PROC is "USER", then Q931 PROC must be "SYMUSER".

If Q931 PROC is "SYMUSER", then on the associated TKGRP form, TRKCLS must be "EDSL" and the

last two digits of DEN (DEN[7,8]) must be either 24 or 48.

If Q931 PROC is "SYMUSER", then QTY must be 1.

ANNC TRUNKS

For 5E6 and later, the following fields (Section 2.40 - Section 2.41) give parameters for Announcement Trunks.

2.40 MUSIC SOURCE

Description: Does the the trunk act as a MUSIC SOURCE? Applications for MUSIC SOURCE trunks include delay tones for modular queuing features.

Software Release: 5E6 and later
Required Field.
Default: N

Data Rules:

When MUSIC SOURCE is set to "Y", then TRK DIR must be set to "ANN".

2.41 MAXCALLS

Description: Enter the maximum number of calls that can be connected to this announcement/music port at the same time. Any attempt to attach additional calls will fail. An entry of 0 will not display on the Recent Change View and it will default to 32.

For the Music on Hold secured feature (see Division 2, Section 4A64) available with 5E7 and later, this field indicates the maximum number of simultaneous inter-SM paths that can be connected to this music source. Once an inter-SM path is established from a particular SM to the music source, multiple users on that SM may be concurrently connected to the music source via the already established inter-SM path.

Software Release: 5E6 and later
Valid Entries: 0 - 60

Data Rules:

A corresponding TKGRP form (5202 Record) where TGN fields on the TKGRP form and this form are equal, must have TRK DIR field equal to "ANN".

CCIS6 TRUNK SIGNALING

Fields Section 2.42 - Section 2.45 apply only to CCS trunks with CCIS6 signaling.

All CCS trunks with CCIS6 signaling are required to be identified with a routing label that uniquely identifies the CCS trunk. The label is made up of three parts:

- Signaling Link Group: the CNI signaling link associated with this trunk.
- Signaling Link Member: the member within the Signaling Link Group.
- Signaling Link Virtual Link: the physical link is represented by eight virtual links.

Each CCS trunk is associated with two links, a Primary Link and a Mate Link, known as a Link Pair. Each must also be assigned a Band and Member Number for a given signaling link. The Band Number is submitted on the TRUNK form, but the Band Member Number is assigned internally. A Band Number can

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be assigned to 16 trunk members per Link Pair combination.

The values of BAND, PRIMARY and MATE LINKS are presently administered and supplied by the CNAC (CCIS Network Administration Center). These fields are required only for CCIS6 trunks in 5E3 and later offices that interface with the CCS CNI ring database.

2.42 BAND

Description: Enter the Band Number for CCIS6 signaling. A particular Band Number can be associated with up to 16 trunk Member Numbers that share the same Primary/Mate Link Pair combination. The Band Number must be a common value for each of the Link Pair combinations.
Valid Entries: 0 - 511

Data Rules:
For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

PRIMARY AND MATE LINKS

The following fields (Section 2.43 - Section 2.45) specify the Primary and Mate Signaling Links for CCS trunks with CCIS6 signaling. The SL GROUP, MEMB, and VLINK values must be specified in pairs; one set of values for the Primary Link and one set for the Mate Link. The combinations of Primary Link values cannot equal that of the Mate Link for a particular trunk member.

2.43 SL GROUP

Description: Enter the Signaling Link Group for CCIS6 links.
Valid Entries: 0 - 63

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

2.44 SL MEMB

Description: Enter the Signaling Link Member within the Signaling Link Group.
Valid Entries: 1 - 15

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

2.45 SL VLINK

Description: Signaling Link Virtual Link. If the CCIS6 messages are using a 4.8 Kbs link, then the SL VLINK must equal 0. If a 56 Kbs link is used, then the physical link is divided into eight virtual links and valid entries are 0 - 7.
Valid Entries: 0 - 7

Data Rules:

For 5E3 and later, if QTY is greater than 1, then an entry in this field is not permitted.

DSN FEATURES

The following fields (Section 2.46 - Section 2.47) are applicable in offices with the DSN (Defense Switched Network) feature, available in 5E3 and later Software Releases.

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2.46 EXT. GUARD TIMING

Description: Will Extended Guard Timing be performed on this trunk?
Valid Entries: Y, N

Data Rules:

When SLEN is entered TRKOE TYPE is "G" or "M", EXT. GUARD TIMING must be "N" or blank.

2.47 ANSWER DELAY TIMING

Description: Will Answer Delay Timing be performed on this trunk?
Valid Entries: Y, N

Data Rules:

If this trunk belongs to a trunk group defined on a TKGRP form with TRKCLS "INAISTRK", ANSWER DELAY TIMING must not be "Y".

When SLEN is entered or if TRKOE TYPE is "G" or "M", ANSWER DELAY TIMING must be "N" or blank.

TSPS TRUNKS

The following field applies only to trunks with trunk class "TSPS".

2.48 NO EXSIG

Description: If this is a TSPS trunk, should the expanded inband signaling field on the OFCOPT form be ignored?

When EXPANDED INBAND SGNLING is "Y" on the OFCOPT form, the SIGNAL field on the TKGRP form is treated as if it were set to "EXINBND", no matter what value is really assigned. If NO EXSIG is set to "Y" when EXPANDED INBAND SGNLING is "Y", EXPANDED INBAND SGNLING is ignored, and the signaling type specified in the SIGNAL field is used. This allows the telephone company to override the office parameter on a per-trunk basis.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If NO EXSIG is "Y", TRKCLS on the corresponding TKGRP form must be "TSPS", and EXPANDED INBAND SGNLING on the OFCOPT form must be "Y".

PACKET SWITCHING

The following fields (Section 2.49 - Section 2.55) are available with 5E5 and later Software Releases and refer to Level 2 and loopback parameters for packet switched trunks. These fields may be entered only when TRKCLS on the TKGRP form is "PACKET", "X75", or "X75P".

For all trunks in a "PACKET" trunk group (TRKCLS is "PACKET" on the TKGRP form) the following fields must be entered: OCU LOOPBACK, CSU LOOPBACK, LAPB ADDR, WINDOW SIZE, RETRANS N2, ACK TIME T1, AND IDLE TIME T3; IN START DIAL and OUT START DIAL must not be entered.

2.49 OCU LOOPBACK

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Description: Is OCU (Office Channel Unit) loopback testing allowed on this trunk member?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

When a Packet Switched trunk group (TRKCLS is "PACKET", "X75", or "X75P" on the TKGRP form) has a DATA RATE of "64K" on the TKGRP form, this field must be "N".

2.50 CSU LOOPBACK

Description: Is CSU (Channel Service Unit) loopback testing allowed on this trunk member?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

When a Packet Switched trunk group (TRKCLS is "PACKET", "X75", or "X75P" on the TKGRP form) has a DATA RATE of "64K" on the TKGRP form, this field must be "N".

2.51 LAPB ADDR

Description: Should Link Address A be used by the Level 2 protocol for a packet switched trunk? If "Y" is entered, Link Address A, which indicates a command frame will be used. If "N" is entered, Link Address B, which indicates a response frame will be used.

The address field identifies a frame as either a command or a response. Command frames are sent with the remote STE address and response frames are sent with the local STE address.

For an IP, X.75, or X.75' trunk (TRKCLS is "PACKET", "X75", or "X75P" on the TKGRP form) that connects two 5ESS Switches, this field must be populated with a "Y" on one switch and "N" on the other. Similarly, for an IP trunk that connects the 5ESS Switch and a 1PSS office, or an X.75 or X.75' trunk that connects the 5ESS Switch and a PPSN (Public Packet Switched Network, e.g. Tymnet), the value in this field must be the opposite of the value on the 1PSS or PPSN side.

Software Release: 5E5 and later
Valid Entries: Y, N

2.52 WINDOW SIZE

Description: Indicate the maximum quantity of sequentially numbered LAPB (Link Access Procedure B) Level 2 I-frames (Information) which the STE (Signaling Terminal) can have unacknowledged at any time. I-frames, which are data packets, are numbered sequentially applying Modulo 8 arithmetic. Modulo 8 arithmetic is strictly concerned with remainders when dividing by 8. For example, 27 Modulo 8 equals 3 because three is the remainder when 27 is divided by eight.

Software Release: 5E5 and later
Valid Entries: 2 - 7

2.53 RETRANS N2

Description: The N2 value is the maximum number of attempts made by the STE (Signaling Terminal) to successfully transmit a frame at the LAPB (Link Access Procedure B) Level 2.

Software Release: 5E5 and later
Valid Entries: 2 - 15

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2.54 ACK TIME T1

Description: The T1 timer is the period of time that the originating STE waits to receive an acknowledgement for a frame from the terminating STE. The time unit is a tenth of a second.

Software Release: 5E5 and later
Valid Entries: 20 - 200, even numbers only

2.55 IDLE TIME T3

Description: Once an idle channel condition is detected, the STE will wait for a period of time, T3, for detection of a return to the active state. The duration of the T3 timer must be greater than the duration of the T1 timer to ensure that retransmission efforts are not aborted. The time unit is a full second.

Software Release: 5E5 and later
Valid Entries: 3 - 30

Data Rules:

The duration entered in the IDLE TIME T3 field must be greater than the duration in the ACK TIME T1 field. (Remember that the time unit of this field is seconds, while the time unit of ACK TIME T1 is tenths of a second.)

X.75P/ X.75 TRUNKS ONLY

The following fields (Section 2.56 - Section 2.70) are available with 5E5 and later Software Releases and refer to X.75P and X.75 packet-switched trunks, X.75 packet switched trunks are available for 5E6 and later Software Releases.

The following fields must only be defined when TRKCLS on the TKGRP form is "X75P" or "X75". At least one of the following fields must be entered for X.75P trunks: LINK ID, HIGH PVC LCN, or 2 WAY LCN.

For 5E8 and later, when X.75P and X.75 TRUNK ONLY fields are entered, all PACKET SWICHING FIELDS must be entered.

2.56 LINK ID

Description: Enter the Gateway LINK ID for an X.75P or X.75 PVC (Permanent Virtual Circuit).

Software Release: 5E5 and later
Valid Entries: 1 - 255

Data Rules:

All LINK IDs entered on this form must be unique.

When this field is entered, the HIGH PVC LCN field must be entered.

2.57 SEND THRUPUT CLASS

Description: Enter the sending throughput class which is the bit per second rate at which a virtual call will send data.

Software Release: 5E5 and later
Required Field.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600, or 19200.

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2.58 RCV THRUPUT CLASS

Description: Enter the receive throughput class which is the bits per second rate at which a virtual call will receive data.

Software Release: 5E5 and later
Required Field.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600, or 19200.

2.59 SEND PKT SIZE

Description: Enter the send packet size, the maximum number of data bytes that can be sent in a packet.

Software Release: 5E5 and later
Required Field.
Default: 128
Valid Entries: 128, 256

2.60 RCV PKT SIZE

Description: Enter the receive packet size, the maximum number of data bytes that can be received in a packet.

Software Release: 5E5 and later
Required Field.
Default: 128
Valid Entries: 128, 256

2.61 SEND PKT WINDOW SIZE

Description: Enter the number of data packets that the STE can have unacknowledged, on a sending basis, at any time.

Software Release: 5E5 and later
Required Field.
Default: 2
Valid Entries:
- 5E8 and earlier: 2 or 3
- 5E9(1) and later: 1 - 7

2.62 RCV PKT WINDOW SIZE

Description: Enter the number of data packets that the STE can have unacknowledged, on a receiving basis, at any time.

Software Release: 5E5 and later
Required Field.
Default: 2
Valid Entries:
- 5E8 and earlier: 2 or 3
- 5E9(1) and later: 1 - 7

2.63 HIGH PVC LCN

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Description: Enter the Highest LCN (Logical Channel Number) that can be assigned to a PVC (Permanent Virtual Circuit).

Software Release: 5E5 and later
Valid Entries: 1 - 127

Data Rules:

When this field is entered, the LINK ID field must be entered.

If this field is entered, then a corresponding X75PVC form (5926 Record) may be entered with a value entered in the LCN field which is less than or equal to the value entered in this field.

For X.75P and X.75 trunks, when this field and the 2 WAY LCN fields are entered, the LOW 2 WAY LCN field must be greater than the HIGH PVC LCN field.

For 5E6 and later, when TRKCLS on the TKGRP form is "X75", at least one of the following fields must be entered: HIGH PVC LCN, LOW LCN INCOMING, LOW LCN 2 WAY or LOW LCN OUTGOING.

2.64 LCN HI TO LOW

Description: Will outgoing calls over this trunk go out on the highest available LCN and incoming calls come in on the lowest available LCN? When this field is set to "N" outgoing calls will go out on the lowest available LCN, and incoming calls will come in on the highest available LCN.

Software Release:
For X.75: 5E6 and later
For X.75': 5E8 and later
Valid Entries: Y, N

Data Rules:

When LCN HI TO LOW is entered at least one set of the LCN LOW/HI entries under the X.75'/X.75 TRUNK ONLY heading must be entered.

If LCN HI TO LOW is "Y", then
- HIGH 2 WAY LCN must be less than LOW OUTGO ING LCN.
- HIGH INCOMING LCN must be less than LOW 2 WAY LCN.
- HIGH INCOMING LCN must be less than LOW
- OUTGOING LCN.

If LCN HI TO LOW is "N", then
- HIGH OUTGOING LCN must be less than LOW 2 WAY LCN.
- HIGH 2 WAY LCN must be less than LOW
- INCOMING LCN.
- HIGH OUTGOING LCN must be less than LOW
- INCOMING LCN.

2.65 LOW INCOMING LCN

Description: Enter the lowest incoming LCN for this X.75 trunk.

Software Release:
For X.75: 5E6 and later
For X.75': 5E8 and later

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Valid Entries: 1 - 127

Data Rules:

If this field is entered, HIGH LCN INCOMING must be entered.

At least one of the following fields must be entered for an X.75 trunk: HIGH PVC LCN, LOW LCN INCOMING, LOW LCN 2 WAY or LOW LCN OUTGOING.

2.66 HIGH INCOMING LCN

Description: Enter the highest incoming LCN for this X.75 trunk.

Software Release:
For X.75: 5E6 and later
For X.75': 5E8 and later
Valid Entries: 1 - 127

Data Rules:

If this field is entered, LOW LCN INCOMING must be entered.

2.67 LOW 2 WAY LCN

Description: Enter the lowest 2-Way LCN (Logical Channel Number) for this X.75 trunk.

Software Release:
For X.75: 5E5 and later
For X.75': 5E8 and later
Valid Entries: Valid Entries: 1 - 127

Data Rules:

When this field is entered, the HIGH 2 WAY LCN field must be entered in order to define a range of two-way LCNs.

When both the HIGH PVC LCN and the 2 WAY LCN fields are entered, the LOW 2 WAY LCN field must be greater than the HIGH PVC LCN field.

At least one of the following fields must be entered for an X.75 trunk: HIGH PVC LCN, LOW INCOMING LCN, LOW 2 WAY LCN, or LOW OUTGOING LCN.

2.68 HIGH 2 WAY LCN

Description: Enter the highest 2-Way LCN (Logical Channel Number) for this X.75 trunk.

Software Release:
For X.75: 5E5 and later
For X.75': 5E8 and later
Valid Entries: 1 - 127

Data Rules:

When this field is entered, the LOW 2 WAY LCN field must be entered in order to define a range of two-way LCNs. The value entered in this field must be greater than or equal to the value entered in the LOW 2 WAY LCN field.

2.69 LOW OUTGOING LCN

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Description: Enter the lowest outgoing LCN for this X.75 trunk.

Software Release:
For X.75: 5E6 and later
For X.75': 5E8 and later
Valid Entries: 1 - 127

Data Rules:

If this field is entered, HIGH LCN OUTGOING must be entered.

At least one of the following fields must be entered for an X.75 trunk: HIGH PVC LCN, LOW LCN INCOMING, LOW LCN 2 WAY or LOW LCN OUTGOING.

2.70 HIGH OUTGOING LCN

Description: Enter the highest outgoing LCN for this X.75 trunk.

Software Release:
For X.75: 5E6 and later
For X.75': 5E8 and later
Valid Entries: 1 - 127

Data Rules:

If this field is entered, LOW LCN OUTGOING must be entered.

PACKET SWITCHING X.75P/X.75 UTILITY INDICATORS

The following fields (Section 2.71 - Section 2.85) are available with 5E5 and later Software Releases and indicate which utilities are supported on an X.75P or X.75 trunk; X.75 packet switched trunks are available for 5E6 and later Software Releases. The following fields must be defined only when TRKCLS on the TKGRP form is "X75P" or "X75". For 5E8 and later, see Division 2, Section 5C for more information on Packet Trunk Interface Standardization.

2.71 CALL ID

Description: Is the Call Identifier indicator provisioned? The call identifier is a unique identifying number for each virtual circuit established.

Software Release: 5E5 and later
Valid Entries: Y, N

2.72 THRUPUT CLASS

Description: Is the throughput class indicator provisioned? The throughput class indicator can be used by any STE for specifying the throughput classes on a per call basis. If particular throughput classes are not requested, the default throughput class values will be used.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If THRUPUT CLASS is "N", both SEND THRUPUT CLASS and RCV THRUPUT CLASS must be 9600.

2.73 WND SZ

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Description: Is the window size indicator provisioned? The window size indicator can be used by any STE for negotiating the window sizes for each direction of transmission. If particular window sizes are not requested, the default window size values will be used.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If WND SZ is "N", both SEND PKT WINDOW SIZE and RCV PKT WINDOW SIZE must be 2.

2.74 PACKET SIZE

Description: Is the packet size indicator provisioned? The packet size indicator can be used by any STE for negotiating the packet sizes for each direction of transmission. If particular packet sizes are not requested, the default packet size values will be used.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If PACKET SIZE is "N", both SEND PKT SIZE and RCV PKT SIZE must be 128.

2.75 FAST SELECT

Description: Is the fast select indicator provisioned? The fast select indicator is used for indicating that the fast select user facility applies to a particular call. The fast select feature, with no response restriction, allows a STE to respond directly with call connected packet of 128 bytes of data and clear a call request packet with 128 bytes of data.

Software Release: 5E5 and later
Valid Entries: Y, N

2.76 CUG

Description: Is the closed user group indicator provisioned? The closed user group indicator allows the establishment of virtual calls by CPEs which are members of an international CUG (Closed User Group).

Software Release: 5E5 and later
Valid Entries: Y, N

2.77 CUG OUTGOING

Description: Is the CUG (Closed User Group) with outgoing access indicator provisioned? The CUG outgoing access indicator allows the establishment of virtual calls by CPEs which are members of an international closed user group. A CUG with outgoing access allows members of a CUG to originate virtual calls to CPE devices that do not belong to any CUG (e.g., public network) or to CPE devices that belong to a CUG with Incoming Access.

Software Release: 5E5 and later
Valid Entries: Y, N

2.78 REVERSE CHARGE

Description: Is the reverse charge indicator provisioned? The reverse charge indicator allows virtual calls to be established internationally, when the called CPE will accept the charges for the call.

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Software Release: 5E5 and later
Valid Entries: Y, N

2.79 ADDR MOD NOTIFY

Description: Is the called line Addressed Modified Notification provisioned? The called line Addressed Modified Notification indicator is used to indicate reasons why the called address in the call connected or clear request packet may be different from the one specified in the call request packet.

Software Release: 5E5 and later
Valid Entries: Y, N

2.80 CLR NETWORK ID

Description: Is the Clearing Network Identification code provisioned? The CNIC (Clearing Network Identification Code) indicator provides additional information on the origin of the clear request packet.

Software Release: 5E5 and later
Valid Entries: Y, N

2.81 TNIC INDICATOR

Description: Is the Transit Network Indicator provisioned? The TNIC utility indicates the number of networks that the packet has transited through.

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

For 5E8 and later, if TNIC INDICATOR is "N", then NUI BEFORE and NUI AFTER must be "N".

X75 and X75P trunks must have TNIC INDICATOR entered.

2.82 UTILITY MARKER

Description: Is the utility marker indicator provisioned? Utility markers separate X.75P and X.75 utilities to determine the beginning and ending of the signaling protocol. These utilities are supported after the utility marker to allow the 5ESS Switch to connect other switches that support these utilities in accordance with pre-1988 CCITT standards.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

For 5E6 and later, this field must be set to "Y" for an X75 trunk that has TDI AFTER, TDS AFTER, TARIFF AFTER, IN RPOA AFTER, or OUT RPOA AFTER set to "Y" or blank and for 5E8 and later, NUI AFTER.

If UTILITY MARKER is "N" then the following fields may not be "Y":
- ACCESS CHAR (5E8 and later)
- CLEAR SUB NET ID
- IC PRESELECT
- NUI AFTER (5E8 and later)
- PROTOCOL CONV
- X75 ID UTILITY

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For 5E10 and later, when Trunk member(s) defined on the TRUNK form belong to a Trunk Group with a Trunk Class of "X75" (the TRKCLS field on the TKGRP form), X75 Trunks must have UTILITY MARKER set to "Y" if any of the following fields are "Y".

- TDI AFTER
- TDS AFTER
- TARIFF AFTER
- IN RPOA AFTER
- OUT RPOA AFTER
- IC PRESELECT

For 5E10 and later, when Trunk member(s) defined on the TRUNK form belong to a Trunk Group with a Trunk Class of "X75P", (the TRKCLS field on the TKGRP form). X75 Trunks must have UTILITY MARKER set to "Y" if any of the following fields are "Y" or blank.

- ACCESS CHAR
- TRANS SUB NET CNT
- CLEAR SUB NET ID
- PROTOCOL CONV
- X75 ID UTILITY
- IC PRESELECT

2.83 UTILITY FLD SIZE

Description: Enter the X.75/X.75P Trunk Utility Facility Field Length. (See Division 2, Section 5C for more information on Packet Trunk Interface Standardization.)

Software Release: 5E8 and later
Valid Entries:

Valid UTILITY FLD SIZE Entries

Entry	Definition
BASIC or B	Basic Facility/Utility Size. The basic Utility Field Size cannot exceed 63 octets and the Facility Field cannot exceed 109 octets.
EXTENDED or E	Extended Facility/Utility Size. The extended Utility Field Size could exceed 63 octets and/or the Facility Field could exceed 109 octets provided the length of the combined facility and utility fields does not exceed 172 octets. If the length does exceed 172 octets, the call will be cleared.

2.84 NUI BEFORE

Description: Should the NUI (Network User ID) exist before the Utility Marker?

If this field is left blank and NUI AFTER is "N" or left blank for X.75 or X.75P trunks, an internal default of "Y" is assigned to this field.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field can only be entered for X.75 or X.75P trunks.

If this field is "Y", then NUI AFTER must not be "Y".

If TNIC INDICATOR is "N", then NUI BEFORE and NUI AFTER must be "N".

If a trunk member(s) defined on the TRUNK form belongs to a Trunk Group with a Trunk Class of "X75P"

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(the TRKCLS field on the TKGRP form), and the ACCESS CHAR field on this TRUNK form is set to "N", then NUI BEFORE must be set to "N" and NUI AFTER must be set to "N" or blank.

If NUI is not to be supported for this X.75 or X.75P trunk, then both NUI BEFORE and NUI AFTER fields must be "N".

2.85 NUI AFTER

Description: Should the NUI (Network User ID) exist after the Utility Marker?

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field can only be entered for X.75 or X.75P trunks that have UTILITY MARKER set to "Y".

If this field is "Y", then NUI BEFORE must "N".

If TNIC INDICATOR is "N", then NUI BEFORE and NUI AFTER must be "N".

If a trunk member(s) defined on the TRUNK form belongs to a Trunk Group with a Trunk Class of "X75P" (the TRKCLS field on the TKGRP form), and the ACCESS CHAR field on this TRUNK form is set to "N", then NUI BEFORE must be set to "N" and NUI AFTER must be set to "N" or not entered.

If UTILITY MARKER is "N", NUI AFTER must not be "Y".

If NUI is not to be supported for this X.75 or X.75P trunk, then both NUI BEFORE and NUI AFTER fields must be "N".

2.86 IC PRESELECT

Description: Is the Inter-exchange Carrier preselected for this trunk? Inter-Exchange Carrier (IC) Preselection Indication is a service that a Bell Operating Company (BOC) can offer to a direct-connected Packet Switched Network. This service will enable a network which is directly connected to the 5ESS ISDN sub-network, via X75 or X75P, to support IC preselection for its users (even though it may not have the routing logic necessary to determine if an IC is required to complete the call). The direct-connected network can pass the end-user's IC preselection value in the IC Preselection Indication utility over the X75 or X75P interface to the 5ESS ISDN sub-network. The 5ESS sub-network will then determine whether an IC is needed to complete the call. If an IC is needed, the IC identified in the IC Preselection Indication utility will be used to complete the call.

Software Release: 5E10 and later
Valid Entries: Y, N

Data Rules:

For 5E9(2) and earlier, this field is only applicable for X.75 trunks.

For 5E10 and later, this field applies to both X75 and X75P trunks.

If UTILITY MARKER is "N", this field cannot be "Y".

For 5E10 and later, when Trunk member(s) defined on the TRUNK form belong to a Trunk Group with a Trunk Class other than "X75" (the TRKCLS field on the TKGRP form), non-X75 Trunks must leave the following PACKET SWITCHING X.75 ONLY UTILITY INDICATORS fields blank.

- TDI BEFORE
- TDI AFTER

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- TDS BEFORE
- TDS AFTER
- TARIFF BEFORE
- TARIFF AFTER
- IN RPOA BEFORE
- IN RPOA AFTER
- OUT RPOA BEFORE
- OUT RPOA AFTER
- RPOA DEL SEND
- RPOA DEL RCV
- TNIC CONFIG
- X75 ID

For 5E10 and later, when Trunk member(s) defined on the TRUNK form, belong to a Trunk Group with a Trunk Class of either "X.75" or "X.75P" (the TRKCLS field on the TKGRP form), X.75 and X.75' Trunks must have IC PRESELECT entered.

PACKET SWITCHING X.75P ONLY UTILITY INDICATORS

The following fields (Section 2.87 - Section 2.95) are available with 5E5 and later Software Releases and apply only to X.75P packet switched trunks. These fields must be defined only when TRKCLS on the TKGRP form is "X75P".

Either the X.75P Only Utility Indicators or X.75 Only Utility Indicators may be specified, but not both.

For 5E10 and later, when Trunk member(s) defined on the TRUNK form belong to a Trunk Group with a Trunk Class other than "X.75" (the TRKCLS field on the TKGRP form), non-X75 Trunks must leave the following PACKET SWITCHING X.75 ONLY UTILITY INDICATORS fields blank.

- TDI BEFORE
- TDI AFTER
- TDS BEFORE
- TDS AFTER
- TARIFF BEFORE
- TARIFF AFTER
- IN RPOA BEFORE
- IN RPOA AFTER
- OUT RPOA BEFORE
- OUT RPOA AFTER
- RPOA DEL SEND
- RPOA DEL RCV
- TNIC CONFIG
- X75 ID

2.87 TARIFF UTILITY

Description: Is the tariff utility indicator provisioned? The tariff utility indicator sends the called party information about the services provided to the calling party. The information that may be sent is an indication of the serving protocol and access line type. This is used for the AMA billing record.

Software Release: 5E5 and later
Valid Entries: Y, N

2.88 TRANSIT DELAY IND

Description: Is the Transit Delay Indicator provisioned? The Transit Delay Indicator is used to indicate the

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transit delay of the virtual circuit. Packet delays occur all along the path of a virtual circuit, therefore, in order to determine expected performance, all sources of delay must be measured.

Software Release: 5E5 and later
Valid Entries: Y, N

2.89 TRANSIT DELAY SEL

Description: Is the Transit Delay Selector provisioned?

Software Release: 5E6 and later
Valid Entries: Y, N

2.90 RPOA UTILITY

Description: Is the RPOA (Recognized Private Operating Agency) indicator provisioned? This utility provides a means to store the identity of up to seven transit RPOA networks in the path from the calling network to the called network.

Software Release: 5E5 and later
Valid Entries: Y, N

2.91 ACCESS CHAR

Description: Is the Access Characteristics indicator provisioned? The Access Characteristics utility is used in a Call Request, Call Connect, or Clear Request packet on an X.75P packet trunk to send billing data within the operating company sub-network packet.

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

X.75P trunks must have ACCESS CHAR entered.

If ACCESS CHAR is "Y", UTILITY MARKER must be "Y".

2.92 TRANS SUB NET CNT

Description: Should the Transit Subnetwork Count Utility Indicator be enabled? In 5E8, X.75P to X.75P transit subnetwork switching is supported. Call looping among subnetworks could arise in a LEC network due to this support. The transit subnetwork count utility can be used to detect invalid looping conditions during transit switching situations within a LEC network.

If this field is left blank for an X.75P trunk and the UTILITY MARKER is "Y", then an internal default of "Y" will be assigned.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field is only applicable for X.75P trunks and cannot be set to "Y" if UTILITY MARKER is set to "N".

2.93 CLEAR SUB NET ID

Description: Is the Clearing Subnetwork ID Utility supported on this X.75P interface? If this field is left blank for an X.75P trunk and the UTILTY MARKER is set to "Y", then an internal default of "Y" is

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assigned.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field is only applicable for X.75P trunks and cannot be set to "Y" if UTILITY MARKER is set to "N".

2.94 PROTOCOL CONV

Description: Is protocol conversion allowed on this X.75P interface? The purpose of this utility is to supplement the protocol information passed in the Access Characteristic utility with additional information that allows protocol screening to be performed. If this field is left blank for an X.75P trunk and the UTILTY MARKER is set to "Y", then an internal default of "Y" is assigned.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field is only applicable for X.75P trunks and cannot be set to "Y" if UTILITY MARKER is set to "N".

2.95 X.75 ID UTILITY

Description: Is the X.75 Identification utility for X.75P trunks supported on this X.75P interface? This field determines if the X.75 ID should be passed through X.75P trunks. If this field is left blank for an X.75P trunk and the UTILTY MARKER is set to "Y", then an internal default of "Y" is assigned.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field is only applicable for X.75P trunks and cannot be set to "Y" if UTILITY MARKER is set to "N".

PACKET SWITCHING X.75 ONLY UTILITY INDICATORS

The following fields (Section 2.96 - Section 2.110) are available with 5E6 and later Software Releases and refer to X.75 packet-switched trunks only. These fields must only be defined when TRKCLS on the TKGRP form is "X.75".

Either the X.75P Only Utility Indicators or X.75 Only Utility Indicators may be specified, but not both.

For 5E6 and 5E7, the default for the utilities was placing the indicator "AFTER" the utility marker. For 5E8 and later, the default is placing the indicator before the utility marker.

2.96 TDI BEFORE

Description: Is the Transit Delay Indicator supported before the utility marker?

Software Release: 5E6 and later
Valid Entries: Y, N

2.97 TDI AFTER

Description: Is the Transit Delay Indicator supported after the utility marker?

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Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If TDI AFTER is not entered for an X.75 trunk, it will be treated as if it was set to "Y".

The TDI cannot be supported both before and after the utility marker; therefore, TDI BEFORE and TDI AFTER cannot both be set to "Y". When TDI BEFORE is "Y", TDI AFTER must be "N".

2.98 TDS BEFORE

Description: Is the Transit Delay Selector supported before the utility marker?

Software Release: 5E6 and later
Valid Entries: Y, N

2.99 TDS AFTER

Description: Is the Transit Delay Selector supported after the utility marker?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If TDS AFTER is not entered for an X.75 trunk, it will be treated as if it was set to "Y".

The TDS cannot be supported both before and after the utility marker; therefore, TDS BEFORE and TDS AFTER cannot both be set to "Y". When TDS BEFORE is "Y", TDS AFTER must be "N".

2.100 TARIFF BEFORE

Description: Is the Tariff Indicator supported before the utility marker?

Software Release: 5E6 and later
Valid Entries: Y, N

2.101 TARIFF AFTER

Description: Is the Tariff Indicator supported after the utility marker?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If TARIFF AFTER is not entered for an X.75 trunk, it will be treated as if it was set to "Y".

The TARIFF cannot be supported both before and after the utility marker; therefore, TARIFF BEFORE and TARIFF AFTER cannot both be set to "Y". When TARIFF BEFORE is "Y", TARIFF AFTER must be "N".

2.102 IN RPOA BEFORE

Description: Is the Incoming RPOA Indicator supported after the utility marker? For 5E8 and later for an X.75 trunk, if IN RPOA BEFORE is not entered, the system software will automatically set it to "Y".

Software Release: 5E6 and later
Valid Entries: Y, N

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Data Rules:

For 5E6 and 5E7, if IN RPOA BEFORE is "Y", IN RPOA AFTER and OUT RPOA AFTER must be "N".

For 5E8 and later, if IN RPOA BEFORE is not entered or is "Y", OUT RPOA AFTER must not be "Y".

2.103 IN RPOA AFTER

Description: Is the Incoming RPOA Indicator supported after the utility marker? For 5E6 and 5E7 for an X.75 trunk, if IN RPOA AFTER is not entered, the system software will automatically set it to "Y".

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

For 5E6 and 5E7, if IN RPOA AFTER is not entered or is "Y", OUT RPOA BEFORE must not be "Y".

For 5E8 and later, if IN RPOA AFTER is "Y", IN RPOA BEFORE and OUT RPOA BEFORE must be "N".

2.104 OUT RPOA BEFORE

Description: Is the Outgoing RPOA Indicator supported before the utility marker? For 5E8 and later for an X.75 trunk, if OUT RPOA BEFORE is not entered, the system software will automatically set it to "Y".

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

For 5E6 and 5E7 if OUT RPOA BEFORE is "Y", OUT RPOA AFTER must be "N".

2.105 OUT RPOA AFTER

Description: Is the Outgoing RPOA Indicator supported after the utility marker? For 5E6 and 5E7 for an X.75 trunk, if IN RPOA AFTER is not entered, the system software will automatically set it to "Y".

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

For 5E8 and later, if OUT RPOA AFTER is "Y", OUT RPOA BEFORE must be "N".

2.106 RPOA DEL SEND

Description: Should the RPOA (Registered Private Operating Agency) be deleted before sending the packet to the remote STE (Signaling Terminal)? If this field is set to "N", the 5ESS Switch X.75 STE passes the RPOA Selection utility or the sequence of RPOA Selection utilities (without deletion) in the transmitted X.75 CRP (Call Request Packet). If this field is not entered for an X.75 trunk member, then an internal default of "Y" is assigned. (See Division 2, Section 5C for more information on Packet Trunk Interface Standardization.)

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

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This field is only applicable for X.75 trunks.

If RPOA DEL SEND is "Y" or not entered, either OUT RPOA BEFORE must be "Y" or not entered, or OUT RPOA AFTER must be "Y".

2.107 RPOA DEL RCV

Description: Should the RPOA be deleted when the packet is received by this X.75 interface from the remote STE? When this field is set to "Y", the 5ESS Switch X.75 STE discards the RPOA Selection utility (or the first RPOA Selection Utility in a sequence of RPOA Selection utilities) when it is received in an X.75 CRP, and if the contents of the RPOA parameter field identifies the network as the 5ESS Switch ISDN subnetwork.

If this field is not entered for an X.75 trunk member, then an internal default of "Y" is assigned.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field is only applicable for X.75 trunks.

If this field is "Y" or not entered, then either IN RPOA BEFORE must be "Y" or not entered, or IN RPOA AFTER must be "Y".

2.108 TNIC CONFIG

Description: Enter the TNIC (Transit Network Identification Code) Configuration. These TNIC CONFIG values are used to detect looping within the network. The TNIC CONFIG value is used when the switch receives an IP (Internal Protocol) Call Request Packet that contains a TNIC or ATNIC (AT&T defined TNIC) facility or a sequence of TNIC or ATNIC facilities. If this field is not entered and the CRP has duplicate TNICs, the call is cleared.

NOTE: Up to Seven unique TNIs may be present in the CRP.

If the 5ESS Switch X.75 STE determines that the network is a transit network, then the STE checks for a TNIC utility with a parameter field value that matches the TNIC field on the ISDNOPT form (5941 Record) before transmitting an X.75 CRP to the remote X.75 STE over an X.75 packet trunk.

- If "SHARED" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 CRP to be transmitted contains at least one instance of a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE does not insert its TNIC value into the X.75 CRP to be transmitted.
  - if the X.75 CRP to be transmitted does *NOT* contain a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE inserts the TNIC utility into the X.75 CRP.

- If "UNIQUE" is entered in the TNI parameter (TNIC CONFIG field on the TRUNK form) then the following occurs:
  - if the X.75 CRP to be transmitted contains at least one instance of a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE clears the virtual call request because looping may occur.

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- if the X.75 CRP to be transmitted does *NOT* contain a TNIC utility with the parameter field value matching the TNIC of the transit network 5ESS Switch, then the transit network 5ESS Switch X.75 STE inserts the TNIC utility into the X.75 CRP.

Software Release: 5E8 and later
Valid Entries:

Valid TNIC CONFIG Entries

Entry	Definition
SHARED or S	The TNIC Configuration is shared.
UNIQUE or U	TNIC Configuration is unique.

Data Rules:

This field is only applicable for X.75 trunks.

2.109 X.75 ID

Description: Enter the 11-digit X.75 Trunk Interface Identification Number. This number is used to uniquely identify the X.75 trunk member used in a call and is used by the RAO (Revenue Accounting Office) to determine appropriate billing for packet calls in network configurations where the called address is not sufficient to indicate the Inter-exchange Carrier or other X.75 connected entity to be billed.

If this field is not entered for an X.75 trunk member then an internal default of 0 will be assigned.

Software Release: 5E8 and later
Valid Entries: 00000000000 - 99999999999

Data Rules:

This field is only applicable for X.75 trunks.

2.110 IC PRESELECT

Description: Is the Inter-exchange Carrier preselected for this trunk? Prior to 5E10, this field was part of Packet Switching X.75 Only Utility Indicators. For 5E10 and later, this field is part of Packet Switching X.75/X.75P Utility Indicators.

Software Release: 5E8 through 5E9(2)
Valid Entries: Y, N

Data Rules:

This field is only applicable for X.75 trunks.

If UTILITY MARKER is "N", this field cannot be "Y".

MISCELLANEOUS

Fields Section 2.111 - Section 2.112 refer to miscellaneous fields.

2.111 MF LOSS

Description: Enter the Multifrequency outpulsing additional dB loss. This field indicates any additional dB loss for multifrequency outpulsing. The additional loss can be specified in 1dB increments over a range of 0 to 7dB. This will provide a net loss range of -10dB to -17dB.

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Software Release: 5E7 and later
Required Field.
Default: 0
Valid Entries: 0 - 7 (dB)

Data Rules:

When MF LOSS is greater than 0, then the corresponding TKGRP form must have
- OUTPULSING set to "MF" or "TT".
- TRKCLS cannot be "ATNDVFY" (for 5E9(1) and later)
- TRK DIR set to "OUT" or "2W"

2.112 ANI

Description: Is Automatic Number Identification provided on this Trunk Group? A value of "Y" applies only to trunks associated with TRKCLS (on TKGRP) set to "PF" or "PFLASH" and applies to all trunks in the group. It is used to outpulse ACSI (Automatic Customer Station Identification) before Cut Through.

Software Release: 5E6 and later
Default: N
Valid Entries: Y,N

Data Rules:

When SLEN is known, ANI must be "N".

If ANI equals "Y", TGN must be defined on the TKGRP form with a TRKCLS of "PF", "PFITT", or "PFLASH"; for 5E7 and later, it may also be "LTOLLCON".

If TGN(s) are defined on the TKGRP form with ACP SDN equals "Y", and TRKCLS equals "PF", all associated TGN/MEMB(s) must be defined on TRUNK with ANI equals "Y".

If TGN(s) are defined on the TKGRP form with CAMA PSAP equals "Y", all associated TGN/MEMB(s) must be defined on TRUNK with ANI equals "N".

All members of a trunk group must have the same value specified for ANI.

EEC OPTION

2.113 *EEC ACTIVE*

Description: This field is used to indicate whether EEC (External Echo Cancellation) is active for the trunk.

DIGITAL TEST TRUNKS

The following fields (Section 2.114 - Section 2.115) define digital test trunks. These fields support the No Test Trunk feature. See Divsion 2, Section 7AS.

2.114 MTB0

Description: This field is used to define the Metallic Test Bus 0 for digital test trunks.

Software Release: 5E15 and later.
Valid Entries:

Valid MTB0 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192

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Metallic Service Unit	MSU	X	0 - 1
Service Group	SG	X	0 - 1
Board Number	BRD	XX	00 - 31
Bus Number	BUS	XX	00 - 14

Data Rules:

When MTB0/MTB1 is entered, DEN must be entered.

When MTB0 or MTB1 is entered, both must be entered.

MTB0 and MTB1 must be unique and reside on the same SM.

When MTB0 and MTB1 are entered, TRKCLS on the TKGRP form must be "TSTK".

MTB0 and MTB1 cannot be assigned to DFI channel 1 and 25; these are reserved for the control channel.

2.115 MTB1

Description: This field is used to define the Metallic Test Bus 1.

Software Release: 5E15 and later.
Valid Entries: See the Valid Entries table for MTB0.

Data Rules:

See Data Rules for the MTB0.

PACKET PIPE MEMBER TRUNK

The following fields (Section 2.116 - Section 2.117) list the packet pipe member trunks (up to 8 entries). These fields support the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.

2.116 TGN

Description: Enter the trunk group number for the packet pipe member trunk.

Software Release: 5E10 and later.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

When PACKET PIPE MEMBER TRUNKS list is entered, then the DATA RATE fields on the corresponding TKGRP forms must all have the same value. A corresponding TKGRP form is found by matching the TGN on PACKET PIPE MEMBER TRUNKS to TGN on the TKGRP form.

For 5E12 and later:

When TGN is entered in a ROW of the PPMTRUNK list, MEMB must also be entered in that ROW.

When TGN is entered in PPMTRUNK list, it should not equal TKGRP.

2.117 MEMB

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Description: Enter the trunk member number for the packet pipe member trunk.

Software Release: 5E10 and later.
Valid Entries: 0 - 1951

Data Rules:

For a PACKET PIPE MEMBER TRUNK entries both a TGN and MEMB must be entered.

A given trunk member cannot be assigned to the PACKET PIPE MEMBER TRUNKS list more than once, i.e. the PACKET PIPE MEMBER TRUNK assignments must be unique.

If the trunk members of this trunk group have one or more row entries completed in the PACKET PIPE MEMBER TRUNKS list, then "PKTPIPE" must be entered in the TKKCLS of the corresponding TKGRP form. Forms correspond if TGN entries match.

The trunk members entered on this list must all reside on the same DFI or DNU-S facility; therefore,

- The first six digits of the DEN must be identical for each trunk member entered on the Packet Pipe Member Trunk List. And, the last two digits must be 01 - 24 or 25 - 48.

If PACKET PIPE MEMBER TRUNKS list is entered on the TRUNK form, then a matching TRUNK form must have a corresponding TKGRP form where TRKCLS is "PPMEM".

- A matching TRUNK form is found by matching the TGN and MEMB on PACKET PIPE MEMBER TRUNKS on the TRUNK form to TGN and MEMB on another TRUNK form.
- A corresponding TKGRP form is found by matching the TGN on PACKET PIPE MEMBER TRUNKS to TGN on the TKGRP form.

All Packet Pipe Members must be assigned the same DATA RATE on the corresponding TKGRP form.

For 5E10 and later:

If any of the Packet Pipe Members on the PPM TRUNK list reside on an RSM all must reside on the RSM.

All of the Packet Pipe Members assigned to a specific Packet Pipe Trunk must reside on the same DFI and facility. The DFI and facility are specified by the DEN. The first 6 characters designate the DFI, characters 7 and 8 designate the facility. 01 - 24 designate FAC0 and 25 - 48 designate FAC1.

For 5E12 and later:

When MEMB is entered in a ROW of the PPMTRUNK list, TGN must also be entered in that ROW.

For 5E13 and later:

The first nine digits of the NEN must be identical for each trunk member entered on the Packet Pipe Member Trunk List and must reside on the same VT assigned to a DNU-S; up to 28 Packet Pipe Members can be assigned on the same VT.

2.118 PACKET PIPE TGN

Description: This is a Recent Change Verify only field for Packet Pipe Member trunk group numbers.

2.119 PACKET PIPE MEMB

Description: This is a Recent Change Verify only field for Packet Pipe Member trunk member numbers.

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CIRCUIT TYPE	SN #	TRUNK DESCRIPTION
TRKLO	102	2-Wire Loop Supv. - Outgoing
TRKLI	103	2-Wire Loop Supv. - Incoming
TRK4EM	104	4-Wire E and M
TRK2EM	105	2-Wire E and M
TRKTST	107	LTD Test Trunk
TKLOTOL	112	Toll 2-Wire Loop Supv. - Outgoing
TKLITOL	113	Toll 2-Wire Loop Supv. - Incoming
TK4ETOL	114	Toll 4-Wire E and M
TK2ETOL	115	Toll 2-Wire E and M
N/A	N/A	Digital Trunks

NOTE: CLEI Values are unique to the equipment in each office and may be obtained via the records command for trunks in Division 8.

Figure 1 TRUNK CLASS REFERENCE GUIDE

```
SCREEN 1 of 6                5ESS Switch
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4/5)       TRUNK

*1. TGN       ____              16. IN START DIAL  ________
*2. MEMB      ____               17. OUT START DIAL ____
 3. QTY       01                18. CGASPN         __________
 4. TEN       ________           19. OTODPN1        __________
 5. DEN       _________          20. OTODPN2        __________
 6. NEN       _____________       21. SLC OTODPN3    __________
 7. SLEN      _________          22. SLC OTODPN4    __________
 8. TRKOE     _ _____________     23. CLCI TRK ID    ____
11. LTP       _______           24. BRCS          N
12. RAF EN    _______            25. SLVLD SPN      __________
13. TRANS CLASS __               26. REMOVE TRUNK   N
14. SUPV      ___                27. ISCN           _______
15. IDLE STATE  ON               28. PSCLI          _______
                          29. INHIBIT DEL    N
                          30. LEAST IDLE     N
```

```
SCREEN 2 OF 6                5ESS Switch
trunk                OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4/5)       TRUNK

     CAMA OPERATOR TRUNKS              CCIS6 TRUNK SIGNALING
31. TRAF SAMPLED        _         42. BAND  ___
32. KEYING TRUNK TGN    ____
33. KEYING TRUNK MBR NO  ____         PRIMARY LINK      MATE LINK
34. TALKING TRUNK TGN    ____       43. SL GROUP __   46. SL GROUP  __
35. TALKING TRUNK MBR NO ____       44. SL MEMB  __   47. SL MEMB   __
                          45. SL VLINK _    48. SL VLINK  _
  EDSL/PRI TRUNKS
36. PRI GROUP ____                    DSN FEATURES
37. DCHN DESG ____                 49. EXT. GUARD TIMING   _
38. Q921 PROC _______               50. ANSWER DELAY TIMING N
39. Q931 PROC _______
```

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```
                    TSPS TRUNKS
  ANNC TRUNKS                51. NO EXSIG N
40. MUSIC SOURCE N
41. MAXCALLS    __
```

```
SCREEN 3 OF 6                5ESS Switch
trunk              OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4/5)      TRUNK

  PACKET SWITCHING                X.75'/X.75 TRUNK ONLY
52. OCU LOOPBACK _    59. LINK ID            ___    66. HIGH PVC LCN    ___
53. CSU LOOPBACK _    60. SEND THRUPUT CLASS   9600   67. LCN HI TO LOW    _
54. LAPB ADDR    _    61. RCV THRUPUT CLASS    9600   68. LOW INCOMING LCN ___
55. WINDOW SIZE  _    62. SEND PKT SIZE        128    69. HI  INCOMING LCN ___
56. RETRANS N2   __   63. RCV PKT SIZE         128    70. LOW 2 WAY LCN    ___
57. ACK TIME T1  ___  64. SEND PKT WINDOW SIZE 2      71. HI  2 WAY LCN    ___
58. IDLE TIME T3 __   65. RCV PKT WINDOW SIZE  2      72. LOW OUTGOING LCN ___
                                  73. HI  OUTGOING LCN ___
```

```
SCREEN 4 OF 6                5ESS Switch
trunk              OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4/5)      TRUNK

          PACKET SWITCHING X.75'/X.75 UTILITY INDICATORS
74. CALL ID       _      80. CUG OUTGOING     _    86. UTILITY FLD SIZE _________
75. THRUPUT CLASS _      81. REVERSE CHARGE   _    87. NUI BEFORE       _
76. WND SZ        _      82. ADDR MOD NOTIFY  _    88. NUI AFTER        _
77. PACKET SIZE   _      83. CLR NETWORK ID   _    89. IC PRESELECT     _
78. FAST SELECT   _      84. TNIC INDICATOR   _
79. CUG           _      85. UTILITY MARKER   _

          PACKET SWITCHING X.75' ONLY UTILITY INDICATORS
90. TARIFF UTILITY    _  93. RPOA UTILITY      _   96. CLEAR SUB NET ID _
91. TRANSIT DELAY IND _  94. ACCESS CHAR       _   97. PROTOCOL CONV    _
92. TRANSIT DELAY SEL _  95. TRANS SUB NET CNT _   98. X75 ID UTILITY   _
```

```
SCREEN 5 OF 6                5ESS Switch
trunk              OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4/5)      TRUNK

          PACKET SWITCHING X.75 ONLY UTILITY INDICATORS
 99. TDI BEFORE    _   105. IN RPOA BEFORE  _   111. TNIC CONFIG  ______
 100. TDI AFTER    _   106. IN RPOA AFTER   _   112. X75 ID       ___________
 101. TDS BEFORE   _   107. OUT RPOA BEFORE _
102. TDS AFTER     _   108. OUT RPOA AFTER  _
103. TARIFF BEFORE _   109. RPOA DEL SEND   _
```

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104. TARIFF AFTER _ 110. RPOA DEL RCV _

MISCELLANEOUS EEC OPTION
113. MF LOSS 0 EEC ACTIVE N
114. ANI N

SCREEN 6 OF 6 5ESS Switch _
trunk OFFICE DATA ADMINISTRATION
(5204-1/2/3/4,5271-1/2/3/4/5) TRUNK

116. PSU PIPE MEMBER TRUNKS (PPMTRUNK)

ROW	TGN	MEMB	ROW	TGN	MEMB	ROW	TGN	MEMB
1	____	____	11	____	____	21	____	____
2	____	____	12	____	____	22	____	____
3	____	____	13	____	____	23	____	____
4	____	____	14	____	____	24	____	____
5	____	____	15	____	____			
6	____	____	16	____	____			
7	____	____	17	____	____			
8	____	____	18	____	____			
9	____	____	19	____	____			
10	____	____	20	____	____			

PSU PIPE TGN
PSU PIPE MEMB

Figure 2 SAMPLE TRUNK FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 2D: 5205 RECORD
FEATURE ASSIGNMENT
TRUNK GROUP MEMBER NUMBER RECORD
- TRUNKFA

1. GENERAL

The 5205 Record is available with 5E2 and later Software Releases, and is used to assign 1 to 48 BRCS features to a particular member of a Trunk Group. The TGN member must be defined on a TRUNK form (5204 Record) with the BRCS field set to "Y" (Yes).

1.1 Speed Call Features

For 5E6 and later Software Releases, Speed Call (Abbreviated Dialing) features are assigned separately from IDP (Individualized Dialing Plan) features. Prior to this disassociation, a trunk can be assigned an IDP feature with a Speed Call feature which counts as one feature for that trunk. However, after a retrofit from the 5E5 Software Release to the 5E6 Software Release, this trunk may have as many as three features: an IDP feature and up to two SC (Speed Call) features depending on whether or not one-digit or two-digit Speed Call has been assigned.

This may raise the count of Terminal features for that trunk above the maximum of thirty features. A trunk only may be assigned up to thirty Terminal features, therefore, use discretion with a TRUNKFA form that has more than twenty-eight Terminal features (IDP feature included) at the time of retrofit. If the Terminal feature count is greater than thirty after retrofit, the SC1 (one-digit Speed Call) feature, if it has been assigned, will be canceled. If SC1 has not been assigned, then SC2 (two-digit Speed Call) will be canceled. If both features have been assigned to this line, both may be canceled.

1.2 Relation to the TKGRPFA Form

BRSC features assigned via the TRUNKFA form override all BRCS features assigned via the TKGRPFA form (5206 Record). That is, if BRCS features are assigned to the Trunk Group via the TKGRPFA form, but a TRUNKFA form is submitted for some particular member of the Trunk Group (say member 1), all members except member 1 will have the BRCS features listed on the TKGRPFA form, but member 1 will be assigned only the BRCS features listed on the TRUNKFA form. If no TKGRPFA form is submitted for the Trunk Group, only those members for which a TRUNKFA form is submitted will be assigned BRCS features.

1.3 Feature Assignment

All feature names explicitly defined on the TRUNKFA form or indirectly through cluster names, on the CLUSTR form, must be unique. No duplications are allowed for a given TGN/Member Number combination. Each cluster name must be defined on the CLUSTR form, where it is expanded into two through sixteen unique feature names. Each unique feature value (not cluster name) must correspond to a BRCS feature name that is defined on one of the BRCS feature definition forms described in Division 4. The total number of unique feature names on this form and associated CLUSTR forms must not exceed 48.

Only one IDFD (Individualize Dialing) feature can be assigned to the TRUNKFA. It is also normally expected that all trunk members of a given Trunk Group will share the exact same set of BRCS feature names.

Wild Card Feature Names of the format "/AA*" (AA equals two upper case alphabetic letters) are not allowed to be assigned to a TGN MEMB on the TRUNKFA form.

1.4 Recent Change View

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The corresponding Recent Change View for this form is 5.11.

2. FORM ENTRIES - 5205 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN value must also be defined on the TRUNK form with BRCS equal to "Y" and assigned to either a DEN or TEN.

2.3 * MEMB

Description: Enter the Trunk Member Number.
Valid Entries: 0 - 1951

Data Rules:

The Trunk Member Number must be defined on the TRUNK form with BRCS equal to "Y" and assigned to either a DEN or TEN.

FEATURE LIST

This (fields Section 2.4 - Section 2.7) is a list of 48 possible feature/cluster names along with the associated initial activation state and a master override status.

2.4 FEATURE

Description: Enter the Feature or Cluster Name.
Valid Entries: 1 - 8 alphanumeric characters

For 5E15 and later, when FEATURE is entered on this form, it must not be defined on the MWFD form (5602 Record) where the appropriate fields on the MWFD form are set as follows:

- FEATURE OPTIONS fields: ACT/INACT OPTION is set to "ACT1CA", MULTIWAY CONTROL is set to "NWAY", and AMAC is set to "USAGE",
- ENTRY POINT fields: FLASH is set to "Y", IN MIDDLE is set to "Y", and OFF HOOK is set to "Y", and
- DEFAULT PARAMETER field: N-WAY MAXIMUM is set to "6".

The feature options on the MWFD form define a USSWC (Usage Sensitive Six-Way Calling) feature which cannot be assigned on this form or any of the associated CLUSTR forms (5600 Record). USSWC must be assigned on the OFCOPT form (5509 Record). For more information on the USSWC feature, see Division 2, Section 4A553.

2.5 A

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Description: Activity Status. Is the BRCS feature initially active or inactive? This value is under the switch owner's control and is feature dependent.

For initial 5ESS Switch offices built by 5ODA, this field is the initial activity status of the given feature assigned to a terminal. For retrofit offices run by 5ODA, this field represents the current or present active/inactive state of the feature.
Valid Entries: Y, N

Data Rules:

If the FEATURE name used in the FEATURE LIST is a real feature name (not a cluster name), then the value of the Activity Status for this FEATURE name is based on the following condition:

- If the FEATURE name is defined on an ARSFD form, then the A must be "Y";
- If the FEATURE name is defined on a TGSRFD form with the ACT TYPE equal to "AUTO", then A must be "Y";
- If the FEATURE name is defined on an IDFD form with CUST ACT/DEACT IDP equal to "N", then A must be "Y";
- If the FEATURE name is defined on an MWFD form with the ACT/INACT OPTION equal to "ALWACT" or "INACT1CA", then A must be "Y";
- If the FEATURE name is defined on an MWFD form with the ACT/INACT OPTION equal to "ACT1CA", then A must be "N";
- If the FEATURE name is defined on a TGSRFD form with the ACT TYPE equal to "CODE" and the DACT TYPE equal to "AUTO", then A must be "N".

2.6 M

Description: Master Override Status. Is the feature turned on?

This is a software switch under the switch owner's control which provides the ability to temporarily unassign a BRCS feature from a terminal without physically deleting any of the internal data structures associated with the feature. When M is "Y", the initial (or current) Activity Status, A, determines whether the feature gets control. If the Master Status is off, "N", the terminal will be treated as if the feature was never assigned.

M should equal "Y" for all new 5ODA offices. If M equals "N" for a new 5ODA office, then TRUNKFA forms that are assigned FEATURE and/or CLUSTER Names with the associated Master Switch equal to "N" turns the customers BRCS feature off. This is an allowed condition for initial ODA runs, but it should be verified that the feature should be disabled.

M can equal "Y" or "N" for 5ODA retrofit purposes.

- ***NOTE:*** For cluster entries on TRUNKFA form, if the feature name used in one of the 48 feature list rows is really a cluster name which has been defined on the CLUSTR input form, then the fields A (Activity Status) and M (Master Override) are "don't care" fields. However, a "Y" should be entered in both fields to pass level 1 and 2 error checks. The actual status for each feature name assigned to the cluster name is defined on the CLUSTR form and Master Override Status will be initialized to "Y".

Valid Entries: Y, N

2.7 AC

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Description: Authorization Code Feature. Is the Authorization Code feature required?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

If there is at least one feature on this form or the corresponding CLUSTR forms with AC of "Y", then there must be one (only one) Authorization Code Feature on this form or the CLUSTR, defined on the ATHFD form (5619-1 Record).

If AC is "Y" and the corresponding feature is not an ATH Feature defined on ATHFD or a CLUSTER name then the feature must be entered on the ATHFCOS form (5619-4 Record) for the ATH Group corresponding to the ATH Feature entered on this or the CLUSTR form.

If the corresponding feature is a CLUSTER name, then each feature with AC of "Y" on the CLUSTR form (5600 Record) must exist on the ATHFCOS form for the CSV ATH Group, and for 5E6 and later the CSD ATH Group, corresponding to the ATH feature entered on this or the CLUSTR form.

AC must be "N" when a Display feature is assigned in the FEATURE field. If FEATURE is a cluster, then for any display feature that appears in the cluster, the corresponding AC field must be "N" on the CLUSTR form.

---

trunkfa 5ESS Switch _
(5205) OFFICE DATA ADMINISTRATION
TRUNK GROUP MEMBER FEATURE ASSIGNMENT

* 1. TGN 0001
* 2. MEMB 0003
3. FEATURE LIST

row	FEATURE	A	M	AC	row	FEATURE	A	M	AC	row	FEATURE	A	M	AC	row	FEATURE	A	M	AC
01	/IDCTX1	Y	Y	Y	13					25					37				
02	/PFA	Y	Y	Y	14					26					38				
03					15					27					39				
04					16					28					40				
05					17					29					41				
06					18					30					42				
07					19					31					43				
08					20					32					44				
09					21					33					45				
10					22					34					46				
11					23					35					47				
12					24					36					48				

Figure 1 SAMPLE TRUNKFA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2E: 5206 RECORD FEATURE ASSIGNMENT TRUNK GROUP RECORD

1. GENERAL

The 5206 Record is available with 5E2 and later Software Releases, and is used to assign 1 to 48 BRCS features to a particular Trunk Group. The Trunk Group value must be defined on a TKGRP form (Record 5202) with the BRCS field set to "Y".

1.1 Speed Call Features

For 5E6 and later Software Releases, Speed Call (Abbreviated Dialing) features are assigned separately from IDP (Individualized Dialing Plan) features. Prior to this disassociation, a trunk can be assigned an IDP feature with a Speed Call feature which counts as one feature for that trunk. However, after a retrofit from the 5E5 Software Release to the 5E6 Software Release, this trunk may have as many as three features: an IDP feature and up to two SC (Speed Call) features depending on whether or not one-digit or two-digit Speed Call has been assigned.

This may raise the count of Terminal features for that trunk above the maximum of thirty features. A trunk only may be assigned up to thirty Terminal features, therefore, use discretion with a TKGRPFA form that has more than twenty-eight Terminal features (IDP feature included) at the time of retrofit. If the Terminal feature count is greater than thirty after retrofit, the SC1 (one-digit Speed Call) feature, if it has been assigned, will be canceled. If SC1 has not been assigned, then SC2 (two-digit Speed Call) will be canceled. If both features have been assigned to this line, both may be canceled.

1.2 Feature Assignment

All feature names explicitly defined on the TKGRPFA form or indirectly through cluster names, on the CLUSTR form, must be unique. No duplications are allowed for a given Trunk Group. Each cluster name must be defined on the CLUSTR form, where it is expanded into two through sixteen unique feature names. Each unique feature value (not cluster name) must correspond to a BRCS feature name that is defined on one of the BRCS feature definition forms described in Division 4. The total number of unique feature names on this form and associated CLUSTR forms must not exceed 48.

Features assigned via the TKGRPFA form will be automatically assigned to each trunk in the group, except when an individual trunk has features assigned via the TRUNKFA form. In that case, only those features assigned via the TRUNKFA form will apply to the individual trunk, but those assigned via the TKGRPFA form will apply to all other members of the group.

- ***NOTE:*** Only one IDP Individualized Dialing Plan feature, defined on the IDFD form, can be assigned to the TKGRPFA.

1.3 Wildcard Features

Wild Card Feature Names of the format "/AA*" (AA equals two upper case alphabetic letters) are not allowed to be assigned to a TKGRPFA Form.

1.4 Recent Change View

The corresponding Recent Change View for this form is 5.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and Office Name on each record.

2.2 * TRUNK GROUP

Description: Enter the Trunk Group Number.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The Trunk Group value must also be defined on the TKGRP form with BRCS equal to "Y".

FEATURE LIST

This (fields Section 2.3 - Section 2.5) is a list of 48 possible feature/cluster names along with the associated initial activation state.

2.3 FEATURE

Description: Enter the Feature or Cluster Name.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

For 5E9(1) and later, a trunk group member defined on a TKGRP form with its WB RATE field entered can only have, at most, one TGSR and/or one IDP feature.

For 5E15 and later, when FEATURE is entered on this form, it must not be defined on the MWFD form (5602 Record) where the appropriate fields on the MWFD form are set as follows:

- FEATURE OPTIONS fields: ACT/INACT OPTION is set to "ACT1CA", MULTIWAY CONTROL is set to "NWAY", and AMAC is set to "USAGE",
- ENTRY POINT fields: FLASH is set to "Y", IN MIDDLE is set to "Y", and OFF HOOK is set to "Y", and
- DEFAULT PARAMETER field: N-WAY MAXIMUM is set to "6".

The feature options on the MWFD form define a USSWC (Usage Sensitive Six-Way Calling) feature which cannot be assigned on this form or any associated CLUSTR form (5600 Record). USSWC must be assigned on the OFCOPT form (5509 Record). For more information on the USSWC feature, see Division 2, Section 4A553.

2.4 A

Description: Is the BRCS feature initially active or inactive? This value is controlled by the switch owner and is feature dependent.

For initial 5ESS offices built by 5ODA, this field is the initial activity status of the given feature assigned to a terminal. For retrofit offices run by 5ODA, this field represents the current or present active/inactive state of the feature.

For cluster entries on TKGRPFA form: if the feature name used in one of the 48 feature list rows is really a cluster name which has been defined on the CLUSTR form, then the field A (Activity Status) is a "don't care" field. However, a "Y" should be entered to pass level 1 and 2 error messages. The actual status for each feature name assigned to the cluster name is defined on the CLUSTR form.

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Valid Entries: Y, N

Data Rules:

If the FEATURE NAME used in the FEATURE LIST is a real feature name (not a cluster name), then the value of the Activity Status for this FEATURE NAME is based on the following conditions:

- if the FEATURE NAME is defined on an ARSFD form, the Activity Status must equal "Y";
- if the FEATURE NAME is defined on a TGSRFD form with the ACT TYPE equal to "AUTO", the Activity Status must equal "Y";
- if the FEATURE NAME is defined on an IDFD form with CUST ACT/DEACT IDP equal to "N", the Activity Status must equal "Y";
- if the FEATURE NAME is defined on an MWFD form with the ACT/INACT OPTION equal to "ALWACT" or "INACT1CA", the Activity Status must equal "Y";
- if the FEATURE NAME is defined on an MWFD form with the ACT/INACT OPTION equal to "ACT1CA", the Activity Status must equal "N";
- if the FEATURE NAME is defined on a TGSRFD form with the ACT TYPE equal to "CODE" and the DACT TYPE equal to "AUTO", the Activity Status must equal "N";
- if the FEATURE NAME is defined on an ATHFD form (5619-1 Record) with ACT TYPE equal to "AUTO", Activity Status must equal "Y".

2.5 AC

Description: Is the Authorization Code Feature required?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

If there is at least one feature on this form or the corresponding CLUSTR form with AC of "Y", then there must be exactly one Authorization Code feature on this or the CLUSTR form, defined on the ATHFD form (5619-1 Record).

If AC is "Y", and the corresponding feature is neither an ATH feature defined on an ATHFD form nor a cluster name, then the feature must be entered on the ATHFCOS form (5619-4 Record) for the CSV ATH Group associated with this trunk group. The CSV ATH Group is specified on the ATHLPA, BFG, or ATHFD form. For 5E6 and later, the feature must also be entered on the ATHFCOS form for the CSD ATH Group.

If the corresponding feature is a Cluster Name, then each feature with AC of "Y" on the CLUSTR form (5600 Record) must exist on the ATHFCOS form for the CSV ATH Group, and for 5E6 and later the CSD ATH Group, corresponding to the ATH feature entered on this or the CLUSTR form (5600 Record).

AC must be "N" when a Display feature is assigned in the FEATURE field. If FEATURE is a cluster, then for any display feature that appears in the cluster, the corresponding AC field must be "N" on the CLUSTR form.

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TRUNK GROUP FEATURE ASSIGNMENT

* 1. TRUNK GROUP 0001
2. FEATURE LIST

row	FEATURE	A	AC	row	FEATURE	A	AC	row	FEATURE	A	AC	row	FEATURE	A	AC
01	/IDSCBAC	Y	Y	13	_____	_	_	25	_____	_	_	37	_____	_	_
02	/MW3WC	Y	Y	14	_____	_	_	26	_____	_	_	38	_____	_	_
03	/PFA____	Y	Y	15	_____	_	_	27	_____	_	_	39	_____	_	_
04	_____	_	_	16	_____	_	_	28	_____	_	_	40	_____	_	_
05	_____	_	_	17	_____	_	_	29	_____	_	_	41	_____	_	_
06	_____	_	_	18	_____	_	_	30	_____	_	_	42	_____	_	_
07	_____	_	_	19	_____	_	_	31	_____	_	_	43	_____	_	_
08	_____	_	_	20	_____	_	_	32	_____	_	_	44	_____	_	_
09	_____	_	_	21	_____	_	_	33	_____	_	_	45	_____	_	_
10	_____	_	_	22	_____	_	_	34	_____	_	_	46	_____	_	_
11	_____	_	_	23	_____	_	_	35	_____	_	_	47	_____	_	_
12	_____	_	_	24	_____	_	_	36	_____	_	_	48	_____	_	_

Figure 1 SAMPLE TKGRPFA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2F: 5207 RECORD
NAIL-UP AND HAIRPIN SPECIFICATION - NAILUP

1. GENERAL

The NAILUP form (5207 Record) is available with the 5E3 Software Release. The NAILUP form contains data to directly link ("nailup") two ports. The Controlling Port is the port requesting the nailup connection; the Non-Controlling port is the port receiving the nailup connection. The nailup connection assigns a semi-permanent path through the SM (or the SM and the CM) from a port on one piece of peripheral equipment to a port on another piece of peripheral equipment.

The nailup capability provides special services lines with the use of dedicated paths through the switching machine from one transmission facility to another. Such possibilities arise when a special service is either a non-local switched type or a non-switched type which must traverse an office enroute to its terminating switch or customer equipment. A service so implemented is referred to as nailed-up through the switch because the transmission path is guaranteed and signalling information is not subjected to normal call-processing functions.

The nailup feature does not support logical port types associated with coin phones, transmission test functions, DC jacks or automatic testing equipment.

Effective with the 5E4(2) and later Software Releases, integrated SLC circuits are supported.

With the 5E8 Software Release, nailup supports two new equipment types ("GEN" and "MEN") for IDCU (Integrated Digital Carrier Unit) facilities and provides what is called a "hairpin"connection where both ports are connected to the same IDCU. Hairpin has the same function as nailup except that it does not use SM time slot resources. (Note that for 5E10 and later, "MEN" (OE TYPE of "M") is discontinued and the nailup of DID (Direct Inward Dialing) trunks is not supported.

To accommodate the inclusion of IDCU hairpin connections and nailup connections, this form was reorganized, its title changed to reference hairpin, and most field names were changed to reflect the new organization. The name of the NAILUP form was changed to NAILUP AND HAIRPIN SPECIFICATION and the form was reorganized to accommodate a new 5ESS Switch peripheral unit called the IDCU (Integrated Digital Carrier Unit).

The IDCU's major function is to connect remote terminals to the 5ESS Switch. It supports TR008 (analog) and TR303 (analog and ISDN) remote terminals. To support IDCU, "hairpin" connections were added. Hairpin connections are a subset of nailup in which both ends of the connections are on the same IDCU, and in which case, no SM TSI resources are used in making the connection. The traditional nailup connection using TSI resources is also supported for IDCU equipment.

The SM and IDCU must be defined on an EQIDCU form (5846 Record), and the remote terminal defined on the RTERM form (5174 Record). For information on defining IDCU connections (i.e., IFACs (IDCU Facilities)), see the EQIFAC form (5847 Record).

Effective as a 5E13 Software Update, the TSI Nail-up of Consecutive DS0s for DNU-S feature (99-5E-7395) is available as a secured feature (SFID 349). See Division 2, Section 4A349. For this feature, OE TYPE of "A", "N", and "D" are used.

1.1 Recent Change View

The corresponding Recent Change View for this form is 7.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and office name on each record.

CONTROLLING PORT DATA

2.2 *C OE (Type)

Description: The OE field is a two segment field. The first segment is a one-character entry for the type of equipment. The second segment is a composite (up to 11 digits) of various equipment. Enter the type of equipment.

Required Field.

Valid C OE TYPE Entries

Entry	Description
A	Software Release: 5E12 and later. TR-303/DNU-S equipment number (INEN). See Division 2, Section 9J. Software Release: 5E13 and later. TSI Nail-Up of Consecutive DS0s for DNU-S. See Division 2, Section 4A349.
D	Software Release: 5E3 and later. DEN (Digital trunk equipment number), digital 4-wire line.
G	Software Release: 5E8 and later. The OE is associated with an IDCU Equipment Number and Number field must contain a 10-digit equipment number (GEN) for a remote terminal or a PUB43801. For 5E10 and later an 11-digit equipment number is required.
N	Software Release: 5E12 and earlier. NEN (Network Equipment Number) which is the 10-digit equipment number for digital trunks on the DNU-S (Digital Networking Unit - SONET). Software Release: 5E13 and later. The VT (Virtual Tributary) field defined on the EQVT form (5858 Record) was split which resulted in an 11-digit NEN. For more information on DNU-S, see Division 2, Section 9C and Division 2, Section 9Q.
O	Software Release: 5E16(2) and later. OIUEN (Optical Interface Unit Equipment Number)
S	Software Release: 5E4(2) and later. SLEN (Subscriber Loop Carrier equipment number). Note that if a SLEN is defined on a SLCCU form with CU TYPE set to "DID" or "DIDDPT", DID (Direct Inward Dialing) trunks is not supported.
T	Software Release: 5E3 and later. TEN (Analog trunk equipment number), analog 4-wire line.

Data Rules:

TYPE D, G, S, T

When the CONTROLLING OE-type and the NON-CONTROLLING OE-type are both "D", "G", "S", or "T", the NON-CONTROLLING OE-number must not be the same as CONTROLLING OE-number.

TYPE G or S

If the CONTROLLING OE-type or the NON-CONTROLLING OE-type is "G" or "S" a corresponding OE type/number must be defined on the MLHLN or LINE input form.

If C OE or NC OE is defined on a TR008 (Mode-I) RT or is a PUB43801, the DS1/DS0 assignments are fixed. Any incorrectly assigned values will be corrected by the system. Additionally, for PUB43801, the C PATH DS1, C PATH1 DS0 and C PATH2 DS0 are directly obtained from the C OE. Thus, C PATH DS1 must equal C OE DS1 minus 51, C PATH1 DS0 must equal C OE LINE minus 1, and C PATH 2 DS0 must equal C OE LINE. If these fields are not entered, they will be selected by the system.

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TYPE D, N, T, S

5E13 and later:

If C/NC OE is "D", "N", "T" or "S", then:

- PATH NUM must be 1
- the following must not be entered:

  C/NC ZCS

  C/NC PATH DS1

  C/NC PATH1 DS0

  C/NC PATH2 DS0

For 5E10 and later, the nailup of DID trunks is not supported. Thus, the controlling port cannot have a corresponding ILEN defined on a RTERM form with CU XX/YY set to "DID" or "DIDDPT". The corresponding ILEN on an RTERM form is found by matching the first three digits of C OE, the fourth and fifth digits of C OE, and the sixth and seventh digits of C OE from the NAILUP form to SM, UNIT NUMBER, and RT EX on the RTERM form, respectively. The matching channel unit (CU XX/YY) is found by matching the tenth and eleventh digits of C OE when OE TYPE is set to "G" to XX in CU XX/YY where the value of YY is XX + 1.

TYPE A

When C OE is "A", C PATH DS1 must be entered as:
- dg [0-1]
- sts [0-5]
- ds1 [01-28]

When "A" is entered, ZCS2 must not be entered.

For 5E13 and later, when C OE is "A", C PATH DS1 must be entered as:
- dg [0-1]
- ste [1-6]
- sts [1]
- vtg [1-7]
- vtm [1-4]

When C OE and NC OE are "A", both OEs must be on the same SM.

For 5E13 and later, when C OE or NC OE is "A", and the associated C OE or NC OE is equal to "N" or "D", SFID ACT 349 must be set to "Y" on the SFSYS form. SFID 349 controls the TSI Nail-up of Consecutive DSOs for DNU-S feature (see Division 2, Section 4A349).

TYPE D

For 5E13 and later, when C OE or NC OE is "D", PATH NUM is 2, and HAIRPIN is "N",

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- there must be a corresponding NEN + 1 assigned on a TRUNK form.
- the C/NC OE[1,3] value must correspond to an SM which is equipped with an SM-2000 class processor (see UNIT TYPE on the EQIM form (5700 Record).

TYPE G

For 5E12 and later, when C OE is "G", C PATH DS1 must be 0-39.

The value of digits seven through ten of C/NC OE on NAILUP forms which have a NC OE TYPE of "G" and matches an RTERM form with a TR303 interface, must be less than or equal to the value of RT LINE SIZE on the matching RTERM form.

When the CONTROLLING PORT(s) on NAILUP form(s), have an C OE TYPE of "G", and have a C OE entered which matches to either the DSL, DSLUSR, MISLINK, or TRUNK form, the NAILUP form with C OE TYPE set to "G" may be used to nailup only LINE and MLHLN OE NUMBERs with the same OE TYPE.

CONTROLLING PORT(s) on NAILUP form(s), with a C OE TYPE of "G", must match an OE TYPE/NUMBER defined on a LINE or MLHLN form:

- The C OE must have a matching Channel Unit position with a known Channel Unit Type defined on the RTERM form.
- The NC OE must have a matching Channel Unit position with a known Channel Unit Type defined on the RTERM form.

A matching RTERM form can be found by matching the first three digits of NC OE, the fourth and fifth digits of NC OE, and the sixth and seventh digits of NC OE from the NAILUP form to SM, UNIT NUMBER, and RT EX on the RTERM form, respectively. If RT INTERFACE is "TR008" then the matching Channel Unit position is found by matching the tenth and eleventh digits of NC OE, when NC OE TYPE is "G", to XX in CU XX/YY where the value of YY is XX + 1.

CONTROLLING PORT(s) and NON-CONTROLLING PORTS on NAILUP form(s), with a C OE TYPE of "G", must match an OE TYPE/NUMBER defined on LINE or MLHLN forms. If the C OE has a matching RTERM form with an RT INTERFACE of "TR303", then the value of digits 8 - 11 of C OE on NAILUP forms must be less than or equal to the value of RT LINE SIZE on the matching RTERM form. A matching RTERM form can be found by matching the first three digits of C OE, the fourth and fifth digits of C OE, and the sixth and seventh digits of C OE from the NAILUP form to SM, UNIT NUMBER, and RT EX on the RTERM form, respectively.

When NON-CONTROLLING PORT(s) on NAILUP form(s), with an NC OE TYPE of "G", have an NC OE entered which matches either the DSL, DSLUSR, MISLINK, or TRUNK form, the NC OEs on the NAILUP form with NC OE TYPE set to "G" may be used to nailup only LINE and MLHLN OE NUMBERs with the same OE TYPE.

TYPE G

If either the CONTROLING OE or NON-CONTROLLING OE type and number defined on the NAILUP form have a CONTROLING or NON-CONTROLLING OE type equal to "G" or "A", the DDS field is set to "Y", and they are associated with an RTERM form where RT INTERFACE is "TR303", then the corresponding MLHLN form must have the TR303 NAILUP field set to "Y". The RTERM form corresponds to this form if the SM field on the RTERM form matches the first three digits of the OE field on this form. The MLHLN form corresponds if the OE NUMBER on that form matches the OE field on this form.

Controlling ports with C or NC OE TYPEs of "G" can only be assigned to "G" or "M" on the LINE and

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MLHLN forms, but cannot be assigned to "G" OEs on the DSL, DSLUSR, or TRUNK forms.

Controlling ports with C or NC OE TYPEs of "G" or "M" must have a C or NC OE entered which matches an OE TYPE/NUMBER defined on a LINE or MLHLN form, a TRKOE originating equipment type/originating equipment number defined on the TRUNK form, or a DSL originating equipment type/originating equipment number defined on the DSL or DSLUSR form. The C or NC OE must have a matching Channel Unit position with a known Channel Unit Type defined on the RTERM form.

TYPE N
For 5E9(2) and later, if the CONTROLLING OE or NON-CONTROLLING OE (types/numbers) defined on this form has a CONTROLLING OE or NON-CONTROLLING OE type equal to "N", then:

- a corresponding NEN must be found on the TRUNK form (5204-1 Record).
- and if a corresponding NEN is defined on a TRUNK form then the INPULSING or OUTPULSING fields on the associated TKGRP form cannot be "CCIS6" or "ISUP7" indicating CCS trunks.

For 5E10 and later, when TGN/MEMB(s) have NEN entered on the TRUNK form and a TRKCLS of "EDSL" or "EDSLHM" on the corresponding TKGRP form, the NEN on the TRUNK form can not be entered as C OE or NC OE on a NAILUP form

As a 5E13 Software Update, when C OE or the NC OE is "N", PATH NUM is 2, and HAIRPIN is "N", there must be a corresponding NEN + 1 assigned on a TRUNK form.

TYPE S
If the C OE or the NC OE-type is "S", the SIGNALLING MODE must not be "ABCD" and there must be a corresponding SM/DCLU/REMOTE TERMINAL defined on the SLCRT form (5106 Record).

If a corresponding C or NC SLEN is defined on a SLCCU form with CU TYPE set to "DID" or "DIDDPT" (which indicates a Direct Inward Dialing trunk), nailup of DID trunks is not supported.

For 5E15 and later, if the C or NC OE-type is "S", and a C or NC OE Number is defined indicating a SLCRT (1 - 6), a corresponding SM/DCLU/Remote Terminal must be defined on a SLCRT form.

TYPE T
If the C OE-type or the NC OE-type is "T", the SIGNALLING MODE must be "A" or "NOSIG" and C and NC INITIAL SIGNAL must be 00 and FINAL SIGNAL must be 11.

If C OE is "T", C INIT SIG, must be 00, C FINAL SIG must be 11, and C TRWRD must be "UAC".

2.3 C OE (Number)

Description: Enter the line Equipment Number.

Required Field.

If OE is "A", enter the INEN Equipment Number of the port requesting the nailup connection:

TR-303 on DNU-S, Type A (5E13 and later)			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Unit Number	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	LINE	XXXX	0001-2048

If OE type is "D", enter the Digital Equipment Number of the port requesting the nail-up connection. This number should also appear on a TRUNK form (5204 Record).

OE NUMBER, TYPE "D"		
Equipment	**Format**	**Valid**

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			Entries
Switching Module	SM	XXX	001 - 192
Digital Line Trunk Unit	DLTU	X	0 - 5 (5E14 and earlier)
		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	DCHAN	XX	01 - 48

If OE type is "G", and the OE resides on a remote terminal, enter the IDCU Equipment Number of the port requesting the nail-up connection. This number should also appear on the LINE form (5109-1 Record) or MLHLN form (5111 Record).

This IDCU Equipment Number residing on a remote terminal consists of:

OE NUMBER, TYPE "G" - Remote Terminal (5E9(2) and earlier)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

OE NUMBER, TYPE "G" - Remote Terminal (5E10 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	XX	00 - 42
Remote Terminal	RT	XX	01 - 31
Line	LINE	XXXX	0001 - 2048

If OE type is "G", and the OE is a PUB43801, enter the IDCU Equipment Number of the port requesting the nail-up connection. This number should also appear on the LINE form (5109-1 Record).

This IDCU Equipment Number residing on a PUB43801 consists of:

OE NUMBER, TYPE "G" - PUB43801 (5E10 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	XX	00 - 42
DS1	DS1	XX	51 - 90
Line	LINE	XXXX	0001 - 0024

If OE type is "N", enter the Network Equipment Number of the port requesting the nail-up connection.

OE NUMBER, TYPE "N" (5E12 and earlier)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
Synchronous Transport Signal	STS	X	0-5
Virtual Tributary	VT	XX	01-28
Digital Signal Level 0	DS0	XX	01-24

OE NUMBER, TYPE "N" (5E13 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
SONET Termination Equipment	STE	X	1-6
Synchronous Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1-7
Virtual Tributary Member	VTM	X	1-4
Digital Signal Level 0	DS0	XX	01-24

When OE TYPE is "O", enter the OIUEN of the port requesting the nail-up connection.

OE NUMBER, TYPE "O" - (5E16 and later)

Equipment		Format	Valid Entries

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Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
ProtectionGroup	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

If OE type is "S", enter the SLC Equipment Number of the port requesting the nail-up connection. This number should also appear on the LINE form (5109-1 Record) or MLHLN form (5111 Record).

This SLC Equipment Number consists of:

OE NUMBER, TYPE "S"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001 - 192
Digital Carrier Line Unit	DCLU	X	0 - 7 (5E14 and earlier)
		XX	0 - 15 (5E15 and later)
Subscriber Loop Carrier Remote Terminal	RT	XX	01 - 06
Line	LINE	XX	01 - 96

When C OE and NC OE is "S", then Path NUM must be 1.

When C OE and NC OE is "S", C/NC ZCS, C/NC PATH DS1, C/NC PATH1 DS0, and C/NC PATH2 DS0 must not be entered.

If a "T" is entered in the OE type field, enter the Trunk Equipment Number of the port requesting the nail-up connection. This number should also appear on TRUNK form (5204 Record).

OE NUMBER, TYPE "T"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Trunk Unit	TU	X	0 - 7
Service Group	SVG	X	0 - 1
Pack	PACK	X	0 - 7
Circuit	CKT	X	0 - 3

When C OE and NC OE is "T", then Path NUM must be 1.

When C OE and NC OE is "T", C/NC ZCS, C/NC PATH DS1, C/NC PATH1 DS0, and C/NC PATH2 DS0 must not be entered.

2.4 C LOSS

Description: This is the Controlling Port's outgoing loss. The 5ESS Switch owner engineer, in designing the end-to-end circuit, determines the loss value for the switch's piece of the entire circuit.

Required Field: .
Default: 0.0 dB

Value Entries: 0 - 7.0 in 0.5 increments,
- where actual loss in dB = loss x 0.5 dB.

2.5 C INIT SIG

Description: This is the Controlling Port's initial signal. It specifies the A/B signalling bit patterns to be sent

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for the first 2.5 seconds of the carrier failure condition of a Nailed-up channel.

This value will vary depending on the type of carrier and the type of channel unit at the end of the connection. The 5ESS Switch Owner engineer determines the correct bit pattern which will be applied during carrier failure.

Software Release: 5E4(2) and later
Required Field.
Default: 00
Valid Entries: 00, 01, 10, 11,
- 0000, 0010, 0101, 1010, or 1111

2.6 C FINAL SIG

Description: This is Controlling Port's final signal. It specifies the A/B signalling bit applied after 2.5 seconds of carrier failure of a nailup channel.

This value will vary depending on the type of carrier and the type of channel unit at the end of the connection. The 5ESS Switch Owner engineer determines the correct bit pattern which will be applied during carrier failure.

Software Release: 5E4(2) and later
Required Field.
Default: 11
Valid Entries: 00, 01, 10, 11,
- 0000, 0010, 0101, 1010, or 1111

2.7 C TRWRD

Description: Indicate the trouble word to be sent during carrier failure. The 5ESS Switch Owner engineer determines which trouble word will be applied.
Default: UAC
Valid Entries:

Valid C TRWRD Entries

Entry	Description
M or MUX	DDS MUX out-of-service code.
T or TRB	Trouble word for series 2000/3000.
UA or UAC	Unassigned channel code.
UM or UMC	DDS unassigned multiplex code.

2.8 C ZCS

Description: Is the Controlling port's zero-code-suppression enabled? ZCS ensures that 16 contiguous 0 bits are not received in the transmission bit stream; here it only pertains to IDCU ports.

This field is only used for OE type of "G". Only OE type of "G" can be set to either "Y" or "N". All other equipment types must always be "N".

If the C OE on this NAILUP form is an IDCU port that is not a PUB, then the use of the C ZCS field on this NAILUP form is dependent on the suppression method specified on the RTERM form (5174 Record) in the SUP METHOD field. (Use the value of C OE on this form to find the correct key fields for the RTERM form).

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The C ZCS field can only be used to turn off zero code suppression that was specified for the DS1s of the RT EX (Remote Terminal External Number) on the RTERM form; it cannot be used to turn on zero code suppression. (Note, this field overrides the C DS1 time slot only; it has no impact on the rest of the DS1 time slots.) Specifying a SUP METHOD of "TR8ZC" or "303ZC" on the RTERM form also specifies that zero code suppression should be used for the DS1, while a SUP METHOD of "TR8B8" or "303B8" specifies that zero code suppression should not be used for the DS1. Therefore, the only time the value specified for the C ZCS field on this NAILUP form impacts zero code suppression is if the C ZCS field is set to "N" and the SUP METHOD field on the RTERM form is "TR8ZC" or "303ZC".

The table below summarizes the interaction of the values of the C ZCS field on this NAILUP form and the SUP METHOD field on the RTERM form.

IDCU NON-PUB PORT		
SUP MTHD FIELD ON RTERM FORM	**C ZCS FIELD ON** NAILUP FORM	**IS ZERO CODE SUPPRESSION USED FOR** THE C DS1 TIME SLOT ON NAILUP?
TR8ZC, 303ZC	Y or blank	Yes
TR8ZC, 303ZC	N	No
TR8B8, 303B8	Y, N or blank	No

If the C OE on this NAILUP form is an IDCU port that is a PUB, then the use of the C ZCS field on this form is dependent on the suppression method specified on the EQIFAC form (5847 Record) in the SUP MTHD field. (Use the value of C OE on this form to find the correct key fields for the EQIFAC form.)

The table below summarizes the interaction of the values of the C ZCS field on this NAILUP form and the SUP MTHD field on the EQIFAC form.

IDCU PUB PORT		
SUP MTHD FIELD ON EQIFAC FORM	**C ZCS FIELD ON** NAILUP FORM	**IS ZERO CODE SUPPRESSION USED FOR** THE C DS1 TIME SLOT ON NAILUP?
D4, FEB7, TR8ZC, 303ZC	Y or blank	Yes
D4, FEB7, TR8ZC, 303ZC	N	No
64K, FE8Z, TR8B8, 303B8	Y, N or blank	No

Valid Entries: Y, N

Data Rules:

ZCS can only be disabled for IDCU hardware. This field must be blank for all other hardware types.

When C OE is "A", C ZCS must not be entered.

2.9 C PATH DS1

Description: This field is only used for OE types "G" or "M". It specifies the controlling port's DS1 IFAC (IDCU Facility) for nailup or hairpin path 1. It identifies the facility used by the controlling port to connect the IDCU to the remote terminal.

The C PATH DS1, C PATH1 DS0, and C PATH2 DS0 fields can be entered or, if left blank, the system will choose the values for these fields depending upon whether PATH NUM is 1 or 2. For example, if PATH NUM is 1, either enter values in both C PATH DS1 and C PATH1 DS0, or leave both blank and the system will choose the values for these fields. (Note also that when PATH NUM is 1, the C PATH2 DS0 and NC PATH2 DS0 fields must be blank.) Similarly, if PATH NUM is 2, either enter values in C PATH DS1, C PATH1 DS0, and C PATH2 DS0, or leave all three blank and the system will choose the values for these fields.
Valid Entries: 0 - 39

The DS1 entered on the NAILUP form must correspond to an IFAC entered in the RT IFAC

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TERMINATION list on the appropriate RTERM form.

The DS1 entered on the NAILUP form must correspond to an FAC entered in the RT FAC TERMINATION list on the appropriate RTERM form.

The DS1 entered cannot be the PROT LINE on the same RTERM form.

2.10 C PATH1 DS0

Description: This field is only used for OE types "G" or "M". It identifies the timeslot (DS0) on the IDCU facility (DS1) that will be used by the controlling port for path 1.
Valid Entries: 0 - 23

2.11 C PATH2 DS0

Description: This field is only used for OE type "G" and is only entered when PATH NUM is 2. It specifies the controlling port's DS0 for dual-DDS (Digital Data Service) hairpin path 2. It identifies the timeslot (DS0) on the IDCU facility (DS1) used by the controlling port for path 2.
Valid Entries:

- 5E8 and earlier: 0 - 23
- 5E9(1) and later: 0 - 18

NON-CONTROLLING PORT DATA

2.12 #NC OE (Type/Number)

- ***NOTE:*** See C OE for CONTROLLING PORT DATA - identical usage.

2.13 NC LOSS

- ***NOTE:*** See C LOSS for CONTROLLING PORT DATA - identical usage.

2.14 NC INIT SIG

- ***NOTE:*** See C INIT SIG for CONTROLLING PORT DATA - identical usage.

2.15 NC FINAL SIG

- ***NOTE:*** See C FINAL SIG for CONTROLLING PORT DATA - identical usage.

2.16 NC TRWRD

- ***NOTE:*** See C TRWRD for CONTROLLING PORT DATA - identical usage.

2.17 NC ZCS

- ***NOTE:*** See C ZCS for CONTROLLING PORT DATA - identical usage.

2.18 NC PATH DS1

- ***NOTE:*** See C PATH DS1 for CONTROLLING PORT DATA - identical usage.

2.19 NC PATH1 DS0

- ***NOTE:*** See C PATH1 DS0 for CONTROLLING PORT DATA - identical usage.

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2.20 NC PATH2 DS0

NOTE: See C PATH2 DS0 for CONTROLLING PORT DATA - identical usage.

FOR BOTH PORTS

2.21 #SIGMODE

Description: Signalling Mode indicates if any signalling is to be passed and the amount. For data circuits, no signalling is passed. When signalling must pass through, three types of signals are possible: 2-state (A), 4-state (AB), and 16-state (ABCD).

NOTE: If both the Controlling and Non-Controlling Port has an OE of "N", then SIGMODE is "don't care", i.e. any signaling mode may be entered.

Required Field.

Valid SIGMODE Entries

Entry	Description
A	2-state.
AB	4-state.
ABCD	16-state.
NOSIG	No signaling mode.

Data Rules:

If either the Controlling or Non-Controlling Port has an OE type of "T", the SIGMODE must be "A" or "NOSIG".

A SIGMODE value of "ABCD", used for an OE type of "D", requires that both the Controlling and Non-Controlling Ports have a corresponding DFI MODE of "FE" or "FE8Z" on the EQDUP form (5730 Record).

If SIGMODE is "NOSIG", "A" or "AB", the corresponding DFI mode on the EQDUP form must be "D4", "64K", "FE", "FE8Z", or "FEB7" which is required for DEN's only.

The 5ESS Switch is designed to accommodate ABCD signalling or 64KB clear transmission through inter RSM, RSM to HOST and inter Switching Module connections.

For SLEN's defined on an SLCRT form, the SIGMODE must not be "ABCD". Therefore, if C OE or NC OE equipment type is "S", SIGMODE must be "A", "AB", or "NOSIG".

If the RT INTERFACE on the RTERM form is "TR008" and C OE or NC OE on the NAILUP form is "M" or "G" (indicating IDCU equipment), SIGMODE must be "A", "AB" or "NOSIG".

If SIGMODE is "NOSIG", C INT SIG and NC INT SIG must be 00, and C FINAL SIG and NC FINAL SIG must be 11.

If SIGMOD is "ABCD", C INIT SIG, NC INIT SIG, C FINAL, and NC FINAL SIG must be either 0000, 0010, 0101, 1010, or 1111.

If SIGMOD is "A", C INIT SIG, NC INIT SIG, C FINAL, and NC FINAL SIG must be either 00 or 11.

If SIGMOD is "AB", C INIT SIG, NC INIT SIG, C FINAL, and NC FINAL SIG must be either 00, 01, 10, or 11.

For 5E10 and later, when NAILUP forms have a C OE or NC OE of "G" indicating an IDCU OE, and the corresponding RTERM form has RT INTERFACE set to TR008, the SIGMODE on the NAILUP forms must be "A", "AB" or "NOSIG".

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2.22 HAIRPIN

Description: Is this connection a hairpin?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "N" for all non-IDCU equipment types.

When HAIRPIN is "Y", C LOSS and NC LOSS must be 0.0.

When HAIRPIN is "Y", the C OE and NC OE must be on the same SM and IDCU.

When HAIRPIN is "Y", C PATH2 DS0 must be 0-18.

2.23 DDS

Description: Is Digital Data Service used?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DDS is "N", PATH NUM must be 1.

If DDS is "Y", SIGMODE must be NOSIG.

If DDS is "Y" and HAIRPIN is "N" and OE is not "A", PATH NUM must be 1.

2.24 PATH NUM

Description: Enter the number of channels (paths) used in the hairpin or nailup.

Required Field.
Default: 1
Valid Entries: 1 or 2

Data Rules:

PATH NUM must be 1 for all nailup ports.

When PATH NUM is 1, C PATH2 DS0 and NC PATH2 DS0 must not be entered.

When PATH NUM is 2 and C OE is "A", C LOSS must be 0.0.

When PATH NUM is 2 and HAIRPIN is "N", C OE and NC OE must both have an OE type of "A" and must both be on the same SM.

For 5E13 and later, when PATH NUM is 2 and HAIRPIN is "N":

- C OE and NC OE must both have an OE type of "A", "D", or "N".
- and C OE or NC OE is either "D" or "N", then C OE and NC OE must have an equipment type of "A".

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- and C OE or NC OE is "D", the DCHAN portion of the DEN must not be 24 or 48.
- and C OE or NC OE is "N", the DS0 portion of the NEN must not be 24.

The value of 2 is only valid for Dual Path DDS terminating on TR008 RTs or on PUB43801 facilities.

If PATH NUM is 2, and C OE or NC OE is either a PUB43801 or on a TR008 RT, the port subsequent to C OE or NC OE must exist and must not be used on any of the LINE or MLHLN forms.

For 5E9(1) and later, if PATH NUM is set to 2 and the CONTROLLING or NON-CONTROLLING OE-types/numbers have RT INTERFACE set to "TR008", this combination indicates a dual path digital data service. Dual path digital data services require consecutive equipment numbers. Therefore, the corresponding ILENs are defined on a RTERM form cannot have CU XX/YY set to

- "COIN"
- "FXS"
- "FXSLS"
- "DIDDPT"

because these are single-channel Channel Units, which have only one equipment number defined and are therefore invalid for dual path digital data services. The corresponding ILEN on a RTERM form is found by matching the first three digits of C OE, the fourth digit of C OE, and the fifth and sixth digits of C OE from the NAILUP form to SM, UNIT NUMBER, and RT EX on the RTERM form, respectively. The matching channel unit (CU XX/YY) is found by matching the seventh and eight digits of C OE, when C OE TYPE is "M", or the nineth and tenth digits of C OE, when C OE TYPE is "G", to XX in CU XX/YY where the value of YY is XX + 1.

For 5E9(1) and later, when the NAILUP form PATH NUM is set to 2, the last two digits of the OE (used to assign time slots) for a TR008 (Mode-I) are restricted from using time slots 19, 22 or 23. The following list of last two digits will result in the use of one of these time slots and is therefore invalid: 11, 21, 23, 35, 45, 47, 59, 69, 71, 83, 93, or 95.

For 5E9(2) and earlier, if PATH NUM is 2, and C OE or NC OE is on a TR008 RT, the C OE or NC OE must be an odd line number (e.g., C OE {7,8} must be an odd number when C OE or NC OE is "M" or C OE or NC OE {7,10} must be an odd number when C OE or NC OE type is "G").

For 5E10 and later, when the NAILUP form has PATH NUM set to 2 (indicating dual-DDS Hairpin) and C OE is on a TR008 Remote Terminal, this requires C OE to be an odd line number, i.e. C OE[8,11] must be an odd number when C OE type is "G".

For 5E10 and later, when the NAILUP form PATH NUM is set to "2" (indicating dual-DDS Hairpin) and NC OE is on a TR008 Remote Terminal, this requires NC OE to be an odd line number. i.e. NC OE[8,11] must be an odd number when NC OE type is "G".

If PATH NUM is 2 for CONTROLLING OE entries on a NAILUP form, then the associated C PATH DS1 value cannot match the PROT LINE field on the corresponding RTERM form. The RTERM form corresponds if the first 3 digits of the C OE on this form matches the entry in the SM field on the RTERM form. In addition for the NON-CONTROLLING OE entries on a NAILUP form, if PATH NUM is 2, the associated NC PATH DS1 value cannot match the PROT LINE field on the corresponding RTERM form.

2.25 DSC NUM

Description: When the 5ESS Switch serves as a DCS (Digital Cellular Switch), the DSC NUM field is used to assign a number to a Dedicated Switch Connection between a cell site and an ECP (Executive Cellular Processor) complex. Its value must be entered when the nailup is a dedicated switch connection.

Software Release: 5E9(1) and later
Valid Entries:

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5E12 and earlier: 1 - 444
5E13 and later: 1 - 9999

Data Rules:

The DSC NBR must be unique or blank.

When DSC NUM is entered, the controlling and non-controlling OEs must both be DENs and DSC trunks. For the controlling OE, the DEN on the TRUNK form must match the C OE on the NAILUP form; the TRKCLS on the corresponding TKGRP form (TGN on the TKGRP form matches the TGN on the TRUNK form) must be "DSC". Likewise, for the non-controlling OE, the DEN on the TRUNK form must match the NC OE on the NAILUP form; the TRKCLS on the corresponding TKGRP form must be "DSC".

```
                        5ESS Switch                _
nailup                 OFFICE DATA ADMINISTRATION
(5207)                 NAIL-UP AND HAIRPIN SPECIFICATION

      CONTROLLING PORT          NON-CONTROLLING PORT       FOR BOTH PORTS
*1. C OE       _ ____________ #12. NC OE       _ ____________#23. SIGMODE  _____
 4. C LOSS      0.0           15. NC LOSS      0.0          24. HAIRPIN  N
 5. C INIT SIG  00            16. NC INIT SIG  00           25. DDS      N
 6. C FINAL SIG 11            17. NC FINAL SIG 11           26. PATH NUM 1
 7. C TRWRD     UAC           18. NC TRWRD     UAC          27. DSC NBR  ___
 8. C ZCS       _             19. NC ZCS       _
 9. C PATH DS1  __            20. NC PATH DS1  __
10. C PATH1 DS0 __            21. NC PATH1 DS0 __
11. C PATH2 DS0 __            22. NC PATH2 DS0 __
```

Figure 1 SAMPLE NAILUP FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 2G: 5271-1 RECORD
TRUNK EQUIPMENT NUMBER RECORD

1. GENERAL

The 5271-1 Record is an output-only record and is used to identify the location of analog trunk equipment.

Digital Trunks use digital equipment which is identified on the Digital Equipment Record (5271-2 Record). Analog and Digital trunks may be combined in the same Trunk Group. Logical Test Port trunks use a Logical Test Port location and are identified on the Logical Test Port Record (5271-3 Record).

1.1 Restrictions

Any SM that is fully loaded with trunks, is required to allow one time slot for idle code and one for audible ring. This means that 510 trunks are the maximum number of trunks available for assignment rather than 512, which is the total number of time slots in an SM. 8 Trunk Units per SM or 1 DLTU with 8 DFIs, plus 5 trunk units per SM, are examples of an SM fully loaded with trunks.

An Analog Trunk equipment location consists of:

TRUNK EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 48 (CM1)
			1 - 192 (CM2)
Trunk Unit	TU	X	0 - 7
Service Group	SG	X	0 - 1
Pack	PACK	X	0 - 7
Circuit	CKT	X	0 - 3

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

The Base and Control Number and Office Name appear on each page of the record.

2.2 SM

Description: This field contains the Switching Module Number. For offices equipped with CM1 (Communication Module 1), the valid values are 1 - 48. For offices equipped with CM2 (Communication Module 2), the valid values are 1 - 192.
Valid Entries: 1 - 192

2.3 TRUNK UNIT

Description: This field contains the Trunk Unit Number.
Valid Entries: 0 - 7

2.4 SWITCH GROUP

Description: This field contains the Switch Group Number.
Valid Entries: 0 - 1

2.5 PACK

Description: This field contains the pack numbers 0 - 7, which are preprinted on the 5271-1 Record.

2.6 CKT

Description: This field contains the circuit numbers 0 - 3, which are preprinted on the 5271-1 Record.

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2.7 FORM

Description: This field indicates the form where the TEN (Trunk Equipment Number is defined).

Valid FORM Entries

Entry	Definition
ACQS form	5425 Record
LINE form	5109 Record
MLHLN form	5111 Record
TRUNK form	5204 Record

2.8 KEY 1

Description: This field indicates the value entered in the first key field of the form listed in the FORM field.

Valid KEY 1 Entries

Entry	Definition
QUOTE TN [5E5 and later]	ACQS form
TN	LINE form
MLHG	MLHLN form
TGN	TRUNK form

2.9 KEY 2

Description: This field indicates the value entered in the second key field of the form listed in the FORM field if applicable.

Valid KEY 2 Entries

Entry	Definition
TERM	MLHLN Form
MEMB	TRUNK Form

2.10 QTY

Description: The QTY field applies only to the TRUNK form and is a method of defining up to 24 trunks, with consecutive physical locations, at a time. QTY specifies the number of trunk member defined.
Valid Entries: 1 - 24

2.11 REMARKS

Description: This field contains any comments deemed locally necessary.

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SEC. 2H: 5271-2 RECORD
DIGITAL EQUIPMENT NUMBER RECORD

1. GENERAL

The 5271-2 Record is an output-only record and is used to identify the location of digital trunk equipment.

Analog Trunks use analog equipment which is identified on the Trunk Equipment Record (5271-1 Record). Analog and Digital trunks may be combined in the same Trunk Group. Logical Test Port trunks use a Logical Test Port location and are identified on the Logical Test Port Record (5271-3 Record).

1.1 Restrictions

Any SM that is fully loaded with trunks, is required to allow one time slot for idle code and one for audible ring. This means that 510 trunks are the maximum number of trunks available for assignment rather than 512, which is the total number of time slots in an SM. An SM with 1 DLTU which has 8 DFIs, plus 5 TUs, is an example of a SM that is fully loaded with trunks.

Care should also be taken when assigning digital channels. The sequence in which the channels are transmitted depends on the type of carrier system. Refer to Figure 1 for the sequences.

A Digital Equipment Location consists of an 8-digit number in the following format.

DLTU (Digital Line Trunk Unit)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Line Trunk Unit	DLTU	X	0 - 5
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	CHAN	XX	01 - 48

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

The Base and Control Number and Office Name appear on each page of the record.

2.2 SM

Description: This field contains the Switching Module Number. In an office equipped with CM1 (Communication Module 1), the valid values are 1 - 48. In an office equipped with CM2 (Communication Module 2), the valid values are 1 - 192.
Valid Entries: 1 - 192

2.3 DLTU

Description: This field contains the Digital Line Trunk Unit Number.
Valid Entries: 0 - 5

2.4 DFI

Description: This field contains the Digital Facility Interface Number.
Valid Entries: 1 - 10

2.5 DIGITAL CHANNEL

Description: The Digital Channel Number assignments depend on the type of carrier system being used for that Trunk Group. The difference in the sequence in which the digital channels are transmitted for D4, D2 and D1D are illustrated in Figure 1 .

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Valid Entries: 1 - 48

2.6 FORM

Description: This field indicates the form where the DEN (Digital Equipment Number) is defined.

Valid Form Entries

Entry	Definition
LINE	5109 Record
MLHLN	5111 Record
TRUNK	5204 Record

2.7 KEY 1

Description: This field indicates the value entered in the first key field of the form listed in the FORM field.

Valid KEY 1 Entries

Entry	Definition
TN	LINE form
MLHG	MLHLN form
TGN	TRUNK form

2.8 KEY 2

Description: This field indicates the value entered in the second key field of the form listed in the FORM field, if applicable.

Valid KEY2 Entries

Entry	Definition
n/a	LINE form
TERM	MLHLN form
MEMB	TRUNK form

2.9 QTY

Description: The QTY field applies only to the TRUNK form and is a method of defining up to 24 trunks with consecutive physical locations, at a time. QTY specifies the number of trunk members defined.
Valid Entries: 1 - 24

2.10 REMARKS

Description: This field may contain any comments deemed locally necessary.

D4 CARRIER CHANNEL ASSIGNMENTS	D2 CARRIER CHANNEL ASSIGNMENTS	D1D CARRIER CHANNEL ASSIGNMENTS
1	12	1
2	13	13
3	1	2
4	17	14
5	5	3
6	21	15
7	9	4
8	15	16
9	3	5
10	19	17
11	7	6
12	23	18
13	11	7
14	14	19
15	2	8
16	18	20
17	6	9
18	22	21
19	10	10
20	16	22

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21	4	11
22	20	23
23	8	12
24	24	24

Figure 1 SEQUENCE IN WHICH THE DIGITAL CHANNELS ARE TRANSMITTED FOR D4, D2, AND D1D CARRIER SYSTEMS

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SEC. 2I: 5271-3 RECORD
LOGICAL TEST PORT RECORD

1. GENERAL

The 5271-3 Record is an output-only record and is used to identify the Logical Test Port locations. Software-only trunks require an LTP assignment.

Digital and Analog equipment assignments are identified on the 5271-1 and 5271-2 Records, respectively.

The following trunk classes require a Logical Test Port Assignment: "LTPMSU", "LTPALIT", "LTPROTL", "LTPICTC", "LTPWSTTF", "LTPOGTC", "LTPCLBCK", "LTPDCJCK", "LTPOTOTF", "LTPESTF", "LTPDGTTF", "LTPDCTU", "LTPS96TF", "LTPISTFL", "LTPISTFX" and "LTPDFTAC".

A Logical Test Port location consists of the following components.

LOGICAL TEST PORT			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Logical Test Port	LTP	XXX	0-255

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

The Base and Control number and Office Name appear on each page of the record.

2.2 SM

Description: This field contains the Switching Module Number. In an office equipped with CM1 (Communication Module 1), the valid values are 1 - 48. In an office equipped with CM2 (Communication Module 2), the valid values are 1 - 192.
Valid Entries: 1 - 192

2.3 LTP

Description: This field contains the Logical Test Port Number.
Valid Entries: 0 - 255

2.4 TRK GRP NUM

Description: This field contains the Trunk Group Number assigned to each LTP location. Trunk Group Numbers exceeding 999 are allowed only if the range from 1 - 999 has been exhausted.
Valid Entries: 1 - 2000

2.5 TRK MEM NUM

Description: This is the Trunk Member Number assigned to each LTP location. Trunk members exceeding 999 are allowed only if the range from 0 - 999 has been exhausted.
Valid Entries: 0 - 2047

2.6 REMARKS

Description: This field may contain any comments deemed locally necessary.

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SEC. 2K: 5209 RECORD
EDSL CALL-BY-CALL FEATURES FORM - TKEDSLD

1. GENERAL

The 5209 Record is available with 5E4(2) and later Software Releases, defines EDSL (Extended Digital Subscriber Line) Call-by-Call features assigned to a B-channel trunk group.

Call-by-Call feature allows a trunk group to be assigned multiple features. Any trunk in a Call-by-Call group can be used for any Call- by-Call feature subscribed to by the group.

In order to have these Call-by-Call SFGs assigned to a trunk group, the TGN must be defined on a TKGRP form (5202 Record) with a TRKCLS of "EDSL" or "EDSLHM", and "Y" entered in the CBC field.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.34.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group number.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The value entered here must be defined on a TKGRP form where, for 5E9(1) and later, CBC must be set to "Y".

When TGN(s), NET SPEC FAC TYPE(s), BAND(s), and CARRIER ID(s) are assigned on the TKEDSLD form, the corresponding CARRIER ID(s) on the ICF form with FEAT GRP set to "D" must be defined.

2.3 * NET SPEC FAC TYPE

Description: Enter the EDSL Call-by-Call service type.

Valid NET SPEC FAC TYPE Entries

Entry	Definition
M800 or M8	Software Release: 5E6 and later. Megacom 800 Service.
MAXOWATS or MA	Maximal band OUTWATS uses the maximum band that's subscribed to the trunk group.
OPOTS or OP	Originating POTS.
ORIGFX or ORIGF	Software Release: 5E9(1) and later. Originating from PRI to FX.
ORIGTIE or ORIGT	Software Release: 5E9(1) and later. Originating from PRI to Tie.
OWBAND or OW	OUTWATS with a specific band number.
SDN or S	Software Release: 5E6 and later. Software Defined Network Service.
TERMFX or TERMF	Software Release: 5E9(1) and later. Terminating from FX to PRI.
TERMTIE or TERMT	Software Release: 5E9(1) and later.

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	Terminating from Tie to PRI.
TPOTS or TP	Terminating POTS including DID.
HM	Software Release: 5E11 and later. Hotel Motel This entry supports the ISDN PRI Hotel/Motel and Selected Class of Call Screening secured feature, see Diviision 2, Section 4A219.
SCOCS	Software Release: 5E11 and later. Selected Class of Call Screening This entry supports the ISDN PRI Hotel/Motel and Selected Class of Call Screening secured feature, see Diviision 2, Section 4A219.

Data Rules:

For 5E11 and later, the number of unique combinations of NET SPEC FAC TYPE, BAND, CARRIER ID, FACILITY NBR, BEARER CAP and SCOCS SERVICE cannot exceed 1023 for all the TKEDSLD forms.

If NET SPEC FAC TYPE is "OWBAND", then BAND must be entered. Otherwise, BAND must not be entered.

For 5E11 and later, when NET SPEC FAC TYPE is "HM" or "SCOCS", BEARER CAP must be entered.

For 5E11 and later, when NET FAC TYPE is "SCOCS", SCOCS SERVICE must be entered.

If "TERMFX", "TERMTIE", or "TPOTS" is entered, TRK DIR on the TKGRP form must be "2W" or "OUT".

If "OPOTS", "ORIGFX", "ORIGTIE", "OWBAND", "MAXOWATS", "SDN", or "M800" is entered, TRK DIR on the TKGRP form must be "2W" or "INC".

If "OPOTS", "OWBAND", "MAXOWATS", "SDN", or "M800" is entered, the MC RTI value on this form must be defined on an MCRTIDX form (5304 Record). The SFG NUMBER on the MCRTIDX form must be defined on a PFASFG form (5609-3 Record) where the SCRN IDX is entered.

For 5E9(1) and later, if NET SPEC FAC TYPE is "ORIGFX", "ORIGTIE", "TERMFX", or "TERMTIE", FACILITY NBR must be entered.

When the TKEDSLD forms have a NET SPEC FAC TYPE of "ORIGFX", "ORIGTIE", "TERMFX" or "TERMTIE", and the MC RTI has been defined on a MCRTIDX form with a MC ROUTE TYPE of "SFG", the SFG NUMBER on the MCRTIDX form must be defined on a PFASFG form whose SFG TYPE must be one of the following values based on NET SPEC FAC TYPE on the TKEDSLD form:

Valid NET SPEC FAC TYPE and SFG TYPE Combinations

NET SPEC FAC Type	SFG Type
ORIGFX	OUTFX or 2WFX
TERMFX	INFX or 2WFX
ORIGTIE	OUTTIE or 2WTIE
TERMTIE	INTIE or 2WTIE

- ***NOTE:*** In all cases, BAND and CARRIER ID will not have been entered on the TKEDSLD form.

For 5E11 and Later:
ISDN PRI Hotel/Motel and Selected Class of Call Screening are secured features. They must be purchased before "HM" or "SCOCS" can be entered in the NET SPEC FAC TYPE field on the TKEDSLD form. A SFSYS form must exist with SFID 219 ACT set to "Y".

When the TKEDSLD forms have a NET SPEC FAC TYPE of "TERMFX", "TERMTIE" or "TPOTS", the associated TKGRP form TRK DIRs must be "2W" or "OUT".

When the NET SPEC FAC TYPE field on the TKEDSLD input form is equal to "OPOTS", "OWBAND", "MAXOWATS", "SDN" or "M800", the SCRN IDX field on the PFASFG input form must be entered. The MC RTI field on the TKEDSLD must match the MC ROUTE INDEX field on the MCRTIDX input form. In turn, the corresponding SFG NUMBER field on the MCRTIDX form must match the SFG NBR field on the

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PFASFG input form.

When the TKEDSLD forms TGN(s), BAND(s), CARRIER ID(s), MC RTI(s) are assigned and NET SPEC FAC TYPE is equal to :

- "OPOTS" or "TPOTS" and on the corresponding MCRTIDX form and MC ROUTE TYPE equals "SFG", the SFG NUMBER(s) on the MCRTIDX form must have a corresponding SFG NBR defined on the PFASFG form, where SFG TYPE equals "EDSL".
- "SDN", and on the corresponding MCRTIDX form and MC ROUTE TYPE equals "SFG", the SFG NUMBER(s) on the MCRTIDX form must have a corresponding SFG NBR defined on the PFASFG form, where SFG TYPE equals "SDN".
- "M800", and on the corresponding MCRTIDX form and MC ROUTE TYPE equals "SFG", the SFG NUMBER(s) on the MCRTIDX form must have a corresponding SFG NBR defined on the PFASFG form, where SFG TYPE equals "M800".
- "MAXOWATS" or "OWBAND" and on the corresponding MCRTIDX form and MC ROUTE TYPE equals "SFG", the SFG NUMBER(s) on the MCRTIDX form must have a corresponding SFG NBR defined on the PFASFG form, where SFG TYPE equals "OUTWATS".

When the TKEDSLD form has NET SPEC FAC TYPE set to "HM" or "SCOCS" and BEARER CAP is set to "56CLR", the corresponding TKGRP form where TGN matches the TGN on the TKEDSLD form, the value of DATA RATE must be entered.

When the TKEDSLD form has a NET SPEC FAC TYPE of "HM" or "SCOCS", and the MC RTI has been defined on a MCRTIDX form with a MC ROUTE TYPE of "SFG", the SFG NUMBER on the MCRTIDX form must be defined on a PFASFG form where SFG TYPE matches NET SPEC FAC TYPE on the TKEDSLD form.

2.4 (*) BAND

Description: Enter the OUTWATS band number.
Valid Entries: 0 - 255

Data Rules:

If NET SPEC FAC TYPE is "OWBAND", then BAND must be entered. Otherwise, BAND must not be entered.

2.5 (*) CARRIER ID

Description: Enter the InterLATA Carrier ID.
Valid Entries:
- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

When CARRIER ID is entered, it must be defined on an ICF form (5305-1 Record); for 5E8 and later, FEAT GRP on the ICF form must be "D". CARRIER ID must also be entered on an MCRTIDX form (5304 Record) where the MC ROUTE TYPE is "SFG".

2.6 (*) FACILITY NBR

Description: Enter the Facility number for the FX or Tie trunk group.

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Software Release: 5E9(1) and later
Valid Entries: 1 - 99999

Data Rules:

When FACILITY NBR is entered, NET SPEC FAC TYPE must be "ORIGFX", "ORIGTIE", "TERMFX", or "TERMTIE".

2.7 (*) BEARER CAP

Description: The BEARER CAP field is used to specify the bearer capability being used during the call to determine voice or data and the speed at which data is sent.

Software Release: 5E11 and later
Valid Entries:

Valid BEARER CAP Entries

Entry	Definition
SPEECH	Speech bearer capability
3PT1KHZ	3.1 kHz Audio bearer capability
56CLR	56-kbps clear bearer capability
64CLR	64-kbps clear bearer capability

Data Rules:

When BEARER CAP is entered, NET SPEC FAC TYPE must be "HM" or "SCOCS".

When the TKEDSLD forms have BEARER CAP set to "64CLR", the corresponding (TGN on the TKEDSLD matches TGN on the TKGRP) TKGRP forms DATA RATE field must be "64K".

2.8 (*)SCOCS SERVICE

Description: The SCOCS SERVICE field is used to specify the service identification level associated with the SCOCS (Selected Class Of Call Screening) service.

Software Release: 5E11 and later
Valid Entries: 1 to 99999, or leave blank

Data Rules:

When SCOCS SERVICE is entered, NET SPEC FAC TYPE must be "SCOCS".

2.9 # MC RTI

Description: Enter the route index for the NET SPEC FAC TYPE.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

MC RTI must be defined as the MC ROUTE INDEX on an MCRTIDX form where the TRUNK GROUP NUMBER is not entered and "SFG" or "REORD" is entered in the MC ROUTE TYPE field.

For valid NET SPEC FAC TYPE and SFG TYPE combinations, see table in Section 2.3 .

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When the CARRIER IDs and MC RTIs are assigned on the TKEDSLD form, the MC RTI should be defined on a MCRTIDX form, with the same CARRIER ID assigned and MC ROUTE TYPE equal to "SFG".

tkedsld 5ESS Switch _
(5209) OFFICE DATA ADMINISTRATION
EDSL CALL BY CALL FEATURES

*1. TGN ____
*2. NET SPEC FAC TYPE _____
(*)3. BAND ___
(*)4. CARRIER ID ____
(*)5. FACILITY NBR _____
(*)6. BEARER CAP _____
(*)7. SCOCS SERVICE _____
#8. MC RTI ____

Figure 1 SAMPLE TKEDSLD FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 2L: 5210 RECORD
INTER SM TRUNKING - IMTRK

1. GENERAL

The 5210 Record is available with 5E5 and later Software Releases.

This form is used to define each terminating end for inter-module trunk group members. The inter-module trunk groups entered on this form must be defined on a TKGRP form (5202 Record) with "Y" in the INTER SM TRK field.

For the TGN and MATE TGN to exist simultaneously, the following must be true: one must be an incoming trunk and the other an outgoing trunk, or both must be 2-way trunks.

For more information on Inter-module Trunking, please refer to Division 2, Section 1n.

1.1 Recent Change View

The Recent Change View corresponding to this form is 5.46.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: Enter the Switching Module associated with the inter-module trunk.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM must be defined on an EQIM form (5700-1/2 Record). The SM entered in this field cannot be the same as the SM entered in the MATE SM field.

2.3 * TGN

Description: Enter the Trunk Group Number associated with the inter-module trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN entered cannot be the same as the TGN entered in the MATE TGN field. The TGN/MEMB must not be duplicated on another IMTRK form.

For 5E7 and later, if SM/TGN/MEMBs and MATE SM/TGN/MEMBs are assigned on the IMTRK form, then the SM value must match the first three digits of a TEN, DEN, or (for 5E9(2) and later) NEN and TGN/MEMBs must match TGN/MEMB entry on a TRUNK form.

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2.4 * MEMB

Description: Enter the Trunk Group Member associated with the inter-module trunk.

Required Field.
Valid Entries: 0 - 1951

2.5 # MATE SM

Description: Enter the Switching Module associated with the other end of the inter-module trunk group. MATE SM indicates where the other end of this inter-module trunk group member physically terminates.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM must be defined on an EQIM form (5700-1/2 Record).

For 5E7 and later, if SM/TGN/MEMBs and MATE SM/TGN/MEMBs are assigned on the IMTRK form, then the SM value must match the first three digits of a TEN, DEN, or (for 5E9(2) and later) NEN and TGN/MEMBs must match TGN/MEMB entry on a TRUNK form.

2.6 # MATE TGN

Description: Enter the Trunk Group Number associated with the other end of the inter-module trunk group.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The MATE TGN/MEMB must not be duplicated on another IMTRK form.

2.7 # MATE MEMB

Description: Enter the Trunk Group member associated with the other end of the inter-module trunk group.

Required Field.
Valid Entries: 0 - 1951

```
imtrk                  5ESS Switch          _
(5210)              OFFICE DATA ADMINISTRATION
                    INTER SM TRUNKING

 *1. SM  ___              #4. MATE SM  ___
 *2. TGN ____             #5. MATE TGN ____
 *3. MEMB ____            #6. MATE MEMB ____
```

Figure 1 SAMPLE IMTRK FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2M: 5211 RECORD
PRIMARY RATE INTERFACE GROUP ASSIGNMENT - PRIGRP

1. GENERAL

This record is available for the 5E9(1) and later Software Releases. Prior to 5E9(1), the D-channel signaling entity only assigns calls to channels on the DS1 facility containing that D-channel. This is called FAS (Facility Associated Signaling) which supports the following configuration:

- 1 D-channel and up to 23 B-channels.

The 5E9(1) and later Software Release continues to support this configuration (referred to as "Custom") which is CCITT and ANSI compatible but not compatible with Bellcore's expansion of these standards.

For 5E9(1) and later, National ISDN PRI is available which is compatible with Bellcore's current technical requirements (i.e., TR1268).

1.1 NFAS (Non-Facility Associated Signaling)

The National ISDN PRI feature allows the D-channel signaling entity to assign calls to B-channels on more than one facility (including the one containing the D-channel). This is referred to as NFAS. Specifically, National ISDN PRI supports the following PRI configurations:

- 1 D-channel and up to 23 B-channels (supports Bellcore requirements); without NFAS.
- 1 D-channel and up to 479 B-channels; with NFAS.
- 2 D-channels and up to 478 B-channels; with NFAS and D-Channel Backup.

1.2 D-Channel Backup Option

When NFAS is employed, the reliability of the signaling performance for the PRIs controlled by the D-channel may be unacceptable. The DCBU capability is suggested to improve the reliability of the D-channel control signaling.

DCBU permits continued access to the network, even if one of the D-channels fails, by transferring the signaling information to a back-up D-channel. DCBU allows a customer to designate a pair of D-channels in separate DS1 facilities as a mated pair. Both D-channels must terminate on the same SM.

1.3 Recent Change View

The corresponding Recent Change view for this form is 5.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 *PRI GROUP

Description: Enter the PRI GROUP number.

Required Field.
Valid Entries:

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- For 5E9(2) and earlier: 1 - 4096
- For 5E10 and later: 1 - 4095

2.3 #PRI TYPE

Description: Enter the PRI TYPE.

Required Field.

Valid PRI TYPE Entries

Entry	Definition
CUSTOM or C	Custom (AT&T/ LUCENT). Compatible with CCITT and ANSI standards; not compatible with Bellcore expansion on these standards.
STD or S	National ISDN PRI (standard Bellcore compatible).

Data Rules:

For 5E10 and later, when the TGN/MEMBs on the TRUNK form have an entry for DEN, PRI GROUP entered and DCHN DESG is left blank (This defines an EDSL B-channel trunk), and the two right-most digits of DEN, entered on the TRUNK form, are set to 24 or 48, the PRI GROUP, entered on the TRUNK form, must be defined on a PRIGRP form. Therefore, the PRI TYPE on the PRIGRP form must be set to "STD".

NOTE: An asterisk (*) preceding a DEN specifies that it was generated automatically from the TRUNK form because QTY was greater than 1.

If PRI TYPE is "CUSTOM", exactly one facility in FACILITY LIST must be entered. If PRI TYPE is "STD", at least one facility in FACILITY LIST must be entered.

When PRI TYPE is "CUSTOM", B CHAN SERV must be blank.

For 5E12, when PRI TYPE is "CUSTOM", STD NSF IE must be "N".

For 5E13 and later, when PRI TYPE is "CUSTOM", STD NSF IE must be "N" or not entered.

2.4 B CHAN SERV

Description: Can B-Channel Service messages be sent to a STD PRI? This field supports the B-Channel Availability Signaling Procedures feature and is valid only with a "STD" PRI TYPE. This field interacts with the RETRY SERV field on the ISDNOPT form (5941 Record).

For more information on the B-Channel Signaling Availability Procedures feature, see Division 2, Section 6I.

Software Release: 5E12 and later
Valid Entries: Blank, Y, N

Data Rules:

When B CHAN SERV is entered, PRI TYPE must be "STD".

When this field is blank, B CHAN SERV is not activated.

When "Y" is entered, PRI TYPE must be "STD". When "N" (or blank) is entered, PRI TYPE must be "STD".

2.5 STD NSF IE

Description: This field is used to specify whether a PRI (Primary Rate Interface) group will use Bellcore

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Standard NSF IE Interpretation. This field option is only available for National or Standard ISDN (Integrated Services Digital Network) PRIs.

Software Release: 5E12 and later
Default: N (5E12), or Blank (5E13)
Valid Entries: Y, N (5E12) or Blank, Y, N (5E13)

Data Rules:

For 5E12 and later, when STD NSF IE is "Y", PRI TYPE must be "STD".

D-CHANNEL INFORMATION

The DCHN DESG, TGN and MEMB NBR fields are accessed via the Recent Change view; they are shown here for display only.

TBCT SERVICE PARAMETERS

The following fields (Section 2.6 - Section 2.9) define the Two B-Channel Transfer calls allowed over an ISDN (Integrated Services Digital Network) PRI (Primary Rate Interface).

2.6 TBCT ACTIVE

Description: The TBCT ACTIVE field indicates if TBCT is active on this PRI group.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y,N

Data Rules:

The ACT field for SFID 214 must be set to "Y" on the SFSYS form before the TBCT ACTIVE can be set to "Y" on the PRIGRP form.

2.7 MAX ACT TBCT

Description: The MAX ACT TBCT field indicates the maximum number of active transfers allowed.

Software Release: 5E13 and later
Default: 0
Valid Entries: Blank (for no limit), 0 - 60000

2.8 MAX TBCT REQS

Description: The MAX TBCT REQS field indicates the maximum valid transfer requests accepted per 10 second intervals.

Software Release: 5E13 and later
Default: 0
Valid Entries: Blank (for no limit), 0 - 500

2.9 TBCT SERV GRP

Description: The TBCTSERVGRP field indicates the TBCT service group number to which this PRI group is assigned.

Software Release: 5E13 and later

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Valid Entries: Blank, 1 - 99999

Data Rules:

A maximum of 100 PRIGRP forms are allowed in a TBCT SERV GRP.

In order to be in the same TBCT SERV GRP, SM in ROW 1 of the FACILITY LIST must be the same for all PRIGRP forms.

2.10 NOTIFY CTRL

Description: Should the controller be notified of the clearing of a transferred call?

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY CTRL is "Y", TBCT ACTIVE must be "Y".

The ACT field for SFID 214 must be set to "Y" on the SFSYS form before the NOTIFY CTRL can be set to "Y" on the PRIGRP form.

FACILITY LIST (FACLIST)

The following fields (Section 2.11 - Section 2.16) define the facilities (T1s) that may be assigned to a PRI Group. If any D-channel or B-channel trunk member is added to the PRI, the corresponding equipment number (the combination of SM, DLTU, DFI and FAC) must exist on this list. When a facility list row is entered, all facility list items must be entered for that row. SM, DLTU, DFI and FAC combinations must also be unique. The SM, DLTU, DFI and FAC combination must be defined on a EQDUP form (5730 Record) as SM, DLTU and DFI PACK NBR, and FAC IND, respectively.

For 5E10 and later, the DLTU, DFI and FAC fields have been replaced with the EQUIPMENT field. This modification allows the assignment of DNU-S facilities to a PRI group.

2.11 SM

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

Data Rules:

The SM value must be the same for all facilities in the list.

For 5E9 and later, each value of SM entered on the FACILITY LIST must have a corresponding EQIM form with the same SM value where the value entered for EQSTATUS is "O" and the value entered for CONFIGURATION supports Primary Rate Interface groups.

2.12 DLTU

Description: Enter the Digital Line/Trunk Unit number.

Software Release: 5E9(2) and earlier
Valid Entries:
- 5E14 and earlier: 0 - 5
- 5E15 and later: 0 - 11

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Data Rules:

The DLTU, DFI and FAC combination must be unique for each row within that PRI group.

2.13 DFI

Description: Enter the Digital Facility Interface pack number.

Software Release: 5E9(2) and earlier
Valid Entries: 1 - 10.

Data Rules:

The DLTU, DFI and FAC combination must be unique for each row within that PRI group.

2.14 FAC

Description: Enter the Facility number. FAC 0 is for channels 1-24 and FAC 1 is for channels 25-48.

Software Release: 5E9(2) and earlier
Valid Entries: 0 - 1

Data Rules:

If a PRI group is assigned, at least one facility must be assigned. The DLTU, DFI and FAC combination must be unique for each row within that PRI group.

When FAC is 0, DFI USAGE on the EQDUP form (5730 Record) for FAC 0 must be "TRUNK" and EQUIPMENT STATUS must be "O".

When FAC is 1, DFI USAGE on the EQDUP form for FAC 1 must be "TRUNK" and EQUIPMENT STATUS must be "O".

2.15 EQUIPMENT

Description: Enter the Equipment Number. The EQUIPMENT field is used to specify the equipment number (composite equipment number consisting of Equipment Type and Equipment Number). Enter EQUIPMENT in the following format:

Software Release: 5E10 and later
Valid Entries:

Valid Equipment Type Entries

Entry	Definition
DLTU	Digital Trunk Equipment Number for PRI
DNUS	Networking Equipment Number
OIU	Optical Interface Unit
PLTU	PCT Line/Trunk Unit Equipment
VIRT	Virtual Equipment.

If Equipment Type is set to "DLTU", this Equipment Number consists of:

Equipment Number, Type DLTU

Equipment		Format	Valid Entries
Digital Line Trunk Unit	DLTU	X	0 - 5 (5E14 and earlier)
		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	01 - 10
Facility	FAC	X	0 - 1

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If Equipment Type is set to "DNUS", this Equipment Number consists of:

Equipment Number, Type DNUS - 5E12 and earlier

Equipment		Format	Valid Entries
Digital Networking Unit - SONET	DNUS	X	0 - 7
Data Group	DG	X	0 - 1
Synchronous Transport Signal number	STS	X	0 - 5
Virtual Tributary	VT	XX	01 - 28

Equipment Number, Type DNUS - 5E13 and later

Equipment		Format	Valid Entries
Digital Networking Unit - SONET	DNUS	X	0 - 7
Data Group	DG	X	0 - 1
Synchronous Termination Equipment number	STE	X	1 - 6
Synchronous Transport Signal number	STS	X	1
Virtual Tributary Group	VTG	X	1 - 7
Virtual Tributary Member	VTM	X	1 - 4

When OE TYPE is "O", the OIU Equipment Number consists of:

OE NUMBER, TYPE "O" - (5E16(2) and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
ProtectionGroup	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

Data Rules:

SM and EQUIPMENT combinations in FACILITY LIST must be unique.

When EQUIPMENT Type or EQUIPMENT Number is entered, both must be entered.

For 5E10 and later, when the PRIGRP forms have FACILITY LIST entries assigned, with EQUIPMENT Type of "DLTU". The SM/EQUIPMENT NUMBER[1,1] / EQUIPMENT NUMBER[2,3] entered on the PRIGRP form, must be defined on an EQDUP form as SM/DLTU/DFI PACK NBR.

When EQUIPMENT NUMBER[4,4] on the PRIGRP form is 0, then under the FAC 0 header on the EQDUP form DFI USAGE must be "TRUNK" and EQUIPMENT STATUS must be "O".

When EQUIPMENT NUMBER[4,4] on the PRIGRP form is 1, then under the FAC 1 header on the EQDUP form DFI USAGE must be "TRUNK" and EQUIPMENT STATUS must be "O".

For 5E10 and later, PRI GROUPs assigned on TRUNK forms must be defined on a PRIGRP form. When EQUIPMENT TYPE is "DLTU", the corresponding six left most digits of DEN on the TRUNK form must be entered in the PRIGRP form FACILITY LIST as SM | EQUIPMENT NUMBER[1,1] | EQUIPMENT NUMBER[2,3] respectively.

When the two right-most digits of DEN, entered on the TRUNK form, are 1-24 then the corresponding EQUIPMENT NUMBER[4,4] entry on the PRIGRP form must be 0.

When the two right-most digits of DEN, entered on the TRUNK form, are 25-48 then the corresponding EQUIPMENT NUMBER[4,4] entry on the PRIGRP form must be 1.

- ***NOTE:*** An asterisk (*) preceding a DEN specifies that it was generated automatically from the TRUNK form because QTY was greater than 1.

For 5E13 and later, for EQUIPMENT TYPE of "DNUS", the SM, EQUIPMENT NUMBER[1,1], EQUIPMENT NUMBER[2,2], EQUIPMENT NUMBER[3,3], EQUIPMENT NUMBER[4,4], EQUIPMENT

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NUMBER[5,5], EQUIPMENT NUMBER[6,6], entered on the the PRIGRP form must be defined on an EQVT form as SM, DNUS, DATA GROUP, STE, STS, VT GROUP AND VT MEMBER, respectively and VT EQSTAT and DS1S EQSTAT must both be "O".

For 5E16 and later, when EQUIPMENT is "VIRT", SERV TYPE must be "CFS" on the ENETLINK form (5827 Record) for SM of the EQUIPMENT number.

For 5E16 and later, EQUIPMENT number with type "OIU" must be unique.

For 5E16 and later, when EQUIPMENT is "OIU", the SM number must have a matching OIU SM, OIU, PROTECTION GRP, HVC, VT GROUP, and VT MEMBER defined on the EQLVC form (5764 Record).

2.16 INTERFACE ID

Description: Enter the Interface Identifier.I NTERFACE ID is not used for Custom PRI message exchange but is provided on this form for data consistency with National ISDN PRIs. It is recommended that 0 be entered for Custom PRIs.

For Standard PRIs, INTERFACE ID is used in message exchange and the assignment of interface IDs per facility must be exactly the same at the switch at the other end of the PRI.
Valid Entries: 0 - 127.

Data Rules:

The INTERFACE ID must be unique for each row within that PRI group.

```
SCREEN 1 OF 2                5ESS Switch
prigrp                OFFICE DATA ADMINISTRATION
(5211)                   PRI GROUP ASSIGNMENT

*1. PRI GROUP   ____              TBCT SERVICE PARAMETERS
#2. PRI TYPE    ______          5. TBCT ACTIVE    N
                             6. MAX ACT TBCT   0
STD PRI PARAMETERS             7. MAX TBCT REQS  0
 3. B CHAN SERV _              8. TBCT SERV GRP  _____
 4. STD NSF IE  _              9. NOTIFY CTRL    N

  D-CHANNEL INFORMATION
  DCHN DESG   TGN   MEMB NBR
```

```
SCREEN 2 OF 2                5ESS Switch
prigrp                OFFICE DATA ADMINISTRATION
(5211)                   PRI GROUP ASSIGNMENT

                    10. FACILITY LIST (FACLIST)
 ROW  SM    EQUIPMENT    INTERFACE ID   ROW  SM    EQUIPMENT    INTERFACE ID
  1   ___   ____   ______    ___         11   ___   ____   ______    ___
  2   ___   ____   ______    ___         12   ___   ____   ______    ___
  3   ___   ____   ______    ___         13   ___   ____   ______    ___
  4   ___   ____   ______    ___         14   ___   ____   ______    ___
  5   ___   ____   ______    ___         15   ___   ____   ______    ___
  6   ___   ____   ______    ___         16   ___   ____   ______    ___
  7   ___   ____   ______    ___         17   ___   ____   ______    ___
  8   ___   ____   ______    ___         18   ___   ____   ______    ___
```

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9 ___ ____ _____ ___ 19 ___ ____ _____ ___
10 ___ ____ _____ ___ 20 ___ ____ _____ ___

Figure 1 SAMPLE PRIGRP FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 2N: 5212 RECORD
CALLING PARTY NUMBER
SCREENING RANGES FORM - SCRNRNG

1. GENERAL

The 5212 Record is available in 5E6 and later Software Releases. It is used to define ranges of valid telephone numbers which are used to screen CPNs (Calling Party Numbers) delivered over PRIs (Primary Rate Interfaces).

A CO (Central Office) may receive CPNs over a PRI interface from a PBX or other CPE (Customer Premise Equipment). These CPNs are screened to determine if a valid CPN was sent by the PBX or CPE. A CPN must fall within one of the defined SCREENING RANGES to pass screening. A CPN not in one of the defined SCREENING RANGES will fail screening.

To indicate that CPNs received from a PBX or CPE should be screened, the CPN SCRN field should be set to "Y" on the TKGRP form (5202 Record) for the PRI. The PBX/CPE ID value on the TKGRP form above is used as the key to this SCRNRNG form.

It should be noted that the far-end office may not send the CPN in the full 10-digit NPANXXXXXX form (i.e., NPA or NXX may not be included). For administrative purposes, the NPA CODE and OFFICE CODE fields of the NOC (Normalized Office Code) form (5501 Record) should be entered to prevent unintended screening failures.

For a further discussion of the CPN screening feature and its options, consult the CPN SCRN, CPN DISC and MAIN DN fields on the TKGRP form (5202 Record). Additionally, a list of PBX/CPE IDs, the trunk groups that use them, and an indicator identifying whether or not screening has been selected can be obtained from thePBXID form (5213 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 7.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PBX/CPE ID

Description: This field contains the numerical identifier for a PBX or other CPE (Customer Premise Equipment) for which CPN (Calling Party Number)/RN (Redirect Number)/OCN (Original Called Number) screening is to be done.
Valid Entries: 1 - 4095

SCREENING RANGES

This 20-element list contains four fields, NPA, NXX, LOW and HIGH. These fieldsSection 2.3 - Section 2.6 are used to define up to 20 valid phone number ranges. Each SCREENING RANGE spans on one NPA-NXX, and is delimited by the LOW and HIGH boundary fields (inclusive). A range defined as:

NPA	NXX	LOW	HIGH
312	555	4123	7568

will define the telephone numbers (312) 555-4123 through and including (312) 555-7568 as CPNs that will pass screening.

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Two SCREENING RANGES list elements cannot overlap. At least one SCREENING RANGES list element must be entered. Each SCREENING RANGES list element must have all or none of its component fields entered. Within a SCREENING RANGE list element, LOW must be less than or equal to HIGH.

2.3 NPA

Description: Enter the Number Planning Area code for the range. Valid NPAs consist of three digits in the format [2-9] [0-1] [0-9].
Valid Entries: 3 digits

- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

2.4 NXX

Description: Enter the office code for the range. Valid NXXs consist of three digits in the format [2-9] [0-9] [0-9].
Valid Entries: 3 digits

2.5 LOW

Description: Enter the last four digits of the lower boundary TN (inclusive). Values entered for LOW must be less than or equal to values entered for HIGH.
Valid Entries: 4 digits

2.6 HIGH

Description: Enter the last four digits of the higher boundary TN (inclusive).
Valid Entries: 4 digits

SCREEN 1 OF 2 5ESS Switch
scrnrng OFFICE DATA ADMINISTRATION
(5212) CALLING PARTY NUMBER SCREENING RANGES

*1. PBX ID ____

2. SCREENING RANGES

	NPA	NXX	LOW	HIGH		NPA	NXX	LOW	HIGH
1.	___	___	____	____	6.	___	___	____	____
2.	___	___	____	____	7	___	___	____	____
3.	___	___	____	____	8.	___	___	____	____
4.	___	___	____	____	9.	___	___	____	____
5.	___	___	____	____	10.	___	___	____	____

SCREEN 2 OF 2 5ESS Switch _
scrnrng OFFICE DATA ADMINISTRATION
(5212) CALLING PARTY NUMBER SCREENING RANGES

2. SCREENING RANGES

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	NPA	NXX	LOW	HIGH		NPA	NXX	LOW	HIGH
11.	___	___	____	____	16.	___	___	____	____
12.	___	___	____	____	17.	___	___	____	____
13.	___	___	____	____	18.	___	___	____	____
14.	___	___	____	____	19.	___	___	____	____
15.	___	___	____	____	20.	___	___	____	____

Figure 1 SAMPLE SCRNRNG FORM 5E6 - 5E11 SOFTWARE RELEASES

```
scrnrng                    5ESS Switch
SCREEN 1 OF 2              OFFICE DATA ADMINISTRATION
(5212)                CALLING PARTY NUMBER SCREENING RANGES

*1. PBX ID ____

          2. SCREENING RANGES (SCREENINGRANGES)

ROW NPA NXX LOW  HIGH ROW NPA NXX LOW  HIGH ROW NPA NXX LOW  HIGH
 1  ___ ___ ____ ____  6 ___ ___ ____ ____  11 ___ ___ ____ ____
 2  ___ ___ ____ ____  7 ___ ___ ____ ____  12 ___ ___ ____ ____
 3  ___ ___ ____ ____  8 ___ ___ ____ ____  13 ___ ___ ____ ____
 4  ___ ___ ____ ____  9 ___ ___ ____ ____  14 ___ ___ ____ ____
 5  ___ ___ ____ ____ 10 ___ ___ ____ ____  15 ___ ___ ____ ____
```

```
scrnrng                    5ESS Switch        _
SCREEN 2 OF 2              OFFICE DATA ADMINISTRATION
(5212)                CALLING PARTY NUMBER SCREENING RANGES

2. SCREENING RANGES (SCREENINGRANGES)

ROW NPA NXX LOW  HIGH
 16 ___ ___ ____ ____
 17 ___ ___ ____ ____
 18 ___ ___ ____ ____
 19 ___ ___ ____ ____
 20 ___ ___ ____ ____
```

Figure 2 SAMPLE SCRNRNG FORM 5E12 SOFTWARE RELEASE

```
scrnrng                    5ESS Switch
SCREEN 1 OF 2              OFFICE DATA ADMINISTRATION
(5212)                CALLING PARTY NUMBER SCREENING RANGES

*1. PBX/CPE ID ____

          2. SCREENING RANGES (SCREENINGRANGES)

ROW NPA NXX LOW  HIGH ROW NPA NXX LOW  HIGH ROW NPA NXX LOW  HIGH
```

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1 ___ ___ ____ ____ 6 ___ ___ ____ ____ 11 ___ ___ ____ ____
2 ___ ___ ____ ____ 7 ___ ___ ____ ____ 12 ___ ___ ____ ____
3 ___ ___ ____ ____ 8 ___ ___ ____ ____ 13 ___ ___ ____ ____
4 ___ ___ ____ ____ 9 ___ ___ ____ ____ 14 ___ ___ ____ ____
5 ___ ___ ____ ____ 10 ___ ___ ____ ____ 15 ___ ___ ____ ____

scrnrng 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5212) CALLING PARTY NUMBER SCREENING RANGES

2. SCREENING RANGES (SCREENINGRANGES)

ROW NPA NXX LOW HIGH
16 ___ ___ ____ ____
17 ___ ___ ____ ____
18 ___ ___ ____ ____
19 ___ ___ ____ ____
20 ___ ___ ____ ____

Figure 3 SAMPLE SCRNRNG FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 2O: 5213 RECORD
PBX ID ASSIGNMENT RECORD

1. GENERAL

The 5213 Record is an output-only record available with 5E6 and later Software Releases. It is used to display which PBX IDs (Identifiers) have been used, the Trunk Groups that have been assigned these PBX IDs and whether or not CPN screening is being done on the assigned Trunk Groups.

All data for the 5213 Record is entered on the TKGRP form (5202 Record). Further information on the fields used in this record is contained in the TKGRP form.

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

The Base and Control Number and Office Name are specified on each record.

2.2 PBX ID

Description: This field contains the numerical identifier for a PBX or other CPE (Customer Premise Equipment) for which CPN (Calling Party Number) screening is to be done.
Valid Entries: 1 - 4095

2.3 TGN

Description: This field contains the Trunk Group Number which was assigned the PBX ID.
Valid Entries: 1 - 2000

2.4 CPN SCRN

Description: This field indicates whether or not CPNs will be screened for PRIs.
Valid Entries: Y, N

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SEC. 2P: 5214 RECORD
LEASED NETWORK ARS GROUP
DEFINITION RECORD - LNARSGD

1. GENERAL

The 5214 Leased Network ARS Group Definition Record is available with 5E6 and later Software Releases. It defines a Leased Network Group, listing all ARS customers that belong to the Leased Network.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * LN GROUP

Description: The LN GROUP name defines a set of ARS Groups that share a Trunk Group, in particular, an LN CCS7 interoffice trunk group.

Required Field.
Valid Entries: 1 - 8 characters.

2.3 ARGPNAME

Description: The ARS Group ID list consists of up to 100 internal ARS Group IDs. The internal ARS Group ID list must contain at least one but no more than one hundred entries. Each entry must be unique.
Valid Entries: 1 - 8 characters

Data Rules:

An ARGPNAME entered on the LNARSGD form must be defined on the ARSGPA form (5608-2 Record) with the LN CUST ID entered.

SCREEN 1 OF 2 5ESS Switch
lnarsgd OFFICE DATA ADMINISTRATION
(5214) LEASED NETWORK ARS GROUP DEFINITION

*1. LN GROUP BUSNET
2. ARGPNAME

1. ACME	11. _____	21. _____	31. _____	41. _____
2. FIDELITY	12. _____	22. _____	32. _____	42. _____
3. MICROENG	13. _____	23. _____	33. _____	43. _____
4. _____	14. _____	24. _____	34. _____	44. _____
5. _____	15. _____	25. _____	35. _____	45. _____
6. _____	16. _____	26. _____	36. _____	46. _____
7. _____	17. _____	27. _____	37. _____	47. _____
8. _____	18. _____	28. _____	38. _____	48. _____
9. _____	19. _____	29. _____	39. _____	49. _____

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10. _____ 20. _____ 30. _____ 40. _____ 50. _____

SCREEN 2 OF 2 5ESS SWITCH _
lnarsgd OFFICE DATA ADMINISTRATION
(5214) LEASED NETWORK ARS GROUP DEFINITION

2. ARGPNAME

51. _____	61. _____	71. _____	81. _____	91. _____
52. _____	62. _____	72. _____	82. _____	92. _____
53. _____	63. _____	73. _____	83. _____	93. _____
54. _____	64. _____	74. _____	84. _____	94. _____
55. _____	65. _____	75. _____	85. _____	95. _____
56. _____	66. _____	76. _____	86. _____	96. _____
57. _____	67. _____	77. _____	87. _____	97. _____
58. _____	68. _____	78. _____	88. _____	98. _____
59. _____	69. _____	79. _____	89. _____	99. _____
60. _____	70. _____	80. _____	90. _____	100. _____

Figure 1 SAMPLE LNARSGD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 2Q: 5271-4 RECORD
RECORDED ANNOUNCEMENT FUNCTION - RAF

1. GENERAL

The 5271-4 Record is an output-only record and is available with the 5E4(2) and later Software Releases. It shows the RAF (Recorded Announcement Function) equipment location for each member of an announcement trunk group. This record must be referred to when assigning trunks to RAF circuits on the TRUNK form (5204 Record). The Trunk Classes (TRKCLS field on the TKGRP form) for announcement trunks connecting to RAF circuits are "RAFANNC", "RAFCTR" or "RAFDTA".

A RAF equipment location consists of:

RAF			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
RAF Unit Number	□	X	0 - 7
RAF Circuit Number	□	XX	00 - 31

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field contains the Base and Control Number and Office Name on each record.

2.2 SM

Description: This field contains the Switching Module number, which is defined on an EQIM form (5700 Record).
Valid Entries: 1 - 192

2.3 RAF UN

Description: This field contains the Recorded Announcement Function Unit number.
Valid Entries: 0 - 7

2.4 DATA GROUP

Description: This field contains the Data Group Number.
Valid Entries: 0 or 1

2.5 PATTERN

Description: This field contains the stuffing pattern assigned. A value is designated in this field if the RAF TYPE is "CTR" or "DTA". When the RAF TYPE is "ANN", this field is blank.

A stuffing pattern is a mechanism to economize on time slots since not all 32 time slots associated with a PIDB are utilized. DTA/CTR RAFs use less than two-thirds of the time slots associated with their PIDBs and can, therefore, take advantage of stuffing. When three DTA/CTR RAFs exist on the same SM and Data Group, and each RAF uses a different stuffing pattern, two PIDBs worth of time slots are used instead of three.

Channel Assignments for DSU2-RAF DTA Announcement Ports:

CHANNELS
0 1 2 3
SP 01234567890123456789012345678901

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□□□□□□□□□□□□----------□
A 00110110110110110110110110110110
B 01011011011011011011011011011010
C 01101101101101101101101101101100

The 1 represents a channel assignment that is allowed and a 0 represents a channel assignment that is not allowed.
Valid Entries: A, B, C

2.6 CHANNEL NUMBER

Description: This field contains the RAF Channel Number.
Valid Entries: 0 - 31

2.7 RAF TYPE

Description: This field contains the RAF Service Type.

Valid RAF TYPE Entries

Entry	Definition
ANN	Announcement Service using 32 channels.
CTR	Coin Tone Receiver using 20 channels.
DTA	Dial Through Announcement Service using 20 channels.

2.8 TRUNK GROUP

Description: This field contains the Trunk Group number.
Valid Entries: 1 - 2000

2.9 TRUNK MEMBER

Description: This field contains the Trunk Group Member number.
Valid Entries: 0 - 1951

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SEC. 2R: 5215 RECORD
UTILITY TELEMETRY TRUNK GROUP FORM - UTTKGRP

1. GENERAL

The 5215 Record is available with the 5E9(2) and later Software Releases. This record is used to define the parameters for a Utility Telemetry Trunk Group.

This form is used for the Suppressed Ringing secured feature. For more information on this feature, see Division 2, Section 4A186.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 (*) TGN

Description: Enter the Trunk Group Number.

Software Release: 5E9(2) and later
Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

When TGN is defined on this form, a TKGRP form must be defined with the same TGN and UTT must be "Y" on the TKGRP form.

Before using this form, the Suppressed Ringing secured feature must be purchased and the SFID 186 ACT field set to "Y" on the SFSYS form (5713-1 Record).

2.3 CTI DIG

Description: Enter the call type information digit off-hook TIU (Telemetry Interface Unit) type.

Software Release: 5E9(2) and later
Required Field.
Default: 70
Valid Entries: 00 - 99

2.4 ST

Description: Enter the ringing duration in milliseconds for a start pulse digit.

Software Release: 5E9(2) and later
Required Field.
Default: 0
Valid Entries: 0 - 999

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2.5 STP

Description: Enter the ringing duration in milliseconds for a start pulse prime digit.

Software Release: 5E9(2) and later
Required Field.
Default: 50
Valid Entries: 0 - 999

2.6 ST2P

Description: Enter the ringing duration in milliseconds for a start pulse prime 2 digit.

Software Release: 5E9(2) and later
Required Field.
Default: 100
Valid Entries: 0 - 999

2.7 MAX CALL TIME

Description: Enter the maximum call time duration in seconds.

Software Release: 5E9(2) and later
Required Field.
Default: 20
Valid Entries: 1 - 999 seconds

---

uttkgrp 5ESS Switch _
(5215) OFFICE DATA ADMINISTRATION
UTILITY TELEMETRY TRUNK GROUP

*1. TGN ____
2. CTI DIG 70
3. ST 0
4. STP 50
5. ST2P 100
6. MAX CALL TIME 20

Figure 1 SAMPLE UTTKGRP FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 2T: 5217 RECORD
CALL INSTANCE CODE DISTRIBUTION FORM - CICDIST

1. GENERAL

The 5217 Record is available with the 5E15 and later Software Releases. The CICDIST (Call Instance Code Distribution) form specifies SM2000 (Switching Module 2000) modules in an office for CIC block distribution.

This form is used for the ATM Global Routing and Signaling secured feature which is available with 5E15 Feature Release 1. For more information on this feature, see Division 2, Section 4A567.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.70.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: Key for the form.

Software Release: 5E15 and later
Required Field.
Default: 1
Valid Entries: 1

Data Rules:

Key must be 1 for this form.

CIC DISTRIBUTION (CICDIST)

These fields are used to specify SM-2000 modules in an office for CIC (Call Instance Code) block distribution.

2.3 SM2K MODULE

Description: CICDIST is a list of up to 23 SM2000s in the office. The service provider must specify the SM2000 modules over which CICs are to be distributed.

Software Release: 5E15 and later
Required Field.
Valid Entries: Blank, or 1 - 192

Data Rules:

At least 1 SM2000 MODULE number in the CIC DISTRIBUTION list must be entered.

SM2000 MODULES in CIC DISTRIBUTION list must be unique.

The CICDIST form can only be entered when the ACT field for SFID 567 is set to "Y" on the SFSYS form (5713 Record).

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Each SM2000 MODULE entered on the CICDIST form must also be defined on the EQIM form (5700 Record) with CONFIGURATION set to "SM2000".

When the CICDEF form is entered, at least one SM2000 MODULE must be provisioned for CIC distribution on the CICDIST form.

2.4 INH DIST

Description: This field indicates whether or not an SM-2000 should use the CIC (Call Instance Code) Redistribution process. This field was added to support the BICC (Bearer Independent Call Control) Static CIC Allocation feature. For more information on this feature, see Division 2, Section 7BF.

Software Release: 5E16 and later
Valid Entries: Y, N

When INH DIST is entered, SM2K MODULE must also be entered.

INH DIST must be "N" for at least one SM2K MODULE.

LTG CIC DISTRIBUTION (LTGCICDIST)

The LTG (Large Terminal Growth) CIC (Call Instance Code) DISTRIBUTION section is a list of up to 23 SM-2000 switching modules in the office over which CICs are distributed. This list is no display and is used only during Large Terminal Growth.

2.5 SM2K MODULE

Description: The SM2K MODULE is a no change field which specifies the SM-2000 modules over which CICs are to be distributed. This field was added to support the Large Terminal Growth for IVTOA (Integrated Voice Telephony Over ATM (Asynchronous Transfer Mode) feature. (For more detailed information on this feature, see Division 2, Section 1CO.

Software Release: 5E15 and later

```
cicdist                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5217)           CALL INSTANCE CODE (CIC) DISTRIBUTION

*1. KEY 1        2. CIC DISTRIBUTION (CICDIST)
              SM2K      SM2K      SM2K      SM2K
           ROW MODULE ROW MODULE ROW MODULE ROW MODULE
            1  ___    7  ___   13  ___   19  ___
            2  ___    8  ___   14  ___   20  ___
            3  ___    9  ___   15  ___   21  ___
            4  ___   10  ___   16  ___   22  ___
            5  ___   11  ___   17  ___   23  ___
            6  ___   12  ___   18  ___
```

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```
cicdist                  5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5217)          CALL INSTANCE CODE (CIC) DISTRIBUTION

LTG CIC DISTRIBUTION (LTGCICDIST)
SM2K   SM2K   SM2K   SM2K
MODULE  MODULE  MODULE  MODULE
 ___    ___    ___    ___
 ___    ___    ___    ___
 ___    ___    ___    ___
 ___    ___    ___    ___
 ___    ___    ___    ___
 ___    ___    ___
```

Figure 1 SAMPLE CICDIST FORM 5E15 SOFTWARE RELEASE

```
cicdist                  5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5217)          CALL INSTANCE CODE (CIC) DISTRIBUTION

*1. KEY 1
            2. CIC DISTRIBUTION (CICDIST)
   SM2K  INH     SM2K  INH     SM2K  INH     SM2K  INH
ROW MODULE DIST ROW MODULE DIST ROW MODULE DIST ROW MODULE DIST
 1  ___   _    7  ___   _   13  ___   _   19  ___   _
 2  ___   _    8  ___   _   14  ___   _   20  ___   _
 3  ___   _    9  ___   _   15  ___   _   21  ___   _
 4  ___   _   10  ___   _   16  ___   _   22  ___   _
 5  ___   _   11  ___   _   17  ___   _   23  ___   _
 6  ___   _   12  ___   _   18  ___   _
```

```
cicdist                  5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5217)          CALL INSTANCE CODE (CIC) DISTRIBUTION
```

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LTG CIC DISTRIBUTION (LTGCICDIST)
SM2K MODULE SM2K MODULE SM2K MODULE SM2K MODULE
___ ___ ___ ___
___ ___ ___ ___
___ ___ ___ ___
___ ___ ___ ___
___ ___ ___ ___
___ ___ ___

Figure 2 SAMPLE CICDIST FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 2U: 5218 RECORD
BICC GRP CIC DEFINITION FORM - CICDEF

1. GENERAL

The 5218 Record is available with the 5E15 and later Software Releases. The BICC (Bearer Independent Connection Control) Group CIC (Call Instance Code) Definition form is used to populate ATM packet CICs for a BICC group.

This form is used for the ATM Global Routing and Signaling secured feature which is available with 5E15 Feature Release 1. For more information on this feature, see Division 2, Section 4A567.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.72.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * BICC GRP

Description: The BICC GRP field is used to designate the bearer channel which carries voice calls over the packet switched network to a given destination.

Software Release: 5E15 and later
Required Field.
Valid Entries: 7000 - 7999

Data Rules:

Each BICC GRP entered has to be defined as a TGN on the TKGRP form (5202 Record)

2.3 # BASE CIC

Description: The BASE CIC field is used to indicate the base call instance code.

Software Release: 5E15 and later
Required Field.
Valid Entries: 1 - 4294967039 (up to 10 digits)

2.4 # TOTAL CICS

Description: The TOTAL CICS field is used to indicate the number of CICs to be allocated for the BICC GRP.

Software Release: 5E15 and later
Required Field.
Valid Entries: 256 - 65536, in multiples of 128

Data Rules:

TOTAL CICS entered cannot exceed the maximum number of CIC blocks for an office (131072).

WARNING: The maximum number of CIC blocks per SM-2000 module cannot exceed 6000. CIC blocks are displayed on the CICDEF form, where the number of blocks is TOTAL CICS/128. The SM-

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2000 modules are defined on the CICDIST form (5217 Record).

```
cicdef                    5ESS Switch
                    OFFICE DATA ADMINISTRATION
(5218)                BICC GRP CIC DEFINITION

*1. BICC GRP     ____
#2. BASE CIC     __________
#3. TOTAL CICS   _____
   TOT CIC BLKS ___
```

Figure 1 SAMPLE CICDEF FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 2X: 5275 RECORD
BLOCKED TRUNK GROUP ASP FCD CODES - TKBLKCD

1. GENERAL

The 5275 Record is available with 5E15 and later Software Releases, and provides private facility trunk groups the capability of blocking selected (unrestricted FCD) triggers by those users who show no interest in using specific services and do not want to access them by inadvertently dialing the trigger code. This form was added to support the ASP Unrestricted FCD Trigger feature. See Division 2, Section 4A572 for more information.

The TKBLKCD form is used by the secured feature ASP Unrestricted FCD Trigger (SFID 572). Therefore, when the TKBLKCD form is used, the ACT field for SFID 572 on SFSYS form must be set to "Y".

1.1 Recent Change View

The corresponding Recent Change Views for this form is 5.65.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number for which certain ASP FCD codes will be blocked.
Valid Entries: Enter 1 - 4000

Data Rules:

When TGN is entered, at least one FCD CODE must be entered.

When URT FCD BLK is "Y" on the TKGRP form, then the corresponding TGN cannot be used on the TKBLKCD form.

When TGN field is entered on the TKBLKCD form, the same TGN must be entered on the TKGRP form and have TRKCLS of "PF", "PFITT" or "PFLASH".

BLOCKED CODES LIST

Field Section 2.3 refers to the BLOCKED CODES LIST, consisting of up to 32 FCD triggers.

2.3 FCD CODE

Description: Enter the ASP unrestricted FCD code to be blocked.
Valid Entries: Enter Blank, or 1 to 7 dialable digits (0 - 9,* or #). If # or * are entered as single characters, they must be preceded by a space.

Data Rules:

At least one FCD CODE must be entered.

FCD CODE must be unique in BLOCKED CODES LIST.

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OFFICE DATA ADMINISTRATION
(5275) BLOCKED TRUNK GROUP ASP FCD CODES

*1. TGN ____

2. BLOCKED CODES LIST (BLKCODESLIST)

FCD ROW CODE	FCD ROW CODE	FCD ROW CODE	FCD ROW CODE	FCD ROW CODE	FCD ROW CODE
1 _____	7 _____	13 _____	19 _____	25 _____	31 _____
2 _____	8 _____	14 _____	20 _____	26 _____	32 _____
3 _____	9 _____	15 _____	21 _____	27 _____	
4 _____	10 _____	16 _____	22 _____	28 _____	
5 _____	11 _____	17 _____	23 _____	29 _____	
6 _____	12 _____	18 _____	24 _____	30 _____	

Figure 1 SAMPLE TKBLKCD FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 2Y: 5221 RECORD
LTG TO PRESERVE SM2K AND CADN FOR BICC - LTGPCI

1. GENERAL

The 5221 Record is available with the 5E15 and later Software Releases. The LTGPCI (Large Terminal Growth to Preserve SM2K and CADN (Call Instance Block Circuit Administration) for BICC (Bearer Independent Call Control Group)) form preserves the SM2K and CADN values during the LTG (Large Terminal Growth) for IVOTA (Integrated Voice and Telephony Over ATM (Asynchronous Transfer Mode)) data.

This form is used for the Large Terminal Growth for IVTOA feature which is available with 5E15 Feature Release 4. For more information on this feature, see Division 2, Section 1CO.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.75.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *BICC GRP

Description: As of the 5E16(2) release, the BICC GRP field is replaced with PKT GRP field. See the PKT GRP field on this form for usage information.The BICC (Bearer Independent Call Control Group) field specifies the bearer channel that carries traffic over the packet ATM network.

Software Release: 5E15 - 5E16(1)
Required Field.
Valid Entries: 7000 - 7999

2.3 *PKT GRP

Description: The PKT GRP field indicates the number of packet group that carries traffic over the packet ATM network. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature. This feature is made available in 5E16 Feature Release 3. (See Division 2, Section 7BX.)

Software Release: 5E16(2) and later
Required Field.
Valid Entries: 7000 - 7999

2.4 *BLK INDX

Description: The BLK INDX (Call Instance Code Block Index) field indicates the index number of the CIC (Call Instance Code) block. A CIC block contains 128 CICs.

Software Release: 5E15 and later
Required Field.
Valid Entries: 0 - 511

2.5 SM2K

Description: The SM2K (SM-2000 Switching Module) field indicates the SM-2000 Switching Module on which a given CIC (Call Instance Code) block is distributed. This is a no change field.

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Software Release: 5E15 and later
Valid Entries: 1 - 192

2.6 CADN

Description: The CADN (Call Instance Block Circuit Administration) field indicates the status of the CIC (Call Instance Code) block after switch initialization. This is a no change field.

Software Release: 5E15 and later
Valid Entries:

Valid CADN Entries

Entry	Definition
TMIIS	Put port in-service following a full initialization.
TMIOCB	Put port in OOS/CADN/BLKD (Out of Service/Circuit Administration/Blocked) state after initialization.
TMIOCD	Put port in OOS/CADN/DSBLD(Out of Service/Circuit Administration/Disabled) state after initialization.
TMIOCL	Put port in OOS/CADN/LKDO (Out of Service/Circuit Administration/Locked Out) state after initialization.

ltgpci 5ESS Switch _
OFFICE DATA ADMINISTRATION
LTG TO PRESERVE SM2K AND CADN FOR BICC

*1. BICC GRP ____
*2. BLK INDX ___
SM2K ___
CADN _____

Figure 1 SAMPLE LTGPCI FORM 5E15 - 5E16(1)

ltgpci 5ESS Switch _
OFFICE DATA ADMINISTRATION
LTG TO PRESERVE SM2K AND CADN FOR IVTOA

*1. PKT GRP ____
*2. BLK INDX ___
SM2K ___
CADN _____

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Figure 2 SAMPLE LTGPCI FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 2Z: 5222 RECORD
LTG TO PRESERVE CADN FOR CIC - LTGCADN

1. GENERAL

The 5222 Record is available with 5E15 and later Software Releases. The LTG (Large Terminal Growth) to Preserve CADN (Call Instance Block Circuit Administration) for CIC (Call Instance Code) form preserves the CADN values during the LTG for IVOTA (Integrated Voice and Telephony Over ATM (Asynchronous Transfer Mode)) data.

This form is used for the Large Terminal Growth for IVTOA feature which is available with 5E15 Feature Release 4. For more information on this feature, see Division 2, Section 1CO.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.76.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *BICC GRP

Description: As of the 5E16(2) release, the BICC GRP field is replaced with the PKT GRP field. See the PKT GRP field on this form for usage information. BICC (Bearer Independent Call Control Group) field specifies the bearer channel that carries traffic over the packet ATM network.

Software Release: 5E15 - 5E16(1)
Required Field.
Valid Entries: 7000 - 7999

2.3 *PKT GRP

Description: The PKT GRP (Packet Group Number) field is used to specify the number of packet group that carries traffic over the packet ATM network. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature. This feature is made available in 5E16 Feature Release 3. (See Division 2, Section 7BX.)

Software Release: 5E15 - 5E16(1)
Required Field.
Valid Entries: 7000 - 7999

2.4 *NCIC

Description: The NCIC (Normalized Call Instance Code) field indicates the Bearer Independent Call Control NCIC.

Software Release: 5E15 and later
Required Field.
Valid Entries: 0 - 65535

2.5 CADN

Description: The CADN (Call Instance Code Circuit Administration) field indicates the status of the CIC (Call Instance Code) after switch initialization. This is a no change field.

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Software Release: 5E15 and later
Valid Entries:

Valid CADN Entries	
Entry	**Definition**
TMIIS	Put port in-service following a full initialization.
TMIOCB	Put port in OOS/CADN/BLKD (Out of Service/Circuit Administration/Blocked) state after initialization.
TMIOCD	Put port in OOS/CADN/DSBLD(Out of Service/Circuit Administration/Disabled) state after initialization.
TMIOCL	Put port in OOS/CADN/LKDO (Out of Service/Circuit Administration/Locked Out) state after initialization.

ltgcadn 5ESS Switch _
OFFICE DATA ADMINISTRATION
LTG TO PRESERVE CADN FOR CIC

*1. BICC GRP ____
*2. NCIC _____
CADN _____

Figure 1 SAMPLE LTGCADN FORM 5E15 - 5E16(1)

ltgcadn 5ESS Switch _
OFFICE DATA ADMINISTRATION
LTG TO PRESERVE CADN FOR CIC

*1. PKT GRP ____
*2. NCIC _____
CADN _____

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Figure 2 SAMPLE LTGCADN FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 3: ROUTING AND CHARGING FORMS

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SEC. 3A: 5300-1 RECORD
DIGIT ANALYSIS SELECTOR FORM - DAS

1. GENERAL

The 5300-1 Record is used to define each DAS (Digit Analysis Selector) in a 5ESS Switch. It is intended to be used as an office record and as a source document for data entry into the DAS form.

1.1 Digit Analysis

The DAS is the initial step in the analysis and routing of dialed digits. The DAS is indexed from either a Line Class Code on an LCC form (5306 Record) or a Trunk Group on a TKGRP form (5202-1 Record). The DAS provides one of two outputs: (1) a PDIT and an LDIT, or (2) an INDIT and an LDIT. A description of each follows.

- The PDIT (Prefix/Feature Digit Interpreter Table) is used to interpret Standard Prefixes (0+, 1+), Operator Codes (0- and 010) and Feature Access Codes (72, 73, etc.). For the complete list of codes, see the PDIT form (5300-2 Record).
- The INDIT (Incoming Trunk Preliminary Digit Interpreter Table) is used to interpret digits received from an incoming or two-way Trunk Group. The INDIT is defined on the INDIT form (5309 Record).
- The LDIT (Local Digit Interpreter Table) is used to interpret all codes dialable from local telephones or accessible by Incoming or two-way Trunks. The LDIT is defined on an LDIT form (5300-3 Record).

1.2 Digit Analysis Selector

The DAS (Digit Analysis Selector) may be numbered from 1 - 254. This provides flexibility in routing not only between Rate Centers but also, where tariffed, within a Rate Center. The DAS number is selected based on inputs from a Line Class Code or a Trunk Group.

1.3 Trunk Groups

Certain Trunk Groups may be assigned a LINE Digit Analysis Selector. These Trunk Groups must have a Trunk Class of "PF", "PFLASH", "PFITT", "EDSL" or "EDSLHM". This assignment might be used if it is desired that the incoming trunks have the same digit analysis capabilities as an originating line in this office.

1.4 IDP Digit Analysis

The terminal's (line or trunk) Digit Analysis Selector might be used for subsequent digit analysis if the terminal belongs to an IDP (Individualized Dialing Plan) Group. This option is available as a BRCS feature.

1.5 CCS Trunks

Digit analysis is invoked for incoming CCS (Common Channel Signaling) trunks based on TCM (Traveling Class Mark) information contained in the IAM (Initial Address Message) of the incoming call. For CCIS6 or ISUP7 calls, TCM information is used to determine if the call is in either the Direct Egress or International Outbound routing categories. CCIS6 and ISUP7 calls are those calls originating on trunks with either "CCIS6" or "ISUP7" in the INPULSING field of a TKGRP form (5202 Record), i.e., trunks carrying CCIS6 and ISDN-UP calls.

1.6 Special DAS Values

Specific DAS values exist as of 5E4(2) and later Software Releases. These values must be defined if

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routing other than the routing specified by the incoming trunk is required. Specific DAS values will override the DAS value defined on the TKGRP form. The following lists services and features which require these DAS values:

DAS Value	Service/Feature
81	International outbound. Fully-coded addressing. Used to translate international data calls (CCIS6 and ISUP7).
82	CSDC (Circuit-Switched Data Capability). Dedicated/direct egress for international outbound calls (CCIS6 and ISUP7).
88	Software Release: 5E5 and later. ACP (Action Control Point) in an SDN (Software Defined Network). A 5ESS Switch that is an ACP will use this DAS to determine if a query should be sent to the NCP (Network Control Point) for routing information.
89	Dedicated egress - voice. Used to route SDN and direct connect calls throughout the PSN (Public Switched Network) to a terminating toll switch. At the terminating switch, Dedicated Egress Voice is used to translate SDN and direct connect voice calls and route them to a directly connected PBX, via direct egress, or to a local office, via switched egress (CCIS6 and ISUP7).
90	Dedicated egress - data. Used to route SDN calls through the PSN to a terminating toll switch. At the terminating switch, Dedicated Egress Data is used to translate the SDN data call and route it to a directly connected PBX, via direct egress, or to a local office, via switched egress (CCIS6 and ISUP7).
91	64 KB Clear - Single Circuit. Voice or data (ISUP only).
92	64 KB Restricted - Single Circuit. Restricted to data only (ISUP7 only).
97	Dedicated Egress - Voice - CCS7 Preferred. Required for Alliance Teleconferencing (ISUP7 only).
98	Dedicated Egress - Data - CCS7 Preferred, 56 kbps (ISUP7 only).

If any trunks are assigned an INPULSING or OUTPULSING of "ISUP7" on the TKGRP form, then DAS values 81, 82, 89, 90, 91, 92, 97 and 98 must be defined on this form.

If any trunks are assigned an INPULSING or OUTPULSING of "CCIS6" on the TKGRP form, then DAS values 81, 82, 89 and 90 must be defined on this form.

1.7 Foreign Area Translator

For 5E6 and later Software Releases, operating companies can make use of a FAT (Foreign Area Translator) LDIT during digit analysis. The FAT/LDIT performs further digit analysis on LDITs that are interpreting common dialed or inpulsed digit strings.

The LINE DAS LOCAL DIT or TRUNK DAS LOCAL DIT values assigned on this DAS form cannot equal the LDIT value assigned on a SMLDIT form (5315 Record) where FAT = "Y". In other words, an LDIT defined as a FAT/LDIT cannot be assigned to a DAS. FAT/LDITs can only be pointed to by other LDITs. For more information concerning the implementation and use of the FAT/LDIT see Division 2, Section 1AO.

1.8 Recent Change View

The corresponding Recent Change View for this form is 9.1

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * DIGIT ANALYSIS SELECTOR

Description: Enter the Digit Analysis Selector number.
Valid Entries:

For 5E14 and earlier: 1 - 99

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For 5E15 and later: 1 - 254

LINE DAS

Complete this section (fields Section 2.3 - Section 2.4) if the Digit Analysis Selector is indexed from a Line Class Code. When the LINE DAS section is completed, the TRUNK DAS section must be blank.

2.3 PREFIX/FEATURE DIT

Description: The PDIT (Prefix/Feature Digit Interpreter Table) is used to define Standard Prefixes (0+, 1+), Operator Codes (0- and 010) and Feature Access Codes (72, 73, etc.). At least one PDIT is required in every 5ESS Switch which has lines. When a 1 is entered in these columns, the ODA system will provide standard Prefix/Feature Digit Interpreter Table data.
Valid Entries: 1 - 999

2.4 LOCAL DIT

Description: Enter the LDIT (Local Digit Interpreter Table) number. The LDIT defines all codes that are dialable by local lines or accessible by Incoming or two-way Trunks.
Valid Entries: 1 - 999

Data Rules:

The LDIT must be defined on an LDIT form (5300-3 Record) and/or on an IDDD form (5307 Record).

TRUNK DAS

Complete this section (fields Section 2.5 - Section 2.6) if the Digit Analysis Selector is indexed from an Incoming or two-way Trunk Group. When the TRUNK DAS section is completed, the LINE DAS section must be blank.

2.5 INC. TRUNK PRELIMINARY DIT

Description: Enter the INDIT (Incoming Trunk Preliminary Digit Interpreter Table) number. The INDIT defines the type of routing to be used for incoming trunk calls.
Valid Entries: 1 - 999

2.6 LOCAL DIT

Description: Enter the LDIT (Local Digit Interpreter Table) number. These columns are normally used for Local Tandem Trunks which inpulse 7 or 10 digits. The same LDIT used for a Line DAS may be used.
Valid Entries: 1 - 999

Data Rules:

When the TRUNK DAS section is specified, an Incoming Trunk Preliminary DIT entry is required along with a Local DIT entry.

2.7 PKT SW

Description: This is a Recent Change only field and indicates whether this DAS is used for packet switching.

2.8 ESCO

Description: Emergency Service Central Office Number. This field identifies the originating office or

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calling area of an E911 caller. It is used to retrieve an ESN (Emergency Service Number) which, in turn, determines routing to the proper emergency bureau.

Software Release: 5E7 and later
Valid Entries: 1 - 255

Data Rules:

ESCO must be defined on an ESCO form (5541 Record).

2.9 REMARKS

Description: This field may contain any entries deemed locally necessary.
Valid Entries: 1 - 16 characters

```
das                    5ESS Switch          _
5300-1              OFFICE DATA ADMINISTRATION
                  DIGIT ANALYSIS SELECTOR

 * 1. DIGIT ANALYSIS SELECTOR    01

       2. LINE DAS                    5. TRUNK DAS

   3. PREFIX / FEATURE DIT   001     6. INC. TRUNK PRELIMINARY DIT   ___
   4. LOCAL DIT              001     7. LOCAL DIT                    ___

   8. ESCO   ___
   9. REMARKS LOCAL TRANSLATOR
```

Figure 1 SAMPLE DAS FORM 5E7 - 5E14 SOFTWARE RELEASES

```
das                    5ESS Switch          _
5300-1              OFFICE DATA ADMINISTRATION
                  DIGIT ANALYSIS SELECTOR


 * 1. DIGIT ANALYSIS SELECTOR    ___


       2. LINE DAS                    5. TRUNK DAS

   3. PREFIX / FEATURE DIT   ___     6. INC. TRUNK PRELIMINARY DIT   ___
   4. LOCAL DIT              ___     7. LOCAL DIT                    ___


   8. ESCO   ___
   9. REMARKS _________________
```

Figure 2 SAMPLE DAS FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 3B: 5300-2 RECORD
PREFIX/FEATURE DIGIT INTERPRETER FORM - PDIT

1. GENERAL

The 5300-2 Record is used to define the Prefix/Feature Digit Interpreter in a 5ESS Switch.

The purpose of PDIT is to provide information defining feature and operator access and to provide prefix information for dialed codes which will be analyzed in the LDIT (Local Digit Interpreter Table). Digit analysis for all line originated calls in a 5ESS Switch start in PDIT. At least the first digit of every valid dialable code must be represented in PDIT.

1.1 Initial Data

Standard codes, normally used in an office, are provided by the ODA system for PDIT 001. See Figure 2. This data is provided whenever an office is initialized for a new start or during a retrofit. Once this initial set of data is provided, it may be changed if required.

For a retrofit, the data within a form is not changed. However, if any forms are missing, they will appear again on the new generic side. If an office requires a PDIT that is significantly different from the standard forms, it is recommended that instead of modifying PDIT 001 another PDIT be defined (e.g., 002) for assignment. PDIT 001 may be deleted in its entirety if not assigned in this office.

Codes are added for BRCS (Business and Residence Custom Service) feature access and for CI (Carrier Interconnect).

The codes starting with 10X represent the FGD CACs (Carrier Access Codes) added for the Carrier Interconnect feature. The FGD CAC format is 10XXX or 101XXXX, where XXX or XXXX is the CIC (Carrier Identification Code). The values allowed in the office for the CIC and CAC depend on the value of the FGD PHASE field on the OFCOPT form; the PDIT form is not affected. See the OFCOPT form and Division 2, Section 1BI for more information on the FGD CAC. These numbers will be translated in the Inter-LATA Carrier Feature Record, ICF form (5305 Record), instead of LDIT.

1.2 IDDD Operator Digits

Customers may incorrectly dial 0 + the FGD CAC, (rather than correctly dialing the FGD CAC only) to reach a vendor other then their PIC. For an equal access office which does not use 010 for an IDDD operator, the route index should be the fixed route index to an announcement such as the "VACANT" code announcement.

1.3 Recent Change View

The corresponding Recent Change View for this form is 9.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PDIT

Description: Enter the Prefix/Feature Digit Interpreter Table Number.
Valid Entries: 1 - 999

2.3 * DIGITS TO INTERPRET

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Description: Enter the Prefix/Feature dialed digits.
Valid Entries:
- 1 - 7 digits (0 - 9, *, or #); or
- 10X followed by 1 to 5 digits (0 - 9, *, or #)

Data Rules:

Carrier Interconnect (10X) calls cannot have a CALL TYPE of "IDDDOPR" or "OPRECAL."

When at least one PDIT form is entered with "10X" as the first 3 digits of DIGITS TO INTERPRET, a FIXRT form must be defined with FIXED ROUTE TYPE equal "INV10XX".

DIGITS TO INTERPRET must be greater than 2.

2.4 # CALL TYPE

Description: Enter the PDIT Call Type.

Required Field.

Valid CALL TYPE Entries

Entry	Definition
CICUT	Cut through to carrier. Used for FGD CAC + # dialed calls. Such calls are cut through to the specified carrier based on the carrier specific code index, and Route Index found on the ICF form.
COMB	Combined Feature and LDIT Call Type. Used whenever the specified Digits To Interpret provide access to a feature if dialing stops (4 second timing) or, if dialing continues. The Digits To Interpret less any Digits To Be Deleted will be re-interpreted in the Local Digit Interpreter Table (normally along with additional digits). For example, if Digits 23 are specified as a COMB Call Type with Feature Type SC2 and no digits deleted in the PDIT entry, the LDIT form must contain at least one entry with its initial Digits equal to 23. LDIT will normally have ten such entries, one for each 3-digit code starting with 23. If entered, TYPE OF CI CALL must be "NONCI".
EMER	911 Emergency Service Bureau.
FEATURE	Used for PDIT entries defining Access Codes for features such as Speed Calling, Call Forward Variable Activate, etc. This Call Type is used in two instances. (1) Whenever the feature Access Code is absolutely unambiguous and no further dialed digits are expected. If additional digits are dialed, they will be ignored. (2) Whenever another PDIT entry is specified with starting digits which are the same as the Digits To Interpret in this entry (i.e., When digit interpretation is to be continued in PDIT). For example, if a Feature Call Type is specified for Digit 2 and another PDIT entry is specified with Digits 23, and if dialing stops after the Digit 2, the Feature Type treatment for the Digit 2 PDIT entry will be given. If a digit 3 is dialed following the 2, the Digits 23 PDIT entry will determine the Call Treatment. (The Digits 23 entry will normally be of a Call Type COMB in the USA.)
IDDDOPR	Used for calls to the IDDD Operator (dial 010).
LDIT	Used for an entry with the first digit(s) of a three or six digit code which will be interpreted in the LDIT or as a Country Access Code on the IDDD form (5307 Record). The Digits To Interpret specified on this entry, less any Digits To Be Deleted, will be reinterpreted along with any additional dialed digits in the Local Digit Interpreter Table.
NORMAL	Advanced Services Platform. Used only for ASP triggers (see Division 2, Section 1AP).
OPER	Used for the operator Access Code (e.g. dial 0).
OPRECAL	Used for the operator recall code (dial 110). Operator Recall is used on 0+ calls to recall the operator in order to obtain billing information or to place another call. The operator recall code may only be used by customers with the Three-Way Calling Feature. A customer without Three-Way Calling simply flashes the switchhook and the operator is recalled. A customer with Three-Way Calling flashes the switchhook and then dials the operator recall code, 110.
PSDONE	Indicates a Packet Switching Call which does not need any further digit analysis to determine its destination. PSDONE should be entered if routing can be determined by the RPOA (Recognized Private Operating Agency) or by the first 3 digits of the called number. The TYPE OF CI CALL determines if the call is intraLATA or interLATA.

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Data Rules:

Refer to Figure 1 for dependencies between this field and other fields.

When CALL TYPE is entered, PDIT must be entered and must be greater than 0.

CICUT - When CALL TYPE is "CICUT":

- and TRIG NBR is entered, NATURE OF NBR must not be entered.
- TYPE OF CI CALL must be "CICUT" and PREFIX must be "NONE".
- CODE INDEX must be entered and must be greater than 0.

COMB- When CALL TYPE is "COMB":

- PREFIX must be entered.
- DIGITS TO BE DELETED must be entered.
- DESEP must be 0 or 63.
- FEATURE must be entered.
- ACTION must be entered.
- TYPE OF CI CALL must be "NONCI".
- and ACTION is not "AD1USE" or "AD2USE", DIGITS TO INTERPRET must not be "10X".

EMER - When CALL TYPE is "EMER":

- TYPE OF CI CALL must be "INTRA".
- CODE INDEX must be entered.
- TRIG NBR must be entered.
- ACTION must not be entered.
- FEATURE must not be entered.
- PREFIX must be "NONE".
- TRIG NBR must be entered.
- POLYGRID must be "N".
- DIGITS TO INTERPRET must not be "10X".

PSDONE - This call type is used when no further digit analysis is required. The call routes to the next switch. The following table shows the routing requirements:

CI Call Type	CODE INDEX and ROUTE INDEX	PSDNICRI 5921 Record	RTIDX 5303 Record	TKGRP 5202 Record
PSCAR	Not Applicable	Required	From PSDNICRI 5921 Record	From RTIDX 5303 Record
PSNCI	Required	Not Applicable	From PDIT 5300-2	From RTIDX

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			Record	5303 Record

When CALL TYPE is PSDONE:

- PREFIX must be "NONE".
- DESEP must be 0 or not entered.
- TYPE OF CI CALLS must be "PSNCI" or "PSCAR".
- and TYPE OF CI CALLS is "PSNCI", ROUTE INDEX must be entered and CODE INDEX must be greater than 0.
- and TYPE OF CI CALLS is "PSCAR", ROUTE INDEX and CODE INDEX must not be entered.

IDDDOPER - When CALL TYPE is "IDDDOPER":

- NATURE OF NBR must be "IDOP" or not entered.
- CODE INDEX must be entered and must be greater than 0.
- DIGITS TO INTERPRET must not be "10X".
- TYPE OF CI CALL must be "NONCI".
- ASP OFC on the OFCOPT form is "SSP", and CALL TYPE is "IDDDOPR", NATURE OF NBR must be "IDDD" or not entered.

LDIT - When CALL TYPE is "LDIT":

- TRIG NBR must not be entered.
- TYPE OF CI CALL must not be entered.
- PREFIX must be entered.
- DIGITS TO BE DELETED must be entered.
- DESEP must be 0 or not entered.
- CODE INDEX must not be entered.
- ROUTE INDEX must not be entered.
- and TRIG NBR is entered or ESC CODE is "Y", PREFIX must be "0+".

NORMAL - When CALL TYPE is "NORMAL":

- TYPE OF CI CALL must be "NONCI".
- CODE INDEX must be entered and must be greater than 0.
- DIGITS TO INTERPRET must not be "10X".
- TRIG NBR must be entered.
- DESEP must not be entered.

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- PREFIX must be "NONE".
- POLYGRID must be "N".

OPER - When CALL TYPE is "OPER":

- and TYPE OF CI CALL is "INTER", NATURE OF NBR must be "ICOP" or not entered.
- and TYPE OF CI CALL is "INTRA", NATURE OF NBR must be "BCOP" or not entered.
- and POLYGRID is "Y", TYPE OF CI CALL must be "NONCI".
- and POLYGRID is "N", TYPE OF CI CALL must be "INTER", "INTRA", or "TOLL".
- ASP OFC on the OFCOPT form is "SSP", and TYPE OF CI CALL on this form is "INTRA", NATURE OF NUMBER must be "BCOP" or not entered.
- PREFIX must be "NONE" or "0+".
- TYPE OF CI CALL must not be "CICUT".
- FEATURE must not be entered.
- ACTION must not be entered.
- CODE INDEX must be entered and must be greater than 0.
- ROUTE INDEX must be entered.
- DIGITS TO BE DELETED must not be "10X".

2.5 TYPE OF CI CALL

Description: This field is used to define the type of CI (Carrier Interconnect).

Valid TYPE OF CI CALL Entries

Entry	Definition
CICUT	Used for calls dialed FGD CAC + #. These calls are cut through to the carrier specified from the CAC.
INTER	Used for calls destined for outside the LATA. These calls must be routed via an InterLATA Carrier.
INTRA	Used for calls destined for within the LATA. These calls are handled by the LEC (Local Exchange Company).
NONCI	Used for calls for which carrier selection is irrelevant.
PSCAR	For PS (Packet Switched) calls, indicates that an IC (Interexchange Carrier) is required. If the DNIC of the IC is given in the RPOA (Recognized Private Operating Agency) selection field, that DNIC is used to route the call. If the DNIC is not given in the RPOA, then the preselected IC is used, given by the IECP DNIC field on the DSLUSR form (5908 Record). The route index is assigned to the DNIC on the PSDNICRI form (5921 Record), therefore the ROUTE INDEX and CODE INDEX must not be entered on this form. The preselected (default) IC is selected at the time of the service order. If the DNIC is not given in the RPOA or entered in the IECP DNIC field, then the PS call is cleared.
PSNCI	For packet switched calls, indicates a carrier interconnect does not apply, therefore a ROUTE INDEX and a CODE INDEX must be specified on this form.
TOLL	Intra-LATA toll. A Intra-LATA toll call within the LATA. When the TYPE OF CI CALL field is set to "TOLL" a SFSYS form must exist with SFID 149 set to "Y".

Data Rules:

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Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

- Packet Switching TYPE OF CI CALLs, "PSCAR" and "PSNCI", cannot be mixed with non-Packet Switching TYPE OF CI CALLs within a single DAS.

2.6 ACTION

Description: Enter the action to be taken when the DIGITS TO INTERPRET have been dialed. This field only applies when CALL TYPE is "COMB" or "FEATURE". For other CALL TYPEs, leave it blank.

Valid ACTION Entries

Entry	Definition
AAOFF	Auto Answer Off via dial code. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
AAON	Auto Answer On via dial code. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
ACBCANC	Cancel auto-callback camp-on.
ACBUSE	Use auto-callback to camp-on to busy line.
ACCANC	LASS Automatic Callback deactivation. This dialed code allows the user to deactivate the AC (Automatic Callback) feature. The user goes off-hook, enters the dialed code, and receives a cancellation announcement.
ACCTACT	Activate account code feature.
ACCTDCT	Deactivate account code feature.
ACCTUSE	Account code use code dialed.
ACDXFER	Transfer call to ACD, followed by ACD DN for the Transfer to ACD from ARU Special Feature. For more information see Division 2 Section 4A71.
ACSRCAN	This ACTION currently unavailable and goes to reorder. Cancel ACSR move.
ACSROFF	Allows a member of an ACSR group with GRP CNTRL set to "Y" on the ACSRFD form (5959-1 Record) to deactivate ACSR for the entire group.
ACSRON	Allows a member of an ACSR group with GRP CNTRL set to "Y" on the ACSRFD form to activate ACSR for the entire group.
ACSRUSE	Allows an ACSR user to invoke an ACSR move.
ACSRVFY	Allows an ACSR user to verify the status of the ACSR move on the queue.
ACTCPNBN	Activate the CPN/BN feature.
ACTGMB	Software Release: 5E15 and later. Activate Group Make Busy
ACTMMB	Software Release: 5E15 and later. Activate Member Make Busy
ACTOFF	Set ACT in IDP off.
ACTON	Set ACT in IDP on.
ACTSTH	Software Release: 5E15 and later. Activate Stop Hunt
ACUSE	LASS Automatic Callback activation. This dialed code allows the user to activate the AC (Automatic Callback) feature. The user goes off-hook, enters the dialed code, and receives an appropriate response.
AD1USE	Use 1 digit abbreviated dial. (See Note 1)
AD1CH	Change 1 digit abbreviated dial list. (See Note 1)
AD2CH	Change 2 digit abbreviated dial list. (See Note 1)
AD2USE	Use 2 digit abbreviated dial. (See Note 1)
AIUSE	Agent Intercom via dial code. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
ALTACT	Activate alternate parameter set.
ANSBACK	National ISDN Call Park Answer Back. For more information, see Division 2, Section 4A258.
AQCUSE	ACD Queue Calling via dial code. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
ARCANC	LASS Automatic Recall cancellation.
ARSCP	Change ARS pattern group number.
ARSDCT	Deactivate ARS feature for one call.
ARS1USE	Use Automatic Route Selection with Private Network Dialing Plan 1.
ARS2USE	Use Automatic Route Selection with Private Network Dialing Plan 2.
ARSUSE	Use Automatic Route Selection with the Office Dialing Plan.
ARUSE	LASS Automatic Recall activation. This dialed code allows the user to activate the AR (Automatic Recall) feature. The user goes off-hook, enters the dialed code, and receives an appropriate response.
ASITOG	ASI (Advanced Service Interface) Proxy implicit mode toggle. A dialed code defined in the office as

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	a CORC (Customer Originated Recent Change) allows the user to activate or deactivate the ASI Proxy implicit mode feature. The system response is a stutter dial tone. See Division 2, Section 4A93 for more information about ASI.
ASIUSE	ASI Proxy explicit mode activation. This dialed code allows the user to activate the ASI Proxy feature in the explicit mode. The user goes off-hook, enters the dialed code, and receives an immediate connection to an ASI trunk (no dial or confirmation tone).
ASPDNC	No further digits are collected and an immediate query is sent to the SCP. A response is received and the call is routed.
ASPNORM	Digit collection and digit analysis on the collected digits are performed. A query is then launched to the SCP. A response is received and the call is routed.
ASPVAR	Digits are collected until interdigit timing expires. A query is launched and a response is received from the SCP. The call is routed.
ASPUSE	Access the ASP (Advanced Services Platform; previously PVN, Private Virtual Network) default dialing plan. The ASP default dialing plan is part of the ODP and is specified via the ASP DAS field on the OFCOPT form (5509 Record). This action will result in an ASP origination only if the line or trunk is allowed to originate ASP calls, which is specified by setting ASP ALW to "Y" on the LINE (5109 Record), MLHLN (5111 Record), DSLUSR (5908 Record), SHTN (5902 Record), or TKGRP (5202 Record) form.
ATACTMWI	Activate Message Waiting Indicator by attendant. This dialed code is used by an MSC (Message Service Center) attendant to activate the MWI (Message Waiting Indicator) at the user's station set. The attendant enters the dialed code, receives stutter dial tone, and then dials the number of the telephone the MWI is to be activated on.
ATDCTMWI	Deactivate Message Waiting Indicator by attendant. This dialed code works similarly to the "ATACTMWI" action. The attendant can enter the dialed code, receive stutter dial tone, and then dial the number of the telephone the MWI is to be deactivated on.
ATFACT	ISDN attendant activate ACVT (Attendant Control of Voice Terminals) feature for individual DN.
ATFDCT	ISDN attendant deactivate ACVT feature for individual DN.
ATGACT	ISDN attendant activate ACVT feature for group of DNs. The ACVT feature assigned must have an associated restriction group defined. A DN can only activate the ACVT feature for the group to which it belongs.
ATGDCT	ISDN attendant deactivate ACVT feature for group of DNs. The ACVT feature assigned must have an associated restriction group defined. A DN can only deactivate the ACVT feature for a group to which it belongs.
ATHACT	This ACTION is used to activate the Authorization Code feature. This ACTION will automatically set the A field to "Y" on the associated line or trunk assignment form, e.g., LINEFA, TRUNKFA, or TKGRPFA forms.
ATHDCT	This ACTION is used to deactivate the Authorization Code feature. This ACTION will automatically set the A field to "N" on the associated line or trunk assignment form, e.g., LINEFA, TRUNKFA, or TKGRPFA forms.
ATHINS	This ACTION is used to put a line or trunk "In Service" by automatically setting the ATH FIRST field to "N" on the associated ATHLPA, ATHMPA, or ATHTPA form. When the ATH FIRST field is set to "N", an Authorization Use Code and the Authorization Code is not needed before the TN is entered.
ATHNREQ	This ACTION is used to automatically set the AC field to "N" on the associated line or trunk assignment form, e.g., LINEFA, TKGRPFA, or TRUNKFA forms. When the AC field has a value of "N", an Authorization Use Code and an Authorization Code is not needed before a feature, e.g., Call Forwarding, can be used. The features must be specified on the ATHFCOS form and they must be dial code activated.
ATHOOS	This ACTION is used to put a line or trunk "Out Of Service" by automatically setting the ATH FIRST field to "Y" on the associated ATHLPA, ATHMPA, or ATHTPA form. When the ATH FIRST field is set to "Y", an Authorization Use Code and the Authorization Code is needed before the TN is entered.
ATHREQ	This ACTION is used to automatically set the AC field to "Y" on the associated line or trunk assignment form. When the AC field has a value of "Y", an Authorization Use Code and an Authorization Code is needed before a feature, e.g., Call Forwarding, can be used. The features must be specified on the ATHFCOS form and they must be Access Code activated.
ATHUSE	This ACTION is used as the Authorization Use Code for the Authorization Code Feature defined on the ATHFD form (5619-1 Record).
AUCUSE	Auto Call Set Up used with Message Service and Electronic Directory Service features.
BBTLUSE	This ACTION is used for billed BRITL (Basic Rate Interface Dial Up Test Line).
BSYACT	Software Release: 5E16(2) and later.

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	Activates all Call Forwarding Busy feature's prestored DNs.
BSYDCT	Software Release: 5E16(2) and later. Deactivates all Call Forwarding Busy feature's prestored DNs.
BTLUSE	This ACTION is used for nonbilled BRITL.
CCL	Code calling for call pickup.
CFDATCH	Change Call Forward Don't Answer timing.
CFDCT	Deactivate all Call Forwarding features with prestored DNs.
CFDNCH	Change Forward-to DN.
CFVACT	Activate all call forwarding variable features.
CFVDCT	Deactivate all call forwarding variable features.
CLOFF	Closed Off via dial code. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
CLON	Closed On via dial code. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
CLWCUSE	Cancel Leave Word Calling. Used with the Message Service feature.
CNDACT	ICLID (Individual Calling Line Identification) Calling Number Delivery activation. This dialed code allows the user to activate the Calling Number Delivery feature which allows the called party to receive data on an incoming call. The user goes off-hook, enters the dialed code, and receives a confirmation tone.
CNDDCT	ICLID (Individual Calling Line Identification) Calling Number Delivery deactivation. This dialed code allows the user to deactivate the Calling Number Delivery feature which allows the called party to receive data on an incoming call. The user goes off-hook, enters the dialed code, and receives a confirmation tone.
CNPUSE	Toggle for NAME privacy per-call (for DISP). This action is used in the Analog Calling Name Delivery Feature. See Division 2 Section 4A40 for more information.
COTUSE	Customer Originated Trace activation. This dialed code allows the user to activate the Customer Originated Trace feature. The user goes off-hook, enters the dialed code, and receives an appropriate response.
CPQ1	Use call pickup feature with queue 1.
CPQ2	Use call pickup feature with queue 2.
CPQ3	Use call pickup feature with queue 3.
CPQ4	Use Call pickup feature with queue 4.
CSACT	Software Release: 5E14 and later. Activate call screening.
CSDCT	Software Release: 5E14 and later. Deactivate call screening.
CSTOG	Software Release: 5E16(2) and later. Used to toggle between activating and deactivating the FCCS (Forwarded Call - Call Screening) Enhancement feature. For more infomation, see Division 2, Section 4A592.
CTT	Used for both Analog and ISDN Call Through Test. Allows the attendant to make a test call from an Analog line that has been assigned an attendant class of service. The test call will verify the operation of the selected trunk member and the switch translations.
CWDLU	Use a dial call waiting feature. For ISDN Attendant Consoles, this action is used to assign the camp-on dialed code.
CWOACT	Activate all call waiting originating features.
CWDACT	Deactivate all call waiting originating features.
CWTACT	Activate all call waiting terminating features.
CWTDCT	Deactivate all call waiting terminating features.
CWXCH	Change call waiting tone repetition interval.
DAACT	Software Release: 5E16(2) and later. Activates all Call Forwarding Don't Answer feature's prestored DNs.
DADCT	Software Release: 5E16(2) and later. Deactivates all Call Forwarding Don't Answer feature's prestored DNs.
DALTACT	Activate alternate parameter set for CSD.
DARSCP	Change the active ARS pattern group number for CSD.
DBDACT	Activate all busy/idle data call forwarding features.
DBDDCT	Deactivate all busy/idle data call forwarding features.
DCDTVM	Software Release: 5E16(2) and later. DTVM Direct Connect.
DCTCPNBN	Activate the CPN/BN feature via dialed code.
DCTGMB	Software Release: 5E15 and later. Deactivate Group Make Busy
DCTMMB	Software Release: 5E15 and later. Deactivate Member Make Busy
DCTMWI	Deactivate Message Waiting Indicator. Used with the Message Service feature. The MWI (Message Waiting Indicator) can be deactivated by entering this dialed code. If an MWI lamp is

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	provided with the station set, this action may be associated with the lamp and can be used to deactivate the lamp.
DCTSTH	Deactivate Stop Hunt
DFRLALT	Activate the CSD alternate FRL.
DGPACT	Activate the ARS CSD group.
DGPDCT	Deactivate the ARS CSD group.
DMAINACT	Activate main parameter set for CSD.
DNPUSE	Activate per call TN privacy use.
DPN	Use directed pickup without barge-in.
DPU	Use directed pickup with barge-in.
DRPCH	Change ringing pattern.
DTVMCF	Software Release: 5E16(2) and later. DTVM Call Forward.
EAVMUSE	Software Release: 5E15 and later. Allows Easy Access to Voice Mail.
EMER	Emergency.
EMUSE	Emergency via dial code or feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.
FRLALT	Activate the Alternate FRL Table.
FRLDMAIN	Activate the CSD main FRL.
FRLMAIN	Activate the Main FRL Table.
FTACT	Activate BRCS feature. (See Note 1)
FTDCT	Deactivate BRCS feature. (See Note 1)
GPACT	Activate IDP, ARS, or ACVT.
GPDCT	Deactivate IDP, ARS, or ACVT.
GRPCARCH	Change group carrier in IDP.
HIDHOLD	This action allows a customer to activate the Dialable Hold feature which is a subset of the Home Intercom feature.
HIRINGA	This action is used to apply ringing pattern A for the Selective Intercom Dialing feature which is a subset of the Home Intercom feature. Provides repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
HIRINGB	This action is used to apply ringing pattern B for the Intercom Code Dialing and Selective Intercom Dialing features. Provides repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on, followed by 4 seconds off.
HIRINGC	This action is used to apply ringing pattern C for the Selective Intercom Dialing feature which is a subset of the Home Intercom feature. Provides repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on, followed by 4 seconds off.
HIRINGG	This action is used to apply ringing pattern G for the Selective Intercom Dialing feature which is a subset of the Home Intercom feature. Provides repeated pattern of 0.3 seconds on, 0.2 seconds off, 1 second on 0.2 seconds off, 1 second on 0.2 seconds 0.3 seconds on, followed by 4 seconds off.
IBSYVFY	ISDN Busy Verify action. This action is used with the ISDN Attendant Console Busy Verification of Directory Numbers and Trunks. The FEATURE associated with this attendant action must be a call pickup originating feature (/CPUVO or equivalent constructed feature). To implement the barge-in feature, the terminating line/trunk must have a call pickup terminating feature (/CPUIVT for digital, /CPUVT for analog, or equivalent constructed feature).
IDNACT	Activate/deactivate ISDN ACVT (Attendant Control of Voice Terminals) restrictions for an individual terminal (line).
IEMEROVR	ISDN Attendant Emergency Override action. The FEATURE associated with this attendant action must be a call pickup originating feature (/CPUEO or equivalent constructed feature). The lines to be overridden must have a call pickup terminating feature (/CPUIEOT for digital, /CPUEOT for analog, or equivalent constructed feature). The attendant will be able to use the dialed code to override terminating restrictions such as Call Forwarding, Series Completion or members of a multiline hunt group.
IGACT	Activate/deactivate ISDN ACVT (Attendant Control of Voice Terminals) restrictions for a group of lines.
INSUSE	Inspect use.
LDNDCT	Deactivate all LDNs for MUPH or ISAT groups with CF variable feature at once.
LSFNOSYM	This action is used by the LSF (LASS Selective Features) to access the SLE (Screen List Editing) session. This ACTION will prompt the user via announcements for digits rather than an asterisk or a pound sign during the SLE session.
LSFSYM	This action is used by the LSF (LASS Selective Features) to access the SLE (Screen List Editing) session. This ACTION will prompt the user via announcements for an asterisk or a pound sign rather than digits during the SLE session.
LSP	Loudspeaker paging for call pickup. The paged party may enter a dialed code and be connected to

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	the calling party.
LWCUSE	Leave Word Calling. The dialed code associated with this action allows a message from the calling party to be left for the called party.
MAINACT	Activate Main parameter set.
MDRACT	MDR Feature activation code.
MDRDCT	MDR Feature deactivation code.
MDROFF	MDR Group Status off.
MDRON	MDR Group Status on.
MEOFF	Dialed Code Request - Manual Exclusion Off.
MEON	Dialed Code Request - Manual Exclusion On.
MWITD	ISDN Terminal Dialed Code.
MWSOH	Start multiway feature off hook.
MWSPL	Split last added party from multiway call.
NNPRV	Force per-call NAME and TN private (for DISP). This action is used in the Analog Calling Name Delivery Feature. See Divison 2 Section 4A40 for more information.
NNPUB	Force per-call NAME and TN public (for DISP). This action is used in the Analog Calling Name Delivery Feature. See Divison 2 Section 4A40 for more information.
PFUSE	Use private facilities.
PODUSE	Print On Demand. Used with the Message Service feature.
RBQCAN	Ringback queuing cancel.
RGQVFY	Ringback queuing verify.
SAUSE	Service Assist via dial code or feature button. For more information on ACD/BRCS secured feature, see Division 2, Section 4A121.
SDNUSE	Invoke a Software Defined Network call.
SEL1XFER	Transfer to Selective Transfer TN 1 from E911 PSAP (Public Safety Answering Point).
SEL2XFER	Transfer to Selective Transfer TN 2 from E911 PSAP.
SEL3XFER	Transfer to Selective Transfer TN 3 from E911 PSAP.
SEL4XFER	Transfer to Selective Transfer TN 4 from E911 PSAP.
SEL5XFER	Transfer to Selective Transfer TN 5 from E911 PSAP.
SEL6XFER	Transfer to Selective Transfer TN 6 from E911 PSAP.
SRGACT	Software Release: 5E16(2) and later. Activate Simultaneous Ringing.
SRGDCT	Software Release: 5E16(2) and later. Deactivate Simultaneous Ringing.
SRGNOSYM	Software Release: 5E16(2) and later. Simultaneous Ringing SLE No Symbols.
SRGSYM	Software Release: 5E16(2) and later. Simultaneous Ringing SLE Symbols.
TD1PAD	Add 1 parameter code.
TDACT	Activate a Time-Of-Day feature.
TDADZP	Add zero parameter code.
TDATCH	Change Time-Of-Day Action Time.
TDDALL	Delete all code lists.
TDDCT	Deactivate a Time-Of-Day feature.
TDDEL1P	Delete 1 parameter code list.
TDOWCH	Change One Week Time-Of-Day Schedule.
TDZPDEL	Delete zero parameter code list.
TGACT	Activate a terminal group feature.
TGDCT	Deactivate a terminal group feature.
UCRACT	Activate UCR (Unidentified Call Rejection).
UCRDCT	Deactivate UCR (Unidentified Call Rejection).
US3WC	Activate Usage Sensitive Three-Way Calling.

- ***NOTE:*** 1:These actions are required in all line offices and have fixed digit codes. For further information, see the BRCS FEATURES section in Division 2 of this guide.

ACUSE, ARUSE: After subscribers dial an "ACUSE" (or "ARUSE") code, they may receive the following responses:

- Audible alerting. The called party is alerted immediately because the called station is found to be idle.
- Short-term denial. Reorder tone is given to the user to indicate that network resources are temporarily exhausted or the called party has a feature active that causes the Automatic Callback (or Automatic Recall) attempt to be denied, e.g., Call Forwarding Variable. A subsequent attempt by the user to activate the feature may succeed.
- Long-term denial. An announcement is returned indicating that the Automatic Callback (or Automatic Recall) feature is not allowed to the user.

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- Confirmation. An announcement is returned indicating that the Automatic Callback (or Automatic Recall) feature has been activated.

COTUSE: After subscribers dial a "COTUSE" code, they may receive the following responses:

- Successful activation. An announcement is returned indicating a successful activation of the COT request and provides information on any further action the user should take.
- Trace not available. An announcement is returned indicating that the call has already been traced or invalid data about the call is stored in the history block, e.g., originating and terminating switches are not connected by CCS7 trunks.
- Buffer full. An announcement is returned indicating that the COT message buffer is full and the user should attempt the trace again later.
- Short-term denial. Reorder tone is given to the user to indicate that network resources are exhausted. A subsequent attempt by the user to activate the feature may succeed.
- Feature denial. Reorder tone is given to the user to indicate that the Customer Originated Trace feature is not available to the user.

DNPUSE: The "DNPUSE" action is used for per-call TN privacy; the dialed code can be used in two ways.

- The calling party subscribes to all-call privacy which allows the calling party to prevent delivery of their TN to the called party for all calls (PRIVACY field on the LINE, MLHLN, or DSLUSR form is "Y"). The calling party can deactivate all-call privacy on a per-call basis (TN PRIVACY field on the DISPFD form is "Y"), allowing the calling TN to be displayed to the called party. To deactivate all-call privacy on a per-call basis, the user goes off-hook, enters the dialed code, receives a confirmation tone, receives dial tone, and then dials the TN.
- The terminal may not subscribe to all-call privacy which allows the TN of the calling party to be delivered to the called party for all calls (PRIVACY field on the LINE, MLHLN, or DSLUSR form is "N"). The calling party can activate per-call privacy on a per-call basis (TN PRIVACY field on the DISPFD form is "Y"), not allowing the calling TN to be displayed to the called party. To activate per-call privacy on a per-call basis, the user goes off-hook, enters a dialed code, receives a confirmation tone, receives dial tone and, then dials the telephone number.

Data Rules:

Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

When ACTION is "ATACTMWI", "ATDCTMWI", "AUCUSE", "BTLUSE", "AAON", "AAOFF", "AIUSE", "AQCUSE", "CLON", "CLOFF", "EMUSE", "SAUSE", "BBTLUSE", "MEOFF", "MEON", "SDNUSE", "UCRACT", or "UCRDCT" then FEATURE must be the NULL FEATURE (/*).

Actions "CNPUSE", "NNPRV", and "NNPUB", must be used with the feature defined on the DISPFD form and have TN PRIVACY set to "Y" on the DISPFD form for the feature being used. The wildcard feature /DI* may also be used with TN PRIVACY set to "N" on the DISPFD form.

For 5E15 and later:

- When ACTION is "ACTGMB", "ACTMMB", "ACTSTH", "DCTGMB", "DCTMMB", or "DCTSTH", CALL TYPE must be "FEATURE".
- When ACTION is "ACTGMB", "ACTMMB", "ACTSTH", "DCTGMB", "DCTMMB", or "DCTSTH",

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FEATURE must be "/*".

ACDXFER - When ACTION is "ACDXFER" the feature must be null feature, (/*).

ACTCPNBM - When ACTION is "ACTCPNBN", the corresponding FEATURE entry must appear on a CPNBNFD form (5982 Record) with ACT set to "CODE".

AD1USE - An ACTION of "AD1USE" requires DIGITS TO INTERPRET to be one digit or one digit preceded by carrier prefix (10X).

AD2USE - An ACTION of "AD2USE" requires DIGITS TO INTERPRET to be two digits or digits preceded by carrier prefix (10X).

ASPDNC, ASPNORM, ASPVAR - When ACTION is "ASPDNC", "ASPNORM", or "ASPVAR",

- CALL TYPE must be "FEATURE",
- TRIG NBR must be entered, and
- ASP OFC on the OFCOPT form must be "SSP".
- For 5E15 and later , FEATURE must be set to "/*". In 5E15 the ACTION field was modified to allow the values of ASPDNC, ASPNORM, and ASPVAR when FEATURE is set to "/*" in order to support the ASP Unrestricted FCD Code feature. For more information, see Division 2, Section 4A572.
- For 5E15 and later, when, FEATURE is "/*" and ACTION is "ASPDNC", "ASPNORM", or "ASPVAR" the ACT field for SFID 572 on the SFSYS form must be "Y".
- For 5E15 and later, when the PDIT form ACTION field is set to "ASPDNC", "ASPNORM", or "ASPVAR" and FEATURE set to "/*". This form must have TRIG NBR defined on the NSTRIG form where APPLICATION is "ASP" and AIN REL is "R0D1".

ASPUSE - When ACTION is "ASPUSE", ASP OFC on the OFCOPT form (5509 Record) must equal "BILLNAP", "NOBILLNAP", or "SSP".

ATFACT, ATFDCT, ATGACT, ATGDCT -

- If IDPDCA forms contain these ACTION entries or conflict resolution ACTION entries, they must be consistent with the corresponding FEATURE entry on the ACVTFD form.
- These BUTTON ACTIONs require a FEATURE name that is defined on the ACVTFD form.
- If these specific ACTION values are entered on the CFGGRP form, the combination of CONFIG GRP and ACTION must be unique.

BSYACT, BSYDCT, CFDATCH, CSTOG, DAACT, DADCT: - For 5E16(2) and later, ACTION can only be "BSYACT", "BSYDCT", "CFDATCH", "CSTOG", "DAACT", or "DADCT" when the ACT field for SFID 592 on the SFSYS form (5713-1 Record) has been set to "Y".

- ***NOTE:*** The following actions can only be assigned to dial codes on the PDIT form (RC/V 9.2) when the ACT field for SFID 592 is set to "Y": "BSYACT", "BSYDCT", "CFDATCH", "CSTOG", "DAACT", or "DADCT" (when being assigned to dial codes, all five actions can only be associated with the /CF* feature). Also, the existing action "CFDATCH" can now be associated with the /CF* feature on the PDIT form (RC/V 9.2) when the ACT field for SFID 592 is set to "Y" (originally, "CFDATCH" could only be associated with non-wildcard CF features. When the ACT field for SFID 592 is set to "Y", the action can be associated with both the /CF* feature and the non-wildcard CF

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features.)

BTLUSE, BBTLUSE: - When "BTLUSE" or "BBTLUSE" is entered, then:

- CALL TYPE must be "FEATURE" for this ACTION.
- TYPE OF CI CALL must be "NONCI" for this ACTION.
- DIGITS TO INTERPRET must contain only the digits 0-9 and may begin with 10X.

When ACTION is "BBTLUSE", the DSL which is being tested, must have BRITL ALW set to "Y" on the corresponding DSLUSR form.

CSACT, CSDCT - When ACTION is "CSACT" or "CSDCT", FEATURE must be "/CF*".

DCTCPNBN - When ACTION is "DCTCPNBN", the corresponding FEATURE entry must appear on a CPNBNFD form (5982 Record) with DEACT set to "CODE".

EAVMUSE - When ACTION is "EAVMUSE", the corresponding FEATURE entry must appear on a MSFD form (5962-1 Record).

HIDHOLD - When ACTION is "HIDHOLD", the DIAL HOLD field must be "Y" on the associated HIFD form (5628 Record).

HIRINGA, HIRINGC, HIRINGG - When ACTION is "HIRINGA", "HIRINGC", or "HIRINGG", the SEL ICM DIAL field must be "Y" on the associated HIFD form (5628 Record).

When ACTION is "HIRINGB", the ICM CODE DIAL field must be "Y" and the SEL ICM DIAL field may be "Y" on the associated HIFD form.

IBSYVFY - When ACTION is "IBSYVFY", the associated call pickup originating feature must be defined on a PUOFD form (5605-1 Record). If the terminating line or trunk is assigned a call pickup terminating feature, that feature must be defined on a PUTFD form (5605-2 Record).

IEMEROVR - When ACTION is "IEMEROVR", the associated call pickup originating feature must be defined on a PUOFD form. The call pickup terminating feature assigned to the lines to be overridden must be defined on a PUTFD form.

SELnXFER - When ACTION is "SELnXFER", where n is 1 - 6, CALL TYPE must be "FEATURE" or "COMB"; and FEATURE must be "/*".

For 5E16(2) and later, when a PDIT form contains ACTION entries which are inconsistent with the corresponding FEATURE entry, either the FEATURE is not found on the appropriate Feature Definition FORM or the FORM level restrictions are not met. (Refer to the Prefix/Feature Digit Interpreter section for the valid combinations of ACTION and FEATURE and the corresponding restrictions).

2.7 FEATURE

Description: Enter the name of a feature or abbreviated dial list which is to be accessed or affected by this dialed code. The feature name entered may be a constructed or preconstructed feature.

The set of preconstructed features includes "wild-card" features which may be entered as valid features in dialing plans (either individualized or the office dialing plan) but may not be assigned to lines or trunks. These wild-card features' names should be entered into dialing plans whenever a dialed code is to affect a feature associated with the terminal (line or trunk) dialing the code rather than a feature specified in the dialing plan itself. For example, if a dialed code's ACTION is 'AD1CH' (change the 1-digit Abbreviated Dial List) and it is desired that dialing the code allows the customer to change his AD list regardless of the specific ID feature containing the AD list, the ID wild-card feature name, /ID*, would be entered as the

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FEATURE. If, on the other hand, it is desired that access to the code would allow changes only to a specific ID's AD list, then the specific ID feature's name would be entered as the FEATURE. The specific feature definition form on which the feature is defined depends upon the value of the ACTION field entry as shown in Figure 3.

Those ACTIONs where the FEATURE TYPE is indicated as "Any non-wild-card feature name" require a specific FEATURE name and the wild-card feature may not be entered here.

For those actions for which the FEATURE TYPE is "Any feature name", either the wild-card feature name or a specific feature name may be entered. It is recommended that the wild-card feature always be used; no cases are presently envisioned in which a non-wild-card feature would be appropriate.

For the cases where FEATURE TYPE is "Any wild-card feature name", only a wild-card feature name may be entered.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be defined on one of the BRCS feature definition forms.

2.8 CODE INDEX

Description: This field is used to define the Code Index.
Valid Entries: 1 - 4095

Data Rules:

Valid Entries are 1 for CALL TYPE "OPER", 2 for CALL TYPE "IDDDOPR", and 3 - 4095 for CALL TYPE "CICUT".

Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

All combinations of CODE INDEX, PREFIX from the PDIT form, and SCREENING INDEX from the LCC form (5306 Record) must have corresponding RAR form (5301 Record) entries for CDI, PFX, and SCR.

When a CODE INDEX is entered, a ROUTE INDEX entered, and POLYGRID is "N", then a corresponding RAR form must exist where the CDI entry matches the CODE INDEX on this form.

CODE INDEX on this form or MLDIT on the INDIT form (5309 Record), CODE INDEX or CDI on an RDIT or LDIT form, or WITH ANI or WITHOUT ANI on an AISCLS form must equal INC CDI on an INFLDEST form (5448 Record).

2.9 ROUTE INDEX

Description: Enter the Regular Route Index.

ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries: 1 - 16382

Data Rules:

Refer to Figure 1 for dependencies between the CALL TYPE field and this field. If the resultant call is a carrier call, the Route Index will normally be overridden by a Carrier Specific Route Index on the ICF or CDIM form. The entry here is provided for consistency in the data base.

2.10 POLYGRID?

Description: If this is a DSN (Defense Switched Network) office, should polygrid routing be used? "Y"

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should be entered for DSN offices to indicate polygrid routing. "N" should be entered for non-DSN offices.

Software Release: 5E3 and later
Required Field.
Valid Entries: Y, N
Default Value: N

Data Rules:

This field is used only in DSN offices; the DSN OPTION field must be "Y" on the OFCOPT form.

- POLYGRID may be "Y" only when CALL TYPE is "OPER", "IDDDOPR", "OPRECAL", or "CICUT", otherwise POLYGRID must be "N".
- When POLYGRID is "Y", TYPE OF CI CALL must be "NONCI".

2.11 DESEP

Description: This field is used to define the Destination Separations Index for Call Types "CICUT", "OPER", and "IDDDOPR". It is prohibited for all other Call Types.
Valid Entries: 1 - 255

Data Rules:

If a DESEP is entered, it must be defined on the TRFSEP form (5308 Record).

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.12 PREFIX

Description: This field is used to define which prefix entry on a RAR form will be used to screen the call.
Valid Entries: 0, 1, or NONE

Data Rules:

PREFIX is a required entry only for Call Types "PSDONE", "LDIT", "COMB", and "CICUT". If CALL TYPE is "CICUT", "PSDONE" or "QUERY" then PREFIX must be "NONE". It is allowed, but only used by the AIN pre-query screening feature to determine if pre-query screening needs to be done, for Call Types "OPER" and "IDDDOPR". It is prohibited for all other Call Types.

Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

2.13 DIGITS TO BE DELETED

Description: This field is used to define the Digits to be Deleted. Enter the number of digits to delete from the dialed code prior to the local digit interpretation. The FGD CAC for carrier calls, if any, does not get interpreted in LDIT, so digit deletion does not include these digits.
Valid Entries: 1 - 7

Valid DIGITS TO BE DELETED Entries

Entry	Definition
0	for 01+ IDDD Operator Assisted Calls and for 011+ IDDD Station-To-Station Calls.
1	

Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

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2.14 NATURE OF NBR

Description: Enter the nature of the number for ASP query formulation.

Software Release: 5E9 and later
Valid Entries:

Valid NATURE OF NBR Entries

Entry	Definition
IDDD or IDD	International
NATL or N	Domestic
PRIV or P	Private
ICOP or IC	IEC Operator
BCOP or B	BOC Operator
IDOP or IDO	IDDD Operator

Data Rules:

Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

When CALL TYPE is "LDIT", NATURE OF NBR cannot be entered.

2.15 TRIG NBR

Description: Enter the Network Services Trigger Number.

Software Release: 5E8 and later
Valid Entries: 1 - 255

Data Rules:

Refer to Figure 1 for dependencies between the CALL TYPE field and this field.

TRIG NBR must equal TRIG NBR on an NSTRIG form (5324 Record).

If APPLICATION on the corresponding NSTRIG form equals "ASP" and SERV KEY equals "CDPN", ALT GBL TITLE must be known on NSTRIG.

If APPLICATION on the corresponding NSTRIG form is "E911", TYPE OF CI CALL must equal "INTRA".

2.16 PREF TRIG NBR

Description: Enter the Prefix Services Trigger Number. This field was added to support the AIN Operator Services Trigger feature. See Division 2, Section 4A584.

Software Release: 5E16(2) and later
Valid Entries:
- For 5E16(2) and later: 1 - 255

Data Rules:

When PREF TRIG NBR is known, PREFIX must be "0+" or CALL TYPE must be "IDDDOPR" or "OPER".

2.17 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

When ESC CODE is "Y", CALL TYPE must be "EMER", "OPER", "IDDDOPR" or "OPRECAL".

2.18 DFLT RT

Description: The DFLT RT field is used to identify the type of default routing treatment to be used for the ASP Default Routing for 3/6/10-Digit Triggers (Phase 1) Special Feature. When the ASP Special Feature has been purchased, this field can be used to specify the type of default routing to occur when an ASP specific digit trigger query fails.

Software Release: 5E9(1) and later
Default: NONE
Valid Entries:

Valid DFLT RT Entries

Entry	Definition
ANNC	Default route to announcement (or tone). The call will route to either a tone or announcement, depending on what is defined for the route.
DLDN	Default route to dialed DN. The call will route to the DN dialed (or the DN being routed to if the call came from a trunk).
NONE	No default routing. No special default routing will take place, and normal call treatment will send the call to reorder or NCA (No Circuits Available).

Data Rules:

ANNC:
When "ANNC" is entered for DFLT RT, then a FIXRT form must be defined with FIXED ROUTE TYPE set to "DFLTRT".

NONE:
When DFLT RT is not "NONE", TRIG NBR must be entered.

When the PDIT forms have a DFLT RT entry other than "NONE", the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

For 5E16(2) and later:

- When DFLT RT is not "NONE", TRIG NBR or PREF TRIG NBR must be entered.
- When the PDIT forms have a DFLT RT entry other than "NONE", and a known value for PREF TRIG NBR, the corresponding TRIG NBR must be defined on a NSTRIG form. In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".
- When the PDIT forms has a known value for PREF TRIG NBR, the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1" and ASP OFC on the ASPOPT form not set to "NONE".
- When the PDIT forms have a DFLT RT entry other than "NONE" and TRIG NBR is known, the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

2.19 INH OBL

Description: Is the ASP originating busy line office trigger inhibited? This field supports the Call Screening

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for ASP Originating Busy/No Answer Triggers. For more information concerning this feature, see Division 2 Section 4A212.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When INH OBL is "Y", CALL TYPE must be "EMER", "IDDDOPR", "OPER" or PREFIX must be 0+, or 1+.

The SFID 212 ACT field on the SFSYS form (5713-1 Record) must be "Y" before "Y" can be entered in this field.

2.20 INH ONA

Description: Is the ASP originating no answer office trigger inhibited? This field supports the Call Screening for ASP Originating Busy/No Answer Triggers. For more information concerning this feature, see Division 2 Section 4A212.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When INH ONA is "Y", CALL TYPE must be "EMER", "IDDDOPR", "OPER" or PREFIX must be 0+, or 1+.

The SFID 212 ACT field on the SFSYS form (5713-1 Record) must be "Y" before "Y" can be entered in this field.

2.21 ANI BYPASS

Description: Will ANI Table options be ignored? An entry of "N" indicates TDX ANI Table options will be processed. This field supports the TDX (Toll Digital Exchange) ANI Table Call Processing Feature. This is a secured feature with SFID 235. For more information on this feature, see Division 2, Section 4A165.

Software Release: 5E10 and later
Default: N

Valid Values: Y, N

2.22 DENY XFER

Description: This field is used to indicate if call transfers to a particular digit string should be denied.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

- When DENY XFER is "Y", CALL TYPE must not be "EMER".
- When DENY XFER is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to

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"Y". "Y" being set on the SFSYS form indicates that the "Deny Transfer of Digit Screened Calls" feature has been purchased.

2.23 REMARK

Description: This field may contain any remarks deemed locally necessary.
Valid Entries: 1 - 16 characters

CALL TYPE	TYPE OF CI CALL	ACTION	FEATURE TYPE/NAME	CODE INDEX	ROUTE INDEX	PREFIX	DIGITS TO DELETE	TRIG NBR	NATURE OF NBR	ESC CODE
CICUT	CICUT	P	P	R	R	R	P	O	O	P
COMB	NONCI	R	R	P	P	R	R	O	O	P
FEATURE	NONCI	R	R	P	P	P	P	O	O	P
IDDDOPR	NONCI	P	P	R	R	O	P	O	O	O
LDIT	P	P	P	P	P	R	R	P	P	P
NORMAL	INTRA or NONCI	O	O	R	O	R	O	R	O	P
OPER	INTER, INTRA or TOLL	P	P	R	R	R	P	P	O	O
OPRECAL	NONCI	P	P	P	P	P	P	O	O	O
PSDONE	PSNCI or PSCAR	P	P	*	*	R	O	O	O	P
QUERY	INTRA or NONCI	O	O	R	O	P	O	N/A	N/A	N/A
EMER	INTRA	P	P	R	O	R	O	R	O	O

P = Prohibited
R = Required
O = Optional
N/A = Not Applicable
* = Required when TYPE OF CI CALL is "PSNCI". Prohibited when TYPE OF CI CALL is "PSCAR".
First Software Releases in parentheses for non-original fields.

Figure 1 RELATIONSHIPS BETWEEN CALL TYPES AND OTHER FIELDS

DIGITS TO INTER-PRET	CALL TYPE	TYPE OF CI CALL	ACTION	FEATURE	CODE INDEX	PREFIX	DIGITS TO DELETE	NATURE OF NBR	TRIG NBR	ESC CODE	REMARKS
*0	OPRECAL	NONCI									OPERATOR RECALL
*72	FEATURE	NONCI	FTACT	/CFV							CFV ACTIVATE
*73	FEATURE	NONCI	FTDCT	/CFV							CFV DEACTIVATE
*74	FEATURE	NONCI	AD1CH	/ID*; /SC*							CHANGE 1-DIG SC (see Note below)
*75	FEATURE	NONCI	AD2CH	/ID*; /SC*							CHANGE 2-DIG SC (see Note

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											below)
0	OPER	INTRA			0001						0 - OPERATOR
00	OPER	INTER			0001						CARRIER OPERATOR
010	IDDDOPR	NONCI			0002						IDDD OPERATOR
0110-0119	LDIT					1	00				IDDD STA-TO-STA
012-019	LDIT					0	00				IDDD OPR ASST
02-09	LDIT					0	01				OPERATOR ASST
10X#	CICUT	CICUT				NONE					CUT-THRU TO CARRIER
10X0	OPER	INTER			0001						CARRIER OPERATOR
10X0110-10X0119	LDIT					1	00				IDDD STA-TO-STA
10X012-10X019	LDIT					0	00				IDDD OPR ASST
10X02-10X09	LDIT					0	01				OPERATOR ASST
10X12-10X19	LDIT					1	01				TOLL STA-TO-STA
10X2	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
10X20-10X29	COMB	NONCI	AD2USE	/ID*; /SC*		NONE	00				LDIT + SC2 (see Note below)
10X3	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
10X30-10X39	COMB	NONCI	AD2USE	/ID*; /SC*		NONE	00				LDIT + SC2 (see Note below)
10X4	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
10X40-10X49	COMB	NONCI	AD2USE	/ID*; /SC*		NONE	00				LDIT + SC2 (see Note below)
10X5-10X9	COMB	NONCI	AD1USE	/ID*; /SC*		NONE	00				LDIT + SC1 (see Note below)
110	OPRECAL	NONCI									
1172	FEATURE	NONCI	FTACT	/CFV							ACTIVATE CFV
1173	FEATURE	NONCI	FTDCT	/CFV							DEACTIVATE CFV
1174	FEATURE	NONCI	AD1CH	/ID*; /SC*							CHANGE 1-DIG SC (see Note below)
1175	FEATURE	NONCI	AD2CH	/ID*; /SC*							CHANGE 2-DIG SC (see Note below)
12-19	LDIT					1	01				TOLL

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											STA-TO-STA
2	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
20-29	COMB	NONCI	AD2USE	/ID*; /SC*		NONE	00				LDIT + SC2 (see Note below)
3	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
30-39	COMB	NONCI	AD2USE	/ID*; /SC*		NONE	00				LDIT + SC2 (see Note below)
4	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
40-49	COMB	NONCI	AD2USE	/ID*; /SC*		NONE	00				LDIT + SC2 (see Note below)
5-6	COMB	NONCI	AD1USE	/ID*; /SC*		NONE	00				LDIT + SC1 (see Note below)
7	FEATURE	NONCI	AD1USE	/ID*; /SC*							SC1 (see Note below)
70-71	LDIT					NONE	00				LDIT
72	COMB	NONCI	FTACT	/CFV		NONE	00				LDIT + CFVACT
73	COMB	NONCI	FTDCT	/CFV		NONE	00				LDIT + CFVDEACT
74	COMB	NONCI	AD1CH	/ID*; /SC*		NONE	00				LDIT + SC1CH (see Note below)
75	COMB	NONCI	AD2CH	/ID*; /SC*		NONE	00				LDIT + SC2CH (see Note below)
76-79	LDIT					NONE	00				LDIT
8-9	COMB	NONCI	AD1USE	/ID*; /SC*		NONE	00				LDIT + SC1 (see Note below)

Figure 2 PDIT CODES BUILT BY ODA WITH REQUIRED ENTRIES

ACTION FORM	FEAT DEFN ALLOWED	WILDCARD ALLOWED	NON-WILDCARD FEATURE
AAOFF	N/A	N/A	must be the null feature (/*)
AAON	N/A	N/A	must be the null feature (/*)
ACBCANC	ACBFD	YES	None
ACBUSE	ACBFD	YES	None
ACCANC	LSACFD	YES	None
ACCTACT	ACCTFD	YES	ACT TYPE = "CODE"
ACCTDCT	ACCTFD	YES	DACT TYPE = "CODE"
ACCTUSE	ACCTFD	YES	None
ACDXFER	N/A	N/A	must be the null feature (/*)
ACSRCAN	ACSRFD	YES	None
ACSROFF	ACSRFD	YES	GRP CNTRL = "Y"
ACSRON	ACSRFD	YES	GRP CNTRL = "Y"
ACSRUSE	ACSRFD	YES	None
ACSRVFY	ACSRFD	YES	None
ACTCPNBN	CPNBNFD	YES	ACT = "CODE"
ACTOFF	IDFD	YES	CUST ACT/DEACT ACT = "Y"
ACTON	IDFD	YES	CUST ACT/DEACT ACT = "Y"
ACUSE	LSACFD	YES	None

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AD1CH	IDFD;SCFD	YES	AD 1 DIGIT CHANGE = "Y"
AD1USE	IDFD;SCFD	YES	AD 1 DIGIT = "Y"
AD2CH	IDFD;SCFD	YES	AD 2 DIGIT CHANGE = "Y"
AD2USE	IDFD;SCFD	YES	AD 2 DIGIT = "Y"
AIUSE	N/A	N/A	must be the null feature (/*)
ALTACT	ACCTFD	YES	PARM ACT TYPE = "CODE"
ALTACT	ATHFD	YES	CHANGE FCOS = "Y"
ANSBACK	N/A	N/A	None
AQCUSE	N/A	N/A	must be the null feature (/*)
ARCANC	LSARFD	YES	None
ARS1USE	ARSFD	YES	None
ARS2USE	ARSFD	YES	None
ARSCP	ARSFD	YES	CHANGE ACTIVE PATTERN GROUP = "Y"
ARSDCT	ARSFD	YES	DACT TYPE = "CODE"
ARSUSE	ARSFD	YES	None
ARUSE	LSARFD	YES	None
ASITOG	ASIFD	YES	IMP ACC = "Y"
ASIUSE	ASIFD	YES	EXP ACC = "Y"
ASPDNC	ASPFD	YES	CONTROL = "ORIG" For 5E15 and later, must be the null feature (/*)
ASPNORM	ASPFD	YES	CONTROL = "ORIG" For 5E15 and later, must be the null feature (/*)
ASPUSE	N/A	N/A	must be the null feature (/*)
ASPVAR	ASPFD	YES	CONTROL = "ORIG" For 5E15 and later, must be the null feature (/*)
ATACTMWI	N/A	N/A	must be the null feature (/*)
ATDCTMWI	N/A	N/A	must be the null feature (/*)
ATFACT	ACVTFD	YES	CONTROL = "ORIG"
ATFDCT	ACVTFD	YES	CONTROL = "ORIG"
ATGACT	ACVTFD	YES	CONTROL = "ORIG"
ATGDCT	ACVTFD	YES	CONTROL = "ORIG"
ATHACT	ATHFD	YES	ACT TYPE = "CODE"
ATHDCT	ATHFD	YES	DACT TYPE = "CODE"
ATHINS	ATHFD	YES	CHANGE ATH FIRST = "Y"
ATHNREQ	ATHFD	YES	None
ATHREQ	ATHFD	YES	None
ATHOOS	ATHFD	YES	CHANGE ATH FIRST = "Y"
ATHUSE	ATHFD	YES	None
AUCUSE	N/A	N/A	must be the null feature (/*)
BBTLUSE	N/A	N/A	must be the null feature (/*)
BTLUSE	N/A	N/A	must be the null feature (/*)
CCL	PUOFD	Not /PO*	INITIATE = "CDCAL"
CFDATCH	CFWFD	Not /CF*	CHANGE DON'T ANSWER TIMING = "Y"
CFDCT	CFWFD	/CF* only	FEATURE must be /CF*
CFDNCH	CFWFD	Not /CF*	CHANGE FWD TO DN = "Y"
CFVACT	CFWFD	/CF* only	FEATURE must be /CF*
CFVDCT	CFWFD	/CF* only	FEATURE must be /CF*
CLOFF	N/A	N/A	must be the null feature (/*)
CLON	N/A	N/A	must be the null feature (/*)
CLWCUSE	MSFD	YES	LW CALLING != "NONE"
CNDACT	LIDFD	YES	ACT TYPE = "CODE"
CNDDCT	LIDFD	YES	DEACT TYPE = "CODE"
CNPUSE	DISPFD	YES	TN PRIVACY = "Y" or must be /DI*
COTUSE	LSCOTFD	YES	None
CPQ1	PUOFD	YES	NUMBER OF PICKUP GROUPS = 1, 2, 3, or 4
CPQ2	PUOFD	YES	NUMBER OF PICKUP GROUPS = 2, 3, or 4
CPQ3	PUOFD	YES	NUMBER OF PICKUP GROUPS = 3 or 4
CPQ4	PUOFD	YES	NUMBER OF PICKUP GROUPS = 4
CSACT	CFWFD	/CF* only	FEATURE must be /CF*
CSDCT	CFWFD	/CF* only	FEATURE must be /CF*
CTT	PFAFD	/PF* only	FEATURE must be /PF*
CWDLU	CWTFD	YES	INVOACTION = "CODE"
CWOACT	CWTFD	/CW* only	FEATURE must be /CW*
CWODCT	CWTFD	/CW* only	FEATURE must be /CW*
CWTACT	CWTFD	/CW* only	FEATURE must be /CW*
CWTDCT	CWTFD	/CW* only	FEATURE must be /CW*
CWXCH	CWTFD	Not /CW*	CHANGE CDPTY TONE INTERVAL = "Y"
DALTACT	ATHFD	YES	CHANGE FCOS = "Y"
DARSCP	ARSFD	YES	CHANGE ACTIVE PATTERN GROUP = "Y"
DBDACT	CFWFD	/CF* only	FEATURE must be /CF*
DBDDCT	CFWFD	/CF* only	FEATURE must be /CF*
DCTCPNBN	CPNBNFD	YES	DACT = "CODE"
DCTMWI	MSFD	YES	AUD MSG WAIT IND = "Y" or VIS MSG WAIT IND = "Y"

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DFRLALT	ARSFD	YES	CHANGE ALT FRL = "Y"
DGPACT	ARSFD	YES	GROUP ACT TYPE = "CODE"
DGPDCT	ARSFD	YES	GROUP DACT TYPE = "CODE"
DMAINACT	ATHFD	YES	CHANGE FCOS = "Y"
DNPUSE	DISPFD	YES	TN PRIVACY = "Y"
DPN	PUOFD	Not /PO*	(INITIATE = "IDPUDL" or "IPREDN") and BARGE IN = "N"
DPU	PUOFD	Not /PO*	(INITIATE = "IDPUDL" or "IPREDN") and BARGE IN = "Y"
DRPCH	DRFD	Not `DR*	CHANGE RINGING PATTERN = "Y"
EMER	IDFD	YES	None
EMUSE	N/A	N/A	must be the null feature (/*)
FRLALT	ARSFD	YES	CHANGE ALT FRL = "Y"
FRLMAIN	ARSFD	YES	CHANGE ALT FRL = "Y"
FRLDMAIN	ARSFD	YES	CHANGE ALT FRL = "Y"
FTACT	ACVTFD	Not /AT*	ACT TYPE = "CODE"
FTACT	CFWFD	Not /CF*	ACT TYPE != "AUTO"
FTACT	CWTFD	Not /CW*	ACT TYP = "CODE"
FTACT	DRFD	Not /DR*	ACT TYPE = "CODE"
FTACT	MWFD	Not /MW*	ACT/INACT OPTION = "ACT1CA" or "CUSTSEL"
FTACT	PFAFD	Not /PF*	None
FTACT	PUOFD	Not /PO*	ACT TYPE = "CODE"
FTACT	PUTFD	See NOTE 1 below	ACT TYPE = "CODE"
FTDCT	ACVTFD	Not /AT*	DEACT TYPE = "CODE"
FTDCT	CFWFD	Not /CF*	DACT TYPE != "NONE" or "AUTO"
FTDCT	CWTFD	Not /CW*	DACT TYP = "CODE"
FTDCT	DRFD	Not /DR*	DACT TYPE = "CODE"
FTDCT	MWFD	Not /MW*	ACT/INACT OPTION = "CUSTSEL" or "INACT1CA"
FTDCT	PFAFD	Not /PF*	None
FTDCT	PUOFD	Not /PO*	DACT TYPE = "CODE"
FTDCT	PUTFD	See NOTE 1 below	DACT TYPE = "CODE"
GPACT	ACVTFD	YES	ACT TYPE = "CODE" and ACVT GRP known
GPACT	ARSFD	YES	GROUP ACT TYPE = "CODE"
GPACT	IDFD;SCFD	YES	CUST ACT/DEACT IDP = "Y"
GPDCT	ACVTFD	YES	DEACT TYPE = "CODE" and ACVT GRP known
GPDCT	IDFD;SCFD	YES	CUST ACT/DEACT IDP = "Y"
GPDCT	ARSFD	YES	GROUP DACT TYPE = "CODE"
GRPCARCH	IDFD	YES	GPIC CUST CHANGEABLE = "Y"
HIRINGA	HIFD	YES	SEL ICM DIAL = "Y"
HIRINGB	HIFD	YES	SEL ICM DIAL = "Y" or ICM CODE DIAL = "Y"
HIRINGC	HIFD	YES	SEL ICM DIAL = "Y"
HIRINGG	HIFD	YES	SEL ICM DIAL = "Y"
HIDHOLD	HIFD	YES	DIAL HOLD = "Y"
IBSYVFY	PUOFD	Not /PO*	INITIATE = "BSYVFY"
ICTT	PFAFD	/PF* only	FEATURE must be /PF*
IDNACT	ACVTFD	YES	None
IEMEROVR	PUOFD	Not /PO*	INITIATE = "EMEROVR"
IGACT	ACVTFD	YES	None
INSUSE	DISPFD	YES	INSPECT = "Y"
LDNDCT	CFWFD	Not /CF*	DACT TYPE != "NONE", "KEY", or "AUTO"
LSP	PUOFD	Not /PO*	INITIATE = "LDSPKPG"
LSFSYM	LSCAFD	YES	None
LSFSYM	LSCFFD	YES	None
LSFSYM	LSDAFD	YES	None
LSFSYM	LSCRFD	YES	None
LSFSYM	LSCARFD	YES	None
LSFNOSYM	LSCAFD	YES	None
LSFNOSYM	LSCFFD	YES	None
LSFNOSYM	LSDAFD	YES	None
LSFNOSYM	LSCRFD	YES	None
LSFNOSYM	LSCARFD	YES	None
LWCUSE	MSFD	YES	LW CALLING = "OUT" or "INOUT"
MAINACT	ACCTFD	YES	PARM ACT TYPE = "CODE"
MAINACT	ATHFD	YES	CHANGE FCOS = "Y"
MDRACT	MDRFD	YES	ACT TYPE = "CODE"
MDRDCT	MDRFD	YES	DACT TYPE = "CODE"
MDROFF	MDRFD	YES	GRP CHANGE ALLOWED = "Y"
MDRON	MDRFD	YES	GRP CHANGE ALLOWED = "Y"
MEOFF	N/A	N/A	must be the null feature (/*)
MEON	N/A	N/A	must be the null feature (/*)
MWITD	MWFD	Not /MW*	DIAL CODE OR BUTTON = "Y"
MWSOH	MWFD	Not /MW*	IN MIDDLE = "Y" or OFF HOOK = "Y" or MULTIWAY CONTROL = "CODEALT"
MWSPL	MWFD	Not /MW*	SPLIT LAST PTY = "Y"

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NNPRV	DISPFD	YES	TN PRIVACY = "Y" or must be /DI*
NNPUB	DISPFD	YES	TN PRIVACY = "Y" or must be /DI*
PFUSE	PFAFD	YES	None
PODUSE	MSFD	YES	PRNT ON DEMAND = "Y"
PVNUSE	N/A	N/A	must be the null feature (/*)
RBQCAN	QUFD	/QU* only	FEATURE must be /QU*
RBQVFY	QUFD	/QU* only	FEATURE must be /QU*
SAUSE	N/A	N/A	must be the null feature (/*)
SDNUSE	N/A	N/A	must be the null feature (/*)
SEL1XFER	N/A	N/A	must be the null feature (/*)
SEL2XFER	N/A	N/A	must be the null feature (/*)
SEL3XFER	N/A	N/A	must be the null feature (/*)
SEL4XFER	N/A	N/A	must be the null feature (/*)
SEL5XFER	N/A	N/A	must be the null feature (/*)
SEL6XFER	N/A	N/A	must be the null feature (/*)
SRGACT	SRFD	NO	None
SRGDCT	SRFD	NO	None
SRGSYM	SRFD	NO	None
SRGNOSYM	SRFD	NO	None
TD1PAD	TODFD	YES	ADD 1 PARM CODE = "Y"
TDACT	TODFD	YES	CUSTOMER ACTIVATION = "Y"
TDADZP	TODFD	YES	ADD 0 PARM CODE = "Y"
TDATCH	TODFD	YES	CHANGE ACTION TIME = "Y"
TDDALL	TODFD	YES	DELETE ALL LISTS = "Y"
TDDCT	TODFD	YES	CUSTOMER ACTIVATION = "Y"
TDDEL1P	TODFD	YES	DELETE 1 PARM LIST = "Y"
TDOWCH	TODFD	YES	CHANGE OWS = "Y"
TDZPDEL	TODFD	YES	DELETE 0 PARM LIST = "Y"
TGACT	TGSRFD	YES	ACT TYPE = "CODE"
TGDCT	TGSRFD	YES	DACT TYPE = "CODE"
UCRACT	N/A	N/A	must be the null feature (/*)
UCRDCT	N/A	N/A	must be the null feature (/*)
US3WC	MWFD	Not /MW*	MWCONTROL = "3WAY" and AMAC = "USE"

Note 1: This feature definition form cannot have a wild-card feature. The PDIT form checks to make sure that the associated feature is not a wild-card feature.

Figure 3 PDIT ACTIONS AND ASSOCIATED RESTRICTIONS

```
pdit            5ESS Switch     _
          OFFICE DATA ADMINISTRATION
(5300-2)     PREFIX/FEATURE DIGIT INTERPRETER TABLE

*1. PDIT         ___     13. NATURE OF NBR ____
*2. DIGITS TO INTERPRET _________  14. TRIG NBR   ___
#3. CALL TYPE      ________   15. ESC CODE   N
 4. TYPE OF CI CALL  _____    16. DFLT RT    NONE
 5. ACTION        _________  17. INH OBL    N
 6. FEATURE       _________  18. INH ONA    N
 7. CODE INDEX      ____     19. ANI BYPASS  N
 8. ROUTE INDEX     ____     20. DENY XFER   N
 9. POLYGRID       N      21. REMARK    ___________________
10. DESEP         ___
11. PREFIX        ____
12. DIGITS TO BE DELETED __
```

Figure 4 SAMPLE PDIT FORM 5E12 THROUGH 5E15 SOFTWARE RELEASES

```
pdit            5ESS Switch     _
          OFFICE DATA ADMINISTRATION
(5300-2)     PREFIX/FEATURE DIGIT INTERPRETER TABLE
```

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*1. PDIT ___ 13. NATURE OF NBR ____
*2. DIGITS TO INTERPRET _____ 14. TRIG NBR ___
#3. CALL TYPE _____ 15. PREF TRIG NBR ___
4. TYPE OF CI CALL _____ 16. ESC CODE N
5. ACTION _____ 17. DFLT RT NONE
6. FEATURE _____ 18. INH OBL N
7. CODE INDEX ____ 19. INH ONA N
8. ROUTE INDEX _____ 20. ANI BYPASS N
9. POLYGRID N 21. DENY XFER N
10. DESEP ___ 22. REMARK _____
11. PREFIX ____
12. DIGITS TO BE DELETED __

Figure 5 SAMPLE PDIT FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 3C: 5300-3a/3b/5a/5b RECORD
LOCAL DIGIT INTERPRETER TABLE FORM - LDIT
MULTIPLE LOCAL DIGIT INTERPRETER TABLE FORM - MLDIT

1. GENERAL

The 5300-3 and 5300-5 Records are used to define all area, office and service codes (NPA, NXX, X11, etc.) in a 5ESS Switch. Any code from one to fifteen digits in length may be defined. The LDIT serves as both a "local" and "foreign" area translator.

The LDIT (Local Digit Interpreter Table) is used for further digit interpretation. For line originated calls, the LDIT is used after the the PDIT (Prefix/ Feature Digit Interpreter Table). For trunk originated calls, the LDIT is used after the INDIT (Incoming Trunk Digit Preliminary Interpreter Table) when the LDIT(Y or N)? field equals "Y" (Yes) on the INDIT form (5309 Record).

1.1 Interpreted Digits

One to fifteen digits may be interpreted. The number of digits depends on how many digits are required before the destination route can be determined. However, for each digit level interpreted, the successive preceding digit levels must be fully expanded (0 - 9) as well as the final digit level. If a number such as 872 - 2813 needs to be routed differently than all other numbers in 872, then 872X, 872XX, 872XXX and 872XXXX (where X is 0 - 9) would be required entries on the LDIT form.

1.2 Rate and Route

The LDIT form provides a Code Index and Regular Route Index (or Office Code) which, when combined with a Screening Index, is used as an input to the RAR form (5301 Record). The Regular Route Index is used if the RTI field is "REGL" on the RAR form. If this route is not to be used for a particular class of subscribers, a Special Route Index is entered on the RAR form which overrides the Regular Route Index or Office Code.

1.3 Conflict Codes

Code Conflicts occur whenever the destination of a call, normally identified by the first three inpulsed digits, depends upon the remaining number of inpulsed digits and not upon their value. Code Conflicts occur when an office code in the local area is the same as a foreign NPA. For Local/Toll offices the concept is extended to include cases where the first three digits may be followed by three digits (NPA + Operator Code), four digits (NXX-XXXX), five digits (NPA + Leave Word Operator Code), six digits (NPA + Toll Tandem Codes + Operator Code) or seven digits (NPA + NXX-XXXX). In the NPA/NXX Code Conflicts, the destination indexes for the two conflicting codes is normally different. For the extended case, the destination indexes may be the same for all cases or the destination indexes may be different. The 5ESS Switch treats each distinct case based upon the entries provided on the 5300-5 Record and the 5300-3 Record form. Therefore, each case must be entered on the Conflict Resolution Record and in the Conflict Resolution section of LDIT form even though the destination indexes provided on all entries may be identical.

1.4 Ambiguity Codes

Ambiguities occur whenever the destination of a call depends, at some point in the impulsing, upon whether or not any additional digits are received. As an example, if two entries are provided on the LDIT, one for impulsed digits 023 and another for 023 - 161, an ambiguity occurs after the digit three is received. The ambiguity is resolved by timing. If no more digits are received within a specified interval, the call times out and its given the treatment specified on the 023 LDIT entry. Otherwise, digit analysis continues as more digits are received. For any two LDIT entries in which ambiguity occurs, the entry with the shorter of the inpulsed codes must have a NBR OF DIGITS entry which is exactly equal to the number of digits in the INCOMING DIGITS field.

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No ambiguity may occur when the TYPE OF CI CALL is "SAC".

1.5 Conversion Codes

Up to four codes defined on the 5300-3 Record may be converted to any other code for outpulsing from the 5ESS Switch. The normal application of code conversion is for the 411, 611, 811 and 911 3-digit Service Codes. These codes are indicated on the 5300-3 Record with CALL TYPEs of "LOCDA", "REPAIR", "BUSOFC" and "EMER", respectively. The converted codes for these Call Types must be defined on the CONV form (5300-4 Record). Since the 5ESS Switch generic software always replaces the dialed digits for these Call Types with the code defined on the 5300-4 Record, the 5300-4 Record must always be completed with entries for these CALL TYPEs even though no code conversion is really required. In such cases, the 5300-4 Record entries must contain the same digits as the dialed code. The converted code is not re-interpreted by the digit analysis call processing software; it is simply used for any required outpulsing subject to digit deletion and prefixing by the Route Index translations, or for Directory Number translations.

1.6 Dial and Access Codes

The 5300-3 Record should contain an entry for every dialable code. This includes NPAs, NXXs and the N11 Service Codes. Feature and operator access codes (e.g., 72, 73, 0 and 1 prefixes, IDDD prefixes, etc.) must not be defined here, but on the PDIT form (5300-2 Record).

1.7 Multiple Local Digit Interpreter Table

MLDIT (Multiple Local Digit Interpreter Table), available with 5E3 and later Software Releases, is similar to LDIT but allows multiple entries of incoming digits to be input when they have common attributes. Conflict or IMPLIED NPA entries are not allowed on the MLDIT form. Entries made on the MLDIT form can only be reviewed on the MLDIT form. The 5300-3 Record will incorporate both LDIT and MLDIT entries.

1.8 Call Types

With 5E4(2) and later, two new values are added to the CALL TYPE field that correspond to inward calls. Inward calls are calls that arrive from a distant operator to an OSPS (Operator Services Position System) operator so that the operator can provide billing validation assistance or complete calls that have experienced difficulties.

With 5E4(2) and later, seven new CALL TYPEs were added to handle test calls in toll offices that employ the TOPAS (Testing, Operations, Provisioning and Administration System) operation system.

1.9 Operator Special-Dialed Codes

If an operator is not allowed to use 4-digit OSDCs (Operator Special-Dialed Codes), then distinguishing a number of the form NPA-TTC-OSDC from NPA-NXX-XXXX, the 5300-5 Record is used to separate the two.

The 5300-3 Record data must be populated so that a call originating on an RSM routes out of the same RSM. The 5300-3 Record also has to be populated with the digit analysis data needed to accept and route residual calls.

1.10 Fully Coded Addressing

Available with 5E5 and later, all international outbound calls will be processed using FCA (Fully Coded Addressing). FCA is a CCS (Common Channel Signaling) single-stage protocol used to route international outbound calls in a uniform manner through the domestic network. With FCA, when an international outbound call is routed to a 5ESS Toll Switch, the 5ESS Toll Switch will collect all the dialed digits and route the call as a CCS single-stage call towards a 4ESS ISC (International Switching Center). CALL

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TYPEs associated with FCA are "STG1FCA" and "IDDDFCA".

1.11 Foreign Area Translator

For 5E6 and later, operating companies can make use of a FAT (Foreign Area Translator) LDIT during digit analysis. The FAT/LDIT performs further digit analysis on LDITs that are interpreting common dialed or inpulsed digit strings. For more information concerning the implementation and use of the FAT/LDIT, see Division 2, Section 1AO.

1.12 Timing Delay

TDAC (Timing Delay For All Calls) is used to eliminate Interdigit timing and to allow Overlap Outpulsing for CONFLCT CALL TYPEs. Conflicts are resolved in two ways - prefix and timing.

A conflict is prefix resolved when the dialed prefix matches the prefix entered in the PREFIX field. For the prefix resolved case, call processing will assume the call has been dialed with the quantity of digits specified in the NBR OF DIGITS field.

For the two conflict entry case, the conflict is also prefix resolved if the PREFIX field is blank, NBR OF DIGITS is known, and a prefix of NONE or 1+ is dialed.

Timing is used to resolve all other conflict scenarios.

Division 2, Section 4C1 discusses the translations for "Special" Features. TDAC translations are found in this section. The TDAC Conflict Resolution Table in Figure 2 represents the result of dialed calls which are interpreted by an LDIT form as Conflict Resolved calls based upon:

- the PREFIX entry on the LDIT form;
- the NBR OF DIGITS entry on the LDIT form;
- and the actual dialed prefix by the end user.

1.13 OSPS International Outbound Calls

If the LDIT field for OSPS international outbound calls is the same as the LDIT for the non-OSPS Toll international outbound calls, see the IDDD form (5307 Record) for the translations to populate the OSPS feature.

1.14 Call Type for Directory Assistance

For 5E7 and later, calls dialed as 5551212, 15551212, or FGD CAC (Carrier Access Code) + 5551212 will be blocked when translated with an LDIT form having TYPE OF CI CALL "INTER", NBR OF DIGITS 7, and CALL TYPE "DA". To successfully translate these calls, the TYPE OF CI CALL must be "INTRA" and the CALL TYPE "DA".

1.15 Recent Change View

The corresponding Recent Change View for the LDIT form is 9.3.

The corresponding Recent Change View for the MLDIT form is 9.15.

2. FORM ENTRIES - 5300-3a RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

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2.2 *LDIT

Description: Enter the Local Digit Interpreter Table Number. The number selected is based upon entries on the DAS form (5300-1 Record)
Valid Entries: 1 - 999

2.3 *INCOMING DIGITS

Description: When using the MLDIT or LDIT form, enter the digits to be interpreted.
Valid Entries: 1 to 15 digits

2.4 RANGE

This field is only used on the MLDIT form. The last three digits specified in the INCOMING DIGITS field through the digits specified in this field will possess the assignments made on Screen 2 of the MLDIT form.

2.5 CALL TYPE

Description: Enter the Call Types to be used. Please refer to Figure 1 for field dependencies per CALL TYPE.

Required Field.
Default: NORMAL
Valid Entries:

Valid CALL TYPE Entries

Entry	Definition
100	Incoming 100 Type Test Calls
101	Incoming 101 Type Test Calls
102	Incoming 102 Type Test Calls
103	Incoming 103 Type Test Calls
104	Incoming 104 Type Test Calls
105	Incoming 105 Type Test Calls
106	Software Release: 5E3 and later. 106 Test Calls for DSN (Defense Switched Network) offices only.
104R	Incoming Call to a RMS-D3 104 Test Line
105R	Incoming Call to a RMS-D3 105 Test Line
109R	Incoming Call to a RMS-D3 109 Test Line
606R	Incoming Call to a RMS-D3 606 Test Line
101R	Incoming Call to a RMS-D3 101 Test Line
101TP	Incoming Call to a Specific RMS-D3 101 Test Position
101TAT	Incoming Call to a Specific RMS-D3 101 Test Position and TAT
211	Software Release: 5E15 and later. Dial 211.
311	Software Release: 5E15 and later. Dial 311.
900	Software Release: 5E5 and later. 900 calls. This CALL TYPE, is used to prevent a LASS AR (Automatic Recall) user from camping-on to this line.
ADDON	Software Release: 5E4(2) and later. Add-on for Alliance Teleconferencing.
APSDN	Software Release: 5E5 and later. ACP (Action Control Point) for a SDN (Software Defined Network). This value indicates that a query should be sent to the NCP (Network Control Point). The NCP will return a routing telephone number.
AUTINW	Software Release: 5E4(2) and later. Automated Inward Call. Calls with this call type are originated by a distant operator and are routed to an automated query.
BBRITL	Software Release: 5E6 and later. This ACTION is used for billed BRITL (Basic Rate Interface Dial Up Test Line).
BRITL	Software Release: 5E5 and later. This ACTION is used for non-billed BRITL.
BUSOFC	Business Office (811)

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CONFLCT	Conflicting NXX and NPA Code - either prefix resolved or timing resolved. Refer to Division 2, Section 4C1 for the description for the TDAC feature and also see Figure 2 in this section.
CSTL	Coin Station Test Line
DA	555 Directory Assistance. Note: A CALL TYPE of "NORMAL" should be used with DA calls (i.e.,,555-1212, NPA-555-1212) that are preceded by an FGD CAC.
DA2VDT	Directory Assistance calls routed to Video Display Terminal.
ECP	Software Release: 5E9(1) and later. Mobile originated call on a 5ESS Switch serving as a Digital Cellular Switch for an ECP (Executive Cellular Processor).
EMER	911 Emergency Service Bureau
FAT	Software Release: 5E6 and later. Foreign Area Translator. When a CALL TYPE of "FAT" is entered, call processing will "escape" to the FAT/LDIT for further digit interpretation.
HNPAD	Home NPA (Numbering Plan Area) dialed in error.
IC1	Incoming 101 Call to Work Station 1
IC2	Incoming 101 Call to Work Station 2
IC3	Incoming 101 Call to Work Station 3
IC4	Incoming 101 Call to Work Station 4
IC5	Incoming 101 Call to Work Station 5
IC6	Incoming 101 Call to Work Station 6
IC7	Incoming 101 Call to Work Station 7
IC8	Incoming 101 Call to Work Station 8
IC9	Software Release: 5E8 and earlier Incoming 101 Call to Work Station 9 associated with CTTU (Central Trunk Test Unit). Software Release: 5E9(1) and later Incoming 101 Call to Work Station 9. Note: Effective with 5E9(1), IC33 is associated with CTTU (Central Trunk Test Unit).
IC10	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 10.
IC11	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 11.
IC12	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 12.
IC13	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 13.
IC14	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 14.
IC15	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 15.
IC16	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 16.
IC17	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 17.
IC18	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 18.
IC19	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 19.
IC20	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 20.
IC21	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 21.
IC22	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 22.
IC23	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 23.
IC24	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 24.
IC25	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 25.
IC26	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 26.
IC27	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 27.

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IC28	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 28.
IC29	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 29.
IC30	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 30.
IC31	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 31.
IC32	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 32.
IC33	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 33 associated with CTTU (Central Trunk Test Unit).
IDDDFCA	Software Release: 5E5 and later. International Direct Distance Dialing FCA call.
IDDDSTS	Software Release: 5E3 and later. International Direct Distance Dialing Station to Station.
INV	Software Release: 5E3 and later. ISTF (Integrated Services Test Function) Inverted Loopback test.
INWATS	INWATS (800+)
LNACP	Software Release: 5E6 and later. ACP (Action Control Point) for a LN (Leased Network).
LOCDA	Local Directory Assistance (411)
LTD	Local Test Desk
MEETME	Software Release: 5E4(2) and later. Alliance Teleconferencing meet-me call.
NINV	Software Release: 5E3 and later. ISTF (Integrated Services Test Function) Non-Inverted Loopback test.
NORM555	Software Release: 5E16 and later. Dial (1) + 555 - XXXX
NORMAL	This value is used for all other types of calls and indicates normal call processing. Intraoffice and interoffice (usually seven or ten digit) calls require no special handling by the Software Release.
NS800	Software Release: 5E4(2) and later. Number Service (SSP800) type call.
OCTL	Open Circuit Test Line
OPINW	Software Release: 5E4(2) and later. Operator-assisted Inward Call. Calls with this call type are originated by a distant operator and are routed to an OSPS operator position.
OPNIT	Operator-assisted DA/Non-ISP call to the VDT.
OSOIWTS	Originating Screening Office INWATS (see Note)
PB	Incoming Permanent Busy Type Test Calls
RELAY	Software Release: 5E15 and later. 711 Relay/Hearing Impaired Service.
REPAIR	Repair Service Bureau (611)
SDNA	Software Release: 5E3 and later. Software Defined Network outgoing calls from the NAP (Network Access Point).
SDNE	Software Release: 5E3 and later. Software Defined Network incoming calls to the NAP (Network Access Point).
SPAB800	Software Release: 5E5 and later. Special Access Basic 800 Service.
SPAM800	Software Release: 5E5 and later. MEGACOM 800 Service.
SRTT	Station Ringer Touch-Tone Test
STG1FCA	Software Release: 5E5 and later. First Stage of a Fully Coded Addressing international outbound call.
SYN	Incoming Synchronous Type Test Calls
VACANT	Vacant NPA, NXX and Service Codes
WETESTC	Software Release: 5E8 and later. Test call associated with 5ESS library programs.

Data Rules:

Call Types "LOCDA", "REPAIR", "BUSOFC" and "EMER" require a corresponding entry on the CONV form.

For 5E3 and later, the MLDIT form requires a CALL TYPE entry. A CALL TYPE of "CONFLCT" is not

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allowed on the MLDIT form.

For 5E5 and later, if a CALL TYPE of 100, 101, 101R, 101TAT, 101TP, 102, 103, 104, 104R, 105, 105R, 106, 109R, 606R, IC1, IC2, IC3, IC4, IC5, IC6, IC7, IC8, IC9, INV, NINV, PB or SYN is entered, then ROUTE INDEX on the RTIDX form, which corresponds to the ROUTE INDEX on this form, must have a ROUTE TYPE of "TEST".

A digit string used for test CALL TYPEs must be used for the same test CALL TYPE in all LDITs in which the digit string is defined. This applies to digit strings defined on LDIT, MLDIT and RDIT forms (5300-7/8 Record).

A terminating test line ("10x", "PB", or "SYN") must be defined in the office as a CALL TYPE on an RDIT, LDIT, or MLDIT form, or as TEST CODE on a LINE form (5109-1/2/3 Record).

For 5E12 and later, when CALL TYPE of "SPAB800", "SPAM800", "IDDDFCA" or "IDDDSTS" is entered, CI TYPE must be "NONCI".

For 5E13 and later, when CALL TYPE is "SDNE", ROUTE INDEX is entered, and PORTED IN is "N", OFFICE CODE cannot be entered.

ADDON: If "ADDON" is entered in the CALL TYPE field, then FIXRT forms (5301 Records) must be submitted with FIXED ROUTE TYPES of "ATCANIF" and "ATCINT".

For 5E7 and later, if CALL TYPE or CONFLICT RESOLUTION CALL TYPE is "ADDON" or "MEETME", then ORIG SCREEN OFF is "Y" on the OFCOPT form and OSPS DA is "Y" on the OSPSOPT form.

APSDN: This value can only be used when a 5ESS Switch is an ACP (ACT PT SDN field on the OFCOPT form is "Y").

AUTINW: This is a valid call type only if the OSPS TA parameter is set to "Y" on the OSPSOPT form.

BBRITL: The DSL which is being tested must have BRITL ALW set to "Y" on the corresponding DSLUSR form.

CONFLCT: For 5E3 and later, when CALL TYPE is "CONFLCT", NBR OF DIGITS is specified, and PREFIX is blank, there must be exactly two CONFLICT RESOLUTION entries.

For 5E9(1) and later:

If CALL TYPE is "CONFLCT", then the DFLT RT on Screen 1 must be "NONE".

If "CONFLCT" or "FAT" are entered in CALL TYPE and "SAC" is entered in TYPE OF CI CALL, then LDIT or MLDIT forms with the above values cannot have INCOMING DIGITS which are the starting digits of:

- INCOMING DIGITS on another LDIT or MLDIT form
- IDDD PREFIX / COUNTRY ACCESS CODE combination on the IDDD form

This restriction applies only to LDIT, MLDIT, IDDD forms sharing the same LDIT value.

For 5E10 and later:

When CALL TYPE is "CONFLCT", ANI BYPASS must be "N".

For 5E11 and later:

When CALL TYPE is not "CONFLCT", CONFLICT RESOLUTION entries cannot be made.

When CALL TYPE is "CONFLCT", then:

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- LNP TRIG NBR must not be entered.
- GEO PORT must be "N".
- PORTED IN must be "N"
- HOME LRN must be "N"
- LRN SCREENING must be "N"
- IHN DNT must be "N"
- ESC CODE must be "N"
- DFLT RT must be "NONE"
- CONFLICT RESOLUTION ANI BYPASS must be "N"
- ROUTE INDEX is prohibited.
- OFFICE CODE is prohibited.
- At least two CONFLICT RESOLUTION entries must be made.

For 5E13 and later, when CALL TYPE is "CONFLCT", NPA SPLIT ANNC must be "N".

For 5E14 and later, when CALL TYPE is "CONFLCT", REL LINK must be "N".

EMER: If a CALL TYPE of "EMER" or "NORMAL" is entered, a TRIG NBR is defined on an NSTRIG form and APPLICATION on the NSTRIG form is "E911" or "800", then ROUTE INDEX and OFFICE CODE on the LDIT or MLDIT form cannot be entered. If APPLICATION on the NSTRIG form is "ASP", then ROUTE INDEX or OFFICE CODE on the LDIT or MLDIT form must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered.

For 5E11 and later, when CALL TYPE is "EMER" and TYPE OF CALL is "INTRA", TRIG NBR must match a TRIG NBR on the NSTRIG form where APPLICATION is "E911."

FAT: When CALL TYPE is "FAT", the value of INCOMING DIGITS on this LDIT form must be in the range 200 - 999 since this represents the FAT/LDIT table number (FAT/LDITs must be in this range); and must be equal to the LDIT value defined on an SMLDIT form (5315 Record) where the FAT field has an entry of "Y" (Yes). Digit interpretation continues on the FAT/LDIT represented by the value of INCOMING DIGITS; therefore, this value of INCOMING DIGITS cannot be expanded on the local LDIT table.

The "FAT" call type cannot be entered on an LDIT pointed to by another FAT/LDIT (a FAT/LDIT cannot point to another FAT/LDIT). Also, the "FAT" call type is not applicable to the CONFLICT RESOLUTION TABLE or the MLDIT form (5300-5 Record).

Code Conversion call types ("EMER", "LOCDA", "REPAIR" or "BUSOFC") cannot be assigned on FAT/LDITs.

For 5E8 and later, if CALL TYPE is "FAT", RDIT cannot be entered.

For 5E9(1) and later, if "CONFLCT" or "FAT" are entered in CALL TYPE and "SAC" is entered in TYPE OF CI CALL, then LDIT or MLDIT forms with the above values cannot have INCOMING DIGITS which are the starting digits of:

- INCOMING DIGITS on another LDIT or MLDIT form

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- IDDD PREFIX / COUNTRY ACCESS CODE combination on the IDDD form

This restriction applies only to LDIT, MLDIT, IDDD forms sharing the same LDIT value.

For 5E11 and later, when CALL TYPE is "FAT", POLYGRID must be "N".

IDDDFCA: This value is used for the address sequence of an international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA. A DAS (Digit Analysis Selector) of 81 will be used instead of the DAS associated with the incoming trunk group. This Call Type may be assigned to incoming digit sequences CC + NN or 0/1X + CC + NN. CC is the Country Code. NN is the National Number. 0/1X is the ISC (International Switching Center) prefix code.

If "IDDDFCA" is entered, then "Y" must be entered in the OFFICE TYPE on the OFCOPT form (5509 Record).

IDDDSTS: Used for multistage international outbound calls which are routed to a MF trunk, CCIS6 trunk or CCS7 ISUP trunk. This value may be assigned to codes which require two-stage call handling at a toll or tandem office. Two-stage call handling includes an acknowledgement wink before the second stage of digits is sent. Also used in a tandem or toll office when the digits inpulsed on the trunk, typically from a TSPS, are 011 + padded Country Code.

For 5E5 and later, this value can be used for:

- A Local office (OFFICE TYPE on the OFCOPT form is "N") where the incoming digits are 011 + (7 - 12 digits).
- A Toll office (OFFICE TYPE on the OFCOPT form is "Y") which will not use FCA (Fully Coded Addressing). Possible incoming digits are 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international call.
- A 5ESS Gateway switch that requires an FCA international outbound call to leave the office on an MF trunk must assign this CALL TYPE to the digit sequence CC + NN. CC is the Country Code. NN is the National Number. ISTF (Integrated Services Test Function) Inverted Loopback test.

LNACP: This value indicates that a query should be sent to the LN NCP (Network Control Point). The NCP will return routing and charging information. This value can only be used when the Leased Network DAS field is entered on the OFCOPT form (5509 Record).

MEETME: If "MEETME" is entered in the CALL TYPE field, then FIXRT forms (5301 Records) must be submitted with FIXED ROUTE TYPES of "ATCANIF" and "ATCINT".

For 5E7 and later, if CALL TYPE or CONFLICT RESOLUTION CALL TYPE is "ADDON" or "MEETME", then ORIG SCREEN OFF is "Y" on the OFCOPT form and OSPS DA is "Y" on the OSPSOPT form.

NORM555: For 5E16 and later, when CALL TYPE is "NORM555", TRIG NBR and CODE INDEX must be entered.

NORMAL: See "EMER" above.

OPINW: The OSPS TA field on the OSPSOPT form must be "Y".

OSOIWTS: If this Call Type is used, COMMON CHAN SIG and ORIG SCREEN OFF must be "Y" and the HOME NPA must be specified on the OFCOPT form (5509 Record). See the ONPA form (5312 Record) for related information.

For 5E7 and later, when CALL TYPE is "OSOIWTS", TYPE OF CI CALL must be "NONCI", "INTER", or

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"INTRA".

If at least one RDIT, LDIT or MLDIT form exists with a CALL TYPE of "OSOIWTS", FIXED ROUTE TYPE must equal "UIA" on a FIXRT form.

- ***NOTE:*** OSOIWTS is used by an Inter-LATA Carrier switch to do originating screening for INWATS digits inpulsed as 800 or 00X plus 7 digits. If this Call Type is used, COMMON CHAN SIG and ORIG SCREEN OFF must be "Y" and the HOME NPA must be entered on the OFCOPT form (5509 Record). See the ONPA form (5312 Record) for related information.

SPAB800: Special Access Basic 800 service allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAB800" on the TKGRP form).

SPAM800: MEGACOM 800 service is a volume discount service which allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAM800" on the TKGRP form). MEGACOM 800 service is similar to Special Access Basic 800 service except that the customer must supply the dedicated trunk group to the 5ESS Toll Switch.

STG1FCA: This value should be used for the first stage of a multi- stage international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA (Fully Coded Addressing. This Call Type may be assigned to incoming digit sequences 1NX + XXX + CCC, 1NX + XXXX + CCC, 011 + PCC, or 18X. 1NX is the customer direct dialed digits. XXX is the 3-digit international carrier. XXXX is the 4-digit international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international code.

For 5E9(1) and later in Recent Change: If "STG1FCA" is entered, then the NBR OF DIGIT field must be 3, 6, 9, or 10.

VACANT: Attempts to dial codes defined as "VACANT" will result in vacant code treatment. In addition, ASP will consider these codes invalid pre-query.

Switch owners may need to define RNX codes that are considered "VACANT" in the normal dialing plan but are treated as "NORMAL" for purposes of ASP pre-query. For these codes, the user should receive "VACANT" code treatment if the number is dialed directly. To accomplish this, CALL TYPE should be set to "NORMAL" and the ROUTE INDEX set to the ROUTE INDEX from the FIXRT form (5301-1 Record) where the FIXED ROUTE TYPE is equal to "VACANT". To identify the RNX codes defined in this manner, it is recommended that the REMARK field should be set to "RNX VAC/ASP QRY".

For 5E15 and later, CALL TYPE on the LDIT/MLDIT forms can be set to "RELAY" only if the ACT field for SFID 594, on the SFSYS form is set to "Y".

2.6 TYPE OF CI CALL

Description: Enter the type of CI (Carrier Interconnect) call. See Figure 1 for appropriate entries per Call Type.

On the MLDIT form, this is a required entry.

Valid TYPE OF CI CALL Entries

Entry	Definition
COMP	Used for calls to a geographical area where the LEC (Local Exchange Carrier) and ICs (Inter-LATA Carriers) compete on an equal basis. Such calls must be routed by a carrier, but this "carrier" may be the LEC. If the subscriber wants to be routed via the LEC, the subscriber must either be presubscribed to the LEC or dial an explicit FGD CAC.
CONFL	Used for cases where the call may be either INTER (Inter-LATA) or INTRA (Intra-LATA), depending on the dialed prefix. See Data Rules for more information.
INTER	Used for calls destined for outside the LATA. Such calls must be routed via a carrier, not the LEC. If the carrier is to be determined by an external database (e.g. AIN database query), "NONCI" should be used since carrier selection is irrelevant in this switch.

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INTRA	Used for calls destined for within the LATA. Usually routed via the LEC. If other carriers are permitted and accept Intra-LATA calls, an explicit FGD CAC must be dialed (not presubscription) to access the carriers for these calls.
INTRM	Software Release: 5E8 and later. FGB Interim call is used for an incoming trunk call dialed by the originator as 950XXXX. The 950 digits are entered in the INCOMING DIGITS. The XXXX represents a Carrier Identification Code. These calls may be from a non-EAEO and less than the seven digits may be received as would then be reflected in the INCOMING DIGITS. When "INTRM" is entered, the last four digits inpulsed (i.e., the Carrier Identification Code) will be used to enter the ICF form (5305 Record) to access the Carrier's FGB CDI and FGB RTI. Because "INTRM" is also a valid entry in the LDIT form, it may be optionally used instead of the INDIT form.
NONCI	Used for calls for which carrier selection is irrelevant.
PRIV	Used for EAS (Extended Area Service) calls where the local calling area extends into the neighboring LATA. These Inter-LATA calls are treated as INTRA (routed by the LEC) except when the subscriber explicitly dials an FGD CAC for an IC. When the FGD CAC is dialed, the call is treated as INTER.
PSCAR	Software Release: 5E3 and later. For PS (Packet Switched) calls, indicates that an IC (Interexchange Carrier) is required. If the DNIC of the IC is given in the RPOA (Recognized Private Operating Agency) selection field, that DNIC is used to route the call. If the DNIC is not given in the RPOA, then the preselected IC is used, given by the IECP DNIC field on the DSLUSR form (5908 Record). The route index is assigned to the DNIC on the PSDNICRI form (5921 Record), therefore the ROUTE INDEX and CODE INDEX must not be entered on this form. The preselected (default) IC is selected at the time of the service order. If the DNIC is not given in the RPOA or entered in the IECP DNIC field, then the PS call is cleared.
PSNCI	Software Release: 5E3 and later. For packet switched calls, indicates a carrier interconnect does not apply, therefore a ROUTE INDEX and a CODE INDEX must be specified on this form.
SAC	Used for SACs (Service Access Codes), e.g., 800 and 900 codes. Each six digit SAC code (800/900 + NXX) is assigned to a specific carrier. The Code Index and Route Index from this form, the LDIT, will be used to route the call. When this Type of CI Call is specified, the Carrier Identification must be entered in SAC OWNER. SAC may not be specified in an ambiguous case.
TCONF	Software Release: 5E9(1) and later. Intra-LATA toll conflict. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TCONF", a SFSYS form must exist with SFID 149 set to "Y".
TOLL	Software Release: 5E9(1) and later. Toll calls within the LATA. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TOLL", a SFSYS form must exist with SFID 149 set to "Y".
WZ1	Used for calls outside the continental United States, but within World Zone 1 (e.g., Canada).

Data Rules:

This field must be entered for all CALL TYPEs except "CONFLCT" and "FAT"

CONFL: Call processing will look ahead at other records to determine if the call should be treated as Intra-LATA or Inter-LATA. When no prefix has been dialed, the ROUTE INDEX value of this LDIT entry will be compared to the RTI value entered in the No Prefix column of the originator's Rate and Route form (5301 Record). If the RTI value equals the ROUTE INDEX value or is REGL, it is considered a match and treated as an Intra-LATA call. If the RTI is not equal to the ROUTE INDEX value, there is no match and therefore the call will be treated as an Inter-LATA call. When a 1 prefix has been dialed, the process is the same as the No Prefix case, except the RTI value found in the 1+ Prefix column of the RAR is used for comparison. When a 0 prefix has been dialed, the comparison technique is inappropriate. In this case, the 0+ Prefix entry in the RAR will be read. The RTI value in that entry will be analyzed to determine whether or not it is an Announcement Route Index. If it is an announcement, the call will be processed as an Inter-LATA call. If it is not, the call will be treated as an Intra-LATA call. When the zero plus call should be treated as an Inter-LATA carrier call and therefore the RAR has an announcement type Route Index, care must be taken to make sure the associated CBLK entry equals No.

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PSCAR: When using this type of CI Call, the CALL TYPE must be "NORMAL" or "900".

PSNCI: When this TYPE OF CI CALL is used, a CALL TYPE of "NORMAL", "900" or "VACANT" must be entered.

Packet Switching TYPE OF CI CALLs ("PSCAR" and "PSNCI") cannot be mixed with non-Packet Switching TYPE OF CI CALLs within a single DAS.

For 5E8 and later, if TYPE OF CI CALL is "PSCAR" or "PSNCI", TRIG NBR must not be entered.

For 5E9(1) and later, if "PSNCI" or "PSCAR" are entered in the CI TYPE CONFLICT RESOLUTION ENTRIES then NBR OF DIGITS and PREFIX cannot be entered.

SAC: When this TYPE OF CI CALL is used, a CALL TYPE of "INWATS", "NORM555", "NORMAL", "900" or "DA" must be entered.

For 5E8 and later, if TYPE OF CI CALL is "SAC", RDIT cannot be entered.

For 5E9(1) and later, if "CONFLCT" or "FAT" are entered in CALL TYPE and "SAC" is entered in TYPE OF CI CALL, then LDIT or MLDIT forms with the above values cannot have INCOMING DIGITS which are the starting digits of:

- INCOMING DIGITS on another LDIT or MLDIT form
- IDDD PREFIX / COUNTRY ACCESS CODE combination on the IDDD form

This restriction applies only to LDIT, MLDIT, IDDD forms sharing the same LDIT value.

WZ1: All forms with TYPE OF CI CALL equals "WZ1" which have the first three digits (that is, the NPA (Numbering Plan Area)) in the INCOMING DIGITS fields must have the same value for WZ1 REGION.

For 5E6 and later, this type of Carrier Interconnect is allowed on FAT/LDITs, however, instead of this value (WZ1) being related to the first three digits of INCOMING DIGITS, it is related to the FAT/LDIT table number.

For 5E9(1) through 5E14, when CALL TYPE is "LOCDA", "BUSOFC", or "REPAIR", TYPE OF CI CALL must be "INTER", "INTRA", or "TOLL".

For 5E12 and later, "IDDD" is not a valid value for TYPE OF CI CALL.

For 5E15 and later, when CALL TYPE is "BUSOFC", "LOCDA", "RELAY", or "REPAIR", TYPE OF CI CALL must be "INTER", "INTRA", or "TOLL".

2.7 NBR OF DIGITS

Description: Enter the total number of digits expected excluding the dialed prefix.

On the MLDIT form, this is a required entry for 5E4(2) and later.
Valid Entries: 1 - 15 or 1 - 18 if IDDD15 functionality is available

Data Rules:

If a value is entered in this field, it must be equal to or greater than the quantity of digits entered in the INCOMING DIGITS field.

For the CALL TYPE of "CONFLCT", where the conflict is prefix resolved, enter the total number of digits expected for the entry associated with the prefix value entered under PREFIX. Refer to Division 2, Section 4C1 for the description for the TDAC feature and also see Figure 2 in this section.

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For CALL TYPEs of "FAT", this field must be blank.

For 5E8 and later, if NBR OF DIGITS is 0 through 6, 8, or 9, and TRIG NBR matches TRIG NBR on an NSTRIG form (5324 Record) where SERV KEY is "CDPN" and APPLICATION equals "ASP", ALT GBL TITLE on NSTRIG must be entered.

For 5E12 and later, when FAT on the corresponding SMLDIT form is "Y", then NBR OF DIGITS must be equal to 4 or 7.

For 5E12 and later, when FAT on the corresponding SMLDIT form is "N", then NBR OF DIGITS on the MLDIT form must be equal to 3, 7 or 10.

For 5E12 and later, when FAT on the corresponding SMLDIT form is "N" and the CONFRES.CI TYPE on the LDIT form is not "IDDD", then NBR OF DIGITS on the MLDIT form must be equal to 3, 7 or 10.

2.8 RDIT

Description: Enter the Remaining Digits Interpreter Table number.

Software Release: 5E8 and later
Valid Entries: 1 - 999

Data Rules:

If RDIT is entered:

- NBR OF DIGITS must be greater than the length of INCOMING DIGITS,
- CALL TYPE cannot be "FAT",
- For LDIT forms, RDIT and INCOMING DIGITS must equal RDIT and PREVIOUS DIGITS on an RDIT form, and
- For MLDIT forms, RDIT and the digit string derived from INCOMING DIGITS and RANGE must equal RDIT and PREVIOUS DIGITS on an RDIT form.

2.9 CODE INDEX

Description: The Code Index combined with a Screening Index is used as an input to the Rate and Route Tables.

For 5E6 and later, the CODE INDEX determines whether or not pre-query call screening will be performed for SSP/800 calls. If CALL TYPE is "NS800" and a value is entered in CODE INDEX, then pre-query screening will be performed. The screening index from the originating line or trunk, along with the dialed prefix and this CODE INDEX, will be used to access the RAR form. When the RTI from the associated RAR form is "REGL", the normal SSP/800 query and call processing will occur. When the RTI contains a numbered route index, the call will be routed to that RTI.

For 5E8 and later, CODE INDEX is now a real Code Index and no longer a pointer to the DISERV form (5321 Record).
Valid Entries: 3 - 4095

Data Rules:

This field must be blank if the CALL TYPE is "VACANT", "CONFLCT", "FAT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN" or "CSTL".

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If the CODE INDEX is entered, it must match the CDI field on an RAR form (5301 Record).

Code Index 1 (0-) and Code Index 2 (010) may not be entered on the LDIT Record.

All combinations of CODE INDEX, PREFIX from the PDIT form, and SCREENING INDEX from the LCC form (5306 Record) must have corresponding RAR form entries for CDI, PFX, and SCR.

All combinations of CODE INDEX and SCR from the TKGRP form must have corresponding RAR form entries for CDI, SCR, and "NONE" for PFX.

For 5E8 and later, either CODE INDEX or CDI on this form or an RDIT form, or CODE INDEX on a PDIT or INDIT form, or WITH ANI or WITHOUT ANI on an AISCLS form must equal INC CDI on an INFLDEST form (5448 Record).

2.10 ROUTE INDEX

Description: This field indicates the Regular Route Index to be used for routing the call except when a Special Route Index entered on the RAR overrides it. The Regular Route Index is the route which is used by the majority of call originators to complete the call.

For 5E8 and later, the ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

When the CALL TYPE is "VACANT", "NS800", "CONFLCT", "FAT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN" or "CSTL", this field must be blank. When the CALL TYPE is other thanthose just listed, an entry is required in this field or in the OFFICE CODE field.

2.11 POLYGRID

Description: Is polygrid routing used for DSN (Defense Switched Network) offices?

Enter "N" for non-DSN offices.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CALL TYPE is "FAT", and TYPE OF CI CALL is "PSCAR" or "PSNCI", POLYGRID must be "N".

If the LDIT or MLDIT forms have a ROUTE INDEX entered, and POLYGRID is "Y", then the DSN OPTION field on the OFCOPT form must be "Y".

2.12 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

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Data Rules:

When NPA is entered, OFFICE CODE must be entered.

For 5E12 and later, when the OFFICE CODES and/or NPA/OFFICE CODE combinations are assigned on the LDIT and/or MLDIT forms, they must be defined on the NOC form.

2.13 OFFICE CODE

Description: Enter an Office Code (NXX) served by the 5ESS Switch (i.e., defined on the NOC form). If an Office Code is entered, it will be entered to "route" the call to a Directory Number of this NXX in this office except when overridden by a Special Route Index entered in the Route Index field of the RAR form.
Valid Entries: 3 digit NXX (N = 2 - 9, X = 0 - 9)

Data Rules:

When the Call Type is "VACANT", "NS800", "CONFLCT", "FAT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN", "SPAB800", "SPAM800", "IDDDFCA", "IDDDSTS" and "CSTL", this field must be blank. When the Call Type is other than these, an entry is required in this field or in ROUTE INDEX.

For 5E12 and later, if the LDIT forms have an OFFICE CODE defined and there are multiple NOC forms with the same value of OFFICE CODE, NPA must also be defined on the LDIT form.

2.14 DESEP

Description: This field is used to define the Destination Separations Index for Call Types other than "VACANT", "CONFLCT", "FAT", "HNPAD", "LTD", "SRTT", "OCTL", or "CSTL". It is only required for Division of Revenue study.
Valid Entries: 1 - 255

Data Rules:

If a DESEP is entered, it must be defined on the Traffic Separation Cell Grouping TRFSEP form (5308 Record).

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.15 PREFIX

Description: This field is only entered on the LDIT form. For a CALL TYPE of "CONFLCT", where the conflict is prefix resolved, enter the prefix associated with the quantity of digits entered in the NBR OF DIGITS field. Each of the values affects call processing as follows: Refer to Division 2, Section 4C1 for a description of the TDAC feature and also to Figure 2 in this section.

Entry	Effect on Call Processing
Blank	If NBR OF DIGITS is known, and the call is dialed with NONE or 1+ prefix, the conflict is prefix resolved. The conflict is timing resolved if 0+ is dialed. If NBR OF DIGITS is blank, the conflict is timing resolved regardless of the prefix dialed.
NONE	Results in the conflict being prefix resolved if call is dialed with no prefix. NBR OF DIGITS determines the quantity of digits to collect. Conflict is timing resolved for any other dialed prefix.
1+	Results in the conflict being prefix resolved if call is dialed with a 1 prefix. NBR OF DIGITS determines the quantity of digits to collect. Conflict is timing resolved for any other dialed prefix.
0+	Results in the conflict being prefix resolved if call is dialed with a 0 prefix. NBR OF DIGITS determines the quantity of digits to collect. Conflict is timing resolved if any other prefix is dialed.

Normally, a 1 is the prefix value.
Valid Entries: 0, 1, NONE

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Data Rules:

This field must be blank when the CALL TYPE is "FAT".

2.16 WZ1 REGION

Description: For codes with a TYPE OF CI CALL equal to WZ1, enter a World Zone 1 region. This digit is used in the first stage of outpulsing for INCs (International Carriers) on either a direct connection or via an Access Tandem. The first stage of outpulsing has a format of KP + 1NX + XXX + 01R + ST, where R is the World Zone 1 region. (1NX is a spare toll center code entered on the Route Index as prefix digits. XXX is the Carrier Identification Code.) For other than WZ1 types, leave this field blank.
Valid Entries: 0 - 9

2.17 TERM LATA

Description: This field is used as the Inter-LATA Carrier when Network Call Denial Screening is required on incoming CAMAANI Trunk Groups.

Valid TERM LATA Entries

Entry	Definition
1	Indicates LATAs not subtending the switch
2 - 31	Software Release: 5E5 and later. Indicates a subtending LATA of the switch.

Data Rules:

If TYPE OF CI CALL is "PSCAR" or "PSNCI", then this field must be blank.

If CALL TYPE is "LNACP", this field must be blank.

If TERM LATA is specified, COMMON CHAN SIG must equal Yes on the OFCOPT form (5509 Record).

When the CALL TYPE is "NORMAL", "DA", "IDDDSTS", "AUTINW", "OPINW" or "INWATS", enter an appropriate value to indicate, based on incoming digits, the destination of this call.

The TERM LATA value is compared to an ORIG LATA value specified on the TKGRP form (5202-3 Record).

2.18 SAC OWNER

Description: For codes with a TYPE OF CI CALL equal to "SAC", enter the Carrier Identification Code of the carrier "owning" the Service Access Code, or "LEC" for a Local Exchange Carrier. The ICF form (5305 Record) will be accessed to check the validity of the Carrier ID and to determine if overlap outpulsing might be required. However, routing will be done based on the Code Index and Route Index of the LDIT, not the ICF.
Valid Entries:

- For 5E8 and earlier: 0 - 999 or "LEC"
- For 5E9(1) and later: 0 - 9999 or "LEC"

Data Rules:

SAC OWNER must be specified for "SAC" TYPE OF CI CALL and is allowed only for "SAC" TYPE OF CI CALL.

For 5E8 and later, if SAC OWNER or CONFLICT RESOLUTION SAC OWNER is assigned on the LDIT form, then they must be defined as CARRIER IDs on an ICF form with FEAT GRP = "D".

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2.19 NATURE OF NBR

Description: Enter the nature of the number. This field is used during query formulation of Network Services calls, and is populated only for ASP SSP offices.

Software Release: 5E8 and later
Valid Entries:

Valid NATURE OF NBR Entries

Entry	Definition
IDDD or I	International
NATL or N	National
PRIV or P	Private

Data Rules:

For 5E8, if NATURE OF NBR is entered, TRIG NBR must be entered.

NATURE OF NUMBER must be entered when ASP OFC on OFCOPT is "SSP", and TRIG NBR equals TRIG NBR on an NSTRIG form where APPLICATION is "ASP".

2.20 TRIG NBR

Description: Enter the Network Services trigger number.

Software Release: 5E8 and later
Valid Entries:

- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

Data Rules:

If TRIG NBR is entered:

- it must equal TRIG NBR on an NSTRIG form,
- TERM LATA cannot be entered, and CODE INDEX must also be entered,
- if RDIT is also entered, CALL TYPE cannot be "CONFLCT",
- if APPLICATION on the corresponding NSTRIG form is "E911", CALL TYPE must be "EMER", and TYPE OF CI CALL must be "INTRA";
- if NBR OF DIGITS is neither 7 nor greater than 9, and SERV KEY on the corresponding NSTRIG form equals "CDPN", ALT GBL TITLE on NSTRIG must be entered and APPLICATION on NSTRIG must be "ASP";
- if a CALL TYPE of "EMER" or "NORMAL" is entered, a TRIG NBR is defined on an NSTRIG form, and APPLICATION on the NSTRIG form is "E911" or "800", then ROUTE INDEX and OFFICE CODE on the LDIT or MLDIT form cannot be entered. If APPLICATION on the NSTRIG form is "ASP", then ROUTE INDEX or OFFICE CODE on the LDIT or MLDIT form must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered.
- For 5E8 only, if ASP OFC on an OFCOPT form is "SSP", and APPLICATION on the corresponding NSTRIG form is "ASP", NATURE OF NBR must be entered.

For 5E9(1) and later, when TRIG NBR is entered, NBR OF DIGITS must be 3, 7, or 10.

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For 5E12 and later, when TRIG NUM on the LDIT/MLDIT forms is entered and the associated NSTRIG form with the same TRIG NUM has an APPLICATION of "ASP", then INCOMING DIGITS on the LDIT/MLDIT forms must have a first digit of "2", "3", "4", "5", "6", "7", "8", or "9".

For 5E15 and later, when CALL TYPE is "RELAY", TRIG NBR must not be entered.

2.21 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ESC CODE must equal "N" for CALL TYPE of "CONFLCT".

2.22 DFLT RT

Description: The DFLT RT field is used to identify the type of default routing treatment to be used for the ASP Default Routing for 3/6/10-Digit Triggers (Phase 1) Special Feature. When the ASP Special Feature has been purchased, this field can be used to specify the type of default routing to occur when an ASP specific digit trigger query fails.

Software Release: 5E9(1) and later
Default: NONE
Valid Entries:

Valid DFLT RT Entries

Entry	Definition
ANNC or A	Default route to announcement (or tone). The call will route to either a tone or announcement, depending on what is defined for the route.
DLDN or D	Default route to dialed DN. The call will route to the DN dialed (or the DN being routed to if the call came from a trunk).
NONE or N	No default routing. No special default routing will take place, and normal call treatment will send the call to reorder or NCA (No Circuits Available).

Data Rules:

ANNC: If "ANNC" is entered in the DFLT RT or CONFLICT RESOLUTION ENTRIES DFLT RT field, then a FIXRT form (5301-1 Record) must be defined with FIXED ROUTE TYPE set to "DFLTRT".

NONE: If DFLT RT is not "NONE" and CALL TYPE is not "CONFLCT", then TRIG NBR must be entered.

If DFLT RT is not "NONE" in CONFLICT RESOLUTION ENTRIES, then TRIG NBR must be entered.

For 5E9(2) and earlier, if an LDIT form has a DFLT RT or CONFLICT RESOLUTION ENTRIES DFLT RT other than "NONE", the corresponding TRIG NBR must be defined on the NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1".

For 5E10 and later, when the LDIT forms have a DFLT RT entry or a CONFLICT RESOLUTION ENTRIES DFLT RT entry other than "NONE", the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

If an MLDIT form has a DFLT RT other than "NONE", the corresponding TRIG NBR must be defined on the NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1".

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2.23 REMARK

Description: This 16-character field may contain any remarks deemed locally necessary.
Valid Entries: 1 to 16 characters (optional)

3. FORM ENTRIES - 5300-3b RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

3.2 *LDIT

Description: Enter the Local Digit Interpreter Table Number. The number selected is based upon entries on the DAS form (5300-1 Record)
Valid Entries: 1 - 999

3.3 *INCOMING DIGITS

Description: When using the MLDIT or LDIT form, enter the digits to be interpreted.
Valid Entries: 1 to 15 digits

3.4 NPA SPLIT ANNC

Description: Should caller be given a warning announcement if dialing a 7-digit or 10-digit number during permissive period of NPA (Numbering Plan Area) Split?

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NPA SPLIT ANNC is set to "Y", NBR OF DIGITS must be "7" or "10".

When NPA SPLIT ANNC or CONFRES.NPA SPLIT ANNC is set to "Y":

- the ACT field for SFID 347 on the SFSYS form (5713-1 Record) must be set to "Y". (For more information, see Division 2, Section 4A347, for the Announcement on Detection of NPA Split feature.)
- the APPLICATION field on the ANNAPL form (5529 Record) must be set to "NPA_SP".
- the FIXED ROUTE TYPE field on the FIXRT form (5301-1 Record) must be set to "NPA_SP". (The FIXRT form must have a record with NPA_SP.)

IMPLIED NPAs

Description: Implied NPAs are used for NM (Network Management) code controls. When code control is to be put into effect for some specific code (incoming digits), the NPA implied by any dialed code must be known to enable the NM software to block these calls.

Implied NPAs are also used for the Carrier Interconnect capability. On a Direct Trunk Group to the Carrier, if the implied NPA is the Home NPA, the CI software will outpulse the 7-digit number (i.e., without the NPA). If the implied NPA is other than the HNPA, the CI software will include the NPA when outpulsing to the carrier. On a connection through an Access Tandem, 10 digits will always be outpulsed.

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Implied NPAs may be entered only for 7-digit calls, i.e., when either NBR OF DIGITS or NBR DIG on one of the conflict resolution entries is equal to 7. In addition, a minimum of three digits must be entered in the INCOMING DIGITS field.

The implied NPA for a specific code may depend on the dialed prefix as well as the code itself. If implied NPAs are entered on the LDIT form for any prefix, these NPAs will be the NPAs used for code control.

If an NPA is not entered on the LDIT form, NM will use the DEFAULT NPA from the OFCOPT form as the implied NPA. The NPA which has been specified as the DEFAULT NPA on the OFCOPT form may not be entered as any IMPLIED NPA on the LDIT form.

If AMB is entered under IMPLIED NPA, the NPA of the calling party as defined on the NOC form (Record 5501), will be used as the implied NPA. This entry would be used in offices serving subscribers in two (or more) area codes and the subscribers have similar dialed codes to reach different destinations (i.e., the same codes in different NPAs). For example, if the subscriber is in Area Code 312 and dials 979, the call would complete to a different place than a subscriber (also served by the same office) in Area Code 815 dialing 979. In this case, the subscriber's NPA is the implied destination NPA.

For 5E6 and later, an IMPLIED NPA is not allowed to be entered on an LDIT functioning as a FAT/LDIT.

If more than three digits are interpreted on the LDIT form for 7-digit calls, every LDIT form with the same value of LDIT and the same first three digits of INCOMING DIGITS, must have identical entries in the IMPLIED NPAs fields.

The IMPLIED NPA fields are not available on the MLDIT form.

3.5 PREFIX

Description: This field is only entered on the LDIT form. Enter the prefix.
Valid Entries: 0, 1, NONE

Data Rules:

This field must be entered when an entry is made for NPA.

3.6 NPA

Description: This field is only entered on the LDIT form. Enter the Numbering Plan Area.
Valid Entries: AMB or any valid NPA;

- 200 - 999

Data Rules:

An entry is permitted only when NBR OF DIGITS equals 7 or a conflict resolution entry has NBR DIG equal to 7.

For 5E12 and later, when the OFFICE CODES and/or NPA/OFFICE CODE combinations are assigned on the LDIT and/or MLDIT forms, they must be defined on the NOC form.

3.7 ANI BYPASS

Description: Will ANI Table options be ignored? An entry of "N" indicates TDX ANI Table options will be processed. This field supports the TDX (Toll Digital Exchange) ANI Table Call Processing Feature. This is a secured feature with SFID 235. For more information on this feature, see Division 2, Section 4A165.

Software Release: 5E10 and later
Default Value: N

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Valid Entries: Y, N

LOCAL NUMBER PORTABILITY

For 5E11 and later, fields (Section 3.8) - (Section 3.13) support the Local Number Portability feature. For more information, see Division 2, Section 4A174.

3.8 LNP TRIG NBR

Description: Enter the LNP trigger number. The LNP trigger number is a conditional trigger which initiates a query to the SCP (Service Control Point) based on further routing determinations and checks following the trigger detection.

Software Release: 5E11 and later
Valid Entries: Blank or 1 - 255

Data Rules:

Local Number Portability is s secured feature. This feature must be purchased and SFID 174 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be entered on either an LDIT/MLDIT form or CONFLICT RESOLUTION on an LDIT form.

When LNP TRIG NBR is entered, TYPE OF CI CALL must be:
- "INTER"
- "INTRA"
- "TOLL"
- "COMP"
- "PRIV"
- "NONCI"
- "TCONF"
- or "CONFL".

When both LNP TRIG NBR and TRIG NBR are entered either on an LDIT/MLDIT form or CONFLICT RESOLUTION on an LDIT form, TRIG NBR must be defined as TRIG NBR (whichever is entered) on the NSTRIG form (5324 Record) which has APPLICATION set to "ASP".

When LNP TRIG NBR is entered either on an LDIT/MLDIT form or CONFLICT RESOLUTION on an LDIT form, LNP TRIG NBR must be defined as TRIG NBR on the NSTRIG form (5324 Record) where APPLICATION is "ASP" and AIN REL is "R0D1".

For 5E13 and later, when LNP TRIG NBR or CONFRES.LNP TRIG NBR, TYPE OF CI CALL or CONFRES.TYPE OF CI CALL can be "INTER" only when the ACT field for SFID 303 on the SFSYS form (5713-1 Record) is set to "Y".

For 5E12 and later, when LNP TRIG NUM on the LDIT/MLDIT forms is entered and the associated NSTRIG form with the same TRIG NUM has an APPLICATION of "ASP", then INCOMING DIGITS on the LDIT/MLDIT forms must have a first digit of "2", "3", "4", "5", "6", "7", "8", or "9".

3.9 GEO PORT

Description: Has geographically porting occurred for at least one DN associated with this LDIT entry?

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

When GEO PORT is "Y", LNP TRIG NBR must be entered.

3.10 PORTED IN

Description: Is at least one DN termination in this office which is associated with this LDIT digit translation have a route index (instead of an office code) that is provisioned for this LDIT translation?

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Local Number Portability is a secured feature. This feature must be purchased and SFID 174 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be entered on either an LDIT/MLDIT form or, CONFLICT RESOLUTION on an LDIT form.

When PORTED IN is "Y", TYPE OF CI CALL must be:
- "INTER"
- "INTRA"
- "TOLL"
- "COMP"
- "PRIV"
- "NONCI"
- "TCONF"
- or "CONFL".

When PORTED IN is "Y", ROUTE INDEX must be entered.

When PORTED IN is "Y", OFFICE CODE must be entered.

For 5E13 and later, when PORTED IN or CONFRES.PORTED IN is "Y", TYPE OF CI CALL or CONFRES.TYPE OF CI CALL can be "INTER" only when the ACT field for SFID 303 on the SFSYS form (5713-1 Record) is set to "Y".

3.11 HOME LRN

Description: Is this a home location routing number? This field is set to "Y" when the LRN represents this switch or a rate center in this switch.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

3.12 LRN SCREENING

Description: Should the screening attributes be used for LRN? This field is set to "Y" when the LRN is a rate center in this switch which would imply that the TYP CI CALL and CDI from analysis of this LRN should be used.

Software Release: 5E11 and later
Required Field.
Default: N

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Valid Entries: Y, N

3.13 INH DNT

Description: Should the processing of dialed number triggers be inhibited?

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

3.14 NODAL IDX

Description: Proprietary field.

3.15 DN PREFD

Description: Proprietary field.

3.16 GETS HPC

Description: Is GETS (Government Emergency Telecommunication Service) HPC (High Probability Call Completion Service) required? The GETS HPC field is used as an indicator to mark GETS HPC calls so that enhanced functionality provided by other HPC capabilities (e.g., Trunk Queuing, ISUP Signaling, Exemption from Network Management Controls) can be invoked. When set to "Y", calls translated to this address receive special treatment resulting in a higher probability of call completion. For more information, see Division 2, Section 4A279.

The use of HPC Network Capabilities is restricted in the United States and U.S. Territories to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be co-ordinated with the OMNCS at the following address:

Office of the Manager
National Communication System
Attn: GETS Program Office
701 South Courthouse Rd
Arlington, VA, 22204-2198
email: gets@ncs.gov

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E13 and later, when the LDIT/MLDIT/RDIT forms' GETS HPC is "Y" or CONFLICT RESOLUTION GETS HPC is "Y", and TRIG NBR or CONFLICT RESOLUTION TRIG NBR is known, then the associated NSTRIG form (associated through TRIG NBR) must have APPLICATION set to "ASP" and ASP TOLL FREE must be "N".

For 5E13 and later, when the LDIT/MLDIT/RDIT/INDIT forms' GETS HPC is "Y" or CONFLICT RESOLUTION GETS HPC is "Y", GETS HPC or CONFLICT RESOLUTION GETS HPC can be "Y" only when the GETS High Probability of Call Completion Secured Feature has been purchased. A SFSYS form must exist with SFID 279 ACT set to "Y".

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3.17 DENY XFER

Description: This field is used to indicate if call transfers to a particular digit string should be denied. This field supports the Deny Transfer of Digit Screened Calls feature. See Division 2, Section 291.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later:

- When DENY XFER is "Y", CALL TYPE must not be "EMER".
- When DENY XFER on the LDIT form is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y".

3.18 REL LINK

Description: Is this a release link directory assistance number? This field is used to indicate whether or not the digits being translated map to a release link directory assistance number.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When REL LINK is "Y":

- CALL TYPE must be "DA", "LOCDA", "NORM555", or "NORMAL".
- One of the following two conditions must exist:
  - For the Release Link for Toll Office feature using ANSI (American National Standards Institute) standard signaling, the ACT field for SFID 520 on the SFSYS form (5713-1 Record) must be set to "Y"; or
  - For the Release Link for Toll Office feature using TOPS (Operating System for DMS (Data Management System)) nonstandard signaling, the ACT field for SFID 521 on the SFSYS form must be set to "Y".

4. FORM ENTRIES - 5300-5a RECORD

4.1 BASE AND CONTROL, ESS UNIT

Description: Enter the Base and Control Number and the office name on each record.

CONFLICT RESOLUTION

Description: Conflict Resolution entries are only entered on the LDIT form.

For 5E3 and later, when CALL TYPE is "CONFLCT", NBR OF DIGITS is specified, and PREFIX is blank,

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there must be exactly two CONFLICT RESOLUTION entries.

For 5E8, for each row of the CONFLICT RESOLUTION ENTRIES list, if NON is entered, TRIG NBR must be entered.

For 5E8 and later, for each row of the CONFLICT RESOLUTION ENTRIES list:

- if TRIG NBR is entered, TERM LATA cannot be entered; and
- if RDIT is entered, NBR DIG must be greater than the length of INCOMING DIGITS.

For 5E9(1) and later, for each row of the CONFLICT RESOLUTION ENTRIES list, when TRIG NBR is entered, NBR DIG must be 3, 7, or 10.

For 5E12 and later:

- when CALL TYPE is "CONFLCT" and CI TYPE is "IDDD", at least three CONFLICT RESOLUTION ENTRIES must be made.
- when any CONFLICT RESOLUTION ENTRY for CALL TYPE is "IDDDSTS" and CI TYPE is "IDDD", all entries must have the same values.
- each row of the CONFLICT RESOLUTION ENTRIES must use consecutive digits in the NBR DIG field when CONFLICT RESOLUTION entries for CALL TYPE is "IDDDSTS" and CI TYPE is "IDDD".

4.2 LDIT

Description: Enter the Local Digit Interpreter Table number. The LDIT must be the same as that from the corresponding 5300-3 Record entry.
Valid Entries: 1 - 999

4.3 INC DIGITS

Description: Enter the code for which the conflict exists. This must be the same as the INCOMING DIGITS of the Conflict Code on the 5300-3 Record. This information is not required as a separate entry on the LDIT form.
Valid Entries: 1 to 15 digits

4.4 NBR DIG

Description: Enter the total number of digits expected excluding any prefix. If the code in conflict is prefix resolved, exactly one of the codes conflict resolution entries must have NBR DIG equal to NBR OF DIGITS entered on screen 1 of this form, 5300-3 Record.
Valid Entries: 1 - 15 or 1 - 18 if IDDD15 functionality is available

Data Rules:

For 5E8 and later, if NBR DIG is 0 through 6, 8, or 9, and SERV KEY on the corresponding NSTRIG form is "CDPN", then on that NSTRIG form, APPLICATION is "ASP" and ALT GBL TITLE must be entered.

For 5E12 and later, when NBR DIG in the CONFLICT RESOLUTION ENTRIES is more than 15, the ACT field for SFID 223 on the SFSYS form (5713-1) must be set to "Y".

For 5E12 and later, when FAT on the corresponding SMLDIT form is "Y", then NBR OF DIGITS must be equal to 4 or 7.

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4.5 CALL TYPE

Description: Enter the Call Type to be used. Please refer to Figure 1 for field dependencies per CALL TYPE.

Valid CALL TYPE Entries

Entry	Definition
211	Software Release: 5E15 and later. Dial 211.
311	Software Release: 5E15 and later. Dial 311.
900	Software Release: 5E5 and later. 900 calls. This CALL TYPE, is used to prevent a LASS AR (Automatic Recall) user from camping-on to this line.
ADDON	Software Release: 5E4(2) and later. Alliance Teleconferencing add-on calls.
APSDN	Software Release: 5E5 and later. ACP (Action Control Point) for a SDN (Software Defined Network). This value indicates that a query should be sent to the NCP (Network Control Point). The NCP will return a routing telephone number.
AUTINW	Software Release: 5E4(2) and later. Automated Inward Call. Calls with this call type are originated by a distant operator and are routed to an automated query.
BBRITL	Software Release: 5E6 and later. This ACTION is used for billed BRITL (Basic Rate Interface Dial Up Test Line).
BRITL	Software Release: 5E5 and later. This ACTION is used for non-billed BRITL.
BUSOFC	Business Office (811)
CSTL	Coin Station Test Line
DA	555 Directory Assistance. Note: A CALL TYPE of "NORMAL" should be used with DA calls (i.e.,,555-1212, NPA-555-1212) that are preceded by an FGD CAC.
ECP	Software Release: 5E9(1) and later. Mobile originated call on a 5ESS Switch serving as a Digital Cellular Switch for an ECP (Executive Cellular Processor).
EMER	911 Emergency Service Bureau.
HNPAD	Home NPA (Numbering Plan Area) dialed in error.
IDDDFCA	Software Release: 5E5 and later. International Direct Distance Dialing FCA call.
IDDDSTS	Software Release: 5E3 and later. International Direct Distance Dialing Station to Station.
INWATS	INWATS (800+) LNACP
LOCDA	Local Directory Assistance (411)
LTD	Local Test Desk
MEETME	Software Release: 5E4(2) and later. Alliance Teleconferencing meet-me call.
NORM555	Software Release: 5E16 and later. Dial (1) + 555 - XXXX
NORMAL	All others
NS800	Software Release: 5E4(2) and later. Number Service (SSP800) type call.
OCTL	Open Circuit Test Line
OPNIT	Operator-assisted DA/Non-ISP call to the VDT.
OPINW	Software Release: 5E4(2) and later. Operator-assisted Inward Call. Calls with this call type are originated by a distant operator and are routed to an OSPS operator position.
RELAY	Software Release: 5E15 and later. 711 Relay/Hearing Impaired Service.
REPAIR	Repair Service Bureau (611)
SDNA	Software Release: 5E3 and later. Software Defined Network outgoing calls from the NAP (Network Access Point).
SDNE	Software Release: 5E3 and later. Software Defined Network incoming calls to the NAP (Network Access Point).
SPAB800	Software Release: 5E5 and later. Special Access Basic 800 Service.
SPAM800	Software Release: 5E5 and later.

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	MEGACOM 800 Service.
SRTT	Station Ringer Touch-Tone Test
STG1FCA	Software Release: 5E15 and later. First Stage of an IDDD call.
VACANT	Vacant NPA, NXX and Service Codes

Data Rules:

900:

For 5E13 and later, when "900" or "NORMAL" is entered, RTI is entered and PORTED IN is "N", NXX cannot be entered.

ADDON: For 5E7 and later, when the MLDIT forms have a CALL TYPE of "ADDON" or "MEETME", these call types are allowed only when ORIG SCREEN OFF is "Y" on the OFCOPT form and OSPS DA is "Y" on the OSPSOPT form.

For 5E8 and later, if CONFLICT RESOLUTION CALL TYPE is "ADDON" or "MEETME", then a FIXRT form is required with a FIXED ROUTE TYPE of "ATCNIF".

APSDN: This value can only be used when a 5ESS Switch is an ACP (ACT PT SDN field on the OFCOPT form is "Y").

AUTINW: The OSPS TA field on the OSPSOPT form must be "Y".

BBRITL: The DSL which is being tested must have BRITL ALW set to "Y" on the corresponding DSLUSR form.

CONFLCT: For 5E8 and later, if CALL TYPE is "CONFLCT", RDIT and TRIG NBR cannot be entered.

For 5E9(1) and later, if "CONFLCT" or "FAT" are entered in CALL TYPE and "SAC" is entered in TYPE OF CI CALL, then LDIT or MLDIT forms with the above values cannot have INCOMING DIGITS which are the starting digits of:

- INCOMING DIGITS on another LDIT or MLDIT form
- IDDD PREFIX / COUNTRY ACCESS CODE combination on the IDDD form

This restriction applies only to LDIT, MLDIT, IDDD forms sharing the same LDIT value.

EMER: For 5E8 and later, if a CONFLICT RESOLUTION ENTRY with a CALL TYPE of "EMER" or "NORMAL" is entered, and a TRIG NBR defined on an NSTRIG form with an APPLICATION on the NSTRIG form is "E911" or "800", then RTI and NXX on the LDIT form cannot be entered. If APPLICATION on the NSTRIG form is "ASP", then RTI or NXX on the LDIT form must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered.

IDDDFCA: This value is used for the address sequence of an international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA. A DAS (Digit Analysis Selector) of 81 will be used instead of the DAS associated with the incoming trunk group. This Call Type may be assigned to incoming digit sequences CC + NN or 0/1X + CC + NN. CC is the Country Code. NN is the National Number. 0/1X is the ISC (International Switching Center) prefix code.

If "IDDDFCA" is entered, then "Y" must be entered in the OFFICE TYPE on the OFCOPT form (5509 Record).

IDDDSTS: Used for multistage international outbound calls which are routed to a MF trunk, CCIS6 trunk or CCS7 ISUP trunk. This value may be assigned to codes which require two-stage call handling at a toll or tandem office. Two-stage call handling includes an acknowledgement wink before the second stage of digits is sent. Also used in a tandem or toll office when the digits inpulsed on the trunk, typically from a

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TSPS, are 011 + padded Country Code.

For 5E5 and later, this value can be used for:

- A Local office (OFFICE TYPE on the OFCOPT form is "N") where the incoming digits are 011 + (7 - 12 digits).
- A Toll office (OFFICE TYPE on the OFCOPT form is "Y") which will not use FCA (Fully Coded Addressing). Possible incoming digits are 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international call.
- A 5ESS Gateway switch that requires an FCA international outbound call to leave the office on an MF trunk must assign this CALL TYPE to the digit sequence CC + NN. CC is the Country Code. NN is the National Number. ISTF (Integrated Services Test Function) Inverted Loopback test.

LNACP: This value can only be used when the Leased Network DAS field is entered on the OFCOPT form (5509 Record).

MEETME: If "MEETME" is entered in the CALL TYPE field, then FIXRT forms (5301 Records) must be submitted with FIXED ROUTE TYPES of "ATCANIF" and "ATCINT".

For 5E7 and later, when the MLDIT forms have a CALL TYPE of "ADDON" or "MEETME", these call types are allowed only when ORIG SCREEN OFF is "Y" on the OFCOPT form and OSPS DA is "Y" on the OSPSOPT form.

Also, see "ADDON" above.

NORM555: For 5E16 and later, when CALL TYPE is "NORM555", CDI and TRIG NBR must be entered.

NORMAL: See "EMER" above.

For 5E13 and later, when "NORMAL" or "900" is entered, RTI is entered and PORTED IN is "N", NXX cannot be entered.

NS800: For 5E11 and later, when CONFLICT RESOLUTION CALL TYPE is "NS800",

- TYPE OF CI CALL must be "NONCI"
- RTI must not be entered
- NXX must not be entered.

OPINW: The OSPS TA field on the OSPSOPT form must be "Y".

SPAB800: Special Access Basic 800 service allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAB800" on the TKGRP form).

SPAM800: MEGACOM 800 service is a discount service which allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAM800" on the TKGRP form). MEGACOM 800 service is similar to Special Access Basic 800 service except that the customer must supply the dedicated trunk group to the 5ESS Toll Switch.

STG1FCA: This value should be used for the first stage of a multi- stage international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA. This Call Type may be assigned to incoming digit sequences 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is

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the Pseudo Country Code. 18X indicates an international call.

VACANT: Attempts to dial codes defined as "VACANT" will result in vacant code treatment. In addition, ASP will consider these codes invalid pre-query.

Switch owners may need to define RNX codes that are considered "VACANT" in the normal dialing plan but are treated as "NORMAL" for purposes of ASP pre-query. For these codes, the user should receive "VACANT" code treatment if the number is dialed directly. To accomplish this, CALL TYPE should be set to "NORMAL" and the ROUTE INDEX set to the ROUTE INDEX from the FIXRT form (5301-1 Record) where the FIXED ROUTE TYPE is equal to "VACANT". To identify the RNX codes defined in this manner, it is recommended that the REMARK field should be set to "RNX VAC/ASP QRY".

4.6 RDIT

Description: Enter the Remaining Digits Interpreter Table number.

Software Release: 5E8 and later
Valid Entries: 1 - 999

Data Rules:

If RDIT is entered, RDIT and INCOMING DIGITS must equal RDIT and PREVIOUS DIGITS on an RDIT form.

4.7 TYPE OF CI CALL

Description: Enter the CI (Carrier Interconnect) type of call. See Figure 1 for appropriate entries per Call Type.

Valid TYPE OF CI CALL Entries

Entry	Definition
COMP	Used for calls to a geographical area where the LEC (Local Exchange Carrier) and ICs (Inter-LATA Carriers) compete on an equal basis. Such calls must be routed by a carrier, but this "carrier" may be the LEC. If the subscriber wants to be routed via the LEC, the subscriber must either be presubscribed to the LEC or dial an explicit FGD CAC.
CONFL	Used for cases where the call may be either INTER (Inter-LATA) or INTRA (Intra-LATA), depending on the dialed prefix. Inter-LATA calls are dialed with a 1 prefix, while Intra-LATA calls are dialed with no prefix.
IDDD	Sofware Release: 5E12 and later. Used for International Direct Distance Dialing calls.
INTER	Used for calls destined for outside the LATA. Such calls must be routed via a carrier, not the LEC.
INTRA	Used for calls destined for within the LATA. Usually routed via the LEC. If other carriers are permitted and accept Intra-LATA calls, an explicit FGD CAC must be dialed (not presubscription) to access the carriers for these calls.
INTRM	Software Release: 5E8 and later. FGB Interim call is used for an incoming trunk call dialed by the originator as 950XXXX. The 950 digits are entered in the INCOMING DIGITS. The XXXX represents a Carrier Identification Code. These calls may be from a non-EAEO and less than the seven digits may be received as would then be reflected in the INCOMING DIGITS. When "INTRM" is entered, the last four digits inpulsed (i.e., the Carrier Identification Code) will be used to enter the ICF form (5305 Record) to access the Carrier's FGB CDI and FGB RTI. Because "INTRM" is also a valid entry in the LDIT form, it may be optionally used instead of the INDIT form.
NONCI	Used for calls for which carrier selection is irrelevant.
PRIV	Used for EAS (Extended Area Service) calls where the local calling area extends into the neighboring LATA. These Inter-LATA calls are treated as INTRA (routed by the LEC) except when the subscriber explicitly dials an FGD CAC for an IC. When the FGD CAC is dialed, the call is treated as INTER.
PSCAR	Software Release: 5E3 and later. For packet switched calls, a Packet Switch INTERLATA Carrier call uses the preselected IECP (Interexchange Carrier). When using this type of CI Call, the CALL TYPE must be "NORMAL" or "900". For 5E11 and later, when TYPE OF CI CALL is "PSNCI" or "PSCAR" NBR OF DIGITS and PREFIX cannot be entered.

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PSNCI	Software Release: 5E3 and later. For Packet Switching calls, Packet Switch non-carrier tandem traffic, where carrier interconnect does not apply. When using this type of CI call the CALL TYPE must be "NORMAL", "900" or "VACANT". For 5E11 and later, when TYPE OF CI CALL is "PSNCI" or "PSCAR" NBR OF DIGITS and PREFIX cannot be entered.
SAC	Used for SACs (Service Access Codes), e.g., 800 and 900 codes. Each six digit SAC code (800/900 + NXX) is assigned to a specific carrier. The Code Index and Route Index from this form, the LDIT, will be used to route the call. When this Type of CI Call is specified, the Carrier Identification must be entered in SAC OWNER. SAC may not be specified in an ambiguous case.
TCONF	Software Release: 5E9(1) and later. Intra-LATA toll conflict. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TCONF", a SFSYS form must exist with SFID 149 set to "Y".
TOLL	Software Release: 5E9(1) and later. Toll calls within the LATA. This entry supports the Intra-LATA capability. With TYPE OF CI CALL set to "TOLL", a SFSYS form must exist with SFID 149 set to "Y".
WZ1	Used for calls outside the continental United States, but within World Zone 1 (e.g., Canada).

Data Rules:

Packet Switching CI TYPEs ("PSCAR" and "PSNCI") cannot be mixed with non-Packet Switching CI TYPEs within a single DAS.

SAC When TYPE CI CALL is "SAC", CALL TYPE must be "900", "DA", "INWATS", "NORM555", or "NORMAL".

WZ1: All forms with CI TYPE equals "WZ1" which have the first three digits (that is, the NPA (Numbering Plan Area)) in the INC DIGITS fields must have the same value for WZ1 REG.

For 5E6 and later, this type of Carrier Interconnect is allowed on FAT/LDITs, however, instead of this value (WZ1) being related to the first three digits of INCOMING DIGITS, it is related to the FAT/LDIT table number.

For 5E8 and later,

- if CI TYPE is "PSCAR" or "PSNCI", TRIG NBR must not be entered, and
- if CI TYPE is "SAC", RDIT must not be entered.

For 5E9(1) and later, when CALL TYPE is "OSOIWTS", TYPE OF CI CALL must be "INTER", "INTRA", "NONCI", "TCONF, or "TOLL".

For 5E9(1) and later, when CALL TYPE is "LOCDA", "BUSOFC", or "REPAIR", TYPE OF CI CALL must be "INTER", "INTRA", or "TOLL".

For 5E11 and later, if TYPE OF CI CALL is not "NORMAL" or "900", if RTI is entered, NXX cannot be enetered.

For 5E12 and later,

- when CALL TYPE is "IDDDSTS", TYPE OF CI CALL must be "NONCI" or "IDDD".
- when CALL TYPE is "SPAB800", "SPAM800", or "IDDDFCA", TYPE OF CI CALL must be "NONCI".
- when TYPE OF CI CALL in the CONFLICT RESOLUTION ENTRIES is "IDDD", the ACT field for SFID 325 on the SFSYS form (5713-1) must be set to "Y".
- when TYPE OF CI CALL in the CONFLICT RESOLUTION ENTRIES is "IDDD", RDIT, NBR OF DIGITS and PREFIX must not be entered, and INCOMING DIGITS must begin with "01".

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For 5E13 and later, when TYPE OF CI CALL is not "PSCAR", and ROUTE INDEX is entered and PORTED IN is "N", OFFICE CODE must not be entered for this CALL TYPE.

For 5E15 and later, when CONFRES.CALL TYPE is "BUSOFC", "LOCDA", "RELAY", or "REPAIR", CONFRES.CI TYPE must be "INTER", "INTRA", or "TOLL".

4.8 CDI

Description: The Code Index combined with a Screening Index is used as an input to the Rate and Route Tables. Code Index 1 (0-) and Code Index 2 (010) may not be entered on the LDIT Record.

For 5E8 and later, CODE INDEX is a real Code Index and no longer a pointer to the DISERV form (5321 Record).
Valid Entries: 3 - 4095

Data Rules:

This field must be blank if the CALL TYPE is "VACANT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN" or "CSTL".

All combinations of CODE INDEX, PREFIX from the PDIT form, and SCREENING INDEX from the LCC form must have corresponding RAR form entries for CDI, PFX, and SCR.

All combinations of CODE INDEX and SCR from the TKGRP form must have corresponding RAR form entries for CDI, SCR, and "NONE" for PFX.

For 5E8 and later, either CODE INDEX or CDI on this form or an RDIT form, or CODE INDEX on a PDIT or INDIT form, or WITH ANI or WITHOUT ANI on an AISCLS form must equal INC CDI on an INFLDEST form (5448 Record).

4.9 RTI

Description: This field indicates the Regular Route Index to be used for routing the call except when a Special Route Index entered on the RAR overrides it. The Regular Route Index is the route which is used by the majority of call originators to complete the call.

For 5E6 and later, the SSP/800 feature uses the RTI (or NXX) field when the SCP query response requests LEC routing, even when CI TYPE is "INTER".

For 5E8 and later, the ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

The CODE INDEX from this form must appear on a DISERV form (5321 Record) and if SERV TYPE is set to "NOQRY" on that DISERV form, then this ROUTE INDEX field must be entered. A SERV TYPE of "NOQRY" will occur at a NAP (Network Access Point) and the ROUTE INDEX must be entered to route to an SSP (Service Switching Point).

When the CALL TYPE is "VACANT", "HNPAD", "LTD", "APSDN", "SRTT", "OCTL" and "CSTL", this field must be blank.

When the Call Type is other than those listed above, this field or the OFFICE CODE field must be entered.

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For 5E13 and later, when RTI is entered and PORTED IN is "N", NXX cannot be entererd for this CALL TYPE.

4.10 POLY

Description: Is polygrid routing used for DSN (Defense Switched Networks)?

"N" should be entered for non-DSN offices.

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

For 5E11 and later, POLY must be "N" or not entered for Packet Switching.

4.11 NPA

Description: Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

Data Rules:

When NPA is entered, NXX must be entered.

For 5E12 and later, when the NXX and/or NPA/NXX combinations are assigned on the LDIT and/or MLDIT forms, they must be defined on the NOC form.

4.12 NXX

Description: Enter an Office Code (NXX) served by the 5ESS Switch (i.e., defined on the NOC form). If an Office Code is entered, it will be entered to "route" the call to a Directory Number of this NXX in this office, except when overridden by a Special Route Index entered in the Route Index field of the RAR form.

For 5E6 and later, the SSP/800 feature uses the NXX (or RTI) field when the SCP query response requests LEC routing, even when CI TYPE is "INTER".

Data Rules:

When the CALL TYPE is "VACANT", "HNPAD", "LTD", "SRTT", "APSDN", "SPAB800", "SPAM800", "IDDDFCA", "IDDDSTS", "OCTL" and "CSTL", this field must be blank. When the Call Type is other than these, an entry is required in this field or in the ROUTE INDEX field.

For 5E12 and later, when the LDIT forms have a "CONFLICT RESOLUTION.NXX" defined in the rows indicated by NBR DIGS, and there are multiple NOC forms with the same value of NXX, "CONFLICT RESOLUTION.NPA" must also be defined in the same row on the LDIT form.

4.13 DESEP

Description: Enter the Destination Separations Index for calls other than "VACANT", "HNPAD", "LTD", "SRTT", "OCTL" or "CSTL". It is only required for Division of Revenue Study.
Valid Entries: 1 - 255

Data Rules:

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If a DESEP is entered, it must be defined on the 5308 Record.

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

4.14 WZ1 REG

Description: For codes with a TYPE OF CI CALL equal to WZ1, enter a World Zone 1 region. This digit is used in the first stage of outpulsing for INCs (International Carriers) on either a direct connection or via an Access Tandem. The first stage of outpulsing has a format of KP + 1NX + XXX + 01R + ST, where R is the World Zone 1 region. (1NX is a spare toll center code entered on the Route Index as prefix digits. XXX is the Carrier Identification Code.) For other than WZ1 types, leave this field blank.
Valid Entries: 0 - 9

4.15 TERM LATA

Description: This field is used as the Inter-LATA Carrier when Network Call Denial Screening is required on incoming CAMAANI Trunk Groups. The TERM LATA value is compared to an ORIG LATA value specified on the TKGRP form (5202-3 Record).

Valid TERM LATA Entries

Entry	Definition
1	Indicates LATAs not subtending the switch
2 - 31	Software Release: 5E5 and later. Indicates a subtending LATA of the switch.

Data Rules:

If TYPE OF CI CALL field is "PSNCI" or "PSCAR", then this field must be blank.

If CALL TYPE is "LNACP", this field must be blank.

If TERM LATA is specified, COMMON CHAN SIG must equal to "Y" on the OFCOPT form (5509 Record).

When the Call Type is "NORMAL", "AUTINW", "OPINW" or "DA", enter an appropriate value to indicate, based on incoming digits, the destination of this call.

4.16 NON

Description: Enter the nature of the number. This field is used during query formulation of Network Services calls, and is populated only for ASP SSP offices.

Software Release: 5E8 and later
Valid Entries:

Valid NON Entries

Entry	Definition
IDDD or I	International.
NATL or N	National.
PRIV or P	Private.

Data Rules:

6For 5E8, if NON is entered, TRIG NBR must be entered for the same entry.

When ASP OFC on OFCOPT is "SSP", and TRIG NBR is entered, and APPLICATION on the corresponding NSTRIG form is "ASP", NON must be entered.

4.17 TRIG NBR

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Description: Enter the Network Services trigger number.

Software Release: 5E8 and later
Valid Entries:
- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

Data Rules:

If TRIG NBR is entered:

- it must equal TRIG NBR on an NSTRIG form,
- if NBR DIG is neither 7 nor greater than 9, and SERV KEY on the corresponding NSTRIG form is "CDPN", then on that NSTRIG form APPLICATION equals "ASP" and ALT GBL TITLE must be entered;
- if APPLICATION on the corresponding NSTRIG form is "E911", CALL TYPE must be "EMER" and CI TYPE must be "INTRA";
- for 5E8 only, if ASP OFC on an OFCOPT form is "SSP", and APPLICATION on the corresponding NSTRIG form is "ASP", NON must be entered.

For 5E8 and later, if a CONFLICT RESOLUTION ENTRY with a CALL TYPE of "EMER" or "NORMAL" is entered, a TRIG NBR defined on an NSTRIG form, and APPLICATION on the NSTRIG form is "E911" or "800", then RTI and NXX on the LDIT form cannot be entered. If APPLICATION on the NSTRIG form is "ASP", then RTI or NXX on the LDIT form must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered.

For 5E12 and later, when CONFLICT RESOLUTION ENTRY, TRIG NUM on the LDIT/MLDIT forms is entered and the associated NSTRIG form with the same TRIG NUM has an APPLICATION of "ASP", then INCOMING DIGITS on the LDIT/MLDIT forms must have a first digit of "2", "3", "4", "5", "6", "7", "8", or "9".

For 5E15 and later, when CONFRES.CALL TYPE is "RELAY", CONFRES.TRIG NBR must not be entered.

4.18 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Default: N
Valid Entries: Y, N

4.19 SAC OWNER

Description: For codes with a TYPE OF CI CALL equal to "SAC", enter the Carrier Identification Code of the carrier "owning" the Service Access Code, or "LEC" for a Local Exchange Carrier. The ICF form (5305 Record) will be accessed to check the validity of the Carrier ID and to determine if overlap outpulsing might be required. However, routing will be done based on the Code Index and Route Index of the LDIT, not the ICF.
Valid Entries:
- For 5E8 only: 0 - 999 or "LEC"
- For 5E9(1) and later: 0 - 9999 or "LEC"

Data Rules:

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For CONFLICT RESOLUTION ENTRY, when CI TYPE is "SAC", SAC OWNER must be entered. And conversely, if CI TYPE is not "SAC", SAC OWNER cannot be entered.

If SAC OWNER or CONFLICT RESOLUTION SAC OWNER is assigned on the LDIT form, then they must be defined as CARRIER IDs on an ICF form with FEAT GRP = "D".

For 5E11 and later, when CI TYPE is not "NORMAL" or "900", if RTI is entered, NXX cannot be entered.

4.20 DFLT RT

Description: The DFLT RT field is used to identify the type of default routing treatment to be used for the ASP Default Routing for 3/6/10-Digit Triggers (Phase 1) Special Feature. When the ASP Special Feature has been purchased, this field can be used to specify the type of default routing to occur when an ASP specific digit trigger query fails.

Software Release: 5E9(1) and later
Default: NONE
Valid Entries:

Valid DFLT RT Entries

Entry	Definition
ANNC or A	Default route to announcement (or tone). The call will route to either a tone or announcement, depending on what is defined for the route.
DLDN or D	Default route to dialed DN. The call will route to the DN dialed (or the DN being routed to if the call came from a trunk).
NONE or N	No default routing. No special default routing will take place, and normal call treatment will send the call to reorder or NCA (No Circuits Available).

Data Rules:

When DFLT RT is not "NONE", either "TRIG NBR" or "LNP TRIG NBR" must be entered.

For 5E10 and later, when the MLDIT forms have a DFLT RT entry entry other than "NONE", the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

4.21 ANI BYPASS

Description: Will ANI Table options be ignored? An entry of "N" indicates TDX ANI Table options will be processed. This field supports the TDX (Toll Digital Exchange) ANI Table Call Processing Feature. This is a secured feature with SFID 235. For more information on this feature, see Division 2, Section 4A165.

Software Release: 5E10 and later
Default Value: N
Valid Entries: Y, N

5. FORM ENTRIES - 5300-5b RECORD

5.1 BASE AND CONTROL, ESS UNIT

CONFLICT RESOLUTION

Description: Enter the Base and Control Number and the office name on each record.

5.2 LDIT

Description: Enter the Local Digit Interpreter Table number. The LDIT must be the same as that from the corresponding 5300-3 Record entry.

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Valid Entries: 1 - 999

5.3 INC DIGITS

Description: Enter the code for which the conflict exists. This must be the same as the INCOMING DIGITS of the Conflict Code on the 5300-3 Record. This information is not required as a separate entry on the LDIT form.
Valid Entries: 1 to 15 digits

LOCAL NUMBER PORTABILITY

For 5E11 and later, fields (Section 5.4) - (Section 5.9) support the Local Number Portability feature. For more information, see Division 2, Section 4A174.

5.4 LNP TRIG NBR

Description: Enter the LNP trigger number. The LNP trigger number is a conditional trigger which initiates a query to the SCP (Service Control Point) based on further routing determinations and checks following the trigger detection.

Software Release: 5E11 and later
Required Field.
Default: IGN
Valid Entries: IGN (ignore), or 1 - 255

Data Rules:

Local Number Portability is a secured feature. This feature must be purchased and SFID 174 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be entered on either an LDIT/MLDIT form or CONFLICT RESOLUTION on an LDIT form.

When LNP TRIG NBR is entered, TYPE OF CI CALL must be:
- "INTER"
- "INTRA"
- "TOLL"
- "COMP"
- "PRIV"
- "NONCI"
- "TCONF"
- or "CONFL".

When both LNP TRIG NBR and TRIG NBR are entered either on an LDIT/MLDIT form or CONFLICT RESOLUTION on an LDIT form, TRIG NBR must be defined as TRIG NBR (whichever is entered) on the NSTRIG form (5324 Record) which has APPLICATION set to "ASP".

When LNP TRIG NBR is entered either on an LDIT/MLDIT form or CONFLICT RESOLUTION on an LDIT form, LNP TRIG NBR must be defined as TRIG NBR on the NSTRIG form (5324 Record) where APPLICATION is "ASP" and AIN REL is "R0D1".

For 5E12 and later, when CONFRES.LNP TRIG NUM on the LDIT/MLDIT forms is entered and the associated NSTRIG form with the same TRIG NUM has an APPLICATION of "ASP", then INCOMING DIGITS on the LDIT/MLDIT forms must have a first digit of "2", "3", "4", "5", "6", "7", "8", or "9".

For 5E13 and later, when LNP TRIG NBR or CONFRES.LNP TRIG NBR is entered, TYPE OF CI CALL or CONFRES.TYPE OF CI CALL can be "INTER" only when the ACT field for SFID 303 on the SFSYS form (5713-1 Record) is set to "Y".

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5.5 GEO PORT

Description: Has geographically porting occurred for at least one DN associated with this LDIT entry?

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When GEO PORT is "Y", LNP TRIG NBR must be entered.

5.6 PORTED IN

Description: Is at least one DN termination in this office which is associated with this LDIT digit translation have a route index (instead of an office code) that is provisioned for this LDIT translation?

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Local Number Portability is a secured feature. This feature must be purchased and SFID 174 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be entered on either an LDIT/MLDIT form or, CONFLICT RESOLUTION on an LDIT form.

When PORTED IN is "Y", TYPE OF CI CALL must be:
- "INTER"
- "INTRA"
- "TOLL"
- "COMP"
- "PRIV"
- "NONCI"
- "TCONF"
- or "CONFL".

When PORTED IN is "Y", ROUTE INDEX must be entered.

When PORTED IN is "Y", OFFICE CODE must be entered.

For 5E13 and later, when PORTED IN or CONFRES.PORTED IN is "Y", TYPE OF CI CALL or CONFRES.TYPE OF CI CALL can be "INTER" only when the ACT field for SFID 303 on the SFSYS form (5713-1 Record) is set to "Y".

5.7 HOME LRN

Description: Is this a home location routing number? This field is set to "Y" when the LRN represents this switch or a rate center in this switch.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

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5.8 LRN SCRN

Description: Should the screening attributes be used for LRN? This field is set to "Y" when the LRN is a rate center in this switch which would imply that the TYP CI CALL and CDI from analysis of this LRN should be used.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

5.9 INH DNT

Description: Should the processing of dialed number triggers be inhibited?

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

5.10 GETS HPC

Description: Is GETS (Government Emergency Telecommunication Service) HPC (High Probability Call Completion Service) required? The GETS HPC field is used as an indicator to mark GETS HPC calls so that enhanced functionality provided by other HPC capabilities (e.g., Trunk Queuing, ISUP Signaling, Exemption from Network Management Controls) can be invoked. When set to "Y", calls translated to this address receive special treatment resulting in a higher probability of call completion. For more information, see Division 2, Section 4A279.

The use of HPC Network Capabilities is restricted in the United States and U.S. Territories to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be co-ordinated with the OMNCS at the following address:

Office of the Manager
National Communication System
Attn: GETS Program Office
701 South Courthouse Rd
Arlington, VA, 22204-2198
email: gets@ncs.gov

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When GETS HPC in CONFLICT RESOLUTION ENTRIES is "Y"

- NBR DIG must be 10.
- CALL TYPE must be "NORMAL".
- CI TYPE must be "COMP", "CONFL", "INTER", "INTRA", "NONCI", "PRIV", "SAC", "TCONF", "TOLL", or "WZ1".

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5.11 DENY XFER

Description: This field is used to indicate if call transfers to a particular digit string should be denied.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, when DENY XFER in CONFLICT RESOLUTION ENTRY (CONFRES) is "Y", CALL TYPE must be "EMER".

For 5E14 and later, for each row of the CONFLICT RESOLUTION ENTRIES (CONFRES) list, when DENY XFER is "Y", CALL TYPE must not be "EMER".

5.12 NPA SPLIT ANNC

Description: Should caller be given a warning announcement if dialing a 7-digit or 10-digit number during permissive period of NPA (Numbering Plan Area) Split?

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NPA SPLIT ANNC in CONFLICT RESOLUTION ENTRIES is "Y", NBR DIG must be "7" or "10".

5.13 REL LINK

Description: Is this a release link directory assistance number? This field is used to indicate whether or not the digits being translated map to a release link directory assistance number.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For each row of the CONFLICT RESOLUTION ENTRIES (CONFRES) list, when REL LINK is "Y":

- CALL TYPE must be "DA", "LOCDA", "NORM555", or "NORMAL".
- One of the following two conditions must exist:
  - For the Release Link for Toll Office feature using ANSI (American National Standards Institute) standard signaling, the ACT field for SFID 520 on the SFSYS form (5713-1 Record) must be set to "Y"; or
  - For the Release Link for Toll Office feature using TOPS (Operating System for DMS (Data Management System)) nonstandard signaling, the ACT field for SFID 521 on the SFSYS form must be set to "Y".

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CALL TYPE	NBR OF DIGITS	TYPEs OF CI CALL	CODE INDEX	ROUTE INDEX	OFFICE CODE	DESEP
100	3 or 6	NONCI	required	optional	optional	
101	3 or 6	NONCI	required	optional	optional	
101R	3 or 6	NONCI	required	optional	optional	
101TAT	6 or 9	NONCI	required	optional	optional	
101TP	5 or 8	NONCI	required	optional	optional	
102	3 or 6	NONCI	required	optional	optional	
103	3 or 6	NONCI	required	optional	optional	
104	3 or 6	NONCI	required	optional	optional	
104R	3 or 6	NONCI	required	optional	optional	
105	3 or 6	NONCI	required	optional	optional	
105R	3 or 6	NONCI	required	optional	optional	
106		NONCI	required	optional	optional	
109R	3 or 6	NONCI	required	optional	optional	
606R	3 or 6	NONCI	required	optional	optional	
900	10	any (usually SAC)	required	optional	optional	
		PSCAR	blank	blank	blank	
ADDON		NONCI	optional	required		
APSDN	3, 7, or 10	NONCI	blank	blank	blank	
AUTINW	6 to 11	any but TRANS or SAC	required	required		
BBRITL	7	NONCI	blank	blank	blank	blank
BRITL	3 or 7	NONCI	blank	blank	blank	blank
BUSOFC	3	INTRA INTER TOLL	required	required for ROUTE INDEX or OFFICE CODE		
CONFLCT	7 or 10	blank	blank	blank	blank	blank
CSTL	3	NONCI	blank	blank	blank	blank
DA	7	any but TRANS	required	optional	optional	
ECP	1 - 15	NONCI	blank	blank	blank	blank
DA2VDT	10	any (except SAC)	required	optional	optional	
EMER	3	INTRA	required	optional	optional	
FAT	blank	blank	blank	blank	blank	blank
HNPAD	1 - 15	NONCI	blank	blank	blank	blank
IC1 to IC33	5	NONCI	required	optional	optional	
IDDDFCA	7 to 14	NONCI	required	required	blank	
IDDDSTS	6	NONCI	required	required	blank	
INV		NONCI	required	optional	optional	
INWATS	10	any (usually SAC)	required	optional	optional	
LNACP	3	NONCI	blank	blank	blank	blank
LOCDA	3	INTRA INTER TOLL	required	required for ROUTE INDEX or OFFICE CODE		
LTD	3	NONCI	blank	blank	blank	blank
MEETME		NONCI	optional	required		
NINV		NONCI	required	optional	optional	
NORMAL	3, 7, or 10	any	required	optional		
		PSCAR	blank	blank	blank	blank
NS800	10	NONCI	blank	blank		
OCTL	3	NONCI	blank	blank	blank	blank
OPINW	6 to 11	any but TRANS or SAC	required	required		
OPNIT	10	any (except SAC)	required	optional	optional	
OSOIWTS	10	NONCI, INTER, INTRA, NONCI, TCONF, or TOLL	optional	optional	optional	optional
PB	3	NONCI	required	optional	optional	
QUERY	3, 7, or 10	INTRA or NONCI	required	optional	blank	blank
REPAIR	3	INTRA INTER TOLL	required	required for ROUTE INDEX or OFFICE CODE		

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SD	7 or 10	NONCI	required	required		
SDNE	7 or 10	NONCI	required	optional	optional	
SPAM800	3, 7, or 10	NONCI	required	required		
SRTT	7	NONCI	blank	blank	blank	blank
STG1FCA	3 or 6	NONCI	blank	blank	blank	blank
SYN	3	NONCI	required	optional	optional	
VACANT	3, 7, or 10	NONCI or PSNCI	blank	blank		
WETESTC	7 or 10	NONCI	allowed	allowed	allowed	allowed

Figure 1 CALL TYPE DEPENDENCIES

STORED PFX (LDIT)	NBR OF DIGITS (LDIT)	DIALED PREFIX	CONFLICT RESOLVED BY
NONE	1 - 15	NONE	Prefix
		1+	Timing
		0+	Timing
1+	1 - 15	NONE	Timing
		1+	Prefix
		0+	Timing
0+	1 - 15	NONE	Timing
		1+	Timing
		0+	Prefix
NULL	1 - 15	NONE	Prefix
		1+	Prefix
		0+	Timing
NULL	NULL	any	Timing

Figure 2 TDAC CODE CONFLICT RESOLUTION TABLE

EXAMPLE 1: Two conflict case - Two conflict resolution entries. 7/10 digit conflict for code 416.

PFX ASSIGNED (LDIT)	NBR OF DIGITS (LDIT)	PFX DIALED	NBR DIGITS DIALED	CONFLICT RESOLUTION	RESULTING CALL TREATMENT
NONE	7	NONE	7	PREFIX	1
NONE	7	1+/0+	7	TIMING	1
NONE	7	NONE	10	PREFIX	2
NONE	7	1+/0+	10	TIMING	3
NONE	10	NONE	7	PREFIX	4
NONE	10	1+/0+	7	TIMING	1
NONE	10	NONE	10	PREFIX	3
NONE	10	1+/0+	10	TIMING	3

EXAMPLE 2: General conflict case - more than 2 conflict resolution entries.
6/7/10 digit conflict for code 416.

PFX ASSIGNED (LDIT)	NBR OF DIGITS (LDIT)	PFX DIALED	NBR DIGITS DIALED	CONFLICT RESOLUTION	RESULTING CALL TREATMENT
NONE	6	NONE	6	PREFIX	5
NONE	6	NONE	7/10	PREFIX	6
NONE	6	1+/0+	7/10	TIMING	1
NONE	7	NONE	6	PREFIX	7
NONE	7	NONE	7	PREFIX	1
NONE	7	1+/0+	7	TIMING	1
NONE	7	NONE	10	PREFIX	2
NONE	7	1+/0+	10	TIMING	3
NONE	10	NONE	6/7	PREFIX	4
NONE	10	1+/0+	7	TIMING	1
NONE	10	NONE	10	PREFIX	3
NONE	10	1+/0+	10	TIMING	3

Figure 3 TDAC CODE CONFLICT RESOLUTION TABLE EXAMPLES

CALL TREATMENTS:

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1. Treatment based on 7 digit conflict entry.

2. Results in either misrouted call or vacant number error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (first 7 digits in this case). Hence if 416-220-1000 is dialed, call processing would attempt termination to 416-2201.

3. Treatment based on 10 digit conflict entry.

4. Partial dial error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (10 digits in this case). However, fewer than 10 digits are dialed.

5. Treatment based on 6 digit conflict entry.

6. Results in either misrouted call or vacant number error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (first 6 digits in this case). Hence if 416-xxxx or 416-xxx-xxxx is dialed, call processing would attempt termination to 416-xxx.

7. Partial dial error treatment. Since conflict is prefix resolved, call processing collects quantity of digits specified in NBR OF DIGITS field (7 digits in this case). However, only 6 digits are dialed.

```
ldit                        5ESS Switch
SCREEN 1 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)         LOCAL DIGIT INTERPRETER TABLE

*1. LDIT          ___              13. PREFIX        ____
*2. INCOMING DIGITS _______________    14. WZ1 REGION    _
 3. CALL TYPE      NORMAL           15. TERM LATA     __
 4. TYPE OF CI CALL _____           16. SAC OWNER     ____
 5. NBR OF DIGITS   __              17. NATURE OF NBR ____
 6. RDIT           ___              18. TRIG NBR      ___
 7. CODE INDEX     ____             19. ESC CODE      N
 8. ROUTE INDEX    _____            20. DFLT RT       NONE
 9. POLYGRID       N                21. INH OBL       N
10. NPA            ___              22. INH ONA       N
11. OFFICE CODE    ___              23. ANI BYPASS    N
12. DESEP          ___              24. REMARK        _________________
```

```
ldit                        5ESS Switch
SCREEN 2 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)         LOCAL DIGIT INTERPRETER TABLE

25. NPA SPLIT ANNC N    LOCAL NUMBER PORTABILITY    35. NODAL IDX _
                  29. LNP TRIG NBR  ___       36. DN PREFD  N
26. IMPLIED NPAs       30. GEO PORT      N        37. GETS HPC  N
ROW PREFIX NPA         31. PORTED IN     N        38. DENY XFER N
 1  ____  ___          32. HOME LRN      N
 2  ____  ___          33. LRN SCREENING N
 3  ____  ___          34. INH DNT       N
```

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```
ldit                    5ESS Switch
SCREEN 3 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 1  __ ________ ___ _____ ____ _____  _  ___ ___  ___   _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 1  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 1  _   _   _     _
```

```
ldit                    5ESS Switch
SCREEN 4 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 2  __ ________ ___ _____ ____ _____  _  ___ ___  ___   _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 2  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 2  _   _   _     _
```

```
ldit                    5ESS Switch
SCREEN 5 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              39. CONFLICT RESOLUTION ENTRIES (CONFRES)
```

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```
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 3 __ _______ ___ _____ ____ _____ _  ___ ___ ___  _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 3  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 3   _   _   _      _
```

```
ldit                        5ESS Switch
SCREEN 6 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)         LOCAL DIGIT INTERPRETER TABLE

            39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 4 __ _______ ___ _____ ____ _____ _  ___ ___ ___  _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 4  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 4   _   _   _      _
```

```
ldit                        5ESS Switch
SCREEN 7 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)         LOCAL DIGIT INTERPRETER TABLE

            39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 5 __ _______ ___ _____ ____ _____ _  ___ ___ ___  _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 5  _  ____ _  _ ____   _     ___    _    _    _   _   _   _
```

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```
   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 5   _   _   _      _
```

```
ldit                        5ESS Switch
SCREEN 8 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 6  __ ________ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 6  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 6  _   _   _      _
```

```
ldit                        5ESS Switch
SCREEN 9 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 7  __ ________ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 7  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 7  _   _   _      _
```

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```
ldit                    5ESS Switch
SCREEN 10 OF 11         OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

            39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 8  __ _______ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 8  _  ____ _  _  ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 8  _   _   _     _
```

```
ldit                    5ESS Switch          _
SCREEN 11 OF 11         OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

            39. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 9  __ _______ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 9  _  ____ _  _  ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY NPA
ROW PREFD HPC  XFER SPLIT ANNC
 9  _   _   _     _
```

Figure 4 SAMPLE LDIT FORM 5E13 SOFTWARE RELEASE

```
ldit                    5ESS Switch
SCREEN 1 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

*1. LDIT        ___             13. PREFIX      ____
```

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```
*2. INCOMING DIGITS _______________    14. WZ1 REGION    _
 3. CALL TYPE       NORMAL           15. TERM LATA     __
 4. TYPE OF CI CALL _____            16. SAC OWNER     ____
 5. NBR OF DIGITS   __               17. NATURE OF NBR ____
 6. RDIT            ___              18. TRIG NBR      ___
 7. CODE INDEX      ____             19. ESC CODE      N
 8. ROUTE INDEX     _____            20. DFLT RT       NONE
 9. POLYGRID        N                21. INH OBL       N
10. NPA             ___              22. INH ONA       N
11. OFFICE CODE     ___              23. ANI BYPASS    N
12. DESEP           ___              24. REMARK        _________________
```

```
ldit                        5ESS Switch
SCREEN 2 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)         LOCAL DIGIT INTERPRETER TABLE

25. NPA SPLIT ANNC N    LOCAL NUMBER PORTABILITY    35. NODAL IDX _
                  29. LNP TRIG NBR  ___       36. DN PREFD  N
26. IMPLIED NPAs       30. GEO PORT      N        37. GETS HPC  N
ROW PREFIX NPA         31. PORTED IN     N        38. DENY XFER N
 1  ____  ___         32. HOME LRN      N        39. REL LINK  N
 2  ____  ___         33. LRN SCREENING N
 3  ____  ___         34. INH DNT       N
```

```
ldit                        5ESS Switch
SCREEN 3 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)         LOCAL DIGIT INTERPRETER TABLE

             40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 1  __  _______ ___  _____ ____ _____  _   ___ ___  ___   _   __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
```

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```
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 1  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 1   _   _   _   _     _
```

```
ldit                    5ESS Switch
SCREEN 4 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                      WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 2  __ _______ ___ _____ ____ _____  _  ___ ___  ___   _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 2  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 2   _   _   _   _     _
```

```
ldit                    5ESS Switch
SCREEN 5 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                      WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 3  __ _______ ___ _____ ____ _____  _  ___ ___  ___   _  __ ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 3  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
```

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```
ROW PREFD HPC  XFER LINK SPLIT ANNC
 3   _   _   _   _     _
```

```
ldit                        5ESS Switch
SCREEN 6 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)          LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 4  __ _______ ___  _____ ____ _____  _   ___ ___  ___   _   __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 4  _   ____ _   _ ____    _     ___     _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 4   _   _   _   _     _
```

```
ldit                        5ESS Switch
SCREEN 7 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)          LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 5  __ _______ ___  _____ ____ _____  _   ___ ___  ___   _   __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 5  _   ____ _   _ ____    _     ___     _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 5   _   _   _   _     _
```

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```
ldit                    5ESS Switch
SCREEN 8 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 6  __ _______ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 6  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 6  _   _   _   _     _
```

```
ldit                    5ESS Switch
SCREEN 9 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)           LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                        WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 7  __ _______ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 7  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 7  _   _   _   _     _
```

```
ldit                    5ESS Switch
SCREEN 10 OF 11         OFFICE DATA ADMINISTRATION
```

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```
(5300-3/3b/5)          LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                          WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 8  __ _______ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 8  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 8   _   _   _   _      _
```

```
ldit                        5ESS Switch          _
SCREEN 11 OF 11          OFFICE DATA ADMINISTRATION
(5300-3/3b/5)          LOCAL DIGIT INTERPRETER TABLE

              40. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL        CI                          WZ1 TERM      TRIG
ROW DIG TYPE    RDIT TYPE  CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR
 9  __ _______ ___  _____ ____ _____  _  ___ ___  ___   _  __  ____ ___

   ESC  DFLT INH INH SAC   ANI    LNP      GEO  PORTED HOME LRN  INH NODAL
ROW CODE RT   OBL ONA OWNER BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX
 9  _  ____ _  _ ____   _     ___    _    _    _   _   _   _

   DN    GETS DENY REL  NPA
ROW PREFD HPC  XFER LINK SPLIT ANNC
 9   _   _   _   _      _
```

Figure 5 SAMPLE LDIT FORM 5E14 AND LATER SOFTWARE RELEASES

```
SCREEN 1 OF 3                5ESS Switch
mldit                 OFFICE DATA ADMINISTRATION
(5300-3)           MULTIPLE LOCAL DIGIT (OFFICE DIALING)


*1. LDIT 001

              INCOMING DIGITS - OPTIONAL RANGE ON LAST 3 DIGITS
```

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*2. _____ - ___ 12. _____ - ___
4. _____ - ___ 14. _____ - ___
6. _____ - ___ 16. _____ - ___
8. _____ - ___ 18. _____ - ___
10. _____ - ___ 20. _____ - ___

SCREEN 2 OF 3 5ESS Switch
mldit OFFICE DATA ADMINISTRATION
(5300-3) MULTIPLE LOCAL DIGIT (OFFICE DIALING)

22. CALL TYPE NORMAL 35. NATURE OF NBR ____
#23. TYPE OF CI CALL _____ 36. TRIG NBR ___
#24. NBR OF DIGITS __ 37. ESC CODE N
25. RDIT ___ 38. DFLT RT NONE
26. CODE INDEX ____ 39. INH OBL N
27. ROUTE INDEX _____ 40. INH ONA N
28. POLYGRID N 41. ANI BYPASS N
29. NPA ___ 42. REMARK _____
30. OFFICE CODE ___
31. DESEP ___
32. WZ1 REGION _
33. TERM LATA __
34. SAC OWNER ____

SCREEN 3 OF 3 5ESS Switch _
mldit OFFICE DATA ADMINISTRATION
(5300-3) MULTIPLE LOCAL DIGIT (OFFICE DIALING)

LOCAL NUMBER PORTABILITY 49. NODAL IDX _
43. LNP TRIG NBR ___ 50. DN PREFD N
44. GEO PORT N 51. GETS HPC N
45. PORTED IN N 52. DENY XFER N
46. HOME LRN N
47. LRN SCREENING N
48. INH DNT N

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Figure 6 SAMPLE MLDIT FORM 5E13 SOFTWARE RELEASE

```
SCREEN 1 OF 3                5ESS Switch
mldit                  OFFICE DATA ADMINISTRATION
(5300-3)           MULTIPLE LOCAL DIGIT (OFFICE DIALING)


*1. LDIT 001

                INCOMING DIGITS - OPTIONAL RANGE ON LAST 3 DIGITS

*2. _________________  -  ___        12. _________________  -  ___
 4. _________________  -  ___        14. _________________  -  ___
 6. _________________  -  ___        16. _________________  -  ___
 8. _________________  -  ___        18. _________________  -  ___
10. _________________  -  ___        20. _________________  -  ___
```

```
SCREEN 2 OF 3                5ESS Switch
mldit                  OFFICE DATA ADMINISTRATION
(5300-3)           MULTIPLE LOCAL DIGIT (OFFICE DIALING)


 22. CALL TYPE      NORMAL            35. NATURE OF NBR ____
#23. TYPE OF CI CALL _____            36. TRIG NBR     ___
#24. NBR OF DIGITS  __                37. ESC CODE     N
 25. RDIT           ___           38. DFLT RT      NONE
 26. CODE INDEX     ____              39. INH OBL      N
 27. ROUTE INDEX    _____             40. INH ONA      N
 28. POLYGRID       N             41. ANI BYPASS   N
 29. NPA            ___           42. REMARK       _________________
 30. OFFICE CODE    ___
 31. DESEP          ___
 32. WZ1 REGION     _
 33. TERM LATA      __
 34. SAC OWNER      ____
```

```
SCREEN 3 OF 3                5ESS Switch          _
mldit                  OFFICE DATA ADMINISTRATION
(5300-3)           MULTIPLE LOCAL DIGIT (OFFICE DIALING)

LOCAL NUMBER PORTABILITY       49. NODAL IDX _
```

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43. LNP TRIG NBR ___ 50. DN PREFD N
44. GEO PORT N 51. GETS HPC N
45. PORTED IN N 52. DENY XFER N
46. HOME LRN N 53. REL LINK N
47. LRN SCREENING N
48. INH DNT N

Figure 7 SAMPLE MLDIT FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 3D: 5300-4 RECORD
CODE CONVERSION FORM - CONV

1. GENERAL

The 5300-4 Record is available with 5E2 and later Software Releases, and is used to associate a Local Digit Interpreter Table call type with a code conversion number.

Whenever a code is dialed which is defined in the Local Digit Interpreter Table with a call type of "LOCDA", "REPAIR", "BUSOFC" or "EMER", the 5ESS Switch will substitute the digits dialed with the Code Conversion Number entered on this form. This substitution is performed after digit interpretation is complete. The Code Conversion digits are not re-interpreted and the Code Index provided by the original dialed digits is used for screening. All Local Digit Interpreter entries with the above call types require a corresponding code conversion entry, whether the code conversion number is the same as or different from the dialed code.

1.1 Foreign Area Tranlator

For 5E6 and later, operating companies can make use of a FAT (Foreign Area Translator) LDIT during digit analysis. The FAT/LDIT performs further digit analysis on LDITs (5300-3 Records) that are interpreting common dialed or inpulsed digit strings. Code conversion call types are not allowed to be assigned on FAT/LDITs. For more information concerning the implementation and use of the FAT/LDIT, see Division 2, Section 1AO.

1.2 Recent Change View

The corresponding Recent Change view for this form is 9.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number, office name and page number on each record.

2.2 * DAS

Description: Enter the Digit Analysis Selector number. The DAS is defined on the 5300-1 Record.

Required Field.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

2.3 * CALL TYPE

Description: Enter the Call Type associated with the Dialed Digits to be converted.

Required Field.

Valid CALL TYPE Entries

Entry	Definition
BUSOFC	Business Office
EMER	Emergency Service Bureau
LOCDA	Local Directory Assistance
RELAY	Relay
REPAIR	Repair

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Data Rules:

Code conversion CALL TYPES which are used on the LDIT/MLDIT (5300 Record) forms that also have OFFICE CODE entered must have a corresponding entry on the CONV form. An entry on the DAS form is necessary to make this correspondence.

For 5e15 and later, code conversion CALL TYPEs "BUSOFC", "EMER", "LOCDA", "RELAY", or "REPAIR" which are used on the LDIT/RDIT/MLDIT forms that also have OFFICE CODE entered must have a corresponding entry on the CONV form. An entry on the DAS form is necessary to make this correspondence.

For 5E15 and later, CALL TYPE can be set to "RELAY" only if the ACT field for SFID 594, on the SFSYS form is set to "Y".

2.4 # CONV TN

Description: Enter the number to which the service access code is to be converted. Normally, three, seven, or ten digits are appropriate.
Valid Entries: 3 - 10 digits

2.5 RMK

Description: This field may contain any remarks deemed locally necessary.
Valid Entries: 16 characters

2.6 # DA CONV TN

Description: Should digit analysis be performed on this converted TN? This field is added to support the Code Conversion Expansion for N11 (99-5E-7878) feature. See Division 2, Section 4A594 for more information.
Default: N
Valid Entries: Y, N

When DA CONV TN is "Y", CALL TYPE must be "RELAY".

---

conv 5ESS Switch _
5300-4 OFFICE DATA ADMINISTRATION
CODE CONVERSION

* 1. DAS __
* 2. CALL TYPE _____
  3. CONV TN _____
  4. RMK _____

Figure 1 SAMPLE CONV FORM 5E5 - 5E14 SOFTWARE RELEASES

---

conv 5ESS Switch
OFFICE DATA ADMINISTRATION
(5300-4) CODE CONVERSION

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*1. DAS ___
*2. CALL TYPE _____
#3. CONV TN _____
4. RMK _____
5. DA CONV TN N

Figure 2 SAMPLE CONV FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 3E: 5300-6 RECORD
CARRIER DESTINATION MAPPING FORM - CDIM

1. GENERAL

The 5300-6 Record is applicable to 5E2 and later Software Releases and defines carrier specific Code Indexes and Routes Indexes for the CI (Carrier Interconnect) capability.

This record is used in two cases. If the office is an AT (Access Tandem), this Record defines the carrier specific Code Indexes and Route Indexes for all carriers the AT is tandeming calls to from EAEOs (Equal Access End Offices). In the second case, an EAEO uses this Record to obtain carrier-specific Code Indexes and Route Indexes for any carrier that has DIG ROUTING equal to "Y" on the ICF form (5305 Record).

1.1 Access Tandem Offices

For Access Tandem offices, the CDIM Form is checked whenever the INDIT form has an entry of "INC" or "AVT" in the TYPE OF CI CALL. The Code Index from the INDIT entry plus the Carrier Identification Number inpulsed from the EAEO are the keys to the CDIM Form where the carrier specific Code Index and Route Index outputs for the RAR form (5301 Record) are found. Every valid combination of INDIT Code Index with "INC" or "AVT", and Carrier Identification Numbers which are valid for this AT must be entered on this form.

1.2 Equal Access End Offices

For the EAEO using the CDIM Form instead of, or in addition to, the ICF Form for a carrier, CDIM entries are keyed by Code Indexes found in the regular digit analysis forms, PDIT, LDIT, and IDDD.

If the carrier's specific Code Index/Route Index pairs are entered on the ICF Form, the CDIM Form will be used for exception cases when DIG ROUTING equals "Y" on the ICF Form. In this case, the ICF pair is selected first, based on the type of CI call. Then, when an entry is found for the call on the CDIM, the CDIM carrier-specific Code Index/Route Index pair overrides the ICF pair. If an entry is not found on the CDIM, the ICF pair is used.

Code Indexes found on the digit analysis forms (PDIT, LDIT and IDDD) are candidates for entry on the CDIM Form. For each Code Index found on those forms, where the TYPE OF CI CALL is "CONFL", "INTER", "WZ1", "PRIV", or "COMP", that Code Index may be entered in the first field of this form. If the carrier accepts IntraLATA or Cut Through calls as indicated on the carrier's ICF Form, then the Code Indexes for "INTRA" or "CICUT" may be entered. If the carrier is a CARRIER TYPE of "CONSOL", then the Code Index from the IDDD Forms may be entered. If the carrier has an ACCESS TYPE of "BOTH", then the Code Index for "TRANS" may be entered.

If the carrier's specific Code Index/Route Index pairs are not entered on the ICF Form, then all possible digit analysis Code Indexes, which may be used for this carrier as outlined above, must be entered on the CDIM Form.

1.3 Long Distance Carriers

If the CDIM Form is being used for the carrier which is providing long distance service before Carrier Interconnect, the population of the CDIM is very specific. For those Types of CI Call which are applicable to this carrier, the Code Index is entered on the CDIM. Initially, the Carrier Code Index is identical to the Code Index, and the Carrier Route Index is the same as the Route Index appearing with the Code Index assigned in the digit analysis forms. This match ensures calls continue to be translated and routed the same as they were before the Carrier Interconnect application. Then the Carrier Code Index and Carrier Route Index entries can be changed on a per digit analysis Code Index basis to accomplish a gradual transition to Equal Access signaling. It also allows for transition when the 5ESS Switch is homed on more

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than one toll switch of this carrier.

1.4 Recent Change View

The corresponding Recent Change View for this form is 9.7.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CODE INDEX

Description: Enter the Code Index assigned in the regular digit analysis forms.
Valid Entries: 1 - 4095

2.3 * CARRIER ID

Description: Enter the InterLATA Carrier ID.
Valid Entries:

- 5E7 and earlier: 0 - 999
- 5E8:
- 0 - 999 for Feature Group D
- 0 - 9999 for Feature Group B
- 5E9(1) and later: 0 - 9999

Data Rules:

With 5E4 - 5E7, this CARRIER ID must not be equal to any CARRIER ID on the ICF form (5305 Record) , where a corresponding CARRIER TYPE equals "PSEUDO".

For 5E8 and later, this CARRIER ID, with FEAT GRP equals "D", must not be equal to any CARRIER ID on the ICF form (5305 Record) , where a corresponding CARRIER TYPE equals "PSEUDO", and the ICF form's FEAT GRP equals "D".

2.4 * FEAT GRP

Description: Enter the Feature Group type. See Division 2, Section 1AY for a description of Feature Groups B and D.

Software Release: 5E8 and later
Required Field.
Valid Entries:

Valid FEAT GRP Entries

Entry	Definition
B	Feature Group B
D	Feature Group D

Data Rules:

For 5E8, when FEAT GRP is "D", CARRIER ID must be 0 - 999. For 5E9(1) and later, when FEAT GRP is "D", CARRIER ID must be 0 - 9999.

2.5 CARRIER CODE INDEX

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Description: The name of this field was changed to CARRIER CDI in 5E8. This field name applies to 5E7 and earlier. See CARRIER CDI for usage information.

2.6 # CARRIER CDI

Description: Enter the Carrier Code Index assigned to this carrier call. (This field was called CARRIER CODE INDEX for 5E7 and earlier).

Required Field.
Valid Entries: 1 - 4095

Data Rules:

For 5E8 and earlier, for non-DSN offices, CARRIER CDI must equal a CDI on an RAR form.

2.7 CARRIER ROUTE INDEX

Description: The name of this field was changed to CARRIER RTI in 5E8. This field name applies to 5E7 and earlier. See CARRIER RTI for usage information.

2.8 # CARRIER RTI

Description: Enter the Carrier Route Index assigned to this call. An entry here is considered the Regular Route Index and is used if the entry found in the RAR form has ROUTE INDEX equal to "REGL". A Special Route Index may be entered in the RAR form which would override this entry, the CARRIER ROUTE INDEX. (This field was called CARRIER ROUTE INDEX for 5E7 and earlier).

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

2.9 REMARKS

Description: Enter any comments deemed locally necessary.
Valid Entries: up to 16 characters

---

cdim 5ESS Switch _
(5300-6) OFFICE DATA ADMINISTRATION
CARRIER DESTINATION MAPPING

*1. CODE INDEX 0013
*2. CARRIER ID 0823
*3. FEAT GRP B
#4. CARRIER CDI 0027
#5. CARRIER RTI 0159
6. REMARKS CARRIER X ROUTE

Figure 1 SAMPLE CDIM FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 3F: 5301 RECORD
RATE AND ROUTE FORM - RAR

1. GENERAL

The 5301 Record, available for 5E2 and later Software Releases, is used to define the routing and charging for each Code Index and Screening Index combination in a 5ESS Switch. The 5301 is intended to be used as an office record and as a source document for data entry into the RAR ODA Input Form.

The Screening Index and Code Index create a matrix for routing and charging which is represented on the 5301 Record. A Screening Index is associated with an originating class of service (Line Class Code for lines or Trunk Group Record for trunks) and is used as an index into the Rate and Route Tables. A Code Index is associated with dialed digits (Local Digit Interpreter for lines or Incoming Digit Interpreter for trunks) and is also used as an index into the Rate and Route Tables.

The output from the Rate and Route Record is a Charge Index and a Route Index. These two indexes are selected based on the prefix dialed (no prefix, 1+ prefix or 0+ prefix). Thus, the 5301 Record allows for three distinct Charge Index and Route Index combinations for routing and charging.

During call processing, the Route Index and Charge Index are known after the appropriate Rate and Route entry is read. However, the Route Index may not always be specifically found in the Rate and Route. The Regular Route Index is found in the digit analysis entry and will be used if the Rate and Route entry is "REGL". If the Regular Route Index is inappropriate for the type of originator or for the prefix type, then a Special Route Index should be entered in the Rate and Route form to override the Regular Route Index. Thus, the Rate and Route form is used primarily for screening and to output the specific Charge Index. For additional information see "Revised Routing and Screening for 5E2 Software Release" in Division 2, Section G of this guide.

All possible Screening Index and Code Index combinations should be entered on the 5301 Record. Code indexes 1 and 2 have special applications in the 5ESS Switch. Code Index 1 is used for all 0- calls; Code Index 2 is used for 010 (IDDD operator) calls.

The screening index used with the OSO-INWATS feature (ORIG SCREEN OFF field is "Y" on the OFCOPT form), will be calculated by adding 100 to the screening index associated with the incoming trunk group.

For OSPS offices, each RAR form must have a corresponding OSPS Rate and Route (ORAR) form (5405 Record) with matching values for SCR, CDI and PFX. For the CACD (Commerical Automatic Call Distribution) feature, the RAR form is used to detect a free call to a CACD agent (charge index is "FREE") or to determine if routing data would, if used, lead to INWATS data and a simulated facilities group.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.10.

2. FORM AND RECORD ENTRIES

2.1 * SCR

Description: Enter the Screening Index number.
Valid Entries: 1 - 4095

2.2 * CDI

Description: Enter the Code Index number.

Code indexes 1 and 2 have special applications in the 5ESS Switch. For line originations, Code Index 1 is

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used for all 0- calls; Code Index 2 is used for 010- IDDD Operator calls. These Code Indexes (1 and 2) must be defined by the Operating Company.

For the SSP/800 feature in 5E6 and later, when LEC routing is specified in an NS800 routing response, and CI TYPE (on the LDIT form) is "INTER" for digits matching the translated 800 number, this CDI field matches the NS CDI specified in the ICF form.
Valid Entries: 1 - 4095

2.3 PFX

Description: The 5ESS Switch provides routing and charging based on the Prefix dialed. Enter the applicable prefix.

Valid PFX Entries

Entry	Definition
NONE	No prefix is dialed.
0	0 prefix is dialed.
1	1 prefix is dialed.

Data Rules:

When the Screening Index is referenced from the TKGRP form, the only required prefix entry is "NONE". 0- calls use a "NONE" PFX entry. Prefix entries of 0 and 1 are optional.

When the Screening Index is referenced from the LCC form, entries are usually required for all three prefix cases: "NONE", 0, and 1. This is determined by the existence of code indexes from one or more PDIT, LDIT or IDDD forms and prefix entries from any PDIT Forms which are associated with this Screening Index. Any allowed combination of code index and prefix determines this requirement.

2.4 RTI

Description: For each prefix ("NONE", 0, or 1) which is to use the Regular Route Index or the 5ESS Switch Office Code found in digit analysis, enter "REGL". If the call should terminate to a Route Index other than the Regular Route Index, or terminate to a Route Index instead of the 5ESS Office Code, enter that Special Route Index.

NOTE: Because the valid range is being reduced with the 5E3 Software Release, a warning message will appear on the ODA screen when a value greater than 3617 is used for the 5E2 Software Release.

Valid Entries:
- For 5E10 and earlier: REGL, or 1 - 3617
- For 5E11 and 5E12: REGL, or 1 - 4095
- For 5E13 and later: Blank, REGL, or 1 - 16382

Data Rules:

If a Special Route Index is entered, it will override the Route Index or Office Code found in digit analysis. For calls which are to be rerouted to the originator's Terminal Group attendant (i.e., the TDV field equals "ATT"), leave this field blank.

2.5 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

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2.6 NXX

Description: An entry in this field is used only if it is necessary to override a 5ESS Switch Office Code entered in digit analysis with another 5ESS Switch Office Code. An Office Code means an NXX code served by this office and defined on the NOC Form.

For 5E3 and later, the format for an Office Code is XXX, where X is a number from 0 - 9.
Valid Entries: 3 digits

Data Rules:

If an NXX is entered, an entry in RTI is prohibited.

For 5E12 and later, if the RAR forms have a "SCRNDATA.NXX" defined in the rows indicated by PFX and there are multiple NOC forms with the same value for NXX, "SCRNDATA.NPA" will also have to be defined in the same row on the RAR form.

For 5E12 and later, when the NXX and/or NPA/NXX combinations are assigned on the RAR form, they must be defined on the NOC form.

2.7 CHGI

Description: For each Prefix ("NONE", 0, 1), enter the Charge Index number to be used for charging.

- ***NOTE:*** Because the valid range is being reduced with the 5E3 Software Release, a warning message will appear on the ODA screen when a value greater than 2047 is used for the 5E2 Software Release.

Valid Entries:
- For 5E2 only: 1 - 4095
- For 5E3 and later: 1 - 2047

2.8 TDV

Description: Enter the Toll Diversion requirements.

Valid TDV Entries

Entry	Definition
ATT	Reroute the call to the attendant of the originator's Terminal Group.
RVB	Return reverse battery on the line toward the PBX. For toll diversion to take place in the case of "RVB", the Line Class Code of the originator must have a Class Of Service of "HOTPBX" or "PBX", and the PBX must be equipped to recognize the battery reversal. The PBX may allow the call to continue and therefore C BLK in this case should equal "N".
N	No diversion is required.

Data Rules:

If "ATT" is entered, the RTI and NXX fields must be blank, and C BLK must be "Y".

If "ATT" is entered, the terminals (lines or trunks) which are assigned to the associated Screening Index must be members of a BRCS Terminal Group (i.e., the terminal must have a TGSR feature assigned on its LINEFA, MLHLNFA, TKGRPFA, or TRUNKFA form.) Additionally, a TGATTD form (5611 Record) must be entered which indicates the attendant's Telephone Number to which this call will be rerouted.

2.9 CST

Description: Enter the Class of Service Tone. If a tone is entered, that tone will be given to the distant end upon answer condition. A tone might be applicable when the termination is to a non-TSPS operator, to alert the operator to a separate Class of Service.

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Default: N
Valid Entries:

Valid CST Entries	
Entry	**Definition**
H	High Tone
L	Low Tone
N	No Tone

2.10 IECR

Description: Should a special two digit ANI information number be outpulsed on the Trunk Group? This field is used for IECR (Inter-exchange Carrier Restriction), which is also known as non-payer screening. The far end should be an OS (Operator Service) facility equipped for long term OS signaling, so it can recognize the special ANI information digits as an indication the call originator is a non-payer.
Valid Entries: Y, N

2.11 C BLK

Description: C BLK (Carrier Block) is used in conjunction with LINE SCREENING on the LCC form. When Line Screening is "Y", and the call is a carrier call, the RAR entry associated with the regular digit analysis forms (PDIT, LDIT and IDDD) is used first.
Valid Entries: Y, N

If C BLK is "Y", the call will be processed based on entries on this form as follows:

RTI	Call Treatment
REGL	REORDER
Blank	REORDER (assuming OFFCOD is also blank)
Non-zero	Routing based on non-zero RTI

If C BLK is "N", then call processing will read the RAR entry for the Carrier Specific Code Index.

In addidtion to the LINE SCREENING field being set to "Y" on the LCC form (5306 Record), LINE SCREENING may be set to "Y" on a per carrier call basis under one of the following conditions:

- 10 digits are dialed without a 1 or 0 prefix.
- 7 digits are dialed.
- The LCC has a Class of Service equal to "CHGCALL", and the ICF (InterLATA Carrier Feature) form for the Carrier has CAC SCRNING equal to "Y".

2.12 RMK

Description: This field may contain any Remarks deemed locally necessary.
Valid Entries: 1 - 16 characters

2.13 NONE CONF

Description: The NONE CONF field is used to specify the none prefix conflict resolution identification value. This field supports the Inter-LATA Carrier's Intra-LATA Capability Special Feature. For more information on this feature see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries:

Valid NONE CONF Entries	
Entry	**Definition**
I	INTER - Interlata traffic only

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T	TOLL - Toll calls

Data Rules:

The NONE CONF, ZERO PLUS CONF and ONE PLUS CONF fields on the RAR form are used by the Inter-LATA Carrier's Intra-LATA Capability Special Feature. It is a secured feature that must be purchased by the office before these fields can be entered. A SFSYS form must exist with SFID 149 set to "Y".

2.14 ZERO PLUS CONF

Description: The ZERO PLUS CONF field is used to specify the zero plus prefix conflict resolution identification value. This field supports the InterLATA Carrier's Intra-LATA Capability Special Feature. For more information on this feature see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries:

Valid ZERO PLUS CONF Entries

Entry	Definition
I	INTER - Interlata traffic only
T	TOLL - Toll calls

Data Rules:

When ZERO PLUS CONF is entered, "0+" must be a Prefex.

The NONE CONF, ZERO PLUS CONF and ONE PLUS CONF fields on the RAR form are used by the Inter-LATA Carrier's Intra-LATA Capability Special Feature. It is a secured feature that must be purchased by the office before these fields can be entered. A SFSYS form must exist with SFID 149 set to "Y".

2.15 ONE PLUS CONF

Description: The ONE PLUS CONF field is used to specify the one plus prefix conflict resolution identification value. This field supports the InterLATA Carrier's Intra-LATA Capability Special Feature. For more information on this feature see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries:

Valid ONE PLUS CONF Entries

Entry	Definition
I	INTER - Interlata traffic only
T	TOLL - Toll calls

Data Rules:

When ZERO PLUS CONF is entered, "0+" must be a Prefex.

The NONE CONF, ZERO PLUS CONF and ONE PLUS CONF fields on the RAR form are used by the Inter-LATA Carrier's Intra-LATA Capability Special Feature. It is a secured feature that must be purchased by the office before these fields can be entered. A SFSYS form must exist with SFID 149 set to "Y".

---

rar 5ESS Switch
(5301) OFFICE DATA ADMINISTRATION
RATE AND ROUTE

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```
* 1. SCR  ____
* 2. CDI  ____

        4.     5.     6.    7.    8.   9.   10.   11.
field 3  PFX    RTI    NXX   CHGI  TDV  CST  IECR  C BLK
row 1    ____   ____   ___   ____  ___  _    _     _
   2     ____   ____   ___   ____  ___  _    _     _
   3     ____   ____   ___   ____  ___  _    _     _


 12. RMK  _________________      13. NONE CONF     _
                            14. ZERO PLUS CONF _
                            15. ONE PLUS CONF  _
```

Figure 1 SAMPLE RAR FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
rar                        5ESS Switch        _
                      OFFICE DATA ADMINISTRATION
(5301)                      RATE AND ROUTE

*1. SCR ____
*2. CDI ____

                3. SCRNDATA
                              C
ROW PFX  RTI  NPA NXX CHGI TDV CST IECR BLK CONF
 1  ____ ____ ___ ___ ____ ___ _  _    _  _____
 2  ____ ____ ___ ___ ____ ___ _  _    _  _____
 3  ____ ____ ___ ___ ____ ___ _  _    _  _____

14. RMK _________________
```

Figure 2 SAMPLE RAR FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3G: 5301-1 RECORD
FIXED ROUTE TYPE FORM - FIXRT

1. GENERAL

The 5301-1 Record is available with 5E2 and later Software Releases and is used to define Routing and Charging treatment of Fixed Route Types.

Various routing conditions may be encountered in the processing of a call, e.g., permanent signal, partial dial, etc. The terminating treatment of these types of calls are user defined. If one of these conditions can be encountered during call processing, then the associated Fixed Route Type must be defined by the Telephone Company as terminating to either a tone, an announcement, or a trunk group. Generally, most of the Fixed Route Types will be required for all offices. When Software Release and other restrictions are applicable, they will be noted with the description of each Fixed Route Type.

1.1 Announcements or Trunk Group Assignments

A Fixed Route Type that is assigned to an announcement or a trunk group must have a route index and a charge index assignment. Fixed Route Types that are assigned a Tone Type of "REORDER" must also have a route index and a charge index assignment. Route index and charge index assignments are prohibited for all other Fixed Route Types. In addition, the route index on a Fixed Route Type that is assigned a TONE TYPE of "REORDER" must contain a ROUTE TYPE of "REORDER" on the RTIDX form (5303 Record).

Since there are no route indexes with predefined meanings in the 5ESS Switch, the TELCO may select any available route index number. However, it is recommended that the first 100 route indexes (1 - 100) be reserved for Fixed Route Type assignments.

1.2 Tone Source

All tones are supplied by the UTG (Universal Tone Generator) Service Circuit. UTG Circuits are provided in the Local Digital Service Unit.

1.3 DSN Offices

For DSN (Defense Switched Network) Offices, where DSN OPT is "Y" on the OFCOPT form, FIXRT forms must be defined for the following FIXED ROUTE TYPEs: "DSNICA", "PPBPC", "PPBPR", "PPUAP", "PPPAL", and "PPVAC". For 5E7 and later, each of these forms must have TONE? set to "N" and TONE TYPE blank.

In addition, a fixed route of "PPNAV" must be defined where, for 5E7 and later, either TONE? is "N" and TONE TYPE is blank, or TONE? is "Y" and TONE TYPE is "PRMPTON".

1.4 Recent Change View

The corresponding Recent Change View for this form is 10.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FIXED ROUTE TYPE

Description: Enter the Fixed Route Type.

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An entry of "ACSR" is necessary to use the Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback) Secured Feature Announcements. Refer to Division 2, Section 4A for details.

Valid FIXED ROUTE TYPE Entries

Entry	Definition
10XXERR	Software Release: 5E7 and earlier. Routes to tones or announcements for calls in which 10XXX was dialed, but 9501XXX should have been dialed.
2LEVEL	Software Release: 5E7 and later. Routes to LASS COT (Customer Originated Trace) and LASS AC (Automatic Callback) announcements given by the DSU2-RAF-DTA (Digital Service Unit Model 2 - Recorded Announcement Function - Dial Through Announcement).
950ERR	Software Release: 5E7 and earlier. Routes to tones or announcements for calls in which 9501XXX was dialed but call should have been dialed with the 10XXX prefix. (See "OEASERR" for 5E8 and later.)
ACSR	Software Release: 5E5 and later. Automatic Customer Station Rearrangement. Routes to the ACSR announcements given by the DSU2-RAF-DTA.
ACT	Alternative Code Treatment announcement. Used when the ACT Set of an IDP Group has an Announcement Treatment.
ACTUCR	Software Release: 5E6 and later. Routes to an announcement when UCR (Unidentified Call Rejection) has been activated by means of a dial code.
AL2LVL	Software Release: 5E8 and later. LASS Alternate announcement 2 level for DSU2-RAF announcments. "AL2LVL" and "ALSLE" support the Alternate Language LASS Announcement secured feature. For more information on this feature, see Division 2, Section 4A119.
ALSLE	Software Release: 5E8 and later. LASS Alternate announcement SLE DSU2-RAF routing. "AL2LVL" and "ALSLE" support the Alternate Language LASS Announcement secured feature. For more information on this feature, see Division 2, Section 4A119.
ANSTO	Routes to a tone or announcement for timeouts while awaiting an answer on FGD International or FGB calls.
APT	Automatic Progression Testing. Routes outgoing operational test calls initiated from TLWS or by APT.
ATCANIF	Software Release: 5E4(2) and later. Alliance Teleconferencing® routes to tones or announcements for calls experiencing ANIF (Automatic Number Identification Failure). The TCA (Telephone Company Administrator) may choose to send it to an announcement for reorder tone on a 13A announcement unit.
ATCINT	Software Release: 5E4(2) and later. Alliance Teleconferencing® routes to an intercept announcement. The exact treatment will be provided by the TCA, but routing to a 13A announcement unit is expected.
BADDATA	Routes to tone or announcement when routing couldn't be completed because of bad data.
BLANK	Software Release: 5E6 and later. Blank number intercept. Routes to tone or announcement for attempting to terminate to a vacant number. This fixed route type is used if the NOC is not defined in an office, and therefore a BLANK NUMBER RTI cannot be found.
BUSY	Software Release: 5E6 and later. Routes to a 60 IPM busy tone or sends a release message over an ISUP7 (ISDN User Part 7) trunk that crosses a network boundary. When "BUSY" is entered, the PLAY ANNC field determines whether the busy tone is played or the ISUP7 message is sent to a previous switch. This fixed route should also be defined for offices in the LEC Network. This fixed route is used to provide treatment for calls forwarded over ISUP trunks that terminate to a BUSY station.
CAC	Routes to a tone or announcement for invalid calls from a Charge-A-Call line.
CALLBACK	IMLT-2 callback route.
CAMAONI	Centralized Automatic Message Accounting Operator Number Identification. Routes to CAMA operator keying trunk group.
CFVACT	Software Release: 5E10 and earlier Call Forward already activated. Note that this field is not allowed for 5E11 and later.
CGC	Software Release: 5E3 and later. Routes to tones or announcements when a CGC (Circuit Group Congestion) backward fail

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	message is received on a CCS (Common Channel Signaling) trunk.
CSACT	Software Release: 5E16 and later. FCCS (Forwarded Call - Call Screening) activation announcement. See Division 2, Section 4A526.
CSDCT	Software Release: 5E16 and later. FCCS deactivation announcement. See Division 2, Section 4A526.
CSFAIL	Software Release: 5E16 and later. FCCS unassigned or failure announcement.
CSTL	Coin Station Test Line. Routes to first available member of a trunk group containing outgoing LTD (Local Test Desk) test trunk circuits wired to CSTL. Used for CSTL test calls originating from coin lines.
CWDBUSY	Software Release: 5E9(1) and later. Provides Call Waiting Deluxe Busy Announcement.For more information on the Call Waiting Deluxe Secured Feature, see Division 2, Section 4A145
CWDDFANC	Software Release: 5E10 and later. Provides Call Waiting Deluxe Default Announcement. For more information on the Call Waiting Deluxe Secured Feature, see Division 2, Section 4A145
CWDHOLD	Software Release: 5E9(1) and later. Provides Call Waiting Deluxe Hold Announcement. For more information on the Call Waiting Deluxe Secured Feature, see Division 2, Section 4A145.
CWDREMDR	Software Release: 5E10 and later. Provides Call Waiting Deluxe Reminder Announcement. For more information on the Call Waiting Deluxe Secured Feature, see Division 2, Section 4A145
DCOFHK	Routes to a tone or announcement when no second start dial wink has been received on a direct trunk from an InterLATA carrier.
DCTUCR	Software Release: 5E6 and later. Routes to an announcement when UCR (Unidentified Call Rejection) has been deactivated by means of a dial code.
DFLTFAIL	Software Release: 5E5 and later. Routes to reorder or announcements (error treatment) for denied calls made on an ISDN BRI line with default service.
DFLTRT	Software Release: 5E9(1) and later. ASP Default Routing for 3/6/10-Digit Triggers.
DGRESP	Routes to TTF responder used by Line Unit Channel Circuit and Trunk Diagnostics to define TTF responders.
DGTGEN	Routes to TTF Tone Generator used by Line Unit Channel Circuit and Trunk Diagnostics to define TTF Tone Generators.
DPAT	Dialing Plan Access Treatment error announcement. Used when an originator in an IDP dials a code prohibited by its DPAT code.
DSNICA	Software Release: 5E3 and later. Routes to the DSN (Defense Switched Network) Isolated Code Announcement for Network Management.
EA1	Routes to Emergency Announcement 1 for NDC (Network Data Collection) OS (Operations System) or NTM (Network Traffic Management) OS.
EA2	Routes to Emergency Announcement 2 for NDC OS or NTM OS.
ELSRESP	Software Release: 5E3 and later. Routes to TTF responder used by the ELS capability to periodically determine the loaded/non-loaded characteristics of lines terminated on a Line Unit. ELSRESP is required for any analog line on any unit (except ISLC). This will include LU, ISLU, and AIU.
ESMRT	Equal Access Signaling Mis-route for the IEC (Interexchange Carrier) switch. Used when the wrong information digits are received from an Equal Access End Office on either a direct trunk or via an Access Tandem.
HNPAD	Routes calls when the HNPA was dialed in error.
HOSTSA	Routes calls which would normally terminate on an RSM (Remote Switching Module) of this office, but cannot because the communication link has been lost, between the host and the RSM. (The call is not originating in the RSM). Usually routed to an announcement in the host office. This Fixed Route Type is required for offices with RSMs.
IC102	Routes to a 102 Test Line for the No. 2 Service Evaluation system.
ICROTL	Routes an incoming call to ROTL on a foreign exchange line from a nearby Central Office. Used only for toll and tandem offices which have no Directory Numbers.
ICSRTT	Incoming Station Ringer Touch Tone test.
ICTSTCL	Software Release: 5E3 and later.

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	Routes incoming Transmission Test Calls on CCS trunks.
IDPERR	IDP error announcement. Used when an originator in an IDP dials an undefined code.
IECFAIL	Routes to a tone or announcement when a termination failure occurred during signaling.
INSID	Routes coin calls where insufficient initial coin deposit is received.
INTTF	Interactive test access from TLWS (Trunk And Line Work Station).
INV10XX	Routes for the following FGD CAC dialing errors: □An IEC Identification Number was dialed on an international call; □An International Carrier Identification Number was dialed on a domestic call. □Software Release: 5E8 and earlier: An unassigned carrier ID was dialed.
INVCAC	Software Release: 5E9(1) and later. Routes FGD carrier calls if 101 is not dialed by a user in an office where FGD PHASE equals "POSTPHASE" (see the OFCOPT form (5509 Record)).
INVDIG	Provides tone or announcement treatment when invalid digits are dialed. The fixed Route Type is set to INVDIG when an invalid digit string containing a "#" or "*" is received during digit reception on a line or trunk.
INVNODIG	Routes to a tone or announcement when an invalid number of digits are received from an InterLATA carrier.
INVPIC	Routes to a tone or announcement for calls from lines with a PIC (Pre-subscribed InterLATA Carrier) when the following error conditions exist: □The PIC is an International Carrier, but a domestic call was dialed; □The PIC was an IEC, but an international call was dialed.
ISTFLB	Software Release: 5E3 and later. Routes to a test line service of the ISTF (Integrated Services Test Facility) Loopback.
ISTFXMIT	Software Release: 5E3 and later. Routes to a transmission test service of the ISTF.
LCOP	Routes to Local Coin Overtime Prompt.
MISRLRN	Misrouted LRN (Location Routing Number). For 5E13 and later, provides announcement or tone routing when cause code 26 is received in a CCS RELease message for misrouted LRN.
NCA	Routes to National Congestion Announcement (or No Circuits Available) for NDC OS or NTM OS.
NCC	Software Release: 5E6 - 5E8 only. No circuit to Carrier announcement. Routes to a special tone or announcement when a trunk to an IEC is not available.
NCD	Network Call Denial. Used when NCD Screening results in a message from the Network Control Point/Signal Transfer Point that the originator is a non-payer of the IEC.
NNC	Software Release: 5E3 and later. Routes to tones or announcements when a National Network Trunk Congestion message is received on a CCS trunk.
NO10XX	Routes FGD CAC dialed calls with the following error conditions: □The call is intraLATA, but the carrier is interLATA; □An FGD CAC was dialed for a Service Access Code call; □An FGD CAC was dialed on an N11 (other than 911) call; □The line is not allowed to dial an FGD CAC; □An FGD CAC was dialed for a Transition (TRANS) call.
NO911	Routes to tone or announcement for offices not providing 911 Emergency Services. This entry is not used and is no longer required.
NOACK	Routes to a tone or announcement when no acknowledging wink has been received from a carrier.
NODLTN	Indicates that no dial tone could be applied to the originator due to unavailability of switch resources (e.g., a UTG). Normally routed to an unavailable resources announcement, or a local overload announcement.
NOSSD	Routes to a tone or announcement when no second start dial wink has been received from an International Carrier.
NOSTART	Routes to a tone or announcement when no start signal has been received from a carrier.
NOXMTR	Routes calls when no transmitter (UTG) is available for outpulsing.
NPA_SP	Software Release: 5E13 and later. Numbering Plan Split Announcement.
NSANNC	Software Release: 5E6 and later. Number Services Announcement. Routes to the Advanced Services Platform announcements given by the DSU2-RAF-DTA.
NWBLK	Network blocked. Routes calls between two SMs when the path through the TMS is blocked.
OEASERR	Software Release: 5E8 and later. Operator equal access signaling error.
OGTGDST	Software Release: 5E16(2) and later.

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	Terminal maintenance test calls requiring GDSF test equipment.
OGTRANS	Outgoing transmission test calls.
OLSPD	Software Release: 5E4(2) and later. Routes to a tone or announcement for 1+ calls from stations denied sent paid DDD billing.
OSANITO	Routes to a tone or announcement when a timeout occurs while waiting for an Automatic Number Identification request from an Operator Facility.
OSPSDA	Software Release: 5E3 and later. Routes to an OSPSDA announcement given by the DSU2-RAF.
OSPSEIS	Software Release: 5E6 and later. OSPS External Information System. Routes to OSPS Listing Services announcements given by the DSU2-RAF. This routes via the trunk hunt mechanisms to an idle RAF port from a trunk group defined on the TKGRP form.
OTOTTF	Software Release: 5E3 and later. Office-to-Office Transmission Test Facility. Routes to a TTF tone decoder during Office-to-Office testing of lines being transferred from a Crossbar Switch or ESS Switch to the 5ESS Switch. The tone decoder is used to detect traffic busy test blockage conditions on the line under test. This value is not required if the Switch has no lines or if the Switch being replaced is a Step-by-Step Switch. Otherwise, this value is required.
OVLD	Routes calls denied due to system overload.
PCPDENY	Software Release: 5E7 and later. Route used for announcements when attempting to use per-call privacy and use of per-call privacy has been denied.
PDIAL	Provides partial dial tone or announcement routing treatment.
PERMSIG	Provides permanent signal tone or announcement routing.
PFXERROR	1+ prefix not permitted. Provides tone or announcement routing when the calling party dials a prefix when it should be omitted. Not currently used.
PFXREQD	For 5E11 and 5E12, provides announcement or tone routing when cause code 26 is received in a CCS RELease message for misrouted LRN (Location Routing Number). Otherwise, unused.
PPBPC	Precedence and Preemption Blocked Precedence. Associated with an AUTOVON (Automatic Voice Network) or DSN. Routes to an announcement when a precedence call with equal or higher precedence prevents a call from being completed.
PPBPR	Precedence and Preemption Blocked Preemption. Associated with an AUTOVON or DSN. Routes to an announcement when a non-preemptable call prevents completion of a precedence call.
PPNAV	Precedence and Preemption Non-AUTOVON. Used to provide treatment to a non-AUTOVON subscriber when the call with an AUTOVON subscriber has been preempted so that a priority government call can be completed. (The AUTOVON subscriber receives preemption tone which requires no FIXRT Type.) Normally sent to an announcement.
PPPAL	Software Release: 5E3 and later. Routes to an announcement when a call is blocked due to the precedence access threshold limit being exceeded.
PPUAP	Precedence and Preemption Unauthorized Precedence. Associated with an AUTOVON or DSN. Routes to an announcement when a caller is attempting to make a call with an unauthorized precedence level.
PPVAC	Precedence and Preemption Vacant Code. Associated with an AUTOVON or DSN. Routes to an announcement when a call can't be completed as dialed.
RASI	Software Release 5E8 and later. Provides routing for the Remote Access to Advanced Service Interface feature.
REORDER	Reorder Tone or announcement.
REQ10XX	Routes to tone or announcement for calls requiring an FGD CAC but the FGD CAC was not dialed.
REVOHANN	Software Release 5E9(1) and later. Provides routing to a tone or announcement when a terminating multi-party line goes off-hook after being rung back due to Multi-Party Revertive Ringing. Available for the REA Revertive Announcement feature. This feature allows the 5ESS Switch to provide an announcement instead of busy tone before revertive ringing when a Multi-Party subscriber calls a number on the same party line.
REVRBANN	Software Release 5E9(1) and later. Provides routing to a tone or announcement when an originating multi-party line is going to be rung back due to Multi-Party Revertive Ringing. Available for the REA Revertive Announcement feature.
ROACCS	Software Release: 5E4(2) and later. OSPS ACCS (Automated Calling Card Service).

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ROAOC	Software Release: 5E6 and later. Route to OSPS MECH announcements.
ROCOIN	Software Release: 5E4(2) and later. OSPS Coin DSU2 (Digital Service Unit Model 2) Routing.
RSMSA	RSM/ORM/TRM - Stand-Alone. This Fixed Route Type is required if the Stand-Alone call processing option has been purchased for any Remote Site. Routes calls originated at the RSM/ORM/TRM when the RSM/ORM/TRM is in Stand-Alone call processing mode and the destination of the call is outside of the Remote Site. It is usually routed to an announcement at the Remote Site.
RTGTRBL	Indicates that an indeterminate internal call handling failure has occurred. Must be routed to an announcement trunk group (TRK DIR field on TKGRP form equal to "ANN") or to Reorder.
S96CTST	TTF used by the SLC96 Channel Unit Diagnostic capability.
SCD	Software Release: 5E5 and later. Routes to a tone or announcement for calls blocked by SCD (Selective Carrier Denial) screening which is a function of the SCD feature.
SEC	Software Release: 5E3 and later. Switching Equipment Congestion. Routes to tones or announcements when an SEC backward fail message is received on a CCS trunk.
SLE	Software Release: 5E6 and later. Screen List Editing. Routes to LASS (Local Area Signaling Services) Screen List Editing announcements given by the DSU2-RAF-DTA.
SSDE	Routes to tone or announcement when a Special Service Access Code was Dialed in Error and shouldn't have been dialed.
SSDOFHK	Routes to a tone or announcement when an off-hook instead of a second start dial wink is received from a carrier.
SSI	Software Release: 5E3 and later. Send Special Information. Routes to tones or announcements when a Send Special Information Tone backward fail message is received on a CCS trunk.
TACCT	Software Release: 5E11 and later. TDX (Toll Digital Exchange) account code used in a LDP (Long Distance Platform) office.
TSTTRK	Routes first available member of a trunk group containing outgoing LTD test trunk circuits. Used during line originated LTD calls.
UCRDENY	Software Release: 5E7 and later. Routes to an announcement when a call is rejected by UCR (Unidentified Call Rejection).
UIA	Unauthorized INWATS Announcement. Used in an Originating Screening Office when the INWATS Data Base sends a message that the originating Numbering Plan Area is out of band for the 800 number. This type is required for offices that perform SSP 800 query messages. For more information on SSP 800 translations, see Division 2, Section 1X.
VACANT	Vacant Code. Software Release: 5E9(1) and later: Routes for an unassigned carrier ID FGD CAC dialing error.
WATSDND	Routes to tone or announcement for calls that are denied WATS usage.

Data Rules:

For 5E5 and later, if the FIXED ROUTE TYPE is not routed to the DSU2-RAF, then the SVC GRP field on the associated TKGRP form should be entered as "NOANNC". If the FIXED ROUTE TYPE entered in this field is routed to the DSU2-RAF, then the following values are needed on the associated TKGRP form:

FIXED ROUTE TYPE ENTRY	**TKGRP form**		
	SVC GRP	**TRKCLS**	**TRK DIR**
ACSR	ACSR	RAFDTA	RAF
ACSR	RAS (See Note)	RAFDTA	RAF
NSANNC	ASP	RAFDTA	RAF
OSPSDA	DA	RAFANNC	RAF
ROACCS	ACCS	RAFDTA	RAF
ROCOIN	COIN	RAFCTR	RAF
SLE	RAS	RAFDTA	RAF
2LEVEL	RAS	RAFDTA	RAF

- ***NOTE:*** A SVC GRP with a value of "RAS" is used with ACSR when the same trunk group also supports LASS and/or RAS (Remote Access Service) announcements.

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For 5E9(1) and later, each FIXED ROUTE TYPE in the following table must be associated with a specific TRKCLS. The ROUTE INDEX must be defined on an RTIDX form, and the TRUNK GROUP NUMBER on that form must be defined on a TKGRP form with the TRKCLS that is specified in the table below.

FIXED ROUTE TYPE	TRKCLS
APT	LTPOGTC
CALLBACK	LTPCLBCK
CSTL	TSTK
DGRESP	LTPDGTTF
DGTGEN	LTPDGTTF
ELSRESP	LTPELSTF
IC102	LTPICTC
ICSRTT	LTPICTC
INTTF	LTPWSTTF
OGTRANS	LTPOGTC
OTOTTF	LTPOTOTF
S96CTST	LTPS96TF
TSTTRK	TSTK

For 5E13 and later, when FIXED ROUTE TYPE entered in this field is set to a value in the following table, the ROUTE INDEX entered on this form must correspond to a RTIDX form (5303 Record) with TRUNK GROUP NUMBER entered. The TRUNK GROUP NUMBER entered on the RTIDX form must match a TGN on a TKGRP form (5202 Record) with SVC GRP set to a corresponding value in the table that follows, and TRK DIR must be "RAF".

FIXED ROUTE TYPE ENTRY	TKGRP FORM SVC GRP ENTRY
ROACCS	ACCS
OSPSDA or OSPSEIS	DA
ROCOIN	COIN
ACSR	ACSR or RAS
2LEVEL	RAS
SLE	RAS
NSANNC	ASP
NPA SP	RAS

The following data rules are listed for specific FIXED ROUTE TYPE entries:

10XERR: Required if any LDIT or MLDIT form (5300-3/5 Record) has "TRANS" entered in the TYPE OF CI CALL field.

950ERR: Required if any LDIT or MLDIT form (5300-3/5 Record) has "TRANS" entered in the TYPE OF CI CALL field.

ACT: Required if any IDPACT form (5601-3 Record) has TREATMENT equal to "ANNC".

ACTUCR: If FIXED ROUTE TYPE is "ACTUCR", TONE must be "N".

AL2LVL or ALSLE: If "AL2LVL" or "ALSLE" is entered, then
- TONE must be "N" and
- ROUTE INDEX must be entered.

For 5E8 and later, a FIXED ROUTE TYPE of "ALSLE" or "AL2LVL", requires an RTIDX form with the ROUTE TYPE equal to "HUNT", and a TKGRP form with TRKCLS equal to "RAFDTA".

ANSTO: Required if any ICF (InterLATA Carrier Feature) or CDIM (Carrier Destination Index Mapping) form exists in the office.

APT: Required in all offices. The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPOGTC".

ATCANIF: The value of "ATCANIF" will point to a route index, which will point to a trunk group. Required when CALL TYPE is set to "ADDON" or "MEETME" on the LDIT or MLDIT form.

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ATCINT: The value of "ATCINT" will point to a route index, which will point to a trunk group. Required when CALL TYPE is set to "ADDON" or "MEETME" on the LDIT or MLDIT form.

BADDATA: Required in all offices.

BLANK: Tones are prohibited for an entry of "BLANK". If "BLANK" is entered, TONE must be "N".

If there is a TKGRP form(s) with INPULSING or OUTPULSING entered as "ISUP7", there must be a FIXRT form with FIXED ROUTE TYPE entered as "BLANK".

For 5E9(1) and later, when FIXED ROUTE TYPE is "BLANK", and the ROUTE INDEX on this form is defined on an RTIDX form where a TRUNK GROUP NUMBER is entered, then on the related TKGRP form the TRK DIR must be "2W" or "OUT".

CAC: Required in all offices.

CALLBACK: TONE field must be "N". Also, for 5E8 and earlier, the ROUTE INDEX must be defined on an RTIDX form, and the trunk group on that form must point to a TKGRP form where TRKCLS is "LTPCLBCK".

CAMAONI: If a trunk group with TRKCLS "CAMAANI", "CAMAONI", or "CAMOPKEY" is defined for the office, a FIXED ROUTE TYPE of "CAMAONI" must be defined on this form and must provide a route index pointing to the trunk group. In addition, for "CAMAOPKEY" trunk groups, one or more of the CAMAONI Trunk Trouble code numbers must be specified on the OFCOPT form (5509 Record).

If the office has "CAMAANI" and/or "CAMAONI" Incoming trunk groups, but does not have a "CAMOPKEY" trunk group (and no CAMAONI Trunk Trouble codes), this Fixed Route Type provides a route index for tandeming Operator Number Identification calls. Normally, this will point to a CAMA or TSPS trunk group, but may point to a tone or an announcement.

This fixed route type is required if any TKGRP form (5202 Record) exists with a TRKCLS field equal to "CAMANI", "CAMAONI" or "CAMOPKEY"; the TONE field must be "N".

CGC: Required if there are any TKGRP entries with INPULSING/OUTPULSING equal to "ISUP7".

CSACT, CSDCT, CSFAIL:
For 5E16 and later:

When FIXED ROUTE TYPE is "CSACT", "CSDCT", or "CSFAIL", TONE? must be "N".

When FIXED ROUTE TYPE is "CSACT", "CSDCT", or "CSFAIL", the ROUTE INDEX must be entered and there must be a matching ROUTE INDEX on the RTIDX form (5303 Record) and on this RTIDX form the TRUNK GROUP NUMBER must be entered, and have a matching TGN on the TKGRP form with TRK DIR equal to "ANN".

CSTL: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "TSTK". Required if any LDIT or MLDIT form (5300-3/5 Record) is entered with a CALL TYPE of "CSTL".

CWDBUSY, CWDDFANC, CWDHOLD, and CWDREMDR: When FIXED ROUTE TYPE is "CWDBUSY", "CWDDFANC", "CWDHOLD", or "CWDREMDR" then

- TONE must be "N"
- ROUTE INDEX must be entered
- the ROUTE INDEX on this form must be defined on the RTIDX form where ROUTE TYPE is "HUNT" and the TRUNK GROUP NUMBER on the RTIDX form must be defined on the TKGRP form where TRK DIR is "ANN".

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DCOFHK: Required if any ICF or CDIM form (5300-6 Record) exists in the office.

DCTUCR: If FIXED ROUTE TYPE is "DCTUCR", TONE must be "N".

DENYORIG: If FIXED ROUTE TYPE is "DENYORIG", TONE must be "N".

DFLTFAIL: If DFLTFAIL is entered, and TONE is "Y", then TONE TYPE must be "REORDER", and both ROUTE INDEX and CHARGE INDEX must be entered. The ROUTE INDEX must be defined on an associated RTIDX form (5303 Record) with ROUTE TYPE set to "HUNT".

If a ROUTE INDEX is entered, it must be defined on an RTIDX form with ROUTE TYPE set to "REORDER" or "HUNT". If the ROUTE TYPE is "HUNT", the TRUNK GROUP NUMBER on the RTIDX form must match a TGN defined on a TKGRP form where TRK DIR is "ANN".

DGRESP: Required in all offices. The associated route index must point to a Trunk Group on the TKGRP form with a TRKCLS of "LTPDGTTF".

DGTGEN: Required in all offices. The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPDGTTF".

DPAT: Required if any IDPGP form (5601-4 Record) has a DPAT TREATMENT equal to "ANNC".

DSNICA: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form).

EA1: For 5E14 and earlier - Required if the OFCOPT form field EADAS LINK has a value of "Y".
For 5E15 and later - Required if the OFCOPT form fields, TRFM LINK or RNM LINK has a value of "Y".

EA2: For 5E14 and earlier - Required if the OFCOPT form field EADAS LINK has a value of "Y".
For 5E15 and later - Required if the OFCOPT form fields, TRFM LINK or RNM LINK has a value of "Y".

ELSRESP: Required if any EQLU form (5710 Record) is entered. The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPELSTF".

ESMRT: Required if any TKGRP form has a TRKCLS of "LATA".

HNPAD: Required if any LDIT or MLDIT form (5300-3/5 Record) entry contains a CALL TYPE of "HNPAD".

HOSTSA: This Fixed Route Type will point to a route index which, in turn, points to the trunk group containing the general stand-alone announcement at the Host. This Fixed Route Type is required for all offices and applies to any RSM or Switching Module that goes into stand-alone operation.

A FIXED ROUTE TYPE of "HOSTSA" is required on the FIXRT form for all offices where any of the following conditions are true on the EQIM form:

- the SM USAGE field is set to "RSM".
- the STAND ALONE field is set to "Y".
- the STAND ALONE field is unknown but on the associated EQSITE form, the STAND ALONE PURCHASED? field is set to 'Y'.

IC102: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPICTC". Required for all multi-module offices if any trunk group has a TRKCLS of "SES".

ICROTL: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPROTL".

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ICSRTT: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPICTC". Required if any LDIT or MLDIT form (5300-3/5 Record) entry contains a CALL TYPE of "SRTT".

ICTSTCL: TONE field must be "N". The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPICTC". Required if there are any TKGRP entries with INPULSING/ OUTPULSING equal to "ISUP7" or "CCIS6". For 5E7 and later, if ROUTE INDEX is entered, the ROUTE INDEX must be defined on an RTIDX form with ROUTE TYPE set to "HUNT" or "TEST".

IDPERR: Required if any IDPGP form has a STANDARD ERROR TREATMENT equal to "ANNC".

IECFAIL: Required if any ICF or CDIM form exists in the office.

INSID: Required if an EQLU form (5710 Record) or EQDCLU form (5810 Record) is entered.

INTTF: Required in all offices. The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPWSTTF".

INV10XX: Required if any ICF or CDIM form exists in the office.

For 5E9(1) and later, except for 911 calls, if the calling party (either an ISDN or a non-ISDN) dials a CAC that refers to an unassigned CIC, the caller shall receive VACANT code treatment.

INVCAC: Required if FGD PHASE equals "POSTPHASE" on the OFCOPT form.

INVDIG: Required in all offices.

INVNODIG: If a trunk group on the TKGRP form has TRKCLS "IC", a FIXED ROUTE TYPE of "INVNODIG" must be defined on this form.

INVPIC: Required if any ICF or CDIM form exists in the office.

ISTFLB: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPISTFL".

ISTFXMIT: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPISTFX".

LCOP: Required if an EQLU form (5710 Record) or EQDCLU form (5810 Record) is entered. The associated route index must point to a trunk group on the TKGRP form with the CYCLES field equal to 1.

NCA: For 5E14 and earlier - Required if the OFCOPT form field EADAS LINK has a value of "Y".
For 5E15 and later - Required if the OFCOPT form fields, TRFM LINK or RNM LINK has a value of "Y".

NCD: Required if any TKGRP form has an NCD SCREENING of "MAP" or "NOMAP".

NNC: Required if there are any TKGRP entries with INPULSING/OUTPULSING equal to "ISUP7" or "CCIS6".

NO10XX: Required if any ICF or CDIM form exists in the office.

NOACK: Required if any ICF or CDIM form exists in the office.

NODLTN: Required in all offices.

NOSSD: Required if any ICF or CDIM form exists in the office.

NOSTART: Required if any ICF or CDIM form exists in the office.

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NOXMTR: Required in all offices.

NPA_SP: For 5E13 and later, when FIXED ROUTE TYPE is "NPA_SP", ROUTE INDEX must be entered.

NSANNC: This value can only be entered when ASP OFC, on the OFCOPT form (5509 Record) is set to "SSP". For 5E9(2) and earlier, if the ASP OFC value is "SSP", then there must be a FIXRT form entered where FIXED ROUTE TYPE is "NSANNC".

For 5E10 and later, an entry with FIXED ROUTE TYPE equal to "NSANNC"for an SSP office is no longer required. However it must be provisioned if routing to a RAF/SAS is desired.

If "NSANNC" is entered:

- CHARGE INDEX must not be entered.
- the corresponding RTIDX form must have ROUTE TYPE equals "HUNT".

NWBLK: Required in all offices. For an RSM, if all RSM-Host time slots are busy, the route index should point to a Trunk Group for an announcement or reorder on that RSM.

If a ROUTE INDEX is entered, it must be defined on an RTIDX form with ROUTE TYPE set to "REORDER" or "HUNT". If the ROUTE TYPE is "HUNT", the TRUNK GROUP NUMBER on the RTIDX form must match a TGN defined on a TKGRP form where TRK DIR is "ANN".

For 5E9(1) and earlier, calls receiving Network Blocking terminating treatment must route to an announcement if the LEC IW REL field on the OFCOPT form is set to "N". If LEC IW REL is set to "YES", a preceding switch provides the terminating treatment.

OEASERR: If "OEASERR" is entered, then there must be a corresponding RTIDX form (5303 Record), where the ROUTE INDEX on this form matches the ROUTE INDEX on the RTIDX form. The ROUTE TYPE on the corresponding RTIDX form must be "HUNT" or "REORDER". In addition, the corresponding TKGRP form (5202 Record), i.e., TGN on TKGRP form matches the TRUNK GROUP NUMBER on the RTIDX form, must have "ANN" entered in the TRK DIR field.

If OSPS TA is "Y" on OSPSOPT form (5424 Record), and OFFICE TYPE is "Y" and OFFICE CARRIER is 288 on the OFCOPT form (5509 Record), then at least one FIXRT form must have a FIXED ROUTE TYPE of "OEASERR".

OGTRANS: Required in all offices. The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPOGTC".

OLSPD: Required in all OSPS offices.

OSANITO: Required if any ICF or CDIM form exists in the office.

OSPSDA: This entry is required for offices with the OSPSDA feature available with 5E4(2) and later.

OSPSEIS: This trunk group must be defined as an RAF announcement group. However, the RAFANNC service class may be used by more than one application. TONE TYPE must NOT be "REORDER" when "OSPSEIS" is entered.

A corresponding RTIDX form (5303 Record) is required for each FIXRT form with a FIXED ROUTE TYPE of "OSPSEIS", where the ROUTE INDEX field on the RTIDX form matches the ROUTE INDEX field on the FIXRT form and the ROUTE TYPE field on the RTIDX form is "HUNT". A corresponding TKGRP form is required for each FIXRT form with a FIXED ROUTE TYPE field of "OSPSEIS". The TGN field on the TKGRP form must match the TRUNK GROUP NUMBER on a RTIDX form. The ROUTE INDEX field on the RTIDX form must match the ROUTE INDEX field on the FIXRT form. Also, the TRK DIR field on the TKGRP form must be "RAF".

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A second RTIDX form may be required for each FIXRT form with a FIXED ROUTE TYPE of "OSPSEIS" for overflow conditions. The ROUTE INDEX field of the second RTIDX form must match the NEXT ROUTE field on the first RTIDX form. The ROUTE INDEX field on the first RTIDX form matches the ROUTE INDEX field on the FIXRT form. The ROUTE TYPE field on the second RTIDX form must be "HUNT" or "REORDER". If the ROUTE TYPE field is "HUNT" on the second RTIDX form, then a corresponding TKGRP form is required where the TGN field matches the TRUNK GROUP NUMBER field on the second RTIDX form and the TRK DIR field on the TKGRP form is "RAF". See Division 2, Section 3C for a discussion of translations for EIS.

OTOTTF: The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPOTOTF".

OVLD: Required in all offices.

PDIAL: Required in all offices.

PERMSIG: Required in all offices.

PPBPC: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form (5509 Record)). Required in offices that have any line, Multi-Line Hunt Line or Trunks assigned Precedence and Preemption BRCS features.

PPBPR: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form (5509 Record)). Required in offices that have any line, Multi-Line Hunt Line or Trunks assigned Precedence and Preemption BRCS features.

PPNAV: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form (5509 Record)). Required in offices that have any line, Multi-Line Hunt Line or Trunks assigned Precedence and Preemption BRCS features. TONE TYPE must be "PRMPTON".

PPPAL: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form).

PPUAP: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form (5509 Record)). Required in offices that have any line or Multi-Line Hunt Lines assigned Precedence and Preemption BRCS features.

PPVAC: Required in all DSN offices (indicated by DSN OPTION field set to "Y" on the OFCOPT form (5509 Record)). Required in offices that have any line, Multi-Line Hunt Lines or Trunks assigned Precedence and Preemption BRCS features.

RASI: If "RASI" is entered, then TONE must be "N" and PLAY ANNC must be "N".

If "RASI" is entered and a ROUTE INDEX is entered:

- the ROUTE INDEX must be defined on an RTIDX form with a ROUTE TYPE of "HUNT" or "REORDER",
- the RTIDX has a ROUTE TYPE of "HUNT" and the TRUNK GROUP NUMBER on the RTIDX form is entered, then the TRUNK GROUP NUMBER must be defined as a TGN on the TKGRP form with "ANN" or "RAF" entered in the TRK DIR field on the TKGRP.

REORDER: Required in all offices. The specified route index must have a ROUTE TYPE of "REORDER" on the RTIDX form (5303 Record). TONE field must be "Y".

REQ10XX: Required if any ICF or CDIM form exists in the office.

REVOHANN, REVRBANN: Revertive Ringback Announcement and Revertive Offhook Announcement

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must be enabled by FID 578 on the FOSYS form.

The default Revertive Offhook Treatment is a distinctive tone, currently three Call Waiting beeps.

If the customer desires to have an announcement for Revertive Offhook Treatment instead of the distinctive tone, FID 579 must be enabled on the FOSYS form. If the customer has selected an announcement for Revertive Offhook Treatment, when the called party answers the announcement will begin. If the calling party goes offhook while the announcement is still playing, both parties will continue to hear announcement until the announcement finishes. Similarly, if the customer has selected distinctive tone for Revertive Offhook Treatment, both parties may hear the tone if they are both offhook at the same time.

If the "REVRBANN" fixed route announcement is not defined, the customer will hear BUSY tone.

If the originator stays offhook for 10 seconds after the "REVRBANN" announcement has finished, the caller will hear BUSY tone.

If the "REVOHANN" fixed route announcement is not defined, the called party will hear Call Waiting Tone 3.

ROCOIN: An OSPSOPT form (5424 Record) must be defined with the OSPA TA and the ACTS field equal to "Y".

In addition, if "Y" is entered for the TA and ACTS fields on the OSPSOPT form, the RAF trunk groups (TRK DIR is "RAF" on the TKGRP form) require a FIXRT form with a FIXED ROUTE TYPE of "ROCOIN".

RSMSA: Required if the RSM STAND ALONE PURCHASED field on the EQSITE form (5722 Record) is "Y".

RTGTRBL: Required in all offices. When this route type is entered, the ROUTE INDEX field must also be entered. The ROUTE INDEX must be defined on an RTIDX form with ROUTE TYPE set to "REORDER" or "HUNT". If the ROUTE TYPE is "HUNT", the TRUNK GROUP NUMBER on the RTIDX form must match a TGN defined on a TKGRP form where TRK DIR is "ANN".

S96CTST: Required if the office serves Integrated SLC96 lines. Required if an SLCRT form (5106 Record) has been entered. The associated route index must point to a trunk group on the TKGRP form with a TRKCLS of "LTPS96TF".

SCD: A FIXED ROUTE TYPE OF "SCD" must be defined on this form if SCD SCRNING of "Y" on at least one ICF form (5305 Record). Also, for 5E6 and later, if SCD is entered in this field, then the TONE ? field must be "N".

SEC: Required if there are any TKGRP entries with INPULSING/ OUTPULSING equal to "ISUP7" or "CCIS6".

SLE: For 5E6 and later, TONE must be "N" and PLAY ANNC must be "N".

SSDE: Required in all offices.

SSDOFHK: Required if any ICF or CDIM form exists in the office.

SSI: Required if there are any TKGRP entries with INPULSING/OUTPULSING equal to "ISUP7".

TACCT: When FIXED ROUTE TYPE is "TACCT", ROUTE INDEX must be entered, TONE TYPE must not be entered, TONE must be "N", and PLAY ANNC must be "N".

When FIXRT forms exist with a FIXED ROUTE TYPE of "TACCT", the ROUTE INDEX on the FIXRT form must be defined on the RTIDX form with a ROUTE TYPE of "HUNT". It also requires the TRUNK GROUP NUMBER on the RTIDX form to be defined on the TKGRP form with a TRK DIR of "RAF".

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TSTTRK: Required if any LDIT or MLDIT form (5300-3/5 Record) contains a CALL TYPE of "LTD". The associated route index must point to a Trunk Group on the TKGRP form with a TRKCLS of "TSTK".

UCRDENY: If FIXED ROUTE TYPE is "UCRDENY", TONE must be "N".

UIA: Required if any LDIT or MLDIT form (5300-3/5 Record) has a CALL TYPE of "OSOIWTS".

VACANT: Required in all offices.

For 5E9(1) and later, A FIXED ROUTE TYPE may not be assigned to a ROUTE INDEX that has a corresponding ROUTE INDEX on an RTIDX form with a ROUTE TYPE of "DNTRAN".

For 5E9(1) and later, when the FIXRT form has a FIXED ROUTE TYPE of "DFLTRT" and the ROUTE INDEX is defined on a RTIDX form with a ROUTE TYPE of "HUNT" and TRUNK GROUP NUMBER on the RTIDX form is entered, then the TGN on the TRGRP form must match the TRUNK GROUP NUMBER and TRK DIR must be "ANN".

2.3 # TONE?

Description: Does the Fixed Route Type provide a tone from a Universal Tone Generator?

Required Field.
Valid Entries: Y, N

Data Rules:

If "Y" is entered and the FIXED ROUTE TYPE is "ESMRT", "NCD" or "UIA", then TONE TYPE must be "REORDER".

When "Y" is entered, TONE TYPE must be entered.

For 5E16 and later, when "N" is entered,

- TONE TYPE must not be entered.
- ROUTE INDEX must be entered.

This field must be "N" when FIXED ROUTE TYPE is "NSANNC".

2.4 TONE TYPE

Description: Enter the type of tone to which the Fixed Route Type should be terminated. This field should only contain an entry when TONE is "Y".

Valid TONE TYPE Entries

Entry	Definition
ROH	Receiver Off Hook Tone.
REORDER	120 IPM Tone. ROUTE TYPE must be "REORDER" on RTIDX form with this TONE TYPE.
BUSY	60 IPM Tone.
PRMPTON	Software Release: 5E4(2) and later. AUTOVON Preemption Tone.
DSNROH	Software Release: 5E3 and later. AUTOVON/DSN permanent tone.

2.5 ROUTE INDEX

Description: Assign a route index for announcement or trunk group terminations. It is required when the FIXED ROUTE TYPE is assigned a TONE TYPE of "REORDER" or if the TONE field is "N". This field

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must be blank when the FIXED ROUTE TYPE is assigned a TONE TYPE other than "REORDER".
Valid Entries:

- For 5E10 and earlier: 1 - 3817
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

If a ROUTE INDEX is entered, it must defined on the corresponding RTIDX form as a ROUTE INDEX.

For 5E9(1) and later, when the FIXRT form has a FIXED ROUTE TYPE of "DFLTRT" and a ROUTE INDEX is entered, the ROUTE INDEX must be defined on a RTIDX form with a ROUTE TYPE of "HUNT" or "REORDER".

2.6 CHARGE INDEX

Description: This field is used to assign a CI for Announcement or Trunk Group terminations.

- ***NOTE:*** If there is no entry in this field, it indicates there is no data. On Recent Change View 10.1, an entry of 0 indicates there is no data.

Valid Entries: 1 - 2047

Data Rules:

This field must be entered if the FIXED ROUTE TYPE is assigned a TONE TYPE of "REORDER" or if the TONE field is "N".

This field must be not be entered when the FIXED ROUTE TYPE is assigned a TONE TYPE other than "REORDER".

2.7 PLAY ANNC

Description: Should a tone or announcement be played on an ISUP7 trunk which crosses a network boundary?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

FIXED ROUTE TYPE	CAPABILITY	REQUIREMENTS	SOFTWARE RELEASE
10XXERR	Carrier ID	Required if any LDIT or MLDIT form (5300-3/5 Record) has "TRANS" entered in the TYPE OF CI CALL field.	5E7 and earlier
2LEVEL	2-Level AC/COT		5E7 and later
950ERR	OSPS Equal Access	See "OEASERR" for 5E8 and later Required if any LDIT or MLDIT form (5300-3/5 Record) has "TRANS" entered in the TYPE OF CI CALL field.	5E7 and earlier
ACSR	ACSR (Automatic Customer Station Rearrangement)		5E5 and later
ACT	ACSR	Required if any IDPACT form (5601-3 Record) has TREATMENT equal to "ANNC".	5E2 and later

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ACTUCR	UCR		5E6 and later
AL2LVL	LASS Alternate Language Announcement	Required for SF119	5E8 and later
ALSLE		Required for SFID 119	5E8 and later
ANSTO	CI (Carrier Interconnect)	Required before CI is activated. Required if any ICF (InterLATA Carrier Feature) or CDIM (Carrier Destination Index Mapping) form exists in the office.	5E2 and later
APT	Test	Required in all offices. Required if office runs Automatic Progression Testing	5E2 and later
ATCANIF	AT (ALLIANCE Teleconferenc-ing)	Required when CALL TYPE is set to "ADDON" or "MEETME" on the LDIT or MLDIT form.	5E4(2) and later
ATCINT	AT	Required when CALL TYPE is set to "ADDON" or "MEETME" on the LDIT or MLDIT form.	5E4(2) and later
BADDATA	Base Required	Required in all offices	5E2 and later
BLANK	CCS Required	Required in all offices Required if "ISUP7" is entered in a TKGRP form(s) with the INPULSING or OUTPULSING fields on the TKGRP form.	5E6 and later
BUSY	CCS		5E6 and later
CAC	Charge-a-call	Required in all offices.	5E2 and later
CALLBACK	LTP	Required in all offices with IMLT-2	5E2 and later
CAMAONI	Base	Required if a trunk group with TRKCLS "CAMAANI", "CAMAONI", or "CAMOPKEY" is defined for the office	5E2 and later <$!deleted via IMR 530623 CFVACT, CFDA, , 5E2 and later>
CGC	CCS	Required if there are any TKGRP entries with INPULSING/OUTPULSING equal to "ISUP7".	5E3 and later
CSTL	Coin	Required for a TKGRP form with a TRKCLS of "TSTK". Required if any LDIT or MLDIT form (5300-3/5 Record) is entered with a CALL TYPE of "CSTL".	5E2 and later
CWDBUSY	Call Waiting Deluxe		5E9(1) and later.
CWDHOLD	Call Waiting Deluxe		5E9(1) and later.
DCOFHK	CI	Required before CI is activated. Required if any ICF or CDIM form (5300-6 Record) exists in the office.	5E2 and later
DCTUCR	UCR (Unidentified Call Rejection)		5E6 and later
DENYORIG	UCR		5E5 and 5E6 only
DFLTFAIL	MDSL (Multi-point DSL)		5E5 and later
DGRESP	LTP (Logical Test Port)	Required in all offices	5E2 and later
DGTGEN	LTP	Required in all offices	5E2 and later
DPAT	IDP	Required if any IDPGP form (5601-4 Record) has a DPAT TREATMENT equal to "ANNC".	5E2 and later
DSNICA	DSN	Required in all DSN offices	5E3 and later
EA1	EADAS	Required if the OFCOPT form field EADAS LINK has a value of "Y".	5E2 and later
EA2	EADAS	Required if the OFCOPT form field EADAS LINK has a value of "Y".	5E2 and later
ELSRESP	LTP	Required in all offices equipped with a 4AC LINE UNIT. Required if any EQLU form (5710 Record) is entered.	5E3 and later
ESMRT	Equal Access Signaling	Required if any TKGRP form has a TRKCLS of "LATA".	5E2 and later
HNPAD	Base	Required if any LDIT or MLDIT form (5300-3/5 Record) entry	5E2 and later

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		contains a CALL TYPE of "HNPAD".	
HOSTSA	RSM	Required for offices with RSMs	5E2 and later
IC102	LTP	Required for all multi-module offices if any trunk group has a TRKCLS of "SES".	5E2 and later
ICROTL	LTP		5E2 and later
ICSRTT	LTP	Required in all offices. Required if any LDIT or MLDIT form (5300-3/5 Record) entry contains a CALL TYPE of "SRTT".	5E2 and later
ICTSTCL	CCS Test	Required if there are any TKGRP entries with INPULSING/ OUTPULSING equal to "ISUP7" or "CCIS6".	5E3 and later
IDPERR	IDP	Required if any IDPGP form has a STANDARD ERROR TREATMENT equal to "ANNC".	5E2 and later
IECFAIL	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
INSID	Coin	Required in all offices equipped with a LINE UNIT or a DCLU. Required if an EQLU form (5710 Record) or EQDCLU form (5810 Record) is entered.	5E2 and later
INTTF	TLWS	Required in all offices.	5E2 and later
INV10XX	Carried ID	Required if any ICF or CDIM form exists in the office.	5E2 and later
INV10XX	FGD CIC	Routes FGD CAC dialing error.	
INVCAC	FGD CIC	Required if FGD PHASE equals ``POSTPHASE'' on the OFCOPT form (5509 Record).	5E9(1) and later
INVDIG	Base Required	Required in all offices.	5E2 and later
INVNODIG	IEC (Interexchange Carrier)	Required if a trunk group has a TRKCLS of "IC".	5E2 and later
INVPIC	PIC (Presubscribed InterLATA Carrier)	Required if any ICF or CDIM form exists in the office.	5E2 and later
ISTFLB	ISTF (Integrated Services Test Facility)		5E3 and later
ISTFXMIT	ISTF		5E3 and later
LCOP	Coin	Required in all offices having either a LINE UNIT or a DCLU. Required if an EQLU form (5710 Record) or EQDCLU form (5810 Record) is entered.	5E2 and later
MISRLRN	CCS		5E11 and later
NCA	EADAS	Required if the OFCOPT form field EADAS LINK has a value of "Y".	5E2 and later
NCC	IEC		5E6 and later
NCD	IEC	Required if any TKGRP form has an NCD SCREENING of "MAP" or "NOMAP".	5E2 and later
NNC	CCS	Required if "ISUP7" or "CCIS6" is entered in the INPULSING/OUTPULSING fields on the TKGRP form.	5E3 and later
NO10XX	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
NO911	911	no longer required	5E2 and later
NOACK	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
NODLTN	Base Required	Required in all offices.	5E2 and later
NOSSD	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
NOSTART	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
NOXMTR	Base Required	Required in all offices.	5E2 and later
NSANNC	ASP	For 5E9(2) and earlier	required if ASP OFC is "Y" on the OFCOPT form (5509 Record).
NWBLK		Required in all offices.	5E2 and later
OEASERR	OSPS Equal Access	Required if this office is an AT&T Toll and Assistance office	5E8 and later
OGTRANS	Base Required	Required in all offices.	5E2 and later
OLSPD	DDD	Required in all OSPS offices.	5E4(2) and later

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OSANITO	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
OSPSDA	OSPS DA	Required for offices with the OSPSDA feature	5E3 and later
OSPSEIS	OSPS EIS		5E6 and later
OTOTTF	Crossbar or ESS	not required if the Switch has no lines or if the Switch being replaced is a Step-by-Step Switch, otherwise, this value is required.	5E3 and later
OVLD	Base Required	Required in all offices.	5E2 and later
PCPDENY	2-Level COT		5E7 and later
PDIAL	Base Required	Required in all offices.	5E2 and later
PERMSIG	Base Required	Required in all offices.	5E2 and later
PFXREQD	CCS		5E11 and later
PPBPC	AUTOVON DSN	Required in all DSN offices	5E2 and later
PPBPR	AUTOVON, DSN	Required in all DSN offices	5E2 and later
PPNAV	AUTOVON	Required in all DSN offices	5E2 and later
PPPAL	AUTOVON DSN	Required in all DSN offices	5E3 and later
PPUAP	AUTOVON DSN	Required in all DSN offices	5E2 and later
PPVAC	AUTOVON DSN	Required in all DSN offices	5E2 and later
RASI	Remote Access to Advanced Service Interface		5E8 and later
REQ10XX	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
REORDER	Base Required	Required in all offices.	5E2 and later
REVOHANN	REA Revertive Announcement		5E9(1) and later
REVRBANN	REA Revertive Announcement		5E9(1) and later
ROACCS	OSPS ACCS	Required in all OSPS offices	5E4(2) and later
ROAOC	OSPS MECH	Required in all OSPS offices with DSU2- RAFs with coin tone receivers or tone decoders	5E6 and later
ROCOIN	OSPS TA	Required in all OSPS offices with DSU2- RAFs with coin tone receivers	5E4(2) and later
RSMSA	RSM ORM TRM	required if the Stand-Alone call processing option has been purchased for any Remote Site.	5E2 and later
RTGTRBL	Base Required	Required in all offices.	5E2 and later
S96CTST	SLC96	Required if the office serves Integrated SLC96 lines. Required if an SLCRT form (5106 Record) has been entered.	5E2 and later
SCD	SCD (Selective Carrier Denial)	Required if SCD SCRNING of "Y" on at least one ICF form (5305 Record).	5E5 and later
SEC	CCS	Required if there are any TKGRP entries with INPULSING/ OUTPULSING equal to "ISUP7" or "CCIS6".	5E3 and later
SLE	LASS		5E6 and later
SSDE	Base Required	Required in all offices.	5E2 and later
SSDOFHK	CI	Required before CI can be activated. Required if any ICF or CDIM form exists in the office.	5E2 and later
SSI	CCS	Required if there are any TKGRP entries with INPULSING/OUTPULSING equal to "ISUP7".	5E3 and later
TSTTRK	LTP	Required if any LDIT or MLDIT form (5300-3/5 Record) contains a CALL TYPE of "LTD".	5E2 and later
UCRDENY	UCR		5E7 and later
UIA	INWATS 800	Required in all Toll OSO offices for which LDIT or MLDIT form (5300-3/5 Record) has a CALL TYPE of "OSOIWTS". Required in offices that perform SSP 800 query messages.	5E2 and later
VACANT	Base Required	Required in all offices.	5E2 and later
VACANT	FGD CIC		5E9(1) and later
VFYERR	2-Level COT	See "PCPDENY for 5E7 and later	5E6 only
WATSDND	WATS	Not currently used	5E2 and later

Figure 1 CAPABILITY VS FIXED ROUTE TYPE

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```
fixrt                    5ESS Switch
(5301-1)              OFFICE DATA ADMINISTRATION
                      FIXED ROUTE TYPE

*1. FIXED ROUTE TYPE INVDIG
#2. TONE ?          Y
 3. TONE TYPE       REORDER
 4. ROUTE INDEX     0013
 5. CHARGE INDEX    0001
 6. PLAY ANNC       N
```

Figure 2 SAMPLE FIXRT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3H: 5300-7a/7b/8a/8b RECORD REMAINING DIGIT INTERPRETATION FORM - RDIT

1. GENERAL

The 5300-7/8 Record is available with 5E8 and later Software Releases.

The RDIT input form contains information for the translation of remaining dialed digit strings for digit analysis. RDIT translation is an extension of primary digit analysis that ascertains whether or not the remaining digit string is a selective dialing request.

1.1 RDIT Operation

RDIT translates digits collected but not translated in LDIT.

RDIT is used to translate selective dialed strings.

As an example, assume the numbers 555-xxxx go to routing set A. Under RDIT, the dialed string 555-1000 is defined as going to routing set B. In this case, all 555-xxxx numbers where xxxx does not equal 1000 still go to routing set A.

The advantage over using LDIT without RDIT is that LDIT would have to fully translate to a seven-digit string (involving dozens of LDIT forms in this example). With RDIT, only an LDIT for 555 and an RDIT for 5551000 need to be specified. RDIT defines the selective dialed strings.

When an LDIT indicates an RDIT exists, but the dialed string is not defined within the RDIT, then routing information from LDIT is used to route the call. For the example above, the string 555-2000 is dialed and 555 indicates an RDIT is present, but the RDIT does not define the remaining digits of 2000. RDIT will therefore not override the LDIT information, and 555-2000 will use routing set A.

Almost all types of routing definable in primary digit analysis can be defined also in RDIT (except FATs (Foreign Area Translators) or SACs (Service Access Codes)).

1.2 Recent Change View

The corresponding Recent Change View for this form is 9.9.

2. FORM ENTRIES - 5300-7A RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * RDIT

Description: Enter the Remaining Digits Interpreter Table Number.

Required Field.
Valid Entries: 1 - 999

2.3 * PREVIOUS DIGITS

Description: Enter the digits defined on the LDIT (5300-3/5 Record) or MLDIT form (5300-3 Record) as INCOMING DIGITS.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

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2.4 * REMAINING DIGITS

Description: Enter the remaining digits.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

2.5 # CALL TYPE

Description: Enter the Call Types to be used. Please refer to Figure 1 for field dependencies per CALL TYPE.

Required Field.
Default: NORMAL
Valid Entries:

Valid CALL TYPE Entries

Entry	Definition
100	Incoming 100 Type Test Calls.
101	Incoming 101 Type Test Calls.
102	Incoming 102 Type Test Calls.
103	Incoming 103 Type Test Calls.
104	Incoming 104 Type Test Calls.
105	Incoming 105 Type Test Calls.
106	106 Test Calls for DSN (Defense Switched Network) offices only.
104R	Incoming Call to a RMS-D3 104 Test Line.
105R	Incoming Call to a RMS-D3 105 Test Line.
109R	Incoming Call to a RMS-D3 109 Test Line.
606R	Incoming Call to a RMS-D3 606 Test Line.
101R	Incoming Call to a RMS-D3 101 Test Line.
101TP	Incoming Call to a Specific RMS-D3 101 Test Position.
101TAT	Incoming Call to a Specific RMS-D3 101 Test Position and TAT.
211	Software Release: 5E15 and later. Dial 211.
311	Software Release: 5E15 and later. Dial 311.
900	900 calls. This CALL TYPE, prevents a LASS AR (Automatic Recall) user from camping-on to this line.
ADDON	Add-on for Alliance Teleconferencing.
APSDN	ACP (Action Control Point) for an SDN (Software Defined Network). This value indicates a query should be sent to the NCP (Network Control Point). The NCP will return a routing telephone number.
AUTINW	Automated Inward Call. Calls with this call type are originated by a distant operator and are routed to an automated query.
BBRITL	This ACTION is used for billed BRITL (Basic Rate Interface Dial Up Test Line).
BRITL	This ACTION is used for non-billed BRITL.
BUSOFC	Business Office (811).
CONFLCT	Conflicting NXX and NPA Code - either prefix resolved or timing resolved.
CSTL	Coin Station Test Line.
DA	555 Directory Assistance. Note: A CALL TYPE of "NORMAL" should be used with DA calls (i.e., 555-1212, NPA-555-1212) preceded by an FGD CAC.
DA2VDT	Directory Assistance calls routed to Video Display Terminal.
ECP	Software Release: 5E9(1) and later. Mobile originated call on a 5ESS Switch serving as a Digital Cellular Switch for an ECP (Executive Cellular Processor).
EMER	911 Emergency Service Bureau.
HNPAD	Home NPA (Numbering Plan Area) dialed in error.
IC1	Incoming 101 Call to Work Station 1.
IC2	Incoming 101 Call to Work Station 2.
IC3	Incoming 101 Call to Work Station 3.
IC4	Incoming 101 Call to Work Station 4.
IC5	Incoming 101 Call to Work Station 5.
IC6	Incoming 101 Call to Work Station 6.
IC7	Incoming 101 Call to Work Station 7.
IC8	Incoming 101 Call to Work Station 8.
IC9	Software Release: 5E8 and earlier Incoming 101 Call to Work Station 9 associated with CTTU (Central Trunk Test Unit).

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	Software Release: 5E9(1) and later Incoming 101 Call to Work Station 9. Note: Effective with 5E9(1), IC33 is associated with CTTU (Central Trunk Test Unit).
IC10	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 10.
IC11	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 11.
IC12	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 12.
IC13	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 13.
IC14	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 14.
IC15	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 15.
IC16	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 16.
IC17	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 17.
IC18	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 18.
IC19	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 19.
IC20	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 20.
IC21	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 21.
IC22	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 22.
IC23	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 23.
IC24	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 24.
IC25	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 25.
IC26	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 26.
IC27	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 27.
IC28	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 28.
IC29	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 29.
IC30	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 30.
IC31	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 31.
IC32	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 32.
IC33	Software Release: 5E9(1) and later. Incoming 101 Call to Work Station 33 associated with CTTU (Central Trunk Test Unit).
IDDDFCA	International Direct Distance Dialing FCA call.
IDDDSTS	International Direct Distance Dialing Station to Station.
INV	ISTF (Integrated Services Test Function) Inverted Loopback test.
INWATS	INWATS (800+)
LNACP	ACP (Action Control Point) for a LN (Leased Network).
LOCDA	Local Directory Assistance (411).
LTD	Local Test Desk.
MEETME	Alliance Teleconferencing meet-me call.
NINV	ISTF (Integrated Services Test Function) Non-Inverted Loopback test.
NORM555	Software Release: 5E16 and later. Dial (1) + 555 - XXXX
NORMAL	This value is used for all other types of calls and indicates normal call processing. Intraoffice and interoffice (usually seven or ten digit) calls require no special handling by the Software Release.
NS800	Number Service (SSP800) type call.

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OCTL	Open Circuit Test Line.
OPINW	Operator-assisted Inward Call. Calls with this call type are originated by a distant operator and are routed to an OSPS operator position.
OPNIT	Operator-assisted DA/Non-ISP call to the VDT.
OSOIWTS	Originating Screening Office INWATS.
PB	Incoming Permanent Busy Type Test Calls.
RELAY	Software Release: 5E15 and later. 711 Relay/Hearing Impaired Service.
REPAIR	Repair Service Bureau (611).
SDNA	Software Defined Network outgoing calls from the NAP (Network Access Point).
SDNE	Software Defined Network incoming calls to the NAP (Network Access Point).
SPAB800	Special Access Basic 800 Service.
SPAM800	MEGACOM 800 Service.
SRTT	Station Ringer Touch-Tone Test.
STG1FCA	First Stage of a Fully Coded Addressing international outbound call.
SYN	Incoming Synchronous Type Test Calls.
VACANT	Vacant NPA, NXX and Service Codes.
WETESTC	Test call associated with 5ESS Switch library programs.

Data Rules:

Call Types "LOCDA", "REPAIR", "BUSOFC" and "EMER" require a corresponding entry on the CONV form (5300-4 Record).

If a CALL TYPE of "100", "101", "101R", "101TAT", "101TP", "102", "103", "104", "104R", "105", "105R", "106", "109R", "606R", "IC1", "IC2", "IC3", "IC4", "IC5", "IC6", "IC7", "IC8", "IC9", "INV", "NINV", "PB" or "SYN" is entered, ROUTE INDEX on the RTIDX form (5303 Record), which corresponds to the ROUTE INDEX on this form, must have a ROUTE TYPE of "TEST".

A digit string used for test CALL TYPEs must be used for the same test CALL TYPE in all LDITs in which the digit string is defined. This applies to digit strings defined on LDIT, MLDIT and RDIT forms.

Test CALL TYPEs require that NBR OF DIGITS exactly equal the number of PREVIOUS and REMAINING DIGITS.

A terminating test line ("10x", "PB", or "SYN") must be defined in the office as a CALL TYPE on an RDIT, LDIT, or MLDIT form, or as TEST CODE on a LINE form (5109 Record).

When CALL TYPE is "NORMAL" or "900",

- CDI must be entered, and
- either RTI NXX must be entered.

When CALL TYPE is not "DA", "NORMAL", "AUTINW", "OPINW", or "900", TERM LATA cannot be entered.

When CALL TYPE is not "CONFLCT", NBR OF DIGITS must be greater than or equal to the sum of the lengths of PREVIOUS DIGITS and REMAINING DIGITS.

The following CALL TYPEs require a FIXRT form (5301-1 Record) with the FIXED ROUTE TYPE listed:

- "CSTL" with FIXED ROUTE TYPE of "CSTL",
- "HNPAD" with FIXED ROUTE TYPE of "HNPAD",
- "LTD" with FIXED ROUTE TYPE of "TSTTRK", and
- "SRTT" with FIXED ROUTE TYPE of "ICSRTT".

ADDON: If "ADDON" is entered in the CALL TYPE field, FIXRT forms (5301 Records) must be submitted

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with FIXED ROUTE TYPES of "ATCANIF" or "ATCINT".

APSDN: This value can only be used when a 5ESS Switch is an ACP (ACT PT SDN field on the OFCOPT form (5509 Record) is "Y").

AUTINW: This is a valid call type only if the OSPS TA parameter is set to "Y" on the OSPSOPT form (5424 Record).

BBRITL: The DSL which is being tested must have BRITL ALW set to "Y" on the corresponding DSLUSR form (5908 Record).

CONFLCT: If CALL TYPE is "CONFLCT", NBR OF DIGITS is specified, and PREFIX is blank, there must be exactly two CONFLICT RESOLUTION entries.

When CALL TYPE is "CONFLCT", NATURE OF NBR (5E8 only) and TRIG NBR cannot be entered.

For 5E9(1) and later, when CALL TYPE is "CONFLCT", then ESC CODE on the first screen must be "N".

For 5E11 and later, when CALL TYPE is "CONFLCT",

- LNP TRIG NBR must be "IGN" or must not be entered.
- at least two rows of CONFLICT RESOLUTION ENTRIES list must be entered.
- GEO PORT must be "N".
- PORTED IN must be "N".
- HOME LRN must be "N".
- LRN SCREENING must be "N".
- INH DNT must be "N".

For 5E13 and later, when CALL TYPE is "CONFLCT", NPA SPLIT ANNC must be "N".

For 5E14 and later:

- when CALL TYPE is "CONFLCT", then REL LINK must be "N".
- when CALL TYPE is "CONFLCT", at least two rows on the CONFLICT RESOLUTION ENTRIES (CONFRES) list must be entered.

EMER: For 5E11 and later, when CALL TYPE is "EMER", LNP TRIG NBR must be "IGN" or not entered.

IDDDFCA: This value is used for the address sequence of an international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA. A DAS (Digit Analysis Selector) of 81 will be used instead of the DAS associated with the incoming trunk group. This Call Type may be assigned to incoming digit sequences CC + NN or 0/1X + CC + NN. CC is the Country Code. NN is the National Number. 0/1X is the ISC (International Switching Center) prefix code.

IDDDSTS: Used for multistage international outbound calls which are routed to an MF trunk, CCIS6 trunk or CCS7 ISUP trunk. This value may be assigned to codes which require two-stage call handling at a toll or tandem office. Two-stage call handling includes an acknowledgement wink before the second stage of digits is sent. Also used in a tandem or toll office when the digits inpulsed on the trunk, typically from a TSPS, are 011 + padded Country Code.

This value can be used for:

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- A Local office (OFFICE TYPE on the OFCOPT form is "N") where the incoming digits are 011 + (7 - 12 digits).
- A Toll office (OFFICE TYPE on the OFCOPT form is "Y") which will not use FCA (Fully Coded Addressing). Possible incoming digits are 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international call.
- A 5ESS Gateway switch that requires an FCA international outbound call to leave the office on an MF trunk must assign this CALL TYPE to the digit sequence CC + NN. CC is the Country Code. NN is the National Number.

LNACP: This value indicates a query should be sent to the LN NCP (Network Control Point). The NCP will return routing and charging information. This value can only be used when the Leased Network DAS field is entered on the OFCOPT form (5509 Record).

MEETME: If "MEETME" is entered in the CALL TYPE field, FIXRT forms (5301 Records) must be submitted with FIXED ROUTE TYPES of "ATCANIF" or "ATCINT".

NORM555: For 5E16 and later, when CALL TYPE is "NORM555", TRIG NBR and CODE INDEX must be entered.

NS800: CALL TYPE of "NS800" requires an OFCOPT form with SERV SWITCH PT of "Y".

OPINW: The OSPS TA field on the OSPSOPT form must be "Y".

OSOIWTS: If this Call Type is used, COMMON CHAN SIG and ORIG SCREEN OFF must be "Y" and the HOME NPA must be specified on the OFCOPT form (5509 Record). See the ONPA form (5312 Record) for related information.

FIXED ROUTE TYPE must equal "UIA" on a FIXRT form if at least one RDIT, LDIT or MLDIT form exists with a CALL TYPE of "OSOIWTS".

If CALL TYPE is "OSOIWTS", TYPE OF CI CALL must be "NONCI", "INTER", or "INTRA".

- ***NOTE:*** OSOIWTS is used by an InterLATA Carrier switch to do originating screening for INWATS digits inpulsed as 800 or 00X plus 7 digits. If this Call Type is used, COMMON CHAN SIG and ORIG SCREEN OFF must be "Y" and the HOME NPA must be entered on the OFCOPT form (5509 Record). See the ONPA form (5312 Record) for related information.

SPAB800: Special Access Basic 800 service allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAB800" on the TKGRP form (5202 Record)).

SPAM800: MEGACOM 800 service is a volume discount service which allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAM800" on the TKGRP form). MEGACOM 800 service is similar to Special Access Basic 800 service except the customer must supply the dedicated trunk group to the 5ESS Toll Switch.

STG1FCA: This value should be used for the first stage of a multi- stage international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y")which will use FCA. This Call Type may be assigned to incoming digit sequences 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international code.

For 5E15 and later, CALL TYPE can be set to "RELAY" only if the ACT field for SFID 594, on the SFSYS form is set to "Y".

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2.6 TYPE OF CI CALL

Description: Enter the type of CI (Carrier Interconnect) call. See Figure 1 for appropriate entries per Call Type.

Valid TYPE OF CI CALL Entries

Entry	Definition
COMP	Used for calls to a geographical area where the LEC (Local Exchange Carrier) and ICs (InterLATA Carriers) compete on an equal basis. Such calls must be routed by a carrier, but this "carrier" may be the LEC. If the subscriber wants to be routed via the LEC, the subscriber must either be presubscribed to the LEC or dial an explicit FGD CAC.
CONFL	Used for cases where the call may be either INTER (InterLATA) or INTRA (IntraLATA), depending on the dialed prefix. See Data Rules for more information.
INTER	Used for calls destined for outside the LATA. Such calls must be routed via a carrier, not the LEC.
INTRA	Used for calls destined for within the LATA. Usually routed via the LEC. If other carriers are permitted and accept IntraLATA calls, an explicit FGD CAC must be dialed (not presubscription) to access the carriers for these calls.
INTRM	FGB Interim call is used for an incoming trunk call dialed by the originator as 950XXXX. The 950 digits are entered in the PREVIOUS DIGITS. The XXXX represents a Carrier Identification Code. These calls may be from a non-EAEO and less than the seven digits may be received as would then be reflected in the PREVIOUS DIGITS. When "INTRM" is entered, the last four digits inpulsed (i.e., the Carrier Identification Code) will be used to enter the ICF form (5305 Record) to access the Carrier's FGB CDI and FGB RTI.
NONCI	Normal tandem traffic or feature activation codes.
PRIV	Used for EAS (Extended Area Service) calls where the local calling area extends into the neighboring LATA. These InterLATA calls are treated as INTRA (routed by the LEC) except when the subscriber explicitly dials an FGD CAC. When the FGD CAC is dialed, the call is treated as INTER.
PSCAR	Used for Packet Switching Carrier calls.
PSNCI	Used for Packet Switching Non-Carrier calls.
TCONF	Software Release: 5E9(1) and later. Intra-LATA toll conflict. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TCONF", a SFSYS form must exist with SFID 149 set to "Y".
TOLL	Software Release: 5E9(1) and later. Toll calls within the LATA. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TOLL", a SFSYS form must exist with SFID 149 set to "Y".
WZ1	Used for calls outside the continental United States, but within World Zone 1 (e.g., Canada).

Data Rules:

This field must be entered for all CALL TYPEs except "CONFLCT".

When TYPE OF CI CALL is "PSCAR" or "PSNCI", TRIG NBR cannot be entered.

When TYPE OF CI CALL equals "COMP", "CONFL", "INTER", "PRIV", "TRANS", or "WZ1", an ICF form (5305 Record) must exist.

CONFL: Call processing will look ahead at other records to determine if the call should be treated as IntraLATA or InterLATA. When no prefix has been dialed, the ROUTE INDEX value of this LDIT entry will be compared to the RTI value entered in the No Prefix column of the originator's Rate and Route form (5301 Record). If the RTI value equals the ROUTE INDEX value or is "REGL", it is considered a match and treated as an IntraLATA call. If the RTI is not equal to the ROUTE INDEX value, there is no match and therefore the call will be treated as an InterLATA call. When a 1 prefix has been dialed, the process is the same as the No Prefix case, except the RTI value found in the 1+ Prefix column of the RAR is used for comparison. When a 0 prefix has been dialed, the comparison technique is inappropriate. In this case, the 0+ Prefix entry in the RAR will be read. The RTI value in that entry will be analyzed to determine whether or not it is an Announcement Route Index. If it is an announcement, the call will be processed as an InterLATA call. If it is not, the call will be treated as an IntraLATA call. When the zero plus call should be treated as an InterLATA carrier call and therefore the RAR has an announcement type Route Index, care must be taken to make sure the associated CBLK entry equals "N".

PSCAR: When using this type of CI Call, the CALL TYPE must be "NORMAL" or "900", and ROUTE

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INDEX, OFFICE CODE, and CODE INDEX cannot be entered.

PSNCI: When TYPE OF CI CALL is "PSNCI", CALL TYPE must be "NORMAL", "900", or "VACANT".

Packet Switching TYPE OF CI CALLs, "PSCAR" and "PSNCI", cannot be mixed with non-Packet Switching TYPE OF CI CALLs within a single DAS.

WZ1: All forms with TYPE OF CI CALL equals "WZ1" which have the first three digits (that is, the NPA (Numbering Plan Area)) in the PREVIOUS DIGITS fields must have the same value for WZ1 REG.

For 5E9(1) and later, when CALL TYPE is "OSOIWTS", TYPE OF CI CALL must be "INTER", "INTRA", "NONCI", "TCONF"or "TOLL".

For 5E9(1) through 5E14, when CALL TYPE is "LOCDA", "BUSOFC", or "REPAIR", TYPE OF CI CALL must be "INTER", "INTRA", or "TOLL".

For 5E15 and later, when CALL TYPE is "BUSOFC", "LOCDA", "RELAY", or "REPAIR", TYPE OF CI CALL must be "INTER", "INTRA", or "TOLL".

2.7 NBR OF DIGITS

Description: Enter the total number of digits expected excluding the dialed prefix.
Valid Entries: 1 - 15

Data Rules:

If a value is entered in this field, it must be equal to or greater than the quantity of digits entered in the INCOMING DIGITS and REMAINING DIGITS fields.

For the CALL TYPE of "CONFLCT", where the conflict is prefix resolved, enter the total number of digits expected for the entry associated with the prefix value entered under PREFIX.

2.8 CODE INDEX

Description: The Code Index combined with a Screening Index is used as an input to the Rate and Route Tables.

The CODE INDEX determines whether or not pre-query call screening will be performed for SSP/800 calls. If CALL TYPE is "NS800" and CODE INDEX is greater than 0, pre-query screening will be performed. The screening index from the originating line or trunk, along with the dialed prefix and this CODE INDEX, is used to access the RAR form (5301 Record). When the RTI from the associated RAR form is "REGL", the normal SSP/800 query and call processing will occur. When the RTI contains a numbered route index, the call will be routed to that RTI.

CODE INDEX is a real Code Index and not a pointer to the DISERV form (5321 Record).
Valid Entries: 3 - 4095

Data Rules:

This field must be blank if the CALL TYPE is "VACANT", "CONFLCT", "HNPAD", "LTD", "SRTT", "OCTL", "OSOIWTS", "APSDN" or "CSTL".

All combinations of CODE INDEX, and RDTA SCRN IDX from the OFCOPT form must have corresponding RAR form entries for SCR and CDI.

Code Index 1 (0-) and Code Index 2 (010) may not be entered on the LDIT Record.

2.9 ROUTE INDEX

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Description: This field indicates the Regular Route Index to be used for routing the call except when a Special Route Index entered on the RAR overrides it. The Regular Route Index is the route which is used by the majority of call originators to complete the call.

The ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

When the CALL TYPE is "VACANT", "NS800", "OSOIWTS", "CONFLCT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN" and "CSTL", this field must be blank. When the CALL TYPE is other than those just listed, an entry is required in this field or in the OFFICE CODE field.

ROUTE INDEX must be defined on an RTIDX form, and should not have a ROUTE TYPE of "BUSY" or "REORDER" on that form. If ROUTE TYPE is "HUNT", the TRK DIR pointed to must not be "ANN".

2.10 POLYGRID

Description: Is polygrid routing used for DSN (Defense Switched Network) offices?

Enter "N" for non-DSN offices.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If a ROUTE INDEX assigned with POLYGRID equals "Y", that ROUTE INDEX must equal POLY RT NUM on a PPPOLY form (5618-7 Record).

When RDIT forms have a ROUTE INDEX entered, and POLYGRID is "Y". The DSN OPTION on the OFCOPT form must be "Y".

2.11 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NXX growth to 8000 secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

Data Rules:

When NPA is entered, OFFICE CODE must be entered.

For 5E12 and later, when the OFFICE CODES and/or NPA/OFFICE CODE combinations are assigned on RDIT forms, they must be defined on the NOC form.

2.12 OFFICE CODE

Description: Enter an Office Code (NXX) served by the 5ESS Switch (i.e., defined on the NOC form (5501 Record)). If an Office Code is entered, it will be entered to "route" the call to a Directory Number of this NXX in this office except when overridden by a Special Route Index entered in the Route Index field of the

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RAR form.
Valid Entries: 3 digit NXX (N = 2 - 9, X = 0 - 9)

Data Rules:

When the Call Type is "VACANT", "NS800", "OSOIWTS", "CONFLCT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN", "SPAB800", "SPAM800", "IDDDFCA", "IDDDSTS" or "CSTL", this field must be blank. When the Call Type is other than these, an entry is required in this field or in ROUTE INDEX.

For 5E12 and later, if the RDIT forms have an OFFICE CODE defined and there are multiple NOC forms with the same value of OFFICE CODE, NPA must also be defined on the RDIT form.

2.13 DESEP

Description: This field defines the Destination Separations Index for CALL TYPES other than "VACANT", "CONFLCT", "HNPAD", "LTD", "SRTT", "OCTL", "OSOIWTS" or "CSTL". It is only required for Division of Revenue study.
Valid Entries: 1 - 255

Data Rules:

If a DESEP is entered, it must be defined on the Traffic Separation Cell Grouping TRFSEP form (5308 Record).

If TYPE OF CI CALL is "PSCAR" or "PSNCI", this field must be blank.

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.14 WZ1 REG

Description: For codes with a TYPE OF CI CALL equal to WZ1, enter a World Zone 1 region. This digit is used in the first stage of outpulsing for INCs (International Carriers) on either a direct connection or via an Access Tandem. The first stage of outpulsing has a format of KP + 1NX + XXX + 01R + ST, where R is the World Zone 1 region. (1NX is a spare toll center code entered on the Route Index as prefix digits. XXX is the Carrier Identification Code.) For other than WZ1 types, leave this field blank.
Valid Entries: 0 - 9

2.15 TERM LATA

Description: This field is used at the InterLATA Carrier when Network Call Denial Screening is required on incoming CAMAANI Trunk Groups.

Valid TERM LATA Entries

Entry	Definition
1	Indicates LATAs not subtending the switch
2 - 15	Indicates a subtending LATA of the switch.
2 - 31	Indicates a subtending LATA of the switch.

Data Rules:

If TYPE OF CI CALL is "PSCAR" or "PSNCI", this field must be blank.

If CALL TYPE is "LNACP", this field must be blank.

If TERM LATA is specified, COMMON CHAN SIG must equal "Y" on the OFCOPT form (5509 Record).

When the CALL TYPE is "NORMAL", "DA", "IDDDSTS", "AUTINW", "OPINW" or "INWATS", enter an

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appropriate value to indicate, based on incoming digits, the destination of this call.

The TERM LATA value is compared to an ORIG LATA value specified on the TKGRP form (5202 Record).

2.16 NATURE OF NBR

Description: Enter the nature of the dialed number.

Software Release: 5E8 and later
Valid Entries:

Valid NATURE OF NBR Entries

Entry	Definition
IDDD or I	International
NATL or N	Domestic
PRIV or P	Private

Data Rules:

For 5E8 only, when NATURE OF NBR is entered, TRIG NBR must be entered.

2.17 TRIG NBR

Description: Enter the Network Services trigger number as defined on the NSTRIG form.
Valid Entries:

- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

Data Rules:

When TRIG NBR is entered, TERM LATA cannot be entered.

For 5E8 only, if ASP OFC on an OFCOPT form equals "SSP", and TRIG NBR equals TRIG NBR on an NSTRIG form where APPLICATION equals "ASP", NATURE OF NBR must also be assigned.

If TRIG NBR equals TRIG NBR on an NSTRIG form with APPLICATION equal to "E911", CALL TYPE must equal "EMER" and TYPE OF CI CALL equal "INTRA".

For a CALL TYPE of "EMER" or "NORMAL", if TRIG NBR is entered and APPLICATION on the corresponding NSTRIG form

- is "E911" or "800", ROUTE INDEX and OFFICE CODE cannot be entered;
- is "ASP", ROUTE INDEX or OFFICE CODE must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered.

If TRIG NBR equals TRIG NBR on an NSTRIG form with SERV KEY equal to "CDPN", and NBR OF DIGITS is neither 7 nor greater than 9, ALT GBL TITLE on NSTRIG must be known.

For 5E15 and later, when CALL TYPE is "RELAY", TRIG NBR must not be entered.

2.18 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Required Field.
Default: N

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Valid Entries: Y, N

2.19 DFLT RT

Description: The DFLT RT field is used to identify the type of default routing treatment to be used for the ASP Default Routing for 3/6/10-Digit Triggers (Phase 1) Special Feature. When the ASP Special Feature has been purchased, this field can be used to specify the type of default routing to occur when an ASP specific digit trigger query fails.

Software Release: 5E10 and later
Default Value: NONE

Valid DFLT RT Entries

Entry	Definition
ANNC	Default route to announcement (or tone). The call will route to either a tone or announcement, depending on what is defined for the route.
DLDN	Default route to dialed DN. The call will route to the DN dialed (or the DN being routed to if the call came from a trunk).
NONE	No default routing. No special default routing will take place, and normal call treatment will send the call to reorder or NCA (No Circuits Available).

Data Rules:
For 5E9(2) and earlier, if an RDIT form has a DFLT RT or CONFLICT RESOLUTION ENTRIES DFLT RT entry other than "NONE", the corresponding TRIG NBR must be defined on the NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1"

For 5E10 and later, when the RDIT forms have a DFLT RT entry or a CONFLICT RESOLUTION ENTRIES DFLT RT entry other than "NONE", the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

2.20 ANI BYPASS

Description: Will ANI Table options be ignored? An entry of "N" indicates TDX ANI Table options will be processed. This field supports the TDX (Toll Digital Exchange) ANI Table Call Processing Feature. This is a secured feature with SFID 235. For more information on this feature, see Division 2, Section 4A165.

Software Release: 5E10 and later
Default: N

Valid Values: Y, N

2.21 REMARKS

Description: This field may contain any remarks deemed locally necessary.
Valid Entries: 1 - 16 characters

3. FORM ENTRIES - 5300-7B RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

3.2 * RDIT

Description: Enter the Remaining Digits Interpreter Table Number.

Required Field.
Valid Entries: 1 - 999

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3.3 * PREVIOUS DIGITS

Description: Enter the digits defined on the LDIT or MLDIT form as INCOMING DIGITS.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

3.4 * REMAINING DIGITS

Description: Enter the remaining digits.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

LOCAL NUMBER PORTABILITY

For 5E11 and later, fields (Section 3.5) - (Section 3.10) support the Local Number Portability feature. For more information, see Division 2, Section 4A174.

3.5 LNP TRIG NBR

Description: Enter the LNP trigger number. The LNP trigger number is a conditional trigger which initiates a query to the SCP (Service Control Point) based on further routing determinations and checks following the trigger detection. The "IGN" entry means to ignore the LNP TRIG NBR, GEO PORT and PORTED IN attributes and inherit these attributes from the LDIT form.

Software Release: 5E11 and later
Required Field.
Default: IGN

Valid Values: IGN or 1 - 255

Data Rules:

Local Number Portability is a secured feature. This feature must be purchased and SFID 174 ACT on the SFSYS form (5713-1 Record) must be "Y" before LNP TRIG NBR and the CONFLICT RESOLUTION field for LNP TRIG NBR can be set to "Y".

When LNP TRIG NBR is "IGN", both PORTED IN and GEO PORT must be "N".

When LNP TRIG NBR is 1 - 255, TYPE OF CI CALL must be"INTER", INTRA", "TOLL", "COMP", "PRIV", "NONCI", "TCONF" or "CONFL".

When both LNP TRIG NBR and TRIG NBR or both CONFLICT RESOLUTION TRIG NBR and CONFLICT RESOLUTION LRN TRIG NBR are entered on this form, the TRIG NBR or CONFLICTION RESOLUTION TRIG NBR (whichever is entered) must be defined on an NSTRG form (5324 Record) which has APPLICATION set to "ASP".

When either LNP TRIG NBR or CONFLICT RESOLUTION LRN TRIG NBR is entered on this form, the LNP TRIG NBR or CONFLICTION RESOLUTION LNP TRIG NBR (whichever is entered) must be defined as TRG NBR on an NSTRG form (5324 Record) which has APPLICATION set to "ASP" and AIN REL "R0D1".

For 5E13 and later, when LNP TRIG NBR or CONFRES.LNP TRIG NBR is entered, TYPE OF CI CALL or CONFRES.TYPE OF CI CALL can be "INTER" only when the ACT field for SFID 303 on the SFSYS form is set to "Y".

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3.6 GEO PORT

Description: Any geographically ported DNs? This field, when set to "Y", indicates geographic porting has occurred for at least one DN associated with this RDIT entry.

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

Data Rules:

When GEO PORT is "Y", LNP TRIG NBR must be 1 - 255.

3.7 PORTED IN

Description: Any ported DN terminations? This field, when set to "Y", indicates that there exists at least one DN termination in this office associated wtih this RDIT digit translation even though a route index (not an office code) is provisioned for this RDIT translation.

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

Data Rules:

Local Number Portability is a secured feature. This feature must be purchased and SFID 174 ACT on the SFSYS form (5713-1 Record) must be "Y" before these fields can be set to "Y".

When PORTED IN is "Y", LNP TRIG NBR must be 1 - 255.

When PORTED IN is "Y", ROUTE INDEX must be entered.

For 5E13 and later, when PORTED IN or CONFRES.PORTED IN is "Y", TYPE OF CI CALL or CONFRES.TYPE OF CI CALL can be "INTER" only when the ACT field for SFID 303 on the SFSYS form is set to "Y".

3.8 HOME LRN

Description: Is this a home location routing number? This field is set to "Y" when the LRN represents this switch or a rate center in this switch.

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

3.9 LRN SCREENING

Description: Use screening attributes for LRN? This field is set to "Y" when the LRN a rate center in this switch which would imply that the TYP CI CALL and CDI from analysis of this LRN should be used.

Software Release: 5E11 and later
Required Field.

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Default: N

Valid Values: Y, N

3.10 INH DNT

Description: Inhibit processing of dialed number triggers?

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

3.11 GETS HPC

Description: Is GETS (Government Emergency Telecommunication Service) HPC (High Probability Call Completion Service) required? The GETS HPC field is used as an indicator to mark GETS HPC calls so that enhanced functionality provided by other HPC capabilities (e.g., Trunk Queuing, ISUP Signaling, Exemption from Network Management Controls) can be invoked. When set to "Y", calls translated to this address receive special treatment resulting in a higher probability of call completion. For more information, see Division 2, Section 4A279.

The use of HPC Network Capabilities is restricted in the United States and U.S. Territories to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be co-ordinated with the OMNCS at the following address:

Office of the Manager
National Communication System
Attn: GETS Program Office
701 South Courthouse Rd
Arlington, VA, 22204-2198
email: gets@ncs.gov

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E13 and later, when the LDIT/MLDIT/RDIT forms' GETS HPC is "Y" or CONFLICT RESOLUTION GETS HPC is "Y", and TRIG NBR or CONFLICT RESOLUTION TRIG NBR is known, then the associated NSTRIG form (associated through TRIG NBR) must have APPLICATION set to "ASP" and ASP TOLL FREE must be "N".

For 5E13 and later, when the LDIT/MLDIT/RDIT/INDIT forms', GETS HPC is "Y" or CONFLICT RESOLUTION GETS HPC is "Y", GETS HPC or CONFLICT RESOLUTION GETS HPC can be "Y" only when the GETS High Probability of Call Completion Secured Feature has been purchased. A SFSYS form must exist with SFID 279 ACT set to "Y".

3.12 DENY XFER

Description: This field is used to indicate if a call transfers to a particular digit string should be denied.

Software Release: 5E12 and later
Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later:

- When DENY XFER is "Y", CALL TYPE must not be "EMER".
- When DENY XFER on the LDIT form is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y". "Y" being set on the SFSYS form indicates that the "Deny Transfer of Digit Screened Calls" feature has been purchased.

3.13 REL LINK

Description: Is this a release link directory assistance number? This field is used to indicate whether or not the digits being translated map to a release link directory assistance number.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When REL LINK is "Y":

- CALL TYPE must be "DA", "LOCDA", "NORM555", or "NORMAL".
- One of the following two conditions must exist:
  - For the Release Link for Toll Office feature using ANSI (American National Standards Institute) standard signaling, the ACT field for SFID 520 on the SFSYS form (5713-1 Record) must be set to "Y"; or
  - For the Release Link for Toll Office feature using TOPS (Operating System for DMS (Data Management System)) nonstandard signaling, the ACT field for SFID 521 on the SFSYS form must be set to "Y".

3.14 NPA SPLIT ANNC

Description: Should caller be given a warning announcement if dialing a 7-digit or 10-digit number during permissive period of NPA (Numbering Plan Area) Split?

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NPA SPLIT ANNC is set to "Y", NBR OF DIGITS must be "7" or "10".

When NPA SPLIT ANNC or CONFRES.NPA SPLIT ANNC is set to "Y":

- the ACT field for SFID 347 on the SFSYS form (5713-1 Record) must be set to "Y". (For more

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information, see Division 2, Section 4A347, for the Announcement on Detection of NPA Split feature.)

- the APPLICATION field on the ANNAPL form (5529 Record) must be set to "NPA_SP".
- the FIXED ROUTE TYPE field on the FIXRT form (5301-1 Record) must be set to "NPA_SP".

4. FORM ENTRIES - 5300-8A RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

4.2 * RDIT

Description: Enter the Remaining Digits Interpreter Table Number.

Required Field.
Valid Entries: 1 - 999

4.3 * PREVIOUS DIGITS

Description: Enter the digits defined on the LDIT or MLDIT form as INCOMING DIGITS.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

4.4 * REMAINING DIGITS

Description: Enter the remaining digits.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

CONFLICT RESOLUTION

Fields Section 4.5 -Section 4.18 refer to conflict resolution entries.

4.5 NBR DIG

Description: Enter the total number of digits expected excluding any prefix. If the code in conflict is prefix resolved, exactly one of the code's conflict resolution entries must have NBR DIG equal to NBR OF DIGITS entered on screen 1 of this form, 5300-7 Record.

Data Rules:

For each row of the CONFLICT RESOLUTION ENTRIES list, NBR DIGS must be greater than or equal to the sum of the lengths of PREVIOUS DIGITS and REMAINING DIGITS.

4.6 CALL TYPE

Description: Enter the Call Type to be used. Please refer to Figure 1 for field dependencies per CALL TYPE.

Valid CALL TYPE Entries

Entry	Definition
211	Software Release: 5E15 and later. Dial 211.
311	Software Release: 5E15 and later.

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	Dial 311.
900	900 calls. This CALL TYPE, prevents a LASS AR (Automatic Recall) user from camping-on to this line.
ADDON	Alliance Teleconferencing add-on calls.
APSDN	ACP (Action Control Point) for an SDN (Software Defined Network). This value indicates a query should be sent to the NCP (Network Control Point). The NCP will return a routing telephone number.
AUTINW	Automated Inward Call. Calls with this call type are originated by a distant operator and are routed to an automated query.
BBRITL	This ACTION is used for billed BRITL (Basic Rate Interface Dial Up Test Line).
BRITL	This ACTION is used for non-billed BRITL.
BUSOFC	Business Office (811).
CSTL	Coin Station Test Line.
DA	555 Directory Assistance. Note: A CALL TYPE of "NORMAL" should be used with DA calls (i.e., 555-1212, NPA-555-1212) preceded by an FGD CAC.
ECP	Software Release: 5E9(1) and later. Mobile originated call on a 5ESS Switch serving as a Digital Cellular Switch for an ECP (Executive Cellular Processor).
EMER	911 Emergency Service Bureau.
HNPAD	Home NPA (Numbering Plan Area) dialed in error.
IDDDFCA	International Direct Distance Dialing FCA call.
IDDDSTS	International Direct Distance Dialing Station to Station.
INWATS	INWATS (800+).
LOCDA	Local Directory Assistance (411).
LTD	Local Test Desk.
MEETME	Alliance Teleconferencing meet-me call.
NORM555	Software Release: 5E16 and later. Dial (1) + 555 - XXXX
NORMAL	All others.
OCTL	Open Circuit Test Line.
OPNIT	Operator-assisted DA/Non-ISP call to the VDT.
OPINW	Operator-assisted Inward Call. Calls with this call type are originated by a distant operator and are routed to an OSPS operator position.
RELAY	Software Release: 5E15 and later. 711 Relay/Hearing Impaired Service.
REPAIR	Repair Service Bureau (611).
SDNA	Software Defined Network outgoing calls from the NAP (Network Access Point).
SDNE	Software Defined Network incoming calls to the NAP (Network Access Point).
SPAB800	Special Access Basic 800 Service.
SPAM800	MEGACOM 800 Service.
SRTT	Station Ringer Touch-Tone Test.
STG1FCA	First Stage of a Fully Coded Addressing international outbound call.
VACANT	Vacant NPA, NXX and Service Codes.

Data Rules:

The following CALL TYPEs require a FIXRT form with the FIXED ROUTE TYPE listed:

- "CSTL" with FIXED ROUTE TYPE of "CSTL",
- "HNPAD" with FIXED ROUTE TYPE of "HNPAD",
- "LTD" with FIXED ROUTE TYPE of "TSTTRK", and
- "SRTT" with FIXED ROUTE TYPE of "ICSRTT".

CALL TYPEs "LOCDA", "REPAIR", "BUSOFC" and "EMER" require a corresponding entry on the CONV form (5300-4 Record).

APSDN: This value can only be used when a 5ESS Switch is an ACP (ACT PT SDN field on the OFCOPT form is "Y").

AUTINW: The OSPS TA field on the OSPSOPT form must be "Y".

BBRITL: The DSL which is being tested must have BRITL ALW set to "Y" on the corresponding DSLUSR form.

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EMER: For 5E11 and later, when CALL TYPE is "EMER", LNP TRIG NBR must be "IGN" or not entered.

IDDDFCA: This value is used for the address sequence of an international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA. A DAS (Digit Analysis Selector) of 81 will be used instead of the DAS associated with the incoming trunk group. This Call Type may be assigned to incoming digit sequences CC + NN or 0/1X + CC + NN. CC is the Country Code. NN is the National Number. 0/1X is the ISC (International Switching Center) prefix code.

IDDDSTS: Used for multistage international outbound calls which are routed to an MF trunk, CCIS6 trunk or CCS7 ISUP trunk. This value may be assigned to codes which require two-stage call handling at a toll or tandem office. Two-stage call handling includes an acknowledgement wink before the second stage of digits is sent. Also used in a tandem or toll office when the digits inpulsed on the trunk, typically from a TSPS, are 011 + padded Country Code.

This value can be used for:

- A Local office (OFFICE TYPE on the OFCOPT form is "N") where the incoming digits are 011 + (7 - 12 digits).
- A Toll office (OFFICE TYPE on the OFCOPT form is "Y") which will not use FCA (Fully Coded Addressing). Possible incoming digits are 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international call.
- A 5ESS Gateway switch that requires an FCA international outbound call to leave the office on an MF trunk must assign this CALL TYPE to the digit sequence CC + NN. CC is the Country Code. NN is the National Number.

MEETME: If "MEETME" is entered in the CALL TYPE field, FIXRT forms (5301 Records) must be submitted with FIXED ROUTE TYPES of "ATCANIF" and "ATCINT".

NORM555: For 5E16 and later, when CALL TYPE is "NORM555", TRIG NBR and CDI must be entered.

OPINW: The OSPS TA field on the OSPSOPT form must be "Y".

SPAB800: Special Access Basic 800 service allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAB800" on the TKGRP form).

SPAM800: MEGACOM 800 service is a discount service which allows calls that terminate at a 5ESS Toll Switch to be routed to a customer's PBX over a dedicated trunk group (TRKCLS of "SPAM800" on the TKGRP form). MEGACOM 800 service is similar to Special Access Basic 800 service except the customer must supply the dedicated trunk group to the 5ESS Toll Switch.

STG1FCA: This value should be used for the first stage of a multi- stage international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form is "Y") which will use FCA. This Call Type may be assigned to incoming digit sequences 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international call.

4.7 CI TYPE

Description: Enter the type of CI (Carrier Interconnect) call. See Figure 1 for appropriate entries per Call Type.

Valid CI TYPE Entries	
Entry	**Definition**

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COMP	Used for calls to a geographical area where the LEC (Local Exchange Carrier) and ICs (InterLATA Carriers) compete on an equal basis. Such calls must be routed by a carrier, but this "carrier" may be the LEC. If the subscriber wants to be routed via the LEC, the subscriber must either be presubscribed to the LEC or dial an explicit FGD CAC.
CONFL	Used for cases where the call may be either INTER (InterLATA) or INTRA (IntraLATA), depending on the dialed prefix. See Data Rules for more information.
INTER	Used for calls destined for outside the LATA. Such calls must be routed via a carrier, not the LEC.
INTRA	Used for calls destined for within the LATA. Usually routed via the LEC. If other carriers are permitted and accept IntraLATA calls, an explicit FGD CAC must be dialed (not presubscription) to access the carriers for these calls.
INTRM	FGB Interim call is used for an incoming trunk call dialed by the originator as 950XXXX. The 950 digits are entered in the PREVIOUS DIGITS. The XXXX represents a Carrier Identification Code. These calls may be from a non-EAEO and less than the seven digits may be received as would then be reflected in the PREVIOUS DIGITS. When "INTRM" is entered, the last four digits inpulsed (i.e., the Carrier Identification Code) will be used to enter the ICF form (5305 Record) to access the Carrier's FGB CDI and FGB RTI.
NONCI	Normal tandem traffic or feature activation codes.
PRIV	Used for EAS (Extended Area Service) calls where the local calling area extends into the neighboring LATA. These InterLATA calls are treated as INTRA (routed by the LEC) except when the subscriber explicitly dials an FGD CAC for an IC. When the FGD CAC is dialed, the call is treated as INTER.
PSCAR	Used for Packet Switching Carrier calls.
PSNCI	Used for Packet Switching Non-Carrier calls.
TCONF	Software Release: 5E9(1) and later. Intra-LATA toll. Toll calls within the LATA. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TCONF", a SFSYS form must exist with SFID 149 set to "Y".
TOLL	Software Release: 5E9(1) and later. IntraLATA toll conflict. This entry supports the Intra-LATA PIC capability. With TYPE OF CI CALL set to "TOLL", a SFSYS form must exist with SFID 149 set to "Y".
WZ1	Used for calls outside the continental United States, but within World Zone 1 (e.g., Canada).

Data Rules:

This field must be entered for all CALL TYPEs except "CONFLCT".

When CI TYPE is "PSNCI" or "PSCAR",

- CALL TYPE must be "NORMAL" or "900", and
- TRIG NBR cannot be entered.

When TYPE OF CI CALL equals "COMP", "CONFL", "INTER", "PRIV", "TRANS", or "WZ1", an ICF form must exist.

CONFL: Call processing will look ahead at other records to determine if the call should be treated as IntraLATA or InterLATA. When no prefix has been dialed, the ROUTE INDEX value of this LDIT entry will be compared to the RTI value entered in the No Prefix column of the originator's Rate and Route form (5301 Record). If the RTI value equals the ROUTE INDEX value or is "REGL", it is considered a match and treated as an IntraLATA call. If the RTI is not equal to the ROUTE INDEX value, there is no match and therefore the call will be treated as an InterLATA call. When a 1 prefix has been dialed, the process is the same as the No Prefix case, except the RTI value found in the 1+ Prefix column of the RAR is used for comparison. When a 0 prefix has been dialed, the comparison technique is inappropriate. In this case, the 0+ Prefix entry in the RAR will be read. The RTI value in that entry will be analyzed to determine whether or not it is an Announcement Route Index. If it is an announcement, the call will be processed as an InterLATA call. If it is not, the call will be treated as an IntraLATA call. When the zero plus call should be treated as an InterLATA carrier call and therefore the RAR has an announcement type Route Index, care must be taken to make sure the associated CBLK entry equals "N".

PSCAR: When using this type of CI Call, the CALL TYPE must be "NORMAL" or "900".

PSNCI: When this TYPE OF CI CALL is used, a CALL TYPE of "NORMAL", "900" or "VACANT" must be

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entered.

Packet Switching CI TYPEs "PSCAR" and "PSNCI", cannot be mixed with non-Packet Switching CI TYPEs within a single DAS.

WZ1: All forms with CI TYPE equals "WZ1" which have the first three digits (that is, the NPA (Numbering Plan Area)) in the PREVIOUS DIGITS fields must have the same value for WZ1 REG.

For 5E15 and later, when CONFRES.CALL TYPE is "BUSOFC", "LOCDA", "RELAY", or "REPAIR", CONFRES.CI TYPE must be "INTER", "INTRA", or "TOLL".

4.8 CDI

Description: The Code Index combined with a Screening Index is used as an input to the Rate and Route Tables. Code Index 1 (0-) and Code Index 2 (010) may not be entered on the RDIT Record.

CODE INDEX is a real Code Index and not a pointer to the DISERV form (5321 Record).
Valid Entries: 3 - 4095

Data Rules:

This field must be blank if the CALL TYPE is "VACANT", "HNPAD", "LTD", "SRTT", "OCTL", "APSDN" or "CSTL".

All combinations of CDI and RDTA SCRN IDX from the OFCOPT form must have corresponding RAR form entries for SCR and CDI.

4.9 RTI

Description: This field indicates the Regular Route Index to be used for routing the call except when a Special Route Index entered on the RAR overrides it. The Regular Route Index is the route which is used by the majority of call originators to complete the call.

The SSP/800 feature uses the RTI (or NXX) field when the SCP query response requests LEC routing, even when CI TYPE is "INTER".

The ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

When the CALL TYPE is "VACANT", "HNPAD", "LTD", "APSDN", "SRTT", "OCTL" and "CSTL", this field must be blank.

When the Call Type is other than those listed above, this field or the OFFICE CODE field must be entered.

ROUTE INDEX must be defined on an RTIDX form, and should not have a ROUTE TYPE of "BUSY" or "REORDER" on that form. If ROUTE TYPE is "HUNT", the TRK DIR pointed to must not be "ANN".

4.10 POLY

Description: Is polygrid routing used for DSN (Defense Switched Network) offices?

Enter "N" for non-DSN offices.
Valid Entries: Y, N

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Data Rules:

If an RTI assigned with POLY equals "Y", that RTI must equal POLY RT NUM on a PPPOLY form.

When CI TYPE is "PSNCI" or "PSCAR", POLY cannot be entered.

4.11 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NXX growth to 8000 secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

Data Rules:

When NPA is entered, NXX must be entered.

4.12 NXX

Description: Enter an Office Code (NXX) served by the 5ESS Switch (i.e., defined on the NOC form). If an Office Code is entered, it will be entered to "route" the call to a Directory Number of this NXX in this office, except when overridden by a Special Route Index entered in the Route Index field of the RAR form.

The SSP/800 feature uses the NXX (or RTI) field when the SCP query response requests LEC routing, even when CI TYPE is "INTER".

Data Rules:

When the CALL TYPE is "VACANT", "HNPAD", "LTD", "SRTT", "APSDN", "SPAB800", "SPAM800", "IDDDFCA", "IDDDSTS", "OCTL" or "CSTL", this field must be blank. When the Call Type is other than these, an entry is required in this field or in the ROUTE INDEX field.

For 5E12 and later, if the RDIT forms have a "CONFLICT RESOLUTION.NXX" defined in the rows indicated by NBR DIGS and there are multiple NOC forms with the same value of NXX, "CONFLICT RESOLUTION.NPA" must also be defined in the same row on the RDIT form.

4.13 DESEP

Description: Enter the Destination Separations Index for calls other than "VACANT", "HNPAD", "LTD", "SRTT", "OCTL" or "CSTL". It is only required for Division of Revenue Study.
Valid Entries: 1 - 255

Data Rules:

If a DESEP is entered, it must be defined on the TRFSEP form (5308 Record).

4.14 WZ1 REG

Description: For codes with a TYPE OF CI CALL equal to WZ1, enter a World Zone 1 region. This digit is used in the first stage of outpulsing for INCs (International Carriers) on either a direct connection or via an Access Tandem. The first stage of outpulsing has a format of KP + 1NX + XXX + 01R + ST, where R is the World Zone 1 region. (1NX is a spare toll center code entered on the Route Index as prefix digits. XXX is the Carrier Identification Code.) For other than WZ1 types, leave this field blank.
Valid Entries: 0 - 9

4.15 TERM LATA

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Description: This field is used as the InterLATA Carrier when Network Call Denial Screening is required on incoming CAMAANI Trunk Groups. The TERM LATA value is compared to an ORIG LATA value specified on the TKGRP form (5202 Record).

Valid TERM LATA Entries

Entry	Definition
1	Indicates LATAs not subtending the switch
2 - 15	Indicates a subtending LATA of the switch.
2 - 31	Indicates a subtending LATA of the switch.

Data Rules:

If TYPE OF CI CALL field is "PSNCI" or "PSCAR", this field must be blank.

If TERM LATA is specified, COMMON CHAN SIG must equal to "Y" on the OFCOPT form (5509 Record).

When the Call Type is "NORMAL", "AUTINW", "OPINW" or "DA", enter an appropriate value to indicate, based on incoming digits, the destination of this call.

4.16 NON

Description: Enter the nature of the dialed number. This value is used in the conflict resolution table during query formulation of Network Services calls.

Software Release: 5E8 and later
Valid Entries:

Valid NON Entries

Entry	Definition
IDDD or I	International
NATL or N	Domestic
PRIV or P	Private

Data Rules:

For 5E8 only, when NON is entered, TRIG NBR must be entered.

4.17 TRIG NBR

Description: Enter the Network Services trigger as defined on the NSTRIG form.
Valid Entries:

- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

Data Rules:

For each row of the CONFLICT RESOLUTION ENTRIES list, when TRIG NBR is entered,

- TERM LATA cannot be entered, and
- CDI must also be entered.

For 5E8 only, if ASP OFC on an OFCOPT form equals "SSP", and TRIG NBR equals TRIG NBR on an NSTRIG form where APPLICATION equals "ASP", NON must also be assigned.

If TRIG NBR equals TRIG NBR on an NSTRIG form with SERV KEY equal to "CDPN", and NBR DIG is neither 7 nor greater than 9, ALT GBL TITLE on NSTRIG must be known.

If TRIG NBR equals TRIG NBR on an NSTRIG form with APPLICATION equal to "E911", CALL TYPE

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must equal "EMER" and CI TYPE equal "INTRA".

For a CALL TYPE of "EMER" or "NORMAL", if TRIG NBR is entered and APPLICATION on the corresponding NSTRIG form

- is "E911" or "800", ROUTE INDEX or NXX cannot be entered;
- is "ASP", ROUTE INDEX or NXX must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered.

For 5E15 and later, when CONFRES.CALL TYPE is "RELAY", CONFRES.TRIG NBR must not be entered.

4.18 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

4.19 DFLT RT

Description: The DFLT RT field is used to identify the type of default routing treatment to be used for the ASP Default Routing for 3/6/10-Digit Triggers (Phase 1) Special Feature. When the ASP Special Feature has been purchased, this field can be used to specify the type of default routing to occur when an ASP specific digit trigger query fails.

Software Release: 5E10 and later
Default: NONE
Valid Entries:

Valid DFLT RT Entries

Entry	Definition
ANNC	Default route to announcement (or tone). The call will route to either a tone or announcement, depending on what is defined for the route.
DLDN	Default route to dialed DN. The call will route to the DN dialed (or the DN being routed to if the call came from a trunk).
NONE	No default routing. No special default routing will take place, and normal call treatment will send the call to reorder or NCA (No Circuits Available).

Data Rules:

For 5E9(2) and earlier, if an RDIT form has a DFLT RT or CONFLICT RESOLUTION ENTRIES DFLT RT entry other than "NONE", the corresponding TRIG NBR must be defined on the NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1"

For 5E10 and later, when the RDIT forms have a DFLT RT entry or a CONFLICT RESOLUTION ENTRIES DFLT RT entry other than "NONE", the corresponding TRIG NBR must be defined on a NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

When DFLT RT is not "NONE", either TRIG NBR must be entered or LNP TRIG NBR must be 1 - 255.

4.20 ANI BYPASS

Description: Will ANI Table options be ignored? An entry of "N" indicates TDX ANI Table options will be processed. This field supports the TDX (Toll Digital Exchange) ANI Table Call Processing Feature. This is

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a secured feature with SFID 235. For more information on this feature, see Division 2, Section 4A165.

Software Release: 5E10 and later
Default: N

Valid Values: Y, N

5. FORM ENTRIES - 5300-8B RECORD

5.1 BASE AND CONTROL, ESS UNIT

CONFLICT RESOLUTION

Enter the Base and Control Group Number and Office Name on each record.

5.2 * RDIT

Description: Enter the Remaining Digits Interpreter Table Number.

Required Field.
Valid Entries: 1 - 999

5.3 * PREVIOUS DIGITS

Description: Enter the digits defined on the LDIT or MLDIT form as INCOMING DIGITS.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

5.4 * REMAINING DIGITS

Description: Enter the remaining digits.

Required Field.
Valid Entries: up to 15 digits (0 - 9)

5.5 LNP TRIG NBR

Description: Enter the LNP trigger number. The LNP trigger number is a conditional trigger which initiates a query to the SCP (Service Control Point) based on further routing determinations and checks following the trigger detection. checks following the trigger detection. The "IGN" entry means ignore.

Software Release: 5E11 and later
Required Field.
Default: IGN

Valid Values: IGN, or 1 - 255

Data Rules:

When LNP TRIG NBR is entered, CI TYPE must be "INTER", INTRA", "TOLL", "COMP", "PRIV", "NONCI", "TCONF", or "CONFL".

5.6 GEO PORT

Description: Any geographically ported DNs? This field, when set to "Y", indicates geographic porting has occurred for at least one DN associated with this RDIT entry.

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Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

Data Rules:

When GEO PORT is "Y", LNP TRIG NBR must be 1 - 255.

5.7 PORTED IN

Description: Any ported DN terminations? This field, when set to "Y", indicates that there exists at least one DN termination in this office associated wtih this LDIT digit translation even though a route index (not an office code) is provisioned for this RDIT translation.

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

Data Rules:

When PORTED IN is "Y", CI TYPE must be "INTER", INTRA", "TOLL", "COMP", "PRIV", "NONCI", "TCONF", or "CONFL".

When PORTED IN is "Y", RTI must be entered.

When PORTED IN is "Y", OFFICE CODE must be entered.

5.8 HOME LRN

Description: Is this a home location routing number? This field is set to "Y" when the LRN represents this switch or a rate center in this switch.

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

5.9 LRN SCRN

Description: Use screening attributes for LRN? This field is set to "Y" when the LRN a rate center in this switch which would imply that the TYP CI CALL and CDI from analysis of this LRN should be used.

Software Release: 5E11 and later
Required Field.
Default: N

Valid Values: Y, N

5.10 INH DNT

Description: Inhibit processing of dialed number triggers?

Software Release: 5E11 and later

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Required Field.
Default: N

Valid Values: Y, N

5.11 GETS HPC

Description: Is GETS (Government Emergency Telecommunication Service) HPC (High Probability Call Completion Service) required? The GETS HPC field is used as an indicator to mark GETS HPC calls so that enhanced functionality provided by other HPC capabilities (e.g., Trunk Queuing, ISUP Signaling, Exemption from Network Management Controls) can be invoked. When set to "Y", calls translated to this address receive special treatment resulting in a higher probability of call completion. For more information, see Division 2, Section 4A279.

The use of HPC Network Capabilities is restricted in the United States and U.S. Territories to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be co-ordinated with the OMNCS at the following address:

Office of the Manager
National Communication System
Attn: GETS Program Office
701 South Courthouse Rd
Arlington, VA, 22204-2198
email: gets@ncs.gov

Data Rules:

When GETS HPC in CONFLICT RESOLUTION ENTRIES is "Y"

- NBR DIG must be 10
- CALL TYPE must be "NORMAL"
- CI TYPE must be "COMP", "CONFL", "INTER", "INTRA", "NONCI", "PRIV", "SAC", "TCONF", "TOLL", or "WZ1"

5.12 DENY XFER

Description: This field is used to indicate if call transfers to a particular digit string should be denied.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later:

- When DENY XFER in CONFLICT RESOLUTION ENTRY (CONFRES) is "Y", CALL TYPE must be "EMER".
- When DENY XFER on the LDIT form is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y". "Y" being set on the SFSYS form indicates that the "Deny Transfer of Digit Screened Calls" feature has been purchased.

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5.13 REL LINK

Description: Is this a release link directory assistance number? This field is used to indicate whether or not the digits being translated map to a release link directory assistance number.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For each row of the CONFLICT RESOLUTION ENTRIES (CONFRES) list, when REL LINK is "Y":

- CALL TYPE must be "DA", "LOCDA", "NORM555", or "NORMAL".
- One of the following two conditions must exist:
  - For the Release Link for Toll Office feature using ANSI (American National Standards Institute) standard signaling, the ACT field for SFID 520 on the SFSYS form (5713-1 Record) must be set to "Y"; or
  - For the Release Link for Toll Office feature using TOPS (Operating System for DMS (Data Management System)) nonstandard signaling, the ACT field for SFID 521 on the SFSYS form must be set to "Y".

5.14 NPA SPLIT ANNC

Description: Should caller be given a warning announcement if dialing a 7-digit or 10-digit number during permissive period of NPA (Numbering Plan Area) Split?

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NPA SPLIT ANNC in CONFLICT RESOLUTION ENTRIES is "Y", NBR DIG must be "7" or "10".

CALL TYPE	NBR OF DIGITS	TYPEs OF CI CALL	CODE INDEX	ROUTE INDEX	OFFICE CODE	DESEP
100	3 or 6	NONCI	required	optional	optional	
101R	3 or 6	NONCI	required	optional	optional	
101TAT	6 or 9	NONCI	required	optional	optional	
101TP	5 or 8	NONCI	required	optional	optional	
101	3 or 6	NONCI	required	optional	optional	
102	3 or 6	NONCI	required	optional	optional	
103	3 or 6	NONCI	required	optional	optional	
104R	3 or 6	NONCI	required	optional	optional	
104	3 or 6	NONCI	required	optional	optional	
105R	3 or 6	NONCI	required	optional	optional	
105	3 or 6	NONCI	required	optional	optional	
106		NONCI	required	optional	optional	
109R	3 or 6	NONCI	required	optional	optional	
606R	3 or 6	NONCI	required	optional	optional	
900	10	any	required	optional	optional	
		PSCAR	blank	blank	blank	
ADDON		NONCI	optional	required		
APSDN	3, 7, or 10	NONCI	blank	blank		

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AUTINW	6 to 11	any but TRANS	required	required		
BBRITL	7	NONCI	blank	blank	blank	blank
BRITL	3 or 7	NONCI	blank	blank	blank	blank
BUSOFC	3	INTRA				
CONFLCT	7 or 10	blank	blank	blank	blank	blank
CSTL	3	NONCI	blank	blank	blank	blank
DA2VDT	10	any	required	optional	optional	
DA	7	any but TRANS	required	optional	optional	
ECP	1 - 15	NONCI	blank	blank	blank	blank
EMER	3	INTRA	required	optional	optional	
HNPAD	10	NONCI	blank	blank	blank	blank
IC1 to IC33	5	NONCI	required	optional	optional	
IDDDFCA	7 to 14	NONCI	required	required	blank	
IDDDSTS	6	NONCI	required	required	blank	
INV		NONCI	required	optional	optional	
INWATS	10	any	required	optional	optional	
LCP	3	NONCI	blank	blank	blank	blank
LOCDA	3	INTRA	required	optional	optional	
LTD	3	NONCI	blank	blank	blank	blank
MEETME		NONCI	optional	required		
NINV		NONCI	required	optional	optional	
NORMAL	3, 7, or 10	any	required			
		PSCAR	blank	blank	blank	blank
NS800	10	NONCI	blank	blank		
OCTL	3	NONCI	blank	blank	blank	blank
OPINW	6 to 11	any but TRANS	required	required		
OPNIT	10	any	required	optional	optional	
OSOIWTS	10	NONCI	blank	blank	blank	blank
PB	3	NONCI	required	optional	optional	
REPAIR	3	INTRA	required	optional	optional	
SD	7 or 10	NONCI	required	required		
SDNE	7 or 10	NONCI	required	optional	optional	
SPAM800	3, 7, or 10	NONCI	required			
SRTT	7	NONCI	blank	blank	blank	blank
STG1FCA	3 or 6	NONCI	blank	blank	blank	blank
SYN	3	NONCI	required	optional	optional	
VACANT	3, 7, or 10	NONCI or PSNCI	blank			
WETESTC	7 or 10	NONCI	allowed	allowed	allowed	allowed

Figure 1 CALL TYPE DEPENDENCIES

---

rdit 5ESS Switch
SCREEN 1 OF 10 OFFCE DATA ADMINISTRATION
(5300-8) REMAINING DIGIT INTERPRETER TABLE

*1. RDIT ___ 13. WZ1 REGION _
*2. PREVIOUS DIGITS _____ 14. TERM LATA __
*3. REMAINING DIGITS _____ 15. NATURE OF NUMBER ___
4. CALL TYPE NORMAL 16. TRIG NBR ___
5. TYPE OF CI CALL _____ 17. ESC CODE N
6. NBR OF DIGITS __ 18. DFLT RT NONE
7. CODE INDEX ____ 19. INH OBL N
8. ROUTE INDEX _____ 20. INH ONA N
9. POLYGRID N 21. ANI BYPASS N
10. NPA ___ 22. REMARK _____
11. OFFICE CODE ___
12. DESEP ___

---

rdit 5ESS Switch
SCREEN 2 OF 10 OFFCE DATA ADMINISTRATION
(5300-8) REMAINING DIGIT INTERPRETER TABLE

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```
LOCAL NUMBER PORTABILITY    29. NODAL IDX _
23. LNP TRIG NBR  IGN       30. DN PREFD  N
24. GEO PORT      N         31. GETS HPC  N
25. PORTED I      N         32. DENY XFER N
26. HOME LRN      N
27. LRN SCREENING N
28. INH DNT       N
```

```
rdit                        5ESS Switch
SCREEN 3 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                       WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 1  __ _______ ______ ____ _____  _   ___ ___  ___   _   __  ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 1  ____ _  _   _     ___     _    _    _   _   _   _    _   _

   DENY
ROW XFER
 1  _
```

```
rdit                        5ESS Switch
SCREEN 4 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                       WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 2  __ _______ ______ ____ _____  _   ___ ___  ___   _   __  ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 2  ____ _  _   _     ___     _    _    _   _   _   _    _   _

   DENY
ROW XFER
 2  _
```

```
rdit                        5ESS Switch
SCREEN 5 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                       WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 3  __ _______ ______ ____ _____  _   ___ ___  ___   _   __  ____ ___   _
```

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```
   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 3 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY
ROW XFER
 3  _
```

```
rdit                        5ESS Switch
SCREEN 6 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                        WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 4 __ _______ ______ ____ _____  _   ___ ___ ___   _   __ ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 4 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY
ROW XFER
 4  _
```

```
rdit                        5ESS Switch
SCREEN 7 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                        WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 5 __ _______ ______ ____ _____  _   ___ ___ ___   _   __ ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 5 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY
ROW XFER
 5  _
```

```
rdit                        5ESS Switch
SCREEN 8 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                        WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 6 __ _______ ______ ____ _____  _   ___ ___ ___   _   __ ____ ___   _
```

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```
   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 6 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY
ROW XFER
 6  _
```

```
rdit                        5ESS Switch
SCREEN 9 OF 10          OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 7 __ _______ ______ ____ _____ _  ___ ___ ___  _  __ ____ ___  _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 7 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY
ROW XFER
 7  _
```

```
rdit                        5ESS Switch         _
SCREEN 10 OF 10         OFFCE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

            33. CONFLICT RESOULTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 8 __ _______ ______ ____ _____ _  ___ ___ ___  _  __ ____ ___  _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 8 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY
ROW XFER
 8  _
```

Figure 2 SAMPLE RDIT FORM 5E13 SOFTWARE RELEASE

```
rdit                        5ESS Switch
SCREEN 1 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

*1. RDIT          ___              13. WZ1 REGION      _
*2. PREVIOUS DIGITS _________________    14. TERM LATA       __
*3. REMAINING DIGITS _________________   15. NATURE OF NUMBER ____
```

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```
 4. CALL TYPE        NORMAL          16. TRIG NBR        ___
 5. TYPE OF CI CALL  ______          17. ESC CODE        N
 6. NBR OF DIGITS    __              18. DFLT RT         NONE
 7. CODE INDEX       ____            19. INH OBL         N
 8. ROUTE INDEX      _____           20. INH ONA         N
 9. POLYGRID         N               21. ANI BYPASS      N
10. NPA              ___             22. REMARK          _________________
11. OFFICE CODE      ___
12. DESEP            ___
```

Remaining digits interpreter table number. Enter 1 - 999.

```
rdit                          5ESS Switch
SCREEN 2 OF 10           OFFICE DATA ADMINISTRATION
(5300-8)              REMAINING DIGIT INTERPRETER TABLE

LOCAL NUMBER PORTABILITY    29. NODAL IDX _
23. LNP TRIG NBR  IGN       30. DN PREFD  N
24. GEO PORT      N         31. GETS HPC  N
25. PORTED IN     N         32. DENY XFER N
26. HOME LRN      N         33. REL LINK  N
27. LRN SCREENING N
28. INH DNT       N
```

```
rdit                          5ESS Switch
SCREEN 3 OF 10           OFFICE DATA ADMINISTRATION
(5300-8)              REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                        WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 1  __ _______ ______ ____ _____  _  ___ ___  ___  _  __ ____ ___  _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 1  ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
```

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```
 1  _   _
```

```
rdit                        5ESS Switch
SCREEN 4 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 2  __ _______ ______ ____ _____  _   ___ ___ ___   _  __ ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 2  ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 2  _   _
```

```
rdit                        5ESS Switch
SCREEN 5 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 3  __ _______ ______ ____ _____  _   ___ ___ ___   _  __ ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 3  ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 3  _   _
```

```
rdit                        5ESS Switch
SCREEN 6 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
```

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```
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 4  __ _______ ______ ____ _____  _  ___ ___ ___  _  __ ____ ___  _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 4 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 4  _   _
```

```
rdit                        5ESS Switch
SCREEN 7 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 5  __ _______ ______ ____ _____  _  ___ ___ ___  _  __ ____ ___  _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 5 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 5  _   _
```

```
rdit                        5ESS Switch
SCREEN 8 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 6  __ _______ ______ ____ _____  _  ___ ___ ___  _  __ ____ ___  _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 6 ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 6  _   _
```

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```
rdit                        5ESS Switch
SCREEN 9 OF 10          OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 7  __ _______ ______ ____ _____  _   ___ ___  ___   _   __ ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 7  ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 7  _   _
```

```
rdit                        5ESS Switch        _
SCREEN 10 OF 10         OFFICE DATA ADMINISTRATION
(5300-8)            REMAINING DIGIT INTERPRETER TABLE

              34. CONFLICT RESOLUTION ENTRIES (CONFRES)
   NBR CALL    CI                          WZ1 TERM      TRIG ESC
ROW DIG TYPE    TYPE   CDI  RTI   POLY NPA NXX DESEP REG LATA NON  NBR  CODE
 8  __ _______ ______ ____ _____  _   ___ ___  ___   _   __ ____ ___   _

   DFLT INH INH ANI    LNP      GEO  PORTED HOME LRN  INH NODAL DN    GETS
ROW RT   OBL ONA BYPASS TRIG NBR PORT IN     LRN  SCRN DNT IDX   PREFD HPC
 8  ____ _  _   _     ___    _    _    _   _   _   _    _   _

   DENY REL
ROW XFER LINK
 8  _   _
```

Figure 3 SAMPLE RDIT FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 3I: 5302-1 RECORD
CHARGE INDEX EXPANSION FORM - CGIDX

1. GENERAL

The 5302-1 Record is available in 5E2 and later Software Releases and is used to define Charge Indexes. This record must be completed for each Charge Index that is assigned on an RAR form (5301 Record).

Several AMA (Automatic Message Accounting) Call Types are available for OUTWATS billing to distinguish between IntraLATA (Local Access And Transport Area) and InterLATA calls. If a SPECIAL BILL NBR is defined on a PFASFG form (5609-3 Record), this number will be used as the billing number. If a SPECIAL BILL NBR is not defined, the terminal's billing number will be used.

Other AMA Call Types are available for additional billing requirements of Carrier Interconnect. For calls originating from a coin telephone and destined for a carrier, a FGBOL (Feature Group B Originating LATA) or FGDOL (Feature Group D Originating LATA) billing record is needed. For these Feature Group originating calls, the Charge Index is defined with an MBI TYPE equal to "C", and a CNCHG form (5302-4 Record) must also be entered. FGBOL and FGDOL Charge Indexes may also be defined for non-coin use.

For 5E6 and later Software Releases, operating companies can make use of two fields (ALT SFC and ALT CC) on this form to control the recording of an SFC (Service Feature Code) or CC (Call Code). The ALT SFC field is used to identify a specific feature invoked during a call; ALT CC is used to identify a specific service provided to an end user.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CHARGE INDEX

Description: Enter the Charge Index being defined.

Required Field.
Valid Entries:

For 5E3 and later: 1 - 2047

2.3 # AMA CALL TYPE

Description: Enter the AMA Call Type assigned to the Charge Index. Valid entries for this field are a subset of the AMA CALL TYPEs defined on the AMACT form (5506 Record).

Required Field.

Valid AMA CALL TYPE Entries

Entry	Definition
ATTSP	AT&T Station Paid. Used by an IEC (Interexchange Carrier) switch on calls from an Equal Access End Office or Access Tandem using Equal Access Signaling, or from directly connected lines.Call Type 60.
CCSAS	Software Release: 5E3 and later. CCSA (Common Control Switching Arrangement) Sampling. Call code 21.

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CFPFNA	No Simulated Answer for Call Forwarding over PrivateFacilities. Same as "TANTTK" except call processing does notgenerate simulated answer. Call code 32.
CMC	Software Release: 5E4(2) and later. Cellular Mobile Carrier.Used for billing when an incoming call originates on a Trunk Groupdefined on a TKGRP form (5202 Record) with the CMC field set to "Y". Call Code 306.
DA411	Local Directory Assistance calls. When used for coin, this field must also contain an MBI (Message Billing Index) assigned on aCNCHG form. Call code 9.
DA555	Toll Directory Assistance calls. When used for coin, this field must also contain an MBI assigned on a CNCHG form. Call code 33.
DMRT	Detail billed, message rate, timed. Call code 5.
DMRTM	Detail billed, message rate, timed, includes an MBI. Call code 1.
DMRUM	Detail billed, message rate, untimed, includes an MBI. Call code 3.
ETCCSA	Software Release: 5E3 and later. Electronic Tandem CCSA. Call code 99.
ETMDR	Software Release: 5E3 and later. Electronic Tandem Message Detail Recording (via Revenue Accounting Office). Call code 85.
FGBOL	Feature Group B Originating LATA. Call code 134.
FGBTL	Feature Group B Terminating LATA. Call code 135.
FGDOL	Feature Group D Originating LATA. Call code 110.
FGDTL	Feature Group D Terminating LATA. Call code 119.
FGDWBL	Feature Group D WATS (Wide Area Telephone Service) Originating LATA. Used for interLATA calls with a Group Billing Number. Call code 114.
FR	Flat-rate calls. This AMA Call Type should be used for local calls from telephone subscribers having flat-rate service. AMA CALL TYPE "FREE" should be used for free calls from a flat-rate line. Call code 67. (Recorded only if under study.)
FREE	Free calls. This AMA CALL TYPE should be used for all free calls from non-coin lines. Free calls from coin lines should be assigned AMA CALL TYPE "LOCN". Calls to Traffic Service Position System, tones, announcements, business office and free terminating line service are normally designated as free. Call code 74. (Recorded only if under study.)
FX	Foreign Exchange. Call code 11.
ICVPN	Software Release: 5E6 and later. Originating Access to an IEC Private Virtual Network. Call code 263.
ISDATA	Software Release: 5E3 and later. ISDN data intraLATA Circuit-Switched calls. Call code 072.
ISDNOL	Software Release: 5E3 and later. ISDN data originating interLATA Circuit-Switched calls. Call code 117.
ISDNTL	Software Release: 5E3 and later. ISDN data terminating interLATA Circuit-Switch calls. Call code 121.
LOCN	Local coin calls. This AMA CALL TYPE should be used for all calls from coin lines except calls to local or toll Directory Assistance. For those calls, AMA CALL TYPEs "DA411" and "DA555" should be used. "FGBOL" and "FGDOL" may also be defined for coin calls. This AMA CALL TYPE must contain an MBI assigned on a CNCHG form. A "C" must be entered in the MBI TYPE field for this AMA CALL TYPE. Call code 41.
MRTM	Message rate, timed, includes an MBI. Call code 2.
MRUM	Message rate, untimed, includes an MBI. Call code 4.
PSVC	Software Release: 5E4(2) and later. ISDN Packet SwitchingVirtual Call. Call code 080 (5E4(2) and 5E5). Call code 180(5E6 and later).
PSIVC	Software Release: 5E4(2) and later. ISDN Packet Switching Intra Group Virtual Call. Call code 378.
SP	Station paid. Provides details for a direct dialed, station paid 7 or 10-digit call. Call code 6.
TANTTK	Tandem Tie Trunk calls. Call code 32.
WATISB	WATS individual station paid. Used for intraLATA calls with a Station Billing Number. Call code 7.
WATSB	WATS using a Special Billing Number. It is for intraLATA calls with a Group Billing Number. Call code 68.
WATSBL	WATS station billed interLATA. Used for interLATA calls with a Station Billing Number. Call code 111.

2.4 MBI TYPE

Description: Enter the MBI (Message Billing Index) Type.

Required Field.

Valid MBI TYPE Entries

Entry	Definition
C	Coin use only. Allowed only for AMA CALL TYPEs of "DA411", "DA555", "LOCN", "FGBOL", and "FGDOL".

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M	Message Register use only. Allowed only for AMA CALL TYPEs of "DMRT", "DMRTM", "DMRUM", "FR", "MRTM", or "MRUM".
N	Non-coin, non-Message Register use only.

Data Rules:

If a "C" or "M" is entered, an MBI/WATS BAND must be entered.

2.5 MBI/WATS BAND

Description: Enter either an MBI Number, or a WATS Band Number.
Valid Entries: 0 - 9 for WATS, 1 - 255 for MBI

Data Rules:

An entry is required in this field when the MBI TYPE is "C" or "M", or when the AMA CALL TYPE is "WATSB".

For an MBI TYPE of "C", the MBI entered in this field must be defined on the CNCHG form. This record provides coin charge information which is used on the AMA record. This is determined by the value entered in the INCLUDE MBI/WATS BAND field on the AMACT form (5506 Record) for the specified AMA CALL TYPE. Normally, the MBI will not be included on the AMA record.

For an MBI TYPE of "M", the MBI entered in this field must be defined on an MREG form (5302-5 Record). This record provides Message Register data. If the MBI is to be used as a Hotel/Motel message register, it must be defined on the MREG form. In addition, the MBI may or may not be included on the AMA record. This is determined by the value entered in the INCLUDE MBI/WATS BAND field on the AMACT form for the specified AMA CALL TYPE. WATSB", "WATISB", "WATSBL" or "FGDWBL"; however, the values 0 - 9 are usually used; 1 - 255 for all other AMA CALL TYPEs.>

2.6 WATS TYPE

Description: Enter the WATS Type.

Valid WATS TYPE Entries

Entry	Definition
MT	Measured Time.
FB	Full Business Day.

Data Rules:

This field requires an entry for AMA CALL TYPEs "WATSB", "WATISB", "WATSBL", and "FGDWBL". An entry is prohibited for all other AMA CALL TYPEs.

2.7 DATA CHARGE INDEX

Description: Enter the charge index associated with ISDN Circuit-Switched data calls. This index provides a means to charge data calls differently from a voice call.

If the data call is to be charged the same as a voice call, this index should have the same value as the CHARGE INDEX entry. For voice calls, this field can be left blank or have the same value as the CHARGE INDEX field.

If this field is left blank, it will be defaulted to the CHARGE INDEX value.

Software Release: 5E3 and later
Valid Entries: 1 - 2047

Data Rules:

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If the DATA CHARGE INDEX value is the same as the CHARGE INDEX value on another CGIDX form, the DATA CHARGE INDEX field on the other CGIDX form must be left blank. The DATA CHARGE INDEX entered must be defined on another CGIDX form as the key if it differs from the CHARGE INDEX entry.

2.8 REMARKS

Description: Enter any descriptive comments deemed locally necessary.
Valid Entries: up to 16 characters

2.9 ALT SFC

Description: Enter the Alternate SFC (Service Feature Code) used to identify a specific feature of the service invoked in a call.

Software Release: 5E6 and later
Valid Entries: 800 - 999

2.10 ALT CC

Description: Enter the Alternate Service Call Code used to identify a specific service provided to an end user.

Software Release: 5E6 and later
Valid Entries: 800 - 999

2.11 MAX OWATS

Description: Is this a Maximal Subscribed OUTWATS charge index?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "N" when AMA CALL TYPE is not "WATSB", "FGDWBL", "WATISB", or "WATSBL".

```
cgidx                    5ESS Switch                _
(5302-1)              OFFICE DATA ADMINISTRATION
                    CHARGE INDEX EXPANSION

* 1.  CHARGE INDEX      1010
  2.  AMA CALL TYPE     ISDATA
  3.  MBI TYPE          N
  4.  MBI / WATS BAND   ___
  5.  WATS TYPE         __
  6.  DATA CHARGE INDEX 1010
  7.  REMARK            ISDN DATA CALLS
```

Figure 1 SAMPLE CGIDX FORM 5E3 - 5E5 SOFTWARE RELEASES

```
cgidx                    5ESS Switch                _
(5302-1)              OFFICE DATA ADMINISTRATION
```

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CHARGE INDEX EXPANSION

*1. CHARGE INDEX 1010
#2. AMA CALL TYPE ISDATA
3. MBI TYPE N
4. MBI / WATS BAND ___
5. WATS TYPE __
6. DATA CHARGE INDEX 1010
7. REMARK ISDN DATA CALLS
8. ALT SFC ___
9. ALT CC ___
10. MAX OWATS N

Figure 2 SAMPLE CGIDX FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3K: ESS 5302-3 RECORD
MESSAGE REGISTER RATE RECORD - RATE

1. GENERAL

The 5302-3 Record is available with 5E2 and later Software Releases and is used to define the Charge Rate assigned to the 24 hours of the day for Message Registers.

The Message Register Rate Record provides charge data for each day of the week and holiday in half-hour increments. This permits the user to have flexibility in Message Register Charging.

For an initial office, ODA builds the RATE forms. Therefore, minimal changes need to be made by the user. See Figure 1 for RATE entries built by ODA.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.15.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and Office Name on each record.

2.2 * DAY

Description: Enter day of the week or holiday.

The days of the week and holiday are preprinted on the 5302-3 Record.

Required Field.

Valid DAY Entries

Entry	Definition
MON	Monday
TUE	Tuesday
WED	Wednesday
THU	Thursday
FRI	Friday
SAT	Saturday
SUN	Sunday
HOL	Holiday

2.3 RATE

Description: The 24 hours of the day, in half hour increments, are preprinted on the form. For each DAY/TIME period, enter the Charge Rate.

Valid RATE Entries

Entry	Definition
D	Day
E	Evening
N	Night

RATE ENTRIES BUILT BY ODA

HOURS	MON - FRI	SAT	SUN	HOL
00:00-07:59	N	N	N	N
08:00-16:59	D	N	N	N
17:00-22:59	E	N	E	N
23:00-23:59	N	N	N	N

Figure 1 RATE ENTRIES BUILT BY ODA

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```
rate                    5ESS Switch          _
5302-3              OFFICE DATA ADMINISTRATION
                  MESSAGE REGISTER RATE

* 1.  DAY  MON

2.  00:00-00:29  D  14. 06:00-06:29  D  26. 12:00-12:29  D  38. 18:00-18:29  D
3.  00:30-00:59  D  15. 06:30-06:59  D  27. 12:30-12:59  D  39. 18:30-18:59  D
4.  01:00-01:29  D  16. 07:00-07:29  D  28. 13:00-13:29  D  40. 19:00-19:29  D
5.  01:30-01:59  D  17. 07:30-07:59  D  29. 13:30-13:59  D  41. 19:30-19:59  D
6.  02:00-02:29  D  18. 08:00-08:29  D  30. 14:00-14:29  D  42. 20:00-20:29  D
7.  02:30-02:59  D  19. 08:30-08:59  D  31. 14:30-14:59  D  43. 20:30-20:59  D
8.  03:00-03:29  D  20. 09:00-09:29  D  32. 15:00-15:29  D  44. 21:00-21:29  D
9.  03:30-03:59  D  21. 09:30-09:59  D  33. 15:30-15:59  D  45. 21:30-21:59  D
10. 04:00-04:29  D  22. 10:00-10:29  D  34. 16:00-16:29  D  46. 22:00-22:29  D
11. 04:30-04:59  D  23. 10:30-10:59  D  35. 16:30-16:59  D  47. 22:30-22:59  D
12. 05:00-05:29  D  24. 11:00-11:29  D  36. 17:00-17:29  D  48. 23:00-23:29  D
13. 05:30-05:59  D  25. 11:30-11:59  D  37. 17:30-17:59  D  49. 23:30-23:59  D
```

Figure 2 SAMPLE RATE FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3L: 5302-4 RECORD
COIN CHARGE FORM - CNCHG

1. GENERAL

The 5302-4 Record is available with 5E2 and later Software Releases, and is used for a Message Billing Index that is assigned to a Coin Charge Index.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.13.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MBI

Description: Enter the Message Billing Index number assigned to the Coin Charge Index. Message Billing Indexes are assigned on the 5302-1 Record.

Required Field.
Valid Entries: 1 - 255

2.3 COIN CALL TYPE

Description: Enter the Type of Coin Call.

Valid COIN CALL TYPE Entries

Entry	Definition
FREE	Used for free calls which do not require operator inbandor expanded inband signaling. These calls donot require an initial coin deposit. Ifa coin is deposited, it is returned.
LOCL	Local coin calls which require aninitial coin deposit to complete thecall. Not timed.
LOVT	Local timed coin calls which require an initialcoin deposit to complete the call.The initial coin deposit is collected 30seconds before the end of the initialtime period. At the end of theinitial time period, the LCOP (Local CoinOvertime Prompt) announcementis connected to both parties of thecall. If there is no additional coindeposit within 30 second, the call isdisconnected.
OPR	Any call which uses a Route Index associated with a TrunkGroup that has a trunk classof either "TSPS" or "RECCMPL". The coinis collected or returned based uponoptions set for the operatorTrunk Group.The converse is also true: if theCOIN CALL TYPE is not "OPR", itmay not be associated with either "TSPS"or "RECCMPL".

2.4 INITIAL MINUTES

Description: Initial Minutes are entered only when the Call Type is "LOVT". This field defines the duration in minutes of the initial time period. An entry of 0 indicates that the initial period is not timed.
Valid Entries: 0 - 7 (minutes)

2.5 OVERTIME MINUTES

Description: Overtime Minutes are entered only when the Call Type is "LOVT". This field defines the duration in minutes of the overtime period. An entry of 0 indicates that the overtime period is not timed.
Valid Entries: 0 - 7 (minutes)

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```
cnchg                    5ESS Switch          _
5302-4                OFFICE DATA ADMINISTRATION
                       COIN CHARGE


* 1.  MBI            019
  2.  COIN CALL TYPE   FREE
  3.  INITIAL MINUTES  _
  4.  OVERTIME MINUTES _
```

Figure 1 SAMPLE CNCHG FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3M: 5302-5 RECORD MESSAGE - MREG

1. GENERAL

The 5302-5 Record is available with 5E2 and later Software Releases, and is used to define Message Billing Index numbers assigned to Message Registers.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.14.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MBI

Description: Enter the Message Billing Index number assigned to the Message Register. Message Billing Indexes are assigned on the 5302-1 Record.
Valid Entries: 1 - 255

MESSAGE REGISTER DATA

These fields (Section 2.3 - Section 2.7) are used to assign the rate and the initial and overtime charging for Message Registers.

For each charge rate (night, evening, and day) enter the following information.

2.3 * RATE

Description: Enter the Charge Rate.

Required Field.

Valid RATE Entries

Entry	Definition
D	Day Rate
E	Evening Rate
N	Night Rate

2.4 INITIAL MINUTES

Description: Enter the duration, in minutes, of the initial time period.
Valid Entries: 0 - 7 (minutes)

2.5 INITIAL M.R. PEGS

Description: Enter the initial time period Message Register pulses.
Valid Entries: 0 - 15

2.6 OVERTIME MINUTES

Description: Enter the duration, in minutes, of the Overtime Period.
Valid Entries: 0 - 7 (minutes)

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2.7 OVERTIME M.R. PEGS

Description: Enter the overtime period Message Register pulses.
Valid Entries: 0 - 15

```
mreg                    5ESS Switch
5302-5              OFFICE DATA ADMINISTRATION
                 MESSAGE REGISTER TIME & CHARGE


* 1.  MBI              024
* 2.  RATE             D
  3.  INITIAL MINUTES   3
  4.  INITIAL M.R. PEGS 01
  5.  OVERTIME MINUTES  1
  6.  OVERTIME M.R. PEGS 01
```

Figure 1 SAMPLE MREG FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3P: 5303-1/2 RECORD
ROUTE INDEX FORM - RTIDX

1. GENERAL

The 5303 Record is used to define each Route Index in a 5ESS Switch. The 5303 record is intended to be used as an office record and as a source document for data entry into the RTIDX form.

A Route Index is the output from a Rate and Route Table and is used to define the routing of a call. A Telephone Number may also contain a Route Index for applications requiring special routing (e.g., PBX-DID (Private Branch Exchange-Direct Inward Dialing)).

The Route Index may be an output of the digit analysis form or carrier interconnect form entries as a Regular Route Index, or it may be a Special Route Index found in the Rate and Route Table which overrides the Regular Route Index. A Route Index may also come from a PFAGPA form (5609-5 Record).

The RTIDX form defines the type of routing, the Trunk Group Number to be used, the number of digits to be deleted or prefixed, and an alternate Route Index number.

1.1 Fixed Route Types

Fixed Route Types may require a Route Index assignment. The first one hundred route indexes should be reserved for Fixed Route Types. When a Fixed Route Type is translated as a tone, a Route Index is not required. However, when it is translated as an Announcement or a Trunk Group, a ROUTE INDEX must be assigned. Fixed Route Types are defined on the FIXRT form (5301-1 Record).

1.2 Recent Change View

The corresponding Recent Change View for this form is 10.2. (See also DTRTX (5314 Record) Division 3, Section 3AA for 10.2.)

2. FORM ENTRIES 5303-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 *ROUTE INDEX

Description: Enter the number of the Route Index being defined.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

- ROUTE INDEX cannot exceed 3617 unless the Increased Number of Trunk Groups feature has been purchased and the ACT field for SFID 172 on the SFSYS form is set to "Y".
- ROUTE INDEX cannot exceed 4095 unless the LDP Routing Enhancement feature has been purchased and the ACT field for SFID 189 on the SFSYS form is set to "Y".
- ROUTE INDEX cannot be deleted when it is used as an RTI or an RTIDX on the RTLIST form.

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2.3 ROUTE TYPE

Description: These columns define the type of routing treatment.

Required Field.

Valid ROUTE TYPE Entries

Entry	Definition
HUNT	Hunt for an idle trunk member.
DNTRAN	Software Release: 5E5 and later. Directory Number Transaction. Used for Inter-module trunks secondary routes across NCT links. If an originating call with this ROUTE TYPE terminates on the same switch, the call will terminate across the NCT links. When routing to another switch, a call with this ROUTE TYPE will fail.
BUSY	Busy tone.
MAINT	This is a Recent Change Entry. See "TEST" for the definition.
REORDER	Reorder tone.
TEST	Toll Test calls. For Recent Change View 10.2, enter "MAINT" .

Data Rules:

HUNT - For 5E9(1) and later, ROUTE TYPE must be "HUNT" when the associated trunk group is defined on a TKGRP form with TRKCLS set to "LTPCLBCK", "LTPDCTU", "PACKET", "RAFANNC", "RAFCTR", or "RAFDTA"; it must be "HUNT" or "TEST" when TRKCLS is "LTPISTFL" or "LTPISTFX".

For 5E13 and earlier, when ROUTE TYPE is "HUNT" and the TRUNK GROUP NUMBER is defined as a TGN on the TKGRP form with IMT set to "N", the NEXT ROUTE on the RTIDX form must match the ROUTE INDEX on a second RTIDX form.

TEST - For 5E5 and later, A ROUTE TYPE of "TEST" must be entered when the associated LDIT form has a CALL TYPE of 100, 101, 101R, 101TAT, 101TP, 102, 103, 104, 104R, 105, 105R, 106, 109R, 606R, IC1, IC2, IC3, IC4, IC5, IC6, IC7, IC8, IC9, INV, NINV, PB, or SYN.

DNTRAN - For 5E9(1) and later, a FIXED ROUTE TYPE may not be assigned to a ROUTE INDEX that has a corresponding RTIDX form with ROUTE TYPE of "DNTRAN".

For 5E12 and earlier:

- when ROUTE TYPE is set to "DNTRAN" and CI ROUTE TYPE is set to "NMFAIL", NEXT ROUTE must be defined as the NOC on the NOC form.
- when ROUTE TYPE is set to "DNTRAN" and CI ROUTE TYPE is "NMFAIL", another RTIDX form must exist with ROUTE TYPE set to HUNT and the NEXT ROUTE must match the ROUTE INDEX on the RTIDX form.

For 5E13 only:

- when ROUTE TYPE is set to "DNTRAN" and CI ROUTE TYPE is set to "CALLFORWARD", NEXT ROUTE must be defined as a valid NOC on a NOC form.
- when ROUTE TYPE is set to "DNTRAN" and CI ROUTE TYPE is set to "CALLFORWARD", another RTIDX form must exist with ROUTE TYPE set to "HUNT" and the NEXT ROUTE must match the ROUTE INDEX on the corresponding RTIDX form. In addition, the INTER SM TRK must be set to "N" on the TKGRP form and TRUNK GROUP NUMBER on the RTIDX form must match the TGN on the TKGRP form.

For 5E13 and later:

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When ROUTE TYPE is not "DNTRAN",

- NEXT ROUTE must be 1 - 16382.
- the value of NEXT ROUTE must not be the same as the key ROUTE INDEX.

When ROUTE TYPE is "DNTRAN", NEXT ROUTE must be 1 - 8190.

2.4 # TRUNK GROUP NUMBER

Description: Enter the Trunk Group Number assigned to the Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 - 5E14: 1 - 4000
- For 5E15: 1 - 4000 for circuit trunk groups or 7000 - 7999 for BICC groups
- For 5E16(2) and later: 1 - 4000
- Entries greater than 999 are allowed only when the range of 1- 999 is completely exhausted.

Data Rules:

The trunk group must be defined on a TKGRP form (5202 Record) where TRK DIR is not "INC".

If ROUTE TYPE is "HUNT" or "TEST", this field must be entered; otherwise, it must be blank.

If the ROUTE TYPE is "TEST", the associated TKGRP form must have a TRKCLS of "LTPICTC" entered.

If the TRUNK GROUP NUMBER is defined on the TKGRP form with TRKCLS of "PACKET", "X75P" or "X75", then the following fields on the RTIDX form must be assigned as follows:
- ROUTE TYPE: "HUNT"
- DIGITS TO BE DELETED: 0 (zero)
- PREFIX DIGITS: not entered
- ANI OUTPULSING: "N"
- OVERLAP OUTPULSING: "N"
- SIGNALING PROTOCOL: "TRAD"
- CI ROUTE TYPE: "OTHER"

When TRKCLS is "LTPICTC" on the corresponding TKGRP form, the following fields must be set as specified:
- ROUTE TYPE: "HUNT" or "TEST"
- DIGITS TO BE DELETED: 0
- PREFIX DIGITS: blank
- ANI OUTPULSING: "N"
- OVERLAP OUTPULSING: "N"
- SIGNALING PROTOCOL: "TRAD"
- CI ROUTE TYPE: "OTHER"; for 5E7 and later,
- it may also be "GENANN".

Additionally, for 5E7 and later, the NEXT ROUTE on this form must either be blank or it must point to another RTIDX form where ROUTE TYPE is "REORDER".

For 5E7 and later, when TRKCLS on the corresponding TKGRP form is "LTPISTFL" or "LTPISTFX", the following fields must be set as specified:

ROUTE TYPE: "HUNT"
- DIGITS TO BE DELETED: 0

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- PREFIX DIGITS: blank
- ANI OUTPULSING: "N"
- OVERLAP OUTPULSING: "N"
- SIGNALING PROTOCOL: "TRAD"
- CI ROUTE TYPE: "OTHER".

For 5E7 and later, if TRUNK GROUP NUMBER is defined on a TKGRP form with a TRKCLS of "TSPS", then SIGNALING PROTOCOL on the RTIDX form cannot be "INC" or "FGB".

For 5E9(1) and later, if the TRUNK GROUP NUMBER is assigned as a TGN on the TKGRP form with a TRKCLS of "LTPDCTU", the CI ROUTE TYPE on this RTIDX form must be "OTHER". In addition, if a NEXT ROUTE is entered on this RTIDX, it should match with the ROUTE INDEX on another RTIDX form where ROUTE TYPE is "REORDER" or null.

For 5E12 and earlier, when a TRUNK GROUP NUMBER is entered and is assigned as TGN on the TKGRP form, and INTER SM TRK is "Y" on the TKGRP form and NEXT ROUTE matches the ROUTE INDEX on a second RTIDX form and ROUTE TYPE is "DNTRAN" on the second RTIDX form, there must be a corresponding NOC form. The NOC form is found by matching NEXT ROUTE on the RTIDX form with the NOC on the NOC form.

For 5E12 and later, when TRUNK GROUP NUMBER is entered, the TRUNK GROUP NUMBER must be defined on the TKGRP form.

For 5E12 and later, when TRUNK GROUP NUMBER is entered, and TRKCLS on the corresponding TKGRP form is "OTOTK", ROUTE TYPE must be "HUNT" and DIGITS TO BE DELETED must be in the range of 0 - 10 on the RTIDX form.

For 5E13 and later, when the TRUNK GROUP NUMBER is entered, NEXT ROUTE must match the ROUTE INDEX on another RTIDX form.

2.5 DIGITS TO BE DELETED

Description: Enter the number of digits to be deleted.

Required Field.
Default: 0
Valid Entries: 0 - 15

Data Rules:

If ROUTE TYPE is "HUNT" or "TEST", this field must be entered. Otherwise, this field must be 0.

This field must be 0 for route indexes which point to Trunk Groups that are Logical Test Ports or have a Trunk Class of "RECCMPL" or "SERVICE".

This field should be 0 if this route index is pointed to by a PFA (Private Facility Access) dial code, defined on a PFAGPA form that is used to access a cut-through trunk (DIG COLL field on the PFAGPA form is "N").

For 5E6 and later, this field must be 0 when SIGNALING PROTOCOL is "EA".

NOTE: If the RTI was generated for a LINE or HGRPS form, the 5ESS Switch reconstructs a 7-digit TN for either line or trunk originated calls. Deleting and prefixing of digits should be based on the reconstructed 7-digit TN.

2.6 PREFIX DIGITS

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Description: Enter the digits to be prefixed for outpulsing.
Valid Entries: from 1 to 10 digits

Data Rules:

An entry is allowed in this field if ROUTE TYPE is "HUNT" or "TEST".

This field must be left blank for route indexes which point to Trunk Groups that are Logical Test Ports or have a Trunk Class of "RECCMPL" or "SERVICE".

For Carrier Interconnect calls from an EAEO (Equal Access End Office) to an Access Tandem using equal access signaling, the prefix digits indicate OZZ codes (spare toll center codes) used in the initial outpulsing sequence. 1NX codes (also spare toll center codes) used in the initial outpulsing sequence for international calls, either on a direct or tandem connection, are also indicated by prefix digits.

If a code of "2ZZ" (where Z is any digit 0 - 9) is entered, it will be converted to 0ZZ before it is outpulsed. The 2ZZ code indicates that the called number will be outpulsed as dialed to an Access Tandem when the optional 7-digit Outpulsing feature is active on Shared Trunks (CI ROUTE TYPE is "STG") with EA (Equal Access) signaling (SIGNALING PROTOCOL IS "EA").

RP (Revertive Pulsing) is available and requires special digit prefixing for Trunk Groups with OUTPULSING set to "RPEO" or "RPTO" on the TKGRP form. The appropriate number of digits need to be deleted so there are four remaining digits. For example, if the OUTPULSING equals "RPEO" (i.e., the far end is an end office with RP), a 0 in PREFIX DIGIT, D1, indicates LOW 5 Directory Numbers, and a 5 indicates HIGH 5 Directory Numbers. By using two Route Indexes, one with 0 and one with 5, a Trunk Group may be used to terminate to two Office Codes. If the Trunk Group Outpulsing equals RPTO (i.e., the far end is a tandem office with RP), the Prefix Digits entered in consecutive order in D1, D2 and D3 are the Office Brush, Office Group and LOW 5/HIGH 5 indicator (0 or 5). This allows up to two hundred Office Codes to be accommodated on a Trunk Group.

For 5E7 and later, PREFIX DIGITS must not be entered if CKT CODE is greater than 0.

For 5E9(2) and later, the PREFIX DIGITS field on the RTIDX form must be blank when:

- The SIGNALING PROTOCOL on the RTIDX form is set to "EA".
- The TRUNK GROUP NUMBER on the RTIDX form is entered.
- The matching TKGRP form (found by matching TRUNK GROUP NUMBER of the RTIDX form with the TGN of the TKGRP form) has OUTPULSING set to "ISUP7".
- TRKCLS on the same associated TKGRP form is "IC".

2.7 NEXT ROUTE

Description: Enter the alternate route index. The number of alternate routes supported is not a fixed quantity. Following are the alternate routing configurations currently supported:

- One primary and three alternate routes are supported if the following condition exists:
  - BRCS features or SFGs are assigned to any of the trunk groups in the route list.
- One primary and four alternate routes are supported if all the following conditions exist:

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- No BRCS features or SFGs are assigned to any of the trunk groups in the route list
- All trunk groups in the route list are defined as local trunk groups. This is indicated by entering an SM number in the LOCAL SM field on the TKGRP form. In addition, all trunk members in the route list must be located on the same SM. (i.e. The TKGRP form for each trunk group in the route list would specify the same SM in the LOCAL SM field.)

- One primary and five alternate routes are supported if all the following conditions exist: (Refer to an exception to this configuration in the special case that follows).
  - No BRCS features or SFGs are assigned to any of the trunk groups in the route list.
  - All trunk groups in the route list are defined as GLOBAL which is indicated by leaving the LOCAL SM field on the TKGRP form blank. This is true even if all members in a trunk group are on the same SM.

- Special case: One primary and four alternate routes are supported if the following conditions exist:
  - The Route Index for the first route in the route list (primary route) is assigned to a DN on a LINE form.
  - A terminal group is assigned to lines that terminate calls to the route list by dialing the above DN.

    An example of this case would be a route list consisting of PRI trunk groups to support access to Internet service providers. This scenario is often provisioned by assigning the Route Index for the primary route to an "access DN" via the LINE form. Normally, this scenario would provide five alternate routes as previously documented. However, if a terminal group is assigned to lines which access the route list by dialing the access DN, only four alternate routes can be expected.

In any of the above configurations, an additional alternate route may be added to the end of the route list assuming this last route is provisioned as "REORDER" or "BUSY". This is indicated by entering the appropriate treatment in the ROUTE TYPE field on this form.

When an alternate Route Index is defined for PFA (Private Facility Access) trunk, the trunk group associated with the alternate route index must have the same characteristics as the primary trunk group. For example, if a primary route points to a cut-through trunk, then the alternate route index should also point to a cut-through trunk.

For Circuit Switched Data calls, the Alternate Data Route Index is used for the first route, based on the bearer capability of the call. When an "all trunks busy" condition is encountered, the routes that are selected using the NEXT RTI do NOT select different alternate data routes (DATARATE ALT RI) based on the bearer capability, but use the trunk group specified by the selected NEXT RTI. Therefore, the trunk group that is referenced by the NEXT RTI must specifically support data calls for all bearer capabilities that the trunk group on the primary RTI can support. For example, if the Trunk Group pointed to by a particular Route Index supports 64K data calls, then the trunk group that the NEXT RTI points to MUST ALSO support 64K data calls.

If a true alternate Route Index is not required, the NEXT ROUTE INDEX is omitted and reorder will be automatically provided on overflow.

The NEXT ROUTE INDEX for DID-PBX trunks should route to busy.

Announcement Trunk Groups must have a next route index which goes to reorder.

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Software Release: 5E5 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11: 1 - 4095
- For 5E12: 1 - 4095 or Normalized Office Code, 1 - 8190, when MC ROUTE TYPE is "DNTRAN"
- For 5E13 and later: Blank, or 1 - 16382 or Normalized Office Code, 1 - 8190.

Data Rules:

This field should not be entered if the Trunk Group assigned to this Route Index is an X.75' or X.75 Trunk Group (TRKCLS is "X75P" or "X75" on the TKGRP form).

When ROUTE TYPE is not "DNTRAN", then:

- the value entered in this field must not equal the value of the Route Index being defined. That is, a Route Index may not alternate to itself.
- the Route Index entered in this field must be defined on an RTIDX form.
- for 5E13 and later, NEXT ROUTE must be 1 - 16382.

When ROUTE TYPE is "DNTRAN", a NOC (Normalized Office Code) must be entered in this field. The NOC entered must be defined on the NOC form (5501 Record) and, for 5E13 and later, NEXT ROUTE must be 1 - 8190.

Special Access Basic 800 trunk groups (TRKCLS of "SPAB800" on the TKGRP form) and MEGACOM 800 trunk groups (TRKCLS of "SPAM800" on the TKGRP form) must not have a NEXT ROUTE entered.

For 5E5 and later, IP (Internal Protocol) trunk groups may alternate route only to other IP trunk groups. That is, if TRUNK GROUP NUMBER is defined on a TKGRP form with TRKCLS set to "PACKET" (i.e. an IP trunk group), then the value entered in this NEXT ROUTE field must be defined as ROUTE INDEX on another RTIDX form that has a TRUNK GROUP NUMBER entered. That trunk group must also be defined on a TKGRP form that has TRKCLS set to "PACKET".

For DSN (Defense Switched Network) offices, this field should be entered as 0 if the ROUTE INDEX is used on the PPPOLY form (5618-7 Record). This is required for DSN Network Management control CANF.

If the Proportionate Bidding feature has been purchased (SFID 34 on the SFSYS form (5713-1 Record) is set to "S") or "Y", this field cannot be in the range of 1001 - 1032 since Proportionate Bidding route indexes cannot be specified as secondary route indexes.

For 5E7 and later, up to seven RTIDX forms may be associated with each announcement trunk group where TRKCLS is "RAFANNC" or "EISTRK". The first is the primary routing form, which must point to an alternate routing form (NEXT ROUTE matches the ROUTE INDEX on another RTIDX form). Up to six alternate routing forms may be defined. The last form in the group may not have a NEXT ROUTE entered and must have ROUTE TYPE set to "REORDER".

On the primary and all alternate RTIDX forms except the last:

- NEXT ROUTE must match a ROUTE INDEX on one of the other forms. To avoid an infinite loop (never reaching the "REORDER" route), NEXT ROUTE may not point to the primary RTIDX form, and no two NEXT ROUTE values may point to the same RTIDX form;
- When more than one alternate route index is defined, CI ROUTE TYPE must have the same value;
- When TRKCLS on the TKGRP form is "RAFANNC", ROUTE TYPE on these RTIDX forms must be

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"HUNT".

For 5E13 and later, when the ACT field for SFID 34 on the SFSYS form is set to "Y", route indexes 1001 through 1032 cannot be assigned as the NEXT ROUTE.

2.8 ANI OUTPULSING

Description: Is ANI (Automatic Number Identification) Outpulsing allowed for this Route Index?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For incoming Trunk Groups (TRK DIR on the TKGRP form is "INC"), this field must be "N".

An entry is allowed in this field if ROUTE TYPE is "HUNT".

2.9 # SIGNALING PROTOCOL

Description: Enter the Signaling Protocol to be used for this Route Index.

Required Field.

Valid SIGNALING PROTOCOL Entries

Entry	Definition
EA	Carrier Interconnect Equal Access signaling. For 5E8 and earlier, this is used in FGD and FGB Transitional Access where CIC (Carrier Identification Code) is 000 - 999. For 5E9(1) and later, this is used in FGD where the CIC is 0000 - 9999, and for Transitional Access where the CIC is 0000 - 0999.
FGB	Carrier Interconnect signaling to Feature Group B carriers that utilize the interim carrier access dialing plan, 950-1XXX. For 5E8 and later, the dialing plan is 950-XXXX.
INC	Carrier Interconnect EA signaling for international calls.
INCM	Software Release: 5E7 and later. Modified EA signaling for international calls. Used in the TAISP (Tandem Access for InterLATA Sent-Paid Coin Calls) feature. For 5E7 and later, a PREF DIG of 1NX is used. Also used for EAOSS (Exchange Access Operator Services System) signaling when LEC OS is set to "Y".
MEA	Software Release: 5E7 and later. Modified EA signaling for domestic calls. Used in the TAISP (Tandem Access for InterLATA Sent-Paid Coin Calls) feature. For 5E7 and later, a PREF DIG of 0ZZ is used. Also used for the EAOSS (Exchange Access Operator Services System) signaling when LEC OS is set to "Y", or EOSS (Exchange Operator Services System) signaling when LEC OS is set to "Y" and no carrier is specified
PNANI	Software Release: 5E7 and later. Automatic Number Identification over Private Facilities special feature. This feature must be purchased by the office.
TRAD	Traditional LAMA/CAMA signaling.

Data Rules:

FGB
If Signaling Protocol is "FGB", the Route Type must be "HUNT".

EA
For 5E7 and later, when SIGNALING PROTOCOL is "EA" and CI ROUTE TYPE is "STG", either PREFIX DIGITS must be entered, or CKT CODE must be greater than 0.

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For 5E7 and later, if SIGNALING PROTOCOL is set to "EA" or "INC" and CI ROUTE TYPE is set to "STG", and the TGN on the TKGRP form has an OUTPULSING other than "ISUP7", and TRKCLS other than "TSPS", then the PREFIX DIGITS must be entered and cannot be zero.

INC
When SIGNALING PROTOCOL is "INC" and CI ROUTE TYPE is "DTG" or "STG", either PREFIX DIGITS must be entered, or CKT **CODE must be** greater than 0. In both these cases, if a TRUNK GROUP NUMBER has been entered and is defined on a TKGRP form where OUTPULSING is not "ISUP7" (i.e., not a CCS7 trunk group), then PREFIX DIGITS must be entered.

INCM
For 5E7 and later, when SIGNALING PROTOCOL is "INCM",

- CI ROUTE TYPE must be "DTG" or "STG",
- PREFIX DIGITS must be entered and must be 3 digits long, and
- TRUNK GROUP NUMBER must be entered.

Also, see below for "MEA".

MEA
For 5E7 and later, when SIGNALING PROTOCOL is "MEA":
- CI ROUTE TYPE must be "DTG" or "STG"
- TRUNK GROUP NUMBER must be entered.

When SIGNALING PROTOCOL is "MEA" and CI ROUTE TYPE is "DTG", PREFIX DIGITS cannot be entered.

When SIGNALING PROTOCOL is "MEA" and CI ROUTE TYPE is "STG", PREFIX DIGITS must be entered and must be 3 digits long.

If "MEA" or "INCM" is entered, the TRUNK GROUP NUMBER on this form must be defined as TGN on a TKGRP form with TRKCLS equal to "TSPS", SIGNAL equal to "INBAND" or "EXINBND", and OUTPULSING not equal to "ISUP7".

If SIGNALING PROTOCOL is equal to "MEA" or "INCM" and TRUNK GROUP NUMBER is defined on the TKGRP form with SIGNAL equal to "INBAND", this data combination is used by the EAOSS for Operator Services Calls special f

eature, which is a secured feature and must be purchased by the office before SIGNAL can be set to "INBAND". Either the ACT field for SFID 11 must be set to "Y" on the SFSYS form, or SIGNAL must be set to "EXINBND".

PNANI
For 5E7 and later, for the ANI over PF feature, SIGNALING PROTOCOL must be "PNANI". When "PNANI" is entered, CI ROUTE TYPE must be "OTHER", OVERLAP OUTPULSING must be "N", and ANI OUTPULSING must be "Y". The ANI over PF special feature will allow only the following classes of service on the originating port: "PF", "PFITT" (PF Intertandem Trunk), "INDIV" (Individual line), "ISDN" (digital subscriber line associated with ISDN service), "ATTENDANT" (Attendant line), and "ISATND" (ISDN Attendant). "PNANI" may not be entered unless the ANI over PF secured feature has been activated with FEATURE ID 5 set to "S" or "Y" on the SFSYS form (5713 Record). (See Division 2, Section 4A5 for information on secured features.)

TRAD:
If this Route Index is associated with a PFA dial code (defined on a PFAGPA form), then this field should

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be "TRAD".

For traffic to a TSPS office which has not converted to OS Signaling, use "TRAD". For traffic to a TSPS office which has converted to OS Signaling, use "EA". Do not enter "INC" or "FGB" for signaling to a TSPS office.

- ***NOTE:*** Since this form entry is the only data internal to the 5ESS Switch to indicate if the far end TSPS office is expecting "TRAD" or "EA" signaling, this must be verified with the TSPS office prior to definition of the signaling protocol for these trunks.

2.10 FGD CIC 4

Description: Is the SSP (Service Switching Point) capable of handling a four-digit CIC? A value of "Y" means a 4-digit CIC is used; "N" means the 3-digit CIC is still being used. This capability is indicated to the SCP (Service Control Point).

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When FGD CIC 4 is "Y",

- SIGNALING PROTOCOL must be "TRAD", "EA", "MEA", "INC" or "INCM", and TRUNK GROUP NUMBER must be entered.
- If SIGNALING PROTOCOL equals "TRAD", TRUNK GROUP NUMBER must be defined on a corresponding TKGRP form with TRKCLS set to either "EDSL", "EDSLHM", or "IC".

2.11 CI ROUTE TYPE

Description: Enter the Carrier Interconnect Route Description Type.

Sometimes more than one Route Index is required to specify more than one relevant entry in this field, even though they point to the same Trunk Group. For example, if overflow from direct Trunk Groups to carriers and overflow on local company Trunk Groups route to the same announcement, it is necessary to define two Route Indexes to establish proper measurements.

Required Field.
Default: OTHER
Valid Entries:

Valid CI ROUTE TYPE Entries

Entry	Definition
ALTRKBSY	The Route Index points to a tone or announcement because of an all trunks busy condition.
BADLATA	The Route Index points to an announcement due to the IC/INC misrouting the call. This may be a call terminating to an AT from an IC/INC, or to an EAEO if the Trunk Group is direct (not tandem) from an IC/INC.
CALLFORWARD	Forward the call for the Call Forward on Trunks feature. For more information, see Division 2, Section 4A273.
DTG	The Route Index points to a Trunk Group that is direct to an IC (interLATA Carrier) or an INC (International Carrier).
DTGOFL	The Route Index points to a tone or announcement on overflow from a DTG type Route Index.
GENANN	The Route Index points to an unspecified announcement.
ICRSTRCT	The Route Index points to an announcement due to an interLATA Carrier restriction.
NMFAIL	The Route Index points to an announcement due to Network Management blocking.
OTHER	Unspecified Route Type. (Used when the other values are not applicable to the Route Index being defined.) It may not be used for any announcement or tone route.

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STG	The Route Index points to a shared Trunk Group from an EAEO to an AT (Access Tandem) and is used for calls bound for an IC/INC.
STGOFL	The Route Index points to a tone or announcement on overflow from a STG type Route Index.

Data Rules:

"OTHER" may not be entered if SIGNALING PROTOCOL is "INC" or "FGB", or for 5E8 and earlier, if ROUTE TYPE is "BUSY" or "REORDER".

If TRKCLS on the TKGRP form is set to either "RAFDTA", "RAFCTR" or "RAFAN", CI ROUTE TYPE must not be "OTHER".

For 5E13 and later, when CI ROUTE TYPE is "CALLFORWARD":

- the ACT field for SFID 273 on the SFSYS form must be set to "Y".
- ROUTE TYPE must be "DNTRAN".
- PREFIX DIGITS must be entered and length of PREFIX DIGITS must be 4.

For 5E14 and later, when CI ROUTE TYPE is "CALLFORWARD",

- the ACT field for SFID 273 on the SFSYS form must be set to "Y".
- TN must be entered.
- ROUTE TYPE must be "DNTRAN".
- PREFIX DIGITS must not be entered, and
- NEXT ROUTE must not be entered.

2.12 TN

Description: This field is used to assign the Call Forward TN associated with this route index.

Software Release: 5E14 and later
Valid Entries: 7-digit or 10-digit TN in the format: XXXXXXX or NXXXXXXXXX
where N = 2 - 9 and X = 0 - 9

Data Rules:

The first 3 digits of a 7-digit TN or the NPA/NXX combination (the first 6 digits of a 10-digit TN) must be defined as OFFICE CODE or NPA/OFFICE CODE, respectively, on a NOC form.

If the TN is 7 digits, there must be only one NOC form with the same value for the OFFICE CODE.

When TN is entered, ROUTE TYPE must be "DNTRAN" and CI ROUTE TYPE must be "CALLFORWARD".

2.13 REMARK

Description: This field may contain any information deemed locally necessary.
Valid Entries: up to 16 characters

2.14 ANI II DIGITS

Description: This field is used to assign ANI (Automatic Number Identification) Flexible Assignment

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Number Identification pairs to the Route Index. Flexible Assignment of two ANI pairs is a secured feature. The Feature must be purchased by the office.

Software Release: 5E6 and later
Valid Entries: 0 - 99

Data Rules:

If ANI II DIGITS is entered, then SIGNALING PROTOCOL must be
- For 5E6 and 5E7: "EA" or "INC"
- For 5E8 and later: "EA","INC","MEA" or "INCM"

In addition, ANI OUTPULSING must be "Y".

2.15 LEC OS

Description: Are operator services provided by LEC as opposed to IC? If "N" is entered, then the operator services are provided by the IC. This field was added for the EAOSS Signaling for Operator Services Calls secured feature. For more information on the secured feature see Division 2, Section 4A11. The SFID (Secured Feature ID) is 11. If SFID 11 is activated on the SFSYS form (5713-1 Record) the following type of signaling may be accepted at a 5ESS Switch OSPS office.

LEC OS	SIGNALING PROTOCOL	CI ROUTE TYPE	SIGNALING PROVIDED
Y	INCM	STG	EAOSS
Y	MEA	STG	EAOSS
Y	MEA	STG	EOSS (no carrier specified)
N	INCM	STG	MEA
N	INCM	DTG	MEA
N	MEA	STG	MEA
N	MEA	DTG	MEA

If SFID 11 is not activated only the following signals will be provided:

LEC OS	SIGNALING PROTOCOL	CI CALL TYPE	SIGNALING PROVIDED
N	INCM	STG	MEA
N	INCM	DTG	MEA
N	MEA	STG	MEA
N	MEA	DTG	MEA

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then:
- SIGNALING PROTOCOL must be "INCM"
- or "MEA"
- CI ROUTE TYPE must be "STG"
- ANI OUTPULSING must be "Y"

This field is used by the EAOSS for Operator Services Calls feature. This is a secured feature and must be purchased by the office. Therefore, the ACT field for SFID 11 must be set to "Y" on the SFSYS form (5713-1 Record) before "Y" can be entered in the LEC OS field.

If "Y" is entered, the TRUNK GROUP NUMBER on this form must be defined as TGN on a TKGRP form with OUTPULSING equal to "MF".

2.16 # OVERLAP OUTPULSING

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Description: Is Overlap Outpulsing allowed for this Route Index?

Required Field.
Valid Entries: Y, N

Data Rules:

An entry is allowed in this field if ROUTE TYPE is "HUNT".

For incoming Trunk Groups (TRK DIR on the TRKGRP form is "INC"), this field must be "N". If CI ROUTE TYPE is not "DTG", "STG" or "OTHER", then this field must be "N".

If this field is "Y" and SIGNALING PROTOCOL is "TRAD", then the PFAGPA form must have the same Route Index assigned in the ROUTE INDEX field and a ROUTE TYPE of "HUNT" entered.

Overlap Outpulsing may also be used for CI (Carrier Interconnect) calls associated with SIGNALING PROTOCOL values of "EA" and "INC". If Overlap Outpulsing is desired for a CI route, the ICF form (5305 Record) must have OVERLAP or SAC OVERLAP equal to "Y".

When the associated Trunk Group utilizes RP, this field must be "N".

For 5E6 and later, if the TRUNK GROUP NUMBER is defined on a TKGRP form with OUTPULSING entered as "ISUP7" or "CCIS6", the OVERLAP OUTPULSING on this form must be "N".

If the TRUNK GROUP NUMBER is defined on a TKGRP form with TRKCLS entered as "EDSL" or "EDSLHM", the OVERLAP OUTPULSING field on this form must be "N".

2.17 LDP RT LIST KEY

Description: The LDP RT LIST KEY field is a display only field used to indicate whether or not a route list (form RTLIST) exists for this ROUTE INDEX.

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

2.18 EON SUPPRESS CN

Description: Proprietary field.

CCS7 EQUAL ACCESS

Fields Section 2.19 - Section 2.24 refer to CCS7 Equal Access.

2.19 CKT CODE

Description: This field, to be transmitted in the Network Identification field of the TNS (Transit Network Selection) parameter of the CCS7 IAM (Initial Address Message), is a one or two digit circuit code that maps to an 0ZZ, 1NX or 1N'X digit string used in equal access and international signaling. The CKT CODE should be populated for Originating End Offices using equal access signaling over shared trunk groups using ISUP7 and for Originating Access Tandem offices that handle international traffic on incoming ISUP7 trunks.

Software Release: 5E6 and later
Default: 0
Valid Entries: 0 - 15

Data Rules:

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When SIGNALING PROTOCOL is "INC", CKT CODE must be 0, 1, 2, or blank.

When the ROUTE INDEX is assigned to CCS7 trunks (OUTPULSING is set to "ISUP7" on the TKGRP form) and SIGNALING PROTOCOL is other than "TRAD" then CKT CODE must be non-zero. In particular, when the SIGNALING PROTOCOL is "INC", CKT CODE must be 1 or 2; when SIGNALING PROTOCOL is "EA" and CI ROUTE TYPE is "STG", CKT CODE must be 1 - 15.

For 5E7 and later, if CKT CODE is greater than 0, PREFIX DIGITS must not be entered.

For 5E9(2) and later, the CKT CODE on the RTIDX form must be entered with a value greater than 0 when:

- The SIGNALING PROTOCOL on the RTIDX form is set to "EA".
- The TRUNK GROUP NUMBER on the RTIDX form is entered.
- The matching TKGRP form (found by matching TRUNK GROUP NUMBER of the RTIDX form with the TGN of the TKGRP form) has OUTPULSING set to "ISUP7".
- TRKCLS on the same associated TKGRP form is "IC".
- The ROUTE DESTINATION TYPE on the RTIDX form is set to "STG".
- The SFID 188 on the SFSYS form is set to "Y".

For 5E9(2) and later, the CKT CODE on the RTIDX form must be 0 or unknown when:

- The SIGNALING PROTOCOL on the RTIDX form is set to "EA".
- The TRUNK GROUP NUMBER on the RTIDX form is entered.
- The matching TKGRP form (found by matching TRUNK GROUP NUMBER of the RTIDX form with the TGN of the TKGRP form) has OUTPULSING set to "ISUP7".
- TRKCLS on the same associated TKGRP form is "IC".
- The SFID 188 on the SFSYS form is set to "N".

2.20 CPN SUBSC

Description: Does the IC/INC (interLATA/International Carrier) subscribe to the CPN (Calling Party Number) parameter?

Enter "Y" if the CPN parameter can be sent in the outgoing IAM (Initial Address Message). Otherwise, enter "N".

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If CPN SUBSC is "Y", then SIGNALING PROTOCOL must not be "TRAD". If CPN SUBSC is "Y", the TRUNK GROUP
NUMBER must be defined on the TKGRP form with OUTPULSING equal to "ISUP7".

If TRUNK GROUP NUMBER is not entered, CPN SUBSC must be "N".

2.21 CSI SUBSC

Description: Should the CSI (Carrier Selection Information) parameter be sent to the IXC (InterLATA Exchange Carrier) in the IAM (Initial Address Message)?

If the OEO (Originating End Office) determines that an IXC is required to complete the call, and if circuit selection results in the selection of a CCS7 outgoing circuit either directly to the IXC or to an AT (Access Tandem), the OEO will mark the circuit busy and formulate an IAM.

Prior to the originating end office sending an IAM, this field will be checked by the operational software to determine if the CSI Parameter should be passed to the IXC in the IAM.

PIC has to be populated depending on the type of origination according to the following table, to allow CSI to populate the IAM message.

ORIGINATION	FORM	FIELD
Analog line	LINE	PIC
	IDPGP	GPIC
	OFCOPT	CARRIER ID
ISDN line	DSLUSR	PIC
	IDPGP	GPIC
	OFCOPT	CARRIER ID
PRI	TKGRP	PIC
	OFCOPT	CARRIER ID

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If SIGNALING PROTOCOL is "FGB" or "TRAD", this field must be "N".

If CSI SUBSC is "Y", OUTPULSING on the TKGRP form (5202 Record) must be "ISUP7".

2.22 ATP SUBSC

Description: Should the ATP (ISUP Access Transport) parameter be sent to the far switch in the IAM?

Q.931 Information Element transfer facilitates the transport of specific Q.931 information elements in the ISUP ATP (Access Transport Parameter) transparently between exchanges in the network.

Prior to sending an IAM message from an OEO, this field will be checked by the operational software to determine if the ATP parameter should be passed to the far switch.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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MF trunks must be "N".

If SIGNALING PROTOCOL is "FGB" or "TRAD", this field must be "N".

If ATP SUBSC is "Y", OUTPULSING on the TKGRP form (5202 Record) must be "ISUP7".

2.23 UUI SUBSC

Description: Should the UUI (User to User Information) parameter be sent to the far switch in the IAM?

The UUI parameter of the an ISUP message allows ISDN customers to exchange user data transparently through the network during call setup and call clearing.

Prior to sending an IAM message from an originating end office, this field is checked by the operational software to determine if the UUI parameter should be passed to the far switch.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

MF trunks must be "N".

If SIGNALING PROTOCOL is "FGB" or "TRAD", this field must be "N".

If UUI SUBSC is "Y", OUTPULSING on the TKGRP form (5202 Record) must be "ISUP7".

2.24 CICP SUBSC

Description: Should the CICP (Carrier Identification Code Parameter) be included in the IAM (Initial Address Message) sent from the originating end office to the far switch?

The CICP SUBSC field supports the Carrier Identification Parameter secured feature (SFID 9). For more information on the Carrier Identification Parameter secured feature, see Division 2, Section 4A9.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field is used by the Carrier Identification Code Parameter special feature. It is a secured feature that must be purchased by the office and the ACT field for SFID 009 on the SFSYS form must be set to "Y" before this field can be set to "Y".

For interworking between Multi Frequency and CCS7 trunks, if CICP SUBSC is "Y", the CICP will not be included in the outgoing IAM if the value of the CICP BLOCK is "Y" on OFCOPT form.

If CICP SUBSC is "Y", then:
- TGN must be entered and must not 0
- SIG PRO must be "EA", "INC", or "MEA"

If "Y" is entered, then the TRUNK GROUP NUMBER must be defined on the TKGRP form where OUTPULSING is "ISUP7".

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If "Y" is entered and SIGNALING PROTOCOL is "INC", then TRUNK GROUP NUMBER cannot be defined on the TKGRP form where TRKCLS is "IC".

TRUNK GROUP SELECTION LIST (TGSL)

The following fields are used to administer the TGSL. A TGSL consists of an ordered list of route index values. The end of each TGSL is marked by a null value in the NEXT ROUTE field. Each route index is associated with a TRUNK GROUP NUMBER value. Eight types of TGSLs are supported and are shown in Figure 1 . Trunk groups that are contained in each TGSL must have characteristics that are consistent with the types of calls that use each TGSL. Figure 1 shows the allowed trunk group data for trunk groups that are contained in each of the types of TGSLs. A value of "x" indicates that trunk groups with the indicated data values are legal for the type of TGSL shown. These restrictions are only enforced by the software for the first trunk group in each TGSL, but this should be manually administered for all trunk groups. Note that the entries for the SPEECH ALT RI and DATARATE ALT RI fields cannot be equal.

2.25 SPEECH ALT RI

Description: Enter the Alternate Route Index for a Speech Call. This route index is used when a call has a bearer capability of "speech". For more information on the Routing Based On Bearer Capability see Division 2, Section 1W on CCS7 ISDN User Part Enhancements.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The entry for SPEECH ALT RI must not equal the entry for ROUTE INDEX.

SPEECH ALT RI must not equal the DATARATE ALT RI for the following:
- 56K
- 64K
- R64K
- 384K
- 1536K
- MULTIRATE.

The entry in this field must be defined on a corresponding RTIDX form with a ROUTE TYPE of "HUNT". In addition, there must be a corresponding TKGRP form defined with the SPEECH TRMTS field set to "Y".

DATARATE ALT RI

Fields Section 2.26 - Section 2.31 refer to Alternate Route Indexes for wide band data rates. DATARATE ALT RI entries can be either segregated (data-only) or non-segregated (data and voice) data rates.

For Circuit Switched Data calls, the Alternate Data Route Index is used for the first route, based on the bearer capability of the call. When an "all trunks busy" condition is encountered, the routes that are selected using the NEXT RTI do NOT select different alternate data routes (DATARATE ALT RI) based on the bearer capability, but use the trunk group specified by the selected NEXT RTI. Therefore, the trunk group that is referenced by the NEXT RTI must specifically support data calls for all bearer capabilities that the trunk group on the primary RTI can support. For example, if the Trunk Group pointed to by a particular Route Index supports 64K data calls, then the trunk group that the NEXT RTI points to MUST ALSO support 64K data calls.

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Prior to 5E9(1), data rates "56K", "R64K", and "64K" were entered on the DTRTX form (5314 Record).

The following data rules apply collectively to the specific DATARATE ALT RI entries indicated below; and are further illustrated in Figure 1 :

- If any DATARATE ALT RI field entry equals ROUTE INDEX, ROUTE TYPE must be "HUNT".
- When a DATARATE ALT RI field entry for 56K, R64K, and 64K points to a TGN on the TKGRP form (via the RTIDX form) that is defined for segregated traffic (data only), the implied DATA RATE on the RTIDX form (i.e., 56K, R64K, or 64K) must match the DATA RATE on the TKGRP form.
- DATARATE ALT RI entries must not be assigned on any of the following forms: HGRPAS (5115 Record), IDDD (5307 Record), INDIT (5309 Record), LDIT (5300 Record), LINE (5109-1/2/3 Record), MLDIT 5300-3/5 Record), RDIT (5300-7/8 Record), PDIT (5300-2 Record) or RAR (5301 Record). Only "EDSL" and "EDSLHM" type trunk groups or trunks using CCIS6 or ISUP7 signaling are capable of handling non-segregated traffic (both voice and data).
- DATARATE ALT RI field entries for 56K, R64K, and 64K that point to a TGN on the TKGRP form (via the RTIDX form) whose TRKCLS is not "LTOLLCON", "TTOLLCON", "PRINTOLL", "EDSL", "EDSLHM", "IFOPER", "IFTERM", "SCINTOLL", "IC", "LATA", "PF", "PFITT", or "PFLASH"is not permitted.
- When a narrow band DATARATE ALT RI field (56K, R64K, or 64K) points to a Trunk Group via an RTIDX form that is defined on the TKGRP form as an EDSL, CCIS6 or ISUP7 type Trunk Group (capable of handling both voice and data), the DATA RATE on the TKGRP form cannot be less than the implied data rate on the original RTIDX form.
- When a wide band DATARATE ALT RI field (384K, 1536K, or MULTIRATE) points to a Trunk Group via an RTIDX form, the WB RATE field on the TKGRP form must be entered and must correspond with the implied RTIDX wide data rate in the following manner:

DATARATE ALT RI	WB RATE
384K	384K, 384/1536K, or MULTIRATE.
1536K	384/1536K, 1536K, or MULTIRATE.
MULTIRATE	384K, 384/1536K, or 1536K or MULTIRATE.

2.26 56K

Description: Enter the Alternate Route Index for 56 KB/s calls.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

2.27 R64K

Description: Enter the Alternate Route Index for restricted 64 KB/s calls.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

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2.28 64K

Description: Enter the Alternate Route Index for 64 KB/s calls.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

2.29 384K

Description: Enter the Alternate Route Index for 384 KB/s calls.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

2.30 1536K

Description: Enter the Alternate Route Index for 1536 KB/s calls.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

2.31 MULTIRATE

Description: Enter the Alternate Route Index for Multirate calls.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

3. FORM ENTRIES 5303-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

PACKET SWITCHING

3.2 DESTINATION PSN

Description: This field specifies the Packet Switch Number of the destination switch in a Packet Switching Network. The Destination PSN is the PSN of a 5ESS Switch that resides in the same IP (Internal Protocol) subnetwork as the originating switch. The Destination PSN entered is either the PSN of a 5ESS

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Switch where the terminating CPE is located or the PSN of the 5ESS Switch where the gateway trunk group to the PPSN (Public Packet Switched Network) is located.

Software Release: 5E3 and later
Valid Entries: 1 - 255

Data Rules:

If the DESTINATION PSN is entered, then the Trunk Group Number must be entered on this form and defined on the TKGRP form with a TRKCLS of "PACKET".

If no EQPSUPH form (5742 Record) exists with an EQST entry of "O", then this field must not be entered.

For 5E5 - 5E10, a value entered in this field may not be assigned as the DESTINATION PSN on any other RTIDX form. Also, it may not be assigned as the PSN on the ISDNOPT form (5941 Record).

For 5E11 and later, when DESTINATION PSN is entered, a value must be entered for PSN on the ISDNOPT input form (5941 Record).

3.3 RTE SEARCH LMT

Description: The RTE SEARCH LMT field is used to specify how far down the route list the switch will search. The route search limit is sent to the downstream switch.

Valid RTE SEARCH LMT Entries

Entry	Definition
1 - 5	Supported by 5ESS
1 - 15	Other vendors
blank	no entry

Data Rules:

When RTE SEARCH LMT is entered, TRUNK GROUP NUMBER must be entered.

3.4 TERM NSC

Description: The TERM NSC field is used to specify the terminating network selection code for calls exiting the switch on this route. This default TERM NSC will only be included in the signaling if the call does not already have a TERM NSC assigned to it, and is exiting the switch on a MINT route.

Software Release: 5E12 and later.
Valid Entries: 0 - 999 or leave blank

Data Rules:

When TERM NSC is entered, TRUNK GROUP NUMBER must be entered.

When TERM NSC is entered on the RTIDX form, the TERM NSC must be defined on the LDPTNSC form.

When TERM NSC is known on the RTIDX form, MINT SIG TYPE must be known on the TKGRP form. In addition, when MINT SIG TYPE is "BETA" on the corresponding TKGRP form, TERM NSC must be between 0 and 63 on the RTIDX form. TRUNK GROUP NUMBER on the RTIDX form matches TGN on the TKGRP form.

3.5 TDR

Description: Is Time Dependent Route active for this Route Index?

Software Release: 5E12 and later.
Default: N

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Valid Entries: Y, N

Data Rules:

When TDR is set to "Y" on the RTIDX form, a corresponding TDR form must exist with ROUTE INDEX matching ROUTE INDEX on the RTIDX form.

When TDR is set to "N" on the RTIDX form, a corresponding TDR form must not be found.

3.6 FNL RT TRIG NBR

Description: The FNL RT TRIG NBR field is used to specify the ASP trigger for the final route.

Software Release: 5E14 and later
Default: BLANK
Valid Entries: Blank, or 1 - 255

Data Rules:

When FNL RT TRIG NBR is entered:

- NEXT ROUTE cannot be entered.
- ROUTE TYPE must be "BUSY", "HUNT", or "REORDER".
- FNL RT TRIG NBR must be defined as TRIG NBR on the NSTRIG form.
- APPLICATION must be "ASP" and AIN REL must be "R0D1" on the NSTRIG form.
- The ACT field for SFID 290 on the SFSYS form must be set to "Y".

3.7 REL LINK TYPE

Description: This field is used to indicate the signaling protocol used for Release Link for Toll calls.

Software Release: 5E14 and later

Valid Entries	
Entry	**Description**
ANSI	Standard Protocol
TOPS	Nonstandard Protocol
BLANK	No release link processing enabled

Data Rules:

When REL LINK TYPE is set to "ANSI", the SFSYS form must have the ACT field for SFID 520 set to "Y".

When REL LINK TYPE is set to "TOPS", the SFSYS form must have the ACT field for SFID 521 set to "Y".

When REL LINK TYPE is entered, TRUNK GROUP NUMBER must be entered.

When REL LINK TYPE is entered, the TRUNK GROUP NUMBER on the RTIDX form must be defined on the TKGRP form and :

- TRKCLS must be "TTOLLCON" or "IC",
- CCS7 TYPE must be unknown or "BELLCORE",
- OUTPULSING must be "ISUP7", and

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- TRK DIR must be "OUT" or "2W".

CRITICAL DATA INDICATOR

The following (fields Section 3.8 - Section 3.9) support the RC Translations Protection For Highly Critical Elements feature, see Division 2, Section 1BY for more information.

3.8 CRIT IND

Description: This field supports the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT IND field is used to indicate whether the route index data is critical.

Software Release: 5E13 and later
Required field.
Default: N
Valid Entries: Y, N

3.9 CRIT RMK

Description: This field enhances the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT RMK field is used to enter a remark to explain why this route index data is critical.

Software Release: 5E15 and later
Valid Entries: Enter up to 32 characters

Data Rules:

When the RTIDX form has the CRIT RMK field entered, the SFSYS form SFID 566 ACT field must be set to "Y".

3.10 OMIT CHARGE

Description: This field indicates whether or not the CHG (Charge Number) pemeter should be omited from the SS7 IAM (Initial Address Message) if the DN (Directory Number) of the CPN (Calling Party Number) parameter and CHHG parameter are the same.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

SS7 OPERATOR SERVICES

The following fields (Section 3.11 - Section 3.14) supports the SS7 Using Operator Services feature. For more information see, Division 2, Section 4A603.

3.11 OPERATOR SIG

Description: This field indicates which SS7 Operator Signaling method should be used on this route.

Software Release: 5E16 and later
Valid Entries:

Entry	Defition
blank	Existing method.
BASIC	Basic Nature of Address method.

MOD	Modified Nature of Address method.

Data Rules:

When OPERATOR SIG is entered, TRUNK GROUP NUMBER must be entered.

3.12 OPERATOR ACCESS

Description: This field indicates whether or not Access Signaling Information should be included in the OSI (Operator Services Information) parameter of outgoing IAM involving InterLata carriers on this route.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

When OPERATOR ACCESS is "Y", OPERATOR SIG must be "MOD".

3.13 CONNECTION HOLD

Description: This field indicates whether or not operator Connection Hold is supported on this route.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

3.14 CARRIER ID

Description: This field indicates which carrier is providing Operator Services.

Software Release: 5E16 and later
Valid Entries: 0 - 9999

TRUNK GROUP SELECTION LISTS										
TRUNK GROUP DATA			TYPE OF TGSL							
DATA RATE	WBRATE	SPEECH	RTI*	SPEECH ALT RI	56K	R64K	64K	384K	1536K	MULTI-RATE
Null	Null	Y		X						
Null	Null	N	X							
56K	Null	N	X		X					
R64K	Null	N	X		X	X				
64K	Null	N	X		X	X	X			
64K	384K	N	X		X	X	X	X		X**
64K	1536K	N	X		X	X	X		X	X**
64K	384/1536K	N	X		X	X	X	X	X	X**
64K	MULTIRATE	N	X		X	X	X	X	X	X

Notes: *This is the normal route index value that the TGSL used for speech and 3.1 Khz calls.**Must be at the end of the TGSL. Calls with certain values of N are released (for example, a 384K TG and a multirate call with N not equal to 6).

Figure 1 TRUNK GROUP SELECTION LISTS TABLE

---

rtidx 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5303-1/2) ROUTE INDEX

*1. ROUTE INDEX 00001 13. ANI II DIGITS __
#2. ROUTE TYPE 14. LEC OS N
3. TRUNK GROUP NUMBER ____ 15. OVERLAP OUTPULSING N

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```
 4. DIGITS TO BE DELETED 00                LDP RT LIST KEY  _
 5. PREFIX DIGITS      _____________      17. EON SUPPRESS CN   N
 6. NEXT ROUTE         _____
 7. ANI OUTPULSING      N              CCS7 EQUAL ACCESS
#8. SIGNALING PROTOCOL  EA             18. CKT CODE  00
 9. FGD CIC 4          N              19. CPN SUBSC N
10. CI ROUTE TYPE      OTHER          20. CSI SUBSC N
11. TN                 _____________  21. ATP SUBSC N
12. REMARK             ___________________  22. UUI SUBSC N
```

```
rtidx                        5ESS Switch
SCREEN 2 OF 2                OFFICE DATA ADMINISTRATION
(5303-1/2)                   ROUTE INDEX

23. CICP SUBSC    N          PACKET SWITCHING
24. SPEECH ALT RI _____      31. DESTINATION PSN ___

DATARATE     ALT RI          32. RTE SEARCH LMT  __
25. 56K      _____           33. TERM NSC        ___
26. R64K     _____           34. FNL RT TRIG NBR ___
27. 64K      _____           35. TDR             N
28. 384K     _____           36. REL LINK TYPE   ____
29. 1536K    _____           37. CRIT IND        N
30. MULTIRATE _____
```

Figure 2 SAMPLE RTIDX FORM 5E14 SOFTWARE RELEASE

```
rtidx                        5ESS Switch
SCREEN 1 OF 3                OFFICE DATA ADMINISTRATION
(5303-1/2)                   ROUTE INDEX

*1. ROUTE INDEX        _____          13. ANI II DIGITS     __
#2. ROUTE TYPE         _______          14. LEC OS          N
 3. TRUNK GROUP NUMBER ____             15. OVERLAP OUTPULSING N
 4. DIGITS TO BE DELETED 00                LDP RT LIST KEY  _
 5. PREFIX DIGITS      _____________      17. EON SUPPRESS CN   N
 6. NEXT ROUTE         _____
 7. ANI OUTPULSING      N              CCS7 EQUAL ACCESS
#8. SIGNALING PROTOCOL  _____          18. CKT CODE  00
 9. FGD CIC 4          N              19. CPN SUBSC N
10. CI ROUTE TYPE      OTHER          20. CSI SUBSC N
11. TN                 _____________  21. ATP SUBSC N
12. REMARK             ___________________  22. UUI SUBSC N
```

```
rtidx                        5ESS Switch
SCREEN 2 OF 3                OFFICE DATA ADMINISTRATION
(5303-1/2)                   ROUTE INDEX

23. CICP SUBSC    N          PACKET SWITCHING
24. SPEECH ALT RI _____      31. DESTINATION PSN ___
```

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```
DATARATE     ALT RI       32. RTE SEARCH LMT  __
25. 56K      _____        33. TERM NSC        ___
26. R64K     _____        34. FNL RT TRIG NBR ___
27. 64K      _____        35. TDR             N
28. 384K     _____        36. REL LINK TYPE   ____
29. 1536K    _____
30. MULTIRATE _____
```

```
rtidx                    5ESS Switch
SCREEN 3 OF 3            OFFICE DATA ADMINISTRATION
(5303-1/2)               ROUTE INDEX

         CRITICAL DATA INDICATOR
37. CRIT IND N
38. CRIT RMK _____________________________________
```

Figure 3 SAMPLE RTIDX FORM 5E15 SOFTWARE RELEASE

```
rtidx                    5ESS Switch
SCREEN 1 OF 3            OFFICE DATA ADMINISTRATION
(5303-1/2)               ROUTE INDEX

*1. ROUTE INDEX          _____          13. ANI II DIGITS     __
#2. ROUTE TYPE           _______          14. LEC OS          N
 3. TRUNK GROUP NUMBER   ____             15. OVERLAP OUTPULSING N
 4. DIGITS TO BE DELETED 00              LDP RT LIST KEY    _
 5. PREFIX DIGITS        __________       17. EON SUPPRESS CN    N
 6. NEXT ROUTE           _____
 7. ANI OUTPULSING       N              CCS7 EQUAL ACCESS
#8. SIGNALING PROTOCOL   _____            18. CKT CODE  00
 9. FGD CIC 4            N              19. CPN SUBSC N
10. CI ROUTE TYPE        OTHER            20. CSI SUBSC N
11. TN                   __________       21. ATP SUBSC N
12. REMARK               _________________  22. UUI SUBSC N
```

```
rtidx                    5ESS Switch
SCREEN 2 OF 3            OFFICE DATA ADMINISTRATION
(5303-1/2)               ROUTE INDEX

23. CICP SUBSC    N          PACKET SWITCHING
24. SPEECH ALT RI _____    31. DESTINATION PSN ___

DATARATE     ALT RI       32. RTE SEARCH LMT  __
25. 56K      _____        33. TERM NSC        ___
26. R64K     _____        34. FNL RT TRIG NBR ___
27. 64K      _____        35. TDR             N
28. 384K     _____        36. REL LINK TYPE   ____
29. 1536K    _____
30. MULTIRATE _____
```

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```
rtidx                    5ESS Switch        _
SCREEN 3 OF 3            OFFICE DATA ADMINISTRATION
(5303-1/2)               ROUTE INDEX

        CRITICAL DATA INDICATOR
37. CRIT IND N
38. CRIT RMK _____________________________

39. OMIT CHARGE N

  SS7 OPERATOR SERVICES
40. OPERATOR SIG   _____
41. OPERATOR ACCESS N
42. CONNECTION HOLD N
43. CARRIER ID     ____
```

Figure 4 SAMPLE RTIDX FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 3Q: 5304 RECORD
BRCS - MC ROUTE INDEX EXPANSION FORM - MCRTIDX

1. GENERAL

The 5304 Record is used to determine routing for various BRCS capabilities.

The MCRTIDX (Modular Customization Route Index) is similar to the Route Index defined on the RTIDX form (5303 Record). The MCRTIDX form, however, allows additional information that is required for ARS (Automatic Route Selection) and sometimes used for PFA (Private Facility Access). An MC Route Index is usually required if an SFG (Simulated Facility Group) is used. The only exception is when the SFG is associated with six-port conference circuits. In this case the PFATG form (5609-2 Record) points directly to the SFG Number.

The following list of forms may contain an MCRTIDX which points to this form:

	Form	Record
TKEDSLD	EDSL Call by Call Features	5209
ARSGPA	Automatic Route Selection Group Parameter	5608-2
PFAGPA	Private Facility Access Group	5609-5
PFAINWT	INWATS Simulated Facility TN	5609-4
PFATG	PFA Terminal Group Facility	5609-2
PPSCRN	Precedence and Preemption Screening	5618-2

The MC Route may be defined for accessing a Trunk Group which may be a private facility, an SFG, or as an overflow to POTS routing.

MC Route Indexes defined for overflow to POTS and for OUTWATS SFGs invoke special call processing which is not required for the other cases. In the overflow to POTS case, which may be used as the last route in an ARS route sequence, the MCRTIDX is pointed to from a NEXT MC ROUTE INDEX entry. The MCRTIDX is defined with MC ROUTE TYPE equal to "MC" and CARRIER ID equal to some numeric.

For the OUTWATS SFG case, which is available for EDSL (Extended Digital Subscriber Line) trunks, the MCRTIDX is defined with MC ROUTE TYPE equal to "SFG", the SFG NUMBER entered and a CARRIER ID entered. The EDSL feature, which is available in 5E4(2) and later Software Releases, uses the MC ROUTE INDEX to gain access to SFGs. This route may be any route in an ARS route sequence or may be a unique route from the PFA Group information. If an SFG "port" associated with the OUTWATS SFG is available, then a Screening Index and an optional OUTWATS Billing Number is accessed from the PFASFG form (5609-3 Record). If all of the OUTWATS SFG "ports" are busy, the NEXT MC ROUTE INDEX is checked for the next route.

For both overflow to POTS and the successful access of an OUTWATS SFG "port", the Carrier ID is used to access the appropriate ICF form (5305 Record). From this point on, the call processes like any POTS call would, including checking for consistency between the type of carrier and Type of CI Call. If the ICF form has DIG ROUTING equal to "Y", the CDIM form (5300-6 Record) is accessed for the Carrier's routes. If the Carrier ID is defined as the LEC (Local Exchange Carrier), the calls may route to either lines or trunks based on entries from POTS digit analysis. The call continues by entering the RAR form (5301 Record). The Screening Index from the PFASFG is used for OUTWATS calls and the terminal's Screening Index is used for overflow to POTS calls.

A Carrier ID is required on the MCRTIDX for both of these cases, even when other Carrier Interconnect information has not been entered for this office. Until Carrier Interconnect is active, any Carrier ID may be entered as long as it is defined on an ICF form with one of the test ACCESS TYPEs. This will cause the calls to route as if they were not carrier calls.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.4.

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2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MC ROUTE INDEX

Description: Enter the number of the MC ROUTE INDEX being defined.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

2.3 # MC ROUTE TYPE

Description: Enter the MC Route Type which defines the routing treatment.

Required Field.

Valid MC ROUTE TYPE Entries

Entry	Definition
ASP	Software Release: 5E8 and later. Used for ASP (Advanced Services Platform; previously PVN (Private Virtual Network)) calls coming from an ARS list. When this route type is used, an ASP origination will occur resulting in either a route to an SSP (Service Switching Point) if at an NAP (Network Access Point) or a query to an SCP (Service Control Point) if at an SSP. This route type cannot be entered when ASP OFC (PVN OFC for 5E6 -5E7) on the OFCOPT form is set to "NONE", since that would indicate that the office does not support ASP.
BUSY	Software Release: 5E7 and later. Busy tone treatment for failure.
DNTRAN	Software Release: 5E5 and later. Used for Inter-module trunks secondary routes across NCT links. When this route type is used, the TN will be completed across the NCT links if the TN terminates on the same Switch. If the TN does not terminate on the host Switch, the call will fail.
MC	Used for hunting a specified Trunk Group or for overflow to POTS.
PVN	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASP". See the description under "ASP".
REORD	Reorder tone.
SFG	Used for hunting a specified Simulated Facility Group.

Data Rules:

ASP
If "ASP" is entered, then the following cannot be entered:
- CARRIER ID
- SFG NUMBER

If "ASP" is entered and ASP OFC set to "SSP" on the OFCOPT form, then the TRUNK GROUP NUMBER, DIGITS TO BE DELETED, PREFIX DIGITS, NEXT ROUTE, and NEXT MC ROUTE INDEX cannot be entered.

BUSY or REORD
If "BUSY" or "REORD"is entered, then the following cannot be entered:
- DIGITS TO BE DELETED
- PREFIX DIGITS

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- SFG NUMBER
- TRUNK GROUP NUMBER

If "BUSY" or "REORD"is entered, then PERFORM PREEMPT HUNT must be "N".

MC
If "MC" is entered and TRUNK GROUP is unknown, then CARRIER ID must be entered.

If "MC" is entered, then SFG Number cannot be entered.

If "MC" is entered and TRUNK GROUP NUMBER AND NEXT ROUTE are entered, and the corresponding TKGRP form has INTER SM TRK of "Y" (TGN matches the TRUNK GROUP NUMBER on this form) then the NEXT ROUTE values on the TKGRP are MC ROUTE INDEX values and must be defined on another MCRTIDX form. In addition, it the MC ROUTE TYPE on the second MCRTIDX is "DNTRAN", NEXT ROUTE on that MCRTIDX form must match the NOC on the NOC form.

SFG
If "SFG" is entered, then SFG NUMBER must be entered, and PERFORM PREEMPT HUNT must be "N".

2.4 TRUNK GROUP NUMBER

Description: Enter the Trunk Group Number.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 - 5E14: 1 - 4000
- For 5E15: 1 - 4000 for circuit trunk groups or 7000 - 7999 for BICC groups
- For 5E16 and later: 1 - 4000

NOTE: Entries greater than 999 are allowed only when the range of 1-999 is completely exhausted.

Data Rules:

For 5E4(2) and later, do not enter a value in this field when the MC ROUTE INDEX on this form equals the MC ROUTE INDEX on a TKEDSLD form (5209 Record). Also, if the SFG TYPE value on the PFASFG form (5609-3 Record) is "OUTWATS", "EDSL", "OESSX" or "2WESSX" leave this field blank.

If SFG NUMBER is entered and a PFASFG form is defined with the SFG NUMBER and an SFG TYPE of "EDSL", "MEGACOM" "OUTESSX", "OUTWATS" or "2WESSX" then this field cannot be entered.

When the MC ROUTE TYPE is "MC", either a TRUNK GROUP NUMBER or a CARRIER ID must be entered. When the MC ROUTE TYPE is "REORD" or "DNTRAN", leave this field blank.

If MC ROUTE TYPE is "PVN" and PVN OFC on the OFCOPT form (5509 Record) is "BILLNAP" or "NOBILLNAP", then this field must be entered. When MC ROUTE TYPE is "PVN", the corresponding TKGRP form (5202 Record) must have OUTPULSING set to "MF" or "ISUP7". If MC ROUTE TYPE is "PVN" and PVN OFC on the OFCOPT form is "SSP", then this field cannot be entered since the MC ROUTE TYPE triggers a query to the SCP from this SSP.

If TRUNK GROUP NUMBER is entered, and OUTPULSING is "ISUP7" and MINT SIG TYPE is entered on the corresponding TKGRP form, SIGNALING PROTOCOL must not be "FGB" on the MCRTIDX form.

For 5E12 and later, when TRUNK GROUP NUMBER is entered on the MCRTIDX for, the TRUNK GROUP NUMBER must be defined on the TKGRP form.

For 5E12 and later, when TRUNK GROUP NUMBER is entered on the MCRTIDX form, and

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OUTPULSING is "MF" and MINT SIG TYPE is entered on the corresponding TKGRP form, SIGNALING PROTOCOL must be "TRAD" on the MCRTIDX form.

2.5 SFG NUMBER

Description: Enter the Simulated Facility Group Number.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

When the MC ROUTE TYPE is "SFG", this field must have an entry. When the MC ROUTE TYPE is "MC", "DNTRAN", "REORD", or "PVN", leave this field blank. If both the SFG NUMBER and CARRIER ID fields are entered, then a PFASFG form must be entered with the SFG NUMBER and a SFG TYPE of "OUTWATS" or "EDSL". For the 5E5 Software Release, SFG TYPE may also be "OUTWATS", "EDSL", "OESSX" or "2WESSX". In 5E6, SFG TYPE may also be "MEGACOM" or "M800".

For 5E11 and later, when the MCRTIDX input form(s) are defined with known values for the SFG NUMBER and the CARRIER ID there must be PFASFG form(s) defined with an SFG NUMBER as the key and the corresponding SFG TYPE set to "EDSL", "HM", "MEGACOM", "M800", "OESSX", "OUTWATS'", "SCOCS", "SDN", or "2WESSX".

When the MCRTIDX form has SFG NUMBERs defined on PFASFG forms with a SFG TYPE of "INFX", "INTIE", "HM", "OUTFX", "OUTTIE", "SCOCS", "2WFX" or "2WTIE", NEXT ROUTE can not be entered on the MCRTIDX form.

2.6 CHARGE INDEX

Description: Enter the CHARGE INDEX. The CHARGE INDEX is used when the MCRTIDX being defined is used for ARS and is not an OUTWATS SFG or overflow to POTS. OUTWATS SFG and overflow to POTS calls, as well as PFA cases, will use the Charge Index (CHGI) found on the appropriate RAR form (5301 Record). The CHARGE INDEX is also used for overflow to a "2WESSX", "INESSX", "OUTESSX", "2WCCSA", "INCCSA", and "OUTCCSA" SFG.
Valid Entries: 1 - 2047

Data Rules:

For 5E7 and later when TRUNK GROUP NUMBER is entered, CHARGE INDEX must be entered to prevent AMA irregularities.

2.7 CARRIER ID

Description: Enter the InterLATA Carrier ID associated with the CI (Carrier Interconnect) capability.
Valid Entries:
- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

If a CARRIER ID is entered, it must be defined on an ICF form (5305 Record) . In addition, for 5E8 and later, the ICF form's FEAT GRP must be equal to "D".

If both the SFG NUMBER and CARRIER ID fields are entered, then a PFASFG form must be defined with the SFG NUMBER and an SFG TYPE of "OUTWATS" or "EDSL". For 5E5, SFG TYPE may also be "OUTWATS", "EDSL", "OESSX" or "2WESSX". For 5E6, SFG TYPE may also be "MEGACOM" or

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"M800".

A CARRIER ID cannot be entered when MC ROUTE TYPE is "PVN".

When CARRIER ID is entered, TRUNK GROUP NUMBER may not be entered.

2.8 DIGITS TO BE DELETED

Description: Enter the number of digits to be deleted from the dialed number before PREFIX DIGITS, if any, are prefixed. This field is used when a TRUNK GROUP NUMBER has been entered. If no digits are to be deleted or if MC ROUTE TYPE is "REORD", leave this field blank. This field should be blank if this Route Index is pointed to by a PFA (Private Facility Access) dial code (defined on a PFAGPA form) that is used to access a cut-through trunk (DIG COLL field on the PFAGPA form is "N").
Valid Entries: 1 - 15

Data Rules:

If MC ROUTE TYPE is "PVN" and PVN OFC on the OFCOPT form (5509 Record) is "SSP", then this field cannot be entered.

2.9 PREFIX DIGITS

Description: Enter digits to be prefixed for outpulsing. If MC ROUTE TYPE is "REORD", leave this field blank.
Valid Entries: up to 10 digits

Data Rules:

If PVN OFC on the OFCOPT form (5509 Record) is "BILLNAP" or "NOBILLNAP" and MC ROUTE TYPE is "PVN", then PREFIX DIGITS must be filled out in one of two ways depending on type of outpulsing available on the trunk group; if OUTPULSING on the associated TKGRP form (associated via TRUNK GROUP NUMBER on this form) is set to "MF", then PREFIX DIGITS must contain the 0ZZ value (where Z = 0 - 9) to be outpulsed; if OUTPULSING on the associated TKGRP form is set to "ISUP7", then PREFIX DIGITS must contain the circuit code (range 00 - 15) to be sent in the CCS IAM (Initial Address Message) message to the SSP for conversion to an 0ZZ or 1NX code via the CKTCODE form (5311 Record, providing that the far end is a 5ESS Switch). If MC ROUTE TYPE is "PVN" and PVN OFC on the OFCOPT form (5509 Record) is "SSP", then this field cannot be entered.

2.10 NEXT ROUTE

Description: Enter the alternate POTS Route Index. This field is checked only when the route is associated with an SFG, an SFG "port" is successfully accessed but the physical trunks are all busy. This is not applicable for OUTWATS SFGs.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11: 1 - 4095
- For 5E12: 1 - 4095 for a Route Index or 1 - 8190 for a Normalized Office Code (MC ROUTE TYPE = "DNTRAN")
- For 5E13 and later: 1 - 16382 for a Route Index or 1 - 8190 for a Normalized Office Code (MC ROUTE TYPE = "DNTRAN")

Data Rules:

If MC ROUTE TYPE is "DNTRAN", then a Normalized Office Code (NOC) must be entered in this field. The NOC entered must be defined on a NOC form (5501 Record).

For DSN (Defense Switched Network) offices, there are two special applications for the NEXT ROUTE

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INDEX field. These applications apply when an MC ROUTE INDEX is associated with an SFG that has been defined on the PFASFG form with an SFG TYPE of either "EOPAT" (End Office Precedence Access Threshold) or "NETPAT" (Network Precedence Access Threshold).

- When the SFG TYPE is "EOPAT", the NEXT ROUTE INDEX is actually another MC ROUTE INDEX and must be defined on the MCRTIDX form.
- When the SFG TYPE is "NETPAT", the NEXT ROUTE INDEX is a ROUTE PATTERN value and must be defined on the PPPOLY form (5618-7 Record). Ordinarily, the route index obtained from digit analysis (LDIT) would be used as the ROUTE PATTERN entry on the PPPOLY form, unless a route index value is entered here, which would override the route index obtained from digit analysis.

If MC ROUTE TYPE is "PVN" and PVN OFC on the OFCOPT form (5509 Record) is "SSP", then this field cannot be entered.

2.11 NEXT MC ROUTE INDEX

Description: Enter the alternate MC ROUTE INDEX This field is checked when all of the ports are busy. The ports will be physical trunks if a TRUNK GROUP NUMBER has been entered or they will be simulated if an SFG NUMBER has been entered. An entry here specifies the next route to attempt.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13: 1 - 16382

Data Rules:

If a true alternate MC ROUTE INDEX is not required, the NEXT MC ROUTE INDEX field is left blank and reorder will be automatically provided on overflow for all SFG TYPES defined on a PFASFG form (5609-3 Record) except "INWATS", "IESSX" and "2WESSX". (However, an MCRTIDX should be defined for this office with MC ROUTE TYPE equal to "REORD".) However, if the SFG TYPE is "INWATS", "IESSX" or "2WESSX", and a true alternate MC ROUTE INDEX is not required, then the NEXT MC ROUTE INDEX field is left blank and if it is a LINE TERMINATION then a busy treatment is automatically returned on overflow, and if it is a trunk termination then a REORDER treatment is returned on overflow.

If this field has a value, and MC ROUTE TYPE on this form is "REORD", then reorder will be provided for the three previously mentioned SFG TYPES.

If a NEXT MC ROUTE INDEX is specified, the numeric value must not equal the value of the MC ROUTE INDEX being defined. That is, an MC ROUTE INDEX may not alternate to itself.

When an alternate Route Index is defined for a PFA (Private Facility Access) trunk, the Trunk Group associated with the alternate Route Index must have the same characteristics as the primary Trunk Group. For example, if a primary route points to a cut-through trunk, then the alternate Route Index should also point to a cut-through trunk.

If MC ROUTE TYPE is "PVN" and PVN OFC on the OFCOPT form (5509 Record) is "SSP", then this field cannot be entered.

2.12 SEGMENTED SIGNALING

Description: Will a cut-through indicator for ARS Segmented Signaling be required?

Software Release: 5E3 and later
Valid Entries: Y, N

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Data Rules:

If a "Y" is entered, the MC ROUTE TYPE must be "MC" and the TRUNK GROUP NUMBER entered must be defined on the TKGRP form with the CUT THRU field set to "Y".

2.13 OVERLAP OUTPULSING

Description: Is Overlap Outpulsing allowed for this MC ROUTE INDEX? This field is applicable only when a TRUNK GROUP NUMBER has been entered.
Valid Entries: Y, N

2.14 SIGNALING PROTOCOL

Description: Enter the SIGNALING PROTOCOL to be used for this MC ROUTE INDEX. If the TRUNK GROUP NUMBER field is left blank, ODA will use "TRAD" in the 5ESS Switch database. This field is applicable only when a TRUNK GROUP NUMBER has been entered.

Valid SIGNALING PROTOCOL Entries

Entry	Definition
TRAD	Traditional LAMA/CAMA signaling.
EA	Carrier Interconnect Equal Access signaling. For 5E8 and earlier, this is used in FGD and FGB Transitional Access where CIC (Carrier Identification Code) is 000 - 999. For 5E9(1) and later, this is used in FGD where the CIC is 0000 - 9999, and for Transitional Access where the CIC is 0000 - 0999.
INC	Carrier Interconnect Equal Access signaling for international calls.
FGB	Carrier Interconnect signaling to Feature Group B carriers that utilize the Interim Carrier access dialing plan, 950-1XXX. For 5E8 and later, the dialing plan is 950-XXXX.
PNANI	Software Release: 5E7 and later. SIGNALING PROTOCOL "PNANI" is used by the Automatic Number Identification over Private Facilities special feature. This feature must be purchased by the office.

Data Rules:

If TRUNK GROUP NUMBER is not entered, then SIGNALING PROTOCOL cannot be entered.

If this MC Route Index is associated with a PFA dial code (defined on a PFAGPA form), then this field should be "TRAD".

For 5E7 and later, for the ANI over PF feature, SIGNALING PROTOCOL must be "PNANI". When "PNANI" is entered, CI ROUTE TYPE must be "OTHER", OVERLAP OUTPULSING must be "N", and ANI OUTPULSING must be "Y". The ANI over PF special feature will allow only the following classes of service on the originating port: "PF", "PFITT" (PF Intertandem Trunk), "INDIV" (Individual Line), "ISDN" (Digital Subsciber Line associated with ISDN service), "ATTENDANT" (Attendant Line), and "ISATND" (ISDN Attendant). "PNANI" may not be entered unless the ANI over PF secured feature has been activated with FEATURE ID 5 set to "S" on the SFSYS form (5713 Record). (See Division 2, Section 4A5 for information on secured features.)

For 5E7 and later, when SIGNALING PROTOCOL is "EA", CI ROUTE TYPE must be entered and must not be "OTHER".

2.15 FGD CIC 4

Description: Is the SSP capable of handling a four-digit CIC? A value of "Y" means a 4-digit CIC is used; "N" means the 3-digit CIC is still being used. This capability is indicated to the SCP.

Software Release: 5E9(1) and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

When FGD CIC 4 is "Y",

- SIGNALING PROTOCOL must be "TRAD", "EA" or "INC", and TRUNK GROUP NUMBER must be entered.
- If SIGNALING PROTOCOL is set to "TRAD", the TRUNK GROUP NUMBER must be defined on a corresponding TKGRP form with TRKCLS set to either "EDSL", "EDSLHM", or "IC".

2.16 CI ROUTE TYPE

Description: Enter the Route Description Type used for the Carrier Interconnect capability (but not just for carrier calls). This field is applicable only when a TRUNK GROUP NUMBER has been entered.

Valid CI ROUTE TYPE Entries

Entry	Definition
OTHER	Unspecified route type; this value should not be used for any announcement or tone route.
DTG	The MC ROUTE INDEX points to a Trunk Group that is direct to an IC (InterLATA) or an INC (International Carrier).
STG	The MC ROUTE INDEX points to a shared Trunk Group from an EAEO (Equal Access End Office) to an AT (Access Tandem) and is used for calls bound for an IC/INC.
DTGOFL	The MC ROUTE INDEX points to a tone or announcement on overflow from a DTG type Route Index.
STGOFL	The MC ROUTE INDEX points to a tone or announcement on overflow from a STG type Route Index.
ALTRKBSY	The MC ROUTE INDEX points to a tone or announcement because of an all trunks busy condition.
GENANN	The MC ROUTE INDEX points to an unspecified tone or announcement.
NMFAIL	The MC ROUTE INDEX points to a tone or announcement due to NM (Network Management) blocking.
BADLATA	The MC ROUTE INDEX points to a tone or announcement due to the IC/INC misrouting the call. This may be a call terminating to an AT from an IC/INC or to an EAEO if the Trunk Group is direct (not tandem) from an IC/INC.
ICRSTRT	The MC ROUTE INDEX points to a tone or announcement due to an InterLATA carrier restriction.

Data Rules:

Sometimes more than one MC ROUTE INDEX is required to specify more than one relevant entry in this field, even though they point to the same Trunk Group. For example, if overflow from direct Trunk Groups to carriers and overflow on local company Trunk Groups route to the same announcement, it is necessary to define two Route Indexes to establish proper measurements.

2.17 FRL GROUP

Description: This field is used only for ARS routes. It indicates the minimum level of FRL (Facility Restriction Level) needed to use this route.

Each terminal which has been assigned an ARS feature has also been assigned an FRL as a default parameter on an ARSFD form or on an ARSLPA, ARSMPA, or ARSTPA form. The terminal must have an FRL number greater than or equal to the FRL of the route to succeed. If the FRL of the terminal is less than the FRL of the route, then reorder tone is applied.

If an FRL is not used, leave this field blank.
Valid Entries: 0 - 16

2.18 WARNING TONE

Description: Has this route been labeled as an expensive route? This field is used for ARS routes only.

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Valid Entries: Y, N

Data Rules:

Each terminal which has been assigned an ARS feature has also been assigned a Tone Type as a default parameter of an ARSFD form or on an ARSLPA, ARSMPA or ARSTPA form. When Warning Tone is Yes, the Tone Type is checked to see what tone, if any, is applicable.

WARNING TONE cannot be "Y" when MC ROUTE TYPE is "PVN".

2.19 PERFORM PREEMPT HUNT?

Description: Is a preemptive hunt of the trunk members to be done? An entry of No indicates that this is a hunt for an idle trunk member. This field is associated with DSN (Defense Switched Network). The DSN (Defense Switched Network) capability is defined using the BRCS feature, Precedence and Preemption.
Valid Entries: Y, N

Data Rules:

If the Trunk Group specified in TRUNK GROUP NUMBER is preemptable, enter "Y".

Enter "N" if MC ROUTE TYPE is "SFG" or "REORD". The Trunk Group is preemptable if the HUNT TYPE specified on the TKGRP form (5202-1 Record) is "PRFF", "PRBL" or "PRFL". If the TRUNK GROUP NUMBER is not entered or it is not preemptable, leave this field blank.

When both an Idle and Preemptive Hunt are to be performed on the same Trunk Group, then two MC ROUTE INDEXs must be defined with "N" or "Y" entered for this field. For example, an idle hunt is to be done on Trunk Group 100, and then a preemptive hunt for a busy trunk with a lower precedence level on the same Trunk Group. Then, MC ROUTE INDEX 10 would be defined with TRUNK GROUP NUMBER equal to 100, NEXT MC ROUTE INDEX equal to 11 and PERFORM PREEMPT HUNT equal to "N". MCRTIDX 11 would be defined with TRUNK GROUP NUMBER equal to 100, NEXT MC ROUTE INDEX blank and PERFORM PREEMPT HUNT equal to "Y". (Additional Trunk Groups may be hunted on an idle and/or preemptive basis. This is controlled via the NEXT MC ROUTE INDEX.) Note that instead of Reorder, the Fixed Route Type of "PPBPC" will be invoked when the NEXT MC ROUTE INDEX is blank.

In the example described above, MCRTIDX 10 would be pointed to by an entry specified on the PPSCRN form (5618-2 Record).

2.20 RTE CAT

Description: Enter the routing category or route numbering plan that the FTS-2000 call will use to complete the call. If no entry is made in this field, then the existing route category or route numbering plan is used. The value entered in this field overrides the routing category or route numbering plan which would have been used if this field been left blank.

This field is used by the FTS-2000 INPA feature. For more information on this feature see Division 2, Section 4C8.

Software Release: 5E9(1) and later.
Valid Entries:

Valid RTE CAT Entries

Entry	Definition
APN	Action Point Numbering Plan
INTL	International Numbering Plan
NANP	North American Numbering Plan

Data Rules:

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If this field is entered, then a DAS must be entered on the OFCOPT form (5509 Record).

2.21 CRANKBACK

Description: Can a crankback message be sent to the previous switch? When a Leased Network Inter-machine switch has exhausted the ARS routing list and is unable to route a call, it may send a crankback message to the LN switch that originated the call. The originating switch can then attempt to reroute the call through another switch.

Software Releases: 5E6 and later
Required field.
Default Value: N
Valid Entries: Y, N

Data Rules:

When CRANKBACK is "Y", TRUNK GROUP NUMBER must be entered and must be defined on a TKGRP form (5202 Record) that has LN TYPE set to "IMT". SFG NUMBER on this form must be blank.

If NEXT MC ROUTE INDEX is entered, then CRANKBACK must be "N".

ANI

The following fields Section 2.22 -Section 2.25 refer to the Automatic Number Identification feature. The ANI6 and ANI 7 fields were added with the ANI6/ANI7 on a Trunk Group or an OUTWATS SFG capability.

2.22 ANI OUTPULSING

Description: Is ANI (Automatic Number Identification) Outpulsing allowed for this MC ROUTE INDEX? This field is applicable only when a TRUNK GROUP NUMBER has been entered.
Valid Entries: Y, N

Data Rules:

For 5E7 and later, if TRUNK GROUP NUMBER is not entered, and MC ROUTE TYPE is not "SFG", then ANI OUTPULSING must be "N" or not entered.

2.23 ANI6

Description: Should the ANI6 digits 6 or 06 be outpulsed? ANI6 indicates to the operator system that calls may require special screening. This capability provides the ability based on the originating Trunk Group or OUTWATS SFG to optionally outpulse ANI6 digits when making an OUTWATS SFG call or a trunk origination when the trunk class of service is "PF", "PFITT", or "PFLASH". Traditionally, ANI6 indicates that the call is from a Hotel/Motel customer.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

If ANI6 is "Y", the following must be true:

ANI7 must not equal "Y"
- ANI OUTPULSING must be "Y"
- ANI II DIGITS must not be entered
- MC ROUTE TYPE must be "SFG"
- SFG NUMBER must be defined on a PFASFG

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- form must have an SFG TYPE of "OUTWATS".

For 5E11 and later, when the MCRTIDX forms have ANI6 set to "Y", the SFG TYPE on the corresponding PFASFG form must be set to "HM" or "OUTWATS".

2.24 ANI7

Description: Should the ANI7 digits 7 or 07 be outpulsed? ANI7 indicates to the operator system that calls may require special screening. Traditionally, ANI7 indicates that the call is from a coin phone.

This capability provides the ability based on the originating Trunk Group or OUTWATS SFG to optionally outpulse ANI7 digits when making an OUTWATS SFG call or a trunk origination when the trunk class of "PF", "PFITT", or "PFLASH".

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

If ANI7 is "Y", the following must be true:

ANI6 must not equal "Y"
- ANI OUTPULSING must be "Y"
- ANI II DIGITS must not be entered
- MC ROUTE TYPE must be "SFG"
- SFG NUMBER must be defined on a PFASFG
- form must have an SFG TYPE of "OUTWATS".

For 5E11 and later, when the MCRTIDX forms, have ANI7 set to "Y", the SFG TYPE on the corresponding PFASFG form must be set to "SCOCS" or "OUTWATS".

2.25 ANI II DIGITS

Description: Enter ANI pairs assigned to the MC ROUTE INDEX. Flexible ANI is secured feature for Automatic Number Identification.

Software Release: 5E6 and later
Valid Entries: 00 - 99

Data Rules:

If ANI II DIGITS is entered, then:
- MC ROUTE TYPE must be "SFG"
- ANI OUTPULSING must be "Y"

2.26 RTE SEARCH LMT

Description: Enter the Route Search Limit. This field was added to support the 99-5E-3782 feature (Mutli-Vendor Intra-Network Trunk). For more information, see Div. 2 Sec. 4A217.

Software Release: 5E12 and later
Valid Entries: 1 - 15 or blank

Data Rules:

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If RTE SEARCH LMT is entered, OUTPULSING must be "ISUP7" and MINT SIG TYPE must be "ALPHA", "BETA" or left blank. A blank means, no route search limit.

2.27 TERM NSC

Description: Enter the Terminating Network Screening index. This field was added to support the 99-5E-3782 feature (Mutli-Vendor Intra-Network Trunk). For more information, see Div. 2 Sec. 4A217.

Software Release: 5E12 and later
Valid Entries: 0 - 999 or blank

Data Rules:

If TERM NSC is entered, the TERM NSC must be defined on the LDPTNSC form (5568 Record).

If TERM NSC is known, MINT SIG TYPE must be known on the TKGRP form. In addition, if MINT SIG TYPE is "BETA" on the corresponding TKGRP form, TERM NSC must be between 0 and 63 on the MCRTIDX form. TRUNK GROUP NUMBER on the MCRTIDX form matches TGN on the TKGRP form.

CRITICAL DATA INDICATOR

The following (fields Section 2.28 - Section 2.29) support the RC Translations Protection For Highly Critical Elements feature, see Division 2, Section 1BY for more information.

2.28 CRIT IND

Description: This field supports the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT IND field is used to indicate whether the route index data is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.29 CRIT RMK

Description: This field enhances the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT RMK field is used to enter a remark to explain why this route index data is critical.

Software Release: 5E15 and later
Valid Entries: Enter up to 32 characters

Data Rules:

When the MCRTIDX form has the CRIT RMK field entered, the SFSYS form SFID 566 ACT field must be set to "Y".

```
mcrtidx                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5304-1/2)          BRCS MC ROUTE INDEX EXPANSION

*1. MC ROUTE INDEX     00001      13. SIGNALING PROTOCOL   _____
#2. MC ROUTE TYPE      ASP        14. FGD CIC 4            N
 3. TRUNK GROUP NUMBER ____       15. CI ROUTE TYPE        ___________
```

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```
 4. SFG NUMBER          ____        16. FRL GROUP          __
 5. CHARGE INDEX        ____        17. WARNING TONE       _
 6. CARRIER ID          ____        18. PERFORM PREEMPT HUNT? _
 7. DIGITS TO BE DELETED __         19. CRANKBACK          N
 8. PREFIX DIGITS       _________   20. RTE CAT            ____
 9. NEXT ROUTE          _____
10. NEXT MC ROUTE INDEX _____
11. SEGMENTED SIGNALING _
12. OVERLAP OUTPULSING  _
```

```
mcrtidx                  5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5304-1/2)           BRCS MC ROUTE INDEX EXPANSION

       ANI
21. ANI OUTPULSING _
22. ANI6         N
23. ANI7         N
24. ANI II DIGITS __

25. RTE SEARCH LMT __
26. TERM NSC      ___
27. CRIT IND      N
```

Figure 1 SAMPLE MCRTIDX FORM 5E13 THROUGH 5E14 SOFTWARE RELEASES

```
mcrtidx                  5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5304-1/2)           BRCS MC ROUTE INDEX EXPANSION

*1. MC ROUTE INDEX     _____       13. SIGNALING PROTOCOL   _____
#2. MC ROUTE TYPE      _______     14. FGD CIC 4            N
 3. TRUNK GROUP NUMBER ____        15. CI ROUTE TYPE        ___________
 4. SFG NUMBER         ____        16. FRL GROUP            __
 5. CHARGE INDEX       ____        17. WARNING TONE         _
 6. CARRIER ID         ____        18. PERFORM PREEMPT HUNT? _
 7. DIGITS TO BE DELETED __        19. CRANKBACK            N
 8. PREFIX DIGITS      _________   20. RTE CAT              ____
 9. NEXT ROUTE         _____
10. NEXT MC ROUTE INDEX _____
11. SEGMENTED SIGNALING _
12. OVERLAP OUTPULSING  _
```

```
mcrtidx                  5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5304-1/2)           BRCS MC ROUTE INDEX EXPANSION

       ANI
21. ANI OUTPULSING _
22. ANI6         N
23. ANI7         N
```

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24. ANI II DIGITS __

25. RTE SEARCH LMT __
26. TERM NSC ___

---

mcrtidx 5ESS Switch
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5304-1/2) BRCS MC ROUTE INDEX EXPANSION

CRITICAL DATA INDICATOR
27. CRIT IND N
28. CRIT RMK _____

Figure 2 SAMPLE MCRTIDX FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 3R: 5305-1/2 RECORD
CARRIER ADMINISTRATION FORM - ICF

1. GENERAL

The 5305 Record is available with 5E2 and later Software Releases, and is used to define the characteristics of Inter-LATA (Local Access Transport Area) and Intra-LATA carriers.

The determination of the Carrier Identification Code on a carrier call is done in one of eight ways:

1. The line is presubscribed to a carrier.

   A PIC (Pre-subscribed Inter-LATA Carrier) Identification number is entered on a LINE form (5109 Record).

2. The line belongs to an IDP (Individualized Dialing Plan) which has a GPIC (Group PIC).

   The GPIC is entered on an IDPGP form (5601-4 Record).

3. The office has defined a carrier that is used when the subscriber does not have a PIC or GPIC and has not dialed a carrier access number or prefix.

   The OFFICE CARRIER ID is entered on the OFCOPT form (5509 Record).

4. The line dials a carrier access number in the format of 950-WXXX.

   W is any digit from 0-9 (usually 1), and XXX is the Carrier Identification Code.

5. The line dials a carrier access number in the format of 950-XXXX.

   XXXX is the Carrier Identification Code. This took effect in 5E8 and later, when Feature Group B was expanded. See Division 2, Section 1AY for a description of Feature Groups B and D.

6. The line dials a carrier access prefix in the format 10XXX, where XXX is the Carrier Identification Code.

7. The line dials a carrier access prefix in the format 101XXXX, where XXXX is the Carrier Identification Code.

   This was available in 5E9(1) and later, when Feature Group D was expanded. See Division 2, Section 1BI for a description of Feature Group D expansion.

8. An end-user line is identified as being presubscribed to a CIC (Carrier Identification Code) as its Alternate Local Service Provider. A CIC is entered in the PLC field on the LINE form (5109 Record). See Division 2, Section 4A269 for more information concerning the Alternate Local Service Provider secured feature.

The format 10XXX or 101XXXX is known as the FGD CAC (Carrier Access Code). The value allowed in the office depends on the value of the FGD PHASE field on the OFCOPT form. See the OFCOPT form and Division 2, Section 1BI for more information on the FGD CAC.

1.1 Carrier Definition

Each carrier is defined with CARRIER TYPE, access method and routing information. All carriers used for Carrier Interconnect subscriber access in this office must be defined, including the LEC (Local Exchange Carrier).

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1.2 Route Indexes

All Route Indexes assigned on this form must also appear on an RTIDX form (5303-1/2 Record). The carrier's specific Code Indexes and Route Indexes may be entered on this record. Depending on the classification of the call by the regular digit analysis forms (PDIT, LDIT, and IDDD) the appropriate pair of Code Index and Route Index is determined. When the TYPE OF CI CALL is "SAC", the LDIT Code Index and Route Index are used to route the call. For this type of carrier call, the ICF form is checked to determine the validity of the Carrier ID and to see if overlap outpulsing might be required. The Code Index is used with both the originator's Screening Index (defined on the LCC form) and the prefix dialed to determine which Rate and Route entry to use for screening this call. The Route Index is considered to be the Regular Route Index and will be used to route the call if the RTI field on the RAR form (5301 Record) equals "REGL". If the Regular Route Index is inappropriate, a Special Route Index may be entered on the RAR form which will override the Regular Route Index.

1.3 OSPS Toll and Assistance Applications

For a carrier-owned 5ESS Switch that supports an OSPS Toll and Assistance application, an ICF form entry must be defined for the switch owner. However, the routing information for the switch owner is defined using the POTS digit analysis forms (PDIT, LDIT and IDDD). The Code Index and Route Index entries on this form should be set so that using them will cause a call to route to reorder.

1.4 Carrier Destination Mapping

If the Code Index/Route Index classifications are not explicit enough to correctly route calls to the carrier, then the DIG ROUTING field may be entered as "Y". In this case, the Carrier Destination Mapping Record (CDIM form; 5300-6 Record) is used to determine the carrier's specific Code Indexes and Route Indexes. The carrier's Code Indexes and Route Indexes do not require entry on the ICF form when DIG ROUTING is "Y".

The carrier's specific Code Indexes and Route Indexes may be entered on the ICF form, even when DIG ROUTING equals "Y". During call processing on a carrier call, the appropriate Code Index/Route Index pair will be selected from the ICF form. Then if DIG ROUTING is "Y", the CDIM form will be checked next. When an entry is found on the CDIM form for the call in progress, the CDIM form Code Index/Route Index pair will override the ICF form pair. When no entry for this call is found on the CDIM form, call processing will use the pair that was selected from the ICF form. Therefore, the CDIM form may be used to provide exceptions to the ICF form entries.

1.5 LEC Service and Carrier Name

Two new fields, LEC SERVICE and CARRIER NAME, were added with the introduction of OSPS Toll and Assistance features in the 5E4(2) Software Release.

The default inter-LATA and international carrier for a forward number are both specified in the OPRTK form (5417 Record). To utilize OSPS, the LEC SERVICE field of the ICF form (5305 Record) for the carrier must be set to "Y".

On a 5ESS Switch owned by an inter-LATA carrier, no data would normally be defined using this form. The exception to this general rule is for an inter-LATA carrier-owned 5ESS Switch that supports the OSPS TA application. In this case, there must be an ICF form entry for the switch owner (defined in the OFC TYP and OFC CARR fields of the OSPSOPT form (5424 Record). While the routing information defined on this form is not used for call routing, the following fields are used in call processing: CARRIER TYPE, ACCESS TYPE, INTRA-LATA, LEC SERVICE and CARRIER NAME. The following fields are not used and should be set to "N": LONG REC, DIG ROUTING, CUT IND, OVERLAP, SAC OVERLAP and CAC SCRNING.

1.6 Carrier not a Switch Owner

In an OSPS application, when a carrier different from the switch owner is used to route a call,

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RSM-specific (Remote Switching Module) data is found in the RSMCAR form (5421 Record). This record is required if any OSPS call from an RSM is to route to this carrier. The data it contains is used in place of the routing information found in the ICF form. This form is not needed for a carrier if operator calls for this carrier are sent to the carrier's own operator system and if the carrier is not used to route any numbers the operator may dial.

1.7 Feature Groups B and D

In 5E8, this form was modified to split administration of the two Feature Groups, B and D. The CARRIER ID field was increased from 3 digits to 4 digits for Feature Group B. A new key field, FEAT GRP, was added to distinguish between Feature Groups B and D.

A new field, MEASUREMENT, was added to indicate if a carrier needs traffic measurements. A new field, TRANS CARRIER, was added to give the Feature Group D transition carrier identification for Feature Group B carriers. Existing fields, TRANSRTI and TRANSCDI were renamed as FGBRTI and FGBCDI, respectively.

In 5e9(1), the CARRIER ID field was increased from 3 digits to 4 digits for Feature Group D.

1.8 Recent Change View

The corresponding Recent Change View for this form is 10.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * CARRIER ID

Description: Enter the FGB/FGD Interexchange Carrier Identification Code.

Required Field.
Valid Entries:
- For 5E8: 0 - 999 for FGD
- 0 - 9999 for FGB
- For 5E9(1) and later: 0 - 9999

Data Rules:

For 5E8 and later, an RSMCAR form (5421 record) is required when CARRIER ID is entered, FEAT GRP equals "D", and the following is true for this ICF form:

- ACCESS TYPE is entered as "BOTH" or "TBOTH",
- DIG ROUTING is entered as "N", and
- CARRIER TYPE is entered as "CONSOL".

The RSMCAR form(s) must have the following fields entered:
- DOMES CDI,
- DOMES RTI,
- FGB CDI,
- FGB RTI,
- INTL CDI,

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- INTL RTI,
- SAC CDI,
- and SAC RTI.

2.3 * FEAT GRP

Description: Enter the Feature Group type.

Software Release: 5E8 and later
Required Field.
Valid Entries:

Valid FEAT GRP Entries

Entry	Definition
B	Feature Group B
D	Feature Group D

Data Rules:

For Feature Group B entries:

- ACCESS TYPE must equal one of the following:

  "ITRM"

  "TRAN"

  "TITRM"

  "TTRAN"

- If DIG ROUTING is equal to "N", FGB CDI and FGB RTI are required; and
- No FEAT GRP D fields are allowed.
- SS7 OP CDI and SS7 OP RTI must not be entered.

For Feature Group D entries:

- CARRIER ID must be from 0 - 999 (5E8 only); For PLC (Presubscribed Local Carrier), CARRIER ID must be 0 - 9999 (for 5E12 and later).
- ACCESS TYPE must equal one of the following: "BOTH", "LTRM", "950", "TBOTH", "TLTM", "T950";
- If CARRIER TYPE is "CONSOL", ACCESS TYPE must not be "950" or "T950";
- If SCD SCRNING is "Y", ACCESS TYPE must not be "950" or "T950"; and
- No FEAT GRP B fields are allowed.
- For 5E8 and later , if FEAT GRP is "D", then separate all TREAT forms, with the CARRIER field entered, into groups with the same ORIG STAT TYPE on the TREAT form. There must be at least one TREAT form in each group for each ICF form where the CARRIER on the TREAT form matches the CARRIER ID on the ICF form.

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- For 5E12 and later, when any of the PLC (Presubscribed Local Carrier) fields are entered, FEAT GRP must be "D".
- For 5E13 and later, when FEAT GRP is "B", Feature Group D fields must not be entered.

2.4 # ACCESS TYPE

Description: Enter the Carrier Interconnect dialed code Access Type. Two dialing methods are used for accessing the carrier:

1. Interim, where the subscriber dials 950-XXXX, where XXXX is the Carrier Identification Code.
2. Long term, where the subscriber dials the called number prefixed by the FGD CAC (Carrier Access Code).

For more information on Carrier Interconnect activation from a test state to a non-test state, please refer to 235-190-100 (FEATURE DESCRIPTIONS) under the "Toll and Carrier Features - Implementation and Administration".

Required Field.
Default:

ITRM if FEAT GRP equals "B"
- LTRM if FEAT GRP equals "D"

Valid Entries:

Valid Feature Group B ACCESS TYPE Entries

Entry	Definition
ITRM	The carrier accepts only Feature Group B interim calls only.
TRAN	The carrier accepts only the transition dialing access method.
TITRM	The carrier accepts only the interim dialing access method from test lines. Calls from non-test lines are not accepted.
TTRAN	The carrier accepts only the transition dialing access method from test lines. Calls from non-test lines are not accepted.

Valid Feature Group D ACCESS TYPE Entries

Entry	Definition
950	The carrier accepts only the interim dialing access method.
BOTH	The carrier accepts both the interim and long term dialing access methods.
LTRM	The carrier accepts only the long term dialing access method.
T950	The carrier accepts only the interim dialing access method from test lines. Calls from non-test lines are not accepted.
TBOTH	The carrier accepts both the interim and the long term method from test lines. Calls from non-test lines are not accepted.
TLTM	The carrier accepts only the long term dialing access method from test lines. Calls from non-test lines are not accepted.

Data Rules:

If CARRIER TYPE is "CONSOL", then the ACCESS TYPE must not be "950" or "T950".

If the CARRIER TYPE is "INC", the ACCESS TYPE must be "LTRM" or "TLTM".

If the CARRIER TYPE is "LEC", the ACCESS TYPE must be "LTRM".

For 5E8 and later, if CARRIER TYPE is "PSEUDO", then the ACCESS TYPE must be "LTRM" or "TLTM".

For 5E8 and later, for Feature Group B entries:

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- If ACCESS TYPE is equal to "TRAN" or "TTRAN":
  - TRANS CARRIER must be entered, and must equal the last three digits of the CARRIER ID, and
  - CARRIER ID must be either "0NNN" or "1NNN".
- If ACCESS TYPE is equal to "ITRM" or "TITRM", TRANS CARRIER is not allowed.

For 5E8 and later, for Feature Group D entries:

- If ACCESS TYPE is "950" or "T950", OVERLAP must be "N", and SACOVLAP must be "N".
- If ACCESS TYPE is "950" or "T950" and CARRIER TYPE is "IC", CUT CI must be "N".

For 5E12 and later, for Feature Group D entries:

When any Presubscribed Local Carrier fields are entered,

- FEAT GRP must be "D"
- CARRIER TYPE must be "IC" or "CONSOL".

2.5 LONG REC

Description: Should the terminating billing record that is generated be detailed (long)? If "N" is entered a short record is generated, which provides a minimum set of billing information and is generated for all answered calls.

The long record provides more detailed information and should be generated when required for study purposes. The long record is generated for answered and unanswered calls and includes the time that trunk seizure is recognized.

Required Field.
Default: N
Valid Entries: Y, N

2.6 MEASUREMENT

Description: Should traffic measurements be done for this carrier?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E8, only 200 ICF forms can be assigned with MEASUREMENT equal to "Y". For 5E9(1) and later, only 500 ICF forms can be assigned with MEASUREMENT equal to "Y".

2.7 DIG ROUTING

Description: Is the CDIM (Carrier Destination Mapping form) checked next for Code Indexes and Route Indexes which may override possible entries on this form? Enter "N" if the carrier's Code Indexes and Route Indexes are only found on this ICF form.

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E4(2) and later, when CARRIER TYPE is "LEC", DIG ROUTING must be "N".

When "Y" is entered and CARRIER TYPE is "PSEUDO", this combination of values is used by the Circuit Switched Trunk feature. Circuit Switched Trunk is a secured feature and must be purchased by the office before data may be built for it. The ACT field for SFID 6 on the SFSYS form (5713-1 Record) must be set to "Y". For more information on this feature, see Division 2 Section 4A6.

For 5E12 and later:
When DIG ROUTING is "N", and OPER MINUS SIGNAL is entered, OPER MINUS CDI and OPER MINUS RTI must be entered.

When DIG ROUTING is "N", and OPER PLUS SIGNAL is entered, OPER PLUS CDI and OPER PLUS RTI must be entered.

When DIG ROUTING is "N", and NORMAL SIGNAL is entered, NORMAL CDI and NORMAL RTI must be entered.

When DIG ROUTING is "N", and LOCDA SIGNAL is entered, LOCDA CDI and LOCDA RTI must be entered.

When DIG ROUTING is "N", and DA SIGNAL is entered, DA CDI and DA RTI must be entered.

When DIG ROUTING is "N", and REPAIR SIGNAL is entered, REPAIR CDI and REPAIR RTI must be entered.

When DIG ROUTING is "N", and BUSOFC SIGNAL is entered, BUSOFC CDI and BUSOFC RTI must be entered.

When DIG ROUTING is "N", and LOCDA CONV DN is entered, LOCDA CDI and LOCDA RTI must be entered.

When DIG ROUTING is "N", and DA CONV DN is entered, DA CDI and DA RTI must be entered.

When DIG ROUTING is "N", and REPAIR CONV DN is entered, REPAIR CDI and REPAIR RTI must be entered.

When DIG ROUTING is "N", and BUS OFC CONV DN is entered, BUS OFC CDI and BUS OFC RTI must be entered.

2.8 LEC SERVICE

Description: Are OSPS TA Operator Services being provided for this carrier? If these services are not being provided, or if the switch does not contain an OSPS TA application, enter "N".

For a carrier-owned 5ESS Switch that supports an OSPS TA application, the INTRA LATA field for the switch owner should be set to "Y".

Software Release: 5E4(2) and later
Required Field for 5E8 and later.
Valid Entries: Y, N

2.9 CARRIER NAME

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Description: Enter the name of the Inter-LATA carrier. The special character "&" is allowed. This entry is displayed to OSPS Toll and Assistance operators when handling a call for this carrier, and thus this field must be entered for OSPS TA offices (OSPS TA field on the OSPSOPT form is "Y").

CARRIER ID and CARRIER NAME entries must be uniquely assigned.

Software Release: 5E4(2) and later
Valid Entries: 1 - 7 alphabetic characters

2.10 SEND ANI II

Description: Should the ANI II digits associated with a screen index on the SCRIDXPA form (5543 Record) be sent on calls for this IC? This field applies only to the Flexible ANI Enhancement secured feature which is described in Division 2, Section 4A142.

Software Release: 5E9(1) and later
Default: N
Valid Entries: Y, N

Data Rules:

This field can by "Y" only if the Flexible ANI Enhancement secured feature has been purchased, and SFID 142 is set to "Y" on the SFSYS form (5713-1 Record).

If SEND ANI is "Y" and FEAT GRP is "B", ACCESS TYPE must be "TRAN" or "TTRAN".

2.11 REMARKS

Description: Enter any remarks deemed locally necessary.
Valid Entries: 1 - 16 alphanumeric characters

FEATURE GROUP B ONLY

Fields Section 2.12 -Section 2.14 refer to Feature Group B only (see Division 2, Section 1AY for a description of Feature Groups B and D).

2.12 FGB CDI

Description: Enter the Transition Code Index for calls dialed 950-XXXX to this carrier.
Valid Entries: 1 - 4095

Data Rules:

If FEAT GRP equals "B", and DIG ROUTING equals "N", there must be an FGB CDI.

2.13 FGB RTI

Description: If the Transition Code Index has an entry, enter the Transition Route Index.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

If FEAT GRP equals "B" and DIG ROUTING equals "N", there must be an FGB CDI.

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If DIG ROUTING equals "N", there must be an FGB RTI, and there must be a matching Route Index entry on the RTIDX form.

2.14 TRANS CARRIER

Description: Assign a Feature Group D Transition Carrier to a Feature Group B Carrier.

Software Release: 5E8 and later
Valid Entries: 0 - 999

Data Rules:

If FEAT GRP is "B" and ACCESS TYPE is equal to "TRAN" or "TTRAN", TRANS CARRIER is required.

If FEAT GRP is "B" and ACCESS TYPE is equal to "TRAN" or "TTRAN", TRANS CARRIER must equal the last three digits of CARRIER ID.

If FEAT GRP is "B" and ACCESS TYPE is equal to "ITRM" or "TITRM", TRANS CARRIER is not allowed.

If TRANS CARRIER is entered, there must be an entry on another ICF form with FEAT GRP equal to "D" and a CARRIER TYPE of either "CONSOL" or "IC".

SS7 OPERATOR SERVICES

The following fields (Section 2.15 - Section 2.16) supports the SS7 Using Operator Services feature. For more information see, Division 2, Section 4A603.

2.15 SS7 OP CDI

Description: This field indicates the destination index for the Interexchange Carrrier that allows calls to be routed to operator services switches. The following dialing codes are supported:

- 1+555+XXXX
- (101XXXX)+0+(NPA)+XXXX
- (101XXXX)+1+(NPA)+XXXX
- (101XXXX)+411 - for all lines, including restricted/special
- (101XXXX)+(1/0)+411 - for all lines, including restricted/special

Software Release: 5E16 and later
Valid Entries: 1 - 4095

2.16 SS7 OP RTI

Description: This field indicates the route index for the Interexchange Carrrier that allows calls to be routed to operator services switches.

- 1+555+XXXX
- (101XXXX)+0+(NPA)+XXXX
- (101XXXX)+1+(NPA)+XXXX
- (101XXXX)+411 - for all lines, including restricted/special

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- (101XXXX)+(1/0)+411 - for all lines, including restricted/special

Software Release: 5E16 and later
Valid Entries: 1 - 16382

FEATURE GROUP D ONLY

Fields Section 2.17 - Section 2.47 refer to Feature Group D only (see Division 2, Section 1AY for a description of Feature Groups B and D).

2.17 CARRIER TYPE

Description: Enter the Carrier Type which defines the type of traffic the carrier accepts.

WARNING: If CARRIER TYPE is set to "CONSOL" or "INC", then, it is expected, but not required, that all IDDD forms (5307 Record) which do not have CALL TYPE set to "QUERY" or "IDDDFCA" will have TYPE CI CALL set to "IDDD" or "PSCAR".

Default: IC
Valid Entries:

Valid CARRIER TYPE Entries

Entry	Definition
CONSOL	Consolidated Carrier, accepts calls within World Zone One (which includes the continental U.S.) and international traffic.
IC	Inter-LATA Carrier, accepts calls within World Zone One.
INC	International Carrier, accepts calls outside the continental U.S.
LEC	Local Exchange Carrier accepts calls within the LATA (Intra-LATA).
PSEUDO	Software Release: 5E4(2) and later Pseudo carrier in access tandem defined for number services calls - SSP (Service Switching Point) and ASP (Advanced Services Platform) calls.

Data Rules:

CONSOL:
If CARRIER TYPE is **"**CONSOL**"**, then

- ACCESS TYPE may not be "950" or "T950";
- if ACCESS TYPE is "BOTH" or "TBOTH":
  - if DIG ROUTING is "N", the following fields are required

    DOMES CDI and DOMES RTI

    INTL CDI and INTL RTI

    ZMINUS CDI and ZMINUS RTI

    ZPLUS CDI and ZPLUS RTI;

  - if SERV SWITCH PT is "Y" on the OFCOPT form, then NS CDI and NS RTI are recommended for 5E6 and later;
- if ACCESS TYPE is "LTRM" or "TLTM"

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- if DIG ROUTING is "N", the following fields are required:

  DOMES CDI and DOMES RTI

  INTL CDI and INTL RTI

  ZMINUS CDI and ZMINUS RTI

  ZPLUS CDI and ZPLUS RTI

  INTL OP CDI and INTL OP RTI

- if SERV SWITCH PT is "Y" on the OFCOPT form, then NS CDI and NS RTI are recommended for 5E6 and later.

IC:
If CARRIER TYPE is **"**IC**"** and:

- ACCESS TYPE is "950" or "T950", then
  - the following fields must be "N"

    INTRALATA

    OVERLAP

    SAC OVERLAP

    DIG ROUTING (5E6 and later)

  - the following fields are not allowed

    ASP CDI and ASP RTI

    ASP TF CDI and ASP TF RTI

    DOMES CDI and DOMES RTI

    INTL CDI and INTL RTI

    INTL OP CDI and INTL OP RTI

    NS CDI and NS RTI

    ZMINUS CDI and ZMINUS RTI

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ZPLUS CDI and ZPLUS RTI

- ACCESS TYPE is "BOTH" or "TBOTH",
  - and DIG ROUTING is "N" then the following fields are required

    DOMES CDI and DOMES RTI

    ZMINUS CDI and ZMINUS RTI

    ZPLUS CDI and ZPLUS RTI

  - the following fields are not allowed:

    INTL CDI and INTL RTI

    INTL OP CDI and INTL OP RTI

  - if SERV SWITCH PT is "Y" on the OFCOPT form, then NS CDI and NS RTI are recommended for 5E6 and later

- ACCESS TYPE is "LTRM" or "TLTM"
  - and DIGROUTING is "N" then the following fields are required:

    DOMES CDI and DOMES RTI

    ZMINUS CDI and ZMINUS RTI

    ZPLUS CDI and ZPLUS RTI

  - the following fields are not allowed:

    INTL CDI and INTL RTI

    INTL OP CDI and INTL OP RTI

  - if SERV SWITCH PT is "Y" on the OFCOPT form, then NS CDI and NS RTI are recommended for 5E6 and later.

INC:
If CARRIER TYPE is **"**INC**"** then

- INTRA LATA must be "N"

  ACCESS TYPE must be "LTRM" or "TLTM"

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- if DIG ROUTING is "N" then the following fields are required:

  INTL CDI and INTL RTI

  ZMINUS CDI and ZMINUS RTI

  INTL OP CDI and INTL OP RTI

- the following fields are not allowed:

  ASP CDI and ASP RTI

  ASP TF CDI and ASP TF RTI

  DOMES CDI and DOMES RTI

  NS CDI and NS RTI

  ZPLUS CDI and ZPLUS RTI

LEC:
If CARRIER TYPE is **"**LEC**"** then

- INTRA LATA must be "Y"

  ACCESS TYPE must be "LTRM" or "TLTM"

  OVERLAP must be "N"

  SAC OVERLAP must be "N"

  SCD SCRNING must be "N"

  DIG ROUTING must be "N" (5E4(2) and later)

  OFC OBL INH must be "N"

  OFC ONA INH must be "N"

  SS7 OP CDI and SS7 OP RTI must not be entered.

- If SERV SWITCH PT on the OFCOPT form is "N", NS CDI and NS RTI must be blank.
- the following fields are not allowed:

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DOMES CDI and DOMES RTI

INTL CDI and INTL RTI

INTL OP CDI and INTL OP RTI

ZMINUS CDI and ZMINUS RTI

ZPLUS CDI and ZPLUS RTI

PSEUDO:
If CARRIER TYPE is **"**PSEUDO**"** then

- ACCESS TYPE must be "BOTH"

  ACCESS TYPE must be "TLTM" or "LTRM"

  INTRA LATA must be "Y"

  OVERLAP must be "N"

  SAC OVERLAP must be "N"

  CI CUT must be "N"

  ZPLUS OPT must be "N"

  ZMINUS OPT must be "N"

  OFC OBL INH must be "N"

  OFC ONA INH must be "N"

- the following fields are not allowed:

  DOMES CDI and DOMES RTI

  INTL CDI and INTL RTI

  INTL OP CDI and INTL OP RTI ZMINUS CDI and ZMINUS RTI

  ZPLUS CDI and ZPLUS RTI

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- If SERV SWITCH PT on the OFCOPT form is "N", NS CDI and NS RTI must be blank.
- the corresponding CARRIER ID (for 5E8 and later, with FEAT GRP equals "D") may not be used as a CARRIER ID on any CDIM forms having FEAT GRP equals "D" in 5E8 and later.
- if DIG ROUTING is "Y", this combination of values is used by the Circuit Switched Trunk feature. Circuit Switched Trunk is a secured feature and must therefore be purchased by the office before data may be built for it. SFID 6 on the SFSYS form is reserved for Circuit Switched Trunk and must have ACT set to "Y".
- For 5E12 and later, when any of the PLC fields are entered, CARR TP must be "IC" or "CONSOL".

2.18 INTRA LATA

Description: Is the carrier allowed and will the carrier accept intra-LATA calls? For a carrier-owned 5ESS Switch that supports an OSPS TA application, the INTRA LATA field for the switch owner should be set to "Y" if the switch owner has been tariffed to carry operator assisted, automated coin, and automated calling card intra-LATA traffic in a nonemergency. If this is not allowed, this field should be set to "N".

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

INTRA LATA must be "N" if CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950", or if CARRIER TYPE is "INC".

INTRA LATA must be "Y" if CARRIER TYPE is "LEC" or "PSEUDO".

2.19 CI CUT

Description: Will the carrier accept cut-through calls (i.e., calls that are dialed (FGD CAC) + (#))?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, ACCESS TYPE must not be "950" or "T950".

If CUT IND is "Y" and DIG ROUTING is "N", then CUT CDI and CUT RTI must be entered.

2.20 OVERLAP

Description: Does the carrier use overlap outpulsing on at least one of its non-SAC (Service Access Code) routes? (Overlap outpulsing for each specific route is indicated on the 5303 Record - RTIDX form.) Enter "N" if the carrier does not use overlap outpulsing on any of its non-SAC routes.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CARRIER ACCESS is "LEC" or "PSEUDO", this entry must be "N".

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OVERLAP must be "N" if CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".

2.21 SAC OVERLAP

Description: Does the carrier use overlap outpulsing on SAC calls?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CARRIER TYPE is "LEC" or "PSEUDO", this entry must be "N".

SAC OVERLAP must be "N" if CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".

2.22 CAC SCRNING

Description: Does the carrier want traditional call processing and screening (which blocks non-free calls) done on calls from Charge-A-Call lines? Enter "N" if the carrier does not want traditional screening. If the entry is "N", then all calls (even calls with prefix dialing errors) will complete to the carrier when originated from a line with CLASS OF SERVICE equal to "CHGCALL" (as defined on the LCC form). Line Screening will never be set to "Y" when CAC SCRNING equals "N".

Required Field.
Default: N
Valid Entries: Y, N

2.23 SCD SCRNING

Description: Does the carrier have the SCD (Selective Carrier Denial) feature? The SCD feature provides a carrier with the ability to selectively inhibit certain calls from lines that have been designated as non-paying subscribers by the carrier itself.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Only 31 carriers can subscribe to the operating company's SCD service at one time, therefore, no more than 31 CARRIER IDs on the ICF form can have SCD SCRNING set to "Y" (for 5E8 and later, FEAT GRP must equal "D").

If "Y" is entered in this field, then "SCD" must be entered in the FIXED ROUTE TYPE field on the FIXRT form (5301 Record).

Enter "N" in the SCD SCRNING field on this ICF form if "LEC" has been entered in the CARRIER TYPE field.

2.24 SENT PAID OVLAP

Description: Does carrier allow overlap outpulsing for sent paid coin calls?

Software Release: 5E7 and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

When SENT PAID OVLAP is "Y", OVERLAP must be "Y".

2.25 AC ICLATA OVR

Description: Should the Deny Toll Auto Callback on ICLATA feature be overridden for this CARRIER ID? This field supports the Deny Auto Callback on Intra-LATA PIC calls Special Feature, for more information on this feature see Division 2, Section 4A201.

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

2.26 ICLATA OPT

Description: Does the Local Exchange Carrier or the FGD carrier handle 0+ intra-LATA toll and 0- calls? Enter "Y"' for Local Exchange Carrier or "N" for FGD carrier. This field supports the ICLATA (Intra-LATA PIC Capability) Special Feature, for more information on this feature see Division 2, Section 4A149.

Software Release: 5E9(1) and 5E9(2)
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field supports the Inter-LATA Carrier's Intra-LATA Capability Special Feature. It is a secured feature that must be purchased by the office, therefore the ACT field for SFID 149 must be set to "Y" on the SFSYS form (5713-1 Record) before this field can be set to "Y".

2.27 ZPLUS OPT

Description: Are 0+ Intra-LATA toll calls handled by the local exchange carrier? Enter "Y" or "N" for FGD carrier. This field supports the Intra-LATA PIC Capability Special Feature. For more information on this feature see Division 2, Section 4A149.

Software Release: 5E10 and later
Required Field.
Valid Entries: Y, N

Data Rules:

When FEAT GRP is "B", ZPLUS OPT must be "N".

When CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950", ZPLUS OPT must be "N".

When CARRIER TYPE id "INC", ZPLUS OPT must be "N".

When CARRIER TYPE is "PSEUDO", ZPLUS OPT must be "N".

The ZPLUS OPT and ZMINUS OPT fields on the ICF form are used by the Inter-LATA Carrier's Intra-LATA Capability Special Feature. It is a secured feature that must be purchased by the office before the fields can be set to "Y".

2.28 ZMINUS OPT

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Description: Are 0- calls handled by local exchange carrier? Enter "Y" or "N" for FGD carrier. This field supports the Intra-LATA PIC Capability Special Feature. For more information on this feature see Division 2, Section 4A149.

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When FEAT GRP is "B", ZMINUS OPT must be "N".

When CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950", ZMINUS OPT must be "N".

When CARRIER TYPE is "INC", ZMINUS OPT must be "N".

When CARRIER TYPE is "PSEUDO", ZMINUS OPT must be "N".

The ZPLUS OPT and ZMINUS OPT fields on the ICF form are used by the Inter-LATA Carrier's Intra-LATA Capability Special Feature. It is a secured feature that must be purchased by the office before the fields can be set to "Y".

2.29 ASP TRIG NBR

Description: The ASP TRIG NBR is an active 0.1 ASP trigger number assigned to the carrier. For incoming calls, if the switch is using Carrier Routing to determine how to route the call, this field will be checked. If this field is present, the switch generates an OHD query for the call and standard ASP call processing is used. This field supports the Carrier Routing / Call Processing by Facility Presence Special Feature. For more information on this feature see Division 2, Section 4A243.

Software Release: 5E11 and later
Valid Entries: 1 - 255

Data Rules:

The ASP TRIG NBR on the ICF form must be defined on the NSTRIG form where AIN REL is "R0D1".

Carrier Routing/Call Processing by Facility Presence is a secured feature that must be purchased by the office before ASP TRIG NBR on the ICF form can be entered. A SFSYS form must exist with SFID 243 ACT set to "Y".

2.30 DOMES CDI

Description: Enter the Domestic Code Index used for calls dialed (FGD CAC) + (1) + 7/10 digits for this carrier.
Valid Entries: 1 - 4095

Data Rules:

DOMES CDI must be entered if:

- CARRIER TYPE is "IC", ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".
- If CARRIER TYPE is "CONSOL", ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

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DOMES CDI is not allowed when CARRIER TYPE is "INC", "IC" "LEC" or "PSEUDO", and ACCESS TYPE is "950" or "T950".

2.31 DOMES RTI

Description: If the Domestic Code Index has an entry, enter the Domestic Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

DOMES RTI must be entered if:

- CARRIER TYPE is "IC", and ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

- CARRIER TYPE is "CONSOL", ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

DOMES RTI is not allowed when CARRIER TYPE is "INC", "IC" "LEC" or "PSEUDO", and ACCESS TYPE is "950" or "T950".

If DOMES RTI is entered, it must also be entered on the RTIDX form.

2.32 INTL CDI

Description: Enter the International Code Index for calls dialed (FGD CAC) + 011 + Country Code + variable digits or dialed (FGD CAC) + (1) + 7/10 digits for destinations within World Zone 1, but outside the continental U.S.

In the case of an inter-LATA carrier-owned switch that supports the OSPS TA (Toll and Assistance) feature, the ICF form provides a possible new Code and Route Index for international calls (coming from the INTL CDI and INTL RTI fields, respectively). If the call is being routed out of an RSM, the RSMCAR form (5421 Record) is used to provide RSM-specific data.
Valid Entries: 1 - 4095

Data Rules:

INTL CDI must be entered if:

- CARRIER TYPE is "INC" and DIG ROUTING is "N".

- CARRIER TYPE is "CONSOL", ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N."

INTL CDI is not allowed when CARRIER TYPE is "IC", "LEC" or "PSEUDO", and ACCESS TYPE is "950" or "T950".

2.33 INTL RTI

Description: If the International Code Index has an entry, enter the International Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617

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- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

INTL RTI must be entered if:

- CARRIER TYPE is "INC" and DIG ROUTING is "N".
- CARRIER TYPE is "CONSOL", ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

INTL RTI is not allowed when CARRIER TYPE is "IC", "LEC" or "PSEUDO", and ACCESS TYPE is "950" or "T950".

If INTL RTI is entered, then the route index must also be entered on an RTIDX form.

2.34 ZMINUS CDI

Description: Enter the Zero Minus Code Index for this carrier. This is the code index used for 10XXX+0 calls to this carrier. This includes 10XXX+0 calls to a carrier with CARRIER TYPE equal to "INC". Y" for the originator of the call, the digit analysis code index, initially defined by ODA as Code Index 1 for 10X0 and 00 in PDIT (5300-2 Record) and 0 PREFIX entry in the RAR form, will be used.
Valid Entries: 1 - 4095

Data Rules:

ZMINUS CDI is not allowed when CARRIER TYPE is "LEC" or "PSEUDO", or when CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".

ZMINUS CDI must be entered if:

- CARRIER TYPE is "IC" or "CONSOL" and ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".
- CARRIER TYPE is "INC" and DIG ROUTING is "N".

2.35 ZMINUS RTI

Description: If the Zero Minus Code Index has an entry, enter the Zero Minus Route Index.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

ZMINUS RTI is not allowed when CARRIER TYPE is "LEC" or "PSEUDO", or when CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".

ZMINUS RTI is required when:

- CARRIER TYPE is "IC" or "CONSOL" and ACCESS TYPE is "BOTH", "TBOTH", "LTRM", or "TLTM", and DIG ROUTING is "N".

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- CARRIER TYPE is "INC" and DIG ROUTING is "N".

If ZMINUS RTI is entered, then the route index must also be entered on an RTIDX form.

2.36 CI CUT CDI

Description: Enter the Cut Through Code Index for calls dialed (FGD CAC) + #.
Valid Entries: 1 - 4095

Data Rules:

CUT CDI must be entered if "Y" is entered in the CUT IND field and "N" is entered in the DIG ROUTING field.

If "N" is entered in the CUT IND field, then the CUT CDI field must be left blank.

2.37 CI CUT RTI

Description: If the Cut Through Code Index has an entry, enter the Cut Through Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

The Route Index entered may not be defined for a Trunk Group with a Trunk Class of "TSPS".

CUT RTI must be entered if "Y" is entered in the CUT IND field and "N" is entered in the DIG ROUTING field.

If "N" is entered in the CUT IND field, then the CUT CDI and CUT RTI fields must be left blank.

If CUT RTI is entered, then the route index must also be entered on an RTIDX form.

2.38 ZPLUS CDI

Description: Enter the Zero Plus Code Index for calls dialed (FGD CAC) + 0 + 7/10 digits to this carrier.
Valid Entries: 1 - 4095

Data Rules:

ZPLUS CDI is not allowed when CARRIER TYPE is "INC", "LEC" or "PSEUDO", or when CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".

ZPLUS CDI must be entered if, CARRIER TYPE is "IC" or "CONSOL" and ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

2.39 ZPLUS RTI

Description: If the Zero Plus Code Index has an entry, enter the Zero Plus Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

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Data Rules:

ZPLUS RTI is not allowed when CARRIER TYPE is "INC", "LEC" or "PSEUDO", or when CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".

ZPLUS RTI must be entered if CARRIER TYPE is "IC" or "CONSOL" and ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

If ZPLUS RTI is entered, then the route index must also be entered on an RTIDX form.

2.40 INTL OP CDI

Description: Enter the International Operator Code Index for calls dialed (FGD CAC) + 01 + Country Code + variable digits or dialed (FGD CAC) + 0 + 7/10 digits where the destination is within World Zone 1, but outside the continental U.S.
Valid Entries: 1 - 4095

Data Rules:

INTL OP CDI must be entered if:

- CARRIER TYPE is "INC" and DIG ROUTING is "N".
- CARRIER TYPE is "CONSOL", ACCESS TYPE is "LTRM", "TLTM", "BOTH" or "TBOTH" and DIG ROUTING is "N".

INTL OP CDI is not allowed when CARRIER TYPE is "IC", "LEC" or "PSEUDO", and ACCESS TYPE is "950" or "T950".

2.41 INTL OP RTI

Description: If the International Operator Code Index has an entry, enter the International Operator Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

INTL OP RTI must be entered if:

- CARRIER TYPE is "INC" and DIG ROUTING is "N".
- CARRIER TYPE is "CONSOL", ACCESS TYPE is "BOTH", "TBOTH", "LTRM" or "TLTM", and DIG ROUTING is "N".

INTL OP RTI is not allowed when CARRIER TYPE is "IC", "LEC" or "PSEUDO", and ACCESS TYPE is "950" or "T950".

If INTL OP RTI is entered, then the route index must also be entered on an RTIDX form.

2.42 NS CDI

Description: Enter the code index for number service 800 calls.

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Software Release: 5E4(2) and later
Valid Entries: 1 - 4095

2.43 NS RTI

Description: Enter the route index for number service 800 calls.

The value of "REGL" can only be entered when the CARRIER TYPE is "LEC" or "PSEUDO" and is used to indicate that the ROUTE INDEX entered on the LDIT/MLDIT form (5300-3/5 Record) should be used. The value of "REGL" was added to the NS RTI field so that if both the NS CDI and NS RTI fields are entered, then only the CODE INDEX on the LDIT/MLDIT form will be overridden with the value entered in the NS CDI field and the value in the ROUTE INDEX field on the LDIT/MLDIT form will be used. For Recent Change view 10.3, "REGL" cannot be entered; Recent Change requires that this field be left blank to indicate the ROUTE INDEX entered on the 9.3 view should be used.

Software Release: 5E4(2) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617 and REGL
- For 5E11 and 5E12: 1 - 4095 and REGL
- For 5E13 and later: 1 - 16382

Data Rules:

When NS RTI is set to "REGL", CARRIER TYPE must be "PSEUDO" or "LEC".

If NS RTI is set to a value other than "REGL", (and for 5E8 and later, FEAT GRP equals "D"), the route index must be entered on the RTIDX form.

2.44 ASP CDI

Description: Enter the code index for ASP (Advanced Services Platform) In an SSP (Service Switching Point), this field is used for the routing of ASP OUTWATS calls and SCP-returned public routes.

Software Release: 5E8 and later
Valid Entries: 1 - 4095

Data Rules:

This field cannot be entered if:

- CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".
- CARRIER TYPE is "INC".
- ASP OFC on the OFCOPT form (5509 Record) is set to "NONE", indicating that this office does not support ASP.

2.45 ASP RTI

Description: Enter the route index for ASP (Advanced Services Platform). In an SSP (Service Switching Point), this field is used for the routing of ASP OUTWATS calls and SCP-returned public routes.

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

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- For 5E13 and later: 1 - 16382

Data Rules:

This field cannot be entered if:

- CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".
- CARRIER TYPE is "INC".

ASP OFC on the OFCOPT form (5509 Record) is set to "NONE", indicating that this office does not support ASP.

If this field is entered, then the route index must be defined on an RTIDX form.

2.46 ASP TF CDI

Description: Enter the ASP (Advanced Services Platform) Toll-free destination index for toll-free calls. In an SSP (Service Switching Point) the ASP TF CDI is used for the routing and charging of ASP (Advanced Services Platform) OUTWATS calls and SCP (Service Control Point) returned public routes if the current trigger is designated as an ASP Toll-free trigger. This field supports the ASP Toll Free Service feature (SFID 236). For more information on this feature, see Division 2, Section 4A236.

Software Release: 5E10 and later
Valid Entries: 1 - 4095

Data Rules:

ASP TF CDI must not be entered if:

- CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".
- CARRIER TYPE is "INC".
- ASP OFC on the OFCOPT form (5509 Record) is set to "NONE", indicating that this office does not support ASP.

2.47 ASP TF RTI

Description: Enter the ASP (Advanced Services Platform Toll-free route index for toll-free calls. In a SSP (Service Switching Point), the ASP TF RTI is used for the routing of ASP OUTWATS calls and SCP returned public routes if the current trigger is designated as an ASP Toll-free trigger. This field supports the ASP Toll Free Service feature (SFID 236). For more information on this feature, see Division 2, Section 4A236.

Software Release: 5E10 and later
Valid Entries:

- For 5E12 and earlier: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

ASP TF RTI must not be entered if:

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- CARRIER TYPE is "IC" and ACCESS TYPE is "950" or "T950".
- CARRIER TYPE is "INC".
- ASP OFC on the OFCOPT form (5509 Record) is set to "NONE", indicating that this office does not support ASP.

When the ASP TF RTI(s) has been assigned on an ICF form, it must defined as a ROUTE INDEX on a RTIDX form.

2.48 OFC OBL INH

Description: Is the ASP originating busy trigger inhibited? This field supports the Call Screening for ASP Originating Busy/No Answer Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A212.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The SFID 212 ACT filed on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set to "Y".

2.49 OFC ONA INH

Description: Is the ASP originating no answer trigger inhibited? This field supports the Call Screening for ASP Originating Busy/No Answer Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A212.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The SFID 212 ACT filed on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set to "Y".

PRESUB LOCAL CARRIER (0-)

The PRESUB LOCAL CARRIER fields are used by the Alternate Local Service Provider feature. This is a secured feature that must be purchased before these fields can be entered. The SFID ACT field for SFID 269 on the SFSYS form (5713-1 Record) must be set to "Y" before these fields can be entered.

2.50 OPER MINUS CDI

Description: Enter the Zero Minus Code Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

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When either OPER MINUS CDI or OPER MINUS RTI is entered, they must both be entered.

2.51 OPER MINUS RTI

Description: Enter the Zero Minus Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12: Blank or 1 - 4095
- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either OPER MINUS CDI or OPER MINUS RTI is entered, they must both be entered.

2.52 OPER MINUS SIGNAL

Description: Enter the Zero Minus Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter ST or STP

PRESUB LOCAL CARRIER (0+)

2.53 OPER PLUS CDI

Description: Enter the Zero Plus Code Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

When either OPER PLUS CDI or OPER PLUS RTI is entered, they must both be entered.

2.54 OPER PLUS RTI

Description: Enter the Zero Plus Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12: Blank or 1 - 4095
- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either OPER PLUS CDI or OPER PLUS RTI is entered, they must both be entered.

2.55 OPER PLUS SIGNAL

Description: Enter the Zero Plus Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later

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Valid Entries: Blank or enter ST or STP

PRESUB LOCAL CARRIER (NONE+/1+)

2.56 INTRASWITCH

Description: Does the Presubscribed Local Carrier route None+/1+ 7/10-digit non-operator assisted intraswitch calls?

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If INTRASWITCH is "Y", then NORMAL CDI, NORMAL RTI, or NORMAL SIGNAL must be entered.

2.57 NORMAL CDI

Description: Enter the Normal Code Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

When either NORMAL CDI or NORMAL RTI is entered, they must both be entered.

2.58 NORMAL RTI

Description: Enter the Normal Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12:Blank or 1 - 4095
- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either NORMAL CDI or NORMAL RTI is entered, they must both be entered.

2.59 NORMAL SIGNAL

Description: Enter the Normal Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter ST or STP

PRESUB LOCAL CARRIER (LOCDA)

2.60 LOCDA CDI

Description: Enter the Local Directory Assistance Code Index for a Presubscribed Local Carrier.

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Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

When either LOCDA CDI or LOCDA RTI is entered, they must both be entered.

2.61 LOCDA RTI

Description: Enter the Local Directory Assistance Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12: Blank or 1 - 4095
- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either LOCDA CDI or LOCDA RTI is entered, they must both be entered.

2.62 LOCDA SIGNAL

Description: Enter the Local Directory Assistance Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter ST or STP

2.63 LOCDA CONV DN

Description: Enter the Local Directory Assistance Conversion Telephone Number for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter up to 15 digits (0-9)

PRESUB LOCAL CARRIER (DA)

2.64 DA CDI

Description: Enter the Directory Assistance Code Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

When either DA CDI or DA RTI is entered, they must both be entered.

2.65 DA RTI

Description: Enter the Local Directory Assistance Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12: Blank or 1 - 4095

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- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either DA CDI or DA RTI is entered, they must both be entered.

2.66 DA SIGNAL

Description: Enter the Local Directory Assistance Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter ST or STP

2.67 DA CONV DN

Description: Enter the Local Directory Assistance Conversion Telephone Number for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter up to 15 digits (0-9)

PRESUB LOCAL CARRIER (REPAIR)

2.68 REPAIR CDI

Description: Enter the Repair Service Code Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

When either REPAIR CDI or REPAIR RTI is entered, they must both be entered.

2.69 REPAIR RTI

Description: Enter the Repair Service Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12: Blank or 1 - 4095
- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either REPAIR CDI or REPAIR RTI is entered, they must both be entered.

2.70 REPAIR SIGNAL

Description: Enter the Repair Service Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter ST or STP

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2.71 REPAIR CONV DN

Description: Enter the Repair Service Conversion Telephone Number for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter up to 15 digits (0-9)

PRESUB LOCAL CARRIER (BUSOFC)

2.72 BUSOFC CDI

Description: Enter the Business Office Code Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or 1 - 4095

Data Rules:

When either BUSOFC CDI or BUSOFC RTI is entered, they must both be entered.

2.73 BUSOFC RTI

Description: Enter the Business Office Route Index for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries:

- For 5E12: Blank or 1 - 4095
- For 5E13 and later: Blank or 1 - 16382

Data Rules:

When either BUSOFC CDI or BUSOFC RTI is entered, they must both be entered.

2.74 BUSOFC SIGNAL

Description: Enter the Business Office Signal Type for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter ST or STP

2.75 BUSOFC CONV DN

Description: Enter the Business Office Conversion Telephone Number for a Presubscribed Local Carrier.

Software Release: 5E12 and later
Valid Entries: Blank or enter up to 15 digits (0-9)

TANDEM CUT

2.76 TANDEM CUT

Description: The TANDEM CUT field indicates whether the FGD Cut-through call is a Feature Group D Tandem Cut-through call. A Cut-through call is a call that is switched to the carrier without first collecting digits for the call.

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Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TANDEM CUT is "Y", CIACCTP must not be "950" or "T950".

When TANDEM CUT is "N", then TANDEM CUT CDI and TANDEM CUT RTI must not be entered.

When CARRTP is "IC" and CIACCTP is "950" or "T950", then TANDEM CUT must be "N".

When TANDEM CUT is "Y", ACT fields for SFIDs 512 and 165 must be set to "Y" on the SFSYS form.

2.77 TANDEM CUT CDI

Description: TANDEM CUT CDI is the code destination index used for the FGD Tandem Cut-through call.

Software Release: 5E13 and later
Valid Entries: Blank or 1 - 4095.

Data Rules:

When CARRTP is "PSEUDO", then TANDEM CUT CDI and TANDEM CUT RTI must not be entered.

2.78 TANDEM CUT RTI

Description: TANDEM CUT RTI is the route index used for the FGD Tandem Cut-through call.

Software Release: 5E13 and later
Valid Entries: Blank or 1 - 16382

Data Rules:

When TANDEMCUT is "Y" and DIGROUTING is "N", TANDEM CUT CDI and TANDEM CUT RTI must be entered.

When TANDEM CUT RTI has been assigned, the same ROUTE INDEX must be defined on the RTIDX form.

ANI II SUBSCRIPTION

2.79 TOLLFREE II

Description: Do the Original II digits map to the Tollfree II digits? The TOLLFREE II field indicates if the original II digits shall be mapped to the Tollfree II digits (refer to RC View 8.74). This will enable carriers to compensate pay phone owners for Tollfree calls (translated to a POTS number) originated from pay phones.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TOLLFREE II is "Y", the ACT field for SFID 332 on the SFSYS form must be set to "Y".

When Feature Group is "B", Feature Group "D" field must be entered.

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- ***NOTE:*** The Pay Phone Compensation for Tollfree Calls and Tollfree Calling Enhancement for Flexible ANI features are secured features (both under SFID 332) that must be set to "Y" before the TFANI form can be populated.

2.80 DEFAULT II

Description: Are the Originall II digits mapped to the Default II digits? For non-translated Tollfree calls, the DEFAULT II field indicates if the original II digits shall be mapped to the Default II digits (refer to RC View 8.74).

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TOLLFREE II is "Y", the ACT field for SFID 332 on the SFSYS form must be set to "Y".

When Feature Group is "B", Feature Group D field must be entered.

- ***NOTE:*** The Pay Phone Compensation for Tollfree Calls and Tollfree Calling Enhancement for Flexible ANI features are secured features (both under SFID 332) that must be set to "Y" before the TFANI form can be populated.

2.81 CRIT IND

Description: This field supports the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT IND field is used to indicate whether the carrier data is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.82 EONTF TRIG NBR

Description: Proprietary field.

2.83 ESC SA TRIG

Description: Proprietary field.

CRITICAL DATA INDICATOR

The following (fields Section 2.84 - Section 2.85) support the RC Translations Protection For Highly Critical Elements feature, see Division 2, Section 1BY for more information.

2.84 CRIT IND

Description: This field supports the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT IND field is used to indicate whether the carrier data is critical.

Software Release: 5E13 and later
Required Field.
Default: N

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Valid Entries: Y, N

2.85 CRIT RMK

Description: This field enhances the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT RMK field is used to enter a remark to explain why this carrier data is critical.

Software Release: 5E15 and later
Valid Entries: Enter up to 32 characters

Data Rules:

When the ICF form has the CRIT RMK field entered, the SFSYS form SFID 566 ACT field must be set to "Y".

```
icf                        5ESS Switch
SCREEN 1 OF 5          OFFICE DATA ADMINISTRATION
(5305)               CARRIER ADMINISTRATION

*1. CARRIER ID  ____             FEATURE GROUP B ONLY
*2. FEAT GRP    _              11. FGB CDI     ____
#3. ACCESS TYPE _____          12. FGB RTI     _____
 4. LONG REC    N              13. TRANS CARRIER ___
 5. MEASUREMENT N
 6. DIG ROUTING N
 7. LEC SERVICE N
 8. CARRIER NAME _______
 9. SEND ANI II N
10. REMARKS     _________________
```

```
icf                        5ESS Switch
SCREEN 2 OF 5          OFFICE DATA ADMINISTRATION
(5305)       CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

14. CARRIER TYPE   ______   25. ASP TRIG NBR ___    36. INTL OP CDI  ____
15. INTRA LATA     N        26. DOMES CDI   ____    37. INTL OPT RTI _____
16. CI CUT         N        27. DOMES RTI   _____   38. NS CDI       ____
17. OVERLAP        N        28. INTL CDI    ____    39. NS RTI       _____
18. SAC OVERLAP    N        29. INTL RTI    _____   40. ASP CDI      ____
19. CAC SCRNING    N        30. ZMINUS CDI  ____    41. ASP RTI      _____
20. SCD SCRNING    N        31. ZMINUS RTI  _____   42. ASP TF CDI   ____
21. SENT PAID OVLAP N       32. CI CUT CDI  ____    43. ASP TF RTI   _____
22. AC ICLATA OVR  N        33. CI CUT RTI  _____   44. OFC OBL INH  N
23. ZPLUS OPT      N        34. ZPLUS CDI   ____    45. OFC ONA INH  N
24. ZMINUS OPT     N        35. ZPLUS RTI   _____
```

```
icf                        5ESS Switch
SCREEN 3 OF 5          OFFICE DATA ADMINISTRATION
(5305)       CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)
```

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```
 PRESUB LOCAL CARRIER (0-)     PRESUB LOCAL CARRIER (NONE+/1+)
46. OPER MINUS CDI  ____     52. INTRASWITCH   N
47. OPER MINUS RTI  _____    53. NORMAL CDI    ____
48. OPER MINUS SIGNAL ___    54. NORMAL RTI    _____
                     55. NORMAL SIGNAL ___
 PRESUB LOCAL CARRIER (0+)
49. OPER PLUS CDI   ____       PRESUB LOCAL CARRIER (LOCDA)
50. OPER PLUS RTI   _____    56. LOCDA CDI     ____
51. OPER PLUS SIGNAL ___     57. LOCDA RTI     _____
                     58. LOCDA SIGNAL  ___
                     59. LOCDA CONV DN _________________
```

```
icf                        5ESS Switch
SCREEN 4 OF 5           OFFICE DATA ADMINISTRATION
(5305)         CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

  PRESUB LOCAL CARRIER (DA)          PRESUB LOCAL CARRIER (BUSOFC)
60. DA CDI    ____              68. BUSOFC CDI    ____
61. DA RTI    _____             69. BUSOFC RTI    _____
62. DA SIGNAL  ___                70. BUSOFC SIGNAL  ___
63. DA CONV DN _________________      71. BUSOFC CONV DN _________________

  PRESUB LOCAL CARRIER (REPAIR)
64. REPAIR CDI    ____
65. REPAIR RTI    _____
66. REPAIR SIGNAL  ___
67. REPAIR CONV DN _________________
```

```
icf                        5ESS Switch        _
SCREEN 5 OF 5           OFFICE DATA ADMINISTRATION
(5305)         CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

     TANDEM CUT
72. TANDEM CUT     N
73. TANDEM CUT CDI ____
74. TANDEM CUT RTI _____

ANI II SUBSCRIPTION
75. TOLLFREE II N
76. DEFAULT II  N

77. CRIT IND N
```

Figure 1 SAMPLE ICF FORM 5E13 THROUGH 5E14 SOFTWARE RELEASES

```
icf                        5ESS Switch
SCREEN 1 OF 6           OFFICE DATA ADMINISTRATION
(5305)                CARRIER ADMINISTRATION

*1. CARRIER ID  ____              FEATURE GROUP B ONLY
*2. FEAT GRP    _              11. FGB CDI      ____
```

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```
#3. ACCESS TYPE _____          12. FGB RTI      _____
 4. LONG REC     N             13. TRANS CARRIER ___
 5. MEASUREMENT  N
 6. DIG ROUTING  N
 7. LEC SERVICE  N
 8. CARRIER NAME _______
 9. SEND ANI II  N
10. REMARKS     _________________
```

```
icf                    5ESS Switch
SCREEN 2 OF 6          OFFICE DATA ADMINISTRATION
(5305)         CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

14. CARRIER TYPE   _______   25. ASP TRIG NBR ___     36. INTL OP CDI  ____
15. INTRA LATA      N        26. DOMES CDI   ____     37. INTL OPT RTI _____
16. CI CUT          N        27. DOMES RTI   _____    38. NS CDI       ____
17. OVERLAP         N        28. INTL CDI    ____     39. NS RTI       _____
18. SAC OVERLAP     N        29. INTL RTI    _____    40. ASP CDI      ____
19. CAC SCRNING     N        30. ZMINUS CDI  ____     41. ASP RTI      _____
20. SCD SCRNING     N        31. ZMINUS RTI  _____    42. ASP TF CDI   ____
21. SENT PAID OVLAP N        32. CI CUT CDI  ____     43. ASP TF RTI   _____
22. AC ICLATA OVR   N        33. CI CUT RTI  _____    44. OFC OBL INH  N
23. ZPLUS OPT       N        34. ZPLUS CDI   ____     45. OFC ONA INH  N
24. ZMINUS OPT      N        35. ZPLUS RTI   _____
```

```
icf                    5ESS Switch
SCREEN 3 OF 6          OFFICE DATA ADMINISTRATION
(5305)         CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

 PRESUB LOCAL CARRIER (0-)     PRESUB LOCAL CARRIER (NONE+/1+)
46. OPER MINUS CDI   ____      52. INTRASWITCH   N
47. OPER MINUS RTI   _____     53. NORMAL CDI    ____
48. OPER MINUS SIGNAL ___      54. NORMAL RTI    _____
                       55. NORMAL SIGNAL ___
 PRESUB LOCAL CARRIER (0+)
49. OPER PLUS CDI    ____          PRESUB LOCAL CARRIER (LOCDA)
50. OPER PLUS RTI    _____      56. LOCDA CDI     ____
51. OPER PLUS SIGNAL ___        57. LOCDA RTI     _____
                       58. LOCDA SIGNAL  ___
                       59. LOCDA CONV DN _________________
```

```
icf                    5ESS Switch
SCREEN 4 OF 6          OFFICE DATA ADMINISTRATION
(5305)         CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

   PRESUB LOCAL CARRIER (DA)          PRESUB LOCAL CARRIER (BUSOFC)
60. DA CDI     ____                68. BUSOFC CDI    ____
61. DA RTI     _____               69. BUSOFC RTI    _____
62. DA SIGNAL  ___                   70. BUSOFC SIGNAL  ___
63. DA CONV DN _________________    71. BUSOFC CONV DN _________________
```

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```
   PRESUB LOCAL CARRIER (REPAIR)
64. REPAIR CDI    ____
65. REPAIR RTI    _____
66. REPAIR SIGNAL  ___
67. REPAIR CONV DN _________________
```

```
icf                    5ESS Switch
SCREEN 5 OF 6          OFFICE DATA ADMINISTRATION
(5305)        CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

      TANDEM CUT
72. TANDEM CUT     N
73. TANDEM CUT CDI ____
74. TANDEM CUT RTI _____

  ANI II SUBSCRIPTION
75. TOLLFREE II    N
76. DEFAULT II     N
77. EONTF TRIG NBR ___
78. ESC SA TRIG    N
```

```
icf                    5ESS Switch        _
SCREEN 6 OF 6          OFFICE DATA ADMINISTRATION
(5305)        CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

        CRITICAL DATA INDICATOR
79. CRIT IND N
80. CRIT RMK _____________________________________
```

Figure 2 SAMPLE ICF FORM 5E15 SOFTWARE RELEASE

```
icf                    5ESS Switch
SCREEN 1 OF 6          OFFICE DATA ADMINISTRATION
(5305)                 CARRIER ADMINISTRATION

*1. CARRIER ID  ____              FEATURE GROUP B ONLY
*2. FEAT GRP    _              11. FGB CDI     ____
#3. ACCESS TYPE _____          12. FGB RTI     _____
 4. LONG REC    N              13. TRANS CARRIER ___
 5. MEASUREMENT N
 6. DIG ROUTING N              SS7 OPERATOR SERVICES
 7. LEC SERVICE N              14. SS7 OP CDI ____
 8. CARRIER NAME _______       15. SS7 OP RTI _____
 9. SEND ANI II N
10. REMARKS     _________________
```

```
icf                    5ESS Switch
```

SCREEN 2 OF 6 OFFICE DATA ADMINISTRATION
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

16. CARRIER TYPE _____ 27. ASP TRIG NBR ___ 38. INTL OP CDI ____
17. INTRA LATA N 28. DOMES CDI ____ 39. INTL OPT RTI _____
18. CI CUT N 29. DOMES RTI _____ 40. NS CDI ____
19. OVERLAP N 30. INTL CDI ____ 41. NS RTI _____
20. SAC OVERLAP N 31. INTL RTI _____ 42. ASP CDI ____
21. CAC SCRNING N 32. ZMINUS CDI ____ 43. ASP RTI _____
22. SCD SCRNING N 33. ZMINUS RTI _____ 44. ASP TF CDI ____
23. SENT PAID OVLAP N 34. CI CUT CDI ____ 45. ASP TF RTI _____
24. AC ICLATA OVR N 35. CI CUT RTI _____ 46. OFC OBL INH N
25. ZPLUS OPT N 36. ZPLUS CDI ____ 47. OFC ONA INH N
26. ZMINUS OPT N 37. ZPLUS RTI _____

---

icf 5ESS Switch
SCREEN 3 OF 6 OFFICE DATA ADMINISTRATION
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

PRESUB LOCAL CARRIER (0-) PRESUB LOCAL CARRIER (NONE+/1+)
48. OPER MINUS CDI ____ 54. INTRASWITCH N
49. OPER MINUS RTI _____ 55. NORMAL CDI ____
50. OPER MINUS SIGNAL ___ 56. NORMAL RTI _____
57. NORMAL SIGNAL ___
PRESUB LOCAL CARRIER (0+)
51. OPER PLUS CDI ____ PRESUB LOCAL CARRIER (LOCDA)
52. OPER PLUS RTI _____ 58. LOCDA CDI ____
53. OPER PLUS SIGNAL ___ 59. LOCDA RTI _____
60. LOCDA SIGNAL ___
61. LOCDA CONV DN _____

---

icf 5ESS Switch
SCREEN 4 OF 6 OFFICE DATA ADMINISTRATION
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

PRESUB LOCAL CARRIER (DA) PRESUB LOCAL CARRIER (BUSOFC)
62. DA CDI ____ 70. BUSOFC CDI ____
63. DA RTI _____ 71. BUSOFC RTI _____
64. DA SIGNAL ___ 72. BUSOFC SIGNAL ___
65. DA CONV DN _____ 73. BUSOFC CONV DN _____

PRESUB LOCAL CARRIER (REPAIR)
66. REPAIR CDI ____
67. REPAIR RTI _____
68. REPAIR SIGNAL ___
69. REPAIR CONV DN _____

---

icf 5ESS Switch

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SCREEN 5 OF 6 OFFICE DATA ADMINISTRATION
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

TANDEM CUT
74. TANDEM CUT N
75. TANDEM CUT CDI ____
76. TANDEM CUT RTI _____

ANI II SUBSCRIPTION
77. TOLLFREE II N
78. DEFAULT II N

79. EONTF TRIG NBR ___
80. ESC SA TRIG N

---

icf 5ESS Switch _
SCREEN 6 OF 6 OFFICE DATA ADMINISTRATION
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

CRITICAL DATA INDICATOR
81. CRIT IND N
82. CRIT RMK _____

Figure 3 SAMPLE ICF FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 3S: 5306 RECORD
LINE CLASS CODE FORM - LCC

1. GENERAL

The 5306 Record is used to define each LCC (Line Class Code) in a 5ESS Switch. A Telephone Number and a Line Equipment Number provide an LCC and Rate Area number. These two inputs are used to access routing and service information contained on this form.

Routing and feature control are described for an LCC in the CLASS OF SERVICE and TERMINATING TREATMENT entries. CLASS OF SERVICE describes originating service and feature handling, while TERMINATING TREATMENT describes terminating service and routing.

1.1 Toll Diversion

For lines requiring Toll Diversion, the service class assigned must be either "PBX" or "HOTPBX". In addition, the Toll Diversion field on the RAR form (5301 Record) must contain an entry.

1.2 Charge-A-Call

For information on the Charge-A-Call feature using a CLASS OF SERVICE of "CHGCALL", refer to Division 2, Section 1A.

1.3 Recent Change View

The corresponding Recent Change View for this form is 4.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * LINE CLASS CODE

Description: Enter the code that describes the class of service, e.g., 1FR, 1PC, DNT.
Valid Entries: 3 alphanumeric characters

2.3 * RATE AREA

Description: Enter the Rate Area center number. This field is used to identify "rate centers" that are established by tariffs for routing and charging. It is used in association with the SCREENING INDEX and the DAS (Digit Analysis Selector) fields on the LCC form (5306 Record). Note that this field is the same (functionally) as the RAX field on the NOC form (5501 Record).
Default: 00 (indicates no RATE AREA number)
Valid Entries:

- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.4 # CLASS OF SERVICE

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Description: This field is used to describe originating service and feature handling by Class of Service.

Required Field.

Valid CLASS OF SERVICE Entries

Entry	Definition
ATND	Attendant DN.
B911	Emergency Service Bureau lines for Basic 911 Service.
CALLBK	Software Release: 5E8 and earlier. Call Back Line associated with the Trunk and Line Work Station Local Talk and Monitor phone lines.
CHGCALL	Charge a Call. Provide ANI7 to TSPS.
COIN	Coin
DAOPER	Software Release: 5E5 and later. OSPS directory assistance operator.
HOTMOTL	Hotel-Motel with Message Register capabilities. No toll diversion; provides ANI-6 to TSPS for hotel/motel DN without automatic room ID. For 5E9(1) and later the ANI-6 can be turned off by activating Option Feature ID 628 (enter "Y" in the ACT field for FID 628 on the FOSYS form (5713-2 Record)).
HOTPBX	Hotel-Motel PBX with Message Register capabilities. Checks
HOTPBX	Hotel-Motel PBX with Message Register capabilities. Checks for Toll Diversion; provides ANI-6 to TSPS; and prevents Fabric Exercise Tests.
INDIV	Individual.
ISATND	Software Release: 5E4(2) and later. ISDN (Integrated Service Digital Network) Attendant Terminal.
ISDN	Software Release: 5E3 and later. ISDN Digital Subscriber Line.
LTPCLBCK	Software Release: 5E9(1) and later. Call Back Line associated with the Trunk and Line Work Station Local Talk and Monitor phone lines.
MISLNK	Software Release: 5E5 and later. OSPS Commercial ACD MIS data link.
MODEM	Software Release: 5E3 and later. Packet Switching Modem Pooling.
PBX	Checks for Toll Diversion; prevents Fabric Exercise Tests.
RCDM	Software Release: 5E7 and later. Recent Change Delayed Message.
SATSTLN	Stand-Alone Test Line, for RSM and Local SM use. This test line allows a switching module to emulate the stand-alone or isolation state during normal operation.
TAOPER	Software Release: 5E4(2) and later. OSPS toll and assistance operator VDT.
TEST	Test Lines.
TWOPTY	Two Party.
XAT	Software Release: 5E6 and later. X.25 access to a T1 facility.
XDB	Software Release: 5E4(2) and later. OSPS external data base.
2PTY	2-Party Multi-Frequency Ringing.
4PFS	4-Party Full Selective.
4PSS	4-Party Semi Selective.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX. Allows an entry of "D" or "T" for the OE TYPE field on the LINE form (5109 Record) and MLHLN form (5111-1 Record).
5PTY	5-Party Multi-Frequency Ringing.
8PSS	8-Party Semi Selective.
10PTY	10-Party Multi-Frequency Ringing.

Data Rules:

B911 - If the LINE/MLHLN forms have a LCC/RAX combination that appears on the LCC form with a CLASS OF SERVICE value of "B911", the following LINE/MLHLN feature must be defined:

- OE TYPE must be "A" (5E12 and later), "C", "E", "G", "L", "M" or "S",
- PTY must be "I",

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- COIN must be "N",
- SUSO must be "Y",
- SUST must be "N".

CALLBK - If MLHLN form entries have an LCC/RAX combination that appears on the LCC form with a CLASS OF SERVICE value of "CALLBK", then the TN field must be numeric and must also be defined on the TLWS form as Local Talk & Monitor line. (For 5E9(1) and later see "LTPCLBCK".)

DAOPER or **TAOPER** - the LCC/RAX must match the LCC/RAX on an AMLBDSL form. These entries are permitted only for Packet Switching.

INDIV - For EDSL service, the CLASS OF SERVICE is "INDIV".

If "INDIV" is entered, TERMINATING TREATMENT must be "AGING", "ASIRA", "INDIV", "RI", "MLHG", "INWATS", or "TINWATS".

ISATND - For 5E4(2), if CLASS OF SERVICE is "ISATND", a DSMLHLN form (5901 Record) must be defined with a corresponding CKT LCC/RAX and a TERM TYPE of "ATND".

LTPCLBCK - If CLASS OF SERVICE is "LTPCLBCK":

- LINE SCREENING must be "N".
- TERMINATING TREATMENT must be "INDIV", "AGING" or "MLHG".

For 5E8 and earlier, see "CALLBK".

For 5E9(1) and later, if a TN defined on a LINE or MLHLN form has a LCC/RAX combination on the LCC form with a CLASS OF SERVICE of "LTPCLBCK", then:

- the TN must be defined on the TLWS form as LOCAL TALK & MONITOR LINE
- OE TYPE on the LINE form must be "A" (5E12 and later), "C", "E" (5E11 and later), "G", "L", "M" or "S"
- the LINE form must have the following values:

SHARED must be "N"
- NO DIAL must be "N"
- PTY must be "I"
- TTC must be "Y"
- DNY ROH must be "N"
- ANI7 must be "N"
- SERHLN must be blank
- BUSY MONITOR must be "N"
- DNY BV must be "N"
- TRAFFIC must be "N"
- DTLBILL must be "N"
- FGA must be "N"
- SLUS must be "N"
- COMPL must be "N"
- SUSO must be "Y"
- MFRI must be "N"

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- For a MLHLN, the following restrictions must hold:
  - OE TYPE on the MLHLN form must be "A" (5E12 and later), "C", "E" (5E11 or later) or "L".
  - MLHG/TERM on the MLHLN form must not be defined on the MULTITN form.
  - FEATURE GROUP A on the corresponding MLHG form must be "N".
  - The MLHLN form must have the following values:

    COMPL must be "N"

    DNY ROH must be "N"

    SERHLN must be unknown

    DNY BV must be "N"

    DTLBILL must be "N"

    NO DIAL must be "N"

    SHARED must be "N"

    SLUS must be "N"

    SUSO must be "Y"

    TRAFFIC must be "N"

MODEM - If CLASS OF SERVICE is "MODEM", OE TYPE on the MLHLN form must be "A", "C", "E", "L", or "S".

RCDM - For 5E7 and later, if CLASS OF SERVICE is "RCDM",

- TERMINATING TREATMENT must be "INDIV".
- LINE SCREENING must be "N".
- If TNs appear on a LINE form where the LCC and RAX are defined on an LCC form with CLASS OF SERVICE set to "RCDM", then for the LINE form:
  - the following fields must be "N":

    MFRI

    BRCS

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EL

FGA

SUSO

DNY ROH

COMPL

SLUS

DTLBILL

TRAFFIC

ICP

DNY BV

TRC

TSTLINE

GNDREF

RANGEX

LNEQ

NO DIAL

ANI7

SHARED

PRIVACY

PVN ALW

- the following fields must be blank:

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SERHLN

SLEEVE LEAD CKT

MAKE BUSY KEY

ASSOC OE TYPE/NUMBER

- the following fields must be blank or "N":

  AC ALW

  AR ALW

  COT ALW

  PCP ALW

  SCR GA ALW

  SCF GA ALW

  SCA GA ALW

  SDA GA ALW

- and:

  PTY must be "I"

  CIDIAL must be "DENY"

  FLS must be "Y"

  SUST must be "Y"

- The AMLBDSL, DSLUSR, and/or MLHLN forms cannot be assigned an LCC and RAX that are defined on an LCC form with a CLASS OF SERVICE of "RCDM". These forms do not support this CLASS OF SERVICE.
- The MASTER TN on an MTNDR form cannot be defined as a TN on a LINE form where the LCC and RAX appear on an LCC form with CLASS OF SERVICE set to "RCDM".

TAOPER or **XDB** - For ISDN service in OSPS, the CLASS OF SERVICE is "TAOPER" or "XDB." DSLs

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with a CLASS OF SERVICE of "XDB" must be configured as packet switching MLHGs. However, it is permissible for each member in the MLHG to have an individual Packet DN. DSLs with a CLASS OF SERVICE of "TAOPER" may have only the LINE CLASS CODE for Packet Switching.

TEST - if TERMINATING TREATMENT is also "TEST", all associated LINE forms with the same LCC/RAX value and ICP set to "N" must have TEST CODE entered.

If "XDB" is entered in the CLASS OF SERVICE field, an OSPSOPT form (5424 Record) must be submitted with "Y" entered in the OSPS TA field.

XAT - When an XAT form (5909 Record) is entered, the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "XAT" and a TERMINATING TREATMENT of "INDIV".

For 5E6 and later, if CLASS OF SERVICE is "XAT", then LINE SCREENING must be "N".

2.5 # TERMINATING TREATMENT

Description: This field is used to describe terminating service and routing.

Required Field.

Valid TERMINATING TREATMENT Entries

Entry	Definition
ASIRA	Software Release 5E8 and later. Advanced Service Interface Remote Access.
AGING	Changed or disconnected TN, routed to Regular Intercept.
INDIV	Individual.
INWATS	INWATS (800 Service). For 5E4(2) and later, this value can be assigned to MLHGs, a POTS line, or a line in a series completion chain.
MLHG	Multi-Line Hunt Group.
PARTY	2, 4, 5, 8, or 10 party.
RAPVN	Software Release: 5E6 - 5E7. ASP (Advanced Services Platform; previously PVN (Private Virtual Network)) DN Trigger. This value can only be assigned to POTS lines, i.e., to lines defined on the LINE form (5109 Record).
RI	Route Index.
TEST	Test Lines, restricted to use with telephone numbers associated with a route index.
TINWATS	Software Release: 5E4(2) and later. Terminating Trunk INWATS (800 Service).

Data Rules:

AGING - When a line or MLHG/TERM is assigned an LCC with TERMINATING TREATMENT set to "AGING", ICP must equal "Y" on the LINE or MLHLN form.

ASIRA - If an LCC/RAX combination with a TERMINATING TREATMENT of "ASIRA" is defined on a LINE form (5109 Record), then the following must be set on the LINE form:

- OE TYPE/NUMBER must not be entered
- SUST must be "N",
- DNY BV must be "Y", and
- SHARED must be "N".

If an LCC/RAX combination with a TERMINATING TREATMENT of "ASIRA" is defined on an MLHLN form (5111 Record), then the following must be set on the MLHLN form:

- OE TYPE/NUMBER must not be entered,
- DNY BV must be "Y", and
- SHARED must be "N".

RI or **TINWATS** - all associated LINE forms with the same LCC/RAX value and ICP set to "N" must have RTI entered.

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TINWATS - If an LCC/RAX combination with a TERMINATING TREATMENT of "TINWATS" is defined on a LINE form, then the OE TYPE/NUMBER field must be blank and the RTI should point to a TGN on a TKGRP form with a TRKCLS of "EDSL" or "EDSLHM" and a BILLING DN entered .

For service to EDSLs, the Terminating Treatment is "RI" or "TINWATS".

For valid CLASS OF SERVICE and TERMINATING TREATMENT combinations, see Figure 1 .

2.6 # SCREENING INDEX

Description: Enter the Screening Index to be used for routing and charging of calls. Screening Indexes are defined on the RAR form.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

It is recommended that all lines with a CLASS OF SERVICE of "4PSS", "4PFS" or "8PSS" point to a Screening Index which provides TSPS routing for all message rate and toll calls. Failure to do this may result in billing errors.

2.7 # LINE SCREENING

Description: Does this LCC (Line Class Code) require that the RAR form associated with the regular digit analysis forms (PDIT (5300-2 Record), LDIT (5307 Record), and IDDD (5300-3 Record)) is read first? If LINE SCREENING is "Y", the non-specific code index is used to determine if the call should be allowed before the carrier specific code index and carrier specific Route Index are used in the Rate and Route.

This field is associated with the Carrier Interconnect capability.

For additional information, see the feature section, Revised Routing and Screening for the 5E2 Software Release, in Division 2, Section G of this guide.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

LCCs defined for WATS Bands, Toll Diversion, and Code Restriction have Line Screening set to "Y".

LCCs corresponding to a dedicated line LEN, should have LINE SCREENING entered as "N".

For 5E5 and later, LINE SCREEN must be N if any of the following fields are defined:

- PPB1 LCC/RAX and/or PPB2 LCC/RAX on the DSL form
- DPKT LCC/RAX and/or ODB LCC/RAX on the DSLUSR form
- PKT LCC/RAX on the AMLBDSL form

2.8 # DIGIT ANALYSIS SELECTOR

Description: Enter the Digit Analysis Selector to be used for routing and charging of calls.

Required Field.

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Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

Digit Analysis Selectors are defined on the DAS form (5300-1 Record).

2.9 INSEP

Description: Enter the Incoming (traffic) Separations class (for Division of Revenue study).
Valid Entries: 1 - 255

Data Rules:

If INSEP is assigned, DESEP must also be assigned; and both must be defined on the Traffic Separation Cell Grouping, TRFSEP form (5308 Record).

INSEP 0 is used whenever INSEP is not provided by the incoming line or trunk translations. INSEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.10 DESEP

Description: Enter the Destination (traffic) Separations class (for Division of Revenue study).
Valid Entries: 1 - 255

Data Rules:

If DESEP is assigned, INSEP must also be assigned; and both must be defined on the Traffic Separation Cell Grouping, TRFSEP form (5308 Record).

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.11 LATA

Description: Enter the Local Access and Transport Area number.

This field is used by the secured feature, TCAP Improvements for a Switch Spanning Multiple LATAs (SFID 171). This LATA field is used to specify the LATA to be used by remote RSMs (Remote Switching Modules) residing in LATAs other than the LATA defined as the office default on the OFCOPT form (5509 REcord). This LATA is used so that the host switch can differentiate which calls originate in a given LATA so as to send those calls to the appropriate LEC (Local Exchange Carrier) STP (Signaling Transfer Point, or, to populate the 800 query with the originating lines' LATA. For more information, see Division 2, Section 4A171.
Valid Entries: 100 - 999

2.12 REMARKS

Description: This field may contain any entry deemed locally necessary.
Valid Entries: 1 - 16 characters

CLASS OF	TERMINATING TREATMENT									
	INDIV	MLHG	RI	AGIN	INWAT	PARTY	TEST	TINWATS	RAPVN	ASIRA

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SERVICE				G	S					
2PTY				X		X				
4PSS				X		X				
4PFS				X		X				
5PTY				X		X				
8PSS				X		X				
10PTY				X		X				
4WINDIV	X	X		X	X					
ATND	X	X	X	X	X					
B911	X	X		X						
CALLBK	X	X		X						
COIN	X			X						
CHGCALL	X			X						
DAOPER	X									
HOTMOTL	X	X		X	X					
HOTPBX	X	X		X	X					
INDIV	X	X	X	X	X			X	X	X
ISATND		X			X					
ISDN	X	X		X	X					
LTPCLBK	X	X		X						
MISLNK	X									
MODEM	X			X						
PBX	X	X		X	X					
RCDM	X									
SATSTLN	X									
TEST							X			
TWOPTY				X		X				
TAOPER	X			X						
XAT	X	X								
XDB	X									

Figure 1 CLASS OF SERVICE AND TERMINATING TREATMENT COMBINATIONS

---

lcc 5ESS Switch _
(5306) OFFICE DATA ADMINISTRATION
LINE CLASS CODE

*1. LINE CLASS CODE TDV
*2. RATE AREA 01
#3. CLASS OF SERVICE PBX
#4. TERMINATING TREATMENT INDIV
#5. SCREENING INDEX 0025
#6. LINE SCREENING Y
#7. DIGIT ANALYSIS SELECTOR 01
8. INSEP ___
9. DESEP ___
10. REMARKS TOLL DIVERSION

Figure 2 SAMPLE LCC FORM 5E2 - 5E10 SOFTWARE RELEASE

---

lcc 5ESS Switch _
(5306) OFFICE DATA ADMINISTRATION
LINE CLASS CODE

*1. LINE CLASS CODE ___
*2. RATE AREA __
#3. CLASS OF SERVICE _____
#4. TERMINATING TREATMENT _____
#5. SCREENING INDEX ____

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#6. LINE SCREENING N
#7. DIGIT ANALYSIS SELECTOR __
8. INSEP ___
9. DESEP ___
10. LATA ___

11. REMARKS _____

Figure 3 SAMPLE LCC FORM 5E11 - 5E14 SOFTWARE RELEASES

lcc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5306) LINE CLASS CODE

*1. LINE CLASS CODE ___
*2. RATE AREA ___
#3. CLASS OF SERVICE _____
#4. TERMINATING TREATMENT _____
#5. SCREENING INDEX ____
6. LINE SCREENING N
#7. DIGIT ANALYSIS SELECTOR ___
8. INSEP ___
9. DESEP ___
10. LATA ___
11. REMARKS _____

Figure 4 SAMPLE LCC FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 3T: 5307 RECORD
INTERNATIONAL DIRECT DISTANCE DIALING FORM - IDDD

1. GENERAL

The 5307 Record is used for IDDD (International Direct Distance Dialing) Country Access Codes.

IDDD provides the capability for Direct Distance Dialing points outside the North American Network by the customer without the assistance of an operator. Customer routing and charging for an IDDD call in a 5ESS Switch is routed via TSPS. The TSPS office forwards the call to a Gateway Office or to an Overseas Assistance Operator based on the dialed digits. The composition of an International Number is shown in Figure 1.

IDDD calls are not required to route to TSPS if the CI (Carrier Interconnect) capability is in effect for the office. However, the intended carrier, either on a direct connection or via an Access Tandem, must utilize the INC (International Carrier) signaling protocol. See the RTIDX form (5303 Record) for additional information on signaling protocol.

1.1 International Carrier Signaling

When INC signaling is used, there are several stages of outpulsing. The first stage is KP + 1NX + XXX + CCC + ST. CCC is the 1- to 3-digit Country Code padded to three digits, if necessary, with leading zeroes. For this reason a Carrier Interconnect office must specify all valid Country Access Codes unlike the discussion which follows later.

1.2 Call Type

For 5E5 and later, TYPE CI CALL and CALL TYPE fields have been provided.

1.3 Prefix Digits

An international call is identified by the first digits dialed. If 010 is dialed, and no more digits are received, the call is destined for Overseas Operator Assistance. A station-to-station call is identified by the code 011. A person-to-person, credit card, or bill-to-third-number call is identified by the code 01. For 01 and 011 dialing, from seven to twelve additional digits are expected.

- **WARNING:** Customers may incorrectly dial 0 + the FGD CAC (Carrier Access Code), (rather than correctly dialing the FGD CAC only) to reach a vendor other then their PIC. The format 10XXX or 101XXXX is known as the FGD CAC, where XXX or XXXX is the CIC (Carrier Identification Code). The value allowed in the office depends on the value of the FGD PHASE field (5E9(1) and later) on the OFCOPT form. See the OFCOPT form and Division 2, Section 1BI for more information on the FGD CAC (On this form, CAC refers to Country Access Code (see next section; this warning is the only instance of FGD CAC). For an equal access office which does not use 010 for an IDDD operator, the route index should be the fixed route index to an announcement such as the "VACANT" code announcement.

1.4 Country Access Codes

These additional digits contain a Country Access Code and a National Number. Some countries have a uniform numbering plan while others have a variable number of digits in their numbering plan. This form makes it possible for the 5ESS Switch to identify and screen the CACs (Country Access Codes) for validity. If the CACs are valid, the 5ESS Switch must determine the acceptable number of digits for the associated numbering plan. This is defined on the record as the minimum and maximum number of digits expected.

If it is not desired that the 5ESS Switch screen the Country Access Codes for validity, the calls may be

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passed to the TSPS for screening. IDDD forms must still be entered into ODA. However, only the initial digits received after the IDDD prefixes are translated and pointed to TSPS with minimum digits of 7 and maximum digits of 15. Valid initial digits are 2 through 9.

1.5 Code Index

Prefix code 010 (Overseas Operator Assistance) is assigned to Code Index 2 on a PDIT form (5300-2 Record). No IDDD form data is required for this prefix code. The 5ESS Switch owner must assign a Code Index for prefix codes 01 and 011 on the Rate and Route Record (5301 Record). For screening purposes, 01 is treated as a 0+ call, while 011 is treated as a 1+ call. Currently only one Code Index is required to translate all of the IDDD Country Access Codes.

1.6 Digit Interpretation

A station-to-station call is identified by the code 011. A person-to-person, credit card, or bill to third number call is identified by the code 01. For 01 and 011 dialing, from seven to fifteen additional digits are expected. These additional digits are defined in the minimum and maximum number of digits expected fields.

Each Country Access Code must be defined twice, once for the 01 prefix and once for the 011 prefix. The valid CACs are "merged" with the Local Digit Interpreter Table (LDIT) by ODA. Thus, it is possible to have various routing treatments for CACs since the LDIT Number will determine the IDDD call treatment.

1.7 Fully Coded Addressing

For 5E5 and later, all international outbound calls will be processed using FCA (Fully Coded Addressing). FCA is a CCS (Common Channel Signaling) single-stage protocol used to route international outbound calls in a uniform manner through the domestic network. With FCA, when an international outbound call is routed to a 5ESS Toll Switch, the 5ESS Toll Switch will collect all the dialed digits and route the call as a CCS single-stage call towards a 4EES ISC (International Switching Center).

1.8 OSPS International Outbound Calls

The IDDD form populates the two types of OSPS International Outbound digit analysis translations. The two types of international outbound OSPS calls are OSPS MF two-stage international calls, which are sent out of the OSPS using two state signaling, and the FCA (Fully Coded Addressing) calls, which may use either the two-stage MF signaling or may be routed via the CCS network. Both types of calls are covered in the data population on this form.

The LDIT field on this form must have the same entry as the LDIT field on the DAS form (5300-1 Record). The COUNTRY ACCESS CODE field on this form must be filled out for the valid Country Code.

If the LDIT field on this form is the same as the LDIT field for the non-OSPS TOLL international outbound calls, and the non-FCA two-stage feature is being used for OSPS, the TOLL feature populates the incoming digit strings on the LDIT form (5300-3/5 Record) as the PCC (Pseudo Country Code) and the OSPS feature populates the CAC (Country Access Code) on this IDDD form. The PCCs and the CACs are set up so they do not conflict with each other, therefore, they can be entered into the same LDIT using two different forms.

The FCA features always uses a DAS of 81 for both the OSPS and the TOLL. Both the OSPS and the TOLL features must have the CAC defined for DAS of 81. When both features are on the same switch, the IDDD form must be used to enter the CACs. If the OSPS feature is not present on the switch, the TOLL feature may use the LDIT form to enter the CAC. However, if an OSPS will be grown on that switch in the future, the IDDD form should be used to enter the CACs.

For OSPS MF two-stage international calls:

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- CALL TYPE field should be "IDDDTSP";
- IDDD PREFIX should be entered as 01 and 011;
- TYPE CI CALL field should be "IDDD".

For FCA calls:

- the CALL TYPE field should be "IDDDFCA";
- IDDD PREFIX should be left blank;
- TYPE CI CALL field should be "NONCI".

The MIN. NBR. DIGITS EXPECTED field should be set to the minimum number of digits that may be dialed for the COUNTRY ACCESS CODE plus the national telephone number. This numeric value is between 4 and 15 digits. The MAX. NBR. DIGITS EXPECTED field should be set to the maximum number of digits that may be dialed for the COUNTRY ACCESS CODE plus the national telephone number. This numeric value is between 7 and 15 digits.

The CODE INDEX field should be set to a value that may be an optional key to call type determination because this value is used to forward this call to the called party.

The ROUTE INDEX field is not used by call type determination, but it may be used to route the call to the forwarded party if CDIM (5300-6 Record), RSMCAR (5421 Record), ICF or RAR forms (5301 Record) do not override it.

The DESEP field is only required for Division of Revenue study. If a DESEP is entered, it must be defined on the TRFSEP form (5308 Record).

1.9 Recent Change View

The corresponding Recent Change View for IDDD is 9.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * LDIT

Description: Enter the Local Digit Interpreter Table number. The LDIT identifies all codes that are dialable. The CACs are "merged" on the LDIT by ODA.

Required Field.
Valid Entries: 1 - 999

2.3 (*) IDDD PREFIX

Description: Enter the IDDD Prefix code, 01 or 011. Any other prefix code will be considered valid but is not normally used in the North American environment. Each prefix value entered must be appropriately defined on a PDIT form with 0 digits deleted.
Valid Entries: 1 - 3 digits

2.4 * COUNTRY ACCESS CODE

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Description: The Country Access Code defines the country to which the call is destined. Enter the CAC if it is desired to screen it for validity locally within the 5ESS Switch. Duplicate Country Codes within an LDIT and IDDD prefix are not permitted. The Traffic Routing Guide defines all valid Country Access Codes.

If screening is not desired, enter a digit 2 through 9 which is the range of the first digit of all valid CACs. Screening must be done at the OSPS. If this office is a Carrier Interconnect office, all Country Access Codes must be furnished.

WARNING: For 5E7 and later, when CCS7 signaling is used on incoming calls destined to an IC (International Carrier), an entry on this form is required for each country code. Adding or deleting COUNTRY ACCESS CODEs to or from the IDDD form (5307 Record) requires that the COUNTRY CODEs be added or deleted to or from the PCC form (5318 Record).

Required Field.
Valid Entries: 1 - 3 digits; the first digit must be 2 - 9

2.5 (*) CITY CODE

Description: The CITY CODE field was added to support the IDDD City Code Routing Enhancement feature. This field is used to specify IDDD routing data for a specific city within a foreign country.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 7 digits

Data Rules:

When CITY CODE is entered, then TYPE CI CALL must be "IDDD" and CALL TYPE must be "IDDDSTS" or "IDDDTSP".

When CITY CODE is entered on an IDDD form (call it IDDD1), there must also be another IDDD form (call it IDDD2) having the same keys LDIT, IDDD PREFIX, and COUNTRY ACCESS CODE, but with blank for CITY CODE. In addition, MIN. NBR. DIGITS EXPECTED on IDDD1 must be equal to or greater than MIN. NBR. DIGITS EXPECTED on IDDD2 and MAX. NBR. DIGITS EXPECTED on IDDD1 must be equal to or less than MAX. NBR. DIGITS EXPECTED on IDDD2.

2.6 # MIN. NBR. DIGITS EXPECTED

Description: The entry in this field is dependent on whether the application is IDDD or OSPS.

For IDDD (International Direct Distance Dialing) enter the Minimum Number of Digits that may be dialed for the Country Code plus the National Number. If the exact number of digits expected is known, this value must be entered as both the Minimum and Maximum Number of Digits Expected.

OSPS looks for 3 digits plus the MIN. NBR. DIGITS EXPECTED entry as the minimum length forward number, e.g. if 4 is entered, OSPS expects 7 digits. The values 4 to 6 may only be used by a 5ESS Switch with OSPS Toll and Assistance.

Required Field.
Valid Entries:
- 5E9(2) and earlier: 4 - 12
- 5E10 and later: 4 - 15

Data Rules:

MIN. NBR. DIGITS EXPECTED cannot be greater than MAX. NBR. DIGITS EXPECTED. For 5E10 and later, the value of MIN. NBR. DIGITS EXPECTED cannot

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exceed 12 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore the SFID 223 ACT field must be set to "Y" on the SFSYS form (5713-1 Record). For more information on this feature, see Division 2, Section 4A223.

For 5E14 and later, MIN NBR DIGITS EXPECTED must be greater than or equal to the sum of the lengths of COUNTRY ACCESS CODE and CITY CODE.

2.7 # MAX. NBR. DIGITS EXPECTED

Description: Enter the Maximum Number of Digits that may be dialed for the Country Code plus the National Number. If the exact number of digits expected is known, this value must be entered as both the Minimum and Maximum Number of Digits Expected.

Required Field.
Valid Entries:
- 5E9(2) and earlier: 7 - 12
- 5E10 and later: 7 - 15

Data Rules:

For 5E10 and later, the value of MAX. NBR. DIGITS EXPECTED cannot exceed 12 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore the SFID 223 ACT field must be set to "Y" on the SFSYS form (5713-1 Record).For more information on this feature, see Division 2, Section 4A223.

2.8 # CODE INDEX

Description: Enter the Code Index Number to be used for 01+ and 011+ calls. For screening purposes, 01+ is treated as an 0+ call, while 011+ is treated as 1+ call. Code Index 2 is normally used to screen IDDD calls.

For 5E8 and later, CODE INDEX is now a real Code Index and no longer a pointer to the DISERV form (5321 Record).

Required Field.
Valid Entries: 1 - 4095

All combinations of CODE INDEX from one or more LDIT, RDIT (5300-7/8 Record), PDIT, IDDD, or MLDIT forms (5300-3 Record), PREFIX from the PDIT form, and SCREENING INDEX from the LCC form (5306 Record) must have corresponding RAR form entries for CDI, PFX, and SCR.

2.9 ROUTE INDEX

Description: This field is used to indicate the Regular Route Index to be used for routing IDDD calls except when a Special Route Index entered on an RAR form overrides it. The Regular Route Index is the route which is used by the majority of call originators to complete the call.

For 5E8 and later, the ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

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For 5E6 and later, a ROUTE INDEX must be entered for every CALL TYPE except "QUERY", for which ROUTE INDEX is optional.

2.10 DESEP

Description: Enter an optional Destination Separation Index to be used for 01+ and 011+ calls.
Valid Entries: 1 - 255

Data Rules:

If a DESEP is entered, it must be defined on a TRFSEP form (5308 Record).

A DESEP cannot be entered when CALL TYPE is "QUERY".

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.11 # CALL TYPE

Description: Enter the Call Type to be used. This Call Type will indicate the action to be taken on the receipt of the incoming digits.

Required Field.

Software Release: 5E5 and later
Default: IDDDTSP
Valid Entries:

Valid CALL TYPE Entries

Entry	Definition
IDDDFCA	International Direct Distance Dialing FCA (Fully Coded Addressing) call.
IDDDSTS	International Direct Distance Dialing Station To Station.
IDDTSP	International Direct Distance Dialing TSPS.
NORMAL	Software Release: 5E8 and later. ASP (Advanced Services Platform).
QUERY	Software Release: 5E6 - 5E7. Possible query to an external database.

IDDDFCA: This value is used for the address sequence of an international outbound call incoming to a Toll Switch (OFFICE TYPE on the OFCOPT form (5509 Record) is "Y") which will use FCA. A DAS (Digit Analysis Selector) of 81 will be used instead of the DAS associated with the incoming trunk group. This Call Type may be assigned to incoming digit sequences CC + NN or 0/1X + CC + NN. CC is the Country Code. NN is the National Number. 0/1X is the ISC (International Switching Center) prefix code. If this value is entered, then "NONCI" must be entered in the TYPE CI CALL field, and the IDDD PREFIX field must not be entered.

IDDDSTS: International Direct Distance Dialing Station To Station is used for multi-stage international outbound calls which are routed to an MF trunk, CCIS6 trunk, or CCS7 ISUP trunk. This value may be assigned to codes which require two-stage call handling at a toll or tandem office. Two-stage call handling includes an acknowledgement wink before the second stage of digits is sent. Also used in a tandem or toll office when the digits inpulsed on the trunk, typically from a TSPS, are 011 + padded Country Code.

This value can be used for:

- A Local office (OFFICE TYPE on the OFCOPT form is "N") where the incoming digits are 011 + (7 - 15 digits).
- A Toll office (OFFICE TYPE on the OFCOPT form is "Y") which will not use FCA (Fully Coded Addressing). Possible incoming digits are 1NX + XXX + CCC or 011 + PCC or 18X. 1NX is the

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customer direct dialed digits. XXX is the international carrier. CCC is the padded Country Code. PCC is the Pseudo Country Code. 18X indicates an international call.

- A 5ESS Gateway Switch that requires an FCA international outbound call to leave the office on an MF trunk must assign this CALL TYPE to the digit sequence CC + NN. CC is the Country Code. NN is the national number.

IDDTSP: This value is used to route IDDD calls via TSPS like 01 + 7- to 15-digit calls. It is also used for Carrier Interconnect calls to an INC (International Carrier). If this value is entered, then the IDDD PREFIX field must be entered.

QUERY: When CALL TYPE is "QUERY", use the CODE INDEX to locate the corresponding DISERV form (5321 Record) to determine what type of query, if any, should be made.

Data Rules:

For 5E8 and later, if an ICF form has CARRIER TYPE equal to "CONSOL" or "INC", all IDDD forms with CALL TYPE not equal to "NORMAL" or "IDDDFCA" should have TYPE CI CALL set to "IDDD".

For 5E8 and later, if CALL TYPE is not "NORMAL", ROUTE INDEX must be entered.

IDDDTSP: For 5E8 and later, if CALL TYPE is "IDDDTSP", then IDDD PREFIX must be entered.

IDDFCA: For 5E8 and later, if CALL TYPE is "IDDDFCA", then TYPE CI CALL must be "NONCI" and IDDD PREFIX cannot be entered.

NORMAL: For 5E8 and later, if CALL TYPE is "NORMAL":

- DESEP cannot be entered,
- TYPE CI CALL must be "NONCI",
- IDDD PREFIX must be entered, and
- TRIG NBR must be entered.

QUERY: If the CALL TYPE is "QUERY", the CODE INDEX on this form must match the CDI field on a DISERV form (5321 Record), and

- SERV TYPE cannot be "E911" on the DISERV form.
- if SERV TYPE is set to "NOQRY" on that DISERV form, then the ROUTE INDEX field on this form must be entered. A SERV TYPE of "NOQRY" occurs at a NAP (Network Access Point) and the ROUTE INDEX must be entered to route to an SSP (Service Switching Point).
- for 5E7 and later, if "SSP" is entered in the PVN OFC on the OFCOPT form, then "PVNINT" must be entered in the SERV TYPE on the DISERV form.

2.12 TYPE CI CALL

Description: Enter the type of carrier interconnect call.

Software Release: 5E5 and later
Required Field.
Default: IDDD
Valid Entries:

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Valid TYPE CI CALL Entries	
Entry	**Definition**
IDDD	Used for calls destined to outside World Zone 1. If this value is entered, at least one ICF form must be defined with a carrier type of "INC" or "CONSOL".
NONCI	Used for calls for where carrier selection is irrelevant.
PSCAR	Software Release: 5E10 and later. Packet Switched international call. This entry supports the 15 Digit IDDD feature. For more information on this feature see Division 2, Section 4A223.

Data Rules:

This field must be set to "NONCI" when CALL TYPE is "IDDDFCA" or "QUERY".

If "PSCAR" is entered, then CALL TYPE must be "IDDDSTS".

2.13 TRIG NBR

Description: Enter the Network Services trigger number.

Software Release: 5E8 and later
Valid Entries:
- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

Data Rules:

If TRIG NBR is entered:

- it must match TRIG NBR on an NSTRIG form (5324 Record) ;
- APPLICATION on the NSTRIG form must not be "E911" ;
- if CALLTYPE is "NORMAL", APPLICATION on the corresponding NSTRIG form must not be "E911";
- for CALL TYPE equal to "NORMAL", if APPLICATION on the corresponding NSTRIG form
  - is "E911" or "800", ROUTE INDEX cannot be entered;
  - is "ASP", ROUTE INDEX must be entered, or ASP DEFAULT ROUTE INDEX on the ODAOPT form must be entered; and
- if SERV KEY on the corresponding NSTRIG form equals "CDPN", then the number of DIGITS EXPECTED on this form must be either 7 or greater than 9 for ALT GBL TITLE on NSTRIG not to be entered.

2.14 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

2.15 DFLT RT

Description: Enter the type of ASP Default Routing for 3/6/10-Digit Triggers.

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Software Release: 5E9(1) and later.
Required Field.
Default: NONE.
Valid Entries:

Valid DFLT RT Entries	
Entry	**Definition**
ANNC	Default routing to a fixed route "DFLTRT" for an announcement.
DLDN	Default routing to the dialed DN.
NONE	Existing treatment to "reorder" or "no circuits available".

Data Rules:

If "ANNC" or "DLDN" are entered:

- then TRIG NBR must be entered.
- then the secured feature ASP (Advanced Service Platform) Default Routing for 3/6/10-Digit Triggers must be purchased. Therefore the SFID ACT 153 field must be "Y" on the SFSYS form (5713-1 Record).

If "ANNC" is entered, then a FIXRT form (5301-1 Record) must be defined with a FIXED ROUTE TYPE set to "DFLTRT".

When DFLT RT is other than "NONE", the corresponding TRIG NBR must be defined on the NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "R0D1". In addition, if DFLT RT equals "ANNC" then SERVICE ALWD must not be "CSD".

2.16 INH OBL

Description: Is the ASP originating busy trigger inhibited? This field supports the Call Screening for ASP Originating Busy/No Answer Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A212.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The SFID 212 ACT filed on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set to "Y".

2.17 INH ONA

Description: Is the ASP originating no answer trigger inhibited? This field supports the Call Screening for ASP Originating Busy/No Answer Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A212.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The SFID 212 ACT filed on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set

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to "Y".

2.18 ANI BYPASS

Description: Will ANI Table options be ignored? An entry of "N" indicates TDX ANI Table options will be processed. This field supports the TDX (Toll Digital Exchange) ANI Table Call Processing Feature. This is a secured feature with SFID 235. For more information on this feature, see Division 2, Section 4A165.

Software Release: 5E10 and later
Default: N

Valid Values: Y, N

2.19 DENY XFER

Description: This field is used to indicate if call transfers to a particular digit string should be denied.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, when DENY XFER is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y". "Y" being set on the SFSYS form indicates that the "Deny Transfer of Digit Screened Calls" feature has been purchased.

2.20 REMARK

Description: This field may contain any remarks deemed locally necessary.

INTERNATIONAL PREFIX	INTERNATIONAL NUMBER (COUNTRY CODE + NATIONAL NUMBER)	TYPE OF INTERNATIONAL CALL
011	7-15 digits	STATION-TO-STATION
010	NONE	INTERNATIONAL OVERSEAS ASSISTANCE OPERATOR
01	7-15 digits	PERSON-TO-PERSON, CREDIT CARD, etc.

Figure 1 COMPOSITION OF INTERNATIONAL CALLS

---

iddd 5ESS Switch _
(5307) OFFICE DATA ADMINISTRATION
INTERNATIONAL DIRECT DISTANCE DIALING

*1. LDIT ___ 11. TRIG NBR ___
(*)2. IDDD PREFIX ___ 12. ESC CODE N
*3. COUNTRY ACCESS CODE ___ 13. DFLT RT NONE
#4. MIN. NBR. DIGITS EXPECTED __ 14. INH OBL N
#5. MAX. NBR. DIGITS EXPECTED __ 15. INH ONA N
#6. CODE INDEX ____ 16. ANI BYPASS N
7. ROUTE INDEX ____ 17. DENY XFER N
8. DESEP ___ 18. REMARK _____
9. CALL TYPE IDDDTSP

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10. TYPE CI CALL IDDD

Figure 2 SAMPLE IDDD FORM 5E12 AND 5E13 SOFTWARE RELEASES

```
iddd                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5307)        International Direct Distance Dialing Form

  *1. LDIT                ___       13. ESC CODE   N
(*)2. IDDD PREFIX         ___       14. DFLT RT    NONE
  *3. COUNTRY ACCESS CODE ___       15. INH OBL    N
(*)4. CITY CODE           _______   16. INH ONA    N
  #5. MIN. NBR. DIGITS EXPECTED __  17. ANI BYPASS N
  #6. MAX. NBR. DIGITS EXPECTED __  18. DENY XFER  N
   7. CODE INDEX          ____      19. REMARK    _________________
   8. ROUTE INDEX         _____
   9. DESEP               ___
  10. CALL TYPE           IDDDTSP
  11. TYPE CI CALL        IDDD
  12. TRIG NBR            ___
```

Local digit interpreter table. Enter 1 to 999.

Figure 3 SAMPLE IDDD FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 3U: 5308 RECORD
TRAFFIC SEPARATIONS CELL GROUPING FORM - TRFSEP

1. GENERAL

The Traffic Separations Cell Grouping Record is available with 5E2 and later Software Releases and defines Cell Groupings associated with INSEP/DESEP pairs. Traffic Separations are DOR (Division of Revenue) requirements.

For traffic separations purposes, every incoming or originating call is assigned an INSEP (Incoming Separations) Class and a DESEP (Destination Separations) Class.

The INSEP and DESEP of a call determine the appropriate accumulating counters to be updated. There is a maximum of 256 INSEPs and 256 DESEPs, therefore 65,536 possible INSEP/DESEP pairs. Each pair may update more than one counter, thus intermediate counters are used.

The INSEPs and DESEPs are used as indexes into a matrix. Each matrix element, called a cell, contains a pointer to one intermediate counter, or cell grouping, which should be updated. The intermediate results contained in the cell groupings are periodically accumulated into SSR (Separations Summarization Registers).

Each call, or call attempt, is assigned an INSEP and a DESEP for traffic separations purposes. INSEP assignment is dependent on line or trunk originations. DESEP assignment is dependent on the digits dialed, i.e., the ultimate destination of the call.

After the INSEP/DESEP assignment, the pair is translated to cell groupings. The INSEP/DESEP matrix has a maximum of 256 INSEPs and 256 DESEPs, therefore a maximum of 65,536 cells. Each cell contains an index into 1024 cell groupings.

Most local/toll offices may not need a 256 x 256 matrix. In these cases a 64 x 64 matrix, or 128 x 128 matrix, can be used.

The cell is used as an index into the cell grouping structure. Each cell grouping contains a peg count and usage count. Every possible combination of INSEP/DESEP pair must be assigned to a cell grouping. All calls through the system (toll or otherwise) will be reflected by the summation of the cell groupings.

INSEP and DESEP of 0 is used by the Software Release whenever no INSEP or DESEP is provided by the incoming line or trunk translations. INSEP and DESEP of 63 and a CELL GROUP of 1023 are Switch defaults and are used for calls that are not applicable to DOR (i.e. busy, reorder etc.). INSEP/DESEP values of (0, 63) should not be assigned.

Every call through the 5ESS Switch is recorded in the DOR cell group report. CELL GROUP 0 has always been used as a default cell group for calls that are not applicable to DOR. However, calls with translation problems were also defaulted to cell group 0.

To separate the calls that had translation problems from the calls that are not applicable to DOR, each call is initialized to a "Switch default" INSEP of 63, DESEP of 63 and a CELL GROUP of 1023. If a call is not applicable as a DOR call (i.e. busy , reorder, permanent signal , vacant code etc) then the call is recorded in the Switch default Cell Group 1023 or Cell Groups translated with a INSEP/DESEP value of 63, and all translational problem calls are recorded in default cell group 0.

CELL GROUP 0 is the default cell group. Valid DOR calls that are not assigned an INSEP and/or DESEP value, use INSEP/DESEP 0.

Note: The input message "ALW:DCGRPT" to identifies INSEP and DESEP translation assignments in error.

CELL GROUP 1023 is the Switch default cell group. When a call is not applicable to DOR (i.e. busy,

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reorder etc.), the division of revenue cell group 1023 will collect the data.

CELL GROUPs translated with DESEP values of 63 include calls routed to a permanent signal. Because a call to permanent signal never receives a digit with which to read the database for a DESEP value. A Switch default INSEP and DESEP value of 63 is used for non DOR calls. These calls do not use the INSEP or DESEP database values.

The last stage of traffic separations is the summarization of the cell groupings into Separations Summary Registers. For the 5ESS Switch, the SSRs, as well as the mapping from cell grouping to SSR, will reside outside the switch in a downstream processor. The summarization process is an external support function.

See Division 2, Section 1B for more information.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each page of the Record.

2.2 * INSEP

Description: Enter the Incoming Separations Class. The INSEP for trunks is assigned according to the Trunk Group of the origination. For lines, the INSEP is assigned on the LCC Form (5306 Record) based on the Line Class Code and Rate Area.

NOTE: By using the Line Class Code form, INSEP assignments can be changed without changing data on a line by line basis.

Required Field.
Default: 0
Valid Entries: 0 - 254

Data Rules:

INSEP 0 is used whenever INSEP is not provided by the incoming line or trunk translations. INSEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.3 * DESEP

Description: Enter the Destination Separations Class. The DESEP assignment for lines is assigned on the LCC Form (5306 Record) based on the Line Class Code and Rate Area. For trunks, a DESEP is assigned according to the digits dialed.

Required Field.
Default: 0
Valid Entries: 0 - 255

Data Rules:

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

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2.4 CELL GROUP

Description: Enter the Traffic Separations Cell Group number. Each cell grouping contains a peg count and usage count.
Valid Entries: 0 - 1023

Data Rules:

Each INSEP and DESEP assigned on other records must be assigned to at least one Cell Group. Every possible combination of INSEP and DESEP must also be assigned to a Cell Group.

CELL GROUP 1023 is the Switch default cell group for non DOR calls and should not be assigned.

CELL GROUPs should not be assigned an INSEP or DESEP value of 63. INSEP/DESEP 63 is used to separate non DOR calls (i.e. Vacant code, Permanant signal, etc.) from a valid DOR call.

CELL GROUP 0 is the default cell group. CELL GROUP 0 should be translated with all possible combinations of: INSEP X - DESEP 0, INSEP 0 - DESEP X, INSEP 0 - DESEP 0:

Where X= 1-62, 64-255

See Figure 1 for a simplified sample of an office with the following assignments.

INSEP	ORIGINATED BY
0	Unassigned
1	Line
2	Trunk

DESEP	DESTINED FOR
0	Unassigned
1	Local number
2	Extended Area Service
3	Home NPA
4	Intrastate
5	Interstate

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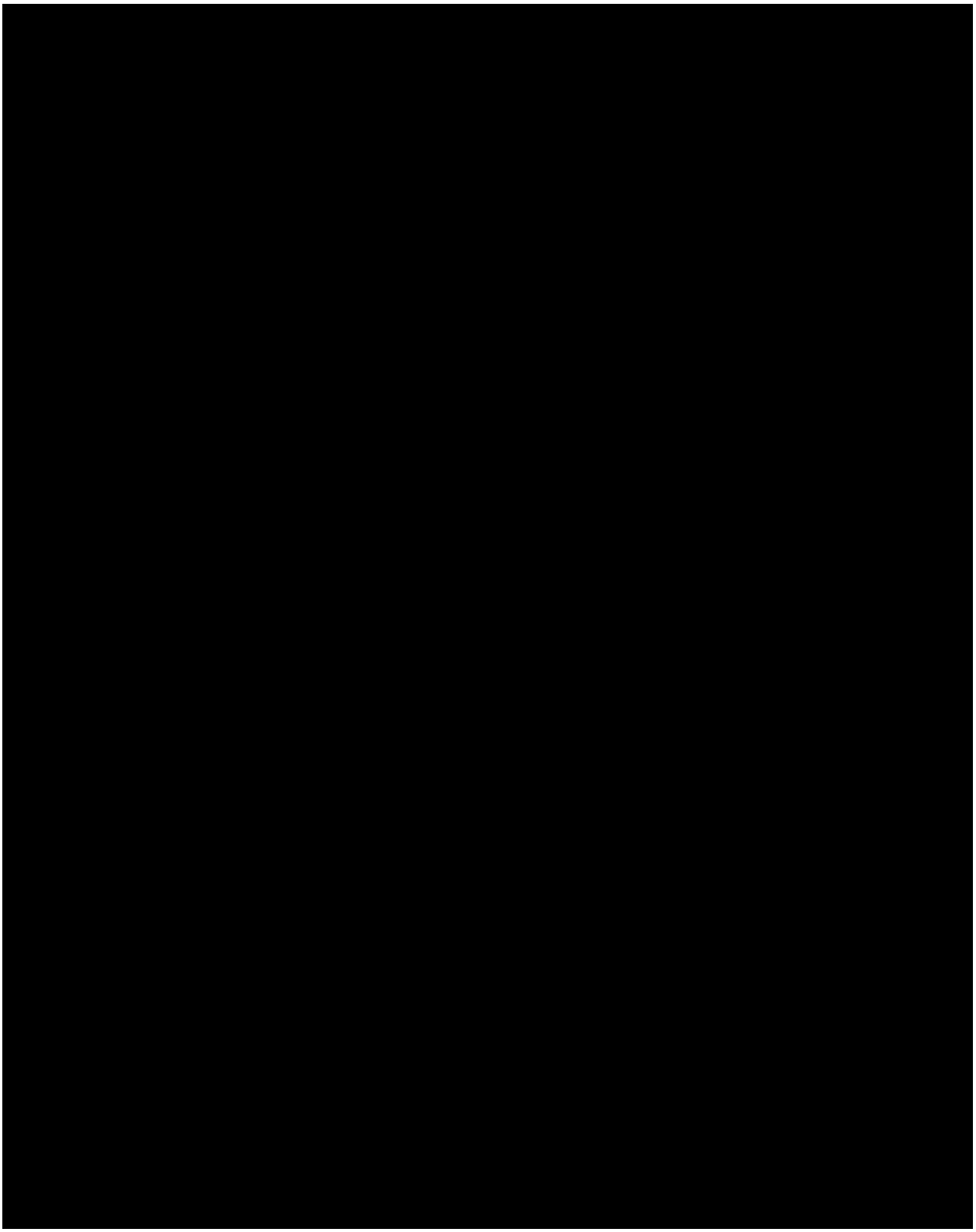

Figure 1 INSEP/DESEP ASSIGNMENT PROCESS

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Figure 2 INSEP/DESEP MATRIX

```
trfsep                    5ESS Switch                _
5308                 OFFICE DATA ADMINISTRATION
                TRAFFIC SEPARATIONS CELL GROUPING

* 1. INSEP            003
* 2. DESEP            005
  3. CELL GROUP       0002
```

Figure 3 SAMPLE TRFSEP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3V: 5309 RECORD
INCOMING TRUNK
PRELIMINARY DIGIT INTERPRETER FORM - INDIT

1. GENERAL

The Incoming Trunk Preliminary Digit Interpretation Record is used to define the initial digit analysis and subsequent treatment of inpulsed digits from all Incoming and Two-Way Trunks based upon the initial digits received.

Set LDIT equal to "N" whenever complete digit analysis is provided by INDIT. That is, whenever LDIT is by-passed and call processing passes directly to the RAR form (5301 Record).

This would normally be the case for a regular 7-digit telephone number when fewer than seven digits are incoming on the trunk. This type of call cannot be translated in LDIT because some or all of the digits of the NXX code have been deleted by the sending office.

The ultimate destination of these calls would typically be to a directory number defined on the Telephone Number Record for this office.

The directory number translation software reconstructs a 7-digit telephone number for either a line or trunk originated call terminating to a line defined with a route index as would be the case for a PBX DID (Direct Inward Dial) group. Therefore, less than 7-digit incoming calls destined for the DID group can use the same entry as the other telephone numbers in the office NXX (i.e., one INDIT entry for the NXX with a single code index). The route index associated with the line is then defined on the RTIDX form (5303 Record) with appropriate digit deletion based on the reconstructed 7-digit telephone numbers.

For any Software Release, it is possible to translate PBX-DID telephone numbers completely in digit analysis, if it is desired, to avoid telephone number translations for these numbers on the LINE form. It is also possible to completely translate EDSL TNs in digit analysis. The EDSL feature is available in 5E4(2) and later Software Releases. To do this, the LDIT would require entries similar to the above description to expand the NXX to the thousands or hundreds digit. If this is a 7-digit incoming office, the INDIT may point to LDIT for these translations. If less than seven digits are expected, both the LDIT and INDIT must break out the NXX and two route indexes would be required for the appropriate digit deletion as described above. If this method is used, it must be remembered that the LINE form was not entered, and therefore no record or verify of the telephone number will exist on a line basis. They will appear to be blank numbers. If one of these numbers is mistakenly assigned as a regular line, calls to the number will be routed to the PBX-DID.

Set LDIT equal to "Y" for incoming calls (usually seven or ten digits) when the ultimate destination is specified on the LDIT form.

The LDIT translations will be those specified for the DAS (Digit Analysis Selector) assigned to the incoming or two-way trunk group on the TKGRP form (5202 Record).

If the office expects seven digits on incoming traffic, either LDIT equal to "Y" or "N" may be used. LDIT equal to "N" would probably be the appropriate choice if the office only allows locally terminating calls on these trunks. "Locally terminating" means telephone numbers which have NXX codes defined on the NOC (Normalized Office Code) form (5501 Record) and would include calls which terminate to a local DID trunk group. By using LDIT equal to "N", the additional call processing step of LDIT would be eliminated for trunk originated calls.

However, if the office tandems traffic, then LDIT equal to "Y" would be appropriate to avoid many duplicate digit analysis entries in both INDIT and LDIT. Both local and tandem codes would be sent to LDIT for digit analysis by entering on the INDIT Record all possible first digits which are acceptable with LDIT equal to "Y". See the example in Figure 2.

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NOTE: Caution must be taken when LDIT is used for digit interpretation and the office is translated for Carrier Interconnect. If a TYPE OF CI CALL such as "INTER" is found during digit interpretation, an InterLATA Carrier will be required to route the call. If the OFFICE CARRIER ID is specified on the OFCOPT form (5509 Record) and the route defined for that carrier is appropriate for trunk originations, then this method is acceptable. However, the preferred method is to use separate digit interpretation (i.e., INDIT or unique LDIT) so that "NONCI" may be entered for TYPE OF CI CALL on trunk originated calls.

For both cases of LDIT equal to "Y" and "N", the subsequent screening on the RAR (Rate and Route) form (5301 Record) utilizes the NO PREFIX entries.

1.1 Revertive Pulsing Trunk Groups

For INDITs used for incoming revertive pulsing trunk groups, the INCOMING DIGITS may be a 0 or 5 which represents LOW 5 and HIGH 5 directory numbers, or three digits which indicate the Office Brush, Office Group and LOW 5/HIGH 5 Indicator. If these calls terminate to directory numbers in this office, the INCOMING DIGIT count may be deleted and the appropriate OFFICE CODE entered. If these calls must tandem to another office without RP signaling, the appropriate digits of the NXX must be prefixed on the RTIDX form (5303 Record). It is possible to receive 0 or 5 plus 4 digits from an end office on an RPEO Trunk Group, and outpulse Office Brush, Office Group and 0 or 5 to a tandem on an RPTO Trunk Group and vice versa. The Office Brush and Office Group digits required for outpulsing to the tandem must be prefixed on the RTIDX form. In the second case, the Office Brush and Group digits could be deleted on the INDIT or on the RTIDX form for outpulsing to the end office.

1.2 Recent Change View

The corresponding Recent Change View for this form is 9.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * INC. TRUNK PRELIMINARY DIT

Description: Enter the Incoming Trunk Preliminary Digit Interpreter Table being defined. The Incoming Trunk Preliminary Digits are used for Incoming and Two-Way Trunk Group terminations.
Valid Entries: 1 - 999

2.3 * INCOMING DIGITS

Description: Enter the incoming digits to be interpreted.

For applications where only four digits are received, and the call is to complete to a 7-digit directory number within the 5ESS Switch, the first digit of each equipped thousands group must be defined in these columns. For example, if NXX 355 has the 3XXX, 4XXX, and 5XXX numbers equipped and the office receives 4 digits incoming, then the digits 3, 4, and 5 must be defined.

If the initial digits received from the trunk are not defined on the INDIT form, reorder will be returned.
Valid Entries: 1 - 15 digits

2.4 LDIT

Description: Should the LDIT (Local Digit Interpreter Table) form (5300-3/5 Record) be used to analyze the incoming digits?

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Required Field.
Valid Entries: Y, N

Data Rules:

For 5E8 and later, if LDIT equals "N", RECONSTRUCT must be "N".

For 5E8 and later, if LDIT equals "Y", TRIG NBR must not be entered.

For 5E9(1) and later, when LDIT equals "Y", ESC CODE must be "N".

2.5 RECONSTRUCT

Description: Should the dialed digits be reconstructed for Network Services triggers?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If RECONSTRUCT equals "Y":

- LDIT must be "Y",
- OFFICE CODE must be entered,
- TYPE OF CI CALL, CODE INDEX, IMPLIED NPA, DESEP, and ROUTE INDEX must not be entered, and
- POLYGRID must be "N".

If LDIT equals "Y" and RECONSTRUCT equals "N", OFFICE CODE and NBR OF DIGITS EXPECTED must not be entered.

2.6 BUILD 10 DIGITS

Description: This field indicates whether or not to reconstruct to 10 digits. For trunk originations involving abbreviated incoming signaling (e.g. less than 7 digits), if this field is set to "Y", the incoming digit string will be reconstructed to 10 digits based on the values entered in the OFFICE CODE and NPA fields. The reconstructed 10-digit number is then re-analyzed in LDIT. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

When LDIT is "N", BUILD 10 DIGITS must be "N".

When LDIT is "Y" and BUILD 10 DIGITS is "Y", RECONSTRUCT must be "Y".

2.7 TYPE OF CI CALL

Description: This field is associated with the Carrier Interconnect capability.

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Valid TYPE OF CI CALL Entries

Entry	Definition
AVT	Access Via Tandem is used for an incoming trunk call from an EAEO (Equal Access End Office); the digits 0ZZXXX are received. The 0ZZ digits are entered in the INCOMING DIGITS field and represent a spare toll center code. XXX represents a Carrier Identification Code and is not interpreted on the INDIT. The 5ESS Switch, serving as an Access Tandem, tandems the call to the carrier based on entries in the CDIM form (5300-6 Record).
INC	International Carrier call is used for an incoming trunk call from an EAEO; the digits 1NXXXXCCC are received. The 1NX digits are entered in the INCOMING DIGITS field and represent a spare toll center code. XXX represents an International Carrier Identification Code and is not interpreted on the INDIT. CCC represents a padded Country Code and is not interpreted by the 5ESS Switch. The 5ESS Switch, serving as an Access Tandem, tandems the call to the International Carrier based on entries in the CDIM form (5300-6 Record).
EMRR	Emergency Reroute call is used for an incoming trunk call from an EAEO; either of the digit sequences illustrated under "AVT" or "INC" are received. The 5ESS Switch in this case may be either an EAEO or an AT and is used only during an emergency when the originating EAEO cannot route to its AT. Based on the 0ZZ or 1NX codes, the call is routed, without further digit interpretation, to the proper AT. EMRR applies only to Equal Access MF and not to ISUP (SS7) signaling.
INTRM	Software Release: 5E8 and later. FGB Interim call is used for an incoming trunk call dialed by the originator as 950XXXX. The 950 digits are entered in the INCOMING DIGITS. The XXXX represent a Carrier Identification Code. These calls may be from a non-EAEO and less than the seven digits may be received as would then be reflected in the INCOMING DIGITS. When "INTRM" is entered, the last four digits inpulsed (i.e., the Carrier Identification Code) will be used to enter the ICF form (5305 Record) to access the Carrier's FGB CDI and FGB RTI. Because "INTRM" is also a valid entry in the LDIT form, it may be optionally used instead of the INDIT form.
TRANS	Software Release: 5E7 and earlier. Transition call is used for an incoming trunk call dialed by the originator as 950WXXX. The 950W digits, where W may be any digit but is usually 1, are entered in the INCOMING DIGITS. The XXX represent a Carrier Identification Code. These calls may be from a non-EAEO and less than the seven digits may be received as would then be reflected in the INCOMING DIGITS. When "TRANS" is entered, the last three digits inpulsed (i.e., the Carrier Identification Code) will be used to enter the ICF form (5305 Record) to access the Carrier's TRANS CDI and TRANS RTI. Because "TRANS" is also a valid entry in the LDIT form, it may be optionally used instead of the INDIT form.
NONCI	Used for calls for which carrier selection is irrelevant (e.g. locally terminating traffic, local company tandem traffic, calls incoming from a carrier either directly or via an AT).
PSNCI	Software Releases: 5E3 and later. Used for incoming Packet Switch calls. These calls will terminate to a line in the office.

Data Rules:

This field is used only when LDIT equals "N".

For 5E5 and later, if "PSNCI" is selected, then either an OFFICE CODE or a ROUTE INDEX must be entered, but not both.

For 5E7 and later, if TYPE OF CI CALL is "PSNCI", DESEP may not be entered.

2.8 CODE INDEX

Description: If LDIT equals "N", or if destination is DN, then enter the CODE INDEX number to be used on the RAR form (5301 Record); otherwise, leave this field blank.

For 5E8 and later, CODE INDEX is now a real Code Index and no longer a pointer to the DISERV form (5321 Record).
Valid Entries: 1 - 4095

Data Rules:

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If any RAR form associated with this INDIT can also be used by lines in this office, then Code Indexes 1 and 2 may not be used.

All combinations of CODE INDEX, and SCR from the TKGRP form must have corresponding RAR form entries for CDI, SCR, and "NONE" for PFX.

For 5E8 and later, either CODE INDEX on this form or an MLDIT (5300-3 Record) or PDIT (5300-2 Record), or CODE INDEX or CDI on RDIT (5300-7/8 Record) or LDIT, or WITH ANI or WITHOUT ANI on an AISCLS form must equal INC CDI on an INFLDEST form (5448 Record).

2.9 ROUTE INDEX

Description: This field is used to indicate the regular route index used for tandem traffic except when a special route index entered on the RAR form (5301 Record) overrides it.

For 5E8 and later, the ROUTE INDEX can be used for routing if the SCP replies to route with it.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

This field is entered only when LDIT equals "N".

No entry should be made in this field when Type of CI Call is "AVT", "INC", or "PSNCI".

2.10 POLYGRID

Description: Should polygrid routing be used? This field is used only in DSN (Defense Switched Network) offices.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this is a DSN office (DSN OPTION set to "Y" on the OFCOPT form), POLYGRID should be "Y". For non-DSN offices, it must be "N".

2.11 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

Data Rules:

When NPA is entered, OFFICE CODE must be entered.

For 5E12 and later, when the OFFICE CODES and/or NPA/OFFICE CODE combinations are assigned on the INDIT form they must be defined on the NOC form.

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2.12 OFFICE CODE

Description: This field is used for two purposes, either to designate a code served by this 5ESS Switch or for NM (Network Management) code controls.
Valid Entries:

For 5E3 and later: 3 digits

Data Rules:

If LDIT is "N" and this incoming trunk call terminates to a number served by the 5ESS Switch (i.e., defined on the NOC form), then enter the NXX. If an OFFICE CODE is entered but the ROUTE INDEX is not, it will route the call to a directory number of this NXX in this office, except when a special route index or NXX entered on the RAR form (5301 Record) overrides it.

When both a ROUTE INDEX and an OFFICE CODE are entered, it is determined that the OFFICE CODE is being used for Network Management code controls. The OFFICE CODE in this case is used when the INCOMING DIGITS do not contain all of the digits of the NXX's (i.e., when four to six digits are inpulsed) which the NM generic software must know to accomplish control (blocking) by codes. If LDIT equals "Y", then the implied NPA/NXX is determined from the LDIT form and is prohibited here.

If LDIT is "N", and NBR OF DIGITS EXPECTED is 4 or 5, the NM implied NXX may be entered here.

If LDIT is "N", NBR OF DIGITS EXPECTED is 6, and the number of INCOMING DIGITS is two or more, the NM implied NXX may be entered here.

If LDIT is "N", NBR OF DIGITS EXPECTED is 6, and the number of INCOMING DIGITS is one, the NM implied NXX is not currently supported and may not be entered.

When LDIT is "N", and NBR OF DIGITS EXPECTED is greater than 6, the implied NXX is determined from the INCOMING DIGITS.

This field is entered only when LDIT equals "N".

See Figure 1 for a summary of allowable entries and constraints for OFFICE CODE when LDIT equals "N".

For 5E12 and later, if the INDIT forms have an OFFICE CODE defined and there are multiple NOC forms with the same value of OFFICE CODE, NPA will also have to be defined on the INDIT form.

2.13 IMPLIED NPA

Description: This field is used by the NM (Network Management) generic software for code control. It contains the called NPA which is implied by incoming trunk calls and is allowed if LDIT equals "N", and NBR OF DIGITS EXPECTED is between 4 and 7 (inclusive), except for the case when 6 digits are expected and the number of INCOMING DIGITS is one.
Valid Entries: 3 digits

- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

Data Rules:

The NPA which has been specified as the DEFAULT NPA on the OFCOPT form (5509 Record) may not be entered as any IMPLIED NPA on the INDIT form.

When four to six digits are expected and IMPLIED NPA has an entry, then the OFFICE CODE must also have an entry.

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See Figure 1 for a summary of allowable entries and constraints for IMPLIED NPA when LDIT equals "N".

2.14 DESEP

Description: This field is used to define the Destination Separations Index.
Valid Entries: 1 - 255

Data Rules:

DESEP is allowed only when LDIT is "N". If entered, DESEP must be defined on the TRFSEP form (5308 Record).

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

2.15 NBR OF DIGITS EXPECTED

Description: Enter the total number of digits expected.
Valid Entries: 1 - 15

Data Rules:

If LDIT is "N", NBR OF DIGITS EXPECTED must be entered. For LDIT trunk destinations, this field must be left blank (since the number of digits expected is entered on the LDIT form).

2.16 # NBR OF DIGITS TO BE DELETED

Description: This field is used to define the number of digits to be deleted after the incoming "steering" digits are analyzed but before either the DN or LDIT translation is begun.

- Incoming Routing Destination - DN; or "N" is entered in LDIT.

For this application, the steering digit(s) is normally deleted since it is no longer required to complete a directory number. This also applies when a call is to complete in the 5ESS Switch Office or is a tandem call. For tandem calls, the steering digits may be deleted here or on the appropriate RTIDX form (5303 Record). The number of digits deleted must be less than or equal to the number of digits expected (NBR OF DIGITS EXPECTED field).

- ***NOTE:*** Any digits deleted here will not appear in the AMA Record if this is a billable call.

- Incoming Routing Destination - LDIT; or "Y" is entered in LDIT.

For this application, 7 or 10 digits are usually expected (except for n11 codes) with no prefix digit(s). Except in the unlikely case that prefixed steering digits are received, no digits should be deleted.

If digits are to be deleted, the number of digits deleted must be less than or equal to the number of digits entered in the INCOMING DIGITS field.

- ***NOTE:*** Any digits deleted here will not appear in the AMA Record if this is a billable call.

Required Field.
Valid Entries: 0 - 15

2.17 TRIG NBR

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Description: Enter the Network Services trigger number.

Software Release: 5E8 and later
Valid Entries:
- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

Data Rules:

If TRIG NBR is entered, it must equal TRIG NBR on an NSTRIG form (5324 Record).

If TRIG NBR is entered, TYPE OF CI CALL must be "AVT".

If LDIT is "N", TYPE OF CI CALL is "AVT", and TRIG NBR is entered, then the corresponding NSTRIG form must have APPLICATION equal to "EAASP" (5E8), "ASP" (5E9(1) and later),or "EAOFC".

When TRIG NBR is entered, and NBR OF DIGITS EXPECTED is 0 through 6, 8, or 9, and SERV KEY is "CDPN" on the corresponding NSTRIG form, then ALT GBL TITLE on NSTRIG must be entered.

For 5E8, if TRIGNBR is entered, and ASP OFC on the OFCOPT form is either "BILLNAP" or "NOBILLNAP", ROUTE INDEX must be entered.

2.18 ESC CODE

Description: Is the digit sequence an ASP off-hook delay trigger exception?

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

2.19 NODAL IDX

Description: Proprietary field.

2.20 DN PREFD

Description: Proprietary field.

2.21 GETS HPC

Description: Is GETS (Government Emergency Telecommunication Service) HPC (High Probability Call Completion Service) required? The GETS HPC field is used as an indicator to mark GETS HPC calls so that enhanced functionality provided by other HPC capabilities (e.g., Trunk Queuing, ISUP Signaling, Exemption from Network Management Controls) can be invoked. When set to "Y", calls translated to this address receive special treatment resulting in a higher probability of call completion. For more information, see Division 2, Section 4A279.

The use of HPC Network Capabilities is restricted in the United States and U.S. Territories to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be co-ordinated with the OMNCS at the following address:

Office of the Manager
National Communication System
Attn: GETS Program Office
701 South Courthouse Rd

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Arlington, VA, 22204-2198
email: gets@ncs.gov

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When GETS HPC is "Y", NBR OF DIGITS EXPECTED must be 10.

When GETS HPC is "Y", TYPE OF CI CALL must be "NONCI".

When the LDIT/MLDIT/RDIT/INDIT forms' GETS HPC is "Y" or CONFLICT RESOLUTION GETS HPC is "Y", GETS HPC or CONFLICT RESOLUTION GETS HPC can be "Y" only when the GETS High Probability of Call Completion Secured Feature has been purchased. A SFSYS form must exist with SFID 279 ACT set to "Y".

2.22 REMARKS

Description: These columns may contain any entries deemed locally necessary.
Valid Entries: 1 - 16 characters

ROUTE INDEX entered?	NUMBER OF INCOMING DIGITS	NUMBER OF DIGITS EXPECTED	OFFICE CODE	IMPLIED NPA
N	don't care	1 - 3	RN	P
N	don't care	4 - 7	RN	A
N	don't care	8 - 15	RN	P
Y	1	1 - 3	P	P
Y	1	4 - 5	A	A
Y	1	6	P	P
Y	1	7	P	A
Y	1	8 - 15	P	P
Y	2 - 3	2 - 3	P	P
Y	2 - 6	4 - 6	A	A
Y	2 - 7	7	P	A
Y	2 - 15	8 - 15	P	P

RN - Required and must be defined on the NOC form

A - Any NPA/NXX allowed

P - Prohibited

Figure 1 REQUIREMENTS FOR OFFICE CODE AND IMPLIED NPA

```
indit                    5ESS Switch                    _
(5309)              OFFICE DATA ADMINISTRATION
              INCOMING TRUNK PRELIMINARY DIGIT INTERPRETER


* 1. INC. TRUNK PRELIMINARY DIT  001
* 2. INCOMING DIGITS           2
  3. LDIT                    N
  4. RECONSTRUCT              N
  5. TYPE OF CI CALL         PSNCI
  6. CODE INDEX              0003
  7. ROUTE INDEX              ____
```

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```
 8. POLYGRID              N
 9. OFFICE CODE           222
10. IMPLIED NPA           ___
11. DESEP                 ___
12. NBR OF DIGITS EXPECTED    02
#13. NBR OF DIGITS TO BE DELETED 00
14. TRIG NBR              ___
15. ESC CODE              N
16. REMARK                ________________
```

Figure 2 SAMPLE INDIT FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
indit                  5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5309)        INCOMING TRUNK PRELIMINARY DIGIT INTERPRETER

*1. INC. TRUNK PRELIMINARY DIT ___
*2. INCOMING DIGITS        ______________
#3. LDIT                  _
 4. RECONSTRUCT           N
 5. BUILD 10 DIGITS       N
 6. TYPE OF CI CALL       _____
 7. CODE INDEX            ____
 8. ROUTE INDEX           ____
 9. POLYGRID              N
10. NPA                   ___
11. OFFICE CODE           ___
12. IMPLIED NPA           ___
```

```
indit                  5ESS Switch       _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5309)        INCOMING TRUNK PRELIMINARY DIGIT INTERPRETER

13. DESEP                 ___
14. NBR OF DIGITS EXPECTED    __
#15. NBR OF DIGITS TO BE DELETED __
16. TRIG NBR              ___
17. ESC CODE              N
18. NODAL IDX             _
19. DN PREFD              N
20. REMARK                ________________
```

Figure 3 SAMPLE INDIT FORM 5E12 AND LATER SOFTWARE RELEASES

```
indit                  5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5309)        INCOMING TRUNK PRELIMINARY DIGIT INTERPRETER

*1. INC. TRUNK PRELIMINARY DIT ___
*2. INCOMING DIGITS        ______________
#3. LDIT                  _
```

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```
 4. RECONSTRUCT              N
 5. BUILD 10 DIGITS          N
 6. TYPE OF CI CALL          _____
 7. CODE INDEX               ____
 8. ROUTE INDEX              _____
 9. POLYGRID                 N
10. NPA                      ___
11. OFFICE CODE              ___
12. IMPLIED NPA              ___
```

```
indit                    5ESS Switch          _
SCREEN 2 OF 2            OFFICE DATA ADMINISTRATION
(5309)          INCOMING TRUNK PRELIMINARY DIGIT INTERPRETER

 13. DESEP                   ___
 14. NBR OF DIGITS EXPECTED  __
#15. NBR OF DIGITS TO BE DELETED __
 16. TRIG NBR                ___
 17. ESC CODE                N
 18. NODAL IDX               _
 19. DN PREFD                N
 20. GETS HPC                N
 21. REMARK                  _________________
```

Figure 4 SAMPLE INDIT FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 3X: 5311 RECORD
CIRCUIT CODE TO DIGIT TRANSLATION RECORD - CKTCODE

1. GENERAL

The 5311 Circuit Code to Digit Translation Record is available with 5E6 and later Software Releases.

This form is used to translate an incoming circuit code to a 0ZZ, 1NX or 1N'X digit string used for equal access or international signaling.

This form is used to translate the 4 bit circuit code, received in the TNS (Transit Network Selection) parameter of an ISUP7 (Integrated Services Digital Network User Part 7) IAM (Initial Address Message), to a digit value which represents the 0ZZ, or 1NX or 1N'X digit string used in equal access and international signaling. This form is only used for Originating Access Tandem offices with incoming "ISUP7" trunks and Originating Toll offices that handle international traffic on incoming "ISUP7" trunks.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * CKT CODE

Description: Enter the circuit code. This field is the network identification field of the Transit Network Selection parameter.

This field, contained in the Network Identification field of the TNS parameter of the CCS7 IAM, contains a 4 bit circuit code value. A 4 bit value of 0000, is defined in the ISUP7 protocol specification to have a meaning of unspecified. Since all CCS7 subfields have a default value of zero unless otherwise assigned, it is not recommended to use 0 as a meaningful value for CKT CODE.

A CKT CODE value of 1 must be used when PREFIX DIGITS contains the 1NX (international call, no operator requested) standardized string. A CKT CODE value of 2 must be used when PREFIX DIGITS contains the 1N'X (international call, operator requested) standardized string.
Valid Entries: 0 - 15

2.3 # DIG

Description: Enter the 0ZZ or 1NX or 1N'X digit string used in equal access and international signaling. Valid entries are 000 - 099 for domestic calls and 100 - 199 for international calls.

Required Field.
Valid Entries: 000 - 199

```
cktcode                5ESS Switch
(5311)            OFFICE DATA ADMINISTRATION
                CIRCUIT CODE TO DIGIT TRANSLATION

*1. CKT CODE 01
#2. DIG      012
```

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Figure 1 SAMPLE CKTCODE FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3Y: 5312 RECORD
ORIGINATING NUMBERING PLAN AREA FORM - ONPA

1. GENERAL

The 5312 Record is applicable to 5E2 and later Software Releases and is used by an INWATS Originating Screening Office (an Interexchange Carrier switch) to associate a 00X code with an originating NPA and vice versa. To use this capability, ORIG SCREEN OFF must equal "Y" on the OFCOPT Form (5509 Record).

The OSO (Originating Screening Office) recognizes an INWATS call for OSO by the CALL TYPE of "OSOIWTS" entered on the LDIT form (5300-3 Record). This call type triggers the software to send a direct signaling message using Common Channel Signaling to the INWATS database. Part of the message specifies the originating NPA.

Usually, the originating NPA can be determined by the ANI (Automatic Number Identification) digit sequence (i.e., the calling number). ANI is sent because the originating office is an Equal Access End Office using Equal Access signaling protocol either on a direct trunk group, or via an Access Tandem, or it is a nonconforming end office on a direct CAMAANI trunk group. If ANI is not sent, then the far end NPA can be determined from the originating trunk group.

However, sometimes the traffic on this incoming trunk group may have originated in multiple NPAs so the FAR END NPA specified on the trunk group would not be correct for all incoming 800 calls. This may be true when nonconforming end offices are not directly connected to this switch but are tandemed either through an Access Tandem or through a tandem switch that does not use Equal Access signaling protocol. If the originating end offices reside in multiple NPAs (and subsequently arrive at the OSO on one trunk group), the tandem switch must delete the 800 digits and prefix a 00X code to the remaining seven digits where the X is a digit representation of the originating NPA. Several unique 00X codes are then outpulsed on one trunk group to the OSO.

The OSO will translate in LDIT the 00X digit strings with the CALL TYPE of "OSOIWTS" when the INWATS database needs to be queried. The digit interpretation is the same as the 800 digit strings. However, call processing will recognize that an 00X-type code translated as "OSOIWTS" requires that the information submitted on this ONPA form must be accessed to determine the originating NPA of the caller.

For either 800 or 00X incoming digit strings, the information sent to and returned from the INWATS database will be the same. If the 800 number is appropriate for the originating NPA, a POTS number will be returned by the INWATS database which will be subsequently interpreted and routed by the OSO. If the 800 number is inappropriate, the message returned will invoke the fixed route type of "UIA" defined on the FIXRT form (5301-1 Record). If the 800 number is not found, the message returned will invoke the fixed route type of "VACANT".

If the OSO has a requirement to screen 800 or 00X codes and return non-Carrier calls to the local company, the inverse of 00X to NPA will be required. This inverse is provided in the database automatically with the values input through the ONPA Form. All INWATS calls that need to be returned to the local company will be outpulsed in the format of 00X plus seven digits. Again, the X is a digit representation of the originating NPA.

By six-digit translating the 800 or 00X original digit string, the OSO can distinguish calls that must be returned from Carrier calls requiring the INWATS database query by using INWATS instead of "OSOIWTS" as the call type in LDIT. When ORIG SCREEN OFF on the OFCOPT Form equal "Y", the 5ESS Switch recognizes the INWATS call type as a call to be routed back to the local company.

If the digit string being interpreted is already in the format 00X-NXX-XXXX, the call may continue processing as it is using the Code Index and Route Index as they appear in the LDIT entry.

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If the digit string is in the format of 800-NXX-XXXX, the 800 must be changed to 00X before the digits are outpulsed. To do this, call processing will access the NPA to 00X database information based on the originating NPA. The 800 digits will now be replaced with the appropriate 00X digits and the call routed based on the Code Index and Route Index of the 800 LDIT entry.

For 5E4(2) and later Software Releases, the 5312 Record is also used by the SSP800 (Service Switching Point 800) capability. To use this capability, SERV SWTCH PT must equal "Y" on the OFCOPT form (5509 Record). The 5312 Record is used to specify the originating LATA and indicate if the traffic from the LATA will be exclusively COIN traffic.

- ***NOTE:*** An office cannot serve as an OSO (Originating Screening Office) and a Service Switching Point Office at the same time.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.8.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * INWATS 00X CODE

Description: Enter the INWATS 00X Code, where the X is a digit representation of the Originating NPA entered in the next field.

Required Field.
Valid Entries: 000 - 009

2.3 ORIGINATING NPA

Description: Enter the Originating NPA of the party calling the 800 INWATS number.

Required Field.
Valid Entries: 3 digits
- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

2.4 ORIGINATING LATA

Description: Enter the LATA number where the call originated.
Default: 0
Valid Entries: 0 - 999

2.5 COIN IND

Description: Will the traffic from the LATA be exclusively COIN traffic? If the traffic will be a combination of COIN and other traffic enter "N".
Default: N
Valid Entries: Y, N

---

onpa 5ESS Switch _

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(5312) OFFICE DATA ADMINISTRATION
ORIGINATING NUMBERING PLAN AREA

* 1. INWATS 00X CODE 001

2. ORIGINATING NPA 815
3. ORIGINATING LATA 002
4. COIN IND N

Figure 1 SAMPLE ONPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3Z: 5313 RECORD - CCSRTI

1. GENERAL

The CCSRTI (Common Channel Signaling Route Index) form and the corresponding 5313 Office Record are available with 5E3 and later Software Releases. The CCSRTI input form is used only with CCS type trunks. Every CCS call whose chosen route does not meet the per call restrictions, identified in the CCS IAM message, must have an appropriate entry specified on the CCSRTI form. Given a current ROUTE INDEX corresponding to a trunk group carrying CCS traffic and associated satellite and digital restrictions, an alternate NEW ROUTE INDEX can be specified. This form should not be submitted in offices without CCS trunks.

For 5E6 and later Software Releases, CCSRTI forms can be used only if the COMMON CHAN SIG field on the OFCOPT form (5509 Record) is "Y".

1.1 Recent Change View

The corresponding Recent Change View for CCSRTI is 10.26.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ROUTE INDEX

Description: Enter the Route Index value associated with a Trunk Group Number that carries CCS traffic.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

2.3 * RESTRICTIONS

Description: The RESTRICTIONS field consists of three parts -- Signal Type, Satellite Restriction, and Digital Path Restriction.

Signal Type can take on two values:

- NS: The new route index chosen must be associated with a trunk group that has either CCIS6 or ISUP7 signaling.

- I7: The new route index chosen must be associated with a trunk group that has ISUP7 signaling. This will only happen if the incoming IAM indicates that ISUP7 signaling is required all the way for this call. This restriction only applies to SDN calls for 5E5.

The Satellite Restriction can take on two values:

- SN: The CCS call has not been routed via satellite on any of the prior call legs, thus there are no Satellite Restrictions on the NEW ROUTE INDEX.

- SY: The CCS call has been routed via satellite on a prior call leg and thus the NEW ROUTE INDEX

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must point to a TGN with the Satellite field set to "N".

The Digital Path Restriction can take on two values indicating whether a digital path is required for the CCS call.

- PN: A digital path is not required, thus there is no Digital Restriction on the trunks associated with the NEW ROUTE INDEX value.
- PY: A digital path is required to complete the CCS call, thus the NEW ROUTE INDEX must be associated with a TGN on the TKGRP input form that contains all digital trunks (DENs) on the corresponding TRUNK input forms.

Required Field.

Valid RESTRICTIONS Entries			
Entry	**Definition**		
	SIGNAL TYPE	**SATELLITE RESTRICTION**	**DIGITAL PATH RESTRICTION**
NSSNPN	Null	No	No
NSSNPY	Null	No	Yes
NSSYPN	Null	Yes	No
NSSYPY	Null	Yes	Yes
I7SNPN	ISUP7	No	No
I7SNPY	ISUP7	No	Yes
I7SYPN	ISUP7	Yes	No
I7SYPY	ISUP7	Yes	Yes

2.4 NEW ROUTE INDEX

Description: The NEW ROUTE INDEX represents the associated Trunk Group that meets the above call restrictions.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The NEW ROUTE INDEX and ROUTE INDEX value can not be the same.

---

ccsrti 5ESS OFFICE DATA ADMINISTRATION _
(5313) COMMON CHANNEL SIGNALING ROUTE INDEX FORM

* 1. ROUTE INDEX 0300
* 2. RESTRICTIONS NSSNPN
3. NEW ROUTE INDEX 0400

Figure 1 SAMPLE CCSRTI FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 3AA: 5314 RECORD
DATA RATE ROUTE INDEX FORM - DTRTX

1. GENERAL

The 5314 Record is applicable to the 5E4(2) through 5E8 Software Releases. This form is used to define a new route index for ISDN circuit switched data calls or CCS Trunks. Data calls will be routed on a Trunk Group that has a Data Rate defined on the TKGRP form. For a Route Index assigned in Digit Analysis, a new Route Index can be assigned to this call depending on the Data Rate requested. The Data Rate Route Index value must be defined on a RTIDX form and the value of the Next Route Index (if applicable) must be capable of handling this traffic. For 5E9(1) and later, assignment of alternate data route indices for both narrow and wide band data rates is provisioned on the RTIDX form (5303 Record).

1.1 Voice and Data Calls

The value of Data Rate Route Index can be defined on the Digit Interpreter Table forms (PDIT, INDIT, LDIT, IDDD) only if the associated Trunk Group is capable of handling both voice and data calls.

1.2 Recent Change View

The corresponding Recent Change View for this form is 10.2 (See also RTIDX form (5303 Record) Division 3, Section 3P for RC view 10.2.)

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * ROUTE INDEX

Description: Enter the Route Index which is to be replaced by the Data Rate Route Index.

Required Field for 5E4(2) - 5E8 only.
Valid Entries: 1 - 3617

Data Rules:

The Route Index entered here must be defined on a RTIDX form where the ROUTE TYPE must be "HUNT" and must be assigned to an interoffice Trunk Group.

2.3 * DATA RATE

Description: Enter the Data Rate to be used to obtain the Data Rate Route Index for the Route Index above.

Required Field for 5E4(2) - 5E8 only.

Valid DATA RATE Entries

Entry	Definition
56K	For trunks able to carry 56 kb/s data calls.
R64K	For trunks able to carry restricted 64 kb/s data calls.
64K	For trunks able to carry 64 kb/s data calls.

2.4 DATA RATE ROUTE INDEX

Description: Enter the Route Index to replace the key Route Index for the Data Rate defined above.

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Required Field for 5E4(2) - 5E8 only.
Valid Entries: 1 - 3617

Data Rules:

The value entered here must be defined on a RTIDX form.

For 5E7 and later, if DATA RATE ROUTE INDEX equals ROUTE INDEX on an RTIDX form, whose TGN is defined on a TKGRP form (5202 Record) where TRK DIR equals "2W" or "OUT", TRKCLS is not "EDSL" or "EDSLHM", and OUTPULSING is not "ISUP7", then it cannot also be assigned as ROUTE INDEX on these forms: HGRPAS (5115 Record), IDDD (5307 Record), INDIT (5309 Record), LDIT (5300-3/5 Record), LINE (5109-1/2/3 Record), MLDIT (5300-3 Record), RDIT (5300-7/8 Record) (5E8 and later), PDIT (5300-2 Record), and RAR (5301 Record).

```
dtrtx              5ESS OFFICE DATA ADMINISTRATION _
5314                 DATA RATE ROUTE INDEX FORM


* 1. ROUTE INDEX          0125
* 2. DATA RATE            64K
  3. DATA RATE ROUTE INDEX  0200
```

Figure 1 SAMPLE DTRTX FORM 5E4(2) - 5E8 SOFTWARE RELEASES

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SEC. 3AB: 5315 RECORD
LDIT AND ASSOCIATED SM LIST - SMLDIT

1. GENERAL

The 5315 Record is available with 5E5 and later Software Releases.

The SMLDIT form is used to associate SM(s) with a particular LDIT (Local Digit Interpreter Table) value. This will allow LDIT information to reside only on the specific SM(s) which require the information, thus optimizing the use of SM memory. For example, if a unique LDIT is defined specifically for an RSM (Remote Switching Module) or ORM (Optically Remote Module) cluster, then that LDIT value could be assigned only to those SMs. The other LDIT values could be assigned to SMs which reside at the Host.

All LDIT values defined on the LDIT form (5300-3 Record) must be entered on an SMLDIT form with a list of SMs where the LDIT information will reside.

It is recommended that this form associate SMs with an LDIT value even though this information is not currently needed on the SMs. It will be needed eventually. This will avoid the need to associate the LDIT information with the SMs during service order or trunk order activity after the office is cutover. By following this recommendation, this form would have to be updated only when a new SM is grown into the office.

The SDN DAS defined on the TKGRP form (5202 Record) and its associated SMs on the TRUNK form (5204 Record) must be defined on the SMLDIT form.

LDIT information is required on an SM when line or trunk terminations on an SM use a particular LDIT to perform digit analysis. LDIT values are associated with line or trunk terminations via the DAS form (5300-1 Record). Each DAS value is assigned to lines or trunks directly or indirectly via an LCC form (5306 Record).

- A DAS value may be assigned directly on one of the following forms and the corresponding SM is determined as follows.
  - TKGRP form (5202 Record) - When a DAS value is entered in the DAS field, then all members of the trunk group, defined on the TRUNK forms (5204 Record), are associated with that DAS value. The SM associated with each trunk member is determined by the first three digits of the TEN or DEN field on the TRUNK form.
  - OSPSDSL form (5411 Record) - When a DAS value is entered in the DAS field, then the associated SM is determined by the first three digits of the MATE LCEN field.
- A DAS value may be assigned indirectly via the LCC form. When a DAS value is assigned on an LCC form, then the corresponding LINE CLASS CODE and RATE AREA combination can be assigned on a LINE, MLHLN, DSL, DSLUSR or AMLBDSL form and the corresponding SM is determined as follows:
  - LINE form (5109 Record) - An LCC/RAX combination is entered and the corresponding SM is determined by the first three digits of the OE NUMBER field.
  - MLHLN form (5111 Record) - An LCC/RAX combination is entered and the corresponding SM is determined by the first three digits of the OE NUMBER field.
  - DSL form (5907 Record) - A PPB1 and/or PPB2 LCC/RAX combination is entered and the corresponding SM is determined by the first three digits of the DSL OE field.
  - DSLUSR form (5908 Record) - A CKT and/or DPKT and/or ODB LCC/RAX combination is entered and the corresponding SM is determined by the first three digits of the OE field.

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- AMLBDSL form (5447 Record) - A PKT LCC/PKT RAX combination is entered and the corresponding SM is determined by the first three digits of the LCEN field.

1.1 OSPS and Toll Offices

In addition to the requirements specified above, OSPS and Toll offices may require additional SM entries on this form. The circumstances under which additional entries for SMLDIT forms are required are described below:

- If this is an OSPS office with the Toll & Assistance feature (the OSPS TA field on the OSPSOPT form (5424 Record) is set to "Y"), then every PSM (Position Switching Module) must be entered on every SMLDIT form. PSMs are SMs which have any LCEN(s) defined on an OPARM form (5400 Record), or any LCEN(s) or DEN(s) defined on an OSPSOP form (5401 Record). The first three digits of the corresponding LCEN or DEN field contain the PSM number.

- If this is an OSPS office with the Directory Assistance feature only (the OSPS DA field on the OSPSOPT form is set to "Y", the OSPS TA field on the OSPSOPT form set to "N"), then every PSM must be entered on every SMLDIT form which is associated with an STINFO form (5402-1/2 Records). All of the PSMs can be determined by finding every SM which has any LCEN(s) defined on an OPARM form, or any LCEN(s) or DEN(s) defined on an OSPSOP form. The SMLDIT form is associated with an STINFO form if the LDIT on the SMLDIT form matches the LDIT assigned (via the DAS form's LOCAL DIT) to the DAS value of the DIG ANALYSIS SEL or SEC DIG ANALYSIS field on the STINFO form.

- If this is an AT&T Toll office (the OFFICE TYPE field is "Y" and the OFFICE CARRIER field is 288 on the OFCOPT form (5509 Record)), then all SMs in the office must be assigned on those SMLDIT forms associated with the special Toll DAS values of 81, 82, 89, 90, 91, 92, 97 and 98. An SMLDIT form is associated with one of these Toll DAS values if the DAS is defined on the DAS form, and the corresponding LOCAL DIT field matches the LDIT value on the SMLDIT form.

- If this is an AT&T Toll office (the OFFICE TYPE field is "Y" and the OFFICE CARRIER field is 288 on the OFCOPT form), and has ACT PT SDN on the OFCOPT form set to "Y" (which means that the office serves as an Action Point for the Software Defined Network), then the SMLDIT form associated with the Toll DAS value of 88 must include every SM which has trunks defined on a TKGRP form (5202 Record) with INPULSING set to "ISUP7" or ACP SDN set to "Y". The Toll DAS value is the LOCAL DIT field on the DAS form. The associated SM(s) can be found in the first three digits of the TEN or DEN field on all related TRUNK forms (5204 Record).

1.2 Foreign Area Translator

For 5E6 and later, operating companies can make use of a FAT (Foreign Area Translator) LDIT during digit analysis. The FAT/LDIT performs further digit analysis on LDITs that are interpreting common dialed or inpulsed digit strings. For more information concerning the implementation and use of the FAT/LDIT, see Division 2, Section 1AO.

1.3 Recent Change View

The corresponding Recent Change view for this form is 9.25.

2. BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.1 * LDIT

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Description: Enter the LDIT (Local Digit Interpreter Table) number. If this LDIT is going to serve as a FAT/LDIT (FAT is "Y" on this form), enter an LDIT value in the range 200 - 999.
Valid Entries: 1 - 999

Data Rules:

This FAT/LDIT value must not be assigned on the DAS form (5300-1 Record) as LINE DAS LOCAL DIT or TRUNK DAS LOCAL DIT. In other words, it cannot be assigned directly to any lines or trunks in an office.

This LDIT must be defined on an LDIT form.

2.2 PKT SW

Description: This field is for use by Recent Change/Verify only.

2.3 FAT

Description: Does this LDIT function as a FAT/LDIT pointed to by other LDITs to continue digit interpretation?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, the LDIT table number must be in the range 200 - 999, and must not point to another FAT/LDIT.

2.4 LIST OF SWITCHING MODULES

Description: Enter the SM(s) associated with the LDIT.
Valid Entries: 1 - 192

Data Rules:

At least one entry must be made and each entry must be unique.

If FAT is "Y" on this form, the LIST OF SWITCHING MODULES must include all SM lists on all LDITs which make reference to this FAT/LDIT.

The SMs entered must be defined on an EQIM form (5700-1 Record).

SCREEN 1 OF 3 5ESS Switch
smldit OFFICE DATA ADMINISTRATION
(5315) LDIT AND ASSOCIATED SM LIST

*1. LDIT 001 2. PKT SW 3. FAT N

4. LIST OF SWITCHING MODULES

1. 012	7. ___	13. ___	19. ___	25. ___	31. ___	37. ___	43. ___
2. 015	8. ___	14. ___	20. ___	26. ___	32. ___	38. ___	44. ___
3. 018	9. ___	15. ___	21. ___	27. ___	33. ___	39. ___	45. ___
4. 023	10. ___	16. ___	22. ___	28. ___	34. ___	40. ___	46. ___
5. 025	11. ___	17. ___	23. ___	29. ___	35. ___	41. ___	47. ___
6. ___	12. ___	18. ___	24. ___	30. ___	36. ___	42. ___	48. ___

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SCREEN 2 OF 3 5ESS Switch
smldit OFFICE DATA ADMINISTRATION
(5315) LDIT AND ASSOCIATED SM LIST

4. LIST OF SWITCHING MODULES

49. ___	58. ___	67. ___	76. ___	85. ___	94. ___	103. ___	112. ___
50. ___	59. ___	68. ___	77. ___	86. ___	95. ___	104. ___	113. ___
51. ___	60. ___	69. ___	78. ___	87. ___	96. ___	105. ___	114. ___
52. ___	61. ___	70. ___	79. ___	88. ___	97. ___	106. ___	115. ___
53. ___	62. ___	71. ___	80. ___	89. ___	98. ___	107. ___	116. ___
54. ___	63. ___	72. ___	81. ___	90. ___	99. ___	108. ___	117. ___
55. ___	64. ___	73. ___	82. ___	91. ___	100. ___	109. ___	118. ___
56. ___	65. ___	74. ___	83. ___	92. ___	101. ___	110. ___	119. ___
57. ___	66. ___	75. ___	84. ___	93. ___	102. ___	111. ___	120. ___

SCREEN 3 OF 3 5ESS Switch
smldit OFFICE DATA ADMINISTRATION
(5315) LDIT AND ASSOCIATED SM LIST

4. LIST OF SWITCHING MODULES

121. ___	130. ___	139. ___	148. ___	157. ___	166. ___	175. ___	184. ___
122. ___	131. ___	140. ___	149. ___	158. ___	167. ___	176. ___	185. ___
123. ___	132. ___	141. ___	150. ___	159. ___	168. ___	177. ___	186. ___
124. ___	133. ___	142. ___	151. ___	160. ___	169. ___	178. ___	187. ___
125. ___	134. ___	143. ___	152. ___	161. ___	170. ___	179. ___	188. ___
126. ___	135. ___	144. ___	153. ___	162. ___	171. ___	180. ___	189. ___
127. ___	136. ___	145. ___	154. ___	163. ___	172. ___	181. ___	190. ___
128. ___	137. ___	146. ___	155. ___	164. ___	173. ___	182. ___	191. ___
129. ___	138. ___	147. ___	156. ___	165. ___	174. ___	183. ___	192. ___

Figure 1 SAMPLE SMLDIT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3AC: 5316 RECORD
COUNTRY CODE PREFIX - CCP

1. GENERAL

The 5316 Record is available with 5E5 and later Software Releases.

This form is used when the calling digits of an international outbound call must be prefixed by a two-digit code (0/1X) in order to prevent misrouting. The two-digit prefix code will identify the appropriate ISC (International Switching Center) to each of the intermediate toll switches in the network.

For 5E5 and later Software Releases, all international outbound calls will be processed using FCA (Fully Coded Addressing). FCA is a CCS (Common Channel Signaling) single-stage protocol used to route international outbound calls in a uniform manner through the AT&T domestic network. With FCA, when an international outbound call is routed to a 5ESS Toll Switch, the 5ESS Toll Switch will collect all the dialed digits and route the call as a CCS single-stage call towards a 4ESS ISC (International Switching Center).

International outbound calls routed through intermediate toll switches (i.e., via switch) may use CCS single stage signaling. CCS single-stage signaling will also be used towards the appropriate ISC.

The digits outpulsed are [0/1X +] CC + NN. The 0/1X is the ISC prefix code. CC is the Country Code. NN is the National Number.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * COUNTRY CODE

Description: Enter a Country Code.
Valid Entries: 1 - 999

2.3 # PREFIX

Description: Enter an ISC (International Switching Center) prefix. The two-digit prefix code will identify the appropriate ISC to route the international outbound call.

Required Field.
Valid Entries: 0 - 19

```
ccp                    5ESS Switch                _
(5316)               OFFICE DATA ADMINISTRATION
                    COUNTRY CODE PREFIX

*1. COUNTRY CODE 20
#2. PREFIX       17
```

Figure 1 SAMPLE CCP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3AD: 5317 RECORD
EAS INFORMATION DIGITS - EASID

1. GENERAL

The 5317 Record is available with 5E5 and later Software Releases.

This form is used to define the EA (Equal Access) Signaling information digits used for international and domestic EA calls. Information digits allow specific types of calls to be allowed or blocked.

A standard set of Information Digits is provided by 5ODA and is shown in Figure 1. If the definition of an Information Digit needs to be changed, this form may be used to change the values.

For 5E5 and later, all international outbound calls will be processed using FCA (Fully Coded Addressing). FCA is a CCS (Common Channel Signaling) single-stage protocol used to route international outbound calls in a uniform manner through the AT&T domestic network. With FCA, when an international outbound call is routed to a 5ESS Toll Switch, the 5ESS Toll Switch will collect all the dialed digits and route the call as a CCS single-stage call towards a 4ESS ISC (International Switching Center).

International calls entering the AT&T network through a 5ESS POP (Point of Presence) Toll Switch may use EA three-stage signaling.

The digits outpulsed in the first-stage are KP + 1NX + XXX + CCC + ST. KP indicates the MF start digit. 1NX is the customer direct dial. XXX is the international carrier. CCC is the padded Country Code. ST is the MF end digit.

The digits outpulsed in the second-stage are KP + [II + ANI +] ST. II is an information digit. ANI is the Automatic Number Identification.

The digits outpulsed in the third-stage are KP + CC + NN + ST. CC is the Country Code. NN is the National Number.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * INFO DIGITS

Description: Enter the EA information digits. Information digits determine the type of calls that are allowed to be international or domestic outbound.

For values of information digits and associated INTL and DOMESTIC entries provided by 5ODA, please refer to Figure 1.
Valid Entries: 0 - 99

Data Rules:

Values 12 - 19 are reserved because they conflict with 1NX, therefore the INTL field must be "EABLOCK" and the DOMESTIC field must be "EAINC".

2.3 INTL

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Description: Enter the type of EA international calls allowed based on the information digits.

Required Field.
Default: EABLOCK
Valid Entries:

Valid INTL Entries	
Entry	**Definition**
EA10ANI	Allow a 10-digit ANI.
EA310ANI	Allow a 3 and 10 digit ANI.
EA3ANI	Allow a 3-digit ANI.
EABLOCK	Block Equal Access international calls.
EAINC	International Carrier call.
EANOANI	No ANI sequence.
EATEST	Test Call.

2.4 DOMESTIC

Description: Enter the type of EA domestic calls allowed based on the information digits.

Required Field.
Default: NONEA
Valid Entries:

Valid DOMESTIC Entries	
Entry	**Definition**
EA10ANI	Allow a 10-digit ANI.
EA310ANI	Allow a 3 and 10 digit ANI.
EA3ANI	Allow a 3-digit ANI.
EAALW800	Allow only 800 calls.
EAINC	International Carrier call.
EANOANI	No ANI sequence.
EATEST	Test Call.
NONEA	Traditional call.

INFO DIGITS	DESCRIPTION	INTL FIELD	DOMESTIC FIELD
00	Identified Line - No Special Treatment	EA10ANI	EA10ANI
01	ONI (Multiparty)	EABLOCK	EA3ANI
02	ANI Failure	EABLOCK	EA3ANI
06	Hotel/Motel	EA10ANI	EA10ANI
07	Coinless, Hospital, Inmate, etc.	EA10ANI	EA10ANI
08	Inter-LATA Restriction	EABLOCK	EAALW800
10	Test Call	EABLOCK	EATEST
12 - 19	Reserved because they conflict with 1NX	EABLOCK	EAINC
20	AIOD (Automatically Identified Outward Dialing) - Listed TN Sent	EA10ANI	EA10ANI
23	Unknown - Coin or Coinless	EABLOCK	EA310ANI
24	Pretranslated 800 Call	EABLOCK	NONEA
27	Coin Call	EABLOCK	EA310ANI
68	Inter-LATA Restricted-Hotel/Motel	EABLOCK	EAALW800
78	Inter-LATA Restricted-Coinless, etc.	EABLOCK	EAALW800
95	Test Call	EABLOCK	EATEST

Figure 1 RECOMMENDED VALUES FOR INFORMATION DIGITS

---

easid 5ESS Switch
(5317) OFFICE DATA ADMINISTRATION
EAS INFORMATION DIGITS

*1. INFO DIGITS 00
2. INTL EA10ANI
3. DOMESTIC EA10ANI

Figure 2 SAMPLE EASID FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3AE: 5318 RECORD
PAIRED COUNTRY CODE (PCC)/COUNTRY CODE (CC) - PCC

1. GENERAL

The 5318 Record is available with 5E5 and later Software Releases.

This form is used to convert a PCC (Pseudo Country Code) to a CC (Country Code) or determine the length of a CC. A Pseudo Country Code is the same as a Paired Country Code.

All PCC (Pseudo Country Codes) and CC (Country Codes) must be defined on this form for the FCA (Fully Coded Addressing) feature which is available on a 5ESS Toll Switch.

For 5E5 and later, all international outbound calls will be processed using FCA (Fully Coded Addressing). FCA is a CCS (Common Channel Signaling) single-stage protocol used to route international outbound calls in a uniform manner through the AT&T domestic network. With FCA, when an international outbound call is routed to a 5ESS Toll Switch, the 5ESS Toll Switch will collect all the dialed digits and route the call as a CCS single-stage call towards a 4 ESS ISC (International Switching Center).

International calls entering the AT&T network through a 5ESS POP (Point of Presence) Toll Switch may use traditional two-stage signaling.

The digits outpulsed in the first-stage are 011 + PCC or 18X. The PCC is the Pseudo Country Code. 18X indicates an international call.

The digits outpulsed in the second-stage are KP + CC + NN + ST or KP + PCC + NN + ST. KP indicates the MF start digit. CC is the Country Code. NN is the National Number. ST is the MF end digit.

- ***NOTE:*** For 5E7 and later, when CCS7 signaling is used on incoming calls destined to an International Carrier, an entry on this form is required for each country code. Adding or deleting COUNTRY ACCESS CODEs to or from the IDDD form (5307 Record) requires that the COUNTRY CODEs be added or deleted to or from this form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.18.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PCC/CC

Description: Enter a Paired/Pseudo Country Code or Country Code. The entry can be a 3-digit Pseudo Country Code or a 1-3 digit Country Code.
Valid Entries: 1 - 999

Data Rules:

For 5E6 and later, every PCC form with PCC/CC not entered the same as Country Code on the first PCC form must have a second PCC form that has Country Code matching the first PCC/CC.

2.3 # COUNTRY CODE

Description: Enter a Country Code. If a PCC is entered in the PCC/CC field, then enter the associated CC

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in this field. If a CC is entered in the PCC/CC field, then enter the same CC in this field.

Required Field.
Valid Entries: 1 - 999

---

pcc 5ESS Switch
(5318) OFFICE DATA ADMINISTRATION
PAIRED COUNTRY CODE (PCC)/COUNTRY CODE (CC)

*1. PCC/CC 31
#2. COUNTRY CODE 31

Figure 1 SAMPLE PCC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3AF: 5319 RECORD
SPECIAL ACCESS BAND SCREENING FORM - SPABS

1. GENERAL

The 5319 Record is available with 5E5 and later Software Releases. This form is associated with the 5ESS Toll Switch features called Special Access WATS (Wide Area Telecommunications Service) and MEGACOM Service.

Special Access WATS is similar to regular switched WATS except Special Access WATS allows a customer's PBX (digital or analog) to connect directly to the 5ESS Toll Switch via a dedicated trunk group. A Special Access WATS trunk group is defined on a TKGRP form (5202 Record) with a TRKCLS of "SPAWATS".

MEGACOM Service is a volume discount service. MEGACOM is similar to WATS service except that there is no subscription to a band and the customer must supply the dedicated trunk connection to the 5ESS Toll Switch. The 5ESS Switch will process the call like a WATS band 6 call. A MEGACOM trunk group is defined on a TKGRP form with a TRKCLS of "SPAMEG".

This form is used to determine if a Special Access customer is allowed to originate a call to a particular NPA based on the customer's subscribed service band. If the NPA entered in the SPA BILL TN field is different from the NPA called, then this form will be used to see if the call will proceed. The customer's subscribed band service will be compared to the band service associated with the NPA defined on this form.The customer's subscribed band service will be determined from the 6th digit of the Special Access Billing Telephone Number defined in the SPA BILL TN field on the TKGRP form.

If the customer's subscribed service band is equal or higher than the band number associated with the NPA on this form, then the call will proceed. Otherwise, the call will be routed to a vacant code announcement.

1.1 Recent Change View

The Recent Change view that corresponds to this form is 10.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * BILLING NPA

Description: Enter the Special Access customer's NPA (Numbering Plan Area).
Valid Entries: 200 - 999

LIST OF NPAs AND BAND NUMBERS FOR AN NPA PAIRING

The following fields in the list (Section 2.3 - Section 2.4) associate an NPA with a particular WATS band. The NPAs listed are used in conjunction with the BILLING NPA to determine if a call can be completed based on the service band. A maximum of 156 NPAs can be listed.

2.3 NPA

Description: Enter a NPA (Numbering Plan Area) which will be used in conjunction with the BILLING NPA.
Valid Entries: 201 - 999

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2.4 BAND

Description: Indicate the WATS service band that the NPA is assigned. The service band assigned to this NPA will be compared to the customer's subscribed service band (digit 6 of the SPA BILL TN defined on the TKGRP form) to determine if the call will proceed.

Valid BAND Entries

Entry	Definition
0	
1	An NPA that is inter-state band 1.
2-6	Standard WATS band values.

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SEC. 3AG: 5320 RECORD
SPECIAL ACCESS EXEMPT NXXs FORM - SPAENXX

1. GENERAL

The 5320 Record is available with 5E5 and later Software Releases. This form is associated with the 5ESS Toll Switch features called Special Access WATS (Wide Area Telecommunications Service) and MEGACOM Service.

Special Access WATS is similar to regular switched WATS except Special Access WATS allows a customer's PBX (digital or analog) to connect directly to the 5ESS Toll Switch via a dedicated trunk group. A Special Access WATS trunk group is defined on a TKGRP form (5202 Record) with a TRKCLS of "SPAWATS".

MEGACOM service is a volume discount service. MEGACOM is similar to WATS service except that there is no subscription to a band and the customer must supply the dedicated trunk connection to the 5ESS Toll Switch. The 5ESS Switch will process the call like a WATS band 6 call. A MEGACOM trunk group is defined on a TKGRP form with a TRKCLS of "SPAMEG".

This form is used to exclude specific NXXs in a NPA from being dialed by a Special Access customer. If the NPA dialed is defined on a SPAENXX form, then the NXX dialed will be checked against the list of exempt NXXs on this form. If the NXX dialed is defined on this form, then a vacant code announcement will be returned. Otherwise, the call will proceed.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FAR END NPA

Enter the Numbering Plan Area (NPA) of the exempt NXXs.

LIST OF EXEMPT NXXs FOR THE GIVEN NPA

The following is a list of NXXs for a particular NPA that cannot be dialed by a Special Access customer.

2.3 NXX

Description: Enter the NXXs for a particular NPA that cannot be dialed by a Special Access customer.
Valid Entries: 200 - 999.

Data Rules:

All NXXs listed must be unique.

---

spaenxx 5ESS Switch _
(5320) OFFICE DATA ADMINISTRATION
SPECIAL ACCESS EXEMPT NXXs

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*1. FAR END NPA 809

2. LIST OF EXEMPT NXXs FOR THE GIVEN NPA

1. 255 6. ___ 11. ___ 16. ___ 21. ___ 26. ___ 31. ___ 36. ___ 41. ___ 46. ___
2. 323 7. ___ 12. ___ 17. ___ 22. ___ 27. ___ 32. ___ 37. ___ 42. ___ 47. ___
3. 435 8. ___ 13. ___ 18. ___ 23. ___ 28. ___ 33. ___ 38. ___ 43. ___ 48. ___
4. ___ 9. ___ 14. ___ 19. ___ 24. ___ 29. ___ 34. ___ 39. ___ 44. ___ 49. ___
5. ___ 10. ___ 15. ___ 20. ___ 25. ___ 30. ___ 35. ___ 40. ___ 45. ___ 50. ___

Figure 1 SAMPLE SPAENXX FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 3AH: 5321 RECORD
DESTINATION TO SERVICE TYPE FORM - DISERV

1. GENERAL

The 5321 Record is available with 5E6 and 5E7 Software Releases. This record relates a code destination index to a type of service when the digit analysis tables indicate the possibility of a query to an external database.For 5E8 and later, this form is no longer needed, its functionality replaced by the NSTRIG form (5324 Record). See Division 2, Section 1AP for more information.

The possibility of a query to an external database can be indicated by entering a CALL TYPE of "QUERY" on the LDIT form (5300-3/5 Record), MLDIT form (5300-3 Record), PDIT form (5300-2 Record), or IDDD form (5307 Record). The CODE INDEX entered on the LDIT, MLDIT, PDIT, or IDDD form corresponds to the CDI field on this form.

A DISERV form must be entered for every such LDIT, MLDIT, PDIT, and IDDD form.

The possibility of a query to an external database can also be indicated by entering a TYPE OF CI CALL of "AVT" on an INDIT form (5309 Record). When such an INDIT form is used while translating a call where the 0ZZ-XXX code for EAMF trunks has XXX matching PSEUDO CARR on the OFCOPT form, then the CODE INDEX on the INDIT form will be used to read a DISERV form. Also, when such an INDIT form is used to translate a call where the TNS parameter for CCS7 trunks matches PSEUDO CARR on the OFCOPT form, then the CODE INDEX on the INDIT form will be used to read a DISERV form.

This form is for use with ASP (Advanced Services Platform (ASP; previously PVN, Private Virtual Network) and E911 features. When PVN OFC on the OFCOPT form (5509 Record) is set to "NONE", this form can be entered only if SERV TYPE is "E911".

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CDI

Description: Enter the code destination index.
Valid Entries: 1 - 4095

2.3 SERV TYPE

Description: Enter the service type to be associated with the CDI.

Required Field.

Valid SERV TYPE Entries

Entry	Definition
E911 or 9	Software Release: 5E7. Enhanced 911 query.
NOQRY or N	No query will be generated. This is used at a NAP (Network Access Point) to indicate that no query will be made and the call will be routed to an SSP (Service Switching Point). The ROUTE INDEX on the LDIT (5300-3/5 Record), MLDIT (5300-3 Record), PDIT (5300-2 Record), IDDD (5307 Record), or INDIT (5309 Record) form will be used to route the call to the SSP.
NS800 or 8	Number Services 800 Call. See Division 2.

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PVN or P	General ASP. This indicates that further digit collection is required to determine the specific ASP type. This is used to indicate ASP service on the first stage signaling of an EA (Equal Access) call. Further digits will need to be collected and analyzed to determine whether the call should be treated as "PVNON", "PVNDOM", or "PVNINT".
PVNDOM or D	ASP Domestic Off-net (public network). This indicates that an ASP query should be made specifying that a domestic off-net number was dialed.
PVNINT or I	ASP International Off-net (public network). This indicates that an ASP query should be made specifying that an international off-net number was dialed.
PVNON or O	ASP On-net (private network). This indicates that an ASP query should be made specifying that an on-net number was dialed.

Data Rules:

If PVN OFC on the OFCOPT form (5509 Record) is set to "BILLNAP" or "NOBILLNAP", SERV TYPE must be set to "NOQRY" or "E911". If PVN OFC on the OFCOPT form is set to "SSP", then SERV TYPE cannot be set to "NOQRY".

---

diserv 5ESS Switch _
(5321) OFFICE DATA ADMINISTRATION
DESTINATION TO SERVICE TYPE

*1. CDI 0006
#2. SERV TYPE PVNDOM

Figure 1 SAMPLE DISERV FORM 5E6 - 5E7 SOFTWARE RELEASES

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SEC. 3AI: 5322 RECORD
LEASED NETWORK ROUTING RECORD - LNROUT

1. GENERAL

The 5322 Leased Network Routing Record is available with 5E6 and later Software Releases.

It assigns screening indexes for ARS (Automatic Route Selection) call routing on an LN (Leased Network) switch. It assigns separate screening indexes for data and voice calls based upon the switch type, access or via. Up to four LNROUT records may be specified.

A Leased Network switch is "access" if the call originates at the switch, i.e., the call reaches the switch on a trunk belonging to a trunk group defined with LN TYPE "QRY" or "NOQRY" on the TKGRP form (5202 Record), or the call reaches the switch on an ISDN BRI (Basic Rate Interface) line defined with LN TYPE "QRY" or "NOQRY" on the DSLUSR form (5908 Record). The switch is "via" if the call is being routed through a Leased Network toll switch, i.e., the call reaches the switch on an LN Intermachine Trunk, a member of a trunk group defined with LN TYPE "IMT" on the TKGRP form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * LN NODE

Description: The LN NODE specifies the per call switch type, access or via.

Valid LN NODE Entries

Entry	Definition
ACC	Acess
VIA	Via

2.3 * DATA CALL

Description: Is the call a data call? "Y" indicates a data call; "N" indicates a voice call.
Valid Entries: Y, N

2.4 ARS SI

Description: Enter an Automatic Route Screening Index. For Leased Network calls, the ARS SI is used instead of the screening index normally obtained from an ARS form.

Required Field.
Default: 1
Valid Entries: 1 - 16

Data Rules:

The ARS SI must be assigned on an ARSSCRN form (5608-6 Record).

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(5322) OFFICE DATA ADMINISTRATION
LEASED NETWORK ROUTING

*1. LN NODE ACC
*2. DATA CALL Y
3. ARS SI 01

Figure 1 SAMPLE LNROUT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3AJ: 5323 RECORD
FLEXIBLE ANI INFORMATION DIGITS ASSIGNMENT FORM - FLEXANI

1. GENERAL

The 5323 Record is available with 5E6 and later Software Releases. This form is associated with the 5ESS Toll Switch feature called FLEXANI (Flexible ANI Information Digits Assignment) feature. The feature allows the assignment of 2-digit ANI pairs to the originating Line Class of Service (via the FLEXANI form), the Route Index (via the RTIDX form, 5303 Record), or the MC Route Index (via the MCRTIDX form, 5304 Record).

Flexible Assignment of 2-digit ANI pairs is a Secured Feature. The Feature must be purchased by the office. The SFSYS form (5713-1 Record) must be entered and the Secured Feature ID 38 must be selected.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SERVCL

Description: This field describes originating service and feature handling by Class of Service.

Required Field.

Valid SERVCL Entries

Entry	Definition
ATND	Software Release: 5E3 and later. Attendant DN.
B911	Software Release: 5E3 and later. Emergency Service Bureau lines for Basic 911 Service.
CALLBK	Software Release: 5E3 and later. Call Back Line associated with the Trunk and Line WorkStation Local Talk and Monitor phone lines.
CHGCALL	Software Release: 5E3 and later. Charge a Call. Provide AN17 to TSPS.
COIN	Software Release: 5E3 and later. Coin.
DAOPER	ISDN Service for OSPS Directory Assistance Operator.
HOTMOTL	Software Release: 5E3 and later. Hotel-Motel - Message Register capabilities. No tolldiversion:provides ANI-6 to TSPS for hotel/motel DN withoutautomatic room ID.
HOTPBX	Software Release: 5E3 and later. Hotel-Motel PBX - Provides ANI-6 to TSPS: checks for TollDiversion, Message Register capabilities, prevents FabricExercise tests.
INDIV	Software Release: 5E3 and later. Individual.
ISATND	Software Release: 5E4(2) and later. ISDN (Integrated Service Digital Network) Attendant Terminal.If this value is entered, then an associated DSMLHLN form(5901 Record) must be defined with a corresponding CKTLCC/RAX and a TERM TYPE of "ATND".
ISDN	Software Release: 5E3 and later. Software Release: 5E3 and later.

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	ISDN Digital Subscriber Line.
LTPCLBCK	Recent Change only. See CALLBK for definition.
MISLINK	OSPS Commercial ACD MIS Data Link.
MODEM	
PBX	Software Release: 5E3 and later. Checks for Toll Diversion, prevents Fabric Exercise tests.
SATSTLN	Software Release: 5E2(2) and later. Stand-Alone Test Line for RSM and Local SM use. This lineallows a Switching Module to emulate the Stand-Alone orisolation state during normal operation.
TAOPER	Software Release: 5E4(2) and later. OSPS Toll and Assistance operator VDT.
TEST	Software Release: 5E3 and later. Test Lines.
TWOPTY	Software Release: 5E3 and later. Two Party.
XDB	Software Release: 5E4(2) and later. OSPS External Data Base.
2PTY	Software Release: 5E3 and later. 2-Party Multi-Frequency Ringing.
4PFS	Software Release: 5E3 and later. 4-Party Full Selective.
4PSS	Software Release: 5E3 and later. 4-Party Semi Selective.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX. Allows anentry of "D" or "T" for the OE TYPE field on the Line Form(5109 Record) and MLHLN form (5111 Record).
5PTY	Software Release: 5E3 and later. 5-Party Semi Selective.
8PSS	Software Release: 5E3 and later. 8-Party Semi Selective.
10PTY	Software Release: 5E3 and later. 10-Party Multi-Frequency Ringing.

2.3 # ANI II DIGITS

Description: This field assigns ANI (Automatic Number Identification) pairs to the originating Class of Service.

Required Field.
Valid Entries: 00 - 99

5ESS Switch
flexani OFFICE DATA ADMINISTRATION
(5323) FLEXIBLE ANI INFORMATION DIGITS ASSIGNMENT

*1. SERVCL INDIV
#2. ANI II DIGITS 02

Figure 1 SAMPLE FLEXANI FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3AK: 5324 RECORD
NETWORK SERVICES TRIGGER DEFINITION FORM - NSTRIG

1. GENERAL

The 5324 Record is available with 5E8 and later Software Releases.

The Network Services Trigger Definition form identifies a network service application. This form was created primarily for the ASP network service, but can be used by other network services. The form contains alternate STP (Service Transfer Point) network addressing and information for the switch owner's selectable service key.

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.35.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TRIG NBR

Description: Enter the Network Services Trigger Number. This specifies a unique network service for a certain dialed number defined on any of the digit analysis ODP forms (INDIT (5309 Record), LDIT (5300-3/5 Record), MLDIT (5300-3 Record), PDIT (5300-2 Record), and RDIT (5300-7/8 Record)).

Required Field.
Valid Entries:
- For 5E8: 1 - 127
- For 5E9(1) and later: 1 - 255

2.3 # APPLICATION

Description: Enter the Network Services Trigger application identifying the type of network service to be provided for this trigger number.

Required Field.

Valid APPLICATION Entries

Entry	Definition
ASP or A	Advanced Services Platform treatment
800 or 8	800 services
E911 or E9	E911 services
EAASP or EAA	Software Release: 5E8 only. Inform Equal Access Originations through the SSP that incoming digits require translation with the ASP dialing plan. The type of trigger associated with this is ASP-subscribed, detected at the EO (NAP) and passed on to the SSP. The call is considered a subscribed trunk origination if a trigger is detected in the ASP dialing plan.
EAOFC or EAO	Inform Equal Access Originations through the SSP that incoming digits require translation in the Office Dialing Plan associated with the incoming trunk. The call may encounter an ASP 3/6/10-digit trigger should an ASP trigger be encountered in the "dialed digit" translation. Note that ASP trigger detection is not done at the EO, but at the SSP. The call is considered a 3/6/10-digit trigger trunk origination if a trigger is detected in the office dialing plan.
GSMMAP	Mobile Application Part indicator.

Data Rules:

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If APPLICATION is "E911", "EAOFC", or "EAASP" (5E8 only), ALT GBL TITLE and SERV KEY must not be entered.

If APPLICATION is "800", ALT GBL TITLE must not be entered, and SERV KEY must be "CDPN".

For 5E9(1) and later,

- When APPLICATION is "800", ADM ST CD must be "ULK", and AIN REL must be "R0"; an OFCOPT form must exist with SERV SWITCH PT set to "Y".
- When APPLICATION is "ASP", AIN REL must be entered; and
- When APPLICATION is "E911" or "EAOFC", ADM ST CD must be "ULK", and AIN REL must not be entered.

For 5E10 and later, when APPLICATION is not "ASP", SERVICE ALWD and ASP TOLLFREE must not be entered.

For 5E16(2) FR 2 and later, when APPLICATION is "GSMMAP", AIN REL, ALT GBL TITLE, and SERV KEY must not be entered.

2.4 ALT GBL TITLE

Description: Enter the Alternate Global Title. This field is used as a default to route to the appropriate SCP (Service Control Point) database if global title derivation fails. This field is presently used by the ASP application only.
Valid Entries: 10 digits

2.5 SERV KEY

Description: Enter the Service Key. The service key indicates whether the originating ANI or the called party's number is used for service key formulation. This field is presently used by ASP and SSP800 applications.

Valid SERV KEY Entries

Entry	Definition
CDPN or C	Use the calling party number as the service key.
ANI or A	Use the originating ANI as the service key.

2.6 STP TT NBR

Description: Enter the STP Translation Type Number for this particular trigger. If blank, the Translation Type entered for the field TRANS TYPE on the DSAPP form is used. This field applies only to ASP Release 0.1B and later for triggers for 5E9(1) and later.

Software Release: 5E9(1) and later
Valid Entries: 0 - 255

2.7 ADM ST CD

Description: Enter the Administrative State Code.

Software Release: 5E9(1) and later
Required Field.
Default: ULK
Valid Entries:

Valid ADM ST CD Entries

Entry	Definition
LK	Lock/deactivate the ASP service trigger.
ULK	Unlock/activate the ASP service trigger.

Data Rules:

If APPLICATION is not "ASP", ADM ST CD must be "ULK".

2.8 AIN REL

Description: Enter the AIN (Advanced Intelligent Network) release for ASP triggers.

Software Release: 5E9(1) and later
Valid Entries:

Valid AIN REL Entries

Entry	Definition
R0	Advanced Intelligent Network Release 0.
R0D1	Advanced Intelligent Network Release 0.1.

Data Rules:

Since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, AIN REL must not equal "R0D1" until SFID 126 ACT on the SFSYS form has been set to "Y".

When AIN REL is "R0D1", SERV KEY must not be entered. When AIN REL is not "R0D1", STP TT NBR must not be entered.

2.9 POST QUERY SCR

Description: Enter the post query screen index.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 4095

Data Rules:

When POST QUERY SCR is entered, APPLICATION must be "ASP".

For each POST QUERY SCR value entered, a matching SCR value must be entered on the RAR form.

For 5E16(2) FR 2 and later:

- when POST QUERY SCR or POST QUERY DAS is entered, APPLICATION must be "ASP" or "MAP".
- when USE CURR DAS is "Y", APPLICATION must be "ASP" or "MAP".

2.10 ASP TOLLFREE

Description: Is ASP Toll-Free service allowed? This field supports the ASP Toll Free Service feature (SFID 236). For more information on this feature, see Division 2, Section 4A236.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ASP TOLLFREE is "Y",

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- APPLICATION must be "ASP"
- AIN REL must be "R0D1".

ASP Toll-Free Service is a secured feature and must be purchased by the office before data can be assigned. Consequently, ASP TOLLFREE on the NSTRIG form must not be "Y" until SFID 236 ACT on the SFSYS form has been set to "Y".

2.11 SERVICE ALWD

Description: Enter service type allowed for an ASP trigger. This field supports the ASP Interworking with CSD (Circuit Switched Data) feature (SFID 237). For more information on this feature, see Division 2, Section 4A237.

Software Release: 5E10 and later.
Valid Entries:

Valid SERVICE ALWD Entries

Entry	Definition
BOTH	Both CSD (Circuit Switched Data) and voice service.
CSD	Circuit Switched Data service.
VOICE	Voice Service.

Data Rules:

When SERVICE ALWD is "BOTH" or "CSD",

- APPLICATION must be "ASP"
- AIN REL must be "R0D1".

For 5E10 and later, ASP Interworking with CSD is a secured feature and must be purchased by the office before data can be assigned. Consequently, SERVICE ALWD on the NSTRIG form must not be "CSD" until SFID 237 ACT on the SFSYS form has been set to "Y".

2.12 POST QUERY DAS

Description: Enter the Post Query Digit Analysis Selector.

Software Release: Software Release: 5E10 and later.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When POST QUERY DAS is entered, APPLICATION must be "ASP".

When POST QUERY DAS is entered, the entry must be defined as a DIGIT ANALYSIS SELECTOR on a DAS form (5300-1 Record).

When POST QUERY DAS is entered, LOCAL DIT must be entered on the corresponding DAS form (5300-1 Record), and the LOCAL DIT must be defined as LDIT on the corresponding SMLDIT (5315 Record) form for every operational SM in the office. This is accomplished by entering an SMLDIT form with this LDIT value as the key and by entering each operational SM (as defined on EQIM forms (5700-1/2 Record) where EQSTATUS is "O") into the LIST OF SWITCHING MODULES.

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The ASP Enhancements to Multiple Rate Center Support feature must be purchased by the office and the SFID 190 ACT field set to "Y" on the SFSYS form (5713-1 Record) before POST QUERY DAS can be entered.

2.13 USE CURR DAS

Description: The USE CURR DAS field is used to specify whether or not the current DAS (Digit Analysis Selector) should be used for post query digit analysis for this trigger. This field only impacts DNTs (Directory Number Triggers). For more information, see Div. 2, Sec. 4A217. Use the current DAS post query?

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When USE CURR DAS is "Y", APPLICATION must be "ASP".

When USE CURR DAS is "Y", POST QUERY DAS must not be entered.

When USE CURR DAS is set to "Y" on the NSTRIG form, the ASP MRC Phase 2 or the Basic LDP (Long Distance Platform) feature must be purchased by the office. An SFSYS form exists with SFID 190 ACT or SFID 165 ACT is set to "Y".

2.14 VPN

Description: Is this a Virtual Private Network trigger?

The VPN field is used to indicate whether or not this is a Virtual Private Network (VPN) trigger. The VPN feature allows the VPN service provider to provision a VPN switch with a new incoming VPN access trunk type and calls received over such a trunk are VPN calls. This allows business subscribers to make long distance calls by use of what appears to them to be their own private network and private network dialing plan. The VPN call is one which encounters a VPN trigger, launches a corresponding SCP query, and (assuming a successful response) generates a VPN AMA record.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When VPN is Y, APPLICATION must be "ASP".

When VPN is Y, AIN REL must be "R0D1".

2.15 DNIS

Description: Is this a DNIS trigger for transport of original dialed number? This field is used to indicate whether or not this is a DNIS trigger for Transport of Original Dialed Number feature.

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

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Data Rules:

When DNIS is "Y", APPLICATION must be "800", or APPLICATION must be "ASP" and ASP TOLLFREE must be "Y".

When DNIS is Y, VPN must be N.

When DNIS is "Y", VPN must be "N".

2.16 EON

Description: Proprietary field.

2.17 SATF

Description: Proprietary field.

Data Rules:

```
nstrig                  5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5324)            NETWORK SERVICE TRIGGER DEFINITION

*1. TRIG NBR      ___          13. VPN  N
#2. APPLICATION   _____        14. DNIS N
 3. ALT GBL TITLE _____________
 4. SERV KEY      _____
 5. STP TT NBR    ___
 6. ADM ST CD     ULK
 7. AIN REL       ____
 8. POST QUERY SCR ____
 9. ASP TOLLFREE   N
10. SERVICE ALWD   _____
11. POST QUERY DAS __
12. USE CURR DAS   N
```

Figure 1 SAMPLE NSTRIG FORM 5E13 - 5E14 SOFTWARE RELEASES

```
nstrig                  5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5324)            NETWORK SERVICE TRIGGER DEFINITION

*1. TRIG NBR      ___          13. VPN  N
#2. APPLICATION   _____        14. DNIS N
 3. ALT GBL TITLE _____________  15. EON  N
 4. SERV KEY      _____
 5. STP TT NBR    ___
 6. ADM ST CD     ULK
 7. AIN REL       ____
 8. POST QUERY SCR ____
 9. ASP TOLLFREE   N
10. SERVICE ALWD   _____
11. POST QUERY DAS ___
12. USE CURR DAS   N
```

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Figure 2 SAMPLE NSTRIG FORM 5E15 SOFTWARE RELEASE

```
nstrig                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5324)            NETWORK SERVICE TRIGGER DEFINITION

*1. TRIG NBR      ___          13. VPN           N
#2. APPLICATION   _____        14. DNIS          N
 3. ALT GBL TITLE _____________  15. EON          N
 4. SERV KEY      ____         16. DNT TABLE LOOKUP N
 5. STP TT NBR    ___          17. SATF          N
 6. ADM ST CD     ULK
 7. AIN REL       ____
 8. POST QUERY SCR ____
 9. ASP TOLLFREE   N
10. SERVICE ALWD   _____
11. POST QUERY DAS ___
12. USE CURR DAS   N
```

Figure 3 SAMPLE NSTRIG FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 3AL: 5325 RECORD
PROPORTIONATE BIDDING FORM - PROPBID

1. GENERAL

Available with 5E6 and later Software Releases, the PROPBID form allows the customer to create, on a per Proportionate Bidding route index basis, a list of carriers (up to 4) used to route calls sent to the Proportionate Bidding route index from the digit analysis forms. This form specifies the carriers, what percentage of calls each carrier should handle and the route index each carrier uses to route out of the office.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.37.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PB RTI

Description: Enter the proportionate bidding route index. If this feature is not active (ACTIVE set to "N" on this form), PB RTI is used as the ROUTE INDEX for the call. If this feature is active (ACTIVE set to "Y"), calls routed to the PB RTI are distributed to the CARRIERs in the CARRIER LIST and the CARRIER RTI of the selected carrier is used to route the call.

Required Field.
Valid Entries: 1001 - 1032

Data Rules:

PB RTIs must be defined as ROUTE INDEXes on RTIDX forms (5303 Record) with a ROUTE TYPE of "HUNT", "BUSY" or "REORDER".

2.3 ACTIVE

Description: Is proportionate bidding active for this route index? When ACTIVE is "Y", calls routed to the PB RTI will be distributed to the CARRIERs in the CARRIER LIST. When ACTIVE is "N", calls will be routed based on the RTIDX information associated with the PB RTI.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ACTIVE is "Y", at least one non-zero CARRIER LIST PROPORTION must be entered.

CARRIER LIST

Description: The following fields (Section 2.4 - Section 2.6) are used to specify the carrier, the percentage of calls that carrier will handle and the route index each carrier uses to route out of the office.

2.4 CARRIER

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Description: Enter the number of a carrier that routes some portion of the calls. This carrier is an arbitrary numerical identifier and not a CARRIER ID number. It does not have to match a CARRIER ID on the ICF form (5305 Record).
Valid Entries: 1 - 999

Data Rules:

When a CARRIER LIST row has CARRIER entered, CARRIER RTI must also be entered.

CARRIER values must be unique within the list.

2.5 PROPORTION

Description: Enter the proportion of calls, in percentage format, that are handled by the carrier.
Valid Entries: 0 - 100 (%)

Data Rules:

When a CARRIER LIST row has PROPORTION entered, CARRIER and CARRIER RTI must also be entered.

When a non-zero PROPORTION has been entered, the sum of all the PROPORTION values must equal 100.

2.6 CARRIER RTI

Description: Enter the "real" route index that is used to route the call to the carrier. This cannot be a Proportionate Bidding route index. It must be a "real" route index that leads to a carrier.

Valid Entries:
- For 5E10 and earlier: 1 - 1000 and 1033 - 3617
- For 5E11 and later: 1 - 1000 and 1033 - 4095

Data Rules:

When a CARRIER LIST row has CARRIER RTI entered, CARRIER must also be entered.

The CARRIER RTIs must be defined as ROUTE INDEXes on RTIDX forms (5303 Record).

---

propbid 5ESS Switch _
(5325) OFFICE DATA ADMINISTRATION
PROPORTIONATE BIDDING

*1. PB RTI 1001
2. ACTIVE Y

4. CARRIER LIST

ROW	CARRIER	PROPORTION	CARRIER RTI
1	1	25	1033
2	2	25	1034
3	3	25	1035
4	4	25	1036

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Figure 1 SAMPLE PROPORTIONATE BIDDING FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 3AM: 5328 RECORD
LOCATION ROUTING NUMBER TABLE - LRNINDEX

1. GENERAL

The 5328 Record is available with 5E11 and later Software Releases and is used to associate an LRN (Location Routing Number) index to an LRN number. This form supports the Local Number Portability secured feature (SFID 174). For more information on this feature, see Division 2, Section 4A174.

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.36.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * LRN INDEX

Description: Enter the Location Routing Number Index for ported lines in this office. The LRN INDEX field is used to specify the index into the LRN table to obtain an LRN (Location Routing Number). LRNs are used to route DNs geographically ported into the office from other switches or within the office from other rate centers.

Software Release: 5E11 and later.
Required Field.
Valid Entries: 1 - 127

2.3 * LRN

Description: Enter the Location Routing Number. The LRN field is used to specify the Location Routing Number associated with the LRN index. LRNs are used to route DNs geographically ported into the office from other switches. An LRN uniquely identifies an office and rate center. To handle geographic portability, offices with multiple rate centers should have more than one LRN.

Software Release: 5E11 and later.
Required Field.
Valid Entries: 1 - 10 digit number.

5ESS Switch _
lrnindex OFFICE DATA ADMINISTRATION
(5328) LOCATION ROUTING NUMBER TABLE

*1. LRN INDEX ___
#2. LRN _____

Figure 1 SAMPLE LOCATION ROUTING NUMBER TABLE FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4: OPERATOR SERVICES POSITION SYSTEM FORMS

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SEC. 4A: 5400-1/2 RECORD
OSPS ADMINISTRATIVE OFFICE PARAMETERS FORM - OPARM

1. GENERAL

The 5400-1/2 Record is available with 5E4(2) and later Software Releases.

This record is used to define administrative parameters of an OSPS (Operator Services Position System), including type of equipment, displays and reports, and the assignment of serving teams.

One 5ESS Switch can support 8 FMCs (Force Management Centers), 32 OSCs (Operator Service Centers), and 1024 active operator positions. No more than 4 OSCs can be assigned to the same SM (Switching Module). Either of two interfaces, an ATA (Asynchronous Terminal Adapter) or an STA (Synchronous Terminal Adapter), can be used with FMCs, which employ AT&T 3B2 Computers.

An OSPS office can generate reports at 15-minute and 24-hour intervals, (including the reports of another office).

If an OPARM form is submitted, an OSPSOPT form (5424 Record) mustexist with "Y" entered in the OSPS DA or OSPS TA field.

Each OPARM form must have an associated OSPSDSL form (5411 Record) such that the value in the LCEN field matches the LCEN value on the OPARM form and the SERVICE CLASS field on the OSPSDSL form except, for 5E7 and later, when the LCEN is 19200000.

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.1.

2. FORM ENTRIES - 5400-2 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and office name on each record.

2.2 * OFFICE TYPE

Description: Enter the office type.

Required Field.

Valid OFFICE TYPE Entries

Entry	Definition
O	OSC (Operator Service Centers).
F	FMC (Force Management Centers).

Data Rules:

If OFFICE TYPE is "F", then:

- OFFICE NUMBER must be in the range of 1 - 8.
- MADE BUSY THR must be 6.
- SPCL RPTS TO FMC must be "N".

When an OPARM form has an OFFICE TYPE of "F" and 24 HR OP AUTO SEND is set to "Y", then 24 HR OP AUTO SEND cannot be set to "Y" on any other OPARM form for the same PSM, i.e. the first 3

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digits of the LCEN are identical.

2.3 * OFFICE NUMBER

Description: Enter the Office Number, 1 through 8 for FMC, or 1 through 32 for OSC.

Required Field.
Valid Entries: 1 - 32

2.4 LCEN

Description: Enter the 8-digit RISLU (Remote Integrated Services Line Unit) LCEN (Line Card Equipment Number) according to the following format.

LINE CARD EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Remote Integrated Services Line Unit	RISLU		0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-30 (even numbers only)

Required Field.

Data Rules:

Duplicate LCENs may not be assigned.

For 5E7 and later, if LCEN is 19200000 then:

- 15 MIN PART1 ALLOWED must be "N"
- 15 MIN PART2 ALLOWED must be "N"
- 15 MIN PART3 ALLOWED must be "N"
- 24 HR OP ALLOWED must be "N"
- CALL QUEUE DISPLAY must be "N"
- FMC REPORT PERM must not be entered
- OFFICE TYPE must not be "F"
- OPER PERF DISPLAY must be "N"
- OSC 1-32 REPORT PERM must not be entered
- POS STATUS DISPLAY must be "N"
- SERV TEAM DISPLAY must be "N"
- SERVING TEAMs 1 - 128 cannot be "Y".

For 5E7 and later, an OSPSDSL form must be submitted with an LCEN that matches the LCEN on this OPARM form, except when the LCEN is 19200000.

For 5E7 and later, LCEN cannot be 19200000 on the OPARM form if a corresponding OTRVLD form(s) (matching OFFICE TYPE and OFFICE NUMBER) is submitted.

2.5 SERVICE CLASS

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Description: Enter the service class requiring OSPS parameters.

Software Release: 5E7 and later.
Required Field for 5E7 - 5E8.
Valid Entries:

Valid SERVICE CLASS Entries	
Entry	**Definition**
MISLNK	OSPS Commercial ACD Data Link
OAP	OSPS Administrative Processor

Data Rules:

If "MISLNK" is entered, then:

- 15 MIN PART1 ALLOWED must be N.
- 15 MIN PART2 ALLOWED must be N.
- 15 MIN PART3 ALLOWED must be N.
- 24 HR OP ALLOWED must be "N".
- ATA LINK must be Y.
- CALL QUEUE DISPLAY must be N.
- FMC - FORCE REPORT must not be entered.
- FMC REPORT PERM must not be entered.
- OPER PERF DISPLAY must be N.
- OSC 1-32 REPORT PERM must not be entered.
- POS STATUS DISPLAY must be N.
- SERV TEAM DISPLAY must be N.
- SPCL RPTS TO FMC must be N.
- SERVING TEAMs 1-128 must not be entered.

The SERVICE CLASSes on corresponding OPARM and OSPSDSL forms (where the LCENs match) must be the same.

2.6 MADE BUSY THR

Description: The Made Busy Threshold is the number of times within one minute that an operator is allowed to be detected as "made busy" before they are considered "delinquent": 0 - 5 for OSCs, and 6 assigned to FMCs.

Required Field.
Valid Entries: 0 - 6

2.7 SPCL RPTS TO FMC

Description: Should special reports be forwarded to the OAP of FMC?

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The Special Reports To Force Management Center Office field indicates whether an OSC (Operator Service Center) office wishes to forward its special reports (manual tickets, emergency call warnings, monitoring call detail records, and emergency call records) to the OAP of its FMC, as defined by the field FMC. "N" is entered for an OSC office that wishes to print its special reports only at its own OAP. "Y" indicates that an OSC office wishes the special reports to be printed at both its own OAP and the OAP of its FMC.

Prior to 5E7, SPCL RPTS TO FMC and ATA LINK fields were combined as one field, OFC DATA LINK TYPE.

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When OFFICE TYPE is "F", SPCL RPTS TO FMC must be "N".

SPCL RPTS TO FMC must be "N" when SERVICE CLASS is "MISLNK".

2.8 ATA LINK

Description: Is the link to OAP an asynchronous terminal adapter?

ATA LINK indicates whether the link to the OAP is connected via an ATA (Asynchronous Terminal Adapter). If not, then it is assumed to be an STA (Synchronous Terminal Adapter). Prior to 5E7, SPCL RPTS TO FMC and ATA LINK fields were combined as one field, OFC DATA LINK TYPE.

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ATA LINK must be "Y" when SERVICE CLASS is "MISLNK".

2.9 MONITOR INDICATION

Description: If this is an OSC office, is an indication to be given to operators that they are being monitored?
Default: N
Valid Entries: Y, N

2.10 CALL QUEUE DISPLAY

Description: Can the OSPS office request the call queue status and performance displays? An entry of "Y" will enable these displays.

The CALL QUEUE DISPLAY consists of a status display and a performance display.

The call queue status display indicates the status of various queues; it displays whether a particular queue is "normal", receiving delay announcements 1, 2 or 3, receiving announcements to reorder, the queue is closed, and the number of calls waiting.

The call queue performance display indicates the average length of time a call is in the queue.

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Required Field.
Default: N

Data Rules:

An OAP (OSPS Administrative Processor) must be assigned to the OSC for that center to request the CALL QUEUE DISPLAY; the SERVICE CLASS on the corresponding (by LCEN) OSPSDSL form must be designated as "OAP".

2.11 SERV TEAM DISPLAY

Description: Can the OSPS office request the serving team status and performance displays?

The serving team status display indicates what the worst queue is (in terms of time in queue before an operator is available), and what the status is of that queue (for a serving team).

The serving team performance display provides the serving team number, work time, average delay, and the number of positions occupied (for a particular serving team).

Required Field.
Default: N

Data Rules:

An OAP must be assigned to the OSC for that center to request the SERV TEAM DISPLAY; the SERVICE CLASS on the corresponding (by LCEN) OSPSDSL form must be designated as "OAP".

2.12 POS STATUS DISPLAY

Description: Can the OSPS office request this display?

The POS STATUS DISPLAY consists of a bar graph of requested serving teams with the following three states: the number of operators handling calls, the number of idle operators, the number of operators made busy, as well as the percentages of these states. Also, the display provides the number of occupied positions, and the number of operators with a high frequency of made busy status.

Required Field.
Default: N

Data Rules:

An OAP must be assigned to the OSC for that center to request the POS STATUS DISPLAY; the SERVICE CLASS on the corresponding (by LCEN) OSPSDSL form must be designated as "OAP".

2.13 OPER PERF DISPLAY

Description: Can the OSPS office request this display?

The OPER PERF DISPLAY provides information on an individual operator basis, such as the number of calls handled, average call handling time, and whether individual operators have access to operator-to-position assignment or position-to-operator assignment displays.

Required Field.
Default: N

Data Rules:

An OAP must be assigned to the OSC for that center to request the OPER PERF DISPLAY; the SERVICE CLASS on the corresponding (by LCEN) OSPSDSL form must be designated as "OAP".

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An OAP must be assigned to the OSC for that center to request any of the above displays. The SERVICE CLASS on the corresponding (by LCEN) OSPSDSL form must be designated as "OAP".

2.14 OFC DATA LINK TYPE

Description: The entry is a combination of the type of data link and whether or not special reports can be sent to the owning FMC.

For 5E7 and later, this field was divided into two fields, SPCL RPTS TO FMC and ATA LINK.

The data link is either an ATA (Asynchronous Terminal Adaptor) or an STA (Synchronous Terminal Adaptor).

Special Reports have four components:

- Emergency call warning - indicates the operator has received an emergency call.
- Manual ticket - contains billing information on a call.
- Emergency call record - contains complete details on an emergency call.
- Call detail record - contains complete details on a call.

The following table summarizes the entries for this field.

Entry	Special Reports	Link Type
0	N	ATA
1	N	STA
2	Y	ATA
3	Y	STA

Software Release: 5E4(2) - 5E6
Default: 0
Valid Entries: 0 - 3

Data Rules:

If "F" is entered in the OFFICE TYPE field or no entry is made in the FMC - FORCE REPORT field, then only entries of 0 or 1 are allowed.

OSPS REPORTS

The following fields (Section 2.15 - Section 2.30) permit various reports to be received or received and printed for an OSPS office.

If an ALLOW field is marked "N", then the corresponding PRINT field will be assigned a value of "N".

2.15 15 MIN PART1 ALLOW

Description: Can this OSPS office receive this portion of the 15-minute report? Part one of the 15-minute report provides a traffic summary.

Software Release: 5E6 and earlier.
Required Field.
Default: N
Valid Entries: Y, N

2.16 15 MIN PART2 ALLOW

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Description: Can this OSPS office receive this portion of the 15-minute report? Part two of the 15-minute report provides a call queue summary.

Software Release: 5E6 and earlier.
Required Field.
Default: N
Valid Entries: Y, N

2.17 15 MIN PART3 ALLOW

Description: Can this OSPS office receive this portion of the 15-minute report. Part three of the 15-minute report provides a serving team summary.

Software Release: 5E6 and earlier.
Required Field.
Default: N
Valid Entries: Y, N

2.18 24 HOUR ALLOW

Description: Can this OSPS office receive the 24-hour report? The 24-hour report provides information about individual operators.

Software Release: 5E6 and earlier.
Required Field.
Default: N
Valid Entries: Y, N

2.19 15 MIN PART1 PRINT

Description: Can this OSPS office print this portion of the 15-minute report?

Software Release: 5E6 and earlier.
Default: N
Valid Entries: Y, N

2.20 15 MIN PART2 PRINT

Description: Can this OSPS office print this portion of the 15-minute report?

Software Release: 5E6 and earlier.
Default: N
Valid Entries: Y, N

2.21 15 MIN PART3 PRINT

Description: Can this OSPS office print this portion of the 15-minute report?

Software Release: 5E6 and earlier.
Default: N
Valid Entries: Y, N

2.22 24 HOUR PRINT

Description: Can this OSPS office print the 24-hour report?

Software Release: 5E6 and earlier.

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Default: N
Valid Entries: Y, N

2.23 15 MIN PART1 ALLOWED

Description: Should Part 1 of the 15 minute report be allowed?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

15 MIN PART1 ALLOWED must be "N" when:

- LCEN is 19200000.
- SERVICE CLASS is "MISLNK".

15 MIN PART1 AUTO SEND must be "N" when 15 MIN PART1 ALLOWED is "N".

2.24 15 MIN PART1 AUTO SEND

Description: Should Part 1 of the 15 minute report be sent automatically?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

15 MIN PART1 AUTO SEND must be "N" when 15 MIN PART1 ALLOWED is "N".

2.25 15 MIN PART2 ALLOWED

Description: Should Part 2 of the 15 minute report be allowed?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

15 MIN PART2 ALLOWED must be "N" when:

- LCEN is 19200000.
- SERVICE CLASS is "MISLNK".

15 MIN PART2 AUTO SEND must be "N", when 15 MIN PART2 ALLOWED is "N".

2.26 15 MIN PART2 AUTO SEND

Description: Should Part 2 of the 15 minute report be sent automatically?

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Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

15 MIN PART2 AUTO SEND must be "N" when 15 MIN PART2 ALLOWED is "N".

2.27 15 MIN PART3 ALLOWED

Description: Should Part 3 of the 15 minute report be allowed?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

15 MIN PART3 must be "N" when:

- LCEN is 19200000
- SERVICE CLASS is "MISLNK".

15 MIN PART3 AUTO SEND must be "N" when 15 MIN PART3 ALLOWED is "N".

2.28 15 MIN PART3 AUTO SEND

Description: Should Part 3 of the 15 minute report be sent automatically?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

15 MIN PART3 AUTO SEND must be "N" when 15 MIN PART3 ALLOWED is "N".

2.29 24 HR OP ALLOWED

Description: Should the 24 hour operator report be allowed?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

24 HR OP ALLOWED must be "N" when:

- LCEN is 19200000.
- SERVICE CLASS is "MISLNK".

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24 HR OP AUTO SEND must be "N" when 24 HR OP ALLOWED is "N".

2.30 24 HR OP AUTO SEND

Description: Should the 24 hour operator report be sent automatically?

Software Release: 5E7 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

24 HR OP AUTO SEND must be "N" when 24 HR OP ALLOWED is "N".

3. FORM ENTRIES - 5400-2 RECORD

3.1 FMC - FORCE REPORT

Description: Enter the FMC office number that receives the force reports and (optionally) tickets for printing on the OAP for this OSPS office.
Valid Entries: 1 - 8

Data Rules:

The value entered in this field must be entered in the OFFICE NUMBER field on another OPARM form where the entry in the OFFICE TYPE field is "F".

If "F" was entered in the OFFICE TYPE field, then this field will be blank.

3.2 FMC REPORT PERM

Description: Can each FMC (1 - 8) obtain report/display information? If an FMC can receive the information, enter "Y".
Valid Entries: Y, N

Data Rules:

An OPARM form must exist for each FMC that has "Y" entered in this field.

3.3 OSC REPORT PERM

Description: Can each OSC (1 - 32) obtain report/display information? If an OSC can receive the information, enter "Y".
Valid Entries: Y, N

Data Rules:

An OPARM form must be completed for each OSC that has "Y" entered in this field.

3.4 SERVING TEAM

Description: Is each serving team (1 - 128) represented in this OSPS office? If the serving team is assigned, enter "Y". An FMC/OSC is usually assigned 1 or more serving teams.
Valid Entries: Y, N

Data Rules:

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An STINFO form (5402 Record) must be completed for each serving team designated in this field.

```
SCREEN 1 of 2                5ESS Switch
oparm                  OFFICE DATA ADMINISTRATION
(5400-1/2)               OSPS OFFICE PARAMETERS


* 1. OFFICE TYPE         O                 REPORTS
* 2. OFFICE NUMBER       16                  -------
  3. LCEN                00100218       11. 15 MIN PART1 ALLOW   Y
  4. MADE BUSY THR       2              12. 15 MIN PART2 ALLOW   Y
  5. MONITOR INDICATION  Y              13. 15 MIN PART3 ALLOW   Y
  6. CALL QUEUE DISPLAY  N              14. 24 HOUR ALLOW        Y
  7. SERV TEAM DISPLAY   Y              15. 15 MIN PART1 PRINT   Y
  8. POS STATUS DISPLAY  Y              16. 15 MIN PART2 PRINT   Y
  9. OPER PERF DISPLAY   Y              17. 15 MIN PART3 PRINT   Y
 10. OFC DATA LINK TYPE  0              18. 24 HOUR PRINT        Y
```

```
SCREEN 2 of 2                5ESS Switch       _
oparm                  OFFICE DATA ADMINISTRATION
                         OSPS OFFICE PARAMETERS

19. FMC - FORCE REPORT    2                              1234567890
                                25. SERVING TEAM 1-10   __________
                          12345678    26. SERVING TEAM 11-20  __________
20. FMC REPORT PERM       YYYYYYYY    27. SERVING TEAM 21-30  YYYYYYYYYY
                                28. SERVING TEAM 31-40  __________
                          1234567890  29. SERVING TEAM 41-50  __________
21. OSC 1-10 REPORT PERM  NNYYYYYYYY  30. SERVING TEAM 51-60  __________
22. OSC 11-20 REPORT PERM __________  31. SERVING TEAM 61-70  __________
23. OSC 21-30 REPORT PERM __________  32. SERVING TEAM 71-80  __________
24. OSC 31-32 REPORT PERM __          33. SERVING TEAM 81-90  __________
                                34. SERVING TEAM 91-100 __________
                                35. SERVING TEAM 101-110 __________
                                36. SERVING TEAM 111-120 __________
                                37. SERVING TEAM 121-128 ________
```

Figure 1 SAMPLE OPARM FORM 5E5 -5E6 LATER SOFTWARE RELEASES

```
SCREEN 1 of 2                5ESS Switch
oparm                  OFFICE DATA ADMINISTRATION
(5400-1/2)               OSPS OFFICE PARAMETERS

* 1. OFFICE TYPE         _                 OSPS REPORTS
* 2. OFFICE NUMBER       __              13. 15 MIN PART1 ALLOWED   N
 #3. LCEN                _________       14. 15 MIN PART1 AUTO SEND N
 #4. SERVICE CLASS       ______          15. 15 MIN PART2 ALLOWED   N
 #5. MADE BUSY THR       _               16. 15 MIN PART2 AUTO SEND N
  6. SPCL RPTS TO FMC    N               17. 15 MIN PART3 ALLOWED   N
  7. ATA LINK            Y               18. 15 MIN PART3 AUTO SEND N
  8. MONITOR INDICATION  N               19. 24 HR OP ALLOWED       N
```

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```
 9. CALL QUEUE DISPLAY  N          20. 24 HR OP AUTO SEND     N
10. SERV TEAM DISPLAY   N
11. POS STATUS DISPLAY  N
12. OPER PERF DISPLAY   N
```

```
SCREEN 2 of 2                5ESS Switch          _
oparm                  OFFICE DATA ADMINISTRATION
                      OSPS OFFICE PARAMETERS

21. FMC - FORCE REPORT    _                          1234567890
                                27. SERVING TEAM 1-10   __________
                       12345678     28. SERVING TEAM 11-20  __________
22. FMC REPORT PERM       ________     29. SERVING TEAM 21-30  __________
                                30. SERVING TEAM 31-40  __________
                       1234567890   31. SERVING TEAM 41-50  __________
23. OSC 1-10 REPORT PERM  __________   32. SERVING TEAM 51-60  __________
24. OSC 11-20 REPORT PERM __________   33. SERVING TEAM 61-70  __________
25. OSC 21-30 REPORT PERM __________   34. SERVING TEAM 71-80  __________
26. OSC 31-32 REPORT PERM __         35. SERVING TEAM 81-90  __________
                                36. SERVING TEAM 91-100 __________
                                37. SERVING TEAM 101-110 __________
                                38. SERVING TEAM 111-120 __________
                                39. SERVING TEAM 121-128 ________
```

Figure 2 SAMPLE OPARM FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 4B: 5401 RECORD
OSPS OPERATOR POSITION FORM - OSPSOP

1. GENERAL

The 5401 Record is available with 5E3 and later Software Releases. This record defines each operator position within an OSC (Operator Service Center) within the OSPS, and assigns RISLU (Remote Integrated Service Line Unit) ports. A maximum of 100 operator positions can be assigned to the same SM (Switching Module). For 5E6 and later Software Releases, a maximum of 200 operator positions can be assigned to the same SM for CACD.

For 5E7 and later, every SM having a regular or interflow position assigned to it on the OSPSOP form must have "Y" entered in the OSPS PSM field on the corresponding EQIM form. The SM number on the EQIM form matches the first three digits of the LCEN or DEN field on the OSPSOP form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.32.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * POS NUM

Description: The POS NUM field defines the Absolute position number for the switch. While each OSC can assign its Relative Position Numbers independently, the POS NUM (absolute position number) must be unique within the OSPS.

Required Field.
Valid Entries: 1 - 4095

2.3 # POS TYPE

Description: Enter the type of operator position.

Required Field.

Valid POS TYPE Entries

Entry	Definition
BST	Directory Assistance Operator or ACD/MIS Agent
INT	Interflow Position. For more information on interflow, see OSPS feature sections in Division 2, Section 3. Also see secured feature sections in Divison 2, Section 4A.
OPT	Software Release: 5E6 and later. Listing Services and combined services .

Data Rules:

If "BST" "OPT" or "VDT" are entered in the POS TYPE field, then entries are required in the LCEN, OFC ID and REL PNUM fields. Also, the DEN and OSPS ID fields must not be entered.

For 5E10 and later, if "BST" or "OPT" is entered, then LCEN, OFC ID and REL PNUM must be entered.

BST:
For 5E9(1) and later, if "BST" is entered, then SERVICE CLASS must be "DAOPER" on the corresponding OSPSDSL form (matching LCENs).

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INT:
If "INT" is entered in the POS TYPE field, then entries are not allowed in the LCEN, OFC ID and REL PNUM fields, and "N" must be entered in the MON POS field. Also, the DEN and OSPS ID fields must contain entries.

OPT:
For 5E9(1) and later, if "OPT" is entered, then SERVICE CLASS must be "TAOPER" on the corresponding OSPSDSL form (matching LCENs).

OPERATOR POS

The following fields (Section 2.4 - Section 2.8) define operator position fields.

2.4 LCEN

Description: Enter the RISLU LCEN (Line Card Equipment Number) for this operator position.
Valid Entries: An 8-digit LCEN in the following format.

LINE CARD EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
(Remote) Integrated Services Line Unit	(R)ISLU		0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

Data Rules:

The entries in this field must be unique.

This field must be left blank if interflow position is selected.

Entries in this field must exist on an OSPSDSL form (5411 Record). The SERVICE CLASS for each of these entries on the OSPSDSL form must be "DAOPER" or "TAOPER".

Any LCEN entered must be on a Line Card specified on the ISLULC form with an EQST (Equipment Status) of Operational ("O").

For 5E7 and later, "Y" must be entered in the OSPS PSM field on the corresponding EQIM form. The SM number on the EQIM form matches the first three digits of the LCEN or DEN field on this form.

2.5 OFC ID

Description: Enter an OSPS FMC/OSC (Force Management Center / Operator Service Center) Office Number.
Valid Entries:
- FMC: 1 - 8
- OSC: 1 - 32

Data Rules:

This field is required for an operator position type and must be left blank when interflow position is selected. Entries in this field must be defined on an OPARM form (5400-1/2 Record).

The combination of OFC ID and REL PNUM on the OSPSOP form must be unique.

For 5E8 and later, at most four different OFC ID values can be entered on OSPSOP forms having the same first three digits on their LCEN fields that specify the same SM.

2.6 REL PNUM

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Description: Enter a unique Relative Position number of the operator position within the OSC.
Valid Entries: 1 - 4095

Data Rules:

For interflow position, this must be left blank.

The combination of OFC ID and REL PNUM values must be unique, i.e., within each OSC or FMC, the REL PNUM entries must be unique. The following two examples illustrate possible approaches:

Example 1:

POS NUMBER	OFC NUMBER	REL POS NUMBER
1	1	1
2	1	2
3	1	3
4	2	1
5	2	2
6	2	3

Example 2:

POS NUMBER	OSC NUMBER	REL POS NUMBER
1	1	1
2	1	2
3	1	3
4	2	4
5	2	5
6	2	6

2.7 MON POS

Enter "Y" Description: Is this operator position used for monitoring?

Data Rules:
The entry must be "N" if interflow position is selected.

2.8 CST INTERFACE

Description: Enter the vendor for the CST (Combined Services Terminal) software. This field is used to provision the Recognition of Customer Provided Terminal. For more information on this feature see Division 2, Section 3C on OSPS Listing Services.

Software Release: 5E9(1) and later
Valid Entries:

Valid CST INTERFACE Entries

Entry	Definition
IBM	Interface used for IBM
VDR	Interface used for Volt Delta

Data Rules:

If this field is entered, POS TYPE must be "OPT".

The total number of OSPSOP forms with an entry in the CST INTERFACE field cannot be greater than the value of MAX DUAL PORT CST field on the OSPSOPT form (5424 Record)

INTERFLOW POS

The following fields (Section 2.9 - Section 2.10) define Interflow position fields. For more information on Interflow see Division 2, Section 3A, 3B, 3C, 3D, 3H, and 3I.

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2.9 DEN

Description: Enter the DEN (Digital Equipment Number) for this Interflow position associated with B-channels on the OSPS EDSL.
Valid Entries: An 8-digit DEN in the following format.

LINE CARD EQUIPMENT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	001 - 192
Digital Line Trunk Unit	DLTU		0 - 5
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	BCHAN	XX	01 - 23 or 25 - 47

Data Rules:

This field must be entered for an interflow position (POS TYPE is "INT") and must not be entered if the operator position is selected (POS TYPE is "OPT", "VDT", or "BST").

Each DEN entered on an OSPSOP form must be unique and must be defined on a TRUNK form (5204 Record). In addition, the related TGN (on the TRUNK form) must be defined on a TKGRP form (5202 Record) with a corresponding TRK DIR of "OUT" and a TRKCLS of "IFOPER".

For 5E7 and later, "Y" must be entered in the OSPS PSM field on the corresponding EQIM form. The SM number on the EQIM form matches the first three digits of the LCEN or DEN field on this form.

2.10 OSPS ID

Description: Enter the OSPS ID number of the receiving interflow switch.
Valid Entries: 1 - 9999

Data Rules:

This field must be entered if POS TYPE is set to "INT" and must be left blank if POS TYPE is "OPT", "BST", or "VDT".

OSPS IDs entered on the OSPSOP form must be defined on an INFLTADP form (5452 Record) along with the B-channel and D- channel trunk group numbers.

ACD/BRCS

For 5E9(1) - 5E10, the following fields (Section 2.11 - Section 2.13) are Recent Change Verify fields for the ACD/BRCS feature. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.The ACD/BRCS data has been moved to forms in Division 4, Section 32.

2.11 ACD LCEN

Description: For 5E9(1) - 5E10, this is a Recent Change Verify only field which displays the line card equipment number associated with an ACD/BRCS Position TN on the 21.32 view. The valid entry is an 8-digit LCEN in the following format:

LINE CARD EQUIPMENT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	001-192
(Remote) Integrated Services Line Unit	(R)ISLU		0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

Data Rules:

This entry must equal an LCEN from view 23.2 or 23.8. In view 23.2 or 23.8, the field ACD POS NUM must

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not be 0.

2.12 ACD POS TN

Description: For 5E9(1) - 5E10, this is a Recent Change Verify only field which displays the ACD (Automatic Call Distributor) position telephone number on the 21.32 view. The valid entry is a 7-digit telephone number.

2.13 TGID

Description: For 5E9(1) - 5E10, this is a Recent Change Verify only field which displays the TGID (Terminal Group Identifier) for the ACD/BRCS serving team positions on the 21.32 view. The valid entries are 1 - 65535, or blank.

```
ospsop                  5ESS Switch          _
(5401)              OFFICE DATA ADMINISTRATION
                    OPERATOR POSITION

*1. POS NUM  0145
#2. POS TYPE INT

      OPERATOR POS              INTERFLOW POS
 3. LCEN        _________      8. DEN    01300223
 4. OFC ID      __             9. OSPS ID 5040
 5. REL PNUM    ____
 6. MON POS     N              ACD/BRCS
 7. CST INTERFACE ___             ACD LCEN
                          ACD POS TN
                          TGID
```

Figure 1 SAMPLE OSPSOP FORM 5E9(1) AND LATER SOFTWARE RELEASES

```
ospsop                  5ESS Switch          _
(5401)              OFFICE DATA ADMINISTRATION
                  OSPS OPERATOR POSITION

*1. POS NUM  ____
#2. POS TYPE ___

      OPERATOR POS              INTERFLOW POS
 3. LCEN        _________      8. DEN    _________
 4. OFC ID      __             9. OSPS ID ____
 5. REL PNUM    ____
 6. MON POS     N
 7. CST INTERFACE ___
```

Figure 2 SAMPLE OSPSOP FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4C: 5402 RECORD
OSPS SERVING TEAM INFORMATION FORM - STINFO

1. GENERAL

The 5402 Record is available with 5E3 and later Software Releases. This record provides information about a serving team. A serving team is a group of operator positions that services one or more call types.

For 5E9(1) - 5E10, only the following fields are applicable to the ACD/BRCS feature:

- AFTER CALL WK
- AUTO CALL DIST?
- E911 PSAP
- #EMRG CONF ALLOW
- EMRG CONF CALL TYPE
- INTRAFLOW ALW
- LIVE MIKE
- MUSIC SELCTD
- OPER TYPE
- PCT INTRAFLOW
- SERVING TEAM
- SERVICE ATTN CALL TYPE
- TGID
- WARN TONE

For 5E11 and later, these fields were moved to the STPARM form (5638 Record).

1.1 Recent Change View

The corresponding Recent Change View for STINFO is 21.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SERVING TEAM

Description: Enter the number of the serving team that will service this call type.

Required Field.
Valid Entries: 1 - 128.

Data Rules:

When the SERVING TEAM entry on this form matches a SUP TEAM in the SUPPORT TEAM LIST on an OSPSCT form, then the OPER TYPE entry on this form must match the OPER TYPE on the OSPSCT form (5404 Record), and the AUTO CALL DIST? entry on this form must match the AUTO CALL DIST entry on the OSPSCT form.

2.3 #OPER TYPE

Description: Enter the Type of Operator.

Software Release: 5E4(2) and later
Required Field.

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Valid Entries:

Valid OPER TYPE Entries

Entry	Definition
DA	Directory Assistance
TA	Toll And Assistance

Data Rules:

When OPER TYPE is "TA", the following assignments will be made by ODA (Office Data Administration):

Assignments Made By ODA

Field	Value
CARRIER DIAL PERM	DENY
CARRIER ID	blank
DAS/C AVAILABLE	N
DIALING PERM INDEX	blank
EMRG CONF ALLOW	N
EXTERNAL DIALING PERM	UNRES
SEC DIG ANALYSIS SEL	0

If "DA" is entered in the OPER TYPE field, then "N" must be entered in both the NON ISP AND TA and NON ISP ONLY fields.

2.4 SERVICE ATTN CALL TYPE

Description: If the serving team is allowed to conference with a service assistant, enter the service assistant's call type.
Valid Entries: 1 - 128

Data Rules:

Each entry in this field must be defined in the OSPS CALL TYPE field on an OSPSCT form (5404 Record). Additionally, the OPER TYPE must match the OPER TYPE on the OSPSCT form.

2.5 #EXTERNAL DIALING PERM

Description: Enter the external dialing permission for the serving team.

Required Field.

Default Value: DENY

Valid EXTERNAL DIALING PERM Entries

Entry	Definition
DENY	Denied external dialing
UNRES	Unrestricted external dialing
RES	Restricted external dialing

Data Rules:

If an OSPSOA form (5403 Record) exists whose SERVING TEAM entry is the same as the SERVING TEAM entry on this STINFO form and the OSPSOA form has a value of "RES" entered in the EXTERNAL DIALING PERM field, then this STINFO form must have a value of "RES" or "UNRES" in the EXTERNAL DIALING PERM field and a value entered in the DIALING PERM INDEX field.

When EXTERNAL DIALING PERM is "UNRES" on this form and "RES" on the corresponding OSPSOA form, then DIALING PERM INDEX must be entered on this form. The corresponding OSPSOA form is found by matching SERVING TEAM on this form with the SERVING TEAM on the OSPSOA form.

2.6 DIALING PERM INDEX

Description: Enter the external dialing permission index.

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Valid Entries: 1 - 64

Data Rules:

If "RES" was entered in the EXTERNAL DIAL PERM field, enter the external dialing permission index for this serving team.

Each entry in this field must be defined on the RESXDL form (5409 Record).

2.7 #EMRG CONF ALLOW

Description: Can the serving team conference emergency calls?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E6 and later, if OPER TYPE is "TA", then this field must be set to "N".

2.8 EMRG CONF CALL TYPE

Description: Enter the emergency conference call type, if "Y" was entered in the EMRG CONF ALLOW field.
Valid Entries: 1 - 128

Data Rules:

If "N" was entered in the EMERG CONF ALLOW field, no entry is allowed in this field.

Each entry in this field must be defined in the OSPS CALL TYPE field on an OSPSCT form (5404 Record). Additionally, the OPER TYPE must match the OPER TYPE on the OSPSCT form.

2.9 #DAS/C AVAILABLE

Description: Does the serving team have a DAS/C (Directory Assistance System Computer)?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

"N" must be entered in this field if "NONE" is entered in the DAS/C VENDOR field or DAS/C VENDOR field is not entered on the OSPSOPT form (5424 Record).

2.10 CARRIER ID

Description: Enter the carrier identification used by this serving team for outgoing interLATA (Local Access and Transport Area) calls.
Valid Entries:

- For 5E3 - 5E8: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

An ICF form (5303 Record) with FEAT GRP equal to "D" must be completed for each carrier identified in

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this field.

2.11 HANDOFF ALLOWED

Description: May operators transfer calls to other operators within the same service team.
Default: Y
Valid Entries: Y, N

2.12 TRANSFER ALLOWED

Description: May operators transfer calls to positions outside the service team.
Default: Y
Valid Entries: Y, N

2.13 CONF TRANS ALLOWED

Description: May operators conference to other operators.
Default: N
Valid Entries: Y, N

2.14 #SCREEN INDEX

Description: The screen index field indicates the routing of calls to trunks on outgoing calls.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

Each SCREEN INDEX entered on this form must exist on a RAR form (5301 Record).

2.15 #DIG ANALYSIS SEL

Description: This field determines the originating table for digital analysis of dialed numbers. This field does not affect ACD/BRCS, however, it is a required field and must be entered. Therefore, it is recommended for ACD/BRCS to follow data rules for an entry in this field, although ACD/BRCS will not use this entry.

Required Field.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

Each Digit Analysis Selector value entered on this form must exist on a DAS form (5300-1 Record).

2.16 SEC DIG ANALYSIS SEL

Description: The SEC DIG ANALYSIS SEL field is used for operator special dial codes.
Default: 0
Valid Entries: 0 - 254

For 5E14 and earlier: 0 - 99
For 5E15 and later: 0 - 254

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Data Rules:

Each Secondary Digit Analysis Selector value greater than 0 entered on this form must exist on a DAS form.

2.17 CARRIER DIAL PERM

Description: This field specifies the access conditions.

Software Release: 5E4(2) and later
Default: DENY
Valid Entries:

Valid CARRIER DIAL PERM Entries

Entry	Definition
ALLOW	May dial carrier access code or use a PIC (Presubscribed InterLATA Carrier) identification number for interLATA calls.
DENY	Must use a PIC number for interLATA calls.
REQ	Must dial the carrier access code for interLATA calls.
TALLOW	May dial carrier access code or use a PIC number for test lines.
TDENY	Must use a PIC number for test lines
TREQ	Must dial carrier access code for test lines.

2.18 AUTO CALL DIST?

Description: Does this serving team handle commercial ACD (Automatic Call Distribution) calls.

Software Release: 5E4(2) and later
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" was entered in this field, then "DA" must be entered in the OPER TYPE field.

2.19 NON ISP AND TA

Description: Does the serving team allow non-ISP and TA calls.

Software Release: 5E5 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field and the OPER TYPE field is set to "TA", then the NON ISP ONLY field must be set to "N". If the OPER TYPE field is set to "DA", then this field must be set to "N".

2.20 NON ISP ONLY

Description: Does the serving team allows only non-ISP calls.

Software Release: 5E5 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If "Y" is entered in the NON ISP AND TA field and "TA" is entered in the OPER TYPE field, then this field must be set to "N". If the OPER TYPE field is set to "DA", then this field must be set to "N".

2.21 INTRAFLOW ALW

Description: Is this serving team allowed to receive intraflowed calls?

Software Release: 5E5 and later.
Default: N
Valid Entries: Y, N

Data Rules:

The following conditions must exist to enable the Intraflow feature: the SERVING TEAM entry on this STINFO form must be defined on the SUP TEAM field of an OSPSCT form (5404 Record), and "Y" must be entered in the INTRAFLOW ALW field of the OSPSOPT form (5424 Record).

2.22 PCT INTRAFLOW

Description: This field indicates the maximum percentage of currently logged-in operators of this serving team that is allowed to handle calls from supporting calls queues.

Software Release: 5E5 and later.
Default: 0(%)
Valid Entries: 0 - 100 (%)

Data Rules:

If "0" is entered in the PCT INTRAFLOW field (or it is left blank), then the INTRAFLOW ALW field is set to "N".

2.23 MUSIC RI

Description: Enter the route index of the music source to be used when a member of the serving team puts a call on hold. This field is for Commercial ACD features only.

Software Release: 5E6 and later.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

If this field is entered, then AUTO CALL DIST? field must be "Y" and OPER TYPE must be "DA".

If MUSIC RI has an entry, then an RTIDX form (5303 Record) must have a ROUTE INDEX entry that equals the entry in this field. In addition, the CI ROUTE TYPE on that RTIDX form must equal "GENANN". Also, the ROUTE INDEX on the RTIDX form must equal a TGN on a TKGRP form (5202 Record) where the TRK DIR field must equal "ANN", the CYCLES field must equal "O" and the BARGE IN field must equal "Y".

An entry in this field also requires a corresponding TRUNK form (5204 Record) be entered where the TGN equals the TRUNK GROUP NUMBER on an RTIDX form and MEMB equals "O" on that TRUNK form. A corresponding TRUNK form is one where the MUSIC RI equals the ROUTE INDEX on the RTIDX form, and the TRUNK GROUP NUMBER on the RTIDX form equals the TGN on the TRUNK form.

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For 5E9(1) - 5E10 later, if MUSIC RI is entered, TGID cannot be entered. If MUSIC RI or TGID is entered, then MUSIC SELCTD must also be entered.

For 5E11 and later, MUSIC RI must be entered if MUSIC SELCTD is "Y".

2.24 MUSIC SELCTD

Description: Is music to be provided to the calls on hold?

Software Release: 5E6 and later.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(1) - 5E10, if MUSIC SELCTD is "Y", either TGID or MUSIC RI must be entered. If MUSIC SELCTD is "N", TGID and MUSIC RI cannot be entered.

For 5E11 and later, if "Y" is entered, then MUSIC RI must be entered.

2.25 AFTER CALL WK

Description: Should the after-call work-state (auto make busy) be allowed? If "Y" is entered, then the ACD/BRCS position enters the "Make Busy with ACD call" state whenever the agent answers a hunted call. For more information on the ACD/BRCS feature see Division 2, Section 4A121.

Software Release: 5E9(1) - 5E10
Required Field.
Default: N
Valid Entries: Y, N

2.26 LIVE MIKE

Description: Should a live mike be allowed during service observing? If "Y" is entered then the ACD/BRCS service observer is by default given a 2-way connection when service observing. If "N" is entered, then the ACD/BRCS service observer is by default given a 1-way connection when service observing.

Software Release: 5E9(1) - 5E10
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

LIVE MIKE is a secured feature and may not be set to "Y" on the STINFO form unless "Y" is entered in SFID 4 on the SFSYS form (5713-1 Record).

2.27 WARN TONE

Description: This field specifies whether, during an ACD/BRCS service observe session, a warning tone

- is provided to the observed agent,
- is provided to the observed agent and far party, or
- is not provided to either the agent or the far party.

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No entry in this field indicates a warning tone is not provided.

Software Release: 5E9(1) - 5E10
Valid Entries:

Valid WARN TONE Entries

Entry	Definition
1ALL	Agent and far end party hear a warning tone one time.
AGENT	Only the agent being observed hears a warning tone.
ALL	The agent being observed and far end hear a warning tone.

2.28 TGID

Description: Enter the Terminal Group Identication used to associate the serving team with an ACD/BRCS customer.

Software Release: 5E9(1) - 5E10
Valid Entries: 1 - 65535

Data Rules:

If TGID is entered, AUTO CALL DIST? must be "Y".

If MUSIC RI is entered, TGID cannot be entered. If MUSIC RI or TGID is entered, then MUSIC SELCTD must also be entered.

The TGID entry on this form must be defined as a GROUP ID on either the TGSRFD, TGSRLPA, TGSRMPA, TGSRTPA or BFG form.

For 5E9(1) - 5E10, if TGID is entered and MUSIC SELCTD is set to "Y", then the TGID specified must have a Music On Hold TGN and MEMB assigned on the associated TGATTD with a GROUP ID that matches the TGID on this form. For more information on the secured feature Music On Hold see Division 2, Section 4A64.

For 5E9(1) - 5E10, when TGID is not entered, SCREEN INDEX must be entered.

For 5E9(1) - 5E10, when TGID is not entered, DIG ANALYSIS SEL must be entered.

2.29 E911 PSAP

Description: Is this serving team associated with an ACD E911 Public Safety Answering Point?

Software Release: 5E9(1) - 5E10
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

To activate this secured feature, the ACT field for SFID 143 on the SFSYS form (5713-1 Record) must be "Y".

When E911 PSAP is "Y", AUTO CALL DIST must be "Y".

2.30 AUTO CLOSE END ANNC

Description: Is the automated close-end announcement treatment allowed? This field supports the OSPS Closed End Branding for Operator Handling Calls secured feature (SFID 404). For more information on this feature, see Division 2, Section 4A404.

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Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

```
SCREEN 1 OF 2                5ESS Switch
stinfo                OFFICE DATA ADMINISTRATION
(5402-1/2)              SERVING TEAM INFORMATION

 *1. SERVING TEAM          ___         13. SCREEN INDEX        ____
 #2. OPER TYPE             __          14. DIG ANALYSIS SEL    __
  3. SERVICE ATTN CALL TYPE ___         15. SEC DIG ANALYSIS SEL 00
 #4. EXTERNAL DIALING PERM  DENY        16. CARRIER DIAL PERM   DENY
  5. DIALING PERM INDEX     __          17. AUTO CALL DIST?     N
 #6. EMRG CONF ALLOW        N           18. NON ISP AND TA      N
  7. EMRG CONF CALL TYPE    ___         19. NON ISP ONLY        N
 #8. DAS/C AVAILABLE        N           20. INTRAFLOW ALW       N
  9. CARRIER ID             ____        21. PCT INTRAFLOW       000
 10. HANDOFF ALLOWED        Y           22. MUSIC RI            ____
 11. TRANSFER ALLOWED       Y           23. MUSIC SELCTD        _
 12. CONF TRANS ALLOWED     N
```

```
SCREEN 2 OF 2                5ESS SWITCH          _
stinfo                OFFICE DATA ADMINISTRATION
(5402-1/2)              SERVING TEAM INFORMATION

 24. AFTER CALL WK N
 25. LIVE MIKE     N
 26. WARN TONE     _____
 27. TGID          _____
 28. E911 PSAP     N

 29. AUTO CLOSE END ANNC N
```

Figure 1 SAMPLE STINFO FORM 5E11 - 5E14 SOFTWARE RELEASES

```
stinfo                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5402-1/2)              OSPS SERVING TEAM INFORMATION

*1. SERVING TEAM          ___      #13. SCREEN INDEX       ____
#2. OPER TYPE             __       #14. DIG ANALYSIS SEL   ___
 3. SERVICE ATTN CALL TYPE ___       15. SEC DIG ANALYSIS SEL 000
 4. EXTERNAL DIALING PERM  DENY     16. CARRIER DIAL PERM   DENY
 5. DIALING PERM INDEX     __       17. AUTO CALL DIST?     N
 6. EMRG CONF ALLOW        N        18. NON ISP AND TA      N
 7. EMRG CONF CALL TYPE    ___      19. NON ISP ONLY        N
 8. DAS/C AVAILABLE        N        20. INTRAFLOW ALW       N
 9. CARRIER ID             ____     21. PCT INTRAFLOW       000
10. HANDOFF ALLOWED        Y        22. MUSIC RI            _____
```

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11. TRANSFER ALLOWED Y 23. MUSIC SELCTD _
12. CONF TRANS ALLOWED N 24. AUTO CLOSE END ANNC N

Figure 2 SAMPLE STINFO FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4D: 5403 RECORD
OSPS OPERATOR ASSIGNMENT FORM - OSPSOA

1. GENERAL

The 5403 Record is available with 5E4(1) and later Software Releases.

This record is used to define OSPS (Operator Services Position System) operator positions, assign operators to serving teams and define valid operator actions.

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * OPERATOR ID

Description: Enter the OSPS operator login identification. OPERATOR IDs must consist only of numbers for OPER TYPES of "DA". Values in the range 9000 through 9999 are reserved and are not allowed.

To receive an AMA record with the OPERATOR ID listed, it is recommended that only numbers are entered rather than alphanumerics for the OPERATOR ID.

Required Field.
Valid Entries: 4 alphanumeric characters

2.3 # OPER TYPE

Description: Enter the type of operator.

For 5E6 and later, the Listing Services operator using a BST-LS terminal, should be aware that the only letters a BST-LS can generate are "a" by pressing SHIFT 2, "n" by pressing SHIFT 6, and "y" by pressing SHIFT 9. An example of an OPERATOR ID for a BST-LS terminal would be "123a" or "1234".

Required Field.

Software Release: 5E4(2) and later
Valid Entries:

Valid OPER TYPE Entries

Entry	Definition
DA	Directory Assistance
TA	Toll and Assistance and Listing Services

2.4 DASC OPERATOR ID

Description: Enter the OSPS DASC (Directory Assistance System Computer) operator login identification.
Valid Entries: 1 - 8999

Data Rules:

If OPER TYPE is "TA", no entry is allowed in the DASC OPERATOR ID field. DASC OPERATOR IDs cannot be duplicated for OPER TYPES of "DA".

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2.5 # SERVING TEAM

Description: Enter the OSPS Serving Team number that this operator is assigned to.

Required Field.
Valid Entries: 1 - 128

Data Rules:

An STINFO form (5402 Record) must be completed for each OPER TYPE/SERVING TEAM combination on this form.

2.6 EXTERNAL DIALING PERM

Description: Enter the external dialing permission for this operator. If the corresponding entry on the STINFO form is appropriate for the operator, enter the same value.
Default: DENY
Valid Entries:

Valid EXTERNAL DIALING PERM Entries

Entry	Definition
DENY	Denied external dialing
UNRES	Unrestricted external dialing
RES	Restricted external dialing

Data Rules:

If "RES" is entered in this field, then the STINFO form whose SERVING TEAM entry is equal to the SERVING TEAM entry on this form, must have an entry of "RES" or "UNRES" in the SERVING TEAM field and an entry between 1 and 64 in the DIALING PERMISSION INDEX field.

2.7 HANDOFF ALLOWED

Description: Can the operator transfer calls to other operators within the same serving team? If the corresponding entry on the STINFO form is appropriate for the operator, enter the same value.
Default: Y
Valid Entries: Y, N

2.8 TRANSFER ALLOWED

Description: Can the operator transfer calls to positions outside the service team? If the corresponding entry on the STINFO form is appropriate for the operator, enter the same value.
Default: Y
Valid Entries: Y, N

2.9 CONF TRANS ALLOWED

Description: Can the operator conference or transfer to other operators? If the corresponding entry on the STINFO form is appropriate for the operator, enter the same value.
Default: N
Valid Entries: Y, N

Data Rules:

If TRANSFER ALLOWED is "N", then CONF TRANSFER ALLOWED must be "N".

2.10 MNGR PSWD

Description: Enter the manager login identification. For 5E6 and later Software

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Releases, if a Listing Services operator is using a BST-LS terminal, the operator should be aware that the only letters a BST-LS can generate are "a" by pressing SHIFT 2, "n" by pressing SHIFT 6, and "y" by pressing SHIFT 9. The password for a BST-LS terminal could be "12ny5".
Valid Entries: 6 alphanumeric characters

Data Rules:

If "TA" is entered in the OPER TYPE field, then the MNGR PSWD must contain at least one alphabetic character. An entry is required in the MNGR PSWD field if "Y" is entered in the MON PERM field.

2.11 MON PERM

Description: Is the operator allowed to monitor calls?
Default: N
Valid Entries: Y, N

```
ospsoa                    5ESS Switch                _
(5403)                 OFFICE DATA ADMINISTRATION
                     OSPS OPERATOR ASSIGNMENT

* 1. OPERATOR ID              ____
# 2. OPER TYPE               __
  3. DASC OPERATOR ID         ____
# 4. SERVING TEAM             ___
  5. EXTERNAL DIALING PERM   DENY
  6. HANDOFF ALLOWED          Y
  7. TRANSFER ALLOWED         Y
  8. CONF TRANS ALLOWED       N
  9. MNGR PSWD                _____
 10. MON PERM                 N
```

Figure 1 SAMPLE OSPSOA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4E: 5404-1/2 RECORD
OSPS CALL TYPE PARAMETERS FORM - OSPSCT

1. GENERAL

The 5404 Record is available with 5E3 Software Release. The 5404-1/2 Records are available with 5E5 and later Software Releases. These records are used to assign call types. Serving teams, delay announcements, and other parameters are assigned to call types.

The following fields are not applicable to the ACD/BRCS feature:

- RECALL CALL TYPE
- BACK ANNC RTI
- COIN RECALL
- COIN NOTIFY
- MECH TYPE
- SVC ID
- LIST SVC RECALL

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *OSPS CALL TYPE

Description: Enter the Call Type.

Required Field.

Valid Entry: 1 - 128

Data Rules:

When the OSPS CALL TYPE entry matches the OSPS CALL TYPE entry on an OPCTO form (5407 Record), the OPER TYPE on the OSPSCT form must be "DA", or "TA" for Listing Services.

When the OSPS CALL TYPE entry matches the CALL TYPE entry on an ACDCTP form (5412 Record), the OPER TYPE on this form must be "TA", and SVC ID must be entered on this form.

When the OSPS CALL TYPE entry matches the APOS CALL TYPE entry on an ACDCTP form (5412 Record), the OPER TYPE on the OSPSCT form must be "TA". and SVC ID must not be entered.

When the OSPS CALL entry matches the CALL TYPE entry in the NEXT CALL TYPE LIST field of an ACDPOL form (5412 Record), the OPER TYPE on this form must be set to "TA".

If an entry is made in the SERVICE ATTN CALL TYPE field on a STINFO form (5402 Record), a corresponding OSPS CALL TYPE entry must be made here.

2.3 #OPER TYPE

Description: Enter the type of operator.

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Software Release: 5E4(2) and later
Required Field.
Valid Entries:

Valid OPER TYPE Entries	
Entry	**Definition**
DA	Directory Assistance for OSPS or Commercial Automatic Call Distributor
TA	Toll and Assistance or Listing Services for OSPS

Data Rules:

If **"DA"** is entered, then

- for 5E5 and later, each SERVING TEAM must be defined on a STINFO form (5402 Record), with corresponding entries in the AUTO CALL DIST fields.
- for 5E6 and later, the BACK ANNC RTI field, MECH TYPE field, and SVC ID must NOT be entered.
- for 5E6 and later, if VECTOR ID field is entered on the OPCTO form, 5407 Record, then OPER TYPE must be "DA" and AUTO CALL DIST must be "Y" for corresponding OPCTO and OSPSCT forms. Corresponding forms are those forms where the OSPS CALL TYPE fields match.

If **"TA"** is entered, then

- for a Listing Services call, the BACK ANNC RTI field, MECH TYPE field, and SVC ID field must also be entered.
- for 5E6 and later, OPER TYPE must be "TA", if OSPS SVC CODE on the corresponding SERVDATA form is "INCPT" or "IBMINCPT". The SERVDATA form corresponds to this form if the SVC ID field on this form matches the SVC ID on a SERVDATA form.
- and the OSPS CALL TYPE matches OSPS CALL TYPE of an OPCTO form, then the SVC ID of OSPSCT form must be entered.

2.4 RECALL CALL TYPE

Description: Enter the Recall Call Type. If no entry is made in the RECALL CALL TYPE field, it will be set to the same value that is entered in the OSPS CALL TYPE field.

Required Field.

Valid Entry: 1 - 128

Data Rules:

The RECALL CALL TYPE field is for OSPS "DA" and "TA". An OSPS RECALL CALL TYPE must match an OSPS CALL TYPE on this form or another OSPSCT form. The OPER TYPE entries must match on OSPSCT forms and AUTO CALL DIST entries must match, where the OSPS CALL TYPE entry on one form matches the RECALL CALL TYPE on the other form.

2.5 #SERVING TEAM

Description: Enter the number of the principal serving team that will service this Call Type.

Required Field.

Valid Entry: 1 - 128

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Data Rules:

Each OPER TYPE/ SERVING TEAM combination entered here must be defined on a STINFO form (5402 Record). In addition, if the OPER TYPE is "DA", then the AUTO CALL DIST values on this form and the STINFO must be the same.

2.6 SERVICE OBJ

Description: Enter the Service Objective for this Call Type. The Service Objective is the average answer delay, in seconds, that the system will try to achieve for this Call Type. This figure is based on Operator Force Management calculations of anticipated call volume. The entries are in increments of one-tenth of a second.

Required Field.
Default: 10.0
Valid Entries: 0.1 - 60.0 (one-tenth seconds)

2.7 MAX CALLS

Description: Enter the maximum number of calls allowed in a queue for this Call Type.

Required Field.

Default: 30
Valid Entry: 0 - 5000

Data Rules:

The sum of the CLAIM CQDB on the OSPSOPT form (5424 Record) and the MAX CALLs on all the OSPSCT forms must not exceed 5000.

2.8 CALL WAITING ON

Description: The system periodically calculates the average answer delay (in seconds) for each Call Type queue. The call waiting indicator for the Call Type queue will be turned on when the average answer delay is greater than the entry in this field.

Required Field.

Default: 11 (seconds)
Valid Entry: 1 - 1800 (seconds)

2.9 CALL WAITING OFF

Description: The call waiting indicator for the Call Type queue will be turned off when the average answer delay (in seconds) is less than the entry in this field.

Required Field.

Default: 9 (seconds)
Valid Entry: 1 - 1800 (seconds)

Data Rules:

The value of the CALL WAITING ON field must be greater than that of the CALL WAITING OFF field.

2.10 #1ST ANNC RTI

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Description: Enter the route index number to the first delay announcement.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The route index entered in this field must be designated in the ROUTE INDEX field of an RTIDX form (5303 Record). The TRUNK GROUP NUMBER on the RTIDX form must match a TGN entry on the TKGRP form and TRK DIR must be "ANN" and LOCAL SM must not be entered on that TKGRP form.

2.11 #1ST ANNC DELAY

Description: The system calculates the expected queue delay (in seconds) for each call that is queued for an operator. Whenever there are two or more calls in a queue, new calls arriving to the queue are eligible for delay announcements in accordance with the length of the expected queue delay. The first delay announcement will be played when the call is first queued if the expected delay exceeds the entry in this field, and does not exceed the entry in the 2ND ANNC DELAY field.

With 5E5 and later Software Releases, 0 may be entered for a forced first announcement.

Required Field.

Default: 15 (seconds)
Valid Entry: 1 - 1800 (seconds)

2.12 #2ND ANNC RTI

Description: Enter the route index number to the second delay announcement.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The route index entered in this field must be designated in the ROUTE INDEX field of an RTIDX form. The TRUNK GROUP NUMBER on the RTIDX form (5303 Record) must match the TGN entry on the TKGRP form (5202 Record). Also, the TRK DIR field must be "ANN" and LOCAL SM must not be entered on that TKGRP form.

2.13 #2ND ANNC DELAY

Description: The call will be routed to the second delay announcement if the expected delay exceeds the entry in this field, and does not exceed the 3RD ANNC DELAY.

Required Field.

Default: 40 (seconds)
Valid Entry: 1 - 1800

Data Rules:

The value entered in this field must be greater than the entry in the 1ST ANNC DELAY field.

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2.14 #3RD ANNC RTI

Description: Enter the route index number to the third delay announcement.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The route index entered in this field must match a ROUTE INDEX field of an RTIDX form.For 5E6(2) and later, if AUTO CALL DIST on this form is "N", the TRUNK GROUP NUMBER on the RTIDX form must match a TGN on the TKGRP form; TRK DIR on the TKGRP form must be "ANN", and LOCAL SM must not be entered.

2.15 #3RD ANNC DELAY

Description: The call will be routed to the third delay announcement if the expected delay (in seconds) exceeds the entry in this field.

Required Field.

Default: 60 (seconds)
Valid Entry: 1 - 1800 (seconds)

Data Rules:

The value entered in this field must be greater than the entry in the 2ND ANNC DELAY field.

2.16 #CLOSE DOWN RTI

Description: The CLOSE DOWN RTI is the route index number to a business closed announcement.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The entry in this field must match a ROUTE INDEX field of an RTIDX form. For 5E6(2) and later, if AUTO CALL DIST on this form is "N", the TRUNK GROUP NUMBER on that RTIDX form must match the TGN on a TKGRP form. The TRK DIR on that TKGRP form must be "ANN" and LOCAL SM must be unknown.

2.17 #CALL TYPE OPEN

Description: " Is this Call Type servicing calls?

Required Field.

Default: N
Valid Entry: Y, N

Data Rules:

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If the entry in this field is "N", then an entry is required in the CLOSE DOWN RTI field.

2.18 CALL TYPE NAME

Description: Enter the Call Type Name. Only alphanumeric characters and spaces may be entered. No double quotes or special characters are allowed.

Valid Entry: 1 - 10 characters

Data Rules:

The entry in this field must be unique, it cannot be duplicated on another OSPSCT form.

2.19 BACK ANNC RTI

Description: Enter the route index number to the turn-back announcement.

Software Release: 5E4(2) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

If OPER TYPE is "DA", then this field must not be entered. If OPER TYPE is "TA", then this field must be entered.

The route index entered in this field must be defined as a ROUTE INDEX on an RTIDX form. For 5E8 and later, a TRUNK GROUP NUMBER must be entered on the RTIDX form and must be defined in the TGN field on a TKGRP form where TRK DIR is "ANN".

2.20 AUTO CALL DIST

Description: Is this Call Type used for CACD (Commercial Automatic Call Distribution)?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "TA" was entered in the OPER TYPE field, this field must be "N".

Entries in the AUTO CALL DIST field must match where the OSPS CALL TYPE on one OSPSCT form matches the RECALL CALL TYPE on another.

For 5E6 and later Software Releases, if "N" is entered and the OPER TYPE field is "DA", then a corresponding OPCTO form (5407 Record) is required where the CPND ASSIGNED field is "N". A corresponding OPCTO form is one in which the OSPS CALL TYPE field matches the OSPS CALL TYPE on the OSPSCT form.

For 5E6 and later, when VECTOR ID is entered on an OPCTO form, the associated OSPSCT form (the OSPS CALL TYPEs match) must have "Y" entered for AUTO CALL DIST.

2.21 COIN RECALL

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Description: Enter the Coin Recall Number, which is the call type (queue) for coin recall. If no entry is made in this field, then the associated OSPS CALL TYPE value will be used.

Software Release: 5E5 and later
Required Field.
Valid Entries: 1 - 128

Data Rules:

Each value in the COIN RECALL field must be defined as a valid CALL TYPE on the same form or on another OSPSCT form. If it is a CALL TYPE on another OSPSCT form, the OPER TYPE value must be the same on both forms.

2.22 COIN NOTIFY

Description: Enter the Coin Notify Number, which is the specific type of notify coin recall. If no entry is made, the associated OSPS CALL TYPE value will be used.

Software Release: 5E5 and later
Valid Entries: 1 - 128

Data Rules:

Each entry in the COIN NOTIFY field must be defined as a valid CALL TYPE on the same form or on another OSPSCT form. If it is a CALL TYPE on another OSPSCT form, the OPER TYPE value must be the same on both forms.

2.23 MECH TYPE

Description: This entry specifies the MECH (More Efficient Call Handling) queue for the call type.

Software Release: 5E6 and later
Valid Entries: 1 - 128

Data Rules:

If OPER TYPE is "TA", then an entry is required for MECH TYPE. If OPER TYPE is not "TA", do not enter anything in this field.

If MECH TYPE is entered on this OSPSCT form, it must match the OSPS CALL TYPE on this form or on another OSPSCT form. If MECH TYPE matches OSPS CALL TYPE on a different OSPSCT form, then the OPER TYPE fields on both forms must match. The default is the OSPS CALL TYPE on this form.

2.24 SVC ID

Description: Enter the Listing Services identification number. For a a Listing Service such as White Pages or customer name and address, if OPER TYPE is NOT "TA", do NOT make an entry in this field.

Division 2, Section 3c discusses the translations needed for Listing Services.

Software Release: 5E6 and later
Valid Entries: 1 - 1023

Data Rules:

An entry in SVC ID field requires that an OPEISDB form exist for each entry in the SERVING TEAM and SUP TEAM field on the corresponding OSPSCT form. The SVC ID fields on the two forms must be equal and the SERVING TEAM or SUP TEAM field on the OSPSCT form must be equal to SERVING TEAM

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field on the OPEISDB form.

If the VECTOR ID field is entered on the OPCTO form, 5407 Record, then this field should be left blank.

When SVC ID is entered, NON ISP ONLY must be "N" on the STINFO form (5402 Record) associated with this OSPSCT form, i.e., the SERVING TEAM on the STINFO form matches either the SERVING TEAM or the SUP TEAM on this form.

2.25 LIST SVC RECALL

Description: Should the service recall type be assigned?

This field provides for the ability to assign the recall call type based on the EIS NAME and SVC ID.

Software Release: 5e6 and later
Required Field.
Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field, then SVC ID field must be entered.

Each EIS NAME and SVC ID on a OPEISDB form may have only one OSPS CALL TYPE on a OSPSCT form used as the Listing Services Recall Call Type.

Call types used as a recall queue identifier type must have the same EIS name assigned to all serving teams for this recall call type.

The recall must be served by the same EIS (External Information System) because only that EIS will have a record of the original call. An EIS is assigned to a SERVING TEAM and SVC ID on the OPEISDB form. Therefore, for each OSPSCT form where LIST SVC RECALL is "Y", a corresponding OPEISDB form must be submitted where the SERVING TEAM and SVC ID fields match on the two forms. A corresponding OPEISDB form must also be submitted for each SUP TEAM entered on the OSPSCT form. The SERVING TEAM and SVC ID fields on the OPEISDB form must match SUP TEAM and SVC ID fields on the OSPSCT form. The EIS NAME must be the same on all corresponding OPEISDB forms.

If LIST SVC RECALL is "Y" on an OSPSCT form, the OSPS CALL TYPE field is used as the SVC ID on this form and the Listing Services Recall Call Type for the EIS NAME on the OPEISDB form that is pointed to by the SERVING TEAM and SVC ID fields on this OSPSCT form.

A second OPEISDB form is required for every OSPSCT form if LIST SVC RECALL is "Y" and if the PRE OPER EIS field entered on the corresponding SERVDATA form is different than the EIS NAME on the first OPEISDB form.

- A corresponding SERVDATA form is found by matching the SVC ID field with the SVC ID field on the OSPSCT form.
- The first OPEISDB form is found by matching the SERVING TEAM and SVC ID fields with SERVING TEAM and SVC ID fields on the OSPSCT form, respectively.
- The second OPEISDB form is found by matching the SVC ID and EIS NAME fields with the SVC ID and PRE OPER EIS fields on the SERVDATA form, respectively.

2.26 INTRAFLOW ALW

Description: Is Intraflow allowed for this call queue?

Software Release: 5E5 and later

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then

- the INTRAFLOW ALW field on the OSPSOPT form (5424 Record) must be set to "Y".
- at least one supporting Serving Team must be entered in the SUP TEAM field in the SUPPORT TEAM LIST. In addition, the SUP TEAMs must be defined on the STINFO form (5402 Record) with INTRAFLOW ALW set to "Y" on the STINFO form.

If no supporting teams are entered, this field should be set to "N". For further information see Division 2, Section 3.

2.27 QUEUE BUSY

Description: Should a busy tone be given to the caller when the call queue is full?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.28 DELAY BUSY

Description: Should a busy tone be given to the caller when the threshold is exceeded?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.29 ANNC ON LVL1

Description: Should an announcement be given instead of audible tone for a level 1 delay?

Software Release: 5E9(1) and later
Default: N
Valid Entries: Y, N

2.30 TGID

Description: This is a Recent Change/Verify only field. This field displays the TGID (Terminal Group Identifier) if it is assigned to an ACD/BRCS serving team. For more information on ACD/BRCS secured feature, see Division 2, Section 4A121. For 5E11 and later, this field was moved to the CQPARM form, Division 4, Section 32E.

Software Release: 5E9(1) - 5E10
Valid Entries: 1 - 65535 or blank

Data Rules:

When the TGID on the OSPS Serving Team view 21.2 is changed, then the TGID is changed to the new value for all of the CALL TYPE(s) that are associated with the SERVING TEAM.

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Q DIALING

For 5E9(1) - 5E10, the following field identifies the ACD and DAA TNs if Q DIALING TN field is set to "Y" on the ACD and DAA assignment form, ACDTN, view 4.15. For 5E11 and later, the ACD/BRCS data in this form has been moved to CQPARM form, Division 4, Section 32E.

2.31 ACD OR DAA TN

Description: This field is a Recent Change/Verify only field. It displays the Q DIALING TN, if assigned, for this call type. For 5E11 and later, this field was moved to the CQPARM form, Division 4, Section 32E.

Software Release: 5E9(1) - 5E10.
Valid Entries: 7-digit telephone number

Data Rules:

When "Y" is entered in the Q DIALING TN field on the ACDTN form, view 4.15, the ACD or DAA telephone number value is displayed in this field.

SUPPORT TEAM LIST

This list (fields Section 2.32 - Section 2.33) details the associated supporting Serving Team for INTRAFLOW and its corresponding delay threshold.

2.32 SUP TEAM

Description: Enter the supporting Serving Team for Intraflow.

Software Release: 5E5 and later
Valid Entries: 1 - 128

Data Rules:

This team cannot be the same as the entry in the SERV TEAM field. Support serving team numbers must be unique.

Any team entered here must be entered as the key value SERV TEAM on a STINFO form (5402 Record). In addition, the OPER TYPE on this form must match the OPER TYPE on the STINFO form and the AUTO CALL DIST fields on both forms must the same.

To enable Intraflow, the corresponding STINFO form must have a "Y" in the INTRAFLOW ALW field and the INTRAFLOW ALW field on the OSPSOPT form (5424 Record) must also be set to "Y". In addition, the OPER TYPE on the STINFO form (5402 Record) must be the same as the OPER TYPE on the OSPSCT form.

For 5E9(1) and later, if the entry on this form matches a SERVING TEAM entry on the STINFO form, then the PCT INTRAFLOW on the STINFO form must be entered and INTRAFLOW ALW on that form must be "Y".

2.33 DELAY THRSH

Description: This field indicates the Intraflow delay threshold in seconds for the associated supporting Serving Team. In this list of 1 to 8 thresholds, any value entered here must be equal to or greater than the preceding DELAY THRSH entered.

Software Release: 5E5 and later
Default: 0

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Valid Entries: 0 - 1800 (seconds)

Data Rules:

If this value is greater than 0, then an entry is required in the corresponding SUP TEAM field.

```
SCREEN 1 of 2                5ESS Switch
ospsct                OFFICE DATA ADMINISTRATION
(5404-1/2/3)              CALL TYPE PARAMETERS

* 1. OSPS CALL TYPE   071            #13. 3RD ANNC RTI    0304
# 2. OPER TYPE        TA             14. 3RD ANNC DELAY  0060
# 3. RECALL CALL TYPE 071            #15. CLOSE DOWN RTI  0300
# 4. SERVING TEAM     033            16. CALL TYPE OPEN  Y
  5. SERVICE OBJ      10.0           17. CALL TYPE NAME  acd71
  6. MAX CALLS        0030           18. BACK ANNC RTI   0400
  7. CALL WAITING ON  0011           19. AUTO CALL DIST  N
  8. CALL WAITING OFF 0009           #20. COIN RECALL     071
# 9. 1ST ANNC RTI     0301           21. COIN NOTIFY     071
 10. 1ST ANNC DELAY   0015           22. MECH TYPE       071
#11. 2ND ANNC RTI     0303           23. SVC ID          0101
 12. 2ND ANNC DELAY   0040           24. LIST SVC RECALL Y
```

```
SCREEN 2 of 2                5ESS Switch          _
ospsct                OFFICE DATA ADMINISTRATION
(5404-1/2/3)              CALL TYPE PARAMETERS

  25. INTRAFLOW ALW Y            31. SUPPORT TEAM LIST
  26. QUEUE BUSY    N
  27. DELAY BUSY    N          ROW  SUP TEAM   DELAY THRSH
  28. ANNC ON LVL1  N            1    076        0045
    TGID                       2    083        0090
                             3   ___        ____
      Q DIALING              4   ___        ____
    ACD OR DAA TN            5   ___        ____
                             6   ___        ____
                             7   ___        ____
                             8   ___        ____
```

Figure 1 SAMPLE OSPSCT FORM 5E9(1) - 5E10 SOFTWARE RELEASES

```
SCREEN 1 of 2                5ESS Switch
ospsct                OFFICE DATA ADMINISTRATION
(5404-1/2/3)            OSPS CALL TYPE PARAMETERS

* 1. OSPS CALL TYPE   ___            #13. 3RD ANNC RTI    ____
# 2. OPER TYPE        __             14. 3RD ANNC DELAY  0060
```

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```
# 3. RECALL CALL TYPE ___          #15. CLOSE DOWN RTI  ____
# 4. SERVING TEAM     ___           16. CALL TYPE OPEN  N
  5. SERVICE OBJ      10.0          17. CALL TYPE NAME  __________
  6. MAX CALLS        0030          18. BACK ANNC RTI   ____
  7. CALL WAITING ON  0011           19. AUTO CALL DIST  N
  8. CALL WAITING OFF 0009          #20. COIN RECALL     ___
# 9. 1ST ANNC RTI     ____          21. COIN NOTIFY     ___
 10. 1ST ANNC DELAY   0015           22. MECH TYPE       ___
#11. 2ND ANNC RTI     ____          23. SVC ID          ____
 12. 2ND ANNC DELAY   0040           24. LIST SVC RECALL N
```

```
SCREEN 2 of 2                5ESS Switch          _
ospsct                  OFFICE DATA ADMINISTRATION
(5404)1/2)               OSPS CALL TYPE PARAMETERS

  25. INTRAFLOW ALW N              31. SUPPORT TEAM LIST
  26. QUEUE BUSY    N
  27. DELAY BUSY    N          ROW  SUP TEAM   DELAY THRSH
  28. ANNC ON LVL1  N            1    ___        ____
                               2    ___        ____
                               3    ___        ____
                               4    ___        ____
                               5    ___        ____
                               6    ___        ____
                               7    ___        ____
                               8    ___        ____
```

Figure 2 SAMPLE OSPSCT FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4F: 5405 RECORD
OSPS RATE AND ROUTE FORM - ORAR

1. GENERAL

The 5405 Record is available with 5E3 and later Software Releases. This record is used to define the routing and charging for each OSPS (Operator Services Position System) screening index/code index combination in a 5ESS Switch office.

A screening index is associated with an originating class of service (trunk group). A code index is associated with the interpretation of dialed digits. The two indexes form a matrix that is used to access routing and charging information for an OSPS call.

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control number and office name on each record.

2.2 * SCR

Description: Enter the screening index number.

Required Field.
Valid Entries: 1 - 4095

2.3 * CDI

Description: Enter the code index number.

Required Field.
Valid Entries: 3 - 4095

2.4 PFX

Description: Enter the applicable prefix.

Valid PFX Entries

Entry	Definition
NONE	No prefixed digits.
0	Dial 0+.
1	Dial 1+.

Data Rules:

Duplicate CDI/PFX combinations may not be entered. The "NONE" (no prefix) entry is always required.

2.5 NOC

Description: Enter the OSPS NOC (Normalized Office Code).
Valid Entries: 1 - 511

Data Rules:

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If an entry is made in the OSPS CALL ID field, leave this field blank. Any entry in this field must be designated in the OPER NOC field of the OCTA form (5406 Record).

2.6 OSPS CALL ID

Description: Enter the OSPS pre-call identification number.
Valid Entries: 1 - 511

Data Rules:

If an entry is made in the NOC field, leave this field blank. Any entry in this field must be designated in the OSPS CALL ID field of the OPCTO form (5407 Record).

---

orar 5ESS Switch _
(5405) OFFICE DATA ADMINISTRATION
OSPS RATE AND ROUTE

* 1. SCR 0112
* 2. CDI 0024

3. SCREENING DATA

	PFX	NOC	OSPS CALL ID
	___	___	_____
1	NONE	016	___
2	0	___	040
3	1	027	___

Figure 1 SAMPLE ORAR FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4G: 5406 RECORD
OSPS CALL TYPE ASSIGNMENT FORM - OCTA

1. GENERAL

The 5406 record is available with 5E3 and later Software Releases.

This form is used to assign OSPS (Operator Services Position System) Call Type identifications from OSPS NOCs (Normalized Office Codes) and local digits-dialed combinations. The OSPS NOC is assigned on the ORAR form (5405 Record).

1.1 Recent Change View

The corresponding Recent Change View for OCTA is 21.25. For more information on Recent Change Views that correspond to ODA forms, please see Division 0, Section 2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * OPER NOC

Description: Enter the OPER NOC.

Required Field.
Valid Entries: 1 - 511

Data Rules:

An OPER NOC entered on this form must be defined on an ORAR form.

2.3 * LOCDN

Description: Enter the local directory number (without the office code). The LOCDN is the final four digits dialed (to obtain OSPS).

Required Field.
Valid Entries: 0000 - 9999

2.4 OSPS CALL ID

Description: Enter the operator pre-call identification number to be assigned to an OPER NOC/LOCDN combination.

Required Field.
Valid Entries: 1 - 127

Data Rules:

An OSPS CALL ID entered on this form must exist on an OPCTO form (5407 Record). In addition, for 5E6 and later Software Releases, the corresponding OPCTO form must have an entry in the TGN field of 9999.

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```
                CREDIT CARD CALLING OPTIONS

*1. KEY 0                       EMERGENCY INTERRUPT
                                ____________________
#2. PIN FAIL TIME    04           7. EI LIMIT        0020
#3. LOCK OUT TIME    005          8. EI THRESHOLD IND  Y
#4. FRAUD FAIL COUNT 30

   SECURITY PRINTER
   SECURITY TERMINAL
```

Figure 1 SAMPLE OCTA FORM 5E5 AND LATER SOFTWARE RELEASES

```
cccopt                  5ESS Switch                _
(5432)              OFFICE DATA ADMINISTRATION
                CREDIT CARD CALLING OPTIONS

*1. KEY 0                       EMERGENCY INTERRUPT
                                ____________________
#2. PIN FAIL TIME    04           7. EI LIMIT        0020
#3. LOCK OUT TIME    005          8. EI THRESHOLD IND  Y
#4. FRAUD FAIL COUNT 30

   SECURITY PRINTER
   SECURITY TERMINAL
```

Figure 2

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SEC. 4H: 5407 RECORD
OSPS CALL TYPE FOR TRUNK ORIGINATIONS FORM - OPCTO

1. GENERAL

The 5407 Record is available with 5E3 and later Software Releases.

This form assigns an OSPS (Operator Services Position System) Call Type and a BST (Basic Services Terminal) Display Index to an OSPS call identification value/trunk group combination.

1.1 Recent Change View

The corresponding Recent Change View for OPCTO is 21.23. For more information on Recent Change Views that correspond to ODA forms, please see Division 0, Section 2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OSPS CALL ID

Description: Enter the OSPS pre-call identification value.

Required Field.
Valid Entries: 1 - 511

Data Rules:

OSPS CALL ID entries on this form must exist on an ORAR form (5405 Record) or an OCTA form (5406 Record).

2.3 * TGN

Description: Enter the trunk group number. An entry of 9999 designates all trunk groups.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000 or 9999
- For 5E11 and later: 1 - 4000 or 9999

Data Rules:

Entries in the TGN field of this form (except for 9999) must exist on a TKGRP form (5202 Record).

If 9999 is entered in this field, another OPCTO form cannot exist with the same value for OSPS CALL ID, OSPS CALL TYPE and DISPLAY INDEX.

2.4 # OSPS CALL TYPE

Description: Assign an OSPS call type for this OSPS CALL ID/TGN combination.

Required Field.
Valid Entries: 1 - 128

Data Rules:

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Entries in this field must exist on an OSPSCT form (5404 Record).

2.5 # DISPLAY INDEX

Description: Assign a BST display index for this CALL ID/TGN combination.

Required Field.
Valid Entries: 1 - 276

Data Rules:

Entries in this field must exist on an OBSTS form (5408 Record).

2.6 VECTOR ID

Description: Enter the VECTOR ID number to be assigned to the OSPS CALL ID on this form. This field assigns the call vector ID that provides call handling while waiting for a CACD agent. See Division 2, Section 4D for translation information on the Call Vectoring Feature.

Software Release: 5E6 and later
Valid Entries: 1 - 256

Data Rules:

An entry in this field must equal an entry in the VECTOR ID on a CVECT form. In addition, when VECTOR ID is entered on this form, the SVC ID field on the corresponding OSPSCT form (OSPS CALL TYPE on the OSPSCT form is equal to the OSPS CALL TYPE on this form) must be blank, "Y" must be entered in the AUTO CALL DIST field and "DA" must be entered for OPER TYPE.

CALLING PARTY NUMBER DELIVERY (CPND)

For 5E6 and later, the following fields (Section 2.7 - Section 2.9) should be entered for the Calling Party Number Delivery feature.

2.7 CPND ASSIGNED

Description: Has the CPND (Calling Party Number Delivery) feature been assigned to the trunk group or the dialed digits combination associated with this OPCTO form?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rule:
If "N" is entered, CPND TO MIS and CPND TO AGENT must also be "N".

If "Y" is entered, a corresponding OSPSCT form must be entered with the OPER TYPE of "DA" and AUTO CALL DIST must be "Y". To find the corresponding OSPSCT form, match OSPS CALL TYPE on this form to the OSPS CALL TYPE on the OSPSCT form.

2.8 CPND TO MIS

Description: Should the calling party number be sent to the MIS for CACD call?

Software Release: 5E6 and later
Required Field.

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Default: N
Valid Entries: Y, N

Data Rule:
This field can only be "Y" if the CPND ASSIGNED field is "Y".

2.9 CPND TO AGENT

Description: Should the calling party number be sent to the PTP for CACD call, for possible display on the agent's terminal? The DISPLAY INDEX field on this form determines the display for the agent's terminal.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rule:
This field can only be "Y" if the CPND ASSIGNED field is "Y".

2.10 DAA

Description: Is direct agent access assigned to this CACD call type? Enter "N" if it is not allowed.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

```
opcto                    5ESS Switch                _
(5407)              OFFICE DATA ADMINISTRATION
              OSPS CALL TYPE FOR TRUNK ORIGINATIONS

* 1. OSPS CALL ID       010
* 2. TGN               1045
# 3. OSPS CALL TYPE     010
# 4. DISPLAY INDEX      017
  5. VECTOR ID         025

CALLING PARTY NUMBER DELIVERY (CPND)
 6. CPND ASSIGNED       N
 7. CPND TO MIS         N
 8. CPND TO AGENT       N

 9. DAA                 N
```

Figure 1 SAMPLE OPCTO FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4I: 5408 RECORD
OSPS BASIC SERVICES TERMINAL SEIZURE FORM - OBSTS

1. GENERAL

The 5408 Record is available with 5E3 and later Software Releases.

This record provides information for OSPS (Operator Services Position System) BST (Basic Services Terminal) displays. Display contents, starting positions and lengths are defined per a BST DISPLAY INDEX.

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.26

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control number and office number on each record.

2.2 * DISPLAY INDEX

Description: Enter the BST display index. When the DISPLAY INDEX is 1 - 256, the calling number (if presentation is allowed) is displayed or merged with the text display entered in DISPLAY, if DN START and DN LENGTH are specified. The CPND ASSIGNED and CPND TO AGENT fields on the OPCTO form (5407 record) must also be set to "Y", to present the calling party number to the agent via the seizure display.

When the DISPLAY INDEX is 257 - 276 the called number is displayed.

Required Field.
Valid Entries: 1 - 276

TEXT DISPLAY

The following field defines the text display for the BST.

2.3 DISPLAY

Description: Enter the text display for this BST display index.
Valid Entries: 10 alphanumeric characters, "-" and "/"

Data Rules:

DISPLAY should be blank when BST DISPLAY INDEX is greater than 256.

CALLING/CALLED NUMBER DISPLAY

The following fields (Section 2.4 - Section 2.5) define the calling/called number display.

2.4 DN START

Description: Enter the starting position for the BST display.
Valid Entries:
- 5E3 only: 1 - 15
- 5E4(2) and later: 1 - 10

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Data Rules:

For 5E5 and earlier, this field must be left blank if the BST DISPLAY INDEX is less than 257. If the BST DISPLAY INDEX is greater than 256, then the sum of the DN START and DN LENGTH fields must be 16 or less for 5E3 only and 11 or less for 5E4(2) and later.

For 5E5 and later, DN START must be entered when DISPLAY INDEX is between 257 and 276.

2.5 DN LENGTH

Description: Enter the Length of the BST display.
Valid Entries:
- 5E3 only: 1 - 15
- 5E4(2) and later: 1 - 10

Data Rules:

For 5E5 and earlier, this field must be left blank if the BST DISPLAY INDEX is less than 257. If the BST DISPLAY INDEX is greater than 256, then the sum of the DN START and DN LENGTH fields must be 16 or less for 5E3 only and 11 or less for 5E4(2) and later.

For 5E5 and later, DN LENGTH must be entered when DISPLAY INDEX is between 257 and 276.

For 5E6 and later, when DISPLAY INDEX is less than 257 and DN START is not entered, DN LENGTH must not be entered. When DISPLAY INDEX is less than 257 and DN START is entered, then DN LENGTH must be entered.

---

obsts 5ESS Switch _
(5408) OFFICE DATA ADMINISTRATION
OSPS SEIZURE

* 1. DISPLAY INDEX 017

TEXT DISPLAY CALLING/CALLED NUMBER DISPLAY

2. DISPLAY UNLISTED 3. DN START __
4. DN LENGTH __

Figure 1 SAMPLE OBSTS FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 4J: 5409 RECORD
OSPS RESTRICTED EXTERNAL DIALING FORM - RESXDL

1. GENERAL

The 5409 Record is available with 5E4(1) and later Software Releases.

This record defines restricted dialing sequences for an external dialing index. The external dialing index is assigned to an OSPS (Operator Services Position System) serving team in the DIALING PERM INDEX field on an STINFO form (5402 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control number and office name on each record.

2.2 * DIALING PERM INDEX

Description: Enter the restricted external dialing index.

Required Field.
Valid Entries: 1 - 64

2.3 DIALED DIGITS

Description: Enter up to 20 restricted dialing sequences for this DIALING PERM INDEX. The "*" or "#" character may not appear by itself; it must be accompanied by at least one other character or a space.
Valid Entries: 1 - 32 characters (0 - 9, "#" or "*")

Data Rules:

At least one DIALED DIGITS string must be entered.

---

resxdl 5ESS Switch _
(5409) OFFICE DATA ADMINISTRATION
OSPS RESTRICTED EXTERNAL DIALING

* 1. DIALING PERM INDEX 40
DIALED DIGITS

2.	3125104640	12.	_____
3.	3125104641	13.	_____
4.	_____	14.	_____
5.	_____	15.	_____
6.	_____	16.	_____
7.	_____	17.	_____
8.	_____	18.	_____
9.	_____	19.	_____
10.	_____	20.	_____

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11. _____ 21. _____

Figure 1 SAMPLE RESXDL FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4K: 5410 RECORD
OSPS OPERATOR TROUBLE REPORT FORM - OTRVLD

1. GENERAL

The 5410 Record is available with 5E3 and later Software Releases. This record defines OSPS (Operator Services Position System) OTRs (Operator Trouble Reports) and the OTR's destination.

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * OTR ID

Description: Enter the Operator Trouble Report Identification Number. For transmission to an external OTR analysis system, a 3-digit number (001 through 999) is the only valid entry. If "N" is entered in the OSPS TA field on the OSPSOPT form (5424 Record), then this field must be a 3-digit number.

WARNING: The trouble codes "998" and "999" should only be used as described below. The incorrect usage of these trouble codes could cause incorrect billing, asserts, etc.

Trouble code "998" is used when the Back Party on the call is TALKING to the operator but the operator's display shows that the Back Party is on-hook. When entered at the operator position, this trouble code updates the operator's display to show the Back Party as off-hook.

Trouble code "999" is used when the Forward Party on the call is talking to the operator but the operator's display shows that the Forward Party is on-hook. When entered at the operator position, this trouble code updates the operator's display to show the Forward Party as off-hook.
Valid Entries:
- For DA (Directory Assistance): 01 - 999
- For TA (Toll and Assistance): 2 - 3 characters

2.3 # ID IN USE

Description: Is the OTR ID currently in use?

Required Field.
Default: N
Valid Entries: Y, N

2.4 # OTR TO MCC

Description: Is the OTR information to be printed at the MCC (Master Control Center) ROP (Read-Only Printer)?

Required Field.
Default: N
Valid Entries: Y, N

2.5 # OFFICE TYPE

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Description: Enter the OSPS Office Type. Enter "F" for a FMC (Force Management Center), or "O" for an OSC (Operator Services Center).

Required Field.
Default: F
Valid Entries:

Valid OFFICE TYPE Entries

Entry	Definition
F	FMC (Force Management Center)
O	OSC (Operator Services Center)

2.6 # OFFICE NUMBER

Description: Enter the OSPS Office Number.

Required Field.
Default: 1
Valid Entries: 1 - 32

Data Rules:

Enter 1 - 8 if "F" is entered in the OFFICE TYPE field, or 1 - 32 if "O" is entered in the OFFICE TYPE field.

Each OFFICE TYPE/OFFICE NUMBER combination entered on the OTRVLD form (5410 Record) must exist on an OPARM form (5400-1/2 Record).

2.7 # OTR TO OKTR

Description: Is this OTR number to be printed at the OKTR (Operator-Keyed Trouble Report) printer?

Required Field.

Software Release: 5E4(2) and later.
Default: Y
Valid Entries: Y, N

Data Rules:

The entry in the OTR to OKTR field must be "Y" unless the entry in the OTR ID field is between 10 and 99, inclusive.

---

otrvld 5ESS OFFICE DATA ADMINISTRATION _
(5410) OSPS OPERATOR TROUBLE REPORT

*1. OTR ID 310
#2. ID IN USE N
#3. OTR TO MCC N
#4. OFFICE TYPE F
#5. OFFICE NUMBER 01
#6. OTR TO OKTR Y

Figure 1 SAMPLE OTRVLD FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 4L: 5411 RECORD
OSPS DIGITAL SUBSCRIBER LINE FORM - OSPSDSL

1. GENERAL

The 5411 Record is available with 5E3 and later Software Releases.

1.1 Digital Subscriber Lines External Names

DSLs (Digital Subscriber Lines) are assigned external names instead of directory numbers. The external name consists of an identifier (DATA LINK GRP) and a relative link number (DATA LINK NBR). The identifier for a DSL with an entry in the SERVICE CLASS field of "DASC" (Directory Assistance System/Computer) is its DAS/C number. The identifier for a DSL with a service class of "RAS" (Remote Alarm Section) is its RISLU site number. For an RAS DSL, the entry in the DSL NAME ID field (OSPS DSL Form) must equal the entry in the RISLU SITE field of an EQRISLU form (5732 Record).

1.2 External Information Systems

The DSLs for an EIS (External Information System) require an entry in the DATA LINK GRP field on this form, which must equal the EIS NBR entry on the corresponding EISDATA form (5462-1 Record). An EISDATA form corresponds to this form if EIS NBR on the EISDATA form matches the DATA LINK GRP on this form. A corresponding EISSM form (5462-3 Record) must exist for each OSPSDSL form with the entry "EIS" in the SERVICE CLASS field. The corresponding SM number on the EISSM form must equal the SM portion of the LCEN on this form.

1.3 5E4(2) Toll and Assistance Features

With 5E4(2) and later, six new fields have been added: D RELPIDB, TIMESLOT, QTR TS, MATE LCEN, SCRN IDX and DAS. These changes are necessary for three OSPS Toll and Assistance features: ACQS (Automatic Charge Quotation Service), RTRS (Real Time Rating System) and AMLB (Automated Multi-Leaf Bulletin). The D RELPIDB, TIMESLOT and QTR TS fields were added for the utilization of ISLUs (Integrated Service Line Units). The MATE LCEN, SCRN IDX and DAS fields are germane to a SERVICE CLASS of "AQDSL" only.

1.4 Time and Charge Quotes For Autoquote

In order to send out a time and charge quote to an autoquote establishment, there must be links that connect the switch to these locations. In the process of sending quotes out over links, the 5411 Record is checked to obtain information about the links and ports, such as the digital to analog port relationship.

1.5 Autoquote Hardware

For 5E4(2) and later Software Releases, the 5ESS Switch that services ACQS establishments, to which the information is sent electronically and directly (as indicated by selecting "Y" in the AUTO QUOTE field of the ACQS form), must provide the necessary hardware.

The required hardware, which is used in a unidirectional manner to send time and charge information from the 5ESS Switch to the ACQS establishment, consists of the following:

- A DSL port on an ISLU or a RISLU. The DSL will be defined on this form, with a SERVICE CLASS of "AQDSL".
- A modem connected to the DSL.
- A terminal adaptor, adjoined to the aforementioned modem, which converts the digital data from the DSL to analog data before it is sent to the analog mate port.

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- An analog mate port residing on a Z-card on an ISLU or RISLU. The card is an SM105 circuit pack, with four circuits. The analog mate port will be defined on the MATE LCEN field on this form. A telephone number is not associated with this port. A DAS (Digit Analysis Selector) is associated with this port, since this port will "call" to a port on an analog trunk unit. The number it will "call" is defined in the QUOTE TN field of the ACQS form. The DAS will be entered in the DAS field of this form. A Screen Index is also associated with this port.

- An analog trunk port, which is connected via customer premise modem to a printer/computer at the ACQS establishment. This port is defined in the AQEST TEN field on the ACQS form. The associated telephone number is defined in the QUOTE TN field of the ACQS form.

1.6 DSL Ports

The 5ESS Switch has a system maximum of sixteen sets of DSL ports and analog mate ports, joined by a modem and terminal adaptor. ODA will not permit more than sixteen OSPSDSL forms with a value in the MATE LCEN field. Please refer to Division 2, Section 3H of this document for (R)ISLU port assignment recommendations.

1.7 Maximum Number of ACQS Subscribers

The 5ESS Switch has a system maximum of 1,000 ACQS establishments that have direct transmittal of time and charge information; ODA will not permit more than 1,000 ACQS forms with a value in the AQEST TEN field.

1.8 Immediate Charge Information

To handle any calls requiring immediate calculations and charges, an RTRS database is needed which receives queries sent from the switch regarding a specific call and sends back a reply containing the chargeable time and the charges for the call. The 5411 Record contains information about RTRS links and ports so that a direct message can be sent from the switch over the correct links.

If no entry is made in the TIMESLOT field, ODA will make the assignments based on the following conditions: LCENs (Line Card Equipment Numbers) assigned to LGCs (Line Group Controllers) 0 through 7 must be defined as odd-numbered PIDB NO. entries on the EQISLU form (5731 Record) and with a PIDB TYPE of "PSU" (also on the EQISLU form). LCENs assigned to LGCs 8 through 15 must be defined as even-numbered PIDB NOs. on the EQISLU form with a PIDB type of "PSU".

ISCN entries on this form require a PIDB with a PIDB TYPE of "PSU" assigned on the same PSU (Packet Switching Unit) shelf on the EQISLU form as the SHELF specified by the first number in the ISCN field.

All OSPSDSLs assigned to the same SHELF and CHL GRP (ISCN fields) must have the same data rate of 16KB, 56KB, or 64KB.

1.9 Recent Change View

The corresponding Recent Change View for OSPSDSL is 21.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and office name on each record.

2.2 * LCEN

Description: Enter a valid 8-digit (R)ISLU LCEN (Line Card Equipment Number). The LCEN must not be

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duplicated on any DSL, DSMLHLN, DSLAP or other OSPSDSL forms.

Refer to Division 2, Section 3H for recommendations for maximizing the efficiency of assigning DSLs on RISLUs and ISLUs.

It is recommended that no more than 16 ISCNs, defined in the ISCN field of an OSPSDSL form or the B1 ISCN field of an AMLBDSL form, be assigned to the same PROTOCOL HANDLER TYPE of "PH128" defined on an EQPSU form (5741 Record) keyed by the first three digits of the LCEN. Duplicate LCENs on OSPSDSL and AMLBDSL forms are counted as only one of the maximum of sixteen.

Those LCENs on OSPSDSL forms, which are assigned to a PROTOCOL HANDLER TYPE of "PH128" defined on the EQPSU form, and equipped in a given SLG, must belong to the same SHELF and CHL GRP (first three digits of ISCN). The SLCs are defined as LCs (0,2,4,6) or (8,10,12,14) or (16,18,20,22) or (24,26,28,30) in any specific LGC on the RISLU.

For LCENs on the OSPSDSL form which are assigned a Protocol Handler on the EQPSU form, it is recommended that those equipped in a given SLG (Sub Line Group), belong to the same DSL group (first three digits of ISCN). An SLG is a set of 4 (R)ISLU LCs (line cards) assigned to the same LGC (Line Group Controller). The LCs are (0,2,4,6) or (8,10,12,14) or (16,18,20,22) or (24,26,28,30).

A SLG (Sub Line Group) is a group of no more than 4 LC (Line Cards)

Growth Order Of SLGs

SLG	LGC 5th And 6th Digit Of LCEN	Line Cards Last 2 Digits Of LCEN
0-15	0-15	16, 18, 10, 22
16-31	0-15	08, 10, 12, 14
32-47	0-15	24, 26, 28, 30
48-63	0-15	00, 02, 04, 06

Valid Entries: 8-digit LCEN in the following format.

LINE CARD EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
(Remote) Integrated Services Line Unit	(R)ISLU		0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	5E4(2) and later 00 - 30 even only

Data Rules:

Duplicate LCENs may not be assigned; the entries in the LCEN and MATE LCEN fields cannot be the same.

An EQPSU form must exist for SMs assigned in the LCEN field. This assignment equips the switching module with packet switch interface units.

The LCEN must be defined as an equipped and operational U or T card on the ISLULC form (5942 Record) with an EQST (Equipment Status) of "O" (Operational) and a LINE CARD TYPE of "TLC", "PULC" or "ULC".

If LCENs are entered on this form that match LCEN entries on an OSPSOP form (5401 Record) then the SERVICE CLASS on the OSPSDSL form must be "DAOPER" or "TAOPER".

For 5E9(2) and earlier, the value assigned in TERMLIM defines the maximum number of ISDN Terminals that are allowed to be simultaneously active per SM. TERMLIM is a no display field on the EQIM form with a default of 2047. In most cases TERMLIM should be set to this value. The ISDN Terminals are defined as follows:

ISDN Terminal Assignments

Form	SM	Number of Assignments

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DSL	OE[1,3]	MTERM defines the quantity of ISDN Terminals per DSL form.
DSLAP	LCEN[1,3]	by 1 for each LCEN list element defined.
MISLINK	OE[1,3]	by 1
OSPSDSL	LCEN[1,3]	by 1 where SERVICE CLASS is not "XDB"

The following conditions apply to Switching Modules where the PROTOCOL HANDLER TYPE field on an EQPSU form (5741 Record) is set to "PH16"

- Within any given DSL group, DSLs of any LGC must be assigned members from one and only one of the member number groupings 0-3, 6-9 or 12-15.
- DASCs must be assigned to different LGCs on the same SM. No more than two OSPSDSL forms with a SERVICE CLASS of "DASC" may have the same first three digits in the LCEN field.
- No more than two OSPSDSL forms with a SERVICE CLASS of "RTRS" may have the same first three digits in the LCEN field.

All of the DSLs -
- IDCU DSLs defined on
- DSL
- MISLINK
- and ISLU/ISLU2 DSLs defined on
- DSL
- DSLAP
- MISLINK
- OSPSDSL

on an SM which have identical entries for the first five digits of the OE for ISLU2 or IDCU or first four digits for ISLU; and which also have the same D REL PIDB and D TIMESLOT entries; must, additionally, have the same
- RT for IDCU
- OE[5,6] for ISLU
- LGC for ISLU2

and SHELF/CHL GRP (also defined as the first through third digits of the [D] ISDN) entries.

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks). The following applications define the possible LLCB assignments:

		LLCB	
Form	**SM**	**SHELF CHL GRP**	**Increment**
AMLBDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	OE[1,3]	PPB1 ISCN[1,3]	by 1 for each PPB1 ISCN defined.
		PPB2 ISCN[1,3]	by 1 for each PPB2 ISCN defined.
		D ISCN[1,3]	by 1 if a matching DSLUSR form is not found
DSLUSR	OE[1,3]	D ISCN[1,3] on the correspond- ing DSL form	by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered.
			by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
		ODB ISCN1[1,3] ODB ISCN2	by 1 if only ODB ISCN1 is entered.
			by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
DSLAP	LCEN[1,3]	ISCN[1,3]	by 1 for each unique LCEN/ISCN combination.
MISLINK	OE[1,3]	SHELF and CHL GRP	by 1 for each MISLINK form.
OSPSDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined.

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			by 1 for each unique OSPSDSL form.
RTERM RT INTERFACE is "TR30311" SM	ISCN[1,3]	ISCN[1,3]	by 3 for each EOC PRI ISCN and each EOC NPRI ISCN entry.
TRUNK Where TRKCLS is "IFOPER", "IFTERM" or "EDSL"	DEN[1,3]		1 for each unique TRUNK form.
XAT	DEN[1,3]	ISCN[1,3]	by 1 for each unique XAT form.

2.3 # SERVICE CLASS

Description: Enter the OSPS Service Class of the equipment assigned to this LCEN.

Required Field.

Valid SERVICE CLASS Entries

Entry	Definition
AQDSL	Software Release: 5E4(2) and later. Auto-Quote Data Link - D-channel.
DAOPER	Directory Assistance Operator - BST (Basic Services Terminal) position, and ACT (Agent Communication Terminals) for CACD.
DASC	OSPS DASC (Directory Assistance Service Computer).
EIS	Software Release: 5E6 and later. External Information System.
HOBICR	Software Release: 5E4(2) and later. Hotel Billing Information Center record TTY (Teletypewriter) Data Link - D-channel.
HOBICV	Software Release: 5E4(2) and later. Hotel Billing Information Center Voice Quote TTY Data Link - D-channel.
HOBIS	Software Release: 5E4(2) and later. Hotel Billing Information System Data Link - D-channel.
MISLINK	Commercial ACD Data Link is no longer valid on the OSPSDSL and AMLBDSL forms. DSLs with a SERVICE CLASS of "MISLNK" must be provisioned on the MISLINK form.
OAP	OSPS Administrative Processor.
RAS	Software Release: 5E4(2) and later. Remote Alarm Section.
RTRS	Software Release: 5E4(2) and later. Real Time Rating System Data Link - D-channel.
TAOPER	Automated Position.
XDB	Software Release: 5E4(2) and later. External Data Base.

Data Rules:

Duplicate combinations of SERVICE CLASS, DATA LINK GRP and DATA LINK NBR are not allowed.

If the SERVICE CLASS is not "AQDSL," then the SCRN IDX, MATE LCEN and DAS fields must be entered.

For 5E7 and later, if the LCEN on this form matches an LCEN on the OPARM form (except when the LCEN is 19200000), then the SERVICE CLASS fields on these corresponding forms must be the same.

The SERVICE CLASS on AMLBDSL form must match SERVICE CLASS on corresponding OSPSDSL form. Forms correspond if the LCENs match.

AQDSL - If "AQDSL" is entered, then
- LVL2 PROF must be "ATA", and
- DATA LINK GRP must be 1.

DAOPER - For 5E6 and later, if "DAOPER" is entered, then

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- EXTERNAL DATA LINK fields LINK GRP and LINK NBR must not be entered.
- AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS may not be entered.
- OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on this form.

DASC - If "DASC" is entered, then LVL2 PROF must be "DASC", and the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

When LCENs have a SERVICE CLASS of "DASC" and they are assigned to the same SM (first three digits of LCEN), then the DATA LINK GRPs must be the same.

Also see **"RTRS"** data rules below.

For 5E6 and later, if "DASC" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on this form..

If "DASC" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on the OSPSDSL form.

EIS - For 5E6 and later , no more than 16 LCENs with a Service Class of "EIS" can be assigned to an SM. If the SERVICE CLASS entry is "EIS" then a corresponding EISDATA form (5462-1 Record) must be submitted where the EIS NBR on the EISDATA form matches the DATA LINK GRP on the OSPSDSL form. Also, a corresponding EISSM form, (5462-3 Record) must exist for each OSPSDSL form, where SERVICE CLASS is "EIS". The SM and NAME on the EISSM form must match the SM portion of the LCEN on the OSPSDSL form and EIS NAME on the EISDATA form respectively.

If "EIS" or "RAS" is entered, then CONFIGURATION must be "LOADED" on the corresponding EQIM form, where the SM on the EQIM form matches the first 3 digits of the LCEN on this form. For 5E9(2) and later, for the CONFIGURATION that supports this value, see the Configurations for Facilities and Applications table for the EQIM form in Division 8, Section 2.

If "EIS" is entered, then the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

For 5E11 and later, if "EIS" is entered and the switching module (first 3 digits of the LCEN) matches an SM on the EISSM form, then the NAME field on the EISSM EIS DATA list must match to EIS NAME on the EISDATA form.

HOBIS - If the SERVICE CLASS class is "HOBIS", then "HOBIS" must be entered in the HOBIS/C field of the OSPSOPT form (5424 Record).

A maximum of eight data links with a SERVICE CLASS of "HOBIS" can be assigned to the same SM (first three digits of LCEN).

HOBICR or **HOBICV** - If the SERVICE CLASS IS "HOBICR" or "HOBICV", then "HOBIC" must be entered in the HOBIS/C field of the OSPSOPT form.

A maximum of eight data links with a SERVICE CLASS of "HOBICR" can be assigned to the same SM (first three digits of LCEN).

A maximum of eight data links with a SERVICE CLASS of "HOBICV" can be assigned to the same SM (first three digits of LCEN).

If "HOBICR" is entered, then LVL2 PROF must be "HOBICR", and the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

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HOBICV - If "HOBICV" is entered, then LVL2 PROF must be "HOBICV", and the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

HOBIS - If "HOBIS" is entered, then LVL2 PROF must be "HOBIS", and the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

OAP - The SERVICE CLASS field must be defined as "OAP" for equipment requesting displays defined on the OPARM form (CALL QUEUE DISPLAY, SERVING TEAM DISPLAY, POSITION STATUS DISPLAY and OPERATOR PERFORMANCE DISPLAY fields).

An OSPSDSL form with a SERVICE CLASS of "OAP" must have an associated OPARM form (5400 Record) such that the LCENs on the respective forms are equal.

For 5E6 and later, if "OAP" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on this form.

If "OAP" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on the OSPSDSL form.

For 5E7 and later, if SERVICE CLASS is "OAP":

- then DATA LINK GRP must be entered and DATA LINK NBR must be 0 or 1. If DATA LINK NBR is 1, then DATA LINK GRP must be 1 - 8. If DATA LINK NBR is 0, then DATA LINK GRP must be 1 - 32,
- a corresponding OPARM form must be found by matching LCEN and OFFICE NUMBER on the OPARM form with LCEN and DATA LINK GRP on the OSPSDSL form. If the OFFICE TYPE is "O" or "F" on the OPARM form, the DATA LINK NBR must be 0 or 1 respectively on the OSPSDSL form.
- no more than 4 LCENs with a SERVICE CLASS of "OAP" can be assigned to a single SM. In addition, the LCEN must not be 19200000, and
- LVL2 PROF must be "ATA" and the AUTOQUOTE ANALOG MAT LINE fields, MATE LCEN, SCRN IDX, and DAS, must be not be entered.

RAS - If the SERVICE CLASS is "RAS" and only one RAS for a particular DSL NAME ID is assigned to an SM, an RISITE form (5940 Record) must exist that meets the following conditions:

- SITE ID must match the DSL NAME ID on the OSPSDSL form.
- SM must match the first three digits of the LCEN field on the OSPSDSL form.
- RAS EQUIPPED? field must be set to "Y".
- RAS DUPLEX ACC? field must be set to "N".

If the SERVICE CLASS is "RAS" and two RASs for a particular DSL NAME ID are assigned to an SM, an RISITE form must exist that meets the following conditions:

- SITE ID must match the DSL NAME ID on the OSPSDSL form.
- SM must match the first three digits of the LCEN field on the OSPSDSL form.
- RAS EQUIPPED? field must be set to "Y".
- RAS DUPLEX ACC? field must be set to "Y".

For 5E6 and later, if "RAS" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form.

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Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on this form.

RTRS - There are two conditions that must be satisfied when there are exactly two OSPSDSL forms with a SERVICE CLASS of "RTRS" or "DASC" and the SM portion of the LCENs match.

If "RAS" is entered, then CONFIGURATION must be "LOADED" on the corresponding EQIM form. For forms to correspond, the SM on the EQIM form matches the first 3 digits of the LCEN on the OSPSDSL form. For 5E9(2) and later, for the CONFIGURATION that supports this value, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

If "RAS" is entered, then LVL2 PROF must be "ATA", and the AUTOQUOTE ANALOG MATE LINE fields, MATE LCEN, SCRN IDX, and DAS must not be entered.

1. DATA LINK GRP entries must be equal.
2. One DATA LINK NBR must be even and the other odd, with

   (the odd entry) - 1 = (the even entry).

If exactly one OSPSDSL form is entered with a SERVICE CLASS of "RTRS" or "DASC", then the DATA LINK NBR must be an even number.

If "RTRS" is entered, then LVL2PR must be "RTRS" and the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

TAOPER - For 5E6 and later, if "TAOPER" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on this form.

If "TAOPER" is entered, then the AUTOQUOTE ANALOG MATE LINE fields: MATE LCEN, SCRN IDX, and DAS must not be entered.

XDB - See also **OAP**. If "XDB" is entered and FIRMWARE CLI is not entered then LVL2 PROF must be "ISDN", and the AUTOQUOTE ANALOG MATE LINE fields (MATE LCEN, SCRN IDX, and DAS) must not be entered. If FIRMWARE CLI is entered, then LVL2 PROF must be "ATA" and the AUTOQUOTE ANALOG MATE LINE fields must not be entered.

OSPSDSL forms with a SERVICE CLASS of "XDB" require corresponding AMLBDSL forms (5447 Records) with matching LCENs.

A maximum of 160 DSLs with a SERVICE CLASS of "XDB" can be assigned to one SM (first three digits of LCEN) on OSPSDSL forms.

DATA LINK NBR must be entered and be in the range of 1-2015.

For 5E14 and earlier, DATA LINK GRP must be entered and in the range of 1 - 2000. For 5E15 and later, DATA LINK GRP must be entered and in the range of 1 - 8191. For each unique DATA LINK GRP where the corresponding SERVICE CLASS is "XDB", the value must also appear in the MLHG field on an MLHG form (5110 Record). Additionally, the MLHG must have an MLHG FEATURE which appears in the FEATURE field on an MLHGFD form (5604 Record) where the HUNT TYPE field is "PSUCD".

For 5E6 and later, if "XDP" is entered, then OSPS PSM must be "Y" on the corresponding EQIM form. Forms correspond if the SM on the EQIM form matches the first 3 digits of the LCEN on this form.

2.4 # ISCN

Description: Enter a valid 6-digit packet ISCN (Integrated Services Channel Number) DSL location. The PSU (Protocol Handler) Shelf number must correspond to a shelf on the EQPSU form which has a SHLF

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SIDE 0/1 EQST of "O".

Each CHL GRP (DSL GROUP) corresponds to a PROTOCOL HANDLER assigned to the PSU SHELF on the EQPSUPH form (5742 Record) with the SWITCHING MODULE equal to this SM and the PSU SHELF equal to the PSU Protocol Handler shelf number.

The CHL is the PSU Protocol Handler member number within the Protocol Handler.

Required Field.
Valid Entries: 6-digit packet ISCN with the following format:

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		**Format**	**Valid Entries**
Shelf	SHELF	X	0 - 4
Channel Group	CHL GRP	XX	00 - 15
Channel	CHL	XXX	5E4(2) and later 000 - 127

Data Rules:

Any combination of SHELF and CHL GRP entered on this form must be defined on an EQPSUPH form.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

Duplicate ISCNs may not be assigned. ISCNs cannot be duplicated on one or more of the following forms:
- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT

If an SM/ISCNs combination has been assigned, then the corresponding combination of SM, PSU, PSU SHELF and GRP must be entered on the PSUGP form.

For 5E4(2) and later, if "PH16" is entered in the PROTOCOL HANDLER TYPE field of the EQPSU form, then the CHL portion of the ISCN entry must be in the following ranges: 000 - 003; 006 - 009; or 012 - 015. If the SHELF (on the SM where digital subscriber lines are assigned) has 16-channel Protocol Handler packs, the CHL sub-field is limited to the range of 000 - 015.

A duplicate combination of the SM entry (first three digits of the LCEN field) and the first three digits of ISCN is not allowed. Note that if the last three digits of the ISCN field are "000", that combination of SM and the first three digits of the ISCN entry (SHELF and CHL GRP) cannot be assigned on any other form.

The combination of the first three digits of the LCEN field and the first three digits of the ISCN field must be unique within the switch.

The first three digits of the LCEN field and the first three digits of the ISCN field may not be duplicated in the first three digits of the DEN field and the first three digits of the ISCN field, respectively, on a TRUNK form (5204 Record).

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The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- RTERM
- XAT

with all TRUNK forms which have a TRKCLS of:

- "EDSL"
- "IFTERM"
- "IFOPER"

However, they can not have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of

- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form
- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form.
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2,
- MISLINK - where SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form.
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is "TAOPER" or "DAOPER".
- XAT - where SHELF/CHL GRP is the first three digits of ISCN.

Each SM (Switching Module) can have up to 5 PSU SHELFs. On the EQIM form, when UNIT TYPE is not "SM2000" each PSU SHELF can be assigned up to (32 times X) time slots for the following table of applications. (Note: X represents the number of PIDBs, 0 to 4, provisioned per shelf.)

Timeslots Reserved for Applications

Application	Definition
EDSL	TRKCLS set to "EDSL" on the TKGRP form
IFOPER	TRKCLS set to "IFOPER" on the TKGRP form
IFTERM	TRKCLS set to "IFTERM" on the TKGRP form

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IP	TRKCLS set to "PACKET" on the TKGRP form
ISM	PSISM
PKTPIPE	TRKCLS set to "PKTPIPE" on TKGRP form
RISLU B Channel	DSL and AMLBDSL
RISLU D Channel	DSL, DSLAP, MISLINK, and OSPSDSL
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value SPCHNDLR
X.25	XAT
X75	TRKCLS set to "X75" on the TKGRP form
X75P	TRKCLS set to "X75P" on the TKGRP form

For 5E10 and later, each DI (Data Interface) in an SM can have a maximum of 256 nailed-up timeslots reserved for the applications listed in the preceding table (except for the RPA application). These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the following applications. Note that a D channel only takes a quarter of a time slot. This data rule is not executed on an SM-2000, because provisioning of nailed-up timeslots is not required on an SM2000.

2.5 FIRMWARE CLI

Description: Enter the firmware CLI (Change Level Indicator) of the equipment assigned to this LCEN. This diagnostic value is transmitted to the switch upon initialization of the BST and VDT (Video Display Terminal) units.
Default: 000000000
Valid Entries: 000000000

Data Rules:

An entry in this field is not allowed if the SERVICE CLASS is "XDB".

2.6 D RELPIDB

Description: Enter the ISLU D-channel packet switching Peripheral Interface Data Bus number.

Software Release: 5E4(2) and later
Valid Entries: 2 - 11

Data Rules:

Do not enter a value if the LCEN is defined on a RISLU; RISLUs do not have D RELPIDB.

If an entry is made in the D RELPIDB field, then entries must also be made in the TIMESLOT and QTR TS fields. Conversely, if one of these fields is left blank, they all must be blank; ODA will assign the appropriate values.

The combination of D RELPIDB, TIMESLOT and QTR TS fields on this form must not be duplicated on any DSL, DSMLHLN, DSLAP or other OSPSDSL forms.

Entries in the D RELPIDB field must be assigned on the EQISLU form with a PIDB TYPE of "PSU" and a SHELF matching the first digit of the ISCN entry on this form.

2.7 TIMESLOT

Description: Enter the D-channel time slot.

Software Release: 5E4(2) and later
Valid Entries: 0 - 31

Data Rules:

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If a TIMESLOT value is entered, it must not equal the LGC portion of the LCEN value plus 16. The LGC is the fifth and sixth digits of the LCEN. The control time slot is the LGC. There must be two control time slots per time slot (an LGC and an LGC + 16).

Do not enter a value if the LCEN resides on a RISLU.

If an entry is made in the TIMESLOT field, then entries must also be made in the D RELPIDB and QTR TS fields. Conversely, if any of these three fields are left blank, they all must be blank; ODA will assign the appropriate values. The combination of D RELPIDB, TIMESLOT and QTR TS fields on this form must not be duplicated on any DSL, DSMLHLN, DSLAP or other OSPSDSL forms.

For 5E8 and later, the LCEN's assigned on the AMLBDSL, DSLAP or OSPSDSL forms, or DSL OE's on the DSL form or OE's on the MISLINK form can not have their D and/or BChannels assigned to conflicting DPIDB time slots or quarter time slots due to manual (vs ODA) time slot assignments. Each SM/ISLU or SM/IDCU DPIDB time slot may be assigned only once. (Note, D channels are allocated to quarter time slots; therefore up to four unique assignments can be made before a time slot is considered full.

When making manual assignments, care must be taken to use assignments as shown in Figure 1, TIMESLOT Assignment vs LGC and D RELPIDB. For example, if manual assingments are being made and the D RELPIDB selected is 11 and the LGC from the OE is 0, then the TIMESLOT assignment must be 1, 9, 17, or 25. B and/or D channel assignments made manually cannot conflict with the ODA assignment algorithm. The ODA algorithm is allocated 4 time slots per DPIDB per SM/ISLU/LGC. The LGCs 00 thru 07 are allocated time slots on the odd numbered DPIDBs while LGCs 08 thru 15 are allocated time slots on the even numbered DPIDBs Manual time slot time slot assignments do not have to follow this algorithm. However, if manual assignments are made, they will use one or more time slots. These manual assignments diminish and may conflict with the time slots available for the ODA assignment algorithm. For example, TS 1, 9, 17 and 25 are the 4 time slots that are allocated to ODA for LGC 0 in any ISLU which has a DPIDB 11 assigned. If a manual assignment is made to TS 9 on DPIDB 11 from any LGC in this ISLU there will only be 3 TS left on PIDB 11 for ODA assignments. Of course other odd numbered DPIDBs will have 4 TS for ODA assignments to LGC 0.

2.8 QTR TS

Description: Enter the D-channel quarter time slot.

Do not enter a value if the LCEN resides on a RISLU.

In order to conserve resources, the assignment of QTR TSs must be "packed." That is, all QTR TSs in a TIMESLOT must be assigned (if possible) before another TIMESLOT is used. To pack the TIMESLOTs, all D-channels on an LGC are candidates for assignments to the same TIMESLOT. No D-channels can be assigned to a TIMESLOT to which a D-channel from another LGC has been assigned.

The D-channels which are assigned to a TIMESLOT must all be in the same CHL GRP (the second and third digits of the ISCN). Furthermore, if the PROTOCOL HANDLER TYPE on the EQPSU form is "PH16," the DSL MEMBERs (the last three digits of the ISCN) of this DSL GROUP, when divided by six, must be equal (when dividing, disregard the remainder).

For example, ISCNs 106000 through 106005 could be assigned to two TIMESLOTs in any combination of two and four or three and three. However, ISCN 106006 (the next member of CHL GRP 06 assigned to SHELF 1) could not be assigned to either of these D TIMESLOTs, and neither could any other ISCN be assigned to either of these TIMESLOTs.

If "PH128" is entered in the PROTOCOL HANDLER TYPE field of the EQPSU form, then the only restriction on the ISCN is that all members assigned to a given TIMESLOT must be in the same CHL GRP, and have the same SHELF assignment (the first three digits of the ISCN must be equal).

Software Release: 5E4(2) and later
Valid Entries: 0 - 3

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Data Rules:

If an entry is made in the QTR TS field, then entries must also be made in the D RELPIDB and QTR TS fields. Conversely, if one of these three fields are left blank, they all must be blank; ODA will assign the appropriate values. The combination of D RELPIDB, TIMESLOT and QTR TS fields on this form must not be duplicated on any DSL, DSMLHLN, DSLAP or other OSPSDSL forms.

The QTR TS must be assigned to a D RELPIDB that is defined on the EQISLU form.

2.9 LVL2 PROF

Description: Level 2 parameter profile type.

Software Release: 5E6 and later
Required Field.
Valid Entries:

Valid LVL2 PROF Entries

Entry	Definition
ATA	OSPS Administrative Terminals or Alarm circuit
BST	Terminal
BXV	On DSL B-channel: variable LAPB
DASC	OSPS Directory Assistance System/Computer term
DX	X.25 packet switching on D channel; no voice on D channel; no B channels
EIS1	External Information System profile 1
EIS2	External Information System profile 2
HOBICR	OSPS Hotel Billing Information Center Record TTY
HOBICV	OSPS Hotel Billing Information Center Voice Quote TTY
HOBIS	OSPS Hotel Billing Information System
IFPRI	OSPS Interflow Primary Rate Interface
ISDN	Two B channels and one D channel
PKTSW	Software Release: 5E8 and later. OSPS Video Display Terminal
RTRS	OSPS Real-Time Rating System
XISDN	Voice/data on D Channel, no B Channel

Data Rules:

The following table gives the LVL2 PROF choices available with the corresponding SERVICE CLASS.

SERVICE CLASS	LVL2 PROF
DAOPER	BST or PKTSW
EIS	EIS1 for CCI EIS2 for IBM
TAOPER	BST or PKTSW

For 5E7 and later, if "ATA", "BST", "DASC", "EIS1", "EIS2", "HOBICR", "HOBICV", "HOBIS", "RTRS" are entered, then D CHAN SERV must be "SONLY".

For 5E8 and later, an AMLBDSL form must not be submitted unless LVL2 PROF (on the corresponding OSPSDSL form with matching LCENs) is "ISDN" or "PKTSW".

ISDN - For 5E7 and later, if "ISDN" is entered, then D CHAN SERV must be "ADMIN".

A corresponding AMLBDSL form is required if "ISDN" is entered in this field. Forms correspond if the LCEN on this form and the AMLBDSL match.

PKTSW - For 5E8 and later, if "PKTSW" is entered, then D CHAN SERV must be "SX". Also, a corresponding AMLBDSL form is required if "PKTSW" is entered in this field. Forms correspond if the LCENs on this form and the LCEN on the AMLBDSL form match.

VDT - For 5E7 and later, if "VDT" is entered, then D CHAN SERV must be "SX".

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2.10 D CHAN SERV

Description: Enter the type of service on a DSL D-channel.

Required Field.

Valid D CHAN SERV Entries

Entry	Definition
ADMIN	Administration only, no Q.931 or X.25 signaling
SONLY	Q.931 signaling only
SX	Q.931 signaling and X.25 packet signaling

Data Rules:

If "ADMIN" or "SX" is entered , then a corresponding AMLBDSL form must be entered where the LCEN on that form matches the LCEN on this form.

EXTERNAL DATA LINK

The following fields (Section 2.11 - Section 2.12) define DSL data links.

The DATA LINK GRP and DATA LINK NBR fields are used to give a user-friendly "name" to groups of DSL data links. The usage is predominantly for maintenance messages. The DATA LINK GRP is used to identify the group to which the DSL data link belongs. A group must be comprised of DSL data links which are all used for the same purpose. The DATA LINK NBR is used to identify the particular member of the group.

As an example, assume that the 5ESS Switch can have, system wide, 3 groups of 20 DSL data links used for Purpose A and 2 groups of 10 DSL data links used for Purpose B. Purpose A could have DATA LINK GRPs (groups) of 1, 2 and 3 with DATA LINK NBRs (members) from 0 to 19 in each DATA LINK GRP. Purpose B could have DATA LINK GRPs (groups) of 1 and 2 with DATA LINK NBRs (members) from 0 to 9 in each DATA LINK GRP. Notice that using the same group number is not an error if the groups are for different purposes.

However, for an EIS (External Information System), the EIS NBR is the same no matter what the SM is. All group numbers are the same but the data link number could be 0 - 3 on one SM or 4 - 7 on another SM.

The following table defines the allowable entries for the DATA LINK GRP and DATA LINK NBR fields based on the SERVICE CLASS.

SERVICE CLASS	DATA LINK GRP	DATA LINK NBR
AQDSL	1	0 - 15
DASC	1 - 999	5E4(2) and later 0 - 4096
EIS	1 - 16	0 - 999
HOBICR	1 - 999	0 - 4096
HOBICV	1 - 999	0 - 4096
HOBIS	1 - 999	0 - 4096
OAP	5E7 and later 1 - 32	0 - 1
RAS	500 - 999	0 - 4096
RTRS	1 - 999	0 - 4096
XDB	5E14 and earlier: 1 - 2000 5E15 and later: 1 - 8191	1 - 2015

2.11 DATA LINK GRP

Description: Enter the data link DSL external name identification. The valid entries are shown in the preceding table under EXTERNAL DATA LINK.

Software Release: 5E3 and later

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Valid Entries: 0 - 2001

Data Rules:

The following SERVICE CLASSes must not have an entry in this field: "DAOPER" and "TAOPER".

Only two RAS DSLs can be assigned to an SM on an OSPSDSL form.

2.12 DATA LINK NBR

Description: Enter the relative link portion of the data link DSL external name.

The valid entries are shown in the preceding table under EXTERNAL DATA LINK.

Software Release: 5E3 and later
Valid Entries: 0 - 4096

Data Rules:

The following SERVICE CLASSes must not have an entry in this field: "DAOPER", and "TAOPER".

Only 16 RAS DSLs can be assigned to an SM (first three digits of LCEN field) on OSPSDSL forms.

2.13 SM LINK NBR

Description: This is a verify only field which gives the relative link number on this SM for an EIS link.

AUTOQUOTE ANALOG MATE LINE

The following fields (Section 2.14 - Section 2.16) define analog port mate lines for AUTOQUOTE.

2.14 MATE LCEN

Description: Enter a valid LCEN value, exactly as described in the LCEN field. The MATE LCEN must define a port on a Z-card, as indicated by a selection of "ZLC" on the TYPE field of the ISLULC form.

The 5ESS Switch has a system maximum of 16 sets of DSL ports and analog port mates, joined by a modem and a terminal adaptor. ODA will not permit more than 16 OSPSDSL forms with a value entered in the MATE LCEN field.

Software Release: 5E4(2) and later
Valid Entries: See LCEN field entries

Data Rules:

This field must be entered if the SERVICE CLASS is defined as "AQDSL", and must be left blank if the SERVICE CLASS is not "AQDSL".

The MATE LCEN field must have a value that is different than the value entered in the LCEN field on this form.

The MATE LCEN must not be duplicated on any DSL, DSMLHLN, DSLAP or other OSPSDSL forms.

The SM portion of the MATE LCEN field must match the entry in the ACQS SM field of the corresponding OSPSOPT form.

2.15 SCRN IDX

Description: Enter the Screen Index.

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Software Release: 5E4(2) and later
Valid Entries: 1 - 4095

Data Rules:

This field must be entered if the SERVICE CLASS is defined as "AQDSL", and must be left blank if the SERVICE CLASS is not "AQDSL".

2.16 DAS

Description: Enter a DAS (Digit Analysis Selector) value.

Software Release: 5E4(2) and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

This field must be entered if the SERVICE CLASS is defined as "AQDSL;" this field must be left blank if the SERVICE CLASS is not "AQDSL."

The value entered in this field must also be entered in the DIGIT ANALYSIS SELECTOR field on a DAS form (5300 Record).

TS	LGC															
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
0				3	5	7	9	11				2	4	6	8	10
1	11				3	5	7	9	10				2	4	6	8
2	9	11				3	4	7	8	10				2	4	6
3	7	9	11				3	5	6	8	10				2	4
4	5	7	9	11				3	4	6	8	10				2
5	3	5	7	9	11				2	4	6	8	10			
6		3	5	7	9	11				2	4	6	8	10		
7			3	5	7	9	11				2	4	6	8	10	
8				3	5	7	9	11				2	4	6	8	10
9	11				3	5	7	9	10				2	4	6	8
10	9	11				3	4	7	8	10				2	4	6
11	7	9	11				3	5	6	8	10				2	4
12	5	7	9	11				3	4	6	8	10				2
13	3	5	7	9	11				2	4	6	8	10			
14		3	5	7	9	11				2	4	6	8	10		
15			3	5	7	9	11				2	4	6	8	10	
16				3	5	7	9	11				2	4	6	8	10
17	11				3	5	7	9	10				2	4	6	8
18	9	11				3	4	7	8	10				2	4	6
19	7	9	11				3	5	6	8	10				2	4
20	5	7	9	11				3	4	6	8	10				2
21	3	5	7	9	11				2	4	6	8	10			
22		3	5	7	9	11				2	4	6	8	10		
23			3	5	7	9	11				2	4	6	8	10	
24				3	5	7	9	11				2	4	6	8	10
25	11				3	5	7	9	10				2	4	6	8
26	9	11				3	4	7	8	10				2	4	6
27	7	9	11				3	5	6	8	10				2	4
28	5	7	9	11				3	4	6	8	10				2
29	3	5	7	9	11				2	4	6	8	10			
30		3	5	7	9	11				2	4	6	8	10		
31			3	5	7	9	11				2	4	6	8	10	

Figure 1 TIMESLOT ASSIGNMENT VS LGC AND D RELPIDB ENTRIES

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```
                    5ESS Switch        _
ospsdsl           OFFICE DATA ADMINISTRATION
(5411)            OSPS DIGITAL SUBSCRIBER LINE

*1. LCEN       00300016       EXTERNAL DATA LINK
#2. SERVICE CLASS EIS          □□□□□□□□□□□□□
#3. ISCN       000008         10. DATA LINK GRP  0001
 4. FIRMWARE CLI  000000000     11. DATA LINK NBR  0014
 5. D RELPIDB    __             SM LINK NBR
 6. TIMESLOT     __
 7. QTR TS       _          AUTOQUOTE ANALOG MATE LINE
#8. LVL2 PROF    EIS1           □□□□□□□□□□□□□
#9. D CHAN SERV  SONLY          12. MATE LCEN    ________
                        13. SCRN IDX     ____
                        14. DAS          __
```

Figure 2 SAMPLE OSPSDSL FORM 5E7 - 5E14 SOFTWARE RELEASES

```
AND LATER                       5ESS Switch        _
ospsdsl           OFFICE DATA ADMINISTRATION
(5411)            OSPS DIGITAL SUBSCRIBER LINE

*1. LCEN       ________       EXTERNAL DATA LINK
#2. SERVICE CLASS ______        ---------------------------
#3. ISCN       ______         10. DATA LINK GRP ____
 4. FIRMWARE CLI _________      11. DATA LINK NBR ____
 5. D RELPIDB    __             SM LINK NBR
 6. TIMESLOT     __
 7. QTR TS       _          AUTOQUOTE ANALOG MATE LINE
 8. LVL2 PROF    ______         ---------------------------
#9. D CHAN SERV  _____          12. MATE LCEN    ________
                        13. SCRN IDX     ____
                        14. DAS          ___
```

Figure 3 SAMPLE OSPSDSL FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4M: 5412 RECORD
OSPS ACD CALLTYPE FORM - ACDCTP
OSPS ACD CALLTYPE POOL FORM - ACDPOL

1. GENERAL

The 5412(A-F) Records are available for the 5E4(2) Software Release. This record(s) is used to assign call type information for the OSPS ACD (Automated Call Distribution) feature. Figure 1 shows expected values and combinations for various fields. Deviations from the table entries will induce a warning message.

1.1 Automatic Call Distribution

All OSPS calls require that operator/agent assistance use the ACD software. The ACD matches operator requests with operators by maintaining the status of all operator positions on the switch and the status of all calls awaiting operator assistance. ACD allows switch administrators to separate incoming operator assistance traffic into distinct call type queues that can be handled by distinct teams of operators.

1.2 Toll And Assistance

Toll and Assistance calls arrive on ISP (Intermediate Switch Point) and CAMA (Centralized Automatic Message Accounting) trunks. Call type determination is done based upon how the call arrived at the OSPS, the way that the call was dialed, and whether this is an initial call or a recall. The 5412(A-F) Records are used to select a call type queue based on the details of the call arrival. Once the queue has been determined, the serving team and operator are selected in the same manner as for Directory Assistance calls.

1.3 Interflow

For the 5E5 and later Software Releases, Toll and Assistance calls may be interflowed from one OSPS office to another OSPS office. For information on the Interflow feature, refer to the OSPS Toll and Assistance feature section in Division 2, Section 3E. For these incoming interflow calls, the ACD has been expanded to provide more detailed screening of the call characteristics. This additional screening is provided by the ACDPOL form. This additional screening, provided by the ACDPOL form, is used when the incoming TGN or CDI information necessary to determine if the call type resides in some other OSPS switch (i.e., not the OSPS switch which is determining how the call should be handled). For incoming calls that are not interflowed from another OSPS switch the information provided in the ACDCTP form should be sufficient to determine the call type.

Please reference the OSPS Automatic Call Distributor feature section for more detailed information concerning the use of the ACDCTP and ACDPOL forms and their dependencies.

1.4 Listing Services Intercept

These forms are needed for Listing Services Intercept feature, even though an operator is not needed to handle the call.

1.5 Recent Change View

For 5E7 and later, the corresponding Recent Change Views for these forms is 26.9 and 26.10.

2. ACDCTP FORM - 5412-A/D RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

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2.2 * CALL ORIGIN

Description: Enter the originating class of the call (how the call arrived at the switch). A call could come in over an ISP trunk, a system CAMA trunk or a transfer CAMA trunk. An inward call from another operator can arrive over some other type of inward trunk.

For an "AIS" call, if an intercept call arrives and a destination index is not found for the call on the AISCLS form, then the intercept treatment will be based on the call origination data (SECOND LEVEL is "DEST"), or on the call origination data and incoming trunk group (SECOND LEVEL is "TGRP").

Software Release: 5E5 and later
Required Field.
Valid Entries:

Valid CALL ORIGIN Entries

Entry	Definition
AIS	Software Release: 5E6(2) and later. Incoming intercept calls.
AP	Software Release: 5E9(2) and later. Automated Position Call
CDSU	Software Release: 5E11 and later. This value was "ORIG2" for 5E10. AATLSOS - AAP (Alternate Access to Language Specific Operator Services - Automatic Access Prompting) Service. This value supports the AATLSOS AAP Using CPDL (Call Processing Data Link) Interface. For more information on this feature, see Division 2, Section 4A412.
DA2VDT	DA call to a VDT (Video Display Terminal).
ICS	Software Release: 5E11 and later. Inmate Calling Service. This value supports the ICS (Inmate Calling Service) feature. For more information on this feature, see Division 2, Section 4A385.
INW	Inward. An inward call occurs when a local operator routes a call to a distant operator for information concerning the call. The distant operator may then assist the calling party (busy line verification, etc.). The inward operator is the distant operator.
ISP	Intermediate Switching Point (4x Tandem). A trunk class of FIOPR on the TKGRP form (5202 Record) and a CDI entry of 0 (zero) on the DIOPR form (5418 Record) will enter the OSPS ACD as an ISP call. The most common call arrives on an ISP trunk.
LSTA	Software Release: 5E6(2) and later. Listing Services call using a TA (Toll and Assist) OT (Originating Treatment).
NIT	Non-ISP Non-TA call to a VDT (Video Display Terminal).
OPI	OSPS Operator-initiated. This includes delayed calls and conference calls with another operator when no forward/back party is connected (both internal and external operators).
ORIG2	Software Release: 5E10 only See "CDSU".
ORIG3	Software Release: 5E9(2) - 5E10 Inmate Calling Service. This value was changed to ICS for 5E11. See ICS for data rules. See Division 2, Section 4A385 for more information on the Inmate Calling Service feature.
RES	Residual Call. A residual call occurs when an OSPS operator is recalled by a mobile or marine operator to collect money from the calling party.
SPCL700	Software Release: 5E7 and later. A specialized 700 number. This entry supports the Specialized Handling for 700 Services secured features. For more information on these features, see Division 2, Section 4A69 and Section 4A89.
SYS	CAMA System. This occurs when the local office cannot identify the back number.
XFER	Transferred through CAMA (Centralized Automatic Message Accounting).

Data Rules:

Figure 1 gives the entry combination values for CALL ORIGIN values.

General:
For 5E10 and later:
Unless the CALL ORIGIN is
- "CDSU"

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- "ICS"
- "ORIG2"
- "ORIG3"
- "SPCL700"

every ACDCTP form must have a corresponding OSPSCT form with OSPS CALL TYPE equal to CALL TYPE.

If CALL ORIGIN is not one of the following
- "CDSU"
- "ICS"
- "ORIG3"
- "SPCL700"

then CALL TYPE must be less than 129.

For 5E11 and later, CALL TYPE in the NEXT CALL TYPE POOL LIST on the ACDPOL form must be less than 129 if CALL ORIGIN is not "CDSU"
- "ICS"
- "ORIG2"
- "ORIG3"
- "SPCL700"

on the ACDCTP form. ACDCTP form is found by matching PRE CALL ID on ACDCTP form with the PRE CALL ID on the ACDPOL form.

For 5E13 and later:

When CALL ORIGIN on the ACDCTP form is not "SPCL700", "CDSU", or "ICS", CALL TYPE must be less than 129.

At least one ACDCTP form must be submitted for each FLEXACD form.

AIS - If "AIS" is entered:

- DISPLAY INDEX must be entered.
- PREFIX must be "NULLP".
- CARRIER must be "UKWN".
- OSPSID must be 0.
- COIN must be "N".
- either SECOND LEVEL must not be "NONE", or ACD EXPRESSION must not be "Q".
- APOS CALL TYPE must not be entered.
- For 5E8 and later, a SERVDATA form must be entered with OSPS SVC CODE of "INCPT" or "IBMINCPT". (SVC ID of SERVDATA form is matched with SVC ID of OSPSCT form to find SERVDATA form. OSPS CALL TYPE of OSPSCT form is matched with CALL TYPE of ACDCTP form to find OSPSCT form) .
- Conversely if CALL ORIGIN is not "AIS", OSPS SVC CODE cannot be

  "IBMINCPT"

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"INCPT"

"INMATE"

"SPCL700"

"SRVC7" (5E10 and earlier).

- For 5E13 and later, there must be an OSPSCT form where CALL TYPE on the FLEXACD form matches OSPS CALL TYPE on the OSPSCT form. Then SVC ID on the OSPSCT form must match the SVC ID on a SERVDATA form. Additionally, OSPS SVC CODE on the SERVDATA form must be "INCPT" or "IBMINCPT".

AIS or LSTA:
If "AIS" or "LSTA" is entered in CALL ORIGIN the following data rules apply:

- and PRE CALL ID is entered, CALL ORIGIN must be the same on all ACDCTP forms with the same PRE CALL ID.
- SVC ID must be entered on the OSPSCT form. An OSPSCT form is required for each ACDCTP form where OSPS CALL TYPE on the OSPSCT form matches CALL TYPE on the ACDCTP form. OPER TYPE must be "TA" on that OSPSCT form.
- SVC ID of OSPSCT form must be the same as the SVC ID of SERVDATA form. (OSPS CALL TYPE of OSPSCT form is matched with CALL TYPE of ACDCTP form.) Conversely if "AIS" or "LSTA" is not entered for CALL ORIGIN, SVC ID must not be entered on the OSPSCT form.
- If APOS CALL TYPE is entered on the ACDPOL form, CALL ORIGIN must not be "SPCL700", "LSTA" or "AIS" on the corresponding ACDCTP form. The forms correspond if the PRE CALL ID field of ACDPOL form matches the PRE CALL ID field of ACDCTP form.

AP
For 5E9(1) only if AP is entered:
PREFIX must be "NULLP"
SECOND LEVEL must be "DEST"

CDSU
If "CDSU" is entered,
- APOS CALL TYPE cannot be entered
- DISPLAY INDEX cannot be entered
- OSPS ID must be 0

For 5E10 only, if "ORIG2" is entered, a SERVDATA form must be entered where SVC ID on the SERVDATA form matches CALL TYPE on the ACDCTP form and OSPS SVC CODE on the SERVDATA form is "SRVC8".

For 5E11 and later, if "CDSU" is entered, a SERVDATA form must be entered where SVC ID on the SERVDATA form matches CALL TYPE on the ACDCTP form and OSPS SVC CODE on the SERVDATA form is "AAP" .

DA2VDT
If "DA2VDT" is entered:

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- PREFIX must be "NONE".
- CARRIER must not be "UNKWN".
- DISPLAY INDEX must be entered.

ICS (or ORIG3):
If "ICS" is entered, then:

- OSPS ID must be 0
- APOS CALL TYPE must not be entered
- DISPLAY INDEX must not be entered
- a SERVDATA form must be submitted where SVC ID on the SERVDATA form matches CALL TYPE on the ACDCTP form and OSPS SVC CODE on the SERVDATA form must be "INMATE" ("SRVC7" for 5E10 and earlier).

INW - If "INW" is entered:

- PREFIX must be "NULLP".
- COIN must be "N".
- CARRIER must be "DC".
- DISPLAY INDEX must not be entered.

ISP - If "ISP" is entered:

- DISPLAY INDEX must not be entered.

LSTA - If "LSTA" is entered:

- DISPLAY INDEX must be entered.
- OSPSID must be 0.
- APOS CALL TYPE must not be entered.

For 5E13 and later, at least one ACDCTP form must be submitted for each FLEXACD form, where PRE CALL ID on the ACDCTP form matches the PRE CALL ID on the FLEXACD form.

OPI - If "OPI" is entered:

- PREFIX must be "NULLP", 0, or "0M".
- COIN must be "N".
- CARRIER must be "DC".
- DISPLAY INDEX must not be entered.
- SECOND LEVEL must be "NONE".

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- For 5E13 and later, ACD EXPRESSION must equal "Q".

RES
If "RES" is entered:

- DISPLAY INDEX must not be entered.
- For 5E13 and later, ACD EXPRESSION must equal "Q".

SPCL700 - If "SPCL700" is entered:

- OSPS ID must be 0.
- APOS CALL TYPE must not be entered.
- DISPLAY INDEX must not be entered.
- For 5E8 and later, a SERVDATA form must be submitted where SVC ID on the SERVDATA form matches CALL TYPE on the ACDCTP form and OSPS SVC CODE on the corresponding SERVDATA form must be "SPCL700" .
- A SERVDATA form must be submitted where SVC ID on the SERVDATA form matches the CALL TYPE field in the NEXT CALL TYPE POOL LIST on the ACDPOL form, and OSPS SVC CODE on the SERVDATA form must be "SPCL700".
- OSPS SVC CODE on the corresponding SERVDATA form must be "SPCL700". SVC ID on the SERVDATA form matches CALL TYPE in the NEXT CALL TYPE POOL LIST on the ACDPOL form. ACDPOL form is found by matching PRE CALL ID on the ACDCTP form with the PRE CALL ID on the ACDPOL form.
- When PRE CALL ID is entered on one ACDCTP form, and the CALL ORIGIN is "SPCL700", CALL ORIGIN must be "SPCL700" on all ACDCTP forms with the same PRE CALL ID entered.
- For 5E13 and later, a SERVDATA form must be found where CALL TYPE on the FLEXACD form matches the SVC ID on the SERVDATA form. The OSPS SVC CODE on this SERVDATA form must be "SPCL700".

SYS - If "SYS" is entered:

- PREFIX must be "NULLP" or 1. If PREFIX is "NULLP",

CARRIER must be "DC". If PREFIX is 1, CARRIER must be "IC", "LEC", or "UNKWN".

- COIN must be "N".
- DISPLAY INDEX must not be entered.

XFER - If "XFER" is entered:

- PREFIX must be "NULLP".
- COIN must be "N".
- CARRIER must be "DC".

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- DISPLAY INDEX must not be entered.
- SECOND LEVEL must not be "DEST".
- For 5E13 and later, ACD EXPRESSION cannot contain call property type "D".

2.3 * PREFIX

Description: Enter the prefix that was originally dialed on the call.

Software Release: 5E5 and later
Required Field.
Valid Entries:

Valid PREFIX Entries

Entry	Definition
0	0+ was dialed
1	1+ was dialed
NULLP	Don't care what prefix was dialed
NONE	No prefixed digits are dialed
0M	0- was dialed
01	Dial "01 + international"
011	Dial "011 + international"

Data Rules:

Figure 1 shows valid combinations of CALL ORIGIN, PREFIX, COIN, and CARRIER fields.

If the entry in the CALL ORIGIN field is "DA2VDT" or "NIT", then the entry in the PREFIX field must be "NONE".

If the entry in the CALL ORIGIN field is "INW" or "XFER", then the entry in the PREFIX field must be "NULLP".

If the entry in the CALL ORIGIN field is "OPI", then the entry in the PREFIX field must be "0", "NULLP" or "0M".

If the CALL ORIGIN is "SYS" and the CARRIER is "DC", then the PREFIX must be "NULLP".

If the CALL ORIGIN is "SYS" and the CARRIER is "IC", "LEC" or "UNKWN", then the PREFIX must be 1.

2.4 * COIN

Description: Is the incoming call a coin call?

Software Release: 5E5 and later
Required Field.
Valid Entries: Y, N

Data Rules:

Figure 1 shows valid combinations of CALL ORIGIN, PREFIX, COIN, and CARRIER fields.

If the entry in the CALL ORIGIN field is "INW", "OPI", "SYS", "AIS", or "XFER", then the entry in the COIN field must be "N".

2.5 * CARRIER

Description: Enter the type of carrier associated with the incoming call.

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Software Release: 5E5 and later
Required Field.
Valid Entries:

Valid CARRIER Entries

Entry	Definition
DC	Don't care about the carrier type
IC	Interexchange Carrier
LEC	Local Exchange Carrier
UNKWN	Unknown Carrier type

Data Rules:

Figure 2 shows valid combinations of CALL ORIGIN, PREFIX, COIN, and CARRIER fields.

If the associated CALL ORIGIN is equal to "NIT" or "DA2VDT", the CARRIER must not be set to "UNKWN". If the entry in the CALL ORIGIN field is "INW", "OPI", "SYS" or "XFER", the entry in the CARRIER field must be "DC".

2.6 * OSPS ID

Description: Enter the OSPS Switch ID from where the call originated. This OSPS Switch ID uniquely identifies the OSPS Switch from which an interflow call originated.

Software Release: 5E5 and later
Required Field.
Default: 0
Valid Entries: 0 - 9999

Data Rules:

If the call in question originates from a non-interflow OSPS Switch, then this field should be set to 0.

If the OSPS ID field is set to any number greater than zero, then an INFLTAP form must exist with an entry in the OSPS LIST field that equals the OSPS ID field. This check ensures that the OSPS office identified here is the one sending information to this OSPS switch.

2.7 # CALL TYPE

Description: Enter the CALL TYPE number that is to be used to route the incoming call to the proper serving team. For 5E8 and later, enter the call type or the Service ID number for Listing Services.

Software Release: 5E5 and later
Required Field.
Valid Entries:

For 5E8 and later: 1 - 1023

Data Rules:

Every CALL TYPE entered on this form must have a corresponding OSPSCT form with a matching OSPS CALL TYPE field. In addition, the OPER TYPE on the corresponding OSPSCT form must be set to "TA".

For 5E8 and later, every Service ID entered on this form must have a corresponding SERVDATA form with a matching SVC ID field.

2.8 PRE CALL ID

Description: Enter the TA (Toll & Assistance) Pre Call ID used to link the call type determination

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information contained upon this ACDCTP form to a common pool of expanded call type information defined on the ACDPOL form, based on the trunk group number and/or destination index of the incoming call.

Software Release: 5E5 and later
Valid Entries: 1 - 127

Data Rules:

Enter a number from 1 to 127 if the incoming calls associated with this CALL ORIGIN reference the pool of common information of expanded call types, otherwise leave blank.

If this field is left blank, then the SECOND LEVEL field must be set to "NONE". If a PRE CALL ID value is entered, then the SECOND LEVEL field must be set to "TGRP" or "DEST".

If PRE CALL ID is entered on one ACDCTP form, and the CALL ORIGIN is
- "CDSU"
- "ICS"
- "ORIG2"
- "ORIG3"
- "SPCL700"

the CALL ORIGIN value must be the same on all of the ACDCTP forms with the same PRE CALL ID value.

For 5E13 and later:

When PRE CALL ID is entered and SECOND LEVEL is "NONE", ACD EXPRESSION must not be "Q".

When PRE CALL ID is not entered, SECOND LEVEL must be "NONE" and ACD EXPRESSION must be "Q".

2.9 DISPLAY INDEX

Description: This is the DA to VDT (Video Display Terminal) and Non-ISP calls VDT display index. The default value for this field is blank, meaning that no VDT displays are required.

Software Release: 5E5 and later
Valid Entries: 1 - 276

Data Rules:

DISPLAY INDEX must be entered if CALL ORIGIN is "AIS", "DA2VDT", or "NIT".

DISPLAY INDEX cannot be entered if CALL ORIGIN is "INW", "INW", "RES", "ISP", or "OPI".

If CALL ORIGIN is equal to "NIT" or "DA2VDT", then this field must contain a number from 1 to 276. In addition, if this field is set to 0 or 1, a corresponding OBSTS form with a matching BST DISPLAY INDEX must be found.

2.10 APOS CALL TYPE

Description: Enter the call type to be served by the Automated Position.

Software Release: 5E7 and later
Valid Entries: 1 - 128

Data Rules:

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The APOS CALL TYPE field is used by the Automated Position feature, which is a Secured Feature and must be purchased before it can be assigned. FEATURE ID 65 on the SFSYS form must be set to "S" or "Y", before APOS CALL TYPE can be entered.

APOS CALL TYPE must not be entered if CALL ORIGIN is "SPCL700", "AIS" or "LSTA".

If the APOS CALL TYPE is entered on this form, then there must be an OSPSCT form (5404 Record) where the OSPS CALL TYPE on an OSPSCT form must match the APOS CALL TYPE on this form. In addition, the OPER TA must be "TA" and the SVC ID must not be entered on the OSPSCT form.

2.11 SECOND LEVEL

Description: This field indicates if a second level of call screening information is required to determine the call type associated with this incoming call.

Software Release: 5E5 and later
Required Field.
Default: NONE
Valid Entries:

Valid SECOND LEVEL Entries

Entry	Definition
DEST	Expanded call determination based on an incoming CDI
NONE	Expanded call determination is not required
TGRP	Expanded call determination based on an incoming TGN

Data Rules:

If CALL ORIGIN is equal to "OPI", then SECOND LEVEL must equal "NONE".

If CALL ORIGIN is equal to "XFER", then SECOND LEVEL cannot be equal to "DEST".

If the PRE CALL ID field contains an entry, then "DEST" or "TGRP" must be entered in the SECOND LEVEL field; if the PREC CALL ID field does not contain an entry, then "NONE" must be entered in the SECOND LEVEL field.

3. ACDPOL FORM - 5421B/C/E/F RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

3.2 * PRE CALL ID

Description: This is the TA (Toll & Assistance) Pre Call ID which is used to link the expanded call type determination common pool information contained in this ACDPOL form back to the call type determination information defined upon the ACDCTP form. This record is used when more specific screening of the incoming call's characteristics is required to determine the call type associated with this call.

Software Release: 5E5 and later
Required Field.
Valid Entries: 1 - 127

Data Rules:

At least one NEXT CALL TYPE POOL LIST entry must be entered on each ACDPOL form entry.

For any value of PRE CALL ID entered on the ACDPOL form, a corresponding ACDCTP form with a matching PRE CALL ID value must be found. Duplicate TGN/CDI entries for each unique PRE CALL ID

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value are not allowed.

If the PRE CALL ID of the ACDPOL form matches the PRE CALL ID of the ACDCTP form, CALL ORIGIN cannot be "LSTA" or "AIS", and APOS CALL TYPE cannot be entered.

The PRE CALL ID entered on the ACDPOL form cannot have a corresponding PRE CALL ID and CALL ORIGIN of entry "AIS" on the ACDCTP form when DEST IDX is known on OSPSOPT form. (ACDPOL form is found by matching DEST IDX of OSPSOPT with the TGN/CDI of NEXT CALL TYPE POOL LIST of ACDPOL form)

3.3 * SEQ NO

Description: This sequence number allows the user to enter multiple lists associated with the same PRE CALL ID. Start with the value 1 and advance the value sequentially until all required TGNs or CDIs associated with this PRE CALL ID have been entered.

Software Release: 5E5 and later
Required Field.
Valid Entries: 1 - 1314

NEXT CALL TYPE POOL LIST

This is a list of the various TGNs and CDIs that may be associated with a particular PRE CALL ID. For any list entries entered, the following fields (Section 3.4 - Section 3.9) must contain valid data.

3.4 TGRP/DEST

Description: This field indicates whether the information on this list entry is defining TGN or CDI call screening call characteristics that are to be used to determine the call type associated with this PRE CALL ID.

Software Release: 5E5 and later
Valid Entries:

Valid TGRP/DEST Entries

Entry	Definition
DEST	Expanded call determination based on an incoming CDI.
TGRP	Expanded call determination based on an incoming TGN.

Data Rules:

For 5E10 and earlier, if TGRP/DEST is equal to "TGRP", then THIRD LEVEL can only equal "NONE" or "DEST" and TGN/CDI must be in the range of 1 - 2000. If TGRP/DEST is equal to "DEST", then THIRD LEVEL can only equal "NONE" or "TGRP" and TGN/CDI must be in the range of 1 - 4095.

For 5E11 and later, when TGRP/DEST is "TGRP", TGN/CDI must be 1 - 4000.

3.5 TGN/CDI

Description: For TGRP/DEST equal to "TGRP", enter the incoming TGN (Trunk Group Number) of the incoming call. For TGRP/DEST equal to "DEST", enter the CDI (Destination Code Index) for the incoming call.

When a call is interflowed to the receiving switch, the sending switch's FIOPR TGN number is used by the receiving switch for expanded call type determination.

If the receiving switch has an FIOPR TGN with the same TGN number as the sending switch, a conflict may result unless precautions are made. The following will prevent problems when the OSPS APS (Automated Position System) is added to any OSPS switch.

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To resolve this conflict, the receiving switch should use the fifth key to ACDCTP form, which is the OSPS ID field. If the OSPS ID field is NOT 000, i.e., it is the OSPS ID of the sending switch, then all calls from that sending switch that match the other four keys will be controlled by the entries on the record on the receiving switch. This information can then be used to match up to a PRE CALL ID that does not use the conflicting TGN number. PRE CALL ID is on the ACDCTP form, and it is the key to the ACDPOL form.

In addition, if the OSPS ID field is 000 on the receiving switch and if there is a matching OSPS ID entry for each sending office, then all non-interflowed calls (calls that originate on the receiving switch) that match the other four keys will be controlled by the entries in this record on the receiving switch.

Software Release: 5E5 and later
Valid Entries:
- For 5E10 and earlier TGN: 1 - 2000
- For 5E11 and later TGN: 1 - 4000
- For CDI: 1 - 4095

Data Rules:

Duplicate TGN/CDI entries for each unique PRE CALL ID value are not allowed.

When DESTINATION INDEX WITH ANI is entered on an AISCLS form, the associated ACDPOL form (where TGRP/DEST is "DEST" and TGN/CDI matches DESTINATION INDEX WITH ANI on the AISCLS form) must have its PRE CALL ID value match the PRE CALL ID on an ACDCTP form. Also the CALL ORIGIN on the ACDCTP form must be set to "AIS".

3.6 CALL TYPE

Description: Enter the Service ID number for Listing Services that is to be used to route the incoming call to the proper serving team. (The Service ID entries are defined in the SVC ID field of the SERVDATA form.)

Software Release: 5E5 and later
Valid Entries: 1 - 1023

Data Rules:

For every CALL TYPE entered on this form, a corresponding OSPSCT form with a matching OSPS CALL TYPE field value must be found; unless for 5E8 and later, the CALL TYPE has a value greater than 128. In addition, the OPER TYPE on this corresponding OSPSCT form must be set to "TA".

For each list element on an ACDPOL form where CALL TYPE is entered, SVC ID must be entered on the associated OSPSCT form when CALL ORIGIN on the associated ACDCTP form is "AIS" or "LSTA". OSPS CALL TYPE on the associated OSPSCT form matches CALL TYPE on the ACDPOL form and PRE CALL ID on the associated ACDCTP form matches PRE CALL ID on the ACDPOL form. Conversely, if CALL ORIGIN on the associated ACDCTP form is not "AIS" or "LSTA", SVC ID must not be entered on the associated OSPSCT form.

For 5E7 and later, CALL TYPE in the NEXT CALL TYPE POOL LIST on the ACDPOL form must be less than 129, if "SPCL700" is NOT entered in the CALL ORIGIN field on the ACDCTP form. The ACDCTP form is found by matching the PRE CALL ID field on the ACDCTP form with the PRE CALL ID field on the ACDPOL form.

3.7 DISPLAY

Description: This is the DA to VDT (Video Display Terminal) and Non-ISP calls VDT display index. An entry in this field is required if a VDT display is to be associated with this incoming call. No entry means

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that no VDT displays are required.

Software Release: 5E5 and later
Valid Entries: 1 - 276

Data Rules:

This field requires an entry if the CALL ORIGIN field on the corresponding ACDCTP form equals "NIT" or "DA2VDT". The call is being generated from the call origin; PRE CALL ID on the ACDPOL form equals a PRE CALL ID on the ACDCTP form. In addition, if this field contains an entry, then a corresponding OBSTS form with a matching BST DISPLAY INDEX must be found.

3.8 APOS CALL TYPE

Description: Enter the call type to be served by the Automated Position.

Software Release: 5E7 and later
Valid Entries: 1 - 128

Data Rules:

The APOS CALL TYPE field is used by the Automated Position feature, which is a Secured Feature and must be purchased before it can be assigned. The ACT field for SFID 65 on the SFSYS form must be set to "Y" , before APOS CALL TYPE can be entered.

If the APOS CALL TYPE is entered on this form, then there must be an OSPSCT form (5404 Record) where the OSPS CALL TYPE on an OSPSCT form must match the APOS CALL TYPE on this form. In addition, the OPER TA must be "TA" and the SVC ID must not be entered on the OSPSCT form.

For 5E7 and later, if APOS CALL TYPE is entered on the ACDPOL form, then CALL ORIGIN cannot be "SPCL700", "LSTA", or "AIS" on the corresponding ACDCTP form. Forms correspond if the PRE CALL ID field on the ACDPOL form matches the PRE CALL ID field on the ACDCTP form.

3.9 THIRD LEVEL

Description: This field indicates if a third level of call screening information is required to determine the call type associated with this incoming call.

Software Release: 5E5 and later
Default: NONE
Valid Entries:

Valid THIRD LEVEL Entries

Entry	Definition
DEST	Expanded call determination based on an incoming CDI
NONE	Expanded call determination is not required
TGRP	Expanded call determination based on an incoming TGN

Data Rules:

If TGRP/DEST is equal to "TGRP", then THIRD LEVEL can only equal "NONE" or "DEST". If TGRP/DEST is equal to "DEST", then THIRD LEVEL can only equal "NONE" or "TGRP".

3.10 ACD EXPRESSION

Description: This field defines the call property expression to be used for flexible ACD call type determination.

Software Release: 5E13 and later

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Required Field.
Default: Q
Valid Entries:

Valid ACD EXPRESSION Entries

Entry	Definition
A	ACCT Owner
C	Carr ID
D	Dest Index
G	Lang Code
I	ANI II
L	LRN
N	NPA-NXX
O	OLS Code
Q	Quit
R	DIOR Carrier
S	Access Number
T	Trk Grp
| or &	Special Cases (e.g., T|D|O&I)

CALL ORIGIN	PREFIX	COIN	CARRIER	SOFTWARE RELEASE
AIS	NULLP	N	UNKWN	5E6(2) and later
AP	NULLP			5E9(2) and later
DA2VDT	NONE	N	DC	5E5 and later
INW	NULLP	N	DC	5E5 and later
LSTA	1	Y	IC	5E6(2) and later
LSTA	1	Y	LEC	5E6(2) and later
LSTA	1	Y	UNKWN	5E6(2) and later
LSTA	1	N	IC	5E6(2) and later
LSTA	1	N	LEC	5E6(2) and later
LSTA	1	N	UNKWN	5E6(2) and later
ISP	0M	Y	IC	5E5 and later
ISP	0M	Y	LEC	5E5 and later
ISP	0M	Y	UNKWN	5E5 and later
ISP	0M	N	IC	5E5 and later
ISP	0M	N	LEC	5E5 and later
ISP	0M	N	UNKWN	5E5 and later
ISP	0	Y	IC	5E5 and later
ISP	0	Y	LEC	5E5 and later
ISP	0	Y	UNKWN	5E5 and later
ISP	0	N	IC	5E5 and later
ISP	0	N	LEC	5E5 and later
ISP	0	N	UNKWN	5E5 and later
ISP	1	Y	IC	5E5 and later
ISP	1	Y	LEC	5E5 and later
ISP	1	Y	UNKWN	5E5 and later
ISP	1	N	IC	5E5 and later
ISP	1	N	LEC	5E5 and later
ISP	1	N	UNKWN	5E5 and later
ISP	NULLP	Y	LEC	5E5 and later
ISP	NULLP	Y	IC	5E5 and later
ISP	NULLP	N	LEC	5E5 and later
ISP	NULLP	N	IC	5E5 and later
NIT	NONE	N	DC	5E5 and later
OPI	O	N	DC	5E5 and later
OPI	OM	N	DC	5E5 and later
OPI	NULLP	N	DC	5E5 and later
RES	NULLP	N	DC	5E5 and later
SYS	1	N	IC	5E5 and later
SYS	1	N	LEC	5E5 and later
SYS	1	N	UNKWN	
SYS	NULLP	N	DC	5E5 and later
XFER	NULLP	N	DC	5E5 and later

These are valid combinations of key field entries. OSPS ID is a key field that is intentionally omitted.
Figure 1 ENTRY COMBINATION VALUES FOR CALL ORIGIN VALUES 5E5 AND LATER SOFTWARE RELEASES

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```
acdctp                    5ESS Switch          _
(5412-A/D)              OFFICE DATA ADMINISTRATION
                      OSPS ACD CALL TYPE

 *1. CALL ORIGIN    AIS
 *2. PREFIX         NULLP
 *3. COIN           N
 *4. CARRIER        UNKWN
 *5. OSPS ID        0000
 #6. CALL TYPE      123
  7. PRE CALL ID    012
  8. DISPLAY INDEX  036
  9. APOS CALL TYPE ___
 10. SECOND LEVEL   DEST
```

Figure 2 SAMPLE ACDCTP FORM 5E7 - 5E12 SOFTWARE RELEASES

```
acdctp                    5ESS Switch          _
(5412-A/D)              OFFICE DATA ADMINISTRATION
                      OSPS ACD CALL TYPE

 *1. CALL ORIGIN    AIS
 *2. PREFIX         NULLP
 *3. COIN           N
 *4. CARRIER        UNKWN
 *5. OSPS ID        0000
 #6. CALL TYPE      123
  7. PRE CALL ID    012
  8. DISPLAY INDEX  036
  9. APOS CALL TYPE ___
 10. SECOND LEVEL   DEST
```

Figure 3 SAMPLE ACDCTP FORM 5E13 AND LATER SOFTWARE RELEASES

```
acdctp                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5412-A/D)                OSPS ACD CALL TYPE

*1. CALL ORIGIN    _______
*2. PREFIX         _____
*3. COIN           _
*4. CARRIER        _____
*5. OSPS ID        0000
#6. CALL TYPE      ____
 7. PRE CALL ID    ___
 8. DISPLAY INDEX  ___
 9. APOS CALL TYPE ___
10. SECOND LEVEL   NONE

 11. ACD EXPRESSION Q
```

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Figure 4 SAMPLE ACDPOL FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 4N: 5413 RECORD
TRUE TRUNK GROUP NPA FORM - PRONXX

1. GENERAL

The 5413 Record is available with 5E4(2) and later Software Releases. When a TGN, assigned on a OPRTK form (5417 Record), serves more than one NPA, then the PROTECTED NXXS field on the OPRTK form must be set to "Y". Those NXXs that are not associated with the NPA in the ORIG NPA field of the OPRTK form are called "protected" NXXs and their actual (or "true") NPA must be identified on the PRONXX form.

If protected NXXs are served by the TGN, the PRONXX form is checked for the true NPA. If there are no protected NXXs, then the NPA is found on the OPRTK form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.13.

2. FORM AND RECORD ENTRIES - 5413 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * TGN NPA

Description: Enter a NPA with an associated protected NXX.
Valid Entries:
- For 5E4(2) - 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

Data Rules:

This value must be entered in the ORIG NPA field of an OPRTK form where the PROTECTED NXXs field has a value of "Y".

2.3 * NXX

Description: Enter the protected NXX. The valid entries are office codes of the format NXX, 0XX or 1XX.
Valid Entries: 3 digits

2.4 # TRUE NPA

Description: Enter the True NPA associated with the protected NXX.
Valid Entries:
- For 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

Data Rules:

The value entered in this field must not be the same as the value entered in the TGN NPA field.

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(5413) OFFICE DATA ADMINISTRATION
OSPS TRUE TRUNK GROUP NPA

*1. TGN NPA 219
*2. NXX 510
#3. TRUE NPA 312

Figure 1 SAMPLE PRONXX FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 4O: 5414 RECORD
NPA-NXX SM ASSIGNMENT AND LATA EXCEPTIONS FORM - NPAMAP

1. GENERAL

The 5414 Record is available with 5E4(2) and later Software Releases.

This record is used to assign an SM (Switching Module), trunk group, exception area index and a LATA (Local Access and Transport Area) to an NPA-NXX combination. For 5E6 and later, NPAs for DIOR (Direct International Originations) can be assigned.

Because the quantity of OLS (Originating Line Screening) data is too great to be stored on each SM, the data is divided among all SMs used for OSPS (Operator Services Position System) traffic by assigning all OLS data for an NPA-NXX to an SM. This assignment is specified on this record. No OLS data can be assigned to a remote SM in this record.

On an operator-initiated call with a valid back number, the NPAMAP form is consulted to see what trunk a call from that back number would arrive on. The DAS and screen index associated with that trunk, found on the TKGRP form (5202 Record), is used for digit analysis and routing. If the NPAMAP form shows that the entered NPA-NXX is for termination only, or if it is not found, the call continues as if not screened, and a warning message is printed.

Using the trunk group that the OSPS call arrived on, the OPRTK form (5417 Record) is checked to determine the default carrier, and if there are any originating exception areas served by that trunk. If there are, then the back number's NPA-NXX is used as the key to this record to see if the call originated in an exception area.

If a forward number is found on the 5414 Record, then the ORIG LATA number on this record is compared to the TERM LATA found in the LDIT form (5300-3 Record). If these LATAs do not match, the inconsistent data is reported to the craft.

Each NPAMAP form submitted must have a TGN assigned that is defined on a TKGRP form with "FIOPR" entered in the TRKCLS field.

1.1 Recent Change View

The corresponding Recent Change view for NPAMAP is 26.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * NPA

Description: Enter the NPA code.

Required Field.
Valid Entries: 100 - 999

2.3 * NXX

Description: Enter the office code that is associated with this NPA. When DIOR NPA is entered, NXX is the originating Country Code.

WARNING: NXXs under 200 do not conform to Network Standards and may cause routing errors.

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Valid Entries: 000 - 999

2.4 DIOR NPA

Description: Is the selected NPA for a DIOR (Direct International Origination) trunk group?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NPA is greater than or equal to 200, DIOR NPA must be "N". When NPA is less than 200, DIOR NPA must be "Y".

2.5 # TERM ONLY

Description: Is this NPA-NXX used for terminating only, and is it in the area subtended by the switch? Enter "N" (No) if this NPA-NXX is used for originating and terminating and is in the area subtended by the switch.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the TERM ONLY field, then the TGN, SM, and ORIG LATA fields must be left blank, and the EAI field must be entered. If TERM ONLY is "N", then an entry is required in the SM field.

2.6 SM

Description: Enter the number of the Switching Module that contains the screening data for this NPA-NXX (from the LINESCRN form (5416 Record)).
Valid Entries: 1 - 192

Data Rules:

An entry is made if "N" is entered in the TERM ONLY field; no entry is made if "Y" is entered in the TERM ONLY field.

This entry must not be an RSM (Remote Switching Module). Each entry in this field must be defined on an EQIM form (5700 Record) with EQSTATUS equal to "O" and SM USAGE not equal to "RSM".

2.7 TGN

Description: Enter the Trunk Group Number.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

An entry is made if the 5417 Record is to be used for operator-initiated delay calls. No entry is made if operator-initiated delay calls are not allowed, or if "Y" is entered in the TERM ONLY field.

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TGN must not be entered when NPA is less than 200. If TGN is not entered, both LATA and EAI must be entered when NPA is greater than 200.

2.8 ORIG LATA

Description: Enter the number of the originating LATA.
Valid Entries: 1 - 31

Data Rules:

No entry is made if intra/interLATA can be determined from the CI TYPE field of a LDIT form. An entry of 2 to 15 is made if the ORIG LATA is compared with the TERM LATA entry on the LDIT form (to determine intra- or interLATA).

LATA must not be entered when NPA is less than 200. LATA is required when TGN is not entered and NPA is greater than 200.

2.9 EAI

Description: Enter the Exception Area Index.
Valid Entries: 1 - 250

Data Rules:

No entry is made if interLATA calls are not treated as intraLATA. Entries from 1 to 250 are made if "Y" is entered in the TERM ONLY field. Each entry in this field must be defined as either an ORIG EAI or TERM EAI on an EXMAP form (5440 Record).

EAI must not be entered when NPA is less than 200. EAI is required when TGN is not entered and NPA is greater than 200.

2.10 PHRASE ID

Description: Enter the phrase used by the ICO (Independent Company Announcement Branding) feature in providing branding for 0+ intraLATA calls. The phrase should contain the name of the carrier eligible for branding. For more information on ICO, see Division 2, Section 4A95.

Software Release: 5E8 and later.
Valid Entries:

- For 5E8 - 5E9(1): 0 - 16,383, 16,385 - 16,389,
- or 16,500 - 32,767
- For 5E9(2) and later: 1 - 16,383 or 16,600 - 65,530

Data Rules:

If TERM ONLY is "Y", PHRASE ID must not be entered.

PHRASE ID must not be entered if NPA is less than 200.

When PHRASE ID is entered, a corresponding PHRASE form must be entered with a matching PHRASE ID and an APPLICATION of "OSPSTA".

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*1. NPA ___
*2. NXX ___
3. DIOR NPA N
4. TERM ONLY N
5. SM ___
6. TGN ____
7. LATA __
8. EAI ___
9. PHRASE ID _____

Figure 1 SAMPLE NPAMAP FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4P: 5415 RECORD
SCREEN CODE TABLE FORM - SCRNCODE

1. GENERAL

The 5415 Record is available with 5E4(2)

This record defines billing restrictions on the back number.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * SCRN CODE

Description: Enter the screening code to be used on the LINESCRN form (5416 Record).

An entry of 0 (zero) denotes no screening. Screen code 127 is reserved for testing.

Required Field.
Valid Entries: 0 - 999

Data Rules:

If a SCRN CODE of 0 (zero) is entered, then the following fields must be set to "Y":
- AUTO COLLECT
- BACK CARD NBR
- BACK THIRD NBR
- COLLECT
- DACC ALLOW
- DACC ALT BILL
- DACC PAID
- FORWARD CARD NBR
- FORWARD THIRD NBR
- PAID or DDD

Additionally, TEXT 1 must be "NOT SCREENED," and TEXT 2 and TEXT 3 must be blank.

2.3 PAID OR DDD

Description: Is paid or DDD (Direct Distance Dialing) billing allowed?

Required Field.
Default: Y
Valid Entries: Y, N

2.4 COLLECT

Description: Is collect billing allowed? All collect calls are allowed for a SCREEN CODE of zero.

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Required Field.
Default: Y
Valid Entries: Y, N

2.5 AUTO COLLECT

Description: Is automatic collect billing allowed?

Required Field.
Default: Y
Valid Entries: Y, N

2.6 BACK CARD NBR

Description: Is back card number billing allowed?

Required Field.
Default: Y
Valid Entries: Y, N

2.7 BACK THIRD NBR

Description: Is back third number billing allowed?

Required Field.
Default: Y
Valid Entries: Y, N

2.8 FORWARD CARD NBR

Description: Is forward card billing allowed?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.9 FORWARD THIRD NBR

Description: Is forward third number billing allowed?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.10 TEXT

Description: Enter the message displayed at the VDT (Video Display Terminal). Up to 3 lines of text with 49 alphanumeric characters, special characters or spaces are allowed per line. The only restriction is that double quotes may not be used.

Comments, explanations of billing restrictions, and special operator treatments associated with the call are some of the more common text entries.
Valid Entries: 49 characters per line

2.11 DACC PAID

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Description: Is paid billing allowed for DACC (Directory Assistance Call Completion) calls? This field and the following two fields are associated with the secured feature OLS DACC. SFID 97 on the SFSYS form must be set to "Y" to enable this feature. (See Division 2, Section 4A97 for more information on this feature.)

Software Release: 5E8 and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.12 DACC ALT BILL

Description: Is alternate billing allowed for DACC calls?

Software Release: 5E8 and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.13 DACC ALLOW

Description: Is DA Call Completion allowed?

Software Release: 5E8 and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.14 ANNC HEADER ID

Description: The ANNC HEADER ID field, in conjunction with the PHRASE ID field, is used to provide a branding announcement for 0+ calls for the CMA (Customized Market Announcement) feature. SFID 96 on the SFSYS form must be set to "Y" to enable this feature. For more information on the CMA feature, see Division 2, Section 4A96.

This branding announcement is given to the customer to provide information on automated calls.

Software Release: 5E8 and later.
Valid Entries:
- For 5E8 -5E9(1): 1 - 255
- For 5E9(2) and later: 1 - 131,071

Data Rules:

When ANNC HEADER ID is entered on the SCRNCODE form, a matching HEADER ID must be entered on the ANNHD form with an APPLICATION of "OSPSTA".

2.15 PHRASE ID

Description: The announcement PHRASE ID is used to provide the branding phrase for 0+ calls for the CMA (Customized Marketing Announcement) feature. The PHRASE ID is part of the branding announcement entered in the ANNC HEADER ID field. The PHRASE ID identifies the specific provider given in the branding announcement to the customer.

Required Field.

Software Release: 5E8 and later.

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Valid Entries:
- For 5E8 - 5E9(1): 0 - 16,383, 16,385 - 16,389,
- or 16,500 - 32,767
- For 5E9(2) and later: 1 - 16,383 or 16,600 - 65,530

When PHRASE ID is entered on the SCRNCODE form, a matching PHRASE ID must be entered on the PHRASE form with an APPLICATION of "OSPSTA".

2.16 ICS TREAT

Description: Is an originating location (i.e. back number) eligible for ICS (Inmate Calling Services) treatment? For more information on this feature see Division 2, Section 4A385.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ICS INTL is "Y", then ICS TREAT must be "Y".

2.17 ICS INTL

Description: Are calls to international numbers from the associated originating location (i.e. back number) eligible for ICS treatment? The ICS TREAT and ICS INTL fields were added to support the ICS (Inmate Calling Services) feature. For more information on this feature, see Division 2, Section 4A385.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ICS INTL is "Y", ICS TREAT must be "Y".

2.18 ACD TRK NUMBER

Description: The ACD TRK NUMBER field is used to specify a "pseudo" trunk group number that can be used during ACD call type determination to route calls to an appropriate operator team. If specified, this number overrides the actual incoming trunk group number for purposes of ACD call type determination only. This field supports the SS7 Signaling for Incoming OSPS Calls from a 4ESS Switch. For more information on this feature see Division 2, Section 3M.

Software Release: 5E10 and later.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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```
*1. SCRN CODE        ___       12. DACC PAID      Y
 2. PAID OR DDD      Y         13. DACC ALT BILL  Y
 3. COLLECT          Y         14. DACC ALLOW     Y
 4. AUTO COLLECT     Y         15. ANNC HEADER ID ______
 5. BACK CARD NBR    Y         16. PHRASE ID      _____
 6. BACK THIRD NBR   Y
 7. FORWARD CARD NBR Y
 8. FORWARD THIRD NBR Y

 9. TEXT 1  ____________________________________________________
10. TEXT 2  ____________________________________________________
11. TEXT 3  ____________________________________________________
```

Figure 1 SAMPLE SCRNCODE FORM 5E9(1) SOFTWARE RELEASES

```
scrncode                5ESS Switch          _
(5415)              OFFICE DATA ADMINISTRATION
                  OSPS BACK SCREEN CODE TABLE

*1. SCRN CODE        ___       12. DACC PAID      Y
 2. PAID OR DDD      Y         13. DACC ALT BILL  Y
 3. COLLECT          Y         14. DACC ALLOW     Y
 4. AUTO COLLECT     Y         15. ANNC HEADER ID ______
 5. BACK CARD NBR    Y         16. PHRASE ID      _____
 6. BACK THIRD NBR   Y         17. ICS TREAT      N
 7. FORWARD CARD NBR Y         18. ICS INTL       N
 8. FORWARD THIRD NBR Y        19. ACD TRK NUMBER ____
 9. TEXT 1  ____________________________________________________
10. TEXT 2  ____________________________________________________
11. TEXT 3  ____________________________________________________
```

Figure 2 SAMPLE SCRNCODE FORM 5E9(2) SOFTWARE RELEASE

```
scrncode                5ESS Switch          _
(5415)              OFFICE DATA ADMINISTRATION
                  OSPS BACK SCREEN CODE TABLE

*1. SCRN CODE        ___       12. DACC PAID      Y
 2. PAID OR DDD      Y         13. DACC ALT BILL  Y
 3. COLLECT          Y         14. DACC ALLOW     Y
 4. AUTO COLLECT     Y         15. ANNC HEADER ID ______
 5. BACK CARD NBR    Y         16. PHRASE ID      _____
 6. BACK THIRD NBR   Y         17. ICS TREAT      N
 7. FORWARD CARD NBR Y         18. ICS INTL       N
 8. FORWARD THIRD NBR Y
 9. TEXT 1  ____________________________________________________
10. TEXT 2  ____________________________________________________
11. TEXT 3  ____________________________________________________
```

Figure 3 SAMPLE SCRNCODE FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4Q: 5416 RECORD
OSPS BACK NUMBER SCREENING FORM - LINESCRN

1. GENERAL

The 5416 Record is available with 5E4(2) and later Software Releases.

This record is used to assign a screen code and routing flag to a line or range of lines. It supplies the SM (Switching Module) that contains a specific Numbering Plan Area/NXX's line screening data. The SM is assigned in the SM field on the NPAMAP form (5414 Record). With the 5E6 Software Release, NPAs for DIOR (Direct International Originations) can be signed.

Once the SM has been determined, the OSPS (Operator Services Position System) sends a query to that SM to retrieve any data that may be in the LINESCRN form (5416 Record) for the back number. Data found may indicate billing restrictions, whether to always route the call to an operator position, whether the call receives ACCS (Automated Calling Card Service) treatment, the originating station type, if the back number is a coin phone, if there is a true billing number to replace the back number or (for 5E5 and later) if the back number is restricted from Subaccount Billing.

Only one LINESCRN form should be submitted per a DN (Directory Number). Additionally, ranges of numbers to be screened must not overlap.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * NPA

Description: Enter a valid 3-digit NPA (Numbering Plan Area).

Required Field.
Valid Entries:
- For 5E6 - 5E8: 100 - 919, middle digit 0 - 1
- For 5E9(1) and later: 100 - 999

Data Rules:

Entries in this field must be defined in the NPA field on an NPAMAP form (5414 Record).

2.3 * NXX

Description: Enter a valid office code.

Required Field.
Valid Entries: 200 - 999

Data Rules:

Entries in this field must be defined in the NXX field on a NPAMAP form.

For 5E6 and later, when DIOR NPA is entered on this form, NXX is the originating Country Code.

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2.4 * BEG LINE

Description: Enter the station portion XXXX of the back number to be screened (the local directory number minus the office code).

The first line in a range or an individual line (back number) may be entered in the BEG LINE field. If a range is entered, the last number should be entered in the END LINE field below.

Required Field.
Valid Entries: 0000 - 9999

Data Rules:

LINESCRN forms must not include the same number in more than one range.

2.5 (*) END LINE

Description: Enter the XXXX of the last line (if a range of back numbers are to be screened).
Valid Entries: 0001 - 9999

Data Rules:

Entries in the END LINE field must be greater than entries in the BEG LINE field.

2.6 # SCRN CODE

Description: Enter the screen code number.

An entry of 0 (zero) denotes that line screening will not take place. Screen code 127 is reserved for testing.

Required Field.
Valid Entries: 0 - 999

Data Rules:

Entries in this field must be defined on a SCRNCODE form (5415 Record) to check for billing restrictions. The SCRN CODE must be the same on all forms using the same TRUE BILL TN.

For 5E9(1) and later, if SCRN CODE is 0, then SERVICE CODE must not be entered.

2.7 DIOR NPA

Description: Is the selected NPA for a DIOR (Direct International Origination) trunk group?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ORIG NPA is greater than or equal to 200, DIOR NPA must be "N". When ORIG NPA is less than 200, DIOR NPA must be "Y".

2.8 # TO OPER POS

Description: Are all calls from this back number to be routed to an operator position? This affects only 0+

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calls. If this field is set to "Y", calls from this back number will not receive automated calling card service or automated coin service.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

TO OPER POS must be "Y" when NPA is less than 200.

2.9 # COIN LINE

Description: Does this line or range belong to coin lines only and may not be combined with other traffic (such as non-coin, hotel/motel, etc.)?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

COIN LINE must be "N" when NPA is less than 200.

2.10 # ORIG STATION

Description: Enter the type of originating station to be used for AMA (Automatic Message Accounting) records.

Required Field.
Default: UNKNOWN
Valid Entries:

Valid ORIG STATION Entries

Entry	Definition
UNKNOWN	Not "NCNPUB" or "NACQSHOTL".
NCNPUB	Non-coin public.
NACQSHOTL	Non-ACQS hotel.

Data Rules:

ORIG STATION must be "UNKNOWN" when NPA is less than 200.

2.11 TRUE BILL TN

Description: Enter the true billing number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: Enter NXXXXXXXXX where N=2 - 9 and X=0 - 9

Data Rules:

TRUE BILL TN must be blank when NPA is less than 200.

For 5E12 and later, when END LINE is entered, TRUE BILL TN cannot be in the range of NPA + NXX + BEG LINE through NPA + NXX + END LINE.

2.12 SUBACCT BILL

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Description: Is Subaccount Billing allowed for this line or range of lines?

Required Field for 5E7 and later.
Default: N
Valid Entries: Y, N

Data Rules:

SUBACCT BILL must be "N" when NPA is less than 200.

2.13 SERVICE CODE

Description: Enter the Service code for Feature Group D Incoming Signaling for Special Applications. The service code may be used to identify specific services or billing arrangements based on the back number. This field supports the Feature Group D Incoming Signaling for Special Applications, Release 2 feature. For more information on this feature, see Division 2, Section 4A373.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 9999

Data Rules:

This field cannot be entered if SCRN CODE is 0.

If this field is entered, END LINE must not be entered.

```
linescrn                  5ESS Switch          _
(5416)               OFFICE DATA ADMINISTRATION
                   OSPS BACK NUMBER SCREENING

  *1. NPA           ___            12. SERVICE CODE ____
  *2. NXX           ___
  *3. BEG LINE      ____
(*)4. END LINE      ____
  #5. SCRN CODE      ___
   6. DIOR NPA       N
   7. TO OPER POS    N
   8. COIN LINE      N
  #9. ORIG STATION   UNKNOWN
  10. TRUE BILL TN   _______
  11. SUBACCT BILL   N
```

Figure 1 SAMPLE LINESCRN FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
linescrn                  5ESS Switch          _
                   OFFICE DATA ADMINISTRATION
(5416)               OSPS BACK NUMBER SCREENING

  *1. NPA          ___
  *2. NXX          ___
  *3. BEG LINE     ____
(*)4. END LINE     ____
```

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```
#5. SCRN CODE    ___
 6. DIOR NPA     N
 7. TO OPER POS  N
 8. COIN LINE    N
 9. ORIG STATION UNKNOWN
10. TRUE BILL TN _____________
11. SUBACCT BILL N
12. SERVICE CODE ____
```

Figure 2 SAMPLE LINESCRN FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 4R: 5417 RECORD
ACCESS TANDEM INCOMING TRUNK GROUPS FORM - OPRTK

1. GENERAL

The 5417 Record is available with 5E4(2)and later Software Releases.

This form is used to define the common information and type of traffic over each trunk group that can access an OSPS (Operator Services Position System) operator. The default interLATA and international carrier for a forward number are both specified on this form. An OPRTK form must be completed for each incoming trunk group in the office that can access the OSPS operator.

1.1 Carrier ID

The OPRTK form also contains the carrier ID used for routing intraLATA, interLATA, and international OS (Operating System) calls. The carrier is determined by ISP (Intermediate Switch Point) and that carrier ID is then used as an index into the DIOPR form (5418 Record).

1.2 Number/Character Entries

In some of the following tables, there are single digit values listed in parentheses after listed entries. These entries may be substituted for the corresponding entry to save data entry keystrokes.

1.3 Recent Change View

The corresponding Recent Change View for this form is 26.26.

2. FORM ENTRIES - 5417-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TGN

Description: Enter the OSPS incoming TGN (Trunk Group Number).
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Each TGN entered on this form must match a TGN entered on the TKGRP form.

For 5E8 and later, OSPS operator trunks defined on OPRTK forms must not be located in BASIC SM (Switching Modules). CONFIGURATION field on the EQIM form (5700 Record) defines the configuration of the SM. The corresponding EQIM form for this TGN is found by the TGN in this field matches the TGN on the TRUNK form (5204 Record). The first three digits (SM) of the TEN or DEN on the corresponding TRUNK form matches the SM entry on the EQIM form.

2.3 # TRKCLS

Description: Enter the trunk classification. See the TKGRP form, Division 3, Section 2A for more detailed definition of trunk classes.

Software Release: 5E6(2) and later

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Required Field.
Valid Entries:

Typical TRKCLS Entries

Entry	Definition
CAMAANI	Incoming CAMA ANI trunks
CAMAONI	Incoming CAMA ONI trunks
DIOR	Direct International Originations
FIOPR	Intermediate Switch Point for incoming operator trunks.
INAISTRK	Incoming Automatic Intercept system trunk
LATA	Intertoll trunks from a LATA
LTOLLCON	Toll connecting - local office end
PF	Software Release: 5E7 and later Private Facility (PFA Feature)
PRINTOLL	Primary intertoll
SCINTOLL	Secondary intertoll
TTOLLCON	Toll connecting - toll office end

Data Rules:

For 5E7 and later, TRKCLS entries assigned on the OPRTK form must be defined in the TRKCLS field on the TKGRP form.

CAMAANI:
If "CAMAANI" is entered, FROM LOCAL OFC must be entered.

DIOR:
If "DIOR" is entered,

- AATOS SDN NRA must be "N";
- For 5E9(1) and later, ALLOW 7 DIGITS must not be entered.
- ANI must be "Y";
- ACQS SCRN must be "NONE";
- AUTO COIN TRAF must be "N";
- COIN must be "N";
- COIN SIG TYPE must be "N";
- COIN TYPE must be blank;
- EXCEPTION AREAS must be "N";
- FROM LOCAL OFC must be blank.
- INTRA CARR ID cannot be "LEC";
- INTER CARR ID cannot be "LEC";
- INTL CARR ID cannot be "LEC";
- LATA TYPE must be "INTER";
- OL SCRN must be "DED";
- ORIG NPA must be 100-199;
- OS EA SIG must be "N";

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- PROTECTED NXXS must be "N";
- START PULSE must be "TURNBACK";
- TRK TYPE must be "DOP";

If TRKCLS is not "DIOR" or "FIOPR", SCRN INDEX must not be entered.

FIOPR:
If TRKCLS is "FIOPR":

- then FROM LOCAL OFC must be entered.
- and if COIN is "Y", then
  - SIG TYPE must be "MW", "IN" or "EX".
  - COIN TYPE must be "D", "C" or "CD".

INAISTRK:
If TRKCLS is "INAISTRK":

- Then the following fields:

  ACQS SCRN must be "NONE";

  ANSWER SUPV must be "Y";

  APOS TREATMENT must be "N";

  AUTO COIN TRAF must be "N";

  CALL COMPL must be "Y";

  COIN must be "N";

  COIN POST PAID must be "N";

  FROM TA SYSTEM must be "N";

  FROM LOCAL OFC must not be entered;

  INTRA CARR ID must not be entered;

  INTER CARR ID must not be entered;

  INTER FOR CC must be "N";

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INTL CARR ID must not be entered;

LATA TYPE must be "BOTH";

MECH must be "N";

OL SCRN must be "NONE";

OS EA SIG must be "N";

TRK TYPE must be "INAIS";

- AIS DAS must be entered on the OSPSOPT form.

5E10 and later:

- and LSTG SVC TRAF is "Y", then PROTECTED NXXS must be "N".

TRKCLS must not be "INAISTRK", when TRK TYPE is "D1P".

LATA:
If TRKCLS is "LATA":

- PROTECTED NXXS must be "N" and FROM LOCAL OFC must be entered.

5E9(1) and later:

- if LSTG SVC TRAF is "Y", then ANSWER SUPV must NOT be enterd.
- if LSTG SVC TRAF is "N", then ALLOW 7 DIGITS must be "N".

5E10 and later:

- and LSTG SVC TRAF is "Y", then
  - PROTECTED NXXS must be "N".
  - FROM LOCAL OFC must be entered.
- and LSTG SVC TRAF is "N", then FROM LOCAL OFC must not be entered.

PF:
If TRKCLS is "PF",

- BILLING DN must be entered on the corresponding TKGRP form;
- and LSTG SVC TRAF is "Y", then
  - ANSWER SUPV must not be entered;

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- FROM LOCAL OFC must be entered.

- and LSTG SVC TRAF is "N", then
  - AATOS SDN NRA must be "N".
  - ANI must be "Y";
  - ACQS SCRN must be "NONE", "DED", or "ASRCH";
  - AUTO COIN TRAF must be "N";
  - COIN must be "N";
  - COIN POST PAID must be "N";
  - EXCEPTION AREAS must not be entered.
  - FROM LOCAL OFC must not be entered.
  - OL SCRN must be "NONE", "DED", or "ASRCH";
  - SIG TYPE must be "NOCN";
  - TRK TYPE must be "COMB", "D0", "D0P", "D0M" or "D1P".

DIOR, INAISTRK, FIOPR:
If TRKCLS on the TKGRP form is not "INAISTRK", "FIOPR", or "DIOR",

- LSTG SVC TRAF must be "Y";
- TRK TYPE must be "D1P";
- ANSWER SUPV must be "N";
- SIG TYPE must be "NOCN" ;
- COIN TYPE must not be entered.

2.4 # ORIG NPA

Description: Enter the originating NPA associated with this trunk group.

Required Field.
Valid Entries: 100 - 999

Data Rules:

When ORIG NPA is less than 200, DIOR NPA must be "Y".

When the TKGRP form (5202 Record) has a TRKCLS of "DIOR", this field must be from 100 to 199. For 5E6 and later, if the corresponding TKGRP form does not have "DIOR" entered in the TRKCLS field, the ORIG NPA must be between 200 and 999.

2.5 DIOR NPA

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Description: Is the selected NPA for a DIOR (Direct International Origination) trunk group?

Software Release: For 5E6 only.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ORIG NPA is greater than or equal to 200, DIOR NPA must be "N". When ORIG NPA is less than 200, DIOR NPA must be "Y".

2.6 # LATA TYPE

Description: Enter the type of LATA (Local Access and Transport Area) traffic that this trunk group is to carry.

Required Field.

Valid LATA TYPE Entries

Entry	Definition
INTRA or INTR	IntraLATA traffic only.
INTER or INTE	InterLATA traffic only.
BOTH or B	Both IntraLATA and InterLATA traffic.

Data Rules:

If "INTER" or "BOTH" is entered in the LATA TYPE field, then there must be an entry in the INTER CARR ID field.

If "INTRA" is entered in the LATA TYPE field, then the INTER CARR ID field must be blank.

For 5E6 and later, when ORIG NPA is less than 200, LATA TYPE must be "INTER".

For 5E6 and later, this field must be "BOTH" when the associated TKGRP form has INPULSING set to "DP".

For 5E9(1) and later:

- If LATA TYPE is "INTRA" and INTRA CARR ID is not 288, ALLOW INTRA DA must be "Y".
- If LATA TYPE is "BOTH" and INTRA CARR ID is not 288, ALLOW INTRA DA must be "Y".
- If LATA TYPE is "INTER", ALLOW INTRA DA must be "N".

2.7 # TRK TYPE

Description: Enter the type of originally-dialed traffic carried on this trunk group.

Required Field.

Valid TRK TYPE Entries

Entry	Definition
COMB or C	Combined (0-,0+,1+) traffic.
D0	Dedicated dial zero traffic.
D0P	0+. Dedicated dial zero plus traffic. (This type is not valid for DP trunks.)
D0M	0-. Dedicated dial zero minus traffic. (This type is not valid for DP trunks.)
D1P or D1	1+. Dedicated dial one plus traffic.
INAIS or I	Incoming Automatic Intercept System (AIS)
SUP or S	Supercombined. (Noncoin/coin 0-,0+,1+) traffic.

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Data Rules:

When TRKCLS is not "FIOPR", "DIOR", or "INAISTRK", the trunk group is used for Listing Services and TRK TYPE must be "D1P". The TKGRP form is found by matching TGN on the OPRTK form with TGN on the TKGRP form.

For 5E10 and later, "COMB", "DO", "DOM", "DOP" or "D1P" must be entered if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

DOP - For 5E6 and later, when ORIG NPA is less than 200, TRK TYPE must be "DOP".

The values "D0P" and "D0M" may not be selected if the trunk group is a Dial Pulse trunk group (indicated by an entry of "DP") in the INPULSING field on the TKGRP form. This restriction is needed because of the following scenario: The central office, upon receiving a 0 origination on a dial pulse trunk, immediately seizes an outgoing trunk. However, the central office can't differentiate between 0+ and 0- because the outgoing trunk has been seized.

INAIS - For 5E6 and later, if TRK TYPE is "INAIS", then:

- LATA TYPE must be "BOTH"
- SCRN INDEX must be 0
- SIG TYPE must be "NOCN" or must not be entered
- START PULSE must be "TURNBACK"
- if CALL COMPL is "Y", ANSWER SUPV must be "Y"
- the following must be "Y":

  ANI

  LSTG SVC TRAF
- the following must not be entered:

  COIN TYPE

  INTRA CARR ID

  INTER CARR ID

  INTL CARR ID
- the following must be "NONE":

  ACQS SCRN

  OL SCRN (or not entered)
- the following must be "N":

  AUTO COIN TRAF

  COIN

  COIN POST PAID

  EXCEPTION AREAS

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INTER FOR CC

MECH

OS EA SIG

PROTECTED NXXS

SUP - If "SUP" is entered in this field, then "Y" must be entered in the COIN field.

If "SUP" is entered in this field, then either "START2P", "START3P", or "TURNBACK" must be entered in the START PULSE field. If "COMB" is entered in this field, then either "START", "STARTP", or "TURNBACK" must be entered in the START PULSE field.

2.8 # SCRN INDEX

Description: Enter the screening index associated with this incoming trunk group.

The SCRN INDEX field is used during an OSPS operator transfer to an external operator system. A normal zero minus seizure is the most common occurrence for the use of this screen index.

Required Field.
Valid Entries: 0 - 4095

Data Rules:

The value defined in this field must correspond to an entry on the RAR form (5301 Record) to tandem calls out to an external operator switch e.g., TSPS (Traffic Services Position System).

SCRN INDEX must not be entered unless TRKCLS is "DIOR", "FIOPR", or "LATA".

2.9 INTRA CARR ID

Description: Enter the intraLATA carrier identification number associated with the trunk group being defined.

Required Field.
Valid Entries: 0 - 9999 or LEC

Data Rules:

For every entry in this field, a corresponding entry in the CARRIER ID field of a DIOPR form (5418 Record) must exist, and B CARRIER must be "N" on the DIOPR form.

For 5E6 and later, when ORIG NPA is less than 200, INTRA CARR ID cannot be "LEC" (Local Exchange Carrier).

If 0 - 9999 is entered, then the CARRIER ID field on an ICF form must match INTRA CARR ID on this form. In addition for 5E8 and later, "D" must be entered in the FEAT GRP field on at least one ICF form where the CARRIER ID on the ICF form matches this field.

For 5E7 and later, INTRA CARR ID must be entered if LATA TYPE is "BOTH" or "INTRA" and TRK TYPE is not "INAIS".

2.10 INTER CARR ID

Description: Enter the interLATA carrier identification number.

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Valid Entries: 0 - 9999 or LEC

Data Rules:

For every carrier specified in this field, a corresponding entry in the CARRIER ID field of a DIOPR form (5418 Record) must exist, and B CARRIER field must be "N" on the DIOPR form.

For 5E6 and later, when ORIG NPA is less than 200, INTER CARR ID cannot be "LEC" (Local Exchange Carrier).

For 5E6 only, INTER CARR ID must be 0 - 999 if LATA TYPE is "INTRA", OFFICE TYPE is "N" on the OFCOPT form, and OSPS TA is "Y" on the OSPSOPT form.

If 0 - 9999 is entered, then a CARRIER ID on the ICF form must match INTER CARR ID on this form. In addition for 5E8 and later, "D" must be entered in the FEAT GRP field on at least one ICF form where theCARRIER ID on the ICF form matches this field.

For 5E7 and later, INTER CARR ID must be entered if LATA TYPE is "BOTH" or "INTRA" and TRK TYPE is not "INAIS".

2.11 INTL CARR ID

Description: Enter the international carrier identification number.
Valid Entries: 0 - 9999 or LEC

Data Rules:

For every carrier specified in this field, a corresponding entry in the CARRIER ID field of a DIOPR form (5418 Record) must exist, and B CARRIER must be "N" on the DIOPR form.

For 5E6 and later, when ORIG NPA is less than 200, INTL CARR ID cannot be "LEC" (Local Exchange Carrier).

If 0 - 9999 is entered, then a CARRIER ID on an ICF form must match the INTL CARR ID on this form. In addition, for 5E8 and later, there must be at least one ICF form with "D" entered in the FEAT GRP field where the CARRIER ID field on the ICF form matches this field.

2.12 OL SCRN

Description: Enter the type of OLS (Originating Line Screening) to be done on the back number for internal OSPS calls. The actual OLS will begin on the LINESCRN form (5416 Record).
Default: NONE
Valid Entries:

Valid OL SCRN Entries

Entry	Definition
NONE or N	No screened traffic carried by trunks in this trunk group.
DED or D	All traffic is screened.
AIFO or AI	Screened traffic identified by ANI Information digit(s) (0)7.
ASRCH or AS	Screened traffic identified by ANI search. Every back number will be searched on the LINESCRN form (5416 Record).

Data Rules:

If "AIFO" or "ASRCH" is entered in this field, then "Y" must be entered in the ANI field.

For 5E6 and later, when ORIG NPA is less than 200, OL SCRN must be "DED".

2.13 COIN

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Description: Does this trunk group carry coin traffic?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "Y" when "SUP" is entered in the TRK TYPE field. If "SUP" is not entered in the TRK TYPE field, enter "Y" if the trunk group carries coin traffic other than postpay coin or if it is dedicated to postpay coin. If the trunk is dedicated to postpay coin, then COIN POST PAID must also be "Y".

Figure 1 shows the type of coin station determined by the combinations of entries in the COIN, TRK TYPE "SUP" (supercombined enumeration), and COIN POST PAID fields and the results of OLS.

If "Y" is entered in this field:

- then "NOCN" cannot be entered in the SIG TYPE field.
- then the entry in the COIN TYPE field must be "C", "D" or "CD".
- If ORIG NPA is less than 200, COIN must be "N".
- for 5E9(1) and later, and if TRKCLS is "FIOPR",
  - then SIG TYPE must be "MW", "IN", or "EX".
  - COIN TYPE must be "D", "C" or "CD".

If "N" is entered in this field, then "NOCN", "MW" or "EX" must be entered in the SIG TYPE field.

For 5E10 and later, "N" must be entered if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

2.14 COIN POST PAID

Description: Does this trunk group carry postpaid coin traffic? Postpaid coin traffic can be carried over coin and noncoin trunk groups.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Postpay coin lines must be identified as coin in the OLS (Originating Line Screening) tables if the trunk group is dedicated noncoin, i.e., COIN is "N". If the trunk group is dedicated to coin, i.e., COIN is "Y" and COIN POST PAID is "Y", then the trunk group is dedicated to postpay and the line numbers need not be in the OLS tables. See Figure 1 to determine if OLS is required. The figure shows that OLS is determined by the entries in the COIN field, COIN POST PAID fields and the "SUP", supercombined enumeration for the TRK TYPE.

if ORIG NPA is less than 200, COIN POST PAID must be "N".

For 5E10 and later, "N" must be entered if LSTG SVC TRAF is "N" and, TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

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2.15 COIN TYPE

Description: Enter the coin dial tone response type.

Valid COIN TYPE Entries

Entry	Definition
C	Coin first.
CD	Coin and dial tone first.
D	Dial tone first.

Data Rules:

If "Y" is entered in the COIN POST PAID field and "N" is entered in the COIN field, then COIN TYPE entries must be "D" or "CD".

If "N" is entered in both the COIN POST PAID and COIN fields, then an entry is not allowed in the COIN TYPE field.

For 5E6 and later, when ORIG NPA is less than 200, COIN TYPE must not be entered.

For 5E6 and later, if TRKCLS is not "FIOPR", "DIOR", or "INAISTRK" on the corresponding TKGRP form, then the trunk group is used for Listing Services and COIN TYPE must not be entered. The corresponding TKGRP is found by matching the TGN on the OPRTK form with the TGN on the TKGRP form.

2.16 SIG TYPE

Description: This field is used for two different purposes: 1) to describe the type of coin signaling over this trunk or 2) to describe the type of signaling (only MW or EX allowed) for the ringback (overtime/time and charges) feature when the local office primarily 1A or 1E is using that type of signaling on its end.

Software Release: 5E5 and later
Default: NOCN
Valid Entries:

Valid SIG TYPE Entries

Entry	Definition
NOCN or N	No coin signaling.
MW or M	Multiwink coin signaling.
IN or I	Inband coin signaling.
EX or E	Expanded inband coin signaling.

Data Rules:

If ORIG NPA is less than 200, SIG TYPE must be "NOCN".

If TRKCLS on the corresponding TKGRP form is not "FIOPR", "DIOR", or "INAISTRK", then the trunk group is used for Listing Services and SIG TYPE must be "NOCN" or it must not be entered. The corresponding TKGRP form is found by matching the TGN on this form with the TGN on the TKGRP form.

For 5E10 and later, "NOCN" must be entered if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

2.17 AUTO COIN TRAF

Description: Will ACTS (Automated Coin Toll Service) be used on this trunk group? With ACTS, no operator services are required.

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If this field equals "Y", then "Y" must be entered in either the COIN or the COIN POST PAID field.

If ORIG NPA is less than 200, AUTO COIN TRAF must be "N".

For 5E10 and later, "N" must be entered if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

2.18 ACQS SCRN

Description: Enter the type of ACQS (Automatic Charge Quotation Service) used. Any actual screening will be done on the ACQS form (5425 Record).
Default: NONE
Valid Entries:

Valid ACQS SCRN Entries

Entry	Definition
NONE or N	ACQS traffic is not carried on this trunk group.
DED or D	Only ACQS traffic is carried on this trunk group.
AIFO or AI	ACQS traffic is identified by ANI (Automatic Number Identification) information digits (0)6.
ASRCH or AS	ACQS traffic is identified by ANI search. Every back number will be searched on the ACQS form.

If "AIFO", "ASRCH" or "DED" is entered in this field, "Y" must be entered in the ANI field.

For 5E6 and later, when ORIG NPA is less than 200, ACQS SCRN must be "NONE".

2.19 ANI

Description: Is the ANI (Automatic Number Identification) back number information expected on this trunk group?

The value entered here will override the information obtained from the RTIDX form (5303 Record).

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the OS EA SIG field, then "Y" must be entered in the ANI field.

If ORIG NPA is less than 200, ANI must be "Y".

For 5E10 and later:

"Y" must be entered

- if LSTG SVC TRAF is "Y" and TRKCLS is not "FIOPR".
- if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

2.20 OS EA SIG

Description: Is the equal access operator signaling used on this trunk group?

Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If "Y" is entered, then ANI must be "Y".

When AATOS SDN NRA is "Y", OS EA SIG must be "Y".

"N" must be entered if EXCEPTION AREAS is "Y".

If this field is set to "Y", then the corresponding TKGRP form must not have its INPULSING field set to "DP". For "DP" signaling, OS EA SIG must be "N".

2.21 CARR SELEC ENF

Description: Will the carrier selection be enforced for this trunk group?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field, then "Y" must be entered in the OS EA SIG field. With "Y" entered in this field, the operator cannot change the carrier identification specified in the INTRA CARR ID, INTER CARR ID, or INTL CARR ID fields.

2.22 START PULSE

Description: Enter the start pulse to be used when a call type cannot be determined due to a transmission failure. Under this condition, a 0-prefix noncoin start will be used. However, start pulses differ depending upon the incoming trunk characteristics. Additionally, the Telephone Company Administrator can choose to and turn back the call (idle the trunk).

When "TURNBACK" is specified and an ANI transmission failure has occurred, the incoming call will be given a reorder tone and the trunk will be idled. When an ANI transmission failure occurs and no digits are received or only one digit is received and that digit is a zero and "TURNBACK" is specified, the call will be treated as a 0- call because of the possibility of the call being associated with an emergency.

Required Field.
Default: TURNBACK
Valid Entries:

Valid START PULSE Entries

Entry	Definition
TURNBACK or 1	Turn back the call. This entry is not valid for 0- calls.
START or 2	Start pulse.
STARTP or 3	Start pulse prime.
START2P or 4	Start pulse double prime.
START3P or 5	Start pulse triple prime.

Data Rules:

For 5E6 and later, when ORIG NPA is less than 200, START PULSE must be "TURNBACK".

3. FORM ENTRIES - 5417-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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3.2 * TGN

Description: Enter the OSPS incoming TGN (Trunk Group Number).
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The incoming trunk group being assigned here must be defined on a TKGRP form (5202 Record) with a TRK DIR of "INC" and a TRKCLS of "FIOPR".

3.3 PROTECTED NXXs

Description: Does this trunk group have any protected NXXs? Enter "Y" if the PRONXX form (5413 Record) will be checked for a TRUE NPA entry.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E6 and later, when ORIG NPA is less than 200, PROTECTED NXXs must be "N".

3.4 EXCEPTION AREAS

Description: Do any exception areas exist in the LATA(s) that this trunk group serves?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the EXCEPTION AREAS field,

- "N" must be entered in the OS EA SIG field;
- "BOTH" must be entered in the LATA TYPE field;
- the EXCEPT DETRM field on the OSPSOPT form must by "Y".

If ORIG NPA is less than 200, EXCEPTION AREAS must be "N".

For 5E10 and later, "N" must be entered

- if LSTG SVC TRAF is "Y" and TRKCLS is not "FIOPR".
- if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".
- EXCEPTION AREAS must not be entered, if LSTG SVC TRAF is "N" and TRKCLS is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

3.5 MECH

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Description: Is MECH (More Efficient Call Handling) feature used for incoming trunks to the operator?

Required Field.

Software Release: 5E6 and later
Default: Y
Valid Entries: Y, N

Data Rules:

If TRK TYPE on this form is "INAIS", then MECH must be set to "N".

3.6 FROM LOCAL OFC

Description: Does this trunk come directly from a local office?

Software Release: 5E6 and later
Default: Y
Valid Entries: Y, N

Data Rules:

For 5E10 and later, FROM LOCAL OFC must not be entered if TRKCLS is "PF" and LSTG SVC TRAF is "N".

3.7 ANSWER SUPV

Description: Does the incoming trunk group return answer supervision to the network?

Software Release: 5E6(2) and later
Valid Entries: Y, N

Data Rules:

If TRK TYPE is "INAIS" and CALL COMPL is "Y", then this field must be "Y".

If ORIG NPA entry is less than 200, then this field must by "Y".

ANSWER SUPV must be not be entered, if:

- TRKCLS is NOT "INAISTRK", "LATA" or "PF".
- TRKCLS is "PF" and LSTG SVC TRAF is "Y".

3.8 AATOS SDN NRA

Description: Does this trunk carry AATOS SDN/NRA (Alternate Access To Operator Services Software Defined Network/Network Remote Access) traffic only? If it is set to "N", AATOS SDN/NRA traffic is not carried on this TGN. If it is set to "Y", the trunk group carries only AATOS SDN/NRA.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ORIG NPA is less than 200, AATOS SDN NRA must be "N".

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If AATOS SDN NRA is "Y",

- ACQS SCRN must be "NONE" or "ASRCH";
- For 5E9(1) and later, ALLOW 7 DIGITS must not be entered.
- ANI must be "Y";
- AUTO COIN TRAF must be "N";
- COIN must be "N";
- COIN POST PAID must be "N";
- COIN TYPE must not be entered;
- EXCEPTION AREAS must be "N";
- LSTG SVC TRAF must be "N".
- OS EA SIG must be "Y";
- PROTECTED NXXS must be "N";
- SIG TYPE must be "NOCN";
- START PULSE must be "TURNBACK";
- TRK TYPE must be "D0P";

For 5E9(1) and later, if this field is "N", ALLOW 7 DIGITS must be entered for this TRKCLS and TRK TYPE.

For 5E10 and later, "N" must be entered if LSTG SVC TRAF is "N" and "TRKCLS" is "LTOLLCON", "PRINTOLL", "SCINTOLL", or "TTOLLCON".

3.9 APOS TREATMENT

Description: Is Automated Position Treatment provided on this trunk group?

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

The APOS TREATMENT field is used by the Automated Position feature, which is a Secured Feature, and must be purchased before it can be assigned. SFID 65 on the SFSYS form must be set to "S" or "Y" before APOS TREATMENT on this form can be set to "Y". (For more information on the Automated Position Feature, see Division 2, Section 4A on Secured Features.)

If TRKCLS is "INAISTRK", APOS TREATMENT must be "N".

3.10 WIRELESS

Description: Does this trunk carry wireless traffic only?

Software Release: 5E8 and later

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If WIRELESS is "Y", then TRKCLS cannot be "DIOR", "CAMAANI" or "CAMAONI".

3.11 WIRELESS SA

Description: Is the wireless special access activated for this trunk? This field is used by the special feature, FGD Incoming Signaling for Special Application, which provides operator services functions while interfacing over direct trunks from switching offices other than a Class 5 local office. For more information on this feature see Division 2, Section 4A83.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If WIRELESS SA is "Y", then:
- AATOS SDN NRA must be "N"
- ANI must be "Y"
- AUTO COIN TRAF must be "N"
- COIN must be "N"
- COIN POST PAID must be "N"
- SIG TYPE must be "NOCN"
- TRKCLS must be "LATA"
- TRK TYPE must be "COMB", "D0", "D0P",
- "D0M" or "D1P"
- WIRELESS must be "Y".

NOTE: If "Y" is entered, TRKCLS on the corresponding TKGRP form must also be set to "LATA". The form corresponds to a TKGRP form if TGN on this form matches the TGN entry on the TKGRP form.

When SELECTIVE OLS is "Y", WIRELESS SA must be "Y".

3.12 SELECTIVE OLS

Description: Should selective originating line screening be activated for this trunk? This field is used by the special feature, FGD Incoming Signaling for Special Application, which provides operator services functions while interfacing over direct trunks from switching offices other than a Class 5 local office. For more information on this feature see Division 2, Section 4A83.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When SELECTIVE OLS is "Y", WIRELESS SA must be "Y".

3.13 ALLOW 7 DIGITS

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Description: Is 7-digit dialing allowed on sequence calls? This field indicates whether 7-digit dialing is allowed on automated sequence calls for this trunk group. For automated sequence calls, OSPS checks the number of digits dialed. 7-digit dialing is not allowed for DIOR or AATOS SDN NRA features.

Software Release: 5E9(1) and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

This field must not be entered if TRUNK TYPE is D1P.

If TRKCLS is "LATA" and LSTG SVC TRAF is "N", then ALLOW 7 DIGITS must be "N".

If "N" is entered, OSPS INPA must be "Y" on the OSPSOPT form.

For 5E10 and later, "N" must be entered if LSTG SVC TRAF is "N" and TRKCLS is "LATA".

3.14 ALLOW INTRA DA

Description: Are intra-LATA DA calls allowed? This field specifies whether calls will be allowed or denied on a per trunk group basis. This field is being used by the DA/LOCDA feature.

Software Release: 5E9(1) and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If LATA TYPE is "INTRA" or "BOTH" and INTRA CARR ID is NOT 288, ALLOW INTRA DA must be "Y".

If LATA TYPE is "INTER", ALLOW INTRA DA must be "N".

3.15 CARRIER CCS

Description: Is the Calling Card Screening by Carrier feature active on this trunk group? The CARRIER CCS field was added to support the Calling Card Screening by Carrier special feature. For more information on this feature see Division 2, Section 4A374.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

3.16 ALLOW AILS

Description: Is AILS (Automated Inward Line Screening) treatment to be applied on this trunk? This field supports the OSPS Automated Inward Line Screening secured feature. (For more information on this feature, see Division 2, Section 4A370.)

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

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3.17 WIRELINE

Description: Are wireline/non-TRS (Telephone Relay Service) FGD (Feature Group D) originations allowed? This field supports the FGD Incoming Signaling Release 2 secured feature, which has an SFID 373. (For more information on this feature, see Division 2, Section 4A373.)

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If WIRELINE is "Y", then:
- WIRELESS must be "N"
- WIRELESS SA must be "N"

For 5E9 only, if WIRELINE is "Y", ANSWER SUPV must not be "N".

4. FORM ENTRIES - 5417-3 RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

4.2 * TGN

Description: Enter the OSPS incoming TGN (Trunk Group Number).
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The incoming trunk group being assigned here must be defined on a TKGRP form (5202 Record) with a TRK DIR of "INC" and a TRKCLS of "FIOPR".

LISTING SERVICES

The following fields (Section 4.3 - Section 4.12) define Listing Services options.

4.3 LSTG SVC TRAF

Description: Does this trunk group have TA Listing Services traffic?

Software Release: 5E6(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If LSTG SVC TRAF is "Y",

- CARR SELEC ENF must be "N";

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- TRKCLS cannot be "DIOR";
- if TRKCLS is not "FIOPR",
  - COIN TYPE must not be entered.
  - SIG TYPE must be "NOCN";
  - START PULSE must be "TURNBACK";
- and TRKCLS is NOT "INAISTRK", then TRK TYPE must be "COMB", "DO", "DOP", "DOM", or "D1P".
- and TRKCLS is "LATA", then
  - ANSWER SUPV must not be entered.
  - FROM LOCAL OFC must be entered.
- and TRKCLS is "PF", FROM LOCAL OFC must be entered.
- For 5E10 and later: TKGRP INPULSING cannot be "CCIS6" nor "ISUP7" when LSTG SVC TRAF is "Y" on the corresponding OPRTK form. TGNs match on corresponding OPRTK and TKGRP forms.

If LSTG SVC TRAF is "N",

- TRKCLS must be "DIOR", "FIOPR", or "PF";
- INTER FOR CC must be "N";
- FROM TA SYSTEM must be "N";
- CALL COPML must be "N".
- For 5E7 and later, when LSTG SVC TRAF is "N" and TRKCLS is "PF", then:
  - TRK TYPE must be "COMB", "D0", "D0P", "D0M" or "D1P".
  - SIG TYPE must be "NOCN".
  - BILLING DN on the corresponding TKGRP form must be entered. The corresponding TKGRP form is found by matching TGN on the TKGRP form with the TGN on the OPRTK form.
- LSTG SVC TRAF is "N" and TRKCLS is "LATA", then:
  - SIG TYPE must be "NOCN".
  - BILLING DN must be a ten-digit number or must not be entered.

If TRKCLS is not "FIOPR", "DIOR" or "INAISTRK" on the TKGRP form associated with an OPRTK form, the trunk group is used for Listing Services and LSTG SVC TRAF must be "Y". The TKGRP form is found by matching TGN on the OPRTK form with TGN on the TKGRP form.

4.4 FROM TA SYSTEM

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Description: Is the Listing Services traffic coming from a Toll and Assist Operator system?

Software Release: 5E6(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TRKCLS is "INAISTRK", FROM TA SYSTEM must be "N".

If LSTG SVC TRAF is "N", FROM TA SYSTEM must be "N".

4.5 CALL COMPL

Description: Is Listing Services call completion allowed?

Software Release: 5E6(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If LSTG SVC TRAF is "N", CALL COPML must be "N".

4.6 INTER FOR CC

Description: Can an interLATA carrier be used for interLATA Listing Services Call Completion calls?

Software Release: 5E6(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "N" if TRKCLS is "INAISTRK", or LSTG SVC TRAF is "N".

If INTER FOR CC is "Y", LATA TYPE must not be "INTRA".

4.7 DA AGGR TRK

Description: Is the DA/DACC (Directory Assistance/DA Call Completion) Enhancements feature active? This field indicates if a trunk group is used as a traffic aggregator for Directory Assistance calls for the OSPS Enhancements to DA and DACC for Wireline and Non-Wireline Users special feature. A traffic aggregator is an entity that collects DA calls from a number of telephone stations and sends them on to an OSPS DA system over a dedicated trunk group. For more information on this secured feature, see Division 2, Section 4A117.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DA AGGR TRK is "Y" then:

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- LSTG SVC TRAF must be "Y"
- WLESS DCIS must be "N"
- WLINE DCIS must be "N"

- and AGGR IS CMC is "Y", then

  COIN must be "N".

  COIN POST PAID must be "N"

  OL SCRN must not be "DED"

  SIG TYPE must be "NOCN".

Enhanced DA/DACC is a secured feature, therefore SFID 117 ACT must be set to "Y" on the SFSYS form (5713-1 Record), before the DA AGGR TRK field on the OPRTK form can be set to "Y".

For 5E9(1) and later, if DA AGGR TRK is "Y" then, AGGR ID, AGGR INDEX and AGGR IS CMC must be entered.

4.8 AGGR ID

Description: Enter the ID (Aggregator Identification Index) of the traffic aggregator using this trunk.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 99999

Data Rules:

If DA AGGR TRK is "Y", then AGGR ID, AGGR INDEX and AGGR IS CMC must be entered. The index is passed to the LSDB to identify the aggregator.

If the same AGGRID INDEX value is entered on two or more OPRTK forms, then those forms must also have identical AGGR ID values.

- **WARNING:** AGGR ID is set to blank if DA AGGR TRK, WLINE DCIS, and WLESS DCIS are "N".

4.9 AGGR INDEX

Description: Enter the index to identify the traffic aggregator using this trunk.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 31

Data Rules:

If DA AGGR TRK is "Y", then AGGR ID, AGGR INDEX and AGGR IS CMC must be entered.

4.10 AGGR IS CMC

Description: Is this traffic aggregator a Cellular Mobile Carrier?

Software Release: 5E9(1) and later.
Valid Entries: Y, N

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Data Rules:

If DA AGGR TRK is "Y", then AGGR ID, AGGR INDEX and AGGR IS CMC must be entered.

If AGGR IS CMC is "Y", then AGGR NPA and AGGR NXX must be entered. However, if "N" is entered, AGGR NPA and AGGR NXX cannot be entered.

4.11 AGGR NPA

Description: Enter the 3-digit area code for LATA determination of the CMC (Cellular Mobile Carrier). The NPA and NXX are associated with the CMC's MTSO (Mobile Telephone Switching Office). The CMC may have several MTSO's with different NPA/NXXs.

Software Release: 5E9(1) and later.
Valid Entries: 200 - 999

Data Rules:

If AGGR NPA and AGGR NXX values are entered on the OPRTK form, matching NPA and NXX values must be found on the NPAMAP form (5414 Record).

4.12 AGGR NXX

Description: Enter the 3-digit exchange code for LATA determination of the Cellular Mobile Carrier. The NPA and NXX are associated with the CMC's MTSO. The CMC may have several MTSO's with different NPA/NXXs.

Software Release: 5E9(1) and later.
Valid Entries: 200 - 999

Data Rules:

If AGGR NPA and AGGR NXX values are entered on the OPRTK form, matching NPA and NXX values must be found on the NPAMAP form (5414 Record).

4.13 WLINE DCIS

Description: Is wireline direct connect incoming signaling traffic being supported on this trunk group? The fields WLINE DCIS and WLESS DCIS were added to support the Feaure Group D Incoming Signaling for Special Applications, Minnesota Equal Access Network Services Group feature. For more information on this feature see Division 2, Section 4A379.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

WLINE DCIS must be "N" if DA AGGR TRK is "Y".

If WLINE DCIS is "Y":
- AGGR ID must be entered
- ANSWER SUPV must not be entered
- DA AGGR TRK must be "N"
- TRK CLASS must be "LATA"
- WIRELESS must be "N"

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- WIRELESS SA must be "N"
- WIRELINE must be "N"
- WLESS DCIS must be "N"

4.14 WLESS DCIS

Description: Is the wireless direct connect incoming signaling traffic being supported on this trunk group. The fields WLINE DCIS and WLESS DCIS were added to support the Feaure Group D Incoming Signaling for Special Applications, Minnesota Equal Access Network Services Group feature. For more information on this feature, see Division 2, Section 4A379.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

WLESS DCIS must be "N" if DA AGGR TRK is "Y".

If "Y" is entered:
- AATOS SDN NRA must be "N"
- AGGR ID must be entered
- ANI must be "Y"
- ANSWER SUPV must be entered
- AUTO COIN TRAF must be "N"
- COIN must be "N"
- COIN POST PAID must be "N"
- DA AGGR TRK must be "N"
- SIG TYPE must be "NOCN"
- TRK CLASS must be "LATA"
- TRK TYPE must be
- "COMB", "D0", ¿D0M", "D0P"
- or "D1P"
- WIRELESS SA must be "N"
- WIRELESS must be "N"
- WIRELINE must be "N"

4.15 CARRIER BRAND

Description: Is carrier specific branding active on this trunk group? This field supports the Carrier Specific Branding on Seizure for ACCS and ACTS feature. For more information on this feature see Division 2, Section 4A378.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

4.16 LS RECONNECT

Description: Is Listing Services Reconnect allowed on this trunk? This field supports OSPS Customer Controlled Reconnect to Directory Assistance/ Listing Services feature. For more information on this feature, see Division 2, Section 4A381.

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Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

4.17 ACCESS ID

Description: Enter the CAP (Competitive Access Provider) Access ID. This ID is used by OSPS when generating AMA records. The ACCESS ID field was added to support the AMA Recording of the Access ID for Competitive Access Provider Calls feature. For more information on this feature, see Division 2, Section 4A392.

Software Release: 5E9(1) and later.
Required Field.
Default: 0
Valid Entries: 0 for LEC or 1 - 255

4.18 SPL ACC SRV ID

Description: Enter the special access service identifier. This field is used to specify a service provider via an access ID, and was added to support the Identification of Calls Originated Through Special Access Methods feature.

Software Release: 5E10 and later.
Required Field.
Default: 0
Valid Entries: 0 - 10

Data Rules:

If 0 is not entered (i.e., 1 - 10 is entered):

- then TRK CLASS must not be "DIOR", "CAMAANI" or "CAMAONI".
- AATOS SDN NRA must be "N".
- INPULSING cannot be set to "ISUP7" on the corresponding TKGRP form, The forms correspond in the TGN fields match. .P

4.19 DA AUTOMATION

Description: Should LS/DA (Listing Service / Directory Assistance) calls be sent to an automated position? This field also supports the Record and Playback secured feature. For more information on this feature, see Division 2, Section 4A415.

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then
- APOS TREATMENT must be "Y"
- LSTG SVC TRAF must be "Y"

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4.20 CALL LNP SRC

Description: The CALL LNP SRC field is used to specify one of the following:

- none of the back numbers arriving on this trunk group are in a portable NPA-NXX.
- the LRN PARAMETER should be used for all back number LRNs for calls arriving on this trunk group.
- an LNP query should be made on the back number to determine the back LRN.

Software Release: 5E11 and later
Required Field.
Default: NOPT
Valid Entries: NOPT, OFCD, and QURY

Data Rules:

When CALL LNP SRC is "OFCD", LRN PARAMETER must be entered.

4.21 LRN PARAMETER

Description: The LRN PARAMETER field is used to specify the Location Routing Number (LRN) to be used as a back number for calls arriving on the trunk group. For more information, see Division 2, Section 4A417 (for LEC) or Section 4A419 (for AT&T).

Software Release: 5E11 and later
Valid Entries: NPANXXXXXX or blank

Data Rules:

When CALL LNP SRC is "OFCD", LRN PARAMETER must be entered.

The following Figure examines the trunk variables and OLS (Originating Line Screening) to determine coin treatment.

COIN - Indicates that the trunk carries coin traffic.

TRK TYPE = "SUP" - Indicates the trunk is super-combined.

COIN POST PAID - Indicates the trunk carries Post-pay traffic.

COIN?	TRK TYPE = "SUP"?	COIN POST PAID?	TREATMENT
N	N	N	Call is Non-Coin. OLS is not needed for coin determination.
N	N	Y	OLS entry is used to indicate postpay coin. (See Note).
Y	N	N	Call is pre-pay coin. OLS is not needed for coin determination.
Y	N	Y	
Y	Y	N	If the start pulse indicates coin, the call is treated as pre-pay coin. OLS is not needed for coin determination.
Y	Y	Y	If the start pulse indicates coin, the call is treated as post-pay coin. If OLS is done, OLS should return coin, or an assert is fired.

Note: In this case, an OLS entry is needed to indicate coin. In all other cases, if there is an OLS entry, the results should not contradict the trunk data, or an assert is fired.

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Figure 1 OLS DETERMINATION FOR COIN TREATMENT

```
SCREEN 1 OF 2                5ESS Switch
oprtk                OFFICE DATA ADMINISTRATION
(5417-1/2/3)        ACCESS TANDEM INCOMING TRUNK GROUPS

*1. TGN          ____     13. COIN TYPE       __       25. ANSWER SUPV    _
#2. TRKCLS       _________ 14. SIG TYPE       NOCN     26. AATOS SDN NRA  N
#3. ORIG NPA     ___      15. AUTO COIN TRAF  N        27. APOS TREATMENT N
#4. LATA TYPE    _____    16. ACQS SCRN       NONE     28. WIRELESS       N
#5. TRK TYPE     _____    17. ANI             Y        29. WIRELESS SA    N
 6. SCRN INDEX   ____     18. OS EA SIG       N        30. SELECTIVE OLS  N
 7. INTRA CARR ID ____    19. CARR SELEC ENF  N        31. ALLOW 7 DIGITS Y
 8. INTER CARR ID ____    20. START PULSE     TURNBACK 32. ALLOW INTRA DA Y
 9. INTL CARR ID  ____    21. PROTECTED NXXS  N        33. CARRIER CCS    N
10. OL SCRN       NONE    22. EXCEPTION AREAS N        34. ALLOW AILS     N
11. COIN          N       23. MECH            Y        35. WIRELINE       N
12. COIN POST PAID N      24. FROM LOCAL OFC  Y
```

```
SCREEN 2 OF 2                5ESS SWITCH          _
oprtk                OFFICE DATA ADMINISTRATION
(5417-1/2/3)        ACCESS TANDEM INCOMING TRUNK GROUPS

  LISTING SERVICES       46. WLINE DCIS     N
36. LSTG SVC TRAF  N     47. WLESS DCIS     N
37. FROM TA SYSTEM N     48. CARRIER BRAND  N
38. CALL COMPL     N     49. LS RECONNECT   N
39. INTER FOR CC   N     50. ACCESS ID      0
40. DA AGGR TRK    N     51. SPL ACC SRV ID 00
41. AGGR ID        _____ 52. DA AUTOMATION  N
42. AGGR INDEX     __
43. AGGR IS CMC    _
44. AGGR NPA       ___
45. AGGR NXX       ___
```

Figure 2 SAMPLE OPRTK FORM 5E10 AND LATER SOFTWARE RELEASES

```
SCREEN 1 OF 2                5ESS Switch
oprtk                OFFICE DATA ADMINISTRATION
(5417-1/2/3)        ACCESS TANDEM INCOMING TRUNK GROUPS

*1. TGN          ____     13. COIN TYPE       __       25. ANSWER SUPV    _
#2. TRKCLS       _________ 14. SIG TYPE       NOCN     26. AATOS SDN NRA  N
#3. ORIG NPA     ___      15. AUTO COIN TRAF  N        27. APOS TREATMENT N
#4. LATA TYPE    _____    16. ACQS SCRN       NONE     28. WIRELESS       N
#5. TRK TYPE     _____    17. ANI             Y        29. WIRELESS SA    N
 6. SCRN INDEX   ____     18. OS EA SIG       N        30. SELECTIVE OLS  N
 7. INTRA CARR ID ____    19. CARR SELEC ENF  N        31. ALLOW 7 DIGITS Y
 8. INTER CARR ID ____    20. START PULSE     TURNBACK 32. ALLOW INTRA DA Y
 9. INTL CARR ID  ____    21. PROTECTED NXXS  N        33. CARRIER CCS    N
```

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```
10. OL SCRN        NONE     22. EXCEPTION AREAS N       34. ALLOW AILS     N
11. COIN           N        23. MECH            Y       35. WIRELINE       N
12. COIN POST PAID  N       24. FROM LOCAL OFC  Y
```

```
SCREEN 2 OF 2                  5ESS SWITCH          _
oprtk                  OFFICE DATA ADMINISTRATION
(5417-1/2/3)        ACCESS TANDEM INCOMING TRUNK GROUPS

  LISTING SERVICES        46. WLINE DCIS     N
36. LSTG SVC TRAF  N      47. WLESS DCIS     N
37. FROM TA SYSTEM N      48. CARRIER BRAND  N
38. CALL COMPL     N      49. LS RECONNECT   N
39. INTER FOR CC   N      50. ACCESS ID      0
40. DA AGGR TRK    N      51. SPL ACC SRV ID 00
41. AGGR ID        _____  52. DA AUTOMATION  N
42. AGGR INDEX     __     53. CALL LNP SRC    NOPT
43. AGGR IS CMC    _      54. LRN PARAMETER   __________
44. AGGR NPA       ___
45. AGGR NXX       ___
```

Figure 3 SAMPLE OPRTK FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4S: 5418 RECORD
ACCESS TANDEM CARRIER AND ROUTE INFORMATION FOR PRIMARY AND ALTERNATE TOLL AND ASSISTANCE OPERATOR SERVICES FORM - DIOPR

1. GENERAL

The 5418 Record is available with 5E4(2) and later Software Releases. This record defines the type of carrier and traffic over each carrier group that can access the OSPS (Operator Services Position System) operator.

The 5418 Record contains routing information for a particular carrier identification (key). It also provides data to determine if all call types will be handled by the OS (Operator System) (could have restricted call types). If no call restrictions are present for a carrier identification, then the primary code index and overlap outpulsing indicator will be used to route the call.

If a particular call type is restricted and ISP (Intermediate Switching Point) determines that the restrictions apply to the call, the code index and overlap outpulsing indicator will be overwritten by an alternate value, and the call will be routed normally.

1.1 Recent Change View

The corresponding Recent Change View for this form is 26.25

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * CARRIER ID

Description: Enter the interexchange carrier identification number. This is the intraLATA/interLATA/international carrier identification number from the OPRTK form (5417 Record), LEC (Local Exchange Carrier), or the Feature Group B carrier.

Required Field.

For 5E4(2) - 5E7: 0 - 999 or LEC

For 5E8 only: LEC or
- 0 - 9999 for Feature Group B
- 0 - 999 for Feature Group D

For 5E9(1) and later: LEC or 0 - 9999

Data Rules:

For 5E8 and later:

- If CARRIER ID is 288 or "LEC", B CARRIER must be "N".
- If B CARRIER is set to "Y" then, the CARRIER ID must also be defined on an ICF form with FEAT GRP set to "B".

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For 5E8 only, if CARRIER ID is 1000 - 9999, then B CARRIER must be "Y".

2.3 * B CARRIER

Description: Is this a Feature Group B carrier? This is a key field in addition to the CARRIER ID field.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E8 and later:

- If B CARRIER is "N", then the following fields must not be entered:

  C950 1+ ALT CDI

  C950 1+ OVLP

  C950 0+ ALT CDI

  C950 0+ OVLP

  NC950 ALT CDI

  NC950 OVLP

  COIN ALT CDI

  TELECONF ALT CID

  TELECONF OVLP

- If B CARRIER is "Y", COIN ALT CDI, TELECONF ALT CDI, and TELECONF OVLP must not be entered.
- If B CARRIER is set to "Y", then the CARRIER ID must also be defined on an ICF form with FEAT GRP set to "B".

2.4 # PRIM CDI

Description: Enter the primary code index of the OS (Operator System) that handles operator calls for this carrier being defined (or of the announcement if no operator system is assigned).

An entry in this field is used as a key into the RAR form (5301 Record) record to route calls out of the office to an external operator switch.

Required Field.

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Valid Entries: 0 - 4095

Data Rules:

For 5E8 and later:

- If PRIM CDI is not 0, the value must match a value in the CDI field on an RAR form.
- If PRIM CDI is 0, the OSPS TA on the OSPSOPT form must be "Y".

2.5 PRIM OVLP

Description: Will overlap outpulsing be allowed to the primary operator switch (route)?
Default: N
Valid Entries: Y, N

2.6 COIN ALT CDI

Description: Enter an alternate code index for coin traffic (indicating where restricted coin traffic is to be routed).
Valid Entries: 0 - 4095

Data Rules:

The entry in the COIN ALT CDI field must not equal the entry in the PRIM CDI field.

This field should be left blank if the primary OS will route coin traffic. If this field contains a valid entry, the primary OS will be restricted from handling coin traffic.

For 5E8 and later, the value entered in this field must match a value entered in the CDI field on the RAR form. In addition, if 0 is entered, then the OSPS TA field on the OSPSOPT form (5424 Record) must be "Y".

2.7 ACQSAQ ALT CDI

Description: Enter an alternate code index wherer ACQS automatic quote traffic will be routed.
Valid Entries: 0 - 4095

Data Rules:

The entry in the ACQSAQ ALT CDI field must not equal the entry in the PRIM CDI field.

This field should be left blank if the primary OS will route ACQS auto quote traffic. If this field contains a valid entry, the primary OS will be restricted from handling ACQS auto quote traffic.

For 5E8 and later, if 0 is entered in this field, then OSPS TA on the OSPSOPT form (5424 Record) must be "Y". Also, the value entered in this field must match a value entered in the CDI field on an RAR form.

2.8 ACQSVQ ALT CDI

Description: Enter an alternate code index where ACQS voice quote traffic is to be routed.
Valid Entries: 0 - 4095

Data Rules:

The entry in the ACQSVQ ALT CDI field must not equal the entry in the PRIM CDI field.

This field should be left blank is the primary OS will route ACQS voice quote traffic. If this field contains a

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valid entry, the primary OS will be restricted from handling ACQS voice quote traffic.

For 5E8 and later, if 0 is entered, then OSPS TA on the OSPSOPT form must be "Y". Also, the value entered in this field must match a value entered in the CDI field on an RAR form.

2.9 NC950 ALT CDI

Description: Enter an alternate code index for noncoin 950 1xxx traffic.
Valid Entries: 0 - 4095

Data Rules:

The entry in the NC950 ALT CDI field must not equal the entry in the PRIM CDI field.

This field should be left blank if the primary OS will be restricted from handling noncoin 950 traffic.

For 5E8 and later, the value entered in this field must match a value entered in the CDI field on the RAR form. In addition, if 0 is entered, then the OSPS TA field on the OSPSOPT form (5424 Record) must be "Y".

2.10 C950 1+ ALT CDI

Description: Enter an alternate code index for coin 950 1+ traffic.
Valid Entries: 0 - 4095

Data Rules:

The entry in the C950 1+ ALT CDI field must not equal the entry in the PRIM CDI field. If an entry is made in this field, then an entry is required in the C950 0+ ALT CDI.

This field should be left blank if the primary OS will be restricted from handling coin 950 1+ traffic.

For 5E8 and later, this field must not be entered if C950 0+ ALT CDI is not entered.

For 5E8 and later, the value entered in this field must match a value entered in the CDI field on the RAR form. In addition if 0 is entered, then the OSPS TA field on the OSPSOPT form (5424 Record) must be "Y".

2.11 C950 0+ ALT CDI

Description: Enter an alternate code index for coin 950 0+ traffic.
Valid Entries: 0 - 4095

Data Rules:

The entry in the C950 0+ ALT CDI field must not equal the entry in the PRIM CDI field. If an entry is made in this field, then an entry is required in the C950 1+ ALT CDI.

This field should be left blank if the primary OS will be restricted from handling coin C950 1+ traffic.

For 5E8 and later, this field must not be entered if 950 0+ ALT CDI is not entered.

For 5E8 and later, the value entered in this field must match a value entered in the CDI field on the RAR form. In addition if 0 is entered, then the OSPS TA field on the OSPSOPT form (5424 Record) must be "Y".

2.12 TELECONF ALT CDI

Description: Enter an alternate code index for teleconferencing traffic.

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Valid Entries: 0 - 4095

Data Rules:

The entry in the TELECONF ALT CDI field must not equal the entry in the PRIM CDI field

This field should be left blank if the primary OS will be restricted from handling teleconferencing traffic.

For 5E8 and later, the value entered in this field must match a value entered in the CDI field on the RAR form. In addition if 0 is entered, then the OSPS TA field on the OSPSOPT form (5424 Record) must be "Y".

2.13 COIN OVLP

Description: Will overlap outpulsing be allowed on calls to the OS handling restricted coin traffic?
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route coin traffic.

For 5E8 and later, if COIN ALT CDI is not entered, COIN OVLP must be "N".

2.14 ACQSAQ OVLP

Description: Will overlap outpulsing be allowed to the alternate ACQS automatic quote?
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route ACQS auto quote traffic.

For 5E8 and later, this field must be "N" if ACQSAQ ALT CDI is not entered.

2.15 ACQSVQ OVLP

Description: Will overlap outpulsing be allowed to the alternate ACQS voice quote.
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route ACQS voice quote traffic.

For 5E8 and later, this field must be "N" if ACQSVQ ALT CDI is not entered.

2.16 NC950 OVLP

Description: Will overlap outpulsing be allowed to the alternate noncoin 950 traffic.
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route noncoin 950 traffic.

For 5E8 and later, this field must be "N" if NC950 ALT CDI is not entered.

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2.17 C950 1+ OVLP

Description: Will overlap outpulsing be allowed to the alternate coin 950 1+ traffic?
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route coin 950 1+ traffic.

For 5E8 and later, this field must be "N" if either C950 1+ ALT CDI is not entered, or C950 0+ ALT CDI is not entered.

2.18 C950 0+ OVLP

Description: Will overlap outpulsing be allowed to the alternate coin 950 0+ traffic?
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route coin 950 0+ traffic.

For 5E8 and later, this field must be "N" if either C950 1+ ALT CDI or C950 0+ ALT CDI is not entered.

2.19 TELECONF OVLP

Description: Will overlap outpulsing be allowed to the alternate teleconferencing traffic?
Default: N
Valid Entries: Y, N

Data Rules:

This field should be left blank if the primary OS will route teleconferencing traffic.

For 5E8 and later, this field must be "N" if TELECONF ALT CDI is not entered.

```
                        5ESS Switch        _
diopr                OFFICE DATA ADMINISTRATION
(5418) ACCESS TANDEM ROUTE INFO. FOR PRIMARY & ALTERNATE TOLL & ASSIST. O.S.

*1. CARRIER ID 007     4. COIN ALT CDI     ____     11. COIN OVLP     N
#2. PRIM CDI   0236    5. ACQSAQ ALT CDI   ____      12. ACQSAQ OVLP   N
 3. PRIM OVLP  N       6. ACQSVQ ALT CDI   ____     13. ACQSVQ OVLP   N
                       7. NC950  ALT CDI   ____     14. NC950 OVLP    N
                       8. C950 1+ ALT CDI  ____     15. C950 1+ OVLP  N
                       9. C950 0+ ALT CDI  ____     16. C950 0+ OVLP  N
                      10. TELECONF ALT CDI ____     17. TELECONF OVLP N
```

Figure 1 SAMPLE DIOPR FORM 5E4 - 5E7 SOFTWARE RELEASES

```
                        5ESS Switch        _   No errors/warnings
diopr                OFFICE DATA ADMINISTRATION
(5418) ACCESS TANDEM ROUTE INFO. FOR PRIMARY & ALTERNATE TOLL & ASSIST. O.S.
```

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*1. CARRIER ID 0007 5. COIN ALT CDI ____ 12. COIN OVLP N
*2. B CARRIER N 6. ACQSAQ ALT CDI ____ 13. ACQSAQ OVLP N
#3. PRIM CDI 0236 7. ACQSVQ ALT CDI ____ 14. ACQSVQ OVLP N
4. PRIM OVLP N 8. NC950 ALT CDI ____ 15. NC950 OVLP N
9. C950 1+ ALT CDI ____ 16. C950 1+ OVLP N
10. C950 0+ ALT CDI ____ 17. C950 0+ OVLP N
11. TELECONF ALT CDI ____ 18. TELECONF OVLP N

Figure 2 SAMPLE DIOPR FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4T: 5419 RECORD
OSPS LEC INTRACOMPANY NETWORK FORM - DNNTWK

1. GENERAL

The 5419 Record is available with the 5E4(2) Software Release.

This record provides LEC (Local Exchange Carrier) intracompany network information for the OSPS (Operator Services Position System) TA (Toll and Assistance) features. Carriers are furnished for operator-dialed directory numbers.

The carrier used for an operator-dialed third number or conference number will be the LEC if the LEC can handle it. If an interLATA carrier is needed, the one selected will be the global default conference carrier, defined in the CF CARR field of the OSPSOPT form (5424 Record).

For operator-dialed third or conference numbers to specific NPA-NXX combinations, a particular carrier can be indicated to be used. The carrier indicated on this form is always used to route to the specified NPA-NXX combination, overriding the carrier indicated on the 5424 Record. There can be as many as three carriers identified per NPA. Each carrier identified is for all NXXs that are marked with its designation (A, B or C). If a DNNTWK form is submitted, then there must be at least one OSPSOP form (5401 Record) defined for this office.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control group number and the office name on each record.

2.2 * NPA

Description: Enter a valid 3-digit NPA (Numbering Plan Area).

Required Field.
Valid Entries:
- For 5E4(2) - 5E8: 200 - 919, middle digit 0 or 1
- For 5E9(1) and later: 200 - 999

2.3 # CARRIER A

Description: Enter a valid interLATA carrier identification number.

Required Field.
Valid Entries:
- For 5E4(2) - 5E8: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

At least one of the NXX positions must be selected for CARRIER A. CARRIER A must not be the same as CARRIER B or CARRIER C.

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Entries in this field must be defined as CARRIER ID on an ICF form (5305 Record). In addition, for 5E9(1) and later, FEAT GRP on the ICF form must be set to "D".

2.4 CARRIER B

Description: Enter a valid interLATA carrier identification number.
Valid Entries:
- For 5E4(2) - 5E8: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

Entries in this field must be defined as CARRIER ID on an ICF form. In addition, for 5E9(1) and later, FEAT GRP on the ICF form must be set to "D".

If one or more NXX positions are defined with "B", then CARRIER B must be specified. CARRIER B cannot be the same as CARRIER A or CARRIER C.

2.5 CARRIER C

Description: Enter a valid interLATA carrier identification number.
Valid Entries:
- For 5E4(2) - 5E8: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

Entries in this field must be defined as CARRIER ID on an ICF form. In addition, for 5E9(1) and later, FEAT GRP on the ICF form must be set to "D".

If one or more NXX positions are defined with "C", then CARRIER C must be specified. CARRIER C cannot be the same as CARRIER A or CARRIER B.

2.6 LIST OF NXXs (200 - 399)

Description: Enter the list of NXXs for the NPA/CARRIER combination. Each NXX that can be dialed must be assigned to either Carrier A, B, or C. An NXX should be left blank if it is not served by any carrier.
Valid Entries: A, B, C

Data Rules:

At least one of the NXX positions must be defined with CARRIER A. If either CARRIER B or CARRIER C are defined, then at least one of the NXX positions must be defined with them.

SCREEN 1 OF 3 5ESS Switch
dnntwk OFFICE DATA ADMINISTRATION
(5419) OSPS LEC INTRACOMPANY NETWORK

*1. NPA 312
#2. CARRIER A 459
3. CARRIER B ___
4. CARRIER C ___

5. LIST OF NXXs (200-399)

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```
      01234 56789       01234 56789       01234 56789       01234 56789
 1. 200 AAAAA AAAAA  6. 250 _____ _____ 11. 300 _____ _____ 16. 350 _____ _____
 2. 210 _____ _____  7. 260 _____ _____ 12. 310 _____ _____ 17. 360 _____ _____
 3. 220 _____ _____  8. 270 _____ _____ 13. 320 _____ _____ 18. 370 _____ _____
 4. 230 _____ _____  9. 280 _____ _____ 14. 330 _____ _____ 19. 380 _____ _____
 5. 240 _____ _____ 10. 290 _____ _____ 15. 340 _____ _____ 20. 390 _____ _____
```

```
SCREEN 2 OF 3                5ESS Switch
dnntwk                OFFICE DATA ADMINISTRATION
(5419)             OSPS LEC INTRACOMPANY NETWORK

                    5. LIST OF NXXs (400-799)
      01234 56789       01234 56789       01234 56789       01234 56789
21. 400 _____ _____ 31. 500 _____ _____ 41. 600 _____ _____ 51. 700 _____ _____
22. 410 _____ _____ 32. 510 _____ _____ 42. 610 _____ _____ 52. 710 _____ _____
23. 420 _____ _____ 33. 520 _____ _____ 43. 620 _____ _____ 53. 720 _____ _____
24. 430 _____ _____ 34. 530 _____ _____ 44. 630 _____ _____ 54. 730 _____ _____
25. 440 _____ _____ 35. 540 _____ _____ 45. 640 _____ _____ 55. 740 _____ _____
26. 450 _____ _____ 36. 550 _____ _____ 46. 650 _____ _____ 56. 750 _____ _____
27. 460 _____ _____ 37. 560 _____ _____ 47. 660 _____ _____ 57. 760 _____ _____
28. 470 _____ _____ 38. 570 _____ _____ 48. 670 _____ _____ 58. 770 _____ _____
29. 480 _____ _____ 39. 580 _____ _____ 49. 680 _____ _____ 59. 780 _____ _____
30. 490 _____ _____ 40. 590 _____ _____ 50. 690 _____ _____ 60. 790 _____ _____
```

```
SCREEN 3 OF 3                5ESS Switch        _
dnntwk                OFFICE DATA ADMINISTRATION
(5419)             OSPS LEC INTRACOMPANY NETWORK

                    5. LIST OF NXXs (800-999)
      01234 56789       01234 56789       01234 56789       01234 56789
61. 800 _____ _____ 66. 850 _____ _____ 71. 900 _____ _____ 76. 950 _____ _____
62. 810 _____ _____ 67. 860 _____ _____ 72. 910 _____ _____ 77. 960 _____ _____
63. 820 _____ _____ 68. 870 _____ _____ 73. 920 _____ _____ 78. 970 _____ _____
64. 830 _____ _____ 69. 880 _____ _____ 74. 930 _____ _____ 79. 980 _____ _____
65. 840 _____ _____ 70. 890 _____ _____ 75. 940 _____ _____ 80. 990 _____ _____
```

Figure 1 SAMPLE DNNTWK FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4U: 5420 RECORD
CARRIER FOR OPERATOR SPECIAL DIALED CODES FORM - OCNTWK

1. GENERAL

The 5420 Record is available with 5E4(2) and later Software Releases.The carrier used for an operator special-dialed code will be the LEC (Local Exchange Carrier) if the LEC can handle it. If an interLATA carrier is needed, the one selected will be the global default route carrier (RT CARR field on the OSPSOPT form (5424 Record)). This form is used to specify exceptions to the above method of carrier selection. The carrier indicated on this form is always used to route to the given operator special-dialed code.

Given a specific NPA (Numbering Plan Area), TTC (Terminating Toll Center), and an operator special-dialed code, a particular carrier can be indicated to be used. If an OCNTWK form (5420 Record) is submitted, at least one OSPSOP form (5401 Record) must be submitted for this office.

If an operator-entered route number is floatable (i.e., the operator can drop off the call and leave the back and route numbers talking), then the carrier used must be the same as the one used for the forward number.

The carrier for an operator-entered non-floatable domestic route number is found by first consulting the 5420 Record to see if a specific carrier is desired. The carrier selected for a non-floatable route number does not have to have operator service supplied to it by OSPS.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control group number and the office name on each record.

2.2 * NPA

Description: Enter a valid NPA (Numbering Plan Area).

Required Field.
Valid Entries:
- For 5E4(2) - 5E8: 200 - 919, middle digit 0 or 1
- For 5E9(1) and later: 200 - 999

2.3 * TTC

Description: Enter a Terminating Toll Center.

Required Field.
Valid Entries: 0 - 99

2.4 * OSDC

Description: Enter an OSDC (Operator Special Dialed Code).

Required Field.
Valid Entries: 0 - 999, 1100 - 1199, or 11000 - 11999

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2.5 # CARRIER ID

Description: Enter an interLATA carrier identification number.

Required Field.
Valid Entries:
- For 5E4(2) - 5E8: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

Entries in this field must be defined in the CARRIER ID field of an ICF form (5305 Record) with FEAT GRP equal to "D".

---

ocntwk 5ESS Switch _
(5420) OFFICE DATA ADMINISTRATION
OSPS CARRIER FOR OPERATOR SPECIAL DIALED CODES

*1. NPA 312
*2. TTC 007
*3. OSDC 01123
#4. CARRIER ID 114

Figure 1 SAMPLE OCNTWK FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4V: 5421 RECORD
OSPS RSM/CARRIER DATA FORM - RSMCAR

1. GENERAL

The 5421 Record is available with 5E4(2) and later Software Releases.

This record defines the routing indexes to a carrier from an RSM (Remote Switching Module). When an OSPS (Operator Services Position System) call is routed to a carrier, the routing information is normally on an ICF form (5305 Record). But, if the call came to the OSPS through an RSM, it is routed out of that same RSM to the desired carrier.

1.1 Recent Change View

The corresponding Recent Change View for this form is 26.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CARRIER ID

Description: Enter an interexchange carrier identification number.

Required Field.
Valid Entries:

For 5E4(2) - 5E7: 0 - 999

For 5E8:
- 0 - 999 for Feature Group D
- 0 - 9999 for Feature Group B

For 5E9(1) and later: 0 - 9999

Data Rules:

Entries in this field must be defined in the CARRIER ID field of an ICF form.

When CARRIER ID and RSM are defined on this form, and CARRIER ID is defined on the ICF form (5305 Record) with an ACCESS TYPE of "BOTH" or "TBOTH", DIG ROUTING equal to "N" and CARRIER TYPE equal to "CONSOL", the RSMCAR form must have DOMES CDI, DOMES RTI, TRANS CDI, TRANS RTI, INTL CDI, INTL RTI, SAC CDI, and SAC RTI entries.

For 5E8 only, if FEAT GRP is "D", then CARRIER ID cannot be four digits.

For 5E9(1) and later, CARRIER ID and FEAT GRP on the RSMCAR form must match CARRIER ID and FEAT GRP on the corresponding ICF form.

2.3 * FEAT GRP

Description: Enter the Feature Group type. (For more information on Feature Groups see Division 2, Section 3I.)

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Software Release: 5E8 and later
Required Field.
Valid Entries:

Valid FEAT GRP Entries

Entry	Definition
B	Feature Group B
D	Feature Group D

Data Rules:

If FEAT GRP equals "B":

- FEATURE GROUP B ONLY fields must be entered.
- FEATURE GROUP D ONLY fields must not be entered.
- INTRA LATA must not be entered.

If FEAT GRP equals "D":

- For 5E8 only, CARRIER ID cannot be four digits,
- FEATURE GROUP B ONLY fields cannot be entered,
- INTRA LATA must be entered, and
- CARRIER ID must be defined on an ICF form:
  - if CARRIER TYPE on the ICF form is "CONSOL", ACCESS TYPE is "LTRM", "TLTM", "BOTH" or "TBOTH", and DIG ROUTING is "N", then the RSMCAR form must have an entry in the following fields:

    DOMES CDI

    DOMES RTI

    INTL CDI

    INTL RTI

    SAC CDI

    SAC RTI

  - if CARRIER TYPE on the ICF form is "IC", the RSMCAR form must not have any entry on the INTL CDI or INTL RTI fields.
  - if CARRIER TYPE is "IC" on the ICF form, and ACCESS TYPE is entered as "LTRM", "TLTM", "BOTH" or "TBOTH" and DIG ROUTING is entered as "N", then RSMCAR form must have have an entry on the following fields:

    DOMES CDI

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DOMES RTI

SAC CDI

SAC RTI

- if CARRIER TYPE on the ICF form is "INC" and DIG ROUTING is entered as "N", then the RSMCAR form must have an entry in the following fields:

  INTL CDI

  INTL RTI

  SAC CDI

  SAC RTI

- if CARRIER TYPE on the ICF form is "INC", the RSMCAR form must have the following fields populated as follows:

  INTRA LATA equals N

  DOMES CDI is blank

  DOMES RTI is blank

- if CARRIER TYPE on the ICF form is "LEC" or "PSEUDO", the RSMCAR form must have the following fields populated as follows:

  INTRA LATA equals Y

  DOMES CDI is blank

  DOMES RTI is blank

  INTL CDI is blank

  INTL RTI is blank

  SAC CDI is blank

  SAC RTI is blank

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2.4 * RSM

Description: Enter the Remote Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For each entry in this field, the corresponding EQIM form (5700 Record) (where the EQIM IM field on the EQIM form matches the entry in this field) must have values of either "RSM", "ORM" or "TRM" in the SM USAGE field on the EQIM form.

2.5 OSPS SERVES

Description: Does this OSPS provide operator service to this carrier for calls originated on this RSM?.
Valid Entries: Y, N

FEATURE GROUP B ONLY

Fields Section 2.6 - Section 2.9 refer to Feature Group B only (see Division 2, Section 1AY for a description of Feature Groups B and D).

2.6 TRANS CDI

Description: The name of this field was changed to FGB CDI in 5E8. This field name applies to 5E7 and earlier. See FGB CDI for usage information.

2.7 FGB CDI

Description: Enter the code index for transitional calls. (This field was called TRANS CDI for 5E7 and earlier).

This code index overrides the value entered on an ICF form so that outgoing calls are routed out of the same RSM cluster that they arrived on.
Valid Entries: 1 - 4095

Data Rules:

Entries in this field must exist on an RAR form.

2.8 TRANS RTI

Description: The name of this field was changed to FGB RTI in 5E8. This field name applies to 5E7 and earlier. See FGB RTI for usage information.

2.9 FGB RTI

Description: Enter the regular route index for transitional calls. (This field was called TRANS RTI for 5E7 and earlier).

This route index overrides the value entered on an ICF form.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

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Data Rules:

Entries in this field must exist on an RTIDX form.

FEATURE GROUP D ONLY

Fields Section 2.10 - Section 2.20 refer to Feature Group D only (see Division 2, Section 1AY for a description of Feature Groups B and D).

2.10 INTRA LATA

Description: Does this carrier accept IntraLATA (Local Access and Transport Area) calls?
Valid Entries: Y, N

2.11 DOMES CDI

Description: Enter the code index for domestic calls.

This code index overrides the value entered on an ICF form so that outgoing calls are routed out of the same RSM cluster that they arrived on (for umbilical preservation).
Valid Entries: 1 - 4095

Data Rules:

Entries in this field must exist on an RAR form (5301 Record).

2.12 DOMES RTI

Description: Enter the regular route index for domestic calls.

This route index overrides the value entered on the ICF form.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

Entries in this field must exist on an RAR form.

2.13 TRANS CDI

Description: Enter the code index for transitional calls.

This code index overrides the value entered on an ICF form so that outgoing calls are routed out of the same RSM cluster that they arrived on (for umbilical preservation).
Valid Entries: 1 - 4095

Data Rules:

Entries in this field must exist on an RAR form.

2.14 TRANS RTI

Description: Enter the regular route index for transitional calls.

This route index overrides the value entered on an ICF form.

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Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

Entries in this field must exist on an RTIDX form.

2.15 INTL CDI

Description: Enter the code index for international calls.

This code index overrides the value entered on an ICF form so that outgoing calls are routed out of the same RSM cluster that they arrived on (for umbilical preservation).
Valid Entries: 1 - 4095

Data Rules:

Entries in this field must exist on an RAR form.

2.16 INTL RTI

Description: Enter the regular route index for international calls.

This route index overrides the value entered on an ICF form.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

Entries in this field must exist on an RTIDX form.

2.17 SAC CDI

Description: Enter the code index for Service Access Code calls.

This code index overrides the value entered on an ICF form so that outgoing calls are routed out of the same RSM cluster that they arrived on (for umbilical preservation).
Valid Entries: 1 - 4095

Data Rules:

Entries in the SAC CDI field must exist on an RAR form.

2.18 SAC RTI

Description: Enter the regular route index for Service Access Code calls.

This route index overrides the value entered on an ICF form.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

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Data Rules:

Entries in this field must exist on an RTIDX form.

2.19 NS CDI

Description: Enter the Number Services 800 calls destination index. This is a destination index which results in routing an SSP 800 call to carrier trunks. If this field is not entered, the default value for NS CDI will be the value entered in the NS CDI field on the ICF form (5305 Record).

Software Release: 5E9(1) and later.
Valid Entries: 1 - 4095

Data Rules:

NS CDI must not be entered if "B" is entered in the FEAT GRP field.

If NS CDI is entered, there must be a corresponding RAR form (5301 Record) where CDI matches NS CDI on the RSMCAR form.

2.20 NS RTI

Description: Enter the Number Services 800 calls route index. The route index entered in this field results in routing the SSP 800 call to carrier trunks. If this field is not entered, the default value for NS RTI will be the value entered in the NS RTI field on the ICF form (5305 Record).

Software Release: 5E9(1) and later.
Valid Entries:

- For 5E10 and earlier: 1 - 3617 or REGL for
- Local Exchange Call
- For 5E11 and 5E12: 1 - 4095 or REGL for
- Local Exchange Call
- For 5E13 and later: Blank, or 1 - 16382 or REGL for Local Exchange Call

Data Rules:

NS CDI must not be entered if "B" is entered in the FEAT GRP field.

If NS RTI is entered and it is not "REGL", then the entry in this field must match a ROUTE INDEX on an RTIDX form (5303 Record).

```
rsmcar                    5ESS Switch                _
(5421)              OFFICE DATA ADMINISTRATION
                   OSPS RSM/CARRIER DATA

*1. CARRIER ID  0113          FEATURE GROUP D ONLY
*2. FEAT GRP    D              7. INTRA LATA Y
*3. RSM         090            8. DOMES CDI  1128
 4. OSPS SERVES Y              9. DOMES RTI  0359
                              10. INTL CDI   1823
FEATURE GROUP B ONLY          11. INTL RTI   0250
 5. FGB CDI ____              12. SAC CDI    1742
 6. FGB RTI ____              13. SAC RTI    0461
                              14. NS CDI     ____
```

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15. NS RTI ____

Figure 1 SAMPLE RSMCAR FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4W: 5422 RECORD
OSPS CAMA TRANSFER TRUNKS FORM - TCITG

1. GENERAL

The 5422 Record is available with 5E4(2) and later Software Releases.

This record defines data associated with CAMA (Centralized Automatic Message Accounting) transfer trunks. System CAMA calls use outgoing transfer CAMA trunks to get the back number from TSPS (Traffic Services Position System) operators in case of ANIF (Automatic Number Identification Failure) during ONI (Operator Number Identification) calls.

Outgoing CAMA are E & M trunks, and incoming transfer CAMA trunks can be either E & M or loop trunks. The sent/received signals in the incoming transfer CAMA trunks are the received/sent signals in the outgoing transfer CAMA trunk.

When an incoming transfer CAMA call arrives, the OSPS (Operator Services Position System) returns an alerting tone to the calling party if ALERT TONE is specified as "Y" (in the 5422 Record) for the two trunk groups associated with the CAMA office.

For an incoming transfer CAMA call to reach an operator, there must be an entry for transfer CAMA in the ACDCTP form (5412 Record). The ACDCTP form entry must have an ORIGIN CALL of "XFER", a PREFIX of "NULLP", a CALL CLASS of "INT" and a CARRIER of "DC". Based on the desired call queue, a serving team to handle the call is selected.

If the OSPS operator enters a trouble number while handling an incoming transfer CAMA call, the OSPS will transmit a 7-digit NXX-YYYY to the CAMA office, where the NXX is specified in the below OTR OFC CODE field for the associated trunk groups, and YYYY is the associated trunk group member number.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control group number and the office name on each record.

2.2 * TGN

Description: Enter a valid trunk group number.

Transfer CAMA trunks from a CAMA office will be in two trunk groups. All the talking trunks from a CAMA office will be in one trunk group, and all the keying trunks from a CAMA office will be in another trunk group. The talking trunk and the associated keying trunk of a transfer CAMA trunk will have the same member number, and must be in the same SM.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Each trunk group number entered here must be defined on the TKGRP form (5202 Record) with a TRKCLS (trunk class) of either "TCITK" or "TCITT".

2.3 ALERT TONE

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Description: Should an alert tone be supplied to the caller upon connection to the operator?
Default: N
Valid Entries: Y, N

2.4 SIGNAL TYPE

Description: Enter the signaling type.

There are two different types of signaling protocols between the CAMA office and the OSPS. If the trunks are analog loop trunks, the SIGNAL TYPE should be specified as 1. If the trunks are analog E & M trunks, the SIGNAL TYPE should be specified as 2. If the trunks are digital trunks, the SIGNAL TYPE can be either 1 or 2 depending on the CAMA office end. If the CAMA office is a 5ESS Switch, the SIGNAL TYPE should be 2.
Default: 2
Valid Entries: 1, 2

Data Rules:

If the SIGNAL TYPE is 1 and the TRKCLS on the TKGRP form is "TCIKT", the IDLE STATE on the TRUNK form (5204 Record) must be set to "OFF", and the SUPV must be "RB". If the SIGNAL TYPE is 1 and the TRKCLS on the TKGRP form is "TCITT", the IDLE STATE on the TRUNK form must be set to "ON" and the SUPV must be "RB". If the SIGNAL TYPE is 2, then SUPV on the TRUNK form must be "EM2" or "EM3"; for 5E7 and later when SIGNAL TYPE is 2, SUPV may also be "EM4" or "EM5".

2.5 OTR OFC CODE

Description: Enter the operator trouble report number.

This entry will be used to identify OTRs (Operator Trouble Reports) associated with this CAMA trunk group.

- **WARNING:** The trouble codes 998 and 999 should only be used for the purpose described in the OSPS Operator Trouble Report form (5410 Record) and should not be used here. The incorrect usage of these trouble codes could cause incorrect billing, asserts, etc.

Valid Entries: 200 - 999

```
tcitg              5ESS OFFICE DATA ADMINISTRATION   _
(5422)               OSPS CAMA TRANSFER TRUNKS FORM


*1. TGN         0248
 2. ALERT TONE   N
 3. SIGNAL TYPE  2
 4. OTR OFC CODE 487
```

Figure 1 SAMPLE TCITG FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 4X: 5423 RECORD
OSPS NXX LIST FOR BILLING NUMBER
ON ONI/ANIF CALLS FORM - VALOFFC

1. GENERAL

The 5423 Record is available with 5E4(2) and later Software Releases.

This record defines the valid NXXs (associated with ISP (Intermediate Switching Point) trunks) that may be entered as billing numbers (i.e., back numbers) by the OSPS (Operator Service Position System) operator. The information is needed for both CAMA (Centralized Automatic Message Accounting) ONI (Operator Number Identification) and ANIF (Automatic Number Identification Failure) calls.

All calls from both ONI- and ANI-type local offices require operator assistance in entering the calling (back) number.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * TGN

Description: Enter a valid TGN (Trunk Group Number).

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The entry in this field must be defined in the TGN field on a TKGRP form (5202 Record) with an entry in the corresponding TRKCLS field of "FIOPR" for 5E5 and earlier Software Releases, and "FIOPR" or "DIOR" for 5E6 and later Software Releases.

2.3 LIST OF NXXs (200 - 399)

Description: Indicate which NXXs may be used as a billing number. If the NXX may be used as a billing number, enter an "X"; otherwise, leave it blank.

At least one set of five NXXs must have each NXX with an "X" or space in each NXX.
Valid Entries: X

SCREEN 1 OF 3 5ESS Switch
valoffc OFFICE DATA ADMINISTRATION
(5423) OSPS NXX LIST FOR BILLING NUMBER ON ONI/ANIF CALLS

*1. TGN 0028

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```
                    2. LIST OF NXXs (200-399)
     01234 56789       01234 56789       01234 56789       01234 56789
1. 200  X   XX   6. 250 _____ _____ 11. 300 _____ _____ 16. 350 _____ _____
2. 210 _____ _____  7. 260 _____ _____ 12. 310 _____ _____ 17. 360  XX  _____
3. 220 _____ _____  8  270  X  _____ 13. 320 _____ _____ 18. 370    X _____
4. 230 _____ _____  9. 280 _____   XXX 14. 330 _____   X  19. 380 _____ _____
5. 240 _____ _____ 10. 290 _____ _____ 15. 340 _____ _____ 20. 390 _____ _____
```

```
SCREEN 2 OF 3                5ESS Switch
valoffc                OFFICE DATA ADMINISTRATION
(5423)       OSPS NXX LIST FOR BILLING NUMBER ON ONI/ANIF CALLS

                    2. LIST OF NXXs (400-799)
     01234 56789       01234 56789       01234 56789       01234 56789
21. 400 _____ _____ 31. 500 _____ _____ 41. 600 _____ _____ 51. 700 _____ _____
22. 410 _____ _____ 32. 510 _____ _____ 42. 610 _____ _____ 52. 710 _____ _____
23. 420 _____ _____ 33. 520 _____ _____ 43. 620 _____ _____ 53. 720 _____ _____
24. 430  X  _____ 34. 530 _____ X    44. 630 _____ _____ 54. 730 _____ _____
25. 440 _____ _____ 35. 540 _____ _____ 45. 640 _____ _____ 55. 740 _____ _____
26. 450 _____ _____ 36. 550 _____ _____ 46. 650 _____ X    56. 750   XX X
27. 460 _____    X  37. 560 _____ _____ 47. 660 _____ _____ 57. 760 _____ _____
28. 470 _____ _____ 38. 570 _____ _____ 48. 670 _____ _____ 58. 770 _____ _____
29. 480   XX _____ 39. 580   X  _____ 49. 680 _____ _____ 59. 780 _____ _____
30. 490 _____ _____ 40. 590 _____ _____ 50. 690 _____ _____ 60. 790 _____ _____
```

```
SCREEN 3 OF 3                5ESS Switch          _
valoffc                OFFICE DATA ADMINISTRATION
(5423)       OSPS NXX LIST FOR BILLING NUMBER ON ONI/ANIF CALLS

                    2. LIST OF NXXs (800-999)
     01234 56789       01234 56789       01234 56789       01234 56789
61. 800  XX  _____ 66. 850 _____ _____ 71. 900 _____ _____ 76. 950 _____ _____
62. 810 _____ _____ 67. 860 _____ _____ 72. 910 _____ _____ 77. 960 _____ _____
63. 820 _____ _____ 68. 870 _____ _____ 73. 920 _____ _____ 78. 970  X  X
64. 830 _____ _____ 69. 880 XXXXX _____ 74. 930 _____ _____ 79. 980 _____ _____
65. 840 _____ _____ 70. 890 _____ _____ 75. 940 _____  X   80. 990 _____ X
```

Figure 1 SAMPLE VALOFFC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4Y: 5424 RECORD
OSPS OPTIONS FORM - OSPSOPT

1. GENERAL

The 5424 Record is available with 5E4(2).

There can only be one OSPSOPT form entered for an office. When an OSPSOPT form is submitted, a CARRIER NAME entry is required on all submitted ICF forms (5305 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.9.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the Office Name on each record.

2.2 * OFFICE ID

Description: Enter the office identification number.

Required Field.
Valid Entries: 1 to 8 characters

Data Rules:

The entry in this field must match the entry in the OFFICE ID field on the OFCOPT form (5509 Record).

2.3 OSPS RAF

Description: Are the Digital Services Unit 2 units used for OSPS RAF (Recorded Announcement Functions)?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered (or no entry is made) in the OSPS RAF field, then an EQIM form (5700 Record) must be submitted with "LOADED" entered in the CONFIGURATION field for 5E9(1) and earlier. For 5E9(2) and later, see the EQIM form (Division 8, Section 2) for the figure showing the CONFIGURATIONs for Facilities and Applications.

DA OPTIONS

The following fields (Section 2.4 - Section 2.8) define OSPS DA (Directory Assistance) options.

2.4 OSPS DA

Description: Does this office serve directory assistance? Entering "N" in the OSPS DA field will disable the OSPS Directory Assistance feature.
Default: N
Valid Entries: Y, N

Data Rules:

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If "Y" is entered in this field, at least one OPARM form (5400-1/2 Record) must exist for this office.

For 5E5 and later, if "Y" is entered in this field and OSPS TA is set to "N", then this is a Directory Assistance feature only, and every PSM (Position Switching Module) must be entered on every SMLDIT form (5315 Record) which is associated with a STINFO form (5402 Record). A PSM is an SM which has an LCEN defined on an OPARM form (5400 Record), or an LCEN or DEN defined on an OSPSOP form (5401 Record). The first three digits of the corresponding LCEN or DEN field contain the PSM number. An SMLDIT form is associated with a STINFO form if the LDIT on the SMLDIT form matches the LDIT assigned (via the LOCAL DIT field on a corresponding DAS form) to the DAS value entered in the DIG ANALYSIS SEL field or the SEC DIG ANALYSIS SEL field on the STINFO form.

2.5 DASC VENDOR

Description: Enter the DAS/C (Directory Assistance System/Computer) vendor supplying DA information for OSPS operators.
Default: NONE
Valid Entries:

Valid DASC VENDOR Entries

Entry	Definition
CCI	Computer Consoles Inc.
IBM	International Business Machines
NONE	No vendor

Data Rules:

If "NONE" is entered in this field, then the DAS/C AVAILABLE field must be "N" on every STINFO form (5402 Record).

If "CCI" is entered as the Vendor, the PSMs must be assigned an ID number in the range 1 - 127 (SM field on the EQIM form). This is a restriction imposed by CCI EIS software.

2.6 RCL LIMIT

Description: Enter the maximum number of operator recalls allowed a subscriber on an OSPS DA call.
Default: 0
Valid Entries: 0 - 255

Data Rules:

If "CCI" is entered in the DASC VENDOR field, then 0 must be entered in this field.

2.7 RCL TIME

Description: Enter the number of 50-millisecond recall timing intervals to be used for OSPS DA calls.
Default: 0
Valid Entries: 0 - 32767

Data Rules:

If "CCI" is entered in the DASC VENDOR field, then 0 must be entered in this field.

2.8 DABRAND

Description: Should a branding phrase be used?
Default: Y
Valid Entries: Y, N

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T&A OPTIONS

The following fields (Section 2.9 - Section 2.16) define OSPS TA options.

2.9 OSPS TA

Description: Does this office service the OSPS TA (Toll and Assistance) feature? Entering "N" in the OSPS TA field will disable the OSPS Toll and Assistance feature.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field then:

- at least one OPARM form (5400-1/2 Record) must exist for this office.
- every PSM (Position Switching Module) must be assigned on every SMLDIT form. A PSM is an SM which has an LCEN defined on an OPARM form, or an LCEN or DEN defined on an OSPSOP form. The first three digits of the corresponding LCEN or DEN field contain the PSM number.
- and the INIT THANK YOU, and BRAND PHRASE fields, then an ANNHD form (5531 Record) must be submitted where 16 is entered in the HEADER ID field and "T" is entered in the APPLICATION field.

For 5E8 and later:

- RTRS SM must be entered.
- EMER INTER must be entered.

For 5E9(1) and later:

- Announcement Header OSPSTA 171 should have a disconnect warning time interval entered which is equal to the value in WARN TIME field on this form.
- APOS PROTOCOL must be "OFF", "1STAGE" or "2STAGE".

"Y" must be entered in the OSPS TA field if "Y" is entered in any of the following fields: ACTS
- BLV
- BRAND PHRASE,
- EXCEPT DETRM
- LATA MAP
- OPER EXT DB

If "N" is entered in the OSPS TA field, then:

- the entry in the OTR ID field of the OTRVLD form (5410 Record) must be a 3-digit number (1-999).
- or if OSPS TA is not entered, APOS PROTOCOL must be "OFF".

2.10 DSU2 Q TIME

Description: Enter the maximum queue time in the DSU2 - RAF (Digital Service Unit 2 - Recorded Announcement Function) DTA (Dial-Through Announcement) before timeout.

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Default: 20
Valid Entries: 3 - 20

2.11 RTRS SM

Description: Enter the number of the SM containing the RTRS data links.
Valid Entries: 1 - 192

Data Rules:

If the RTRS SM field is entered, then an OSPSDSL form (5411 Record) must exist with a matching SM (first three digits of LCEN) and a SERVICE CLASS of "RTRS".

For 5E8 and later, if OSPS TA is "Y", then RTRS SM must be entered.

2.12 A1 ZONE

Description: Enter the difference between time zone one and the office time zone found on the OFCOPT form.

Required Field.
Default: 0
Valid Entries: N2, N1, 0, 1, and 2 (N stands for negative)

2.13 A2 ZONE

Description: Enter the difference between time zone two and the office time zone.

Required Field.
Default: 0
Valid Entries: N2, N1, 0, 1, and 2 (N stands for negative)

2.14 EX CONF DN

Description: This field furnishes a telephone number for operator external conference. This number is also used as a pseudo - ANI when an operator conference or route number is set up over an equal access trunk. The DN is in the format of NPA NXX XXXX.
Valid Entries: 10 digit numbers of the format

- For 5E9(1) and later: NPANXXXXXX,
- where N is 2 - 9, A / P / X are 0 - 9

Data Rules:

If no external conferencing is required, do not enter a DN.

2.15 APOS PROTOCOL

Description: This entry assigns the Automated Position status or protocol. The OSPS Automated Position automates the handling of 0+ dialed calls with collect, third number, and card billing. Two different protocols are provided for delivering calls to the APs: one stage and two stage. In a one stage office, APs provide automation of calling card, collect, and third number billing. The one stage protocol provides APOS handling for all 0+ dialed calls on incoming trunks marked for APOS handling.

In a two stage protocol, the caller is sent to an AP if the party fails to respond (timeout, flash, or dials 0) to the ACCS offering of calling card billing and the incoming trunk is marked for AP handling. In this situation, the AP provides the automation for collect, third number billing, and calling card.

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The APOS PROTOCOL field is used by the AP (Automated Position) feature. (See Division 2, Section 4A for more information on the Automated Position Feature.)

Software Release: 5E7 and later
Default: OFF
Valid Entries:

Valid APOS PROTOCOL Entries

Entry	Definition
OFF or O	Status is off
1STAGE or 1	Provide automation of all 0+ calls
2STAGE or 2	

Data Rules:

If OSPS TA is "Y", APOS PROTOCOL must be "OFF", "1STAGE", or "2STAGE".

APOS PROTOCOL is a Secured Feature and must be purchased before "1STAGE" or "2STAGE" can be entered. The ACT field for SFID 65 on the SFSYS form must be set to"Y" before "1STAGE" or "2STAGE" is entered in this field. If SFID 65 is not activated, then "OFF" must be entered in APOS PROTOCOL.

OFF: If OSPS TA is "N", then APOS PROTOCOL must be "OFF".

2.16 ID COIN LINE

Description: Should the ANI digits be changed when a coin line is transferred out to an IC (Interexchange Carrier) when operator transfers calls to 0 over FGD using the operator key sequence "TRAN-0-SEND"?

The 0- Transfer over Feature Group D Trunks feature allows the LEC operator to use the TRAN-0-SEND OSPS capability to transfer calls to any IC supporting FGD (Feature Group D) signaling. If the operator enters a CIC (Carrier Identification Code) other than 288 and uses TRAN-0-SEND to transfer, the call is routed using FGD signaling to the carrier (i.e., (KP + II + ANI + ST)+(KP + 0 + ST)). The OSPS generates billing access records using structure code 00625 or 00627 and call type code 110 (InterLATA sent paid). This feature allows the LEC to signal special ANI INFO digits on coin line FGD TRAN-0-SEND transfers, thereby allowing the IC to identify the call as coin. This is a secured feature and must be activated on SFSYS form (5710-1 Record), Recent Change view 8.22; the secured feature ID is 102. For more information on 0- Transfer over Feature Group D feature see Division 2, Section 4A102.

If this field is "Y", the ANI INFO digits on coin lines are signaled to the IC as 27 when FGD TRAN-0-SEND is used.

Software Release: 5E8 and later
Default: N
Valid Entries: Y, N

OFFICE TRAFFIC MIX

The following fields (Section 2.17 - Section 2.18) support Office Traffic Mix. See Division 2, Section 3E for more information on OSPS Office Traffic Mix.

2.17 COIN MECH

Description: The COIN MECH field is used to specify the sum of the percentage of office traffic expected for ACTS (Automatic Coin Toll System) calls and the percentage of office traffic expected for MECH (More Efficient Call Handling) calls.

Software Release: 5E9(2) and later.
Required Field.

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Default: 80
Valid Entries: 0 - 100 (%)

Data Rules:

If "Y" is entered in the ACT field and/or MECH FEATURE WORD, and the SM CONFIGURATION is "STANDARD", "LOADED", or "SM2000" on the EQIM form, then this field must not be 0. (See the figure for CONFIGURATIONs for Facilities and Applications on the EQIM form.)

2.18 LS QUANTUM

Description: The LS QUANTUM field is used to specify the sum of the percentage of office traffic expected for Listing Services calls and the percentage of office traffic expected for Easy Reach (QUANTUM) calls.

Software Release: 5E9(2) and later.
Required Field.
Default: 20
Valid Entries: 0 - 100 (%)

Data Rules:

LS QUANTUM on the OSPSOPT form must be entered if this office has an EQIM form where the value of CONFIGURATION supports OSPS, and one or more of the following conditions is true:

- OSPS DA is "Y" on the OSPSOPT form
- OSPS TA is "Y" on the OSPSOPT form
- PSM is "Y" on an OSPSSMINF form
- OSPS PSM is "Y" on an EQIM form

For the CONFIGURATION that supports OSPS see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

Conversely, if the CONFIGURATION value on the EQIM form does not support OSPS or if "Y" is not entered in either OSPS DA or OSPS TA,then LS QUANTUM must be zero on the OSPSOPT form.

ACCS BRANDING TIMERS

The following fields (Section 2.19 - Section 2.21) support the ACCS Thank You Branding Timer feature. For more information on this secured feature (SFID 390) see Division 2, Section 4A390.

2.19 DOM CALLED NUMBER

Description: Enter the duration, in tenths of a second, between the completion of an AT&T Thank You Branding announcement request, and the start of outpulsing a Domestic Format Called Number call.

Software Release: 5E9(1) and later.
Required Field.
Default: 80
Valid Entries: 0 - 80 tenths of a second

Data Rules:

- **WARNING:** When THANK YOU BRANDING is "Y", DOM and INTL CALLED NUMBERs are not usually set to 0. The normal default value for these fields is 80.

2.20 INTL CALLED NUMBER

Description: Enter the duration, in tenths of a second, between the completion of an AT&T Thank You

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Branding announcement request, and the start of outpulsing an International Format Called Number call.

Software Release: 5E9(1) and later.
Required Field.
Default: 80
Valid Entries: 0 - 80 tenths of a second

Data Rules:

- **WARNING:** When THANK YOU BRANDING is "Y", DOM and INTL CALLED NUMBERs are not usually set to 0. The normal default value for these fields is 80.

2.21 THANK YOU BRANDING

Description: Is the Thank You Branding Timer feature active?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

- **WARNING:** When THANK YOU BRANDING is "Y", DOM and INTL CALLED NUMBERs, are not usually set to 0. The normal default value for these fields is 80.

If "Y" is entered, a SFSYS form (5713-1 Record) must exist with either SFID 288 ACT (AT&T) or SFID 390 (LECs) ACT set to "Y".

ACTS OPTIONS

The following fields (Section 2.22 - Section 2.29) define the available options for ACTS features.

2.22 ACTS

Description: Is the ACTS (Automatic Coin Toll Service) to be activated?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the ACTS field, then "Y" must be entered in the OSPS TA field. If "N" is entered in the OSPS TA field, then "N" must be entered in this field.

5E9(2) and later:

If either ACTS (Automated Coin Toll Service) is "Y" or FEATURE WORD is "Y" then, COIN MECH must be entered.

If an office has no EQIM form where the value of CONFIGURATION supports OSPS or if both the ACTS (Automated Coin Toll Service) and the FEATURE WORD fields are not set to "Y", then COIN MECH must be 0.

2.23 INI TIMER

Description: Enter the length (in half-seconds) of the coin timeout interval to be used during initial contact

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with the customer. If a coin is not deposited by the customer within the interval, an initial contact timeout will occur and the customer will be given an announcement.
Default: 11
Valid Entries: 1 - 31

Valid INI TIMER Entries

Entry	Definition
INI TIMER 1	0.5 seconds
INI TIMER 2	1.0 seconds
INI TIMER 3	1.5 seconds
□	
□	
□	
INI TIMER 31	15.5 seconds

2.24 OVT TIMER

Description: Enter the length (in half-seconds) of the coin timeout interval to be used during interim overtime coin seizures. If a coin is not deposited by the customer within the interval, an overtime seizure timeout will occur and the customer will be given an announcement.
Default: 16
Valid Entries: 1 - 63

Valid OVT TIMER Entries

Entry	Definition
OVT TIMER 1	0.5 seconds
OVT TIMER 2	1.0 seconds
OVT TIMER 3	1.5 seconds
□	
□	
□	
OVT TIMER 63	31.5 seconds

2.25 INT C TIMER

Description: Enter the length (in half-seconds) of the intercoin timeout interval to be used between coin deposits. If a coin is not deposited by the customer within the interval, an intercoin timeout will occur and the customer will be given an announcement.
Default: 11
Valid Entries: 1 - 31

Valid INT C TIMER Entries

Entry	Definition
INT C TIMER 1	0.5 seconds
INT C TIMER 2	1.0 seconds
INT C TIMER 3	1.5 seconds
□	
□	
□	
INT C TIMER 31	15.5 seconds

2.26 INI RAT FL

Description: This field defines the routing of a CFR/RTRS (Centralized Flexible Rating/Real Time Rating System) rating failure during the initial contact period of an ACTS call.
Default: ANN
Valid Entries:

Valid INI RAT FL Entries

Entry	Definition
ANN	Route the call to an announcement.
OPR	Route the call to an operator.

2.27 EOC RAT FL

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Description: This field defines the routing of a CFR/RTRS rating failure during the end-of-call period of an ACTS call.
Default: OPR
Valid Entries:

Valid EOC RAT FL Entries

Entry	Definition
FREE	No charge for the call
OPR	Route the call to an operator

2.28 LRG CHG THR

Description: Enter the threshold (in nickels) at which a coin call will be designated as a large charge call.
Default: 60
Valid Entries: 6 - 100

2.29 C TST CALL

Description: Enter the ACTS coin station test call number. A person at the coin station can initiate the testing of that station by dialing a 0+ call plus the digit string entered in this field.

If the test call number is to be automatically prefixed by an NPA, as indicated on a LDIT form (5300-3 Record), this feature will not function unless routing data is provided to route the call directly to a coin test trunk. The coin test trunk can be the same as used for a FIXED ROUTE TYPE of "ROCOIN", as indicated on a FIXRT form (5301-1 Record).
Default: 9591230
Valid Entries: 0 - 9999999 (telephone number)

MISC FEATURE ACTIVATION

The following fields (Section 2.30 - Section 2.49) define miscellaneous feature options.

2.30 OPER EXT DB

Description: Are OSPS TA operators able to access an external data base?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the OPER EXT DB field, then "Y" must be entered in the OSPS TA field. If "N" is entered in the OSPS TA field, then "N" must be entered in this field.

2.31 LATA MAP

Description: Does this OSPS or ISP (Intermediate Switching Point) office perform LATA (Local Access and Transport Area) mapping to determine whether a call is interLATA or intraLATA?

This field should be set to "N" when the office contains multiple digit trees (one per LATA served by the OSPS). This is the case for an OSPS integrated with an AT (Access Tandem) switch, or for one that resides in the local switching network.

A value of "Y" will be used when the office does not contain multiple digit trees and must perform LATA mapping to determine the type of carrier interconnect call. This is the case for an OSPS integrated with a toll switch that resides in the toll switching network, or when the office has trunks which serve more than one LATA.
Default: N
Valid Entries: Y, N

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Data Rules:

If "Y" is entered in the LATA MAP field, then "Y" must be entered in the OSPS TA field.

2.32 EXCEPT DETRM

Description: Can this OSPS or ISP office perform exception area determination for interLATA calls?

Exception areas exist where the originating and terminating office codes (NPA-NXX) reside in different LATAs, but are owned by the same telephone company and are allowed to connect calls between these offices with their own LEC. Under normal situations, only IC (Interexchange Carriers) are allowed to make these interLATA connections. These are areas in which LECs are allowed to carry interLATA calls. This field should be set to "N" when the office does not have exception areas within its serving area. A value of "Y" will be used when the office does have exception areas within its serving area.

Exception areas are defined on an EXMAP form (5440 Record) and assigned to NPA-NXX combinations on an NPAMAP form (5414 Record).

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the EXCEPT DETRM field, then "Y" must be entered in the OSPS TA field.

2.33 ITNA

Description: Is ITNA (Improved Third Number Acceptance) feature processing activated?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.34 ITNA CHECKS

Description: Are Special Area Checks activated for ITNA (Improved Third Number Acceptance) treatment?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.35 INTRAFLOW ALW

Description: Is the the OSPS Intraflow feature activated?

This field turns OSPS Intraflow on or off for this office. Intraflow permits a Call Type to designate a principal Serving Team and up to 8 Supporting Teams, each with an associated delay outflow threshold.

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

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Intraflow must be individually activated or deactivated for each Call Type and Serving Team via the INTRAFLOW ALW field on the OPSPSCT forms (5404 Record) and the STINFO forms (5402 Record), respectively.

2.36 FCA ON

Description: Are International Calls handled by FCA (Fully Coded Addressing)?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered here, then, on the OFCOPT form (5509 Record), "Y" must be entered in the OFFICE TYPE field and 288 0288 must be entered in the OFFICE CARRIER ID field.

2.37 AUTODACT MON

Description: Should the BST (Basic Services Terminal) or VDT (Video Display Terminal) monitoring port be automatically deactivated upon manager logoff?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

2.38 AUTO DIOR

Description: Are Automated Initial DIOR calls allowed?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

2.39 MQ900

Description: Does this OSPS handle 900 services? Also, for Recent Change only, this field allows the OSPS handled 900 feature to be tested before it is activated in an office. (See Division 2, Section 3I for more information on OSPS 900 Services.)

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries:

Valid MQ900 Entries

Entry	Definition
N	OSPS 900 processing is off.
Y	OSPS 900 processing is on.
T	This value is for Recent Change Only. Only OSPS 900 calls arriving on a designated test trunk receive treatment.

2.40 DIFF CARD ON

Description: Is the OSPS DIFF (Differentiation Of Card Service Charges) feature activated? (See Division 2, Section 3I for more information on the Differentiation of Card Service Charges feature.)

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Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When DIFF CARD ON is "Y", CCC ON must be "Y".

2.41 TCS PUB IND

Description: Should the "Public ??" indicator be displayed for collect calls requiring manual outpulsing for terminating code screening? (For more information on the TCS (Terminating Code Screening) Release 3 feature, see Division 2 Section 3I.)

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

2.42 CDBS SEQ

Description: Is CDBS (Customer Defined Bill Segmentation) for sequence calls activated? (For more information on CDBS, see Division 2, Section 3I.)

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDBS SEQ is "Y", then either CAS R3 ON must be "Y", or at least one of the following fields must NOT be "A":

- L CC ATT INTER
- L CC LEC INTER
- L CC ATT INTRA
- L CC LEC INTRA

2.43 BELLCORE ANI

Description: Does this OSPS conform to BELLCORE ANI signaling standards? "Y" indicates that a 0 or 1 cannot be accepted as the first number in a 7-digit ANI.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

2.44 OSPS INPA

Description: Is the OSPS Interchangeable Numbering Plan Area feature active? The Interchangeable Numbering Plan feature expands the range of the middle digit of the NPA from 0 - 1, to 0 - 9. This field should be "N" if the RAF has not been upgraded to support the announcements needed for this feature. For more information on the INPA feature see Division 2, Section 3E.

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Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "Y" if ALLOW 7 DIGITS is "N" on the OPRTK form (5417 Record).

2.45 ALLOW 809 COMPL

Description: Is area code 809 eligible for CICADA service call completion?" The CICADA (Completion of InterLATA Calls Accessing Directory Assistance) feature provides the OSPS with the ability to offer call completion on calls to LEC DA (Directory Assistance) offices through AT&T owned OSPSs.

Callers dialing an 800 DA and who also receive ACCS (Automated Calling Card Services) treatment will hear a CICADA offer prompt after the "thank you". This announcement prompts the caller to enter 1 to accept the CICADA service and 2 to decline the CICADA service. If this field is set to "N", then the offer announcement is not provided.

For operator handled calls: the operator is given the "LSCC Eligible" indicator on 809 DA calls allowing the operator to offer the CICADA feature, if this field is set to "Y". No LSCC Eligible indicator displays if this field is set to "N".

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.46 INTRA TO INTER

Description: Is the Intraflow to Interflow feature active?

Intraflow to Interflow Call Handling with Interflow Call Queues is a secured feature that provides the ability for calls to be intraflowed to interflow call queues and for interflowed calls to be queued on the sending switch. For more information on the Intraflow to Interflow Call Handling see Division 2, Section 4A113.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.47 TOLL FREE 800

Description: Should the DIOR (Direct International Originations) Toll-Free 800 feature be activated? This feature allows 800 Service providers to specify how charging for the International Portion of the call will be handled from different countries. See Division 2, Section 3K, *Direct International Originations for more information on this feature.*

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.48 DIOR CPS R2

Description: Should the DIOR Country Pair Screening Release 2 feature be activated? See Division 2,

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Section 3K, *Direct International Originations for more information on this feature.*

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.49 BRAND ON ROUTE

Description: Should carrier specific branding be done before routing? The BRAND ON ROUTE field supports the Carrier Specific Branding on Seizure for ACCS and ACTS feature. For more information on this secured feature, see Division 2, Section 4A378.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.50 ICS

Description: Is the ICS (Inmate Calling Services) feature activated? For more information on this feature, see Division 2, Section 4A385.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Inmate Calling Service is a secured feature that must be purchased by the office. Before this field can be set to "Y", the ACT field for SFID 385 or SFID 288 must be set to "Y" on the SFSYS form 5713-1 Record .

EXTERNAL DATA BASE QUERY OPTIONS

The following fields (Section 2.51 - Section 2.68) define external database query options.

RATE

The following fields (Section 2.51 - Section 2.54) define rating timing and query options.

2.51 TIME

Description: Enter the longest time (in seconds) that call processing will wait for a rating reply from the database.

- **WARNING:** A timeout will result in a rating failure. Since the level of query traffic that can be handled decreases as the holding time increases, extreme care should be used when increasing the value above the default value. If this time is increased beyond the default value, call load will be adversely affected.

Default: 4 (seconds)
Valid Entries: 1 - 8 (seconds)

2.52 MIN QRY

Description: Enter the minimum rate query attempts required in 15 minutes before alarm calculations are done.

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Default: 40
Valid Entries: 1 - 64

2.53 ALARM THR

Description: Enter the rating alarm threshold for successful query percentage. An alarm is activated if the actual percentage of queries falls below this threshold.
Default: 95(%)
Valid Entries: 0 - 100(%)

2.54 OVLD TIME

Description: Enter the rating database overload timing for cutback controls. This indicates how long rating query cutback controls will be in affect for any non-zero overload level received from the rating database.
Default: 1 (minute)
Valid Entries: 0 - 8 (minutes)

NCD

The following fields (Section 2.55 - Section 2.58) define timing and query options for NCD (Network Call Denial).

2.55 TIME

Description: Enter the NCD timeout parameter. This is the longest time (in minutes) that call processing will wait for a reply from the database.

- **WARNING:** A timeout will result in the operator following local practices to obtain verification. Since the level of query traffic that can be handled decreases as the holding time increases, extreme care should be used when increasing the value above the default values. If this time is increased beyond the default value, call load will be adversely affected.

Default: 2 (seconds)
Valid Entries: 1 - 8 (seconds)

2.56 MIN QRY

Description: Enter the minimum NCD query attempts required in 15 minutes before alarm calculations are done.
Default: 40
Valid Entries: 1 - 64

2.57 ALARM THR

Description: Enter the NCD alarm threshold for successful query percentage. An alarm is activated when the actual percentage falls below this value.
Default: 95(%)
Valid Entries: 0 - 100(%)

2.58 STAT

Description: Should NCD (Network Call Denial) queries be sent?
Default: N
Valid Entries: Y, N

CC

The following fields (Section 2.59 - Section 2.64) define CC (Calling Card) timing and query options.

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2.59 CC ACC BNS SAMPLE SQD

Description: Enter the sampling rate for supplemental query data messages.
Default: 20
Valid Entries: 0 - 127

2.60 TIME

Description: Enter the calling card timeout parameter (in seconds). This is the longest time that call processing will wait for a calling card reply from the database.

- **WARNING:** A timeout will result in the operator following local practices to obtain verification. Since the level of query traffic that can be handled decreases as the holding time increases, extreme care should be used when increasing the value above the default value. If this time is increased beyond the default value, call load will be adversely affected.

Default: 2 (seconds)
Valid Entries: 1 - 8 (seconds)

2.61 MIN QRY

Description: Enter the minimum calling card query attempts required in 15 minutes before calling card software alarm calculations are done.
Default: 40
Valid Entries: 1 - 64

2.62 ALARM THR

Description: Enter the calling card alarm threshold for successful query percentage. An alarm is activated when the actual percentage falls below this threshold.
Default: 95(%)
Valid Entries: 0 -100(%)

2.63 OVLD TIME

Description: Enter the calling card database overload timing for cutback controls. This indicates how long calling card query cutback controls will be in affect for any non-zero overload level received from the database.
Default: 1 (minute)
Valid Entries: 0 - 8 (minutes)

2.64 BILL BLOCK

Description: Will a call be blocked for indeterminate query responses? An entry of "N" will allow the call to complete.
Default: N
Valid Entries: Y, N

BNS

The following fields (Section 2.65 - Section 2.68) define timing and query options for BNS (Billed Number Screening).

2.65 TIME

Description: Enter the BNS timeout parameter (in seconds). This is the longest interval that call processing will wait for a BNS reply from the database.

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WARNING: A timeout will result in the operator following local practices to obtain verification. Since the level of query traffic that can be handled decreases as the holding time increases, extreme care should be used when increasing the value above the default value. If this time is increased beyond the default value, call load will be adversely affected.

Default: 2 (seconds)
Valid Entries: 1 - 8 (seconds)

2.66 MIN QRY

Description: Enter the minimum BNS query attempts required in 15 minutes before alarm calculations are done.
Default: 40
Valid Entries: 1 - 64

2.67 ALARM THR

Description: Enter the BNS alarm threshold for successful query percentage. An alarm is activated when the actual percentage falls below this threshold.
Default: 95(%)
Valid Entries: 0 - 100(%)

2.68 OVLD TIME

Description: Enter the BNS overload timing for cutback controls. This indicates the BNS database overload timing for cutback controls, and specifies how long BNS query cutback controls will be in affect for any non-zero overload level received from the database.
Default: 1 (minutes)
Valid Entries: 0 - 8 (minutes)

INTL BILL NBR SCREENING

The following field supports the IBNS (International Billed Number Screen Release 2) feature. For more information on this feature see Division 2, Section 4A386.

2.69 IBNS CTI

Description: Enter the treatment to be provided for IBNS "Deny Collect" calls.

Software Release: 5E9(1) and later.
Required Field.
Default: OPR
Valid Entries:

Valid IBNS CTI Entries

Entry	Definition
ANN	Tone Announcement
OPER	Operator

HOTEL/MOTEL OPTIONS

The following fields (Section 2.70 - Section 2.77) define hotel/motel billing options.

2.70 ACQS SM

Description: Enter the number of the SM containing the HOBIS/ (Hotel Billing Information System) HOBIC (Hotel Billing Information Center) and Auto Quote data links. This entry must be an ISDN SM.
Valid Entries: 1 - 192

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Data Rules:

This field must be left blank if the HOBIS/C field is blank.

If this field is entered, an OSPSDSL form must exist with a matching SM (first three digits of LCEN) and a Service Class of "HOBICR", "HOBICV", "HOBIS", or "AQDSL".

2.71 HOBIS/C

Description: This field indicates whether the office is connected to a HOBIC (Hotel Billing Information Center) or a HOBIS (Hotel Billing Information System).
Valid Entries: HOBIC or HOBIS

Data Rules:

For 5E6 and later, if "HOBIS" is entered, then the only type of OSPS Hotel Billing Information entry that can be made in the SERVICE CLASS field on the OSPSDSL form is "HOBIS". If "HOBIC" is entered on this form, then only "HOBICV" or "HOBICR" can be entered in the SERVICE CLASS on the OSPSDSL form.

2.72 ACQS TAX

Description: Should applicable taxes be included in the charge computed for ACQS (Automatic Charge Quotation Service) calls?
Default: Y
Valid Entries: Y, N

2.73 DUP HOBIC

Description: Should the hotel billing information be sent over a duplicate set of printer lines to the HOBIC?
Default: N
Valid Entries: Y, N

2.74 HOBIS/C TIME

Description: Enter the number of minutes allowed for HOBIS/C messages before a credit record is made and attempts to send messages are not allowed.
Default: 10 (minutes)
Valid Entries: 1 - 10 (minutes)

2.75 HOBIS/C ALARM

Description: Enter the software alarm threshold for the number of HOBIS/C messages that will be buffered before an alarm is given.
Default: 100
Valid Entries: 1 - 100

2.76 ACQS FAIL

Description: After an ACQS rating failure, should the call be free? If "N" is entered, billing data will be sent to the HOBIS/C.
Default: N
Valid Entries: Y, N

2.77 Q CHK TIME

Description: Enter the number of minutes between checks of the ACQS message queue once a warning

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condition has been reached.
Default: 3 (minutes)
Valid Entries: 1 - 60 (minutes)

ACCS OPTIONS

The following fields (Section 2.78 - Section 2.83) specify ACCS (Automatic Calling Card Service) options.

2.78 ACCS 1

Description: Enter the ACCS initial prompt treatment for coin and hotel/motel services.
Default: TANN
Valid Entries:

Valid ACCS 1 Entries

Entry	Definition
OP	OSPS position
TANN	Tone and Announcement
TONE	Tone treatment

Date Rules:
The HEADER ID field on an ANNHD form assigns the announcement for "TANN".

Either "TANN" or "TONE" (tone treatment) may be overridden by individual telephone number entries on an ACCST form (5428 Record).

2.79 ACCS 2

Description: Enter the ACCS initial prompt treatment for non-coin and non-hotel/motel (Service Class 2) services.
Default: TONE
Valid Entries:

Valid ACCS 2 Entries

Entry	Definition
OP	OSPS position.
TANN	Tone and announcement.
TONE	Tone.

Data Rules:

The HEADER ID field on an ANNHD form assigns the "TANN" announcement.

Either "TANN" or "TONE" treatment may be overridden by individual telephone number entries on an ACCST form (5428 Record).

2.80 BRAND PHRASE

Description: Is a branding phrase is to be used to indicate the carrier for a call?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the BRAND PHRASE field, then "Y" must be entered in the OSPS TA field. If "N" is entered in the OSPS TA field, then "N" must be entered in this field.

If "Y" is entered in the OSPS TA, INIT THANK YOU, and BRAND PHRASE fields, then an ANNHD form must be submitted where 16 is entered in the HEADER ID field and "T" is entered in the APPLICATION field.

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"Y" must be entered in the OSPS TA field if "Y" is entered in any of the following fields:
- ACTS
- BLV
- BRAND PHRASE
- EXCEPT DETRM
- LATA MAP
- OPER EXT DB

2.81 INIT THANK YOU

Description: Should an ACCS "thank you" announcement for initial credit card validation be given?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the OSPS TA field and "Y" is entered in this field, then "5" must be entered in the HEADER ID field of an ANNHD form where "T" has been entered in the APPLICATION field.

If "Y" is entered in the OSPS TA, INIT THANK YOU and BRAND PHRASE fields, then an ANNHD form must be submitted where 16 is entered in the HEADER ID field and "T" is entered in the APPLICATION field.

2.82 SEQ THANK YOU

Description: Should an ACCS "thank you" announcement for sequential credit card validation be given?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the OSPS TA field and "Y" is entered in this field, then 5 must be entered in the HEADER ID field of an ANNHD form where "T" has been entered in the APPLICATION field.

2.83 OPER SEQUENCE

Description: Is automated sequence dialing allowed following operator release?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OPER SEQUENCE is "Y", OSPS TA must be "Y".

The Automated Sequence Dialing Following an Operator Release is a secured feature. This field can be activated only after Secured Feature ID 66 is set to "S" or "Y" on the SFSYS form.

AMA OPTIONS

The following fields (Section 2.84 - Section 2.90) specify AMA (Automatic Message Accounting) options.

2.84 BCCSC REC

Description: Should an AMA record be made when a call is blocked due to unsuccessful credit card

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validation?
Default: N
Valid Entries: Y, N

2.85 ACCSQ REC

Description: Should an AMA record be made for every ACCS validation failure?
Default: N
Valid Entries: Y, N

2.86 ROUTE REC

Description: Should an AMA record be made when an inward call is made by an OSPS operator via the ROUTE# key? The number entered in the ROUTE or INTL Route field shall be recorded in the special service call AMA record. An inward call refers to the call from the OSPS to an external operator system.
Default: N
Valid Entries: Y, N

2.87 LSTG SVC REC

Description: Should an AMA record be written for a Listing Services call? An AMA record is only written when a valid ANI signal is received from the originating office. The record is written after the service is provided, so if multiple listings are accessed, multiple records are written.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.88 SAMPLE N

Description: Enter the sampling rate for AMA sampling. If the value entered indicates N, then the sampling rate equals 1/N. The default value 0 turns off sampling.
Default: 0
Valid Entries: 0 - 99

2.89 INW C REC

Description: Enter the inward call recording parameter. When this option is defined, a special service call AMA record is made for the inward call handled either automatically or by an OSPS operator. An inward call is a call to the OSPS from an external operator system.
Valid Entries: 0 - 999

2.90 WIRELESS REC

Description: Should wireless module be appended on AMA record for wireless calls? The AMA Recording of Calls from Wireless Service Providers feature allows the TCA to administer a new attribute in trunk group data, that identifies the trunk group as coming from a WSP (Wireless Service Provider). All calls that arrive at the OSPS from this trunk group, regardless of the forward number, will be treated as being WSP calls. To activate this feature, the Secured FEATURE ID for 104 must be active on the SFSYS form, view 8.22. See Division 2, Section 4A104 for more information on the secured feature AMA Recording of Calls from Wireless Service Providers and Division 2 Section 4A79 for more information on the secured feature ACCS for 0+800 Calls from Wireless Service Providers.

Software Release: 5E8 and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If SFID 104 on the SFSYS form is not entered, WIRELESS REC must be "N".

NAI

The following fields (Section 2.91 - Section 2.99) support the NAI (Network Access Interrupt) feature. For more information on the NAI feature, see Division 2, Section 4A380.

2.91 TRANS TYPE

Description: Enter the index used by the 2STPE (Number 2 Signal Transfer Point Emulator) to look up a destination point code for queries destined for the 2LAC/NCP (Number 2 Line Application for Consumers / Network Control Point) for CCS7 TCAP (Common Channel Signaling 7 Transaction Capabilities Application Protocol) functions.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 255.

2.92 INDET RPLY

Description: Should deny treatment be given when the 2LAC/NAI CCS7 TCAP query reply is indeterminate?

Software Release: 5E9(1) and later.
Required Field.
Default: A
Valid Entries:

Valid INDET RPLY Entries

Entry	Definition
A	ALLOW treatment is to be given, and the call will successfully complete through normal handling.
D	DENY treatment is to be given, and the call will not be completed.

2.93 NAI MIN QRY

Description: Enter the number of 2LAC/NAI CCS7 TCAP query attempts required in a 15 minute period before software alarm calculations will be performed.

Software Release: 5E9(1) and later.
Required Field.
Default: 40
Valid Entries: 1 - 64

2.94 SUCC QRY

Description: Enter the percentage of successful 2LAC/NAI CCS7 TCAP queries, below which percentage an alarm will be activated, e.g. if the percentage of successful queries falls below the amount entered in this field, an alarm will be activated.

Software Release: 5E9(1) and later.
Required Field.
Default: 95
Valid Entries: 0 - 100 (%)

2.95 NAI CARRID

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Description: Enter the carrier for NAI traffic.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 9999

2.96 NAI TIMEOUT

Description: Enter the time intervals call processing will wait for an NAI reply to a 2LAC/NAI CCS7 TCAP query. The intervals are in tenths of a second, e.g. 6 intervals would be 1 second.

Software Release: 5E9(1) and later.
Required Field.
Default: 20 (tenths of a second)

Enter 5 - 200 (1/10 of a second)

2.97 NAI

Description: Is the NAI (Network Access Interrupt) feature activated for this office?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then
- TRANS TYPE must be entered.
- NAI CARRID must be entered.

If "N" is entered, then
- CARD NAI must be N.
- BNS NAI must be N.

2.98 CARD NAI

Description: Is the NAI (Network Access Interrupt) card parameter activated? This parameter indicates whether 2LAC/NAI CCS7 TCAP signaling will be used instead of ANSI signaling for the 14-digit LEC card query.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.99 BNS NAI

Description: Should the 2LAC/NAI CCS7 TCAP signaling be used instead of ANSI signaling for BNS (Billed Number Screening) queries? This parameter indicates the type of signaling query that is to be sent. If the parameter is set to "Y", a 2LAC/NAI CCS7 TCAP is sent; otherwise an ANSI query is sent, depending on current processing.

Software Release: 5E9(1) and later.
Required Field.
Default: N

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Valid Entries: Y, N

CAMA OPTIONS

The following fields (Section 2.100 - Section 2.101) define define CAMA (Centralized Automatic Message Accounting) options.

2.100 ANIF TRBL RPT

Description: Should a trouble report be automatically generated each time a back number is entered due to an ANIF (Automatic Number Identification Failure)?
Default: N
Valid Entries: Y, N

2.101 TRANS OFC

Description: Should a 1+ system CAMA ONI (Operator Number Identification) ANIF calls be routed to a CAMA transfer office? If the call is not routed to the CAMA transfer office it will be handled by the OSPS operator.
Default: N
Valid Entries: Y, N

Data Rules:

If this office is in an initial or growth state, the OFC TYP field will be set to "Y".

COIN TROUBLE

The following fields (Section 2.102 - Section 2.103) define trouble numbers for coin trouble.

2.102 FRAUD NUM

Description: Enter the coin fraud trouble number.
Valid Entries: 0 - 999

2.103 CREDIT NUM

Description: Enter the coin credit trouble number.
Valid Entries: 0 - 999

BLV OPTIONS

The following fields (Section 2.105 - Section 2.106) define BLV (Busy Line Verification) options.

2.104 BLV

Description: Is BLV feature activated for the OSPS office?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in BLV, then "Y" must be entered in OSPS TA. Conversely, if "N" is entered in OSPS TA, the BLV must be "N".

2.105 BLV DAS

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Description: Enter the BLV DAS (Digit Analysis Selector). An entry of 0 denotes "no data".

Software Release: 5E4(2) and later
Default: 0
Valid Entries:

For 5E14 and earlier: 0 - 99
For 5E15 and later: 0 - 254

2.106 SCREEN IDX

Description: Enter the Screening Index for BLV.
Valid Entries: 1 - 4095

CARRIER ID

The following fields (Section 2.107 - Section 2.111) define carrier identification numbers.

2.107 ROUTE

Description: Enter the route field carrier identification number. The route carrier is the default interLATA carrier used with the "ROUTE" key.
Valid Entries: 0 - 9999

Data Rules:

For 5E9(1) and later, if ROUTE is entered, then it must match a CARRIER ID on an ICF form which has "D" entered in the FEAT GRP field on that form.

2.108 CONF

Description: Enter the conference field carrier identification number (default interLATA carrier for an operator or third number conference).
Valid Entries: 0 - 9999

Data Rules:

For 5E9(1) and later, the entry in this field must match a CARRIER ID entry on an ICF form which has "D" entered in the FEAT GRP field on that form.

2.109 ICOS

Description: Enter the carrier identification number for blind transfer to an external IC operator system.
Valid Entries: 0 - 9999 or LEC

Data Rules:

For 5E9(1) and later, if 0 - 9999 is entered in this field, then the entry must match a CARRIER ID on an ICF form which has "D" entered in the FEAT GRP field on that form.

2.110 LSTG SVC

Description: LSTG SVC specifies the default carrier for calls that are outpulsed from Listing Services operator position and require an IC carrier on Listing Service non-ISP trunks.

Software Release: 5E6 and later
Required Field.

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Valid Entries: 0 - 9999

Data Rules:

The entry in this field must match an entry in the CARRIER ID field on the ICF form.

2.111 EMER INTER

Description: This field indicates the default carrier for emergency interLATA calls from a trunk group which is defined as intraLATA.

Software Release: 5E5 and later
Required Field.
Valid Entries: 0 - 9999

Data Rules:

For 5E6 and later, the value entered in this field must match a CARRIER ID on an ICF form. In addition, for 5E8 and later, "D" must be entered in the FEAT GRP field on the ICF form.

For 5E8 and later, if OSPS TA is "Y", then this field must be entered.

ACCS FOR CCC

The following fields (Section 2.112 - Section 2.115) support the ACCS for CCC (Automated Calling Screen Services for Commercial Credit Cards) feature. This is a secured feature, with SFID 388. For more information on this feature see Division 2, Section 4A388.

2.112 ACCS FOR CCC

Description: Is the ACCS for CCC feature active?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.113 DLY ANN INFTV

Description: Enter the maximum time (in tenths of a second) that a CCC (Commercial Credit Card) card validation query may take without the caller getting a delay announcement. The time represented by this field is compared to the time represented by the QUERY TIMEOUT field on the TCCID form (5454 Record) which is the OSPS TCR (TELEPHONE CREDIT CARD) ATTRIBUTES form. If this field is less, the CCC customer is given a delay announcement.

Software Release: 5E9(2) and later.
Required Field.
Default: 60
Valid Entries: 0 - 160 (tenths of a second)

2.114 VIRT CRD TXT

Description: Enter 6 alphanumeric characters of textual information displayed at the operator position for VC (Virtual Card) calls. A VC is a calling card issued by AT&T which can be used to charge calls in the AT&T Network. A VC is based on a customer selected card number which could represent a memorable personal combination of alphanumerics and digits. These unique combinations permit the issuing of "Vanity Cards". Examples of a VC number issued to a customer could be: "JOHNSMITH-1234" or "NEIMANMARCUS".

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Software Release: 5E9(2) and later.
Valid Entries: 6 characters

2.115 DFLT CRD TXT

Description: Enter 6 characters of textual information displayed at the operator position for card calls which do not use virtual cards nor cards defined on the TCCATTR form (5473 Record).

Software Release: 5E9(2) and later.
Valid Entries: 6 characters

INTERFLOW

The following fields (Section 2.116 - Section 2.119) define OSPS Interflow options.

2.116 Q DRN TIME

Description: Enter the Interflow Call Queue Drain time. This entry specifies the number of minutes allowed for draining the call queues of Operator Serving Teams undergoing scheduled Interflow activation. See OSPS feature section in Division 2, Section 3 for additional information.

Software Release: 5E5 and later
Required Field.
Default: 0 (minutes)
Valid Entries: 0 - 3 (minutes)

2.117 OSPS ID

Description: Enter the Interflow OSPS Office ID number. This is a number is unique among the switches in this interflowing switch complex. The default value of 0 should be used if this office is not interflowing calls.

This same entry will be used by switches receiving interflowed calls from this switch. The ACDCTP form (5412-A/F Records) of the receiving switch will use this value.

Software Release: 5E5 and later
Required Field.
Default: 0
Valid Entries: 0 - 9999

2.118 IFNAME

Description: Enter the Interflow OSPS Office Identifier Name. The IFNAME field indicates the name of an OSPS office used for Interflow and this name appears as part of the display on the operators' console of the receiving interflowed office.

Software Release: 5E5 and later
Default: 0
Valid Entries: 1 - 4 characters

Data Rules:

If entries are made on an INFLTADP form (5452 Record) and on INFLDEST forms (5448 Record), then the value entered here must be other than 0.

2.119 IFTRANSID

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Description: A three-digit OSPS translation identifier is automatically entered in this field. The first two digits represent the Software Release and the third digit indicates the level within the Software Release. For example, the first issue of 5E8 would have an entry of 081.

The IFTRANSID field defines the translation identifier for this OSPS. The translation identifier is used to translate Interflow messages and affect decision points in the processing of a call when differing generics or point issues of software are used in an Interflowed complex.

Software Release: 5E5 and later
Default:

For 5E9(1) only: 91
- For 5E10: 101
- For 5E11: 111

Valid Entries:
- This field is automatically populated.

AUTO RECONFIGURATION

The following fields (Section 2.120 - Section 2.121) define Automatic Reconfiguration Options.

2.120 AUTO RECONFIG

Description: Is the OSPS call queue and the operator automatic reconfiguration active? If this field is set to "Y", then call queue and operator automatic reconfiguration pattern data is processed by the auto-reconfiguration terminal process, which is created every 15 minutes.

For 5E8 and later, this field is set to "N". This field is always set to "N" by ODA. Once the office has retrofitted onto the new Software Release, Recent Change can then be used to change this field to "Y". This field can also be automatically changed during the retrofit as follows:

1. During the BEGIN state, the retrofit software records the state of the AUTO RECONFIG field.
2. ODA ODD is expected to set this to "N".
3. When it is safe to turn this feature on, the retrofit process executes code to restore it to "Y", if it was originally "Y". This ensures that a "PAT ID" that was expected to fire, will only fire during a safe place in the retrofit process.

Software Release: 5E7 and later
Default: N
Valid Entries: N

2.121 SCHED IFLOW

Description: Is scheduled interflow activation and deactivation active? If this field is set to "Y", the scheduled interflow activation and deactivation pattern data is processed by the auto-reconfiguration terminal process, which is created every 15 minutes.

For 5E8 and later, this field is set to "N". This field is always set to "N" by ODA. Once the office has retrofitted onto the new Software Release, Recent Change can then be used to change this field to "Y". This field can also be automatically changed during the retrofit as follows:

1. During the BEGIN state, the retrofit software records the state of the SCHED IFLOW field.

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2. ODA ODD is expected to set this to "N".

3. When it is safe to turn this feature on, the retrofit process executes code to restore it to "Y", if it was originally "Y". This ensures that a "PAT ID" that was expected to fire, will only fire during a safe place in the retrofit process.

Software Release: 5E7 and later
Default: N
Valid Entries: N

2.122 ICS EIS TIME

Description: Enter the length of time, in 10 second intervals, OSPS shall wait to receive a message from the EIS (External Information System). The value specified in this field is used when the OSPS recognizes that the EIS has gone off-hook on the ARU (Audio Response Unit) port. Prior to expiration of this timer, OSPS expects the EIS to request OSPS to perform forward number and billing restriction checks or to terminate the call. This field supports the Inmate Calling Services secured feature (SFID 385). For more information on this feature, see Division 2, Section 4A385.

Software Release: 5E9(2) and later.
Required Field.
Default: 60
Valid Entries: 10 - 160 (10 second intervals)

2.123 ICS BILL TIME

Description: Enter the length of time, in 15 second intervals, OSPS shall wait to receive a message from the EIS (External Information System). The value specified in this field is used when the OSPS has determined that billing is acceptable for the associated call and that, from an OSPS perspective, the call can be allowed to complete. Prior to expiration of this timer, OSPS expects the EIS to request OSPS to begin billable timing or to terminate the call. This field supports the Inmate Calling Services secured feature (SFID 385). For more information on this feature, see Division 2, Section 4A385.

Software Release: 5E9(2) and later.
Required Field.
Default: 240
Valid Entries: 15 - 480 (15 second intervals)

LINE INFORMATION DATA BASE QUERY OPTIONS

The following fields (Section 2.124 - Section 2.140) define LIDB (Line Information Data Base) options.

2.124 CC AND BNS TIME

Description: Enter the longest time that LIDB call processing will wait for a CC or BNS reply from the database.

WARNING: A timeout will result in the operator following local practices be handled decreases as the holding time increases, extreme care should be used when increasing the value above the default value. If this time is increased beyond the default value, call load will be adversely affected.

Software Release: 5E5 and later
Required Field.
Default: 2 (seconds)
Valid Entries: 1 - 8 (seconds)

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L CC

The following fields define LIDB CC (Calling Card) options.

2.125 MIN QUERY

Description: Enter the minimum query attempts required in 15 minutes before LIDB CC alarm calculations will be performed.

Software Release: 5E5 and later
Required Field.
Default: 40
Valid Entries: 1 - 64

2.126 ALARM THR

Description: Enter the value for the LIDB CC software alarm threshold, which is a value for successful query percentage. If the percentage falls below this threshold, an alarm is activated.

Software Release: 5E5 and later
Required Field.
Default: 95(%)
Valid Entries: 0 - 100(%)

2.127 ATT INTER

Description: Enter one of the four following choices for an AT&T-carried interLATA call query.

Software Release: 5E5 and later
Required Field.
Default: A
Valid Entries:

Valid ATT INTER Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD.
D	Query handled by the designated DEFAULT field.

Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.128 LEC INTER

Description: Enter one of the four following choices for a LEC-carried interLATA query.

Software Release: 5E5 and later
Default: A
Valid Entries:

Valid LEC INTER Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

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Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.129 ATT INTRA

Description: Enter one of the four following choices for an AT&T-carried intraLATA query.

Software Release: 5E5 and later
Required Field.
Default: A
Valid Entries:

Valid ATT INTRA Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.130 LEC INTRA

Description: Enter one of the four following choices for a LEC-carried intraLATA query.

Software Release: 5E5 and later
Required Field.
Default: A
Valid Entries:

Valid LEC INTRA Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.131 DEFAULT

Description: Is the Calling Card validation default database a LEC? Enter "N" if default database is an alternate destination or BVA.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When "C" is entered in any of the ATT/LEC INTER/INTRA fields, the LIDBLNQ form is accessed. If the LIDBLNQ form does not reveal the database, the L CC DEFAULT field is accessed. The entries in the L BNS DEFAULT and L CC DEFAULT fields must match.

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2.132 CALLED NBR

Description: Is the called number in LIDB query protocol allowed on this switch? See Division 2, Section 4C3 for more information on the Inclusion Of The Called Number In The LIDB Protocol feature.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

L BNS

Description: The following fields define BNS (Billed Number Screening) LIDB options.

2.133 MIN QUERY

Description: Enter the value which indicates the minimum query attempts which are required in 15 minutes before LIDB BNS software alarm calculations will be performed.

Software Release: 5E5 and later
Required Field.
Default: 40
Valid Entries: 1 - 64

2.134 ALARM THR

Description: Enter the value for LIDB BNS software alarm threshold, which is a value for the successful query percentage. If the percentage falls below this threshold, an alarm is activated.

Software Release: 5E5 and later
Required Field.
Default: 95 (%)
Valid Entries: 0 - 100 (%)

2.135 ATT INTER

Description: Enter one of the four following choices for an AT&T-carried interLATA query.

Software Release: 5E5 and later
Default: A
Valid Entries:

Valid ATT INTER Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.136 LEC INTER

Description: Enter one of the four following choices for a LEC-carried interLATA query.

Software Release: 5E5 and later

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Default: A
Valid Entries:

Valid LEC INTER Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.137 ATT INTRA

Description: Enter one of the four following choices for an AT&T-carried intraLATA query.

Software Release: 5E5 and later
Default: A
Valid Entries:

Valid ATT INTRA Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

2.138 LEC INTRA

Description: Enter one of the four following choices for a LEC-carried intraLATA query.

Software Release: 5E5 and later
Default: A
Valid Entries:

Valid LEC INTRA Entries

Entry	Definition
A	Query handled by AD (Alternate Destination) or BVA. For more information on the EABS Alternate Routing secured feature, see Division 2, Section 4A86.
B	Query handled by LEC.
C	Query handled by AD or BVA and LEC.
D	Query handled by the designated DEFAULT field.

Data Rules:

If "C" is entered, then data must be entered on the LIDBLNQ form (5449 Record).

2.139 DEFAULT

Description: Is the BNS validation default database a LEC? Enter "N" if it is an alternate destination or BVA.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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When "C" is entered in any of the ATT/LEC INTER/INTRA fields, the LIDBLNQ form is accessed. If the LIDBLNQ form does not reveal the database, then the L BNS DEFAULT field of this form is accessed.

The entries in the L BNS DEFAULT and L CC DEFAULT fields must match.

2.140 IIW INDET DNY

Description: Should automated international inward BNS (Billed Number Screening) indeterminate replies be denied?

The OSPS International Billed Number Screening is a secured feature that allows an international operator to access an OSPS for the purpose of performing a billed number screening check on a billing number.

This field indicates if indeterminate replies should be given "deny" treatment. The default value is "N", which means IBNS indeterminate query reply treatment results in "allowed" treatment.

The secured FEATURE ID 101 must be activated on the SFSYS form, Recent Change view 8.22. For more information on the OSPS International Billed Number Screening feature, see Division 2, Section 4A101.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.141 INDET AIBNS

Description: Should the treatment for an Automated AIBNS (Automated Inward Billed Number Screen) indeterminate query reply be allowed or denied? This field specifies whether deny treatment is to be given when the AIBNS reply is indeterminate.

The AIBNS (Automated Inward Billed Number Screening) feature provides Automated Inward access to the BNS (Billed Number Screening) capabilities of the OSPS. The BNS collect or third number check is performed automatically upon receiving a 10-digit number. Announcements are provided indicating whether the number to be used for billing is allowed, denied, or is a public station.

Software Release: 5E8 and later
Required Field.
Default: A
Valid Entries:

Valid INDET AIBNS Entries

Entry	Definition
A	Allow the call, indeterminate replies are given allow treatment.
D	Deny the call, indeterminate replies are given deny treatment.

2.142 INTRA AIBNS

Description: Should AIBNS intraLATA replies be given allow treatment? This field specifies whether allow treatment is to be given when the collect or third number acceptance indicator in the AIBNS reply indicates an intraLATA allow. "N" indicates the intraLATA allow reply will be given deny treatment.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

89/CCC (ANSI)

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The following fields (Section 2.143 - Section 2.144) define the 89C (CCITT Telecommunication) card options.

2.143 MIN QUERY

Description: Enter minimum number 891/CCC ANSI Transaction query attempts in a 15 minute period before an SW (software) alarm is given.

Software Release: 5E7 and later
Default: 40
Valid Entries: 1 - 64

2.144 ALARM THR

Description: Enter 891/CCC ANSI TCAP (Transaction Capabilities Application Part) query software alarm threshold, which is the successful ANSI non-alarmed query percentage. This percent is number of ANSI TCAP queries attempted in a 15 minutes period, which Every fifteen minutes, counts of the number of ANSI TCAP queries attempted and the number of queries with reply valid are sent to the DS SP (Direct Signaling - System Process) are counted. The ANSI TCAP query success rate is calculated from these counts and is compared to the value in this field.

Software Release: 5E7 and later
Required Field.
Default: 95%
Valid Entries: 0 - 100 (%)

QUERY REPLIES

The following fields (Section 2.145 - Section 2.147) define the parameters for the LIDB Change Handling of Indeterminate Reply Codes Secured Feature. See Division 2, Section 4A81 for more information on this feature.
To activate this feature, 81 must be entered for the feature ID on the SFSYS form (5713-1 Record).

2.145 UNR AND NPG

Description: Specifies whether LIDB unavailable network resources and nonparticipating group query replies should be allowed, denied or given existing treatment. Existing treatment is specified by the field CC BILL BLOCK for card and indeterminate for BNS.

Software Release: 5E7 and later.
Required Field.
Default: E
Valid Entries:

Valid UNR AND NPG Entries

Entry	Definition
A	Allow; LIDB unavailable network resources and nonparticipating group query replies will be allowed.
D	Deny; LIDB unavailable network resources and nonparticipating group query replies will be denied.
E	Existing treatment; LIDB unavailable network resources and nonparticipating group query replies will be given existing treatment (field CC BILL BLOCK for card, indeterminate for BNS).

2.146 TIMEOUT

Description: Specifies whether a LIDB timeout query reply should be allowed, denied or given existing treatment. Existing treatment is specified by the field CC BILL BLOCK for card, and indeterminate for BNS.

Software Release: 5E7 and later.

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Required Field.
Default: E
Valid Entries:

Valid TIMEOUT Entries

Entry	Definition
A	Allow; LIDB timeout query replies will be allowed.
D	Deny; LIDB timeout query replies will be denied.
E	Existing treatment; LIDB timeout query replies will be given existing treatment (field CC BILL BLOCK for card, and indeterminate for BNS).

2.147 OTHER INDET

Description: Specifies whether the other LIDB indeterminate query replies, Misroute, Missing Group, Reject Message, and Garbled message, should be allowed, denied or given existing treatment. This field does not apply to reply codes No Translation Address, Subsystem Congestion, Subsystem Failure, Unequipped User, Network Failure, or Network Congestion. Existing treatment is specified by the field CC BILL BLOCK for card, and indeterminate for BNS.

Software Release: 5E7 and later.
Required Field.
Default: E
Valid Entries:

Valid OTHER INDET Entries

Entry	Definition
A	Allow; all other LIDB indeterminate query replies will be allowed.
D	Deny; all other LIDB indeterminate query replies will be denied.
E	Existing treatment; all other LIDB indeterminate query replies will be given existing treatment (field CC BILL BLOCK for card, and indeterminate for BNS).

CAS

The following fields (Section 2.148 - Section 2.157) define CAS (Customer Account Services) options.

2.148 TIME

Description: This field specifies the amount of time to wait for a CAS query reply. Enter the longest time that CAS call processing will wait for a calling card reply. Entries are made in tenths of a second, for example, 10 represents one second, 11 represents 1.1 second, and 25 represents 2.5 seconds.

A timeout will result in call processing continuing the call (as indicated by the entry in the INDT BLK field). The level of query traffic that can be handled decreases as the holding time increases; extreme care should be used when increasing the value above the default value (20, or two seconds).

Software Release: 5E5 and later
Valid Entries: 10 - 80 (tenths of a second)

2.149 MIN QUERY

Description: Enter the minimum query attempts required in 15 minutes before CAS software alarm calculations will be performed.

Software Release: 5E5 and later
Default: 40
Valid Entries: 1 - 64

2.150 ALARM THR

Description: Enter CAS alarm threshold which is a value for the successful query percentage. If the

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percentage falls below this threshold, an alarm is activated.

Software Release: 5E5 and later
Default: 95(%)
Valid Entries: 0 - 100(%)

2.151 CAS ON

Description: Is the CAS feature turned on? If "N" is entered in this field, then all 0- and 0+ calling card calls are treated as 10+4 card calls (LEC card).

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field, then a CASCON form (5455 Record) and a CASICON form (5456 Record) must be submitted (contract tables must exist).

If the entry in the NCD OFF field is "Y", then the entry in the CAS ON field must be "Y".

2.152 INDT BLK

Description: Should the call be blocked when CAS query response is indeterminate?

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

2.153 PIN ONLY

Description: Can the customer dial a 4-digit PIN (Personal Identification Number) only for calling card calls (pre-authorized collect feature)? The operator may enter a 4-digit PIN regardless of the entry in this field.

Software Release: 5E5 and later
Default: Y
Valid Entries: Y, N

2.154 NCD OFF

Description: Is NCD (Network Call Denial) query for calling cards turned off?

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

If the entry in the NCD OFF field is "Y", then the entry in the CAS ON field must be "Y".

2.155 CON TO OPR

Description: Is the caller to be routed to an operator when a contract table check violation is detected by call processing? A contract table check occurs when a caller uses an AT&T CAS calling card on an LEC-carried call.

Software Release: 5E5 and later

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Default: N
Valid Entries: Y, N

2.156 INCON TO OPR

Description: Enter "Y" is the caller to be routed to an operator when an inverse contract table check violation is detected by call processing? An inverse contract table check occurs when a caller uses an LEC calling card on an AT&T-carried call.

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

2.157 INW VAL ID

Description: Is the CAS IVI (Inward Validation Identification) feature activated? (See Division 2 Section 3I for more information on the CAS IVI feature.)

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If INW VAL ID is "Y", CAS R3 ON must be "Y".

If PL ON is "Y", INW VAL ID must be "Y".

COMMERCIAL CREDIT CARD

The following fields (Section 2.158 - Section 2.161) define CCC (Commercial Credit Card) options. They are available with CAS Release 2.

2.158 CCC ON

Description: Will the OSPS process CCC (Commercial Credit Cards) or other non-AT&T telecommunication cards (TEL)?

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the CCC ON field, then "Y" must entered in the OSPS TA field, and "Y" must be entered in the CAS ON field.

2.159 PROMPT TIME

Description: This field indicates the timing interval from the "bong" tone to initial digit reception for a customer-dialed 0+ ACCS call. A call that reaches the end of this timing interval will be routed to an operator position.

Entries are made in tenths of a second, for example, 20 represents two seconds, 21 represents 2.1 seconds, and 35 represents 3.5 seconds.

Software Release: 5E5 and later

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Default: 50 (5 seconds)
Valid Entries: 20 - 90 (tenths of a second)

Data Rules:

This field will have no effect unless "Y" is entered in the CCC ON field.

2.160 ZERO TIME OUT

Description: This field is for customer-dialed 0+ ACCS calls; and indicates the timing interval of all card types (LEC, CAS, CCC and TEL) to route a call to an operator position when the initially-dialed card number is a "0" after the "bong" tone.

Entries are made in tenths of a second, for example, 10 represents one second, 11 represents 1.1 seconds, and 25 represents 2.5 seconds. The default value, 0, means that the call will be immediately routed to an operator position.

Software Release: 5E5 and later
Default: 0
Valid Entries: 0 - 90 (tenths of a second)

Data Rules:

This field will have no effect unless "Y" is entered in the CCC ON field.

2.161 DIGS TIME OUT

Description: This field is for customer-dialed ACCS calls, and indicates the inter-digit timing interval for all card types (LEC, CAS, CCC and TEL) from the first non-zero digit after the "bong" tone, until the last of a maximum of 32 digits is received. A timeout is the end of the calling card number entry process.

Call processing will give proper treatment to this call, depending on the received calling card number. If the account number has a variable number of digits, this field is used to determine the end of the calling card entry process.

Entries are made in tenths of a second, for example, 20 represents 2 seconds, 21 represents 2.1 seconds, and 35 represents 3.5 seconds.

Software Release: 5E5 and later
Default: 50 (5 seconds)
Valid Entries: 20 - 90 (tenths of a second)

Data Rules:

This field will have no effect unless "Y" is entered in the CCC ON field.

ENHANCED CUT-THROUGH

The following fields (Section 2.162 - Section 2.164) define options for Enhanced Operator Cut-through feature. (See Division 2, Section 3I for more information on this 5E8 Software Release feature.)

2.162 ECUT ON

Description: Is the Enhanced Operator Cut-through Feature activated?

Software Release: 5E8 and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

When ECUT ON is "Y", CAS ON must be "Y".

2.163 ECUT TIME

Description: Enter the interdigit timing after the fourteenth calling card digit is collected for the Enhanced Operator Cut-through feature. The timing entry is in tenths of a second, e.g., an entry of 20 is 2 seconds and an entry of 50 is 5 seconds.

Software Release: 5E8 and later
Required Field.
Default: 25
Valid Entries: 20 - 50 (tenths of a second)

2.164 ECUT ODO

Description: Is an operator request automatically generated? If "N" is entered, then the call is idled with a disconnect announcement when a caller's second attempt to enter a calling card number results in an ECUT (Enhanced Operator Cut-through) card recognition failure.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then "Y" must be entered in the ECUT ON field.

CAS RELEASE 3

The following fields (Section 2.165 - Section 2.171) define the CAS Release 3 options.

2.165 CAS R3 ON

Description: Is CAS R3 (Customer Account Services Release 3) feature activated?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CAS R3 ON is "Y", then CAS ON must be "Y" and CCC ON must be"Y".

If CAS R3 is "Y", at least one TCCID form must exist.

2.166 OFFICE ADMIN ID

Description: Enter a number to identify the originating administration to the foreign card databases for ICCV queries. The OFFICE ADMIN ID is sent as a field in a CAS CCS7 or CCITT TCAP (Transaction Capabilities Application Part) query.

Software Release: 5E7 and later

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Default: 8900
Valid Entries: 0 - 9999999

2.167 CCS7 ALARM THR

Description: Enter the number of software alarm queries that is the threshold for CAS (Customer Account Services) TCAP (Transaction Capabilities Application Part). Every 15 minutes, counts of the number of CAS TCAP queries attempted and the number of queries with "reply valid" are sent to the DSSP (Direct Signal System Process). The CAS TCAP query success rate is calculated from these counts and is compared to the CCS7 ALARM THR percent. If the percentage rate falls below this threshold an alarm is activated. The CCS7 ALARM THR is specified by the TCA.

Software Release: 5E7 and later
Default: 95(%)
Valid Entries: 0 - 100(%)

2.168 ICCV ALARM THR

Description: Enter the number software alarm queries for the threshold for ICCV (International Credit Card Validation) TCAP. Every 15 minutes, counts of the number of ICCV CCITT TCAP queries attempted and the number of queries with "reply valid" are sent to the DSSP (Direct Signal System Process). The ICCV CCITT TCAP query success rate is calculated from these counts and is compared to ICCV ALARM THR. If the percentage rate falls below the threshold, an alarm is activated. The ICCV ALARM THR is specified by the TCA.

Software Release: 5E7 and later
Default: 95(%)
Valid Entries: 0 - 100(%)

2.169 CCS7 MIN QUERY

Description: Enter the the minimum number of CAS CCS7 TCAP queries to be attempted in a 15 minute period before alarm.

Software Release: 5E7 and later
Default: 40
Valid Entries: 1 - 64

2.170 ICCV MIN QUERY

Description: Enter the the minimum number of ICCV CCITT TCAP queries to be attempted in a 15 minute period before alarm.

Software Release: 5E7 and later
Default: 40
Valid Entries: 1 - 64

2.171 RECOGNIZE 10P4

Description: Recognize 10+4 cards in the CAS card recognition table?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If RECOGNIZE 10P4 is "Y", then CAS R3 ON must be "Y".

CARRIER SPECIFIC ROUTING

The following field defines the carrier specific routing.

2.172 CSR ON

Description: Is the CAS (Customer Account Services) CSR (Carrier Specific Routing) active? (For more information on this feature see Division 2, Section 3I.)

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CSR ON is "Y", CAS R3 ON must be "Y" and the Fully Coded Addressing feature must be activated, FCA ON must be "Y".

CAS CARD LIMITS

The following fields (Section 2.173 - Section 2.183) define CAS Purchase Limit attributes. For all Card Limit features, CAS R3 must be set to "Y". (For more information on CAS features see Division 2, Section 3I.)

2.173 PURCHASE LIMIT

Description: Is the CAS Purchase Limit Feature activated? For more information on CAS features see Division 2, Section 3I.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When PL ON is "Y", INW VAL ID must be "Y".

2.174 DURATION LIMIT

Description: Is the OSPS CAS Duration Limits feature active? This feature provides the ability to monitor the duration of a card call and possibly limit the call's duration to an amount specified in the card validation reply to a CAS CCS7 card validation query. See Division 2 Section 3I for more information on the CAS Duration Limits feature.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DURATION LIMIT is "Y", then CAS INW VAL ID must be "Y".

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2.175 VOLUME LIMIT

Description: Is the OSPS CAS Volume Limits feature active? This feature provides the ability to limit the number of calls billed to an AT&T CAS card. For more information on CAS features see Division 2, Section 3I.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If VOLUME LIMIT is "Y", CAS INW VAL ID must be "Y".

2.176 ENHANCED LIMITS

Description: Is the OSPS CAS Enhanced Limits feature active? This feature provides the ability to explicitly restrict card calls to one call in progress at a time, or explicitly enable card calls to allow multiple calls in progress at a time. For more information on CAS features see Division 2, Section 3I.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ENHANCED LIMITS is "Y", then CAS INW VAL ID must be "Y".

2.177 CDM TIME

Description: Enter the Purchase Limit timing interval for calls in progress. This is the time in seconds, entered at 30-second intervals, between updates to the NCP while a call is in progress. For example, in 5E9(1) and later, if the entry is 600 (seconds) i.e., 10 minutes, then every 10 minutes while the call is in progress the OSPS sends a message to the database to update a CAS Limits card's status in the database while the call is in progress. For more information on CAS features see Division 2, Section 3I.

Software Release: 5E8 and later
Required Field.
Default: 600 (10 minutes)
Valid Entries: 30 - 1200 (seconds at 30-second intervals)

Data Rules:

For 5E9(1) and later, the value entered in CDM TIME must be equal to or greater than the value entered in the MIN REQUERY field plus 33 (CDM TIME = (or) MIN REQUERY + 33).

2.178 WARN TIME

Description: Enter the amount of time in seconds which is the amount of time after a Card Limits Disconnect Warning Announcement is played before the call is forcibly disconnected. For more information on CAS features see Division 2, Section 3I.

Software Release: 5E9(1) and later
Default: 30 (seconds)
Valid Entries: 10 - 90 (seconds, entered in increments of 5 seconds)

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Data Rules:

If OSPS TA is set to "Y" on this form, then the announcement headers OSPSTA 171 and OSPSTA 174 on the ANNHD form have the same disconnect warning time interval (specified by PHRASES values) which is displayed as the entry in this field. Therefore, the PHRASES value which is third to the last (or third and fourth to the last) represents a time value equal to the entry in this field.

2.179 COURTESY INTERVAL

Description: This parameter is associated with the CAS Card Limits features. It provides a courtesy interval for the customer by specifying a desired (though not guaranteed) minimum amount of time a customer may talk before hearing a CL DWA (Card Limits Disconnect Warning Announcement). If the maximum allowed length of the call is so short that the caller would hear the CL DWA before having talked for the courtesy interval time, then the OSPS uses the minimum possible value of the Disconnect Warning Interval of 10 seconds instead of the value specified in this field. For more information on CAS features see Division 2, Section 3I.

Software Release: 5E9(1) and later.
Required Field.
Default: 12
Valid Entries: 8 - 99 (seconds)

2.180 MIN REQUERY

Description: Enter the CL MRT (Card Limit Minimum Re-query Time) in seconds, which is the minimum required time between requests to the card database for an additional balance. If a call does not have enough balance left to last through the duration of the MRT before it must request more balance again, then it is disconnected after consumption of the currently available balance without requesting more balance. This parameter is associated with the CAS Enhanced Limits feature of multiple calls in progress.

Software Release: 5E9(1) and later.
Required Field.
Default: 120 (seconds)
Valid Entries: 30 -360 (seconds)

2.181 PLBQ ON

Description: Is the Purchase Limit Balanced Quotation feature activated? The PLBQ (Purchase Limit Balance Quotation) feature provides special handling for disposable cards, which is a subset of PL (Purchase Limit) cards. Calls that are billed to disposable cards will receive a quotation of their remaining balance in dollars and cents prior to call completion. For more information on the PLBQ feature, see Division 2, Section 4A24.

Software Release: For RC/V: 5E8 and later
For ODA: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When PLBQ ON is "Y", PURCHASE LIMIT must be "Y".

2.182 PLBQ2 ON

Description: Should Release 2 of the PLBQ (Purchase Limit Balanced Quotation) feature be activated? See Division 2 Section 4A24 for more information on the PLBQ feature.

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Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PLBQ2 ON is "Y", then PLBQ ON must be "Y".

2.183 AMA GENERIC DATA

Description: Is the AMA Generic Data Module feature activated? The OSPS provides the TCA with the ability to activate/deactivate the appending of the Generic Data AMA Module. The PLBQ Release 2 feature requires a new AMA module and tables to store the Card Rate, Product Type, and Tax Exemption indicator. The OSPS must append Module 343 - Generic Data Module to the AMA structure that is recorded for all "on-net" card calls if Release 2 is activated and the feature activation for AMA recording of card information is on.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If AMA GENERIC DATA is 'Y', PLBQ2 ON must be "Y".

NON-ENGLISH ANNC

The following fields (Section 2.184 - Section 2.185) define the attributes for the Non-English Announcements For Card Calls feature. For more information on NACC features see Division 2, Section 3I.

2.184 NACC

Description: Is the NACC (Non-English Announcements for Card Calls) feature active? The NACC feature provides the ability to play announcements for card calls in languages other than English.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If NACC is "Y", CAS ON must be "Y".

2.185 MAX LOP

Description: Enter the maximum LOP (Language Override Parameter) value that is considered valid in a CAS CCS7 TCAP query reply. The LANGUAGE entries on the LANGTBL form (5483-1 Record) may not exceed the MAX LOP value.

Software Release: 5E9(1) and later.
Default: 5
Valid Entries: 5 - 7

Data Rules:

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If LANGUAGE is entered on the TCCID form, and a corresponding LANGTBL form exists (found by matching LANGUAGE on the TCCID form to DISPLAY ID on the LANGTBL form), then MAX LOP must be entered on the OSPSOPT form. No LANGUAGE entries on the LANGTBL form may exceed the MAX LOP value entered on the OSPSOPT form.

ICCV

The following fields (Section 2.186 - Section 2.190) define the parameters for ICCV (International Credit Card Validation). For more information on ICCV features, see Division 2, Section 3I.

2.186 CDBS

Description: Is CDBS (Customer Defined Bill Segmentation) for ICCV calls activated? (For more information on CDBS, see Division 2, Section 3I.)

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDBS is "Y", CAS R3 ON must be "Y".

2.187 GEO RESTRICT

Description: Is the OSPS International Credit Card Validation - Called Number Geographic Restrictions feature activated? This feature allows restrictions to be placed on PTT (Post Telegraph and Telephone) card billed calls that originate on an AT&T OSPS.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then CAS R3 ON must be "Y".

2.188 CALL DUR CHRG

Description: Is the ICCV Call Duration and Charge feature active? The OSPS ICCV CDC (Request for Call Duration and Charge) feature provides a call disposition message containing call information to the card issuer. For more information on this feature, see Division 2, Section 3I

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then CAS R3 ON must be "Y".

2.189 SDR CONV

Description: Enter the Standard Drawing Rights conversion factor. This parameter is used to convert US

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monetary units to SDR (Standard Drawing Rights) and vice-versa for International Credit Card Validation call processing.

Software Release: 5E9(1) and later.
Required Field.
Default: 1.1000
Valid Entries: 0.0000 - 1.9999

2.190 CALL SCREENING

Description: Is the ICCV Call Screening feature activated? This feature allows restrictions on calls made to the "home" country for ICCV.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

CAS RESTRICTIONS

The following field indicates if the Called Number Restrictions feature is active.

2.191 CDNR CGNR

Description: Is the Called or Calling Number Restrictions feature active? This feature is an enhancement to the CAS (Customer Account Services) R3 feature, and allows identification of reply codes from a card database query that indicate restrictions on the called number or calling number.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then CAS R3 ON must equal "Y".

CARD SPEED DIALING (CSD)

The following fields (Section 2.192 - Section 2.195) define options for the Card Speed Dialing feature which allows holders of CAS/NCP CCS7 calling cards to use their own personal speed dial codes to make card billed calls, by using an abbreviated speed dial code instead of a full forward number. For more information on the Card Speed Dialing feature, see Division 2, Section 4A365.

2.192 ACCESS CODE *

Description: Enter the digit(s) for the service access code for the Card Speed Dialing feature. The access code will be a * and the one or two digits entered in this field.

Software Release: 5E8 and later.
Required Field.
Default: 7
Valid Entries: 1 - 99 (multiples of 10 are not allowed.)

2.193 CBSD ON

Description: Is the CBSD (Card Based Speed Dialing) feature active? For 5E9(2), both Phase 1 and

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Phase 2 are included in the CBSD feature. Both ACCS and operator calls are now handled under this feature.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CBSD ON is "Y", then:
- CAS R3 must be "Y"
- CSD ACCESS CODE must be entered

2.194 PHASE 1

Description: Is Phase 1 of the CSD (Card Speed Dialing) feature activated? Phase 1 of the CSD feature provides basic speed dialing for automated card billed calls. Provisioning of the SDC (Speed Dialing Codes) will be done manually by customer services representatives.

Software Release: 5E8 - 5E9(1)
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then CAS R3 must be "Y".

2.195 PHASE 2

Description: Is Phase 2 of the Card Speed Dialing feature activated? Phase 2 of the CSD feature allows the caller to make operator initiated calls.

Software Release: 5E9(1) only
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then CSD PHASE 1 must be also be "Y".

Phase 2 for CSD (Card Speed Dialing) feature is a secured feature that must be purchased by the office before the CSD PHASE 2 field on the OSPSOPT form can be set to "Y". SFID 365 ACT field must be set to "Y" on the SFSYS form (5713-1 Record).

AUTO PROVISIONING (SDAP)

The following fields (Section 2.196 - Section 2.198) support the Card Based Speed Dialing Auto Provisioning feature.

2.196 SDAP ON

Description: Is the Auto Provisioning phase of the CSD (Card Based Speed Dialing) feature active? This phase allows automated position treatment of Speed Dial calls. For more information on Speed Dial Auto Provisioning, see Division 2, Section 4A367. See also, Division 2, Section 4A365 for Card Based Speed

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Dialing.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If SDAP ON is "Y", then:
- AS FEATURE WORD must be "Y"
- CAS R3 ON must be "Y"
- CBSD ON must be "Y"
- SDAP DEST IDX must be entered
- SDAP PCN must not be 0

2.197 DEST IDX

Description: This field specifies the serving teams that have automated positions capable of handling Card Based Speed Dialing Auto Provisioning calls. This parameter is initially set to 0, but it must be updated to a valid index, as determined by the service provider, before the Auto Provisioning feature can be activated. When set to a non-zero value, this routing index is used to determine the serving team for the call.

Software Release: 5E9(2) and later.
Valid Entries: 1 - 4095

Data Rules:

If SDAP ON is "Y", then SDAP DEST IDX must be entered. This must equal a destination index (CDI field) defined on an ACDPOL form (5412 Record).

If DEST IDX (for the SDAP feature) is entered, then the following conditions must be met:

1. NEXT CALL TYPE POOL LIST must be entered on an ACDPOL form where the TGN/CDI value on that forms equals the DEST IDX on this form.

2. This same ACDPOL form must have a PRE CALL ID which matches the PRE CALL ID on an ACDCTP form.

3. The matching ACDCTP form must have CALL ORIGIN set to "AP".

2.198 SDAP PCN

Description: This field is used as the "pseudo called number" on the AMA records of billable SDAP (Speed Dial Auto Provisioning) calls such as DIOR and Wireless. For more information on Speed Dial Auto Provisioning, see Division 2, Section 4A367. See also, Division 2, Section 4A365 for Card Based Speed Dialing.

Software Release: 5E9(2) and later.
Required Field.
Default: 0
Valid Entries: 0 or 10 digits

MECH

The following fields (Section 2.199 - Section 2.207) define options for MECH (More Efficient Call

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Handling) feature.

2.199 FEATURE WORD

Description: Is MECH feature processing activated? ("T" for test trunk can be entered in the Recent Change View.)

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(2) and later:

COIN MECH on the OSPSOPT form must be entered, if this office has an EQIM form where the value of CONFIGURATION supports OSPS. Also, one or more of the following conditions is true:

- OSPS DA is "Y" on the OSPSOPT form
- OSPS TA is "Y" on the OSPSOPT form
- PSM is "Y" on an OSPSSMINF form
- OSPS PSM is "Y" on an EQIM form

For the CONFIGURATION that supports OSPS see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

Conversely, if an office does not have an EQIM form where the value of CONFIGURATION supports OSPS or when both the ACTS (Automated Coin Toll Service) and the FEATURE WORD fields are not set to "Y", then COIN MECH must be 0.

2.200 PERSON SWITCH

Description: Is MECH processing of person-to-person calls is activated?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If PERSON SWITCH is "Y", PERSON COLLECT must be "Y".

2.201 PERSON COLLECT

Description: Is MECH processing of person-to-person collect calls activated? The OSPS 5E6 MECH feature accommodated MECH eligibility on Station Collect calls only or on Station Collect calls plus all Person calls regardless of their class of charge (Person Paid, Person Card, etc). The PERSON COLLECT field, when coordinated with the PERSON SWITCH field value, allows both call handling enforcement and OAP 15 Minute and 24 Hour Report support of Station and Person Collect only MECH eligibility. The following table illustrates the allowed states of these fields and the resulting MECH eligibility for Person calls.

PERSON SWITCH	PERSON COLLECT	MECH ELIGIBILITY
N	Y	Only PERSON COLLECT is MECHable
Y	Y	ALL PERSON calls are MECHable. These are the active values at retrofit and they apply when, before retrofit, Station Collect PLUS ALL Person calls were technically MECHable. To change to the Station and Person Collect

		only MECH eligibility state, PERSON SWITCH must be changed from "Y" to "N".
N	N	NO PERSON calls are MECHable
Y	N	Invalid combination

Software Release: 5E9(1) and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.202 MUTE BK

Description: Should the back party be muted at operator seizure? If "Y" is entered, the back party is muted when a MECH processed call goes to an operator's position after the forward party answer.

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.203 MUTE FWD

Description: Should the forward party be muted at operator seizure? If "Y" is entered the forward party is muted when a MECH call goes to an operator's position after the forward party answer.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.204 MECH ANNC

Description: Should the holding announcement always be played for each call if an operator is not available to service the call at the forward party answer? If "N" is entered in the MECH ANNC field, then the holding announcement is only played when the expected delay exceeds the first delay threshold entered in the 1ST ANNC DELAY field on the OSPSCT form.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.205 MECH BRAND

Description: Should the branding feature be activated for holding announcement calls handled by MECH? Branding indicates the type of operator used. An entry of "N" indicates that the unbranded holding announcement (UNBRANDED ANNC) is played.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.206 REPEAT INTERVAL

Description: REPEAT INTERVAL is the number of seconds between MECH holding announcements.

Software Release: 5E6 and later

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Required Field.
Default: 8 (seconds)
Valid Entries: 0 - 255 (seconds)

2.207 OFF HOOK WAIT

Description: OFF HOOK WAIT represents the length of time in minutes a MECH call is outpulsed while waiting for an off-hook message. If an off-hook message is not received within the number of minutes specified in this field, the call is torn down. A value of 0 turns off timing.

Software Release: 5E6 and later
Required Field.
Default: 4 (minutes)
Valid Entries: 0 - 15 (minutes)

LISTING SERVICES

The following fields (Section 2.208 - Section 2.211) define options for Listing Services. For more information on Listing Services features see Division 2 Section 3C.

2.208 LSCC FEATURE WORD

Description: Is the DACC (Directory Assistance Call Completion) feature activated?

Software Release: 5E6(2) and later
Required Field.
Valid Entries: Y, N

2.209 COIN PAID TRAF

Description: Should coin sent paid traffic be allowed for Listing Services call completion?

Software Release: 5E6(2) and later
Required Field.
Default: N
Valid Entries: Y, N

2.210 LS INTER CC

Description: Should interLATA call completion be allowed for Listing Services?

Software Release: 5E6(2) and later
Required Field.
Valid Entries: Y, N

2.211 LSCC R2

Description: Is the Listing Services Call Completion Release 2 feature activated? This feature includes entry of the back number and charging information by the Listing Services operator for LSCC (Listing Services Call Completion.) For more information on Listing Services Features, see Division 2, Section 3C.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If this field is "Y", then LSCC FEATURE WORD must be "Y".

2.212 MAX DUAL PORT CST

Description: Enter the maximum number of operator positions allowed to use the CST (Combined Service Terminals) software for the OSPS Recognition of Customer Provided Terminal feature. This field can only be entered in ODA, it cannot be entered or changed via Recent Change.
Valid Entries: 1 - 4095

Data Rules:

The total number of OSPSOP forms with CST INTERFACE entered must not be greater than the value of MAX DUAL PORT CST. If the total number of forms is greater, either some of the OSPSOP forms must be deleted, or the value of MAX DUAL PORT CST must be increased.

2.213 REC ON TRANS ANNC

Description: Should an enhanced AMA record be generated for Listing Services calls upon transfer to an announcement? The field supports the Enhanced AMA for Listing Services Secured Feature. For more information on this feature see Division 2, Section 4A369.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If LSTG SVC REC is "Y", REC ON TRANS ANNC must be "N".

This field is used by the "Enhanced AMA for Listing Services" secured feature. This feature must be purchased by the office before this field can be set to "Y". A SFSYS form must exist with SFID 369 ACT set to "Y".

2.214 REC ON CSAME/CDIFF

Description: Should an enhanced AMA record be generated for Listing Services calls for CSAME (Completion Same) and CDIF (Completion Different)? CSAME bills the call to the phone used to make the call. CDIF provides alternate billing, such as collect or credit card. The field supports the DACC (Directory Assistance Call Completion) AMA Record with Operator-Entered Forward Number secured feature (SFID 407 and OFID 640). For more information on this feature, see Division 2, Section 407. This field replaced the REC ON MANUAL COMP field .

Required Field.

Data Rules:
If LSTG SVC REC is "Y", REC ON CSAME/CDIFF must be "N".

2.215 REC ON VERBAL REPT

Description: Should an enhanced AMA record be generated for Listing Services calls upon verbal report? The field supports the Enhanced AMA for Listing Services Secured Feature. For more information on this feature see Division 2, Section 4A369.

Software Release: 5E9(1) and later.
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If LSTG SVC REC is "Y", REC ON VERBAL REPT must be "N".

This field is used by the "Enhanced AMA for Listing Services" secured feature. This feature must be purchased by the office before this field can be set to "Y". A SFSYS form must exist with SFID 369 ACT set to "Y".

2.216 REC ON POS RELEASE

Description: Should an enhanced AMA record be generated for Listing Services calls upon position release? The field supports the Enhanced AMA for Listing Services Secured Feature. For more information on this feature see Division 2, Section 4A369.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If LSTG SVC REC is "Y", REC ON POS RELEASE must be "N".

This field is used by the "Enhanced AMA for Listing Services" secured feature. This feature must be purchased by the office before this field can be set to "Y". A SFSYS form must exist with SFID 369 ACT set to "Y".

INTERCEPT

The following fields (Section 2.116 - Section 2.119) define the Intercept feature. Intercept is a feature for 5E6(2) and later.

2.217 INTER CC

Description: Should OSPS intercept interLATA call completion be allowed?

Software Release: 5E6(2) and later
Required Field.
Valid Entries: Y, N

2.218 DEST IDX

Description: Enter the Intercept Destination Index. This field indicates how OSPS should treat an incoming intercept call when a signaling irregularity is detected. If this field is left blank, then the call is sent to reorder, but if a non-zero value is entered, then this destination index is used to determine the OSPS call queue for the call.

Software Release: 5E6(2) and later
Valid Entries: 1 - 4095

2.219 AIS DAS

Description: Enter the DAS (Digit Analysis Selector) for incoming intercept signaling over MF trunks. The DAS is used as the starting point in digit analysis for digits signaled over incoming intercept trunks using MR signaling. Using this DAS, an INDIT/LDIT (Incoming Trunk Preliminary Digit Interpreter Table / Local Digit Interpreter Table) combination can be found which defines the valid signaling patterns for these

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trunks. Valid patterns should have a CALL TYPE of "NORMAL", while invalid patterns should use "VACANT" on the LDIT form.

Software Release: 5E6(2) and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

The AIS DAS entered on an OSPSOPT form must be defined as DIGIT ANALYSIS SELECTOR on the DAS form.

AATOS/SDN NRA (AS)

The following fields (Section 2.220 - Section 2.222) define AATOS (Alternate Access to Operator Services) and SDN/NRA (Software Defined Network/ Network Remote Access) options.

2.220 AS FEATURE WORD

Description: Is the processing of AATOS/SDN NRA calls activated?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If AS FEATURE WORD is "Y", then:

- SDN CARRIER must be entered
- For 5E 14 and earlier: SDN DAS must be 1 - 99.

  For 5E15 and later: SDN DAS must be 1 - 254.
- OSPS TA must be entered as "Y".
- SDN CARRIER must be entered as the CARRIER ID on the ICF form.

2.221 SDN CARRIER

Description: Enter the default carrier ID for SDN/NRA calls.

Software Release: 5E7 and later
Valid Entries: 0 - 9999

Data Rules:

The SDN CARRIER must be entered as the CARRIER ID on the ICF form. In addition, for 5E9(1) and later, FEAT GRP on the ICF form must equal "D".

2.222 SDN DAS

Description: Enter the Digital Analysis Selector for SDN/NRA calls.

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Software Release: 5E7 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

DIOR SPEED DIALING

The following field defines a parameter for the DSD (DIOR SPEED DIALING) feature. For more information on the DIOR Speed Dialing feature, see Division 2, Section 3K.

2.223 DSD SERVICE CODE

Description: Enter the access code for the DIOR Speed Dialing Service.

Software Release: 5E8 and later.
Default: 14
Valid Entries: 11 - 18 or 191 - 198

Data Rules:

For 5E9(1) and later the DSD SERVICE CODE entry must not equal the ACCESS CODE or SERVICE CODE entries on this form.

SUBACCOUNT BILLING

The following fields (Section 2.224 - Section 2.226) define Sub-account billing options.

2.224 SAB ON

Description: Is Subaccount Billing to be offered by this switch?

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "Y" if the entry in LEC ALW is "Y".

2.225 ACCESS CODE

Description: This field indicates the Subaccount Billing access code, which is the digit sequence keyed by the customer at the ACCS bong tone to indicate that the call should receive Subaccount Billing treatment.

Software Release: 5E5 and later
Default: 15
Valid Entries: 11 - 18

2.226 LEC ALW

Description: If the switch is owned by an interexchange carrer, is Subaccount Billing Service offered by the LEC serving this switch?

Software Release: 5E5 and later
Default: N

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Valid Entries: Y, N

Data Rules:

If "Y" is entered in the LEC ALW field, then "Y" must be entered in the SAB ON field.

CALL QUEUE SLOTS

The following fields (Section 2.227 - Section 2.229) define call queuing options for ACD. Software Release: 5E6 and later

2.227 ACTUAL CQDB

This is a Recent Change only field.

2.228 REQUIRED CQDB

This is a Recent Change only field.

2.229 CLAIM CQDB

Description: CLAIM CQDB specifies the maximum number of conference and transfer requests within the OSPS ACD to specific positions (i.e., requested by operator login id or position number) that can be queued because the "claimed" positions are busy.

Software Release: 5E6 and later
Required Field.
Default: 0
Valid Entries: 0 - 5000

Data Rules:

The sum of the entry in this field and all the entries of MAX CALLS on the OSPSCT form (5404 Record) must not exceed 5000.

DIOR SEQUENCE CALLING

The following fields (Section 2.230 - Section 2.236) define parameters for DIOR Sequence Call Handling. For more information on DIOR Sequence Call Handling, see Division 2, Section 3K on DIOR features.

2.230 DOM WAIT

Description: Enter the domestic waiting time period in seconds for the amount of time the DIOR Sequence Call Handling feature must wait before playing the announcement offering sequence dialing for an undefined or ring/no answer domestic call.

Software Release: 5E9(1) and later.
Default: 36
Valid Entries: 1 - 120 (seconds)

Data Rules:

If DIOR OTTO ACT is "Y", then DOM WAIT, INTL WAIT, and POST COMPL must all be entered.

2.231 INTL WAIT

Description: Enter the international waiting time period in seconds that is the amount of time the DIOR Sequence Call Handling feature must wait before playing the announcement offering to transfer the call to

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an operator on undefined or ring/no answer international call.

Software Release: 5E9(1) and later.
Default: 60
Valid Entries: 1 - 120 (seconds)

Data Rules:

If DIOR OTTO ACT is "Y", then DOM WAIT, INTL WAIT, and POST COMPL, must all be entered.

2.232 POST COMPL

Description: Enter the post call completion time period in seconds that is the amount of time the DIOR Sequence Call Handling feature must wait before playing the announcement offering to transfer the call to an operator after a call has been completed. Entering 15 effectively turns this feature off for post call completion, since the switch disconnects after 10 seconds.

Software Release: 5E9(1) and later.
Default: 3
Valid Entries: 0 - 9, 15 (seconds)

Data Rules:

If DIOR OTTO ACT is "Y", then DOM WAIT, INTL WAIT, and POST COMPL must all be entered.

2.233 BUSY ANN ACT

Description: Should the DIOR Sequence Call Handling feature play an announcement to offer to transfer to the operator the CCS7 busy calls?

Software Release: 5E9(1) and later.
Default: N
Valid Entries: Y, N

2.234 RNA ANN ACT

Description: Should the DIOR Sequence Call Handling feature play an announcement to offer to transfer to the operator the CCS7 ring no answer calls?

Software Release: 5E9(1) and later.
Default: N
Valid Entries: Y, N

2.235 UNDEF ANN ACT

Description: Should the DIOR Sequence Call Handling feature play an announcement to offer to transfer to the operator the calls with a called number status of undefined?

Software Release: 5E9(1) and later.
Default: N
Valid Entries: Y, N

2.236 DIOR OTTO ACT

Description: Should the DIOR Sequence Call Handling feature be activated to OTTO (Offer Transfer To Operator)?

Software Release: 5E9(1) and later.

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Default: N
Valid Entries: Y, N

If DIOR OTTO ACT is "Y", then DOM WAIT, INTL

WAIT, and POST COMPL must all be entered.

DIOR AUTOMATED CALLING

The following field supports DIOR AIC R3 (Direct International Originations Automated Initial Calls Release 3) feature. For more information on this feature, see Division 2, Section 3K on Direct International Originations.

2.237 DIOR AIC R3

Description: Is the DIOR Automated Initial Calls Release 3 feature active?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

VOICE MESSAGING SERVICE

The following fields (Section 2.238 - Section 2.241) define Voice Messaging service options.

2.238 VMS ON

Description: Is the OSPS VMSI feature activated?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ESP CREDIT CHECK is "Y", then CAS R3 ON must be "Y" and VMS ON must be "Y".

If PROMPT ON BUSY is "Y", then VMS ON must be "Y".

If PROMPT ON RING is "Y", then VMS ON must be "Y".

If OSPS TA is "N" then VMS ON must be "N".

If VMS ON is "Y" then SERVICE CODE must be entered.

2.239 VMS TIME OUT

Description: Enter the time out for ready to receive measured in seconds.

Software Release: 5E7 and later
Required Field.
Default: 20
Valid Entries: 1 - 20 seconds

2.240 OSPS OWNER

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Description: Enter the the owner ID of the originating OSPS.

Software Release: 5E7 and later
Required Field.
Default: 0
Valid Entries: 0 - 9

2.241 SERVICE CODE

Description: Enter the VMSI Service Code.

Software Release: 5E7 and later
Default: 12
Valid Entries: 11 - 18, 191 - 198

Data Rules:

SERVICE CODE must not equal ACCESS CODE.

If SERVICE CODE is equal to 15, ACCESS CODE must be entered, but not as 15.

If VMS ON is "Y", then SERVICE CODE must be entered.

VMS ANNOUNCEMENT PROMPT

The following fields (Section 2.242 - Section 2.244) define VMS announcement prompt options. See Division 2, Section 3I for more information on this feature.

2.242 PROMPT ON BUSY

Description: Is the VMS prompt treatment on busy calls feature activated?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PROMPT ON BUSY is "Y", then VMS ON must be "Y".

2.243 PROMPT ON RING

Description: Is the VMS prompt treatment on Ring - No Answer activated?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PROMPT ON RING is "Y", then VMS ON must be "Y".

2.244 RING TIME OUT

Description: Enter the RING TIME OUT in seconds before applying VMS Prompt On Ringing. This field is used by OSPS to indicate the amount of time it will wait before applying VMS prompting treatment on Ring

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- No Answer calls.

Software Release: 5E7 and later
Default: 36
Valid Entries: 0 - 120 (seconds)

ESP (VMS) CREDIT CHECK

The following field defines the ESP (Enhanced Service Provider) VMS (Voice Messaging Service) credit check.

2.245 CREDIT CHECK

Description: Is the Enhanced Service Provider Credit Checking feature activated? For more information on this feature, see Division 2, Section 3I.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ESP CREDIT CHECK is "Y", then CAS R3 ON must be "Y" and VMS ON must be "Y".

TELEPHONE RELAY SERVICE (TRS)

The following fields (Section 2.246 - Section 2.248) define parameters for the TRS (Telephone Relay Service) feature. The OSPS TRS Call Handling special feature provides identification of TRS call billing restrictions based on received ANI Information Digits (II), screening calls originating in the area normally served by the receiving OSPS and identifying the calls as TRS calls in the AMA records for billing purposes. For more information on the TRS secured feature, see Division 2, Section 4A25.

2.246 TRS UNRESTRICTED

Description: Enter Telephone Relay Service unrestricted ANI II digits. Unrestricted indicates that all types of billing are allowed.

Software Release: 5E8 and later.
Required Field.
Default: 60
Valid Entries: 10 - 99

2.247 TRS RESTRICTED

Description: Enter the Telephone Relay Service restricted ANI II digits. Restricted indicates that sent-paid billing is not allowed.

Software Release: 5E8 and later.
Required Field.
Default: 67
Valid Entries: 10 - 99

2.248 TRS HOTEL

Description: Enter the Telephone Relay Service hotel ANI II digits. Hotel indicates that sent-paid billing not allowed on calls with an ANI outside the normally served area of the OSPS.

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Software Release: 5E8 and later.
Required Field.
Default: 66
Valid Entries: 10 - 99

PRE-PAID OVERTIME COIN

The following fields (Section 2.249 - Section 2.250) define parameters for the Prepaid Overtime Coin feature. For more information on the Prepaid Overtime Coin feature see Division 2, Section 4A372.

2.249 COIN WARN

Description: This field is used to specify the time for the warning period for Pre-Paid Overtime for Coin Calls. This time period is for the amount of time prior to the end of the overtime period that a warning announcement should be given to the caller. If 0 is entered, no warning will be given.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 15

2.250 ERROR HNDLG

Description: This field is used to specify the type of call handling that should be used when too many rating failures occur on a Pre-Paid Overtime for Coin Call. The default treatment is to revert to standard post-paid coin service.

Software Release: 5E9(1) and later.
Valid Entries:

Valid ERROR HNDLG Entries

Entry	Definition
STD	Standard post-paid coin service
OPER	Transfer to an operator

AUTO INWRD LINE SCRN

The following fields (Section 2.251 - Section 2.255) support the AILS (Automated Inward Line Screening) feature. For more information on the AILS features, see Division 2, Section 4A370.

2.251 SOFTWARE VERSION

Description: Enter the AILS software version currently active in the OSPS.

Software Release: 5E9(1) and later.
Required Field.
Default: 1
Valid Entries: 1 - 99

2.252 ALLOW TCS

Description: are AILS CCS7 TCAP queries for TCS checks allowed when the OSPS is accessed via an 800 number?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.253 TIME

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Description: Enter the TCAP query timeout parameter. It is expressed in tenths of seconds, e.g. enter 20 for 2 seconds.

Software Release: 5E9(1) and later.
Required Field.
Default: 20 (tenths of a second)
Valid Entries: 5 - 100 (tenths of a second)

2.254 ALARM THRESHOLD

Description: Enter the percentage to be compared with the ratio of AILS AT&T CCS7 TCAP query successes to total query attempts. In the event this ratio falls below the threshold, a software alarm will be activated. This field will not be active until 5E10 and later.

Software Release: 5E9(1) and later.
Required Field.
Default:

For 5E9(1) - 5E9(2): 0
- For 5E10 and later: 95

Valid Entries: 0 - 100

2.255 MINIMUM QUERY

Description: Enter the minimum number of query attempts required within a quarter hour for AILS AT&T CCS7 TCAP queries before a software alarm is activated by the OSPS. This field will not be active until 5E10 and later.

Software Release: 5E9(1) and later.
Required Field.
Default:

For 5E9(1) - 5E9(2): 1
- For 5E10 and later: 40

Valid Entries: 1 - 64

AUTO SERVICE ACCESS PROMPT

The following fields (Section 2.256 - Section 2.257) support the Auto Service Access Prompt for Language Specific Operator Services feature. For more information on this secured feature, see Division 2, Section 4A384.

2.256 ASAP AMA

Description: Should a new module be attached to the AMA billing stream that identifies calls that were given ASAP (Automated Service Access Prompting) FEM (Front End Menu) prompting?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ASAP (Auto Service Access Prompt) is a secured feature and must be purchased by the office before the

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ASAP AMA or ASAP RTRS field on the OSPSOPT form can be set to "Y". The ACT field for SFID 384 must be set to "Y" on the SFSYS form (5713-1 Record) or the ACT field for SFID 288 for AT&T secured features must be "Y".

2.257 ASAP RTRS

Description: Should a new module be attached to the RTRS (Real Time Rating System) queries for ASAP calls and 0- operator calls to identify the level of automation and who entered the forward number?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ASAP (Auto Service Access Prompt) is a secured feature and must be purchased by the office before the ASAP AMA or ASAP RTRS field on the OSPSOPT form can be set to "Y". The ACT field for SFID 384 must be set to "Y" on the SFSYS form (5713-1 Record) or the ACT field for SFID 288 for AT&T secured features.

INCOMING SS7 SIGNALING

The following fields (Section 2.258 - Section 2.260) support the CCS7 Incoming Signaling for OSPS feature. For more information on this feature, see Division 2, Section 4A395.

2.258 SS7 SIGNALING

Description: Is the CCS7 Incoming Signaling for OSPS feature activated for this switch? This field specifies whether or not the OSPS is allowed to handle the incoming SS7 signaled calls from the 4ESS Switch.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This is a secured feature. If "Y" is entered, either the ACT field for SFID 395 must be "Y" on the SFSYS form (5713-1 Record) for this feature, or the ACT field for SFID 288 for AT&T secured features must be "Y".

2.259 ACM INTL TIMER

Description: For SS7 incoming international calls, enter the time delay (in 10 millisecond increments) between

- requesting that an ACM (Address Complete Message) be sent

and

- the initial request to connect an announcement circuit, automated position, or operator position.

Software Release: 5E10 and later.
Required Field.

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Default: 1000
Valid Entries: 0 - 5000 (in 10 msec increments)

2.260 ACM DOMESTIC TIMER

Description: For SS7 domestic calls, enter the time delay (in 10 milisecond increments) between

- requesting that an ACM (Address Complete Message) be sent

and

- the initial request to connect an announcement circuit, automated position, or operator position.

Software Release: 5E10 and later.
Required Field.
Default: 100
Valid Entries: 0 - 5000 (in 10 msec increments)

2.261 PLBQ PROMO CARD

Description: Is the PLBQ Business/Residential Card feature activated? The PLBQ PROMO CARD and FULL CARD ENTRY fields were added to support the PLBQ Business/Residential Card feature. For more information on this feature, see Division 2, Section 4A400.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PLBQ PROMO CARD equals "Y", then PLBQ2 ON must equal "Y".

PLBQ Business/Residential Promo Card is a secured feature that must be purchased by the office before the PLBQ PROMO CARD field on the OSPSOPT form can be set to "Y". If "Y" is entered, then the ACT field for SFID 288 or SFID 400 must be set to "Y",

2.262 FULL CARD ENTRY

Description: Is the full card number required to be entered to receive CAS (Customer Accounts Services) rate quotes? The PLBQ PROMO CARD and FULL CARD ENTRY fields to support the PLBQ Business/Residential Card feature. For more information on this feature, see Division 2, Section 4A400.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If FULL CARD ENTRY equals "Y", then PLBQ2 ON must equal "Y".

QUIET HEAR

The following fields (Section 2.263 - Section 2.268) support the Quiet Hear feature. For more information on this feature, see Division 2, Section 4A402. This is a secured feature, therefore "Y" must be entered in

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either the ACT field for SFID 402 or SFID 228.

2.263 LEC CARD ALW

Description: Are LEC (Local Exchange Carrier) cards eligible for QH (Quiet Hear) treatment?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.264 COLLECT COC ALW

Description: Are calls billed with a Collect COC (Class-of-Charge) eligible for QH treatment.

Software Release: 5E9(2) and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.265 THIRD NUMBER COC ALW

Description: Are calls billed with a Third Number COC (Class Of Charge) eligible for QH treatment.

Software Release: 5E9(2) and later.
Required Field.
Default: Y
Valid Entries: Y, N Enter Y for yes or N for no.

2.266 MISC COC ALW

Description: Are calls billed with
- Auto Collect
- Direct Distance Dialing (DDD)
- Hotel Room Number
- No Charge
- Paid
- COC (Class Of Charge)

designations are eligible for QH treatment? This field also defines QH treatment eligibility when external routing occurs without COC.

Software Release: 5E9(2) and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.267 DOM TIMER

Description: Enter the time interval for QH-T1 (Quiet Hear-Timer1). After a request is made to play the Quiet Hear Audio Logo annoucement (OSPSTA Header ID 148), which is a branding announcement, this timer determines the length of time (in tenths of seconds) OSPS waits before starting to outpulse a domestic forward number.

Software Release: 5E9(2) and later.
Required Field.
Default: 80

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Valid Entries: 0 - 80 tenths of a second.

2.268 INTL TIMER

Description: Enter the time interval for QH-T2 (Quiet Hear-Timer2). After a request is made to play the Quiet Hear Audio Logo annoucement (OSPSTA Header ID 148), which is a branding announcement, this timer determines the length of time (in tenths of seconds) OSPS waits before starting to outpulse an international forward number.

Software Release: 5E9(2) and later.
Required Field.
Default: 80
Valid Entries: 0 - 80 tenths of a second

DIOR NRA

The following fields (Section 2.269 - Section 2.271) define parameters which support the DIOR (Direct International Originations) NRA (Network Remote Access) feature. For more information on this feature, see Division 2, Section 3K on Direct International Origination features.

2.269 NRA RTE IDX

Description: Enter the DIOR Network Remote Access routing index. The destination index (NRA DEST IDX) and route index fields should be populated with the destination and route indexes to be used when routing the DIOR NRA calls to the appropriate NRA toll office.

Software Release: 5E9(2) and later.
Valid Entries:
- For 5E13 and earlier: 1 - 3617
- For 5E14 and later: Blank, or 1 - 16382

2.270 NRA DEST IDX

Description: Enter the DIOR NRA (Network Remote Access) destination index to be used when routing DIOR NRA calls to the appropriate NRA toll office.

Software Release: 5E9(2) and later.
Valid Entries:
- For 5E12 and earlier: 1 - 4095
- For 5E13 and later: 1 - 16382

2.271 DIOR NRA ACT

Description: Is the DIOR (Direct International Originations) NRA (Network Remote Access) feature active?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DIOR NRA ACT is "Y", NRA RTE IDX and NRA DEST IDX must both be entered.

TOLL-FREE NPA EXPANSION

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The following fields (Section 2.272 - Section 2.274) define the parameters for the 800 Toll Free Service NPA Expansion secured feature. For more information on this feature, see Division 2, Section 4A405.

2.272 DISP AUTO COLLECT

Description: Is AUTO COLLECT automatically displayed at a position for toll-free calls?

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.273 ENF AUTO COLLECT

Description: Is the auto collect portion of the 800 Toll-Free Services NPA Expansion feature enforced?

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then DISP AUTO COLLECT must equal "Y".

2.274 DIOR VMS FWD NBR

Description: Enter the 10-digit forward number to which VMS (Voice Messaging Service) transfers are sent for DIOR or wireless calls.

Software Release: 5E10 and later.
Required Field.
Default: 8005626275
Valid Entries: 10 digits

VMS ACCESS DIALING

The following fields (2.275 - 2.279) define the parameters for the VMS Access Dialing secured feature. For more information on this feature, see Division 2, Section 4A418.

2.275 VMS ACC DIAL

Description: Is the VMS Access Dialing feature activated? When this field is "Y", and the VMS ON field is "Y", then it is activated.

Software Release: 5E10 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When VMS ACC DIAL is Y, VMS ON must be Y.

2.276 VMS AD TIMER

Description: Specifies the interval, in tenths of a second, that OSPS waits for completion of entering an ESP (Enhanced Service Provider) access code.

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Software Release: 5E10 and later.
Default: 20
Valid Entries: 10 - 90 tenths of a second

2.277 INTL RING TO

Description: Specifies the ring duration, in seconds, to wait before applying VMS prompt treatment for international non-answered calls.

Software Release: 5E10 and later.
Default: 36
Valid Entries: 0 - 120 seconds

2.278 IMPLCT TRANS

Description: Is the VMS Implicit Transfer feature activated? When this field is set to "Y", the VMS ACC DIAL field is set to "Y" and the IM TR ESP AC field has a valid value set, this feature is activated.

Software Release: 5E10 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When IMPLCT TRANS is "Y", VMS ACC DIAL must be "Y".

When IMPLCT TRANS is "Y", IM TR ESP AC must be entered.

2.279 IM TR ESP AC

Description: Specifies the ESP (Enhanced Service Provider) Access Code to which a call is transferred when the caller has implicitly requested a transfer to VMS.

Software Release: 5E10 and later.
Valid Entries: 0 - 999 or blank

Data Rules:

When the IM TR ESP AC field is entered on the OSPSOPT form, there must be an associated ESPINFO form where ACCESS CODE matches the IM TR ESP AC value.

```
SCREEN 1 OF 14                5ESS Switch
ospsopt                 OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

*1. OFFICE ID 1          2. OSPS RAF Y

          LIST OF FEATURE OPTIONS AND THEIR SCREEN NUMBERS
AATOS/SDN NRA       12    CAS/SP DIAL/SDAP   9,10  LIDB QUERY          8
ACCS                 5    COIN TROUBLE        7    LISTING SERVICES    11
ACTS                 3    DA                  2    MECH                11
AMA                  5    DIOR               12    MISC FEATURE ACT     3
AUTO RECONFIGURATION 7    EXTERNAL DB QUERY   4    SUBACCOUNT BILLING  12
BLV                  7    HOTEL/MOTEL         5    T&A                  2
CALL QUEUE SLOTS    12    ICCV               10    TRS                 13
CAMA                 7    INTERCEPT          12    VMS                 13
```

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CARRIER IDs 7 INTERFLOW 7

SCREEN 2 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

DA OPTIONS	T&A OPTIONS	OFFICE TRAFFIC MIX
3. OSPS DA N	8. OSPS TA N	16. COIN MECH 80
4. DASC VENDOR NONE	9. DSU2 Q TIME 20	17. LS QUANTUM 20
5. RCL LIMIT 0	10. RTRS SM ___	
6. RCL TIME 0	11. A1 ZONE 0	ACCS BRANDING TIMERS
7. DABRAND Y	12. A2 ZONE 0	18. DOM CALLED NUMBER 80
	13. EX CONF DN _____	19. INTL CALLED NUMBER 80
	14. APOS PROTOCOL OFF	20. THANK YOU BRANDING N
	15. ID COIN LINE N	

SCREEN 3 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

ACTS OPTIONS	MISC FEATURE ACTIVATION	
30. ACTS N	38. OPER EXT DB Y	55. TCS PUB IND N
31. INI TIMER 11	39. LATA MAP N	56. CDBS SEQ N
32. OVT TIMER 16	40. EXCEPT DETRM Y	57. BELLCORE ANI N
33. INT C TIMER 11	41. ITNA N	58. OSPS INPA N
34. INI RAT FL ANN	#45. ITNA CHECKS N	59. ALLOW 809 COMPL N
35. EOC RAT FL OPR	46. INTRAFLOW ALW N	60. INTRA TO INTER N
36. LRG CHG THR 060	47. FCA ON N	61. TOLL FREE 800 N
37. C TST CALL 9591230	48. AUTODACT MON N	62. DIOR CPS R2 N
	49. AUTO DIOR N	63. BRAND ON ROUTE N
	50. MQ900 N	64. ICS N
	54. DIFF CARD ON N	

SCREEN 4 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

EXTERNAL DATA BASE QUERY OPTIONS

RATE	77. CC AND BNS SAMPLE SQD 20	
69. TIME 4	CC	BNS
70. MIN QRY 40	78. TIME 2	83. TIME 2
71. ALARM THR 95	79. MIN QRY 40	84. MIN QRY 40
72. OVLD TIME 1	80. ALARM THR 95	85. ALARM THR 95
	81. OVLD TIME 1	86. OVLD TIME 1
NCD	82. BILL BLOCK N	
73. TIME 2	INTL BILL NBR SCREENING	
74. MIN QRY 40	87. IBNS CTI OPR	
75. ALARM THR 95		
76. STAT N		

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```
SCREEN 5 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

 HOTEL/MOTEL OPTIONS            ACCS OPTIONS             AMA OPTIONS
100. ACQS SM      ___      108. ACCS 1        TANN   114. BCCSC REC    N
101. HOBIS/C      _____    109. ACCS 2        TONE   115. ACCSQ REC    N
102. ACQS TAX     Y        110. BRAND PHRASE  Y      116. ROUTE REC    N
103. DUP HOBIC    N        111. INIT THANK YOU Y     117. LSTG SVC REC N
104. HOBIS/C TIME 10       112. SEQ THANK YOU  Y     118. SAMPLE N     0
105. HOBIS/C ALARM 100     113. OPER SEQUENCE  N     119. INW C REC    ___
106. ACQS FAIL    N                                  120. WIRELESS REC N
107. Q CHK TIME   03
```

```
SCREEN 6 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

      NAI
121. TRANS TYPE  ___
122. INDET RPLY  A
123. NAI MIN QRY 40
124. SUCC QRY    95
125. NAI CARRID  ____
126. NAI TIMEOUT 20
127. NAI         N
```

```
SCREEN 7 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

   CAMA OPTIONS              CARRIER ID             INTERFLOW
138. ANIF TRBL RPT N      145. ROUTE     ____     154. Q DRN TIME 0
139. TRANS OFC     N      146. CONF      ____     155. OSPS ID    0000
                        147. ICOS      LEC      156. IFNAME     0000
   COIN TROUBLE         148. LSTG SVC  ____       . IFTRANSID  121
140. FRAUD NUM  ___      149. EMER INTER ____
141. CREDIT NUM ___
```

```
SCREEN 8 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

          LINE INFORMATION DATA BASE QUERY OPTIONS
169. CC AND BNS TIME 2

      L CC               L BNS          187. INTRA AIBNS N
170. MIN QUERY  40    178. MIN QUERY     40
171. ALARM THR  95    179. ALARM THR     95     89/CCC (ANSI)
172. ATT INTER  A     180. ATT INTER     A    188. MIN QUERY 40
```

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```
173. LEC INTER  A     181. LEC INTER     A    189. ALARM THR 95
174. ATT INTRA  A     182. ATT INTRA     A
175. LEC INTRA  A     183. LEC INTRA     A      QUERY REPLIES
176. DEFAULT    N     184. DEFAULT       N    190. UNR AND NPG E
177. CALLED NBR N     185. IIW INDET DNY N    191. TIMEOUT     E
                 186. INDET AIBNS   A    192. OTHER INDET E
```

```
SCREEN 9 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

      CAS           COMMERCIAL CREDIT CARD          CAS RELEASE 3
197. TIME        20     207. CCC ON        N      214. CAS R3 ON       N
198. MIN QUERY   40     208. PROMPT TIME   50     215. OFFICE ADMIN ID 0008900
199. ALARM THR   95     209. ZERO TIME OUT 0      216. CCS7 ALARM THR  95
200. CAS ON      N      210. DIGS TIME OUT 50     217. CCS7 MIN QUERY  40
201. INDT BLK    N                          218. RECOGNIZE 10P4  N
202. PIN ONLY    Y     ENHANCED CUT-THROUGH
203. NCD OFF     N      211. ECUT ON   N          CARRIER SPECIFIC ROUTING
204. CON TO OPR  N      212. ECUT TIME 25         219. CSR ON N
205. INCON TO OPR N     213. ECUT ODO  N
206. INW VAL ID  N                          INMATE CALLING SERVICE
                                      220. ALLOW COIN HNDLG N
```

```
SCREEN 10 OF 14               5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

  CAS CARD LIMIT          NON-ENGLISH ANNC          CARD SPEED DIALING (CSD)
221. PURCHASE LIMIT   N   232. NACC    N           242. ACCESS CODE *7
222. DURATION LIMIT   N   233. MAX LOP 5           243. CBSD ON      N
223. VOLUME LIMIT     N
224. ENHANCED LIMITS  N         ICCV              AUTO PROVISIONING (SDAP)
225. CDM TIME         600 234. CDBS          N     244. SDAP ON  N
   WARN TIME          30  235. GEO RESTRICT  N     245. DEST IDX ____
227. COURTESY INTERVAL 12  236. CALL DUR CHRG  N     246. SDAP PCN 0
228. MIN REQUERY       120 237. SDR CONV       1 1000
229. PLBQ ON           N   240. CALL SCREENING N     ACCS SPECIAL 10 DIGIT
230. PLBQ2 ON          N     CAS RESTRICTIONS        248. LEC PIN PROMPT N
231. AMA GENERIC DATA  N   241. CDNR CGNR    N       249. TEN DIG TCCC   N
```

```
SCREEN 11 OF 14               5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

      MECH                      LISTING SERVICES
261. FEATURE WORD    N          273. LS FEATURE WORD    N
265. PERSON SWITCH   Y          277. COIN PAID TRAF     N
266. PERSON COLLECT  Y           278. LS INTER CC        N
267. MUTE BK         Y          279. LSCC R2            N
268. MUTE FWD        N           280. MAX DUAL PORT CST  ____
```

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269. MECH ANNC N 281. REC ON TRANS ANNC N
270. MECH BRAND N 282. REC ON CSAME/CDIFF N
271. REPEAT INTERVAL 8 283. REC ON VERBAL REPT N
272. OFF HOOK WAIT 4 284. REC ON POS RELEASE N
285. AMA LS SRCH TYPES N

SCREEN 12 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

INTERCEPT DIOR SPEED DIALING DIOR SEQUENCE CALLING
286. INTER CC N 303. DSD SERVICE CODE 14 318. DOM WAIT 36
287. DEST IDX ____ 319. INTL WAIT 60
288. AIS DAS __ SUBACCOUNT BILLING 320. POST COMPL 2
304. SAB ON N 321. BUSY ANN ACT N
AATOS/SDN NRA (AS) 305. ACCESS CODE 15 322. RNA ANN ACT N
297. AS FEATURE WORD N 306. LEC ALW N 323. UNDEF ANN ACT N
301. SDN CARRIER ____ 324. DIOR OTTO ACT N
302. SDN DAS __ CALL QUEUE SLOTS
ACTUAL CQDB DIOR AUTOMATED CALLING
REQUIRED CQDB 325. DIOR AIC R3 N
309. CLAIM CQDB 0

SCREEN 13 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

VOICE MESSAGING SERVICE ESP (VMS) CREDIT CHECK AUTO INWRD LINE SCRN
326. VMS ON N 333. CREDIT CHECK N 339. SOFTWARE VERSION 3
327. VMS TIME OUT 20 340. ALLOW TCS N
328. OSPS OWNER 0 TELEPHONE RELAY SERVICE 341. TIME 20
329. SERVICE CODE 12 334. TRS UNRESTRICTED 60 342. ALARM THRESHOLD 95
335. TRS RESTRICTED 67 343. MINIMUM QUERY 40
VMS ANNOUNCEMENT PROMPT 336. TRS HOTEL 66
330. PROMPT ON BUSY N AUTO SERVICE ACCESS PROMPT
331. PROMPT ON RING N PRE-PAID OVERTIME COIN 344. ASAP AMA N
332. RING TIME OUT 36 337. COIN WARNING 0 345. ASAP RTRS N
338. ERROR HNDLG STD

SCREEN 14 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

INCOMING SS7 SIGNALING QUIET HEAR DIOR NRA
346. SS7 SIGNALING N 354. LEC CARD ALW N 360. NRA RTE IDX ____
347. ACM INTL TIMER 1000 355. COLLECT COC ALW Y 361. NRA DEST IDX ____
348. ACM DOMESTIC TIMER 100 356. THRD NBR COC ALW Y 362. DIOR NRA ACT N
357. MISC COC ALW Y
349. PLBQ PROMO CARD N 358. DOM TIMER 80 VMS ACCESS DIALING
350. FULL CARD ENTRY N 359. INTL TIMER 80 363. VMS ACC DIAL N
364. VMS AD TIMER 20

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365. INTL RING TO 36
351. DISP AUTO COLLECT N 366. IMPLCT TRANS N
352. ENF AUTO COLLECT N 367. IM TR ESP AC ___
353. DIOR VMS FWD NBR 8005626275

Figure 1 SAMPLE OSPSOPT FORM 5E12 - 5E14 SOFTWARE RELEASES

AND LATERSCREEN 1 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

*1. OFFICE ID _____ 2. OSPS RAF Y

LIST OF FEATURE OPTIONS AND THEIR SCREEN NUMBERS

AATOS/SDN NRA	12	CAS/SP DIAL/SDAP	9,10	LIDB QUERY	8
ACCS	5	COIN TROUBLE	7	LISTING SERVICES	11
ACTS	3	DA	2	MECH	11
AMA	5	DIOR	12	MISC FEATURE ACT	3
AUTO RECONFIGURATION	7	EXTERNAL DB QUERY	4	SUBACCOUNT BILLING	12
BLV	7	HOTEL/MOTEL	5	T&A	2
CALL QUEUE SLOTS	12	ICCV	10	TRS	13
CAMA	7	INTERCEPT	12	VMS	13
CARRIER IDs	7	INTERFLOW	7		

SCREEN 2 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

DA OPTIONS	T&A OPTIONS	OFFICE TRAFFIC MIX
3. OSPS DA N	8. OSPS TA N	16. COIN MECH 80
4. DASC VENDOR NONE	9. DSU2 Q TIME 20	17. LS QUANTUM 20
5. RCL LIMIT 0	10. RTRS SM ___	
6. RCL TIME 0	11. A1 ZONE 0	ACCS BRANDING TIMERS
7. DABRAND Y	12. A2 ZONE 0	18. DOM CALLED NUMBER 80
13. EX CONF DN _____		19. INTL CALLED NUMBER 80
14. APOS PROTOCOL OFF		20. THANK YOU BRANDING N
15. ID COIN LINE N		

SCREEN 3 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

ACTS OPTIONS	MISC FEATURE ACTIVATION	
21. ACTS N	29. OPER EXT DB Y	40. TCS PUB IND N
22. INI TIMER 11	30. LATA MAP N	41. CDBS SEQ N
23. OVT TIMER 16	31. EXCEPT DETRM N	42. BELLCORE ANI N
24. INT C TIMER 11	32. ITNA N	43. OSPS INPA N
25. INI RAT FL ANN	#33. ITNA CHECKS N	44. ALLOW 809 COMPL N
26. EOC RAT FL OPR	34. INTRAFLOW ALW N	45. INTRA TO INTER N
27. LRG CHG THR 060	35. FCA ON N	46. TOLL FREE 800 N

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```
28. C TST CALL  9591230      36. AUTODACT MON  N       47. DIOR CPS R2     N
                             37. AUTO DIOR     N       48. BRAND ON ROUTE  N
                             38. MQ900         N       49. ICS             N
                             39. DIFF CARD ON  N
```

```
SCREEN 4 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

          EXTERNAL DATA BASE QUERY OPTIONS
    RATE          58. CC AND BNS SAMPLE SQD 20
50. TIME     4          CC                BNS
51. MIN QRY  40    59. TIME      2     64. TIME     2
52. ALARM THR 95   60. MIN QRY   40    65. MIN QRY  40
53. OVLD TIME 1    61. ALARM THR  95    66. ALARM THR 95
                62. OVLD TIME  1     67. OVLD TIME 1
     NCD          63. BILL BLOCK N
54. TIME     2                    INTL BILL NBR SCREENING
55. MIN QRY  40                       68. IBNS CTI OPR
56. ALARM THR 95
57. STAT     N
```

```
SCREEN 5 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

 HOTEL/MOTEL OPTIONS            ACCS OPTIONS              AMA OPTIONS
69. ACQS SM        ___       77. ACCS 1         TANN   83. BCCSC REC     N
70. HOBIS/C        _____     78. ACCS 2         TONE   84. ACCSQ REC     N
71. ACQS TAX       Y         79. BRAND PHRASE   N      85. ROUTE REC     N
72. DUP HOBIC      N         80. INIT THANK YOU  Y     86. LSTG SVC REC  N
73. HOBIS/C TIME   10        81. SEQ THANK YOU   Y     87. SAMPLE N      0
74. HOBIS/C ALARM  100       82. OPER SEQUENCE   N     88. INW C REC     ___
75. ACQS FAIL      N                                   89. WIRELESS REC  N
76. Q CHK TIME     03
```

```
SCREEN 6 OF 14                5ESS Switch
ospsopt                OFFICE DATA ADMINISTRATION
(5424)                      OSPS OPTIONS

       NAI
90. TRANS TYPE   ___
91. INDET RPLY   A
92. NAI MIN QRY  40
93. SUCC QRY     95
94. NAI CARRID   ____
95. NAI TIMEOUT  20
```

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96. NAI N

SCREEN 7 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

CAMA OPTIONS CARRIER ID INTERFLOW
97. ANIF TRBL RPT N 104. ROUTE ____ 113. Q DRN TIME 0
98. TRANS OFC N 105. CONF ____ 114. OSPS ID 0000
106. ICOS LEC 115. IFNAME 0000
COIN TROUBLE 107. LSTG SVC ____ . IFTRANSID 151
99. FRAUD NUM ___ 108. EMER INTER ____
100. CREDIT NUM ___ AUTO RECONFIGURATION
ACCS FOR CCC 117. AUTO RECONFIG N
BLV OPTIONS 109. ACCS FOR CCC N 118. SCHED IFLOW N
101. BLV N 110. DLY ANN INTV 60
102. DIGTREE START 000 111. VIRT CARD TXT _____ 119. ICS EIS TIME 60
103. SCREEN IDX ____ 112. DFLT CRD TXT _____ 120. ICS BILL TIME 240

SCREEN 8 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

LINE INFORMATION DATA BASE QUERY OPTIONS
121. CC AND BNS TIME 2

L CC L BNS 139. INTRA AIBNS N
122. MIN QUERY 40 130. MIN QUERY 40
123. ALARM THR 95 131. ALARM THR 95 89/CCC (ANSI)
124. ATT INTER A 132. ATT INTER A 140. MIN QUERY 40
125. LEC INTER A 133. LEC INTER A 141. ALARM THR 95
126. ATT INTRA A 134. ATT INTRA A
127. LEC INTRA A 135. LEC INTRA A QUERY REPLIES
128. DEFAULT N 136. DEFAULT N 142. UNR AND NPG E
129. CALLED NBR N 137. IIW INDET DNY N 143. TIMEOUT E
138. INDET AIBNS A 144. OTHER INDET E

SCREEN 9 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

CAS COMMERCIAL CREDIT CARD CAS RELEASE 3
145. TIME 20 155. CCC ON N 162. CAS R3 ON N
146. MIN QUERY 40 156. PROMPT TIME 50 163. OFFICE ADMIN ID 0008900
147. ALARM THR 95 157. ZERO TIME OUT 0 164. CCS7 ALARM THR 95
148. CAS ON N 158. DIGS TIME OUT 50 165. CCS7 MIN QUERY 40
149. INDT BLK N 166. RECOGNIZE 10P4 N
150. PIN ONLY Y ENHANCED CUT-THROUGH
151. NCD OFF N 159. ECUT ON N CARRIER SPECIFIC ROUTING
152. CON TO OPR N 160. ECUT TIME 25 167. CSR ON N

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153. INCON TO OPR N 161. ECUT ODO N
154. INW VAL ID N INMATE CALLING SERVICE
168. ALLOW COIN HNDLG N

SCREEN 10 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

CAS CARD LIMIT NON-ENGLISH ANNC CARD SPEED DIALING (CSD)
169. PURCHASE LIMIT N 180. NACC N 190. ACCESS CODE *7
170. DURATION LIMIT N 181. MAX LOP 5 191. CBSD ON N
171. VOLUME LIMIT N
172. ENHANCED LIMITS N ICCV AUTO PROVISIONING (SDAP)
173. CDM TIME 600 182. CDBS N 192. SDAP ON N
WARN TIME 30 183. GEO RESTRICT N 193. DEST IDX ____
175. COURTESY INTERVAL 12 184. CALL DUR CHRG N 194. SDAP PCN 0
176. MIN REQUERY 120 185. SDR CONV 1 1000
177. PLBQ ON N 188. CALL SCREENING N ACCS SPECIAL 10 DIGIT
178. PLBQ2 ON N CAS RESTRICTIONS 195. LEC PIN PROMPT N
179. AMA GENERIC DATA N 189. CDNR CGNR N 196. TEN DIG TCCC N

SCREEN 11 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

MECH LISTING SERVICES
197. FEATURE WORD N 206. LS FEATURE WORD N
198. PERSON SWITCH Y 207. COIN PAID TRAF N
199. PERSON COLLECT Y 208. LS INTER CC N
200. MUTE BK Y 209. LSCC R2 N
201. MUTE FWD N 210. MAX DUAL PORT CST ____
202. MECH ANNC N 211. REC ON TRANS ANNC N
203. MECH BRAND N 212. REC ON CSAME/CDIFF N
204. REPEAT INTERVAL 8 213. REC ON VERBAL REPT N
205. OFF HOOK WAIT 4 214. REC ON POS RELEASE N
215. AMA LS SRCH TYPES N

SCREEN 12 OF 14 5ESS Switch
ospsopt OFFICE DATA ADMINISTRATION
(5424) OSPS OPTIONS

INTERCEPT DIOR SPEED DIALING DIOR SEQUENCE CALLING
216. INTER CC N 222. DSD SERVICE CODE 14 227. DOM WAIT 36
217. DEST IDX ____ 228. INTL WAIT 60
218. AIS DAS ___ SUBACCOUNT BILLING 229. POST COMPL 2
223. SAB ON N 230. BUSY ANN ACT N
AATOS/SDN NRA (AS) 224. ACCESS CODE 15 231. RNA ANN ACT N

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```
219. AS FEATURE WORD N      225. LEC ALW     N         232. UNDEF ANN ACT N
220. SDN CARRIER    ____                          233. DIOR OTTO ACT N
221. SDN DAS        ___      CALL QUEUE SLOTS
                             ACTUAL CQDB         DIOR AUTOMATED CALLING
                             REQUIRED CQDB       234. DIOR AIC R3 N
                        226. CLAIM CQDB 0
```

```
SCREEN 13 OF 14              5ESS Switch
ospsopt              OFFICE DATA ADMINISTRATION
(5424)                    OSPS OPTIONS

 VOICE MESSAGING SERVICE    ESP (VMS) CREDIT CHECK     AUTO INWRD LINE SCRN
235. VMS ON       N       242. CREDIT CHECK N       248. SOFTWARE VERSION 3
236. VMS TIME OUT 20                                249. ALLOW TCS       N
237. OSPS OWNER   0       TELEPHONE RELAY SERVICE   250. TIME            20
238. SERVICE CODE  12     243. TRS UNRESTRICTED 60  251. ALARM THRESHOLD  95
                        244. TRS RESTRICTED   67   252. MINIMUM QUERY    40
 VMS ANNOUNCEMENT PROMPT  245. TRS HOTEL       66
239. PROMPT ON BUSY N                       AUTO SERVICE ACCESS PROMPT
240. PROMPT ON RING N       PRE-PAID OVERTIME COIN   253. ASAP AMA  N
241. RING TIME OUT  36    246. COIN WARNING     0    254. ASAP RTRS N
                        247. ERROR HNDLG      STD
```

```
SCREEN 14 OF 14              5ESS Switch          _
ospsopt              OFFICE DATA ADMINISTRATION
(5424)                    OSPS OPTIONS

INCOMING SS7 SIGNALING            QUIET HEAR            DIOR NRA
255. SS7 SIGNALING     N    263. LEC CARD ALW     N   269. NRA RTE IDX  _____
256. ACM INTL TIMER    1000  264. COLLECT COC ALW  Y   270. NRA DEST IDX ____
257. ACM DOMESTIC TIMER  100  265. THRD NBR COC ALW Y   271. DIOR NRA ACT N
                        266. MISC COC ALW     Y
258. PLBQ PROMO CARD N       267. DOM TIMER       80    VMS ACCESS DIALING
259. FULL CARD ENTRY N       268. INTL TIMER      80  272. VMS ACC DIAL N
                                  273. VMS AD TIMER 20
                                  274. INTL RING TO 36
260. DISP AUTO COLLECT N                        275. IMPLCT TRANS N
261. ENF AUTO COLLECT  N                        276. IM TR ESP AC ___
262. DIOR VMS FWD NBR  8005626275
```

Figure 2 SAMPLE OSPSOPT FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4Z: 5425 RECORD
AUTOMATIC CHARGE QUOTATION SERVICE FORM - ACQS

1. GENERAL

The 5425 Record is available with 5E4(2) and later Software Releases.

This record defines the characteristics of an ACQS (Automatic Charge Quotation Service) client. This record must not be entered unless the OSPSOPT form (5425 Record) is submitted and the OSPS TA field on that form is specified as "Y" (Yes).

An ACQS client can be a hotel, hospital, motel, law office, etc. The ACQS client will receive a time and charge quotation upon termination of a call originating from the ACQS client. The quotation will be sent, by the 5ESS Switch OSPS (Operator Services Position System) in one of three manners.

In the first manner, the quote will be electronically transmitted to a HOBIC or HOBIS (Hotel Billing Information Center or System), where an operator will then verbally transmit the information to the ACQS client. This is referred to as a voice quote.

In the second manner, a Network Auto Quote will be electronically transmitted to a HOBIC or HOBIS, where an operator will then verbally transmit the information to the ACQS client. This will appear as a voice quote to the client.

In the third manner, the quote is electronically transmitted directly to the ACQS client over a leased line to a printer or computer. This is referred to as an auto quote.

1.1 Hardware Requirements

The complete hardware requirements for an auto quote system (as opposed to a voice quote system), are explained in Division 3, Section 4L of this document.

The only component of the hardware that is defined on this input form is the analog TEN (Trunk Equipment Number), which defines the analog trunk port that connects to a leased line to a printer or computer at the ACQS client.

1.2 Recent Change View

The corresponding Recent Change view for this form is 26.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and the Office Name on each record.

2.2 * NPA

Description: Enter the NPA of the ACQS client line.

For 5E5 and later, this form contains three key fields and one optional key field. The four fields, NPA, NXX, BEG LINE and END LINE permit the entry of a range of telephone numbers. It is imperative that a single number or a number within a range of numbers is not duplicated as a single number or a number within a range of numbers on another instance of the ACQS input form.

Software Release: 5E5 and later.
Required Field.
Valid Entries:

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- For 5E4(2) - 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

Data Rules:

For 5E9(1) and later, NPA/NXX assigned on the ACQS form must be defined on the NPAMAP form.

2.3 * NXX

Description: Enter the NXX of the ACQS client line.

Software Release: 5E5 and later.
Required Field.
Valid Entries: 3 digits

2.4 * BEG LINE

Description: Enter the last four digits of the ACQS client line. If a single line is being entered, then the END LINE field should not be entered. If a range of lines is being entered, then the entry in the BEG LINE field is the first member of the range.

Software Release: 5E5 and later.
Required Field.
Valid Entries: 0000 - 9999

2.5 (*) END LINE

Description: If a range of ACQS client lines is being entered, enter the last four digits of the last member of the range.

Software Release: 5E5 and later.
Valid Entries: 0000 - 9999

Data Rules:

If an entry is made in the END LINE field, it must be greater than the entry in the BEG LINE field.

2.6 # QUOTE TN

Description: Enter the 10-digit number used to deliver the time and charge quotation to the ACQS client. The valid entries for this required field are telephone numbers in NPA-NXX-XXXX format.

In the case of a voice quote, this is the number that a HOBIS/HOBIC operator would call to verbally relay time and charge information to the ACQS client.

In the case of auto quote, the QUOTE TN defines the telephone number associated with the analog trunk port defined in the AQEST TEN field.

The analog trunk port connects the leased line to the printer/computer of the ACQS client. the QUOTE TN is used internally by the 5ESS Switch software to access the analog trunk port and ensure that the path to the ACQS client is available.

Required Field.
Valid Entries: 10 digits
(See NPA field for NPA codes)

Data Rules:

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The QUOTE TN, in both the voice quote and auto quote systems, must be duplicated on every instance of an ACQS input form where the entry in the ACQS NAME field is the same. The ACQS NAME field is an identifier of the ACQS client; every line within the same ACQS client must have the same QUOTE TN. Conversely, different ACQS clients (with different ACQS NAME entries) cannot share the same QUOTE TN.

The QUOTE TN is of special concern in the case of an auto quote system (as opposed to a voice quote system). The following condition applies only when the AUTO QUOTE field is set to "Y", which indicates an auto quote system. The last seven digits of the QUOTE TN must not be duplicated within the 5ESS Switch because the QUOTE TN is associated with a port in the 5ESS Switch. The only exception is the situation stated in the previous paragraph. The duplication of the last seven digits of the QUOTE TN, in the case of a voice quote system, where the AUTO QUOTE field is set to "N", is not of concern because the QUOTE TN is not associated with a port in the 5ESS Switch.

For 5E4(2), if the AUTO QUOTE field is set to "Y" (auto quote system), the last seven digits of the QUOTE TN must not appear in the following fields.

Field	Form	Record
PKT TN	AMLBDSL	5447-1
CKT TN	DSL	5900-1
CKT TN	DSMLHLN	5901-1
PKT TN	DSMLHLN	5901-1
TN	LINE	5109-1
LISTED TN to HIGHEST LISTED TN	MLHG	5110-1
SUBTN (1 to 8)	MLHG	5110-2
TN	MLHLN	5111-1
TN	MTNDR	5550
TN	MULTITN	5114
ACCESS TN	PSMTN	5925
TN (Note 1)	SHTN	5902-1

NOTE: 1:The TN is not the same as the TN in the first row of the SHARED LIST.

For 5E5 and later, the following fields are added to the list. The DSL (5900 Record) and DSMLHLN forms are no longer available.

Field	Form	Record
LOC TN	DFLTSRV	5974
TN (PPB1)	DSL	5907
TN (PPB2)	DSL	5907
CKT TN	DSLUSR	5908
PKT TN	DSLUSR	5908
ODB TN	DSLUSR	5908
MLHG TN (CKT)	DSLUSR	5908
MLHG TN (DPKT)	DSLUSR	5908

If the AUTO QUOTE field on this form is "Y", a NOC form (5501 Record) must exist whose OFFICE CODE matches the fourth through sixth digits of the QUOTE TN, and whose NPA CODE matches the first through third digits of the QUOTE TN.

Every ACQS input form which defines a line for the same ACQS client (the ACQS NAME fields are the same) and have AUTO QUOTE set to "Y" (an auto quote system) must have the same QUOTE TN and AQEST TEN combination. This combination of the QUOTE TN and the AQEST TEN is used by a single ACQS client. Therefore, the QUOTE TN or the AQEST TEN cannot appear on another ACQS input form with a different ACQS NAME.

Every ACQS input form which defines a line for the same ACQS client (the ACQS NAME fields are the same) and have AUTO QUOTE set to "N" (a voice quote system) must have the same QUOTE TN. Therefore, the QUOTE TN cannot appear on another ACQS input form with a different ACQS NAME.

2.7 # ACQS NAME

Description: Enter the identity of the ACQS client. No special characters are allowed.

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Required Field.
Valid Entries: 3 alphanumeric characters

Data Rules:

Every line within the same ACQS client will have the same ACQS NAME.

Two or more ACQS clients must not share the same ACQS NAME.

Every ACQS input form with the same ACQS NAME (same client) must have the identical entry in the following fields: QUOTE TN, TRUE HOTEL, AUTO QUOTE and AQ MSG FORMAT.

For 5E7 and later, less than 1000 telephone numbers may be assigned to an ACQS Auto Quote Client on ACQS forms. If AUTO QUOTE is "Y" on any ACQS form for 5E4(2) - 5E7 or "PRIVATE_LINE", for 5E8 and later (indicating an ACQS private line auto quote), then the number of 10-digit telephone numbers (indicating an ACQS Auto Quote Client), (NPA, NXX, BEG LINE through END LINE) on all ACQS forms with the same ACQS NAME must be less than 1000.

2.8 # TRUE HOTEL

Description: Is the ACQS client in the business of renting lodging on a nightly basis, such as a hotel or motel?

This information will appear in the AMA Record, Table 12 - Service Feature.

Required Field.
Valid Entries: Y, N

2.9 # AUTO QUOTE

Description: Does the ACQS client use an auto quote system? If "N" is entered, a voice quote system is used.

Software Release: 5E5 - 5E7
Required Field.
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the AUTO QUOTE field, then the AQEST TEN must be specified. If "N" is entered in the AUTO QUOTE field, then an entry is not allowed in the AQEST TEN field.

If "N" is entered in this field, then the AQ MSG FORMAT field must be set to "OSPS".

2.10 AQEST TEN

Description: Enter the TEN (Trunk Equipment Number) for the analog trunk port that connects to a leased line, which in turn connects to a printer or computer at the ACQS client.
Valid Entries: a 7-digit TEN in the following format.

TEN (TRUNK EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Trunk Unit	TU	X	0-7
Service Group	SVG	X	0-1
Pack	PACK	X	0-7
Circuit	CKT	X	0-3

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Data Rules:

This field must be entered if the AUTO QUOTE field on this input form has been defined as "Y". This field must not be entered if the AUTO QUOTE field on this form has been defined as "N".

The AQEST TEN value must be defined on an EQTUP form (5720 Record), with the corresponding circuit (last digit of AQEST TEN) defined as "O" (operational) in the CKT X EQSTAT field (where X is the circuit number). ACQS TENs that are defined on the EQTUP form (with a CIRCUIT TYPE of "TRKTST") must have a circuit value (the seventh digit of the AQEST TEN) of 0 or 1 (and not 2 or 3).

The 5ESS Switch allows clients a system maximum of 1,000 auto quote clients (as opposed to voice quote).

The entry in this field must be a unique TEN within the 5ESS Switch. It cannot be duplicated in the following fields:

Field	Form	Record
TEN (Note 1)	TRUNK	5204
NUMBER (when OE TYPE = "T")	MLHLN	5111
NUMBER (when OE TYPE = "T")	LINE	5109

- ***NOTE:*** 1:If the QTY field is greater than 1, consecutive TENs are built for the next (QTY - 1) trunk members.

The AQEST TEN must not be duplicated on other ACQS input forms unless the forms have the same ACQS NAME entry, in which case the duplication is imperative.

2.11 MANUAL PBX

Description: Do either of the following conditions apply to the ACQS client line: a) the call originates through a manual PBX or b) the line is used for administrative calls in some instances and for "guest" calls in other instances? An administrative call does not require a time and charge quotation, whereas a "guest" call (e.g., a call from a hospital patient's room) does require a time and charge quotation.
Default: N
Valid Entries: Y, N

2.12 TRUE BILL TN

Description: Enter the telephone number to be used for billing purposes, if the client line telephone number is not to be used. The telephone number entered in this field will appear on the AMA record.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For the 5E4(2) Software Release, the TRUE BILL TN entry cannot be the same as the last seven digits in the ACQS TN field.

For 5E5 and later, the TRUE BILL TN, if the first three digits match the entry in the NXX field, must be such that the last four digits do not match the entry in the BEG LINE or END LINE fields, nor any value between the two entries.

For 5E4(2), if a TRUE BILL TN is entered (and the same number will doubtlessly be entered on every ACQS input form with the same ACQS NAME), then another ACQS input form must be entered such that the key field, ACQS TN, is the TRUE BILL TN prefixed by the NPA of the ACQS TN on the ACQS input form where the TRUE BILL TN is entered. Additionally, the ACQS input form that has the TRUE BILL TN as the last seven digits of the key ACQS TN field should have the same QUOTE TN, ACQS NAME,

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TRUE HOTEL, AUTO QUOTE, AQEST TEN and AQ MSG FORMAT entries (or no entries) as the original ACQS input form with the TRUE BILL TN. Finally, the TRUE BILL TN field should not be entered.

For 5E5 and later, if a TRUE BILL TN is entered (and the same number will doubtlessly be entered on every ACQS input form with the same ACQS NAME), than another ACQS input form must be entered such that: a) the NPA entry is the same as the NPA entry on the form with the TRUE BILL TN field, b) the NXX field is the first three digits of the TRUE BILL TN, c) the BEG LINE field is the last four digits of the TRUE BILL TN, and d) the END LINE field does not have an entry. Additionally, the "extra" ACQS input form that was built with keys from the TRUE BILL TN must have the same QUOTE TN, ACQS NAME, TRUE HOTEL, AUTO QUOTE, AQEST TEN and AQ MSG FORMAT entries (or no entries) as the original ACQS input form with the TRUE BILL TN. Finally, the TRUE BILL TN field should not be entered.

This additional ACQS input form that is submitted because of the presence of a TRUE BILL TN has no restrictions placed upon the entry in the MANUAL PBX field. It is possible that an ACQS client will have a mixture of ACQS input forms where some have an entry of "N" in the MANUAL PBX field and some have an entry of "Y". The choice of entry for the MANUAL PBX field in this additional ACQS input form requires some further explanation on the use of the MANUAL PBX field.

If "N" is entered in the MANUAL PBX field, then the call will be treated as a hotel seizure. If a number is entered in the TRUE BILL TN field on this input form, then that number will be displayed to the OSPS operator in the BACK NUMBER portion of the display.

If "Y" is entered in the MANUAL PBX field, then the call will be treated as a non-coin seizure and there will be no hotel identification associated with the call. The original ANI (Automatic Number Identification) will be displayed for the OSPS operator. If the call is announced by the ACQS client operator, the call will be treated as a hotel seizure via the OSPS operator depressing the HOTEL ROOM NUMBER key or depressing the BILLING CODE key and entering "GUEST" or "GST". If a number is entered in the TRUE BILL TN field, then that number will be displayed to the OSPS operator. All normal hotel practices will then apply.

If the ACQS client uses a true billing number and has a mixture of lines, where one subset has MANUAL PBX set to "Y" and the other subset has MANUAL PBX set to "N", then the following call processing conditions, in the event of an ANI failure or ONI (Operator Number Identification) failure, must be considered. If MANUAL PBX is set to "Y" in the form for the true billing number, calls will be treated as non-coin seizures; conversely, if MANUAL PBX is set to "N", calls will be treated as hotel seizures.

If the ACQS client does not use a true billing number, then in the event of an ANI or ONI failure, the aforementioned call processing conditions will be applied based on the MANUAL PBX entry associated with the individual line.

When the ACQS client does not have a mixture of MANUAL PBX entries for their lines, but does use a true billing number, the client should have the same value for MANUAL PBX as appears on the other ACQS input forms for that client.

For 5E12 and later, when a TRUE BILL TN is entered on an ACQS form, it must also be defined on another ACQS form where the:

- NPA equals the first three digits of the TRUE BILL TN
- NXX equals the next three digits of the TRUE BILL TN
- BEG LINE equals the last four digits of the TRUE BILL TN

The END LINE and TRUE BILL TN fields must not be entered on this ACQS form. The QUOTE TN, ACQS NAME, TRUE HOTEL, AUTO QUOTE, AQEST TEN, and AQ MSG FORMAT fields must have the same values or not have entries as on the previous form.

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2.13 AQ MSG FORMAT

Description: If "Y" (Yes) is entered in the AUTO QUOTE field, then enter an autoquote message format for the ACQS client. The entry has significance only in the case of an auto quote system, which receives a printed time and charge quotation. A voice quote system receives the time and charge quotation verbally from the HOBIS/HOBIC.
Default: OSPS
Valid Entries:

Valid AQ MSG FORMAT Entries

Entry	Definition
OSPS	Operator Services Position System.
1BT2	Corresponds to the TSPS (Traffic Service Position System) generic 1BT2 format.
TSPS	Corresponds to the TSPS format used prior to generic 1BT2.

The OSPS ACQS interface avoids requiring replacement of existing auto quote TTY equipment. A comprehensive discussion of ACQS message formats is available in a document entitled "5ESS Switch Interface Specifications Required for the AUTO QUOTE Service for Hotel/Motel Feature," which is available from the Customer Information Center (using the ordering number 5D5-900-500).

The following tables present examples of each format type.

TSPS Format Example

123A ABC 06/30 12345 18:15 0028 $004.50 212-345-6789 X	
123A	The sequence number of the message for this ACQS; "A" identifies the TSPS buffer. The number portion will be replaced by "***" when the message cannot be sent to the ACQS directly (due to AQ TTY problems) and will be sent to a HOBIS/HOBIC.
ABC	The client account acronym.
06/30	The date of the call.
12345	The room number or client number.
18:15	The clock time (hours and minutes - 24-hour basis) at which chargeable conversation started.
0028	The elapsed, chargeable conversation time (minutes).
$004.50	The charge for the call.
212-345-6789	The called telephone number; always 10 digits.
X	The special call identifier; "D" is directory assistance; "V" is a verification call; "F" is an international call; "L" is a local call; "T" is a domestic toll call. An asterisk (*) will follow the letter when the message cannot be sent to the ACQS directly (due to AQ TTY paper change state) and will be sent to HOBIS/HOBIC.

1BT2 Format Example

C 123A ABC 06/30 12345 18:15:32 0028:36 $004.50 212-345-6789 X	
C	The carrier identifier. An "A" indicates AT&T-C, a "B" indicates a Bell Operating Company, (or an independent operating company), and a "U" indicates unknown.
123A	The sequence number of the message for this ACQS; "A" identifies the TSPS buffer. The number portion will be replaced by "***" when the message cannot be sent to the ACQS directly (due to AQ TTY problems) and will be sent to a HOBIS/HOBIC. The number portion will be replaced by "###" when an end-of-call rating failure occurs. The time and charge must be voice quoted.
ABC	The client account acronym.
06/30	The date of the call.
12345	The room number or client number.
18:15:32	The clock time (hours, minutes and seconds - 24-hour basis) at which chargeable conversation started.
0028:36	The elapsed, chargeable conversation time (minutes and seconds).
$004.50	The charge for the call. In the event of an end-of-call rating failure, the dollar amount will be "$SSS.SS" or "$PPP.PP" for station and person calls, respectively.
212-345-6789	The called telephone number; always 10 digits.
X	The special call identifier; "D" is directory assistance; "V" is a verification call; "F" is an international call; "L" is a local call; "T" is a domestic toll call. An asterisk (*) will follow the letter when the message cannot be sent to the ACQS directly (due to AQ TTY paper change state) and will be sent to HOBIS/HOBIC.

OSPS Format Example	5E9(1) and later
0288 123C ABC 06/30 1234567890 18:15:32 0028:36 $004.50 212-345-6789 X	
0288	The identification of the interLATA carrier, Bell Operating Company or independent operating company. "0288" indicates AT&T-C, "0000" indicates a Bell Operating Company, (or an independent operating company), while any other value indicates any other interLATA carrier.
123C	The sequence number of the message for this ACQS. If "C" is filled by the letter "A", this indicates that the voice quote number is known. If "C" is filled by the letter "X", this indicates that

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	the voice quote number is unknown, and that the ACQS calling number will be substituted. The number portion will be replaced by "***" when the message cannot be sent to the ACQS directly (due to AQ TTY problems) and will be sent to a HOBIS/HOBIC. The number portion will be replaced by "###" when an end-of-call rating failure occurs. The time and charge must be voice quoted.
ABC	The client account acronym.
06/30	The date of the call.
1234567890	The room number or client number.
18:15:32	The clock time (hours, minutes and seconds - 24-hour basis) at which chargeable conversation started.
0028:36	The elapsed, chargeable conversation time (minutes and seconds).
$004.50	The charge for the call. In the event of an end-of-call rating failure, the dollar amount will be "$SSS.SS" or "$PPP.PP" for station and person calls, respectively.
212-345-6789	The called telephone number; always 10 digits.
X	The special call identifier; "D" is directory assistance; "V" is a verification call; "F" is an international call; "L" is a local call; "T" is a domestic toll call. An asterisk (*) will follow the letter when the message cannot be sent to the ACQS directly (due to AQ TTY paper change state) and will be sent to HOBIS/HOBIC.

OSPS Format Example	5E8 and later
288 123C ABC 06/30 1234567890 18:15:32 0028:36 $004.50 212-345-6789 X	
288	The identification of the interLATA carrier, Bell Operating Company or independent operating company. "288" indicates AT&T-C, "000" indicates a Bell Operating Company, (or an independent operating company), while any other value indicates any other interLATA carrier.
123C	The sequence number of the message for this ACQS. If "C" is filled by the letter "A", this indicates that the voice quote number is known. If "C" is filled by the letter "X", this indicates that the voice quote number is unknown, and that the ACQS calling number will be substituted. The number portion will be replaced by "***" when the message cannot be sent to the ACQS directly (due to AQ TTY problems) and will be sent to a HOBIS/HOBIC. The number portion will be replaced by "###" when an end-of-call rating failure occurs. The time and charge must be voice quoted.
ABC	The client account acronym.
06/30	The date of the call.
1234567890	The room number or client number.
18:15:32	The clock time (hours, minutes and seconds - 24-hour basis) at which chargeable conversation started.
0028:36	The elapsed, chargeable conversation time (minutes and seconds).
$004.50	The charge for the call. In the event of an end-of-call rating failure, the dollar amount will be "$SSS.SS" or "$PPP.PP" for station and person calls, respectively.
212-345-6789	The called telephone number; always 10 digits.
X	The special call identifier; "D" is directory assistance; "V" is a verification call; "F" is an international call; "L" is a local call; "T" is a domestic toll call. An asterisk (*) will follow the letter when the message cannot be sent to the ACQS directly (due to AQ TTY paper change state) and will be sent to HOBIS/HOBIC.

Data Rules:

For 5E5 - 5E7 if "N" is entered in the AUTO QUOTE field, or for 5E8 and later, "PRIVATE_LINE" is entered in the QUOTE TYPE field, the entry in the AQ MSG FORMAT field must be "OSPS".

2.14 QUOTE TYPE

Description: QUOTE TYPE describes how the ACQS (Automatic Charge Quotation Service) transmits the time and charge information for toll calls made by a party of the client.

Software Release: 5E8 and later.
Default: VOICE
Valid Entries:

Valid QUOTE TYPE Entries

Entry	Definition
NETWORK or N	Network Autoquote - the 5ESS Switch transmits the time and charge data to a HOBIS (Hotel Billing Information System). An individual at the HOBIS then dials up a connection

	to a printer in the ACQS establishment and prints the charge information on the printer. This field is provided by a secured feature.
PRIVATE_LINE or P	Private Line Autoquote - the 5ESS Switch transmits the time and charge data.
FAX or F	FAX quote - the HOBIS transmits the time and charge data via FAX. This field is provided by a secured feature.
VOICE or V	Voice quote - the 5ESS Switch transmits the time and charge data to the HOBIS/HOBIC and then verbally forwards the data to the client.

Data Rules:

If "PRIVATE_LINE" is entered in the QUOTE TYPE field, then the AQEST TEN must be specified. If "PRIVATE_LINE" is NOT entered in the QUOTE TYPE field, then an entry is not allowed in the AQEST TEN field.

If QUOTE TYPE is not "PRIVATE_LINE", then AQ MSG FORMAT must be "OSPS".

If TNs have assigned the NPA, NXX, BEG LINE and optionally END LINE field, and the QUOTE TYPE field is equal to "PRIVATE_LINE"; then the corresponding QUOTE TN requires that the NPA CODE and OFFICE CODE fields on a NOC form match the NPANXX of the QUOTE TN.

"FAX" and "NETWORK" enumerations are provided by a secured feature, therefore, SFID 82 must be set to "Y" on the SFSYS form (5713-1 Record) before these enumerations may be entered.

```
acqs                    5ESS Switch                _
(5425)              OFFICE DATA ADMINISTRATION
              OSPS AUTOMATIC CHARGE QUOTATION SERVICE

  *1. NPA          312
  *2. NXX          444
  *3. BEG LINE     2000
(*)4. END LINE     2019
  #5. QUOTE TN     3126781000
  #6. ACQS NAME    ABC
  #7. TRUE HOTEL   Y
  #8. AUTO QUOTE   Y
   9. AQEST TEN    0033123
  10. MANUAL PBX   N
  11. TRUE BILL TN 4442050
  12. AQ MSG FORMAT OSPS
```

Figure 1 SAMPLE ACQS FORM 5E8 THROUGH 5E11 SOFTWARE RELEASES

```
acqs                    5ESS Switch                _
(5425)              OFFICE DATA ADMINISTRATION
              OSPS AUTOMATIC CHARGE QUOTATION SERVICE

  *1. NPA          312
  *2. NXX          444
  *3. BEG LINE     2000
(*)4. END LINE     2019
  #5. QUOTE TN     3126781000
  #6. ACQS NAME    ABC
  #7. TRUE HOTEL   Y
   8. AQEST TEN    0033123
   9. MANUAL PBX   N
```

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10. TRUE BILL TN 4442050
11. AQ MSG FORMAT OSPS
12. QUOTE TYPE VOICE

Figure 2 SAMPLE ACQS FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 4AA: 5426 RECORD
NPA TIME ZONES FORM - TMZN

1. GENERAL

The 5426 Record is available with 5E4(2) and later Software Releases.

This form should not be submitted unless the OSPS TA field on the OSPSOPT form (5424 Record) has been specified as "Y" (Yes).

This record defines the time zones in which the majority of NXXs within an NPA (Numbering Plan Area) reside. It is used in conjunction with any real time rated calls such as ACQS (Automatic Charge Quotation Service), and any RTRS (Real Time Rating System) or CFR (Centralized Flexible Rating) system. The time zone is expressed relative to the time zone in which the OSPS (Operator Services Position System) resides.

Advance planning is critical before completing the TMZN and NXXZN forms. An NPA which spans multiple time zones must be flagged. Each NXX within that NPA, which is not in the majority time zone, must be defined on the NXXZN form (5427 Record).

The correct choice for a MAJORITY ZONE will greatly reduce the number of NXXZN forms to be completed.

The OSPSOPT form A1 ZONE and A2 ZONE fields are used to specify a time difference between the 5ESS Switch OSPS time and A1 ZONE or A2 ZONE time. The difference can be a maximum of two hours.

These three different time zones should be carefully used to prevent numerous future NXXZN recent change exercises.

1.1 Four Planning Cases

There are four planning cases to consider, representing the possible combinations of the following variables:

- The NPA is entirely within a single time zone or the NPA spans two time zones.
- Every NXX in the NPA reacts to Daylight Savings Time in the same manner (all use Daylight Savings or all don't), or some NXXs in an NPA use Daylight Savings Time and some NXXs don't.

The first case is an NPA where every NXX is in the same time zone and every NXX uses Daylight Savings Time in a like manner. All the NXXs thus comprise a single set, with each NXX at the same time throughout the calendar year. The OSPSOPT form A1 ZONE or A2 ZONE would be referenced only if the NPA's time zone differed from the 5ESS Switch OSPS time zone. The NXXZN form would not be used because every NXX is in the MAJORITY ZONE.

The second case is an NPA that spans two time zones and every NXX uses Daylight Savings Time in a like manner. The NXXs thus comprise two distinct sets, each in a different time zone. The MAJORITY ZONE should represent the larger of the two sets. If one set of NXXs is in the same time zone as the 5ESS Switch OSPS, then the OSPSOPT form A1 ZONE field would be referenced to express the time difference relative to the 5ESS Switch OSPS time for the second set of NXXs. If both sets of NXXs are not in the same time zone as the 5ESS Switch OSPS, then the OSPSOPT form A1 ZONE and A2 ZONE fields would be referenced to express the time differences relative to the 5ESS Switch OSPS time. An NXXZN form would be used to indicate the time zone for each NXX that is not in the MAJORITY ZONE.

The third case is an NPA where every NXX is in the same time zone, but the NXXs do not use Daylight Savings Time in a like manner. The NXXs comprise two distinct sets, one which uses Daylight Savings

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Time and one which does not. The MAJORITY ZONE should represent the larger of the two sets. The OSPSOPT form A1 ZONE and/or A2 ZONE fields could be used for either or both of the following purposes.

- To define a time zone if the NPA's MAJORITY ZONE differs from the 5ESS Switch OSPS time.
- To define a time zone for the smaller subset of NXXs which use Daylight Savings Time in a like manner.

An NXXZN form would be used to indicate the time zone for each NXX that is not in the MAJORITY ZONE. Thus, when the Daylight Savings Time change took place, the smaller set of NXXs would not have to be respecified through NXXZN Recent Change, but rather the A1 ZONE or A2 ZONE variables.

The fourth case is an NPA where the NXXs are in different time zones and the NXXs do not use Daylight Savings Time in a like manner. The MAJORITY ZONE should be the largest subset of NXXs that are in the same time zone all year (treating Daylight Savings Time in the same manner). The OSPSOPT form A1 ZONE and/or A2 ZONE fields could be used for the following purposes.

- To define a time zone if the NPA's MAJORITY ZONE differs from the 5ESS Switch OSPS time.
- To define a time zone for a subset of NXXs not in the MAJORITY ZONE and/or subset of NXXs which do not treat Daylight Savings Time in the same manner as the majority.

An NXXZN form would be used to indicate the time zone for each NXX that is not in the MAJORITY ZONE time zone. Thus, when the Daylight Savings Time change took place, the set of NXXs that are not in the majority time zone would not have to be re-entered, but rather, the A1 ZONE or A2 ZONE variable(s) could be changed.

1.2 Recent Change View

The corresponding Recent Change view for this form is 26.14.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control group number and the office name on each record.

2.2 * NPA

Description: Enter the NPA of the back number requesting time and charges (served by this OSPS).

Required Field.
Valid Entries:
- For 5E4(2) - 5E7: 200 - 919, middle digit 0 -1
- For 5E8: 100 - 919, middle digit 0 - 1
- For 5E9(1) and later: 100 - 999

Data Rules:

Entries in the NPA field must also be entered in the ORIG NPA field of the OPRTK form (5417 Record) or as TRUE NPA on the PRONXX form (5413 Record).

2.3 # MAJORITY ZONE

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Description: Enter the time zone in which the majority (or all) of the NXXs in this NPA reside (defines the time difference compared to OSPS system time).

Required Field.

Valid MAJORITY ZONE Entries

Entry	Definition
PRI	Primary Time Zone. This is the same time as the 5ESS Switch (OSPS time).
ALT1	Alternate Time Zone 1. This indicates that the zone defined in the A1 ZONE field of the OSPSOPT form will be used.
ALT2	Alternate Time Zone 2. This indicates that the zone defined in the A2 ZONE field of the OSPSOPT form will be used.

2.4 # ADDL ZONES

Description: Does the NPA cover more than one time zone?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the ADDL ZONES field, time zone entries are required (for this NPA) on the NXXZN form on a per-NXX basis.

---

tmzn 5ESS Switch _
(5426) OFFICE DATA ADMINISTRATION
OSPS NPA TIME ZONES

*1. NPA 219
#2. MAJORITY ZONE PRI
#3. ADDL ZONES Y

Figure 1 SAMPLE TNZN FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AB: 5427 RECORD
NXX OUTSIDE OF MAJORITY TIME ZONE FORM - NXXZN

1. GENERAL

The 5427 Record is available with 5E4(2) and later Software Releases.

This record should not be entered unless the OSPS TA field on the OSPSOPT form (5424 Record) has been specified as "Y" (Yes). This record defines the time zone for each NXX which does not reside in the majority time zone (that was specified for the NPA on the TMZN form (5426 Record)).

Please refer to the general section in the TMZN Form for useful information and strategy regarding defining time zones.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * NPA

Description: Enter the Numbering Plan Area of the back number requesting time and charges (NPA served by this OSPS).

Required Field.
Valid Entries: For 5E4(2) - 5E7: 200 - 919, middle digit 0 - 1

For 5E8: 100 - 919, middle digit 0 - 1

For 5E9(1) and later: 100 - 999

Data Rules:
The ADDL ZONES field must be marked "Y" on the TMZN form for each NPA entered in this field.

2.3 * NXX

Description: Enter the NXX that does not exist in the MAJORITY ZONE field of the TMZN form. If an NXX is not found here, the TMZN form time zone will be used.

Required Field.
Valid Entries: 000 - 999

2.4 # ZONE

Description: Enter the non-majority time zone.

Required Field.

Valid ZONE Entries

Entry	Definition
PRI	Primary Time Zone. This is the same time as the 5ESS Switch (OSPS time).
ALT1	Alternate Time Zone 1. This indicates that the zone defined in the A1 ZONE field of the OSPSOPT form will be used.
ALT2	Alternate Time Zone 2. This indicates that the zone defined in the A2 ZONE field of the OSPSOPT form

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will be used.

nxxzn 5ESS Switch _
(5427) OFFICE DATA ADMINISTRATION
OSPS NXX OUTSIDE OF MAJORITY TIME ZONE

*1. NPA 219
*2. NXX 387
#3. ZONE ALT1

Figure 1 SAMPLE NXXZN FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AC: 5428 RECORD
OSPS ACCS SPECIAL TREATMENT TABLE FORM - ACCST

1. GENERAL

The 5428 Record is available with 5E4(2) and later Software Releases.

This record defines 10-digit telephone numbers that require ACCS (Automated Calling Card Service) special treatment.

When a 0+ call is received at an OSPS (Operator Services Position System), if the call is not screened against calling card service, the ACCST form is checked, based on the calling (back) NPA-NXX entered, to determine the handling of the call. Possible values in the ACCST form include route the call to an operator, provide a tone to the caller or provide tone and announcement to the caller.

If the calling number is not found in the ACCST form, "default" treatment is applied to the call depending on the type of originating station.

Each ACCST form that is submitted must have a corresponding NPAMAP form (5414 Record). The two forms' NPA/NXX entries must match.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.40.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the office name on each record.

2.2 * TN

Description: Enter a valid 10-digit telephone number of the format NPANXXXXXX. For 5E4(2) - 5E8 NPA format is 200 - 919 where the middle digit can be only 0 - 1. For 5E9(1) and later, the NPA format is 200 - 999.

Required Field.
Valid Entries: 10 digits

2.3 # PROMPT TREATMENT

Description: Enter the initial prompt that a customer will encounter on an ACCS call.

Normally, the initial prompt that a customer will hear is controlled by an entry on the OSPSOPT form (5424 Record). The ACCS CL1 field is used for coin and hotel/motel lines, while the ACCS CL2 field is used for all other types of service.

The ACCST form is used to override the OSPSOPT form treatment on a per-telephone number basis.

Required Field.

Valid PROMPT TREATMENT Entries

Entry	Definition
OP	Routes the call to an OSPS position.
TANN	Routes the call to an announcement. (Digital ServicesUnit 2 - Recorded Announcement Function (DSU2-RAF) - DTA)treatment.
TONE	Routes the call to a tone.

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```
accst                5ESS Switch                _
(5428)           OFFICE DATA ADMINISTRATION
                 OSPS ACCS SPECIAL TREATMENT TN

*1. TN         3125104647
#2. PROMPT TREAT TANN
```

Figure 1 SAMPLE ACCST FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AD: 5429 RECORD
OSPS ACCS RESTRICTED SEQUENCE TN FORM - SEQREST

1. GENERAL

The 5429 Record is available with 5E4(2) and later Software Releases.

This record is used to assign 3-, 7-, and 10-digit telephone numbers that cannot be accessed with ACCS (Automatic Calling Card Service) as an automated sequence call. For 5E5 and later Software Releases, the option is offered to disallow the number to be a forward number for an ACCS sequence call or for a Subaccount Billing sequence call.

ACCS (Automated Calling Card Service) customers can be restricted from calling certain numbers when dialing ACCS sequence calls. This applies to both LEC (Local Exchange Carrier) and CAS (Customer Account Services) cards.

Subaccount Billing is a new feature introduced in the 5E5 Software Release. This form allows for restriction of this feature for certain forward numbers when dialed as a sequence call.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.41.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group number and the Office Name on each record.

2.2 * RESTRICTED TN

Description: Enter the 3-, 7-, or 10-digit restricted telephone number. For example, an entry of 500 restricts all 500-XXX-XXXX. NPA5551212 restricts all 5551212 numbers where an NPA was dialed.

Required Field.
Valid Entries: 411

- 500
- 5551212
- 611
- 700
- 800,
- 811, 822, 833, 844 (5E10 and later)
- 855, 866, 877, 888, 899 (5E10 and later)
- 900
- 911
- NPA5551212 (for all NPAs)

Data Rules:

For 5E10 and later, if any number is not one of the following:

- 411
- 611
- 500
- 5551212
- 700
- 800

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- 900
- 911
- NPA5551212 (where NPA is any NPA),

then INWATS NPA must be entered on a corresponding INWNPA form matching the RESTRICTED TN entry.

2.3 # ACCS

Description: Can this directory number be a forward number for an ACCS (Automated Calling Card Service) sequence call?

Software Release: 5E5 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.4 SUBACCT BILL

Description: Can this directory number be a forward number for a Subaccount Billing sequence call?

Software Release: 5E5 and later
Required Field.
Default: Y
Valid Entries: Y, N

---

seqrest 5ESS Switch _
(5429) OFFICE DATA ADMINISTRATION
OSPS BILLING RESTRICTED SEQUENCE TN

*1. RESTRICTED TN NPA5551212
#2. ACCS N
3. SUBACCT BILL Y

Figure 1 SAMPLE SEQREST FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AF: 5431 RECORD
DIOR EIGHT HUNDRED NUMBER PROVISIONING - DEHNP

1. GENERAL

The 5431 Record is available with the 5E9(1) and later Software Releases. The DIOR Eight Hundred Number Provisioning form specifies the countries from which DIOR (Direct International Originations) calls to 800 numbers have the international leg of the call billed to the caller, billed to the 800 number, or are denied completion. This form supports the DIOR Toll-Free 800 feature, for more information on this feature see Division 2, Section 3K.

Each OFFICE CODE must be pre-assigned to an SM on the DEHOCSM form.

Each entry in the CAC field of the CODELIST must be pre-defined as an IDDD CAC on the OSPS Country Number to Country Name Mapping form, CCNAME.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.85.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * INWATS NPA

Description: Enter the NPA of an INWATS (Inward Wide Area Telecommunications Service) number. This field was added to support the Toll-Free NPA Expansion feature. This feature allows new toll-free NPAs to be assigned as INWATS NPAs (with the current exhaustion of 800 numbers). For more information on provisioning the secured feature Toll-Free NPA Expansion, see Divison 2, Section 4A405.

Software Release: 5E10 and later
Required Field.
Default: 800
Valid Entries: 100 - 999.

Data Rules:

For each DEHNP form entered, there must be a corresponding DEHOCSM form where the following is found:

- INWATS NPA entries must match
- OFFICE CODE entries must match
- FEATURE on the DEHOCSM form must be "TF8"

2.3 * OFFICE CODE

Description: Enter the office code (NXX) of an 800 number.

Required Field.
Valid Entries: 200 - 999

Data Rules:

See Data Rule for INWATS NPA.

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2.4 * LINE NUMBER

Description: Enter the line number of an 800 number.

Required Field.
Valid Entries: 0000 - 9999

2.5 ALL TRMT

Description: Enter the billing treatment to be used on the international leg of an 800 number call from any country code that is not entered in the CAC field of the CODELIST list below.

Required Field.
Default: CALLER
Valid Entries:

Valid ALL TRMT Entries

Entry	Definition
CALLER	Caller pays for the international leg of the call.
DENIED	800 number does not accept calls from any international origin
EHPAID	800 number pays for the international leg of the call.

Data Rules:

If "CALLER" is entered then:
- CODELIST TRMT cannot be "CALLER"
- CODELIST must have at least one entry

If "DENIED" is entered, then CODELIST TRMT cannot be "DENIED".

If "EHPAID" is entered, then CODELIST TRMT cannot be "EHPAID".

COUNTRY CODE TREATMENT LIST (CODELIST)

The following fields (Section 2.6 - Section 2.8) assigns the 800 number treatment for the IDDD (International Direct Distance Dialing) CAC (Country Access Codes).

2.6 CAC

Description: Enter the IDDD Country Access Code that is to have a billing treatment that is different from the treatment specified in the ALL TRMT field.
Valid Entries: 1 - 999

Data Rules:

CAC cannot be 0.

The combination of CAC and NXX entries must be unique.

If CAC is entered, then CODELIST TRMT and NXX must be entered. Conversely, if CAC is not entered then CODELIST TRMT and NXX cannot be entered.

When an CAC value is entered in the COUNTRY CODE TREATMENT LIST on this form, a corresponding CCNAME form must exist where the CAC and NXX combination entries match the combination of IDDD CAC and IS 809 NXX entries on the CCNAME form (5463 Record).

2.7 TRMT

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Description: Enter the billing treatment to be used on the international leg of an 800 number call from the country code specified in the CAC field.

Valid CODELIST TRMT Entries	
Entry	**Definition**
CALLER	Caller pays for the international leg of the call.
DENIED	800 number does not accept calls from any international origin
EHPAID	800 number pays for the international leg of the call.

2.8 NXX

Description: Is the country code specified in the CAC field an NXX for the 809 country code?
Valid Entries: Y, N

Data Rules:

The CAC and NXX combination must be pre-defined using the IDDD CAC and IS 809 NXX fields on the OSPS Country Number to Country Name Mapping CCNAME form (5461 Record).

SCREEN 1 OF 4 5ESS Switch
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

*1. OFFICE CODE ___
*2. LINE NUMBER ____
3. ALL TRMT CALLER

4. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
1	___	_____	_	7	___	_____	_	13	___	_____	_	19	___	_____	_
2	___	_____	_	8	___	_____	_	14	___	_____	_	20	___	_____	_
3	___	_____	_	9	___	_____	_	15	___	_____	_	21	___	_____	_
4	___	_____	_	10	___	_____	_	16	___	_____	_	22	___	_____	_
5	___	_____	_	11	___	_____	_	17	___	_____	_	23	___	_____	_
6	___	_____	_	12	___	_____	_	18	___	_____	_	24	___	_____	_

SCREEN 2 OF 4 5ESS Switch
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

4. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
25	___	_____	_	35	___	_____	_	45	___	_____	_	55	___	_____	_
26	___	_____	_	36	___	_____	_	46	___	_____	_	56	___	_____	_
27	___	_____	_	37	___	_____	_	47	___	_____	_	57	___	_____	_
28	___	_____	_	38	___	_____	_	48	___	_____	_	58	___	_____	_
29	___	_____	_	39	___	_____	_	49	___	_____	_	59	___	_____	_
30	___	_____	_	40	___	_____	_	50	___	_____	_	60	___	_____	_
31	___	_____	_	41	___	_____	_	51	___	_____	_	61	___	_____	_
32	___	_____	_	42	___	_____	_	52	___	_____	_	62	___	_____	_
33	___	_____	_	43	___	_____	_	53	___	_____	_	63	___	_____	_
34	___	_____	_	44	___	_____	_	54	___	_____	_	64	___	_____	_

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SCREEN 3 OF 4 5ESS Switch
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

4. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
65	___	_____	_	75	___	_____	_	85	___	_____	_	95	___	_____	_
66	___	_____	_	76	___	_____	_	86	___	_____	_	96	___	_____	_
67	___	_____	_	77	___	_____	_	87	___	_____	_	97	___	_____	_
68	___	_____	_	78	___	_____	_	88	___	_____	_	98	___	_____	_
69	___	_____	_	79	___	_____	_	89	___	_____	_	99	___	_____	_
70	___	_____	_	80	___	_____	_	90	___	_____	_	100	___	_____	_
71	___	_____	_	81	___	_____	_	91	___	_____	_	101	___	_____	_
72	___	_____	_	82	___	_____	_	92	___	_____	_	102	___	_____	_
73	___	_____	_	83	___	_____	_	93	___	_____	_	103	___	_____	_
74	___	_____	_	84	___	_____	_	94	___	_____	_	104	___	_____	_

SCREEN 4 OF 4 5ESS Switch _
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

4. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
105	___	_____	_	111	___	_____	_	117	___	_____	_	123	___	_____	_
106	___	_____	_	112	___	_____	_	118	___	_____	_	124	___	_____	_
107	___	_____	_	113	___	_____	_	119	___	_____	_	125	___	_____	_
108	___	_____	_	114	___	_____	_	120	___	_____	_	126	___	_____	_
109	___	_____	_	115	___	_____	_	121	___	_____	_	127	___	_____	_
110	___	_____	_	116	___	_____	_	122	___	_____	_				

Figure 1 SAMPLE DEHNP FORM 5E9(1) - 5E9(2) SOFTWARE RELEASES

SCREEN 1 OF 4 5ESS Switch
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

*1. INWATS NPA 800
4. ALL TRMT CALLER
*2. OFFICE CODE ___

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*3. LINE NUMBER ____

5. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
1	___	_____	_	7	___	_____	_	13	___	_____	_	19	___	_____	_
2	___	_____	_	8	___	_____	_	14	___	_____	_	20	___	_____	_
3	___	_____	_	9	___	_____	_	15	___	_____	_	21	___	_____	_
4	___	_____	_	10	___	_____	_	16	___	_____	_	22	___	_____	_
5	___	_____	_	11	___	_____	_	17	___	_____	_	23	___	_____	_
6	___	_____	_	12	___	_____	_	18	___	_____	_	24	___	_____	_

SCREEN 2 OF 4 5ESS Switch
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

5. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
25	___	_____	_	35	___	_____	_	45	___	_____	_	55	___	_____	_
26	___	_____	_	36	___	_____	_	46	___	_____	_	56	___	_____	_
27	___	_____	_	37	___	_____	_	47	___	_____	_	57	___	_____	_
28	___	_____	_	38	___	_____	_	48	___	_____	_	58	___	_____	_
29	___	_____	_	39	___	_____	_	49	___	_____	_	59	___	_____	_
30	___	_____	_	40	___	_____	_	50	___	_____	_	60	___	_____	_
31	___	_____	_	41	___	_____	_	51	___	_____	_	61	___	_____	_
32	___	_____	_	42	___	_____	_	52	___	_____	_	62	___	_____	_
33	___	_____	_	43	___	_____	_	53	___	_____	_	63	___	_____	_
34	___	_____	_	44	___	_____	_	54	___	_____	_	64	___	_____	_

SCREEN 3 OF 4 5ESS Switch
dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

5. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
65	___	_____	_	75	___	_____	_	85	___	_____	_	95	___	_____	_
66	___	_____	_	76	___	_____	_	86	___	_____	_	96	___	_____	_
67	___	_____	_	77	___	_____	_	87	___	_____	_	97	___	_____	_
68	___	_____	_	78	___	_____	_	88	___	_____	_	98	___	_____	_
69	___	_____	_	79	___	_____	_	89	___	_____	_	99	___	_____	_
70	___	_____	_	80	___	_____	_	90	___	_____	_	100	___	_____	_
71	___	_____	_	81	___	_____	_	91	___	_____	_	101	___	_____	_
72	___	_____	_	82	___	_____	_	92	___	_____	_	102	___	_____	_
73	___	_____	_	83	___	_____	_	93	___	_____	_	103	___	_____	_
74	___	_____	_	84	___	_____	_	94	___	_____	_	104	___	_____	_

SCREEN 4 OF 4 5ESS Switch _

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dehnp OFFICE DATA ADMINISTRATION
(5431) DIOR EIGHT HUNDRED NUMBER PROVISIONING

5. COUNTRY CODE TREATMENT LIST (CODELIST)

ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX	ROW	CAC	TRMT	NXX
105	___	_____	_	111	___	_____	_	117	___	_____	_	123	___	_____	_
106	___	_____	_	112	___	_____	_	118	___	_____	_	124	___	_____	_
107	___	_____	_	113	___	_____	_	119	___	_____	_	125	___	_____	_
108	___	_____	_	114	___	_____	_	120	___	_____	_	126	___	_____	_
109	___	_____	_	115	___	_____	_	121	___	_____	_	127	___	_____	_
110	___	_____	_	116	___	_____	_	122	___	_____	_				

Figure 2 SAMPLE DEHNP FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4AG: 5432 RECORD
CREDIT CARD CALLING OPTIONS FORM - CCCOPT

1. GENERAL

The 5432 Record is available with 5E4(2) and later Software Releases.

This record is used to define credit card options.

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.99.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control group number and the office name on each record.

2.2 * KEY

Description: For this key field, 0 is the default and only valid entry.

Required Field.
Default: 0
Valid Entries: 0

2.3 # PIN FAIL TIME

Description: Enter the PIN (Personal Identification Number) failure time in minutes. This is the interval during which card validation PIN failure from a specific back number and with the same account number can occur before the LOCK OUT TIME interval is entered.

Required Field.
Default: 4
Valid Entries: 4 - 20 (minutes)

Data Rules:

The PIN FAIL TIME entry must be less than the LOCK OUT TIME entry.

2.4 # LOCK OUT TIME

Description: Enter the lock out time in minutes. This is the interval that a particular calling card customer will be blocked from ACCS service due to exceeding the FRAUD FAIL count with the PIN FAILURE TIME.

Required Field.
Default: 5
Valid Entries: 5 - 120 (minutes)

2.5 # FRAUD FAIL COUNT

Description: Enter the quantity of card validation PIN failures a customer will be allowed within the PIN FAIL TIME before the LOCK OUT TIME interval is entered.

Required Field.
Default: 30

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Valid Entries: 4 - 30

2.6 SECURITY PRINTER

Description: For 5E8 and earlier, this field appears as text only on the input view and is changeable only by Recent Change. This field previously resided on the OFCOPT form (5509 Record) as OPERATOR SERVICE CENTER.

For 5E9(1) and later, this parameter specifies the OSC (Operator Service Center) and FMC (Force Management Center) location for the security printer. It is used to forward security messages to the right OSPS OAP (Administrative Processor). This field cannot be entered in ODA. On the Recent Change view 21.99, enter 1 - 32 for OSCs, or 101 - 108 for FMCs.

2.7 SECURITY TERMINAL

Description: This field appears as text only on the input view and is changeable only by Recent Change. This field previously resided on the OFCOPT form (5509 Record) as FORCE MANAGEMENT CENTER.

EMERGENCY INTERRUPT

The following fields (Section 2.8 - Section 2.9) define an emergency interrupt threshold.

2.8 EI LIMIT

Description: Enter the emergency interrupt limit in seconds. This field indicates the maximum number of seconds the operator can interrupt the forward party during Emergency Interrupt before a message will be generated on the security printer.
Default: 0
Valid Entries: 0 - 1023 (seconds)

2.9 EI THRESHOLD IND

Description: Will emergency interrupt thresholds be indicated? This field indicates whether a message should be printed when the Emergency Interrupt is exceeded.
Default: N
Valid Entries: Y, N

ALL CARDS FAIL (ACF)

The following fields (Section 2.10 - Section 2.13) define the global parameters for the ACF (All Cards Fail) feature which are only accessible from the OSPS OAP security terminal. They cannot be entered on an ODA view; they can only be entered on the Recent Change view 21.99 (OSPS Security Parameters). For more information on this feature see Division 2, Section 3I.

2.10 ACF ON

Description: This field activates the All Cards Fail feature.

Software Release: 5E9(1) and later.

2.11 PERMIT TIME

Description: This field indicates the ACF fraud candidate interval, 4 - 20 minutes. The ACF PERMIT TIME Interval is the specified time interval, in minutes, to allow repeated card validating failures from a specific back number and with the same PIN before the LOCK OUT TIME interval is entered.

Software Release: 5E9(1) and later.

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2.12 LOCK OUT TIME

Description: ACF lockout interval is 5 - 120 minutes. The LOCK OUT TIME interval is the interval, in minutes, that a particular calling card customer will be blocked from ACCS service due to exceeding the FAIL THRESHOLD within the PERMIT TIME.

Software Release: 5E9(1) and later.

2.13 FAIL THRESHOLD

Description: Maximum ACF fraud attempts per PERMIT TIME, 4 - 30 attempts.

This parameter is the number of card validation replies matching the ACF fraud criteria. Enter the quantity of card validation failures that a customer will be allowed within the PERMIT TIME before the LOCK OUT TIME interval is entered, which qualifies for ACF.

Software Release: 5E9(1) and later.
Valid Entries:

```
cccopt                    5ESS Switch
(5432)                OFFICE DATA ADMINISTRATION
                    CREDIT CARD CALLING OPTIONS

*1. KEY 0                          EMERGENCY INTERRUPT

#2. PIN FAIL TIME    04              8. EI LIMIT         0000
#3. LOCK OUT TIME    005             9. EI THRESHOLD IND  N
#4. FRAUD FAIL COUNT 30
 5. SECURITY PRINTER ___               ALL CARDS FAIL (ACF)

                           10. ACF ON         N
                           11. PERMIT TIME    10
    SECURITY TERMINAL      12. LOCK OUT TIME  20
                           13. FAIL THRESHOLD 15
```

Figure 1 SAMPLE CCCOPT FORM 5E5 - 5E8 SOFTWARE RELEASES

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SEC. 4AH: 5433 RECORD
DIOR COUNTRY PAIR SCREENING SPECIAL SCREENING - DCPSSS

1. GENERAL

The 5433 Record is available with the 5E9(1) Software Release. This form specifies additional screening which may be done on a country pair for DIOR (Direct International Originations) calls. For a Terminating Country Code (TERM CC field), calls may be required to use an AT&T card or be automatically routed to an operator based on the Originating Country Code (ORIG CC field) and/or carrier.

Screening may be specified in 3 different ways:

1. "ALL" in the ORIG CC field and no entry in the CARRIER field means that all originations receive the same treatment unless overridden by either of the following two ways.

2. A specific country code in the ORIG CC field and no carrier entered means all carriers from that country receive the same treatment unless overridden by the third way below. This can also override the treatment specified in (1) above for all carriers from this country.

3. Both a specific country code in the ORIG CC field and a carrier in the CARRIER field overrides the treatment specified in (1) or (2) above.

This form supports the CPS-SS (DIOR Country Pair Screening - Special Screening) feature. For more information on this feature see Division 2, Section 3K on DIOR features.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.86.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TERM CC

Description: Enter the DIOR terminating country code which is to have special screening done.

Required Field.
Valid Entries: 1 - 3 characters

Data Rules:

The entries in this field must be defined on the NONUSA form (5477 Record) using the HOME COUNTRY field with the DIOR MEMBER field set to "Y".

2.3 * ORIG CC

Description: Enter the DIOR originating country code to be paired with the TERM CC entry for special screening. "ALL" indicates that all originations receive the same screening when terminating to this TERM CC.

Required Field.
Valid Entries: 200 - 999 or ALL

Data Rules:

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If "ALL" is entered, the CARRIER must not be entered.

Entries in this field must be defined on the CCNAME form (5463 Record) using the COUNTRY NUMBER field.

2.4 (*) CARRIER

Description: Enter the carrier of the originating country code to be paired with the terminating country code for special screening. If this field is not entered, it indicates all carriers.

Required Field.
Valid Entries: 0 - 9

2.5 # SCREEN CARD

Description: Should calls matching the originating country code and/or carrier terminating to this terminating country code be screened for an AT&T card?

Required Field.
Valid Entries: Y, N

Data Rules:

If both SCREEN CARD and OPERATOR are "N", then ORIG CC cannot be "ALL".

2.6 # OPERATOR

Description: Should calls matching the originating country code and/or carrier terminating to this terminating country code always be routed to an operator?

Required Field.
Valid Entries: Y, N

Data Rules:

If both SCREEN CARD and OPERATOR are "N", then ORIG CC cannot be "ALL".

```
dcpsss                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(5433)         DIOR COUNTRY PAIR SCREENING SPECIAL SCREENING

  *1. TERM CC     ___
  *2. ORIG CC     ___
(*)3. CARRIER     _
  #4. SCREEN CARD _
  #5. OPERATOR    _
```

Figure 1 SAMPLE DCPSSS FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4AI: 5434 RECORD
OPERATOR DATA BASE PARAMETERS FORM - OPDBPARM

1. GENERAL

The 5434 Record is available with 5E4(2) and later Software Releases.

This record defines the data base and X.25 protocol parameters necessary to establish a session to an external data base (that is also accessible to the OSPS (Operator Services Position System) operator's VDT (Video Display Terminal)). The parameters (defined in this form) allow a call to be made to the database; a "virtual" event over a real "link".

The OPDBPARM form also defines the login and password strings being passed from the external data base, and the X.25 protocol parameters used to establish the link and define the message packet format.

When an OPDBPARM form is submitted, the OSPSOPT form (5424 Record) must have the OSPS TA field defined as "Y."

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Description: Enter the base and control group number and the office name on each record.

2.2 * DB NUMBER

Description: Enter the data base number that is accessible by an OSPS operator.

Required Field.
Valid Entries: 1 - 31

2.3 # DB NAME

Description: Enter a data base name. The entries must be unique.

Required Field for 5E6 and later.
Valid Entries: 1 - 5 characters

2.4 # DB PKT TN

Description: The name of this field was changed to FIRST DB PKT TN in 5E8. This field name applies to 5E7 and earlier. See FIRST DB PKT TN for usage information.

2.5 # FIRST DB PKT TN

Description: For 5E6 and later Software Releases, enter the ISDN telephone number of the external data base. This external data is used to provide MLB (Multileaf Bulletin) or EIS information to operators. Data base computers which belong to the same type are configured as a packet switching MLHG (Multiline Hunt Group). (This field was called DB PKT TN in 5E6 and 5E7.)

Required Field for 5E6 - 5E8.
Valid Entries: 7 or 11 digits

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Data Rules:

For 5E9(1) and later:
If FIRST DB PKT TN is entered, then CUGPX must be entered. If FIRST DB PKT TN is not entered, then CUGPX must not be entered.

If TERM TYPE is "TEMPLATE", both FIRST DB PKT TN and SECOND DB PKT TN must be entered.

If TERM TYPE is "BASIC" or "TRAINER", FIRST DB PKT TN must be entered.

2.6 SECOND DB PKT TN

Description: Enter the second ISDN Destination telephone number of the database. This is only used for databases which support "TEMPLATE" terminal emulation, i.e., "T" is entered in the TERM TYPE field.

Software Release: 5E8 and later
Valid Entries: 7 or 11 digits

Data Rules:

For 5E6 - 5E8, if TERM TYPE is "BASIC", then this field must not be entered. However, if TERM TYPE is NOT "BASIC", then this field must be entered.

For 5E9(1) and later, If TERM TYPE is "TEMPLATE", both FIRST DB PKT TN and SECOND DB PKT TN must be entered. If TERM TYPE is not "TEMPLATE", SECOND DB PKT TN must not be entered.

2.7 # CUGPX

Description: Enter the packet switching (preferential customer) Closed User Group index.

Required Field for 5E6 - 5E8.
Valid Entries: 0 - 99

Data Rules:

For 5E6 and later Software Releases, every CUGPX entry requires corresponding AMLBDSL and OSPSDSL forms to be entered, which meet the following criteria:

A. CUG LIST IDX field on the AMLBDSL form (5447 Record) must match the CUGPX entry on this form.

B. Every AMLBDSL form must have a corresponding OSPSDSL form (5411 Record) where entry in the SERVICE CLASS field is "TAOPER" and the entry in the LVL2 PROF field is "VDT". Corresponding forms have matching LCENs.

C. In addition, if the OPDBPARM form has a SEND WINDOW SIZE entry other than zero, the corresponding AMLBDSL form must have "Y" entered in the FLOW CNTL field.

For 5E9(1) and later, if FIRST DB PKT TN is entered, then CUGPX must be entered. If FIRST DB PKT TN is not entered, then CUGPX must not be entered.

2.8 FIRST SEARCH STRING

Description: Enter a first prompt string from the external data base e.g., login:
Valid Entries: 1 - 10 characters

2.9 SECOND SEARCH STRING

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Description: Enter a second prompt string from the external data base, e.g., password: .
Valid Entries: 1 - 10 characters

2.10 SEND WINDOW SIZE

Description: Enter the sending size of the X.25 level 2 packet switch window.
Default: 0
Valid Entries: 0, 2, or 3

Data Rules:

When SEND WINDOW SIZE is 0, then SEND PACKET SIZE, RECEIVE WINDOW SIZE, and RECEIVE PACKET SIZE must all be 0.

2.11 SEND PACKET SIZE

Description: Enter the maximum size of information that can be sent as a block of data.
Default: 0
Valid Entries: 0 or 128

Data Rules:

When SEND PACKET SIZE is 0, then SEND WINDOW SIZE, RECEIVE WINDOW SIZE, and RECEIVE PACKET SIZE must all be 0.

2.12 RECEIVE WINDOW SIZE

Description: Enter the receiving size of the X.25 level 2 packet switch window.
Default: 0
Valid Entries: 0, 2, or 3

Data Rules:

When RECEIVE WINDOW SIZE is 0, then SEND WINDOW SIZE, SEND PACKET SIZE, and RECEIVE PACKET SIZE must all be 0.

2.13 RECEIVE PACKET SIZE

Description: Enter the maximum size of information that can be received as a block of data.
Default: 0
Valid Entries: 0 or 128

Data Rules:

When RECEIVE PACKET SIZE is 0, then SEND WINDOW SIZE, SEND PACKET SIZE, and RECEIVE WINDOW SIZE must all be 0.

2.14 RESTART TIMER

Description: Enter the restart request response timer. The X.25 level timer is used to time the response for sending the RESTART REQUEST packet from the VDT to the 5ESS Switch. The timer is started when a RESTART REQUEST packet is sent out and stopped when a RESTART CONFIRMATION or a RESTART REQUEST is received by the VDT. When the timer response time expires, the restart request counter is decremented and another RESTART REQUEST is sent out with RESTART TIMER being restarted.

Software Release: 5E6 and later
Required Field.

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Default: 3 (seconds)
Valid Entries: 1 - 31 (seconds)

2.15 DATA TIMER

Description: The data packet acknowledgement timer. This is the X.25 level 3 timer used to time the acknowledgement of data packets. This timer is started whenever a DATA packet is sent from the VDT. It is also started whenever a DATA, Restart Request (RR) or Receiver Not Ready (RNR) packet is received with a P(R) that rotates the level 3 window. Upon timing out, the level 3 reset procedure is invoked with a RESTART REQUEST packet being sent out from the VDT.

Software Release: 5E6 and later
Required Field.
Default: 25 (seconds)
Valid Entries: 1 - 31 (seconds)

2.16 RESTART COUNT

Description: Restart request count. This is an X.25 level 3 counter associated with the restart request response timer. The restart request counter is decremented when the restart request response timer times out. When the restart request response timer times out the number of times equal to the restart request counter, level 3 communication is declared broken and the application is informed of this event.

Software Release: 5E6 and later
Required Field.
Default: 3
Valid Entries: 1 - 15

2.17 TERM TYPE

Description: This field defines the type of emulation used by the terminal when interfacing with the data base. For 5E6 and 5E7 this field is found on the OPEXTDB form (5435 Record).

Software Release: 5E8 and later
Required Field.
Default: BASIC
Valid Entries:

Valid TERM TYPE Entries

Entry	Definition
BASIC or B	The Basic terminal emulation (pre 5E6). This is the pre 5E6(2) terminal emulation
IBM or I	Software Release: 5E9(1) and later. Terminal emulation used for IBM.
TEMPLATE or TE	Specific terminal emulation specified by OA.
TRAINER or TR	
VDR or V	Software Release: 5E9(1) and later. Terminal emulation used for Volt Delta.

Data Rules:

When TERM TYPE is "BASIC", FIRST DB PKT TN must be entered.

For 5E9(1) and later, when TERM TYPE is "TEMPLATE", both FIRST DB PKT TN and SECOND DB PKT TN must be entered.

If "IBM" or "VDR" is entered, then the AUTO SESSION field on the corresponding OPEXTDB form must be "Y". The OPEXTDB and OPDBPARM forms correspond if the entry in DB NAME on the OPEXTDB form matches the the entry in DB NAME on this form.

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```
                    5ESS Switch                _
opdbparm             OFFICE DATA ADMINISTRATION
(5434)          OSPS OPERATOR DATABASE PARAMETERS

* 1. DB NUMBER          04              13. RESTART COUNT  3
# 2. DB NAME           NSC1
# 3. DB PKT TN         2246006
# 4. CUGPX             34
  5. FIRST SEARCH STRING   login:
  6. SECOND SEARCH STRING  password:
  7. SEND WINDOW SIZE      0
  8. SEND PACKET SIZE      0000
  9. RECEIVE WINDOW SIZE   0
 10. RECEIVE PACKET SIZE   0000
 11. RESTART TIMER         3
 12. DATA TIMER            25
```

Figure 1 SAMPLE OPDBPARM FORM 5E6 AND 5E7 SOFTWARE RELEASES

```
                    5ESS Switch                _
opdbparm             OFFICE DATA ADMINISTRATION
(5434)          OSPS OPERATOR DATABASE PARAMETERS

 *1. DB NUMBER          04              13. DATA TIMER     25
 #2. DB NAME           NSC1              14. RESTART COUNT  3
 #3. FIRST DB PKT TN    2246006             15. TERM TYPE      TEMPLATE
  4. SECOND DB PKT TN   2246007
 #5. CUGPX             34
  6. FIRST SEARCH STRING   login:
  7. SECOND SEARCH STRING  password:
  8. SEND WINDOW SIZE      0
  9. SEND PACKET SIZE      0000
 10. RECEIVE WINDOW SIZE   0
 11. RECEIVE PACKET SIZE   0000
 12. RESTART TIMER         3
```

Figure 2 SAMPLE OPDBPARM FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4AJ: 5435 RECORD
EXTERNAL DATA BASE ACCESS FORM - OPEXTDB

1. GENERAL

The 5435 Record is available with 5E4(2) and later Software Releases.

This record assigns each SERVING TEAM within an OSPS (Operator Services Position System) OSC (Operator Service Center) access to one or more external data bases. Each SERVING TEAM may have a primary data base session, a secondary data base session, and up to fifteen data base accesses.

The OPEXTDB form also defines login and password values, whether automatic login should be attempted and whether the data calls should be charged to the external data base DSL (Digital Subscriber Line) or to the operator VDT (Video Display Terminal) DSL.

When an OPEXTDB form is submitted, the OSPS TA field of the OSPSOPT form (5424-1/2/3/3/5 Record) must be set to Y.

1.1 Recent Change View

The corresponding Recent Change for this form is 27.31

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Description: Enter the base and control group number and the office name on each record.

2.2 * OSC NUMBER

Description: Enter the number of the operator service center.

Required Field.
Valid Entries: 1 - 32

Data Rules:

Every OSC NUMBER entry must appear in the OFFICE NUMBER field of an OPARM form (5400-1/2 Record).

2.3 * SERVING TEAM

Description: Enter the SERVING TEAM number that will service this OSPS call type.

A SERVING TEAM of 0 should be used when the operator is using the session for training purposes. When the operator logs into the switch for processing transactions, SERVING TEAM values 1 to 128 should be used.

Required Field.
Valid Entries: 0 - 128

Data Rules:

An entry in this field must be defined in the SERVING TEAM field on a STINFO form (5402 Record). If the SERVING TEAM is 0, no entry is required on the STINFO form.

For 5E6 and later, it is not necessary to submit an OPEXTDB form (5435 Record) for serving team 0. ODA will automatically assign terminal data base keys to a maximum of 15 external data bases for serving

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team 0 in each OSC.

If SERVING TEAM is 0, then OSPS LOGIN must be "N".

2.4 * TERM DB KEY

Description: Enter the data base key number on the operator's terminal, TERM DB KEY, that is associated with a specific serving team and service identification number.

Required Field.

Valid TERM DB KEY Entries

Entry	Definition
MAINDB	Main data base key
DB1	Soft key 1 of the operator's terminal
DB2	Soft key 2 of the operator's terminal
DB3	Soft key 3 of the operator's terminal
DB4	Soft key 4 of the operator's terminal
DB5	Soft key 5 of the operator's terminal
DB6	Soft key 6 of the operator's terminal
DB7	Soft key 7 of the operator's terminal
DB8	Soft key 8 of the operator's terminal
DB9	Soft key 9 of the operator's terminal
DB10	Soft key 10 of the operator's terminal
DB11	Soft key 11 of the operator's terminal
DB12	Soft key 12 of the operator's terminal
DB13	Soft key 13 of the operator's terminal
DB14	Soft key 14 of the operator's terminal

Data Rules:

Each TERM DB KEY entry on an OPEISDB form (5462-2 Record) must correspond with one or more OPEXTDB forms, where SERVING TEAM and TERM DB KEY entries on OPEISDB and OPEXTB forms match. Also, DB NAME entries must be the same on all OPEXTDB forms associated with the same OPEISDB form.

2.5 # DB NAME

Description: Enter a 1 - 15 character the database name associated with the database number, DB NUMBER, on the OPDBPARM form (5434 Record).
Valid Entries: 1 - 15 characters

Data Rules:

For each DB NAME on this form, a corresponding DB NAME must be defined on the OPDBPARM form (5434 Record).

2.6 LOGIN ID

Description: Enter the OSPS user login identification.
Valid Entries: 1 - 6 characters

2.7 LOGIN DELIM

Description: Enter the login delimiter. This is the terminating character of the login string.

Valid LOGIN DELIM Entries

Entry	Definition
CR	Carriage return.
NL	New line.

2.8 PASSWORD

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Description: Enter an OSPS password for access to the external data base.
Valid Entries: 1 - 8 character

Data Rules:

If AUTO LOGIN is "N", then neither PASSWORD nor LOGIN ID can be entered.

2.9 PASSWORD DELIM

Description: Enter the password delimiter. This is the terminating character of the password string.

Valid PASSWORD DELIM Entries

Entry	Definition
CR	Carriage return.
NL	New line.

2.10 AUTO LOGIN

Description: Will the operator position be automatically logged-in once an operator session is active? This feature is intended to reduce operator work time by performing redundant noncall-related steps that are required to access a remote (external) computer system.
Default: Y
Valid Entries: Y, N

Data Rules:

If "N" is entered in the AUTO LOGIN field, then an entry is not allowed in the LOGIN ID and PASSWORD fields.

2.11 AUTO SESSION

Description: Will the operator session be automatically established with the external data base? A session is the period of time during which a connection exists between the VDT and an external system (when information can be exchanged).
Default: Y
Valid Entries: Y, N

2.12 OSPS LOGIN

Description: Will the individual operator OSPS login identification be used as the LOGIN ID?

Required Field.
Valid Entries: Y, N

Data Rules:

If "Y" is entered in the OSPS LOGIN field, then an entry is not allowed in the LOGIN ID field.

2.13 REVERSE CHARGE

Description: Are data calls charged to the external data base DSL? Enter "N" if data calls are charged to the operator VDT DSL.

Required Field.
Valid Entries: Y, N

2.14 TERM TYPE

Description: For 5E6 and 5E7 Software Releases, this field defines the type of emulation used by the

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terminal when interfacing with the data base. For 5E8 and later, this field was moved to the OPDBPARM form (5434 Record).

Software Release: 5E6 and 5E7
Required Field.
Default: BASIC
Valid Entries:

Valid TERM TYPE Entries

Entry	Definition
T	Specific terminal emulation specified by OA.
B	Basic terminal emulation prior to 5E6 Software Release.

```
                    5ESS Switch
opextdb             OFFICE DATA ADMINISTRATION
(5435)              OSPS EXTERNAL DATABASE ACCESS

* 1. OSC NUMBER     03            13. TERM TYPE  TEMPLATE
* 2. SERVING TEAM   012
* 3. TERM DB KEY    DB2
# 4. DB NAME        NSC1
  5. LOGIN ID       mlh
  6. LOGIN DELIM    NL
  7. PASSWORD       mary90
  8. PASSWORD DELIM NL
  9. AUTO LOGIN     Y
 10. AUTO SESSION   Y
#11. OSPS LOGIN     N
#12. REVERSE CHARGE Y
```

Figure 1 SAMPLE OPEXTDB FORM 5E6 AND 5E7 SOFTWARE RELEASES

```
                    5ESS Switch
opextdb             OFFICE DATA ADMINISTRATION
(5435)              OSPS EXTERNAL DATABASE ACCESS

* 1. OSC NUMBER     03
* 2. SERVING TEAM   012
* 3. TERM DB KEY    DB2
# 4. DB NAME        NSC1
  5. LOGIN ID       mlh
  6. LOGIN DELIM    NL
  7. PASSWORD       mary92
  8. PASSWORD DELIM NL
  9. AUTO LOGIN     Y
 10. AUTO SESSION   Y
#11. OSPS LOGIN     N
#12. REVERSE CHARGE Y
```

Figure 2 SAMPLE OPEXTDB FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4AK: 5436 RECORD TERMINATING CODE SCREENING TEXT AND RESTRICTIONS FORM - TCSTEXT

1. GENERAL

The 5436 Record is available with 5E4(2) and later Software Releases. For automated and operator-assisted credit card calls, the screen code is used to find the corresponding entry in the 5436 Record. If no match is found, then the call is not TCS (Terminating Code Screening) restricted. If there is a match, the originating station class fields for TCS restrictions are checked.

This record contains the text and restrictions associated with TCS as it appears on the VDT (Video Display Terminal).

TCS restricts calling card and collect calls to designated domestic and international destinations. It also allows the display of user-defined text to an operator for designated destinations.

1.1 Office Options

If a TCSTEXT form is defined, then an OSPSOPT form (5424 Record) must exist with OSPS TA set to "Y".

1.2 Recent Change

The corresponding Recent Change View for this form is 27.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SCRN CODE

Description: Enter the terminating screen code from the TCSNPA form (5437 Record). An entry of 0 means not screened.
Valid Entries:
- 5E4(2) through 5E6: 0 - 31
- 5E7 and later: 0 - 127

Data Rules:

If 0 is entered in the SCRN CODE field, then:

- RESTRICT, DENY ALL, DENY STATION, PUBLIC, HOTEL, and OTHER fields under both the RESTRICT CLG CRD and DENY THIRD NBR heading must all be set to "N";
- the TEXT 1 field must be set to "NOT SCREENED"; and
- the TEXT 2 and TEXT 3 fields must not be entered.

DENY COLLECT

This heading was changed to COLLECT for 5E8 and later. See COLLECT for usage information.

COLLECT

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The following fields (Section 2.3 - Section 2.7) determine screening when a collect call is made to a forward number. (This heading was called DENY COLLECT for 5E4(2) through 5E7.)

2.3 ALL

Description: The name of this field was changed to DENY ALL for 5E8 and later. See DENY ALL for usage information.

2.4 RESTRICT

Description: Should non-blocked collect calls be restricted to manual operator outpulsing?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

2.5 STATION ONLY

Description: The name of this field was changed to DENY STATION for 5E8 and later. See DENY STATION for usage information.

2.6 DENY STATION

Description: Should only station collect calls to a forward number be denied? (This field was called STATION ONLY for 5E4(2) through 5E7.)

Required Field.
Default: N
Valid Entries: Y, N

2.7 DENY ALL

Description: Should all collect calls (station and person) to a forward number be denied? (This field was called ALL for 5E4(2) through 5E7.)

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DENY ALL is "Y", then STATION ONLY is a "don't care" situation.

For 5E8 and later, A SCRN CODE of 0 means not screened. All restriction must be set to "N".

RESTRICT CLG CRD

The following fields (Section 2.8 - Section 2.10) determine screening when a credit card call is made to a forward number.

2.8 PUBLIC

Description: Should calling card calls from public phones be restricted from manual outpulsing?

Required Field.
Default: N

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Valid Entries: Y, N

2.9 HOTEL

Description: Should calling card calls from hotels be restricted from manual outpulsing?

Required Field.
Default: N
Valid Entries: Y, N

2.10 OTHER

Description: Should calling card calls from any non-public/non-hotel phones be restricted from manual outpulsing?

Required Field.
Default: N
Valid Entries: Y, N

DENY THIRD NBR (TH)

The following fields (Section 2.11 - Section 2.13) determine screening for billing to a third number.

2.11 PUBLIC

Description: Should third number billing from public phones be denied?

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.12 HOTEL

Description: Should third number billing from hotels be denied?

Software Release 5E8 and later.
Required Field.
Default Value: N
Valid Entries: Y, N

2.13 OTHER

Description: Should third number billing from any non-public/non-hotel phones be denied?

Software Release 5E8 and later.
Required Field.
Default Value: N
Valid Entries: Y, N

2.14 TEXT

Description: Enter the message to be displayed at the VDT. Three lines of text may be added. Each line is an individual field, named TEXT 1, TEXT 2 and TEXT 3, respectively. Each line can have a maxi- mum of 49 characters. The only character which may not be entered is the double quote (").
Valid Entries: 0 - 49 characters

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```
tcstext                    5ESS Switch                _
(5436)                OFFICE DATA ADMINISTRATION
          OSPS TERMINATING CODE SCREENING TEXT AND RESTRICTIONS

*1. SCRN CODE    12

DENY COLLECT:                    RESTRICT CLG CRD FROM:
#2. ALL         N              #4. PUBLIC N
#3. STATION ONLY N              #5. HOTEL  N
                          #6. OTHER  N

 7. TEXT 1 NOT SCREENED
 8. TEXT 2 _____________________________________________________
 9. TEXT 3 _____________________________________________________
```

Figure 1 SAMPLE TCSTEXT FORM 5E4(2) THROUGH 5E7 SOFTWARE RELEASES

```
tcstext                    5ESS Switch                _
(5436)                OFFICE DATA ADMINISTRATION
          OSPS TERMINATING CODE SCREENING TEXT AND RESTRICTIONS

*1. SCRN CODE    01

     COLLECT          RESTRICT CLG CRD       DENY THIRD NBR (TH)
 2. RESTRICT     N        5. PUBLIC N            8. PUBLIC N
 3. DENY STATION N        6. HOTEL  N            9. HOTEL  N
 4. DENY ALL     Y        7. OTHER  N           10. OTHER  N

11. TEXT1 NO COLLECT CALLS
12. TEXT2 _____________________________________________________
13. TEXT3 _____________________________________________________
```

Figure 2 SAMPLE TCSTEXT FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4AL: 5437 RECORD
TERMINATING CODE SCREENING FOR NPA-NXX FORM - TCSNPA

1. GENERAL

The 5437 Record is available with 5E4(2) and later Software Releases.

This record contains the terminating screening codes for NPA-NXXs.

If a TCSNPA form is submitted where the NXX field is not entered and the SCRN CODE field is non-zero, then every NXX within the NPA will apply the indicated screening. If a TCSNPA form is submitted with the same NPA and an NXX is entered, that form will be ignored by ODA.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NPA

Description: Enter a 3-digit NPA (Numbering Plan Area) code.
Valid Entries:
- For 5E4(2) - 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

2.3 (*) NXX

Description: Enter a 3-digit Office Code. If this field is not entered, or 000 is entered, the entire NPA will receive the indicated screening.
Valid Entries: 000 - 999

Data Rules:

For 5E7 and later, if NXX is 000, there cannot be another TCSNPA form with the same NPA as entered on this form.

2.4 REORDER

Description: When restrictions apply, will the call be sent to reorder? If an "N" is entered then the call will be routed to an OSPS (Operator Services Position System) operator when restrictions apply.

Required Field.
Default: N
Valid Entries: Y, N

2.5 MECH

Description: Are the calls terminating at the NPA and NXX eligible for MECH (More Efficient Call Handling)?

Software Release: For 5E6 and later

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Required Field.
Default: Y
Valid Entries: Y, N

ORIGINATING NPA LIST

The following fields (Section 2.6 - Section 2.7) assign the originating NPAs to a terminating screen code.

2.6 SCRN CODE

Description: Enter the terminating screen code. An entry of 0 means not screened.

Required Field.
Valid Entries:
- For 5E4(2) through 5E6: 0 - 31
- For 5E7 and later: 0 - 127

Data Rules:

For 5E7 and later, at least one SCRN CODE must be entered if N1 is entered, and a SCRN CODE may appear only once in this ORIGINATING NPA LIST.

The entry must be defined in the SCRN CODE field on the TCSTEXT form (5436 Record).

2.7 N1 - N16

Description: Enter the originating NPA of the back number. If "ALL" is entered for any originating NPA on this form, no other originating NPA entry is allowed. N1 through N16 must be entered left-to-right with no blanks between the entries. For example, if N3 is entered, then N1 and N2 must be entered.

Software Release: 5E7 and later
Valid Entries: Three-digit NPA, where the first digit must be 2-9 and the middle digit 0-1

Data Rules:

N1 must be entered for each SCRN CODE entered. N1 - N16 may appear only once in this ORIGINATING NPA LIST. The total number of N1 - N16 entries for this ORIGINATING NPA LIST may not exceed 16, i.e. all elements entered in the list must be unique.

```
tcsnpa              5ESS OFFICE DATA ADMINISTRATION  _
(5437)                TERMINATING CODE SCREENING
                      FOR NPA-NXX FORM

  *1. NPA      312
(*)2. NXX      510
  #3. SCRN CODE 17
  #4. REORDER   N
```

Figure 1 SAMPLE TCSNPA FORM 5E4(2) AND 5E5 SOFTWARE RELEASES

```
                        5ESS Switch                  _
tcsnpa                OFFICE DATA ADMINISTRATION
(5437)          OSPS TERMINATING CODE SCREENING FOR NPA-NXX
```

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```
 * 1. NPA        708
(*)2. NXX        510
 # 3. SCRN CODE  17
   4. REORDER    N
   5. MECH       Y
```

Figure 2 SAMPLE TCSNPA FORM 5E6 SOFTWARE RELEASE

```
SCREEN 1 OF 2                5ESS Switch
tcsnpa                OFFICE DATA ADMINISTRATION
(5437)         OSPS TERMINATING CODE SCREENING FOR NPA-NXX

  *1. NPA  708                    3. REORDER Y
(*)2. NXX  224                    4. MECH    Y

                    5. ORIGINATING NPA LIST

ROW SCRN CODE  N1  N2  N3  N4  N5  N6  N7  N8  N9  N10 N11 N12 N13 N14 N15 N16
 1   005     312 815 219 ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 2   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 3   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 4   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 5   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 6   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
```

```
SCREEN 2 OF 2                5ESS Switch
tcsnpa                OFFICE DATA ADMINISTRATION
(5437)         OSPS TERMINATING CODE SCREENING FOR NPA-NXX

                    5. ORIGINATING NPA LIST

ROW SCRN CODE  N1  N2  N3  N4  N5  N6  N7  N8  N9 N10 N11 N12 N13  N14 N15 N16
 7   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 8   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
 9   ___     ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
```

Figure 3 SAMPLE TCSNPA FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 4AM: 5438 RECORD TERMINATING CODE SCREENING AND PCC FOR COUNTRY CODE FORM - TCSCC

1. GENERAL

The 5438 Record is available with 5E4(2) and later Software Releases.

This record contains the terminating screen codes for Country Codes, and is used for the International feature and the TCS (Terminating Code Screening) feature.

A PAIRED COUNTRY CODE is assigned for each COUNTRY CODE on this form. The remaining fields are related to TCS screening restrictions on the given international Customer Administration Centers.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * COUNTRY CODE

Description: Enter the Country Code portion of a forward number.
Valid Entries: 1 - 999

Data Rules:

The COUNTRY CODE field should be populated with a COUNTRY ACCESS CODE entered on the IDDD form (5307 Record).

2.3 # PAIRED COUNTRY CODE

Description: Enter the paired Country Code portion of the forward number. This is a padded 3-digit Country Code to be outpulsed on completed IDDD (International Direct Distance Dialing) calls. In order to complete the outpulsing of an international call, the COUNTRY CODE must be mapped to a PAIRED COUNTRY CODE.

Required Field.
Valid Entries: 1 - 999

2.4 REORDER

Description: When card restrictions apply, will the call be sent to reorder? If an "N" is entered then the call will be routed to an OSPS (Operator Services Position System) operator when restrictions apply.

Required Field.
Default: N
Valid Entries: Y, N

2.5 MECH

Description: Are the calls to this Country Code eligible for MECH (More Efficient Call Handling)?

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Software Release: For 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

ORIGINATING NPA LIST

The following fields (Section 2.6 - Section 2.7) assign the orginating NPAs to a terminating screen code.

2.6 SCRN CODE

Description: Enter the terminating screen code. An entry of 0 means not screened.

Required Field.
Valid Entries:
- 5E4(2) through 5E6: 0 - 31
- 5E7 and later: 0 - 127

Data Rules:

For 5E7 and later, if one member of the ORIGINATING NPA LIST is entered, then SCRN CODE must be entered.

The entry must be defined in the SCRN CODE field on a TCSTEXT form (5436 Record).

2.7 N1 - N16

Description: Enter the originating NPA of the back number. If "ALL" is entered for any originating NPA on this form, no other originating NPA entry is allowed. When retrofitting from 5E6 to 5E7, the originating NPA, NP1 or row1 is set to "ALL". NP1 through NP16 must be entered left-to-right with no blanks between the entries. For example, if NP3 is entered, then NP1 and NP2 must be entered.

Software Release: 5E7 and later
Valid Entries: ALL, 100 - 999

Data Rules:

If SCRN CODE is entered, then one NPA or "ALL" must be entered.

```
tcscc                    5ESS Switch                    _
(5438)                OFFICE DATA ADMINISTRATION
          OSPS TERMINATING CODE SCREENING & PCC FOR COUNTRY CODE

*1. COUNTRY CODE       616
#2. PAIRED COUNTRY CODE 618
#3. SCRN CODE          27
#4. REORDER            N
```

Figure 1 SAMPLE TCSCC FORM 5E4(2) AND 5E5 SOFTWARE RELEASES

```
                         5ESS Switch                    _
tcscc                 OFFICE DATA ADMINISTRATION
(5438)      OSPS TERMINATING CODE SCREENING & PCC FOR COUNTRY CODE
```

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*1. COUNTRY CODE 616
#2. PAIRED COUNTRY CODE 618
#3. SCRN CODE 27
4. REORDER N
5. MECH Y

Figure 2 SAMPLE TCSCC FORM 5E6 SOFTWARE RELEASE

SCREEN 1 OF 2 5ESS Switch
tcscc OFFICE DATA ADMINISTRATION
(5438) OSPS TERMINATING CODE SCREENING & PCC FOR COUNTRY CODE

*1. COUNTRY CODE 41 3. REORDER Y
#2. PAIRED COUNTRY CODE 041 4. MECH Y

5. ORIGINATING NPA LIST

ROW	SCRN CODE	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14	N15	N16
1	005	312	708	___	___	___	___	___	___	___	___	___	___	___	___	___	___
2	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
3	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
4	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
5	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
6	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___

SCREEN 2 OF 2 5ESS Switch
tcscc OFFICE DATA ADMINISTRATION
(5438) OSPS TERMINATING CODE SCREENING & PCC FOR COUNTRY CODE

5. ORIGINATING NPA LIST

ROW	SCRN CODE	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14	N15	N16
7	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
8	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
9	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___

Figure 3 SAMPLE TCSCC FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 4AN: 5439 RECORD
OPERATOR SPECIAL DIALED CODES FORM - OSDC

1. GENERAL

The 5439 Record is available with 5E4(2) and later Software Releases.

This record contains the valid operator special-dialed codes used for residual calls. Residual calls are specialized operator calls handled by the SOST (Special Operator Service Traffic) operators.

When a customer places a residual call, the OSPS (Operator Services Position System) operator obtains the type of service information from the customer, enters an OSDC (Operator Special Dialed Code) to reach an SOST operator, informs the SOST of the call details, and then releases the call.

If an OSDC form is defined, then the OSPSOPT form (5424 Record) must be submitted with OSPS TA set to "Y".

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * OPER SPEC DIAL CODE

Description: Enter a 4- or 5-digit operator special-dialed code.
Valid Entries: 1100 - 1199, 11000 - 11999.

Data Rules:

There are a maximum of 10 codes permitted per 5ESS Switch. All the codes must be the same number of digits.

---

osdc 5ESS Switch
(5439) OFFICE DATA ADMINISTRATION
OSPS OPERATOR SPECIAL DIALED CODES

*1. OPER SPEC DIAL CODE 1104

Figure 1 SAMPLE OSDC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AO: 5440 RECORD
EXCEPTION AREAS FORM - EXMAP

1. GENERAL

The 5440 Record is available with 5E4(2) and later Software Releases.

This record defines the originating and terminating exception area indices for an exception call. The use of this form assumes that the 5ESS Switch has ISP (Intermediate Switching Point) trunks and, probably, OSPS (Operator Services Position System). This form should not be entered unless at least one TKGRP form (5202 Record) exists with a TRKCLS field entry of "FIOPR".

Exception calls are calls from a specific NPA-NXX served by the 5ESS Switch to a specific NPA-NXX in another LATA (Local Access and Transport Area). Although the call crosses a LATA boundary, the call is to be treated as an intraLATA call.

Exception area mapping is only done if an OSPSOPT form (5424 Record) has been submitted with the EXCEPT DETRM field set to "Y".

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ORIG EAI

Description: Enter the originating exception area index.

Required Field.
Valid Entries: 1 - 250

Data Rules:

The ORIG EAI entry must not equal the TERM EAI entry.

Entries in this field must be defined in the EAI field of an NPAMAP form (5414 Record).

2.3 * TERM EAI

Description: Enter the terminating exception area index.

Required Field.
Valid Entries: 1 - 250

Data Rules:

The TERM EAI entry must not equal the ORIG EAI entry.

Entries in this field must be defined in the EAI field of an NPAMAP form (5414 Record).

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(5440) OFFICE DATA ADMINISTRATION
OSPS/ISP EXCEPTION AREAS

*1. ORIG EAI ___
*2. TERM EAI ___

Figure 1 SAMPLE EXMAP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AP: 5441-1/2/3 RECORD
BUSY LINE VERIFICATION NPA FORM - BLVNPA

1. GENERAL

The 5441 Record is available with 5E4(2) and later Software Releases.

This Record contains information regarding NPA-NXXs that can be verified using the BLV (Busy Line Verify) feature. BLV permits an operator to determine whether a telephone line is actually busy or not. The BLVNPA form contains the NPAs (Numbering Plan Areas) that are verifiable from the OSPS (Operator Services Position System) office, and a status for each NXX (Office Code) within the NPA (Numbering Plan Area). It also contains a routing code used when BLV is performed by the operator.

If a BLVNPA form is submitted, then an OSPSOPT form (5424 Record) must be submitted with the OSPS TA field set to "Y".

No more than 16 BLVNPA forms may be submitted for a 5ESS Switch.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NPA

Description: Enter an NPA (Numbering Plan Area).

Required Field.
Valid Entries:
- For 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

2.3 # ROUTE CODE

Description: Enter the routing code for Busy Line Verification. This code will replace the NPA of the called number when the operator attempts a BLV (for digit analysis). The code is used to properly route the call out of the OSPS office.

Required Field.
Valid Entries: 0 - 199

2.4 LIST OF NXXs (200-399)

Description: Enter the list of NXX lines; this field represents a BLV screen bit map.

Valid LIST OF NXXs Entries

Entry	Definition
0 (or blank)	Verifiable; theentire NXX can be verifiedby this OSPS.
1	Exclusions; there are linenumbers in the NXX that are excludedfrom verification.
2	Nonverifiable; the entire NXXcannot be verified by this OSPS.The operator can go to aninward operator to performthe verification.

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Data Rules:

Entries of 1 in the LIST OF NXXs field require that a BLVEX form (5442 Record) be defined for this NPA/NXX combination.

SCREEN 1 OF 3 5ESS Switch
blvnpa OFFICE DATA ADMINISTRATION
(5441) OSPS BUSY LINE VERIFICATION NPA

*1. NPA 312
#2. ROUTE CODE 016

3. LIST OF NXXs (200-399)

	01234 56789	01234 56789	01234 56789	01234 56789
1.	200 _____ _____	6. 250 _1___ _____	11. 300 _____ _____	16. 350 _____ _____
2.	210 _____ _____	7. 260 _____ _____	12. 310 _____ _____	17. 360 _____ _____
3.	220 _____ ___2_	8. 270 ____1 _____	13. 320 _____ _____	18. 370 _____ _____
4.	230 _____ _____	9. 280 _____ _____	14. 330 _____ _____	19. 380 _____ _____
5.	240 _2___ _____	10. 290 _____ _____	15. 340 _____ _____	20. 390 _____ _____

SCREEN 2 OF 3 5ESS Switch
blvnpa OFFICE DATA ADMINISTRATION
(5441) OSPS BUSY LINE VERIFICATION NPA

3. LIST OF NXXs (400-799)

	01234 56789	01234 56789	01234 56789	01234 56789
21.	400 _____ _____	31. 500 _____ _____	41. 600 _____ _____	51. 700 _____ _____
22.	410 _____ _____	32. 510 _____ _____	42. 610 _____ _____	52. 710 _____ _____
23.	420 _____ _____	33. 520 _____ _____	43. 620 _____ _____	53. 720 _____ _____
24.	430 _____ _____	34. 530 _____ _____	44. 630 _____ _____	54. 730 _____ _____
25.	440 _____ _____	35. 540 _____ _____	45. 640 _____ _____	55. 740 _____ _____
26.	450 _____ _____	36. 550 _____ _____	46. 650 _____ _____	56. 750 _____ _____
27.	460 _____ _____	37. 560 _____ _____	47. 660 _____ _____	57. 760 _____ _____
28.	470 _____ _____	38. 570 _____ _____	48. 670 _____ _____	58. 770 _____ _____
29.	480 _____ _____	39. 580 _____ _____	49. 680 _____ _____	59. 780 _____ _____
30.	490 _____ _____	40. 590 _____ _____	50. 690 _____ _____	60. 790 _____ _____

SCREEN 3 OF 3 5ESS Switch _
blvnpa OFFICE DATA ADMINISTRATION
(5441) OSPS BUSY LINE VERIFICATION NPA

3. LIST OF NXXs (800-999)

	01234 56789	01234 56789	01234 56789	01234 56789
61.	800 _____ _____	66. 850 _____ _____	71. 900 _____ _____	76. 950 _____ _____
62.	810 _____ _____	67. 860 _____ _____	72. 910 _____ _____	77. 960 _____ _____
63.	820 _____ _____	68. 870 _____ _____	73. 920 _____ _____	78. 970 _____ _____
64.	830 _____ _____	69. 880 _____ _____	74. 930 _____ _____	79. 980 _____ _____
65.	840 _____ _____	70. 890 _____ _____	75. 940 _____ _____	80. 990 _____ _____

Figure 1 SAMPLE BLVNPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AQ: 5442 RECORD
BUSY LINE VERIFICATION LINE EXCLUSIONS FORM - BLVEX

1. GENERAL

The 5442 Record is available with 5E4(2) and later Software Releases.

This record contains information regarding the lines excluded from verification for an NPA-NXX code.

A maximum of 96 BLVEX form entries are allowed for a specific combination of NPA and NXX.

If a BLVEX form is submitted, then the OSPSOPT form (5424 Record) must be submitted with OSPS TA set to "Y".

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NPA

Description: Enter an NPA (Numbering Plan Area).

Required Field.
Valid Entries:
- For 5E4(2) - 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

Data Rules:

For the NPA entered on this form, there must be a BLVNPA form (5441 Record) keyed by the NPA.

For 5E11 and later, ten-digit numbers which are defined by NPA, NXX, BEG LINE, and optionally, END LINE on the BLVEX form, must not be duplicated or overlapped by ten-digit numbers on another BLVEX form.

2.3 * NXX

Description: Enter an Office Code.

Required Field.
Valid Entries: 200 - 999

Data Rules:

For the NXX entered on this form, the BLVNPA form, keyed by the NPA on this form, must have a 1 entered for this NXX value in the LIST OF NXXs.

2.4 * BEG LINE

Description: Enter the station number to be excluded from verification. This field may be used to specify the first number for a range of numbers to be excluded. If this field is used to specify such a range, the

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END LINE field will contain the last number in the range to be screened.

Required Field.
Valid Entries: 0000 - 9999

2.5 (*) END LINE

Description: Enter the last number in a range of numbers to be screened. This field is optional.
Valid Entries: 0001 - 9999

Data Rules:

If an entry is made in this field, it must be greater than the entry in the BEG LINE field.

---

blvex 5ESS Switch _
(5442) OFFICE DATA ADMINISTRATION
OSPS BUSY LINE VERIFICATION LINE EXCLUSIONS

*1. NPA 312
*2. NXX 420
*3. BEG LINE 4647
(*)4. END LINE ____

Figure 1 SAMPLE BLVEX FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AR: 5443 RECORD
TGN TO LEC INDEX FORM - TGNLEC

1. GENERAL

The 5443 Record is available with 5E4(2) and later Software Releases.

This record provides information for mapping a TGN (Trunk Group Number) to the appropriate text to be displayed to an operator when a call is routed to an OSPS (Operator Services Position System) position.

In other words, the record is used to provide VDT (Video Display Terminal) text specific to an incoming LEC (Local Exchange Carrier) trunk group. This text can be used to inform the OSPS operator that the call originated from an independent LEC company.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the base and control group number and the office name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

2.3 # LEC INDEX

Description: Enter the index into the LEC message table.

Required Field.
Valid Entries: 0 - 1999

Data Rules:

Entries in this field must exist as entries in the TEXT LINES field on the LECTEXT form (5444 Record).

```
tgnlec                  5ESS Switch          _
(5443)              OFFICE DATA ADMINISTRATION
                  OSPS TGN TO LEC INDEX

*1. TGN      ____
#2. LEC INDEX ____
```

Figure 1 SAMPLE TGNLEC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AS: 5444 RECORD
LOCAL EXCHANGE CARRIER TEXT FORM - LECTEXT

1. GENERAL

The 5444 Record is available with 5E4(2) and later Software Releases.

This record provides LEC (Local Exchange Carrier) specific text to be displayed to an operator when a call comes to an OSPS (Operator Services Position System) operator position.

This text can be used to inform the OSPS operator that the call originated from an independent LEC company.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * LEC INDEX

Description: Enter the index into the LEC message table.

Required Field.
Valid Entries: 0 - 1999

2.3 TEXT LINES

Description: Enter the text to be displayed at the VDT (Video Display Terminal). There are 4 lines of data. Each line is an individual field, named TEXT 1, TEXT 2, TEXT 3 and TEXT 4, respectively. Each line can have a maximum of 29 characters. At least one character must be entered in one of the four lines; all characters are allowed, with the exception of a double quote (").
Valid Entries: 29 characters (per line)

---

lectext 5ESS Switch _
(5444) OFFICE DATA ADMINISTRATION
OSPS LOCAL EXCHANGE CARRIER TEXT

*1. LEC INDEX 0455

#2. LEC TEXT LINE 1 _____
3. LEC TEXT LINE 2 _____
4. LEC TEXT LINE 3 _____
5. LEC TEXT LINE 4 _____

Figure 1 SAMPLE LECTEXT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AT: 5446 RECORD
NXX RESTRICTION FOR MEET-ME/ADD-ON
ALLIANCE TELECONFERENCING FORM - ATC

1. GENERAL

The 5446 Record is available with 5E4(2) and later Software Releases. It is used to list NPAs for which some or all NXXs can be restricted from using Meet-me or Add-on ATC (Alliance Teleconferencing). This record is used by OSPS (Operator Services Position System) for access restriction.

Detailed information concerning Alliance Teleconferencing capability is located in Division 2, Section 1O.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.40.

2. FORM ENTRIES

2.1 BASE AND CONTROL, UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NPA

Description: Enter the NPA (Numbering Plan Area) served by this OSPS containing NXXs that are restricted from originating Meet-me or Add-on calls.

Required Field.
Valid Entries:
- For 5E4(2) - 5E8: 200 - 919, middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

2.3 * TYPE

Description: Enter the ATC type.

Required Field.

Valid TYPE Entries

Entry	Definition
A	Add-on ATC
M	Meet-me ATC

2.4 # RESTRICT ALL

Description: Are all of the NXXs restricted? Enter "N" if only some of them are restricted.

Required Field.
Default: N
Valid Entries: Y, N

2.5 LIST OF NXXs

Description: Enter "X" (Yes) for each NXX that is to be restricted from originating Add-on or Meet-Me (depending upon the value in the TYPE field) ATC calls. Leave each NXX field blank (or spaces) that is not restricted.

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If "Y" is entered in the RESTRICT ALL field, there is no need to make any entry in the LIST OF NXXs.
Valid Entries: X (blank or spaces)

SCREEN 1 OF 3 5ESS Switch
atc OFFICE DATA ADMINISTRATION
(5446) OSPS NXX RESTRICTION FOR MEET-ME/ADD-ON ALLIANCE TELECONFERENCING

*1. NPA 312
*2. TYPE ADDON
#3. RESTRICT ALL N

4. LIST OF NXXs (200-399)

	01234 56789		01234 56789		01234 56789		01234 56789
1. 200	_____ _____	6. 250	_____ _____	11. 300	_____ _____	16. 350	_____ _____
2. 210	_____ _____	7. 260	_____ _X___	12. 310	_____ _____	17. 360	_____ _____
3. 220	_____ _____	8. 270	_____ _____	13. 320	_____ _____	18. 370	_____ _____
4. 230	_____ _____	9. 280	_____ _____	14. 330	_____ _____	19. 380	_____ _____
5. 240	_____ _____	10. 290	_____ _____	15. 340	_____ _____	20. 390	_____ _____

SCREEN 2 OF 3 5ESS Switch
atc OFFICE DATA ADMINISTRATION
(5446) OSPS NXX RESTRICTION FOR MEET-ME/ADD-ON ALLIANCE TELECONFERENCING

4. LIST OF NXXs (400-799)

	01234 56789		01234 56789		01234 56789		01234 56789
21. 400	_____ _____	31. 500	_____ _____	41. 600	_____ _____	51. 700	_____ _____
22. 410	_____ _____	32. 510	_____ _____	42. 610	_____ _____	52. 710	_____ _____
23. 420	_____ ___X_	33. 520	_____ _____	43. 620	_____ _____	53. 720	_____ _____
24. 430	_____ _____	34. 530	_____ _____	44. 630	_____ _____	54. 730	_____ _____
25. 440	_____ _____	35. 540	_____ _____	45. 640	_____ _____	55. 740	_____ _____
26. 450	_____ _____	36. 550	_____ _____	46. 650	_____ _____	56. 750	_____ _____
27. 460	_____ _____	37. 560	_____ _____	47. 660	_____ XXXX_	57. 760	_____ _____
28. 470	_____ _____	38. 570	_____ _____	48. 670	_____ _____	58. 770	_____ _____
29. 480	_____ _____	39. 580	_____ _____	49. 680	_____ _____	59. 780	_____ _____
30. 490	_____ _____	40. 590	_____ _____	50. 690	_____ _____	60. 790	_____ _____

SCREEN 3 OF 3 5ESS Switch _
atc OFFICE DATA ADMINISTRATION
(5446) OSPS NXX RESTRICTION FOR MEET-ME/ADD-ON ALLIANCE TELECONFERENCING

4. LIST OF NXXs (800-999)

	01234 56789		01234 56789		01234 56789		01234 56789
61. 800	_____ _____	66. 850	_____ _____	71. 900	_____ _____	76. 950	_____ _____
62. 810	_____ _____	67. 860	_____ _____	72. 910	_____ _____	77. 960	_____ _____
63. 820	_____ _____	68. 870	_____ _____	73. 920	_____ _____	78. 970	_____ _____
64. 830	_____ _____	69. 880	_____ _____	74. 930	_____ _____	79. 980	_____ _____
65. 840	_____ _____	70. 890	_____ _____	75. 940	_____ _____	80. 990	_____ _____

Figure 1 SAMPLE ATC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AV: 5447-1/2/3 RECORD
OSPS DSL PACKET SWITCHING ASSIGNMENTS FORM - AMLBDSL

1. GENERAL

The 5447 Record is available with 5E4(2) and later Software Releases, and is used to collect data for OSPS/CACD (Centrex Automatic Call Distribution) packet switching DSL (Digital Subscriber Lines). The AMLB (Automated Multi-Leaf Bulletin) capability allows a VDT (Video Display Terminal) or CST (Combined Services Terminal) to make a packet-switched call to an external data base. In order to do this, the external data base is connected to a DSL (Digital Subscriber Line). The DSL needs to have its features and characteristics set appropriately to provide maximum efficiency for data transfer. This record is used to collect data for OSPS (Operator Services Position System) external data base DSLs.

AMLB is an on-line query system that contains frequently used information which may be used by an operator to complete a customer's call. OSPS uses the AMLB capability to access multi-leaf bulletin data. See Division 2, Section 3H for a more detailed discussion of the AMLB capability. See Division 2, Section 3G for additional information on MDBA (Multiple Data Base Access), which is an extension of AMLB.

1.1 B-channel Time Slots

The choice of a B-channel time slot must be unique within the 5ESS Switch. The combination of the LCEN (first four digits), PIDB, and TS fields are used to determine the uniqueness of a B-channel time slot. Figure 1 illustrates the forms and corresponding fields where the combination of the three fields may not be duplicated. Table references to the LCEN field refer only to the first four digits. The AMLBDSL form is included because the combination of the three fields may not be duplicated on different occurrences of an AMLBDSL form.

1.2 Recent Change View

The corresponding recent change view for this form is 21.34

2. FORM ENTRIES - 5447-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the office name on each record.

2.2 * LCEN

Description: The LCEN field lists the physical components that describe the AMLB DSL. Enter a valid 8-digit RISLU (Remote Integrated Service Line Unit) LCEN (Line Card Equipment Number).

Required Field.
Valid Entries: An 8-digit LCEN in the following format:

LINE CARD EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
(Remote) Integrated Services Line Unit	(R)ISLU	X	0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

Data Rules:

Duplicate LCENs must not be assigned.

LCENs defined in this field must be even (divisible by 2).

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Within any given DSL group, DSLs of any LGC (Line Group Controller) must be assigned members from one and only one of the member number groupings 0-3, 6-9 or 12-15.

One EQISLU or EQRISLU form is required for all AMLBDSL forms with the same SM and ISLU entries in the LCEN field. All AMLBDSL forms require corresponding OSPSDSL forms with matching LCENs.

The SWITCHING MODULE field on the EQPSU form matches the SM portion of the LCEN field on the OSPSDSL and AMLBDSL forms. The ISCN field is located on the OSPSDSL form, and the ISCN field is located on an AMLBDSL form.

An SLG is a set of four ISLU LCs (Line Cards) assigned to the same LGC. The valid sets of LCs are as follows:

0, 2, 4, 6

8, 10, 12, 14

16, 18, 20, 22

24, 26, 28, 30

It is recommended that OSPS DSLs equipped in a given SLG (Sub-Line Group) belong to the same DSL group, when a Protocol Handler Type of PH3 is entered on the EQPSU form. (OSPS DSLs are assigned on an AMLBDSL and OSPSDSL forms.) A corresponding EQPSU form is one where the SM entry on the EQPSU form matches the SM portion of the LCEN entry on this form.

A LCEN which has a PKT RAX and a PKT LCC entered on a LCC form (5306 Record), which has an associated DIGIT ANALYSIS SELECTOR entered on a DAS form (5300-1 Record), which finally has the associated PREFIX/FEATURE DIT entered on PDIT form(s) (5300-2 Record[s]) and/or the associated LOCAL DIT entered on LDIT form(s) (5300-3/5 Record[s]) requires the following: When TYPE OF CI CALL is known on a PDIT and/or a LDIT form, it must be equal to "PSNCI" or "PSCAR".

A corresponding AMLBDSL form is required for each OSPSDSL form when LVL2 PROF on the OSPSDSL form is "ISDN" or "PKTSW". An AMLBDSL form must not be submitted unless LVL2 PROF on the corresponding OSPSDSL form is "ISDN" or "PKTSW". The AMLBDSL and OSPSDSL forms correspond if they have matching LCENs.

For 5E10 and later, the following data rule does not apply to an SM2000, provisioning of nailed-up time slots is not required on an SM2000.
On a PSU2, each Data Interface in an SM can have a maximum of 256 nailed-up time slots reserved for the following applications.

Timeslots Reserved for Applications

Application	Defined on Form(s)
EDSL	TRKCLS set to "EDSL" on the TKGRP form
IFOPER	TRKCLS set to "IFOPER" on the TKGRP form
IFTERM	TRKCLS set to "IFTERM" on the TKGRP form
IP	TRKCLS set to "PACKET" on the TKGRP form
ISM	PSISM
PKTPIPE	TRKCLS set to "PKTPIPE" on TKGRP form
RISLU B Channel	DSL and AMLBDSL
RISLU D Channel	DSL, DSLAP, MISLINK, and OSPSDSL
SPCHNDLR	TRKCLS set to "SPCHNDLR" on TKGRP form
X.25	XAT
X75	TRKCLS set to "X75" on the TKGRP form
X75P	TRKCLS set to "X75P" on the TKGRP form

These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D-channel only takes a quarter of a time slot. A PSU SHELF may be assigned more than 1 DI: one for DI 0 and a second for DI 1. Since a given PSU SHELF may have as many as 128 time slots on a DI, it is not possible for each time slot to have a unique

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vertical (column) position (i.e., unique time slot value of 0 - 31 on different PIDBs).

2.3 SERVICE CLASS

Description: Enter the OSPS Service Class.

Software Release: 5E6 and later
Required Field.
Valid Entries:

Valid SERVICE CLASS Entries

Entry	Definition
DAOPER	Directory Assistance Operator - BST
TAOPER	Toll and Assistance Operator - VDT
XDB	External Data Base

Data Rules:

DAOPER - If "DAOPER" is entered, then
- CUGOA must be "N"
- CUGIA must be "N"
- DPIDB must be blank
- ICB must be "N"
- ISCN must be blank
- N2 must be blank
- OCB must be "N"
- RATE must not be entered
- RCV TPC must be 9600
- SEND TPC must be 9600
- T1 must be blank
- TN must be entered
- TS must be blank
- TPCN must be "N"
- WNDSZ must be blank.

If "DAOPER" is entered and H PVC LCN is entered, then L 2W LCN and H 2W LCN must not be entered.

If "DAOPER" is entered and H PVC LCN is not entered, then L 2W LCN must be 1 and H 2W LCN must be 12.

TAOPER - If "TAOPER" is entered, then
- CUGOA must be "N"
- CUGIA must be "N"
- DPIDB must be blank
- FSA must be "N"
- IA must be "N"
- ICB must be "Y"
- ISCN must be blank
- H 2W LCN must be blank
- H OUT LCN must be 12
- H PVC LCN must be blank
- L 2W LCN must be blank
- L OUT LCN must be 1
- N2 must be blank
- OCB must be "N"
- RATE must not be entered
- RCV TPC must be 9600

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- ☐ RCV PKT SIZE must be 128
- ☐ SEND TPC must be 9600
- ☐ SEND PKT SIZE must be 128
- ☐ T1 must be blank
- ☐ TN must be entered
- ☐ TPCN must be "N"
- ☐ TS must be blank
- ☐ WNDSZ must be blank.

For 5E9(1) and later, if "TAOPER" is entered and L IN LCN is not entered, then:

- ☐ CUGOA, CUGIA and IA must all be "N"
- ☐ ICB must be "Y"
- ☐ H IN LCN must not be entered
- ☐ L OUT LCN must be 1
- ☐ the corresponding OSPSDSL form (found by matching LCEN values) must not have any DATA LINK GRP or DATA LINK NBR entries.

For 5E9(1) and later, if "TAOPER" is entered and L IN LCN is entered, then:

- ☐ CUGOA, CUGIA, and IA must all be "Y"
- ☐ ICB must be "N"
- ☐ CUGOA, CUGIA, and IA must all be "Y"
- ☐ ICB must be "N"
- ☐ H IN LCN must be 1
- ☐ L IN LCN must be 1
- ☐ L OUT LCN must be 2
- ☐ the corresponding OSPSDSL form (found by matching LCEN values) must have entries for DATA LINK GRP and DATA LINK NBR.

XDB - If "XDB" is entered, then

- ☐ ISCN must be entered
- ☐ N2 must be entered
- ☐ RCV PKT SIZE must be 128
- ☐ RATE must be entered
- ☐ SEND PKT SIZE must be 128
- ☐ SUST must be "N"

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- T1 must be entered
- WNDSZ must be entered.

If "XDB" is entered then either IN LCN or 2W LCN must have an entry.

2.4 TN

Description: Enter the TN (Packet Switching Telephone Number) that identifies this DSL.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

TNs must be unique for each entry.

A NOC form must exist for each entry in the TN field.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the AMLBDSL form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE or the NOC form does not exist, the 7-digit TN(s) must be entered as a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.5 # RAX

Description: Enter the Packet Switching Rate Center that performs digit analysis.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

The RAX on this form must match a RATE AREA on an LCC form. The LCC (LINE CLASS CODE) and RAX (RATE AREA) of an LCC form with a CLASS OF SERVICE of "TAOPER" must match the LCC and RAX on this form.

The LCC for a CLASS OF SERVICE of "TAOPER" is permitted only for packet switching.

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.6 # LCC

Description: Enter the Packet Switching Line Class Code that performs digit analysis. This entry represents an index to a terminating class and service class combination.

Required Field.
Valid Entries: 3-character alphanumeric strings

Data Rules:

The LCC on this form must match a LINE CLASS CODE on an LCC form. The LINE CLASS CODE and RATE AREA of an LCC form with a CLASS OF SERVICE of "TAOPER" must match the LCC and RAX on an AMLBDSL form. The LINE CLASS CODE for a CLASS OF SERVICE of "TAOPER" is permitted only

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for packet switching.

2.7 ISCN

Description: Enter a valid 6-digit packet ISCN (Integrated Services Channel Number). The ISCN field defines the protocol handler that is used by this DSL for communications purposes.
Valid Entries: 6-digit packet ISCN with the following format:

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		Format	Valid Entries
Shelf	SHELF	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-124

Data Rules:

The CHL entry must be zero or a multiple of four (e.g., 000, 004, 008, 012, ..., or 124).

Duplicate ISCNs may not be assigned.

If the PROTOCOL HANDLER TYPE on the corresponding EQPSU form is "PH16", then the last three digits of the ISCN entry must be 000.

When B1 PKT ISCNs are assigned on this form, a PIDB (Peripheral Interface Data Bus) with a PIDB TYPE of "PSU" is required on the same Packet Switching Unit shelf (on the EQISLU form) as the PSU shelf number specified by the first two digits of the ISCN entry.

One EQPSU form is required for all AMLBDSL forms assigning ISCNs in the same SM.

If ISCN has been entered, then the corresponding combination of SM, PSU, PSU SHELF and GRP must be entered on the PSUGP form.

ISCNs cannot be duplicated on one or more of the following forms:
- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK and XAT.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

For 5E9(1) and later:

If SM / SHELF / CHL GRP combination corresponds with the combination of SM, PSU, PSU SHELF and GRP on the PSUGP form, then the PH TYPE on the PSUGP form must be set to "PH3". The SM is the first three digits of LCEN, SHELF/CHL GRP is the first three digits of ISCN on the AMLBDSL form (when it is entered) or the first three digits of ISCN on the corresponding OSPSDSL form when ISCN is not entered on the AMLBDSL form.

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group.

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The following applications use one ALCB:

- AMLBDSL - where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form
- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2
- MISLINK - where SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN and SERVICE CLASS is "TAOPER" or "DAOPER"
- XAT - where SHELF/CHL GRP is the first three digits of ISCN.

For 5E10 and later:

Each SM (Switching Module) can have up to 5 PSU SHELFs (defined by the first digit in the ISCN field). If the UNIT TYPE on the EQIM form (5700 Record) is not "SM2000", each PSU SHELF can be assigned up to (32 times X) time slots for the following applications: (Note: X represents the number of PIDBs, 0 to 4, provisioned per shelf.)

32 Time Slots For Applications
5E10 and Later

Application	Form
RISLU B Channel	defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	defined on the DSL/DSLAP/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
X.25	defined on the XAT form.
ISM	defined on the PSISM form.
IP	defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
X75P	defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.
X75	defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
EDSL	defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
RPA	defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
PKTPIPE	defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
SPCHNDLR	defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.

For 5E10 and later, the SM entered in the ISCN field on this form can not have an ISCN SHELF and CHL GRP which are mixed with ISCNs from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of

- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"

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- "X75"
- "X75P"

defined on the TKGRP form. However, the

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- ODBRES
- OSPSDSL
- RTERM
- XAT

forms along with all TRUNK forms which have a TRKCLS of

- "EDSL"
- "IFTERM"
- "IFOPER"

defined on the TKGRP form can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM.

2.8 N2

Description: The N2 field defines the maximum number of LAPB level 2 frame retransmissions for packet switching on a B-channel that will take place before any type of testing action is taken.
Valid Entries: 2 - 15

Data Rules:

An entry in the N2 field is required when "ADMIN" is entered in the D SERV field.

2.9 T1

Description: Enter the timeout value for LAPB level 2 frame retransmission. The value may range from 0.2 to 2.0 seconds in increments of 0.02 seconds.
Valid Entries: even numbers from 20 - 200 (tenths of a second)

Data Rules:

An entry in the T1 field is required when "ADMIN" is entered in the D SERV field.

2.10 WNDSZ

Description: Enter the maximum number of LAPB level 2 I-frames. This entry indicates how many frames containing data may be transmitted before an acknowledgement is required.
Valid Entries: 1 - 7

Data Rules:

An entry in the WNDSZ field is required when "ADMIN" is entered in the D SERV field.

2.11 DPIDB

Description: Enter the PIDB number for the ISLU-based AMLB DSL.
Valid Entries: 2 - 11

Data Rules:

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An entry in this field is required when "ADMIN" is entered in the D SERV field.

An entry is not allowed in this field for DSLs assigned to a RISLU.

2.12 TS

Description: Enter the time slot that the B-channel is assigned to on the D PIDB.
Valid Entries: 0 - 31

Data Rules:

An entry in the TS field is required when "ADMIN" is entered in the D SERV field. Digital subscriber lines must not be assigned to duplicate B-channel time slots.

B-channel time slots cannot be assigned by ODA. Hardware assignments (on the EQISLU form) must be sufficient for the number of time slots required. An entry is not allowed in the TS field for DSLs assigned to a RISLU.

The TS entry must not be equal to the LGC portion of the entry in the LCEN field, and must not equal the sum of the LGC plus 16.

The LCEN's assigned on the AMLBDSL, DSLAP or OSPSDSL forms, or DSL OE's on the DSL form or OE's on the MISLINK form can not have their D and/or B Channels assigned to conflicting DPIDB time slots or quarter time slots due to manual (vs ODA) time slot assignments. Each SM/ISLU or SM/IDCU DPIDB time slot may be assigned only once. (Note, D channels are allocated to quarter time slots; therefore up to four unique assignments can be made before a time slot is considered full.

When making manual assignments, care must be taken to use assignments as shown in Figure 2, TS Entry vs LGC and DPIDB entries. For example, if manual assignments are being made and the DPIDB selected is 11 and the LGC from the OE is 0, then the TS assignment must be 1, 9, 17, or 25. B and/or D channel assignments made manually cannot conflict with the ODA assignment algorithm. The ODA algorithm allocates 4 time slots for each DPIDB per SM/ISLU/LGC. The LGCs 0 - 7 are allocated time slots on the odd numbered DPIDBs while LGCs 8 - 15 are allocated time slots on the even numbered DPIDBs. Manual time slot assignments do not have to follow this algorithm. However, if manual assignments are made, they will use one or more time slots. These manual assignments diminish (and may conflict with) the time slots available for the ODA assignment algorithm. For example, TS 1, 9, 17 and 25 are the 4 time slots that are allocated to ODA for LGC 0 in any ISLU which has a DPIDB 11 assigned. If a manual assignment is made to TS 9 on DPIDB 11 from any LGC in this ISLU there will only be 3 TS left on PIDB 11 for ODA assignments. Of course other odd numbered DPIDBs will have 4 TS for ODA assignments to LGC 0.

2.13 # SUST

Description: Can packet switching termination be denied on this DSL. Enter "Y" to deny termination; enter "N" to allow termination.

Required Field for 5E6 and later
Default: Y
Valid Entries: Y, N

2.14 BILL TN

Description: Enter a valid 7 or 10 digit packet switching telephone number to which charges should be billed for this DSL. No entry is required if the billing number is the same number that was entered in the TN field.
Valid Entries: 7 or 10 digit TN

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2.15 RMK

Description: Enter a remarks or brief information.
Valid Entries: 0 - 16 alphanumeric characters

3. FORM ENTRIES - 5447-2 RECORD

3.1 H PVC LCN

Description: Enter the highest assignable PVC (Permanent Virtual Circuit) LCN (Logical Channel Number) to be used by this DSL.
Valid Entries: 1 - 127

Data Rules:

If an entry is made in the H PVC LCN field of the AMLBDSL form, a corresponding PSPVC formmust exist. This requires that either a TN exist on an AMLBDSL form, or that a PKT MLHG/TERM combination exists (that matches a DSL NAME ID/DSL NAME RL combination on the OSPSDSL form with SERVICE CLASS of "XDB"). PSPVC forms are required for assigning PSPVCs (Packet Switching Permanent Virtual Circuits).

Logical Channel Numbers

The following fields (Section 3.2 - Section 3.9) refer to LCNs.

- The IN LCN (Incoming Logical Channel Number) fields control the calls that are to be terminated on the AMLB DSL.
- The 2W LCN The 2W LCN fields control the calls that are to be both originated and terminated on the AMLB DSL.
- The OUT LCN fields control the calls that are to be originated by the AMLB DSL.

Data Rules:
An entry is required in either the IN LCN or 2W LCN fields when "ADMIN" is entered in the D SERV field.

3.2 L IN LCN

Description: The L IN LCN entry is the starting channel number of incoming calls for this DSL. This value and the H IN LCN value limit the number of logical channels that will be handled by the DSL.
Valid Entries: 1 - 127

Data Rules:

If L IN LCN is entered, then H IN LCN must be entered, and vice versa.

If the H PVC LCN field is blank, then L IN LCN must be 1. The value entered in the L IN LCN field must be at least one greater than the entry in the H PVC LCN field.

3.3 H IN LCN

Description: The H IN LCN entry is the upper starting channel number. The L IN LCN value and this value limit the number of logical channels that will be handled by the DSL.
Valid Entries: 1 - 127

Data Rules:

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If L IN LCN is entered, then H IN LCN must be entered, and vice versa. The value entered in the H IN LCN field must be greater than or equal to the entry in the L IN LCN field.

3.4 ICB

Description: Are incoming calls barred?

Required Field.

Default Value: N
Valid Entries: Y, N

Data Rules:

For 5E9(1) and earlier, if ICB is "Y", then L/H 2W LCN must be blank.

3.5 L 2W LCN

Description: Enter the starting channel number of two-way calls for this DSL. This value and the value for H 2W LCN limit the number of logical channels that will be handled by the DSL for two-way calls.
Valid Entries: 1 - 127

Data Rules:

If H 2W LCN is entered, then L 2W LCN must be entered, and vice versa. Also, H 2W LCN must be greater than or equal to L 2W LCN.

The entry in the L 2W LCN field must be greater than the entry in the H PVC LCN field

3.6 H 2W LCN

Description: Enter the upper channel number. This value and the value for L 2W LCN limit the number of logical channels that will be handled by the DSL for two-way calls.
Valid Entries: 1 - 127

Data Rules:

If H 2W LCN is entered, then L 2W LCN must be entered, and vice versa. The entry in the H 2W LCN field must be greater than or equal to the entry in the L 2W LCN field.

3.7 L OUT LCN

Description: Enter the starting channel number of outgoing calls on this DSL The L OUT LCN and H OUT LCN fields limit the number of out-going logical channels that will be handled by the DSL.
Valid Entries: 1 - 127

Data Rules:

If H OUT LCN is entered, then L OUT LCN must be entered, and H OUT LCN must be greater than or equal to L OUT LCN.

The entry in the L OUT LCN field must be greater than the entry in the H PVC LCN field.

If H 2W LCN is entered, then L OUT LCN must be greater than H 2W LCN

3.8 H OUT LCN

Description: Enter the upper channel number for outgoing calls on this DSL. The L OUT LCN and H OUT

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LCN fields limit the number of outgoing logical channels that will be handled by the DSL.
Valid Entries: 1 - 127

Data Rules:

If L OUT LCN is entered, then H OUT LCN must be entered. The entry in the H OUT LCN field must be greater than the entry in the L OUT LCN field.

The entry in the L OUT LCN field must be greater than the entry in the H 2W LCN field.

3.9 OCB

Description: Are outgoing calls barred, i.e. not permitted? If "Y" is entered in the OCB field, only entries within the closed user group to which the VDT subscribes will be allowed.

Required Field.
Default: N
Valid Entries: Y, N

3.10 X25VER

Description: Enter the X.25 CCITT Standard Version supported for this DTE (Data Terminating Equipment).

Software Release: 5E6 and later
Required Field.
Default: 1984
Valid Entries: 1980, 1984

Data Rules:

If X25VER is 1980 and CUGOA or CUGIA is "Y", then CUGPX must be entered.

3.11 LPS PORT

Description: Is this port used by the adjunct processor of the LPS (Lesson Presentation System) feature? If so, this port cannot be used as an operator port on the switch. This field supports the Lesson Presentation System feature. For more information on this feature, see Division 2, Section 3L.

Software Release: 5E9(1) and later.
Default: N
Valid Entries: Y, N

Data Rules:

If LPS PORT is ""Y"", then:
- CUGIA must be "Y"
- CUGOA must be "Y"
- H IN LCN must be 1
- IA must be "Y"
- ICB must be "N"
- L IN LCN must be 1
- L OUT LCN must be 2
- SERVICE CLASS must be "TAOPER"

If LPSPORT is ""N"" and OSPSSRVCL is "TAOPER", then:
- CUGOA must be "N"

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- CUGIA must be "N"
- H IN LCN must not be entered
- IA must be "N"
- ICB must be "Y"
- L OUT LCN must be 1

3.12 MLHG

Description: This field can only be entered on the Recent Change View 21.34. It specifies the D-channel packet multiline hunt group number. This field supports the Lesson Presentation System feature. For more information on this feature, see Division 2, Section 3L.

Software Release: 5E9(1) and later.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

This must equal an HML from view 3.5. View 3.5 must have a LISTED TN and LAST LISTED TN entered and an MLH FEATURE entered which has been defined on view 12.18 with a HUNT TYPE of "PSUCD".

3.13 TERM

Description: This field can only be entered on the Recent Change View 21.34. This field specifies the D-channel packet multiline hunt terminal number. This is used to uniquely identify a member in an MLHG that represents a packet end-point. This field supports the Lesson Presentation System feature. For more information on this feature, see Division 2, Section 3L.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 2015.

3.14 SEND TPC

Description: Enter the send throughput class. This field and the RCV TPC field define the upper limits of the needed throughput for the AMLB DSL. A value higher than the expected maximum should be chosen. For AMLB uses, this value should be 19200.

Required Field.
Default:

5E9(1) and later: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600 or 19200.

3.15 RCV TPC

Description: Enter the send and receive throughput classes. These fields define the upper limits of the needed throughput for the AMLB DSL. A value higher than the expected maximum should be chosen. For AMLB uses, this value should be 19200.

Required Field.
Default:

5E9(1) and later: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600 or 19200.

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3.16 SEND PKT SIZE

Description: Enter the Send Packet Sizes (in bytes).

Required Field.
Default: 128
Valid Entries: 128 or 256 (bytes)

3.17 RCV PKT SIZE

Description: Enter the Receive Packet Sizes (in bytes).

Required Field.
Default: 128
Valid Entries: 128 or 256 (bytes)

3.18 SEND PKTWD

Description: Enter the number of data packets that the CPE device can have unacknowledged, on a sending basis, at any time. If no entry is made in this field, it is set to 2.

Required Field.
Default: 2
Valid Entries:

5E9(1) and later: 1 - 7

Data Rules:

For 5E9(1) and later, if SEND PKTWD is not 2, FCPN must be "Y".

3.19 RCV PKTWD

Description: Enter the number of data packets that the CPE device can have unacknowledged, on a receiving basis, at any time. If no entry is made in the PKT SIZE RCV field, it is set to 2.

Required Field.
Default: 2
Valid Entries:

5E9(1) and later: 1 - 7

Data Rules:

For 5E9(1) and later, if RCV PKTWD is not 2, FCPN must be "Y".

3.20 REV CHARGE

Description: Is reverse charged allowed for the call?

Required Field.
Default: N
Valid Entries: Y, N

3.21 FCPN

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Description: Should flow control parameter negotiation indication between the calling and called parties be enabled? When a call is made, a number of parameters are requested by the calling party. These parameters are referred to as negotiated parameters. The negotiated parameters that are allowed will have to be determined based on the needs of the parameters that are supported by the external data base computer"s X.25 "front end".

3.22 TPCN

Description: Is Throughput class negotiation for a virtual circuit indicated?

Required Field.
Default: N
Valid Entries: Y, N

3.23 FSA

Description: Does Fast Select acceptance permit the transfer of data in an incoming call packet. Enter "Y" to indicate fast select acceptance.

Required Field.
Default: N
Valid Entries: Y, N

3.24 IA

Description: Is an abbreviated packet telephone number allowed to be used in calls?

Required Field.
Default: N
Valid Entries: Y, N

3.25 IECP DNIC

Description: Enter the IECP (Inter-Exchange Carrier Preselect) DNIC (Data Network Identification Code) used when calls go beyond the 5ESS Switch to which the data base is connected.
Valid Entries: 1111 - 1114 and 2000 - 9000.

Data Rules:

Corresponding PSDNICRI forms are required where the entry in the DNIC field (on the PSDNICRI form) matches the IECP DNIC entry on an AMLBDSL form.

3.26 RATE

Description: Enter the X.25 B1 channel data rate. This field supports the CSIDP (Call Serving Information Delivery Platform). For more information on this special feature, see Division 2, Section 4C13. For the CSIDP feature, this field must be either "56KB" or "64KB" and must match the DIP switch settings of the corresponding T-BR1TE card in the ADTRAN channel bank. The recommended value is "64KB" if the XDB (External Database) is on an ISLU. For the RISLU, the value should be "56KB".

Software Release: 5E8 and later.
Default: 64IK
Valid Entries:

Valid RATE Entries

Entry	Definition
56K	56 KB data calls
64K	64 KB data calls
64IK	Inverted 64 KB data calls

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Data Rules:

If SERVICE CLASS is "XDB", RATE must be entered.

4. FORM ENTRIES - 5447-3 RECORD

CLOSED USER GROUP

The following fields (Section 4.1 - Section 4.4) define information for a CUG (Closed User Group). The VDT/CST may belong to one or more CUGs.

4.1 CUGPX

Description: Enter the Preferential Customer CUG Index.
Valid Entries: 0 - 99

Data Rules:

If no entry is made in the CUGHX field, then no entry is allowed in the CUGPX field. Each entry in the PREFER CUST IDX field must equal one of the entries in the IDX field.

4.2 CUGOA

Description: Are outgoing calls permitted to be made to CUGs other than those specified in the CUG.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If no entry is made in the CUGHX field, then this field must be "N".

For 5E6 and later, if CUGOA or CUGIA is "Y" and X25VER is "1980", then CUGPX must be specified.

4.3 CUGIA

Description: Are incoming calls permitted to be accepted from CUGs other than those specified in the CUG.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If no entry is made in the CUGHX field, then this field must be "N".

If CUGHX is blank, then CUGIA and CUGOA must be "N" and CUGPX must be blank.

For 5E6 and later, if CUGIA is "Y" and X25VER is 1980, then CUGPX must be entered.

4.4 CUGHX

Description: Enter the Highest Customer CUG Index.
Valid Entries: 0 - 99

Data Rules:

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If CUGHX is blank, then CUGIA and CUGOA must be "N" and CUGPX must be blank.

If CUGHX is entered, and CUGOA and CUGIA are "N", then CUGPX must be less than or equal to CUGHX.

CUG LIST

The following fields (Section 4.5 - Section 4.7) define information for the Closed User Group List.

4.5 DNIC

Description: Enter the packet switching DNIC (Data Network Identification Code). If all of the members of a closed user group are within the same network, the DNIC is that of the home network. Otherwise, one of the other networks involved should be designated as the coordinating administration.
Valid Entries: 1111 - 1114 and 2000 - 9999

Data Rules:

If either DNIC, ICN or IDX are entered, then all three must be entered.

4.6 ICN

Description: Enter the International Closed user group code. This entry indicates the international CUGs that this DSL is allowed to communicate with. This value is unique for each CUG belonging to the same network.
Valid Entries: 1 - 32767

Data Rules:

If either DNIC, ICN or IDX are entered, then all three must be entered.

4.7 IDX

Description: Enter the customer CUG Index. This is a local CUG that this DSL is allowed to communicate with.
Valid Entries: 0 - 99

Data Rules:

If either DNIC, ICN or IDX are entered, then all three must be entered.

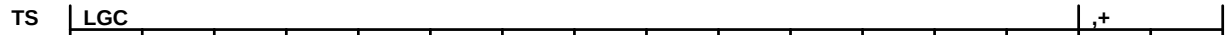
Duplicate IDX entries are not allowed.

The entry in the IDX field must be less than or equal to the entry in the CUGHX field. The highest entry in the IDX field must equal the entry the CUGHX.

FORMS AND FIELDS WHERE LCEN, B RELPIDB AND B TIMESLOT MAY NOT BE DUPLICATED

FORM	COMBINATION OF FIELDS*
DSL	LCEN, D RELPIDB AND D TIMESLOT
DSL	LCEN, DPIDB and TS
OSPSDSL	LCEN, D RELPIDB and TIMESLOT
DSLAP	LCEN, REL PIDB AND TS
AMLBDSL	LCEN, DPIDB AND TS

* LCEN, DPIDB and TS entries may not be duplicated in this combination of fields.
Figure 1 FORMS AND FIELDS WHERE LCEN, DPIDB, AND TS MAY NOT BE DUPLICATED



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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0				3	5	7	9	11				2	4	6	8	10
1	11				3	5	7	9	10				2	4	6	8
2	9	11				3	4	7	8	10				2	4	6
3	7	9	11				3	5	6	8	10				2	4
4	5	7	9	11				3	4	6	8	10				2
5	3	5	7	9	11				2	4	6	8	10			
6		3	5	7	9	11				2	4	6	8	10		
7			3	5	7	9	11				2	4	6	8	10	
8				3	5	7	9	11				2	4	6	8	10
9	11				3	5	7	9	10				2	4	6	8
10	9	11				3	4	7	8	10				2	4	6
11	7	9	11				3	5	6	8	10				2	4
12	5	7	9	11				3	4	6	8	10				2
13	3	5	7	9	11				2	4	6	8	10			
14		3	5	7	9	11				2	4	6	8	10		
15			3	5	7	9	11				2	4	6	8	10	
16				3	5	7	9	11				2	4	6	8	10
17	11				3	5	7	9	10				2	4	6	8
18	9	11				3	4	7	8	10				2	4	6
19	7	9	11				3	5	6	8	10				2	4
20	5	7	9	11				3	4	6	8	10				2
21	3	5	7	9	11				2	4	6	8	10			
22		3	5	7	9	11				2	4	6	8	10		
23			3	5	7	9	11				2	4	6	8	10	
24				3	5	7	9	11				2	4	6	8	10
25	11				3	5	7	9	10				2	4	6	8
26	9	11				3	4	7	8	10				2	4	6
27	7	9	11				3	5	6	8	10				2	4
28	5	7	9	11				3	4	6	8	10				2
29	3	5	7	9	11				2	4	6	8	10			
30		3	5	7	9	11				2	4	6	8	10		
31			3	5	7	9	11				2	4	6	8	10	

Figure 2 TS (TIME SLOT) ASSIGNMENT VS LGC ENTRY AND DPIDB ENTRY

```
SCREEN 1 OF 2                5ESS Switch
amlbdsl              OFFICE DATA ADMINISTRATION
5447-1/2/3         OSPS DSL PACKET SWITCHING ASSIGNMENT

 *1. LCEN          _________   13. BILL TN  ___________        LPS PORT N
 #2. SERVICE CLASS _______     14. RMK     ___________________  MLHG
  3. TN            ___________ 15. H PVC LCN ___              TERM
 #4. RAX           ___         16. L IN  LCN ___
 #5. LCC           ___         17. H IN  LCN ___
  6. ISCN          _______     #18. ICB      N
  7. N2            __          19. L 2W  LCN ___
  8. T1            ___         20. H 2W  LCN ___
  9. WNDSZ         _           21. L OUT LCN ___
 10. DPIDB         __          22. H OUT LCN ___
 11. TS            __         #23. OCB      N
#12. SUST          Y           24. X25VER    1984
```

```
SCREEN 2 OF 2                5ESS Switch          _
amlbdsl              OFFICE DATA ADMINISTRATION
5447-1/2/3         OSPS DSL PACKET SWITCHING ASSIGNMENT

 26. SEND TPC      9600              38. RATE 64IK
 27. RCV  TPC      9600              CLOSED USER GROUP
 28. SEND PKT SIZE 128                39. CUGPX  __
 29. RCV  PKT SIZE 128                40. CUGOA  N
 30. SEND PKTWD    2                  41. CUGIA  N
```

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```
31. RCV  PKTWD    2                    42. CUGHX  __
32. REV CHARGE    N
33. FCPN          N                    43. CUG LIST
34. TPCN          N                  row  44. DNIC  45. ICN  46. IDX
35. FSA           N                   1     ____   _____     __
36. IA            N                   2     ____   _____     __
37. IECP DNIC     ____                3     ____   _____     __
```

Figure 3 SAMPLE AMLBDSL FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 4AW: 5448 RECORD
OSPS LISTING SERVICES/CACD INTERFLOW DESTINATION RECORD - INFLDEST

1. GENERAL

The 5448 Record is available with 5E5 and later Software Releases. The INFLDEST form (5448 Record) is is used for selecting a new destination index for Listing Services and CACD (Commercial Automatic Call Distribution) calls that are to be interflowed. An outgoing destination index is assigned based on an incoming destination index, the trunk group number, and a destination office ID.

For each unique combination of the INC CDI and DEST ID fields specified on one or more INFLDEST forms, there must be a corresponding INFLDEST form defined with the wild card TGN value of "9999".

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL ESS UNIT

Enter the Base and Control number and Office Name on each record.

2.2 * INC CDI

Description: Enter the Incoming Code Index.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

The entries in the INC CDI and OUTGO CDI fields must not be the same.

For every INC CDI entered on this form, there must be a CDI entered on one of the following forms:

- The CODE INDEX field or the CDI field on the CONFLICT RESOLUTION ENTRIES list, on the LDIT form (5300-3/5 Record);
- For 5E8 and later, the CODE INDEX field or the CDI field on the CONFLICT RESOLUTION ENTRIES list, on the RDIT form (5300-7/8 Record);
- The CODE INDEX field on the MLDIT form (5300-3/5 Record);
- The CODE INDEX field on the PDIT form (5300-2 Record);
- The CODE INDEX field on the INDIT form (5309 Record); or
- For 5E7 and later, the WITH ANI or WITHOUT ANI fields on the AISCLS form (5469 Record).

2.3 * TGN

Description: Enter the Incoming TGN (Trunk Group Number).

Required Field.
Valid Entries:
- For 5E10 and earlier 1 - 2000, or 9999

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- For 5E11 and later: 1 - 4000, or 9999

Data Rules:

For every TGN entered on this form that is not equal to "9999", there must be a corresponding entry in the TGN field of a TKGRP form (5202 Record).

2.4 * DEST ID

Description: This field indicates the new OSPS listing services and C-ACD interflow destination office ID.

Required Field.
Valid Entries: 1 - 9999

Data Rules:

A maximum of 16 unique values are allowed.

2.5 # OUTGO CDI

Description: This required field indicates the Outgoing CDI. The valid range entries range from 1 through 4095.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

The entries in the OUTGO CDI and INC CDI fields must not be the same.

Each OUTGO CDI entry on an INFLDEST form must be defined in the CDI field of at least one RAR form (5301 Record).

The OUTGO CDI field on an INFLDEST form and the OUTGO CDI on another INFLDEST form cannot be the same when the following conditions are met:

- The TGN on one of the INFLDEST forms is between 1 and 2000 and the TGN on the other INFLDEST form is 9999.
- The combination of the INC CDI and DEST ID fields is the same on both INFLDEST forms.

2.6 # DEST NAME

Description: This required field indicates the destination office name. Entries must be unique.

Required Field.
Valid Entries: 4-character alphanumeric
- office identifiers

Data Rules:

If DEST ID on this form equals one of the OSPS IDs on the INFLTADP form (5452 Record), then DEST NAME must be identical to the corresponding OFC on the INFLTADP form. (All OSPS IDs must be unique).

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```
infldest                    5ESS Switch
(5448)                OFFICE DATA ADMINISTRATION
          OSPS LISTING SERVICES/C-ACD INTERFLOW DESTINATION

*1. INC CDI   0011
*2. TGN       0157
*3. DEST ID   5040
#4. OUTGO CDI 0021
#5. DEST NAME NAPL
```

Figure 1 SAMPLE INFLDEST FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AX: 5449 RECORD
OSPS LINE INFORMATION DATABASE (LIDB) QUERY FORM - LIDBLNQ

1. GENERAL

The 5449 Record is available with 5E5 and later Software Releases, and is used for designating a query destination on a per NPA-NXX or RAO-(0/1)XX basis.

1.1 Line Information Data Base Exchange/ Alternate Billing Service

The LIDB/EABS (Line Information Data Base Exchange Alternate Billing Service) capability provides a LEC (Local Exchange Carrier) OSPS (Operator Services Position System) the ability to obtain billing authorization information from the LIDB via the LEC's SS7 (Signaling System 7) network for interLATA traffic or from the BVA (Billing Validation Application) via AT&T's CCIS6 or DCIS6 network. These capabilities are needed to permit LECs to process Calling Card, Collect, and Bill-To-Third number calls, in an environment where the billing authorization data base is distributed between the LECs and AT&T. A LEC can now either query the AT&T BVA database or the LIDB database.

The 5449 Record defines where a query should be sent to each NXX/(0/1)XX of a given NPA or RAO (Revenue Accounting Office) subgroup. (An NPA or RAO subgroup is a group of calling or BNS (Billed Number Screening) numbers. Refer to Division 2, Section 3I for more detailed information regarding the definition and population of the LIDB feature. Also, for enchancements to this feature, see Division 2, Section 4A81, Division 2, Section 4C1 and Section 4C3.

1.2 EABS Alternate Routing Secured Feature

For 5E8 and later, with the introduction of the EABS Alternate Routing Secured feature, this record may be used to select between two databases capable of processing LIDB format queries for billing validations. When the LIDB field has a value of "N", the database that is queried is an AD (Alternate Destination) if the EABS Alternate Routing secured feature has been activated. If this feature is off, the Alternate Destination is the BVA. If this feature is on, the Alternate Destination is a database capable of processing LIDB queries. For more information on the EABS Alternate Routing Secured feature, see Division 2, Section 4A86.

1.3 5449 Record Fields

The columns in the 5449 Record reflect the following:

NPA/RAO column reflects the NPA/RAO field on this form.

HUND DIGIT column reflects the hundred digit of the START XXX field.

NXX / (0/1)XX columns reflects the entry in the LIDB field ("Y" or "N") for each NXX or (0/1)XX from 000 through 999.

1.4 Cross Check with OSPSOPT Form

A LIDBLNQ form may not be submitted unless at least one of the following fields on the OSPSOPT form (5424 Record) is set to "C".

L CC ATT INER
- □ CC LEC INTER
- □ CC ATT INTRA
- □ CC LEC INTRA
- □ BNS ATT INTER
- □ BNS LEC INTER
- □ BNS ATT INTRA

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- BNS LEC INTRA

1.5 Recent Change View

The corresponding Recent Change views are 27.32 and 27.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and Office Name on each record.

2.2 *NPA OR RAO

Description: This key field refers to the NPA or RAO of the CC (Calling Card) or BNS numbers.
Valid Entries: 200 - 999

2.3 *START XXX

Description: This second key field indicates the starting office code [NXX or (0/1)XX] for a range of values whose query destination will be entered. The START XXX and END XXX fields enable the definition of query destinations of ranges of NXXs/(0/1)XXs within an NPA/RAO.

The START XXX value and the END XXX value define the office code range of numbers for which the query destination of LIDB or BVA is specified in the RANGE LIDB. Or, if exceptions occur within this range, they are entered in the NXX(0/1)XX field lists, and the LIDB field is entered for each of the exceptions. The remaining numbers in the range receive the default value entered in the L CC DEFAULT and L BNS DEFAULT fields on the OSPSOPT form (Record 5424).
Valid Entries: x00, where x is an integer, for example 000, 200, 600 or 900.

2.4 END XXX

Description: The END XXX field is automatically populated after the START XXX value is entered. The value will be x99, where x is the integer entered as the first number in the START XXX field. For example, if 600 is entered for START XXX, then 699 will be automatically entered for END XXX. Individual exceptions to the range specified by START XXX and END XXX fields are entered in the NXX (0/1)XX LIST.

2.5 RANGE LIDB

Description: Is the LIDB database populated with billing information for the range of values indicated on this form? This field is used only if the entire range of values of START XXX to END XXX have the query destination set to the same database. For example, 600 through 699 range of values should be set to query the AD BVA database. If "Y" is entered, then LEC's LIDB is populated with billing data for the entire range of values. If "N" is entered, then the AD database is populated with billing data for the entire range of values. If the EABS Alternate Routing Special Feature is off, the Alternate Destination is the BVA. If it is on, the Alternate Destination is a database capable of processing LIDB queries.
Valid Entries: Y, N

Data Rules:

If an entry is made in RANGE LIDB, then no further entries should be made on this form.

NXX (0/1)XX LIST

The following fields (Section 2.6 - Section 2.7) define numbers in the range which are exceptions. If the

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query destinations for the numbers in the range, as specified by START XXX and END XXX, are not the same, those exceptions should be listed in this field and the database destination query entered in the LIDB field. The numbers that are not entered in the list below receive the default value entered in the L CC DEFAULT and L BNS DEFAULT fields on the OSPSOPT form. Therefore, if the L CC DEFAULT/L BNS DEFAULT is "Y" (the query database destination is the LIDB database), list only the three digit office codes that query the BVA database and enter "N" as the LIDB field for each of those office codes.

2.6 XXX

Description: Enter the number which should NOT receive the default value entered in the L CC DEFAULT and L BNS DEFAULT fields on the OSPSOPT form.
Valid Entries: The three digit office code value within the range defined by START XXX and END XXX.

2.7 LIDB

Description: Should the LEC LIDB be the destination database? If "Y" is entered, then the LEC's LIDB is the destination database that is populated with the billing data for this office code. If "N" is entered, then the AD database is the destination database that is populated with the billing data for this office code. If the EABS Alternating Routing secured feature is not activated, the Alternate Destination is the BVA. If it is activated, the Alternate Destination is a database capable of processing LIDB queries.
Valid Entries: Y, N

SCREEN 1 OF 4 5ESS Switch
lidblnq OFFICE DATA ADMINISTRATION
(5449) OSPS LINE INFORMATION DATABASE (LIDB) QUERY

*1. NPA OR RAO 708 3. END XXX 399
*2. START XXX 300 4. RANGE LIDB _

5. NXX (0/1)XX LIST

XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB
1. 334	Y	6. ___	_	11. ___	_	16. ___	_	21. ___	_
2. 338	Y	7. ___	_	12. ___	_	17. ___	_	22. ___	_
3. 359	Y	8. ___	_	13. ___	_	18. ___	_	23. ___	_
4. 378	Y	9. ___	_	14. ___	_	19. ___	_	24. ___	_
5. ___	_	10. ___	_	15. ___	_	20. ___	_	25. ___	_

SCREEN 2 OF 4 5ESS Switch
lidblnq OFFICE DATA ADMINISTRATION
(5449) OSPS LINE INFORMATION DATABASE (LIDB) QUERY

5. NXX / (O/1)XX LIST

XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB
26. ___	_	31. ___	_	36. ___	_	41. ___	_	46. ___	_
27. ___	_	32. ___	_	37. ___	_	42. ___	_	47. ___	_
28. ___	_	33. ___	_	38. ___	_	43. ___	_	48. ___	_
29 ___	_	34. ___	_	39. ___	_	44. ___	_	49. ___	_
30. ___	_	35. ___	_	40. ___	_	45. ___	_	50. ___	_

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SCREEN 3 OF 4 5ESS Switch
lidblnq OFFICE DATA ADMINISTRATION
(5449) OSPS LINE INFORMATION DATABASE (LIDB) QUERY

5. NXX / (0/1)XX LIST

XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB
51. ___	_	56. ___	_	61. ___	_	66. ___	_	71. ___	_
52. ___	_	57. ___	_	62. ___	_	67. ___	_	72. ___	_
53. ___	_	58. ___	_	63. ___	_	68. ___	_	73. ___	_
54. ___	_	59. ___	_	64. ___	_	69 ___	_	74. ___	_
55. ___	_	60. ___	_	65. ___	_	70. ___	_	75. ___	_

SCREEN 4 OF 4 5ESS Switch _
lidblnq OFFICE DATA ADMINISTRATION
(5449) OSPS LINE INFORMATION DATABASE (LIDB) QUERY

5. NXX / (0/1)XX LIST

XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB	XXX	LIDB
76. ___	_	81. ___	_	86. ___	_	91. ___	_	96. ___	_
77. ___	_	82. ___	_	87. ___	_	92. ___	_	97. ___	_
78. ___	_	83. ___	_	88. ___	_	93. ___	_	98. ___	_
79. ___	_	84. ___	_	89. ___	_	94. ___	_	99. ___	_
80. ___	_	85. ___	_	90. ___	_	95. ___	_	100. ___	_

Figure 1 SAMPLE LIDBLNQ FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4AZ: 5451 RECORD
OSPS (INCOMING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS FORM - INFLTAP

1. GENERAL

The INFLTAP form (5451 Record) is an ODA (Office Data Administration) input form that is used for Interflow (incoming) Serving Team information for OSPS. This form is available with 5E5 and later Software Releases.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.51.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL

Enter the Base and Control number and Office Name on each record.

2.2 * KEY

Description: This field is used to activate the form; the only valid entry is 1.

Required Field.
Valid Entries: 1

OSPS LIST

The following information (fields Section 2.3 - Section 2.6) is required for each OSPS Switch that is sending interflow data to this switch.

This list consists of four fields. If an entry is made in one field, then entries are required in the remaining three associated fields.

The OSPS LIST was increased to allow a maximum of 100 entries to support the Interflow: Expanding the Number of Incoming Trunk Groups feature (SFID 394). For more information on this feature, see Division 2, Section 4A394.

2.3 OSPS ID

Description: This field indicates the unique ID number of the originating OSPS Switch. This identifier represents the switch from which the interflow data is coming.
Valid Entries: 1 - 9999

2.4 OFC

Description: This field indicates the unique name of the originating OSPS Switch.
Valid Entries: 1 - 4 alphanumeric characters

2.5 BCHTGN

Description: Enter the TGN (Trunk Group Number) for B-channels for incoming Interflow traffic.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

The entry in the BCHTGN field cannot equal the entry in the DCHTGN field for this or any other OSPS ID. Each entry in this field must be unique.

For every TGN identified here, a corresponding entry should exist on the TKGRP form (5202 Record), with the corresponding TRK DIR field set to "INC" and the TRKCLS field set to "IFTERM."

2.6 DCHTGN

Description: Enter the TGN (Trunk Group Number) for D-channels for incoming interflow traffic.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Entries must be unique. The entry in the DCHTGN field cannot equal the entry in the BCHTGN field for this or any other OSPS ID.

For every TGN identified here, a corresponding entry should exist on the TKGRP form, with the corresponding TRK DIR set to "SGNL" and the TRKCLS set to "IFTERM."

---

infltap 5ESS Switch _
(5451) OFFICE DATA ADMINISTRATION
OSPS (INCOMING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS

*1. KEY 1

2. OSPS LIST

	OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
1.	4040	WCHG	0500	0501	9.	____	____	____	____
2.	2110	WHEA	0820	0821	10.	____	____	____	____
3.	4041	LABE	0862	0863	11.	____	____	____	____
4.	2111	DF12	0560	0561	12.	____	____	____	____
5.	____	____	____	____	13.	____	____	____	____
6.	____	____	____	____	14.	____	____	____	____
7.	____	____	____	____	15.	____	____	____	____
8.	____	____	____	____	16.	____	____	____	____

Figure 1 SAMPLE INFLTAP FORM 5E5 - 5E9(2) SOFTWARE RELEASES

SCREEN 1 OF 7 5ESS Switch
infltap OFFICE DATA ADMINISTRATION
(5451) OSPS (INCOMING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS

*1. KEY 1

2. OSPS LIST

	OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
1.	____	____	____	____	9.	____	____	____	____
2.	____	____	____	____	10.	____	____	____	____

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3.	____	____	____	____	11.	____	____	____	____
4.	____	____	____	____	12.	____	____	____	____
5.	____	____	____	____	13.	____	____	____	____
6.	____	____	____	____	14.	____	____	____	____
7.	____	____	____	____	15.	____	____	____	____
8.	____	____	____	____	16.	____	____	____	____

SCREEN 2 OF 7 5ESS Switch
infltap FFICE DATA ADMINISTRATION
(5451) OSPS (INCOMING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS

2. OSPS LIST

OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
17.____	____	____	____	25.	____	____	____	____
18.___	____	____	____	26.	____	____	____	____
19.____	____	____	____	27.	____	____	____	____
20.____	____	____	____	28.	____	____	____	____
21.____	____	____	____	29.	____	____	____	____
22.____	____	____	____	30.	____	____	____	____
23.____	____	____	____	31.	____	____	____	____
24.____	____	____	____	32.	____	____	____	____

SCREEN 3 OF 7 5ESS Switch
infltap FFICE DATA ADMINISTRATION
(5451) OSPS (INCOMING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS

2. OSPS LIST

OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
33.____	____	____	____	41.	____	____	____	____
34.___	____	____	____	42.	____	____	____	____
35.____	____	____	____	43.	____	____	____	____
36.____	____	____	____	44.	____	____	____	____
37.____	____	____	____	45.	____	____	____	____
38.____	____	____	____	46.	____	____	____	____
39.____	____	____	____	47.	____	____	____	____
40.____	____	____	____	48.	____	____	____	____

SCREEN 4 OF 7 5ESS Switch
infltap FFICE DATA ADMINISTRATION

2. OSPS LIST

OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
49.____	____	____	____	57.	____	____	____	____
50.___	____	____	____	58.	____	____	____	____

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51.____ ____ ____ ____ 59. ____ ____ ____ ____
52.____ ____ ____ ____ 60. ____ ____ ____ ____
53.____ ____ ____ ____ 61. ____ ____ ____ ____
54.____ ____ ____ ____ 62. ____ ____ ____ ____
55.____ ____ ____ ____ 63. ____ ____ ____ ____
56.____ ____ ____ ____ 64. ____ ____ ____ ____

SCREEN 5 OF 7 5ESS Switch
infltap FFICE DATA ADMINISTRATION

2. OSPS LIST

OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
65.____	____	____	____	73.	____	____	____	____
66.___	____	____	____	74.	____	____	____	____
67.____	____	____	____	75.	____	____	____	____
68.____	____	____	____	76.	____	____	____	____
69.____	____	____	____	77.	____	____	____	____
70.____	____	____	____	78.	____	____	____	____
71.____	____	____	____	79.	____	____	____	____
72.____	____	____	____	80.	____	____	____	____

SCREEN 6 OF 7 5ESS Switch
infltap FFICE DATA ADMINISTRATION

2. OSPS LIST

OSPS ID	OFC	BCHTGN	DCHTGN		OSPS ID	OFC	BCHTGN	DCHTGN
81.____	____	____	____	89.	____	____	____	____
82.___	____	____	____	90.	____	____	____	____
83.____	____	____	____	91.	____	____	____	____
84.____	____	____	____	92.	____	____	____	____
85.____	____	____	____	93.	____	____	____	____
86.____	____	____	____	94.	____	____	____	____
87.____	____	____	____	95.	____	____	____	____
88.____	____	____	____	96.	____	____	____	____

SCREEN 7 OF 7 5ESS Switch _
infltap FFICE DATA ADMINISTRATION

2. OSPS LIST

OSPS ID	OFC	BCHTGN	DCHTGN
97.____	____	____	____
98.___	____	____	____

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99.____ ____ ____ ____
100.____ ____ ____ ____

Figure 2 SAMPLE INFLTAP FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4BA: 5452 RECORD
OSPS (OUTGOING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS FORM - INFLTADP

1. GENERAL

The INFLTADP form (5452 Record) is an ODA (Office Data Administration) input form that is used for Destination (outgoing) Interflow Serving Team information for OSPS (Operator Services Position System). This form is available with 5E5 and later Software Releases. This form defines the interflow destinations and associates them with B- and D-channels.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.52.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL

Enter the Base and Control Number and Office Name on each record.

2.2 * KEY

Description: This field activates the form; the only valid entry is 1.

Required Field.
Valid Entries: 1

OSPS LIST

The following information (fields Section 2.3 - Section 2.7) is required for each OSPS Switch that will be receiving interflow traffic from this switch.

This is a list consisting of four fields. If an entry is made in one field, then entries are required in the remaining three associated fields.

2.3 OSPS ID

Description: This field is an identifier of the OSPS Switch that will receive Interflow calls. This field must be unique for each entry.
Valid Entries: 1 - 9999

2.4 OFC

Description: This field indicates the name of the receiving OSPS Switch. Entries in the OFC field must be unique.
Valid Entries: 1 - 4 alphanumeric characters

2.5 BCHTGN

Description: Enter the Trunk Group Number for B-channels for outgoing interflow traffic.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

Entries in the BCHTGN field must be unique and cannot be equal to the entry in the DCHTGN field for this or any other OSPS ID.

For every TGN identified here, a corresponding entry must exist on the TKGRP form (5202 Record) with the corresponding TRK DIR field set to "OUT" and the TRKCLS field set to "IFOPER."

2.6 DCHTGN

Description: Enter the Trunk Group Number for D-channels for outgoing interflow traffic. Entries in the DCHTGN field must be unique.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Entries in the DCHTGN field must be unique and cannot be the same as the entry in the BCHTGN field for this or any other OSPS ID.

For every TGN entered here, a corresponding entry should exist on the TKGRP form (5202 Record) with the corresponding TRKCLS field set to "IFOPER" and the TRK DIR field set to "SGNL."

2.7 ISERVTM

Description: This field displays the interflow serving team number associated with the OSPS ID of the OSPS used for interflow call traffic on the RC View 27.52. This is a Recent Change/Verify field, it cannot be entered in ODA.

Software Release: 5E9(1) and later.
Valid Entries: 129 - 144

SCREEN 1 OF 2 5ESS Switch
infltadp OFFICE DATA ADMINISTRATION
(5452) OUTGOING OSPS INTERFLOW TOLL AND ASSISTANCE IDENTIFIERS

*1. KEY 1

2. OSPS LIST

ROW	OSPS ID	OFC	BCHTGN	DCHTGN	ISERVTM
1	____	____	____	____	
2	____	____	____	____	
3	____	____	____	____	
4	____	____	____	____	
5	____	____	____	____	
6	____	____	____	____	
7	____	____	____	____	
8	____	____	____	____	

SCREEN 2 OF 2 5ESS SWITCH _
infltadp OFFICE DATA ADMINISTRATION

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(5452) OUTGOING OSPS INTERFLOW TOLL AND ASSISTANCE IDENTIFIERS

	2. OSPS LIST				
ROW	OSPS ID	OFC	BCHTGN	DCHTGN	ISERVTM
9	____	____	____	____	
10	____	____	____	____	
11	____	____	____	____	
12	____	____	____	____	
13	____	____	____	____	
14	____	____	____	____	
15	____	____	____	____	
16	____	____	____	____	

Figure 1 SAMPLE INFLTADP FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4BB: 5453 RECORD
OSPS INTERFLOW TRANSLATION IDENTIFIERS - INFLTRID

1. GENERAL

The INFLTRID form (5453 Record) is available with 5E5 and later Software Releases. The 5453 Record defines the valid translation identifiers for cooperating Interflow OSPS Switches.

When any cooperating OSPS has a generic retrofit or update requiring translations at this OSPS switch, an update with the new translation identifier is needed. These identifiers are used to insure upward and downward compatibility of the different software levels in an interflow complex.

After an interflow call is interflowed between two switches, the call is processed cooperatively by the two switches. In the process, messages and data are interflowed back and forth between the two switches via OSPS EDSLs (Primary Rate Interfaces). If the two switches are operated under different Software Releases (or BWM levels within a Software Release), a translation of the message and/or data may be necessary.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.50.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Number on each record.

2.2 * KEY

Description: This field is used to activate the form; the only valid entry is 1.

Required Field.
Valid Entries: 1

VALID TRANSLATION IDENTIFIERS

The Valid Translation Identifiers (fields Section 2.4 - Section 2.5) indicates the generic or the associated software, and is used by the cooperating switch to determine if and what type of message translation is needed. The 5453 Record contains the translation ID of this switch and a list of other translation IDs which may be recognized by this switch, and provides application compatibility between this and other switches. If the translation ID in an interflowed message does not match the IDs in the list, the message cannot be translated.

There must be at least one entry in this list.

2.3 THIS TRANS ID

Description: The field is used for Recent Change purposes only.

2.4 TRANS ID

Description: The TRANS ID field defines a translation identifier of the compatible Software Releases. The first two digits represent the software release and the third digit indicates the level within the software release. For example, the first issue of 5E5 will be 051.
Valid Entries: 51 - 255

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2.5 REMARK

Description: This field may be used to enter a remark, such as the Software Release name or point issue.
Valid Entries: 1 - 12 alphanumeric characters

---

infltrid 5ESS Switch _
(5453) OFFICE DATA ADMINISTRATION
OSPS INTERFLOW TRANSLATION IDENTIFIERS

*1. KEY 1
THIS TRANS ID

3. VALID TRANSLATION IDENTIFIERS

	TRANS ID	REMARK		TRANS ID	REMARK
1.	051	5E5(1)	6.	___	_____
2.	061	_____	7.	___	_____
3.	___	_____	8.	___	_____
4.	___	_____	9.	___	_____
5.	___	_____	10.	___	_____

Figure 1 SAMPLE INFLTRID FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4BC: 5454 RECORD
OSPS TELEPHONE CREDIT CARD ISSUER IDENTIFICATION - TCCID

1. GENERAL

The TCCID form is an ODA (Office Data Administration) input form that provides for identification of telephone calling cards other than the 14 digit LEC (Local Exchange Carrier) card. This identification will be used in the CAS (Customer Account Service) feature. With the use of CAS Release 2, other TEL (non-AT&T Telecommunication cards) in the CCITT standard format, will also be recognized. Additionally, with CAS 2, certain CCC (Commercial Credit Cards) - such as Mastercard, VISA, American Express, etc, will be accepted if they are in the ISO/ANSI standard format. This form is available with 5E5 and later Software Releases.

1.1 Recent Change View

The corresponding Recent Change View to this form is 27.55.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control GROUP Number and Office Name on each record.

2.2 *ISSUER ID DIGITS

Description: This key field is used for the Issuer ID digits of the TCR (Telephone Credit card). Enter the digits of the issuer ID.

Required Field.
Valid Entries: 00 - 9999999

Data Rules:

Entries which are substrings of other digit entries are not allowed. A substring is defined as a value of ISSUER ID DIGS on one TCCID form, which equals the leftmost digits of the ISSUER ID DIGS entered on another TCCID form. For example: if "5971234" had already been entered as a ISSUER ID DIGS value, then entries of "597" and "59712" would be substrings and would be invalid entries.

The number of digits in ISSUER ID DIGITS plus the sum of ACCT NBR LENGTH + CHECK NBR LENGTH must be less than 20.

For 5E7 and later, if the number of digits entered in the ISSUER ID DIGITS field added to the values of ACCT NBR, CHECK NBR, and PIN is equal to 14, then the corresponding TCCATTR form should not have SIGNALING TYPE of "CCS6" and PREPEND 891 set to "N". TCCATTR form corresponds to this form if the CARD ATTR ID on the TCCATTR form matches the CARD ATTR ID on this form.

For 5E9(2) and later, if the number of ISSUER ID DIGITS is greater than 4, then the corresponding TCCATTR form must have PREPEND 891 set to "N". The corresponding TCCATTR form is found by matching CARD ATTR ID with CARD ATTR ID on the TCCATTR form.

2.3 #CARD ATTR ID

Description: Enter the card attribute identification number. The attributes entered on this form are assigned to this ID.

Software Release: 5E7 and later
Required Field.

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Valid Entries: 0 - 63

Data Rules:

Every CARD ATTR ID entered on the TCCID form must have a matching CARD ATTR ID on the TCCATTR form.

2.4 #TRANS TYPE

Description: Enter the number to indicate the translation type to be used when a query is sent from the 5ESS Switch to a 2STP (Signal Transfer Point). The 2STP uses this entry and the internal tables to select the proper database to which the query is routed. The TRANS TYPE should match a TRANS TYPE on a DSAPP form (5537 Record).

Software Release: 5E7 and later
Required Field.
Valid Entries: 0 - 255

2.5 CSR ATTR ID

Description: Enter the Carrier Specific Routing Attribute ID. The CSR ATTR ID is the key into the CSRATTR form which identifies the card vendor country code, the administration ID number which indicates the foreign carrier for that card, and indicates if another carrier for call overflow is allowed.

Software Release: 5E7 and later
Valid Entries: 1 - 200

Data Rules:

If CSR ATTR ID is entered, there must be a corresponding CSRATTR form where the CSR ATTR ID on the CSRATTR form matches the CSR ATTR ID on this form.

For 5E9(1) and later, if CSR ATTR ID is entered, but SIGNALING TYPE is not set to "ICCV" on the TCCATTR form, then one or more corresponding NONUSA forms must be entered. (The corresponding TCCID form is found by matching CARD ATTR ID on the TCCATTR form with CARD ATTR ID on the TCCID form. The corresponding NONUSA form is found by matching COUNTRY on the TCCID form to HOME COUNTRY on the NONUSA form.)

QUANTITY OF DIGITS

The following fields (Section 2.6 - Section 2.10) define the options for the quantity of digits. This label applies only to 5E5 - 5E8.

2.6 ACCT NBR

Description: The name of this field was changed to ACCT NBR LENGTH in 5E9(1). This field name applies to 5E5 - 5E8. See ACCT NBR LENGTH for usage information.

2.7 # ACCT NBR LENGTH

Description: This field represents the quantity of digits in the TCR account field. If CARD TYPE is "CCC", and if the account number has more than one acceptable length (i.e some Visa cards with 13-digit account numbers and some VISA cards with 10-digit account numbers), this field must be 0. If CARD TYPE is "TEL" or "CAS", this field must have an entry. (This field was called ACCT NBR for 5E5 - 5E8.)
Valid Entries: 0 - 14

Data Rules:

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This value plus the number of digits entered in ISSUER ID DIGS plus the CHECK NBR value must not exceed a total of 19.

If ACCT NBR on the TCCID form is 0, CARD TYPE on the TCCATTR form must be "CCC".

2.8 #CHECK NBR

Description: The name of this field was changed to CHECK NBR LENGTH in 5E9(1). This field name applies to 5E5 - 5E8. See CHECK NBR LENGTH for usage information.

2.9 # CHECK NBR LENGTH

Description: This required field refers to the digits in the TCR check number field. If the Luhn Check Digit is separate from the account number, enter a 1, else enter 0. (This field was called CHECK NBR for 5E5 - 5E8.)

Required Field.
Valid Entries: 0, 1

Data Rules:

This value plus the number of digits entered in ISSUER ID DIGS plus the ACCT NBR value must not exceed a total of 19.

2.10 #PIN

Description: The name of this field was changed to PIN LENGTH in 5E9(1). This field name applies to 5E5 - 5E8. See PIN LENGTH for usage information.

2.11 # PIN LENGTH

Description: Enter the quantity of digits in the TCR PIN (Personal Identification Number). (This field was called PIN for 5E5 - 5E8.)

Required Field.
Valid Entries: 0 - 13

Data Rules:

If PIN LENGTH is 0, then EXP DATE TRMT must be "N".

2.12 DB LABEL

Description: DB LABEL is used as a heading label on the software alarm and measurements report to identify an individual or group of ICCV (International Credit Card Validation) card issuers. The entry "DFALT" is reserved for use as a "default" group of ICCV card issuers.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 5 alphanumeric characters

Data Rules:

If the SIGNALING TYPE of the corresponding TCCATTR form (found by matching the CARD ATTR ID on both forms) is "ICCV", then this field must match a DB LABEL value on the ICCVDB form (5478 Record).

2.13 COUNTRY

Description: Enter the identifier for the country of the ICCV card issuer.

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Software Release: 5E9(1) and later.
Valid Entries: 1 - 3 alphanumeric characters

Data Rules:

For 5E9(1) and later, if the SIGNALING TYPE on the corresponding TCCATTR form (found by matching the CARD ATTR ID values on both forms) is "ICCV", then the TCCID's COUNTRY field must be entered and the value entered must match either an ACCESS CODE on an IDDD form (5307 Record) or a HOME COUNTRY value on a NONUSA form (5477-1 Record).

If SIGNALING TYPE is not set to "ICCV" on the TCCATTR form and CSR ATTR ID is not entered on the corresponding TCCID form, then COUNTRY must not be entered and DB LABEL must be 0 or must not be entered on that TCCID form. (The corresponding TCCID form is found by matching CARD ATTR ID on the TCCATTR form with CARD ATTR ID on the TCCID form.)

2.14 LANGUAGE

Description: Enter the identifier for the language to be used for credit card announcements. If this field is not entered, English is the language that is used.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 3 characters

Data Rules:

If this field is entered, then a a matching DISPLAY ID value must be entered on the LANGTBL form.

2.15 ALLOW HOME CALL

Description: Is call completion allowed for a "home" call? If this is an ICCV card, this field indicates whether home country calls are allowed by this card issuer.

Software Release: 5E9(1) and later.
Default: Y
Valid Entries: Y, N

Data Rules:

If "N" is entered, COUNTRY DIRECT NUM must be entered.

If "Y" is entered, COUNTRY DIRECT NUM cannot be entered.

2.16 COUNTRY DIRECT NUM

Description: Enter the card issuer's country direct number. The TCA must enter an 800 number each time ALLOW HOME CALL is set to "N".

Software Release: 5E9(1) and later.
Valid Entries: 10 digits

Data Rules:

If ALLOW HOME CALL is "N", then this field must be entered with the card issuers country direct 800 number.

If ALLOW HOME CALL is "Y", this field cannot be entered.

2.17 DISPOSABLE CARD

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Description: Is this a disposable card? A disposable card is a prepaid card which can be used as a gift, a promotional card, or for foreigners traveling in the United States. For more information on Disposable Cards see the Purchase Limits Balance Quotation secured feature in Division 2, Section 4A24.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, the corresponding TCCATTR form must have a SIGNALING TYPE of "CCS7". (The TCCATTR form corresponds if the CARD ATTR ID on the TCCID form matches the CARD ATTR ID on the TCCATTR form.)

For 5E9(1) and later, if "Y" is entered, LANGUAGE must not be entered.

2.18 CARR GRP

Description: Enter a Carrier Group ID for which all carriers within the group will accept this card for billing purposes. If this field is not entered it indicates that all carriers accept this card. The CARR GRP field was added to support the Calling Card Screening by Carrier secured feature (SFID 374). For more information on this feature see Division 2, Section 4A374.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 200

Data Rules:

If CARR GRP is entered, then there must be a matching CARRGRP form (5492 Record) with the same CARR GRP values.

2.19 ISSUER ID TEXT

Description: Enter the issuer ID information displayed at the operator position for calling card calls. The ISSUER ID TEXT and EXP DATE TRMT fields were added to support the ACCS (Automated Calling Card Services) for CCC (Commercial Credit Cards) secured feature (SFID 388).

Software Release: 5E9(2) and later.
Valid Entries: 1 - 6 characters

2.20 EXP DATE TRMT

Description: Should CCC cards be given expiration date treatment instead of the normal PIN treatment?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PIN LENGTH is 0, then EXP DATE TRMT must be "N".

2.21 QUIET HEAR TRMT

Description: Should Quiet Hear treatment be applied based on the entry for a non-LEC card's Issuer

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Identifier as defined in the OSPS Card Recognition table? The QUIET HEAR TRMT field was added to support the Quiet Hear secured feature (SFID 402). For more information on the Quiet Hear feature, see Division 2, Section 4A402.

Software Release: 5E9(2) and later.
Required Field.
Default: Y
Valid Entries: Y, N

2.22 VMS ELIGIBLE

Description: Is this card's issuer identifier eligible for Voice Message System (VMS) treatment? For more information, see Division 2, Section 4A418.

Software Release: 5E10(1) and later.
Required Field.
Default: Y
Valid Entries: Y, N

---

tccid 5ESS Switch _
(5454) OFFICE DATA ADMINISTRATION
OSPS TELEPHONE CREDIT CARD ISSUER IDENTIFICATION

*1. ISSUER ID DIGITS _____
#2. CARD ATTR ID __
#3. TRANS TYPE ___
4. CSR ATTR ID ___
#5. ACCT NBR LENGTH __
#6. CHECK NBR LENGTH _
#7. PIN LENGTH __
8. ICCV DB LABEL _____
9. COUNTRY ___
10. LANGUAGE ___
11. ALLOW HOME CALL Y
12. COUNTRY DIRECT NUM _____
13. DISPOSABLE CARD N
14. CARR GRP ___
15. ISSUER ID TEXT _____
16. EXP DATE TRMT N
17. QUIET HEAR TRMT Y
18. VMS ELIGIBLE Y
19. DACC ALLOW Y

Figure 1 SAMPLE TCCID FORM 5E10 SOFTWARE RELEASE

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SEC. 4BD: 5455-A/B RECORD
OSPS CAS CONTRACT STATUS RECORD - CASCON

1. GENERAL

The 5455-A Record is available with 5E5 and later Software Releases. It is used for creating a CAS (Customer Account Services) contract table. The contract table is used to verify that a contract exists between AT&T and the LEC (Local Exchange Carrier) such that an AT&T calling card can be used as a billing method for LEC carried calls. For CAS Release 2, this table also defines the contractual status for CCC (Commercial Credit Cards) and other TEL (telecommunication) cards. The contractual status of a complete NPA associated with a billing number can be indicated or if necessary, the individual NXXs status can be defined.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.53.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NPA

Description: Enter the NPA (Numbering Plan Area code).

Required Field.
Valid Entries: 200 - 999

2.3 # NPA STATUS

Description: This is the indicator of the CAS NPA contract status.

Required Field.
Default: A
Valid Entries:

Valid NPA STATUS Entries

Entry	Definition
A	Allow all NXXs (contract exists).
D	Deny all NXXs (no contract exists).
P	Partial Allow (only some NXXs have contract).

Data Rules:

If the value "P" (Partial Allow) is entered, at least one entry must be made in the LIST OF NXXs. If "A" or "D" is entered, then no entries can be made in the LIST OF NXXs.

2.4 LIST OF NXXs

The LIST OF NXXs indicates whether an NXX has a contract for LEC calls to be charged to an AT&T, CCC, or TEL calling card. Entries are made in the LIST OF NXXs only if the NPA STATUS has a value of "P" (Partial Allow).

Enter "N" (No) in the appropriate space for those NXXs not contracted. Leave blank if a contract exists. The NXXs are arranged in 5-position fields; a change to any 5-position field requires the reentry of all 5 positions.

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Data Rules:
At least one entry of "N" must be made on this field if NPA STATUS is "P".

SCREEN 1 OF 3 5ESS Switch
cascon OFFICE DATA ADMINISTRATION
(5455-A/B) OSPS CAS CONTRACT STATUS

*1. NPA 312
#2. NPA STATUS A

3. LIST OF NXXs (200-399)

01234 56789	01234 56789	01234 56789	01234 56789
1. 200 _____ _____	6. 250 _____ _____	11. 300 _____ _____	16. 350 _____ _____
2. 210 _____ _____	7. 260 _____ _____	12. 310 _____ _____	17. 360 _____ _____
3. 220 _____ _____	8. 270 _____ _____	13. 320 _____ _____	18. 370 _____ _____
4. 230 _____ _____	9. 280 _____ _____	14. 330 _____ _____	19. 380 _____ _____
5. 240 _____ _____	10. 290 _____ _____	15. 340 _____ _____	20. 390 _____ _____

SCREEN 2 OF 3 5ESS Switch
cascon OFFICE DATA ADMINISTRATION
(5455-A/B) OSPS CAS CONTRACT STATUS

3. LIST OF NXXs (400-799)

01234 56789	01234 56789	01234 56789	01234 56789
21. 400 _____ _____	31. 500 _____ _____	41. 600 _____ _____	51. 700 _____ _____
22. 410 _____ _____	32. 510 _____ _____	42. 610 _____ _____	52. 710 _____ _____
23. 420 _____ _____	33. 520 _____ _____	43. 620 _____ _____	53. 720 _____ _____
24. 430 _____ _____	34. 530 _____ _____	44. 630 _____ _____	54. 730 _____ _____
25. 440 _____ _____	35. 540 _____ _____	45. 640 _____ _____	55. 740 _____ _____
26. 450 _____ _____	36. 550 _____ _____	46. 650 _____ _____	56. 750 _____ _____
27. 460 _____ _____	37. 560 _____ _____	47. 660 _____ _____	57. 760 _____ _____
28. 470 _____ _____	38. 570 _____ _____	48. 670 _____ _____	58. 770 _____ _____
29. 480 _____ _____	39. 580 _____ _____	49. 680 _____ _____	59. 780 _____ _____
30. 490 _____ _____	40. 590 _____ _____	50. 690 _____ _____	60. 790 _____ _____

SCREEN 3 OF 3 5ESS Switch _
cascon OFFICE DATA ADMINISTRATION
(5455-A/B) OSPS CAS CONTRACT STATUS

3. LIST OF NXXs (800-999)

01234 56789	01234 56789	01234 56789	01234 56789
61. 800 _____ _____	66. 850 _____ _____	71. 900 _____ _____	76. 950 _____ _____
62. 810 _____ _____	67. 860 _____ _____	72. 910 _____ _____	77. 960 _____ _____
63. 820 _____ _____	68. 870 _____ _____	73. 920 _____ _____	78. 970 _____ _____
64. 830 _____ _____	69. 880 _____ _____	74. 930 _____ _____	79. 980 _____ _____
65. 840 _____ _____	70. 890 _____ _____	75. 940 _____ _____	80. 990 _____ _____

Figure 1 SAMPLE CASCON FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4BE: 5456-A/B RECORD
OSPS CAS INVERSE CONTRACT STATUS RECORD - CASICON

1. GENERAL

The 5456-A Record is available with 5E5 and later Software Releases. It provides for creating a CAS (Customer Account Services) inverse contract table. This table is used to indicate whether a contract exists between the switch owner and the LEC (Local Exchange Carrier) such that a LEC calling card can be used as a billing method for calls carried by the switch owner. Entries are based on the NPA-NXX or RAO of the LEC calling card number. The contractual status of a complete NPA or RAO (Revenue Accounting Office) number is indicated. In the case of NPA, the individual NXX status can be defined if desired.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.54.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NUMBER

Description: Enter the NPA (Numbering Plan Area) code or the RAO (Revenue Accounting Office) code.

Required Field.
Valid Entries: 200 - 999

2.3 * TYPE

Description: This field indicates the type of number (NPA or RAO) which has been entered above.

Required Field.

Valid TYPE Entries

Entry	Definition
N	Numbering Plan Area.
R	Revenue Accounting Office.

2.4 # STATUS

Description: This field is the indicator of the CAS inverse contract status. It indicates whether an NXX has a contract for calls carried by the switch owner to be billed to a LEC calling card.

Required Field.
Default: A
Valid Entries:

Valid STATUS Entries

Entry	Definition
A	Allow all NXXs or XXXs (contract exists).
D	Deny all NXXs or XXXs (no contract exists).
P	Partial Allow (only some NXXs have contract).

Data Rules:

If "RAO" has been entered as TYPE, then only "A" or "D" are valid entries. Partial Allow ("P") is used only for "NPA" entries.

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If "A" or "D" is entered, there must not be any entries in the NXX LIST. If the value "P" (Partial Allow) is entered, then entries must be made in the NXX LIST.

2.5 NXX LIST

Description: This field indicates whether an NXX has a contract for calls carried by the switch owner to be billed to a LEC calling card. Entries are made here only if STATUS has a value of "P" (Partial Allow) and TYPE is "NPA."

Enter "N" (No) in the corresponding space for those NXXs not contracted. Leave blank if a contract exists. The NXXs are arranged in 5-position fields; a change to any 5-position field requires the re-entry of all 5 positions.
Valid Entries: N

Data Rules:

At least one entry of "N" must be made in this field if STATUS is "P".

SCREEN 1 OF 3 5ESS Switch
casicon OFFICE DATA ADMINISTRATION
(5456-A/B) OSPS CAS INVERSE CONTRACT STATUS

NPA/RAO

*1. NUMBER 704
*2. TYPE NPA
#3. STATUS A

4. NXX LIST (200-399)

	01234 56789		01234 56789		01234 56789		01234 56789
1. 200	_____ _____	6. 250	_____ _____	11. 300	_____ _____	16. 350	_____ _____
2. 210	_____ _____	7. 260	_____ _____	12. 310	_____ _____	17. 360	_____ _____
3. 220	_____ _____	8. 270	_____ _____	13. 320	_____ _____	18. 370	_____ _____
4. 230	_____ _____	9. 280	_____ _____	14. 330	_____ _____	19. 380	_____ _____
5. 240	_____ _____	10. 290	_____ _____	15. 340	_____ _____	20. 390	_____ _____

SCREEN 2 OF 3 5ESS Switch
casicon OFFICE DATA ADMINISTRATION
(5456-A/B) OSPS CAS INVERSE CONTRACT STATUS

4. NXX LIST (400-799)

	01234 56789		01234 56789		01234 56789		01234 56789
21. 400	_____ _____	31. 500	_____ _____	41. 600	_____ _____	51. 700	_____ _____
22. 410	_____ _____	32. 510	_____ _____	42. 610	_____ _____	52. 710	_____ _____
23. 420	_____ _____	33. 520	_____ _____	43. 620	_____ _____	53. 720	_____ _____
24. 430	_____ _____	34. 530	_____ _____	44. 630	_____ _____	54. 730	_____ _____
25. 440	_____ _____	35. 540	_____ _____	45. 640	_____ _____	55. 740	_____ _____
26. 450	_____ _____	36. 550	_____ _____	46. 650	_____ _____	56. 750	_____ _____
27. 460	_____ _____	37. 560	_____ _____	47. 660	_____ _____	57. 760	_____ _____
28. 470	_____ _____	38. 570	_____ _____	48. 670	_____ _____	58. 770	_____ _____
29. 480	_____ _____	39. 580	_____ _____	49. 680	_____ _____	59. 780	_____ _____
30. 490	_____ _____	40. 590	_____ _____	50. 690	_____ _____	60. 790	_____ _____

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SCREEN 3 OF 3 5ESS Switch _
casicon OFFICE DATA ADMINISTRATION
(5456-A/B) OSPS CAS INVERSE CONTRACT STATUS

4. NXX LIST (800-999)

01234 56789	01234 56789	01234 56789	01234 56789
61. 800 _____ _____	66. 850 _____ _____	71. 900 _____ _____	76. 950 _____ _____
62. 810 _____ _____	67. 860 _____ _____	72. 910 _____ _____	77. 960 _____ _____
63. 820 _____ _____	68. 870 _____ _____	73. 920 _____ _____	78. 970 _____ _____
64. 830 _____ _____	69. 880 _____ _____	74. 930 _____ _____	79. 980 _____ _____
65. 840 _____ _____	70. 890 _____ _____	75. 940 _____ _____	80. 990 _____ _____

Figure 1 SAMPLE CASICON FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4BF: 5458 RECORD
OSPS COMMERCIAL ACD PARAMETERS - CACDPARM

1. GENERAL

The 5458 Record is available with 5E6 and later Software Releases.

This form is used to define OSPS (Operator Services Position System) CACD (Commercial Automatic Call Distributor) and Call Vectoring global parameters residing in the SMs (Switching Modules). Also, the call vectoring limits that can be set by the TCA (Telephone Company Administration) are defined in the 5458 Record. Only one CACDPARM form is entered for an office.

1.1 Commercial ACD

For the 5E4(2) and 5E5 Software Releases, Commercial ACD is activated on the OSPSOPT form (5424 Record). For 5E6 and later, CACD is activated on the CACDPARM form. For 5E9(1) and later, ACD/BRCS global parameters have been added to this form.

Division 2, Section 3D, OSPS Commercial Automatic Call Distributor Services Feature Section gives information on how to provision OSPS CACD features and Call Vectoring.

See Division 2, Section 4A121 for information on how to provision the ACD/BRCS secured feature.

1.2 Call Vectoring

The CVECT form (5460 Record) defines the Call Vectoring Steps. The maximum limits for Call Vectoring steps and delays are defined on this form. The TCA (Telephone Company Administration) can limit the number of vector steps for a call. These limits prevent any infinite loops that may be defined in call vectoring by the CACD customer from consuming unlimited real-time resources. When a given limit is reached, vector processing stops, reorder tone is given to a caller if the call has not yet been queued; or if the call has been queued, it remains in queue. If no limit is specified, no limit is enforced.

Call vectoring steps are divided into a set of categories reflecting their use and real-time load. The vector step categories are:

- Queuing or transferring the call between queues
- Conditional GOTOs based on call queue or serving team state, age of the call at head of the queue or expected delay
- GOTO based on time-of-day or day-of-week
- Announcement or delay with music
- Conditional or unconditional GOTO to another vector

Any vector step that does not fall into one of these categories does not have a limit associated with it other than the limit on total vector steps. Each category has a resettable limit such that if, during vector processing, the limit for the allowable number of steps in that category is reached and vector processing is paused. The pause lasts an amount of time identified for all Call Vectoring pauses established by the TCA. If no pause limit is specified, the pause period shall be five seconds. Each forced pause resets the limits for all categories. In addition, the limits are reset each time a delay step is successfully executed or the call is successfully routed to an announcement.

In addition to the resettable limits, each category has an absolute limit on the number of steps that each call can sequence. This limit is not reset by the successful execution of a delay step or successful route to an announcement. If a step is encountered during vector processing that exceeds the limit on that step's

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category, vector processing is stopped for the call. If no limit is specified for steps in a given category, no limit is enforced for steps in that category.

In addition to the above limits, there is a global limit on the length of time that a call can be vectored without being placed in queue. The intent of this limit is to prevent calls from receiving endless vector treatment.

1.3 Recent Change View

The corresponding Recent Change view for this form is 8.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and office name on each record.

2.2 * KEY

Description: This field is the Processor ID and is always 0.

Required Field.
Valid Entries: 0

FEATURE ACTIVATION

The following fields (Section 2.3 - Section 2.4) activate the Commercial ACD features.

2.3 COMMERCIAL ACD

Description: Should CACD be activated? Enter "Y" if CACD should be activated and "N" if it should not be activated.

For 5E4(2) and 5E5, this field is on the OSPSOPT form (5424 Records).

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, the OSPS DA field on the OSPSOPT form (5424 Record) must be "Y".

2.4 CALL VECTORING

Description: Should the Call Vectoring feature be activated? Enter "Y" if Call Vectoring should be activated and "N" if it should not be activated.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E11 and later, if "Y" is entered, COMMERCIAL ACD must be "Y".

ACD/BRCS

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For 5E9(1) - 5E10, fields Section 2.5 - Section 2.7 define the office parameters for the ACD/BRCS feature. For 5E11 and later, these fields were moved to the ACDBPARM form, see Division 4, Section 32K.

2.5 SIMINTRA

Description: Enter the maximum number of simultaneous intraoffice forwarded calls allowed as an action of ACD re-routing for ACD/BRCS. For more information on ACD/BRCS feature see Division 2, Section 4A121. For 5E11 and later, this field was moved to the ACDBPARM form, see Division 4, Section 32K.

Software Release: 5E9(1) - 5E10
Required Field.
Default: 99
Valid Entries: 1 - 99

2.6 SIMINTER

Description: Enter the maximum number of simultaneous interoffice forwarded calls allowed as an action of ACD re-routing for ACD/BRCS. For more information on ACD/BRCS feature see Divison 2, Section 4A121. For 5E11 and later, this field was moved to the ACDBPARM form, see Division 4, Section 32K.

Software Release: 5E9(1) - 5E10
Required Field.
Default: 99
Valid Entries: 1 - 99

2.7 CFMAX

Description: Enter the maximum number of call forwardings as an action of ACD re-routing for ACD/BRCS. For more information on ACD/BRCS feature see Division 2, Section 4A121. For 5E11 and later, this field was moved to the ACDBPARM form, see Division 4, Section 32K.

Software Release: 5E9(1) - 5E10
Required Field.
Default: 5
Valid Entries: 1 - 32

CALL VECTORING FIELDS

The following fields (Section 2.8 - Section 2.21) specify the maximum limits for Call Vectoring commands (steps) and delays.

ABSOLUTE MAXIMUM LIMITS (A)

The following fields (Section 2.8 - Section 2.14) preceded by an "A" specify the maximum limits for call vectoring steps.

2.8 A VECTOR XFERS

Description: This field specifies the maximum number of intervector GOTOs that can be processed for a given call. An intervector GOTO is any conditional or unconditional GOTO to a step in another vector. Vector processing is stopped when this limit is reached. If the call has not been previously queued, the caller is provided with reorder. If the call has been previously queued, the caller continues to receive any active delay treatment and remains in the queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If you enter 0 in this field no limit is enforced.
Default: 20

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Valid Entries: 0 - 255

2.9 A ACD STAT QRYS

Description: This field specifies the maximum number of "GOTOAGE", "GOTOQUE", "GOTOSTA", "GOTOAVL" and "GOTODLY" steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call has not been place in a queue, the caller is given reorder. If the call has been queued, the caller continues to receive any active delay treatment, such as music, ring or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

When the field is 0, no limit is enforced.
Default: 4
Valid Entries: 0 - 255

2.10 A TOD DOW STPS

Description: This field specifies the maximum number of "GOTOTOD" and "GOTODOW" steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is given reorder. If the call is in a queue, the caller receives any active delay treatment and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If 0 is entered no limit is enforced.
Default: 10
Valid Entries: 0 - 255

2.11 A MUS ANNC STPS

Description: This field specifies the maximum number of "MUSIC", "ANNOUNC" or "PROMPT" steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is provided with reorder. If the call is in a queue, the caller receives any active delay treatment, such as music, ringing, or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If 0 is entered, no limit is enforced.
Default: 10
Valid Entries: 0 - 255

2.12 A QUEUE STPS

Description: This field specifies the maximum number of QUEUE steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller provided with reorder. If the call is in a queue, the caller receives any active delay treatment, such as music, ringing, or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If 0 is entered, no limit is enforced.
Default: 4
Valid Entries: 0 - 255

2.13 A VECTOR STPS

Description: This field specifies the total number of vector steps a call can go through while waiting for an available agent. The purpose of this field is to detect and terminate endless loops in a CACD customer's vector program. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is provided with reorder. If the call is in a queue, the caller receives any active delay treatment, such

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as music, ringing, or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If 0 is entered, no limit is enforced.
Default: 100
Valid Entries: 0 - 255

2.14 A NOT QUEUED SEC

Description: This field specifies the maximum number of seconds a call can be vectored without being placed in a queue. When this limit is reached, call vector processing is stopped and the caller is provided with reorder.

If 0 is entered, no limit is enforced.
Default: 120
Valid Entries: 0 - 255 (seconds)

2.15 A ANNC SEC

Description: This field specifies the maximum number of seconds an announcement can last, if the call was routed to that announcement and had not been placed in a queue. An announcement is stopped when this limit is reached.

If 0 is entered, no limit is enforced.
Default: 120
Valid Entries: 0 - 255 (seconds)

BETWEEN DELAYS MAXIMUM LIMITS (B)

The following fields (Section 2.16 - Section 2.20) preceded by an "B" specify the maximum limits for steps that can be processed without pausing.

2.16 B VECTOR XFERS

Description: This field specifies the maximum number of intervector GOTOs that can be processed without pausing. An intervector GOTO step is vector processing a conditional or unconditional GOTO another step in another vector. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step, defined on the CVECT form (5460 Record) is successfully processed. If the counter reaches the specified limit, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early, if an agent becomes available during the pause. Any currently active delay treatment continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If 0 is entered, no limit is enforced.
Default: 2
Valid Entries: 0 - 255

2.17 B ACD STAT QRYS

Description: This field specifies the maximum number of "GOTOAGE", "GOTOQUE", "GOTOAVL", "GOTOSTA" and "GOTODLY" steps that can be processed without pausing. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment, such as music, ringing or quiet, continues during the pause. If no delay treatment is

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active, the caller hears silence during the pause.

If 0 is entered in this field, no limit is enforced.
Default: 2
Valid Entries: 0 - 255

2.18 B TOD DOW QRYS

Description: This field specifies the maximum number of "GOTOTOD" and "GOTODOW" steps that can be processed without pausing. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step defined on the CVECT form (5460 Record) is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment,such as music, ringing or silence, continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If 0 is entered, no limit is enforced.
Default: 6
Valid Entries: 0 - 255

2.19 B MUS ANNC STPS

Description: This field specifies the maximum number of "MUSIC", "ANNOUNC" or "PROMPT" steps that can be processed without pausing. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step, defined on the CVECT form (5460 Record) is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment, such as music, ringing or silence, continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If 0 is entered, no limit is enforced.
Default: 1
Valid Entries: 0 - 255

2.20 B QUEUE STPS

Description: This field specifies the maximum number of "QUEUE" steps that can be processed without pausing. The counter used to count the steps is reset whenever an ANNOUNC, MUSIC, RING or QUIET step, defined on the CVECT form, is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If 0 is entered, no limit is enforced.
Default: 1
Valid Entries: 0 - 255

FORCE PAUSE DELAY

The Call Vectoring Global Pause Period is defined in the following field (Section 2.8).

2.21 PAUSE SEC

Description: This field specifies the length of time (in seconds) that a call can be paused if any of the

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resettable limits are reached. The value entered in this field must be greater than or equal to 5.
Default: 5
Valid Entries: 5 - 255 (seconds)

VECTOR PROMPT TIMING

The following fields (Section 2.22 - Section 2.23) define the timing for vector prompts.

2.22 FIRST DIGIT

Description: Enter the number of seconds the Call Vector Prompt feature will wait for the first digit in any prompt step.

Software Release: 5E8 and later
Valid Entries: 0 - 64 (seconds)

2.23 OTHER DIGITS

Description: Enter the seconds the Call Vector Prompt feature will wait for all other digits in a multidigit prompt step.

Software Release: 5E8 and later
Valid Entries: 0 - 64 (seconds)

```
SCREEN 1 OF 2                5ESS Switch
cacdparm                OFFICE DATA ADMINISTRATION
(5458-1/2)             OSPS COMMERCIAL ACD PARAMETERS


*1.  KEY          0


 FEATURE ACTIVATION
 2. COMMERCIAL ACD  Y
 3. CALL VECTORING  Y

    ACD/BRCS
    ________
 4. SIMINTRA  99
 5. SIMINTER  99
 6. CFMAX     05
```

```
SCREEN 2 OF 2                5ESS Switch
cacdparm                OFFICE DATA ADMINISTRATION
(5458-1/2)             OSPS COMMERCIAL ACD PARAMETERS


                        CALL VECTORING

     ABSOLUTE              BETWEEN DELAYS            FORCED
  MAXIMUM LIMITS (A)     MAXIMUM LIMITS (B)       PAUSE DELAY
```

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```
 4. A VECTOR XFERS    20    12. B VECTOR XFERS   2     17. PAUSE SEC   5
 5. A ACD STAT QRYS   4     13. B ACD STAT QRYS  2
 6. A TOD DOW QRYS    10    14. B TOD DOW QRYS   6      VECTOR PROMPT TIMING
 7. A MUS ANNC STPS   10    15. B MUS ANNC STPS  1     18. FIRST DIGIT  08
 8. A QUEUE STPS      4     16. B QUEUE STPS     1     19. OTHER DIGITS 05
 9. A VECTOR STPS     100
10. A NOT QUEUED SEC  120
11. A ANNC SEC        120
```

Figure 1 SAMPLE CACDPARM FORM 5E9(1) - 5E10 SOFTWARE RELEASES

```
SCREEN 1 OF 2                5ESS Switch
cacdparm                OFFICE DATA ADMINISTRATION
(5458-1/2)              OSPS COMMERCIAL ACD PARAMETERS

*1.  KEY          0

 FEATURE ACTIVATION
 2. COMMERCIAL ACD  N
 3. CALL VECTORING  N
```

```
SCREEN 2 OF 2                5ESS Switch
cacdparm                OFFICE DATA ADMINISTRATION
(5458-1/2)               ACD OFFICE PARAMETERS


                        CALL VECTORING

      ABSOLUTE                BETWEEN DELAYS              FORCED
   MAXIMUM LIMITS (A)         MAXIMUM LIMITS (B)          PAUSE DELAY
 4. A VECTOR XFERS    20    12. B VECTOR XFERS   2     17. PAUSE SEC   5
 5. A ACD STAT QRYS   4     13. B ACD STAT QRYS  2
 6. A TOD DOW QRYS    10    14. B TOD DOW QRYS   6      VECTOR PROMPT TIMING
 7. A MUS ANNC STPS   10    15. B MUS ANNC STPS  1     18. FIRST DIGIT  08
 8. A QUEUE STPS      4     16. B QUEUE STPS     1     19. OTHER DIGITS 05
 9. A VECTOR STPS     100
10. A NOT QUEUED SEC  120
11. A ANNC SEC        120
```

Figure 2 SAMPLE CACDPARM FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4BG: 5459 RECORD
OSPS COMMERCIAL ACD CALL VECTORING DESTINATION TN - CVDSTTN

1. GENERAL

The 5459 Record is available with 5E6 and later Software Releases.

This form defines call routing for the Call Vectoring command step ROUTE, which reroutes the caller to another telephone number. The Call Vectoring ROUTE step is defined on the CVECT form (5460 Record). ARG1, an argument in the "ROUTE" step must be populated with DEST NBR, the destination ID defined on this form. The DEST NBR provides the key to this form which gives either the Route Index (RI field) or the destination Telephone Number (TN field) for the rerouted call. The destination telephone number is billed for the forward leg of the call.

1.1 Recent Change View

The corresponding Recent Change View for CVDSTTN is 21.42. For more information on Recent Change Views that correspond to ODA forms, please see Division 0, Section 2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * DEST NBR

Description: Enter the destination number ID.

Required Field.
Valid Entries: 1 - 256

Data Rules:

A DEST NBR entered in the ARG1 field of the "ROUTE" step on the CVECT form (5460 Record) requires an entry in this field equal to ARG1.

2.3 TN

Description: Enter a 7- or 10-digit telephone number.
Valid Entries: 7 or 10 digits

Data Rules:

Either a telephone number is entered in this field or a route index is entered in the RI field, but both cannot be entered on a form.

A TN entered on this form requires that the same value is defined on one of the following forms
- ACQS,
- DSLUSR
- LINE
- MLHLN
- MLHG
- MLTITIN
- MTNDR
- PSMTN
- SHTN

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2.4 RI

Description: Enter a route index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

Either this field or the TN field must have an entry, but not both. An entry in this field requires an equivalent entry in the ROUTE INDEX field on the RTIDX form (5303 Record). The field is restricted to Private Facility trunks, i.e., the trunks have a TKCLS of "PFITT" or "PFLASH" on the TKGRP form.

```
cvdsttn                    5ESS Switch                _
(5459)              OFFICE DATA ADMINISTRATION
              OSPS COMMERCIAL ACD CALL VECTORING DESTINATION TN

*1. DEST NBR 002
 2. TN       7085107554
 3. RI       ____
```

Figure 1 SAMPLE CVDSTTN FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BH: 5460 RECORD
OSPS COMMERCIAL ACD CALL VECTORS FORM - CVECT

1. GENERAL

The 5460 record is available with 5E6 and later Software Releases. This form is used to define Call Vectoring steps that determine how an incoming call is to be treated while waiting for a CACD (Commercial Automatic Call Distributor) agent.

This record is used to identify the vector steps to be applied to a call that has been routed for call vectoring. Included among the steps that can be applied to a call are: placing the call in queue, playing an announcement or music, rerouting the caller to an alternate destination or branching to another step within the current vector or to a step in a different vector.

To apply Call Vectoring treatment to a call, the ACTIVATE field must be set to "Y". If the initial vector is not activated, all calls associated with that vector receive standard call processing treatment.

The REDIR VECTOR field diverts calls to another VECTOR ID to receive alternate Call Vectoring treatment. If the vector specified in the redirection parameter does not exist, the call is placed in its call queue and receives standard call processing treatment. Only one level of redirection is permitted. If the second vector also has a VECTOR ID populated in its REDIR VECTOR field, the second redirection is ignored and the call is provided with Call Vectoring treatment as defined by the second vector.

The initial vector, which redirects to another vector, must be activated. Any vector steps that are associated with a vector referenced during branching to a second vector are performed regardless of the activation state of the second vector.

On a single CVECT form, up to 15 steps or commands can be identified in each vector. However, longer step sequences can be created by chaining vectors together using GOTO commands. The table in Figure 1 , Call Vectoring Commands and Associated Arguments, displays the vector commands and their corresponding arguments to allow for the proper handling of the vector command.

The office maximum limits for the vector steps are set on the CACDPARM form (5458 Record). Only one CACDPARM form is entered per office.

Examples of Call Vectoring are given in Figures Figure 2 and Figure 3 at the end of this section.

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.41.

2. BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and office name on each record.

2.1 * VECTOR ID

Description: Enter the call vector number.

Required Field.
Valid Entries:
- 5E9(2) and earlier: 1 - 256
- 5E10 and later: 1 - 1024

2.2 ACTIVATE

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Description: Should this vector be activated? Enter "Y" to activate this vector; enter "N" to deactivate it. When this attribute is "N", all calls assigned to this vector receive standard treatment.

Required Field.
Default: N
Valid Entries: Y, N

2.3 REDIR VECTOR

Description: Enter the alternate Vector ID for redirection. Calls that would ordinarily receive call vectoring treatment on this form are redirected to the alternate vector number.
Valid Entries:

- 5E9(2) and earlier: 1 - 256
- 5E10 and later: 1 - 1024

Data Rules:

If the REDIR VECTOR is entered, then another CVECT form must exist which has a VECTOR ID equal to the REDIR VECTOR value on this CVECT form. This field entry cannot equal the VECTOR ID on this CVECT form.

CALL VECTOR STEPS

The following fields (Section 2.4 - Section 2.10) define the call vectoring steps for this VECTOR ID.

2.4 CMD CD

Description: Enter the call vector command code for steps 1 -15. This field defines the function to be performed by this vector step.

Valid CMD CD Entries

Entry	Definition
ANNOUNC	Connect call to announcement.
ANSWER	Return answer supervision.
BUSY	Forced busy.
DISC	Forced disconnect.
GOTO	Unconditional GOTO.
GOTOAGE	Conditional GOTO based on the age of the call at the head of a queue.
GOTOAVL	Conditional GOTO based on available agents.
GOTODLY	Conditional GOTO based on expected delay.
GOTODOW	Conditional GOTO based on the day of the week.
GOTONUM	Conditional GOTO based on TOUCH-TONE number(s) entered by caller.
GOTOQUE	Conditional GOTO based on the number of calls in a queue.
GOTOSTA	Conditional GOTO based on staffed agents.
GOTOTOD	Conditional GOTO based on the time of day.
MUSIC	Delay caller with music.
NOOP	No operation.
PROMPT	Prompt caller for a number via TOUCH-TONE digit entry.
QUEUE	Queue or transfer call.
QUIET	Delay caller with silence.
REQRTE	Software Release: 5E10 only Request Route call vectoring command for the Third Party Call Control feature. For 5E11 and later, this value was moved to the CMD CD field on the ACDVCT form (5643 Record) to support the ACD/BRCS Interworking II feature.
RING	Delay caller with audible ring.
ROUTE	Route call to remote destination.
STOP	Stop operation.

ANNOUNC - Connect call to announcement

This command is used to route a caller to an announcement identified by the RTI (Route Index). An optional error step may be defined to provide alternate treatment to the caller when an announcement

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channel cannot be obtained. If no error step is specified, vector processing will continue on to the next step.

- ARG1 - Valid entries are the route index to the announcement:

  For 5E10 and earlier: 1 - 3617

  For 5E11 and 5E12: 1 - 4000

  For 5E13 and later: 1 - 16382

  The ROUTE INDEX on an RTIDX form must equal ARG1. In addition, CI ROUTE TYPE on the RTIDX form must equal "GENANN". In addition A TKGRP form must be entered where TGN equals the TRUNK GROUP NUMBER on the above RTIDX form, TRK DIR is "ANN", and the CYCLES field on the TKGRP form cannot equal 0. Also, a TRUNK form (5204 Record) must be entered where the TGN field equals the TRUNK GROUP NUMBER on the above RTIDX form, and the first member on the TRUNK form must have MEMB equal 0.

- ARG2 - must be blank
- ERR - blank or 1 - 15 If ERR is 1 - 15
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

ANSWER - Return answer supervision

- ARG1 - must be blank
- ARG2 - must be blank
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

This command is used to return answer supervision if it has not yet been returned.

BUSY - Forced busy

- ARG1 - must be blank
- ARG2 - must be blank
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

This command is used to disconnect a caller from any active delay treatment, remove the caller from queue and return busy tone to the caller prior to disconnecting the call. This command causes the call to be removed from vector processing.

DISC - Forced disconnect

This command is used to disconnect a caller from any active delay treatment, remove the caller from queue and optionally route the caller to an announcement prior to disconnecting the call. This command

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causes the call to be removed from vector processing. See ANNOUNC command for routing to an announcement.

ARG1 - Valid entries are a blank or the route index to the announcement:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4000
- For 5E13 and later: 0 - 16382
- ARG2 - must be blank
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

DISC routes the call to the announcement indicated by the route index if given. When specified, the route index must be valid and correspond to a terminating port. The route index is also owned by the CACD customer. The route index in ARG1 must be entered in the ROUTE INDEX field on the RTIDX form (5303 Record) and the CI ROUTE TYPE field on that RTIDX form must equal "GENANN". In addition, A TKGRP form must be entered where TGN equals the TRUNK GROUP NUMBER on the above RTIDX form, the TRK DIR is "ANN", and the CYCLES field on the TKGRP form cannot equal 0. Also, a TRUNK form (5204 Record) must be entered where TGN field equals the TRUNK GROUP NUMBER on the above RTIDX form, and the first member on the TRUNK form must have MEMB equal 0.

GOTO - Unconditional GOTO

This command is used to unconditionally branch to a step in the current vector or to a step in another vector.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank,, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15, vector step number. ARG2 must be entered.

- ERR - must be blank

- COND - must be blank

- CARG1 - must be blank

- CARG2 - must be blank

GOTOAGE - Conditional GOTO based on the age of the call at the head of a queue

This command is a conditional GOTO step used to branch to a step in the current vector or to a step in another vector when the specified condition is met. The decision to branch is based on the age of the first call in the specified Call Queue (length of time the first call has been in that queue). An optional error step can be executed if the AM/CMP is in overload or the query for the queue status fails. If the query for the queue status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the age of the first call in queue is greater than 8191 seconds.

- ARG1 - Valid entries are blank or a VECTOR ID number:

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5E9(2) and earlier: 1 - 256

5E10 and later: 1 - 1024

If ARG1 is not blank, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15, vector step number; the argument must be entered.
- ERR - Valid entries are blank or 1 - 15, vector step number
- COND - Valid entries are GT or LE
- CARG1 - Valid entries are 1 - 128, number of the queue, which must equal the OSPS CALL TYPE field on the OSPSCT form (5404 Record). This number must be entered.
- CARG2 - Valid entries are 1 - 8191, threshold in seconds for the age of the first call on the specified queue. This number must be entered.

GOTOAVL - Conditional GOTO based on available agents

This conditional GOTO command is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on the current number of agents who are not busy with a call or made busy in the specified Serving Team. An optional error step can be executed if the AM/CMP is in overload or the query for the serving team status fails. If the query for the serving team status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the number of available agents is zero.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15, vector step number. This argument must be entered.
- ERR - Valid entries are blank or 1 - 15, vector step number
- COND - Valid entries are "GT" or "LE". This argument must be entered.
- CARG1 - Valid entries are 1 - 128, serving team ID, which must equal an entry in the SERVING TEAM field on the STINFO form (5402 Record). This argument must be entered.
- CARG2 - Valid entries are 0 - 4000, threshold for number of serving team. This argument must be entered.

GOTODLY - Conditional GOTO based on expected delay

This command is a conditional GOTO step used to branch to a step in this VECTOR ID or to a step in another VECTOR ID when the specified condition is met. The decision to branch is based on the expected delay for attaching a caller to an agent for calls in the specified Call Queue. An optional error step can be executed if the AM/CMP is in overload or the query for the queue status fails. If the query for the queue status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the expected delay for calls in the queue to be serviced is greater than

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8191 seconds.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15, vector step number. This argument must be entered.

- ERR - Valid entries are blank or 1 - 15, vector step number

- COND - Valid entries are "GT" or "LE"; this argument must be entered.

- CARG1 - Valid entries are 1 - 128, number of the queue, which must equal the OSPS CALL TYPE field on the OSPSCT form (5404 Record). This number must be entered.

- CARG2 - Valid entries are 1 - 8191, threshold in seconds for the expected delay for connecting a call to an agent. This argument must be entered.

GOTODOW - Conditional GOTO based on the day of the week

This conditional GOTO command is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on the current Day-of-Week. One of two conditions can be identified: the current day is Less than or Equal to,"LE", Greater Than, "GT" or Equal to, "EQ", the specified day or the current day is Included in, IN" or Excluded from, "EX", the specified day range. If the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank,, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15 vector step number; must be entered.

- ERR - must be blank

- COND - Valid entries are "GT", "LE", "IN", "EQ" or "EX"; must be entered.

- CARG1 - Enter day of the week, 1 - 7, where 1 is Monday; must be entered.

- CARG2 - must be blank if COND is "GT", "LE" or "EQ"; if COND is "IN" or "EX" then day of the week, 1 - 7, where 1 is Monday; must be entered.

GOTONUM - Conditional GOTO based on TOUCH-TONE number(s) entered by caller

This command is used in conjunction with the PROMPT command to provide branching on caller-entered digits. It is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on evaluation of the digits entered by the caller.

- ARG1 - Valid entries are blank or a VECTOR ID number:

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5E9(2) and earlier: 1 - 256

5E10 and later: 1 - 1024

If ARG1 is not blank, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15, vector step number. ARG2 must be entered.
- ERR - blank or 1 - 15
- COND - Valid entries are "EQ", "GT" or "LE"; must be entered
- CARG1 - Valid entries are caller entered digit, 0 - 32. The digit to be examined for the condition. If no digit is specified, the first digit entered by the customer is examined. This argument is optional.
- CARG2 - Enter digit value used to evaluate the condition. This value is compared with the digit indicated by CARG1. Valid entries are, 0 - 9, 11 based on the "#" key or 16 based on the empty digit.

If an entry is made in the CARG1 field, the entry specifies the caller-entered digit to be examined as part of the conditional evaluation. If no entry is made in this field, the first digit is examined. Vector Processing branches to the step specified by the optional error step of a GOTONUM command when the number of caller-entered digits is less than the value populated in the CARG1 field. When this occurs, the branch occurs immediately and evaluation of the condition is bypassed. If no error step is identified, the condition is evaluated even if the specified number of digits are not entered by the customer (the digits not entered by the caller are padded with 'empty' digits and used in the evaluation).

The entry in the CARG2 field identifies a digit value which is used in the evaluation of the condition. This value is compared against the specified caller-entered digit (or the first digit if no entry exists in the CARG1 field) to determine if the condition evaluates to TRUE or FALSE.

GOTOQUE - Conditional GOTO based on the number of calls in a queue.

This command is a conditional GOTO based on the number of calls in a queue. This command may branch to a step in the current vector or to a step in another vector if the number of calls that currently reside in the specified Call Queue is greater than "GT" less than "LE" or equal to "EQ", the specified amount in CARG2. An optional error step can be executed if the AM/CMP is in overload or the query for the queue status fails. If the query for the queue status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this vector ID is executed. If an error step is not specified, the condition is evaluated assuming that number of calls in queue is greater than 5000.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank,, then ARG1 must equal the VECTOR ID number on a CVECT form.
- ARG2 - Valid entries are 1 - 15, vector step number; this argument must be entered.
- ERR - Valid entries are a blank or 1 - 15, vector step number.
- COND - Valid entries are "GT", "LE" or "EQ"; this argument must be entered.
- CARG1 - Valid entries are 1 - 128, number of the queue, which must equal the OSPS CALL TYPE field on the OSPSCT form (5404 Record). This number must be entered.

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- CARG2 - Valid entries are 0 - 5000, threshold for calls in a queue; this argument must be entered.

GOTOSTA - Conditional GOTO based on staffed agents

This command is a conditional GOTO step used to branch to a step in the current vector or to a step in another vector when the specified condition is met. The decision to branch is based on the current number of agents logged-in to the specified Serving Team. An optional error step can be executed if the AM/CMP is in overload or the query for the serving team status fails. If the query for the serving team status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the number of agents logged-in is zero.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank,, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15, vector step number; this argument must be entered.

- ERR - Valid entries are blank or 1 - 15, vector step number

- COND - Valid entries are "GT" or "LE"; this argument must be entered.

- CARG1 - Valid entries are 1 - 128, serving team ID, which must equal an entry in the SERVING TEAM field on the STINFO form (5402 Record). This argument must be entered.

- CARG2 - Valid entries are 0 - 4000, threshold for number of agents who are not busy with a call or made busy on the specified serving team members logged-in. This argument must be entered.

GOTOTOD - Conditional GOTO based on the time of day

This conditional GOTO command is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on the current Time-of-Day. One of four conditions can be identified: the current time is Less than or Equal to, "LE" or Greater Than "GT", the specified time or the current time is Included in "IN" or Excluded from, "EX" the specified time range. If the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed.

- ARG1 - Valid entries are blank or a VECTOR ID number:

  5E9(2) and earlier: 1 - 256

  5E10 and later: 1 - 1024

  If ARG1 is not blank, then ARG1 must equal the VECTOR ID number on a CVECT form.

- ARG2 - Valid entries are 1 - 15 vector step number. This argument must be entered.

- ERR - must be blank

- COND - Valid entries are "GT", "LE", "IN" or "EX". One of these conditions must be entered.

- CARG1 - Valid entries are hours and minutes of the day. This argument must be entered. 0 - 23, first two digits are the hours of the day, 00 - 59, second two digits are the minutes of the hour

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- CARG2 - Valid entries are blank if COND is "GT" or "LE". If COND is "IN" or "EX" then valid entries are: 0000 - 2359: 00 - 23, first two digits are the hours of the day; 00 - 59, second two digits are the minutes of the hour.

MUSIC - Delay caller with music

This command provides delay treatment to a caller by routing the call to a music source identified by the Route Index. The route index must be valid and correspond to a terminating port. This route index is also owned by the CACD customer. An optional error step may be defined to provide alternate treatment to the caller if a music channel cannot be obtained. If the route attempt to the music source is unsuccessful and no error step is specified, the caller is provided with audible ring. The length of time that music is to be provided to the caller may be defined.

- If no time limit is specified and the call has been previously queued, vector processing is stopped and the caller continues to hear music until an agent is available or until the caller abandons.
- If no time limit is specified and the caller is not in a queue, the caller will get reorder.
- If no time limit is specified, and the caller is not in a queue and the A NOT QUEUED SEC set to 0 on the CACDPARM form, the caller will get reorder.

- ARG1 - Valid entries are the route index:

  For 5E10 and earlier: 1 - 3617

  For 5E11 and 5E12: 1 - 4000

  For 5E13 and later: 1 - 16382

  ARG1 must be entered. The ROUTE INDEX on an RTIDX form must equal ARG1. In addition, CI ROUTE TYPE on the RTIDX form must equal "GENANN". In addition, A TKGRP form must be entered where TGN equals the TRUNK GROUP NUMBER on the above RTIDX form, and TRK DIR is "ANN". In addition, on the above TKGRP form, CYCLES must equal 0 and BARGE IN must equal "Y". Also, a TRUNK form (5204 Record) must be entered where TGN field equals the TRUNK GROUP NUMBER on the above RTIDX form and the first member on the TRUNK form must have MEMB equal 0.

- ARG2 - Valid entries are blank or 15 - 1023, the duration of the music in seconds.
- ERR - blank or 1 - 15
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

NOOP - No operation

ARG1 - any value
- ARG2 - any value
- ERR - any value
- COND - any value
- CARG1 - any value
- CARG2 - any value

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This is the initial state for vectoring commands. This command can be used to temporarily disable steps rather than deleting them. The given step(s) remains intact but they are passed over during vector processing rather than executed.

PROMPT - Prompt caller for a number via TOUCH-TONE dialing

The PROMPT command is a secured feature. See Division 2, Section 4A for information on how to activate a secured feature.

The PROMPT command routes the caller to an announcement which prompts the called for TOUCH-TONE digit entry.

- ARG1 - Valid entries are the route index to the announcement:

  For 5E10 and earlier: 1 - 3617

  For 5E11 and 5E12: 1 - 4000

  For 5E13 and later: 1 - 16382

  This field must be entered. The ROUTE INDEX on an RTIDX form must equal ARG1. In addition, CI ROUTE TYPE on the RTIDX form must equal "GENANN". In addition, A TKGRP form must be entered where TRK DIR is "ANN" and the TGN equals the TRUNK GROUP NUMBER on the above RTIDX form. CYCLES must be equal to 1 on the TKGRP form. Also, a TRUNK form (5204 Record) must be entered where TGN field equals the TRUNK GROUP NUMBER on the above RTIDX form, and first member on the TRUNK form must have MEMB equal 0.

- ARG2 - Valid entries are 1 - 32, the number of digits expected after prompt announcement. This field must be entered.

- ERR - blank or 1 - 15

- COND - must be blank

- CARG2 - must be blank

This feature provides CACD customers with the ability to route callers to an announcement prior to delivery to an agent. The announcement is used to prompt callers for Touch-Tone input. The digits are collected and then used to provide the following functions:

- To determine the appropriate call queue (and ultimately serving team) to handle the call. This allows a caller to be connected to an agent trained specifically to handle the caller's needs.

- To provide front-end digit collection (such as a credit card number, social security number or zip code). This allows faster call handling as data is available to the agent upon position seizure.

The announcement is provided to a caller through a 13A or similar unit. Digit collection is accomplished through the use of UTDs (Universal Tone Decoders) equipped in the OSM (Originating Switching Module). When a PROMPT command is encountered in a vector, the caller is routed to the announcement unit as specified by the route index given in ARG1. ARG2 specifies the maximum number of digits to collect. Digits entered after the maximum value has been reached are not collected in this PROMPT step. An optional error step may be specified to identify call treatment if an announcement unit cannot be accessed or a UTD is not available.

The UTD is connected to the call prior to routing to the announcement. This allows callers to begin digit entry prior to the completion of the announcement. The path to the announcement is dropped once the

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first digit is entered. On variable length multi-digit entries, the "#" key may be used to signal early input termination before the specified maximum number of digits has been entered. The "*" key may be used to delete all previously entered digits. This key may be depressed at any time until the caller has entered the maximum number of digits as specified in the PROMPT command. The caller can then begin reentry of the number.

Upon termination of the prompting announcement, the caller has 8 seconds to begin digit entry. Failure to begin digit entry within 8 seconds causes Touch-Tone entry to be terminated and Vector Processing to proceed to the next step. Once digit entry has begun, the caller has 5 seconds between each digit to continue digit entry. Touch-Tone entry is terminated and Vector processing proceeds to the next step if the caller pauses for more than 5 seconds between digits. Failure to obtain an 8 second timer prior to entry of the first digit is treated as an immediate timeout and entry is terminated. Failure to obtain a timer for subsequent digits is ignored and the PROMPT command waits indefinitely for the next digit. Early input termination may also occur:

- When an agent is attached to the call prior to entry of all digits (this may only occur when the call has been queued prior to the PROMPT step)
- When the prompting announcement exceeds the length of time that an announcement can last for a call that has not been previously placed in a queue (this may only occur when the call has not been queued prior to the PROMPT step).

On multi-digit entries, the caller-entered digits are sent to the MIS as part of the vector PROMPT message. The determination of whether an entry is multi-digit or not is based on the value populated in the ARG2 field. The MIS receives a vector PROMPT message for all PROMPT steps in which the value of the ARG2 field is greater than one even if the caller enters only one digit. Single digit entries are not sent to the MIS as they are typically associated with the selection of a call queue and would not be useful to the CACD customer. A partial multi-digit entry is sent to the MIS for any of the early input termination cases discussed above.

Once the caller-entered digits have been collected, the GOTONUM command maybe used. The GOTONUM command contains a conditional argument used to determine the proper handling of a call. If the condition evaluates to TRUE, Call Vectoring treatment branches to the specified step in this VECTOR ID or to a step in another vector. If the condition evaluates to FALSE, the next step in the current vector is processed.

See Figure 2 and Figure 3 for examples of PROMPT command.

For 5E9(2) and later, if CMD CD is "PROMPT",the number of times an announcement may be repeated per call is 1, therefore the CYCLES field on the TKGRP form must be 1.

QUEUE - Queue or transfer call

This command causes a call to be placed in queue if it is not in a queue or transferred to the identified queue if the call has been queued. An error step is executed if the queue attempt fails either because the AM/CMP is in overload or the call could not be queued (e.g. the queue is full).

- ARG1 - Valid entries are 1 - 128, number of the queue, which must equal an OSPS CALL TYPE field on the OSPSCT form (5404 Record). This number must be entered.
- ARG2 - Valid entries are blank or 1 - 276, the BST display index associated with the call, which must equal the BST DISPLAY INDEX on a corresponding OBSTS form (5408 Record).
- ERR - Valid entries are vector step numbers; this parameter cannot be blank.
- COND - must be blank

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- CARG1 - must be blank
- CARG2 - must be blank

QUIET - Delay caller with silence.

This command provides delay treatment to a caller in the form of silence. The length of time that silence is provided to the caller must be specified.

- ARG1 - must be blank
- ARG2 - Valid entries are 5 - 1023, duration of quiet in seconds. ARG2 must be entered.
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

REQRTE - Software Release: 5E10 only
Request route call vectoring command for Third Party Call Control.

The REQRTE command is a secured feature (SFID 222) used to route calls to another destination based on the routing information sent by the customer's host computer to the switch. Routing choices allow the system administrator of the host computer to specify a 1 - 10 digit TN, an ACD/BRCS call type queue ID, an ACD/BRCS vector ID, or an ACD/BRCS agent ID. See Division 2, Section 4A222 for more information.

- ARG1 - Valid entries are blank or a host computer ID of 1 - 1000
- ARG2 - must be blank
- ERR - Valid entries are 1 - 15 (required vector step number to execute for error conditions)
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

RING - Delay caller with audible ring

This command provides delay treatment to a caller in the form of audible ring. The length of time that audible ring is to be provided to the caller may be defined.

- If no time limit is specified and the call has been previously queued, vector processing is stopped and the caller continues to hear audible ring until an agent is available or until the caller abandons.
- If no time limit is specified and the caller is not in a queue, the caller will get reorder.
- If no time limit is specified, and the caller is not in a queue and the A NOT QUEUED SEC set to 0 on the CACDPARM form, the caller will get reorder.

- ARG1 - must be blank

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- ARG2 - Valid entries are blank or 5 - 1023 duration of ring in seconds
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

ROUTE - Route call to remote destination

When this command is executed, the call is removed from queue and vector processing is terminated. ARG1 for the ROUTE step is the Destination Number Index and must be defined in the CVDSTTN form (5459 Record). The CVDSTTN form assigns either a 7- or 10-digit telephone number or a route index for routing the caller. The intended use of this command is to reroute calls to another destination when the queue is either closed or full and cannot handle the call.

- ARG1 - Valid entries are 1 - 256, destination ID number. This entry must equal a DEST NBR on the CVDSTTN form (5459 Record) which assigns the forwarding telephone number (TN field) or route index (RTI field).
- ARG2 - must be blank
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

STOP - Stop operation

- ARG1 - must be blank
- ARG2 - must be blank
- ERR - must be blank
- COND - must be blank
- CARG1 - must be blank
- CARG2 - must be blank

This command is used to halt further vector processing. If the call has not been queued, the caller is provided with reorder. If the call has been queued, any active delay treatment continues and the call remains in queue. The call remains in this state until the caller abandons or the caller is attached to an agent.

2.5 ARG1

Description: Enter the first argument for the vector step. See Figure 1 for types of ARG1 arguments associated with a specific Vector Command.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

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Data Rules:

If one of the GOTO steps is entered in the CMD CD field and the corresponding ARG1 is greater than 0, then a CVECT form must be entered where VECTOR ID equals that ARG1.

If "MUSIC", "DISC", "PROMPT" or "ANNOUNC" is entered in the CMD CD field, then an RTIDX form (5303 Record) must be entered with a ROUTE INDEX equal to the corresponding ARG1 and a CI ROUTE TYPE on the RTIDX form must equal "GENANN". In addition, a TKGRP form (5202 Record) must be entered where TGN equals the TRUNK GROUP NUMBER on the RTIDX form and TRK DIR on TKGRP form equals "ANN". For an entry of "ANNOUNC" or "DISC", CYCLES on the above corresponding TKGRP form cannot equal 0. For an entry of "MUSIC", the CYCLES field must equal 0 and BARGE IN must equal "Y" on that corresponding TKGRP form. For an entry of "PROMPT", the CYCLES field on the TKGRP form must be 1.

If "MUSIC", "DISC", "PROMPT" or "ANNOUNC" is entered in this field, then a TRUNK form (5204 Record) must be entered where the TGN equals the TRUNK GROUP NUMBER entry on the RTIDX form and the first member on that TRUNK form must have MEMB equal 0.

2.6 ARG2

Description: Enter the second argument for the vector step. See Figure Figure 1 for types of ARG2 arguments associated with a specific Vector Command. ARG2 of the GOTO steps cannot branch back to the same step.
Valid Entries: 1 - 1023

2.7 ERR

Description: Enter the error treatment vector step number. For example, "MUSIC" can fail to route to a music port if is is already connected to the maximum number of calls it can support. When such a failure occurs, vector processing can be diverted to another vector step by specifying that step in the ERR field.
Valid Entries: 1 - 15

2.8 COND

Description: Enter the conditional specification for a conditional GOTO statement. For example, if "LE" is entered, the branch step occurs if the condition being tested is less than or equal to the entry in CARG1 / CARG2.

Valid COND Entries

Entry	Definition
LE	Less than or equal to a value
GT	Greater than a value
IN	Included in a range of values
EX	Excluded from a range of values
EQ	Equal to a value

2.9 CARG1

Description: Enter the first conditional GOTO argument of the vector step. See Figure 1 for types of CARG1 arguments associated with a specific Vector Command.
Valid Entries: 0 - 2359

Data Rules:

If "GOTOQUE", "GOTOAGE" or "GOTODLY" is entered in the CMD CD field, then an OSPSCT form must be entered where the OSPS CALL TYPE equals the corresponding CARG1.

2.10 CARG2

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Description: Enter the second conditional GOTO argument of the vector step. See Figure 1 for types of CARG2 arguments associated with a specific Vector Command.
Valid Entries: 0 - 8191

CALL VECTORING COMMANDS AND ASSOCIATED ARGUMENTS

CMD CD	ARG1	ARG2	ERR	COND	CARG1	CARG2
NOOP						
STOP						
ANSWER						
BUSY						
DISC	[RTI]					
QUEUE	Queue #	[DISPX]	Step #			
ROUTE	DEST NBR					
ANNOUNC	RTI		[Step #]			
MUSIC	RTI	[15-1023]	[Step #]			
QUIET		5-1023				
RING		[5-1023]			,	
PROMPT	RTI	1-32	[Step #]			
REQRTE 5E10 only	Host ID		[Step #]			
GOTO	[Vector #]	Step #				
GOTOQUE	[Vector #]	Step #	[Step #]	GT/LE	Queue #	0-5000
GOTOAGE	[Vector #]	Step #	[Step #]	GT/LE	Queue #	1-8191
GOTODLY	[Vector #]	Step #	[Step #]	GT/LE	Queue #	1-8191
GOTOSTA	[Vector #]	Step #	[Step #]	GT/LE	Serv Team #	0-4000
GOTOAVL	[Vector #]	Step #	[Step #]	GT/LE	Serv Team #	0-4000
GOTOTOD	[Vector #]	Step #		GT/LE	HHMM	
GOTOTOD	[Vector #]	Step #		IN/EX	HHMM	HHMM
GOTODOW	[Vector #]	Step #		GT/LE/EQ	1-7	
GOTODOW	[Vector #]	Step #		IN/EX	1-7	1-7
GOTONUM	[Vector #]	Step #	[Step #]	GT/LE/EQ	[Digit Index]	0-16

[] - Arguments or error steps enclosed in [] are optional.
DISPX - Display index
HHMM - Hours and Minutes
Host ID - ACD/BRCS customer's host computer identification number
Queue - Queue number of call type ID
RTI - Route Index
Serv Team - Serving Team

Figure 1 CALL VECTORING COMMANDS AND ASSOCIATED ARGUMENTS

EXAMPLE 1: CALL VECTOR SCENARIO

Step	CMD CD	ARG1	ARG2	ERR Step	COND	CARG1	CARG2
1	PROMPT	304	2	6			
2	GOTONUM		4		LE		5
3	BUSY						
4	QUEUE	75		6			
5	MUSIC	2015					
6	STOP						

1. When the above vector is processed, the caller is routed to the announcement associated with ROUTE INDEX 304.
2. The announcement prompts the caller for input. A maximum of 2 digits are accepted, as specified by the value in the ARG2 field.
3. After the caller-entered digits have been collected, the "GOTONUM" command is evaluated. Because CARG1 is blank, the first digit entered is compared against the digit 5, the value identified in the CARG2 field.
4. If the first digit entered is less than or equal to 5, then the condition is evaluated as TRUE and Vector Processing branches to Step 4 in the current VECTOR ID, as specified by the value in the ARG2 field. Step 4 places the caller in call queue 75 and then provides the caller with the music source associated with ROUTE INDEX 2015 and vector processing stops because a time limit has not been specified in ARG2 of the MUSIC step (step 5). The caller is connected to the music until an agent becomes available for the call or the calling party abandons.

Figure 2 EXAMPLE 1: CALL VECTOR SCENARIO

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EXAMPLE 2: CALL VECTOR SCENARIO

Step	CMD CD	ARG1	ARG2	ERR Step	COND	CARG1	CARG2
1	PROMPT	305	32				
2	GOTONUM		5		EQ		11
3	GOTONUM		5		EQ	32	2
4	BUSY						
5	QUEUE	75		7			
6	MUSIC	2015					
7	STOP						

1. When the above vector is processed, the caller is routed to the announcement associated with ROUTE INDEX 305.
2. The announcement prompts the caller for input. A maximum of 32 digits will be accepted, as specified by the value in the ARG2 field.
3. After the caller-entered digits have been collected, the GOTONUM command identified in Step 2 is evaluated. The first digit entered, (CARG1 is blank) is compared against the "#" key, the value identified in the CARG2 field.
4. If the first digit entered is equal to "#", then the condition is evaluated as TRUE and Vector Processing branches to Step 5 in the current VECTOR ID, as specified by the value in the ARG2 field. Step 5 indicates that the caller is to be placed in call queue 75 and then Step 6 provided with the music source associated with ROUTE INDEX 2015 and vector processing stops.
5. When Step 3 is processed, the 32nd caller-entered digit, as specified by the value in the CARG1 field, is compared against the digit 2, the value identified in the CARG2 field. If the 32nd digit is equal to 2, then the condition is evaluated as TRUE and Vector Processing branches to Step 5 in the current VECTOR ID, as specified by the value in the ARG2 field. If the 32nd digit entered is not equal to 2, the condition is evaluated as FALSE and the next step, Step 4 is processed. Step 4 causes Vector Processing to stop and busy tone to be returned to the caller.

Figure 3 EXAMPLE 2: CALL VECTOR SCENARIO

```
SCREEN 1 OF 2                5ESS Switch
cvect                  OFFICE DATA ADMINISTRATION
(5460)            OSPS COMMERCIAL ACD CALL VECTORS

*1. VECTOR ID    ____2. ACTIVATE     N
3. REDIR VECTOR ____
                    4. CALL VECTOR STEPS
     CMD CD    ARG1    ARG2    ERR  COND    CARG1      CARG2
  1. ________  ____    ____    __   __      ____       ____
  2. ________  ____    ____    __   __      ____       ____
  3. ________  ____    ____    __   __      ____       ____
  4. ________  ____    ____    __   __      ____       ____
  5. ________  ____    ____    __   __      ____       ____
  6. ________  ____    ____    __   __      ____       ____
  7. ________  ____    ____    __   __      ____       ____
```

```
SCREEN 2 OF 2                5ESS Switch        _
cvect                  OFFICE DATA ADMINISTRATION
(5460)            OSPS COMMERCIAL ACD CALL VECTORS
                    4. CALL VECTOR STEPS
     CMD CD    ARG1    ARG2    ERR  COND    CARG1      CARG2
  8. ________  ____    ____    __   __      ____       ____
  9. ________  ____    ____    __   __      ____       ____
 10. ________  ____    ____    __   __      ____       ____
 11. ________  ____    ____    __   __      ____       ____
```

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12. _____ ____ ____ __ __ ____ ____
13. _____ ____ ____ __ __ ____ ____
14. _____ ____ ____ __ __ ____ ____
15. _____ ____ ____ __ __ ____ ____

Figure 4 SAMPLE CVECT FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4BI: 5461-1 RECORD
OSPS IMPROVED THIRD NUMBER ACCEPTANCE LINE EXCEPTION - EXCPT

1. GENERAL

The 5461-1 Record is available with 5E6 and later Software Releases. This record is the ITNA (Improved Third Number Acceptance) Line exception table, and indicates the TIME SET ID for a single line number or for a range of line numbers based on the calling number. See Division 2, Section 3I for more translation information for ITNA.

1.1 TIME SET ID

A TIME SET ID field is first checked on the TREAT form. If the time of day does not fall between the start and stop time specified by that TIME SET ID field or "NEVER" is entered in the TIME SET ID field, then the exception table is referenced to determine if the calling number contains a different TIME SET ID. If a different TIME SET ID is found in the exception table, then it can be determined if the time of day falls between the start and stop times for this TIME SET ID.

The TIME SET ID on this form indicates whether auto outpulsing should always be performed for the calling number or if automatic outpulsing to the third number for acceptance of the charges depends on the time of day.

1.2 Directory Numbers

Directory numbers should never overlap on EXCPT forms. An EXCPT form may not include the same directory number(s) in a range that is also entered on another EXCPT form.

1.3 NPAMAP Form

For every EXCPT form entered, a corresponding NPAMAP form (5414 Record) must be entered where the NPA and NXX are equivalent on both forms.

1.4 Recent Change View

The corresponding Recent Change View for this form is 26.32.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * NPA

Description: Enter the numbering plan area code.

Required Field.
Valid Entries: 200 - 999

Data Rules:

The NPA and NXX combination on this form must equal the same combination on an NPAMAP form.

2.3 * NXX

Description: Enter the exchange office code.

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Required Field.
Valid Entries: 200 - 999

2.4 * BEGIN LN

Description: Enter an individual line number or the first line number in a range of consecutive line numbers. The range of directory numbers (NPA-NXX-BEGIN LN through NPA-NXX-END LN) should never overlap between EXCPT forms. A minimum of 5 lines must be entered in a range.

Required Field.
Valid Entries: 0 - 9999

2.5 (*) END LN

Description: Enter the last number in a range of line numbers. This is an optional key field.
Valid Entries: 0 - 9999

Data Rules:

If an entry is made in this field, then an entry must be made in BEGIN LN and the entry in END LN must be greater than the BEGIN LN entry.

2.6 # TIME SET ID

Description: Enter the TIME SET ID. The "TSx" entries are defined by the TCA. This allows for the third party number not to be disturbed during late night hours for verification. An entry of "ALWAYS" specifies auto outpulsing to the third party number should always be performed for the calling number.

Required Field.
Valid Entries: TS1, TS2, TS3, TS4, TS5, TS6, TS7, TS8 or ALWAYS.

Data Rules:

If "TS1", "TS2", "TS3", "TS4", "TS5", "TS6", "TS7" or "TS8" is entered in the TIME SET ID field, a SETID form must be defined with that TIME SET ID.

```
excpt                    5ESS Switch          _
(5461-1)              OFFICE DATA ADMINISTRATION
        OSPS IMPROVED THIRD NUMBER ACCEPTANCE LINE EXCEPTION

  *1. NPA         708
  *2. NXX         510
  *3. BEGIN LN    6000
(*)4. END LN      ____
  #5. TIME SET ID  TS2
```

Figure 1 SAMPLE EXCPT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BJ: 5461-2 RECORD
OSPS IMPROVED THIRD NUMBER ACCEPTANCE TIME SET FORM - SETID

1. GENERAL

The 5461-2 Record is available with 5E6 and later Software Releases. This record defines the associated starting time and stopping time of the TIME SET ID for the ITNA (Improved Third Number Acceptance) feature. The combination of the START HOUR plus the START MINUTE cannot equal the STOP HOUR plus the STOP MINUTE.

1.1 TIME SET ID

The TIME SET IDs are assigned on the EXCPT form (5461-1 Record) and TREAT form (5461-4 Record). TIME SET ID has an associated start and stop time that corresponds to a time range which ITNA feature uses to determine whether it is acceptable to call the third party to obtain verbal acceptance for calling charges. For example, if it is late at night, it may not be acceptable to wake the third party for verbal acceptance.

If the time that the call is attempted takes place between the START HOUR and the STOP HOUR, automatic outpulsing occurs. Otherwise, a message is displayed to the operator indicating that verbal acceptance is required, but the time is inappropriate. See Division 2, Section 3I for translation information for ITNA.

1.2 Recent Change View

The corresponding Recent Change View for this form is 26.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * TIME SET ID

Description: Enter the TIME SET ID to be defined. These TIME SET IDs are assigned on the EXCPT form and the TREAT form.

Required Field.
Valid Entries: TS1, TS2, TS3, TS4, TS5, TS6, TS7, TS8.

2.3 # START HOUR

Description: Enter the start hour for the TIME SET ID.

Required Field.
Valid Entries: 00 - 23

2.4 # START MINUTE

Description: Enter the start minute for the TIME SET ID.

Required Field.
Valid Entries: 00 - 59

2.5 # STOP HOUR

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Description: Enter the stop hour for the TIME SET ID.

Required Field.
Valid Entries: 00 - 23

2.6 # STOP MINUTE

Description: Enter the stop minutes for the TIME SET ID.

Required Field.
Valid Entries: 00 - 59

---

setid 5ESS Switch _
(5461-2) OFFICE DATA ADMINISTRATION
OSPS IMPROVED THIRD NUMBER ACCEPTANCE TIME SET ID

*1. TIME SET ID TS2
#2. START HOUR 22
#3. START MINUTE 00
#4. STOP HOUR 06
#5. STOP MINUTE 30

Figure 1 SAMPLE SETID FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BK: 5461-3 RECORD
OSPS IMPROVED THIRD NUMBER ACCEPTANCE SPECIAL AREA CODE FORM - SPECL

1. GENERAL

The 5461-3 Record is available with 5E6 and later Software Releases. This record identifies the back third number NPAs which are being designated as special areas and should receive ITNA treatment. If an entry is found for the billing number NPA requested by the back calling party, ITNA treatment will be provided to the call. Otherwise, standard operator practices should be followed. For example, a TCA handles traffic for locations near the Canadian border and uses the Billing Validation Application for Billed Number Screening which returns an indeterminate reply. That TCA may allow the benefits of the ITNA automation by including those NPAs in this form.

See Division 2, Section 3I for translation information for ITNA.

1.1 Recent Change View

The corresponding Recent Change View for this form is 26.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * KEY

Description: Do not enter this field. This should be not be entered, because only one form is required.

2.3 NPA

Description: Enter the Numbering Plan Area Code(s) for the special area(s).

Required Field.
Valid Entries: 200 - 999

```
specl                    5ESS Switch          _
(5461-3)              OFFICE DATA ADMINISTRATION
        OSPS IMPROVED THIRD NUMBER ACCEPTANCE SPECIAL AREA CODE

*1. KEY _

                    2. LIST OF NPAS
                    ---------------

  1. 416  5. ___  9. ___ 13. ___ 17. ___ 21. ___ 25. ___ 29. ___
  2. 613  6. ___ 10. ___ 14. ___ 18. ___ 22. ___ 26. ___ 30. ___
  3. ___  7. ___ 11. ___ 15. ___ 19. ___ 23. ___ 27. ___ 31. ___
  4. ___  8. ___ 12. ___ 16. ___ 20. ___ 24. ___ 28. ___ 32. ___
```

Figure 1 SAMPLE SPECL FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BL: 5461-4 RECORD
OSPS IMPROVED THIRD NUMBER ACCEPTANCE CALL TREATMENT FORM - TREAT

1. GENERAL

The 5461-4 Record is available with 5E6 and later Software Releases. This record assigns the special and normal SET TIME IDs when the ITNA (Improved Third Number Acceptance) feature is applied to the call. The TIME SET IDs are defined in the SETID form (5461-2 Record) and give the corresponding time range when the third party number is automatically outpulsed for verbal acceptance of the charges. For example, the number is not automatically outpulsed in late evening hours.

See Division 2, Section 3I for translation information for ITNA.

1.1 Recent Change View

The corresponding Recent Change View for this form is 26.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * ORIG STAT TYPE

Description: Enter the Originating Station Types.

The data fields entered on the TREAT form must be consistent for the same ORIG STAT TYPE.

EXAMPLE: There are three ORIG STAT TYPEs of "PREPCOIN". One form entry has a CARRIER and a TGN entered. The other two only have TGNs entered. This is an error since all the "PREPCOIN" entries must have the same fields entered consistently (they do not have to match). However, it is permissible to have a TGN entered on one and a TGN range entered on another.

Valid ORIG STAT TYPE Entries

Entry	Definition
0 or OTHER	All others
1 or POSTPCOIN	Postpaid coin
2 or PREPCOIN	Prepaid coin
3 or TRUEHOTL	True hotel ACQS (Automatic Charge Quotation Service) calls
4 or ACQSOTHER	Other types of ACQS calls
5 or UNKNOWN	Type unknown
6 or NCNPUB	Non coin public
7 or NACQSHOTL	Hotel, non-ACQS

Data Rules:

If the TCA does not care what the originating station type is and would like to treat all station types the same, the "UNKNOWN" entry should be used.

2.3 (*) CARRIER

Description: Enter the CARRIER ID. LEC indicates the Local Exchange Carrier.
Valid Entries:

- For 5E6 - 5E8: 0 - 999 or LEC
- For 5E9(1) and later: 0 - 9999 or LEC

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Data Rules:

If CARRIER is entered, BEGIN TGN must be entered.

An entry in this field, other than "LEC", requires an ICF form (5305 Record) to be entered with the CARRIER ID equal to this entry. If no carrier is specified, all carriers are treated the same.

For 5E8 and later, if CARRIER is not "LEC", and BEGIN TGN and END TGN are entered, CARRIER must equal a CARRIER ID on an ICF form, with the ICF form's FEAT GRP equal to "D".

For 5E6 and 5E7 , if a CARRIER is entered on any TREAT form, then a CARRIER must be entered on all TREAT forms with that same ORIG STAT TYPE. In addition, there must be at least one TREAT form with the same ORIG STAT TYPE for each ICF form where CARRIER on the TREAT form matches CARRIER ID on the ICF form.

For 5E8 and later , separate all TREAT forms with CARRIER entered into groups which have the same ORIG STAT TYPE. For every ICF form entered in which FEAT GRP is "D", then there must be at least one TREAT form in each group (of the same ORIG STAT TYPE) where the CARRIER on the TREAT form matches the CARRIER ID on the ICF form.

2.4 (*) BEGIN TGN

Description: Enter an individual Trunk Group Number or the first number in a range of Trunk Group Numbers.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If no beginning Trunk Group Number is specified, all incoming operator trunks receive the same treatment.

A minimum of 5 Trunk Group Numbers must be entered in a range. Trunk Group Numbers in a range on one TREAT form should never overlap on the Trunk Group Numbers in a range on another TREAT form.

2.5 (*) END TGN

Description: Enter the last number in a range of Trunk Group Numbers.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If END TGN is entered, BEGIN TGN must also be entered. The END TGN entry must be greater than the BEGIN TGN entry.

2.6 # TIME SET ID

Description: Enter the TIME SET ID.

"ALWAYS" indicates the third party number will always be automatically outpulsed for verbal acceptance of the calling charges.

"NEVER" indicates that acceptance by the third party is not required. However, the EXCPT form (5461-1 Record) will be checked to see if exceptions exist to this case.

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Required Field.
Valid Entries: TSx (x=1-8), ALWAYS, or NEVER

Data Rules:

The "TSx" entries are defined on the SETID form, therefore, if "TS1", "TS2", "TS3", "TS4", "TS5", "TS6", "TS7" or "TS8" are entered in this field, there must be a SETID form defining that entry.

When the TREAT form is entered with a TIME SET ID equal to an entry other than "NEVER" or "ALWAYS", a SETID form must be entered with TIME SET ID equal to TIME SET ID on the TREAT form.

```
treat                    5ESS Switch
(5461-4)            OFFICE DATA ADMINISTRATION
        OSPS IMPROVED THIRD NUMBER ACCEPTANCE CALL TREATMENT

 * 1. ORIG STAT TYPE  OTHER
(*)2. CARRIER        288
(*)3. BEGIN TGN      0123
(*)4. END TGN        ____
 # 5. TIME SET ID    TS2
```

Figure 1 SAMPLE TREAT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BM: 5462-1 RECORD
OSPS EXTERNAL INFORMATION SYSTEM (EIS) DATA - EISDATA

1. GENERAL

The 5462-1 Record is available with 5E6 and later Software Releases. This record defines the operational parameters for a particular OSPS EIS (External Information System).

Division 2, Section 3C gives the translations for provisioning an EIS and External ARU (Audio Response Unit).

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.51.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * EIS NBR

Description: Enter the External Information System Identification Number that is assigned to the EIS. The EIS NBR is assigned to a particular EIS by the 5ESS Switch owner.
Valid Entries: 1 - 16

Data Rules:

The EIS NBR must match the DATA LINK GRP number on the corresponding OSPSDSL form (5411 Record) for all Call Processing Data Links associated with the EIS.

2.3 # EIS NAME

Description: The External Information System's Name is used to identify the EIS on other input forms. The 1 to 15 character name must be unique.

Required Field.
Valid Entries: 1 - 15 characters

Data Rules:

The entry in this field must match the following:

- EIS NAME is entered on an OPEISDB form (5462-2 Record)
- EIS NAME on the SERVDEST form (5467 Record)
- NAME field on the EISSM form (5462-3 Record)

2.4 # VENDOR

Description: Enter the name of the EIS vendor supplying the EIS.

Required Field.

Valid VENDOR Entries

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Entry	Definition
C or CCI	Software Release: 5E6 and later Computer Consoles Incorporated
CGI	Software Release: 5E7 and later. Computer Generation Incorporated
I or IBM	Software Release: 5E6 and later International Business Machines
NRP	Software Release: 5E10 and later Network Resource Platform.This value supports the AATLSOS AAP AATLSOS - AAP (Alternate Access to Language SpecificOperator Services - Automatic Access Prompting) Using CPDL (Call Processing Data Link) Interface feature.For more information on this feature, see Division 2,
TMC	Software Release: 5E9(2) and later. Tele-Matic. This value supports the ICS (Inmate CallingServices) secured feature (SFID 385 or 288). For moreinformation on this feature, see Division 2, Section4A385.
VDR	Software Release: 5E7 and later. Volt Delta Resource

Data Rules:

CCI:
If "CCI" is entered, "SET1" is automatically entered in MSG SET.

CGI:
If "CGI" is entered:

- "SET3" is automatically entered in MSG SET.
- When PRE OPER EIS is entered on the SERVDATA form, and the corresponding EISDATA form (found by matching PRE OPER EIS on the SERVDATA form with EIS NAME on the EISDATA form) has "CGI" entered as the VENDOR, then OSPS SVC CODE on the SERVDATA form must be "SPCL700". If VENDOR is not "CGI" on the EISDATA form, OSPS SVC CODE must not be "SPCL700" on the SERVDATA form. (For more information on Specialized Handling for 700 Services secured features, see Division 2, Section 4A69 and Section 4A89.)

IBM:
If "IBM" is entered:

- "SET2" is automatically entered in the MSG SET field.
- The IBMRNGS form must be submitted.
- The SERVICE CLASS on the OSPSDSL form is "EIS"
- EIS NBR on the EISDATA form matches DATA LINK GRP on the OSPSDSL form), and the DATA LINK NBR on the OSPSDSL form must be less than 255.
- PRE OPER EIS on the SERVDATA form matches EIS NAME on this form and OSPS SVC CODE on the SERVDATA form must be either "IBMLS" or "IBMINCPT".

NRP:
If VENDOR is "NRP", then MSG SET is set to "SET6".

TMC:
If "TMC" is entered, "SET5" is automatically entered in MSG SET.

If PRE OPER EIS is entered on the SERVDATA form, and the corresponding EISDATA form (found by

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matching PRE OPER EIS on the SERVDATA form with EIS NAME on the EISDATA form) has "TMC" entered as the VENDOR, then OSPS SVC CODE on the SERVDATA form must be "INMATE".

When PRE OPER EIS is entered on the SERVDATA form, and the corresponding OSPS SVC CODE on the SERVDATA form is "INMATE", the associated EISDATA form (found by matching PRE OPER EIS on the SERVDATA form with EIS NAME on the EISDATA form) must have "TMC" entered as the VENDOR.

VDR:
If "VDR" is entered, then "SET4" is automatically entered in MSG SET.

2.5 MSG SET

Description: The MSG SET field identifies the message sets supported by the EIS software interface. This field cannot be entered. It is set automatically when the VENDOR field is entered.

Valid MSG SET Entries

Entry	Definition
SET1	Software Release: 5E6 and later. CCI message set.
SET2	Software Release: 5E6 and later. IBM message set.
SET3	Software Release: 5E7 and later. CGI message set.
SET4	Software Release: 5E7 and later. VDR message set.
SET5	Software Release: 5E9(2) and later. TMC message set. This value supports the Inmate CallingServices feature (SFID 385). For more information on thisfeature, see Division 2, Section 4A385.
SET6	Software Release: 5E10 and later This value supports the AATLSOS AAP AATLSOS - AAP (Alternate Access to Language SpecificOperator Services - Automatec Access Prompting) Using CPDL (Call Processing Data Link) Interface feature.For more information on this feature, see Division 2,

2.6 SWITCH ID

Description: The Switch Identification number is a number assigned by the EIS to this 5ESS Switch.

Required Field.
Default: 0
Valid Entries: 0 - 255

2.7 MSG DELAY

Description: Message Delay is the number of 50 millisecond intervals that OSPS waits for an expected message response from the specified EIS. The default of 100 milliseconds should result in a delay of 5 seconds.

Required Field.
Default: 100
Valid Entries: 1 - 1023

2.8 MAX CALLS

Description: The Maximum Calls per link indicates the maximum number of calls to be assigned to the CPDL. This value is based on the expected number of messages required for calls that can be assigned to the CPDLs on a given EIS and the holding time of those calls. It is assumed that all CPDLs to a vendor have the same call handling capacity. If more calls occur than the MAX CALL entry for all CPDLs associated with the EIS on a single SM, these calls will be routed to an operator and must be handled manually.

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Required Field.
Default: 60
Valid Entries: 1 - 255

2.9 MAX MSGS

Description: This is the maximum number of application messages per second that can be received and sent over a CPDL operating during normal conditions.

Required Field.
Default: 10
Valid Entries: 1 - 255

2.10 NEW EIS NAME

Description: This is a Recent Change field used to assign a new name to an existing EIS.

```
                        5ESS Switch          _
eisdata               OFFICE DATA ADMINISTRATION
(5462_1)        OSPS EXTERNAL INFORMATION SYSTEM (EIS) DATA

* 1. EIS NBR    01
# 2. EIS NAME   NSCEIS
# 3. VENDOR     CCI
  4. MSG SET    SET1
  5. SWITCH ID  002
  6. MSG DELAY  0100
  7. MAX CALLS  60
  8. MAX MSGS   10

    FOR UPDATE ONLY
    _______________
    NEW EIS NAME
```

Figure 1 SAMPLE EISDATA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BN: 5462-2 RECORD
OSPS OPERATOR TO EIS AND DATA BASE MAPPING - OPEISDB

1. GENERAL

The 5462-2 Record is available with 5E6 and later Software Releases.

The 5462-2 Record assigns the EIS (External Information System) name and database key from the operator terminal to a particular serving team and service ID. This allows the proper database display and EIS interface to be provided to an operator when a call is routed to the operator's position. This is based on the operator's serving team and the service ID of the call.

The following forms may be required for OPEISDB form entires.

- STINFO form (5402 Record) is required to define the serving team number.
- SERVDATA form (5466 Record) is required to define a SVC ID (Service Identification) number.
- EISDATA form (5462-1 Record) is required if the EIS NAME is entered on this form.
- OPEXTDB form (5435 Record) is required if the TERM DB KEY is entered on this form.

Division 2, Section 3C discusses the translations required for Listing Services.

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.55.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * SERVING TEAM

Description: Serving Team number is the identification number of the the group of operators to provide a specific service.

Required Field.
Valid Entries: 1 - 128.

Data Rules:

This Serving Team number must be defined on an STINFO form (5402 Record).

2.3 * SVC ID

Description: The SVC ID (Service Identification) number defines a particular type of service.

Required Field.
Valid Entries: 1 - 1023

Data Rules:

SVC ID must be defined on a SERVDATA form (5466 Record). Each EIS NAME and SVC ID on an OPEISDB form (5462-2 Record) must have exactly one OSPS CALL TYPE on an OSPSCT form (5404

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Record), which is used as the Listing Services Recall Call Type. If LIST SVC RECALL is "Y" on an OSPSCT form, OSPS CALL TYPE is used as the Listing Services Recall Call Type for the EIS NAME on the OPEISDB form pointed to by the SERVING TEAM and SVC ID on this OSPSCT form.

2.4 EIS NAME

Description: The External Information System name is given by the 5ESS Switch to identify a particular EIS.
Valid Entries: 1 - 15 characters

Data Rules:

The EIS NAME is defined on an EISDATA form (5462-1 Record).

2.5 TERM DB KEY

Description: The TERM DB KEY (Database Key) number on the operator's VDT terminal (for 5E6 and later Software Releases) is assigned to a particular serving team and EIS identification number. The BST-LS may not utilize this field, even though it is populated for a given serving team.

Valid TERM DB KEY Entries

Entry	Definition
MAINDB	Main data base key
DB1	Soft key 1 of the operator's terminal
DB2	Soft key 2 of the operator's terminal
DB3	Soft key 3 of the operator's terminal
DB4	Soft key 4 of the operator's terminal
DB5	Soft key 5 of the operator's terminal
DB6	Soft key 6 of the operator's terminal
DB7	Soft key 7 of the operator's terminal
DB8	Soft key 8 of the operator's terminal
DB9	Soft key 9 of the operator's terminal
DB10	Soft key 10 of the operator's terminal
DB11	Soft key 11 of the operator's terminal
DB12	Soft key 12 of the operator's terminal
DB13	Soft key 13 of the operator's terminal
DB14	Soft key 14 of the operator's terminal

Data Rules:

If a TERM DB KEY is entered, the key must be defined on one or more OPEXTDB forms (5435 Record), and the SERVING TEAM and TERM DB KEY fields on both forms must match. Also, DB NAME must be the same on all OPEXTDB forms associated with the same OPEISDB form (5462-2 Record). If a TERM DB KEY is not entered, NO data base key will be activated.

5ESS Switch
opeisdb OFFICE DATA ADMINISTRATION
(5462-2) OSPS OPERATOR TO EIS AND DATABASE MAPPING

* 1. SERVING TEAM 012
* 2. SVC ID 0101
  3. EIS NAME ARU1
  4. TERM DB KEY DB10

Figure 1 SAMPLE OPEISDB FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BO: 5462-3 RECORD
OSPS SM SPECIFIC DATA FOR EIS - EISSM

1. GENERAL

The 5462-3 Record is available with 5E6 and later Software Releases.

The 5462-3 Record defines the EIS (External Information System) data specific to a particular SM. This form indicates the EIS has been assigned CPDLs (Call Processing Data Links) on this SM and specifies the minimum number of CPDLs needed to support the SM during the busy hour. It also indicates if this SM supports 5ESS Switch and EIS message interaction prior to an operator being attached to the call, i.e., pre-operator services directed by the EIS. Note that the number of CPDLs for each SM attached to an EIS can be different than the minimum number required to handle busy hour traffic. The MIN LINKS field is used by maintenance to permit a conditional removal of a CPDL from service if more CPDLs are in service then the MIN LINKS number.

The following forms are required with this form:

- EQIM form (5700-1/2 Record), where the SM number on EQIM matches the SM number on the EISSM form. The CONFIGURATION entry on the EQIM form must be "LOADED".
- OSPSDSL form (5411 Record) with a SERVICE CLASS entry of "EIS". The SM on the EISSM form must match the SM portion of the LCEN on the OSPSDSL form.
- EISDATA form (5462-1 Record) must have an entry in the EIS NAME field that matches the NAME field in the EISSM form.
- SERVDATA form (5466 Record): if the PRE OPER EIS field has an entry, then a corresponding EISSM form must exist with PRE OPER equal "Y", and NAME on the EISSM form must match the PRE OPER EIS field on the SERVDATA form.

Division 2, Section 3C contains information on the translations for an External ARU (Audio Response Unit).

1.1 Recent Change View

The corresponding Recent Change view for this form is 21.52. For more information on Recent Change views that correspond to ODA forms, please see Division 0, Section 2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * SM

Description: Enter the SM number that has CPDLs assigned to the EIS for this SM.

Required Field.
Valid Entries: 1 - 192

Data Rules:

An EQIM form (5700-1/2 Record) must be submitted for this SM and the CONFIGURATION field on the EQIM form must be "LOADED". If the SERVICE CLASS is "EIS" on the OSPSDSL form (5411 Record)

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and on a corresponding EISDATA form (5462-1 Record) the EIS NBR field on the EISDATA form matches the DATA LINK GRP on the OSPSDSL form, then the SM on the EISSM form must match the SM portion of the LCEN on the OSPSDSL form.

EIS DATA

Enter the data for the CPDLs in the next three fields (Section 2.3 - Section 2.5). At least one entry is required in each of the fields under EIS DATA.

2.3 NAME

Description: Enter the same EIS NAME specified on the corresponding EISDATA form (5462-1 Record).
Valid Entries: 1 - 15 characters

Data Rules:

If SERVICE CLASS is "EIS" on an OSPSDSL form (5411 Record), and on the corresponding EISDATA form the EIS NBR field matches the DATA LINK GRP on the OSPSDSL form, then the NAME on EISSM form must match the EIS NAME on the EISDATA form.

2.4 MIN LINKS

Description: Enter the minimum number of links assigned for each EIS. This is the minimum number of links required during the busy hour. The minimum number of links cannot be greater than the number of links assigned on the OSPSDSL form (5411 Record) for this SM and EIS.

A major alarm is sounded if the number of CPDLs in service falls below the number specified in this field. The determination of the minimum number of links required is based on the number of EIS calls that are handled by a particular EIS SM, the average work time for such calls and the average number of EIS messages associated with each of those calls. Initially this number must be an approximation until actual usage statistics are monitored to determine if greater or fewer CPDLs are required.
Valid Entries: 0 - 16

2.5 PRE OPER

Description: Are the CPDLs on this SM to be used to communicate with the EIS prior to an operator being attached to the call? The pre-operator services are controlled by the EIS, therefore, this feature must be supported by the associated EIS vendor. Enter "N" if this SM does not communicate with the EIS prior to an operator seizure.
Valid Entries: Y, N

5ESS Switch _
eissm OFFICE DATA ADMINISTRATION
(5462-3) OSPS SM SPECIFIC DATA FOR EIS

* 1. SM 005

2. EIS DATA

	NAME	MIN LINKS	PRE OPER
1.	NSCEIS	04	N
2.	_____	__	_
3.	_____	__	_
4.	_____	__	_
5.	_____	__	_
6.	_____	__	_

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7. _____ __ _
8. _____ __ _

Figure 1 SAMPLE EISSM FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BP: 5463 RECORD
OSPS COUNTRY CODE TO COUNTRY NAME MAPPING FORM - CCNAME

1. GENERAL

The 5463 Record is available with 5E6and later Software Releases. The form is used to map Country Number to a 15-character country name. This information is used for DIOR (Direct International Origination) calls. It also specifies whether automated calling card initial and sequence calls are allowed from this country. If the DIOR Sequence Call Enhancements feature is active, then it can specify automated initial and sequence calls by carrier within a country number.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.81. The view number was changed from 27.7 to 27.81 enabling all new views to be grouped together which were added to support the various DIOR features.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * COUNTRY NUMBER

Description: Enter the DIOR (Direct International Originations) country number.

Required Field.
Valid Entries: 200 - 999

2.3 COUNTRY NAME

Description: Enter the Country Name associated with the Country Number.
Valid Entries: 1 to 15 characters

2.4 AUTO HNDLG ALLOW

Description: Are DIOR initial and sequence calls eligible for automated handling?
Default: N
Valid Entries: Y, N

2.5 IDDD CAC

Description: Enter the IDDD (International Direct Distance Dialing) CAC (Country Access Code) that corresponds to the country number specified in the COUNTRY NUMBER field, with the exception of 809. If the IDDD CAC is 809, enter the NXX (see the IS 809 NXX field below.) The fields IDDD CAC and IS 809 NXX were added for the DIOR (Direct International Originations) Toll Free 800 feature. For more information on this feature, see Division 2, Section 3K on DIOR features.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 808, 810 - 999

Data Rules:

IDDD CAC cannot be 0.

If IDDD CAC is entered, IS 809 NXX must be entered, and conversely if this field is not entered, IS 809

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NXX must not be entered.

2.6 IS 809 NXX

Description: Is the code entered in the IDDD CAC field the NXX for a Caribbean country code?

Software Release: 5E9(1) and later.
Required Field.
Default: N (5E9(2) and later)

Valid Entries: Y, N

Data Rules:

If "Y" is entered, then IDDD CAC must be entered.

2.7 AP QUEUE

Description: Should the Automated Position queue be used when an automated call needs to be sent to a position from this country? The AP QUEUE field supports the DIOR Automated Initial Calls Release 3 feature. For more information on this feature, see Division 2, Section 3K on DIOR features.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.8 NRA CC

Description: Enter a country code other than the IDDD CAC (International Direct Distance Dialing Country Access Code) for DIOR NRA (Network Remote Access) calls originating from the country specified in the COUNTRY NUMBER field. This country code is used to determine call completion permissions. This field should not be entered (i.e., blank) if the IDDD CAC is used for NRA calls. The NRA CC field was added to support the DIOR (International Originations) Network Remote Access feature. For more information on this feature, see Division 2, Section 3K on provisioning DIOR features.

Software Release: 5E9(2) and later.
Valid Entries: 1 - 999

CARRIER HANDLING PERMISSIONS (CARRHNDLG)

The following fields (Section 2.9 - Section 2.12) define the carrier handling permissions for each possible carrier for a country number. This is a positional list where each element corresponds to a particular possible carrier. If a carrier does not exist for a country, these list element entries must be left blank.

The list of carrier permissions supports the DIOR Sequence Call Enhancements special feature. For more information on this feature, see Division 2, Section 3K.

Data Rules:
For each carrier, AUTO INIT, AUTO SEQ, DIOR OTTO, and APQ must all be entered or all be blank.

2.9 AUTO INIT

Description: Are automated initial calls allowed from this carrier? This field indicates if DIOR initial calls are eligible for automated handling by this carrier.

Software Release: 5E9(1)
Valid Entries: Y, N

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Data Rules:

For each carrier, AUTO INIT, AUTO SEQ, DIOR OTTO, and APQ must all be entered or all be blank.

2.10 AUTO SEQ

Description: Are automated sequence calls allowed from this carrier? This field indicates if DIOR sequence calls are eligible for automated handling by this carrier.

Software Release: 5E9(1)
Valid Entries: Y, N

Data Rules:

For each carrier, AUTO INIT, AUTO SEQ, DIOR OTTO and APQ must all be entered or all be blank.

2.11 DIOR OTTO

Description: Is the DIOR OTTO (Offer Transfer To Operator) feature available to this carrier?

Software Release: 5E9(1)
Valid Entries: Y, N

Data Rules:

For each carrier, AUTO INIT, AUTO SEQ, DIOR OTTO, and APQ must all be entered or all be blank.

2.12 APQ

Description: Should the Automated Position queue be used when an automated call from this carrier needs to be sent to a position? The APQ field supports the DIOR Automated Initial Calls Release 3 feature. For more information on this feature see Division 2, Section 3K on DIOR features.

Software Release: 5E9(2) and later.
Valid Entries: Y, N

Data Rules:

For each carrier, AUTO INIT, AUTO SEQ, DIOR OTTO, and APQ must all be entered or all be blank.

AFRICA	
COUNTRY NAME	**COUNTRY NUMBER**
Egypt	200
Morocco	212
Algeria	213
Tunisia	216
Libya	218
Gambia	220
Senegal	221
Mauritania	222
Mali	223
Guinea	224
Ivory Coast	225
Bourkina Fasso	226
Niger Rep	227
Togolese Rep	228
Benin	229
Mauritius	230
Liberia	231
Sierra Leone	232
Ghana	233
Nigeria	234

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Chad	235
Cnt African Rep	236
Cameroon	237
Cape Verde	238
Sao Tome	239
Equator. Guinea	240
Gabonese Rep	241
Congo	242
Zaire	243
Angola	244
Guinea-Bissau	245
Diego Garcia	246
Ascension Is.	247
Seychelles	248
Sudan	249
Rwandese Rep	250
Ethiopia	251
Somali Dem Rep	252
Djibouti	253
Kenya	254
Tanzania	255
Uganda	256
Burundi	257
Mozambique	258
Zanzibar	259
Zambia	260
Madagascar	261
Reunion	262
Zimbabwe	263
Namibia	264
Malawi	265
Lesotho	266
Botswana	267
Swaziland	268
Comoros	269
South Africa	270

Figure 1 COUNTRY NUMBERS

EUROPE	
COUNTRY NAME	**COUNTRY NUMBER**
Faroe Islands	298
Greenland	299
Greece	300
Netherlands	310
Belgium	320
France	330
Andorra	331
Monaco	332
Spain	340
Gibraltar	350
Portugal	351
Luxembourg	352
Ireland	353
Iceland	354
Albania	355
Malta	356
Cyprus	357
Finland	358
Bulgaria	359
Hungary	360
German Dem Rep	370
Yugoslavia	380
Italy	390
San Marino	391
Vatican City	392
Romania	400
Switzerland	410
Liechtenstein	411
Czechoslovakia	420
Austria	430
United Kingdom	440
Denmark	450
Sweden	460

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Norway	470
Poland	480
Germany (FRG)	490

Figure 2 COUNTRY NUMBERS

CENTRAL AMERICA/SOUTH AMERICA	
COUNTRY NAME	**COUNTRY NUMBER**
Falkland Is.	500
Belize	501
Guatemala	502
El Salvador	503
Honduras	504
Nicaragua	505
Costa Rica	506
Panama	507
St. Pierre	508
Haiti	509
Peru	510
Mexico	520
Mexico	521
Mexico	522
Mexico	523
Mexico	524
Mexico	525
Mexico	526
Mexico	527
Mexico	528
Mexico	529
Mexico(see also Carribean)	
Cuba	530
Guantanamo Bay	539
Argentina	540
Brazil	550
Chile	560
Colombia	570
Venezuela	580
Guadeloupe	590
Bolivia	591
Guyana	592
Ecuador	593
Guiana	594
Paraguay	595
Martinique	596
Suriname	597
Uruguay	598
Netherlands Ant	599
Aruba	297

Figure 3 COUNTRY NUMBERS

SOUTHEAST ASIA/AUSTRALIA/SOUTH PACIFIC	
COUNTRY NAME	**COUNTRY NUMBER**
Malaysia	600
Australia	610
Indonesia	620
Philippines	630
New Zealand	640
Singapore	650
Thailand	660
Mariana Islands	670
Guam	671
Australian Terr	672
Brunei	673
Nauru	674
Papula	675
Tonga	676
Solomon Islands	677
Vanuatu	678
Fiji	679
Palau	680
Wallis/Futuna	681
Cook Islands	682
Niue Island	683

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American Samoa	684
Western Samoa	685
Kiribati Rep	686
New Caledonia	687
Tuvalu	688
French Polynes.	689
Tokelan	690
Micronesia	691
Marshall Is.	692

Figure 4 COUNTRY NUMBERS

USSR/CARRIBEAN/ASIA	
COUNTRY NAME	**COUNTRY NUMBER**
USSR	700
Anguilla	710
Antigua	711
Bahamas	712
Barbados	713
Bermuda	714
Br. Virgin Is.	716
Cayman Is.	717
Dominica	718
Dominican Rep	719
Grenada	720
Jamaica	721
Monserrat	722
St. Kitts	726
St. Lucia	727
St. Vincent	728
Trinidad/Tobago	729
Turks/Caicos	730
Mexico	759
St. Eustatius	793
Saba	794
St. Maarten	795
Costa Rica	796
Bonnaire	797
Curacao	799
Japan	810
Korea	820
Viet Nam	840
Dem Rep Korea	850
Hong-Kong	852
Macao	853
Dem Kampuchea	855
Lao Dem Rep	856
China (PRC)	860
Bangladesh	880
Taiwan	886
Turkey	900
India	910
Pakistan	920
Afghanistan	930
Sri Lanka	940
Burma	950
Maldives	960
Lebanon	961
Jordan	962
Syrian Arab Rep	963
Iraq	964
Kuwait	965
Saudi Arabia	966
Yemen Arab Rep	967
Oman	968
Yemen	969
United Arab Em.	971
Israel	972
Bahrain	973
Qatar	974
Mongolian Rep	976
Nepal	977
Iran	980

Figure 5 COUNTRY NUMBERS

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```
                    5ESS Switch          _
ccname              OFFICE DATA ADMINISTRATION
(5463)        OSPS COUNTRY NUMBER TO COUNTRY NAME MAPPING

*1. COUNTRY NUMBER  ___              4. IDDD CAC  ___
#2. CONNTRY NAME    _______________      5. IS 809 NXX _
 3. AUTO HNDLG ALLOW N

          6. CARRIER HANDLING PERMISSIONS (CARRHNDLG)
             AUTO AUTO DIOR              AUTO AUTO DIOR
    ROW  CARRIER INIT SEQ  OTTO     ROW  CARRIER INIT SEQ  OTTO
     1    0    _  _  _      6    5    _  _  _
     2    1    _  _  _      7    6    _  _  _
     3    2    _  _  _      8    7    _  _  _
     4    3    _  _  _      9    8    _  _  _
     5    4    _  _  _     10    9    _  _  _
```

Figure 6 SAMPLE CCNAME FORM 5E9(1) SOFTWARE RELEASE

```
                    5ESS Switch          _
ccname              OFFICE DATA ADMINISTRATION
(5463)        OSPS COUNTRY NUMBER TO COUNTRY NAME MAPPING

*1. COUNTRY NUMBER  ___              4. IDDD CAC  ___   7. NRA CC ___
#2. CONNTRY NAME    _______________      5. IS 809 NXX N
 3. AUTO HNDLG ALLOW N              6. AP QUEUE   N

          8. CARRIER HANDLING PERMISSIONS (CARRHNDLG)
             AUTO AUTO DIOR              AUTO AUTO DIOR
    ROW  CARRIER INIT SEQ  OTTO APQ
     ROW  CARRIER INIT SEQ  OTTO APQ
     1    0    _  _  _  _      6    5    _  _  _  _
     2    1    _  _  _  _      7    6    _  _  _  _
     3    2    _  _  _  _      8    7    _  _  _  _
     4    3    _  _  _  _      9    8    _  _  _  _
     5    4    _  _  _  _     10    9    _  _  _  _
```

Figure 7 SAMPLE CCNAME FORM 5E9(2) SOFTWARE RELEASE

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SEC. 4BQ: 5464 RECORD
OSPS INTERNATIONAL TERMINATING RESTRICTIONS - TPRINTL

1. GENERAL

The 5464 Record is available with 5E6 and later Software Releases. For 5E6 - 5E9(1), this form was the TPRCC form for OSPS Terminating Country Permission. For 5E9(2) and later, this form is the OSPS International Terminating Restrictions form, TPRINTL. This form defines the countries that DIOR (Direct International Originations) can terminate to. For those DIOR calls allowed to terminate to certain foreign countries, the DIOR service provider (the carrier for the call) and each allowable terminating Country Code must be specified in this form.

The OSPS International Terminating Restrictions provides TERM CC and ADDITIONAL DIGITS information to screen/restrict calls to specific international forward numbers or groups of numbers. It also specifies the treatment to be given to DIOR, AATOS, AATLSOS, and wireless call types to the entered international forward numbers or groups of numbers.

The terminating end of a DIOR call is not permitted to route to a foreign country unless that carrier and Country Code have been entered in this form.

For a listing of country names and associated Country Codes refer to the CCNAME form (5463 Record).

1.1 Terminating Point Restrictions for International Numbers

For 5E9(2) and later, ITPR (Terminating Point Restrictions for International Numbers) is a feature that must be purchased by the office before the TPRINTL forms can be used. Therefore, the ACT field for SFID 387 on the SFSYS form (5713-1 Record) must be "Y", before any entries are made on this form.

1.2 Recent Change View

The corresponding Recent Change View for this form is 27.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CARRIER ID

Description: Enter the ID number of the carrier that will provide DIOR service to the country specified in the COUNTRY CODE field.
Valid Entries: 0 - 9999

Data Rules:

For 5E9(1) and earlier, Each entry in this field requires a duplicate entry in the CARRIER ID field on an ICF form (5305 Record), and for 5E8 - 5E9(1)and later, the ICF form's FEAT GRP must equal "D".

For 5E9(1) only, if the value in this field matches the value of the CARRIER ID on the ICF with "D" entered in the FEAT GRP field, then the CARRIER TYPE on the ICF form must be either "INC" or "CONSOL".

For 5E9(2) and later, the only value entered is 0288.

2.3 * COUNTRY CODE

Description: The name of this field was changed to TERM CC in 5E9(2). This field name applies to 5E9(1)

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and earlier. See TERM CC for usage information.

2.4 * TERM CC

Description: Terminating Country Code of the international forward number which is used to screen the call for restrictions. This field was called COUNTRY CODE for 5E9(1) and earlier.

Required Field.
Valid Entries: 1 - 999

Data Rules:

For 5E10 and later, TERM CC cannot be 0.

2.5 (*) ADDITIONAL DIGITS

Description: The ADDITIONAL DIGITS field more precisely identifies any screening to be done beyond the TERM CC. Leave blank to specify the TERM CC only, or enter enough digits such that the number of digits in the TERM CC field added to the number of digits in this field add up to a total of 4 to 6 digits, or enter an entire international forward number except for the country code.

If any digits are entered in this field, the total number of digits calculated by adding the length of the TERM CC field and this field must be at least 4.

If a total of 4 to 6 digits are entered between the two fields, all calls of the types below to any international forward number that consists of the same first 4- to 6-digits receive the treatment indicated for that call type.

If no digits are entered in this field, treatment specified below for any given call type is given on all calls to the country code entered in the TERM CC field.

If 7 or more digits are entered, they are assumed to be an entire international forward number, and matching is only attempted on the entire digit string for screening purposes.

Software Release: 5E9(2) and later.
Valid Entries: 0 - 14 digits

2.6 EXPLANATION

Description: The EXPLANATION field is a no-change field that displays a reminder of how the data entered in the ADDITIONAL DIGITS field will be used. This field cannot be entered.

If a total of 7 or more digits is entered in a combination of the TERM CC and ADDITIONAL DIGITS fields the phrase "Full Number Match Only" is displayed; otherwise, the phrase "Any Partial Number Match" is displayed.

Software Release: 5E9(2) and later.

2.7 DIOR TRMT

Description: OSPS International Terminating Restriction Treatment given to DIOR calls.

Software Release: 5E9(2) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid DIOR TRMT Entries

Entry	Definition

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ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.8 AATOS TRMT

Description: OSPS International Terminating Restriction Treatment given to AATOS calls.

Software Release: 5E9(2) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid AATOS TRMT Entries

Entry	Definition
ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.9 AATLSOS TRMT

Description: OSPS International Terminating Restriction Treatment given to AATLSOS calls.

Software Release: 5E9(2) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid AATLSOS TRMT Entries

Entry	Definition
ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.10 WIRELESS TRMT

Description: OSPS International Terminating Restriction Treatment given to WIRELESS calls.

Software Release: 5E9(2) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid WIRELESS TRMT Entries

Entry	Definition
ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.11 QUIET HEAR TRMT

Description: Should Quiet Hear treatment be applied on an international forward number as defined in the OSPS International Terminating Restrictions table?

The QUIET HEAR TRMT field was added to support the Quiet Hear feature. For more information on this feature, see Division 2, Section 4A402.

Software Release: 5E9(2) and later.
Required Field.

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Default: N
Valid Entries: Y, N

```
tprcc                    5ESS Switch        _
(5464)              OFFICE DATA ADMINISTRATION
                OSPS TERMINATING COUNTRY PERMISSIONS

*1. CARRIER     001
*2. COUNTRY CODE 353
```

Figure 1 SAMPLE TPRCC FORM 5E6 - 5E9(1) SOFTWARE RELEASES

```
                         5ESS Switch        _
tprintl              OFFICE DATA ADMINISTRATION
(5464)         OSPS INTERNATIONAL TERMINATING RESTRICTIONS

    CARRIER ID       0288
  *2. TERM CC        ___
(*)3. ADDITIONAL DIGITS _______________
    EXPLANATION      ____________________________
  5. DIOR TRMT       ALLOW
  6. AATOS TRMT      ALLOW
  7. AATLSOS TRMT    ALLOW
  8. WIRELESS TRMT   ALLOW
  9. QUIET HEAR TRMT N
```

Figure 2 SAMPLE TPRINTL FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 4BR: 5465 RECORD
OSPS TERMINATING NPA NXX RESTRICTIONS FORM - TPRNPA

1. GENERAL

The 5465 Record is available with 5E6 and later Software Releases. This form defines the terminating point restrictions data for a DIOR (Direct International Origination) call with a domestic forward number.

An entry in this record indicates that a DIOR call is not allowed to terminate to the identified NPA or NPA NXX.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CARRIER

Description: Enter the carrier ID number of the carrier providing DIOR service for the call.
Valid Entries: 0 - 9999

Data Rules:

For every CARRIER entry on this form, a corresponding ICF form must have "D" entered in the FEAT GRP field. Forms correspond if the entry in this field is equal to the entry in the CARRIER ID field on the ICF form.

2.3 * NPA

Description: Enter the Numbering Plan Area code.
Valid Entries: 200 - 999

2.4 (*)NXX

Description: Enter the Office Code.
Valid Entries: 0 - 999

Data Rules:

If LINE is entered, NXX must be entered.

2.5 (*) LINE

Enter the forward line number (the local DN minus the office code). If this field is blank, the entire NPA or entire NPA and NXX is specified. The LINE, DIOR TRMT, AATOS TRMT, AATLSOS TRMT, and WIRELESS TRMT fields support the TPR (Terminating Point Restrictions) Expansion feature. For more information on this feature, see Division 2, Section 4A371.

Data Rules:
If LINE is entered, then NXX must be entered.

2.6 DIOR TRMT

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Description: Enter the type of Terminating Point Restriction Expansion treatment to be given to DIOR calls. The LINE, DIOR TRMT, AATOS TRMT, AATLSOS TRMT, and WIRELESS TRMT fields support the TPR (Terminating Point Restrictions) Expansion feature. For more information on this feature, see Division 2, Section 4A371

Software Release: 5E9(1) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid DIOR TRMT Entries

Entry	Definition
ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.7 AATOS TRMT

Description: Enter the type of Terminating Point Restriction Expansion treatment to be given to AATOS calls.

Software Release: 5E9(1) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid AATOS TRMT Entries

Entry	Definition
ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.8 AATLSOS TRMT

Description: Enter the type of Terminating Point Restriction Expansion treatment to be given to AATLSOS calls.

Software Release: 5E9(1) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid AATLSOS TRMT Entries

Entry	Definition
ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.9 WIRELESS TRMT

Description: Enter the type of Terminating Point Restriction Expansion treatment given to wireless calls.

Software Release: 5E9(1) and later.
Required Field.
Default: ALLOW
Valid Entries:

Valid WIRELESS TRMT Entries

Entry	Definition

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ALLOW	Call Allowed.
ANN	Blocked. Send to Announcement
OPER	Blocked. Send to Operator.
RESTR	Restricted. Send to operator (operator override allowed).

2.10 QUIET HEAR TRMT

Description: Should Quiet Hear treatment be applied on a domestic forward number as defined in the OSPS Terminating NPA NXX Restrictions Table?

This field supports the QUIET HEAR feature. For more information on this feature, see Division 2, Section 4A402.

Software Release: 5E9(2) and later.
Required Field.
Default: Y
Valid Entries: Y, N

```
tprnpa                  5ESS Switch                _
(5465)              OFFICE DATA ADMINISTRATION
                OSPS TERMINATING NPA-NXX RESTRICTIONS

 *1. CARRIER 288
 *2. NPA    201
(*)3. NXX   999
```

Figure 1 SAMPLE TPRNPA FORM 5E6 - 5E8 SOFTWARE RELEASES

```
tprnpa                  5ESS Switch                _
(5465)              OFFICE DATA ADMINISTRATION
                OSPS TERMINATING NPA-NXX RESTRICTIONS

 *1. CARRIER     ____
 *2. NPA         ___
(*)3. NXX        ___
(*)4. LINE       ____
  5. DIOR TRMT   ALLOW
  6. AATOS TRMT  ALLOW
  7. AATLOS TRMT ALLOW
  8. WIRELESS TRMT ALLOW
```

Figure 2 SAMPLE TPRNPA FORM 5E9(1) SOFTWARE RELEASE

```
tprnpa                  5ESS Switch                _
(5465)              OFFICE DATA ADMINISTRATION
                OSPS TERMINATING NPA-NXX RESTRICTIONS

 *1. CARRIER     ____
 *2. NPA         ___
(*)3. NXX        ___
(*)4. LINE       ____
  5. DIOR TRMT   ALLOW
  6. AATOS TRMT  ALLOW
```

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7. AATLOS TRMT ALLOW
8. WIRELESS TRMT ALLOW

9. QUIET HEAR TRMT Y

Figure 3 SAMPLE TPRNPA FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 4BS: 5466 RECORD
OSPS SERVICE DATA FOR LISTING SERVICES CALLS - SERVDATA

1. GENERAL

The 5466 Record is available with 5E6 and later Software Releases. This record defines, for the 5ESS Switch owner, the EIS service parameters. A Service ID is assigned to each call queue to determine the treatment each call is to receive. The SVC ID is assigned to serving teams on the OSPSCT form (5404 Record). Division 2, Section 3C discusses the translations required for an EIS and an External ARU (Audio Response Unit).

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.54.

2. FORM AND RECORD ENTRIES - 5466 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * SVC ID

Description: The Service Identification number is assigned by the switch owner to identify the specific service parameters.
Valid Entries: 1 - 1023

Data Rules:

For 5E9(1) and later, if an entry is made on this form, then the LSTG SVC field on the OSPSOPT form must have an entry.

2.3 INITIAL ACTION

Description: This field is for call processing use at call origination to determine the initial treatment to be given to the call.

Required Field.
Default: TOOPR
Valid Entries:

Valid INITIAL ACTION Entries

Entry	Definition
ASKEIS or A	Request action from EIS.
REORDER or R	Route to reorder.
TODEST or TOD	Route directly to service destination.
TOOPER or TOO	Route directly to operator.

Data Rules:

If "ASKEIS" is entered:

- PRE OPER EIS must be entered
- OSPS SVC CODE cannot be "IBMLS"
- SVC DEST must not be entered
- for 5E9(2) only, INT ANNC TYPE must not be entered unless OSPS SVC CODE is "SRVC7", then it

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must be entered.

- for 5E10 and later,
  - and OSPS SVC CODE is "INMATE", then INT ANNC TYPE must be 150.
  - and OSPS SVC CODE is "AAP"
  - and OSPS SVC CODE is "SRVC8" INT ANNC TYPE must be 317.
- for 5E11 and later,
  - and OSPS SVC CODE is "AAP", then INT ANNC TYPE must be 317.

When PRE OPER EIS is entered on the SERVDATA form, and when the associated INITIAL ACTION field is "ASKEIS", a corresponding EISSM form (5462-3 Record) must exist where PRE OPER is "Y" and NAME on the EISSM form matches PRE OPER EIS on the SERVDATA form.

If "REORDER" or "TOOPER" are entered, INT ANNC TYPE, PRE OPER EIS, and SVC DEST must not be entered.

If "TOOPER" is entered, OSPS SVC CODE cannot be:
- "AAP"
- "IBMINCPT"
- "INMATE"
- "SPCL700"
- "SRVC7" (5E9(2) - 5E10)

If "TODEST" is entered, SVC DEST must be entered.

2.4 PRE OPER EIS

Description: The pre-operator EIS name is used when the call is to establish an interface with an EIS to obtain initial routing instructions, i.e., before being routed to an operator position. This can be used to provide an EIS directed announcement based on call related data, such as, the time of day, the day of the week, etc. Enter the name that is defined on the EISDATA form (5462-1 Record).
Valid Entries: 1 - 15 characters

Data Rules:

PRE OPER EIS and SVC DEST fields are the keys to the SERVDEST form (5467 Record).

If PRE OPER EIS is entered, then a corresponding EISSM form (5462-3 Record) must exist where PRE OPER is "Y" and NAME on the EISSM form matches PRE OPER EIS on the SERVDATA form.

A second OPEISDB form (5462-2 Record) and a second OSPSCT form (5404 Record) are required for the first OSPSCT form if LIST SVC RECALL on the first OSPSCT form is "Y" and PRE OPER EIS entry on the corresponding SERVDATA form is different than the EIS NAME on the first OPEISDB form.

- A corresponding SERVDATA form is found by matching the SVC ID field on the SERVDATA form with the SVC ID field on the first OSPSCT form.
- The first OPEISDB form is found by matching the SERVING TEAM and SVC ID fields on the OPEISDB form with the SERVING TEAM and SVC ID fields on the first OSPSCT form, respectively.

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- The second OPEISDB form is found by matching the SVC ID and EIS NAME fields on the second OPEISDB form with the SVC ID and PRE OPER EIS fields on the SERVDATA form.

If PRE OPER EIS is entered and the corresponding EISDATA form (found by matching PRE OPER EIS on the SERVDATA form with EIS NAME on the EISDATA form) has

- "VDR" entered as the VENDOR,

  then OSPS SVC CODE on the SERVDATA form must be "VDRLS" or "INCPT".

- "TMC" entered as the VENDOR,

  then OSPS SVC CODE on the SERVDATA form must be "SRVC7".

2.5 SVC DEST

Description: Enter the Service Destination Number, which defines the type of destination, such as, an External ARU, an operator or an Internal ARU. The Service Destination ID is a flexible way of assigning the destination ID provided by the vendor.

The PRE OPER EIS and SVC DEST entries are the keys into the SERVDEST form (5467 Record), which provides the initial routing destination for the initial action of an EIS. The SVC DEST field is an identifier used to obtain the route type and route code when the INITIAL ACTION is "TODEST".
Valid Entries: 1 - 65535

Data Rules:

If SVC DEST is entered on the SERVDATA form (5466 Record), then a corresponding SERVDEST form (5467 Record) must exist where SVC DEST and EIS NAME on the SERVDEST form match SVC DEST and PRE OPER EIS on the SERVDATA form, respectively.

If SVC DEST and INT ANNC TYPE are both entered on a SERVDATA form, then RTE TYPE on the corresponding SERVDEST form must be "FIIA" or "RIIA". A corresponding SERVDEST form is where the SVC DEST and EIS NAME fields on the SERVDEST form match the SVC DEST and PRE OPER EIS fields on the SERVDATA form, respectively.

If SVC DEST is entered, but INT ANNC TYPE is NOT entered on the SERVDATA form, then RTE TYPE on the corresponding SERVDEST form must NOT be "FIIA" or "RIIA". A corresponding SERVDEST form is where the SVC DEST and EIS NAME fields on the SERVDEST form match the SVC DEST and PRE OPER EIS fields on the SERVDATA form, respectively.

2.6 INT ANNC TYPE

Description: Enter the Internal Announcement Type, which specifies the internal pre-announcement to be supplied by the 5ESS Switch DSU2-RAF. The internal RAF unit may play a specified pre-announcement if this source is selected as the initial SVC DEST. The entries are defined by the HEADER ID on the ANNHD form (5531 Record). The larger range of values for 5E9(2) and later supports SAS (Service Announcement System).
Valid Entries:

- For 5E6 - 5E9(1): 1 - 255
- For 5E9(2) and later: 1 - 131,071

Data Rules:

5E9(1) and earlier, INT ANNC TYPE must not be entered if INITIAL ACTION is "ASKEIS".

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5E9(2) and later:

If INT ANNC TYPE is entered:

- then "SRVC7" must be entered in OSPS SVC CODE. If "SRVC7" is not entered, INT ANNC TYPE may not be entered.
- and INITIAL ACTION is "ASKEIS", then OSPS SVC CODE must "SRVC7". If OSPS SVC CODE is not "SRCV7", and INITIAL ACTION is "ASKEIS", then INT ANNC TYPE cannot be entered.
- and "SRVC7" is entered in OSPS SVC CODE, then an ANNAPL form must exist where APPLICATION is "OSPSTA"
- and "SRVC7" is not entered in OSPS SVC CODE, then a corresponding ANNHD form is required and the APPLICATION field on ANNHD form must be "OSPSDA".
- and "SRVC7" is entered in OSPS SVC CODE, then a corresponding ANNHD form is required where APPLICATION is "OSPSTA" and HEADER ID matches INT ANNC TYPE on the SERVDATA form.
- and OSPS SVC CODE is not "SRVC7" an ANNAPL form must exist where APPLICATION is "OSPSDA". If OSPS SVC CODE is "SRVC7", INT ANNC TYPE must be 150.

2.7 OSPS SVC CODE

Description: Enter the OSPS Service Code, which is the code of an OSPS supported service.

Required Field.
Default: LS
Valid Entries:

Valid OSPS SVC CODE Entries

Entry	Definition
AAP	Software Release: 5E11 and later. (For 5E9(2) - 5E10 see "SRVC8".) AATLSOS AAP using CPDL Interface Services using NRP (Network Resource Platform) as the EIS vendor. This value supports the AATLSOS AAP CPDL (Alternate Access to Language Specific Operator Services Automated Access Prompting Call Processing Data Link) Interface feature. For more information on this feature, see Division 2, Section 4A412,
IBMINCPT or IBMI	Software Release: 5E6(2) and later. IBM Intercept Services
IBMLS or IBML	Software Release: 5E6(2) and later. IBM Listing Services
INCPT or IN	Software Release: 5E6(2) and later. CCI and general Intercept Services
INMATE	Software Release: 5E11 and later. Inmate Calling Services using TMC (Tele-Matic Corporation) as the EIS vendor. This value supports the Inmate Calling Service feature. For more information on this feature, see Division 2, Section 4A385. For 5E9(2) - 5E10 later, see "SRVC7".
LS or L	Software Release: 5E6 and later. CCI and general Listing Services
SPCL700 or SP	Software Release: 5E7 and later. Specialized Handling for 700 calls. For more information on Specialized Handling for 700 Services secured features, see Division 2, Section 4A69 and Section 4A89. For information on Specialized Handling for 700 Calls Test Calls, see Division 2, Section 4C17.
SRVC7	Software Release: 5E9(2) - 5E10. Inmate Calling Services using TMC (Tele-Matic Corporation) as the EIS

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	vendor. This value supports the Inmate Calling Service feature. For more information on this feature, see Division 2, Section 4A385. For 5E11 and later, see "INMATE".
SRVC8	Software Release: 5E9(2) - 5E10. For 5E11 and later, see "AAP". AATLSOS AAP using CPDL Interface Services using NRP (Network Resource Platform) as the EIS vendor This value supports the AATLSOS AAP CPDL (Alternate Access to Language Specific Operator Services Automated Access Prompting Call Processing Data Link) Interface feature. For more information on this feature, see Divison 2, Section 4A412.
VDRLS or V	Software Release: 5E9(1) and later. VDR (Volt Delta Resource) Listing Services

Data Rules:

"INCPT" or "IBMINCPT" must be entered, when CALL ORIGIN on a corresponding ACDCTP form is "AIS". The corresponding form is found when SVC ID of this form matches SVC ID of OSPSCT form and OSPS CALL TYPE of OSPSCT form matches CALL TYPE of ACDCTP form. Conversely, if CALL ORIGIN on the ACDCTP form is not "AIS", OSPS SVC CODE field cannot be "INCPT", "IBMINCPT" or "SPCL700".

If "IBMLS" or "IBMINCPT" is entered, a corresponding EISDATA form (found by matching PRE OPER EIS on the SERVDATA form with EIS NAME on the EISDATA form) must have "IBM" entered as the VENDOR.

AAP
If "AAP" is entered and INITIAL ACTION is "ASKEIS", then INT ANNC TYPE must be 317.

INMATE
If "INMATE" is entered,

- BILLING NUMBER must be entered.
- and INITIAL ACTION is "ASKEIS", then INT ANNC TYPE must be 150.

SPCL700

- "SPCL700" is used by the Specialized Handling of 700 Calls secured feature, therefore, SFID 69 on the SFSYS form (5713-1 Record) must be set to "S" or "Y".
- If "SPCL700" is entered, CALL COMPL must be "Y"
- "SPCL700" cannot be entered if SVC ID on this form matches a SVC ID entry on the OPEISDB form.
- If "CGI" is entered as the VENDOR on the corresponding EISDATA form, then OSPS SVC CODE must be "SPCL700". If "CGI" is not entered as the VENDOR on the corresponding EISDATA form, then OSPS SVC CODE cannot be "SPCL700". Corresponding forms are found by matching the value in the PRE OPER EIS field on this form with the EIS NAME field on the EISDATA form.

SRVC7
If "SRVC7" is entered:
- BILLING NUMBER must be entered
- INITIAL ACTION cannot be "TOOPER"
- INT ANNC TYPE must be 150

If "SRVC7" is entered and PRE OPER EIS is entered, then the associated EISDATA form (found by

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matching PRE OPER EIS on the SERVDATA form with EIS NAME on the EISDATA form) must have "TMC" entered as the VENDOR.

If "SRVC7" is not entered, BILLING NUMBER must not be entered.

SRVC8
See "AAP".

2.8 EIS APPL CODE

Description: Enter the EIS Application Code, which is supplied by the EIS vendor and informs the vendor's application which service is required by this call.
Valid Entries: 1 - 1023

2.9 NBR RECALLS

Description: Enter the Number of Recalls, which is the default value used by OSPS as the number of recalls permitted for this service. The EIS vendor system may override this parameter. This field is used when a value is not provided by an EIS vendor or when a service is provided without EIS support.

Required Field.
Default: 0
Valid Entries: 1 - 255

2.10 RECALL DELAY

Description: The RECALL DELAY is the interval in 50 millisecond intervals the call is to be delayed after a particular service, such as the end of an announcement, before an operator is requested for the call. For example, "100" gives a 5-second delay between the end of the automated portion of the service and the beginning operator recall. An entry in this field is needed only when a value is not provided by an EIS or when a service is provided without EIS support. This is an optional field.
Default: 0
Valid Entries: 0 - 1023

2.11 CALL COMPL

Description: Is Call Completion allowed?

Software Release: 5E6(2) and later
Default: N
Valid Entries: Y, N

Data Rules:

If CALL COMPL is "N", DIGIT TIMING, CALL PROG RI, and TURN BACK RI cannot be entered.

2.12 DIGIT TIMING

Description: This field is not currently being used, because internal ARUs do not support Call Completion prompting at this time.

2.13 TURN BACK RI

Description: Enter the route index for the announcement to be played, when the call cannot be completed.

Software Release: 5E6(2) and later

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Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

This field can only be entered if CALL COMPL is "Y".

A corresponding RTIDX form is required, where the ROUTE INDEX value on the RTIDX form must match the TURN BACK RI value on the SERVDATA form. In addition, this matching RTIDX form must have ROUTE TYPE set to "HUNT" and CI ROUTE TYPE set to "GENANN". A corresponding TKGRP form is also required. The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form . Additionally, on the TKGRP Form, the TRK DIR must be "ANN".

2.14 CALL PROG RI

Description: Enter the route index for the call in progress announcement.

Software Release: 5E6(2) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If this field is entered, then CALL COMP must be "Y".

A corresponding RTIDX form is required, where the ROUTE INDEX value on the RTIDX form must match the CALL PROG RI value. In addition, this matching RTIDX form must have ROUTE TYPE set to "HUNT" and CI ROUTE TYPE set to "GENANN". A corresponding TKGRP form is also required. The TGN on the TKGRP form must match the TRUNK GROUP NUMBER on the corresponding RTIDX form. Additionally, on the TKGRP Form, the TRK DIR must be "ANN".

2.15 BILLING NUMBER

Description: Enter the 10-digit number (NPANXXXXXX) that will be billed for a pre-paid ICS call. This field supports the OSPS Inmate Calling Service secured feature (SFID 385). For more information on this feature, see Division 2, Section 4A385.

Software Release: 5E9(2) and later.
Valid Entries: 10-digit number

Data Rules:

BILLING NUMBER must be entered if OSPS SVC CODE is "SRVC7". It must not be entered if OSPS SVC CODE is not "SRVC7".

5ESS Switch _
servdata OFFICE DATA ADMINISTRATION
(5466) OSPS SERVICE DATA FOR LISTING SERVICES CALLS

* 1. SVC ID ____ 13. CALL PROG RI ____

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2. INITIAL ACTION TOOPER 14. BILLING NUMBER _____
3. PRE OPER EIS _____
4. SVC DEST _____
5. INT ANNC TYPE _____
6. OSPS SVC CODE LS
7. EIS APPL CODE ____
8. NBR RECALLS 0
9. RECALL DELAY ____
10. CALL COMPL N
11. DIGIT TIMING ____
12. TURN BACK RI ____

Figure 1 SAMPLE SERVDATA FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 4BT: 5467 RECORD
OSPS DESTINATION DATA FOR LISTING SERVICES CALLS - SERVDEST

1. GENERAL

The 5467 Record is available with 5E6 and later Software Releases.

The 5467 Record is used to translate an EIS (External Information Service) vendor's service destination to a 5ESS Switch routing type and associated routing code, such as a route index. Note that if the EIS NAME is null, this Record can still be accessed for routing information for services that do not initially have an EIS assigned to the call.

The route type can specify route to an internal announcement, route to an external announcement or route to an operator.

1.1 Listing Services Translations

Division 2, Section 3C discusses the translations required for Listing Services, and the form flow figures for the cross checks for RTE TYPEs of "RIXA", "RIIA" and "FIIA".

1.2 Recent Change View

The corresponding Recent Change View for this form is 21.53.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * SVC DEST

Description: Enter the EIS (External Information System) service destination identification number. This number is supplied by the vendor.
Valid Entries: 1 - 65535

Data Rules:

When SVC DEST is entered on the SERVDATA form (5466 Record), a corresponding SERVDEST form (5467 Record) must exist where SVC DEST and EIS NAME on the SERVDEST form match SERV DEST and PRE OPER EIS on the SERVDATA form respectively.

2.3 (*) EIS NAME

Description: External Information System Name. This field allows the same destination IDs to be used by EISs from different vendors. This is an optional key field. Leave blank or enter a name that is 1-15 characters and is defined on the EISDATA form (5462-1 Record).
Valid Entries: 1 - 15 characters

Data Rules:

A corresponding EISDATA form must exist where EIS NAME matches EIS NAME on the SERVDEST form (5467 Record).

2.4 # RTE TYPE

Description: The Route Type is used to indicate the 5ESS Switch route type.

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Required Field.

Valid RTE TYPE Entries

Entry	Definition
CC	Software Release: 5E7 and later. Complete call
FIIA	Route to an internal announcement that has a fixed route index
OPER	Route to an operator
R13A	Software Release: 5E7 and later. Route to 13A recorded announcement unit
REORDER	Software Release: 5E7 and later. Route to reorder
RICCXA	Software Release: 5E7 and later. Route to external announcement with CC checks that has a route index.
RIIA	Route to an internal announcement that has a route index
RIXA	Route to an external announcement that has a route index
TERM	Software Release: 5E7 and later. Terminate the call

Data Rules:

Figures 1, 2 and 3 show the form flow for cross reference forms for RTE TYPEs.

RTE CODE must not be entered for the following RTE TYPEs:
- "CC",
- "FIIA",
- "OPER",
- "REORDER", or
- "TERM"

RTE CODE must be entered for the following RTE TYPEs:
- "RICCXA",
- "RIIA",
- "RIXA", or
- "R13A".

FIIA - For every SERVDEST form with "FIIA" entered for RTE TYPE, there must exist a FIXRT form (5301 Record) with "OSPSEIS" entered for FIXED ROUTE TYPE. In addition, the RTIDX (5303 Record) and TKGRP (5202-1/2 Record) forms are also required when a fixed route is defined.

RIIA, RIXA, RICCXA, R13A - If "RIIA", "RIXA", "RICCA" or "R13A" is entered for RTE TYPE, then an RTIDX form is required where ROUTE INDEX on the RTIDX form matches RTE CODE on the SERVDEST form (5467 Record) and ROUTE TYPE on the RTIDX form is "HUNT".

In addition, for 5E7 and later, if the RTE TYPE is "RIIA" or "R13A", CI ROUTE TYPE on the corresponding RTIDX form must be "GENANN".

RIIA - A second RTIDX form may be required for each SERVDEST form with a RTE TYPE of "RIIA" or "RIXA" to handle overflow conditions. The ROUTE INDEX on the second RTIDX form must match the NEXT ROUTE on the first RTIDX form. The ROUTE INDEX on the first RTIDX form must match the RTE CODE on the SERVDEST form. Also, the ROUTE TYPE on the second RTIDX form must be "HUNT" or "REORDER".

If "RIIA" is entered:

- SVC GRP must be "DA" on the corresponding TKGRP form.

- TRKCLS must be "RAFANNC" on TKGRP form.

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A TKGRP form is associated with a SERVDEST form through a RTIDX form as follows: the ROUTE INDEX on the RTIDX form matches RTE CODE on the SERVDEST form and TGN on the TKGRP form matches TGN on the RTIDX form.

- and the RTE TYPE on the second RTIDX is "HUNT", then a corresponding TKGRP form is required where TGN on the TKGRP form matches TRUNK GROUP NUMBER on the second RTIDX form and TRK DIR on the TRKGRP form is "RAF".

RIXA - If the RTE TYPE on the SERVDEST form is "RIXA" and RTE TYPE on the second RTIDX is "HUNT", then a corresponding TKGRP form is required where TGN on the TRKGRP form matches TRUNK GROUP NUMBER on the second RTIDX form and TRKCLS on the TRKGRP form is "EISTRK".

If SVC DEST and EIS NAME on the SERVDEST form match SVC DEST and PRE OPER EIS on the SERVDATA form respectively, and SVC DEST and INT ANNC TYPE are both entered on a SERVDATA form, then the RTE TYPE on the corresponding SERVDEST form must be "FIIA" or "RIIA". Conversely, if SVC DEST is entered and INT ANNC TYPE is NOT entered on a SERVDATA form, the RTE TYPE on the corresponding SERVDEST form must NOT be "FIIA" or "RIIA".

2.5 RTE CODE

Description: The Routing Code is used to designate the route index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

RTE CODE must not be entered if RTE TYPE is "OPER" or "FIIA". An entry is required if the RTE TYPE is "RIIA" or "RIXA".

---

servdest 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5467) OSPS DESTINATION DATA FOR LISTING SERVICE CALLS

*1. SVC DEST _____
(*)2. EIS NAME _____
#3. RTE TYPE _____
4. RTE CODE _____

Figure 1 SAMPLE SERVDEST FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BV: 5469 RECORD
OSPS INTERCEPT DESTINATION INDICES - AISCLS

1. GENERAL

The 5469 Record is available with 5E6(2) and later Software Releases. This form defines the intercept class, which determines the destination index (to be used for call type determination) on the basis of the intercept class and the called number information. Each class has two destination indexes, one is used if ANI (Automatic Number Identification) is available, the other is used if ANI is not available. All intercept calls receive treatment based on the data entered on this form and the data entered on the ACDCTP form. If this form does not contain data for the call, or if the destination index is blank, then the intercept data on the ACDCTP form is used.

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.57.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * INCPT CLASS

Description: Enter the intercept class. In the following entries, only the first few letters which make the entry unique need to be entered. The abbreviated entries are within brackets in the following list.

Valid INCPT CLASS Entries

Entry	Definition
[ANIB]LNK	
[ANIF]AIL	ANI Equipment Failure to Identify Line Number
[ANIR]EG	ANI Regular
[ANIT]RBL	ANI Special (Trouble) Number
[C]ONC	Concentrator Spinoff
[ONIR]EG	ONI (Operator Number Identification) Regular
[ONIB]LNK	ONI Blank or Unassigned Number
[ONIT]RBL	ONI Special (Trouble) Number

Data Rules:

An entry in this field requires an entry either in the WITH ANI field or in the WITHOUT ANI field.

If "ANIFAIL", "CONC", "ONIREG", "ONIBLNK", or "ONITRBL" are entered, the WITH ANI field must be left blank, but the WITHOUT ANI field must have an entry.

DESTINATION INDEX

The following fields (Section 2.3 - Section 2.4) assign the destination index for expanded call type determination.

2.3 WITH ANI

Description: Enter the destination index for expanded call type determination that is used if ANI is available.
Valid Entries: 1 - 4095

Data Rules:

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If the destination index is blank, then the call will receive treatment according to the call origination data on the ACDCTP form (5412 Record) when SECOND LEVEL is "DEST", or on call origination data and incoming trunk group when SECOND LEVEL is "TGRP". This cannot be blank if WITHOUT ANI is blank.

If the DESTINATION INDEX WITH ANI field is entered, an ACDPOL form (5412 - B/C/E/F Record) must exist where TGRP/DEST is "DEST" and TGN/CDI field matches the DESTINATION INDEX WITH ANI on the AISCLS form.

The WITH ANI entry may be an INC CDI (Code Index) on the INFLDEST form (5448 Record).

2.4 WITHOUT ANI

Description: Enter the destination index for expanded call type determination that is used if ANI is not available. If the destination index is blank, then the call will receive treatment according to the expanded call type determination data populated for intercept.
Valid Entries: 1 - 4095

Data Rules:

If the destination index is blank, then the call will receive treatment according to the call origination data on the ACDCTP form (5412 Record) when SECOND LEVEL is "DEST", or on call origination data and incoming trunk group when SECOND LEVEL is "TGRP".

If the DESTINATION INDEX WITHOUT ANI field is entered, an ACDPOL form (5412 - B/C/E/F Record) must exist where TGRP/DEST is "DEST" and TGN/CDI field matches the DESTINATION INDEX WITHOUT ANI on the AISCLS form.

The WITHOUT ANI entry may be an INC CDI (Code Index) on the INFLDEST form.

```
                    5ESS Switch
aiscls            OFFICE DATA ADMINISTRATION
(5469)          OSPS INTERCEPT DESTINATION INDICES

*1. INCPT CLASS  CONC

   DESTINATION INDEX
   ____________________
 2. WITH ANI     ____
 3. WITHOUT ANI  1234
```

Figure 1 SAMPLE AISCLS FORM 5E6(2) AND LATER SOFTWARE RELEASES

```
                    5ESS Switch
aiscls            OFFICE DATA ADMINISTRATION
(5469)          OSPS INTERCEPT DESTINATION INDICES

*1. INCPT CLASS  CONC

   DESTINATION INDEX
   ____________________
 2. WITH ANI     ____
 3. WITHOUT ANI  1234
```

Figure 2

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SEC. 4BW: 5471-1/2 RECORD
OSPS PORT RANGES FOR IBM DA SYSTEM - IBMRNGS

1. GENERAL

This form is available with 5E6(2) and later Software Releases and is used to define the parameters for the IBM interface. Only one form is entered for each 5ESS Switch. It allows the OSPS owner to obtain an IBM position ID for each of the ARU (Audio Response Unit) trunk group members (ports) associated with the IBM DAS (Directory Assistance System). The MIN POSITION, MAX POSITION, and TGN LIST fields allow the OSPS owner to obtain an IBM Position ID for each of the OSPS operator positions associated with the IBM DAS working in conjunction with an OSPS.

1.1 Position ID Range

The MIN POSITION and MAX POSITION assign the range of sequential positions, from the minimum position to the maximum number of positions, that may interface with the IBM DAS. For example, when OSPS position numbers in the range of 500 to 1499 are planned to interface with an IBM DAS, MIN POSITION is set to 500 and MAX POSITION is set to 1000. Not all the positions within this range are required to interface with the IBM DAS. Only OSPS operator position IDs where "VDT" is entered in the POS TYPE field on the OSPSOP form (5401 Record) are converted to IBM Position ID. However, all current and future positions which provide services via the IBM DAS must fall within these bounds. If the MIN POSITION entry or MAX POSITION entry is changed later, all IBM Position IDs associated with ARU ports will need to be reassigned in the IBM DAS; therefore, growth for operator position should be considered when assigning these values.

1.2 IBM Position ID

The IBM Position ID equals the POS NUM entry on the OSPSOP form. If the OSPS owner wishes to start the sequence at OSPS position number 1, the POS NUM can be set to zero to make the OSPS position number and IBM Position ID equal; this only wastes the first IBM Position ID (ID = 0), as OSPS has no position number zero. Alternately, this parameter can be set to one, which makes the IBM Position ID one less than the corresponding OSPS position number.

1.3 ARU Trunks

The sum of the MAX POSITION entry, plus the trunk groups may not exceed 9000. (See TOTAL PORTS field for how this is calculated.) This is an IBM system limit. The 9000 range must be potentially shared with other switching systems that use a given IBM DAS.

- **WARNING:** When the sum of all ranges exceeds 4500, indicating that over half the available array in the IBM DAS has been allocated for this office alone, a reassessment may be required if other offices share an IBM DAS.

1.4 5471-2 Output Record

The 5471-2 Record is an output record which shows the operator position and trunk group member assiociated with an IBM position ID.

1.5 Recent Change View

The corresponding Recent Change View for this form is 21.58.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: This is the key into this form. It will always be 1.
Default: 1
Valid Entries: 1

Data Rules:

The IBMRNGS form must be submitted when SERVICE CLASS on the OSPSDSL form is "EIS" and VENDOR on the EISDATA form is "IBM" (EIS NBR on the EISDATA form matches DATA LINK GRP on the OSPSDSL form).

2.3 # MIN POSITION

Description: Enter the lowest operator position number. MIN POSITION assigns the the lowest (minimum) operator position number served by the IBM DAS.

Required Field.
Valid Entries: 0 - 4095

Data Rules:

The MIN POSITION entry plus MAX POSITION entry must be less than 4097.

2.4 # MAX POSITION

Description: Enter the maximum number of operator positions that can serve an IBM DAS. The MAX POSITION is the highest number of operator position numbers set aside to serve the IBM DAS. MIN POSITION plus MAX POSITION assigns the range of sequential positions that may interface with the IBM DAS.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

MAX POSITION cannot be less than MIN POSITION.

Leave the MAX POSITION entry blank if no data is to be entered for this field; 0 is not allowed. If MAX POSITION is blank (no value entered by the customer), then MIN POSITION must be 0.

TGN LIST

The following fields (Section 2.5 - Section 2.9) define options for the ARU trunk groups that interface with an IBM DAS.

These fields assign the range for ARU trunk groups and indicate the maximum member range (MAX MEMB) for each of up to eight ARU trunk groups which may interface with a Directory Assistance System(s).

Each of the 8 rows for the ARU trunk groups apply to both internal OSPS DSU2-RAF trunk groups as well as external ARU trunk groups which connect to IBM DAS ARU's. The remainder from the division of the trunk group number divided by eight is referred to as the "IBM trunk group index." Each ARU trunk group associated with a particular IBM DAS must have a unique IBM trunk group index. The MAX MEMB specifies the range of the largest trunk group with a TGN (Trunk Group Number) that is a multiple of eight (IBM Trunk Group Index of zero) and interfaces with an IBM DAS. The DAS1(2,3,4) TGN field applies to

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any IBM DAS-associated trunk group with an IBM trunk group index of 1, etc.

Assume an office requires two DAS Systems, DAS1 and DAS2; a trunk group to DAS1 (TGN 256) needs 200 members and a trunk group to DAS2 (TGN 504) requires 350 members. The MAX MEMB is set to 350. The ranges specified must include room for growth. If any range is later modified, it will affect all the Position IDs of ARU members in groups with a larger IBM trunk group index, and will require reassignment in the IBM DAS.

If MAX POSITION is not 0, then the sum of RANGES in the TGN LIST must be greater then 0, i.e. one of the fields must have an entry.

If MAX POSITION is blank, then MAX MEM row 1 must be blank. The sum of all the ranges for positions and trunk groups may not exceed 9000. This is an IBM system limit. Note that the 9000 range must be potentially shared with other switching systems that use a given IBM DAS. Therefore, ODA gives a warning when the sum of all ranges exceeds 4500, indicating that over half the available array in the IBM DAS has been allocated for this office alone, and reassessment may be required if other offices share an IBM DAS.

The TOTAL (number of) PORTS equals the sum of the operator positions (MAX POSITION entry minus the MIN POSITION entry) plus 1, plus the sum of the entries for MAX POSITION plus the sum of the number of MAX POSITION entries must be less than 9001. For example, if MIN POSITION is 100, MAX POSITION is 200 and MAX MEMB has entries 300 and 400, then TOTAL PORTS = (200 - 100) +1 +(300 + 400) + 2 (number of entries for MAX MEMB), which equals 803. It SHOULD be less than 4501, otherwise an ODA warning is given.

2.5 MAX MEMB

Description: Enter the maximum member range for ARU trunk groups interfaced with an IBM DAS. At least one MAX MEMB must be entered.
Valid Entries: 1 - 4095

Data Rules:

If MAX MEM is entered, at least one DAS TGN must also be entered.

2.6 DAS1 TGN

Description: Enter the TGN (trunk group number) connected to IBM DAS system 1.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The first row entry for IBM DAS1 must be divisible by 8, (i.e., must have a remainder of 0). The second row entry must have a remainder of 1 when divided by 8. The third row entry must have a remainder of 2 when divided by 8, the forth row a remainder of 3, the fifth row a remainder of 4, the sixth row a remainder of 5, the seventh row a remainder of 6, and the eighth row must have a remainder of 7 when divided by 8.

Each DAS1 (DAS2, DAS3, DAS4) TGN, entered on the IBMRNGS form, must have a matching TGN on a TKGRP form. The TRKCLS on the corresponding TKGRP form must be either "EISTRK" or "RAFANNC". If TRKCLS is set to "RAFANNC" the SVC GRP on the TKGRP form must be set to "DA". If TRKCLS is set to "EISTRK", no other DAS TGN values entered on the same row on the IBMRNGS form can have the same TGN. For example, DAS2, DAS3, or DAS4 cannot have the same TGN value as DAS1.

2.7 DAS2 TGN

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Description: Enter the TGN (trunk group number) connected to IBM DAS system 2.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The first row entry for IBM DAS2 must be divisible by 8, (i.e., must have a remainder of 0). The second row entry must have a remainder of 1 when divided by 8. The third row entry must have a remainder of 2 when divided by 8, the forth row a remainder of 3, the fifth row a remainder of 4, the sixth row a remainder of 5, the seventh row a remainder of 6, and the eighth row must have a remainder of 7 when divided by 8.

Each DAS1 (DAS2, DAS3, DAS4) TGN, entered on the IBMRNGS form, must have a matching TGN on a TKGRP form. The TRKCLS on the corresponding TKGRP form must be either "EISTRK" or "RAFANNC". If TRKCLS is set to "RAFANNC" the SVC GRP on the TKGRP form must be set to "DA". If TRKCLS is set to "EISTRK", no other DAS TGN values entered on the same row on the IBMRNGS form can have the same TGN. For example, DAS2, DAS3, or DAS4 cannot have the same TGN value as DAS1.

2.8 DAS3 TGN

Description: Enter the TGN (trunk group number) connected to IBM DAS system 3.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The first row entry for IBM DAS3 must be divisible by 8, (i.e., must have a remainder of 0). The second row entry must have a remainder of 1 when divided by 8. The third row entry must have a remainder of 2 when divided by 8, the forth row a remainder of 3, the fifth row a remainder of 4, the sixth row a remainder of 5, the seventh row a remainder of 6, and the eighth row must have a remainder of 7 when divided by 8.

Each DAS1 (DAS2, DAS3, DAS4) TGN, entered on the IBMRNGS form, must have a matching TGN on a TKGRP form. The TRKCLS on the corresponding TKGRP form must be either "EISTRK" or "RAFANNC". If TRKCLS is set to "RAFANNC" the SVC GRP on the TKGRP form must be set to "DA". If TRKCLS is set to "EISTRK", no other DAS TGN values entered on the same row on the IBMRNGS form can have the same TGN. For example, DAS2, DAS3, or DAS4 cannot have the same TGN value as DAS1.

2.9 DAS4 TGN

Description: Enter the TGN (trunk group number) connected to IBM DAS system 4.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The first row entry for IBM DAS4 must be divisible by 8, (i.e., must have a remainder of 0). The second row entry must have a remainder of 1 when divided by 8. The third row entry must have a remainder of 2 when divided by 8, the forth row a remainder of 3, the fifth row a remainder of 4, the sixth row a remainder of 5, the seventh row a remainder of 6, and the eighth row must have a remainder of 7 when divided by 8.

Each DAS1 (DAS2, DAS3, DAS4) TGN, entered on the IBMRNGS form, must have a matching TGN on a TKGRP form. The TRKCLS on the corresponding TKGRP form must be either "EISTRK" or "RAFANNC". If TRKCLS is set to "RAFANNC" the SVC GRP on the TKGRP form must be set to "DA". If TRKCLS is set

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to "EISTRK", no other DAS TGN values entered on the same row on the IBMRNGS form can have the same TGN. For example, DAS2, DAS3, or DAS4 cannot have the same TGN value as DAS1.

2.10 TOTAL PORTS

Description: This field cannot be entered. The total number of ports is calculated and entered when the form is validated. The TOTAL (number of) PORTS equals the sum of the operator positions (MAX POSITION entry minus the MIN POSITION entry) plus 1, plus the sum of the entries for MAX POSITION, plus the sum of the number of MAX POSITION entries must be less than 9001.

SCREEN 1 OF 1 5ESS Switch _
ibmrngs OFFICE DATA ADMINISRATION
(5471-1/2) OSPS PORT RANGES FOR IBM DA SYSTEM

*1. KEY 1 #2. MIN POSITION 1 #3. MAX POSITION 500

4. TGN LIST

row	MAX MEMB	DAS1 TGN	DAS2 TGN	DAS3 TGN	DAS4 TGN	
1	0235	0024	0032	0040	0048	
2	0240	0009	0017	0025	0033	
3	____	____	____	____	____	
4	____	____	____	____	____	
5	____	____	____	____	____	
6	____	____	____	____	____	
7	____	____	____	____	____	
8	____	____	____	____	____	TOTAL PORTS 975

Figure 1 SAMPLE IBMRNGS FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4BX: 5472 RECORD
VOICE MESSAGING SERVICE INTERFACE - ESPINFO

1. GENERAL

This record is available with 5E7 and later Software Releases. This form defines information about the ESP (Enhanced Service Provider) for VMS (Voice Messaging Service). The ESP is external to the 5ESS Switch. For more information on VMS features, see Division 2, Section 3I.

1.1 CCS7 Signaling Call Processing Data Needs

For 5E8 and later, CCS7 signaling can be used to transfer data to a particular ESC (Enhanced Services Complex). If the VMS Signaling Parameter specifies CCS7 signaling, then, as applicable, the OSPS encodes the Calling Number, Billing Number, Called Number, CCC Authorization Code, and Subaccount Billing Number into the parameters of an IAM message. The CCS7 SIGNALING field specifies whether or not CCS7 signaling is being used. The CC DIGIT TYPE attribute is used to indicate that the Billing Number sent in a Generic Digits Parameter is a card number.

The PIN DIGIT TYPE, CAC DIGIT TYPE, SAB DIGIT TYPE, and the THIRD NBR TYPE fields allow the TCA to initialize or modify the Type of Digits value of the Generic Digits Parameter used to send the PIN information, CCC Authorization Code, SAB Number information, and the Third Number Billing information to any specific ESC.

The default values for these fields are the expected values to be used by the AT&T ESC.

1.2 Recent Change View

The corresponding Recent Change View for this form is 27.65.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *ACCESS CODE

Description: Enter the ESP Access Code. Enter a 1, 2, or 3 digit number.
Valid Entries: 0 - 9, 00 - 99, 000 - 99

2.3 #ACCESS TN

Description: Enter the ESP access ten-digit telephone number (NPANXXXXXX). For 5E7 - 5E8, the NPA format is 200 - 919, where the middle digit can be only 0 - 1. For 5E9(1) and later, NPA is 200 - 999.

Required Field.
Valid Entries: 10 digits

2.4 SEND CARD NBR

Description: Should the Calling Card Number be sent to ESP?

Required Field.
Default: N
Valid Entries: Y, N

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2.5 SEND SAB NBR

Description: Should the Subaccount Billing Number be sent to ESP?

Required Field.
Default: N
Valid Entries: Y, N

2.6 BACK THIRD XFER

Description: Should the Bill be transferred to a Back Third Number?

Required Field.
Default: N
Valid Entries: Y, N

2.7 CCS7 SIGNALING

Description: Is CCS7 signaling used for the transfer of information to the ESPs?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

2.8 CC DIGIT TYPE

Description: Enter the type of digits for credit card billing number. This field is the decimal form of the binary value to be placed into an IAM (Initial Address Message). It represents the billing number credit card type of digits used in the IAM. The value must be a number recognized by the receiving switch network.

Software Release: 5E8 and later
Required Field.
Default: 27
Valid Entries: 0 - 31

Data Rules:

CC DIGIT TYPE, PIN DIGIT TYPE, CAC DIGIT TYPE and SAB DIGIT TYPE must be unique.

2.9 PIN DIGIT TYPE

Description: Enter the billing number PIN type of digits used in an IAM (Initial Address Message). This field is used to indicate that the message being sent contains a credit card PIN (personal identification number). This value must be a number recognized by the receiving switches in the network.

Software Release: 5E8 and later
Required Field.
Default: 21
Valid Entries: 0 - 31

Data Rules:

CC DIGIT TYPE, PIN DIGIT TYPE, CAC DIGIT TYPE and SAB DIGIT TYPE must be unique.

2.10 CAC DIGIT TYPE

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Description: Enter the CCC (Commercial Credit Card) Authorization Code type of digits used in the Initial Address Message. This field is used to indicate that the message being sent contains a credit card authorization code. This value must be a number recognized by the receiving switches in the network.

Software Release: 5E8 and later
Default: 29
Valid Entries: 0 - 31

Data Rules:

CC DIGIT TYPE, PIN DIGIT TYPE, CAC DIGIT TYPE and SAB DIGIT TYPE must be unique.

2.11 SAB DIGIT TYPE

Description: Enter the SAB (Subaccount Billing) number type of digits used in an IAM. This field is used to indicate that the message being sent contains a subaccount billing number. This value must be a number recognized by the receiving switches in the network.

Software Release: 5E8 and later
Default: 28
Valid Entries: 0 - 31

Data Rules:

CC DIGIT TYPE, PIN DIGIT TYPE, CAC DIGIT TYPE and SAB DIGIT TYPE must be unique.

2.12 THIRD NBR TYPE

Description: Enter the third number type used in an IAM. This field is used to indicate that the message being sent contains a third number billing number. This value must be a number recognized by the receiving switches in the network.

Software Release: 5E8 and later
Default: 128
Valid Entries: 0 - 255

2.13 VMS DOM BLG

Description: Is the VMS (Voice Messaging Service) Access Dialing feature used for billing purposes when forwarded numbers are domestic? For more information, see Div. 2, Sec. 4A418.

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

2.14 VMS INTL BLG

Description: Is the Voice Messaging Service (VMS) Access Dialing feature used for billing purposes when forwarded numbers are international? For more information, see Div. 2, Sec. 4A418.

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

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```
                VOICE MESSAGING SERVICE INTERFACE
*1. ACCESS CODE    ___          13. VMS INTL BLG N
#2. ACCESS TN      __________
 3. SEND CARD NBR   N
 4. SEND SAB NBR    N
 5. BACK THIRD XFER N
 6. CCS7 SIGNALING  N
 7. CC DIGIT TYPE   27
 8. PIN DIGIT TYPE  21
 9. CAC DIGIT TYPE  29
10. SAB DIGIT TYPE  28
11. THIRD NBR TYPE  128
12. VMS DOM BLG     N
```

Figure 1 SAMPLE ESPINFO FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4BY: 5473 RECORD
OSPS TELEPHONE CREDIT CARD (TCR) ATTRIBUTES - TCCATTR

1. GENERAL

The 5473 record is available with 5E7 and later Software Releases. This form defines the attributes for a card type. It is used to group a set of card attributes together so that particular group of attributes can be associated with a particular card or cards that are identified via the Card Identification Tables.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.56.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CARD ATTR ID

Description: Enter the card attribute identification number. The attributes entered on this form are assigned to this ID.
Valid Entries: 0 - 63

Data Rules:

Every CARD ATTR ID entered on the TCCID form must have a matching CARD ATTR ID on the TCCATTR form.

CARD ATTRIBUTES

This heading is found only on the 5E7 form. The following fields (Section 2.3 - Section 2.8) define the card attributes for this card attribute ID.

2.3 # CARD TYPE

Description: Enter the TCR calling card type. For 5E5 and 5E6 this field was on the TCCID form, (5454 Record).

Required Field.

Valid CARD TYPE Entries

Entry	Definition
CAS	AT&T Customer Account Services card only
CCC	Commercial Credit Card
TEL	Non-AT&T Telecommunications card

Data Rules:

The following table gives the CARD TYPE enumerations that must be entered for the SIGNALING TYPE.

SIGNALING TYPE	CARD TYPE
MAN	TEL or CCC
CCS7	CAS
ICCV	TEL

CARD TYPE on TCCATTR form must be "CCC" when ACCT NBR on the TCCID form is 0. (CARD ATTR ID on TCCATTR form matches the CARD ATTR ID on the TCCID form.)

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2.4 # SIGNALING TYPE

Description: Enter the query signaling type used to validate a calling card.

Required Field.

Valid SIGNALING TYPE Entries

Entry	Definition
CCS7 or 7	CAS Common Channel Signaling 7
ERV	External Routing Verfication
ICCV or I	International Credit Card Validation
MAN or M	Manual
AT1 or A	ANSI type 1 signaling
LIDB or L	Software Release: 5E8 and earlier. LIDB signaling

Data Rules:

When SIGNALING TYPE is "CCS7", "ICCV", or "AT1" ,

- QUERY TIMEOUT must be entered.
- The PIN field on the associated TCCID form must be 4. (The CARD ATTR ID on the associated TCCID form matches the CARD ATTR ID on this form.)

When SIGNALING TYPE is "ICCV":

- CARD TYPE must be "TEL".
- QUERY TIMEOUT must be entered.
- For 5E9(1) and later, if the CARD ATTR ID value on this form matches the CARD ATTR ID value on the TCCID form, then:
  - the COUNTRY field on the TCCID form must be entered and the value entered must match either an ACCESS CODE on an IDDD form (5307 Record) or a HOME COUNTRY value on a NONUSA form (5477-1 Record).
  - the value in the DB LABEL field on the TCCID form must match the DB LABEL value on the ICCVDB form (5478 Record).

When SIGNALING TYPE is "CCS7", QUERY TIMEOUT must be entered.

When SIGNALING TYPE is "MAN":

- CARD TYPE must be "TEL" or "CCC".
- QUERY TIMEOUT must not be entered.

WARNING: For 5E14 and later, when SIGNALING TYPE is "MAN":

- TIME AND CHARGES will automatically be set to blank.
- PREPEND 891 will automatically be set to blank.
- INDETERMINATE will automatically be set to blank.

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For 5E14 and later, when SIGNALING TYPE is "ERV", the VER ROUTING NBR field on the FTPARM form cannot be blank.

For 5E15 and later, when SIGNALING TYPE is "ERV", the VER ROUTING NBR field on the FTPARM form (6424 Record) or the TCCATTR form (5473 Record) cannot be blank.

2.5 TIME AND CHARGES

Description: Are time and charge requests allowed for this call?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

When SIGNALING TYPE is "MAN", TIME AND CHARGES must be "N".

2.6 INDETERMINATE

Description: Is the call allowed when the query response in not definite?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

INDETERMINATE must be "N" if SIGNALING TYPE is "MAN".

2.7 PREPEND 891

Description: Should 891 be prepended to this card number?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

PREPEND 891 must be "N"

- if SIGNALING TYPE is "MAN".
- if the sum of the number of digits entered in the ISSUER ID DIGITS field on the TCCID form, added to the values of ACCT NBR, CHECK NBR, and PIN equal 14.

2.8 QUERY TIMEOUT

Description: Enter the length of time in tenths of a second allowed to wait for a query reply.
Valid Entries: 10 - 160 (tenths of a second)

Data Rules:

QUERY TIMEOUT must be entered if SIGNALING TYPE is "AT1", "ICCV", or "CCS7". If QUERY TIMEOUT is not entered for these SIGNALING TYPEs, it defaults to 20.

QUERY TIMEOUT must not be entered if SIGNALING TYPE is "MAN".

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2.9 ALLOW 900 CALLS

Description: Are OSPS 900 services allowed for this CARD ATTR ID?

Software Release: 5E8 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.10 VER ROUTING NBR

Description: This field specifies a 10-digit external routing number to be used by the OSPS (Operator Services Position System) when a caller has selected a commercial credit card as the method of call billing.

Software Release: 5E15 and later
Valid Entries: 10-digit number (8XXXXXXXXX where X = 0 - 9)

The first digit for this field must be 8.

```
tccattr                  5ESS Switch          _
(5473)              OFFICE DATA ADMINISTRATION
          OSPS TELEPHONE CREDIT CARD (TCR) ATTRIBUTES

*1. CARD ATTR ID     02
#2. CARD TYPE        CAS
#3. SIGNALING TYPE   CCS7
 4. TIME AND CHARGES Y
 5. INDETERMINATE    Y
 6. PREPEND 891      N
 7. QUERY TIMEOUT    020
 8. ALLOW 900 CALLS  Y
```

Figure 1 SAMPLE TCCATTR FORM 5E8 - 5E14 SOFTWARE RELEASES

```
tccattr                  5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5473)         OSPS TELEPHONE CREDIT CARD (TCR) ATTRIBUTES

*1. CARD ATTR ID     __
#2. CARD TYPE        ___
#3. SIGNALING TYPE   ____
 4. TIME AND CHARGES _
 5. INDETERMINATE    _
 6. PREPEND 891      _
 7. QUERY TIMEOUT    ___
 8. ALLOW 900 CALLS  Y
 9. VER ROUTING NBR  __________
```

Figure 2 SAMPLE TCCATTR FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4BZ: 5474 RECORD
OSPS SERVICE DESIGNATION FOR 1+800 AATOS/SDN NRA OR AATLSOS CALLS - SRVDESIG

1. GENERAL

The 5474 Record is available with 5E7 and later Software Releases. The AATOS (Alternate Access To Operator Services) and SDN/NRA (Software Defined Network/Network Remote Access) and AATLSOS (Alternate Access to Language Specific Operators) features handle 1+8XX dialed calls which arrive at an OSPS via a dedicated trunk with an SSC-WXY number signaled in the forward number field. This form is used to determine the expected Service type for 1 + 8XX calls arriving on AATOS and SDN/NRA MF trunks.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.70

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 (*) SSC WXY

Description: Enter the SSC-WXY number as signaled in the forward number field of a 1+8XX dialed AATOS or SDN/NRA call. SSC-WXY can be any combination of digits 0 through 9.
Valid Entries: 0 - 999999

Data Rules:

For 5E8 and later, if SSC WXY is entered, ACCESS NUMBER 800 cannot be entered.

2.3 (*) Z

Description: Enter the Z digit signaled in the forward number of the call. The Z digit is either the 10th digit of the 1+8XX Access with FGD Signaling telephone number, or it is associated with the SSCWXY number.

Software Release: 5E8 and later.
Valid Entries: 0 - 9

Data Rules:

If ACCESS NUMBER 800 is entered, Z cannot be entered.

5E9(2) and later:
"Z" must be entered if:
- SERVICE TYPE is "IBNS"
- SERVICE TYPE is "SVC01" - "SVC41"

2.4 (*) ACCESS NUMBER 800

Description: Enter the 1+8XX Access Call number using Feature Group D Signaling. These the digits are signaled by the OSO (Originating Screening Office) in the forward number field of a 1+8XX Access call using the Feature Group D signaling. These digits are used to differentiate calls routed to the OSPS

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directly from a LEC end office or access tandem office from AATOS calls and SDN calls to private networks. This field supports the Toll-Free Access Using FGD Signaling secured feature (SFID 377). For more information on this feature, see Division 2 Section 4A377.

Software Release: 5E9(1) and later.
Valid Entries: 0000000 - 9999999

Data Rules:

If ACCESS NUMBER 800 is entered,
- SSC WXY cannot be entered
- Z cannot be entered

2.5 (*) INWATS NPA

Description: Enter the NPA of the INWATS (INward Wide Area Telecommunications Service) access call using Feature Group D Signaling. This field supports the Toll-Free Services NPA secured feature (SFID 405), which, with the exhaustion of 800 numbers, allows other NPAs to be assigned as INWATS. For more information on this feature, see Division 2, Section 4A405. Also, for direct-dialed calls, the LEC Toll-free Treatment for NPA 888 Phase 1 feature must be active. This is a secured feature with SFID 158. For more information on this feature, see Division 2, Section 4A158.

Software Release: 5E10 and later.
Valid Entries: 100 - 999

Data Rules:

If SSC WXY is entered, ACCESS NUMBER 800 and INWATS NPA cannot be entered.

If ACCESS NUMBER 800 is entered, then INWATS NPA must be entered.

If INWATS NPA is entered, a corresponding INWNPA form (6404 Record) must be entered with a matching INWATS NPA value.

2.6 # SERVICE TYPE

Description: Is this call an AATOS call or an SDN/NRA call?

Valid SERVICE TYPE Entries

Entry	Definition
AATOS or A	An Alternate Access to Operator Services call For more information on the AATOS feature, see Division 2, Section 3I.
IBNS	Software Release: 5E9(2) only. See "IBNS".
IBNS	Software Release: 5E10 and later. International Billed Number Screening Release 2. "IBNS" supports the International Billed Number Screening Release 2 secured feature (SFID 386). For more information on this feature see Division 2, Section 4A386.
SDAP	Software Release: 5E9(2) and later. 1+8XX SDAP (Speed Dialing Auto-Provisioning) calls. For more information on Card Based SDAP feature, see Division 2, Section 4A365.
SDNNRA or S	A Software Defined Network/Network Remote Access call For more information on the SDN NRA feature, see Division 2, Section 4A85.
SVC01 - 41	

Data Rules:

If "AATOS", "SDAP" or "SDNNRA" is entered, DESTINATION INDEX cannot be entered.

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For 5E9(2) and later, if SERVICE TYPE is not
- "AATOS"
- "SDAP" (5E10 and later.)
- "SDNNRA", or
- "IBNS",

then LABEL must be entered.

IBNS:
If "IBNS" is entered, then
- ACCESS NUMBER 800 must not be entered.
- ACQS must be "N"R
- DESTINATION INDEX must be entered.
- FTS must be "N".
- LABEL must not be entered.
- PAID must be "N".
- Z must be entered.

WARNING: TCS ONPA is automatically set to 0 if SERVICE TYPE is "IBNS".

SDNNRA:
If "SDNNRA" is entered:
- ACQS must be "N"
- PAID must be "N"

SVC01 - SCV41:
If "SVC01" - "SVC41" is entered, then Z must be entered.

2.7 DESTINATION INDEX

Description: Enter the destination index used to route the call to a language-specific operator serving team.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 4095

2.8 FTS

Description: Is this a FTS NRA (Federal Telecommunications System Network Remote Access) call?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then:
- ACQS must be "N"
- PAID must be "N"
- SERVICE TYPE must be "SDNNRA"

2.9 LABEL

Description: Enter the label displayed at the operator position to indicate the service requested by the

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caller.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 7 characters

Data Rules:

LABEL must be entered for all SERVICE TYPEs that are not
- "AATOS"
- IBNS (5E9(2) and later.)
- SDAP(5E10 and later.)
- "SDNNRA"

If SERVICE TYPE is "IBNS", then LABEL must not be entered.

2.10 ACQS

Description: Is the hotel room number's Class of Charge billing allowed for this AATLSOS call.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.11 PAID

Description: Is PAID and DDD (Direct Distance Dialing) Class of Charge billing allowed for this AATLSOS call?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

2.12 MEASUREMENT INDEX

Description: Enter the measurement index for Toll-Free Access calls which have an associated label displayed along with measurements on the 30-minute traffic report. This field supports the Toll-Free Access Using FGD Signaling (Phase 2) secured feature (SFID 377). For more information on this feature, see Division 2 Section 4A377.

Software Release: 5E9(2) and later.
Valid Entries: 1 - 100

Data Rules:

If MEASUREMENT INDEX is entered, then a matching MEASDSIG form with a corresponding MEASUREMENT INDEX value must be entered.

2.13 TCS ONPA

Description: Enter the originating NPA to be used during TCS (Terminating Code Screening) checks. If this field is not entered, then the signaled originating NPA is used as the originating NPA during TCS checks. If 0 is entered then no TCS checks apply. The TCS ONPA is specified on a per service basis. This field supports the AATOS (Alternate Access To Operator Services) Fraud Control feature. For more information on this feature, see Division 2, Section 4A401.

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Software Release: 5E9(2) and later.
Default: 800
Valid Entries: 0 - 999

Data Rules:

- **WARNING:** TCS ONPA is automatically set to 0 if SERVICE TYPE is "IBNS".

2.14 QUIET HEAR TRMT

Description: Is Quiet Hear treatment allowed? The application of the Quiet Hear feature is based on either the Toll-free Access Call Routing Number or Toll-free Access Number as defined in the OSPS Service Designation table. The QUIET HEAR TRMT and AUDIO LOGO BRAND fields support the Quiet Hear secured feature (SFID 402). For more information on this feature, see Division 2, Section 4A402.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "N" is entered, then AUDIO LOGO BRAND must be "N".

2.15 AUDIO LOGO BRAND

Description: Is Quiet Hear Audio Logo branding allowed? The application of Quiet Hear Audio Logo Branding is based on either the Toll-free Access Call Routing Number or Toll-free Access Number as defined in the OSPS Service Designation table. The QUIET HEAR TRMT and AUDIO LOGO BRAND fields support the Quiet Hear secured feature (SFID 402). For more information on this feature, see Division 2, Section 4A402.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then QUIET HEAR TRMT must be "Y".

2.16 AUTO TRMT

Description: Should a 1-800-CALLATT call be provided with OSPS/APS (Automated Position System) handling? The AUTO TRMT field has been added to support the AATLSOS (Alternate Access To Language Specific Operator Services) - AAP (Automated Access Prompting) feature. For more information on this feature, see Division 2, Section 4A619.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If AUTO TRMT equals "Y", then SERVICE TYPE must be "SVC01" - "SVC41".

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2.17 ASAP TREATMENT

Description: Should ASAP (Automated Service Access Prompting) treatment apply to calls on this trunk group? The ASAP TREATMENT field was added to support the ASAP for LSOS (Language Specific Operator Services) Rating Changes secured feature (SFID 414). For more information on this feature, see Division 2, Section 4A414.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.18 CPDL TREATMENT

Description: Enter the CPDL (Call Processing Data Links) Treatment. The CPDL Treatment specifies whether the 1-800-CALLATT call can be supported by the CPDL Interface interacting with the NRP (Network Routing Processor) platform.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If AUTO TRMT is "Y", CPDL TREATMENT must be "N".

If CPDL TREATMENT is "Y", ASAP TREATMENT must be "N".

```
srvdesig                    5ESS Switch          _
(5474)              OFFICE DATA ADMINISTRATION
    OSPS SERVICE DESIGNATION FOR 1+800 AATOS/SDN NRA OR AATLSOS CALLS

(*)1. SSC WXY         ______
(*)2. Z               _
(*)3. ACCESS NUMBER 800 _______
  #4. SERVICE TYPE     ______
   5. DESTINATION INDEX ____
   6. FTS              N
   7. LABEL            _______
   8. ACQS             N
   9. PAID             N
```

Figure 1 SAMPLE SRVDESIG FORM 5E9(1) SOFTWARE RELEASE

```
srvdesig                    5ESS Switch          _
(5474)              OFFICE DATA ADMINISTRATION
    OSPS SERVICE DESIGNATION FOR 1+800 AATOS/SDN NRA OR AATLSOS CALLS

(*)1. SSC WXY         ______        13. QUIET HEAR TRMT  N
(*)2. Z               _             14. AUDIO LOGO BRAND N
(*)3. ACCESS NUMBER 800 _______     15. AUTO TRMT        N
(*)4. INWATS NPA      ___           16. ASAP TREATMENT   N
  #5. SERVICE TYPE    ______        17. CPDL TREATMENT   N
```

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```
  6. DESTINATION INDEX ____
  7. FTS             N
  8. LABEL           _______
  9. ACQS            N
 10. PAID            N
 11. MEASUREMENT INDEX ___
 12. TCS ONPA        800
```

Figure 2 SAMPLE SRVDESIG FORM 5E9(2) SOFTWARE RELEASE

```
srvdesig                    5ESS Switch        _
(5474)              OFFICE DATA ADMINISTRATION
     OSPS SERVICE DESIGNATION FOR 1+800 AATOS/SDN NRA OR AATLSOS CALLS

(*)1. SSC WXY          ______      13. AUDIO LOGO BRAND N
(*)2. Z                _           14. AUTO TRMT       N
(*)3. ACCESS NUMBER 800 _______
  #4. SERVICE TYPE     ______
   5. DESTINATION INDEX ____
   6. FTS              N
   7. LABEL            _______
   8. ACQS             N
   9. PAID             N
  10. MEASUREMENT INDEX ___
  11. TCS ONPA         800
  12. QUIET HEAR TRMT  N
```

Figure 3 SAMPLE SRVDESIG FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4CA: 5475 RECORD
OSPS CARRIER SPECIFIC ROUTING (CSR) INTL CREDIT CARD ATTRIBUTES - CSRATTR

1. GENERAL

The 5475 Record is available with the 5E7 Software Release. This record is used to provide information about international credit cards. The information provided on this record is the card vendor's country code as defined by the CCITT, the international administration ID, which is the carrier to be used for international call in the destination country, and CSR preference indicator.

The card vendor country code, CARD VENDOR CC, is used by the OSPS office to determine if a CSR call is also an international calling card call destined for the home country of the card issuer.

The international administration ID, INTL ADMIN ID, and and CSR preference indicator, PREFERENCE ID, are signaled by the OSPS office (via TOLL), to the GATEWAY office. The GATEWAY office depending on the condition of the network, the value of INTL ADMIN ID, and the value of the PREFERENCE ID gives the CSR calls the following treatment:

- if the card issuer's network, CSR ATTR ID, is available, the CSR call is routed to that INTL ADMIN ID, the carrier's network in the destination country.
- if card issuer's network is not available and if PREFERENCE ID, the preference indicator is set to "PREFERRED", the CSR call is overflowed to another carrier's network in the destination country.
- if the card issuer's network is not available and INTL ADMIN ID is set to "MANDATORY", the CSR call is denied. (See Division 2 Section 3I for more information on CSR feature.)

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.58.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CSR ATTR ID

Description: Enter the Carrier Specific Routing Attribute ID. It is used as an index to determine information for a particular card number when an international call is made. The CSR ATTR ID value is assigned to the TCR (Telephone Credit Card) number on the TCCID form.

Required Field.
Valid Entries: 1 - 200

2.3 # CARD VENDOR CC

Description: Enter the Card Vendor country code. This field provides the country code of the card issuer as defined by the CCITT.

Required Field.
Valid Entries: 1 - 999

2.4 # INTL ADMIN ID

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Description: Enter the International Administration ID. The Administration ID represents the international carrier that should be used for routing a credit card call in the home country of the card issuer. This parameter is signaled by the OSPS office (via TOLL), to the GATEWAY office, and the GATEWAY office uses it to route the CSR call to an appropriate carrier's network in the destination country.

Required Field.
Valid Entries: 1 - 7

2.5 # PREFERENCE ID

Description: Enter the CSR Preference Indicator. This attribute indicates whether the carrier to be used for the CSR international credit card, once the call reaches the home country of the card issuer, has to be the carrier identified in the INTL ADMIN ID, "MANDATORY", or if the INTL ADMIN ID carrier is not available, the call may be overflowed to another carrier in that country, "PREFERRED". This parameter is signaled by the OSPS office (via TOLL), to the GATEWAY office. The GATEWAY office uses it when routing the CSR call.

Required Field.

Valid PREFERENCE ID Entries

Entry	Definition
MANDATORY	Carrier identified in the INTL ADMIN ID
PREFERRED	Overflow to another carrier in that country, if the INTL ADMIN ID carrier is not available.

csrattr 5ESS Switch _
(5475) OFFICE DATA ADMINISTRATION
OSPS CARRIER SPECIFIC ROUTING (CSR) INTL CREDIT CARD ATTRIBUTES

*1. CSR ATTR ID 25
#2. CARD VENDOR CC 616
#3. INTL ADMIN ID 2
#4. PREFERENCE ID MANDATORY

Figure 1 SAMPLE CSRATTR FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 4CB: 5476 RECORD
OSPS SM INFORMATION - OSPSSMINF

1. GENERAL

The 5476 Record is available for the 5E6 - 5E9(2) Software Releases.The OSPS Switching Module Information form defines present or future OSPS equipment on an SM for distribution requirements of group types of GPD OSPS (OSPS Group Partitioned Data) and GPD OPRT (SM's with operator traffic trunks Group Partitioned data)

1.1 Recent Change View

This form does not have a corresponding Recent Change View.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 # CONFIG

Description: Enter the SM Configuration.

Required Field.

Valid CONFIGURATION Entries

Entry	Definition
BASIC	Includes software installed in every SM.
STANDARD	Includes all of the "Basic" programs, plus special programs supporting toll service (e.g., CSG, OSPS trunking, and Federal Systems).
LOADED	Includes all of the "Basic" and "Standard" programs, plus programs supporting ISDN services and OSPS.
SM2000	Software Release: 5E9(2) and later. Includes SM-2000 software.

Data Rules:

For 5E9(1) and earlier, a "BASIC" SM can not be a PSM or be equipped with DTA RAFs, operator traffic trunks, or OSPS operator trunks.

The entry in this form should match the CONFIGURATION field on the corresponding EQIM form where SM on the EQIM form matches the SM on the OSPSSMINF form.

2.4 PSM

Description: Are regular or interflow operator positions assigned to this SM? If an SM is a PSM (Position Switching Module) then either "DAOPER" is entered in the OSPS SRVCL on the OSPS DSL form, or "IFOPER" is entered as the TRKCLS on the TKGRP form.

Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If PSM is "Y", CONFIG should be LOADED.

If PSM is "N", DTA RAF should be entered.

If both PSM and OPR TR TRK are "N", OSPS OPR TRK should be entered.

A "BASIC" SM can not be a PSM or be equipped with DTA RAFs, operator traffic trunks, or OSPS operator trunks.

If "Y" is entered, then regular operator positions or interflow operator positions should be assigned to an equipment number in the SM. Regular operator positions and interflow operator positions are assigned equipment numbers in the LCEN or DEN fields on OSPSOP forms. The first three digits in the LCEN or DEN is the SM number.

For 5E8 and later, the entry in this field should match OSPS PSM on the corresponding EQIM for where SM on the EQIM form matches the SM on the OSPSSMINF form.

2.5 DTA RAF

Description: Is a DTA RAF on this SM? If a DTA RAF is on this SM, then "DTA" or "CTR" will be entered in the RAF TYPE field on the EQRA form.

Required Field.
Default: N(5E9(1) and earlier)
Valid Entries: Y, N

Data Rules:

If PSM is "N", DTA RAF should be entered.

A "BASIC" SM can not be a PSM or be equipped with DTA RAFs, operator traffic trunks, or OSPS operator trunks.

If "Y" is entered, thenat least one DTA RAF should be equipped in the SM. An SM on the EQRA form should match the SM on this form and SERVICE TYPE on the EQRA form should be "DTA" or "CTR".

2.6 OPR TR TRK

Description: Are operator traffic trunks in this SM? If Operator traffic trunks are on this SM, then "DIOR", "FIOPR", "FIOPRI" or "INAISTRK" is entered in the TRKCLS field on the TKGRP form.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If both PSM and OPR TR TRK are "N", then OSPS OPR TRK should be entered.

A "BASIC" SM can not be a PSM or be equipped with DTA RAFs, operator traffic trunks, or OSPS operator trunks.

If "Y" is entered, thenoperator traffic trunks should be assigned in the SM specified on the form. Operator traffic trunks are in a trunk group with a trunk class of

- "DIOR"

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- "FIOPR"
- "FOPRI"
- "INAISTRK" The TKGRP form should point to at least one TRUNK form (matching TGN) where the first three digits of the TEN, DEN, or NEN match the SM on the OSPSSMINF form.

2.7 OSPS OPR TRK

Description: Are OSPS operator trunks in this SM? OSPS operator trunks on this SM are also entered on the OPRTK form.

Required Field.
Default: N(5E9(1) and earlier)
Valid Entries: Y, N

Data Rules:

If both PSM and OPR TR TRK are N, then OSPS OPR TRK should be entered.

A "BASIC" SM can not be a PSM or be equipped with DTA RAFs, operator traffic trunks, or OSPS operator trunks. If "Y" is entered, then OSPS operator trunks should be assigned in the SM specified on the form. OSPS operator trunk groups are specified on the OPRTK form. An OPRTK form should point to at least one trunk form (matching TGN) where the first three digits of the TEN, DEN, or NEN match the SM on the OSPSSMINF form.

```
                    5ESS Switch
ospssminf           OFFICE DATA ADMINISTRATION
5476                OSPS SM INFORMATION

*1. SM          ___
#2. CONFIG      ________
 3. PSM         N
 4. DTA RAF     N
 5. OPR TR TRK  N
 6. OSPS OPR TRK  N
```

Figure 1 SAMPLE OSPSSMINF FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 4CC: 5477-1 RECORD
NPA NXXS OUTSIDE THE UNITED STATES - NONUSA

1. GENERAL

The 5477-1 Record is available with the 5E8 Software Release. This record is used to construct a table of NPA NXXs that are located within the NANP (North American Numbering Plan), but are outside the United States.

The table indicates if the NPA NXX is an acceptable terminating number for a DIOR country-to-country call. This table is used by the DIOR CPS (Direct International Originations Country Pair Screening) feature to screen DIOR country-to-country calls. For more information on the special feature, DIOR CPS, see Division 2, Section 4C4. For more information on the DIOR feature, see Division 2, Section 3I.

For 5E9(1) and later, this form is also applicable to the ICCV Request for Call Duration and Charge feature, see Division 2, Section 3I.

1.1 Recent Change View

The corresponding Recent Change View for this form is 26.6

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NPA

Description: Enter the NPA of the forward number which is within the NANP, but not within the United States, and which is being identified by the DIOR Country Pair Screening feature.

Required Field.
Valid Entries: 3 digits for the NPA
- For 5E8: N is (2 - 9), P is (0 - 1), A is (0 - 9)
- For 5E9(1) and later: 200 - 999

2.3 (*) NXX

Description: Enter the office code, NXX, of the forward number, which is being identified by the Country Pair Screening Feature. If this field is not entered, it indicates that all NXXs are applicable for the NPA entered on this form.
Valid Entries: 200 - 999

Data Rules:

If this field is blank (indicating all NXXs for this NPA), then no other NONUSA forms may exist with the same NPA value.

2.4 # HOME COUNTRY

Description: Enter 3 alphanumeric characters to identify the home country of this NPA-NXX for the ICCV Request for Call Duration and Charge feature.

Software Release: 5E9(1) and later.
Required Field.

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Valid Entries: 1 - 3 alphanumeric characters

2.5 MEMBER

Description: The name of this field was changed to DIOR MEMBER in 5E9(1). This field name applies to 5E8. See DIOR MEMBER for usage information.

2.6 DIOR MEMBER

Description: Are DIOR country-to-country calls permitted to terminate to this NPA NXX? This field specifies whether the NPA NXX(s) entered on this form identifies a country which is a member of a group of countries that allow DIOR calls to terminate to other group members. (This field was called MEMBER for 5E8.)

Required Field.
Default: N
Valid Entries: Y, N

```
nonusa                  5ESS Switch          _
(5477-1)            OFFICE DATA ADMINISTRATION
                NPA-NXXS OUTSIDE THE UNITED STATES

 * 1. NPA    809
(*)2. NXX    952
   3. MEMBER Y
```

Figure 1 SAMPLE NONUSA FORM 5E8 SOFTWARE RELEASE

```
nonusa                  5ESS Switch          _
(5477-1)            OFFICE DATA ADMINISTRATION
                NPA-NXXS OUTSIDE THE UNITED STATES

  *1. NPA         506
(*)2. NXX         ___
  #3. HOME COUNTRY CAN
   4. DIOR MEMBER  Y
```

Figure 2 SAMPLE NONUSA FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4CD: 5478 RECORD
INTERNATIONAL CREDIT CARD VALIDATION DATABASE FORM - ICCVDB

1. GENERAL

The 5478 Record is available with 5E9(1) and later Software Releases. This table is used to provide a ratio percentage of successful queries on a card issuer basis and the minimum number of query attempts required before the query success ratio is applied. It includes a label which is printed on the measurement and software alarm reports. Each entry is linked to the card issuer by the ICCV DB LABEL field on the TCCID form.

Each entry in this table contains information about an ICCV card issuer.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.60

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * DB NUMBER

Description: The entry in this field is used to link this view with ICCV (International Credit Card Validation) card issuers on the TCCID form (5454 Record). A DB NUMBER of 0 represents all data bases not specified on the TCCID form.

Required Field.
Valid Entries: 0 - 16

Data Rules:

If DB NUMBER is 0, then DB LABEL is set to "DFALT".

2.3 # DB LABEL

Description: DB LABEL is used as a header on software alarm and measurements reports to identify an individual or group of ICCV (International Credit Card Validation) card issuers. The entry "DFALT" is reserved for use as a "default" group of ICCV card issuers.

Required Field.
Valid Entries: 1 - 5 alpha-numeric characters or DFALT

Data Rules:

DB LABEL must be unique.

If DB NUMBER is 0, DB LABEL must be "DFALT".

If a TCCATTR form (5473 Record) corresponds with a TCCID form (5454 Record), i.e. the CARD ATTR ID on both forms match, and the SIGNALING TYPE on the TCCATTR form is "ICCV", then the DB LABEL on the TCCID form must match the DB LABEL entry on this form.

2.4 ALARM THR

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Description: Enter the CAS ICCV TCAP query alarm threshold in terms of the percentage of the number of successful queries. If the percentage falls below this threshold, an alarm is activated.

Required Field.
Default: 95 (%)
Valid Entries: 0 - 100 (%)

2.5 MIN QUERY

Description: Minimum number of CAS ICCV TCAP query attempts required in a 15 minute period before query success ratio is applied and a software alarm calculation is performed.

Required Field.
Default: 40
Valid Entries: 1 - 64

FOR UPDATE ONLY

The following field is for Recent Change Update purposes only.

2.6 NEW DB LABEL

Description: This is a Recent Change only field. Enter the new database label to be used as a header on software alarm and measurements reports. This field can only be entered in an update operation. The entry "DFALT" is reserved for use as a "default" group of ICCV card issuers.
Valid Entries: 1 - 5 alpha-numeric characters or DFALT

Data Rules:

If NEW DB LABEL equals "DFALT", then DB NUMBER must equal 0.

NEW DB LABEL must not equal DB LABEL.

```
iccvdb                  5ESS Switch
(5478)              OFFICE DATA ADMINISTRATION
          INTERNATIONAL CREDIT CARD VALIDATION DATABASE

*1. DB NUMBER 02
#2. DB LABEL  ATTNS
 3. ALARM THR 95
 4. MIN QUERY 40

  FOR UPDATE ONLY
    NEW DB LABEL
```

Figure 1 SAMPLE ICCVDB FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4CF: 5480 RECORD
OSPS DIFFERENTIATION OF CARD SERVICE CHARGES FORM - CMPCRD

1. GENERAL

The 5480 Record is available with the 5E8 Software Release. This form assigns the comparison calling card defined by the TCA (Telephone Company Administration) for the Differentiation of Card Service Charges feature, and assigns a label which defines the Issuer of the comparison card. This comparison card can be used as a marketing technique to compare calling card prices between the calling customer's card and a TCA defined comparison card.

Only one CMPCRD form can be entered for an office.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.45

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * COMPARISON CARD

Description: Enter the first 2 - 7 digits of the comparison card. This is the comparison Card Vendor/Issuer ID number. It will be used in rate quote queries.

For 2 - 5 or 7-digit card numbers:

- If the 2 - 5 or 7-digit card number is found in the card recognition tables, the entry is accepted.
- If the card number is not found in the card recognition tables and the TCA entered 2-5 digits or 7 digits, the entry must be rejected.

For a 6-digit number:

- If a 6-digit number is found in the card recognition tables, and the TCA did not indicate the card is a 10+4 card, then OSPS must accept the entry.
- If a 6-digit number is found in the card recognition tables, and the TCA indicated the number is a 10+4 card, then OSPS must reject the entry.
- If a 6-digit number is not found in the card recognition tables, and the TCA did not indicate the card is a 10+4 card, the OSPS must reject the entry.
- If a 6-digit number is not found in the card recognition tables, and the TCA indicated the number is a 10+4 card, the OSPS must accept the entry.

Required Field.
Default: N
Valid Entries: 00 - 9999999

Data Rules:

If COMPARISON CARD is not a six-digit number, CARD IS 10P4 must be "N".

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2.3 CARD IS 10P4

Description: Is this comparison card a 10+4 card?

Required Field.
Valid Entries: Y, N

Data Rules:

If COMPARISON CARD is not a six-digit number, then this field must be "N".

If CARD IS 10P4 is "N", then the entry in the COMPARISON CARD on this form must match ISSUER ID DIGITS on the TCCID form (5454 Record).

If CARD IS 10P4 is "Y", then COMPARISON CARD entry can not match any ISSUE ID DIGITS entry on the TCCID form.

2.4 # CARD LABEL

Description: Enter 1 - 5 characters that is a meaningful label for the comparison card. This label will display the name of the card issuer on the RATE page of the OSPS VDT/CST when a comparison card is used during processing of OSPS calling card Rate Quote queries.

Required Field.
Valid Entries: 1 - 5 characters

```
                        5ESS Switch
cmpcrd                 OFFICE DATA ADMINISTRATION
(5476)          OSPS DIFFERENTIATION OF CARD SERVICE CHARGES


*1. COMPARISON CARD 891288
 2. CARD IS 10P4    N
#3. CARD LABEL      AT&T
```

Figure 1 SAMPLE CMPCRD FORM 5E8 AND LATE SOFTWARE RELEASES

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SEC. 4CG: 5481 RECORD
OSPS BACK NUMBER ALTERNATE ROUTING - SCROAR

1. GENERAL

The 5481 Record is available for 5E7 and later Software Releases.

The OSPS Back Number Alternate Routing form is used to populate the OSPS Back Number Alternate Routing Table. This table provides alternate routing based on the alternate screening index that is directly associated with the screening code for the back line number of the call. A maximum of 64 different SCREEN CODEs can be defined.

1.1 OLS Alternate Routing

This form was added for the OAR (Originating Line Screening Alternate Routing) secured feature. (For more information on the OAR feature, see Division 2, Section 4A76.) The OLS (Originating Line Screening) Alternate Routing feature allows an OSPS to populate alternate routing translation data for a particular call and apply it just before routing the call from the OSPS to the final routing destination. The final routing destination is based on the alternate screening index, SCRN IDX, that is directly associated with the screening code, SCRN CODE, applicable to the back line number of the call. Possible destinations can be anything that can be accomplished through routing translations: including announcement facility (e.g. 13A announcement), reorder, or an alternate trunking arrangement.

This feature uses the screening code applied to the back number of the call to determine the alternate screening index to be used. OAR works in conjunction with the existing OLS feature which allows the OSPS to assign OLS code(s) to the back line number(s). The OSPS could choose to assign all the back line number(s) to one OLS code or assign certain back line number(s) to separate OLS codes which can provide a finer control in handling the call for this feature.

This is a secured feature. It is activated on the SFSYS form (5713-1 Record) by setting SFID 76 to "Y". Also, the entry in the SCRN IDX field must also be entered in the SCR field on the RAR form.

1.2 Recent Change View

The corresponding Recent Change View for this form is 26.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SCRN CODE

Description: Enter the OSPS Back Number Screen Code associated with the back number screening.

Required Field.
Valid Entries: 1 - 999

2.3 # SCRN IDX

Description: Enter the alternate screening index.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

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If SCRN IDX is entered on this form, then that screen index must be entered in the SCR field on an RAR form.

```
                    5ESS Switch
scroar              OFFICE DATA ADMINISTRATION
(5481)          OSPS BACK NUMBER ALTERNATE ROUTING

*1. SCRN CODE ___
#2. SCRN IDX  ____
```

Figure 1 SAMPLE SCROAR FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 4CH: 5482A/B RECORD
OSPS BLOCKING 900 CALLS FOR LEC CARDS FORM - BLK900

1. GENERAL

The 5482 Record is available with 5E7 and later Software Releases. It is used by the OSPS Blocking 900 Calls for LEC Cards feature to determine if a LEC calling card can be used to bill a 900 number call. (For more information on OSPS Blocking 900 Calls for LEC Card features see Division 2, Section 4A77.) For 5E7, identification is based on the first three card digits, either the NPA (Numbering Plan Area) or RAO (Revenue Accounting Office) code for 5E7. For 5E8 and later, in addition to identification based on NPA or RAO, identification may be based on the first six digits of the card for specific NXXs within an NPA.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.59.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NUMBER

Description: Enter the NPA or RAO code associated with the LEC calling card.

Required Field.
Valid Entries: 200 - 999

2.3 * TYPE

Description: This entry indicates whether an NPA or an RAO is entered in the NUMBER field.

Required Field.

Valid TYPE Entries

Entry	Definition
N or NPA	An NPA NUMBER is entered.
R or RAO	An RAO NUMBER is entered.

Data Rules:

If "R" is entered, then the LIST OF NXXs cannot be entered, and "A" or "B" must be entered in the STATUS field.

2.4 # STATUS

Description: This entry indicates if 900 calls should be blocked or allowed for the LEC card corresponding to the RAO or NPA.

WARNING: If TYPE is "NPA" and "A" or "B" is entered for STATUS, **all** entries in the LIST OF NXXs will be changed to match the entry in this field.

Required Field.

Valid STATUS Entries

Entry	Definition
A	Allow the RAO or all NXXs for the NPA to charge 900 calls to the corresponding LEC calling card.
B	Block the RAO or all NXXs for the NPA from charging 900 calls to the corresponding LEC calling card.

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P	Software Release: 5E8 and later. Partial block. Block only the NXXs with "B" entered in the LIST OF NXXs (200-999) from charging 900 calls to the corresponding LEC calling card for the NPA.

Data Rules:

For 5E8 and later, if STATUS is "P", there must be at least one entry in the LIST OF NXXs.

2.5 LIST OF NXXs (200-999)

Description: Enter if an NXX for 900 calls should be blocked to the LEC card corresponding to the NPA NXX. If 900 calls should be blocked for the NPA NXX, enter a "B" in the table for the NXX number. If 900 calls are allowed, leave the entry blank.

Software Release: 5E8 and later.
Valid Entries:

Valid LIST OF NXXs Entries

Entry	Definition
blank	a space or blank indicates the NPA-NXX is allowed to charge 900 calls.
B	Block 900 calls for this NXX.

```
                        5ESS Switch
blk900                OFFICE DATA ADMINISTRATION
(5482)          OSPS BLOCKING 900 CALLS FOR LEC CARDS

  NPA/RAO
*1. NUMBER 708
*2. TYPE   NPA
#3. STATUS B
```

Figure 1 SAMPLE BLK900 FORM 5E7 SOFTWARE RELEASE

```
SCREEN 1 OF 3                5ESS Switch
blk900                OFFICE DATA ADMINISTRATION
(5482-A/B)         OSPS BLOCKING 900 CALLS FOR LEC CARDS

  NPA/RAO
*1. NUMBER 708
*2. TYPE   NPA
#3. STATUS P
                    4. LIST OF NXXs (200-399)
 ROW   01234 56789 ROW    01234 56789 ROW    01234 56789 ROW    01234 56789
 1  200 _____ _____  6  250 _____ __B__ 11  300 _____ _____ 16  350 _____ _____
 2  210 _____ _____  7  260 _____ _____ 12  310 _____ _____ 17  360 _____ _____
 3  220 ____B _____  8  270 _____ _____ 13  320 B____ _____ 18  370 _____ _____
 4  230 _____ _____  9  280 _____ _____ 14  330 _____ _____ 19  380 _____ B____
 5  240 _____ _____ 10  290 _____ _____ 15  340 _____ _____ 20  390 _____ _____
```

```
SCREEN 2 OF 3                5ESS Switch
blk900                OFFICE DATA ADMINISTRATION
```

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(5482-A/B) OSPS BLOCKING 900 CALLS FOR LEC CARDS

4. LIST OF NXXs (400-799)

ROW	01234	56789	ROW	01234	56789	ROW	01234	56789	ROW	01234	56789
21	400	_____	31	500	_____	41	600	_____	51	700	_____
22	410	_____	32	510	_____	42	610	_____	52	710	_____
23	420	_____	33	520	_____	43	620	_____	53	720	_____
24	430	_____	34	530	_____	44	630	_____	54	730	_____
25	440	_____	35	540	_____	45	640	_____	55	740	_____
26	450	_____	36	550	_____	46	650	_____	56	750	_____
27	460	_____	37	560	_____	47	660	_____	57	760	_____
28	470	_____	38	570	_____	48	670	_____	58	770	_____
29	480	_____	39	580	_____	49	680	_____	59	780	_____
30	490	_____	40	590	_____	50	690	_____	60	790	_____

SCREEN 3 OF 3 5ESS Switch _
blk900 OFFICE DATA ADMINISTRATION
(5482-A/B) OSPS BLOCKING 900 CALLS FOR LEC CARDS

4. LIST OF NXXs (800-999)

ROW	01234	56789	ROW	01234	56789	ROW	01234	56789	ROW	01234	56789
61	800	_____	66	850	_____	71	900	_____	76	950	_____
62	810	_____	67	860	_____	72	910	_____	77	960	_____
63	820	_____	68	870	_____	73	920	_____	78	970	_____
64	830	_____	69	880	_____	74	930	_____	79	980	_____
65	840	_____	70	890	__B__	75	940	_____	80	990	_____

Figure 2 SAMPLE BLK900 FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4CI: 5483-1 RECORD
NON-ENGLISH LANGUAGE ANNOUNCEMENT APPLICATION TYPES - LANGTBL

1. GENERAL

The 5483-1 Record is available with the 5E9(1) Software Release. An entry in this table maps the language value for a calling card to the announcement application type so that card announcements may be played in the appropriate language for a customer. It also maps the language to the operator position display. The LANGUAGE field is equivalent to the LOP (Language Override Parameter) that may be returned in a calling card query reply from the CAS (Customer Account Services) NCP (Network Control Point) database.

Each non-English language that is to be used must have an entry (and only one) entry in this table. This form allows each language to activated or deactivated independently.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.66.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * LANGUAGE

Description: Enter the non-English language identifier. The language value is retrieved from the card issuer database (TCCID form, 5454 Record) or is returned in a CAS card validation query as a language of preference. This table maps the language value to the proper set of announcements to play so that the announcements are in the language that the card issuer or customer has selected.

Required Field.
Valid Entries: 2 - 7

Data Rules:

The entry in this field may not exceed the MAX LOP value entered on the OSPSOPT form (5424 Record).

2.3 ACTIVATE

Description: Is this language activated for use on card call announcements? This field may be set to "N" if the phrase set for this language has not been populated on the specified RAF announcement board. A value of "N" will result in English announcements being used instead of the language specified on this form.

Required Field.
Default: N
Valid Entries: Y, N

2.4 # ANNC APPL

Description: Enter the announcement application type. Special announcement applications are defined to allow using the same announcement header IDs for non-English language announcements as are used for English OSPS card announcements.

Required Field.
Valid Entries: L[2 - 7]

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Data Rules:

Each entry in this field must be unique.

2.5 # DISPLAY ID

Description: Enter the language identifier to be displayed at the operator position indicating which non-English language is associated with this call.

NOTE: Upper case letters are not translated into lower case letters.

Required Field.
Valid Entries: 1 - 3 alphanumeric characters

Data Rules:

Each entry in this field must be unique.

If LANGUAGE is entered on the TCCID form (5454 Record), a matching value must be entered in this field, and the MAX LOP field on the OSPSOPT form (5424 Record) must be entered.

---

langtbl 5ESS Switch _
(5483-1) OFFICE DATA ADMINISTRATION
NON-ENGLISH LANGUAGE ANNOUNCEMENT APPLICATION TYPES

*1. LANGUAGE 3
2. ACTIVATE Y
#3. ANNC APPL L3
#4. DISPLAY ID GER

Figure 1 SAMPLE LANGTBL FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4CJ: 5483-2 RECORD
ENGLISH PHRASE ID TO NON-ENGLISH PHRASE ID MAPPING - PHRLANG

1. GENERAL

The 5483-2 Record is available with the 5E9(1) Software Release. An entry in this form maps an English language phrase ID to a corresponding non-English language phrase ID. This is necessary only for those phrase IDs that are not associated with an announcement header ID. For example, the entries in this form map English phrases, such as those used for for CMA (Customized Market Announcements) to corresponding non-English language phrases specified in the OLS (Originating Line Screening) record.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.67.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ENGLISH PHRASE ID

Description: Enter the English phrase ID to be mapped to a non-English language phrase ID.

Required Field.
Valid Entries:
- For 5E9(1): 1 - 16,000
- For 5E9(2) and later: 1 - 16,383 or 16,600 - 65,530

Data Rules:

For each ENGLISH PHRASE ID entered on this form, there must be a matching PHRASE ID on the PHRASE form (5534 Record) where APPLICATION is "OSPSTA".

2.3 * NON ENGLISH ANNC APPL

Description: Enter the announcement application type of the non-English language used to map the English phrase ID to the non-English phrase ID>

Required Field.
Valid Entries: L[2 - 7]

Data Rules:

For each PHRLANG form, there must be a corresponding PHRASE form where NON ENGLISH PHRASE ID and NON ENGLISH ANNC APPL on the PHRLANG form match PHRASE ID and APPLICATION on the PHRASE form.

2.4 # NON ENGLISH PHRASE ID

Description: Enter the non-English phrase ID which corresponds to the English phrase ID entered in ENGLISH PHRASE ID.

Required Field.
Valid Entries:

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- For 5E9(1): 1 - 16,000
- For 5E9(2) and later: 1 - 16,383 or 16,600 - 65,530

Data Rules:

For each PHRLANG form, there must be a corresponding PHRASE form where NON ENGLISH PHRASE ID and NON ENGLISH ANNC APPL on the PHRLANG form match PHRASE ID and APPLICATION on the PHRASE form.

---

phrlang 5ESS Switch _
(5483-2) OFFICE DATA ADMINISTRATION
ENGLISH PHRASE ID TO NON_ENGLISH PHRASE ID MAPPING

*1. ENGLISH PHRASE ID 00207
*2. NON ENGLISH ANNC APPL L4
#3. NON ENGLISH PHRASE ID 10217

Figure 1 SAMPLE PHRLANG FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4CK: 5477-2 RECORD
DIOR COUNTRY PAIR SCREENING PERMISSIONS - DCPSP

1. GENERAL

The 5477-2 Record is available with the 5E8 Software Release. It is used to construct a table of Originating and Terminating Country Codes for the DIOR CPS (Country Pair Screening) feature. CPS uses this table to screen DIOR Country-to-Country calls to allow completion of calls to countries if the originating country does not restrict country-to-country DIOR calls. For more information on the special feature DIOR CPS see Division 2, Section 3K on DIOR features.

For 5E8, the COUNTRY CODE field contains either an originating or a terminating country code depending upon the value in ORIG CARR. If 0 - 9 is entered for ORIG CARR, then the value entered in COUNTRY CODE is an originating country code. A terminating country code does not have a carrier associated with it.

For 5E9(1) and later, the COUNTRY CODE field contains the DIOR Originating Country Code.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.82. This view was re-numbered from 27.8 to 27.82 in order to keep all the DIOR views together.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * COUNTRY CODE

Description: **For 5E8 only,** enter the originating or terminating country code. If 0 - 9 is entered for ORIG CARRIER, then the value entered in this field is an originating country code. A terminating country code does not have an entry in ORIG CARR. Country codes are defined on the CCNAME form (5463 Record).

For 5E9(1) and later,enter the DIOR originating country code for an international call. The value specified should match the number found in the country code portion of the international forward number.

This field is named ORIG CC on RC view 27.82.

Required Field.
Valid Entries: 200 - 999

Data Rules:

For 5E8 only, if COUNTRY CODE is greater than 199, the COUNTRY CODE value on this form must match a COUNTRY NUMBER on a corresponding CCNAME form.

For 5E9(1) and later, every COUNTRY CODE entered on this form must have a matching COUNTRY NUMBER entered on a CCNAME form.

2.3 (*)ORIG CARR

Description: The name of this field was changed to ORIG CARRIER in 5E9(1). This field name applies to 5E8 only. See ORIG CARRIER for usage information.

2.4 (*) ORIG CARRIER

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Description: Enter the Originating Carrier Code providing the DIOR service from the country specified in Country Code. The carrier code identifies the carrier from which the DIOR call originates. The originating carrier is a one-digit code that is the seventh digit from the left of the 10-digit DIOR back number. (For more information on DIOR back numbers see the DIOR feature section in Division 2, Section 3I.) (This field was called ORIG CARR for 5E8.)
Valid Entries: 0 - 9

Data Rules:

When COUNTRY CODE is less than 200, ORIG CARR cannot be entered.

If ORIG CARR is not entered, CALL ANYWHERE must be "N".

2.5 CALL ANYWHERE

Description: Does the originating carrier providing DIOR service permit calls to all countries? If "N" is entered, then the originating country has terminating restrictions.

Software Release: 5E8 only.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ORIG CARR is not entered, CALL ANYWHERE must be "N".

2.6 # TERM CC

Description: Enter the dialable country code that applies to the DIOR Originating Country Code when a DIOR caller is placing a call to that country.

Software Release: 5E9(1) and later.
Required Field.
Valid Entries: 2 - 999

2.7 # COMPLETION TYPE

Description: Enter the call completion type identified for the ORIG CARRIER providing DIOR service for the COUNTRY CODE entry.

Software Release: 5E9(1) and later.
Required Field.
Valid Entries:

Valid COMPLETION TYPE Entries

Entry	Definition
R or MEMBER	Permit completion to member countries only.
R+ or MEMBER+	Permit completion to all member countries plus certain non-member countries listed here.
R- or MEMBER-	Permit completion to all member countries except certain members listed on this form in the TERMINATING COUNTRY IDENTIFIER LIST.
W or WORLD	Permit completion to any country
W- or WORLD-	Permit completion to any country except those listed on this form in the TERMINATING COUNTRY IDENTIFIER LIST.

Data Rules:

If "MEMBER" or "WORLD" is entered, no entries are allowed in the TERMINATING COUNTRY IDENTIFIER LIST.

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If "MEMBER+", "MEMBER-", or "WORLD-" is entered then there must be at least one entry in the TERMINATING COUNTRY IDENTIFIER LIST.

TERMINATING COUNTRY IDENTIFIER LIST (CTRYLIST)

The following ROW ID fields specify the country code for adding or subtracting from the normal list of allowed calls. The entries in this list must be unique.

2.8 ROW ID

Description: Enter the dialable country code (digits) or country name abbreviation (characters) for adding or subtracting from the normal list of allowed calls.

Software Release: 5E9(1) and later.
Required Field.
Valid Entries: 1 - 3 digits or characters

Data Rules:

This field must have at least one entry if the COMPLETION TYPE field is set to "MEMBER-", "MEMBER+", or "WORLD-". This field cannot have any entries if the COMPLETION TYPE field is set to "MEMBER", or "WORLD".

For each 1 - 3 digit TERMINATING COUNTRY IDENTIFIER LIST ID entered where COMPLETION TYPE is "MEMBER-", a matching TERM CC must be entered on this or on another DCPSP form.

If 1 - 3 digits are entered and the COMPLETION TYPE is "MEMBER+", then the TERM CC entry on this form or TERM CC entry any other DCPSP form cannot match this entry.

Each three character country code with a COMPLETION TYPE of "MEMBER+", "MEMBER-", or "WORLD-" must be defined on a corresponding NONUSA form (5477-1 Record). A corresponding NONUSA form is found by matching the TERMINATING COUNTRY IDENTIFIER LIST ID with HOME COUNTRY on the NONUSA form. If the COMPLETION TYPE is "MEMBER-", DIOR MEMBER on the corresponding NONUSA form must be "Y". When the COMPLETION TYPE is "MEMBER+", DIOR MEMBER must be "N".

```
dcpsp                    5ESS Switch                _
(5477-2)              OFFICE DATA ADMINISTRATION
                DIOR COUNTRY PAIR SCREENING PERMISSIONS

  *1. COUNTRY CODE  44
(*)2. ORIG CARR     3
   3. CALL ANYWHERE Y
```

Figure 1 SAMPLE DCPSP FORM 5E8 SOFTWARE RELEASE

```
SCREEN 1 OF 2                5ESS Switch
dcpsp                OFFICE DATA ADMINISTRATION
(5477-2)             DIOR COUNTRY PAIR SCREENING

*1. COUNTRY CODE ___              #3. TERM CC       ___
*2. ORIG CARRIER _              #4. COMPLETION TYPE _______
```

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5. TERMINATING COUNTRY IDENTIFIER LIST (CTRYLIST)>

ROW ID	ROW ID	ROW ID	ROW ID	ROW
1 ___	9 ___	17 ___	25 ___	33 ___
2 ___	10 ___	18 ___	26 ___	34 ___
3 ___	11 ___	19 ___	27 ___	35 ___
4 ___	12 ___	20 ___	28 ___	36 ___
5 ___	13 ___	21 ___	29 ___	37 ___
6 ___	14 ___	22 ___	30 ___	38 ___
7 ___	15 ___	23 ___	31 ___	39 ___
8 ___	16 ___	24 ___	32 ___	40 ___

SCREEN 2 OF 2 5ESS Switch _
dcpsp OFFICE DATA ADMINISTRATION
(5477-2) DIOR COUNTRY PAIR SCREENING

5. TERMINATING COUNTRY IDENTIFIER LIST (CTRYLIST)

ROW ID	ROW ID	ROW ID	ROW ID	ROW ID	ROW ID
41 ___	51 ___	61 ___	71 ___	81 ___	91 ___
42 ___	52 ___	62 ___	72 ___	82 ___	92 ___
43 ___	53 ___	63 ___	73 ___	83 ___	93 ___
44 ___	54 ___	64 ___	74 ___	84 ___	94 ___
45 ___	55 ___	65 ___	75 ___	85 ___	95 ___
46 ___	56 ___	66 ___	76 ___	86 ___	96 ___
47 ___	57 ___	67 ___	77 ___	87 ___	97 ___
48 ___	58 ___	68 ___	78 ___	88 ___	98 ___
49 ___	59 ___	69 ___	79 ___	89 ___	99 ___
50 ___	60 ___	70 ___	80 ___	90 ___	100 ___

Figure 2 SAMPLE DCPSP FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4CL: 5484 RECORD
OSPS DIOR SPEED DIALING - DIORSD

1. GENERAL

The 5484 Record is available with the 5E8 and later Software Releases. The OSPS DIOR (Direct International Originations) Speed Dialing form assigns a speed-dialing code to a telephone number. DIOR speed dialing provides USA Direct customers with the ability to use abbreviated or speed-dialing codes to access a number of information services. The numbers of these services are maintained in this form and are accessible to all DIOR customers through a 1- to 3-digit speed-dialing code. When prompted for a forward number, a DIOR caller may dial the DIOR speed-dialing service code and the corresponding 1- to 3-digit speed-dialing code to complete the call to the desired service provider. This capability allows both the automated DIOR customer and an operator assisted DIOR customer to complete calls with an abbreviated digit string. For more information on DIOR Speed Dialing see Division 2, Section 4B26.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.9

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SPEED DIALING CODE

Description: This field specifies the speed-dialing code which can be dialed instead of the telephone number.

Required Field.
Valid Entries: 1 - 999

2.3 # TELEPHONE NUMBER

Description: This field specifies the telephone number associated with the speed-dialing code number.

Required Field.
Valid Entries:
- 10 digits (domestic calls)
- 7 - 15 digits (international calls)

2.4 INTERNATIONAL

Is this telephone number an international number?

Required Field.

(diorsd) 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5484) OSPS DIOR SPEED DIALING

*1. SPEED DIALING CODE ___
#2. TELEPHONE NUMBER _____

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3. INTERNATIONAL N

Figure 1 SAMPLE DIORSD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4CM: 5485 RECORD
OSPS FTS NRA COUNTRY CODE EXCEPTIONS - FTSCC

1. GENERAL

The 5485 Record is available with 5E8 and later Software Releases. The OSPS FTS NRA Country Code Exceptions form assigns the forward number country code that identifies those FTS NRA (Federal Telecommunications System Network Remote Access) calls that must be routed over the FTS NRA PNI (Private Network Interface).

This form supports the OSPS FTS-2000 NRA feature. For more information on the FTS-2000 NRA feature, see Division 2, Sections 4A85.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.78.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * COUNTRY CODE

Description: Enter a forward number country code that identifies FTS NRA calls that must be routed over the FTS NRA PNI.

Required Field.
Valid Entries: 1 - 999

---

ftscc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5485) OSPS FTS NRA COUNTRY CODE EXCEPTIONS

*1. COUNTRY CODE ___

Figure 1 SAMPLE FTSCC FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4CN: 5486 RECORD
OSPS FTS NRA DOMESTIC EXCEPTIONS - FTSNANP

1. GENERAL

The 5486 Record is available with 5E8 and later Software Releases. The OSPS FTS NRA NPA-NXX Exceptions form assigns the forward number NPAs or NPA-NXXs that identify those FTS NRA (Federal Telecommunications System Network Remote Access) calls that must be routed over the public network. This form supports the OSPS FTS-2000 NRA feature. For more information on this secured feature see Division 2, Section 4A85.

The range of the field NPA was expanded in 5E9(1) and later to support the Interchangeable NPAs feature. For more information on this feature see Division 2, Section 3E, *OSPS 5ESS Switch Enhancements.*

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.77.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 NPA

Description: Enter a forward NPA code that identifies FTS NRA calls that must be routed over the public network.
Valid Entries: 3-digits
- For 5E8: 200 - 919 middle digit 0 - 1
- For 5E9(1) and later: 200 - 999

2.3 NXX

Description: Enter a forward NXX office code that identifies FTS NRA calls that must be routed over the public network.
Valid Entries: 200 to 999

---

ftsnanp 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5486) OSPS FTS NRA DOMESTIC EXCEPTIONS

*1. NPA ___
(*)2. NXX ___

Figure 1 SAMPLE FTSNANP FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4CO: 5487 RECORD
OSPS FTS NRA 700-NXX CODES - FTSNXX

1. GENERAL

The 5487 Record is available with 5E8 and later Software Releases and supports the OSPS FTS-2000 (Federal Telecommunications System) NRA (Network Remote Access) secured feature. This form assigns the 700-NXX forward number codes that indicate a potential FTS NRA call.

For more information on the FTS-2000 NRA feature, see Division 2, Section 4A86.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.75.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NXX

Description: Enter the NXX (office code) portion of a 700 forward number that indicates a potential FTS NRA call.

Required Field.
Valid Entries: 200 - 999

---

ftsnxx 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5487) OSPS FTS NRA 700-NXX CODES

*1. NXX ___

Figure 1 SAMPLE FTSNXX FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4CP: 5488 RECORD
OSPS FTS NRA ROUTING NUMBERS - FTSRN

1. GENERAL

The 5488 Record is available with 5E8 and later Software Releases. The OSPS FTS NRA Routing Numbers form assigns the 10-digit routing numbers used to route FTS NRA (Federal Telecommunications System Network Remote Access) calls to the FTS NRA PNI (Private Network Interface). It also assigns the 10-digit FTS NRA attendant forward number.

This form supports the OSPS FTS-2000 NRA feature. For more information on this feature see Division 2, Section 4A85.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.76.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ROUTING NUMBER

Description: Enter the routing number that is used to route FTS NRA calls to the FTS NRA PNI. This field is also used to specify the FTS NRA attendant forward number.

Required Field.
Valid Entries: 10-digit routing number.

2.3 ATTENDANT

Description: Is this number is used to complete an FTS NRA call to an FTS NRA attendant?

Required Field.
Default: N
Valid Entries: Y, N

```
ftsrn                    5ESS Switch          _
                   OFFICE DATA ADMINISTRATION
(5488)               OSPS FTS NRA ROUTING NUMBERS

*1. ROUTING NUMBER _____________
 2. ATTENDANT      N
```

Figure 1 SAMPLE FTSRN FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 4CW: 5496 RECORD
DIOR EIGHT HUNDRED OFFICE CODE TO SM MAPPING - DEHOCSM

1. GENERAL

The 5496 Record is available with the 5E9(1) and later Software Releases. The DIOR Eight-Hundred Office Code-to-SM form specifies the SM (Switching Module) on which the billing treatment data is stored for DIOR (Direct International ORiginations) Toll Free International 800 Services. For more information on this feature, see Division 2, Section 3K, *Direct International Originating Features.*

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.84

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * INWATS NPA

Description: Enter the NPA of an INWATS (Inward Wide Area Telecommunications Service) number. The INWATS NPA key field was added to support the exhaustion of 800 numbers, to allow other NPAs to be assigned as INWATS (Inward Wide Area Telecommunications Service) NPAs. This field supports the 800 Toll Free Services NPA Expansion feature. This feature is a secured feature with an SFID of 405. For more information on provisitioning this feature, see Division 2, Section 4A405.

Software Release: 5E10 and later.
Required Field.
Valid Entries: 100 - 999

Data Rules:

For each DEHOCSM form entered, there must be a corresponding INWNPA form with a matching INWATS NPA entry.

2.3 * OFFICE CODE

Description: Enter the office code (NXX) of the INWATS number.

Required Field.
Valid Entries: 200 - 999

2.4 * FEATURE

Description: Enter the DIOR feature that is using this particular OFFICE CODE-to-SM mapping to store its data. The FEATURE field was added to support the DIOR Network Remote Access feature. For more information on this feature, see Division 2, Section 3K on provisioning DIOR features.

Software Release: 5E9(2) and later.
Required Field.
Valid Entries:

Valid FEATURE Entries

Entry	Definition
TF8	DIOR Toll-free 800 feature.
NRA	DIOR Network Remote Access feature.

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2.5 # SM

Description: The SM field is used to specify the switching module where the billing treatment data is to be stored for the international leg of a DIOR (Direct International Originations) call to an 800 number with the office code entered in the OFFICE CODE field.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E10 and later, each SM entry must be defined on an EQIM form.

ESS 5496(5/96)TG-5 DIOR EIGHT HUNDRED OFFICE CODE TO SM MAPPING DATE _____
DEHOCSM 5ESS SWITCH
27.84
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

INW ATS NPA	OFFICE COD E	FEA TUR E	SM	REMARKS

Figure 1 SAMPLE 5496 RECORD

5ESS Swtich _
dehocsm OFFICE DATA ADMINISTRATION
(5496) DIOR EIGHT HUNDRED OFFICE CODE TO SM MAPPING

*1. OFFICE CODE ___
#2. SM ___

Figure 2 SAMPLE DEHOCSM FORM 5E9(1) SOFTWARE RELEASE

5ESS Swtich _
dehocsm OFFICE DATA ADMINISTRATION
(5496) DIOR EIGHT HUNDRED OFFICE CODE TO SM MAPPING

*1. INWATS NPA 800
*2. OFFICE CODE ___
*3. FEATURE ___
#4. SM ___

Figure 3 SAMPLE DEHOCSM FORM 5E9(2) SOFTWARE RELEASE

5ESS Swtich _
dehocsm OFFICE DATA ADMINISTRATION
(5496) DIOR EIGHT HUNDRED OFFICE CODE TO SM MAPPING

*1. OFFICE CODE ___
*2. FEATURE ___
#3. SM ___

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Figure 4 SAMPLE DEHOCSM FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4CX: 5498 RECORD - CICPHR

1. GENERAL

The 5498 Record is available for 5E9(1) and later. This form maps the Carrier Identification Code to an Announcement Phrase Identification Code for the carrier. Refer to the PHRASE form (5534 Record) for a description of Phrase IDs.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.66.

2. FORM AND RECORD ENTRIES

2.1 * CARRIER ID

Description: Enter the Carrier Identification Code.

Required Field.
Valid Entries: 0 - 9999

2.2 # PHRASE ID

Description: Enter the Phrase Identification Code.

Required Field.

Valid PHRASE ID Entries	
1 - 16383, 16385 - 16389, or 16500 - 32767	5E9(2) and earlier. See Division 3, Sec. 5AH for a description of PHRASE IDs.
1 - 16383 or 16600 - 65530	5E10 and later. See Division 3, Sec. 5AH for a description of PHRASE IDs.

Data Rules:

When a PHRASE ID is entered, there must be an associated PHRASE form where APPLICATION is "OSPSTA" and the PHRASE ID on the PHRASE form matches the PHRASE ID on the CICPHR form.

---

cicphr 5ESS Switch
OFFICE DATA ADMINISTRATION
(5498) OSPS CARRIER BRANDING PHRASE

*1. CARRIER ____
#2. PHRASE ID _____

Figure 1 SAMPLE MEASDSIG FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 4CY: 5499 RECORD
OSPS MEASUREMENTS DESIGNATION FOR 800 ACCESS CALLS - MEASDSIG

1. GENERAL

The 5499 Record is available for 5E9(2) and later. This form specifies information for measurement indexes and their corresponding labels.

This form was added to support phase 2 of the 800 Access Using FGD Signaling feature. Phase 2 of this feature replaces the existing 800 Access Using FGD Signaling feature measurements (i.e., attempts and messages for AATOS (Alternate Access to Operator System) and AATLSOS (Alternate Access to Language Specific Operator System) calls) with a measurement array.

The measurement array is defined by the Measurement Label Data. Each entry in the Measurement Label Data contains the following:

- a label assigned to an index,
- the number of call Attempts for 800 access calls assigned to that index in the 1+800 Service designation Table, and
- the number of messages (billable calls) for 800 access calls assigned to that index in the 1+800 Service Designation Table.

This form allows the operating company personnel to populate indexes and labels for the Measurement Array Data. Indexes must be assigned in sequential order from 1 to 100. The labels shall be alphanumeric and shall be able to range from 1 - 7 characters including blanks.

1.1 Recent Change View

The corresponding Recent Change view for this form is 27.71

For Recent Change, deletes can only performed on the last (highest) index populated in the view. This feature modifies OSPS RC/V view 27.70 by adding a new field called MEASUREMENT INDEX. After OSPS RC/V view 27.71 has been populated, Indexes can be assigned to existing 800 access numbers already defined in this view and new 800 access numbers can be added as required. For existing 800 access numbers in this view, the MEASUREMENT INDEX is "blank" and measurement peg counts are not performed until a valid index is assigned.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MEASUREMENT INDEX

Description: Enter the measurement index used to specify 800 Access calls which have an associated label displayed along with measurements on the 30-minute traffic report.

Required Field.
Valid Entries: 1 - 100

2.3 # LABEL

Description: Enter the label associated with the measurement index. Enter up to 7 alphanumeric

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characters, including spaces.

Required Field.
Valid Entries: 7 characters

Data Rules:

LABEL cannot consist of all spaces.

```
                    5ESS Switch        _
measdsig            OFFICE DATA ADMINISTRATION
(5499)      OSPS MEASUREMENTS DESIGNATION FOR 800 ACCESS CALLS

*1. MEASUREMENT INDEX ___
#2. LABEL             _______
```

Figure 1 SAMPLE MEASDSIG FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 4CZ: 6400 RECORD
DIOR NETWORK REMOTE ACCESS PROVISIONING - DNRA

1. GENERAL

The 6400 Record is available for 5E9(2) and later Software Releases. This form specifies the countries to which DIOR (Direct International Originations) calls to NRA INWATS (Network Remote Access Inward Wide Area Telecommunications Service) numbers are allowed or are denied completion. This view was added to support the DIOR Network Remote Access feature. For more information on this feature, see Division 2, Section 3K on provisioning DIOR features.

Each OFFICE CODE must be assigned to an SM on the DEHOCSM (DIOR Eight Hundred Office Code to SM Mapping) form (5496 Record). Each entry in the CAC field of the Exception List must be defined as an NRA CC or as an IDDD CAC on the CCNAME (OSPS Country Number to Country Name Mapping) form (5463 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.87.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * INWATS NPA

Description: Enter the NPA of the INWATS (toll-free) number that subscribes to the NRA feature. For 5E9(2) only, the only entry allowed for this field was 800.

Required Field.
Default: 800
Valid Entries: 100 - 999

2.3 * OFFICE CODE

Description: Enter the office code of an INWATS (toll-free) number that subscribes to the NRA feature.

Required Field.
Valid Entries: 200 - 999

Data Rules:

For each DNRA form entered, there must be a corresponding DEHOCSM form where OFFICE CODE and INWATS NPA on the DNRA form matches the OFFICE CODE and INWATS NPA on the DEHOCSM form and FEATURE on the DEHOCSM form is set to "NRA".

The same OFFICE CODE/LINE NUMBER combination cannot be entered on both the DEHNP form and the DNRA form, e.g. the same toll-fee number cannot be used for the DIOR Toll-Free 800 feature and the DIOR NRA feature. (See Division 2, Section 3K for more information on the DIOR Toll-Free feature.)

2.4 * LINE NUMBER

Description: Enter the line number of the INWATS number that subscribes to the NRA feature.

Required Field.

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Valid Entries: 0000 - 9999

Data Rules:

See the data rule for OFFICE CODE.

2.5 # ROUTING NUMBER

Description: Enter the 7-digit routing number for routing calls to the Network that subscribes to the NRA feature.

Required Field.
Valid Entries: 7 digits (0 - 9)

2.6 #5 DEFAULT TRMT

Description: Are calls allowed or denied for this NRA number from any country code that is not specified in the CAC field of the NRA EXCEPTION LIST below?

Required Field.

Valid DEFAULT TRMT Entries

Entry	Definition
A	Allowed
D	Denied

NRA EXCEPTION LIST (EXCEPTIONLIST)

The following field in the Country Code Exception List consists of the IDDD CAC (International Direct Distance Dialing Country Access Codes) or NRA CC (Network Remote Access Country Codes) that do not receive the default Network Remote Access number treatment.

2.7 CAC

Description: Enter the IDDD CAC or NRA CC that should be treated differently from the treatment specified in the DEFAULT TRMT field.
Valid Entries: 1 - 999

Data Rules:

CAC entries must be unique.

CAC cannot be 0.

This country access code must be defined using the IDDD CAC field or the NRA CC field on the CCNAME (5463 Record, View 27.81).

```
SCREEN 1 OF 4                5ESS Switch
dnra                 OFFICE DATA ADMINISTRATION
(6400)          DIOR NETWORK REMOTE ACCESS PROVISIONING

*1. INWATS NPA  800          #4. ROUTING NUMBER _______
*2. OFFICE CODE ___           #5. DEFAULT TRMT  _
*3. LINE NUMBER ____

                    6. NRA EXCEPTION LIST (EXCEPTIONLIST)
ROW CAC           ROW CAC            ROW CAC            ROW CAC
```

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1 ___	7 ___	13 ___	19 ___
2 ___	8 ___	14 ___	20 ___
3 ___	9 ___	15 ___	21 ___
4 ___	10 ___	16 ___	22 ___
5 ___	11 ___	17 ___	23 ___
6 ___	12 ___	18 ___	24 ___

SCREEN 2 OF 4 5ESS Switch
dnra OFFICE DATA ADMINISTRATION
(6400) DIOR NETWORK REMOTE ACCESS PROVISIONING

6. NRA EXCEPTION LIST (EXCEPTIONLIST)

ROW CAC	ROW CAC	ROW CAC	ROW CAC
25 ___	35 ___	45 ___	55 ___
26 ___	36 ___	46 ___	56 ___
27 ___	37 ___	47 ___	57 ___
28 ___	38 ___	48 ___	58 ___
29 ___	39 ___	49 ___	59 ___
30 ___	40 ___	50 ___	60 ___
31 ___	41 ___	51 ___	61 ___
32 ___	42 ___	52 ___	62 ___
33 ___	43 ___	53 ___	63 ___
34 ___	44 ___	54 ___	64 ___

SCREEN 3 OF 4 5ESS Switch
dnra OFFICE DATA ADMINISTRATION
(6400) DIOR NETWORK REMOTE ACCESS PROVISIONING

6. NRA EXCEPTION LIST (EXCEPTIONLIST)

ROW CAC	ROW CAC	ROW CAC	ROW CAC
65 ___	75 ___	85 ___	95 ___
66 ___	76 ___	86 ___	96 ___
67 ___	77 ___	87 ___	97 ___
68 ___	78 ___	88 ___	98 ___
69 ___	79 ___	89 ___	99 ___
70 ___	80 ___	90 ___	100 ___
71 ___	81 ___	91 ___	101 ___
72 □-	82 ___	92 ___	102 ___
73 ___	83 ___	93 ___	103 ___
74 ___	84 ___	94 ___	104 ___

SCREEN 4 OF 4 5ESS Switch _
dnra OFFICE DATA ADMINISTRATION
(6400) DIOR NETWORK REMOTE ACCESS PROVISIONING

6. NRA EXCEPTION LIST (EXCEPTIONLIST)

ROW CAC	ROW CAC	ROW CAC	ROW CAC
105 ___	111 ___	117 ___	123 ___
106 ___	112 ___	118 ___	124 ___

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107 ___	113 ___	119 ___	125 ___
108 ___	114 ___	120 ___	126 ___
109 ___	115 ___	121 ___	127 ___
110 ___	116 ___	122 ___	128 ___

Figure 1 SAMPLE DNRA FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 4DD: 6404 RECORD
INWATS NPA DEFINITION - INWNPA

1. GENERAL

The 6404 Record is available with 5E10 and later Software Releases. The INWATS NPA DEFINITION form is used to provision NPAs (other than 800) as INWATS (Inward Wide Area Telecommunications Service) NPAs to allow more INWATS NPA after the exhaustion of 800 numbers. This form supports the Toll-Free NPA Expansion feature. For more information on this feature, see Division 2, Section 4A405.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.72

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * INWATS NPA

Description: Enter an NPA to be used as an INWATS Toll-Free NPA.

Required Field.
Valid Entries: 100 - 999

5ESS Switch _
inwnpa OFFICE DATA ADMINISTRATION
(6404) INWATS NPA DEFINITION

*1. INWATS NPA ___

Figure 1 SAMPLE INWNPA FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4DE: 6406 RECORD
CUSTOMIZED HANDLING BY CARD PRODUCT TYPE - CHBCPT

1. GENERAL

The 6406 Record is available with the 5E9(2) Software Release. It is used to define parameters for specific card product types in the Card Product Type table. This form supports the PLBQ (Purchase Limits Balance Quotation) Business/Residential Card feature. For more information on this feature, see Division 2, Section 4A400.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.61.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CARD PRODUCT TYPE

Description: Enter the card product type which will be used to define the parameters in the Card Product Type table.

Required Field.
Valid Entries: 0 - 255

BALANCE QUOTATION CONTENT

The following fields (Section 2.3 - Section 2.5) define the balance quotation content.

2.3 ANNC MONETARY BAL

Description: Should the monetary amount of the remaining balance be included in the balance quotation?

Required Field.
Default: N
Valid Entries: Y, N

2.4 ANNC TIME BAL

Description: Should the allowed time that the specific call can last for the given monetary balance be included in the balance quotation?

Required Field.
Default: N
Valid Entries: Y, N

2.5 CUSTOM ANNC HDR

Description: Description: Enter the Announcement HEADER ID for the customized announcement to be given with the balance quotation. The CUSTOM ANNC HDR field is used to indicate that this announcement may be given as part of, or instead of, the balance quotation.

Data Rules:

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If CUSTOM ANNC HDR is entered, there must be a corresponding ANNHD form with HEADER ID equal to the CUSTOM ANNC HDR entry, and with APPLICATION set to "OSPSTA".

2.6 RECORD BILLING

Description: Should AMA Module 917 be appended for the recording of credit that has been used?

Required Field.
Default: N
Valid Entries: Y, N

2.7 WARNING ANNC HDR

Description: Enter the HEADER ID for the announcement to be given instead of the standard disconnect warning announcement. The WARNING ANNC HDR field is used to indicate which customized announcement should be given instead of the standard disconnect warning announcement.
Valid Entries: 271 - 300

Data Rules:

If WARNING ANNC HDR is entered, there must be a corresponding ANNHD form with HEADER ID equal to the WARNING ANNC HDR entry, and with APPLICATION set to "OSPSTA".

2.8 CARD RSTRCT HNDLG

Description: Enter the type of card restriction that should be used on a specific card product type. The CARD RSTRCT HNDLG field was added to support the ATCO (Automated TCS/CPS Override) feature. For more information on this feature, see Division 2, Section 4A409.

Software Release: 5E10 and later.
Required Field.
Default: VERIFY
Valid Entries:

Valid CARD RSTRCT HNDLG Entries

Entry	Definition
ALLOW	Verificaiton is not needed. Restriction can beautomatically overridden.
OTHBLG	Verification is not needed. Restriction cannot beoverridden - use other billing.
VERIFY	Verification with the ICVC (International Card Verification Center) should proceed.

5ESS Switch _
chbcpt OFFICE DATA ADMINISTRATION
(6406) CUSTOMIZED HANDLING BY CARD PRODUCT TYPE

*1. CARD PRODUCT TYPE ___

BALANCE QUOTATION CONTENT
2. ANNC MONETARY BAL N
3. ANNC TIME BAL N
4. CUSTOM ANNC HDR _____

5. RECORD BILLING N
6. WARNING ANNC HDR _____
7. CARD RSTRCT HNDLG VERIFY

Figure 1 SAMPLE CHBCPT FORM 5E9(2) SOFTWARE RELEASE

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```
                    5ESS Switch        _
chbcpt            OFFICE DATA ADMINISTRATION
(6406)       CUSTOMIZED HANDLING BY CARD PRODUCT TYPE

*1. CARD PRODUCT TYPE ___

  BALANCE QUOTATION CONTENT
 2. ANNC MONETARY BAL N
 3. ANNC TIME BAL     N
 4. CUSTOM ANNC HDR   ______

 5. RECORD BILLING    N
 6. WARNING ANNC HDR  ______
```

Figure 2 SAMPLE CHBCPT FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4DF: 6407 RECORD
INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN - IDIFLOW

1. GENERAL

The 6407 Record is available with the 5E10 and later Software Releases. It is used by the the OSPS auto-reconfiguration process to set up serving team data for a scheduled interflow activation/ deactivation. An auto-reconfiguration pattern ID (which is recent changeable only on View 21.16) and interflow activation/ deactivation pattern data. A pattern has data that will be acted upon at some time in the future as specified by the time (data) in the pattern. Patterns contain data on a serving team basis. The data consists of the next scheduled interflow status (on or off) of a serving team and the destination where calls for the serving team will be interflowed. This form can only be entered for retrofits.

1.1 Recent Change View

There is no corresponding Recent Change View for this form. However, the PATTERN ID and automatic reconfiguation time and day are entered on the 21.16. There is no ODA input form equivalent for view 21.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PATTERN ID

Description: Enter the pattern ID that is entered on RC View 21.16. The Pattern ID identifies specific OSPS automatic reconfiguration time data in the OSPS database.

Required Field.
Valid Entries: 1 - 84

Data Rules:

A corresponding PATTERN ID must be entered on the RC View 21.16 prior to retrofit, or this PATTERN ID cannot be entered.

DESTINATION

The following fields (Section 2.3 - Section 2.7) list the interflow data for a serving team.

2.3 SERVING TEAM

Description: Enter the serving team that has been assigned the PATTERN ID.
Valid Entries: 1 - 128

Data Rules:

SERVING TEAM numbers for which INTERFLOW or REROUTE are entered must also be entered on the STINFO form (5402 Record).

2.4 INTERFLOW

Description: Enter the interflow destination.
Valid Entries: 129 - 144

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Data Rules:

If INTEFLOW or REROUTE is entered, either ACTIVATE or DEACTIVATE must be "Y".

If INTERFLOW and REROUTE are not entered:
- ACTIVATE must not be entered
- DEACTIVATE must not be entered

If INTERFLOW is entered, then on the corresponding STINFO form (SERVING TEAM entries match):
- NON ISP ONLY must be "N"
- OPER TYPE must be "TA"

If INTERFLOW is entered a corresponding entry is required in the ISERVTM field in the OSPS LIST on the INFLTADP form (5452 Record).

2.5 REROUTE

Description: Enter the Reroute destination.
Valid Entries: 1 - 16

Data Rules:

If INTEFLOW or REROUTE is entered, either ACTIVATE or DEACTIVATE must be "Y".

If INTERFLOW and REROUTE are not entered:
- ACTIVATE must not be entered
- DEACTIVATE must not be entered

If REROUTE is entered and OPER TYPE is "TA" on the corresponding STINFO form, then NON ISP AND TA and NON ISP ONLY must have different entries on the STINFO form, i.e., they cannot both be "Y" nor can they both be "N").

If REROUTE is entered, and OPER TYPE is "DA" on the corresponding STINFO form, then NON ISP ONLY and NON ISP AND TA must be "N" on the STINFO form.

2.6 ACTIVATE

Description: Enter the activation status.
Valid Entries: Y or blank

2.7 DEACTIVATE

Description: Enter the deactivation status.
Valid Entries: Y or blank

SCREEN 1 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

*1. PATTERN ID
2. DESTINATION
SERVING TEAM INTERFLOW REROUTE ACTIVATE DEACTIVATE
1 ___ __ _ _

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2	___	__	_	_
3	___	__	_	_
4	___	__	_	_
5	___	__	_	_
6	___	__	_	_
7	___	__	_	_
8	___	__	_	_

SCREEN 2 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
9	___	__	_	_
10	___	__	_	_
11	___	__	_	_
12	___	__	_	_
13	___	__	_	_
14	___	__	_	_
15	___	__	_	_
16	___	__	_	_

SCREEN 3 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
17	___	__	_	_
18	___	__	_	_
19	___	__	_	_
20	___	__	_	_
21	___	__	_	_
22	___	__	_	_
23	___	__	_	_
24	___	__	_	_

SCREEN 4 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
25	___	__	_	_
26	___	__	_	_

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27	___	__	_	_
28	___	__	_	_
29	___	__	_	_
30	___	__	_	_
31	___	__	_	_
32	___	__	_	_

SCREEN 5 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
33	___	__	_	_
34	___	__	_	_
35	___	__	_	_
36	___	__	_	_
37	___	__	_	_
38	___	__	_	_
39	___	__	_	_
40	___	__	_	_

SCREEN 6 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
41	___	__	_	_
42	___	__	_	_
43	___	__	_	_
44	___	__	_	_
45	___	__	_	_
46	___	__	_	_
47	___	__	_	_
48	___	__	_	_

SCREEN 7 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
49	___	__	_	_
50	___	__	_	_
51	___	__	_	_
52	___	__	_	_

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53	___	__	_	_
54	___	__	_	_
55	___	__	_	_
56	___	__	_	_

SCREEN 8 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

	2. DESTINATION			
SERVING TEAM	INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
57	___	__	_	_
58	___	__	_	_
59	___	__	_	_
60	___	__	_	_
61	___	__	_	_
62	___	__	_	_
63	___	__	_	_
64	___	__	_	_

SCREEN 9 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

	2. DESTINATION			
SERVING TEAM	INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
65	___	__	_	_
66	___	__	_	_
67	___	__	_	_
68	___	__	_	_
69	___	__	_	_
70	___	__	_	_
71	___	__	_	_
72	___	__	_	_

SCREEN 10 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

	2. DESTINATION			
SERVING TEAM	INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
73	___	__	_	_
74	___	__	_	_
75	___	__	_	_
76	___	__	_	_
77	___	__	_	_
78	___	__	_	_
79	___	__	_	_

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80	___	__	_	_

SCREEN 11 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
81	___	__	_	_
82	___	__	_	_
83	___	__	_	_
84	___	__	_	_
85	___	__	_	_
86	___	__	_	_
87	___	__	_	_
88	___	__	_	_

SCREEN 12 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
89	___	__	_	_
90	___	__	_	_
91	___	__	_	_
92	___	__	_	_
93	___	__	_	_
94	___	__	_	_
95	___	__	_	_
96	___	__	_	_

SCREEN 13 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
97	___	__	_	_
98	___	__	_	_
99	___	__	_	_
100	___	__	_	_
101	___	__	_	_
102	___	__	_	_
103	___	__	_	_
104	___	__	_	_

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SCREEN 14 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
105	___	__	_	_
106	___	__	_	_
107	___	__	_	_
108	___	__	_	_
109	___	__	_	_
110	___	__	_	_
111	___	__	_	_
112	___	__	_	_

SCREEN 15 OF 16 5ESS Switch
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
113	___	__	_	_
114	___	__	_	_
115	___	__	_	_
116	___	__	_	_
117	___	__	_	_
118	___	__	_	_
119	___	__	_	_
120	___	__	_	_

SCREEN 16 0F 16 5ESS Switch GFLAG _
idiflow OFFICE DATA ADMINISTRATION
(6407) INTERFLOW DATA FOR AUTO-RECONFIGURATION PATTERN

SERVING TEAM	2. DESTINATION INTERFLOW	REROUTE	ACTIVATE	DEACTIVATE
121	___	__	_	_
122	___	__	_	_
123	___	__	_	_
124	___	__	_	_
125	___	__	_	_
126	___	__	_	_
127	___	__	_	_
128	___	__	_	_

Figure 1 SAMPLE IDIFLOW FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4DI: 6410 RECORD
OSPS VMS TERMINATING NPA NXX RESTRICTIONS - VMSTPR

1. GENERAL

The VMSTPR form (6410 Record) is available with 5E10 and later Software Releases. It provides NPA, NXX and LINE number information to block call termination for VMS (Voice Messaging Service) calls. For more information, see Div. 2, Sec. 4A418.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.64.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *NPA

Description: The NPA field is used to specify the terminating numbering plan area code that is being blocked.

Required Field.
Valid Entries: 1 - 999

2.3 (*)NXX

Description: The NXX field is used to specify the terminating office code that is being blocked.

Required Field.
Valid Entries: 0 - 999

Data Rules:

When NXX has not been entered, LINE cannot be entered.

2.4 (*)LINE

Description: The LINE field is used to specify the terminating line number that is being blocked.

Required Field.
Valid Entries: 0 - 9999

5ESS Switch _
vmstpr OFFICE DATA ADMINISTRATION
(6410) OSPS VMS TERMINATING NPA NXX RESTRICTIONS

*1. NPA ___
(*)2. NXX ___

(*)3. LINE ____

Figure 1 SAMPLE VMSTPR FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 4DJ: 6411 RECORD
OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY - OLNPU

1. GENERAL

The OLNPU form (6411 Record) is available with 5E11 and later Software Releases. It is used to maintain the billing validation for a specified set of NXXs in an NPA. The LNPD (Local Number Portability Database) or an alternate destination may be selected. All operations: insert, update, review and delete, may be performed using this form. For more information, see Division 2, Section 4A417 for the LEC offering or Section 4A419 for the AT&T offering.

1.1 Recent Change View

For this form there are two corresponding Recent Change Views. RC/V view 27.34 is for inserting and deleting LNPD data while RC/V view 27.35 is used for reviewing and updating LNPD data.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *NPA

Description: The NPA field is used to specify the numbering plan area code.

Required Field.
Valid Entries: 200 - 999

2.3 *START XXX

Description: The START XXX field is used to specify the first NXX for which local number portability information is to be viewed or changed.

Required Field.
Valid Entries: 000,100,200,300,400,500,600,700,800,900

2.4 END XXX

Description: The END XXX field is a no change field which specifies the last NXX in a range when the local number portability status of an entire range of NXX values is to be changed.

2.5 RANGE LNPD

Description: Is the query destination for the START XXX to END XXX range the LNPD?
Valid Entries: Y, N

Data Rules:

If RANGE LNPD is entered, there should be no XXX LIST entries.

Either RANGE LNPD must be entered or an entry must be made in the XXX LIST.

NXX LIST

The following fields (Section 2.6 - Section 2.7) make up the NXX LIST. The NXX LIST displays the portability status for the listed XXX values.

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2.6 XXX

Description: An individual XXX value from within the START XXX to END XXX range for which the portability status is displayed.
Valid Entries: An XXX value within the range of START XXX to END XXX.

Data Rules:

XXX entries must be unique.

If XXX is entered, then LNPD must be entered.

2.7 LNPD

Description: Should a query be sent to the LNPD for number portability?
Valid Entries: Y, N

Data Rules:

If LNPD is entered, then XXX must be entered.

```
SCREEN 1 OF 4                5ESS Switch
olnpu                OFFICE DATA ADMINISTRATION
(6411)         OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY

*1. NPA      ___
*2. START XXX  ___
   END XXX    ___
 4. RANGE LNPD _

                    5. NXX LIST
ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX  LNP
D
 1  ___  _    6 ___  _   11 ___  _   16 ___  _   21 ___  _   26 ___   _
 2  ___  _    7 ___  _   12 ___  _   17 ___  _   22 ___  _   27 ___   _
 3  ___  _    8 ___  _   13 ___  _   18 ___  _   23 ___  _   28 ___   _
 4  ___  _    9 ___  _   14 ___  _   19 ___  _   24 ___  _   29 ___   _
 5  ___  _   10 ___  _    15 ___  _    20 ___  _    25 ___  _    30 ___   _
```

```
SCREEN 2 OF 4                5ESS Switch
 olnpu                OFFICE DATA ADMINISTRATION
 (6411)         OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY

                    5. NXX LIST
 ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX  LNP
D
  31 ___  _   36 ___  _   41 ___  _   46 ___  _   51 ___  _   56 ___   _
  32 ___  _   37 ___  _   42 ___  _   47 ___  _   52 ___  _   57 ___   _
  33 ___  _   38 ___  _   43 ___  _   48 ___  _   53 ___  _   58 ___   _
  34 ___  _   39 ___  _   44 ___  _   49 ___  _   54 ___  _   59 ___   _
  35 ___  _   40 ___  _   45 ___  _   50 ___  _   55 ___  _   60 ___   _
```

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```
SCREEN 3 OF 4                5ESS Switch
 olnpu                  OFFICE DATA ADMINISTRATION
 (6411)          OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY

                        5. NXX LIST
 ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD ROW XXX LNPD  ROW XXX LNP
D
  61 ___ _   66 ___ _   71 ___ _   76 ___ _   81 ___ _   86 ___ _
  62 ___ _   67 ___ _   72 ___ _   77 ___ _   82 ___ _   87 ___ _
  63 ___ _   68 ___ _   73 ___ _   78 ___ _   83 ___ _   88 ___ _
  64 ___ _   69 ___ _   74 ___ _   79 ___ _   84 ___ _   89 ___ _
  65 ___ _   70 ___ _   75 ___ _   80 ___ _   85 ___ _   90 ___ _
```

```
SCREEN 4 OF 4                5ESS Switch        _
 olnpu                  OFFICE DATA ADMINISTRATION
 (6411)          OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY

                        5. NXX LIST
 ROW XXX LNPD ROW XXX LNPD
  91 ___ _   96 ___ _
  92 ___ _   97 ___ _
  93 ___ _   98 ___ _
  94 ___ _   99 ___ _
  95 ___ _  100 ___ _
```

Figure 1 SAMPLE OLNPU FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4DK: 6412 RECORD
OSPS DACC TREATMENT TABLE

1. GENERAL

The 6412 Record is available with 5E10 and later Software Releases. The OSPS DACC Treatment Table defines enhanced treatment for CICADA call completion

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.88.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *DEST NBR

Description: Destination Number. This field is used to specify a 3, 7, or 10-digit destination number for DA call completion. Enter a 3-digit number of the form N11 (where N is 2 - 9), or enter a 7 or 10 digit number.

Required Field.

2.3 DA TYPE

Description: Directory Assistance Type. This field specifies an indicator to be associated with the destination number. This value is mapped to a value included in the AMA record made for a DA call completion call.
Valid Entries: 1 - 20, or blank

2.4 DACC ALLOW

Description: Is DA call completion allowed? This field specifies whether or not the calls to DEST NBR are eligible for CICADA call completion.

Required Field.
Default: Y
Valid Entries: Y,N

For 5E12 and later, when DACC ALLOW is "N", DA TYPE must not be entered.

2.5 HEADER ID

Description: Announcement Header ID. This field specifies the announcement HEADER ID for the CICADA announcement for DEST NBR.
Valid Entries: 1 - 131071

2.6 LSCC REDIRECT

Description: Is LSCC with SS7 Redirect feature treatment activated for the associated DA destination number? This field specifies whether or not LSCC (Listing Services Call Completion) with SS7 Redirect feature treatment is active for the associated DA (Directory Assistance) destination number.

Required Field.
Default: N

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Valid Entries: Y, N

2.7 LIST LIMIT ENF

Description: Should an error message be displayed to the OSPS-LS operator on calls to the associated DA destination number? Listing Services Limit Display Indicator. This field specifies whether or not to display an error message to the OSPS-LS operator on calls to the associated DA destination number. This parameter is exampled by the OSPS-LS only on a 4ESS originated call.

Required Field.
Default: N
Valid Entries: Y, N

2.8 DIOR DACC ALLOW

Description: Is DA Call Completion allowed for DIOR originated calls? This field specifies whether or not the DA Call Completion feature is allowed for DIOR originated calls. The DIOR DACC ALLOW field was added to support the Listing Services - International DA (Directory Assistance) feature. For more information on this feature, see Division 2, Section 4A324.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

For 5E12 and later, when DIOR DACC ALLOW is "Y", DACC ALLOW must be "Y".

2.9 PL CARD ALLOW

Description: Is DA Call Completion allowed for a valid Purchase Limits card? This field specifies whether or not a DA call should be allowed for a valid Purchase Limits card. The PL CARD ALLOW field was added to support the Listing Services - International DA feature. For more information on this feature, see Division 2, Section 4A324.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

2.10 RTRS INTL IND

Description: Should the RTRS international call indicator be set? This field determines how RTRS should handle the rate quotation query. The RTRS INTL IND field was added to support the Listing Services - International DA feature. For more information on this feature, see Division 2, Section 4A324.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

2.11 APS 00- DA

Description: Activate the Automated Position System 00- DA Measurement parameter. This field is used to determine whether or not the OSPS-TA should peg the new measurements for AP-handled calls.

Required Field.
Default: N

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Valid Entries: Y, N

2.12 LS MEASUREMENT

Description: Activate the Listing Services Measurement parameter? This field is used to determine whether or not OSPS-LS should peg the new measurements.

Required Field.
Default: N
Valid Entries: Y, N

```
dacctrt                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(6412)                 OSPS DACC TREATMENT TABLE

*1. DEST NBR          ________
 2. DA TYPE           __
 3. DACC ALLOW        Y
 4. HEADER ID         ______
 5. LSCC REDIRECT     N
 6. LIST LIMIT ENF    N
 7. DIOR DACC ALLOW N
 8. PL CARD ALLOW     N
 9. RTRS INTL IND     N
10. APS 00- DA        N
11. LS MEASUREMENT    N
```

Figure 1 SAMPLE DACCTRT FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 4DY: 6424 RECORD
OSPS FEATURE PARAMETERS - FTPARM

1. GENERAL

The 6424 Record is available with 5E10 and later Software Releases. The OSPS Feature Parameters provides the capability for specifying, updating, and/or verifying OSPS feature options.

This view is an extension of the OSPSOPT form (5424 Record, RC View 8.9). New feature parameters will be added to this form, unless a specific parameter needs to added to an already existing feature group on the OSPSOPT form. The OFFICE ID must be defined for the OSPSOPT form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.41. The RC View 8.41 has one restriction on the use of the view. No more than 40 parameters should be changed in a single update activity. Single updates of more than 40 parameters may not be completed successfully. However, the integrity of the office data in the database is maintained in all situations.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OFFICE ID

Description: Enter the office identification. This may be the common language office name.
Valid Entries: 1 - 8 characters

Data Rules:

When the FTPARM form is entered, the OSPSOPT form must also be entered and the OFFICE ID values must match.

AUTOMATED TCS/CPS OVERRIDE (ATCO)

The following fields (Section 2.3 - Section 2.12) define the parameters for ATCO (Automation of TCS/CPS Override) feature. For more information on this secured feature, see Division 2, Section 4A409.

2.3 DIOR TO INTL DEST

Description: Is the ATCO feature activated for DIOR originations that terminate to international destinations?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the following must be entered:
- CALL SETUP TIMER
- CALLER SPLIT TIMER
- FINAL DISP TIMER
- ICVC TOLL-FREE NBR and must not be 0
- INTERACTION TIMER
- POST WARNING TIMER

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2.4 DIOR TO DOM DEST

Description: Is the ATCO feature activated for DIOR originations that terminate to domestic destinations?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the following must be entered:
- CALL SETUP TIMER
- CALLER SPLIT TIMER
- FINAL DISP TIMER
- ICVC TOLL-FREE NBR must not be 0
- INTERACTION TIMER
- POST WARNING TIMER

2.5 NO DIOR TO INTL DEST

Description: Is the ATCO feature activated for non-DIOR originations that terminate to international destinations?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the following must be entered:
- CALL SETUP TIMER
- CALLER SPLIT TIMER
- FINAL DISP TIMER
- ICVC TOLL-FREE NBR and must not be 0
- INTERACTION TIMER
- POST WARNING TIMER

2.6 NO DIOR TO DOM DEST

Description: Is ATCO feature activated for non-DIOR originations that terminate to domestic destinations?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the following must be entered:
- CALL SETUP TIMER
- CALLER SPLIT TIMER
- FINAL DISP TIMER
- ICVC TOLL-FREE NBR and must not be 0
- INTERACTION TIMER
- POST WARNING TIMER

2.7 CALL SETUP TIMER

Description: Enter the timer threshold, in seconds, from the time the OSPS routes the call to the ICVC (International Card Verification Center) until the ICVC returns answer supervision (or network "busy" or "block" is received). A timeout (timer threshold is exceeded) indicates a problem with the routing and

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results in the call being sent to an OSPS operator queue.
Valid Entries: 1 - 60 (seconds)

2.8 CALLER SPLIT TIMER

Description: Enter the maximum time, in seconds, from the time the caller is "split" (unable to hear conversation), until the caller is "unsplit" so that they hear an announcement or interact with the ICVC attendant or an OSPS operator. A timeout (maximum time is exceeded) indicates the caller has been "split" for too long during ATCO processing, which results in a warning announcement/tone being played to the ICVC attendant.
Valid Entries: 2 - 180 (seconds)

Data Rules:

CALLER SPLIT TIMER must be greater than CALL SETUP TIMER.

2.9 INTERACTION TIMER

Description: Enter the sanity timer for monitoring the the length of the verification conversation. This field specifies the duration threshold, in seconds, for which the ICVC attendant must provide a final call disposition after the verification conversation has begun (i.e., the caller was "unsplit"). A timeout (sanity timer is expired) results in a warning announcement/tone being played.
Valid Entries: 1 - 1800 (seconds)

2.10 POST WARNING TIMER

Description: Enter the timer specifying the amount of time the ICVC attendant has to signal a call status to the OSPS after a warning announcement has been given (either due to a Caller Split or Caller Interact timing). A timeout results in the call being sent to an OSPS operator queue.
Valid Entries: 1 - 30 (seconds)

2.11 FINAL DISP TIMER

Description: Enter the timer specifying the amount of time the ICVC attendant has to signal a call status to the OSPS after the caller has been "split" via the # key. A timeout results in a the call being sent to an OSPS operator queue.
Valid Entries: 1 - 10 (seconds)

2.12 ICVC TOLL-FREE NUMBER

Description: Enter the 10-digit Toll-Free routing number from the office to the ICVC. If 0 is entered, it indicates no data.
Default: 0
Valid Entries: 10-digit number

2.13 WIRELESS AP HANDLING

Description: Can CCS7 Signaled Wireless calls be routed to an AP (Automated Position)? This field supports the CCS7 Incoming Signaling From 4ESS for Wireless Service Providers feature.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

INTERCEPT SCREENING

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The following fields (Section 2.14 - Section 2.16) define parameters for the CAS International Intercept feature. For more information on this feature see Division 2, Section 4A420.

2.14 INTRCPT DIOR

Description: Is CAS intercept screening for DIOR originations offered by this switch?

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.15 INTRCPT NDIOR

Description: Is CAS intercept screening for non-DIOR originations offered by this switch?

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

2.16 CRD RESTR TYP

Description: Is the quotation of the card restriction type in ATCO announcements and operator displays offered by this switch?

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

CARD VERIFICATION

2.17 VER ROUTING NBR

Description: This field specifies a 10-digit external routing number to be used by the OSPS (Operator Services Position System) when a caller has selected a commercial credit card as the method of call billing.

Software Release: 5E14 and later
Valid Entries: 10-digit number (8XXXXXXXXX where X = 0 - 9)

The first digit for this field must be 8.

AATLSOS - AAP

The following fields (Section 2.18 - Section 2.22) define the parameters that support the AATLSOS - AAP (Alternate Access to Language Specific Operator Services - Automatic Access Prompting) using CPDL (Call Processing Data Link) Interface feature. See Division 2 Section 4A412 for more information on this feature.

2.18 COMP CALL TIMER

Description: Enter the AATLSOS Automated Access Prompting ACCS completion call timer value in seconds in 10 second increments. This is the timeout value after which, the OSPS recognizes that the NRP (Network Resource Platform) has gone off hook on the external ARU (Audio Response Unit) trunk.

Software Release: 5E10 and later

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Required Field.
Default: 900 (seconds)
Valid Entries: 10 - 1800 (increments of 10 seconds)

2.19 ACCS FWD NBR TIMER

Description: Enter the AATLSOS AAP ACCS (Automated Calling Card Service) forward number timer in tenths of a second. The ACCS FWD NBR TIMER field specifies the interdigit timeout value (time waiting for another entered digit), after the 10th digit if an NANP (North American Number Plan) number is dialed, or after the 11th digit, if a 0 or 1 is dialed prior to the NANP number until normal call processing continues.

Software Release: 5E10 and later
Required Field.
Default: 50 (5 seconds)
Valid Entries: 0 - 80 (0 - 8 seconds)

2.20 ACCS CARD NBR TIMER

Description: Enter the time in tenths of a second before a time occurs after the "#" is entered after the forward number.

Software Release: 5E10 and later
Required Field.
Default: 20
Valid Entries: 0 - 80 (0 - 8 seconds)

2.21 AATOS TREATMENT

Description: Enter the type of treatment the AATOS call will receive.

Software Release: 5E10 and later
Required Field.
Default: OPR
Valid Entries:

Valid AATOS TREATMENT Entries

Entry	Definition
ANN	The AATOS call will receive a played announcement
OPR	The AATOS call will be sent to the operator.

2.22 FOCUS LOAD SM

Description: Enter the SM number for the AATLSOS Automated Access Prompting SM for 1-800-CALLATT calls using CPDL interface. This SM has a CPDL link and a vendor of NRP.

Software Release: 5E10 and later.
Required Field.
Default: 0
Valid Entries: 0 - 192

LOCAL NUMBER PORTABILITY (LNP)

The following fields (Section 2.23 - Section 2.34) define parameters for the Local Number Portability for OSPS feature. For more information on this feature, see Division 2, Section 4A417.

2.23 ATT FEAT ACT

Description: Is the LNP (Local Number Portability) feature active?

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Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ATT FEAT ACT and LEC FEAT ACT cannot both be set to "Y".

In order to set the ATT FEAT ACT field to "Y", the Local Number Portability feature must first be purchased by the office by setting the ACT field for either SFID 288 or SFID 419 to "Y" on the SFSYS form.

2.24 LEC FEAT ACT

Description: Is the LEC (Local Exchange Carrier) LPN feature activated?

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ATT FEAT ACT and LEC FEAT ACT cannot both be set to "Y".

In order to set the LEC FEAT ACT field to "Y", the Local Number Portability feature must first be purchased by the office by setting the ACT field for SFID 417 to "Y" on the SFSYS form.

2.25 ATT QRY TRANS

Description: Enter the unique Query Translation Type for LNP TCAP queries.

Software Release: 5E11 and later.
Required Field.
Default: 0
Valid Entries: 0 - 255

2.26 AIN TRIGGER NBR

Description: Enter the AIN trigger number used for OSPS AIN (Advanced Intelligent Network) LNP queries.

Software Release: 5E11 and later.
Required Field.
Default: 0
Valid Entries: 0 - 255

2.27 ATT QRY TIMEOUT

Description: Enter the LNP Query Timeout Parameter in seconds for LNP queries.

Software Release: 5E11 and later.
Required Field.
Default: 2
Valid Entries: 1 - 8 (seconds)

2.28 ATT QRY ALM THR

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Description: Enter the LNP Query Alarm Threshold, which is the percent of LNP query successes in 1/4 hour below which LNP failure alarm will be activated.

Software Release: 5E11 and later.
Required Field.
Default: 15 (%)
Valid Entries: 0 - 100 (%)

2.29 ATT MIN THR

Description: Enter Minimum Threshold for LNP queries, which is the minimum threshold for LNP Software Alarm Calculations.

Software Release: 5E11 and later.
Required Field.
Default: 1
Valid Entries: 1 - 64

2.30 TLN CARD NBR

Description: Are the LNP Queries sent on TLN (Telephone Line Number) based 10+4 card numbers?

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.31 THRD NBR CALLS

Description: Enter whether LNP queries sent on all third number calls at billing validation time or at routing time.

Software Release: 5E11 and later.
Required Field.
Default: BILL
Valid Entries:

Valid THRD NBR CALLS Entries

Entry	Definition
BILL	Billing validation time
ROUT	Routing time

2.32 LRN IN OTRS

Description: Is the LRN (Location Routing Number) included in the OTR (Operator Trouble Reports)?

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.33 LRN ASSERTS

Description: Is the LRN included in Asserts?

Software Release: 5E11 and later.
Required Field.
Default: N

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Valid Entries: Y, N

2.34 DIGITS LIDB QRY

Description: Enter the number of digits to be included in the address of a LIDB query.

Software Release: 5E11 and later.
Required Field.
Default: 6
Valid Entries: 6 or 10

2.35 FLEX ACD FEAT ACT

Description: This field specifies whether the OSPS Flexible ACD Call Type Determination feature is active.

Software Release: 5E13 and later.
Required Field.
Default: N
Valid Entries: Y,N

2.36 MAX CTD LEVELS

Description: This field specifies the maximum number of call type determination levels allowed on a call that receives OSPS Flexible Call Type Determination feature treatment.

Software Release: 5E13 and later.
Required Field.
Default: 4
Valid Entries: 4 - 7

LISTING SERVICES

2.37 INTL DA TA ACT

Description: Activate the TA portion of the International Directory Assistance TA feature? This field specifies whether or not the TA portion of International DACC (Directory Assistance Call Completion) is active. The INTL DA TA ACT field was added to support the Listing Services - International DA (Directory Assistance) feature. For more information on this feature, see Division 2, Section 4A324.

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, when INTL DA TA ACT is "Y":

- TA NATL DA must be "Y"
- the ACT field on the SFSYS form (5713-1 Record) for SFID 324 must be set to "Y"

2.38 INTL DA LS ACT

Description: Activate the LS portion of the International Directory Assistance TA feature? This field specifies whether or not the LS portion of International DACC is active. The INTL DA LS ACT field was

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added to support the Listing Services - International DA feature. For more information on this feature, see Division 2, Section 4A324.

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, when INTL DA LS ACT is "Y":

- LS NATL DA must be "Y"
- the ACT field on the SFSYS form (5713-1 Record) for SFID 324 must be set to "Y"

```
SCREEN 1 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6424)        OSPS FEATURE PARAMETERS (ALSO SEE OSPSOPT FORM)

*1. OFFICE ID ________

            LIST OF FEATURE OPTIONS AND THEIR SCREEN NUMBERS
AATLSOS AAP CPDL        3   IBNS BLOCK CONDITIONS 5
AMA RECORDING           5   INTERCEPT SCREENING   2
ASCQ                    4   LISTING SERVICES      6
ATCO                    2   LNP                   3
CDR CHRGING RECS        4   LSCC SS7 REDIRECT     4
CICADA R3               3   OLNS                  5
DIALECT                 4   RATE ANNOUNCEMENT     3
DIOR TOLL FREE NBRS     5   WIRELESS CALL IND     5
```

```
SCREEN 2 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6424)                 OSPS FEATURE PARAMETERS

            AUTOMATED TCS/CPS OVERRIDE (ATCO)         INTERCEPT SCREENING
 2. DIOR TO INTL DEST    N   7. CALLER SPLIT TIMER    ___   12. INTRCPT DIOR  N
 3. DIOR TO DOM DEST     N   8. INTERACTION TIMER     ____  13. INTRCPT NDIOR N
 4. NO DIOR TO INTL DEST N   9. POST WARNING TIMER    __    14. CRD RESTR TYP N
 5. NO DIOR TO DOM DEST  N  10. FINAL DISP TIMER      __
 6. CALL SETUP TIMER     __ 11. ICVC TOLL-FREE NUMBER 0

15. WIRELESS AP HANDLING   N
16. AMA REC ANI II LNG TRM N
17. DIOR CCC FEAT ACT      N
18. PEEL OUT CC FEAT ACT   N
```

```
SCREEN 3 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6424)                 OSPS FEATURE PARAMETERS
```

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```
    AATLSOS - AAP                LOCAL NUMBER PORTABILITY (LNP)
19. COMP CALL TIMER     900   26. ATT FEAT ACT    N    32. ATT MIN THR    1
20. ACCS FWD NBR TIMER  50    27. LEC FEAT ACT    N    33. TLN CARD NBR   N
21. ACCS CARD NBR TIMER 20    28. ATT QRY TRANS   0    34. THRD NBR CALLS BILL
22. AATOS TREATMENT     OPR   29. AIN TRIGGER NBR 0    35. LRN IN OTRS    N
23. FOCUS LOAD SM       0     30. ATT QRY TIMEOUT 2    36. LRN ASSERTS    N
                              31. ATT QRY ALM THR 15   37. DIGIT LIDB QRY 06
    CICADA R3                                38. ATT QRY SINGLE N
24. CICADA R3      N
25. CALL ATT DA DN _____________                    RATE ANNOUNCEMENT
                                         39. RATE ANC FEAT ACT N
```

```
SCREEN 4 OF 6                5ESS Switch
ftparm                  OFFICE DATA ADMINISTRATION
(6425)                   OSPS FEATURE PARAMETERS

      DIALECT              HARRIS INTERFACE       AUTO SEQ CARD QUERIES (ASCQ)
40. DIALECT FEAT ACT N       HARRIS FEAT ACT N     56. ASCQ FEAT ACT     N
41. LNG CODE THR     2       SWITCH ID        0   57. CARD TRANS TYPE   000
42. LNG MENU THR     2       WPROGRESS TIMER 1     58. CARD GROUP ID     ___
                           RELEASE TIMER   1     59. CARD INDET REPLY  D
LSCC SS7 REDIRECT            ROUTE CLASS     0     60. CARD QRY TIMEOUT  2
43. TA NATL DA  N           HARRIS AC CODE  0     61. OVERRIDE CIID     N
44. LS NATL DA  N                                 62. CARD ISSUER LABEL _______
45. OSPS TA ACT N          CDR CHRGING RECS
46. OSPS LS ACT N          54. CDR FEAT ACT N
47. RTRS DA QRY N          55. AMA FEAT ACT N
```

```
SCREEN 5 OF 6                5ESS Switch
ftparm                  OFFICE DATA ADMINISTRATION
(6424)                   OSPS FEATURE PARAMETERS

  IBNS CALL BLOCKING       WIRELESS CALL IND       DIOR PERS TOLL FREE NBRS
63. IBNS CALL BLOCK ACT N  71. PHASE 1 ACT N       75. PTF FEAT ACT    N
64. PUBLIC PHONE        N  72. PHASE 2 ACT N       76. PTF DEST INDEX  _____
65. CUST REQ NO COLLECT N                          77. PTF ROUTE INDEX _____
66. NO COLLECT          N    AMA RECORDING
67. REJECT INTERLATA    N  73. ANI II REL2 N            OLNS
68. OTHER COLLECT DENY  N  74. DA LISTING  N       78. ACTIVATE OLNS   N
69. INDETERM DENY       N                          79. ALARM THRESHOLD 95
70. CARRIER DENY        N                          80. MINIMUM QUERY   40
```

```
SCREEN 6 OF 6                5ESS Switch        _
ftparm                  OFFICE DATA ADMINISTRATION
(6424)                   OSPS FEATURE PARAMETERS

   LISTING SERVICES
81. CUST RECONN LIMIT 31
82. INTL DA TA ACT    N
83. INTL DA LS ACT    N
```

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84. TA SVC MEASMT ACT N
85. LS SVC MEASMT ACT N

Figure 1 SAMPLE FTPARM FORM 5E12 SOFTWARE RELEASE

SCREEN 1 OF 6 5ESS Switch
ftparm OFFICE DATA ADMINISTRATION
(6424) OSPS FEATURE PARAMETERS (ALSO SEE OSPSOPT FORM)

*1. OFFICE ID _____

LIST OF FEATURE OPTIONS AND THEIR SCREEN NUMBERS

AATLSOS AAP CPDL	3	IBNS BLOCK CONDITIONS	5
AMA RECORDING	5	INTERCEPT SCREENING	2
ASCQ	4	LISTING SERVICES	6
ATCO	2	LNP	3
CDR CHRGING RECS	4	LSCC SS7 REDIRECT	4
CICADA R3	3	OLNS	5
DIALECT	4	RATE ANNOUNCEMENT	3
DIOR PERS TOLL FREE NBRS	5	WIRELESS CALL IND	5
FLEXIBLE ACD	5		

SCREEN 2 OF 6 5ESS Switch
ftparm OFFICE DATA ADMINISTRATION
(6424) OSPS FEATURE PARAMETERS

AUTOMATED TCS/CPS OVERRIDE (ATCO) INTERCEPT SCREENING

2. DIOR TO INTL DEST N	7. CALLER SPLIT TIMER ___	12. INTRCPT DIOR N
3. DIOR TO DOM DEST N	8. INTERACTION TIMER ____	13. INTRCPT NDIOR N
4. NO DIOR TO INTL DEST N	9. POST WARNING TIMER __	14. CRD RESTR TYP N
5. NO DIOR TO DOM DEST N	10. FINAL DISP TIMER __	
6. CALL SETUP TIMER __	11. ICVC TOLL-FREE NUMBER 0	

15. WIRELESS AP HANDLING N
16. AMA REC ANI II LNG TRM N
17. DIOR CC FEAT ACT N
18. PEEL OUT FEAT ACT N

SCREEN 3 OF 6 5ESS Switch
ftparm OFFICE DATA ADMINISTRATION
(6424) OSPS FEATURE PARAMETERS

AATLSOS - AAP	LOCAL NUMBER PORTABILITY (LNP)	
19. COMP CALL TIMER 900	26. ATT FEAT ACT N	32. ATT MIN THR 1
20. ACCS FWD NBR TIMER 50	27. LEC FEAT ACT N	33. TLN CARD NBR N
21. ACCS CARD NBR TIMER 20	28. ATT QRY TRANS 0	34. THRD NBR CALLS BILL
22. AATOS TREATMENT OPR	29. AIN TRIGGER NBR 0	35. LRN IN OTRS N
23. FOCUS LOAD SM 0	30. ATT QRY TIMEOUT 2	36. LRN ASSERTS N
	31. ATT QRY ALM THR 15	37. DIGITS LIDB QRY 06
CICADA R2		38. ATT QRY SINGLE N
24. CICADA R2 N		

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```
25. CALL ATT DA DN __________   RATE ANNOUNCEMENT
                    39. RATE ANC FEAT ACT N
                    40. REL 3 FEAT ACT    N
```

```
SCREEN 4 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6425)                 OSPS FEATURE PARAMETERS

      DIALECT          AUTO SEQ CARD QUERIES (ASCQ)
41. DIALECT FEAT ACT N   49. ASCQ FEAT ACT     N
42. LNG CODE THR     2   50. CARD TRANS TYPE   000
43. LNG MENU THR     2   51. CARD GROUP ID     ___
                    52. CARD INDET REPLY  D
LSCC SS7 REDIRECT       53. CARD QRY TIMEOUT  2
44. TA NATL DA  N       54. OVERRIDE CIID     N
45. LS NATL DA  N       55. CARD ISSUER LABEL _______
46. OSPS TA ACT N
47. OSPS LS ACT N         CDR CHRGING RECS
48. RTRS DA QRY N       56. CDR FEAT ACT N
                    57. AMA FEAT ACT N
```

```
SCREEN 5 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6424)                 OSPS FEATURE PARAMETERS

  IBNS BLOCK CONDITIONS     WIRELESS CALL IND            FLEXIBLE ACD
58. IBNS CALL BLOCK ACT N   66. PHASE 1 ACT N       73. FLEX ACD FEAT ACT N
59. PUBLIC PHONE       N    67. PHASE 2 ACT N       74. MAX CTD LEVELS    4
60. CUST REQ NO COLLECT N
61. NO COLLECT         N     AMA RECORDING           ORIG LINE NBR SCRN
62. REJECT INTERLATA    N   68. ANI II REL2 N       75. ACTIVATE OLNS   N
63. OTHER COLLECT DENY  N   69. DA LISTING  N       76. ALARM THRESHOLD 95
64. INDETERM DENY       N                       77. MINIMUM QUERY   40
65. CARRIER DENY        N   DIOR PERS TOLL FREE NBRS
                    70. PTF FEAT ACT N
                    71. PTF DEST INDEX  ____
                    72. PTF ROUTE INDEX _____
```

```
SCREEN 6 OF 6                5ESS Switch        _
ftparm                OFFICE DATA ADMINISTRATION
(6424)                 OSPS FEATURE PARAMETERS

  LISTING SERVICES
78. CUST RECONN LIMIT 31
79. INTL DA TA ACT    N
80. INTL DA LS ACT    N
81. TA SVC MEASMT ACT N
82. LS SVC MEASMT ACT N
```

Figure 2 SAMPLE FTPARM FORM 5E13 SOFTWARE RELEASE

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```
SCREEN 1 OF 6                5ESS Switch
ftparm              OFFICE DATA ADMINISTRATION
(6424)      OSPS FEATURE PARAMETERS (ALSO SEE OSPSOPT FORM)

*1. OFFICE ID ________

          LIST OF FEATURE OPTIONS AND THEIR SCREEN NUMBERS
AATLSOS AAP CPDL       3       IBNS BLOCK CONDITIONS   5
AMA RECORDING          5       INTERCEPT SCREENING     2
ASCQ                   4       LISTING SERVICES        6
ATCO                   2       LNP                     3
CDR CHRGING RECS       4       LSCC SS7 REDIRECT       4
CICADA R3              3       OLNS                    5
DIALECT                4       RATE ANNOUNCEMENT       3
DIOR PERS TOLL FREE NBRS 5     WIRELESS CALL IND       5
FLEXIBLE ACD           5
```

```
SCREEN 2 OF 6                5ESS Switch
ftparm              OFFICE DATA ADMINISTRATION
(6424)               OSPS FEATURE PARAMETERS

          AUTOMATED TCS/CPS OVERRIDE (ATCO)        INTERCEPT SCREENING
 2. DIOR TO INTL DEST    N   7. CALLER SPLIT TIMER    ___   12. INTRCPT DIOR  N
 3. DIOR TO DOM DEST     N   8. INTERACTION TIMER     ____  13. INTRCPT NDIOR N
 4. NO DIOR TO INTL DEST N   9. POST WARNING TIMER    __    14. CRD RESTR TYP N
 5. NO DIOR TO DOM DEST  N  10. FINAL DISP TIMER      __
 6. CALL SETUP TIMER     __ 11. ICVC TOLL-FREE NUMBER 0

15. WIRELESS AP HANDLING   N          CARD VERIFICATION
16. AMA REC ANI II LNG TRM N      19. VER ROUTING NBR _____________
17. DIOR CC FEAT ACT       N
18. PEEL OUT FEAT ACT      N
```

```
SCREEN 3 OF 6                5ESS Switch
ftparm              OFFICE DATA ADMINISTRATION
(6424)               OSPS FEATURE PARAMETERS

    AATLSOS - AAP                LOCAL NUMBER PORTABILITY (LNP)
20. COMP CALL TIMER     900   27. ATT FEAT ACT    N    33. ATT MIN THR     1
21. ACCS FWD NBR TIMER  50    28. LEC FEAT ACT    N    34. TLN CARD NBR    N
22. ACCS CARD NBR TIMER 20    29. ATT QRY TRANS   0    35. THRD NBR CALLS  BILL
23. AATOS TREATMENT     OPR   30. AIN TRIGGER NBR 0    36. LRN IN OTRS     N
24. FOCUS LOAD SM       0     31. ATT QRY TIMEOUT 2    37. LRN ASSERTS     N
                              32. ATT QRY ALM THR 15   38. DIGITS LIDB QRY 06
CICADA R2                                    39. ATT QRY SINGLE  N
25. CICADA R2      N
26. CALL ATT DA DN _____________                  RATE ANNOUNCEMENT
                                    40. RATE ANC FEAT ACT N
                                    41. REL 3 FEAT ACT    N
```

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```
SCREEN 4 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6425)                 OSPS FEATURE PARAMETERS

      DIALECT          AUTO SEQ CARD QUERIES (ASCQ)
42. DIALECT FEAT ACT N   50. ASCQ FEAT ACT     N
43. LNG CODE THR     2   51. CARD TRANS TYPE   000
44. LNG MENU THR     2   52. CARD GROUP ID     ___
                         53. CARD INDET REPLY  D
LSCC SS7 REDIRECT        54. CARD QRY TIMEOUT  2
45. TA NATL DA  N        55. OVERRIDE CIID     N
46. LS NATL DA  N        56. CARD ISSUER LABEL _______
47. OSPS TA ACT N
48. OSPS LS ACT N          CDR CHRGING RECS
49. RTRS DA QRY N        57. CDR FEAT ACT N
                         58. AMA FEAT ACT N
```

```
SCREEN 5 OF 6                5ESS Switch
ftparm                OFFICE DATA ADMINISTRATION
(6424)                 OSPS FEATURE PARAMETERS

  IBNS BLOCK CONDITIONS     WIRELESS CALL IND              FLEXIBLE ACD
59. IBNS CALL BLOCK ACT N   67. PHASE 1 ACT N          74. FLEX ACD FEAT ACT N
60. PUBLIC PHONE        N   68. PHASE 2 ACT N          75. MAX CTD LEVELS    4
61. CUST REQ NO COLLECT N
62. NO COLLECT          N     AMA RECORDING              ORIG LINE NBR SCRN
63. REJECT INTERLATA    N   69. ANI II REL2 N          76. ACTIVATE OLNS   N
64. OTHER COLLECT DENY  N   70. DA LISTING  N          77. ALARM THRESHOLD 95
65. INDETERM DENY       N                         78. MINIMUM QUERY   40
66. CARRIER DENY        N   DIOR PERS TOLL FREE NBRS
                         71. PTF FEAT ACT    N
                         72. PTF DEST INDEX  ____
                         73. PTF ROUTE INDEX _____
```

```
SCREEN 6 OF 6                5ESS Switch          _
ftparm                OFFICE DATA ADMINISTRATION
(6424)                 OSPS FEATURE PARAMETERS

   LISTING SERVICES          ANSI INCOMING SS7 SIG
79. CUST RECONN LIMIT 31     84. CALL PARTY IND N
80. INTL DA TA ACT    N
81. INTL DA LS ACT    N
82. TA SVC MEASMT ACT N
83. LS SVC MEASMT ACT N
```

Figure 3 SAMPLE FTPARM FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 4EG: 6434 RECORD
OSPS FLEXIBLE ACD CALL TYPE DETERMINATION - FLEXACD

1. GENERAL

The 6434 Record is available with the 5E13 and later Software Releases. It provides the ability to specify OSPS call queues based upon various call characteristic parameters. This form supports the Flexible ACD (Automatic Call Distributor) Call Type Determination feature. For more information on this feature, see Division 2, Section 4a450.

1.1 Recent Change View

The corresponding Recent Change View for this form is 26.8.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PRE CALL ID

Description: This field specifies the Pre Call ID value that serves as a key to the flexible ACD call type determination process.

Required Field.
Valid Entries: 1 - 127

Data Rules:

Each PRE CALL ID value defined on this form must be entered on at least one ACDCTP form.

2.3 * CALL PROPERTY

Description: These fields identify the call property type and value used in flexible ACD call type determination.

The CALL PROPERTY field actually consists of 2 fields - Call Property Type (CPTYPE) and Call Property Value (CPVALUE).

Required Field.
Valid Entries: 1 - 10 alpha-numeric characters

Valid CALL PROPERTY (CPTYPE) Entries

Entry	Definition
AN	Access Number
AO	Account Owner
CIC	Carrier Identification Code
DCIC	DIOR Carrier
DEST	Destination Index
II	ANI II Digits
LC	Language Code
LRN	Originating Location Routing Number
NPA	Originating NPA-NXX
OLS	Originating Line Screening Code
TGRP	Incoming Trunk Group Number

Data Rules:

For 5E13 and later:

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- When CALL PROPERTY is "AN", CALL PROPERTY.CPVALUE must be either a 7-digit number, where each digit is 0 - 9, or a 10-digit number of the form 8XXNXXXXXX where N=2 - 9 and X=0 - 9.
- When CALL PROPERTY.CPTYPE is greater than 128, then DISPLAYINDEX must be unknown.
- When CALL PROPERTY.CPTYPE is "AO", CALL PROPERTY.CPVALUE must be 4 alpha-numeric characters.
- When CALL PROPERTY.CPTYPE is "CIC", CALL PROPERTY.CPVALUE must be 0 - 9999 or LEC.
- When CALL PROPERTY.CPTYPE is "DCIC", CALL PROPERTY.CPVALUE must be of the form XXXX, where X=0 - 9.
- When CALL PROPERTY.CPTYPE is "DEST", CALL PROPERTY.CPVALUE must be 1 - 4095.
- When CALL PROPERTY.CPTYPE is "II", CALL PROPERTY.CPVALUE must be 00 - 99.
- When CALL PROPERTY.CPTYPE is "LC", CALL PROPERTY.CPVALUE must be 0 - 1000.
- When CALL PROPERTY.CPTYPE is "LRN", CALL PROPERTY.CPVALUE must be of the form NXXXXX, where N=1 - 9 and X=0 - 9.
- When CALL PROPERTY.CPTYPE is "NPA", CALL PROPERTY.CPVALUE must be of the form NXXXXX, where N=1 - 9 and X=0 - 9.
- When CALL PROPERTY.CPTYPE is "OLS", CALL PROPERTY.CPVALUE must be 0 - 999.
- When CALL PROPERTY.CPTYPE is "TGRP", CALL PROPERTY.CPVALUE must be 1 - 4000.

2.4 # CALL TYPE

Description: This field identifies the OSPS Call Type or Service ID selected during the flexible ACD call type determination.

Required Field.
Valid Entries: 1 - 1023

2.5 DISPLAY INDEX

Description: This field specifies the operator position display index.
Valid Entries: 1 - 276

Data Rules:

When DISPLAY INDEX is entered, an associated OBSTS form must be found with matching DISPLAY INDEX.

2.6 APOS CALL TYPE

Description: This field specifies the call type used to direct calls to automated positions.
Valid Entries: 1 - 128

Data Rules:

When APOS CALL TYPE is entered, the FLEXACD form must have a corresponding OSPSCT form with APOS CALL TYPE equal to OSPS CALL TYPE. Additionally, the matching OSPSCT form must have OPR TYPE set to "TA".

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2.7 ACD EXPRESSION

Description: This field defines the overriding call property expression to be used for flexible ACD call type determination.
Valid Entries: A, C, D, G, I, L, N, O, Q, S, T, |, &, or blank

Valid ACD EXPRESSION Entries

Entry	Definition
A	ACCT Owner
C	Carr ID
D	Dest Index
G	Lang Code
I	ANI II
L	LRN
N	NPA-NXX
O	OLS Code
Q	Quit
R	DIOR Carrier
S	Access Number
T	Trk Grp
| or &	Special Cases (e.g., T|D|O&I)
blank	

Data Rules:

For 5E13 and later:

- Unless the CALL ORIGIN is "CDSU", "SPCL700", or "ICS", each FLEXACD form must have a corresponding OSPSCT form with OSPS CALL TYPE equal to CALL TYPE. Additionally, the matching OSPSCT form must have OPER TYPE set to "TA".

- When APOS CALL TYPE is entered on a FLEXACD form, the FLEXACD form must have a corresponding ACDCTP form where the CALL ORIGIN of the corresponding ACDCTP form is not "AIS", "CDSU", "SPCL700" or "ICS".

- When APOS CALL TYPE is entered on a FLEXACD form, and the FLEXACD form has a corresponding ACDCTP form where the CALL ORIGIN of the corresponding ACDCTP form is not "AIS", "CDSU", "LSTA", "SPCL700" or "ICS", there must be an OSPSCT form where APOS CALL TYPE on the FLEXACD form matches the OSPS CALL TYPE on the OSPSCT form. In addition, the SVC ID on the OSPSCT form must not be entered.

- When APOS CALL TYPE is entered on a FLEXACD form and the matching ACDCTP form has a CALL ORIGIN of "LSTA", the AP call queue can be a Listing Services call, but only if SFID 415 ACT is set to "Y". This is a secured feature which must be purchased.

- There must be a corresponding OSPSCT form such that OSPS CALL TYPE on the OSPSCT form matches CALL TYPE on the FLEXACD form, and this OSPSCT form must have SVC ID entered.

- There must be a corresponding OSPSCT form such that OSPS CALL TYPE on the OSPSCT form matches CALL TYPE on the FLEXACD form, and this OSPSCT form must not have SVC ID entered.

- A SERVDATA form must be found where CALL TYPE on the FLEXACD form matches the SVC ID on the SERVDATA form. The OSPS SVC CODE on this SERVDATA form must be "AAP".

- A SERVDATA form must be found where CALL TYPE on the FLEXACD form matches the SVC ID on the SERVDATA form. The OSPS SVC CODE on this SERVDATA form must be "INMATE".

- There must be an OSPSCT form where CALL TYPE on the FLEXACD form matches OSPS CALL TYPE on the OSPSCT form. Then SVC ID on the ODPSCT form must match the SVC ID on a SERVDATA form. Additionally, OSPS SVC CODE on the SERVDATA form must not be "INCPT", "IBMINCPT", "SPCL700" or "INMATE".

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- When CALL ORIGIN on the associated ACDCTP form is "LSTA" and APOS CALL TYPE on the FLEXACD form is entered, there must also be a corresponding OSPSCT form such that OSPS CALL TYPE on the OSPSCT form matches APOS CALL TYPE on the FLEXACD form. This OSPSCT form must have SVC ID entered.

- ACD EXPRESSION cannot contain a call property type matching the call property type in CALL PROPERTY.

```
flexacd                  5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(6434)           OSPS Flexible ACD Call Type Determination

*1. PRE CALL ID   ___
*2. CALL PROPERTY  ____ __________
#5. CALL TYPE     ____
 6. DISPLAY INDEX  ___
 7. APOS CALL TYPE ___
 8. ACD EXPRESSION _______
```

Figure 1 SAMPLE FLEXACD FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 4EH: 6435 RECORD
OSPS NPA CODE EXPANSION FOR BLV - ENHBLV

1. GENERAL

The 6435 Record is available as a 5E11 Software Update. It provides the capability for specifying the LRN (Location Routing Numbers) or NPA (Numbering Plan Area), the route code, and NXX (Office Code), or range of NXXs. This form supports the OSPS NPA Code Expansion feature. For more information on this feature, see Division 2, Section 4A449.

1.1 Recent Change View

The corresponding Recent Change View for this form is 27.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *LRN/NPA

Description: This field is used to specify the numbering plan area code.

Software Release: 5E11 and later
Required Field.
Valid Entries: 200 - 999

Data Rules:

Ten-digit numbers which are defined by NPA, NXX, BEG LINE, and optionally, END LINE on the ENHBLV form, must not be duplicated or overlapped by ten-digit numbers on another ENHBLV form.

2.3 (*) BEG NXX

Description: This field is used to specify the NXX or the first number in a range of NXXs.

Software Release: 5E11 and later
Valid Entries:

000 - 999 (for first NXX in a range)
blank (for all NXXs)

Data Rules:

When an ENHBLV form is entered, the BEG NXX field is blank, and the LRN/NPA is entered, there can be no other ENHBLV forms entered with the same LRN/NPA value. Leaving the BEG NXX blank means that all NXXs are excluded for that LRN/NPA. Therefore no other forms can be entered for that LRN/NPA.

2.4 (*) END NXX

Description: This field is used to specify the last NXX in a range of NXXs.

Software Release: 5E11 and later
Valid Entries:

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001 - 999 or
blank

When END NXX is known, BEG NXX must not be greater than END NXX.

2.5 # ROUTE CODE

Description: This field specifies the routing code for the LRN or NPA.

Software Release: 5E11 and later
Required Field.
Valid Entries: 1 - 999

Data Rules:

The ROUTE CODE must be the same for all ENHBLV forms having the same LRN/NPA value.

---

enhblv 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6435) OSPS NPA CODE EXPANSION FOR BLV

*1. LRN/NPA ___
(*)2. BEG NXX ___
(*)3. END NXX ___
#4. ROUTE CODE ___

Figure 1 SAMPLE ENHBLV FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 4ES: 6446 RECORD
OSPS DA CUSTOM BRANDING BY ACCOUNT OWNER - AOWNER

1. GENERAL

The 6446 Record is available as a 5E13 Software Update. It provides DA custom branding by account owner information. This form supports the DA Custom Branding by Account Owner feature. For more information on this feature, see Division 2, Section 4A543.

1.1 Recent Change View

The corresponding Recent Change View for this form is 21.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *ACCOUNT OWNER

Description: This field is used to specify the account owner.

Software Release: 5E13 and later
Required Field.
Valid Entries: Four alpha-numeric characters

2.3 # HEADER ID

Description: This field specifies the Announcement Header ID number.

Software Release: 5E13 and later
Required Field.
Valid Entries: 1 - 131071

Data Rules:

When the HEADER ID is entered on any AOWNER form, there must be a corresponding ANNHD form with matching HEADER ID and the APPLICATION field set to "OSPSDA".

---

aowner 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6446) OSPS DA CUSTOM BRANDING BY ACCOUNT OWNER

*1. ACCOUNT OWNER ____
#2. HEADER ID _____

Figure 1 SAMPLE AOWNER FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5: MISCELLANEOUS FORMS

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SEC. 5A: 5501 RECORD
NORMALIZED OFFICE CODE ASSIGNMENT FORM - NOC

1. GENERAL

The 5501 Record is used to associate a NOC (Normalized Office Code) with each OFFICE CODE and NPA (Numbering Plan Area) code. The OFFICE CODE is commonly referred to as the "NXX" which are the 3-digits after the NPA (commonly referred to as the "area code"). In addition, this form is used to assign Routing and Charging Intercept Treatment. Each type of Intercept (Regular, Blank Number, Out-of-Service and Deny Termination) is assigned a Route Index and Charge Index per NXX.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *NPA

Description: The NPA field is used to specify the numbering plan area code. With 5E12, this field has been changed to a key field. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Required Field.

Software Release: 5E12 and later
Valid Entries: 200 - 999

2.3 * OFFICE CODE

Description: Enter the NXX of the office. Traditionally, office codes are of the form NXX. However, 0XX and 1XX are provided for special uses to preserve standard office code ranges. These are typically used for INWATS lines. Since 0XX and 1XX are being excluded from the LDIT, these lines can only be terminated to from an incoming trunk.

Required Field.
Valid Entries: 3 digits (of the form XXX where
- X = 0 - 9)

Data Rules:

For 5E12 and later, one NOC form is required for every OFFICE CODE or NPA/OFFICE CODE combination in the office.

For 5E12 and later, if the NOC form has an OFFICE CODE value equal to that of another NOC form, the Number Portability NPA-NXX Growth feature is required. It is a secured feature which must be purchased by the office. An SFSYS form must exist with SFID 198 set to "Y".

2.4 # BASE NPA

Description: The BASE NPA field is used to display the base numbering plan area status. BASE NPA

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must equal "Y" for each NXX in the office. The first occurrence of an NXX in the office must have BASE NPA equal to "Y" and all others with the same NXX value must have BASE NPA equal to "N". When assigning an NXX to more than one NPA (NON-UNIQUE NXX), one of the NPAs must be designated as the BASE NPA. This would usually correspond to the NPA associated with the NXX if the NXX was previously assigned as a unique NXX.This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Required Field.
Valid Entries: Y, N

Data Rules:

For 5E12 and later, only one NOC form per OFFICE CODE value may have BASE NPA set to "Y".

2.5 UNIQUE OFFCODE

Description: This is a Recent Change display-only field. The UNIQUE OFFCODE field is used to display the office code unique status.

2.6 NPA CODE

Description: Enter the Numbering Plan Area Code. NPAs are normally in the following range: N is 2-9; P is 0-1; A is 0-9.

Required Field.

Software Release: 5E11 and earlier
Valid Entries: 3 digits
- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 through 5E11: 200 - 999

2.7 NOC

Description: Enter a unique Normalized Office Code Number, one per Office Code.

Required Field.
Valid Entries:
- For 5E12 and later: 1 - 8190

Data Rules:

For 5E12 and later, when the NOC forms have a NOC value greater than 250, the Number Portability NPA-NXX Growth feature must be provided. It is a secured feature which must be purchased by the office. An SFSYS form must exist with SFID 198 set to "Y".

For 5E12 and later, NOCs cannot be duplicated on the NOC input form. All NOCs associated with NPA and OFFICE CODE (NXX) combinations must be unique values for the given office.

2.8 RAX

Description: Enter the Rate Area Exchange center number. This field is used to identify "rate centers" that are established by tariffs for routing and charging. It is used in association with the SCREENING INDEX and DAS (Digit Analysis Selector) fields on the LCC form (5306 Record). Note that this field is the same (functionally) as the RATE AREA field on the LCC form.

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Software Release: 5E8 and later.
Default: 00 (indicates no RAX number)
Valid Entries:
- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

ROUTE INDEX DATA

The following fields (Section 2.9 - Section 2.12) are used to define Route Index Data.

2.9 REG ICPT RI

Description: Enter the Route Index Number that is to be used for Regular intercept. Route Indexes 1 - 100 should be assigned to Fixed Route Types.

If the specified Route Index points to an AIS Trunk Group, the AIS normally expects to receive a prefix digit of 3 for this type of Intercept. If this is desired, 3 must be entered in PREFIX DIGITS on the RTIDX form (5303 Record).

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

2.10 BLANK NBR RI

Description: Enter the Route Index number that is to be used for Blank Number Intercept. Route Indexes 1 - 100 should be assigned to Fixed Route Types.

If the specified Route Index points to an AIS Trunk Group, the AIS normally expects to receive a prefix digit of 0 for this type of Intercept. If this is desired, 0 must be entered in PREFIX DIGITS on the RTIDX form (5303 Record).

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

2.11 OOS RI

Description: Enter the Route Index number that is to be used for Out-of-Service (trouble) Intercept. Route Indexes 1 - 100 should be assigned to Fixed Route Types.

If the specified Route Index points to an AIS Trunk Group, the AIS normally expects to receive a prefix digit of 1 for this type of Intercept. If this is desired, 1 must be entered in PREFIX DIGITS on the RTIDX form (5303 Record).

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095

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- For 5E13 and later: 1 - 16382

2.12 DENIED TERM RI

Description: Enter the Route Index number that is to be used for Deny Termination Intercept. Route Indexes 1 - 100 should be assigned to Fixed Route Types.

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

For 5E12 and later, the denied term intercept route index(s) defined on the NOC form, must be defined on the RTIDX form.

For 5E12 and later, the denied term intercept route index(s) defined on the NOC form, must be defined on the CGIDX form.

CHARGE INDEX DATA

The following fields (Section 2.13 - Section 2.16) are used to define Charge Index Data.

2.13 REG ICPT CI

Description: Enter the Charge Index number that is to be used for Regular Intercept.

Required Field.
Valid Entries: 1 - 2047

Data Rules:

For 5E12 and later, the regular intercept charge index(s) defined on the NOC form, must be defined on the CGIDX form.

2.14 BLANK NBR CI

Description: Enter the Charge Index number that is used for Blank Number Intercept.
Valid Entries: 1 - 4095

2.15 OOS CI

Description: Enter the Charge Index number that is to be used for Out-of-Service (trouble) Intercept.
Valid Entries: 1-2047

Data Rules:

For 5E12 and later, the out-of-service intercept charge index defined on the NOC form, must be defined on a CGIDX form.

2.16 DENIED TERM CI

Description: Enter the Charge Index number that is to be used for Deny Termination Intercept.

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Required Field.
Valid Entries: 1 - 2047

Data Rules:

For 5E12 and later, the deny term intercept charge index defined on the NOC form, must be defined on the CGIDX form.

2.17 REMARKS

Description: This field may contain any entries deemed locally necessary.
Valid Entries: 16 characters

2.18 NOT CODE HOLDER

Description: Is this switch not the code holder?

Required field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOT CODE HOLDER is "Y", ACT must be "Y" for SFID 530 on the SFSYS form.

THOUSANDS GROUP STATUS

In order to use the following fields, ACT must be "Y" for SFID 530 on the SFSYS form.Refer to Section 2.19 through Section 2.28 for individual field information.

2.19 PORTED OUT 0

Description: Is the 0000 to 0999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.20 PORTED OUT 1

Description: Is the 1000 to 1999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.21 PORTED OUT 2

Description: Is the 2000 to 2999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.22 PORTED OUT 3

Description: Is the 3000 to 3999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.23 PORTED OUT 4

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Description: Is the 4000 to 4999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.24 PORTED OUT 5

Description: Is the 5000 to 5999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.25 PORTED OUT 6

Description: Is the 6000 to 6999 block of telephone numbers ported out?
Valid Entries: Y, N

2.26 PORTED OUT 7

Description: Is the 7000 to 7999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.27 PORTED OUT 8

Description: Is the 8000 to 8999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

2.28 PORTED OUT 9

Description: Is the 9000 to 9999 block of telephone numbers ported out?
Default: N
Valid Entries: Y, N

---

noc 5ESS Switch _
(5501) OFFICE DATA ADMINISTRATION
NORMALIZED OFFICE CODE ASSIGNMENT

*1. NPA ___
*2. OFFICE CODE ___ #3. BASE NPA _
#5. NOC ____ UNIQUE OFFCODE _
6. RAX 00

ROUTE INDEX DATA CHARGE INDEX DATA
#7. REG ICPT RI ____ #8. REG ICP CI ____
#9. BLANK NBR RI ____ #10. BLANK NBR CI ____
#11. OOS RI ____ #12. OOS CI ____
#13. DENIED TERM RI ____ #14. DENIED TERM CI ____

15. REMARKS _____

Figure 1 SAMPLE NOC FORM 5E12 AND 5E13 SOFTWARE RELEASES

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SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5501) NORMALIZED OFFICE CODE ASSIGNMENT

*1. NPA ___
*2. OFFICE CODE ___ #3. BASE NPA _
#5. NOC ____ UNIQUE OFFCODE _
6. RAX 000

ROUTE INDEX DATA CHARGE INDEX DATA
#7. REG ICPT RI _____ #8. REG ICP CI ____
#9. BLANK NBR RI _____ #10. BLANK NBR CI ____
#11. OOS RI _____ #12. OOS CI ____
#13. DENIED TERM RI _____ #14. DENIED TERM CI ____

15. REMARKS _____

---

noc 5ESS SWITCH _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5501) NORMALIZED OFFICE CODE ASSIGNMENT

16. NOT CODE HOLDER N
THOUSANDS GROUP STATUS
17. PORTED OUT 0 N
18. PORTED OUT 1 N
19. PORTED OUT 2 N
20. PORTED OUT 3 N
21. PORTED OUT 4 N
22. PORTED OUT 5 N
23. PORTED OUT 6 N
24. PORTED OUT 7 N
25. PORTED OUT 8 N
26. PORTED OUT 9 N

Figure 2 SAMPLE NOC FORM 5E14 SOFTWARE RELEASE

---

noc 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5501) NORMALIZED OFFICE CODE ASSIGNMENT

*1. NPA ___
*2. OFFICE CODE ___ #3. BASE NPA _
#5. NOC ____ UNIQUE OFFCODE _
6. RAX 000

ROUTE INDEX DATA CHARGE INDEX DATA
#7. REG ICPT RI _____ #8. REG ICP CI ____
#9. BLANK NBR RI _____ #10. BLANK NBR CI ____
#11. OOS RI _____ #12. OOS CI ____
#13. DENIED TERM RI _____ #14. DENIED TERM CI ____

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15. REMARKS _____

noc 5ESS SWITCH _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5501) NORMALIZED OFFICE CODE ASSIGNMENT

16. NOT CODE HOLDER N
THOUSANDS GROUP STATUS
17. PORTED OUT 0 N
18. PORTED OUT 1 N
19. PORTED OUT 2 N
20. PORTED OUT 3 N
21. PORTED OUT 4 N
22. PORTED OUT 5 N
23. PORTED OUT 6 N
24. PORTED OUT 7 N
25. PORTED OUT 8 N
26. PORTED OUT 9 N

Figure 3 SAMPLE NOC FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5B: 5502 RECORD
MAIN DISTRIBUTING FRAME
TEST TRUNK ASSIGNMENT FORM - MDFTA

1. GENERAL

The 5502 Record is applicable to 5E2 and later Software Releases. It is used for IMLT-2 (Integrated Mechanized Loop Testing) with a DFTAC (Distributing Frame Test Access Circuit). The MDFTA is used to define the connection between the DFTAC (Distributing Frame Test Access Circuit) and the MDF (Main Distributing Frame) TTC (Test Trunk Circuit) as well as the DFTAC LTP (Logical Test Port) and the LEN of the dedicated line from the DFTAC to an LU (Line Unit). Refer to the feature division for IMLT-2.

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TEST TRUNK CIRCUIT TGN

Description: Enter the Trunk Group Number of the Test Trunk Circuit connecting the DFTAC and the MDF.

Required Field.
Valid Entries: 1 - 255

Data Rules:

The TTC TGN must also be defined on the TKGRP form (5202 Record).

2.3 * TTC MEMBER NUMBER

Description: Enter the Test Trunk Circuit member number.

Required Field.
Valid Entries: 0 - 999

Data Rules:

The TTC Member Number must also be defined on the TRUNK form (5204 Record).

2.4 DFTAC IDENTIFICATION

Description: Enter the DFTAC Identification which is the DFTAC appearance on the MSU/MMSU. The DFTAC identification number must be a 7-digit number in the following format.

DFTAC IDENTIFICATION

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-48 (CM1)
			1-192 (CM2)
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15

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			(Regular MSU) 00-31 (Modular MSU)

Data Rules:

DFTAC IDENTIFICATIONs must match an EQMMSP or EQMSP form with PACK EQUIPMENT LIST TYPE equal to "DFTC" and PACK EQUIPMENT LIST EQST set to "O".

2.5 LOGICAL TEST PORT

Description: Enter the Logical Test Port associated with the MDF. This is the LTP with a TRKCLS of "LTPDFTAC". One LTP is required per DFTAC circuit and it must be located in the same SM as the DFTAC.

LTP (LOGICAL TEST PORT) NUMBER

Equipment	Valid Entries
Switching Module	1 - 48 (CM1)
	1 - 192 (CM2)
Logical Test Port	000-255

Valid Entries: 6 digits

Data Rules:

The LTP must also be defined on the TRUNK form (5204 Record).

2.6 OE TYPE

Description: Enter the type of line.

Valid OE TYPE Entries

Entry	Definition
C	Telephone Number is associated with an ISLU Line Card Equipment Number and NUMBER field must contain an 8-digit equipment number.
D	Telephone Number is associated with a 4-wire Digital Equipment Number and NUMBER field must contain an 8-digit DEN.
G	Software Release: 5E8 and later. Telephone Number is associated with an IDCU (Integrated Digital Carier Unit) Equipment Number and NUMBER field must contain a 10-digit equipment number (GEN) for a remote terminal or a PUB43801. For 5E10 and later a 11 digit equipment number is required.
L	Telephone Number is associated with an analog-type Line Equipment Number and NUMBER field must contain an 8- or 10-digit LEN.
M	Software Release: 5E8 through 5E9(2). Telephone Number is associated with an IDCU (Integrated Digital Carier Unit) Equipment Number and NUMBER field must contain an 8-digit equipment number (MEN) for a remote terminal or a PUB43801.
S	Telephone Number is associated with a SLC-96 Equipment Number and NUMBER field must contain a 7-digit SLEN.
T	Telephone Number is associated with a 4-wire analog Trunk Equipment Number and NUMBER field must contain a 7-digit TEN.

Data Rules:

For OE TYPE and NUMBER there must be a corresponding TN with matching OE TYPE and NUMBER on the LINE form (5109 Record).

The LINE form(s) associated with OE TYPE and NUMBER on MDFTA form must have the indicated fields populated on the LINE form as follows:

- BRCS must be "N"
- COIN must be "N"

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- COMPL must be "N"
- DNY BV must be "N"
- DNY ROH must be "N"
- DTLBILL must be "N"
- FGA must be "N"
- FLS must be "N"
- GST must be "N"
- NO DIAL must be "N"
- PALIT must be "Y"
- PTY must be "I"
- SERHLN must not be entered
- SLUS must be "N"
- SUSO must be "Y"
- TRAFFIC must be "N"
- TSTLINE must be "N"
- TTC must be "Y"
- ICP must be "N"

The LCC form(s) that corresponds to a LINE form(s) associated with OE TYPE and NUMBER on the MDFTA form, must have the CLASS OF SERVICE of "INDIV".

DFTAC (Distributing Frame Test Access Circuit) dedicated lines can not be associated with multi-line hunt groups, they can only be assigned on the LINE form. Therefore MLHLN forms cannot have an OE TYPE and MUMBER which corresponds to an OE TYPE and NUMBER on an MDFTA form.

2.7 NUMBER

Description: Enter the equipment number. The content of this field is dependent upon the entry in the OE TYPE field as described above.

If OE TYPE is "G" for an IDCU Remote Terminal, the Equipment Number consists of:

GEN (IDCU Remote Terminal 5E9(2) and earlier)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	X	0-7
Remote Terminal	RT	XX	01-31
Line	LINE	XXXX	0001-2048

GEN (IDCU Remote Terminal 5E10 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	XX	00-42
Remote Terminal	RT	XX	01-31
Line	LINE	XXXX	0001-2048

If OE TYPE is "G" for an IDCU PUB, the Equipment Number consists of:

GEN (IDCU PUB43801 5E9(2) and earlier)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	X	0-7
DS1	DS1	XX	51-90
Line	LINE	XXXX	0001-0024

GEN (IDCU PUB43801 5E10 and later)

Equipment		Format	Valid Entries

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Switching Module	SM	XXX	001-192
Unit Number	IDCU	XX	00-42
DS1	DS1	XX	51-90
Line	LINE	XXXX	0001-0024

If OE TYPE is "L", this is a Line Equipment Number, an 8-digit number in the following format.

LEN (LINE EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Line Unit	LU	X	0-7
		XXX	000 - 042 (5E9(2) and later)
Concentrator	CONC	X	0-9
Switch Group	SWG	X	0-1
Switch	SW	X	0-7
Level	LEV	X	0-3

If OE TYPE is "M" for an IDCU Remote Terminal, this is a 8-digit number in the following format.

MEN (IDCU Remote Terminal)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	X	0-7
Remote Terminal	RT	XX	01-31
Line	LINE	XX	01-99

If OE TYPE is "M" for an IDCU PUB, this is an 8-digit number in the following format.

MEN (IDCU PUB43801)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	X	0-7
DS1	DS1	XX	51-90
Line	LINE	XX	01-24

If OE TYPE is "S", this is a SLC-96 Equipment Number, an 8-digit number in the following format.

SLC-96 EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Digital Carrier Line Unit	DCLU		0-7
Remote Terminal	RT	XX	01-32
Line	LINE	XX	01-96

If OE TYPE is "D", this is a 4-wire Digital Equipment Number, an 8-digit number in the following format.

DEN (DIGITAL EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Line Trunk Unit	DLTU	X	0-5
Digital Facility Interface	DFI	XX	01-10
Digital Channel	DCHAN	XX	01-48

If OE TYPE is "T", this is a 4-wire analog Trunk Equipment Number, a 7-digit number in the following format.

TEN (TRUNK EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Trunk Unit	TU	X	0-7
Service Group	SVG	X	0-1
Pack	PACK	X	0-7
Circuit	CKT	X	0-3

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If OE TYPE is "C", this is an ISLU Line Card Equipment Number, 8 digits in the following format.

LINE CARD EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Line Unit	LU		0-7
Line Group Controller	LGC	XX	00-15
Line Card	LC	XX	00-31

```
mdfta                    5ESS Switch          _
(5502)              OFFICE DATA ADMINISTRATION
          MAIN DISTRIBUTING FRAME TEST TRUNK ASSIGNMENT


* 1. TEST TRUNK CIRCUIT TGN  012
* 2. TTC MEMBER NUMBER       800
  3. DFTAC IDENTIFICATION    0301120
  4. LOGICAL TEST PORT       030100
  5. OE  TYPE                L
     NUMBER                  03011033
```

Figure 1 SAMPLE MDFTA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5C: 5503 RECORD
PAIR GAIN TEST CONTROLLER FORM - PGTC

1. GENERAL

The 5503 Record is applicable to 5E2 and later Software Releases. It is used in offices equipped with IMLT-2 (Integrated Mechanized Loop Testing System Two) if those offices have the optional PGTC (Pair Gain Test Controller). The PGTC is the interface between the IMLT-2 and a USLC-96 (Universal SLC-96) and is only required if IMLT-2 will be used to test USLC-96. The 5503 Record will define the connections between the PGTC and the 5ESS Switch.

The IMLT-2 obtains access to the PGTC via the MTB (Metallic Test Bus). Only one PGTC test port can terminate on an MMSU (Modular Metallic Service Unit). Also, a PGTC test port must terminate on an MMSU where a DCTU (Directly Connected Test Unit) port, used for testing USLC-96 remote terminals, terminates.

The PGTC is controlled by Distribute Points in the 5ESS Switch. There are two Distribute Points and two Metallic Bus connections required for PGTC. The two Distribute Points must be assigned sequentially to the same MMSU and the same DIST (Distribute Point) circuit pack. Likewise, the two MTBs must be assigned sequentially to the same MMSU and MACC (Metallic Access Circuit) pack.

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.7.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PGTC FRAME NUMBER

Description: Enter the Pair Gain Test Controller Frame Number. Only one PGTC Frame will exist at a host office and it will always be numbered one (1). Each RSM or cluster of RSMs will only have one PGTC which will be numbered as the RSM or lowest numbered RSM in the cluster.

In an office equipped with CM1 (Communications Module 1), the valid entries for SM are 1 - 48. In an office equipped with CM2, the valid entries are 1 - 192.

Required Field.
Valid Entries: 1 - 192

2.3 * PGTC TRUNK NUMBER

Description: Enter the Pair Gain Test Controller Trunk Number.

Required Field.
Valid Entries: 1 - 255

Data Rules:

Only one PGTC Test Trunk is allowed per MSU shelf in a Service Group.

2.4 # METALLIC TEST BUS

Description: Enter the low numbered MTB which is the bus wired to the input of the PGTC. MTBs for

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PGTC are assigned in contiguous pairs and must be on the same MACC pack; two MTBs per PGTC are required. The second MTB (wired to the PGTC output) will be assigned automatically as the next sequential MTB. The maximum value of the low numbered MTB that can be assigned is a 13 because MTB 15 is reserved for testing. Also, a minimum of one MTB assigned to the DCTU must terminate on the same MMSU service group shelf as the two MTBs assigned to the PGTC. Furthermore, for higher testing throughputs (PST), PGTC test ports must be assigned to each MMSU service group shelf where a DCTU port used for testing USLC-96 remote terminals terminates.

In an office equipped with CM1 (Communications Module 1), the valid entries for SM are 1 - 48. In an office equipped with CM2, the valid entries are 1 - 192.

Metallic Test Bus Point 15 of every MACC pack is reserved for general internal MSU and MMSU diagnostics. Protocol test or diode resistor tests are included in general internal diagnostics.

The Metallic Test Bus is assigned a 9-digit number in the following format.

MTB (METALLIC TEST BUS)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Bus	BUS	XX	00 - 14

Data Rules:

If this MTB number resides on an ORM, RSM, or TRM, the PGTC and the MTB must share the same SITE ID (assigned on the EQIM form). In addition, if this is a remote SITE ID, the MTBs must reside on the Common Resource Module (denoted by MASTER MODULE on a corresponding EQSITE form (5722 Record)). This rule does not apply to co-located ORMs/TRMs sharing resources.

2.5 # LO DISTRIBUTE POINT

Description: Enter the low PGTC Distribute Point number. This is the value of the MSU Distribute Point wired to the high valued resistor for the PGTC. The second Distribute Point will be assigned to the next sequential Distribute Point on the same Distribute pack. These Distribute Points must be in the same MSU as the MACC packs that terminate the low and high MTBs.

In an office equipped with CM1 (Communications Module 1), the valid entries for SM are 1 - 48. In an office equipped with CM2, the valid entries are 1 - 192.

The PGTC Distribute Point is a 9-digit number in the following format.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Distribute Point Number	DPN	XX	00 - 30

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PAIR GAIN TEST CONTROLLER

* 1. PGTC FRAME NUMBER 001
* 2. PGTC TRUNK NUMBER 003

3. METALLIC TEST BUS 004011102
4. LO DISTRIBUTE POINT 004011122

Figure 1 SAMPLE PGTC FORM 5E5 - 5E11 SOFTWARE RELEASE

pgtc 5ESS Switch _
(5503) OFFICE DATA ADMINISTRATION
PAIR GAIN TEST CONTROLLER

* 1. PGTC FRAME NUMBER 001
* 2. PGTC TRUNK NUMBER 003

3. METALLIC TEST BUS 004011102
4. LO DISTRIBUTE POINT 004011122

Figure 2 SAMPLE PGTC FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5D: 5504 RECORD
TONE TIME FORM - TNTYP

1. GENERAL

The TNTYP form is used to define "ROH", "REORDER", "HIGHTONE", and "BUSY" tones.

Offices must also define the DSN (Defense Switched Network) Preemption Tone, "PRMPTON", if any line or Multi-Line Hunt Line is assigned a Precedence and Preemption BRCS feature.

With 5E3 and later Software Releases, DSN (Defense Switched Network) offices must also define the DSN (Defense Switched Network) Permanent Tone, "DSNROH".

1.1 Standard Input Data

A standard set of input data is provided by the ODA system as each office is registered. If, however, it is required that the timing intervals vary from the standard, the TNTYP form may be used to specify them.

1.2 Recent Change View

The corresponding Recent Change View for this form is 8.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *TONE TYPE

Description: Enter the Type of Tone being defined.

Valid TONE TYPE Entries

Entry	Definition
AUDIBLE	Software Release: 5E7 and later. Audible tone.
ROH	Receiver Off Hook
REORDER	120 IPM
BUSY	60 IPM
PRMPTON	DSN (Defense Switched Network) Preemption Tone. Required in all DSN (Defense Switched Network) offices and all offices in which any PP (Precedence and Preemption) feature is assigned to any line or trunk.
DSNROH	Software Release: 5E3 and later. DSN (Defense Switched Network) permanent tone. Required in all DSN offices. Only DSN offices may select this entry.
HIGHTONE	Software Release: 5E4(2) and later. Steady High Tone.
HIGH120	Software Release: 5E7 and later. 120 ipm cadenced high tone. Required in all E911 offices. If a CAMA PSAP attempts a Selective Transfer for which no TN is assigned in the caller's ESN form (5540 Record), this tone is returned to the PSAP.

Data Rules:

If a TN on a LINEFA form (5112 Record) or a MLHG/TERM combination on a MLHLNFA form (5113 Record) are assigned a FEATURE defined on a PUOFD form (5605-1A Record) where INITIATE is set to "BSYVFY", then a TNTYP form must be submitted with TONE TYPE set to "HIGHTONE" and TIMED? set to "N".

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When TONE TYPE is "HIGH120", TIMED? must be "N".

2.3 TIMED?

Description: Is the Tone timed?

Required Field.
Valid Entries: Y, N

Data Rules:

If a "Y" is entered in this field, the duration in seconds must be entered in the HOW MANY SECONDS? field. If an "N" is entered in this field, then an entry must not be made in the HOW MANY SECONDS? field.

2.4 HOW MANY SECONDS?

Description: If a Tone is Timed, this field must contain the duration in seconds.
Valid Entries: 0 - 255

Standard Input Data for 5E2 and 5E3

TONE TYPE	TIMED?	HOW MANY SECONDS?
BUSY	N	
REORDER	N	
ROH	Y	045

Standard Input Data for 5E4(2) and Later

TONE TYPE	TIMED?	HOW MANY SECONDS?
BUSY	N	
HIGHTONE	N	
REORDER	N	
ROH	Y	045

Figure 1 STANDARD INPUT DATA

---

tntyp 5ESS Switch
(5504) OFFICE DATA ADMINISTRATION
TONE TIMING

* 1. TONE TYPE ROH
2. TIMED? Y
3. HOW MANY SECONDS? 030

Figure 2 SAMPLE TNTYP FORM 5E2 AND LATER SOFTWARE RELEASES

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SEC. 5E: 5505-1/2 RECORD
AUTOMATIC TRUNK TEST TABLE FORM - AUTO

1. GENERAL

The 5505-1/2 Records are used to define the ATTTN (Automatic Trunk Test Table Numbers) and their associated test lines. It is used by both the Trunk Automatic Progression Testing program and manual testing initiated at the 5ESS Switch as a record of the outpulsing information necessary to reach certain test lines in the terminating office.

1.1 Number of Outpulsed Digits

All test numbers require the same number of digits to be outpulsed to process a normal outgoing call to each terminating office. If a terminating office is expecting five digits to be outpulsed to that office from the 5ESS Switch Outgoing Trunk Group, then five digits should be entered on the ATTTN (Automatic Trunk Test Table Number) for that Outgoing Trunk Group.

1.2 Trunk Groups Requiring ATTTN

Most two-way and outgoing Trunk Groups require an ATTTN. Refer to the Trunk Group Record in Division 3 Section 2A for Trunk Groups requiring an ATTTN. If a Trunk Group is required by ODA to have an ATTTN, but the far end office does not have test circuits, any defined ATTTN may be assigned to the Trunk Group. However, it is recommended that a "dummy" ATTTN be used and defined on this 5505 Record. The dummy ATTTN may contain any combination of data which satisfies the ODA input requirements and user standards.

If the trunk group has a TRKCLS of "TSPS" which terminates on an OSPS trunk with a TRKCLS of "FIOPR", then the test numbers entered on this form must conform to the format of 10x, 958-10x, or 959-10x, where x is an integer 1 - 9.

1.3 Test Assignments

The 5505-1/2 Records contain sixteen types of test assignments. (For more complete descriptions see AT&T Practice 781-030-100, Section 8.)

SYNCHRONOUS TEST - This test provides an automatic series of on hook/off hook flashes for each pulsing rate. After all of the series of flashes are complete, the trunk will be left in the quiet termination state.

NONSYNCHRONOUS TEST - The Nonsynchronous type is the only type required for those offices where marginal type tests cannot be applied directly to the incoming trunk circuit, as is frequently the case with Step-by-Step systems.

PERMANENT BUSY - The Number associated with this test provides a permanent busy tone when accessed.

100 TEST - This test provides far to near end loss measurements and near end noise measurements. The 100 Test Line supplies milliwatt tone for approximately 5 seconds and then applies a quiet termination to the caller until the caller hangs up.

102 TEST - This test provides far to near end loss measurements. The 102 Test Line supplies milliwatt tone for 9 seconds and then applies a quiet termination for 1 second. This 10 second sequence is repeated indefinitely until the caller hangs up.

103 TEST - This test provides for overall testing of the supervisory and signaling capabilities of intertoll trunks equipped with rering features. The 103 Test Line is required for 5ESS Switch local/toll applications.

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104 TEST - This test provides two-way loss and noise measurements on any type of trunk. The 104 Test Line seizes a trunk, outpulses digits, sends tones to the far end office, and evaluates the tones received from the far end office.

105 TEST - This test provides two-way loss and noise measurements. The 105 Test Line is used by the CAROT (Centralized Automatic Reporting on Trunks) system.

106 TEST - This test is used in conjunction with the 102 test line for loop-around or two-way transmission testing. This test will provide 10 seconds of 1004 Hz tone followed by loop-around of the T&R leads to the T1 and R1 leads until disconnect is detected on the E lead. This test is used for DSN (Defense Switched Network) offices.

INV TEST - This test provides access to the ISTF (Integrated Services Test Function) Unit to do inverted (bits are inverted on channel) Transmission Tests over a digital trunk. Available with 5E4(2) and later Software Releases.

NINV TEST - This test is similar to the INV TEST except that the bit pattern is not inverted on the channel. Available with 5E4(2) and later Software Releases.

SXS TEST - Used by an office with trunks terminating at a step-by-step office. The testing is similar to synchronous testing, consisting of on-hook/off-hook signals. Available with 5E4(2) and later Software Releases.

CTX2 TEST - A synchronous test type used by an office with trunks terminating to a Number 5 Crossbar office that is equipped with Phase II Centrex features. The test exercises the supervisory and transfer features of the trunk. Available with 5E4(2) and later Software Releases.

CTX3 TEST - A synchronous test type used by an office with trunks terminating to a Number 5 Crossbar office that is equipped with Phase III Centrex features. The test exercises the supervisory and transfer features of the trunk. Available with 5E4(2) and later Software Releases.

109 TEST - A test of the performance of an echo controller at a terminating toll office. The test is only used when there is an office, on the far end of any trunk, that is a 5ESS Switch with an RMS-D3 test device. Available with 5E4(2) and later Software Releases.

606 TEST - A digital loop-back test for digital continuity and fidelity. The test is only used when there is an office, on the far end of any trunk, that is a 5ESS Switch with an RMS-D3 test device. Available with 5E4(2) and later Software Releases.

1.4 Continuity Checks

The AUTOMATIC PROGRESSION TEST TYPE of "CONT" is available with 5E3 and later Software Releases. The continuity checks are run on a time basis over CCS trunks until continuity is restored or until they are stopped by maintenance personnel.

1.5 Recent Change View

The corresponding recent change view for this form is 14.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * AUTOMATIC TRUNK TEST TABLE NUMBER

Description: Enter the Automatic Trunk Test Table Number.

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Valid Entries: 1 - 999

2.3 AUTOMATIC PROGRESSION TEST TYPE

Description: Enter the APTT (Automatic Progression Test Type).

Valid AUTOMATIC PROGRESSION TEST TYPE Entries

Entry	Definition
102LB	Software Release: 5E9(1) and later. 102 Loopback Test
103	103 Type Test
105	Software Release: 5E9(1) and later. 105 type test
CONT	Software Release: 5E3 and later. Continuity Test
CTX2	Software Release: 5E4(2) and later. Centrex Phase II Test
CTX3	Software Release: 5E4(2) and later. Centrex Phase III Test.
INV	ISTF Inverted Loopback Test
NINV	ISTF Non-Inverted Loopback Test
NSYN	Non-Synchronous Test
PB	Permanent Busy Test
SHCT	Software Release: 5E10 and later. Speech Handler trunk PCM loop back test.This enumeration supports the CDMA (Code Division MultipleAccess) feature. For more information on this feature, seeDivision 2, Section 8B.
SYN	Synchronous Test
SXS	Software Release: 5E4(2) and later. Step-by-Step Test.

Data Rules:

An entry is required if any trunk group has an "N" entered in the IAPT (Inhibit Automatic Progression Table) field on the TKGRP form.

With 5E3 and later, CCS Trunks (INPULSING/OUTPULSING CCIS6 or ISUP7) must use an Automatic Progression Test Type of "CONT" or "PB" or blank.

"102LB" may be entered in this field only for DCS (Digital Cellular Switch) trunks where TRKCLS on the corresponding TKGRP form (5202 Record) is "CST2" or "IVTRK".

For 5E14 and earlier, when TGNs are defined on the TKGRP form (5202 Record) with TRKCLS equal to "SPCHNDLR" and the ATTTN field on this form is entered, the AUTO form must be entered and this field must be equal to "SHCT".

For 5E15 and later, when the AUTO form is entered and this field is "SHCT", any TKGRP forms which use a value of the ATTTN field on this form must have a TRKCLS field equal to "SPCHNDLR".

DIGITS TO BE OUTPULSED

The following fields (Section 2.4 - Section 2.19) define the digits to be outpulsed.

2.4 SYNCHRONOUS TEST

Description: Enter the number to be outpulsed to access the Synchronous Test Line at the far end office.
Valid Entries: 1 - 11 digits

2.5 NONSYNCHRONOUS TEST

Description: Enter the number to be outpulsed to access the Nonsynchronous Test Line at the far end office.

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If SYNCHRONOUS TEST contains an entry and NONSYNCHRONOUS TEST is blank, ODA specifies the same number entered in SYNCHRONOUS TEST for NONSYNCHRONOUS TEST.
Valid Entries: 1 - 11 digits

2.6 PERMANENT BUSY TEST

Description: Enter the number to be outpulsed to access the Permanent Busy Test Line at the far end office.
Valid Entries: 1 - 11 digits

2.7 100 TYPE TEST

Description: Enter the number to be outpulsed to access the 100 Test Line at the far end office.
Valid Entries: 1 - 11 digits

2.8 102 TYPE TEST

Enter the number to be outpulsed to access the 102 Test Line at the far end office.

2.9 103 TYPE TEST

Description: Enter the number to be outpulsed to access the 103 Test Line at the far end office.
Valid Entries: 1 - 11 digits

2.10 104 TYPE TEST

Description: Enter the number to be outpulsed to access the 104 Test Line at the far end office.
Valid Entries: 1 - 11 digits

2.11 105 TYPE TEST

Description: Enter the number to be outpulsed to access the 105 Test Line at the far end office.
Valid Entries: 1 - 11 digits

2.12 106 TYPE TEST

Description: Enter the number to be outpulsed to access the 106 test line.
Valid Entries: 1 - 11 digits

Data Rules:

This field may be entered only for DSN (Defense Switched Network) offices, therefore, the DSN OPT field must be set to "Y" on the OFCOPT form.

2.13 INV TYPE TEST

Description: Enter the number to be outpulsed to access an INV Test line at the far-end office where the bits in the bit stream will be inverted. Only digital trunks will be tested.

Software Release: 5E4(2) and later
Valid Entries: 1 - 11 digits

2.14 NINV TYPE TEST

Description: Enter the number to be outpulsed to access an NINV Test line at the far-end office where the bits in the bit stream are not inverted. Only digital trunks will be tested.

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Software Release: 5E4(2) and later.
Valid Entries: 1 - 11 digits

2.15 SXS TYPE TEST

Description: Enter the number to be outpulsed to access the SXS Test Line.

Software Release: 5E4(2) and later
Valid Entries: 1 - 10 digits

Data Rules:

If the AUTOMATIC PROGRESSION TEST TYPE field is "SXS", then a value must be entered in the SXS TYPE TEST field.

2.16 CTX2 TYPE TEST

Description: Enter the number to be outpulsed to access the CTX2 Test Line.

Software Release: 5E4(2) and later.
Valid Entries: 1 - 10 digits

Data Rules:

If the AUTOMATIC PROGRESSION TEST TYPE field is "CTX2", then a value must be entered in the CTX2 TYPE TEST field.

2.17 CTX3 TYPE TEST

Description: Enter the number to be outpulsed to access the CTX3 Test Line.

Software Release: 5E4(2) and later.
Valid Entries: 1 - 10 digits

Data Rules:

If the AUTOMATIC PROGRESSION TEST TYPE field is "CTX3", then a value must be entered in the CTX3 TYPE TEST field.

2.18 109 TYPE TEST

Description: Enter the number to be outpulsed to access the 109 Test Line.

Software Release: 5E4(2) and later.
Valid Entries: 1 - 10

2.19 606 TYPE TEST

Description: Enter the number to be outpulsed to access the 606 Test Line.

Software Release: 5E4(2) and later.
Valid Entries: 1 - 10

---

auto 5ESS Switch _
(5505) OFFICE DATA ADMINISTRATION
AUTOMATIC TRUNK TEST TABLE

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*1. AUTOMATIC TRUNK TEST TABLE NUMBER 028
2. AUTOMATIC PROGRESSION TEST TYPE CTX2

DIGITS TO BE OUTPULSED

3. SYNCHRONOUS TEST _____	11. 106 TYPE TEST _____
4. NONSYNCHRONOUS TEST _____	12. INV TYPE TEST _____
5. PERMANENT BUSY TEST _____	13. NINV TYPE TEST _____
6. 100 TYPE TEST _____	14. SXS TYPE TEST _____
7. 102 TYPE TEST _____	15. CTX2 TYPE TEST 457896
8. 103 TYPE TEST _____	16. CTX3 TYPE TEST _____
9. 104 TYPE TEST _____	17. 109 TYPE TEST 375104
10. 105 TYPE TEST _____	18. 606 TYPE TEST 438241

Figure 1 SAMPLE AUTO FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 5F: 5506 RECORD
AMA CALL TYPE FORM - AMACT

1. GENERAL

The 5506 Record is used to define AMA (Automatic Message Accounting) Call Types. A subset of the AMA Call Types are assigned on the CGIDX form (5302-1 Record). For an initial office, ODA builds the AMACT forms. Figures 2 - 6 describe the entries built by ODA.

The figures are a composite of all Call Types for the various Software Releases. Software Release restrictions are included under AMA CALL TYPE descriptions.

Since the AMACT entries assigned by ODA are in compliance with Standard telecommunications accounting procedures, extreme caution should be used by the switch owner if changes are considered. However, it may be necessary to change the "Special Study" and "Include Customer ID"? field since ODA defaults all Call Types to a "NO". Any other field changes on the AMACT form should be discussed with the AMA personnel.

With 5E4(2) and later, new AMA CALL TYPES have been added for the OSPS (Operator Services Position System) toll and assistance feature.

OSPS AMA records are generated at the end of a call. The determination of making an AMA record, the call type and the structure code is based on the information in the call record, i.e., it is based on what the operator and customers did during the call.

When an AMA record is to be made, a call type, which is specified in the 5506 Record, is determined for the call based on various information.

For definitions of call codes not associated with call types on this form, refer to 235-100-125 (System Descriptions).

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and office name on each record.

2.2 * AMA CALL TYPE

Description: This field is used to enter the AMA Call Type being defined. Refer to Figure 1 for valid AMA CALL TYPE entries.

2.3 DETAIL BILL

Description: Is the number dialed to be included on the AMA record?

Required Field.
Valid Entries: Y, N

2.4 TRACER TYPE

Description: This field is used for revenue purposes to describe the data sent to AMA.

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The AMA personnel receive measurements from the 5ESS Switch on the number of calls per Tracer Type that were transmitted over the data link. If the AMA calls do not agree with the 5ESS Switch calls, the AMA personnel can then estimate the amount of revenue lost by using an average charge per Tracer Type (e.g., if 200 local calls were lost at an average charge of 20 cents, the estimated loss of revenue is $40.00).

Required Field.

Valid TRACER TYPE Entries

Entry	Definition
LOCAL	Local call, pegs records output local answered or not recorded local answered.
TOLL	Toll call, pegs records output toll answered or not recorded toll answered.
SPCL	Software Release: 5E4(2) and later. Special services, pegs records output special answered or not recorded special.
SPECIAL	Software Release: 5E3 and earlier. Special services, pegs records output special answered or not recorded special.
OPER	Operator Assisted Calls, pegs records output operator answered or not recorded operator answered.
OTHER	Not toll or local, pegs records output other answered or not recorded other answered.
INTERLATA	Software Release: 5E4(2) and later. InterLATA call, pegs records output interLATA for answered or unanswered calls or not recorded interLATA for answered and unanswered interLATA calls.
ILATA	Software Release: 5E3 and earlier. InterLATA call, pegs records output interLATA for answered or unanswered calls or not recorded interLATA for answered and unanswered interLATA calls.

AMA personnel should be consulted before changing the entries built by ODA in this field since these are Accounting Classifications not Network Facility Classifications.

2.5 INCLUDE MBI/WATS BAND ?

Description: Is the MBI (Message Billing Index) to be included on the AMA record?

Required Field.
Valid Entries: Y, N

2.6 STUDY TYPE

This field is used by the Maintenance Center. The Maintenance Center may optionally request an AMA study on abandoned calls. The criteria for an abandoned call is as follows:

- The call has been processed.
- A network connection is up.
- The terminating end is ringing.
- The originator hangs up before answer.

Normally abandoned call details are not recorded at AMA facilities. However, call details will be recorded by classification of call when a study is initiated by the Maintenance Center. The Maintenance Center may request a study on LOCAL, TOLL, ALL or SPECIAL CALL Types. When SPECIAL CALL Types are requested, only those Call Types that have a Y in the Special Study field will be studied. AMA personnel should be consulted before changing the entries built by ODA in this field since these are Accounting Classifications not Network Facility Classifications.

These entries are totally independent of the classifications entered in the Tracer Type field.

Required Field.

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Valid STUDY TYPE Entries

Entry	Definition
LOCL	Software Release: 5E4(2) and later. Local data.
LOCAL	Software Release: 5E3 and earlier. Local data.
TOLL	Toll data.
OTHER	Other data (not local or toll).
ILATA	Software Release: 5E3 and earlier. InterLATA data.
INTERLATA	Software Release: 5E4(2) and later. InterLATA data.
OPER	Software Release: 5E4(2) and later. Operator Assisted Calls.

2.7 SPECIAL STUDY?

The Maintenance Center may optionally request an AMA study on abandoned calls. Abandoned call details are recorded at AMA facilities based on the call classification requested at the Maintenance Center. The Maintenance Center may select LOCAL, TOLL, ALL or SPECIAL Call Types. When SPECIAL is selected, only those Call Types that have a "Y" entered in this field will be studied.

Required Field.

2.8 INCLUDE CUSTOMER ID?

Description: Will the customer's identification number (a terminal group number) be included in the AMA record?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This entry may be equal to "Y" only for the following AMA Call Types: "ACCT", "CCSAS", "CFPFNA" "ETCCSA", "ETMDR", "FGDWBL" "FX", "TANTTK", "WATISB", "WATSB" or "WATSBL". For 5E6 and later, it may also be "Y" when AMA CALL TYPE is "DMRTM", "FGBOL", "FGDOL", "ISDATA", "ISDNOL", or "SP".

Valid AMA CALL TYPE Entries

VALID ENTRY	REMARKS	SOFTWARE RELEASE	CALL CODE
ACCT	Account Code calls not normally recorded.	5E3 and later	124
ACCTX	Account Code dialed calls extended by an attendant to a CENTREX station not normally recorded.	5E3 and later	83
ACCTIE	Account code dialed calls extended by an attendant to a tie trunk.	5E3 and later	84
ATTCMC	AT&T Cellular Mobile Carrier. Used for billing when an incoming call originates on a Trunk Group with CMC equal to "Y" with 5E2 and 5E3. With 5E4(2) and later , this value is "CMC"	5E2 and 5E3	306
ATTSP	AT&T Station Paid. Used by an Interexchange Carrier switch on calls from an Equal Access End Office or Access Tandem using Equal Access Signaling or from directly connected lines.		60
AUTO	Automatic collect T&A OSPS call.		019
BLVOSPS	Busy Line Verify T&A OSPS calls.		043
CCSAS	Common Control Switching Arrangement Sampling.	5E3 and later	21
CFPFNA	Call Forwarding over Private Facilities No Answer. Used for tandem tie trunk. Same as Call Type "TANTTK" except call processing does not generate a simulated answer.		32
CMC	AT&T Cellular Mobile Carrier. Used for billing when an incoming call originates on a Trunk Group with CMC equal to Yes.	5E4(2) and later	306
CMBOT	Cellular Mobile Carrier originating calls to access tandem for Type 2B	5E11 and later.	63

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	access.		
CMCBTT	Cellular Mobile Carrier originating calls to access tandem for Type 2B access.	5E11 and later.	65
CMCOT	Cellular Mobile Carrier originating calls to access tandem for Type 2A access.	5E9(1) and 5E10.	64
CMCTT	Cellular Mobile Carrier terminating calls from access tandem for Type 2A access.	5E9(1) and 5E10.	66
CNA	Connecting Network Access.	5E11 and later	720
CRED	Subscriber credit entry AMA record.	5E4(2) and later	107
DIDSTUDY	Direct Inward Dialing Study. It is used to track PBX DID trunk calls which have not returned answer supervision after a specified time. This time limit is determined on the OFCOFT form (5509 Record). The 5ESS Switch determines that the call is connected upon receiving an "answer back" from the PBX, however, some PBX's turn off the answer back which allows incoming calls to connect without being billed. Tracking these calls via AMA study records helps prevent this occurrence.	5E6 and later	381
DA411	Local Directory Assistance calls.		9
DA555	Toll Directory Assistance calls.		33
DDD0	Direct Distance Dialing Operator-assisted OSPS T&A calls.		024
DMRT	Detail billed, message rate, timed.		5
DMRTM	Detail billed, message rate, timed. Also includes an MBI.		1
DMRUM	Detail billed, message rate, untimed. Includes an MBI.		
EIOSPS	Emergency Interrupt T&A OSPS calls.		044
ETCCSA	Electronic Tandem Common Control Switching Arrangement.		
ETMDR	Electronic Tandem Message Detail Recording (via Revenue Accounting Office-RAO).	5E3 and later	
FGAOL	Feature Group A Originating LATA.		
FGATL	Feature Group A Terminating LATA.		
FGBOL	Feature Group B Originating LATA.		
FGBTL	Feature Group B Terminating LATA.		
FGDOL	Feature Group D Originating LATA.		
FGDTL	Feature Group D Terminating LATA.		
FGDWBL	Feature Group D WATS Originating LATA. Used for InterLATA calls with a Group Billing Number.		114
FR	Flat rate calls. This AMA Call Type should be used for local calls from telephone subscribers having flat rate service. AMA Call Type "FREE" should be used for free calls from a flat-rate line.		
FREE	Free calls. This AMA Call Type should be used for all free calls from non-coin lines. Free calls from coin lines should be assigned AMA Call Type "LOCN". Calls to TSPS, tones, announcements, business office and free terminating line service are normally designated as free.		
FX	Foreign Exchange.		11
ICVPN	Originating Access to Interexchange Carrier Virtual Private Network.		263
INWAT	Terminating INWATS.		8
INWTS	Terminating INWATS.	5E4(2) and later	8
ISDATA	ISDN data intraLATA calls.	5E3 and later	
ISDNOL	ISDN data originating interLATA calls.	5E3 and later	117
ISDNTL	ISDN data terminating interLATA calls.	5E3 and later	121
LNPDFR	Local Number Portability	5E13 and later	721
LOCN	Local coin calls should be used for all calls from coin lines except calls to local or toll Directory Assistance. For those calls, AMA Call Types DA411 and DA555 should be used. AMA Call Type LOCN must contain an MBI assigned on the 5302-4 Record. AMA Call Types DA411 and DA555, when used for coin, must also contain an MBI assigned on the 5302-4 Record.		41
MRTM	Message rate, timed, includes an MBI.		
MRUM	Message rate, untimed, includes an MBI.		4
NONR	Nonrevenue OSPS T&A calls.	5E4(2) and later	35
NRBLV	Busy Line Verify, Nonrevenue OSPS T&A calls.	5E4(2) and later	057
NREIOSPS	Nonrevenue emergency interrupt OSPS T&A call.	5E4(2) and later	058
NS	Number services call, use call code from SCP data base stored in call code.	5E4(2) and later	
OSOINW	Originating Screening Office INWATS.	5E5 and later	360
PECO	Person collect OSPS T&A call.	5E4(2) and later	017
PEPD	Person paid OSPS T&A call.	5E4(2) and later	016.
PPCZTA	Person coin zone OSPS T&A call.	5E4(2) and later	029
PSCD	Person special called OSPS T&A call.	5E4(2) and later	023

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PSCG	Person special calling OSPS T&A call.	5E4(2) and later	018
SCBLV	Special calling busy line verify OSPS T&A call.	5E4(2) and later	054
SCEI	Special calling emergency interrupt OSPS T&A call.	5E4(2) and later	055
SCOL	Station collect OSPS T&A call.	5E4(2) and later	014
SCOSPS	Station coin zone OSPS T&A call.		
SP	Station paid. Provides details for a direct dialed, station paid 7 or 10 digit call.		
SPAMEG	MEGACOM service.		309
SPAWAT	Special Access Wide Area Telecommunications Service.		
SPOH	Station paid operator-handled OSPS T&A call.	5E4(2) and later	
SPOSPS	Station paid OSPS T&A call.	5E4(2) and later	
SSCD	Station special called OSPS T&A call.		
SSCG	Station special calling OSPS T&A call.		015
SSVC	Special service OSPS T&A call.	5E4(2) and later	108
TANTTK	Tandem Tie Trunk calls.		32
TCNT	OSPS Traffic Counts AMA record.	5E4(2) and later	056
UTT	Utility Telemetry Trunk	5E9(2) and later	550
WATISB	WATS individual station paid. Used for IntraLATA calls with a Station Billing Number.		7
WATSB	WATS using special billing. It is for IntraLATA calls with a Group Billing Number		68
WATSBL	WATS station billed InterLATA. Used for InterLATA calls with a Station Billing Number.		111

Figure 1 VALID AMA CALL TYPE ENTRIES

AMA CALL TYPE	DETAIL BILL	TRACER TYPE	INCLUDE MBI/WATS BAND?	STUDY TYPE	SPECIAL STUDY?	INCLUDE CUSTOMER ID?
ACCT	N	OTHER	N	OTHER	N	N
ATTSP	Y	TOLL	N	TOLL	N	N
AUTO	N	OPER	N	OPER	N	N
BLVOSPS	Y	OPER	N	OPER	N	N
CCSAS	Y	OTHER	N	OTHER	N	N
CFPFNA	N	OTHER	N	OTHER	N	N
CMC	Y	SPCL	N	TOLL	N	N
CNA	Y	TOLL	N	TOLL	N	N
CRED	N	OTHER	N	OTHER	N	N
DA411	N	SPCL	N	LOCL	N	N
DA555	N	SPCL	N	TOLL	N	N
DDDO	N	TOLL	N	TOLL	N	N
DIDSTUDY	Y	OTHER	N	OTHER	N	N
DMRT	Y	LOCAL	N	LOCL	N	N
DMRTM	Y	LOCAL	Y	LOCL	N	N
DMRUM	Y	LOCAL	Y	LOCL	N	N
EIOSPS	Y	OPER	N	OPER	N	N
ETCCSA	Y	OTHER	N	OTHER	N	N
ETMDR	Y	OTHER	N	OTHER	N	N
FGAOL	N	INTERLATA	N	LOCL	N	N
FGATL	N	INTERLATA	N	LOCL	N	N
FGBOL	N	INTERLATA	N	LOCL	N	N
FGBTL	N	INTERLATA	N	LOCL	N	N
FGDOL	N	INTERLATA	N	INTERLATA	N	N
FGDTL	N	INTERLATA	N	INTERLATA	N	N
FGDWBL	N	INTERLATA	Y	INTERLATA	N	N
FR	Y	OTHER	N	LOCL	N	N
FREE	Y	OTHER	N	LOCL	N	N
FX	Y	OTHER	N	OTHER	N	N
ICVPN	Y	TOLL	N	TOLL	N	N
INWTS	N	SPCL	N	OTHER	N	N
ISDATA	N	SPCL	N	LOCL	N	N
ISDNOL	N	INTERLATA	N	INTERLATA	N	N
ISDNTL	N	INTERLATA	N	INTERLATA	N	N
LNPDFR	Y	LOCAL	N	LOCL	N	N
LOCN	Y	OTHER	N	OTHER	N	N
MRTM	N	LOCAL	Y	LOCL	N	N
MRUM	N	LOCAL	Y	LOCL	N	N
NONR	N	OTHER	N	OTHER	N	N
NRBLV	Y	OTHER	N	OPER	N	N
NREIOSPS	Y	OTHER	N	OPER	N	N
NS	Y	OTHER	N	OTHER	N	N

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OSOINW	Y	TOLL	N	TOLL	N	N
PECO	N	OPER	N	OPER	N	N
PEPD	N	OPER	N	OPER	N	N
PPCZTA	Y	OPER	N	OPER	N	N
PSCD	N	OPER	N	OPER	N	N
PSCG	N	OPER	N	OPER	N	N
SCBLV	Y	OPER	N	OPER	N	N
SCEI	Y	OPER	N	OPER	N	N
SCOL	N	OPER	N	OPER	N	N
SCOSPS	Y	OPER	N	OPER	N	N
SP	Y	TOLL	N	TOLL	N	N
SPAMEG	Y	TOLL	Y	TOLL	N	N
SPAWAT	Y	TOLL	Y	TOLL	N	N
SPOH	N	OPER	N	OPER	N	N
SSCD	N	OPER	N	OPER	N	N
SSCG	N	OPER	N	OPER	N	N
SSVC	N	SPCL	N	OTHER	N	N
TANTTK	N	OTHER	N	OTHER	N	N
TCNT	N	OPER	N	OPER	N	N
WATISB	Y	SPCL	N	TOLL	N	N
WATSB	Y	SPCL	Y	TOLL	N	N
WATSBL	Y	INTERLATA	Y	INTERLATA	N	N

Figure 2 AMACT ENTRIES BUILT BY ODA 5E9(1) AND LATER SOFTWARE RELEASES

```
amact                5ESS OFFICE DATA ADMINISTRATION _
(5506)                  AMA CALL TYPE FORM


* 1. AMA CALL TYPE            DMRTM
  2. DETAIL BILL              Y
  3. TRACER TYPE              LOCAL
  4. INCLUDE MBI / WATS BAND? Y
  5. STUDY TYPE               LOCAL
  6. SPECIAL STUDY?           N
  7. INCLUDE CUSTOMER ID?     N
```

Figure 3 SAMPLE AMACT FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 5G: 5507 RECORD
IOP APPLICATION PROCESSOR COMMUNICATION FORM - APCOMM

1. GENERAL

The 5507 Record is available with 5E3 and later Software Releases and is used to define the communication path between an application process running in the 5ESS Switch, and an application running in an AP (Application Processor). The Application Processor Communications Package formats, sends and receives messages to an AP from the Input/Output Processor through a Synchronous Data Link Controller. APPLICATION PROCESSOR on the OFCOPT form must be "AM" or "AMSM".

For 5E4(2) and later, a maximum of 10 AP SITE IDs may be defined for the office.

1.1 Recent Change View

The corresponding Recent Change View for this form is 24.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * AP SITE ID

Description: Enter the Site Identification Number of the Application Processor. This number identifies the AP to the 5ESS Switch.

Required Field.
Valid Entries: 1 - 255

2.3 AP INDEX

Description: Enter the Application Processor Index; this number must be unique to each AP SITE ID entered. A maximum of three AP SITE ID and associated AP INDEX values are currently supported.

Required Field.
Valid Entries: 1 - 3

2.4 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 8 characters

2.5 LINK (1-6)

Description: These entries represent the external data links that connect the AP to the 5ESS Switch. At least one of the six LINKs must be assigned for each APCOMM input form submitted. Once a link is assigned on a given APCOMM input form, it cannot be used again on any other APCOMM input form submitted. A given AP can be assigned any number of the available links, but since the maximum number of APs is currently three, the suggested number of links assigned to each AP is two. Although the range for this field is 1 - 32, currently the only valid entries are 1 - 6.
Valid Entries: 1 - 6

---

apcomm 5ESS Switch _

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(5507) OFFICE DATA ADMINISTRATION
IOP APPLICATION PROCESSOR COMMUNICATION

* 1. AP SITE ID 001
2. AP INDEX 1
3. REMARKS _____
4. LINK 1 01
5. LINK 2 02
6. LINK 3 03
7. LINK 4 __
8. LINK 5 __
9. LINK 6 __

Figure 1 SAMPLE APCOMM FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5I: 5509 RECORD
OFFICE OPTIONS FORM - OFCOPT

1. GENERAL

The OFCOPT form is available with 5E2 and later Software Releases. This form must be completed for a 5ESS Switch and is used to supply various miscellaneous office options and parameters. This form is required at the time of initial translations for all offices.

The 5509 Record is provided as a reproducible form that may optionally be used. However, if this record is requested in the ODA data base using "records" command, the screen image of the input form will be printed instead of the tabularized record.

1.1 Recent Change View

The corresponding Recent Change Views for this form are 8.1 and 8.15.

2. FORM AND RECORD ENTRIES

2.1 *KEY

Description: Enter the key value which is always 0.

2.2 OFFICE ID

Description: This field is used to identify the office to the Recent Change System. Any entry which will sufficiently identify the office is acceptable.
Valid Entries: 1 - 8 alphanumeric characters

2.3 COMPANY ID

Description: This field is used to identify the Company. This field may be used for Secured Feature Activation using a common company-wide password rather than an individual switch-specific password. For more information, please see the Feature Description Section in Division 2, Section 1BX.
Valid Entries: 1 - 8 alphanumeric characters

2.4 TIME ZONE

Description: Enter the time zone in which the 5ESS Switch is located. This entry reflects the hour difference between the office and GMT (Greenwich Mean Time).

Valid TIME ZONE Entries

Entry	Definition
-12 through +12	Hour difference between office and GMT
EST or -5	Eastern Standard Time
CST or -6	Central Standard Time
MST or -7	Mountain Standard Time
PST or -8	Pacific Standard Time
-5S	Software Release: 5E5 and later. Eastern Standard Time Special (no Daylight Savings Time)
-6S	Software Release: 5E5 and later. Central Standard Time Special (no Daylight Savings Time)
-7S	Software Release: 5E5 and later. Mountain Standard Time Special (no Daylight Savings Time)
-8S	Software Release: 5E5 and later. Pacific Standard Time Special (no Daylight Savings Time)

2.5 DAYLIGHT SAVINGS TIME

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Description: Is Daylight Savings Time observed in this office?
Valid Entries: Y, N

2.6 COIN RETURN POTENTIAL

Description: Enter the potential used by the office for coin return.
Valid Entries: "PLUS" or "MINUS"

2.7 EXPANDED INBAND SGNLING

Description: Is Expanded Inband Signaling provided in the office? Expanded Inband Signaling provides the 5ESS Switch with the ability to recognize a lengthened on-hook wink from the TSPS.
Valid Entries: Y, N

2.8 STUCK COIN REPORT

Description: This field identifies the frequency, in minutes, with which the Stuck Coin Report is printed.
Valid Entries: 15, 30, 45 or 60 minutes

2.9 LTP SCR

Description: Enter the Screening Index to be used for Logical Test Port calls. An entry must be made in this field if any of the following are supported by the office: ROTL, Remote TLWS or CTTU.

This Screening Index is accessed during digit analysis of ROTL (Remote Office Test Line) Security Callback and Connection Appraisal calls or termination to the Remote Talk and Monitor Telephone Numbers of either the Remote TLWS (Trunk and Line Work Station) or CTTU (Central Trunk Test Unit).

The Screening Index used should have the characteristics of a simple POTS line Screening Index, such as single party flat rate or equivalent.
Valid Entries: 1 - 4095

2.10 LTP DAS

Description: Enter the DAS (Digit Analysis Selector) to be used for Logical Test Port calls. An entry must be made in this field if any of the following are supported by the office: ROTL, Remote TLWS or CTTU.

This DAS is accessed during digit analysis of ROTL (Remote Office Test Line) Security Callback and Connection Appraisal calls or termination to the Remote Talk and Monitor Telephone Numbers of either the Remote TLWS (Trunk and Line Work Station) or CTTU (Central Trunk Test Unit).

The Digit Analysis Selector used should have the characteristics of a simple POTS line Digit Analysis Selector, such as single party flat rate or equivalent.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

2.11 AM ODD MEMORY SIZE

Description: This field is used to indicate the amount of memory in kilobytes to be reserved for the ODD (Office Dependent Data).

The basis for populating this field is the number of EOP (End-Of-Period) lines as it appears in 5DOPS (5ESS Switch Digital Ordering and Planning System).
Default:

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5E15 and earlier: 10240

5E16 and later: 16384

Valid Entries: (see table)

Valid AM ODD MEMORY SIZE Entries

Software Release	VCDX	3B21	DRM
5E9(2) - 5E11	6144	3584	-
5E12	9216	10240	-
5E13	10240	10240	-
5E14 - 5E15	10240	10240	10240
5E16 and later	10240	16384	10240

2.12 ODD DISK SIZE

Description: This field indicates in kilobytes the amount of disk space available for disk resident ODD (Office Dependent Data).

The appropriate disk configuration for an office is based on formulas in 5DOPS (5ESS Digital Ordering and Planning System) which relate to the total SM ODD size and the AMA requirements of the office. DISK CONFIGURATION information is entered on the ECDOPT form.
Default:

5E8 and later: 8992
Valid Entries:

Valid ODD DISK SIZE Entries

Software Release	Values	DISK CONFIGURATION on ECDOPT form
5E8 and later	8992	63, 66

For 5E13 and earlier, the ODD DISK SIZE on the OFCOPT form must correspond to the DISK CONFIGURATION on the ECDOPT form. The ODD DISK SIZE on the OFCOPT form must correspond to the DISK CONFIGURATION on the RETINFO form.

2.13 EOP LINES

Description: Enter the EOP (End-Of-Period) lines.
Valid Entries: 0 - 99, 999

2.14 EOP TRUNKS

Description: Enter the EOP (End-Of-Period) trunks.
Valid Entries: 0 - 99, 999

2.15 EOP SCR

Description: Enter the EOP (End-Of-Period) Screening Indexes.
Valid Entries: 1 - 4095

2.16 EOP CDI

Description: Enter the EOP (End-Of-Period) Code Indexes.
Valid Entries: 1 - 4095

2.17 RCOSL

Description: This is a Recent Change only field used for Operations System.

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NDC NTMOS/RCVERBOSE OPTS

The following fields are used to indicate whether or not the office has a link to NDC OS. Refer to Section 2.18 - Section 2.23 for individual field information.

2.18 EADAS LINK

Description: The EADAS LINK field is changed to TRFM LINK for 5E15 and later. See TRFM LINK below for usage information.

2.19 TRFM LINK

Description: Prior to 5E15, this field was called EADAS LINK. Is there a link to the Network Data Collections Operations System?
Valid Entries: Y, N

Data Rules:

For Flexible IOP Selection (5E4(2) and later), if "Y" is entered in this field, DEVICE TYPE on the ECDOPT form must be "SDL3".

2.20 RCVERBOSE

Description: This is a Recent Change only field which indicates whether a one line summary of Recent Change inserts, updates, deletes and failures is printed on the ROP (Receive Only Printer) after a Recent Change transaction has completed. If this option is set to "Y", all recent changes are logged to the ROP unless the user specifically sets the verbose option to "N".

2.21 RNM LINK

Description: Does this office have a direct link to the RNMC (Remote Network Management Center) system data link?

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

If RNM LINK is set to "Y", DEVICE TYPE on the ECDOPT form must be "SDL5". Conversely, if "N" is entered, DEVICE TYPE on ECDOPT form cannot be " SDL5".

2.22 TRFM RNM OPT

Description: The value of this field indicates which type of link (TRFM or RNM) is used for the TCP/IP link.

Software Release: 5E15 and later
Default: NONE
Valid Entries:

Valid TRFM RNM OPT Entries - 5E15 and later

Entry	Definition
BOTH	TRFM and RNM links are the TCP/IP links.
NONE	No TCP/IP links.
RNM	Remote Network Management Link is the TCP/IP link.
TRFM	Traffic Measurement Link is the TCP/IP link.

Data Rules:

When TRFM RNM OPT is "NONE", RNM LINK must be "N".

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When TRFM RNM OPT is "RNM", RNM LINK must be "Y".

When TRFM RNM OPT is "TRFM", TRFM LINK must be "Y".

When TRFM RNM OPT is "BOTH", TRFM LINK must be "Y" and RNM LINK must be "Y".

When TRFM RNM OPT is "BOTH", "RNM" or "TRFM", LOC IDENT CODE must be entered.

TRFM RNM OPT can be set to "BOTH", "RNM" or "TRFM", when the ACT field for SFID 532 is set to "Y" on the SFSYS form (5713-1 Record).

2.23 LOC IDENT CODE

Description: The value of this field is the Common Language Location Identifier Code that is unique to the SPCS (Stored Program Control System).

Software Release: 5E15 and later.
Valid Entries: Blank, or 11 Alphanumeric Characters

LOC IDENT CODE must be entered when TRFM RNM OPT is "BOTH", "RNM" or TRFM".

2.24 ACTIVATE DIV OF REV

Description: Is the Division of Revenue feature to be activated?
Valid Entries: Y, N

2.25 DIV OF REV HOURLY RPTS

Description: Are the hourly Division of Revenue reports to be generated?
Valid Entries: Y, N

2.26 DIV OF REV COUNT TYPES

Description: Enter the type of Division of Revenue reports which are to be sent to EADAS.
Valid Entries: PEG, USAGE, or BOTH.

2.27 5 MIN PERM SIG THRESHOLD

Description: This field establishes a threshold for the number of permanent signal conditions appearing on lines within a 5 minute interval. When this threshold is exceeded, an alarmed message will be produced at the RSB (Remote Service Bureau), if equipped, or at the SCC (Switching Control Center).

The threshold value is dependent upon the number of lines in an office. A suggested value can be derived using the formula ((Number of Lines * 1/600) + 7). Employing this formula, a 5,000-line office would have a 5-Minute Permanent Signal Threshold value of 15.
Valid Entries: 4 - 90

2.28 VAR TIME PERM SIG THRESHOLD

Description: This field establishes a threshold for the number of permanent signal conditions appearing on lines within a variably set interval. When this threshold is exceeded, an alarmed message will be produced at the RSB (Remote Service Bureau), if equipped, or at the SCC (Switching Control Center).

The threshold value is dependent upon the number of lines in an office. A suggested value can be derived using the formula ((Number of Lines * 3/800) + 13). Employing this formula, a 5,000-line office would have a Variable Time Permanent Signal Threshold value of 31.

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Valid Entries: 4 - 400

2.29 VAR TIME PERM SIG INTERVAL

Description: This field defines the interval, in minutes, for the Variable Timed Permanent Signal Threshold.
Valid Entries: 15, 30, 45 or 60 minutes

2.30 ALLOW TOUCH TONE FRAUD

Description: Can all customers in the database marked as DP (Dial-Pulse) only originate calls with DTMF (Dual Tone Multifrequency) station sets? This is also called Touch Tone fraud.
Default: N
Valid Entries: Y, N

2.31 PRINT TOUCH TONE FRAUD

Description: Should the TTY print a message whenever Touch Tone fraud occurs? This allows the maintenance personnel to change the database and either correct their records or have the Business Office contact the customer about paying for DTMF service.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, ALLOW TOUCH TONE FRAUD? must be "Y".

2.32 #DSN OPTION

Description: Is this a Defense Switched Network office?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "N" is entered in the DSN OPTION? field, an entry in the BILLING DN field of the TKGRP form (5202 Record) is allowed for TRKCLS values of "LATA", "PF", "PFLASH", "PFITT", "LTPCLBCK", "LTPDFTAC", "LTPROTL", "EDSL", "EDSLHM", "IFOPER" and "IFTERM".

In a DSN office (DSN OPT is "Y"), if the AMA LENGTH field on the ACCTFD form (5623-1 Record) is set to 8, then the ACCT LENGTH field on the ACCTGP form (5623-2 Record) must be less than or equal to 7. If the AMA LENGTH field on the ACCTFD form is set to 15, then the ACCT LENGTH field on the ACTGP form must be less than or equal to 14.

For 5E9(1) and later, if the DSN OPT field is set to "Y", then:

- TIMING forms with a SERVICE CLASS of "PF" must conform to one of the two following rules:
  - if SIGNAL TYPE is "NONE", START SIGNAL must be "DIRC"
  - if SIGNAL TYPE is not "NONE", then it must be "DP", "TT" or "MF" and START SIGNAL must be "DLAY", "DLTN", "IMED", "WINK", "GRND", "LOOP" or "ANSDTONE".

- TIMING forms with a SERVICE CLASS of "LTOLLCON" must conform to one of the three following

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rules:

- if SIGNAL TYPE is either "RPEO" or "RPTO", START SIGNAL must be "IMED";
- if SIGNAL TYPE is "NONE", START SIGNAL must be "DIRC";
- if SIGNAL TYPE is not "RPEO", "RPTO" or "NONE", it must be "DP" or "MF" and START SIGNAL must be "DLAY", "IMED", "WINK" or "DLTN"

- TIMING forms with a SERVICE CLASS of "PFLASH" must conform to one of the two following rules:
  - if SIGNAL TYPE is "NONE", START SIGNAL must be "DIRC";
  - if SIGNAL TYPE is not "NONE", it must be "DP", "TT" or "MF" and START SIGNAL must be "DLAY", "DLTN", "IMED", "WINK", "GRND" or "LOOP".

2.33 #CPE OPTION

Description: Is the 5ESS Switch configured as CPE (Customer Premises Equipment)?

This field is set to "Y" when the 5ESS Switch is configured as a privately-owned PBX.

When this field is "Y", the power level of dial tone generated by the switch is lowered and the loss plan for talking connections is altered.

When this field is "N", no digital loss is inserted on line-to-line connections, and no digital loss is inserted in the plan from the line to the trunk on line-to-trunk connections.

Software Release: 5E3 and later
Required Field for 5E4(2) and later.
Default: N
Valid Entries: Y, N

2.34 SES

Description: Enter the SES trunk group number. This entry is used to declare which trunk group is the Service Evaluation System trunk group for the office.

More than one TKGRP form can have a TRKCLS of "SES", but only one value can be entered for SES on the OFCOPT form. This means that the other trunks with TRKCLS "SES" will not have full [if any] SES functionality.

Software Release: 5E7 and later.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If SES is entered, then it must be defined as a TGN on the TKGRP form and TRKCLS must be set to "SES".

BATCH RC/V

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The following fields (Section 2.35 - Section 2.40) are used for Batch Recent Change/Verify.

2.35 BATCH RC/V INTERVAL

Description: Enter the number of hours between scheduled Batch RC/V (Recent Change/Verify) releases.
Default: 1
Valid Entries: 0 - 24

- ***NOTE:*** Although zero is a legal value, it should not be entered because it means the Batch RC/V process would run continuously.

2.36 BATCH RC/V RELEASE TIME

Description: Enter the number of minutes past the hour that Batch RC/V changes should be released.
Default: 0
Valid Entries: 0 - 59

2.37 BATCH RC/V CLEANUP AGE

Description: Enter the number of days a Batch RC/V file may age before being cleaned up.
Default: 14
Valid Entries: 0 - 30

- ***NOTE:*** Although zero is a legal value, it should not be entered because it means the Batch RC/V file would be cleaned up in less than 24 hours, when the next Batch RC/V process begins.

2.38 BATCH RC/V CLEANUP TIME

Description: This field indicates what time to start the Batch RC/V cleanup process.
Default: 00:00
Valid Entries: 00:00 - 23:59 (hrs:min) where 00:00 is midnight.

2.39 BATCH RC/V INHIBIT

Description: Should the Batch RC/V process be inhibited?
Default: Y
Valid Entries: Y, N

2.40 BATCH CLEANUP INHIBIT

Description: Should the Batch RC/V cleanup process be inhibited?
Default: Y
Valid Entries: Y, N

TRUNK ERROR ANALYSIS

The following fields (Section 2.41 - Section 2.42) are used to analyze trunks.

2.41 ROUTE TO TERA?

Description: Should the MDIIs (Machine Detected Interoffice Irregularities) be sent to TERA (Trunk Error Analysis)?
Default: Y
Valid Entries: Y, N

2.42 ERROR THRESHOLD

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Description: Enter the consecutive error count analysis threshold to be used in reporting Trunk port or UTD (Universal Tone Decoder) failures which are sent to TERA.
Default: 3
Valid Entries: 1 - 15

2.43 MFR REVERTIVE MANUAL?

Description: Are revertive calls originated by MFR (Multi-Frequency Ringing) customers to be completed manually via an operator?

Revertive calls are calls originated by one party of a multi-party line (i.e., they share common line equipment).

NOTE: Offices which do not have MFR customers should use the default value.
Default: N
Valid Entries: Y, N

2.44 2 PARTY ANI?

Description: Do calls originated by two party lines require ANI (Automatic Number Identification) or ONI (Operator Number Identification) for billing?

NOTE: For 5E5 and later, this field was moved to the IMINFO form (5510 Record).

Required Field.
Valid Entries: Y, N

2.45 LOCAL TRAF MEAS CHANNEL?

Description: For 5ESS Switch owners who do not utilize an EADAS (Engineering and Administrative Data Acquisition System), is a local traffic channel of the IOP (Input/Output Processor) equipped to print traffic reports locally or remotely or to collect the traffic reports for further processing by some other system?
Default: SUMMARY
Valid Entries:

Valid LOCAL TRAF MEAS CHANNEL Entries

Entry	Definition
BOTH	Both traffic measurement reports are printed.
SECTION	Traffic measurement section reports are printed.
SUMMARY	Traffic measurement summary reports are printed.

Data Rules:

If "SECTION" is entered, then TRAFFIC CHNL (TTY7) on the ECDOPT form must not be equipped.

If "SUMMARY" is entered, TRAFFIC CHNL (TTY7) on the ECDOPT form must be equipped.

2.46 IMLT-2?

Description: Does the office have the IMLT-2 (Integrated Mechanized Loop Testing) System?
Valid Entries: Y, N

Data Rules:

For Flexible IOP Selection (5E4(2) and later), if "Y" is entered in this field, then " SDL2" must be entered as a valid DEVICE TYPE on the EDCOPT form.

2.47 IMLT RETRY

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Description: The IMLT (Integrated Mechanized Loop Testing) RETRY field indicates whether or not the IMLT retry timer should be activated.
Required field.

Software Release: 5E16(2) FR 1 and later
Default: N
Valid Entries: Y, N

Data Rules:

When IMLT RETRY is "Y", the ACT field for SFID 685 on the SFSYS form (5713-1 Record) must also be set to "Y".

2.48 IMLT RDELAY

Description: The IMLT RETRY time delay field indicates the amount of time in seconds that is designated for IMLT retry.
Required field.

Software Release: 5E16(2) FR 1 and later
Default: 25
Valid Entries: 1 - 60 seconds

2.49 #APPLICATION PROCESSOR

Description: Does the office have the Application Processor Option?

Software Release: 5E3 and later
Required Field.
Default: NO
Valid Entries:

Valid AP Entries - 5E4(2) and later

Entry	Definition
NO	No APs on this switch
AM	Only AM IOP APs on the switch
SM	Only ISDN SM APs on this switch
AMSM	Both AM IOP and ISDN SM APs on this switch.

Data Rules:

If the APCOMM form (5507 Record) is submitted, then APPLICATION PROCESSOR must be set to "Y".

2.50 CARRIER ID

Description: The Carrier Identification Code specifies the OSPS number associated with certain operator service features. It is used to route Carrier Interconnect calls when the line subscriber (or trunk) originates a CI call and does not explicitly dial an FGD CAC (Carrier Access Code) and has neither a PIC nor a Group PIC. The PIC (Presubscribed InterLATA Carrier) is assigned on the LINE or MLHLN forms. Group PICs may be assigned on IDPGP forms for terminals belonging to an Individualized Dialing Plan.

Software Release: 5E5 and later
Valid Entries:

For 5E9(1) and later: 0 - 9999

Data Rules:

If a Carrier Identification Code is entered, it must be defined on the ICF form (5305 Record), and for 5E8

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and later, FEAT GRP on the ICF form must equal "D".

If CARRIER ID is not entered, then an FIXRT form must exist for each of the following FIXED ROUTE TYPE values:

- ANSTO
- DCOFHK
- IECFAIL
- INVPIC
- NO10XX
- NOACK
- NOSSD
- NOSTART
- OSANITO
- REQ10XX
- SSDOFHK

For 5E8 and later, if "OFFICE" CARRIER is 288 (0288 for 5E9(1) and later)and OFFICE TYPE is "Y" on this form, and "Y" is entered in OSPS TA on the OSPSOPT form (5424 Record), then at least one FIXRT form (5301-1 Record) must have a FIXED ROUTE TYPE of "OEASERR".

2.51 TOLL CARRIER

Description: Enter the presubscribed intraLATA toll carrier designation. This field supports the Intra-LATA PIC secured feature. For more information on this feature, see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 9999 or blank

Data Rules:

For 5E14 and later, the TOLL CARRIER entered requires a CARRIER ID on the ICF form with FEAT GRP equal to "D".

For 5E14 and earlier, if this field is entered, the TOLL CARRIER must be entered as the CARRIER ID on the ICF form (5305 Record).

This field is used by the Intra-LATA PIC feature. It is a secured feature that must be purchased by the office before the field can be entered. The ACT field for SFID 149 on the SFSYS (5713-1 Record) must be set to "Y", before this field can be entered.

2.52 ICLATA SCD IND

Description: Should Intra-LATA PIC Selective Carrier Denied 0- calls be routed to an announcement? Enter "Y" for routing to an announcement or "N" to route to LEC. This field supports the Intra-LATA PIC secured feature. For more information on this feature, see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field is used by the InterLATA Carrier's IntraLATA Capability Special Feature. It is a secured feature that must be purchased by the office before the field can be set to "Y", i.e., the ACT field for SFID 149 on

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the SFSYS (5713-1 Record) must be set to "Y".

This field also requires the Selective Carrier Denial secured feature. Before this field can be set to "Y", the ACT field for SFID 13 on the SFSYS (5713-1 Record) must be set to "Y".

This field is used by the Alternate Local Service Provider Routing feature. It is a secured feature that must be purchased by the office before the field can be set to "Y". The ACT field for SFID 269 on the SFSYS (5713-1 Record) must be set to "Y".

2.53 RINGING TIMEOUT

Description: This field indicates in minutes how long ringing will continue if the following conditions do not occur: answer, abandon or overload. If the conditions are not met the call will unconditionally timeout. If this field is left blank, no timeout will occur.
Valid Entries: 2 - 32767 minutes

2.54 INTEROFFICE TRACE NUMBERS

Description: Enter a maximum of four 7- or 10-digit Interoffice Trace Numbers. All interoffice calls made to these designated Telephone Numbers will be traced.
Valid Entries: 7- or 10-digit TN (0 - 9)

2.55 CAMA - ONI TRUNK TROUBLE CODE NUMBERS

Description: If one or more Trunk Groups with a trunk class of CAMOPKEY are equipped in the office, a maximum of four 7-digit CAMA Trunk Trouble Code Numbers may be specified in these fields. These Telephone Numbers are used by the CAMA Operator when trouble is encountered on a particular call. The operator is able to key in one of these trouble code numbers and report the trouble.
Valid Entries:

- For 5E11 and earlier: 7-digit TN (0 - 9)
- For 5E12 and later: XXXXXXX where X is 0 - 9

Data Rules:

If these fields are left blank, all ONI calls will be redirected to the "CAMAONI" fixed route defined on the FIXRT form (5301-1 Record).

2.56 NM DEFAULT NPA

Description: This is the implied NPA for the office. The Area Code entered will be used for Network Management code control and for Carrier Interconnect calls when the Area Code is not analyzed in digit analysis forms of LDIT and INDIT as part of the Incoming Digits string. The Area Code to be entered is usually considered the Home NPA of the office and is most frequently implied for 7-digit calls by the originator. For cases where the Area Code entered here is not to be used, NPAs entered on the LDIT and INDIT will override the DEFAULT NPA.

If this office is equipped with the SSP 800 feature (SERV SWITCH PT set to "Y"), this field is used to determine if intraLATA routed numbers returned from the SCP database are to be routed as 7-digit calls. Refer to Division 2, Section 1X for more information on the SSP 800 feature.
Valid Entries: 200 - 999

2.57 NM SILC LEVEL 1

Description: This field is used by NM (Network Management) SILC (Selective Incoming Load Control). Enter a percentage of calls that will be blocked during machine congestion level 1.

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Default: 0.0
Valid Entries: 0.0 - 100.0 in increments of 12.5

2.58 NM SILC LEVEL 2

Description: This field is used by NM (Network Management) SILC (Selective Incoming Load Control). Enter a percentage of calls that will be blocked during machine congestion level 2.
Default: 0.0
Valid Entries: 0.0 - 100.0 in increments of 12.5

2.59 COMMON CHAN SIG

Description: Does the office use CCS (Common Channel Signaling)?

For 5E11 and later, enter the CCS platform being used in this office.

Required Field for 5E11 and later.
Default: NO for 5E11 and later.
Valid Entries:
- For 5E10 and earlier: Y, N
- For 5E11 and later: See table below.

Valid COMMON CHAN SIG Entries

Entry	Definition
CNI	SS7 on CNI (Common Network Interface) platform is used in this office.
NO	No SS7 platform is used in this office.
PSU	SS7 on PSU (Packet Switch Unit) platform is used in this office.
ALL	Software Release: 5E12 and later CNI and SS7 are equipped in this office. This allows use of the CNI or a given GSM to signal for a specific ISUP trunk group. For reliability considerations, an ISUP trunk group can be added on a given GSM and use the GSM's PSU for signaling instead of the CNI ring. When using the PSU, all members of the given ISUP trunk group must physically reside on the given GSM. Only 16 GSMs are allowed in a given office; not all SMs can equip PSU signaled ISUP trunk groups. For TCAP applications (NS800, ASP, ISVM, CNAM, LASS), PSU signaling can be the application used when on a GSM. When on a non-GSM, the application must use the CNI for signaling.

Data Rules:

For 5E10 and earlier:

If "Y" is entered, at least one Link Node should be specified as "Y" on the ECDOPT form (5706 Record).

For 5E9(1) through 5E10:

- If "N" is entered, then SERV SWITCH PT? must be "N".

For 5E9(1) and later:

- If COMMON CHAN SIG is entered for a non-ATT office, only one Origination Point Code is allowed for CCS7 Trunk Groups. Thus, if the ORIG PT CODE on the TKGRP form (5202 Record) is entered, it must be the same on all TKGRP forms where it has been entered and it must match the OPC on the OFCOPT form.

For 5E11 and later:

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If COMM CHAN SIG is set to "CNI" but does not agree with the data found in the office database, the discrepancy can cause serious problems during booting. Contact the Lucent Technologies Project Consultant at once.

The entry in this field must be consistent with the entry for the PRODUCT field on this form.

Only when COMMON CHAN SIG is "CNI" or "PSU" on this form, may ACT PT SDN be "Y".

If COMMON CHAN SIG is "NO" or "PSU" then:

- ORIG SCREEN OFF must be "N"
- ACTION POINT must be "N"
- ACT PT SDN must be "N"
- HOMENPA must not be entered.

CNI:
If COMMON CHAN SIG is "CNI" on this form with INPULSING/OUTPULSING set to "ISUP7" on the TKGRP form (5202 Record) or WB RATE is entered and INPULSING/OUTPULSING is set to "DCHN" on the TKGRP form, then LOCAL SM must be entered on the TKGRP form.

NO:
When COMM CHAN SIG is set to "NO", SERV SWITCH PT? must be "N".

COMM CHAN SIG must not be set to "NO" when INPULSING or OUTPULSING is "CCIS6" or "ISUP7" on the TKGRP form (5202 Record).

If COMMON CHAN SIG is "NO", the CCSRTI form(s) (5313 Record) should be defined.

When a DSAPP form (5537 Record) is entered, COMMON CHAN SIG can not be "NO".

PSU:
If COMMON CHAN SIG is "PSU" on this form with INPULSING/OUTPULSING set to "ISUP7" on the TKGRP form (5202 Record) or WB RATE is entered and INPULSING/OUTPULSING is set to "DCHN" on the TKGRP form, then LOCAL SM must be entered on the TKGRP form and LOCAL SM must match GSM on the CCGSM form (6008 Record).

If COMMON CHAN SIG is "PSU" on this form, then a CCGSM form must be defined.

If COMMON CHAN SIG is "PSU" on this form, then APPLIC on the DSAPP form (5537 Record) must be "ACND", "ASP", "ISVM", "LASS", "NS800", "AINR0D1", "LNACP", or "TNAI".

For 5E15 and later:

- when COMMON CHAN SIG is set to "PSU" or "ALL" on this form, the first three digits of DEST POINT CODE are not equal to "000", INPULSING/ OUTPULSING is set to "ISUP7" and LOCAL SM is known on the TKGRP form (5202 Record):
  - the LOCAL SM on the TKGRP form must match either the SM on the MDLNK form (6009 Record) or the NON GLOBAL SM on the CMTMH form (6021 Record); and
  - the GSM on the CCGSM form (6008 Record) must match either the SM on the MDLNK form or the GLOBAL SM on the CMTMH form.

- when COMMON CHAN SIG is set to "PSU" or "ALL" on this form, INPULSING/OUTPULSING is set to

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"ISUP7", the first three digits of the DEST POINT CODE are not equal to "000" and LOCAL SM is unknown on the TKGRP form (5202 Record):

- the first three digits of TEN, DEN, or NEN for all members of that trunk group entered on the TRUNK form (5204 Record) must match either SM on the MDLNK form (6009 Record) or NON GLOBAL SM on the CMTMH form (6021 Record); and
- GSM on the CCGSM form must match either SM on the MDLNK form or GLOBAL SM on the CMTMH form.

ALL:
For 5E14 and later, when COMMON CHAN SIG is "ALL" on this form, the value of each ALIAS PC on the CCGSM form must not match either the value of OPC on the OFCOPT form or the value of ALIAS POINT CODE on the ALIASPC form.

2.60 DIRECT LINK NODE

Description: Does a DLN (Direct Link Node) exist in the CCS office?

Software Release: 5E4(2) and later
Valid Entries: Y, N

Data Rules:

For 5E10 and earlier:

If DIRECT LINK NODE is "Y", then COMMON CHAN SIG must be "Y".

For 5E11 and later:

If DIRECT LINK NODE is "Y", then COMMON CHAN SIG must be "ALL" or "CNI".

2.61 ORIG SCREEN OFF

Description: Is the office an Originating Screening Office for INWATS (800) calls?

For LEC switches, this field should be left blank or set to "N".
Valid Entries: Y, N

Data Rules:

If "Y" is entered, COMMON CHAN SIG must equal "Y" and HOME NPA must be entered.

With 5E4(2) and later, if ORIG SCREEN OFF is "Y" the SERV SWITCH PT must not be "Y".

If ORIG SCREEN OFF or SERV SWITCH PT is "Y", then if TRK DIR is "INC" and TRKCLS is not "DIOR", "TOPAS", "RMSD3", or "INAISTRK", and for 5E9(1) and later is also not "ACJCK", "BUSYVFY", or "LTOLLCON", then FAR END NPA must be entered on the TKGRP form.

For 5E9(1) and later, if "Y" is entered then SERV SWITCH PT? must not be "Y".

2.62 HOME NPA

Description: This field applies to any toll network switch that does 800 screening and is defined as an 800 originating screening office (ORIG SCREEN OFF set to "Y"). The HOME NPA represents the home NPA of the toll office doing the screening. It is used to determine whether or not the translated 800 number (POTS number) returned from the NCP/STP is within the Home NPA.

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For LEC switches, this field should be blank.
Valid Entries: 200 - 999

Data Rules:

If ORIG SCREEN OFF is "Y", the Home NPA of the office must be entered otherwise it should be left blank.

2.63 ACT PT SDN

Description: Does the office serve as an ACP (Action Control Point) for the SDN (Software Defined Network)?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

An office serving as an ACP must provide CCS (Common Channel Signaling), therefore, if this field is "Y", then the COMMON CHAN SIG field must by "Y".

An office cannot serve as an ACP and an SSP (Service Switching Point), therefore, if this field is "Y", then the SERV SWITCH PT field must be "N".

For 5E7 and later, if SERV SWITCH PT or ACT PT SDN equals "Y", at least one SCFAM form (5536 Record) must exist.

For 5E9(1) and later, if "Y" is entered, then SERV SWITCH PT? may not be "Y".

2.64 #SERV SWITCH PT?

Description: Can this SSP (Service Switching Point) office process Number Services calls?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", the LATA NUMBER field must be entered.

For 5E6 and later, if SERV SWITCH PT? is "Y", then incoming and two-way trunk groups (TRK DIR is "INC" or "2W" on the TKGRP form) must be assigned a FAR END NPA on the TKGRP form (5202 Record).

If ORIG SCREEN OFF or SERV SWITCH PT is "Y", then if TRK DIR is "INC" and TRKCLS is not "DIOR", "TOPAS", "RMSD3", or "INAISTRK", and for 5E9(1) and later is also not "ACJCK", "BUSYVFY", or "LTOLLCON", then FAR END NPA must be entered on the TKGRP form.

For 5E7 and later, if SERV SWITCH PT or ACT PT SDN equals "Y", at least one SCFAM form (5536 Record) must exist.

For 5E8 and later, if SERV SWITCH PT? is "N", on each ICF form where FEAT GRP equals "D" and CARRIER TYPE equals "LEC" or "PSEUDO", NS CDI and NS RTI must not be entered.

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For 5E9(1) and later:

- If COMMON CHAN SIG is "N", then SERV SWITCH PT? must be "N".
- If "Y" is entered, then LATA NUMBER must be known.
- If ORIG SCREEN OFF is "Y", then SERV SWITCH PT? must not be "Y".
- If ACT PT SDN is "Y", then SERV SWITCH PT? may not be "Y".

For 5E11 and later:

When this field is "Y", ACT PT SDN must be "N".

2.65 LATA NUMBER

Description: Enter the LATA (Local Access and Transport Area) number for this office. For 5E11 and later, LATA fields were added to the DSAPP (5537 Record) and LCC (5306 Record) forms to support the TCAP Improvements for Switches Spanning Multiple LATAs feature which extends the operation of the current LASS features to support lines (or groups of lines) in LATAs other than the LATA specified on this OFCOPT form. For more information on this feature, see Division 2, Section 4A171.

Software Release: 5E4(2) and later
Valid Entries: 100 - 999

Data Rules:

For 5E9(1) - 5E10, this field must be entered if SERV SWITCH PT? is "Y".

For 5E11 and later, if this field is not entered, SERV SWITCH PT? must be "N".

2.66 EXTRA START WINK

Description: Does an Equal Access End Office expect to receive an extra start wink from an International Carrier over the shared Trunk Group to the access tandem?
Default: N
Valid Entries: Y, N

2.67 OPC

Description: OPC preserves the 9-character origination point code for an office having a CNI frame to support CCS7 trunking over retrofit. This is the same value as OPC on the TKGRP form. A value cannot be entered in this field.

For 5E9(1) and later, OPC indicates the office is using the AT&T format and therefore all the DEST PT CODE values on the TKGRP form must be in the correct format based on the first 3 digits. If the first 3 digits of the DEST PT CODE are 236 or 254 and match the first 3 digits of the OPC field, then the DEST PT CODE must be in the AT&T format, else the T1 CCS format will be used.

Software Release: 5E8 and later

Data Rules:

For 5E15 and later, if the first three digits of the OPC on this form are 236 or 254, then ISUP7 trunks in an AT&T-C office or a UNITEL office must be signaled via the CNI platform and one of the following conditions must exist:

- The Pseudo-Point Code Capability feature must be activated. (For a more detailed discussion of the

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Pseudo-Point Code Capability feature, see Sections 6.5.52 and 6.5.57 of the 235-190-120 document.)

- The TCAP (Transaction Capabilities Application Part) Message Tandem feature must be activated. This is a secured feature that is activated by setting the ACT field for SFID (Secured Feature ID) 195 to "Y" on the SFSYS form (5713-1 Record). For more information on the TCAP Message Tandem feature, see Division 2, Section 4A195.

EQUAL ACCESS

The following fields (Section 2.68 - Section 2.71) are used only when this office serves as InterLATA Carrier switch (i.e. when the associated trunk groups have a TRKCLS of "LATA".

When overlap outpulsing is used by an EAEO (Equal Access End Office) for EA (Equal Access) Three-Stage Signaling, the overlap outpulsing timers will prevent abnormal holding of 5ESS Toll Switch resources.

2.68 TIME

Description: Enter the maximum time in milliseconds to wait between the Equal Access Signaling digit sequences (i.e., the ANI and address sequences). When EA (Equal Access) Three-Stage Signaling is used, the value entered in this field represents the maximum time allowed from the receipt of the last digit of the second stage to the receipt of the first digit of the third stage.
Default: 300000
Valid Entries: 2000 - 300000.

2.69 OVERLOAD TIME

Description: Enter the maximum time in milliseconds to use (instead of the value entered in TIME) when the switch is in overload condition.
Default: 15000
Valid Entries: 2000 - 15000

2.70 OFFICE TYPE

Description: Is this a switch owner toll office? "N" indicates this is a LEC (Local Exchange Carrier) office.

This field is used to allow software features which are to be used only in the switch owner network. It controls certain OSPS features and the Fully Coded Addressing feature that attaches specific digits to international calls processed in the switch owner network.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "N", then the OFFICE CARRIER field will automatically be assigned a value of "000".

If this field is "Y" and the OFFICE CARRIER field has the value of 288 (0288 for 5E9(1) and later), indicating that this is a switch owner toll office, then each SMLDIT form (5315 Record) that is associated with a special Toll DAS value (81, 82, 89, 90, 91, 92, 97, 98) must include every SM in the office (i.e., all of the SMs defined on an EQIM form (5700-1 Record)). The SMLDIT form is associated with a DAS value via the LOCAL DIT field on a DAS form (5300-1 Record).

If the OFFICE TYPE has a value of "Y", the OFFICE CARRIER field has a value of "288" (0288 in 5E9(1)

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and later)indicating that this is a switch owner toll office; and in addition, the ACT PT SDN field on the OFCOPT form is "Y", indicating that this office serves as an ACP (Action Point) for the SDN (Software Defined Network); then, the SMLDIT form which is associated with the Toll DAS value of 88 must include every SM that has any trunks which are defined on the TKGRP form with INPULSING set to "ISUP7" or ACP SDN set to "Y". (The associated SM(s) can be found in the first three digits of the DEN, TEN, or (for 5E9(2) and later) NEN field on all related TRUNK forms.)

For 5E8 and later, if OFFICE TYPE is "Y", then RCD 3PT1 ITC on the TKGRP form (5202 Record) must not be entered and, RCD 3PT1 ITC on this form must be "3PT1KHZ".

For 5E14 and later, when DRM is "Y" on the EQCORE form, OFFICE TYPE must be "N".

2.71 OFFICE CARRIER

Description: For a 5ESS Toll Switch, the international carrier identification of the office should be entered in this field.

The Carrier Identification Code entered in this field is also the OSPS backup carrier for operator services dialing and operator conferencing when the designated carrier cannot handle the call. The carrier identification entered in this field is the primary OSPS carrier used for back party recalls and operator delayed (booked) calls.

For AT&T switches, enter 288 (0288 for 5E9(1) and later). For LEC (Local Exchange Carrier) owned switches, 0 should be entered even though such a switch may have toll functionality.

Software Release: 5E5 and later
Default: 000
Valid Entries:

For 5E9(1) and later: 0 - 9999 or LEC

Data Rules:

For 5E8 and later, if OFFICE CARRIER is 288 (0288 for 5E9(1) and later)and OFFICE TYPE is "Y" on this form, and "Y" is entered in OSPS TA on the OSPSOPT form (5424 Record), at least one FIXRT form (5301-1 Record) must have a FIXED ROUTE TYPE of "OEASERR".

For 5E9(1) through 5E13, the OFFICE CARRIER field must be entered as CARRIER ID on the ICF form if OFFICE CARRIER has a value other than "LEC".

For 5E14 and later, the OFFICE CARRIER field on the OFCOPT form is required to be entered as CARRIER ID with FEAT GRP equal to "D" on the ICF form, if OFFICE CARRIER has a value other than "LEC".

AMA RECORDING OPTIONS

The following fields (Section 2.72 - Section 2.103) are used for AMA billing. All the AMA RECORDING OPTIONS must be entered.

2.72 AMA METHOD

Description: Enter the method to be used for AMA billing.

- ***NOTE:*** For 5E5 and later, if "NONE" is entered a warning message will be displayed to alert the office that all billing WITHIN the office has ceased. (Billing could be handled externally through CAMA facilities.)

Default: AMATPS

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Valid Entries:

Valid AMA METHOD Entries

Entry	Definition
AMATPS	Allows a small office to use teleprocessing. Enter this value if the office uses LAMA (Local AMA).
AMATPS1	Makes the billing system act like AMATPS, but should only be used when the office is normally a Dual Stream office that is operating in a "degraded" single stream mode defaulting to Stream 1.
AMATPS2	Should only be used when the office is operating in a "degraded" single stream mode defaulting to Stream 2.
AMADUAL	Allows the office to operate as a full Dual Stream office, with billing traffic going to two separate streams. This allows large offices to process and send two separate billing streams simultaneously.
NONE	Turns off all billing options in an office except for CAMA billing.

2.73 AMADNS ACTIVE

Description: Use the Automatic Message Accounting Data Networking System billing interface?

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered:

- SFID 328 on the SFSYS form must be set to "Y".
- AMA METHOD field must be set to "AMATPS" or "AMATPS1".

2.74 MIN AMA ALRM

Description: Enter AMA Disk Writer Minor Alarm setting as a percentage of the total AMA disk storage. (See Division 2, Section 1AX, *Allow Craft To Set AMA Alarm Levels* for more information.)

Software Release: 5E8 and later
Required Field.
Default: 70 (%)
Valid Entries: 0 - 96 (%)

Data Rules:

If MIN AMA ALRM must be at least 2 less than the value of MAJ AMA ALRM (given that MAJ AMA ALRM is populated with a valid value 2 - 98), and at least 4 less than the value of CRIT AMA ALRM, (given that CRIT AMA ALRM is populated with a valid value 4 - 100).

2.75 MAJ AMA ALRM

Description: Enter AMA Disk Writer Major Alarm setting as a percentage of the total AMA disk storage. (See Division 2, Section 1AX, *Allow Craft To Set AMA Alarm Levels* for more information.)

Software Release: 5E8 and later
Required Field.
Default: 90 (%)
Valid Entries: 2 - 98 (%)

Data Rules:

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If the value of MAJ AMA ALRM must be at least 2 greater than the value of MIN AMA ALRM (given that MIN AMA ALRM is populated with a valid value 0 - 96), and at least 2 less than the value of CRIT ALRM (given that CRIT AMA ALRM is populated with a valid value 4 - 100).

2.76 CRIT AMA ALRM

Description: Enter AMA Disk Writer Critical Alarm alarm setting as a percentage of the total AMA disk storage. (See Division 2, Section 1AX, *Allow Craft To Set AMA Alarm Levels* for more information).

Software Release: 5E8 and later
Required Field.
Default: 100 (%)
Valid Entries: 4 - 100 (%)

Data Rules:

If the value of CRIT AMA ALRM must be at least 4 greater than the value of MIN AMA ALRM (given that MIN AMA ALRM is populated with a valid value 0 - 96), and at least 2 greater than the value of MAJ AMA ALRM (given that MAJ AMA ALRM is populated with a valid value 2 - 98).

2.77 ISDAMAOPT

Description: This field is used to select the type of AMA records generated as a result of CSD (Circuit-Switched Data) calls. Should voice ("Y") or data ("N") structure and call codes be used in the AMA record for CSD calls?

When "N" is entered, the existing 5E3 and later implementation of AMA call codes and structure codes for CSD calls are used.

When "Y" is entered, the existing voice call codes and structure codes are used for CSD calls.

When either "N" or "Y" is entered, an EBAF (Extended Bellcore AMA Format) record is appended to the AMA record. This appended record contains information about the type of service invoked by the CSD call. A 070 Module is appended when a signaling/supplementary service is invoked, otherwise, Module 071 is appended.

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.78 ISVAMAOPT

Description: This field is used to select the type of AMA records generated as a result of CSV (Circuit-Switched Voice) calls.

When "Y" is entered, either module AAA or BBB is always appended to an existing voice structure code, depending upon whether a signaling/supplementary service is used in the call.

When "N" is entered, a data module is not appended unless a signaling/supplementary service is used, in which case module AAA is used.

In addition, an EBAF (Extended Bellcore AMA Format) record is appended to the AMA record. This appended record contains information about the type of service invoked by the CSD call.

When "Y" is entered, either the 070 Module or 071 Module will always be appended to the record. Module 070 is appended when a signaling/supplementary service is invoked, otherwise, Module 071 is appended. When "N" is entered, no EBAF record is appended unless a signaling/ supplementary service is used.

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Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.79 SHORT SUPERVISORY TRANSITIONS

Description: Are Short Supervisory Transitions (also referred to as Signaling Irregularities) recorded for all billable calls?

When set to "Y", up to 16 Short Supervisory Transitions can be recorded per call.
Default: N
Valid Entries: Y, N

2.80 LOCAL ANSWERED CALLS?

Description: Should local answered calls generate AMA data?

An entry of "N" indicates that calls will not be recorded on AMA for Tracer Types defined as local on the 5506 Record (AMACT form). This is intended to be used in case of trouble to enable higher revenue calls to continue to be recorded.
Default: Y
Valid Entries: Y, N

2.81 LOCAL ABANDONS?

Description: Should AMA data be recorded for abandoned local calls?
Default: N
Valid Entries: Y, N

Data Rules:

If the entry is "Y", calls recorded will be those defined as LOCAL in the STUDY TYPE field of the AMACT form (5506 Record).

2.82 TOLL ABANDONS?

Description: Should AMA data be recorded for abandoned toll calls?
Default: Y
Valid Entries: Y, N

Data Rules:

If the entry is "Y", calls recorded will be those defined as TOLL in the STUDY TYPE field of the AMACT form (5506 Record).

2.83 SPECIAL ABANDONS?

Description: Should AMA data be recorded for abandoned calls which are associated with particular AMA Call Types that are being used for special studies?
Default: N
Valid Entries: Y, N

Data Rules:

The special study AMA Call Types must be defined on the AMACT form.

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2.84 ALL ABANDONS?

Description: Should AMA data be recorded for all abandoned calls?
Default: N
Valid Entries: Y, N

Data Rules:

If the entry is "Y", calls recorded will be those defined as "LOCAL", "TOLL" and "OTHER" in the STUDY TYPE field of the AMACT form (5506 Record).

2.85 SSU ON LOCAL CALLS?

Description: Should the Switch Supervisory Unit (also referred to as the Trunk Network Number) be recorded for local calls?
Default: N
Valid Entries: Y, N

2.86 SSU ON TOLL CALLS?

Description: Should the Switch Supervisory Unit (also referred to as the Trunk Network Number) be recorded for toll calls?
Default: N
Valid Entries: Y, N

2.87 LOCAL COIN

Description: Should AMA records be generated for local-coin sent-paid calls? When LOCAL COIN is set to "Y", an AMA record will be generated for each local sent-paid coin phone call not involving an operator. This field is used by the Coin Line AMA Secured Feature; for more information, see Division 2, Section 4A70.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

This field is used by the Coin Line AMA, a secured feature, and must be purchased by the office; therefore, the SFID 70 on the SFSYF form (5713-1 Record) must be set to "S" or "Y", before "Y" can be entered in this field.

2.88 SSU ON ALL CALLS?

Description: Should the Switch Supervisory Unit (also referred to as the Trunk Network Number) be recorded for all calls?
Default: N
Valid Entries: Y, N

2.89 TERMINATING INTERLATA?

Description: Should terminating call recording be done on calls received from InterLATA Carriers associated with CI (Carrier Interconnect)?

This is considered the master switch for CI terminating billing.

If this entry equals "N", the Charge Index options for Feature Group B and D Terminating LATA billing will

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be ignored.
Default: Y
Valid Entries: Y, N

2.90 SSU ON INTERLATA?

Description: Should the Switch Supervisory Unit (also referred to as the Trunk Network Number) be recorded on answered InterLATA calls?
Default: N
Valid Entries: Y, N

2.91 HR INWATS OVERFLOW RECORD?

Description: Should the hourly AMA records be produced for the cumulative count of overflows due to busy INWATS terminating Multiline Hunt Groups?
Default: N
Valid Entries: Y, N

2.92 DID TIMEOUT

Description: Enter the amount of time in minutes that a DID facility will be terminated without receiving answer supervision from the PBX before a DID study is generated by AMA. If 0 is entered, DID study records will not be generated.

Software Release: 5E6 and later
Required Field.
Default: 5
Valid Entries: 0 - 60 (minutes)

2.93 CMC WINK CONNECT

Description: Should the initial wink received from the FGD carrier be used as the CMC (Cellular Mobile Carrier) connect time? This parameter is used to determine the begin time for AMA Billing for calls from a CMC to an FGD (Feature Group D) Carrier. A "Y" indicates the connect time begins when the initial wink is received from the FGD carrier. The default value "N" indicates that the connect time begins when seizure is detected on an incoming trunk.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

2.94 AMA ERROR MIN ALARM

Description: Should a minor alarm be generated when AMALOST and AMAIRR records are sent to the ROP? This parameter is being added as part of the AMA ERROR LOG FILE feature. This parameter will NOT be coupled with the AMALOST and AMAERROR records that will be written to the new log file.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

2.95 LDC GEN TIME

Description: Enter the time of day to generate AMA Long Duration Call records. The entry must be in the format of HH:MM where HH is the hour and MM is the minute. Enter midnight as 00:00. All five

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characters, including the colon, must be entered. This field supports the AMA Long Duration Recording Duration Enhancements feature. For more information on this feature, see Division 2, Section 1AP.

Software Release: 5E10 and later
Required Field.
Default: 00:00
Valid Entries: HH:MM, where
- HH is 00 - 23
- MM is 00 - 59

2.96 TRUNK

Description: Should the trunk module be appended to AMA Records? This field was added for the Local Trunk Billing Enhancements secured feature. For more information concerning this feature, see Division 2, Section 4A278.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The Local Trunk Billing Enhancements secured feature that must be purchased by the office, and the ACT field for SFID 278 on the SFSYS form must be set to "Y" before the TRUNK field on the OFCOPT form can be set to "Y".

2.97 OPER

Description: Should an AMA Record be generated for operator services? This field was added for the AMA Recording Capabilities for Unbundled Local Switching secured feature. For more information concerning this feature, see Division 2, Section 4A281.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The AMA Recording Capabilities for Unbundled Local Switching is a secured feature that must be purchased by the office, and the ACT field for SFID 281 on the SFSYS form must be set to "Y" before the OPER field on the OFCOPT form can be set to "Y".

2.98 ORIG UNBUNDLED

Description: This field is used to control AMA (Automatic Message Accounting) recording for originating unbundled lines.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the ORIG UNBUNDLED , ORIG RESOLD, TERM UNBUNDLED or TERM RESOLD fields are set to

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"Y", or the UNBLD/RESLD SC field is set to "001", the ACT field for SFID 321 on the SFSYS form (5713-1 Record) must be set to "Y".

2.99 ORIG RESOLD

Description: This field is used to control AMA (Automatic Message Accounting) recording for originating resold lines.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

2.100 TERM UNBUNDLED

Description: This field is used to control AMA (Automatic Message Accounting) recording for terminating unbundled lines.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

2.101 TERM RESOLD

Description: This field is used to control AMA (Automatic Message Accounting) recording for terminating resold lines.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

2.102 UNBLD/RESLD SC

Description: This field is used to select the structure code to be used when a Call Type Record CC126 or CC128 is generated through theAMA (Automatic Message Accounting) Recording for Resale and Unbundled. For further information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default: 500
Valid Entries: 001 or 500

2.103 AMA AIN BUSY NA

Description: Is the AMA Recording for AIN Busy and Don't Answer Calls feature active? This field supports the AMA Recording for AIN Busy and Don't Answer Calls secured feature. For more information on this feature, see Division 2, Section 4A166. When this field is set to "Y", busy or abandoned ASP calls with a pending AMA record will generate an XX220 or XX221 record. When this field is set to "N", busy ASP calls with a pending AMA record will not generate a record. Existing AMA functionality will determine whether abandoned or unanswered ASP calls with a pending AMA record will generate a record.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E10 and 5E11
Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

The SFID 166 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set to "Y".

When this field is set to "Y" and the AMA Recording - IN Busy Don't Answer secured feature has been purchased with SFID 166 ACT field set to "Y" on the SFSYS form, then SFID 126 ACT field on the SFSYS form must also be set to "Y".

TESTING OPTIONS

The following fields (Section 2.104 - Section 2.107) are used for Automatic Line Insulation Testing.

2.104 ALIT START TIME

Description: Enter the scheduled start time for ALIT (Automatic Line Insulation Testing).
Valid Entries: 00:00 - 23:59 (hrs:min) where 00:00 is midnight.

Data Rules:

If any ALIT option is entered, all ALIT fields must have an entry.

2.105 ALIT DURATION

Description: Enter the duration, in hours, of ALIT (Automatic Line Insulation Testing).
Valid Entries: 0 - 8

Data Rules:

If any ALIT option is entered, all ALIT fields must have an entry.

2.106 ALIT RANGE

Description: Enter the resistance range to be used during ALIT testing. A higher resistance range gives a greater test sensitivity.

Valid ALIT RANGE Entries

Resistance Range	ALIT Pack Equipped		
	TN 330	**TN 329**	**TN 328**
A	320 K ohms	80 K ohms	80 K ohms
B	1.25 M ohms	320 K ohms	160 K ohms
C	2.5 M ohms	1.25 M ohms	640 K ohms
D	5.0 M ohms	5.0 M ohms	2.5 M ohms

Data Rules:

If any ALIT option is entered, all ALIT fields must have an entry.

2.107 ALIT TYPE

Description: Enter the ALIT test type desired for the office.

Valid ALIT TYPE Entries

Entry	Definition
FEMF	Foreign potential on-line test, with retest on failure.
SRG	Short circuit and Ring to Ground test, with retest on failure.
TRG	Tip or Ring to Ground test, with retest on failure.
GEN	General test, which incorporates FEMF plus SRG plus TRG tests, with no retest on failure.

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Data Rules:

If any ALIT option is entered, ALIT Type must have an entry.

APT TESTING

The following fields are used to designate the start time, duration and the algorithm, number of processes, day on which APT Testing should be done. Refer to Section 2.108 - Section 2.112 for individual field information.

2.108 ALGORITHM

Description: This field indicates the algorithm used for offices in APT (Automatic Progression Testing) for trunks on DS1s (Digital Signal Level 1). Analog trunks are tested sequentially during APT testing independently. This field supports the APT Enhancements feature. For information on this feature see, Division 2, Section 2AD.

Required Field.

Software Release: 5E16 FR2 and later
Default: SEQN
Valid Entries:

Valid ALGORITHM Entries

Entry	Definition
1ONLY	Test One Only (test one trunk only on the DS1, independently on this field value whether test passes or fails and then move to a trunk on another DS1).
FULL	Full (test all trunks on the DS1, independently on this field value whether test passes or fails, and then move to a trunk on another DS1).
SEQN	Sequential (APT should test all trunks sequentially in the office, independently on APT testing algorithm settings for individual DS1s).
SUCC	Stop on Success (test one trunk on the DS1 and then move to a trunk on another DS1 if test passes, or test next trunk on the same DS1 if test fails).

Data Rules:

When ALGORITHM is "'SEQN", PROCS NBR must be 2.

2.109 PROCS NBR

Description: This field indicates the maximum number of concurrent APT (Automatic Progression Testing) processes that can be running. This field supports the APT Enhancements feature. For information on this feature see, Division 2, Section 2AD.

Required Field.

Software Release: 5E16 FR2 and later
Default: 2
Valid Entries: 1 - 8

2.110 APT START TIME

Description: Enter the scheduled start time for APT (Automatic Progression Testing) on trunks.
Valid Entries: 00:00 - 23:59 (hrs:min) where 00:00 is midnight.

Data Rules:

If any APT option is entered, all APT fields must have an entry.

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2.111 APT DURATION

Description: Enter the duration, in hours, of APT (Automatic Progression Testing).
Valid Entries: 0 - 8

Data Rules:

If any APT option is entered, all APT fields must have an entry.

2.112 DAYS ON WHICH APT TESTING IS TO BE CONDUCTED:

This field contains an entry for every day of the week. Enter a "Y" opposite the appropriate day if APT testing is to be conducted on that day. Otherwise, enter "N".

Data Rules:
If any APT option is entered, all APT fields must have an entry.

2.113 OCTL TONE DURATION

Description: Enter the duration in tenths of a second for the Open Circuit Test Tone.
Default: 50 (5 seconds)
Valid Entries: 0 - 127

2.114 OCTL OPEN DURATION

Description: Enter the duration in seconds of the open circuit to be used during open circuit testing.
Default: 30
Valid Entries: 0 - 127 seconds.

TWS FOR 101TL:

The following fields (2.89 - 2.91) are used to specify the order of priority for terminating incoming 101 Test Line calls. Duplicated designations are not allowed.

2.115 FIRST

Description: Enter the priority order of the TWS (Trunk Work Stations) to be used for terminating incoming 101 Test Line calls.
Default: "LOCAL"
Valid Entries:

Valid TWS FOR 101TL Entries

Entry	Definition
LOCAL	Local TLWS (Trunk and Line Work Stations).
REMOTE	Remote TLWS (Trunk and Line Work Stations).
CTTU	Central Trunk Test Unit.

2.116 SECOND

Description: Enter the priority order of the TWS (Trunk Work Stations) to be used for terminating incoming 101 Test Line calls.

Valid TWS FOR 101TL Entries

Entry	Definition
LOCAL	Local TLWS (Trunk and Line Work Stations).
REMOTE	Remote TLWS (Trunk and Line Work Stations).
CTTU	Central Trunk Test Unit.

2.117 THIRD

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Description: Enter the priority order of the TWS (Trunk Work Stations) to be used for terminating incoming 101 Test Line calls.

Valid TWS FOR 101TL Entries

Entry	Definition
LOCAL	Local TLWS (Trunk and Line Work Stations).
REMOTE	Remote TLWS (Trunk and Line Work Stations).
CTTU	Central Trunk Test Unit.

MSU/MMSU ALARMS CONTROLS/REPORTS

The following fields (Section 2.118 - Section 2.122) are used for MSU/MMSU Alarms.

2.118 MISCELLANEOUS ALM OPT

Description: Is the office equipped with the MSU/MMSU Miscellaneous Alarms option?
Default: N
Valid Entries: Y, N

2.119 #OVERLAP SIZE

Description: Enter the number of digits in the message that it sends from originating treatment to terminating treatment to outpulse to the external operator system when overlap outpulsing is in effect.

Software Release: 5E4(2) and later
Required Field.
Default: 1
Valid Entries: 1 - 15

2.120 #DN PRIVACY?

Description: Is DN (Directory Number) privacy on for the office?

This field should not be used when the office does not have all-call DN privacy assigned properly to the terminals in the office. In this way, the calling DNs will not be displayed until the data in the office has been set up correctly.

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is set to "N", DN Privacy is not turned on for the office, but is turned on individually for each terminal (analog or ISDN) if DN Privacy is assigned to the terminal. Calling DNs can be displayed at those ISDN terminals that have the Calling Number Delivery feature. If this field is set to "Y", then the calling DN will not be displayed even if the terminal has the Calling Number Delivery feature.

2.121 ISP DIGITS

Description: This field indicates the number of digits that must be collected before outpulsing can occur when an operator calls through the ISP (Intermediate Switch Point).

Software Release: 5E4(2) and later
Required Field.
Default: 2
Valid Entries: 2 - 31

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2.122 FAIL ID

Description: This field indicates the destination index of the operator system announcement to route operator calls when the carrier cannot be determined because of a failure in digit reception from the local office.

Software Release: 5E4(2) and later
Valid Entries: 0 - 9999 or LEC

LEASED NETWORK

The following fields (Section 2.123 - Section 2.129) are parameters used for Leased Networks.

The fields (8 HR SCAN, 8 HR START, and 8 HR FREQ) are parameters used for the 8-hour passed MDR (Message Detail Recording) feature. The 8-hour passed MDR feature generates an additional MDR record for calls that have been in progress for 8-hours or more. The 8-hour passed MDR feature is assigned to a MDR Group by entering "Y" in the 8 HR PASSED field on the MDRGP form (5624-2 Record).

2.123 8 HR SCAN

Description: Should the 8-hour passed scanning software be activated?

The scanning software looks for calls that have been in progress for at least 8 hours. When the 8-hour passed scanning software is activated, the frequency of scanning will be determined by the values entered in the 8 HR START and 8 HR FREQ fields.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the 8-hour passed scanning is activated, then an 8-hour passed MDR record will be generated when a call has been in progress for 8-hours or more and the 8-hour passed MDR feature has been assigned on the MDRGP form.

If this field is "N", the scanning software will not be activated, therefore, an 8-hour passed MDR record will not be generated even if a "Y" is entered in the 8 HR PASSED field on the MDRGP form.

2.124 8 HR START

Description: Indicate the starting time of the scanning software in hours past midnight. The scanning software looks for calls that are assigned the 8-hour passed MDR feature and have been in progress for a least 8-hours. The scanning will be done periodically based on the value entered in the 8 HR FREQ field. a required field.

Software Release: 5E5 and later
Required Field.
Default: 1 (1 a.m.)
Valid Entries: 0 - 23 (hours past midnight)

2.125 8 HR FREQ

Description: Indicate the scanning frequency of the software in hours. The scanning frequency is how often the scanning software looks for calls that are assigned the 8-hour passed MDR feature and have been in progress for at least 8-hours.

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Software Release: 5E5 and later
Required Field.
Default: 8
Valid Entries: 2, 4, 6, or 8

For example, if 7 is entered in the 8 HR START field and 6 is entered in this field, scanning will occur at 7 a.m, 1 p.m, 7 p.m and 1 a.m.

2.126 TIME OUT

Description: This field specifies the number of seconds a Leased Network Action Control Point will wait for a response from the NCP (Network Control Point) before routing a call to reorder.

Software Release: 5E6 and later
Required Field.
Default: 4
Valid Entries: 2 - 6

2.127 GLBL TITLE

Description: This field is used by a Leased Network ACP (Action Control Point) when it queries the Network Control Point for routing and charging information. The field specifies a 6 digit global title, inserted by the ACP into the CCS7 SCCP header and translated by the STP (Signaling Transfer Point) into a Destination Point Code, to route a message to the NCP.

Software Release: 5E6 and later
Required Field.
Default: 0
Valid Entries: 0 - 999999

2.128 DAS

Description: This field specifies the DAS (Digit Analysis Selector) to be used for vacant code screening for Leased Network Action Control Point calls.

Software Release: 5E6 and later
Valid Entries:

Data Rules:

If entered, the Digital Analysis Selector must be defined on the DAS form (5300-1 Record). If the ACTION POINT field is "Y", this DAS may not appear on any TKGRP form.

2.129 ACTION POINT

Description: Is this office an Action Point for a Leased Network?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

All LN ACP offices must be equipped with a CCS7 CNI (Common Network Interface). Therefore, when ACTION POINT is "Y", COMMON CHAN SIG must also be "Y".

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PPM PULSE WIDTH

The following fields (Section 2.130 - Section 2.132) are used to set the Battery reversal, Tone, and Third-wire PPM (Periodic Pulse Metering) pulse width for ISLUs.

2.130 #ISLU BATTERY

Description: This field indicates the ISLU Battery reversal PPM pulse width.

Software Release: 5E3 and later
Required Field.
Default: 0 ms
Valid Entries: 0, 100 - 800; in 50 ms increments.

2.131 #ISLU TONE

Description: This field indicates the ISLU tone PPM pulse width.

Software Release: 5E3 and later
Required Field.
Default: 0 ms
Valid Entries: 0, 100 - 800; in 50 ms increments.

2.132 #ISLU THIRD WIRE

Description: This field specifies the ISLU third-wire applique PPM pulse width.

Software Release: 5E3 and later
Required Field.
Default: 0 ms
Valid Entries: 0, 100 - 800; in 50 ms increments.

SPECIAL ACCESS

The following field is used for Special Features.

2.133 SP ACCESS

Description: Is the Special Access feature to be activated at this office?

The Special Access feature allows a customer to have a PBX (digital or analog) directly connected to the DLTU of a 5ESS Toll Switch.

This field must be "Y" if at least one Special Access customer is or will be connected to this switch.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

CCS FEATURES

Available with 5E11 and later Software Releases, the following fields (Section 2.134 - Section 2.136) are used by the CCS (Common Channel Signaling) feature. These features are available for both the CNI-based SS7 signaling platform and the PSU-based SS7 (Signaling System 7) signaling platform.

2.134 EXPANDED SLS

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Description: Is the Expanded Signaling Link Selection feature to be activated at this office? The SLS feature determines the specific links and STP (Signal Transfer Points) used to route a message. This field is used to indicate whether expansion on the SLS is allowed. Such expansion allows the maximum size of a "B" or "D" link set to be 16 links compared to the previous value of 8. The expansion also allows a more even traffic distribution on links in a (combined) link set, especially after link failures. This field on this form defines the feature only for the CNI-based SS7 signaling platform. For the PSU-based SS7 signaling platform, see Division 9, Section 10H.

This feature is a secured feature with SFID 175 which must be set to "Y" on the SFSYS form before it can be activated.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered,

- SFID 175 ACT on the SFSYS form must be "Y".
- COMMON CHAN SIG must be "ALL" or "CNI".
- CNI EQUIP must be "Y".

If SFID 175 is not set to "Y" on the SFSYS form, EXPANDED SLS must be "N".

2.135 IMPROVED SLT

Description: Is the Improved Signaling Test feature to be activated at this office? This feature adds two additional capabilities to the existing SLT procedure. The first improvement provides that the test pattern sent in the second signaling link test message is the same as that sent in the first signaling link test message. This allows the response to the first test message to be accepted as a response to the second test message, in effect, allowing twice the time for a response to the first signaling link test message. The second improvement provides that when the "test available (i.e., in-service) links periodically" option is on, the test should be performed even on links which are experiencing transmit or receive congestion. This field defines the feature for both CNI and PSU-based SS7 signaling platforms.

This feature is a secured feature with SFID 176 which must be set to "Y" on the SFSYS form before it can be activated.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered,

- SFID 176 ACT on the SFSYS form must be "Y".

If SFID 176 is not set to "Y" on the SFSYS form, IMPROVED SLT must be "N".

2.136 MTP NODE RESTART

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Description: Is the Message Transport Protocol feature to be activated at this office? This feature enables the MTP to bring sufficient signaling links into the available state to handle the expected traffic and to stabilize its routing before user traffic is restarted at a signaling point that has just become available. This procedure uses the TRA (Traffic Restart Allowed) and the TRW (Traffic Restart Waiting) messages. This field defines the feature for both CNI and PSU-based SS7 signaling platforms.

This feature is a secured feature with SFID 177 which must be set to "Y" on the SFSYS form before it can be activated.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered,

- SFID 177 ACT on the SFSYS form must be "Y".

If SFID 177 is not set to "Y" on the SFSYS form, MTP NODE RESTART must be "N".

2.137 FALSE LINK CONG

Description: This field is used to display the false link congestion level.

Software Release: 5E13 and later
Required Field.
Default: LVL2
Valid Entries: None, LVL1, or LVL2

ADV SVC PLATFORM

Available with 5E6 and through 5E11 Software Releases, the following fields (Section 2.138 - Section 2.149) are used by ASP (Advanced Services Platform). For 5E12 and later, the following fields have been moved to the ASPOPT form (5670 Record). See Division 4, Section 31G.

2.138 MAX TRIG

Description: Enter the number of times an ASP call can serially trigger.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Valid Entries: 1 - 6

Data Rules:

When MAX TRIG is entered, then ASP OFC must be "SSP".

2.139 ACG FNL TRMT

Description: Enter the ACG (Automatic Call Gap) final treatment for calls blocked due to ACG controls.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11

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Required Field.
Default: RT
Valid Entries:

Valid ACG FNL TRMT Entries	
Entry	**Definition**
RT	Reorder tone.
VA	Voice announcement. Routed to the "NCA" (National Congestion Announcement (no circuits available) Fixed Route Type.

2.140 RDRCT THRES

Description: Enter the Forward Call Redirection Threshold, the number of times an ASP call can be forwarded.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Valid Entries: 1 - 10

Data Rules:

When RDRCT THRES is entered, then ASP OFC must be "SSP".

Since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, RDRCT THRES must not be entered until SFID 126 ACT on the SFSYS form has been set to "Y".

2.141 ESC CD CNTL

Description: Can escape codes be used on dialed digits following the detection of an 0ZZ shared interoffice trigger on the INDIT form?

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ESC CD CNTL is entered, then ASP OFC must be "SSP".

Since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, ESC CD CNTL must be "N" until SFID 6 ACT and SFID 126 ACT on the SFSYS form have been set to "Y".

2.142 INT OFC TRIG

Description: Enter the shared interoffice trigger number.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Valid Entries: 1 - 255

Data Rules:

When INT OFC TRIG is entered, then ASP OFC must be "SSP".

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When INT OFC TRIG is entered, it must equal TRIG NBR on an NSTRIG form, where APPLICATION equals "ASP".

2.143 SCP DAS

Description: Enter the single DAS value for SCP return route trunk ASP calls.

NOTE: For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When SCP DAS is entered, then ASP OFC must be "SSP".

When an SCP DAS is entered, it must be defined on an associated DAS form.

2.144 ASP OFC

Description: Enter the type of ASP (Advanced Services Platform) support to be provided by this office.

NOTE: For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E6 through 5E11
Required Field.
Default: NONE
Valid Entries:

Valid ASP OFC Entries

Entry	Definition
NONE or N	This office does not support ASP.
SSP or S	This office is an ASP SSP (Service Switching Point).

Data Rules:

For 5E6 and later, since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, ASP OFC must be "NONE" until SFID 58 on the SFSYS form has been set to "S" or "Y".

For 5E8 and later, if ASP OFC is not "SSP", NATURE OF NBR on all LDIT, MLDIT (5300-3 Record), or RDIT forms (5300-7/8 Record), and NON on all LDIT or RDIT forms must not be entered.

NONE For 5E8 and later, if "NONE" is entered,

- MAX CONV must be 5.
- NSTRIG forms must have APPLICATION equal to "E911" or 800.
- No CFGGRP forms (5964 Record) may exist with BUTTON LIST ACTION(s) of "ASPUSE".
- No ICF forms may exist with ASP CDI or ASP RTI entered.
- No MCRTIDX forms (5304 Record) may exist with MC ROUTE TYPE equals "ASP".
- No IDPDCA forms may exist with ACTION or CONFLICT ACTION equal to "IDPASP" (For 5E9(1) and later, "ASPDNC", "ASPNORM", "ASPVAR").

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For 5E9(1) and later, if ASP OFC equals "NONE", no PDIT forms may exist with ACTION equals "ASPDNC", "ASPNORM", or "ASPVAR".

For 5E10 and later, when the OFCOPT form has ASP OFC defined as "NONE", there is no office support for ASP. The ICF forms can have neither ASP TF CDI nor ASP TF RTI entered.

SSP - For 5E8 and later, if ASP OFC equals "SSP"

- and APPLICATION equals "ASP" (and for 5E9(1) and later, AIN REL equals "R0") on an NSTRIG form (5324 Record), SERV KEY on that NSTRIG form must equal "CDPN" or "ANI".
- for 5E9(2) and earlier, there must be a FIXRT form where FIXED ROUTE TYPE equals "NSANNC", and where CHARGE INDEX is not entered.
- Any MCRTIDX forms where MC ROUTE TYPE equals "ASP" must not have TRUNK GROUP NUMBER, DIGITS TO BE DELETED, PREFIX DIGITS, NEXT ROUTE, or NEXT MC ROUTE INDEX entered.
- A DSAPP form (5537 Record) must exist with APPLIC set to "ASP". For 5E9(1) and later, a DSAPP form must exist with APPLIC set to "ASP" or "AINR0D1".

For 5E9(1) and later, if ASP OFC is "SSP", then:

- ASP ANI and PSEUDO CARR must be entered;
- MAX TRIG must be entered;
- INT OFC TRIG must be entered.
- since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, MAX TRIG must equal 3 unless SFID 126 ACT on the SFSYS form has been set to "Y".
- for 5E9(1) only, if APPLIC is "ASP" on the DSAPP form (5537 Record) and the field HAVE THE DIALING PLANS FOR ASP USERS BEEN REVIEWED? is "N" on the ODAOPT form (5523 Record), data changes may be required for the continued seamless operation of the ASP capabilities after the office has retrofitted to 5E9(1). Reference material is available in the *GUIDE TO ASP DATA CHANGES* to assist in these changes.

If ASP OFC is not "SSP",

- there must be no SCFAM forms where STRUCT CODE FAMILY equals "ASP".
- NATURE OF NBR on all LDIT, MLDIT (5300-3 Record), or RDIT forms (5300-7/8 Record), and NON on all LDIT or RDIT forms must not be entered.
- there must be no SSPANN forms where CUST HDRID or CUST TRLID is entered.

2.145 PSEUDO CARR

Description: Enter the carrier ID that is to be outpulsed in the EA (Equal Access) signaling stream to the SSP. This carrier must also be defined in the Access Tandem as a pseudo carrier.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E6 through 5E11

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Valid Entries:

For 5E9(1) and later: 0 - 9999

Data Rules:

If PSEUDO CARR is entered on this form, then it must be defined on the IFC form.

When ASP OFC is "SSP", then a PSEUDO CARRIER must be entered.

For 5E8 and later, PSEUDO CARR must equal CARRIER ID on an ICF form, with the ICF form's FEAT GRP equal to "D".

2.146 ASP ANI

Description: Enter the digits to be used as the ASP (Advanced Services Platform) ANI (Automatic Number Identifier). This ANI is used to distinguish an incoming EAMF/CCS7 trunk call as ASP. It is also used as the ANI II digits on an outgoing EAMF/CCS7 trunk when the SCP does not provide an OST (Originating Station Type) parameter to be outpulsed as the ANI II.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E6 through 5E11
Required Field.
Default: 100
Valid Entries: 00 - 99, but value 100 may be input to represent a "null" ASP ANI.

2.147 MAX CONV

Description: Enter the maximum number of conversations an ASP call is allowed to have, per transaction, with the SCP. (See Division 2, Section 4A on Secured Features for more information.)

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E8 through 5E11
Required Field.
Default: 5
Valid Entries: 1 - 30

Data Rules:

When ASP OFC is "NONE", MAX CONV must be 5.

This parameter is used by the Advanced Services Platform feature, which is a 5E6 and later Secured Feature that must be purchased by the office before the data may be set to a value other than the default. SFID 51 on the SFSYS form (5713 Record) is reserved for Advanced Services Platform and must be set to "S".

2.148 ASP RESP

Description: Enter the ASP (Advanced Services Platform) SCP response timer. This is the number of seconds an ASP call will suspend, waiting for the SCP to respond to the ASP query. When the SCP fails to respond in this specified time interval, the call is routed to reorder.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E6 through 5E11
Required Field.

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Default: 3
Valid Entries: 1 - 5

2.149 ORIG NO ANS TIME

Description: Enter the timeout value in seconds for the ASP Originating No Answer Timer. This field supports the ASP BLNA (Busy Line No Answer) secured feature. For more information on this feature see Division 2, Section 4A147.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Valid Entries: 1 - 120 (seconds)

Data Rules:

This field is used by the ASP BLNA and ASP Originating Busy/No Answer Triggers with Extended Ringing secured features. Therefore, before this field can be entered, the ACT field for either SFID 147 or SFID 189 on the SFSYS form (5713-1 Record) must be set to "Y".

2.150 PRE QUERY SCR

Description: Should pre-query screening be ignored for 0+ prefix calls on a line with an Off-Hook Delay trigger? This field supports the ASP Pre-Query Screening for OHD Triggers secured feature. For more information on this feature, see Division 2, Section 4A178.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E10 and 5E11
Default: N
Valid Entries:

Valid PRE QUERY SCR Entries

Entry	Definition
Y	0+ calls will not be part of the pre-query screening.
N	0+ calls will be subject to screening.

Data Rules:

This field supports the ASP Pre-Query Screening for OHD Triggers secured feature and must be purchased before this field can be changed. Therefore, the ACT field for SFID 178 on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be changed.

2.151 ORIG BUSY TRG

Description: Enter the originating busy line trigger number. The trigger number is used to locate the unique network service when the busy line condition is encountered. Population of this field indicates that a query will be launched to an external database. This field supports the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature. For more information on this feature, see Division 2, Section 4A189.

- ***NOTE:*** For 5E11, the Recent Change View 8.1 field is ASP BL TRIG NBR.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E11
Default: 1 - 255

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Data Rules:

ASP Originating Busy/No Answer Triggers with Extended Ringing is a secured feature. Before ORIG BUSY TRG or ORIG NO ANS TRG can be entered, SFID 189 ACT field on the SFYS form (5713-1 Record) must be set to "Y".

When ORIG BUSY TRG is entered, ORIG BUSY TRG must be defined on an NSTRIG form (5324 Record) as TRIG NBR. On the NSTRIG form, APPLICATION must be "ASP" and AIN REL must equal "R0D1".

2.152 ORIG NO ANS TRG

Description: Enter the originating no answer trigger number. The trigger number is used to locate the unique network service when a no answer condition is encountered. Population of this field indicates that a query will be launched to an external database. This field supports the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature. For more information on this feature, see Division 2, Section 4A189.

- ***NOTE:*** For 5E11, the Recent Change View 8.1 field is ASP NA TRIG NBR.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E11.
Default: 1 - 255

Data Rules:

ASP Originating Busy/No Answer Triggers with Extended Ringing is a secured feature. Before ORIG BUSY TRG or ORIG NO ANS TRG can be entered, SFID 189 ACT field on the SFYS form (5713-1 Record) must be set to "Y".

When ORIG NO ANS TRG is entered, ORIG NO ANS TRG must be defined on an NSTRIG form (5324 Record) as TRIG NBR. On the NSTRIG form, APPLICATION must be "ASP" and AIN REL must equal "R0D1".

2.153 INH OFC OBL OOL

Description: Is the ASP office busy line trigger out of LATA inhibited? This field supports the ASP Call Screening for Busy/No Answer Office Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A212.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E11
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The ASP Call Screening for Busy/No Answer Office Triggers is a secured feature. The SFID 212 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set to "Y".

2.154 INH OFC ONA OOL

Description: Is the ASP office no answer trigger out of LATA inhibited? This field supports the ASP Call Screening for Busy/No Answer Office Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A212.

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- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E11
Required Field.
Default: N
Valid Entries: Y,

Data Rules:

The ASP Call Screening for Busy/No Answer Office Triggers is a secured feature. The SFID 212 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be set to "Y".

ORIG DAS FOR ASP TRIGGERS

The following fields (Section 2.155 - Section 2.156) define the parameters which support the ASP Multiple Rate Center Support feature. This is a secured feature with SFID 162 and is available for 5E9(1) through 5E11. For more information on this feature, see Division 2, Section 4A162. For 5E12 and later, these fields have been moved to the ASPOPT form (5670 Record). See Division 4, Section 31G.

2.155 ARS FCD CDP

Description: Is the DAS (Digit Analysis Selector) assigned to the originator used after ARS (Automatic Route Selection) FCD (Feature Code Dialing), and CDP (Customized Dialing Plan) triggers? If "Y" is entered the DAS assigned to the originator is used to interpret digits after an ASP query for ARS, FCD, and CDP triggers. If "N" is entered, the SCP DAS is used to interpret digits after an ASP query for ARS, FCD, and CDP triggers.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

SFID 162 on the SFSYS form (5713-1 Record) must have the ACT field set to "Y" before the ARS FCD CDP or OHI OHD TAT field can be set to "Y".

2.156 OHI OHD TAT

Description: Is the DAS (Digit Analysis Selector) assigned to the originator used after OHI (Off-Hook Immediate), OHD (Off-Hook Demand), and TAT (Termination Attempt Triggers) triggers? If "Y" is entered, the DAS assigned to the originator is used to interpret digits after an ASP query for OHI, OHD, and TAT triggers. If "N" is entered the SCP DAS is used to interpret digits after an ASP query for OHI, OHD, and TAT triggers.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E9(1) through 5E11
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

SFID 162 on the SFSYS form (5713-1 Record) must have the ACT field set to "Y" before the ARS FCD CDP or OHI OHD TAT field can be set to "Y".

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ASP IP TIMERS

Available with 5E10 and 5E11 Software Releases, the following fields (Section 2.157 - Section 2.158) are used to set the maximum duration of an STOR connection and the maximum amount of time the switch will wait for the IP (Intelligent Peripheral) to send the Disconnect message. These fields support the AIN SSP Send To Outside Resource (Local) feature. For more information on this feature, see Division 2, Section 4A229. For 5E12 and later, these fields have been moved to the ASPOPT form (5670 Record). See Division 4, Section 31G.

2.157 TSTRC

Description: Enter the STOR (Sent To Outside Resource (Local)) connection time. This field indicates the maximum duration of an STOR connection, as measured from the Connect message received from the IP. 0 indicates no timing.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E10 and 5E11
Required Field.
Default: 06
Valid Entries: 0 - 60 minutes

Data Rules:

Since STOR (Send To Outside Resource (Local) is a secured feature and must be purchased by the office before STOR data can be assigned, TSTRC must be 06 until SFID 126 ACT and SFID 229 ACT on the SFSYS form have been set to "Y".

2.158 TDISC

Description: Enter the STOR (Sent To Outside Resource (Local) disconnection time. This field indicates the maximum amount of time the switch will wait for the IP to send the Disconnect message after a facility message with a Cancel IP Resource operation is sent from the SSP (Service Switching Point) to the IP.

- ***NOTE:*** For 5E12 and later, this field was moved to the ASPOPT form (5670 Record).

Software Release: 5E10 and 5E11
Required Field.
Default: 4.0
Valid Entries: 1.0 - 4.0 (in increments of 0.5)

Data Rules:

Since STOR (Send To Outside Resource (Local)) is a secured feature and must be purchased by the office before STOR data can be assigned, TDISC must be 4.0 until SFID 126 ACT and SFID 229 ACT on the SFSYS form have been set to "Y".

INTERNATIONAL OUTBOUND CALL

Available with 5E5 and later Software Releases, traditional 2-stage signaling uses these fields (Section 2.159 - Section 2.160) for international outbound calls. The digits received in the first stage are 011 + PCC or 18X where PCC is the Pseudo Country Code and 18X indicates an international call. Digits received in the second stage are KP + CC + NN + ST or KP + PCC + NN + ST. KP is the MF Start Digit. CC is the Country Code. PCC is the Pseudo Country Code. NN is the National Number. ST is the MF end digit.

2.159 TRAD 2-STAGE PST

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Description: This field indicates the maximum time in milliseconds for permanent signal timing during the second stage of a traditional 2-stage international outbound call. At expiration of the timer, the call is torn down.

Software Release: 5E5 and later
Default: 10000 ms
Valid Entries: 5000 - 25000 ms

2.160 TRAD 2-STAGE PDT

Description: This field indicates the maximum time in milliseconds for partial dial timing during the second stage of a traditional 2-stage international outbound call. At expiration of the timer, the call is torn down.

Software Release: 5E5 and later
Default: 20000 ms
Valid Entries: 5000 - 25000 ms

2.161 PROHIBIT DT

Description: Should Prohibit Disconnect Timing idle the MLHG member immediately upon disconnect, rather than applying the normal 10-second disconnect timing? If "Y" is entered, the MLHG will become idle immediately after disconnect. If "N" is entered, the 10-second disconnect timing will be provided for the MLHG member.

NOTE: For 5E5 and later, this field was moved to the IMINFO form (5510 Record).

Required Field.
Default Value: N
Valid Entries: Y, N

Data Rules:

This field pertains to Multi-line Hunt Group members whose LCC is defined on an LCC form with a CLASS OF SERVICE entry of "ATND".

2.162 # RM RTG RSTRCT

Description: The value entered in this field serves as the cornerstone for the 5ODA algorithms that assign hundreds groups to routing modules.

Before selecting a value, refer to Division 3, Section 1O in order to understand the 5ODA algorithms.

If "Y" is entered in this field, then a remote module (ORM, RSM, TRM) can be a routing module for a hundreds group if and only if all the terminations within the hundreds group physically reside within the remote cluster.

If "N" is entered in this field, then a remote module (ORM, RSM, TRM) can be routing module for a hundreds group regardless of where the terminations within the hundreds group physically reside.

Software Release: 5E5 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then this office has Restricted Routing Module Assignment. A Hundreds Group can

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contain packet switching TNs which have ports on a Remote SM ("RSM", "TRM", or "ORM" is entered in SM USAGE field on the EQIM form). Normally, for a packet routing module in a RESTRICTED office, all of the TNs in the HG (Hundreds Group) must terminate on an SM in the same Remote Cluster (the CLIDs on the EQIM form must match). It is also required that the routing module for packet HGs be an SM with a value in the CONFIGURATION field on the EQIM form which supports packet switching (see the table for Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.) However, if the only SMs in this office which support packet switching are Remote SMs, routing will be provided in the Remote SM which supports Packet Switching. This is equivalent to assigning UNRESTRICTED status to the office (RM RTG RSTRCT = "N") for packet TNs.

- ***NOTE:*** The default value of "Y" is normally used in order to prevent Remote Modules from containing Routing Data for Local Modules. When a Remote Module is isolated and contains Routing Data for a Local Module, Digit Analysis cannot be completed for any call needing the Routing Data in the Remote Module.

- ***NOTE:*** Values for the PKT SM are taken from the HGRPAS input form. If HGRPAS form does not have a value in the PKT SM field, a routing assignment is then made algorithmically.

Q931 PROTOCOL OPTIONS

The following field is used to assign Q931 protocol options.

2.163 CAUSE LOC

Description: This field is used internally by the switch for Q.931 error analysis.

Software Release: 5E6 and later
Required Field.
Default: PUB
Valid Entries:

Valid CAUSE LOC Entries

Entry	Definition
PUB	A public network serves the local user.
PRIV	A private network serves the local user.

DEFAULT BRI TYPE

The following field is available with 5E6 and later Software Releases. It is used as a default on the RC Views 23.2 and 23.8, when assigning DSL Line Cards.

2.164 # BRI TYPE

Description: This office parameter specifies the default type of DSL line card circuit to be assigned in the office. If a BRI TYPE is not specified on the assignment forms, this field is used as the default on the RC Views 23.2 and 23.8 to indicate the subscriber's NT1 (Network Termination) type. This office parameter is provided to help reduce the number of BRI TYPE entries that need to be specified on assigning a DSL. If the switch has more than one type of BRI line card type, choose the type of BRI line card that is the most prevalent on the switch as the default type to eliminate the greatest number of BRI TYPE entries that need to be made on RC Views 23.2 and 23.8. It is important to assign a subscriber to a line card (equipment number) with the same type as the subscriber's NT1. If the wrong type is assigned, the DSL will not go in service and the subscriber will not get dial tone.

Software Release: 5E6 and later
Required Field.
Valid Entries:

Valid BRI TYPE Entries

Entry	Definition

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TLC	5E4(2) T-card
PULC	5E4(2)Phase 1 U-card
ULC	5E4(2)Phase 2 U-card
AULC	5E6 ANSI Standard U-card
I2TCKT	Software Release: 5E10 and later. ISLU2 TLBD (T-Circuit)
I2UCKT	Software Release: 5E10 and later. ISLU2 ULBD (U-Circuit)

CDMA DTMF

The following fields provide CDMA (Code Division Multiple Access) DTMF (Dual Tone Multi-Frequency) Tone Programmability and are available with 5E13 and later Software Releases. See Division 2, Section 8b for more information.

- ***NOTE:*** For 5E15 and later, these fields have been moved to the CDMAOPT form (5599 Record).

2.165 OVERRIDE

Description: Do you want to override the CDMA mobile on/off duration?

When this field is "Y", the mobile on/off duration values can be overriden with the provisioned values in the LENGTH ON and LENGTH OFF fields.

When this field is "N", the mobile on/off duration is not overriden.

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

Data Rules:

When OVERRIDE is "N", LENGTH ON must not be entered.

When OVERRIDE is "N", LENGTH OFF must not be entered.

When OVERRIDE is "Y", LENGTH ON must be entered.

2.166 LENGTH ON

Description: The LENGTH ON field is used to indicate the Dual Tone Multi-Frequency on duration, in milliseconds, for CDMA.

Software Release: 5E13 and later
Valid Entries: 100, 150, 200, 250, 300, 350 or blank

2.167 LENTGH OFF

Description: The LENGTH OFF field is used to indicate the Dual Tone Multi-Frequency off duration, in milliseconds, for CDMA

Software Release: 5E13 and later
Valid Entries: 50, 100, 150, 200 or blank

PERFORMANCE MONITORING

The following fields (Section 2.168 - Section 2.172) apply to the PM alerting function. Performance monitoring alerting, which is available with 5E6 and later Software Releases, is the ability to collect and

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report performance data for TIDI U-BRIs (U-interface BRIs). The operating company has the ability to inhibit and allow the setting and reporting of performance monitoring alerting thresholds. The U-BRI provides two, 64 Kbps (kilo-bits per second) B-channels for circuit-switched voice, circuit-switched data or packet switched data calls; and one 16 Kbps D-channel for signaling or packet-switched data over a single, non-loaded pair of wires. (For more information concerning PM alerting and the U-interface BRI, see the PMTHRESH form (5948 Record)).Three of the following fields, PM TIME, MAX NO THR GRPS,

and FAC PM ENABLE, are also used for performance monitoring on a DFI (Digital Facility Interface), an IDCU (Integrated Digital Carrier Unit), and a DNU-S (Digital Networking Unit - SONET). See Division 5, Section 5L for performance monitoring for the DNU-S.

2.168 DSL PM ENABLE

Description: Should performance monitoring alerting be enabled for office DSLs? This office parameter is used to indicate if layer 1 performance monitoring alerting is turned on or off on the entire switch. (See the PMTHRESH form (5948 Record) for more information on performance monitoring alerting).

Software Release: 5E6 and later. Required Field.
Default: Y
Valid Entries: Y, N

2.169 REPORT INT

Description: Specify the interval at which PM interval reports are generated for the switch office.

Software Release: 5E6 and later
Required Field.
Default: 1
Valid Entries: 1, 2, 3, 4, 6, 8, 12 and 24 hour(s).

2.170 CRC SES RATE

Description: Specify the number of Cyclic Redundancy Code errors allowed before a SES (Severely Errored Second) is incremented in an ANSI U-Card.

Software Release: 5E6 and later
Required Field.
Default: 3
Valid Entries: 1 - 10

2.171 MAX NO THR GRPS

Description: Enter the maximum number of Performance Monitoring groups allowed for this office.

Software Release: 5E6 and later
Required Field.
Default: 256
Valid Entries: 0 - 65535

Data Rules:

For 5E7 and later, the total number of PM forms, which is the sum of the number of PMTHRESH forms and the number of DNUPM forms, must not exceed the entry in this field.

2.172 PM TIME

Description: The PM TIME field specifies the hour at which ALE and performance monitoring reports will

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be generated daily.For DFI, IDCU, and DNU-S, this field specifies the start hour for the 24-hour collection interval.

Software Release: 5E6 and later
Required Field.
Default: 0
Valid Entries: 0 - 23; where 0 is 12 midnight.

2.173 BPV SES RATE

Description: Enter the number of BPVs (Bipolar Violations) that can occur before a DS1 SES (Severely Errored Second) is declared. (See the PMTHRESH form (5948 Record) for more information on performance monitoring alerting.)

Software Release: 5E8 and later
Default: 307 (SES)
Valid Entries: 1 - 334 (SES)

2.174 FAC PM ENABLE

Description: Should PM (Performance Monitoring) alerting be enabled for switch facilities for DFI, IDCU, and DNU-S. See the PMTHRESH form (5948 Record) for more information on performance monitoring alerting.See also Division 5, Section 5L for DNU-S performance monitoring data.

Software Release: 5E8 and later
Default: Y
Valid Entries: Y, N

MISMATCH DETECTION

The following fields (Section 2.175 - Section 2.176) are used to support the ANSI U-interface BRI (Basic Rate Interface) available with 5E6 and later Software Releases.

2.175 ENABLE

Description: Is U-BRI NT (Network Termination) automatic mismatch detection activated for the switch?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.176 REPORT

Description: Should an output message be generated when a mismatch is detected between the NT and the U-BRI in the ISLU?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

ISUP

The following fields (Section 2.177 - Section 2.178) are available with 5E6 and later Software Releases. They support timing control functions in CCS7 network interconnect between Local Exchange and InterLATA Carriers.

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2.177 CRA TIMER

Description: This field is the Circuit Reservation Acknowledgement Timer. It indicates the elapsed time (seconds) an originating toll office will wait for an IAM (Initial Address Message) after sending a Circuit Reservation Acknowledgement message to the Originating Access Tandem.

Software Release: 5E6 and later
Required Field.
Default: 25
Valid Entries: 20 - 25 seconds

2.178 EXM D TIMER

Description: This field is the ISUP exit message delay timer. It provides a delay to ensure that glare or blocking is not encountered on the outgoing trunk to an Originating Toll Office. When the timer expires, the Originating Access Tandem sends an Exit Message to the End Office.

Software Release: 5E6 and later
Required Field.
Default: 300 ms
Valid Entries: 100 - 1200; in 100 ms intervals.

2.179 BUSY ANNC

Description: Should the terminating exchange send busy tone to the originating exchange when the called party is busy?

A terminating exchange determines whether the called party interface is busy prior to performing circuit allocation. If the called party interface is busy, the office must either (1) return a Release Message (REL) with a cause of user busy (17), or (2) provide busy tone.

The ISUP Busy Play Announcement (BUSY ANNC) is checked by the operational software during call failures in which the called party is busy and the call route consists of ISUP protocol trunks interworked to other signal protocol trunks.

If "Y" is entered a busy tone should be provided to the originating exchange. If "N" is entered a Release Message should be sent to the originating exchange.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

2.180 LEC ANNC

Description: If the call cannot be routed for failure conditions, other than those associated with called party screening, should the terminating exchange send a busy tone to the originating exchange?

If "N" is entered, a CCS7 Release Message will be sent to the originating switch instead of busy tone.

These options are for treatment of Vacant Code, No Circuit Announcement, and Reorder.

The options in this field do not apply to called party screening failures, which include the following CCS7 Release Messages: destination out of order (27), number changed (22), unallocated number (1), user busy (17), no user responding (18), call rejected (21), or bearer capability not implemented (65).

If a failure event other than what is listed above occurs, the switch software must determine whether to

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send a Release Message or provide an appropriate tone or announcement.

The value entered in this field will be checked at Local Exchanges by the operational software for call failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call is of type, 3.1kHz audio or speech.
- the call route consists of only ISUP trunks.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

2.181 LEC IW REL

Description: Is an ISUP Local Exchange Carrier Interworking Release message provided to the previous exchange when a failure occurs on an ISUP trunk in the LEC network? This only applies to non-ISDN access calls which have not used ISUP trunks exclusively over the full call completion path.

"Y" indicates that a Release message will be sent. "N" indicates that a tone/announcement will be provided to the preceding exchange.

These options are for treatment of Vacant Code, No Circuit Announcement, and Reorder.

The options in this field do not apply to called party screening failures, which include the following CCS7 Release Messages: destination out of order (27), number changed (22), unallocated number (1), user busy (17), no user responding (18), call rejected (21), or bearer capability not implemented (65).

The value entered in this field will be checked at Local Exchanges by the operational software for call failures that consist of the following:

- the call originates from a non-ISDN interface.
- the call is of type, 3.1kHz audio or speech.
- the call route consists of a combination of ISUP trunks interworked to other protocol trunks (e.g., MF).

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

2.182 BLANK NBR REL

Description: Is the Release with Cause Code Value 1 for Vacant Numbers feature active for this office? For more information on this feature, see Division 2, Section 1BU.

- ***NOTE:*** This feature is intended for use in Canada only. There is no expectation at this time that this feature will be used in the U.S., and it is not recommended that this feature be turned on in U.S. switches.

Software Release: 5E13 and later
Required Field.
Default: N

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Valid Entries: Y, N

2.183 RCD 3PT1 ITC

Description: Recode 3PT1kHz Information Transfer. Enter the bearer capability (speech or 3.1kHz) , which is the information transfer capability when referring to the specific rate of communication, or the user service information when referring to user-specified information. See Division(2 Section 1W for more information on Recode 3.1kHz Audio feature.)

This field is used to determine the bearer capability under the following conditions:

- the call has a bearer capability of 3.1kHz audio;
- the call is about to be routed out over an ISUP trunk;
- the office processing the call is either a local tandem which received the call via an incoming inband signaling speech trunk or an originating end office serving a non-ISDN origination;
- the per trunk group indicator, RCD 3PT1 ITC on the TRKGRP form (5202 Record), is blank.

(See Division 2, Section 1W, *CCS7 ISDN-UP Enhancements* for more information.)

Software Release: 5E8 and later
Required Field.
Default: SPEECH
Valid Entries:

Valid RCD 3PT1 ITC Entries

Entry	Definition
SPEECH	Recode the bearer capability to "speech".
3PT1KHZ	Send out bearer capability as "3.1kHz audio" without modification.

Data Rules:

This field should not be set to "3PT1KHZ" until the following conditions are met:

1. all far switches have implemented the rule that the value of the USI parameter is either controlled by the trunk group parameter (if not set to "null"), or the switch parameter;
2. the transmission facilities to all far switches are capable of handling calls with a bearer capability of 3.1kHz audio; and
3. the software at all far switches is capable of handling calls with a bearer capability of 3.1kHz audio.

These checks are not made by the software; therefore, the craft personnel should make these checks before changing this global office parameter to "3PT1KHZ".

If this is a switch owner toll office, then RCD 3PT1 ITC must be "3PT1KHZ".

2.184 CICP BLOCK

Description: Should the ISUP Carrier Identification Code Parameter be blocked? This field is used by the Carrier Identification Code Parameter secured feature, which must be purchased by the office before this field can be set to "Y". For more information on this feature, see Division 2, Section 4A9.

Software Release: 5E8 and later.
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the SFID 009 ACT field on the SFSYS form (5713-1 Record) must be set to "Y".

2.185 ISUP APN DAS

Description: Proprietary field.

2.186 IAM CRM PRIOR

The IAM CRM PRIOR (Initial Address Message and Circuit Reservation Message Priority) field is used as an indicator for SS7 ISUP to mark the priority for IAMs and CRMs. When set to 1, all outgoing IAMs and CRMs (regardless of type) are set to the standard priority of 1. If set to 0, all GETS (Government Emergency Telecommunications Service) and MLPP (Multi-Level Precedence and Preemption) non-routine IAMs and CRMs have outgoing priority equal to 1; all other types of calls (including routine MLPP calls) have their priority lowered to 0. For more information, see Division 2, Section 4A279.

Required Field.

2.187 OFC OLI

Description: Proprietary field.

ON-LINE OFFICE RECORDS

The ON-LINE OFFICE RECORDS entries are associated with office records which are changed via the RC/V (Recent Change/Verify) system. The information that is printed is that found on the Records 5100-1/2/3, 5105-1/2, 5109-1/2, 5110-1/2, 5111-1/2 and 5171-1/2. This information will be automatically printed on-line at the office based on the options assigned in fields (Section 2.188 - Section 2.191).

2.188 ENABLED?

Description: Should office records which are changed via the RC/V (Recent Change/Verify) system be automatically printed on-line at the office?
Default: N
Valid Entries: Y, N

2.189 START HOUR

Description: Enter the hour of the day when the office records should begin printing on-line at the office.
Default: 23
Valid Entries: 0 - 23; where 0 is midnight.

2.190 DURATION

Description: Enter the duration in hours that will be allowed for the printing of the on-line office records.
Default: 4
Valid Entries: 0 - 24 hours

2.191 SUN THROUGH SAT

Description: For each day of the week, Sunday through Saturday, should the on-line office records be printed automatically?
Valid Entries: Y, N

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HOME INTERCOM

Available with 5E6 and later Software Releases, the following fields (Section 2.192 - Section 2.194) are parameters used by the Home Intercom feature.

2.192 MAX RING TIME

Description: This field indicates the maximum amount of time a phone may ring before it must be picked up during Home Intercom activation.

Software Release: 5E6 and later
Required Field.
Default: 180 seconds
Valid Entries: 30 - 300 seconds

2.193 MAX HOLD TIME

Description: This field indicates the maximum amount of time an outside call may be put on hold during the Home Intercom Dialable Hold feature.

Software Release: 5E6 and later
Required Field.
Default: 180 seconds
Valid Entries: 30 - 32767 seconds

2.194 MAX TALK TIME

Description: This field indicates the maximum amount of time extensions on the same line may talk during Home Intercom Basic, Intercom Code Dialing, Selective Intercom Dialing, Selective Call Transfer (only during private conference when outside party disconnects).

Software Release: 5E6 and later
Required Field.
Default: 10
Valid Entries: 1 - 1440 minutes

SERIES COMPLETION

The following field is Recent Change only. It is used to remove back links for Series Completion.

2.195 DEL BCK LNK

Description: This is a Recent Change only field. This field indicates if error messages will occur when attempting to delete a directory number that is a member of a series completion linked list, i.e. when BCK LNK is "Y".

If "Y" is entered, no error message will occur and the series completion back links will be removed automatically when the DN is deleted. This will also remove the DN from the series completion field on all other TNs (multiple lines series complete to the same line.)

If "N" is entered, an error message will occur when attempting to delete a DN that is a member of a series completion linked list. The craft will need to enter the update mode in Recent Change and set the BCK LNK field on the associated Recent Change View (e.g. view 1.1, 23.2, 23.8) to "N" (removes back links) before the TN can be removed.

Software Release: 5E6 and later

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PER CALL TEST FAILURE

The following field is a Recent Change only. It is used for PCTF (Per Call Test Failure) Reports.

2.196 PCTF INT

Description: This is a Recent Change only field. This field is used to indicate the time interval between PCTF summary reports. The report will be generated automatically based on the value stored in this field.

Software Release: 5E6 and later

SLC96 T1 FACILITIES

The following field is available with 5E6 and later Software Releases. It is used to optionally monitor the status of SLC96 T1 Facilities.

2.197 # OFF NORMAL

Description: Should the SM status indicator be updated when SLC-96 T1 facilities are off normal?

If "Y" is entered and the SLC96 T1 facility is on protection, the SM status indicator will be updated to "RT PLS". If the facility is out of service, the SM status indicator will be set to "CKT OOS".

If "N" is entered, the SM status indicator will not be affected.

Software Release: 5E6 and later
Required Field.
Valid Entries: Y, N

ISVM OPTION

The ISVM TCAP TIMER field was added with the Inter-Switch Voice Messaging feature. This feature is described in Division 2 Section 5 of the TG.

2.198 ISVM TCAP TIMER

Description: Inter-Switch Voice Messaging TCAP (Transaction Capabilities Application Part) timer. An entry in this field represents the timeout value for ISVM TCAP Message.

Software Release: 5E7 and later.
Default: 3
Valid Entries: 1 - 10 seconds.

REMOTE DIGITAL TEST ACCESS

The following fields (Section 2.199 - Section 2.202) are used to set up an RDTA (Remote Digital Test Access) connection on an ISDN line or trunk. With this feature (also referred to as RPA [Remote Protocol Access]), a craft at a Customer Service Center can access customer BRIs, PRIs, packet trunks, or CCS7 ISUP trunks and troubleshoot problems. Refer to the RPA feature description in Division 2, Section 5F for more information on this feature.

2.199 RDTA SCRN IDX

Description: Enter the Screening Index (used by RDTA during digit analysis) to translate a TN for a 56Kbps or 64Kbps data call.

Software Release: 5E7 and later

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Valid Entries: 1 - 4095

Data Rules:

If at least one RDTAPORT (5909 Record) or RDTATN (5910 Record) is entered for this office, then RDTA SCRN IDX must be entered.

If RDTA SCRN IDX is entered then RDTA DAS must be entered. For 5E8 and later, all combinations of CODE INDEX from one or more RDIT forms, and RDTA SCRN IDX must have corresponding RAR form (5301 Record) entries for CDI and SCR.

2.200 RDTA DAS

Description: Enter the Digit Analysis Selector (to be used in digit analysis) that translates a DN from an input TTY message for RDTA.

Software Release: 5E7 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

RDTA DAS must be entered if a RDTAPORT form (5909 Record) or RDTATN form (5910 Record) is entered for this office.

If RDTA DAS is entered, RDTA SCRN IDX must be entered.

The RDTA DAS entered must be defined on a DAS form (5300 Record) with the LINE DAS information entered. The LDIT defined on the DAS form should be entered on a SMLDIT form (5315 Record) and assigned to all the LOADED SMs as well as standard SMs in the office. A loaded SM is defined on a EQIM form with CONFIGURATION equal to "LOADED".

The LDIT defined on the DAS form must be defined on an LDIT form with CODE INDEX or CDI entered. All combinations of RDTA SCRN IDX (entered on this form) and CODE INDEXs or CDIs (entered on the corresponding LDIT forms) must be entered on the RAR form.

2.201 BRI MAX SESSION

Description: Enter the maximum number of simultaneous RPA BRI sessions allowed for any SM in this office.

Software Release: 5E7 and later
Valid Entries: 1 - 15

Data Rules:

If BRI MAX SESSION is entered, RDTA SCRN IDX and RDTA DAS must be entered.

2.202 RDTA PIC

Description: Enter the Remote Digital Terminal Access PIC (Primary Inter-Exchange Carrier).

Software Release: 5E9(1) and later.
Valid Entries: 0 - 9999

Data Rules:

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RDTA DAS must be entered when RDTA PIC is entered.

For 5E14 and later, when the RDTA PIC is entered on the OFCOPT form, a corresponding ICF form must be entered where the RDTA PIC from the OFCOPT form is equal to a CARRIER ID from the ICF form with FEAT GRP equal to "D".

911

The following field (Section 2.203) is used for B911 and E911 service.

2.203 TIMING DELAY

Description: This field defines the digit analysis timing delay for a 911 call. After a caller dials 911, or any other digits designated to receive 911 treatment, the switch waits the specified number of seconds before it considers the dialing complete. If the caller enters additional digits during the delay period, the switch will report a dialing error.

The TIMING DELAY field is used for both B911 and E911 calls. If left blank, no timing delay will be applied.

Software Release: 5E7 and later
Default: 0
Valid Entries: 0 - 3 (seconds)

ENHANCED 911

The following fields (Section 2.204 - Section 2.212) apply to the E911 feature available with 5E7 and later Software Releases. For information about E911, see Division 2, Section 1BD.

2.204 E911 OPTION

Description: The E911 OPTION field specifies what type of E911 processing the switch supports.

Software Release: 5E7 and later
Default: INACTIVE
Valid Entries:

Valid E911 OPTION Entries

Entry	Definition
INACTIVE	The switch does not have E911 processing capabilities.
ESA	The switch can process E911 calls and has the ability to query the ESA (E911 Service Adjunct) for selective routing information.
NONESA	The switch can process E911 calls but does not have the ability to query the ESA for selective routing information.

Data Rules:

If E911 OPTION is "ESA", one and only one DSLAP form (5963 Record) must be entered with E911 SITE set to "Y".

If "ESA" or "NONESA" is entered, then the following fields must be entered:
- E911 DAS
- E911 LN SFG
- E911 SCR
- E911 TRK SFG

If E911 OPTION is "ESA" or "NONESA", there must be an ESN form (5540 Record) with SM entered and

DAS blank for each SM on the EQIM form where EQSTATUS is operational, "O". Also, a TNTYP form (5504 Record) must be defined with TONE TYPE set to "HIGH120".

2.205 E911 DAS

Description: The E911 DAS specifies the Digit Analysis Selector that will be used to translate telephone numbers stored in E911 data. Telephone numbers translated by this DAS include primary and alternate PSAP (Public Safety Answering Point) TNs, selective transfer TNs, and PSAP reroute TNs. PSAP and selective transfer TNs are specified in ESN forms (5540 Record); PSAP reroute TNs are specified in TKGRP forms.

Software Release: 5E7 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When E911 OPTION is "ESA" or "NONESA", the E911 DAS must be entered and must be defined on a DAS form (5300-1 Record).

If E911 DAS is entered, the LDIT associated with the DAS must be distributed to all SMs in the office. Either the LINE DAS LOCAL DIT or TRUNK DAS LOCAL DIT on the DAS form must be specified on an SMLDIT form (5315 Record) where every operational SM, defined on EQIM forms (5700-1/2 Record) with EQSTATUS set to "O", is specified in the LIST OF SWITCHING MODULES.

If E911 DAS is entered, the LDIT associated with the DAS must not have a packet routing CI TYPE of "PSNCI" or "PSCAR".

2.206 E911 SCR

Description: The E911 SCR field specifies the screening index used to route to telephone numbers stored in the E911 data. It is used in conjunction with the E911 DAS to route to primary and alternate PSAP (Public Safety Answering Point) TNs, selective transfer TNs, and to PSAP reroute TNs. PSAP and selective transfer TNs are specified in ESN forms (5540 Record); PSAP reroute TNs are specified in TKGRP forms.

Software Release: 5E7 and later
Valid Entries: 1 - 4095

Data Rules:

A value must be entered in this field if E911 OPTION is "ESA" or "NONESA".

2.207 E911 LN SFG

Description: This field specifies the E911 Line SFG (Simulated Facilities Group) which will restrict the number of 911 calls allowed to simultaneously terminate at E911 PSAPs. The Line SFG restricts only those calls that originate from lines or from PBX trunks (E911 TYPE set to "PBXNONDED" on the TKGRP form). 911 calls will receive reorder treatment when they originate from these sources and the SFG limit (defined on the corresponding PFASFG form) has been reached.

Software Release: 5E7 and later
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

If E911 OPTION is "ESA" or "NONESA", E911 LN SFG must be entered and must be defined on a PFASFG form (5609-3 Record) with an associated SFG TYPE of "E911LNE".

2.208 E911 TRK SFG

Description: This field specifies the E911 TRK SFG (Trunk Simulated Facilities Group) which will restrict the number of 911 calls routed to E911 PSAPs when the calls originate from trunk groups with E911 TYPE set to "NONDED".

Software Release: 5E7 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If E911 OPTION is "ESA" or "NONESA", E911 TRK SFG must be entered and must be defined on a PFASFG form with an associated SFG TYPE of "E911TRK".

2.209 PRIM E911 APID

Description: This field displays the primary APID (Application Processor ID) used as a link to the ESA. It is a Recent Change Verify only field. This field is populated from the 24.7 view. This parameter is used to identify the primary E911 ESA. There can be only one instance of PRIM E911 SITE being set to "Y".

Software Release: 5E7 and later

2.210 SEC E911 APID

Description: This field is a Recent Change Verify only field. This global parameter is used by the Dual ESA for E911 secured feature to identify the backup E911 AP (Applications Processor), which is also known as an ESA (Emergency Services Adjunct). This field is populated from the 24.7 view. If the SEC E911 SITE field is set to "Y", then this parameter should be set to the "APID" on that view. There can only be one instance of SEC E911 SITE being set to "Y".

Software Release: 5E8 and later

2.211 ESA SW TIME

Description: Enter the hour of the day (military time) to automatically switch the active and inactive ESAs (Emergency Services Adjuncts). This field is used by the Dual ESA for E911 Enhancements secured feature. It is a secured feature and must be purchased by the office before this field can be changed from the default value. For more information on this feature, see Division 2, Section 4A141.

If 0 is entered, then no switch occurs. An entry of 24 indicates midnight.

Software Release: 5E9(1) and later.
Required Field.
Default: 0
Valid Entries: 0 - 24 (military time)

Data Rules:

For any entry other than 0, the SFID 141 ACT field must be set to "Y" on the SFSYS form (5713-1

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Record).

2.212 E911 CESID

Description: Enter the E911 Customer Emergency Service Identification. This field is associated with the CPN Delivery on E911 Calls secured feature; it specifies on a per office basis whether the BN (Billing Directory Number) or the CPN (Calling Party Number) will be used for ESA (E911 Service Adjunct) queries, PSAP (Public Safety Answering Point) displays, and ALI/DMS (Automatic Location Information / Data Management System) look-ups. For more information about this field, see Division 2, Section 4A116, which describes the secured feature.

Software Release: 5E8 and later.
Required Field.
Default: BN
Valid Entries:

Valid E911 CESID Entries

Entry	Definition
BN or B	Billing number
CPN or C	Calling party number

Data Rules:

E911 CESID can be set to "CPN" only if the secured feature is purchased (SFID 116 ACT is "Y" on the SFSYS form (5713-1 Record)); otherwise, it must be set to "BN".

OUTBOUND SERVICES

The following field defines the parameter for Alternate Signal Switching Modules.

2.213 ALT SIG SM

Description: Alternate Signal Switching Module.

NOTE: This field is not enterable pending future development.

OFFICE EQUIPMENT

The following field defines a parameter for the OE (Office Equipment).

2.214 OE SIZE

Description: This field is used to specify whether an office supports either an 8- or 10-digit OE number for IDCU port assignments. If the RTs (Remote Terminals) to be provisioned are to have a capacity of more than 99 lines, a 10-digit OE number is required.
The OE SIZE field dictates the OE TYPE field for all IDCU equipment.

For 5E9(2) and earlier, if an IDCU remote terminal or PUB43801 is to be provisioned, the same OE TYPE of either "G" (10-digit) or "M" (8-digit) must be assigned on all assignment forms:

- DSL (5907 Record)
- DSLUSR (5908 Record)
- LINE (5109 Record)
- MISLINK
- MLHLN (5111 Record)
- NAILUP (5207 Record)
- TRUNK (5204 Record)

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- ***NOTE:*** All OE Types of "M" or "G" in an office must correspond with the OFCOPT form OE SIZE field and only one OE Type is allowed in an office (either "G" or "M").

Software Release: 5E8 and later
Required Field.
Default: 8
Valid Entries: 8 or 10

- ***NOTE:*** When an existing 5ESS Switch office is converted from an 8-digit OE ("M") to a 10-digit OE ("G"), all future IDCU OEs (TR303, TR08, or PUBs) entered must be in the new 10-digit OE format. Any attempt to enter an 8-digit ("M") format will be rejected.

The OE format is:

- 8-digit "M":

  XXXYZZLL, where

  XXX = SM

  Y = Unit Number

  ZZ = Remote Terminal

  LL = Line

- 10-digit "G":

  XXXYZZLLLL, where

  XXX = SM

  Y = Unit Number

  ZZ = Remote Terminal

  LLLL = Line

Conversion from an 8- to 10-digit OE is performed on Recent Change View 8.1. In order to avoid error conditions as a result of OE conversions, care must be taken to ensure that OE conversions are coordinated to assure that affected personnel are apprised of the impact of an 8-digit to 10-digit OE conversion.

Data Rules:

All IDCU equipment in an office must use the same OE TYPE.

If RT LINE SIZE on the RTERM form (5174-1/2/3/4 Record) is greater than 99, OE SIZE must be set to 10.

INDIV DIALING PLAN

The following field defines an IDP (Individualized Dialing Plan) parameter.

2.215 IDP DESEP

Description: Enter the IDP (Individualized Dialing Plan) Destination Separation Class for IDP dial codes. When IDP digit analysis identifies that an IDP dial code has been dialed, the value of this field is assigned

to the route request message. All IDP dial codes are given this value, regardless of which IDP group the dial codes are defined in.

Software Release: 5E8 and later
Valid Entries: 1 - 255

Data Rules:

If a DESEP is entered, it must be defined on the Traffic Separation Cell Grouping TRFSEP form (5308 Record).

DESEP 0 is used whenever DESEP is not provided by digit analysis, line, or trunk translations. DESEP 63 is used by the Switch for calls that are not applicable to DOR (Division of Revenue). The values of 0 and 63 should not be assigned. See Division 2, Section 1B.

ASI PROXY

Field Section 2.216 refers to the ASI (Advanced Service Interface) Proxy feature.

2.216 ASI ON

Description: Is the ASI Proxy traffic enabled?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ASI Proxy is a secured feature and must be purchased by the office before the default value for this field can be changed. An SFSYS form must exist with SFID 93 set to "S" for ASI ON to equal "Y".

ESSENTIAL SERVICE PROTECT

The following field defines the office parameter for ESP (Essential Service Protection).

2.217 ESP NORM ALW

Description: Is Essential Service Protection normally allowed? This office parameter is used by the ESP Back-lighting feature. This field defines how the off-normal condition for ESP (Essential Service Protection) is be displayed on the MCC. A value of "N" indicates that the off-normal condition for ESP is allowed and the normal condition is inhibited. A value of "Y" indicates that the off-normal condition for ESP is inhibited and the normal condition is allowed. When ESP is allowed, an indicator on the MCC page 109 (OVERLOAD) is back-lighted with yellow and the OVERLOAD indicator in the SSA (Summary Status Area) is back-lighted with blue indicating an OFF-NORMAL condition.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

SSP 800

The following fields (Section 2.218 - Section 2.219) define the office parameters for Advanced Service Platform and Service Switching Point 800 calls.

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2.218 INH SCP NPA DEL

Description: Should deleting the NPA code from the routing DN returned from the SCP be inhibited? This office parameter is used for ASP (Advanced Services Platform) and SSP (Service Switching Point) 800 calls to indicate if the deleting of the NPA should be inhibited for the routing DN returned from the SCP (Service Control Point) database. At an SSP office a query is made to an external SCP database to obtain routing information necessary to complete the call. The NPA deletion is done before invoking digit analysis on the returned routing DN.

Software Release: 5E6 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.219 SCP 800 DAS

Description: Enter the DAS for retranslating the routing DN returned from the SCP. If the originator's DAS is not desired, this office parameter is used as the DAS (Digit Analysis Selector) for retranslating SSP (Service Switching Point) 800 calls after querying the external SCP (Service Control Point) database. At an SSP office, a query is made to an external SCP database to obtain routing information necessary to complete the call. This parameter is used to indicate where translations should begin in digit analysis for routing numbers that are returned from the SCP database. If this field is not entered, SCP 800 DAS will not be used for retranslating returned routing numbers; the originator's DAS will be used, except for the case where 800 calls are made via ASP. Then,

For 5E9(1) and later, the line DAS will be used as the originator's DAS since the ASP DAS no longer exists.

Software Release: 5E6 and later.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

For 5E9(1) and later, the SCP 800 DAS must be defined in the DIGIT ANALYSIS SELECTOR field on a DAS form (5300-1 Record).

MDII

The following fields (Section 2.220 - Section 2.222) define the office parameters for the Excessive MDII Alarm feature. For more information on this feature, see Division 2, Section 4C6.

2.220 MDII INTERVAL

Description: Enter the time interval, in minutes, to be used for counting the number of MDII (Machine Detected Interoffice Irregularities) which must be reached to generate an alarm. A value of 0 indicates that an alarm will not be generated.

Software Release: 5E6 and later.
Default: 0
Valid Entries: 0 - 127 (minutes)

2.221 MDII THRESHOLD

Description: Enter theMDII count threshold that must be exceeded to generate an alarm.

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Software Release: 5E6 and later.
Default: 20
Valid Entries: 1 - 255

2.222 MDII MJR ALARM

Description: Should an MDII major alarm be generated? This field indicates whether a major or minor alarm is generated when the MDII threshold is exceeded within the specified time interval. "N" indicates a minor alarm should be generated.

Software Release: 5E6 and later.
Default: N
Valid Entries: Y, N

FEATURE GROUP D

Fields Section 2.223 - Section 2.224 refer to Feature Group D.

2.223 FGD PHASE

Description: Enter the Feature Group D phase for the office.

WARNING: This field controls the ODP translation of CAC codes. Use of "POSTPHASE" will turn off 5-digit CACs. See Division 2, Section 1BI for more information on FGD CACs.

Software Release: 5E9(1) and later
Required Field.
Default: PREPHASE
Valid Entries:

Valid FGD PHASE Entries

Entry	Definition
PREPHASE or PR	Ordinary subscribers are allowed to dial the 10XXX CAC. Test lines will have the capability to dial the expanded CAC and be routed to the proper carrier. This phase does not impact dialing of 950 calls or any other features.
PERMPHASE or PE	Ordinary subscribers are allowed to dial either the 10XXX or the 101XXXX CAC on a call by call basis. This phase does not impact dialing of 950 calls or any other features.
POSTPHASE or PO	Ordinary subscribers are allowed to dial only the 101XXXX CAC. This phase does not impact dialing of 950 calls or any other features.

Data Rules:

If FGD PHASE equals "POSTPHASE", exactly one FIXRT form must exist with FIXED ROUTE TYPE set to "INVCAC"

2.224 TCAP CIC

Description: Will this office accept an expanded TCAP CIC (Carrier Identification Code)? The value of this field indicates to the SCP whether or not the SSP is capable of handling a four-digit CIC. A value of "Y" means that a 4-digit CIC is used; "N" means that the 3-digit CIC is still being used. For ASP queries, this field only applies to ASP Release 0.0. The ASP 0.1 (5E9(1)) protocol does not support this parameter.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

SPEECH ROUTING

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Field Section 2.225 refers to trunks with speech treatments.

2.225 SPEECH TRK GRPS

Description: This is a Recent Change / Verify only field on the 8.1 view which displays the number of trunk groups in the office which have speech treatments applied to them. Trunk groups which have speech treatments have the SPEECH TRMTS field set to "Y" on the TKGRP form, view 5.1 For more information on the Routing Based on Bearer feature, see Division 2, Section 1W on CCS7 IDSN UP (User Part) Enhancements.

Software Release: 5E9(1) and later

NETWORK RELEASE

The following field (Section 2.226) defines Software Releases for switches networked with the switch in this office.

2.226 OLDEST RELEASE

Description: The entry in this field indicates the oldest Software Release which is currently being run on any switch which is networked with the switch in this office. Some features require that every switch that communicates with the switch in this office be on the same or later Software Release. These features look at this parameter to determine when the feature can be active on the network and therefore active on this switch. These features cannot be active on this switch until this parameter indicates that all switches on the network are operating at the minimum Software Release needed to support the feature. This minimum Software Release level is referred to as the "Activation Level". As long as the entry in this field is greater than or equal to the feature's "Activation Level", the feature can safely be active on the network. Some optional features may also have a feature activation field which will not apply until after the "Activation Level" has been satisfied. If coordination is necessary, all switches on the network may update this field at the same time during periods of low call traffic.

The first one (or two) digits indicate the Software Release. The last two digits indicate the Software Update level within the current Software Release. This is an arbitrary designation and does not necessarily correspond to the actual number of Software Updates distributed to the field.

For example:
901 is entered for the first Software Release for 5E9(1). Later Software Updates in 5E9(1) which require network coordination would be represented by 902, 903, etc.

This field does not need to be updated unless it is required by a certain feature within that release.

- ***NOTE:*** Decreasing the value of this field could deactivate some features on the switch which are currently active. Increasing the value of this field by more than one will activate features for this value and features for the values that were skipped.

The following table lists features which use this field to determine when they are allowed to be active in the network. The activation level is the minimum software release level the network must be on before the feature can be active.

NETWORK	FEATURE	ACTIVATION LEVEL
FTS2000	INPA	901

Software Release: 5E9(1) and later.
Valid Entries: 1 - 9999

CKT SWITCHED TRUNK

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The following field describes an office parameter for Circuit Switched Trunks.

2.227 CST DAS

Description: Enter the circuit switched trunk digit analysis selector.

Software Release: 5E8 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

USTWC

The following fields (Section 2.228 - Section 2.231) define the parameters for the Usage-Sensitive 3-Way Calling feature. The fields also define parameters for the Spontaneous Usage-Sensitive 3-Way Calling feature.

2.228 USTWC FEAT

Description: Enter the Usage-Sensitive 3-Way Calling feature name. This parameter is being used to store the feature identifier for Usage Sensitive Three Way Calling. It will only be stored if the feature SFID (Secured Feature ID) 106 has been activated on the SFSYS form (5713-1 Record). If this parameter is stored, it will indicate that the feature is available in the office. This field also is used for the Spontaneous Usage-Sensitive 3-Way Calling feature. For more information on this feature, see Division 2, Section 4A156.

Software Release: 5E8 and later.
Valid Entries: 1 - 8 characters

Data Rules:

The Usage Sensitive Three-Way Calling feature is a Secured Feature that must be purchased by the office before data can be entered and/or changed for the USTWC fields on the OFCOPT form. If an SFSYS form does not have SFID 106 ACT set to "Y", then the field USTWC FEAT must not be entered and the fields USTWC ACT and USTWC CHRG must be set to "N".

For 5E9(1) and later:

- if USTWC FEAT is not entered, then SPONT AVAIL must be "UNAVAIL".
- if USTWC FEAT is entered and the SPONT AVAIL is "GENAVAIL" or "SUBSCR", then the USTWC FEAT field is used by the Spontaneous Usage Sensitive Three-Way Calling Special Feature and the feature name entered in this field must be defined on the MWFD form with the following:

  ACT/INACT OPTION is "ALWACT"

  AMAC is "USAGE"

  MULTIWAY CONTROL is "3WAY"

  FLASH ENTRY POINT is "Y"

  OFF HOOK ENTRY POINT is "N"

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- if SPONT AVAIL is "UNAVAIL", then USTWC FEAT field is used by the Usage Sensitive Three-Way Calling Special Feature. Therefore, the feature name entered in this field must be defined on the MWFD form with:

  ACT/INACT OPTION is "ACT1CA"

  AMAC is "USAGE"

  FLASH ENTRY POINT is "N"

  MULTIWAY CONTROL is "3WAY"

  OFF HOOK ENTRY POINT is "Y"

2.229 USTWC ACT

Description: Should Usage-Sensitive 3-Way Calling activation records be made? See Division 2, Section 4A106 for more information on Usage Sensitive Three-Way Calling Secured feature. This field also is used for the Spontaneous Usage-Sensitive 3-Way Calling feature. For more information on this feature, see Division 2, Section 4A156.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If SFID 106 is not set to "Y" on the SFSYS form, USTWC ACT must be "N".

2.230 USTWC CHRG

Description: Should Usage-Sensitive 3-Way Calling charge records be made? This field also is used for the Spontaneous Usage-Sensitive 3-Way Calling feature. For more information on this feature, see Division 2, Section 4A156.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If SFID 106 is not set to "Y" on the SFSYS form, USTWC CHRG must be "N".

2.231 SPONT AVAIL

Description: The SPONT AVAIL field is used to determine the type of availability for the Spontaneous Usage-Sensitive Three-Way Calling Feature. The SPONT AVAIL field was added to support the Spontaneous Usage-Sensitive Three-Way Calling Special Feature. This feature will be made available in

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a 5e9(1) Software Update (SU). For more information on this feature, see Division 2, Section 4A156.

Software Release: 5E9(1) and later.
Required Field.
Default: UNAVAIL
Valid Entries:

Valid SPONT AVAIL Entries

Entry	Definition
GENAVAIL	The Spontaneous USTWC feature is to be generally available to all users, with the exception of disabled lines.
SUBSCR	Feature is available only to those users who subscribe to use it (RC view 1.6, ODA LINE form).
UNAVAIL	Feature is not available in this office.

Data Rules:

"UNAVAIL" must be entered in this field if USTWC FEAT field is not entered.

This field supports the Spontaneous Usage Sensitive Three-Way Calling feature, which is a Secured Feature that must be purchased by the office before this field can be changed from the default value of "UNAVAIL". Therefore, the ACT field for SFID 156 on the SFSYS form (5713-1 Record) must be set to "Y" before this field can be entered.

NETWORK ACCESS INTERRUPT (NAI)

The following fields (Section 2.232 - Section 2.233) defines office parameters for the Toll NAI (Network Access Interrupt) secured feature.

2.232 TOLL

Description: Is the Network Access Interrupt feature for Toll active? This field supports the Toll NAI secured feature (SFID 380). For more information on the Toll NAI feature, see Division 2, Section 4A380.

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then NAI SUBSYS NBR must be entered.

2.233 SUBSYS NBR

Description: Enter the subsystem number used in direct signaling application for Toll NAI.

Software Release: 5E9(1) and later.
Valid Entries: 232 - 255

DNUS

The following field defines the office parameter for DNU-S

2.234 FI SWITCH INT

Description: Enter the minimum interval in days that the REX (Routine Exercise) is permitted to run without switching the SFIs (STSX-1 Facility Interfaces). A value of "OFF" means never switch. This parameter supports the DNU-S. For more information on DNU-S, see Division 2, Section 9C.

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Software Release: 5E9(2) and later.
Required Field.
Default: 28
Valid Entries: OFF or 1 - 360 (days)

OIU

The following field defines the office parameter for OIU.

2.235 OFI SWITCH INT

Description: The OFI SWITCH INT field is used to specify the minimum interval in days that REX (Routine EXercise) is permitted to run without switching the OFI (Optical Facility Interfaces). This field supports the OIU (Optical Interface Unit) feature. For more information on this feature, see Division 2, Section 7BQ.

Software Release: 5E16(2) and later.
Required Field.
Default: 28
Valid Entries: OFF or 1 - 360 (days)

2.236 OIU TDM CHBLK CNT

Description: The OIU TDM CHBLK CNT (Optical Interface Unit Time Division Multiplexing Channel Block Count) field is used to display the number of 672 channel blocks assigned to TDM OIUs in the office. This is a no change field. This field supports the OIU - IP (Optical Interface Unit - Internet Protoco) feature. This feature is made available in 5E16 Feature Release 3. (For more information on this feature, See Division 2, Section 7BX.)

Software Release: 5E16(2) and later
Required Field.
Default: 0
Valid Entries: 0 - 1152

2.237 OIU TDM CHBLK LMT

Description: The OIU TDM CHBLK LMT (Optical Interface Unit Time Division Multiplexing Channel Block Limit) field is used to display the maximum number of 672 channel blocks assigned to TDM OIUs in the office. This is a no change field. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature. This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

Software Release: 5E16(2) and later
Required Field.
Default: 0
Valid Entries: 0 - 1152

2.238 OIU IP CHBLK CNT

Description: The OIU IP CHBLK CNT (Optical Interface Unit Internet Protocol Channel Block Count) field is used to display the number of 672 channel blocks assigned to IP OIUs in the office. This is a no change field. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature. This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

Software Release: 5E16(2) and later
Required Field.
Default: 0

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Valid Entries: 0 - 1152

2.239 OIU IP CHBLK LMT

Description: The OIU IP CHBLK LMT (Optical Interface Unit Internet Protocol Channel Block Limit) field is used to display the maximum number of 672 channel blocks assigned to IP OIUs in the office. This is a no change field. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature. This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

Software Release: 5E16(2) and later.
Required Field.
Default: 0
Valid Entries: 0 - 1152

PHA

The following fields (Section 2.240 - Section 2.242) define the parameters for the Protocol Handler for PHA (Protocol Handler for Asynchronous Transfer) feature. For more information on this feature, see Divison 2, Section 4A224.

2.240 CONG1 QCAP

Description: Enter the percentage when the Congestion Level 1 Queue Capacity Threshold is exceeded for Protocol Handlers for ATM (Asynchronous Transfer Mode). Measurements are pegged when this threshold is exceeded.

Software Release: 5E10 and later.
Required Field.
Default: 50(%)
Valid Entries: 0 - 100 (%)

Data Rules:

CONG1 QCAP cannot be greater than CONG2 QCAP.

2.241 CONG2 QCAP

Description: Enter the percentage when the Congestion Level 2 Queue Capacity Threshold for Protocol Handlers for ATM (PHA) is exceeded. Measurements are pegged when this threshold is exceeded.

Software Release: 5E10 and later.
Required Field.
Default: 80 (%)
Valid Entries: 0 - 100 (%)

2.242 ATM LAYER

Description: Enter the Asynchronous transfer mode layer used to specify the physical layer used between PHAs (Protocol Handlers for Asynchronous Transfer Mode).

Software Release: 5E10 and later.
Required Field.
Default: SONET
Valid Entries:

Valid ATM LAYER Entries	
Entry	**Definition**

SONET	Synchronous Optical Network
SDH	Synchronous Digital Hierarchy

PHV

The following fields (Section 2.243 - Section 2.244) define the parameters for PHV (Protocol Handlers for Voice.) These fields support the CDMA (Code Division Multiple Access) feature. For more information on this feature see Division 2, Section 8B.

2.243 VOC TYPE

Description: Enter the rate of the vocoders on the PHV (protocol handlers for voice).

Software Release: 5E10 and later.
Required Field.
Default: 8 or 13 KBPS
Valid Entries:

Valid VOC TYPE Entries

Entry	Definition
8KBPS	8 kilobit per second vocoder
13KBPS	13 kilobit per second vocoder

2.244 REV QLTY THRESH

Description: Enter the CDMA reverse voice quality threshold. This threshold is used to determine when to peg the SH (Speech Handler) measurements associated with Low Quality Reverse Voice Call Intervals. Specifically, when the voice quality value of the reverse voice frame fed to the vocoder for the call interval is below this threshold, the appropriate measurement is pegged. This threshold is NOT used for SH reverse voice frame selection.

Software Release: 5E10 and later.
Required Field.
Default: 0
Valid Entries: 0 - 127

CNIS INTRAGROUP DELIVERY ONLY

The following field defines the office parameter for CNIGI (Calling Number Identification Services Intragroup Delivery Only) feature. For more information on this National ISDN 3 feature, see Division 2, Section 1AM.

2.245 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the Terminal Group Attendant and Data form, TGATTD (5611 Record, Recent Change view 4.4).

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COMMUNICATION MODULE

The following field supports the CM3 NxTMS feature (99-5E-4104). For more information on this feature see Division 2, Section 7BO.

2.246 TMS HUNT

Description: This field indicates the Time Multiplex Switch algorithm number.

Software Release: 5E16.2 and later
Default: 0
Valid Entries:

Valid TMS HUNT Entries - 5E16.2 and later

Mode	Name	Definition	Usage
1	Round Robin	Call paths are hunted in a rotation among all equipped TMSFP (including TMSFP 0).	Offices with all SM-2000s
2	Zero-last	Call paths are hunted in a rotation among all equipped TMSFP. TMSFP 0 is always hunted last.	Offices with SMs
0	Default	If the office has all SM-2000s then use mode 1. If the office has a mixture of SM 2000s and SMs then use mode 2.	Default for all offices.

The TMS Hunt value will be set to default (0) for new starts on or retrofits to 5E16.2. The option can be changed to lock in a mode (1 or 2)

CALL WAITING DELUXE

The following fields defines the office parameter for Call Waiting Deluxe. These fields support the Call Waiting Deluxe Phase II Feature. This is a secured feature with SFID 145. For more information on this feature, see Division 2, Section 4A145.

2.247 ALERT TYPE

Description: The Call Waiting Deluxe Alerting Type. The user and/or the CPE is alerted of an incoming call by way of a tone.

Software Release: 5E10 and later.
Default: CWD2
Valid Entries:

Valid ALERT TYPE Entries - 5E10 and later

Entry	Definition
OFCALERT	Office value
CWD	SAS only with non-ADSI per-call options allowed
CWD1	SAS & CAS with non-ADSI per-call options restricted
CWD2	SAS & CAS with non-ADSI allowed

2.248 DFLT OPT

Description: Default Service Option is a treatment applied to incoming calls when the user does not select a per-call option.

Software Release: 5E10 and later.
Default: CALLFWD
Valid Entries:

Valid DFLT OPT Entries - 5E10 and later

Entry	Definition
OFCDFLTOPT	Office value
	Continue providing waiting party audible ringing

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CALLFWD	Forward waiting call to CFDA destination
DEFANNC	Connect waiting call to default announcement

2.249 USG SENS CONF

Description: Usage Sensitive Conference is used to track the usage of conferencing.

Software Release: 5E10 and later.
Default: N
Valid Entries:

Valid USG SENS CONF Entries - 5E10 and later

Entry	Definition
OFCCONF	Office value
N	Do not provide usage sensitive AMA for conferencing on this line
Y	Provide usage sensitive AMA for conferencing on this line

2.250 SUPV ANNC

Description: Answer Supervision on Per-call Announcement will charge for each time announcement is used.

Software Release: 5E10 and later.
Valid Entries: Y, N
Default Value: Y

2.251 DFLT ANNC

Description: Determines if answer supervision shall be provided for the default announcement.

Software Release: 5E10 and later.
Default: Y
Valid Entries: Y, N

2.252 HOLD ANNC

Description: Determines if answer supervision shall be provided at the beginning or ending of Hold Announcement.

Software Release: 5E10 and later.
Default: BEGOFANNC
Valid Entries:

Valid HOLD ANNC Entries - 5E10 and later

Entry	Definition
BEGOFANNC	Provide answer supervision at the beginning of the hold annc.
ENDOFANNC	Provide answer supervision at the end of hold annc.

2.253 FLASH TIMER

Description: Maximum amount of time the switch mutes the voice-path after it detects a flash signal from a non-ADSI compatible CPE while a call is on hold. If the flash timer expires before a DTMF tone is detected, the switch performs the RETURN treatment. The flash timer is stopped when the system detects a valid DTMF tone.

Software Release: 5E10 and later.
Default: 1.5 seconds
Valid Entries: Enter a value from 1 to 8 seconds (increments of 0.5 seconds)

2.254 DFLT TIMER

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Description: Amount of time the switch waits before providing CWD default treatment, if the CWD customer has not selected a CWD per-call option or the waited party has not disconnected. The default timer is started after the switch sends the re-alerting tone. The default timer is stopped when the system detects a flash or the waiting party disconnects.

Software Release: 5E10 and later.
Default: 15 seconds
Valid Entries: Enter a value from 0 to 110 seconds (increments of 1 seconds)

2.255 HOLD TIMER

Description: The interval from when a held party is connected to a silent termination until it is connected, or re-connected, to a reminder announcement.

Software Release: 5E10 and later.
Default: 60 seconds
Valid Entries: 0 - 120 seconds (increments of 1 second)

2.256 PRODUCT

Description: Enter Product Architecture Type.

Software Release: 5E10 and later.
Default: 5ESS
Valid Entries:

Valid PRODUCT Entries - 5E10 and later

Entry	Definition
5ESS	Standard 5ESS office.
VCDX	Very Compact Digital Exchange.
WNC	Wireless NetworkCentrex.
DRM	Distinctive Remote Module. For more information see Division 2, Section 4A525.

Data Rules:

If PRODUCT is "VCDX", all trunk groups with DCS TRK on the TKGRP form equal to "Y" must also have LOCAL MOD specified. If PRODUCT is other than "VCDX", all trunk groups with DCS TRK equal to "Y" must leave LOCAL MOD blank.

For 5E11 and later, when VCDX OFFICE is set to "Y" on the EQCORE form and TRKCLS on the TKGRP form (5202-1/2 Record) is not in the table below, then LOCAL SM on the TKGRP form must be known.

For 5E14 and later, when the REMOTE MODULE has RALM forms for various Alarm Scan Points (0-54) defined and the PRODUCT field on the OFCOPT form is set to "DRM", ALARM INPUT OPT must be "Y" on the OFCOPT form.

For 5E14 and later, when the REMOTE MODULE has RALM forms for Alarm Scan Points 100 through 113 defined and the PRODUCT field on the OFCOPT form is set to "DRM", ALARM OUTPUT OPT must be "Y" on the OFCOPT form.

For 5E14 and later, if the value of PRODUCT on the OFCOPT form is either "VCDX" or "DRM", then all TKGRP forms with DCS TRK equal to "Y" must have LOCAL SM specified. If the value of PRODUCT on the OFCOPT form is not "VCDX" or "DRM", then all TKGRP forms with DCS TRK equal to "Y" must have LOCAL SM null.

LOCAL SM Entries
Software Release: 5E11 and later

Data Condition	Trunk Group Definition
TRKCLS[1,3] = "LTP"	Local Test Port Trunk
TRKCLS = "EDS" and RDTA GRP = "Y"	Extended Digital Subscriber RDTA Trunk TRKCLS = "INAISTRK"

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TRKCLS = "RMSD3"	TAT connected to RSM-D3 Trunk
TRKCLS = "TOPAS"	Test Access Trunk - TOPAS Interface

For 5E10 and later, when WNC is entered, a WCTXOPT form must be entered with a SITE ID of 0.

When "WCN" is entered, an action of "FLASH" must be entered on the SRVCDESC form (5985 Record) to indicate the WCTX Wireless Flash feature.

For 5E13 and later, when PRODUCT is "WNC", then TANDEM CUT on the ICF form must be "N".

LONG DISTANCE PLATFORM

Prior to 5E12, this was the TOLL DIGITAL EXCHANGE field group, the field group name was changed to LONG DISTANCE PLATFORM.

The following fields define Long Distance Platform parameters used in a LDP (Long Distance Platform) office. This is a secured feature with SFID 165. For more information on this feature, see Division 2, Section 4A165.

2.257 TDX CARRID

Description: With 5E12 and later, this field name is changed to LDP CARRID. Enter the Toll Exchange Carrier Identification number. This field supports the Toll Digital Exchange Basic Call Processing Feature used in a LDP office.

Software Release: 5E10 through 5E11.
Valid Entries: 0 - 9999

Data Rules:

When TDX CARRID is entered, the CARRIER ID must be defined on the ICF form, and FEAT GRP on the ICF form must equal "D".

The TDX CARRID field can not be set to "0" when any trunk group defined in the office has TDX set to "Y" on the TKGRP form.

2.258 LDP CARRID

Description: Prior to 5E12, this was the TDX CARRID field. With 5E12 and later, this field name was changed to LDP CARRID. Enter the Long Distance Platform Identification number. This field supports the Long Distance Platform Basic Call Processing Feature used in a LDP office.

Software Release: 5E12 and later.
Valid Entries: 0 - 9999

Data Rules:

When LDP CARRID is entered, the CARRIER ID must be defined on the ICF form, and FEAT GRP on the ICF form must equal "D".

The LDP CARRID field cannot be set to "0" when any trunk group defined in the office has LDP set to "Y" on the TKGRP form.

2.259 LDP OFFICE ID

Description: The LDP OFFICE ID is used to populate the office ID in the NST (Network Specific Termination) parameter. For more information, see Division 2, Section 4A287.

Software Release: 5E13 and later.

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Valid Entries: 1 - 255, or leave blank.

2.260 NST ALL

Description: Send the NST (SS7 Network Specification Termination) parameter on all (ACM, CPG, and REL) messages, should the other conditions for sending the parameter be met? For more information, see Division 2, Section 4A287.

Software Release: 5E13 and later.
Valid Entries: Y, N
Default Value: N

2.261 ACCT PROMPT

Description: The ACCT PROMPT field specifies the toll account prompt. The ACCT ANNC field was removed. The ACCT PROMPT and CARRIER TONE fields were added to support the 400Hz Carrier Tone feature. For more information on this feature see Division 2, Section 4A165.

Software Release: 5E13 and later
Default: BEEP2
Valid Entries:

Valid ACCT PROMPT Entries

Entry	Definition
ANNC	SAS (Service Announcement System announcement)
BEEP2	Prompt of two audible beeps
CARRIER	400Hz carrier tone.

Data Rules:

When ACCT PROMPT is "CARRIER", CARRIER TONE must be "Y".

For 5E13 later, when the OFCOPT form has ACCT PROMPT set to "ANNC", exactly one FIXRT form must exist with FIXED ROUTE TYPE set to "TACCT".

2.262 CARRIER TONE

Description: The CARRIER TONE field specifies whether the 400Hz Carrier Tone should be provided as a system tone. Should 400Hz Carrier Tone be provided as a system tone?
Default: N
Valid Entries: Y, N

2.263 ACCT ANNC

Description: Should Account Code Announcement Indicator be provided by the Service Announcement System?

For 5E13 and later, this field is changed to ACCT PROMPT.

Software Release: 5E11 through 5E12
Valid Entries: Y, N
Default Value: N

Data Rules:

When the OFCOPT form has ACCT ANNC set to "Y", exactly one FIXRT form must exist with FIXED ROUTE TYPE set to "TACCT".

2.264 NSC WC ID

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Description: The NSC WC ID field is used to specify the LDP (Long Distance Platform) network selection code context ID. If the Context ID, the first three digits of the AMA Digits Dialed WC parameter, returned from the SCP is the same as the NSC WC ID, the remaining digits in the AMA Digits Dialed WC parameter will be treated as a T-NSC (Terminating Network Selection Code). If the two values being compared do not match, the remaining digits will be treated as AMA digits. For more information, see Div. 2, Sec. 4A217.

Software Release: 5E12 and later.
Valid Entries: 0 - 999, or leave blank.

2.265 ORIG NSC

Description: The ORIG NSC field is used to specify the LDP originating network selection code and must be entered for the MINT-ALPHA feature.For more information see, Div. 2, Sec. 4A217.

Software Release: 5E12 and later.
Valid Entries: 0 - 999, or leave blank.

2.266 TERM NSC

Description: The TERM NSC field is used to specify the LDP terminating network selection code. For more information, see Div. 2, Sec. 4A217.

Software Release: 5E12 and later.
Valid Entries: 0 - 999, or leave blank.

Data Rules:

When the MINT-ALPHA feature is purchased by the office with SFID 217 ACT set to "Y" on the SFSYS form, TERM NSC on the OFCOPT form and the corresponding LDPTNSC form must be entered.

2.267 TEST CALL TNSC

Description: The TEST CALL TNSC field is used to specify the LDP test call terminating network selection code. For more information, see Div. 2, Sec. 4A217.

Software Release: 5E12 and later.
Valid Entries: 0 - 999, or leave blank.

Data Rules:

When the MINT-ALPHA feature is purchased by the office with SFID 217 ACT set to "Y" on the SFSYS form, TEST CALL TNSC on the OFCOPT form and the corresponding LDPTNSC form must be entered.

2.268 LDP ANI

Description: The LDP ANI field is used to indicate which ANI table is used. If "Y" the ANITABLE form is used, if "N" the ANITBL form is used.

For more information see Division 2, section 4A165.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E13, when TRKCLS on the TKGRP form is "IC", "LATA" or "TTOLLCON", and LDP on the TKGRP form is "Y" and LDP ANI on the OFCOPT form is "N", then there must exist an ANITBL form with NPA equal to 000, NXX equal to 000 and LINE equal to 0000.

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INCREASED TGN

The following fields define the Increase Number of Trunk Groups to 4000 feature. This is a secured feature with SFID 172. For more information on this feature, see Division 2, Section 4A172.

2.269 MAX TGN

Description: The MAX TGN field is used to specify the maximum number of trunk groups in this office.

Software Release: 5E11 and later.
Valid Entries: 2000, 4000
Default Value: 2000

Data Rules:

The Increase Number of Trunk Groups to 4000 is a secured feature that must be purchased by the office before MAX TGN can be set to 4000 on the OFCOPT form. A SFSYS form must exist with SFID 172 ACT set to "Y".

The TGN entered on the TKGRP form must be less or equal to the value of MAX TGN on the OFCOPT form.

2.270 MAX RTIDX

Description: The MAX RTIDX field is used to specify the maximum number of route indices in this office.

Software Release: 5E11 and later.
Default: 3617
Valid Entries:

For 5E13 and later: 3617, 4095 , 16382

Data Rules:

This field supports the Increase Number of Trunk Groups to 4000 secured feature that must be purchased by the office before MAX RTIDX can be set to 4095 on the OFCOPT form. A SFSYS form must exist with SFID 172 ACT set to "Y".

The MC ROUTE INDEX on the MCRTIDX form and the ROUTE INDEX on the RTIDX form must be less or equal to the value of MAX RTIDX on the OFCOPT form.

When MAX RTIDX is set to 16382, the ACT field for SFID 289 must be set to "Y" on the SFSYS form.

LOCAL NUMBER PORTABILITY

The following field defines a parameter for the Local Number Portability feature. This is a secured feature with SFID 174. For more information on this feature, see Division 2, Section 4A174.

2.271 JIP

Description: Enter 6 digits NPA-NXX of the form (0-9) (0-9) (0-9) (0-9) (0-9) (0-9). This field defines the Jurisdiction Information Parameter. The JIP field is used to specify the ISUP parameter included in the IAM (Initial Address Message). It contains the NPA-NXX of a designated LRN (Location Routing Number) on the originating switch. The JIP is needed to allow carriers to determine the switch of the originating service provider so the bill can be sent to the correct company.

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Software Release: 5E11 and later.
Valid Entries: A 6-digit number

Data Rules:

If JIP is entered, SFID 174 ACT on the SFSYS form must be "Y".

2.272 DFLT FLAT RATE

Description: The DFLT FLAT RATE field is used to indicate whether or not flat rate AMA records should be generated.

Software Release: 5E11 and later.
Valid Entries:

Valid DFLT FLAT RATE Entries

Entry	Definition
C for COND	Conditional generation of flat rate record when a LRN is received in the NP response message.
N for NONE	Never generate a flat rate record.
U for UNCOND	Unconditional generation of flat rate records whenever an LNP query is performed without failure or errors.

2.273 DFR STRCT CODE

Description: The DFR STRCT CODE field is used to specify which structure code is to be used for the generation of a flat rate AMA record.

SoftwareRelease: 5E11 and later.
Valid Entries: 001 or 500

REORDER THRESHOLDS

The following fields (Section 2.274 - Section 2.276) provide an alarm on a per SM basis when the "re-order" count (the number of incompleted calls routed for retry (re-order) reaches the defined threshold. Calls may be re-ordered due to a busy trunk, lack of proper engineering or overload situation, software/hardware resource limitations, and/or database inconsistencies.

2.274 RCR MINOR

Description: The RCR MINOR field is used to specify the minor Reorder Count Ratio alarm threshold in this office.

Software Release: 5E11 and later.
Default: 0
Valid Entries: 0 - 253 (0 to deactivate)

Data Rules:

RCR MINOR must be less than RCR MAJOR.

RCR MINOR, RCR MAJOR, and RCR CRITICAL must be all 0 or all greater than 0.

2.275 RCR MAJOR

Description: The RCR MAJOR field is used to specify the major Reorder Count Ratio alarm threshold in this office.

Software Release: 5E11 and later.
Default: 0

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Valid Entries: 0, or 2 - 254 (0 to deactivate)

Data Rules:

RCR MAJOR must be less than RCR CRITICAL.

RCR MINOR, RCR MAJOR, and RCR CRITICAL must be all 0 or all greater than 0.

2.276 RCR CRITICAL

Description: The RCR CRITICAL field is used to specify the critical Reorder Count Ratio alarm threshold in this office.

Software Release: 5E11 and later.
Default: 0
Valid Entries: 0, or 3 - 255 (0 to deactivate)

RCR MINOR, RCR MAJOR, and RCR CRITICAL must be all 0 or all greater than 0.

LDCW TREATMENT

The following field defines the office papameter for the Long Distance Call Waiting feature.

2.277 LDCW TRMT

Description: Are SS7 calls without Calling Party Number information to be treated as local calls for the Long Distance Call Waiting Feature? Enter "N" for Long Distance Calls or "Y" for Local Calls. This field supports the Enhanced Long Distance Call Waiting Feature. For more information on this feature see Division 2, Section 4A91.

Software Release: 5E10 and later.
Default: N
Valid Entries: Y, N

2.278 SIGIOPT

Description: Investigate abnormal signaling? This field is a no change field and defaults to "Y".

Software Release: 5E11 and later
Required Field.
Default Value: Y
Valid Entries: Y, N

ISUP/BICC QRY OPTIONS

The following fields define the office parameters for the Circuit Query Options for the CCS7-PSU for EXM/SM-2000 feature. Refer to Division 2, Section 9L for more information on this feature.

2.279 CQM RSND

Description: This parameter specifies the circuit query timer value (in seconds) used when waiting for a reply to a Circuit Query Message.

Software Release: 5E12 and later.
Default: 10
Valid Entries: 10 - 15 in seconds

2.280 CQ START TIME

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Description: This field has been replaced by CQ/BQ START TIME.

2.281 CQ/BQ START TIME

Description: This parameter specifies the circuit query (5E12 and later)/BICC CIC Query (5E15 and later) start time value. It is used to define the hours that the daily automatic office wide circuit query and the BICC CIC query will begin. The BICC group query was added to support Feature 99-5E-7555.D. See Division 2, Section 4A567 for more information.

Software Release: 5E12 and later
Default: 3
Valid Entries: 0 - 23 (blank means query is off)

NPA-NXX GROWTH

2.282 ASI SID 10

Description: The ASI SID 10 field is used to indicate whether the default directory number associated with the ASI (Advanced Services Interface) subscriber to the IP (Intelligent Peripheral) on this switch should be displayed as 10 digits or 7 digits. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and later, the ASI SID 10 field on the OFCOPT form is used by the Number Portability - NPA-NXX Growth feature. This is a secured feature that must be purchased by the office before data can be changed from the default value. An SFSYS form must exist with SFID 198 set to "Y".

2.283 ROP DISP DN 10

Description: The ROP DISP DN 10 is used to indicate whether the switch is displaying the full 10 digits of a DN (Directory Number) whenever DNs are printed on the ROP. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

RTCD OPTIONS

2.284 BILL SM

Description: The BILL SM is used to display the global billing SM (Switching Module) for the RTCD (Real Time Call Detail) platform. For more information, see Division 2, Section 4A245.

Software Release: 5E12 and later.
Default: Null
Valid Entries: 0 - 192 (0 indicates there is no global billing SM)

2.285 RTCD OFC

Description: The RTCD OFC field is used to indicate on a per office basis, whether or not RTCD billing

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records are generated. For more information, see Division 2, Section 4A245.

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries: Y,N

Data Rules:

For 5E12 and later, when RTCD OFC on the OFCOPT form is set to "Y", SFID 245 must be set to "Y" on the SFSYS form.

2.286 RTCD ALM

Description: The RTCD ALM field is used to indicate on a per office basis, whether or not alarms are activated during stand-alone billing. These alarms will sound when the RTCD records that have been written to the stand-alone billing memory have filled the available RTCD memory space to the defined thresholds. For more information, see Division 2, Section 4A245.

Software Release: 5E12 and later.
Required Field.
Default: Y
Valid Entries: Y,N

2.287 SCP TREC

Description: The SCP TREC field is used to determine how billing information should be recorded for SCP transactions. For more information, see Division 2, Section4A245.

Software Release: 5E13 and later.
Valid Entries:

Valid SCP TREC Entries

Entry	Definition
AMAONLY	Use the AMAslpID for AMA records only.
RTCDAMA	Use the AMAslpID for AMA and RTCD records.
RTCDONLY	Use the AMAslpID for RTCD records only.

PSU TRUNKS

2.288 PP IDLE

Description: Enter the time in seconds indicating the time without flags before Packet Pipes go idle.

This office parameter indicates the time without flags before packet pipe trunk members will go to the state of idle channel. When the PH being used by a packet pipe trunk member detects that a previously active packet pipe has gone idle at layer 1 (i.e. no 0/1 transitions), an "idle" timer of duration PP IDLE is started. If the "idle" timer expires before any activity is detected on the packet pipe, the "idle" condition of the packet pipe is reported to TM (Terminal Maintenance). TM reports the status of the packet pipe as "OOS BLKD IDLE".

This field was added to support the CDMA Data Services - Circuit Mode feature for 5E12 and later. For more information on this feature, see Division 2, Section 8F.

Software Release: 5E12 and later.
Required Field.
Default: 4
Valid Entries: 1 - 30 seconds

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2.289 PER RATE

Description: Enter the Protocol Error Record leak rate for speech handler trunks.

This office parameter indicates the PER (Protocol Error Record) leak rate for the speech handler channel trunks. The parameter applies to all trunks on a switch. The leak rate represents the number of PERs to be leaked in a period of time. Example: If the value of this global parameter is set to 5 and the time interval is 3 minutes, then every 3 minutes 5 PERs will be leaked.

This field was added to support the CDMA Data Services - Circuit Mode feature for 5E12 and later. For more information on this feature, see Division 2, Section 8F.

Software Release: 5E12 and later.
Required Field.
Default: 5
Valid Entries: 0 - 255

2.290 PER THRESH

Description: Enter the Protocol Error Record threshold for speech handler trunks.

This office parameter indicates the PER (Protocol Error Record) error threshold for speech handler channel trunks. The parameter applies to all the trunks on a switch. A report is generated when the defined PER threshold value is met. Example: If this global parameter is set to 15, then when the PER count for a trunk reaches 15 a report is generated. An internal counter is reset so that the next report is only generated when a new PER count of 15 is reached.

This field was added to support the CDMA Data Services - Circuit Mode feature for 5E12 and later. For more information on this feature, see Division 2, Section 8F.

Software Release: 5E12 and later.
Required Field.
Default: 15
Valid Entries: 0 - 255

2.291 PER 3G RATE

Description: Enter the PER (Protocol Error Record) CDMA Third Generation leak rate.

This office parameter indicates the PER leak rate for CDMA Third Generation 1X High Speed Data trunks. The parameter applies to all trunks on a switch. The leak rate represents the number of PERs to be leaked in a period of time. For example, if the value of this global parameter is set to "5" and the time interval is 3 minutes, then every 3 minutes, 5 PERS are leaked.

This field was added to support the CDMA 3G1X High Speed Data feature for 5E15 and later. For more information on this feature, see Division 2, Section 8Z.

Software Release: 5E15 and later.
Required Field.
Default: 5
Valid Entries: 0 - 255

2.292 PER 3G THRESH

Description: Enter the Protocol Error Record CDMA Third Generation threshold.

This office parameter indicates the PER error threshold for CDMA Third Generation 1X High Speed Data trunks. The parameter applies to all the trunks on a switch. A report is generated when the defined PER

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threshold value is met. For example, if this global parameter is set to "15", then when the PER count for a trunk reaches 15, a report is generated. An internal counter is reset so that the next report is only generated when a new PER count of 15 is reached.

This field was added to support the CDMA 3G1X High Speed Data feature for 5E15 and later. For more information on this feature, see Division 2, Section 8Z.

Software Release: 5E15 and later.
Required Field.
Default: 15
Valid Entries: 0 - 255

2.293 PRIM VOC ALG

Description: Enter the Primary Voice Decoder Algorithm.

The PRIM VOC ALG field is used to specify the primary (default) voice 1 decoder (vocoder) algorithm. This algorithm is only used for voice decoder channel groups (defined by PH TYPE on the PSUGP form (5949 Record)) that can be associated with more than one GRP TYPE on the PSUGP form. It is used to set the GRP TYPE when an ADT (AUTOPLEX Data Trunk) is assigned to the channel group before a CVT (CDMA Voice Trunk) is assigned to the channel group. Example: Suppose that PH TYPE "PHV3" is able to handle the 8K, 13K, and EVRC algorithms, which means that GRP TYPE could get set to "CQ8CG", "CQ13CG", or "EVRCCG". Also suppose that this PH has been assigned on the PSUGP form, but has not been used yet by any trunk group member (so GRP TYPE is currently NULL). If the first trunk group member assignment to this PHV3 is an ADT and PRIM VOC ALG is set to "8K", the GRP TYPE will get set to "CQ8CG" for that channel group. (This means that CVT trunks subsequently assigned to this channel group must also have SERV TYPE "8K" on the TKGRP form (5202 Record))

This field was added to support the CDMA Data Services - Circuit Mode feature for 5E12 and later. For more information on this feature, see Division 2, Section 8F.

Software Release: 5E12 and later.
Required Field.
Default: EVRC
Valid Entries:

Valid PRIM VOC ALG Entries - 5E12 and later

Entry	Definition
8K	8 KB channel group.
13K	13 KB channel group.
EVRC	EVRC algorithm channel group.

2.294 SEC VOC ALG

Description: Secondary Voice Decoder Algorithm.

This field is used to specify the default voice decoder (vocoder) algorithm for the first data (ADT) trunk group member on a PHV5 where no voice trunk has been assigned on the same channel group.

This field was added to support the Dynamic Allocation of Vocoders on PHV5 feature for 5E16 and later. (For more information on this feature, see Division 2, Section 8Y.)

Software Release: 5E16 and later.
Required Field.
Default: CEV13
Valid Entries:

Valid SEC VOC ALG Entries - 5E16 and later

Entry	Definition
13K	13K voice service for SPCHNDLR trunk groups.

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ACELP	Algebraic Code Excited Linear Predictive Algorithm Vocoder
CEV13	Service type for CDMA EVRC and 13K Vocoder.
EVRC	Enhanced Variable Rate Coding for SPCHNDLR trunk groups.
TACVS	Service type for TDMA ACELP and VSELP Vocoder.
VSELP	Vector Sum Excited Linear Predictive Algorithm Vocoder.

Data Rules:

- ***NOTE:*** A SEC VOC ALG of "TACVS" is not currently supported. The valid entry "TACVS" for this field may potentially be supported for future use.

FRBC LEV 3 PER

The following fields define the Frame Relay Bearer Channel Level 3 Protocol Error Record Minimum and Maximum Thresholds.

These fields were added to support the CDMA Data Services - Circuit Mode feature for 5E12 and later. For more information on this feature, see Division 2, Section 8F.

2.295 MIN THRESH

Description: Enter the Frame Relay Bearer Channel Level 3 Protocol Error Record Minimum Threshold.

This office parameter indicates the minimum (troubled) threshold for service-affecting level 3 errors on FRBC (Frame Relay Bearer Channel) trunks for the entire switch. When this threshold is reached, an entry for this FRBC trunk will be placed in a table that tracks FRBCs experiencing errors and the entry is timestamped. If the maximum threshold is reached, the current time and the timestamp of the table entry are compared. If the difference is less than a pre-defined time, the FRBC is taken out-of-service. If the time difference is greater than the pre-defined time, then the error count is decremented by a pre-defined amount.

Software Release: 5E12 and later.
Required Field.
Default: 500
Valid Entries: 1 - 2047

Data Rules:

MIN THRESH must be less than MAX THRESH

2.296 MAX THRESH

Description: Enter the Frame Relay Bearer Channel Level 3 Protocol Error Record Maximum Threshold.

This office parameter indicates the maximum (remove) threshold for service-affecting level 3 errors on FRBC (Frame Relay Bearer Channel) trunks for the entire switch. When the minimum (troubled) threshold is reached, an entry for this FRBC trunk will be placed in a table that tracks FRBCs experiencing errors and the entry is timestamped. If the maximum threshold is reached, the current time and the timestamp of the table entry are compared. If the difference is less than a pre-defined time, the FRBC is taken out-of-service. If the time difference is greater than the pre-defined time, then the error count is decremented by a pre-defined amount.

Software Release: 5E12 and later.
Required Field.
Default: 900
Valid Entries: 1 - 2047

TALKING CALL WAITING

The following fields (Section 2.297 - Section 2.307) were added to support the Talking Call Waiting feature

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for 5E12 and later. For more information on this feature, see Division 2, Section 4A331.

2.297 ANS TIMER

Description: This field is used to indicate the maximum amount of time in seconds that the switch waits for the IP (Intelligent Peripheral) to answer.

Software Release: 5E12 and later
Default: 2
Valid Entries: 0.1 - 10.0

Data Rules:

When ANS TIMER is not equal to 2.0, DN1 or DN2 must be entered.

For 5E14 and earlier, when ANS TIMER is set to a value other than 2, the ACT field for SFID 331 on the SFSYS form (5713-1 Record) must be set to "Y".

2.298 DISC TIMER

Description: This field is used to indicate the maximum amount of time in seconds that the switch waits for the IP (Intelligent Peripheral) to disconnect.

Software Release: 5E12 and later
Default: 3
Valid Entries: 0.1 - 10.0

Data Rules:

When DISC TIMER is not equal to 3.0, DN1 or DN2 must be entered.

For 5E14 and earlier, when DISC TIMER is set to a value other than 3, the ACT field for SFID 331 on the SFSYS form must be set to "Y".

2.299 DN1

Description: The DN1 (Directory Number 1) field indicates the DN of the Intelligent Peripheral which provides the call waiting tone and spoken name of the calling party to the TCW subscriber. The DN must be translated correctly on the LDIT/RDIT forms (5300-3, 5300-7 Records) so that a call to this DN terminates to the IP.

Software Release: 5E12 and later
Valid Entries: 0 - 9 (up to 18 digits)

Data Rules:

When DN1 is entered, TCW DAS and TCW SCR must both be entered.

When DN1, DN2, TCW DAS, or TCW SCR is entered, the ACT field for SFID 331 on the SFSYS form (5713-1 Record) must be set to "Y".

2.300 DN2

Description: The DN2 (Directory Number 2) field indicates the DN of the Intelligent Peripheral which provides the spoken name only of the calling party to the TCW subscriber. The DN must be translated accurately on the LDIT/RDIT forms (5300-3/5300-7 Records) so that a call to the DN terminates to the IP. The subscriber subscribes to CWT (Call Waiting Terminating), TCW, and CIDCW (Caller ID on Call Waiting). If CIDCW overrides Caller ID, TCW is not invoked.

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Software Release: 5E12 and later
Valid Entries: 0 - 9 (up to 18 digits)

Data Rules:

When DN is entered, TCW DAS and TCW SCR must both be entered.

NOTE: DN1/DN2 should not be any special number (e.g., 800/888) that results in a query to an external system (e.g., STP/SCP (Signal Transfer Point/Service Control Point). No AIN (Automatic Identification Number) triggers should be assigned to the DN1/DN2. In both of these cases normal CW (Call Waiting) tone (instead of talking) will be provided to the subscriber.

DN1/DN2 should be translated correctly on PDIT/LDIT/RDIT (5300-2, 5300-3, 5300-7 Records) and on the RAR (5301 Record) forms so that a call to these DNs terminates to the IP (Intelligent Peripheral) using LEC(Local Exchange Carrier) facility and the call becomes a free call (if the TELCO (Telephone Company) wants no AMA (Automatic Message Accounting)).

2.301 DNB

Description: This field is used by the Talking Call Waiting - Distinctive Call Waiting Tones feature to indicate the DN (Directory Number) of the Intelligent Peripheral which provides the call waiting tone pattern "B". The DNB field on this form supports the Talking Call Waiting - Distinctive Call Waiting Tones feature. This is a secured feature, therefore the ACT field for SFID 590 must be set to "Y" on the SFSYS form (5713-1 Record) before this field can be entered. (For more detailed information on the Talking Call Waiting - Distinctive Call Waiting Tones feature, see Division 2, Section 4A590.)

Software Release: 5E16 and later.
Valid Entries: Blank, or enter 1 - 18 digits of 0 - 9

Data Rules:

When DNB, DNC, or DNG is entered, DN1, TCW DAS and TCW SCR must be entered.

2.302 DNC

Description: This field is used by the Talking Call Waiting - Distinctive Call Waiting Tones feature to indicate the DN of the Intelligent Peripheral which provides the call waiting tone pattern "C". The DNC field on this form supports the Talking Call Waiting - Distinctive Call Waiting Tones feature. This is a secured feature, therefore the ACT field for SFID 590 must be set to "Y" on the SFSYS form (5713-1 Record) before this field can be entered. (For more detailed information on the Talking Call Waiting - Distinctive Call Waiting Tones feature, see Division 2, Section 4A590.)

Software Release: 5E16 and later.
Valid Entries: Blank, or enter 1 - 18 digits of 0 - 9

Data Rules:

When DNB, DNC, or DNG is entered, DN1, TCW DAS and TCW SCR must be entered.

2.303 DNG

Description: This field is used by the Talking Call Waiting - Distinctive Call Waiting Tones feature to indicate the DN of the Intelligent Peripheral which provides the call waiting tone pattern "G". The DNG field on this form supports the Talking Call Waiting - Distinctive Call Waiting Tones feature. This is a secured feature, therefore the ACT field for SFID 590 must be set to "Y" on the SFSYS form (5713-1 Record) before this field can be entered. (For more detailed information on the Talking Call Waiting - Distinctive Call

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Waiting Tones feature, see Division 2, Section 4A590.)

Software Release: 5E16 and later.
Valid Entries: Blank, or enter 1 - 18 digits of 0 - 9

Data Rules:

When DNB, DNC, or DNG is entered, DN1, TCW DAS and TCW SCR must be entered.

2.304 TCW DAS

Description: The TCW DAS (Talking Call Waiting Digit Analysis Selector) is a number that indicates which digit interpreter tables to use for analyzing the incoming digit stream for a call used to make a connection to the IP. TCW DAS is used to determine which PDIT/LDIT/RDIT is to be used by digit analysis to route the call to IP (DN1/DN2) overriding the TCW subscriber's line DAS. The PDIT/LDIT/RDIT provides Code Index, TYPE OF CI CALL, and Route Index (or Office Code) for the call to DN1/DN2. TCW DAS could be an existing DAS (preferred) or a new DAS. The DAS must be defined on the DAS form (5300-1 Record).

Software Release: 5E12 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When TCW DAS is entered, then DN1 or DN2, and TCW SCR must be entered.

When TCW DAS is entered, that TCW DAS must be defined on the DAS form (5300 Record).

2.305 TCW SCR

Description: The TCW SCR (Talking Call Waiting Screening Index) field is used for digit analysis when making a connection to the IP. This value is also used to access information for routing and charging. TCW SCR is used to point to the RAR form where a Charge Index is assigned to the Code Index (from PDIT/LDIT/RDIT) associated with the DN1/DN2 for billing the call to DN1/DN2. TCW SCR overrides the subscriber's line SCR.

The Charge Index is then expanded on CGIDX form (5302-1 Record) where the AMA CALL TYPE is set to "FREE" resulting in no AMA record generation for the call to DN1/DN2.

TCW SCR could be an existing SCR (preferred) or a new SCR.

The SCR must be defined on the RAR form.

The "FREE" Charge Index could be an existing one or a new one.

Software Release: 5E12 and later
Valid Entries: 1 - 4095

Data Rules:

When TCW SCR is entered, then DN1 or DN2, and TCW DAS must be entered.

When TCW SCR is entered, then TCW SCR must be defined on at least one RAR form (5301 Record) as SCR.

NOTE: The DN1/DN2 must be translated first on the PDIT/LDIT forms and then on the RDIT

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form with a unique Code Index and a TYPE OF CI CALL equal "NORMAL" on the RDIT form. This unique Code Index can then be entered on the RAR form (corresponding to TCW SCR) for the correct prefix of DN1/DN2, to provide a "FREE" Charge Index.

2.306 TCW SUPPRESS AMA

Description: This field is used to indicate whether AMA (Automatic Message Accounting) billing should be suppressed for TCW (Talking Call Waiting) calls.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E14 and later:

When TCW SUPPRESS AMA is entered, this value must be defined on the ICF form (5305 Record).

When TCW SUPPRESS AMA is "Y", the ACT fields for SFID 331 and SFID 558 must also be set to "Y".

2.307 TCW CARRID

Description: This field defines the carrier that will be used to route Inter-LATA (Local Access and Transport Area) calls to an external IP (Intelligent Peripheral).

Software Release: 5E14 and later
Valid Entries: Blank, or 0 - 9999

Data Rules:

For 5E14 and later:

When TCW CARRID is entered, this value must be defined on the ICF form (5305 Record).

When TCW CARRID is entered, and TCW SUPPRESS AMA is "Y", the ACT fields for SFID 331 and SFID 558 must also be set to "Y".

2.308 VIRTUAL SWITCH

Description: VIRTUAL SWITCH field indicates whether or not this CP (Call Processing) node is a part of a virtual switch. (i.e. the switch is a host for DRM or a DRM itself). Is this call processing node part of a virtual switch? For more information, see Division 2, Section 4A525.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When PRODUCT is "DRM", VIRTUAL SWITCH must be "Y".

The Distinctive Remote Module feature is a Secured Feature which must be purchased by the office before VIRTUAL SWITCH on the OFCOPT form may be set to "Y". An SFSYS form must exist with SFID 525 ACT set to "Y".

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CALEA

The following fields (Section 2.309 - Section 2.311) define the fields used for the CALEA feature. For more information on this feature see Division 2, Section 4A509.

The CALEA (The Communication Assistance for Law Enforcement Act) feature is a Secured Feature, that must be purchased by the office before the following CALEA fields can be changed. An SFSYS form must exist with SFID 509 ACT set to "Y".

2.309 CALEA SM

Description: The CALEA SM field is used to indicate the delivery SM for the call content channels. For more information, see Division 2, Section 4A509.

Software Release: 5E14 and later
Valid Entries: 1 - 192

Data Rules:

When CALEA SM is greater than 0, a SFSYS form must exist with SFID 509 ACT set to "Y".

2.310 ADMIN ACCESS

Description: Should access to non - CALEA views be allowed? The ADMIN ACCESS field gives 5E personnel an option to restrict the CALEA personnel from access to the 5E data. For more information, see Division 2, Section 4A509.

Software Release: 5E15 and later
Required field.
Default: N
Valid Entries: Y, N

2.311 TD LIMIT

Description: The TD LIMIT field, supports the CALEA Punch List Dialed Digit Extraction message solution. This field provides a threshold for tone decoders. Therefore, when a particular SM gets close to use all of its tone decoders on regular phone calls and surveillance, CALEA Punch List code will detect the situation (based on the threshold and number of tone decoders of that particular SM) and free up the tone decoder used by the surveillance to the regular phone calls. For more information, see Division 2, Section 4A509.

Software Release: 5E15 and later
Required field.
Default: 50
Valid Entries: 0 - 90 percent

CALL SCREENING

The following fields (Section 2.312 - Section 2.313) define the interval duration for the screening and monitoring phases of a forwarded call for the Forwarded Call - Call Screening feature. The screening phase is the period of time when a forwarded call is made available for screening. The monitoring phase is the period of time when a subscriber is allowed to monitor a forwarded call. For more information on this feature see Division 2, Section 4A526.

2.312 T SCREEN

Description: This field is used to define the duration of the screening phase.

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Software Release: 5E14 and later
Required field.
Default: 20
Valid Entries: 6 - 60 seconds

2.313 CS MONITOR

Description: This field is used to define the duration of the monitoring phase.

Software Release: 5E14 and later
Required field.
Default: 60
Valid Entries: 0 - 180 seconds where 0 indicates no time limit

USAGE SENSITIVE CALL FORWARDING

The following fields (Section 2.314 - Section 2.315) were added to support the Usage Sensitive Call Forwarding feature. For more details on this feature, refer to Division 2, Section 4A544.

2.314 USCF FEAT

Description: Usage Sensitive Call Forwarding feature name. This field indicates which call forwarding feature is activated when USCF ALW and USCF ACT on the LINE form (Record 5109) are "Y".

Software Release: 5E15 and later.
Valid Entries: Up to eight alphanumeric characters.

Data Rules:

When USCF FEAT is entered, the following must be true:

- ACT must be "Y" on the SFSYS form for SFID 544
- The feature name in the USCF FEAT field must be defined on a CFWFD form with FWD CONDITION set to "BOTH" and ACT TYPE set to "CDCA1A" or "CDDNCA".

2.315 USCF CFV ALERT

Description: Should alerting be provided when a call is forwarded by USCF FEAT?

Software Release: 5E15 and later.
Required Field.
Default: N
Valid Entries: Y or N

Data Rules:

When USCF CFV ALERT is "Y", USCF FEAT must be entered.

SESSION INITIATION PROTOCOL

The field under this heading was added to support the SIP (Session Initiation Protocol) for Packet Trunking feature. For more information see Division 2, Section 4A684.

2.316 COUNTRY CODE

Description: This field represents the Home Country Code.

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Software Release: 5E16(2) FR 3 and later
Valid Entries:

Valid COUNTRY CODE Entries	
Entry	**Definition**
0	SIP-T processing is not available in the office.
1-999	Country Code

Data Rules:

When the ACT field for SFID 684 is "N" on the SFSYS form (5713-1 Record), COUNTRY CODE must be 0.

When GSM is not defined on the SIPGSM form (5880 Record), COUNTRY CODE must be 0.

When GSM is defined on the SIPGSM form, COUNTRY CODE must not be 0.

USAGE SENSITIVE SIX -WAY CALLING

The following fields (Section 2.317 - Section 2.319) were added to support the Usage Sensitive Six-Way Calling feature. For more information on this feature, see Division 2, Section 4A553.

2.317 USSWC FEAT

Description: Usage Sensitive Six-Way Calling Multiway feature name. This field is optional. It is used to store the Usage Sensitive Six-Way Calling Multiway feature name if the feature is enabled in the office. If left blank, the feature is not active in the office. To activate the feature, a Usage Sensitive Six-Way Calling feature or the preconstructed feature "/MWUSSWC" (Multi-Way Usage Sensitive Six-Way Calling) can be entered in this field

Software Release: 5E15 and later
Valid Entries: Blank, or enter 1 - 8 characters to activate.

For 5E15 and later:

- USSWC (Usage Sensitive Six-Way Calling) is a secured feature and must be purchased by the office before the USSWC FEAT, USSWC ACT, and USSWC CHRG fields can be entered and/or changed for the USSWC feature. Consequently, the ACT field for SFID 553 must be set to "Y" on the SFSYS form (5713-1 Record) before this field and the USSWC ACT and USSWC CHRG fields can be entered and /or changed. (For more information about the USSWC feature, see Division 2, Section 4A553.)
- When the USSWC FEAT field is entered on this form, the USSWC FEAT name must be defined on the MWFD form (5602 Record) where the appropriate fields on the MWFD form are set as follows:
  - FEATURE OPTIONS fields: ACT/INACT OPTION must be set to "ACT1CA", MULTIWAY CONTROL must be set to "NWAY", and AMAC must be set to "USAGE",
  - ENTRY POINT fields: FLASH must be set to "Y", IN MIDDLE must be set to "Y", and OFF HOOK must be set to "Y", and
  - DEFAULT PARAMETER field: N-WAY MAXIMUM must be set to "6".

2.318 USSWC ACT

Description: Should a Usage Sensitive Six-Way Calling AMA activation record be created? This field is used to determine if Usage Sensitive Six-Way Calling AMA activation records should be made in the office when USSWC calls are made. This field supports the Usage Sensitive Six-Way Calling feature. For more information on this feature, see Division 2, Section 4A553.

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Software Release: 5E15 and later
Required field.
Default: N
Valid Entries: Y, N

Data Rules:

When USSWC ACT is "Y", USSWC FEAT must be entered.

For 5E15 and later, when the ACT field on the SFSYS form (5713-1 Record) for SFID (Secured Feature ID) 553 is set to "Y" , the USSWC ACT field can be changed to "Y". (For more detailed information on the Usage Sensitive Six-Way Calling, see Division 2, Section 4A553.)

2.319 USSWC CHRG

Description: Should a Usage Sensitive Six-Way Calling AMA charge record be created? This field is used to determine if Usage Sensitive Six-Way Calling AMA charge records should be made in the office when USSWC calls are made. This field supports the Usage Sensitive Six-Way Calling feature. For more information on this feature, see Division 2, Section 4A553.

Software Release: 5E15 and later
Required field.
Default: N
Valid Entries: Y, N

Data Rules:

When USSWC CHRG is "Y", USSWC FEAT must be entered.

For 5E15 and later, when the ACT field on the SFSYS form (5713-1 Record) for SFID (Secured Feature ID) 553 is set to "Y", the USSWC CHRG field can be changed to "Y". (For more detailed information on the Usage Sensitive Six-Way Calling, see Division 2, Section 4A553.)

CGA OPTIONS

2.320 CGA BUNDLE

Description: Bundled carrier group alarm report? This field was added to support the PCT Line/Trunk (PLTU) feature. For more information on this feature, see Division 2, Section 7AP.

Software Release: 5E15 and later
Default: Y
Valid Entries: Y, N

2.321 INH VACANT FAC

Description: The Inhibit Vacant Facility field is used to activate/deactivate the Inhibit CGA (Carrier Group Alarm) feature. For more information on this feature, see Division 2, Section 4A661.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

Data Rules:

When INH VACANT FAC is "Y", the ACT field for SFID 661 on the SFSYS form (5713-1 Record) must also be set to "Y".

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2.322 VACANT FAC REPT TIME

Description: The Vacant Facility Report Time field is used to specify the hour of the day in which the daily automatic vacancy report will be generated. This field supports the Inhibit CGA feature.

Software Release: 5E16(2) and later
Default: 0
Valid Entries: 0 - 23

Data Rules:

When VACANT FAC REPT TIME is a non-zero value, the ACT field for SFID 661 on the SFSYS form (5713-1 Record) must be set to "Y".

DRM

The following fields (Section 2.323 - Section 2.325) provide alarm control for the DRM (Distinctive Remote Module) feature. For more information on this feature, see Division 2, Section 4A525.

2.323 ALARM OUTPUT OPT

Description: Should the alarm output option be turned on for this site?

Software Release: 5E14 and later
Required field.
Default: N
Valid Entries: Y, N

Data Rules:

When PRODUCT is not "DRM", ALARM OUTPUT OPT must be "N".

When ALARM OUTPUT OPT is "Y", ALARM DURATION must be entered.

When ALARM OUTPUT OPT is "N", ALARM DURATION must not be entered.

When the ALARM OUTPUT OPT field is set to "Y" on the OFCOPT form, the ALARM POINTs (50 - 54 & 100 - 113) should be assigned on the RALM forms for the SM defined on the EQIM form.

When the ALARM OUTPUT OPT field is set to "Y" on the OFCOPT form, there must be an EQRAU form for the SM defined on the EQIM form.

2.324 ALARM INPUT OPT

Description: Should the alarm input option be turned on for this site?

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When PRODUCT is not "DRM", ALARM INPUT OPT must be "N".

When the ALARM INPUT OPT field is set to "Y" on the OFCOPT form, the ALARM POINTs should be

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assigned on the RALM forms for the SM defined on the EQIM form.

2.325 ALARM DURATION

Description: Alarm duration for output alarms.
Valid Entries: Blank, or enter 5 - 300 seconds.

Data Rules:

When PRODUCT is not "DRM", ALARM DURATION must not be entered.

PLATFORM CUTOVER

The following fields (Section 2.326 - Section 2.328) are added to support the SS7 (Signaling System 7) PSU (Packet Switching Unit) feature. For more information on this feature, see Division 2, Section 7BA.

2.326 CUTOVER MODE

Description: This field indicates whether or not the office is in signaling cutover mode. This is a display only field for ODA.

Software Release: 5E15 and later
Default: NONE

2.327 HOST PLAT 1

Description: This field indicates the signaling platform acting as the primary interface to the SS7 network when CUTOVER MODE is set to "PRECUT". This is a display only field for ODA.

Software Release: 5E15 and later

2.328 HOST PLAT 2

Description: This field indicates the signaling platform acting as the primary interface to the SS7 network when CUTOVER MODE is set to "POSTCUT". This is a display only field for ODA.

Software Release: 5E15 and later

SS7 CONNECTION HOLD TIMERS

This field supports the SS7 Using Operator Services feature. For more information see, Division 2, Section 4A603.

2.329 END OFFICE

Description: This field indicates the time in seconds to wait for a Connection Hold Release from operator services switch used at the originating end office.

Software Release: 5E16 and later.
Default: 120
Valid Entries: 60 - 240 seconds

CRITICAL INDICATORS

The following fields (Section 2.330 - Section 2.346) support the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY.

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2.330 CRIT EXPANDED INBAND SGNLING

Description: The CRIT EXPANDED INBAND SGNLING field is used to indicate whether the EXPANDED INBAND SGNLING field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.331 CRIT NM DEFAULT NPA

Description: The CRIT NM DEFAULT NPA field is used to indicate whether the NM DEFAULT NPA field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.332 CRIT HOME NPA

Description: The CRIT HOME NPA field is used to indicate whether the HOME NPA field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.333 CRIT EXTRA START WINK

Description: The CRIT EXTRA START WINK field is used to indicate whether the EXTRA START WINK field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.334 CRIT CPE OPTION

Description: The CRIT CPE OPTION field is used to indicate whether the CPE OPTION field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.335 CRIT OFFICE TYPE

Description: The CRIT OFFICE TYPE field is used to indicate whether the OFFICE TYPE field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

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2.336 CRIT E911 OPTION

Description: The CRIT E911 OPTION field is used to indicate whether the E911 OPTION field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.337 CRIT E911 DAS

Description: The CRIT E911 DAS field is used to indicate whether the E911 DAS field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.338 CRIT E911 SCR

Description: The CRIT E911 SCR field is used to indicate whether the E911 SCR field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.339 CRIT IHN SCP NPA DEL

Description: The CRIT IHN SCP NPA DEL field is used to indicate whether the IHN SCP NPA DEL field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.340 CRIT SCP 800 DAS

Description: The CRIT SCP 800 DAS field is used to indicate whether the SCP 800 DAS field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.341 CRIT FGD PHASE

Description: The CRIT FGD PHASE field is used to indicate whether the FGD PHASE field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.342 CRIT TCAP CIC

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Description: The CRIT TCAP CIC field is used to indicate whether the TCAP CIC field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.343 CRIT USTWC FEAT

Description: The CRIT USTWC FEAT field is used to indicate whether the USTWC FEAT field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.344 CRIT USTWC ACT

Description: The CRIT USTWC ACT field is used to indicate whether the USTWC ACT field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.345 CRIT SPONT AVAIL

Description: The CRIT SPONT AVAIL field is used to indicate whether the SPONT AVAIL field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.346 CRIT CICP BLOCK

Description: The CRIT CICP BLOCK field is used to indicate whether the CICP BLOCK field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

CIC ALLOCATION

The following fields (Section 2.347 - Section 2.350) supports the BICC (Bearer Independent Call Control) Static CIC Allocation feature. For more information on this feature, see Division 2, Section 7BF.

2.347 CAMPON TIMER

Description: This field indicates the number of minutes to be used for camp-on when the "Automatic Start CIC (Call Instance Code) Growth Process" parameter is set to "Y" or the CAMPON parameter is not specified in the MML (Man Machine Language) command.

Software Release: 5E16 and later
Default: 20
Valid Entries: 1 - 60

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2.348 KILL CALLS

Description: This field specifies whether or not BICC Calls on selected CIC block will be killed when the camp-on timer expires. It also is used when the UNCONTIONAL parameter is not specified in the MML command.

Software Release: 5E16 and later
Default: Y
Valid Entries: Y, N

2.349 GROWTH VIA RCV

Description: This field specified whether or not adding an SM2000 to the CIC Distribution (RC/V (Recent Change and Verify) 5.70) will trigger the CIC SM (Switching Module) Growth process.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

Data Rules:

For 5E16(2) FR 3 and later, when GROWTH VIA RCV is "Y", then a BICC Packet group must be defined on the PKTGRP form (5219 Record), and the CICDIST form (5217 Record) must exist.

2.350 PRINT ASSERT NAME

Description: This field is used to indicate whether or not an assert name should be printed.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

On-Hook Data Transmission

2.351 OFC FSK OSI

Description: This field is used to indicate the per-office parameter provided to control the sending of the OSI (Open Signaling Interval).

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

For 5E15 and later, when OFC FSK OSI is set to "Y", the ACT field for SFID 613 on the SFSYS form (5713-1 Record) must also be set to "Y".

BICC TIMERS/RANGES

The following fields (Section 2.352 - Section 2.370) are fields that support the PSAX Separate BICC (Bearer Independent Call Control) Timers feature. For more information on this feature, see Division 2, Section 10D.

2.352 BICC ADDR COMP

Description: This field is used to indicate the time to wait (in seconds) for the CCS (Common Channel

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Signaling) address complete message using the BICC protocol.

Software Release: 5E16 and later
Required Field.
Default: 25

2.353 BICC COT

Description: This field is used to indicate the time to wait (in seconds) for the CCS continuity message using the BICC protocol.

Software Release: 5E16 and later
Required Field.
Default: 12

2.354 BICC CQ START TIME

Description: This field is used to specify the hours past midnight that the daily automatic office-wide BICC circuit query starts.

Software Release: 5E16 and later
Required Field.
Default: 4

2.355 BICC GBLO RSND

Description: This field indicates the global BICC group block resend (in seconds).

Software Release: 5E16 and later
Required Field.
Default: 10

2.356 BICC GRS RSND

Description: This field indicates the BICC group reset resend timer (in seconds).

Software Release: 5E16 and later
Required Field.
Default: 10

2.357 BICC GUBL RSND

Description: This field indicates the BICC group unblocking resend timer (in seconds).

Software Release: 5E16 and later
Required Field.
Default: 10

2.358 BICC CQM RSND

Description: This field indicates the BICC circuit query timer value (in seconds) that is used when waiting for a reply to a circuit query message.

Software Release: 5E16 and later
Required Field.
Default: 10

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2.359 BICC RLC SHORT

Description: This field indicates the time to wait in seconds for the CCS release complete message using BICC protocol.

Software Release: 5E16 and later
Required Field.
Default: 10

2.360 BICC RLC LONG

Description: This field indicates the time to wait (in seconds) for the CCS release complete message using BICC protocol.

Software Release: 5E16 and later
Required Field.
Default: 60

2.361 BICC RS RSND

Description: This field indicates the global BICC reset resend (in seconds).

Software Release: 5E16 and later
Required Field.
Default: 10

2.362 BICC SUS

Description: This field indicates the time to wait (in seconds) for the CCS SUS message using the BICC protocol.

Software Release: 5E16 and later
Required Field.
Default: 15

2.363 MAX RNG BGB BGU

Description: This field indicates the maximum value for range in BIC GB/GU messages.

Software Release: 5E16 and later
Required Field.
Default: 127

2.364 MAX RNG BGRS

Description: This field indicates the maximum value for range in BICC GRS messages.

Software Release: 5E16 and later
Required Field.
Default: 127

2.365 UNI SETUP IND

Description: This field indicates the time to wait (in seconds) for the UNI_SETUP_IND message (Sapphire UNI Setup Indicating Message) at the Originating Packet Switch.

Software Release: 5E16 and later
Required Field.

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Default: 15

2.366 UNI CONN CFM

Description: This field indicates the time to wait (in seconds) for UNI_CONNECT_CFM message (Sapphire UNI Connect Confirmation Message) at the Originating Packet Switch.

Software Release: 5E16 and later
Required Field.
Default: 15

2.367 UNI CONN IND

Description: This field indicates the time to wait (in seconds) for UNI_CONNECT_IND message (Sapphire UNI Connect Indicating Message) at the TPS (Terminating Packet Switch).

Software Release: 5E16 and later
Required Field.
Default: 10

2.368 UNI REL CFM

Description: This field indicates the time to wait (in seconds) for UNI_RELEASE_CFM message (Sapphire UNI Release Confirmation Message.)

Software Release: 5E16 and later
Required Field.
Default: 5

2.369 UNI REL IND

Description: This field indicates the time to wait (in seconds) for UNI_RELEASE_IND message (Sapphire UNI Release Indicating Message).

Software Release: 5E16 and later
Required Field.
Default: 5

2.370 UNI IWG REL

Description: This field indicates the time (in seconds) to wait for the BICC release prior to passing an IWG (InterWorking Gateway) release event to BICC.

Software Release: 5E16 and later
Required Field.
Default: 2
Valid Entries: 1 - 4

2.371 COMFORT NOISE GEN

Description: This field contains the type of comfort noise generations. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). For more information on this feature, see Division 2, Section 7BX.
Default: IDLE
Valid Entries: Blank, IDLE or HOTH

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2.372 OPS APM TIMER

Description: This field is used to specify in seconds how long the OPS (Originating Packet Switch) waits for an APM (Application Transport Message) from the TPS (Terminating Packet Switch). This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308) This feature is made available in 5E16 Feature Release 3. For more information on this feature, see Division 2, Section 7BX.
Default: 10
Valid Entries: 1 - 30

2.373 TPS APM TIMER

Description: This field is used to specify in seconds how long the TPS (Terminating Packet Switch) waits for an APM (Application Transport Message) from the OPS (Originating Packet Switch). This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. For more information on this feature, see Division 2, Section 7BX.
Default: 10
Valid Entries: 1 - 30

2.374 INTG IDENTIFIER

Description: This field is used to specify the global default Inter-Nodal traffic group identifier. This field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. For more information on this feature, see Division 2, Section 7BX.
Default: 0
Valid Entries: 1 - 65535

2.375 GSM ESCALATION

Description: This global parameter field is used for the enhancements to CCS (Common Channel Signaling) operation on a PSU (Packet Switching Unit) signaling platform in a wireless environment. It supports the GSM Escalation Strategy Enhancements feature. For information on this feature see, Division 2, Section 7CD.

Software Release: 5E16(1) FR 4 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When GSM ESCALATION is "Y", CUTOVER MODE must not be "PRECUT" or "POSTCUT".

When SM on the EQPSU form (5741 Record) is defined as a GSM on the CCGSM form (6008 Record), and the GSM ESCALATION field on this form is set to "Y", the CRIT PSU on the EQPSU form must not be set to "Y" on any GSM with dual PSUs set to 1.

When GSM ESCALATION is "Y", AMPS DCS GSM must be entered and must be a value greater than zero on the APXPARM form (5050 Record).

2.376 SPOP

Description: The SPOP (Signaling PH Outage Prevention) field is an officewide parameter used to indicate whether Signaling PH Outage Prevention function is turned on or off for this office.

Software Release: 5E17 and later
Required Field.
Default: OFF

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Valid Entries: ON, OFF

8.1/8.15 Field Name VS OFCOPT Field Names

RC View	RC Field Name	OFCOPT Field Name
8.1	5 MIN PST	5 MIN PERM SIG THRESHOLD
8.1	ACG FNL TRMT	FNL TREAT
8.1	ALITDURATION	ALIT DURATION
8.1	ALITHRSTART	ALIT START TIME
8.1	ALLABND	ALL ABANDONS?
8.1	ALLOW TTF	ALLOW TOUCH TONE FRAUD
8.1	ALLOW TTF	ALLOW TOUCH TONE FRAUD?
8.1	ALLSUPV	SSU ON ALL CALLS?
8.1	AMAOPTION	AMA METHOD
8.1	APOPTION	APPLICATION PROCESSOR
8.1	ASPANI	ASP ANI
8.15	BLO RSND	BLORSND
8.1	CARRID	CARRIER ID
8.1	COIN INT	STUCK COIN REPORT
8.1	CPE	CPE OPTION
8.1	CPE	CPE OPTION?
8.1	CUTTRANS	CUTOVER
8.1	DAS	LTP DAS
8.15	DLN EQUIP	DIRECT LINK NODE
8.1	DN PRIV	DN PRIVACY?
8.1	DRCOUNTTYPE	DIV OF REV COUNT TYPES
8.1	DRCOUNTTYPE	DIV OF REV COUNT TYPES?
8.1	DRHRLY	DIV OF REV HOURLY RPTS
8.1	DRHRLY	DIV OF REV HOURLY RPTS?
8.1	DRON	ACTIVATE DIV OF REV
8.1	DRON	ACTIVATE DIV OF REV?
8.1	DST	DAYLIGHT SAVINGS TIME
8.1	DST	DAYLIGHT SAVINGS TIME?
8.1	DURATION	APT DURATION
8.1	EADAS LINT	EADAS LINK?
8.1	EXSIG	EXPANDED INBAND SGNLING
8.1	EXSIG	EXPANDED INBAND SGNLING?
8.1	HOMENPA	HOME NPA
8.1	HRSTART	APT START TIME
8.1	HRSTART	START HOUR
8.1	ICSUPV	SSU ON INTERLATA?
8.1	ICTERM	TERMINATING INTERLATA?
8.1	IMLT2	IMLT-2 ?
8.1	IMPLD NPA	NM DEFAULT NPA
8.1	INC WINK	EXTRA START WINK
8.15	LATA	LATA NUMBER
8.1	LITRANGE	ALIT RANGE
8.1	LITTYPE	ALIT TYPE
8.1	LOCABND	LOCAL ABANDONS?
8.1	LOCANSW	LOCAL ANSWERED CALLS?
8.1	LOCSUPV	SSU ON LOCAL CALLS?
8.1	NT1 TYPE	BRI TYPE
8.15	OFFICE ID	COMMON CHAN SIG
8.1	OPEN INT	OCTL OPEN DURATION
8.1	PERC1SILC	NM SILC LEVEL 1
8.1	PERC2SILC	NM SILC LEVEL 2
8.1	POTENT	COIN RETURN POTENTIAL
8.1	PRINT TTF	PRINT TOUCH TONE FRAUD
8.1	PRINT TTF	PRINT TOUCH TONE FRAUD?
8.1	REVMAN	MFR REVERTIVE MANUAL?
8.1	RING TOT	RINGING TIMEOUT
8.1	RUNFRI	APT FRI
8.1	RUNMON	APT MON
8.1	RUNSAT	APT SAT
8.1	RUNSUN	APT SUN
8.1	RUNTHR	APT THR
8.1	RUNTUE	APT TUE
8.1	RUNWED	APT WED
8.1	SCR	LTP SCR
8.1	SPECABND	SPECIAL ABANDONS?
8.15	SSP	SERV SWITCH PT?
8.1	SST	SHORT SUPERVISORY TRANSITIONS
8.1	TIMEZONE	TIME ZONE
8.1	TOLLABND	TOLL ABANDONS?
8.1	TOLLSUPV	SSU ON TOLL CALLS?

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8.1	TONE DUR	OCTL TONE DURATION
8.1	TRKTRCD1	CODE 1
8.1	TRKTRCD2	CODE 2
8.1	TRKTRCD3	CODE 3
8.1	TRKTRCD4	CODE 4
8.1	VAR INT	VAR TIME PERM SIG INTERVAL
8.1	VAR PST	VAR TIME PERM SIG THRESHOLD

Figure 1 CORRESPONDING RC FIELDS WHICH DIFFER FROM ODA FIELDS

```
ofcopt                    5ESS Switch
SCREEN 1 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

*1. KEY              0        13. EOP TRUNKS              _____
 2. OFFICE ID                 _________   14. EOP SCR              _____
 3. TIME ZONE          -6     15. EOP CDI                 _____
 4. DAYLIGHT SAVINGS TIME  _       20. EADAS LINK              _
 5. COIN RETURN POTENTIAL  _____       RCVERBOSE               _
 6. EXPANDED INBAND SGNLING _      22. RNM LINK                N
 7. STUCK COIN REPORT      __      23. ACTIVATE DIV OF REV     _
 8. LTP SCR                ____    24. DIV OF REV HOURLY RPTS  _
 9. LTP DAS                __      25. DIV OF REV COUNT TYPES  _____
10. AM ODD MEMORY SIZE     10240   26. 5 MIN PERM SIG THRESHOLD  ___
11. ODD DISK SIZE          8992    27. VAR TIME PERM SIG THRESHOLD ___
12. EOP LINES              _____   28. VAR TIME PERM SIG INTERVAL  __
```

```
ofcopt                    5ESS Switch
SCREEN 2 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 29. ALLOW TOUCH TONE FRAUD N      39. BATCH CLEANUP INHIBIT Y
 30. PRINT TOUCH TONE FRAUD N
 31. DSN OPTION          N            TRUNK ERROR ANALYSIS
 32. CPE OPTION          N      >40. ROUTE TO TERA?       Y
 33. SES                 ____   41. ERROR THRESHOLD      03
                          >42. MFR REVERTIVE MANUAL?  N
        BATCH RC/V              43. LOCAL TRAF MEAS CHANNEL SUMMARY
>34. BATCH RC/V INTERVAL   01     44. IMLT-2?               _
 35. BATCH RC/V RELEASE TIME 00     45. APPLICATION PROCESSOR  NO
 36. BATCH RC/V CLEANUP AGE  14     46. CARRIER ID            ____
 37. BATCH RC/V CLEANUP TIME 00:00  47. TOLL CARRIER          ____
 38. BATCH RC/V INHIBIT     Y      48. ICLATA SCD IND        N
```

```
ofcopt                    5ESS Switch
SCREEN 3 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 49. RINGING TIMEOUT _____  58. DIRECT LINK NODE _       68. OFFICE TYPE N
                        59. ORIG SCREEN OFF  _
CAMA TRUNK TROUBLE CODE    60. HOME NPA       ___
>50. CODE 1 _______        61. ACT PT SDN     N
 51. CODE 2 _______        62. SERV SWITCH PT?  N
 52. CODE 3 _______        63. LATA NUMBER    ___
```

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```
 53. CODE 4 _______        >64. EXTRA START WINK N
                    OPC           _________
>54. NM DEFAULT NPA ___
 55. NM SILC LEVEL 1   0.0       EQUAL ACCESS
 56. NM SILC LEVEL 2   0.0  >66. TIME         300000
>57. COMMON CHAN SIG NO      67. OVERLOAD TIME 15000
```

```
ofcopt                    5ESS Switch
SCREEN 4 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 69. OFFICE CARRIER LEC                  79. LOCAL ABANDONS?          N
                                80. TOLL ABANDONS?           Y
        AMA RECORDING OPTIONS           81. SPECIAL ABANDONS?        N
>70. AMA METHOD                AMATPS   82. ALL ABANDONS?            N
 71. AMADNS ACTIVE              N       83. SSU ON LOCAL CALLS?      N
 72. MIN AMA ALRM               70      84. SSU ON TOLL CALLS?       N
 73. MAJ AMA ALRM               90      85. LOCAL COIN               N
 74. CRIT AMA ALRM              100     86. SSU ON ALL CALLS?        N
 75. ISDAMAOPT                  Y       87. TERMINATING INTERLATA?   Y
 76. ISVAMAOPT                  N       88. SSU ON INTERLATA?        N
 77. SHORT SUPERVISORY TRANSITIONS N    89. HR INWATS OVERFLOW RECORD? N
 78. LOCAL ANSWERED CALLS?      Y       90. DID TIMEOUT              05
```

```
ofcopt                    5ESS Switch
SCREEN 5 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 91. CMC WINK CONNECT   N           TESTING OPTIONS
 92. AMA ERROR MIN ALRM N      >101. ALIT START TIME _____
 93. LDC GEN TIME      00:00    102. ALIT DURATION   _
 94. TRUNK             N        103. ALIT RANGE      _
 95. OPER              N        104. ALIT TYPE       ____
 96. ORIG UNBUNDLED    N
 97. ORIG RESOLD       N       >105. APT START TIME _____
 98. TERM UNBUNDLED    N        106. APT DURATION   _
 99. TERM RESOLD       N
100. UNBLD/RESLD SC    500     DAYS ON WHICH APT TESTING IS TO BE CONDUCTED
                       107. SUN _
                       108. MON _
```

```
ofcopt                    5ESS Switch
SCREEN 6 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 109. TUE _              118. THIRD ______          126. 8 HR FREQ 8
 110. WED _                                         127. TIME OUT  4
 111. THR _                 MSU/MMSU ALARMS REPORTS
 112. FRI _              >119. MISCELLANEOUS ALM OPT N
 113. SAT _              120. OVERLAP SIZE         01
                    121. DN PRIVACY?          N
```

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```
>114. OCTL TONE DURATION 050  122. ISP DIGITS          2
 115. OCTL OPEN DURATION 030  123. FAIL ID            ____

   TWS FOR 101TL              LEASED NETWORK
>116. FIRST  LOCAL           124. 8 HR SCAN  N
 117. SECOND ______           125. 8 HR START 01
```

```
ofcopt                    5ESS Switch
SCREEN 7 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

128. GLBL TITLE   000000
129. DAS          __
130. ACTION POINT N
```

```
ofcopt                    5ESS Switch
SCREEN 8 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

    PPM PULSE WIDTH      138. FALSE LINK CONG LVL2       DEFAULT BRI TYPE
131. ISLU BATTERY     0                          >#143. BRI TYPE ______
132. ISLU TONE        0   INTERNATIONAL OUTBOUND CALL
133. ISLU THIRD WIRE  0  139. TRAD 2-STAGE PST 010000       CDMA DTMF
                    140. TRAD 2-STAGE PDT 020000    144. OVERRIDE   N
 SPECIAL ACCESS                                  145. LENGTH ON  ___
134. SP ACCESS N         141. RM RTG RESTRCT Y          146. LENGTH OFF ___

     CCS FEATURES       Q931 PROTOCOL OPTIONS
135. EXPANDED SLS     N   142. CAUSE LOC PUB
136. IMPROVED SLT     N
137. MTP NODE RESTART N
```

```
ofcopt                    5ESS Switch
SCREEN 9 OF 17          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

  PERFORMANCE MONITORING             ISUP            ON-LINE OFFICE RECORDS
147. DSL PM ENABLE   Y      156. CRA TIMER     25      >166. ENABLED?   N
148. REPORT INT      01     157. EXM D TIMER   0300     167. START HOUR 23
149. CRC SES RATE    3      158. BUSY ANNC     N        168. DURATION   04
150. MAX NO THR GRPS 256    159. LEC ANNC      N        169. SUN        N
151. PM TIME         0      160. LEC IW REL    N        170. MON        Y
152. BPV SES RATE    307    161. BLANK NBR REL N        171. TUE        Y
153. FAC PM ENABLE   Y      162. RCD 3PT1 ITC  SPEECH    172. WED        Y
                     163. CICP BLOCK    N        173. THR        Y
MISMATCH DETECTION          164. IAM CRM PRIOR 1        174. FRI        Y
154. ENABLE Y               165. OFC OLI       00       175. SAT        N
155. REPORT N
```

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```
ofcopt                    5ESS Switch
SCREEN 10 OF 17        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

     HOME INTERCOM     SLC96 T1 FACILITIES            911
176. MAX RING TIME 180  >#181. OFF NORMAL _      187. TIMING DELAY 0
177. MAX HOLD TIME 180
178. MAX TALK TIME 10        ISVM OPTION            ENHANCED 911
                  182. ISVM TCAP TIMER 03  188. E911 OPTION  INACTIVE
 SERIES COMPLETION                        189. E911 DAS    __
    DEL BCK LNK Y      REMOTE DIGITAL TEST ACCESS 190. E911 SCR    ____
                  183. RDTA SCRN IDX   ____ 191. E911 LN SFG  ____
PER CALL TEST FAILURE     184. RDTA DAS      __  192. E911 TRK SFG ____
    PCTF INT 60M       185. BRI MAX SESSION __
                  186. RDTA PIC       ____     PRIM E911 APID _
                                          SEC E911 APID  _
```

```
ofcopt                    5ESS Switch
SCREEN 11 OF 17        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

195. ESA SW TIME 0     ESSENTIAL SVC PROTECT          FEATURE GROUP D
196. E911 CESID  BN    200. ESP NORM ALW N        206. FGD PHASE PREPHASE
                                  207. TCAP CIC  N
 OUTBOUND SERVICES          SSP 800
    ALT SIG SM ___     201. INH SCP NPA DEL N          SPEECH ROUTING
                202. SCP 800 DAS     __         SPEECH TRK GRPS ____
INDIV DIALING PLAN
198. IDP DESEP ___              MDII              NETWORK RELEASE
                203. MDII INTERVAL    0     209. OLDEST RELEASE ____
  ASI PROXY          204. MDDI THRESHOLD   20
199. ASI ON N        205. MDDI MAJOR ALARM N     CKT SWITCHED TRUNK
                                  210. CST DAS __
```

```
ofcopt                    5ESS Switch
SCREEN 12 OF 17        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

        USTWC                    PHA
211. USTWC FEAT  _________       217. CONG1 QCAP 50
212. USTWC ACT   N           218. CONG2 QCAP 80
213. USTWC CHRG  N             219. ATM LAYER  SONET
214. SPONT AVAIL UNAVAIL
                      220. REV QLTY THRESH 0
NETWORK ACCESS INTERUPT (NAI)
215. TOLL N                 CNIS INTRAGROUP DELIVERY
                      221. CNIGI NORSTRCT
       DNUS
216. FI SWITCH INT 028
```

```
ofcopt                    5ESS Switch
```

```
SCREEN 13 OF 17          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

    CALL WAITING DELUXE        LONG DISTANCE PLATFORM       INCREASED TGN
222. ALERT TYPE    CWD2       233. LDP CARRID     ____     242. MAX TGN   2000
223. DFLT OPT      CALLFWD    234. LDP OFFICE ID  ___      243. MAX RTIDX  3617
224. USG SENS CONF NO         235. NST ALL        N
225. SUPV ANNC     Y          236. ACCT PROMPT    BEEP2
226. DFLT ANNC     Y          237. CARRIER TONE   N
227. HOLD ANNC     BEGOFANNC  238. NSC WC ID      ___
228. FLASH TIMER   1.5        239. ORIG NSC       ___
229. DFLT TIMER    15         240. TERM NSC       ___
230. HOLD TIMER    60         241. TEST CALL TNSC ___
231. PRODUCT       5ESS
    POFFLOSS      N
```

```
ofcopt                    5ESS Switch
SCREEN 14 OF 17          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

 LOCAL NUMBER PORTABILITY      ISUP CKT QRY OPTIONS         RTCD OPTIONS
244. JIP            ______     251. CQM RSND       10        BILL SM  ___
245. DFLT FLAT RATE NONE       252. CQM START TIME  3    256. RTCD OFC N
246. DFR STRCT CODE 500                                  257. RTCD ALM Y
                          NPA-NXX GROWTH        258. SCP TREC AMAONLY
  REORDER THRESHOLDS          253. ASI SID 10     N
247. RCR MINOR    0           254. ROP DISP DN 10 N       EEC OPTIONS
248. RCR MAJOR    0                                  259. EEC ACT SIG
249. RCR CRITICAL 0

 LDCW TREATMENT
250. LDCW TRMT N
```

```
ofcopt                    5ESS Switch
SCREEN 15 OF 17          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

      PSU TRUNKS                  TALKING CALL WAITING
260. PP IDLE      4       266. ANS TIMER        2.0
261. PER RATE     5       267. DISC TIMER       3.0
262. PER THRESH   15      268. DN1              ____________________
263. PRIM VOC ALG EVRC    269. DN2              ____________________
                    270. TCW DAS          __
   FRBC LEV 3 PER         271. TCW SCR          ____
264. MIN THRESH 0500       272. TCW SUPPRESS AMA N
265. MAX THRESH 0900       273. TCW CARRID       ____

                         SIGI Y
```

```
ofcopt                    5ESS Switch
SCREEN 16 OF 17          OFFICE DATA ADMINISTRATION
```

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(5509) OFFICE OPTIONS

275. VIRTUAL SWITCH N

276. CALEA SM ___

CALL SCREENING
277. T SCREEN 20
278. CS MONITOR 60
DRM
279. ALARM OUTPUT OPT N
280. ALARM INPUT OPT N
281. ALARM DURATION ___

---

ofcopt 5ESS Switch _
SCREEN 17 OF 17 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

CRITICAL INDICATORS CRITICAL INDICATORS
282. CRIT EXPANDED INBAND SGNLING N 293. CRIT SCP 800 DAS N
284. CRIT NM DEFAULT NPA N 294. CRIT FGD PHASE N
285. CRIT HOME NPA N 295. CRIT TCAP CIC N
286. CRIT EXTRA START WINK N 296. CRIT USTWC FEAT N
287. CRIT CPE OPTION N 297. CRIT USTWC ACT N
288. CRIT OFFICE TYPE N 298. CRIT SPONT AVAIL N
289. CRIT E911 OPTION N 299. CRIT CICP BLOCK N
290. CRIT E911 DAS N
291. CRIT E911 SCR N
292. CRIT IHN SCP NPA DEL N

Figure 2 SAMPLE OFCOPT FORM 5E14 SOFTWARE RELEASE

---

ofcopt 5ESS Switch
SCREEN 1 OF 19 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

*1. KEY 0 13. EOP LINES _____
2. OFFICE ID _____ 14. EOP TRUNKS _____
3. COMPANY ID _____ 15. EOP SCR _____
4. TIME ZONE -6 16. EOP CDI _____
5. DAYLIGHT SAVINGS TIME _
6. COIN RETURN POTENTIAL _____ NDC NTMOS/RCVERBOSE OPTS
7. EXPANDED INBAND SGNLING _ >21. TRFM LINK _
8. STUCK COIN REPORT __ RCVERBOSE _
9. LTP SCR ____ 23. RNM LINK N
10. LTP DAS ___ 24. TRFM RNM OPT NONE
11. AM ODD MEMORY SIZE 16384 25. LOC IDENT CODE _____
12. ODD DISK SIZE 8992

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```
ofcopt                    5ESS Switch
SCREEN 2 OF 19          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

>26. ACTIVATE DIV OF REV      _              BATCH RC/V
 27. DIV OF REV HOURLY RPTS    _      >37. BATCH RC/V INTERVAL    01
 28. DIV OF REV COUNT TYPES    _____  38. BATCH RC/V RELEASE TIME 00
 29. 5 MIN PERM SIG THRESHOLD  ___    39. BATCH RC/V CLEANUP AGE  14
 30. VAR TIME PERM SIG THRESHOLD ___  40. BATCH RC/V CLEANUP TIME 00:00
 31. VAR TIME PERM SIG INTERVAL __    41. BATCH RC/V INHIBIT     Y
 32. ALLOW TOUCH TONE FRAUD    N      42. BATCH CLEANUP INHIBIT  Y
 33. PRINT TOUCH TONE FRAUD    N
 34. DSN OPTION                N          TRUNK ERROR ANALYSIS
 35. CPE OPTION                N      >43. ROUTE TO TERA?       Y
 36. SES                       ____   44. ERROR THRESHOLD      03
                                 >45. MFR REVERTIVE MANUAL? N
```

```
ofcopt                    5ESS Switch
SCREEN 3 OF 19          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 46. LOCAL TRAF MEAS CHANNEL SUMMARY    56. CODE 4 _______
 47. IMLT-2?                  _
 48. APPLICATION PROCESSOR   NO       >57. NM DEFAULT NPA      ___
 49. CARRIER ID              ____      58. NM RR INH DIG PFX/DEL N
 50. TOLL CARRIER            ____      59. NM SILC LEVEL 1      0.0
 51. ICLATA SCD IND          N         60. NM SILC LEVEL 2      0.0
 52. RINGING TIMEOUT         _____    >61. COMMON CHAN SIG      NO
                               62. DIRECT LINK NODE    _
CAMA TRUNK TROUBLE CODE              63. ORIG SCREEN OFF     _
>53. CODE 1 _______                  64. HOME NPA            ___
 54. CODE 2 _______                  65. ACT PT SDN          N
 55. CODE 3 _______                  66. SERV SWITCH PT?     N
```

```
ofcopt                    5ESS Switch
SCREEN 4 OF 19          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 67. LATA NUMBER      ___         75. AMADNS ACTIVE              N
>68. EXTRA START WINK N          76. MIN AMA ALRM               70
    OPC               _________  77. MAJ AMA ALRM               90
                                 78. CRIT AMA ALRM              100
      EQUAL ACCESS               79. ISDAMAOPT                  Y
>70. TIME          300000        80. ISVAMAOPT                  N
 71. OVERLOAD TIME  15000         81. SHORT SUPERVISORY TRANSITIONS N
 72. OFFICE TYPE    N             82. LOCAL ANSWERED CALLS?      Y
 73. OFFICE CARRIER LEC           83. LOCAL ABANDONS?            N
                                 84. TOLL ABANDONS?             Y
 AMA RECORDING OPTIONS           85. SPECIAL ABANDONS?          N
>74. AMA METHOD AMATPS           86. ALL ABANDONS?              N
```

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```
ofcopt                    5ESS Switch
SCREEN 5 OF 19          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

87. SSU ON LOCAL CALLS?       N        99. OPER          N
88. SSU ON TOLL CALLS?        N       100. ORIG UNBUNDLED N
89. LOCAL COIN                N       101. ORIG RESOLD    N
90. SSU ON ALL CALLS?         N       102. TERM UNBUNDLED N
91. TERMINATING INTERLATA?    Y       103. TERM RESOLD    N
92. SSU ON INTERLATA?         N       104. UNBLD/RESLD SC 500
93. HR INWATS OVERFLOW RECORD? N
94. DID TIMEOUT              05           TESTING OPTIONS
95. CMC WINK CONNECT          N      >105. ALIT START TIME _____
96. AMA ERROR MIN ALRM        N       106. ALIT DURATION   _
97. LDC GEN TIME          00:00       107. ALIT RANGE      _
98. TRUNK                     N       108. ALIT TYPE       ____
```

```
ofcopt                    5ESS Switch
SCREEN 6 OF 19          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

      APT TESTING         119. OCTL OPEN DURATION 030   127. FAIL ID ____
>109. APT START TIME _____
 110. APT DURATION   _         TWS FOR 101TL              LEASED NETWORK
 111. SUN            _      >120. FIRST  LOCAL           128. 8 HR SCAN  N
 112. MON            _       121. SECOND ______          129. 8 HR START 01
 113. TUE            _       122. THIRD  ______          130. 8 HR FREQ  8
 114. WED            _                                   131. TIME OUT   4
 115. THR            _         MSU/MMSU ALARMS REPORTS
 116. FRI            _      >123. MISCELLANEOUS ALM OPT N
 117. SAT            _       124. OVERLAP SIZE         01
                      125. DN PRIVACY?          N
>118. OCTL TONE DURATION 050  126. ISP DIGITS           2
```

```
ofcopt                    5ESS Switch
SCREEN 7 OF 19          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

132. GLBL TITLE   000000
133. DAS          ___
134. ACTION POINT N
```

```
ofcopt                    5ESS Switch
SCREEN 8 OF 19          OFFICE DATA ADMINISTRATION
```

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```
(5509)                    OFFICE OPTIONS

    PPM PULSE WIDTH      142. FALSE LINK CONG LVL2       DEFAULT BRI TYPE
135. ISLU BATTERY      0                          >#147. BRI TYPE ______
136. ISLU TONE         0   INTERNATIONAL OUTBOUND CALL
137. ISLU THIRD WIRE   0  143. TRAD 2-STAGE PST 010000
                    144. TRAD 2-STAGE PDT 020000
 SPECIAL ACCESS
138. SP ACCESS N         145. RM RTG RESTRCT Y

     CCS FEATURES        Q931 PROTOCOL OPTIONS
139. EXPANDED SLS     N   146. CAUSE LOC PUB
140. IMPROVED SLT     N
141. MTP NODE RESTART N
```

```
ofcopt                    5ESS Switch
SCREEN 9 OF 19          OFFICE DATA ADMINISTRATION
(5509)                    OFFICE OPTIONS

  PERFORMANCE MONITORING             ISUP            ON-LINE OFFICE RECORDS
148. DSL PM ENABLE   Y      157. CRA TIMER     25      >168. ENABLED?   N
149. REPORT INT      01     158. EXM D TIMER   0300     169. START HOUR 23
150. CRC SES RATE    3      159. BUSY ANNC     N        170. DURATION   04
151. MAX NO THR GRPS 256    160. LEC ANNC      N        171. SUN        N
152. PM TIME         0      161. LEC IW REL    N        172. MON        Y
153. BPV SES RATE    307    162. BLANK NBR REL N        173. TUE        Y
154. FAC PM ENABLE   Y      163. RCD 3PT1 ITC  SPEECH   174. WED        Y
                    164. CICP BLOCK    N        175. THR        Y
MISMATCH DETECTION         165. ISUP APN DAS ___      176. FRI        Y
155. ENABLE Y              166. IAM CRM PRIOR 1       177. SAT        N
156. REPORT N              167. OFC OLI       00
```

```
ofcopt                    5ESS Switch
SCREEN 10 OF 19         OFFICE DATA ADMINISTRATION
(5509)                    OFFICE OPTIONS

     HOME INTERCOM      SLC96 T1 FACILITIES              911
178. MAX RING TIME 180   >#183. OFF NORMAL _       189. TIMING DELAY 0
179. MAX HOLD TIME 180
180. MAX TALK TIME 10          ISVM OPTION              ENHANCED 911
                    184. ISVM TCAP TIMER 3    190. E911 OPTION  INACTIVE
 SERIES COMPLETION                            191. E911 DAS    ___
    DEL BCK LNK Y       REMOTE DIGITAL TEST ACCESS 192. E911 SCR    ____
                    185. RDTA SCRN IDX   ____ 193. E911 LN SFG  ____
PER CALL TEST FAILURE      186. RDTA DAS       ___  194. E911 TRK SFG ____
    PCTF INT 60M         187. BRI MAX SESSION __
                    188. RDTA PIC        ____      PRIM E911 APID _
                                                   SEC E911 APID  _
```

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```
ofcopt                    5ESS Switch
SCREEN 10 OF 19        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

     HOME INTERCOM     SLC96 T1 FACILITIES            911
178. MAX RING TIME 180  >#183. OFF NORMAL       189. TIMING DELAY 0
179. MAX HOLD TIME 180
180. MAX TALK TIME 10       ISVM OPTION           ENHANCED 911
                  184. ISVM TCAP TIMER 3   190. E911 OPTION  INACTIVE
 SERIES COMPLETION                         191. E911 DAS    ___
    DEL BCK LNK Y      REMOTE DIGITAL TEST ACCESS 192. E911 SCR    ____
                  185. RDTA SCRN IDX   ____ 193. E911 LN SFG  ____
PER CALL TEST FAILURE     186. RDTA DAS      ___  194. E911 TRK SFG ____
    PCTF INT 60M       187. BRI MAX SESSION __
                  188. RDTA PIC       ____     PRIM E911 APID _
                                          SEC E911 APID  _
```

```
ofcopt                    5ESS Switch
SCREEN 11 OF 19        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

197. ESA SW TIME 0     ESSENTIAL SVC PROTECT          FEATURE GROUP D
198. E911 CESID  BN    202. ESP NORM ALW N       208. FGD PHASE PREPHASE
                                  209. TCAP CIC  N
 OUTBOUND SERVICES           SSP 800
    ALT SIG SM ___     203. INH SCP NPA DEL N          SPEECH ROUTING
               204. SCP 800 DAS     ___        SPEECH TRK GRPS ____
INDIV DIALING PLAN
200. IDP DESEP ___             MDII              NETWORK RELEASE
               205. MDII INTERVAL    0     211. OLDEST RELEASE ____
  ASI PROXY          206. MDDI THRESHOLD   20
201. ASI ON N        207. MDDI MAJOR ALARM N     CKT SWITCHED TRUNK
                                  212. CST DAS ___
```

```
ofcopt                    5ESS Switch
SCREEN 12 OF 19        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

        USTWC                     OIU
213. USTWC FEAT  _________      219. OFI SWITCH INT 028
214. USTWC ACT   N
215. USTWC CHRG  N                  PHA
216. SPONT AVAIL UNAVAIL       220. CONG1 QCAP 50
                       221. CONG2 QCAP 80
NETWORK ACCESS INTERUPT (NAI)   222. ATM LAYER  SONET
217. TOLL N
                       223. REV QLTY THRESH 0
       DNUS
218. FI SWITCH INT 028        CNIS INTRAGROUP DELIVERY
                       224. CNIGI NORSTRCT
```

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```
ofcopt                    5ESS Switch
SCREEN 13 OF 19        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

    CALL WAITING DELUXE       LONG DISTANCE PLATFORM      INCREASED TGN
225. ALERT TYPE    CWD2     236. LDP CARRID     ____    245. MAX TGN   2000
226. DFLT OPT      CALLFWD  237. LDP OFFICE ID  ___     246. MAX RTIDX  3617
227. USG SENS CONF NO       238. NST ALL        N
228. SUPV ANNC     Y        239. ACCT PROMPT    BEEP2
229. DFLT ANNC     Y        240. CARRIER TONE   N
230. HOLD ANNC     BEGOFANNC 241. NSC WC ID     ___
231. FLASH TIMER   1.5      242. ORIG NSC       ___
232. DFLT TIMER    15       243. TERM NSC       ___
233. HOLD TIMER    60       244. TEST CALL TNSC ___
234. PRODUCT       5ESS
    POFFLOSS      N
```

```
ofcopt                    5ESS Switch
SCREEN 14 OF 19        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

 LOCAL NUMBER PORTABILITY       ISUP QRY OPTIONS          RTCD OPTIONS
247. JIP            _______    254. CQM RSND      10      BILL SM  ___
248. DFLT FLAT RATE NONE       255. CQ START TIME  3    259. RTCD OFC N
249. DFR STRCT CODE 500                                 260. RTCD ALM Y
                          NPA-NXX GROWTH       261. SCP TREC AMAONLY
  REORDER THRESHOLDS          256. ASI SID 10     N
250. RCR MINOR      0         257. ROP DISP DN 10 N       EEC OPTIONS
251. RCR MAJOR      0                                   262. EEC ACT SIG
252. RCR CRITICAL   0

 LDCW TREATMENT
253. LDCW TRMT N
```

```
ofcopt                    5ESS Switch
SCREEN 15 OF 19        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

      PSU TRUNKS                TALKING CALL WAITING          SIGI Y
263. PP IDLE       4         272. ANS TIMER        2.0
264. PER RATE      5         273. DISC TIMER       3.0
265. PER THRESH    15        274. DN1          ____________________
266. PER 3G RATE   5         275. DN2          ____________________
267. PER 3G THRESH 15        276. DNB          ____________________
268. PRIM VOC ALG  EVRC      277. DNC          ____________________
269. SEC VOC ALG   CEV13     278. DNG          ____________________
                          279. TCW DAS       ___
  FRBC LEV 3 PER            280. TCW SCR       ____
270. MIN THRESH 0500        281. TCW SUPPRESS AMA N
```

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271. MAX THRESH 0900 282. TCW CARRID ____

---

ofcopt 5ESS Switch
SCREEN 16 OF 19 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

284. VIRTUAL SWITCH N USAGE SENSITIVE SIX WAY CALLING PLATFORM CUTOVER
290. USSWC FEAT _____ CUTOVER MODE NONE
CALEA 291. USSWC ACT N HOST PLAT 1 ___
285. CALEA SM ___ 292. USSWC CHRG N HOST PLAT 2 ___
286. ADMIN ACCESS N
287. TD LIMIT 50 CGA OPTIONS PAG TIMERS
293. CGA BUNDLE Y 300. OPS TIMER 15
CALL SCREENING DRM 301. TPS TIMER 10
288. T SCREEN 20 294. ALARM OUTPUT OPT N
289. CS MONITOR 60 295. ALARM INPUT OPT N
296. ALARM DURATION ___

---

ofcopt 5ESS Switch
SCREEN 17 OF 19 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

CRITICAL INDICATORS CRITICAL INDICATORS
303. CRIT EXPANDED INBAND SGNLING N 314. CRIT SCP 800 DAS N
305. CRIT NM DEFAULT NPA N 315. CRIT FGD PHASE N
306. CRIT HOME NPA N 316. CRIT TCAP CIC N
307. CRIT EXTRA START WINK N 317. CRIT USTWC FEAT N
308. CRIT CPE OPTION N 318. CRIT USTWC ACT N
309. CRIT OFFICE TYPE N 319. CRIT SPONT AVAIL N
310. CRIT E911 OPTION N 320. CRIT CICP BLOCK N
311. CRIT E911 DAS N
312. CRIT E911 SCR N
313. CRIT IHN SCP NPA DEL N

---

ofcopt 5ESS Switch
SCREEN 18 OF 19 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

USAGE SENSITIVE CALL FORWARDING 324. MSTMCI 30
321. USCF FEAT _____
322. USCF CFV ALERT N CIC ALLOCATION
325. CAMPON TIMER 20
SWITCH-BASED 8XX TRANSLATION INFO 326. KILL CALLS Y
323. SVC FEAT CODE 000 327. GROWTH VIA RCV N

ON-HOOK DATA TRANSMISSION
332. OFC FSK OSI N

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```
ofcopt                    5ESS Switch          _
SCREEN 19 OF 19         OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

  BICC TIMERS/RANGES          BICC TIMERS/RANGES
BICC ADDR COMP    25        MAX RNG BGB BGU 127
BICC COT          12        MAX RNG BGRS    127
BICC CQ START TIME  4         UNI SETUP IND   15
BICC GBLO RSND    10          UNI CONN CFM    15
BICC GRS RSND     10          UNI CONN IND    10
BICC GUBL RSND    10          UNI REL CFM     5
BICC CQM RSND     10          UNI REL IND     5
BICC RLC SHORT    10          UNI IWG REL     2
BICC RLC LONG     60     513. GSM ESCALATION  N
BICC RS RSND      10
BICC SUS          15
```

Figure 3 SAMPLE OFCOPT FORM 5E15 THROUGH 5E16(1) SOFTWARE RELEASES

```
ofcopt                    5ESS Switch
SCREEN 1 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

*1. KEY                 0          13. EOP LINES  _____
 2. OFFICE ID           _________     14. EOP TRUNKS _____
 3. COMPANY ID          _________     15. EOP SCR    _____
 4. TIME ZONE           -             16. EOP CDI    _____
 5. DAYLIGHT SAVINGS TIME  _
 6. COIN RETURN POTENTIAL  _____          NDC NTMOS/RCVERBOSE OPTS
 7. EXPANDED INBAND SGNLING _          21. TRFM LINK      _
 8. STUCK COIN REPORT      __             RCVERBOSE      _
 9. LTP SCR                ____        23. RNM LINK       N
10. LTP DAS                ___         24. TRFM RNM OPT   NONE
11. AM ODD MEMORY SIZE     16384       25. LOC IDENT CODE _____________
12. ODD DISK SIZE          8992
```

```
ofcopt                    5ESS Switch
SCREEN 2 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

>26. ACTIVATE DIV OF REV      _              BATCH RC/V
 27. DIV OF REV HOURLY RPTS   _       >37. BATCH RC/V INTERVAL     01
 28. DIV OF REV COUNT TYPES   _____    38. BATCH RC/V RELEASE TIME 00
 29. 5 MIN PERM SIG THRESHOLD ___      39. BATCH RC/V CLEANUP AGE  14
 30. VAR TIME PERM SIG THRESHOLD ___     40. BATCH RC/V CLEANUP TIME 00:00
 31. VAR TIME PERM SIG INTERVAL __      41. BATCH RC/V INHIBIT      Y
 32. ALLOW TOUCH TONE FRAUD     N       42. BATCH CLEANUP INHIBIT   Y
```

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```
 33. PRINT TOUCH TONE FRAUD      N
 34. DSN OPTION                  N          TRUNK ERROR ANALYSIS
 35. CPE OPTION                  N       >43. ROUTE TO TERA?       Y
 36. SES                        ____     44. ERROR THRESHOLD       03
                                  >45. MFR REVERTIVE MANUAL? N
```

```
ofcopt                      5ESS Switch
SCREEN 3 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 46. LOCAL TRAF MEAS CHANNEL BOTH     56. CODE 2 _______
 47. IMLT-2?                 _        57. CODE 3 _______
 48. IMLT RETRY              N        58. CODE 4 _______
 49. IMLT RDELAY             25
 50. APPLICATION PROCESSOR   NO       >59. NM DEFAULT NPA       ___
 51. CARRIER ID              ____     60. NM RR INH DIG PFX/DEL N
 52. TOLL CARRIER            ____     61. NM SILC LEVEL 1       0.0
 53. ICLATA SCD IND          N        62. NM SILC LEVEL 2       0.0
 54. RINGING TIMEOUT         _____    >63. COMMON CHAN SIG      NO
                           64. DIRECT LINK NODE     _
CAMA TRUNK TROUBLE CODE             65. ORIG SCREEN OFF      _
>55. CODE 1 _______                 66. HOME NPA             ___
```

```
ofcopt                      5ESS Switch
SCREEN 4 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 67. ACT PT SDN       N                  AMA RECORDING OPTIONS
 68. SERV SWITCH PT?  N          >76. AMA METHOD                AMATPS
 69. LATA NUMBER      ___        77. AMADNS ACTIVE              N
>70. EXTRA START WINK N          78. MIN AMA ALRM               70
    OPC               _________  79. MAJ AMA ALRM              90
                           80. CRIT AMA ALRM             100
      EQUAL ACCESS             81. ISDAMAOPT                  Y
>72. TIME          300000       82. ISVAMAOPT                  N
 73. OVERLOAD TIME  15000        83. SHORT SUPERVISORY TRANSITIONS N
 74. OFFICE TYPE    N            84. LOCAL ANSWERED CALLS?      Y
 75. OFFICE CARRIER LEC          85. LOCAL ABANDONS?            N
                           86. TOLL ABANDONS?            Y
```

```
ofcopt                      5ESS Switch
SCREEN 5 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

87. SPECIAL ABANDONS?        N    99. LDC GEN TIME   00:00  109. ALIT RANGE _
88. ALL ABANDONS?            N   100. TRUNK          N
```

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```
89. SSU ON LOCAL CALLS?       N   101. OPER          N
90. SSU ON TOLL CALLS?        N   102. ORIG UNBUNDLED N
91. LOCAL COIN                N   103. ORIG RESOLD    N
92. SSU ON ALL CALLS?         N   104. TERM UNBUNDLED N
93. TERMINATING INTERLATA?    Y   105. TERM RESOLD    N
94. SSU ON INTERLATA?         N   106. UNBLD/RESLD SC 500
95. HR INWATS OVERFLOW RECORD? N
96. DID TIMEOUT               05      TESTING OPTIONS
97. CMC WINK CONNECT          N  >107. ALIT START TIME _____
98. AMA ERROR MIN ALRM        N   108. ALIT DURATION   _
```

```
ofcopt                      5ESS Switch
SCREEN 6 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 110. ALIT TYPE ____          120. FRI _
                              121. SAT _
      APT TESTING
 111. ALGORITHM     SEQN     >122. OCTL TONE DURATION 050
 112. PROCS NBR     2         123. OCTL OPEN DURATION 030
>113. APT START TIME _____
 114. APT DURATION   _          TWS FOR 101TL
 115. SUN            _        >124. FIRST  LOCAL
 116. MON            _         125. SECOND ______
 117. TUE            _         126. THIRD  ______
 118. WED            _
 119. THR            _
```

```
ofcopt                      5ESS Switch
SCREEN 7 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

    MSU/MMSU ALARMS REPORTS       136. GLBL TITLE   000000
>127. MISCELLANEOUS ALM OPT N      137. DAS          ___
 128. OVERLAP SIZE         01     138. ACTION POINT N
 129. DN PRIVACY?          N
 130. ISP DIGITS           2
 131. FAIL ID              ____

  LEASED NETWORK
 132. 8 HR SCAN  N
 133. 8 HR START 01
 134. 8 HR FREQ  8
 135. TIME OUT   4
```

```
ofcopt                      5ESS Switch
SCREEN 8 OF 23          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS
```

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```
    PPM PULSE WIDTH      146. FALSE LINK CONG LVL2       DEFAULT BRI TYPE
139. ISLU BATTERY     0                          >#151. BRI TYPE ______
140. ISLU TONE        0   INTERNATIONAL OUTBOUND CALL
141. ISLU THIRD WIRE  0  147. TRAD 2-STAGE PST 010000
                    148. TRAD 2-STAGE PDT 020000
 SPECIAL ACCESS
142. SP ACCESS N         149. RM RTG RESTRCT Y

     CCS FEATURES        Q931 PROTOCOL OPTIONS
143. EXPANDED SLS     N   150. CAUSE LOC PUB
144. IMPROVED SLT     N
145. MTP NODE RESTART N
```

```
ofcopt                      5ESS Switch
SCREEN 9 OF 23           OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

  PERFORMANCE MONITORING             ISUP            ON-LINE OFFICE RECORDS
152. DSL PM ENABLE   Y      161. CRA TIMER     25      >172. ENABLED?   N
153. REPORT INT      01     162. EXM D TIMER   0300     173. START HOUR 23
154. CRC SES RATE    3      163. BUSY ANNC     N        174. DURATION   04
155. MAX NO THR GRPS 256    164. LEC ANNC      N        175. SUN        N
156. PM TIME         0      165. LEC IW REL    N        176. MON        Y
157. BPV SES RATE    307    166. BLANK NBR REL N        177. TUE        Y
158. FAC PM ENABLE   Y      167. RCD 3PT1 ITC  SPEECH   178. WED        Y
                     168. CICP BLOCK    N        179. THR        Y
MISMATCH DETECTION         169. ISUP APN DAS ___      180. FRI        Y
159. ENABLE Y              170. IAM CRM PRIOR 1       181. SAT        N
160. REPORT N              171. OFC OLI       00
```

```
ofcopt                      5ESS Switch
SCREEN 10 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

     HOME INTERCOM      SLC96 T1 FACILITIES              911
182. MAX RING TIME 180   >#187. OFF NORMAL _       193. TIMING DELAY 0
183. MAX HOLD TIME 180
184. MAX TALK TIME 10          ISVM OPTION              ENHANCED 911
                     188. ISVM TCAP TIMER 3    194. E911 OPTION  INACTIVE
 SERIES COMPLETION                             195. E911 DAS    ___
   DEL BCK LNK Y       REMOTE DIGITAL TEST ACCESS 196. E911 SCR    ____
                     189. RDTA SCRN IDX   ____ 197. E911 LN SFG  ____
PER CALL TEST FAILURE      190. RDTA DAS       ___  198. E911 TRK SFG ____
   PCTF INT 60M         191. BRI MAX SESSION __
                     192. RDTA PIC        ____      PRIM E911 APID _
                                                    SEC E911 APID  _
```

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```
ofcopt                    5ESS Switch
SCREEN 11 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

201. ESA SW TIME 0     ESSENTIAL SVC PROTECT          FEATURE GROUP D
202. E911 CESID  BN    206. ESP NORM ALW N        212. FGD PHASE PREPHASE
                                  213. TCAP CIC  N
 OUTBOUND SERVICES           SSP 800
    ALT SIG SM ___    207. INH SCP NPA DEL N          SPEECH ROUTING
                 208. SCP 800 DAS    ___        SPEECH TRK GRPS ____
INDIV DIALING PLAN
204. IDP DESEP ___            MDII              NETWORK RELEASE
                 209. MDII INTERVAL   0    215. OLDEST RELEASE ____
  ASI PROXY          210. MDDI THRESHOLD   20
205. ASI ON N        211. MDDI MAJOR ALARM N     CKT SWITCHED TRUNK
                                  216. CST DAS ___
```

```
ofcopt                    5ESS Switch
SCREEN 12 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

        USTWC                     OIU
217. USTWC FEAT  _________      223. OFI SWITCH INT    028
218. USTWC ACT   N             OIU TDM CHBLK CNT 0000
219. USTWC CHRG  N               OIU TDM CHBLK LMT 0000
220. SPONT AVAIL UNAVAIL          OIU IP CHBLK CNT  0000
                          OIU IP CHBLK LMT  0000
NETWORK ACCESS INTERUPT (NAI)       MAXIMUM          0
221. TOLL N
                              PHA
       DNUS               229. CONG1 QCAP 50
222. FI SWITCH INT 028        230. CONG2 QCAP 80
                        231. ATM LAYER  SONET
```

```
ofcopt                    5ESS Switch
SCREEN 13 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

232. REV QLTY THRESH 0

CNIS INTRAGROUP DELIVERY
233. CNIGI NORSTRCT

COMMUNICATION MODULE
234. TMS HUNT 0
```

```
ofcopt                    5ESS Switch
```

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```
SCREEN 14 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

    CALL WAITING DELUXE        LONG DISTANCE PLATFORM       INCREASED TGN
235. ALERT TYPE    CWD2      246. LDP CARRID     ____    255. MAX TGN   2000
236. DFLT OPT      CALLFWD   247. LDP OFFICE ID ___     256. MAX RTIDX  3617
237. USG SENS CONF NO        248. NST ALL        N
238. SUPV ANNC     Y         249. ACCT PROMPT    BEEP2
239. DFLT ANNC     Y         250. CARRIER TONE   N
240. HOLD ANNC     BEGOFANNC 251. NSC WC ID      ___
241. FLASH TIMER   1.5       252. ORIG NSC       ___
242. DFLT TIMER    15        253. TERM NSC       ___
243. HOLD TIMER    60        254. TEST CALL TNSC ___
244. PRODUCT       5ESS
    POFFLOSS      N
```

```
ofcopt                    5ESS Switch
SCREEN 15 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

 LOCAL NUMBER PORTABILITY       ISUP QRY OPTIONS          RTCD OPTIONS
257. JIP          ______    264. CQM RSND      10        BILL SM  ___
258. DFLT FLAT RATE NONE     265. CQ START TIME  3    269. RTCD OFC N
259. DFR STRCT CODE 500                          270. RTCD ALM Y
                          NPA-NXX GROWTH      271. SCP TREC AMAONLY
  REORDER THRESHOLDS         266. ASI SID 10     N
260. RCR MINOR      0        267. ROP DISP DN 10 N      EEC OPTIONS
261. RCR MAJOR      0                                272. EEC ACT SIG
262. RCR CRITICAL   0

 LDCW TREATMENT
263. LDCW TRMT N
```

```
ofcopt                    5ESS Switch
SCREEN 16 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

      PSU TRUNKS                 TALKING CALL WAITING            SIGI Y
273. PP IDLE      4       282. ANS TIMER       2.0
274. PER RATE     5       283. DISC TIMER      3.0
275. PER THRESH   15      284. DN1          ____________________
276. PER 3G RATE  5       285. DN2          ____________________
277. PER 3G THRESH 15     286. DNB          ____________________
278. PRIM VOC ALG EVRC    287. DNC          ____________________
279. SEC VOC ALG  CEV13   288. DNG          ____________________
                          289. TCW DAS      ___
  FRBC LEV 3 PER          290. TCW SCR      ____
280. MIN THRESH 0500      291. TCW SUPPRESS AMA N
281. MAX THRESH 0900      292. TCW CARRID   ____
```

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```
ofcopt                    5ESS Switch
SCREEN 17 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

294. VIRTUAL SWITCH N USAGE SENSITIVE SIX WAY CALLING 307. ALARM INPUT OPT N
              300. USSWC FEAT ________      308. ALARM DURATION  ___
     CALEA       301. USSWC ACT  N
295. CALEA SM    ___ 302. USSWC CHRG N              PLATFORM CUTOVER
296. ADMIN ACCESS N                              CUTOVER MODE NONE
297. TD LIMIT    50        CGA OPTIONS            HOST PLAT 1  ___
              303. CGA BUNDLE        Y       HOST PLAT 2  ___
  CALL SCREENING    304. INH VACANT FAC      N
298. T SCREEN   20   305. VACANT FAC REPT TIME  2       PAG TIMERS
299. CS MONITOR 60                          312. OPS TIMER 15
                        DRM             313. TPS TIMER 10
              306. ALARM OUTPUT OPT N
```

```
ofcopt                    5ESS Switch
SCREEN 18 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

SS7 CONNECTION HOLD TIMERS
314. END OFFICE 120
```

```
ofcopt                    5ESS Switch
SCREEN 19 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

      CRITICAL INDICATORS          CRITICAL INDICATORS
315. CRIT EXPANDED INBAND SGNLING N   326. CRIT SCP 800 DAS N
317. CRIT NM DEFAULT NPA        N   327. CRIT FGD PHASE   N
318. CRIT HOME NPA            N   328. CRIT TCAP CIC    N
319. CRIT EXTRA START WINK      N   329. CRIT USTWC FEAT  N
320. CRIT CPE OPTION          N   330. CRIT USTWC ACT   N
321. CRIT OFFICE TYPE         N   331. CRIT SPONT AVAIL N
322. CRIT E911 OPTION         N   332. CRIT CICP BLOCK  N
323. CRIT E911 DAS            N
324. CRIT E911 SCR            N
325. CRIT IHN SCP NPA DEL       N
```

```
ofcopt                    5ESS Switch
SCREEN 20 OF 23        OFFICE DATA ADMINISTRATION
(5509)                 OFFICE OPTIONS

USAGE SENSITIVE CALL FORWARDING     336. MSTMCI 30
333. USCF FEAT     ________
```

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```
334. USCF CFV ALERT N              SESSION INITIATION PROTOCOL
                          337. COUNTRY CODE 000
SWITCH-BASED 8XX TRANSLATION INFO
335. SVC FEAT CODE 000               CIC ALLOCATION
                          338. CAMPON TIMER   20
                          339. KILL CALLS     Y
                          340. GROWTH VIA RCV N

                          341. PRINT ASSERT NAME N
```

```
ofcopt                     5ESS Switch
SCREEN 21 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

ON-HOOK DATA TRANSMISSION
346. OFC FSK OSI N
```

```
ofcopt                     5ESS Switch
SCREEN 22 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

  BICC TIMERS/RANGES      BICC TIMERS/RANGES          SIP FIELDS
BICC ADDR COMP     25    MAX RNG BGB BGU 127    #366. PRACK ENABLED N
BICC COT           12    MAX RNG BGRS    127
BICC CQ START TIME  4    UNI SETUP IND   15      367. OPS APM TIMER   10
BICC GBLO RSND     10    UNI CONN CFM    15      368. TPS APM TIMER   10
BICC GRS RSND      10    UNI CONN IND    10      369. INTG IDENTIFIER 0
BICC GUBL RSND     10    UNI REL CFM     5
BICC CQM RSND      10    UNI REL IND     5
BICC RLC SHORT     10    UNI IWG REL     2
BICC RLC LONG      60
BICC RS RSND       10
BICC SUS           15
```

```
ofcopt                     5ESS Switch        _
SCREEN 23 OF 23          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

          GSM MAP
370. MAP ENABLED     N
371. MAP Q RESP TIME 20
372. GTS ADDRESS     ____________
373. GTS PSEUDO CLI  ____________
374. EARLY ACM TIMER 18
```

Figure 4 SAMPLE OFCOPT FORM 5E16(2) SOFTWARE RELEASE

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```
ofcopt                    5ESS Switch
SCREEN 1 OF 20          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

*1. KEY              0          13. EOP LINES  _____
 2. OFFICE ID          _________     14. EOP TRUNKS _____
 3. COMPANY ID         _________     15. EOP SCR    _____
 4. TIME ZONE          -6          16. EOP CDI    _____
 5. DAYLIGHT SAVINGS TIME  _
 6. COIN RETURN POTENTIAL  _____          NDC NTMOS/RCVERBOSE OPTS
 7. EXPANDED INBAND SGNLING _          >21. TRFM LINK      _
 8. STUCK COIN REPORT      __             RCVERBOSE       _
 9. LTP SCR                ____         23. RNM LINK       N
10. LTP DAS                ___          24. TRFM RNM OPT   NONE
11. AM ODD MEMORY SIZE     16384        25. LOC IDENT CODE _____________
12. ODD DISK SIZE          8992
```

```
ofcopt                    5ESS Switch
SCREEN 2 OF 20          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

>26. ACTIVATE DIV OF REV      _              BATCH RC/V
 27. DIV OF REV HOURLY RPTS    _        >37. BATCH RC/V INTERVAL     01
 28. DIV OF REV COUNT TYPES    _____    38. BATCH RC/V RELEASE TIME 00
 29. 5 MIN PERM SIG THRESHOLD  ___      39. BATCH RC/V CLEANUP AGE  14
 30. VAR TIME PERM SIG THRESHOLD ___    40. BATCH RC/V CLEANUP TIME 00:00
 31. VAR TIME PERM SIG INTERVAL  __     41. BATCH RC/V INHIBIT      Y
 32. ALLOW TOUCH TONE FRAUD     N       42. BATCH CLEANUP INHIBIT   Y
 33. PRINT TOUCH TONE FRAUD     N
 34. DSN OPTION                 N          TRUNK ERROR ANALYSIS
 35. CPE OPTION                 N       >43. ROUTE TO TERA?       Y
 36. SES                        ____    44. ERROR THRESHOLD       03
                                  >45. MFR REVERTIVE MANUAL? N
```

```
ofcopt                    5ESS Switch
SCREEN 3 OF 20          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 46. LOCAL TRAF MEAS CHANNEL BOTH     56. CODE 2 _______
 47. IMLT-2?                 _        57. CODE 3 _______
 48. IMLT RETRY              N        58. CODE 4 _______
 49. IMLT RDELAY             25
 50. APPLICATION PROCESSOR   NO       >59. NM DEFAULT NPA       ___
 51. CARRIER ID              ____      60. NM RR INH DIG PFX/DEL N
 52. TOLL CARRIER            ____      61. NM SILC LEVEL 1       0.0
 53. ICLATA SCD IND          N         62. NM SILC LEVEL 2       0.0
 54. RINGING TIMEOUT         _____     >63. COMMON CHAN SIG      NO
                               64. DIRECT LINK NODE     _
CAMA TRUNK TROUBLE CODE              65. ORIG SCREEN OFF      _
```

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>55. CODE 1 _____ 66. HOME NPA ___

---

ofcopt 5ESS Switch
SCREEN 4 OF 20 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

67. ACT PT SDN N AMA RECORDING OPTIONS
68. SERV SWITCH PT? N >76. AMA METHOD AMATPS
69. LATA NUMBER ___ 77. AMADNS ACTIVE N
>70. EXTRA START WINK N 78. MIN AMA ALRM 70
OPC _____ 79. MAJ AMA ALRM 90
80. CRIT AMA ALRM 100
EQUAL ACCESS 81. ISDAMAOPT Y
>72. TIME 300000 82. ISVAMAOPT N
73. OVERLOAD TIME 15000 83. SHORT SUPERVISORY TRANSITIONS N
74. OFFICE TYPE N 84. LOCAL ANSWERED CALLS? Y
75. OFFICE CARRIER LEC 85. LOCAL ABANDONS? N
86. TOLL ABANDONS? Y

---

ofcopt 5ESS Switch
SCREEN 5 OF 20 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

87. SPECIAL ABANDONS? N 99. LDC GEN TIME 00:00 109. ALIT RANGE _
88. ALL ABANDONS? N 100. TRUNK N
89. SSU ON LOCAL CALLS? N 101. OPER N
90. SSU ON TOLL CALLS? N 102. ORIG UNBUNDLED N
91. LOCAL COIN N 103. ORIG RESOLD N
92. SSU ON ALL CALLS? N 104. TERM UNBUNDLED N
93. TERMINATING INTERLATA? Y 105. TERM RESOLD N
94. SSU ON INTERLATA? N 106. UNBLD/RESLD SC 500
95. HR INWATS OVERFLOW RECORD? N
96. DID TIMEOUT 05 TESTING OPTIONS
97. CMC WINK CONNECT N >107. ALIT START TIME _____
98. AMA ERROR MIN ALRM N 108. ALIT DURATION _

---

ofcopt 5ESS Switch
SCREEN 6 OF 20 OFFICE DATA ADMINISTRATION
(5509) OFFICE OPTIONS

110. ALIT TYPE ____ 120. FRI _
121. SAT _
APT TESTING
111. ALGORITHM SEQN >122. OCTL TONE DURATION 050
112. PROCS NBR 2 123. OCTL OPEN DURATION 030
>113. APT START TIME _____
114. APT DURATION _ TWS FOR 101TL
115. SUN _ >124. FIRST LOCAL
116. MON _ 125. SECOND _____

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```
117. TUE          _       126. THIRD  ______
118. WED          _
119. THR          _
```

```
ofcopt                    5ESS Switch
SCREEN 7 OF 20          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

    MSU/MMSU ALARMS REPORTS       136. GLBL TITLE   000000
>127. MISCELLANEOUS ALM OPT N      137. DAS          ___
 128. OVERLAP SIZE         01     138. ACTION POINT N
 129. DN PRIVACY?          N
 130. ISP DIGITS           2
 131. FAIL ID              ____

  LEASED NETWORK
 132. 8 HR SCAN  N
 133. 8 HR START 01
 134. 8 HR FREQ  8
 135. TIME OUT   4
```

```
ofcopt                    5ESS Switch
SCREEN 8 OF 20          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

    PPM PULSE WIDTH     146. FALSE LINK CONG LVL2       DEFAULT BRI TYPE
139. ISLU BATTERY     0                          >#151. BRI TYPE ______
140. ISLU TONE        0   INTERNATIONAL OUTBOUND CALL
141. ISLU THIRD WIRE  0  147. TRAD 2-STAGE PST 010000
                    148. TRAD 2-STAGE PDT 020000
 SPECIAL ACCESS
142. SP ACCESS N        149. RM RTG RESTRCT Y

     CCS FEATURES       Q931 PROTOCOL OPTIONS
143. EXPANDED SLS    N   150. CAUSE LOC PUB
144. IMPROVED SLT    N
145. MTP NODE RESTART N
```

```
ofcopt                    5ESS Switch
SCREEN 9 OF 20          OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

  PERFORMANCE MONITORING            ISUP          ON-LINE OFFICE RECORDS
152. DSL PM ENABLE   Y     161. CRA TIMER     25     >172. ENABLED?   N
153. REPORT INT      01    162. EXM D TIMER   0300    173. START HOUR 23
154. CRC SES RATE    3     163. BUSY ANNC     N       174. DURATION   04
155. MAX NO THR GRPS 256   164. LEC ANNC      N       175. SUN        N
156. PM TIME         0     165. LEC IW REL    N       176. MON        Y
157. BPV SES RATE    307   166. BLANK NBR REL N       177. TUE        Y
158. FAC PM ENABLE   Y     167. RCD 3PT1 ITC  SPEECH  178. WED        Y
```

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```
                    168. CICP BLOCK    N        179. THR       Y
MISMATCH DETECTION         169. ISUP APN DAS ___      180. FRI       Y
159. ENABLE Y              170. IAM CRM PRIOR 1       181. SAT       N
160. REPORT N              171. OFC OLI       00
```

```
ofcopt                      5ESS Switch
SCREEN 10 OF 20          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

     HOME INTERCOM      SLC96 T1 FACILITIES              911
182. MAX RING TIME 180   >#187. OFF NORMAL _       193. TIMING DELAY 0
183. MAX HOLD TIME 180
184. MAX TALK TIME 10          ISVM OPTION              ENHANCED 911
                    188. ISVM TCAP TIMER 3    194. E911 OPTION  INACTIVE
 SERIES COMPLETION                            195. E911 DAS    ___
   DEL BCK LNK Y       REMOTE DIGITAL TEST ACCESS 196. E911 SCR    ____
                    189. RDTA SCRN IDX   ____ 197. E911 LN SFG  ____
PER CALL TEST FAILURE      190. RDTA DAS       ___  198. E911 TRK SFG ____
   PCTF INT 60M         191. BRI MAX SESSION __
                    192. RDTA PIC        ____      PRIM E911 APID _
                                         SEC E911 APID  _
```

```
ofcopt                      5ESS Switch
SCREEN 11 OF 20          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

201. ESA SW TIME 0      ESSENTIAL SVC PROTECT           FEATURE GROUP D
202. E911 CESID  BN     206. ESP NORM ALW N         212. FGD PHASE PREPHASE
                                    213. TCAP CIC  N
 OUTBOUND SERVICES             SSP 800
   ALT SIG SM ___     207. INH SCP NPA DEL N          SPEECH ROUTING
                  208. SCP 800 DAS     ___         SPEECH TRK GRPS ____
INDIV DIALING PLAN
204. IDP DESEP ___              MDII               NETWORK RELEASE
                  209. MDII INTERVAL    0     215. OLDEST RELEASE ____
  ASI PROXY           210. MDDI THRESHOLD   20
205. ASI ON N         211. MDDI MAJOR ALARM N      CKT SWITCHED TRUNK
                                    216. CST DAS ___
```

```
ofcopt                      5ESS Switch
SCREEN 12 OF 20          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

        USTWC                    OIU         CNIS INTRAGROUP DELIVERY
217. USTWC FEAT  _________     223. OFI SWITCH INT 028  230. CNIGI NORSTRCT
218. USTWC ACT   N             OIU PCT CNT    0000
219. USTWC CHRG  N             OIU PCT LMT    0000 COMMUNICATION MODULE
220. SPONT AVAIL UNAVAIL                      231. TMS HUNT 0
```

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```
                          PHA
NETWORK ACCESS INTERUPT (NAI) 226. CONG1 QCAP 50
221. TOLL N               227. CONG2 QCAP 80
                     228. ATM LAYER  SONET
      DNUS
222. FI SWITCH INT 028       229. REV QLTY THRESH 0
```

```
ofcopt                    5ESS Switch
SCREEN 13 OF 20         OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

    CALL WAITING DELUXE       LONG DISTANCE PLATFORM      INCREASED TGN
232. ALERT TYPE    CWD2      243. LDP CARRID     ____    252. MAX TGN   2000
233. DFLT OPT      CALLFWD   244. LDP OFFICE ID ___     253. MAX RTIDX  3617
234. USG SENS CONF NO        245. NST ALL        N
235. SUPV ANNC     Y         246. ACCT PROMPT    BEEP2
236. DFLT ANNC     Y         247. CARRIER TONE   N
237. HOLD ANNC     BEGOFANNC 248. NSC WC ID      ___
238. FLASH TIMER   1.5       249. ORIG NSC       ___
239. DFLT TIMER    15        250. TERM NSC       ___
240. HOLD TIMER    60        251. TEST CALL TNSC ___
241. PRODUCT       5ESS
    POFFLOSS      N
```

```
ofcopt                    5ESS Switch
SCREEN 14 OF 20         OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 LOCAL NUMBER PORTABILITY       ISUP QRY OPTIONS          RTCD OPTIONS
254. JIP            ______    261. CQM RSND      10       BILL SM  ___
255. DFLT FLAT RATE NONE      262. CQ START TIME  3    266. RTCD OFC N
256. DFR STRCT CODE 500                            267. RTCD ALM Y
                        NPA-NXX GROWTH       268. SCP TREC AMAONLY
  REORDER THRESHOLDS         263. ASI SID 10     N
257. RCR MINOR      0       264. ROP DISP DN 10 N       EEC OPTIONS
258. RCR MAJOR      0                             269. EEC ACT SIG
259. RCR CRITICAL   0

 LDCW TREATMENT
260. LDCW TRMT N
```

```
ofcopt                    5ESS Switch
SCREEN 15 OF 20         OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

      PSU TRUNKS                TALKING CALL WAITING          SIGI Y
270. PP IDLE      4       279. ANS TIMER       2.0
271. PER RATE     5       280. DISC TIMER      3.0
272. PER THRESH   15      281. DN1          ____________________
273. PER 3G RATE  5       282. DN2          ____________________
```

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```
274. PER 3G THRESH  15      283. DNB            _____________________
275. PRIM VOC ALG  EVRC     284. DNC            _____________________
276. SEC VOC ALG   CEV13    285. DNG            _____________________
                       286. TCW DAS        ___
  FRBC LEV 3 PER           287. TCW SCR        ____
277. MIN THRESH 0500        288. TCW SUPPRESS AMA N
278. MAX THRESH 0900        289. TCW CARRID     ____
```

```
ofcopt                      5ESS Switch
SCREEN 16 OF 20          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

291. VIRTUAL SWITCH N USAGE SENSITIVE SIX WAY CALLING 304. ALARM INPUT OPT N
                297. USSWC FEAT _________       305. ALARM DURATION  ___
      CALEA         298. USSWC ACT  N
292. CALEA SM      ___ 299. USSWC CHRG N                PLATFORM CUTOVER
293. ADMIN ACCESS N                                  CUTOVER MODE NONE
294. TD LIMIT     50          CGA OPTIONS              HOST PLAT 1  ___
                300. CGA BUNDLE          Y         HOST PLAT 2  ___
  CALL SCREENING     301. INH VACANT FAC       N
295. T SCREEN   20    302. VACANT FAC REPT TIME  2       PAG TIMERS
296. CS MONITOR 60                                 309. OPS TIMER 15
                          DRM                 310. TPS TIMER 10
                303. ALARM OUTPUT OPT N
```

```
ofcopt                      5ESS Switch
SCREEN 17 OF 20          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

SS7 CONNECTION HOLD TIMERS
311. END OFFICE 120
```

```
ofcopt                      5ESS Switch
SCREEN 18 OF 20          OFFICE DATA ADMINISTRATION
(5509)                   OFFICE OPTIONS

      CRITICAL INDICATORS            CRITICAL INDICATORS
312. CRIT EXPANDED INBAND SGNLING N    323. CRIT SCP 800 DAS N
314. CRIT NM DEFAULT NPA         N    324. CRIT FGD PHASE   N
315. CRIT HOME NPA               N    325. CRIT TCAP CIC    N
316. CRIT EXTRA START WINK       N    326. CRIT USTWC FEAT  N
317. CRIT CPE OPTION             N    327. CRIT USTWC ACT   N
318. CRIT OFFICE TYPE            N    328. CRIT SPONT AVAIL N
319. CRIT E911 OPTION            N    329. CRIT CICP BLOCK  N
320. CRIT E911 DAS               N
321. CRIT E911 SCR               N
322. CRIT IHN SCP NPA DEL        N
```

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```
ofcopt                    5ESS Switch
SCREEN 19 OF 20         OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

USAGE SENSITIVE CALL FORWARDING     333. MSTMCI 30
330. USCF FEAT  ________
331. USCF CFV ALERT N               CIC ALLOCATION
                        334. CAMPON TIMER   20
SWITCH-BASED 8XX TRANSLATION INFO   335. KILL CALLS     Y
332. SVC FEAT CODE 000              336. GROWTH VIA RCV N

                        337. PRINT ASSERT NAME N

                        ON-HOOK DATA TRANSMISSION
                        342. OFC FSK OSI N
```

```
ofcopt                    5ESS Switch        _
SCREEN 20 OF 20         OFFICE DATA ADMINISTRATION
(5509)                  OFFICE OPTIONS

 BICC TIMERS/RANGES     BICC TIMERS/RANGES    362. COMFORT NOISE GEN IDLE
BICC ADDR COMP     25   MAX RNG BGB BGU 127   363. OPS APM TIMER     10
BICC COT           12   MAX RNG BGRS    127   364. TPS APM TIMER     10
BICC CQ START TIME  4   UNI SETUP IND   15    365. INTG IDENTIFIER   0
BICC GBLO RSND     10   UNI CONN CFM    15
BICC GRS RSND      10   UNI CONN IND    10    565. GSM ESCALATION N
BICC GUBL RSND     10   UNI REL CFM     5     566. SPOP          ON
BICC CQM RSND      10   UNI REL IND     5
BICC RLC SHORT     10   UNI IWG REL     2
BICC RLC LONG      60
BICC RS RSND       10
BICC SUS           15
```

Figure 5 SAMPLE OFCOPT FORM 5E17 AND LATER SOFTWARE RELEASES

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SEC. 5J: 5510 RECORD
SWITCHING MODULE INFORMATION FORM - IMINFO

1. GENERAL

The Switching Module Information Record is available with 5E2 and later Software Releases, and gathers and builds miscellaneous customer data related to a given SM (Switching Module). It must be completed for each SM in a multi-module 5ESS Switch.

1.1 Directly Connected Test Unit

The DCTU (Directly Connected Test Unit) measures voltage, resistance and capacitance on analog circuits for trunks and lines. It replaces manual testing previously done from the TLWS (Trunk and Line Work Station). The Route Index establishes the metallic path between a given line or trunk in an SM to be tested and the DCTU test circuits defined by the LTPs (Logical Test Ports) in a Trunk Group. DCTUs are assigned on the EQDCTU form (5751 Record).

Ordinarily, only one DCTU is required in a 5ESS Switch. If one or more DCTUs is equipped in a multi-module office, the DCTU Route Index must be defined for every SM in the office. This Route Index must be defined on the RTIDX form (5303 Record) and associated with a Trunk Group containing LTPs. Refer to Division 2, Section 2J.

1.2 Remote Switch Modules

RSM (Remote Switch Module) types ORM (Optically Remote Switching Module) and TRM (Two-Mile optically Remote Switching Module) are available with 5E3 and later. ORMs and TRMs are assigned on the EQIM form (5700-1/2 Record).

1.3 Cutover of Switch Modules

The *CUTOVER BY SM DATA* fields are related to the cutover capability. The initialization of the pre- and post- cutover status and Cutover Route Index allow the customer the choice of either a flash cutover or a gradual cut by SM. A flash cut means all customers are put into service at once on the new 5ESS Switch. A gradual cut means selected customers (based on the SM value) are cut into service on the new 5ESS Switch in a phased approach via MCC maintenance messages.

The Status refers to the state of the line in the 5ESS Switch. The normal Precut Status would be "INACTIVE", as the customer personnel does testing. After cutover procedures have been activated, the Postcut Status would be "ACTIVE"; the customer line is now being actively served by the 5ESS Switch.

If the customer prefers to cut by SM in the gradual method,

- for the SM being cut over, the Precut Status is "INACTIVE" and the Postcut Status is "ACTIVE"; and
- for the SM to be cut over later, the Precut Status and Postcut Status are both "INACTIVE". The Postcut Status would be set later to "ACTIVE" and the customer personnel would use MCC Maintenance messages and screens to individually activate each SM.

Table 1 summarizes cutover data requirements for both this form and the COTH form (5513 Record).

1.4 Recent Change View

The corresponding Recent Change Views for this form are 8.27, 10.2, 11.1 and 18.1.

2. FORM AND RECORD ENTRIES

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2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * SWITCHING MODULE

Description: Enter the number of the Switching Module being defined.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E2 and later, in offices equipped with CM1 (Communications Module 1), the valid entries are 1-48. In offices equipped with CM2 (Communications Module 2), the valid entries are 1-192.

EQUIP RELATED RTIs

Fields Section 2.3 - Section 2.8 refer to related Route Indexes. All have Note 1 applying to the valid entries.

2.3 DCTU ROUTE INDEX

Description: Enter the DCTU Route Index if a DCTU is provided in the office or at the Remote Site.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

A DCTU Route Index must be assigned to an RSM, an ORM, or a TRM if a DCTU is provided at the RSM, ORM, or TRM.

All RSMs in the same remote site, if served by only one DCTU physically connected to an RSM within the remote site, can have the same DCTU Route Index.

For 5E5 and later, co-located ORMs (or TRMs) can have the same DCTU Route Index provided that a DCTU is physically connected to an ORM (or TRM) at the same location.

The values for DCTU ROUTE INDEX, SLIM ROUTE INDEX, ALIT ROUTE INDEX, MAJ ROUTE INDEX, CSTL ROUTE INDEX, LTD ROUTE INDEX and ALT CUTOVER RTI must be unique.

DCTU ROUTE INDEX may not be duplicated on a LINE (5109-1/2/3 Record),NOC (5501 Record), RAR (5301 Record), or FIXRT form (5301-1 Record).

The value of the DCTU Route Index must be defined on an RTIDX form (5303 Record) with an associated TGN defined on a TKGRP form (5202 Record). This Trunk Group must have LTPs assigned dedicated to the DCTU circuits (TRKCLS "LTPDCTU").

Any DCTU ROUTE INDEX entered must be assigned on an RTIDX form with ROUTE TYPE of "HUNT".

For 5E3 and later, if no DCTU is in the office, then this field must be left blank or be assigned on an RTIDX form with a ROUTE TYPE of "REORDER".

2.4 SLIM ROUTE INDEX

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Description: Enter the Subscriber Line and Instrument Measurement Route Index.

This field supports the TLWS Metallic Test Capability. See Division 2, Section 4A230.

Software Release: 5E10 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If a SLIM ROUTE INDEX is entered, there must be a corresponding entry on the RTIDX form with the same ROUTE INDEX and a TRUNK GROUP NUMBER entered. The TRUNK forms entered with the same TGN value must have an LTP equipment number on an SM which has a corresponding EQMMSP form with a PACK EQUIPMENT LIST TYPE of "SLIM".

If SLIM ROUTE INDEX is entered, ROUTE INDEX on the RTIDX form must be entered with a indicated TRUNK GROUP number.

If SLIM ROUTE INDEX is entered, the associated TRUNK GROUP NUMBER must have a TRUNK CLASS of "LTPSLIM" on the TRKGRP form.

SLIM ROUTE INDEX may not be duplicated on a RAR, FIXRT, or NOC form.

2.5 ALIT ROUTE INDEX

Description: Enter the Route Index Number assigned for Automatic Line Insulation Tests. An entry is required only if the SM has one or two MSUs (Metallic Service Units) or MMSUs (Modular Metallic Service Units), with at least one ALIT type pack assigned.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If a Route Index is entered, it must be defined on the RTIDX form and associated with an LTP Trunk Group (TRKCLS "LTPALIT"). For further information, refer to the section describing Automatic Line Insulation Tests within Division 2, Section 2 of this guide.

If this field is entered, this Switching Module must be equipped on the EQMSP or EQMMSP forms (5750 Record) with an MSU/MMSU Pack Type equal to "ALIT".

If ALIT ROUTE INDEX is specified, then MAJ ROUTE INDEX is required. ALIT ROUTE INDEX and MAJ ROUTE INDEX must be unique values

ALIT ROUTE INDEX may not be duplicated on a LINE, NOC,RAR,or FIXRT form.

2.6 MAJ ROUTE INDEX

Description: Enter the Route Index Number assigned for Metallic Access Junctors. An entry is required only if the SM has one or two MSUs or MMSUs with at least one MACC (Metallic Access Circuit) type pack assigned.
Valid Entries:
- For 5E10 and earlier: 1 - 3617

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- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If a Route Index is entered, it must be defined on the RTIDX form and associated with an LTP Trunk Group (TRKCLS "LTPMSU").For further information refer to the section describing Metallic Access for Line and Trunk Testing within Division 2, Section 2 of this guide.

If this field is entered, this Switching Module must be equipped on the EQMSP or EQMMSP forms with an MSU/MMSU MSU Pack Type equal to "MACC".

MAJ ROUTE INDEX may be assigned without ALIT ROUTE INDEX being assigned (that is, an SM may be equipped with an MSU which has an MACC pack but no ALIT pack).

MAJ ROUTE INDEX may not be duplicated on a LINE, NOC,RAR,or FIXRT form.

2.7 CSTL ROUTE INDEX

Description: Enter the Coin Station Test Line (CSTL) Route Index. This Route Index is only used in the routing of outgoing CSTL calls from RSMs, ORMs or TRMs. The CSTL Route Index points to a Trunk Group containing outgoing CSTL trunks (from the SM).
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The value of CSTL ROUTE INDEX may not be entered for any of the other Route Indexes on this form; that is, DCTU ROUTE INDEX, ALIT ROUTE INDEX, MAJ ROUTE INDEX, LTD ROUTE INDEX or ALT CUTOVER RTI. This value also cannot be duplicated on other IMINFO forms, unless the RSM is part of an RSM cluster or if the RSM is one in a group of co-located ORMs (or TRMs). If a Route Index is entered, it must be defined on an RTIDX form.

CSTL ROUTE INDEX may not be duplicated on a NOC, RAR,or FIXRT form.

If the RSM is part of a cluster, then this field can have the same value entered on the IMINFO forms for all RSMs in the cluster. For example, if CSTL ROUTE INDEX on the IMINFO form for SM3 and the IMINFO form for SM90 are both 101, then SM3 and SM90 are part of a cluster and the corresponding EQIM forms for SM3 and SM90 should have the same RSM SITE or REMOTE SITE value.

Each RSM equipped with an outgoing CSTL trunk(s) must have its own outgoing CSTL Trunk Group as well as its own unique Route Index which points to it unless the RSM is a member of a cluster.

This field must be used only for RSMs equipped with an outgoing CSTL trunk; that is, CSTL ROUTE INDEX must equal ROUTE INDEX on an RTIDX form, where the Trunk Group assigned to the Route Index is defined on a TKGRP form with TRKCLS equal to "TSTK".

For 5E5 and later, ORMs (or TRMs) can have the same CSTL ROUTE INDEX if they are co-located.

2.8 LTD ROUTE INDEX

Description: Enter the LTD (Local Test Desk) Route Index. This Route Index is only used in the routing of outgoing LTD calls from RSMs or with ORMs or TRMs available with 5E3 and later. The LTD Route Index points to a Trunk Group containing outgoing LTD trunks from the SM. This field is used only for Remote

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Switching Modules (RSMs, ORMs or TRMs).
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The value of LTD Route Index may not be entered for any of the other Route Indexes on this form; that is, DCTU ROUTE INDEX, ALIT ROUTE INDEX, MAJ ROUTE INDEX, CSTL ROUTE INDEX or ALT CUTOVER RTI. This value also cannot be duplicated on other IMINFO forms, unless the RSM Module is part of an RSM cluster, or if the RSM is one in a group of co-located ORMs (or TRMs). If a Route Index is entered, it must be defined on an RTIDX form.

LTD ROUTE INDEX may not be duplicated on a NOC, RAR,or FIXRT form.

For 5E5 and later, ORMs (or TRMs) can have the same LTD ROUTE INDEX if they are co-located.

This field must be used only for RSMs, ORMs or TRMs equipped with an outgoing LTD trunk; that is, LTD ROUTE INDEX must equal ROUTE INDEX on an RTIDX form, where the Trunk Group assigned to the Route Index is defined on a TKGRP form with TRKCLS equal to "TSTK".

CUTOVER BY SM DATA

Fields Section 2.9 - Section 2.11 refer to cutover of SMs.

2.9 PRECUT STATUS

Description: Enter the precut mode status of the SM.

Valid PRECUT STATUS Entries

Entry	Definition
ACTIVE	The SM is active.
INACTIVE	The SM is inactive.

Data Rules:

If the SMs are going to be cut over in a flash cut or gradually (see Section 1.3), this field should be set to "INACTIVE".

For 5E4(2) and later, for LTG (Large Terminal Growth), if PRECUT STATUS is "INACTIVE" and the OFCOPT form (5509 Record) has CUTOVER equal to "N", the ODA Project Consultants should be called to change CUTOVER to "Y".

For 5E4(2) and later, if the office is undergoing LTG, IMINFO forms with both PRECUT STATUS and POSTCUT STATUS set to "ACTIVE" should be investigated. PRECUT STATUS and POSTCUT STATUS may need to be blank. If no new lines are added to this SM, then PRECUT STATUS and POSTCUT STATUS should be blank. Refer to the official LTG documentation for formal procedures.

Existing TNs cannot be defined for an SM with an "INACTIVE" PRECUT STATUS.

2.10 POSTCUT STATUS

Description: Enter the postcut mode status of the SM.

Valid POSTCUT STATUS Entries

Entry	Definition
ACTIVE	The SM is active.
INACTIVE	The SM is inactive.

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Data Rules:

For a flash cutover, this field should be set to "ACTIVE". For an SM to be cut over at a later time, set this field to "INACTIVE". When using the gradual cut, MLHG members are cut into service based on the SM value of the LEN associated with the main directory number (Member 1) of the MLHG regardless of the LEN values of each member.

For 5E4(2) and later, if the office is undergoing LTG (Large Terminal Growth), IMINFO forms with both PRECUT STATUS and POSTCUT STATUS set to "ACTIVE" should be investigated. PRECUT STATUS and POSTCUT STATUS may need to be blank. If no new lines are added to this SM, then PRECUT STATUS and POSTCUT STATUS should be blank. Refer to the official LTG documentation for formal procedures.

2.11 ALT CUTOVER RTI

Description: Enter the Alternate Cutover Route Index, which is required for every SM. This Route Index routes calls terminating to a pre-cutover line in the "INACTIVE" state. The Route Index may be associated with reorder tone, a recorded announcement, or an outgoing Trunk Group to the existing office in which the Telephone Number is active.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

This field must be entered for initial and growth offices.

The ALT CUTOVER RTI must not be duplicated on the FIXRT, LINE, NOC, or RAR forms.

2.12 MFR FREQUENCY CLASS

Description: Enter the valid Frequency Class for this SM.

Required Field.
Default: NON
Valid Entries:

Valid MFR FREQUENCY CLASS Entries

Entry	Definition
NON	SM does not support MFR customer lines
HAR	Harmonic Frequency Series
SYN	Synchromonic Frequency Series
DEC	Decimonic Frequency Series

Data Rules:

All SMs that have any MFR (Multi-Frequency Ringing) customers assigned must have the appropriate MFR Frequency Class specified. See Division 3, Sections 1I and 1K for the table giving the correspondence of MFR Frequency Class to Party value assigned to customer MFR lines on the LINE and MLHLN forms (5111-1/2/3 Record).

If an SM does not support MFR, a value of "NON" is required in this field.

For SMs with an entry other than "NON", all line units defined on EQLUP forms (5711 Record) must have LINE UNIT TYPE not equal to "4AB1".

2.13 2 PARTY ANI

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Description: Is there ANI (Automatic Number Identification) for two-party lines? If this field is set to "Y", ANI is used; if set to "N", ONI (Operator Number Identification) is used. This field should be specified at ODA time. There is no Recent Change support for this field.

Software Release: 5E5 and later
Required Field.
Valid Entries: Y, N

Data Rules:

If this field is "Y", then each of the LINE forms which have the same OE NUMBER defined for this SM must have PTY entered, with only 1 tip party assignment when PTY is "T", 0, or 6 - 9 and/or 1 ring party assignment where PTY is "R" or 1 - 5.

2.14 PROHIBIT DT

Description: Is disconnect timing prohibited?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

MSU/MMSU ALARMS CONTROLS

Fields Section 2.15 - Section 2.16 refer to parameters used to measure chatter.

2.15 CHATTER SAMPLING

Description: Enter the sampling time in seconds used for chattering controls.

Software Release: 5E5 and later
Default: 1
Valid Entries: 1 - 10 (seconds)

2.16 CHATTER TRANSITION

Description: Enter the number of MMSU scan point transitions for chattering.

Software Release: 5E5 and later
Default: 4
Valid Entries: 0 - 60

2.17 UTD LIMIT

Description: Enter the percentage of UTDs (Universal Tone Decoders) on the SM that may be used for ASI (Advanced Service Interface) Proxy.

Software Release: 5E8 and later
Required Field.
Default: 10
Valid Entries: 0 - 100 (%)

2.18 LOCAL LOSS

Description: Enter the time slot interchanger local loss. See the Far Access Remote secured feature in Division 2, Section 4A184.

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Software Release: 5E9(2) and later
Required Field.
Default: 0.0
Valid Entries: 0.0 - 15.0 (dB in 0.5 increments)

Data Rules:

The LOCAL LOSS and REMOTE LOSS fields on the IMINFO form are used by the Far Access Remote secured feature. The feature must be purchased by the office, and an SFSYS form must exist with the ACT field for SFID 184 set to "Y" before data can be changed from the default value 0.0.

2.19 REMOTE LOSS

Description: Enter the time slot interchanger remote loss. See the Far Access Remote secured feature in Division 2, Section 4A184.

Software Release: 5E9(2) and later
Required Field.
Default: 0.0
Valid Entries: 0.0 - 15.0 (dB in 0.5 increments)

Data Rules:

See data rules for LOCAL LOSS.

2.20 STOR UTD LIMIT

Description: Enter the maximum percentage of UTDs (Universal Tone Decoders) on the SM available for STOR. This field specifies the maximum percentage of UTDs (Universal Tone Decoders) that may be used by the AIN SSP STOR (Send to Outside Resource) (Local) secured feature (SFID 229). For more information on the AIN SSP STOR (Local) feature, see Division 2, Section 4A229.

Software Release: 5E10 and later
Required Field.
Default: 10
Valid Entries: 0 - 100

Data Rules:

Since AIN SSP STOR (Send To Outside Resource) (Local) is a secured feature and must be purchased by the office before STOR data can be assigned, STOR UTD LIMIT must be 10 until SFID 126 ACT and SFID 229 ACT on the SFSYS form have been set to "Y".

2.21 ODTMF UTD LIMIT

Description: The ODTMF UTD LIMIT (Originating Dual Tone Multi-Frequency Universal Tone Decoders Limit) field is used to specify the maximum percentage of UTD (Universal Tone Decoders) that may be used by the O_DTMF event for the ASP (Advanced Services Platform) Mid Call Event Detection feature. This is expressed as a percentage of the total available UTDs on the Switching Module. For more information on the ASP Mid Call Event Detection feature, see Division 2, Section 4A343.

Software Release: 5E13, 5E15 and later
Required Field.
Default: 10
Valid Entries:
- For 5E13 and 5E14: 1 - 100
- For 5E15: 0 - 100

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Data Rules:

When the ODTMF UTD LIMIT field is set to a valid value other than 10, the ACT field for SFID 345 on the SFSYS form (5713-1 Record) must be set to "Y".

WARNING: When ODTMF UTD LIMIT is greater than 49% of the available UTDs assigned for Mid Call Event, call originations using UTD may be impacted.

CORC LOG BUFFER

Fields Section 2.22 - Section 2.23 refer to parameters used to set thresholds for controlling the Customer Originated Recent Change Log Buffer. CORCs are customer activated changes, such as call-forwarding, which affect switch data. The CORC log buffer maintains CORC changes which are periodically "flushed" to disk. The following fields define the frequency of CORE flushes.

2.22 CORC FLUSH

Description: This field specifies how full the CORC log buffer must be before a CORC "flush" will take place. This threshold is expressed as the percent of the total available CORC log buffer.

Software Release: 5E9(2) and later
Default: 50
Valid Entries: 20 - 80 percent

2.23 TOD CORCS

Description: This field specifies the number of Time of Day CORCs allowed in the log buffer before a CORC flush may take place.

Software Release: 5E9(2) and later
Valid Entries: 1 - 20

NUMBER PORTABILITY

This field group was added to accommodate local number portability. This is a secured feature with SFID 199. For more information on Number Portability, see Division 2, Section 4A174.

2.24 JIP

Description: This field specifies the JIP (Jurisdiction Information Parameter) and is used with number portability. It specifies the ISUP parameter used, on a per-SM basis, when generating the IAM (Initial Address Message). This parameter contains the NPA/NXX combination of the designated LRN (Location Routing Number) representing this SM.

When this SM serves as a community dial office replacement with a wire-center different than the host office, the JIP overrides the office parameter defined on the OFCOPT form (5509 Record). The per-SM parameter is used in IXC (Inter-eXchange Carrier) AMA Access recording for IXC handled calls originating or terminating to or from ported DNs on the SM.

This feature was added for the AMA Billing feature. For more information on AMA Billing, see Division 2, Section 4A199.

Software Release: 5E11 and later
Valid Entries: Blank or 6 digits (0 - 9)

SMs SERVING:	OFFICE	TYPE	IMINFO form		COTH form	

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			PRECUT	POSTCUT	PRECUT	POSTCUT
New 1000s Groups Only	Initial or LTG	Flash	Inactive	Active	Not Required	
		SM		Inactive/Active as Required	Not Required	
		1000s Group	Active	Active	Inactive	Inactive/Active as Required
Existing 1000s Groups Only	LTG	Any	Blank	Blank	Not Required	
Both New and Existing 1000s Groups		Any	Active	Active	Not Required (existing)	
					Inactive (new)	Inactive/Active as Required (new)

Figure 1 CUTOVER DATA REQUIREMENTS

```
iminfo                  5ESS Switch
(5510)              OFFICE DATA ADMINISTRATION
SCREEN 1 OF 2        SWITCHING MODULE INFORMATION

*1. SWITCHING MODULE ___        10. MFR FREQUENCY CLASS NON
                        11. 2 PARTY ANI      _
   EQUIP RELATED RTIs           12. PROHIBIT DT       N
 2. DCTU ROUTE INDEX ____
 3. ALIT ROUTE INDEX ____          MSU/MMSU ALARMS CONTROLS
 4. MAJ ROUTE INDEX  ____         13. CHATTER SAMPLING   01
 5. CSTL ROUTE INDEX ____          14. CHATTER TRANSITION 04
 6. LTD ROUTE INDEX  ____
                        15. UTD LIMIT 10
    CUTOVER BY SM DATA
 7. PRECUT STATUS  _________
 8. POSTCUT STATUS _________
 9. ALT CUTOVER RTI ____
```

```
iminfo                  5ESS Switch
(5510)              OFFICE DATA ADMINISTRATION
SCREEN 2 OF 2        SWITCHING MODULE INFORMATION

16. LOCAL LOSS  0.0
17. REMOTE LOSS 0.0

 CORC LOG BUFFER
18. CORC FLUSH 50
19. TOD CORCS  __
```

Figure 2 SAMPLE IMINFO FORM 5E12 SOFTWARE RELEASE

```
iminfo                  5ESS Switch
SCREEN 1 OF 2        OFFICE DATA ADMINISTRATION
(5510)              SWITCHING MODULE INFORMATION

*1. SWITCHING MODULE 001        CUTOVER BY SM DATA
                        8. PRECUT STATUS  _________
   EQUIP RELATED RTIs         9. POSTCUT STATUS  _________
```

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```
 2. DCTU ROUTE INDEX _____     10. ALT CUTOVER RTI _____
 3. SLIM ROUTE INDEX _____
 4. ALIT ROUTE INDEX _____     11. MFR FREQUENCY CLASS NON
 5. MAJ ROUTE INDEX  _____    #12. 2 PARTY ANI        Y
 6. CSTL ROUTE INDEX _____     13. PROHIBIT DT        N
 7. LTD ROUTE INDEX  _____
                      MSU/MMSU ALARMS CONTROLS
                      14. CHATTER SAMPLING  01
                      15. CHATTER TRANSTION 04
```

```
iminfo                      5ESS Switch
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5510)              SWITCHING MODULE INFORMATION

16. UTD LIMIT 10          NUMBER PORTABILITY
                     23. JIP ______
17. LOCAL LOSS      0.0
18. REMOTE LOSS     0.0
19. STOR UTD LIMIT  10
20. ODTMF UTD LIMIT 10

 CORC LOG BUFFER
21. CORC FLUSH 50
22. TOD CORCS  __
```

Figure 3 SAMPLE IMINFO FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5K: 5511 RECORD
TRUNK AND LINE WORK STATION FORM - TLWS

1. GENERAL

The 5511 Record is available in 5E2 and later Software Releases and defines each TLWS (Trunk and Line Work Station) associated with a 5ESS Switch. An MCC (Master Control Center) TLWS is required in every 5ESS Switch and must be defined on the 5511 Record.

If the TLWS is equipped with a TAU (Test Access Unit), this record defines the LTP (Logical Test Port), Metallic Test Bus, and the Cut-Thru and Diode Distribute Points assigned to each DC Jack and the AC Jack TENs (Trunk Equipment Numbers).

1.1 Logical Test Port Assignments

LTP assignments are made by machine owner. The Metallic Test Bus and Distribute Point assignments are also made by machine owner, but are taken from a list of available assignments provided by Lucent Technologies. All DC Jack assignments for each TLWS must be in the same SM (Switching Module).

The 5511 Record is formatted in such a way that two lines of data may be required for each TLWS. The first line of data contains the WSN (Work Station Number), the T&M (Talk and Monitor) Telephone Numbers (if applicable), an indication of a possible TAU, DC Jack 1 and AC Jack Trunk Data assignments. The second line of data contains the DC Jack 2 assignments. If the TLWS is not equipped with a TAU, only one line of data is required.

1.2 Device Identification

For 5E6 and earlier, when each TLWS form is entered into ODA, a DEVID (Device Identification) value is computed by the ODA program based on the WSN. The DEVID is also output if the 5511 Record is requested. The following table shows the correspondence of WSN to DEVID:

WSN	DEVID	DESCRIPTION
1	a	TLWS in the MCC.
2	z	TLWS in an SCC (Switching Control Center).
3	l	First Supplemental TLWS.
4	m	Second Supplemental TLWS.
5	n	Third Supplemental TLWS.
6	o	Fourth Supplemental TLWS.
7	j	Fifth Supplemental TLWS.
8	k	Sixth Supplemental TLWS.

For 5E7 and 5E8, the DEVID value must be entered; it is not automatically computed. For 5E9(1) and later, DEVID is optional.

1.3 Talk and Monitor Telephone Number

Each TLWS may be assigned a T&M Telephone Number, which is Local or Remote. A TLWS may not have assignments for both. A local Telephone Number is used if the TLWS may be served by the local 5ESS Switch line equipment (either an LEN or SLEN) and the NXX is defined in the OFFICE CODE field on a NOC form (5501 Record). Otherwise, the T&M Monitor is a remote Telephone Number.

1.4 Recent Change View

The corresponding Recent Change View for this form is 14.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Group Number and Office Name on each record.

2.2 * WORK STATION NUMBER

Description: Enter the WSN.

Required Field.

Valid WORK STATION NUMBER Entries

Entry	Definition
1	MCC (Master Control Center).
2	SCC (Switching Control Center).
3-8	
3 - 32	Software Release: 5E9(1) and later. Supplemental TLWS.

Data Rules:

Work Station Number 1 is required for every 5ESS Switch. The only valid entries for single module offices are 1 and 2.

For 5E6 and earlier, a value between 3 and 8, entered in this field is directly related to entries on the ECDOPT form (5706 Record) for new or growth offices.

For 5E4(2) through 5E6, the introduction of Flexible IOP (Input/Output Processor) selection altered the ECDOPT form. A given WORK STATION NUMBER is directly related to an entry in the DVT (Device Type) element of a member of IOP LIST on the ECDOPT form. The table below shows what DVT value to use for a particular WORK STATION NUMBER. If the WORK STATION NUMBER is not defined on a TLWS form, that value should not be used in the IOP LIST.

5E4(2) - 5E6 Software Releases

WORK STATION NUMBER	IOP List DVT Value
3	TTY11
4	TTY12
5	TTY13
6	TTY14
7	TTY09
8	TTY10

For 5E7 and later, there is no automatic assignment of a DVT value on the ECDOPT form by WORK STATION NUMBER.

For 5E9(1) and later, if WORK STATION NUMBER is set to 1, it is recommended that DEVID be "a".

2.3 DEVID

Description: For 5E6 and earlier, this was a Recent Change field, with the Device Identification automatically computed based on the WORK STATION NUMBER entered.

Software Release: 5E7 and later
Required Field for 5E8 and earlier.
Valid Entries:

Valid DEVID Entries

Entry	Description
a	
z	
j - o	Supplemental TLWS.
C - I	Supplemental TLWS.
Y	Supplemental TLWS.

Data Rules:

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For 5E7 - 5E8, the following table shows the DEVICE TYPE which must be entered on the ECDOPT form for a DEVID entry. For 5E9(1) and later, adherence to the corresponding values in this table is not required but is recommended.

5E7 - 5E8 Software Releases

DEVID	DEVICE TYPE	NAME
l	TTY11	STLWS1
m	TTY12	STLWS2
n	TTY13	STLWS3
o	TTY14	STLWS4
j	TTY9	STLWS5
k	TTY10	STLWS6
C	TTY28	STLWS7
D	TTY29	STLWS8
E	TTY30	STLWS9
F	TTY31	STLWS10
G	TTY32	STLWS11
H	TTY33	STLWS12
I	TTY34	STLWS13
Y	TTY50	STLWS14

If DEVID is "a", it is recommended that WORK STATION NUMBER be 1.

2.4 REMARKS

Description: Enter any comments deemed locally necessary.
Valid Entries: up to 16 characters (alphanumeric or
- blank)

2.5 LOCAL TALK & MONITOR TN

Description: Enter the Local T&M Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

An entry is required for Work Station 1, and is optional for Work Stations 2-8. A Telephone Number entered must be a Telephone Number served by the 5ESS Switch, i.e., the NXX is defined in the OFFICE CODE field on a NOC form.

It is recommended that:

- all Local T&M phones on the TLWS forms be members of the same MLHG and defined on an MLHLN form (5111-1 Record).

- all Local T&M phones have an individual DN (Directory Number).

- if only Work Station 1 is equipped, the local T&M phone be an MLHG member. A T&M TN that is an individual line must be defined on the LINE form (5109 Record). Whether the Telephone Number is an individual line or an MLHG member, the Telephone Number must have a "Y" in the SUSO field on the LINE or MLHLN form and a CLASS OF SERVICE of "CALLBK" on an LCC form (5306 Record).

For 5E8, the Local T&M must also be assigned on either the LINE form or the MLHLN form with OE TYPE and NUMBER entered, with ICPT set to "N". The LCC/RAX combination on the LINE form or MLHLN form must also appear on the LCC form with a SERVICE CLASS of "CALLBK".

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For 5E9 and later, the Local T&M must also be assigned on either the LINE form or the MLHLN form with OE TYPE and NUMBER entered, with ICPT set to "N". The LCC/RAX combination on the LINE form or MLHLN form must also appear on the LCC form with a SERVICE CLASS of "LTPCLBCK".

Either the LOCAL TALK & MONITOR TN field or the REMOTE TALK & MONITOR TN field may be entered, but not both.

If 1 is entered in the WORK STATION NUMBER field, either the LOCAL TALK & MONITOR TN or the REMOTE TALK & MONITOR TN field must be entered.

For 5E12 and later, if the first 3 digits of the 7-digit LOCAL TALK & MONITOR TNs on the TLWS form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the following 7-digit LOCAL TALK & MONITOR TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.6 REMOTE TALK & MONITOR TN

Description: Enter a Remote Talk and Monitor Telephone Number.

The Telephone Number is used for terminating TLWS T&M requests and 101 Test Line calls to the remote TLWS, and may be served by any other office. A 0+ number is not recommended.
Valid Entries: 7 or 10 digits plus an optional 0 or 1 prefix

- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

Data Rules:

An entry is made in this field only if the TLWS is remote from the 5ESS Switch.

If a Local T&M TN has been entered for this TLWS, this field must be left blank.

When a T&M or 101 Test Line call must be terminated to this TN, the TN is screened and routed as if dialed by a line with the LTP SCR and LTP DAS fields of the OFCOPT form entered.

If 1 is entered in the WORK STATION NUMBER field, then either this field or the LOCAL TALK & MONITOR TN field must be entered.

2.7 REMOTE TALK & MONITOR LTP

Description: Enter the LTP for the Remote T&M TN.

Valid Entries: A six-digit number of the following format:

REMOTE T&M LTP

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Logical Test Port	LTP	XXX	000-255

Data Rules:

If a Remote T & M TN is specified, an LTP must be entered.

The LTP may be assigned in any equipped SM, and must be assigned to a member of an outgoing LTP Trunk Group on the TKGRP form (5202-1) Record, with HUNT TYPE set to "FIFO" and TRKCLS set to "LTPCLBCK".

The value entered in this field must not be duplicated in the TALK & MONITOR LTP field on a CTTU form (5518 Record).

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2.8 TEST ACCESS UNIT EQUIPPED

Description: Is the TLWS1 equipped with a TAU?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

TAU must equal "N" if the WSN is 2. The Supplemental TLWSs (WSN is 3 through 8) may be optionally equipped with a TAU.

If TAU equals "Y", all of the fields for AC JACKs and DC JACKs must be entered. If TAU equals "N", all the fields for AC JACKs and DC JACKs must not be entered.

2.9 CARRIER ID

Description: Enter an InterLATA Carrier ID, if required, for the Remote T&M TN. If the digit interpreter tables referenced by the LTP DAS on the OFCOPT form (5509 Record), define the Remote T&M TN as an InterLATA call, a Carrier ID is required to route the call back to the Remote Talk and Monitor TN.
Valid Entries:

- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

Any Carrier ID entered must be defined on an ICF form (5305 Record), and for 5E8 and later, FEAT GRP on the ICF form must equal "D".

DC-JACK Assignments

Fields Section 2.10 -Section 2.17 refer to DC-JACK assignments. Entries are required in these fields when the TLWS is equipped with a TAU. If the TLWS is not equipped with a TAU, these fields must be blank. For 5E8 and earlier, all DC Jack assignments for each TLWS must be in the same SM.

2.10 DC-JACK 1 LOGICAL TEST PORT

Description: Enter the LTP assigned to DC Jack #1.
Valid Entries: A 6-digit number of the following format:

LOGICAL TEST PORT

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Logical Test Port	LTP	XXX	000-255

2.11 DC-JACK 1 METALLIC TEST BUS

Description: Enter the MTB (Metallic Test Bus) assignment for DC Jack #1.
Valid Entries: A nine-digit number of the following format:

METALLIC TEST BUS

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Regular MSU)
			00-31

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			(Modular MSU)
Bus	BUS	XX	00-14

Data Rules:

The METALLIC TEST BUS entry must be unique within the 5ESS Switch.

The MTB assigned to DC Jack #1 must be associated with the same MSU Unit as the MTB assigned to DC Jack #2 and must be in SVG 0.

MTB Point 15 of every MACC (Metallic Access Circuit) pack is reserved for general internal MSU and MMSU (Modular Metallic Service/Switch Unit) diagnostics. Protocol tests or diode resistor tests are included in general internal diagnostics.

For 5E9(1) and later, LTPs, MTBs, and DPs assigned on this form must reside in the local office and may not terminate to an ORM, RSM or TRM (the first three characters of the MTB represent the SM).

2.12 DC-JACK 1 CUT-THRU DIST. PT.

Description: Enter the Cut-Thru Distribute Point assigned to DC Jack #1.
Valid Entries: A nine-digit number of the following format:

CUT-THRU DIST. PT.

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

The Cut-Thru Distribute Point associated with DC Jack #1 must be assigned to Service Group 0. Refer to Division 8, Section 1 for procedures to obtain the DPN assignments.

The DIST. PT. entry must be unique within the 5ESS Switch. The entry must also appear on an EQMSP form (5750 Record) or EQMMSP form (5750 Record) with the TYPE element in the PACK EQUIPMENT LIST set to "DIST".

For 5E9(1) and later, LTPs, MTBs, and DPs assigned on this form must reside in the local office and may not terminate to an ORM, RSM or TRM (the first three characters of the MTB represent the SM).

2.13 DC-JACK 1 DIODE DIST. POINT

Description: Enter the Diode Distribute Point assigned to DC Jack #1.
Valid Entries: A nine-digit number of the following format:

DIODE DIST. PT.

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

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The Diode Distribute Point associated with DC Jack #1 must be assigned to SVG 0. Refer to Division 8, Section 1 for procedures to obtain the DPN assignments.

The DIST. PT. entry must be unique within the 5ESS Switch. The entry must also appear on an EQMSP form (5750 Record) or EQMMSP form (5750 Record) with the TYPE element in the PACK EQUIPMENT LIST set to "DIST".

2.14 DC-JACK 2 LOGICAL TEST PORT

Description: Enter the LTP assigned to DC Jack #2.
Valid Entries: A six-digit number of the following format:

LOGICAL TEST PORT

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-127
Logical Test Port	LTP	XXX	000-255

Data Rules:

The value must not be the same as the value used for DC-JACK 1. Refer to Division 8, Section 1 for procedures to obtain these assignments.

For 5E9(1) and later, LTPs, MTBs, and DPs assigned on this form must reside in the local office and may not terminate to an ORM, RSM or TRM (the first three characters of the MTB represent the SM).

2.15 DC-JACK 2 METALLIC TEST BUS

Description: Enter the MTB assignment for DC Jack #2.
Valid Entries: A nine-digit number of the following format:

METALLIC TEST BU

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Bus	BUS	XX	00-14

Data Rules:

The METALLIC TEST BUS entry must be unique within the 5ESS Switch.

The MTB assigned to DC Jack #2 must be associated with the same MSU as the MTB assigned to DC Jack #1 and must be in SVG 1.

MTB Point 15 of every MACC pack is reserved for general internal MSU and MMSU diagnostics. Protocol tests or diode resistor tests are included in general internal diagnostics.

2.16 DC-JACK 2 CUT-THRU DIST. POINT

Description: Enter the Cut-Thru Distribute Point assigned to DC Jack #2.
Valid Entries: A nine-digit number of the following format:

CUT-THRU DIST. PT.

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	1
Board	BRD	XX	00-15

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			(Regular MSU) 00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-30

Data Rules:

The Cut-Thru Distribute Point associated with DC Jack #2 must be assigned to SVG 1.

The DIST. PT. entry must be unique within the 5ESS Switch. The entry must also appear on an EQMSP form (5750 Record) or EQMMSP form (5750 Record) with the TYPE element in the PACK EQUIPMENT LIST set to "DIST".

2.17 DC-JACK 2 DIODE DIST. POINT

Description: Enter the Diode Distribute Point assigned to DC Jack #2.
Valid Entries: A nine-digit number of the following format:

DIODE DIST. PT.

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	1
Board	BRD	XX	00-15 (Regular MSU) 00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

The Diode Distribute Point associated with DC Jack #2 must be assigned to SVG 1.

The DIST. PT. entry must be unique within the 5ESS Switch. The entry must also appear on an EQMSP form (5750 Record) or EQMMSP form (5750 Record) with the TYPE element in the PACK EQUIPMENT LIST set to "DIST".

AC JACK TRUNK DATA

Fields Section 2.18 -Section 2.19 refer to AC Jack Trunks. Entries are required in these fields only when the TLWS is equipped with a TAU. Otherwise, leave these fields blank.

The TENs (Trunk Equipment Numbers) entered in the AC-JACK 1 TEN and AC-JACK 2 TEN fields must be assigned on a TRUNK form (5204-1 Record). In 5E2, the entry appears in the TEN field. In 5E3 and later, the entry may appear in the TEN field or be "implied" by the value in the QTY field. The QTY field defines a maximum of 24 Trunk Members with one form. The requisite hardware is assigned sequentially.

The TENs entered in the AC-JACK 1 TEN and AC-JACK 2 TEN fields must be associated with a Trunk Group whose TRKCLS on the TKGRP form is set to "ACJCK".

For 5E15 FR 5 (Feature Release 5) and later, the names have been changed for AC-JACK 1 TEN and AC-JACK 2 TEN to AC-JACK 1 OE and AC-JACK 2 OE. Prior to 5E15 FR 5 and later, the TEN is restricted to SVG 1 of a Trunk Unit.

2.18 AC-JACK 1 OE

Description: This field is used if the TRUNK and LINE Workstation is equipped with a TAU (Test Access Unit. These fields supports the Digital Trunk Interface for TAU feature. For more information on this feature see Division 2, Section 4A632.
Valid Entries: Prior to 5E15 FR1 a seven-digit number of the following format:

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TRUNK EQUIPMENT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Trunk Unit	TU		0-7
Service Group	SVG	X	0
Pack	PK	X	0-7
Circuit	CKT	X	0-3

For 5E15 FR1 and later:

DEN (Digital Line and Trunk Unit) Equipment Number			
Equipment		**Format**	**Valid Entries**
SM	Switching Module	XXX	001-192
DLTU	Digital Line Trunk Unit	XXX	000-011
DFI	Digital Facility Unit	XX	01-10
DCHAN	Digital Channel	XX	01-48

NEN (Digital Networking Unit - SONET) Equipment Number			
Equipment		**Format**	**Valid Entries**
SM	Switching Module	XXX	001-192
DNUS-S	Digital Networking Unit - SONET	X	0-7
DG	Data Group	X	0-1
STE	Synchronous Transport Signal	X	1-6
STS	SONET Termination Equipment	X	1
VTG	Virtual Tributary Group	X	1-7
VTM	Virtual Tributary Member	X	1-4
DS0	Digital Signal Level 0	XX	01-24

TEN (Analog TU (Trunk Unit)) Equipment Number			
Equipment		**Format**	**Valid Entries**
SM	Switching Module	XXX	001-192
TU	Trunk Unit	X	0-7
SWG	Switch Group	X	0-1
GR	Group	X	0-7
CKT	Circuit	X	0-3

Data Rules:

For offices equipped with CM1 Communications Module, valid SM entries are 1-48. For offices equipped with CM2, valid entries are 1-192.

For 5E15 FR1 and later,

- AC-JACK 1 OE must be assigned to Service Group 0 for TEN type trunks defined on the TRUNK form (5204 Record)..
- When AC-JACK 1 OE and AC-JACK 2 OE are entered on the TLWS form with types equal to "D" or "N", the ACT field for SFID 632 on the SFSYS form (5713-1 Record) must be set to "Y".

When equipments are associated with the AC-JACK 1 OE or AC-JACK 2 OE fields, the TKGRP form must be defined with TRKCLS equal to "ACJCK".

When AC-JACK 1 OE or AC-JACK 2 OE is assigned, a corresponding TRUNK form must exist.

2.19 AC-JACK 2 OE

Description: This field is used if the TRUNK and LINE Workstation is equipped with a TAU (Test Access Unit. These fields supports the Digital Trunk Interface for TAU feature. For more information on this feature see Division 2, Section 4A632. Prior to 5E15 FR 5 and later, the TEN is restricted to SVG 1 of a Trunk

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Unit.
Valid Entries: Prior to 5E15 FR 5 a seven-digit number of the following format:

TRUNK EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Trunk Unit	TU		0-7
Service Group	SVG	X	1
Pack	PK	X	0-7
Circuit	CKT	X	0-3

For 5E15 FR1 and later:

DEN (Digital Line and Trunk Unit) Equipment Number

Equipment		Format	Valid Entries
SM	Switching Module	XXX	001-192
DLTU	Digital Line Trunk Unit	XXX	000-011
DFI	Digital Facility Unit	XX	01-10
DCHAN	Digital Channel	XX	01-48

NEN (Digital Networking Unit - SONET) Equipment Number

Equipment		Format	Valid Entries
SM	Switching Module	XXX	001-192
DNUS-S	Digital Networking Unit - SONET	X	0-7
DG	Data Group	X	0-1
STE	Synchronous Transport Signal	X	1-6
STS	SONET Termination Equipment	X	1
VTG	Virtual Tributary Group	X	1-7
VTM	Virtual Tributary Member	X	1-4
DS0	Digital Signal Level 0	XX	01-24

TEN (Analog TU (Trunk Unit)) Equipment Number

Equipment		Format	Valid Entries
SM	Switching Module	XXX	001-192
TU	Trunk Unit	X	0-7
SWG	Switch Group	X	0-1
GR	Group	X	0-7
CKT	Circuit	X	0-3

Data Rules:

For offices equipped with CM1, valid SM entries are 1-48. For offices equipped with CM2, valid entries are 1-192.

AC-JACK 2 OE must be assigned to Service Group for TEN type trunks defined on the TRUNK form..

```
SCREEN 1 OF 2                5ESS Switch
tlws                 OFFICE DATA ADMINISTRATION
(5511)                TRUNK AND LINE WORK STATION

* 1. WORK STATION NUMBER         02
  2. DEVICE ID                   z
  3. REMARKS                     _________________
  4. LOCAL TALK & MONITOR TN     _______
  5. REMOTE TALK & MONITOR TN    18159761234
  6. REMOTE TALK & MONITOR LTP   002010
  7. TEST ACCESS UNIT EQUIPPED?  N
  8. CARRIER ID                  0732
```

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```
 9. DC-JACK 1 LOGICAL TEST PORT  ______
10. DC-JACK 1 METALLIC TEST BUS  _________
11. DC-JACK 1 CUT-THRU DIST. PT. _________
12. DC-JACK 1 DIODE DIST. PT.    _________
```

```
SCREEN 2 OF 2                5ESS Switch          _
tlws                  OFFICE DATA ADMINISTRATION
(5511)                 TRUNK AND LINE WORK STATION

 13. DC-JACK 2 LOGICAL TEST PORT  ______
 14. DC-JACK 2 METALLIC TEST BUS  _________
 15. DC-JACK 2 CUT-THRU DIST. PT. _________
 16. DC-JACK 2 DIODE DIST. PT.    _________


        AC-JACK TRUNK DATA
 17. AC-JACK 1  TEN          _______
 18. AC-JACK 2  TEN          _______
```

Figure 1 SAMPLE TLWS FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
tlws                         5ESS Switch
SCREEN 1 OF 2              OFFICE DATA ADMINISTRATION
(5511)                  TRUNK AND LINE WORK STATION

*1. WORK STATION NUMBER        __
 2. DEVICE ID                  _
 3. REMARKS                    _________________
 4. LOCAL TALK & MONITOR TN    __________
 5. REMOTE TALK & MONITOR TN   ___________
 6. REMOTE TALK & MONITOR LTP  ______
 7. TEST ACCESS UNIT EQUIPPED?  N
 8. CARRIER ID                 ____
 9. DC-JACK 1 LOGICAL TEST PORT  ______
10. DC-JACK 1 METALLIC TEST BUS  _________
11. DC-JACK 1 CUT-THRU DIST. PT. _________
12. DC-JACK 1 DIODE DIST. PT.    _________
```

```
tlws                         5ESS Switch          _
SCREEN 2 OF 2              OFFICE DATA ADMINISTRATION
(5511)                  TRUNK AND LINE WORK STATION

13. DC-JACK 2 LOGICAL TEST PORT  ______
14. DC-JACK 2 METALLIC TEST BUS  _________
15. DC-JACK 2 CUT-THRU DIST. PT. _________
16. DC-JACK 2 DIODE DIST. PT.    _________

   AC-JACK TRUNK DATA
17. AC-JACK 1  TEN _______
18. AC-JACK 2  TEN _______
```

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Figure 2 SAMPLE TLWS FORM 5E12 THROUGH 5E14 SOFTWARE RELEASES

```
tlws                        5ESS Switch
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5511)              TRUNK AND LINE WORK STATION

*1. WORK STATION NUMBER        __
 2. DEVICE ID                  _
 3. REMARKS                    _________________
 4. LOCAL TALK & MONITOR TN    ___________
 5. REMOTE TALK & MONITOR TN   ____________
 6. REMOTE TALK & MONITOR LTP  ______
 7. TEST ACCESS UNIT EQUIPPED?  N
 8. CARRIER ID                 ____
 9. DC-JACK 1 LOGICAL TEST PORT  ______
10. DC-JACK 1 METALLIC TEST BUS  _________
11. DC-JACK 1 CUT-THRU DIST. PT. _________
12. DC-JACK 1 DIODE DIST. PT.    _________
```

```
tlws                        5ESS Switch        _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5511)              TRUNK AND LINE WORK STATION

13. DC-JACK 2 LOGICAL TEST PORT  ______
14. DC-JACK 2 METALLIC TEST BUS  _________
15. DC-JACK 2 CUT-THRU DIST. PT. _________
16. DC-JACK 2 DIODE DIST. PT.    _________

   AC-JACK TRUNK DATA
17. AC-JACK 1 OE _______
18. AC-JACK 2 OE _______
```

Figure 3 SAMPLE TLWS FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5L: 5512 RECORD
REMOTE OFFICE TEST LINE FORM - ROTL

1. GENERAL

The 5512 Record is available with 5E2 and later Software Releases. The ROTL (Remote Office Test Line) interfaces with existing CAROT (Centralized Automatic Reporting On Trunks) systems through the DDD Network. This form is used to store the security call-back telephone numbers of all CAROTS that can access the 5ESS Switch trunks (outgoing and 2-way) in this office, and also defines the maintenance mode of the CAROT.

The ROTL feature allows interoffice trunk testing to be performed automatically from a CAROT System, a computerized system that automatically accesses and tests trunks. The ROTL answers calls from the CAROT, receiving information in the form of Multi-Frequency digits, and causes trunks to be accessed and attached to the responder for transmission measurement.

Access to ROTL is made via a number defined on the LINE form (5109 -1/2/3 Record) with TEST CODE equal to "ROTL", and the RTI field defined. Refer to Division 2, Section 2 for the full description of the ROTL Logical Test Ports.

The key field is the CAROT Identification code.

The other entries □ security call-back telephone number and maintenance test mode □ define the actual security call-back number and associated maintenance test mode.

1.1 Recent Change View

The corresponding Recent Change View for this form is 14.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CAROT ID CODE

Description: Enter the CAROT identification code sent to the 5ESS Switch ROTL software, which will be used for security callback.
Valid Entries: 0 - 9

2.3 SECURITY CALL-BACK TN

Description: Enter the telephone number used by the ROTL to call back the CAROT.
Valid Entries: Any 7 or 10 digit Telephone Number,

- □ plus an optional 1 prefix digit
- □ For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- □ For 5E8 and later: 200 - 999

Data Rules:

If MAINTENANCE TEST MODE is "MAN" or "AUTO", this field is required.

2.4 MAINTENANCE TEST MODE

Description: Enter the mode of maintenance authority for ROTL testing.

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Required Field.

Valid MAINTENANCE TEST MODE Entries

Entry	Definition
AUTO	Automatic. Any CAROT center can automatically remove trunksfrom service if they fail specific tests. The AML (AutomaticMaintenance Limit) cannot be exceeded. The AML is established by theowner of the 5ESS Switch and states the number of trunks that can beremoved from service.
MAN	Manual. A manual control location gives the customer authorityto remove some or all trunks from service, allowing the AML to beexceeded. Exceeding the AML is not allowed with the AUTO mode.
NONE	Inhibits any and all callers from a given CAROT ID from changingthe trunk status of any tested trunks.

2.5 CARRIER ID

Description: Enter a Carrier Identification Code, if required, for the Security Call-Back Telephone Number.

If the digit interpreter tables referenced by the LTP DAS entry on the OFCOPT form (5509 Record) define that Telephone Number as an InterLATA call, then a Carrier ID is required to route the call back to the Security Call-Back TN.
Valid Entries:

- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

Any CARRIER ID entered must be defined on an ICF form (5305 Record), and for 5E8 and later, FEAT GRP on the ICF form must equal "D".

```
rotl                  5ESS Switch                _
5512                OFFICE DATA ADMINISTRATION
                  REMOTE OFFICE TEST LINE


* 1. CAROT ID CODE          3
  2. SECURITY CALL-BACK TN    13127279912
  3. MAINTENANCE TEST MODE    NONE
  4. CARRIER ID               288
```

Figure 1 SAMPLE ROTL FORM 5E2 - 5E8 SOFTWARE RELEASES

```
rotl                  5ESS Switch                _
5512                OFFICE DATA ADMINISTRATION
                  REMOTE OFFICE TEST LINE


* 1. CAROT ID CODE          3
  2. SECURITY CALL-BACK TN    13127279912
  3. MAINTENANCE TEST MODE    NONE
  4. CARRIER ID               0288
```

Figure 2 SAMPLE ROTL FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 5M: 5513 RECORD
CUTOVER BY THOUSANDS GROUP - COTH

1. GENERAL

The 5513 Record is available with 5E2 and later Software Releases and is used to define the Cutover By Thousands Group. It is part of the gradual cutover capability associated with the IMINFO form (5510 Record).

Data presented on this record will enable the customer personnel to cut over telephone lines from an existing office to a 5ESS Switch office based on the Office Code and Thousands Group of the Telephone Numbers.

Since the 5513 Record is for support of the 5510 Record, the 5513 Record use is optional. In the absence of the 5513 Record, the default condition will be the Flash Cut or Interface Module Cut as indicated by the 5510 Record. Thus, any Telephone Numbers not specifically covered by the 5513 Record will take on the pre-cutover or post-cutover status as defined on the 5510 Record. From that viewpoint, the 5513 Record can be looked upon as an exception list.

For 5E12 and later, COTH forms cannot be entered for lines in existing thousands groups in the office.

1.1 Multi-party Groups

Two, four, and eight party lines share the same Line Equipment Number. Cutover By Thousands Group works from the Telephone Number. Therefore, when any member of a multi-party group is cut over into active service in the 5ESS Switch office, all members of the multi-party group will be cutover. This will be true even if one or more of the Telephone Numbers of the multi-party group is in a Thousands Group which is not marked for cutover at that time.

1.2 Multi-Line Hunt Groups

When any member of a Multi-Line Hunt Group is cutover to a 5ESS Switch office, all members of the Multi-Line Hunt Group without individual TNs are cutover at the same time. The group is cutover according to the thousands group of the MLHG TN. Members of the group that have individual TNs are cutover according to the thousands group of their individual TN.

1.3 DSL Lines

For 5E5 and later, DSLs are cutover as follows. Multipoint DSLs are cutover as a single entity according to the thousands group specified by the "cut digits" of the DSL form (5907 Record). Point-to-Point DSLs are cutover according to the "cut digits" of the DSL form.

The AP (Application Processor) Data Links DSL lines are always cutover in an "in-service" state.

1.4 Recent Change View

The corresponding Recent Change view for this form is 11.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each Record.

2.2 *NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the

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Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

Data Rules:

For 5E12 and later, when the OFFICE CODES and/or NPA/OFFICE CODE combinations are assigned on COTH forms, they must be defined on the NOC form.

2.3 * OFFICE CODE

Description: Enter the three-digit NXX of the office for which the Thousands Group is to be cutover to the 5ESS Switch.

Required Field.
Valid Entries: 3 digits

Data Rules:

For 5E12 and later, if the COTH forms have an OFFICE CODE defined and there are multiple NOC forms with the same value of OFFICE CODE, NPA will also have to be defined on the COTH form.

2.4 * THOUS DIGIT

Description: Enter the Thousands Digit of the Telephone Numbers in the Office Code that is to be cut over to the 5ESS Switch.

Required Field.
Valid Entries: 0 - 9

2.5 PRECUT STATUS

Description: The recommended entry for Pre-Cut-Over Status is "INACTIVE".

Valid PRECUT STATUS Entries

Entry	Definition
ACTIVE	Lines are active when the office is in a precut state.
INACTIVE	Lines are inactive when the office is in a precut state.

Data Rules:

Existing TNs cannot be defined for an SM with an "INACTIVE" PRECUT STATUS.

For 5E12 and later, COTH forms that have a PRECUT STATUS of "INACTIVE", must have the CUTOVER field on the OFCOPT form set to "Y".

2.6 POSTCUT STATUS

Description: The recommended entry for POSTCUT STATUS is "INACTIVE". Other uses are to be made of this field in the future.

Valid POSTCUT STATUS Entries

Entry	Definition
ACTIVE	Lines are active when the office is in a postcut state.
INACTIVE	Lines are inactive when the office is in a postcut state.

2.7 ALT CUTOVER RTI

Description: Enter a Route Index when the PRECUT STATUS is "INACTIVE". The route index is used to

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route calls attempting to terminate to an inactive line. It may be associated with reorder tone, a recorded announcement, or an outgoing Trunk Group to the existing office in which the Telephone Number is active.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

```
coth                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5513)              CUTOVER BY 1000s GROUP

(*)1. NPA       ___
  *2. OFFICE CODE ___
  *3. THOUS DIGIT _

   4. PRECUT STATUS   INACTIVE
   5. POSTCUT STATUS  INACTIVE
  #6. ALT CUTOVER RTI ____
```

Figure 1 SAMPLE COTH FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5N: 5514 RECORD
CARRIER GROUP ALARM
SCAN POINT DEFINITION FORM - CGASP

1. GENERAL

The 5514 Record is available with 5E2 and later Software Releases and is used to define Scan Points assigned to Carrier Group Alarms.

The 5514 Record is used to associate the Scan Point Number with the type of carrier facility and the action to be taken on its associated trunks or lines if that system fails.

If the carrier system terminates directly on the 5ESS Switch, do not assign a Carrier Group Alarm Scan Point. Digital Trunks, specified as DENs (Digital Equipment Numbers) and Subscriber Loop Carrier lines, specified as Integrated SLENs (Subscriber Loop Carrier-96 Equipment Numbers) on these systems will be cared for by the 5ESS Switch software.

A Scan Point defined on the 5514 Record is then assigned to the carrier's trunks or lines. For trunks, enter the Carrier Group Alarm Scan Point Number on a TRUNK form (5204 Record). For lines, enter the Carrier Group Alarm Scan Point Number on a LINE form (5109 Record) for individual lines or on an MLHLN form (5111 Record) for Multi-Line Hunt Group lines.

A scan point must be unique within the 5ESS Switch. Scan points appearing in any of the following fields must be assigned on a CGASP form.

FIELD	FORM	RECORD
CARRIER GRP ALM	LINE	5109
CARRIER GRP ALM	MLHLN	5111
CGASPN	TRUNK	5204

The scan point values may be duplicated among the three aforementioned forms.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * CGA SCAN POINT

Description: Enter the scan point number assigned to the CGA. The scan point is a 9-digit number that must be in the following format.

Refer to Division 8, Section 1 for procedures to obtain the SPN assignments.

Required Field.

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 48 (CM1)
			1 - 192 (CM2)
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15

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			(Regular MSU) 00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00-30

Data Rules:

The first four components (SM, MSU, SVG and BRD) must be defined on an EQMSP form (5750 Record) with the TYPE set to "SCAN".

The first four components (SM, MSU, SVG and BRD) must be defined on an EQMMSP form (5750 Record) with the TYPE set to "SCAN".

2.3 ACTION

Description: This field defines the Action to be taken by the 5ESS Switch during a failure on a Carrier Group.

Required Field.
Default: REP
Valid Entries:

Valid ACTION Entries

Entry	Definition
IGN	Ignore. No action of any type is to be taken if the carrier fails.
REP	Report when the Carrier fails. A message will be printed at the Master Control Center when the Carrier fails. This treatment would be the most satisfactory for lines.
CON	Condition when the Carrier fails. When "CON" is entered, the associated line or trunk will be taken out of service when the Carrier fails. Normally this option would be selected for trunks only.

2.4 FACILITY TYPE

Description: Enter the Type of Facility assigned to the CGA.

Valid FACILITY TYPE Entries

Entry	Definition
ANCB	Analog Channel Bank
DTCB	Digital Channel Bank
PG	Pair Gain
SLC	Subscriber Loop Carrier - nonintegrated

cgasp 5ESS Switch
(5514) OFFICE DATA ADMINISTRATION
CGA SCAN POINT DEFINITION

*1. CGA SCAN POINT 008112024
2. ACTION REP
3. FACILITY TYPE ANCB

Figure 1 SAMPLE CGASP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5O: 5515 RECORD
ROUTINE EXERCISE SCHEDULE FORM - RXSCHD

1. GENERAL

The 5515 Record is available with 5E2 and later Software Releases. It is used to supply the time for the Routine Exercise Schedule for the Administrative Module and Switching Module tests. The recommended schedules are provided in the following documents: 235-105-210 and 235-105-110.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 ENTITY

Description: Entity identifies the type of unit for which the schedule is being established. The AM (Administrative Module) and each operational Switching Module requires an entry in this field.

An entry of a zero indicates that the schedule being established will be applicable for the Administrative Module. When the schedule being established is applicable to a Switching Module, the Switching Module Number (1 - 192) must be entered here. For offices equipped with CM1 (Communications Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2, valid entries are 1 - 192.
Valid Entries: 0 - 192

Data Rules:

If ENTITY is 1 - 192, then START TIME and DURATION must be entered for all three types of testing.

Each entry for a Switching Module (1 - 192) must be defined in the SM field of an EQIM form (5700-1 Record) with the corresponding EQSTATUS set to "O" (Operational).

DIAGNOSTICS

Entries made in the Diagnostics column will provide for the DGN (Diagnostic) tests. Diagnostic test schedule data must be provided for the Administrative Module. There are two test types available for scheduling in the Administrative Module, full ("F") and partial ("P") diagnostic tests. For reliability reasons, full diagnostics for the Administrative Module should be scheduled only about once a week and partial diagnostics should be scheduled for the remaining six days of the week.

Only the full diagnostics test is available for Switching Modules; it should be scheduled once per week.

Testing should be scheduled for light traffic hours, i.e. during early morning hours, and should be limited to a maximum of six hours.

ELS

Entries made in the ELS (Electronic Loop Segregation) column will provide for the Electronic Loop Segregation tests which analyze customer lines for their electrical characteristics. Electronic Loop Segregation tests periodically test the loaded/non-loaded characteristics of lines, and update the database accordingly. The ELS tests take approximately one hour for each Line Unit. The point at which the test stops will be the point at which it will start testing at its next scheduled time. Electronic Loop Segregation

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test schedule data cannot be provided for the Administrative Module.

Each SM (Switching Module) executing ELS tests requires the use of a TTF (Transmission Test Facility) responder so the total number of SMs executing ELS at any one time should not exceed the number of TTF responders equipped in the office. For example, if an office with 5 SMs has 3 TTF responders, only 3 SMs should perform ELS tests at the same time.

FABRIC

Description: Entries made in the Fabric column will provide for the Fabric tests. Fabric tests Line Unit Grid Circuits. The Fabric tests take approximately two hours for each Line Unit. The point at which the test stops will be the point at which it will start testing at its next scheduled time. Fabric test schedule data cannot be provided for the Administrative Module.

2.3 START TIME

Description: Enter the Start Time for the test being scheduled. The entry must be in the format of HH:MM where HH is the hour, and MM is the minute. All five characters, including the colon, must be entered.
Valid Entries: HH:MM, where

- HH is 00 - 23
- MM is 00 - 59

2.4 DURATION

Description: Enter the number of hours for which the tests may continue. Although zero is a valid entry, if it is entered, the test will never begin because, although the test is scheduled, no time is allocated for it.
Valid Entries: 0 - 12

Data Rules:

If an entry is made in one of the DURATION fields, then the corresponding START TIME field must have an entry. If a DURATION field is not entered, then all other corresponding fields must not be entered.

2.5 VERBOSE

Description: Should completion messages be printed at the end of Diagnostics, ELS, and Fabric Tests?
Default: N
Valid Entries: Y, N

2.6 SUNDAY THROUGH SATURDAY

Description: Enter the extent to which the test is to be run.

Valid SUNDAY THROUGH SATURDAY Entries

Entry	Definition
F	Full set of tests
N	(Or if the field is left blank) no tests are to be performed.
P	Partial Diagnostic test on the Administrative Module.

Data Rules:

When ENTITY is 0, indicating an Administrative Module schedule, a "P" may be entered in the Diagnostic column.

An entry of "P" is not allowed in the ELS (Electronic Loop Segregation) or Fabric columns under any circumstances, or the Diagnostic column when ENTITY is 1 - 192, indicating Switching Module.

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```
rxschd                    5ESS Switch
5515                 OFFICE DATA ADMINISTRATION
                   ROUTINE EXERCISE SCHEDULE

* 1. ENTITY  005

              > 2. DIAGNOSTICS    > 13. ELS          > 24. FABRIC

START TIME         3. 23:00          14. 04:10          25. 02:05
DURATION           4. 03             15. 01             26. 02
VERBOSE            5. Y              16. Y              27. Y
SUNDAY             6. F              17. N              28. F
MONDAY             7. N              18. F              29. N
TUESDAY            8. N              19. F              30. F
WEDNESDAY          9. N              20. F              31. N
THURSDAY          10. N              21. F              32. F
FRIDAY            11. N              22. F              33. N
SATURDAY          12. N              23. F              34. F
```

Figure 1 SAMPLE RXSCHD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5P: 5516 RECORD
REMOTE ALARM ASSIGNMENT RECORD - RALM

1. GENERAL

The 5516 Record is used to define Remote Alarm Scan and Distribute Point Number Assignments.

This record is intended to be used as an Office Record for those 5ESS Switches that do not utilize the default assignments for Remote Alarms. See Figure 1 for the default assignments.

The Remote Alarm Process applies to an RSM (Remote Switching Module), ORM (Optically Remote Module), or TRM (Two-Mile Optically Remote Module).

Remote Alarm Scan and Distribute Point Assignments are "mirror image"; for each Scan or Distribute Point entered in Service Group 0, a corresponding point will be automatically assigned in Service Group 1 with the same SM, MSU, BRD and SPN. The Remote Alarm Scan and Distribute Points for both Service Groups 0 and 1 will appear on the following records (other than the 5516 Record):

- 5840 and 5840A for Scan Points
- 5841 and 5841A for Distribute Points

The Remote Alarm Process has two Scan Boards, and one Distribute board duplicated on each of the two Service Groups of a Metallic Service Unit in each Remote Module. The boards are identified on an EQMSU form (5750 Record).

The Remote Alarm Process consists of two options, the Alarm Input Option and the Alarm Output Option. Any existing RSM is equipped with the hardware necessary for both options. Only the designated MASTER MODULE of a REMOTE SITE can be assigned these options on an EQSITE form.

The Input Option provides for building and power alarm sources to be wired as alarm inputs to this capability. Hardware for the Input Option consists of eighteen power alarm sources and two standard building alarms. Also included are thirty scan points that may be assigned on an office basis to additional building alarm sources. The Input Option utilizes unused scan points that may exist on MSU Scan circuit packs. If existing unused scan points are unavailable, additional circuit packs must be purchased.

The Output Option provides the audibles for all alarms and for the Alarm and Status Panel at the remote site. The Output Option utilizes unused points that may exist on TN220B MMSU Scan and TN221 MMSU Distribute circuit packs. If existing unused scan or distribute points are unavailable, additional packs must be purchased. Hardware for the Output Option consists of the following:

- Alarm and Status Circuit Pack or RAU Circuit Pack.
- Alarm and Status Display Panel.
- Audible Alarm Unit.
- Five MMSU Scan Points per service group.
- Fifteen MMSU Distribute Points per service group.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number, and the Office Number on each record.

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2.2 * REMOTE MODULE

Description: Enter the Switching Module number of the Remote Module being served.

For offices equipped with CM1 (Communications Module 1), valid entries for SM are 1 - 48. For offices equipped with CM2, valid entries are 1 - 192.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM entered must be defined as the MASTER MODULE on an EQSITE form.

For 5E10 and later, if the SM entered is a WCTX (Wireless Centrex) application (as defined by PRODUCT on the OFCOPT form (5509 Record) set to "WNC"), the SM entered must have a matching SM value on the EQIM form (5700 Record).

2.3 * ALARM POINT

Description: Enter the Remote Alarm Scan Point. The Alarm Point number is the number used to identify the point in messages to maintenance personnel and to the Recent Change process.

The Alarm Input Option corresponds to Alarm Points 0 - 54. The Alarm Output Option corresponds to Alarm Points and 100 - 108 for 5A RSMs and Alarm Points and 100 - 113 for Multi-Module RSMs, ORMs or TRMs. See Figure 1 for Remote Alarm Point Default values.

Required Field.
Valid Entries:
- For 5E9(1) and earlier: 0 - 54 and 100 - 113
- For 5E9(2) and later:
- VCDX office: 0, 1, 4 - 54 and 100 - 113
- Non-VCDX office: 0 - 54 and 100 - 113

Data Rules:

For WCTX applications (i.e., PRODUCT on the OFCOPT form set to "WNC"):

- if a Remote Alarm Point 0 - 54 is assigned, the WCTXOPT form must have the INPUT OPTION entry set to "Y".

- if any Remote Alarm Point 100 - 113 is assigned, the WCTXOPT form must have the INPUT OPTION entry set to "Y" and the ALARM DURATION entered.

2.4 SCAN POINT NO

Description: Enter the Scan Point Number assigned to this Remote Alarm Point. This entry is required for Alarm Points 0 - 54 only; leave blank for all others.

The Scan Point is a 9-digit number in the following format.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0
Board	BRD	XX	00 - 15

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			(Regular MSU) 00 - 31 (Modular MSU)
Scan Point Number	SPN	XX	00 - 30

- ***NOTE:*** Only Service Group 0 should be entered. A corresponding Scan Point will be automatically assigned for Service Group 1 with the same SM, MSU, BRD and SPN.

Data Rules:

Scan Point Number 31 is used for a current sensing point and cannot be assigned in this field.

The SM entered in this field must be the same as the SM entered in the REMOTE MODULE field. The Scan Point must be defined on an EQMSP (5750 Record) or EQMMSP (5750 Record) form with "SCAN" entered in the TYPE field.

2.5 DIST POINT NO

Description: Enter the Distribute Point Number assigned to this Remote Alarm Point. This entry is required for Alarm Points 100 - 113 only; leave blank for all others.

The Distribute Point is a 9-digit number in the following format.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0
Board	BRD	XX	00 - 15 (Regular MSU)
			00 - 31 (Modular MSU)
Distribute Point Number	DPN	XX	00 - 31

- ***NOTE:*** Only Service Group 0 should be entered. A corresponding Distribute Point will be automatically assigned for Service Group 1 with the same SM, MSU, BRD and DPN.

Data Rules:

The SM entered in this field must be the same as the SM entered in the REMOTE MODULE field. The Distribute Point must be defined on the EQMSP or EQMMSP form with "DIST" entered in the TYPE field.

2.6 IN USE?

Description: Is this Scan Point operational? Enter an "N" if this Scan Point is not operational.

Required Field.
Valid Entries: Y, N

2.7 MCC NAME

Description: Enter the name of the alarm as it should appear on the MCC (Master Control Center).

Leave this field blank if the Alarm Point is 0, 1 or greater than 31.
Valid Entries: 9 characters

2.8 TTY NAME

Description: Enter the name of the alarm as it should appear on the TTY. This is the name that will be presented to the maintenance personnel on their teletype unit.

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Valid Entries: 20 characters

2.9 NORMAL STATE

Description: Enter the Normal (unalarmed) State for this Scan Point.

Required Field.
Valid Entries: OPEN and CLOSED

2.10 ALARM LEVEL

Description: Enter the Alarm Level to be indicated to the maintenance personnel when the Scan Point state is different than that shown for the Normal State.

Valid ALARM LEVEL Entries

Entry	Definition
CRIT	Critical.
MAJ	Major.
MIN	Minor.
ACT	Action.
INFO	Information.

ALARM POINT	IN USE?	TELETYPE NAME	NORMAL STATE	ALARM LEVEL
0	Y	FIRE	OPEN	CRIT
1	Y	FIRE ALARM TROUBLE	OPEN	MAJ
2	Y	ESM (VCDX office only)	OPEN	CRIT
3	Y	ESM POWER (VCDX office only)	OPEN	MAJ
4 - 31	N			
32	Y	DISCHARGE FUSE FAIL	OPEN	MAJ
33	Y	INVERTER FAILURE	OPEN	MAJ
34		MISC POWER FAILURE-A	OPEN	
35		MISC POWER FAILURE-B	OPEN	
36		MISC POWER FAILURE-C	OPEN	
37	Y	RECTIFIER FAILURE	OPEN	MAJ
38	Y	ALM BATTERY FAILURE	OPEN	MAJ
39	Y	CO BATTERY DISCHARGE	OPEN	MAJ
40	Y	HIGH VOLTAGE	OPEN	MAJ
41	Y	COMM POWER FAILURE	OPEN	MAJ
42	Y	STBY PLANT LOW FUEL	OPEN	MIN
43	Y	STBY PLANT OPERATING	OPEN	MAJ
44	Y	STBY PLANT RECT FAIL	OPEN	MIN
45	Y	STBY PLANT FAILURE	OPEN	MAJ
46	Y	MISC CAB FUSE ALM-0	OPEN	MAJ
47	Y	MISC CAB FUSE ALM-1	OPEN	MAJ
48	Y	FUSE FAILURE PDF-0	OPEN	MAJ
49	Y	FUSE FAILURE PDF-1	OPEN	MAJ
50	Y	ASC/RAU ALARM ACTIVE	OPEN	INFO
51	Y	ASC/RAU ALM TEST SW	OPEN	INFO
52	Y	ASC/RAU POWER FAIL	CLOSED	INFO
53	Y	ASC/RAU ALM RET SW	OPEN	INFO
54	Y	ASC ALM MAN MODE SW	OPEN	INFO
100	Y	ASC CTR / RAU SANITY	OPEN	INFO
101	Y	ASC SMTBL / RAU EON	OPEN	INFO
102	Y	ASC/RAU BLDG/PWR	OPEN	INFO
103	Y	ASC/RAU TEST IN PROG	OPEN	INFO
104	Y	ASC/RAU CRIT LAMP	OPEN	INFO
105	Y	ASC/RAU STD ALN LAMP	OPEN	INFO
106	Y	ASC/RAU MAJOR LAMP	OPEN	INFO
107	Y	ASC/RAU MINOR LAMP	OPEN	INFO
108	Y	ASC OSMAB / RAU ATST	OPEN	INFO
109	Y	ASC MANUAL MODE LAMP	OPEN	INFO
110	Y	ASC CRITICAL AUDIBLE	OPEN	INFO
111	Y	ASC MAJOR AUDIBLE	OPEN	INFO
112	Y	ASC MINOR AUDIBLE	OPEN	INFO
113	Y	ASC CYCLE TIMER INH	OPEN	INFO

Note 1: Valid only for RSMs equipped with the Alarm and Status Circuit, see EQRAU form (5705 Record).Note 2: These default values cannot be changed.

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Figure 1 REMOTE ALARM SCAN AND DISTRIBUTE POINT DEFAULT VALUES

```
ralm                    5ESS Switch
5516                OFFICE DATA ADMINISTRATION
                  REMOTE ALARM ASSIGNMENT

* 1. REMOTE MODULE  088
* 2. ALARM POINT    110

  3. SCAN POINT NO  _________
  4. DIST. POINT NO 088000000
  5. IN USE?        Y
  6. MCC NAME       _________
  7. TTY NAME       ASC CRITICAL AUDIBLE
  8. NORMAL STATE   OPEN
  9. ALARM LEVEL    INFO
```

Figure 2 SAMPLE RALM FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5Q: 5517 RECORD
RSM LINK ASSIGNMENT FORM - RSMLNK

1. GENERAL

The 5517 Record is used to define the assignment of the Umbilical Links between the Host Switching Module (i.e., the HOST field) and the Remote Switching Module (i.e., the RSM field).

The DFI-R (RSM Digital Facility Interface) is used in the DLTU (Digital Line Trunk Unit) to provide the interface between the Host Switching Module and the Remote Switching Module.

Effective with 5E10 and later, a single Host SM-2000 can host between 1 and 30 RSMs as opposed to the previous limit of 5 RSMs per Host SM. This enhancement pertains to the operation of an SM-2000 as a host to RSMs, not to operating an SM-2000 as an RSM itself.

Effective as a 5E13 and later Software Update, this feature provides the capability to support a non-SM-2000 RSM via a DNU-S on a Host SM-2000. The following updates were made to implement this feature:

1. a UNIT TYPE field was added to define either a DLTU or a DNU-S,
2. three new fields were added: STS, VTG, and VTM (consistent with the 5E13 DNU-S VT Group Number feature (99-5E-4424) which introduced a new VT facility DS1 numbering scheme for DNU-S provisioning (see Division 2, Section 9Q)),
3. three fields were modified: DNUS, DG, and STE were appended to the FAR END fields.

For more information on the RSM feature, see the RSM on DNU-S feature (99-5E-4209), Division 2, Section 9S.

1.1 Intra-Cluster Links

The RSMLNK form is also used to define the ICLs (Intra-Cluster Links) between the RSMs within an RSM site. RSMLNK forms are required for both Single Module and Multi-Module RSMs. For more information on RSM sites, see the EQSITE form, Division 8, Section 15..

1.2 Recent Change View

The corresponding Recent Change Views for this form are 18.5 and 18.9.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * RSM

Description: Enter the Switching Module number of the RSM (Remote Switching Module).

Required Field.
Valid Entries: 1 - 192

Data Rules:

This SM must have an SM USAGE of "RSM" on the EQIM form (5700 Record).

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2.3 # RSM SITE

Description: Enter the RSM SITE number. All Switching Modules in the same RSM SITE must have the same RSM SITE value.

Required Field.
Valid Entries: 1 - 174

Data Rules:

The RSM SITE value assigned here must be defined on an EQSITE form (5722 Record).

2.4 # HOST

Description: Enter the Switching Module number of the HIM (Host Switching Module).

Required Field.
Valid Entries: 1 -192

Data Rules:

For offices equiped with a CM1 (Communications Module 1) only 1 - 48 can be entered for the SM. For offices equipped with a CM2, 1 - 192 can be entered for the SM.

This SM must have an SM USAGE of "HIM" on the EQIM form.

This value must not equal the value in the RSM field or any FAR END SM.

In a Multi-Module RSM, it is not required that all Switching Modules at the RSM SITE have the same HOST.

For 5E10 and later, if this HOST SM is defined as an SM2000 (UNIT TYPE is "SM2000" on the EQIM form), the FAR END DFIs on this RSMLNK form that carry the first two CTS to the same FAR END DLTU2 must not be on the same DLTU2 fuse group on HOST SM. The first two CTS are on the NEAR END DLTU2 0, NEAR END DFI 1, FAC 0 and NEAR END DFI 2, FAC 0. Note that Far END DFIs on the RSMLNK forms are assigned to fuse groups on the DLTU2 as follows:

Fuse Groups	FAR END DFI Number
A	1, 5, 9
B	2, 6, 10
C	4, 8
D	3, 7

LINKS:

This section is used to define up to 20 umbilical links between the RSM and the HIM. The RSM can be remoted from the host office using 2 to 20 umbilical links. A minimum of two T1 umbilical links are required to the Host Switching Module.

The LINKS section is used to define RSM Umbilical Links and ICLs (Intra-Cluster Links) for Multi-Module RSMs.

The following fields (Section 2.5 - Section 2.16) define the LINKS.

For each link the remote DLTU (Digital Line Trunk Unit), DFI (Digital Facility Interface), and the Host DLTU and DFI must be assigned.

In 5E5 and later Software Releases, the Remote and Host facility must also be assigned.

Data Rules:

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The matching NEAR END and FAR END LINKS must have the same DFI TRANSMISSION MODES specified on EQDUP forms (5730 Record).

The NEAR END assignments must be unique. The FAR END assignments must be unique.

If the LINK SM is not "H", then the matching NEAR END and FAR END LINKS must have their FIU PORTS, on EQDUP forms, in the same range, either 0 - 1 or 2 - 9.

Remote DFIs must have the DFI USAGE field, on the EQDUP form, set to "RDFI" or "CDFI".

Every item associated with a LINK must have an entry.

2.5 NEAR END DLTU

Description: Enter the DLTU on the "near end" of the link, whether or not it is an umbilical to the Host or an ICL to another RSM within the RSM SITE. This is the DLTU on the RSM.
Valid Entries: 0 - 5

Data Rules:

DLTU 0 with DFIs of 1 - 2 cannot be used for ICL links.

2.6 NEAR END DFI

Description: Enter the DFI on the "near end" of the link, whether or not it is an umbilical to the Host or an ICL to another RSM within the RSM SITE. This is the DFI on the RSM.
Valid Entries: 5E12 and earlier: 1 - 16
5E13 and later: 1 - 10

2.7 NEAR END FAC

Description: Indicate the "near end" facility.

Software Release: 5E5 and later
Valid Entries:

Valid NEAR END FAC Entries

Entry	Definition
0	For a DFI, the DFI can terminate one T1 facility (24 channels) per circuit pack.
	For a DFI-2, the DFI-2 can terminate two T1 facilities (48 channels) per circuit pack. A value of 0 entered in this field indicates that channels 1 - 24 are utilized.
1	For DFI-2, the DFI-2 can terminate two T1 facilities (48 channels) per circuit pack. A value of 1 entered in this field indicates that channels 25 - 48 are utilized.

Data Rules:

If 0 is entered for a DFI, the FAC IND on the EQDUP form must be 0.

If 0 is entered for a DFI-2, the FAC IND on the EQDUP form must be 1 or 3.

If 1 is entered for a DFI-2, the FAC IND on the EQDUP form must be 3.

2.8 UNIT TYPE

Description: Enter the Unit Type.

Software Release: 5E13 and later
Valid Entries: DLTU or DNUS

Data Rules:

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When UNIT TYPE is "**DLTU**",

- DFI/DG must be 1 - 10
- FAC/STE must be 0 - 1
- STS must not be entered
- VTG and VTM must not be entered

When UNIT TYPE is "DNUS",

- DFI/DG must be 0 - 1
- FAC/STE must be 1 - 6
- STS must be 1
- VTG must be 1 - 7
- VTM must be 1 - 4

When UNIT TYPE is "DNUS" and FAR SM is "H", the required host CTS (Control Time Slot) links ROW pairs [1-2 and 3-4] must not have the same DNUS, DG, and STE. Also, the corresponding CTS ROW mates [1-3 and 2-4] must not have the same DNUS, DG, and STE.

2.9 FAR END SM

Description: Enter the "far end" SM number or "H" for host.

Valid FAR END SM Entries

Entry	Definition
H	The "far end" of the link is the HOST.
1 - 192	The RSM number of the "far end" that is an RSM within the RSM SITE.

Data Rules:

If FAR END SM is "H", CLK REF must be "N".

2.10 FAR END DLTU/DNUS

Description: Enter the DLTU or DNUS used at the "far end" of the umbilical or ICL link. For 5E13 and later, this field name was changed from FAR END DLTU to FAR END DLTU/DNUS to support the RSM on DNU-S feature (99-5E-4209). For more information, see Division 2, Section 9S.

Valid DLTU/DNUS Entries

Entry	Definition
5E14 and earlier: 0 - 5	DLTU.
5E15 and later: 0 - 11	
0 - 7	DNU-S.

Data Rules:

For 5E13 and later, for DNU-S, the NEAR END LINKS and matching FAR END DNU-S VT LINKS must have a NEAR END DFI (TRANSMISSION) MODE OF "B8ZS" on the corresponding EQDUP form.

2.11 FAR END DFI/DG

Description: Enter the DFI or DG used at the "far end" of the umbilical or ICL link. For 5E13 and later, this

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field name was changed from FAR END DFI to FAR END DFI/DG to support the RSM on DNU-S feature (99-5E-4209). For more information, see Division 2, Section 9S.
Valid Entries: 5E12 and earlier: 1 - 16 (DLTU/DFI)
5E13 and later: 0 - 1 (DNUS/DG)

2.12 FAR END FAC/STE

Description: Indicate the "far end" facility or STE (Signaling Terminal Equipment). For 5E13 and later, this field name was changed from FAR END FAC to FAR END FAC/STE to support the RSM on DNU-S feature (99-5E-4209). For more information, see Division 2, Section 9S.

Software Release: 5E5 and later: 0 - 1 (FAC)
5E13 and later: 1 - 6 (STE)
Valid Entries:

Valid FAR END FACSTE Entries

Entry	Definition
0	For a DFI, the DFI can terminate one T1 facility (24 channels) per circuit pack.
1	For a DFI-2, the DFI-2 can terminate two T1 facilities (48 channels) per circuit pack. A value of 1 entered in this field indicates that channels 25 - 48 are utilized.

Data Rules:

If 0 is entered for a DFI, then the FAC IND on the EQDUP form must be 0.

If 0 is entered for a DFI-2 then the FAC IND on the EQDUP form must be 1 or 3.

If 1 is entered for a DFI-2, then FAC IND on the EQDUP form must be 3.

2.13 STS

Description: Enter the STS (Synchronous Transport Signal) for the DNU-S. For 5E13 and later, this field was added to support the RSM on DNU-S feature (99-5E-4209). For more information, see Division 2, Section 9S.

Software Release: 5E13 and later
Valid Entries: 1

2.14 VTG

Description: Enter the VTG (Virtual Tributary Group) for the DNU-S. For 5E13 and later, this field was added to support the RSM on DNU-S feature (99-5E-4209). For more information, see Division 2, Section 9S.

Software Release: 5E13 and later
Valid Entries: 1 - 7

2.15 VTM

Description: Enter the VTG (Virtual Tributary Member) for the DNU-S. For 5E13 and later, this field was added to support the RSM on DNU-S feature (99-5E-4209). For more information, see Division 2, Section 9S.

Software Release: 5E13 and later
Valid Entries: 1 - 4

2.16 CLK REF

Description: Is this link used to provide a timing link between RSMs within the RSM SITE? "N" must be

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entered for an umbilical link (i.e., "H" is entered for FAR END SM.)
Valid Entries: Y, N

Data Rules:
When CLK REF is "Y", the links must be assigned in pairs on a given RSMLNK form. The pair of timing links must not specify the same value of FIU SUBGROUP on the EQDUP forms which define these RSM Cluster DFIs. (Cluster DFI links with a FAC = 0 are associated with the FAC 0 FIU SUBGROUP on the EQDUP form. Cluster DFI links with a FAC = 1 are associated with the FAC 1 FIU SUB GROUP on the EQDUP form.

SCREEN 1 OF 2 5ESS Switch
rsmlnk OFFICE DATA ADMINISTRATION
(5517) RSM LINK ASSIGNMENT

*1. RSM ___
#2. RSM SITE ___
#3. HOST ___

7. LINKS:	NEAR END			FAR END			
	DLTU	DFI	FAC	SM	DLTU	DFI	FAC	CLK
row 1	_	__	_	___	_	__	_	_
row 2	_	__	_	___	_	__	_	_
row 3	_	__	_	___	_	__	_	_
row 4	_	__	_	___	_	__	_	_
row 5	_	__	_	___	_	__	_	_
row 6	_	__	_	___	_	__	_	_
row 7	_	__	_	___	_	__	_	_
row 8	_	__	_	___	_	__	_	_
row 9	_	__	_	___	_	__	_	_
row 10	_	__	_	___	_	__	_	_

SCREEN 2 OF 2 5ESS Switch _
rsmlnk OFFICE DATA ADMINISTRATION
(5517) RSM LINK ASSIGNMENT

17. LINKS	NEAR END			FAR END			
	DLTU	DFI	FAC	SM	DLTU	DFI	FAC	CLK
row 1	_	__	_	___	_	__	_	_
row 2	_	__	_	___	_	__	_	_
row 3	_	__	_	___	_	__	_	_
row 4	_	__	_	___	_	__	_	_
row 5	_	__	_	___	_	__	_	_
row 6	_	__	_	___	_	__	_	_
row 7	_	__	_	___	_	__	_	_
row 8	_	__	_	___	_	__	_	_
row 9	_	__	_	___	_	__	_	_
row 10	_	__	_	___	_	__	_	_

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Figure 1 SAMPLE RSMLNK FORM 5E5 - 5E12 SOFTWARE RELEASES

```
SCREEN 1 OF 2                5ESS Switch
rsmlnk                 OFFICE DATA ADMINISTRATION
(5517)                   RSM LINK ASSIGNMENT

*1. RSM     ___
#2. RSM SITE ___
#3. HOST     ___
                NEAR END                  FAR END
     7. LINKS:  ----------------  ----------------------------------------
                                UNIT    DLTU/ DFI/ FAC/          CLK
          DLTU  DFI  FAC   TYPE  SM  DNUS  DG   STE STS VTG VTM REF
   row  1  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  2  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  3  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  4  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  5  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  6  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  7  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  8  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  9  _    __    _   ____  ___ _   __   _  _  _  _  _
   row 10  _    __    _   ____  ___ _   __   _  _  _  _  _
```

```
SCREEN 2 OF 2                5ESS Switch          _
rsmlnk                 OFFICE DATA ADMINISTRATION
(5517)                   RSM LINK ASSIGNMENT


                NEAR END                  FAR END
     22. LINKS  ----------------  ----------------------------------------
                                UNIT    DLTU/ DFI/ FAC/          CLK
          DLTU  DFI  FAC   TYPE  SM  DNUS  DG   STE STS VTG VTM REF
   row  1  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  2  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  3  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  4  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  5  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  6  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  7  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  8  _    __    _   ____  ___ _   __   _  _  _  _  _
   row  9  _    __    _   ____  ___ _   __   _  _  _  _  _
   row 10  _    __    _   ____  ___ _   __   _  _  _  _  _
```

Figure 2 SAMPLE RSMLNK FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5R: 5518 RECORD
CENTRAL TRUNK TEST UNIT FORM - CTTU

1. GENERAL

The 5518 Record is used to define the CTTUs (Central Trunk Test Units). CTTU is available with 5E2 and later Software Releases.

The Central Trunk Test Unit is used to test trunks and lines from a remote location, and is similar in function to a Trunk and Line Work Station. However, the CTTU is a common work station designed for use with any ESS. The user of the CTTU runs tests at the remote Central Offices by making selections from menus without having knowledge of the specifics of the different test positions of the various ESS's. In other ESS switches, the CTTU interfaces to an RTTU (Remote Trunk Test Unit) which resides outside the switch at the Central Office. In the 5ESS Switch, the CTTU interfaces directly to the switch, the RTTU function being implemented in software residing in the switch. The 5ESS Switch software interprets requests originated from a CTTU, performs the appropriate line or trunk tests locally and returns the results to the CTTU.

The Central Trunk Test Unit communicates with the 5ESS Switch over a synchronous dial up Data Link operating at 1200 bits per second. The dial up line must be defined as denied origination on the LINE form (5100-1 Record) and is connected to an auto answer 212 dataset. The dataset is connected to an appropriate slot of the 3B IOP (Input/Output Processor).

1.1 CTTU User Classes

Four classes of CTTU users exist. Class A users have unrestricted control over trunk maintenance state and the ability to monitor traffic busy circuits. This work center has PCO (Plant Control Office) responsibility for the circuits involved (i.e., in-service/out-of-service control over them). Class B users can make trunks temporarily unavailable for call processing and monitor the trunk under test during manual access. Class C users have the ability to remove a limited number of trunks from service (up to the automatic maintenance limit). Class C users are mechanized systems operating in an automatic mode to routinely test trunks. Class D users are only allowed to test traffic idle circuits and cannot invoke the talk and monitor feature. Class D users are not allowed to remove trunks from service.

Since Class A, B, and C users can adversely affect system performance, a security protocol is required. This security is provided by entries made with the 5518 Record. The CTTU sends a message to the 5ESS Switch containing a user ID number. The switch then calls back the CTTU on the Security Callback Telephone Number. The switch also establishes a Talk and Monitor circuit, if specified, for Class A and B users. No entries are required or allowed for Class D users.

User number 2 must be defined as a Class A user. All other valid user numbers (2 through 9 and 20 through 49) may be assigned to any security classification A, B, or C. However, it is recommended users 3 and 4 (in addition to user 2) be assigned as Class A, user 5 be assigned as Class C, and all other user numbers be assigned as Class B. If these recommendations are not followed, an appropriate warning message will be issued by ODA. An absolute limit of three Class A users, thirty-four Class B users, and one Class C user exists. If any CTTU user is defined, user number 2 must be defined.

1.2 Recent Change View

The corresponding Recent Change View for this form is 14.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

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2.2 * USER NUMBER

Description: Enter the CTTU user identification number.
Valid Entries: 2 - 9 and 20 - 49

Data Rules:

If USER NUMBER is 2, SECURITY CLASSIFICATION must be "A", and TALK AND MONITOR PHONE TN must exist. For 5E2 through 5E6, if USER NUMBER is 2, 101 ACCESS? must be known.

2.3 SECURITY CLASSIFICATION

Description: Enter the security classification. User number 2 must be Class A. It is recommended users 3 and 4 also be assigned Class A, user 5 be assigned Class C and all other user numbers be assigned Class B.

Required Field.
Valid Entries: A, B, or C

2.4 SECURITY CALLBACK TN

Description: Enter the Security Callback Telephone Number. Any CTTU user defined on this form must have a Security Callback Number.

Required Field.
Valid Entries: Any 7 or 10 digit Telephone Number, plus an optional 1 prefix digit
- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

2.5 TALK & MONITOR PHONE TN

Description: Enter the T&M (Talk and Monitor) Phone Telephone Number. A T&M Phone TN is required for user number 2 and is optional for other Class A and B users. It may be activated by the user at the CTTU through menu commands or by a distant office terminating to the CTTU User Number 2 as a 101 Test Line call. (See Division 2, Section 2 of this guide for translations on Terminating Test Lines.)
Valid Entries: Any 7 or 10 digit Telephone Number, plus an optional 1 prefix digit
- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

2.6 TALK & MONITOR LTP

Description: Enter the Talk and Monitor LTP (Logical Test Port).

The Talk and Monitor LTP is used by the 5ESS Switch software to originate Talk and Monitor phone calls for the CTTU user. These calls are screened and routed as if they had been dialed by a line with the Screening Index and Digit Analysis Selector specified in the LTP SCR (Logical Test Port Screening Index) and LTP DAS (Logical Test Port Digital Analysis Selector) fields of the OFCOPT form (5509 Record).
Valid Entries: A six-digit number consisting of the following:

TALK AND MONITOR LOGICAL TEST POINT

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Logical Test Port	LTP	XXX	000-255

Data Rules:

Each user assigned a Talk and Monitor Phone Telephone Number requires a unique LTP. The LTP may

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be assigned in any equipped Switching Module, and must be assigned to a member of an outgoing LTP Trunk Group with no HUNT TYPE and a TRKCLS of "LTPCLBCK". The Trunk Group must have IAPT of "Y". These LTP trunks may be members of the same Trunk Group containing the Trunk and Line Work Station's Remote Talk and Monitor LTP. If the user is not assigned a Talk and Monitor phone, this field must be left blank.

2.7 CARRIER ID

Description: Enter a Carrier Identification Code, if required, for the Security Callback Telephone Number or Talk and Monitor Phone TN. If either or both of these numbers are defined as InterLATA calls on the digit interpreter tables, then a Carrier ID is required to route these calls.
Valid Entries:

- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

Any Carrier ID entered must be defined on an ICF form (5305 Record), and for 5E8 and later, FEAT GRP on the ICF form must equal "D".

2.8 101 ACCESS?

Description: Will the Talk and Monitor phone be used to terminate incoming 101 Test Line calls? This field is for User Number 2 only, other user numbers must leave it blank.

Software Release: 5E2 through 5E6
Valid Entries: Y, N

```
cttu                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
                     CENTRAL TRUNK TEST UNIT


* 1. USER NUMBER              3
  2. SECURITY CLASSIFICATION    A
  3. SECURITY CALLBACK TN       6689930
  4. TALK & MONITOR PHONE TN    6689931
  5. TALK & MONITOR LTP         002001
  6. CARRIER ID                 288
```

Figure 1 SAMPLE CTTU FORM 5E2 - 5E6 SOFTWARE RELEASES

```
cttu                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
                     CENTRAL TRUNK TEST UNIT


* 1. USER NUMBER              3
  2. SECURITY CLASSIFICATION    A
  3. SECURITY CALLBACK TN       6689930
  4. TALK & MONITOR PHONE TN    6689931
  5. TALK & MONITOR LTP         002001
  6. CARRIER ID                 0288
```

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Figure 2 SAMPLE CTTU FORM 5E7 - 5E8 SOFTWARE RELEASES

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SEC. 5S: 5519 RECORD
REMOTE CLOCK REFERENCE FORM - RCLKREF

1. GENERAL

The 5519 Record is available with 5E2 and later Software Releases and is used to describe the exterior references for the Remote Clock equipped in an RSM Site.

1.1 Recent Change View

The corresponding Recent Change View for this form is 20.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * REM SW MODULE

For 5E5 and later, this field is replaced by RSM.

2.3 * RSM

Description: Enter the value of the Remote Switching Module.

Software Release: 5E5 and later
Valid Entries: 1 - 192

Data Rules:

This RSM must be identified as the Master RSM on the appropriate EQSITE form (5722 Record).

2.4 * REFERENCE

Description: Enter the external reference number.
Valid Entries: 1 - 8

2.5 # PRIORITY

Description: Enter the priority of the external reference. The highest stability or most preferred reference should have a priority of one, the next most preferred a priority of two, and so on for all equipped references. These values must be unique for each reference associated with the clock.

Required Field.
Valid Entries: 1 - 8

2.6 EQUIPMENT STATUS

Description: Enter the equipment status.

Required Field.
Default: O
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
O	Operational

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G	Growth
U	Unequipped

Data Rules:

For new offices and units destined for factory testing, the status must be operational ("O"). During offline ODA database retrofits, it may be set to the other values.

2.7 INTERRUPT STATUS

Description: Enter the Interrupt Status.

Required Field.
Default: ALLOW
Valid Entries: ALLOW, INHIBIT

Data Rules:

If EQUIPMENT STATUS is "O", INTERRUPT STATUS must be "ALLOW". If EQUIPMENT STATUS is "U", INTERRUPT STATUS must be "INHIBIT".

2.8 # REFERENCE TYPE

Description: Enter the type of reference used.

Required Field.

Valid REFERENCE TYPE Entries

Entry	Definition
24CHAN	24 channel T1 trunk
ANALOG	Analog reference

REFERENCE TYPE must be "24CHAN" for remote clock references.

2.9 REFERENCE FORMAT

Description: Enter the reference format used.

For 5E5 through 5E7, if the RCLK references come from a BITS (Building Integrated Timing Supply) clock, REFERENCE FORMAT must be set to "D4WZC".

WARNING: RSM synchronization should be obtained from the HSM-RSM umbilicals. Synchronization from other sources is not recommended. (If synchronization is from another source, the synchronization clock must be traceable to the clock source used by the host switch; and it must meet the LSSGR requirements for stability, reliability, and availability.)

Required Field.
Default: FEWZC
Valid Entries:

Valid REFERENCE FORMAT Entries

Entry	Definition
D4WOZ	D4 without Zero Code Suppression.
D4B8	D4 with Bipolar 8 Zeros Suppression.
D4WZC	D4 with Zero Code Suppression.
FEWOZ	Extended Framing Format without Zero Code Suppression.
FEB8	Extended Framing Format with Bipolar 8 Zeros Suppression.
FEWZC	Extended Framing Format with Zero Code Suppression.

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2.10 EXT REF

Description: Will the RCLK references come from an external source? If this field is "Y", the RCLK references are NOT coming from RSM umbilicals through BRs (Bridging Repeaters), but from another source such as a BITS (Building Integrated Timing Supply) clock. This case is demonstrated in Figure 1 .

If this field is "N", the RCLK references ARE coming from RSM umbilicals through BRs (as implemented prior to the 5E8 Software Release). This case is demonstrated in Figure 2 .

During a retrofit to the 5E8 Software Release, if the REFERENCE FORMAT field is "FEB8" or "FEWZC", the EXT REF field will be set to "N"; otherwise, it will be set to "Y".

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If EXT REF is "N", all fields under REFERENCE SOURCE and ALTERNATE SOURCE must be entered. If EXT REF is "Y", these fields are optional; but if any of them is entered, all must be entered.

REFERENCE SOURCE

At least two Reference Sources (fields Section 2.11 - Section 2.14) must be defined for each RSM specified, therefore two RCLKREF forms are required. The suggested method of assigning the sources is to use the first Reference Source as the Alternate Source for the second and the second Reference Source as the Alternate Source for the first.

2.11 SM

Description: Enter the number of the Switching Module that has the DLTU (Digital Line and Trunk Unit) that contains the reference.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM entered must be the same as the value entered in the RSM field.

2.12 DLTU

Description: Enter the number of the Digital Line and Trunk Unit containing the pack with the reference.

Required Field.
Valid Entries: 0 - 5

2.13 DFI

Description: Enter the number of the DFI (Digital Facility Interface) pack that contains the reference.

Required Field.
Valid Entries: 1 - 16

2.14 FAC

Description: Indicate the facility used.

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Software Release: 5E5 and later
Required Field.
Valid Entries: 0, 1

Data Rules:

For a DFI the entry must be 0; the DFI can terminate one T1 facility (24 channels) per circuit pack.

For a DFI-2 the entry may be 0 or 1. The DFI-2 can terminate two T1 facilities (48 channels) per circuit pack. A value of 0 entered in this field indicates that channels 1 - 24 are utilized. A value of 1 entered in this field indicates that channels 25 - 48 are utilized.

ALTERNATE SOURCE

The fields (Section 2.15 - Section 2.18) define the Alternate Source.

2.15 ALTERNATE SM

Description: Enter the number of the Switching Module that has the DLTU that contains the Alternate Source for this reference.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM entered must be the same as the value entered in the RSM field.

2.16 ALTERNATE DLTU

Description: Enter the number of the Digital Line and Trunk Unit containing the pack with the alternate reference.

Required Field.
Valid Entries: 0 - 5

2.17 ALTERNATE DFIPK

Description: Enter the number of the DFI pack that contains the alternate reference.

Required Field.
Valid Entries: 1 - 16

2.18 ALTERNATE FAC

Description: Indicate the facility used for the alternate reference.

Software Release: 5E5 and later
Required Field.
Valid Entries: 0, 1

Data Rules:

For a DFI the entry must be 0; the DFI can terminate one T1 facility (24 channels) per circuit pack.

For a DFI-2 the entry may be 0 or 1. The DFI-2 can terminate two T1 facilities (48 channels) per circuit pack. A value of 0 entered in this field indicates that channels 1 - 24 are utilized. A value of 1 entered in this field indicates that channels 25 - 48 are utilized.

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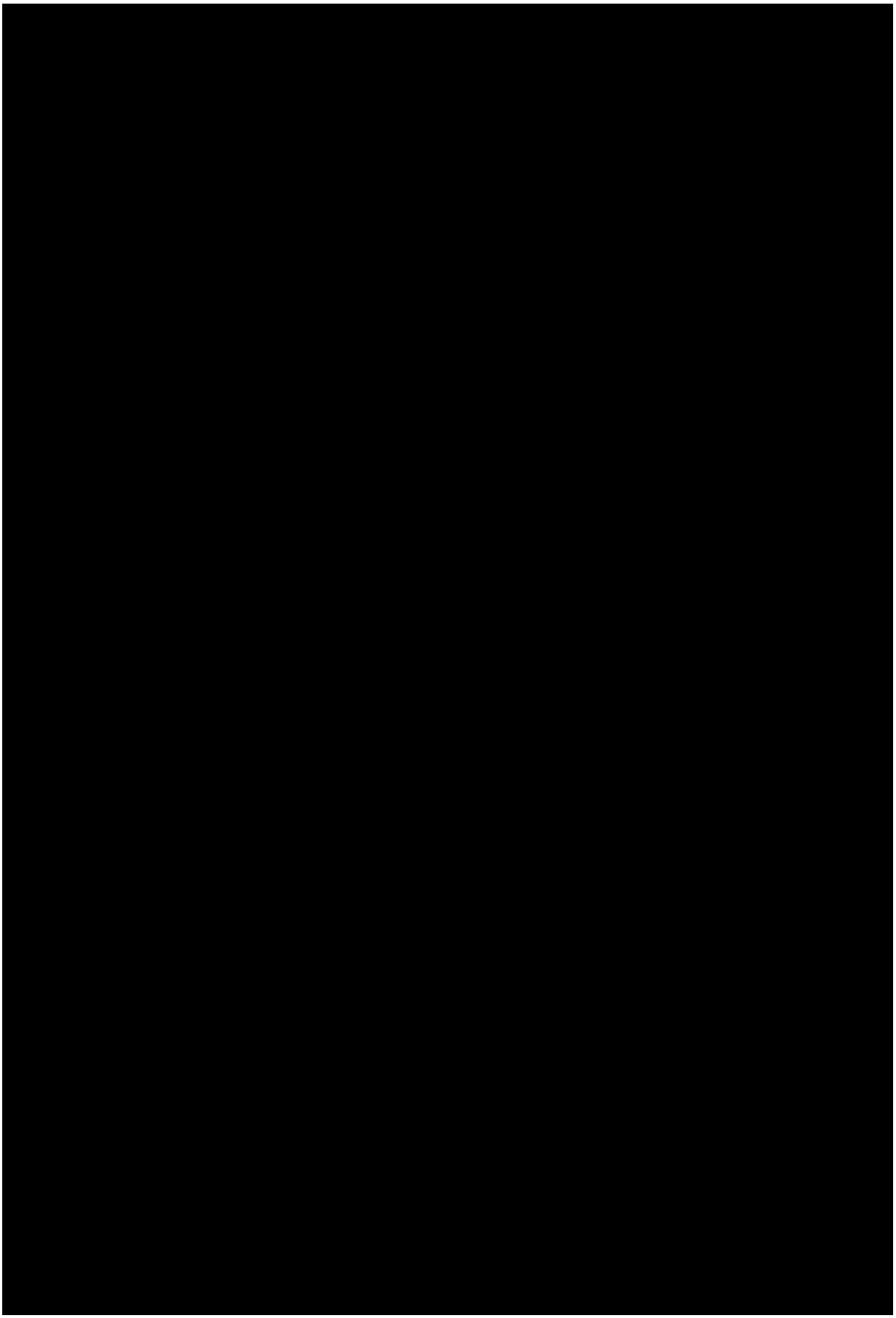

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Figure 1 EXT REF "Y"

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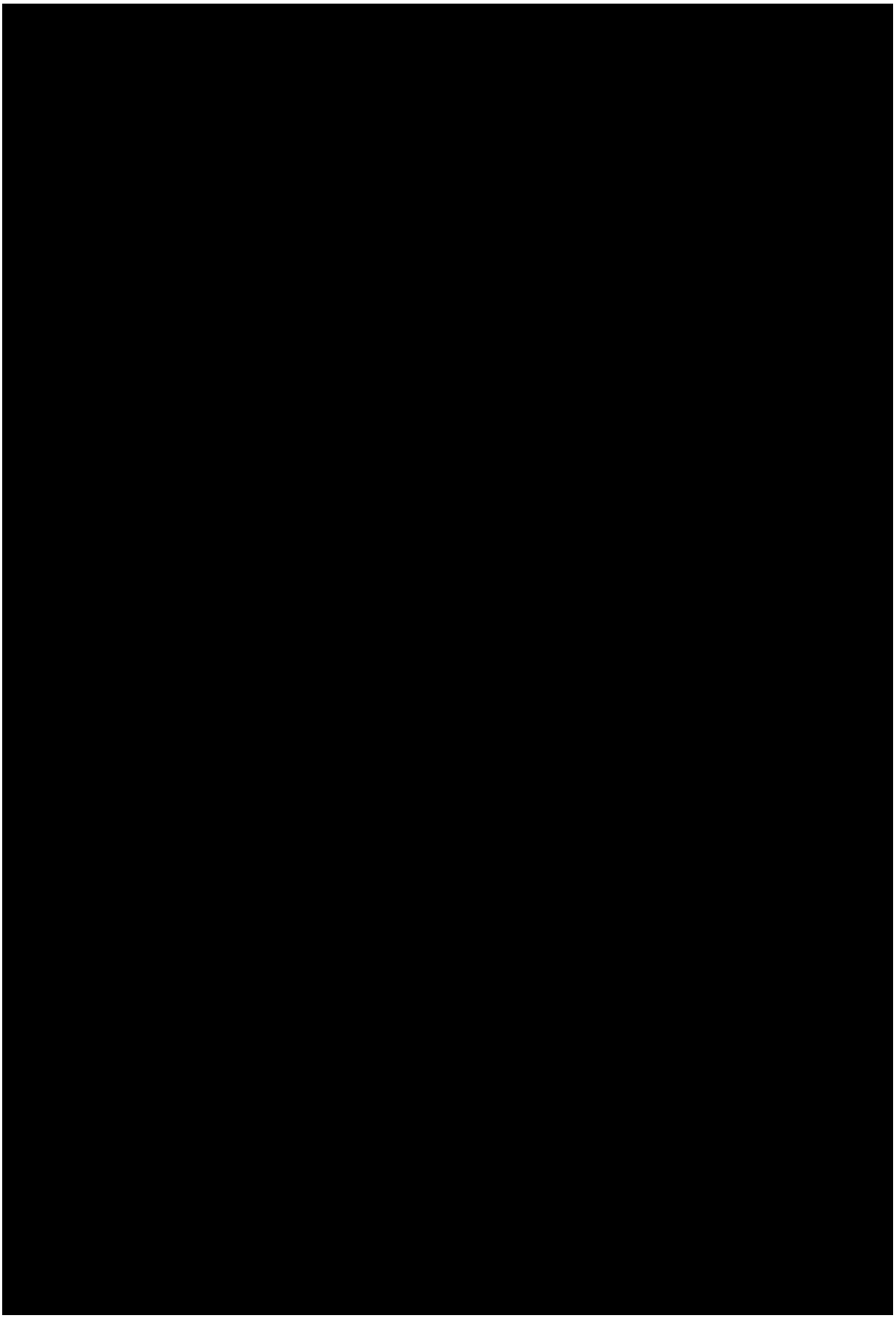

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Figure 2 EXT REF "N"

```
rclkref                    5ESS Switch                _
(5519)                  OFFICE DATA ADMINISTRATION
                      REMOTE CLOCK REFERENCE

*1. RSM            008              REFERENCE SOURCE
*2. REFERENCE       1                9. SM   008
                                     10. DLTU 0
#3. PRIORITY        1                11. DFI  03
 4. EQUIPMENT STATUS O               12. FAC  0
 5. INTERRUPT STATUS ALLOW
#6. REFERENCE TYPE   24CHAN           ALTERNATE SOURCE
 7. REFERENCE FORMAT FEWZC           13. ALTERNATE SM    008
 8. EXT REF          N               14. ALTERNATE DLTU  1
                                     15. ALTERNATE DFIPK 03
                                     16. ALTERNATE FAC   0
```

Figure 3 SAMPLE RCLKREF FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 5T: 5520 RECORD
DIGIT ANALYSIS TIMING FORM - TIMING

1. GENERAL

The 5520 Record is used to define intervals for Permanent Signal, Partial Dial and Critical Timing in a 5ESS Switch.

1.1 Default Data

A standard set of input data is provided by the ODA system as each office is registered and normally no data need be entered by the ODA system users. If, however, it is required that timing intervals vary from the standard, the TIMING form may be used to specify them (see Figure 1).

With 5E3 and later, a standard set of input data is provided by the 5ODA system for DSN (Defense Switch Network) offices (see Figure 2).

1.2 Line Class of Service

A TIMING form entry must be defined for each combination of Line CLASS OF SERVICE (specified on the LCC form (5306 Record)) and SIGNAL TYPE (TT or DP) for which any Line form (5109-1/2 Record) or MLHLN form (5111-1/2 Record) entry exists.

With 5E3 and later, a TIMING form entry must be defined for the Line CLASS OF SERVICE "ISDN" specified on the LCC form (5306 Record) and SIGNAL TYPE of "DCHN", for which any DSL form (5900 Record) or DSMLHLN form (5901 Record) exists.

1.3 Trunk Class of Service

A TIMING form must be defined for each combination of Trunk Class, (with the exception of "ACJCK", "FXROTL", "EDSL", "EDSLHM", "IFOPER", "IFTERM", "OTOTK", "PACKET", "TCIKT" and "TCITT") and INPULSING field, defined on the TKGRP form, and IN START DIAL, specified for any incoming or two-way trunk on the TRUNK form.

1.4 Recent Change

The corresponding Recent Change View for this form is 8.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SERVICE CLASS

Description: Enter the Service Class. Service Classes are categorized as either Line or Trunk classes.

Required Field.

Valid LINE CLASS Entries

Entry	Definition
ATND	Attendant DN.
B911	Basic 911 Emergency Service Bureau.
CALLBK	Trunk and Line Work Station Call Back Line.
CHGCALL	Charge-a-Call Line.
COIN	Coin Line.
HOTMOTL	Line with Hotel/Motel features.
HOTPBX	Line with Hotel/Motel and PBX features.

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INDIV	Individual Line.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Line .
ISDN	Software Release: 5E3 and later. Digital Subscriber Line.
LTPCLBCK	Recent Change only. See CALLBK for definition.
MODEM	Software Release: 5E3 and later. Packet Switching Modem Pooling.
PBX	Line with PBX features.
RCDM	Software Release: 5E7 and later. Recent Change Delayed Message.
SATSTLN	Stand-alone test line for RSM and Local SM use.
TEST	Test Line.
TWOPTY	Two Party Line.
2PTY	2 Party Multi-Frequency Ringing.
4PFS	4 Party Full-Selective.
4PSS	4 Party Semi-Selective.
4WINDIV	Software Releaser: 5E3 and later. 4-Wire Individual.
5PTY	5 Party Multi-Frequency Ringing.
8PSS	8 Party Semi-Selective.
10PTY	10 Party Multi-Frequency Ringing.

Valid TRUNK CLASS Entries

Entry	Definition
ACJCK	Incoming From TLWS (Trunk and Line Work Station) for AC Testing.
ATNDVFY	Software Release: 5E8 and later. Remote Busy Verify. Allows the ISDN Attendant the ability to verify lines on remote 5ESS Switches by way of BVTs (Busy Verify Trunks). The lines on the remote Switch may be busy verified only if they are associated to an incoming ISAT BVT. For information on how various TNs are associated, see Division 2, Section 1T.
BUSYVFY	Incoming From Switchboard or TSPS.
CAMAANI	Incoming CAMA ANI Trunks.
CAMAONI	Incoming CAMA ONI Trunks.
DIOR	Software Release: 5E6 and later. Direct International Origination.
EDSL	Extended Digital Subscriber Line trunks.
EDSLHM	Extended Digital Subscriber Line hotel/motel service to TSPS.
FIOPR	Software Release: 5E4(2) and later. Intermediate Switch Point for incoming operator trunk.
IC	Interexchange Carrier.
IDCS	Software Release: 5E9(1) and later. Inter-DCS (Digital Cellular Switch) trunk.
INAISTRK	Software Release: 5E6(2) and later. Incoming Intercept Trunk using an EIS (External Information System) database.
LATA	Intertoll Trunks from a LATA.
LTOLLCON	Toll Connecting Trunk - Local Office End.
PF	Private Facility Trunk.
PFITT	Software Release: 5E3 and later. Private Facility Intertandem Trunk.
PFLASH	Private Facility Trunk with FLASH.
PRINTOLL	Primary Intertoll.
RMSD3	Software Release: 5E4(2) and later. TAT connected to a RMSD3.
SCINTOLL	Secondary Intertoll.
SPAB800	Software Release: 5E5 and later. Special Access Basic 800 Service.
SPAM800	Software Release: 5E5 and later. MEGACOM 800 Service.
SPAMEG	Software Release: 5E5 and later. MEGACOM service.
SPAWATS	Software Release: 5E5 and later. Special Access WATS service.
TOLLOPER	Incoming From Toll Switchboard.
TOPAS	Software Release: 5E4(2) and later. TAT connected to TOPAS.
TSTK	LTD, Incoming or Outgoing.
TTOLLCO	Toll Connecting - Toll Office End.

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Data Rules:

For 5E6(2) and later, when a TIMING form is submitted with a SERVICE CLASS of "INAISTRK", at least one TKGRP form must be submitted with a TRKCLS of "INAISTRK".

For 5E7 and later, if SERVICE CLASS is "RCDM", then
- SIGNAL TYPE must be "DP" or "TT"
- START SIGNAL must be "NONE"

and the following fields default to recommended values that may be changed if desired:

CRITICAL TIMING defaults to "4"
- PARTIAL DIAL TIMING defaults to "20"
- PERMANENT SIGNAL TIMING defaults to "20"
- OVERLOAD PARTIAL DIAL defaults to "10"
- OVERLOAD PERM. SIGNAL defaults to "10"

For 5E8 and later, if SERVICE CLASS is equal to "ATNDVFY", START SIGNAL must equal "WINK", and SIGNAL TYPE must equal "MF".

For 5E9(1) and later, if SFID ACT 130 is "N" on the SFSYS form (5713-1 Record), SERVICE CLASS may not be "IDCS". If SERVICE CLASS is "IDCS", SIGNAL TYPE must be "MF" or "TT". Additionally, the following fields must be set within the valid ranges. When a field is left blank, the system will set it to the specified default value.

Service Class "IDCS"

Field	Range	Default
CRITICAL TIMING	2 - 5	4
PARTIAL DIAL TIMING	4 - 12	4
PERMANENT SIGNAL TIMING	4 - 12	5
OVERLOAD PARTIAL DIAL	4 - 12	4
OVERLOAD PERM SIGNAL	4 - 12	5

2.3 * START SIGNAL

Description: Enter the Start Signal Type.

Required Field.

Valid LINE CLASS START SIGNAL Entries

Entry	Definition
NONE	No start signal for lines, revertive pulse trunks, and CCS trunks.
WINK	Wink Start.
WNKDT	Software Release: 5E3 and later. Wink Start and Dial Tone. Used in the Defense Switched Network.
DLTN	Dial Tone.

Data Rules:

For any LINE Service Class, with the exception of "4WINDIV", the only valid entry is "NONE".

For a LINE Service Class of "4WINDIV", the valid entries are "WINK", "WNKDT", and "DLTN".

Valid TRUNK CLASS START SIGNAL Entries

Entry	Definition
ANSDTONE	Software Release: 5E4(2) and later. Answer Supervision/Dial Tone. Provide answer supervision along with dial tone start signal on incoming trunks when the 5ESS Switch is configured as a PBX.
DLAY	Delay Dial.
DLTN	Dial Tone.
IMED	Immediate Start.

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NONE	No start signal for lines, revertive pulse trunks and CCS trunks.
WINK	Wink Start.
DIRC	Incoming Direct Connect Trunk.
GRND	Ground start supervision FX trunk.
LOOP	Loop start supervision FX trunk.
WNKDT	Software Release: 5E3 and later. Wink start and dial tone. Used in the Defense Switched Network.

ANSDTONE:

- "ANSDTONE" is only valid with a SERVICE CLASS of "PF".
- SIGNAL TYPE must be "DP", "MF" or "TT".

DIRC:"DIRC" is valid with SERVICE CLASS of "PF", "PFLASH", "PFITT", "LTOLLCON", or "INAISTRK". When START SIGNAL is "DIRC", then SIGNAL TYPE must be "NONE"; for 5E9(1) and later, SIGNAL TYPE must be "DP", "MF", "TT" or "NONE".

GRND and **LOOP**: "GRND" and "LOOP" START SIGNALS are valid only if SERVICE CLASS is a trunk class value of "PF" or "PFLASH".

NONE: When SERVICE CLASS is "LATA": if Signal Type is "MF", START SIGNAL must be "WINK"; if Signal Type is "ISUP7", START SIGNAL must be "NONE".

A SERVICE CLASS of "EDSL" or "EDSLHM" must have a START SIGNAL of "NONE".

WINK: A Service Class of "IC", "RMSD3" or "TOPAS" must have a Start Signal of "WINK". For Software Release 5E5 and earlier, a Service Class of "LATA" must also have a Start Signal of "WINK".

A SERVICE CLASS of "SPAWATS" or "SPAMEG" must have a START SIGNAL of "WINK", "DLTN" or "IMED".

A SERVICE CLASS of "SPAB800" or "SPAM800" must have a START SIGNAL of "WINK", "DLAY" or "IMED".

For 5E6(2) and later, START SIGNAL must be "WINK", "DLAY", "IMED", or "DIRC", if SERVICE CLASS IS "INAISTRK".

2.4 * SIGNAL TYPE

Description: Enter the Signal Type.

Required Field.

Valid LINE SERVICE CLASS SIGNAL TYPE Entries

Entry	Definition
DP	Dial Pulse.
TT	Touch-Tone.
DCHN	Software Release: 5E3 and later. D-Channel signaling for Digital Subscriber Lines

Data Rules:

The only valid entry for a LINE SERVICE CLASS code of "4WINDIV" is "TT".

DCHN: For 5E3 - 5E5, "DCHN" is valid only with SERVICE CLASS "ISDN" and "ISATND".

For 5E6 and later, it is also valid for SERVICE CLASS "EDSL" and "EDSLHM". START SIGNAL must be "NONE". All LINE SERVICE CLASSES, with the exception of "4WINDIV", the valid entries are "DP", "TT", and "DCHN".

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Valid TRUNK CLASS SIGNAL TYPE Entries	
Entry	**Definition**
DP	Dial Pulse.
MF	Multifrequency.
NONE	No Inpulsing for direct connect trunks.
RPEO	Revertive Pulsing to End Office.
RPTO	Revertive Pulsing to Tandem Office.
TT	Touch-Tone.

Signal types "RPEO" and "RPTO" are valid only with SERVICE CLASS "LTOLLCON" and START SIGNAL must be "IMED".

When SIGNAL TYPE is "NONE", then START SIGNAL must be "DIRC".

A SERVICE CLASS of "IC", "LATA", "RMSD3" or "TOPAS" must have a SIGNAL TYPE of "MF".

A SERVICE CLASS of "SPAWATS", "SPAMEG", "SPAB800" or "SPAM800" must have a SIGNAL TYPE of "MF", "DP" or "TT".

A SERVICE CLASS of "PF" or "PFLASH" must have a SIGNAL TYPE of "DP", "MF", "TT" or "NONE".

A SERVICE CLASS of "PFITT" must have a SIGNAL TYPE of "DP", "ISUP7", "MF", "TT" or "NONE".

A SERVICE CLASS of "LATA" must have a SIGNAL TYPE of "ISUP7" or "MF".

A SERVICE CLASS of "EDSL" or "EDSLHM" must have a SIGNAL TYPE of "DCHN" or "NONE".

For 5E6(2) and later, the SIGNAL TYPE must be "MF", "DP", or "NONE", if the SERVICE CLASS is "INAISTRK"

2.5 CRITICAL TIMING

Description: Enter the Critical Timing interval in seconds. Critical timing is used between dialed or in-pulsed digits where a timeout would cause digit analysis to provide a Specified Feature Treatment (PDIT form) or Code Conflict Treatment (LDIT form).
Valid Entries: 2 - 5 (seconds)

Data Rules:

For 5E8 and earlier, the CRITICAL TIMING value must be at least two seconds less than the PARTIAL DIAL TIMING.

2.6 PARTIAL DIAL TIMING

Description: Enter the partial dial timing interval in seconds. PARTIAL DIAL TIMING is used under normal conditions. OVERLOAD PARTIAL DIAL is used when an office is in an overload condition. Either PARTIAL DIAL TIMING or OVERLOAD PARTIAL DIAL will be in effect at one time. An office would not have both in use at the same time.

Required Field.
Valid Entries: 2 - 120 (seconds)

2.7 PERMANENT SIGNAL TIMING

Description: Enter the permanent signal timing interval in seconds. PERMANENT SIGNAL TIMING is used under normal conditions. OVERLOAD PERM. SIGNAL is used when an office is in an overload condition. Either PERMANENT SIGNAL TIMING or OVERLOAD PERM. SIGNAl will be in effect at one time. An office would not have both in use at the same time.

Required Field.

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Valid Entries: 2 - 120 (seconds)

2.8 OVERLOAD PARTIAL DIAL

Description: Enter the partial dial timing interval under office overload conditions. Partial dial timing is used under normal conditions. OVERLOAD PARTIAL DIAL is used when an office is in an overload condition. Either PARTIAL DIAL TIMING or OVERLOAD PARTIAL DIAL will be in effect at one time. An office would not have both in use at the same time.

Required Field.
Valid Entries: 2 - 120 (seconds)

2.9 OVERLOAD PERM. SIGNAL

Description: Enter the permanent signal timing interval when the office is in an overload condition. PERMANENT SIGNAL TIMING is used under normal conditions. OVERLOAD PERM. SIGNAL is used when an office is in an overload condition. Either PERMANENT SIGNAL TIMING or OVERLOAD PERM. SIGNAL will be in effect at one time. An office would not have both in use at the same time.

Required Field.
Valid Entries: 2 - 120 (seconds)

SERVICE CLASS	STARTSIG NAL	SIGNAL TYPE	TIMING INTERVALS					SOFTWARE RELEASE
			CRITICAL	PART. DIAL	PERM. SIG.	OVERLO AD PART. DIAL	OVERLO AD PERM. SIG	
10PTY	NONE	DP	4	20	20	10	10	5E3 and later
10PTY	NONE	TT	4	20	20	10	10	5E3 and later
2PTY	NONE	DP	4	20	20	10	10	5E3 and later
2PTY	NONE	TT	4	20	20	10	10	5E3 and later
4PFS	NONE	DP	4	20	20	10	10	5E3 and later
4PFS	NONE	TT	4	20	20	10	10	5E3 and later
4PSS	NONE	DP	4	20	20	10	10	5E3 and later
4PSS	NONE	TT	4	20	20	10	10	5E3 and later
4WINDIV	DLTN	TT	4	20	20	10	10	5E3 and later
4WINDIV	WINK	TT	4	20	20	10	10	5E3 and later
4WINDIV	WNKDT	TT	4	20	20	10	10	5E3 and later
5PTY	NONE	DP	4	20	20	10	10	5E3 and later
5PTY	NONE	TT	4	20	20	10	10	5E3 and later
8PSS	NONE	DP	4	20	20	10	10	5E3 and later
8PSS	NONE	TT	4	20	20	10	10	5E3 and later
ACJCK	NONE	MF	4	20	20	10	10	5E3 and later
ATND	NONE	DP	4	20	20	10	10	5E3 and later
ATND	NONE	TT	4	20	20	10	10	5E3 and later
ATNDVFY	WINK	MF	4	20	20	10	10	5E8 and later
B911	NONE	DP	4	20	20	10	10	5E3 and later
B911	NONE	TT	4	20	20	10	10	5E3 and later
BUSYVFY	DLAY	DP	4	20	20	10	10	5E3 and later
BUSYVFY	DLAY	MF	4	20	20	10	10	5E3 and later
BUSYVFY	IMED	DP	4	20	20	10	10	5E3 and later
BUSYVFY	IMED	MF	4	20	20	10	10	5E3 and later
BUSYVFY	WINK	DP	4	20	20	10	10	5E3 and later
BUSYVFY	WINK	MF	4	20	20	10	10	5E3 and later
CALLBK	NONE	DP	4	20	20	10	10	5E3 and later
CALLBK	NONE	TT	4	20	20	10	10	5E3 and later
CAMAANI	DLAY	DP	4	20	20	10	10	5E3 and later
CAMAANI	DLAY	MF	4	20	20	10	10	5E3 and later
CAMAANI	IMED	DP	4	20	20	10	10	5E3 and later
CAMAANI	IMED	MF	4	20	20	10	10	5E3 and later
CAMAANI	WINK	DP	4	20	20	10	10	5E3 and later
CAMAANI	WINK	MF	4	20	20	10	10	5E3 and later
CAMAONI	DLAY	DP	4	20	20	10	10	5E3 and later
CAMAONI	DLAY	MF	4	20	20	10	10	5E3 and later
CAMAONI	IMED	DP	4	20	20	10	10	5E3 and later
CAMAONI	IMED	MF	4	20	20	10	10	5E3 and later
CAMAONI	WINK	DP	4	20	20	10	10	5E3 and later
CAMAONI	WINK	MF	4	20	20	10	10	5E3 and later

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CHGCALL	NONE	DP	4	20	20	10	10	5E3 and later
CHGCALL	NONE	TT	4	20	20	10	10	5E3 and later
COIN	NONE	DP	4	20	20	10	10	5E3 and later
COIN	NONE	TT	4	20	20	10	10	5E3 and later
DIOR	WINK	MF	4	20		10		5E6 and later
DIOR	DLAY	MF	4	20		10		5E6 and later
EDSL	NONE	DCHN	4	20	20	10	10	5E6 and later
EDSLHM	NONE	DCHN	4	20	20	10	10	5E6 and later
FIOPR	DLAY	DP	4	20	20	10	10	5E3 and later
FIOPR	DLAY	MF	4	20	20	10	10	5E3 and later
FIOPR	IMED	DP	4	20	20	10	10	5E3 and later
FIOPR	IMED	MF	4	20	20	10	10	5E3 and later
FIOPR	WINK	DP	4	20	20	10	10	5E3 and later
FIOPR	WINK	MF	4	20	20	10	10	5E3 and later
HOTMOTL	NONE	DP	4	20	20	10	10	5E3 and later
HOTMOTL	NONE	TT	4	20	20	10	10	5E3 and later
HOTPBX	NONE	DP	4	20	20	10	10	5E3 and later
HOTPBX	NONE	TT	4	20	20	10	10	5E3 and later
INAISTRK	WINK	MF	4	20	20	10	10	5E6(2) and later
INAISTRK	DLAY	MF	4	20	20	10	10	5E6(2) and later
INAISTRK	WINK	DP	4	20	20	10	10	5E6(2) and later
INAISTRK	DLAY	DP	4	20	20	10	10	5E6(2) and later
INAISTRK	IMED	MF	4	20	20	10	10	5E6(2) and later
INAISTRK	IMED	DP	4	20	20	10	10	5E6(2) and later
INAISTRK	DIRC	NONE	4	20	20	10	10	5E6(2) and later
INDIV	NONE	DP	4	20	20	10	10	5E3 and later
INDIV	NONE	TT	4	20	20	10	10	5E3 and later
ISATND	NONE	DCHN	4	20	20	10	10	5E4(2) and later
ISDN	NONE	DCHN	4	20	20	10	10	5E3 and later
LATA	NONE	ISUP7	4	20	20	10	10	5E6 and later
LATA	WINK	MF	4	20	20	10	10	5E3 and later
LTOLLCON	DIRC	NONE	4	20	20	10	10	5E3 and later
LTOLLCON	DLAY	DP	4	20	20	10	10	5E3 and later
LTOLLCON	DLAY	MF	4	20	20	10	10	5E3 and later
LTOLLCON	DLTN	DP	4	20	20	10	10	5E3 and later
LTOLLCON	DLTN	MF	4	20	20	10	10	5E3 and later
LTOLLCON	IMED	DP	4	20	20	10	10	5E3 and later
LTOLLCON	IMED	MF	4	20	20	10	10	5E3 and later
LTOLLCON	IMED	RPEO	4	20	110	10	10	5E3 and later
LTOLLCON	IMED	RPTO	4	20	110	10	10	5E3 and later
LTOLLCON	WINK	DP	4	20	20	10	10	5E3 and later
LTOLLCON	WINK	MF	4	20	20	10	10	5E3 and later
MODEM	NONE	DP	4	20	20	10	10	5E3 and later
MODEM	NONE	TT	4	20	20	10	10	5E3 and later
PBX	NONE	DP	4	20	20	10	10	5E3 and later
PBX	NONE	TT	4	20	20	10	10	5E3 and later
PF	ANSDTONE	DP	4	20	20	10	10	5E3 and later
PF	ANSDTONE	MF	4	20	20	10	10	5E3 and later
PF	ANSDTONE	TT	4	20	20	10	10	5E3 and later
PF	DLAY	DP	4	20	20	10	10	5E3 and later
PF	DLAY	MF	4	20	20	10	10	5E3 and later
PF	DLAY	TT	4	20	20	10	10	5E3 and later
PF	DLTN	DP	4	20	20	10	10	5E3 and later
PF	DLTN	MF	4	20	20	10	10	5E3 and later
PF	DLTN	TT	4	20	20	10	10	5E3 and later
PF	GRND	DP	4	20	20	10	10	5E3 and later
PF	GRND	MF	4	20	20	10	10	5E3 and later
PF	GRND	TT	4	20	20	10	10	5E3 and later
PF	IMED	DP	4	20	20	10	10	5E3 and later
PF	IMED	MF	4	20	20	10	10	5E3 and later
PF	IMED	TT	4	20	20	10	10	5E3 and later
PF	LOOP	DP	4	20	20	10	10	5E3 and later
PF	LOOP	MF	4	20	20	10	10	5E3 and later
PF	LOOP	TT	4	20	20	10	10	5E3 and later

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PF	WINK	DP	4	20	20	10	10	5E3 and later
PF	WINK	MF	4	20	20	10	10	5E3 and later
PF	WINK	TT	4	20	20	10	10	5E3 and later
PFITT	DLAY	DP	4	20	20	10	10	5E3 and later
PFITT	DLAY	MF	4	20	20	10	10	5E3 and later
PFITT	DLAY	TT	4	20	20	10	10	5E3 and later
PFITT	DLTN	DP	4	20	20	10	10	5E3 and later
PFITT	DLTN	MF	4	20	20	10	10	5E3 and later
PFITT	DLTN	TT	4	20	20	10	10	5E3 and later
PFITT	IMED	DP	4	20	20	10	10	5E3 and later
PFITT	IMED	TT	4	20	20	10	10	5E3 and later
PFITT	WINK	DP	4	20	20	10	10	5E3 and later
PFITT	WINK	MF	4	20	20	10	10	5E3 and later
PFITT	WINK	TT	4	20	20	10	10	5E3 and later
PFLASH	DLAY	DP	4	20	20	10	10	5E3 and later
PFLASH	DLAY	MF	4	20	20	10	10	5E3 and later
PFLASH	DLAY	TT	4	20	20	10	10	5E3 and later
PFLASH	DLTN	DP	4	20	20	10	10	5E3 and later
PFLASH	DLTN	MF	4	20	20	10	10	5E3 and later
PFLASH	DLTN	TT	4	20	20	10	10	5E3 and later
PFLASH	GRND	DP	4	20	20	10	10	5E3 and later
PFLASH	GRND	MF	4	20	20	10	10	5E3 and later
PFLASH	GRND	TT	4	20	20	10	10	5E3 and later
PFLASH	IMED	DP	4	20	20	10	10	5E3 and later
PFLASH	IMED	MF	4	20	20	10	10	5E3 and later
PFLASH	IMED	TT	4	20	20	10	10	5E3 and later
PFLASH	LOOP	DP	4	20	20	10	10	5E3 and later
PFLASH	LOOP	MF	4	20	20	10	10	5E3 and later
PFLASH	LOOP	TT	4	20	20	10	10	5E3 and later
PFLASH	WINK	DP	4	20	20	10	10	5E3 and later
PFLASH	WINK	MF	4	20	20	10	10	5E3 and later
PFLASH	WINK	TT	4	20	20	10	10	5E3 and later
PRINTOLL	DLAY	DP	4	20	20	10	10	5E3 and later
PRINTOLL	DLAY	MF	4	20	20	10	10	5E3 and later
PRINTOLL	IMED	DP	4	20	20	10	10	5E3 and later
PRINTOLL	IMED	MF	4	20	20	10	10	5E3 and later
PRINTOLL	WINK	DP	4	20	20	10	10	5E3 and later
PRINTOLL	WINK	MF	4	20	20	10	10	5E3 and later
RCDM	NONE	DP	4	20	20	10	10	5E7 and later
RCDM	NONE	TT	4	20	20	10	10	5E7 and later
RMSD3	WINK	MF	4	20	20	10	10	5E3 and later
SATSTLN	NONE	DP	4	20	20	10	10	5E3 and later
SATSTLN	NONE	TT	4	20	20	10	10	5E3 and later
SCINTOLL	DLAY	DP	4	20	20	10	10	5E3 and later
SCINTOLL	DLAY	MF	4	20	20	10	10	5E3 and later
SCINTOLL	IMED	DP	4	20	20	10	10	5E3 and later
SCINTOLL	IMED	MF	4	20	20	10	10	5E3 and later
SCINTOLL	WINK	DP	4	20	20	10	10	5E3 and later
SCINTOLL	WINK	MF	4	20	20	10	10	5E3 and later
SPAB800	DLAY	DP	4	10	10	10	10	5E5 and later
SPAB800	DLAY	MF	4	10	10	10	10	5E5 and later
SPAB800	DLAY	TT	4	10	10	10	10	5E5 and later
SPAB800	IMED	DP	4	10	10	10	10	5E5 and later
SPAB800	IMED	MF	4	10	10	10	10	5E5 and later
SPAB800	IMED	TT	4	10	10	10	10	5E5 and later
SPAB800	WINK	DP	4	10	10	10	10	5E5 and later
SPAB800	WINK	MF	4	10	10	10	10	5E5 and later
SPAB800	WINK	TT	4	10	10	10	10	5E5 and later
SPAM800	DLAY	DP	4	10	10	10	10	5E5 and later
SPAM800	DLAY	MF	4	10	10	10	10	5E5 and later
SPAM800	DLAY	TT	4	10	10	10	10	5E5 and later
SPAM800	IMED	DP	4	10	10	10	10	5E5 and later
SPAM800	IMED	MF	4	10	10	10	10	5E5 and later
SPAM800	IMED	TT	4	10	10	10	10	5E5 and later
SPAM800	WINK	DP	4	10	10	10	10	5E5 and later
SPAM800	WINK	MF	4	10	10	10	10	5E5 and later
SPAM800	WINK	TT	4	10	10	10	10	5E5 and later
SPAMEG	DLTN	DP	4	10	10	10	10	5E5 and later
SPAMEG	DLTN	MF	4	10	10	10	10	5E5 and later
SPAMEG	DLTN	TT	4	10	10	10	10	5E5 and later
SPAMEG	WINK	DP	4	10	10	10	10	5E5 and later
SPAMEG	WINK	MF	4	10	10	10	10	5E5 and later
SPAMEG	WINK	TT	4	10	10	10	10	5E5 and later
SPAWATS	DLTN	DP	4	10	10	10	10	5E5 and later
SPAWATS	DLTN	MF	4	10	10	10	10	5E5 and later

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SPAWATS	DLTN	TT	4	10	10	10	10	5E5 and later
SPAWATS	WINK	DP	4	10	10	10	10	5E5 and later
SPAWATS	WINK	MF	4	10	10	10	10	5E5 and later
SPAWATS	WINK	TT	4	10	10	10	10	5E5 and later
TEST	NONE	DP	4	20	20	10	10	5E3 and later
TEST	NONE	TT	4	20	20	10	10	5E3 and later
TOLLOPER	DLAY	DP	4	20	20	10	10	5E3 and later
TOLLOPER	DLAY	MF	4	20	20	10	10	5E3 and later
TOLLOPER	IMED	DP	4	20	20	10	10	5E3 and later
TOLLOPER	IMED	MF	4	20	20	10	10	5E3 and later
TOLLOPER	WINK	DP	4	20	20	10	10	5E3 and later
TOLLOPER	WINK	MF	4	20	20	10	10	5E3 and later
TOPAS	WINK	MF	4	20	20	10	10	5E3 and later
TSTK	WINK	MF	4	20	20	10	10	5E3 and later
TTOLLCON	DLAY	DP	4	20	20	10	10	5E3 and later
TTOLLCON	DLAY	MF	4	20	20	10	10	5E3 and later
TTOLLCON	IMED	DP	4	20	20	10	10	5E3 and later
TTOLLCON	IMED	MF	4	20	20	10	10	5E3 and later
TTOLLCON	WINK	DP	4	20	20	10	10	5E3 and later
TTOLLCON	WINK	MF	4	20	20	10	10	5E3 and later
TWOPTY	NONE	DP	4	20	20	10	10	5E3 and later
TWOPTY	NONE	TT	4	20	20	10	10	5E3 and later

Figure 1 DEFAULT DATA PROVIDED BY ODA

SERVICE CLASS	STARTSIGNAL	SIGNAL TYPE	TIMING INTERVALS					SOFTWARE RELEASE
			CRITICAL	PART. DIAL	PERM. SIG.	OVERLOAD PART. DIAL	OVERLOAD PERM. SIG	
10PTY	NONE	DP	4	20	20	10	10	5E3 and later
10PTY	NONE	TT	4	20	20	10	10	5E3 and later
2PTY	NONE	DP	4	20	20	10	10	5E3 and later
2PTY	NONE	TT	4	20	20	10	10	5E3 and later
4PFS	NONE	DP	4	20	20	10	10	5E3 and later
4PFS	NONE	TT	4	20	20	10	10	5E3 and later
4PSS	NONE	DP	4	20	20	10	10	5E3 and later
4PSS	NONE	TT	4	20	20	10	10	5E3 and later
4WINDIV	DLTN	DP	4	10	10	10	10	5E3 and later
4WINDIV	DLTN	TT	4	10	10	10	10	5E3 and later
4WINDIV	WINK	DP	4	10	10	10	10	5E3 and later
4WINDIV	WINK	TT	4	10	10	10	10	5E3 and later
4WINDIV	WNKDT	DP	4	10	10	10	10	5E3 and later
4WINDIV	WNKDT	TT	4	10	10	10	10	5E3 and later
5PTY	NONE	DP	4	20	20	10	10	5E3 and later
5PTY	NONE	TT	4	20	20	10	10	5E3 and later
8PSS	NONE	DP	4	20	20	10	10	5E3 and later
8PSS	NONE	TT	4	20	20	10	10	5E3 and later
ACJCK	NONE	MF	4	20	20	10	10	5E3 and later
ATND	NONE	DP	4	10	10	10	10	5E3 and later
ATND	NONE	TT	4	10	10	10	10	5E3 and later
ATNDVFY	WINK	MF	4	10	10	10	10	5E8 and later
B911	NONE	DP	4	20	20	10	10	5E3 and later
B911	NONE	TT	4	20	20	10	10	5E3 and later
BUSYVFY	DLAY	DP	4	20	20	10	10	5E3 and later
BUSYVFY	DLAY	MF	4	20	20	10	10	5E3 and later
BUSYVFY	IMED	DP	4	20	20	10	10	5E3 and later
BUSYVFY	IMED	MF	4	20	20	10	10	5E3 and later
BUSYVFY	WINK	DP	4	20	20	10	10	5E3 and later
BUSYVFY	WINK	MF	4	20	20	10	10	5E3 and later
CALLBK	NONE	DP	4	20	20	10	10	5E3 and later
CALLBK	NONE	TT	4	20	20	10	10	5E3 and later
CAMAANI	DLAY	DP	4	20	20	10	10	5E3 and later
CAMAANI	DLAY	MF	4	20	20	10	10	5E3 and later
CAMAANI	IMED	DP	4	20	20	10	10	5E3 and later
CAMAANI	IMED	MF	4	20	20	10	10	5E3 and later
CAMAANI	WINK	DP	4	20	20	10	10	5E3 and later
CAMAANI	WINK	MF	4	20	20	10	10	5E3 and later
CAMAONI	DLAY	DP	4	20	20	10	10	5E3 and later
CAMAONI	DLAY	MF	4	20	20	10	10	5E3 and later
CAMAONI	IMED	DP	4	20	20	10	10	5E3 and later
CAMAONI	IMED	MF	4	20	20	10	10	5E3 and later
CAMAONI	WINK	DP	4	20	20	10	10	5E3 and later
CAMAONI	WINK	MF	4	20	20	10	10	5E3 and later
CHGCALL	NONE	DP	4	20	20	10	10	5E3 and later

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CHGCALL	NONE	TT	4	20	20	10	10	5E3 and later
COIN	NONE	DP	4	20	20	10	10	5E3 and later
COIN	NONE	TT	4	20	20	10	10	5E3 and later
HOTMOTL	NONE	DP	4	20	20	10	10	5E3 and later
HOTMOTL	NONE	TT	4	20	20	10	10	5E3 and later
HOTPBX	NONE	DP	4	20	20	10	10	5E3 and later
HOTPBX	NONE	TT	4	20	20	10	10	5E3 and later
IC	WINK	MF	4	20	20	10	10	5E3 and later
INDIV	NONE	DP	4	10	10	10	10	5E3 and later
INDIV	NONE	TT	4	10	10	10	10	5E3 and later
ISDN	NONE	DCHN	4	20	20	10	10	5E3 and later
LATA	WINK	MF	4	20	20	10	10	5E3 and later
LTOLLCON	DIRC	NONE	4	20	20	10	10	5E3 and later
LTOLLCON	DLAY	DP	4	10	10	10	10	5E3 and later
LTOLLCON	DLAY	MF	4	10	10	10	10	5E3 and later
LTOLLCON	DLTN	DP	4	10	10	10	10	5E3 and later
LTOLLCON	DLTN	MF	4	10	10	10	10	5E3 and later
LTOLLCON	IMED	DP	4	10	10	10	10	5E3 and later
LTOLLCON	IMED	MF	4	10	10	10	10	5E3 and later
LTOLLCON	IMED	RPEO	4	10	10	10	10	5E3 and later
LTOLLCON	IMED	RPTO	4	10	10	10	10	5E3 and later
LTOLLCON	WINK	DP	4	10	10	10	10	5E3 and later
LTOLLCON	WINK	MF	4	10	10	10	10	5E3 and later
MODEM	NONE	DP	4	20	20	10	10	5E3 and later
MODEM	NONE	TT	4	20	20	10	10	5E3 and later
PBX	NONE	DP	4	10	10	10	10	5E3 and later
PBX	NONE	TT	4	10	10	10	10	5E3 and later
PF	DIRC	NONE	4	20	20	10	10	5E3 and later
PF	DLAY	DP	4	10	10	10	10	5E3 and later
PF	DLAY	MF	4	10	10	10	10	5E3 and later
PF	DLAY	TT	4	10	10	10	10	5E3 and later
PF	DLTN	DP	4	10	10	10	10	5E3 and later
PF	DLTN	MF	4	10	10	10	10	5E3 and later
PF	DLTN	TT	4	10	10	10	10	5E3 and later
PF	GRND	DP	4	10	10	10	10	5E3 and later
PF	GRND	MF	4	10	10	10	10	5E3 and later
PF	GRND	TT	4	10	10	10	10	5E3 and later
PF	IMED	DP	4	10	10	10	10	5E3 and later
PF	IMED	MF	4	10	10	10	10	5E3 and later
PF	IMED	TT	4	10	10	10	10	5E3 and later
PF	LOOP	DP	4	10	10	10	10	5E3 and later
PF	LOOP	MF	4	10	10	10	10	5E3 and later
PF	LOOP	TT	4	10	10	10	10	5E3 and later
PF	WINK	DP	4	10	10	10	10	5E3 and later
PF	WINK	MF	4	10	10	10	10	5E3 and later
PF	WINK	TT	4	10	10	10	10	5E3 and later
PFITT	DLAY	DP	4	20	20	10	10	5E3 and later
PFITT	DLAY	MF	4	20	20	10	10	5E3 and later
PFITT	DLAY	TT	4	20	20	10	10	5E3 and later
PFITT	DLTN	DP	4	20	20	10	10	5E3 and later
PFITT	DLTN	MF	4	20	20	10	10	5E3 and later
PFITT	DLTN	TT	4	20	20	10	10	5E3 and later
PFITT	IMED	DP	4	20	20	10	10	5E3 and later
PFITT	IMED	TT	4	20	20	10	10	5E3 and later
PFITT	WINK	DP	4	20	20	10	10	5E3 and later
PFITT	WINK	MF	4	20	20	10	10	5E3 and later
PFITT	WINK	TT	4	20	20	10	10	5E3 and later
PFLASH	DIRC	NONE	4	20	20	10	10	5E3 and later
PFLASH	DLAY	DP	4	10	10	10	10	5E3 and later
PFLASH	DLAY	MF	4	10	10	10	10	5E3 and later
PFLASH	DLAY	TT	4	10	10	10	10	5E3 and later
PFLASH	DLTN	DP	4	10	10	10	10	5E3 and later
PFLASH	DLTN	MF	4	10	10	10	10	5E3 and later
PFLASH	DLTN	TT	4	10	10	10	10	5E3 and later
PFLASH	GRND	DP	4	10	10	10	10	5E3 and later
PFLASH	GRND	MF	4	10	10	10	10	5E3 and later
PFLASH	GRND	TT	4	10	10	10	10	5E3 and later
PFLASH	IMED	DP	4	10	10	10	10	5E3 and later
PFLASH	IMED	MF	4	10	10	10	10	5E3 and later
PFLASH	IMED	TT	4	10	10	10	10	5E3 and later
PFLASH	LOOP	DP	4	10	10	10	10	5E3 and later
PFLASH	LOOP	MF	4	10	10	10	10	5E3 and later
PFLASH	LOOP	TT	4	10	10	10	10	5E3 and later
PFLASH	WINK	DP	4	10	10	10	10	5E3 and later
PFLASH	WINK	MF	4	10	10	10	10	5E3 and later

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PFLASH	WINK	TT	4	10	10	10	10	5E3 and later
PRINTOLL	DLAY	DP	4	10	10	10	10	5E3 and later
PRINTOLL	DLAY	MF	4	10	10	10	10	5E3 and later
PRINTOLL	IMED	DP	4	10	10	10	10	5E3 and later
PRINTOLL	IMED	MF	4	10	10	10	10	5E3 and later
PRINTOLL	WINK	DP	4	10	10	10	10	5E3 and later
PRINTOLL	WINK	MF	4	10	10	10	10	5E3 and later
SATSTLN	NONE	DP	4	20	20	10	10	5E3 and later
SATSTLN	NONE	TT	4	20	20	10	10	5E3 and later
SCINTOLL	DLAY	DP	4	20	20	10	10	5E3 and later
SCINTOLL	DLAY	MF	4	20	20	10	10	5E3 and later
SCINTOLL	IMED	DP	4	20	20	10	10	5E3 and later
SCINTOLL	IMED	MF	4	20	20	10	10	5E3 and later
SCINTOLL	WINK	DP	4	20	20	10	10	5E3 and later
SCINTOLL	WINK	MF	4	20	20	10	10	5E3 and later
TEST	NONE	DP	4	20	20	10	10	5E3 and later
TEST	NONE	TT	4	20	20	10	10	5E3 and later
TOLLOPER	DLAY	DP	4	20	20	10	10	5E3 and later
TOLLOPER	DLAY	MF	4	20	20	10	10	5E3 and later
TOLLOPER	IMED	DP	4	20	20	10	10	5E3 and later
TOLLOPER	IMED	MF	4	20	20	10	10	5E3 and later
TOLLOPER	WINK	DP	4	20	20	10	10	5E3 and later
TOLLOPER	WINK	MF	4	20	20	10	10	5E3 and later
TSTK	WINK	MF	4	20	20	10	10	5E3 and later
TTOLLCON	DLAY	DP	4	10	10	10	10	5E3 and later
TTOLLCON	DLAY	MF	4	10	10	10	10	5E3 and later
TTOLLCON	DLAY	TT	4	10	10	10	10	5E3 and later
TTOLLCON	DLTN	DP	4	10	10	10	10	5E3 and later
TTOLLCON	DLTN	MF	4	10	10	10	10	5E3 and later
TTOLLCON	DLTN	TT	4	10	10	10	10	5E3 and later
TTOLLCON	IMED	DP	4	10	10	10	10	5E3 and later
TTOLLCON	IMED	MF	4	10	10	10	10	5E3 and later
TTOLLCON	IMED	TT	4	10	10	10	10	5E3 and later
TTOLLCON	WINK	DP	4	10	10	10	10	5E3 and later
TTOLLCON	WINK	MF	4	10	10	10	10	5E3 and later
TTOLLCON	WINK	TT	4	10	10	10	10	5E3 and later
TTOLLCON	WNKDT	DP	4	10	10	10	10	5E3 and later
TTOLLCON	WNKDT	MF	4	10	10	10	10	5E3 and later
TTOLLCON	WNKDT	TT	4	10	10	10	10	5E3 and later
TWOPTY	NONE	DP	4	20	20	10	10	5E3 and later
TWOPTY	NONE	TT	4	20	20	10	10	5E3 and later

Figure 2 DEFAULT DATA PROVIDED BY ODA FOR DSN

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timing 5ESS Switch
(5520) OFFICE DATA ADMINISTRATION
DIGIT ANALYSIS TIMING

* 1. SERVICE CLASS INDIV
* 2. START SIGNAL NONE
* 3. SIGNAL TYPE TT
4. CRITICAL TIMING 4
5. PARTIAL DIAL TIMING 20
6. PERMANENT SIGNAL TIMING 20
7. OVERLOAD PARTIAL DIAL 10
8. OVERLOAD PERM. SIGNAL 10

Figure 3 SAMPLE TIMING FORM 5E2 AND LATER SOFTWARE RELEASES

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SEC. 5U: 5521 RECORD
TOPAS CLLI CODE IDENTIFICATION FORM - CLLI

1. GENERAL

The 5521 Record is available with 5E4(2) and later Software Releases. The TOPAS CCLI Code Identification form is used by toll offices that employ the TOPAS (Testing, Operations, Provisioning and Administration System) Operations System. The TOPAS Operations System provides circuit order and testing administration for circuits terminating on a 5ESS Switch in the AT&T Network.

A single 5521 Record is required to define the 5ESS Office CLLI (Common Language Location Identification) Code; and an additional 5ESS Switch 5521 Record is required for each Remote Switch Module, that has a unique CLLI Code, linked to the host at the local 5ESS Switch Office.

1.1 Recent Change View

There is no corresponding Recent Change View for this form.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * SM TYPE

Description: Enter the type of Switching Module site that is being identified.

Required Field.

Valid SM TYPE Entries

Entry	Definition
LSM	An identifier for all the Switching Modules located within the local 5ESS Switch Office. There must be only one CLLI form with "LSM" entered in the SM TYPE field.
RSM	An identifier for each Remote Switch Module, that has a unique CLLI code, linked to the host at the local 5ESS Switch Office.

2.3 (*) RSM NBR

Description: Remote Switching Module number.
Valid Entries: 1 - 174

Data Rules:

If "LSM" was entered in the SM TYPE field on this input form, the RSM NBR field must not be entered. If "RSM" was entered in the SM TYPE, then a value must be entered in the RSM NBR field.

The value entered must be defined in the RSM SITE field on the EQIM Form (5700-1 Record).

2.4 # CLLI CODE

Description: Enter the local CLLI Code if the SM TYPE field on this form was set to "LSM". Enter the CLLI Code assigned at the Remote Switching Module if the SM TYPE field on this form was set to "RSM". The entry must be six alphabetic characters followed by five alphanumeric characters. The following example illustrates a valid entry for the CLLI CODE field.

CLLI CODE Example

Definition	Entry	Description
ENTITY	"CG8"	Control Group 8

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BUILDING	"PT"	Peach Tree
STATE	GA	Georgia
PLACE	"ATLA"	Atlanta

Required Field.
Valid Entries: 11 characters

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clli 5ESS Switch _
(5521) OFFICE DATA ADMINISTRATION
TOPAS CLLI CODE IDENTIFICATION

*1. SM TYPE RSM
(*)2. RSM NBR 082
#3. CLLI CODE ATLAGAPTCG8

Figure 1 SAMPLE CLLI FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5W: 5523 RECORD
ODA OPTIONS - ODAOPT

1. GENERAL

The 5523 Record is available with 5E2 and later Software Releases. The ODA options form must be completed for a 5ESS Switch. It is used to supply miscellaneous ODA options and parameters for Retrofits or Large Terminal Growth.

The 5523 Record is provided as a reproducible record that may optionally be used. However, if this record is requested in the ODA database using the "records" command, the screen image of the input form will be printed instead of a tabularized record.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * KEY

Description: Enter the key value.

Required Field.
Default: For 5E7 and later: 0
Valid Entries: 0

2.3 TRANSITIONAL LINE PIC

Description: Enter the Carrier Identification Number to be assigned during ODA to each line in the office as its PIC (Presubscribed InterLATA Carrier) if the line does not have a PIC assigned in the PIC field on the defining form and the CIDIAL field on the defining form is not set to "REQ", or "TREQ".

For 5E2, the defining form can be a LINE form (5109-1 Record), or a MLHLN form (5111-1 Record).

For 5E3 and 5E4(2), the defining form can be a LINE form, a MLHLN form, a DSL form (5900-2 Record), or a DSMLHLN form (5901-2 Record).

For 5E5, the defining form can be a LINE form, a MLHLN form or a DSLUSR form (5908-2 Record).

Software Release: 5E5 and earlier
Valid Entries: 0 - 999

Data Rules:

If this field is entered, the value must be defined in the CARRIER ID field on an ICF form (5305 Record).

2.4 # PBX DID CONVERSION

Description: Should PBX DID hundreds groups currently defined in blocks of one hundred consecutive TNs on LINE forms with a common RTI be reassigned to a HGRPAS form (5115 Record)?

This field is applicable to retrofit offices converting to 5E2 through 5E6 and all large terminal growth offices.

The PBX DID conversion has been developed to reassign PBX DID hundreds groups that were assigned on LINE forms prior to the introduction of the HGRPAS form. Conversions requested will be automatically

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executed at the time of the first crosscheck run. A report listing all the hundred groups converted will be generated by the conversion process. This DID converted report can be accessed using the "list" command.

Software Release: 5E6 and earlier
Required Field.
Valid Entries: Y, N

2.5 HUNDREDS GROUP SM ROUTING ASSIGNMENT

Description: Enter the option for preserving Routing Module assignments indicated on HGRPAS forms.

This field is directly related to the SAVE field on the HGRPAS form. The HGRPAS form allows the assignment of a Circuit Routing Module and/or a Packet Routing Module to a specific Hundreds Group. If none of the Hundreds Groups, or only a subset of the Hundreds Groups within the 5ESS Switch (as opposed to all the Hundreds Groups), are assigned a Circuit Routing Module and/or a Packet Routing Module, the 5ODA software will apply a series of algorithms to assign a Circuit Routing Module and/or a Packet Routing Module to those Hundreds Groups without assignment.

The series of algorithms assign a Routing Module based on the physical terminations of Telephone Numbers within the Hundreds Group. The first choice for a Routing Module would be the SM in which the most TNs, within the Hundreds Group, physically terminate. This would optimize call processing performance and reduce memory usage.

If all the Telephone Numbers within a Hundreds Group physically terminated on RSMs, ORMs, or TRMs within the same Remote Site, one of the RSMs, ORMs, or TRMs would be the choice for the Routing Module.

The SAVE field on the HGRPAS form is used to indicate if the Circuit Routing Module, or Packet Routing Module, or both, assigned to a particular Hundreds Group, are to be saved for an office undergoing a Retrofit or a Large Terminal Growth.

Software Release: 5E5 and later
Valid Entries:

Valid HUNDREDS GROUP SM ROUTING ASSIGNMENT Entries

Entry	Definition
REALLOCATE or R	5ODA will apply the series of algorithms to every Hundreds Group in the 5ESS Switch. 5ODA will completely ignore the existing Routing Module assignments.
PARTIAL or P	ODA will apply the series of algorithms only to those Hundreds Groups associated with either no entry, or an entry of "NONE" in the SAVE field on HGRPAS forms. If the SAVE field has an entry of "CKT", "PKT", or "BOTH", that existing assignment will be preserved.
PRESERVE or S	5ODA will not apply the series of algorithms to any Hundreds Groups in the 5ESS Switch regardless of the SAVE entries on HGRPAS forms. Every existing assignment will be preserved.

Data Rules:

This field must be entered for an office undergoing a Retrofit or a Large Terminal Growth, but must not be entered for a new office.

If "PARTIAL" is entered in this field, at least one HGRPAS form must be submitted where at least one SAVE field has a value of "CKT", "PKT", or "BOTH".

2.6 MULTIWAY 3WAY CONSTRUCTED FEATURE

Description: Enter the name of a constructed feature with MULTIWAY CONTROL equal to "3WAY" that the office plans to replace with the standardized /MWCTIA4 feature (MULTIWAY CONTROL equals "3WAY" on the MWFD form (5602-1/2 Record)). Since this is a required field, if a feature name does not

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need to be entered, enter the word "NONE".

The /MWCTIA4 preconstructed feature on the MWFD form has existed in two ways, with MULTIWAY CONTROL equal to "3WAY" or "AUTO3WAY". For retrofits, if an office has previously come in with /MWCTIA4 MULTIWAY CONTROL equal to "3WAY", was forced to change to "AUTO3WAY" and built a new constructed feature with "3WAY" to maintain functionality, this field will help the office to convert that new constructed feature back to the standardized /MWCTIA4. A new preconstructed feature /MWCTIA5 is identical to /MWCTIA4, except that MULTIWAY CONTROL is equal to "AUTO3WAY".

Two crosschecks will be run using this new field. The first crosscheck will compare the constructed feature to /MWCTIA4 and specify any discrepancies so that office is assured of maintaining functionality following the change. The second crosscheck will identify all assignments of the constructed feature in the database. Using the output from this crosscheck, the office (or the ODA Project Consultants, at the office's request) can manually change some or all of the assignments of the constructed feature to /MWCTIA4.

Software Release: 5E7 and later
Required Field.
Valid Entries: Any valid constructed feature name (not beginning with a /) or NONE

2.7 ASP DEFAULT ROUTE INDEX

Description: Enter the default ASP route index for 3/6/10-N11 trigger definitions in digit analysis transalations. When an ASP trigger is assigned on an IDDD, LDIT, MLDIT or RDIT form and no OFFICE CODE or ROUTE INDEX is entered, the entry for this ASP DEFAULT ROUTE INDEX field is used as the ROUTE INDEX.

This ROUTE INDEX will then be used when an attempt is made to route to the DN specified as the 3/6/10-N11 trigger, either if the ASP trigger is deactivated or if the SCP routes the call back to the DN after the query.

Software Release: 5E8 and later
Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

2.8 HAVE THE DIALING PLANS FOR ASP USERS BEEN REVIEWED?

Description: Have you reviewed your dialing plans for ASP users?

Software Release: 5E9(1)
Required Field.
Default: N
Valid Entries: Y, N

---

odaopt 5ESS Switch _
(5523) OFFICE DATA ADMINISTRATION
ODA OPTIONS

*1. KEY 0

2. HUNDREDS GROUP SM ROUTING ASSIGNMENT _____
#3. MULTIWAY 3WAY CONSTRUCTED FEATURE _____

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4. ASP DEFAULT ROUTE INDEX ____
5. HAVE THE DIALING PLANS FOR ASP
USERS BEEN REVIEWED? N

Figure 1 SAMPLE ODAOPT FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 5Y: 5525 RECORD
NETWORK CLOCK 2 REFERENCE FORM - NCLKREF

1. GENERAL

The 5525 Record is available with 5E2 and later Software Releases and is used to define the exterior references for the NCLK2 (Network Clock Model 2). This form is required for 24-channel exterior references for NCLK2 (clock type of "24CHAN2"on the EQCORE input form).

1.1 Recent Change View

The corresponding Recent Change view for this form is 17.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * REFERENCE

Description: Enter the external reference number.

- ***NOTE:*** REFERENCE number in a CM2 (Communication Module Model 2) office can not be reused. Each value must be unique. Also, at most, 8 of these forms can be entered for CM3 (Communication Module Model 3).

Required Field.
Valid Entries: 1 - 8

Data Rules:

If a 24-channel NCLK2 is used (CLOCK TYPE of "24CHAN2" on the EQCORE input form), then only reference values 1 - 4 can be used with the following restrictions:

For 5E14 and earlier:

- A REFERENCE TYPE of "ANALOG" can be used for references 1 and 3.
- A REFERENCE TYPE of "24CHAN" can be used on any reference 1 - 4.

For 5E15 and later:

The EQCORE form (5701 Record) must be inserted before this form can be inserted/updated.

When this form exists with a REFERENCE value of 1 or 0, and a REFERENCE TYPE of "ANALOG", and CLOCK TYPE on the EQCORE form is "NCLK3", then this same REFERENCE value with REFERENCE TYPE of "ANALOG10" must not exist. Either one or the other of these NCLKREF forms with the same REFERENCE value can exist, but not both.

2.3 *REFERENCE TYPE

Description: Enter the reference type used.

Valid REFERENCE TYPE Entries

Entry	Definition
30CHAN	30-channel reference

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64K	64 Kilobytes reference
24CHAN	24-channel reference
ANALOG	Analog reference (2.048mHz)
ANALOG10	Analog reference (10mHz)

Data Rules:

For 5E15 and later:

When REFERENCE TYPE is "ANALOG" or "ANALOG10" , REFERENCE FORMAT must not be entered.

When REFERENCE TYPE is "24CHAN", the REFERENCE FORMAT must be "D4B8", "DAWOZ", "D4WZC", "FEB8", "FEWOZ", or "FEWZC".

When REFERENCE TYPE is "64K", REFERENCE FORMAT must be "AMI64K".

When REFERENCE TYPE is "30CHAN", REFERENCE FORMAT must be "AMI" or "HDB3".

When REFERENCE TYPE is "ANALOG", "ANALOG10", or "64K" and CLOCK TYPE is "NCLK3", then REFERENCE must be 1 or 2.

2.4 #CLOCK TYPE

Description: This field is used to indicate the type of Network Clock being used.
Valid Entries:

Valid CLOCK TYPE Entries

Entry	Definition
24CHAN2	24-channel DS1 format T1 trunk
NCLK3	NCLK3 NetworkClock
SANC3	NCLK3 Stand-alone
STDALNE2	NCLK2 Stand-alone

Data Rules:

For 5E15 and later:

When an office is equipped with CM3, CLOCK TYPE must be "NCLK3" or "SANC3".

When an office is equipped with CM2, CLOCK TYPE must be "24CHAN2" or "STDALNE2".

When CLOCK TYPE is "24CHAN2", REFERENCE TYPE must be "ANALOG" or "24CHAN".

When CLOCK TYPE is "24CHAN2", and REFERENCE TYPE is "24CHAN", REFERENCE can only be 1 through 3.

When CLOCK TYPE is "24CHAN2", only REFERENCE 1 can have a REFERENCE TYPE of "24CHAN".

When CLOCK TYPE is "STDALNE2", REFERENCE TYPE must be "ANALOG" or "24CHAN".

When CLOCK TYPE is "STDALNE2", EQUIPMENT STATUS must not be "O".

When CLOCK TYPE is "NCLK3", only REFERENCE 1 or 2 can have a REFERENCE TYPE of "ANALOG", "ANALOG10", or "64K".

When CLOCK TYPE is "SANC3", EQUIPMENT STATUS must not be "O".

2.5 #PRIORITY

Description: Enter the priority of the external reference. The primary reference has a value of 1, the

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second priority reference has a value of 2, and so forth until all references have been assigned.
Valid Entries: 1 - 8

2.6 EQUIPMENT STATUS

Description: Enter the equipment status. For new offices and units destined for factory testing, operational is the only allowed value. During off-line ODA database retrofits, the other values are valid.

Valid EQUIPMENT STATUS Entries

Entry	Definition
O	Operational
G	Growth
U	Unequipped

Data Rules:

For 5E15 and later:.

When EQUIPMENT STATUS is "O", INTERRUPT STATUS must be allowed.

When EQUIPMENT STATUS is "U", INTERRUPT STATUS must be inhibited.

2.7 INTERRUPT STATUS

Description: Enter the Interrupt Status.

Required Field.
Default: ALLOW
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Definition
ALLOW	Allow interrupts
INHIBIT	Inhibit interrupts

Data Rules:

If EQUIPMENT STATUS is "O", INTERRUPT STATUS must be "ALLOW". If EQUIPMENT STATUS IS "U", INTERRUPT STATUS must be "INHIBIT".

2.8 REFERENCE FORMAT

Description: Enter the format of the reference.
Default: D4WOZ
Valid Entries:

Valid REFERENCE FORMAT Entries

Entry	Definition
AMI64K	64K-composite signal AMI.
D4WOZ	D4 without Zero Code Suppression
D4B8	D4 with Bipolar 8 Zeros Suppression
D4WZC	D4 with Zero Code Suppression
FEWOZ	Extended Framing Format without Zero Code Suppression
FEB8	Extended Framing Format with Bipolar 8 Zeros Suppression
FEWZC	Extended Framing Format with Zero Code Suppression
AMI	30-channel Alternate Mark Inversion
HDB3	30-channel High Density Bipolar with 3 Zeros Substitution

Data Rules:

If REFERENCE TYPE is "24CHAN", valid entries are "D4WOZ", "D4B8", "D4WZC", "FEWOZ", "FEB8", and "FEWZC".

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```
nclkref                  5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5525)                NETWORK CLOCK 2 REFERENCE

*1. REFERENCE _

#2. PRIORITY      _
 3. EQUIPMENT STATUS O
 4. INTERRUPT STATUS ALLOW
#5. REFERENCE TYPE   ______
 6. REFERENCE FORMAT D4WOZ
```

Figure 1 SAMPLE NCLKREF FORM 5E5 - 5E14 SOFTWARE RELEASES

```
nclkref                  5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5525)                NETWORK CLOCK 2/3 REFERENCE

*1. REFERENCE     _
*2. REFERENCE TYPE ________
#3. CLOCK TYPE    ________

#4. PRIORITY      _
 5. EQUIPMENT STATUS O
 6. INTERRUPT STATUS ALLOW
 7. REFERENCE FORMAT ______
```

Figure 2 SAMPLE NCLKREF FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5AC: 5529 RECORD
ANNOUNCEMENT APPLICATION SM LIST FORM - ANNAPL

1. GENERAL

The 5529 Record is available with 5E4(2) and later Software Releases.

This record is used to enter the SMs (Switching Modules) where the DSU2-RAFs (Digital Service Unit Model 2 - Recorded Announcement Function) reside as well as the type of application announcements supported by that DSU2-RAF.

NOTE: The specific APPLICATION must be entered before Standard Input Data is provided by ODA for the associated ANNHD form (5531 Record), ANNTR form (5533 Record), and/or ANNDG form (5532 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control group Number and the Office Name on each record.

2.2 * APPLICATION

Description: Enter the type of application which corresponds to an SM.

An entry of "LASS" is necessary to use the Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback) Secured Feature Announcements. Refer to Division 2, Section 4A for details.

Required Field.

Valid APPLICATION Entries

Entry	Definition
2LEVEL or 2	Software Release: 5E7 and later. 2-Level COT and AC (Customer Originated Trace and Automatic Callback).
ACSR or A	Software Release: 5E5 and later. Automatic Customer Station Rearrangement.
ASP or AS	Software Release: 5E8 and later. ASP (Advanced Services Platform)
L[2 - 7]	Software Release: 5E9(1) and later. The OSPS Non-English Application type used to map the English phrase ID to the non-English phrase ID. L2 - L7 are defined on the LANGTBL (5483-2 Record) and correspond to the non-English language designated by the DISPLAY ID field.
LASS or L	Software Release: 5E6 and later. LASS (Local Area Signaling Services) Selective Features Screen List Editing.
NPA_SP	Software Release: 5E13 and later. Numbering Plan Area Split Announcement.
OSPSDA or D	Software Release: 5E4(2) and later. OSPS Directory Assistance.
OSPSTA or T	Software Release: 5E4(2) and later. OSPS Toll and Assistance.
RAS or R	Software Release: 5E5 and later. Remote Access Service.
VARRAF	Software Release: 5E13 and later. Variant Recorded Announcements Function

Data Rules:

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For 5E8 and later, if at least one ANNAPL form has an APPLICATION that is not
- "OSPSDA"
- "OSPSTA"
- "L2 - 6"

then at least one EQIM form must have OSPS PM set to "N".

For 5E11 and later, when APPLICATION does not equal "2LEVEL", "ASP", "LASS", "TACCT", (for 5E13 and later) "NPA_SP", or "VARRAF", then at least one ANNHD form (5531 Record), ANNDG form (5532 Record), and the ANNTR form (5533 Record) must be submitted for the same announcement application.

For 5E13 and later, when APPLICATION is "2LEVEL", "LASS", or "NPA_SP, at least one ANNHD form (5531 Record) and ANNDG form (5532 Record) must be submitted for that APPLICATION.

WARNING: For 5E13 and later, when APPLICATION is "OSPSDA", "OSPSTA", "RAS", "ACSR", "LASS", "2LEVEL", "ASP", or "NPA_SP", there must be one TKGRP form (5202 Record) with a corresponding SVC GRP value listed in the following table.

APPLICATION ENTRY	TKGRP FORM SVC GRP ENTRY
OSPSDA	DA
OSPSTA	ACCS or COIN
RAS	RAS
ACSR	ACSR or RAS
LASS	RAS
2LEVEL	RAS
ASP	ASP
NPA_SP	RAS

2LEVEL - For 5E7 and later, if the APPLICATION is "2LEVEL", then at least one associated ANNHD form and one ANNDG form must exist.

ACSR / RAS - For 5E5 and later, if the APPLICATION is "ACSR" or "RAS", then at least one associated ANNHD form (5531 Record), ANNTR form (5533 Record), and ANNDG form (5532 Record) must be entered.

ASP
For 5E6 and later, if the APPLICATION is "ASP", then at least one associated ANNHD form (5531 Record) must exist. Associated ANNTR forms (5533 Record) may exist. No associated ANNDG forms (5532 Record) will exist.

LASS
For 5E6 and later, if the APPLICATION is "LASS", then at least one associated ANNHD form and one ANNDG form must exist.

OSPSDA / OSPSTA
For 5E7 and later, if APPLICATION is "OSPSDA" or "OSPSTA", then OSPS PSM must be "Y" on at least one EQIM form.

VARRAF
For 5E13 and later, when APPLICATION is "VARRAF" at least one ANNHD form (5531 Record) must be submitted for the same announcement application.

2.3 LOG UPDATE

Description: This field is used only by Recent Change.

Software Release: 5E6 and later

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2.4 SWITCHING MODULES

Description: Enter the 3-digit SMs.
Valid Entries: 1 - 192

Data Rules:

The list of SMs must contain at least one entry. Each SM in the list must be unique. Up to 25 SMs may be used per application.

For 5E8 and later, if a RAF on an SM is defined on the EQRA form, it must be assigned to an application on an ANNAPL form. Also, an entry in this field must have a RAF on that SM defined on an EQRA form.

---

annapl 5ESS Switch _
(5529) OFFICE DATA ADMINISTRATION
ANNOUNCEMENT APPLICATION SM LIST

*1. APPLICATION OSPSDA LOG UPDATE

2. SWITCHING MODULES

row	SM	row	SM	row	SM	row	SM	row	SM
1	036	6	___	11	___	16	___	21	___
2	112	7	___	12	___	17	___	22	___
3	118	8	___	13	___	18	___	23	___
4	___	9	___	14	___	19	___	24	___
5	___	10	___	15	___	20	___	25	___

Figure 1 SAMPLE ANNAPL FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 5AD: 5530 RECORD
MSU/MMSU SCAN POINT ASSIGNMENT FORM - MSUSP

1. GENERAL

The 5530 Record is applicable to 5E2 and later Software Releases, and is used to define the MSU/MMSU (Metallic Service Unit/Modular Metallic Service Unit) Scan Points.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MSU/MMSU SCAN POINT

Description: Enter the MSU/MMSU Scan Point Number. Refer to Division 8, Section 1 for procedures to obtain these assignments.

This is a 9-digit number in the following format.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-48 (CM1)
			1-192 (CM2)
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-31

Required Field.
Valid Entries: 9 digits

Data Rules:

The value must be unique within the 5ESS Switch.

The pack must be defined on an EQMSP or an EQMMSP form (5750 Record) with TYPE set to "SCAN".

2.3 SCAN POINT TYPE

Description: Enter the Scan Point Type.

Required Field.

Valid SCAN POINT TYPE Entries

Entry	Definition
BDOCPWR	Broadcast Dynamic Overload Control Power
MISC	Miscellaneous Alarm
MSUPWR	MSU Power
NMFPWR	Network Management Frame Power
R13A	13A Recorded Announcement and 14A Recorded Announcement

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Data Rules:

For 5E3 and later, if this field is "R13A", then "MJOP" or "MNOP" are the only valid entries for NORMAL STATE.

2.4 ACTION

Description: Enter the Action to be taken by the 5ESS Switch during a failure.

Required Field.

Valid ACTION Entries

Entry	Definition
IGN	Ignore; no action of any type is to be taken.
REP	Report a failure. A message will be printed at the Master Control Center.
CON	Condition. When "CON" is entered, the associated line or trunk will be taken out of service. Under normal conditions, only R13A scan points may require a value of "CON" to allow conditioning of 13A and 14A announcement unit ports.

2.5 NORMAL STATE

Description: Enter the type of facility assigned to this alarm.

Required Field.

Valid NORMAL STATE Entries

Entry	Definition
MJOP	Major Alarm. Scan Point normally open (unsaturated).
MJCL	Major Alarm. Scan Point normally closed (saturated).
MNOP	Minor Alarm. Scan Point normally open (unsaturated).
MNCL	Minor Alarm. Scan Point normally closed (saturated).
MAJGA	Major Group Alerting circuit. This feature provides a means of alerting a group or several groups of subscribers for the purpose of disseminating an alert message.
MINGA	Minor Group Alerting circuit.
ANCB	Analog channel bank.
DTCB	Digital channel bank.
PG	Pair gain.
SLC	Subscriber line concentrator.

2.6 IN USE

Description: Is this Scan Point operational?
Valid Entries: Y, N

Data Rules:

For 5E8 and later, this field can be entered only for SCAN POINT TYPEs "MISC" and "R13A"; for all other types it must be blank.

2.7 DUPLEX SCAN POINT

Description: Scan Points may be duplicated for certain Circuit Types. If this is a Duplex Scan Point, enter the MSU/MMSU Duplex Scan Point Number. If it is a Simplex Scan Point, leave this field blank.

Refer to Division 8, Section 1 for procedures to obtain these assignments.

The field consists of a 9-digit number in the following format.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-48
			(CM1)
			1-192

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			(CM2)
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-31

Valid Entries: 9 digits

Data Rules:

If a value is entered, the Service Group (fifth digit) must not be the same as the Service Group (fifth digit) in the MSU/MMSU SCAN POINT value.

If a value is entered, the SM (first three digits) must be the same as the SM (first three digits) in the MSU/MMSU SCAN POINT value.

2.8 SIDE

Description: Enter the Scan Point side.
Valid Entries: 0 or 1

Data Rules:

If the SCAN POINT TYPE is "BDOCPWR", "MSUPWR" OR "NMFPWR", a value must be entered in this field; otherwise leave this field blank.

2.9 LABEL

Description: Enter the name of the alarm as it should appear on the MCC (Master Control Center).
Valid Entries: 5E9(2) and earlier: 11 characters
- 5E10 and later: 25 characters

Data Rules:

A value must be entered if the SCAN POINT TYPE is "R13A" or "MISC"; otherwise leave this field blank.

PORT CONDITIONING

The following fields (Section 2.10 - Section 2.14) are used to describe the port which the scan point conditions. These fields are used only when ACTION is equal to "CON".

2.10 TN

Description: Enter the Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The TN entered here must be defined on a LINE form (5109 Record). If a value is entered in this field, then MLHG/TERM and TGN/MEMB must be blank.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the MSUSP form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or

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the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.11 MLHG

Description: Enter the Multi-Line Hunt Group Number.
Valid Entries: For 5E14 and earlier: 1 - 2000

For 5E15 and later: Blank or 1 - 8191

Data Rules:

The MLHG/TERM entered must be defined on an MLHLN form (5111 Record). If a value is entered in this field, then the TERM field must also be entered and TN, TGN and MEMB must be blank.

2.12 TERM

Description: Enter the MLHG Terminal Number.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

2.13 TGN

Description: Enter the Trunk Group Number.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

A value is allowed for TGN to describe the port, which the scan point conditions, only if ACTION is equal to "CON". If a value is entered in this field, then the MEMB field must also be entered and the TN, MLHG and TERM must be blank. The TGN/MEMB entered must be defined on a TRUNK form (5204 Record).

2.14 MEMB

Description: Enter each Member Number in the Trunk Group.
Valid Entries: 0 - 1951

```
msusp                    5ESS Switch                _
(5530)              OFFICE DATA ADMINISTRATION
                 MSU/MMSU SCAN POINT ASSIGNMENT



 * 1. MSU/MMSU SCAN POINT 005011622
   2. SCAN POINT TYPE     R13A
   3. ACTION              CON
   4. NORMAL STATE        MJOP
   5. IN USE              Y
   6. DUPLEX SCAN POINT   _________
   7. SIDE                _
   8. LABEL               PART DAIL


   PORT CONDITIONING
```

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```
 9. TN _______     10. MLHG ____     12. TGN  0004
                11. TERM ____     13. MEMB 0001
```

Figure 1 SAMPLE MSUSP FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
msusp                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5530)              MSU/MMSU SCAN POINT ASSIGNMENT

*1. MSU/MMSU SCAN POINT _________              PORT CONDITIONING
#2. SCAN POINT TYPE    _______              9. TN  __________
#3. ACTION             ___                 10. MLHG ____
#4. NORMAL STATE       _____               11. TERM ____
 5. IN USE             _                   12. TGN  ____
 6. DUPLEX SCAN POINT  _________           13. MEMB ____
 7. SIDE               _
 8. LABEL              _____________________________
```

Figure 2 SAMPLE MSUSP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5AE: 5531 RECORD
ANNOUNCEMENT HEADER PHRASE LIST FORM - ANNHD

1. GENERAL

The 5531 Record is available with 5E3 and later Software Releases. This record lists the phrases, in the required order, to be associated with an announcement header. An announcement header enables a group of phrases (comprising an announcement) to be accessed with a "header identification number."

The header identification is mapped to a set of phrase identification commands which specify either to concatenate a phrase identification or to insert a digit string at that point in the announcement. For example, a typical announcement header is "The number is . . . ," followed by a directory number given twice in succession. The "language" portion is a phrase or phrases, which are ordered in the PHRASE list on this form. Each PHRASE is defined on a PHRASE form (5534 Record). The pattern for the Directory Number is defined in an ANNDG form (5532 Record).

NOTE: The specific APPLICATION must be entered on the associated ANNAPL form (5529 Record) before the default input data will be provided for this form.

1.1 Default Data

For 5E5 and later Software Releases, a standard set of default data is provided by the ODA system. Normally, no data need be entered, with the exception that customers using customized packs may need to enter data manually. They should consult customer support.

1.2 Limited 2-Level COT/AC Secured Feature

To use the Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback) Secured Feature Announcements, an ANNHD form with APPLICATION equal to "LASS" must exist or be entered. In addition, new HEADER ID values of 249 through 255 must be entered by the office through RC or ODA, or via an SU/BWM script (See Figure 2). Refer to Division 2, Section 4A for details.

1.3 Recent Change View

The corresponding Recent Change view for this form is 8.61.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * HEADER ID

Description: Enter a Header Identification number.
Valid Entries:
- For 5E3 - 5E9(1): 1 - 255
- For 5E9(2) and later: 1 - 137,071

Data Rules:

For 5E5 and later, Header IDs for the application "OSPSTA" that are not included in the standard input data provided for OSPS TA offices should be manually entered. Customers using customized packets should consult customer support.

For RAF services, if the HEADER ID is for an OSPS Customized Announcement Circuit Pack, the MICRO

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CODE field for the Customized pack should be entered on the EQRAP form (5822 Record) with an entry of "5D155xyy" (where x is alphabetic and yy is numeric), and the corresponding APPLICATION entry on the EQRAP form should be equal to "OSPS-TA". Also, the BRAND PHRASE field on the OSPSOPT Form (5424 Record) must be set to "Y".

2.3 * APPLICATION

Description: Enter the type of application which corresponds to the header announcement.

Valid APPLICATION Entries

Entry	Definition
2LEVEL or 2	Software Release: 5E7 and later. 2-Level COT and AC (Customer Originated Trace and Automatic Callback).
ACSR or AC	Software Release: 5E6 and later. Automatic Customer Station Rearrangement.
ASP or AS	Software Release: 5E8 and later. ASP (Advanced Services Platform)
L[2 - 7]	Software Release: 5E9(1) and later. The OSPS Non-English Application type used to map the English phrase ID to the non-English phrase ID. L2 - L7 are defined on the LANGTBL form (5483-2 Record) and correspond to the non-English language designated by the DISPLAY ID field.
LASS or LA	Software Release: 5E6 and later. LASS Selective Features Screen List Editing. Also used by Limited 2-Level COT/AC.
NPA_SP	Software Release: 5E13 and later. Numbering Plan Area Split Announcement.
OSPSDA or D	Software Release: 5E3 and later. OSPS Directory Assistance.
OSPSTA or T	Software Release: 5E4(2) and later. OSPS Toll and Assistance.
RAS or R	Software Release: 5E5 and later. Remote Access Service.
TACCT	Software Release: 5E11 and later. TDX (Toll Digital Exchange) account code.
VARRAF	Software Release: 5E13 and later. Variant Recorded Announcements Function

Data Rules:

2LEVEL:
For 5E7 and later, if the APPLICATION is "2LEVEL", then at least one associated ANNAPL form and one ANNDG form must exist.

ACSR or RAS:
For 5E5 and later, if the APPLICATION is "ACSR" or "RAS", an associated ANNAPL form (5529 Record), ANNTR form, and ANNDG form must be entered.

ASP:
For 5E6 and later, if the APPLICATION is "ASP", then an associated ANNAPL form must exist and an associated ANNTR forms may exist. No associated ANNDG forms will exist. If the APPLICATION is "LASS", then an associated ANNAPL form, and an ANNDG form must exist.

NPA_SP:
For 5E13 and later, when APPLICATION is "NPA_SP", the HEADER ID must be "1".

OSPSTA - If an announcement HEADER ID of 39 or 40 is entered with APPLICATION equal to "OSPSTA", then the BRAND PHRASE field on the OSPSOPT form (5424 Record) must be set to "Y". In addition, for 5E9(1) and later, SFID 15 on the SFSYS form (5713-1 Record) is set to "Y".

For 5E4(2) and later, if the APPLICATION is "OSPSDA" or "OSPSTA", then an associated ANNDG form (5532 Record), ANNTR form (5533 Record) and an ANNAPL form (5529 Record) must exist.

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For 5E9(1) and later, if APPLICATION is "OSPSTA" and a phrase value in the PHRASE LIST is in the range

- 14000 - 14999, the following must be true:
  - All SMs listed on the ANNAPL form with an APPLICATION of "OSPSTA" must have at least one associated EQRAP form (the SM values match).
  - This associated EQRAP form must have an APPLICATION of "OSPS-TA" and must have

    for 5E9(1) only, a MICROCODE with the first 7 characters equal to 5D155A1 entered on PACK 2 or PACK 3.

    or

    for 5E9(2) and later, a MICROCODE of 5D155A10 entered on PACK 2 or PACK 3.

    For 5E10 and later, this does not apply to SAS.

- 290 through 312, the following must be true:
  - All SMs listed on the ANNAPL form with an APPLICATION of "OSPSTA" must have at least one associated EQRAP form (the SM values match).
  - This associated EQRAP form must have an APPLICATION of "OSPS-TA" and must have

    for 5E9(1) only, a MICROCODE with the first 7 characters equal to 5D172A2 or 5D172A3 entered on PACK 2 or PACK 3

    or

    for 5E9(2) and later, a MICROCODE of 5D172A20 or 5D172A30 entered on PACK 2 or PACK 3.

    For 5E10 and later, this does not apply to SAS.

- 256 through 289, the following must be true:
  - All SMs listed on the ANNAPL form with an APPLICATION of "OSPSTA" must have at least one associated EQRAP form (the SM values match).
  - This associated EQRAP form must have an APPLICATION of "OSPS-TA" and for 5E9(1) only, must have a MICROCODE with the first 7 characters equal to 5D172A1, 5E172A2, or 5D172A3 entered on PACK 2 or PACK 3.

    or

    for 5E9(2) and later must have a MICROCODE of 5D172A10, 5D172A20 or 5D172A30 entered on PACK 2 or PACK 3.

    For 5E10 and later, this does not apply to SAS.

- 313 through 324, the following must be true:
  - All SMs listed on the ANNAPL form with an APPLICATION of "OSPSTA" must have at least one associated EQRAP form (the SM values match).
  - This associated EQRAP form must have an APPLICATION of "OSPS-TA" and must have

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for 5E9(1) only a MICROCODE with the first seven characters equal to 5D172A3 entered on PACK 2 or PACK 3.

or

for 5E9(2) and later, a MICROCODE of 5D172A30 entered on PACK 2 or PACK 3.

For 5E10 and later, this does not apply to SAS.

For 5E9(1) and later, if APPLICATION is "OSPSTA" and HEADER ID is 171, then:

- the PHRASE ID list must contain PHRASE ID 94 only once.
- the PHRASE ID preceding PHRASE ID 94 must be 6, 29, 34, or 39 - 46.
- if the PHRASE ID preceding PHRASE ID 94 is 6, then the phrase preceding PHRASE ID 6 must be in the range 39 - 45.
- if OSPS TA is set to "Y" on the OSPSOPT form, then "OSPSTA" announcement header 171 should have a disconnect warning time interval (specified by the PHRASE ID value) which is equal to the (CAS CARD LIMIT) WARN TIME on the OSPSOPT form. This means that the PHRASE ID value which precedes PHRASE ID 94 (or the first and second PHRASE ID values preceding PHRASE ID 94) must be a number which represents a time value equal to that of WARN TIME.

The actual time value in seconds can be found using the PHRASE ID in the table below.

PHRASE ID Values

FIRST PRECEDING PHRASE ID	SECOND PRECEDING PHRASE ID	TIME VALUE
29		ten
34		fifteen
39		twenty
40		thirty
41		forty
42		fifty
43		sixty
44		seventy
45		eighty
46		ninety
6	39	twenty-five
6	40	thirty-five
6	41	forty-five
6	42	fifty-five
6	43	sixty-five
6	44	seventy-five
6	45	eighty-five

VARRAF:
For 5E13 or later:

- when APPLICATION is "VARRAF", PHRASE_LIST.PHR must be 32768 - 33407.
- when APPLICATION is "VARRAF", PHRASE_LIST for PHRASE ID must be defined on the PHRASE form (5534 Record) with APPLICATION set to "VARRAF".

2.4 DURATION

Description: The DURATION field specifies the duration of the announcement in seconds. This is a read

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only, verify field on Recent Change view 8.61. It cannot be entered on the ODA form or the Recent Change view. The values in this field are in the range of 0 - 7200 seconds.

The calculated duration of the commands/phrases on the ANNHD input form cannot exceed 7200 seconds. The duration is calculated from the PHRASE input form records.

2.5 PHRASES

Enter the phrase numbers for each phrase header.

Valid PHRASE Entries

Entry	Description
0	Software Release: 5E3 - 5E9(1). Defines end-of-phrase list.
1 - 46	Digit string-related phrase IDs (refer to the PHRASE form).
47 - 16383	Application-defined phrase IDs.
16385	Command - insert a digit string.
16386	Command - repeat the previous digit string.
16387	Software Release: 5E7 and later. Command - date of last incoming call.
16388	Software Release: 5E7 and later. Command - time of last incoming call.
16389	Software Release: 5E7 and later. Command - number of dollars and cents.
16500	Software Release: 5E4(2) and later. Command - insert a Credit digit string.
16501	Software Release: 5E4(2) and later. Command - insert a Charge Due digit string.
16502	Software Release: 5E4(2) and later. Command - insert a Call Duration digit string.
16600 - 65530	Software Release: 5E9(2) and later. Application-defined phrase IDs.

Data Rules:
For 5E3 - 5E9(1), at least two entries in this list are required. The last (and only the last) phrase number must be 0. For 5E9(1) and earlier a maximum of 50 phrases may be used. For 5E9(2) a maximum of 67 phrases may be used, and at least one phrase is required.

Each command/phrase defined on this form for a HEADER ID must be defined in the PHRASE ID field on a PHRASE form.

APPLICATION	HEADER ID	PHRASES							SOFTWARE RELEASE
2LEVEL	001	00104	00105	00107	00108	00111	00112	00114	5E7 and later
		00027	00116	00098	00000				
2LEVEL	002	00104	00105	00107	00108	00109	16387	16388	5E7 and later
		00111	00112	00114	00115	00027	00116	00098	
		00000							
2LEVEL	003	00104	00105	00177	16385	00028	00027	16386	5E7 and later
		00111	00112	00114	00115	00027	00116	00098	
		00000							
2LEVEL	004	00104	00105	00177	16385	00027	00028	16386	5E7 and later
		00109	16387	16388	00111	00112	00114	00115	
		00027	00116	00098	00000				
2LEVEL	005	00104	00105	00177	00171	16385	00028	00027	5E7 and later
		00111	00112	00114	00115	00027	00116	00098	
2LEVEL	006	00104	00105	00177	00171	16385	00028	00027	5E7 and later
		16386	00109	16387	16388	00111	00112	00114	
		00115	00116	00098	00000				
2LEVEL	007	00119	00120	00115	00027	00116	00098	00000	5E7 and later
2LEVEL	008	00104	00122	00124	16389	00131	00114	00115	5E7 and later
		00116	00098	00000					
2LEVEL	009	00104	00122	00117	00131	00114	00115	00027	
		00098	00000						
2LEVEL	010	00132	00115	00027	00116	00098	00000		5E7 and later
2LEVEL	011	00065	00118	00168	00028	00028	00028	00000	5E7 and later

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ACSR	001	00282	16385	00000					5E5 and later
ACSR	003	00257	00261	00000					5E5 and later
ACSR	004	00280	00258	00000					5E5 and later
ACSR	005	00263	00256	00000					5E5 and later
ACSR	006	00273	16385	00000					5E5 and later
ACSR	008	00268	00256	00000					5E5 and later
ACSR	009	00065	00277	00000					5E5 and later
ACSR	012	00070	16385	00000					5E5 and later
ACSR	015	00276	00000						5E5 and later
ACSR	017	00065	00278	00000					5E5 and later
ACSR	018	00065	00283	00258	00000				5E5 and later
ACSR	020	00274	16385	00000					5E5 and later
ACSR	021	00275	16385	00000					5E5 and later
ACSR	023	00257	00260	00000					5E5 and later
ACSR	025	00269	00000						5E5 and later
ACSR	026	00281	00257	00266	00000				5E5 and later
ACSR	027	00281	00257	00266	00284	16385	00000		5E5 and later
ACSR	028	00272	16385	00000					5E5 and later
ACSR	029	00287	16385	00000					5E5 and later
ACSR	034	00280	00393	00395	00000				5E7 and later
ACSR	036	00396	00397	00256	00000				5E7 and later
ACSR	037	00398	16385	00399	00000				5E7 and later
ACSR	038	00065	00398	16385	00400	00000			5E7 and later
ACSR	041	00403	16385	00404	00000				5E7 and later
ACSR	042	00065	00405	00000					5E7 and later
ACSR	043	00065	00406	00000					5E7 and later
ACSR	045	00281	00257	00408	00000				5E7 and later
LASS	001	00303	00028	00323	00000				5E6 and later
LASS	002	00291	00028	00028	00028	00324	00326	00291	5E6 and later
LASS	003	00324	00326	00291	00000				5E6 and later
LASS	004	00383	00289	00312	00296	16385	00290	00000	5E6 and later
LASS	005	00383	00289	00312	00384	00310	00290	00000	5E6 and later
LASS	006	00383	00289	00312	16385	00290	00000		5E6 and later
LASS	007	00316	16385	00328	00000				5E6 and later
LASS	008	00303	00316	00329	00000				5E6 and later
LASS	009	00316	16385	00328	00000				5E6 and later
LASS	010	00316	16385	00328	00000				5E6 and later
LASS	011	00330	00313	00290	00000				5E6 and later
LASS	012	00331	00304	00337	16385	00000			5E6 and later
LASS	013	00331	00304	00336	00000				*5E6 and later
LASS	014	00331	00305	00000					*5E6 and later
LASS	015	00331	00304	00000					*5E6 and later
LASS	016	00336	00028	00000					*5E6 and later
LASS	017	00028	00028	00028	00028	00340	00290	00000	5E6 and later
LASS	018	00306	00308	00000					5E6 and later
LASS	019	00303	00341	00342	00313	00290	00000		5E6 and later
LASS	020	00295	00344	00314	00290	00000			5E6 and later
LASS	021	00295	00344	00314	00290	00000			5E6 and later
LASS	022	00345	00314	00290	00000				5E6 and later
LASS	023	00303	00306	00308	00313	00290	00000		5E6 and later
LASS	024	00346	00000						5E6 and later
LASS	025	00315	00296	16385	00000				*5E6 and later
LASS	026	00347	00296	16385	00000				*5E6 and later
LASS	027	00337	16385	00317	00298	00318	00299	00314	5E6 and later
		00000							
LASS	028	00337	16385	00317	00298	00318	00299	00314	5E6 and later
		00000							
LASS	029	00348	16385	00379	00298	00318	00299	00314	5E6 and later
		00000							
LASS	030	00303	00349	00350	00000				*5E6 and later
LASS	031	00303	00351	00313	00290	00000			5E6 and later
LASS	032	00319	00321	00026	00320	00322	00026	00352	5E6 and later
		00353	00026	00354	00298	00026	00000		
LASS	033	00355	00356	00380	00361	00374	00299	00026	5E6 and later
		00290	00000						
LASS	034	00355	00356	00381	00361	00374	00299	00026	5E6 and later
		00290	00000						
LASS	035	00303	00362	00363	00000				*5E6 and later
LASS	036	00303	00364	00290	00000				5E6 and later
LASS	037	00365	00366	00028	00319	00295	00321	00290	5E6 and later
LASS	038	00338	00298	00339	00299	00314	00290	00000	*5E6 and later
LASS	039	00338	00298	00339	00299	00314	00290	00000	*5E6 and later
LASS	040	00306	00308	00369	00370	00028	00028	00028	5E6 and later
LASS	041	00303	00376	00000					5E6 and later
LASS	042	00303	00306	00308	00313	00290	00000		5E6 and later

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LASS	043	00306	00382	00311	00312	00026	00000		*5E6 and later
LASS	044	00385	00312	16385	00290	00000			5E6 and later
LASS	045	00385	00312	00296	16385	00290	00000		5E6 and later
LASS	046	00385	00312	00290	00000				5E6 and later
LASS	047	00315	00310	00000					*5E6 and later
LASS	048	00292	00358	00312	00369	00370	00028	00028	5E6 and later
		00000							
LASS	049	00307	16385	00311	00312	00369	00370	00028	5E6 and later
		00028	00000						
LASS	050	00292	00358	00312	00313	00290	00000		5E6 and later
LASS	051	00307	16385	00311	00312	00313	00290	00000	5E6 and later
LASS	052	00347	00310	00000					*5E6 and later
LASS	053	00315	16385	00000					*5E6 and later
LASS	054	00292	00357	00312	00369	00370	00028	00028	5E6 and later
		00000							
LASS	055	00307	16385	00308	00369	00370	00028	00028	5E6 and later
		00000							
LASS	056	00292	00357	00387	00000				5E6 and later
LASS	057	00307	16385	00308	00000				5E6 and later
LASS	058	00347	16385	00000					*5E6 and later
LASS	059	00336	00317	00298	00339	00299	00314	00290	*5E6 and later
LASS	060	00336	00317	00298	00339	00299	00314	00290	*5E6 and later
LASS	061	00377	16385	00000					*5E6 and later
LASS	062	00377	00296	16385	00000				*5E6 and later
LASS	063	00293	16385	00000					*5E6 and later
LASS	064	00293	00296	16385	00000				*5E6 and later
LASS	065	00026	00378	00321	00300	00326	00000		5E6 and later
LASS	066	00291	00028	00028	00028	00325	00327	00291	5E6 and later
LASS	067	00325	00327	00291	00000				5E6 and later
LASS	068	00333	00304	00337	16385	00000			5E6 and later
LASS	069	00333	00304	00336	00000				*5E6 and later
LASS	070	00333	00305	00000					*5E6 and later
LASS	071	00333	00304	00000					*5E6 and later
LASS	072	00336	00028	00000					*5E6 and later
LASS	073	00332	00304	00348	16385	00000			5E6 and later
LASS	074	00332	00305	00000					*5E6 and later
LASS	075	00332	00304	00000					*5E6 and later
LASS	076	00334	00305	00000					*5E6 and later
LASS	077	00334	00304	00000					*5E6 and later
LASS	078	00335	00305	00000					*5E6 and later
LASS	079	00335	00304	00000					*5E6 and later
LASS	080	00303	00367	00313	00290	00000			5E6 and later
LASS	081	00303	00368	00313	00290	00000			5E6 and later
LASS	082	00307	16385	00308	00309	00358	00369	00370	5E6 and later
		00028	00028	00000					
LASS	083	00307	16385	00308	00000				5E6 and later
LASS	084	00309	16385	00311	00369	00370	00028	00028	5E6 and later
		00000							
LASS	085	00307	16385	00308	00309	00391	00000		5E6 and later
LASS	086	00307	16385	00308	00000				5E6 and later
LASS	087	00309	16385	00386	00000				5E6 and later
LASS	088	00359	00028	00371	00372	00373	00299	00314	5E6 and later
		00000							
LASS	089	00360	00028	00371	00372	00373	00299	00314	5E6 and later
		00000							
LASS	090	00303	00375	00313	00290	00000			5E6 and later
LASS	091	00297	00388	00000					5E6 and later
LASS	092	00297	00390	00000					5E6 and later
LASS	093	00297	00389	00000					5E6 and later
LASS	094	00291	00028	00028	00028	00324	00291	00000	5E6 and later
LASS	095	00324	00291	00000					5E6 and later
LASS	096	00303	00341	00343	00313	00290	00000		5E6 and later
LASS	097	00319	00302	00026	00320	00301	00026	00352	5E6 and later
		00353	00026	00354	00298	00026	00000		
LASS	098	00365	00366	00028	00319	00302	00290	00000	5E6 and later
LASS	099	00026	00000						*5E6 and later
LASS	100	00026	00378	00302	00294	00300	00000		5E6 and later
LASS	101	00291	00028	00028	00028	00325	00291	00000	5E6 and later
LASS	102	00325	00291	00000					5E6 and later
LASS	110	00303	00323	00000					5E7 and later
LASS	111	00303	00323	00026	00000				5E7 and later
LASS	112	00441	00326	00026	00442	00443	00326	00026	5E7 and later
		00290	00000						
LASS	113	00383	00289	00387	00296	16385	00000		5E7 and later
LASS	114	00412	00289	00312	00384	00310	00000		5E7 and later

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LASS	115	00383	00289	00387	16385	00000			5E7 and later
LASS	116	00412	00413	16385	00414	00026	00000		5E7 and later
LASS	117	00303	00415	00329	00000				5E7 and later
LASS	118	00412	00413	16385	00414	00026	00000		5E7 and later
LASS	119	00412	00413	16385	00414	00026	00000		5E7 and later
LASS	120	00330	00000						5E7 and later
LASS	121	00330	00026	00000					5E7 and later
LASS	122	00331	00304	00337	16385	00000			5E7 and later
LASS	123	00028	00028	00028	00028	00416	00417	00418	5E7 and later
		00000							
LASS	124	00028	00028	00028	00028	00416	00418	00417	5E7 and later
		00290	00000						
LASS	125	00306	00382	00308	00000				5E7 and later
LASS	126	00303	00420	00342	00000				5E7 and later
LASS	127	00295	00344	00294	00321	00314	00290	00000	5E7 and later
LASS	128	00295	00344	00294	00321	00314	00290	00000	5E7 and later
LASS	129	00345	00294	00321	00314	00290	00000		5E7 and later
LASS	130	00303	00306	00308	00000				5E7 and later
LASS	131	00346	00421	00028	00000				5E7 and later
LASS	132	00346	00028	00000					5E7 and later
LASS	133	00315	00296	16385	00026	00000			5E7 and later
LASS	134	00347	00296	16385	00026	00000			5E7 and later
LASS	135	00337	16385	00317	00298	00318	00299	00314	5E7 and later
		00000							
LASS	136	00337	16385	00317	00298	00318	00299	00314	5E7 and later
		00000							
LASS	137	00348	16385	00379	00422	00423	00424	00314	5E7 and later
		00000							
LASS	138	00303	00351	00000					5E7 and later
LASS	139	00303	00351	00026	00000				5E7 and later
LASS	140	00359	00026	00319	00321	00026	00425	00322	5E7 and later
		00354	00422	00026	00374	00424	00026	00314	
		00000							
LASS	141	00360	00026	00319	00321	00026	00425	00322	5E7 and later
		00354	00422	00026	00374	00424	00026	00314	
		00000							
LASS	142	00303	00364	00000					5E7 and later
LASS	143	00426	00427	00028	00319	00295	00321	00290	5E7 and later
LASS	144	00306	00308	00369	00428	00419	00028	00028	5E7 and later
		00000							
LASS	145	00303	00412	00429	00000				5E7 and later
LASS	146	00303	00412	00429	00026	00000			5E7 and later
LASS	147	00385	00387	00000					5E7 and later
LASS	148	00315	00310	00026	00000				5E7 and later
LASS	149	00292	00358	00411	00369	00428	00419	00028	5E7 and later
		00028	00000						
LASS	150	00307	16385	00311	00411	00369	00428	00419	5E7 and later
		00028	00028	00000					
LASS	151	00292	00358	00411	00000				5E7 and later
LASS	152	00307	16385	00311	00411	00000			5E7 and later
LASS	153	00315	16385	00026	00000				5E7 and later
LASS	154	00292	00357	00411	00369	00428	00419	00028	5E7 and later
		00028	00000						
LASS	155	00307	16385	00308	00369	00428	00419	00028	5E7 and later
		00028	00000						
LASS	156	00292	00357	00411	00430	00026	00000		5E7 and later
LASS	157	00307	16385	00308	00430	00026	00000		5E7 and later
LASS	158	00347	16385	00026	00000				5E7 and later
LASS	159	00431	16385	00000					5E7 and later
LASS	160	00431	00296	16385	00000				5E7 and later
LASS	161	00378	00321	00443	00432	00326	00028	00028	5E7 and later
LASS	162	00433	00327	00026	00434	00327	00026	00435	5E7 and later
		00026	00374	00424	00026	00314	00290	00000	
LASS	163	00333	00304	00337	16385	00000			5E7 and later
LASS	164	00332	00304	00348	16385	00000			5E7 and later
LASS	165	00028	00028	00028	00028	00313	00417	00418	5E7 and later
		00000							
LASS	166	00028	00028	00028	00028	00313	00418	00417	5E7 and later
		00290	00000						
LASS	167	00303	00367	00000					5E7 and later
LASS	168	00303	00367	00026	00000				5E7 and later
LASS	169	00303	00368	00000					5E7 and later
LASS	170	00303	00368	00026	00000				5E7 and later
LASS	171	00307	16385	00308	00309	00391	00369	00428	5E7 and later
		00028	00028	00028	00000				

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LASS	172	00307	16385	00308	00000				5E7 and later
LASS	173	00309	16385	00386	00369	00428	00419	00028	5E7 and later
		00028	00000						
LASS	174	00307	16385	00308	00309	00391	00430	00026	5E7 and later
LASS	175	00307	16385	00308	00000				5E7 and later
LASS	176	00309	16385	00386	00430	00026	00000		5E7 and later
LASS	177	00028	00028	00028	00028	00436	00417	00418	5E7 and later
		00000							
LASS	178	00303	00375	00000					5E7 and later
LASS	179	00303	00375	00026	00000				5E7 and later
LASS	180	00441	00026	00442	00443	00026	00314	00290	5E7 and later
LASS	181	00303	00420	00437	00000				5E7 and later
LASS	182	00295	00344	00314	00290	00000			5E7 and later
LASS	183	00295	00344	00314	00290	00000			5E7 and later
LASS	184	00345	00314	00290	00000				5E7 and later
LASS	185	00359	00026	00319	00438	00026	00425	00439	5E7 and later
		00354	00422	00026	00374	00424	00026	00314	
		00000							
LASS	186	00360	00026	00319	00438	00026	00425	00439	5E7 and later
		00354	00422	00026	00374	00424	00026	00314	
		00000							
LASS	187	00426	00427	00028	00319	00438	00290	00000	5E7 and later
LASS	188	00378	00440	00432	00294	00443	00028	00028	5E7 and later
LASS	189	00433	00026	00434	00026	00435	00026	00374	5E7 and later
		00026	00314	00290	00000				
LASS	190	00444	00304						5E16(2) and later
LASS	191	00444	00305						5E16(2) and later
LASS	192	00355	00380	00361	00374	00299	00026	00314	5E16(2) and later
		00290							
LASS	193	00355	00381	00361	00374	00299	00026	00314	5E16(2) and later
		00290							
OSPSDA	001	00052	00030	00026	16385	00028	16386	00028	5E5 and later
		00000							
OSPSDA	002	00052	00031	00026	16385	00028	16386	00028	5E6 and later
		00026	16385	00028	16386	00028	00000		
OSPSDA	003	00052	00046	00028	00027	00000			5E5 and later
OSPSDA	004	00052	00035	00027	00029	00027	16385	00027	5E5 and later
		00000							
OSPSDA	005	00052	00036	00027	00029	00027	16385	00027	5E5 and later
		00000							
OSPSDA	006	00052	00033	00026	16385	00028	16386	00028	5E5 and later
		00000							
OSPSDA	007	00052	00039	00026	16385	00028	16386	00028	5E5 and later
		00000							
OSPSDA	008	00052	00040	00026	16385	00028	16386	00028	5E5 and later
		00000							
OSPSDA	009	00052	00041	00027	00030	00026	16385	00028	5E5 and later
		00028	00027	00000					
OSPSDA	010	00052	00042	00027	00030	00026	16385	00028	5E5 and later
		00028	00027	00000					
OSPSDA	011	00052	00043	00027	00030	00026	16385	00028	5E5 and later
		00028	00027	00000					
OSPSDA	012	00052	00044	00027	00030	00026	16385	00028	5E5 and later
		00028	00027	00000					
OSPSDA	013	00052	00050	00026	16385	00028	00051	00027	5E5 and later
		00028	00027	00000					
OSPSDA	014	00052	00000						5E5 and later
OSPSTA	001	00079	00028	00047	00048	00000			5E5 and later
OSPSTA	002	00047	00049	00028	00050	00000			5E5 and later
OSPSTA	003	00080	00000						5E5 and later
OSPSTA	004	00051	00028	00050	00000				5E5 and later
OSPSTA	005	00052	00000						5E5 and later
OSPSTA	006	00053	00049	00028	00054	00000			5E5 and later
OSPSTA	007	00055	00000						5E5 and later
OSPSTA	008	00051	00028	00056	00000				5E5 and later
OSPSTA	009	00051	00000						5E5 and later
OSPSTA	010	00057	00059	00061	16385	00000			5E5 and later
OSPSTA	011	00057	00060	00061	16385	00000			5E5 and later
OSPSTA	012	00057	00059	00061	00062	00000			5E5 and later
OSPSTA	013	00058	00063	00000					5E5 and later
OSPSTA	014	00058	00064	00000					5E5 and later
OSPSTA	015	00065	00028	00066	00000				5E5 and later
OSPSTA	016	00155	00126	00000					5E5 and later
OSPSTA	017	00068	00069	00071	00000				5E5 and later
OSPSTA	018	00072	00081	00000					5E5 and later

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OSPSTA	019	00068	00070	00071	00000				5E5 and later
OSPSTA	020	00072	00082	00000					5E5 and later
OSPSTA	021	00073	00028	00074	00000				5E5 and later
OSPSTA	022	00075	00002	00027	00009	00024	00027	00007	5E5 and later
		00007	00027	00001	00001	00001	00017	00000	
OSPSTA	023	00076	00000						5E5 and later
OSPSTA	024	00077	00000						5E5 and later
OSPSTA	025	00078	00000						5E5 and later
OSPSTA	026	00079	00000						5E5 and later
OSPSTA	027	00138	00139	00141	00142	00028	00134	00148	5E5 and later
		00000							
OSPSTA	028	00138	00140	00141	00143	00028	00134	00136	5E9(1) and later
		00137	00000						
OSPSTA	029	00144	00142	00028	00134	00148	00137	00000	5E5 and later
OSPSTA	030	00144	00143	00028	00134	00136	00137	00000	5E5 and later
OSPSTA	031	00145	00028	00149	00000				5E9(1) and later
OSPSTA	032	00144	00142	00028	00149	00000			5E9(1) and later
OSPSTA	033	00153	00000						5E5 and later
OSPSTA	034	00150	00151	0000					5E9(1) and later
OSPSTA	035	00152	00138	00049	00000				5E5 and later
OSPSTA	036	00152	00064	00000					5E5 and later
OSPSTA	037	00057	00060	00061	00062	00000			5E5 and later
OSPSTA	038	00156	00026	00157	00000				5E5 and later
OSPSTA	039	00079	(logo)	00000					5E7 and later
OSPSTA	040	00079	(logo)	00028	00047	00206	00048	00000	5E7 and later
OSPSTA	041	00051	00028	00066	00000				5E7 and later
OSPSTA	042	00160	00162	00161	00000				5E7 and later
OSPSTA	043	00160	00162	00161	00000				5E7 and later
OSPSTA	044	00212	00028	00051	00000				5E8 and later
OSPSTA	045	00214	00000						5E7 and later
OSPSTA	046	00209	00028	00215	00000				5E7 and later
OSPSTA	047	00215	00000						5E7 and later
OSPSTA	048	00210	00028	00216	00000				5E7 and later
OSPSTA	049	00121	00026	00160	00000				5E7 and later
OSPSTA	050	00079	00028	00047	00048	00000			5E7 and later
OSPSTA	052	00260	00262	00026	00278	00275	00283	00002	5E7 and later
		00026	00285						
OSPSTA	053	00264	00026	00278	00275	00283	00002	00014	5E7 and later
		00285							
OSPSTA	055	00145	00028	00134	00157	00000			5E8 and later
OSPSTA	056	00304	00207	00305	00027	00050	00000		5E8 and later
OSPSTA	057	00138	00290	00305	00027	00134	00148	00137	5E8 and later
OSPSTA	058	00138	00291	00207	00305	00027	00134	00148	5E8 and later
		00000							
OSPSTA	059	00292	00293	00000					5E8 and later
OSPSTA	060	00294	00137	00027	00292	00293	00000		5E8 and later
OSPSTA	063	00144	00142	00027	00298	00299	00300	00301	5E8 and later
		00000							
OSPSTA	064	00074	00027	00299	00300	00302	00303	00000	5E8 and later
OSPSTA	065	00079	00000						5E8 and later
OSPSTA	066	00155	00000						5E8 and later
OSPSTA	088	00144	00142	00028	00210	00000			5E8 and later
OSPSTA	089	00145	00028	00210	00000				5E8 and later
OSPSTA	090	00144	00142	00028	00298	00210	00000		5E8 and later
OSPSTA	091	0295							5E7 and later
OSPSTA	092	00047	00048	00000					5E8 and later
OSPSTA	093	0079	00134	00117	00005	00084	00099	00103	5E7 and later
		00120	00026	00047	00207	00048			
OSPSTA	094	00156	00026	00157					5E7 and later
OSPSTA	095	00145	00028	00134	00157				5E7 and later
OSPSTA	096	00051	00028	00066					5E7 and later
OSPSTA	097	00210	00027	00316	00317	00000			5E9(1) and later
OSPSTA	098	00316	00317	00000					5E9(1) and later
OSPSTA	099	00210	00027	00145	00288	00316	00317	00000	5E9(1) and later
OSPSTA	100	00055	00000						5E9(1) and later
OSPSTA	101	16501	00102	00028	00113	16386	00181	16502	5E6 and later
OSPSTA	102	16501	00102	00028	00028	00113	16386	00119	5E5 and later
OSPSTA	103	00113	16501	00000					5E5 and later
OSPSTA	104	00113	16501	00105	00000				5E5 and later
OSPSTA	105	00121	00122	00126	00000				5E5 and later
OSPSTA	106	00052	00000						5E5 and later
OSPSTA	107	00121	00122	00126	00118	16500	00100	00120	5E5 and later
OSPSTA	108	00052	00118	16500	00100	00120	00000		5E5 and later
OSPSTA	109	16502	00114	00115	00000				5E5 and later
OSPSTA	110	00113	16501	00028	00028	16386	00182	16502	5E6 and later

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OSPSTA	111	16501	00102	00028	00028	00118	16500	00100	5E6 and later
		16501	00104	00182	16502	00000			
OSPSTA	112	00124	00028	00113	16501	00028	00028	16386	5E6 and later
		16502	00000						
OSPSTA	113	00124	00028	16501	00102	00028	00028	00118	5E6 and later
		00100	00113	16501	00104	00182	16502	00000	
OSPSTA	114	00107	00108	00028	00113	00109	00000		5E5 and later
OSPSTA	115	00109	00000						5E5 and later
OSPSTA	116	00110	00000						5E5 and later
OSPSTA	117	00111	00000						5E5 and later
OSPSTA	118	00123	00000						5E5 and later
OSPSTA	119	00113	00000						5E5 and later
OSPSTA	120	00108	00114	00000					5E5 and later
OSPSTA	121	00155	00000						5E9(1) and later
OSPSTA	122	00118	16500	00100	00120	00000			5E9(1) and later
OSPSTA	123	000155	000125						5E9(2) only
OSPSTA	124	00052							5E9(2) only
OSPSTA	148	00155	00126						5E9(2) and later
OSPSTA	151	00051	00027	00056	00000				5E9(1) and later
OSPSTA	152	00298	00210	00027	00316	00317	00000		5E9(1) and later
OSPSTA	153	00058	00063	00000					5E9(1) and later
OSPSTA	154	00058	00064	00000					
OSPSTA	155	00138	00317	00071	00028	00318	00319	00000	5E9(1) and later
OSPSTA	156	00296	00073	00027	00306	00028	00000		5E9(1) and later
OSPSTA	157	00296	00073	00027	00306	00028	00000		5E9(1) and later
OSPSTA	158	00296	00073	00027	00306	00028	00000		5E9(1) and later
OSPSTA	159	00295	00027	00296	00297	00029	00094	00000	5E9(1) and later
OSPSTA	160	00073	00028	00074	00000				5E9(1) and later
OSPSTA	161	00210	00027	00316	00317	00000			5E9(1) and later
OSPSTA	162	00316	00317	00000					5E9(1) and later
OSPSTA	163	00210	00027	00145	00288	00316	00317	00000	5E9(1) and later
OSPSTA	164	00055	00000						5E9(1) and later
OSPSTA	165	00051	00027	00056	00000				5E9(1) and later
OSPSTA	166	0047	00207	00048					5E9(1) and later.
OSPSTA	167	00053	00049						5E9(1) and later
OSPSTA	168	00318	00319						5E9(1) and later
OSPSTA	169	00051	00027	00213	00000				5E8 and later
OSPSTA	170	00047	00049	00028	00050	00000			5E9(1) and later
OSPSTA	171	00295	00027	00296	00297	00040	00094	00000	5E9(1) and later
OSPSTA	172	00296	00073	00027	00306	00028	00000		5E9(1) and later
OSPSTA	176	00321	00026	00055	00000				
OSPSTA	177	00323	00026	00064	00000				5E9(1) and later
OSPSTA	178	00323	00026	00064	00000				5E9(1) and later
OSPSTA	179	00076	00000						5E8 - 5E9(1)
OSPSTA	179	00076							
OSPSTA	180	00324	00000						5E9(1) and later
OSPSTA	181	00157	00000						5E8 - 5E9(1)
OSPSTA	181	00157							5E9(2) - 5E10
OSPSTA	182	00321	00026	00055	00000				5E9(1) and later
OSPSTA	183	000323	00026	00055	00000				5E9(1) and later
OSPSTA	184	00323	00026	00063	00000				5E9(1) and later
OSPSTA	185	00323	00026	00064	00000				5E9(1) and later
OSPSTA	186	00076	00000						5E8 - 5E9(1)
OSPSTA	186	00076							5E9(2) - 5E10
OSPSTA	188	00107	00026	000324	00000				5E9(1) and later
OSPSTA	189	00051	00028	00318	00319	00000			5E9(1) and later
OSPSTA	190	00051	00028	00050	00000				5E9(1) only
OSPSTA	190	00051	00028	00050					5E9(2) and later.
OSPSTA	191	00118	16503	00027	00000				5E8 - 5E9(1)
OSPSTA	191	00118	16503	00027					5E9(2) and later
OSPSTA	192	00210	00027	00138	00140	00000			5E8 - 5E9(1)
OSPSTA	192	00210	00027	00138	00140				5E9(2) and later
OSPSTA	193	00210	00027	00051	00000				5E8 - 5E9(1)
OSPSTA	193	00210	00027	00051					5E9(2) and later
OSPSTA	195	00213	00027	00053	00049	00000			5E9(1) only
OSPSTA	195	00054	00026	00053	00049				5E9(2) and later
OSPSTA	196	00054	00027	00053	00049	00000			5E9(1) and later
OSPSTA	197	00054	00027	00306	00000				5E9(1) and later
OSPSTA	198	00213	00027	00053	00049	00000			5E9(1) and later
OSPSTA	199	00213	00027	00306	00000				5E9(1) and later
OSPSTA	206	00134	00148	00137	00027	00138	00214	00000	5E9(1) only
OSPSTA	206	00134	00148	00137	00027	00138	00214		5E9(2) and later.

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OSPSTA	207	00134	00148	00137	00027	00144	00142	00000	5E9(1) only
OSPSTA	207	00134	00148	00137	00027	00144	00142		5E9(2) and later
OSPSTA	208	00152	00063	00000					5E9(1) only
OSPSTA	208	00152	00063						5E9(2) and later.
OSPSTA	209	00152	00064	00000					5E9(1) only
OSPSTA	209	00152	00064						5E9(2) and later.
OSPSTA	212	00124	00027	00118	16502	00104	00000		5E9(1) only
OSPSTA	212	00124	00027	00118	16502	00104			5E9(2) and later.
OSPSTA	213	00113	16501	00005	16502	00105	00000		5E9(1) only
OSPSTA	213	00113	16501	00005	16502	00105			5E9(2) and later.
OSPSTA	214	00158	00162	00159	00028	00028	00028	00028	5E9(1) only
		00000							
OSPSTA	214	00158	00162	00159	00028	00028	00028	00028	5E9(2) and later.
OSPSTA	220	00144	00142	00027	00134	00148	00137	00000	5E9(1) and later
OSPSTA	221	00145	00027	00210	00000				5E9(1) and later
OSPSTA	222	00144	00142	00027	00210	00000			5E9(1) and later
OSPSTA	223	00067	00000						5E9(1) only
OSPSTA	223	00067							5E9(2) and later
OSPSTA	224	00075	00002	00027	00009	00024	00027	00007	
		00005	00017	00027	00001	00001	00001	00017	
		00000							
OSPSTA	224	00075	00002	00027	00009	00024	00027	00007	
		00005	00017	00027	00001	00001	00001	00017	
OSPSTA	225	00075	00002	00027	00009	00024	00027	00007	
		0005	00017	00027	00001	00001	00001	00017	
		00000							
OSPSTA	225	00075	00002	00027	00009	00024	00027	00007	
		0005	00017	00027	00001	00001	00001	00017	
OSPSTA	226	00075	00002	00027	00009	00024	00027	00007	
		0005	00017	00027	00001	00001	00001	00017	
		00000							
OSPSTA	226	00075	00002	00027	00009	00024	00027	00007	
		0005	00017	00027	00001	00001	00001	00017	
OSPSTA	227	00075	00002	00027	00009	00024	00027	00007	
		00005	00017	00027	00001	00001	00001	00017	
		00000							
OSPSTA	227	00075	00002	00027	00009	00024	00027	00007	
		00005	00017	00027	00001	00001	00001	00017	
OSPSTA	228	00075	00002	00027	00009	00024	00027	00007	5E9(1) only
		00005	00017	00027	00001	00001	00001	00017	
		00000							
OSPSTA	228	00075	00002	00027	00009	00024	00027	00007	5E9(2) and later
		00005	00017	00027	00001	00001	00001	00017	
OSPSTA	229	00075	00002	00027	00009	00024	00027	00007	5E9(1) only
		00005	00017	00027	00001	00001	00001	00017	
		00000							
OSPSTA	229	00075	00002	00027	00009	00024	00027	00007	5E9(2) and later
		00005	00017	00027	00001	00001	00001	00017	
OSPSTA	230	00138	00140	00000					5E9(1) only
OSPSTA	230	00138	00140						5E9(2) and later
OSPSTA	231	16504	16501	00102	00028	00113	16386	00181	5E9(1) only
		16502	00000						
OSPSTA	231	16504	16501	00102	00028	00113	16386	00181	5E9(2) and later
		16502							
OSPSTA	232	00079	16504	00028	00047	00048	00000		5E9(1) only
OSPSTA	232	00079	16504	00028	00047	00048			5E9(2) and later
OSPSTA	233	00155	16504	00000					5E9(1) only
OSPSTA	233	00155	16504						5E9(2) and later
OSPSTA	234	00155	16504	00118	16500	00100	00120	00000	5E9(1) only
OSPSTA	234	00155	16504	00118	16500	00100	00120		5E9(2) and later
OSPSTA	235	16504	16501	00102	00028	00028	00113	16386	5E9(1) only
		00119	00000						
OSPSTA	235	16504	16501	00102	00028	00028	00113	16386	5E9(2) and later
		00119							
OSPSTA	236	14066	00124	14066	00124	00000			5E9(1) and later.
OSPSTA	237	00156	00157	00074					5E9(2) and later.
OSPSTA	240	00121	00026	00160					5E9(2) and later.
RAS	001	00080	16385	00081	00013	00082	00012	00054	5E5 and later
		00000							
RAS	002	00083	00074	00098	00000				5E5 and later
RAS	003	00077	00084	16385	00085	00086	00098	00000	5E5 and later
RAS	004	00059	00060	00062	00000				5E5 and later
RAS	005	00059	00061	00062	00000				5E5 and later
RAS	006	00065	00091	00092	00000				5E5 and later
RAS	007	00065	00089	00090	00000				5E5 and later

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RAS	008	00077	00093	00074	00098	00000			5E5 and later
RAS	009	00077	00078	00079	00054	00098	00000		5E5 and later
RAS	010	00077	00097	00074	00098	00000			5E5 and later
RAS	014	00065	00066	00067	00068	00000			5E5 and later
RAS	016	00065	00087	00088	00098	00000			5E5 and later
RAS	018	00101	00019	00102	00053	00054	00098	00000	5E5 and later
RAS	021	00065	00103	00075	16385	00076	00074	00098	5E5 and later
RAS	023	00051	00052	00000					5E5 and later
RAS	024	00100	00000						5E5 and later
RAS	025	00065	00094	16385	00095	00096	00098	00000	5E5 and later
RAS	026	00055	16385	00081	00056	00082	00012	00054	5E5 and later
		00000							
RAS	027	00058	00098	00000					5E5 and later
RAS	028	00074	00098	00000					5E5 and later
RAS	029	00065	00070	16385	00071	00072	00074	00098	5E5 and later
RAS	030	00054	00098	00000					5E5 and later
RAS	033	0059	0179	062					5E16(2) and later
RAS	034	0059	0180	00062					5E16(2) and later
RAS	035	0181	0074	00098					5E16(2) and later
RAS	036	0182	0074	00098					5E16(2) and later
RAS	037	0065	0179	00075	16385	00076	00074	00098	5E16(2) and later
RAS	038	0065	0180	00075	16385	00076	00074	00098	5E16(2) and later
TACCT	001	00047	00002	00048					5E11 and later
TACCT	002	00047	00003	00048					5E11 and later
TACCT	003	00047	00004	00048					5E11 and later
TACCT	004	00047	00005	00048					5E11 and later
TACCT	005	00047	00006	00048					5E11 and later
TACCT	006	00047	00007	00048					5E11 and later
TACCT	007	00047	00008	00048					5E11 and later
TACCT	008	00047	00009	00048					5E11 and later
TACCT	009	00047	00010	00048					5E11 and later
TACCT	010	00047	00029	00048					5E11 and later
TACCT	011	00047	00030	00048					5E11 and later
TACCT	012	00047	00031	00048					5E11 and later
TACCT	013	00047	00032	00048					5E11 and later
TACCT	014	00047	00033	00048					5E11 and later
TACCT	015	00047	00034	00048					5E11 and later
TACCT	016	00049							5E11 and later

Figure 1 DEFAULT INPUT DATA PROVIDED BY ODA

```
annhd                    5ESS Switch                    _
(5531)              OFFICE DATA ADMINISTRATION
                ANNOUNCEMENT HEADER PHRASE LIST

                                3. PHRASE LIST
* 1. APPLICATION _____  ROW  PHR   ROW  PHR   ROW  PHR   ROW  PHR   ROW
* 2. HEADER ID   ___      1 _____   11 _____   21 _____   31 _____   41 _____
                         2 _____   12 _____   22 _____   32 _____   42 _____
                         3 _____   13 _____   23 _____   33 _____   43 _____
                         4 _____   14 _____   24 _____   34 _____   44 _____
                         5 _____   15 _____   25 _____   35 _____   45 _____
                         6 _____   16 _____   26 _____   36 _____   46 _____
                         7 _____   17 _____   27 _____   37 _____   47 _____
                         8 _____   18 _____   28 _____   38 _____   48 _____
                         9 _____   19 _____   29 _____   39 _____   49 _____
                        10 _____   20 _____   30 _____   40 _____   50 _____
```

Figure 2 SAMPLE ANNHD FORM 5E9(1) SOFTWARE RELEASE

```
SCREEN 1 OF 2                5ESS Switch
annhd                OFFICE DATA ADMINISTRATION
(5531)           ANNOUNCEMENT HEADER PHRASE LIST
```

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```
                    3. PHRASE LIST (50 of 67)
*1. HEADER ID  ______   ROW PHR   ROW PHR   ROW PHR   ROW PHR   ROW PHR
*2. APPLICATION ______    1 _____  11 _____  21 _____  31 _____  41 _____
   DURATION        2 _____  12 _____  22 _____  32 _____  42 _____
                3 _____  13 _____  23 _____  33 _____  43 _____
                4 _____  14 _____  24 _____  34 _____  44 _____
                5 _____  15 _____  25 _____  35 _____  45 _____
                6 _____  16 _____  26 _____  36 _____  46 _____
                7 _____  17 _____  27 _____  37 _____  47 _____
                8 _____  18 _____  28 _____  38 _____  48 _____
                9 _____  19 _____  29 _____  39 _____  49 _____
               10 _____  20 _____  30 _____  40 _____  50 _____
```

```
SCREEN 2 OF 2                5ESS Switch        _
annhd                  OFFICE DATA ADMINISTRATION
(5531)                 ANNOUNCEMENT HEADER PHRASE LIST

3. PHRASE LIST (51 - 67)
ROW PHR   ROW PHR
51 _____  61 _____
52 _____  62 _____
53 _____  63 _____
54 _____  64 _____
55 _____  65 _____
56 _____  66 _____
57 _____  67 _____
58 _____
59 _____
60 _____
```

Figure 3 SAMPLE ANNHD FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 5AF: 5532 RECORD
ANNOUNCEMENT DIGIT INFLECTION SCHEME FORM - ANNDG

1. GENERAL

The 5532 Record is available with 5E3 and later Software Releases. This record contains a list of inflection commands and phrases used to convert a digit string into a set of phrase identifications.

The Digit Inflection Scheme is a "template" for the digit string; the Digit Inflection Scheme details how to pronounce digits. Digit string expansion occurs whenever a digit string is to be inserted into an announcement. Digit information is extracted from a digits array used by application software. For each digit string in this array, the associated Inflection ID is used to determine what inflection scheme is to be applied to the digit string. The phrases are interpreted as commands or Phrase IDs. The Phrase IDs correspond to digit-related phrases such as digits, pauses, area codes, etc.

- ***NOTE:*** The specific APPLICATION on the associated ANNAPL form (5529 Record) must be entered before Standard Input Data will be provided by ODA for this form.

1.1 Limited 2-Level COT/AC Secured Feature

To use the Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback) Secured Feature Announcements, forms with APPLICATION equal to "LASS" and INFLECTION ID equal to 1 through 7 and 10 must be entered. These 8 forms are shared by the LASS features and the COT/AC application.

1.2 Recent Change View

The corresponding Recent Change View for this form is 8.60.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * APPLICATION

Description: Enter the type of application which corresponds to the header announcement.

Valid APPLICATION Entries

Entry	Definition
2 or 2LEVEL	Software Release: 5E7 and later. 2-Level COT and AC (Customer Originated Trace and AutomaticCallback).
A or ACSR	Software Release: 5E5 and later. Automatic Customer Station Rearrangement.
L[2 - 7]	Software Release: 5E9(1) and later. The Non-English Application type used to map the Englishphrase ID to the non-English phrase ID. L2 - L7 are definedon the LANGTBL (5483-2 Record) and correspond to thenon-English language designated by the DISPLAY ID field.
L or LASS	Software Release: 5E6 and later. Local Area SignalingServices Selective Features Screen List Editing.
NPA_SP	Software Release: 5E13 and later. Numbering Plan Area Split Announcement.
D or OSPSDA	OSPS Directory Assistance.
T or OSPSTA	Software Release: 5E4(2) and later. OSPS Toll and Assistance.
R or RAS	Software Release: 5E5 and later. Remote Access Service.

Data Rules:

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For 5E4(2) and later, if the APPLICATION is "OSPSDA" or "OSPSTA", then an associated ANNHD form (5531 Record), ANNTR form (5533 Record), and an ANNAPL form (5529 Record) must exist.

For 5E5 and later, if the APPLICATION is "RAS" or "ACSR", then an associated ANNHD form (5531 Record), ANNTR form (5533 Record), ANNDG form, and an ANNAPL form (5529 Record) must exist.

For 5E6 and later, if the APPLICATION is "LASS", then an associated ANNHD form (5531 Record), ANNDG form, and an ANNAPL form (5529 Record) must exist.

For 5E7 and later, if the APPLICATION is "2LEVEL", then at least one associated ANNHD form and an ANNAPL form must exist.

2.3 * INFLECTION ID

Description: Enter an Inflection Identification number. Each application may have from 1 to 255 different inflection schemes.

2.4 INFLECTION COMMANDS/PHRASES

Description: Enter the Inflection Command/Phrase number for each string. At least two INFLECTION COMMANDS/PHRASES are required; "END" must be entered at the end of each string.
Valid Entries: See Figures 1 and 2

Data Rules:

"TWODIG" must be entered if a digit string is to be entered twice.

Any entries in this field must have a corresponding PHRASE ID on a PHRASE form (5534 Record).

INFLECTION COMMAND/PHRASE	DESCRIPTION	SOFTWARE RELEASE
END	End of Inflection Command/Phrase Array	5E3 and later
FLTO	Flat "Zero" Phrase ID	5E3 and later
FLT1	Flat "One" Phrase ID	5E3 and later
FLT2	Flat "Two" Phrase ID	5E3 and later
FLT4	Flat "Three" Phrase ID	5E3 and later
FLT5	Flat "Five" Phrase ID	5E3 and later
FLT6	Flat "Six" Phrase ID	5E3 and later
FLT7	Flat "Seven" Phrase ID	5E3 and later
FLT8	Flat "Eight" Phrase ID	5E3 and later
FLT9	Flat "Nine" Phrase ID	5E3 and later
FLT10 - FLT20	Flat "Ten" - "Twenty" Phrase ID	5E4(2) and later
FLT30	Flat "Thirty" Phrase ID	5E4(2) and later
FLT40	Flat "Forty" Phrase ID	5E4(2) and later
FLT50	Flat "Fifty" Phrase ID	5E4(2) and later
FLT60	Flat "Sixty" Phrase ID	5E4(2) and later
FLT70	Flat "Seventy" Phrase ID	5E4(2) and later
FLT80	Flat "Eighty" Phrase ID	5E4(2) and later
FLT90	Flat "Ninety" Phrase ID	5E4(2) and later
FLTOH	Flat "Oh" Phrase ID	5E3 and later
FAL0	Falling "Zero" Phrase ID	5E3 and later
FAL1	Falling "One" Phrase ID	5E3 and later
FAL2	Falling "Two" Phrase ID	5E3 and later
FAL3	Falling "Three" Phrase ID	5E3 and later
FAL4	Falling "Four" Phrase ID	5E3 and later
FAL5	Falling "Five" Phrase ID	5E3 and later
FAL6	Falling "Six" Phrase ID	5E3 and later
FAL7	Falling "Seven" Phrase ID	5E3 and later
FAL8	Falling "Eight" Phrase ID	5E3 and later
FAL9	Falling "Nine" Phrase ID	5E3 and later
FALOH	Falling "Oh" Phrase ID	5E3 and later
AREA	"Area Code" Phrase ID	5E3 and later
HUND	"Hundred" Phrase ID	5E3 and later
THOUS	"Thousand" Phrase ID	5E3 and later

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QTR	Quarter second pause Phrase ID	5E3 and later
HALF	Half second pause Phrase ID	5E3 and later
FULL	Full second pause Phrase ID	5E3 and later
PH29 - PH127	Application-defined Phrase ID	5E3 only
PH47 - PH127	Application-defined Phrase ID	5E4(2) and later
FLAT	Command - Give digit in flat inflection	5E3 and later
FALL	Command - Give digit in falling inflection	5E3 and later
SAZERO	Command - Give all subsequent "0"s as "Zero"	5E3 and later
SAOH	Command - Give all subsequent "0"s as "Oh"	5E3 and later
SAHUND	Command - If last three digits were "N00", where N = 1-9, substitute with "N hundred"	5E3 and later
SATHOUS	Command - If last three digits were "N000", where N = 1-9, substitute with "N thousand"	5E3 and later
SAHORT	Command - Perform Hundred or Thousand substitution as described above. Thousand substitution, if applicable, has priority	5E3 and later
TWODIG	Repeat Digit String Twice	5E4(2) and later

Figure 1 ANNOUNCEMENT INFLECTION COMMAND/PHRASE TABLE

APPLICATION	INFLECTION ID	INFLECTION COMMANDS/PHRASES								SOFTWARE RELEASE
2LEVEL	1	SAOH	FALL	END						5E7 and later
2LEVEL	2	SAOH	FLAT	FALL	END					5E7 and later
2LEVEL	3	SAOH	FLAT	FLAT	FALL	END				5E7 and later
2LEVEL	4	SAOH	FLAT	FLAT	FLAT	FALL	SAHORT	END		5E7 and later
2LEVEL	5	SAOH	FLAT	FLAT	FLAT	FLAT	FALL	SAHORT	END	5E7 and later
2LEVEL	6	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	5E7 and later
		SAHORT	END							
2LEVEL	7	SAOH	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	5E7 and later
		FALL	SAHORT	END						
2LEVEL	10	FLAT	SAOH	FLAT	FALL	SAHUND	HALF	FLAT	FLAT	5E7 and later
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHORT	END	
ACSR	1	FALL	END							5E5 and later
ACSR	2	FLAT	FALL	END						5E5 and later
ACSR	3	FLAT	FLAT	FALL	END					5E5 and later
ACSR	4	FLAT	FLAT	FLAT	FALL	END				5E5 and later
ACSR	5	FLAT	FLAT	FLAT	FLAT	FALL	END			5E5 and later
ACSR	6	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END		5E5 and later
ACSR	7	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END	5E5 and later
ACSR	10	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E12 and later
		FLAT	FALL	END						
LASS	1	SAOH	FALL	END						5E6 and later
LASS	2	SAOH	FLAT	FALL	END					5E6 and later
LASS	3	SAOH	FLAT	FLAT	FALL	END				5E6 and later
LASS	4	SAOH	FLAT	FLAT	FLAT	FALL	SAHORT	END		5E6 and later

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LASS	5	SAOH	FLAT	FLAT	FLAT	FLAT	FALL	SAHO RT	END	5E6 and later
LASS	6	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	5E6 and later
		SAHO RT	END							
LASS	7	SAOH	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	5E6 and later
		FALL	SAHO RT	END						
LASS	8	SAOH	FALL	HALF	FLAT	FLAT	FALL	HALF	FLAT	5E6 and later
		FLAT	FLAT	FALL	SAHO RT	END				
LASS	9	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FALL	HALF	5E6 and later
		FLAT	FLAT	FLAT	FALL	SAHO RT	END			
LASS	10	FLAT	SAOH	FLAT	FALL	SAHU ND	HALF	FLAT	FLAT	5E6 and later
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	END	
LASS	11	FALL	HALF	SAOH	FLAT	FLAT	FALL	SAHU ND	HALF	5E6 and later
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	
		SAHO RT	END							
LASS	12	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FALL	HALF	5E6 and later
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	
		SAHO RT	END							
LASS	13	SAOH	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FALL	5E6 and later
		HALF	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	
		FALL	SAHO RT	END						
LASS	14	SAOH	FLAT	FLAT	FLAT	FALL	HALF	FLAT	FLAT	5E6 and later
		FALL	HALF	FLAT	FLAT	FALL	HALF	FLAT	FLAT	
		FLAT	FALL	SAHO RT	END					
LASS	15	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FALL	HALF	5E6 and later
		FLAT	FLAT	FALL	SAHU ND	HALF	FLAT	FLAT	FALL	
		HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	END		
LASS	16	SAOH	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FALL	5E6 and later
		HALF	FLAT	FLAT	FALL	SAHU ND	HALF	FLAT	FLAT	
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	END	
LASS	17	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FALL	END							
LASS	18	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FALL	END						
LASS	19	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FALL	END					
LASS	20	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FALL	END				
LASS	21	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FALL	END			
LASS	22	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END		
LASS	23	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END	
LASS	24	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	
		END								

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LASS	25	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FALL	END							
LASS	26	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FALL	END						
LASS	27	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FALL	END					
LASS	28	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FALL	END				
LASS	29	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FALL	END			
LASS	30	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END		
LASS	31	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END	
LASS	32	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E6 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	
		END								
OSPSDA	3	SAOH	FLAT	FLAT	FALL	END				5E5 and later
OSPSDA	4	SAOH	FLAT	FLAT	FLAT	FALL	SAHO RT	END		5E5 and later
OSPSDA	7	SAOH	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	5E5 and later
		FALL	SAHO RT	END						
OSPSDA	10	SAOH	AREA	FLAT	FLAT	FALL	HALF	FLAT	FLAT	5E5 and later
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	END	
OSPSDA	100	SAOH	FLAT	FLAT	FALL	SAHU ND	HALF	FLAT	FLAT	5E5 and later
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	END	
OSPSDA	255	FLT0	SAOH	AREA	FLT3	FLT1	FAL2	QTR	FLAT	5E5 only
		FLAT	FALL	SAHU ND	FLAT	FLAT	FLAT	FALL	SAHO RT	
		FLT1	SAOH	AREA	FLT3	FLT1	FAL2	QTR	FLAT	
		FLAT	FALL	SAHU ND	FLAT	FLAT	FLAT	FALL	SAHO RT	
		FLT2	SAOH	AREA	FLT3	FLT1	FAL2	QTR	FLAT	
		FLAT	FALL	SAHU ND	FLAT	FLAT	FLAT	FALL	PH65	
		PH66	END							
OSPSTA	1	FLT0	END							5E5 only
OSPSTA	2	SAOH	FLAT	FALL	END					5E5 and later
OSPSTA	3	FLAT	FLAT	FALL	END					5E5 and later
OSPSTA	101	TWODIG	PH83	END						5E6 and later
OSPSTA	102	TWODIG	PH84	END						5E6 and later
OSPSTA	103	TWODIG	PH83	PH106	TWODIG	PH88	END			5E6 and later
OSPSTA	104	TWODIG	PH84	PH106	TWODIG	PH88	END			5E6 and later

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OSPSTA	105	TWODIG	PH88	END						5E6 and later
OSPSTA	106	TWODIG	PH85	END						5E6 and later
OSPSTA	107	TWODIG	PH86	END						5E6 and later
OSPSTA	108	TWODIG	PH83	PH106	TWODIG	PH90	END			5E6 and later
OSPSTA	109	TWODIG	PH84	PH106	TWODIG	PH90	END			5E6 and later
OSPSTA	110	TWODIG	PH90	END						5E6 and later
OSPSTA	111	TWODIG	PH95	END						5E6 and later
OSPSTA	112	TWODIG	PH96	END						5E6 and later
OSPSTA	113	TWODIG	PH95	PH106	TWODIG	PH92	END			5E6 and later
OSPSTA	114	TWODIG	PH96	PH106	TWODIG	PH92	END			5E6 and later
OSPSTA	115	TWODIG	PH92	END						5E6 and later
OSPSTA	116	TWODIG	PH97	END						5E6 and later
OSPSTA	117	TWODIG	PH98	END						5E6 and later
OSPSTA	118	TWODIG	PH95	PH106	TWODIG	PH94	END			5E6 and later
OSPSTA	119	TWODIG	PH96	PH106	TWODIG	PH94	END			5E6 and later
OSPSTA	120	TWODIG	PH94	END						5E6 and later
OSPSTA	121	TWODIG	PH89	END						5E8 and later
OSPSTA	122	TWODIG	PH83	PH106	TWODIG	PH89	END			5E8 and later
OSPSTA	123	TWODIG	PH84	PH106	TWODIG	PH89	END			5E8 and later
OSPSTA	124	FLAT	HUND	PH86	END					5E8 and later
OSPSTA	125	FLAT	HUND	PH84	PH106	TWODIG	PH89	END		5E8 and later
OSPSTA	126	FLAT	HUND	PH84	PH106	TWODIG	PH90	END		5E8 and later
OSPSTA	127	FLAT	HUND	TWODIG	PH86	END				5E8 and later
OSPSTA	128	FLAT	HUND	TWODIG	PH84	PH106	TWODIG	PH89	END	5E8 and later
OSPSTA	129	FLAT	HUND	TWODIG	PH84	PH106	TWODIG	PH90	END	5E8 and later
OSPSTA	130	FLAT	THOUS	PH86	END					5E8 and later
OSPSTA	131	FLAT	THOUS	PH84	PH106	TWODIG	PH89	END		5E8 and later
OSPSTA	132	FLAT	THOUS	PH84	PH106	TWODIG	PH90	END		5E8 and later
OSPSTA	133	FLAT	THOUS	TWODIG	PH86	END				5E8 and later
OSPSTA	134	FLAT	THOUS	TWODIG	PH84	PH106	TWODIG	PH89	END	5E8 and later
OSPSTA	135	FLAT	THOUS	TWODIG	PH84	PH106	TWODIG	PH90	END	5E8 and later
OSPSTA	136	FLAT	THOUS	FLAT	HUND	PH86	END			5E8 and later

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OSPSTA	137	FLAT	THOUS	FLAT	HUND	PH84	PH106	TWODIG	PH89	5E8 and later
		END								
OSPSTA	138	FLAT	THOUS	FLAT	HUND	PH84	PH106	TWODIG	PH90	5E8 and later
		END								
OSPSTA	139	FLAT	THOUS	FLAT	HUND	TWODIG	PH86	END		5E8 and later
OSPSTA	140	FLAT	THOUS	FLAT	HUND	TWODIG	PH84	PH106	TWODIG	5E8 and later
		PH89	END							
OSPSTA	141	FLAT	THOUS	FLAT	HUND	TWODIG	PH84	PH106	TWODIG	5E8 and later
		PH90	END							
RAS	1	FALL	END							5E5 and later
RAS	2	FLAT	FALL	END						5E5 and later
RAS	3	FLAT	FLAT	FALL	END					5E5 and later
RAS	4	SAOH	FLAT	FLAT	FLAT	FALL	SAHORT	END		5E5 and later
RAS	5	SAOH	FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHORT	5E5 and later
		END								
RAS	6	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	5E5 and later
		SAHORT	END							
RAS	7	SAOH	FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	5E5 and later
		FALL	SAHORT	END						
RAS	8	FALL	HALF	SAOH	FLAT	FLAT	FALL	HALF	FLAT	5E5 and later
		FLAT	FLAT	FALL	SAHORT	END				
RAS	9	FLAT	SAOH	FALL	HALF	FLAT	FLAT	FALL	HALF	5E5 and later
		FLAT	FLAT	FLAT	FALL	SAHORT	END			
RAS	10	AREA	FLAT	FLAT	FALL	SAHUND	HALF	FLAT	FLAT	5E5 and later
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHORT	END	
RAS	11	FLAT	AREA	FLAT	SAOH	FLAT	FALL	SAHUND	HALF	5E5 and later
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	
		SAHORT	END							
RAS	12	FLAT	FLAT	FALL	HALF	SAOH	FLAT	FALL	HALF	5E5 and later
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	
		SAHORT	END							
RAS	13	FLAT	FLAT	FALL	HALF	SAOH	FLAT	FALL	HALF	5E5 and later
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FLAT	
		FALL	SAHORT	END						
RAS	14	FLAT	FLAT	FALL	HALF	SAOH	FLAT	FALL	HALF	5E5 and later
		FLAT	FALL	HALF	FLAT	FALL	HALF	FLAT		
		FLAT	FLAT	FALL	SAHORT	END				
RAS	15	FLAT	SAOH	FALL	HALF	FLAT	FLAT	FALL	HALF	5E5 and later
		AREA	FLAT	FLAT	FALL	SAHUND	HALF	FLAT	FLAT	
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHORT	END	
RAS	16	FLAT	FALL	SAOH	HALF	FLAT	FLAT	FALL	HALF	5E5 and later
		FALL	HALF	AREA	FLAT	FLAT	FALL	SAHU	HALF	

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								ND		
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	
		SAHO RT	END							
RAS	17	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FALL	END							
RAS	18	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FALL	END						
RAS	19	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FALL	END					
RAS	20	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FALL	END				
RAS	21	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FALL	END			
RAS	22	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END		
RAS	23	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END	
RAS	24	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	
		END								
RAS	25	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FALL	END							
RAS	26	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FALL	END						
RAS	27	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FALL	END					
RAS	28	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FALL	END				
RAS	29	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FALL	END			
RAS	30	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END		
RAS	31	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	END	
RAS	32	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	5E5 and later
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	
		FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FLAT	FALL	
		END								
RAS	100	SAOH	AREA	FLAT	FLAT	FALL	SAHU ND	HALF	FLAT	5E5 and later
		FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	
		END								
RAS	101	SAOH	FLAT	FALL	HALF	FLAT	FLAT	FALL	HALF	5E5 and later
		AREA	FLAT	FLAT	FALL	SAHU ND	HALF	FLAT	FLAT	
		FALL	HALF	FLAT	FLAT	FLAT	FALL	SAHO RT	END	
RAS	102	SAOH	FLAT	AREA	FLAT	FLAT	FALL	SAHU	HALF	5E5 and

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								ND		later
		FLAT	FLAT	FALL	HALF	FLAT	FLAT	FLAT	FALL	
		SAHO RT	END							

Figure 2 DEFAULT INPUT DATA PROVIDED BY ODA

anndg 5ESS OFFICE DATA ADMINISTRATION _
(5532) ANNOUNCEMENT DIGIT INFLECTION SCHEME

3. INFLECTION COMMANDS/PHRASES

* 1. APPLICATION	OSPSDA	row	6.	9.	12.	15.	18.
* 2. INFLECTION ID	3	1	SAOH	_____	_____	_____	_____
		2	FLAT	_____	_____	_____	_____
		3	FLAT	_____	_____	_____	_____
		4	FALL	_____	_____	_____	_____
		5	END	_____	_____	_____	_____
		6		_____	_____	_____	_____
		7		_____	_____	_____	_____
		8		_____	_____	_____	_____
		9		_____	_____	_____	_____
		10		_____	_____	_____	_____

Figure 3 SAMPLE ANNDG FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 5AG: 5533 RECORD
ANNOUNCEMENT TRAILER PHRASE LIST FORM - ANNTR

1. GENERAL

The 5533 Record is available with 5E3 and later Software Releases. This record lists phrases that identify announcement trailer. An announcement trailer enables a group of phrases (comprising an announcement) to be accessed with a "trailer identification number."

The trailer identification is mapped to a set of phrase identifications/ commands which specify whether to concatenate a phrase identification or to expand a digit string at that point in the announcement. For example, a typical announcement trailer is, "If you have further questions, a directory assistance operator will return". The type of trailer announcement depends on whether subscriber recall will be allowed. If recall is not allowed, the typical trailer is, "If you have further questions, please hang up and try again".

The phrase or phrases are ordered in the PHRASE list on this form, and each PHRASE is defined on a PHRASE form (5534 Record).

With 5E4(2) and later Software Releases, the SM and DURATION fields have been removed.

1.1 Default Data

With 5E5 and later Software Releases, a set of Default Input Data is provided by ODA (See Figure 1).

NOTE: The specific APPLICATION must be entered on the associated ANNAPL form (5529 Record) before Default Input Data will be provided by ODA for this form.

1.2 Recent Change View

The corresponding Recent Change View for this form is 8.62.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TRAILER ID

Description: Enter a trailer identification number.
Valid Entries: For 5E11 and earlier: 1 - 255
For 5E12 and later: 1 - 65535

2.3 * APPLICATION

Description: Enter the type of application which corresponds to the trailer announcement.

Valid APPLICATION Entries

Entry	Definition
ACSR or A	Software Release: 5E5 and later. Automatic Customer Station Rearrangement.
ASP or AS	Software Release: 5E8 and later. ASP (Advanced Services Platform) (previously PVN (Private Virtual Network)).
L[2 - 7]	Software Release: 5E9(1) and later. The Non-English Application type used to map the English phrase ID to the non-English phrase ID. L2 - L7 are defined on the LANGTBL (5483-2 Record) and correspond to the non-English language designated by the DISPLAY ID field.

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OSPSDA or D	OSPS Directory Assistance.
OSPSTA or T	Software Release: 5E4(2) and later. OSPS Toll and Assistance.
PVN or P	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASP". See the description under "ASP".
RAS or R	Software Release: 5E5 and later. Remote Access Service.

Data Rules:

For 5E5 and later, if the APPLICATION is "ACSR" or "RAS" at least one ANNAPL form, ANNHD form, ANNDG form, and ANNTR form must be entered.

For 5E6 and 5E7, if the APPLICATION is "PVN", then an associated ANNAPL form (5529 Record) must exist. An associated ANNHD form (5531 Record) may exist. No associated ANNDG forms (5532 Record) will exist.

2.4 DURATION

Description: This field is a Recent Change only field. The DURATION field specifies the duration of the announcement in seconds.
Valid Entries: 0 - 7200

Data Rules:

The calculated duration of the commands/phrases string on the ANNTR input form cannot exceed
- 255 seconds for 5E9(1) and earlier or
- 7200 seconds for 5E9(2) and later.

The duration is calculated from the PHRASE input form records.

2.5 PHRASES

Description: Enter the phrase numbers for each phrase trailer.
Valid Entries:
- For 5E7 - 5E9(1): 0 - 16383, 16385 - 16389
- or 16500 - 32767
- For 5E9(2) and later: 1 - 16383, 16385 - 16389,
- or 16500 - 65530

Data Rules:

For 5E3 - 5E9(1), at least two entries in this list must be entered. The last, and only the last phrase number, must be 0. For 5E9(1) and earlier, the maximum number of phrases is 50.

For 5E9(2) and later, at least one phrase is required. The maximum number of phrases is 49.

APPLICATION	TRAILER ID	PHRASES									SOFTWARE RELEASE
ACSR	002	00279	00000								5E5 and later
ACSR	007	00081	00013	00082	00012	00054	00256	00000			5E5 and later
ACSR	010	00267	00000								5E5 and later
ACSR	011	00271	00000								5E5 and later
ACSR	013	0026	0027	0025	0000						5E5 and later

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		5	0	6	0						
ACSR	014	00265	00271	00000							5E5 and later
ACSR	016	00271	00000								5E5 and later
ACSR	019	00264	00000								5E5 and later
ACSR	022	00081	00013	00082	00012	00262	00256	00000			5E5 and later
ACSR	024	00065	00259	00000							5E5 and later
ACSR	030	00288	00000								5E5 and later
ACSR	031	00285	00279	00000							5E5 and later
ACSR	032	00286	00000								5E5 and later
ACSR	033	00285	00000								5E5 and later
ACSR	035	00394	00000								5E7 and later
ACSR	039	00401	00000								
ACSR	040	00402	00000								5E7 and later
ACSR	044	00407	00000								5E7 and later
OSPSDA	001	00047	00048	00000							5E5 and later
OSPSDA	002	00047	00049	00000							5E5 and later
OSPSTA	001	00154	16385	00000							5E5 and later
OSPSTA	101	00027	00113	00109	00000						5E5 and later
OSPSTA	102	00027	00113	00110	00000						5E5 and later
OSPSTA	103	00027	00113	00111	00000						5E5 and later
OSPSTA	104	00027	00052	00000							5E5 and later
RAS	012	00053	00054	00098	00000						5E5 and later
RAS	013	00073	00054	00098	00000						5E5 and later
RAS	020	00063	00013	00064	00012	00054	00098	00000			5E5 and later
RAS	032	00178	00054	00098							5E12 and later

Figure 1 DEFAULT INPUT DATA PROVIDED BY ODA

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anntr 5ESS OFFICE DATA ADMINISTRATION _
(5533) ANNOUNCEMENT TRAILER PHRASE LIST

3. PHRASES
* 1. APPLICATION OSPSDA row 6. 9. 12. 15. 18.
* 2. TRAILER ID 1 1 47 _____ _____ _____ _____
2 48 _____ _____ _____ _____
3 0 _____ _____ _____ _____
4 _____ _____ _____ _____ _____
5 _____ _____ _____ _____ _____

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```
6  _____ _____ _____ _____ _____
7  _____ _____ _____ _____ _____
8  _____ _____ _____ _____ _____
9  _____ _____ _____ _____ _____
10 _____ _____ _____ _____ _____
```

Figure 2 SAMPLE ANNTR FORM 5E4(2) - 5E9(1) SOFTWARE RELEASES

```
anntr                5ESS Switch                _
(5533)          OFFICE DATA ADMINISTRATION
              ANNOUNCEMENT TRAILER PHRASE LIST

*1. TRAILER ID ___                3. PHRASE LIST
*2. APPLICATION ______  ROW PHR  ROW PHR  ROW PHR  ROW PHR  ROW PHR
   DURATION        1 _____ 11 _____ 21 _____ 31 _____ 41 _____
                   2 _____ 12 _____ 22 _____ 32 _____ 42 _____
                   3 _____ 13 _____ 23 _____ 33 _____ 43 _____
                   4 _____ 14 _____ 24 _____ 34 _____ 44 _____
                   5 _____ 15 _____ 25 _____ 35 _____ 45 _____
                   6 _____ 16 _____ 26 _____ 36 _____ 46 _____
                   7 _____ 17 _____ 27 _____ 37 _____ 47 _____
                   8 _____ 18 _____ 28 _____ 38 _____ 48 _____
                   9 _____ 19 _____ 29 _____ 39 _____ 49 _____
                  10 _____ 20 _____ 30 _____ 40 _____
```

Figure 3 SAMPLE ANNTR FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 5AH: 5534 RECORD
ANNOUNCEMENT PHRASE LIST FORM - PHRASE

1. GENERAL

The 5534 Record is available with 5E3 and later Software Releases. This record defines and describes phrase IDs which are provided on the DSU2-RAF (Digital Services Unit 2-Recorded Announcement Function) Announcement Storage circuit packs for each application (see Division 8, Section 36 for required pack assignments).

As phrase IDs are changed in the RAFs (5531, 5532, and 5533 Records), they must be changed on this record so that the two are synchronized. (This is not necessarily true during a growth scenario.) The 5534 Record allows the phrases to be stored in the AM (Administrative Module) to provide verification and information while populating the announcement data base.

1.1 Default Data

Available with 5E5 and later Software Releases, a standard set of input data is provided for the APPLICATIONs, such as "ACSR" and "RAS", by the ODA system as each office is registered and normally no data need be entered by the ODA system users for those particular applications. If, however, it is required that the data vary from the standard, this form may be used to specify the necessary data.

- ***NOTE:*** With 5E7 only, FEATURE ID 536 must be activated on the SFSYS form (8.22 Record) (RC View 8.31) to access LASS phrases 411 through 443. The MC5D143A30, L23 pack must be equipped on the DSU2-RAF (see Division 8, Section 36 for required pack assignments). Refer to Division 3, Section 5AE for further explanation.

- ***NOTE:*** Since the PHRASE field only accommodates 65 characters, some standard input phrases may have words omitted or abbreviated from the actual announcement supplied by the DSU2-RAF firmware.

1.2 Limited 2-Level COT/AC Secured Feature

To use the Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback) Secured Feature Announcements, forms with APPLICATION equal to "LASS" and PHRASE ID equal to 1 through 46, 65, 98, 104 through 177, or any customized phrase number used by the ANNHD forms must be entered.

Form instances with PHRASE IDs equal to 1 through 46 are used by other LASS announcements and are provided as part of the standard data set. Form instances with PHRASE ID equal to 65, 98, and 104 through 177 are specific to the Limited 2-Level COT/AC Secured Feature and are not provided with standard data; rather, they must be entered by the office through RC or ODA or via an SU/BWM script.

In order to use the phrases provided on the standard BRCS-SLE announcement board (see the EQRAP form (5822 Record), Division 8, Section 36) forms using phrases in Figure 2 must be built.

1.3 Recent Change View

The corresponding Recent Change View for this form is 8.63.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PHRASE ID

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Description: Enter a phrase identification number.
Valid Entries:

- For 5E7 - 5E9(1): 1 - 6383,
- 16,385 - 16,389, and
- 16,500 - 32,767
- For 5E9(2) and later: 1 - 16,383, and
- 16,600 - 65,530

Valid PHRASE ID Entries

PHRASE ID	Definition
1 - 46	Digit String-related Phrase IDs.
47 - 16383	Application-defined Phrase IDs.
14000 - 14999	Software Release: 5E5 and later. Customized audible logos provided for BRCS Customized Announcement Circuit Pack.
16385	Software Release: 5E4(2) and later. Command. Insert a digit string.
16386	Software Release: 5E4(2) and later. Command. Repeat the previous digit string.
16387	Software Release: 5E7 and later. Command - date of last incoming call.
16388	Software Release: 5E7 and later. Command - time of last incoming call.
16389	Software Release: 5E7 and later. Command - number of dollars and cents.
16500 - 32767	Software Release: 5E4(2) and later. Application-specific commands that are defined by applications to have certain meanings.
32768 - 65530	Software Release: 5E9(2) and later. Application-defined phrase IDs.

For OSPS ACTS (Automated Coin Announcements), the following application-specific commands are recognized:

Valid OSPS ACTS PHASE ID Entries

PHRASE ID	Definition
16500	Command. Insert a CREDIT digit string.
16501	Command. Insert a CHARGE DUE digit string.
16502	Command. Insert a CALL DURATION digit string.

Data Rules:

A PHRASE form must be submitted for each PHRASE ID value from 1 - 46 for 5E4(2) and later.

2.3 * APPLICATION

Description: Enter the type of application which corresponds to a Switching Module.
Default: OSPSDA
Valid Entries:

Valid APPLICATION Entries

Entry	Definition
2LEVEL or 2	Software Release: 5E7 and later. 2-Level COT and AC (Customer Originated Trace and Automatic Callback).
ACSR or A	Software Release: 5E5 and later Automatic Customer Station Rearrangement.
ASP or AS	Software Release: 5E8 and later. ASP (Advanced Services Platform) (previously PVN (Private Virtual Network)).
LASS or L	Software Release: 5E6 and later Local Area Signaling Services Selective Features Screen List Editing. Also used by Limited 2-Level COT/AC.

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NPA_SP	Software Release: 5E13 and later. Numbering Plan Area Split Announcement.
OSPSDA or D	Software Release: 5E3 and later OSPS Directory Assistance.
OSPSTA or T	Software Release: 5E4(2) and later OSPS Toll and Assistance.
PVN or P	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASP". See the description under "ASP".
RAS or R	Software Release: 5E5 and later Remote Access Service.
TACCT	Software Release: 5E11 and later TDX (Toll Digital Exchange) account code.
VARRAF	Software Release: 5E13 and later. Variant Recorded Announcements Function.

Data Rules:

When APPLICATION is "VARRAF", LANGUAGE CODE must be entered.
When APPLICATION is not "VARRAF", LANGUAGE CODE must not be entered.

2.4 # DURATION

Description: Enter the expected duration of the phrase.

Required Field.
Valid Entries:
- For 5E3 - 5E9(1): 1 - 255
- For 5E9(2) and later: 1 - 7200 (seconds)

2.5 # PHRASE

Description: Enter the text equivalent of the phrase.

Required Field.
Valid Entries: 1 - 65 characters.

The following table shows the DURATION value and the PHRASE text that will be ODA assigned after certain PHRASE IDs are entered. The user may enter values to overwrite the ODA assignments.

Valid PHRASE Entries

PHRASE ID	DURATION	Entries
1	1	zero (flat)
2	1	one (flat)
3	1	two (flat)
4	1	three (flat)
5	1	four (flat)
6	1	five (flat)
7	1	six (flat)
8	1	seven (flat)
9	1	eight (flat)
10	1	nine (flat)
11	1	oh flat)
12	1	zero (falling)
13	1	one (falling)
14	1	two (falling)
15	1	three (falling)
16	1	four (falling)
17	1	five (falling)
18	1	six (falling)
19	1	seven (falling)
20	1	eight (falling)
21	1	nine (falling)
22	1	oh (falling)
23	2	area code

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24	2	hundred
25	2	thousand
26	1	(quarter second pause)
27	1	(half second pause)
28	1	(full second pause)
29	1	Software Release: 5E4(2) and later. ten (flat)
30	1	Software Release: 5E4(2) and later. eleven (flat)
31	1	Software Release: 5E4(2) and later. twelve (flat)
32	1	Software Release: 5E4(2) and later. thirteen (flat)
33	1	Software Release: 5E4(2) and later. fourteen (flat)
34	1	Software Release: 5E4(2) and later. fifteen (flat)
35	1	Software Release: 5E4(2) and later. sixteen (flat)
36	1	Software Release: 5E4(2) and later. seventeen (flat)
37	1	Software Release: 5E4(2) and later. eighteen (flat)
38	1	Software Release: 5E4(2) and later. nineteen (flat)
39	1	Software Release: 5E4(2) and later. twenty (flat)
40	1	Software Release: 5E4(2) and later. thirty (flat)
41	1	Software Release: 5E4(2) and later. forty (flat)
42	1	Software Release: 5E4(2) and later. fifty (flat)
43	1	Software Release: 5E4(2) and later. sixty (flat)
44	1	Software Release: 5E4(2) and later. seventy (flat)
45	1	Software Release: 5E4(2) and later. eighty (flat)
46	1	Software Release: 5E4(2) and later. ninety (flat)

2.6 LANGUAGE CODE

Description: The LANGUAGE CODE field is used to specify the preferred language code using the phrase.
Default: See Default Input Data Provided By ODA figure.
Valid Entries:

For 5E14 and earliuer: 1, 2, 6, 7

For 5E15 and later: 1 - 255

See tables below.

Valid LANGUAGE CODE Entries for 5E14 and Earlier

Entry	Definition
Blank	No value.
1	English
2	French
6	Mandarin
7	Cantonese

Valid LANGUAGE CODE Entries for 5E15 and Later

Entry	Definition
Blank	No value.

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1	English
2	French
3	Spanish
4	German
5	Portuguese
6	Cantonese
7	Mandarin
8	Hangul (Korea)
9	Bahasa-Indonesia
10	Hindi
11	Urdu
12	Tagalog (Phillippines)
13	Youroba (West Africa)
14	Swahili
15	Gaelic
16	Hebrew
17	Nihongo (Japan)
18	Russian
19	Arabic
20	Dutch
21	Italian
22	Polish
23	Vietnamese
24	Greek
25	Yiddish
26	Thiai
27	Laotian
28	Persian
29	French Creole
30	Armenian
31	Navaho
32	Hungarian
33	Mon-Khmer (Cambodian)
34	Gujarathi
35	Ukranian
36	Czech
37	Pennsylvania Dutch
38	Miao (Hmong)
39	Norwegian
40	Slovak
41	Swedish
42	Serbian
43	Kru
44	Rumanian
45	Lithuanian
46	Finnish
47	Punjabi
48	Formosan
49	Croatian
50	Bosian
51	Turkish
52	Llocano
53	Bangali
54	Danish
55	Flemish
56	Syrian
57	Tamil
58	Samoan
59	Malayalsmm
60	Cajun
61	Amharic

- ***NOTE:*** For 5E15 and later, any four languages can be selected.

Data Rules:

For 5E13 and 5E14 Software Release.

When LANGUAGE CODE is 1, PHRASE ID must be 32768 - 32895, or 32896 - 33023.
When LANGUAGE CODE is 2, PHRASE ID must be 32768 - 32895, or 33024 - 33151.
When LANGUAGE CODE is 6, PHRASE ID must be 32768 - 32895, or 33152 - 33279.
When LANGUAGE CODE is 7, PHRASE ID must be 32768 - 32895, or 33280 - 33407.

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APPLICATION	PHRASE	DURATION	PHRASE TEXT	SOFTWARE RELEASE
2LEVEL	00001	1	zero (flat)	5E7 and later
2LEVEL	00002	1	one (flat)	5E7 and later
2LEVEL	00003	1	two (flat)	5E7 and later
2LEVEL	00004	1	three (flat)	5E7 and later
2LEVEL	00005	1	four (flat)	5E7 and later
2LEVEL	00006	1	five (flat)	5E7 and later
2LEVEL	00007	1	six (flat)	5E7 and later
2LEVEL	00008	1	seven (flat)	5E7 and later
2LEVEL	00009	1	eight (flat)	5E7 and later
2LEVEL	00010	1	nine (flat)	5E7 and later
2LEVEL	00011	1	oh (flat)	5E7 and later
2LEVEL	00012	1	zero (falling)	5E7 and later
2LEVEL	00013	1	one (falling)	5E7 and later
2LEVEL	00014	1	two (falling)	5E7 and later
2LEVEL	00015	1	three (falling)	5E7 and later
2LEVEL	00016	1	four (falling)	5E7 and later
2LEVEL	00017	1	five (falling)	5E7 and later
2LEVEL	00018	1	six (falling)	5E7 and later
2LEVEL	00019	1	seven (falling)	5E7 and later
2LEVEL	00020	1	eight (falling)	5E7 and later
2LEVEL	00021	1	nine (falling)	5E7 and later
2LEVEL	00022	1	oh (falling)	5E7 and later
2LEVEL	00023	1	area code	5E7 and later
2LEVEL	00024	1	hundred	5E7 and later
2LEVEL	00025	1	thousand	5E7 and later
2LEVEL	00026	1	(quarter second pause)	5E7 and later
2LEVEL	00027	1	(half second pause)	5E7 and later
2LEVEL	00028	1	(full second pause)	5E7 and later
2LEVEL	00029	1	ten (flat)	5E7 and later
2LEVEL	00030	1	eleven (flat)	5E7 and later
2LEVEL	00031	1	twelve (flat)	5E7 and later
2LEVEL	00032	1	thirteen (flat)	5E7 and later
2LEVEL	00033	1	fourteen (flat)	5E7 and later
2LEVEL	00034	1	fifteen (flat)	5E7 and later
2LEVEL	00035	1	sixteen (flat)	5E7 and later
2LEVEL	00036	1	seventeen (flat)	5E7 and later
2LEVEL	00037	1	eighteen (flat)	5E7 and later
2LEVEL	00038	1	nineteen (flat)	5E7 and later
2LEVEL	00039	1	twenty (flat)	5E7 and later
2LEVEL	00040	1	thirty (flat)	5E7 and later
2LEVEL	00041	1	forty (flat)	5E7 and later
2LEVEL	00042	1	fifty (flat)	5E7 and later
2LEVEL	00043	1	sixty (flat)	5E7 and later
2LEVEL	00044	1	seventy (flat)	5E7 and later
2LEVEL	00045	1	eighty (flat)	5E7 and later
2LEVEL	00046	1	ninety (flat)	5E7 and later
2LEVEL	00065	1	We're sorry.	5E7 and later
2LEVEL	00098	2	(Prompt tone 300ms of 400HZ tone)	5E7 and later
2LEVEL	00104	1	This is	5E7 and later
2LEVEL	00105	2	your automatic callback service.	5E7 and later
2LEVEL	00106	2	your call return service.	5E7 and later
2LEVEL	00107	3	The number of your last incoming call is	5E7 and later
2LEVEL	00108	3	a private number and cannot be announced.	5E7 and later
2LEVEL	00109	2	The call was received	5E7 and later
2LEVEL	00110	1	at	5E7 and later
2LEVEL	00111	2	To activate	5E7 and later
2LEVEL	00112	2	automatic callback	5E7 and later
2LEVEL	00113	2	call return	5E7 and later
2LEVEL	00114	2	dial 1,	5E7 and later
2LEVEL	00115	2	otherwise hang up.	5E7 and later
2LEVEL	00116	3	Please dial 1 now or hang up.	5E7 and later
2LEVEL	00117	3	There will be a charge for this service.	5E7 and later
2LEVEL	00118	2	Please hang up now.	5E7 and later
2LEVEL	00119	3	You must dial one to activate	5E7 and later
2LEVEL	00120	1	the callback,	5E7 and later
2LEVEL	00121	2	the call return,	5E7 and later
2LEVEL	00122	3	your customer originated trace service.	5E7 and later
2LEVEL	00123	2	your call trace service.	5E7 and later
2LEVEL	00124	3	The charge for this service will be	5E7 and later
2LEVEL	00125	1	dollar (flat)	5E7 and later
2LEVEL	00126	1	dollars (flat)	5E7 and later

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2LEVEL	00127	1	dollar. (falling)	5E7 and later
2LEVEL	00128	1	dollars. (falling)	5E7 and later
2LEVEL	00129	1	and	5E7 and later
2LEVEL	00130	1	cents. (falling)	5E7 and later
2LEVEL	00131	3	To trace your last incoming call,	5E7 and later
2LEVEL	00132	3	You must dial one to trace the call,	5E7 and later
2LEVEL	00133	1	January	5E7 and later
2LEVEL	00134	1	February	5E7 and later
2LEVEL	00135	1	March	5E7 and later
2LEVEL	00136	1	April	5E7 and later
2LEVEL	00137	1	May	5E7 and later
2LEVEL	00138	1	June	5E7 and later
2LEVEL	00139	1	July	5E7 and later
2LEVEL	00140	1	August	5E7 and later
2LEVEL	00141	1	September	5E7 and later
2LEVEL	00142	1	October	5E7 and later
2LEVEL	00143	1	November	5E7 and later
2LEVEL	00144	1	December	5E7 and later
2LEVEL	00145	1	a.m.	5E7 and later
2LEVEL	00146	1	p.m.	5E7 and later
2LEVEL	00147	1	1st	5E7 and later
2LEVEL	00148	1	2nd	5E7 and later
2LEVEL	00149	1	3rd	5E7 and later
2LEVEL	00150	1	4th	5E7 and later
2LEVEL	00151	1	5th	5E7 and later
2LEVEL	00152	1	6th	5E7 and later
2LEVEL	00153	1	7th	5E7 and later
2LEVEL	00154	1	8th	5E7 and later
2LEVEL	00155	1	9th	5E7 and later
2LEVEL	00156	1	10th	5E7 and later
2LEVEL	00157	1	11th	5E7 and later
2LEVEL	00158	1	12th	5E7 and later
2LEVEL	00159	1	13th	5E7 and later
2LEVEL	00160	1	14th	5E7 and later
2LEVEL	00161	1	15th	5E7 and later
2LEVEL	00162	1	16th	5E7 and later
2LEVEL	00163	1	17th	5E7 and later
2LEVEL	00164	1	18th	5E7 and later
2LEVEL	00165	1	19th	5E7 and later
2LEVEL	00166	1	20th	5E7 and later
2LEVEL	00167	1	30th	5E7 and later
2LEVEL	00168	3	Consult your written instructions and try again later.	5E7 and later
2LEVEL	00169	3	If you choose to trace your last incoming call,	5E7 and later
2LEVEL	00170	4	you will be charged a fee as described in your instruction guide.	5E7 and later
2LEVEL	00171	1	extension	5E7 and later
2LEVEL	00172	2	Customer Originated Trace.	5E7 and later
2LEVEL	00173	3	To trace the last call received,	5E7 and later
2LEVEL	00174	2	The last incoming number was	5E7 and later
2LEVEL	00175	2	This call was received on	5E7 and later
2LEVEL	00176	3	To activate Automatic Recall,	5E7 and later
2LEVEL	00177	3	The number of your last incoming call was	5E7 and later
ACSR	00001	1	zero (flat)	5E5 and later
ACSR	00002	1	one (flat)	5E5 and later
ACSR	00003	1	two (flat)	5E5 and later
ACSR	00004	1	three (flat)	5E5 and later
ACSR	00005	1	four (flat)	5E5 and later
ACSR	00006	1	five (flat)	5E5 and later
ACSR	00007	1	six (flat)	5E5 and later
ACSR	00008	1	seven (flat)	5E5 and later
ACSR	00009	1	eight (flat)	5E5 and later
ACSR	00010	1	nine (flat)	5E5 and later
ACSR	00011	1	oh (flat)	5E5 and later
ACSR	00012	1	zero (falling)	5E5 and later
ACSR	00013	1	one (falling)	5E5 and later
ACSR	00014	1	two (falling)	5E5 and later
ACSR	00015	1	three (falling)	5E5 and later
ACSR	00016	1	four (falling)	5E5 and later
ACSR	00017	1	five (falling)	5E5 and later
ACSR	00018	1	six (falling)	5E5 and later
ACSR	00019	1	seven (falling)	5E5 and later
ACSR	00020	1	eight (falling)	5E5 and later
ACSR	00021	1	nine (falling)	5E5 and later
ACSR	00022	1	oh (falling)	5E5 and later
ACSR	00023	2	area code	5E5 and later

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ACSR	00024	2	hundred	5E5 and later
ACSR	00025	2	thousand	5E5 and later
ACSR	00026	1	(quarter second pause)	5E5 and later
ACSR	00027	1	(half second pause)	5E5 and later
ACSR	00028	1	(full second pause)	5E5 and later
ACSR	00029	1	ten (flat inflection)	5E5 and later
ACSR	00030	1	eleven (flat inflection)	5E5 and later
ACSR	00031	1	twelve (flat inflection)	5E5 and later
ACSR	00032	1	thirteen (flat inflection)	5E5 and later
ACSR	00033	1	fourteen (flat inflection)	5E5 and later
ACSR	00034	1	fifteen (flat inflection)	5E5 and later
ACSR	00035	1	sixteen (flat inflection)	5E5 and later
ACSR	00036	1	seventeen (flat inflection)	5E5 and later
ACSR	00037	1	eighteen (flat inflection)	5E5 and later
ACSR	00038	1	nineteen (flat inflection)	5E5 and later
ACSR	00039	1	twenty (flat inflection)	5E5 and later
ACSR	00040	1	thirty (flat inflection)	5E5 and later
ACSR	00041	1	forty (flat inflection)	5E5 and later
ACSR	00042	1	fifty (flat inflection)	5E5 and later
ACSR	00043	1	sixty (flat inflection)	5E5 and later
ACSR	00044	1	seventy (flat inflection)	5E5 and later
ACSR	00045	1	eighty (flat inflection)	5E5 and later
ACSR	00046	1	ninety (flat inflection)	5E5 and later
ACSR	00047	1	star (flat inflection)	5E5 and later
ACSR	00048	1	star (falling inflection)	5E5 and later
ACSR	00049	1	pound (flat inflection)	5E5 and later
ACSR	00050	1	star (falling inflection)	5E5 and later
ACSR	00052	2	The number you dialed,	5E5 and later
ACSR	00054	2	Please dial now	5E5 and later
ACSR	00063	3	If this number is correct, dial	5E5 and later
ACSR	00064	3	If this number is not correct, dial	5E5 and later
ACSR	00065	1	We're sorry.	5E5 and later
ACSR	00070	2	The number you dialed,	5E5 and later
ACSR	00081	3	If this number is correct, dial	5E5 and later
ACSR	00082	3	If this number is not correct, dial	5E5 and later
ACSR	00256	1	beep (138ms of 400Hz tone)	5E5 and later
ACSR	00257	2	Automatic Station Rearrangement (flat)	5E5 and later
ACSR	00258	2	Automatic Station Rearrangement (falling)	5E5 and later
ACSR	00259	5	but your request for Station Rearrangement cannot be accepted	5E5 and later
ACSR	00260	3	has become temporarily unavailable	5E5 and later
ACSR	00261	2	has been completed	5E5 and later
ACSR	00262	5	If you do not want to replace the present service, please hang up	5E5 and later
ACSR	00263	10	If you have a service identification number, please enter it now.	5E5 and later
ACSR	00264	5	In order to get service, you must contact your local telecommunications	5E5 and later
ACSR	00265	3	is not a valid telephone number for this feature	5E5 and later
ACSR	00266	2	is still being processed	5E5 and later
ACSR	00267	3	Please check to make sure we have the correct numbers	5E5 and later
ACSR	00268	4	Please enter your personal identification number now.	5E5 and later
ACSR	00269	2	Please hold on.	5E5 and later
ACSR	00270	3	Please re-enter your telephone number now.	5E5 and later
ACSR	00271	2	Service cannot be established.	5E5 and later
ACSR	00272	3	Service has been established on this line for	5E5 and later
ACSR	00273	2	Service will be established for	5E5 and later
ACSR	00274	6	Station Rearrangement will replace the phone number that is presently	5E5 and later
ACSR	00275	4	There is no Automatic Station Rearrangement request pending for	
ACSR	00276	4	The new telephone number for this line has not been confirmed.	
ACSR	00277	4	We cannot complete your Station Rearrangement request as dialed	
ACSR	00278	7	We have received many requests for Station Rearrangement and we	
ACSR	00279	5	When it has been completed, you will be called back with a record	5E5 and later
ACSR	00280	1	You have reached	5E5 and later

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ACSR	00281	2	Your request for	5E5 and later
ACSR	00282	5	Thank you. Your Station Rearrangement should be completed in approximately	
ACSR	00283	3	Your service cannot be established using	5E5 and later
ACSR	00284	3	It should be completed in approximately	5E5 and later
ACSR	00285	1	minutes	5E5 and later
ACSR	00286	13	If you previously requested a Station Rearrangement, it should	5E5 and later
ACSR	00287	2	In order to move service for	5E5 and later
ACSR	00288	12	to this location, you must first reprogram this number in your	5E5 and later
ACSR	00393	3	an Automatic Station Rearrangement service.	5E7 and later
ACSR	00394	4	check the status of your rearrangement request.	5E7 and later
ACSR	00395	3	This service allows you to	5E7 and later
ACSR	00396	2	Please enter	5E7 and later
ACSR	00397	5	the telephone number for which you requested a Station Rearrangement	5E7 and later
ACSR	00398	3	The status of the Station Rearrangement for	5E7 and later
ACSR	00399	2	will be determined.	5E7 and later
ACSR	00400	2	cannot be determined	5E7 and later
ACSR	00401	2	from this line.	5E7 and later
ACSR	00402	3	cancel your rearrangement request.	5E7 and later
ACSR	00403	3	The Station Rearrangement of	5E7 and later
ACSR	00404	2	will be cancelled.	5E7 and later
ACSR	00405	4	your Station Rearrangement request cannot be cancelled (flat)	5E7 and later
ACSR	00406	4	your Station Rearrangement request cannot be cancelled (falling)	5E7 and later
ACSR	00407	8	If you previously requested a Station Rearrangement, it should not	5E7 and later
ACSR	00408	2	has been cancelled.	5E7 and later
ACSR	00409	7	If you have a service identification number, please enter it now.	5E7 and later
ACSR	00410	3	the service identification number or	5E7 and later
ASP (Note 1)	00001	1	zero (flat)	5E6 and later
ASP (Note 1)	00002	1	one (flat)	5E6 and later
ASP (Note 1)	00003	1	two (flat)	5E6 and later
ASP (Note 1)	00004	1	three (flat)	5E6 and later
ASP (Note 1)	00005	1	four (flat)	5E6 and later
ASP (Note 1)	00006	1	five (flat)	5E6 and later
ASP (Note 1)	00007	1	six (flat)	5E6 and later
ASP (Note 1)	00008	1	seven (flat)	5E6 and later
ASP (Note 1)	00009	1	eight (flat)	5E6 and later
ASP (Note 1)	00010	1	nine (flat)	5E6 and later
ASP (Note 1)	00011	1	oh (flat)	5E6 and later
ASP (Note 1)	00012	1	zero (falling)	5E6 and later
ASP (Note 1)	00013	1	one (falling)	5E6 and later
ASP (Note 1)	00014	1	two (falling)	5E6 and later
ASP (Note 1)	00015	1	three (falling)	5E6 and later
ASP (Note 1)	00016	1	four (falling)	5E6 and later
ASP (Note 1)	00017	1	five (falling)	5E6 and later
ASP (Note 1)	00018	1	six (falling)	5E6 and later
ASP (Note 1)	00019	1	seven (falling)	5E6 and later
ASP (Note 1)	00020	1	eight (falling)	5E6 and later
ASP (Note 1)	00021	1	nine (falling)	5E6 and later
ASP (Note 1)	00022	1	oh (falling)	5E6 and later
ASP (Note 1)	00023	1	your area code is	5E6 and later
ASP (Note 1)	00024	2	hundred	5E6 and later
ASP (Note 1)	00025	2	thousand	5E6 and later
ASP (Note 1)	00026	1	(quarter second pause)	5E6 and later
ASP (Note 1)	00027	1	(half second pause)	5E6 and later
ASP (Note 1)	00028	1	(full second pause)	5E6 and later
ASP (Note 1)	00029	1	ten (flat)	5E6 and later
ASP (Note 1)	00030	1	eleven (flat)	5E6 and later
ASP (Note 1)	00031	1	twelve (flat)	5E6 and later
ASP (Note 1)	00032	1	thirteen (flat)	5E6 and later
ASP (Note 1)	00033	1	fourteen (flat)	5E6 and later
ASP (Note 1)	00034	1	fifteen (flat)	5E6 and later
ASP (Note 1)	00035	1	sixteen (flat)	5E6 and later
ASP (Note 1)	00036	1	seventeen (flat)	5E6 and later
ASP (Note 1)	00037	1	eighteen (flat)	5E6 and later
ASP (Note 1)	00038	1	nineteen (flat)	5E6 and later

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ASP (Note 1)	00039	1	twenty (flat)	5E6 and later
ASP (Note 1)	00040	1	thirty (flat)	5E6 and later
ASP (Note 1)	00041	1	forty (flat)	5E6 and later
ASP (Note 1)	00042	1	fifty (flat)	5E6 and later
ASP (Note 1)	00043	1	sixty (flat)	5E6 and later
ASP (Note 1)	00044	1	seventy (flat)	5E6 and later
ASP (Note 1)	00045	1	eighty (flat)	5E6 and later
ASP (Note 1)	00046	1	ninety (flat)	5E6 and later
ASP (Note 1)	00047	11	Dial Tone	5E6 and later
ASP (Note 1)	00048	11	Recall Dial Tone	5E6 and later
ASP (Note 1)	00049	21	Reorder Tone	5E6 and later
ASP (Note 1)	00050	1	We're sorry.	5E6 and later
ASP (Note 1)	00051	3	We cannot complete your call at this time.	5E6 and later
ASP (Note 1)	00052	3	Please hang up and try your call again later.	5E6 and later
ASP (Note 1)	00053	2	The number you have dialed	5E6 and later
ASP (Note 1)	00054	2	is not correct.	5E6 and later
ASP (Note 1)	00055	2	has been disconnected.	5E6 and later
ASP (Note 1)	00056	3	The call you are attempting is not authorized.	5E6 and later
ASP (Note 1)	00057	3	We cannot complete your call as dialed.	5E6 and later
ASP (Note 1)	00058	3	Please hang up, check the number	5E6 and later
ASP (Note 1)	00059	2	Please dial now.	5E6 and later
ASP (Note 1)	00060	3	Dial your Personal Identification Number.	5E6 and later
ASP (Note 1)	00061	4	The Personal Identification Number you have dialed is not valid.	
ASP (Note 1)	00062	3	Dial your Personal Identification Number again.	5E6 and later
ASP (Note 1)	00063	2	Please dial the number to be called.	5E6 and later
ASP (Note 1)	00064	4	The digits you dialed are not a valid telephone number.	5E6 and later
ASP (Note 1)	00065	3	Please dial the number to be called again.	5E6 and later
ASP (Note 1)	00066	3	Please dial the authorization code.	5E6 and later
ASP (Note 1)	00067	4	The authorization code you have dialed is not valid.	5E6 and later
ASP (Note 1)	00068	3	Please dial the authorization code again now.	5E6 and later
ASP (Note 1)	00069	3	The number you have dialed has been changed.	5E6 and later
ASP (Note 1)	00070	4	Please call your private network operator for assistance.	5E6 and later
LASS	00001	1	zero (flat)	5E6 and later
LASS	00002	1	one (flat)	5E6 and later
LASS	00003	1	two (flat)	5E6 and later
LASS	00004	1	three (flat)	5E6 and later
LASS	00005	1	four (flat)	5E6 and later
LASS	00006	1	five (flat)	5E6 and later
LASS	00007	1	six (flat)	5E6 and later
LASS	00008	1	seven (flat)	5E6 and later
LASS	00009	1	eight (flat)	5E6 and later
LASS	00010	1	nine (flat)	5E6 and later
LASS	00011	1	oh (flat)	5E6 and later
LASS	00012	1	zero (falling)	5E6 and later
LASS	00013	1	one (falling)	5E6 and later
LASS	00014	1	two (falling)	5E6 and later
LASS	00015	1	three (falling)	5E6 and later
LASS	00016	1	four (falling)	5E6 and later
LASS	00017	1	five (falling)	5E6 and later
LASS	00018	1	six (falling)	5E6 and later
LASS	00019	1	seven (falling)	5E6 and later
LASS	00020	1	eight (falling)	5E6 and later
LASS	00021	1	nine (falling)	5E6 and later
LASS	00022	1	oh (falling)	5E6 and later
LASS	00023	2	area code	5E6 and later
LASS	00024	2	hundred	5E6 and later
LASS	00025	2	thousand	5E6 and later
LASS	00026	1	(quarter second pause)	5E6 and later
LASS	00027	1	(half second pause)	5E6 and later
LASS	00028	1	(full second pause)	5E6 and later
LASS	00029	1	ten (flat inflection)	5E6 and later
LASS	00030	1	eleven (flat inflection)	5E6 and later
LASS	00031	1	twelve (flat inflection)	5E6 and later
LASS	00032	1	thirteen (flat inflection)	5E6 and later
LASS	00033	1	fourteen (flat inflection)	5E6 and later
LASS	00034	1	fifteen (flat inflection)	5E6 and later
LASS	00035	1	sixteen (flat inflection)	5E6 and later
LASS	00036	1	seventeen (flat inflection)	5E6 and later
LASS	00037	1	eighteen (flat inflection)	5E6 and later
LASS	00038	1	nineteen (flat inflection)	5E6 and later
LASS	00039	1	twenty (flat inflection)	5E6 and later
LASS	00040	1	thirty (flat inflection)	5E6 and later

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LASS	00041	1	forty (flat inflection)	5E6 and later
LASS	00042	1	fifty (flat inflection)	5E6 and later
LASS	00043	1	sixty (flat inflection)	5E6 and later
LASS	00044	1	seventy (flat inflection)	5E6 and later
LASS	00045	1	eighty (flat inflection)	5E6 and later
LASS	00046	1	ninety (flat inflection)	5E6 and later
LASS	00289	1	is already	5E6 and later
LASS	00290	1	(Prompt tone 300ms of 400Hz tone)	5E6 and later
LASS	00291	1	(confirmation tone three 300ms of 400Hz tone)	5E6 and later
LASS	00292	1	There is	5E6 and later
LASS	00293	1	Next	5E6 and later
LASS	00294	1	Then	5E6 and later
LASS	00295	1	Please	5E6 and later
LASS	00296	1	Extension	5E6 and later
LASS	00297	2	Welcome to	5E6 and later
LASS	00298	2	Dial one	5E6 and later
LASS	00299	2	Dial zero	5E6 and later
LASS	00300	2	Dial zero one	5E6 and later
LASS	00301	2	Dial one one	5E6 and later
LASS	00302	2	Dial one two	5E6 and later
LASS	00303	2	We're sorry	5E6 and later
LASS	00304	2	Is now on	5E6 and later
LASS	00305	2	Is now off	5E6 and later
LASS	00306	2	There are no	5E6 and later
LASS	00307	1	There are	5E6 and later
LASS	00308	2	entries on your list	5E6 and later
LASS	00309	1	Including	5E6 and later
LASS	00310	2	A private entry	5E6 and later
LASS	00311	2	private entries	5E6 and later
LASS	00312	2	on your list	5E6 and later
LASS	00313	2	Please start again	5E6 and later
LASS	00314	2	Please dial now	5E6 and later
LASS	00315	2	The number you have added is	5E6 and later
LASS	00316	2	The digits you have dialed	5E6 and later
LASS	00317	2	If this is correct	5E6 and later
LASS	00318	2	If this is not correct	5E6 and later
LASS	00319	2	To add an entry	5E6 and later
LASS	00320	2	To remove an entry	5E6 and later
LASS	00321	2	Press the number sign key	5E6 and later
LASS	00322	2	Press the star key	5E6 and later
LASS	00323	4	Please try adding the number again in a few minutes	5E6 and later
LASS	00324	2	Please dial the number to be added	5E6 and later
LASS	00325	3	Please dial the number to be removed	5E6 and later
LASS	00326	3	Then press the number sign key again	5E6 and later
LASS	00327	3	Then press the star key again	5E6 and later
LASS	00328	3	Are not a valid telephone number	5E6 and later
LASS	00329	2	Are not a valid command	5E6 and later
LASS	00330	3	You have cleared the digits dialed	5E6 and later
LASS	00331	3	Your Computer Access Restriction service	5E6 and later
LASS	00332	3	Your Selective Call Forwarding service	5E6 and later
LASS	00333	3	Your Selective Call Acceptance service	5E6 and later
LASS	00334	3	Your Selective Call Rejection service	5E6 and later
LASS	00335	3	Your Selective Distinctive Alert service	5E6 and later
LASS	00336	3	Unaccepted callers will hear a recording	5E6 and later
LASS	00337	3	Unaccepted calls will be forwarded to	5E6 and later
LASS	00338	4	If you want unaccepted callers to hear a recording	5E6 and later
LASS	00339	4	If you want to forward unaccepted calls to another number	
LASS	00340	3	Please continue or dial zero for help	5E6 and later
LASS	00341	3	You must dial a phone number after dialing	5E6 and later
LASS	00342	3	The number sign key or the star key	5E6 and later
LASS	00343	3	one two or one one	5E6 and later
LASS	00344	4	Dial the number to which you want unaccepted calls forwarded	
LASS	00345	4	Please dial the number to which you want your calls forwarded	
LASS	00346	2	This is the end of your list	5E6 and later
LASS	00347	3	The number you have removed is	5E6 and later
LASS	00348	3	Your calls will be forwarded to	5E6 and later
LASS	00349	2	Please hang up now	5E6 and later
LASS	00350	4	Consult your written instructions and try again later	5E6 and later
LASS	00351	3	The number you have dialed is incorrect	5E6 and later
LASS	00352	2	Please wait for the prompt tone	5E6 and later
LASS	00353	4	Before dialing the number to be added or to be	5E6 and later

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			removed	
LASS	00354	3	To hear the entries on your list	5E6 and later
LASS	00355	4	To remove all entries dial zero eight	5E6 and later
LASS	00356	4	To remove just the private entries dial zero nine	5E6 and later
LASS	00357	2	One entry	5E6 and later
LASS	00358	2	One private entry	5E6 and later
LASS	00359	3	To turn this service off, dial 3	5E6 and later
LASS	00360	3	To turn this service on, dial 3	5E6 and later
LASS	00361	2	To save your list hang up	5E6 and later
LASS	00362	3	This service is being interrupted	5E6 and later
LASS	00363	3	Please hang up and try again in a few minutes	5E6 and later
LASS	00364	5	Your list is full. You must remove an entry before adding another	
LASS	00365	3	In order to turn-on this service	5E6 and later
LASS	00366	3	You must add entries to your list	5E6 and later
LASS	00367	3	You have dialed too few digits	5E6 and later
LASS	00368	3	You have dialed too many digits	5E6 and later
LASS	00369	4	You may dial during the announcements for faster service	5E6 and later
LASS	00370	3	You may dial now or wait for instructions	5E6 and later
LASS	00371	4	To add, remove	5E6 and later
LASS	00372	3	dial according to instructions	5E6 and later
LASS	00373	2	To hear these instructions	5E6 and later
LASS	00374	3	To hear these instructions repeated	5E6 and later
LASS	00375	4	The number you have dialed is not available with this service	
LASS	00376	3	The number is not available now	5E6 and later
LASS	00377	3	The first entry on your list is	5E6 and later
LASS	00378	3	To reject the last calling party	5E6 and later
LASS	00379	2	If this number is correct	5E6 and later
LASS	00380	3	To turn your service on dial 3	5E6 and later
LASS	00381	4	To turn your service off dial 3	5E6 and later
LASS	00382	1	more	5E6 and later
LASS	00383	2	This number	5E6 and later
LASS	00384	1	as	5E6 and later
LASS	00385	3	The number to be removed is not	5E6 and later
LASS	00386	2	private entries.	5E6 and later
LASS	00387	2	on your list.	5E6 and later
LASS	00388	3	your Computer Access Restriction service.	5E6 and later
LASS	00389	3	your Selective Call Forwarding service.	5E6 and later
LASS	00390	3	your Selective Call Acceptance service.	5E6 and later
LASS	00391	2	one private entry.	5E6 and later
LASS	00411	2	on your list.	5E7 and later
LASS	00412	2	The number	5E7 and later
LASS	00413	2	you have dialed,	5E7 and later
LASS	00414	2	is not permitted.	5E7 and later
LASS	00415	2	The digits dialed	5E7 and later
LASS	00416	2	Please continue,	5E7 and later
LASS	00417	1	or	5E7 and later
LASS	00418	3	dial zero for instructions.	5E7 and later
LASS	00419	2	hang up.	5E7 and later
LASS	00420	4	You must dial a telephone number after dialing	5E7 and later
LASS	00421	3	Your list is now empty.	5E7 and later
LASS	00422	2	dial one.	5E7 and later
LASS	00423	3	If this number is not correct,	5E7 and later
LASS	00424	2	dial zero.	5E7 and later
LASS	00425	3	To remove one or more entries,	5E7 and later
LASS	00426	3	To turn on this service,	5E7 and later
LASS	00427	4	you must add an entry to your list.	5E7 and later
LASS	00428	3	When you have finished,	5E7 and later
LASS	00429	4	of the last calling party is not available.	5E7 and later
LASS	00430	5	To delete an entry, dial zero, seven as soon as you hear it.	5E7 and later
LASS	00431	2	Repeating,	5E7 and later
LASS	00432	1	and	5E7 and later
LASS	00433	3	Dial the number to be removed,	5E7 and later
LASS	00434	4	To remove all entries, dial zero, eight,	5E7 and later
LASS	00435	5	To remove just the private entries, dial zero, nine,	5E7 and later
LASS	00436	3	Please try other options	5E7 and later
LASS	00437	3	one, two or one, one.	5E7 and later
LASS	00438	2	dial one, two.	5E7 and later
LASS	00439	2	dial one, one.	5E7 and later
LASS	00440	2	dial one, two	5E7 and later
LASS	00441	3	Dial the number to be added,	5E7 and later

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LASS	00442	3	To add the last calling party,	5E7 and later
LASS	00443	2	dial zero, one,	5E7 and later
LASS	00444	3	Your Simultanewous Ringing service.	5E16(2) and later
OSPSDA	00001	1	zero (flat)	5E5 and later
OSPSDA	00002	1	one (flat)	5E5 and later
OSPSDA	00003	1	two (flat)	5E5 and later
OSPSDA	00004	1	three (flat)	5E5 and later
OSPSDA	00005	1	four (flat)	5E5 and later
OSPSDA	00006	1	five (flat)	5E5 and later
OSPSDA	00007	1	six (flat)	5E5 and later
OSPSDA	00008	1	seven (flat)	5E5 and later
OSPSDA	00009	1	eight (flat)	5E5 and later
OSPSDA	00010	1	nine (flat)	5E5 and later
OSPSDA	00011	1	oh (flat)	5E5 and later
OSPSDA	00012	1	zero (falling)	5E5 and later
OSPSDA	00013	1	one (falling)	5E5 and later
OSPSDA	00014	1	two (falling)	5E5 and later
OSPSDA	00015	1	three (falling)	5E5 and later
OSPSDA	00016	1	four (falling)	5E5 and later
OSPSDA	00017	1	five (falling)	5E5 and later
OSPSDA	00018	1	six (falling)	5E5 and later
OSPSDA	00019	1	seven (falling)	5E5 and later
OSPSDA	00020	1	eight (falling)	5E5 and later
OSPSDA	00021	1	nine (falling)	5E5 and later
OSPSDA	00022	1	oh (falling)	5E5 and later
OSPSDA	00023	1	area code	5E5 and later
OSPSDA	00024	1	hundred	5E5 and later
OSPSDA	00025	1	thousand	5E5 and later
OSPSDA	00026	1	(quarter second pause)	5E5 and later
OSPSDA	00027	1	(half second pause)	5E5 and later
OSPSDA	00028	1	(full second pause)	5E5 and later
OSPSDA	00029	2	the number	5E5 and later
OSPSDA	00030	2	the number is	5E5 and later
OSPSDA	00031	3	the first number is	5E5 and later
OSPSDA	00032	4	an alternate number is	5E5 and later
OSPSDA	00033	3	the area code is	5E5 and later
OSPSDA	00034	4	dial one and then the number	5E5 and later
OSPSDA	00035	1	coin	5E5 and later
OSPSDA	00036	2	not a coin	5E5 and later
OSPSDA	00037	4	is assigned to a coin phone	5E5 and later
OSPSDA	00038	4	is not assigned to a coin phone	5E5 and later
OSPSDA	00039	5	the reservation and information number is	5E5 and later
OSPSDA	00040	7	the night, Saturday, Sunday and holiday numbers	5E5 and later
OSPSDA	00041	4	the number may not yet be connected	5E5 and later
OSPSDA	00042	4	you may call the number collect	5E5 and later
OSPSDA	00043	4	collect calls will be accepted	5E5 and later
OSPSDA	00044	4	to place catalog orders only	5E5 and later
OSPSDA	00045	10	in the future, you can obtain area code information without charge from your telephone directory or by calling the operator	5E5 and later
OSPSDA	00046	7	at the customer's request, the number is not published, and is not listed in our records	5E5 and later
OSPSDA	00047	3	if you have further questions	5E5 and later
OSPSDA	00048	4	a Directory Assistance Operator will return	5E5 and later
OSPSDA	00049	3	please hang up and redial	5E5 and later
OSPSDA	00050	4	the toll-free number is	5E5 and later
OSPSDA	00051	1	repeat	5E5 and later
OSPSDA	00052	3	for more information	5E5 only
OSPSDA	00052	1	high tone for ISDN ACS	5E6 and later
OSPSDA	00053	2	please call	5E5 only
OSPSDA	00054	4	or visit your local	5E5 only
OSPSDA	00055	2	phone center	5E5 only
OSPSDA	00056	4	toll free number is	5E5 only
OSPSDA	00057	2	AT&T	5E5 only
OSPSDA	00058	2	MCI	5E5 only
OSPSDA	00059	3	Teleconnect	5E5 only
OSPSDA	00060	3	U.S.Sprint	5E5 only
OSPSDA	00061	2	Teltec	5E5 only
OSPSDA	00062	2	Microtel	5E5 only
OSPSDA	00063	4	Houston NTW	5E5 only
OSPSDA	00064	4	Western Union	5E5 only
OSPSDA	00065	3	Telecom	5E5 only
OSPSDA	00066	2	GTE	5E5 only
OSPSDA	00067	4	Rochester	5E5 only

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OSPSTA	00001	1	zero (flat)	5E5 and later
OSPSTA	00002	1	one (flat)	5E5 and later
OSPSTA	00003	1	two (flat)	5E5 and later
OSPSTA	00004	1	three (flat)	5E5 and later
OSPSTA	00005	1	four (flat)	5E5 and later
OSPSTA	00006	1	five (flat)	5E5 and later
OSPSTA	00007	1	six (flat)	5E5 and later
OSPSTA	00008	1	seven (flat)	5E5 and later
OSPSTA	00009	1	eight (flat)	5E5 and later
OSPSTA	00010	1	nine (flat)	5E5 and later
OSPSTA	00011	1	oh (flat)	5E5 and later
OSPSTA	00012	1	zero (falling)	5E5 and later
OSPSTA	00013	1	one (falling)	5E5 and later
OSPSTA	00014	1	two (falling)	5E5 and later
OSPSTA	00015	1	three (falling)	5E5 and later
OSPSTA	00016	1	four (falling)	5E5 and later
OSPSTA	00017	1	five (falling)	5E5 and later
OSPSTA	00018	1	six (falling)	5E5 and later
OSPSTA	00019	1	seven (falling)	5E5 and later
OSPSTA	00020	1	eight (falling)	5E5 and later
OSPSTA	00021	1	nine (falling)	5E5 and later
OSPSTA	00022	1	oh (falling)	5E5 and later
OSPSTA	00023	1	area code	5E5 and later
OSPSTA	00024	1	hundred	5E5 and later
OSPSTA	00025	1	thousand	5E5 and later
OSPSTA	00026	1	(quarter second pause)	5E5 and later
OSPSTA	00027	1	(half second pause)	5E5 and later
OSPSTA	00028	1	(full second pause)	5E5 and later
OSPSTA	00029	1	ten (flat inflection)	5E5 and later
OSPSTA	00030	1	eleven (flat inflection)	5E5 and later
OSPSTA	00031	1	twelve (flat inflection)	5E5 and later
OSPSTA	00032	1	thirteen (flat inflection)	5E5 and later
OSPSTA	00033	1	fourteen (flat inflection)	5E5 and later
OSPSTA	00034	1	fifteen (flat inflection)	5E5 and later
OSPSTA	00035	1	sixteen (flat inflection)	5E5 and later
OSPSTA	00036	1	seventeen (flat inflection)	5E5 and later
OSPSTA	00037	1	eighteen (flat inflection)	5E5 and later
OSPSTA	00038	1	nineteen (flat inflection)	5E5 and later
OSPSTA	00039	1	twenty (flat inflection)	5E5 and later
OSPSTA	00040	1	thirty (flat inflection)	5E5 and later
OSPSTA	00041	1	forty (flat inflection)	5E5 and later
OSPSTA	00042	1	fifty (flat inflection)	5E5 and later
OSPSTA	00043	1	sixty (flat inflection)	5E5 and later
OSPSTA	00044	1	seventy (flat inflection)	5E5 and later
OSPSTA	00045	1	eighty (flat inflection)	5E5 and later
OSPSTA	00046	1	ninety (flat inflection)	5E5 and later
OSPSTA	00047	4	Please dial your card number - used as a prefix	5E5 and later
OSPSTA	00048	4	or zero for an operator now.	5E5 and later
OSPSTA	00049	1	again now.	5E5 and later
OSPSTA	00050	4	The card number you have dialed is not valid.	5E5 and later
OSPSTA	00051	4	Please hang up and dial again	5E5 and later
OSPSTA	00052	1	Thank-you.	5E5 and later
OSPSTA	00053	4	Please dial the number you are calling.	5E5 and later
OSPSTA	00054	4	The number you have called is not correct.	5E5 and later
OSPSTA	00055	2	Please dial now.	5E5 and later
OSPSTA	00056	4	The number you have dialed is not correct.	5E5 and later
OSPSTA	00057	1	Valid number	5E5 and later
OSPSTA	00058	1	Invalid number	5E5 and later
OSPSTA	00059	2	Unrestricted PIN	5E5 and later
OSPSTA	00060	2	Restricted PIN	5E5 and later
OSPSTA	00061	2	RAO	5E5 and later
OSPSTA	00062	1	unavailable	5E5 and later
OSPSTA	00063	2	Please dial again now.	5E5 and later
OSPSTA	00064	2	Please hang up.	5E5 and later
OSPSTA	00065	4	Please hang up and dial direct.	5E5 and later
OSPSTA	00066	7	This number cannot be dialed as a sequence call.	5E5 and later
OSPSTA	00067	4	Thank-you for using AT&T.	5E5 and later
OSPSTA	00068	3	You may dial another	5E5 and later
OSPSTA	00069	2	AT&T handled call - flat inflection	5E5 and later
OSPSTA	00070	2	local phone company call - flat inflection	5E5 and later
OSPSTA	00071	1	now	5E5 and later
OSPSTA	00072	7	You may continue your sequence calling only with another	
OSPSTA	00073	5	Your call cannot be completed at this time.	5E5 and later
OSPSTA	00074	5	Please hang up and try your call again later.	5E5 and later

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OSPSTA	00075	5	Access to AT&T network is not authorized. Please call	
OSPSTA	00076	2	Billing allowed	5E5 and later
OSPSTA	00077	2	Invalid billing	5E5 and later
OSPSTA	00078	4	You may dial another number now.	5E5 and later
OSPSTA	00079	1	bong	5E5 and later
OSPSTA	00080	4	Please dial your card number. (standalone)	5E5 and later
OSPSTA	00081	2	AT&T handled call (falling)	5E5 and later
OSPSTA	00082	2	local phone company call (falling)	5E5 and later
OSPSTA	00083	1	dollar (flat)	5E5 and later
OSPSTA	00084	1	dollars (flat)	5E5 and later
OSPSTA	00085	1	dollar (falling)	5E5 and later
OSPSTA	00086	1	dollars (falling)	5E5 and later
OSPSTA	00087	1	cent (flat)	5E5 and later
OSPSTA	00088	1	cents (flat)	5E5 and later
OSPSTA	00089	1	cent (falling)	5E5 and later
OSPSTA	00090	1	cents (falling)	5E5 and later
OSPSTA	00091	1	second (flat)	5E5 and later
OSPSTA	00092	1	seconds (flat)	5E5 and later
OSPSTA	00093	1	second (falling)	5E5 and later
OSPSTA	00094	1	seconds (falling)	5E5 and later
OSPSTA	00095	1	minute (flat)	5E5 and later
OSPSTA	00096	1	minutes (flat)	5E5 and later
OSPSTA	00097	1	minute (falling)	5E5 and later
OSPSTA	00098	1	minutes (falling)	5E5 and later
OSPSTA	00099	1	for the	5E5 and later
OSPSTA	00100	1	credit (flat)	5E5 and later
OSPSTA	00101	1	credit (falling)	5E5 and later
OSPSTA	00102	1	please	5E5 and later
OSPSTA	00103	1	first	5E5 and later
OSPSTA	00104	1	more (flat)	5E5 and later
OSPSTA	00105	1	more (falling)	5E5 and later
OSPSTA	00106	1	and	5E5 and later
OSPSTA	00107	1	coin	5E5 and later
OSPSTA	00108	1	test	5E5 and later
OSPSTA	00109	1	nickel	5E5 and later
OSPSTA	00110	1	dime	5E5 and later
OSPSTA	00111	1	quarter	5E5 and later
OSPSTA	00112	1	past	5E5 and later
OSPSTA	00113	2	Please deposit	5E5 and later
OSPSTA	00114	2	has ended	5E5 and later
OSPSTA	00115	4	Please signal when through.	5E5 and later
OSPSTA	00116	2	plus tax for	5E5 and later
OSPSTA	00117	2	the charges are	5E5 and later
OSPSTA	00118	2	you have	5E5 and later
OSPSTA	00119	2	for this call	5E5 and later
OSPSTA	00120	2	towards overtime	5E5 and later
OSPSTA	00121	2	Thank you (flat)	5E5 and later
OSPSTA	00122	2	for using	5E5 and later
OSPSTA	00123	2	Timing error.	5E5 and later
OSPSTA	00124	1	(alerting tone)	5E5 and later
OSPSTA	00125	4	AT&T	5E5 and later
OSPSTA	00126	4	Northwestern Bell	5E5 and later
OSPSTA	00127	4	Ohio Bell	5E5 and later
OSPSTA	00128	4	New Jersey Bell	5E5 and later
OSPSTA	00129	4	Wisconsin Telephone	5E5 and later
OSPSTA	00130	4	C&P	5E5 and later
OSPSTA	00131	3	your local telephone company	5E5 and later
OSPSTA	00132	2	GTE	5E5 and later
OSPSTA	00133	2	for calling	5E5 and later
OSPSTA	00134	2	For this call	5E5 and later
OSPSTA	00135	3	the AT&T card number	5E5 and later
OSPSTA	00136	3	the calling card number	5E5 and later
OSPSTA	00137	4	you have dialed is not allowed	5E5 and later
OSPSTA	00138	2	Please dial	5E5 and later
OSPSTA	00139	6	your local telephone company calling card number now	
OSPSTA	00140	4	your AT&T card number now	5E5 and later
OSPSTA	00141	2	or arrange	5E5 and later
OSPSTA	00142	2	other billing	5E5 and later
OSPSTA	00143	3	other AT&T billing	5E5 and later
OSPSTA	00144	4	Please hang up and arrange	5E5 and later
OSPSTA	00145	5	Please dial another telephone number now	5E5 and later
OSPSTA	00146	9	The number you dialed cannot be billed to this AT&T card	
OSPSTA	00147	2	RPC	5E5 and later
OSPSTA	00148	3	the card number	5E5 and later

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OSPSTA	00149	6	This call cannot be billed to this AT&T card	5E5 and later
OSPSTA	00150	6	We're sorry, your card number is invalid	5E5 and later
OSPSTA	00151	6	Please redial your complete card number now	5E5 and later
OSPSTA	00152	2	Number invalid	5E5 and later
OSPSTA	00153	2	Number valid	5E5 and later
OSPSTA	00154	2	subaccount	5E5 and later
OSPSTA	00155	3	Thank you for using	5E5 and later
OSPSTA	00156	2	We're sorry	5E5 and later
OSPSTA	00157	7	The service you have requested is not available	5E5 and later
OSPSTA	00158	2	Please hold for	5E6 and later
OSPSTA	00159	1	operator.	5E6 and later
OSPSTA	00160	1	Please hold,	5E6 and later
OSPSTA	00161	3	operator will be connected to this call promptly.	5E6 and later
OSPSTA	00162	1	an	5E6 and later
OSPSTA	00163	2	a telephone company	5E6 and later
OSPSTA	00164	1	an AT&T	5E6 and later
OSPSTA	00165	2	a United Telephone	5E6 and later
OSPSTA	00166	2	a New York Telephone	5E6 and later
OSPSTA	00167	2	a New England Telephone	5E6 and later
OSPSTA	00168	2	an S.N.E.T.	5E6 and later
OSPSTA	00169	2	a New Jersey Bell	5E6 and later
OSPSTA	00170	2	a Cincinnati Bell	5E6 and later
OSPSTA	00171	2	a US West Communications	5E6 and later
OSPSTA	00172	1	a GTE	5E6 and later
OSPSTA	00173	2	a Pacific Bell	5E6 and later
OSPSTA	00174	2	a Nevada Bell	5E6 and later
OSPSTA	00175	1	hour (flat)	5E6 and later
OSPSTA	00176	1	hour. (falling)	5E6 and later
OSPSTA	00177	1	hours (flat)	5E6 and later
OSPSTA	00178	1	hours. (falling)	5E6 and later
OSPSTA	00179	2	the next available	5E6 and later
OSPSTA	00180	1	ACS Tone	5E6 and later
OSPSTA	00181	1	for the first	5E6 and later
OSPSTA	00182	1	for the past	5E6 and later
OSPSTA	00183	1	a Northwestern Bell	5E6 and later
OSPSTA	00184	1	an Ohio Bell	5E6 and later
OSPSTA	00185	2	a Wisconsin Telephone	5E6 and later
OSPSTA	00186	1	a C & P	5E6 and later
OSPSTA	00187	2	a Whidbey Telephone Company	5E6 and later
OSPSTA	00188	2	a Roseville Telephone company	5E6 and later
OSPSTA	00189	1	an Illinois Bell	5E6 and later
OSPSTA	00190	1	a Michigan Bell	5E6 and later
OSPSTA	00191	1	a Southwestern Bell	5E6 and later
OSPSTA	00192	2	a Rochester Telephone	5E6 and later
OSPSTA	00193	1	United Telephone	5E6 and later
OSPSTA	00194	1	New York Telephone	5E6 and later
OSPSTA	00195	2	New England Telephone	5E6 and later
OSPSTA	00196	1	S.N.E.T.	5E6 and later
OSPSTA	00197	1	Cincinnati Bell	5E6 and later
OSPSTA	00198	2	U.S. West Communications	5E6 and later
OSPSTA	00199	1	Pacific Bell	5E6 and later
OSPSTA	00200	1	Nevada Bell	5E6 and later
OSPSTA	00201	2	Whidbey Telephone company	5E6 and later
OSPSTA	00202	2	Roseville Telephone	5E6 and later
OSPSTA	00203	1	Illinois Bell	5E6 and later
OSPSTA	00204	1	Michigan Bell	5E6 and later
OSPSTA	00205	1	Southwestern Bell	5E6 and later
OSPSTA	00206	2	Rochester Telephone	5E6 and later
OSPSTA	00207	1	...and PIN...	5E7 and later
OSPSTA	00208	1	...and PIN.	5E7 and later
OSPSTA	00209	4	...your AT &T card number and PIN now	5E7 and later
OSPSTA	00210	3	This call cannot be billed to this card	5E7 and later
OSPSTA	00211	4	Please redial your complete card number and PIN now	5E7 and later
OSPSTA	00212	4	Validation service is not provided for this card	5E7 and later
OSPSTA	00213	3	This card cannot be used for this service	5E7 and later
OSPSTA	00214	3	...a different card number and PIN now	5E7 and later
OSPSTA	00215	3	Please dial your PIN now	5E7 and later
OSPSTA	00216	3	Please hang up and contact your card issuer	5E7 and later
OSPSTA	00256	1	Southern Bell.	5E7 and later
OSPSTA	00257	1	a Southern Bell	5E7 and later
OSPSTA	00258	1	South Central Bell	5E7 and later
OSPSTA	00259	1	a South Central Bell	5E7 and later
OSPSTA	00260	2	Buzz..Buzz (2 busy tones)	5E7 and later
OSPSTA	00261	3	Ring (Audible Ring)	5E7 and later
OSPSTA	00262	1	Please don't hang up.	5E7 and later

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OSPSTA	00263	1	The phone is busy	5E7 and later
OSPSTA	00264	2	Your party is not answering	5E7 and later
OSPSTA	00265	1	but	5E7 and later
OSPSTA	00266	1	for a charge	5E7 and later
OSPSTA	00267	1	for a charge.	5E7 and later
OSPSTA	00268	2	for an additional charge	5E7 and later
OSPSTA	00269	2	for an additional charge.	5E7 and later
OSPSTA	00270	1	of	5E7 and later
OSPSTA	00271	1	you may leave a message	5E7 and later
OSPSTA	00272	1	you may leave a message.	5E7 and later
OSPSTA	00273	2	you may leave a voice message	5E7 and later
OSPSTA	00274	2	you may leave a voice message.	5E7 and later
OSPSTA	00275	2	using a Messaging Service.	5E7 and later
OSPSTA	00276	2	using a Voice Messaging Service.	5E7 and later
OSPSTA	00277	2	For AT&T's	5E7 and later
OSPSTA	00278	1	To leave a message	5E7 and later
OSPSTA	00279	3	using AT&T's VoiceMark Messaging Service	5E7 and later
OSPSTA	00280	2	using AT&T's	5E7 and later
OSPSTA	00281	1	Voice	5E7 and later
OSPSTA	00282	1	Messaging Service	5E7 and later
OSPSTA	00283	1	press pound	5E7 and later
OSPSTA	00284	1	press star	5E7 and later
OSPSTA	00285	4	followed by the Access Code of your Messaging Service Provider.	5E7 and later
OSPSTA	00286	4	followed by Service Code of another Messaging Service provider.	5E7 and later
OSPSTA	00287	4	followed by the Access Code of another Messaging Service provider	5E7 and later
OSPSTA	00288	1	or	5E7 and later
OSPSTA	00289	1	USA Direct	5E7 and later
OSPSTA	00289	1	USA Direct	5E7 only
OSPSTA	00290	3	your local telephone company calling card number	5E8 and later
OSPSTA	00291	2	your AT&T card number	5E8 and later
OSPSTA	00292	3	Please dial another PIN	5E8 and later
OSPSTA	00293	4	or press pound to retain your previous PIN.	5E8 and later
OSPSTA	00294	2	The PIN	5E8 and later
OSPSTA	00295	3	alerting tone for CAS PL	5E8 and later
OSPSTA	00296	3	Due to calling card restrictions	5E8 and later
OSPSTA	00297	3	this call will be terminated in	5E8 and later
OSPSTA	00298	2	From this phone	5E8 and later
OSPSTA	00299	1	your call	5E8 and later
OSPSTA	00300	2	to this nine hundred number	5E8 and later
OSPSTA	00301	3	must be billed to a card number.	5E8 and later
OSPSTA	00302	2	cannot be completed	5E8 and later
OSPSTA	00303	2	from this phone.	5E8 and later
OSPSTA	00304	3	Please redial your card number	5E8 and later
OSPSTA	00305	3	or press zero for an operator now.	5E8 and later
OSPSTA	00306	4	Please hold for an operator or hang up now	5E8 and later
OSPSTA	00307	1	hour (flat)	5E8 and later
OSPSTA	00308	1	hour.(falling)	5E8 and later
OSPSTA	00309	1	hours (flat)	5E8 and later
OSPSTA	00310	1	hours.(falling)	5E8 and later
OSPSTA	00311	1	for the first	5E8 and later
OSPSTA	00312	1	for the past	5E8 and later
OSPSTA	00313	2	Alascom	5E9(1) and later
OSPSTA	00314	2	an Alascom	5E9(1) and later
OSPSTA	00315	2	Lincoln Telephone	5E9(1) and later
OSPSTA	00316	3	a Lincoln Telephone	5E9(1) and later
OSPSTA	00317	4	The area code and seven-digit number that you are calling	5E9(1) and later
OSPSTA	00318	2	An area code must	5E9(1) and later
OSPSTA	00319	3	be dialed to complete this call	5E9(1) and later
OSPSTA	00320	1	now	5E9(1) and later
OSPSTA	00321	2	Collect check.	5E9(1) and later
OSPSTA	00322	2	Third number check.	5E9(1) and later
OSPSTA	00323	2	Unrecognized.	5E9(1) and later
OSPSTA	00324	2	Denied billing.	5E9(1) and later
PVN	Note 1			
RAS	00001	1	zero (flat)	5E5 and later
RAS	00002	1	one (flat)	5E5 and later
RAS	00003	1	two (flat)	5E5 and later
RAS	00004	1	three (flat)	5E5 and later
RAS	00005	1	four (flat)	5E5 and later
RAS	00006	1	five (flat)	5E5 and later

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RAS	00007	1	six (flat)	5E5 and later
RAS	00008	1	seven (flat)	5E5 and later
RAS	00009	1	eight (flat)	5E5 and later
RAS	00010	1	nine (flat)	5E5 and later
RAS	00011	1	oh (flat)	5E5 and later
RAS	00012	1	zero (falling)	5E5 and later
RAS	00013	1	one (falling)	5E5 and later
RAS	00014	1	two (falling)	5E5 and later
RAS	00015	1	three (falling)	5E5 and later
RAS	00016	1	four (falling)	5E5 and later
RAS	00017	1	five (falling)	5E5 and later
RAS	00018	1	six (falling)	5E5 and later
RAS	00019	1	seven (falling)	5E5 and later
RAS	00020	1	eight (falling)	5E5 and later
RAS	00021	1	nine (falling)	5E5 and later
RAS	00022	1	oh (falling)	5E5 and later
RAS	00023	2	area code	5E5 and later
RAS	00024	2	hundred	5E5 and later
RAS	00025	2	thousand	5E5 and later
RAS	00026	1	(quarter second pause)	5E5 and later
RAS	00027	1	(half second pause)	5E5 and later
RAS	00028	1	(full second pause)	5E5 and later
RAS	00029	1	ten (flat inflection)	5E5 and later
RAS	00030	1	eleven (flat inflection)	5E5 and later
RAS	00031	1	twelve (flat inflection)	5E5 and later
RAS	00032	1	thirteen (flat inflection)	5E5 and later
RAS	00033	1	fourteen (flat inflection)	5E5 and later
RAS	00034	1	fifteen (flat inflection)	5E5 and later
RAS	00035	1	sixteen (flat inflection)	5E5 and later
RAS	00036	1	seventeen (flat inflection)	5E5 and later
RAS	00037	1	eighteen (flat inflection)	5E5 and later
RAS	00038	1	nineteen (flat inflection)	5E5 and later
RAS	00039	1	twenty (flat inflection)	5E5 and later
RAS	00040	1	thirty (flat inflection)	5E5 and later
RAS	00041	1	forty (flat inflection)	5E5 and later
RAS	00042	1	fifty (flat inflection)	5E5 and later
RAS	00043	1	sixty (flat inflection)	5E5 and later
RAS	00044	1	seventy (flat inflection)	5E5 and later
RAS	00045	1	eighty (flat inflection)	5E5 and later
RAS	00046	1	ninety (flat inflection)	5E5 and later
RAS	00047	1	star (flat inflection)	5E5 and later
RAS	00048	1	star (falling inflection)	5E5 and later
RAS	00049	1	pound (flat inflection)	5E5 and later
RAS	00050	1	pound (falling inflection)	5E5 and later
RAS	00051	3	This is your Remote Access Service.	5E5 and later
RAS	00052	3	Please use a touch tone telephone only	5E5 and later
RAS	00053	6	You may now dial your seven digit home or office telephone number	
RAS	00054	2	Please dial now.	5E5 and later
RAS	00055	2	The number you have dialed is	5E5 and later
RAS	00056	3	your Personal Identification Number.	5E5 and later
RAS	00057	2	and enter a new number.	5E5 and later
RAS	00058	3	Please dial a feature code now.	5E5 and later
RAS	00059	2	You have accessed the	5E5 and later
RAS	00060	2	Call Forwarding Activation	5E5 and later
RAS	00061	3	Call Forwarding Deactivation	5E5 and later
RAS	00062	1	feature.	5E5 and later
RAS	00063	3	To confirm this feature, dial	5E5 and later
RAS	00064	3	To try a new feature dial	5E5 and later
RAS	00065	1	We're sorry.	5E5 and later
RAS	00066	3	We cannot complete your call as dialed.	5E5 and later
RAS	00067	2	Please hang up and dial again.	5E5 and later
RAS	00068	4	Or for more information, consult your written instructions.	5E5 and later
RAS	00069	3	Dial your Personal Identification Number.	5E5 and later
RAS	00070	2	The number you dialed,	5E5 and later
RAS	00071	4	is not a valid feature code for remote access in this area	
RAS	00072	4	For more information, please consult your written instructions.	5E5 and later
RAS	00073	4	Dial the business extension which has remote access service.	
RAS	00074	4	You may hang up, or dial another feature code now.	5E5 and later

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RAS	00075	3	is not presently authorized to	5E5 and later
RAS	00076	5	For more information, please consult your local telephone office.	5E5 and later
RAS	00077	3	This is your call forwarding service	5E5 and later
RAS	00078	4	Please dial the number to which you want your calls forwarded.	
RAS	00079	7	If you must dial 1 or and area code to reach this number then do	
RAS	00080	3	Your calls will be forwarded to	5E5 and later
RAS	00081	3	If this number is correct, dial	5E5 and later
RAS	00082	3	If this number is not correct, dial	5E5 and later
RAS	00083	3	Your calls are now forwarded.	5E5 and later
RAS	00084	3	Your calls are currently forwarded to	5E5 and later
RAS	00085	6	You must deactivate call forwarding before you activate it again.	
RAS	00086	4	You may hang up or dial the deactivation code now.	5E5 and later
RAS	00087	3	You have not dialed enough digits.	5E5 and later
RAS	00088	2	Please start again.	5E5 and later
RAS	00089	5	We cannot activate your call forwarding service because too may..	
RAS	00090	3	Please hang up now and try again later.	5E5 and later
RAS	00091	4	Your call can't be completed do to temporary service problems.	
RAS	00092	3	Please hang up and try again later.	5E5 and later
RAS	00093	3	Your calls are not currently being forwarded.	5E5 and later
RAS	00094	2	The digits you dialed	5E5 and later
RAS	00095	3	are not a valid telephone number.	5E5 and later
RAS	00096	2	Please start again.	5E5 and later
RAS	00097	3	Your calls will no longer be forwarded.	5E5 and later
RAS	00098	2	(Prompt tone 300ms of 400HZ tone)	5E5 and later
RAS	00099	2	(ACS tone 1 sec. of 480HZ tone)	5E5 and later
RAS	00100	5	For faster service, please enter the pound sign when you are done	5E5 and later
RAS	00101	2	Please dial only,	5E5 and later
RAS	00102	1	digits.	5E5 and later
RAS	00103	2	Call forwarding	5E5 and later
RAS	00178	6	You may now dial your home or office telephone number	5E12 and later
RAS	00179	3	Simultaneous Ringing Activation	5E16(2) and later
RAS	00180	3	Simultaneous Ringing deactivation	5E16(2) and later
RAS	00181	4	Your Simultaneous Ringing feature is now activated	5E16(2) and later
RAS	00182	5	Your Simultaneous Ringing feature is now deactivated	5E16(2) and later
TACCT	00001	1	zero (flat)	5E11 and later
TACCT	00002	1	one (flat)	5E11 and later
TACCT	00003	1	two (flat)	5E11 and later
TACCT	00004	1	three (flat)	5E11 and later
TACCT	00005	1	four (flat)	5E11 and later
TACCT	00006	1	five (flat)	5E11 and later
TACCT	00007	1	six (flat)	5E11 and later
TACCT	00008	1	seven (flat)	5E11 and later
TACCT	00009	1	eight (flat)	5E11 and later
TACCT	00010	1	nine (flat)	5E11 and later
TACCT	00011	1	oh (flat)	5E11 and later
TACCT	00012	1	zero (falling)	5E11 and later
TACCT	00013	1	one (falling)	5E11 and later
TACCT	00014	1	two (falling)	5E11 and later
TACCT	00015	1	three (falling)	5E11 and later
TACCT	00016	1	four (falling)	5E11 and later
TACCT	00017	1	five (falling)	5E11 and later
TACCT	00018	1	six (falling)	5E11 and later
TACCT	00019	1	seven (falling)	5E11 and later
TACCT	00020	1	eight (falling)	5E11 and later
TACCT	00021	1	nine (falling)	5E11 and later
TACCT	00022	1	oh (falling)	5E11 and later
TACCT	00023	1	area code	5E11 and later
TACCT	00024	1	hundred	5E11 and later
TACCT	00025	1	thousand	5E11 and later
TACCT	00026	1	quarter second pause	5E11 and later
TACCT	00027	1	half second pause	5E11 and later
TACCT	00028	1	full second pause	5E11 and later
TACCT	00029	1	ten	5E11 and later
TACCT	00030	1	eleven	5E11 and later

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TACCT	00031	1	twelve	5E11 and later
TACCT	00032	1	thirteen	5E11 and later
TACCT	00033	1	fourteen	5E11 and later
TACCT	00034	1	fifteen	5E11 and later
TACCT	00035	1	sixteen	5E11 and later
TACCT	00036	1	seventeen	5E11 and later
TACCT	00037	1	eighteen	5E11 and later
TACCT	00038	1	nineteen	5E11 and later
TACCT	00039	1	twenty	5E11 and later
TACCT	00040	1	thirty	5E11 and later
TACCT	00041	1	forty	5E11 and later
TACCT	00042	1	fifty	5E11 and later
TACCT	00043	1	sixty	5E11 and later
TACCT	00044	1	seventy	5E11 and later
TACCT	00045	1	eighty	5E11 and later
TACCT	00046	1	ninety	5E11 and later
TACCT	00047	2	Please enter your	5E11 and later
TACCT	00048	2	Digit account code	5E11 and later
TACCT	00049	1	Thank you	5E11 and later

Note 1: ASP applications were named PVN in 5E6 - 5E7.

Figure 1 DEFAULT INPUT DATA PROVIDED BY ODA

APPLICATION	PHRASE	DURATION	PHRASE TEXT	SOFTWARE RELEASE
LASS	65	1	We're sorry.	5E6 only
LASS	98	2	(Prompt tone 300ms of 400Hz tone)	5E6 only
LASS	104	1	This is	5E6 only
LASS	105	2	your automatic callback service.	5E6 only
LASS	106	2	your call return service.	5E6 only
LASS	107	3	The number of your last incoming call is	5E6 only
LASS	108	3	a private number and cannot be announced.	5E6 only
LASS	109	2	The call was received	5E6 only
LASS	110	1	at	5E6 only
LASS	111	2	To activate	5E6 only
LASS	112	2	automatic callback	5E6 only
LASS	113	2	call return	5E6 only
LASS	114	2	dial 1	5E6 only
LASS	115	2	otherwise hang up.	5E6 only
LASS	116	3	Please dial 1 now or hang up.	5E6 only
LASS	117	3	There will be a charge for this service.	5E6 only
LASS	118	2	Please hang up now.	5E6 only
LASS	119	3	You must dial one to activate	5E6 only
LASS	120	1	the callback.	5E6 only
LASS	121	2	the call return.	5E6 only
LASS	122	3	your customer originated trace service.	5E6 only
LASS	123	2	your call trace service.	5E6 only
LASS	124	3	The charge for this service will be	5E6 only
LASS	125	1	dollar (flat)	5E6 only
LASS	126	1	dollars (flat)	5E6 only
LASS	127	1	dollar. (falling)	5E6 only
LASS	128	1	dollars.(falling)	5E6 only
LASS	129	1	and	5E6 only
LASS	130	1	cents. (falling)	5E6 only
LASS	131	3	To trace your last incoming call,	5E6 only
LASS	132	3	You must dial one to trace the call.	5E6 only
LASS	133	1	January	5E6 only
LASS	134	1	February	5E6 only
LASS	135	1	March	5E6 only
LASS	136	1	April	5E6 only
LASS	137	1	May	5E6 only
LASS	138	1	June	5E6 only
LASS	139	1	July	5E6 only
LASS	140	1	August	5E6 only
LASS	141	1	September	5E6 only
LASS	142	1	October	5E6 only
LASS	143	1	November	5E6 only
LASS	144	1	December	5E6 only
LASS	145	1	a.m.	5E6 only
LASS	146	1	p.m.	5E6 only
LASS	147	1	1st	5E6 only
LASS	148	1	2nd	5E6 only
LASS	149	1	3rd	5E6 only

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LASS	150	1	4th	5E6 only
LASS	151	1	5th	5E6 only
LASS	152	1	6th	5E6 only
LASS	153	1	7th	5E6 only
LASS	154	1	8th	5E6 only
LASS	155	1	9th	5E6 only
LASS	156	1	10th	5E6 only
LASS	157	1	11th	5E6 only
LASS	158	1	12th	5E6 only
LASS	159	1	13th	5E6 only
LASS	160	1	14th	5E6 only
LASS	161	1	15th	5E6 only
LASS	162	1	16th	5E6 only
LASS	163	1	17th	5E6 only
LASS	164	1	18th	5E6 only
LASS	165	1	19th	5E6 only
LASS	166	1	20th	5E6 only
LASS	167	1	30th	5E6 only
LASS	168	3	Consult your written instructions and try again later.	5E6 only
LASS	169	3	If you choose to trace your last incoming call,	5E6 only
LASS	170	4	you will be charged a fee as described in your instruction guide.	5E6 only
LASS	171	1	extension	5E6 only
LASS	172	2	Customer Originated Trace.	5E6 only
LASS	173	3	To trace the last call received,	5E6 only
LASS	174	2	The last incoming number was	5E6 only
LASS	175	2	This call was received on	5E6 only
LASS	176	3	To activate Automatic Recall,	5E6 only
LASS	177	3	The number of your last incoming call was	5E6 only

Figure 2 SAMPLE DATA FOR LIMITED 2-LEVEL COT/AC SECURED FEATURE

APPLICATION	PHRASE	DURATION	PHRASE TEXT	SOFTWARE RELEASE
LASS	65	1	We're sorry.	5E6 only
LASS	98	2	(Prompt tone 300ms of 400Hz tone)	5E6 only
LASS	104	1	This is	5E6 only
LASS	105	2	your automatic callback service.	5E6 only
LASS	106	2	your call return service.	5E6 only
LASS	107	3	The number of your last incoming call is	5E6 only
LASS	108	3	a private number and cannot be announced.	5E6 only
LASS	109	2	The call was received	5E6 only
LASS	110	1	at	5E6 only
LASS	111	2	To activate	5E6 only
LASS	112	2	automatic callback	5E6 only
LASS	113	2	call return	5E6 only
LASS	114	2	dial 1	5E6 only
LASS	115	2	otherwise hang up.	5E6 only
LASS	116	3	Please dial 1 now or hang up.	5E6 only
LASS	117	3	There will be a charge for this service.	5E6 only
LASS	118	2	Please hang up now.	5E6 only
LASS	119	3	You must dial one to activate	5E6 only
LASS	120	1	the callback.	5E6 only
LASS	121	2	the call return.	5E6 only
LASS	122	3	your customer originated trace service.	5E6 only
LASS	123	2	your call trace service.	5E6 only
LASS	124	3	The charge for this service will be	5E6 only
LASS	125	1	dollar (flat)	5E6 only
LASS	126	1	dollars (flat)	5E6 only
LASS	127	1	dollar. (falling)	5E6 only
LASS	128	1	dollars.(falling)	5E6 only
LASS	129	1	and	5E6 only
LASS	130	1	cents. (falling)	5E6 only
LASS	131	3	To trace your last incoming call,	5E6 only
LASS	132	3	You must dial one to trace the call.	5E6 only
LASS	133	1	January	5E6 only
LASS	134	1	February	5E6 only
LASS	135	1	March	5E6 only
LASS	136	1	April	5E6 only
LASS	137	1	May	5E6 only
LASS	138	1	June	5E6 only
LASS	139	1	July	5E6 only
LASS	140	1	August	5E6 only
LASS	141	1	September	5E6 only

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LASS	142	1	October	5E6 only
LASS	143	1	November	5E6 only
LASS	144	1	December	5E6 only
LASS	145	1	a.m.	5E6 only
LASS	146	1	p.m.	5E6 only
LASS	147	1	1st	5E6 only
LASS	148	1	2nd	5E6 only
LASS	149	1	3rd	5E6 only
LASS	150	1	4th	5E6 only
LASS	151	1	5th	5E6 only
LASS	152	1	6th	5E6 only
LASS	153	1	7th	5E6 only
LASS	154	1	8th	5E6 only
LASS	155	1	9th	5E6 only
LASS	156	1	10th	5E6 only
LASS	157	1	11th	5E6 only
LASS	158	1	12th	5E6 only
LASS	159	1	13th	5E6 only
LASS	160	1	14th	5E6 only
LASS	161	1	15th	5E6 only
LASS	162	1	16th	5E6 only
LASS	163	1	17th	5E6 only
LASS	164	1	18th	5E6 only
LASS	165	1	19th	5E6 only
LASS	166	1	20th	5E6 only
LASS	167	1	30th	5E6 only
LASS	168	3	Consult your written instructions and try again later.	5E6 only
LASS	169	3	If you choose to trace your last incoming call,	5E6 only
LASS	170	4	you will be charged a fee as described in your instruction guide.	5E6 only
LASS	171	1	extension	5E6 only
LASS	172	2	Customer Originated Trace.	5E6 only
LASS	173	3	To trace the last call received,	5E6 only
LASS	174	2	The last incoming number was	5E6 only
LASS	175	2	This call was received on	5E6 only
LASS	176	3	To activate Automatic Recall,	5E6 only
LASS	177	3	The number of your last incoming call was	5E6 only

Figure 3 SAMPLE DATA FOR LIMITED 2-LEVEL COT/AC SECURED FEATURE

---

phrase 5ESS Switch _
(5534) OFFICE DATA ADMINISTRATION
ANNOUNCEMENT PHRASE LIST

*1. PHRASE ID _____
*2. APPLICATION OSPSDA
#3. DURATION ____
#4. PHRASE TEXT _____

Figure 4 SAMPLE PHRASE FORM 5E9(2) - 5E12 SOFTWARE RELEASES

---

phrase 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5534) ANNOUNCEMENT PHRASE LIST

*1. PHRASE ID _____
*2. APPLICATION OSPSDA
#3. DURATION ____
#4. PHRASE TEXT

_____

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5. LANGUAGE CODE ___

Figure 5 SAMPLE PHRASE FORM 5E13 AND 5E14 SOFTWARE RELEASES

phrase 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5534) ANNOUNCEMENT PHRASE LIST

*1. PHRASE ID _____
*2. APPLICATION OSPSDA
#3. DURATION ____
#4. PHRASE TEXT
_____

Figure 6 SAMPLE PHRASE FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5AI: 5535 RECORD
NETWORK ANNOUNCEMENTS FORM - SSPANN

1. GENERAL

The 5535 Record is available with 5E4(2) and later Software Releases. It is used to specify a failure announcement code and either the route index to an announcement trunk group to be used to supply the appropriate message or pointers to customized header and trailer announcements.

The customized header and trailer announcements, specified by CUST HDRID and CUST TRLID, are for use by ASP (Advanced Services Platform) announcement codes. With 5E9(2) and earlier, the ANNC RTI is not used by ASP announcement codes. The route index for the ASP DSU2/RAF is derived from the FIXRT form (5301-1 Record) where FIXED ROUTE TYPE is "NSANNC". With 5E10 and later, ASP announcement codes may specify an ANNC RTI. Specifying an ANNC RTI allows routing to 13A announcements.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * ANNC CODE

Description: Enter the integer value of the Network Announcement Code that provides the appropriate failure message.

The announcement code will be determined by the SCP (Service Control Point) location and returned to the office where the call was routed from. Each announcement code, that can be returned by the SCP, must have either an associated route index or an associated customized header ID specified.

Required Field.
Valid Entries:
- For 5E11 and earlier: 0 - 255
- For 5E12 and later: 0 - 65535

2.3 SM

Description: This field is used only by Recent Change.

2.4 ANNC RTI

Description: Enter the route index number of the trunk group that will route the caller to the appropriate announcement.

Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules

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The route index must appear on an RTIDX form (5303 Record) and the associated trunk group must be defined on a TKGRP form (5202 Record).

If a CUST HDRID is not entered, then an ANNC RTI must be entered.

2.5 CUST HDRID

Description: Enter the customized announcement header ID associated with this ANNC CODE. The specified announcement header will be played when this ANNC CODE is received back from the SCP.
Valid Entries:
- For 5E11 and earlier: 1 - 255
- For 5E12 and later: 1 - 65535

Data Rules:

Since a CUST HDRID is only used by ASP (Advanced Services Platform, previously Private Virtual Network, PVN) located on an SSP (Service Switching Point), a CUST HDRID cannot be entered unless PVN OFC on the OFCOPT form (5509 Record) is set to "SSP".

Every CUST HDRID must be defined as the HEADER ID on an ANNHD form (5531 Record) where APPLICATION is set to "ASP". If an ANNC RTI is not entered, then a CUST HDRID must be entered.

2.6 CUST TRLID

Description: Enter the customized announcement trailer ID associated with this ANNC CODE. The specified announcement trailer will be played when this ANNC CODE is received back from the SCP.
Valid Entries:
- For 5E11 and earlier: 1 - 255
- For 5E12 and later: 1 - 65535

Data Rules:

Since a CUST TRLID is only used by ASP (Advanced Services Platform; previously Private Virtual Network, PVN) located on a SSP (Service Switching Point), a CUST TRLID cannot be entered unless PVN OFC on the OFCOPT form (5509 Record) is set to "SSP".

Every CUST TRLID must be defined as the TRAILER ID on an ANNTR form (5533 Record) where APPLICATION is set to "ASP". A CUST TRLID cannot be entered unless a CUST HDRID has also been entered.

2.7 TONE TYPE

Description: The TONE TYPE field provides the 400Hz carrier tone as the network tone. This field was added to support 400Hz Carrier Tone feature. The 400Hz Carrier Tone feature provides a basic enhancement to the Long Distance Platform, it relies on the condition that SFID 165 is unlocked. For more information on this feature see Division 2, Section 4A165.

Software Release: 5E13 and later
Valid Entries: Blank or CARRIER

Data Rules:

One and only one of ANNC RTI, CUST HDRID or TONE TYPE must be entered and must not be zero.

When the SSPANN forms have TONE TYPE entered, the ASP OFC field on the ASPOPT form must be set to "SSP".

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When the SSPANN form has TONE TYPE set to "CARRIER", the CARRIER TONE on the OFCOPT form must be set to "Y".

```
sspann                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5535)                NETWORK ANNOUNCEMENTS

*1. ANNC CODE _____
    SM        ___

     13A ANNC
 3. ANNC RTI _____

    RAF/SAS ANNC
 4. CUST HDRID 00000
 5. CUST TRLID 00000

      UTG TONE
 6. TONE TYPE _______
```

Figure 1 SAMPLE SSPANN FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5AJ: 5536 RECORD
STRUCTURE CODE FAMILY FORM - SCFAM

1. GENERAL

The 5536 Record is available with 5E4(2) and later Software Releases.

This form is used to specify Call Code to structure code family. This is saved in a call record from the TCAP (Transaction Capability Application Part) message sent from a remote data base.

In 5E4(2), this form was used for an SSP (Service Switching Point) office to process Number Services calls.

In 5E5 and later, this form can be used for an SSP office or an office serving as an ACP (Action Control Point) for an SDN (Software Defined Network). In 5E6 and later, it can also be used for a Leased Network ACP.

In 5E6 and later, this form can also be used for an SSP office which supports ASP (Advanced Services Platform) calls.

To determine if the office is an SSP office (with or without ASP support) or an ACP office, please refer to the OFCOPT form. An SSP office without ASP support will have "Y" entered in the SERV SWITCH PT field and "NONE" entered in the ASP OFC (5E8 and later) PVN OFC (5E6 - 5E7) field on the OFCOPT form. An SSP office with ASP support will have "SSP" entered in the ASP (PVN) OFC field on the OFCOPT form (the value entered in SERV SWITCH PT does not matter in this case). An ACP office will have a "Y" entered in the ACT PT SDN field on the OFCOPT form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.18.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * CALL CODE

Description: Enter the integer representation of the digits contained in the TCAP message sent from the SCP for Number Services calls. The values entered must be coordinated with the data base administrator for the SCP installation.
Valid Entries: 0 - 999

2.3 # STRUCT CODE FAMILY

Description: Enter the structure code family. This indicates the structure code to be used to bill the call.

Required Field.

Valid STRUCT CODE FAMILY Entries

Entry	Definition
APSDN	Software Release: 5E5 and later. Software Defined Network structure code family. This entry is used if the call code returned from the data base is to be billed as a SDN call at an ACP, and can only be used for an ACP office.
ASP	Software Release: 5E8 and later. ASP (AdvancedServices Platform, previously PVN (Private Virtual Network))structure code family. This entry is used if the call code returnedfrom the SCP is to be billed as an ASP call at an SSP, and can

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	onlybe used for an SSP office with ASP support; that is, ASP OFC (PVN OFCfor 5E6 - 5E7) on the OFCOPT form (5509 Record) is set to"SSP").
IC	Interexchange Carrier structure code family. This entry is used if the call code returned from the SCP is to be billed for an IC(Interexchange Carrier), and can only be used for a SSP office.
LNACP	Software Release: 5E6 and later. LN (Leased Network)structure code family. This entry is used if the call code returnedfrom the Network Control Point data base is to be billed as a LN callat the ACP. This structure code family is only valid for LNACP. If anSCFAM form is entered with STRUCT CODE FAMILY equal to"LNACP", there must be an OFCOPT form with ACTION POINT setto "Y".
PVN	Software Release: 5E6 - 5E7. For 5E8 and later, thisis changed to "ASP". See the description under "ASP".
TELCO	Local Telephone Company structure code family. This entry is used if the call code returned from the SCP is to be billed for a Local Telephone Company, and can only be used for a SSP office.

scfam 5ESS Switch
(5536) OFFICE DATA ADMINISTRATION
STRUCTURE CODE FAMILY

*1. CALL CODE 555
#2. STRUCT CODE FAMILY IC

Figure 1 SAMPLE SCFAM FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 5AK: 5537 RECORD
DIRECT SIGNALING APPLICATION FORM - DSAPP

1. GENERAL

The 5537 Record is available with the 5E4(2) and later Software Releases. It is used to specify the Direct Signaling Application Type, Transaction Type and the Subsystem Number used by the direct signaling trunks which use the CCS7 (Common Channel Signaling System 7) signaling protocols.

1.1 CNI Database Caution

The signaling application view 8.17 (DSAPP form (5537 Record)) must be entered for each CCS7 based feature. The 15.10 and 15.11 Recent Change views must be inserted prior to the 8.17 view.

The CNI database is not a relational database, therefore it does not directly interface with the 5ESS-2000 Switch relational database. Due to the differences between the two databases, if the 8.17 view is populated prior to the 15.10 and 15.11 views, the application is marked as prohibited and no call processing will occur for those application type calls. If 8.17 is entered first, the views must be deleted and then reinserted in the proper sequence. For more information on provisioning CNI, see Division 9.

1.2 Recent Change

The corresponding Recent Change View for this form is 8.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 *APPLIC

Description: Enter the Direct Signaling Application type.

Valid APPLIC Entries

Entry	Definition
ACND or AC	Software Release: 5E6 and later. CNAM (Analog Calling Name Delivery).
AINR0D1 or AI	Software Release: 5E9(1) and later. AIN (Advanced Intelligent Network) Release 0.1B.
APSDN or AP	Software Release: 5E5 and later. 5ESS-2000 Switch ACP (Action Control Point) for a SDN (Software Defined Network).
ASP or AS	Software Release: 5E8 and later. ASP (Advanced Services Platform) (previously PVN (Private Virtual Network)).
AT1 or AT	Software Release: 5E5 and later. ANSI (American National Standards Institute) TCAP (Transaction Capabilities Application Part) Type 1 signaling to a database. For 5E5 and 5E6, this signaling queries the LIDB (Line Information Database). For 5E7 and later, queries are sent to the BVD (Billing Validation Database).
CCS7 or C	Software Release: 5E7 and later. CCS7 signaling to a CAS/NCP database.
DCIS or D	Software Release: 5E5 and later. Destination-routed CCIS6.
ICCV or IC	Software Release: 5E7 and later. ICCV signaling to a foreign database.
ISVM or IS	Software Release: 5E7 and later. Inter-Switch Voice Messaging.
LALT	Software Release: 5E8 and later. LIDB Alternate Destination. This is the direct signaling application type for the EABS

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	Alternate Routing secured feature. For more information on this feature, see Division 2, Section 4A86.
LASS or LAS	Software Release: 5E5 and later. Local Area Signaling Services.
LIDB or L	Software Release: 5E5 and later. Line Interface Data Base usage.
LNACP or N	Software Release: 5E6 and later. Leased Network Action Control Point.
NCD	Software Release: 5E9(1) and later. Network Call Denial. (Currently not used)
NS800 or NS	Number Service 800 usage.
PVN or P	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASP". See the description under "ASP".
OLNP or OL	Software Release: 5E12 and later. OSPS Local Number Portability
ONAI	Software Release: 5E9(1) and later. OSPS Network Access Interrupt
TNAI	Toll Network Access Interrupt Application.

Data Rules:

For 5E8 and earlier, if "NS800" or "PSDN" is entered for APPLIC, the OFCOPT form (5509 Record) must have either SERV SWTCH PT or ACT PT SDN set to "Y".

If "PVN" is entered for APPLIC, the OFCOPT form (5509 Record) must have ASP OFC (5E8 and later) (PVN OFC for 5E6 - 5E7) set to "SSP".

For 5E9(1) and later, if APPLIC equals "ASP" or "AINR0D1", ASP OFC on the OFCOPT form must equal "SSP".

The APPLIC field on this form may be set to "ACND" only when the CNAM (Analog Calling Name Delivery) secured feature has been purchased and the secured feature ID 40 has been set to "S"(for 5E9(1) and later, SFID 40 must have ACT equal to "Y") on the SFSYS form (5713-1 Record).

For 5E9(1) and later, since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, APPLIC must not equal "AINR0D1" until SFID 126 ACT on the SFSYS form has been set to "Y".

2.3 *LATA

Description: Enter the Local Access and Transport Area number. The maximum number of LATAs that can be entered is 28. This field, and DPC 1 and DPC 2 fields, are used to support the TCAP Improvements for Switches Spanning Multiple LATAs feature to extend the operation of the current LASS features to support lines (or groups of lines) in LATAs other than the LATA number specified on the OFCOPT form (5509 Record). See Division 2, Section 4A171.

Software Release: 5E11 and later
Valid Entries: 0 - 255

Data Rules:
If LATA is entered,

- there must exist another DSAPP form with the same APPLIC entry and the LATA field is not entered.
- APPLIC must be "ACND" or "LASS".
- DPC 1 and DPC 2 must be entered.
- SUB SYS NBR must not be entered.

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- the ACT field for SFID 171 must be activated on the SFSYS form.

If LATA is not entered,

- DPC 1 and DPC 2 must not be entered.
- SUB SYS NBR must be entered.

2.4 #TRANS TYPE

Description: Enter the Transaction Type to be used with Direct Signaling Applications. The STP TT NBR field on the NSTRIG form applies only to ASP Release 0.1B and later for 5E9(1) and later triggers. If STP TT NBR is blank, the Translation Type entered for the field TRANS TYPE on the DSAPP form is used.

Required Field.
Valid Entries: 0 - 255

Data Rules:

If APPLIC is "ICCV" or "CCS7", then TRANS TYPE must be 0.

2.5 SUB SYS NBR

Description: Enter the Subsystem Number used by the Direct Signaling Application.

Data Rule:
For 5E5 and later, the Subsystem Number must be unique for each Application type defined on the DSAPP form.

Required Field.
Valid Entries: 232 - 254

2.6 DPC 1

Description: Enter the Destination Point Code 1. This field is used to specify the first signaling point for the STP (Signaling Transfer Point).

Software Release: 5E11 and later
Valid Entries: 9 digits in the following format.

2.7 DPC 2

Description: Enter the Destination Point Code 2. This field is used to specify the second signaling point for the STP.

Software Release: 5E11 and later
Valid Entries: 9 digits in the following format.

Valid DPC1/DPC2 for Lucent Technologies Entries

Definition	Format	Valid Entries
Network Indicator	XXX	000 - 255
Regional Number	XX	00 - 31
Cluster Identification	X	0 - 7
Member	XXX	000 - 255

Valid DPC1/DPC2 for LEC Entries

Definition	Format	Valid

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		Entries
Network Indicator	XXX	000 - 255
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

dsapp 5ESS Switch
(5537) OFFICE DATA ADMINISTRATION
DIRECT SIGNALING APPLICATION

*1. APPLIC _____
(*)2. LATA ___
#3. TRANS TYPE ___
4. SUB SYS NBR ___
5. DPC 1 _____
6. DPC 2 _____

Figure 1 SAMPLE DSAPP FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 5AL: 5538 RECORD
REMOTE ACCESS SERVICE RTI DEFINITION FORM - RASRTI

1. GENERAL

The 5538 Record is available with 5E5 and later Software Releases. This form is used to define the routing used by RAS (Remote Access Service) from an RADN (Remote Access DN) to the DSU2-RAF-DTA that corresponds with a specified home switch.

For 5E8 and later, a corresponding ANNAPL form must be submitted with an APPLICATION of "RAS".

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.19.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ANNC RTI

Description: Enter the the route index that routes the RAS customer to the DSU2-RAF-DTA.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

The ROUTE INDEX must be defined on the RTIDX form (5303 Record) with CI ROUTE TYPE set to "GENANN"; the associated TKGRP form must have SVC GRP set to "RAS".

2.3 IDPNAME

Description: Enter the IDP group name. IDP names have no restrictions on the valid characters. If the field is left blank, the Office Dialing Plan will be used.
Valid Entries: 1 - 8 characters

Data Rules:

Either this field or the DAS field must be entered.

The IDPNAME must be defined on the IDPGP form (5601-4 Record).

2.4 IDP RESTRICT

Description: Must the calling TN be in the same IDP group as the RADN IDP group assigned on this form?
Default: N
Valid Entries: Y, N

Data Rules:

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This field can only be "Y" when the IDPNAME field is entered. If "Y" is entered the calling TN must be in the same IDP group as the RADN.

2.5 DAS

Description: Enter the DAS (Digit Analysis Selector) number used to screen digits.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

Either this field or the IDPNAME field must be entered. The DAS must be defined on the DAS form (5300-1 Record).

```
rasrti                    5ESS Switch          _
(5538)                OFFICE DATA ADMINISTRATION
                  REMOTE ACCESS SERVICE RTI DEFINITION

*1. ANNC RTI     0001
 2. IDPNAME      RASFET1
 3. IDP RESTRICT N
 4. DAS          __
```

Figure 1 SAMPLE RASRTI FORM 5E5 - 5E14 SOFTWARE RELEASES

```
rasrti                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5538)                REMOTE ACCESS SERVICE RTI DEFINITION

*1. ANNC RTI     _____
 2. IDPNAME      ________
 3. IDP RESTRICT N
 4. DAS          ___
```

Figure 2 SAMPLE RASRTI FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5AM: 5539 RECORD
LU/(R)ISLU MEASUREMENTS FORM - MEASLU

1. GENERAL

The 5539 Record is available with 5E7 and later Software Releases. It supports the LU/ISLU Load Administration Measurements feature, which is explained in the Switch Administration and Engineering Guidelines document, 235-070-100.

NOTE: References to "ISLUs" in this section also apply to RISLUs (Remote ISLUs).

The LU/ISLU Load Administration Measurements feature will assist network administrators in monitoring call loads on the switch for the following units:

- LUs (Line Units) and ISLUs
- ISLUs (Integrated Service Line Units)

An administrator can study the traffic load on selected units by: 1) defining study groups on the MEASLU form (5539 Record), and 2) enabling measurement generation and collection through appropriate Input Messages to the switch. Usage data for operational Switch Groups and Line Group Controllers on the selected units will be reported on half hour intervals in Sections 144 and 145 of the TRFC30 report.

1.1 Defining a Study Group

LUs and ISLUs (or Remote ISLUs) are targeted for study by including them in a study group defined on an MEASLU form. Each study group definition requires a line unit type ("LU" or "ISLU"), a study group identifier, and a list of SMs/LUs or SMs/ISLUs. A maximum of 19 study groups, each containing up to 100 unique units, may be specified. A unit can be included in multiple study groups.

NOTE: Although 500 ISLUs and 500 LUs can be included in study groups, only a maximum of 250 fully equipped ISLUs and 4000 Switch Groups can be studied simultaneously (the number of fully equipped Line Units is dependent on the LU concentration level).

1.2 Recent Change View

The corresponding Recent Change View for this form is 13.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * UNIT TYPE

Description: Enter the type of units being studied. A study group may include either LUs or ISLUs but not both a combination of the three.

Required Field.

Valid UNIT TYPE Entries

Entry	Definition
LU	This is a Line Unit study group.
ISLU	This is an Integrated Services Line Unit study group.

NOTE: For the AIU (Access Interface Unit) measurements, introduced in 5E11, see Division 2,

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Section 7K.

Data Rules:

When "LU" is entered, each pair of SM and UNIT NO fields must be defined on an EQLU form (5710 Record) as SM and LINE UNIT. When "ISLU" is entered each SM and UNIT NO must be defined either on an EQISLU form (5731 Record) as SM and ISLU NUMBER or on an EQRISLU form (5732 Record) as SM and RISLU NUMBER.

For 5E10 and later, when a UNIT TYPE of "ISLU" is defined on the MEASLU form, all SM/UNIT NO combinations listed on the MEASLU form must be defined as either SWITCHING MODULE/ISLU NUMBER on an EQISLU form or SWITCHING MODULE/RISLU NUMBER on an EQRISLU form.

2.3 * STUDY GROUP

Description: Enter a number that uniquely identifies the LU or ISLU study group. An office can have a total of 19 LU or 19 ISLU study groups that may be created. Each study group is numbered uniquely from 1 to 19 (not necessarily in numerical order).

Required Field.
Valid Entries:
- 5E13 and earlier: 1 - 5
- 5E14 and later: 1 - 19

UNITS FOR DATA COLLECTION

A study group may contain up to 100 line units (LUs or ISLUs), each identified by a pair of fields, SM and UNIT NO.

2.4 SM

Description: Enter the number of the Switching Module on which the line unit (LU or ISLU) resides.

Value Entries: 1 - 192

2.5 UNIT NO

Description: Enter the number of the line unit (LU or ISLU) to be studied.

NOTE: For 5E9(2) and later, 0 - 7 is used for SMs; 0 - 42 is used for SM-2000.
Valid Entries:
- 5E9(1) and earlier: 0 - 7
- 5E9(2) and later: 0 - 42

Data Rules:

If an SM is entered, the corresponding UNIT NO must also be entered; if the UNIT NO is entered, the SM must be entered.

Each SM/UNIT NO combination must be unique within the study group; however, any particular SM/UNIT NO can be included in more than one study group.

For a Study Group defined with a Unit Type of "LU", each pair of SM and UNIT NO fields must be defined on an EQLU form (5710 Record) as SM and LINE UNIT. When "ISLU" is entered, the SM and UNIT NO must be defined either on an EQISLU form (5731 Record) as SM and ISLU NUMBER or on an EQRISLU form (5732 Record) as SM and RISLU NUMBER.

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If the SMs and UNIT NOs are defined on the EQLU form, measurements will be performed on all operational Line Unit Grids associated with the Line Units as defined on the EQLUP form (5711 Record). If the SMs and UNIT NOs are defined on the EQISLU or EQRISLU form, all the operational Line Group Controllers associated with the Integrated Service Line Units as defined on EQLGC form (5733 Record) will be measured.

SCREEN 1 OF 3 5ESS Switch
measlu OFFICE DATA ADMINISTRATION
(5539) LU/(R)ISLU MEASUREMENTS

*1. UNIT TYPE LU
*2. STUDY GROUP 1

3. UNITS FOR DATA COLLECTION (DATACOLL)

ROW	SM	UNIT NO	ROW	SM	UNIT NO	ROW	SM	UNIT NO	ROW	SM	UNIT NO
1	001	1	8	___	_	15	___	_	22	___	_
2	001	2	9	___	_	16	___	_	23	___	_
3	002	1	10	___	_	17	___	_	24	___	_
4	___	_	11	___	_	18	___	_	25	___	_
5	___	_	12	___	_	19	___	_	26	___	_
6	___	_	13	___	_	20	___	_	27	___	_
7	___	_	14	___	_	21	___	_	28	___	_

SCREEN 2 OF 3 5ESS Switch
measlu OFFICE DATA ADMINISTRATION
(5539) LU/(R)ISLU MEASUREMENTS

3. UNITS FOR DATA COLLECTION (DATACOLL)

ROW	SM	UNIT NO	ROW	SM	UNIT NO	ROW	SM	UNIT NO	ROW	SM	UNIT NO
29	___	_	39	___	_	49	___	_	59	___	_
30	___	_	40	___	_	50	___	_	60	___	_
31	___	_	41	___	_	51	___	_	61	___	_
32	___	_	42	___	_	52	___	_	62	___	_
33	___	_	43	___	_	53	___	_	63	___	_
34	___	_	44	___	_	54	___	_	64	___	_
35	___	_	45	___	_	55	___	_	65	___	_
36	___	_	46	___	_	56	___	_	66	___	_
37	___	_	47	___	_	57	___	_	67	___	_
38	___	_	48	___	_	58	___	_	68	___	_

SCREEN 3 OF 3 5ESS Switch _
measlu OFFICE DATA ADMINISTRATION
(5539) LU/(R)ISLU MEASUREMENTS

3. UNITS FOR DATA COLLECTION (DATACOLL)

ROW	SM	UNIT NO	ROW	SM	UNIT NO	ROW	SM	UNIT NO	ROW	SM	UNIT NO
69	___	_	77	___	_	85	___	_	93	___	_
70	___	_	78	___	_	86	___	_	94	___	_
71	___	_	79	___	_	87	___	_	95	___	_
72	___	_	80	___	_	88	___	_	96	___	_

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73 ___	_	81 ___	_	89 ___	_	97 ___	_
74 ___	_	82 ___	_	90 ___	_	98 ___	_
75 ___	_	83 ___	_	91 ___	_	99 ___	_
76 ___	_	84 ___	_	92 ___	_	100 ___	_

Figure 1 SAMPLE MEASLU FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 5AN: 5540 RECORD SELECTIVE ROUTING AND TRANSFER DATA FOR ESN (SM/DAS) - ESN

1. GENERAL

For 5E7 and later Software Releases, the 5540 Record is available with the E911 feature (see Division 2, Section 1BD).

The ESN form serves two purposes. First, it is used to define an ESN (Emergency Service Number), a set of telephone numbers for the emergency services a 911 caller may require. Second, it is used to define SM standalone data, a set of emergency numbers for a 911 call that arrives at an SM unable to communicate with the CMP (Communication Module Processor).

1.1 ESN Data

An ESN represents a municipal or county area served by a specific set of emergency services. Each 911 call that enters the switch is associated with an ESN, either by a query to the ESA (Emergency Service Adjunct) or from data on an ESCO form (5541 Record).

The ESN determines the primary PSAP (Public Service Answering Point) to which the call will be routed. It also provides an alternate PSAP(s), to be used when the primary PSAP is unavailable.

The E911 attendant at a CAMA PSAP can selectively transfer a 911 call to a specific agency in the caller's area. The ESN stores the telephone numbers for up to six selective transfer keys on the PSAP console.

Additionally, an ESN may specify that the caller's NPD (Numbering Plan Digit) and ANI (Automatic Number Identification) will be flashed at the E911 attendant's console at a CAMA PSAP. The flashing indicates to the attendant that the call may require special attention, for example, calls from a chemical plant.

1.2 SM Standalone Data

In addition to defining E911 ESNs, the ESN form is used to define standalone data for individual Switching Modules on the E911-serving switch.

ESN processing is performed on the 5ESS Switch CMP. When an SM is unable to communicate with the CMP, the ESN, with its accompanying routing and selective transfer information, is inaccessible. Standalone data establishes a set of routing and selective transfer numbers the SM will use when the CMP does not respond.

One standalone ESN form must be defined for each SM. These required forms must have only the SM number as a key; the DAS field must be blank.

If more than one set of emergency standalone numbers is required for 911 calls arriving at an SM, distinctions can be made through the DAS associated with the caller. Additional ESN forms can be defined with SM and DAS as keys. In this way, multiple 911 calling areas can be routed to different emergency numbers.

When a 911 call requires standalone routing on an SM, the operational software will look first for an ESN form with the SM and DAS. If the form does not exist, it will use the form for the SM (blank DAS).

When a 911 call is routed using SM standalone data, the caller's NPD and ANI are always flashed on the E911 attendant console at a CAMA PSAP. The flash indicates to the attendant that the call may require special attention -- in this case because it was routed with standalone data.

1.3 E911 Feature Lock

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The E911 secured feature must be unlocked on the SFSYS form (5713 Record) before ODA software will accept ESN forms.

1.4 Recent Change View

The corresponding Recent Change View for this form is 9.40.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 (*) ESN

Description: The ESN (Emergency Service Number) is an optional key field that cannot be used in conjunction with the SM or DAS key fields. It represents the proper emergency services a specific address should receive. It is used to obtain routing and selective call transfer telephone numbers.
Valid Entries: 1 - 1023

Data Rules:

Either ESN or SM, but not both, must be entered on this form.

When ESN is entered, DAS must be blank.

2.3 (*) SM

Description: The SM (Switching Module) is an optional key field on this form. It cannot be used in conjunction with the ESN field; however, it can be used with the DAS field.
Valid Entries: 1 - 192

Data Rules:

Either ESN or SM, but not both, must be entered.

Either SM or ESN, but not both, must be entered.

When SM is entered, FLASH must be "N" or blank; the SM must be defined on an EQIM form (5700-1/2 Record) where EQSTATUS is operational ("O").

2.4 (*) DAS

Description: The DAS (Digital Analysis Selector) field is an optional key. It cannot be used with the ESN field but can be used with the SM.

DAS is used to expand the extra selective routing cability when an SM goes into stand-alone mode or when the CMP does not respond to an SM request for an ESN translation. Emergency calls originating on this SM can, in these cases, use the call originator's DAS and SM as keys to retrieve default routing and selective transfer telephone numbers.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

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When DAS is entered, SM must be entered and ESN must be blank. The DAS must be defined on a DAS form (5300-1 Record).

2.5 FLASH

Description: Should the caller's NPD and ANI be flashed on the E911 attendant's console at the CAMA PSAP? Flashing indicates to the attendant that the call may require special attention.

Since 911 calls routed with SM standalone data are automatically flashed, this FLASH field applies only to ESN data.
Default: N
Valid Entries: Y, N

Data Rules:

FLASH may be "Y" only when ESN is entered.

2.6 # PRIM PSAP

Description: This field is the Primary PSAP (Public Safety Answering Point) TN, a 7- or 10-digit telephone number first used to route an E911 call.

Required Field.
Valid Entries: 7 or 10 digits

Data Rules:

The PRIM PSAP telephone number must be different than the ALT1 PSAP and ALT2 PSAP telephone numbers described below.

2.7 # ALT1 PSAP

Description: The ALT1 PSAP is the First Alternate PSAP TN, a 7- or 10-digit telephone number used to route the E911 call when routing to the PRIM PSAP telephone number fails.

Required Field.
Valid Entries: 7 or 10 digits

Data Rules:

The ALT1 PSAP telephone number must be different than the PRIM PSAP and ALT2 PSAP telephone numbers.

2.8 ALT2 PSAP

Description: The ALT2 PSAP is the Second Alternate PSAP TN, a 7- or 10-digit telephone number used to route the E911 call when routing to the PRIM PSAP and ALT1 PSAP telephone numbers fail.
Valid Entries: 7 or 10 digits

Data Rules:

The ALT2 PSAP telephone number must be different than the PRIM PSAP and ALT1 PSAP telephone numbers.

- ***NOTE:*** Care should be taken in choosing the PSAP TNs. If the routing for the TN chosen is in a Remote Module, this could impact the ability to complete the E911 call, if the Remote Module is isolated. Verify the routing by reviewing the 5115 HGRPS form (4.14 RC/V) to see what Module (Local or Remote) contains the routing data for the NPA NXX YY?? chosen for the PSAP TN.

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CRITICAL DATA INDICATOR

The following (fields Section 2.9 - Section 2.10) support the RC Translations Protection For Highly Critical Elements feature, see Division 2, Section 1BY for more information.

2.9 CRIT IND

Description: This field supports the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT IND field is used to indicate whether the ESN data is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.10 CRIT RMK

Description: This field enhances the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT RMK field is used to enter a remark to explain why this ESN form instance is critical.

Software Release: 5E15 and later
Valid Entries: Enter up to 32 characters

Data Rules:

When the ESN form has the CRIT RMK field entered, the SFSYS form SFID 566 ACT field must be set to "Y".

SELECTIVE TRANSFER TNS

The E911 feature includes a capability called "Selective Transfer". This option allows an E911 attendant to transfer a call by depressing a key for a specific emergency service, for example, "FIRE". The operational software on the switch will associate that key with the telephone number for the fire department in the caller's area.

Up to six Selective Transfer TNs (fields Section 2.11 - Section 2.16) can be specified.

Other translations required for the Selective Transfer option are discussed in Division 2, Section 1BD, "Enhanced 911 Emergency Service".

2.11 TN1

Description: TN1 is the first Selective Transfer Telephone Number, a 7- or 10-digit telephone number used by CAMA PSAP attendants to do selective call transfers.
Valid Entries: 7 or 10 digits

2.12 TN2

Description: TN2 is the second Selective Transfer Telephone Number, a 7- or 10-digit telephone number used by CAMA PSAP attendants to do selective call transfers.
Valid Entries: 7 or 10 digits

2.13 TN3

Description: TN3 is the third Selective Transfer Telephone Number, a 7- or 10-digit telephone number

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used by CAMA PSAP attendants to do selective call transfers.
Valid Entries: 7 or 10 digits

2.14 TN4

Description: TN4 is the fourth Selective Transfer Telephone Number, a 7- or 10-digit telephone number used by CAMA PSAP attendants to do selective call transfers.
Valid Entries: 7 or 10 digits

2.15 TN5

Description: TN5 is the fifth Selective Transfer Telephone Number, a 7- or 10-digit telephone number used by CAMA PSAP attendants to do selective call transfers.
Valid Entries: 7 or 10 digits

2.16 TN6

Description: TN6 is the sixth Selective Transfer Telephone Number, a 7- or 10-digit telephone number used by CAMA PSAP attendants to do selective call transfers.
Valid Entries: 7 or 10 digits

```
esn                      5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5540)      SELECTIVE ROUTING AND TRANSFER DATA FOR ESN (SM/DAS)

(*)1. ESN      ____        SELECTIVE TRANSFER TNS
(*)2. SM       ___          9. TN1 _________________
(*)3. DAS      __          10. TN2 _________________
  4. FLASH     N           11. TN3 _________________
 #5. PRIM PSAP ___________   12. TN4 _________________
 #6. ALT1 PSAP ___________   13. TN5 _________________
  7. ALT2 PSAP ___________   14. TN6 _________________
  8. CRIT IND  N
```

Figure 1 SAMPLE ESN FORM 5E13 - 5E14 SOFTWARE RELEASES

```
esn                      5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5540)      SELECTIVE ROUTING AND TRANSFER DATA FOR ESN (SM/DAS)

(*)1. ESN      ____        SELECTIVE TRANSFER TNS
(*)2. SM       ___          8. TN1 _________________
(*)3. DAS      ___          9. TN2 _________________
  4. FLASH     N           10. TN3 _________________
 #5. PRIM PSAP ___________   11. TN4 _________________
 #6. ALT1 PSAP ___________   12. TN5 _________________
  7. ALT2 PSAP ___________   13. TN6 _________________
```

```
esn                      5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
```

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(5540) SELECTIVE ROUTING AND TRANSFER DATA FOR ESN (SM/DAS)

CRITICAL DATA INDICATOR
14. CRIT IND N
15. CRIT RMK _____

Figure 2 SAMPLE ESN FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5AO: 5541 RECORD
EMERGENCY SERVICE CENTRAL OFFICE FORM - ESCO

1. GENERAL

For 5E7 and later software releases, the 5541 Record is available with the E911 feature. When a 911 call arrives at an E911-serving office, the ESCO form is used to retrieve an ESN (Emergency Service Number), NPD (Numbering Plan Digit), and selective routing indicator, based on the originating calling area.

An ESCO is associated with a 911 call through the dialing plan or trunk group. When the call originates in the E911-serving office, the ESCO is determined from the DAS form (5300-1 Record). When the call arrives on a trunk, the ESCO is taken from the TKGRP form (5202 Record) unless an ESCO is not assigned; then, it is taken from the DAS form.

- **WARNING:** For E911-serving offices (E911 OPTION set to "ESA" or "NONESA" on the OFCOPT form), it is recommended that an ESCO be assigned to every DAS form used for voice calls. If a 911 call cannot be associated with an ESCO through the trunk group or dialing plan, the call will be routed using the SM standalone data defined in the ESN form (5540 Record).

See Division 2, Section 1BD, for more information on the E911 feature.

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.41.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ESCO

Description: For E911 calls, the ESCO (Emergency Service Central Office) is used to retrieve an Emergency Service Number, Numbering Plan Digit, and Selective Routing Indicator. Each ESCO is associated with 911 calls from specific offices or calling areas.

ESCO values are assigned to calling areas through originating trunk groups (on the TKGRP form) or dialing plans (on the DAS form).
Valid Entries: 1-999

2.3 # ESN

Description: An ESN represents a set of Emergency Service Numbers assigned to a specific address. The ESN assigned to the ESCO is used by the operational software when selective routing is not required (SEL RT is "N"), and when a selective routing query to the ESA (E911 Service Adjunct) fails. The ESN determines PSAP (Public Safety Answering Point) and selective call transfer telephone numbers from the ESN form.

Required Field.
Valid Entries: 1 - 1023

Data Rules:

The ESN must be defined on an ESN form (5540 Record).

2.4 # NPD

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Description: The NPD (Numbering Plan Digit) represents the NPA of the E911 call originator. The one-digit NPD and the caller's ANI (Automatic Number Identification) are displayed on the attendant's console at an E911 CAMA PSAP.

Required Field.
Valid Entries: 0 - 3

2.5 # SEL RT

Description: Should Selective Routing be performed? When SEL RT is "Y", a query will be sent to the ESA to retrieve an ESN determined by the caller's ANI. When selective routing is not required (SEL RT = "N"), the ESN on this form will be used to route the E911 call.

Required Field.
Valid Entries: Y, N

CRITICAL DATA INDICATOR

The following (fields Section 2.6 - Section 2.7) support the RC Translations Protection For Highly Critical Elements feature, see Division 2, Section 1BY for more information.

2.6 CRIT IND

Description: This field supports the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT IND field is used to indicate whether the emergency service central office data is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.7 CRIT RMK

Description: This field enhances the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY. The CRIT RMK field is used to enter a remark to explain why this ESCO is critical.

Software Release: 5E15 and later
Valid Entries: Enter up to 32 characters

Data Rules:

When the ESCO form has the CRIT RMK field entered, the SFSYS form SFID 566 ACT field must be set to "Y".

```
esco                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5541)             EMERGENCY SERVICE CENTRAL OFFICE

*1. ESCO   001
#2. ESN    0043
#3. NPD    2
#4. SEL RT Y
```

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Figure 1 SAMPLE ESCO FORM 5E12 SOFTWARE RELEASE

```
esco                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5541)             EMERGENCY SERVICE CENTRAL OFFICE

*1. ESCO    ___
#2. ESN     ____
#3. NPD     _
#4. SEL RT  _
 5. CRIT IND N
```

Figure 2 SAMPLE ESCO FORM 5E13 THROUGH 5E14 SOFTWARE RELEASES

```
esco                    5ESS Switch
SCREEN 1 OF 2            OFFICE DATA ADMINISTRATION
(5541)             EMERGENCY SERVICE CENTRAL OFFICE

*1. ESCO   ___
#2. ESN    ____
#3. NPD    _
#4. SEL RT _
```

```
esco                    5ESS Switch
SCREEN 2 OF 2            OFFICE DATA ADMINISTRATION
(5541)             EMERGENCY SERVICE CENTRAL OFFICE

        CRITICAL DATA INDICATOR
5. CRIT IND N
6. CRIT RMK _____
```

Figure 3 SAMPLE ESCO FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5AP: 5542 RECORD
LEASED NETWORK NODE MAPPING - LNNODEM

1. GENERAL

The 5542 Record is available with 5E7 and later Software Releases. This capability provides a new automatic Network Management control that provides the ability for the network manager to reserve up to 15 trunks in a trunk group for critical users.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *DEST CLLI

Description: This field is used to identify a destination switch for reporting node-to-node measurements by inputting the Far End Common Language Location Identifier.

Software Release: 5E3 and later
Valid Entries: 1 - 11 characters

The format for Far End Common Language Location Identifier is as follows:

Example: CHCGILMOCG0.

DEST CLLI Format

Character Positions	Location	Example
1 - 4	Place	CHCG (Chicago)
5, 6	State	IL (Illinois)
7, 8	Building	MO (Monroe)
9 - 11	Entity	CG0 (Control Group 0)

2.3 #LN ARS IDX

Description: This field is the ARS Index used to route to the Destination switch for collection of the Leased Network node-to-node data.
Valid Entries: 1 - 1000

Data Rules:

Any single value of LN ARS IDX may not be entered on more than one LNNODEM form.

---

lnnodem 5ESS Switch _
(5542) OFFICE DATA ADMINISTRATION
LEASED NETWORK NODE MAPPING

*1. DEST CLLI CHCGILMOCGO
#2. LN ARS IDX 1000

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Figure 1 SAMPLE LNNODEM FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 5AQ: 5543 RECORD
SCREENING INDEX PARAMETER ASSIGNMENT - SCRIDXPA

1. GENERAL

The 5543 Record is available with the 5E6 and later Software Releases and is used to assign parameters to a line or trunk on a per screening index basis.

The key screening index (SCRN IDX) is assigned to specific LCC (Line Class Code) and RAX (Rate Area) combinations. When an SCRIDXPA form has been entered, the information will apply to all lines defined on the LINE form (5109 Record), MLHLN form (5111 Record), and DSLUSR form (5908 Record) whose LCC and RAX have been assigned this SCRN IDX. In some cases, the attributes may be overridden by attributes on the LINE, MLHLN or DSLUSR forms. See specific field descriptions to determine when attributes may be overridden on a per-line basis. For more information, see D2S4A.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SCRN IDX

Description: Enter a screening index. This is a screening index associated with a line or trunk that originates a call.

Required Field.
Valid Entries: 1 - 4095.

Data Rules:

SCRN IDXs assigned on SCRIDXPA forms must be defined as SCREENING INDEX on an RAR form.

CPN PRESENTATION

The following fields (Section 2.3 - Section 2.4) are applicable only to the CPNP special feature in determining the presentation status of the calling party.

2.3 PCP ALW

Description: Is per-call privacy general availability allowed with this screening index? This field is applicable only to the CPNP (Calling Party Number Presentation) feature.

In some cases, this field can be used to override the status of PCP general availability as set on the LASSFA form:

1. If LASSFA has PCP set to "SUBSCR", then setting this PCP ALW to "Y" will make PCP generally available for lines assigned this screening index, provided the appropriate LINE, MLHLN or DSLUSR form also has PCP ALW set to "Y" and does not have a subscribed DISP feature.

2. If LASSFA has PCP set to "GENAVAIL", then setting this PCP ALW to "N" will prohibit PCP from being generally available for lines assigned this screening index without a subscribed DISP feature.

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Per-call Privacy is applicable to only certain classes of service. If LCC forms have a SCREENING INDEX defined on an SCRIDXPA form where PCP ALW is set to "Y", CLASS OF SERVICE on the LCC form must be set to one of the following values: ATND, INDIV, 4WINDIV, CHGCALL, ISDN, ISATND, B911, SATSTLN, CALLBK, PBX, TWOPTY, HOTMOTL, COIN, 2PTY.

CPN Presentation is a Secured Feature, and must be purchased before data can be assigned. FEATURE ID 50 on the SFSYS form must be set to "S" before PCP ALW can be set to "Y" and PRIVACY can be entered on a SCRIDXPA form. When FID 50 is not "S", this field will not be used and must be set to "N".

For 5E11 and later, if PCP ALW is "Y", the SCRN IDX field on each SCRIDXPA form must have at least one matching SCREENING INDEX value on the LCC form.

2.4 PRIVACY

Description: Is all-call privacy active? When set to "Y", all calls will be marked with a presentation status of private. When set to "N", all calls will be marked with a presentation status of public. When left blank, presentation status cannot be determined from this attribute on this form (see the information below in this description for interactions with the OFCOPT form).

The PRIVACY field also appears on the LINE, MLHLN and DSLUSR forms, and when entered on one of those forms, it will overrride the value on this SCRIDXPA form for that particular line. When PRIVACY has not been entered on the LINE, MLHLN or DSLUSR forms, the value of PRIVACY on this form will be used.

When PRIVACY has been left blank on both this form and the LINE, MLHLN and DSLUSR forms, the value of DN PRIVACY on the OFCOPT form (5509 Record) will be used to determine the presentation status.
Default: N
Valid Entries: Y, N

Data Rules:

CPN Presentation is a Secured Feature, and must be purchased before data can be assigned. FEATURE ID 50 on the SFSYS form must be set to "S" before PCP ALW can be set to "Y" and PRIVACY can be set on an SCRIDXPA form. When FID 50 is not "S", this field will not be used and cannot be set.

2.5 ANI II DIGITS

Description: This ANI pair will be associated with the screen index for the Flexible ANI Enhancement secured feature. For more information about the feature, see Division 2, Section 4A142.

Software Release: 5E9(1) and later
Valid Entries: 00 - 99

Data Rules:

A value can be entered in this field only if the Flexible ANI Enhancement secured feature has been purchased, and SFID 142 is set to "Y" on the SFSYS form (5713-1 Record).

ASP

The following fields (Section 2.6 - Section 2.8) support the ASP (Advanced Services Platform) Inhibiting of

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Originating Busy/No Answer Office Triggers secured feature. For more information concerning this feature, see Division 2, Section 4A210.

2.6 OFC OBL INH

Description: The OFC OBL INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by screen index. It indicates whether the ASP Office Originating Busy Line Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating Busy Line Trigger is inhibited.

For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, S4A210.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC OBL INH must be "N".

2.7 OFC ONA INH

Description: The OFC ONA INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by screen index. It indicates whether the ASP Office Originating No Answer Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating No Answer Trigger is inhibited.

For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, S4A210.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC ONA INH must be "N".

2.8 OS TRIG INH

Description: This field indicates if the AIN Operator Services trigger is inhibited or not. This field was added to support the AIN Operator Services Trigger feature. See Division 2, Section 4A584.

Software Release: 5E16 and later.
Required Field.
Default: N
Valid Entries: Y, N

2.9 RESTRICT LINE

Description: This field indicates if the origination should be processed as a restricted/special line.

Software Release: 5E16 and later
Valid Entries:

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Entry	Defition
blank	Use value from subsequent screening index, or previous if subsequent also has blank value in this field.
Y	Calls are processed as originating from restricted/special line. Also subsequent screening induces will use this value.
N	Calls are processed as originating from non restricted/special line. Also subsequent screening induces will use this value.

```
scridxpa                5ESS Switch          _
(5543)            OFFICE DATA ADMINISTRATION
                SCREENING INDEX PARAMETER ASSIGNMENT

*1. SCRN IDX ____

CPN PRESENTATION
 2. PCP ALW N
 3. PRIVACY _

 4. ANI II DIGITS __

      ASP
 5. OFC OBL INH N
 6. OFC ONA INH N
```

Figure 1 SAMPLE SCRIDXPA FORM 5E11 THROUGH 5E15 SOFTWARE RELEASES

```
scridxpa                5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5543)              SCREENING INDEX PARAMETER ASSIGNMENT

*1. SCRN IDX ____      8. RESTRICT LINE _

CPN PRESENTATION
 2. PCP ALW N
 3. PRIVACY _

 4. ANI II DIGITS __

      ASP
 5. OFC OBL INH N
 6. OFC ONA INH N
 7. OS TRIG INH N
```

Figure 2 SAMPLE SCRIDXPA FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 5AR: 5713-1 RECORD
SECURED FEATURE SYSTEM ASSIGNMENT FORM - SFSYS

1. GENERAL

This form is used to enable secured features. Secured features are the optional service features that can be purchased in addition to the features included in the current Software Release. The secured features need to be enabled by a Lucent Technologies SEE (System Equipment Engineer). Once the SEE determines through the TEO (Telephone Equipment Order) that secured features have been purchased by the customer, the SEE enables those features either through 5ODA or through Recent Change View 8.22. For 5E13 and later, the SFID (Secured Feature ID) number fields increased from 500 to 996 (see Division 2, Section 4A0).

For a new 5ESS Switch office, retrofit or large terminal growth, the SEE populates the SFSYS form, which enables access to the secured features that the office has purchased. Figure 1 gives the SFID number that corresponds to a specific secured feature.

NOTE: For information on a specific secured feature, see Division 2, Section 4A*XX*, where *XX* is the SFID. For example, for information on the secured feature having SFID 34, see Division 2, Section 4A34.

1.1 On-line Informational Software Updates

Informational Software Updates, which are available on SCANS (Software Change Administration and Notification System), provide information on features which are released during a Software Update. In addition to being transmitted to users via SCANS, these Informational Software Updates can also be accessed in the 5ESS Switch electronic media documentation. The Informational Software Updates are located on the menu for 5ESS Switch documentation on-line or on CD-ROM.

1.2 Recent Change View

The corresponding Recent Change View for SFSYS is 8.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and the Office Name on each record.

2.2 * MODULE

Description: Enter "OFC", the only entry allowed for this field. This form applies to each SM in the office.

Software Release: 5E5 and later
Required Field.
Valid Entries: OFC

2.3 SFID

Description: The secured feature identification number to be activated. This field is not changeable by the user. It is simply a list of available SFIDs.

2.4 ACT

Description: This field is used to enable or disable access to a secured feature.

To enable a feature, select the SFID number corresponding to the secured feature and enter "Y" in the

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ACT field. To disable a feature, select the SFID number corresponding to the secured feature and enter "N" or a "tic" (a single quote) to blank the ACT field.

Figure 1 shows the corresponding SFID number for each secured feature.
Valid Entries: Y, N, or blank

FEATURE NAME	SFID	SOFTWARE RELEASE	SOFTWARE UPDATE / FEATURE RELEASE	INFO SOFTWARE UPDATE / FEATURE RELEASE
MDNL (Multiple Directory Numbers per Line)	1	5E4(2) 5E5 5E6	SU 880057 GA GA	SU 880096 GA GA
OSPS 0-/0+ Rate Differential	2	5E4(2) 5E5 5E6	SU 880104 GA GA	SU 890035 GA GA
VPATH 7/10 Digit Outpulsing	3	5E4(2) 5E5 5E6	SU 890044 GA GA	SU 890071 GA GA
OSPS DA And C-ACD Full Monitoring Path (Open Mike)	4	5E4(2) 5E5 5E6	SU 890070 GA GA	SU 890063 GA GA
ANI (Automatic Number Identification) Over Private Facilities	5	5E4(2) 5E5 5E6 5E7	SU 900067 SU 900081 SU 900054 GA	SU 900057 SU 900071 SU 900036 GA
CST (Circuit Switched Trunk)	6	5E4(2) 5E5 5E6	SU 890127 SU 890060 GA	SU 890119 SU 890045 GA
SIC (Service Indicator Code) Expansion	7	5E4(2) 5E5 5E6 5E7	SU 910004 SU 910006 SU 910004 GA	SU 900056 SU 900106 SU 900044 GA
108 Test Line	8	5E6 5E7 5E8	SU 920060 SU 920096 GA	SU 920056 SU 920080 GA
CICP (Carrier Identification Code Parameter)	9	5E8 5E9(1) 5E9(2)	SU 940015 SU 940026 GA	SU 940016 SU 940062 GA
LDP Enhanced DAL (Data Access Link)	10	5E15	GA	GA
EAOSS (Exchange Access Operator Services System) Signaling for Operator Service Calls	11	5E8 5E9(1) 5E9(2)	SU 930045 SU 940006 GA	SU 930079 SU 940013 GA
DC-ACVT (Direct Connect) Capability through the ISDN ACVT (Attendant Control of Voice Terminals) feature for analog lines)	12	5E8 5E9(1)	SU 930033 GA	SU 930050 GA
SCD (Selective Carrier Denial)	13	5E5 5E6	GA GA	GA GA
Executive Ringer Cutoff	14	5E5 5E6	SU 890021 GA	SU 890014 GA
OSPS Custom Toll and Assistance Branding	15	5E5 5E6	GA GA	GA GA
OSPS/ACD C-ACD Direct Agent Access	16	5E5 5E6	SU 900074 GA	SU 900066 GA
OSPS 10XXX Unblocking Fraud Prevention	17	5E5 5E6	SU 900065 GA	SU 900049 GA
TGSR for ISUP Trunks	18	5E5 5E6 5E7	SU 900110 SU 900048 GA	SU 900086 SU 900010 GA
Pre-Compliant FGB CIC Expansion	19	5E6	SU 900048	SU 900035

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		5E7	GA	GA
		5E8	GA	GA
OSPS C-ACD Alternated External Dialing	20	5E5	SU 900085	SU 900077
		5E6	SU 900031	SU 900027
		5E7	GA	GA
OSO AMA Recording For ANI Delivery	21	5E5	SU 900129	SU 900098
		5E6	SU 900066	SU 900046
		5E7	GA	GA
OSPS 891 Format Credit Card Service	22	5E5	SU 900130	SU 900128
		5E6	SU 910072	-
		5E7	NA	NA
OSPS Virtual Card	23	5E8	SU 930035	SU 930053
		5E9(1)	GA	GA
OSPS Purchase Limits Balance Quotation - Phase 1	24	5E8	SU 930039	SU 930063
		5E9(1)	GA	GA
TRS (OSPS Telephone Relay Service Call Handling)	25	5E8	SU 930033	SU 930048
		5E9(1)	GA	GA
OSPS BNS (Billed Number Screening) Fraud Control	26	5E8	SU 930027	SU 930045
		5E9(1)	GA	GA
Forced Calling Number Privacy on CCS Trunks	27	5E6	SU 930003	SU 930003
		5E7	SU 930005	SU 930003
		5E8	SU 930007	SU 930009
		5E9(1)	GA	GA
800 Post Dial Delay MF Signaling Transmission	28	5E6	SU 930002	SU 920093
Reduction (for End Office)		5E7	SU 930004	SU 920136
				SU 920138
		5E8	SU 920019	SU 920025
				SU 920043
		5E9(1)	GA	GA
800 Post Dial Delay MF Signaling Response Reduction	29	5E6	SU 930002	SU 920093
(for Access Tandem Office)		5E7	SU 930004	SU 920136
		5E8	SU 920019	SU 920026
				SU 920044
		5E9(1)	GA	GA
MCLD (Modified Called Line Disconnect) Enhancement	30	5E8	GA	GA
OSPS Interworking with SSP 800	31	5E6	SU 920060	SU 920055
		5E7	SU 920096	SU 920079
		5E8	GA	GA
AM Based Protocol Monitoring Translator	32	5E6	SU 920035	SU 920034
		5E7	SU 920064	SU 920046
		5E8	GA	GA
AR/AC with Privacy Number ID for AMA (Return Call	33	5E6	SU 920004	SU 910159
AMA)		5E7	SU 920005	SU 910023
		5E8	GA	GA
Proportionate Bidding	34	5E6	SU 920027	SU 920006
		5E7	SU 920104	SU 920066
		5E8	GA	GA
OSPS Position Release of NPA-131 Calls	35	5E6	SU 910095	SU 910093
		5E7	GA	GA
LASS Validation and Screening for NPA Split	36	5E6	SU 910133	SU 910114
		5E7	SU 910033	SU 910019
		5E8	GA	GA
Multi-Distinctive Ringing II / Enhanced MDNL	37	5E6	GA	GA
(Depends on SFID 1, see Division 2, Section 4A1)				
Flexible ANI	38	5E6	GA	GA
Enhanced INWATS-Type AMA Records	39	5E6	GA	GA
Calling Name Delivery Phase 0	40	5E6	SU 910142	SU 910112
		5E7	SU 920005	SU 910020
		5E8	GA	-
Calling Name Delivery Phase 2	40	5E7	SU 920105	SU 920087
		5E8	GA	-

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Calling Name Delivery Phase 2.1	40	5E8 5E9(1)	SU 930010 GA	SU 920029 GA
OSPS C-ACD Call Interaction Interface of Inbound Call Management (Call Vectoring Command PROMPT)	41	5E6	GA	GA
OSPS C-ACD Conference And Transfer For Outgoing TM/TS Calls	42	5E6 5E7	SU 910007 GA	SU 910005 GA
Limited 2-Level COT/AC (Customer Originating Trace/Automatic Callback)	43	5E6 not 5E7	SU 910014 NA	SU 910011 NA
ITSE (Incoming Trunk Service Evaluation)	44	5E6 5E7	SU 900054 GA	SU 900035 GA
OSPS Automated Operator	45	5E6 5E7	SU 910022 GA	NONE GA
OSPS ANI II Digit Treatment	46	5E6 5E7	SU 900073 GA	SU 900061 GA
UCR (Unidentified Call Rejection)	47			
- Base		5E5	SU 910089	SU 910084
- Base		5E6*	SU 910052	SU 910042
- Dial Code Activation of UCR		5E6	SU 910063	SU 910162
- UCR Announcement for Dial Code		5E6	SU 920004	SU 910156
- Base		5E7	SU 920035	SU 910018
POLIN (Privacy Option For Last Incoming Number)	48	5E6 5E7	SU 910004 GA	SU 910003 GA
Remove ISDN COT Agency	49	5E6 5E7	SU 910052 GA	SU 910043 GA
CPNP (Calling Party Number Presentation)	50	5E6 5E7	SU 910100 GA	SU 910083 GA
ASP Feature Release 0.1A (ASP Enhancement) (Depends on SFID 58, see Division 2, Section 4A58)	51	5E6 5E7 5E8	SU 920027 SU 920052 GA	SU 910155 SU 910017 GA
OSPS ANI Forwarding	52	5E6 5E7	SU 900073 GA	SU 900060 GA
Operator Line Verification Interaction With Call Forwarding Busy Line	53	5E6 5E7	SU 910052 GA	SU 910041 GA
OSPS Emergency Interrupt AMA	54	5E6 5E7	SU 910032 GA	SU 910021 GA
OSPS Feature Group B Prepay Coin Access Charge Recording	55	5E6 5E7	SU 910032 GA	SU 910023 GA
OSPS Missing LIDB Data Call Handling Modifications	56	5E6 5E7	SU 910050 GA	SU 910035 GA
OSPS Unblock 900 For Rate Quotes	57	5E6 5E7	SU 910050 GA	SU 910034 GA
ASP Base Feature Lock	58	5E6 5E7	SU 910077 GA	SU 910060 GA
IDDD Routing via SFG	59	5E6 5E7	SU 910077 GA	SU 910062 GA
Metro Hub	60	5E6 5E7	SU 910092 GA	SU 910084 GA
E911 (Enhanced 911)	61	5E7	GA	GA
CFDA (Call Forward Don't Answer) after Call Waiting	62	5E7	GA	GA
CLSS (Calling Line Side Supervision)	63	5E7	GA	GA
Music On Hold	64	5E7 5E8	SU 920085 GA	SU 920084 GA
OSPS Automated Position Call Type Determination	65	5E7	GA	GA
OSPS Automated Sequence Dialing Following Operator Release	66	5E7	GA	GA
OSPS OAP 15 Minute Traffic Report MECH Usage Data	67	5E7	GA	GA
OSPS OAP 24 Hour Traffic Report MECH Usage Data	68	5E7	GA	GA
OSPS Specialized Handling for 700 Calls	69	5E7	GA	SU 920032
CLAMA (Coin Line Automatic Message Counting)	70	5E7	GA	SU 920040
Transfer From ARU to ACD	71	5E7 5E8	SU 920035 GA	SU 910030 GA
5E8 Base Lock for ISTF	72	5E7 5E8	GA GA	GA GA

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OSPS Real Time Rating Improvements for DACC	73	5E7	GA	GA
PBX Trunk Access to OSPS	74	5E7	GA	SU 920011
OSPS OLS Before DACC Prompt	75	5E7	GA	GA
OSPS OLS - Alternate Routing	76	5E7 5E8	SU 920019 GA	SU 920011 GA
OSPS Block 900 Calls for 10+4 Cards	77	5E7 5E8	SU 920019 GA	SU 920011 GA
OSPS Completion of Inter-LATA calls Accessing Directory Assistance	78	5E7 5E8	SU 920057 GA	SU 920050 GA
OSPS ACCS for 0+800 Calls From Wireless Service Providers	79	5E7 5E8	SU 920081 GA	SU 920074 GA
Intra-Switch Analog Line Transfer	80	5E7 5E8 5E9(1)	SU 920131 SU 930006 GA	SU 920015 SU 920102 GA
OSPS LIDB - Change Handling of Indeterminate Reply Codes	81	5E7 5E8	SU 920096 GA	SU 920092 GA
OSPS ACQS Rate Distinction Based on Quote Delivery	82	5E8 5E9(1)	SU 930027 GA	SU 930039 GA
OSPS Feature Group D Incoming Signaling for Special Applications	83	5E8 5E9(1)	SU 930027 GA	SU 930043 GA
OSPS Alternate Access to Language Specific Operator Services	84	5E8 5E9(1)	SU 930010 GA	SU 930013 GA
OSPS FTS/NRA	85	5E8 5E9(1)	SU 930012 GA	SU 930025 GA
OSPS EABS (Exchange Alternate Billing Services) Alternate Routing	86	5E8 5E9(1)	SU 930008 GA	SU 930010 GA
OSPS Volt Delta DA Interface	87	5E8 5E9(1)	SU 930008 NA	SU 930006 NA
Circuit Switched Trunk Enhancement (Depends on SFID 6, see Division 2, Section 4A6)	88	5E8 5E9(1)	SU 930010 GA	SU 930020 GA
OSPS Specialized Handling for 700 Calls Release 2.1	89	5E8 5E9(1)	SU 930010 GA	SU 930012 GA
OSPS Subaccount Billing - ANI Screening	90	5E7 5E8	SU 920096 GA	SU 920088 GA
Call Waiting with Distinctive Tones/Ringing for Long Distance Calls	91	5E8	GA	GA
Bridging Onto Conference Call, Multiple Bridgers, RHR of Cong. Call	92	5E8	GA	GA
Advanced Service Interface Proxy	93	5E8 5E9(1)	SU 930015 GA	SU 930001 GA
OSPS MECH Zip Tone	94	5E8	GA	GA
OSPS Independent Company, Announcement Branding	95	5E8	GA	GA
OSPS OLS - Customized Market Announcements	96	5E8	GA	GA
OSPS Original Line Number Screening Before DACC - Phase 2	97	5E8	GA	GA
OSPS Purchase Limits - Alert Tone Prior to Disconnect	98	5E8	GA	GA
OSPS Originating Station Class for DA Call Completion	99	5E7 5E8	SU 920083 GA	- GA
OSPS VMS Service Code Measurements	100	5E8 5E9(1)	SU 920015 GA	SU 920031 GA
OSPS International Billed Number Screening	101	5E8 5E9(1)	SU 920015 GA	SU 920028 GA
OSPS 0- Transfer Over Feature Group D Trunks	102	5E8 5E9(1)	SU 920020 GA	SU 920040 GA
AP (Applications Processor) Link Diversification	103	5E8	GA	GA
AMA - Recording of Calls from Wireless Service Providers	104	5E8 5E9(1)	SU 930006 GA	SU 930002 GA
CENTREX PRI (Primary Rate Interface) Enhancements (Depends on SFID 60, see Division 2, Section 4A60)	105	5E8 5E9(1)	SU 930037 GA	SU 930047 GA
Usage-Sensitive Three-Way Calling	106	5E8 5E9(1)	SU 940001 GA	SU 930058 GA
OSPS AIBNS (Automated Inward Billed Number Screening)	107	5E8 5E9(1)	SU 930008 GA	SU 930004 GA
Dual ESA for E911	108	5E8	SU 920020	SU 920017

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		5E9(1)	GA	GA
ALIC-5 (Analog Line to Integrated Carrier on the 5ESS Switch)	109	5E8 5E9(1)	SU 930010 GA	SU 920049 GA
OSPS CICADA (Completion of Calls Accessing Inter-LATA Directory Assistance II Block/Unblock 809 (Depends on SFID 78, see Division 2, Section 4A78)	110	5E8 5E9(1)	SU 930008 GA	SU 930007 GA
AC (Automatic Callback) Blocked to Private Number	111	5E8 5E9(1)	SU 930012 GA	SU 930015 GA
OSPS AMA Identification of 800 Access Calls	112	5E8 5E9(1)	SU 930019 GA	SU 930030 GA
OSPS Intraflow to Interflow Call Handling	113	5E8 5E9(1)	SU 930024 GA	SU 930040 GA
ISDN PSAP (Public Safety Answering Point) (Depends on SFID 61, see Division 2, Section 4A61)	114	5E8 5E9(1) 5E9(2)	SU 940012 SU 940011 GA	SU 940008 SU 940022 GA
OSPS CICADA Mute Back to Connect Operator (Depends on SFID 78, see Division 2, Section 4A78)	115	5E8 5E9(1)	SU 930015 GA	SU 930022 GA
CPN (Calling Party Number) Delivery on E911 Calls (Depends on SFID 61, see Division 2, Section 4A61)	116	5E8 5E9(1) 5E9(2)	SU 940012 SU 940011 GA	SU 940008 SU 940020 GA
OSPS Enhancements to DA and DACC for Wireless Users	117	5E8 5E9(1) 5E9(2)	SU 930045 SU 940006 GA	SU 930077 SU 940005 GA
15A Announcement	118	5E9(1) 5E9(2)	SU 940024 GA	SU 940068 GA
Alternate Language LASS Announcement	119	5E8 5E9(1) 5E9(2)	SU 940007 SU 940023 GA	SU 940001 SU 940010 GA
Originating AR/AC Destination Point Code	120	5E14	SU	SU
ACD (Automatic Call Distributor/BRCS DN Provisioning	121	5E9(1)	GA	GA
ACD (Automatic Call Distributor/BRCS Position Provisioning (Depends on SFID 121, see Division 2, Section 4A121)	122	5E9(1)	GA	GA
ACD (Automatic Call Distributor/BRCS Agent Login (Depends on SFID 122, see Division 2, Section 4A122)	123	5E9(1)	GA	GA
Call Park	124	5E9(1)	GA	GA
Fractional DS1 Switching - N x DS0	125	5E9(1)	GA	GA
ASP (Advanced Service Platform) Release 0.1B (Depends on SFID 51, see Division 2, Section 4A51)	126	5E9(1)	GA	GA
AMATRC (AMA Trace) Enhancements	127	5E9(1)	GA	GA
AMA Capabilities for Type 2A Cellular Interconnections	128	5E9(1)	GA	GA
Software Update Process Automation	129	5E9(1)	GA	GA
Digital Cellular Switch (Digital AMPS TDMA)	130	5E9(1) 5E9(2)	SU 930005 GA	- GA
ELINK (E-Link Access and Alternate A-Link Set Routing)	131	5E9(1)	GA	GA
FPCR (Full Point Code Routing)	132	5E9(1)	GA	GA
CIDCW (Calling Identity Delivery on Call Waiting) (Depends on SFID 140, see Division 2, Section 4A140)	133	5E9(1) 5E9(2)	SU 940017 GA	SU 940024 GA
ATTS (Automatic Trunk Test Scheduler)	134	5E9(1)	GA	GA
ASP Distinctive Ringing (Depends on SFID 126, see Division 2, Section 4A126)	135	5E9(1) 5E9(2)	SU 940020 GA	SU 940069 GA
ASP Default Routing for Termination Attempt Triggers (Depends on SFID 126, see Division 2, Section 4A126)	136	5E9(1) 5E9(2)	SU 940020 GA	SU 940045 GA
ASP BRCS OHD Interworking (Depends on SFID 126, see Division 2, Section 4A126)	137	5E9(1) 5E9(2)	SU 940016 GA	SU 940017 GA

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ASP OHD LASS Interworking (Depends on SFID 126, see Division 2, Section 4A126)	137	5E9(1) 5E9(2)	SU 940033 GA	SU 940077 GA
Vector Prompt Enhancement (Depends on SFID 41 and 123, see Division 2, Section 4A41 and Division 2, Section 4A123)	138	5E9(1) 5E9(2) 5E10	SU 940037 SU 950003 GA	SU 940089 SU 950005 GA
ASP Interworking with NISDN and ISATs (Depends on SFID 126, see Division 2, Section 4A126)	139	5E9(1) 5E9(2)	SU 940016 GA	SU 940023 GA
Switch-to-CPE Analog Off-Hook FSK Data Interface	140	5E9(1) 5E9(2)	SU 940017 GA	SU 940024 GA
Dual ESA (Emergency Services Adjunct) for E911 Enhancements (Depends on SFID 108, see Division 2, Section 4A108)	141	5E9(1) 5E9(2)	SU 940023 GA	SU 940051 GA
Flexible ANI Enhancements (Depends on SFID 38, see Division 2, Section 4A38)	142	5E9(1) 5E9(2)	SU 940024 GA	SU 940044 GA
Pinnacle ACD E911 Service (Depends on SFID 114 and 123, see Division 2, Section 4A114 and Division 2, Section 4A123)	143	5E9(1) 5E9(2)	SU 940034 GA	SU 940067 GA
Dual Circuit FX (Foreign Exchange) Plugs	144	5E9(1) 5E9(2)	SU 950001 GA	SU 940037 GA
Call Waiting Deluxe - Phase I (Depends on SFID 140, see Division 2, Section 4A140)	145	5E9(1) 5E9(2) 5E10	SU 950007 SU 950014 GA	SU 950011 SU 950041 GA
A-I-Net LASS-SCN/Intelligent Peripheral Interworking (Depends on SFID 139, see Division 2, Section 4A139)	146	5E9(1) 5E9(2) 5E10	SU 940037 SU 950003 GA	- SU 950010 GA
ASP Busy/No Answer Subsequent Event Detection (Depends on SFID 126, see Division 2, Section 4A126)	147	5E9(1) 5E9(2) 5E10	SU 950010 SU 950016 GA	SU 950013 SU 950035 GA
ASP Interworking with SMDR (Station Message Detail Recording) (Depends on SFID 58, see Division 2, Section 4A58)	148	5E9(1) 5E9(2)	SU 940017 GA	SU 940052 GA
ICLATA (Inter-LATA Carrier's Intra-LATA) Capability	149	5E9(1) 5E9(2) 5E10	SU 940037 SU 950008 GA	SU 940103 SU 950029 GA
Additional ASP OHD Interactions with Account Code and CPN/BN (Depends on SFID 126, see Division 2, Section 4A126)	150	5E9(1) 5E9(2)	SU 940033 GA	SU 940084 GA
Protocol Monitoring Translator for National ISDN (Depends on SFID 32, see Division 2, Section 4A32)	151	5E9(1) 5E9(2) 5E10	SU 950019 SU 960001 GA	SU 950043 SU 950080 GA
ASP 3/6/10 Digit Trigger Screening (Depends on SFID 58, see Division 2, Section 4A58)	152	5E9(1) 5E9(2) 5E10	SU 940035 SU 940006 GA	SU 940094 SU 940005 GA
ASP Default Routing for 3/6/10 Digit Triggers (Depends on SFID 126, see Division 2, Section 4A126)	153	5E9(1) 5E9(2) 5E10	SU 950009 SU 950020 GA	SU 950016 - GA
Toll Connecting Routing and Billing Enhancement	154	5E9(1) 5E9(2) 5E10	SU 950004 SU 950005 GA	SU 950006 SU 950023 GA
Call Forwarding Over Private Facilities/Don't Answer	155	5E9(1) 5E9(2) 5E10	SU 950016 SU 950019 GA	SU 950031 SU 950060 GA
Spontaneous Usage Sensitive 3-way Calling	156	5E9(1) 5E9(2) 5E10	SU 95A015 SU 960001 GA	SU 950029 SU 950065 GA
Toll-Free Treatment for NPA 888 Phase 1	158	5E9(1) 5E9(2)	SU 950018 SU 950020	SU 950035 SU 950064

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		5E10	GA	GA
ASP Trunk Trigger for Toll (Depends on SFID 126, see Division 2, Section 4A126)	159	5E9(1) 5E9(2) 5E10	SU 950009 SU 950010 GA	SU 950019 SU 950044 GA
Type 2A/2B CMC (Cellular Mobile Carrier) via CCS (Common Channel Signaling) (Depends on SFID 128, see Division 2, Section 4A128)	160	5E9(1) 5E9(2) 5E10 5E11	SU 950018 SU 960003 SU 960001 GA	SU 950039 SU 950075 SU 950016 GA
Redirecting Number Parameter Delivery on PRI	161	5E9(1) 5E9(2) 5E10 5E11	SU 950018 SU 960001 SU 96A004 GA	SU 950041 SU 950077 SU 960012 GA
ASP Multiple Rate Center Support (Depends on SFID 126, see Division 2, Section 4A126)	162	5E9(1) 5E9(2) 5E10	SU 95A017 SU 950022 GA	SU 950036 SU 950066 GA
ISUP Message Loop Detection	163	5E11	GA	GA
TRFC30 30 to 60 Minute Collection	164	5E9(1) 5E9(2) 5E10 5E11	SU 950018 SU 960001 SU 960006 GA	SU 950040 SU 950076 SU 960017 GA
Toll Digital Exchange Basic Call Processing for Toll 5ESS-2000 Switch	165	5E10 5E11	SU 96A004 GA	SU 960008 GA
AMA Recording For AIN Busy And Don't Answer Calls (Depends on SFID 126, see Division 2, Section 4A126)	166	5E10 5E11	SU 960002 GA	SU 960004 GA
AMA Capabilities for Type 1 Cellular Access	167	5E10 5E11	SU 960009 GA	SU 960007 GA
Enhanced Poke Confirmation Feature	168	5E10 5E11	SU 96A010 GA	SU 960020 GA
Increase Collection Unit for ROP - Section 144	169	5E11	GA	GA
SSNCI (Subsystem Number Capacity Increase) (Depends on SFID 126, see Division 2, Section 4A126)	170	5E10 5E11	SU 96A008 GA	SU 960021 GA
TCAP Improvements for a Switch Spanning Multiple LATAs	171	5E11	GA	GA
Increase Number of Trunk Groups to 4000	172	5E11	GA	GA
AIN Toll Free Service Phase 2 (Depends on SFID 236, see Division 2, Section 4A236)	173	5E11	GA	GA
LRN (Local Number Portability) (Depends on SFID 126, see Division 2, Section 4A126)	174	5E11	SU 970020	-
Expanded SLS (Signaling Link Selection)	175	5E11	GA	GA
Improved SLT (Signaling Link Test)	176	5E11	GA	GA
MTP (Message Transfer Part) Node Restart	177	5E11	GA	GA
Pre-Query Screening for OHD Triggers (Depends on SFID 58, see Division 2, Section 4A58)	178	5E10 5E11	SU 960013 GA	SU 960033 GA
Enhanced Professional Office	179	5E11	SU 970005	SU 970011
NP - Basic LRN AMA	180	5E11 5E12	SU 970005 GA	- GA
Centrex Network	181	5E9(2)	GA	GA
Centrex Network with ISVM (Depends on SFID 181, see Division 2, Section 4A181)	182	5E9(2)	GA	GA
Centrex Network for Government Security (Depends on SFID 181, see Division 2, Section 4A181)	183	5E9(2)	GA	GA
Far Access Remote	184	5E9(2)	GA	GA
ASP NESS (Network Element Services Signaling) (Depends on SFID 139, see Division 2, Section 4A139)	185	5E9(2) 5E10	SU 950007 GA	SU 950018 GA
Suppressed Ringing	186	5E9(2) 5E10	SU 950021 GA	SU 950074 GA

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IXE Tandem Calls via 2 Local Access Tandems	188	5E9(2) 5E10 5E11	SU 950022 SU 950005 GA	SU 950078 SU 950021 GA
ASP Originating Busy/No Answer Triggers with Extended Ringing (Depends on SFID 126, see Division 2, Section 4A126)	189	5E11 5E12	SU 97A016 GA	SU 970041 GA
ASP Enhancements to Multiple Rate Center Support (Depends on SFID 51, see Division 2, Section 4A51)	190	5E10 5E11	SU 960017 GA	SU 960040 GA
IS-634 A2 Interface	191	5E13	GA	GA
ICLID Enhancement for MLHG	192	5E10 5E11	SU 96A008 GA	SU 960026 GA
E911 Trunk Failure Alarms	193	5E11 5E12	- GA	- GA
A/B Link and No Path Access Delay and Blockage	194	5E11	GA	GA
TCAP Message Tandem	195	5E11	GA	GA
MLPP (Multi-Level Precedence and Preemption) on SS7-Stage 1	196	5E11 5E12 5E13	SU 970024 SU 970007 GA	SU 970046 SU 970001 GA
MLPP (Multi-Level Precedence and Preemption) on SS7-Stage 2 (Depends on SFID 196, see Division 2, Section 4A196)	197	5E11 5E12 5E13	SU 970024 SU 970007 GA	SU 970046 SU 970001 GA
Number Portability - NPA-NXX Growth	198	5E12	GA	GA
NP - AMA Access Billing (Depends on SFID 180, see Division 2, Section 4A180)	199	5E11 5E12	SU 970006 GA	SU 970019 GA
Automatic SPID Download	200	5E10 5E11 5E12	SU 970003 SU 970015 GA	SU 970004 SU 970009 GA
Deny Automatic Callback on Intra-LATA PIC Calls - Per CIC Control	201	5E10 5E11 5E12	SU 960020 SU 97A016 GA	SU 960057 SU 970032 GA
LDP Multiple CIC Support (Depends on SFID 165, see Division 2, Section 4A165)	202	5E11 5E12	SU 970006 GA	SU 970007 GA
LDP Data Calls (Depends on SFID 165, see Division 2, Section 4A165)	203	5E11 5E12	SU 970006 GA	SU 970007 GA
Decoupling of AM/CM for CM-Only Initilization	204	5E12	GA	GA
Multiple Tandem Cut Through to IXC (Inter□Exchange Carrier) for CAP (Competitive Access Provider) (Depends on SFID 154, see Division 2, Section 4A154)	205	5E10 5E11	SU 960019 GA	SU 960050 GA
Data Only for PRI (Primary Rate Interface)	206	5E10 5E11 5E12	SU 970004 SU 970002 GA	SU 970005 SU 970002 GA
LDP Multiple ANI Support (Depends on SFID 165, see Division 2, Section 4A165)	207	5E12	GA	GA
Call Information Display	208	5E10 5E11 5E12	SU 97A013 - GA	- - GA
Repeat Dial Interworking with AIN Originating Busy Trigger (Depends on SFID 189, see Division 2, Section 4A189)	209	5E11 5E12	- GA	SU 970058 GA
ASP Inhibiting of Originating Busy/No Answer Office Triggers (Depends on SFID 189, see Division 2, Section 4A189)	210	5E11 5E12	- GA	SU 970056 GA
ASP Provisioning of Originating Busy/No Answer Office	211	5E12	GA	GA

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Triggers (Depends on SFID 189, see Division 2, Section 4A189)				
Call Screening for ASP Originating Busy/No Answer Office Triggers (Depends on SFID 189, see Division 2, Section 4A189)	212	5E11 5E12	- GA	SU 960057 GA
Route International Calls by Country Code (Depends on SFID 159, see Division 2, Section 4A159)	213	5E10 5E11 5E12	SU 960025 SU 960004 GA	SU 960025 SU 960004 GA
TBCT (Two B-Channel Transfer) on PRI (Primary Rate Interface) and ISDN TBCT Notify to Controller	214	5E13	GA	GA
CDMA Data Services - Circuit Mode (Depends on SFID 221, see Division 2, Section 4A221)	215	5E12	GA	GA
NP - Non-Conditional 10-Digit Trigger for LRN (Depends on SFID 174, see Division 2, Section 4A174)	216	5E11 5E12	SU 970061 GA	SU 970061 GA
General MINT Capability, Alpha Signaling (Depends on SFID 165, see Division 2, Section 4A165)	217	5E12 5E13	SU 980024 GA	- GA
5ESS-2000 LN (Local Nodal) EO (End Office) (Depends on SFID 38, see Division 2, Section 4A38)	218	5E12	GA	GA
PRI Call-by-Call Service Selection for Hotel/Motels and SCOCS	219	5E11	GA	GA
Calling Name for ISDN PRI	220	5E11	GA	GA
CDMA (Code Division Multiple Access) (Depends on SFID 130, see Division 2, Section 4A130)	221	5E10	GA	GA
Third Party Call Control Request Route (Depends on SFID 121, see Division 2, Section 4A121)	222	5E10 5E11	SU 960002 GA	SU 960001 GA
CCITT Recommendation E.164 Compliance for 15 Digit IDDD (International Direct Distance Dialing)	223	5E10	GA	GA
PHA (Protocol Handler for Asynchronous Transfer Mode)	224	5E10	GA	GA
National ISDN 5E10 BRI Package	225	5E10	GA	GA
ASP BRCS/OHD Interworking Extensions (Depends on SFID 137, see Division 2, Section 4A137)	226	5E10	GA	GA
ASP Call Routing Parameters (Depends on SFID 126, see Division 2, Section 4A126)	227	5E10	GA	GA
ISDN PCS (Personal Communications Services) Interworking (Depends on SFIDs 137, 146, 147, 150, 185, 225, and 227, see appropriate Division 2, Section 4A)	228	5E10	GA	GA
AIN 0.2 Send To Outside Resource (Local) (Depends on SFID 126, see Division 2, Section 4A126)	229	5E10 5E11	SU 96A007 GA	SU 960018 GA
TLWS (Trunk Line Workstation Metallic Test Capability on SM2000 Using SLIM 2 (Subscriber Line and Instrument Measurements 2)	230	5E10	GA	GA
Third Party Call Control Redirect Alerting Call (Depends on SFID 122, see Division 2, Section 4A122)	231	5E10 5E11	SU 960002 GA	SU 960001 GA
Third Party Call Control Transfer/Conference Position Call (Depends on SFID 122, see Division 2, Section 4A122)	232	5E10 5E11	SU 960002 GA	SU 960001 GA
Third Party Call Control Originate Call (Depends on SFID 122, see Division 2, Section	233	5E10 5E11	SU 960002 GA	SU 960001 GA

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4A122)				
Switch Verification for Multiple Directory Numbers	234	5E10	GA	GA
Toll Digital Exchange ANI Table Processing (Depends on SFID 165, see Division 2, Section 4A165)	235	5E10 5E11	SU 96A004 GA	SU 960008 GA
ANI Toll Free Phase 1 (Depends on SFID 126, see Division 2, Section 4A126)	236	5E10 5E11	SU 960022 GA	SU 960053 GA
ASP Interworking with CSD (Circuit Switched Data) (Depends on SFID 126, see Division 2, Section 4A126)	237	5E10 5E11	SU 960022 GA	SU 960054 GA
Automatic Association of Default Service	238	5E10 5E11	SU 950005 GA	SU 950019 GA
ASP (Advanced Service Platform) Selective NPA Deletion for ASP Multiple Rate Center Support (Depends on SFID 51, see Division 2, Section 4A51)	239	5E10 5E11 5E12	SU 970010 - GA	SU 970015 - GA
Line Blocking Enhancement for ISVM (Inter-Switch Voice Messaging)	240	5E10 5E11 5E12	SU 970002 SU 970003 GA	SU 970002 SU 970006 GA
AIN Send to Outside Resource (Remote) (Depends on SFID 229, see Division 2, Section 4A229)	241	5E11 5E12	SU 980001 GA	SU 980001 GA
VPN-LDP (Virtual Private Network - Long Distance Platform) (Depends on SFIDs 235, 203, and 202, see Division 2, Section 4A235 or, Division 2, Section 4A203, or Division 2, Section 4A202)	242	5E11 5E12	SU 970020 GA	SU 970053 GA
Carrier Routing / Call Processing By Facility Presence (Depends on SFID 126, see Division 2, Section 4A126)	243	5E11 5E12	SU 97A021 GA	SU 970054 GA
Modified Redirecting Number Parameter Origination on PRI	244	5E10 5E11 5E12	SU 970011 SU 970015 GA	SU 970013 SU 970030 GA
RTCD (Real Time Call Detail) Platform/Application (Depends on SFID 165, see Division 2, Section 4A165)	245	5E12	GA	GA
MINT Beta Signaling (Depends on SFID 217, see Division 2, Section 4A217)	247	5E12 5E13	SU 980024 GA	- GA
MINT Gamma Signaling (Depends on SFID 217, see Division 2, Section 4A217)	248	5E12 5E13	SU 980024 GA	- GA
Reroute Queuing	249	5E12 5E13	SU 980024 GA	- GA
MINT Reroute on Release	250	5E12 5E13	SU 980024 GA	- GA
MINT Time Dependent routing	251	5E12 5E13	SU 980024 GA	- GA
AIN Announcement ID Expansion (Depends on SFID 126, see Division 2, Section 4A126)	252	5E12	GA	GA
Restrict Usage of ASP Triggers (Depends on SFID 126, see Division 2, Section 4A126)	254	5E11 5E12	SU 97A021 GA	SU 970052 GA
ASP Originating Triggers (Depends on SFID 126, see Division 2, Section 4A126 - For more information see Division 2, Section 4A254)	255	5E11 5E12	SU 97A021 GA	SU 970052 GA
ASP Dialing Plan Triggers (Depends on SFID 126, see Division 2, Section 4A126 - For more information see Division 2, Section	256	5E11 5E12	SU 97A021 GA	SU 970052 GA

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4A254)				
ASP Terminating Triggers (Depends on SFID 126, see Division 2, Section 4A126 - For more information see Division 2, Section 4A254)	257	5E11 5E12	SU 97A021 GA	SU 970052 GA
National ISDN Call Park	258	5E12 5E13	SU 99A002 GA	SU 980055 GA
Switched Based TDMA (Time Division Multiple Access) Vocoders (Depends on SFID 130, see Division 2, Section 4A130)	259	5E12	GA	GA
Protocol Monitor for CCS Signaling Links	260	5E12 5E13	SU 98A021 GA	- GA
LDP Operator Routing Based on Called Party Number (Depends on SFID 165, see Division 2, Section 4A165)	261	5E12	GA	GA
IBDS (Internally Bridged Dual Services), Package 1	262	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 970073 SU 970006 GA
IBDS (Internally Bridged Dual Services), Package 2 (Depends on SFID 262, see Division 2, Section 4A262)	263	5E12 5E13	SU 980006 GA	SU 970007 GA
Telephone Status Monitor and Select	264	5E12 5E13	SU 980005 GA	SU 980015 GA
Selective Manual RC Output Priority	265	5E12	GA	GA
Prohibit REX on BRI Lines Per Office	266	5E11 5E12 5E13	SU 97A021 GA GA	SU 970055 GA GA
Prohibit REX on BRI Lines Per Line	267	5E11 5E12 5E13	SU 97A021 GA GA	SU 970055 GA GA
Two Simultaneous Voice Calls on BRI	268	5E11 5E12	SU 970019 GA	SU 970051 GA
Alternate Local Service Provider Routing	269	5E12 5E13	SU 990004 GA	SU 990005 GA
VPN (Virtual Private Network) Expansion Package A (Depends on SFID 242, see Division 2, Section 4A242)	270	5E12 5E13	SU 98A022 GA	- GA
DNIS (Dialed Number Identification Service)	271	5E12	GA	GA
DALs (Direct Access Links) (Depends on SFID 126, see Division 2, Section 4A126)	272	5E12	GA	GA
Call Forward on Trunks	273	5E11 5E12 5E13	SU 97A025 SU 970005 GA	SU 970075 SU 970008 GA
Signaling System 7 F-Links	274	5E12	GA	GA
Feature Interactions with 10-Digit Office Dialing Plan	275	5E10 5E11 5E12 5E13	SU 970011 SU 970014 SU 980001 GA	SU 970016 SU 970038 SU 970017 GA
NP Service Provider Portability AMA Enhancements (Depends on SFID 199, see Division 2, Section 4A199)	276	5E11 5E12 5E13	SU 98A013 SU 98A017 GA	SU 980023 SU 980028 GA
VFDE (Voice Frequency Data Enhancement)	277	5E11 5E12 5E13	SU 980008 SU 980008 GA	SU 980010 SU 980010 GA
Local Trunk Billing Enhancement	278	5E11 5E12 5E13	SU 980006 SU 980007 GA	SU 980006 SU 980006 GA
GETS (Government Emergency Telecommunications Service) High Probability of Call Completion	279	5E13	GA	GA
IBDS (Internally Bridged Dual Service) - Package 3	280	5E13	GA	GA

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(Depends on SFID 263, see Division 2, Section 4A263)				
Operator & Directory Assistance Billing for Unbundled Local Switching	281	5E11 5E12 5E13	SU 98A011 SU 98C014 GA	SU 980019 SU 980025 GA
II Digits Screening (Depends on SFID 165, see Division 2, Section 4A165)	282	5E13	GA	GA
Ability to stop RST:TRK, TKGMN	283	5E12 5E13	SU 980011 GA	SU 980011 GA
Recovery from ABD (Alternate Boot Disks)	284	5E13	GA	GA
CDMA Data Services-Packet Mode (Depends on SFID 130, see Division 2, Section 4A130)	285	5E13	-	-
TDMA Data Services-Circuit Mode (Depends on SFIDs 259 and 130, see Division 2, Section 4A259 or Division 2, Section 4A130)	286	5E13	-	-
5ESS-2000 LDP (Long Distance Platform) MINT Expansion Package A (Depends on SFID 165, see Division 2, Section 4A165)	287	5E13 5E14	SU 990009 GA	SU 990031 GA
OSPS CSG (Communications Services Group) Secured Feature Office Identifier	288	5E9(1) 5E9(2)	SU 940020 GA	- GA
LDP (Long Distance Platform) RTI (Route Index) Expansion/List	289	5E13	-	-
LDP (Long Distance Platform) Final Route Trigger (Depends on SFID 237, see Division 2, Section 4A237)	290	5E13	-	-
Deny Transfer of Digit Screened Calls	291	5E12 5E13	- GA	- GA
Simplified Custom ISDN Attendant	292	5E12 5E13	- -	- -
E911 Call Error Detection and Alarm	293	5E11 5E12 5E13	SU 980011 SU 98C014 GA	SU 980017 - GA
Route Outage AML (Automatic Maintenance Limit) E911 Call Error Detection and Alarm	294	5E11 5E12 5E13	SU 98A011 SU 98C014 GA	SU 980017 SU 980022 GA
ASP Persistent Transactions Enhancements (Depends on SFID 126, see Division 2, Section 4A126)	295	5E12 5E13	SU 990009 SU 980007	SU 990007 -
Delete Warning Display for Essential Services	296	5E11 5E12 5E13	SU 980009 SU 980011 GA	SU 980020 SU 980024 GA
ASM (Administrative Services Module) Base	297	5E12 5E13	- GA	- GA
Wireless E911 (Depends on SFID 61, see Division 2, Section 4A61)	298	5E12 5E13	SU 98A016 GA	- GA
FGD (Feature Group D) Interface to E911 (Depends on SFID 61, see Division 2, Section 4A61)	299	5E12 5E13	SU 980013 GA	- GA
Number Portability - Test Query for LRN (Depends on SFID 126, see Division 2, Section 4A126)	300	5E11 5E12 5E13	SU 98A011 SU 980016 GA	SU 980027 SU 980027 GA
ASP Network Busy Event (Depends on SFID 126, see Division 2, Section 4A126)	301	5E13	GA	GA
Enhanced Alternate Carrier Routing (Depends on SFID 126, see Division 2, Section 4A126)	302	5E13	GA	GA
LPN (Local Number Portability) on the LDP (Long Distance Toll Platform) (Depends on SFID 174, see Division 2, Section	303	5E12 5E13	- GA	- GA

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4A174)				
Number Portability - Non-Conditional Trigger for DID Trunks (Depends on SFID 216, see Division 2, Section 4A216)	304	5E11 5E12 5E13	SU 980014 SU 980021 GA	SU 980038 SU 980051 GA
Global Recent Change Interaction with LASS AR (Depends on SFID 189, see Division 2, Section 4A189)	305	5E11 5E12 5E13	SU 980016 SU 98A022 GA	SU 980040 SU 980040 GA
5E Acceptance of 1A Wink NPD and ANI for 911 Routed Calls (Depends on SFID 61 and 193, see Division 2, Section 4A61 or Division 2, Section 4A193)	314	5E11 5E12 5E13	SU 980003 SU 980017 GA	- SU 980046 GA
Incoming/Outgoing Trunk Group Usage Counts	315	5E13 5E14	- GA	- GA
OSDE (On-Site Data Evolution) (Depends on SFID 297, see Division 2, Section 4A297)	316	5E12 5E13	- GA	- GA
Packet Pipe Enhancements (Depends on SFID 221, see Division 2, Section 4A221)	317	5E13 5E14	- GA	- GA
CNAM (Originating Switch Calling Name)	318	5E13	GA	GA
NP Service Provider Portability AMA Enhancements II (Depends on SFID 199, see Division 2, Section 4A199)	319	5E11 5E12 5E13 5E14	SU 980013 SU 98A017 GA GA	SU 980032 SU 980028 GA GA
Feature Deployment via the Data Services Module (Depends on SFID 297, see Division 2, Section 4A297)	320	5E12 5E13	- SU 99A004	- -
AMA Recording for Resale and Unbundling	321	5E12 5E13 5E14	- - GA	- - GA
Recent Change Front End on the ASM (Depends on SFID 297, see Division 2, Section 4A297)	322	5E13	GA	GA
Trunk Group Hunt Sequence Enhancements	323	5E13	GA	GA
OSPS Listing Services - International Directory Assistance	324	5E12 5E13 5E14	SU 980023 SU 980002 GA	SU 980078 - GA
City Code Routing on International Calls	325	5E12 5E13	SU 980026 SU 980004	- SU 980006
Number Portability - Officewide Reserved Marketing (Depends on SFID 174, see Division 2, Section 4A174)	326	5E12 5E13 5E14	SU 98A021 SU 980005 GA	SU 980064 SU 980013 GA
ADSI Acknowledgment Timer Optional Value (Depends on SFID 140, see Division 2, Section 4A140)	327	5E12 5E13 5E14	SU 980025 SU 980004 GA	SU 980060 - GA
Support for AMADNS Phase 1 (Depends on SFID 297, see Division 2, Section 4A297)	328	5E12 5E13 5E14	- SU 990005 GA	- SU 990012 GA
OSPS Limit for Customer-Controlled Reconnect to LS/DA	329	5E12 5E13 5E14	SU 990004 SU 990003 GA	SU 980057 - GA
Tandem to Tandem E911 (Depends on SFID 61, see Division 2, Section 4A61)	330	5E12 5E13 5E14	SU 990005 SU 980006 GA	SU 990010 SU 990014 GA
Talking Call Waiting	331	5E12 5E13 5E14	SU 99B006 SU 99A005 GA	SU 990017 SU 990019 GA
Pay Phone Compensation for Tollfree Calls, Tollfree Calling Enhancement for Flexible ANI II	332	5E11 5E12 5E13	SU 990002 SU 990007 SU 990007	SU 990001 SU 990018 SU 990026

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		5E14	GA	GA
ASP Send to Outside Resource Interworking with Orig Busy/No Answer with Extended Ringing (Depends on SFID 126, 189, and 229, see Division 2, Section 4A126 or Division 2, Section 4A189 or Division 2, Section 4A229)	333	5E12 5E13 5E14	SU 990006 - GA	SU 990016 - GA
Call Forward Don't Answer - Ring Control	335	5E12 5E13 5E14	SU 990004 SU 99A004 GA	SU 990006 SU 990009 GA
NPA to NPD Translation Table for E911 Calls (Depends on SFID 61, see Division 2, Section 4A61)	337	5E12 5E13 5E14	SU 990009 SU 990007 GA	SU 990011 SU 990015 GA
OSPS DIALECT by OLS	338	5E12 5E13 5E14	- - GA	- - GA
OSPS Customized Operator Service - Release 1	339	5E12 5E13 5E14	- - GA	- - GA
866 - 822 Toll Free Service (Depends on SFID 158, see Division 2, Section 4A158)	340	5E12 5E13 5E14	- - GA	- - GA
Distinctive Call Forwarding Alert	341	5E12 5E13 5E14	- - GA	- - GA
Module 55803 Enhancement	342	5E13 5E14	SU 990010 GA	- GA
ASP Mid Call Event Detection (Depends on SFID 126, see Division 2, Section 4A126)	343	5E13 5E14 5E15	- - -	- - -
Raw Formatted Output for Office Records	344	5E12 5E13 5E14	IMR 664621 IMR664621 GA	IMR 664621 IMR664621 GA
ASP Mid Call Event Detection (Depends on SFID 126, see Division 2, Section 4A126)	345	5E13 5E14 5E15	- - GA	- - GA
NP - Append BAF Module 164 with CNA (Chargeable Account Number)	346	5E13	GA	GA
Announcement on Detection of NPA Split	347	5E13 5E14 5E15	FR4 FR3 GA	- - GA
LDP AMA Correlation Module	348	5E13 5E14	IMR 671818 GA	SU 990060 GA
TSI Nailup of Consecutive DS0s for DNU-S	349	5E13 5E13 5E14	FR1 IMR 674164 FR2 IMR 674164 GA	99-0073 99-0024 GA
Multiline Hunt Group Capacity Expansion	351	5E15	GA	GA
OSPS Interflow for Operator Conferences	361	5E9(1)	GA	GA
OSPS ICCV Call Screening	362	5E9(1)	GA	GA
OSPS CIID - Carrier Specific Routing	363	5E9(1)	GA	GA
OSPS Operator Trouble Report with Automated Position	364	5E9(1)	GA	GA
OSPS Card Based Speed Dialing - Phase 2	365	5E9(1) 5E9(2)	SU 940002 GA	SU 940017 GA
OSPS Screening for Real Time Call Details	366	5E9(1) 5E9(2)	SU 940008 GA	SU 940019 GA
OSPS Speed Dialing Auto Provisioning (Depends on SFID 365, see Division 2, Section 4A365)	367	5E9(2)	GA	GA
OSPS LIDB - Recognition of PSDI Value 4	368	5E9(1) 5E9(2)	SU 940003 GA	SU 940003 GA
OSPS Enhanced AMA for Listing Services	369	5E9(1)	SU 940020	SU 940054

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		5E9(2)	GA	GA
OSPS Automated Inward Line Screening	370	5E9(1)	SU 940023	SU 940106
		5E9(2)	SU 940009	SU 940009
		5E10	GA	GA
OSPS Terminating Point Restriction Expansion	371	5E9(1)	SU 940023	SU 940061
		5E9(2)	GA	GA
OSPS Prepaid Overtime for Coin Calls	372	5E9(1)	SU 940018	SU 940043
		5E9(2)	GA	GA
OSPS Feature Group D Incoming Signaling for Special Applications - Release 2	373	5E9(1)	SU 940018	SU 940048
		5E9(2)	GA	GA
OSPS Calling Card Screening by Carrier	374	5E9(1)	SU 940018	SU 940047
		5E9(2)	GA	GA
OSPS TCS Screen Code Expansion	375	5E9(1)	SU 940020	SU 940056
		5E9(2)	GA	GA
OSPS Recall from Subscriber Deactivation	376	5E9(1)	SU 940023	SU 940053
		5E9(2)	GA	GA
OSPS 800 Access Using Feature Group D Signaling	377	5E9(1)	SU 940026	SU 940075
		5E9(2)	GA	GA
OSPS Carrier Specific Branding on Seizure for ACCS and ACTS	378	5E9(1)	SU 940030	SU 940079
		5E9(2)	SU 940009	SU 940004
		5E10	GA	GA
OSPS LEC Feature Group D Incoming Signaling/Special Handling of Calls	379	5E9(1)	SU 940030	SU 940086
		5E9(2)	SU 940009	SU 940004
		5E10	GA	GA
OSPS Network Access Interrupt	380	5E9(1)	SU 940038	SU 940095
		5E9(2)	SU 950002	SU 940022
		5E10	GA	GA
OSPS Customer Controlled Reconnect to DA	381	5E9(1)	SU 94A037	SU 940105
		5E9(2)	SU 950005	SU 950020
		5E10	GA	GA
OSPS Forward Number Interdigit Timing Change	382	5E9(1)	SU 940034	SU 940092
		5E9(2)	SU 950002	SU 940018
		5E10	GA	GA
OSPS Feature Group D Enhancements (Depends on OFID 617, see Division 2, Section 4A617)	383	5E9(1)	SU 940034	SU 940091
		5E9(2)	SU 950002	SU 940002
		5E10	GA	GA
OSPS ASAP - Release 2	384	5E9(1)	SU 94A037	SU 940099
		5E9(2)	SU 950002	SU 940025
		5E10	GA	GA
OSPS Inmate Calling Service	385	5E9(2)	SU 950009	SU 950033
		5E10	GA	GA
OSPS International Billed Number Screening - Release 2	386	5E9(1)	SU 940002	SU 940116
		5E9(2)	SU 950004	SU 940026
		5E10	GA	GA
OSPS TPR Expansion for International Numbers	387	5E9(2)	SU 950004	SU 950002
		5E10	GA	GA
OSPS ACCS for Commercial Credit Cards	388	5E9(2)	SU 950004	SU 950004
		5E10	GA	GA
OSPS Extending Round Trip Delay for OSC	389	5E10	GA	GA
OSPS ACCS Thank You Branding Timer	390	5E9(2)	SU 950005	SU 950026
		5E10	GA	GA
OSPS Teleconferencing Service Signaling Interface	391	5E9(2)	SU 950010	SU 950030
		5E10	GA	GA
OSPS AMA Recording of the Access ID for CAP Calls	392	5E9(2)	SU 950007	SU 950022
		5E10	GA	GA
OSPS BNS Query Message Enhancements	393	5E9(1)	SU 950004	SU 950004
		5E9(2)	SU 950005	SU 950017
		5E10	GA	GA
OSPS Expanding Interflow Incoming Trunks	394	5E10	GA	GA
Incoming ISUP (SS7) to OSPS	395	5E10	GA	GA
OSPS 1+ Time And Charges	396	5E9(1)	SU 950007	SU 950012
		5E9(2)	SU 950011	SU 950032
		5E10	GA	GA

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OSPS Specialized AMA for 15 Digit International	397	5E10	GA	GA
OSPS ASAP for Language Specific Operator Services Using Route Number	398	5E9(2) 5E10	SU 950007 GA	SU 950027 GA
OSPS Early Position Release of International Calls	399	5E9(2) 5E10	SU 950013 GA	SU 950038 GA
OSPS Purchase Limits Balance Quotation Business/Residential Cards	400	5E9(2) 5E10	SU 950016 SU 950003	SU 950050 SU 950008
OSPS AATOS Fraud Control	401	5E9(2) 5E10	SU 950018 GA	SU 950054 GA
OSPS Quiet Hear	402	5E9(2) 5E10 5E11	SU 950020 SU 950006 GA	SU 950061 SU 960007 GA
OSPS AATLSOS - Automated Access Prompt	403	5E9(2) 5E10 5E11	SU 950020 SU 950006 GA	SU 950063 SU 950003 GA
OSPS Closed End Branding for Operator Handling Calls	404	5E9(2) 5E10 5E11	SU 950021 SU 950005 GA	SU 950070 SU 950015 GA
OSPS 800 Toll Free Services NPA Expansion	405	5E10	GA	GA
OSPS Allow Leading 1 and 011 for Automated Phone Number Collection	406	5E9(2) 5E10 5E11	SU 950022 SU 950004 GA	SU 950067 SU 950001 GA
OSPS DACC AMA Record with Operator Entered Forward Number	407	5E9(2) 5E10 5E11	SU 950022 SU 960002 GA	SU 950071 SU 960020 GA
OSPS Automation of T&A Information	408	5E10 5E11	SU 960002 GA	SU 960022 GA
OSPS Automation of TCS/CPS Override	409	5E10 5E11	SU 96A010 GA	SU 960028 GA
OSPS Universal T1.5 Access Signaling Changes	410	5E11	GA	GA
OSPS Identification of Calls Originated Through Special Access Methods	411	5E10 5E11	SU 960009 GA	SU 960025 GA
OSPS Automated Access Prompting using Call Processing Data Links	412	5E10 5E11	SU 960025 GA	SU 960046 GA
OSPS OLS Call Routing for Special Services	413	5E10 5E11	SU 96A010 GA	SU 960024 GA
OSPS ASAP Language Specification Operator Services Rating Changes	414	5E10 5E11 5E12	SU 960017 SU 960007 GA	SU 960044 SU 960001 GA
OSPS Record and Playback	415	5E10 5E11 5E12	SU 960019 SU 960006 GA	SU 960052 SU 960004 GA
OSPS Bill To Third Fraud Control Based on Third Number NPA	416	5E10 5E11 5E12	SU 960016 SU 960005 GA	SU 960037 - GA
OSPS Local Number Portability for Local Exchange Carrier Offices	417	5E11 5E12	SU 960007 GA	SU 970007 GA
OSPS VMS Access Dialing Changes	418	5E10 5E11 5E12	SU 960028 SU 970001 GA	SU 960068 SU 960015 GA
OSPS Local Number Portability for AT&T Version	419	5E11 5E12	SU 960007 GA	SU 970007 GA
OSPS Customer Account Services International Intercept	420	5E10 5E11 5E12	SU 960025 SU 960005 GA	SU 960061 SU 960003 GA
OSPS Inmate Calling Services Allow Coin Handling	421	5E10 5E11 5E12	SU 960023 SU 960006 GA	SU 960060 SU 960006 GA
OSPS AMA Recording for Listing Services Search Types	422	5E10 5E11 5E12	SU 970002 SU 970002 GA	SU 960075 SU 970004 GA
OSPS 800 Universal International Numbering	423	5E11 5E12	SU 97A008 GA	SU 970018 GA

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OSPS CICADA Release 3	424	5E10 5E11 5E12	SU 960028 SU 970002 GA	SU 960069 SU 970003 GA
OSPS DIALECT (Direct Integrated Access to Language Enhanced Capabilities)	425	5E11 5E12	SU 97A019 GA	SU 970047 GA
OSPS NPA Handling by Trunk Group	426	5E11 5E12	SU 97A008 GA	SU 970024 GA
OSPS LS: Automated Directory Assistance System Release 1 (Depends on SFID 415, see Division 2, Section 4A415)	427	5E10 5E11 5E12	SU 97A006 SU 97A009 GA	SU 970009 SU 970025 GA
OSPS Rate for Flat and Measured Service	428	5E11 5E12	SU 970016 GA	SU 970033 GA
OSPS LSCC with SS7 Redirection	429	5E11 5E12	SU 970023 GA	SU 970040 GA
OSPS TCS-NPA Expansion	430	5E11 5E12	SU 970018 GA	SU 970039 GA
OSPS AMA - Record ANI II Digits - Interim	431	5E11 5E12	SU 97A009 GA	SU 970026 GA
OSPS ACCS - Special Calling Card Handling - LEC Pin Prompt	432	5E11 5E12	SU 970014 GA	SU 970036 GA
OSPS ACCS - Special Calling Card Handling - 10 Digit True Choice Calling Card	433	5E11 5E12	SU 970014 GA	SU 970036 GA
OSPS AMA - Record ANI II Digits	434	5E11 5E12 5E13	SU 97A019 SU 97B007 GA	SU 970049 SU 970010 GA
OSPS DIOR with Commercial Credit Card Capability	435	5E11 5E12 5E13	SU 970023 SU 980005 GA	SU 970064 SU 970011 GA
OSPS 800 Peel Out for Calling Card	436	5E12 5E13	SU 980005 GA	SU 980007 GA
OSPS 800 Peel Out for Multiple Card	437	5E12 5E13	SU 980005 GA	SU 980007 GA
OSPS CDR Charging Records (Depends on SFID 245, see Division 2, Section 4A245)	438	5E12 5E13	SU 980005 GA	SU 980007 GA
OSPS Automated Sequential Card Queries	439	5E12	GA	GA
OSPS PLBQ With Add-On Capability	440	5E11 5E12 5E13	SU 980003 SU 980007 GA	SU 980002 SU 980001 GA
OSPS CCS7 Incoming Signaling Wireless Call Indicator	442	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 980008 SU 980016 GA
OSPS National DA 00-Access LSCC with SS7 Redirection	443	5E11 5E12 5E13	SU 980001 SU 980002 GA	SU 980003 SU 980002 GA
OSPS CAS TCAP Query Changes for International Terminating Numbers	444	5E11 5E12 5E13	SU 970024 SU 97B006 GA	SU 970066 SU 970012 GA
OSPS IBNS Call Blocking	445	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 970078 SU 970016 GA
OSPS Acceptance of New Parameters in LIDB BNS and Card Replies	446	5E11 5E12 5E13	SU 980006 SU 980003 GA	SU 980005 SU 980003 GA
OSPS Credit Key Blocking	447	5E11 5E12 5E13	SU 980005 SU 980006 GA	SU 980009 SU 980009 GA
OSPS AMA - Record ANI II Digits - Release 2	448	5E11 5E12 5E13	SU 980003 SU 980009 GA	SU 970071 SU 980004 GA

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OSPS NPA Code Expansion	449	5E12 5E13	SU 980024 GA	SU 980063 GA
OSPS Flexible Automated Call Type Determination	450	5E13	GA	GA
OSPS 0- LEC Calls Maintenance Assert Handling	451	5E13	GA	GA
OSPS Originating Line Number Screening	452	5E12 5E13 5E14	SU 980024 SU 990003 GA	SU 980069 SU 990003 GA
OSPS DIOR 800 Services	453	5E12 5E13	SU 98A021 GA	SU 980048 GA
OSPS ATT LNP (Local Number Portability) Using Single Number Query	454	5E12 5E13	SU 980022 GA	SU 980049 GA
OSPS Flexible ANI Enhancement	455	5E11 5E12 5E13	SU 98A009 SU 98C014 GA	SU 980025 SU 980031 GA
OSPS AATLSOS-Automated Access Prompting Non-Tariffed Announcement	457	5E11 5E12 5E13 5E14	SU 98A009 SU 980A17 GA GA	SU 980026 SU 980030 GA GA
OSPS ESP 5ESS Operator Services Overlay Interface Control (and ES System Integrity/Reliability (99-5E-4327.A) see Division ???)	458	5E12 5E13 5E14	- - GA	- - GA
OSPS DA Listing in AMA Record	459	5E12 5E13 5E14	SU 990004 SU 990003 GA	SU 990004 SU 990008 GA
OSPS Control of DACC per LS/DA Transporting Carrier	460	5E12 5E13 5E14	SU 980025 SU 980004 GA	SU 980068 SU 980001 GA
OSPS DIOR Calling Card Restrictions to Domestic Terminations	461	5E12 5E13 5E14	SU 980025 SU 990002 GA	SU 980076 SU 980012 GA
OSPS Rate Announcement on 0+ Call, Release 2	462	5E12 5E13 5E14	SU 980023 SU 980004 GA	SU 980071 SU 980004 GA
OSPS ANSI Incoming Signaling System No. 7 from End Office	463	5E14	GA	GA
OSPS Listing Services Call Completion Service Measurements	464	5E12 5E13 5E14	SU 990005 SU 990005 GA	SU 990003 SU 990007 GA
OSPS - Rate Announcement on 0+ Calls	465	5E15	GA	GA
OSPS Provide Account Owner to LSDB	466	5E14	GA	GA
NP Verify Office for LRNs	505	5E14	GA	GA
DRM-2000	506	5E14	GA	GA
ASP Terminating Busy/NoAnswer Triggers and Subsequent Event Detection (Depends on SFID 126, see Division 2, Section 4A126)	507	5E14 5E15	- GA	- GA
ASP Display on BRI (Depends on SFID 126, see Division 2, Section 4A126)	508	5E14 5E15	- GA	- GA
CALEA - Core	509	5E14	GA	GA
Wireless Digital Loop Carrier (RDT on a Switch) (Depends on SFID 221, see Division 2, Section 4A221)	510	5E14	GA	GA
Message Waiting Indicator MWI Via PRI NOTE: FEATURE CANCELLED	511	5E14	GA	GA
FGD (Feature Group D) Cut Through Enhancements (Depends on SFID 165, see Division 2, Section 4A165)	512	5E13 5E14	SU 990009 GA	SU 990030 GA
PINNACLE Third Party Call Control Enhancements 1 (Depends on SFID 123, see Division 2, Section 4A123)	513	5E13 5E14	- GA	- GA
National ISDN Smart Attendant Service	514	5E14	GA	GA
Proprietary.	515	5E14	GA	GA

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Default Routing for Off-Hook Delay Triggers (Depends on SFID 126, see Division 2, Section 4A126)	516	5E14	GA	GA
AIN Furnish AMA Information Component (Depends on SFID 126, see Division 2, Section 4A126)	517	5E14	GA	GA
AC/AR by Destination Point Code	518	5E13 5E14	SU 980005 GA	SU 980010 GA
Release Link for Toll - ANSI Standard Protocol and TOPS Nonstandard Protocol (Depends on SFID 165 and OFID 788, see Division 2, Sections 4A165 and 4B788)	520	5E14	GA	GA
Release Link for Toll - TOPS Nonstandard Protocol (Depends on SFID 165 and OFID 788, see Division 2, Sections 4A165 and 4B788)	521	5E14	GA	GA
SS7 PSU MTP Routing Enhancements	522	5E14	-	-
Improved RC Verify	523	5E13 5E14	- GA	- GA
LD CIC at Terminating Tandem	524	5E14 5E15	- GA	- GA
DRM (Distinctive Remote Module)	525	5E14	GA	GA
Call Screening	526	5E14	-	-
Verify Office Capability for Long Distance Platform	527	5E14 5E15	FR1 GA	SU990008 GA
ASP Toll Free Service Interaction with Flexible ANI Features (Depends on SFID 332, see Division 2, Section 4A332)	528	5E13 5E14 5E15	- - GA	- - GA
CALEA PHASE III	529	5E14	GA	GA
1000 Block Number Pooling Using Number Portability (Depends on SFID 174, see Division 2, Section 4A174 and OFID 955, see Division 3, Section 5AS)	530	5E14 5E15	FR3 GA	- GA
TCP/IP Interface for Traffic Measurements	532	5E15	GA	GA
CNA CC720 Modification (Depends on SFID 180, see Division 2, Section 4A180)	533	5E14 5E15	FR2 GA	- GA
ASP AMA Recording for Abandoned STOR Connections (Depends on SFID 229, see Division 2, Section 4A229)	534	5E13 5E14 5E15	FR3 FR2 GA	- - GA
MDR (Multi-Distinctive Ringing)/CW (Call Waiting/CF (Call Forwarding) Interaction Enhancement (FAX Ring)	535	5E14	GA	GA
60 Minute Traffic Reporting Option	537	5E14	GA	GA
Type 1/2A/1B CMC ID Enhancement (Depends on SFIDs 128, 160, and 167. Refer to Division 2 Section 4A538)	538	5E14 5E15	FR1 GA	SU990003 GA
Proxy Database Phase 1 Proxy Database	539	5E15	GA	-
Easy Access to Voice Mail	540	5E15	GA	GA
Proprietary.	541	5E15	GA	GA
64KBPS X.75/X.75 Trunk Group	542	5E13 5E14 5E15	FR3 FR2 GA	SU 000007 SU 000014 GA
OSPS DA Custom Branding by Account Owner (Depends on OFID 970)	543	5E13 5E14 5E15	FR3 FR2 GA	SU 000011 - GA
Usage Sensitive Call Forwarding (USCF)	544	5E15	GA	GA
Multi Services Platform Summary Alarm Status	545	5E14 5E15	FR2 GA	- GA
Terminating Trunk Group Trigger (Depends on SFID 126, see Division 2, Section 4A126.)	546	5E15	GA	GA
Proprietary.	547	5E15	FR1	-
Proprietary.	548	5E15	FR2	-
Audible Calling Name on *69 (Automatic Callback) (Depends on OFID 971. See Division 2, Section	549	5E14 5E15	FR3 GA	- GA

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4B971.)				
PBX Calling ID	550	5E14 5E15	FR3 GA	- GA
Flexible DNIS (Dialed Number Information Service)	551	5E14 5E15	FR3 GA	- GA
Echo Cancellation for CDMA	552	5E15	GA	GA
Usage Sensitive Six-Way Calling	553	5E15	GA	GA
Dial Code Terminal Make Busy for MLHGS	555	5E15	GA	GA
II/OLI Delivery for National ISDN PRI	556	5E14 5E15	FR3 GA	- GA
ASP CDP on PRI	557	5E15	GA	GA
TCW - Inter-LATA Call Enhancements	558	5E14 5E15	FR3 GA	- GA
DA Automatic Position Release (Depends on OFID 977. See Division 2, Section 4B977.)	559	5E14	FR3	-
ASP Extended TSTRC Timer	560	5E15	GA	GA
Rate Area Exchange Increase	561	5E15	GA	GA
ASP Monitor for BRI and Multiline Hunt Group	563	5E15	FR1	-
DAS Increase	564	5E15	GA	GA
AMA Module 104 Direction Indicator	565	5E14 5E15	FR3 GA	- GA
Customer Recent Change Input For Critical Translations Protection	566	5E15	GA	GA
ATM Global Routing and Signaling	567	5E15	FR1	-
OSPS Commercial Credit Card Alternate Access Methods	568	5E14 5E15	FR4 GA	- GA
VTOA [Voice Telephony Over ATM (Asynchronous Transfer Mode)] LS (Local Services) (Depends on SFID 567. See Division 2, Section 4A567.)	569	5E15 5E16	FR-PSAX GA	- GA
Proxy Database Phase 1 Recent Change and SQUAL	570	5E15	GA	-
Proxy Database Phase 1 User Defined Database	571	5E15	GA	-
ASP Unrestricted FCD Trigger	572	5E15	FR1	-
Non-Restrictive ANI over Private Facility	573	5E14 5E15	FR3 GA	- GA
LTSB Interworking with Home Intercom	575	5E15 5E16	FR2 GA	- GA
Per Use Three Way Calling with Call Transfer This feature requires a USTWC feature to be active, therefore ACT must be "Y" for SFID 106 or SFID 156.	577	5E15 5E16	FR3 GA	- GA
Visual Call Pickup	578	5E15 5E16	FR2 GA	- GA
Talking Call Waiting with Caller ID	579	5E16	GA	GA
AIN Operator Services Trigger	584	5E16	GA	-
Furnish AMA Recording for Abandonded STOR Connections	585	5E15	FR2 GA	- GA
Direct Call Transfer to Voice Mail	586	5E16	GA	GA
Simultaneous Ringing	587	5E16	GA	GA
Call Transfer Enhancements	588	5E16	GA	GA
ESN (Emergency Service Number) Expansion for E911 (Depends on SFID 61. See Division 2, Section 4A61.)	589	5E16	GA	GA
Talking Call Waiting - Distinctive Call Waiting Tones	590	5E16	GA	GA
FCCS (Forwarded Call - Call Screening) Enhancement	592	5E16	GA	GA
AIN Ping Ring in a Forward Call Message	593	5E15 5E16	FR 2 GA	- GA
Code Conversion Expansion for N11	594	5E15 5E16	FR3 GA	- GA
RC Security for View and Class with Login ID	595	5E15 5E16	FR3 GA	- GA
Trunk Group Register Expansion	596	5E15 5E16	FR3 GA	- GA
Carrier Selection Information Default Handling for the Long Distance Platform Feature	597	5E14 5E15 5E16	- - GA	- - GA

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Expanded Virtual Terminal Access for ASM	598	5E16	GA	GA
G.168-2000 Compliance and Acoustic Echo Cancellation on PHV5	599	5E16	GA	GA
Use of NPA for E911 Default Routed Calls	600	5E15 5E16	FR3 GA	- GA
Billing and Comptrollers	601	5E15	FR3	-
7R/E Packet Solutions 4.0 ATM Transport Solution	602	5E16	GA	GA
SS7 Using Operator Services	603	5E16	FR2	-
PRI Calling Name for the Canadian Market	604	5E15 5E16	- GA	SU 010046 GA
TCP/IP for SCCS/NFM	608	5E15	IMR 731330	SU 10058
External Interface Infrastructure Expansion	609	5E15	IMR 731330	SU 10061
Increased ASM Disk Space For AMADNS	610	5E15	IMR 732254	SU 10062
SS7-PSU Remove Routing Data From Dedicated Host GSM	615	5E15	FR5	-
CNI Network ID Expansion	619	5E16(1)	GA	GA
CNI/PSU Support for 128K ISUP Trunk	622	5E15	SU 20006	SU 20001
IWG PCT Link Reservation (Feature has been canceled)	624	5E16(2)	-	-
Network Management Hard-To-Reach	625	5E16(2)	GA	GA
Network Management Code Specific Reroute	626	5E15 FR4.5 5E16	FR4.5 GA	- GA
Increase Terminal Sessions for Read Only RC on ASM	627	5E15	FR4	SU 20018
TCP/IP Security Enhancements for CALEA	628	5E15 FR5 5E16	FR5 GA	- GA
EAI (Emergency Action Interface) via ASM	631	5E15 FR5 5E16	FR5 GA	- GA
Digital Trunk Interface for TAU (Test Access Unit).	632	5E15 5E16	FR1 GA	- GA
Critical Alarms (DCS) Improvement	633	5E16(1)	SU 2A004	SU 20008
Voice and Data Channel Counts	635	5E16(2)	GA	GA
Dual PSU RTU feature for 1 SM (See Division 2, Section 7BK.)	636	5E16	FR2	-
Dual PSU RTU feature for 2 SMs (See Division 2, Section 7BK.)	637	5E16	FR2	-
Dual PSU RTU feature for 3 SMs (See Division 2, Section 7BK.)	638	5E16	FR2	-
Dual PSU RTU feature for 4 SMs (See Division 2, Section 7BK.)	639	5E16	FR2	-
Dual PSU RTU feature for 5 SMs (See Division 2, Section 7BK.)	640	5E16	FR2	-
Dual PSU RTU feature for 6 SMs (See Division 2, Section 7BK.)	641	5E16	FR2	-
Dual PSU RTU feature for 7 SMs (See Division 2, Section 7BK.)	642	5E16	FR2	-
Dual PSU RTU feature for 8 SMs (See Division 2, Section 7BK.)	643	5E16	FR2	-
Dual PSU RTU feature for 9 SMs (See Division 2, Section 7BK.)	644	5E16	FR2	-
Dual PSU RTU feature for 10 SMs (See Division 2, Section 7BK.)	645	5E16	FR2	-
Dual PSU RTU feature for 11 SMs (See Division 2, Section 7BK.)	646	5E16	FR2	-
Dual PSU RTU feature for 12 SMs (See Division 2, Section 7BK.)	647	5E16	FR2	-
Dual PSU RTU feature for 13 SMs (See Division 2, Section 7BK.)	648	5E16	FR2	-
Dual PSU RTU feature for 14 SMs (See Division 2, Section 7BK.)	649	5E16	FR2	-
Dual PSU RTU feature for 15 SMs (See Division 2, Section 7BK.)	650	5E16	FR2	-
Dual PSU RTU feature for 16 SMs (See Division 2, Section 7BK.)	651	5E16	FR2	-
Dual PSU RTU feature for 17 SMs (See Division 2, Section 7BK.)	652	5E16	FR2	-
Dual PSU RTU feature for 18 SMs	653	5E16	FR2	-

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(See Division 2, Section 7BK.)				
Dual PSU RTU feature for 19 SMs (See Division 2, Section 7BK.)	654	5E16	FR2	-
Dual PSU RTU feature for 20 SMs (See Division 2, Section 7BK.)	655	5E16	FR2	-
Dual PSU RTU feature for 21 SMs (See Division 2, Section 7BK.)	656	5E16	FR2	-
Dual PSU RTU feature for 22 SMs (See Division 2, Section 7BK.)	657	5E16	FR2	-
Dual PSU RTU feature for 23 SMs (See Division 2, Section 7BK.)	658	5E16	FR2	-
Dual PSU RTU feature for 24 SMs (See Division 2, Section 7BK.)	659	5E16	FR2	-
Dual PSU RTU feature for 25 SMs (See Division 2, Section 7BK.)	660	5E16	FR2	-
CM3 TMS Fabric Expansion (see Division 2, Section 7BO)	662	5E16(2)	GA	GA
CM3 TMS Fabric Expansion (see Division 2, Section 7BO)	663	5E16(2)	GA	GA
CM3 TMS Fabric Expansion (see Division 2, Section 7BO)	664	5E16(2)	GA	GA
GETS Enabled Edge Switch (depends upon SGID 279 and SFID 218)	665	5E16(2)	GA	GA
New Traffic Measurements for NxTMS	666	5E16(2)	GA	GA
Call Transfer/COT/AC Enhancements	667	5E16	GA	GA
AIN Activity Test Message (Depends on SFID 126. See Division 2, Section 4A126.)	668	5E16(2)	FR1	SU 30001
Patch Space Recovery Tool	669	5E16(2)	FR 1	-
SAAL SS7 High Speed Signaling Links	670	5E16(2)	FR 1	GA
Assert Mnemonics on the ROP	671	5E16(2)	GA	GA
RC/V Security' Logging and Verbose Enhancements	674	5E16(2)	GA	GA
FCCS (Forwarded Call - Call Screening) Announcement Modification	678	5E16(2)	GA	GA
High Capacity APT Enhancements	682	5E16(2)	FR1	GA
OIU SIP-T	684	5E16(2)	FR3	GA
IMLT Access Improvements and Metallic A-Link Blockage Notification	685	5E16(2)	FR1	GA
3B21D/RTR High Speed Performance Improvement	686	5E16(2)	FR1	SU 30013
TCP/IP via ASM for CIA	689	5E16(2)	FR2	GA
ASM Model 1 Support Extension	690	5E16(2)	FR2	-
ASM Model 1 Support Extension	691	5E16(2)	FR2	-
CIC Routing Solution	697	5E17(1)	FR3	GA
Secured Feature Module Growth Update Automation	NA	5E5 5E6	SU 900085 GA	- GA

NONE = No Informational Software Update issued.

- = Software Release Feature. No Informational Software Update issued.

GA = Feature available in the General Availability Software Release.

NA = Feature no longer uses SFID or is not available for this Software Release.

* = When multiple software updates are listed for a single software release, all of the software updates for that software release must be installed for the feature to function.

FR = Feature is available with a feature release; e.g., FR2 indicates Feature Release 2.

Figure 1 SECURED FEATURE ID NUMBERS AND CORRESPONDING FEATURE NAMES

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sfsys 5ESS Switch
SCREEN 1 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

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*1. MODULE OFC
2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
1	1	_	9	9	_	17	17	_	25	25	_	33	33	_	41	41	_
2	2	_	10	10	_	18	18	_	26	26	_	34	34	_	42	42	_
3	3	_	11	11	_	19	19	_	27	27	_	35	35	_	43	43	_
4	4	_	12	12	_	20	20	_	28	28	_	36	36	_	44	44	_
5	5	_	13	13	_	21	21	_	29	29	_	37	37	_	45	45	_
6	6	_	14	14	_	22	22	_	30	30	_	38	38	_	46	46	_
7	7	_	15	15	_	23	23	_	31	31	_	39	39	_	47	47	_
8	8	_	16	16	_	24	24	_	32	32	_	40	40	_	48	48	_

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sfsys 5ESS Switch
SCREEN 2 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
49	49	_	57	57	_	65	65	_	73	73	_	81	81	_	89	89	_
50	50	_	58	58	_	66	66	_	74	74	_	82	82	_	90	90	_
51	51	_	59	59	_	67	67	_	75	75	_	83	83	_	91	91	_
52	52	_	60	60	_	68	68	_	76	76	_	84	84	_	92	92	_
53	53	_	61	61	_	69	69	_	77	77	_	85	85	_	93	93	_
54	54	_	62	62	_	70	70	_	78	78	_	86	86	_	94	94	_
55	55	_	63	63	_	71	71	_	79	79	_	87	87	_	95	95	_
56	56	_	64	64	_	72	72	_	80	80	_	88	88	_	96	96	_

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sfsys 5ESS Switch
SCREEN 3 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
97	97	_	105	105	_	113	113	_	121	121	_	129	129	_	137	137	_
98	98	_	106	106	_	114	114	_	122	122	_	130	130	_	138	138	_
99	99	_	107	107	_	115	115	_	123	123	_	131	131	_	139	139	_
100	100	_	108	108	_	116	116	_	124	124	_	132	132	_	140	140	_
101	101	_	109	109	_	117	117	_	125	125	_	133	133	_	141	141	_
102	102	_	110	110	_	118	118	_	126	126	_	134	134	_	142	142	_
103	103	_	111	111	_	119	119	_	127	127	_	135	135	_	143	143	_
104	104	_	112	112	_	120	120	_	128	128	_	136	136	_	144	144	_

---

sfsys 5ESS Switch
SCREEN 4 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

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```
ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
145 145  _ 153 153  _ 161 161  _ 169 169  _ 177 177  _ 185 185  _
146 146  _ 154 154  _ 162 162  _ 170 170  _ 178 178  _ 186 186  _
147 147  _ 155 155  _ 163 163  _ 171 171  _ 179 179  _ 187 187  _
148 148  _ 156 156  _ 164 164  _ 172 172  _ 180 180  _ 188 188  _
149 149  _ 157 157  _ 165 165  _ 173 173  _ 181 181  _ 189 189  _
150 150  _ 158 158  _ 166 166  _ 174 174  _ 182 182  _ 190 190  _
151 151  _ 159 159  _ 167 167  _ 175 175  _ 183 183  _ 191 191  _
152 152  _ 160 160  _ 168 168  _ 176 176  _ 184 184  _ 192 192  _
```

```
sfsys                    5ESS Switch
SCREEN 5 OF 21           OFFICE DATA ADMINISTRATION
(5713-1)                 SECURED FEATURE UPGRADE

              2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
193 193  _ 201 201  _ 209 209  _ 217 217  _ 225 225  _ 233 233  _
194 194  _ 202 202  _ 210 210  _ 218 218  _ 226 226  _ 234 234  _
195 195  _ 203 203  _ 211 211  _ 219 219  _ 227 227  _ 235 235  _
196 196  _ 204 204  _ 212 212  _ 220 220  _ 228 228  _ 236 236  _
197 197  _ 205 205  _ 213 213  _ 221 221  _ 229 229  _ 237 237  _
198 198  _ 206 206  _ 214 214  _ 222 222  _ 230 230  _ 238 238  _
199 199  _ 207 207  _ 215 215  _ 223 223  _ 231 231  _ 239 239  _
200 200  _ 208 208  _ 216 216  _ 224 224  _ 232 232  _ 240 240  _
```

```
sfsys                    5ESS Switch
SCREEN 6 OF 21           OFFICE DATA ADMINISTRATION
(5713-1)                 SECURED FEATURE UPGRADE

              2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
241 241  _ 249 249  _ 257 257  _ 265 265  _ 273 273  _ 281 281  _
242 242  _ 250 250  _ 258 258  _ 266 266  _ 274 274  _ 282 282  _
243 243  _ 251 251  _ 259 259  _ 267 267  _ 275 275  _ 283 283  _
244 244  _ 252 252  _ 260 260  _ 268 268  _ 276 276  _ 284 284  _
245 245  _ 253 253  _ 261 261  _ 269 269  _ 277 277  _ 285 285  _
246 246  _ 254 254  _ 262 262  _ 270 270  _ 278 278  _ 286 286  _
247 247  _ 255 255  _ 263 263  _ 271 271  _ 279 279  _ 287 287  _
248 248  _ 256 256  _ 264 264  _ 272 272  _ 280 280  _ 288 288  _
```

```
sfsys                    5ESS Switch
SCREEN 7 OF 21           OFFICE DATA ADMINISTRATION
(5713-1)                 SECURED FEATURE UPGRADE

              2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
289 289  _ 297 297  _ 305 305  _ 313 313  _ 321 321  _ 329 329  _
290 290  _ 298 298  _ 306 306  _ 314 314  _ 322 322  _ 330 330  _
```

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291 291 _ 299 299 _ 307 307 _ 315 315 _ 323 323 _ 331 331 _
292 292 _ 300 300 _ 308 308 _ 316 316 _ 324 324 _ 332 332 _
293 293 _ 301 301 _ 309 309 _ 317 317 _ 325 325 _ 333 333 _
294 294 _ 302 302 _ 310 310 _ 318 318 _ 326 326 _ 334 334 _
295 295 _ 303 303 _ 311 311 _ 319 319 _ 327 327 _ 335 335 _
296 296 _ 304 304 _ 312 312 _ 320 320 _ 328 328 _ 336 336 _

---

sfsys 5ESS Switch
SCREEN 8 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
337 337 _ 345 345 _ 353 353 _ 361 361 _ 369 369 _ 377 377 _
338 338 _ 346 346 _ 354 354 _ 362 362 _ 370 370 _ 378 378 _
339 339 _ 347 347 _ 355 355 _ 363 363 _ 371 371 _ 379 379 _
340 340 _ 348 348 _ 356 356 _ 364 364 _ 372 372 _ 380 380 _
341 341 _ 349 349 _ 357 357 _ 365 365 _ 373 373 _ 381 381 _
342 342 _ 350 350 _ 358 358 _ 366 366 _ 374 374 _ 382 382 _
343 343 _ 351 351 _ 359 359 _ 367 367 _ 375 375 _ 383 383 _
344 344 _ 352 352 _ 360 360 _ 368 368 _ 376 376 _ 384 384 _

---

sfsys 5ESS Switch
SCREEN 9 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
385 385 _ 393 393 _ 401 401 _ 409 409 _ 417 417 _ 425 425 _
386 386 _ 394 394 _ 402 402 _ 410 410 _ 418 418 _ 426 426 _
387 387 _ 395 395 _ 403 403 _ 411 411 _ 419 419 _ 427 427 _
388 388 _ 396 396 _ 404 404 _ 412 412 _ 420 420 _ 428 428 _
389 389 _ 397 397 _ 405 405 _ 413 413 _ 421 421 _ 429 429 _
390 390 _ 398 398 _ 406 406 _ 414 414 _ 422 422 _ 430 430 _
391 391 _ 399 399 _ 407 407 _ 415 415 _ 423 423 _ 431 431 _
392 392 _ 400 400 _ 408 408 _ 416 416 _ 424 424 _ 432 432 _

---

sfsys 5ESS Switch
SCREEN 10 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
433 433 _ 441 441 _ 449 449 _ 457 457 _ 465 465 _ 473 473 _
434 434 _ 442 442 _ 450 450 _ 458 458 _ 466 466 _ 474 474 _
435 435 _ 443 443 _ 451 451 _ 459 459 _ 467 467 _ 475 475 _
436 436 _ 444 444 _ 452 452 _ 460 460 _ 468 468 _ 476 476 _
437 437 _ 445 445 _ 453 453 _ 461 461 _ 469 469 _ 477 477 _

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438 438 _ 446 446 _ 454 454 _ 462 462 _ 470 470 _ 478 478 _
439 439 _ 447 447 _ 455 455 _ 463 463 _ 471 471 _ 479 479 _
440 440 _ 448 448 _ 456 456 _ 464 464 _ 472 472 _ 480 480 _

---

sfsys 5ESS Switch
SCREEN 11 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
481 481 _ 489 489 _ 497 497 _ 505 505 _ 513 513 _ 521 521 _
482 482 _ 490 490 _ 498 498 _ 506 506 _ 514 514 _ 522 522 _
483 483 _ 491 491 _ 499 499 _ 507 507 _ 515 515 _ 523 523 _
484 484 _ 492 492 _ 500 500 _ 508 508 _ 516 516 _ 524 524 _
485 485 _ 493 493 _ 501 501 _ 509 509 _ 517 517 _ 525 525 _
486 486 _ 494 494 _ 502 502 _ 510 510 _ 518 518 _ 526 526 _
487 487 _ 495 495 _ 503 503 _ 511 511 _ 519 519 _ 527 527 _
488 488 _ 496 496 _ 504 504 _ 512 512 _ 520 520 _ 528 528 _

---

sfsys 5ESS Switch
SCREEN 12 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
529 529 _ 537 537 _ 545 545 _ 553 553 _ 561 561 _ 569 569 _
530 530 _ 538 538 _ 546 546 _ 554 554 _ 562 562 _ 570 570 _
531 531 _ 539 539 _ 547 547 _ 555 555 _ 563 563 _ 571 571 _
532 532 _ 540 540 _ 548 548 _ 556 556 _ 564 564 _ 572 572 _
533 533 _ 541 541 _ 549 549 _ 557 557 _ 565 565 _ 573 573 _
534 534 _ 542 542 _ 550 550 _ 558 558 _ 566 566 _ 574 574 _
535 535 _ 543 543 _ 551 551 _ 559 559 _ 567 567 _ 575 575 _
536 536 _ 544 544 _ 552 552 _ 560 560 _ 568 568 _ 576 576 _

---

sfsys 5ESS Switch
SCREEN 13 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT ROW SFID ACT
577 577 _ 585 585 _ 593 593 _ 601 601 _ 609 609 _ 617 617 _
578 578 _ 586 586 _ 594 594 _ 602 602 _ 610 610 _ 618 618 _
579 579 _ 587 587 _ 595 595 _ 603 603 _ 611 611 _ 619 619 _
580 580 _ 588 588 _ 596 596 _ 604 604 _ 612 612 _ 620 620 _
581 581 _ 589 589 _ 597 597 _ 605 605 _ 613 613 _ 621 621 _
582 582 _ 590 590 _ 598 598 _ 606 606 _ 614 614 _ 622 622 _
583 583 _ 591 591 _ 599 599 _ 607 607 _ 615 615 _ 623 623 _
584 584 _ 592 592 _ 600 600 _ 608 608 _ 616 616 _ 624 624 _

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SCREEN 14 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
625	625	_	633	633	_	641	641	_	649	649	_	657	657	_	665	665	_
626	626	_	634	634	_	642	642	_	650	650	_	658	658	_	666	666	_
627	627	_	635	635	_	643	643	_	651	651	_	659	659	_	667	667	_
628	628	_	636	636	_	644	644	_	652	652	_	660	660	_	668	668	_
629	629	_	637	637	_	645	645	_	653	653	_	661	661	_	669	669	_
630	630	_	638	638	_	646	646	_	654	654	_	662	662	_	670	670	_
631	631	_	639	639	_	647	647	_	655	655	_	663	663	_	671	671	_
632	632	_	640	640	_	648	648	_	656	656	_	664	664	_	672	672	_

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SCREEN 15 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
673	673	_	681	681	_	689	689	_	697	697	_	705	705	_	713	713	_
674	674	_	682	682	_	690	690	_	698	698	_	706	706	_	714	714	_
675	675	_	683	683	_	691	691	_	699	699	_	707	707	_	715	715	_
676	676	_	684	684	_	692	692	_	700	700	_	708	708	_	716	716	_
677	677	_	685	685	_	693	693	_	701	701	_	709	709	_	717	717	_
678	678	_	686	686	_	694	694	_	702	702	_	710	710	_	718	718	_
679	679	_	687	687	_	695	695	_	703	703	_	711	711	_	719	719	_
680	680	_	688	688	_	696	696	_	704	704	_	712	712	_	720	720	_

sfsys 5ESS Switch
SCREEN 16 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
721	721	_	729	729	_	737	737	_	745	745	_	753	753	_	761	761	_
722	722	_	730	730	_	738	738	_	746	746	_	754	754	_	762	762	_
723	723	_	731	731	_	739	739	_	747	747	_	755	755	_	763	763	_
724	724	_	732	732	_	740	740	_	748	748	_	756	756	_	764	764	_
725	725	_	733	733	_	741	741	_	749	749	_	757	757	_	765	765	_
726	726	_	734	734	_	742	742	_	750	750	_	758	758	_	766	766	_
727	727	_	735	735	_	743	743	_	751	751	_	759	759	_	767	767	_
728	728	_	736	736	_	744	744	_	752	752	_	760	760	_	768	768	_

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SCREEN 17 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
769	769	_	777	777	_	785	785	_	793	793	_	801	801	_	809	809	_
770	770	_	778	778	_	786	786	_	794	794	_	802	802	_	810	810	_
771	771	_	779	779	_	787	787	_	795	795	_	803	803	_	811	811	_
772	772	_	780	780	_	788	788	_	796	796	_	804	804	_	812	812	_
773	773	_	781	781	_	789	789	_	797	797	_	805	805	_	813	813	_
774	774	_	782	782	_	790	790	_	798	798	_	806	806	_	814	814	_
775	775	_	783	783	_	791	791	_	799	799	_	807	807	_	815	815	_
776	776	_	784	784	_	792	792	_	800	800	_	808	808	_	816	816	_

---

sfsys 5ESS Switch
SCREEN 18 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
817	817	_	825	825	_	833	833	_	841	841	_	849	849	_	857	857	_
818	818	_	826	826	_	834	834	_	842	842	_	850	850	_	858	858	_
819	819	_	827	827	_	835	835	_	843	843	_	851	851	_	859	859	_
820	820	_	828	828	_	836	836	_	844	844	_	852	852	_	860	860	_
821	821	_	829	829	_	837	837	_	845	845	_	853	853	_	861	861	_
822	822	_	830	830	_	838	838	_	846	846	_	854	854	_	862	862	_
823	823	_	831	831	_	839	839	_	847	847	_	855	855	_	863	863	_
824	824	_	832	832	_	840	840	_	848	848	_	856	856	_	864	864	_

---

sfsys 5ESS Switch
SCREEN 19 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
865	865	_	873	873	_	881	881	_	889	889	_	897	897	_	905	905	_
866	866	_	874	874	_	882	882	_	890	890	_	898	898	_	906	906	_
867	867	_	875	875	_	883	883	_	891	891	_	899	899	_	907	907	_
868	868	_	876	876	_	884	884	_	892	892	_	900	900	_	908	908	_
869	869	_	877	877	_	885	885	_	893	893	_	901	901	_	909	909	_
870	870	_	878	878	_	886	886	_	894	894	_	902	902	_	910	910	_
871	871	_	879	879	_	887	887	_	895	895	_	903	903	_	911	911	_
872	872	_	880	880	_	888	888	_	896	896	_	904	904	_	912	912	_

---

sfsys 5ESS Switch
SCREEN 20 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

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2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
913	913	_	921	921	_	929	929	_	937	937	_	945	945	_	953	953	_
914	914	_	922	922	_	930	930	_	938	938	_	946	946	_	954	954	_
915	915	_	923	923	_	931	931	_	939	939	_	947	947	_	955	955	_
916	916	_	924	924	_	932	932	_	940	940	_	948	948	_	956	956	_
917	917	_	925	925	_	933	933	_	941	941	_	949	949	_	957	957	_
918	918	_	926	926	_	934	934	_	942	942	_	950	950	_	958	958	_
919	919	_	927	927	_	935	935	_	943	943	_	951	951	_	959	959	_
920	920	_	928	928	_	936	936	_	944	944	_	952	952	_	960	960	_

---

sfsys 5ESS Switch _
SCREEN 21 OF 21 OFFICE DATA ADMINISTRATION
(5713-1) SECURED FEATURE UPGRADE

2. SECURED FEATURE ID LIST (SFLIST)

ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT	ROW	SFID	ACT
961	961	_	969	969	_	977	977	_	985	985	_	993	993	_
962	962	_	970	970	_	978	978	_	986	986	_	994	994	_
963	963	_	971	971	_	979	979	_	987	987	_	995	995	_
964	964	_	972	972	_	980	980	_	988	988	_	996	996	_
965	965	_	973	973	_	981	981	_	989	989	_			
966	966	_	974	974	_	982	982	_	990	990	_			
967	967	_	975	975	_	983	983	_	991	991	_			
968	968	_	976	976	_	984	984	_	992	992	_			

Figure 2 SAMPLE SFSYS FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5AS: 5713-2 RECORD SPECIAL AND TRANSPARENCY FEATURE OPTIONING SYSTEM FORM - FOSYS

1. GENERAL

For 5E5 through 5E8 Software Releases, the FOSYS (Feature Optioning SYStem) form is used to administer TFOS (Transparency Feature Optioning System) bits for Special and Transparency Features. For 5E9(1) and later, these TFOS IDs (Transparency Feature IDs) are called OFS IDs (Optioned Feature System IDs). Transparency Features have been developed to replicate features that exist on the 1A ESS Switch.

NOTE: The use of OFS IDs is not limited to Transparency Features, and not all Transparency Features use OFS IDs.

OFS IDs can be administered on a per-SM basis. If an FOSYS form exists with MODULE set to an SM number, then that form sets the OFS IDs on that SM. If there is no FOSYS form for a particular SM and an FOSYS form with MODULE set to "OFC" exists, then those settings are used. Therefore, the FOSYS form with MODULE set to "OFC" acts as a default for all SMs without an SM-specific form.

1.1 Initializing OFS Parameters In Newly Grown SMs

For 5E6 and later, this capability provides for the initialization of OFS parameters to either be activated or deactivated during SM growth. Prior to this capability, when a new SM was added to an office, all OFS feature activation status was set by default to be deactivated. This capability allows OFS feature activation status in the new SM to be activated at growth time.

OFS feature parameters are dependent on the state of existing OFS parameters, and features will be activated in the new SM based on the following rules:

Feature Activation During SM Growth

Existing State	Newly Grown SM State
On in all SMs.	On
On in some SMs.	Off
Off in all SMs.	Off

This capability keeps a record in the CMP of the status (either active or inactive) of each SM's optioned features. These settings, called "normal" or "growth" settings, reflect how OFS IDs are set across the office and will be used to initialize OFS IDs in newly grown SMs. For 5E6 and later, when MODULE is "CMP", then the FID (Feature ID) settings have the following meaning:

Valid FEATURE ID Entries For MODULE set to "CMP"

Entry	Definition
Y	Software Release: 5E9(1) and later. Yes. The OFS ID is active in all SMs.
P	Software Release: 5E6 and later. Partially set/active. The OFS ID is set/active in some but not all SMs.
N or Blank	Software Release: 5E9(1) and later. Not active. The OFS ID is not active in any SMs.

These settings are used to initialize OFS IDs in newly grown SMs. When the FID is "P", "N", or blank, the FID on the new SM will be "N" or blank. When a CMP form exists, it must be consistent with other FOSYS form data. When a CMP form does not exist, it will be automatically created during mapping and during the printing of office records.

2. ON-LINE INFORMATIONAL SOFTWARE UPDATES

Informational Software Updates, which are available on SCANS (Software Change Administration And Notification System), provide information on features which are released during a Software Update. In

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addition to being transmitted to users via SCANS, these Informational Software Updates can also be accessed in the 5ESS Switch electronic media documentation. The Informational Software Updates are located on the menu for 5ESS Switch documentation on-line or on CD-ROM.

2.1 Recent Change View

For 5E9(1) and later, the corresponding Recent Change View for FOSYS is 8.31.

3. FORM AND RECORD ENTRIES

3.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and the Office Name on each record.

3.2 * MODULE

Description: Enter the SM number which will receive its own OFS ID settings. Enter "OFC" to set OFS IDs in all SMs that do not have their own FOSYS form (i.e., all SMs not having their own OFS ID settings will receive the same OFS ID settings). The value of "OFC" is not available after a retrofit because "OFC" will be represented by each SM value. After a retrofit, only the values of 1 - 192 and "CMP" can be referenced directly.

Required Field.

Valid MODULE Entries

Entry	Definition
1 - 192	Set OFS IDs for this SM.
CMP	Use these OFS IDs to initialize OFS IDs in newly grown SMs.
OFC	Set OFS IDs in all SMs that do not have their own FOSYS form.

TRANSPARENCY FEATURE ID LIST

This list of OFS IDs is generally used to enable or option Special and Transparency Features. To enable or option a feature, select the FID that corresponds to the desired OFS ID and enter "Y" in the ACT field. To disable an OFS ID, enter "N" or blank. Figure 1 shows the corresponding number for each Special or Transparency Feature.

3.3 ACT

Description: This is the OFS ID number.

For 5E9(1) and later, FID refers to the OFS ID number only, and ACT is the input field. This indicates that the feature corresponding to that OFS ID is enabled. When MODULE is "CMP", enter "P" to indicate that the feature corresponding to that OFS ID is enabled in some but not all SMs. To disable a OFS ID, enter "N" or blank.
Valid Entries:

Valid ACT Entries

Entry	Definition
Y	Software Release: 5E9(1) and later. Enable feature for this OFS ID.
Blank	Software Release: 5E5 and later. Disable feature for this OFS ID.
N	Software Release: 5E9(1) and later. Disable feature for this OFS ID.
P	The feature is enabled for this OFS ID in some but not all SMs.

Data Rules:

While FIDs can normally be altered on a per SM basis, there are certain FIDs that must be consistent on

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an office basis. The FIDs which must be consistent on all FOSYS forms are:

For 5E5: None
- For 5E6: 539, 541, 546, 547, 548, 550, 553, 557
- For 5E7: 541, 546, 547, 548, 550, 553, 557
- For 5E8: 541, 550, 553, 557
- For 5E9(1): 541, 550, 553, 557 692 - 755

When FID is "P", then MODULE must be "CMP".

For 5E6 and later, if all the SMs have a particular FID set to "Y", then on the "CMP" FOSYS form the FID should also be set to "Y". If all the SMs have a particular FID set to blank or "N", then on the "CMP" FOSYS form that FID should also be blank or "N". If the SMs have mixed values of "Y, blank or "N" for a particular FID, then on the "CMP" FOSYS form that FID should be set to "P".

FEATURE NAME	OFS ID	SOFTWARE RELEASE	SOFTWARE UPDATE / FEATURE RELEASE	INFO SOFTWARE UPDATE / FEATURE RELEASE
3-Way Reconnect Procedures (TF)	500	5E4(2)	SU 890073	SU 890059
No Data Impact		5E5	GA	GA
Multi-Way 3-Way Conference/Call Transfer B911	501	5E5	SU 900125	SU 900097
Interactions (TF)		5E6	GA	GA
No Data Impact				
Directed Call Pickup with Barge-In Assignment (TF)	502	5E5	SU 900012	SU 890050
No Data Impact		5E6	GA	GA
Shared DN Display with No Ringing Option (TF)	503	5E4(2)	SU 890108	-
No Data Impact		5E5	SU 890035	-
		5E6	GA	GA
Limited Intragroup ICLID (SpF)	504	5E4(2)	SU 890134	SU 890126
No Data Impact		5E5	SU 890060	SU 890053
		5E6	GA	GA
Entry of Forwarded-To-DN/IDP (TF)	505	5E4(2)	SU 900067	SU 900055
		5E5	SU 900096	SU 900086
		Not 5E6	NA	NA
Non-Alerting ISDN Shared Terminal Display Option	506	5E4(2)	SU 900010	-
(TF)		5E5	SU 900009	-
No Data Impact		5E6	GA	GA
		Not 5E7	NA	NA
Separate Call Waiting from MW Ringback Parameter	507	5E4(2)	SU 900037	SU 900028
(TF)		5E5	SU 900064	SU 900051
No Data Impact		5E6	GA	GA
Increase Number of Simultaneous Calls Forwarded to	508	5E4(2)	SU 900041	-
DID Groups (TF)		5E5	SU 900028	-
No Data Impact		5E6	GA	GA
Fix for PFA, ARS, and VPATH (TF)	509	5E4(2)	SU 900024	-
No Data Impact		5E5	SU 900027	-
		5E6	GA	GA
Hotel Motel Mini Feature (TF)	510	5E5	SU 900065	-
No Data Impact		5E6	GA	GA
FTS2000 Office Indicator for Private MDR Record Fix	511	5E5	SU 900068	-
(TF)		Not 5E6	NA	NA
No Data Impact				
Authorization Code Interaction with Multiway Fix (TF)	512	5E4(2)	SU 910017	-
No Data Impact		5E5	SU 900076	-
		5E6	SU 900047	-
		Not 5E7	NA	NA
Restrict Initial Flash and Call Waiting Before Answer	513	5E4(2)	SU 910019	SU 910013
(TF)	514	5E5	SU 910045	SU 910028

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No Data Impact		5E6	SU 910004	SU 910002
		5E7	GA	GA
Calling Party Disconnect Indication (SpF)	515	5E4(2)	SU 910027	SU 910023
No Data Impact		5E5	SU 910064	SU 910063
		5E6	SU 910077	SU 910061
		5E7	GA	GA
Transfer of Unsupervised Lines Fix (TF)	516	5E4(2)	SU 900066	-
No Data Impact		5E5	SU 900108	-
		5E6	SU 910006	-
		5E7	GA	GA
Modified Calling Line Disconnect (SpF)	517	5E5	SU 910049	SU 910029
		5E6	SU 910052	SU 910044
		5E7	GA	GA
		5E8	GA	GA
Call Transfer to Busy - Return Busy to Originator (TF)	518	5E5	SU 910045	SU 910041
No Data Impact		5E6	SU 910064	SU 910059
		5E7	GA	GA
Fix for Optioning Errors During NPA Splits (TF)	520	5E5	SU 900116	-
No Data Impact		5E6	SU 900055	-
		5E7	GA	GA
Fix to Decrease SC (Series Completion) and MLHGs	521	5E5	SU 910030	SU 910019
Post Dial Delay (TF)		5E6	SU 910032	SU 910026
No Data Impact		5E7	GA	GA
Bridging Indication to Analog Shared DN Lines (TF)	522	5E5	SU 910055	-
No Data Impact		5E6	SU 910069	-
		5E7	GA	GA
Problems with Routing Intra-LATA / Interstate Calls	523	5E4(2)	SU 910031	SU 910026
(TF)		5E5	SU 910089	SU 910080
No Data Impact		5E6	SU 910163	SU 910132
		5E7	GA	GA
Option to Prevent IDP Users from Using ODP LASS	524	5E5	SU 910050	-
Dial Codes (TF)		5E6	SU 910079	-
No Data Impact		5E7	GA	GA
Option to Provide 5E6 Functionality for Series	531	5E7	SU 920124	SU 920120
Completion and MSS Interaction (TF)		5E8	SU 920007	SU 920011
		5E9(1)	GA	GA
Limited 2 Level COT/AC (SF43)	532	5E6	SU 910014	SU 910011
See Division 2, Section 4A43	533	Not 5E7	NA	NA
POLIN (Privacy Option for Last Incoming Number)	534	5E6	SU 910004	SU 910003
(SF48),		5E7	GA	GA
See Division 2, Section 4A48				
DTA Routing of Calls Based on Attendant's LCC (TF)	535	5E7	GA	GA
No Data Impact				
Customized Announcement 5E6 to 5E7 Retrofit Fix	536	5E7 Only	GA	GA
(TF)	537			
No Data Impact				
Shared DN Groups Across SM/RSM Clusters (TF)	538	5E6	SU 910056	SU 910038
No Data Impact		5E7	GA	GA
MSSCF (Message Service System Call Forwarding	539	5E6	SU 910129	SU 910124
Interaction) (TF)		5E7	Retrofit	-
		5E8	Retrofit	-
		Not 5E9	NA	NA
Transfer to ACD from ARU (SpF)	540	5E6	SU 910169	SU 910141
		5E7	SU 920035	SU 910004
				SU 910030
		5E8	GA	GA
Calling Name Delivery (SF40) - Phase 0	541	5E6	SU 910142	-
See Division 2, Section 4A40		5E7	SU 920005	SU 910112
		5E8	GA	GA

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Calling Name Delivery (SF40) - Phase 2	541	5E7	SU 920105	SU 920087
See Division 2, Section 4A40		5E8	GA	GA
		5E9(1)	GA	GA
Calling Name Delivery (SF40) - Phase 2.1				
See Division 2, Section 4A40	541	5E8	SU 930010	SU 920029
		5E9(1)	GA	GA
ISDN Fast Transfer Enhanced Feature (TF)	542	5E8	GA	GA
Provide Redirect Display for TGSR and ACVT	543	5E6	SU 920032	SU 920024
Enhancement for Terminating Restrictions Resulting		5E7	SU 920056	SU 920036
with Reroute to a DN (TF)		5E8	GA	GA
Metro Hub (ELIGI) (SF60)	544	5E6	SU 910092	SU 910084
See Division 2, Section 4A60		5E7	GA	GA
Option to Block the Sending of Off-Switch Calling DN	545	5E6	SU 910075	SU 910146
Across API Link (TF)		5E7	GA	GA
No Data Impact				
LASS and Split NPA Management (SF36)	546	5E6 and	SU 910133	SU 910114
See Division 2, Section 4A36	547	5E7 Only	SU 910033	SU 910019
	548	5E8	NA	NA
800 Post Dial Delay MF Signaling Transmission	549	5E6	SU 930002	SU 920093
Reduction (for End Office) (SF28)	556	5E7	SU 930004	SU 920136
See Division 2, Section 4A28				SU 920138
		5E8	SU 920019	SU 920025
				SU 920043
		5E9(1)	GA	GA
Charge/No Charge for UCR (Unidentified Call	550	5E6	SU 910163	SU 910162
Rejection) Call Rej Annc (SF47)		5E7	GA	GA
See Division 2, Section 4A47		5E8	GA	GA
AMA Recording of Prefixed Digits in PNDP (Private	551	5E6	SU 920035	SU 920017
Network Dialing Plan) (TF)		5E7	SU 920081	SU 920022
		5E8	GA	GA
OSPS LS Billing on Position Release (TF)	552	5E7	SU 920061	SU 910060
		5E8	GA	GA
UCR Special Feature Option for Confirmation	553	5E6	SU 920057	SU 920040
Announcement/Tone with the UCR Activation Dial Code		5E7	SU 920083	SU 920040
(SF47)		5E8	GA	GA
See Division 2, Section 4A47				
Option to Maintain the 5E6 Operation of Intraswitch	554	5E7	SU 920077	SU 920065
Originally Called DN (OCDN) Which is Sent to VMS		5E8	GA	GA
(Voice Mail System) (TF)				
IALT (Intra-Switch Analog Line Transfer) (SF80)	555	5E7	SU 920131	SU 920102
See Division 2, Section 4A80		5E8	SU 930006	SU 920015
		5E9(1)	GA	GA
UCR Special Feature Option for Confirmation	557	5E6	SU 920057	SU 920072
Announcement/Tone with the UCR Deactivation Dial		5E7	SU 920083	SU 920072
Code (SF47)		5E8	GA	GA
See Division 2, Section 4A47				
Hotel/Motel Charge Table Option (TF)	558	5E8	GA	GA
		5E9(1)	GA	GA
OSPS AIBNS (Automated Inward Billed Number	559	5E8	SU 930008	SU 930004
Screening) (SF107)		5E9(1)	GA	GA
See Division 2, Section 4A107				
OSPS Volt Delta DA Interface (SF87)	560	5E8	SU 930008	SU 930006
See Division 2, Section 4A87		5E9(1)	GA	GA
OSPS AATOS (Access To Operator Services) (TF)	561	5E8	SU 920015	SU 920038
		5E9(1)	GA	GA
OSPS EABS (External Alternate Billing System)	562	5E8	SU 930008	SU 930010
Alternate Routing (SF86)		5E9(1)	GA	GA
See Division 2, Section 4A86				
OSPS FTS (Federal Telephone System) / NRA	563	5E8	SU 930012	SU 930025
(Network Remote Access) (SF85)		5E9(1)	GA	GA
See Division 2, Section 4A85				

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OSPS Alternate Access to Language Specific Operator Services (SF84) See Division 2, Section 4A84	564	5E8 5E9(1)	SU 930010 GA	SU 930013 GA
OSPS DIOR Speed Dialing (SpF)	565	5E8 5E9(1)	SU 930012 GA	SU 930016 GA
OSPS EABS (External Alternate Billing System) - Alternate Routing Transition	566	5E8 Only 5E9(1)	SU 930008 NA	SU 930010 NA
OSPS AMA Identification of 800 Access Calls (SF112) See Division 2, Section 4A112	567	5E8 5E9(1)	SU 930019 GA	SU 930030 GA
OSPS 0+ / 1+ 500 and 1+700 Traffic Handling (SF69) See Division 2, Section 4A69	568	5E8 5E9(1)	SU 930012 GA	SU 930017 GA
DC-ACVT (Direct Connect Capability for Analog Lines through ISDN ACVT feature (SF12) See Division 2, Section 4A12	569	5E8 5E9(1) Not 5E9(2)	SU 930033 GA NA	SU 930050 SU 930059 GA NA
OSPS Interflow for Operator Conferences (SF361) See Division 2, Section 4A361	570	5E9(1)	GA	GA
OSPS CICADA Mute Back (SF115) See Division 2, Section 4A115	571	5E8 5E9(1)	SU 930015 GA	SU 930022 GA
OSPS Feature Group D Incoming Signaling for Special Applications (SF83) See Division 2, Section 4A83	572	5E8 5E9(1)	SU 930027 GA	SU 930043 GA
OSPS ACQS Rate Distinction Based on Quote Delivery (SF82) See Division 2, Section 4A82	573	5E8 5E9(1)	SU 930027 GA	SU 930039 GA
OSPS BNS (Billed Number Screening) Fraud Control (SF26) See Division 2, Section 4A26	574	5E8 5E9(1)	SU 930027 GA	SU 930045 GA
OSPS Telephone Relay Service Call Handling (SF25) See Division 2, Section 4A25	575	5E8 5E9(1)	SU 930033 GA	SU 930048 GA
POLIN (Private Option for Last Incoming Number)/CFDA (Call Forwarding Don't Answer) Feature Interaction (SpF)	576	5E8 5E9(1)	SU 930011 GA	SU 930018 GA
Multi-Distinctive Ringing and Message Service System Interaction Option (TF)	577	5E8 5E9(1)	SU 930019 GA	SU 930035 GA
Revertive Ringback Announcement (TF)	578 579	5E9(1)	GA	GA
OSPS Route ACCS RAF Failures to AP (TF)	580	5E8 5E9(1)	SU 930017 GA	- GA
Limited Intra-Group ICLID (LIGI) (TF) - Call Forwarding	581	5E8 5E9(1)	SU 930026 GA	SU 930037 GA
OSPS Non-Equal Access Dummy ANI for Unitel AATOS	582	5E8 5E9(1)	SU 930032 GA	- GA
OSPS Virtual Card (SF23) See Division 2, Section 4A23	583	5E8 5E9(1)	SU 930035 GA	SU 930053 GA
OSPS AATLSOS - (Allow Sent Paid Special Feature - Phase 2)	584	5E9(1) 5E9(2)	SU 940009 GA	SU 940012 GA
OSPS AATLSOS (Allowed Sent Paid Special Feature - Phase 1) (SF84) See Division 2, Section 4A84	585	5E8 5E9(1) 5E9(2)	SU 930037 SU 930003 GA	SU 930060 SU 930002 GA
OSPS CIID - Carrier Specific Routing (SF363) See Division 2, Section 4A363	586	5E9(1)	GA	GA
PRI Echo Cancler Options	587 588	5E9(1)	GA	GA
OSPS AATOS/AATLOS Fraud Control	589 590	5E8 5E9(1)	SU 930032 GA	SU 930054 GA
Centrex Tie Line Unanswered Call Record	591	5E8 5E9(1) 5E9(2)	SU 930043 SU 940006 GA	SU 930074 SU 940007 GA
Call Park - Feature Assignment Enhancement	592	5E9(1)	GA	GA
Inhibit 800 Post Dial Delay MF Signaling Response Reduction (Access Tandem Office) (SF29) See Division 2, Section 4A29	593	5E8 5E9(1)	SU 930038 GA	SU 930065 GA

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OSPS AATLSOS - (Allow Sent Paid Special Feature - Phase 2 - BNS Query Option)	594	5E9(1) 5E9(2)	SU 940009 GA	SU 940012 GA
OSPS Screening for Real Time Call Details (SF366) See Division 2, Section 4A366	595	5E9(1) 5E9(2)	SU 940008 GA	SU 940019 GA
OSPS OTR with Automated Position ID	596	5E9(1) 5E9(2)	SU 940008 GA	SU 940011 GA
OSPS Prepaid Overtime for Coin Calls (SF372) See Division 2, Section 4A327	597	5E9(1) 5E9(2)	SU 940018 GA	SU 940043 GA
Clock Synchronization Circuit	598	5E8 5E9(1) 5E9(2)	SU 940009 SU 940028 GA	- - GA
OSPS LIDB - Recognition of PSDI Value 4 (SF368) See Division 2, Section 4A368	599	5E9(1) 5E9(2)	SU 940003 GA	SU 940003 GA
OSPS Inclusion of International Called Number in LIDB Query	600	5E9(1) 5E9(2)	SU 940011 GA	SU 940025 GA
OSPS Automated Inward Line Screening - Phase 1 (SF370) See Division 2, Section 4A370	601	5E9(1) 5E9(2) 5E10	SU 940023 SU 940009 GA	SU 940071 SU 940009 GA
OSPS Inclusion of International Calling Country Code in LIDB Query	602	5E9(1) 5E9(2)	SU 940011 GA	SU 940025 GA
OSPS Allow Back Number Listing Services Calls	603	5E9(1) 5E9(2)	SU 940005 GA	- GA
OSPS Terminating Point Restriction Expansion (SF371) See Division 2, Section 4A371	604	5E9(1) 5E9(2)	SU 940023 GA	SU 940061 GA
OSPS Feature Group D Incoming Signaling for Special Application - Release 2 (SF373) See Division 2, Section 4A373	605	5E9(1) 5E9(2)	SU 940018 GA	SU 940048 GA
OSPS Automated Inward Line Screening - Phase 2	606	5E9(2) 5E10	SU 950009 GA	SU 950031 GA
OSPS Recall from Subscriber Deactivation (SF376) See Division 2, Section 4A376	607	5E9(1) 5E9(2)	SU 940023 GA	SU 940053 GA
COT Duplicate Activation Request Treatment	608	5E8 5E9(1) 5E9(2)	SU 940009 SU 940013 GA	SU 940010 SU 940029 GA
OSPS TCS Screen Code Expansion	609	5E9(1) 5E9(2)	SU 940020 GA	SU 940056 GA
OSPS Feature Group D Incoming Signaling for Special Application - Release 2 - AMA Option	610	5E9(1) 5E9(2)	SU 940018 GA	SU 940048 GA
Incoming Foreign Exchange Calls (Defeating Immediate Answer)	611	5E9(1) 5E9(2) 5E10	SU 940029 SU 950003 GA	SU 940080 SU 950004 GA
Screening of E911 Calls	612	5E9(1) 5E9(2)	SU 940023 GA	SU 940072 GA
OSPS 800 Access Using Feature Group D Signaling (SF377) See Division 2, Section 4A377	613	5E9(1) 5E9(2)	SU 940026 GA	SU 940075 GA
OSPS LEC Feature Group D Incoming Signaling/Special Handling of Calls (SF379) See Division 2, Section 4A379	614	5E9(1) 5E9(2) 5E10	SU 940030 SU 940009 GA	SU 940086 SU 940004 GA
OSPS Customer Controlled Reconnect to DA (SF381) See Division 2, Section 4A381	615	5E9(1) 5E9(2) 5E10	SU 940037 SU 950005 GA	SU 940105 SU 950020 GA
OSPS Forward Number Interdigit Timing Change (SF382) See Division 2, Section 4A382	616	5E9(1) 5E9(2) 5E10	SU 940034 SU 950002 GA	SU 940092 SU 940018 GA
OSPS Feature Group D Enhancements (SF383) See Division 2, Section 4A383	617	5E9(1) 5E9(2) 5E10	SU 940034 SU 950002 GA	SU 940002 SU 940019 GA
OSPS Quantum Sequence Call Handling	618	5E9(1) 5E9(2) 5E10	SU 940038 SU 940009 GA	SU 940098 SU 940008 GA

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OSPS AATLSOS Automated Access Prompt	619	5E9(2) 5E10 5E11	SU 950020 SU 950006 GA	SU 950061 SU 950003 GA
OSPS International Billed Number Screening Release 2 (SF386) See Division 2, Section 4A386	620	5E9(1) 5E9(2) 5E10	SU 950002 SU 950004 GA	SU 940116 SU 940026 GA
OSPS TRP Expansion for International Numbers (SF387) See Division 2, Section 4A387	621	5E9(2) 5E10	SU 950004 GA	SU 950002 GA
OSPS ACCS for Commercial Credit Cards (SF388) See Division 2, Section 4A388	622	5E9(2) 5E10	SU 950004 GA	SU 950014 GA
Ability to Drop Fully Restricted Terminating Leg of a Multiway Call (TF)	623	5E10	GA	GA
OSPS AMA Recording of the Access ID for CAP Calls (SF392) See Division 2, Section 4A392	624	5E9(2) 5E10	SU 950007 GA	- GA
OSPS Extending Round Trip Delay for OSC (TF)	625	5E10	GA	GA
OSPS Teleconferencing Service Signaling Interface (SF391) See Division 2, Section 4A391	626	5E9(2) 5E10	SU 950010 GA	SU 950030 GA
OSPS 800 Toll Free Services NPA Expansion (SF405) See Division 2, Section 4A405	627	5E10 5E11	SU 950004 GA	SU 950012 GA
OSPS Option for HOTMOT Line	628	5E9(1) 5E9(2) 5E10	SU 950004 SU 950002 GA	SU 940115 - GA
OSPS Allow Leading 1 and 011 for Automated Phone Number Collection	629	5E9(2) 5E10 5E11	SU 950022 SU 950004 GA	SU 950067 SU 950001 GA
OSPS BNS Query Message Enhancements (SF630) See Division 2, Section 4A630	630	5E9(1) 5E9(2) 5E10	SU 950004 SU 950005 GA	SU 940004 SU 950017 GA
Call Forwarding Block Operator and N11 Forward to DNs Option (TF)	631	5E9(1) 5E9(2) 5E10	SU 950004 SU 950019 GA	- SU 950062 GA
OSPS 1+ Time And Charges (SF396) See Division 2, Section 4A396	632	5E9(1) 5E9(2) 5E10	SU 950007 SU 950011 GA	SU 950012 SU 950032 GA
OSPS In Language Services Call Transfer Using Route Number (SF398) See Division 2, Section 4A398	633	5E9(2) 5E10	SU 950007 GA	SU 950027 GA
OSPS Specialized AMA for 15 Digit International Numbering Plan (SF397) See Division 2, Section 4A397	634	5E10	GA	GA
OSPS Early Position Release of International Calls (SF399) See Division 2, Section 4A399	635	5E9(2) 5E10	SU 950013 GA	SU 950038 GA
OSPS AATOS Fraud Control (SF401) See Division 2, Section 4A401	636	5E9(2) 5E10	SU 950018 GA	SU 950054 GA
OSPS AATOS Fraud Control - Enhanced Screening (TF)	637	5E10	GA	GA
OSPS Quiet Hear (TF)	638	5E9(2) 5E10 5E11	SU 950020 SU 950006 GA	- SU 950003 GA
OSPS Closed End Branding for Operator Handled Calls (TF)	639	5E9(2) 5E10 5E11	SU 950021 SU 950005 GA	SU 950070 SU 950015 GA
OSPS DACC AMA Record with Operator Entered Forward Number Special Feature.	640	5E9(1) 5E9(2) 5E10 5E11	SU 950017 SU 950022 SU 950004 GA	SU 950071 SU 950071 - GA
OSPS Automation of T & A Information Special Feature	641	5E10 5E11	SU 950002 GA	SU 950022 GA

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OSPS DIOR Calling Card Announcement Change Special Feature	642	5E9(2) 5E10 5E11	SU 950021 SU 950003 GA	SU 950068 SU 950005 GA
Automation of TCS / CPS Override	643	5E10	SU 960010 GA	SU 960028 GA
OSPS Quantum SDN	644	5E10 5E11	SU 960006 GA	SU 960006 GA
OSPS Quantum Calling Party Pays Air Time	645	5E10 5E11	SU 960006 GA	SU 960013 GA
E911 / TGSR Interaction Option	646	5E9(1) 5E9(2) 5E10 5E11	SU 950019 SU 960001 SU 970007 GA	- SU 950083 - GA
Option for ST on NONCI 0+	647	5E9(1) 5E9(2) 5E10 5E11	SU 950019 SU 950019 SU 960001 GA	- SU 950086 - GA
ASP IntraLATA PIC Interworking	648	5E10 5E11	SU 960005 GA	SU 960015 GA
OSPS Universal T1.5 Access Signaling Changes	649	5E11	GA	GA
Identification of Calls Originated Through Special Access Methods	650	5E10 5E11	SU 960009 GA	SU 960025 GA
OLS Call Routing for Special Services	651	5E10 5E11	SU 960010 GA	SU 960022 GA
OSPS AATLSOS Automated Access Prompting Using CPDL	652	5E10 5E11	SU 960025 GA	SU 960046 GA
ICLID Enhancement for MLHG (SF192) See Division 2, Section 4A192	653	5E10 5E11	SU 960008 GA	SU 960026 GA
Block No ANI on Non-Equal Access Calls	654	5E10 5E11	SU 960008 GA	SU 960016 GA
OLS Routing for 0 - Calls	655	5E10 5E11	SU 960020 SU 960005	SU 960051 SU 960005
OLS Routing for 00 - Calls	656	5E10 5E11	SU 960020 SU 960005	SU 960021 SU 960005
OSPS ASAP Language Specification Operator Services	657	5E10 5E11	SU 960017 SU 960007	SU 960044 SU 960001
OSPS AATLSOS Automated Access Prompting Menu Changes - Release 2	658	5E10 5E11	SU 96A008 GA	SU 960023 GA
OSPS Record and Playback (SF415) See Division 2, Section 4A415	659	5E10 5E11 5E12	SU 960019 SU 960006 GA	SU 960052 SU 960004 GA
Remove E911 PSAP Outpulsing Delay Option	660	5E9(1) 5E9(2) 5E10 5E11	SU 950002 SU 960002 SU 960010 GA	- - SU 960031 GA
CCS7 Incoming Signaling from 4ESS for Wireless Service Providers	661	5E11	GA	GA
OSPS Bill to Third Fraud Control Based on Third Number NPA	662	5E10 5E11 5E12	SU 960016 SU 960005 GA	SU 960037 SU 960002 GA
Call Waiting with 3-Way Calling Interaction	663	5E10 5E11	SU 960023 GA	SU 960059 GA
Billing Option for Spontaneous Usage Sensitive 3-Way Calling	664	5E10 5E11	SU 960016 GA	SU 960045 GA
Local Number Portability AMA Billing	665	5E11 5E12	SU 970005 GA	- GA
Deny Automatic Callback on Intra-LATA PIC Calls (SF201) See Division 2, Section 4A201	666	5E10 5E11	SU 960020 GA	SU 960057 GA
OSPS 800 Universal International Numbering	667	5E11 5E12	SU 970008 GA	SU 970018 GA
Selective NPA Deletion for ASP Multiple Rate Center Support	668	5E10 5E11	SU 970010 SU 970016	SU 970015 -

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		5E12	GA	GA
Line Blocking Enhancement for ISVM	669	5E10	SU 970002	SU 970002
		5E11	SU 970003	SU 970006
		5E12	GA	GA
OSPS 10 Digit Branding in the AABS - AAP	670	5E10	SU 960028	SU 960077
		5E11	SU 970003	SU 960016
		5E12	GA	GA
OSPS NPA Handling by Trunk Group	671	5E11	SU 97A008	SU 970024
		5E12	GA	GA
OSPS DIOR with Commercial Credit Card Capability	672	5E11	SU 970023	SU 970064
		5E12	SU 980005	SU 970011
		5E13	GA	GA
OSPS LS Automated Directory Assistance	673	5E10	SU 970006	SU 970009
		5E11	SU 970009	SU 970025
		5E12	GA	GA
OSPS Rate Quote for Flat and Measured Services	674	5E11	SU 970016	-
		5E12	GA	GA
OSPS AMA - Record ANI II Digits - Interim	676	5E11	SU 970009	SU 970026
		5E12	GA	GA
OSPS 0 - LEC Calls Maintenance Handling	677	5E11	-	-
		5E12	GA	GA
Access Code Option for SUSTWC	678	5E11	SU 970026	SU 970089
		5E12	SU 970007	-
		5E13	GA	GA
OSPS DIOR 800 Services	679	5E12	SU 980021	SU 980048
		5E13	GA	GA
ADSI Acknowledgment Timer Optional Value	680	5E12	SU 980025	SU 980060
		5E13	SU 980004	-
		5E14	GA	GA
Transfer Two Outgoing ISUP?PRI Trunks Together	681	5E13	SU 020001	-
		5E14	SU 010003	SU 020017
		5E15	SU 020006	SU 010069
		5E16(1)	GA	GA
Recent Change (Hashsum Failure) Blocking Feature (TF)	692	5E10	GA	GA
ASI Proxy Option for OLHB Population Feature	693	5E9(1)	SU 950017	-
		5E9(2)	SU 950019	SU 950062
		5E10	-	-
		5E11	GA	GA
Minimize SS7 Link Downtime During Retrofit	694	5E10	SU 970006	-
		5E11	SU 970008	-
		5E12	GA	GA
Auto ISDN Line Assignment	695	5E11	SU 980013	SU 970037
		5E12	GA	GA
911 Billing for Toll Transferred Calls	696	5E10	SU 970009	SU 970011
		5E11	SU 970010	SU 970029
		5E12	GA	GA
Alternate Local Service Provide Routing	697	5E12	SU 990004	SU 990005
		5E13	GA	GA
TPCC Use IDP/ODP	698	5E10	SU 980003	SU 970018
		5E11	SU 980001	SU 970070
		5E12	GA	GA
Number Portability NPA - NXX Growth	699	5E12	GA	GA
IC (Inter-exchange Carrier) Option for Screening Enhancements to Outside Calling Area Alerting	700	5E10	SU 970011	SU 970017
		5E11	SU 970019	SU 970043
		5E12	GA	GA
OSPS 800 Peel Out for Calling Card	701	5E12	SU 980005	SU 980007
		5E13	GA	GA
OSPS PLBQ with Add-on Capability	702	5E10	SU 980003	SU 980002
		5E12	SU 980007	SU 980001
		5E13	GA	GA
OSPS Automated Sequential Card Queries	703	5E12	GA	GA

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NP - Service Provider Portability AMA Enhancement	704	5E11	SU 980011	SU 980023
(Originating) (depends on SFID 276)		5E12	SU 980015	SU 980028
See Division 2, Section 4A276		5E13	GA	GA
NP - Service Provider Portability AMA Enhancement	705	5E11	SU 980011	SU 980023
(Terminating) (depends on SFID 276)		5E12	SU 980015	SU 980028
See Division 2, Section 4A276		5E13	GA	GA
OSPS CAS TCAP Query Changes Using CCC	706	5E11	SU 970024	-
Numbers		5E12	SU 970006	SU 970012
		5E13	GA	GA
OSPS CAS TCAP Query Changes Using CAS	707	5E11	SU 970024	SU 970066
Numbers		5E12	-	-
		5E13	GA	GA
TCP/IP Security Enhancements for CALEA	708	5E15 FR5	FR5	-
		5E16	GA	GA
Deny Transfer of International Calls	709	5E11	SU 970026	SU 970077
		5E12	SU 97B006	SU 970014
		5E13	GA	GA
Telcordia Technologies (Bellcore) Cause Codes and	710	5E13	GA	GA
Location Values				
OSPS Acceptance of New Parameters in LIDB BNS	711	5E11	SU 980006	SU 980005
and Card Replies		5E12	SU 980003	SU 980003
		5E13	GA	GA
Deny Transfer of Digit Screened Calls	712	5E13	GA	GA
MCG (Manual Control Gap) Interactions with LNP	713	5E11	SU 970027	-
		5E12	SU 980001	-
		5E13	GA	GA
OSPS Credit Key Blocking for Domestic Calls	714	5E11	SU 980005	SU 980009
		5E12	SU 980006	SU 980009
		5E13	GA	GA
OSPS Credit Key Blocking for International Calls	715	5E11	SU 980005	SU 980009
		5E12	SU 980006	SU 980009
		5E13	GA	GA
E911 Call Error Detection and Alarm (SF293)	716	5E11	SU 980011	SU 980017
See Division 2, Section 4A293		5E12	SU 980014	SU 980022
		5E13	GA	GA
Simplified Custom ISDN Attendant	717	5E12	-	-
		5E13	-	-
		5E14	GA	GA
ASP CDI/RTI Ignore on LNP	718	5E11	SU 980006	-
		5E12	SU 980007	-
		5E13	GA	GA
CNA Trunk Group Billing Number	719	5E11	SU 980011	SU 980024
		5E12	SU 980016	SU 980024
		5E13	GA	GA
OSPS NPA Code Expansion	720	5E11	-	-
		5E12	SU 980024	SU 980063
		5E13	GA	GA
OSPS 0 - LEC Calls Maintenance Assert Handling	721	5E13	GA	GA
Abstract OSPS Enhanced AMA LS Single Record	722	5E11	SU 980007	-
		5E12	SU 980011	-
		5E13	GA	GA
Balance	723	5E11	SU 980013	SU 980035
		5E12	SU 980017	SU 980035
		5E13	GA	GA
NP Service Provider Portability AMA Enhancements	724	5E11	SU 980013	SU 980023
(SF276)		5E12	SU 980017	-
See Division 2, Section 4A276		5E13	GA	GA
OSPS Flexible ANI Enhancement	725	5E11	SU 980009	SU 980025
		5E12	SU 980014	-
		5E13	GA	GA
AATLOS - Automated Access Prompting Non-Tariffed	726	5E11	SU 980009	SU 980026
Announcement		5E12	SU 980017	SU 980030

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		5E13	GA	GA
OSPS Billed Number Screening Call Blocking - Release 2	727	5E11	SU 980014	SU 980036
		5E12	SU 980020	SU 980045
		5E13	GA	GA
ASP Alternate Routing Before Announcement	729	5E13	GA	GA
Control of DACC Per LS/DA Transporting Carrier	730	5E12	SU 980025	SU 980068
		5E13	SU 980004	SU 980001
		5E14	GA	GA
DIOR Calling Card Restrictions to Domestic Terminations	731	5E12	SU 980025	SU 980076
		5E13	SU 980002	-
		5E14	GA	GA
OAS Call Origination for Intertoll Trunk Calls	732	5E12	SU 990006	SU 990013
		5E13	SU 99B006	SU 990017
		5E14	GA	GA
Send pANI to 8-digit PSAP	733	5E12	SU 980023	-
		5E13	SU 99A004	-
		5E14	SU 980023	-
Trunk trigger for Toll	734	5E12	SU 980025	-
		5E13	SU 980002	-
		5E14	GA	GA
Inhibit TGC NPA Deletion On Reroute	735	5E11	SU 990001	-
		5E12	SU 990002	-
		5E13	SU 980007	SU 980017
		5E14	GA	GA
Inhibit Flash on E911 Calls No Data Impact	736	5E10	-	-
		5E11	SU 990001	-
		5E12	SU 990007	-
		5E13	SU 980003	-
		5E14	GA	GA
Call Forward Don't Answer - Ring Control	737	5E12	SU 990004	SU 990006
		5E13	SU 990004	SU 990009
		5E14	GA	GA
30 SEC T310 Timer for PRI	738	5E11	SU 990001	-
		5E12	-	-
		5E13	SU 990005	-
		5E14	GA	GA
Use NPA to get NPD from ESCO	740	5E11	SU 990001	-
		5E12	SU 990002	-
		5E13	SU 980007	-
		5E14	GA	GA
OTR Automatic Link Restoral	741	5E12	-	-
		5E13	-	-
		5E14	GA	GA
NPA to NPD Translation Table for E911 Calls	742	5E12	SU 990009	-
		5E13	SU 990007	-
		5E14	GA	GA
Pre-query Screen for TYPE CI CALL of TCONF.	743	5E10	-	-
		5E11	SU 990003	-
		5E12	SU 990004	-
		5E13	SU 990007	-
		5E14	GA	GA
ASP Toll Free Service Interaction with Flexible ANI Features	744	5E13	-	-
		5E14	-	-
		5E15	GA	GA
ASP Toll Free Service Interaction with Flexible ANI Features	745	5E13	-	-
		5E14	-	-
		5E15	GA	GA
Call Forward Don't Answer During Ringback of a Call Waiting Call	746	5E12	□	-
		5E13	□	□
		5E14	-	□

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		5E15	GA	GA
ASP/LDP Module 21 220 Record Enhancement	747	5E13 5E14 5E15	SU 990021 SU 990004 GA	SU 990070 SU 990014 GA
Standard PRI XMIT Progress Instead of Alerting when Interworking non-ISDN	748	5E14 5E15	SU 990001 GA	- GA
Selective Destination Screening for Software Defined Network	749	5E11 5E15	□ GA	□ GA
Include CSI in IAM for ASP Calls	750	5E14 5E15	□ GA	□ GA
Release Link for Toll (SFs 520 and 521) See Division 2, Sections 4A520 and 4A521)	788	5E14	GA	GA
Populate Call Type with ASP Default for Continue with Slip	948	5E13 5E14	- GA	- GA
SPS ANSI Incoming Signaling System Number 7 from End Office	949	5E14	-	-
NP - DID PBX Query Enhancement	950	5E13	FR2	FR 990025
PCN Request Handling Parameter	951	5E14 5E15	IMR 719567 GA	IMR 719567 GA
OSPS Provide Account Owner to LSDB Feature Activation	952	5E13 5E14 5E15	SU 0010 - GA	SU 000007 - GA
OSPS Control of Call ID Activation	953	5E14 5E15	SU 0010 GA	SU 000007 GA
Easy Access to Voice Mail (Depend upon SFID 540. See Division 2, Section 4A540)	954	5E15	GA	GA
1000 Block Number Pooling Using Number Portability (Depends on SFID 530. See Division 2, Section 4A530)	955	5E14 5E15	FR3 GA	- GA
1000 Block Number Pooling Using Number Portability (Depends on OFID 955.)	956	5E14 5E15	FR3 GA	- GA
DA Custom Branding by Account Owner (Depends on SFID 543) (See Division 2, Section 4A543)	970	5E13 5E14 5E15	FR3 FR2 GA	FR 000011 - GA
Audible Calling Name on *69 (Automatic Callback) (Depends on SFID 549. See Division 2, Section 4A549.)	971	5E14 5E15	FR3 GA	- GA
Allow SCP DAL Carrier Compare	972	5E15	GA	GA
ASP Monitor for BRI and Multiline Hunt Group	973	5E15	FR1	-
Commercial Credit Card Alternate Access Methods	974	5E14 5E15	FR4 GA	- GA
PSAP (Public Safety Answering Point) Trunk Reports OOS BLKD When Originator Hangs Up Before PSAP	975	5E13 5E14 5E15	- - GA	- - GA
Talking Call Waiting	976	5E13	-	-
DA Automatic Position Release (Depends on SFID 559. See Division 2, Section 4A559.)	977	5E14	FR3	-
GETS (Government Emergency Telecommunications Service) Egress Queuing	978	5E15 5E16	FR3 GA	SU 010036- GA
GETS (Government Emergency Telecommunications Service) Office Queuing	979	5E15 5E16	FR3 GA	SU 010036- GA
Carrier Compare For VPN (Virtual Private Network) Depends on SFID 165 and SFID 242.	980	- - 5E16	5E14 FR6 5E15 FR2 GA	- - GA
NM 3 Digit Reroute	981	5E14 5E15 5E16(1)	- - GA	- - GA
Inhibit No Circuit Peg Counts on Final Route Type of Busy	983	5E14 5E15	IMR 720980 GA	IMR 720980 GA
NPA Split Enhancement	984	5E14	SU 010002	SU 010003

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		5E15	-	-
		5E16(1)	GA	GA
LEA TPKT Inhibit	985	5E14	SU 010002	-
		5E15	GA	GA
Use Originators Screen Index for ANI II Digits	986	5E14	-	-
		5E15	GA	GA
PRI Calling Party Number Presentation Indicator	987	5E14	SU 010002	-
Exception		5E15	GA	GA
Enhancement for Stand-Alone Routing for International	988	5E14	SU 030002	SU 010016
		5E15	SU 020008	SU 010068
		5E16(1)	GA	GA
Alternate ASP Algorithm used' to Delete an NPA	989	5E14	SU 010003	-
		5E15	SU 010010	-
		5E16(1)	GA	GA
256K Trunk Scaling for Mega 5ESS	990	5E16	GA	GA
Bypass Subset of Crosschecks during RCV 10.10	992	5E14	SU 010005	-
Screening Delete		5E15	SU 010016	-
		5E16(1)	GA	GA
Listing Services for OSPS ANSI Incoming SS7 form	993	5E14	SU 010006	SU 990009
End Offices		5E15	SU 010016	-
		5E16(1)	GA	GA
Canadian 15-Digit International Direct Distance Dialed	994	5E14	SU 010008	SU 010014
		5E15	SU 010017	-
		5E16(1)	GA	GA
Precedence and Preemption Terminating Feature	996	5E15	SU 020002	-
Selection Enhancement		5E16(2)	GA	GA
Delete Network Identity Digits on PRI PLI IE	997	5E15	SU 020007	SU 020013
		5E16(2)	GA	GA
GETS Enabled Edge Switch	998	5E16(2)	GA	GA
DNIS Enhancement for Canada - Part 1	999	5E15	FR 5	-
DNIS Enhancement for Canada - Part 2	1000	5E15	FR 5	-
DNIS Enhancement for Canada - Part 3	1001	5E15	FR 5	-
PRI CBC with Blank/Zero SFG Screen Index	1003	5E14	IMR 759058	IMR 759058
		5E15	IMR 759058	IMR 759058
		5E16(1)	IMR 759058	IMR 759058
		5E16(2)	GA	GA
Inhibit Printing of FC2CF_LTM Assert	1004	5E14	SU 030001	SU 020006
		5E15	SU 020009	SU 020025
		5E16(1)	SU 020008	SU 020014
		5E16(2)	GA	GA
IAM Charge Number	1005	5E15	SU 200003	SU 200002
		5E16.1		
		5E16.2		
		5E17.1		
256 ISUP Tandem Solution	1006	5E16(2)	SU 030001	SU 020006
		5E17(1)	GA	GA
On-Hook Data Transmission without Power Ring	1008	5E15	FR4	-
		5E16	GA	GA
IMLT Metallic A-Link Blackage Notification	1010	5E16(2)	FR1	-
Inhibit CGA (Carrier Group Alarms)	1012	5E16(2)	FR1	SU 30011
SS7 Release Message	1013	5E16(2)	GA	GA

Notes:

SU - Feature available in a Software Update (Formerly called BWM).

GA - Feature available in the General Availability Software Release.

- = No Informational Software Update available.
NA - Not applicable. An optioning bit is no longer needed to option the feature. An alternative mechanism (e.g., a dedicated parameter or an option name on the options views) is now used to option the feature.

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(SFxx) - Secured Feature. Optional feature that can be purchased. For more information refer to Division 2, Section 4Axx.

(SpF) - Special Feature. For more information refer to Division 2, Section 4C.
(TF) - Transparency Feature. For more information refer to Division 2, Section 4B0, Page 1.
Figure 1 ID NUMBERS FOR TRANSPARENCY FEATURES

SCREEN 1 OF 6 5ESS Switch
fosys OFFICE DATA ADMINISTRATION
(5713-2) OPTIONED FEATURE UPGRADE

*1. MODULE OFC
2. OPTIONED FEATURE ID LIST

ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT
1	500	_	9	508	_	17	516	_	25	524	_	33	532	_	41	540	_
2	501	_	10	509	_	18	517	Y	26	525	_	34	533	_	42	541	_
3	502	_	11	510	_	19	518	_	27	526	_	35	534	_	43	542	_
4	503	_	12	511	_	20	519	_	28	527	_	36	535	_	44	543	_
5	504	_	13	512	_	21	520	_	29	528	_	37	536	_	45	544	_
6	505	_	14	513	_	22	521	_	30	529	_	38	537	_	46	545	_
7	506	_	15	514	_	23	522	_	31	530	_	39	538	_	47	546	_
8	507	_	16	515	Y	24	523	_	32	531	_	40	539	_	48	547	_

SCREEN 2 OF 6 5ESS Switch
fosys OFFICE DATA ADMINISTRATION
(5713-2) OPTIONED FEATURE UPGRADE

2. OPTIONED FEATURE ID LIST

ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT
49	548	_	57	556	_	65	564	_	73	572	_	81	580	_	89	588	_
50	549	_	58	557	_	66	565	_	74	573	_	82	581	_	90	589	_
51	550	_	59	558	_	67	566	_	75	574	_	83	582	_	91	590	_
52	551	_	60	559	_	68	567	_	76	575	_	84	583	_	92	591	_
53	552	_	61	560	_	69	568	_	77	576	_	85	584	_	93	592	_
54	553	_	62	561	_	70	569	_	78	577	_	86	585	_	94	593	_
55	554	_	63	562	_	71	570	_	79	578	_	87	586	_	95	594	_
56	555	_	64	563	_	72	571	_	80	579	_	88	587	_	96	595	_

SCREEN 3 OF 6 5ESS Switch
fosys OFFICE DATA ADMINISTRATION

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(5713-2) OPTIONED FEATURE UPGRADE

2. OPTIONED FEATURE ID LIST

ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT
97	596	_	105	604	_	113	612	_	121	620	_	129	628	_	137	636	_
98	597	_	106	605	_	114	613	_	122	621	_	130	629	_	138	637	_
99	598	_	107	606	_	115	614	_	123	622	_	131	630	_	139	638	_
100	599	_	108	607	_	116	615	_	124	623	_	132	631	_	140	639	_
101	600	_	109	608	_	117	616	_	125	624	_	133	632	_	141	640	_
102	601	_	110	609	_	118	617	_	126	625	_	134	633	_	142	641	_
103	602	_	111	610	_	119	618	_	127	626	_	135	634	_	143	642	_
104	603	_	112	611	_	120	619	_	128	627	_	136	635	_	144	643	_

SCREEN 4 OF 6 5ESS Switch
fosys OFFICE DATA ADMINISTRATION
(5713-2) OPTIONED FEATURE UPGRADE

2. OPTIONED FEATURE ID LIST

ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT
145	644	_	153	652	_	161	660	_	169	668	_	177	676	_	185	684	_
146	645	_	154	653	_	162	661	_	170	669	_	178	677	_	186	685	_
147	646	_	155	654	_	163	662	_	171	670	_	179	678	_	187	686	_
148	647	_	156	655	_	164	663	_	172	671	_	180	679	_	188	687	_
149	648	_	157	656	_	165	664	_	173	672	_	181	680	_	189	688	_
150	649	_	158	657	_	166	665	_	174	673	_	182	681	_	190	689	_
151	650	_	159	658	_	167	666	_	175	674	_	183	682	_	191	690	_
152	651	_	160	659	_	168	667	_	176	675	_	184	683	_	192	691	_

SCREEN 5 OF 6 5ESS Switch
fosys OFFICE DATA ADMINISTRATION
(5713-2) OPTIONED FEATURE UPGRADE

2. OPTIONED FEATURE ID LIST

ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT	ROW	FID	ACT
193	692	_	201	700	_	209	708	_	217	716	_	225	724	_	233	732	_
194	693	_	202	701	_	210	709	_	218	717	_	226	725	_	234	733	_
195	694	_	203	702	_	211	710	_	219	718	_	227	726	_	235	734	_
196	695	_	204	703	_	212	711	_	220	719	_	228	727	_	236	735	_
197	696	_	205	704	_	213	712	_	221	720	_	229	728	_	237	736	_
198	697	_	206	705	_	214	713	_	222	721	_	230	729	_	238	737	_

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199 698 _ 207 706 _ 215 714 _ 223 722 _ 231 730 _ 239 738 _
200 699 _ 208 707 _ 216 715 _ 224 723 _ 232 731 _ 240 739 _

SCREEN 6 OF 6 5ESS Switch _
fosys OFFICE DATA ADMINISTRATION
(5713-2) OPTIONED FEATURE UPGRADE

2. OPTIONED FEATURE ID LIST

ROW FID ACT ROW FID ACT
241 740 _ 249 748 _
242 741 _ 250 749 _
243 742 _ 251 750 _
244 743 _ 252 751 _
245 744 _ 253 752 _
246 745 _ 254 753 _
247 746 _ 255 754 _
248 747 _ 256 755 _

Figure 2 SAMPLE FOSYS FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 5AT: 5544 RECORD
MH PIPE ASSIGNMENT FORM - EQPIPE

1. GENERAL

The 5544 Record is available with the 5E9(2) and later Software Releases. It is used to assign QLPS (Quad-Link Packet Switch) MH (Message Handler) pipes in an SM-2000 office.

An SM-2000 Message Handler pipe is a high bandwidth path for message transport between a QLPS QTMSLNK (a port connection on the QLPS board of the TMS (Time Multiplex Switch)) and a given QLPS endpoint, that is, an MH (Message Handler) in an SM-2000. It is a physical path that sustains HDLC (High Level Data Link Control) traffic from the QLPS to the MH. When an SM-2000 Message Handler pipe is assigned, the operational software determines what resources are available for the pipe: QTMSLNKs and HDLC channels and timeslots on the QTMSLNKs.

New pipes cannot be assigned during a retrofit.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * QLPS NETWORK

Description: Enter the QLPS Board to which the pipe is assigned.

Required Field.
Valid Entries: 0, 1

Data Rules:

Two EQQLPS forms (5854 Record) must exist for the QLPS NETWORK entered here, one each for ONTC SIDE 0 and ONTC SIDE 1. On both forms EQSTAT must be "O".

2.3 * SM2000 SM

Description: Enter the SM-2000 on which the pipe is being defined.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM-2000 must be defined on an EQIM form (5700-1/2 Record) where UNIT TYPE is "SM2000" and EQSTATUS is "O".

Each SM-2000 entered defines a MH Pipe from an SM-2000 class processor Switching Module to a QLPS NETWORK. Similarly, each GLOBAL SM, PSU SHELF, and CHANNEL GROUP combination entered on the QPHPIPE form defines a QPH Pipe from a GSM (Global Switching Module) to a QLPS NETWORK. There is a limit to the number of pipes that can be defined on each QLPS NETWORK. There are 30 available pipes for each TMSLINK (QTMSLINK). There are 4 TMSLINKSs defined on each QLPS NETWORK for a total of 120 pipes for each QLPS NETWORK. Each TMSLINK has a total of 224 timeslots

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that can be utilized between the 30 pipes defined on that TMSLINK.

```
                    5ESS Switch
eqpipe            OFFICE DATA ADMINISTRATION
(5544)              MH PIPE ASSIGNMENT


*1. QLPS NETWORK 0
*2. SM2000 SM    007
```

Figure 1 SAMPLE EQPIPE FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 5AU: 5545 RECORD
LOCAL OFFICE SCREENING - LOCSCRN

1. GENERAL

The 5545 Record is available with the 5E8 Software Release. It is used to screen the NPA (Numbering Plan Area) and Office Codes (NXX) for long distance calls.

This form contains all of the NPA and NPA NXX entries which should be treated as local calls for the CWT (Call Waiting Terminating) with DT (Distinctive Tones) and DR (Distinctive Ringing) for Long Distance Calls.

This form must be populated with all NPA and NPA NXX entries that are considered local to the office. SS7 trunks with a TRKCLS of "LTOLLCON" will check this table for an entry. If an entry is found, the call is considered a local call. If the NPA or NPA NXX is not found on this table, the call is considered long distance and may require distinctive tones for call waiting, or distinctive ringing for long distance calls. For more information on the Call Waiting with Distinctive Tones and Distinctive Ringing for Long Distance Calls feature, see Division 2, Section 4A91.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.26.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *DAS

Description: The DAS field is used to to allow a screening NPA+NXX table for each DAS in the switch. These screening tables are used to determine the call treatment for intra-switch and inter-switch calls. This field supports the Enhanced Long Distance Call Waiting Feature. For more information on this feature see Division 2, Section 4A91.

Software Release: 5E10 and later.
Required Field.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When the DAS field is entered there must be a corresponding DAS value defined on a DAS form.

2.3 * LOCAL NPA

Description: Enter the three digit local NPA that should be considered as local for CWT DT/DR (Call Waiting Distinctive Tones and Distinctive Ringing).

Software Release: 5E8 and later.
Required Field.
Valid Entries: 200 - 999

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Data Rules:

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before data can be entered on the LOCSCRN form. Therefore, the ACT field for SFID 91 must be set to "Y" on the SFSYS form (5713-1 Record).

Once a LOCSCRN form is entered without specifying a LOCAL OFC CODE, no other LOCSCRN forms may be entered for the same LOCAL NPA.

2.4 (*) LOCAL OFC CODE

Description: Enter the Local Office Code that is considered as local to this office for CWT DT/DR. A LOCAL OFC CODE that is left blank implies that this is an NPA only case.

Software Release: 5E8 and later.
Valid Entries: 000 - 110, 112 - 999

Data Rules:

LOCAL OFC CODE cannot be equal to 111.

If the LOCAL NPA is entered and the LOCAL OFC CODE is unknown, then LOCAL OFC CODE cannot be entered for the same LOCAL NPA on any other LOCSCRN forms. Once a LOCSCRN form is entered without specifying a LOCAL OFC CODE, no other LOCSCRN forms may be entered for the same LOCAL NPA to specify NPA-NXX combinations.

```
locscrn                  5ESS Switch                _
(5545)                OFFICE DATA ADMINISTRATION
                     LOCAL OFFICE SCREENING

  *1. LOCAL NPA     ___
(*)2. LOCAL OFC CODE ___
```

Figure 1 SAMPLE LOCSCRN FORM 5E8 THROUGH 5E9(2) SOFTWARE RELEASES

```
locscrn                  5ESS Switch                _
(5545)                OFFICE DATA ADMINISTRATION
                     LOCAL OFFICE SCREENING

  *1. DAS           __
  *2. LOCAL NPA     ___
(*)3. LOCAL OFC CODE ___
```

Figure 2 SAMPLE LOCSCRN FORM 5E10 - 5E14 SOFTWARE RELEASES

```
locscrn                  5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(5545)                   LOCAL OFFICE SCREENING

  *1. DAS           ___
  *2. LOCAL NPA     ___
(*)3. LOCAL OFC CODE ___
```

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Figure 3 SAMPLE LOCSCRN FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5AV: 5546 RECORD
LASS NPA SPLIT RESOLUTION FORM - NPASPLIT

1. GENERAL

The 5546 Record is available with the 5E6 and later Software Releases and is used to allow the customer to build data for a single NPA split.

The LASS NPA Split Resolution feature is a secured feature that must be purchased by the office and SFID 36 set to "S" on the SFSYS form (Record 5713-1 Record) before data can be entered on the NPASPLIT form.

For 5E6 and 5E7 , there is a one-to-one correspondence between an old NPA and a new NPA. A given old NPA can be split into only one new NPA. A given new NPA can be split from only one old NPA.

In 5E8 and later, there can be a one-to-many and/or a many-to-one relationship between OLD NPA and NEW NPA. A given OLD NPA can be split into more than one NEW NPA.

For example, 312 could be split into both 708 and 815. Two NPASPLIT forms are built with the key sets:

- OLD NPA = 312
- NEW NPA = 708
- OLD NPA = 312
- NEW NPA = 815

A given NEW NPA can be split from more than one OLD NPA

For example, 816 could be split from 217, 319 and 808. Three NPASPLIT forms are built with the key sets:

- OLD NPA = 217
- NEW NPA = 816
- OLD NPA = 319
- NEW NPA = 816
- OLD NPA = 808
- NEW NPA = 816

For 5E8 and later, an NPASPLIT form is entered for every combination of OLD NPA and NEW NPA.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.25.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

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2.2 * OLD NPA

Description: Enter the old NPA (Numbering Plan Area) that is going to be split.

Required Field.
Valid Entries: 200 - 999

2.3 * NEW NPA

Description: Enter the new NPA into which the old NPA is being split.

Required Field.
Valid Entries: 200 - 999

2.4 TCAP VALID (OPTION 1)

Description: Should TCAP (Transaction Capabilities Application Part) validation be used? This option is used when validating the DN in a TCAP query for AC (Automatic Callback), AR (Automatic Recall) and SLE (Screen List Editing). If the TCAP NPA is in the NPA Split Table and TCAP VALID (OPTION 1) is "Y", the TCAP DN will be considered valid if the TCAP DN is valid with either NPA from the NPA Split Table.

For 5E6 and 5E7, this field exists for informational purposes only and is controlled by setting/resetting TFOS ID 546 on the FOSYS form (5713-2 Record). TFOS ID 546 controls the TCAP mismatch option. This option is used for TCAP queries to validate a DN in a TCAP query for AC (Automatic Callback), AR (Automatic Recall) or SLE (Screen List Editing). If TFOS ID 546 is "S" and the NPA in the TCAP query matches an NPA in the NPA split table, the DN in the TCAP query is considered valid.

Required Field.
Default: N
Valid Entries: Y, N

2.5 DIG SCRN (OPTION 2)

Description: Should digit screening be used? This option is used when performing screening. If the calling NPA is in the NPA Split Table and DIG SCRN (OPTION 2) is "Y", screening will use only the last seven digits of the calling DN when searching a screening list. If these seven digits match a DN on the screening list and the calling NPA and the screening list NPA are associated with the same NPA split, a match has been found and actions appropriate to the screening feature are taken. If the calling NPA and the list NPA do not match, the call will fail screening.

For 5E6 and 5E7, this field exists for informational purposes only and is controlled by setting/resetting TFOS ID 547 on the FOSYS form (5713-2 Record). TFOS ID 547 is the screening office option. This option is used when performing screening on an incoming call. If TFOS ID 547 is "S", screening is done on the seven digits, NXX-XXXX, of the calling DN. If the seven digits match a DN on the screening list, and if the calling NPA and the screening list NPA are associated with the same NPA split, a match has been found. If the screening list NPA is not associated with the same NPA split as the calling NPA, screening continues.

Required Field.
Default: N
Valid Entries: Y, N

2.6 SLE DEL (OPTION 3)

Description: Should SLE (Screen List Editing) deletion screening be used? When using SLE to delete a number from a screening list, if the NPA of the number to delete is in the NPA Split Table and SLE DEL

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(OPTION 3) is "Y", SLE list delete will use both the old and the new NPA to check if the DN exists on the list.

For 5E6 and 5E7, this field exists for informational purposes only and is controlled by setting/resetting TFOS ID 548 on the FOSYS form (5713-2 Record). TFOS ID 548 is the SLE add/delete option. If TFOS ID 548 is "S" and the NPA of the DN being added/deleted from the screening list is in the NPA split table, SLE uses both old and new NPAs to check if the DN is on the screening list.

Required Field.
Default: N
Valid Entries: Y, N

2.7 SLE CHNG (OPTION 4)

Description: Should SLE (Screen List Editing) change screening be used? When using SLE to add a number to a screening list, if the NPA of the number to add is in the NPA Split Table and SLE CHNG (OPTION 4) is "Y", SLE list add will use both the old and the new NPA to check if the DN already exists on the list. If the DN is on the list with the old NPA, and the user has attempted to add it with the new NPA, SLE list add will update the screening list entry and replace the old NPA with the new NPA.

For 5E6 and 5E7, this field exists for informational purposes only and is controlled by setting/resetting TFOS ID 548 on the FOSYS form (5713-2 Record). TFOS ID 548 is the SLE add/delete option. If TFOS ID 548 is "S" and the NPA of the DN being added/deleted from the screening list is in the NPA split table, SLE uses both old and new NPAs to check if the DN is on the screening list.

Required Field.
Default: N
Valid Entries: Y, N

```
npasplit                5ESS Switch                _
(5546)              OFFICE DATA ADMINISTRATION
                  LASS NPA SPLIT RESOLUTION

*1. OLD NPA             312
*2. NEW NPA             708
   TCAP VALID (OPTION 1)
   DIG SCRN   (OPTION 2)
   SLE DEL    (OPTION 3)
   SLE CHNG   (OPTION 4)
```

Figure 1 SAMPLE NPASPLIT FORM 5E6 AND 5E7 SOFTWARE RELEASES

```
npasplit                5ESS Switch                _
(5546)              OFFICE DATA ADMINISTRATION
                  LASS NPA SPLIT RESOLUTION

*1. OLD NPA             312
*2. NEW NPA             708
 3. TCAP VALID (OPTION 1) Y
 4. DIG SCRN   (OPTION 2) Y
 5. SLE DEL    (OPTION 3) Y
 6. SLE CHNG   (OPTION 4) Y
```

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Figure 2 SAMPLE NPASPLIT FORM 5E8 SOFTWARE RELEASE

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SEC. 5AW: 5547 RECORD
SRE INCREMENTAL GLOBAL PARAMETERS - SREINCR

1. GENERAL

- **WARNING: This view should not be used to make changes to dynamic memory without first contacting your local support and/or Lucent Technologies support. Once the software resource is increased, it cannot be decreased without a switch initialization.** For more detailed information, refer to Lucent Technologies 235-070-100, Administration and Engineering Guidelines, Sec. 10: SM Resource Utilization; SM Resource Overload Control; Software Engineerable Resources.

The 5547 Record is available with the 5E9(2) and later Software Releases. It is used to increase engineering software resource (memory) parameters per SM (Switching Module) for new start and/or retrofit offices. The SREINCR form is implemented to facilitate efficient utilization of memory per SM. A software resource is defined as a dynamic ODD (Office Dependent Data) data structure, or data block, required to provide the necessary memory to support various service requirements.

1.1 Software Resource Calculation

Effective with 5E9(2) and later, automatic algorithms calculate dynamic software resources per SM based upon factors such as the number of lines, trunks, feature usage, etc. This process is adequate to handle most engineerable software resources and therefore use of ODA to define quantities of software resources should not be necessary.

In some instances, however, this form may be required in order to initially define an allocation of software resources. For example, in the case of the SRVOT software resource, the automatic algorithm's SRVOT calculation may over/under engineer memory per SM in sites that have LS (Listing Services) trunking on a subset of SMs. In this case, this form is used by the administrator to allocate SRVOT software resources in the SMs that serve LS calls. This could also apply to COINOT. SRVOT and COINOT calculations are dependent upon the global values set on the OSPSOPT form (5424 Record) using the LS QUANTUM and COIN MECH fields, respectively (see Division 3, Section 4Y).

The SREINCR INCREMENTAL VALUE field is used to initially define the quantity of a particular software resource, when necessary. The increment range is 0 - 65535; however, there is a maximum quantity of data blocks that can be assigned to a particular software resource, by type of switching module (i.e., SM, SM-2000, or Administrative Module), as indicated in the Maximum Incremental Values table in this section.

1.2 Recent Change View

The Recent Change View for this form is 8.40.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *MODULE

Description: Enter the number to distinguish the SM from the AM (Administrative Module). The 1 - 192 range is used to designate an SM; 193 is used to designate an AM for purposes of updating Software Resources.

Required Field.
Valid Entries: 1 - 193

Data Rules:

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If MODULE is 1 - 192 (i.e., SM), there must be a least one EQIM form where the SM field on the EQIM form matches the MODULE field on this form.

If MODULE 1- 192, and SOFTWARE RESOURCE is "CINDX7" or "ENTRY7" and INCREMENTAL VALUE is a non-zero value, there must be at least one TRUNK form specified with a DEN, TEN, or NEN whose first 3 digits are equal to the MODULE value on this form, and the corresponding TKGRP form must have INPULSING and/or OUTPULSING set to "ISUP7".

If MODULE is 193 (i.e., AM), and SOFTWARE RESOURCE is "CINDX7" or "ENTRY7", and INCREMENTAL VALUE is a non-zero value, there must be at least one TRUNK form specified with a DEN, TEN, or NEN, and the corresponding TKGRP form must have INPULSING and/or OUTPULSING set to "ISUP7".

2.3 *SOFTWARE RESOURCE

Description: Enter the Software Resource.

Required Field.

Valid SOFTWARE RESOURCES Entries

Entry	Description
ACRD	Auxiliary Call Record. Used in conjunction with the 5ESS Call Record and the OSPS Call Record to maintain call-related information for the life of an OSPS call.
ADB	Analog Data Block. This dynamic relation contains data used to keep track of an ISDN originated call for the Shared Analog member.
APB	Associated Process Block.
APBUF	Software Release: 5E10 and later. Applications Processors Memory Buffer.
APDU	Software Release: 5E10 and later. An SM loaded with the IDCU or ATS (Automatic Terminal Setup) packages, which is nominally based on the number of TR303 RTs present in the SM and the ATS software (which is a fixed number 60) and this incremental global parameter. This global parameter should be administered by ODA and TM triggers. It is not administered by RC. This count is recalculated during a retrofit. (See also, "MALLOC", "RTLB", and "RTMSGBUF".)
ASPBASE	A global parameter that tracks the current tuple count for the following data relations: Relation Owner for ASP (NS_IDX); Network Services Data Block for ASP (NSDB); Network Services Data Block for ASP Call Legs (NS_BILL).
ASPTP	Software Release: 5E13 and later. A global parameter that contains an SM's current tuple count for relation ASP_TP. It is verified during full initializations and updated as tuples are inserted via trigger functions. For more information, see Division 2, Section 4A301.
ATCALL	Software Release: 5E10 and later. Automatic Call Data for Message Services and Electronic Directory Service.
BRCSDB	BRCS Data Block linked to the DALB for BRCS specific data.
CBDB	Call Buildup Data Block.
CCSSTPDB	CCSSeTuP Data Block.
CFLNT	Call Forwarding Line Termination Data Block.
CFSCOP	Call Forwarding System Process Data Block.
CINDX7	CCS7 Message Consolidation and Acknowledgement Handler CIC List Index Data Block.
CLDB	Call Leg Data Block.
COINOT	OSPS COIN Originating Treatment dynamic data.
CPLR	Coupler Data Block.
CQB	Circuit Queuing Block.
CRD	Call Record Data Block.
CVSTATE	Call Vectoring State.
DALB	D-Channel Application Linkage Block. This dynamic relation contains data to provide a means to route messages from a D-channel to the proper Terminal Process.
DBCND	CLID Calling Number Delivery temporary storage block. This relation is used as a temporary storage structure to store the last incoming calling DN (LICDN). By storing the LICDN, the terminal that has ICLID CND and performs a pickup will be able to display the number.
DISPDB	Display Data Block.
E911DB	E911 Data Block.
ENTRY7	CCS7 MCAH Table Entry Data Block.

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FACMSG	Proprietary.
FRNAMA	Software Release: 5E14 and later. AIN Furnish AMA (Automatic Message Accounting) Information. SFID 517.
GPFTIME	Software Release: 5E12 and later. General purpose functional timer data blocks.
LSCMDB	Large Shared Call Model Data Block. This dynamic relation contains data used by the SCM (Shared Call Model). The SCM Data Block is linked to the APB of the terminal process which contains the controlling SCM.
MALLOC	Software Release: 5E10 and later. An SM loaded with the IDCU or ATS (Automatic Terminal Setup) packages, which is nominally based on the number of TR303 RTs present in the SM and the ATS software (which is a fixed number 80) and this incremental global parameter. This global parameter should be administered by ODA and TM triggers. It is not administered by RC. (See also, "APDU", "RTLB", and "RTMSGBUF".)
MDB	Model Data Block.
MSMWIDA	Software Release: 5E10 and later. Message Waiting Indicator Data.
OAOTDB	Software Release: 5E10 and later. Actions Originating Treatment Data Block. Used for incoming calls to OSPS.
ORIGINFO	Software Release: 5E16(2) and later. Supports the Call Transfer Custom Display Enhancement feature. See Division 2, Section 4A588 for information on this feature.
OSPCB	OSDS (Operating System for Distributed Switching) Process Control Block.
OSTCB	OSDS Timer Control Block.
PHDB	Path Data Block.
PHISTORY	Port status history. An IM relation that stores a port's history of out-of-service statuses whenever a port is out-of service for more than one reason. These statuses are called pending statuses.
PTRDB	Pointers to Data Blocks.
PUENTRY	Stores information about the Call Pickup queued call.
QRYDB	Contains data saved across transition strings for the QUERY model.
QVSTATE	Software Release: 5E11 and later. Per SM count of initialized ACD/BRCS queuing and vectoring state tuples. This entry supports the ACD/BRCS Interworking 11 feature. For more information on this feature, see Division 2, Section 4A121.
RTLB	Software Release: 5E10 and later. An SM loaded with the IDCU or ATS (Automatic Terminal Setup) packages
RTMSGBUF	Software Release: 5E10 and later. An SM loaded with the IDCU or ATS (Automatic Terminal Setup) packages
SCMDB	Shared Call Model Data Block. Contains data used by the SCM. The SCM Data Block is linked to the APB of the terminal process which contains the controlling SCM.
SDAP	Speed Dialing Auto-Provisioning Data Block.
SIPTBLK	Software Release: 5E16(2) FR 3 and later. Session Initiation Protocol for Telephony is blank.
SIPTMAP	Software Release: 5E16(2) FR 3 and later. Session Initiation Protocol for Telephony Mapping.
SRVOT	Listing Services and Quantum Call Data for OT and EIS Interface.
STPDB	Proprietary.
TATDB	Terminating Attempt Trigger Data Block.
TNINFO	Notification Information Data Block.

Data Rules:

APBUF:
For 5E10 and later, if "APBUF" is entered, and a non-zero INCREMENTAL VALUE, at least one DSLAP form must exist for each of the SREINCR forms where MODULE on the SREINCR form matches SM on the DSLAP form. In addition, MODULE on the SREINCR form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports Application Processors.

APDU:
If "APDU", "MALLOC", "RTLB" or "RTMSGBUF" (ISDN and TR303 IDCU applications) are entered and have a non-zero INCREMENTAL VALUE, MODULE on the SREINCR form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports ISDN and/or

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TR303 IDCU applications.

ASPBASE:
If "ASPBASE" or "TNINFO" is entered, and a non-zero INCREMENTAL VALUE is entered, "ASP OFC" must equal "SSP" or SERV SWITCH PT must equal "Y" on the OFCOPT form (5509 Record) and a DSAPP form (5537 Record) must exist with APPLIC set to "ASP" or "AINR0D1" .

ASPTP:
For 5E13 and later, if "ASPTP" is entered and INCREMENTAL VALUE is not 0, then there must be one and only one DSAPP form with APPLIC equal "AINR0D1".

For 5E13 and later, on the SREINCR form, if SOFTWARE RESOURCE is "ASPTP" and INCREMENTAL VALUE is not 0 , then ASP OFC must be "SSP" on the ASPOPT form.

For 5E13 and later, when the SREINCR form has SOFTWARE RESOURCE set to "ASPTP", and a non-zero INCREMENTAL VALUE, an SFSYS form must exist with SFID 126 ACT set to "Y".

ATCALL:
For 5E10 and later, when SREINCR forms have SOFTWARE RESOURCE set to "ATCALL", and a non-zero INCREMENTAL VALUE, at least one DSLUSR form must have an associated MLHLNFA or LINEFA form with either an EDS feature assigned, whose associated EDSFD form has AUTO CALL set to "Y", or an MSS feature assigned, whose associated MSFD form has AUTO CALL set to "Y" for each of the SREINCR forms where MODULE on the SREINCR form matches OE[1,3] on the DSLUSR form.

In addition, MODULE on the SREINCR form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports ISDN BRCS.

BRCSDB:
For 5E10 and later, if SOFTWARE RESOURCE is set to "BRCSDB", and a non-zero INCREMENTAL VALUE, the MODULE entry must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports ISDN BRCS.

CCSSTPDB:
For 5E11 and later, if MODULE is less than 193 on an SM and SOFTWARE RESOURCE is set to "CCSSTPDB", and a non-zero INCREMENTAL VALUE, there must be at least one TRUNK form specified with a DEN, TEN, or NEN whose first 3 digits are equal to the MODULE on the SREINCR form, and the corresponding TKGRP form must have INPULSING set to "ISUP7".

DISPDB:
For 5E10 and later, if SOFTWARE RESOURCE is set to "DISPDB", and a non-zero INCREMENTAL VALUE, the MODULE entry must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports ISDN BRCS.

FRNAMA:
If "FRNAMA" is entered and INCREMENTAL VALUE is not 0, ASP OFC on the ASPOPT form must be "SSP".

MALLOC:
"APDU", "MALLOC", "RTLB" or "RTMSGBUF" are used for ISDN and TR303 IDCU applications. If "APDU", "MALLOC", "RTLB" or "RTMSGBUF" are entered and have a non-zero INCREMENTAL VALUE, MODULE on the SREINCR form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports ISDN and/or TR303 IDCU applications.

MSMWIDA:
For 5E10 and later, when SREINCR forms have SOFTWARE RESOURCE set to "MSMWIDA", and a non-zero INCREMENTAL VALUE, at least one DSLAP form with ISVM set to "Y", must exist for each of the SREINCR forms where MODULE on the SREINCR form matches SM on the DSLAP form. In addition, MODULE on the SREINCR form must have a corresponding EQIM form with the same SM

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value where the value entered for CONFIGURATION supports Application Processors.

QVSTATE:
If "QVSTATE" is entered and has a non-zero INCREMENTAL VALUE, an SFSYS form must exist with SFID 121 ACT set to "Y".

RTLB and RTMSGBUF:
"APDU", "MALLOC", "RTLB" or "RTMSGBUF" are used for ISDN and TR303 IDCU applications. If "APDU", "MALLOC", "RTLB" or "RTMSGBUF" are entered and have a non-zero INCREMENTAL VALUE, MODULE on the SREINCR form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports ISDN and/or TR303 IDCU applications.

TATDB:
If SOFTWARE RESOURCE is set to "TATDB" and a non-zero INCREMENTAL VALUE, then an OFCOPT form must exist with ASP OFC is set to "SSP" or SERV SWITCH PT is set to "Y", and a DSAPP form must also exist with APPLIC set to "AINR0D1".

TNINFO:
If "TNINFO" (or "ASPBASE") in entered, and a non-zero INCREMENTAL VALUE is entered, "ASP OFC" must equal "SSP" or SERV SWITCH PT must equal "Y" on the OFCOPT form (5509 Record) and a DSAPP form (5537 Record) must exist with APPLIC set to "ASP" or "AINR0D1".

2.4 #INCREMENTAL VALUE

Description: This field is used to define the available data blocks for the software resource and module entered. Enter the resource quantity desired.

Required Field.
Valid Entries: 0 - 65535 (increments of 50)

Data Rules:

For 5E10 and later, a list of all the possible values for SOFTWARE RESOURCE field on SREINCR form where MODULE is not equal to 193 (on an SM), and the corresponding maximum allowed on the INCREMENTAL VALUE is shown below. The maximum may vary depending on the types of SWITCHING MODULE.

SM denotes those SREINCR forms where the associated EQIM form, found by matching SM to MODULE, have UNIT TYPE set to a value other than "SM2000". SM2000 denotes those SREINCR forms where the associated EQIM form have UNIT TYPE set to "SM2000".

MAXIMUM INCREMENTAL VALUES

SOFTWARE RESOURCE	SM	SM2000
ACRD	8975	8975
ADB	16383	16383
APB	4093	0
APBUF	1023	1023
APDU	511	511
ASPBASE	32000	32000
ATCALL	256	256
BRCSDB	32000	32000
CBDB	2047	2047
CCSSTPDB	4095	4095
CFLNT	200	1000
CFSCOP	250	8191
CINDX7	400	400
CLDB	30718	30718
COINOT	24192	24192
CPLR	65534	65534
CQB	320	320
CRD	32000	32000
CVSTATE	16383	16383
DALB	31999	31999

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DBCND	4095	4095
DISPDB	31999	31999
E911DB	2047	2047
ENTRY7	250	5E14 and earlier: 2500 5E15 and later: 3500
FRNAMA	3200	3200
GPFTIME	21810	21810
LSCMDB	28800	28800
MALLOC	2047	2047
MDB	65533	65533
MSMWIDA	1023	1023
OAOTDB	24192	24192
ORIGINFO	600	3000
OSPCB	5000	26000
OSTCB	1300	6765
PHDB	512	14848
PHISTORY	8191	8191
PTRDB	449	449
PUENTRY	2000	2000
QRYDB	449	449
QVSTATE	16383	16383
RTLB	511	511
RTMSGBUF	2047	2047
SCMDB	28800	28800
SDAP	32	32
SIPTBLK`	0	64800
SIPTMAP	0	10795
SRVOT	24192	24192
TATDB	5E13 and earlier: 546 5E14 and later: 11382	5E13 and earlier: 546 5E14 and later: 11382
TNINFO	17111	17111

2.5 CURRENT TOTAL VALUE

Description: This is a Recent Change display-only field.

---

sreincr 5ESS Switch
(5547) OFFICE DATA ADMINISTRATION
SCREEN 1 OF 1 SRE INCREMENTAL GLOBAL PARAMETERS

*1. MODULE ___
*2. SOFTWARE RESOURCE _____
#3. INCREMENTAL VALUE _____

CURRENT TOTAL VALUE

WARNING: This form should not be used to make changes to dynamic memory without first contacting your next level of Lucent Technologies support. Refer to the Administration and Engineering guidelines for SM resource utilization: SM resource overload control; software engineering resources.

Figure 1 SAMPLE SREINCR FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 5AX: 5548 RECORD
SLIM OE LIST - SLLEN

1. GENERAL

The SLLEN form (5548 Record) is available with the 5E10 and later Software Releases. It is used to define the range of subscriber office equipment numbers that are to be tested by the SLIM2 (Subscriber Line and Instrument Measurements-2) feature, executed in the "Routine Mode".

The "Routine Mode" of the SLIM2 feature is a secured feature and therefore SFID ACT 230 must be "Y" on the SFSYS form (5713-1 Record).

For more information on SLIM2, see Divison 2, Section 4A230.

1.1 Recent Change View

The corresponding Recent Change View for this form is 14.13.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *OE LIST ID

Description: Enter the OE LIST ID.

Required Field.
Valid Entries: 1 - 8

2.3 *ENTRY NUMBER

Description: Enter the entry number.

Required Field.
Valid Entries: 1 - 60

2.4 #START OE

Description: Enter the originating equipment type.

Required Field.

Valid START OE Entries

Entry	Definition
A	Software Release: 5E12 and later. TR-303 on DNU-S (i.e., INEN).
C	The TN is associated with ISLU Line Card Equipment Number and Number field must contain an 8-digit equipment number.
E	Software Release: 5E11 and later. The TN is associated with an AIU (Access Interface Unit).
G	The TN is associated with an analog IDCU Equipment Number and Number field must contain an 11-digit equipment number (GEN) for a remote terminal or a PUB43801.
L	The TN is associated with an analog-type Line Equipment Number and Number field must contain a 10-digit LEN.
S	The TN is associated with SLC-96 Equipment Number and Number field must contain an 8-digit SLEN.

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2.5 END OE

Description: Enter the ending originating equipment type.

Required Field.
Valid Entries: (see table above)

Data Rules:

When END OE is specified, the START OE must be specified.

The END OE value must equal the START OE value.

---

sllen 5ESS Switch _
(5548) OFFICE DATA ADMINISTRATION
SLIM OE LIST

* 1. OE LIST ID _
* 2. ENTRY NUMBER __
# 3. START OE _ _____
6. END OE _ _____

Figure 1 SAMPLE SLLEN FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5AY: 5549 RECORD
SLIM TEST SET - SLTSET

1. GENERAL

The SLTSET form (5549 Record) is available with the 5E10 and later Software Releases. It is used to define the types of SLIM (Subscriber Line and Instrument Measurements) tests that are to be performed during a SLIM2 test session, executed in the "Routine Mode". Several sets can be defined with each set having different tests associated with it.

The "Routine Mode" of the SLIM2 feature is a secured feature and therefore SFID ACT 230 must be "Y" on the SFSYS form (5713-1 Record).

For more information on SLIM2, see Divison 2, Section 4A230.

1.1 Recent Change View

The corresponding Recent Change View for this form is 14.14.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TEST SET ID

Description: Enter the identification number for the test set.

Required Field.
Valid Entries: 1 - 8

FOREIGN VOLTAGE

The following fields (Section 2.3 - Section 2.8) define what foreign voltage tests are performed.

2.3 T01ONV

Description: The AC tip to ground is a non-entry field which is defaulted to "Y".

2.4 T02ONV

Description: The AC ring to ground is a non-entry field which is defaulted to "Y".

2.5 T03ONV

Description: The AC tip to ring is a non-entry field which is defaulted to "Y".

2.6 T04ONV

Description: The DC tip to ground is a non-entry field which is defaulted to "Y".

2.7 T05ONV

Description: The DC ring to ground is a non-entry field which is defaulted to "Y".

2.8 T06ONV

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Description: The DC tip to ring is a non-entry field which is defaulted to "Y".

INSULATION RESISTANCE

The following fields (Section 2.9 - Section 2.11) define what insulation resistance tests are performed.

2.9 T01ONR

Description: Execute insulation resistance on hook tip to ground test?

Required Field.
Default: N
Valid Entries: Y, N

2.10 T02ONR

Description: Execute insulation resistance on hook ring to ground test?

Required Field.
Default: N
Valid Entries: Y, N

2.11 T03ONR

Description: Execute insulation resistance on hook tip to ring test?

Required Field.
Default: N
Valid Entries: Y, N

CAPACITANCE

The following fields (Section 2.12 - Section 2.14) define what capacitance tests are performed.

2.12 T01ONC

Description: Execute capacitance on hook tip to ground test?

Required Field.
Default: N
Valid Entries: Y, N

2.13 T02ONC

Description: Execute capacitance on hook ring to ground test?

Required Field.
Default: N
Valid Entries: Y, N

2.14 T03ONC

Description: Execute capacitance on hook tip to ring test?

Required Field.
Default: N
Valid Entries: Y, N

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```
sltset                  5ESS Switch                _
(5549)              OFFICE DATA ADMINISTRATION
                      SLIM TEST SET

* 1. TEST SET ID      _

   FOREIGN VOLTAGE                 INSULATION RESISTANCE
 2. T01ONV Y (AC tip to grnd)     8. T01ONR N (tip to grnd)
 3. T02ONV Y (AC ring to grnd)    9. T02ONR N (ring to grnd)
 4. T03ONV Y (AC tip to ring)    10. T03ONR N (tip to ring)
 5. T04ONV Y (DC tip to grnd)
 6. T05ONV Y (DC ring to grnd)       CAPACITANCE
 7. T06ONV Y (DC tip to ring)    11. T01ONC N (tip to grnd)
                                 12. T02ONC N (ring to grnd)
                                 13. T03ONC N (tip to ring)
```

Figure 1 SAMPLE SLTSET FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5AZ: 5554-1/2 RECORD
SLIM THRESHOLD LIST - SLTHRS

1. GENERAL

The SLTHRS form (5554-1/2 Record) is available with the 5E10 and later Software Releases. It supports the SLIM2 (Subscriber Line and Instrument Measurement-2) feature. It is used to define threshold values for the various tests performed during SLIM2 testing to determine the tolerance for pass/fail indications.

1.1 Routine and Operator Modes

The threshold values which are available to an SM (Switching Module) are determined by whether testing is executed in "Routine Mode" or "Operator Mode". The "Routine Mode" of SLIM2 is a secured feature which allows threshold values to be set in a range of values, outside of the initial default values. In order to execute testing using the Routine Mode, SFID ACT 230 on the SFSYS form (5713-1 Record) must be set to "Y".

The "Operator Mode" of SLIM2 is not a secured feature and allows only the default values to be used during SLIM2 testing. To execute SLIM2 in the Operator Mode, this is the only SLIM2-related view which can be entered; all others are blocked.

For more information on SLIM2, see Division 2, Section 4A230.

1.2 Recent Change View

The corresponding Recent Change View for this form is 14.15.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *THRESHOLD LIST ID

Description: Enter the identification number for the Threshold List.

Required Field.
Default: 0
Valid Entries: 0 - 8

Data Rules:

A SLTHRS form with a THRESHOLD LIST ID of 0 must always exist for SLIM2 OPERATOR mode, that is, a THRESHOLD ID of 0 is required with all threshold values set to their defaults.

FOREIGN VOLTAGE TESTS

The following fields (Section 2.3 - Section 2.14) define the low and high thresholds for foreign voltage tests.

2.3 LOW T01ONVL

Description: Enter the desired threshold value for the AC tip to ground in volts.

Required Field.
Default: 0

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Valid Entries: 0 - 500

Data Rules:

T01ONVL must be less than or equal to T01ONVH.

2.4 HIGH T01ONVH

Description: Enter the desired threshold value for the AC tip to ground in volts.

Required Field.
Default: 7
Valid Entries: 0 - 500

2.5 LOW T02ONVL

Description: Enter the desired threshold value for the AC ring to ground in volts.

Required Field.
Default: 0
Valid Entries: 0 - 500

Data Rules:

T02ONVL must be less than or equal to T02ONVH.

2.6 HIGH T02ONVH

Description: Enter the desired threshold value for the AC ring to ground in volts.

Required Field.
Default: 7
Valid Entries: 0 - 500

2.7 LOW T03ONVL

Description: Enter the desired threshold value for the AC tip to ring in volts.

Required Field.
Default: 0
Valid Entries: 0 - 500

Data Rules:

T03ONVL must be less than or equal to T03ONVH.

2.8 HIGH T03ONVH

Description: Enter the desired threshold value for the AC tip to ring in volts.

Required Field.
Default: 7
Valid Entries: 0 - 500

2.9 LOW T04ONVL

Description: Enter the desired threshold value for the DC tip to ground in volts.

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Required Field.
Default: -50
Valid Entries: -999 - 999

Data Rules:

T04ONVL must be less than or equal to T04ONVH.

2.10 HIGH T04ONVH

Description: Enter the desired threshold value for the DC tip to ground in volts.

Required Field.
Default: 100
Valid Entries: -999 - 999

2.11 LOW T05ONVL

Description: Enter the desired threshold value for the DC ring to ground in volts.

Required Field.
Default: -50
Valid Entries: -999 - 999

Data Rules:

T05ONVL must be less than or equal to T05ONVH.

2.12 HIGH T05ONVH

Description: Enter the desired threshold value for the DC ring to ground in volts.

Required Field.
Default: 100
Valid Entries: -999 - 999

2.13 LOW T06ONVL Required Field.

Description: Enter the desired threshold value for the DC tip to ring in volts.

Data Rules:

T06ONVL must be less than or equal to T06ONVH.

2.14 HIGH T06ONVH Required Field.

Description: Enter the desired threshold value for the DC tip to ring in volts.

INSULATION RESISTANCE TESTS

The following fields (Section 2.15 - Section 2.22) define the low and high thresholds for the Insulation Resistance Tests.

2.15 LOW T01ONRL

Description: Enter the desired threshold value for the tip to ground in kilohms.

Required Field.

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Default: 30
Valid Entries: 1 - 16000

Data Rules:

T01ONRL must be less than or equal to T01ONRH.

2.16 HIGH T01ONRH

Description: Enter the desired threshold value for the tip to ground in kilohms.

Required Field.
Default: 50
Valid Entries: 1 - 16000

2.17 LOW T02ONRL

Description: Enter the desired threshold value for the ring to ground in kilohms.

Required Field.
Default: 30
Valid Entries: 1 - 16000

Data Rules:

T02ONRL must be less than or equal to T02ONRH.

2.18 HIGH T02ONRH

Description: Enter the desired threshold value for the ring to ground in kilohms.

Required Field.
Default: 50
Valid Entries: 1 - 16000

2.19 LOW T03ONRL

Description: Enter the desired threshold value for the tip to ring in kilohms.

Required Field.
Default: 30
Valid Entries: 1 - 16000

Data Rules:

T03ONRL must be less than or equal to T03ONRH.

2.20 HIGH T03ONRH

Description: Enter the desired threshold value for the tip to ring in kilohms.

Required Field.
Default: 50
Valid Entries: 1 - 16000

2.21 LOW T04ONRL

Description: Enter the desired threshold value for the monitor for short in kilohms.

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Required Field.
Default: 35
Valid Entries: 35 - 65

Data Rules:

T04ONRL must be less than or equal to T04ONRH.

2.22 HIGH T04ONRH

Description: Enter the desired threshold value for the monitor for short in kilohms.

Required Field.
Default: 65
Valid Entries: 35 - 65

CAPACITANCE TESTS

The following fields (Section 2.23 - Section 2.28) define the low and high threshold values for Capacitance Tests.

2.23 LOW T01ONCL

Description: Enter the desired threshold value for the tip to ground in nanofarads in increments of 10.

Required Field.
Default: 0
Valid Entries: 0 - 6000 (increments of 10)

Data Rules:

T01ONCL must be less than or equal to T01ONCH.

2.24 HIGH T01ONCH

Description: Enter the desired threshold value for the tip to ground in nanofarads in increments of 10.

Required Field.
Default: 500
Valid Entries: 0 - 6000 (increments of 10)

2.25 LOW T02ONCL

Description: Enter the desired threshold value for the ring to ground in nanofarads in increments of 10.

Required Field.
Default: 0
Valid Entries: 0 - 6000 (increments of 10)

Data Rules:

T02ONCL must be less than or equal to T02ONCH.

2.26 HIGH T02ONCH

Description: Enter the desired threshold value for the ring to ground in nanofarads in increments of 10.

Required Field.

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Default: 500
Valid Entries: 0 - 6000 (increments of 10)

2.27 LOW T03ONCL

Description: Enter the desired threshold value for the tip to ring in nanofarads in increments of 10.

Required Field.
Default: 0
Valid Entries: 0 - 6000 (increments of 10)

Data Rules:

T03ONCL must be less than or equal to T03ONCH.

2.28 HIGH T03ONCH

Description: Enter the desired threshold value for the tip to ring in nanofarads in increments of 10.

Required Field.
Default: 3000
Valid Entries: 0 - 6000 (increments of 10)

OFF-HOOK TESTS

The following fields (Section 2.29 - Section 2.42) define the low and high threshold values for the Off-Hook Tests.

2.29 LOW T01OFL

Description: Enter the desired threshold value for the loop resistance in ohms.

Required Field.
Default: 150
Valid Entries: 0 - 3000

Data Rules:

T01ONFL must be less than or equal to T01ONFH.

2.30 HIGH T01OFH

Description: Enter the desired threshold value for the loop resistance in ohms.

Required Field.
Default: 2000
Valid Entries: 0 - 3000

2.31 LOW T02OFL

Description: Enter the desired threshold value for the dial speed in tenths of a hertz.

Required Field.
Default: 80
Valid Entries: 50 - 250 (in tenths of a hertz)

Data Rules:

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T02ONFL must be less than or equal to T02ONFH.

2.32 HIGH T02OFH

Description: Enter the desired threshold value for the dial speed in tenths of a hertz.

Required Field.
Default: 120
Valid Entries: 50 - 250 (in tenths of a hertz)

2.33 LOW T03OFL

Description: Enter the desired threshold value for the dial pulse ratio percentage.

Required Field.
Default: 50
Valid Entries: 5 - 95

Data Rules:

T03ONFL must be less than or equal to T03ONFH.

2.34 HIGH T03OFH

Description: Enter the desired threshold value for the dial pulse ratio percentage.

Required Field.
Default: 70
Valid Entries: 5 - 95

2.35 LOW T04OFL

Description: Enter the desired threshold value for the key tone level in dBm.

Required Field.
Default: -20
Valid Entries: -26 - 3

Data Rules:

T04ONFL must be less than or equal to T03ONFH.

2.36 HIGH T04OFH

Description: Enter the desired threshold value for the key tone level in dBm.

Required Field.
Default: 0
Valid Entries: -26 - 3

2.37 LOW T05OFL

Description: Enter the desired threshold value for the key tone difference in dBm.

Required Field.
Default: -11
Valid Entries: -26 - 26

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Data Rules:

T05ONFL must be less than or equal to T05ONFH.

2.38 HIGH T05OFH

Description: Enter the desired threshold value for the key tone difference in dBm.

Required Field.
Default: 11
Valid Entries: -26 - 26

2.39 LOW T06OFL

Description: Enter the desired threshold value for the key tone frequency in tenths of a percent.

Required Field.
Default: 982
Valid Entries: 900 - 1100 (in tenths of a percent)

Data Rules:

T06ONFL must be less than or equal to T06ONFH.

2.40 HIGH T06OFH

Description: Enter the desired threshold value for the key tone frequency in tenths of a percent.

Required Field.
Default: 1018
Valid Entries: 900 - 1100 (in tenths of a percent)

2.41 LOW T07OFL

Description: Enter the desired threshold value for the flash hook in milliseconds.

Required Field.
Default: 200
Valid Entries: 40 - 1500

Data Rules:

T07ONFL must be less than or equal to T03ONFH.

2.42 HIGH T07OFH

Description: Enter the desired threshold value for the flash hook in milliseconds.

Required Field.
Default: 1100
Valid Entries: 40 - 1500

SCREEN 1 of 3 5ESS Switch
slthrs OFFICE DATA ADMINISTRATION
(5554) SLIM THRESHOLD LIST

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*1. THRESHOLD LIST ID 0

FOREIGN VOLTAGE TESTS

	LOW	HIGH	
2.	T01ONVL 000	3. T01ONVH 005	(AC tip to grnd in volts)
4.	T02ONVL 000	5. T02ONVH 005	(AC ring to grnd in volts)
6.	T03ONVL 000	7. T03ONVH 005	(AC tip to ring in volts)
8.	T04ONVL -050	9. T04ONVH 0000	(DC tip to grnd in volts)
10.	T05ONVL -050	11. T05ONVH 0000	(DC ring to grnd in volts)
12.	T06ONVL -055	13. T06ONVH 0055	(DC tip to ring in volts)

SCREEN 2 OF 3 5ESS Switch
slthrs OFFICE DATA ADMINISTRATION
(5554) SLIM THRESHOLD LIST

INSULATION RESISTANCE TESTS

	LOW	HIGH	
14.	T01ONRL 00030	15. T01ONRH 00050	(tip to grnd in kilohms)
16.	T02ONRL 00030	17. T02ONRH 00050	(ring to grnd in kilohms)
18.	T03ONRL 00030	19. T03ONRH 00050	(tip to ring in kilohms)
20.	T04ONRL 35	21. T04ONRH 65	(monitor for short in kilohms)

CAPACITANCE TESTS

	LOW	HIGH	
22.	T01ONCL 0010	23. T01ONCH 0500	(tip to grnd in nanofarads)
24.	T02ONCL 0010	25. T02ONCH 0500	(ring to grnd in nanofarads)
26.	T03ONCL 0010	27. T03ONCH 3000	(tip to ring in nanofarads)

SCREEN 3 OF 3 5ESS Switch _
slthrs OFFICE DATA ADMINISTRATION
(5554) SLIM THRESHOLD LIST

OFF-HOOK TESTS

	LOW	HIGH	
28.	T01OFL 0150	29. T01OFH 2000	(Loop Resistance in Ohms)
30.	T02OFL 080	31. T02OFH 120	(Dial Speed in tenths of Hz.)
32.	T03OFL 50	33. T03OFH 70	(Dial Pulse Ratio Percentage)
34.	T04OFL -20	35. T04OFH 000	(Key tone level in dBm)
36.	T05OFL -11	37. T05OFH 011	(Key tone difference in dBm)
38.	T06OFL 0982	39. T06OFH 1018	(Key tone frequency tenths of percent)
40.	T07OFL 080	41. T07OFH 200	(Flash Hook)

Figure 1 SAMPLE SLTHRS FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5BA: 5555 RECORD
SLIM TEST JOB - SLJOB

1. GENERAL

The SLJOB form (5555 Record) is available with the 5E10 and later Software Releases. It is used to specify test jobs for scheduled SLIM2 (Subscriber Line and Instrument Measurements-2) test sessions, executed in the "Routine Mode". This form relates test sets, threshold lists, equipment numbers, etc., to be tested and the types of lines to be allowed to be tested. Up to 240 jobs can be defined to test subscriber line and trunks.

The "Routine Mode" of the SLIM2 feature is a secured feature and therefore SFID ACT 230 must be "Y" on the SFSYS form (5713-1 Record).

For more information on SLIM2, see Division 2, Section 4A230.

1.1 Recent Change View

The corresponding Recent Change View for this form is 14.16.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *JOB ID

Description: Enter the JOB ID.

Required Field.
Valid Entries: 1 - 240

2.3 #TEST SET ID

Description: Enter the Test Set ID number.

Required Field.
Valid Entries: 1 - 8

2.4 THRESHOLD LIST ID

Description: Enter the Threshold List ID.

Required Field.
Default: 0
Valid Entries: 0 - 8

2.5 #START OE

Description: Enter the originating equipment type and number.

Required Field.

Valid START OE Entries

Entry	Definition
A	Software Release: 5E12 and later. TR-303 on DNU-S (i.e., INEN).

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C	The TN is associated with ISLU Line Card Equipment Number and Number field must contain an 8-digit equipment number.
E	Software Release: 5E11 and later: The TN is associated with an AIU (Access Interface Unit).
G	The TN is associated with an analog IDCU Equipment Number and Number field must contain an 11-digit equipment number (GEN) for a remote terminal or a PUB43801.
L	The TN is associated with an analog-type Line Equipment Number and Number field must contain a 10-digit LEN.
S	The TN is associated with SLC-96 Equipment Number and Number field must contain an 8-digit SLEN.

Data Rules:

If START OE is entered, OE LIST ID must be blank.

2.6 NUMBER

Description: The Office Equipment Number.
Valid Entries: An 8-, 10- or 11-digit number in one of the following formats.

If DSL OE is set to "A", the INEN Equipment Number consists of:

TR-303 on DNU-S, Type A

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	LINE	XXXX	0001-2048

If OE TYPE is "C", this ISLU Line Card Equipment Number consists of:

OE NUMBER, TYPE C

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7
Line Group Controller	LGC	XX	00 - 15
Line Card	LC	XX	00 - 31

Data Rules:

The ISLU Line Card must be defined on an ISLULC form (5942 Record) with EQST set to "O" and TYPE set to "ZLC".

If OE TYPE is "E", this AIU Equipment Number consists of:

OE NUMBER, TYPE E

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	AIU	XXX	000 - 042
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 31
			Coin 00 - 15

If OE TYPE is "G", this IDCU Equipment Number residing on a PUB43801 consists of:

OE NUMBER, TYPE G - PUB43801

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7 (5E9(1)and earlier)
		XXX	000 - 042 (5E9(2) and later)
DS1	DS1	XX	51 - 90
Line	LINE	XXXX	0001 - 0024

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OE NUMBER, TYPE G - Remote Terminal			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Unit Number	IDCU	X	0 - 7 (5E9(1)and earlier)
		XXX	000 - 042 (5E9(2) and later)
DS1	DS1	XX	51 - 90
Line	LINE	XXXX	0001 - 0024

If OE TYPE is "L", this Line Unit Equipment Number consists of:

OE NUMBER, TYPE L			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7 (5E9(1)and earlier)
		XXX	000 - 042 (5E9(2) and later)
Concentrator	CONC	X	0 - 9
Switch Group	SWG	X	0 - 1
Switch	SW	X	0 - 7
Level	LEV	X	0 - 3

If OE TYPE is "S", this SLC Equipment Number consists of:

OE NUMBER, TYPE S			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Digital Carrier Line Unit	DCLU	X	
Remote Terminal	RT	XX	01 - 06
Line	LINE	XX	01 - 96

2.7 END OE

Description: Enter the ending originating equipment type and number.

Required Field.
Valid Entries: (see tables above)

Data Rules:

The END OE type must be the same as the START OE type.

The END OE SM value must equal the START OE SM value.

When END OE is specified, the START OE must be specified.

2.8 OE LIST ID

Description: Enter the Test Set ID number.

Required Field.
Valid Entries: 1 - 8

Data Rules:

If OE LIST ID is entered, START OE must be blank.

2.9 OOS ALLOWED

Description: Do you want to test out of service lines within a given OE range?

Required Field.

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Default: N
Valid Entries: Y, N

2.10 PBX ALLOWED

Description: Do you want to test private branch exchange lines within a given OE range?

Required Field.
Default: Y
Valid Entries: Y, N

```
sljob                    5ESS Switch          _
(5555)                OFFICE DATA ADMINISTRATION
                       SLIM TEST JOB

 *1. JOB ID           ___
 #2. TEST SET ID       _
  3. THRESHOLD LIST ID 0
  4. START OE          _ ___________
  7. END OE            _ ___________
 10. OE LIST ID        _
 11. OOS ALLOWED       N
 12. PBX ALLOWED       Y
```

Figure 1 SAMPLE SLJOB FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5BB: 5556 RECORD
SLIM TEST SESSION - SLSESS

1. GENERAL

The SLSESS form (5556 Record) is available with the 5E10 and later Software Releases. It supports the SLIM2 (Subscriber Line and Instrument Measurements-2) feature, executed in the "Routine Mode". The SLESS form is used to define the schedule that test jobs will be executed. Up to six different jobs can be scheduled, but the actual number of jobs that can be executed is dependent upon the number of SLIM devices that exist and the quantity of OEs and tests assigned to each job.

The "Routine Mode" of the SLIM2 feature is a secured feature and therefore SFID ACT 230 must be "Y" on the SFSYS form (5713-1 Record).

For more information on the SLIM2 feature, see Divison 2, Section 4A230.

1.1 Recent Change View

The corresponding Recent Change View for this form is 14.17.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TEST SESSION ID

Description: Enter the identification number of the test session.

Required Field.
Valid Entries: 1 - 40

2.3 #TEST JOB 1

Description: Enter the number for test job 1.

Required Field.
Valid Entries: 1 - 240

2.4 TEST JOB 2

Description: Enter the number for test job 2.
Valid Entries: 1 - 240

2.5 TEST JOB 3

Description: Enter the number for test job 3.
Valid Entries: 1 - 240

2.6 TEST JOB 4

Description: Enter the number for test job 4.
Valid Entries: 1 - 240

2.7 TEST JOB 5

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Description: Enter the number for test job 5.
Valid Entries: 1 - 240

2.8 TEST JOB 6

Description: Enter the number for test job 6.
Valid Entries: 1 - 240

2.9 START DATE

Description: Enter the date to start the test session.
Valid Entries: MMDDYY

Data Rules:

If START DATE is known, START TIME and STOP TIME must also be known.

If START DATE is unknown, START TIME and STOP TIME must also be unknown.

2.10 START TIME

Description: Enter the time to start the test session, in military time.
Valid Entries: HH:00-23; MM:00-59

2.11 STOP TIME

Description: Enter the time to stop the test session, in military (24 hour) time.
Valid Entries: HH:00-23; MM:00-59

2.12 PERIODICITY

Description: Enter the test session periodicity.

Required Field.
Default: ONCE
Valid Entries:

Valid PERIODICITY Entries

Entry	Definition
O	Once.
D	Daily.
W	Weekly.
M	Monthly.

---

slsess 5ESS Switch _
(5556) OFFICE DATA ADMINISTRATION
SLIM TEST SESSION

*1. TEST SESSION ID __
#2. TEST JOB 1 ___
3. TEST JOB 2 ___
4. TEST JOB 3 ___
5. TEST JOB 4 ___
6. TEST JOB 5 ___
7. TEST JOB 6 ___
8. START DATE _____
9. START TIME ____

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10. STOP TIME ____
11. PERIODICITY ONCE

Figure 1 SAMPLE SLSESS FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5BC: 5557 RECORD
METALLIC COMPENSATION VALUES - MTBCOMP

1. GENERAL

The MTBCOMP form (5557 Record) is available with the 5E10 and later Software Releases. It is used to define the SLIM2 (Subscriber Line and Instrument Measurements-2) metallic testing compensation values. The SLIM2 feature operates in either the "Routine Mode" or "Operator Mode". The Routine Mode is a secured feature and therefore SFID ACT 230 must be "Y" on the SFSYS form (5713-1 Record) to activate Routine Mode. When this form is defined, there must be a corresponding entry where MTBCOMP SM, UNIT TYPE, and UNIT NO have a match on one of the following equipment forms:

Form Name	Record Number	SM	UNIT TYPE	UNIT NO
EQRISLU	5732	IM	RISLU	0 - 104
EQISLU	5731	IM	(multiple unit types)	0 - 104
EQLU	5710	IM	(multiple unit types)	0 - 104
EQAIU	5745	SM	(multiple unit types)	0 - 104
EQDNUS	5855	SM	DNUS	0 - 104
EQDLCU	5809	IM	DCLU	0 - 104
EQTU	5720	IM	SN100	0 - 104
EQIDCU	5846	SM	IDCU	0 - 104

For more information on SLIM2, see Division 2, Section 4A230.

1.1 Recent Change View

There is no corresponding Recent Change View for this form as once initially defined these values can only be changed via ODA (Office Data Administration).

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SM

Description: Enter the Switching Module number.

Required Field.

2.3 *UNIT TYPE

Description: Enter the type of unit.

Required Field.

Valid LINE UNIT TYPE Entries

Entry	Definition
4AB1	2-shelf Model 1 Line Unit.
4AC1	2-shelf Model 2 Line Unit.
4AD1	2-Shelf Model 3 Line Unit. Provides a 10:1 concentration ratio.
ISLU	Integrated Services Line Unit.
ISLU2	Integrated Services Line Unit 2.
RISLU	Remote Integrated Services Line Unit.
IDCU	Integrated Digital Carrier Unit.
DCLU	Digital Carrier Line Unit.
SN100	Trunk Unit.
AIU	Access Interface Unit

2.4 *UNIT NUMBER

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Description: Enter the Unit Number.

Software Release: 5E12 and later
Required Field.
Valid Entries: 0 - 104

2.5 LOOPRES

Description: This field was edited for spacing (readability) in 5E12. See LOOP RES below.

2.6 LOOP RES

Description: Enter the loop resistance value in ohms.
Valid Entries: 0 - 8000
Default Value:
- 5E12 and later: 0

Data Rules:
LOOPRES must be 0 for UNIT TYPEs of "4AD1", "4AN1", "4AC1", "4AB1", "ISLU", "SN100", or "AIU".

2.7 AB2ECAP

Description: This field was edited for spacing (readability) in 5E12. See AB2E CAP below.

2.8 AB2E CAP

Description: Enter the tip to ring leg to ground in nanofarads.
Valid Entries: 0 - 6000 (in increments of 10)

Data Rules:
AB2ECAP must be 110 for UNIT TYPEs of "4AD1", "4AN1", "4AC1", "4AB1", "ISLU", "SN100", or "AIU".

2.9 A2BCAP

Description: This field was edited for spacing (readability) in 5E12. See A2B CAP below.

2.10 A2B CAP

Description: Enter the tip to ring capacitance in nanofarads.
Valid Entries: 0 - 6000 (in increments of 10)
Default Value:
- 5E12 and later: 0

Data Rules:
AB2ECAP must be 0 for UNIT TYPEs of "4AD1", "4AN1", "4AC1", "4AB1", "ISLU", "SN100", or "AIU".

2.11 LEAKT2G

Description: For 5E12 and later, this field was renamed to LEAK T2G. See LEAK A2E for usage information.

2.12 LEAK A2E

Description: Enter the tip leg to ground leakage resistance in kilo-ohms.
Valid Entries: -1 - 50000000

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Default value:
- 5E12 and later: 50000000

2.13 LEAKR2G

Description: For 5E12 and later, this field was renamed to LEAKB 2E. See LEAKB 2E for usage information.

2.14 LEAKB 2E

Description: Enter the ring leg to ground leakage resistance in kilo-ohms.
Valid Entries: -1 - 50000000
Default value:
- 5E12 and later: 50000000

2.15 LEAKT2R

Description: For 5E12 and later, this field was renamed to LEAKA 2B. See LEAKA 2B for usage information.

2.16 LEAKA 2B

Description: Enter the tip leg to ring leakage resistance in kilo-ohms.
Valid Entries: -1 - 50000000
Default value:
- 5E12 and later: 50000000

2.17 FREQLOSS

Description: This field name was edited for spacing (readability) in 5E12. See FREQ LOSS below.

2.18 FREQ LOSS

Description: Enter the frequency loss in kHz.
Valid Entries: 0 - 1000000

```
mtbcomp                  5ESS Switch                _
(5557)              OFFICE DATA ADMINISTRATION
                  METALLIC COMPENSATION VALUES

* 1. UNIT TYPE _____

  2. LOOPRES  ____    (Loop resistance in Ohms)
  3. AB2ECAP  ____    (Tip to ring leg to ground capacitance in nanofarads)
  4. A2BCAP   ____    (Tip to ring capacitance in nanofarads)
  5. LEAKT2G  _______ (Tip leg to grnd leakage resistance in kilo-ohms)
  6. LEAKR2G  _______ (Ring leg to grnd leakage resistance in kilo-ohms)
  7. LEAKT2R  _______ (Tip leg to ring leg leakage resistance in kilo-ohms)
  8. FREQLOSS _______ (Frequency loss in kHz)
```

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Figure 1 SAMPLE MTBCOMP FORM 5E10 SOFTWARE RELEASE

```
                    OFFICE DATA ADMINISTRATION
(5557)          SLIM METALLIC TESTING COMPENSATION VALUES

*1. SM       ___
*2. UNIT TYPE _____
*3. UNIT NO   ___
 4. LOOP RES  0
 5. AB2E CAP  ____
 6. A2B CAP     0
 7. LEAK A2E  50000000
 8. LEAKB 2E  50000000
 9. LEAKA 2B  50000000
10. FREQ LOSS 0
```

Figure 2 SAMPLE MTBCOMP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BD: 5560 RECORD
AUTOMATIC NUMBER IDENTIFICATION SWITCHING MODULE FORM - ANIMOD

1. GENERAL

The 5560 Record is applicable to 5E10 and later Software Releases and is used to define the SM (Switch Module) which contains Outbound Services data for the given ANI (Automatic Number Identification). This form supports the TDX (Toll Digital Exchange) Special Feature in a LDP (Long Distance Platform) office.

The TDX ANI (Automatic Number Identification) Table Processing feature is part of the Long Distance Platform Feature set. See Div. 2 Sec 4A165 (Toll Digital Exchange Basic Call Processing For Toll 5ESS Switch) for details.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.50

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NPA

Description: The NPA field is used to specify the Numbering Plan Area code.

Required Field.
Valid Entries: 200 - 999.

2.3 * NXX

Description: The NXX field is used to specify the Office code associated with this NPA. Enter the NPA portion of the ANI.

Required Field.
Valid Entries: 000 - 999.

2.4 # SM

Description: The SM field is used to specify the switching module where the ANI Table resides for this NPA and NXX. If the SM field is left blank, an SM is automatically selected. Subsequent Recent Change inserts with SM set to blank will cause RC to select the next operational SM in the office, in order to distribute the ANI Table equally across all SMs.
Valid Entries: 1 - 192

Data Rules:

Each value of SM entered on the ANIMOD form must be defined on an EQIM form with EQSTATUS equal to "O".

---

animod 5ESS Switch _
(5560) OFFICE DATA ADMINISTRATION
AUTOMATIC NUMBER IDENTIFICATION SWITCHING MODULE

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*1. NPA ___
*2. NXX ___
#3. SM ___

Figure 1 SAMPLE ANIMOD FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5BE: 5561 RECORD
AUTOMATIC NUMBER IDENTIFICATION TABLE - ANITBL

1. GENERAL

The 5561 Record is applicable to 5E12 and earlier Software Releases. For 5E13 and later this form is split into the ANITABLE and LDPINDEX forms. For 5E13 the 5561 Record will remain for retrofit purposes. See Div. 2, Sec. 4A165 for details.

The Automatic Number Identification Table form contains the switch - based ANI (Automatic Number Identification) table. The ANI table contains ANI's designating special treatment when a match occurs with an ANI associated with an incoming TDX (Toll Digital Exchange) Call based on the option set, which is defined on this form.

This form supports the TDX (Toll Digital Exchange) ANI Table Processing Feature. This is a secured feature with SFID 235.

The TDX ANI (Automatic Number Identification) Table Processing feature is part of the LDP (Long Distance Platform) Feature set. See Div. 2 Sec. 4A165 (Toll Digital Exchange Basic Call Processing For Toll 5ESS Switch) for details.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.51

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *NPA

Description: The NPA field is used to specify the Numbering Plan Area code.

Required Field.
Valid Entries: 200 - 999, or 000 for default ANI table entry.

Data Rules:

When NPA equals 000, NXX must be 000 and LINE must be 0000.

When NPA equals 000, NXX equals 000 and LINE equals 0000, then DAS must be greater than 0.

When the NPA, NXX, LINE and DAS fields are entered on the ANITBL form a DAS form must be defined as a DIGIT ANALYSIS SELECTOR value with a PREFIX/FEATURE DIT value entered (e.g., Line DAS).

When the NPA, NXX, LINE and DAS fields are entered on the ANITBL form, and the DAS field is defined as the DIGIT ANALYSIS SELECTOR on a DAS form, the value of LOCAL DIT for LINE DAS on the corresponding DAS form must be entered. Also LOCAL DIT must be defined as LDIT on the corresponding SMLDIT form for every operational SM in the office. This must be accomplished by entering an SMLDIT form with this LDIT value as the key and by entering each operational SM (as defined on EQIM forms where EQSTATUS is "O") into the LIST OF SWITCHING MODULES.

When the NPA and NXX have been assigned on the ANITBL form, they must also be defined on an ANIMOD form.

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When the NPA, NXX, LINE and TRIG NBR fields are entered on the ANITBL form, the TRIG NBR must be defined on a corresponding NSTRIG form with APPLICATION equal to "ASP" and AIN REL equal to "R0D1".

For 5E11 and later, when the NPA, NXX, LINE and FIXED CARRIER fields are entered on the ANITBL form, a CARRIER ID must be defined on a corresponding ICF form with FEAT GRP equal to "D".

For 5E11 and later, when the NPA, NXX, LINE and LDP CARRIER fields are entered on the ANITBL form, the LDP CARRIER must defined on a corresponding LDPCTBL form.

For 5E11, when the NPA, NXX, LINE and LDP CARRIER fields are entered on the ANITBL form, the LDP CARRIER must not be entered as TDX CARRID on the OFCOPT form.

For 5E12 and later, there must not be more than 8 ANITBL forms where NPA, NXX and LINE fields are the same.

For 5E12 and later, when there is more than one ANITBL form with the same NPA, NXX and LINE fields, a SFSYS form must exist with SFID 207 ACT set to "Y".

2.3 *NXX

Description: The NXX field is used to specify the Office Code associated with this NPA. Enter the NPA portion of the ANI.

Required Field.
Valid Entries: 000 - 999, or 000 for default ANI table entry.

2.4 *LINE

Description: The LINE field is used to specify the Local DN minus the office code.

Required Field.
Valid Entries:

- For 5E11 and earlier: 0000 - 9999
- For 5E12 and later: 0000 - 9999 or ANY for the wild card. For more information, see Division 2, Section 4A165, Feature 99-5E- 4221.

2.5 *LDP CARRIER

Description: The Long Distance Platform Carrier field is used to specify a carrier for the call. This field supports the Mulitple CIC (Carrier Identification Code) Support for LDP (Long Distance Platform) Feature. For more information see Div. 2, Sec. 4A165.

Software Release: 5E11 and later
Valid Entries:

- For 5E11: Blank or 0 - 9999
- For 5E12: Enter 0 - 9999, 10000 for default LDP CARRIER, or 10004 for the wild card LDP CARRIER. For more information, see Division 2, Section 4A165, Feature 99-5E- 4221.
- For 5E13 and later: Enter 0 - 9999, 10000 for default LDP CARRIER, or ANY for the wild card LDP CARRIER.

Data Rules:

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When NPA is "000", NXX must be "000", LINE must be "0000" and LDP CARRIER must not be entered.

When LDP CARRIER is "10000", NPA must be "000" and LINE must be "0000".

2.6 DAS

Description: Enter the digit analysis selector or tree number for interpreting incoming digits to enable routing and charging calls. A value of 0 indicates no data for this field.
Default: 00
Valid Entries: 00 - 99.

2.7 SCR

Description: The SCR field is used to specify the screening index which allows for different billing rates and routing. This field supports the ANI Table Line Class Code feature. For more information see Div. 2, Sec. 4A165.
Valid Entries: Blank, or 1 - 4095.

2.8 NET CALL DENIAL

Description: Should the TDX call origination be denied?
Default: N
Valid Entries: Y, N

2.9 ACCT CODE LENGTH

Description: The ACCT CODE LENGTH field is used to specify the number of account code digits expected. A value of "0" indicates that an account code is not expected.
Default: 0
Valid Entries: 0 - 15.

2.10 FIXED CARRIER

Description: The FIXED CARRIER field is used to specify the Carrier used for inter-LATA calls.

Valid Entries: 0 - 9999, or blank.

Data Rules:

When FIXED CARRIER is entered, TRIG NBR must not be entered.

2.11 TRIG NBR

Description: The TRIG NBR field is used to specify the ASP (Advanced Services Platform) trigger number used to locate unique network service for dialed digits. Population of this field indicates that a query will be launched to an external database.
Valid Entries: 1 - 255, or blank.

Data Rules:

When TRIG NBR is entered, FIXED CARRIER must not be entered.

The TRIG NBR field on the ANITBL form is used by the Toll Digital Exchange Special Feature in a LDP (Long Distance Platform) office. It is a secured feature that must be purchased by the office before the field can be entered. A SFSYS form must exist with SFID 126 ACT set to "Y".

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2.12 II SCREEN

Description: The II SCREEN field is used to indicate whether or not the ANI data should be taken from the II Digits Table.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.13 TERM NSC

Description: The TERM NSC field is used to specify the terminating network selection code. It translates to a DAS (Digit Analysis Selector) and screening index for routing the call. It is applicable in LDP (Long Distance Platform) networks that employ MINT (Multi-vendor Intra-Network Trunk) processing. For more information, see Div. 2, Sec. 4A217.

Software Release: 5E12 and later
Valid Entries: 0 - 999, or leave blank.

```
anitbl                  5ESS Switch          _
(5561)              OFFICE DATA ADMINISTRATION
                AUTOMATIC NUMBER IDENTIFICATION TABLE


*1. NPA          ___
*2. NXX          ___
*3. LINE         ____
 4. DAS          00
 5. SCR          ____
 6. NET CALL DENIAL   N
 7. ACCT CODE LENGTH  0
 8. FIXED CARRIER     ____
 9. TRIG NBR          ___
10. LDP CARRIER       ____
```

Figure 1 SAMPLE ANITBL FORM 5E11 SOFTWARE RELEASE

```
anitbl                  5ESS Switch
(5561)              OFFICE DATA ADMINISTRATION    _
                AUTOMATIC NUMBER IDENTIFICATION TABLE

*1. NPA          ___
*2. NXX          ___
*3. LINE         ____
*4. LDP CARRIER      _____
 5. DAS          00
 6. SCR          ____
 7. NET CALL DENIAL   N
 8. ACCT CODE LENGTH  0
 9. FIXED CARRIER     ____
10. TRIG NBR          ___
11. TERM NSC          ___
```

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Figure 2 SAMPLE ANITBL FORM 5E12 SOFTWARE RELEASE

```
anitbl                  5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5561)              AUTOMATIC NUMBER IDENTIFICATION TABLE

*1. NPA             ___
*2. NXX             ___
*3. LINE            ____
*4. LDP CARRIER     _____
 5. DAS             00
 6. SCR             ____
 7. NET CALL DENIAL  N
 8. ACCT CODE LENGTH 0
 9. FIXED CARRIER    ____
10. TRIG NBR         ___
11. II SCREEN        N
12. TERM NSC         ___
```

Figure 3 SAMPLE ANITBL FORM 5E13 SOFTWARE RELEASE

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SEC. 5BF: 5562 RECORD
LONG DISTANCE PLATFORM CARRIER TABLE - LDPCTBL

1. GENERAL

The 5562 Record is applicable to 5E11 and later Software Releases. The 5562 Record provides an LDP Carrier Table and Default Carrier Table. The LDP Carrier Table applies to callers who used a carrier not shown in the ANI table or did not require ANI table processing and used a carrier that was not the home carrier ID. The default LDP Carrier Table applies to callers who used a carrier to which they have not subscribed or did not require ANI table processing and used a carrier that was not entered in the LDP carrier table.

The LDP Carrier Table supports part of the LDP (Long Distance Platform) Feature set. See Div. 2, Sec. 4A165 (Toll Digital Exchange Basic Call Processing For Toll 5ESS - 2000 Switch) for details.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.52

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *LDP CARRIER

Description: Enter the Long Distance Platform Carrier ID.

Required Field.
Valid Entries: 0 - 9999 or 10000 for default LDP carrier.

Data Rules:

The LDP CARRIER field on the LDPCTBL form is used by the Long Distance Platform Carrier Special Feature. It is a secured feature that must be purchased by the office before the field can be entered. A SFSYS form must exist with SFID 202 ACT set to "Y".

When the LDP CARRIER field is entered on the LDPCTBL form, the LDP CARRIER must be defined as CARRIER ID on a corresponding ICF form with FEAT GRP equal to "D".

2.3 *CARRIER PRESUBSCD

Description: Is carrier presubscribed?

Software Release: 5E12 and later
Required Field.
Valid Entries: Y, N

2.4 #DAS

Description: Enter the digit analysis selector or tree number for interpreting incoming digits to enable routing and charging calls.

Required Field.
Valid Entries:

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For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When the DAS field is entered on the LDPCTBL form, the DAS must be defined on a DAS form as a DIGIT ANALYSIS SELECTOR value with a PREFIX/FEATURE DIT value entered.

When the DAS field is entered on the LDPCTBL form, the DAS field is defined as DIGIT ANALYSIS SELECTOR on a DAS form. Therefore, the value of LOCAL DIT for LINE DAS on the corresponding DAS form must be entered. Also LOCAL DIT must be defined as LDIT on the corresponding SMLDIT for every operational SM in the office. This must be accomplished by entering an SMLDIT form with this LDIT value as the key and by entering each operational SM (as defined on EQIM forms where EQSTATUS is "O") into the LIST OF SWITCHING MODULES.

2.5 SCR

Description: The SCR field is used to specify the screening index which allows for different billing rates and routing.

Software Release: 5E12 and later
Valid Entries: 1 - 4095

2.6 NET CALL DENIAL

Description: Is Network Call Denial Active?
Valid Entries: Y, N

2.7 ACCT CODE LENGTH

Description: The ACCT CODE LENGTH field is used to specify the number of account code digits expected. A value of 0 indicates that an account code is not expected.
Valid Entries: 0 - 15.

2.8 FIXED CARRIER

Description: The FIXED CARRIER field is used to specify the Carrier used for inter-LATA calls.
Valid Entries: 0 - 9999

Data Rules:

When the FIXED CARRIER field is entered on the LDPCTBL form, the FIXED CARRIER must be defined as CARRIER ID on a corresponding ICF form with FEAT GRP equal to "D".

2.9 TRIG NBR

Description: The TRIG NBR field is used to specify the ASP (Advanced Services Platform) trigger number used to locate unique network service for dialed digits. Population of this field indicates that a query will be launched to an external database.
Valid Entries: 1 - 255

Data Rules:

When TRIG NBR is entered, FIXED CARRIER must not be entered.

The TRIG NBR field on the LDPCTBL form is used by the Long Distance Platform Carrier Special Feature. It is a secured feature that must be purchased by the office before the field can be entered. A SFSYS form

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must exist with SFID 126 ACT set to "Y".

When the TRIG NBR field is entered on the LDPCTBL form, the TRIG NBR must be defined on a corresponding NSTRIG form with APPLICATION equal to "ASP" and AIN REL equal to "R0D1".

2.10 II SCREEN

The II SCREEN field is used to indicate whether or not the ANI data should be taken from the II Digits Table.

Required Field.

2.11 TERM NSC

Description: The TERM NSC field is used to specify the terminating network selection code. It translates to a DAS (Digit Analysis Selector) and screening index for routing the call. It is applicable in LDP (Long Distance Platform) networks that employ MINT (Multi-vendor Intra-Network Trunk) processing. For more information, see Div. 2, Sec. 4A217.

Software Release: 5E12 and later
Valid Entries: 0 - 999, or leave blank.

Data Rules:

For 5E12 and later, the TERM NSC entered on the LDPCTBL form must be defined on the corresponding LDPTNSC form.

```
ldpctbl                  5ESS SWITCH          _
(5562)              OFFICE DATA ADMINISTRATION
               LONG DISTANCE PLATFORM CARRIER TABLE

*1. LDP CARRIER      _____
#2. DAS              __
 3. NET CALL DENIAL  _
 4. ACCT CODE LENGTH __
 5. FIXED CARRIER    ____
 6. TRIG NBR         ___
```

Figure 1 SAMPLE LONG DISTANCE PLATFORM CARRIER TABLE FORM 5E11 SOFTWARE RELEASE

```
ldpctbl                  5ESS Switch          _
(5562)              OFFICE DATA ADMINISTRATION
               LONG DISTANCE PLATFORM CARRIER TABLE

*1. LDP CARRIER      _____
*2. CARRIER PRESUBSCD _
#3. DAS              ___
 4. SCR              ____
 5. NET CALL DENIAL  _
 6. ACCT CODE LENGTH __
 7. FIXED CARRIER    ____
 8. TRIG NBR         ___
```

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9. TERM NSC ___

Figure 2 SAMPLE LONG DISTANCE PLATFORM CARRIER TABLE FORM 5E12 AND LATER SOFTWARE RELEASES

ldpctbl 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5562) LONG DISTANCE PLATFORM CARRIER TABLE

*1. LDP CARRIER _____
*2. CARRIER PRESUBSCD _
#3. DAS __
4. SCR ____
5. NET CALL DENIAL _
6. ACCT CODE LENGTH __
7. FIXED CARRIER ____
8. TRIG NBR ___

9. II SCREEN N
10. TERM NSC ___

Figure 3 SAMPLE LONG DISTANCE PLATFORM CARRIER TABLE FORM 5E13 - 5E14 SOFTWARE RELEASES

ldpctbl 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5562) LONG DISTANCE PLATFORM CARRIER TABLE

*1. LDP CARRIER _____
*2. CARRIER PRESUBSCD _
#3. DAS __
4. SCR ____
5. NET CALL DENIAL _
6. ACCT CODE LENGTH __
7. FIXED CARRIER ____
8. TRIG NBR ___

9. II SCREEN N
10. TERM NSC ___

Figure 4 SAMPLE LONG DISTANCE PLATFORM CARRIER TABLE FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5BG: 5563 RECORD
MEASUREMENT COLLECTION SUMMARY - MEASSUM

1. GENERAL

The MEASSUM (Measurement Collection Summary) form (5563 Record) is available with 5E11 and later Software Releases. It is used to identify "components" selected for traffic measurements reported on the "30-minute" measurement report. Components are defined as the entity to be measured; components can be at the end product level (AIU, DNU-S, SS7 PSU, etc.) or subassemblies (i.e., packs, lines, DPIDB, etc.).

This form was introduced concurrently with the 5E11 and later AIU (Access Interface Unit) feature. The introduction of this form implements a new traffic measurement architecture for the collection of traffic data. Effective with 5E12 and later, additional measurement capabilities were added to support new features (see the Valid SECTION NAME Entries table).

The SECTION NAME field is used to select the components for measurement. The value of the SECTION NAME field gives meaning to the other fields on this form. For example, when field SECTION NAME is set to "AIULN", field START2COMP represents a pack number on an AIU. However, when SECTION NAME is set to "AIU", START2COMP has no meaning because the end product AIU is the highest level in the product structure, and therefore START2COMP should be left blank. For more details, see the description for the three START1COMP through START3COMP fields.

For ODA, the SECTION NAME field is used at the time of office initialization to select components to be measured. After office initialization, the components selected can be viewed on the corresponding RC (Recent Change) View 13.9. Note that RC's corresponding 13.9 View is actually a RC verify-only view.

RC Views 13.7 and 13.8 are used to further delineate selected components or to select a range of components to be measured. RC View 13.7 allows updating of individual components within a range to be selected/unselected for measurement. RC View 13.8 allows all components within a range to be selected/unselected for measurement. If multiple RC updates of either or both views are performed for a particular range of components, the data will reflect only the final state. For example, if RC View 13.7 is used to activate a certain component and subsequently RC View 13.8 is used to activate a range of components including that same component, the net result will be that all components within that range will be activated, including the component that was first activated using 13.7. No error/warning is generated by RC when selecting a component that is already selected. Similarly, if a range of components is activated using 13.8, RC View 13.7 could be used to deactivate one or more of those components, leaving the remainder active.

If reviewing the selected components (using either Recent Change Views 13.7, 13.9 (or 5563 Record)), only the selected component(s) and status can be determined, not the manner in which RC was used to select the components.

For 5E12 and later, RC View 13.10 is introduced and has some differences with Recent Change Views 13.7 and 13.8. For example, Recent Change View 13.10 is limited to data keyed by DN (Directory Number) for SECTION NAMES "ECDN" and "EPCS". RC Views 13.7 and 13.8 can also be used to update these same sections. RC View 13.10 can also operate in a special insert mode, where only unselected data is operated upon. Unlike update mode, previously selected components will be silently ignored, and the collection values for that component (e.g., ROP (Read/Receive Only Printer)) will not be changed. If reviewing SECTION NAMES "ECDN" or "EPCS", only the selected components can be determined, not the RC View (13.7, 13.8, or 13.10) used to select them.

1.1 Recent Change View

The corresponding Recent Change View for this form is 13.9 - a read only view. Supporting Recent Change Views for updating the data entered on this ODA form are 13.7, 13.8, and 13.10.

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2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

COMPONENTS

These fields are used to designate the entity level (i.e., unit, component, etc.) for measurement. The SECTION NAME field is used along with the START1COMP - START3COMP fields to designate the measurable entity.

2.2 *SECTION NAME

Description: Enter the value for the desired traffic measurement report(s).

Required Field.

Valid SECTION NAME Entries

Entry	TRFC30 Section Number	Description
ADPIDB	229	Software Release: 5E12 and later: Measurements for On-Demand B-Channel on DPIDB (Directly Connected Peripheral Interface Data Bus) for the AIU, AIU ISDN U-Interface, and Remote AIU ("EAIU") features.
AIU	216	Software Release: 5E11 and later: Measurements for the AIU feature and, for 5E12 and later, the Remote AIU ("EAIU") feature. See Division 2, Section 7K.
AIULC	218	Software Release: 5E11 and later: Measurements for all line circuits within a specific AIU type that has at least 1 operational application pack. See Division 2, Section 7K.
AIULN	217	Software Release: 5E11 and later: Measurements for specified AIU type line circuits.
APSODB	228	Software Release: 5E12 and later: Measurements for On-Demand B-Channel per AIU.
ATMLNK	167	Software Release: 5E17(1) FR1 and later: ATM Link measurements.
ATMQOSPS	239	Software Release: 5E17(1) FR1 and later: ATM Quality Of Service measurements for PSU to PSU connectivity on PHA2.
BCHNEG	80	Software Release: 5E14 and later: Measurements for B-Channel Negotiation. See Division 2, Section 6K.
BEARERLNK		Software Realease: 5E16(2) and later: BEARERLNK (Bearer Link Measurements). This entry supports the OIU - IP feature. See Division 2, Section 7BX.
[BI]CCG	205	Software Release: 5E15 and later: BICC Group Measurements. This entry supports the PDS - BICC Call Processing feature. See Division 2, Section 4A567.
[BIC]CSM	207	Software Realease: 5E16(2) and later: BICC CIC (Call Instance Code) SM-2000. This entry supports the BICC Static CIC Allocation feature. See Division 2, Section 1CB.
[DL]INE	222	Software Release: 5E12 and later: Measurements for specified TR303 on DNU-S lines. This entry supports the TR303 DNU-S feature. See Division 2, Section 9J.
[DO]DB	223	Software Release: 5E12 and later: On-Demand B-Channel for DNU-S. This entry supports the TR303 DNU-S feature. See Division 2, Section 9J.
[EC]DN	235	Software Release: 5E12 and later:

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		Measurements for Expanded Customer Directory Number. This entry supports the Number Portability - NXX Growth to 8000 secured feature. See Division 2, Section 4A198.
ECPSRVT	247	Software Release: 5E13 and later: Executive Cellular Processor Service Type
[EP]CS	236	Software Release: 5E12 and later: Measurements for Expanded Personal Communication Service. This entry supports the Number Portability - NXX Growth to 8000 secured feature. See Division 2, Section 4A198.
HSL		Software Release: 5E16(2) FR 1 and later: High Speed Link
HSPD	244	Software Release: 5E15 and later: Measurements for High Speed Data Trunk Group.
IPOIU		Software Realease: 5E16(2) and later: IPOIU Measurements. This entry supports the OIU - IP feature. See Division 2, Section 7BX.
LAG	251	Software Release: 5E16(2) and later. Measurement for Line Access Gateway.
[MMSUG]MTIB	79	Software Release: 5E12 SU and later: Measurements for the MMSU Modular Metallic Test Interface Bus. See Division 2, Section 1BS.
[MMSUJ]MTB	78	Software Release: 5E12 SU and later: Measurements for the MMSU Modular Metallic Test Bus. See Division 2, Section 1BS.
MTSM	149	Software Release: 5E16(2) and later. Matrix Time Slot Measurements. See Division 2, Section 7BO.
[O]DBPSU	221	Software Release: 5E12 and later: On-Demand B-Channel measurements for specified PSU shelves. This entry supports the TR303 DNU-S feature. See Division 2, Section 9J.
OIU	81	Software Release: 5E16(2) and later. Measurements for Optical Interface Unit. This entry supports the OIU feature. See Division 2, Section 7BQ.
PBOCC	165	Software Release: 5E17.1 FR 1 and later. This entry supports the PSU PB Occupancy Measurements feature. See Division 2, Section 1CS.
[P]C	234	Software Release: 5E12 and later: Point Code. This entry supports the SS7 PSU on SM/EXM-2000 feature. See Division 2, Section 9L.
PCF	245	Software Release: 5E17(1) FR 2 and later: Packet Control Function. This value supports the Measurements for PCF on PHE2 feature. See Division 2, Section AH.
PHE	2	Software Release: 5E17(1) FR 2 and later: Protocol Handler Ethernet This value supports the Measurements for PCF on PHE2 feature. See Division 2, Section AH.
PKTGRP	211	Software Release: 5E16(2) FR 3 and later: Packet Group. This field supports the SIP-T (Session Initiation Protocol) for Packet Trunkingfeature. For more information see Division 2, Section 4A684.
PKTZ		Software Realease: 5E16(2) and later: PKTZ (Different Packetization Time Measurements). This entry supports the OIU - IP feature. See Division 2, Section 7BX.
PRIGRP	243	Software Release: 5E14 and later: This entry was previously called "TBCT" for 5E13 and earlier. The name was changed to more accurately describe the measurement. See Division 2, Section 4A214.
PSUCHAN	193	Software Release: 5E14 and later: Packet Switch Unit Channel Measurements
RDT	224	Software Release: 5E12 and later: Measurements for specified DNU-S and RDT(s) (Remote Digital Terminals). This entry supports the TR303 DNU-S feature. See Division 2, Section 9J.

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[RDTDN]U	225	Software Release: 5E12 and later: RDT measurements for specified DNU-S. This entry supports the TR303 DNU-S feature. See Division 2, Section 9J.
[SC]CP	233	Software Release: 5E12 and later: Signaling Connection Control Part. This entry supports the SS7 PSU on SM/EXM-2000 feature. See Division 2, Section 9L.
SCTP	210	Software Release: 5E16(2) FR 3 and later. Stream Control Transmission Protocol. This field supports the OIU (Optical Interface Unit) SIP-T (Session Initiation Protocol for Telephones) feature. For more information see Division 2, Section 4A684.
SL	230	Software Release: 5E12 and later: Signaling Link. This entry supports the SS7 PSU on SM/EXM-2000 feature. See Division 2, Section 9L.
SLS	203	Software Release: 5E15 and later: Provides data for the Signaling Link Set performance. See Division 2, Section 7AX.
[SM]IWGPCT	206	Software Release: 5E15 and later: PCT Link Measurements. This entry supports the PDS - BICC Call Processing feature. See Division 2, Section 4A567.
SNP	204	Software Release: 5E15 and later: Provides data for the performance of CCS7 links for the GSM (Global Switching Modules). See Division 2, Section 7AX.
TAG	252	Software Release: 5E16(2) and later. Measurement for Trunk Access Gateway.
[T]BCT	243	Software Release: 5E13 and later: Measurements for the PRI Two B-channel Transfer feature. See Division 2, Section 4A214. NOTE: The name of this entry was changed to "PRIGRP" in 5E14.
TGN	212	Software Release: 5E15 and later: Measurements for trunk groups. Introduced by the Trunk Group Register Expansion feature. See Division 2, Section 4A596.
TSM	150	Software Release: 5E16(2) and later: Measurements for time slots. This entry supports the Additional Time Slot Measurements feature. See Division 2, Section 7BR.

Data Rules:

When "ADPIDB" is entered:

- DEST SM, START3COMP and START2COMP must be defined as SM, AIU and LOCAL TIME SLOT GROUP (PIDB) PSU SHLF, with EQSTAT is set to "O", respectively on the EQAIU form.
- DEST SM must be entered,
- START1COMP must be 0,
- START2COMP must be 0 - 4,
- START3COMP must be 0 - 42.

When "AIU" is entered:

- DEST SM and START1COMP must be defined as the SM and the AIU, respectively, on the EQAIU form (5745 Record) with its EQSTATUS set to "O".

DEST SM and START1COMP must be defined as SM and AIU on the EQAIU form where LOCAL TIME SLOT GROUP (PIDB), ROW 1, EQSTAT is set to "O", or where REMOTE COMDAC 0 TIME SLOT

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GROUP (TSPFAC0) row 1 EQSTAT is set to "O", or where TIME SLOT GROUP (XAIUTSGRP) row 1 EQSTAT is set to "O".

When "AIU" or "AIULC" is entered:

- DEST SM must be entered
- Refer to the START1COMP Valid Entry Table for software-release-specific entries.
- START2COMP and START3COMP must not be entered.

When "AIULC" is entered:

- At least one EQAIUP form must be defined with EQSTAT set to "O", and DEST SM and START1COMP defined as SM and AIU, respectively.
- Only one MEASSUM form is allowed per office.

When "AIULN" is entered:

- DEST SM must be entered,
- Refer to the START1COMP - START3COMP fields for software-release-specific entries.
- DEST SM, START1COMP and START2COMP must be defined as SM, AIU and APPL PACK NUM on the EQAIUP form where TYPE is not set to "AIRG" and EQSTAT is set to "O".
- and TYPE is "AIURPLP" on the corresponding EQAIUP form, START3COMP must be in the range of 00 - 11.
- and TYPE is "AICLP" or "AIULP" on the corresponding EQAIUP form, START3COMP must be in the range of 00 - 15.

When "APSODB" is entered:

- DEST SM and START1COMP must be defined as SM and AIU on the EQAIU form where LOCAL TIME SLOT GROUP (PIDB), ROW 1, EQSTAT is set to "O".

When "BCHNEG" is entered:

- START1COMP must be 1 - 4000, or leave blank

  1 - 4000 = (PRI) B-Channel trunk group number

  blank = uses the highest numbered (PRI) B-Channel trunk group number.
- START2COMP, START3COMP, and DEST SM must not be entered.
- START1COMP must have a matching TGN on the TKGRP form with a TRKCLASS of "EDSL" or "EDSLHM" and a TRK DIR of "INC", "OUT", or "2W".

When "DLINE" is entered:

- DEST SM must be entered,

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- START1COMP must be 0 - 7 (DNU-S),
- START2COMP must be 1 - 99 (RDT),
- START3COMP must be 1 - 2048 (RT Line),
- the maximum lines per office is 512.

When "DLINE", "DODB" , "ODBPSU", "RDT", or "RDTDNU" is entered:

- the DEST SM must be a valid SM defined on the EQIM form and UNIT TYPE must be "SM2000".

When "DODB" or "RDTDNU" is entered:

- START1COMP must be 0 - 7 (DNU-S),
- START2COMP must not be entered,
- START3COMP must not be entered,
- only one MEASSUM form is allowed per office for "DODB".
- only two MEASSUM forms are allowed per office for "RDTDNU".

When "ODBPSU"is entered:

- DEST SM must be entered,
- START1COMP must be 0,
- START2COMP must be 0 - 4 (PSU shelf),
- START3COMP must not be entered.
- the maximum lines per office is 115.

When "RDT" is entered:

- DEST SM must be entered,
- START1COMP must be 0 - 7 (DNU-S),
- START2COMP must be 1 - 99 (RDT),
- START3COMP must not be entered,
- the maximum lines allowed per office is 256.

When "ECDN" or "EPCS" is entered:

- START1COMP must be a 7 or 10-digit TN (NXXXXXX or NXXXXXXXXX).
- START2COMP, START3COMP, or DEST SM must not be entered,

For 5E12 and later,

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- a maximum of 250 MEASSUM forms are allowed per office with SECTION NAME of "ECDN" and a maximum of 250 MEASSUM forms are allowed per office with SECTION NAME of "EPCS".
- if START1COMP is either a 7-digit or 10-digit TN, when the 7-digit TN is equal to the last seven digits of a 10-digit TN with the same value of SECTION NAME, and the NPA for the seven digit TN is the same as the first three digits of the 10-digit TN, the forms are duplicated; one of the two forms must be deleted.
- 7-digit and 10-digit TNs cannot have duplicate OFFICE CODE entries on the NOC form.
- the first three digits of a 7-digit TN and the first six digits of a 10-digit TN must be assigned on the NOC form as the OFFICE CODE or the NPA/OFFICE CODE, respectively.

When "PC" is entered:

- START1COMP must be 9 digits:

[000-225] [000-255] [000-255] or
[000-255] [00-31] [0-7] [000-255]

When "PRIGRP" is entered:

- START1COMP on the same MEASSUM form must be defined as PRI GROUP on the PRIGRP form (5211 Record).
- a maximum of 640 MEASSUM forms are allowed per office with SECTION NAME of "PRIGRP".

When "PSUCHAN" is entered:

- START1COMP, must be a number from 0 to 1 or blank, where (0-1) is the PSU number or where blank uses the lowest PSU number.
- START2COMP, must be a number from 0 to 4 or blank, where (0-4) is the PSU SHELF number and where blank uses the lowest PSU SHELF number
- START3COMP, must be a number from 0 to 15 or blank, where (0-15) is the channel group for the PSU shelf.

When "SCCP" is entered:

- START1COMP must be 0 - 192 (GSM)
- START2COMP, START3COMP, and DEST SM must not be entered.

When "SL" is entered:

- DEST SM must be entered, START1COMP must be 0 - 255 (link set), START2COMP must be 0 - 7 (member) and START3COMP must not be entered.

For 5E12 SU and later:

When SECTION NAME is "MMSUJMTB":

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- START3COMP must be 0 - 3.

When SECTION NAME is "MMSUGMTIB":

START1COMP must be 0 - 1, and START2COMP and START3COMP must not be entered.

For 5E13 and later:

When SECTION NAME is "TBCT"/"PRIGRP":

- START1COMP must be 1 - 4095, and START2COMP, START3COMP, and DEST SM must not be entered.
- and START1COMP is entered, START1COMP must match PRI GROUP on the PRIGRP form.
- a maximum of 640 MEASSUM forms are allowed per office.

For 5E15 and later:

When SECTION NAME is "SLS":

- DEST SM must be entered, START1COMP and END1COMP must be 1- 255 (Link Set Number) or not entered, START2COMP, END2COMP, START3COMP, and END3COMP must not be entered.

When SECTION NAME is "SNP":

- DEST SM must not be entered, START1COMP and END1COMP must be 1- 192 (GSM) or not entered, START2COMP, END2COMP, START3COMP, and END3COMP must not be entered.

When SECTION NAME is "BICCG":

- START1COMP must be entered and should be between 7000 and 7999.
- DEST SM, START2COMP, START3COMP, and START4COMP must not be entered.

When SECTION NAME is "HSPD":

- START1COMP must have a matching TGN on the TKGRP form with a TRKCLASS of "3GPD".

When SECTION NAME is "SMIWGPCT":

- DEST SM must be known and, START1COMP, START2COMP, START3COMP, and START4COMP must not be entered.
- DEST SM should have a matching IM on the EQIWG form (5874 Record).

When SECTION NAME is "SMIWGPCT" or "FRBC":

- DEST SM should have a matching IM on the EQIM form (5700 Record) with EQSTATUS set to "O".

When SECTION NAME is "TGN":

- START1COMP must be 1 - 4000.

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- START2COMP, START3COMP and DEST SM must not be entered.
- START1COMP must have a matching TGN on the TKGRP form (5202 Record) where TRKCLS does not equal "FRBC", "PPMEM", "PKTPIPE", or "SVC".
- START1COMP must have a trunk group number less than or equal to MAX TGN in the OFCOPT form (5509 Record).
- ACT must be "Y" for SFID 596 on the SFSYS form (5713-1 Record).

For 5E16(2) and later:

When SECTION NAME is "BICCSM":

- DESTSM must have a matching SM2K MODULE value entered in the CIC DISTRIBUTION list on the CICDIST form (5217 Record).
- START1COMP must have a matching TGN on the TKGRP form (5202 Record).

When SECTION NAME is "LAG", DEST SM must be entered, START1COMP must be 1 - 105 (LAG), and START2COMP and START3COMP must not be entered.

When SECTION NAME is "TAG", DEST SM must be entered, START1COMP must be 1 - 9 (TAG), and START2COMP and START3COMP must not be entered.

When SECTION NAME is "PSUCHAN":

- START1COMP [1, 1] (PS UNIT) must be 0 - 1
- START1COMP [2, 14] (PSU SHELF) must be 0 - 4
- START2COMP (CHANNEL GROUP) must be 0 - 15
- START3COMP (CHANNEL) must be 0 - 127
- DEST SM must be entered.

When SECTION NAME is not "PC", "ECPSRVT", "PSUCHAN", or "FRBC", START1COMP must not have leading zeroes.

When SECTION NAME is "ECPSRVT", START1COMP [2, 10] must match the SERV TYPE on the TKGRP form (5202 Record).

When SECTION NAME is "ECPSRVT" for START1COMP [2, 10], SERV TYPE on the TKGRP form (5202 Record) must be "3G1XPD".

When SECTION NAME is "PSUCHAN" , and DEST SM matches SWITCHING MODULE on the EQPSU or EQPSUP forms:

- START1COMP [1, 1] (PS UNIT) must match PSU on the EQPSU or EQPSUPH forms
- START1COMP [2, 14] (PSU SHELF) must match PSU on the EQPSU or EQPSUPH forms

When SECTION NAME is "MTSM":

- START1COMP and START2COMP must be different and must be a value between 1-192,

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START3COMP and DESTSM must not be entered.

When SECTION NAME:

- is "BEARERLNK", then START1COMP must be between 1 and 192, START2COMP must be between 1 and 512, START3COMP and DEST SM must not be entered.
- is "PKTZ", then START1COMP must be between 1 and 512, START2COMP, START3COMP and DESTSM must not be entered.
- is "IPOIU", then START1COMP must be between 1and 192, START2COMP must be between 0 and 7, START3COMP must be between 0 and 9, DEST SM must not be entered.
- is "BEARERLNK", START1COMP must match OIU SM on the EQOIUP form and START2COMP must match BNID on the EQOIUP form.
- is "IPOIU", START1COMP, START2COMP, and START3COMP must match OIU SM, OIU, and PROTECTION GROUP on the EQOIUP form and BNID on the EQOIUP form must be entered.
- is "PKTZ", START1COMP should have a matching BNID on the BEARERNET form.

For each START1COMP entered for "IPOIU" SECTION NAME on the MEASSUM form, there must be a corresponding tuple on the EQIM form, where SM is equal to START1COMP, with UNIT TYPE set to "SM2000"' or "SM2005" and EQSTATUS is equal to "O" (Operational).

When "PKTGRP" is entered, START1COMP should have a matching PKT GRP defined on the PKTGRP form (5219 Record) where ASSOC SET NAME is entered.

When "SCTP" is entered, START1COMP should have a matching ASSOC NUMBER on the SCTPASSC form (5889 Record), and DEST SM must be entered.

For 5E17 and later:

When SECTION NAME is "SNP" and/or "PBOCC":

- START1COMP must have a matching SM on the EQIM form (5700 Record) with EQSTATUS equal "O".

When SECTION NAME is "PBOCC":

- START1COMP must match SWITCHING MODULE, and START2COMP must match PSU on the EQPSU form (5741 Record).
- the ATMLNK form (5592 Record) must have at least one tuple where its CHANNELS CON TYPE equals "ATMNET", and the SM matches START1COMP and PSU matches START2COMP on the MEASSUM form.

When SECTION NAME is "ATMLNK" and START3COMP is "P", then the DEST SM, START1COMP, and START2COMP must have the corresponding SM, PSU, and LINK values entered on the ATMLNK form (5592 Record) and CHANNELS CON TYPE is "ATMNET".

When SECTION NAME is "PCF" :

- there must be a corresponding PCFPDSN form (Record) where DEST SM, START1COMP, START2COMP, and START3COMP equals SM, PSU, SHELF and CHANNEL GROUP respectively.

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When SECTION NAME is "PCF" or PHE:

- there must be a corresponding ETHIP form (Record) where DEST SM, START1COMP, START2COMP, and START3COMP equals SM, PSU, SHELF, and CHANNEL GROUP respectively.

2.3 (*)START1COMP

Description: The START1COMP field specifies the component pattern of the initial starting point for a range of components. This value will be used in conjunction with the START2COMP and START3COMP fields to determine the starting point for displaying, in ascending order, the collection identifier in the COMPONENT COLLECTION LIST field on Recent Change View 13.7.
Valid Entries: The following table summarizes valid entries for this field:

Valid START1COMP Entries

Entry	Description
0 - 104	"ADPIDB", "AIU", "AIULC", "AIULN", "APSODB"
0 - 1	"ATMLNK", MMSUGMTIB", "MMSUJMTB", "PCF", and "PHE".
1 - 512	"BEARERLNK", IPOIU", "PKTZ"
1 - 4000	"BCHNEG", "HSPD" For 5E15 FR3 and later: "BCHNEG", "HSPD" and "TGN"
7 or 10-digit telephone number	"ECDN" or "EPCS".
0 - 1 + Service Type	"ECPSRVT"
00100000 - 19241531	"FRBC"
7000 - 7999	"BICCG", "BICCSM"
1 - 105	"LAG"
1 - 9	"TAG"
0 - 1	"MMSUGMTIB" or "MMSUJMTB"
0 - 7	"OIU"
1 - 192	"BEARERLNK", "IPOIU", "TSM" , MTSM", "PBOCC",
1 - 4095	"PRIGRP"
0 - 1 (PS UNIT), 0 - 4 (PSU SHELF)	"PSUCHAN"
10 - 255	"HSL" or "HSLS"

2.4 (*)START2COMP

Description: This field is used to specify the component pattern of the initial starting point for a range of components. This value is used in conjunction with the START1COMP and START3COMP fields to determine the starting point for displaying in ascending order, the collection identifier in the COMPONENT COLLECTION LIST field on the 13.7 View.
Valid Entries:

Valid START2COMP Entries

Entry	Description
1 - 10	"ATMLNK", "ATMQOSPS"
1 - 512	"BEARERLNK"
H orL (ATMQOSPS)	CP
0 - 7	"IPOIU"
0 - 15	"HSL" , "PCF", "PHE"
0 - 1	"MMSUJMTB"' or "PBOCC"
1 - 192	"MTSM"
0 - 4	"PCF", "PHE"

Data Rules:

When SECTION NAME is "AIULN", enter a number from 0 - 19, for the AIU pack number, or leave blank (uses lowest operational APPL PACK NUM in the AIU).

When SECTION NAME is "AIU" or "AIULC", leave blank (not used).

2.5 (*)START3COMP

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Description: This field is used to specify the component pattern of the initial starting point for a range of components. This value is used in conjunction with the START1COMP and START2COMP fields to determine the starting point for displaying, in ascending order, the collection identifier in the COMPONENT COLLECTION LIST field on 13.7 View.
Valid Entries:

Valid START3COMP Entries

Entry	Description
"B" or "P"	"ATMLNK"
[0-3]-[1-254]-[L,H] 0-3 represents the far subnet ID 1-254 is the far community address, and H, L is either High or Low connect priority	"ATMQOSPS"
1 - 10	"ATMQOSPS"
0 - 9	"IPOIU"
0 - 3	"MMSUJMTB"
Blank	"MTSM"
0 - 15	"PCF", "PHE"

Data Rules:

If SECTION NAME is "AIULN", enter a number from 0 - 31, where:
- 0 - 15: circuits on an AIU coin pack
- 0 - 31: circuits on an AIU non-coin application pack.

Blank: uses lowest circuit number in the AIU pack.

If SECTION NAME is "AIU" or "AIULC", leave blank (not used).

2.6 (*)DEST SM

Description: The field is used to specify the SM associated with components from which the data will be collected.
Valid Entries: Blank, or 1 - 192

2.7 ROP

Description: Generate the components measurements report on the ROP (Receive Only Printer)?

Software Release: 5E12 and later
Valid Entries: Y, N

```
meassum                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5563)              MEASUREMENT COLLECTION SUMMARY

     COMPONENTS
  *2. SECTION NAME _____________
(*)3. START1COMP  _________________
(*)4. START2COMP  _________________
(*)5. START3COMP  _________________
(*)7. DEST SM     ___

   8. ROP _
```

Figure 1 SAMPLE MEASSUM FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BH: 5567 RECORD
CCS TCAP APPLICATION - CCSTCAP

1. GENERAL

The CCSTCAP (Common Channel Signaling Transaction Capabilities Application Part) form (5567 Record) is available with 5E12 and later Software Releases.

It is used to support the CCS7-PSU on SM/EXM-2000 feature (see Division 2, Section 9L).

The 5567 Record defines, on an SM/SM-2000 basis:

- the CCS signaling platform: CNI (Common Network Interface) or a particular GSM (Global Switching Module)
- the type of CCS signaling application.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.42.

1.2 * SM

Description: Enter the SM (Switching Module) Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

SM on the CCSTCAP form must match SM on the EQIM form.

1.3 * APPLICATION

Description: Enter the signaling application type.

Required Field.

Valid APPLICATION Entries	
ACND	Analog Calling Name Delivery.
AILS	Automated Inward Line Screening.
AINROD1	Advanced Services Platform Release 0.1.
APSDN	Software Defined Network at an Action Point.
ASP	Advanced Services Platform.
AT1	ANSI TCAP Type I.
CCS7	Common Channel Signaling System 7 TCAP.
DCIS	Destination Routed CCIS6.
E911	Emergency 911 call.
ICCV	International Credit Card Validation.
ISVM	Inter-Switch Voice Messaging.
LALT	LIDB Alternate Destination.
LASS	Local Area Signaling Services.
LIDB	Line Information Database.
LNACP	Leased Network Action Control Point.
NCD	Network Call Denial.
NS800	Number Services 800 Application.
OLNP	OSPS Local Number Portability.
ONAI	OSPS Network Access Interrupt Application.
PVN	Private Virtual Network.
TNAI	Toll Network Access Interrupt Application.

Data Rules:

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When APPLICATION is not "NS800", "LASS", "AINRODI", "ASP", "ISVM", "ACND", "LNACP", or "TNAI", PLATFORM must be 0.

For each APPLICATION entered, there must be a matching DSAPP entered on the DSAPP form (5537 Record).

When APPLICATION matches the APPLIC on the DSAPP form and the PLATFORM is not set to 0 and is not equal to SM on the CCSTCAP form, the PLATFORM must match a GSM on the corresponding CCTT form where the TRANS TYPE on the DSAPP form matches the TRANS TYPE on the CCTT form.

1.4 # PLATFORM

Description: Enter the CCS signaling platform.

Required Field.

Valid PLATFORM Entries	
0	Common Network Interface.
1 - 192	Global Switching Module.

Data Rules:

When PLATFORM is 0, the COMMON CHAN SIG field on the OFCOPT form (5509 Record) must be "CNI" or "ALL".

For each non-zero PLATFORM entered,

- there must be a matching GSM entered on the CCGSM form.
- TRANS TYPE on the DSAPP form (5537 Record) must match a TRANS TYPE on the CCTT form.

For 5E14 and earlier, when PLATFORM is not 0, PLATFORM must be equal to SM.

When PLATFORM is not 0 and the SM entered has an SM-2000 class processor, the APPLICATION field must not be set to "LNACP".

For 5E15 and later, when PLATFORM is not 0 and is not equal to SM on the CCSTCAP form, the PLATFORM and the SM on the CCSTCAP form must match the GLOBAL SM and NON GLOBAL SM on the CMTMH form, respectively.

---

ccstcap 5ESS Switch _
(5567) OFFICE DATA ADMINISTRATION
CCS TCAP APPLICATION

*1. SM ___
*2. APPLICATION _____
#3. PLATFORM ___

Figure 1 SAMPLE CCSTCAP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BI: 5568 RECORD
LDP TERMINATING NSC - LDPTNSC

1. GENERAL

The LDPTNSC form (5568 Record) is available with 5E12 and later Software Releases. It provides the capability for specifying or verifying a TNSC (Terminating Network Selection Code), and its associated DAS (Digit Analysis Selector) and screening index information. This view will be populated on a LDP switch, and will be used to provide the DAS and screening index to route ingressing traffic from a MINT (Multi-Vendor Intra-Network Trunk). It will also be used when a TNSC is returned from the SCP. This new form was added to support the MINT feature. For more information, see Div. 2, Sec. 4A217.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.53.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TERM NSC

Description: The TERM NSC field is used to specify the terminating network selection code. It translates to a DAS (Digit Analysis Selector) and screening index for routing the call. It is applicable in LDP networks that employ MINT processing.

Required Field.
Valid Entries: 0 - 999

Data Rules:

When TERM NSC is entered on the ANITBL form, the TERM NSC must be defined on the LDPTNSC form.

2.3 #DAS

Description: The DAS field is used to specify the digit analysis selector used when interpreting incoming digits for routing and charging purposes.

Required Field.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

The DAS entered on the LDPTNSC form must be defined on the DAS form where DIGIT ANALYSIS SELECTOR matches DAS on the LDPTNSC form. In addition, the TYPE OF CI CALL and CI TYPE of CONFLICT RESOLUTION ENTRIES on the corresponding LDIT form and the TYPE OF CI CALL on the corresponding MLDIT form must not be "PSNCI" and "PSCAR".

2.4 #SCR

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Description: The SCR field is used to specify the screening index. It is used to determine how calls will be charged.

Required Field.
Valid Entries: 1 - 4095

2.5 LRN DAS

Description: Location routing number digit analysis selector.

Software Release: 5E13 and later.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When LRN DAS is entered on this form, the ACT field for SFID 303 must be set to "Y" on the SFSYS form (5713-1 Record).

When LRN DAS is entered on the LDPTNSC form, it must be defined as DIGIT ANALYSIS SELECTOR on the DAS form.

```
ldptnsc                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5568)                 LDP TERMINATING NSC

*1. TERM NSC ___
#2. DAS      __
#3. SCR      ____
```

Figure 1 SAMPLE LDPTNSC FORM 5E12 SOFTWARE RELEASE

```
ldptnsc                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5568)                 LDP TERMINATING NSC

*1. TERM NSC ___
#2. DAS      __
#3. SCR      ____
 4. LRN DAS  __
```

Figure 2 SAMPLE LDPTNSC FORM 5E13 AND LATER SOFTWARE RELEASES

```
ldptnsc                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5568)                 LDP TERMINATING NSC
```

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*1. TERM NSC ___
#2. DAS ___
#3. SCR ____
4. LRN DAS ___

Figure 3 SAMPLE LDPTNSC FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5BJ: 5569 RECORD
LDP TRUNK TERMINATING NSC - TGNTNSC

1. GENERAL

The TGNTNSC form (5569 Record) is available with 5E12 and later Software Releases. It provides the capability for specifying or verifying a TNSC (Terminating Network Selection Code) based on an incoming TNSC over a trunk group. This new form was added to support the MINT feature. For more information, see Div. 2, Sec. 4A217.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.54.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TGN

Description: The TGN field is used to specify the trunk group number.

Required Field.
Valid Entries: 0 - 999

2.3 *INCOMING TERM NSC

Description: The INCOMING TERM NSC field is used to specify the terminating network selection code. It is applicable in LDP networks that employ MINT processing.

Required Field.
Valid Entries: 0 - 999, or the number 1022.

Data Rules:

INCOMING TERM NSC cannot be the same as TERM NSC.

2.4 #TERM NSC

Description: The TERM NSC field is used to specify the terminating network selection code. It is applicable in LDP (Long Distance Platform) networks that employ MINT processing.

Required Field.
Valid Entries: 0 - 999

Data Rules:

The TERM NSC entered on the TGNTNSC form must be defined on the LDPTNSC form.

---

tgntnsc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5569) LDP TRUNK TERMINATING NSC

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*1. TGN ____
*2. INCOMING TERM NSC ____
#3. TERM NSC ___

Figure 1 SAMPLE TGNTNSC FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BK: 5570 RECORD
REROUTE ON RELEASE CAUSE LIST - RORLST

1. GENERAL

The RORLST form (5570 Record) is available with 5E12 and later Software Releases. It is used to arm (i.e. enable) various cause values associated with a resource unavailable event. If a reroute on release message is received at this switch, and the cause value associated with the message is armed, the switch shall continue searching for an outgoing route. The search will commence with the next route index in the chain after the one which returned the reroute on release message, and will continue until another route is found available, a route search limit is reached, or the chain is exhausted. If a reroute on release message is received at this switch, and the cause value associated with the message is not armed, or the Reroute on Release feature is not purchased, reroute on release processing as previously described will not occur. This form was added to support the Multi-Vendor Intra-Network Trunk (MINT) feature. This feature was first made available in a 5E12(1) software update. For more information, see Div. 2, Sec 4a217.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.55.

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *KEY

Description: The KEY field is used to access this form.

Required Field.
Valid Entries: 1

2.3 CAUSE 32 - 47

Description: The CAUSE 32 - 47 fields are used to indicate whether or not this ISUP protocol cause value is activated for the office. Is this ISUP protocol activated for the office?

Required Field.
Default: N
Valid Entries: Y, N

Cause Value	Description
32	Unspecified
33	Unspecified
34	No circuit value
35	Unspecified
36	Unspecified
37	Unspecified
38	Network out-of-order
39	Unspecified
40	Unspecified
41	Temporary failure
42	Switching equipment congestion
43	User information discarded
44	Requested Circuits/Channels not available
45	Unspecified
46	Precedence call block
47	Resource Unavailable, Unspecified

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```
rorlst                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5570)                 REROUTE ON RELEASE CAUSE LIST

*1. KEY     1
 2. CAUSE 32 N    10. CAUSE 40 N
 3. CAUSE 33 N    11. CAUSE 41 N
 4. CAUSE 34 N    12. CAUSE 42 N
 5. CAUSE 35 N    13. CAUSE 43 N
 6. CAUSE 36 N    14. CAUSE 44 N
 7. CAUSE 37 N    15. CAUSE 45 N
 8. CAUSE 38 N    16. CAUSE 46 N
 9. CAUSE 39 N    17. CAUSE 47 N
```

Figure 1 SAMPLE RORLST FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BL: 5571 RECORD
TIME DEPENDENT ROUTING - TDR

1. GENERAL

The TDR form (5571 Record) is available with 5E12 and later Software Releases. It is used to specify and verify time intervals and their associated substitute route indices. The new route index overrides the original route index for the specified time interval. If two or more time intervals include the present time, and are marked as active, the new route index will be chosen from the highest numbered row entry in the list of time intervals. This form was added to support the MINT (Multi-Vendor Intra Network Trunk) feature. This feature was first made available in a 5E12 Software Update. For more information, see Div. 2, Sec. 4A217.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.39

2. FORM ENTRIES AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *ROUTE INDEX

Description: The ROUTE INDEX field is used to specify the route index number. The route index determines a network path, typically used to complete a call or route to error treatment when the call is unable to complete.

Required Field.
Valid Entries: 1 - 16382

Data Rules:

When a ROUTE INDEX is entered, at least one time interval must be entered.

The ROUTE INDEX entered on the TDR form cannot be used as NEW ROUTE IDX on any other TDR forms. In addition, the NEW ROUTE IDX entered on the TDR form also cannot be used as ROUTE INDEX on any other TDR forms.

The following ROUTE INDEX and/or NEW ROUTE IDX entered on the TDR forms must be defined on the RTIDX forms.

TIME INTERVALS

The following list of time intervals (up to 16 entries) consisting of START DAY, START TIME, END DAY, END TIME, NEW ROUTE INDEX, and ACTIVATION status, for a given ROUTE INDEX. When a time interval field is entered, all other fields for that interval must be entered.

2.3 START DAY

Description: The START DAY field is used to specify the starting day for a particular time interval.

Valid Entries: MON, TUE, WED, THU, FRI, SAT, SUN, or leave blank.

2.4 START TIME

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Description: The START TIME field is used to specify the starting time for a particular time interval.
Valid Entries: 0 - 23, or leave blank.

Data Rules:

When START DAY equals END DAY, START TIME must be different than the END TIME for that time interval.

2.5 END DAY

Description: The END DAY field is used to specify the end day for a particular time interval.
Valid Entries: MON, TUE, WED, THU, FRI, SAT, SUN, or leave blank.

2.6 END TIME

Description: The END TIME field is used to specify the end time for a particular time interval.
Valid Entries: 0 - 23, or leave blank.

2.7 NEW ROUTE IDX

Description: The NEW ROUTE IDX field is used to specify the route index which replaces the ROUTE INDEX for a particular time interval.
Valid Entries:

- For 5E12 and earlier: 1 - 4095, or leave blank.
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

When a NEW ROUTE IDX is entered, it must not be equal to ROUTE INDEX.

2.8 ACTIVE

Description: The ACTIVE field is used to indicate whether a particular time interval entry will be evaluated when selection of a NEW ROUTE IDX occurs.
Valid Entries: Y, N or blank

---

tdr 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5571) TIME DEPENDENT ROUTING

*1. ROUTE INDEX ____

2. TIME INTERVALS

ROW	START DAY	START TIME	END DAY	END TIME	NEW ROUTE IDX	ACTIVE
1	___	__	___	__	____	_
2	___	__	___	__	____	_
3	___	__	___	__	____	_
4	___	__	___	__	____	_
5	___	__	___	__	____	_
6	___	__	___	__	____	_

---

tdr 5ESS Switch _

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SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5571) TIME DEPENDENT ROUTING

2. TIME INTERVALS

ROW	START DAY	START TIME	END DAY	END TIME	NEW ROUTE IDX	ACTIVE
7	___	__	___	__	____	_
8	___	__	___	__	____	_
9	___	__	___	__	____	_
10	___	__	___	__	____	_
11	___	__	___	__	____	_
12	___	__	___	__	____	_
13	___	__	___	__	____	_
14	___	__	___	__	____	_
15	___	__	___	__	____	_
16	___	__	___	__	____	_

Figure 1 SAMPLE TDR FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BM: 5572 RECORD
TDMA OFFICE OPTIONS - TDMAOPT

1. GENERAL

The 5572 Record is available with the 5E12 Software Update and BMI (Beginning Managed Introduction) of the 5E13 Software Release. It provides the capability for specifying or verifying the global parameters for TDMA (Time Division Multiple Access).

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.56.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: This field is used to access this form.

Required Field.
Default: 0
Valid Entries: 0

2.3 ECHO BP

Description: The Echo Canceller Bypass field indicates whether or not echo canceller is turned on for Switched Based TDMA Vocoders feature.
Default: N
Valid Entries: Y, N

2.4 PARAM 1

Description: This field is used to define tuning parameter 1 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.5 PARAM 2

Description: This field is used to define tuning parameter 2 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.6 PARAM 3

Description: This field is used to define tuning parameter 3 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.7 PARAM 4

Description: This field is used to define tuning parameter 4 for TDMA vocoders.
Default: 0

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Valid Entries: 0 - 32767

2.8 PARAM 5

Description: This field is used to define tuning parameter 5 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.9 PARAM 6

Description: This field is used to define tuning parameter 6 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.10 PARAM 7

Description: This field is used to define tuning parameter 7 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.11 PARAM 8

Description: This field is used to define tuning parameter 8 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.12 PARAM 9

Description: This field is used to define tuning parameter 9 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.13 PARAM 10

Description: This field is used to define tuning parameter 10 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.14 PARAM 11

Description: This field is used to define tuning parameter 11 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.15 PARAM 12

Description: This field is used to define tuning parameter 12 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.16 PARAM 13

Description: This field is used to define tuning parameter 13 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

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2.17 PARAM 14

Description: This field is used to define tuning parameter 14 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.18 PARAM 15

Description: This field is used to define tuning parameter 15 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

2.19 PARAM 16

Description: This field is used to define tuning parameter 16 for TDMA vocoders.
Default: 0
Valid Entries: 0 - 32767

```
tdmaopt                    5ESS Switch                _
                  OFFICE DATA ADMINISTRATION
                    TDMA  OFFICE OPTIONS

*1. KEY      0       13. PARAM 11 0
 2. ECHO BP  N        14. PARAM 12 0
 3. PARAM 1  0        15. PARAM 13 0
 4. PARAM 2  0        16. PARAM 14 0
 5. PARAM 3  0        17. PARAM 15 0
 6. PARAM 4  0        18. PARAM 16 0
 7. PARAM 5  0
 8. PARAM 6  0
 9. PARAM 7  0
10. PARAM 8  0
11. PARAM 9  0
12. PARAM 10 0
```

Figure 1 SAMPLE TDMAOPT FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5BN: 5573 RECORD
II DIGITS TABLE FORM - IIDIGTBL

1. GENERAL

The 5573 Record is available with 5E13 and later Software Releases and contains the information to route the call. A II Digits Screen bit is added to each entry of the ANI (Automatic Number Identification) Table and the LDP (Long Distance Platform) Carrier Table.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.57.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * II DIGITS

Description: This field is used to specify the II digits value associated with an LDP call.

Required Field.
Valid Entries: 0 - 99, or ANY for the wild card

2.3 * TGN

Description: This field used to specify the trunk group number.

Required Field.
Valid Entries: 1 - 4000, or ANY for the wild card

Data Rules:

When TGN exceeds 2000, the ACT field for Secured Feature ID (SFID) 172 must be set to "Y" on the SFSYS form (5713-1 Record).

2.4 DAS

Description: This field is used to specify the digit analysis selector or tree number used when interpreting incoming digits for routing and charging purposes.

Required Field.
Default: 000
Valid Entries:

For 5E14 and earlier: 0 - 99
For 5E15 and later: 0 - 254

Data Rules:

When IIDIGTBL forms have a known value for the DAS field which matches a DAS value on the DAS form, the LDIT value associated with the DAS must be distributed to all operational SMs (Switching Modules). This is accomplished by entering the LDIT value as the key on the SMLDIT form and by entering each operational SM (as defined on EQIM forms where EQSTATUS is "O") into the list of SMs on the SMLDIT

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form.

When DAS is entered, DAS must be defined as DIGIT ANALYSIS SELECTOR on the DAS form where PREFIX/FEATURE DIT is entered.

2.5 SCR

Description: This field is used to specify the screening index which allows for different billing rates and routing.
Valid Entries: 1 - 4095, or blank

Data Rules:

When SCR is entered, SCR must be defined on the RAR form as SCR.

2.6 NET CALL DENIAL

Description: This field is used to specify whether or not an LDP call will be denied origination.

Required Field.
Default: N
Valid Entries: Y, N

2.7 ACCT CODE LENGTH

Description: This field is used to specify the number of account code digits that are expected. A value of 0 indicates that an account code is not expected.

Required Field.
Default: 0
Valid Entries: 0 - 15

2.8 FIXED CARRIER

Description: This field is used to specify the carrier used to route Inter-LATA calls.
Valid Entries: 0 - 9999, or blank

Data Rules:

When FIXED CARRIER is entered:

- TRIG NBR must not be entered.
- FIXED CARRIER must be defined as CARRIER ID on the ICF form where FEAT GROUP equals "D".

2.9 TRIG NBR

Description: This field is used to specify the trigger number to locate unique network service for dialed digits.
Valid Entries: 1 - 255, or blank

Data Rules:

When TRIG NBR is entered:

- FIXED CARRIER must not be entered.

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- TRIG NBR on the NSTRIG form must be defined where APPLICATION equals "ASP" and AIN REL equals "R0D1".

2.10 TERM NSC

Description: This field is used to specify the terminating network selection code. It translates to a DAS and screening index for routing the call. It is applicable in LDP networks that employ MINT (Multifarious Intra-Network Trunk) processing.
Valid Entries: 0 - 999, or blank

Data Rules:

When TERM NSC is entered, TERM NSC on the LDPTNSC form must be defined.

```
iidigtbl                5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5573)                  II DIGITS TABLE

*1. II DIGITS       ___
*2. TGN             ____
 3. DAS             00
 4. SCR             ____
 5. NET CALL DENIAL  N
 6. ACCT CODE LENGTH 0
 7. FIXED CARRIER    ____
 8. TRIG NBR         ___
 9. TERM NSC         ___
```

Figure 1 SAMPLE IIDIGTBL FORM 5E13 - 5E14 SOFTWARE RELEASES

```
iidigtbl                5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5573)                  II DIGITS TABLE

*1. II DIGITS       ___
*2. TGN             ____
 3. DAS             000
 4. SCR             ____
 5. NET CALL DENIAL  N
 6. ACCT CODE LENGTH 0
 7. FIXED CARRIER    ____
 8. TRIG NBR         ___
 9. TERM NSC         ___
```

Figure 2 SAMPLE IIDIGTBL FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5BO: 5574 RECORD
ROUTE INDEX LIST FORM - RTLIST

1. GENERAL

1.1 Route Index List Definition

This form allows for a list of route indicies to be linked or chained together for the purposes of searching for a non-busy route. A route index is used to determine a network path for call completion. If the call is unable to complete it is routed to an error treatment source as determined by the route index. The position of the route indicies in the list indicates the sequence in which they are searched. When a LDP (Long Distance Platform) call is originated, it proceeds routing to the trunk group associated with the first route index in the list. Upon finding no available members in the trunk group, the call routes to the trunk group associated with the next route index in the list. This process continues until an available path is found or until the route index list is exhausted. If the call routes through the list without finding an idle trunk group, attempts to queue or apply Final Route Trigger are made, if assigned and active, before sending the call to final treatment. When a route index list exists, the NEXT ROUTE field on the RTIDX form is not used.

1.2 Recent Change View

The corresponding Recent Change View for RTLIST is 10.40.

2. FORM ENTRIES - 5574 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * RTIDX

Description: RTIDX is the first route index in the list and acts as the key field for this form. It uniquely identifies a list of route indices. The value in this field must be unique in that a route index can only be used as a key for a list once.

Software Release: 5E13 and later.
Valid Entries: 1 - 16382

ROUTE INDEX LIST

For 5E13 and later, this is a list of route indices with associated route type, trunk group number, digits deleted, prefix digit, signaling protocol and final route trigger. Also, a remarks field is included for each route index in the list. The order of the route indices in the list determines the sequence in which they are searched to find an available route path. Refer to Section 2.3 - Section 2.10 for individual field information.

2.3 RTI

Description: This field specifies a route index. The routing sequence is determined by the position of the route index in the list.

Software Release: 5E13 and later.
Valid Entries: 1 - 16382

Data Rules:

The RTI in row 1 of the ROUTE INDEX LIST (RTILIST) must match the RTIDX key.

Each RTI in the ROUTE INDEX LIST (RTILIST) must be unique.

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Each RTI in the ROUTE INDEX LIST (RTILIST) must be defined on the RTIDX form.

Only the last RTI in the ROUTE INDEX LIST (RTILIST) may have:

- ROUTE TYPE equal to "DNTRAN" or "REORDER"
- an entry in the FNL RT TRIG NBR field

on the corresponding RTIDX form.

2.4 ETYP

Description: This field is a no change field and displays the type of routing associated with this route index.

Software Release: 5E13 and later.
Valid Entries: HUNT, DNTRAN, REORDER, BUSY, or MAIN

- ***NOTE:*** Refer to Division 3 Section 3p, Route Index Form - RTIDX, for details on specific route types.

2.5 TGN

Description: This field is a no change field. It displays the group number of the trunk group to be routed to based on the associated RTI in the list.

Software Release: 5E13 and later.
Valid Entries:

- For 5E13 and 5E14: 0 - 4000
- For 5E15:1 - 4000 for circuit trunk groups or 7000 - 7999 for BICC groups
- For 5E16(2) and later: 1 - 4000

2.6 DIG DLT

Description: This field is a no change field which displays the number of digits to be deleted.

Software Release: 5E13 and later.
Valid Entries: 00 - 15

2.7 PRF DIG

Description: This is a no change field that displays the digits to be prefixed for outpulsing.

Software Release: 5E13 and later.
Valid Entries: 1 - 10 or blank

2.8 SIG PRO

Description: This is a no change fild that displays the type of signaling protocol for the

Software Release: 5E13 and later.
Valid Entries: EA, FGB, INC, INCM, MEA, PNANI or TRAD

- ***NOTE:*** Refer to Division 3 Section 3p, Route Index Form - RTIDX, for details on these valid entries..

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2.9 FNL TRIG

Description: This is a no change field which displays the final route trigger that is used when the route index list has been exhausted.

Software Release: 5E13 and later.
Valid Entries: 1 - 255 or blank

2.10 RMK

Description: This field is a no change field which displays optional remarks or comments pertinent to the associated RTI.

Software Release: 5E13 and later.
Valid Entries: Up to 16 alphanumeric characters (including special characters and/or blanks)

```
rtlist                  5ESS Switch
SCREEN 1 OF 2             OFFICE DATA ADMINISTRATION
(5574)                  ROUTE INDEX LIST

*1. RTIDX _____

              2. ROUTE INDEX LIST (RTILIST)
                DIG PRF       SIG   FNL
ROW RTI   ETYP    TGN  DLT DIG       PRO   TRIG RMK           TDR
 1 _____ _______ ____ __ __________ _____ ___ _________________ _
 2 _____ _______ ____ __ __________ _____ ___ _________________ _
 3 _____ _______ ____ __ __________ _____ ___ _________________ _
 4 _____ _______ ____ __ __________ _____ ___ _________________ _
 5 _____ _______ ____ __ __________ _____ ___ _________________ _
 6 _____ _______ ____ __ __________ _____ ___ _________________ _
 7 _____ _______ ____ __ __________ _____ ___ _________________ _
```

```
rtlist                  5ESS Switch       _
SCREEN 2 OF 2             OFFICE DATA ADMINISTRATION
(5574)                  ROUTE INDEX LIST

              2. ROUTE INDEX LIST (RTILIST)
                DIG PRF       SIG   FNL
ROW RTI   ETYP    TGN  DLT DIG       PRO   TRIG RMK           TDR
 8 _____ _______ ____ __ __________ _____ ___ _________________ _
 9 _____ _______ ____ __ __________ _____ ___ _________________ _
10 _____ _______ ____ __ __________ _____ ___ _________________ _
11 _____ _______ ____ __ __________ _____ ___ _________________ _
12 _____ _______ ____ __ __________ _____ ___ _________________ _
13 _____ _______ ____ __ __________ _____ ___ _________________ _
14 _____ _______ ____ __ __________ _____ ___ _________________ _
15 _____ _______ ____ __ __________ _____ ___ _________________ _
16 _____ _______ ____ __ __________ _____ ___ _________________ _
```

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Figure 1 SAMPLE RTLIST FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5BP: 5575 RECORD
AUTOMATIC NUMBER IDENTIFICATION INDEX TABLE - ANITABLE

1. GENERAL

The 5575 Record is available with 5E13 and later Software Releases and contains the ANI's designating special treatment when a match occurs with an incoming LDP (Long Distance Platform) call based on an index-defined option set, which is on the LDPINDEX form.

This form supports the ANI Table Index feature which is an evolution of the TDX (Toll Digital Exchange) ANI Table Processing Feature SFID 235.

See Div. 2, Sec. 4A165 (Toll Digital Exchange Basic Call Processing For Toll 5ESS Switch) for details.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.58

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *NPA

Description: The NPA field is used to specify the Numbering Plan Area code.

Required Field.
Valid Entries: 200 - 999, or 000 for default ANI table entry.

Data Rules:

When NPA is 000, NXX must be 000, LINE must be 0000, LDP CARRIER must be 10000, and INDEX must be 0.

When NPA and NXX have been assigned on the ANITABLE form, NPA and NXX must be defined on an ANIMOD form.

When TRKCLS on the TKGRP form is "IC", "LATA" or "TTOLLCON", and LDP on the TKGRP form is "Y", then there must be an ANITABLE form with NPA equal to 000, NXX equal to 000 and LINE equal to 0000.

2.3 *NXX

Description: The NXX field is used to specify the Office Code associated with this NPA. Enter the NPA portion of the ANI.

Required Field.
Valid Entries: Enter a number from 000 to 999. For default ANI table entry enter 000 with an NPA of 000. For a 3-digit ANI, enter 000 with a valid NPA and LINE equal to 0000.

2.4 *LINE

Description: The LINE field is used to specify the Local DN minus the office code.

Required Field.
Valid Entries: Enter a four-digit number from 0000 to 9999, or ANY for the wild card digits. For the default

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ANI, enter 0000 with an NPA and NXX of 000. For a 3-digit ANI, enter 0000 with an NXX of 000 and a valid NPA.

2.5 *LDP CARRIER

Description: The Long Distance Platform Carrier field is used to specify a carrier for the call. This field supports the Mulitple CIC (Carrier Identification Code) Support for LDP (Long Distance Platform) Feature. For more information see Div. 2, Sec. 4A165.
Valid Entries: Enter 0-9999, or 10000 for the default carrier, or ANY for the wild card carrier.

Data Rules:

When LDP CARRIER is 10000, NPA must be 000, NXX must be 000, and LINE must be 0000.

When the LDP CARRIER field is entered on the ANITABLE form, LDP CARRIER must be defined on a corresponding LDPCTBL form with CARRIER PRESUBSCD equal to "Y".

2.6 INDEX

Description: Long Distance Platform index.
Valid Entries: 0, 10 - 131071

Data Rules:

When INDEX is 0, NPA must be 000, NXX must be 000, LINE must be 0000, and LDP CARRIER must be 10000.

The INDEX field on the ANITABLE form must be defined on the LDPINDEX form.

---

anitable 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5575) AUTOMATIC NUMBER IDENTIFICATION INDEX TABLE

*1. NPA ___
*2. NXX ___
*3. LINE ____
*4. LDP CARRIER _____
#5. INDEX _____

Figure 1 SAMPLE ANITABLE FORM 5E13 AND LATER SOFTWARE RELEASE

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SEC. 5BQ: 5576 RECORD
LONG DISTANCE PLATFORM (LDP) INDEX FORM - LDPINDEX

1. GENERAL

The 5576 Record is available with 5E13 and later Software Releases and contains the option set for the ANITABLE form.

For more information see Division 2, Section 4A165.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.59.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * INDEX

Description: Long distance platform index.

Required Field.
Valid Entries: Enter 10 - 131071 or 0 for the default ANI table entry.

Data Rules:

When INDEX is 0 (default ANI table entry) DAS must be entered and not 00.

For 5E14 and later, a LDPINDEX form must exist with INDEX equal to 0.

LDP BASIC CALL PROCESSING

The following fields (Section 2.3 - Section 2.5) supports the LDP (Long Distance Platform) Basic Call Processing capabilities.

2.3 DAS

Description: This field is used to specify the digit analysis selector or tree number used when interpreting incoming digits for routing and charging purposes.

Required Field.
Default: 00
Valid Entries:

For 5E14 and earlier: 0 - 99
For 5E15 and later: 0 - 254

Data Rules:

When INDEX is 0 (default ANI table entry), DAS must be entered and not 00.

When the DAS field is entered on the LDPINDEX form, it must be defined on a DAS form as the DIGIT ANALYSIS SELECTOR value with a PREFIX/FEATURE DIT value entered.

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When the DAS field is entered on the LDPINDEX form and the DAS field is defined as a DIGIT ANALYSIS SELECTOR on a DAS form, the value of the LOCAL DIT for the LINE DAS on the corresponding DAS form must be entered. Also, the LOCAL DIT must be defined as a LDIT on the corresponding SMLDIT for every operational SM in the office.

This must be accomplished by entering a SMLDIT form with this LDIT value as the key and by entering each operational SM (as defined on EQIM forms where EQSTATUS is "O") into the LIST OF SWITCHING MODULES.

2.4 SCR

Description: This field is used to specify the screening index which allows for different billing rates and routing.
Valid Entries: 1 - 4095, or blank

Data Rules:

When the SCR field is entered on the LDPINDEX form,this SCR must be defined on a corresponding RAR form.

2.5 TERM NSC

Description: This field is used to specify the terminating network selection code. It translates to a DAS and screening index for routing the call. It is applicable in LDP networks that employ MINT (Multifarious Intra-Network Trunk) processing.
Valid Entries: 0 - 999, or blank

Data Rules:

When the TERM NSC is entered on the LDPINDEX form, the TERM NSC must be defined on the LDPTNSC form.

LDP ENHANCED CALL PROCESSING

The following fields (Section 2.6 - Section 2.10) supports the LDP (Long Distance Platform) Enhanced Call Processing capabilities.

2.6 NET CALL DENIAL

Description: This field is used to specify whether or not an LDP call will be denied origination.

Required Field.
Default: N
Valid Entries: Y, N

2.7 ACCT CODE LENGTH

Description: This field is used to specify the number of account code digits that are expected. A value of 0 indicates that an account code is not expected.

Required Field.
Default: 0
Valid Entries: 0 - 15

2.8 FIXED CARRIER

Description: This field is used to specify the carrier used to route Inter-LATA calls.

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Valid Entries: 0 - 9999, or blank

Data Rules:

When FIXED CARRIER is entered TRIG NBR must not be entered.

When the FIXED CARRIER field is entered on the LDPINDEX form, FIXED CARRIER must be defined on a corresponding ICF form with FEAT GRP equal to "D".

2.9 TRIG NBR

Description: This field is used to specify the trigger number to locate unique network service for dialed digits. If this field is entered, a query will be launched to an external database.
Valid Entries: 1 - 255, or blank

Data Rules:

When TRIG NBR is entered, FIXED CARRIER must not be entered.

When the TRIG NBR field is entered on the LDPINDEX form,TRIG NBR must be defined on a corresponding NSTRIG form with APPLICATION equal to "ASP" and AIN REL equal to "R0D1".

2.10 II SCREEN

Description: The II SCREEN field is used to indicate if call processing should use the ANI data from the IIDIGTBL form to route the call.
Default: N
Valid Entries: Y, N

2.11 REMARKS

Description: The REMARKS field is used to enter remarks for the index used by ANIs.
Valid Entries: Enter up to 12 alphanumeric characters.

2.12 USED BY COUNT

Description: The USED BY COUNT field is used to hold the number of ANIs which use this index.
Valid Entries: 0 - 9999999

```
ldpindex                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5576)           LONG DISTANCE PLATFORM (LDP) INDEX TABLE

*1. INDEX          ______
 2. DAS            00
 3. SCR            ____
 4. NET CALL DENIAL  N
 5. ACCT CODE LENGTH 0
 6. FIXED CARRIER   ____
 7. TRIG NBR        ___
 8. II SCREEN       N
 9. TERM NSC        ___
10. REMARKS         ____________
    USED BY COUNT   _______
```

Figure 1 SAMPLE LDPINDEX FORM 5E13 SOFTWARE RELEASE

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```
ldpindex                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5576)           LONG DISTANCE PLATFORM (LDP) INDEX TABLE

*1. INDEX ______            LDP ENHANCED CALL PROCESSING
                        5. NET CALL DENIAL  N
LDP BASIC CALL PROCESSING     6. ACCT CODE LENGTH 0
 2. DAS      00             7. FIXED CARRIER    ____
 3. SCR      ____           8. TRIG NBR         ___
 4. TERM NSC ___            9. II SCREEN        N

                       10. REMARKS      _____________
                         USED BY COUNT _______
```

Figure 2 SAMPLE LDPINDEX FORM 5E14 SOFTWARE RELEASE

```
ldpindex                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5576)           LONG DISTANCE PLATFORM (LDP) INDEX TABLE

*1. INDEX ______            LDP ENHANCED CALL PROCESSING
                        5. NET CALL DENIAL  N
LDP BASIC CALL PROCESSING     6. ACCT CODE LENGTH 0
 2. DAS      000            7. FIXED CARRIER    ____
 3. SCR      ____           8. TRIG NBR         ___
 4. TERM NSC ___            9. II SCREEN        N

                       10. REMARKS      _____________
                         USED BY COUNT _______
```

Figure 3 SAMPLE LDPINDEX FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5BR: SETTINGS OF TRAFFIC MEASUREMENTS REPORTS FORM - MEASRET

1. GENERAL

The form is used to retrofit the TRFMSET Relation, and is made available with the 5E16(1) FR 2 Software Release.This form is used only for Retrofit. It supports the Reserve the Settings of Traffic Meassurements Reports feature. For more information on this feature, see Division 2, Section 2AC.

1.1 Recent Change View

There is no corresponding Recent Change View for this form.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * INDEX

Description: This field indicates the key that is used to access a particular tuple in the TRFMSET Relation.

Required Field.

Software Release: 5E16(1) FR 2 and later
Valid Entries: 0 - 511

2.3 COMP LIST

Description: The Component List field contains information about the settings of Traffic Measurements reports needed to define them.

Software Release: 5E16(1) FR 2 and later
Valid Entries: 8 alphanumeric characters

---

measret 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
Settings of Traffic Measurements Reports (RETROFIT ONLY)

*1. INDEX 1

2. COMP LIST

ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP
1	_____	9	_____	17	_____	25	_____	33	_____	41	_____
2	_____	10	_____	18	_____	26	_____	34	_____	42	_____
3	_____	11	_____	19	_____	27	_____	35	_____	43	_____
4	_____	12	_____	20	_____	28	_____	36	_____	44	_____
5	_____	13	_____	21	_____	29	_____	37	_____	45	_____
6	_____	14	_____	22	_____	30	_____	38	_____	46	_____
7	_____	15	_____	23	_____	31	_____	39	_____	47	_____
8	_____	16	_____	24	_____	32	_____	40	_____	48	_____

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measret 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
Settings of Traffic Measurements Reports (RETROFIT ONLY)

2. COMP LIST

ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP
49	_____	57	_____	65	_____	73	_____	81	_____	89	_____
50	_____	58	_____	66	_____	74	_____	82	_____	90	_____
51	_____	59	_____	67	_____	75	_____	83	_____	91	_____
52	_____	60	_____	68	_____	76	_____	84	_____	92	_____
53	_____	61	_____	69	_____	77	_____	85	_____	93	_____
54	_____	62	_____	70	_____	78	_____	86	_____	94	_____
55	_____	63	_____	71	_____	79	_____	87	_____	95	_____
56	_____	64	_____	72	_____	80	_____	88	_____	96	_____

---

measret 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
Settings of Traffic Measurements Reports (RETROFIT ONLY)

2. COMP LIST

ROW	COMP	ROW	COMP	ROW	COMP	ROW	COMP
97	_____	105	_____	113	_____	121	_____
98	_____	106	_____	114	_____	122	_____
99	_____	107	_____	115	_____	123	_____
100	_____	108	_____	116	_____	124	_____
101	_____	109	_____	117	_____	125	_____
102	_____	110	_____	118	_____	126	_____
103	_____	111	_____	119	_____	127	_____
104	_____	112	_____	120	_____		

Figure 1 SAMPLE MEASRET FORM 5E16(1) AND LATER SOFTWARE RELEASES

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SEC. 5BS: 5578 RECORD
TOLLFREE/DEFAULT ANI II - TFANI

1. GENERAL

The 5578 Record is available with 5E11 and later Software Releases. The Tollfree/Default ANI (Automatic Number Identification) II form is used to map Original II digits to Default II digits and Tollfree II digits.

The Pay Phone Compensation for Tollfree Calls and Tollfree Calling Enhancement for Flexible ANI features are secured features (both under SFID 332) that must be set to "Y" before the TFANI form can be populated.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.74.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ORIGINAL II

Description: This field is used to specify the Original ANI II digits as determined by call processing. For Access Tandems, these are the II digits received in the signaling message from the end office. For translation numbers, the original II digits are the SCP returned II digits. These ANI II digits identify the originating line class-of-service.

Required Field.
Valid Entries: 00 - 99

2.3 TOLLFREE II

Description: This field is used to specify the mapped ANI II digits that will be sent if the carrier does not accept original II digits for translated tollfree calls. If blank, no new modification to the ANI II digits will be made.
Valid Entries: 00 - 99 or blank

2.4 DEFAULT II

Description: This field is used to specify the mapped ANI II digits that will be sent if the carrier does not accept Original II digits for non-translated tollfree calls. If blank, no new modification to the ANI II digits will be made.
Valid Entries: 00 - 99 or blank

2.5 REMARKS

Description: This field is for optional remarks or for a descriptive comment.
Valid Entries: Enter up to 16 characters (includes alphanumeric, special characters, or blank).

---

tfani 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5578) TOLLFREE/DEFAULT ANI II

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*1. ORIGINAL II __
2. TOLLFREE II __
3. DEFAULT II __
4. REMARK _____

Figure 1 SAMPLE TFANI FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 5BU: 5580 RECORD
OLD NPANXX MAPPING TO NEW NPA - NPANXX

1. GENERAL

The NPANXX form (5580 Record) is available with 5E13 and later Software Releases, and is used to map an old NPA (Numbering Plan Area) NXX (Office Code (Part of Dialed Number)) to a new NPA. Specifiying the OLD NXX is optional. The new NPA is used in an announcement stating the transition to the new NPA. The office code is commonly referred to as the "NXX" which are the three digits (e.g., telephone exchange) after the NPA (commonly referred to as the "area code").

The NPANXX form was added to support the Announcement on Detection of NPA Split feature. This is a secured feature with an SFID of 347 that must be activated before using this form. For more detailed information on activating this feature, see Division 2, Section 4A347.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *OLD NPA

Description: Enter the 3-digit old NPA that is being split. NPAs are normally in the following range: N is 2-9; P is 0-9; A is 0-9.

Required Field.

Software Release: 5E13 and later
Valid Entries: 200 - 999

Data Rules:

When two or more NPANXX forms have the same value of OLD NPA, the OLD NXX must be entered on all of the NPANXX forms.

2.3 (*)OLD NXX

Description: Enter the 3-digit old Office Code. NXXs are normally in the following range: N is 0-9; X is 0-9; X is 0-9. This field is optional.

Software Release: 5E13 and later
Valid Entries: 000 - 999

2.4 #NEW NPA

Description: Enter the 3-digit new NPA created. NPAs are normally in the following range: N is 2-9; P is 0-9; A is 0-9.

Required Field.

Software Release: 5E13 and later
Valid Entries: 200 - 999

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```
npanxx                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5580)              OLD NPANXX MAPPING TO NEW NPA

  *1. OLD NPA ___
(*)2. OLD NXX ___
  #3. NEW NPA ___
```

Figure 1 SAMPLE NPANXX FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5BW: 5590 RECORD
NO TEST TRUNK (NTT) UNIT - NTTU

1. GENERAL

The 5590 Record is available with the 5E15 and later Software Releases. The No Test Trunk (NTT) Unit form is used to define an NTT unit and MTB (Metallic Test Bus) pairs reserved for each testing trunk connected to NTT unit. It also contains information about equipment locations for MSU (Metallic Service Unit) of the first MTB 0 associated with the NTT unit and the related digital trunk unit which is used for NTT trunk assignments.

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NTT UNIT ID

Description: The NTT UNIT ID field indicates the NTT unit identifier being unique in the office.

Software Release: 5E15 and later
Required Field.
Valid Entries: 1 - 99

2.3 SM

Description: The SM field indicates the switching module where the MSU of the first MTB 0 associated to NTT unit is located. This is a display only field.

Software Release: 5E15 and later
Valid Entries: 1 - 192

2.4 EQL BAY

Description: The EQL BAY field indicates the equipment location bay number for the MSU of the first MTB 0 associated with the NTT unit.

Software Release: 5E15 and later
Valid Entries:

00 to 84
0 - 14, 100 - 104, or 200 - 208 for an SM2000.

2.5 EQL UNVER

Description: The EQL UNVER field indicates the equipment location vertical position number for the MSU of the first MTB 0 associated with the NTT unit.

Software Release: 5E15 and later
Valid Entries: 00 - 84

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2.6 EQL AISLE

Description: The EQL AISLE field indicates the equipment location (floor and aisle) number for the MSU of the first MTB 0 associated with the NTT unit.

Software Release: 5E15 and later
Valid Entries:

00 - 99 for floor number
00 - 99 for aisle number

2.7 DIGITAL TRUNK UNIT

Description: The DIGITAL TRUNK UNIT field indicates the equipment number (composite equipment number consisting of DTUTYP and DTUNBR) of the digital trunk unit used for assignment of NTT trunk sthat are connected to the NTT unit.

Software Release: 5E15 and later
Valid Entries:

Digital Trunk Unit Type Valid Entries

Entry	Definition
D	DEN [Digital Line and Trunk Unit (DLTU) Equipment NumbeR.
N	NEN [Digital Networking Unit - SONET (DNU-S) Equipment Number.

Digital Trunk Unit Equipment Number for DEN

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
DLTU (digital line trunk unit)	DLTU	XXX	000 - 011
DFI (digital facility interface)	DFI	XX	01 - 10
FACIND (facility indicator	FAC IND	X	1 - 2

Digital Trunk Unit Equipment Number for NEN

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
DNU-S (digital networking unit - SONET)	DNU-S	X	0 - 7
DG (data group)	DG	X	0 - 1
STE (SONET termination equipment)	STE	X	1 - 6
STS (synchronous transport signal)	STS	X	1
VTG (virtual tributary group)	VTG	X	1 - 7
VTM (virtual tributary member)	VTM	X	1 - 4

MTB ASSIGNMENT LIST (MTBLIST)

The MTB assignment list contains MTB pairs associated to DS0's of NTT Unit related to testing trunks connected to this unit and assigned to respective channels of digital trunk unit. The channel 1 is used for Signaling Converter Control Trunk (SCCT), and testing trunks are assigned to channels 2 thru 13 of digital trunk unit.

2.8 MTB0

Description: The MTB0 field indicates the Metallic Test Bus 0 associated with a NTT testing trunk. It is used for configuration and verification of a trunk.

Software Release: 5E15 and later
Valid Entries:

MTB0 Valid Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 -1
Service Group	SG	X	0 -1
Board	BD	XX	00 - 31

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Bus	BUS	XX	00 - 14

Data Rules:

MTB0 for CHNL 2 must be entered.

2.9 MTB1

Description: The MTB1 field indicates the Metallic Test Bus 1associated with a NTT testing trunk. It is used for configuration and verification of a trunk.

Software Release: 5E15 and later
Valid Entries:

MTB1 Valid Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 -1
Service Group	SG	X	0 -1
Board	BD	XX	00 - 31
Bus	BUS	XX	00 - 14

Data Rules:

All entered.MTB0 and MTB1 must be unique.

```
nttu                    5ESS Switch          _
                   OFFICE DATA ADMINISTRATION
(5590)                NO TEST TRUNK (NTT) UNIT

*1. NTT UNIT ID __     EQL UNVER         __
   SM          ___    EQL AISLE         ____
   EQL BAY     ___    DIGITAL TRUNK UNIT _ _________

          9. MTB ASSIGNMENT LIST (MTBLIST)
ROW CHNL MTB0      MTB1      ROW CHNL MTB0      MTB1
 1   2  _________ _________   7   8  _________ _________
 2   3  _________ _________   8   9  _________ _________
 3   4  _________ _________   9  10  _________ _________
 4   5  _________ _________  10  11  _________ _________
 5   6  _________ _________  11  12  _________ _________
 6   7  _________ _________  12  13  _________ _________
```

Figure 1 SAMPLE NTT (NO TEST TRUNK) UNIT 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5CA: 5586 RECORD
INWATS NPA TABLE

1. GENERAL

The 5586 Record supports a 5E15 proprietary feature.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.34.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *INWATS NPA

Description: This is a proprietary feature.

---

inwatnpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5586) INWATS NPA TABLE

*1. INWATS NPA ___

Figure 1 SAMPLE INWATS NPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5CB: 5766 Record
OIU CARRIER GROUP ALARM INTEGRATION
TIMESGROUP FORM - CGATIME

1. GENERAL

The 5766 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete CGA (Carrier Group Alarm) groups which define alarm ON/OFF integration times of Alarm Indication Signals, Local Alarms, and Remote Alarms on all OIU facilities. This form supports the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 20.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CGA GROUP

Description: This field is used to specify the name for a Carrier Group Alarm group.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric charaters

2.3 SONET TYPE

Description: This field is used to indicate whether or not the associated CGA Group is for SONET (Synchronous Optical Networking) type STE, HVC, and LVC facilities.

Software Release: 5E16(2) and later
Valid Entries: Y, N

Data Rules:

When SONET TYPE is "Y":

- ST AIS must be 1.0 - 10.0 by 0.5
- ST LOCAL must be 1.0 - 10.0 by 0.5
- ST REMOTE must be 1.0 - 10.0 by 0.5
- CL AIS must be 1.0 - 200.0 by 0.5
- CL LOCAL must be 1.0 - 200.0 by 0.5

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- CL REMOTE must be 1.0 - 200.0 by 0.5
- The ratio of timers CL AIS to ST AIS cannot exceed 20:1.
- The ratio of timers CL LOCAL to ST LOCAL cannot exceed 20:1.
- The ratio of timers CL REMOTE to ST REMOTE cannot exceed 20:1.

When SONET TYPE is "N":

- ST AIS must be 0.1 - 60.0 by 0.1
- ST LOCAL must be 0.1 - 60.0 by 0.1
- ST REMOTE must be 0.1 - 60.0 by 0.1
- CL AIS must be 0.1 - 1200.0 by 0.1
- CL LOCAL must be 0.1 - 1200.0 by 0.1
- CL REMOTE must be 0.1 - 1200.0 by 0.1
- The ratio of timers ST AIS to CL AIS cannot exceed 20:1.
- The ratio of timers CL AIS to ST AIS cannot exceed 20:1.
- For the timers CL AIS and ST AIS, the smaller must divide evenly into the larger.
- The ratio of timers ST LOCAL to CL LOCAL cannot exceed 20:1.
- The ratio of timers CL LOCAL to ST LOCAL cannot exceed 20:1.
- For the timers CL LOCAL and ST LOCAL, the smaller must divide evenly into the larger.
- The ratio of timers ST REMOTE to CL REMOTE cannot exceed 20:1.
- The ratio of timers CL REMOTE to ST REMOTE cannot exceed 20:1.
- For the timers ST REMOTE and CL REMOTE, the smaller must divide evenly into the larger.

2.4 REMARKS

Description: This field is used to save any remarks associated with this CGA group.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 32 alphanumeric characters

2.5 STAIS

Description: The SONET Set Alarm Indication Signal field sets the amount of time (in seconds) an AIS (Alarm Indication Signal) should integrate before declaring a CGA SET on any facility subscribing to this provisioning group.

Software Release: 5E16(2) and later
Default: 2.5
Valid Entries:

1.0 - 10.0 seconds in 0.5 second increments, or

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0.1 - 60.0 seconds in 0.1 second increments (dependent upon the value of SONET TYPE)

2.6 STLCL

Description: The SONET Set Local field sets the amount of time (in seconds) an local alarm should integrate before declaring a CGA SET on any facility subscribing to this provisioning group.

Software Release: 5E16(2) and later
Default: 2.5
Valid Entries:

1.0 - 10.0 seconds in 0.5 second increments, or
0.1 - 60.0 seconds in 0.1 second increments (dependent upon the value of SONET TYPE)

2.7 STRMT

Description: The SONET SET Remote field sets the amount of time (in seconds) a remote alarm should integrate before declaring a CGA SET on any facility subscribing to this provisioning group.

Software Release: 5E16(2) and later
Default: 0.5
Valid Entries:

1.0 - 10.0 seconds in 0.5 second increments, or
0.1 - 60.0 seconds in 0.1 second increments (dependent upon the value of SONET TYPE)

2.8 CLAIS

Description: The SONET Clear Alarm Indication Signal field sets the amount of time (in seconds) an AIS alarm should de-integrate before declaring a CGA CLEAR on any facility subscribing to this provisioning group.

Software Release: 5E16(2) and later
Default: 10
Valid Entries:

1.0 - 200.0 seconds in 0.5 second increments, or
0.1 - 1200.0 seconds in 0.1 second increments (dependent upon the value of SONET TYPE)

2.9 CLLCL

Description: The SONET Clear Local field sets the amount of time (in seconds) a local alarm should deintegrate before declaring a CGA CLEAR on any facility subscribing to this provisioning group.

Software Release: 5E16(2) and later
Default: 10
Valid Entries:

1.0 - 200.0 seconds in 0.5 second increments, or
0.1 - 1200.0 seconds in 0.1 second increments (dependent upon the value of SONET TYPE)

2.10 CLRMT

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Description: The SONET Clear Remote field sets the amount of time (in seconds) a remote alarm should deintegrate before declaring a CGA CLEAR on any facility subscribing to this provisioning group.

Software Release: 5E16(2) and later
Default: 0 .1
Valid Entries:

1.0 - 200.0 seconds in 0.5 second increments, or
0.1 - 1200.0 seconds in 0.1 second increments (dependent upon the value of SONET TYPE)

```
cgatime                    5ESS Switch
                    OFFICE DATA ADMINISTRATION
(5766)              CARRIER GROUP ALARM INTEGRATION TIMES

 *1. CGA GROUP  ________
 #2. SONET TYPE _
  3. REMARKS    ____________________________________
 #4. STAIS      ____._
 #7. STLCL      ____._
#10. STRMT      ____._
#13. CLAIS      ____._
#16. CLLCL      ____._
#19. CLRMT      ____._
```

Figure 1 SAMPLE CGATIME FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 5CC: 5767 Record
OIU PERFORMANCE MONITORING - THRESHOLD GROUP FORM - OIUPM

1. GENERAL

The 5767 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete PM (Performance Monitoring) thresholds for OIU transport facilities. This form supports the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 20.32.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PM GROUP

Description: The PM (Performance Monitoring) Group field is used to specify a name for a PM group.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric charaters

2.3 REMARKS

Description: This field is used to save any remarks associated with this PM group.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 32 alphanumeric characters

2.4 # CKT TYPE

Description: This field is used to specify what types of OIU facilities this PM group can be assigned to. Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid CKT TYPE Entries

Entry	Definition
DS1	OIU Digital Signal - Level 1 Facility .
OC3	OIU - SONET Terminating Equipment facility.
OC3C	Optical Carrier level 3 Concatenated signal .
PPPLNK	Point-to-Point Link facility.
STS1FAC	OIU - Synchronous Transport Signal Facility.
STS3C	OIU Synchronous Transport Signal Facility.
VT15	OIU - Virtual Tributary 1.5 Facility

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Data Rules:

When CKT TYPE is "OC3" or "OC3C":

- LESDAT must be blank or 1 - 65535.
- LSESDAT must be blank or 1 - 65535.
- LES15MAT must be blank or 1 - 900.
- LSES15MAT must be blank or 1- 900.
- PFLSDAT must be blank or 1 - 65535.
- PFLS15MAT must be blank or 1- 900.

When CKT TYPE is "STS1FAC", "VT15", or "DS1":

- PESDAT must be blank or 1 - 65535.
- PSESDAT must be blank or 1 - 65535.
- PUASDAT must be blank or 1 - 65535.
- PES15MAT must be blank or 1 - 900.
- PSES15MAT must be blank or 1 - 900.
- PUAS15MAT must be blank or 1 - 900.

When CKT TYPE is "DS1":

- PFLSDAT must be blank or 1 - 65535.
- PSSDAT must be blank or 1 - 65535.
- PFLS15MAT must be blank or 1 - 900.
- PSS15MAT must be blank or 1 - 900.
- PUAS15MAT must be blank or 1 - 900.
- PSESDAT must be blank or 1 - 65535.
- PUASDAT must be blank or 1 - 65535.
- PES15MAT must be blank or 1 - 900.
- PSES15MAT must be blank or 1 - 900.

When CKT TYPE is "STS3C":

- PESDAT must be blank or 1 - 65535.
- PSESDAT must be blank or 1 - 65535.
- PUASDAT must be blank or 1 - 65535.

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- CV15MAT must be blank or 1 - 16383
- PES15MAT must be blank or 1 - 900.
- PSES15MAT must be blank or 1 - 900.
- PUAS15MAT must be blank or 1 - 900.

When CKT TYPE is "PPPLNK":

- CVDAT, LESDAT, LSESDAT, PESDAT, PSESDAT, PUASDAT, PFLSDAT, PSSDAT, CV15MAT, LES15MAT, LSES15MAT, PES15MAT, PSES15MAT, PUAS15MAT, PFLS15MAT, and PSS15MAS must all be blank.

When CKT TYPE is not "PPPLNK":

- IPHDAT, IPCDAT, USPDAT, IIHDAT, IIQDAT, IIFDAT, ICRDAT, IDCDAT, ICPDAT, ICEDAT, ICTDAT, UURDAT, EURDAT, RDLDAT, ERRDAT, URVDAT, URIDAT, IPH15MAT, IPC15MAT, USP15MAT, IIH15MAT, IIQ15MAT, IIF15MAT, ICR15MAT, ICD15MAT, ICP15MAT, ICE15MAT, ICT15MAT, UUR15MAT, EUR15MAT, RDL15MAT, ERR15MAT, URV15MAT, and URI15MAT must all be blank.
- IPHDAT must be blank or 1 - 65535.
- IPCDAT must be blank or 1 - 65535.
- USPDAT must be blank or 1 - 65535.
- IIHDAT must be blank or 1 - 65535.
- IIQDAT must be blank or 1 - 65535.
- IIFDAT must be blank or 1 - 65535.
- ICRDAT must be blank or 1 - 65535.
- ICDDAT must be blank or 1 - 65535.
- ICPDAT must be blank or 1 - 65535.
- ICEDAT must be blank or 1 - 65535.
- ICTDAT must be blank or 1 - 65535.
- UURDAT must be blank or 1 - 65535.
- EURDAT must be blank or 1 - 65535.
- RDLDAT must be blank or 1 - 65535.
- ERRDAT must be blank or 1 - 65535.
- URVDAT must be blank or 1 - 65535.
- URIDAT must be blank or 1 - 65535.
- IPHMAT must be blank or 1 - 900.
- IPCMAT must be blank or 1 - 900.

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- USPMAT must be blank or 1 - 900.
- IIHMAT must be blank or 1 - 900.
- IIQMAT must be blank or 1 - 900.
- IIFMAT must be blank or 1 - 900.
- ICRMAT must be blank or 1 - 900.
- ICDMAT must be blank or 1 - 900.
- ICEMAT must be blank or 1 - 900.
- ICTMAT must be blank or 1 - 900.
- UURMAT must be blank or 1 - 900.
- EURMAT must be blank or 1 - 900.
- RDLMAT must be blank or 1 - 900.
- ERRMAT must be blank or 1 - 900.
- URVMAT must be blank or 1 - 900.
- URIMAT must be blank or 1 - 900.

DAILY ALERTING THRESHOLDS

2.5 INHDAY

Description: This field is used to indicate whether or not to inhibit all daily alerting thresholds. Required field.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

2.6 CVDAT

Description: This field is used to specify the Coding Violation Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 1048575

2.7 LESDAT

Description: This field is used to specify Line Errored Seconds Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.8 LSESDAT

Description: This field is used to specify Line Severely Errored Seconds Daily Alerting Threshold.

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Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.9 PESDAT

Description: This field is used to specify Path Errored Seconds Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.10 PFLSDAT

Description: This field is used to specify Path Frame Loss Seconds Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.11 PSESDAT

Description: This field is used to specify Path Severely Errored Seconds Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.12 PSSDAT

Description: This field is used to specify Path Slip Seconds Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.13 PUASDAT

Description: This field is used to specify Path Unavailable Seconds Daily Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

IP THRESHOLDS

These fields (Section 2.14 - Section 2.30) support the OIU-IP feature. For more information on these features, see Division 2, Section 7BQ and Division 2, Section 7BX, respectively.

2.14 IPHDAT

Description: The IPHDAT (Invalid PPP Header Received) field is used to specify the alerting threshold for the number of invalid PPP (Point-to-Point) headers received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.15 IPCDAT

Description: The IPCDAT (Invalid PPP Checksum Received) field is used to specify the alerting threshold for the number of invalid PPP checksums received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

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2.16 USPDAT

Description: The USPDAT (Unavailable Seconds At PPP Layer) field is used to specify the alerting threshold for the number of unavailable seconds at PPP layer time.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.17 IIHDAT

Description: The IIHDAT (Invalid IP Header) field is used to specify the alerting threshold for the number of invalid IP (Internet Protocol) headers.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.18 IIQDAT

Description: The IIQDAT (Incoming IP Queue Congestion) field is used to specify the alerting threshold for the number of incoming IP queue congestions.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.19 IIFDAT

Description: The IIHDAT (Incoming Fragmented IP Datagrams) field is used to specify the alerting threshold for the number of invalid IP headers.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.20 ICRDAT

Description: The ICRDAT (Incoming ICMP Datagrams Received) field is used to specify the alerting threshold for the number of incoming ICMP (Internet Control Message Protocol) datagrams received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.21 ICDDAT

Description: The ICDDAT (Incoming Destination Unreachable Message Received) field is used to specify the alerting threshold for the number of incoming destination unreachable message received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.22 ICPDAT

Description: The ICPDAT (ICMP Parameter Problem Message Received) field is used to specify the alerting threshold for the number of ICMP parameter problem messages received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.23 ICEDAT

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Description: The ICEDAT (ICMP Echo Request Message Received) field is used to specify the alerting threshold for the number of ICMP echo request messages received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.24 ICTDAT

Description: The ICTDAT (ICMP TTL Exceeded Message Received) field is used to specify the alerting threshold for the number of ICMP exceeded messages received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.25 UURDAT

Description: The UURDAT(Unexpected UDP Datagrams Received) field is used to specify the alerting threshold for the number of unexpected UDP (User Datagram Protocol) datagrams.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.26 EURDAT

Description: The EURDAT (Errored UDP Datagrams Received) field is used to specify the alerting threshold for the number of errored UDP datagrams received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.27 RDLDAT

Description: The RDLDAT (RTP Datagrams Lost) field is used to specify the alerting threshold for the number of RTP (Real Time Transport Protocol) datagrams lost.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.28 ERRDAT

Description: The ERRDAT (Errored RTP Datagrams Received) field is used to specify the alerting threshold for the number of errored RTP datagrams received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.29 URVDAT

Description: The URVDAT (Unexpected RTCP Datagrams Received Valid Port) field is used to specify the alerting threshold for the number of unexpected RTCP (Real Time Control Protocol) datagrams receiving invalid ports.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.30 URIDAT

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Description: The URIDAT (Unexpected RTCP Datagrams Received Invalid Port) field is used to specify the alerting threshold for the number of unexpected RTCP datagrams receiving invalid ports.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

FIFTEEN MINUTE ALERTING THRESHOLDS

2.31 INH15

Description: This field is used to inhibit all 15 minute alerting thresholds.
Required field.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

2.32 CV15MAT

Description: This field is used to specify the alerting threshold for the Coding Violation 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 65535

2.33 LES15MAT

Description: This field is used to specify the alerting threshold for the Line Errored Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.34 LSES15MAT

Description: This field is used to specify the alerting threshold for the Line Severely Errored Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.35 PES15MAT

Description: This field is used to specify the alerting threshold for the Path Errored Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.36 PFLS15MAT

Description: This field is used to specify the alerting threshold for the Path Frame Loss Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

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2.37 PSES15MAT

Description: This field is used to specify the alerting threshold for the Path Severely Errored Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.38 PSS15MAT

Description: This field is used to specify the alerting threshold for the Path Slip Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.39 PUAS15MAT

Description: This field is used to specify the alerting threshold for the Path Unavailable Seconds 15 Minute Alerting Threshold.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

IP THRESHOLDS

These fields (Section 2.40 - Section 2.56) support the OIU-NAR and the OIU-IP features. For more information on these features, see Division 2, Section 7BQ and Division 2, Section 7BX, respectively.

2.40 IPH15MAT

Description: The IPH15MAT field is used to specify the alerting threshold for the number of invalid PPP headers received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.41 IPC15MAT

Description: The IPC15MAT field is used to specify the alerting threshold for the number of invalid PPP checksums received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.42 USP15MAT

Description: The USP15MAT field is used to specify the alerting threshold for the number of unavailable seconds for the PPP layer.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.43 IIH15MAT

Description: The IIH15MAT field is used to specify the alerting threshold for the number of invalid IP headers.

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Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.44 IIQ15MAT

Description: The IIQ15MAT field is used to specify the alerting threshold for the number of incoming IP queue congestion.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.45 IIF15MAT

Description: The IIF15MAT field is used to specify the alerting threshold for the number of incoming fragmented IP datagrams.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.46 ICR15MAT

Description: The ICR15MAT field is used to specify the alerting threshold for the number of incoming ICMP datagrams received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.47 ICD15MAT

Description: The ICD15MAT field is used to specify the alerting threshold for the number of incoming destination unreachable messages received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.48 ICP15MAT

Description: The ICP15MAT field is used to specify the alerting threshold for the number of ICMP parameter problem message received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.49 ICE15MAT

Description: The ICE15MAT field is used to specify the alerting threshold for the number of ICMP echo request messages received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.50 ICT15MAT

Description: The ICT15MAT field is used to specify the alerting threshold for the number of ICMP exceeded messages received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

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2.51 UUR15MAT

Description: The UUR15MAT field is used to specify the alerting threshold for the number of unexpected UDP datagrams.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.52 EUR15MAT

Description: The EUR15MAT field is used to specify the alerting threshold for the number of errored UDP datagrams received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.53 RDL15MAT

Description: The RDL15MAT field is used to specify the alerting threshold for the number of RTP datagrams lost.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.54 ERR15MAT

Description: The ERR15MAT field is used to specify the alerting threshold for the number of errored RTP datagrams received.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.55 URV15MAT

Description: The URV15MAT field is used to specify the alerting threshold for the number of unexpected RTCP datagrams received valid port.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

2.56 URI15MAT

Description: The URI15MAT field is used to specify the alerting threshold for the number of unexpected RTCP datagrams receiving invalid ports.

Software Release: 5E16(2) and later
Valid Entries: 1 - 900

```
oiupm                        5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5767)         OIU PERFORMANCE MONITORING THRESHOLD GROUP

*1. PM GROUP ________
 2. REMARKS  ____________________________________
#3. CKT TYPE _______
```

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```
oiupm                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5767)         OIU PERFORMANCE MONITORING THRESHOLD GROUP

DAILY ALERTING THRESHOLDS     IP THRESHOLDS     27. UURDAT _____
 4. INHDAY  N            16. IPHDAT _____    28. EURDAT _____
 5. CVDAT  _______         17. IPCDAT _____    29. RDLDAT _____
 6. LESDAT  _____          18. USPDAT _____    30. ERRDAT _____
 7. LSESDAT _____          19. IIHDAT _____    31. URVDAT _____
 8. PESDAT  _____          20. IIQDAT _____    32. URIDAT _____
 9. PFLSDAT _____          21. IIFDAT _____
10. PSESDAT _____          22. ICRDAT _____
11. PSSDAT  _____          23. ICDDAT _____
12. PUASDAT _____          24. ICPDAT _____
                    25. ICEDAT _____
                    26. ICTDAT _____
```

```
oiupm                    5ESS Switch
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5767)         OIU PERFORMANCE MONITORING THRESHOLD GROUP

FIFTEEN MINUTE ALERTING THRESHOLDS     IP THRESHOLDS     56. UUR15MAT ___
33. INH15    N                45. IPH15MAT ___    57. EUR15MAT ___
34. CV15MAT  _____                 46. IPC15MAT ___    58. RDL15MAT ___
35. LES15MAT  ___                  47. USP15MAT ___    59. ERR15MAT ___
36. LSES15MAT ___                  48. IIH15MAT ___    60. URV15MAT ___
37. PES15MAT  ___                  49. IIQ15MAT ___    61. URI15MAT ___
38. PFLS15MAT ___                  50. IIF15MAT ___
39. PSES15MAT ___                  51. ICR15MAT ___
40. PSS15MAT  ___                  52. ICD15MAT ___
41. PUAS15MAT ___                  53. ICP15MAT ___
                         54. ICE15MAT ___
                         55. ICT15MAT ___
```

Figure 1 SAMPLE OIUPM FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 5CD: 5769 Record
THRESHOLD ALARM LEVELS - ALRMLVLS

1. GENERAL

The 5769 Record is available with 5E16(2) and later Software Releases. It is used to review and update threshold alarm levels. This form supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. For more information on this feature, see Division 2, Section 7BX.

1.1 Recent Change View

The Recent Change View for this form is 8.29.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: The KEY field is used to access the form.

Software Release: 5E16(2) and later
Default: 0

2.3 ICMP ECHO REQ

Description: This field is used to define the alarm level for the ICMP (Internet Control Message Protocol) echo request thresholds, ICE15MAT and ICEDAT, on the OIUPM form.

Software Release: 5E16(2) and later
Valid Entries: Blank, or enter MINOR

2.4 IP FRAG DATAGRM

Description: This field is used to define the alarm level for the IP (Internet Protocol) fragmented datagrams thresholds, IIF15MAT and IIFDAT, on the OIUPM form.

Software Release: 5E16(2) and later
Valid Entries: Blank, or enter MINOR

2.5 UDP UNEXP DATAGRM

Description: This field is used to define the alarm level for the UDP (User Datagram Protocol) unexpected datagram thresholds, UUR15MAT and UURDAT, on the OIUPM form.

Software Release: 5E16(2) and later
Valid Entries: Blank, or enter MINOR

2.6 RTCP INV PORT

Description: This field is used to define the alarm level for the RTCP (Real-time Control Protocol) unexpected invalid port use thresholds, URI15MAT and URIDAT, on the OIUPM form.

Software Release: 5E16(2) and later

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Valid Entries: Blank, or enter MINOR

2.7 RTCP VAL PORT

Description: This field is used to define the alarm level for the RTCP unexpected valid port use thresholds, URV15MAT and URVDAT, the OIUPM form.

Software Release: 5E16(2) and later
Valid Entries: Blank, or enter MINOR

---

alrmlvls 5ESS Switch
OFFICE DATA ADMINISTRATION
(5769) THRESHOLD ALARM LEVELS

*1. KEY 0
2. ICMP ECHO REQ _____
3. IP FRAG DATAGRM _____
4. UDP UNEXP DATAGRM _____
5. RTCP INV PORT _____
6. RTCP VAL PORT _____

Figure 1 SAMPLE ALRMLVLS FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 5CF: 5589 RECORD
BICC RELEASE CAUSE VALUE - UNI2BCAU

1. GENERAL

The UNI2BCAU form (5589 Record) is available with 5E15 Feature Release 3 Software Update, and is used to provide customers with the ability to enter the desired BICC (Bearer Independent Connection Control) causes from the UNI (User to Network Interface) release cause categories.

This form is being added to support the Cause Value Mapping feature. This is a secured feature with an SFID of 567 that must be activated before using this form. For more detailed information on activating this feature, see Division 2, Section 4A567.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.43.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *UNI KEY

Description: This field is used as the UNI cause value or BICC category. When a bearer connection is being released, a UNI RELEASE message will be sent. One of the fields in the RELEASE message is "cause", which specifies the reason why the bearer connection is released.

Required Field.

Software Release: 5E15 and later
Valid Entries:

Valid OUTPULSING Entries

Entry	Definition
CV0	Unknown
CV1	Unallocated number
CV2	No route to specified transit network
CV3	No route to destination
CV16	Normal Call Clearing
CV22	Number changed
CV25	Exchange Routing Errors
CV27	Destination out of order
CV28	Invalid Number Format (Address incomplete)
CV31	Normal - unspecified
CV34	No circuit available
CV35	Requested VPCI/VCI Not Available
CV36	VPCI/VCI Assignment Failure
CV37	User Cell Rate Not Available
CV38	Network out of order
CV41	Temporary failure
CV42	Switching equipment congestion
CV44	Requested Channel not available
CV45	No VPI/VCI Available
CV46	Precedence Call Blocked
CV47	Resource Unavailable
CV49	Quality of Service Not Available
CV57	Bearer Capability not authorized
CV58	Bearer Capability presently not available
CV63	Service or option not available, unspecified
CV65	Bearer capability not implemented, unspecified
CV66	Channel type not implemented
CV69	Requested facility not implemented

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CV70	Only restricted digital information bearer capability is available
CV73	Unsupported combination of traffic parameters
CV79	Service or option not implemented, unspecified
CV91	Invalid transit network selection
BRF	BICC Cause Category "A": Bearer routing failure
NCC	BICC Cause Category "B": Normal Call Clearing
RUU	BICC Cause Category "C": Resource unavailable, unspecified
SNU	BICC Cause Category "D": Service or option not implemented, unspecified.
IU	BICC Cause Category "E": Interworking, unspecified
NU	BICC Cause Category"F": Normal, unspecified

Data Rules:

2.3 #BICC CAUSE

Description: This field is the BICC cause value. When a BICC call is being released, a BICC RELEASE message will be sent. One of the fields in the RELEASE message is "cause", which specifies the reason why the call is released.

Required Field.

Software Release: 5E15 and later
Valid Entries: 1 - 127

```
uni2bcau                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5589)                BICC RELEASE CAUSE VALUE

*1. UNI KEY    ____
#2. BICC CAUSE ___
```

Figure 1 SAMPLE UNI2BCAU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 6: SECURED FEATURES

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SEC. 6A: 5550 RECORD
MULTIPLE TN'S WITH DISTINCTIVE RINGING - MTNDR

1. GENERAL

The 5550 Record is available with 5E4(2) and later Software Releases. This is a Secured Feature and is available only to 5ESS Switch offices that have made special arrangements to purchase the feature.

1.1 Line Assignment

The MDNL (Multiple Telephone Numbers Per Line with Distinctive Ringing) feature allows multiple telephone numbers, with distinctive ringing, to be assigned to a single line (Master TN), without an additional line termination or additional station equipment.

An unlimited number of telephone numbers (Dependent TNs) may be assigned to the Master TN, but only four distinctive ringing patterns are available to be assigned to Dependent TNs.

This feature may only be assigned to analog lines with a CLASS OF SERVICE of "INDIV" or "INWATS" on the associated LCC form (5306 Record).

1.2 BRCS Feature Assignment

BRCS features are assigned to the Master TN and these features except Distinctive Ringing will be applied to all Dependent TNs.

The Master TN will receive ringing pattern "A" unless the BRCS Distinctive Ringing feature (defined on the DRFD form (5606-1 Record)) is assigned to the Master TN with a ringing pattern other than "A" The Dependent TNs are assigned individual distinctive ringing patterns on this form.

The BRCS Call Waiting and Call Forwarding features are enhanced with the MDNL feature. Distinctive Call Waiting tones, which correspond to the distinctive ringing patterns assigned to the Dependent TN on this form, allow the user to distinguish which number is being called.

If Call Forwarding is assigned to the Master TN, the forwarding of calls to Dependent TNs can be applied two different ways:

A. All calls that terminate to the Master or Dependent TNs can be forwarded using the Call Forwarding Variable feature assigned to the Master TN. This is accomplished by assigning a Call Forwarding Variable feature with the FORWARD MULTIPLE TN'S? field set to "Y" on the CFWLPA form (5614-3 Record).

B. All calls that terminate to the Master TN can be forwarded. All calls to Dependent TNs cannot be forwarded. This is accomplished by assigning a Call Forwarding Variable feature with the FORWARD MULTIPLE TN'S? field set to "N" on the CFWLPA form (5614-3 Record).

1.3 Line Time Slot Bridging

The MDNL feature is compatible with the 1-TN LTSB (Line Time Slot Bridging) feature (refer to Division 2, Section 1ac). 1-TN LTSB has two ports with the same telephone number. The ports are bridged through software emulation, as opposed to the traditional metallic bridging.

1.4 Recent Change View

The corresponding Recent Change View for this form is 1.9.

2. FORM AND RECORD ENTRIES

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2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * TN

Description: Enter the Telephone Number of the Dependent TN.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

This TN must be unique within the 5ESS Switch and must not be set to the TN entered in the MASTER TN field.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the MTNDR form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, the TN(s) defined on the MTNDR form must have the first three digits of a 7-digit TN or the first six digits of a 10-digit TN assigned on the NOC form as the OFFICE CODE or the NPA/OFFICE CODE, respectively.

2.3 # MASTER TN

Description: Enter the seven-digit Telephone Number of the Master TN. The Master TN is the telephone number that the Dependent TN is associated with. This is a required field.

Required Field.
Valid Entries: 7 digits, 0 - 9

Data Rules:

The value entered here must be defined on a LINE form with an OE NUMBER specified and either PTY must be set to "I" and MFRI must be set to "N" or PTY must be left blank.

MTNDR form(s) cannot have a MASTER TN assigned which matches a TN on a LINE form having 2-TN LTSB (Line Time Slot Bridging) assigned (the ASSOC OE TYPE and NUMBER match a second LINE form with matching OE TYPE and NUMBER). These types of lines cannot have Multiple TNs with Distinctive Ringing assigned.

For 5E12 and later, if the first 3 digits of the 7-digit MASTER TNs on the MTNDR form are equivalent to an OFFICE CODE on the NOC form, but there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7- digit MASTER TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, the TNs on the MTNDR form cannot have the MASTER TN equal to the TN on the same MTNDR form.

2.4 # RINGING PATTERN TYPE

Description: Enter the Distinctive Ringing Pattern that is assigned to the Dependent TN entered in the TN field.

Required Field.

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Default: A
Valid Entries:

Valid RINGING PATTERN TYPE Entries

Entry	Definition
A	Ringing - repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern). Call Waiting Tone - pattern of 0.3 seconds on.
B	Ringing - repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off. Call Waiting Tone - pattern of 0.1 seconds on, 0.1 seconds off, 0.1 seconds on.
C	Ringing - repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off. Call Waiting Tone - pattern of 0.1 seconds on, 0.1 seconds off, 0.1 seconds on, 0.1 seconds off, 0.1 seconds on.
E	Ringing - repeated pattern of 0.3 seconds on, 0.2 seconds off, 1 second on, 0.2 seconds off, 0.3 seconds on, and 4 seconds off. Call Waiting Tone - pattern of 0.1 seconds on, 0.1 seconds off, 0.3 seconds on, 0.1 seconds off, 0.1 seconds on.

2.5 # TRC

Description: Will Call Tracing be allowed? When Call Trace is in effect, it is used to trace all incoming calls to the customer's Telephone Number and a record is printed on the Maintenance TTY.

Required Field.
Default: N
Valid Entries: Y, N

2.6 # ICP

Description: Will routing of terminating calls be allowed to go to regular intercept? If ICP is "Y" then all calls terminating to the Dependent TN, defined in the TN field, are rerouted to Regular Intercept.

Required Field.

Default value is N
Valid Entries: Y, N

2.7 DNY BV

Description: This field is used in Recent Change as a verify only field to indicate if Deny Busy Verification is allowed.

2.8 # INWATS

Description: Will Inwats be allowed? If a "Y" is entered, then the Dependent TN, defined in the TN field, will have Inwats.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If this field is "Y" then ICP must be "N"

2.9 NEXT KEY TN

Description: This field is used in Recent Change as a verify only field to determine all the Dependent TNs associated with the Master TN.

```
mtndr                    5ESS Switch          _
5550                OFFICE DATA ADMINISTRATION
               MULTIPLE TNs WITH DISTINCTIVE RINGING



* 1. TN                3451236
# 2. MASTER TN            3455000
# 3. RINGING PATTERN TYPE  B
# 4. TRC                 N
# 5. ICP                 N
    DNY BV
# 6. INWATS              N
    NEXT KEY TN
```

Figure 1 SAMPLE MTNDR FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
mtndr                    5ESS Switch          _
5550                OFFICE DATA ADMINISTRATION
               MULTIPLE TNs WITH DISTINCTIVE RINGING



* 1. TN                _____________
# 2. MASTER TN            _____________
# 3. RINGING PATTERN TYPE  A
# 4. TRC                 N
# 5. ICP                 N
    DNY BV
# 6. INWATS              N
    NEXT KEY TN
```

Figure 2 SAMPLE MTNDR FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 6B: 5551 RECORD
CARRIER LINE SCREENING FORM - CARSCR

1. GENERAL

The 5551 record is available with 5E5 and later Software Releases, and is used by the operating company to assign carrier line screening information to an individual TN (Telephone Number) or to an MLHG (Multi-Line Hunt Group) and MLHG member for a particular carrier as part of the SCD (Selective Carrier Denial) feature. The SCD feature is also available with 5E5 and later Software Releases and allows carriers to selectively inhibit certain calls from lines the carriers themselves have designated as non-paying subscribers.

The 5551 Record consists of all carriers assigned to each individual TN or MLHG group and member. Each unique CARRIER ID, however, generates a second record (5551A). This record consists of each individual carrier and the corresponding TN or MLHG group and member the listed carrier is screening.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.60.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 (*) TN

Description: Enter a local Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

If a TN is entered, then the MLHG and TERM fields on this form must be left blank. However, if MLHG and TERM values are going to be entered on this form, this TN field must be left blank.

The TN entered on this form must be defined on a LINE form (5109 Record) where OE TYPE/NUMBER must be defined and "N" must be entered in the SHARED field. Also, the CLASS OF SERVICE field on the LCC form (5306 Record), where the LCC/RAX value equals the LCC/RAX entered on the LINE form, must have one of the following values entered: "INDIV", "PBX", "HOTMOTL", or "HOTPBX".

For 5E12 and later, TNs on different CARSCR forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the CARSCR form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 SCD OE

Description: This field identifies the Selective Carrier Denial Office Equipment number. This is a Recent Change only field.

2.4 (*) MLHG

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Description: Enter the MLHG number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

When assigning MLHG numbers, entries exceeding 999 are not allowed until the range of 1 - 999 is completely exhausted. If a value is entered in this field, the TERM field on this form must also have an entry and the TN must be left blank. If a TN value was entered, leave this MLHG field blank.

The MLHG value entered must be defined on an MLHLN form (5111-1/2/3 Record) where OE TYPE/NUMBER must be defined and "N" must be entered in the SHARED field. Also, the CLASS OF SERVICE field on the LCC form, where LCC/RAX matches the LCC/RAX on the MLHLN form, must have one of the following values: "INDIV", "PBX", "HOTMOTL", or "HOTPBX".

2.5 (*) TERM

Description: Enter the MLHG terminal number.
Valid Entries: 1 - 2015 and 3001 - 3999
- (outdial terminals only)

Data Rules:

The TERM value must be defined on the MLHLN form where OE TYPE/NUMBER must be defined and "N" must be entered in the SHARED field. Also, the CLASS OF SERVICE field on the LCC form, where the LCC/RAX matches the LCC/RAX on the MLHLN form, must have one of the following values: "INDIV", "PBX", "HOTMOTL", or "HOTPBX".

If a value is entered in this field, an MLHG value must be entered and the TN field must be blank; however, the TERM field is left blank if a TN value was entered.

2.6 * CARRIER ID

Description: Enter the Carrier Identification Code.

Required Field.
Valid Entries:
- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

The CARRIER ID value entered on this form must be defined on the ICF form (5305 Record) with SCD SCRNING set to "Y", and for 5E8 and later, FEAT GRP on the ICF form must equal "D".

```
carscr                  5ESS Switch
(5551)              OFFICE DATA ADMINISTRATION
                  CARRIER LINE SCREENING

(*)1. TN      _______
    SCD OE
(*)5. MLHG      0330
```

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```
(*)6. TERM       0120
 * 7. CARRIER ID  0288
```

Figure 1 SAMPLE CARSCR FORM 5E9(2) THROUGH 5E11 SOFTWARE RELEASES

```
carscr                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5551)                  CARRIER LINE SCREENING

(*)1. TN        __________
     SCD OE     _ ___________
(*)5. MLHG      ____
(*)6. TERM      ____
  *7. CARRIER ID ____
```

Figure 2 SAMPLE CARSCR FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 6C: 5552 RECORD
SCD SCREENED SERVICE ACCESS CODES FORM - SACSCR

1. GENERAL

This form is available with 5E5 and later Software Releases. It is used to assign Service Access Codes that will be screened by the operating company via the SCD (Selective Carrier Denial) feature. The SCD feature allows a carrier to selectively inhibit certain carrier handled calls from lines designated as non-paying subscribers by the particular carrier.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.8.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SAC

Description: Enter a three-digit Service Access Code in the NPA format where N is any digit in the range 2 - 9, P is in the range 0 - 1, and A equals 0 - 9.

Required Field.
Valid Entries: 3 digits

Data Rules:

If a SAC is entered on this form, it must be defined as the first three digits of INCOMING DIGITS on at least one LDIT form with TYPE OF CI CALL set to "SAC".

---

sacscr 5ESS Switch _
(5552) OFFICE DATA ADMINISTRATION
SCD SCREENED SERVICE ACCESS CODES

*1. SAC 209

Figure 1 SAMPLE SACSCR FORM 5E5 AND LATER SOFTWARE RELEASES

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DIV. 4: BRCS FEATURE FORMS

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SEC. 1: CLUSTER FORMS

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SEC. 1A: 5600 RECORD
CLUSTER DEFINITION FORM - CLUSTR

1. GENERAL

The 5600 Record is available with 5E2 and later Software Releases and defines a cluster of BRCS (Business and Residence Custom Services) Feature names.

With 5E6 and later Software Releases, Speed Calling (Abbreviated Dialing) features are assigned separately from IDP (Individualized Dialing Plan) features. Prior to this disassociation, a 5600 Record can be assigned an IDP feature with a Speed Call feature which counts as one feature for that line. However, after a retrofit from the 5E5 Software Release to the 5E6 Software Release, any CLUSTR form with an IDP feature will retain IDP features but will not retain any Speed Call features. Constructed and preconstructed Speed Calling features in the 5E5 Software Release are automatically assigned to corresponding Speed Calling preconstructed features in the 5E6 Software Release.

The CLUSTER NAME is an arbitrary eight character name that must be unique and cannot be equivalent to any other BRCS Feature names.

The CLUSTR form is normally used to create a CLUSTER NAME that represents a group of BRCS feature names. The CLUSTER NAME is then assigned on various feature assignment forms such as LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), TRUNKFA (5205 Record), and TKGRPFA (5206 Record). This method saves data entry effort by allowing a group of features to be represented by a single CLUSTER NAME which is then used in the actual customer assignment.

Note that a CLUSTER NAME can be defined with no BRCS Features. The empty CLUSTER value is assigned on appropriate feature definition forms to initialize the customer assignment base relation data in ODA, and then the actual features are added to the CLUSTR form (5600 Record) after turnover using Recent Change update.

Wildcard feature names of the format /AA* (AA equal to alphabetic) are not allowed to be assigned to a feature on the CLUSTR form.

The following restrictions apply:

- A maximum of 1023 clusters may be defined in an office.
- Clusters may not be assigned to any party lines.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.2.

2. FORM AND RECORD ENTRIES - 5600 RECORD

2.1 BASE AND CONTROL ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * CLUSTER NAME

Description: Enter a unique BRCS Feature Cluster Name. The Cluster Name cannot be equivalent to any other BRCS Feature names assigned on the CLUSTR form.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

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The total quantity of unique CLUSTER NAMEs may not exceed 1023.

2.3 REMARKS

Description: Enter a description of the CLUSTER NAME.
Valid Entries: 1 - 32 characters

FEATURE LIST

Fields Section 2.4 -Section 2.8 refer to a list of up to sixteen feature names (16 rows, each containing a unique BRCS Feature name), with the associated Activity Status, automatic forms Presentation status, Authorization Code feature status, and Remote Access Services feature status.

2.4 FEATURE

Description: Enter the unique BRCS Feature Name.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

For 5E9(1) and later, the BRCS Feature Names assigned on the input CLUSTR form must be defined on any of the associated Feature Definition forms:

ACBFD, ACCTFD, ACSRFD, ACVTFD, ARSFD, ASIFD, ASPFD, ATHFD, BCLIDFD, CFWFD, CPNBNFD, CWTFD, DISPFD, DRFD, EDSFD, HIFD, ICMFD, IDFD, MSFD, LIDFD, LSACFD, LSARFD, LSCOTFD, LSCAFD, LSCFFD, LSCRFD, LSDAFD, LSCARFD, MWFD, MDRFD, PFAFD, PPFD, PUOFD, PUTFD, RNDFD, SCFD, TGSRFD, TODFD

The /LIRDAMU, /LIRDNMU, and /LIRMDU preconstructed features which were created to support the Calling Name Delivery feature were not available for the 5E7 Software Release.

For 5E15 and later, when FEATURE is entered on this form, it must not be defined on the MWFD form (5602 Record) where the appropriate fields on the MWFD form are set as follows:

- FEATURE OPTIONS fields: ACT/INACT OPTION must be set to "ACT1CA", MULTIWAY CONTROL must be set to "NWAY", and AMAC must be set to "USAGE",
- ENTRY POINT fields: FLASH must be set to "Y", IN MIDDLE must be set to "Y", and OFF HOOK must be set to "Y", and
- DEFAULT PARAMETER field: N-WAY MAXIMUM must be set to "6".

The feature options on the MWFD form define a USSWC (Usage Sensitive Six-Way Calling) feature which cannot be assigned on this form. USSWC must be assigned on the OFCOPT form (5509 Record). For more information on the USSWC feature, see Division 2, Section 4A553.

2.5 A

Description: Is the BRCS feature initially active? This is the Activity Status.
Valid Entries: Y, N

Data Rules:

The value of the Activity Status for each Feature Name in the FEATURE LIST is based on the following conditions:

If the Feature Name is defined on the ACBFD (5616-1 Record) or ARSFD form (5608-1A/1B Record), then

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the Activity Status must equal "Y".

If the Feature Name is defined on the CFWFD (5614-1/2 Record), CWTFD (5603-1 Record), DRFD (5606-1 Record), PUOFD (5605-1 Record), PUTFD (5605-2 Record) (5E6 and earlier) , or TGSRFD form (5607-1/2 Record) with the ACT TYPE equal to "AUTO", then the Activity Status must equal "Y".

For 5E7 and later, if the Feature Name is defined on the PUTFD form, with ACT TYPE equal to "AUTO", it is recommended that the Activity Status equal "Y".

If the Feature Name is defined on the TODFD form (5610-1 Record) with the CUSTOMER ACTIVATION equal to "N", then the Activity Status must equal "Y".

If the Feature Name is defined on the IDFD form (5601 Record) with CUST ACT/DEACT IDP equal to "N", then the Activity Status must equal "Y".

If the Feature Name is defined on the MWFD form (5602-1/2 Record) with the ACT/INACT OPTION equal to "ALWACT" or "INACT1CA", then the Activity Status must equal "Y".

If the Feature Name is defined on the CFWFD form with the ACT TYPE equal to "CODE", "CDDN", "CDDNC", or "CDDNCA", then the Activity Status must equal "N".

If the Feature Name is defined on the MWFD form with the ACT/INACT OPTION equal to "ACT1CA", then the Activity Status must equal "N".

If the Feature Name is defined on the CWTFD, DRFD or TGSRFD form with the ACT TYPE equal to "CODE" and the DACT TYPE equal to "AUTO", then the Activity Status must equal "N".

2.6 P

Description: Enter the value for automatic forms presentation. The value to be entered is that which will be used in RC/V after the ODD (Office Dependent Data) is loaded on the switch.

Valid P Entries

Entry	Definition
N	No automatic forms presentation
R	Automatic forms presentation on RC/V review case
U	Automatic forms presentation on RC/V update case

Data Rules:

If one or more Feature Names are submitted, the corresponding A and P fields must also have an entry.

If the FEATURE assigned on this form is defined on the DISPFD form (5965 Record) or LIDFD form (5966 Record), then this field must be entered with "N".

2.7 AC

Description: Is the Authorization Code feature required?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

If AC is "Y", then this CLUSTR form or an associated LINEFA, MLHLNFA, TKGRPFA or TRUNKFA form must have one and only one ATH Feature associated with it, defined on the ATHFD form (5619-1 Record).

If AC is "Y", and the corresponding feature is not an ATH feature defined on an ATHFD form, then the feature must be entered on ATHFCOS forms (5619-4 Record) for the CSV ATH Groups associated with lines, MLHG/TERMs, trunk groups, or trunks to which this cluster is assigned. For 5E6 and later, the

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feature must also be entered on ATHFCOS forms for the CSD ATH Group.

If the AC field is set to "Y", then an Authorization Code Feature must also exist on either a LINEFA form, a BFG form, or an associated CLUSTR form. The Authorization Code Feature must be defined on the ATHFD form, and entered on a LINEFA form, BFG form, or an associated CLUSTR form.

AC must be "N" when FEATURE is:

- a DISP feature, and the cluster is assigned on a LINEFA, MLHLNFA, TKGRPFA, or TRUNKFA form;
- an ACVT, BCLID, CPNBN, EDS, LID, MS, or RND feature, and the cluster is assigned on a LINEFA or MLHLNFA form;
- an ACSR, HI, or Feature Button ICM feature, and the cluster is assigned on a LINEFA form.

2.8 R

Description: Are RAS (Remote Access Services) requested on the feature?

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

The only feature supported by RAS in 5E5 is RACF (Remote Access Call Forwarding). If "Y" is entered, the associated CFWFD form (5614-1/2 Record) must have ACT TYPE set to "CDDN", "CDDNC", "CDDNCA", "CDCA1A", or "CODE", and the DACT TYPE set to "CODE".

clustr 5ESS Switch _
(5600) OFFICE DATA ADMINISTRATION
FEATURE CLUSTER DEFINITION

* 1. CLUSTER NAME AJAXI
2. REMARKS _____

3. FEATURE LIST (FEATLIST)

	5.			11.				17.				23.			
row	FEATURE	A	P	AC	R	FEATURE	A	P	AC	R	FEATURE	A	P	AC	R	FEATURE	A	P	AC	R
01	AJAXDPI	Y	U	Y	N	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_
02	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_
03	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_
04	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_	_____	_	_	_	_

Figure 1 SAMPLE CLUSTR FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2: INDIVIDUALIZED DIALING FORMS

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SEC. 2A: 5601 RECORD
INDIVIDUALIZED DIALING FEATURE DEFINITION FORM - IDFD

1. GENERAL

The 5601 Record is available with 5E2 and later Software Releases. The IDFD form is used to define IDPs (Individualized Dialing Plans) for assignment to lines and/or trunks.

A terminal (line or trunk) may be assigned only one ID feature on the feature assignment forms LINEFA, MLHLNFA, BFG, TKGRPFA or TRUNKFA. Each such combination is given a feature name of from one- to eight-characters which is used to assign the constructed (switch owner defined) feature to lines or trunks. ID constructed features do not count toward the office's Constructed Feature Limit; see the CFL form (5712 Record) in Division 8, Section 11.

Certain ID features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/) and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed ID features is contained in Figure 2 .

1.1 Recent Change View

The corresponding Recent Change view for this form is 12.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the Individualized Dialing feature name. Feature names may be from one- to eight-characters long, with no restrictions on the valid characters, except that feature names starting with a slash (/) are reserved for preconstructed features.

Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.7) define the options assigned with the feature.

2.4 INHIBIT CHARGING

Description: Enter the type of calls that will not be charged.
Default: ICOMOFFC
Valid Entries:

Valid INHIBIT CHARGING Entries

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Entry	Definition
ICOMGRP	Inhibit charging of intercom calls within the originator's Terminal Group.
ICOMOFFC	Inhibit charging of line-to-line intercom calls withinthe originator's switching office.
NO	Bill all calls normally.

2.5 CUST ACT/DEACT IDP

Description: Is the customer allowed to activate or deactivate the IDP?
Default: N
Valid Entries: Y, N

Data Rules:

If customer deactivation is allowed, the particular IDP must contain an IDP deactivation code (see the IDPDCA form). A terminal must be authorized with an appropriate DPAT (Dialing Plan Access Treatment) code to deactivate its IDP and it must be assigned to an IDP Group for deactivation to be successful.

If customer activation of an IDP is allowed, the ODP (Office Dialing Plan) must contain an IDP activation code (see the PDIT Form). A terminal must be authorized to activate its IDP, and it must be assigned to an IDP Group for activation to be successful. A terminal is authorized by being assigned an IDFD feature name which allows activation of the IDP. If it is desired that not all of the terminals which use the IDP Group information should be allowed to activate the IDP, then two IDFD features would be required. One of the IDFD forms would be defined with CUST ACT/DEACT IDP equal to "Y", and the other equal to "N". They must have unique feature names so they can be assigned appropriately to the terminals on the feature assignment forms. All the terminals can still be assigned to (and share) the same IDP Group Name and information.

2.6 CUST ACT/DEACT ACT

Description: Is the customer allowed to activate or deactivate the Alternate Code Treatment for any of its defined sets (see the IDPACT form)? Enter "N" if customer activation/deactivation is not allowed.
Default: N
Valid Entries: Y, N

Data Rules:

If customer activation/deactivation is allowed, either the named IDP must contain codes with "ACTOFF" and "ACTON" actions (see the IDPDCA form) or an appropriate key must be provided (see the FTRKEY form).

To activate or deactivate the ACT with a dialed code, a terminal must be authorized (with an appropriate DPAT code), and it must be assigned an IDP for the change to be successful.

2.7 GPIC CUST CHANGEABLE

Description: Is the customer allowed to change the IDP group primary interexchange carrier?
Default: N
Valid Entries: Y, N

Data Rules:

If customer change is allowed, the named IDP must contain a group carrier change code (see the IDPDCA form). To change the carrier, a terminal must be authorized (with an appropriate DPAT code) to change the carrier and it must be assigned an IDP for the change to be successful.

DEFAULT PARAMETERS

The following fields (Section 2.8 - Section 2.10) define the default parameters assigned with the feature to

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terminals (lines or trunks). These parameters will be assigned to the terminal unless they are overridden by entries on the IDPLPA, IDPMPA or IDPTPA forms.

If an IDPLPA, IDPMPA, or IDPTPA parameter assignment form is entered for any given terminal, all entries on that form will be used for the terminal. None of the default parameters entered here on the IDFD form will be used.

2.8 IDP GROUP NAME

Description: Enter the name of the default Individualized Dialing Plan Group Name. The name may be from one to eight characters, with no restrictions on the valid characters.
Valid Entries: 1 - 8 characters

Data Rules:

When a trunk is assigned an IDP feature on the TKGRPFA, TRUNKFA, or associated CLUSTR form, the IDP GROUP NAME must be entered here or on the IDPTPA form if one exists for the trunk group.

If a default IDP GROUP NAME entered is defined on an IDPGP form (5601-4 Record) with DPAT ALLOWED set to "Y", DPAT CATEGORY must be entered on this IDFD form.

If a default IDP GROUP NAME is not entered, DPAT CATEGORY must not be specified.

2.9 DPAT CATEGORY

Description: Enter the default Dialing Plan Access Treatment category.
Valid Entries: 1 - 32

Data Rules:

If this field is entered, IDP GROUP NAME must be entered on this form, and for 5E8 and later, DPAT ALLOWED must be "Y" on the corresponding IDPGP form (5601-4 Record).

2.10 ICR SFG

Description: Enter an Intercom Calling Restriction Simulated Facility Group number.
Valid Entries: 1 - 2000

Data Rules:

If an ICR SFG is entered, then an IDP GROUP NAME must be entered. The ICR SFG must also be defined on the PFASFG form with "ICR" entered in the SFG TYPE field.

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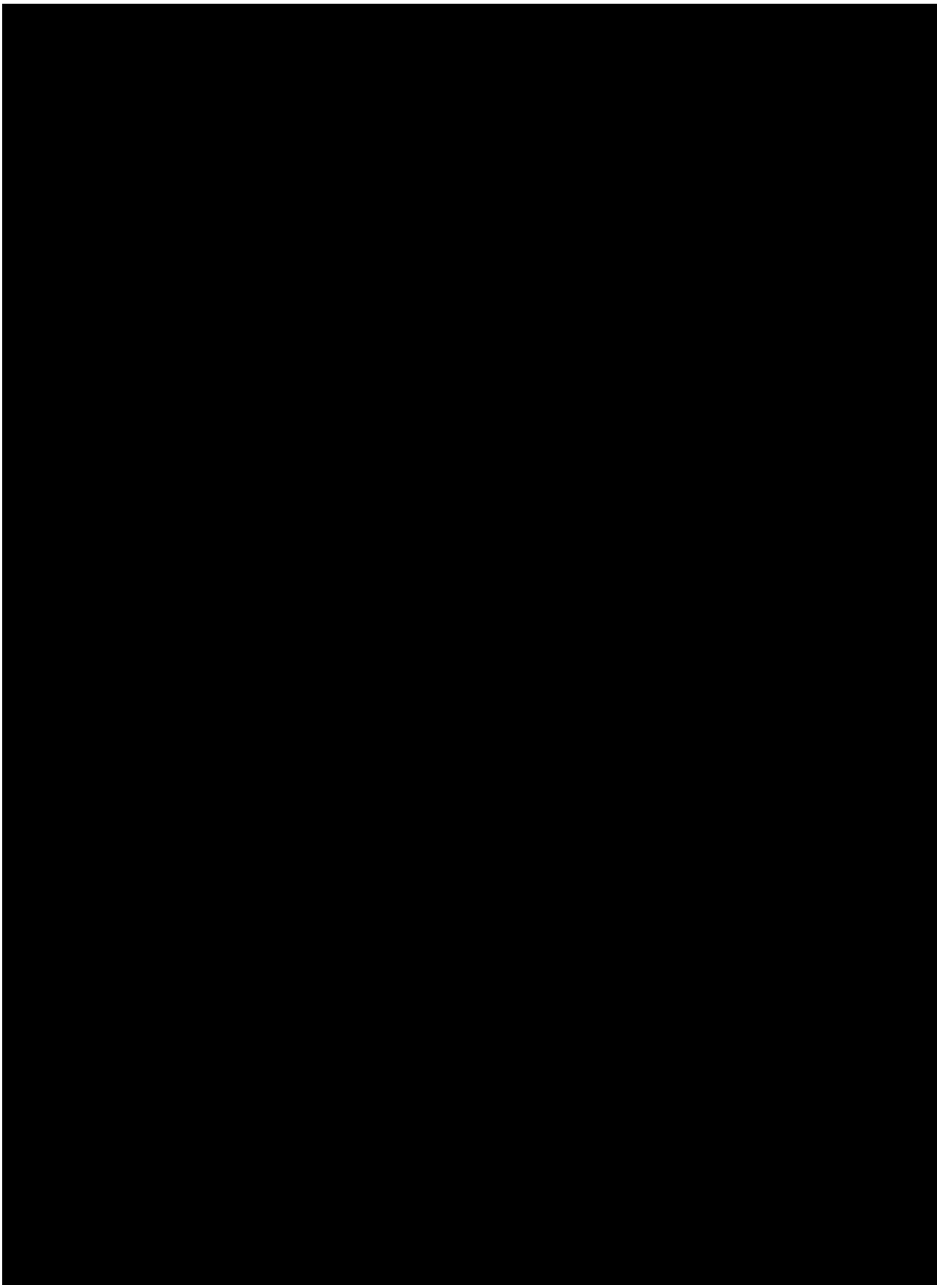

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Figure 1 INDIVIDUALIZED DIALING FORM FLOW 5E7 AND LATER SOFTWARE RELEASES

ESS 5601(11/96)TG-5 INDIVIDUALIZED DIALING DATE _____

FEATURE DEFINITION RECORD

IDFD 5ESS SWITCH

12.17

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS				DEFAULT PARAMETERS		
		INHIBIT CHARGING	CUST ACT/DEACT IDP	CUST ACT/DEACT ACT	GPIC CUST CHANGEABLE	IDP GROUP NAME	DCP ATTEG ORY	ICR SFG
/ID*	WILD-CARD ID FEATURE	ICOMGRP	Y	Y	Y			
/IDP	ID FEATURE WITHOUT CUST CHANGE.	ICOMGRP	N	N	N			
/IDP1	ID FEATURE WITH CUST CHANGE.	ICOMGRP	Y	Y	Y			

Figure 2 PRECONSTRUCTED ID FEATURES 5E7 AND LATER SOFTWARE RELEASES

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```
                    5ESS Switch
idfd              OFFICE DATA ADMINISTRATION
(5601)       INDIVIDUAL DIALING PLAN FEATURE DEFINITION

*2. FEATURE ID1              3. REMARKS _____

============================== FEATURE OPTIONS ================================
 4. INHIBIT CHARGING    ICOMOFFC
 5. CUST ACT/DEACT IDP  N
 6. CUST ACT/DEACT ACT  N
 7. GPIC CUST CHANGEABLE N

============================= DEFAULT PARAMETERS ==============================
 8. IDP GROUP NAME      IDP1
 9. DPAT CATEGORY       02
10. ICR SFG             0001
```

Figure 3 SAMPLE IDFD FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 2B: 5601-1/2 RECORDS
INDIVIDUALIZED DIALING PLAN DIALED CODE ASSIGNMENT FORM - IDPDCA

1. GENERAL

The 5601-1/2 Record is used to define the dialed codes associated with IDPs (Individualized Dialing Plans).

The IDPDCA form is associated with an Individualized Dialing Feature Definition form, IDFD form (5601-a/b Record).

1.1 Dialed Code Ambiguities

Ambiguities are allowed in defining an IDP's dialed codes. This is similar to ambiguities which occur in the ODP (Office Dialing Plan), particularly as defined in LDIT. Ambiguities occur whenever the treatment of a call depends, at some point in the inpulsing, upon whether or not any additional digits are received. As an example, if two entries are provided on the IDPDCA, one for 2 (an Abbreviated Dial code) and one for 2000 (an Intercom code), an ambiguity occurs after the digit 2 is received. The ambiguity is resolved by critical timing, usually four seconds (see the TIMING form, (5520 Record)). If no more digits are received within this specified interval, the call times out and is given the treatment specified on the IDPDCA entry for 2. Otherwise, digit analysis continues as more digits are received.

For any two IDPDCA entries in which ambiguity occurs, the entry with the shorter of the codes must have a STATE of "NORMAL", i.e., all the digits expected must be specified in Incoming Digits.

1.2 Abbreviated Dialing

A terminal which belongs to an IDP Group, and also has Abbreviated Dialing, must use the IDPDCA to interpret the AD (Abbreviated Dialing) codes. Dialing AD codes while the Office Dialing Plan is doing digit analysis will not be allowed for this terminal.

It is possible to enter in Incoming Digits more than one digit for AD1USE and more than two digits for AD2USE. However, call processing will use the last digit or digits dialed to enter the Abbreviated Dialing Lists. For instance, if *20 is defined in the IDPDCA as AD2USE, the 20 should be defined in the ADLIST. When the customer dials *20, the Stored DN associated with 20 will be used.

1.3 Recent Change View

The corresponding Recent Change View for this form is 9.13.

2. FORM ENTRIES - 5601-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * IDP GRP

Description: Enter the IDP Group Name.

Required Field.
Valid Entries: 1 - 8 characters

2.3 * INC DIGITS

Description: Enter the dialed, or inpulsed, code to be interpreted.

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Required Field.
Valid Entries: 1 - 10 digits, 0 - 9 inclusive. The first digit may also be # or *. The first or second digit, but not both, may be O, F, I, or P.

Data Rules:

If the O, F, I or P characters are entered, the corresponding ACTION and FEATURE must be associated with DSN/PP (Defense Switched Network / Precedence and Preemption). The DSN/PP interface is defined with the BRCS feature PP (Precedence and Preemption). For additional information concerning digit analysis for DSN/PP refer to the PPFD form (5618-1 Record).

If it is necessary to enter a single character * or #, the character must be preceded or followed by a space (space bar).

2.4 STATE

Description: This field defines the state of digit interpretation after the last digit in the INC DIGITS field has been dialed.

Required Field.
Default: NORMAL
Valid Entries:

Valid STATE Entries

Entry	Definition
CONFLCT	If the destination or treatment of the call cannot be determined after receipt of the last digit in the INC DIGITS field but depends upon the number (rather than value) of additional dialed digits, then enter "CONFLCT" in this field. Also enter "CONFLCT" when the treatment can be determined by the INC DIGITS, but a variable number of digits remain to be collected.
REMAIN	If the specified INC DIGITS are sufficient to determine the call treatment, but additional digits are to be collected for outpulsing or for intercom calling, then enter "REMAIN". If "REMAIN" is specified, an entry is required in the NBR REM DIGITS field. If "REMAIN" is specified, an entry is required in both ACTION and FEATURE.
NORMAL	If the specified digits are sufficient to determine the call treatment, and no additional digits are to be collected, enter "NORMAL". If "NORMAL" is specified, an entry is required in both ACTION and FEATURE.
PAUSE	This state is applicable to the DSN (Defense Switched Network) capability. If the specified INC DIGITS are sufficient to determine an action but subsequent digits must also be analyzed in the IDPDCA, enter "PAUSE". If "PAUSE" is specified, an entry is required in both ACTION and FEATURE.

Data Rules:

When STATE is "CONFLCT", at least two conflict resolution entries must be entered on this form.

If STATE is "CONFLCT" then only the conflict entries may be specified.

When STATE is "PAUSE", REM DIGITS must be blank.

2.5 ACTION

Description: Enter the action to be taken when the INC DIGITS are dialed.

This field does not apply when STATE is "CNFLCT" or "CONFLCT".

Valid ACTION Entries

Entry	Definition
AAOFF	Auto Answer Off via dial code. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.
AAON	Auto Answer On via dial code. For more information on the ACD/BRCS secured feature see

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	Division 2, Section 4A121.
ACBCANC	Cancel auto-call back camp-on.
ACBUSE	Use auto-call back to camp-on to busy line.
ACCANC	LASS Automatic Callback deactivation. This dialed code allows the user to deactivate the AC (Automatic Callback) feature. The user goes off-hook, enters the dialed code, and receives a cancellation announcement.
ACCTACT	Activate account code feature.
ACCTDCT	Deactivate account code feature.
ACCTUSE	Account code use code.
ACDXFER	Transfer to ACD from ARU followed by ACD DN for the Transfer to ACD from ARU Special Feature.
ACSRCAN	Cancel ACSR move. This action is currently not available.
ACSROFF	Allows a member of an ACSR group with GRP CNTL set to "Y" on the ACSRFD form to deactivate ACSR for the entire group.
ACSRON	Allows a member of an ACSR group with GRP CNTL set to "Y" on the ACSRFD form (5959-1 Record) to activate ACSR for the entire group.
ACSRUSE	Allows an ACSR user to invoke an ACSR move.
ACSRVFY	Allows an ACSR user to verify the status of the ACSR move on the queue.
ACTCPNBN	Activate the CPN/BN feature via dialed code.
ACTGMB	Software Release: 5E15 and later. Activate Group Make Busy
ACTMMB	Software Release: 5E15 and later. Activate Member Make Busy
ACTOFF	Set ACT in IDP off.
ACTON	Set ACT in IDP on.
ACTSTH	Software Release: 5E15 and later. Activate Stop Hunt
ACUSE	Callback activation. This dialed code allows the user to activate the AC (Automatic Callback) feature. The user goes off-hook, enters the dialed code, and receives an appropriate response. (See page of this section for possible responses.)
AD1CH	Change 1 digit Abbreviated Dial list.
AD1USE	Use 1 digit Abbreviated Dial.
AD2CH	Change 2 digit Abbreviated Dial list.
AD2USE	Use 2 digit Abbreviated Dial.
AIUSE	Agent Intercom via dial code. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.
ALTACT	Activate alternate parameter set.
ANSBACK	Call Park Answer Back. This action allows the user to answer back a parked call from any DN within the same terminal group. For more information on Call Park see Division 2, Section 4A124.
AQCUSE	ACD Queue Calling via dial code. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.
ARCANC	LASS Automatic Recall deactivation. This dialed code allows the user to deactivate the AR (Automatic Recall) feature. The user goes off-hook, enters the dialed code and a cancellation announcement is returned.
ARSCP	Change ARS pattern group number.
ARSDCT	Deactivate ARS feature for one call.
ARS1USE	Use Automatic Route Selection with Private Network Dialing Plan 1.
ARS2USE	Use Automatic Route Selection with Private Network Dialing Plan 2.
ARSUSE	Use Automatic Route Selection with the Office Dialing Plan.
ARUSE	LASS Automatic Recall activation. This dialed code allows the user to activate the AR (Automatic Recall) feature. The user goes off-hook, enters the dialed code, and receives an appropriate response. (See page of this section for possible responses.)
ASITOG	ASI (Advanced Service Interface) Proxy implicit mode toggle. A dialed code defined in the office as a CORC (Customer Originated Recent Change) allows the user to activate or deactivate the ASI Proxy implicit mode feature. The system response is a stutter dial tone. See Division 2, Section 4A93 for more information about ASI.
ASIUSE	ASI Proxy explicit mode activation. This dialed code allows the user to activate the ASI Proxy feature in the explicit mode. The user goes off-hook, enters the dialed code, and receives an immediate connection to an ASI trunk (no dial or confirmation tone).
ASPDNC	No further digits are collected and an immediate query is sent to the SCP. A response is received and the call is routed.
ASPNORM	Digit collection and digit analysis on the collected digits are performed. A query is then launched to the SCP. A response is received and the call is routed.
ASPVAR	Digits are collected until interdigit timing expires. A query is launched and a response is received from the SCP. The call is routed.
ATACTMWI	Activate Message Waiting Indicator by attendant. This dialed code is used by a MSC (Message

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	Service Center) attendant to activate the MWI (Message Waiting Indicator) at the user's station set. The attendant enters the dialed code, receives stutter dial tone and then dials the number of the telephone the MWI is to be activated on.
ATDCTMWI	Deactivate Message Waiting Indicator by attendant. This dialed code works similarly to the "ATACTMWI" action. The attendant can enter the dialed code, receive stutter dial tone and then dial the number of the telephone the MWI is to be deactivated on.
ATFACT	DN activates ISDN Attendant Control of Voice Terminal feature.
ATFDCT	DN deactivates ISDN Attendant Control of Voice Terminals feature.
ATGACT	A DN activates ISDN ACVT (Attendant Control of Voice Terminal) feature for a group of DNs.
ATGDCT	A DN deactivates ISDN ACVT (Attendant Control of Voice Terminal) feature for a group of DNs.
ATHACT	This feature is used to activate the Authorization Code feature. This ACTION will automatically set the A field to "Y" on the associated line or trunk assignment form, e.g., LINEFA, TRUNKFA, or TKGRPFA forms.
ATHDCT	This feature is used to deactivate the Authorization Code feature. This ACTION will automatically set the A field to "N" on the associated line or trunk assignment form, e.g., LINEFA, TRUNKFA, or TKGRPFA forms.
ATHINS	This ACTION is used to put a line or trunk "In Service" by automatically setting the ATH FIRST field to "N" on the associated ATHLPA, ATHMPA or ATHTPA form. When the ATH FIRST field is set to "N", an Authorization Use Code and the Authorization Code is not needed before the TN is entered.
ATHNREQ	This ACTION is used to automatically set the AC field to "N" on the associated line or trunk assignment form, e.g., LINEFA, TKGRPFA, or TRUNKFA forms. When the AC field has a value of "N", an Authorization Use Code and an Authorization Code is not needed before a feature, e.g., call forwarding, can be used. The features must be specified on the ATHFCOS form and they must be dial code activated.
ATHOOS	This ACTION is used to put a line or trunk "Out of Service" by automatically setting the ATH FIRST field to "Y" on the associated ATHLPA, ATHMPA or ATHTPA form. When the ATH FIRST field is set to "Y", an Authorization Use Code and the Authorization Code is needed before the TN is entered.
ATHREQ	This ACTION is used to automatically set the AC field to "Y" on the associated line or trunk assignment form. When the AC field has a value of "Y", an Authorization Use Code and an Authorization Code is needed before a feature (e.g., call forwarding) can be used. The features must be specified on the ATHFCOS form and they must be access code activated.
ATHUSE	This ACTION is used as the Authorization Use Code for the Authorization Code Feature defined on the ATHFD form (5619-1 Record).
AUCUSE	Auto Call Set Up used with Message Service and Electronic Directory Service features.
BPARK	Basic Call Park. This action allows a user active on a call to park the call against the user's DN. Dial codes can be used for ISAT (ISDN Attendant) consoles but cannot be used with ISDN terminals. For more information on Call Park see Division 2, Section 4A124.
BBTLUSE	This action is used for billed BRITL (Basic Rate Interface Dial Up Test Line).
BSYACT	Software Release: 5E16(2) and later. Activates all Call Forwarding Busy feature's prestored DNs.
BSYDCT	Software Release: 5E16(2) and later. Deactivates all Call Forwarding Busy feature's prestored DNs.
BTLUSE	This action is used for non-billed BRITL access.
CCL	Code calling for call pickup.
CFDATCH	Change Call Forward Don't Answer timing.
CFDCT	Deactivate all Call Forwarding features with prestored DNs.
CFDNCH	Change Forward-to DN.
CFVACT	Activate all Call Forwarding Variable features. Associated with Call Forwarding Busy/Idle feature.
CFVDCT	Deactivate all Call Forwarding Variable features. Associated with Call Forwarding Busy/Idle feature.
CLOFF	Closed Off via dial code. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.
CLON	Closed On via dial code. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.
CLWCUSE	Cancel Leave Word Calling. Used with the Message Service feature.
CNDACT	ICLID (Individual Calling Line Identification) Calling Number Delivery activation. This dialed code allows the user to activate the Calling Number Delivery feature which allows the called party to receive data on an incoming call. The user goes off-hook, enters the dialed code, and receives a confirmation tone.
CNDDCT	ICLID (Individual Calling Line Identification) Calling Number Delivery deactivation. This dialed code allows the user to deactivate the Calling Number Delivery feature which allows the called

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	party to receive data on an incoming call. The user goes off-hook, enters the dialed code, and receives a confirmation tone.
CNPUSE	Toggle for NAME privacy per-call. This action is used in the Analog Calling Name Delivery Feature. See Division 2 Section 4A40 for more information.
COTUSE	Customer Originated Trace activation. This dialed code allows the user to activate the Customer Originated Trace feature. The user goes off-hook, enters the dialed code, and receives an appropriate response. (See page of this section for possible responses.)
CPQ1	Use call pickup feature with queue 1.
CPQ2	Use call pickup feature with queue 2.
CPQ3	Use call pickup feature with queue 3.
CPQ4	Use call pickup feature with queue 4.
CSACT	Software Release: 5E14 and later. Activate call screening.
CSDCT	Software Release: 5E14 and later. Deactivate call screening.
CSTOG	Software Release: 5E16(2) and later. Used to toggle between activating and deactivating the FCCS (Forwarded Call - Call Screening) Enhancement feature. For more infomation, see Division 2, Section 4A592.
CTT	Analog Attendant Call Though Test Action. Allows the attendant to make a test call from an Analog line that has been assigned an attendant class of service. The test call will verify the operation of the selected trunk member and the switch translations.
CWDLU	Use a dial Call Waiting feature. For ISDN Attendant Consoles, this action is used to assign the camp-on dialed code.
CWOACT	Activate all Call Waiting Originating features.
CWODCT	Deactivate all Call Waiting Originating features.
CWTACT	Activate all Call Waiting Terminating features.
CWTDCT	Deactivate all Call Waiting Terminating features.
CWXCH	Change Call Waiting tone repetition interval.
DAACT	Software Release: 5E16(2) and later. Activates all Call Forwarding Don't Answer feature's prestored DNs.
DADCT	Software Release: 5E16(2) and later. Deactivates all Call Forwarding Don't Answer feature's prestored DNs.
DALTACT	Activate alternate parameter set for CSD.
DARSCP	Change the active ARS pattern group number for CSD.
DBDACT	Deactivate all busy/idle data call forwarding features.
DBDDCT	Deactivate all busy/idle data call forwarding features.
DCDTVM	Software Release: 5E16(2) and later. DTVM Direct Connect.
DCTCPNBN	Deactivate the CPN/BN feature via dialed code.
DCTGMB	Software Release: 5E15 and later. Deactivate Group Make Busy
DCTMMB	Software Release: 5E15 and later. Deactivate Member Make Busy
DCTMWI	Deactivate Message Waiting Indicator. Used with the Message Service feature. The MWI (Message Waiting Indicator) can be deactivated by entering this dialed code. If an MWI lamp is provided with the station set, this action may be associated with the lamp and can be used to deactivate the lamp.
DCTSTH	Software Release: 5E15 and later. Deactivate Stop Hunt
DFRLALT	Activate the CSD alternate FRL.
DGPACT	Activate the ARS CSD group.
DGPDCT	Deactivate the ARS CSD group.
DMAINACT	Activate main parameter set for CSD.
DNPUSE	DNPUSE
DPARK	Directed Call Park. This action allows a user active on a call to park the call against the user's DN, or direct the call to be parked against another directory number within the same terminal group. Dial codes can be used for ISAT (ISDN Attendant) consoles but cannot be used with ISDN terminals. For more information on Call Park see Division 2, Section 4A124.
DPN	Use directed call pickup without barge-in.
DPU	Use directed call pickup with barge-in.
DRPCH	Change ringing pattern.
DTONE	Provide second dial tone.
DTPOTSA	Escape to POTS and give dial tone: Do not retranslate the access code (INC DIGITS) in the Office Dialing Plan.
DTVMCF	Software Release: 5E16(2) and later. DTVM Call Forward.
EMER	Emergency call to DSN operator.
EMUSE	Emergency via dial code or feature button. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.

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FRLALT	Activate the Alternate FRL table.
FRLDMAIN	Activate the CSD main FRL.
FRLMAIN	Activate the Main FRL table.
FTACT	Activate BRCS feature.
FTDCT	Deactivate BRCS feature.
GPACT	Activate ARS group.
GPDCT	Deactivate IDP or ARS group.
GRPCARCH	Change group carrier in IDP.
HIDHOLD	This action allows a customer to activate the Dialable Hold feature which is a subset of the Home Intercom feature.
HIRINGA	This action is used to apply Ringing Pattern A for the Selective Intercom Dialing feature which is a subset of the Home Intercom feature. Provides repeated pattern of 2 seconds on and 4 seconds off.
HIRINGB	This action is used to apply Ringing Pattern B for the Selective Intercom Dialing and Intercom Code Dialing features. Provides repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on, followed by 4 seconds off.
HIRINGC	This action is used to apply Ringing Pattern C for the Selective Intercom Dialing feature which is a subset of the Home Intercom feature. Provides repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on, followed by 4 seconds off.
HIRINGG	This action is used to apply Ringing Pattern G for the Selective Intercom Dialing feature which is a subset of the Home Intercom feature. Provides repeated pattern of 0.3 seconds on, 0.2 seconds off, 1 second on, 0.2 seconds off, 0.3 seconds on, followed by 4 seconds off.
IBSYVFY	ISDN Busy Verify action. This action is used with the ISDN Attendant Console Busy Verification of Directory Numbers and Trunks. The FEATURE associated with this attendant action must be a call pickup originating feature (/CPUVO or an equivalent constructed feature). To implement the barge-in feature, the terminating line/trunk must have a call pickup terminating feature (/CPUIVT for digital, /CPUVT for analog, or an equivalent constructed feature).
ICMUSE	Use intercom range.
IDNACT	Activate/deactivate ISDN ACVT (Attendant Control of Voice Terminals) restrictions for an individual terminal (line).
IDPASP	Access the ASP (Advanced Service Platform; previously PVN (Private Virtual Network)) "default" dialing plan via this IDP. The ASP "default" dialing plan is specified via the ASP DAS field on the OFCOPT form (5509 Record). This action will result in an ASP origination regardless of whether or not the line or trunk is allowed to originate ASP calls. In other words, the action "IDPASP" overrides the ASP ALW field on the LINE (5109 Record), MLHLN (5111 Record), DSLUSR (5908 Record), SHTN (5902 Record) and TKGRP (5202 Record) forms.
IEMEROVR	ISDN Attendant Emergency Override action. The FEATURE associated with this attendant action must be a call pickup originating feature (/CPUEO or an equivalent constructed feature). The lines to be overridden must have a call pickup terminating feature (/CPUIEOT for digital, /CPUEOT for analog, or an equivalent constructed feature). The attendant will be able to use the dialed code to override terminating restrictions such as Call Forwarding, Series Completion or members of a multiline hunt group.
IGACT	Activate/deactivate ISDN ACVT (Attendant Control of Voice Terminals) restrictions for a group of lines.
INSUSE	Inspect Use Action. This action allows the display of call-related information about any call appearance in a hold, alerting, or active state.
LDNDCT	Deactivation of all LDNs in a MUPH or ISAT group for a CF variable feature at once.
LSFNOSYM	This action is used by the LSF (LASS Selective Features) to access the SLE (Screen List Editing) session. This ACTION will prompt the user via announcements for digits rather than an asterisk or a pound sign during an SLE session.
LSFSYM	This action is used by the LSF (LASS Selective Features) to access the SLE (Screen List Editing) session. This ACTION will prompt the user via announcements for an asterisk or a pound sign rather than digits during an SLE session.
LSP	Loudspeaker paging for call pickup. The paged party may enter a dialed code and be connected to the calling party.
LWCUSE	Leave Word Calling. The dialed code associated with this action allows the calling party to leave a message for the called party.
MAINACT	Activate main parameter set.
MDRACT	MDR Feature activation code.
MDRDCT	MDR Feature deactivation code.
MDROFF	MDR Group Status - off.
MDRON	MDR Group Status - on.
MEOFF	Dialed Code Request - Manual Exclusion off.
MEON	Dialed Code Request - Manual Exclusion on.

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MWITD	ISDN Terminal Dialed Code.
MWSOH	Start multiway feature off hook.
MWSPL	Split last added party from multiway call.
NNPRV	Force per-call NAME and TN private.
NNPUB	Force per-call NAME and TN public.
NTPOTSA	Escape to POTS without dial tone; retranslate the access code (INC DIGITS) in the Office Dialing Plan.
PAI	Immediate DSN/PP access code with second dial tone.
PDTEO	Executive override DSN/PP access code with second dial tone.
PDTF	Flash DSN/PP access code with second dial tone.
PDTFO	Flash override DSN/PP access code with second dial tone.
PDTI	Immediate DSN/PP access code with second dial tone.
PDTP	Priority DSN/PP access code with second dial tone.
PDTR	Routine DSN/PP access code with second dial tone.
PDTRC	DSN/PP Route Code with second dial tone.
PFUSE	Use private facilities.
PNTEO	Executive override DSN/PP access code without second dial tone.
PNTF	Flash DSN/PP access code without second dial tone.
PNTFO	Flash override DSN/PP access code without second dial tone.
PNTI	Immediate DSN/PP access code without second dial tone.
PNTP	Priority DSN/PP access code without second dial tone.
PNTR	Routine DSN/PP access code without second dial tone.
PNTRC	DSN/PP route code without dial tone.
PO	Routine DSN/PP call to DSN/PP operator.
PODUSE	Print on Demand. Used with the Message Service feature.
POF	Flash DSN/PP call to DSN/PP operator.
POFO	Flash override DSN/PP call to DSN/PP operator.
POI	Immediate DSN/PP call to DSN/PP operator.
POP	Priority DSN/PP call to DSN/PP operator.
PP1AREA	PP area code, each area code corresponds to an DSN geographic area. (See Note 1.)
PP2AREA	PP area code, each area code corresponds to an DSN geographic area. (See Note 1.)
PP3AREA	PP area code, each area code corresponds to an DSN geographic area. (See Note 1.)
PP4AREA	PP area code, each area code corresponds to an DSN geographic area. (See Note 1.)
PP5AREA	PP area code, each area code corresponds to an DSN geographic area. (See Note 1.)
PRCD	DSN/PP Route Control Digit.
RBQCAN	Ringback queuing cancel.
RBQVFY	Ringback queuing verify.
RTRV	Call Park Retrieve. This action allows a user to answer a call that is parked against the user's DN. For more information on Call Park see Division 2, Section 4A124.
SAUSE	Service Assist via dial code or feature button. For more information on the ACD/BRCS secured feature see Division 2, Section 4A121.
SDNUSE	Invoke a Software Defined Network call.
SEL1XFER	Transfer to Selective Transfer TN 1 from E911 PSAP (Public Safety Answering Point).
SEL2XFER	Transfer to Selective Transfer TN 2 from E911 PSAP.
SEL3XFER	Transfer to Selective Transfer TN 3 from E911 PSAP.
SEL4XFER	Transfer to Selective Transfer TN 4 from E911 PSAP.
SEL5XFER	Transfer to Selective Transfer TN 5 from E911 PSAP.
SEL6XFER	Transfer to Selective Transfer TN 6 from E911 PSAP.
SPCAR	Use the FGD CAC (Carrier Access Code) with the Intercom or Abbreviated Dial digits that follow.
SP4CAR	Use the FGD CAC with the Intercom or Abbreviated Dial digits that follow.
SRGACT	Software Release: 5E16(2) and later. Activate Simultaneous Ringing
SRGDCT	Software Release: 5E16(2) and later. Deactivate Simultaneous Ringing
SRGNOSYM	Software Release: 5E16(2) and later. Simultaneous Ringing SLE No Symbols
SRGSYM	Software Release: 5E16(2) and later. Simultaneous Ringing SLE Symbols
TD1PAD	Add 1 parameter code.
TDACT	Activate a Time-Of-Day feature.
TDADZP	Add zero parameter code.
TDATCH	Change Time-Of-Day Action Time.
TDDALL	Delete all code lists.
TDDCT	Deactivate a Time-Of-Day feature.
TDDEL1P	Delete 1 parameter code list.
TDOWCH	Change One Week Time-Of-Day Schedule.
TDZPDEL	Delete zero parameter code list.
TGACT	Activate a terminal group feature.
TGDCT	Deactivate a terminal group feature.
UCRACT	Activate UCR (Unidentified Call Rejection).
UCRDCT	Deactivate UCR (Unidentified Call Rejection).

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- ***NOTE:*** 1: Actions marked with "Note 1" in the above table are associated with the BRCS feature, Precedence and Preemption, used for the DSN Network.

For 5E16(2) and later, when this form contains an ACTION or CONFLICT RESOLUTION ACTION entry which is inconsistent with the corresponding FEATURE entry. Either the FEATURE is not found on the appropriate Feature Definition FORM or the FORM level restrictions are not met.

- For 5E16(2) and later, when this form has the wildcard feature or CONFLICT RESOLUTION LIST wildcard feature (/CF*), ACTION can only be "BSYACT", "BSYDCT", "CFDATCH", "CSTOG", "DAACT", or "DADCT" when the ACT field for SFID 592 on the SFSYS form (5713-1 Record) has been set to "Y".

- ***NOTE:*** The following actions can only be assigned to dial codes on the IDPDCA form (RC/V 9.13) when the ACT field for SFID 592 is set to "Y": "BSYACT", "BSYDCT", "CFDATCH", "CSTOG", "DAACT", or "DADCT" (when being assigned to dial codes, all five actions can only be associated with the /CF* feature). Also, the existing action "CFDATCH" can now be associated with the /CF* feature on the PDIT form (RC/V 9.13) when the ACT field for SFID 592 is set to "Y" (originally, "CFDATCH" could only be associated with non-wildcard CF features. When the ACT field for SFID 592 is set to "Y", the action can be associated with both the /CF* feature and the non-wildcard CF features.)

ACUSE, ARUSE: After subscribers dial an "ACUSE" (or "ARUSE") code, they may receive the following responses:

- Audible alerting. The called party is alerted immediately because the called station is found to be idle.
- Short-term denial. Reorder tone is given to the user to indicate that network resources are temporarily exhausted or the called party has a feature active that causes the Automatic Callback (or Automatic Recall) attempt to be denied, e.g., Call Forwarding Variable. A subsequent attempt by the user to activate the feature may succeed.
- Long-term denial. An announcement is returned indicating that the Automatic Callback (or Automatic Recall) feature is not allowed to the user.
- Confirmation. An announcement is returned indicating that the Automatic Callback (or Automatic Recall) feature has been activated. Change the 1 digit Abbreviated Dial list.

COTUSE: After subscribers dial a "COTUSE" code, they may receive the following responses:

- Successful activation. An announcement is returned indicating a successful activation of the COT request and provides information on any further action the user should take.
- Trace not available. An announcement is returned indicating that the call has already been traced or invalid data about the call is stored in the history block, e.g., originating and terminating switches are not connected by CCS7 trunks.
- Buffer full. An announcement is returned indicating that the COT message buffer is full and the user should attempt the trace again later.
- Short-term denial. Reorder tone is given to the user to indicate that network resources are exhausted. A subsequent attempt by the user to activate the feature may succeed.
- Feature denial. Reorder tone is given to the user to indicate that the Customer Originated Trace feature is not available to the user.

DNPUSE: The "DNPUSE" action is used for per-call TN privacy; the dialed code can be used in two ways.

- The calling party subscribes to all-call privacy which allows the calling party to prevent delivery of their

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TN to the called party for all calls (PRIVACY field on the LINE, MLHLN, or DSLUSR form is "Y"). The calling party can deactivate all-call privacy on a per-call basis (TN PRIVACY field on the DISPFD form is "Y"), allowing the calling TN to be displayed to the called party. To deactivate all-call privacy on a per-call basis, the user goes off-hook, enters the dialed code, receives a confirmation tone, receives dial tone, and then dials the TN.

- The terminal may not subscribe to all-call privacy which allows the TN of the calling party to be delivered to the called party for all calls (PRIVACY field on the LINE, MLHLN, or DSLUSR form is "N"). The calling party can activate per-call privacy on a per-call basis (TN PRIVACY field on the DISPFD form is "Y"), not allowing the calling TN to be displayed to the called party. To activate per-call privacy on a per-call basis, the user goes off-hook, enters a dialed code, receives a confirmation tone, receives dial tone, and then dials the telephone number.

Data Rules:

When STATE is "PAUSE", "REMAIN", or "NORMAL", a value must be entered in this field.

When ACTION is "ASPDNC", "ASPNORM", or "ASPVAR",

- TRIG NBR must be entered; and
- ASP OFC on the OFCOPT form must be "SSP".

ACDXFER: This action is for the Special Feature Transfer to ACD from an ARU. For more information see Division 2, Section 4A71. This action can only be used with the NULL feature (/*).

ACTCPNBN: When ACTION is "ACTCPNBN", then the corresponding FEATURE entry must be defined on a CPNBNFD form (5982 Record) with ACT set to "CODE". In addition, the corresponding FEATURE entry must be defined on the ACVTFD form (5967 record) .

ATFACT: When ACTION is "ATFACT" then the corresponding FEATURE entry must be defined on the ACVTFD form (5967 record).

ATFDCT: When ACTION is "ATFDCT" then the corresponding FEATURE entry must be defined on the ACVTFD form (5967 record).

ATGACT: When ACTION is "ATGACT", then the ACVT feature assigned must have an associated restriction group defined. A DN can only activate an ACVT feature for the group in which the DN belongs. In addition, the corresponding FEATURE entry must be defined on the ACVTFD form (5967 record).

ATGDCT: When ACTION is "ATGDCT", then the ACVT feature assigned must have an associated restriction group defined. A DN can only deactivate an ACVT feature for the group in which the DN belongs. In addition, the corresponding FEATURE entry must be defined on the ACVTFD form (5967 record).

BBTLUSE: When ACTION is "BBTLUSE", the DSL that will be tested must have BRITL ALW set to "Y" on the corresponding DSLUSR form. In addition, INC DIGITS on this form must contain only the digits 0 - 9.

BTLUSE: When ACTION is "BTLUSE", then INC DIGITS on this form must contain only the digits 0 - 9.

CNPUSE: The ACTION "CNPUSE" must be used with the feature defined on the DISPFD form and have TN PRIVACY set to "Y" on the DISPFD form for the feature being used. The wildcard feature /DI* may also be used with TN PRIVACY set to "N" on the DISPFD form.

CSACT, CSDCT: When ACTION is "CSACT" or "CSDCT", FEATURE must be "/CF*".

DCTCPNBN: When ACTION is "DCTCPNBN", the corresponding FEATURE entry must appear on a

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CPNBNFD form (5982 Record) with DEACT set to "CODE".

DTONE: When ACTION is "DTONE", STATE must equal PAUSE.

HIDHOLD: When ACTION is "HIDHOLD", the DIAL HOLD field must be "Y" on the associated HIFD form (5628 Record).

HIRINGA, HIRINGC, HIRINGG: When ACTION is "HIRINGA", "HIRINGC", or "HIRINGG", the SEL ICM DIAL field must be "Y" on the associated HIFD form (5628 Record).

HIRINGB: When ACTION is "HIRINGB", the ICM CODE DIAL field or the SEL ICM DIAL field must be "Y" on the associated HIFD form.

IBSYVFY: When ACTION is "IBSYVFY", the associated call pickup originating feature must be defined on a PUOFD form (5605-1 Record). If the terminating line or trunk is assigned a call pickup terminating feature, that feature must be defined on a PUTFD form (5605-2 Record).

IDPPVN: The "IDPPVN" ACTION cannot be entered when PVN OFC on the OFCOPT form is set to "NONE" since that would indicate the office does not support ASP.

IEMEROVR: When ACTION is "IEMEROVR", the associated call pickup originating feature must be defined on a PUOFD form. The call pickup terminating feature assigned to the lines to be overridden must be defined on a PUTFD form.

NNPRV, NNPUB: ACTIONs "NNPRV" and "NNPUB", must be used with the feature defined on the DISPFD form and have TN PRIVACY set to "Y" on the DISPFD form for the feature being used. The wildcard feature /DI* may also be used with TN PRIVACY set to "N" on the DISPFD form.

SELnXFER: When ACTION is "SELnXFER", where n is 1 - 6, FEATURE must be "/*".

UCRACT: When the ACTION is "UCRACT", the feature must be the /*.

The following ACTIONs require the NULL FEATURE (/*):

- "AAOFF",
- "AAON",
- "ACDXFER",
- "AIUSE",
- "AQCUSE",
- "ATACTMWI",
- "ATDCTMWI",
- "AUCUSE",
- "BBTLUSE",
- "BTLUSE",
- "CLOFF",
- "CLON",
- "EMUSE",
- "MEOFF",
- "MEON",
- "SAUSE",
- "SDNUSE"

2.6 FEATURE

Description: Enter the name of a feature to be accessed or affected by this dialed code. The feature must be defined on one of the BRCS feature definition forms. It may be a constructed or preconstructed feature.

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The set of preconstructed features includes wild-card features which may be entered in Individualized or Office Dialing Plans but may not be assigned to lines or trunks. These wild-card features should be included in dialing plans whenever a dialed code affects a feature associated with the calling terminal (line or trunk) rather than a feature specified in the dialing plan itself. For example, if a dialed code's ACTION is "AD1CH" (change the 1-digit Abbreviated Dial List), and the customer dialing the code is to be allowed to change his AD List regardless of the specific ID feature containing the AD list, then the ID wild-card feature name "/ID*" should be entered as the FEATURE. If the customer should be allowed to change only a specific AD list, then the specific ID feature name should be entered as the FEATURE.

The specific feature definition form on which the feature is defined depends upon the value of the ACTION field entry as shown in Figure Figure 1 .

Those ACTIONs where the FEATURE TYPE is indicated as "any non-wild-card feature name" require a specific FEATURE name and the wild-card feature may not be entered here.

For those actions for which the FEATURE TYPE is "any feature name", either the wild-card feature name or a specific feature name may be entered. It is recommended that the wild-card feature always be used; no cases are presently envisioned in which a non-wild-card feature would be appropriate.

For the cases where FEATURE TYPE is "any wild-card feature name", only a wild-card feature name may be entered.
Valid Entries: 1 - 8 characters

Data Rules:

When STATE is "CNFLCT" or "CONFLCT", this field must be blank.

When STATE is "PAUSE", "REMAIN", or "NORMAL", a value must be entered in this field.

2.7 REM DIGS

Description: Enter the number of remaining digits to collect.
Valid Entries: 1 - 14

If the STATE is not "REMAIN", this field must be blank.

2.8 ACT SET

Description: Enter the alternate code treatment set number.
Valid Entries: 1 - 32

Data Rules:

Any value entered here must have been defined on the IDPACT form (5601-3 Record) with the IDP GRP entered on this form.

2.9 ICM RANGE

Description: Enter the intercom range identification number.
Valid Entries: 1 - 512

Data Rules:

Any value entered here must be defined on the IDPICM form (5601-5 Record) with the same IDP GRP entered on this form. This field must be entered if ACTION is ICMUSE, PO, POP, POI, POF, POFO or EMER.

When STATE is "PAUSE", "REMAIN", or "NORMAL", a value must be entered in this field.

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2.10 TRIG NBR

Description: Enter the Network services trigger number.

Software Release: 5E9(1) and later
Valid Entries: 1 - 255

Data Rules:

When TRIG NBR is entered, ACTION must be "ASPNORM", "ASPVAR" or "ASPDNC".

2.11 DPAT CATEGORIES

Description: Enter a "Y" or "N" in each position of each dialing plan access treatment categories. A "Y" indicates that a line (or trunk) with the corresponding DPAT code will be allowed access to the feature specified for this dialed code. An "N" indicates no access is allowed. For each of the seven groupings, either leave all five categories blank, indicating that access is not permitted for any of the five categories, or enter "Y" or "N" in each of the five categories, as appropriate. In each case, the leftmost position of the grouping represents the lowest numbered category of the group and the rightmost represents the highest.

A DPAT code is assigned to each terminal (line or trunk) via the default parameter of DPAT CATEGORY on the IDFD form or on a parameter assignment form, IDPLPA, IDPMPA or IDPTPA. If both are used, the value on the parameter assignment form takes precedence, overriding the default value.

Whenever the IDPDCA form is used to analyze digits, either dialed or reconstructed, the DPAT CATEGORY will be checked. Abbreviated Dial and Intercom codes are examples of reconstructed numbers. If the Abbreviated Dial code is allowed for the originator (via DPAT), but the reconstructed number is not (and is being analyzed in IDP), the call will be given the DPAT error treatment.

When STATE is "PAUSE", "REMAIN", or "NORMAL", a value must be entered in this field.

3. FORM ENTRIES - 5601-2 RECORD

CONFLICT RESOLUTION LIST

The following fields (Section 3.1 - Section 3.7) are arranged into eight conflict resolution entries. At least two conflict resolution entries must be entered when the value entered in the STATE field is "CONFLCT".

- ***NOTE:*** The input screen format was consolidated to streamline the data entry function. The number of screens was reduced from five to two. Also, the field group title was changed from CONFLICT RESOLUTION ENTRIES to CONFLICT RESOLUTION LIST.

3.1 REM DIGS

Description: Enter the number of remaining digits to be dialed before the call treatment can be determined.
Valid Entries: 0 - 14

3.2 ACTION

Description: Enter the action to be taken when the INC DIGITS plus NBR DIGITS have been dialed.
Valid Entries: Refer to the ACTION field description at the beginning of this section.

Data Rules:

When CONFLICT RESOLUTION ACTION is "ASPDNC", "ASPNORM" or "ASPVAR",

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- TRIG NBR must be entered; and
- ASP OFC on the OFCOPT form must be "SSP".

3.3 FEATURE

Description: Enter the name on a feature, IDP or Abbreviated Dial List which is to be accessed or affected by this dialed code. The name entered here must be defined on one of the BRCS feature definition forms. For a more complete description, see the description of the FEATURE field earlier in this section.
Valid Entries: 1 - 8 characters

3.4 ACT SET

Description: Enter the Alternate Code Treatment set number.
Valid Entries: 1 - 32

Data Rules:

Any value entered here must have been defined on the IDPACT form with the IDP GRP entered on this form.

3.5 ICM RANGE

Description: Enter the intercom range identification number.
Valid Entries: 1 - 512

Data Rules:

Any value entered here must be defined on the IDPICM form with the IDP GRP entered on this form.

3.6 TRIG NBR

Description: Enter the Network Services trigger number.

Software Release: 5E9(1) and later
Valid Entries: 1 - 255

Data Rules:

When TRIG NBR is entered in the CONFLICT RESOLUTION LIST, ACTION in the list must be "ASPNORM", "ASPVAR"or "ASPDNC".

3.7 DPAT CATEGORIES

Description: Enter a "Y" or "N" in each position of each of the Dialing Plan Access Treatment categories. A Y indicates that a line (or trunk) with the corresponding DPAT code will be allowed access to the feature specified for this dialed code. An "N" indicates no access is allowed. For each of the seven groupings, either leave all five categories blank, indicating that access is not permitted for any of the five categories, or enter "Y" or "N" in each of the five categories, as appropriate. In each case, the leftmost position of the grouping represents the lowest numbered category of the group and the rightmost represents the highest.

IDP ACTIONS AND THEIR FEATURE DEFINITION FORM DEPENDENCIES

ACTION	FEAT DEFN FORM	WILDCARD ALLOWED	NON-WILDCARD FEATURE RESTRICTIONS
AAOFF	-	/*	None
AAON	-	/*	None
ACBCANC	ACBFD	YES	None
ACBUSE	ACBFD	YES	None
ACCANC	LSACFD	YES	None

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ACCTACT	ACCTFD	YES	ACT TYPE = "CODE"
ACCTDCT	ACCTFD	YES	DACT TYPE = "CODE"
ACCTUSE	ACCTFD	YES	None
ACDXFER		/*	None
ACTCPNBN	CPNBNFD	YES	ACT = "CODE"
ACSRCAN	ACSRFD	YES	None
ACSROFF	ACSRFD	YES	GRP CNTRL = "Y"
ACSRON	ACSRFD	YES	GRP CNTRL = "Y"
ACSRUSE	ACSRFD	YES	None
ACSRVFY	ACSRFD	YES	None
ACTOFF	IDFD	YES	CUST ACT, /DEACT ACT = "Y"
ACTON	IDFD	YES	CUST ACT, /DEACT ACT = "Y"
ACUSE	LSACFD	YES	None
AD1CH	SCFD	YES	SC = "SC1" and SCC = "Y"
AD1USE	SCFD	YES	SC = "SC1"
AD2CH	SCFD	YES	SC = "SC2" and SCC = "Y"
AD2USE	SCFD	YES	SC = "SC2"
AIUSE	-	/*	None
ALTACT	ACCTFD	YES	PARM ACT TYPE = "CODE"
ALTACT	ATHFD	YES	CHG FCOS = "Y"
ANSBACK	PUOFD	NO	INITIATE = "ANSBACK"
AQCUSE	-	/*	None
ARCANC	LSARFD	YES	None
ARSCP	ARSFD	YES	CHANGE ACTIVE PATTERN GROUP= "Y"
ARSDCT	ARSFD	YES	DACT TYPE= "CODE"
ARSUSE	ARSFD	YES	None
ARS1USE	ARSFD	YES	None
ARS2USE	ARSFD	YES	None
ARUSE	LSARFD	YES	None
ASITOG	ASIFD	YES	IMP ACC="Y"
ASIUSE	ASIFD	YES	EXP ACC="Y"
ASPDNC	ASPFD	YES	CONTROL="ORIG"
ASPDNC	IDFD	YES	FEATURE must be /ID*
ASPNORM	ASPFD	YES	CONTROL="ORIG"
ASPNORM	IDFD	YES	FEATURE must be /ID*
ASPVAR	ASPFD	YES	CONTROL="ORIG"
ASPVAR	IDFD	YES	FEATURE must be /ID*
ATACTMWI	-	/*	None
ATDCTMWI	-	/*	None
ATFACT	ACVTFD	YES	CONTROL = "ORIG"
ATFDCT	ACVTFD	YES	CONTROL = "ORIG"
ATGACT	ACVTFD	YES	CONTROL = "ORIG"
ATGDCT	ACVTFD	YES	CONTROL = "ORIG"
ATHACT	ATHFD	YES	ACT TYPE = "CODE"
ATHDCT	ATHFD	YES	DACT TYPE = "CODE"
ATHINS	ATHFD	YES	CHANGE ATH FIRST = "Y"
ATHNRQ	ATHFD	YES	None
ATHOOS	ATHFD	YES	CHANGE ATH FIRST = "Y"
ATHREQ	ATHFD	YES	None
ATHUSE	ATHFD	YES	None
AUCUSE	-	/*	None
BBTLUSE	-	/*	None
BPARK	PUOFD	NO	INITIATE = "BPARK"
BTLUSE	-	/*	None
CCL	PUOFD	Not /PO*	INITIATE = "CDCAL"
CFDATCH	CFWFD	Not /CF*	CHANGE DON'T ANSWER TIMING = "Y"
CFDCT	CFWFD	/CF* only	FEATURE must be /CF*
CFDNCH	CFWFD	Not /CF*	CHANGE FWD TO DN = "Y"
CFVACT	CFWFD	/CF* only	FEATURE must be /CF*
CFVDCT	CFWFD	/CF* only	FEATURE must be /CF*
CLOFF	-	/*	None
CLON	-	/*	None
CLWCUSE	MSFD	YES	LW CALLING != "NONE"
CNDACT	LIDFD	YES	None
CNDDCT	LIDFD	YES	None
CNPUSE	DISPFD	/DI*	TN PRIVACY = "Y"
COTUSE	LSCOTFD	YES	None
CPQ1	PUOFD	YES	NUMBER OF PICKUP GROUPS = 1, 2, 3 or 4
CPQ2	PUOFD	YES	NUMBER OF PICKUP GROUPS = 2, 3 or 4
CPQ3	PUOFD	YES	NUMBER OF PICKUP GROUPS = 3 or 4
CPQ4	PUOFD	YES	NUMBER OF PICKUP GROUPS = 4
CSACT	CFWFD	/CF* only	FEATURE must be /CF*
CSDCT	CFWFD	/CF* only	FEATURE must be /CF*
CTT	PFAFD	/PF*only	FEATURE must be /PF*
CWDLU	CWTFD	YES	INVOCATION = "CODE"

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CWOACT	CWTFD	/CW* only	FEATURE must be /CW*
CWODCT	CWTFD	/CW* only	FEATURE must be /CW*
CWTACT	CWTFD	/CW* only	FEATURE must be /CW*
CWTDCT	CWTFD	/CW* only	FEATURE must be /CW*
CWXCH	CWTFD	Not /CW*	CHANGE CDPTY TONE INTERVAL? = "Y"
DALTACT	ATHFD	YES	CHG FCOS = "Y"
DARSCP	ARSFD	YES	CHANGE ACTIVE PATTERN GROUP = "Y"
DBDACT	CFWFD	/CF* only	FEATURE must be /CF*
DBDDCT	CFWFD	/CF* only	FEATURE must be /CF*
DCTCPNBN	CPNBNFD	YES	DEACT = "CODE"
DCTMWI	MSFD	YES	AUD MSG WAIT IND = "Y" or VIS MSG WAIT IND = "Y"
DFRLALT	ARSFD	YES	CHG ALT FRL = "Y"
DGPACT	ARSFD	YES	GROUP ACT TYPE = "CODE"
DGPDCT	ARSFD	YES	GROUP DACT TYPE = "CODE"
DMAINACT	ATHFD	YES	CHG FCOS = "Y"
DNPUSE	DISPFD	YES	TN PRIVACY = "Y"
DPARK	PUOFD	NO	INITIATE = "DPARK"
DPN	PUOFD	Not /PO*	(INITIATE = "IDPUDL" or "IPREDN") and BARGE IN = "N"
DPU	PUOFD	Not /PO*	(INITIATE = "IDPUDL" or "IPREDN") and BARGE IN = "Y"
DRPCH	DRFD	Not /DR*	CHANGE RINGING PATTERN = "Y"
DTONE	PPFD	YES	None
DTPOTSA	IDFD	YES	None
EMER	IDFD	YES	None
EMUSE	-	/*	None
FRLALT	ARSFD	YES	CHG ALT FRL = "Y"
FRLDMAIN	ARSFD	YES	CHG ALT FRL = "Y"
FRLMAIN	ARSFD	YES	CHG ALT FRL = "Y"
FTACT	ACVTFD	Not /AT*	ACT TYPE = "CODE"
FTACT	CFWFD	Not /CF*	ACT TYPE != "AUTO"
FTACT	CWTFD	Not /CW*	ACT TYPE = "CODE"
FTACT	DRFD	Not /DR*	DACT TYPE = "CODE"
FTACT	MWFD	Not /MW*	ACT/INACT OPTION = "ACT1CA" or "CUSTSEL"
FTACT	PFAFD	Not /PF*	None
FTACT	PUOFD	Not /PO*	ACT TYPE = "CODE"
FTACT	PUTFD	See NOTE 1 below.	ACT TYPE = "CODE"
FTDCT	ACVTFD	Not /AT*	DACT TYPE = "CODE"
FTDCT	CFWFD	Not /CF*	DACT TYPE != "NONE" or "AUTO"
FTDCT	CWTFD	Not /CW*	DACT TYPE = "CODE"
FTDCT	DRFD	Not /DR*	DACT TYPE = "CODE"
FTDCT	MWFD	Not /MW*	ACT/INACT OPTION = "CUSTSEL" or "INACT1CA"
FTDCT	PFAFD	Not /PF*	None
FTDCT	PUOFD	Not /PO*	DACT TYPE = "CODE"
FTDCT	PUTFD	See NOTE 1 below.	DACT TYPE = "CODE"
GPACT	ACVTFD	YES	ACT TYPE = "CODE" and ACVTGRPNAM known
GPACT	ARSFD	YES	GROUP ACT TYPE = "CODE"
GPACT	IDFD	YES	CUST ACT/DEACT IDP = "Y"
GPDCT	ACVTFD	YES	GROUP DACT TYPE = "CODE" and ACVT GRP known
GPDCT	ARSFD	YES	GROUP DACT TYPE = "CODE"
GPDCT	IDFD	YES	CUST ACT, /DEACT IDP = "Y"
GRPCARCH	IDFD	YES	GPIC CUST CHANGEABLE = "Y"
HIRINGA	HIFD	YES	SEL ICM DIAL = "Y"
HIRINGB	HIFD	YES	SEL ICM DIAL = "Y" or ICM CODE DIAL = "Y"
HIRINGC	HIFD	YES	SEL ICM DIAL = "Y"
HIRINGG	HIFD	YES	SEL ICM DIAL = "Y"
HIDHOLD	HIFD	YES	DIAL HOLD = "Y"
IBSYVFY	PUOFD	Not /PO*	INITIATE = "BSYVFY"
ICMUSE	IDFD	YES	None
ICTT	PFAFD	/PF* only	FEATURE must be /PF*
IDNACT	ACVTFD	YES	None
IDPASP	IDFD	YES	None
IDPPVN	IDFD	YES	None
IEMEROVR	PUOFD	Not /PO*	INITIATE = "EMEROVR"
IGACT	ACVTFD	YES	None
INSUSE	DISPFD	YES	INSPECT = "Y"
LDNDCT	CFWFD	Not /CF*	DACT TYPE != "NONE", "KEY" or "AUTO"
LSP	PUOFD	Not /PO*	INITIATE = "LDSPKPG"
LSFSYM	LSCAFD	YES	None
LSFSYM	LSCFFD	YES	None
LSFSYM	LSCRFD	YES	None
LSFSYM	LSDAFD	YES	None

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LSFSYM	LSCARFD	YES	None
LSFNOSYM	LSCAFD	YES	None
LSFNOSYM	LSCFFD	YES	None
LSFNOSYM	LSCRFD	YES	None
LSFNOSYM	LSDAFD	YES	None
LSFNOSYM	LSCARFD	YES	None
LWCUSE	MSFD	YES	LW CALLING = "OUT" or "INOUT"
MAINACT	ACCTFD	YES	PARM ACT TYPE = "CODE"
MAINACT	ATHFD	YES	CHG FCOS = "Y"
MDRACT	MDRFD	YES	ACT TYPE = "CODE"
MDRDCT	MDRFD	YES	DACT TYPE = "CODE"
MDROFF	MDRFD	YES	GRP CHANGE ALLOWED? = "Y"
MDRON	MDRFD	YES	GRP CHANGE ALLOWED? = "Y"
MEOFF	-	/*	None
MEON	-	/*	None
MWITD	MWFD	Not /MW*	DIAL CODE OR BUTTON = "Y"
MWSOH	MWFD	Not /MW*	IN MIDDLE = "Y" or OFF HOOK = "Y" or MULTIWAY CONTROL = "CODEALT"
MWSPL	MWFD	Not /MW*	SPLIT LAST PTY = "Y"
NNPRV	DISPFD	/DI*	TN PRIVACY = "Y"
NNPUB	DISPFD	/DI*	TN PRIVACY = "Y"
NTPOTSA	IDFD	YES	None
PDTEO	PPFD	YES	None
PDTF	PPFD	YES	None
PDTFO	PPFD	YES	None
PDTI	PPFD	YES	None
PDTP	PPFD	YES	None
PDTR	PPFD	YES	None
PDTRC	PPFD	YES	None
PFUSE	PFAFD	NO	None
PODUSE	MSFD	YES	PRINT ON DEMAND = "Y"
PP1AREA	PPFD	YES	AREA1 CDI is known
PP2AREA	PPFD	YES	AREA2 CDI is known
PP3AREA	PPFD	YES	AREA3 CDI is known
PP4AREA	PPFD	YES	AREA4 CDI is known
PP5AREA	PPFD	YES	AREA5 CDI is known
PNTEO	PPFD	YES	None
PNTF	PPFD	YES	None
PNTFO	PPFD	YES	None
PNTI	PPFD	YES	None
PNTP	PPFD	YES	None
PNTR	PPFD	YES	None
PNTRC	PPFD	YES	None
PO	IDFD	YES	None
POF	IDFD	YES	None
POFO	IDFD	YES	None
POI	IDFD	YES	None
POP	IDFD	YES	None
PRCD	PPFD	YES	None
RBQCAN	QUFD	/QU* only	FEATURE must be /QU*
RBQVFY	QUFD	/QU* only	FEATURE must be /QU*
RTRV	PUOFD	NO	INITIATE = "RTRV"
SAUSE	-	/*	None
SDNUSE	-	/*	None
SELnXFER (n = 1 to 6)	-	/*	None
SPCAR	IDFD	YES	None
SP4CAR	IDFD	YES	None
SRGACT	SRFD	NO	None
SRGDCT	SRFD	NO	None
SRGSYM	SRFD	NO	None
SRGNOSYM	SRFD	NO	None
TD1PAD	TODFD	YES	ADD 1 PARM CODE = "Y"
TDACT	TODFD	YES	CUSTOMER ACTIVATION = "Y"
TDADZP	TODFD	YES	ADD 0 PARM CODE = "Y"
TDATCH	TODFD	YES	CHANGE ACTION TIME = "Y"
TDDALL	TODFD	YES	DELETE ALL LISTS = "Y"
TDDCT	TODFD	YES	CUSTOMER ACTIVATION = "Y"
TDDEL1P	TODFD	YES	DEL 1 PARM CODE = "Y"
TDOWCH	TODFD	YES	CHANGE OWS = "Y"
TDZPDEL	TODFD	YES	DELETE 0 PARM CODE = "Y"
TGACT	TGSRFD	YES	ACT TYPE = "CODE"
TGDCT	TGSRFD	YES	DACT TYPE = "CODE"
UCRACT	-	/*	None

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UCRDCT	-	/*	None

Note 1: This feature definition form cannot have a wild-card feature.

Figure 1 IDP ACTIONS AND THEIR FEATURE DEFINITION FORM DEPENDENCIES

```
idpdca                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5601-1/2)          IDP DIALED CODE ASSIGNMENT

*1. IDP GRP   _________     10. DPAT 1 TO 8   _________
*2. INC DIGITS ___________   11. DPAT 9 TO 16  _________
 3. STATE     NORMAL        12. DPAT 17 TO 24 _________
 4. ACTION    _________     13. DPAT 25 TO 32 _________
 5. FEATURE   _________
 6. REM DIGS  __
 7. ACT SET   __
 8. ICM RANGE ___
 9. TRIG NBR  ___
```

```
idpdca                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5601-1/2)          IDP DIALED CODE ASSIGNMENT

              16. CONFLICT RESOLUTION LIST (CONFRES.C)

   REM              ACT ICM   TRIG DPAT     DPAT     DPAT     DPAT
ROW DIGS ACTION   FEATURE  SET RANGE NBR  1 TO 8   9 TO 16  17 TO 24 25 TO 32
 1  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 2  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 3  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 4  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 5  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 6  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 7  __ _________ _________ __  ___ ___ _________ _________ _________ _________
 8  __ _________ _________ __  ___ ___ _________ _________ _________ _________
```

Figure 2 SAMPLE IDPDCA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 2C: 5601-3 RECORD
INDIVIDUALIZED DIALING PLAN
ALTERNATE CODE TREATMENT FORM - IDPACT

1. GENERAL

The 5601-3 Record is available with the 5E2 and later Software Releases. It is used to define A.C.T.s (Alternate Code Treatments) associated with IDPs (Individualized Dialing Plans). An Alternate Code Treatment allows customers to provide different treatments to specified IDP codes at certain times. This is accomplished by associating a valid IDP dialed code with an A.C.T. set. Each A.C.T. set is associated with an on/off indicator. When the indicator is off, normal treatment is given when a line (or trunk) dials a code assigned to that A.C.T. set. If a line or trunk dials a code in a set with the indicator on, the Alternate Code Treatment is given.

The on/off indicator is set (or unset) either by customer dial access to an appropriate code in the IDP or by a key. See the FTRKEY form (5613 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * IDP GROUP NAME

Description: Enter the IDP Group Name.

Required Field.
Valid Entries: 1 - 8 characters

2.3 * A.C.T. SET

Description: Enter the Alternate Code Treatment set number.

Required Field.
Valid Entries: 1 - 32

2.4 ACTIVE?

Description: Will Alternate Code Treatment be active when the database is initially installed in the 5ESS Switch?

Required Field.
Default: N
Valid Entries: Y, N

2.5 TREATMENT

Description: Specify the treatment to be given when A.C.T. is active.

Required Field.
Default: TONE
Valid Entries:

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Valid TREATMENT Entries	
Entry	**Definition**
ANNC	When A.C.T. is active, the call will be sent to anannouncement as specified by the Fixed Route Type of "ACT"on the FIXRT Form (5301-1 Record).
RERTE	When A.C.T. is active, the call will be sent to aDirectory Number as specified in the REROUTE TO DN field below.
TONE	When A.C.T. is active, the call will be given reorder tone.

2.6 REROUTE TO DN

Description: If the TREATMENT is "RERTE", enter the Directory Number the call is to be re-routed to. If the TREATMENT is other than "RERTE", leave this field blank. The digits entered will be interpreted by the IDPDCA Form (5601-1/2 Record).
Valid Entries: Up to 32 digits (0 - 9, * and #)

idpact 5ESS Switch _
(5601-3) OFFICE DATA ADMINISTRATION
IDP ALTERNATE CODE TREATMENT

* 1. IDP GROUP NAME AJAX
* 2. A.C.T. SET 01
3. ACTIVE? N
4. TREATMENT TONE
5. REROUTE TO DN _____

Figure 1 SAMPLE IDPACT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2D: 5601-4 RECORD
INDIVIDUALIZED DIALING PLAN GROUP DEFINITION FORM - IDPGP

1. GENERAL

The 5601-4 Record is available with the 5E2 and later Software Releases, and defines the options associated with IDPs (Individualized Dialing Plans).

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * IDP GROUP NAME

Description: Enter the IDP group name.
Valid Entries: 1 - 8 characters

2.3 REMARK

Description: Enter an optional descriptive comment.
Valid Entries: up to 32 characters

2.4 IDP ACTIVE?

Description: Is the IDP initially active?

Required Field.
Default: Y
Valid Entries: Y, N

2.5 A.C.T. ALLOWED?

Description: Is Alternate Code Treatment allowed?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If A.C.T. is allowed, an IDPACT form (5601-3 Record) must be completed for the IDP and two codes must be defined on the IDPDCA form (5601 -1/2 Record), or a key must be defined on the FTRKEY form (5613 Record), to allow for A.C.T. activation and deactivation.

2.6 DPAT ALLOWED?

Description: Is Dialing Plan Access Treatment allowed?

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If the value for DPAT ALLOWED? is "Y", the DPAT CATEGORY must be entered on the IDFD forms (5601 Record) and IDPTPA forms (5601-8 Record) assigned this IDP GROUP NAME.

2.7 GPIC

Description: Enter the Group Pre-subscribed InterLATA Carrier for the IDP group. The GPIC is used as the InterLATA Carrier whenever a line (or trunk) assigned to this IDP originates and the line does not have a Line Primary Carrier and does not dial the carrier number.
Valid Entries:
- For 5E8 and earlier: 0 - 999
- For 5E9(1) and later: 0 - 9999

Data Rules:

If GPIC is known, it must equal CARRIER ID on an ICF form (5305 Record), and for 5E8 and later, FEAT GRP on the ICF form must equal "D".

2.8 GROUP PTC

Description: The GROUP PTC field is used to specify the group presubscribed intra-LATA toll carrier identification number. This field supports the Intra-LATA PIC Capability Special Feature, for more information on this feature see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 9999 or leave blank

For 5E12 and later, when the GROUP PTC field on the IDPGP form has been entered, the GROUP PTC must be entered as a CARRIER ID on the ICF form with FEAT GRP equal to "D".

2.9 GROUP PLC

Description: The GROUP PLC field is used to specify the group PLC (Presubscribed Local Carrier) code.

Software Release: 5E12 and later
Valid Entries: Blank or 0-9999

Data Rules:

When GROUP UNBUNDLED is "Y", GROUP PLC must be entered.

GROUP PLC on the following IDPGP forms must be defined as CARRIER ID on the ICF form with FEAT GRP equal to "D".

2.10 GROUP UNBUNDLED

Description: Has this group been unbundled from the LEC?

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

When GROUP UNBUNDLED is "Y", GROUP PLC must be entered.

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2.11 STANDARD ERROR TREATMENT

Description: Enter the treatment to be given an origination dialing an invalid IDP code.

Required Field.
Default: TONE
Valid Entries:

Valid STANDARD ERROR TREATMENT Entries

Entry	Definition
ANNC	The call is sent to an announcement as specified by the FIXED ROUTE TYPE of "IDPERR" on the FIXRT form (5301-1 Record).
RERTE	The call is sent to a Directory Number as specified in the ERROR REROUTE TO DN field below.
TONE	The call is given reorder tone.
USEOFFC	The digits dialed are reinterrupted using the ODP (Office Dialing Plan) and the call is treated accordingly. If the call is originated by a line assigned to this IDP Group, the ODP consists of PDIT and LDIT. If the call is originating from a trunk assigned to this IDP Group, the DAS specification on the Trunk Group determines an INDIT or PDIT and an LDIT.

2.12 ERROR REROUTE TO DN

Description: Enter a Telephone Number. The digits entered are interpreted by the IDPDCA form.
Valid Entries: up to 32 digits, 0 - 9, * and #

Data Rules:

An entry in this field is allowed only if the STANDARD ERROR TREATMENT is "RERTE".

2.13 DPAT TREATMENT

Description: Enter the treatment to be given an origination with a disallowed DPAT code.

Valid DPAT TREATMENT Entries

Entry	Definition
ANNC	The call is sent to an announcement as specified by the FIXED ROUTE TYPE of "DPAT" on the FIXRT form.
RERTE	The call is sent to a Directory Number as specified in the DPAT REROUTE TO DN field below.
TONE	The call is given reorder tone.

Data Rules:

An entry in this field is allowed only if DPAT ALLOWED is "Y".

2.14 DPAT REROUTE TO DN

Description: Enter a Telephone Number. The digits entered are interpreted by the IDPDCA form.
Valid Entries: up to 32 digits, 0 - 9, *, and #

Data Rules:

An entry in this field is allowed only if the DPAT TREATMENT is "RERTE".

2.15 SLE SYMBOL

Description: Enter the symbols allowed as part of an extension during a LASS Screen List Editing session or Forward to DN.

Software Release: 5E6 and later
Required Field.
Default: NONE
Valid Entries:

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Valid SLE SYMBOL Entries	
Entry	**Definition**
"*"(space)	Only an "*" may be used as part of an extension or Forward to DN.
"#"(space)	Only a "#" may be used as part of an extension or Forward To DN.
"*#"	Both an "*" and a "#" may be used as part of an extension or Forward To DN.
NONE	Neither "*" or "#" may be used as part of an extension or Forward To DN.

2.16 CF DT POTS

Description: Should a dial tone be returned following entry of an "escape to POTS" dial code during an entry of the Forward to DN on a Call Forward activation?

The escape to POTS dial code is defined by entering an ACTION of "DTPOTSA" on the IDPDCA form.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.17 ESC TO POTS

Description: Enter the dial code used to escape to POTS. When an ISDN Standard CPE (Customer Premises Equipment) terminal originates a POTS call via functional addressing, the switch software will prefix this ESC TO POTS code to the (called) address digits. The code must be the same as the escape to POTS code defined in the IDP (data rule below). ESC TO POTS applies only to Standard BRI users (DSL CLS is "STD" on the DSL form).

Software Release: 5E8 and later
Valid Entries: 3 digits; first digit may be "*" or "#"

Data Rules:

The entry must be defined as INC DIGITS for the IDP GRP on an IDPDCA form with a STATE of "NORMAL" and ACTION of "DTPOTSA"; or if the STATE is "CONFLCT" then there must be one entry in the CONFLICT RESOLUTION LIST where REM DIGS is 0 and ACTION is "DTPOTSA". The FEATURE field or the CONFLICT RESOLUTION LIST FEATURE field must have an IDP feature defined on the IDPFD form.

---

idpgp 5ESS Switch
(5601-1 a/b) OFFICE DATA ADMINISTRATION
IDP GROUP DEFINITION

* 1. IDP GROUP NAME _____ 13. CF DT POTS N
2. REMARK _____ 14. ESC TO POTS ___
3. IDP ACTIVE? Y
4. A.C.T. ALLOWED? N
5. DPAT ALLOWED N
6. GPIC ____
7. GROUP PTC ____
8. STANDARD TREATMENT TONE
9. ERROR REROUTE TO DN _____
10. DPAT TREATMENT _____
11. DPAT REROUTE TO DN _____
12. SLE SYMBOL NONE

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Figure 1 SAMPLE IDPGP FORM 5E10 AND 5E11 SOFTWARE RELEASES

```
idpgp                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5601-4)               IDP GROUP DEFINITION

*1. IDP GROUP NAME    ________
 2. REMARK            _____________________________________
 3. IDP ACTIVE?       Y
 4. A.C.T. ALLOWED?   N
 5. DPAT ALLOWED      N
 6. GPIC              ____
 7. GROUP PTC         ____
 8. GROUP PLC         ____
 9. GROUP UNBUNDLED   N
10. STANDARD TREATMENT TONE

11. ERROR REROUTE TO DN _____________________________________
```

```
idpgp                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5601-4)               IDP GROUP DEFINITION

12. DPAT TREATMENT _____
13. DPAT REROUTE TO DN _____________________________________
   14. SLE SYMBOL  NONE
   15. CF DT POTS  N
   16. ESC TO POTS ___
```

Figure 2 SAMPLE IDPGP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 2E: 5601-5 RECORD
INDIVIDUALIZED DIALING PLAN
INTERCOM RANGE FORM - IDPICM

1. GENERAL

The 5601-5 Record is available with the 5E2 and later Software Releases. It is used to define the intercom ranges associated with IDPs (Individualized Dialing Plans). Intercom dialing allows a customer to have a shortened dialing sequence, typically to reach a group of destination Telephone Numbers with common leading digits.

When a customer dials a code within an intercom range, the switch determines the intercom range and the appropriate number of digits are deleted, and then the appropriate digits are prefixed (as defined on this form). The transformed number is then interpreted by either the IDP or the Office Dialing Plan as if it had actually been dialed.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * IDP GROUP NAME

Description: Enter the IDP Group Name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The IDP group whose name is entered here must be defined on the IDPGP form (5601-4 Record) and one or more IDPDCA forms (5601-1/2 Records).

2.3 * INTERCOM RANGE ID

Description: Enter a number to identify the intercom range. The intercom range defined on this form may be entered on the IDPDCA form for the appropriate dialed codes.

Required Field.
Valid Entries: 1 - 512

2.4 USE OFFICE DIALING PLAN?

Description: Is the reconstructed code to be interpreted by the ODP (Office Dialing Plan)? if "N" is entered, the IDP will be used.

Required Field.
Default: Y
Valid Entries: Y, N

2.5 NUMBER OF DIGITS TO DELETE

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Description: Enter the number of digits to delete from the dialed digits. No entry is equivalent to 0.
Valid Entries: 0 - 7.

2.6 PREFIXED DIGITS

Description: Enter the digits to be prefixed to the digits remaining after the NUMBER OF DIGITS TO DELETE have been deleted. The resulting reconstructed code will be re-interpreted by either the IDP or the office dialing plan, as appropriate.
Valid Entries: Up to 32 digits (0 - 9, *, #, F, O, I, P), where

- F - Flash
- O - Override flash
- I - Immediate
- P - Priority

---

idpicm 5ESS Switch _
(5601-5) OFFICE DATA ADMINISTRATION
IDP INTERCOM RANGE

* 1. IDP GROUP NAME AJAX
* 2. INTERCOM RANGE ID 001
3. USE OFFICE DIALING PLAN? Y
4. NUMBER OF DIGITS TO DELETE 1
5. PREFIXED DIGITS 5778030

Figure 1 SAMPLE IDPICM FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2F: 5601-6 RECORD
IDP LINE (TN) PARAMETER FORM - IDPLPA

1. GENERAL

The 5601-6 Record is available with the 5E2 and later Software Releases. It is used when assigning ID features to non-Multi-Line Hunt lines to assign ID feature parameters to the lines if the default parameters associated with the ID feature are inappropriate or unspecified.

NOTE: For 5E6 and later Software Releases, Speed Call parameters are assigned to non-Multi-Line Hunt lines by entering the SCLPA (Speed Call Line Parameter Assignment) form (5627-2 Record) instead of the IDPLPA form (5601-6 Record). To use the SCLPA form instead of the IDPLPA form, see Division 4, Section 27B.

If an IDPLPA form is entered for any given line, then all entries on that form will be used for the line instead of the default parameters entered on the corresponding IDFD form (5601-a/b Record).

For 5E5 and earlier Software Releases, when an ID feature associated exclusively with Abbreviated Dialing (i.e., an ID feature without an Individualized Dialing Plan) is assigned to a line with unshared Abbreviated Dialing only, this form need not be entered. The unshared AD List name will be the letter "A" followed by the 7-digit Telephone Number of the line.

For 5E5 and earlier Software Releases, when assigning Individualized Dialing features (defined with an IDP Group) to lines, the options AD1 and AD2 must be considered. For example, if a line is assigned an ID feature which has been defined with AD1 equal to "Y", then that line will be assigned a 1-digit Abbreviated Dialing list either through explicit translations or by default. If the default parameter entries for the 1-digit list are not entered on the IDFD form (5601-a/b Record) nor on this IDPLPA form, the list will be assumed to be unshared.

Therefore, the specific Abbreviated Dialing requirements for the line must be defined on the IDFD form. If a line is not to have 1-digit Abbreviated Dialing, then the Individualized Dialing feature assigned to the line must be defined with AD1 equal to "N".

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.26.

2. FORM ENTRIES, 5E5 AND EARLIER SOFTWARE RELEASES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the line.

Required Field.
Valid Entries:

For 5E5 and earlier: 7 digits

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following:

Class of Service

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Entry	Definition
ATND	50B Non-data Link Console Line or Attendant Line.
INDIV	Individual Line.
HOTMOTL	Line with hotel/motel feature.
ISDN	Software Release: 5E4(2) and later. ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
TWOPTY	Two-Party Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.

2.3 * ID FEATURE

Description: Enter the name of the ID feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ID feature defined on the IDFD form.

2.4 IDP GROUP NAME

Description: Enter the name of an Individualized Dialing Plan group which this line will use, if any.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an IDP GROUP defined on the IDPGP form and one or more IDPDCA forms.

2.5 DPAT CATEGORY

Description: If an IDP GROUP NAME is specified, and DPAT is allowed on the IDP GROUP (as specified on the IDPGP form), then enter the Dialing Plan Access Treatment category.
Valid Entries: 1 - 32

Data Rules:

If this field is entered and the line is to access a feature via the IDP, then the appropriate character of the DPAT CATEGORIES on the IDPDCA form must be set to "Y".

An entry is prohibited in this field if the IDP GROUP is unspecified or an IDP GROUP is specified but DPAT is not allowed on the IDP GROUP.

ABBREVIATED DIAL LIST 1

The following fields (Section 2.6 - Section 2.7) define a 1-digit Abbreviated Dialing list.

2.6 LIST NAME

Description: If the line subscribes to unshared 1-digit Abbreviated Dialing (Speed Calling), leave this field blank and enter N in the SHARED field. The name assigned to the list will automatically be set to the letter "A" followed by the seven-digit Telephone Number of the line. If the line subscribes to a shared list, enter a 1-digit Abbreviated Dialing List name. A shared list name may be any one- to eight-character name except the letter "A" followed by seven digits or an eight-digit name where the first four digits are in the range 0001 to 2000 and the second four digits are in the range 0000 to 2047.

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Valid Entries: 1 - 8 characters

2.7 SHARED?

Description: Is the 1-digit Abbreviated Dialing List to be shared among two or more terminals (lines and/or trunks)?
Valid Entries: Y, N

Data Rules:

A "Y" is required if the LIST NAME was entered.

ABBREVIATED DIAL LIST 2

The following fields (Section 2.8 - Section 2.9) define a 2-digit Abbreviated Dialing list.

2.8 LIST NAME

Description: If the line subscribes to unshared 2-digit Abbreviated Dialing (Speed Calling), leave this field blank and enter "N" in the SHARED field. The name assigned to the list will automatically be set to the letter "A" followed by the seven-digit Telephone Number of the line. If the line subscribes to a shared list, enter a 2-digit Abbreviated Dialing List name. A shared list name may be any one- to eight-character name except the letter "A" followed by seven digits or an eight-digit name where the first four digits are in the range 0001 to 2000 and the second four digits are in the range 0000 to 2047.
Valid Entries: 1 - 8 characters

2.9 SHARED?

Description: Is the 2-digit Abbreviated Dialing List to be shared among two or more terminals (lines and/or trunks)?
Valid Entries: Y, N

Data Rules:

A "Y" is required if the LIST NAME was entered.

2.10 ICR SFG

Description: Enter an Intercom Calling Restriction Simulated Facility Group number.
Valid Entries: 1 - 2000

Data Rules:

If an ICR SFG is entered, then an IDP GROUP NAME must be entered. The ICR SFG must also be defined on the PFASFG form.

3. FORM ENTRIES, 5E6 AND LATER SOFTWARE RELEASES

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 * TN

Description: Enter the seven-digit Telephone Number of the line.

Required Field.

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Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following:

Class of Service	
Entry	**Definition**
ATND	50B Non-data Link Console Line or Attendant Line.
HOTMOTL	Software Release: 5E6 and earlier. Line with hotel/motel feature.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
MODEM	Software Release: 5E7 and later. Packet Switching Modem Pooling.
PBX	Line to a PBX.
TWOPTY	Two-Party Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.

For 5E12 and later, TN/FEATURE combinations on different IDPLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the IDPLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

3.3 * FEATURE

Description: Enter the name of the ID feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ID feature defined on the IDFD form.

3.4 # IDP GROUP NAME

Description: Enter the name of an Individualized Dialing Plan group which this line will use, if any.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an IDP GROUP defined on the IDPGP form and one or more IDPDCA forms.

3.5 DPAT CATEGORY

Description: If DPAT is allowed on the IDP GROUP (as specified on the IDPGP form), then enter the Dialing Plan Access Treatment category.

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Valid Entries: 1 - 32

Data Rules:

An entry is prohibited in this field if DPAT is not allowed on the IDP GROUP.

If this field is entered and the line is to access a feature via the IDP, then the appropriate character of the DPAT CATEGORIES on the IDPDCA form must be set to "Y".

3.6 ICR SFG

Description: Enter an Intercom Calling Restriction Simulated Facility Group number.
Valid Entries: 1 - 2000

Data Rules:

If an ICR SFG is entered, then an IDP GROUP NAME must be entered. The ICR SFG must also be defined on the PFASFG form.

```
                        5ESS Switch
idplpa                OFFICE DATA ADMINISTRATION
(5601-6)        INDIVIDUAL DIALING PLAN (TN) LINE PARAMETERS

*1. TN           9791090
*2. FEATURE       ID1

#3. IDP GROUP NAME IDP1
 4. DPAT CATEGORY  01
 5. ICR SFG       0012
```

Figure 1 SAMPLE IDPLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
idplpa                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5601-6)        INDIVIDUAL DIALING PLAN (TN) LINE PARAMETERS

*1. TN     __________
*2. FEATURE ________

#3. IDP GROUP NAME ________
 4. DPAT CATEGORY  __
 5. ICR SFG       ____
```

Figure 2 SAMPLE IDPLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 2G: 5601-7 RECORD
IDP LINE (MLHG/TERM) PARAMETER FORM - IDPMPA

1. GENERAL

The 5601-7 Record is used to assign feature ID parameters to Multi-Line Hunt lines when the default parameters associated with the ID feature are inappropriate.

NOTE: Speed Call parameters are assigned to Multi-Line Hunt lines by entering the SCMPA (Speed Call MLHG/TERM Line Parameter Assignment) form (5627-3 Record) instead of the IDPMPA form (5601-7 Record). Therefore, ignore all references to Abbreviated Dialing (Speed Call) attributes on the IDPMPA form for 5E6 and later Software Releases. To use the SCMPA form instead of the IDPMPA form, see Division 4, Section 27C.

If an IDPMPA form is entered for any given terminal, then all entries on that form will be used for the terminal instead of the default parameters entered on the corresponding IDFD form (5601-a/b Record).

For 5E5 and earlier Software Releases, when an ID feature associated exclusively with Abbreviated Dialing (i.e., an ID feature without an Individualized Dialing Plan) is assigned to a Multi-Line Hunt line with unshared Abbreviated Dialing only, this form need not be entered. The unshared AD List name will be the letter "A" followed by the 7-digit Telephone Number of the Multi-Line Hunt line. (Multi-Line Hunt lines may subscribe to unshared AD Lists only if they have a Telephone Number.)

For 5E5 and earlier Software Releases, the options AD1 and AD2 must be considered when assigning Individualized Dialing features (defined with an IDP Group) to Multi-Line Hunt lines. For example, if a Multi-Line Hunt line is assigned an ID feature which has been defined with AD1 equal to "Y", then that line will be assigned a 1-digit Abbreviated Dialing list either through explicit translations or by default. If the default parameter entries for the 1-digit list are not entered on the IDFD form (5601-a/b Record), nor on this IDPMPA form, the list will be assumed to be unshared.

Therefore, the specific Abbreviated Dialing requirements for the Multi-Line Hunt line must be defined on the IDFD Form. If a Multi-Line Hunt line is not to have 1-digit Abbreviated Dialing, then the Individualized Dialing feature assigned to the Multi-Line Hunt line must be defined with AD1 equal to "N".

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.26.

2. FORM ENTRIES, 5E5 AND EARLIER SOFTWARE RELEASES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Member number of the line.

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Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service

Entry	Definition
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
HOTMOTL	Line with hotel/notel feature.
PBX	Line to a PBX.
TWOPTY	Two-Party Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.

2.4 * ID FEATURE

Description: Enter the name of the ID feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ID feature defined on the IDFD form.

2.5 IDP GROUP NAME

Description: Enter the name of the Individualized Dialing Plan Group which this line will use, if any.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an IDP group defined on the IDPGP form and one or more IDPDCA forms.

2.6 DPAT CATEGORY

Description: If an IDP GROUP NAME is specified, and DPAT is allowed on the IDP GROUP (as specified on the IDPGP form) then enter the Dialing Plan Access Treatment category.
Valid Entries: 1 - 32

Data Rules:

If this field is entered and the line is to access a feature via the IDP, then the appropriate character of the DPAT CATEGORIES on the IDPDCA form must be set to Y.

An entry is prohibited in this field if the IDP GROUP is unspecified, or an IDP GROUP is specified but DPAT is not allowed on the IDP GROUP.

ABBREVIATED DIAL LIST 1

The following fields (Section 2.7 - Section 2.8) define a 1-digit Abbreviated Dialing list.

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2.7 LIST NAME

Description: Multi-Line Hunt lines may subscribe to unshared AD lists only if they have a Telephone Number. If this line has a TN and subscribes to unshared 1-digit Abbreviated Dialing (Speed Calling), enter a 1-digit AD List name consisting of the letter "A" followed by the seven-digit Telephone Number assigned to the Multi-Line Hunt line. If the line subscribes to a shared list, enter a 1-digit Abbreviated Dialing List name. A shared list name may be any one- to eight-character name except the letter "A" followed by seven digits or an eight-digit name where the first four digits are in the range 1 to 2000 and the second four digits are in the range 0 to 2047.
Valid Entries: 1 - 8 characters

2.8 SHARED?

Description: Is the 1-digit Abbreviated Dialing List to be shared among two or more terminals (lines and/or trunks)?
Valid Entries: Y, N

Data Rules:

A "Y" is required if the LIST NAME was entered.

ABBREVIATED DIAL LIST 2

The following fields (Section 2.9 - Section 2.10) define a 2-digit Abbreviated Dialing list.

2.9 LIST NAME

Description: Multi-Line Hunt lines may subscribe to unshared AD Lists only if they have a Telephone Number. If this line has a TN and subscribes to unshared 2-digit Abbreviated Dialing (Speed Calling), enter a 2-digit AD List name consisting of the letter "A" followed by the seven-digit Telephone Number assigned to the Multi-Line Hunt line. If the line subscribes to a shared list, enter a 2-digit Abbreviated Dialing List name. A shared list name may be any one- to eight-character name except the letter "A" followed by seven digits or an eight-digit name where the first four digits are in the range 1 to 2000 and the second four digits are in the range 0 to 2047.
Valid Entries: 1 - 8 characters

2.10 SHARED?

Description: Is the 2-digit Abbreviated Dialing List to be shared among two or more terminals (lines and/or trunks)?
Valid Entries: Y, N

Data Rules:

A "Y" is required if the LIST NAME was entered.

2.11 ICR SFG

Description: Enter an Intercom Calling Restriction Simulated Facility Group number.
Valid Entries: 1 - 2000

Data Rules:

If an ICR SFG is entered then an IDP GROUP NAME must be entered. The ICR SFG must also be defined on the PFASFG form.

3. FORM ENTRIES, 5E6 AND LATER SOFTWARE RELEASES

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3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

3.3 * TERM

Description: Enter the Multi-Line Hunt Group Member number of the line.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
Entry	**Definition**
ATND	50B Nondata Link Console Line or Attendant Line.
HOTMOTL	Software Release: 5E6 and earlier. Linewith hotel/motel feature.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
MODEM	Software Release: 5E7 and later. Packet Switching Modem Pooling.
PBX	Line to a PBX.
TWOPTY	Two-Party Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.

3.4 * FEATURE

Description: Enter the name of the ID feature for which the parameters are to be assigned.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ID feature defined on the IDFD form.

3.5 IDP GROUP NAME

Description: Enter the name of the Individualized Dialing Plan Group which this line will use, if any.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an IDP group defined on the IDPGP form and one or more IDPDCA forms.

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3.6 DPAT CATEGORY

Description: If DPAT is allowed on the IDP GROUP (as specified on the IDPGP Form), then enter the Dialing Plan Access Treatment category.
Valid Entries: 1 - 32

Data Rules:

An entry is prohibited in this field if DPAT is not allowed on the IDP GROUP.

If this field is entered and the line is to access a feature via the IDP, then the appropriate character of the DPAT CATEGORIES on the IDPDCA form must be set to "Y".

3.7 ICR SFG

Description: Enter an Intercom Calling Restriction Simulated Facility Group number.
Valid Entries: 1 - 2000

Data Rules:

If an ICR SFG is entered then an IDP GROUP NAME must be entered. The ICR SFG must also be defined on the PFASFG form.

```
idpmpa                  5ESS Switch          _
(5601-7)              OFFICE DATA ADMINISTRATION
                  IDP LINE (MLHG/TERM) PARAMETERS

*1. MLHG          0028
*2. TERM          0001
*3. ID FEATURE    ABCCO
 4. IDP GROUP NAME ABC
 5. DPAT CATEGORY  01

 ABBREVIATED DIAL LIST 1:
 6. LIST NAME     COMP
 7. SHARED?       Y

 ABBREVIATED DIAL LIST 2:
 8. LIST NAME     ________
 9. SHARED?       _

10. ICR SFG       0024
```

Figure 1 SAMPLE IDPMPA FORM 5E5 SOFTWARE RELEASE

```
                        5ESS Switch          _
idpmpa                OFFICE DATA ADMINISTRATION
(5601-7)    INDIVIDUAL DIALING PLAN (MLHG/TERM) LINE PARAMETERS

*1. MLHG          0010
*2. TERM          0021
*3. FEATURE       ID1
```

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4. IDP GROUP NAME IDP1
5. DPAT CATEGORY 01
6. ICR SFG 0014

Figure 2 SAMPLE IDPMPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 2H: 5601-8 RECORD
IDP TRUNK PARAMETER FORM - IDPTPA

1. GENERAL

The 5601-8 Record is available with 5E2 and later Software Releases. It is used when assigning ID features to trunks when the default parameters associated with the ID feature are inappropriate.

- ***NOTE:*** For 5E6 and later Software Releases, Speed Call parameters are assigned to trunks by entering an SCTPA (Speed Call Trunk Parameter Assignment) form (5627-4 Record) instead of the IDPTPA form (5601-8 Record). To use the SCTPA form instead of the IDPTPA form, see Division 4, Section 27D.

If an IDPTPA form is entered for any given trunk, all entries on that form will be used for the trunk instead of the default parameters on the corresponding IDFD form (5601-a/b Record).

For 5E5 and earlier Software Releases, when an ID feature associated exclusively with Abbreviated Dialing (i.e., an ID feature without an Individualized Dialing Plan) is assigned to a trunk with unshared Abbreviated Dialing only, this form need not be entered. The unshared AD List name will be the 4-digit Trunk Group Number followed by the 4-digit Member Number.

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.26.

2. FORM ENTRIES, 5E5 AND EARLIER SOFTWARE RELEASES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TRUNK GROUP

Description: Enter the Trunk Group Number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202 Record) must be one of the following.

TRKCLS	
Entry	**Definition**
LTOLLCON	Toll Connecting.
PF	Private Facility.
PFITT	Software Release: 5E3 and later. Private Facility Intertandem Trunk.
PFLASH	Private Facility Feature Flash.
PRINTOLL	Primary Intertoll.
TTOLLCON	Toll Completing.
EDSL	Software Release: 5E8 and later. Extended Digital Subscriber Line trunk.
EDSLHM	Software Release: 5E8 and later. EDSL for Hotel/Motel TSPS service.

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2.3 * MEMBER

Description: Enter the Trunk Group Member Number of the trunk.

Required Field.
Valid Entries: 0 - 1951.

2.4 * ID FEATURE

Description: Enter the name of the ID feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ID feature defined on the IDFD form (5601-a/b Record).

2.5 IDP GROUP NAME

Description: Enter the name of the Individualized Dialing Plan which this trunk will use, if any.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an IDP defined on the IDPGP form and one or more IDPDCA forms.

2.6 DPAT CATEGORY

Description: If an IDP GROUP NAME is specified, and DPAT is allowed on the IDP GROUP (as specified on the IDPGP form), then enter the Dialing Plan Access Treatment category.
Valid Entries: 1 - 32

Data Rules:

If this field is entered and the trunk is to access a feature via the IDP, then the appropriate character of the DPAT CATEGORIES on the IDPDCA form must be set to "Y".

An entry is prohibited in this field if the IDP GROUP is unspecified, or an IDP GROUP is specified but DPAT is not allowed on the IDP GROUP.

ABBREVIATED DIAL LIST 1

The following fields (Section 2.7 - Section 2.8) define a 1-digit Abbreviated Dialing list.

2.7 LIST NAME

Description: If the trunk subscribes to unshared 1-digit Abbreviated Dialing (Speed Calling), leave this field blank and enter "N" in the SHARED field. The name assigned to the list will automatically be set to an eight-digit list name consisting of the four-digit Trunk Group Number followed by the four-digit Member Number. If the trunk subscribes to a shared list, enter a 1-digit Abbreviated Dialing List name. A shared list name may be any one- to eight-character name except the letter "A" followed by seven digits or an eight-digit name where the first four digits are in the range 1 to 2000 and the second four digits are in the range of 0 to 1951.
Valid Entries: 1 - 8 characters

2.8 SHARED?

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Description: Is the 1-digit Abbreviated Dialing List to be shared among two or more terminals (lines and/or trunks)?
Valid Entries: Y, N

Data Rules:

A "Y" is required if the LIST NAME was entered.

ABBREVIATED DIAL LIST 2

The following fields (Section 2.9 - Section 2.10) define a 2-digit Abbreviated Dialing list.

2.9 LIST NAME

Description: If the trunk subscribes to unshared 2-digit Abbreviated Dialing (Speed Calling), leave this field blank and enter "N" in the SHARED field. The name assigned to the list will automatically be set to an eight-digit list name consisting of the four-digit Trunk Group Number followed by the four-digit Member Number. If the trunk subscribes to a shared list, enter a 2-digit Abbreviated Dialing List name. A shared list name may be any one- to eight-character name, except the letter "A" followed by seven digits or an eight-digit name where the first four digits are in the range 1 to 2000 and the second four digits are in the range of 0 to 1951.
Valid Entries: 1 - 8 characters

2.10 SHARED?

Description: Is the 2-digit Abbreviated Dialing List to be shared among two or more terminals (lines and/or trunks)?
Valid Entries: Y, N

Data Rules:

A "Y" is required if the LIST NAME was entered.

3. FORM ENTRIES, 5E6 AND LATER SOFTWARE RELEASES

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 * TGN

Description: Enter the Trunk Group Number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202 Record) must be one of the following.

TRKCLS	
Entry	**Definition**
LTOLLCON	Toll Connecting.
PF	Private Facility.
PFITT	Software Release: 5E3 and later. Private Facility Intertandem Trunk.

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PFLASH	Private Facility Feature Flash.
PRINTOLL	Primary Intertoll.
TTOLLCON	Toll Completing.

3.3 * MEMB

Description: Enter the Trunk Group Member Number of the trunk.

Required Field.
Valid Entries: 0 - 1951

3.4 * FEATURE

Description: Enter the name of the ID feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ID feature defined on the IDFD form (5601-a/b Record).

3.5 # IDP GROUP NAME

Description: Enter the name of the Individualized Dialing Plan which this trunk will use, if any.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an IDP defined on the IDPGP form and one or more IDPDCA forms.

3.6 DPAT CATEGORY

Description: If DPAT is allowed on the IDP GROUP (as specified on the IDPGP form), then enter the Dialing Plan Access Treatment category.
Valid Entries: 1 - 32

Data Rules:

An entry is prohibited in this field if DPAT is not allowed on the IDP GROUP.

If this field is entered and the line is to access a feature via the IDP, then the appropriate character of the DPAT CATEGORIES on the IDPDCA form must be set to "Y".

```
                    5ESS Switch
idptpa                OFFICE DATA ADMINISTRATION
(5601-8)          INDIVIDUAL DIALING PLAN TRUNK PARAMETERS

*1. TGN           0021
*2. MEMB           1900
*3. FEATURE        ID1

#4. IDP GROUP NAME IDP1
 5. DPAT CATEGORY  22
```

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Figure 1 SAMPLE IDPTPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 2I: 5601-9 RECORD
ABBREVIATED DIALING LIST FORM - ADLIST

1. GENERAL

The 5601-9 Record is available with the 5E5 and earlier Software Releases. It is used to reserve memory for Abbreviated Dialing Lists and for assigning stored DNs (Directory Numbers) to Abbreviated Dialing codes.

For 5E6 and later Software Releases, the 5601-9 Record is not available; therefore, use the SCLIST form (5627-5 Record) to assign DNs to Speed Call codes.

When the stored DNs are not known at ODA time, an ID feature has been defined, and this form was not entered for any given AD List, memory will be reserved for the list entries for codes 2 through 7 (1-digit lists) or codes 20 through 49 (2-digit lists).

When the stored DNs are not known at ODA time, no ID feature has been defined, and this form was not entered for any given AD List, memory will be reserved for the list entries for codes 2 through 9 (1-digit lists) or codes 20 through 49 (2-digit lists).

When any forms are submitted for any given AD List, memory will only be reserved for the codes (1-digit) or ten-code blocks (2-digit) which are entered on the forms. Therefore, when any data is submitted for a 1-digit list, for example, extreme care must be taken to enter all eight codes (or more, if desired) even though the stored DNs may not be known for all of the codes. Customer originated changes to the AD Lists will be allowed only for those codes (or ten-code blocks) for which memory has been reserved.

This form may be submitted for shared AD Lists which are not yet assigned to any terminal. However, it may not be submitted for unshared AD Lists which are unassigned. That is, if the SHARED field is "N", one LINEFA or MLHLNFA form must also be submitted for a line with the Telephone Number indicated after the "A" in AD LIST NAME. For trunks, either a TRUNKFA form must be submitted for the indicated Trunk Group and Member Number or a TKGRPFA form must be submitted for the indicated Trunk Group and the indicated Member Number defined on a TRUNK form.

The codes 2 through 9 and 20 through 49 are also provided in PDIT. If other codes are to be used by subscribers in the ODP (Office Dialing Plan), those codes must be added.

If any member of an IDP Group has Abbreviated Dialing options, all codes must be defined in the IDPDCA for that IDP Group.

1.1 Recent Change View

The corresponding Recent Change view for this form is 4.2.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * AD LIST NAME

Description: Enter the Abbreviated Dialing List name. For unshared lists assigned to lines, the AD LIST NAME must be the letter "A" followed by the Telephone Number of the line. For this reason, unshared lists may not be assigned to Multi-Line Hunt lines unless the lines have Telephone Numbers. For unshared lists assigned to a trunk, the AD LIST NAME must be the four-digit Trunk Group Number (0001 to 2000) followed by the four-digit Member Number (0000 to 2047). Shared list names may be any one- to eight-character names except for those allowed for unshared lists.

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Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

AD LIST NAMEs for 1-digit lists must be unique and list names for 2-digit lists must be unique. However, the same name may be used for a 1-digit list as for a 2-digit list.

2.3 * AD CODE BLOCK

Description: For 1-digit AD lists, enter a 0. For 2-digit lists, enter the tens digit of the codes which are entered in the AD CODE fields, followed by a 0. For example, for the ten AD List codes 20 through 29, enter 20 in AD CODE BLOCK. For 2-digits lists, the valid values of the first digit are *, # and 0 to 9.

Required Field.
Valid Entries: 2 digits (See Description.)

2.4 SHARED

Description: Is the list shared?

Required Field.
Valid Entries: Y, N

AD LIST

The Abbreviated Dialing list consists of the followings fields (Section 2.5 - Section 2.6).

2.5 AD CODE

Description: Enter the Abbreviated Dialing code to be dialed. For 1-digit lists, up to twelve codes may be specified (*,# and 0 to 9). Since the characters # and * are cursor control codes for the ODA system, it is necessary to follow each of these characters by a blank (space bar) when entering it into the ODA system. For 2-digit lists, the first digit must be the same as the first digit of the AD CODE BLOCK and only ten codes may be specified with each code's last digit in the range 0 to 9. For 2-digit lists where the AD CODE BLOCK starts with a # or *, do not enter the blank. AD CODEs may not be duplicated in the list.

Caution should be used when defining the AD codes. If a line uses the ODP (Office Dialing Plan) and 0 is used as an AD code, then this subscriber will not be able to reach the operator on a zero-minus call. If a terminal (line or trunk) uses an IDP (Individualized Dialing Plan), care should be taken with codes defined in the IDPDCA. For instance, if 0 is used for attendant access, or 9 is used for escape to POTS, then those codes can not also be used for AD codes.
Valid Entries: 2 digits (See Description.)

2.6 STORED DN

Description: Leave this field blank if the stored DN (Directory Number) is unknown. If the DN is known, enter a string of up to 32 digits which the AD CODE is to access. The digits may be *, # or 0 to 9, or O, F, I and P which are applicable to terminals which are also assigned a Precedence and Preemption feature. See the PPFD form (5618-1 Record).
Valid Entries: up to 32 digits (0 - 9, *, #, O, F, I, P)

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```
* 1. AD LIST NAME   AD1AJAX
* 2. AD CODE BLOCK  0
  3. SHARED?        Y
  4. AD LIST:
    row   AD CODE   STORED DN
     1       1      1041
     2       2      1042
     3       3      1043
     4       4      1044
     5       5      1045
     6       6      1046
     7       7      1047
     8       8      1048
     9       *     1049
    10       #      1050
    11      __    ____________________________
    12      __    ____________________________
```

Figure 1 SAMPLE ADLIST FORM 5E5 SOFTWARE RELEASE

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SEC. 2J: 5601-10 RECORD
ABBREVIATED DIALING GROUP DATA FORM - ADDATA

This section has been removed from the TG-5.

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SEC. 2K: 5601-11 RECORD IDP REVERSE CODE ASSIGNMENT (INDIVIDUAL DIALING) - IDPRDCA

1. GENERAL

The 5601-11 Record is available with the 5E5 and later Software Releases. It is used to define the reverse codes associated with IDPs (Individualized Dialing Plans).

The IDPRDCA is associated with an IDFD (Individualized Dialing Feature Definition) which has IDP GROUP equal to "Y".

This form is used to assign a reverse intercom range to a public TN in an IDP group. Reverse intercom code assignment allows a customer to convert a 10-digit public TN back to an intercom extension for intra-switch AC invocations.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * IDP GRP

Description: Enter the IDP GRP name. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The value entered here must be defined on the IDPGP form (5601-4 Record) as IDP GROUP NAME.

2.3 * DIGITS

Description: Enter the dialed digits to be interpreted. Up to ten digits may be entered in the format of NPA-NXX-XXXX.

Required Field.
Valid Entries: up to 10 digits (0 - 9)

Data Rules:

The digits entered in this field cannot be the beginning substring of another DIGITS field with the same IDP GRP defined on this form.

2.4 # REV ICM RANGE

Description: This field indicates the reverse intercom range.

Required Field.
Valid Entries: 1 - 512

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Data Rules:

Any value entered here must be defined on the IDPRICM form (5601-12 Record) with the same IDP GRP defined on this form.

---

idprdca 5ESS Switch
(5601-11) OFFICE DATA ADMINISTRATION
IDP REVERSE CODE ASSIGNMENT

*1. IDP GRP IDPGP
*2. DIGITS 3123785592
#3. REV ICM RANGE 010

Figure 1 SAMPLE IDPRDCA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2L: 5601-12 RECORD IDP REVERSE INTERCOM RANGE (INDIVIDUAL DIALING) - IDPRICM

1. GENERAL

The 5601-12 Record is available with the 5E5 and later Software Releases. It is used to define the reverse intercom ranges associated with IDPs (Individualized Dialing Plans). Reverse intercom dialing allows a 10-digit public TN to be converted back to an intercom extension after a LASS (Local Area Signaling Serviced) AC (Automatic Callback) invocation.

When the AC feature is invoked, the switch determines the reverse intercom range, the appropriate number of digits are deleted, and then the appropriate digits are prefixed to reconstruct the extension. The extension is then interpreted by the IDP or ODP (Office Dialing Plan) as if it had actually been dialed.

1.1 Recent Change View

The corresponding Recent Change view for this form is 9.26.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * IDP GRP

Description: Enter the IDP Group Name. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The IDP group whose name is entered here must be defined on the IDPGP form and one or more IDPRDCA forms.

2.3 * REV ICM RANGE

Description: This field indicates the reverse intercom range.

Required Field.
Valid Entries: 1 - 512

Data Rules:

The reverse intercom range defined on this form must be entered on the IDPRDCA form (5601-11 Record) for the appropriate codes.

2.4 # NBR DEL DIG

Description: Enter the number of digits to delete.

Required Field.
Default: 0
Valid Entries: 0 - 10

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Data Rules:

If NBR DEL DIG is 0, then PRFX DIG must be entered.

2.5 PRFX DIG

Description: Enter the digits to be prefixed to the remaining digits. The resulting reconstructed extension will be re-interpreted by either the IDP or the office dialing plan, as appropriate.
Valid Entries: up to 7 digits (0 - 9, *, and #)

```
idpricm                    5ESS Switch
(5601-12)              OFFICE DATA ADMINISTRATION
                    IDP REVERSE INTERCOM RANGE

*1. IDP GRP       IDPR1
*2. REV ICM RANGE 200
#3. NBR DEL DIG    1
 4. PRFX DIG      _______
```

Figure 1 SAMPLE IDPRICM FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3: MULTIWAY CALLING FORMS

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SEC. 3A: 5602-1/2 RECORD
MULTI-WAY FEATURE DEFINITION FORM - MWFD

1. GENERAL

The 5602-1/2 Record is available with the 5E2 and later Software Releases. The record is used to define many of the Add-On and conferencing features used in other switching systems (e.g., Call Hold, Three-Way Calling, Six-Port Conferencing, and Call Transfer) and replaces the Three-Way Calling feature in earlier 5ESS Software Releases. The 5602-1/2 Record is also used to define how call processing will be affected by customer attempts to flash or disconnect while holding, adding, or transferring calls.

Multi-Way Calling is also used in conjunction with other BRCS features to provide services similar to those existing systems.

There are two basic types of multi-way features - Hold features and Conference features. The Hold features are those constructed with the multi-way control options Hold, Hold and Alternate, and Code and Alternate ("HOLD", "HOLDAT" and "CODEALT", respectively in the MULTIWAY CONTROL field). These features allow a customer to hold an existing call and make another call, and to reconnect to the originally held call.

Each defined feature is given a feature name of from one to eight characters which is used to assign the constructed (defined) feature to lines or trunks. Certain multi-way features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/) and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed multi-way features is contained in Figures 1, 2, 3, and 4.

A terminal (line or trunk) must be assigned a multi-way feature on the appropriate feature assignment form, BFG (5625-1/7 Record), CLUSTR (5600 Record), LINEFA (5112 Record), MLHNFA (5113 Record), TKGRPFA (5206 Record) or TRUNKFA (5205 Record).

1.1 Class of Service

For 5E6 and later, lines assigned a Multiway Calling feature must have an associated Class of Service of "4WINDIV", "INDIV", "ATND", "PBX", "SATSTLN", "ISDN", or "ISATND". That is, when a TN defined on a LINE form or a CKT TN defined on a DSLUSR form is assigned a Multiway Calling feature on a LINEFA, BFG, or associated CLUSTR form, the TN must be assigned an LCC and RAX defined on the LCC form with one of the above classes of service. The same restriction holds for a Multi-Line Hunt Group terminal defined on an MLHLNFA form or a CKT MLHG/TERM defined on a DSLUSR form.

1.2 Feature Assignment Rules

Multi-way features assigned to CKT TNs defined on DSLUSR forms with an associated Class of Service of "ISDN" must have the following fields set to "N": FLASH, IN MIDDLE, OFF HOOK, CALL WAITING, and CALL PICKUP.

Multi-way features assigned to CKT TNs with an associated Class of Service other than "ISDN" must have the following fields set to "N": FEATURE BUTTON, DIAL CODE OR BUTTON, and ISDN CALL PICKUP.

Multi-way features assigned to CKT TNs with an associated Class of Service of "ISATND" must have the following fields set to "N": FLASH, IN MIDDLE, OFF HOOK, CALL WAITING, CALL PICKUP, FEATURE BUTTON, DIAL CODE OR BUTTON, and ISDN CALL PICKUP.

Multi-way features assigned to CKT TNs with an associated Class of Service other than "ISATND" must have the ISDN ATTENDANT field set to "N".

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1.3 Preconstructed Feature Changes

A new preconstructed feature, /MWCTIA5, was added for 5E3 and later Software Releases. This was done because the /MWCTIA4 preconstructed feature on the MWFD form has existed in two ways, with MULTIWAY CONTROL equal to "3WAY" or "AUTO3WAY". In 5E7 and later Software Releases, /MWCTIA4 will be standardized to have MULTIWAY CONTROL equal to "3WAY" in all offices. The new preconstructed feature /MWCTIA5 is identical to /MWCTIA4, except that MULTIWAY CONTROL is equal to "AUTO3WAY".

The following outlines the revised retrofit process:

1. During retrofits to 5E4, 5E5 or 5E6, the /MWCTIA4 feature will retain its current MULTIWAY CONTROL value. MULTIWAY CONTROL values of "AUTO3WAY" will remain "AUTO3WAY". MULTIWAY CONTROL values of "3WAY" will remain "3WAY".

2. In 5E3 and later, the /MWCTIA4 feature will have MULTIWAY CONTROL equal to "3WAY" for all new-start offices or for retrofitting offices that have deleted or renamed their original /MWCTIA4 feature.

3. Existing offices can get the /MWCTIA5 feature via application of a BWM. The customer is being asked in 5E3 - 5E6 to use /MWCTIA5 for features that wish to have MULTIWAY CONTROL equal to "AUTO3WAY" so as to minimize impact in 5E7 and 5E8 retrofits.

4. During a retrofit to 5E7 or 5E8, the /MWCTIA4 feature will be standardized. The /MWCTIA4 feature will have MULTIWAY CONTROL set to "3WAY" in all offices. If the /MWCTIA4 feature came in with MULTIWAY CONTROL equal to "AUTO3WAY", then all assignments of the /MWCTIA4 feature will be automatically changed by ODA to /MWCTIA5 to preserve functionality. If /MWCTIA4 came in with MULTIWAY CONTROL equal to "3WAY", then nothing will be changed.

5. An office which previously started with /MWCTIA4 MULTIWAY CONTROL equal to "3WAY", was forced to change MULTIWAY CONTROL to "AUTO3WAY" and had to replace /MWCTIA4 assignments with a new constructed feature with MULTIWAY CONTROL equal to "3WAY" to maintain functionality, may use the ODAOPT form (5523 Record) to "back out" the constructed feature assignments and replace them with the standardized /MWCTIA4 feature.

   The new field MULTIWAY 3WAY CONSTRUCTED FEATURE has been added to the ODAOPT form. This field can be used to specify the name of a constructed feature with MULTIWAY CONTROL equal to "3WAY" that the customer plans to replace with the standardized /MWCTIA4 feature (MULTIWAY CONTROL equal to "3WAY").

   This conversion will not take place automatically. The actual changes must be done manually.

   Two crosschecks will be run using this new field. The first crosscheck will compare the constructed feature to /MWCTIA4 and specify any discrepancies so that the office is assured of maintaining functionality following the change. The second crosscheck will identify all assignments of the constructed feature in the database. Using the output from this crosscheck, the office (or the ODA Project Consultants, at the office's request) can manually change some or all of the assignments of the constructed feature to /MWCTIA4.

   Note that this replacement process is manual, not automated. As such, the use of the new MULTIWAY 3WAY CONSTRUCTED FEATURE field and the crosscheck data is optional in all offices. The purpose of the field and crosscheck is to assist offices in "undoing" changes forced on offices during earlier retrofits.

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1.4 Recent Change View

The corresponding Recent Change View for this form is 12.19.

2. FORM ENTRIES - 5602-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE NAME

Description: Enter the multi-way calling Feature Name.

There are no restrictions on the valid characters, except that Feature Names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed, or inserted.

Required Field.
Valid Entries: 1- 8 characters

Data Rules:

For 5E15 and later, the feature options on the MWFD form define a USSWC (Usage Sensitive Six-Way Calling) feature which cannot be assigned on this form or any of the associated CLUSTR forms (5600 Record). USSWC must be assigned on the OFCOPT form (5509 Record). For more information on the USSWC feature, see Division 2, Section 4A553.

For 5E15 and later, when FEATURE NAME is entered for USSWC (Usage Sensitive Six-Way Calling) features defined on this form where the fields listed are set as follows:

- FEATURE OPTIONS fields: ACT/INACT OPTION is set to "ACT1CA", MULTIWAY CONTROL is set to "NWAY", and AMAC is set to "USAGE",
  - ***NOTE:*** The MULTIWAY CONTROL and AMAC fields are locked and cannot be changed.
- ENTRY POINT fields: FLASH is set to "Y", IN MIDDLE is set to "Y", and OFF HOOK is set to "Y", and
  - ***NOTE:*** The FLASH, IN MIDDLE, and OFF HOOK fields are locked and cannot be changed.
- DEFAULT PARAMETER field: N-WAY MAXIMUM is set to "6",

then:

- the MLHLNFA, CLUSTR, and/or BFG forms (5113, 5600, 5625 Records respectively) cannot have a USSWC feature name entered as these features are not assignable to multiline hunt lines. The USSWC feature must be assigned on the OFCOPT form (5509 Record). (For more information on the USSWC feature, see Division 2, Section 4A553.)
- the LINEFA, CLUSTR, and/or BFG forms (5112, 5600, 5625 Records respectively) cannot have a USSWC feature name entered as these features are not assignable to lines. The USSWC feature must be assigned on the OFCOPT form. (For more information on the USSWC feature, see Division 2, Section 4A553.)

2.3 REMARKS

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Description: Enter (optionally) a descriptive comment.
Valid Entries: up to 32 characters

FEATURE OPTIONS

Fields Section 2.4 -Section 2.11 refer to feature options.

2.4 ACT/INACT OPTION

Description: Enter the activation/deactivation type for the feature.

Required Field.
Default: ALWACT
Valid Entries:

Valid ACT/INACT OPTION Entries

Entry	Definition
ACT1CA	When this option is selected, the feature is inactive when assigned to a line. In order to use the feature, the customer dials an activation code for the feature. As soon as the call ends, the feature is automatically deactivated. The activation code is required in either the Office Dialing Plan defined on a PDIT form (5300-2 Record), or the line's Individualized Dialing Plan defined on an IDPDCA form (5601-1/2 Record), with an ACTION of "FTACT" and a FEATURE equal to the FEATURE NAME entered on this form.
ALWACT	When this option is selected, the feature is completely activated when assigned to the line. The only way to deactivate the feature is through a service order request.
CUSTSEL	When this option is selected, the feature is inactive when assigned to a line. A customer can activate and deactivate it by dialing an appropriate activation or deactivation code. The state of activation or deactivation is determined by the last dialed activation or deactivation code (i.e., an active feature remains active until the customer dials the deactivation code, or until the Time-Of-Day feature triggers the deactivation code. The activation code is required in either the Office Dialing Plan (defined on a PDIT form), or the line's Individualized Dialing Plan (defined on an IDPDCA form), with an ACTION of "FTACT", and a FEATURE equal to the FEATURE NAME entered on this form. The deactivation code is similarly required in either the office dialing plan or the line's Individualized Dialing Plan with an ACTION of "FTDCT", and a FEATURE equal to the FEATURE NAME entered on this form.
INACT1CA	When this option is selected, the feature is active when assigned to a line. In order to deactivate the feature, the customer dials a deactivation code for the feature. As soon as the call ends, the feature is automatically reactivated. The deactivation code is required in either the Office Dialing Plan (defined on a PDIT form), or the line's Individualized Dialing Plan (defined on an IDPDCA form), with an ACTION of "FTDCT", and a FEATURE equal to the FEATURE NAME entered on the form.

2.5 MULTIWAY CONTROL

Description: Enter the type of Multi-Way calling feature.

"3WAY" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.

- ***NOTE:*** See Section 1.3 for details on the correct value of this field for certain preconstructed features.

Default: 3WAY
Valid Entries:

Valid MULTIWAY CONTROL Entries

Entry	Definition
3WAY	Allows the customer to hold and add terminals to a call and to form three-way calls. The controlling terminal of a two-way call (i.e., the terminal with the multi-way feature) uses the same procedure as used in the "HOLD" type call to put the non-controlling terminal on hold and dial a

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	third party. At any time after the controlling terminal receives (audible), it may flash to reconnect the non-controlling terminal of the original call to form a three-way call. If the non-controlling terminal of the original call disconnects after the third party answers but before the three-way call is established, the controlling terminal receives an optional party departure tone. If the controlling terminal disconnects from the three-way call, the other two terminals are also disconnected unless the MULTIWAY TRANSFER is specified as "ALW". NOTE: The third party can be bridged on even if busy tone or reorder was reached by subscribing to the secured feature, Three-Way Reconnect. For 5E5 and later, this feature must be activated by an AT&T System Equipment Engineer on RC View 10.19 in the 5E4(2) Software Release, or on the SFSYS form (5713 Record, RC View 8.22) in 5E5 and later.
AUTO3WAY	Similar to the 3WAY option except the non-controlling terminal of the original call is automatically reconnected when the controlling terminal receives calling terminal treatment (audible, busy tone, etc). Features of this type are normally assigned to 50B CPS and other attendant consoles, but may be assigned to any line.
CODEALT	This option allows the controlling terminal to put the non-controlling terminal of a two-way establishing a connection with the third terminal to flash (getting recall dial tone) and dial a code to reestablish a connection with the original non-controlling terminal. Subsequent flashes by the controlling terminal return recall dial tone and the controlling terminal can dial the code to alternate between the held terminals. The dialed code is required in either the Office Dialing Plan (defined on the PDIT form), or the line's Individualized dialing Plan (defined on the IDPDCA form), with an ACTION of "MWSOH", and a FEATURE equal to the FEATURE NAME entered on this form.
DIRCON	Allows the controlling terminal of a two-way call to flash and automatically form a three-way call with a predesignated third terminal. The predesignated third terminal is changeable only by a service order.
FLSHRPT	Flash repeat.
HOLD	This option allows the controlling terminal of a two-way call to hold the non-controlling terminal by flashing (thereby receiving recall dial tone). After receiving recall dial tone, the controlling terminal can dial the number of a third terminal. If the controlling terminal flashes again after receiving recall dial tone and before dialing of the third party is complete, the call is reconnected to the non-controlling terminal of the original two-way call. If a connection is established between the controlling terminal and the third terminal, the call must be completed and the controlling terminal must disconnect. After disconnect, the system rings the controlling terminal back and on answer, the original two-way call is reestablished. If the non-controlling terminal of the original two-way call disconnects while the controlling terminal and third terminal are connected, the controlling terminal receives an optional party departure tone.
HOLDALT	This option allows the controlling terminal to put the non-controlling terminal of a two-way call on hold, hold a third terminal and while speaking with or awaiting answer from the third terminal to flash to alternate between the original non-controlling terminal and the third terminal. Subsequent flashes by the controlling terminal alternate between the two non-controlling terminals.
HLDALT3W	Software Release: 5E10 and later. Call Waiting Deluxe - Hold call and alternate 3 way. For more information on the Call Waiting Deluxe Secured Feature, see Division 2, Section 4A145
NWAY	Similar to 3WAY except that up to six parties may be included in the call, depending on the value of N-WAY MAXIMUM assigned to the controlling terminal. This option requires 6-port conference circuits be equipped in the office as specified on the EQDSP form (5740 Record).
CODE3WAY	Software Release: 5E4(2) and later. Dial SOCS for 3-Way Calling.
HA3WAY	Software Release: 5E4(2) and later. Hold call and alternate 3-way.

Data Rules:

3WAY - For 5E15 and later:

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- When MULTIWAY CONTROL is "3WAY" and AMAC is "USAGE" and FLASH is "N":
  - ACT/INACT OPTION must be "ACT1CA"
  - IN MIDDLE must be "N" and OFF HOOK must be "Y"
- When MULTIWAY CONTROL is "3WAY" and AMAC is "USAGE" and FLASH is "Y":
  - ACT/INACT OPTION must be "ALWACT"
  - OFF HOOK must be "N"
- When MULTIWAY CONTROL is "3WAY" and AMAC is "USAGE":
  - MULTIWAY TRANSFER must be "NO"
  - PS/PD TREATMENT must be "AUTOREST"
  - DEPARTMENT TONE must be "NONE"
  - FLASH BEFORE ANS must be "N"
  - SPLIT LAST PTY must be "N"
  - CALL WAITING and CALL PICKUP must be "N"
  - FEATURE BUTTON must be "N"
  - DIAL CODE OR BUTTON must be "N"
  - ISDN CALL PICKUP and ISDN ATTENDANT must be "N"
  - 3WAY XFER and HOLD XFER must be "N"
  - N-WAY MAXIMUM must not be entered
  - TONE DURATION must not be entered
  - DIRECT CONNECT DN must not be entered
  - HOLD must be "ALL"
  - 3WAY must be "ALL"
  - TRANSFER must be "ALL"
  - HOLD ORIG PTY Call Types must be "Y"
  - HOLD ADDED PTY Call Types must be "Y"
  - 3WAY ORIG PTY Call Types must be "Y"
  - 3WAY ADDED PTY Call Types must be "Y"
  - XFER ORIG PTY Call Types must not be entered
  - XFER ADDED PTY Call Types must not be entered

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- XFER PTYS PRES Call Types must not be entered
- NWAY PTYS PRES Call Types must not be entered

AUTO3WAY - For 5E4(2) and later, if MULTIWAY CONTROL is "AUTO3WAY", ISDN FEATURE BUTTON, ISDN CALL PICKUP and ISDN DIALED CODE, BUTTON, SPLIT LAST PTY, and the CALL PICKUP ENTRY POINT must be "N".

CODEALT - For 5E4(2) and later, if MULTIWAY CONTROL is "CODEALT", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICKUP, ISDN ATTENDANT, 3WAY XFER, SPLIT LAST PTY, and the CALL PICKUP ENTRY POINT must be "N".

DIRCON - For 5E4(2) and later, if MULTIWAY CONTROL is "DIRCON", ISDN DIALED CODE OR BUTTON, ISDN ATTENDANT, MULTIWAY TRANSFER must be "ALW", SPLIT LAST PTY must "N", and the IN MIDDLE, OFF HOOK, CALL WAITING, and CALL PICKUP ENTRY POINTS must be "N".

When MULTIWAY CONTROL is "DIRCON", the CLASS OF SERVICE on the associated LCC form cannot be "ISATND".

FLSHRPT - For 5E4(2) and later, if MULTIWAY CONTROL is "FLSHRPT", ISDN ATTENDANT, FLASH BEFORE ANS, SPLIT LAST PTY, and the FLASH and ISDN FEATURE BUTTON ENTRY POINTS must be "N".

HOLD - For 5E4(2) and later, if MULTIWAY CONTROL is "HOLD", 3WAY XFER, SPLIT LAST PTY and the CALL PICKUP ENTRY POINT must be "N".

HOLDALT - For 5E4(2) and later, if MULTIWAY CONTROL is "HOLDALT", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICKUP, ISDN ATTENDANT, 3WAY XFER, SPLIT LAST PTY, and the CALL PICKUP ENTRY POINT must be "N".

HLDALT3W - For 5E10 and later, if MULTIWAY CONTROL is "HLDALT3W", CALL WAITING ENTRY POINT must be "Y", the following fields must be "N":

- 3WAY XFER SIGNAL CONTROL
- SPLIT LAST PTY
- CALL PICKUP ENTRY POINT
- FEATURE BUTTON
- DIAL CODE OR BUTTON
- ISDN CALL PICKUP
- ISDN ATTENDANT

NWAY - For 5E4(2) and later, if MULTIWAY CONTROL is "NWAY", HOLD XFER must not be "TONE", and the CALL PICKUP ENTRY POINT must be "N".

For 5E15 and later:

- When MULTIWAY CONTROL is "NWAY", AMAC is "USAGE" and FLASH is "Y", IN MIDDLE and OFF HOOK must be "Y", CALL WAITING, and CALL PICKUP ENTRY POINTS must be "N".
- When MULTIWAY CONTROL is "NWAY" and AMAC is "USAGE":

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- ACT/INACT OPTION must be "ACT1CA"
- MULTIWAY TRANSFER must be "NO"
- PS/PD TREATMENT must be "AUTOREST"
- DEPARTURE TONE must be "NONE"
- FLASH BEFORE ANS must be "N"
- SPLIT LAST PTY must be "Y"
- CALL WAITING and CALL PICKUP must be "N"
- FEATURE BUTTON must be "N"
- DIAL CODE OR BUTTON must be "N"
- ISDN CALL PICKUP and ISDN ATTENDANT must be "N"
- 3WAY XFER and HOLD XFER must be "N"
- N-WAY MAXIMUM must be "6"
- TONE DURATION must not be entered
- DIRECT CONNECT DN must not be entered
- HOLD must be "ALL"
- 3WAY must not be entered
- TRANSFER must not be entered
- HOLD ORIG PTY Call Types must be "Y"
- HOLD ADDED PTY Call Types must be "Y"
- 3WAY ORIG PTY Call Types must not be entered
- 3WAY ADDED PTY Call Types must not be entered
- XFER ORIG PTY Call Types must not be entered
- XFER ADDED PTY Call Types must not be entered
- XFER PTYS PRES Call Types must not be entered
- NWAY PTYS PRES Call Types must be "N"

CODE3WAY - For 5E4(2) and later, if MULTIWAY CONTROL is "CODE3WAY", MULTIWAY TRANSFER, SPLIT LAST PTY, HOLD XFER, 3WAY XFER, and the IN MIDDLE, OFF HOOK and CALL PICKUP ENTRY POINTS must be "N".

2.6 MULTIWAY TRANSFER

Description: Enter the Multi-Way Transfer option.

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"NO" is the only value allowed except for multi-way features derived from the preconstructed features using ODA change-insert mode of the review operation.
Default: NO
Valid Entries:

Valid MULTIWAY TRANSFER Entries

Entry	Definition
ALW	Allow transfer occurs when the controlling terminal disconnects from a configuration in which one or more terminals are on hold and the controlling terminal is talking to another terminal, or a configuration in which the controlling terminal is talking with two or more other terminals. The transfer connects the non-controlling terminals into a talking configuration.
ET	Software Release: 5E9(1) and later. Explicit Transfer Request. A feature with MULTIWAY TRANSFER set to "ET" may be assigned only to Standard BRI users: DSL CLS is "STD" on the DSLUSR form (5908 Record).
NO	No transfer is allowed. When the controlling terminal disconnects, all terminals on the call are idled unless there is a terminal on hold, in which case the controlling terminal is rung back by the held terminal(s).
TONE	Allows transfer on dial tone. Provides the ability to receive a call, flash to hold the call and then after dialing an access code to the public network or a private facility that returns dial tone, disconnect and transfer the dial tone to the held terminal. That terminal can then complete dialing the call. The held terminal must be a member of the controlling terminal's terminal group.

Data Rules:

For 5E4(2) and later, if MULTIWAY TRANSFER is "NO", ISDN ATTENDANT must be "N".

For 5E4(2) and later, if MULTIWAY TRANSFER is "TONE", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICKUP, ISDN ATTENDANT, CALL WAITING, and CALL PICKUP ENTRY POINTS must be "N", and MULTIWAY CONTROL cannot be "DIRCON", "NWAY", or "CODE3WAY".

2.7 PS/PD TREATMENT

Description: Enter the Multi-Way Calling Permanent Signal/Partial Dial Treatment. This is used to specify what types of treatment are given when a customer using a multi-way feature and receiving a dial tone to dial a code or telephone number times out due to normal permanent signal or partial dial timing.

"AUTOREST" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: AUTOREST
Valid Entries:

Valid PS/PD TREATMENT Entries

Entry	Definition
AUTOREST	The state which existed prior to the dial tone that resulted in PS/PD timeout is restored.
NORMAL	Normal office PS/PD treatment. The treatment is given even if there are held terminals. The customer may flash to exit this treatment and be reconnected to dial tone or may disconnect. If the customer has one or more terminals on hold, the caller is rung back upon disconnect.
SILENCE	The customer hears nothing when PS/PD treatment is begun. The customer may flash to exit this treatment in the same way as with "NORMAL".

Data Rules:

For 5E4(2) and later, if PS/PD TREATMENT is "AUTOREST", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICK-UP, and ISDN ATTENDANT must be "N".

For 5E4(2) and later, if PS/PD TREATMENT is "SILENCE", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICKUP and ISDN ATTENDANT must be "N".

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2.8 DEPARTURE TONE

Description: Enter the departure tone given to the controlling terminal in a multi-way call when either a held terminal or a non-controlling terminal in a three-way or n-way call disconnects.

"NONE" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: NONE
Valid Entries:

Valid DEPARTURE TONE Entries

Entry	Definition
BEEP1	One beep of from 200 to 4000 milliseconds of 440 Hz tone. The duration of the tone is specified in the TONE DURATION field of this form or the MWLPA (5602-3 Record), MWMPA (5602-3 Record) or MWTPA (5602-4 Record) form.
BEEP2	Two beeps of 100 milliseconds of 440 Hz tone separated by 100 milliseconds.
BEEP3	Three beeps of 100 milliseconds of 440 Hz tone separated by 100 milliseconds.
LEAVE	Party leaving tone of 150 milliseconds of 1510 Hz tone followed by 300 milliseconds of 1510 Hz + 1103 Hz tone.
NONE	No tone.

2.9 FLASH BEFORE ANS

Description: Is Flash Before Answer allowed? Flash Before Answer allows the switch owner to select when a customer flash is recognized by the switch while the controlling terminal is establishing the first leg of a multi-way call.

If "Y", The controlling terminal is allowed to flash after calling party treatment (e.g., audible ring) is returned but before the called party answers.

If "N", The controlling terminal is allowed to flash only after the called party answers.

"Y" is the default value and the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: Y
Valid Entries: Y, N

Data Rules:

For 5E4(2) and later, if FLASH BEFORE ANS is "Y", CALL WAITING and CALL PICK-UP ENTRY POINTS must be "N".

For 5E4(2) and later, if FLASH BEFORE ANS is "N", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICK-UP and ISDN ATTENDANT must be "N".

2.10 SPLIT LAST PTY

Description: Is Split Last Party allowed? Split Last Party allows the controlling terminal in an n-way call to flash (after the n-way call is established) and dial a code to remove the last party added to the n-way call. Once a terminal is split from the call, the code may not be used again until another party has been added to the call.

The split last party code is required in either the office dialing plan (defined on the PDIT form), or the line's IDP (defined on the IDPDCA form) with an ACTION of "MWSPL" and a FEATURE equal to the FEATURE NAME entered on this form.

"N" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N

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Valid Entries: Y, N

Data Rules:

"Y" may be entered only if the MULTIWAY CONTROL is "NWAY".

2.11 AMAC

Description: This field indicates whether flat rate or usage sensitive billing is used.

Software Release: 5E8 and later.
Default: FLAT
Valid Entries:

Valid AMAC Entries

Entry	Definition
FLAT	Flat rate AMA charging.
USE	Software Release 5E8 only. Usage sensitive AMA charging.
USEAGE	Software Release 5E9 and later. Usage sensitive AMA charging.

Data Rules:

When AMAC is "FLAT", all other billing options must be "N".

If AMAC is "USAGE" or "USE"

- 3WAY must be "ALL"
- 3WAY ADDED PTY CALL TYPES must be "Y"
- 3WAY ORIG PTY CALL TYPES must be "Y"
- 3WAY XFER and HOLD XFER must be "N".
- ACT/INACT OPTION must be "ACT1CA"
- CALL WAITING and CALL PICKUP must be "N".
- DEPARTURE TONE must be "NONE"
- DIAL CODE OR BUTTON must be "N".
- DIRECT CONNECT DN must not be entered.
- FEATURE BUTTON must be "N".
- FLASH must be "N".
- FLASH BEFORE ANS must be "N".
- HOLD must be "ALL"
- HOLD ADDED PTY CALL TYPES must be "Y"
- HOLD ORIG PTY CALL TYPES must be "Y"
- IN MIDDLE must be N and OFF HOOK must be "Y"
- ISDN CALL PICKUP and ISDN ATTENDANT must be "N".

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- MULTIWAY CONTROL must be "3WAY"
- MULTIWAY TRANSFER must be "NO"
- N-WAY MAXIMUM must not be entered.
- NWAY PTYS PRES CALL TYPES must not be entered.
- PS/PD TREATMENT must be "AUTOREST"
- SPLIT LAST PTY must be "N".
- TONE DURATION must not be entered.
- TRANSFER must be "ALL"
- XFER ORIG PTY CALL TYPES must not be entered.
- XFER ADDED PTY CALL TYPES must not be entered.
- XFER PTYS PRES CALL TYPES must not be entered.

If Usage Sensitive Three-Way Calling features are defined on an MWFD form where MULTIWAY CONTROL is "3WAY" and AMAC is "USAGE", these features cannot be assigned to lines, therefore the LINEFA, CLUSTR, and/or BFG forms cannot have a Usage Sensitive Three-Way Calling feature name entered.

The field USTWC FEAT on the OFCOPT form is used by the Usage Sensitive Three-Way Calling Special Feature, therefore the feature name specified in that field must be defined on an MWFD form where MULTIWAY CONTROL is "3WAY" and AMAC is "USAGE".

If Usage Sensitive Three-Way Calling features are defined on an MWFD form where MULTIWAY CONTROL is "3WAY" and AMAC is "USAGE", these features cannot be assigned to multi-line hunt lines; therefore MLHLNFA, CLUSTR and/or BFG forms cannot have a Usage Sensitive Three-Way Calling feature name entered.

For 5E9(1) and later with Usage Sensitive 3-Way Calling, when AMAC is "USAGE" and FLASH is "N",

- ACT/INACT OPTION must be "ACT1CA"
- IN MIDDLE must be "N"
- OFF HOOK must be "Y".

For 5E9(1) and later with Spontaneous Usage Sensitive 3-Way Calling, when AMAC is "USAGE" and FLASH is "Y",

- ACT/INACT OPTION must be "ALWACT"
- OFF HOOK must be "N".

ENTRY POINT

Fields Section 2.12 -Section 2.16 specify when the multi-way feature is invoked during normal call processing. The two dialed code entry points, IN MIDDLE and OFF HOOK are not mutually exclusive with each other. However, the remaining entry points, FLASH, CALL WAITING and CALL PICKUP are

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mutually exclusive with each other and with the IN MIDDLE and OFF HOOK entry points, one of the ENTRY POINTS must be "Y".

2.12 FLASH

Description: Will the controlling terminal in a call involving two parties or involving the controlling terminal and some treatment (audible ringing, reorder, announcement, etc.) flash to receive dial tone and invoke the multi-way feature?

"Y" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: Y
Valid Entries: Y, N

Data Rules:

If FLASH is "Y", IN MIDDLE, OFF HOOK, CALL WAITING and CALL PICKUP ENTRY POINTS must be "N".

2.13 IN MIDDLE

Description: Is the multi-way feature accessed by dialing a code? In order for the customer to dial the code, dial tone must be provided with one or two terminals already being held. Therefore, a terminal assigned a multi-way feature with an IN MIDDLE entry point must either also be assigned a multi-way feature with one of the FLASH, entry points or a multi-way feature with the OFF HOOK entry point. The OFF HOOK entry point may be specified on either the same multi-way feature as the IN MIDDLE entry point, or on another multi-way feature.

If on another multi-way feature, both features must be assigned to the terminal. The code to invoke the feature is required in either the Office Dialing Plan (defined on the PDIT form), or the line's IDP (defined on the IDPDCA form) with an ACTION of "MWSOH" and a FEATURE equal to the FEATURE NAME entered on this form.

"N" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E4(2) and later, if IN MIDDLE is "Y", MULTIWAY CONTROL cannot be "DIRCON" or "CODE3WAY".

2.14 OFF HOOK

Description: Is a multi-way feature invoked while receiving dial tone with no terminals held by dialing a code? The code to invoke the feature is required in either the Office Dialing Plan (defined on the PDIT form), or the line's IDP (defined on the IDPDCA form) with an ACTION of "MWSOH" and a FEATURE equal to the FEATURE NAME entered on this form.

"N" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E4(2) and later, if OFF HOOK is "Y", CALL WAITING and CALL PICKUP ENTRY POINTS must be "N". In addition, MULTIWAY CONTROL cannot be "DIRCON" or "CODE3WAY".

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2.15 CALL WAITING

Description: Is the multi-way feature to be invoked from the call waiting feature? In order for a call waiting feature to exit to this multi-way feature, the call waiting feature (defined on the CWTFD form (5603-1 Record)) must have this multi-way feature specified as its MULTI-WAY BRIDGE TO FEATURE.

If the call waiting customer flashes (the first flash), the talked to terminal is put on hold, control of the call is transferred to this multi-way feature and the controlling terminal is connected with the waiting terminal.

"N" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E4(2) and later, if CALL WAITING is "Y", CALL PICKUP must be "N", ACT/INACT must be "ALWACT", MULTI-WAY XFER must not be "TONE", FLASH BEFORE ANS must be "N", 3WAY XFER must be "N" and HOLD XFER must be "N".

2.16 CALL PICKUP

Description: Is the multi-way feature invoked from the call pickup terminating feature? In order for a call pickup terminating feature to exit to this multi-way feature, the call pickup terminating feature (defined on the PUTFD form (5605-2 Record)) must have this multi-way feature specified as its MULTI-WAY field.

"N" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N
Valid Entries: Y, N

Data Rules:

If CALL PICKUP is "Y", ACT/INACT must be "ALWACT", MULTIWAY CONTROL must be "3WAY", MULTIWAY TRANSFER cannot be "TONE", FLASH BEFORE ANS must be "N", and HOLD XFER must be "N".

ISDN ENTRY POINT

Fields Section 2.17 -Section 2.20 refer to when the multi-way feature is invoked during normal call processing for ISDN terminals. The entry points, FEATURE BUTTON, DIALED CODE OR BUTTON and ISDN CALL PICKUP are mutually exclusive. Features constructed with these entry points can be assigned only to ISDN terminals.

2.17 FEATURE BUTTON

Description: Will entry to multi-way features be allowed for ISDN functional buttons, Conference or Transfer, from an ISDN terminal on a two-way call? These are functional buttons and depression of these buttons causes specific messages (Conference or Transfer message) to be sent by the terminal.

When an ISDN terminal voice is active on a CA (Call Appearance) and is in a talking state as the result of either originating or receiving a call, or is connected to some treatment (audible ringing or announcement) after having completed dialing, the user may press the conference or transfer button on the ISDN terminal and may or may not press the CA of the other call to conference with or transfer to depending upon the terminal interface.

Software Release: 5E4(2) and later

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ISDN FEATURE BUTTON is "Y" then the following must be true:

- ISDN DIALED CODE OR BUTTON and ISDN CALL PICKUP must be "N".
- 3WAY XFER SIGNAL CONTROL and HOLD XFER SIGNAL CONTROL must be "N".
- FLASH BEFORE ANSWER must be "Y".
- CALL TRANSFER CONSTRAINTS must not be "TONE" and MULTIWAY CONTROL must not be "AUTO3WAY", "HOLDALT", "CODEALT", or "DIRCON".
- PS/PD TREATMENT must be "NORMAL" and HOLD FILTERING must be "ALL".

For 5E8 and later, if a Multi-Way feature with FEATURE BUTTON set to "Y" is assigned to a CKT TN on a non-Standard BRI (CKT TN is defined on a DSLUSR form where the associated DSL form has a DSL CLS other than "STD"), the CKT TN's CPE must have more than one call appearance. Either the CA QTY on the DSLUSR form must be greater than one, or the CKT TN must appear in the SHARED LIST of an SHTN form (5902 Record) where the CKT TN is not the key TN. Similarly, if the feature is assigned to a CKT MLHG/TERM, the CKT MLHG/TERM's CPE must have more than one call appearance. Either the CA QTY on the DSLUSR form must be greater than one, or the CKT MLHG/TERM must appear in the SHARED LIST of an SHTN form where the CKT MLHG/TERM is not the key MLHG/TERM.

For 5E10 and later, if the ISDN FEATURE BUTTON ENTRY POINT is "Y", MULTIWAY CONTROL cannot be "AUTO3WAY", "CODEALT", "DIRCON", "HLDALT3W" or "HOLDALT".

2.18 DIAL CODE OR BUTTON

Description: Can the ISDN terminal voice user invoke an active ISDN multi-way feature by dialing a code? Optionally, the user can press a feature button instead of dialing the code. In order to dial this type of code or press a feature button to indicate the feature, the user must be receiving dial tone.

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ISDN DIALED CODE OR BUTTON is "Y" then the following must be true:

- ISDN FEATURE BUTTON, ISDN CALL PICKUP, 3WAY XFER SIGNAL CONTROL must be "N".
- FLASH BEFORE ANSWER must be "Y".
- CALL TRANSFER CONSTRAINTS must not be "TONE" and MULTIWAY CONTROL must not be "AUTO3WAY", "HOLDALT", "CODEALT", or "DIRCON".
- PS/PD TREATMENT must be "NORMAL" and HOLD FILTERING must be "ALL".

If a Multi-Way feature with DIAL CODE OR BUTTON set to "Y" is assigned to a CKT TN on a non-Standard BRI (CKT TN is defined on a DSLUSR form where the associated DSL form has a DSL CLS

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other than "STD"), the CKT TN's CPE must have more than one call appearance. Either the CA QTY on the DSLUSR form must be greater than one, or the CKT TN must appear in the SHARED LIST of an SHTN form (5902 Record) where the CKT TN is not the key TN.Similarly, if the Multi-Way Feature is assigned to the CKT MLHG/TERM on a non-Standard BRI, the CKT MLHG/TERM's CPE must have more than one call appearance. Either the CA QTY on the DSLUSR form must be greater than one, or the CKT MLHG/TERM must appear in the SHARED LIST of an SHTN form where the CKT MLHG/TERM is not the key MLHG/TERM.

For 5E10 and later, if DIAL CODE OR BUTTON ENTRY POINT is "Y", MULTIWAY CONTROL cannot be "AUTO3WAY", "CODEALT", "DIRCON", "HLDALT3W" or "HOLDALT".

2.19 ISDN CALL PICKUP

Description: May a multi-way feature for ISDN be entered from Call Pickup?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ISDN CALL PICKUP is "Y" then the following must be true:

- ISDN FEATURE BUTTON, DIALED CODE OR BUTTON, 3WAY XFER SIGNAL CONTROL and HOLD XFER SIGNAL CONTROL must be "N".
- ACT/INACT OPTION must be "ALWACT", MULTIWAY CONTROL must be "3WAY", FLASH BEFORE ANSWER must be "Y", PS/PD TREATMENT must be "NORMAL" and HOLD FILTERING must be "ALL".
- CALL TRANSFER CONSTRAINTS must not be "TONE".

2.20 ISDN ATTENDANT

Description: May a multi-way feature for ISDN ATTENDANT be accessed by dialed code or feature button?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ISDN CALL PICKUP is "Y" then the following must be true:

- ISDN FEATURE BUTTON, ISDN CALL PICKUP, 3WAY XFER SIGNAL CONTROL and HOLD XFER SIGNAL CONTROL must be "N".
- FLASH BEFORE ANSWER must be "Y", PARTIAL SIGNAL/PARTIAL DIAL treatment must be "NORMAL" and HOLD FILTERING must be "ALL".
- MULTIWAY CONTROL must not be "FLSHRPT", "HOLDALT", "CODEALT", "DIRCON" or "HOLD".
- CALL TRANSFER CONSTRAINTS must not be "N". HOLD XFER must be "N" and HOLD FILTERING must be "ALL".

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For 5E10 and later, if ISDN ATTENDANT ENTRY POINT is "Y", MULTIWAY CONTROL cannot be "CODEALT", "DIRCON", "FLSHRPT", "HLDALT3W", "HOLD" or "HOLDALT".

SIGNAL CONTROL

Fields Section 2.21 -Section 2.22 refer to allowing a signal to be sent to a controlling terminal on 3-Way and transfer and hold and transfer. When a 50A or 50B console is used by an attendant to transfer calls, the attendant usually sets up a three-way call with the last terminal still unanswered. The attendant puts this call on hold.

If the last terminal answers, or the original non-controlling terminal disconnects, the switch sends an open interval (nominally 150 milliseconds) toward the console. The console senses this open interval and disconnects.

- ***NOTE:*** This open interval under worst case extreme switch load conditions could be of a duration up to 330 milliseconds.

If the open interval was sent as a result of a disconnect from the original non-controlling terminal, the switch idles all the terminals involved in the three-way call.

If the open interval had been sent as a result of an answer from the last terminal, the switch connects the remaining two (non-attendant) terminals.

If the controlling terminal's hardware is not equipped to detect the open interval, it has no affect on call processing.

If both of the SIGNAL CONTROL options are specified as "N", no open interval is sent.

2.21 3WAY XFER

Description: Will a signal be sent to the controlling terminal on 3-way and transfer?

"N"is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N
Valid Entries: Y, N

Data Rules:

For MULTIWAY CONTROL options of "3WAY", "AUTO3WAY", "DIRCON", or "NWAY" with MULTIWAY TRANSFER of either "ALW" or "TONE", 3WAY XFER may be specified as "Y". For other MULTIWAY CONTROL options and for MULTIWAY TRANSFER of "NO", 3WAY XFER must be "N". If "Y" is specified and a three-way or n-way call has been established with no terminals on hold and the third (or nth) terminal has been called and answers, or the non-controlling terminal of a three-way call disconnects, the open interval is sent to the controlling terminal.

For 5E4(2) and later, if 3WAY XFER is "Y", ISDN FEATURE BUTTON, ISDN DIALED CODE or BUTTON, ISDN CALL PICKUP and ISDN ATTENDANT must be "N", MULTIWAY CONTROL cannot be "HOLD", "HOLDALT", or "CODEALT", MULTIWAY TRANSFER must be "Y" and the CALL WAITING and CALL PICKUP ENTRY POINTS must be "N".

For 5E7 and later, if 3WAY XFER is "Y", then the MW feature cannot be assigned on either the TRUNKFA form (5205 Record) or TKGRPFA form (5206 Record).

For 5E10 and later, when 3WAY XFER is "Y", MULTIWAY CONTROL cannot be "CODE3WAY", "CODEALT", "HLDALT3W", "HOLD" or "HOLDALT".

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2.22 HOLD XFER

Description: Will a signal be sent to the controlling terminal on hold and transfer?

"N" is the only value allowed except for multi-way features derived from the preconstructed features using the ODA change-insert mode of the review operation.
Default: N
Valid Entries: Y, N

Data Rules:

If the MULTIWAY CONTROL option equals "NWAY" or "CODE3WAY", HOLD XFER must equal "N". For all other MULTIWAY CONTROL values, HOLD XFER can be equal to "Y" or "N".

If MULTIWAY TRANSFER equals "NO", HOLD XFER must be "N".

If "Y" is specified and one terminal is on hold and the controlling terminal has dialed a third terminal, when the third terminal answers, or if the held terminal disconnects, an open interval is sent to the controlling terminal.

For 5E4(2) and later, if HOLD XFER is "Y", ISDN FEATURE BUTTON, ISDN DIALED CODE or BUTTON, ISDN CALL PICKUP, ISDN ATTENDANT and CALL WAITING and CALL PICKUP ENTRY POINTS must be "N".

For 5E7 and later, if HOLD XFER is "Y", then the MW feature cannot be assigned on either the TRUNKFA form (5205 Record) or TRGRPFA form (5206 Record).

FILTERING FEATURE OPTIONS

Fields Section 2.23 -Section 3.9 refer to Filtering Feature Options. The Filtering Feature Options specified on screen 2 of the MWFD form are used to limit and control the actions of the multi-way feature based on the relationship of the controlling terminal (i.e., the terminal to which the multi-way feature is assigned) to both its status as a call originator and its relationship to the terminal it is attempting to affect. Two classes of filtering must be specified:

A. Originating/Terminating Filtering, which determines whether the call was originated by, or terminated to, the controlling terminal (i.e., the terminal to which the multi-way feature is assigned); and

B. Call Filtering, which determines the relationship of the controlling to a non-controlling terminal in a multi-way call.

In each of the filtering classes, if the conditions specified by the selected filtering option are not met, the action being attempted by the controlling terminal is not allowed.

ORIGINATING/TERMINATING

Fields Section 2.23 -Section 2.25 refer to Originating/Terminating Options. Each of the Originating/Terminating options is used to specify whether the multi-way action is allowed based on whether the original call was originated by, or terminated to, the controlling terminal (i.e., the terminal to which the multi-way feature is assigned).

Valid ORIGINATING/TERMINATING Entries

Entry	Definition
ALL	Allows the action regardless of whether the original call was originated by or terminated to the controlling terminal.
ORIG	Limits the action to cases in which the original call was originated by the controlling terminal.
TERM	Limits the action to cases in which the original call was terminated to the controlling terminal.

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For 5E4(2) and later, if any of the ORIGINATING/TERMINATING options is "ORIG" or "TERM", ISDN FEATURE BUTTON, ISDN DIALED CODE OR BUTTON, ISDN CALL PICKUP and ISDN ATTENDANT must be "N".

2.23 HOLD

Description: Enter the Originating/Terminating Option for HOLD filtering.

If this multi-way feature has a FLASH entry point, the HOLD filtering is done on the original call at the time the controlling terminal flashes to put another terminal on hold.

If the requirements of the specified option are not met, the flash is ignored and the controlling terminal remains in a talking state with the original non-controlling terminal.

If the entry point is IN MIDDLE and the controlling terminal dials a code to invoke the multi-way feature and the requirements of the specified option are not met, the feature is not allowed, reorder is given to the controlling terminal and the controlling terminal must use the original feature's control functions to remove the reorder.

Required Field.
Default: ALL
Valid Entries: ALL, ORIG, TERM

Data Rules:

For 5E4(2) and later, if HOLD is not "ALL", ISDN ENTRY POINTS BUTTON, DIALED CODE OR BUTTON, CALL PICKUP and ATTENDANT must be "N".

2.24 3WAY

Description: Enter the Originating/Terminating Option for 3WAY filtering.

If this multi-way feature has a FLASH entry point, the 3WAY filtering is done on the original call at the time the controlling terminal flashes to create a three-way call.

If the requirements of the specified option are not met, the flash is ignored, the controlling terminal is not allowed to create the three-way call and the call configuration that existed prior to the flash remains.

If the entry point is IN MIDDLE and the controlling terminal dials a code to create a three-way call and the requirements of the specified option are not met, the feature is not allowed, reorder is given to the controlling terminal and the controlling terminal must use the original feature's control functions to remove the reorder.

An entry is required in this field if MULTIWAY CONTROL is "3WAY", "AUTO3WAY", or "DIRCON". Otherwise, 3-way filtering is not done and no entry is allowed in this field.
Valid Entries: ALL, ORIG, TERM

2.25 TRANSFER

Description: Enter the Originating/Terminating Option for TRANSFER filtering.

If this multi-way feature has a MULTIWAY TRANSFER option of "ALW" or "TONE", this filtering is done on a call in which the controlling terminal has either set up a three-way call, or has put the non-controlling terminal of a two-way call on hold and has dialed a third terminal and then disconnects.

If the requirements of the specified option are not met, all terminals involved in the call are idled.

An entry is required in this field if the MULTIWAY TRANSFER option is either "ALW" or "TONE".

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Otherwise no entry is allowed in this field.
Valid Entries: ALL, ORIG, TERM

3. FORM ENTRIES - 5602-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

CALL FILTERING

Fields Section 3.2 -Section 3.9 refer to Call Filtering.

This type of filtering examines the relationship among the non-controlling terminals involved in the call and the controlling terminal.

Within each of the eight call classes below, a "Y" or "N" indication must be specified (depending on the selected MULTIWAY CONTROL and MULTIWAY TRANSFER options) for each of five categories of calls. If more than one of the categories are "Y", a call in any of the specified categories is allowed to complete (assuming that originating/terminating filtering also passed). The five categories are as follows:

Valid CALL TYPES

Entry	Definition
ATTENDANT	A "Y" specifies that if the non-controlling terminal involved in the call is classed as an attendant (i.e., its Line Class Code must have a Class Of Service of "ATND") and is in the same terminal group as the controlling terminal, the action is allowed.
INTRAGRP	A "Y" specifies that the non-controlling terminal involved in the call must be in the same terminal group as the controlling terminal but may not be either a private facility or an attendant.
INTRAOFC	A "Y" specifies that the non-controlling terminal involved in the call must be in the same office as the controlling terminal but may not be in the same terminal group or be either a private facility or an attendant.
INTEROFC	A "Y" specifies that the non-controlling terminal involved in the call must be in a different office from the controlling terminal and may not be either a private facility or an attendant.
PVTFAC	A "Y" specifies that the non-controlling terminal involved in the call must be a private facility and may not be classed as an attendant.

For 5E4(2) and later Software Releases, one of the above five categories must be "Y".

CALL CLASSES

Fields Section 3.2 -Section 3.9 refer to Call Classes.

3.2 HOLD ORIG PTY

Description: Can the controlling terminal put the originating party on hold?

This filtering is done on the relationship between the controlling terminal and the non-controlling terminal of the original call at one of the following times:

A. If this multi-way feature has a FLASH entry point, when the controlling terminal flashes in an attempt to hold the original non-controlling terminal.

   If the original non-controlling terminal is not in one of the allowed categories, the flash is ignored and the controlling terminal remains in a talking state with the non-controlling terminal.

B. If the entry point is IN MIDDLE and the controlling terminal dials a code to invoke the multi-way hold feature and the original non-controlling terminal is not in one of the allowed categories, the feature is not allowed, reorder is given to the controlling terminal and the controlling terminal must use the

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original feature's control functions to remove the reorder.

"Y" or "N" entries are always required in all five categories.

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the HOLD ORIG PTY Call Type, then one of the options must be "Y".

3.3 HOLD ADDED PTY

Description: Can the controlling terminal put the added party on hold?

This filtering is done on the relationship between the controlling terminal and a new terminal after the controlling terminal successfully holds any other terminals involved in the call and finishes dialing either a party to be added or an access code to another multi-way feature in an attempt to alternate to or add another party.

If the party being added is not in one of the allowed categories, the controlling terminal is given reorder and must use the original feature's control functions to remove it. "Y" or "N" entries are always required in all five categories.

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the HOLD ADDED PTY Call Type, then one of the options must be "Y".

3.4 3WAY ORIG PTY

Description: Can the controlling terminal add a third party to an existing call?

This filtering is done on the relationship between the controlling terminal and the original non-controlling terminal of a two-way call after the controlling terminal flashes to create a three-way call or dials an access code to another multi-way feature in an attempt to add a new terminal to the call.

If the original party is not in one of the allowed categories, the controlling terminal is given reorder and must use the original feature's control functions to remove it.

"Y" or "N" entries must be specified in all five categories for multi-way features with MULTIWAY CONTROL of "3WAY", "AUTO3WAY", or "DIRCON". Entries are prohibited for all other multi-way features.
Default: Y
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the 3WAY ORIG PTY Call Type, then one of the options must be "Y".

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3.5 3WAY ADDED PTY

Description: Can the controlling terminal add another line to an existing call?

This filtering is done on the relationship between the controlling terminal and a new terminal after the controlling terminal flashes to create a three-way call or dials an access code to another multi-way feature in an attempt to add a new terminal to the call (e.g., a direct connect feature).

If the party being added is not in one of the allowed categories, the controlling terminal is given reorder and must use the original feature's control functions to remove it.

"Y" or "N" entries must be specified in all five categories for multi-way features with MULTIWAY CONTROL of "3WAY", "AUTO3WAY", or "DIRCON". Entries are prohibited for all other multi-way features.
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the 3WAY ADDED PTY Call Type, then one of the options must be "Y".

3.6 XFER ORIG PTY

Description: Can the controlling terminal transfer the originating party?

This filtering is done on the relationship between the controlling terminal and the original non-controlling terminal of a two-way call after the controlling terminal disconnects from the call.

If the original party is not in one of the allowed categories, all remaining terminals in the call are idled.

"Y" or "N" entries must be specified in all five categories for multi-way features with MULTIWAY TRANSFER of "ALW" or "TONE". Entries are prohibited for all other multi-way features.
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the XFER ORIG PTY Call Type, then one of the options must be "Y".

3.7 XFER ADDED PTY

Description: Does the added party stay connected after the controlling terminal disconnects?

This filtering is done on the relationship between the controlling terminal and the added terminal after the controlling terminal disconnects from the call.

If the added party is not in one of the allowed categories, all remaining terminals on the call are idled.

"Y" or "N" entries must be specified in all five categories for multi-way features with MULTIWAY TRANSFER of "ALW" or "TONE". Entries are prohibited for all other multi-way features.
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the XFER ADDED PTY Call Type, then one of the options must be "Y".

3.8 XFER PTYS PRES

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Description: Does the other party or third party stay present after the controlling terminal disconnects?

This filtering is done on the relationship between the controlling terminal and both the original and the added terminals after the controlling terminal disconnects from the call.

If either of the non-controlling terminals are in any of the allowed categories, the transfer is effected.

If neither of the two non-controlling terminals is in one of the allowed categories, all terminals on the call are idled.

"Y" or "N" entries must be specified in all five categories for multi-way features with MULTIWAY TRANSFER of "ALW" or "TONE". Entries are prohibited for all other multi-way features.
Valid Entries: Y, N

Data Rules:

When one of the FILTERING FEATURE OPTIONS is entered for the XFER PTYS PRES Call Type, then one of the options must be "Y".

3.9 NWAY PTYS PRES

Description: Do the parties remain present after the controlling terminal disconnects?

This filtering is done on the relationship between the controlling terminal and all non-controlling terminals in an n-way call when the controlling terminal disconnects with none of the non-controlling terminals on hold (if any terminals are on hold, the controlling terminal is rung back).

If any of the non-controlling terminals are in any of the allowed categories, the remaining terminals are connected in an (n-1)-way call. Each subsequent disconnect by the remaining terminals repeats the filtering using the relationship between the original controlling terminal and the remaining non-controlling terminals. On any of the disconnects, if none of the remaining terminals is in one of the allowed categories, all terminals on the call are idled.

"Y" or "N" entries must be specified in all five categories for multi-way features with MULTIWAY CONTROL of "NWAY". Entries are prohibited for all other multi-way features.
Valid Entries: Y, N

Data Rules:

For 5E15 and later, when MULTIWAY CONTROL is "NWAY" and AMAC is "USAGE" for NWAY PTYS PRES Call Type, then all of the FILTERING FEATURE OPTIONS must be "N".

For 5E15 and later, when MULTIWAY CONTROL is not "NWAY" or AMAC is not "USAGE" for NWAY PTYS PRES Call Type, then one of the FILTERING FEATURE OPTIONS must be "Y".

DEFAULT PARAMETERS

Fields Section 3.10 -Section 3.12 refer to Default Parameters. Default Parameters on a MWFD form are automatically assigned to a terminal when the multi-way feature is assigned to the terminal unless they are overridden by parameters specified on the individual terminal parameter (MWLPA, MWMPA, or MWTPA) form.

If the terminal parameter form is entered for a given terminal, all of the parameters specified override the default parameters.

3.10 N-WAY MAXIMUM

Description: Enter the maximum number of terminals which may be connected on a n-way call.

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This parameter is allowed only for a MULTIWAY CONTROL of "NWAY".
Valid Entries:

For 5E4(2) and later: 0, 3 - 6

3.11 TONE DURATION

Description: Enter the duration (in milliseconds) of the BEEP1 DEPARTURE TONE.

This entry is allowed only when DEPARTURE TONE is "BEEP1".
Valid Entries: 200, 300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000, 3300, 3600, 3900, and 4000.

3.12 DIRECT CONNECT DN

Description: Enter the predesignated TN of the Terminal for the Direct Connect three-way connections.

This entry is required and only allowed when MULTIWAY CONTROL is "DIRCON".
Valid Entries: 1 - 15 digits (0 - 9, # or *)

	REMARKS											
FEATURE	**ACTINACT**	**CONTROL**	**TRANSFER**	**PSPD**	**DEPTONE**	**FLSHB4AN**	**SPLASTPT**	**FLASH**	**IN MID**	**OFFHK**	**FRCW**	**FRPU**
	ISBUTTON	**ISDIALCD**	**ISFRPU**	**ISATTDNT**	**3WAYXFER**	**HOLDXFER**	**NWAYSIZE**	**TONEDURN**				
	DIRCONDN	**HOLDFILT**	**3WAYFILT**	**XFERFILT**	**AMAC**							
/MW*	MULTIWAY WILDCARD FEATURE											
	ALWACT	3WAY	NO	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MW3WC	THREE WAY CALLING											
	ALWACT	3WAY	NO	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL									
/MW6WC	6 WAY CONFERENCING											
	ALWACT	NWAY	ALW	AUTOREST	NONE	Y	Y	N	Y	Y	N	N
	N	N	N	N	N	N	6					
		ALL		ALL								
/MWACH1	ADD ON CONSULT HOLD INC 1											
	ALWACT	3WAY	NO	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	TERM									
/MWACH2	ADD ON CONSULT HOLD INC 2											
	ALWACT	3WAY	NO	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		TERM	TERM									
/MWACT1	ATTENDANT CALL TRANSFER											
	ALWACT	AUTO3WAY	ALW	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	Y	Y						
		ALL	ALL	ALL								
/MWACT2	ATTENDANT CALL TRANSFER											
	ALWACT	3WAY	ALW	AUTOREST	NONE	Y	N	N	Y	N	N	N

	N	N	N	N	Y	Y						
		ALL	ALL	ALL								
/MWCH1	CALL HOLD 1											
	ALWAC T	CODEAL T	NO	SILENC E	NONE	Y	N	N	Y	N	N	N
	N	N	N	N	N	N						
		ALL										
/MWCH2	CALL HOLD 2											
	ALWAC T	CODEAL T	NO	SILENC E	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL										
/MWCP	BRIDGE FROM CALL PICKUP											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	N	N	N	N	N	N	Y
	N	N	N	N	Y	N						
		ALL	ALL	ALL								
/MWCTA1	CALL TRANS ATTENDANT 1 (W/CH)											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	TERM	TERM								
/MWCTA2	CALL TRANS ATTNDT 2 (W/O CH)											
	ALWAC T	DIRCON	ALW	AUTOR EST	NONE	N	N	Y	N	N	N	N
	N	N	N	N	N	N						
		TERM	TERM	TERM								
/MWCTIA 1	CALL TRANS INDIV ALL CALLS 1											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWCTIA 2	CALL TRANS INDIV ALL CALLS 2											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWCTIA 3	CALL TRANS INDIV ALL CALLS 3											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWCTIA 4	CALL TRANS INDIV ALL CALLS 4											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWCTIA 5	CALL TRANS INDIV ALL CALLS 5											
	ALWAC T	AUTO3W AY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWCTII1	CALL TRANS IND INC ONLY (W/CH)											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	TERM	TERM								
/MWCTII2	CALL TRANS IND INC ONLY 2(W/O CH											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		TERM	TERM	TERM								
/MWCTII3	CALL TRANS IND INC ONLY 3 W/CH											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	TERM	TERM								
/MWCTII4	CALL TRANS IND INC ONLY 4 W/O CH											
	ALWAC T	3WAY	ALW	AUTOR EST	NONE	Y	N	Y	N	N	N	N

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	N	N	N	N	N	N						
		TERM	TERM	TERM								
/MWCTIO	CALL TRANS INTERNAL ONLY W/CH											
1	ALWAC	3WAY	ALW	AUTOR	NONE	Y	N	Y	N	N	N	N
	T			EST								
	N	N	N	N	N	N						
		ALL	TERM	TERM								
/MWCTIO	CALL TRANS INTERNAL ONLY W/O CH											
2	ALWAC	3WAY	ALW	AUTOR	NONE	Y	N	Y	N	N	N	N
	T			EST								
	N	N	N	N	N	N						
		TERM	TERM	TERM								
/MWCDA	BRIDGE FROM CALL CWD - ANY CALL											
C	ALWAC	HOLDAL	NO	AUTOR	NONE	N	N	N	N	N	Y	N
	T	T		EST								
	N	N	N	N	N	N						
		ALL										
/MWCDG	BRIDGE FROM CWD INTRAGRP ONLY											
O	ALWAC	HOLDAL	NO	AUTOR	NONE	N	N	N	N	N	Y	N
	T	T		EST								
	N	N	N	N	N	N						
		ALL										
/MWCWI	BRIDGE FROM CALL WTG - INC ONLY											
G	ALWAC	HOLDAL	NO	AUTOR	NONE	N	N	N	N	N	Y	N
	T	T		EST								
	N	N	N	N	N	N						
		ALL										
/MWCWDI	BRIDGE FROM CWD- INC ONLY											
O	ALWAC	HOLDAL	NO	AUTOR	NONE	N	N	N	N	N	Y	N
	T	T		EST								
	N	N	N	N	N	N						
		ALL										
/MWCWD	BRIDGE FROM CWD - NOT INTRAGRP											
NG	ALWAC	HOLDAL	NO	AUTOR	NONE	N	N	N	N	N	Y	N
	T	T		EST								
	N	N	N	N	N	N						
		ALL										
/MWDTA1	ATTENDT DIAL THRU 1											
	ALWAC	AUTO3W	TONE	AUTOR	NONE	Y	N	Y	N	N	N	N
	T	AY		EST								
	N	N	N	N	Y	N						
		ALL	ALL	ALL								
/MWDTA2	ATTENDT DIAL THRU 2											
	ALWAC	AUTO3W	TONE	AUTOR	NONE	Y	N	N	Y	N	N	N
	T	AY		EST								
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWDTV	DIRECT CALL TRANSFER TO VM											
M	ALWAC	3WAY	ALW	NORMA	NONE	Y	N	N	Y	N	N	N
	T			L								
	N	Y	N	N	N	N						
		ALL	ALL	ALL	FLAT							
/MWI6WB	ISDN 6-WAY FLEXIBLE CALL W/TRAN											
2	ALWAC	NWAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N	6					
		ALL		ALL								
/MWI6WB	ISDN FLEXIBLE CALL EXP TRAN											
3	ALWAC	NWAY	ET	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N	6					
		ALL		ALL								
/MWI6WB	ISDN SIX-WAY FLEXIBLE CALL W/TRAN											
A	ALWAC	NWAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N	6					
		ALL		ALL								
/MWI6WB	ISDN 6-WAY FLEXIBLE CALL NO TRAN											
N	ALWAC	NWAY	NO	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								

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	Y	N	N	N	N	N	6					
		ALL		ALL								
/MWI6WB	ISDN 6-WAY FLEX CALL EXP TRAN											
T	ALWAC	NWAY	ET	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N	6					
		ALL		ALL								
/MWI3WC	ISDN THREE-WAY CALLING											
	ALWAC	3WAY	NO	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWI6WC	ISDN SIX-WAY CALLING											
	ALWAC	NWAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	N	Y	N	N	N	N	6					
		ALL		ALL								
/MWIA3W	ISDN ATTENDANT 3-WAY CALLING											
C	ALWAC	3WAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	N	N	N	Y	N	N						
		ALL	ALL	ALL								
/MWIA6W	ISDN ATTENDANT 6-WAY CALLING											
C	ALWAC	NWAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	N	N	N	Y	N	N	6					
		ALL		ALL								
/MWIAA3	ISDN ATTENDANT AUTO 3-WAY											
W	ALWAC	AUTO3W	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T	AY		L								
	N	N	N	Y	N	N						
		ALL	ALL	ALL								
/MWIACH	ISDN ADD-ON/CONSULT INC ONLY											
	ALWAC	3WAY	NO	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	TERM	TERM								
/MWIAHA	ISDN ATTEND HOLD AND ALT 3-WAY											
3	ALWAC	HA3WAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	N	N	N	Y	N	N						
		ALL	ALL	ALL								
/MWICTA	ISDN FLEX TRAN INDV ALL CALLS											
2	ALWAC	3WAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWICTA	ISDN FLEX EXP-TRAN INDV ALL CALL											
3	ALWAC	3WAY	ET	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWICTA	ISDN FLEX EXP-TRAN INTERNAL ONLY											
4	ALWAC	3WAY	ET	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWICTA	ISDN CALL TRANS ATTENDANT											
T	ALWAC	3WAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	TERM	TERM								
/MWICTI1	ISDN CALL TRAN INDIV INC ONLY 1											
	ALWAC	3WAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								
	Y	N	N	N	N	N						
		ALL	TERM	TERM								
/MWICTI2	ISDN CALL TRANS INDIV INC ONLY 2											
	ALWAC	3WAY	ALW	NORMA	NONE	Y	N	N	N	N	N	N
	T			L								

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	Y	N	N	N	N	N						
		ALL	TERM	TERM								
/MWICTI3	ISDN CALL TRANSFER ATTNDNT											
	ALWACT	3WAY	ALW	NORMAL	NONE	Y	N	N	N	N	N	N
	Y	N	N	N	N	N						
		ALL	TERM	TERM								
/MWICTIA	ISDN CALL TRANS INDIV ALL CALLS											
	ALWACT	3WAY	ALW	NORMAL	NONE	Y	N	N	N	N	N	N
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWICTIN	ISDN CALL TRANS INTERNAL ONLY											
	ALWACT	3WAY	ALW	NORMAL	NONE	Y	N	N	N	N	N	N
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWICTOU	ISDN CALL TRANS OUTSIDE											
	ALWACT	3WAY	ALW	NORMAL	NONE	Y	N	N	N	N	N	N
	Y	N	N	N	N	N						
		ALL	ALL	ALL								
/MWISAT1	ISDN FLASH REPEATING											
	ALWACT	FLSHRPT	ALW	NORMAL	NONE	Y	N	N	N	N	N	N
	Y	N	N	N	N	N						
		ALL	TERM	TERM								
/MWISPU	ISDN CALL PICKUP W/ BARGE-IN											
	ALWACT	3WAY	NO	NORMAL	NONE	Y	N	N	N	N	N	N
	N	N	Y	N	N	N						
		ALL	ALL	TERM								
/MWISPUH	ISDN PICKUP W/ BARGE-IN HELD CAL											
	ALWACT	3WAY	ALW	NORMAL	NONE	Y	N	N	N	N	N	N
	N	N	Y	N	N	N						
		ALL	ALL	TERM								
/MWMFE	RLT ATTENDANT CALL XFER											
	ALWACT	AUTO3WAY	ALW	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		TERM	TERM	TERM								
/MWSAT1	SATELLITE ATTENDANT TRANSFER											
	ALWACT	FLSHRPT	NO	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		TERM										
/MWSAT2	SAT. ATT. TRANS. - FLASH REPEAT											
	ALWACT	FLSHRPT	NO	AUTOREST	NONE	Y	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL										
/MWSP3WC	SPONT USAGE SENSITIVE 3-WAY CALL											
	ALWACT	3WAY	NO	AUTOREST	NONE	N	N	Y	N	N	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWUS3WC	USAGE SENSITIVE 3-WAY CALLING											
	ACT1CA	3WAY	NO	AUTOREST	NONE	N	N	N	N	Y	N	N
	N	N	N	N	N	N						
		ALL	ALL	ALL								
/MWUSSWC	USAGE SENSITIVE 6-WAY CALLING											
	ACT1CA	NWAY	NO	AUTOREST	NONE	N	Y	Y	Y	Y	N	N
	N	N	N	N	N	N	6					
		ALL										

Figure 1 PRECONSTRUCTED MULTI-WAY FEATURES (5602-1) 5E10 AND LATER SOFTWARE RELEASES

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FEATURE		FILTERING							
		HOLD ORG PTY	HOLD ADDP TY	3WAY ORG PTY	3WAY ADDP TY	XFER ORG PTY	XFER ADDP TY	XFER PRSP TY	NWAY PRSP TY
/MW*	ATTNDNT:	Y	Y	Y	Y				
	INTRAGRP:	Y	Y	Y	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MW3WC	ATTNDNT:	Y	Y	Y	Y				
	INTRAGRP:	Y	Y	Y	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MW6WC	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	N	N
	INTEROFC:	Y	Y			Y	Y	N	N
	PFA:	Y	Y			Y	Y	N	N
/MWACH1	ATTNDNT:	Y	Y	N	Y				
	INTRAGRP:	Y	Y	N	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWACH2	ATTNDNT:	N	Y	N	Y				
	INTRAGRP:	N	Y	N	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWACT1	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWACT2	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCH1	ATTNDNT:	Y	Y						
	INTRAGRP:	Y	Y						
	INTRAOFC:	Y	Y						
	INTEROFC:	Y	Y						
	PFA:	Y	Y						
/MWCH2	ATTNDNT:	Y	Y						
	INTRAGRP:	Y	Y						
	INTRAOFC:	Y	Y						
	INTEROFC:	Y	Y						
	PFA:	Y	Y						
/MWCP	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCTA1	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	N	N	N	N	N	N	
	INTRAOFC:	Y	N	Y	N	Y	N	N	
	INTEROFC:	Y	N	Y	N	Y	N	N	
	PFA:	Y	N	Y	N	Y	N	N	
/MWCTA2	ATTNDNT:	N	Y	N	Y	N	Y	Y	
	INTRAGRP:	N	N	N	N	N	N	N	
	INTRAOFC:	Y	N	Y	N	Y	N	N	
	INTEROFC:	Y	N	Y	N	Y	N	N	
	PFA:	Y	N	Y	N	Y	N	N	
/MWCTIA1	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCTIA2	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	

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	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWCTIA3	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	N	Y	N	Y	N	N	
	INTEROFC:	Y	N	Y	N	Y	N	N	
	PFA:	Y	N	Y	N	Y	N	N	
/MWCTIA4	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCTIA5	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCTII1	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCTII2	ATTNDNT:	N	Y	N	Y	N	Y	Y	
	INTRAGRP:	N	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWCTII3	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWCTII4	ATTNDNT:	N	Y	N	Y	N	Y	Y	
	INTRAGRP:	N	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWCTIO1	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	N	Y	N	Y	N	N	
	INTEROFC:	Y	N	Y	N	Y	N	N	
	PFA:	Y	N	Y	N	Y	N	N	
/MWCTIO2	ATTNDNT:	N	Y	N	Y	N	Y	Y	
	INTRAGRP:	N	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	N	Y	N	Y	N	N	
	INTEROFC:	Y	N	Y	N	Y	N	N	
	PFA:	Y	N	Y	N	Y	N	N	
/MWCWAC	ATTNDNT:	Y	Y						
	INTRAGRP:	Y	Y						
	INTRAOFC:	Y	Y						
	INTEROFC:	Y	Y						
	PFA:	Y	Y						
/MWCWGO	ATTNDNT:	Y	N						
	INTRAGRP:	Y	Y						
	INTRAOFC:	Y	N						
	INTEROFC:	Y	N						
	PFA:	Y	N						
/MWCWIG	ATTNDNT:	Y	Y						
	INTRAGRP:	Y	Y						
	INTRAOFC:	Y	N						
	INTEROFC:	Y	N						
	PFA:	Y	N						
/MWCWIO	ATTNDNT:	Y	N						
	INTRAGRP:	Y	N						
	INTRAOFC:	Y	Y						
	INTEROFC:	Y	Y						
	PFA:	Y	Y						
/MWCWNG	ATTNDNT:	Y	Y						
	INTRAGRP:	Y	N						
	INTRAOFC:	Y	Y						
	INTEROFC:	Y	Y						
	PFA:	Y	Y						
/MWDTA1	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	

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	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWDTA2	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWDTVM	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWI6WB2	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	Y	Y
	INTEROFC:	Y	Y			Y	Y	Y	Y
	PFA:	Y	Y			Y	Y	Y	Y
/MWI6WB3	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	Y	Y
	INTEROFC:	Y	Y			Y	Y	Y	Y
	PFA:	Y	Y			Y	Y	Y	Y
/MWI6WBA	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	N	N
	INTEROFC:	Y	Y			Y	Y	N	N
	PFA:	Y	Y			Y	Y	N	N
/MWI6WBN	ATTNDNT:	Y	Y						Y
	INTRAGRP:	Y	Y						Y
	INTRAOFC:	Y	Y						Y
	INTEROFC:	Y	Y						Y
	PFA:	Y	Y						Y
/MWI6WBT	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	N	N
	INTEROFC:	Y	Y			Y	Y	N	N
	PFA:	Y	Y			Y	Y	N	N
/MWI3WC	ATTNDNT:	Y	Y	Y	Y				
	INTRAGRP:	Y	Y	Y	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWI6WC	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	N	N
	INTEROFC:	Y	Y			Y	Y	N	N
	PFA:	Y	Y			Y	Y	N	N
/MWIA3WC	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWIA6WC	ATTNDNT:	Y	Y			Y	Y	Y	Y
	INTRAGRP:	Y	Y			Y	Y	Y	Y
	INTRAOFC:	Y	Y			Y	Y	Y	Y
	INTEROFC:	Y	Y			Y	Y	Y	Y
	PFA:	Y	Y			Y	Y	Y	Y
/MWIAA3W	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWIACH	ATTNDNT:	Y	Y	N	Y				
	INTRAGRP:	Y	Y	N	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWIAHA3	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWICTA2	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	

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	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWICTA3	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWICTA4	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWICTAT	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	N	N	N	N	
	INTRAOFC:	Y	Y	Y	N	Y	N	N	
	INTEROFC:	Y	Y	Y	N	Y	N	N	
	PFA:	Y	Y	Y	N	Y	N	N	
/MWICTI1	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWICTI2	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWICTI3	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	Y	N	Y	Y	
	INTRAOFC:	Y	Y	Y	N	Y	N	N	
	INTEROFC:	Y	Y	Y	N	Y	N	N	
	PFA:	Y	Y	Y	N	Y	N	N	
/MWICTIA	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWICTIN	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	N	Y	N	N	
	INTEROFC:	Y	Y	Y	N	Y	N	N	
	PFA:	Y	Y	Y	N	Y	N	N	
/MWICTOU	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	N	
	INTEROFC:	Y	Y	Y	Y	Y	Y	N	
	PFA:	Y	Y	Y	Y	Y	Y	N	
/MWISAT1	ATTNDNT:	Y	Y	N	Y	N	Y	Y	
	INTRAGRP:	Y	Y	N	N	N	N	N	
	INTRAOFC:	Y	Y	Y	N	Y	N	N	
	INTEROFC:	Y	Y	Y	N	Y	N	N	
	PFA:	Y	Y	Y	N	Y	N	N	
/MWISPU	ATTNDNT:	Y	Y	Y	Y				
	INTRAGRP:	Y	Y	Y	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWISPUH	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWMFE	ATTNDNT:	Y	Y	Y	Y	Y	Y	Y	
	INTRAGRP:	Y	Y	Y	Y	Y	Y	Y	
	INTRAOFC:	Y	Y	Y	Y	Y	Y	Y	
	INTEROFC:	Y	Y	Y	Y	Y	Y	Y	
	PFA:	Y	Y	Y	Y	Y	Y	Y	
/MWSAT1	ATTNDNT:	N	Y						
	INTRAGRP:	N	N						
	INTRAOFC:	Y	N						
	INTEROFC:	Y	N						
	PFA:	Y	N						
/MWSAT2	ATTNDNT:	Y	Y						
	INTRAGRP:	Y	Y						
	INTRAOFC:	Y	Y						
	INTEROFC:	Y	Y						

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	PFA:	Y	Y						
/MWSP3WC	ATTNDNT:	Y	Y	Y	Y				
	INTRAGRP:	Y	Y	Y	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWUS3WC	ATTNDNT:	Y	Y	Y	Y				
	INTRAGRP:	Y	Y	Y	Y				
	INTRAOFC:	Y	Y	Y	Y				
	INTEROFC:	Y	Y	Y	Y				
	PFA:	Y	Y	Y	Y				
/MWUSSWC	ATTNDNT:	Y	Y						N
	INTRAGRP:	Y	Y						N
	INTRAOFC:	Y	Y						N
	INTEROFC:	Y	Y						N
	PFA:	Y	Y						N

Figure 2 PRECONSTRUCTED MULTI-WAY FEATURES (5602-2) 5E10 AND LATER SOFTWARE RELEASES

SCREEN 1 OF 3 5ESS Switch
mwfd OFFICE DATA ADMINISTRATION
(5602-1/2) MULTIWAY CALLING FEATURE DEFINITION

*2. FEATURE NAME FEATURE 3. REMARKS _____

FEATURE OPTIONS ENTRY POINT SIGNAL CONTROL
4. ACT/INACT OPTION ALWACT FLASH Y 3WAY XFER N
MULTIWAY CONTROL 3WAY IN MIDDLE N HOLD XFER N
MULTIWAY TRANSFER NO OFF HOOK N
PS/PD TREATMENT AUTOREST CALL WAITING N
DEPARTURE TONE NONE CALL PICKUP N
FLASH BEFORE ANS Y
SPLIT LAST PTY N ISDN ENTRY POINT
AMAC FLAT 17. FEATURE BUTTON N
18. DIAL CODE OR BUTTON N
19. ISDN CALL PICKUP N
20. ISDN ATTENDANT N

SCREEN 2 OF 3 5ESS Switch
mwfd OFFICE DATA ADMINISTRATION
(5602-1/2) MULTIWAY CALLING FEATURE DEFINITION

FILTERING FEATURE OPTIONS

ORIGINATING / TERMINATING
23. HOLD ALL 24. 3WAY _____ 25. TRANSFER _____

CALL TYPES ATTENDANT INTRAGRP INTRAOFC INTEROFC PVTFAC
"""""- """" """" """" """" """"
26. HOLD ORIG PTY 27. Y 28. Y 29. Y 30. Y 31. Y
32. HOLD ADDED PTY 33. Y 34. Y 35. Y 36. Y 37. Y

38. 3WAY ORIG PTY 39. _ 40. _ 41. _ 42. _ 43. _
44. 3WAY ADDED PTY 45. _ 46. _ 47. _ 48. _ 49. _

50. XFER ORIG PTY 51. _ 52. _ 53. _ 54. _ 55. _

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56. XFER ADDED PTY 57. _ 58. _ 59. _ 60. _ 61. _
62. XFER PTYS PRES 63. _ 64. _ 65. _ 66. _ 67. _
68. NWAY PTYS PRES 69. _ 70. _ 71. _ 72. _ 73. _

SCREEN 3 OF 3 5ESS Switch _
mwfd OFFICE DATA ADMINISTRATION
(5602-1/2) MULTIWAY CALLING FEATURE DEFINITION

DEFAULT PARAMETERS
74. N-WAY MAXIMUM _
75. TONE DURATION ____
76. DIRECT CONNECT DN _____

Figure 3 SAMPLE MWFD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 3B: 5602-3 RECORD
MULTIWAY CALLING
LINE (TN) PARAMETER FORM - MWLPA

1. GENERAL

The 5602-3 Record is available with 5E2 and later Software Releases, and is used to define Multiway Calling Line Parameters.

The Line Parameter Form is used when a Multiway constructed feature is assigned to a terminal (line or trunk) and the desired parameters are different from the default parameters on the MWFD Form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TELEPHONE NUMBER

Description: Enter a valid customer Telephone Number.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The TN must be assigned on the LINE Form (5109 Record).

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
B911	Line to an Emergency Bureau.
INDIV	Individual Line.
PBX	Line to a PBX.
SATSTLN	Stand-Alone Test Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
ISDN	Digital Subscriber Line associated ISDN (Integrated Service Digital Network) service.
ISATND	ISDN attendant.

For 5E12 and later, TELEPHONE NUMBER and FEATURE combinations on different MWLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TELEPHONE NUMBERs on the MWLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

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Description: Enter the Feature Name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a multiway feature defined on the MWFD form, except it must not be a wild card feature.

2.4 N-WAYS

Description: Enter the number of terminals allowed in an N-Way call.
Valid Entries: 0, 3, 4, 5 or 6

2.5 TONE DURATION

Description: Enter the duration of party departure tone (single beep only) in milliseconds. The normal duration is 300 milliseconds.
Valid Entries: 0, 200, 300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000, 3300, 3600, 3900 or 4000 (milliseconds)

2.6 DIRECT CONN DN

Description: Enter a Direct Connect Directory Number. Entries are typically 1, 3, 7, 8, 10 or 11 digits or an IDDD number.
Valid Entries: 1 - 15 digits

```
mwlpa                    5ESS Switch          _
(5602-3)              OFFICE DATA ADMINISTRATION
                MULTIWAY CALLING LINE (TN) PARAMETERS

*1. TELEPHONE NUMBER   6682501
*2. FEATURE            0
 3. N-WAYS             3
 4. TONE DURATION      0300
 5. DIRECT CONN DN     _________________
```

Figure 1 SAMPLE MWLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
mwlpa                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5602-3)            MULTIWAY CALLING LINE (TN) PARAMETERS

*1. TELEPHONE NUMBER __________
*2. FEATURE          ________
 3. N-WAYS           _
 4. TONE DURATION    ____
 5. DIRECT CONN DN   _________________
```

Figure 2 SAMPLE MWLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3C: 5602-4
MULTIWAY CALLING
LINE (MLHG/TERM) PARAMETER FORM - MWMPA

1. GENERAL

The 5602-4 Record is available with 5E2 and later Software Releases, and is used to define Multiway Calling Multi-Line Hunt Group Parameters.

The parameter form for Multiway Calling will be used when a Multiway constructed feature is assigned to a terminal (line or trunk), and the desired parameters are different from the default parameters on the MWFD Form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Terminal (member) Number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
B911	Line to an Emergency Bureau.
INDIV	Individual Line.
PBX	Line to a PBX.
SATSTLN	Stand-Alone Test Line.
4WINDIV	4-Wire Individual Line or 4-Wire manual PBX.
ISDN	Digital Subscriber Line associated ISDN (Integrated Service Digital Network) Service.
ISATND	ISDN attendant.

2.4 * FEATURE

Description: Enter the Feature Name.

Required Field.

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Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a Multiway feature defined on the MWFD form, except it may not be a wild card feature.

2.5 N-WAYS

Description: Enter the number of terminals allowed in a N-way call.
Valid Entries: 0, 3, 4, 5 or 6

2.6 TONE DURATION

Description: Enter the duration of party departure tone (single beep only) in milliseconds. The normal duration is 300 milliseconds.
Valid Entries: 0, 200, 300, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000, 3600, 3900 or 4000 (milliseconds)

2.7 DIRECT CONN DN

Description: Enter a Direct Connect Directory Number. Entries are typically 1, 3, 7, 8, 10 or 11 digits or an IDDD number.
Valid Entries: 1 - 15 digits

```
mwmpa                    5ESS Switch        _
(5602-4)            OFFICE DATA ADMINISTRATION
          MULTIWAY CALLING LINE (MLHG/TERM) PARAMETERS

*1. MLHG          0048
*2. TERM          0015
*3. FEATURE        0
 4. N-WAYS         3
 5. TONE DURATION  0300
 6. DIRECT CONN DN _______________
```

Figure 1 SAMPLE MWMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3D: 5602-5
MULTIWAY CALLING
TRUNK PARAMETER FORM - MWTPA

1. GENERAL

The 5602-5 Record is available with 5E2 and later Software Releases, and is used to define Multiway Calling Trunk Parameters.

The Trunk Parameter Form is used when a multiway constructed feature is assigned to a terminal (line or trunk) and the desired parameters are different from the default parameters on the MWFD form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TGN

Description: Enter the TGN (Trunk Group Number).

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202 Record) must be one of the following.

TRKCLS	
PF	Private Facility
PFLASH	Private Facility Feature Flash
PFITT	Private Facility Intertandem trunk

2.3 * MEMB

Description: Enter the Trunk Group Member number.

Required Field.
Valid Entries: 0 - 1951

2.4 * FEATURE

Description: Enter the feature name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a multiway feature defined on the MWFD form, except it may not

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be a wild card feature.

2.5 N-WAYS

Description: Enter the number of terminals allowed in an N-way call.
Valid Entries: 0, 3, 4, 5 or 6

2.6 TONE DURATION

Description: Enter the duration of party departure tone (single beep only) in milliseconds. The normal duration is 300 milliseconds.
Valid Entries: 0, 200, 300, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000, 3300, 3600, 3900 or 4000 (milliseconds)

2.7 DIRECT CONN DN

Description: Enter a Direct Connect Directory Number. Entries are typically 1, 3, 7, 8, 10 or 11 digits or an IDDD number.
Valid Entries: 1 - 15 digits

---

mwtpa 5ESS Switch _
(5602-5) OFFICE DATA ADMINISTRATION
MULTIWAY CALLING TRUNK PARAMETERS

*1. TGN 0033
*2. MEMB 0025
*3. FEATURE ABC
4. N-WAYS 6
5. TONE DURATION 0300
6. DIRECT CONN DN _____

Figure 1 SAMPLE MWTPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4: CALL WAITING FORMS

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SEC. 4A: 5603-1 RECORD
CALL WAITING FEATURE DEFINITION FORM - CWTFD

1. GENERAL

The 5603-1 Record is available with 5E2(2) and later Software Releases. It is used to define a number of separate features by selecting various feature options for Call waiting. The provided features are Call Waiting Terminating, distinctive tones for Call Waiting Terminating, Call Waiting Originating Dial Call Waiting, Call Waiting - Incoming only and Attendant Camp-On.

Each feature is given a feature name of from one to eight characters which is used to assign the constructed (defined) feature to lines.

1.1 Pre-defined Call Waiting Features

Certain Call Waiting features are pre-defined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed Call Waiting features is contained in Figure 1.

1.2 Recent Change View

The corresponding Recent Change View for this form is 12.15.

2. FORM AND RECORD ENTRIES - ESS
5603-1 RECORD

2.1 BASE AND CONTROL NUMBER, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * FEATURE NAME

Description: Enter the Feature Name.

Feature names may be from one to eight characters long, with no restrictions on the valid characters, except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment of up to 32 characters.
Valid Entries: 1 - 32 characters

ACTIVATION

Fields (Section 2.4 - Section 2.7) specify the Call Waiting activation options.

2.4 ACT TYPE

Description: Enter the method of feature Activation.

Required Field.
Default: AUTO

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Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
CODE	Used to indicate that activation allowed for this feature is by dialing a code.
AUTO	Used to indicate no customer activation. Upon assignment the feature is made active and is ready to be used.

Data Rules:

If ACT TYPE equals "AUTO", then DACT TYPE must be "NONE" or "CODE".

If ACT TYPE is CODE and this feature is assigned to a line, then the line should normally be assigned an IDP (Individualized Dialing Plan), and at least one dialed code of the IDP (on the IDPDCA Form) ESS 5601-1/2 Record should have ACTION equal to FTACT and a FEATURE associated with the dialed code on the IDPDCA Form equal to this Call Waiting feature, or CWOACT if INVOCATION is ORIG or CODE, and the FEATURE associated with the dialed code on the IDPDCA Form must be that of the Call Waiting "wild-card" feature (/CW*) or CWTACT if INVOCATION is TERM and the FEATURE associated with the dialed code on the IDPDCA Form must be that of the Call Waiting "wild-card" feature (/CW*).

Alternately, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to FTACT and a FEATURE associated with the dialed code on the PDIT Form equal to this Call Waiting feature, or CWOACT if INVOCATION is ORIG or CODE and the FEATURE associated with the dialed code on the PDIT Form must be that of the Call Waiting "wild-card" feature (/CW*), or CWTACT if INVOCATION is TERM and the FEATURE associated with the dialed code on the PDIT Form must be that of the Call Waiting "wild-card" feature (/CW*).

If Telephone Numbers on the LINEFA form or Multi-Line Hunt Group Terminal Numbers on the MLHLNFA form are assigned a Call Waiting Feature with the Activation Type entry set to "AUTO" on the CWTFD form, the corresponding Initial Activation Status entry on the LINEFA form or MLHLNFA form, the BFG form or an associated CLUSTR form must be "Y".

2.5 DACT TYPE

Description: Enter the method of feature Deactivation.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
CODE	Used to indicate that deactivation allowed for this feature is by dialing a code.
NONE	Used to indicate no customer deactivation is allowed. The feature can never be deactivated from the customer's station, except by a Service Order request through the switch owner.
AUTO	Used to indicate no customer deactivation. The feature is inactive upon assignment and stays inactive until a valid activation code is dialed.

Data Rules:

If ACT TYPE is set to "AUTO", the DACT TYPE must be equal to "NONE" or "CODE".

If ACT TYPE is set to "CODE", the DACT TYPE must be equal to "AUTO" or "CODE".

If DACT TYPE is "CODE" and this feature is assigned to a line, then the line should normally be assigned an IDP (Individualized Dialing Plan), and at least one dialed code of the IDP (on the IDPDCA Form) should have ACTION equal "FTDCT" and a FEATURE associated with the dialed code on the IDPDCA Form equal to this Call Waiting feature.

Alternately, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one

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dialed code ACTION equal to "FTDCT", and a FEATURE associated with the dialed code on the PDIT Form equal to this Call Waiting feature. If the ACTION is equal to "CWTDCT", the FEATURE associated with the dialed code on the PDIT Form must be that of the Call Waiting "wild-card" feature (/CW*).

2.6 INVOCATION

Description: Enter the type of Invocation. Required Field.
Default Value: TERM

Valid INVOCATION Entries

Entry	Definition
CODE	Used if the line with this feature is to invoke Call Waiting by dialing a code. When this option is selected, the customer may then dial the code followed by the terminating line's Telephone Number, if the terminating line is busy it will receive Call Waiting tone.
ORIG	Used if all calls originated from a line with this feature to a busy line within the originator's terminal group will send Call Waiting tone to the terminating line.
PTRM	Similar in use to RTRM except that the tone will indicate to this line when the call waiting has a higher precedence level than the existing call. (This assumes that the line does not have the parameter IMMED PREEMPTION equal to Yes. If it did, this feature would not be invoked.)
RTRM	Used only for lines which have also been assigned a Precedence and Preemption BRCS feature, see the PPFD Form, ESS 5618-1 Record. This is a special type of Call Waiting Terminating feature and combined with a unique CDPTY TONE INDICATOR will indicate to this line when a call is waiting that is either of routine precedence or a lower precedence than the existing call. Any line which is assigned a Call Waiting feature with this INVOCATION type, must also be assigned a Call Waiting feature with the INVOCATION equal to TERM.
TERM	Used if the line with this feature is to receive Call Waiting tone whenever any call meeting the specified CALL SELECTION criteria attempts to terminate to it and the line is busy.

Any line which is assigned a Call Waiting feature with this INVOCATION type, must also be assigned a Call Waiting feature with the INVOCATION equal to TERM.

Data Rules:

CODE:
If dial Call Waiting (INVOCATION is "CODE"), Call Waiting Originating (INVOCATION is "ORIG") and Call Waiting Terminating (INVOCATION is "TERM") are assigned to a line, then dial Call Waiting takes precedence over Call Waiting Terminating, and Call Waiting Terminating takes precedence over Call Waiting Originating.

If "CODE" is entered, then the line with this feature should normally be assigned an IDP and at least one dialed code of the IDP (on the IDPDCA Form) should have ACTION equal to "CWDLU", and the FEATURE associated with the dialed code on the IDPDCA Form must be that of the Call Waiting "wild-card" feature (/CW*), or equal to this Call Waiting feature.

Alternately, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "CWDLU" and the FEATURE associated with the dialed code on the PDIT Form must be that of the Call Waiting "wild-card" feature (/CW*), or equal to this Call Waiting feature.

For 5E6 and later, if "CODE" is entered, then CALLED PTY TONE INTERVAL must be 10.

PTRM and RTRM:
For 5E8 and later, if "PTRM" or "RTRM" is entered, then LONG DST DT must be "NORMAL".

ORIG:
For 5E6 and later, if "ORIG" is entered, CALLED PTY TONE INTERVAL must be 10.

2.7 FLASH ON FORWARD?

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Description: Is a called party allowed to be connected to a Call Waiting party and place the original party in a hold state?

If a flash is not allowed for the specific Call Waiting feature, it will be ignored. The Call Waited party may disconnect the current call and be rungback by the Call Waiting party.

Required Field.
Default: Y, N

NOTE: The default and only value is "Y", except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

BRIDGE TO FEATURE

Field Section 2.8 specifies the bridge to Multiway feature.

2.8 MULTIWAY

Description: Enter a Multiway feature name if FLASH ON FORWARD is "Y".

Multiway feature name may be from one to eight characters long, with no restrictions on the valid characters. However wild-card feature (/MW*) is not allowed.

If flashing is allowed for the specific Call Waiting feature, the feature will place the original party in a hold state and connect to the Call Waiting party. At this time, call processing control is passed to the Multiway feature where it has an entry point from Call Waiting.
Valid Entries: 1 - 8 characters

Data Rules:

If FLASH ON FORWARD is "Y", the assigned MW feature must have the following characteristics equal to "Y" on the MWFD Form (5602-1/2 Record):

ENTRY POINT for CALL WAITING

HOLD ORIG PTY for ATTENDANT

HOLD ORIG PTY for INTRAGRP

HOLD ORIG PTY for INTRAOFC

HOLD ORIG PTY for INTEROFC

HOLD ORIG PTY for PVTFAC

HOLD ADDED PTY for ATTENDANT must equal ATTENDANT on the CWTFD Form

HOLD ADDED PTY for INTRAGRP must equal INTRA TERMINAL GROUP on the CWTFD Form

HOLD ADDED PTY for INTRAOFC must equal INTRA OFFICE on the CWTFD Form

HOLD ADDED PTY for INTEROFC must equal INTER OFFICE on the CWTFD Form

HOLD ADDED PTY for PVTFAC must equal PRIVATE FACILITY ACCESS on the CWTFD Form.

INDICATORS

Fields (Section 2.9 - Section 2.11) specify the various indications for the calling and called parties.

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2.9 CDPTY TONE INDICATOR

Description: Enter the Called Party Indicator Tone.

CDPTY Tone alerts a talking party of an incoming call. The indicator is in the form of tone patterns.

Required Field.
Default: BEEP1
Valid Entries:

Valid CDPTY TONE INDICATOR Entries

Entry	Definition
BEEP1	Called party receives one beep
BEEP2	Called party receives two beeps
BEEP3	Called party receives three beeps

2.10 CGPTY TONE INDICATOR

Description: Enter Calling Party Tone Indicator.

This field specifies the various indications that a calling party should receive.

Required Field.
Default: RING
Valid Entries:

Valid CGPTY TONE INDICATOR Entries

Entry	Definition
BEEP1	Calling party receives one beep followed by audible ring.
BEEP2	Calling party receives two beeps followed by audible ring.
BEEP3	Calling party receives three beeps followed by audible ring.
BUSY	Calling party receives a busy tone. When this field is busy, the calling party receives a "beep" followed by "silence" because of the Attendant Camp-On with Silence Field Feature.
RING	Calling party receives an audible ring
SILENCE	Software Release: 5E4(2) and later. Calling party receives one beep followed by silence.
MUSIC	Software Release: 5E7 and later. Music is given to the calling party.

Data Rules:

Secured Feature ID 64 must be set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (Record 5713-1) in order for CGPTY TONE INDICATOR to be set to "MUSIC" for constructed features.

When CGPTY TONE INDICATOR is "MUSIC", INVOCATION must be either "ORIG" or "CODE".

If CGPTY TONE INDICATOR is "MUSIC" on this form for a Call Waiting feature assigned to a TN or MLHG/MEMB on a LINEFA, MLHLNFA, CLUSTR, or BFG form, then the TN or MLHG/MEMB must also have a TGSR feature assigned with MOH ALW set to "Y" on either the TGSRFD, TGSRLPA, TGSRMPA, or BFG form.

2.11 DEPTY TONE INDICATOR

Description: Enter the Party Departure Tone Indicator. DEPTY Tone Indicator is of the review operation. This field has the default and only value of "NONE".

Required Field.
Default: NONE
Valid Entries:

Valid DEPTY TONE INDICATOR Entries

Entry	Definition

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BEEP1	One beep.
BEEP2	Two beeps.
BEEP3	Three beeps.
LEAVE	Party leaving tone.
NONE	No tone.

BILLING

Field Section 2.12 specifies the type of calling party billing to be used.

2.12 CALLING PARTY BILL

Description: Enter whether the calling party will be billed normally, not at all, or in some special manner.

Required Field.
Default: NORMAL
Valid Entries:

Valid CALLING PARTY BILL Entries

Entry	Definition
NORMAL	Indicates billing the calling party when there is a connection between the calling party and the called party.
NEVER	Indicates never billing the calling party.
AFTER	Indicates billing the calling party x seconds after any kind of calling party treatment beings (a tone or an announcement but not audible ring or busy tone). If an answer occurs before the time interval x.

The default and only value is NORMAL, except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

CHANGE PARAMETER

Field Section 2.13 - Section 2.14 specifies whether the customer is allowed to change parameters.

2.13 CHANGE CDPTY TONE INTERVAL

Description: Is the customer is allowed to change the called party tone interval by dialing a code.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

CHANGE CDPTY TONE INTERVAL must equal "N" if INVOCATION is set to "ORIG" or "CODE".

IF CHANGE CDPTY TONE INTERVAL is "Y", and this feature is assigned to a line, then the line should normally be assigned an IDP (Individualized Dialing Plan), and at least one dialed code of the IDP (on the IDPDCA) Form should have ACTION equal to "CWXCH" and have FEATURE associated with the dialed code on the IDPDCA Form equal to this Call Waiting feature.

Alternately, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "CWXCH", and FEATURE associated with the dialed code on the PDIT Form equal to this Call-Waiting feature.

2.14 CW DELUXE

Description: Activate Call Waiting Deluxe for this feature? For more information on the secured feature Call Waiting Deluxe, see Division 2, Section 4A145.

Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

When CW DELUXE is "Y" then MULTIWAY must be entered and must be "/MWCWAC", "/MWCWGO" , "/MWCWIO", or "/MWCWNG".

When CW DELUXE is "Y", INVOCATION must be "TERM".

When Call Waiting Deluxe features are defined on this form with CW DELUXE set to "Y", then

- ACT for SFID 145 on the SFSYS form must be "Y" before LINE forms can have a Call Waiting Deluxe feature assigned on the LINEFA, CLUSTR, and/or BFG form.
- if LINE forms have Call Waiting Deluxe features assigned on the LINEFA, CLUSTR, and/or BFG form, the LCC and RAX of the line must be defined on the LCC form with CLASS OF SERVICE set to "INDIV" or "PBX".
- if LINE forms have Call Waiting Deluxe features assigned on the LINEFA, CLUSTR, and/or BFG form, on the LINE form, then SUSO, SUST, SHARED must be "N" and ASSOC OE TYPE and NUMBER must not be entered.
- if Remote Call Forwarding features are defined on the CFWFD form where FORWARD is "BOTH", ACT TYPE is "AUTO", and DACT TYPE is "NONE", then LINE forms cannot have both a Call Waiting Deluxe and Remote Call Forwarding feature assigned on the LINEFA, CLUSTR and/or BFG form.
- these features are not assignable to ISDN lines defined on the DLUSR form. Therefore, LINEFA, MLHLNFA, CLUSTR and/or BFG forms associated with an ISDN line cannot have a Call Waiting Deluxe feature name entered.
- these features are not assignable to multi-line hunt lines defined on the MLHLN form. Therefore, MLHLNFA, CLUSTR and/or BFG forms associated with a multi-line hunt line cannot have a Call Waiting Deluxe feature name entered.

CALL SELECTION

Fields (Section 2.15 - Section 2.19) specify the conditions under which a called line should be call waited. For a call to be call waited, the following five options are used as criteria. Any of the following five options may be specified.

2.15 ATTENDANT

Description: Enter "Y" if ATTENDANT calls are call-waited, or "N" if not.

Required Field.
Default: Y
Valid Entries: Y, N

- ***NOTE:*** The default and only value is "Y", except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

2.16 INTRA OFFICE

Description: The incoming call is an intraoffice, non-private facility call, and the incoming call and the called line are not members of the same Terminal Group and the incoming call is not from the attendant. Enter "Y" (Yes) if intraoffice calls are call-waited, or "N" (No) if not.

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The default and only value is Y, except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Required Field.
Default: Y
Valid Entries: Y, N

2.17 INTER OFFICE

Description: The incoming call is an interoffice, non-private facility and the incoming call and the called line are not in the same Terminal Group and the incoming call is not from the attendant. Enter "Y" if interoffice calls are call-waited, or "N" if not.

The default and only value is Y, except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

For 5E8 and later, if "N" is entered, LONG DST DT must be "NORMAL".

2.18 INTRA TERMINAL GROUP

Description: The incoming call belongs to the same Terminal Group as the called line and the incoming call is not from the attendant. Enter "Y" if intra Terminal Group calls are call waited, or "N" if not.

The default and only value is "Y", except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Required Field.
Default: Y
Valid Entries: Y, N

2.19 ATTENDANT PRIVATE FACILITY ACCESS

The incoming call is from a private facility and not from an attendant. Enter "Y" if private facility access calls are call-waited, or "N" if not.

The default and only value is Y, except for Call Waiting features derived from the preconstructed features using the ODA change-insert mode of the review operation.

DEFAULT PARAMETERS

The following fields (Section 2.20 - Section 2.21) define the default parameters assigned with the feature to lines. These parameters are assigned to the line unless they are over-ridden by entries on the CWTLPA or CWTMPA forms.

2.20 CALLED PTY TONE INTERVAL

Description: Enter the interval at which the called party receives beeps.
Default: 10 (seconds) Valid Entries: 0 - 60 (seconds)

Data Rules:

For 5E6 and later , when INVOCATION is "ORIG" or "CODE", CALLED PTY TONE INTERVAL must be

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"10".

2.21 LONG DST DT

Description: Long Distance Distinctive Tone specifies whether a distinctive call waiting tone is given when the called party receives a long distance incoming call. The NPA/NXX entries on the LOCSCRN form (5545 Record) determines when this would apply. This field supports the Call Waiting Distinctive Tone and Distinctive Ringing for Long Distance Calls feature. For more information on this feature, see Division 2, Section 4A91.

Software Release: 5E8 and later.
Required Field.
Default: NORMAL
Valid Entries:

Valid LONG DST DT Entries

Entry	Definition
DTONE	Provide normal call waiting treatment for non-long distance calls and call waiting distinctive tone pattern E for long distance calls.
NORMAL	Both local and long distance calls receive the "normal" call waiting tones.
ONLY	Provide call waiting distinctive tone pattern E only for long distance calls.

Data Rules:

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before the LONG DST DT field can be changed from its default value on either the BFG, CWTFD, CWTLPA or CWTMPA forms. If the SFID 91 ACT field is not set to "Y" on the SFSYS form (5713-1 Record), then the LONG DST DT field must be "NORMAL".

CALL WAITING DELUXE

The following fields define the office parameters for Call Waiting Deluxe. These fields support the Call Waiting Deluxe Phase II Feature. This is a secured feature with SFID 145. For more information on this feature, see Division 2, Section 4A145.

2.22 ALERT TYPE

Description: Enter the Call Waiting Deluxe Alerting Type. The user and/or the CPE is alerted of an incoming call by way of a tone.

Software Release: 5E10 and later.
Default: OFCALERT
Valid Entries:

Valid ALERT TYPE Entries - 5E10 and later

Entry	Definition
OFCALERT	Office value
CWD	SAS only with non-ADSI per-call options allowed
CWD1	SAS & CAS with non-ADSI per-call options restricted
CWD2	SAS & CAS with non-ADSI allowed

Data Rules:

When ALERT TYPE is not "OFCALERT", CW DELUXE must be "Y".

2.23 DFLT OPT

Description: Default Service Option is a treatment applied to incoming calls when the user does not select a per-call option.

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Software Release: 5E10 and later.
Default: OFCDFLTOPT
Valid Entries:

Valid DFLT OPT Entries - 5E10 and later

Entry	Definition
OFCDFLTOPT	Office value
CONTRING	Continue providing waiting party audible ringing
CALLFWD	Forward waiting call to CFDA destination
DEFANNC	Connect waiting call to default announcement

Data Rules:

When DFLT OPT is not "OFCDFLTOPT", CW DELUXE must be "Y".

2.24 USG SENS CONF

Description: Usage Sensitive Conference is used to track the usage of conferencing.

Software Release: 5E10 and later.
Default: OFCCONF
Valid Entries:

Valid USG SENS CONF Entries - 5E10 and later

Entry	Definition
OFCCONF	Office value
NO	Do not provide usage sensitive AMA for conferencing on this line
YES	Provide usage sensitive AMA for conferencing on this line

Data Rules:

When USG SENS CONF is not "CWDELUXE", CW DELUXE must be "Y".

TALKING CALL WAITING

2.25 TCW

Description: This field is used in determining whether or not Talking Call Waiting is assigned to the Call Waiting feature.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When TCW is "Y", INVOCATION must be "TERM".

MDNL CALL WAITING

The following fields (Section 2.26 - Section 2.28) support the MDR/CW/CF Interaction Enhancement (FAX Ring) Feature. This is a secured feature using SFID 535. For more information on this feature, see Division 2, Section 4A535.

2.26 INH CW MASTER

Description: Is Call Waiting inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

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Data Rules:

If INVOCATION is not in "TERM" then INH CW MASTER must be "N".

If INH CW MASTER is "Y", then INH CW DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.27 INH CW DEPEND

Description: Is Call Waiting inhibited for the dependent TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CW DEPEND must be "N".

If INH CW DEPEND is "Y", then INH CW MASTER must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.28 INHIBIT MDNL CW

Description: This field is used in determining whether or not Call Waiting is inhibited for the master telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CW must be "NONE".

ESS 5603-1A(6/95)TG-5 CALL WAITING FEATURE DEFINITION RECORD DATE _____
CWTFD 5ESS SWITCH
BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	ACTIVATION				BRDG TO FEATURE	INDICATORS			BILL CHANGE	CHANGE PARM	
		ACT TYPE	DACT TYPE	INVOKE	FLASH	MULTI WAY	CLDPTY	CLGPTY	DEPTY	CLG PTY	CTHOGN E CI	CW DELUXE

											DN PT TV YL	
/CW*	WILD CARD CALL WAITING FEATURE	AUTO	NONE	TERM	Y	/MWCWAC	BEEP1	RING	NONE	NORMAL	Y	N
/CWACO	ATTENDANT CAMP ON	AUTO	NONE	ORIG	Y	MWCWIG	BEEP1	BEEP1	NONE	NORMAL	N	N
/CWACODT	ATTENDANT CAMP ON W/DISTINCTIVE TONES	AUTO	NONE	ORIG	Y	/MWCWIG	BEEP3	BEEP1	NONE	NORMAL	N	N
/CWC1	CALL WAITING W/CANCEL 1 (POTS)	AUTO	CODE	TERM	Y	/MWCWAC	BEEP1	RING	NONE	NORMAL	N	N
/CWC1DT1	CW W/CANCEL 1 W/DIST. TONES 1	AUTO	CODE	TERM	Y	/MWCWGO	BEEP1	RING	NONE	NORMAL	N	N
/CWC1DT2	CW W/CANCEL 1 W/DIST. TONES 2	AUTO	CODE	TERM	Y	/MWCWNG	BEEP2	RING	NONE	NORMAL	N	N
/CWC2	CALL WAITING W/CANCEL 2 (BUS.)	AUTO	CODE	TERM	Y	/MWCWIO	BEEP1	RING	NONE	NORMAL	N	N
/CWC2DT	CW W/CANCEL 2 W/DIST. TONES	AUTO	CODE	TERM	Y	/MWCWIO	BEEP2	RING	NONE	NORMAL	N	N
/CWD	DIALED CALL WAITING	AUTO	NONE	CODE	Y	/MWCWIG	BEEP1	RING	NONE	NORMAL	N	N
/CWDC1	CW DELUXE W/CANCEL 1 (POTS)	AUTO	CODE	TERM	Y	/MWCWAC	BEEP1	RING	NONE	NORMAL	N	Y
/CWDC2	CW DELUXE W/CANCEL 2 (BUS.)	AUTO	CODE	TERM	Y	/MWCWIO	BEEP1	RING	NONE	NORMAL	N	Y
/CWDC2DT	CW DELUXE W/CANC 2 W/DIST TONES	AUTO	CODE	TERM	Y	/MWCWIO	BEEP2	RING	NONE	NORMAL	N	Y
/CWDCDT1	CW DELUXE W/CANC 1 W/DIST TONE 1	AUTO	CODE	TERM	Y	/MWCWGO	BEEP1	RING	NONE	NORMAL	N	Y
/CWDCDT2	CW DELUXE W/CANC 1 W/DIST TONE 2	AUTO	CODE	TERM	Y	/MWCWNG	BEEP1	RING	NONE	NORMAL	N	Y
/CWDDT	DIALED CALL WAITING W/DIST.	AUTO	NONE	CODE	Y	/MWCWIG	BEEP3	RING	NONE	NORMAL	N	N

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	TONES											
/CWDIO	CW DELUXE INCOMING ONLY	AUTO	NONE	TERM	Y	/MWCWIO	BEEP1	RING	NONE	NORMAL	N	Y
/CWDIODT	CW DELUXE INC ONLY W/DIST TONES	AUTO	NONE	TERM	Y	/MWCWIO	BEEP2	RING	NONE	NORMAL	N	Y
/CWDM	DIALED CALL WAITING MUSIC ON HOLD	AUTO	NONE	CODE	Y	/MWCWIG	BEEP1	MUSIC	NONE	NORMAL	N	N
/CWDT	CW DELUXE TERMINATING	AUTO	NONE	TERM	Y	/MWCWAC	BEEP1	RING	NONE	NORMAL	N	Y
/CWDTDT1	CW DELUXE TERM W/DIST. TONES 1	AUTO	NONE	TERM	Y	/MWCWGO	BEEP1	RING	NONE	NORMAL	N	Y
/CWDTDT2	CW DELUXE TERM W/DIST. TONES 2	AUTO	NONE	TERM	Y	/MWCWNG	BEEP2	RING	NONE	NORMAL	N	Y

Figure 1 5E9(1) AND LATER PRECONSTRUCTED CALL WAITING FEATURE LIST

ESS 5603-1B(6/95)TG-5 CALL WAITING FEATURE DEFINITION RECORD DATE _____
CWTFD 5ESS SWITCH
BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	CALL SELECT					DEF PARM	
		ATTN	INTRAOF	INTREOF	INTRART G	PPA	CIDNPTTVY TONE	LDOSNTG DT
/CW*	WILD CARD CALL WAITING FEATURE	Y	Y	Y	Y	Y	10	NORMAL
/CWACO	ATTENDANT CAMP ON	Y	N	N	Y	N	10	NORMAL
/CWACODT	ATTENDANT CAMP ON W/DISTINCTIVE TONES	Y	N	N	Y	N	10	NORMAL
/CWC1	CALL WAITING W/CANCEL 1 (POTS)	Y	Y	Y	Y	Y	10	NORMAL
/CWC1DT1	CW W/CANCEL 1 W/DIST. TONES 1	N	N	N	Y	N	10	NORMAL
/CWC1DT2	CW W/CANCEL 1 W/DIST. TONES 2	Y	Y	Y	N	Y	10	NORMAL
/CWC2	CALL WAITING W/CANCEL 2 (BUS.)	N	Y	Y	N	Y	10	NORMAL
/CWC2DT	CW W/CANCEL 2 W/DIST. TONES	N	Y	Y	N	Y	10	NORMAL
/CWD	DIALED CALL WAITING	Y	N	N	Y	N	10	NORMAL
/CWDC1	CW DELUXE W/CANCEL 1 (POTS)	Y	Y	Y	Y	Y	10	NORMAL

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/CWDC2	CW DELUXE W/CANCEL 2 (BUS.)	N	Y	Y	N	Y	10	NORMAL
/CWDC2DT	CW DELUXE W/CANC 2 W/DIST TONES	N	Y	Y	N	Y	10	NORMAL
/CWDCDT1	CW DELUXE W/CANC 1 W/DIST TONE 1	N	N	N	Y	N	10	NORMAL
/CWDCDT2	CW DELUXE W/CANC 1 W/DIST TONE 2	Y	Y	Y	N	Y	10	NORMAL
FEATURE NAME	REMARKS	CALL SELECT					DEF PARM	
		ATTN	INTTRAOF	INTTREAOF	INTTRART	PAP	CIDNPTTVY TONE	LDOSNTGDT
/CWDDT	DIALED CALL WAITING W/DIST. TONES	Y	N	N	Y	N	10	NORMAL
/CWDIO	CW DELUXE INCOMING ONLY	N	Y	Y	N	Y	10	NORMAL
/CWDIODT	CW DELUXE INC ONLY W/DIST TONES	N	Y	Y	N	Y	10	NORMAL
/CWDM	DIALED CALL WAITING MUSIC ON HOLD	Y	N	N	Y	N	10	NORMAL
/CWDT	CW DELUXE TERMINATING	Y	Y	Y	Y	Y	10	NORMAL
/CWDTDT1	CW DELUXE TERM W/DIST. TONES 1	N	N	N	Y	N	10	NORMAL
/CWDTDT2	CW DELUXE TERM W/DIST. TONES 2	Y	Y	Y	N	Y	10	NORMAL
/CWIO	CW INCOMING ONLY	N	Y	Y	N	Y	10	NORMAL
/CWIODT	CW INCOMING ONLY W/DIST. TONES	N	Y	Y	N	Y	10	NORMAL
/CWO	CW ORIGINATING	Y	N	N	Y	N	10	NORMAL
/CWODT	CW ORIGINATING W/DIST. TONES	Y	N	N	Y	N	10	NORMAL
/CWOM	CW ORIGINATING MUSIC ON HOLD	Y	N	N	Y	N	10	NORMAL
/CWT	CW TERMINATING	Y	Y	Y	Y	Y	10	NORMAL
/CWTDT1	CW TERMINATING W/DIST. TONES 1	N	N	N	Y	N	10	NORMAL
/CWTDT2	CW TERMINATING W/DIST. TONES 2	Y	Y	Y	N	Y	10	NORMAL

Figure 2 5E9(1) AND LATER PRECONSTRUCTED CALL WAITING FEATURE LIST

---

cwtfd 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5603-1A/B) CALL WAITING FEATURE DEFINITION

*1. FEATURE NAME AAAAA
3. REMARKS _____

ACTIVATION
4. ACT TYPE AUTO
5. DACT TYPE NONE
6. INVOCATION TERM
FLASH ON FORWARD Y
BRIDGE TO FEATURE

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```
 8. MULTIWAY _________
```

```
cwtfd                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)         CALL WAITING FEATURE DEFINITION

         INDICATORS                CALL SELECTION
 9. CDPTY TONE INDICATOR BEEP1    ATTENDANT            Y
10. DEPTY TONE INDICATOR RING     INTRA OFFICE         Y
    DEPTY TONE INDICATOR NONE     INTER OFFICE         Y
                              INTRA TERMINAL GROUP    Y
         BILLING              PRIVATE FACILITY ACCESS Y
    CALLING PARTY BILL NORMAL
       CHANGE PARAMETER
13. CHANGE CDPTY TONE INTERVAL N
14. CW DELUXE                N
```

```
cwtfd                    5ESS Switch        _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)         CALL WAITING FEATURE DEFINITION

        DEFAULT PARAMETERS
20. CALLED PTY TONE INTERVAL 10
21. LONG DST DT           NORMAL
     CALL WAITING DELUXE
22. ALERT TYPE    OFCALERT
23. DFLT OPT      OFCDFLTOPT
24. USG SENS CONF OFCCONF

TALKING CALL WAITING
25. TCW N
```

Figure 3 SAMPLE CWTFD FORM 5E12 AND 5E13 SOFTWARE RELEASES

```
cwtfd                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)         CALL WAITING FEATURE DEFINITION

*1. FEATURE NAME
 3. REMARKS     _____________________________________

       ACTIVATION
 4. ACT TYPE        AUTO
 5. DACT TYPE       NONE
 6. INVOCATION      TERM
    FLASH ON FORWARD Y
  BRIDGE TO FEATURE
 8. MULTIWAY _________
```

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```
cwtfd                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)         CALL WAITING FEATURE DEFINITION

        INDICATORS                CALL SELECTION
 9. CDPTY TONE INDICATOR BEEP1    ATTENDANT            Y
10. DEPTY TONE INDICATOR RING     INTRA OFFICE         Y
   DEPTY TONE INDICATOR NONE      INTER OFFICE         Y
                          INTRA TERMINAL GROUP   Y
        BILLING              PRIVATE FACILITY ACCESS Y
   CALLING PARTY BILL NORMAL
      CHANGE PARAMETER
13. CHANGE CDPTY TONE INTERVAL N
14. CW DELUXE              N
```

```
cwtfd                    5ESS Switch       _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)         CALL WAITING FEATURE DEFINITION

       DEFAULT PARAMETERS          MDNL CALL WAITING
20. CALLED PTY TONE INTERVAL 10      26. INH CW MASTER N
21. LONG DST DT           NORMAL     27. INH CW DEPEND N

    CALL WAITING DELUXE
22. ALERT TYPE   OFCALERT
23. DFLT OPT     OFCDFLTOPT
24. USG SENS CONF OFCCONF

TALKING CALL WAITING
25. TCW N
```

Figure 4 SAMPLE CWTFD FORM 5E14 SOFTWARE RELEASES

```
cwtfd                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)         CALL WAITING FEATURE DEFINITION

*1. FEATURE NAME ________
 3. REMARKS     ____________________________________

      ACTIVATION
 4. ACT TYPE       AUTO
 5. DACT TYPE      NONE
 6. INVOCATION     TERM
   FLASH ON FORWARD Y
  BRIDGE TO FEATURE
 8. MULTIWAY ________
```

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```
cwtfd                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)        CALL WAITING FEATURE DEFINITION

        INDICATORS                CALL SELECTION
 9. CDPTY TONE INDICATOR BEEP1    ATTENDANT          Y
10. DEPTY TONE INDICATOR RING     INTRA OFFICE       Y
   DEPTY TONE INDICATOR NONE      INTER OFFICE       Y
                          INTRA TERMINAL GROUP  Y
        BILLING             PRIVATE FACILITY ACCESS Y
   CALLING PARTY BILL NORMAL
      CHANGE PARAMETER
13. CHANGE CDPTY TONE INTERVAL N
14. CW DELUXE               N
```

```
cwtfd                    5ESS Switch      _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5603-1A/B)        CALL WAITING FEATURE DEFINITION

       DEFAULT PARAMETERS            MDNL CALL WAITING
20. CALLED PTY TONE INTERVAL 10      26. INHIBIT MDNL CW NONE
21. LONG DST DT          NORMAL

    CALL WAITING DELUXE
22. ALERT TYPE   OFCALERT
23. DFLT OPT     OFCDFLTOPT
24. USG SENS CONF OFCCONF

TALKING CALL WAITING
25. TCW N
```

Figure 5 SAMPLE CWTFD FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4B: 5603-2 RECORD
CALL WAITING LINE (TN) PARAMETER FORM - CWTLPA

1. GENERAL

The 5603-2 Record is available with 5E2 and later Software Releases. It is used to define specific parameters assigned to every non-Multi-Line Hunt line assigned with a specific constructed Call Waiting feature. It is required only if the default parameters assigned on the CWTFD form (5603-1 Record) are inappropriate.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL , ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * TN

Description: Enter a Telephone Number.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Non-data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Line to a PBX.

For 5E12 and later, TN/FEATURE combinations on different CWTLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the CWTLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the Feature Name. There are no restrictions on valid characters.

Required Field.
Valid Entries: 1 - 8 characters

2.4 CDPTY TONE INTERVAL

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Description: Enter the interval at which the called party receives beeps. Zero indicates no repetition.
Valid Entries: 0 - 60 (seconds)

Data Rules:

CDPTY TONE INTERVAL must equal 10 if INVOCATION on the CWTFD form equals ORIG or CODE.

2.5 LONG DST DT

Description: Long Distance Distinctive Tone specifies whether a distinctive call waiting tone is given when the called party receives a long distance incoming call. The NPA/NXX entries on the LOCSCRN (5545 Record) determine when this would apply.

Software Release: 5E8 and later.
Valid Entries:

Valid LONG DST DT Entries

Entry	Definition
DTONE	Provide normal call waiting treatment for non-long distance calls and call waiting distinctive tone pattern E for long distance calls. (See Division 2)
NORMAL	Both local and long distance calls receive the "normal" call waiting tones as specified in the CDPTY TONE INDICATOR field on the CWTFD form.
ONLY	Provide call waiting distinctive tone pattern E only for long distance calls. (See Division 2)

Data Rules:

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before the LONG DST DT field can have values other than "NORMAL" or unknown on either the BFG, CWTFD, CWTLPA, or CWTMPA forms. If the SFID 91 ACT field is not set to "Y" on the SFSYS form (5713-1 Record), then the LONG DST DT field must be "NORMAL".

If a TN on the LINEFA form has a CWT Feature assigned on either the LINEFA, CLUSTR, or BFG form, and the feature has either INVOCATION set to "PTRM" or "RTRM" or INTER OFFICE is set to "N" on the CWTFD form (5603-1 Record), then LONG DST DT must be "NORMAL" or unknown on either the BFG or corresponding CWTLPA form. If a CWT feature is assigned through a BFG that has any of the CWT parameters entered, then all CWT parameters on the BFG form are used.

CALL WAITING DELUXE

The following fields define the office parameters for Call Waiting Deluxe. These fields support the Call Waiting Deluxe Phase II Feature. This is a secured feature with SFID 145. For more information on this feature, see Division 2, Section 4A145.

For 5E10 and later, when CWTLPA forms, keyed by TN, have input fields ALERT TYPE not equal to "OFCALERT" or DFLT OPT not equal to "OFCDFLTOPT" or USG SENS CONF not equal to "OFCCONF", FEATURE must be defined on a CWTFD form with CW DELUXE equal to "Y".

2.6 ALERT TYPE

Description: Enter the Call Waiting Deluxe Alerting Type. The user and/or the CPE is alerted of an incoming call by way of a tone.

Software Release: 5E10 and later.
Default: OFCALERT
Valid Entries:

Valid ALERT TYPE Entries - 5E10 and later

Entry	Definition
OFCALERT	Office value

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CWD	SAS only with non-ADSI per-call options allowed
CWD1	SAS & CAS with non-ADSI per-call options restricted
CWD2	SAS & CAS with non-ADSI allowed

2.7 DFLT OPT

Description: Default Service Option is a treatment applied to incoming calls when the user does not select a per-call option.

Software Release: 5E10 and later.
Default: OFCDFLTOPT
Valid Entries:

Valid DFLT OPT Entries - 5E10 and later

Entry	Definition
OFCDFLTOPT	Office value
CONTRING	Continue providing waiting party audible ringing
CALLFWD	Forward waiting call to CFDA destination
DEFANNC	Connect waiting call to default announcement

2.8 USG SENS CONF

Description: Usage Sensitive Conference is used to track the usage of conferencing.

Software Release: 5E10 and later.
Default: OFCCONF
Valid Entries:

Valid USG SENS CONF Entries - 5E10 and later

Entry	Definition
OFCCONF	Office value
NO	Do not provide usage sensitive AMA for conferencing on this line
YES	Provide usage sensitive AMA for conferencing on this line

TALKING CALL WAITING

2.9 TCW

Description: This field is used in determining whether or not Talking Call Waiting is assigned to the Call Waiting feature for this line only.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

MDNL CALL WAITING

The following fields (Section 2.10 - Section 2.12) support the MDR/CW/CF Interaction Enhancement (FAX Ring) Feature. This is a secured feature using SFID 535. For more information on this feature, see Division 2, Section 4A535.

2.10 INH CW MASTER

Description: Is Call Waiting inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

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If INVOCATION is not in "TERM" then INH CW MASTER must be "N".

If INH CW MASTER is "Y", then INH CW DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.11 INH CW DEPEND

Description: Is Call Waiting inhibited for the dependent TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CW DEPEND must be "N".

If INH CW DEPEND is "Y", then INH CW MASTER must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.12 INHIBIT MDNL CW

Description: This field is used in determining whether or not Call Forwarding is inhibited for the master telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CW must be "NONE".

```
cwtlpa                    5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5603-2)              CALL WAITING LINE (TN) PARAMETERS

*1. TN              __________
*2. FEATURE         ________
#3. CDPTY TONE INTERVAL __
 4. LONG DST DT     ______

    CALL WAITING DELUXE
 5. ALERT TYPE    OFCALERT
 6. DFLT OPT      OFCDFLTOPT
 7. USG SENS CONF OFCCONF

TALKING CALL WAITING
 8. TCW N
```

Figure 1 SAMPLE CWTLPA FORM 5E12 AND 5E13 SOFTWARE RELEASES

```
cwtlpa                    5ESS Switch        _
```

```
                    OFFICE DATA ADMINISTRATION
(5603-2)              CALL WAITING LINE (TN) PARAMETERS

*1. TN                _____________     MDNL CALL WAITING
*2. FEATURE           _________           9. INH CW MASTER N
#3. CDPTY TONE INTERVAL __                10. INH CW DEPEND N
 4. LONG DST DT       _______

    CALL WAITING DELUXE
 5. ALERT TYPE    OFCALERT
 6. DFLT OPT      OFCDFLTOPT
 7. USG SENS CONF OFCCONF

TALKING CALL WAITING
 8. TCW N
```

Figure 2 SAMPLE CWTLPA FORM 5E14 SOFTWARE RELEASES

```
cwtlpa                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5603-2)              CALL WAITING LINE (TN) PARAMETERS

*1. TN                _____________       MDNL CALL WAITING
*2. FEATURE           _________            9. INHIBIT MDNL CW NONE
#3. CDPTY TONE INTERVAL __
 4. LONG DST DT       _______

    CALL WAITING DELUXE
 5. ALERT TYPE    OFCALERT
 6. DFLT OPT      OFCDFLTOPT
 7. USG SENS CONF OFCCONF

TALKING CALL WAITING
 8. TCW N
```

Figure 3 SAMPLE CWTLPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4C: 5603-3 RECORD
CALL WAITING LINE (MLHG/MEMB) PARAMETER FORM - CWTMPA

1. GENERAL

The 5603-3 Record is available with 5E2 and later Software Releases. It is used to define specific parameters assigned to every Multi-Line Hunt line associated with a specific constructed Call Waiting feature. It is required only if the default parameters assigned on the CWTFD form (5603-1 Record) are inappropriate.

Only Call Waiting originating and Dial Call Waiting can be assigned to MLHG/TERMs. Call Waiting Terminating cannot be assigned to MLHG/TERMs. Those Call Waiting features that are allowed have INVOCATION equal to "CODE" or "TERM" on the CWTFD form. Disallowed features have INVOCATION equal to "TERM", "RTRM" or "PTRM".

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * MLHG

Description: Enter a Multi-Line Hunt Group Number.

Required Field.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter a Multi-Line Hunt Member Number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Line to a PBX.

2.4 * FEATURE

Description: Enter the feature name. There are no restrictions on the valid characters.

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Required Field.
Valid Entries: 1 - 8 characters

2.5 CDPTY TONE INTERVAL

Description: Enter the interval at which the called party receives beeps. Zero indicates no repetition.
Valid Entries: 0 - 60 (seconds)

Data Rules:

CDPTY TONE INTERVAL must equal 10 if INVOCATION on the CWTFD form equals "ORIG" or "CODE".

2.6 LONG DST DT

Description: Long Distance Distinctive Tone specifies whether a distinctive call waiting tone is given when the called party receives a long distance incoming call. The NPA/NXX entries on the LOCSCRN (5545 Record) determine when this would apply.

Software Release: 5E8 and later.
Valid Entries:

Valid LONG DST DT Entries

Entry	Definition
DTONE	Provide normal call waiting treatment for non-long distance calls and call waiting distinctive tone pattern E for long distance calls.
NORMAL	Both local and long distance calls receive the "normal" call waiting tones as specified in the CALLED PTY TONE INTERVAL field on the CWTFD form (5603-1 Record).
ONLY	Provide call waiting distinctive tone pattern E only for long distance calls.

Data Rules:

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before the LONG DST DT field can have values other than "NORMAL" or unknown on either the BFG, CWTFD, CWTLPA, or CWTMPA forms. If the SFID 91 ACT field is not set to "Y" on the SFSYS form (5713-1 Record), then the LONG DST DT field must be "NORMAL".

If a CWT Feature assigned on either the MLHLNFA, CLUSTR, or BFG form and the feature has either the INVOCATION field set to "PTRM" or "RTRM" or the INTER OFFICE field set to "N" on the CWTFD form (5603-1 Record), then LONG DST DT must be "NORMAL" or unknown on either the BFG or corresponding CWTMPA form. If a CWT feature is assigned through a BFG that has any of the CWT parameters entered, then all CWT parameters on the BFG form are used.

CALL WAITING DELUXE

The following fields define the office parameters for Call Waiting Deluxe. They are Recent Change only fields and can not be entered. These fields support the Call Waiting Deluxe Phase II Feature. This is a secured feature with SFID 145. For more information on this feature, see Division 2, Section 4A145.

2.7 ALERT TYPE

Description: The Call Waiting Deluxe Alerting Type. The user and/or the CPE is alerted of an incoming call by way of a tone. This is a Recent Change field only and can not be entered.

Software Release: 5E10 and later.
Valid Entries:

Valid ALERT TYPE Entries - 5E10 and later

Entry	Definition

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OFCALERT	Office value
CWD	SAS only with non-ADSI per-call options allowed
CWD1	SAS & CAS with non-ADSI per-call options restricted
CWD2	SAS & CAS with non-ADSI allowed

2.8 DFLT OPT

Description: Default Service Option is a treatment applied to incoming calls when the user does not select a per-call option. This is a Recent Change field only and can not be entered.

Software Release: 5E10 and later.
Valid Entries:

Valid DFLT OPT Entries - 5E10 and later

Entry	Definition
OFCDFLTOPT	Office value
CONTRING	Continue providing waiting party audible ringing
CALLFWD	Forward waiting call to CFDA destination
DEFANNC	Connect waiting call to default announcement

2.9 USG SENS CONF

Description: Usage Sensitive Conference is used to track the usage of conferencing. This is a Recent Change field only and can not be entered.

Software Release: 5E10 and later.
Valid Entries:

Valid USG SENS CONF Entries - 5E10 and later

Entry	Definition
OFCCONF	Office value
NO	Do not provide usage sensitive AMA for conferencing on this line
YES	Provide usage sensitive AMA for conferencing on this line

MDNL CALL WAITING

The following fields (Section 2.10 - Section 2.12) support the MDR/CW/CF Interaction Enhancement (FAX Ring) Feature. This is a secured feature using SFID 535. For more information on this feature, see Division 2, Section 4A535.

2.10 INH CW MASTER

Description: Is Call Waiting inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CW MASTER must be "N".

If INH CW MASTER is "Y", then INH CW DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.11 INH CW DEPEND

Description: Is Call Waiting inhibited for the dependent TN of a line using MDR?

Software Release: 5E14
Default: N

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Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CW DEPEND must be "N".

If INH CW DEPEND is "Y", then INH CW MASTER must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.12 INHIBIT MDNL CW

Description: This field is used in determining whether or not Call Forwarding is inhibited for the master telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CW must be "NONE".

```
cwtmpa                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5603-3)        CALL WAITING LINE (MLHG/TERM) PARAMETERS

*1. MLHG            ____      TALKING CALL WAITING
*2. TERM            ____      9. TCW N
*3. FEATURE         ________
#4. CDPTY TONE INTERVAL __
 5. LONG DST DT      ______

    CALL WAITING DELUXE
   ALERT TYPE   _________
   DFLT OPT     __________
   USG SENS CONF _______
```

Figure 1 SAMPLE CWTMPA FORM 5E12 THROUGH 5E13 SOFTWARE RELEASES

```
cwtmpa                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5603-3)        CALL WAITING LINE (MLHG/TERM) PARAMETERS

*1. MLHG            ____      TALKING CALL WAITING
*2. TERM            ____      9. TCW N
*3. FEATURE         ________
#4. CDPTY TONE INTERVAL __        MDNL CALL WAITING
 5. LONG DST DT      ______      INH CW MASTER N
                          INH CW DEPEND N
    CALL WAITING DELUXE
   ALERT TYPE   _________
   DFLT OPT     __________
```

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USG SENS CONF _____

Figure 2 SAMPLE CWTMPA FORM 5E14 SOFTWARE RELEASES

```
cwtmpa                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5603-3)          CALL WAITING LINE (MLHG/TERM) PARAMETERS

*1. MLHG              ____      TALKING CALL WAITING
*2. TERM              ____      9. TCW N
*3. FEATURE           ________
#4. CDPTY TONE INTERVAL __            MDNL CALL WAITING
 5. LONG DST DT       ______       INHIBIT MDNL CW NONE

    CALL WAITING DELUXE
   ALERT TYPE   _________
   DFLT OPT     __________
   USG SENS CONF _______
```

Figure 3 SAMPLE CWTMPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4D: 5603-4 RECORD
CALL WAITING TRUNK (TGN/MEMB) PARAMETERS - CWTTPA

1. GENERAL

The 5603-4 Record is available with 5E5 and later Software Releases. It is used to define specific parameters assigned to every trunk member associated with a specific constructed Call Waiting feature. It is required only if the default parameters assigned on the CWTFD form (5603-1 Record) are inappropriate.

Call Waiting can only be assigned to trunks with a TRKCLS of "PFLASH" and RLT TYPE of "PERM" or "TEMP" on the TKGRP form (Record 5202).

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202 Record) must be "PFLASH", Private Facility Feature Flash.

2.3 * MEMB

Description: Enter the trunk group member number.

Required Field.
Valid Entries: 0 - 1951

2.4 * FEATURE

Description: Enter the feature name. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

2.5 CLD PTY TONE INTERVAL

Description: Enter the interval at which the called party receives beeps. Zero indicates no repetition.
Valid Entries: 0 - 60 (seconds)

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Data Rules:

CLD PTY TONE INTERVAL must equal 10 if INVOCATION on the CWTFD form is "ORIG" or "CODE".

2.6 BILLAFTX

Description: This field indicates how many seconds will lapse before billing the calling party. This is a no change field which is defaulted to 0.
Default: 0
Valid Entries: 0

```
cwttpa                    5ESS Switch
(5603-4)              OFFICE DATA ADMINISTRATION
              CALL WAITING TRUNK (TGN/MEMB) PARAMETERS

*1. TGN               0001
*2. MEMB               0005
*3. FEATURE             CWRLT
 4. CLD PTY TONE INTERVAL 10
    BILLAFTX
```

Figure 1 SAMPLE CWTTPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5: MULTILINE HUNT GROUP FORMS

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SEC. 5A: 5604 RECORD
MULTI-LINE HUNT GROUP
FEATURE DEFINITION FORM - MLHGFD

1. GENERAL

The 5604 Record is available with 5E2 and later Software Releases; it is used to describe the Multi-Line Hunt Group feature definition.

The Multi-Line Hunting capability provides hunting for multiple non-data link consoles, Uniform Call Distribution, queuing for lines and non-data link consoles, call waiting lamp control, delay treatment for queuing, and key control.

Certain MLHG features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.18.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * FEATURE NAME

Description: Enter a unique feature name to define the particular BRCS (Business and Residence Customer Services) feature. The first character cannot be a slash (/). Feature names starting with a slash are reserved for preconstructed features. See Figure 1 for the preconstructed MLHG feature names.

Required Field.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

Each FEATURE NAME which is defined on the MLHGFD form must also be assigned on the MLHG form (5110 Record).

2.3 REMARKS

Description: Enter a descriptive comment to describe the meaning of the BRCS feature.
Valid Entries: 1 - 32 characters

2.4 # HUNT TYPE

Description: Enter the type of hunting for the MLHG.

Required Field.
Default: REG
Valid Entries:

Valid HUNT TYPE Entries

Entry	Definition
HTC	Circular Hunt is an arrangement in which hunting begins with the Terminal Number associated with the called number and continues sequentially through the last Terminal Number in the Multi-Line Hunt Group. Hunting resumes with Terminal Number 1 and continues through the Terminal Number preceding the Start

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	Hunt Terminal Number.
ISAT	Software Release: 5E4(2) and later. ISDN Attendant Terminal Hunt. ISDN Attendant Terminals must be configured into hunt groups known as ISAT Multi-Line Hunt Groups. This HUNT TYPE is used to hunt these Multi-Line Hunt Groups.
MUPH	MUPH (Multiple Position Hunt) is a line hunting arrangement used by a business customer that has multiple non-data link attendant console positions. The services MUPH provides to multiple console positions are as follows: □ Call regulation that allows only one call to ring at a console at any one time and prevents any new incoming calls from completing to a console position that is busy. □Even call distribution to Multiple Console positions in the MUPH group. □Access for up to six Call Types. □ Hunting for up to thirty-two lines per console. □ Hunting for up to sixteen consoles in the hunt group. □ Optional queuing for calls when busy conditions are encountered.
PMHG	Software Release: 5E3 and later. Precedence Hunt. This entry is associated with an DSN(Defense Switched Network). This HUNT TYPE should be used, if the MLHG is preemptable. After hunting for an idle terminal, and one is not found, a preemptable hunt will be made by precedence level of existing calls, starting with the first preemptable member. Precedence levels are used to search by priority each succeeding level that is lower than the precedence call terminating.
PRRG	Precedence Regular Hunt. This entry is associated with an DSN(Defense Switched Network). This HUNT TYPE should be used if the MLHG is preemptable. After hunting for an idle terminal, and if one is not found, a preemptable hunt will be made by precedence level of existing calls, starting with the first preemptable member. Precedence levels are used to search by priority each succeeding level that is lower than the precedence call terminating.
PSUCD	Software Release: 5E3 and later. Packet Switching Uniform Call Distribution is a HUNT TYPE used with DSL groups that are designated for packet switching. For 5E8 and later, any packet MLHG with a hunt type of "PSUCD" can also subscribe to a Linear hunt option. The Linear hunt algorithm for packet MLHGs is similar to the Regular hunt type for circuit MLHGs. The linear hunt begins with the start hunt terminal number (entry point) and continues sequentially through the last terminal number of the MLHG. The Linear hunt type is provisioned on packet MLHGs by defining LNR HNT TNs (Linear entry points) on members of the MLHG. These MLHG members and their linear hunt TNs can be defined on the DSL form (as PPB1 TERM and PPB1 LNR HNT TN or PPB2 TERM and PPB2 LNR HNT TN), the DSLUSR form (as DPKT TERM and DPKT LNR HNT TN or ODB TERM and ODB LNR HNT TN), and the XAT form (as TERM NBR and LNR HNT TN). The Linear Hunt TN defined on member 1 of the MLHG serves as the Group Linear entry point. Therefore, the Linear Hunt TN for member 1 must be defined if the MLHG subscribes to Linear hunting. If the Linear Hunt TN for member 1 is not defined, no other member can have a Linear Hunt TN.
REG	Regular Hunt is an arrangement in which hunting begins with the Start Hunt Terminal Number and continues sequentially through the last terminal number in the Multi-Line Hunt Group.
UCD	Software Release: 5E3 and later. UCD (Uniform Call Distribution) is a hunting arrangement that provides uniform termination call assignment (distribution) to members of a Multi-Line Hunt Group. This HUNT TYPE should be used with a Multi-Line Hunt Group of Modem Pool. A Modem Pool Group is comprised of modems and terminal adaptors which allow data calls between analog and digital customers.

Data Rules:

With HUNT TYPE "HTC" or "REG", the listed Telephone Number must be associated with Terminal 1 on the MLHLN form (5111 Record).

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If HUNT TYPE "PMHG" or "PRRG" is used for an MLHG, the FIRST PREEMPT MEMB must also be specified on the MLHG form, and each terminal in the MLHG must have a Precedence and Preemption Feature assigned.

For 5E5 and later, when HUNT TYPE is "PSUCD", at least one EQPSUPH form (5742 Record) must have an entry of "O" in the EQST field.

For 5E6 and later, if HUNT TYPE is "PSUCD", INWATS must be "N".

2.5 # OVERFLOW REG

Description: Will an Overflow Message Register be used?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the Overflow Peg Count Reg is assigned a Distribute Point Number on the MLHG form (5110 Record), this field must have an entry of "Y".

2.6 # INWATS

Description: Is this MLHG an INWATS group?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The INWATS feature is applicable on a group basis only. When this field is "Y", all members of the MLHG must have an LCC with a TERMINATING TREATMENT of "INWATS" and a CLASS OF SERVICE of "INDIV", "HOTPBX", "PBX", "HOTMOTL", or "ATND".

2.7 # CF BUSY

Description: Can the Multi-Line Hunt Group be assigned Call Forwarding Busy Line?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E3 and later, if a Modem Pool Group is being defined, which is indicated by an entry in the MPTYPE field on the MLHG form, this field must be "N".

If a Packet Switching Group (DSL members) is being defined, which is indicated by a HUNT TYPE of "PSUCD" on this form, this field must be "N".

2.8 # CF VARIABLE

Description: Can the Multi-Line Hunt Group be assigned Call Forwarding Variable?

Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

For 5E5 and later, when CF VARIABLE is "Y", the first member of the MLHG must for 5E5 and 5E6 (and should for 5E7 and later) be assigned a Call Forwarding Variable feature. For 5E5 only, the FWD CONDITION for the feature must be "BOTH" or "PRCV" on the MLHGFD form. For 5E6 and later, FWD CONDITION must be "BOTH" or "DBTH".

For 5E3 and later, if a Modem Pool Group is being defined, which is indicated by an entry in the MPTYPE field on the MLHG form, this field must be "N".

If a Packet Switching Group (DSL members) is being defined, which is indicated by a HUNT TYPE of "PSUCD" on this form, this field must be "N".

2.9 # BEARER

Description: BEARER is used to indicate the type of calls that can be routed to this Multi-Line Hunt Group.

Software Release: 5E4(2) and later
Required Field.
Default: VOICE
Valid Entries:

Valid BEARER Entries

Entry	Definition
CSD	Circuit Switched Data.
PACKET	Packet data.
VOICE	Voice.

Data Rules:

If BEARER is "CSD", HUNT TYPE must be "UCD", "HTC", or "REG".

For 5E5 and later, If HUNT TYPE is "HTC", "REG", or "UCD", BEARER must be "CSD" or "VOICE".

If HUNT TYPE is "ISAT", BEARER must be "VOICE". For 5E5 and later, if HUNT TYPE is "ISAT", "MUPH", or "PMHG", BEARER must be "VOICE". If HUNT TYPE is "PSUCD", BEARER must be "PACKET".

If CSD is entered and a CKT MLHG/TERM is defined on the DSMLHLN form (5901 Record), the associated LCC form (5306 Record) must have a TERMINATING TREATMENT of "MLHG".

ESS 5604(5E4)TG-5 MULTILINE HUNT GROUP DATE _____

FEATURE DEFINITION RECORD
5ESS SWITCH

MLHGFD
12.18
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	FEATURE OPTIONS					
		HUNT TYPE	ORVEEGR	INWATS	CBFUS	CVFAR	BEARER

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			F L W		Y	I A B L E	
/MH*	ISAT MLHG MAGIC FEATURE	ISAT	Y	Y	Y	Y	VOICE
/MHC	HTC HUNT	HTC	N	N	N	N	VOICE
/MHCB	HTC;CFBUSY	HTC	N	N	Y	N	VOICE
/MHCBI	HTC;CFBUSY,INWATS	HTC	N	Y	Y	N	VOICE
/MHCBIO	HTC;CFBUSY,INWATS,OVERFLOW	HTC	Y	Y	Y	N	VOICE
/MHCBIOV	HTC;CFBUSY,INWATS,OVERFLOW,CFVAR	HTC	Y	Y	Y	Y	VOICE
/MHCBIV	HTC;CFBUSY,INWATS,CFVAR	HTC	N	Y	Y	Y	VOICE
/MHCBO	HTC;CFBUSY,OVERFLOW	HTC	Y	N	Y	N	VOICE
/MHCBOV	HTC;CFBUSY,OVERFLOW,CFVAR	HTC	Y	N	Y	Y	VOICE
/MHCBV	HTC;CFBUSY,CFVAR	HTC	N	N	Y	Y	VOICE
/MHCI	HTC;INWATS	HTC	N	Y	N	N	VOICE
/MHCIO	HTC;INWATS,OVERFLOW	HTC	Y	Y	N	N	VOICE
/MHCIOV	HTC;INWATS,OVERFLOW,CFVAR	HTC	Y	Y	N	Y	VOICE
/MHCIV	HTC;INWATS,CFVAR	HTC	N	Y	N	Y	VOICE
/MHCO	HTC;OVERFLOW	HTC	Y	N	N	N	VOICE
/MHCOV	HTC;OVERFLOW,CFVAR	HTC	Y	N	N	Y	VOICE
/MHCV	HTC;CFVAR	HTC	N	N	N	Y	VOICE
/MHDC	ISDN CSD MLHG FEATURE	HTC	N	N	N	N	CSD
/MHDCO	ISDN CSD MLHG FEATURE	HTC	Y	N	N	N	CSD
/MHDR	ISDN CSD MLHG FEATURE	REG	N	N	N	N	CSD
/MHDRO	ISDN CSD MLHG FAETURE	REG	Y	N	N	N	CSD
/MHDU	ISDN CSD MLHG FEATURE	UCD	N	N	N	N	CSD
/MHDUO	ISDN CSD MLHG FEATURE	UCD	Y	N	N	N	CSD
/MHI	ISDN ATTENDANT MLHG FEATURE	ISAT	N	N	N	N	VOICE
/MHIB	ISDN ATTENDANT MLHG FEATURE	ISAT	N	N	Y	N	VOICE
/MHIBI	ISDN ATTENDANT MLHG FEATURE	ISAT	N	Y	Y	N	VOICE
/MHIBIO	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	Y	Y	N	VOICE
/MHIBIOV	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	Y	Y	Y	VOICE
/MHIBIV	ISDN ATTENDANT MLHG FEATURE	ISAT	N	Y	Y	Y	VOICE
/MHIBO	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	N	Y	N	VOICE
/MHIBOV	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	N	Y	Y	VOICE
/MHIBV	ISDN ATTENDANT MLHG FEATURE	ISAT	N	N	Y	Y	VOICE
/MHII	ISDN ATTENDANT MLHG FEATURE	ISAT	N	Y	N	N	VOICE
/MHIIOV	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	Y	N	Y	VOICE
/MHIIV	ISDN ATTENDANT MLHG FEATURE	ISAT	N	Y	N	Y	VOICE

ESS 5604(5E4)TG-5 MULTILINE HUNT GROUP DATE _____

FEATURE DEFINITION RECORD
5ESS SWITCH

MLHGFD
12.18
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	FEATURE OPTIONS					
		HUNT TYPE	ORVEG	INWA	CBFU	CVFA	BEARER

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			RFLW	TS	SY	RIABLE	
/MHIO	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	N	N	N	VOICE
/MHIOI	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	Y	N	N	VOICE
/MHIOV	ISDN ATTENDANT MLHG FEATURE	ISAT	Y	N	N	Y	VOICE
/MHIV	ISDN ATTENDANT MLHG FEATURE	ISAT	N	N	N	Y	VOICE
/MHM	MUPH HUNT	MUPH	N	N	N	N	VOICE
/MHMB	MUPH;CFBUSY	MUPH	N	N	Y	N	VOICE
/MHMBI	MUPH;CFBUSY,INWATS	MUPH	N	Y	Y	N	VOICE
/MHMBIO	MUPH;CFBUSY,INWATS,OVERFLOW	MUPH	Y	Y	Y	N	VOICE
/MHMBIOV	MUPH;CFBUSY,INWATS,OVFLOW,CFVAR	MUPH	Y	Y	Y	Y	VOICE
/MHMBIV	MUPH;CFBUSY,INWATS,CFVAR	MUPH	N	Y	Y	Y	VOICE
/MHMBO	MUPH;CFBUSY,OVERFLOW	MUPH	Y	N	Y	N	VOICE
/MHMBOV	MUPH;CFBUSY,OVERFLOW,CFVAR	MUPH	Y	N	Y	Y	VOICE
/MHMBV	MUPH;CFBUSY,CFVAR	MUPH	N	N	Y	Y	VOICE
/MHMI	MUPH;INWATS	MUPH	N	Y	N	N	VOICE
/MHMIO	MUPH;INWATS,OVERFLOW	MUPH	Y	Y	N	N	VOICE
/MHMIOV	MUPH;INWATS,OVERFLOW,CFVAR	MUPH	Y	Y	N	Y	VOICE
/MHMIV	MUPH;INWATS,CFVAR	MUPH	N	Y	N	Y	VOICE
/MHMO	MUPH;OVERFLOW	MUPH	Y	N	N	N	VOICE
/MHMOV	MUPH;OVERFLOW,CFVAR	MUPH	Y	N	N	Y	VOICE
/MHMV	MUPH;CFVAR	MUPH	N	N	N	Y	VOICE
/MHPS	PACKET SWITCHING MLHG FEATURE	PSUCD	N	N	N	N	PACKET
/MHR	REG HUNT	REG	N	N	N	N	VOICE
/MHRB	REG;CFBUSY	REG	N	N	Y	N	VOICE
/MHRBI	REG;CFBUSY,INWATS	REG	N	Y	Y	N	VOICE

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/MHRBIO	REG;CFBUSY,INWATS,OVERFLOW	REG	Y	Y	Y	N	VOICE
/MHRBIOV	REG;CFBUSY,INWATS,OVERFLOW,CFVAR	REG	Y	Y	Y	Y	VOICE
/MHRBIV	REG;CFBUSY,INWATS,CFVAR	REG	N	Y	Y	Y	VOICE
/MHRBO	REG;CFBUSY,OVERFLOW	REG	Y	N	Y	N	VOICE
/MHRBOV	REG;CFBUSY,OVERFLOW,CFVAR	REG	Y	N	Y	Y	VOICE
/MHRBV	REG;CFBUSY,CFVAR	REG	N	N	Y	Y	VOICE
/MHRI	REG;INWATS	REG	N	Y	N	N	VOICE
/MHRIO	REG;INWATS,OVERFLOW	REG	Y	Y	N	N	VOICE
/MHRIOV	REG;INWATS,OVERFLOW,CFVAR	REG	Y	Y	N	Y	VOICE
/MHRIV	REG;INWATS,CFVAR	REG	N	Y	N	Y	VOICE
/MHRO	REG;OVERFLOW	REG	Y	N	N	N	VOICE

ESS 5604(5E4)TG-5 MULTILINE HUNT GROUP DATE _____

FEATURE DEFINITION RECORD

MLHGFD 5ESS SWITCH

12.18

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	FEATURE OPTIONS				
		HUNT TYPE	OVERFLOW EGRESS FULL WARNING	INWATS	CBFUSY	CVFARIABLE
/MHROV	REG;OVERFLOW,CFVAR	REG	Y	N	N	Y
/MHRV	REG;CFVAR	REG	N	N	N	Y
/MHU	UCD HUNT	UCD	N	N	N	N
/MHUB	UCD;CFBUSY	UCD	N	N	Y	N
/MHUBI	UCD;CFBUSY,INWATS	UCD	N	Y	Y	N
/MHUBIO	UCD;CFBUSY,INWATS,OVERFLOW	UCD	Y	Y	Y	N
/MHUBIOV	UCD;CFBUSY,INWATS,OVERFLOW,CFVAR	UCD	Y	Y	Y	Y
/MHUBIV	UCD;CFBUSY,INWATS,CFVAR	UCD	N	Y	Y	Y
/MHUBO	UCD;CFBUSY,OVERFLOW	UCD	Y	N	Y	N
/MHUBOV	UCD;CFBUSY,OVERFLOW,CFVAR	UCD	Y	N	Y	Y
/MHUBV	UCD;CFBUSY,CFVAR	UCD	N	N	Y	Y
/MHUI	UCD;INWATS	UCD	N	Y	N	N
/MHUIO	UCD;INWATS,OVERFLOW	UCD	Y	Y	N	N
/MHUIOV	UCD;INWATS,OVERFLOW,CFVAR	UCD	Y	Y	N	Y
/MHUIV	UCD;INWATS,CFVAR	UCD	N	Y	N	Y
/MHUO	UCD;OVERFLOW	UCD	Y	N	N	N
/MHUOV	UCD;OVERFLOW,CFVAR	UCD	Y	N	N	Y
/MHUV	UCD;CFVAR	UCD	N	N	N	Y
/MHXPS	OSPS XDB PKT SWITCHING MLHG	PSUCD	N	N	N	N

Figure 1 PRECONSTRUCTED MLHG FEATURES 5E4(2) AND LATER SOFTWARE RELEASES

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```
mlhgfd              5ESS OFFICE DATA ADMINISTRATION  _
(5604)         MULTILINE HUNT GROUP FEATURE DEFINITION FORM


 *2. FEATURE NAME CIRCUIT1      3. REMARKS  ISAT GROUP

    FEATURE OPTIONS:
 #4. HUNT TYPE     ISAT
 #5. OVERFLOW REG  N
 #6. INWATS        N
 #7. CF BUSY       N
 #8. CF VARIABLE   N
 #9. BEARER        VOICE
```

Figure 2 SAMPLE MLHGFD FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 6: CALL PICKUP ORIGINATING/TERMINATING FORMS

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SEC. 6A: 5605-1a/b RECORD
CALL PICKUP ORIGINATING FEATURE DEFINITION FORM - PUOFD

1. GENERAL

The 5605-1a/b Record is available with 5E2 and later Software Releases. It is used to define a number of separate but related features by selecting various feature options for CPUO (Call Pickup Originating). The provided features are CPUO, DCP (Directed Call Pickup) Originating, DCP Originating with Barge In, Loud Speaker Paging, and Code Calling.

Each feature is given a feature name of from one to eight characters which is used to assign the constructed (defined) feature to lines.

1.1 Predefined Call Pickup Originating Features

Certain CPUO features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed CPUO features is contained in Figure 1. A list of the preconstructed CPUT (Call Pickup Terminating) features is contained in Division 4, Section 6B, Figures 1, 2, and 3.

1.2 Terminal Assignments

A terminal (line or trunk) must be assigned a CPUO feature on the appropriate feature assignment form, LINEFA, MLHLNFA, BFG, TKGRPFA or TRUNKFA.

1.3 Line Assignments

For 5E4(2) and later Software Releases, each terminal (line) which is assigned the PUO (Pickup Originating) feature on the appropriate LINEFA, MLHLNFA, BFG or CLUSTR form with the feature also defined on the PUOFD form with the INITIATE field equal to "BSYVFY" or "EMEROVR" must have a CKT MLHG/TERM or CKT TN defined on the DSMLHLN or DSL forms with an associated CLASS OF SERVICE on the LCC form of "ISATND".

1.4 Recent Change View

The corresponding Recent Change View for this form is 12.13.

2. FORM ENTRIES - 5605-1a RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *FEATURE NAME

Description: Enter the Feature Name. Feature Names may be from one to eight characters long, with no restrictions on the valid characters, except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

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Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

Fields Section 2.4 - Section 2.9 define the feature options.

2.4 ACT TYPE

Description: Enter the method of feature Activation.

Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
CODE	Activation by dialing a code.
AUTO	No customer activation. The feature is considered active as soon as the switch owner assigns it to a line. The feature will remain active until the switch owner deactivates it.

Data Rules:

If ACT TYPE is "CODE", DACT TYPE must be "CODE"; if ACT TYPE is "AUTO", then DACT TYPE must be "NONE".

If ACT TYPE is "CODE", and this feature is assigned to a line, then the line should normally be assigned an IDP, and at least one dialed code of the IDP on the IDPDCA Form (5601-1/2 Record) should have ACTION equal to "FTACT", and a FEATURE associated with the dialed code on the IDPDCA Form equal to this CPUO feature.

Alternately, if the line is not assigned an IDP, then the PDIT (Primary Digit Interpreter Table) used by the line should contain at least one dialed code with ACTION equal to "FTACT", and a FEATURE associated with the dialed code on the PDIT Form equal to this CPUO feature.

For 5E6 and later, a Call Pickup Originating feature with activation and deactivation type "CODE" cannot be assigned on a BFG form (5625 Record).

For 5E7 and later, when Telephone Numbers on the LINEFA form or Multiline Hunt Terminal Numbers on the MLHLNFA form are assigned a Call Pickup Originating Feature with the Activation Type entry set to "AUTO" on the PUOFD form, the corresponding Initial Activation Status entry on the LINEFA or MLHLNFA form, an associated CLUSTR form or on a BFG form must be equal to "Y".

2.5 DACT TYPE

Description: Enter the method of feature Deactivation.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
CODE	Deactivation by dialing a code.
NONE	No customer deactivation is allowed.

Data Rules:

If DACT TYPE is "CODE", then ACT TYPE must be "CODE".

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If DACT TYPE is "NONE", then ACT TYPE must be "AUTO".

If DACT TYPE is "CODE", and this feature is assigned to a line, then the line should normally be assigned an IDP, and at least one dialed code of the IDP on the IDPDCA Form (5601-1/2 Record) should have ACTION equal to "FTDACT", and a feature associated with the dialed code on the IDPDCA Form equal to this CPUO feature.

2.6 INITIATE

Description: Indicate which option of the PUO feature is being selected, and in which manner it will actually be used.
Default: IPRDQ
Valid Entries:

Valid INITIATE Entries

Entry	Definition
ANSBACK	Software Release: 5E9(1) and later. For Answer Back of a parked call. For more information on Call Park, see Division 2, Section 4A124, or for National ISDN Call Park (5E12 and later), see Division 2, Section 4A258.
BPARK	Software Release: 5E9(1) and later. For Basic Call Park. For more information on Call Park, see Division 2, Section 4A124.
BSYVFY	Software Release: 5E4(2) and later. For Busy Verify.
CDCAL	For Code Calling.
DPARK	Software Release: 5E9(1) and later. For Directed Call Park. For more information on Call Park, see Division 2, Section 4A124, or for National ISDN Call Park (5E12 and later), see Division 2, Section 4A258.
EMEROVR	Software Release: 5E4(2) and later. For Emergency Override.
IDPUDL	Initiation by Directed Call Pickup.
IPRDQ	Initiation by Predesignated Pickup group.
IPREDN	Initiation by Predesignated Directory Number (Telephone Number).
LDSPKPG	For Loud Speaker Paging.
RTRV	Software Release: 5E9(1) and later. For Retrieving a parked call. For more information on Call Park see Division 2, Section 4A124.

- ***NOTE:*** "IPRDQ" is the default value, and the only value allowed except for CPUO features derived from the preconstructed features using the ODA change-insert mode of the review operation.For 5E9(1) and later, if INITIATE equals "ANSBACK", "BPARK", "DPARK", or "RTRV", then the following must be true:

- BARGE IN must be "N".
- NUMBER OF PICKUP GROUPS must be 0.
- CHANGE PICKUP TN ALLOWED must be "N".

Only one each of the INITIATE values "ANSBACK", "BPARK", "DPARK", and "RTRV" is allowed to be assigned to a given port (i.e., assigned to a given LINEFA/MLHLNFA form, BFG form or an associated CLUSTR form(s)).

If a Call Pickup Originating feature with INITIATE set to any of the values "ANSBACK", "BPARK", "DPARK" or "RTRV" is assigned to the line or BFG, then a Home Intercom feature cannot be assigned to the line or BFG.

A Pickup Originating feature with INITIATE set to "BPARK" or"RTRV" cannot be assigned to MLHG MUPH members.

Data Rules:

BPARK: BPARK is not allowed for STD digital subscriber lines (i.e., National ISDN lines).

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BSYVFY: For 5E4(2) and later, if INITIATE equals "BSYVFY", then

- BARGE IN must be "Y",
- NUMBER OF PICKUP GROUPS must be 0,
- CHANGE PICKUP TN ALLOWED must be "N", and
- TONE TYPE field on TNTYP form (5504 Record) must be "HIGHTONE".

CDCAL, LDSPKPG: These options are mutually exclusive. However, multiple features can be assigned to one line. If this feature is assigned to a line, then the line should normally be assigned an IDP, and at least one dialed code of the IDP on the IDPDCA Form (5601-1/2 Record) should have ACTION of

- "CCL" if INITIATE is "CDCAL",
- "LSP" if INITIATE is "LDSPKPG",
- "DPU" if INITIATE is "IPREDN" or "IDPUDL", and BARGE IN is "Y",
- "DPN" if INITIATE is "IPREDN" or "IDPUDL", and BARGE IN is "N",

and a FEATURE associated with the dialed code on the IDPDCA Form is equal to this CPUO feature.

Code Calling and Loud Speaker Paging allow customer premises equipment to be accessed by attendants and TG (Trunk Group) station users as well as non-TG station users by dialing an Access Code.

If INITIATE is "CDCAL" or "LDSPKPG", then NUMBER OF PICKUP GROUPS must be 0, BARGE IN must be "N", and CHANGE PICKUP TN ALLOWED must be "N".

For 5E4(2) and later, if INITIATE is "CDCAL" or "LDSPKPG", then TGN and MEMB must be entered as default parameters on this form, and/or on the associated PULPA (5605-3 Record) or PUMPA form (5605-4 Record), and the corresponding TKGRP form must have a TRKCLS of "PFCPE".

EMEROVR: Emergency override allows the attendant to complete incoming calls to TNs with terminating restrictions, call forwarding activated, busy from the make busy key, or part of a series completion or MLHG. It cannot preempt a call, but can override call forwarding, stations with series completion, multi-line hunting, group make busy, Terminal Group & Station Restriction or Attendant-Controlled Voice Terminals. The line need not be a DSL to be overridden. The attendant can activate Emergency Override with a feature button or a dialed access code.

If INITIATE equals "EMEROVR", then BARGE IN must be "Y", NUMBER OF PICKUP GROUPS must be 0, and CHANGE PICKUP TN ALLOWED must be "N".

For 5E5 and later, if /CPUEO, or any feature with INITIATE equal to "EMEROVR" is assigned on a LINEFA or MLHLNFA form, or assigned BFG or CLUSTER form, the corresponding LINE, MLHG, MLHLN, DSLUSR, or SHTN form must have an entry in the ATT MLHG field.

IDPUDL: DCP without Barge In allows the customer to attempt a call pickup on either predesignated or not predesignated TN. DCP with Barge In works the same as DCP without Barge In unless the ringing station is answered before DCP with Barge In is initiated. If the line on which the Barge In is being attempted, is in the talking state, Barge In will be performed.

If INITIATE equals "IDPUDL", then NUMBER OF PICKUP GROUPS must be 0 and CHANGE PICKUP TN ALLOWED must be "N".

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IPRDQ: Call Pickup is used to allow a customer to pickup any ringing station set in a specified pickup group. A customer can pickup from up to four pickup groups per constructed feature. Calls in the pickup group are arranged by longest ringing period. The call which has been ringing the longest will be removed from the pickup group first.

If INITIATE equals "IPRDQ", then BARGE IN must be "N", CHANGE PICKUP TN ALLOWED must be "N", and NUMBER OF PICKUP GROUPS must be 1 to 4.

For 5E3 and later, If INITIATE equals "IPRDQ", then only one PUOFD FEATURE NAME may exist per TN on a LINEFA or its associated BFG or CLUSTR form(s), or per MLHG/TERM on a given MLHLNFA or its associated BFG or CLUSTR form(s).

IPREDN: If INITIATE equals "IPREDN", then NUMBER OF PICKUP GROUPS must be 0.

RTRV: RTRV is not allowed for STD digital subscriber lines (i.e., National ISDN lines).

2.7 BARGE IN?

Description: Is Barge In into an existing call allowed?

Barge In is used with Directed Call Pickup.
Default: N
Valid Entries: Y, N

- ***NOTE:*** For 5E2 and later, "N" is the default value and the only value allowed except for CPUO features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Data Rules:

With 5E4(2) and later, if BARGE IN is "Y", then INITIATE must be "IDPUDL", "IPREDN", "EMEROVR", or "BSYVFY".

2.8 CHANGE PICKUP TN ALLOWED?

Description: Is change DCP number allowed?
Default: N
Valid Entries: Y, N

The note in Section 2.7 also applies here.

Data Rules:

If CHANGE PICKUP TN ALLOWED is set to "Y", then INITIATE must be "IPREDN".

2.9 NUMBER OF PICKUP GROUPS

Description: Enter the number of pickup queues (groups) a customer is able to pick up from.

Up to four groups may be specified. This applies to call pickup only. A different dialed code is associated with each of the groups, although there is only one assigned feature.

Required Field.
Valid Entries: 0 - 4

Data Rules:

If INITIATE is "IPRDQ", then NUMBER OF PICKUP GROUPS must be 1 to 4.

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If NUMBER OF PICKUP GROUPS is 1 to 4, and this feature is assigned to a line, then the line should normally be assigned an IDP. At least one dialed code of the IDP on the IDPDCA Form should then have ACTION of

- "CPQ1" if NUMBER OF PICKUP GROUPS is 1 to 4,
- "CPQ2" if NUMBER OF PICKUP GROUPS is 2 to 4,
- "CPQ3" if NUMBER OF PICKUP GROUPS is 3 or 4,
- "CPQ4" if NUMBER OF PICKUP GROUPS is 4,

and a FEATURE associated with the dialed code on the IDPDCA Form (5601-1/2 Record) must be that of the CPUO "wild-card" feature (/PO*) or equal to this CPUO feature.

Alternately, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION of

- "CPQ1" if NUMBER OF PICKUP GROUPS is 1 to 4,
- "CPQ2" if NUMBER OF PICKUP GROUPS is 2 to 4,
- "CPQ3" if NUMBER OF PICKUP GROUPS IS 3 or 4,
- "CPQ4" if NUMBER OF PICKUP GROUPS is 4,

and a FEATURE associated with the dialed code on the PDIT Form (5300-2 Record) must be that of the CPUO "wild-card" feature (/PO*) or to this CPUO feature.

CALL SELECTION

At least one of the following options (Section 2.10 - Section 2.14) must be set to "Y". Call selection indicates the type of calls the party can pickup by means of Call Pickup, DCP, DCP with Barge In, or with 5E4 and later Software Releases, Busy Verify. For call pickup, this would indicate the type of calls that this party can remove from the pickup group. There will be no queues for Directed Pickup and Directed Pickup with Barge In, but through CALL SELECTION, the type of call will be entered. For Code Calling and Loud Speaker Paging, CALL SELECTION determines the party attempting to initiate a code call is eligible to do so.

2.10 ATTENDANT?

Description: Are attendant calls allowed?
Default: Y
Valid Entries: Y, N

NOTE: For 5E2 and later, "Y" is the default value and the only value allowed except for CPUT features derived from the preconstructed features using the ODA change-insert mode of the review operation.

2.11 INTRA TERMINAL GROUP?

Description: Are Intraterminal Group calls allowed?
Default: Y
Valid Entries: Y, N

The note in Section 2.10 also applies here.

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2.12 INTRAOFFICE?

Description: Are Intraoffice calls allowed?
Default: Y
Valid Entries: Y, N

The note in Section 2.10 also applies here.

2.13 INTER OFFICE?

Description: Are Interoffice calls allowed?
Default: Y
Valid Entries: Y, N

The note in Section 2.10 also applies here.

2.14 PRIVATE FACILITY ACCESS?

Description: Are Private Facilities Access calls allowed?
Default: Y
Valid Entries: Y, N

The note in Section 2.10 also applies here.

3. FORM ENTRIES - 5605-1b RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 *FEATURE NAME

Description: Enter the Feature Name. Refer to Section 2.2 . Feature Names maybe from one to eight characters long, with no restrictions on the valid characters except that the first character may not be a slash (/). Feature Names starting with a slash are reserved for preconstructed features.

DEFAULT PARAMETERS

The following fields (Section 3.3 - Section 3.10) define the default parameters assigned with the feature to lines. These parameters will be assigned to the line unless they are overridden by entries on the PULPA (5605-3 Record) or PUMPA (5605-4 Record) Forms.

3.3 DIRECT PICKUP TN

Description: The name of this field was changed to DPU TN in 5E12. This field name applies to 5E11 and earlier. See DPU TN for usage information.

3.4 DPU TN

Description: Enter the Telephone Number served by this office. This field was called DIRECT PICKUP TN for 5E11 and earlier.

Software Release: 5E12 and later
Valid Entries: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

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If DPU TN is entered, then INITIATE must be "IPREDN".

NXX(s) (the first 3 digits of a 7-digit TN) and/or NPA/NXX combinations (the first 6 digits of a 10-digit TN) from the DPU TN on the PUOFD form must be defined as OFFICE CODE and/or NPA/OFFICE CODE on the NOC form.

If the first 3 digits of the 7-digit DPU TNs on the PUOFD form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit DPU TN(s) must be entered as a 10-digit DPU TN(s).

3.5 ORIG PICKUP GROUP 1

Description: Enter the queue (group) that the customer can originate to pickup.
Valid Entries: 2 - 65534

Data Rules:

If this field has an entry, the NUMBER OF PICKUP GROUPS must be 1, 2, 3, or 4.

3.6 ORIG PICKUP GROUP 2

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

If this field has an entry, the NUMBER OF PICKUP GROUPS must be 2, 3, or 4.

3.7 ORIG PICKUP GROUP 3

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

If this field has an entry, the NUMBER OF PICKUP GROUPS must be 3 or 4.

3.8 ORIG PICKUP GROUP 4

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

If this field has an entry, the NUMBER OF PICKUP GROUPS must be 4.

3.9 TGN

Description: Enter the Trunk Group Number for Code Calling or Loud Speaker Paging.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If this field has an entry, then MEMB must be specified.

If TGN and MEMB have an entry, then INITIATE must be "CDCAL" or "LDSPKPG", and SLVLDSPN on

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the TRUNK Form (5204 Record) must be specified.

3.10 MEMB

Description: Enter the Trunk Group Member Number for Code Calling or Loud Speaker Paging.
Valid Entries:

For 5E3 and later: 0 - 1951

ESS 5605-1(2001) CALL PICKUP ORIGINATING FEATURE DEFINITION RECORD DATE _____

puofd
12.13
5ESS SWITCH

BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	ACT TYPE	DACT TYPE	INITIATE	BGPUINTGRPUPS	CALL SELECT AIIIIP	DEF PARM DIPRIECKTU P	PIP CIKCUKPUPORGIRGO U	PIP CIKCUKPUPORGIRGO U	PIP CIKCUKPUPORGIRGO U	PIP CIKCUKPUPORGIRGO U	TG N	ME MB

													P 1	P 2	P 3	P 4		
/CPANSBK	CALL PARK ANSWER BACK	AUTO	NONE	ANSBACK	N	N	0	Y	Y	Y	Y	Y						
/CPBPARK	BASIC CALL PARK	AUTO	NONE	BPARK	N	N	0	Y	Y	Y	Y	Y						
/CPCCL	CODE CALLING ANSWER	AUTO	NONE	CDCAL	N	N	0	Y	Y	Y	Y	Y						
/CPDNO	NO BARGE-IN DIRECTED PICKUP ORIG	AUTO	NONE	IDPUDL	N	N	0	Y	Y	Y	Y	Y						
/CPDPARK	DIRECTED CALL PARK	AUTO	NONE	DPARK	N	N	0	Y	Y	Y	Y	Y						
/CPLSP	LOUD SPEAKER PAGING ANSWER	AUTO	NONE	LDSPKPG	N	N	0	Y	Y	Y	Y	Y						
/CPRTRV	CALL PARK RETRIEVE	AUTO	NONE	RTRV	N	N	0	Y	Y	Y	Y	Y						
/CPUDO	DORECTED PICKUP ORIGINATING	AUTO	NONE	IDPUDL	Y	N	0	Y	Y	Y	Y	Y						
/CPUEO	EMERGENCY OVERRIDE	AUTO	NONE	EMEROVR	Y	N	0	Y	Y	Y	Y	Y						
/CPUO	CALL PICKUP ORIGINATING	AUTO	NONE	IPRDQ	N	N	1	Y	Y	Y	Y	Y						
/CPUO2	CALL PICKUP ORIG 2 GROUPS	AUTO	NONE	IPRDQ	N	N	2	Y	Y	Y	Y	Y						
/CPUVO	BUSY VERIFY	AUTO	NONE	BSYVFY	Y	N	0	Y	Y	Y	Y	Y						
/PO*	WILD□CARD PICKUP ORIG FEATURE	AUTO	NONE	IPRDQ	N	N	1	Y	Y	Y	Y	Y						

Figure 1 PRECONSTRUCTED CALL PICKUP ORIGINATING FEATURES - 5E9(1) AND LATER SOFTWARE RELEASES

---

puofd 5ESS Switch _
(5605-1a/b) OFFICE DATA ADMINISTRATION
CALL PICKUP ORIGINATING FEATURE DEFINITION

* 2. FEATURE NAME PICK 3. REMARKS _____

FEATURE OPTIONS: DEFAULT PARAMETERS:
4. ACT TYPE CODE 15. DIRECT PICKUP TN _____
5. DACT TYPE CODE 16. ORIG PICKUP GROUP 1 00012
6. INITIATE IPRDQ 17. ORIG PICKUP GROUP 2 00015
7. BARGE IN? N 18. ORIG PICKUP GROUP 3 00020
8. CHANGE PICKUP TN ALLOWED? N 19. ORIG PICKUP GROUP 4 00023
9. NUMBER OF PICKUP GROUPS 4 20. TGN ____
21. MEMB ____
CALL SELECTION:
10. ATTENDANT? Y
11. INTRA TERMINAL GROUP? Y
12. INTRA OFFICE? Y
13. INTER OFFICE? Y
14. PRIVATE FACILITY ACCESS? Y

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Figure 2 SAMPLE PUOFD FORM 5E11 AND EARLIER SOFTWARE RELEASE

```
puofd                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5605-1a/b)     CALL PICKUP ORIGINATING FEATURE DEFINITION

*1. FEATURE NAME ________
 3. REMARKS     ____________________________________

        FEATURE OPTIONS
#4. ACT TYPE              AUTO
#5. DACT TYPE             NONE
   INITIATE              IPRDQ
   BARGE IN?             N
   CHANGE PICKUP TN ALLOWED? N
#9. NUMBER OF PICKUP GROUPS  _
```

```
puofd                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5605-1a/b)     CALL PICKUP ORIGINATING FEATURE DEFINITION

       CALL SELECTION        19. TGN  ____
   ATTENDANT?            Y   20. MEMB ____
   INTRA TERMINAL GROUP?   Y
   INTRA OFFICE?         Y       DIRECTED PICKUP
   INTER OFFICE?         Y   21. DPU TN     __________
   PRIVATE FACILITY ACCESS? Y

     DEFAULT PARAMETERS
15. ORIG PICKUP GROUP 1 _____
16. ORIG PICKUP GROUP 2 _____
17. ORIG PICKUP GROUP 3 _____
18. ORIG PICKUP GROUP 4 _____
```

Figure 3 SAMPLE PUOFD FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 6B: 5605-2a/b RECORD
CALL PICK-UP TERMINATING FEATURE DEFINITION RECORD - PUTFD

1. GENERAL

The 5605-2a/b Record is available with 5E2 and later Software Releases. It is used to define a number of separate but related features by selecting various feature options for Call Pick-Up Termination. The Call Pick-Up Terminating feature determines what one allows to be done to his telephone by others who have the originating feature.

Each feature is given a feature name of from one to eight characters which is used to assign the constructed (defined) feature to lines. Certain Call Pick-Up Termination features are pre-defined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed Call Pick-Up Terminating features is contained in Figures 1, 2, and 3. A list of the preconstructed Call Pick-Up Originating features is contained in Division 4, Section 6A, Figures 1 and 2.

The 5605-2a/b Record is not used as a record for output. It is provided to give the customer more space to enter valid entries used for ODA input.

A terminal (line or trunk) must be assigned a Call Pick-Up Terminating feature on the appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), TKGRPFA (5206 Record), or TRUNKFA (5205 Record).

1.1 Directed Pick-Up Nonbarge-In Feature

The DPN (Directed Pick-Up Nonbarge-In feature) has been changed for 5E5 and later Software Releases. For 5E4(2) and earlier Software Releases, it is necessary to assign the terminating DPN feature (/CPDNT) to a line so other terminal group members with the originating DPN feature (/CPDNO) can pick up that particular line.

NOTE: For 5E7 and later, /CPDNT is no longer available as a preconstructed feature.

For 5E5 and later Software Releases, all terminal group members that are assigned the /CPDNO feature will be allowed to pick up another group member's calls without the need of a terminating feature being assigned to the called users. However, group members who do not wish to have their lines picked up by other group members can block these terminal group members by using a new feature (/CPBDNT). Therefore, instead of using a feature to allow call pick-up (/CPDNT), terminal group members can use a feature (/CPBDNT) to deny call pick-up to particular group members since all members of the same group can be picked up by default.

During a retrofit from 5E4(2) to 5E5, /CPDNT features are removed from all LINEFA, MLHLNFA, BFG, and CLUSTR input forms if the terminal group to which it belonged had a Call Pick-Up Originating feature and the /CPDNT terminating feature; lines that were not assigned the /CPDNT feature now are assigned the /CPBDNT feature. These changes do not alter the functionality of the DPN feature; i.e., the 5E4(2) and earlier version and the 5E5 version perform the same function.

1.2 Recent Change View

The corresponding Recent Change View for this form is 12.14.

2. FORM ENTRIES - 5605-2a/b RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

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2.2 * FEATURE NAME

Description: Enter the feature name. Feature names have no restrictions on the valid characters, except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment if desired.
Valid Entries: up to 32 characters

FEATURE OPTIONS

Fields Section 2.4 -Section 2.9 refer to feature options.

2.4 ACT TYPE

Description: Enter the method of feature activation.

Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
CODE	Dialing a code activates this feature.
AUTO	No customer activation. The feature is considered active as soon as the switch owner assigns it to a line. The feature remains active until the switch owner deactivates it.

Data Rules:

If ACT TYPE is "CODE", then DEACT TYPE must be "CODE". If ACT TYPE is "AUTO", then DEACT TYPE must be "NONE".

For 5E6 and later, a Call Pickup Terminating feature with activation and deactivation type "CODE" cannot be assigned on a BFG form (5625 Record).

For 5E6 and earlier, if ACT TYPE is "AUTO", the corresponding Initial Activation Status entry on the MLHLNFA, BFG, or associated CLUSTR form (5600 Record) must be "Y".

For 5E7 and later, if ACT TYPE is "AUTO", it is recommended that the corresponding Initial Activation Status entry on the MLHLNFA, BFG, or associated CLUSTR form be "Y".

For 5E7 and later, when Telephone Numbers on the LINEFA form are assigned a Call Pickup Terminating feature and ACT TYPE is "AUTO" on the PUTFD form, the corresponding Initial Activation Status on the LINEFA, BFG, or associated CLUSTR form must be "Y".

If ACT TYPE is "CODE", and this feature is assigned to a line, then the line should normally be assigned an Individualized Dialing Plan, and at least one dialed code of the IDP (on the IDPDCA form (5601-1/2 Record)) must have ACTION equal to "FTACT", and a FEATURE associated with the dialed code on the IDPDCA form equal to this Call Pick-Up Terminating feature. Alternately, if the line is not assigned an IDP, then the PDIT used by the line must contain at least one dialed code with ACTION equal to "FTACT", and a FEATURE associated with the dialed code on the PDIT form (5300-2 Record) equal to this Call Pick-Up Terminating feature.

For 5E6 and later, if ACT TYPE is "CODE" and the feature is assigned to an MLHG/TERM on the MLHLNFA form (5113 Record), the Multi-Line Hunt Group terminal must have access to an IDP

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(Individualized Dialing Plan) or ODP (Office Dialing Plan) where the action code associated with the feature is "FTACT". An IDP is defined on the IDPDCA form (5601-1/2 Record); an ODP is defined on the PDIT form (5300-2 Record). If the MLHG/TERM is Secondary Only, the dialing plans associated with the Primary terminal are considered for the check.

2.5 DACT TYPE

Description: Enter the method of feature deactivation.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
CODE	Dialing a code deactivates this feature.
NONE	No customer deactivation is allowed.

Data Rules:

If DACT TYPE is "CODE", then ACT TYPE must be "CODE".

If DACT TYPE is "NONE", then ACT TYPE must be "AUTO".

If DACT TYPE is "CODE", and this feature is assigned to a line, then the line should normally be assigned an Individualized Dialing Plan, and at least one dialed code of the IDP (on the IDPDCA form (5601-1/2 Record)) should have ACTION equal to "FTDACT", and a FEATURE associated with the dialed code on the IDPDCA form equal to this Call Pick-Up Terminating feature.

For 5E6 and later, if DACT TYPE is "CODE" and the feature is assigned to an MLHG/TERM on the MLHLNFA form (5113 Record), the Multi-Line Hunt Group terminal must have access to an IDP (Individualized Dialing Plan) or ODP (Office Dialing Plan) where the action code associated with the feature is "FTDCT". An IDP is defined on the IDPDCA form (5601-1/2 Record); an ODP is defined on the PDIT form (5300-2 Record). If the MLHG/TERM is Secondary Only, the dialing plans associated with the Primary terminal are considered for the check.

2.6 FEATURE FUNCTION

Description: Select the pickup terminating option. Selection of an option indicates that the customer will permit others to perform this function on this line.

Required Field for 5E4(2) and later.
Default: CALPU
Valid Entries:

Valid FEATURE FUNCTION Entries

Entry	Definition
CALPU	For Call Pick-Up, a ringing station can only go into one terminating pickup group. The terminating pickup group number is assigned at the time the feature is assigned.
DIRPU	Directed pickup is used to determine whether a particular line will be able to have the directed pickup function performed on it. (This option indicates that the customer who has this line would like for other eligible parties to be able to pick this phone up when it is ringing.)
DIRPUBRG	Directed pickup with barge-in is similar to directed pickup with the exception that barge-in is performed along with the directed pickup. (This option would be selected for those who wish to allow direct pickup with barge-in to be performed on their line.)
HDIRPUBRG	Software Release: 5E4(2) and later. Directed pickup with barge-in on held calls is similar to directed pickup with barge-in with the addition that barge-in may be performed on a call that has been placed on hold.
TBSYVFY	Software Release: 5E4(2) and later. This option allows an ISDN Attendant to perform busy verification on lines to determine if a

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	particular line is actually in use or possibly out of service.
TEMEROVR	Software Release: 5E4(2) and later. This option allows an ISDN Attendant to complete incoming calls on an emergency override basis to directory numbers that cannot receive calls directly due to one or more of the following features being invoked on the line: □Call forwarding □Series completion □Multi-Line Hunting □Make busy keys □TGSR (Terminal Group Station Restriction) □ACVT (Attendant Control of Voice Terminal). The line to be overridden can be digital or analog. This feature does not provide preemption of a call, it merely allows for completion of calls to lines with the features described below.

NOTE: For 5E2 and 5E3, "CALPU" is the default value and the only value allowed except for Call Pick-Up Terminating features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Data Rules:

No more than one Call Pick-Up Terminating feature with FEATURE FUNCTION equal to "CALPU", "DIRPU", "DIRPUBRG", "HDIRPUBRG", "TBSYVFY", and "TEMEROVR" may be assigned to a directory number via feature assignment forms.

If FEATURE FUNCTION is "CALPU", then BARGE IN TONE INDICATOR must be "NONE", ORIG/TERM CALL must be "NONE".

If FEATURE FUNCTION is "DIRPU", then BARGE IN TONE INDICATOR must be "NONE", ORIG/TERM CALL must be "NONE", and MULTIWAY FEATURE must be blank; for 5E7 and later, ATTENDANT?, INTRA OFFICE?, INTRA TERMINAL GROUP?, INTER OFFICE?, and PRIVATE FACILITY ACCESS? cannot all be "Y".

If FEATURE FUNCTION is "DIRPUBRG", then BARGE IN TONE INDICATOR must be "BEEP1" or "NONE" (with 5E9(1) and later), ORIG/TERM CALL must be "ORGCAL", "TERMCAL", or "ACALNFLT", and MULTIWAY FEATURE must be specified.

For 5E5 and later, if FEATURE FUNCTION is "DIRPUBRG", then BARGE IN TONE INDICATOR must be "BEEP1" or "NONE", ORIG/TERM CALL must be "ORGCAL", "TERMCAL", or "ACALNFLT", and MULTIWAY FEATURE must be specified.

For 5E4(2) and later, if Feature Function is "TBSYVFY", then ORIG/TERM CALL must be "ACALNFLT", BARGE IN TONE indicator must be "BEEP1", and MULTIWAY FEATURE must be known.

If /CPUVT, /CPUIVT, or any feature with FEATURE FUNCTION equal to "TBSYVFY" is assigned on a LINEFA or MLHLNFA form, or assigned BFG or CLUSTER form, the corresponding LINE, MLHLN, DSLUSR, or SHTN form must for 5E7 and earlier have an entry in the ATT MLHG field. For 5E8 and later, the form must have an entry in either the ATT MLHG or the RBV TGN field, unless MLHG TERM is 1. If the feature is assigned to member 1 of an MLHG, then if the HUNT TYPE on the associated MLHGFD form is "HTC", "REG", or "PMHG", ATT MLHG or RBV TGN must be entered on the MLHG form; if HUNT TYPE is "UCD", ATT MLHG or RBV TGN must be entered on the MLHG, DSLUSR, MLHLN, or SHTN form.

For 5E4(2) and later, if Feature Function is "TEMEROVR", then ORIG/TERM CALL must be "ACALNFLT", and BARGE IN TONE indicator must be "BEEP1".

For 5E5 - 5E7, if /CPUEOT, /CPUIEOT, or any feature with FEATURE FUNCTION equal to "TEMEROVR" is assigned on a LINEFA or MLHLNFA form, or assigned BFG or CLUSTER form, the corresponding LINE, MLHLN, DSLUSR, or SHTN form must have an entry in the ATT MLHG field.

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For 5E9(2) and later, when the MLHG/TERM(s) on the MLHLN form or CKT MLHG/CKT TERM(s) on the DSLUSR form or MLHG/TERM NBR(s) on the SHTN form where TERM is not equal to 1 are assigned a Call Pickup Terminating Feature on the MLHLNFA, BFG or associated CLUSTR form, the Call Pickup Terminating Feature must be defined on a PUTFD form where FEATURE FUNCTION is set to "TEMEROVR". Therefore, the ATT MLHG on the DSLUSR, MLHLN or SHTN form must be entered. In addition, the ATT MLHG must be defined on a corresponding MLHG form with a MLHG FEATURE defined on a MLHGFD form that has HUNT TYPE set to "ISAT".

For 5E9(2) and later, when TN(s) on the LINE form or CKT TN(s) on the DSLUSR form or TN(s) on the SHTN form are assigned a Call Pickup Terminating Feature on the LINEFA, BFG or associated CLUSTR form, and this Call Pickup Terminating Feature is defined on a PUTFD form where FEATURE FUNCTION is "TEMEROVR", then:

- the ATT MLHG on the LINE, DSLUSR or SHTN form must be entered
- the ATT MLHG must be defined on a corresponding MLHG form with an MLHG FEATURE defined on a MLHGFD form that has HUNT TYPE set to "ISAT"
- either the ATT MLHG field is blank, or the ATT MLHG field is entered but not associated with a HUNT TYPE of "ISAT".

For 5E9(2) and later, when TN(s) on the LINE form or CKT TN(s) on the DSLUSR form or TN(s) on the SHTN form are assigned a Call Pickup Terminating Feature on the LINEFA, BFG or associated CLUSTR form, and this Call Pickup Terminating Feature is defined on a PUTFD form where FEATURE FUNCTION is "TBSYVFY", then:

- the ATT MLHG or RVB TGN on the LINE, DSLUSR or SHTN form must be entered
- when the ATT MLHG is entered, it must be defined on a corresponding MLHG form with an MLHG FEATURE defined on a MLHGFD form that has HUNT TYPE set to "ISAT"
- either the ATT MLHG and RBV TGN fields are both blank, or the ATT MLHG field is entered but not associated with a HUNT TYPE of "ISAT".

2.7 BARGE IN TONE INDICATOR

Description: This field informs the "barged-in upon party of an existing call in the talking state that another party is barging-in on the call. The tone is given to the party being barged-in upon and will be given regardless of whether or not this party originated the existing call.

Required Field for 5E4(2) and later.
Default: NONE
Valid Entries:

Valid BARGE IN TONE INDICATOR Entries

Entry	Definition
NONE	No Tone
BEEP1	One Beep

- ***NOTE:*** For 5E2 and 5E3, "NONE" is the default value and the only value allowed except for Call Pick-Up Terminating features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Data Rules:

For 5E4(2) and later, if BARGE IN TONE INDICATOR is "BEEP1", then FEATURE FUNCTION must be "DIRPUBRG", "HDIRPUBRG", "TBSYVFY", or "TEMEROVR".

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2.8 ORIG/TERM CALL

Description: This field is used for Directed Pick-Up with Barge-in. Filtering is based on the call on which barge-in is being attempted.

Required Field for 5E4(2) and later.
Default: NONE
Valid Entries:

Valid ORIG/TERM CALL Entries

Entry	Definition
ORCAL	Originating calls
TERMCAL	Terminating calls
ACALNFLT	Any calls - indicates no filtering.
NONE	Not applied

- ***NOTE:*** For 5E2 and 5E3, "NONE" is the default value and the only value allowed except for Call Pick-Up Terminating features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Data Rules:

For 5E4(2) and later, if ORIG/TERMCALL is "ACALNFLT", then FEATURE FUNCTION must be "DIRPUBRG", "HDIRPUBRG", "TBSYVFY", or "TEMEROVR".

For 5E9(1) and later, if ORIG/TERMCALL is "NONE", then FEATURE FUNCTION must be "CALPU" or "DIRPU".

For 5E9(1) and later, if ORIG/TERMCALL is "ORGCAL", then FEATURE FUNCTION must be "DIRPUBRG" or "HDIRPUBRG".

For 5E9(1) and later, if ORIG/TERMCALL is "TERMCAL", then FEATURE FUNCTION must be "DIRPUBRG" or "HDIRPUBRG".

2.9 MULTIWAY FEATURE

Description: When a party having direct pickup with barge-in terminating feature is in the talking state, and another party having direct pickup with barge-in originating feature attempts to barge in, call processing control is passed to the multiway feature where it has an entry point from Call Pick-Up. Enter a MULTIWAY FEATURE name if FEATURE FUNCTION is "DIRPUBRG" or "HDIRPUBRG". MULTIWAY FEATURE name has no restrictions on the valid characters. Wild-card feature (/MW*) is not allowed.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E4(2) and later, the assigned MULTIWAY FEATURE must have the following characteristics: On the MWFD form (5602 Record), 3 WAY ORIG PTY for ATTENDANT, INTRAGRP, INTRAOFC, INTEROFC, and PVTFAC must be "Y"; 3WAY ADDED PTY for ATTENDANT, INTRAGRP, INTRAOFC, INTEROFC, and PVTFAC must equal the values for ATTENDANT?, INTRA TERMINAL GROUP?, INTRA OFFICE?, INTER OFFICE?, and PRIVATE FACILITY ACCESS? respectively on the PUTFD form.

When a terminal (line) defined on the DSLUSR form (5908 Record) has an associated CLASS OF SERVICE of "ISDN" on the LCC form (5306 Record), and the line has been assigned a Call Pick-Up Terminating feature on the MLHLNFA, CLUSTR (5600 Record), BFG, or LINEFA form with the feature also defined on this form and a value entered in this field, then on the MWFD form, the ENTRY POINT for CALL PICK-UP field must be "N", and ISDN ENTRY POINT for ISDN CALL PICK-UP field must be "Y".

When a CKT TN defined on a DSLUSR form has an associated Class of Service of "ISDN", and the TN is assigned a Call Pick-Up Terminating feature on the LINEFA form, or on an associated BFG or CLUSTR

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form, with the feature defined on this form with a value entered in the MULTIWAY FEATURE field and FEATURE FUNCTION set to "TEMEROVR", then on the MWFD form ISDN CALL PICKUP must be set to "Y".

If the Call Pick-Up Terminating feature has FEATURE FUNCTION equal to "HDIRPUBRG", then on the MWFD form, the MULTIWAY TRANSFER must be "ALW".

CALL SELECTION

Call Selection specifies the condition under which a called line should be added to the pickup group for a particular line. The type of call must be known at the time the pickup is attempted.

2.10 ATTENDANT?

Description: Are attendant calls allowed?

Required Field for 5E5 and later.
Default: Y
Valid Entries: Y, N

2.11 INTRA OFFICE?

Description: Are Intraoffice calls allowed?

Required Field for 5E5 and later.
Default: Y
Valid Entries: Y, N

Data Rules:

The note in Section 2.10 also applies here.

2.12 INTRA TERMINAL GROUP?

Description: Are Intraterminal Group calls allowed?

Required Field for 5E5 and later.
Default: Y
Valid Entries: Y, N

Data Rules:

The note in Section 2.10 also applies here.

2.13 INTER OFFICE?

Description: Are Interoffice calls allowed?

Required Field for 5E5 and later.
Default: Y
Valid Entries: Y, N

Data Rules:

The note in Section 2.10 also applies here.

2.14 PRIVATE FACILITY ACCESS?

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Description: Are Private Facility Access calls allowed?

Required Field for 5E5 and later.
Default: Y
Valid Entries: Y, N

Data Rules:

The note in Section 2.10 also applies here.

DEFAULT PARAMETERS

Fields Section 2.15 -Section 2.17 define the default parameters assigned with the feature to lines. These parameters will be assigned to the line unless they are over-ridden by entries on the PULPA (5605-3 Record) or PUMPA (5605-4 Record) forms.

2.15 TERM PICK-UP GROUP

Description: Enter the Terminating Pick-Up Group.
Valid Entries: 2 - 65535

Data Rules:

If this field has an entry, then FEATURE FUNCTION must be "CALPU".

2.16 TONE INTERVAL

Description: Enter the Barge-in Tone Interval in seconds. An entry of 0 indicates no repetition.

Software Release: 5E5 and earlier
Valid Entries: 0, blank

2.17 TONE DURATION

Description: Enter the Barge-in Tone Duration in milliseconds.

Software Release: 5E5 and earlier
Valid Entries: 900, blank

Data Rules:

For 5E4(2) and 5E5, if Tone Duration is 900, then FEATURE FUNCTION must be "DIRPUBRG", "HDIRPUBRG", "TBSYVFY", or "TEMEROVR".

ESS 5605-2(03)TG-5 CALL PICKUP TERMINATING FEATURE DEFINITION RECORD DATE _____

PUTFD 5ESS SWITCH
BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	ACTTYPE	DACTTYPE	FEATURE FUNCTION	BARGEIN TO	ORIGTERM CALL	MULTIWAY FEATURE	CALL SELECT					DEF PARM		
								ATTTT	INTTT	IITTT	IITTT	PTTTA	TERMPICKU	TONEINT	TONEDUR

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					NE				NDANOTFN	RAGN	RARE	EOF	PGROUP	VL	N
/CPBDNT	BLOCK DPN TERMINATING	AUTO	NONE	DIRPU	NONE	NONE		N	N			N			
/CPUDT	DIRECTED PICKUP TERMINATING	AUTO	NONE	DIRPUBRG	BEEP1	ACALNFLT	/MWCP	Y	Y	Y	Y	Y		0	900
/CPUEOT	ANALOG EMERGENCY OVERRIDE TERMINATING	AUTO	NONE	TEMEROVR	BEEP1	ACALNFLT	/MWCP	Y	Y	Y	Y	Y		0	900
/CPUIDT	ISDN CALL PICKUP WITH BARGE-IN	AUTO	NONE	DIRPUBRG	BEEP1	ACALNFLT	/MWISPU	Y	Y	Y	Y	Y		0	900
/CPUIEOT	ISDN EMERGENCY OVERRIDE TERMINATING	AUTO	NONE	TEMEROVR	BEEP1	ACALNFLT	/MWISPU	Y	Y	Y	Y	Y		0	900
/CPUIHDT	ISDN PICKUP /W BARGE-IN HELD CALL	AUTO	NONE	HDIRPUBRG	BEEP1	ACALNFLT	/MWISPUH	Y	Y	Y	Y	Y		0	900
/CPUIVT	ISDN BUSY VERIFY TERMINATING	AUTO	NONE	TBSYUFY	BEEP1	ACALNFLT	/MWISPU	Y	Y	Y	Y	Y		0	900
/CPUT	CALL PICKUP TERMINATING	AUTO	NONE	CALPU	NONE	NONE		Y	Y	Y	Y	Y			
/CPUVT	ANALOG BUSY VERIFY TERMINATING	AUTO	NONE	TBSYUFY	BEEP1	ACALNFLT	/MWCP	Y	Y	Y	Y	Y		0	900

Figure 1 PRECONSTRUCTED CALL PICK-UP TERMINATING FEATURES 5E9(1) AND LATER SOFTWARE RELEASES

---

putfd 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5605-2a/b) CALL PICKUP TERMINATING FEATURE DEFINITION

*1. FEATURE NAME
3. REMARKS _____

FEATURE OPTIONS
4. ACT TYPE AUTO
5. DACT TYPE NONE
6. FEATURE FUNCTION CALPU
7. BARGE IN TONE INDICATOR NONE
8. ORIG/TERM CALL NONE
9. MULTIWAY FEATURE _____

---

putfd 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5605-2a/b) CALL PICKUP TERMINATING FEATURE DEFINITION

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CALL SELECTION
10. ATTENDANT? Y
11. INTRA OFFICE? Y
12. INTRA TERMINAL GROUP? Y
13. INTER OFFICE? Y
14. PRIVATE FACILITY ACCESS? Y

DEFAULT PARAMETERS
15. TERM PICKUP GROUP _____

Figure 2 SAMPLE PUTFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 6C: 5605-3 RECORD
CALL PICKUP LINE (TN) PARAMETER FORM - PULPA

1. GENERAL

The 5605-3 Record is available with 5E2 and later Software Releases. It is used to define specific parameters assigned to every non-Multi-Line Hunt Group line associated with a specific constructed call pickup feature. It is required only if the default parameters assigned on the PUOFD or PUTFD forms are inappropriate.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TN

Enter a Telephone Number.

Required Field.

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
INDIV	Individual Line
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
ISDN	Digital Subscriber Line associated ISDN (Integrated Services Digital Network) service.
PBX	Line to a PBX.

2.3 * FEATURE

Description: Enter the feature name. There are no restrictions on the valid characters except that the first character may not be a slash (/). Feature Names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E12 and later, TN/FEATURE combinations on different PULPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the PULPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TNs must be 10-digit TNs with the NPA/OFFICE CODE defined on the NOC form.

2.4 # TERM PICKUP GROUP

Description: Enter the Terminating Pickup Group.

Required Field.
Valid Entries: 1 - 65534.

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Data Rules:

This field must have a value of 1 if the FEATURE field on this form appears in the FEATURE NAME field of a PUOFD form (5605-1 Record). This field must have a value in the range of 2 to 65534 if the FEATURE field on this form appears in the FEATURE NAME field of a PUTFD form with a FEATURE FUNCTION of "CALPU".

If this field has a value of 2 to 65534, then DIRECT PICKUP TN, ORIG PICKUP GROUPs 1-4, TGN and MEMB must not be entered.

2.5 TONE INTERVAL

Description: Enter the Barge-in Tone repetition Interval in seconds.
Valid Entries: 0 (seconds)

Data Rules:

For 5E4(2) and later, TONE INTERVAL is entered only if the associated FEATURE FUNCTION on the PUTFD form is "DIRPUBRG", "TBSYVFY" or "TEMEROVR".

2.6 TONE DURATION

Description: Enter the Barge-in Tone Duration in milliseconds.
Valid Entries: 900 (milliseconds)

Data Rules:

TONE DURATION is entered only when FEATURE FUNCTION on the PUTFD form equals "DIRPUBRG".

2.7 DIRECT PICKUP TN

Description: The name of this field was changed to DPU TN in 5E12. This field name applies to 5E11 and earlier. See DPU TN for usage information.
When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

2.8 DPU TN

Description: Enter the Telephone Number served by this office. This field was called DIRECT PICKUP TN for 5E11 and earlier.

Software Release: 5E12 and later
Valid Entries: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

If DPU TN is entered, ORIG PICKUP GROUP 1 and TGN must not be specified.

If this field has an entry, then INITIATE on the PUOFD form must be "IPREDN". The corresponding PUOFD form is found by matching FEATURE on this form with FEATURE NAME on the PUOFD form.

If the first 3 digits of the 7-digit DPU TNs on the PULPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the DPU TN must be a 10-digit TN.

NXX(s) (the first 3 digits of a 7-digit TN) and/or NPA/NXX combinations (the first 6 digits of a 10-digit TN) from the DPU TN on the PULPA form must be defined as OFFICE CODE and/or NPA OFFICE CODE on the NOC form.

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If the PULPA forms have a DPU TN entry, the corresponding PUOFD forms must have an INITIATE entry of "IPREDN".

If the TN(s) is missing the DPU TN assignment on the PULPA form or in the PUOFD form's default parameters but the Call Pickup Originating Feature with INITIATE equal to "IPREDN" on the PUOFD form, the Direct Pickup TN has to be specified if Call Pickup Originating is initiated by a predesignated TN.

2.9 ORIG PICKUP GROUP 1

Description: Enter the queue (Group) that the customer can Originate to Pickup.
Valid Entries: 2 - 65534

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

If ORIG PICKUP GROUP 1 is entered, DIRECT PICKUP TN and TGN must not be specified.

If ORIG PICKUP GROUP 1 is entered, then the NUMBER OF PICKUP GROUPS on the associated PUOFD form must be 1, 2, 3 or 4.

2.10 ORIG PICKUP GROUP 2

Description: Enter the queue (Group) that the customer can Originate to Pickup.
Valid Entries: 2 - 65534

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

If TERM PICKUP GROUP is 1 and ORIG PICKUP GROUP 2 is entered, ORIG PICKUP GROUP 1 must be specified.

If ORIG PICKUP GROUP 2 is entered, then the NUMBER OF PICKUP GROUPS on the associated PUOFD form must be 2, 3 or 4.

2.11 ORIG PICKUP GROUP 3

Description: Enter the queue (Group) that the customer can Originate to Pickup.
Valid Entries: 2 - 65534

Data Rules:

If TERM PICKUP GROUP is 1 and ORIG PICKUP GROUP 3 is entered, ORIG PICKUP GROUP 1 and 2 must be specified.

When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

If ORIG PICKUP GROUP 3 is entered, then the NUMBER OF PICKUP GROUPS on the associated PUOFD form must be 3 or 4.

2.12 ORIG PICKUP GROUP 4

Description: Enter the queue (Group) that the customer can Originate to Pickup.
Valid Entries: are 2 - 65534

Data Rules:

If TERM PICKUP GROUP is 1 and ORIG PICKUP GROUP 4 is entered, ORIG PICKUP GROUP 1, 2 and

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3 must be specified.

When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

If ORIG PICKUP GROUP 4 is entered, then the NUMBER OF PICKUP GROUPS on the associated PUOFD form must be 4.

2.13 # NOTIFY 1

Description: Provide visual notification that a call should be picked up from pickup group 1. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 1 is "Y", ORIG PICKUP GROUP 1 must be entered.

When NOTIFY 1 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 1 can be changed to a "Y".

NOTIFY 1 can be set to "Y" only when the associated Class of Service of the TN is "ISDN".

2.14 # NOTIFY 2

Description: Provide visual notification that a call should be picked up from pickup group 2. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 2 is "Y", ORIG PICKUP GROUP 2 must be entered.

When NOTIFY 2 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 2 can be changed to a "Y".

NOTIFY 2 can be set to "Y" only when the associated Class of Service of the TN is "ISDN".

2.15 # NOTIFY 3

Description: Provide visual notification that a call should be picked up from pickup group 3. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2,

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Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 3 is "Y", ORIG PICKUP GROUP 3 must be entered.

When NOTIFY 3 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 3 can be changed to a "Y".

NOTIFY 3 can be set to "Y" only when the associated Class of Service of the TN is "ISDN".

2.16 # NOTIFY 4

Description: Provide visual notification that a call should be picked up from pickup group 4. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 4 is "Y", ORIG PICKUP GROUP 4 must be entered.

When NOTIFY 4 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

NOTIFY 4 can be set to "Y" only when the associated Class of Service of the TN is "ISDN".

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 4 can be changed to a "Y".

2.17 TGN

Description: Enter the Trunk Group Number for Code Calling or Loud Speaker Paging.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

If TGN is entered, ORIG PICKUP GROUP 1 and DIRECT PICKUP TN must not be specified.

If TGN and MEMB are specified, then INITIATE on the associated PUOFD form (5605-1 Record) must be

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"CDCAL" or "LDSPKG".

2.18 MEMB

Description: Enter the Trunk Group member number for Code Calling or Loud Speaker Paging.
Valid Entries: 0 - 1951

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be specified.

If TGN is entered, MEMB must be specified.

```
pulpa                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5605-3)            CALL PICKUP LINE (TN) PARAMETERS

*1. TN  ___________              DIRECTED PICKUP
*2. FEATURE _________          10. DPU TN     ___________

#3. TERM PICKUP GROUP   _____
 4. ORIG PICKUP GROUP 1 _____
 5. ORIG PICKUP GROUP 2 _____
 6. ORIG PICKUP GROUP 3 _____
 7. ORIG PICKUP GROUP 4 _____
 8. TGN              ____
 9. MEMB             ____
```

Figure 1 SAMPLE PULPA FORM 5E12 THROUGH 5E14 SOFTWARE RELEASES

```
pulpa                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5605-3)            CALL PICKUP LINE (TN) PARAMETERS

*1. TN  ___________          12. TGN   ____
*2. FEATURE _________          13. MEMB   ____
                       14. DPU TN ___________
#3. TERM PICKUP GROUP   _____
 4. ORIG PICKUP GROUP 1 _____
 5. ORIG PICKUP GROUP 2 _____
 6. ORIG PICKUP GROUP 3 _____
 7. ORIG PICKUP GROUP 4 _____
 8. NOTIFY 1          N
 9. NOTIFY 2          N
10. NOTIFY 3          N
11. NOTIFY 4          N
```

Figure 2 SAMPLE PULPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 6D: 5605-4 RECORD
CALL PICKUP LINE (MLHG/TERM) PARAMETER FORM - PUMPA

1. GENERAL

The 5605-4 Record is available with 5E2 and later Software Releases. It is used to define specific parameters assigned to every Multi-Line Hunt Group line associated with a specific constructed call pickup feature. It is required only if the default parameters assigned on the PUOFD or PUTFD forms are inappropriate.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt member number.
Valid Entries: 1 - 2015 and 3001-3999 (Outdial Terminals only)

Data Rules:

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be one of the following:

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Line to a PBX.
ISDN	Digital Subscriber Line associated ISDN Service.
ISATND	ISDN (Integrated Service Digital Network) attendant.

If the class of service is "ISATND", the INITIATE field on the PUOFD form (5605-1a/b Record) must be "BSYVFY".

2.4 * FEATURE

Description: Enter the feature name. There are no restrictions on the valid characters, except that the first character may not be a slash (/). Feature Names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

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2.5 # TERM PICKUP GROUP

Description: Enter the Terminating Pickup Group. Call Pickup Terminating may be assigned to MLHG terminals.

Required Field.
Default: 1
Valid Entries: 1 - 65534

Data Rules:

This field must have a value of 1 if the FEATURE field on this form appears in the FEATURE NAME field of a PUOFD form. This field must have a value of 2 to 65534 if the FEATURE field on this form appears in the FEATURE NAME field of a PUTFD form with a FEATURE FUNCTION of "CALPU".

2.6 TONE INTERVAL

Description: Enter the barge-in tone repetition interval.
Valid Entries: 0

2.7 TONE DURATION

Description: Enter the barge-in tone duration.
Valid Entries: 900

2.8 DIRECT PICKUP TN

Description: The name of this field was changed to DPU TN in 5E12. This field name applies to 5E11 and earlier. See DPU TN for usage information.

2.9 DPU TN

Description: Enter the Telephone Number served by this office. This field was called DIRECT PICKUP TN for 5E11 and earlier.

Software Release: 5E12 and later
Valid Entries: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If DPU TN is entered, ORIG PICKUP GROUP 1 and TGN must not be specified.

If the DPU TN is entered, the INITIATE field on the PUOFD form must be "IPREDN".

If the first 3 digits of the 7-digit DPU TNs on the PUMPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the DIRECT PICKUP TN must be a 10-digit TN(s).

NXX(s) (the first 3 digits of a 7-digit TN) and/or NPA/NXX combinations (the first 6 digits of a 10-digit TN) from the DPU TN on the PUMPA form must be defined as OFFICE CODE and/or NPA OFFICE CODE on the NOC form.

If the MLHG/TERM(s) is missing the DPU TN assignment on the PUMPA form or in the PUOFD form's default parameters but the Call Pickup Originating Feature with INITIATE equal to "IPREDN" on the PUOFD form, the Directed Pickup TN has to be specified if Call Pickup Originating is initiated by a predesignated TN.

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2.10 ORIG PICKUP GROUP 1

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If ORIG PICKUP GROUP 1 is entered, Direct PICKUP TN and TGN must not be specified.

If ORIG PICKUP GROUP 1 is entered, the NUMBER OF PICKUP GROUPS on the PUOFD form (5605-1 Record) must be 1, 2, 3 or 4.

2.11 ORIG PICKUP GROUP 2

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If ORIG PICKUP GROUP 2 is entered, the NUMBER OF PICKUP GROUPS on the PUOFD form (5605-1 Record) must be 2, 3 or 4.

If TERM PICKUP GROUP is 1 and ORIG PICKUP GROUP 2 is specified, then ORIG PICKUP GROUP 1 must be specified.

2.12 ORIG PICKUP GROUP 3

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If ORIG PICKUP GROUP 3 is entered, the NUMBER OF PICKUP GROUPS on the PUOFD form (5605-1 Record) must be 3 or 4.

If TERM PICKUP GROUP is 1 and ORIG PICKUP GROUP 3 is specified, then ORIG PICKUP GROUP 1 and 2 must be specified.

2.13 ORIG PICKUP GROUP 4

Description: Enter the queue (group) that the customer can originate to pick up.
Valid Entries: 2 - 65534

Data Rules:

If ORIG PICKUP GROUP 4 is entered, the NUMBER OF PICKUP GROUPS on the PUOFD form (5605-1 Record) must be 4.

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If TERM PICKUP GROUP is 1 and ORIG PICKUP GROUP 4 is specified, then ORIG PICKUP GROUP 1, 2 and 3 must be specified.

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2.14 # NOTIFY 1

Description: Provide visual notification that a call should be picked up from pickup group 1. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 1 is "Y", ORIG PICKUP GROUP 1 must be entered.

NOTIFY 1 can be set to "Y" only when the associated Class of Service of the MLHG/TERM is "ISDN".

When NOTIFY 1 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 1 can be changed to a "Y".

2.15 # NOTIFY 2

Description: Provide visual notification that a call should be picked up from pickup group 2. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 2 is "Y", ORIG PICKUP GROUP 2 must be entered.

NOTIFY 2 can be set to "Y" only when the associated Class of Service of the MLHG/TERM is "ISDN".

When NOTIFY 2 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 2 can be changed to a "Y".

2.16 # NOTIFY 3

Description: Provide visual notification that a call should be picked up from pickup group 3. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N

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Valid Entries: Y, N

Data Rules:

When NOTIFY 3 is "Y", ORIG PICKUP GROUP 3 must be entered.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 3 can be changed to a "Y".

NOTIFY 3 can be set to "Y" only when the associated Class of Service of the MLHG/TERM is "ISDN".

When NOTIFY 3 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

2.17 # NOTIFY 4

Description: Provide visual notification that a call should be picked up from pickup group 4. This field was added for the Visual Call Pickup feature (99-5E-2551). For more information on this feature, see Division 2, Section 4A578.

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When NOTIFY 4 is "Y", ORIG PICKUP GROUP 4 must be entered.

NOTIFY 4 can be set to "Y" only when the associated Class of Service of the MLHG/TERM is "ISDN".

When NOTIFY 4 is set to "Y", no more than 30 ISDN terminals can be assigned to each ORIG PICKUP GROUP.

The ACT field for SFID 578 on the SFSYS form must be set to "Y", before the default value for NOTIFY 4 can be changed to a "Y".

2.18 TGN

Description: Enter the Trunk Group Number for Code Calling or Loud Speaker Paging.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If TGN is entered, ORIG PICKUP GROUP 1 and DIRECT PICKUP TN must not be specified.

If TGN and MEMB are entered, then the INITIATE field on the associated PUOFD form must be "CDCAL" or "LDSPKPG", and the SLVLD SPN associated field on the TRUNK form (5204 Record) must be specified.

2.19 MEMB

Description: Enter the Trunk Group Member Number for Code Calling or Loud Speaker Paging.

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Valid Entries: 0 - 1951

Data Rules:

When TERM PICKUP GROUP is 2 to 65534, this field must not be entered.

If TGN is entered, MEMB must be specified.

```
pumpa                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5605-4)          CALL PICKUP LINE (MLHG/TERM) PARAMETERS

*1. MLHG    ____                DIRECTED PICKUP
*2. TERM    ____             11. DPU TN     __________
*3. FEATURE ________

#4. TERM PICKUP GROUP   00001
 5. ORIG PICKUP GROUP 1 _____
 6. ORIG PICKUP GROUP 2 _____
 7. ORIG PICKUP GROUP 3 _____
 8. ORIG PICKUP GROUP 4 _____
 9. TGN             ____
10. MEMB            ____
```

Figure 1 SAMPLE PUMPA FORM 5E12 THROUGH 5E14 SOFTWARE RELEASES

```
pumpa                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5605-4)          CALL PICKUP LINE (MLHG/TERM) PARAMETER

*1. MLHG    ____              9. NOTIFY 1 N
*2. TERM    ____             10. NOTIFY 2 N
*3. FEATURE ________          11. NOTIFY 3 N
                  12. NOTIFY 4 N
#4. TERM PICKUP GROUP   00001   13. TGN     ____
 5. ORIG PICKUP GROUP 1 _____   14. MEMB    ____
 6. ORIG PICKUP GROUP 2 _____   15. DPU TN  __________
 7. ORIG PICKUP GROUP 3 _____
 8. ORIG PICKUP GROUP 4 _____
```

Figure 2 SAMPLE PUMPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 6E: 5605-5 RECORD
CALL PICKUP TERMINATING GROUP DATA FORM - PUGD

This section has been removed from the TG-5.

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SEC. 7: DISTINCTIVE RINGING FORMS

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SEC. 7A: 5606-1 RECORD
DISTINCTIVE RINGING FEATURE DEFINITION FORM - DRFD

1. GENERAL

The 5606-1 Record is available with 5E2 and later Software Releases. It is used to define various combinations of DR (Distinctive Ringing) feature characteristics for assignment to lines or ISDN terminals. DR provides seven ringing patterns. Each combination is given a feature name of one to eight characters which is used to assign the constructed (defined) feature to lines. Certain DR features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed DR features is contained in Figure Figure 1 .

A customer subscribing to a Distinctive Ringing feature may have distinctive ringing cycles based upon whether the incoming call is intra- or inter-terminal group, Dial Call Waiting, Call Waiting Originating or completed over private facilities.

A terminal (line or trunk) must be assigned a Distinctive Ringing feature on the appropriate feature assignment form, LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), TKGRPFA (5206 Record), or TRUNKFA (5205 Record).

When a DR feature is assigned to a TN on a LINE form (5109 form) or to a CKT TN on a DSLUSR form (5908 Record) via a LINEFA, BFG, or associated CLUSTR form, then the TN must have an LCC/RAX defined on the LCC form (5306 form) with a service class of "INDIV", "ATND", "4WINDIV", "PBX", or "ISDN".

Distinctive Ringing features cannot be assigned to members of a Multi-Line Hunt Group that it is a Multiple Position Hunt Group or an ISDN Attendant Terminal Hunt Group. A Multi-Line Hunt Group is one of the above types if the HUNT TYPE on the associated MLHGFD form (5604 Record) is set to "MUPH" or "ISAT".

1.1 Recent Change View

The corresponding Recent Change view for this form is 12.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * FEATURE NAME

Description: Enter the Feature Name. Feature names have no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed, or inserted.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The feature name must be unique and cannot be duplicated on any other BRCS feature definition form.

2.3 REMARKS

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Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

2.4 ACT TYPE

Description: Enter the method of feature activation.

Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
CODE	Dial code activation.
AUTO	Automatic activation.

Data Rules:

For 5E7 and earlier when ACT TYPE is "CODE", DACT TYPE must be "AUTO" or "CODE"; when ACT TYPE is "AUTO", DACT TYPE must be "NONE" or "CODE".

For 5E7 and later, if Telephone Numbers on the LINEFA form or the MLHG/TERM on the MLHLNFA form are assigned a Distinctive Ringing Feature with the Activation Type entry set to "AUTO" on the DRFD form, the corresponding Initial Activation Status entry on the LINEFA form or the MLHLNFA form, the BFG form, or an associated CLUSTR form must be equal to "Y".

For 5E8 and later when ACT TYPE is "CODE", DACT TYPE must be "CODE".

2.5 DACT TYPE

Description: Enter the method of feature deactivation.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
AUTO	Automatic deactivation.
CODE	Dial code deactivation.
NONE	No feature deactivation.

2.6 ATTENDANT

Description: Is the attendant filtering criteria allowed?

"Y" is the only value allowed except for preconstructed features and those copied from a preconstructed feature using the ODA change-insert feature.
Default: Y
Valid Entries: Y

2.7 INTRA OFF

Description: Is intra-office filtering criteria allowed?

"Y" is the only value allowed except for preconstructed features and those copied from a preconstructed feature using the ODA change-insert feature.
Default: Y
Valid Entries: Y

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2.8 INTER OFF

Description: Is inter-office filtering criteria allowed?

"Y" is the only value allowed except for preconstructed features and those copied from the preconstructed feature using the ODA change-insert feature.
Default: Y
Valid Entries: Y

2.9 INTRA TG

Description: Is intra-terminal group filtering criteria allowed?

"Y" is the only value allowed except for preconstructed features and those copied from the preconstructed feature using the ODA change-insert feature.
Default: Y
Valid Entries: Y

2.10 PFA

Description: Is private facility filtering criteria allowed?

"Y" is the only value allowed except for preconstructed features and those copied from the preconstructed feature using the ODA change-insert feature.
Default: Y
Valid Entries: Y

2.11 FEAT TYPE

Description: Enter the feature filtering type.

"NONE" is the only value allowed except for preconstructed features and those copied from the preconstructed feature using the ODA change-insert feature.
Default: NONE
Valid Entries:

Valid FEAT TYPE Entries

Entry	Definition
CWO	Call Waiting Originating.
DCW	Dial Call Waiting.
CFV	Call Forwarding Variable.
MWY	Multiway Calling.
PP	Precedence and Preemption.
NONE	No filtering.

2.12 CHANGE RINGING PATTERN?

Description: Is the customer allowed to change the ringing pattern via a use code?
Default: N
Valid Entries: Y, N

DEFAULT PARAMETER

The following field (Section 2.13) is the only default parameter for DR features.

2.13 RINGING PATTERN TYPE

Description: Enter the DR patterns.
Default: A

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Valid Entries:

Valid RINGING PATTERN TYPE Entries

Entry	Definition
A	A repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern) or Pattern 0 for ISDN terminals.
B	A repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on, followed by 4 seconds off or Pattern 1 for ISDN terminals.
C	A repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on, and 4.0 seconds off or Pattern 2 for ISDN terminals.
D	A repeated pattern of 1.0 seconds on, 1.0 seconds off, 1.0 seconds on, and 3.0 seconds off (also known as Code 2 ringing) or Pattern 3 for ISDN terminals.
E	A routine ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
F	A priority ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
P	A precedence ringing pattern of 1640 milliseconds on, 360 milliseconds off, repeated for the duration of the ringing interval or Pattern 5 for ISDN terminals.

ESS 5606-1(01)TG-5 DISTINCTIVE RINGING DATE _____

FEATURE DEFINITION RECORD

DRFD 5ESS SWITCH

12.16

BASE_____CONT GR____ 5ESS UNIT _____

FEATURE NAME	REMARKS	FEATURE OPTIONS									DPEAFRA M
		ACTTYPE	DACTTYPE	ATTENDANT	IONFTFRA	IONFTFER	ITNGTER	PFA	FEATTYPE	RPIANTG	RPITNNG
/DR*	DIST. RINGING WILDCARD	AUTO	NONE	N	Y	Y	N	Y	NONE	N	A

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/DRATT	DIST. RINGING ATTENDANT AND MW	AUTO	NONE	Y	N	N	N	N	MWY	N	B
/DRCWO	DIST. RINGING CALL WAITING ORIG.	AUTO	NONE	Y	N	N	Y	N	CWO	N	C
/DRDCW	DIST. RINGING DIAL CALL WAITING	AUTO	NONE	Y	N	N	Y	N	DCW	N	C
/DRIC	DIST. RINGING INCOMING ONLY	AUTO	NONE	N	Y	Y	N	Y	NONE	N	B
/DRNS	DIST. RINGING NIGHT SERVICE	AUTO	NONE	Y	N	N	N	N	CFV	N	B
/DRPP	DR PRECEDENCE AND PREEMPTION	AUTO	NONE	Y	Y	Y	Y	Y	PP	N	P

Figure 1 PRECONSTRUCTED DR FEATURES 5E9(2) AND LATER SOFTWARE RELEASES

drfd 5ESS Switch _
(5606-1) OFFICE DATA ADMINISTRATION
DISTINCTIVE RINGING FEATURE DEFINITION

* 2. FEATURE NAME CUSTFEAT 3. REMARKS SAMPLE FEATURE

4. ACT TYPE AUTO
5. DACT TYPE NONE
6. ATTENDANT Y
7. INTRA OFF Y
8. INTER OFF Y
9. INTRA TG Y
10. PFA Y
11. FEAT TYPE NONE
12. CHANGE RINGING PATTERN ? Y

DEFAULT PARAMETER:
13. RINGING PATTERN TYPE B

Figure 2 SAMPLE DRFD FORM 5E2 AND LATER SOFTWARE RELEASES

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SEC. 7B: 5606-2 RECORD
DISTINCTIVE RINGING LINE PARAMETER FORM - DRLPA

1. GENERAL

The 5606-2 Record is available with the 5E2 and later Software Releases. It defines the DR (Distinctive Ringing) parameters for individual lines if the default parameters associated with the DR feature on the DRFD form (5606-1 Record) are inappropriate or unspecified. Do not enter this record if the DR default parameters are acceptable.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.25.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * TN

Description: Enter the Telephone Number of the customer.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The Telephone Number entered here must be defined on the LINE form (5109 Record).

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Non-data Link Console Line or Attendant Line.
INDIV	Individual Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
PBX	Line to a PBX.

For 5E12 and later, TN and FEATURE NAME combinations on different DRLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the DRLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE NAME

Description: Enter the feature name.

Required Field.
Valid Entries: 1 - 8 characters

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Data Rules:

The feature name must be defined on the DRFD form.

2.4 RING PTN

Description: Enter the DR patterns.
Default: A
Valid Entries:

Valid RING PTN Entries

Entry	Definition
A	A repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	A repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.
C	A repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4.0 seconds off.
D	A repeated pattern of 1.0 second on, 1.0 second off, 1.0 second on and 3.0 seconds off (also known as Code 2 ringing).
E	A routine ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
F	A priority ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
P	A precedence ringing pattern of 1640 milliseconds on, 360 milliseconds off, repeated for the duration of the ringing interval.

```
drlpa                    5ESS Switch                    _
(5606-2)              OFFICE DATA ADMINISTRATION
                  DISTINCTIVE RINGING LINE PARAMETERS

* 1. TN              5735201
* 2. FEATURE NAME      ABC
  3. RING PTN          B
```

Figure 1 SAMPLE DRLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
drlpa                    5ESS Switch                    _
                    OFFICE DATA ADMINISTRATION
(5606-2)             DISTINCTIVE RINGING LINE PARAMETERS

*1. TN          __________
*2. FEATURE NAME ________
 3. RING PTN     A
```

Figure 2 SAMPLE DRLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 7C: 5606-3 RECORD DISTINCTIVE RINGING LINE (MLHG/TERM) PARAMETER FORM - DRMPA

1. GENERAL

The 5606-3 Record is available with the 5E2 and later Software Releases. It defines the DR (Distinctive Ringing) parameters for individual lines. If the default parameters associated with the DR feature on the DRFD form (5606-1 Record) are inappropriate or unspecified. Do not enter this record if the DR default parameters are acceptable.

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.25.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Enter the Multi-Line Hunt Group Member number.

Required Field.

Data Rules:
The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Line to a PBX.

2.4 * FEATURE

Description: Enter the feature name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The feature name must be defined on the DRFD form.

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2.5 RINGING PATTERN TYPE

Description: Enter the DR pattern.
Default: A
Valid Entries:

Valid RING PTN Entries

Entry	Definition
A	A repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	A repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on, followed by 4 seconds off.
C	A repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on, and 4.0 seconds off.
D	A repeated pattern of 1.0 second on, 1.0 second off, 1.0 second on, and 3.0 seconds off (also known as Code 2 ringing).
E	A routine ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
F	A priority ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
P	A precedence ringing pattern of 1640 milliseconds on, 360 milliseconds off, repeated for the duration of the ringing interval.

drmpa 5ESS Switch _
(5606-3) OFFICE DATA ADMINISTRATION
DISTINCTIVE RINGING LINE (MLHG/TERM) PARAMETERS

* 1. MLHG 0031
* 2. TERM 0025
* 3. FEATURE MYFEATUR

4. RINGING PATTERN TYPE B

Figure 1 SAMPLE DRMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 8: TERMINAL GROUP STATION RESTRICTION FORMS

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SEC. 8A: 5607-1/2 RECORD
TERMINAL GROUP AND STATION RESTRICTION - TGSRFD
FEATURE DEFINITION FORM

1. GENERAL

The 5607-1 and 5607-2 Records are available with 5E2 and later Software Releases, and are used to define the Terminal Group and Station Restriction Feature Definition.

Terminal Group and Station Restriction provides a means of grouping two or more terminals to provide station screening. The screening is based on the terminal's membership in a given TG (Terminal Group) and the type of SR (Station Restriction) characteristics of the terminal.

1.1 Terminal Group

A terminal may be either a line or a trunk. A line is a Telephone Number or Multi-Line Hunt Group/Member with associated equipment number. All members of a Trunk Group must be in the same Terminal Group. Terminal Groups can be defined across Switching Modules.

1.2 Station Restriction

SR (Station Restriction) provides a means to restrict calls on the basis of the terminal's membership in a particular Terminal Group and the Station Restriction feature selected. Station Restriction is assigned on a terminal basis and can be originating or terminating.

There are four major SR components that are defined on the input form as Feature Options:

- Customer Control of feature (Activation/Deactivation)
- Originating Restriction
- Terminating Restriction
- Error Treatment (Originating/Terminating)

Each individual member in the Terminal Group (line or trunk) will be assigned Station Restrictions which are defined on the TGSRFD form.

1.3 Class of Service

Every Telephone Number assigned a TGSR Feature on the LINEFA form (5112 Record), and every MLHG/TERM assigned a TGSR Feature on the MLHLNFA form (5113 Record), must also be associated with a Class of Service of "INDIV", "PBX", "HOTPBX", "HOTMOTL", "4WINDIV", "SATSTLN", "ATND", "ISDN", or "ISATND" defined on the LCC form; for 5E8 and later, it may also be "MODEM".

Every CKT TN (Circuit Telephone Number) assigned a TGSR Feature on the LINEFA form and every Circuit MLHG/TERM assigned a TGSR Feature on the MLHLNFA form must be associated with a Class of Service of "ISDN"or "ISATND" on the LCC form.

All Telephone Numbers, Circuit Telephone Numbers, MLHG/TERM Numbers and Circuit MLHG/TERM Numbers assigned as manual lines on the LINE or MLHLN form, and also assigned a TGSR Feature on the LINEFA or MLHLNFA form, must have the TGSR Feature name defined on the TGSRFD form, and must be unrestricted originating (ORIGINATING RESTRICTION of "NONE" and DEFAULT of "NONE").

Every TRUNK/TKGRP assigned a TGSR Feature on the TRUNKFA, TKGRPFA, or CLUSTR form must have the associated TRKCLS entry on the TKGRP form (5202-1 Record) as listed below:

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Trunk Class	
AUXTRNK	Auxiliary Service Trunk.
EDSL	Extended Digital Subscriber Line Trunks. This TRKCLS entry is valid only when "Y"is entered in the ACT field for SFID 60 on the SFSYS form (5713-1 Record) to activate the Secured Feature Metro Hub.
EDSLHM	EDSL Trunk for Hotel/Motel TSPS Service. This TRKCLS entry is valid only when "Y"is entered in the ACT field for SFID 60 on the SFSYS form (5713-1 Record) to activate the Secured Feature Metro Hub.
LTOLLCON	Toll Connecting.
PBXDID	PBX Direct Inward Dialing 1 Way Outgoing.
PF	Private Facility.
PFCPE	Private Facility Customer Premise Equipment.
PFLASH	Private Facility Feature Flash.
PFITT	Software Release: 5E3 and later. Private Facility Intertandem Trunk.
PRINTOLL	Primary Intertoll.
TTOLLCON	Toll Completing.

1.4 Preconstructed Features

Preconstructed Feature names are available for the Terminal Group and Station Restriction Feature Definition form. The preconstructed names listed in Figure 3 can only be reviewed through 5ODA on the TGSRFD input form, therefore Default Parameters cannot be specified. The appropriate TGSRLPA, TGSRMPA or TGSRTPA form must be entered to specify the actual Parameter values required on the preconstructed feature name.

1.5 Advanced Services Platform

Due to the nature of ASP (Advanced Services Platform, previously PVN, Private Virtual Network), originating restrictions are overridden for ASP calls so that the SCP (Service Control Point) can perform call screening functions.

1.6 Recent Change View

The corresponding Recent Change View for this form is 12.21.

2. FORM ENTRIES - 5607-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *FEATURE NAME

Description: Enter a Feature Name to define the particular version of the BRCS (Business and Residence Custom Services) Terminal Group and Station Restriction feature. The first character of all preconstructed features is always a slash (/).
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

A Terminal Group Station Restriction Feature name can be assigned to many different terminals (individual lines, MLHG Terminals and Trunks), but each terminal can be assigned only one TGSR Feature name defined on the TGSRFD form.

For 5E9(1) and later, a TGN/MEMB(s) defined on a TKGRP form with its WB RATE field entered can only have, at most, one TGSR Feature assigned.

2.3 REMARKS

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Description: Describe the meaning of the feature.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The fields (Section 2.4 - Section 2.5) specify how the feature can be activated and deactivated.

2.4 ACT TYPE

Description: Enter the activation type for the feature.

Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	No customer activation code is needed; the feature is always active and the Originating and Terminating Station Restrictions apply.
CODE	Customer activation by dialing an activation code.

Data Rules:

For 5E7 and later, if "AUTO"is entered for a TGN assigned a Terminal Group and Station Restriction Feature on the TRUNKFA (or CLUSTR) form then the corresponding A field entry for Initial Activation Status on the TRUNKFA (or CLUSTR) form must be "Y".

If "AUTO"is entered for MLHG/TERMS on the MLHLNFA form that are assigned a Terminal Group and Station Restriction Feature, then "Y"must be entered in the corresponding A field for the Initial Activation Status on the MLHLNFA, BFG or associated CLUSTR form.

2.5 DACT TYPE

Description: Enter the deactivation type for the feature.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
NONE	No customer deactivation code (change is prohibited).
CODE	Customer deactivation by dialing a deactivation code.
AUTO	Automatic deactivation, e.g., the customer activates Station Restriction via a dialed code for SR to be active for one call, the call in progress. When the terminal goes back on-hook, SR is automatically deactivated.

Data Rules:

When ACT TYPE is set to "AUTO", DEACT TYPE must be set to "NONE". When ACT TYPE is set to "CODE", DEACT TYPE must be set to "AUTO"or "CODE".

ORIGINATING

The fields (Section 2.6 - Section 2.8) apply to originating Station Restriction.

2.6 RESTRICTION

Description: Enter the Originating Station Restriction Option. Station Restriction applies if the customers TGSR feature is active (on).

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Required Field.
Default: NONE
Valid Entries:

Valid RESTRICTION Entries

Entry	Definition
NONE	Originating Unrestricted Option. No originating restrictions on the terminal.
SEMI	Originating Semi-Restricted Option prohibits the completion of calls destined to terminate outside the originating terminal's TG. See Figure 4 for exceptions to Semi-Restricted Options.
FULL	Originating Fully Restricted Option prohibits the completion of all calls destined to terminate outside the originating terminal's TG or the attendant. See Figure 5 for exceptions to Fully Restricted Options.

2.7 DEFAULT

Description: Enter the Originating SR (Station Restriction) Default Option. This SR applies if the customer feature is deactivated (off).

Required Field.
Default: NONE
Valid Entries:

Valid DEFAULT Entries

Entry	Definition
NONE	Originating Unrestricted Option. No originating restrictions on the terminal.
SEMI	Originating Semi-Restricted Option prohibits the completion of calls destined to terminate outside the originating terminal's TG. See Figure 4 for exceptions to Semi-Restricted Options.
FULL	Originating Fully Restricted Option prohibits the completion of all calls destined to terminate outside the originating terminal's TG or the attendant. See Figure 5 for exceptions to Fully Restricted Options.

Data Rules:

Default Restriction is used only when a customer is given ACT TYPE of "CODE"so that the customer can turn the feature on or off. When the SR feature is active, then the Restriction applies. When the SR feature is deactivated, then the default applies.

2.8 ERROR TRTMT

Description: Enter the Originating Station Restriction Error Treatment Option. Error treatment is given whenever a call cannot complete because of SR failure. Station Restriction error treatment will be applied to the originating terminal for both originating and terminating restriction.

Required Field.
Default: TONE
Valid Entries:

Valid ERROR TRTMT Entries

Entry	Definition
TONE	Reorder tone is applied to the terminal to indicate SR error.
RERTE	Reroute to Telephone Number. The call is forwarded to a prearranged Telephone Number if a Station Restriction error is encountered. The individual terminals for the TG of this feature must have the FORWARD TO DN specified on either the TGSRFD or on an individual parameter form (TGSRLPA, TGSRMPA, or TGSRTPA).
ANNC	Announcement if SR error. The individual terminals for the TG of this feature must have the ERROR ANNCMT ROUTE INDEX specified on either the TGSRFD form (in a default parameter) or on an individual parameter form (TGSRLPA, TGSRMPA, or TGSRTPA).

Data Rules:

For 5E5 and later, when a TGSR feature is assigned (via a TRUNKFA/TKGRPFA form) then ORIGINATING ERROR TRTMT and TERMINATING ERROR TRTMT must be set to "TONE"when the corresponding TRKGRP form has INPULSING or OUTPULSING equal to "ISUP7"

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For 5E6 and later, when a TGSR feature is assigned (via a TRUNKFA or CLUSTR form), then the TGSR feature must have the ORIGINATING ERROR TRTMT and TERMINATING ERROR TRTMT must be set to "TONE" when the corresponding TKGRP form has TRKCLS equal to "EDSL" or "EDSLHM".

TERMINATING

The fields (Section 2.9 - Section 2.11) apply to terminating Station Restriction.

2.9 RESTRICTION

Description: Enter the Terminating Station Restriction Option. Station Restriction applies if the customers TGSR feature is active (on).

Required Field.
Default: NONE
Valid Entries:

Valid RESTRICTION Entries

Entry	Definition
NONE	Terminating Unrestricted Option. No terminating restrictions on the terminal.
SEMI	Terminating Semi-Restricted Option prohibits the completion of calls originating outside the restricted terminal's TG and destined to terminate to the restricted terminal. There is one exception; the restricted terminal can receive calls from outside the TG if there is intermediate routing (see following note) and the last connection was from the attendant or another terminal in a given TG. See Figure 4 for exceptions to Semi-Restricted Options.
ASPS	Software Release: 5E8 only. Terminating Semi-Restricted, plus ASP (Advanced Services Platform; previously PVN (Private Virtual Network)) originations. This option prohibits the completion of non-ASP calls originating outside of a restricted terminal's TG and destined to terminate to the restricted terminal. ASP calls are always allowed to terminate. There is one exception to the above rules: the restricted terminal can receive calls from outside the TG if there is intermediate routing (see the following note) and the last connection was from the attendant or another terminal in a given TG. See Figure 4 for exceptions to Semi-Restricted Options.
PVNS	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASPS". See the description under "ASPS".
FULL	Terminating Fully Restricted Option prohibits the completion of all calls originating outside the restricted terminal's TG or the attendant to terminate to the restricted terminal. See Figure 5 for exceptions to Fully Restricted Options.
ASPF	Software Release: 5E8 only. Terminating Fully Restricted, plus ASP (Advanced Services Platform; previously PVN (Private Virtual Network)) originations. This option prohibits the completion of all non-ASP calls originating outside either the restricted terminal's TG or the attendant to terminate to the restricted terminal. ASP calls are always allowed to terminate. See Figure 5 for exceptions to Fully Restricted Options.
PVNF	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASPF". See the description under "ASPF".

NOTE: Intermediate routing is that routing which causes a route different from that originally made, i.e., Call Forwarding which creates intermediate routing on the forwarded leg of the call.

2.10 DEFAULT

Description: Enter the Terminating Station Restriction Default Option. This SR applies if the customer TGSR feature is deactivated (off).

Required Field.
Default: NONE
Valid Entries:

Valid DEFAULT Entries

Entry	Definition

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NONE	Terminating Unrestricted Option. No terminating restrictions on the terminal.
SEMI	Terminating Semi-Restricted Option prohibits the completion of calls originating outside the restricted terminal's TG and destined to terminate to the restricted terminal. There is one exception, the restricted terminal can receive calls from outside the TG if there is intermediate routing (see the following Note) and the last connection was from the attendant or another terminal in a given TG. See Figure 4 for exceptions to Semi-Restricted Options.
ASPS	Software Release: 5E8 only. Terminating Semi-Restricted, plus (Advanced Services Platform; previously PVN (Private Virtual Network)) originations. This option prohibits the completion of non-ASP calls originating outside of a restricted terminal's TG and destined to terminate to the restricted terminal. ASP calls are always allowed to terminate. There is one exception to the above rules: the restricted terminal can receive calls from outside the TG if there is intermediate routing (see the following Note) and the last connection was from the attendant or another terminal in a given TG. See Figure 4 for exceptions to Semi-Restricted Options.
PVNS	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASPS". See the description under "ASPS".
FULL	Terminating Fully Restricted Option prohibits the completion of all calls originating outside the restricted terminal's TG or the attendant to terminate to the restricted terminal. See Figure 5 for exceptions to Fully Restricted Options.
ASPF	Software Release: 5E8 only. Terminating Fully Restricted, plus ASP (Advanced Services Platform; previously PVN (Private Virtual Network)) originations. This option prohibits the completion of all non-ASP calls originating outside either the restricted terminal's TG or the attendant to terminate to the restricted terminal. ASP calls are always allowed to terminate. See Figure 5 for exceptions to Fully Restricted Options.
PVNF	Software Release: 5E6 - 5E7. For 5E8 and later, this is changed to "ASPF". See the description under "ASPF".

NOTE: Intermediate routing is that routing which causes a route different from that originally made, e.g., Call Forwarding which creates intermediate routing on the forwarded leg of the call.

This Default restriction is used only when ACT TYPE is set to "CODE", DACT TYPE is "AUTO"or "CODE", and the feature has been deactivated.

2.11 ERROR TRTMT

Description: Enter the Terminating Station Restriction Error Treatment Option. Error treatment is given whenever a call cannot complete because of SR failure. Station Restriction error treatment will be applied to the originating terminal for both originating and terminating restriction.

Required Field.
Default: TONE
Valid Entries:

Valid ERROR TRTMT Entries

Entry	Definition
TONE	Reorder tone is applied to the terminal to indicate SR error.
RERTE	Reroute to Telephone Number. The call is forwarded to a prearranged Telephone Number if a Station Restriction error is encountered. The individual terminals for the TG of this feature must have the FORWARD TO DN specified on either the TGSRFD or on an individual parameter form (TGSRLPA, TGSRMPA, or TGSRTPA).
ANNC	Announcement if SR error. The individual terminals for the TG of this feature must have the ERROR ANNCMT ROUTE INDEX specified on either the TGSRFD form or on an individual parameter form (TGSRLPA, TGSRMPA, or TGSRTPA).

Data Rules:

For 5E5 and later, when a TGSR feature is assigned (via a TRUNKFA/TKGRPFA form) then ORIGINATING ERROR TRTMT and TERMINATING ERROR TRTMT must be set to "TONE"when the corresponding TRKGRP form has INPULSING or OUTPULSING equal to "ISUP7"

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For 5E6 and later, when a TGSR feature is assigned (via a TRUNKFA or CLUSTR form), then the TGSR feature must have the ORIGINATING ERROR TRTMT and TERMINATING ERROR TRTMT must be set to "TONE" when the corresponding TKGRP form has TRKCLS equal to "EDSL" or "EDSLHM".

3. FORM ENTRIES - 5607-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

3.2 * FEATURE NAME

Description: Enter the Feature Name defined on the 5607-1 Record.

DEFAULT PARAMETERS

The Default Parameter values (fields Section 3.3 - Section 3.4) apply automatically to each line (Telephone Number), Multi-Line Hunt Group/Member or Trunk Group/Member that is assigned the TGSR feature. These items are all optional on the feature definition form, but their use is highly recommended to save data entry work with the assignment of individual line and trunk parameter forms.

Any line, Multi-Line Hunt line or trunk that has a Terminal Group Station Restriction feature may override the parameters assigned on this form by entering the parameters on an associated TGSRLPA, TGSRMPA or TGSRTPA form.

3.3 GROUP ID

Description: Enter the Terminal Group Identification number. The Group ID is the value which names the association of two or more terminals to provide screening and restriction criteria.
Valid Entries: 1 - 65535

Data Rules:

If a trunk is a member of a Terminal Group, then all members of the Trunk Group must be members of the same Terminal Group, with the same Group ID.

If the GROUP ID is not assigned on this form, it must be individually assigned to each line, Multi-Line Hunt line and trunk via the associated TGSRLPA, TGSRMPA, and TGSRTPA forms.

For 5E7 and earlier, when members of the same MLHG are assigned a TGSR feature on MLHNLFA, CLUSTR or BFG forms, the feature must have the same GROUP ID on this TGSRFD form or on associated TGSRMPA forms.

3.4 MOH ALW

Description: Is Music on Hold allowed?

Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when Secured Feature ID 64 is set to "S" on the SFSYS form (5713-1 Record).

Software Release: 5E7 and later
Required Field.
Default Values: N
Valid Entries: Y, N

Data Rules:

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If MOH ALW is "Y"for a TGSR feature assigned to a TN or an MLHG/TERM on a LINEFA, MLHLNFA, CLUSTR, or BFG form, then:

- the LCC and RAX of the TN or MLHG/TERM must be defined on a corresponding LCC form with CLASS OF SERVICE of "INDIV", "ATND", "ISDN", "ISATND".
- a GROUP ID must be specified on either the BFG or corresponding TGSRFD, TGSRLPA or TGRSMPA form and have a MUSIC ON HOLD TGN and MEMB assigned on the TGATTD form.

If TGSR features assigned on the BFG form or an associated CLUSTR form have ORIGINATING/TERMINATING ERROR TRTMT set to "ANNC" on the TGSRFD form, a corresponding ORIGINATING/TERMINATING ERROR ANNCMT ROUTE INDEX entry must be made on the TGSRFD form or in the TGSR Parameters on the BFG form.

- ***NOTE:*** The BFG form takes precedence over the TGSRFD form if any of the following BFG form TERMINAL GROUP Parameters are entered:

- GROUP ID
- MOH ALW
- ORIGINATING/TERMINATING FORWARD TO DN
- ORIGINATING/TERMINATING ERROR ANNCMT ROUTE INDEX.

If TGSR features assigned on the BFG form or an associated CLUSTR form have ORIGINATING/TERMINATING ERROR TRTMT set to "RERTE" on the TGSRFD form, a corresponding ORIGINATING/TERMINATING FORWARD TO DN entry must be made on the TGSRFD form or in the TGSR Parameters on the BFG form.

- ***NOTE:*** The BFG form takes precedence over the TGSRFD form if any of the following BFG form TEMINAL GROUP Parameters are entered:

- GROUP ID
- MOH ALW
- ORIGINATING/TERMINATING FORWARD TO DN
- ORIGINATING/TERMINATING ERROR ANNCMT ROUTE INDEX.

FORWARD TO DN

The fields (Section 3.5 - Section 3.6) specify the telephone numbers to which calls will be rerouted when Station Restriction failure occurs.

3.5 ORIGINATING

Description: Originating Forwarded to Directory Number. The Directory Number value is related to the Feature Option field Originating Error Treatment.
Valid Entries: 1 - 32 digits (0 - 9, *, #)

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Data Rules:

If Originating ERROR TREATMENT is "RERTE", then an associated Originating Forward to DN must be specified on either the TGSRFD form as a default parameter or as a value on a given line or trunk parameter form (TGSRLPA, TGSRMPA or TGSRTPA).

3.6 TERMINATING

Description: Terminating Forwarded to Directory Number. The Directory Number value is related to the Feature Option field Terminating Error Treatment.
Valid Entries: 1 - 32 digits (0 - 9, *, #)

Data Rules:

If Terminating ERROR TREATMENT is "RERTE", then an associated Terminating Forward to DN must be specified on either the TGSRFD form as a default parameter, as a value on a given line or trunk parameter form (TGSRLPA, TGSRMPA or TGSRTPA).

ERROR ANNCMT ROUTE INDEX

The fields (Section 3.7 - Section 3.8) specify the error announcement route indexes for originating and terminating.

3.7 ORIGINATING

Description: Originating Error Announcement Route Index.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The Route Index value is related to the Originating Error Treatment field. If ORIGINATING ERROR TRTMT is "ANNC", then an associated ORIGINATING ERROR ANNCMT ROUTE INDEX must be specified on either the TGSRFD form as a default parameter, or on a given line or trunk parameter form (TGSRLPA, TGSRMPA or TGSRTPA).

3.8 TERMINATING

Description: Terminating Error Announcement Route Index.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The Route Index value is related to the Terminating Error Treatment field. If TERMINATING ERROR TRTMT is "ANNC", then an associated TERMINATING ERROR ANNCMT ROUTE INDEX must be specified on either the TGSRFD form as a default parameter, or on a given line or trunk parameter form (TGSRFD, TGSRMPA or TGSRTPA).

3.9 DISP RESTRICT

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Description: The Display Restriction field is used to indicate the restriction that displays on an ISAT's console for an incoming MBG (Multiswitch Business Group) call. The DISP RESTRICT field was added to support the CENTREX Network feature. For more information on the CENTREX Network secured features, see Division 2, Sections 4A181, 4A182, and 4A183.

Software Release: 5E9(2) and later.
Valid Entries:

Valid DISP RESTRICT Entries

Entry	Definition
TOLL	Attendant display indicates toll calls are restricted.

3.10 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the TGATTD (Terminal Group Attendant and Data) form (5611 Record), RC view (4.4); but ifthat form does not exist or is NULL

```
tgsrfd                    5ESS Switch
(5607-1/2)            OFFICE DATA ADMINISTRATION
        TERMINAL GROUP STATION RESTRICTION FEATURE DEFINITION


* 2. FEATURE NAME ________     3. REMARKS _____________________________

  FEATURE OPTIONS          DEFAULT PARAMETERS
  4. ACT TYPE  AUTO        12. GROUP ID _____   18. DISP RESTRICT ____
  5. DACT TYPE NONE        13. MOH ALW  N       19. CNIGI        NULL

  ORIGINATING              FORWARD TO DN
  6. RESTRICTION NONE      14. ORIGINATING _____________________________
  7. DEFAULT     NONE      15. TERMINATING _____________________________
  8. ERROR TRTMT TONE
                       ERROR ANNCMT ROUTE INDEX
  TERMINATING          16. ORIGINATING ____
  9. RESTRICTION NONE      17. TERMINATING ____
 10. DEFAULT     NONE
 11. ERROR TRTMT TONE
```

Figure 1 SAMPLE TGSRFD FORM 5E10 THROUGH 5E16(1) SOFTWARE RELEASE

```
tgsrfd                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5607-1/2)   TERMINAL GROUP STATION RESTRICTION FEATURE DEFINITION
```

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*1. FEATURE NAME AAAA TERMINATING
3. REMARKS _____ 9. RESTRICTION NONE
10. DEFAULT NONE
FEATURE OPTIONS 11. ERROR TRTMT TONE
4. ACT TYPE AUTO
5. DACT TYPE NONE

ORIGINATING
6. RESTRICTION NONE
7. DEFAULT NONE
8. ERROR TRTMT TONE

---

tgsrfd 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5607-1/2) TERMINAL GROUP STATION RESTRICTION FEATURE DEFINITION

DEFAULT PARAMETERS 18. DISP RESTRICT ____
12. GROUP ID _____ 19. CNIGI NULL
13. MOH ALW N

FORWARD TO DN
14. ORIGINATING _____
15. TERMINATING _____

ERROR ANNCMT ROUTE INDEX
16. ORIGINATING _____
17. TERMINATING _____

Figure 2 SAMPLE TGSRFD FORM 5E16(2) AND LATER SOFTWARE RELEASE

ESS 5607-1(01)TG-5 TERMINAL GROUP AND STATION RESTRICTION DATE _____
FEATURE DEFINITION RECORD
TGSRFD 5ESS SWITCH
12.21
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	ACT TYPE	DCT TYPE	ORIGINATING			TERMINATING		
/TG*	WILDCARD TERM GROUP FEATURE	AUTO	NONE	NONE	NONE	TONE	NONE	NONE	TONE
/TGFFA	FULLY RESTRICTED ORIG & TERM ANN	AUTO	NONE	FULL	NONE	ANNC	FULL	NONE	ANNC
/TGFFDN	FULL ORIG & TERM ROUTE TO TN	AUTO	NONE	FULL	NONE	RERTE	FULL	NONE	RERTE
/TGFFT	FULL RESTRICT ORIG & TERM TONE	AUTO	NONE	FULL	NONE	TONE	FULL	NONE	TONE
/TGFSA	FULLY ORIG, SEMI TERM ANN	AUTO	NONE	FULL	NONE	ANNC	SEMI	NONE	ANNC
/TGFSDN	FULLY ORIG, SEMI TERM ROUTE TN	AUTO	NONE	FULL	NONE	RERTE	SEMI	NONE	RERTE
/TGFST	FULLY ORIG, SEMI TERM TONE	AUT	NON	FUL	NON	TON	SEM	NON	TON

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		O	E	L	E	E	I	E	E
/TGFUA	FULLY RESTRICTED ORIGINATING ANN	AUTO	NONE	FULL	NONE	ANNC	NONE	NONE	ANNC
/TGFUDN	FULLY RESTRICTED ORIG ROUTE TN	AUTO	NONE	FULL	NONE	RERTE	NONE	NONE	RERTE
/TGFUT	FULLY RESTRICTED ORIG. TONE	AUTO	NONE	FULL	NONE	TONE	NONE	NONE	TONE
/TGSFA	SEMI ORIG, FULLY TERM ANN	AUTO	NONE	SEMI	NONE	ANNC	FULL	NONE	ANNC
/TGSFDN	SEMI ORIG, FULLY TERM ROUTE TN	AUTO	NONE	SEMI	NONE	RERTE	FULL	NONE	RERTE
/TGSFT	SEMI ORIG, FULLY TERM TONE	AUTO	NONE	SEMI	NONE	TONE	FULL	NONE	TONE
/TGSSA	SEMI-RESTRICTED ORIG & TERM ANN	AUTO	NONE	SEMI	NONE	ANNC	SEMI	NONE	ANNC
/TGSSDN	SEMI-ORIG & TERM ROUTE TO TN	AUTO	NONE	SEMI	NONE	RERTE	SEMI	NONE	RERTE
/TGSST	SEMI-RESTRICT ORIG. & TERM TONE	AUTO	NONE	SEMI	NONE	TONE	SEMI	NONE	TONE
/TGSUA	SEMI-RESTRICTED ORIGINATING ANN	AUTO	NONE	SEMI	NONE	ANNC	NONE	NONE	ANNC
/TGSUDN	SEMI-RESTRICTED ORIG ROUTE TN	AUTO	NONE	SEMI	NONE	RERTE	NONE	NONE	RERTE
/TGSUT	SEMI-RESTRICTED ORIG. TONE	AUTO	NONE	SEMI	NONE	TONE	NONE	NONE	TONE
/TGUFA	FULLY RESTRICTED TERMINATING ANN	AUTO	NONE	NONE	NONE	ANNC	FULL	NONE	ANNC
/TGUFDN	FULLY RESTRICTED TERM ROUTE TN	AUTO	NONE	NONE	NONE	RERTE	FULL	NONE	RERTE
/TGUFT	FULLY RESTRICTED TERM TONE	AUTO	NONE	NONE	NONE	TONE	FULL	NONE	TONE
/TGUSA	SEMI-RESTRICTED TERMINATING ANN	AUTO	NONE	NONE	NONE	ANNC	SEMI	NONE	ANNC
/TGUSDN	SEMI-RESTRICTED TERM ROUTE TN	AUTO	NONE	NONE	NONE	RERTE	SEMI	NONE	RERTE
/TGUST	SEMI-RESTRICTED TERM TONE	AUTO	NONE	NONE	NONE	TONE	SEMI	NONE	TONE
/TGUUA	ALLOW ORIG, ALLOW TERM ANN	AUTO	NONE	NONE	NONE	ANNC	NONE	NONE	ANNC
/TGUUDN	ALLOW ORIG, ALLOW TERM ROUTE TN	AUTO	NONE	NONE	NONE	RERTE	NONE	NONE	RERTE
/TGUUT	ALLOW ORIGINATE, ALLOW TERMINATE	AUTO	NONE	NONE	NONE	TONE	NONE	NONE	TONE

Figure 3 PRECONSTRUCTED TGSR FEATURES

Feature	Semi-Restricted Originating	Semi-Restricted Terminating
CF	Can forward call to attendant or another TG member independent of whether call is from inside or outside TG	Can receive call forwarded by attendant or another TG member independent of whether call is from inside or outside TG
3W/6W (Multiway)	3W/6W calls involving non TG members allowed	Can be added onto 3W/6W by attendant or another TG member regardless if other conferees are not in TG
Transfer	Attendant or another TG member can transfer call from semi-restricted terminal to outside TG	Call from outside TG may be transferred by attendant or another TG member to semi-restricted terminal
PU	Pick up of call from outside TG allowed	Does not apply
Hunting	Does not apply	Calls from outside TG allowed

Figure 4 SEMI-STATION RESTRICTION OPTION INTERACTIONS

Feature	Fully Restricted Originating	Fully Restricted Terminating

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CF	Calls forwarded to attendant or outside TG are blocked	Calls forwarded from attendant or outside TG are blocked
3W/6W (Multiway)	No 3W/6W with non-TG member or attendant	No 3W/6W with non-TG member or attendant
Transfer	No transfer to non-TG member or attendant	Calls from outside TG cannot be transferred to fully restricted terminal by attendant or another member
PU	Pick up calls from within the TG only (but not attendant)	Does not apply
Hunting	Does not apply	Calls from outside TG blocked. Hunting ceases.

Figure 5 FULLY STATION RESTRICTION OPTION INTERACTIONS

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SEC. 8B: 5607-3 RECORD
TERMINAL GROUP AND STATION RESTRICTION
LINE (TN) PARAMETER FORM - TGSRLPA

1. GENERAL

The 5607-3 Record is available with 5E2 and later Software Releases, and is used to define a Terminal Group and Station Restriction Line Parameter.

The Line Parameter form is associated with the Terminal Group and Station Restriction Feature Definition form and is keyed by the TN (Telephone Number). Individual TNs assigned a particular TGSR Feature name can be given new specific values for Terminal Group ID, Forwarded to DNs (Originating or Terminating) and Error Announcement Route Indexes (Originating or Terminating) that will replace or overwrite the Default Parameter values that are defined on the TGSR feature Definition form.

There are certain Feature Options that require either a value on a TGSR Feature Definition Default Parameter field or the presence of the associated Line Parameter field.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.29.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * TN

Description: Enter a customer Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The TN must be assigned on an associated Line Feature Assignment form, LINEFA (5112 Record).

The associated Class of Service on the LCC form (5306 Record) must be one of the following:

	Class of Service
ATND	50B Non-Data Link Console Line or Attendant Line.
HOTMOTL	Special Termination at Motel Equipment.
HOTPBX	Special Termination to a Motel.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
SATSTLN	Stand-Alone Test Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.

For 5E12 and later, TN/FEATURE combinations on different TGSRLPA forms cannot be duplicated.

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For 5E12 and later, if the first 3 digits of the 7-digit TNs on the TGSRLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the unique Feature name for the TGSR feature defined on the TGSRFD form.
Valid Entries: 1 - 8 characters

2.4 GROUP ID

Description: Enter the Group Identification number.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

If the GROUP ID is not assigned on the associated TGSRFD form (5607-1/2 Record), it must be entered on this form.

2.5 MOH ALW

Description: Is Music on Hold allowed?

Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

Software Release: 5E7 and later
Required Field.
Default Values: N
Valid Entries: Y, N

Data Rules:

If MOH ALW is "Y" for a TGSR feature assigned to a TN or an MLHG/TERM on a LINEFA, MLHLNFA, CLUSTR, or BFG form, then:

- the LCC and RAX of the TN or MLHG/TERM must be defined on a corresponding LCC form with CLASS OF SERVICE of "INDIV", "ATND", "ISDN", "ISATND".
- a GROUP ID must be specified on either the BFG or corresponding TGSRFD, TGSRLPA or TGRSMPA form and have a MUSIC ON HOLD TGN and MEMB assigned on the TGATTD form.

FORWARD TO DN

The fields (Section 2.6 - Section 2.7) specify the telephone numbers to which calls will be rerouted when Station Restriction failure occurs.

2.6 ORIGINATING

Description: Enter the ORIGINATING FORWARD TO DN, Directory Number. An entry corresponds to the associated ORIGINATING ERROR TRTMT field equal to "RERTE" (reroute to DN) on the TGSRFD form.
Valid Entries: 1 - 32 characters (0 - 9, *, or #)

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2.7 TERMINATING

Description: Enter the TERMINATING FORWARD TO DN, Directory Number. An entry corresponds to the associated TERMINATING ERROR TRTMT field equal to "RERTE" (reroute to DN) on the TGSRFD form.
Valid Entries: 1 - 32 characters (0 - 9, *, or #)

ERROR ANNCMT ROUTE INDEX

The fields (Section 2.8 - Section 2.9) specify the error announcement route indexes for originating and terminating.

2.8 ORIGINATING

Description: Enter the ORIGINATING ERROR ANNCMT ROUTE INDEX. An entry corresponds to the associated ORIGINATING ERROR TRTMT field equal to "ANNC" (route to special announcement) on the TGSRFD form.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

If the ORIGINATING ERROR TRTMT field on the TGSRFD form is "TONE", then the associated ORIGINATING fields for both FORWARD TO DN and ERROR ANNCMT ROUTE INDEX must be blank.

If the ORIGINATING ERROR TRTMT field on the TGSRFD form is "ANNC", then the associated ORIGINATING field for ERROR ANNCMT ROUTE INDEX must be specified. For any other Originating Error Treatment, this field must be blank.

2.9 TERMINATING

Description: Enter the TERMINATING ERROR ANNCMT ROUTE INDEX. An entry corresponds to the associated TERMINATING ERROR TRTMT field equal to "ANNC" (route to special announcement) on the TGSRFD form.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

For 5E13 and later: 1 - 16382

Data Rules:

If the TERMINATING ERROR TRTMT field on the TGSRFD form is "TONE", then the associated TERMINATING fields for both FORWARD TO DN and ERROR ANNCMT ROUTE INDEX must be blank.

If the TERMINATING ERROR TRTMT field on the TGSRFD form is "ANNC", then the associated TERMINATING field for ERROR ANNCMT ROUTE INDEX must be specified. For any other Terminating Error Treatment, this field must be blank.

2.10 DISP RESTRICT

Description: The Display Restriction field is used to indicate the restriction that displays on an ISAT's console for an incoming MBG (Multiswitch Business Group) call. The DISP RESTRICT field was added to support the CENTREX Network feature. For more information on the CENTREX Network secured

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features, see Division 2, Sections 4A181, 4A182, and 4A183.

Software Release: 5E9(2) and later.
Valid Entries:

Valid DISP RESTRICT Entries

Entry	Definition
TOLL	Attendant display indicates toll calls are restricted.

2.11 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the TGATTD (Terminal Group Attendant and Data) form (5611 Record), RC view (4.4); but if that form does not exist or is NULL consult OFCOPT.

tgsrlpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5607-3) TERMINAL GROUP STATION RESTRICTION LINE (TN) PARAMETERS

*1. TN _____ 9. DISP RESTRICT ____
*2. FEATURE _____ 10. CNIGI NULL
#3. GROUP ID _____
4. MOH ALW N

FORWARD TO DN
5. ORIGINATING _____
6. TERMINATING _____

ERROR ANNCMT ROUTE INDEX
7. ORIGINATING ____
8. TERMINATING ____

Figure 1 SAMPLE TGSRLPA FORM 5E12 THROUGH 5E16(1) SOFTWARE RELEASES

tgsrlpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5607-3) TERMINAL GROUP STATION RESTRICTION LINE (TN) PARAMETERS

*1. TN _____ 9. DISP RESTRICT ____
*2. FEATURE _____ 10. CNIGI NULL
#3. GROUP ID _____
4. MOH ALW N

FORWARD TO DN

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5. ORIGINATING _____
6. TERMINATING _____

ERROR ANNCMT ROUTE INDEX
7. ORIGINATING _____
8. TERMINATING _____

Figure 2 SAMPLE TGSRLPA FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 8C: 5607-4 RECORD
TERMINAL GROUP AND STATION RESTRICTION
LINE (MLHG/TERM) PARAMETER FORM - TGSRMPA

1. GENERAL

The 5607-3 Record is available with 5E2 and later Software Releases. It is used to define Terminal Group and Station Restriction parameters for an MLHG MEMB (Multi-Line Hunt Group Member).

The MLHG/TERM Form is associated with the Terminal Group and Station Restriction Feature Definition Form and is keyed by MLHG/TERM. Individual MLHG/TERMS assigned a TGSR Feature name can be given new specific values for Terminal Group ID, Forward to DNs (originating or terminating) that will replace or overwrite the Default Parameter values that are defined on the TGSR Feature Definition Form.

There are certain Feature Options that require either a value on a TGSR Feature Definition Default Parameter field or the presence of the associated MLHG/TERM Parameter field.

The MLHG/TERM Form is used to distinguish customer lines that have Station Restrictions different from those defined on the TGSRFD Form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.29.

2. FORM AND RECORD ENTRIES

2.1 BASE CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * MLHG

Description: Enter a Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

The MLHG value must be assigned on the Multi-Line Hunt and Member Feature Assignment Form, MLHLNFA (5113 Record).

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Terminal (member) Number.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The terminal value must be assigned on a Multi-Line Hunt and Member Feature Assignment Form, MLHLNFA.

The associated Class of Service on the LCC form (5306 Record) must be one of the following:

Class of Service	
ATND	50B Non-Data Link Console Line or Attendant Line.
HOTMOTL	Special Termination at Motel Equipment.

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HOTPBX	Special Termination to a Motel.
INDIV	Individual Line.
ISDN	Software Release: 5E4 and later. Integrated Services Digital Network (ISDN) digital subscriber lines.
ISATND	Software Release: 5E4 and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
SATSTLN	Stand-Alone Test Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.

2.4 *FEATURE

Description: Enter the feature name for the specific TSGR feature, defined on the TGSRFD Form.
Valid Entries: 1 - 8 characters

2.5 GROUP ID

Description: Enter the Terminal Group Identification number.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

If the GROUP ID is not assigned on the associated TGSRFD form (5607-1/2 Record), it must be entered on this form.

2.6 MOH ALW

Description: Is Music on Hold allowed?

Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

Software Release: 5E7 and later
Required Field.
Default Values: N
Valid Entries: Y, N

Data Rules:

If MOH ALW is "Y" for a TGSR feature assigned to a TN or an MLHG/TERM on a LINEFA, MLHLNFA, CLUSTR, or BFG form, then:

- the LCC and RAX of the TN or MLHG/TERM must be defined on a corresponding LCC form with CLASS OF SERVICE of "INDIV", "ATND", "ISDN", "ISATND".
- a GROUP ID must be specified on either the BFG or corresponding TGSRFD, TGSRLPA or TGRSMPA form and have a MUSIC ON HOLD TGN and MEMB assigned on the TGATTD form.

FORWARD TO DN

The fields (Section 2.7 - Section 2.8) specify the telephone numbers to which calls will be rerouted when Station Restriction failure occurs.

2.7 ORIGINATING

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Description: Enter the Originating Forward to DN (Directory Number). Note that an entry corresponds to the associated Originating Error Treatment field equal to "RERTE" on the TGSRFD Form, reroute to DN.
Valid Entries: 1 - 32 digits (0 - 9, *, or #)

2.8 TERMINATING

Description: Enter the Terminating Forward to DN (Directory Number). Note that an entry corresponds to the associated Terminating Error Treatment field equal to "RERTE" on the TGSRFD Form, reroute to DN.
Valid Entries: 1 - 32 digits (0 - 9, *, or #)

ERROR ANNCMT ROUTE INDEX

The fields (Section 2.9 - Section 2.10) specify the error announcement route indexes for originating and terminating.

2.9 ORIGINATING

Description: Enter the Originating Error Announcement Index. Note that an entry corresponds to the associated Originating Error Treatment field equal to "ANNC" on the TGSRFD Form, for route to special announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

  For 5E13 and later: 1 - 16382

2.10 TERMINATING

Description: Enter the Terminating Error Announcement Route Index. Note that an entry corresponds to the associated Terminating Error Treatment field equal to "ANNC" on the TGSRFD Form, for route to special announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

  For 5E13 and later: 1 - 16382

Data Rules:

If the Originating or Terminating Error Treatment field on the TGSRFD Form equals "TONE", then the associated Originating/Terminating fields for both FORWARD TO DN and ERROR ANNCMT ROUTE INDEX must be blank.

2.11 DISP RESTRICT

Description: The Display Restriction field is used to indicate the restriction that displays on an ISAT's console for an incoming MBG (Multiswitch Business Group) call. The DISP RESTRICT field was added to support the CENTREX Network feature. For more information on the CENTREX Network secured features, see Division 2, Sections 4A181, 4A182, and 4A183.

Software Release: 5E9(2) and later.
Valid Entries:

Valid DISP RESTRICT Entries

Entry	Definition
TOLL	Attendant display indicates toll calls are restricted.

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2.12 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the TGATTD (Terminal Group Attendant and Data) form (5611 Record), RC view (4.4); but if that form does not exist or is NULL consult OFCOPT.

tgsrmpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5607-4)TERMINAL GROUP STATION RESTRICTION LINE (MLHG/TERM) PARAMETERS

*1. MLHG ____ ERROR ANNCMT ROUTE INDEX
*2. TERM ____ 8. ORIGINATING _____
*3. FEATURE _____ 9. TERMINATING _____
#4. GROUP ID _____
5. MOH ALW N 10. DISP RESTRICT ____
11. CNIGI NULL
FORWARD TO DN
6. ORIGINATING _____
7. TERMINATING _____

Figure 1 SAMPLE TGSRMPA FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 8D: 5607-5 RECORD
TERMINAL GROUP AND STATION RESTRICTION
TRUNK PARAMETER FORM - TGSRTPA

1. GENERAL

The 5607-5 Record is available with 5E2 and later Software Releases, and is used to define Terminal Group and Station Restriction Trunk Parameter.

The TGN/MEMB NO Form is associated with the Terminal Group and Station Restriction Feature Definition Form and is keyed by TGN/MEMB. Individual TGN/MEMBs assigned a particular TGSR feature name can be given new specific values for Terminal Group ID, Forward to Directory Numbers (Originating or Terminating) that will replace or overwrite the Default Parameter values that are defined on the TGSR Feature Definition Form.

There are certain Feature Options that require a value on a TGSR Feature Definition Default Parameter field or the presence of the associated Trunk Parameter field.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.29.

2. BASE AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN value must be assigned on a Trunk Feature Assignment Form, TRUNKFA (5205 Record) or on the TKGRPFA form (5206 Record).

The associated TRKCLS entry on the TKGRP form (5202-1 Record) must be one of the following:

Trunk Class	
AUXTRNK	Auxiliary Service Trunk.
EDSL	Extended Digital Subscriber Line Trunks. This TRKCLS is not valid unless Secured Feature ID 60 is activated.
EDSLHM	EDSL Trunk for Hotel/Motel TSPS Service. This TRKCLS is not valid unless Secured Feature ID 60 is activated.
LTOLLCON	Toll Connecting.
PBXDID	PBX Direct Inward Dialing 1 Way Outgoing.
PF	Private Facility.
PFCPE	Private Facility Customer Premise Equipment.
PFLASH	Private Facility Feature Flash.
PFITT	Software Release: 5E3 and later. Private Facility Intertandem Trunk.
PRINTOLL	Primary Intertoll.
TTOLLCON	Toll Completing.

2.3 * MEMB

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Description: Enter the TG (Trunk Group) Member Number.
Valid Entries:
- For 5E2: 0 - 1983
- For 5E3 and later: 0 - 1951

Data Rules:

The TG Member Number value must be assigned on a Trunk Feature Assignment Form (TRUNKFA).

2.4 * FEATURE

Description: Enter the feature name for the specific TGSR feature, defined on the TGSR Form.
Valid Entries: 1 - 8 characters

2.5 GROUP ID

Description: Enter the Terminal Group Identification number.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

If the GROUP ID is not assigned on the associated TGSRFD form (5607-1/2 Record), it must be entered on this form.

FORWARD TO DN

The fields (Section 2.6 - Section 2.7) specify the telephone numbers to which calls will be rerouted when Station Restriction failure occurs.

2.6 ORIGINATING

Description: Enter the Originating Forward to DN (Directory Number). Note that an entry corresponds to the associated Originating Error Treatment field equal to "RERTE" on the TGSRFD Form, reroute to DN.
Valid Entries: 1 - 32 digits (0 - 9, *, or #)

2.7 TERMINATING

Description: Enter the Terminating Forward to DN (Directory Number). Note that an entry corresponds to the associated Terminating Error Treatment field equal to "RERTE" on the TGSRFD Form, reroute to DN.
Valid Entries: 1 - 32 digits (0 - 9, *, or #)

ERROR ANNCMT ROUTE INDEX

The fields (Section 2.8 - Section 2.9) specify the error announcement route indexes for originating and terminating.

2.8 ORIGINATING

Description: Enter the Originating Announcement Route Index. Note that an entry corresponds to the associated Originating Error Treatment field equal to "ANNC" on the TGSRFD Form, for route to special announcement.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

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- For 5E13 and later: Blank, or 1 - 16382

2.9 TERMINATING

Description: Enter the Terminating Error Announcement Route Index. Note that an entry corresponds to the associated Terminating Error Treatment field equal to "ANNC" on the TGSRFD Form, for route to special announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If the Originating or Terminating Error Treatment field on the TGSRFD Form equal to "TONE", then the associated Originating/ Terminating fields for both FORWARD TO DN and ERROR ANNCMT ROUTE INDEX must be blank.

2.10 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the TGATTD (Terminal Group Attendant and Data) form (5611 Record), RC view (4.4); but if that form does not exist or is NULL consult OFCOPT.

```
tgsrtpa                    5ESS Switch          _
(5607-5)              OFFICE DATA ADMINISTRATION
          TERMINAL GROUP STATION RESTRICTION TRUNK PARAMETERS

                          ERROR ANNCMT INDEX
 *1. TGN      ____          7. ORIGINATING ____
 *2. MEMB     ____          8. TERMINATING ____
 *3. FEATURE  _________
  4. GROUP ID  _____        9. CNIGI NULL

  FORWARD TO DN
  5. ORIGINATING _____________________________________

  6. TERMINATING _____________________________________
```

Figure 1 SAMPLE TGSRTPA FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 9: AUTOMATIC ROUTE SELECTION FORMS

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SEC. 9A: 5608-1A/B RECORDS
AUTOMATIC ROUTE SELECTION FEATURE DEFINITION FORM - ARSFD

1. GENERAL

The 5608-1 Record is available with 5E2 and later Software Releases. It is used to define various combinations of options associated with ARS (Automatic Route Selection), a BRCS feature. With 5E3 and later Software Releases, this record has been expanded into two records, the 5608-1A and 5608-1B, to accommodate additional options and default parameters.

1.1 ARS Features

Each combination is given a feature name of from one to eight characters which is used to assign the constructed (switch owner defined) feature to lines or trunks. Certain ARS features are pre-defined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. Lists of preconstructed features appear in Figure 1 and Figure 2 .

1.2 ARS Capability

The ARS capability is used to route calls based on prespecified choices of facilities such as Tie, FX, OUTWATS or DDD for the 5ESS Switch customer. ARS uses the dialed number to route a call over the first available facility in the customer's prespecified list. The customer can have up to six groups of route patterns and may be allowed to change which group is active manually from a control line or by utilizing the Time Of Day BRCS feature. ARS allows customers to restrict the use of facilities based on an FRL (Facility Restriction Level) associated with each terminal (line or trunk) accessing the ARS capability. The customer can optionally specify which facilities in each route pattern are considered expensive so that any terminal accessing that facility via ARS would receive an Expensive Route Warning Tone.

To use the ARS capability, a terminal must be assigned an ARS feature on the appropriate feature assignment form (e.g., LINEFA form (5112 Record), TKGRPFA form (5206 Record) etc.) and must belong to an ARS group. The ARS Group Name is assigned either as a default parameter defined with an ARS constructed feature on the ARSFD form or on an ARSLPA (5608-3 Record), ARSMPA (5608-4 Record) or ARSTPA (5608-5 Record) form. For 5E2, the ARS group information, defined on the ARSGPA form, is used to indicate the preferred (or initial) route to use for each pattern group based on dialed digits. For 5E3 and later, the preferred route based on dialed digits is defined on the ARSSCRN form (5608-6 Record). For all Software Releases, the ARSGPA form (5608-2 Record) is used to define parameters for the ARS Group.

ARS is normally considered an originating feature in that it is a feature assigned to a terminal so that, when the terminal originates, it may access unique digit analysis and/or unique ARS routing. There exist two cases where the terminal that is being terminated to by Automatic Route Selection routing requires an ARS feature and associated parameters to be assigned. These cases are when the Trunk Group selected requires an outgoing Traveling Class Mark (see the default parameter, TCMOUT on this form) or requires Segmented Signaling (see the ARSSIG form (5608-9 Record)). In both cases, even if the Trunk Group is one-way outgoing, the trunks will require an ARS feature.

1.3 Valid Service Classes

Valid service classes for terminals assigned an ARS feature are as follows. For Software Release availability, see the LCC form (5306 Record) for lines or the TKGRP form (5202-1 Record) for trunks.

Valid CLASS OF SERVICES	
Lines	**Trunks**
INDIV	PF
ATND	PFLASH
PBX	PFITT

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4WINDIV	EDSL
ISDN	EDSLHM
ISATND	
MODEM	

1.4 ARS Access

Access to the ARS capability may be automatic (usually for a PBX) or via an Access Code defined in digit analysis as an "ARSUSE" action. Two additional actions associated with ARS Access Codes in 5E3 and later are "ARS1USE" and "ARS2USE", used respectively to indicate that digit analysis should be done in Private Network Dialing Plans 1 and 2. See the PNDP form (5608-10/11 Records). The access type is defined on the ARSFD form under ENTRY.

1.5 Supplementary Services for ISDN CSD

The BRCS Supplementary Services for ISDN CSD (Circuit-Switched Data) calls feature, which is available in 5E6 and later, allows the ARS service originally developed for CSV (Circuit-Switched Voice) calls to apply to CSD calls as well. Use of this feature provides the means to establish CSD calls between BRIs (Basic Rate Interfaces) or PRIs (Primary Rate Interfaces) that are making use of the ARS service. When a line or trunk is assigned ARS service, it may apply to both CSV and CSD calls for that BRI or PRI.

Since ARS groups for CSD and CSV calls are separate, all group options available to a CSV ARS user are also available to a CSD ARS user. The values of these options, which are entered on the ARSGPA form (5608-2 Record) can differ or be the same for each group. Allowing group names to be different prevents ARS CSD GROUPS from being restricted to just duplicating ARS CSV GROUPs.

CSD ARS GROUP may also be assigned through BFGs (BRCS Feature Groups) in the same manner CSV ARS groups are currently assigned.

CSD calls use the same UNP (Uniform Numbering Plan) as CSV calls, that is, even with the existence of both CSD and CSV ARS groups, the UNP for CSV calls will be the only UNP that is used.

Queuing is not supported for CSD ARS calls. Also, different ARS action codes must be used for CSD as follows:

- DARSCP, Change the active pattern group
- DGPACT, Activate the ARS CSD group
- DGPDCT, Deactivate the ARS CSD group
- FRLDMAIN, Activate the CSD Main FRL
- DFRLALT, Activate the CSD Alternate FRL

Existing preconstructed features for CSV calls will also be used for CSD calls (no new preconstructed ARS features). ARS features for both groups will be constructed the same way using the options on this ARSFD form, ARSGPA (5608-2 Record) and/or ARSLPA form (5608-3 Record), ARSMPA form (5608-4 Record) and ARSTPA form (5608-5 Record). For more information concerning the assignment of BRCS features, see Division 2, Section 1F.

1.6 Recent Change View

The corresponding Recent Change View for this form is 12.11.

2. FORM ENTRIES - 5608-1A RECORD

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and the Office Name on each record.

2.2 * FEATURE NAME

Description: This field is used to enter the ARS Feature Name. Feature Names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: This field is used for a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.14) comprise the available Feature Options.

2.4 DACT TYPE

Description: This field is used to indicate whether or not the feature can be deactivated by the subscriber for one call.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
NONE	The subscriber is not permitted deactivation.
CODE	The subscriber is permitted to deactivate the feature by dialing a code.

Data Rules:

When "CODE" is entered, the ENTRY field is usually equal to "AUTO". The code dialed to deactivate the feature must be defined in the subscriber's IDP (Individualized Dialing Plan) Dialed Code Assignment, (5601-1 Record) (if a member of an IDP Group) as Action equal to "ARSDCT". If not a member of an IDP group, the code must be defined with this action in the PDIT form (5300-2 Record).

2.5 GROUP ACT TYPE

Description: This field is used to indicate whether the ARS Group can be activated by the subscriber.
Default: AUTO
Valid Entries:

Valid GROUP ACT TYPE Entries

Entry	Definition
AUTO	Permission is denied.
CODE	The ARS Group can be activated by dialing a code.

Data Rules:

The default and only value is "AUTO", except for ARS features derived from the preconstructed features using the ODA change-insert mode of the review operation.

To use "CODE", the code to be dialed to activate the ARS Group must be defined in the IDPDCA (5601-1 Record) or the PDIT (5300-2 Record), as action equal to "GPACT". The record used is dependent on

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whether the customer uses an IDP or the ODP (Office Dialing Plan).

2.6 GROUP DACT TYPE

Description: This field is used to indicate whether the ARS Group can be deactivated by the subscriber.

If the ARS Group has been deactivated via a code and a member of the ARS Group dials a call, that call will be routed based on the ODP as if this was a POTS call. If the entry to the ARS capability is via an ARS Access Code, that code will not be analyzed in the ODP but all subsequent digits will be analyzed.
Default: NONE
Valid Entries:

Valid GROUP DACT TYPE Entries

Entry	Definition
NONE	**Permission denied.**
CODE	**The ARS Group can be deactivated by dialing a code.**

Data Rules:

If GROUP ACT TYPE is "AUTO", GROUP DACT TYPE must be "NONE". If GROUP ACT TYPE is "CODE", GROUP DACT must be "CODE".

To use "CODE", the code to be dialed to deactivate the ARS Group must be defined in the IDPDCA or the PDIT as action equal to "GPDCT" depending on whether or not the customer is a member of an IDP Group.

2.7 ENTRY

Description: This field is used to indicate the customer's ability to access the ARS capability.

Required Field.
Default: CODE
Valid Entries:

Valid ENTRY Entries

Entry	Definition
CODE	ARS routing is used when the customer dials a code.
AUTO	ARS routing is always used.

Data Rules:

When "CODE" is entered, a code must be defined in the IDPDCA or PDIT with ACTION equal to "ARSUSE" depending on whether or not the customer is a member of an IDP Group. Two additional actions associated with ARS Access Codes in 5E3 and later, are "ARS1USE" and "ARS2USE", used respectively to indicate that digit analysis should be done in Private Network Dialing Plan 1 and 2. See the PNDP (5608-10/11 Records) form. Both of these actions may be used in either the IDPDCA or PDIT.

2.8 BAD NUMBER TREATMENT

Description: This field is used to enter the error treatment to be used for inappropriate ARS dialed numbers when the Office Dialing Plan is used to interpret ARS digits.

For 5E2, the ODP is always used. For 5E3 and later, the ODP is used only when the action associated with Code entry ARS is "ARSUSE" or when ODP is specified for Auto entry ARS as a parameter. However, when a PNDP is used, this entry will not be used.

When an ARS number is dialed, the ODP that the originator is assigned to is analyzed to determine a pointer via the POTS Route Index to the appropriate route list. (See the ARSGPA form 5608-2 Record for additional information.) If the POTS Route Index is not defined for the ARS Group on the ARSGPA, then the number dialed is determined to be inappropriate for this group.

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The software associated with ARS may also determine that a number is inappropriate if the ODP is used. When the ODP digit analysis tables are read, the Call Type is checked. If the Call Type is "EMER", ARS is ignored and the call is completed as if ARS routing had not been invoked. If the Call Type is "NORMAL", ARS continues processing. If the Call Type is not "EMER" or "NORMAL", the call is considered inappropriate and call termination depends on this entry.

Required Field.

Software Release: 5E3 and later
Default: POTS
Valid Entries:

Valid BAD NUMBER TREATMENT Entries

Entry	Definition
REORD	Route to reorder tone.
ANN	Route to an announcement.
ATT	Used for 5E2 only. Route to the attendant of this customer's Terminal Group
ATDN	Used for 5E3 and later. Route to the attendant of this customer's Terminal Group.
POTS	The dialed digits (not including an ARS Access Code,if dialed) are interpreted in the Office Dialing Plan and the call is treated like a POTS origination.

Data Rules:

If "ANN" is entered, a Route Index that points to an announcement Trunk Group must be entered on the ARSGPA (5608-2 Record) form in the field BAD NUMBER ANNOUNCEMENT.

If "ATT" or "ATDN" is entered, the customer must be assigned to a Terminal Group (see the Terminal Group/Station Restriction BRCS capability) and the Terminal Group must have an Attendant Telephone Number defined on the TGATTD (5611 Record) form.

2.9 FRL TYPE

Description: This field is used to indicate the type of Facility Restriction Level used with this ARS feature.

Required Field.
Default: FIX
Valid Entries:

Valid FRL TYPE Entries

Entry	Definition
FIX	Indicates that the FRL value for all customers with this feature is fixed at 16. (This is the maximum value and thus indicates no blocking will be done based on FRL.)
VAR	Indicates that the FRL permission is defined on a per terminal basis with values of 1 - 16.

2.10 CHANGE ACTIVE PATTERN GROUP

Description: Can the active Pattern Group Number be changed via the TOD (Time of Day) BRCS feature?

Required Field.
Default: N
Valid Entries: Y, N

2.11 CHANGE WARNING TONE

Description: Is the customer permitted to change the warning tone parameter defined for the terminal which is assigned the ARS feature by dialing a code?
Valid Entries: Y, N

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NOTE: For 5E2 and later the default and only value is N, except for ARS features derived from the preconstructed features using the ODA change-insert mode of the review operation.

2.12 CHANGE ALT FRL

Description: Is the customer permitted to activate and deactivate an Alternate FRL (Facility Restriction Level) table by dialing a code?

The code dialed to deactivate the Alternate FRL table (and therefore activate the Main FRLs) must be defined in the IDPDCA or PDIT with an ACTION equal to "FRLMAIN". For additional information on the Alternate FRL table, see the ARSFRL form (5608-7 Record).

Required Field.

Software Release: 5E3 and later
Default: N
Valid Entries: Y, N

Data Rules:

When this entry equals "Y", the code dialed to activate the Alternate FRL table must be defined in the customer's IDPDCA form (5601-1 Record) (if a member of an IDP Group) with an ACTION equal to "FRLALT". If not a member of an IDP Group, the code must be defined with this ACTION in PDIT (5300-2 Record).

2.13 TCM OPTION

Description: Do any of the private Trunk Groups associated with the ARS Group use TCM (Traveling Class Marks)?

TCMs provide the means to pass FRL information between private network nodes. The TCM is a one or two-digit number appended to the called number digit string. TCMs may be received on trunks incoming to this office or outpulsed on trunks outgoing to the next node. See the default parameters TCM IN, TCM OUT, and DEFAULT TCM on this form. If the TCM in either direction is a one-digit number, it will need conversion provided by the ARSTCM form (5608-8 Record) to or from the two-digit format of the FRL.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E6 and later, this field must be set to "Y" if the ARS GROUP NAME assigned on the ARSTCM form is defined as CSV ARS GROUP or CSD ARS GROUP on this ARSFD form.

2.14 CCSA LIMITATION

Description: Should CCSA SFG (Simulated Facility Group) and private CCSA AMA billing records be used?

If this entry equals "Y", the "CCSA SFG" and special billing will be used only when the ARS originated call is being interpreted in the Private Network Dialing Plan 1 associated with the ARS Group of the terminal. If the initial digits are being interpreted in either the Office Dialing Plan or PNDP 2, then CCSA is not applicable. For additional information, see the PNDP form (5608-10/11 Records) and the PFATG form (5609-2 Record).

Software Release: 5E3 and later

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Required Field.
Default: N
Valid Entries: Y, N

3. FORM ENTRIES, 5608-1B RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the Office Name on each record.

DEFAULT PARAMETERS

The following fields (Section 3.2 - Section 3.20) define the default parameters assigned with the feature to terminals (lines or trunks). These parameters will be assigned to the terminal unless they are overridden by entries on the ARSLPA, ARSMPA or ARSTPA forms.

3.2 ARS GROUP NAME

Description: This field is used to insert the name of the ARS Group. The maximum quantity of ARS Groups in an office is 200.

Software Release: 5E5 and earlier
Valid Entries: 1 - 8 characters

Data Rules:

The ARS Group Name must be defined on an ARSGPA (5608-2 Record) form.

3.3 CSV ARS GRP

Description: This field is used to enter the Circuit-Switched Voice ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The ARS Group Name must be defined on the ARSGPA form (5608-2 Record) with GROUP TYPE of "VOICE".

Defining a CSV ARS GRP is not required, however; if a CSD ARS GRP is defined on this form, then a CSV ARS GRP also must be defined.

If CSV ARS GRP is entered, the following fields must be entered: TONE TYPE, ARS SI, USE ALT FRL, ALW MDR RAO, QUEUE ALLOWED and PRIORITY QUEUE.

3.4 CSD ARS GRP

Description: This field is used to enter the name of the Circuit-Switched Data ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The CSD ARS GRP must match an ARS Group Name defined on the ARSGPA (5608-2 Record) form with a GROUP TYPE of "CSD".

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There cannot be CSD only groups for ARS service. This field can only be entered if CSV ARS GRP is entered.

If this CSD ARS GRP is to be assigned to a trunk or trunk group via the TRUNKFA or TKGRPFA form and the TRKCLS on the associated TKGRP form is "EDSL" or "EDSLHM", the DATA RATE on the corresponding TKGRP form must be entered.

3.5 TONE TYPE

Description: This field is used to indicate the warning tone to be applied to the ARS call originator if a route marked as an expensive route (as indicated on the MCRTIDX form 5304 Record) is accessed.

Valid TONE TYPE Entries

Entry	Definition
BEEP1	A single beep tone.
NONE	No tone.

3.6 FRL LINE

Description: This field is used to indicate the FRL (Facility Restriction Level) of privilege assigned to the terminal.

If the ARS feature is defined with FRL TYPE equal to "FIX" and FRL LINE has an entry, the entry must be 16. Each ARS route within a route list of a route pattern (which is defined on an MCRTIDX form (5304 Record)) is also assigned an FRL to indicate the minimum level of privilege needed to access the facility. The terminal must have an FRL number greater than or equal to the FRL of the route to succeed.

If the FRL of the terminal is less than the FRL of the route, then Reorder tone is applied. With 5E3 and later, before Reorder tone is given, there may be interactions with Authorization Codes and Queuing, if applicable.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

3.7 USE ALT FRL

Description: Should the terminal's FRL (Facility Restriction Level) be changed when the Alternate FRL table is activated via a dial code or Time of Day?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

If the associated ARS Group has ALW ALT FRL equal to "N" on the ARSGPA form (5608-2 Record) then this entry must equal "N".

3.8 ARS SI

Description: This field is used to indicate the ARS Screening Index associated with the terminal.

The ARS SIs provide the ability to give different ARS routing treatment to groups of terminals within an ARS Group. The ARS Group Name and each ARS SI for the group must be entered along with all applicable ARS Indexes (found in digit analysis) on the ARSSCRN form (5608-6 Record).

Software Release: 5E3 and later
Valid Entries: 1 - 16 characters

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3.9 ALW MDR RAO

Description: Should an AMA billing record be made when the terminal originates a call which finds a Charge Index with an AMA Call Type of "CCSAS", "ETSMDR" or "ETSCCSA"? By setting Allow Message Detail Recording to Revenue Accounting Office to "N", these private billing records will be inhibited for this terminal.

Software Release: 5E3 and later
Valid Entries: Y, N

3.10 PRIVATE DN

Description: This field is used to enter the Private Directory billing number. If entered this number will be used for the Message Detail Recording of private billing records either to the CL (Customer Location) or RAO (Revenue Accounting Office).

Software Release: 5E3 and later
Valid Entries:

- For 5E11 and earlier: enter up to 7 digits, 0 - 9
- For 5E12 and later: enter up to 10 digits, 0 - 9

3.11 TCM IN

Description: This field is used to indicate whether a one or two-digit TCM (Traveling Class Mark) is expected to be received on incoming calls on trunks which are assigned this feature. This parameter is only applicable to trunks. Lines which are assigned this feature (when this field has an entry) will not have the value stored and, therefore, has no effect on the lines.

This feature may be used only when a Private Network Dialing Plan is interpreting the ARS digits. See the PNDP form (5608-10/11 Records).

Software Release: 5E3 and later
Valid Entries:

Valid TCM IN Entries

Entry	Definition
1	Indicates a one-digit TCM.
2	Indicates a two-digit TCM.

Data Rules:

When this field is entered, TCM OPTION must equal "Y" and trunks assigned this feature must be One-Way Incoming or Two-Way.

For 5E6 and later, if a trunk with TRKCLS "EDSL" or "EDSLHM" (on the TKGRP form) is assigned this feature without an overriding ARSTPA form, then TCM IN must be left blank.

3.12 TCM OUT

Description: This field is used to indicate whether a one or two-digit TCM (Traveling Class Mark) is expected to be sent on outgoing calls on trunks which are assigned this feature. This parameter is only applicable to trunks. Lines which are assigned this feature (when this field has an entry) will not have the value stored and, therefore, has no effect on the lines.

Software Release: 5E3 and later
Valid Entries:

Valid TCM OUT Entries

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Entry	Definition
1	Indicates a one-digit TCM.
2	Indicates a two-digit TCM.

Data Rules:

For 5E6 and later , if this field is entered, an ARSTCM form must be entered with an ARS GROUP NAME that matches the CSV ARS GROUP defined on this ARSFD form.

When this field is entered, then TCM OPTION must equal "Y" and trunks assigned this feature must be One-Way Outgoing or Two-Way.

For 5E6 and later, if a trunk with TRKCLS "EDSL" or "EDSLHM" (on the TKGRP form) is assigned this feature without an overriding ARSTPA form, then TCM OUT must be left blank.

3.13 DEFAULT TCM

Description: This field is used to specify the Default Traveling Class Mark for any trunk that has TCM OUT specified. The Outgoing TCM is normally determined by the FRL (Facility Restriction Level) of the call. If an FRL is not present, the Default TCM will be used. Such would be the case on a maintenance test call or if the trunk can also be accessed through PFA (Private Facility Access) codes.

Software Release: 5E3 and later
Valid Entries: 0 - 16

Data Rules:

When TCM OUT is 1, this field may be 0 - 7; when TCM OUT is 2 it may be 0 - 16; otherwise, leave it blank.

When this field is entered, trunks assigned this feature without an overriding ARSTPA form must be One-Way Outgoing or Two-Way, i.e., the TRK DIR on the TKGRP form must be "OUT" or "2W".

For 5E6 and later, if a trunk with TRKCLS "EDSL" or "EDSLHM" (on the TKGRP form) is assigned this feature without an overriding ARSTPA form, then DEFAULT TCM must be left blank.

3.14 QUEUE ALLOWED

Description: Is the terminal allowed to queue for the first route in the ARS route list when queuing is active and all routes are busy?

Software Release: 5E3 and later
Valid Entries: Y, N

Data Rules:

For 5E9(1) and later when an MLHG member has a "MODEM" class of service, it may not be assigned an ARS feature (on the MLHLNFA, BFG, or associated CLUSTR form) where QUEUE ALLOWED is set to "Y" on the ARSFD, ARSMPA, or BFG form. An MLHG member is defined as MLHG and TERM on an MLHLN form or as CKT MLHG and CKT TERM on a DSLUSR form.

3.15 PRIORITY QUEUE

Description: Should the terminal be allowed to enter the Priority Queue? Incoming trunks and Attendant lines must have Priority Queuing if queuing is provided.

Software Release: 5E3 and later
Valid Entries: Y, N

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3.16 DIAL PLAN

Description: This field is used only when ENTRY equals "AUTO" to indicate where to analyze the ARS dialed number. See the PNDP form (5608- 10/11 Records) if the Dial Plan is 1 or 2.

For terminals that use an access code to invoke ARS (i.e., ENTRY equals "CODE") the action specified for the access code will determine the dialing plan, therefore, this field must be blank.

Software Release: 5E3 and later
Valid Entries:

Valid DIAL PLAN Entries

Entry	Definition
ODP	The Office Dialing Plan of the terminal will be used.
1	The digits will be interpreted in Private Network Dialing Plan 1.
2	The digits will be interpreted in Private Network Dialing Plan 2.

Data Rules:

If DIAL PLAN is 1 or 2, the DIAL PLAN value and CSV ARS GROUP name defined on this form must be defined on the PNINFO form (5608-12 Record).

3.17 RLT FRL IND

Description: Release Link Trunk Facility Restriction Level indicator. Is the original caller's FRL to be used in place of the attendant's FRL for routing and for the MDR Record?

Required Field.

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

3.18 RLT AMA IND

Description: Release Link Trunk Automatic Message Accounting indicator. Is the original caller's data to be used in place of the attendant's data in the AMA Record?

Required Field.

Software Release: 5E5 and later
Default: N
Valid Entries: Y, N

3.19 VOICE ETE

Description: This field is used to enter the End-to-End Q.931 Connectivity option for voice calls using this ARS feature.

Required Field.

Software Release: 5E6 and later
Default: ANY
Valid Entries:

Valid VOICE ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. If no PRI trunks are available, the route will fail.

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Data Rules:

When CSV ARS GRP is left blank, VOICE ETE must contain the default value of "ANY".

When this form is entered for an ARS feature assigned to a non-PRI Trunk (the corresponding TKGRP form (5202 Record) has TRKCLS set to some value other than "EDSL" or "EDSLHM") without an overriding ARSTPA form VOICE ETE must be set to the default value of "ANY".

When this ARS feature is assigned to a Line or MLHG Terminal and VOICE ETE is set to any value other than "ANY", then CLASS OF SERVICE on the appropriate LCC form (5306 Record) must be set to one of the following values: "INDIV", "ATND", "PBX", "4WINDIV", ISDN", "ISATND", "MODEM .

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

Since this field does not appear on the BFG form, if a value other than the default of "ANY" is desired, then that value must appear on the ARSFD form or one of the ARS Line Parameter Assignment (ARSLPA, ARSMPA, ARSTPA) forms.

3.20 DATA ETE

Description: Enter the End-to-End Q.931 Connectivity option for data calls using this ARS feature.

Required Field.

Software Release: 5E6 and later
Default: ANY
Valid Entries:

Valid DATA ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI trunks are preferred to route the call. However, if a PRI trunk is not available then any trunk will be used.
REQ	PRI trunks are required to route the call. If no PRI trunks are available, the route will fail.

Data Rules:

When CSD ARS GRP is left blank, DATA ETE must contain the default value of "ANY".

When this form is entered for an ARS feature assigned to a non-PRI Trunk (the corresponding TKGRP form - 5202 Record, has TRKCLS set to some value other than "EDSL" or "EDSLHM"), without an overriding ARSTPA form, VOICE ETE must be set to the default value of "ANY".

When this ARS feature is assigned to a Line or MLHG Terminal and DATA ETE is set to any value other than "ANY", then CLASS OF SERVICE on the appropriate LCC form (5306 Record) must be set to one of the following values: "INDIV", "ATND", "PBX", "4WINDIV", ISDN", "ISATND", "MODEM

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

Since this field does not appear on the BFG form, if a value other than the default of "ANY" is desired, that value must appear on the ARSFD form or one of the ARS Line Parameter Assignment (ARSLPA, ARSMPA, ARSTPA) forms.

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BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	FEATURE OPTIONS										
		DACTTYPE	GRAOCUTPTTYPE	GRDOAUCPTTTYPE	ENTRY	BATDRENAUTMMENT	FRLTYPE	CHANGE APG	CHTAONNGE E WRN	CHFARNLG GE ALT	TCOMPTIONE	CCSALMNATON
/AR*	WILD CARD ARS FEATURE	CODE	CODE	CODE	AUTO	POTS	VAR	Y	N	Y	N	N
/ARA	OUTWARD CALLING FOR PBX VIA ARs	NONE	AUTO	NONE	AUTO	POTS	FIX	N	N	N	N	N
/ARAD	USE CODE DELUXE ARS	NONE	AUTO	NONE	CODE	POTS	VAR	N	N	N	N	N
/ARADCCS	USE CODE DELUXE ARS W/CCSA LIMIT	NONE	AUTO	NONE	CODE	POTS	VAR	N	N	N	N	Y
/ARADTCM	USE CODE DELUXE ARS WITH TCM	NONE	AUTO	NONE	CODE	POTS	VAR	N	N	N	Y	N
/ARC	FLEXIBLE ROUTE SELECTION	NONE	AUTO	NONE	CODE	POTS	FIX	N	N	N	N	N
/ARCD	CODE DEACTIVATE DELUXE ARS	CODE	AUTO	NONE	AUTO	POTS	VAR	N	N	N	N	N
/ARGD	DELUXE ARS GROUP CONTROL	NONE	CODE	CODE	AUTO	POTS	VAR	Y	N	Y	N	N

Figure 1 PRECONSTRUCTED ARS FEATURES (OPTIONS) 5E6 AND LATER SOFTWARE RELEASES

ESS 5608-1(03)TG-5 AUTOMATIC ROUTE SELECTION FEATURE DEFINITION RECORD 5ESS SWITCH DATE _____

arsfd
12.11

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BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	FEATURE OPTIONS								DEFAULT PARAMETERS		
		DACTTYPE	GRAOCUTPTYPE	GRDOACPTTYPE	ENTRY	BATDRENAUTMMENTN	FRLTYPE	CHAPG	CHANGEWRNTONE	ARSGROUPNAME	TONETYPE	FRLLINE
/AR*	WILD CARD ARS FEATURE	CODE	CODE	CODE	AUTO	POTS	VAR	Y	N			
	OUTWARD CALLING FOR PBX VIA ARS	NONE	AUTO	NONE	AUTO	POTS	FIX	N	N			
/ARAD	USE CODE DELUXE ARS	NONE	AUTO	NONE	CODE	POTS	VAR	N	N			
/ARC	FLEXIBLE ROUTE SELECTION	NONE	AUTO	NONE	CODE	POTS	FIX	N	N			
/ARCD	CODE DEACTIVATE DELUXE ARS	CODE	AUTO	NONE	AUTO	POTS	VAR	N	N			
/ARGD	DELUXE ARS GROUP CONTROL	CODE	CODE	CODE	AUTO	POTS	VAR	N	N			

Figure 2 PRECONSTRUCTED ARS FEATURES (DEFAULT PARAMETERS) 5E6 AND LATER SOFTWARE RELEASES

---

arsfd 5ESS Switch
(5608-1A/1B) OFFICE DATA ADMINISTRATION
SCREEN 1 OF 2 AUTOMATIC ROUTE SELECTION FEATURE DEFINITION

* 2. FEATURE NAME ARS1 3. REMARKS _____

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```
      FEATURE OPTIONS:
  4. DACT TYPE                NONE     13. TCM OPTION       Y
  5. GROUP ACT TYPE           AUTO     14. CCSA LIMITATION  N
  6. GROUP DACT TYPE          NONE
  7. ENTRY                    CODE          DEFAULT PARAMETERS:
  8. BAD NUMBER TREATMENT     POTS     15. CSV ARS GRP      ARS1
  9. FRL TYPE                 VAR      16. CSD ARS GRP      ARSD
 10. CHANGE ACTIVE PATTERN GROUP  N       17. TONE TYPE       NONE
 11. CHANGE WARNING TONE      N       18. FRL LINE        01
 12. CHANGE ALT FRL           N       19. USE ALT FRL     Y
```

```
arsfd                    5ESS Switch        _
(5608-1A/1B)             OFFICE DATA ADMINISTRATION
SCREEN 2 OF 2    AUTOMATIC ROUTE SELECTION FEATURE DEFINITION

    DEFAULT PARAMETERS:
  20. ARS SI        02          31. VOICE ETE ANY
  21. ALW MDR RAO   Y           32. DATA ETE  ANY
  22. PRIVATE DN    _______
  23. TCM IN        _
  24. TCM OUT       1
  25. DEFAULT TCM   __
  26. QUEUE ALLOWED  N
  27. PRIORITY QUEUE  N
  28. DIAL PLAN     ___
  29. RLT FRL IND   N
  30. RLT AMA IND   N
```

Figure 3 SAMPLE ARSFD FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
arsfd                    5ESS Switch
SCREEN 1 OF 2            OFFICE DATA ADMINISTRATION
(5608-1A/1B)     AUTOMATIC ROUTE SELECTION FEATURE DEFINITION

*1. FEATURE NAME _________                  12. CHANGE ALT FRL  N
 3. REMARKS      _____________________________  13. TCM OPTION      N
                              14. CCSA LIMITATION N
       FEATURE OPTIONS
 4. DACT TYPE              NONE              DEFAULT PARAMETERS
 5. GROUP ACT TYPE         AUTO              15. CSV ARS GRP _________
 6. GROUP DACT TYPE        NONE              16. CSD ARS GRP _________
 7. ENTRY                  CODE              17. TONE TYPE   _____
 8. BAD NUMBER TREATMENT   POTS              18. FRL LINE    __
 9. FRL TYPE               FIX               19. USE ALT FRL _
10. CHANGE ACTIVE PATTERN GRP N
11. CHANGE WARNING TONE    N
```

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```
arsfd                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5608-1A/1B)    AUTOMATIC ROUTE SELECTION FEATURE DEFINITION

    DEFAULT PARAMETERS       31. VOICE ETE ANY
20. ARS SI        __         32. DATA ETE  ANY
21. ALW MDR RAO   _
22. PRIV DN       __________
23. TCM IN        _
24. TCM OUT       _
25. DEFAULT TCM   __
26. QUEUE ALLOWED _
27. PRIORITY QUEUE _
28. DIAL PLAN     ___
29. RLT FRL IND   N
30. RLT AMA IND   N
```

Figure 4 SAMPLE ARSFD FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 9B: 5608-2 RECORD
AUTOMATIC ROUTE SELECTION GROUP PARAMETER FORM - ARSGPA

1. GENERAL

The 5608-2 Record is available with 5E2 and later Software Releases and is used to define the group level of information required for the ARS (Automatic Route Selection) BRCS capability.

Each terminal (line or trunk) which is to use the ARS capability must be assigned an ARS feature name (defined on the ARSFD form (5608-1 Record)) on the appropriate feature assignment form, LINEFA, MLHLNFA, TKGRPFA, or TRUNKFA. In addition, each terminal must be assigned to an ARS Group which may be defined as a Default Parameter of the ARSFD form or on an individual terminal basis with the ARSLPA, ARSMPA or ARSTPA forms.

1.1 5E3 and Later Software Releases

Exactly one ARSGPA form is submitted for each ARS Group containing the parameters for the group where one value is appropriate for the group independent of the screening data used to determine the first route of an ARS dialed sequence. The screening data must be defined on the ARSSCRN form (5608-6 Record). Many ARSSCRN forms may need to be entered to define routing for the group.

1.2 Call Processing

When the ARS capability is invoked in the 5E2 Software Release, either automatically or via an Access Code defined with action equal to "ARSUSE", special call processing takes place. The number dialed (excluding any Access Code) is analyzed in the originator's POTS (Plain Old Telephone Service) digit analysis tables, usually a PDIT and LDIT. The Call Type is checked to see if this is an appropriate number for ARS routing. If the Call Type is "EMER", ARS is ignored and the call is completed as if ARS routing had not been invoked. If the Call Type is "NORMAL", ARS continues processing. If the Call Type is not "EMER" or "NORMAL", the call is determined to be inappropriate and the ARSFD form (5608-1 Record) is checked to determine how this call should be treated based on BAD NUMBER TREATMENT. When the Call Type is "NORMAL", the Route Index is read for this digit analysis entry.

Because an ARS call is being processed, the software does not enter the Rate and Route Record as a normal POTS call would. Instead, the POTS ROUTE INDEX is used as a key into the ARS Group Parameter information for the particular ARS Group of which the call originator is a member. (This assumes that the ARS Group is active. If not, the call would have been routed based on the POTS digit analysis entries that were just read and processed just like a POTS call.) If the POTS ROUTE INDEX is not found for the ARS Group, the call is processed based on the BAD NUMBER TREATMENT of the ARSFD form. If the POTS ROUTE INDEX is found, the MC ROUTE INDEX entry is read, based on which Pattern Group is active (e.g., when Pattern Group 3 is active, MC ROUTE INDEX 3 is used.)

The Route Indexes produced by POTS digit analysis must be sufficiently unique to determine proper ARS routing for all ARS Groups. This may require that duplicate information be defined for two or more Route Indexes, even though they are not required for POTS calls. For instance, Codes 232 and 989 might use the same terminating Trunk Group for POTS calls and, therefore, the LDIT entries for both would have the same Route Index. However, if an ARS Group required unique routing sequences for these codes, then two Route Indexes would be needed as pointers into the Group Parameter information and separate Route Indexes would be entered (and defined identically) in the LDIT for these two codes.

1.3 Recent Change View

The corresponding Recent Change View for this form is 10.5.

2. FORM AND RECORD ENTRIES

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2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * ARS GROUP NAME

Description: Enter the name of the ARS Group.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E9 and later, the maximum quantity of ARS Groups in an office is 200.

2.3 GROUP STATUS

Description: Is the ARS Group active?
Default: Y
Valid Entries: Y, N

2.4 NUMBER PATTERN GROUPS ALLOWED

Description: Enter the number of Pattern Groups allowed for this ARS Group.

Required Field.
Default: 1
Valid Entries: 1 - 6

Data Rules:

All ARSGPA forms entered into ODA for a particular ARS Group must have the same value for this field.

2.5 ACTIVE PATTERN GROUP NUMBER

Description: Enter the number of the Pattern Group that is active. In the case where GROUP STATUS equals "N", this field indicates which Pattern Group will be active when the ARS Group is activated.

Required Field.
Default: 1
Valid Entries: 1 - 6

Data Rules:

The value entered must be less than or equal to the value entered in NUMBER PATTERN GROUPS ALLOWED.

All ARSGPA forms entered into ODA for a particular ARS Group must have the same value for this field.

2.6 GROUP TYPE

Description: Enter the type of call the ARS group is applicable to.

Required Field.
Default: VOICE
Valid Entries:

Valid GROUP TYPE Entries

Entry	Definition
VOICE	CSV (Circuit-Switched Voice) calls
CSD	CSD (Circuit-Switched Data) calls

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2.7 BAD NUMBER ANNOUNCEMENT RTI

Description: Enter the Route Index to be used when a member of this ARS Group dials an inappropriate number for ARS.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

The Route Index entered here will also be used when any ARSSCRN form (5608-6 Record) has a ROUTE TYPE equal to "ANNCE", or when an associated PNINFO form (5608-12 Record) has ERROR TREATMENT equal to "ANNCE".

If a Route Index is entered here, it must be defined on the RTIDX form (5303 Record) and point to an announcement type Trunk Group.

All ARSGPA forms entered into ODA for a particular ARS Group must have the same value (or blank) for this field.

2.8 INHIBIT TOD

Description: Can TOD (Time Of Day) scheduled changes for the ARS Group be temporarily inhibited by the ARS customer through Facilities Management?

Required Field.
Default: N
Valid Entries: Y, N

2.9 ALW ALT FRL

Description: Are Alternate FRLs (Facility Restriction Levels) allowed for this ARS Group?

When the Action "FRLALT" is invoked via either a dialed code or TOD, the Alternate FRLs will be used instead of the FRL assigned to each terminal in the ARS Group. For additional information and restrictions, see the ARSFRL form.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field equals "Y", the Alternate FRLs for this ARS Group must be defined on the ARSFRL form (5608-7 Record).

2.10 ALT FRL ACTIVE

Description: Is the Alternate FRL (Facility Restriction Level) active for this ARS Group?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If ALW ALT FRL equals "N", the terminal FRLs will always be used and this field must equal "N".

If ALW ALT FRL equals "Y", this field may be equal to either "Y" or "N", where "Y" indicates the Alternate FRL table is active and "N" indicates the terminal FRLs (sometimes referred to as the Main FRLs) are active.

2.11 POST QUEUE FRL

Description: Enter the FRL (Facility Restriction Level) to use for Post Queue routing if the queue times out.

The ARS call is placed on queue under the following conditions. ARS routing searches for an idle port in each succeeding route in the route list until a route is found with an FRL which exceeds the originator's FRL or until the end of the route list. The originator's FRL may be either as assigned as the ARS parameter or it may be the Alternate FRL if this group has Alternate FRLs and they are active. If the search through the route list has stopped because the originator's FRL is insufficient, the Authorization Code feature may be invoked to provide a higher FRL for the terminal so that more routes may be searched.

If the Authorization Code feature is not used for this terminal or an idle port still cannot be found, the call will be placed on the queue of the first choice facility if that facility, either a Trunk Group or a Simulated Facility Group, has an active Queue Feature assigned to it and the originating terminal is allowed to queue. See the ARS parameter QUEUE ALLOWED on the ARSFD, ARSLPA, ARSMPA or ARSTPA forms.

If the call remains on queue longer than the timeout value specified current FRL of the terminal is equal to or greater than the FRL specified in THRESH FRL, the FRL will be changed to the FRL value specified in this field. This may be used to upgrade the terminal's FRL so that more routes may be searched on this second routing attempt. If a route is found this time with an FRL greater than currently used for the terminal, the call may not queue again so Reorder tone will be applied. If post queue FRL upgrade is not desired, leave this field blank.
Valid Entries: 0 - 16

Data Rules:

If this entry is specified, THRESH FRL must be specified.

2.12 THRESH FRL

Description: Enter a minimum or Threshold value of the current terminal FRL (Facility Restriction Level) before the FRL will be upgraded to the FRL specified in POST QUEUE FRL.
Valid Entries: 0 - 16

Data Rules:

If this field has an entry, then POST QUEUE FRL must be specified. Additionally, the FRL value entered here must be less than or equal to the POST QUEUE FRL value.

2.13 SAT HOP CNT

Description: Enter the maximum Satellite Hop Count allowed for each call in an ARS group. This represents the maximum number of satellite hops a call can take during its routing. When the maximum Satellite Hop Count is reached or exceeded, then the option specified by the field SAT HOP OPT, also on this form, will determine what action will be taken.

It is suggested, but not required, that all SAT HOP CNT entries within an office be set to the same value.

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Required Field.
Default: 2
Valid Entries: 0 - 9

2.14 SAT HOP OPT

Description: Enter the option which will determine what action to take once the Satellite Hop Count has been reached or exceeded.

As an example, consider a call in the process of being routed by an ARS feature whose ARS group has SAT HOP CNT set to 3. The call has passed through 3 satellites so far in the route. The remainder of the route will be handled as follows:

If SAT HOP OPT has been set to "STRICT", then the remainder of the route will not be allowed to pass through any satellites. If the route cannot be completed using only terrestrial facilities, then the route will fail.

If SAT HOP OPT has been set to "PREF", then the remainder of the route will attempt to be made using terrestrial facilities. However, when terrestrial facilities are used up, and satellite facilities exist, the satellite facilities will be used.

If SAT HOP OPT has been set to "ANY", then the remainder of the route will use both terrestrial and satellite facilities, whichever is available.

Required Field.
Default: ANY
Valid Entries:

Valid SAT HOP OPT Entries

Entry	Definition
ANY	Any available route. Once the Satellite Hop Count has been reached, continue to route using either terrestrial or satellite facilities, whichever is available.
PREF	Preferred terrestrial route. Once the Satellite Hop Count has been reached, try to route using terrestrial facilities; if no terrestrial facilities are available, route using satellite facilities.
STRICT	Strictly terrestrial route. Once the Satellite Hop Count has been reached, try to route using terrestrial facilities; if no terrestrial facilities are available, the route will fail.

2.15 LN CUST ID

Description: Enter the LN (Leased Network) Customer ID.

It is the LN ARSID received by the LN Action Control Point from the Network Control Point or received by an LN VIA office in a CCS7 ISUP Initial Address Message. This is the Internal ARS Voice ID assigned to the associated ARS group name when the associated GROUP TYPE is entered as "VOICE" and the Internal ARS Data Group ID assigned to the associated ARS Group Name when the associated GROUP TYPE is entered as "CSD".
Valid Entries: 1 - 255

Data Rules:

An LN CUST ID number can only be defined on a maximum of two ARSGPA forms, of which exactly one GROUP TYPE must be "VOICE".

---

arsgpa 5ESS Switch _
(5608-2) OFFICE DATA ADMINISTRATION
AUTOMATIC ROUTE SELECTION GROUP PARAMETERS

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```
* 1. ARS GROUP NAME     XYZ              12. SAT HOP CNT 2
                                         13. SAT HOP OPT ANY
  2. GROUP STATUS                Y       14. LN CUST ID  ___
  3. NUMBER PATTERN GROUPS ALLOWED  1
  4. ACTIVE PATTERN GROUP NUMBER    1
  5. GROUP TYPE                  VOICE
  6. BAD NUMBER ANNOUNCEMENT RTI    0123
  7. INHIBIT TOD                 N
  8. ALW ALT FRL                 N
  9. ALT FRL ACTIVE              N
 10. POST QUEUE FRL                16
 11. THRESH FRL                  01
```

Figure 1 SAMPLE ARSGPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 9C: 5608-3 RECORD
AUTOMATIC ROUTE SELECTION LINE (TN) PARAMETER FORM - ARSLPA

1. GENERAL

The 5608-3 Record is available with 5E2 and later Software Releases. It is used when assigning ARS (Automatic Route Selection) features to non-Multi-Line Hunt lines. The ARS feature parameters are assigned to the lines if the default parameters of the ARSFD form (5608-1A/1B Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the line.
Valid Entries:
- For 5E2: NXXXXXX, where N is 2 - 9 and X is 0 - 9.
- For 5E3 through 5E11: XXXXXXX, where X is a number in the range of 0 - 9.
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The associated Class Of Service on the LCC form (5306 Record) must be:

CLASS OF SERVICE	Definition
ATND	50B Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.
MODEM	Software Release: 5E4(2) and later. Packet Switching Modem Pooling.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ARSLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, TN/FEATURE combinations on different ARSLPA forms cannot be duplicated.

2.3 * FEATURE

Description: Enter the name of the ARS feature for which the parameters are to be assigned. The name entered here must be that of an ARS feature defined on the ARSFD form (5608-1A/1B Record).
Valid Entries: 1 - 8 characters

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2.4 * ARS GROUP NAME

Description: This field has been renamed CSV ARS GRP for 5E6 and later.

Enter the name of an ARS Group of which this line is a member.

Software Release: 5E5 and earlier
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ARS Group defined on the ARSGPA form (5608-2 Record). The maximum quantity of ARS Groups in an office is 200.

2.5 # CSV ARS GRP

Description: Enter the name of the CSV (Circuit-Switched Voice) ARS group.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined with a matching ARS GROUP NAME defined on the ARSGPA form (5608-2 Record) with a GROUP TYPE of "VOICE". Defining a CSV ARS GRP for this port is required.

If this form is entered and CCSA LIMITATION is "Y" on the ARSFD form, the CSV ARS GROUP assigned on this form must match the ARS GROUP NAME defined on the PNINFO form (5608-12 Record) where DIAL PLAN is 1.

2.6 CSD ARS GRP

Description: Enter the name of the CSD (Circuit-Switched Data) ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined with a matching ARS GROUP NAME on the ARSGPA form (5608-2 Record) with a GROUP TYPE of "CSD". Defining a CSD ARS GRP for this port is optional.

If a CSD group is defined the CSD ARS GRP name must not be the same as the CSV ARS GRP name.

2.7 TONE TYPE

Description: Enter the warning tone to be applied to the line if a route marked as an expensive route (as indicated on the MCRTIDX form (5304 Record)) is accessed.

Required Field.
Default: NONE
Valid Entries:

Valid TONE TYPE Entries

Entry	Definition
BEEP1	A single beep tone.
NONE	No tone.

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2.8 FRL LINE

Description: Enter the FRL (Facility Restriction Level) of privilege assigned to the line. Each ARS route within a route list of a route pattern (which is defined on an MCRTIDX form (5304 Record)) is also assigned an FRL to indicate the minimum level of privilege needed to access the facility. The line must have an FRL number greater than or equal to the FRL of the route to succeed.

If the FRL of the line is less than the FRL of the route, then Reorder tone is applied. With 5E3 and later, before Reorder tone is given, there may be interactions with Authorization Codes and Queuing, if applicable.

Required Field.
Default: 16
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

Data Rules:

If the ARS feature to which this line is assigned is defined with FRL TYPE equal to "FIX", then the entry must be 16.

2.9 USE ALT FRL

Description: Should the terminal's FRL change when the Alternate FRL table is activated via a dial code or TOD (Time Of Day) feature?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the associated ARS Group has ALW ALT FRL equal to "N" on the ARSGPA form (5608-2 Record), then this entry must equal "N".

2.10 ARS SI

Description: Enter the ARS-SI (Automatic Route Selection Screening Index) associated with the terminal. The ARS SIs provide the ability to give different ARS routing treatment to groups of terminals within an ARS Group.

Software Release: 5E3 and later
Required Field.
Default: 1
Valid Entries: 1 - 16

Data Rules:

The ARS Group Name and each ARS SI for the group must be entered along with all applicable ARS Indexes (found in digit analysis) on the ARSSCRN form (5608-6 Record).

2.11 ALW MDR RAO

Description: Should an AMA (Automatic Message Accounting) billing record be made when the terminal originates a call which finds a Charge Index with an AMA Call Type of "CCSAS", "ETSMDR", or

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"ETSCCSA"?

By setting ALW MDR RAO (Allow Message Detail Recording to Revenue Accounting Office) to "N", the private billing records will be inhibited for this terminal.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.12 PRIVATE DN

Description: Enter the Private directory billing number. This number, if entered, will be used for the MDR (Message Detail Recording) of private billing records either to the CL (Customer Location) or RAO.

Software Release: 5E3 and later
Valid Entries:
- For 5E11 and earlier: enter up to 7 digits, 0 - 9
- For 5E12 and later: enter up to 10 digits, 0 - 9

2.13 QUEUE ALLOWED

Description: Is the Terminal allowed to queue for the first route in the ARS route list when queuing is active and all routes are busy? For 5E6 and later, this applies to CSV ARS GRP only.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.14 PRIORITY QUEUE

Description: Should the terminal be in the Priority Queue when queuing is allowed for a terminal? Attendant lines must have Priority Queuing if queuing is provided.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry equals "Y", then QUEUE ALLOWED must be equal to "Y".

2.15 DIAL PLAN

Description: Enter where to analyze the ARS dialed number. This field is used only when the ARS Feature associated with this line is defined with ENTRY equal to "AUTO" on the ARSFD form (5608-1A/1B Record). See the PNDP form (5608-10/11 Records).

Software Release: 5E3 and later
Valid Entries:

Valid DIAL PLAN Entries

Entry	Definition
ODP	Use Office Dialing Plan of the terminal.
1	Digits will be interpreted in PNDP (Private Network Dialing Plan) 1.
2	Digits will be interpreted in PNDP 2.

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Data Rules:

For 5E6 and later, if this field is entered for a CSV ARS GROUP, this group must be entered as ARS GROUP NAME on the PNDP form for the corresponding INCOMING DIGITS value and the DIAL PLAN value and CSV ARS GROUP NAME must be defined on the PNINFO form (5608-12 Record).

For terminals that use an access code to invoke ARS (i.e., ENTRY equals "CODE") the action specified for the access code will determine the dialing plan, therefore, this field must be blank.

2.16 VOICE ETE

Description: Enter the ETE (End-to-End) Q.931 Connectivity option for voice calls using this ARS feature.

Software Release: 5E6 and later
Required Field.
Default: ANY
Valid Entries:

Valid VOICE ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI (Primary Rate Interface) trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. If no PRI trunks are available, the route will fail.

Data Rules:

When this ARS feature is assigned to a Line or MLHG Terminal and VOICE ETE is set to any value other than "ANY", then CLASS OF SERVICE on the appropriate LCC form must be set to one of the following values: "INDIV", "ATND", "PBX", "4WINDIV", "ISDN", "ISATND", or "MODEM".

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

2.17 DATA ETE

Description: Enter the ETE (End-to-End) Q.931 Connectivity option for data calls using this ARS feature.

Software Release: 5E6 and later
Required Field.
Default: ANY
Valid Entries:

Valid DATA ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. If no PRI trunks are available, the route will fail.

Data Rules:

When CSD ARS GRP is left blank, then DATA ETE must contain the default value of "ANY".

When this ARS feature is assigned to a Line or MLHG Terminal and DATA ETE is set to any value other than "ANY", then CLASS OF SERVICE on the appropriate LCC form must be set to one of the following values: "INDIV", "ATND", "PBX", "4WINDIV", "ISDN", "ISATND", or "MODEM".

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

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```
arslpa                    5ESS Switch                _
(5608-3)              OFFICE DATA ADMINISTRATION
          AUTOMATIC ROUTE SELECTION LINE (TN) PARAMETERS

 * 1. TN            5107559       12. PRIORITY QUEUE N
 * 2. FEATURE         /ARAD        13. DIAL PLAN     ___
                                14. VOICE ETE     ANY
 # 3. CSV ARS GRP     GRP1         15. DATA ETE      ANY
   4. CSD ARS GRP     ________
   5. TONE TYPE       NONE
   6. FRL LINE        16
   7. USE ALT FRL     N
   8. ARS SI          01
   9. ALW MDR RAO     N
  10. PRIVATE DN      _______
  11. QUEUE ALLOWED   N
```

Figure 1 SAMPLE ARSLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
arslpa                    5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(5608-3)       AUTOMATIC ROUTE SELECTION LINE (TN) PARAMETERS

*1. TN      ___________          12. PRIORITY QUEUE N
*2. FEATURE _________            13. DIAL PLAN     ___
                         14. VOICE ETE     ANY
#3. CSV ARS GRP   _________      15. DATA ETE      ANY
 4. CSD ARS GRP   _________
 5. TONE TYPE     NONE
 6. FRL LINE      16
 7. USE ALT FRL   N
 8. ARS SI        01
 9. ALW MDRRAO    N
10. PRIV DN       __________
11. QUEUE ALLOWED N
```

Figure 2 SAMPLE ARSLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 9D: 5608-4 RECORD
AUTOMATIC ROUTE SELECTION LINE (MLHG/TERM) PARAMETER FORM - ARSMPA

1. GENERAL

The 5608-4 Record is available with 5E2 and later Software Releases. It is used when assigning ARS features to Multi-Line Hunt lines to assign ARS feature parameters to the lines if the default parameters of the ARSFD form (5608-1A/1B Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Member Number of the line.
Valid Entries:
- 1 - 2015
- 3001-3999 (Outdial Terminals Only)

Data Rules:

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be:

CLASS OF SERVICE	Definition
ATND	50B "Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.
MODEM	Software Release: 5E4(2) and later. Packet Switching Modem Pooling.

2.4 * FEATURE

Description: Enter the name of the ARS feature for which the parameters are to be assigned. The name entered here must be that of an ARS feature defined on the ARSFD form (5608-1A/1B Record).
Valid Entries: 1 - 8 characters

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2.5 * ARS GROUP NAME

Description: This field has been renamed CSV ARS GRP for 5E6 and later.

Enter the name of an ARS Group of which this line is a member.

Software Release: 5E5 and earlier
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ARS Group defined on the ARSGPA form (5608-2 Record). The maximum quantity of ARS Groups in an office is 200.

2.6 # CSV ARS GRP

Description: Enter the name of the CSV "(Circuit-Switched Voice) ARS group.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined with a matching ARS GROUP NAME defined on the ARSGPA form (5608-2 Record) with a GROUP TYPE of "VOICE". Defining a CSV ARS GRP for this port is required.

For 5E6 and later, if this form is entered and CCSA LIMITATION is "Y" on the ARSFD form, the CSV ARS GROUP assigned on this form must match the ARS GROUP NAME defined on the PNINFO form (5608-12 Record) where DIAL PLAN is 1.

2.7 CSD ARS GRP

Description: Enter the name of the CSD "(Circuit-Switched Data) ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined with a matching ARS GROUP NAME on the ARSGPA form (5608-2 Record) with a GROUP TYPE of "CSD". Defining a CSD ARS GRP for this port is optional. If a CSD group is defined the CSD ARS GRP name must not be the same as the CSV ARS GRP name.

2.8 TONE TYPE

Description: Enter the warning tone to be applied to the line if a route marked as an expensive route (as indicated on the MCRTIDX form (5304 Record)) is accessed.

Required Field.
Default: NONE
Valid Entries:

Valid TONE TYPE Entries

Entry	Definition
BEEP1	A single beep tone.
NONE	No tone.

2.9 FRL LINE

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Description: Enter the FRL (Facility Restriction Level) of privilege assigned to the line. Each ARS route within a route list of a route pattern (which is defined on an MCRTIDX form (5304 Record)) is also assigned an FRL to indicate the minimum level of privilege needed to access the facility. The line must have an FRL number greater than or equal to the FRL of the route to succeed.

If the FRL of the line is less than the FRL of the route, then Reorder tone is applied. With 5E3 and later, before Reorder tone is given, there may be interactions with Authorization Codes and Queuing, if applicable.

Required Field.
Default: 16
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

Data Rules:

If the ARS feature which this line is assigned is defined with FRL TYPE equal to "FIX", then the entry must be 16.

2.10 USE ALT FRL

Description: Should the terminal's FRL change when the Alternate FRL table is activated via a dial code or TOD (Time Of Day) feature?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the associated ARS Group has ALW ALT FRL equal to "N" on the ARSGPA form (5608-2 Record), then this entry must equal "N".

2.11 ARS SI

Description: Enter the ARS-SI (Automatic Route Selection Screening Index) associated with the terminal. The ARS SIs provide the ability to give different ARS routing treatment to groups of terminals within an ARS Group.

Software Release: 5E3 and later
Required Field.
Default: 1
Valid Entries: 1 - 16

Data Rules:

The ARS Group Name and each ARS SI for the group must be entered along with all applicable ARS Indexes (found in digit analysis) on the ARSSCRN form (5608-6 Record).

2.12 ALW MDR RAO

Description: Should an AMA (Automatic Message Accounting) billing record be made when the terminal originates a call which finds a Charge Index with an AMA Call Type of "CCSAS", "ETSMDR , or "ETSCCSA"?

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By setting ALW MDR RAO (Allow Message Detail Recording to Revenue Accounting Office) to "N", the private billing records will be inhibited for this terminal.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.13 PRIVATE DN

Description: Enter the Private directory billing number. This number, if entered, will be used for the MDR (Message Detail Recording) of private billing records either to the CL (Customer Location) or RAO.

Software Release: 5E3 and later
Valid Entries:

- For 5E11 and earlier: enter up to 7 digits, 0 - 9
- For 5E12 and later: enter up to 10 digits, 0 - 9

2.14 QUEUE ALLOWED

Description: Is the Terminal allowed to queue for the first route in the ARS route list when queuing is active and all routes are busy? For 5E6 and later, this applies to CSV ARS GRP only.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.15 PRIORITY QUEUE

Description: Should the terminal be in the Priority Queue when queuing is allowed for a terminal? Attendant lines must have Priority Queuing if queuing is provided.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry equals "Y", then QUEUE ALLOWED must be equal to "Y".

2.16 DIAL PLAN

Description: Enter where to analyze the ARS dialed number. This field is used only when the ARS Feature associated with this line is defined with ENTRY equal to "AUTO" on the ARSFD form (5608-1A/1B Record). See the PNDP form (5608-10/11 Records).

Software Release: 5E3 and later
Valid Entries:

Valid DIAL PLAN Entries

Entry	Definition
ODP	Use Office Dialing Plan of the terminal.
1	Digits will be interpreted in PNDP (Private Network Dialing Plan) 1.
2	Digits will be interpreted in PNDP 2.

Data Rules:

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For 5E6 and later, if this field is entered for a CSV ARS GROUP, this group must be entered as ARS GROUP NAME on the PNDP form for the corresponding INCOMING DIGITS value and the DIAL PLAN value and CSV ARS GROUP NAME must be defined on the PNINFO form (5608-12 Record).

For terminals that use an access code to invoke ARS (i.e., ENTRY equals "CODE") the action specified for the access code will determine the dialing plan, therefore, this field must be blank.

2.17 VOICE ETE

Description: Enter the ETE "(End-to-End) Q.931 Connectivity option for voice calls using this ARS feature.

Software Release: 5E6 and later
Required Field.
Default: ANY
Valid Entries:

Valid VOICE ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI (Primary Rate Interface) trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. If no PRI trunks are available, the route will fail.

Data Rules:

When this ARS feature is assigned to a Line or MLHG Terminal and VOICE ETE is set to any value other than "ANY", then CLASS OF SERVICE on the appropriate LCC form must be set to one of the following values: "INDIV", "ATND , "PBX", "4WINDIV", "ISDN", "ISATND", or "MODEM".

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

2.18 DATA ETE

Description: Enter the ETE "(End-to-End) Q.931 Connectivity option for data calls using this ARS feature.

Software Release: 5E6 and later
Required Field.
Default: ANY
Valid Entries:

Valid DATA ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. If no PRI trunks are available, the route will fail.

Data Rules:

When CSD ARS GRP is left blank, then DATA ETE must contain the default value of "ANY".

When this ARS feature is assigned to a Line or MLHG Terminal and DATA ETE is set to any value other than "ANY", then CLASS OF SERVICE on the appropriate LCC form must be set to one of the following values: "INDIV", "ATND", "PBX", "4WINDIV", "ISDN", "ISATND", or "MODEM".

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

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```
arsmpa                    5ESS Switch          _
(5608-4)              OFFICE DATA ADMINISTRATION
          AUTOMATIC ROUTE SELECTION LINE (MLHG/TERM) PARAMETERS

* 1. MLHG           0003         12. QUEUE ALLOWED    N
* 2. TERM           0001         13. PRIORITY QUEUE   N
* 3. FEATURE         /ARC          14. DIAL PLAN       ___
                              15. VOICE ETE       ANY
# 4. CSV ARS GRP     GRP1         16. DATA ETE        ANY
  5. CSD ARS GRP     ________
  6. TONE TYPE       NONE
  7. FRL LINE        16
  8. USE ALT FRL     N
  9. ARS SI          01
 10. ALW MDR RAO     N
 11. PRIVATE DN      _______
```

Figure 1 SAMPLE ARSMPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
arsmpa                    5ESS Switch          _
(5608-4)              OFFICE DATA ADMINISTRATION
          AUTOMATIC ROUTE SELECTION LINE (MLHG/TERM) PARAMETERS

* 1. MLHG           0003         12. QUEUE ALLOWED    N
* 2. TERM           0001         13. PRIORITY QUEUE   N
* 3. FEATURE         /ARC          14. DIAL PLAN       ___
                              15. VOICE ETE       ANY
# 4. CSV ARS GRP     GRP1         16. DATA ETE        ANY
  5. CSD ARS GRP     ________
  6. TONE TYPE       NONE
  7. FRL LINE        16
  8. USE ALT FRL     N
  9. ARS SI          01
 10. ALW MDR RAO     N
 11. PRIVATE DN      _______
```

Figure 2 SAMPLE ARSMPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 9E: 5608-5 RECORD
AUTOMATIC ROUTE SELECTION TRUNK (TGN/MEMB)
PARAMETER FORM - ARSTPA

1. GENERAL

The 5608-5 Record is available with 5E2 and later Software Releases. It is used when assigning ARS features to trunks if the default parameters of the ARSFD form (5608-1A/1B Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and the Office Name on each record.

2.2 * TGN

Description: This field is used to enter the Trunk Group Number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202-1 Record) must be:

TKCLS Entry	Definition
PF	Private Facility
PFCPE	Private Facility Customer Premise Equipment
PFLASH	Private Facility Feature Flash
PFITT	Software Release: 5E3 and later. Private Facility Intertandem Trunk
EDSL	Software Release: 5E8 and later. Extended Digital Subscriber Line trunk.
EDSLHM	Software Release: 5E8 and later. EDSL trunk for Hotel/Motel TSPS service.

2.3 * MEMB

Description: This field is used to enter the Trunk Group Member Number of the trunk.

Required Field.
Valid Entries:
- For 5E2 only: 0-1983
- For 5E3 and later: 0-1951

2.4 * FEATURE

Description: This field is used to enter the ARS feature name for which the parameters are to be assigned.

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Required Field.
Valid Entries: 1- 8 characters

Data Rules:

The name entered here must be that of an ARS feature defined on the ARSFD form (5608-1A/1B Record).

2.5 ARS GROUP NAME

Description: This field is used to enter the ARS Group Name. The maximum quantity of ARS Groups in an office is 200. For 5E6 and later this field has been renamed CSV ARS GRP.

Software Release: 5E5 and earlier
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ARS Group defined on the ARSGPA form (5608-2 Record).

2.6 CSV ARS GRP

Description: This field is used to enter the name of the circuit-switched voice ARS group.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined with a matching ARS GROUP NAME on the ARSGPA form (5608-2 Record) with a GROUP TYPE of "VOICE".

If this form is entered and CCSA LIMITATION is "Y" on the ARSFD form, the CSV ARS GROUP assigned on this form must match the ARS GROUP NAME defined on the PNINFO form (5608-12 Record) where DIAL PLAN is 1.

For 5E7 and later, when this field is not entered, TCM IN and TCM OUT cannot be entered.

2.7 CSD ARS GRP

Description: This field is used to enter the name of the circuit-switched data ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined with a matching ARS GROUP NAME on the ARSGPA form (5608-2 Record) with a GROUP TYPE of "CSD". Defining a CSD ARS GRP for this port is optional. If a "CSD" group is defined, the CSD ARS GRP name must not be the same as the CSV ARS GRP name.

If this CSD ARS GRP is to be assigned to a trunk or trunk group via the TRUNKFA form (5205 Record) or TKGRPFA form (5206 Record) (FEATURE on TRUNKFA form, TKGRPFA form (5206 Record) or CLUSTR form (5600 Record) matches FEATURE on this ARSFD form) and the TRKCLS for the corresponding TGN/MEMB(s) is "EDSL" or "EDSLHM" on the TKGRP form (5202 Record) the DATA RATE on the TKGRP form must be entered.

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2.8 TONE TYPE

Description: This field is used to indicate the warning tone to be applied to the trunk if a route marked as an expensive route (as indicated on the MCRTIDX form (5304 Record)) is accessed.

Required Field.
Default: NONE
Valid Entries:

Valid TONE TYPE Entries

Entry	Definition
BEEP 1	A single beep tone
NONE	No tone

2.9 FRL LINE

Description: This field is used to indicate the FRL (Facility Restriction Level) of privilege assigned to the trunk. Each ARS route within a route list of a route pattern (which is defined on an MCRTIDX form (5304 Record)) is also assigned an FRL to indicate the minimum level of privilege needed to access the facility. The trunk must have an FRL number greater than or equal to the FRL of the route to succeed.

If the FRL of the trunk is less than the FRL of the route, then reorder tone is applied. With 5E3 and later Software Releases, before Reorder tone is given, there may be interactions with Authorization Codes and Queuing, if applicable.

Required Field.
Default: 16
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

Data Rules:

If the ARS feature to which this trunk is assigned, is defined with FRL TYPE equal to "FIX", then the entry must be 16.

2.10 USE ALT FRL

Description: Should the terminal's FRL (Facility Restriction Level) be changed when the Alternate FRL table is activated via a dial code or Time of Day?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E6 and later, for the associated ARS Group, or CSV ARS GRP and/or CSD ARS GRP, the entry in this field must match ALW ALT FRL entered on the ARSGPA form (5608-2 Record).

2.11 ARS SI

Description: This field is used to indicate the ARS Screening Index associated with the terminal.

The ARS SIs provide the ability to give different ARS routing treatment to groups of terminals within an ARS Group.

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Software Release: 5E3 and later
Required Field.
Default: 1
Valid Entries: 1 - 16

Data Rules:

The ARS Group Name and each ARS SI for the group must be entered along with all applicable ARS Indexes (found in digit analysis) on the ARSSCRN form (5608-6 Record).

2.12 ALW MDR RAO

Description: Should an AMA billing record be made when the terminal originates a call which finds a Charge Index with an AMA Call Type of "CCSAS", "ETSMDR" or "ETSCCSA" ?

By setting ALW MDR RAO (Allow Message Detail Recording to Revenue Accounting Office) to "N", these private billing records will be inhibited for this terminal.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.13 PRIVATE DN

Description: This field is used to enter the Private directory billing number. This Private directory billing number, if entered, will be used for the MDR (Message Detail Recording) of private billing records either to the CL (Customer Location) or RAO (Revenue Accounting Office).

Software Release: 5E3 and later
Valid Entries:
- For 5E11 and earlier: enter up to 7 digits, 0 - 9
- For 5E12 and later: enter up to 10 digits, 0 - 9

2.14 TCM IN

Description: This field is used to indicate whether a one-digit or two-digit TCM (Traveling Class Mark) is expected to be received on incoming calls on this trunk.

Software Release: 5E3 and later
Valid Entries:

Valid TCM IN Entries

Entry	Definition
1	Indicates a one-digit TCM
2	Indicates a two-digit TCM

Data Rules:

This feature may be used only when a Private Network Dialing Plan is interpreting the ARS digits. See the PNDP form (5608-10/11 Records).

When this field is entered, then TCM OPTION on the ARSFD form (5608-1A Record) must equal "Y". Additionally, this trunk must be One-Way Incoming or Two-Way.

When 1 is entered, the ARSTCM form (5608-8 Record) will be used to convert the one-digit TCM to a two-digit FRL (Facility Restriction Level) to be used during call processing.

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For 5E6 and later, this field must be left blank when the trunk has a TRKCLS of "EDSL" or "EDSLHM" on the associated TKGRP form (5202 Record).

2.15 TCM OUT

Description: This field is used to indicate whether a one-digit or two-digit TCM (Traveling Class Mark) is expected to be sent on outgoing calls on this trunk.

Software Release: 5E3 and later
Valid Entries:

Valid TCM OUT Entries

Entry	Definition
1	Indicates a one-digit TCM
2	Indicates a two-digit TCM

Data Rules:

When this field is entered the TCM OPTION on the ARSFD form (5608-1A Record) must equal "Y". Additionally, this trunk must be One-Way Outgoing or Two-Way. The field, DEFAULT TCM, must also have an entry.

When 1 is entered, the data determined from the ARSTCM form (5608-8 Record) will be used to convert the two-digit FRL value of the current call to the one-digit TCM required for outpulsing.

For 5E6 and later, if this field is set to "Y" and CSV ARS GROUP and/or CSD ARS GROUP name is assigned on this form, the CSV ARS GRP and/or CSD ARS GROUP name must match the ARS GROUP NAME on the ARSTCM form.

For 5E6 and later, this field must be left blank when the trunk has a TRKCLS of "EDSL" or "EDSLHM" on the associated TKGRP form (5202 Record).

2.16 DEFAULT TCM

Description: This field is used to determine if a Default TCM is used.

The DEFAULT TCM (Traveling Class Mark) is specified for any trunk that has TCM OUT specified. The Outgoing TCM is normally determined by the FRL (Facility Restriction Level) of the call. If an FRL is not present, the default TCM will be used. Such would be the case on a maintenance test call or if the trunk can be accessed through PFA (Private Facility Access) codes.

Software Release: 5E3 and later
Valid Entries:

- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

Data Rules:

Valid entries are 0 - 7 when TCM OUT equals 1 and 1 - 16 when TCM OUT equals 2. Otherwise, leave this field blank.

When this field is entered, the trunk must be One-Way Outgoing or Two-Way, TRK DIR "OUT" or "2W" on the associated TKGRP form (5202 Record).

For 5E6 and later, this field must be left blank when the trunk has a TRKCLS of "EDSL" or "EDSLHM" on the associated TKGRP form.

2.17 QUEUE ALLOWED

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Description: Is the terminal allowed to queue for the first route in the ARS route list when queuing is active and all routes are busy?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.18 PRIORITY QUEUE

Description: If queuing is allowed for a terminal, should the terminal be in the Priority Queue? Incoming Trunks must have Priority Queuing if queuing is provided.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry equals "Y", then QUEUE ALLOWED must be equal to "Y".

2.19 DIAL PLAN

Description: This field is used only when the ARS Feature associated with this trunk is defined with ENTRY equal to "AUTO" on the ARSFD form (5608-1A Record). It is used to indicate where to analyze the ARS dialed number.

Software Release: 5E3 and later
Valid Entries:

Valid DIAL PLAN Entries

Entry	Definition
1	The digits will be interpreted in Private Network Dialing Plan 1
2	The digits will be interpreted in Private Network Dialing Plan 2
ODP	The Office Dialing Plan of the terminal will be used

Data Rules:

For more information detailing valid entries please see the PNDP form (5608-10/11 Records).

For 5E6 and later, the DIAL PLAN value and CSV ARS GROUP name must be defined on the PNINFO form (5608-12 Record).

For terminals that use an access code to invoke ARS (i.e., ENTRY equals "CODE"), the action specified for the access code will determine the dialing plan, therefore, this field must be blank.

2.20 RLT FRL IND

Description: Is the original caller's FRL to be used in place of the attendant's FRL for routing and for the MDR Record? Enter the Release Link Trunk Facility Restriction Level indicator.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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This entry must be "Y" if the original caller's FRL is to be used in place of the attendant's FRL for routing and for the MDR Record.

If this field is "Y", then RLT TYPE must not be "NONE" on the associated TKGRP form.

2.21 RLT AMA IND

Description: Is the original caller's data to be used in place of the attendant's data in the AMA Record? Enter the Release Link Trunk Automatic Message Accounting indicator.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This entry must be "Y" if the original caller's data is to be used in place of the attendant's data in the AMA Record.

If this field is "Y", then RLT TYPE must not be "NONE" on the associated TKGRP form.

2.22 VOICE ETE

Description: This field is used to enter the End-to-End Q.931 Connectivity option for voice calls using this ARS feature.

Required Field.
Default: ANY
Valid Entries:

Valid VOICE ETE Entries

Entry	Definition
ANY	The call routes over any available trunk.
PREF	PRI trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. However, if a PRI trunk is not available, the route will fail.

Data Rules:

When this feature is assigned to a non-PRI trunk (the TRKCLS has a value other than "EDSL" or "EDSLHM" on the associated TKGRP form), this field must be set to "ANY".

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

2.23 DATA ETE

Description: This field is used to enter the End-to-End Q.931 Connectivity option for data calls using this ARS feature.

Required Field.
Default: ANY
Valid Entries:

Valid DATA ETE Entries

Entry	Definition
ANY	The Call Routes over any available trunk.
PREF	PRI trunks are preferred to route the call. However, if a PRI trunk is not available, then any trunk will be used.
REQ	PRI trunks are required to route the call. However, if a PRI trunk is not available, the route will fail.

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Data Rules:

When CSD ARS GRP is left blank, then DATA ETE must contain the default value of "ANY".

When this feature is assigned to a non-PRI trunk (the TRKCLS has a value other than "EDSL" or "EDSLHM" on the associated TKGRP form) this field must be set to "ANY".

If "REQ" is entered, then there must be PRI trunks in the route list. Also, route selection will be enhanced if the PRIs appear earlier in the route list.

```
arstpa                    5ESS Switch          _
(5608-5)              OFFICE DATA ADMINISTRATION
          AUTOMATIC ROUTE SELECTION TRUNK (TGN/MEMB) PARAMETERS

 * 1. TGN          1100              12. TCM IN         _
 * 2. MEMB         1205              13. TCM OUT        _
 * 3. FEATURE      ARS1              14. DEFAULT TCM    __
                                 15. QUEUE ALLOWED   N
   4. CSV ARS GRP   ARS1              16. PRIORITY QUEUE  N
   5. CSD ARS GRP   ARSD              17. DIAL PLAN       ___
   6. TONE TYPE     NONE              18. RLT FRL IND     N
   7. FRL LINE      16                19. RLT AMA IND     N
   8. USE ALT FRL   N                 20. VOICE ETE       ANY
   9. ARS SI        01                21. DATA ETE        ANY
  10. ALW MDR RAO   N
  11. PRIVATE DN    _______
```

Figure 1 SAMPLE ARSTPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
arstpa                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5608-5)     AUTOMATIC ROUTE SELECTION TRUNK (TGN/MEMB) PARAMETERS

*1. TGN     ____              12. TCM IN         _
*2. MEMB    ____              13. TCM OUT        _
*3. FEATURE _________         14. DEFAULT TCM    __
                         15. QUEUE ALLOWED  N
 4. CSV ARS GRP _________      16. PRIORITY QUEUE N
 5. CSD ARS GRP _________      17. DIAL PLAN      ___
 6. TONE TYPE   NONE           18. RLT FRL IND    N
 7. FRL LINE    16             19. RLT AMA IND    N
 8. USE ALT FRL N              20. VOICE ETE      ANY
 9. ARS SI      01             21. DATA ETE       ANY
10. ALW MDR RAO N
11. PRIV DN     ___________
```

Figure 2 SAMPLE ARSTPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 9F: 5608-6 RECORD
AUTOMATIC ROUTE SELECTION
GROUP SCREENING FORM - ARSSCRN

1. GENERAL

The 5608-6 Record is available with 5E3 and later Software Releases and is used to determine the initial route of a route list for ARS (Automatic Route Selection) groups.

The ARSSCRN forms are used for all ARS Groups. Digit analysis for the ARS calls may be provided by either the originator's ODP (Office Dialing Plan) or a PNDP (Private Network Dialing Plan). When the ODP is used, the ARS INDEX used as one of the keys into the ARS Screening data is the Route Index normally found in the LDIT form (5300-3/5 Record). When a PNDP is used, the ARS INDEX is a result of a call defined as "ON" or "OFF" in the PNDP form (5608-10/11 Record).

In addition to the ARS GROUP NAME and ARS INDEX, the third key to this data is the ARS SCREENING INDEX. The ARS Screening Index is an ARS terminal parameter which, like the ARS Group Name, may be defined as a default parameter on the ARSFD form (5608-1B Record) or on an individual terminal basis on the ARSLPA (5608-3 Record), ARSMPA (5608-4 Record), or ARSTPA form (5608-5 Record).

This ARS Screening Index is similar to the Screening Indexes used in the POTS application on the RAR form (5301 Record). It provides the ability to subdivide the ARS Group so that different treatments may be given to groups of terminals within the ARS Group which all use the same common ARS Group data and digit analysis.

This may be used to allow a set of terminals within the ARS Group to route with an initial route (an MC Route Index) of a route list while another set of terminals may be "routed" to an announcement, reorder tone or to their attendant. To accomplish this, the first set of terminals could be defined with ARS Screening Index 1 and the second set, ARS Screening Index 2. Then ARSSCRN forms would be required for all ARS INDEX values for the ARS Group with both 1 and 2 indicated for the ARS SCREENING INDEX. The desired routing treatment would then be indicated in the appropriate Pattern Group entry.

Please note, the treatments here are similar to those specified in BAD NUMBER TREATMENT on the ARSFD form (5608-1A Record). These error treatments will be used when the ARS number is being initially analyzed in the ODP. However, if this error treatment is inappropriate for some calls, a different treatment can be given as described above.

When a PNDP is used to analyze the ARS numbers, BAD NUMBER TREATMENT will not be used. If the result of PNDP is an ARS Index, the ARS Index must be defined here on the ARSSCRN form for every ARS Screening Index of the group.

ARS Screening Indexes may also be used so that different subsets of the ARS Group use different route lists. This may be useful for satellite route avoidance. That is, one set of terminals in the ARS Group may not be allowed to route over a Trunk Group which is a satellite route. Another set or sets of the ARS Group do use the satellite route as a first or early route in the route list. FRL (Facility Restriction Level) would not be appropriate in this case because the first set would be blocked before subsequent routes which are allowed.

The ARS Group may be divided into a maximum of 16 subgroups by using ARS Screening Indexes 1 to 16. These indexes should not be confused with the FRL of the terminal and route. Even though they have the same range of values, they are independent uses.

In addition to an error treatment or an initial MC Route of a route list, the ARSSCRN form may also specify an Office Code when the call should be routed to a line in this office. This type of routing may be used when the ARS call that is being translated is in the on-network (private) format of RNX-XXXX and the number is a line defined in this office as NXX-XXXX. This form may provide that transition. The RNX would be translated in a PNDP with a unique ARS Index so this form may specify the Office Code (NXX)

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that is defined on the NOC form (5501 Record). The NXX plus the last four digits collected will be used to enter Directory Number translations for line terminations.

Each ARS Group may be defined with 1 to 6 Pattern Groups as specified on the ARSGPA form (5608-2 Record) in NUMBER PATTERN GROUPS ALLOWED. However, only one Pattern Group is active at any given point in time. During call processing, the active Pattern Group is used as the fourth Key to determine the route to be used. Therefore, for each allowed Pattern Group, an entry should be made on each ARSSCRN form. For example, if an ARS Group has four Pattern Groups, a route should be specified in PATTERN GROUP row values of 1 through 4 on every ARSSCRN form input for the ARS Group. If the ARS Group uses only one Pattern Group (which by definition is always active), then the ARSSCRN forms will be defined with entries only in the first row under ARS PATTERN GROUP ROUTES.

1.1 Recent Change View

This corresponding Recent Change view for this form is RC/V 10.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * ARS GROUP NAME

Description: Enter the name of the ARS Group.
Valid Entries: 1 - 8 characters

Data Rules:

The ARS GROUP NAME must be defined on an ARSGPA form (5608-2 Record).

The maximum quantity of ARS Groups in an office is 200.

2.3 * ARS INDEX

Description: Enter the ARS Index. If the Office Dialing Plan is used to analyze the initial ARS dialed or inpulsed digits, then this entry will be a POTS Route Index normally found in LDIT. If a Private Network Dialing Plan is used to analyze the ARS number, then this entry will be an index used by the PNDP to point to the appropriate data in this form in the form of an ARS INDEX.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

2.4 * ARS SCREENING INDEX

Description: Enter the ARS Screening Index.
Default: 1
Valid Entries: 1 - 16

Data Rules:

For each ARS Screening Index assigned to the ARS terminals with the same ARS Group Name, a separate ARSSCRN form must be input.

2.5 CHARGE INDEX

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Description: Enter the Charge Index to be used when terminating to a line in this office.
Valid Entries: 1 - 2047

Data Rules:

If a value is entered here, it must be defined on the CGIDX form (5302-1 Record).

If any ROUTE TYPE on this form equals "MCTRAN", this field must be entered; otherwise, leave this field blank.

ARS PATTERN GROUP ROUTES

This group of fields (Section 2.6 - Section 2.9) defines the appropriate ROUTE TYPE (and MCRTI and NXX values as required) for each Pattern Group used for this ARS Group. Each Pattern Group is represented by a row 1 through 6. The rows must be entered in consecutive order and may not exceed the value entered in NUMBER PATTERN GROUPS ALLOWED which is specified on the ARSGPA form (5608-2 Record).

2.6 ROUTE TYPE

Description: Enter the Route Type for each allowed Pattern Group 1 - 6.

Valid ROUTE TYPE Entries

Entry	Definition
ANNCE	Used to route the call to the announcement specified on the ARSGPA form (5608-2 Record) in the field BAD NUMBER ANNOUNCEMENT RTI.
ATDN	Used to route the call to the Attendant of this originator's Terminal Group. If "ATDN" is used, all terminals which access this ARSSCRN form, must be assigned to a Terminal Group ID via the TGSR feature and the Terminal Group must have an Attendant Telephone Number defined on the TGATTD form (5611 Record).
MC	Used to route the call via an MC route list. The first route in the route list is specified in MCRTI.
MCTRAN	Used to route the call to a line in this office. The office code is specified in NXX.
REORDER	Used to route the call to Reorder tone.

2.7 MCRTI

Description: Enter the MC Route Index for each allowed Pattern Group 1 - 6 where ROUTE TYPE equals "MC".
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

Any value entered here must be defined on the MCRTIDX form (5304 Record) as the first route in the route list. Subsequent (or overflow) routes are also defined on the MCRTIDX form. Additionally, on the MCRTIDX form, MC ROUTE TYPE must be set to "MC", "SFG" or "PVN".

2.8 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

2.9 NXX

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Description: Enter the Office Code for each allowed Pattern Group 1 - 6 where ROUTE TYPE equals "MCTRAN".
Valid Entries: 3 digits

Data Rules:

Any value entered here must be defined on the NOC form (5501 Record).

For 5E12 and later, when NXX (Office Code) and/or NPA/NXX combinations are assigned on the ARSSCRN form, they must be defined on the NOC form.

For 5E12 and later, if the ARSSCRN forms have a "PATTERN GROUP ROUTES.NXX" defined in the rows indicated by PATTERN GROUP and there are multiple NOC forms with the same value for NXX, "PATTERN GROUP ROUTES.NPA" will also have to be defined in the same row on the ARSSCRN form.

```
arsscrn                  5ESS Switch        _
(5608-6)            OFFICE DATA ADMINISTRATION
          AUTOMATIC ROUTE SELECTION GROUP SCREENING

* 1. ARS GROUP NAME      XAJA
* 2. ARS INDEX           0023
* 3. ARS SCREENING INDEX  01
  4. CHARGE INDEX        ____


      5. ARS PATTERN GROUP ROUTES

  PATTERN    ROUTE TYPE    MCRTI    NXX
   GROUP
    1        MC           0023     ___
    2        MC           0024     ___
    3        ANNCE         ____     ___
    4        ATDN          ____     ___
    5        _______       ____     ___
    6        _______       ____     ___
```

Figure 1 SAMPLE ARSSCRN FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
arsscrn                  5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5608-6)          AUTOMATIC ROUTE SELECTION GROUP SCREENING

*1. ARS GROUP NAME      _________   5. ARS PATTERN GROUP ROUTES (ROUTE)
*2. ARS INDEX           ____        PATTERN
*3. ARS SCREENING INDEX 01          GROUP   ROUTE TYPE MCRTI  NPA   NXX
 4. CHARGE INDEX        ____          1     _______  ____  ___   ___
                                      2     _______  ____  ___   ___
                                      3     _______  ____  ___   ___
                                      4     _______  ____  ___   ___
                                      5     _______  ____  ___   ___
                                      6     _______  ____  ___   ___
```

Figure 2 SAMPLE ARSSCRN FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 9G: 5608-7 RECORD
AUTOMATIC ROUTE SELECTION ALTERNATE FACILITY RESTRICTION LEVELS FORM - ARSFRL

1. GENERAL

The 5608-7 Record is available with 5E3 and later Software Releases. It is used to define the set of FRLs (Facility Restriction Levels) to use for an ARS (Automatic Route Selection) Group.

This form must be submitted for an ARS Group when the ARSGPA form (5608-2 Record) is defined with ALW ALT FRL equal to "Y".

The FRL of the ARS originating terminal is defined as a default parameter of the ARSFD form (5608-1B Record), or on an individual terminal basis as a parameter on the ARSLPA, ARSMPA and ARSTPA forms (5608-3, 5608-4 and 5608-5 Records, respectively). In the case of an originating trunk, the FRL may have been derived from an incoming TCM (Traveling Class Mark). See TCM IN on the ARSFD form or ARSTPA form. When a two-digit TCM is received, it becomes the FRL for that origination. When a one-digit TCM is received, it must be converted to the "two-digit FRL format on the ARSTCM form (5608-8 Record).

The originating terminal FRL, sometimes labeled the FRL of the call, is used during call processing to determine if the originator has sufficient permission to use an ARS route. The route FRL is specified for each route in an ARS route list on the MCRTIDX form (5304 Record) as FRL GROUP. The terminal FRL must be equal to or greater than the route FRL to use the route.

If a PNDP (Private Network Dialing Plan) is used to analyze and collect the ARS digits, an FRL may also be specified on calls that escape to the ODP. Because the call is escaping ARS, an MC Route Index will not be used on the call and, therefore, the FRL Group cannot be used. The FRL specified on the PNDP form (5608-10/11 Records) takes the place of the route FRL and may be used, based on the dialed (or inpulsed) digit string, to require sufficient FRL permission to use the ODP.

If the terminal FRL is less than the FRL of the route, then there is insufficient permission. At this time during call processing, an Authorization Code may be entered to raise the terminal FRL if the originating terminal has an appropriate Authorization Code feature. See the ATHGPA form (5620-2 Record), for requirements on changing the FRL value associated with terminals in an Authorization Code Group. If an Authorization Code is entered to increase the FRL of the call, additional routes in the ARS route list may be used by increasing the level of permission of the terminal.

If no route is available in the route list, either because of insufficient FRL or all the routes in the route list are busy, queuing for the first route in the route list will be invoked. This first route must have a Modular Queuing feature assigned. If the route is a Trunk Group, see the TKGRP form (5202-3 Record), and if an SFG (Simulated Facility Group), see the PFASFG form (5609-3 Record). Queuing will not be invoked if the originating terminal has the ARS parameter, QUEUE ALLOWED, equal to "N". When all possibilities are exhausted, the terminal is given Reorder tone.

The originating terminal FRL, however, may be changed when Alternate FRL is invoked. This may be done either via a dialed code or by TOD (Time Of Day). A code defined in the IDPDCA form (5601-1/2 Record), or in the PDIT form (5300-2 Record), with an action of FRLALT invokes this table of Alternate FRLs. For each possible originating FRL value of 1 to 16, there is a corresponding alternate FRL of 1 to 16. This form then may be used to either raise or lower the FRL of the originating terminal as desired for each FRL value. While the alternate FRL table is in effect, the alternate FRL, instead of the terminal FRL, will be used on origination. The alternate FRL then interacts with Authorization Code and Queuing as discussed above. The original FRLs of the terminals are restored by a code defined with an action of "FRLMAIN". These actions may be automatically invoked via Time Of Day on the TODCD form (5610-2 Record).

If the originating terminal has been defined with the ARS parameter, USE ALT FRL, equal to "N", then the

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terminal's FRL value will not be changed even when the Alternate FRL table is invoked.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.8.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * ARS GROUP NAME

Description: Enter the name of the ARS Group. The maximum quantity of ARS Groups in an office is 200.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The group name must be defined on an ARSGPA form (5608-2 Record) with the associated ALW ALT FRL field entered as "Y".

ALTERNATE FACILITY RESTRICTION LEVELS

Fields 2.3 - Section 2.19 are used to enter the Alternate FRLs. For each terminal FRL indicated by ALTFRL x, where x equals 1 through 16, enter the corresponding Alternate FRL to be used when this Alternate FRL table is active.

2.3 ALTFRL 0

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 0.

Software Release: 5E7 and later
Required Field.
Default: 0
Valid Entries: 0 - 16

2.4 ALTFRL 1

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 1.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.5 ALTFRL 2

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 2.

Required Field.
Default: 1
Valid Entries:

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- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.6 ALTFRL 3

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 3.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.7 ALTFRL 4

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 4.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.8 ALTFRL 5

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 5.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.9 ALTFRL 6

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 6.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.10 ALTFRL 7

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 7.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

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2.11 ALTFRL 8

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 8.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.12 ALTFRL 9

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 9.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.13 ALTFRL 10

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 10.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.14 ALTFRL 11

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 11.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.15 ALTFRL 12

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 12.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.16 ALTFRL 13

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Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 13.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.17 ALTFRL 14

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 14.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.18 ALTFRL 15

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 15.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.19 ALTFRL 16

Description: Enter the Alternate FRL to be used when the assigned terminal FRL is 16.

Required Field.
Default: 1
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

```
arsfrl                    5ESS Switch
(5608-7)              OFFICE DATA ADMINISTRATION
              ARS ALTERNATE FACILITY RESTRICTION LEVELS


* 1. ARS GROUP NAME  ABC


  ALTERNATE FACILITY RESTRICTION LEVELS

  2. ALTFRL 1  01      10. ALTFRL 9   01
  3. ALTFRL 2  01      11. ALTFRL 10  01
  4. ALTFRL 3  01      12. ALTFRL 11  01
  5. ALTFRL 4  01      13. ALTFRL 12  01
```

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```
 6. ALTFRL 5  01      14. ALTFRL 13  01
 7. ALTFRL 6  01      15. ALTFRL 14  01
 8. ALTFRL 7  01      16. ALTFRL 15  01
 9. ALTFRL 8  01      17. ALTFRL 16  01
```

Figure 1 SAMPLE ARSFRL FORM 5E6 AND EARLIER SOFTWARE RELEASES

```
arsfrl                    5ESS Switch
(5608-7)              OFFICE DATA ADMINISTRATION
              ARS ALTERNATE FACILITY RESTRICTION LEVELS

* 1. ARS GROUP NAME  ABC

  2. ALTFRL 0 00      12. ALTFRL 10  01
  3. ALTFRL 1 01      13. ALTFRL 11  01
  4. ALTFRL 2 01      14. ALTFRL 12  01
  5. ALTFRL 3 01      15. ALTFRL 13  01
  6. ALTFRL 4 01      16. ALTFRL 14  01
  7. ALTFRL 5 01      17. ALTFRL 15  01
  8. ALTFRL 6 01      18. ALTFRL 16  01
  9. ALTFRL 7 01
 10. ALTFRL 8 01
 11. ALTFRL 9 01
```

Figure 2 SAMPLE ARSFRL FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 9H: 5608-8 RECORD
AUTOMATIC ROUTE SELECTION TRAVELING CLASS MARK CONVERSION TABLE FORM - ARSTCM

1. GENERAL

The 5608-8 Record is available with 5E3 and later Software Releases. It is used to input the FRL (Facility Restriction Level) to be used during call processing on ARS (Automatic Route Selection) calls which originate on private trunks sending a "one-digit TCM (Traveling Class Mark).

This conversion may be needed when communicating with other switching systems because some use a TCM (and FRL) range of 0 to 7. The 5ESS Switch uses an FRL range of 1 to 16.

The ARS feature assigned to the private trunk must have TCM OPTION equal to "Y" to enable this conversion information to be accessed. This information, however, is associated with the ARS Group. One form is input for the group and is used whenever the trunks in the ARS Group are defined with TCM IN equal to 1, indicating a "one-digit TCM is expected on the trunk. The TCM digit is appended to the incoming digit string. A PNDP (Private Network Dialing Plan) must be used to translate the digits. See the PNDP form (5608-10/11 Records).

For each digit 0 through 7, a direct conversion is input on this form to the corresponding "two-digit FRL value.

An inverse of this direct conversion is also automatically built in the database to provide conversion from the 5ESS Switch two-digit FRL to a one-digit TCM. This one-digit TCM will be used on any trunk in this ARS Group that is defined with the ARS parameter, TCM OUT, equal to 1, indicating that a one-digit TCM is expected to be outpulsed on the trunk.

Because the values input of this form are used for conversion on both one-digit TCM to two-digit FRL and "two-digit FRL to one digit TCM, this form is required when any trunk in the ARS Group has either TCM IN or TCM OUT equal to 1.

The conversion for two-digit FRL to one-digit TCM is not always straightforward. The value entered for any TCM will reverse that FRL to the TCM. However, when there are nonconsecutive values entered, any FRL that falls in between will be given the higher value. The following table illustrates this conversion based on the values entered in Figure 2. Note that the values entered in the form must be of increasing numeric value.

2-DIGIT FRL TO 1-DIGIT TCM

Entry	Definition	Entry	Definition
1	0	9	3
2	0	10	4
3	0	11	5
4	0	12	6
5	0	13	7
6	1	14	7
7	2	15	7
8	2	16	7

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.9.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

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2.2 *ARS GROUP NAME

Description: Enter the name of the ARS Group. The maximum quantity of ARS Groups in an office is 200.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name must be defined on an ARSGPA Form (5608-2 Record).

TRAVELING CLASS MARK CONVERSION TABLE

Fields Section 2.3 - Section 2.10 refer to the construction of a TCM Table. For each TCM of 0 - 7, enter the corresponding two-digit FRL that it should be converted to. An inverse of this table (from the two-digit FRL to the TCM 0 - 7) will be automatically built in the database.

2.3 TCM 0

Description: Enter the "two-digit FRL that corresponds to TCM 0.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.4 TCM 1

Description: Enter the "two-digit FRL that corresponds to TCM 1.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.5 TCM 2

Description: Enter the "two-digit FRL that corresponds to TCM 2.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.6 TCM 3

Description: Enter the "two-digit FRL that corresponds to TCM 3.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

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2.7 TCM 4

Description: Enter the "two-digit FRL that corresponds to TCM 4.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.8 TCM 5

Description: Enter the "two-digit FRL that corresponds to TCM 5.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.9 TCM 6

Description: Enter the "two-digit FRL that corresponds to TCM 6.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

2.10 TCM 7

Description: Enter the "two-digit FRL that corresponds to TCM 7.

Required Field.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

---

arstcm 5ESS OFFICE DATA ADMINISTRATION _
(5608-8) AUTOMATIC ROUTE SELECTION
TRAVELING CLASS MARK CONVERSION TABLE FORM

* 1. ARS GROUP NAME NSC

TRAVELING CLASS MARK
CONVERSION TABLE

2. TCM 0 05
3. TCM 1 06
4. TCM 2 08
5. TCM 3 09
6. TCM 4 10
7. TCM 5 11
8. TCM 6 12

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9. TCM 7 13

Figure 1 SAMPLE ARSTCM FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 9I: 5608-9 RECORD
AUTOMATIC ROUTE SELECTION
SEGMENTED SIGNALING FORM - ARSSIG

1. GENERAL

The 5608-9 Record is available with 5E3 and later Software Releases. It is used to specify Segmented Signaling, if required, when outpulsing on an ARS (Automatic Route Selection) private facility.

Segmented signaling will be required on a cut-through route to a PBX if the PBX requires incoming digits to be on a phased basis. That is, the 5ESS Switch can be specified to outpulse some digits, pause for some seconds and then outpulse additional digits. From one to four pairs of values for PAUSE and POSITION are submitted on this form so that the specified pause in seconds will be taken before the digit position. By setting the position to 1, this means that the first (or only) pause will be taken before any digits are outpulsed.

This form must be entered for any MC Route Index that is defined with SEGMENTED SIGNALING equal to "Y". See the MCRTIDX form (5304 Record). Additionally, the Trunk Group specified with this indicator on the MCRTIDX form must be defined on the TKGRP form (5202 Record) with CUT THRU equal to "Y".

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.7.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * ARS GROUP NAME

Description: Enter the name of the ARS Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The ARS GROUP NAME must be defined on an ARSGPA form (5608-2 Record). The maximum quantity of ARS Groups in an office is 200.

2.3 * MC ROUTE INDEX

Description: Enter the MC Route Index.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The MC ROUTE INDEX must be defined on the MCRTIDX form (5304 Record) with SEGMENTED SIGNALING equal to "Y" and is used by this ARS Group.

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SEGMENTED SIGNALING LIST

Enter up to four pairs of PAUSE and POSITION, (fields Section 2.4 - Section 2.5). Each pair must be sequentially entered such that the position values are in increasing numeric order. Values must be submitted in pairs and at least one pair must be specified.

2.4 PAUSE

Description: Enter the pause in seconds to be taken before the digit position specified in POSITION.
Valid Entries: 1 - 10

2.5 POSITION

Description: Enter the digit position of the outpulsing sequence where the pause specified in this pair is to be done. Indicate the digit the pause comes before.
Valid Entries: 1 - 15

```
arssig                    5ESS Switch                _
(5608-9)              OFFICE DATA ADMINISTRATION
          AUTOMATIC ROUTE SELECTION SEGMENTED SIGNALING



* 1. ARS GROUP NAME  ABC
* 2. MC ROUTE INDEX  0129


  3. SEGMENTED SIGNALING LIST

  row   PAUSE   POSITION

   01    10       1
   02    05       4
   03    __       __
   04    __       __
```

Figure 1 SAMPLE ARSSIG FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 9J: 5608-10/11 RECORDS
PRIVATE NETWORK DIALING PLAN FORM - PNDP

1. GENERAL

The 5608-10/11 Records are available with 5E3 and later Software Releases. They are used to provide private digit analysis of both public and private numbers.

PNDPs (Private Network Dialing Plans) may be optionally used for subscribers who are assigned an ARS (Automatic Route Selection) BRCS feature.

If the ARS feature assigned to the terminal is defined on the ARSFD form (5609-1 Record), with ENTRY equal to "AUTO", then the dialing plan used to analyze ARS digits is specified as a default parameter of the ARSFD form or as a parameter of the ARSLPA, ARSMPA or ARSTPA forms (5608-3, 5608-4 or 5608-5 Records), respectively. With this type of ARS feature, exactly one dialing plan is specified. The choices are ODP (the Office Dialing Plan of the originator), 1 (PNDP 1) or 2 (PNDP 2).

If the ARS feature is defined with ENTRY equal to "CODE", the action defined for the access code will indicate which dialing plan to use when interpreting ARS digits. The ARS access code or codes may be defined on the PDIT form (5300-2 Record), or on the IDPDCA form (5601-1/2 Records). An action of "ARSUSE" indicates that the Office Dialing Plan of the originator should be used while the actions "AR1USE" and "ARS2USE" indicate that Private Network Dialing Plan 1 or 2, respectively, should be used. With this type of ARS feature, more than one dialing plan may be used by specifying unique access codes with the desired actions. If two access codes and dialing plans are used, typically, one dialing plan is used for off-network (public) numbers and one dialing plan is used for on-network (private) numbers.

Each ARS Group and PNDP combination must be entered on a PNINFO form (5608-12 Record) to specify the error treatment to be given when the ARS digits are not found in the associated PNDP. (This error treatment does not apply to partial dial. If the caller dials an incomplete digit string, the call will route according to the partial dial error treatment specified for the office.)

Caution should be exercised in defining both the dialed digits in the PNDP and selecting the appropriate error treatment. Any call which results in an error treatment of "USEOFFC" or digits explicitly defined in a PNDP with a Call Type of "USEOFFC" must be able to succeed through the originator's Office Dialing Plan and normal screening on the Rate and Route. It is probably never appropriate to allow on-network numbers to escape to POTS in this manner. Care still needs to be exercised with off-network numbers because of the 1 prefix and Home NPA. If the 1 has not been dialed but is required in LDIT, (5300-3/5 Records), because of prefix resolved conflicts or is required on the RAR form (5301 Record), the dialed digits should be defined in the PNDP with a Call Type of OFF and an ARS Index. This information, when passed back to ARS, should result in an MC Route Index where the 1 can be prefixed. Similarly, the Home NPA, when dialed but inappropriate for the LDIT, can be deleted on an MC Route Index.

Generally, all digits dialed when ARS is invoked and a PNDP is used are treated equally. Special treatment for digits used as prefixes is not provided with a PNDP. In cases where a 1 is included in the digits dialed by the subscriber, it needs to be included in the INCOMING DIGITS of the PNDP. When ARS subsequently routes these calls, if the 1 is inappropriate for outpulsing on any of the routes, it must be deleted on the appropriate MC Route Indexes.

1.1 Common Control Switching Arrangement

There is a special association of PNDP with CCSA (Common Control Switching Arrangement). When a terminal is assigned an ARS Feature with CCSA LIMITATION equal to YES and the call is being interpreted in Private Network Dialing Plan 1, the call will be subject to SFG (Simulated Facility Group) limits and special billing. CCSA SFGs may be specified for calls originating and/or terminating to the CCSA group on the PFATG form (5609-2 Record). When the call is recognized as a CCSA call (i.e., CCSA LIMITATION and PNDP 1), and the call is being routed off the private network, a special AMA billing record will be produced with an AMA Call Type of CCSAS, call code 21. See the AMACT form (5506

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Record). The call is determined to be an off-network call if it completes to a service class other than a Private Facility trunk (e.g., "PF", "PFLASH", "PFITT"). The CCSAS AMA record will be made in addition to the public billing record specified for the off-network call by the Charge Index found during call processing. If it is desired to inhibit this private billing record for a terminal, the ARS parameter, ALW MDR RAO should equal "N".

1.2 Traveling Class Mark

When a TCM (Traveling Class Mark) is expected on an incoming ARS trunk, a PNDP must be used for digit interpretation. The PNDP will be informed by ARS that one or two digits are expected and PNDP will collect these digits after the regular PNDP digits are analyzed and collected. The NBR DIGITS field on this form should not include the count of TCM digits.

1.3 Selective Destination Screening

SDS (Selective Destination Screening) is a special digit analysis routine provided with a PNDP to give unique treatment to some codes with fewer form instances to input and, therefore, less memory used. An example may help to illustrate its use. The ARS business customer desires all calls dialed with a given NPA, for example 212, to route via an ARS route sequence except certain NXXs, 555 and 976. Calls dialed 212-555 + 4 digits or 212-976 + 4 digits are to be routed to an announcement. Three PNDP forms will be input for this case. 212 is entered as usual, in this case as a "10-digit, "off-net number with the normal ARS Index. 212555 and 212976 are each entered on separate forms similar to the 212 entry except a unique ARS Index is entered and SELECT DEST SCRN is equal to "Y". During digit analysis, the results indicated by the 212 entry will be used unless the next three digits are 555 or 976; the information entered with 212555 or 212976 would then override the original 212 information. In any case, the resulting data is passed to ARS. The unique treatments are then accomplished through ARS screening and route sequences.

1.4 Off-network and On-network Number Translation

The Private Network Dialing Plan has the ability to translate both off-network numbers and on-network numbers in one PNDP or two. If the subscriber is required to always dial an NPA, including the Home NPA, for off-network numbers, then one PNDP could be used because the two types of numbers could be distinguished. To allow the subscribers to dial off-network numbers within the Home NPA on a "seven-digit basis, two PNDPs should be used (with unique access codes) so the "seven-digit off-network numbers do not conflict with "seven-digit "on-network numbers.

Even when the ARS has a private network with on-network digits, the originating subscriber may be allowed to dial the public off-network number. Translating the appropriate digits with a Call Type of "OFFON" causes the digits to be converted by the PNOFFON form (5608-13 Record), to the on-network number which is subsequently retranslated in the specified PNDP.

1.5 On-network to Off-network Number Conversion

On-network to off-network number conversion is also provided totally with translations, however, it is not a direct result of digit analysis in the PNDP. When the PNDP passes information about an on-network call to ARS, it includes an indication that the current digit string is an on-network number (either because that's what was dialed or it was involved in an off to on conversion). When ARS determines that the route to be used requires an off-network number, such as for OUTWATS or overflow to DDD, then ARS will request an on-network to off-network conversion via the PNONOFF form (5608-14 Record). In this case, the route has already been determined so subsequent translations of the converted number is not required in the PNDP.

1.6 Account Code Digits

A PNDP also provides for Account Code Lead digit or digits if the ARS subscribers also have an Account

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Code BRCS feature assigned. Any digit or digits may be translated in the PNDP with a Call Type of ACLD provided the digit sequence is unique and unambiguous within the PNDP. During PNDP digit analysis when the result is ACLD, the first digit is deleted and subsequent digits are collected under the Account Code feature. After the Account Code has been collected, the Account Code feature will return control of subsequent digit analysis to PNDP.

1.7 Recent Change View

The corresponding Recent Change View for this form is 9.21.

2. FORM ENTRIES - 5608-10 RECORD

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and the office name on each record.

2.2 * ARS GROUP NAME

Description: This field is used to enter the name of the ARS Group. The maximum number of ARS Groups in an office is 200.
Valid Entries: 1 - 8 characters

Data Rules:

The valid entries are defined an ARSGPA form (5608-2 Record).

2.3 * DIAL PLAN

Description: This field is used to enter the Private Network Dialing Plan number.

Valid DIAL PLAN Entries

Entry	Definition
1	Digits will be interpreted in PNDP 1 (Private Network Dialing Plan).
2	Digits will be interpreted in PNDP 2 (Private Network Dialing Plan).

Data Rules:

Each unique combination of Dial Plan and ARS Group Name must also be entered on a PNINFO form (5608-12 Record), to specify the treatment to give the call when the digit sequence is not found in the PNDP.

2.4 * INCOMING DIGITS

Description: This field is used to enter the dialed ARS number to be interpreted. The first digit may be *, # or 0-9. All digits except the first digit must be 0-9. There must be a space before or after the * and # symbols in order for them to be entered alone.
Valid Entries:

- For 5E9(2) and earlier: 1 - 15 characters
- For 5E10 and later: 1 - 18 characters

Data Rules:

When the INCOMING DIGITS entered on this form are a beginning substring of another PNDP form with the same ARS GROUP NAME and DIAL PLAN number, then either the PNDP form with the shorter INCOMING DIGIT string must enter the number of digits in its INCOMING DIGIT string in the NBR DIGITS field or the PNDP form with the longer INCOMING DIGIT string entered must have "Y" entered in the SELECT DEST SCRN field.

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For 5E10 and later, the number of characters entered in this field cannot be greater than 15 unless the 15 Digit IDDD (International Direct Distance Dialing) secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5713-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.5 CALL TYPE

Description: This field is used to enter the Call Type.

Required Field.

Valid CALL TYPE Entries

Entry	Definition
ACLD	Account Code Lead Digit.
CONFLCT	Conflict to be resolved in 5608-11 Record.
DARS	Deactivate ARS for the current call, used for AUTO entry ARS without an IDP
NSC	Network Service Code.
OFF	Off-network number.
OFFON	Off-network number requiring conversion to an on-network number.
ON	On-network number.
USEOFFC	Use the originator's office Dialing Plan instead of ARS.

2.6 NBR DIGITS

Description: This field is used, for Call Types other than "CONFLCT", to enter the total number of digits expected in the PNDP form, both analyzed and collected. Do not include the ARS access code (if associated with a code entry ARS feature) or Traveling Class Marks which may be received as appended digits to the digit string when inpulsed on some trunks.

When a TCM (Traveling Class Mark) is expected on an incoming ARS trunk, a PNDP must be used for digit interpretation. The PNDP will be informed by ARS that one or two digits are expected and PNDP will collect these digits after the regular PNDP digits are analyzed and collected. The NBR DIGITS field should not include the count of TCM digits, i.e., only 1 - 14 digits are valid with one digit Traveling Class Marks and only 1 - 13 digits are valid with the two digit TCM.
Valid Entries:

- For 5E9(2) and earlier: 1 - 15 digits
- For 5E10 and later: 1 - 18 digits

Data Rules:

The number entered must be equal to or greater than the quantity of digits entered in INCOMING DIGITS.

For Call Type "ACLD", the entry must be equal to the quantity of digits specified in INCOMING DIGITS.

For Call Type "CONFLCT", leave this field blank.

For 5E10 and later, this field cannot have a value greater than 15 digits unless the 15 Digit IDDD (International Direct Distance Dialing) secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5713-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.7 ARS INDEX

Description: This field is used, for Call Types "ON" or "OFF", to enter the ARS INDEX. This entry with the ARS Group Name on this view together with the ARS Screening Index of the originating ARS terminal are used to access the ARSSCRN form (5608-6 Record).
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

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Data Rules:

For all other Call Types, leave this field blank.

2.8 FRL

Description: This field is used to enter an FRL (Facility Restriction Level) for the digit string being interpreted.

The FRL entered here is used similarly to the FRL Group on the MCRTIDX form (5304 Record). That is, the FRL of the originating terminal will be compared to the FRL entered here. If the FRL of the terminal is equal to or greater than this FRL, escape to the ODP as a POTS call will be successful. If the FRL of the terminal is less than this FRL, the call will route to Reorder tone.

The FRL of the terminal may be specified as a parameter of the ARSLPA, ARSMPA or ARSTPA forms (5608-3, 5608-4 or 5608-5 Records), respectively, or as a default parameter of the ARSFD form (5608-1 Record).
Valid Entries: 0 - 16

Data Rules:

For Call Type "USEOFFC", enter a FRL for the digit string being interpreted.

For all other Call Types, leave this field blank.

2.9 ROUTE TYPE

Description: This field is used to enter the Route Type of a call.

Valid ROUTE TYPE Entries

Entry	Definition
MC	The normal route of the call is not to a line in this office.
MCTRAN	The normal route of the call is to a line in this office.

Data Rules:

For Call Types "ON" or "OFF", enter the Route Type of the call. If the normal route of the call is to a line in this office, enter "MCTRAN", otherwise enter "MC". The Route Type may be overridden during call processing as the call is processed by the ARSSCRU form (5608-6 Record).

For all other Call Types, leave this field blank.

2.10 SELECT DEST SCRN

Description: Is this is a Selective Destination Screening entry?

If this entry equals "Y", then there must be another form entered with the same NBR DIGITS where the INCOMING DIGITS are the same as the first digits entered in INCOMING DIGITS on this form. The INCOMING DIGITS on this form must have at least one more digit entered to be analyzed.

The result of entering "Y" in this field indicates that this particular entry should be selectively screened out and given different treatment than indicated by the form with fewer digits in the INCOMING DIGITS. Calls starting with those same fewer INCOMING DIGITS but which don't find another form with digits indicated with Selective Destination Screening will be given the treatment specified by the first form.

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

For 5E6 and later:
If SELECT DEST SCRN is "Y":

- CALL TYPE must be "ON", "OFF , or "USEOFFC". For all other Call Types this entry must be "N".
- and CALL TYPE is "USEOFFC", then FRL must be known.

SELECT DEST SCRN and ARS SDN cannot both be "Y".

2.11 CONVERSION INDEX

Description: This field is used, for Call Type "OFFON", to enter the Conversion Index. This entry will be used with the ARS Group Name to access the PNOFFON form (5608-13 Record), which will delete and prefix digits, on the off-network number defined here, converting that number to its on-network format. The reconstructed number will then be analyzed in either this PNDP form or another provided for the ARS Group. The Dial Plan used is specified by the PNOFFON form.
Valid Entries: 1 - 65535

Data Rules:

For all other Call Types, leave this field blank.

2.12 NSC DN

Description: This field is used, for Call Type "NSC", to enter the Network Service Code replacement Directory Number. The DN entered will replace the digits analyzed and collected on this form and will be subsequently analyzed in the Dialing Plan specified in NSC DIAL PLAN. The DN may be either a valid on-network or off-network number.
Valid Entries: 7 - 11 digits of 0 - 9

Data Rules:

For all other Call Types, leave this field blank.

2.13 NSC DIAL PLAN

Description: This field is used, for Call Type "NSC", to enter the Private Network Dialing Plan of this ARS Group that will analyze the Directory Number entered in NSC DN.
Valid Entries: 1, 2

Data Rules:

For all other Call Types, leave this field blank.

2.14 ARS SDN

Description: Do the incoming dialed digits (INCOMING DIGITS) represent a Software Defined Network call?

Software Release: 5e6 and later.
Required Field.
Default Value: N
Valid Entries: Y, N

Data Rules:

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This field must be set to "N" when CALL TYPE is "CONFLCT".

SELECT DEST SCRN and ARS SDN cannot both be "Y".

2.15 NODAL 56K

Description: Proprietary field.

2.16 REMARKS

Description: This field is used as deemed locally necessary.
Valid Entries: Up to 16 alphanumeric characters

3. FORM ENTRIES - 5608-11 RECORD

3.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and the office name on each record.

3.2 * ARS GROUP NAME

Description: This field is used to enter the name of the ARS Group. The name must be the same as that from the corresponding 5608-10 Record entry. This information is not required on the PNDP ODA input form.
Valid Entries: 1 - 8 characters.

3.3 * DIAL PLAN

Description: This field is used to enter the Private Network Dialing Plan number. The number must be the same as that from the corresponding 5608-10 Record entry. This information is not required on the PNDP ODA input form.

Valid DIAL PLAN Entries

Entry	Definition
1	Digits will be interpreted in PNDP 1 (Private Network Dialing Plan).
2	Digits will be interpreted in PNDP 2 (Private Network Dialing Plan).

3.4 * INCOMING DIGITS

Description: This field is used to enter the code for which the conflict exists. This must be the same as the INCOMING DIGITS of the Conflict Code on the 5608-10 Record. This information is not required on the PNDP ODA input form.

CONFLICT RESOLUTION TABLE ENTRIES

The following fields (3.5 - 3.11) comprise the Conflict Resolution Table Entries.

3.5 NBR DIGITS

Description: This field is used to enter the total number of digits expected in the PNDP form, both analyzed and collected.
Valid Entries:

- For 5E9(2) and earlier: 1 - 15 digits
- For 5E10 and later: 1 - 18 digits

Data Rules:

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For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5713-1 Record).

3.6 CALL TYPE

Description: This field is used to enter the Call Type.

Valid CALL TYPE Entries

Entry	Definition
DARS	Deactivate ARS for the current call, used for AUTO entry ARS without an IDP.
OFF	Off-network number
OFFON	Off-network number requiring conversion to an on-network number
ON	On-network number
USEOFFC	Use the originator's office Dialing Plan instead of ARS

3.7 ARS INDEX

Description: This field is used, for Call Types "ON" and "OFF", to enter the ARS Index.

This entry with the ARS Group Name on this view together with the ARS Screening Index of the originating ARS terminal are used to access the ARSSCRN form (5608-6 Record).
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

For all other Call Types, leave this field blank.

3.8 FRL

Description: This field is used for Call Type "USEOFFC" to enter a Facility Restriction Level for the digit string being interpreted.

The FRL entered here is used similarly to the FRL GROUP on the MCRTIDX form (5304 Record). That is, the FRL of the originating terminal will be compared to the FRL entered here. If the FRL of the terminal is equal to or greater than this FRL, escape to the ODP as a POTS call will be successful. If the FRL of the terminal is less than this FRL, the call will route to Reorder tone.

The FRL of the terminal may be specified as a parameter of the ARSLPA (5608-3 Record), ARSMPA (5608-4 Record) or ARSTPA forms (5608-5 Records), or as a default parameter of the ARSFD form (5608-1 Record).
Valid Entries: 0 - 16

Data Rules:

For all other Call Types, leave this field blank.

3.9 ROUTE TYPE

Description: This field is used for Call Types "ON" or "OFF" to enter the Route Type of the call. Route Type may be overridden during call processing as the call is processed by the ARSSCRU form (5608-6 Record).

Valid ROUTE TYPE Entries

Entry	Definition
MC	The normal route of the call is not to a line in this office.
MCTRAN	The normal route of the call is to a line in this office.

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Data Rules:

For all other Call Types, leave this field blank.

3.10 CONVERSION INDEX

Description: This field is used for Call Type "OFFON" to enter the Conversion Index.

This entry will be used with the ARS Group Name to access the PNOFFON form (5608-13 Record), which will delete and prefix digits, on the off-network number defined here, converting that number to its on-network format. The reconstructed number will then be analyzed in either this PNDP or another provided for the ARS Group. The Dial Plan used is specified by the PNOFFON form.
Valid Entries: 1 - 65535

Data Rules:

For all other Call Types, leave this field blank.

3.11 ARS SDN

Description: Do the incoming dialed digits represented by this CONFLICT RESOLUTION TABLE entry is a Software Defined Network call?

Software Release: 5E6 and later
Valid Entries: Y, N

3.12 NODAL 56K

Description: Proprietary field.

```
SCREEN 1 OF 2                5ESS Switch
pndp                 OFFICE DATA ADMINISTRATION
(5608-10/11)           PRIVATE NETWORK DIALING PLAN


* 1. ARS GROUP NAME   ARS001              13. ARS SDN N
* 2. DIAL PLAN        1                  14. REMARKS NPA NXX CONFLICT
* 3. INCOMING DIGITS  510
  4. CALL TYPE        CONFLCT
  5. NBR DIGITS       __
  6. ARS INDEX        ____
  7. FRL              __
  8. ROUTE TYPE       ______
  9. SELECT DEST SCRN N
 10. CONVERSION INDEX _____
 11. NSC DN           ___________
 12. NSC DIAL PLAN    _
```

```
SCREEN 2 OF 2                5ESS Switch          _
pndp                 OFFICE DATA ADMINISTRATION
(5608-10/11)           PRIVATE NETWORK DIALING PLAN

              15. CONFLICT RESOLUTION TABLE ENTRIES
```

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```
Row  NBR      CALL      ARS     FRL    ROUTE    CONVERSION   ARS
     DIGITS   TYPE      INDEX          TYPE     INDEX        SDN
 1.   07      OFF       0023    __     MC       _____        _
 2.   10      OFFON     ____    __     ______       3        _
 3.   __      _______   ____    __     ______   _____        _
 4.   __      _______   ____    __     ______   _____        _
 5.   __      _______   ____    __     ______   _____        _
 6.   __      _______   ____    __     ______   _____        _
 7.   __      _______   ____    __     ______   _____        _
 8.   __      _______   ____    __     ______   _____        _
```

Figure 1 SAMPLE PNDP FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
pndp                        5ESS Switch
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5608-10/11)          PRIVATE NETWORK DIALING PLAN

*1. ARS GROUP NAME  ________          13. ARS SDN   N
*2. DIAL PLAN       _                 14. NODAL 56K N
*3. INCOMING DIGITS ____________________  15. REMARKS  ________________
#4. CALL TYPE       _______
 5. NBR DIGITS      __
 6. ARS INDEX       ____
 7. FRL             __
 8. ROUTE TYPE      ______
 9. SELECT DEST SCRN N
10. CONVERSION INDEX _____
11. NSC DN          ___________
12. NSC DIAL PLAN   _
```

```
pndp                        5ESS Switch        _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5608-10/11)          PRIVATE NETWORK DIALING PLAN

                  16. CONFLICT RESOLUTION TABLE ENTRIES (CONFRES)

   NBR    CALL    ARS       ROUTE  CONVERSION ARS NODAL
ROW DIGITS TYPE    INDEX FRL TYPE   INDEX      SDN 56K
 1  __  _______ ____  __ ______  _____    _   _
 2  __  _______ ____  __ ______  _____    _   _
 3  __  _______ ____  __ ______  _____    _   _
 4  __  _______ ____  __ ______  _____    _   _
 5  __  _______ ____  __ ______  _____    _   _
 6  __  _______ ____  __ ______  _____    _   _
 7  __  _______ ____  __ ______  _____    _   _
 8  __  _______ ____  __ ______  _____    _   _
 9  __  _______ ____  __ ______  _____    _   _
```

Figure 2 SAMPLE PNDP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 9K: 5608-12 RECORD
PRIVATE NETWORK INFORMATION FORM - PNINFO

1. GENERAL

The 5608-12 Record is available with 5E3 and later Software Releases. It is used to define the error treatment associated with a PNDP (Private Network Dialing Plan).

PNDPs may be optionally used for subscribers who are assigned an ARS (Automatic Route Selection) BRCS feature.

If the ARS feature assigned to the terminal is defined on the ARSFD form (5609-1 Record), with ENTRY equal to "AUTO", then the dialing plan used to analyze ARS digits is specified as a default parameter of the ARSFD form or as a parameter of the ARSLPA, ARSMPA, or ARSTPA forms, (5608-3, 5608-4, or 5608-5 Records, respectively). With this type of ARS feature, exactly one dialing plan is specified. The choices are ODP (the Office Dialing Plan of the originator), 1 (Private Network Dialing Plan 1) or 2 (Private Network Dialing Plan 2).

If the ARS feature is defined with ENTRY equal to "CODE", the action defined for the access code will indicate which dialing plan to use when interpreting ARS digits. The ARS access code or codes may be defined on the PDIT form (5300-2 Record) or on the IDPDCA form (5601-1/2 Records). An action of "ARSUSE" indicates that the Office Dialing Plan of the originator should be used while the actions "ARS1USE" and "ARS2USE" indicate that Private Network Dialing Plan 1 or 2, respectively, should be used. With this type of ARS feature, more than one dialing plan may be used by specifying unique access codes with the desired actions. If two access codes and dialing plans are used, typically, one dialing plan is used for off-network (public) numbers and one dialing plan is used for on-network (private) numbers.

For either "AUTO" or "CODE" entry ARS features, when Private Network Dialing Plan 1 or 2 is to be used, then the ARS digits are interpreted on the PNDP form (5608-10/11 Records). If the digits are not found in the PNDP, the call will be given the ERROR TREATMENT which is defined on this form, unless partial dial has occurred. If the caller dials an incomplete digit string, the call will route according to the partial dial error treatment specified for the office.

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 * ARS GROUP NAME

Description: Enter the name of the ARS Group as defined on an ARSGPA form (5608-2 Record). The maximum quantity of ARS Groups in an office is 200.
Valid Entries: 1 - 8 characters

Data Rules:

If this form is submitted, the name entered here together with the DIAL PLAN specified must be entered on one or more PNDP forms (5608-10/11 Records).

2.3 * DIAL PLAN

Description: Enter the Private Network Dialing Plan number.

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Valid Entries: 1 - 2

Data Rules:

If this form is submitted, the DIAL PLAN entered here together with the specified ARS GROUP NAME must be entered on one or more PNDP forms (5608-10/11 Records).

2.4 ERROR TREATMENT

Description: Enter the error treatment to be used when the ARS dialed digits cannot be found in the Private Network Dialing Plan.

Partial dialed digit strings are not subject to this Error Treatment. If 011 is defined in the Private Network Dialing Plan and 0 is not defined, a user dialing a 0 will be subject to partial dial treatment, since 011 is expected to be dialed.

Required Field.
Default: TONE
Valid Entries:

Valid ERROR TREATMENT Entries

Entry	Definition
ANNCE	Used to route the call to the announcement specified on the ARSGPA form (5608-2 Record) in the field BAD NUMBER ANNOUNCEMENT RTI.
ARSODP	ARS will use the ODP. The ODP is used to dodigit analysis. If the Route Index from LDIT is entered inthe ARS IDX field on the ARSSCRN form (5608-6 Record), ARSroutes the call. If the LDIT Route Index is not found onthe ARSSCRN form, treatment is determined from the BAD NUMBER TREATMENT entry on the ARSFD form (5608-1a/bRecord).
ATDN	Used to route the call to the Attendant of this originator's Terminal Group. If "ATDN" is used, all terminals which use this DIAL PLAN, must be assigned to a Terminal Group ID via the TGSR feature, and the Terminal Group must have an Attendant Telephone Number defined on the TGATTD form (5611 Record).
USEOFFC	Used to route the call via the originator's Office Dialing Plan. The call will be treated as if the ARS feature had not been invoked.
TONE	Used to route the call to reorder tone.

pninfo 5ESS OFFICE DATA ADMINISTRATION _
(5608-12) PRIVATE NETWORK INFORMATION

* 1. ARS GROUP NAME ARS0001
* 2. DIAL PLAN 1
3. ERROR TREATMENT USEOFFC

Figure 1 SAMPLE PNINFO FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 9L: 5608-13 RECORD
PRIVATE NETWORK OFF NETWORK NUMBER CONVERSION FORM - PNOFFON

1. GENERAL

The 5608-13 Record is available with 5E3 and later Software Releases and is used to convert an off-network number to an on-network number.

The PNOFFON provides the ability to allow the ARS (Automatic Route Selection) subscriber to dial the public, off-network number even though the call is to be analyzed and routed based on the private, on-network digits.

The information on this form is accessed during call processing when digits analyzed on a PNDP form (5608-10/11 Record) indicate a CALL TYPE of "OFFON" with an associated Conversion Index. The ARS Group Name of the PNDP and the Conversion Index are then used as keys to this data where digits are deleted and prefixed, as necessary, to convert the off-net number to its corresponding on-net format. The converted number will then be analyzed in the PNDP of the ARS Group as specified on this form. The PNDP may be the same as the one that initially translated the off-network number or it may be another one used for the ARS Group. For instance, Dial Plan 1 may be used only for off-network numbers while Dial Plan 2 is used for on-network numbers. In this case Dial Plan 1 will initially analyze the off-network dialed digits and this form will indicate that the converted number needs to be analyzed on Dial Plan 2.

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.22.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *ARS GROUP NAME

Description: Enter the name of the ARS Group. The name may be from one to eight characters as defined on an ARSGPA Form, 5608-2 Record. The maximum quantity of ARS Groups in an office is 200.

Software Release: 5E3 and later
Required Field.
Valid Entries: 1 - 8 characters

2.3 *CONVERSION INDEX

Description: Enter the Conversion Index. The Conversion Index entered here is a pointer from at least one PNDP Form, 5608-10 Record, where the Call Type is OFFON.

Software Release: 5E3 and later
Required Field.
Valid Entries: 1 - 65535

2.4 DELETE

Description: Enter the quantity of digits to delete from the off-network number requiring conversion.

Software Release: 5E3 and later
Required Field.
Valid Entries: 3 - 11

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2.5 DIGIT PFX

Description: Enter the digits to prefix, after the deletion indicated above, to convert the off-network number to its on-network format. The converted number must be in the format RNX-XXXX where R and N are any digits 2-9 and X is any digit 0-9.

Software Release: 5E3 and later
Required Field.
Valid Entries: 3 - 7 digits

2.6 DIAL PLAN

Description: Enter the Private Network Dialing Plan of this ARS Group that will analyze the number after conversion to the on-network format.

Software Release: 5E3 and later
Required Field.
Valid Entries: 1 or 2

---

pnoffon 5ESS Switch _
(5608-13) OFFICE DATA ADMINISTRATION
PRIVATE NETWORK OFF NETWORK NUMBER CONVERSION

* 1. ARS GROUP NAME ARSO12
* 2. CONVERSION INDEX 1
3. DELETE 6
4. DIGIT PFX 456
5. DIAL PLAN 2

Figure 1 SAMPLE PNOFFON FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 9M: 5608-14 RECORD
PRIVATE NETWORK ON NETWORK NUMBER CONVERSION FORM-PNONOFF

1. GENERAL

The 5608-14 Record is available with 5E3 and later Software Releases and is used to convert an on-network number to an off-network number.

During call processing, Automatic Route Selection (ARS) will request this conversion when the number it currently has is an on-network number and the available route in the route list requires an off-network number. Off-network numbers are required on an OUTWATS route or on overflow to DDD.

Typically, the RNX of the on-network number is sufficient to determine the appropriate NPA-NXX which will replace it. In this case, the RNX is entered in ON DIGIT, 3 is entered in DELETE and the NPA-NXX is entered in DIGIT PFX. If a prefix of 1 is required for foreign NPAs in this office, it should also be entered in DIGIT PFX, e.g., 1415232. The number converted to its off-network format of (1) + NPA-NXX-XXXX is given to ARS for use on the selected route. The converted number is not retranslated in the PNDP data. However, ARS will take the digits through the originator's Office Dialing Plan to determine Carrier Interconnect and office routing data.

If it is desired that all station numbers within an RNX be replaced by the station number of the attendant, the RNX is entered in ON DIGIT, 7 is entered in DELETE and the attendant number, (1) + NPA-NXX-YYYY, is entered in DIGIT PFX.

It is also possible to translate on more than the RNX before determining the appropriate requirement for deleting and prefixing of digits. In this case the RNXX or even the entire number RNXXXXX may be entered in ON DIGIT. However, it must be understood that this is similar to a digit interpreter table in that the codes must be nonconflicting. If 2320 is entered, 232 must not also be entered. However, 2321 through 2329, or any subset of these digit strings, could also be entered.

All numbers which have been translated in a PNDP for the ARS Group as an on-network number and have an opportunity to go off-net during ARS routing, must be entered on a PNONOFF Form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 9.23.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *ARS GROUP NAME

Description: Enter the name of the ARS Group. The name may be from one to eight characters as defined on an ARSGPA form (5608-2 Record). The maximum quantity of ARS Groups in an office is 200.

Software Release: 5E3 and later.
Required Field.
Valid Entries: 1 - 8 characters

2.3 *ON DIGIT

Description: Enter from three to seven digits of the on-network number which requires conversion to its off-network (public) format for an ARS off-net route. The on-network number is in the format RNX-XXXX where R and N are any digits 2-9 and X is any digit 0-9. The RNX is typically sufficient.

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Software Release: 5E3 and later.
Required Field.
Valid Entries: 3 - 7 digits

2.4 DELETE

Description: Enter the quantity of digits to delete from the on-network number requiring conversion.

Software Release: 5E3 and later.
Required Field.
Valid Entries: 3 - 7

2.5 DIGIT PFX

Description: Enter the digits to prefix, after the deletion indicated above, to convert the on-network number to its off-network format. The converted number is normally in the format of NXX-XXXX or NPA-NXX-XXXX with an optional 0 or 1 prefix.

Software Release: 5E3 and later.
Required Field.
Valid Entries: 3 - 11 digits

2.6 REMARKS

Description: Optionally enter up to 16 alphanumeric characters as deemed locally necessary.

Software Release: 5E3 and later.
Valid Entries: 1 - 16 characters

```
pnonoff                    5ESS Switch                _
(5608-14)              OFFICE DATA ADMINISTRATION
            PRIVATE NETWORK ON NETWORK NUMBER CONVERSION

* 1. ARS GROUP NAME   ABC
* 2. ON DIGIT        345
  3. DELETE          3
  4. DIGIT PFX       1415232
  5. REMARKS         ________________
```

Figure 1 SAMPLE PNONOFF FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 10: PRIVATE FACILITY ACCESS FORMS

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SEC. 10A: 5609-1 RECORD
PRIVATE FACILITY ACCESS FEATURE DEFINITION FORM - PFAFD

1. GENERAL

The 5609-1 Record is available with 5E2 and later Software Releases. It is used to define a PFA (Private Facilities Access) feature, associating it with a PFA Group name defined on a PFAGPA form (5609-5 Record). It is the linkage between the feature assignment forms and the group information.

A terminal, line or trunk, may be assigned a PFA feature on the appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), TKGRPFA (5206 Record), or TRUNKFA (5205 Record).

1.1 PFA Features

Some PFA features have been preconstructed and appear in Figures 1 through 4. If a preconstructed feature is used, the terminal parameter forms must be entered to identify the PFA Group Name. PFA constructed (switch owner defined) features do not count toward the office's Contructed Feature Limit.

The PFA Group name entry is actually a default parameter. The PFA parameter forms of PFALPA (5609-6 Record), PFAMPA (5609-7 Record), and PFATPA (5609-8 Record) have been included for consistency with other BRCS features. However, the PFAFD form with the Group name assignment eliminates the need for the parameter forms.

Each terminal (line or trunk) may be assigned only one PFA feature, even though the feature may be associated with multiple sets of private facilities. This is resolved on the PFAGPA form with the various dial code accesses. This also means that one PFA feature will be used for all codes in the IDPDCA form (5601-1/2 Record) with ACTION equal to "PFUSE".

A terminal must be assigned a PFA feature when dial code access is required. That is, to access any of the facilities defined in the PFAGPA form, the terminal must have a PFA feature. Other forms in the 5609 Record series do not require a PFA feature. They are the PFATG (5609-2 Record), PFASFG (5609-3 Record), and PFAINWT (5609-4 Record) forms, and are included here because of the inter-relatedness of the Simulated Facility Groups.

1.2 PFA Dial Access

The PFA feature allows customers to have dial access to various types of public and private switching arrangements. These include dial access to FX trunks, OUTWATS, tie trunks and tandem tie trunk networks, CCSA (Common Control Switching Arrangement) networks, ETS (Electronic Tandem Switching) networks, and EPSCS (Enhanced Private Switched Communications Service) networks. While the 5ESS Switch allows access to CCSA, ETS and EPSCS networks, it does not currently support its use as a CCSA, ETS or EPSCS switching node.

PFA also provides dial access to equipment provided on the customer premises, such as radio paging and recorded telephone dictation equipment.

1.3 ISDN Circuit-Switched Data Calls

The BRCS Supplementary Services for ISDN CSD (Circuit-Switched Data) calls feature, which is available in 5E6 and later Software Releases, allows the Private Facilities Access feature originally developed for CSV (Circuit-Switched Voice) calls to apply to CSD calls, as well.

Use of this feature provides the means to establish CSD calls between BRIs (Basic Rate Interfaces) or PRIs (Primary Rate Interfaces) that are making use of the Private Facilities Access service. When a BRI or PRI is assigned PFA service, the service may apply to both CSV and CSD calls for that BRI or PRI.

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Since PFA groups for CSD and CSV calls are separate, all group options available to a CSV PFA user are also available to a CSD PFA user. The values of these options, which are entered on the PFAGPA form (5609-5 Record), can differ or be the same for each group.

CSD PFA groups may also be assigned through BFGs (BRCS Feature Groups) in the same manner CSV PFA groups are currently assigned.

The following CSD PFA calls are not supported:

- Radio paging
- Recorded telephone dictation
- Calls using Foreign Exchange carriers

Also, Queueing is not supported for CSD PFA calls.

Existing preconstructed features for CSV calls will also be used for CSD calls (no new preconstructed PFA features). For more information concerning the assignment of BRCS features, see Division 2, Section 1F.

1.4 Recent Change View

The corresponding Recent Change View for this form is 12.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * FEATURE NAME

Description: Enter the PFA (Private Facility Access) Feature Name. PFA Feature Names have no restrictions on the valid characters, except that the first character may not be a slash (/).
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

DEFAULT PARAMETERS

The following fields (Section 2.4 - Section 2.8) define the default parameters assigned with the feature to terminals (lines or trunks). These parameters will be assigned to the terminal unless they are overridden by entries on the PFALPA, PFAMPA or PFATPA forms. For PFA it is recommended that the PFA Group name be entered here, eliminating the need for the parameter forms.

2.4 PFA GROUP

Description: For 5E6 and later, this field is renamed CSV PFA GRP.

Enter the name of the PFA Group.

Software Release: 5E5 and earlier
Valid Entries: 1 - 8 characters

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2.5 CSV PFA GRP

Description: Enter the name of the Circuit-Switched Voice PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The CSV PFA GRP must match a PFA GROUP defined on the PFAGPA form (5609-5 Record) with a GROUP TYPE of "VOICE".

Defining a CSV PFA GRP is not required; however, if a CSD PFA GRP is defined on this form, then a CSV PFA GRP also must be defined.

2.6 CSD PFA GRP

Description: Enter the name of the Circuit-Switched Data PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

If CSD PFA GRP is entered, CSV PFA GRP must also be entered; the two group names must be different.

CSD PFA GRP must match a PFA GROUP defined on the PFAGPA form (5609-5 Record) with a GROUP TYPE of "CSD".

2.7 QUEUE ALLOWED

Description: Is queuing of outgoing trunks allowed for this PFA feature? If "N" is entered, calls originating from this PFA feature cannot be queued.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.8 PRIORITY QUEUE

Description: Does this PFA feature have a priority option? An entry of "Y" indicates that the calls in queue for this feature can be prioritized.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PRIORITY QUEUE is "Y", QUEUE ALLOWED must be "Y".

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FEATURE NAME	REMARKS	CSV PFA GROUP	CSD PFA GROUP	QUEUED	PQ PRIORITY QUEUE
/PF*	PFA WILDCARD FEATURE			N	N
/PFA	PRIVATE FACILITIES ACCESS			N	N

Figure 1 PRECONSTRUCTED PFA FEATURE 5E6 AND LATER SOFTWARE RELEASES

pfafd 5ESS Switch _
(5609-1) OFFICE DATA ADMINISTRATION
PRIVATE FACILITY ACCESS FEATURE DEFINITION

* 2. FEATURE NAME PFA1 3. REMARKS _____

DEFAULT PARAMETERS

4. CSV PFA GRP PFA2
5. CSD PFA GRP PFAD
6. QUEUE ALLOWED N
7. PRIORITY QUEUE N

Figure 2 SAMPLE PFAFD FORM 5E6 AND LATER SORFTWARE RELEASES

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SEC. 10B: 5609-2 RECORD
PFA TERMINAL GROUP FORM - PFATG

1. GENERAL

The 5609-2 Record is available with 5E2 and later Software Releases. It is used to associate a BRCS Terminal Group, from the Terminal Group Station Restriction feature, to an SFG (Simulated Facility Group). The SFGs provide limited access for ESSX service and to six-port conference circuits.

ESSX service is a means of simulating the Central Office access trunks that a PBX (Private Branch Exchange) uses to access the Central Office. ESSX is used for a customer group that has line appearances in the 5ESS Switch for each of their telephones, but they wish to limit the number of calls originating and/or terminating to these lines. ESSX limits are achieved through the use of SFGs.

In the 5ESS Switch, ESSX limits the quantity of simultaneous calls to and/or from numbers outside the customer's Terminal Group, or calls that are placed without using the intercom feature of the IDP (Individualized Dialing Plan) capability.

The ESSX service can be incoming only, outgoing only or two-way. If a customer has two-way ESSX, there can be separate SFGs for incoming and outgoing, an SFG which serves both, or hunting arrangements which incorporate both types.

When a member of a Terminal Group originates a call, the PFATG form is checked to see if there is an entry for its Terminal Group ID in ORIG MC ROUTE INDEX. An entry signifies that this Terminal Group has originating (outgoing) ESSX. With outgoing ESSX, the 5ESS Switch checks to see if the call is an intercom call. (An intercom call is identified in the IDPDCA form (5601-1/2 Record) with an action of "ICMUSE".) If it is an intercom call, the terminal that the call is terminating to is checked to see if it belongs to the same Terminal Group. Only calls which are both intercom and within the Terminal Group are exempt from the SFG limit. Also, calls incoming to or outgoing from the Terminal Group over private facilities (e.g. FX, tie lines) are not restricted by the SFG. For all other calls, outgoing ESSX applies and the ORIG MC ROUTE INDEX is used for the MCRTIDX form (5304 Record) to determine which SFG to use. If all the "ports" of this SFG are busy, the NEXT MC ROUTE INDEX on the MCRTIDX form is checked to see if another ESSX SFG should be tried or if the call should route to reorder tone.

Similar processing takes place when calls are terminating to a Terminal Group except that TERM MC ROUTE INDEX on this form is checked to see if the Terminal Group has terminating (incoming) ESSX.

When a member of a Terminal Group initiates a six-port conference call, the PFATG form is checked to find the SIXPORT SFG entry for its Terminal Group ID. The Terminal Group has limited access to the six-port conference circuits in this office. The SFG limits the number of six-port conference circuits that the specified Terminal Group can use simultaneously. To use a six-port conference circuit, the Terminal Group member must also be assigned a BRCS Multiway feature such as "/MW6WC" or its equivalent.

To be a member of a Terminal Group, a terminal must be assigned a TGSR (Terminal Group Station Restriction) BRCS feature. The Terminal Group ID is assigned as a default parameter of the TGSRFD form (5607-1/2 Record) or on a TGSRLPA (5607-3 Record), TGSRMPA (5607-4 Record), or TGSRTPA form (5607-5 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 7.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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2.2 * TERMINAL GROUP ID

Description: Enter the Terminal Group ID number.

Required Field.
Valid Entries: 1 - 65535

2.3 ORIG MC ROUTE INDEX

Description: If Outgoing ESSX service is required for this Terminal Group, enter an MC Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The MC Route Index must be defined on an MCRTIDX form with an MC ROUTE TYPE of "SFG".

2.4 TERM MC ROUTE INDEX

Description: If Incoming ESSX service is required for this Terminal Group, enter an MC Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The MC Route Index must be defined on an MCRTIDX form with an MC ROUTE TYPE of "SFG".

2.5 CCSA ORIG MC RTI

Description: If Originating CCSA (Common Control Switching Arrangement) is required for this Terminal Group, enter an MC Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The MC Route Index must be defined on an MCRTIDX form with an MC ROUTE TYPE of "SFG".

2.6 CCSA TERM MC RTI

Description: If Terminating CCSA (Common Control Switching Arrangement) is required for this Terminal Group, enter an MC Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

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Data Rules:

The MC Route Index must be defined on an MCRTIDX form with an MC ROUTE TYPE of "SFG".

2.7 SDN MC ROUTE INDEX

Description: If access to an SDN (Software Defined Network) is required for this Terminal Group, enter an MC Route Index.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The MC Route Index must be defined on an MCRTIDX form with an MC ROUTE TYPE of "SFG".

2.8 SIXPORT SFG

Description: If access to six-port conference circuits is required for this Terminal Group, enter an SFG Number.
Valid Entries: 1 - 2000

Data Rules:

The SFG Number must be defined on a PFASFG form (5609-3 Record) with an SFG TYPE of "6PORT".

2.9 EON MC RI

Description: Proprietary field.

---

pfatg 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5609-2) PFA TERMINAL GROUP

*1. TERMINAL GROUP ID _____
2. ORIG MC ROUTE INDEX ____
3. TERM MC ROUTE INDEX ____
4. CCSA ORIG MC RTI ____
5. CCSA TERM MC RTI ____
6. SDN MC ROUTE INDEX ____
7. SIXPORT SFG ____
8. EON MC RI ____

Figure 1 SAMPLE PFATG FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 10C: 5609-3A/B RECORD
SIMULATED FACILITY GROUP FORM - PFASFG

1. GENERAL

The 5609-3 Record is available with 5E2 and later Software Releases. It is used to define SFG (Simulated Facility Groups) which allow controlling access to physical groups such as lines, trunks and special circuits. SFGs may be used for OUTWATS, INWATS, ESSX, EDSL, CCSA, SDN, Megacom, Megacom 800 and six-port conference circuits.

In order to obtain access to the associated feature or facility, an idle member of the Simulated Facility Group must be available. The hunting method for SFGs is similar to the linear hunt of a Trunk Group. Each member of either an SFG or a Trunk Group is marked as busy or idle. The difference is that the SFG members do not have an associated piece of equipment, e.g., a DEN or a TEN. It is software only, hence, the name simulated.

When an SFG is used, the customer is allowed limited access to a physical set of equipment. The number of simultaneous accesses is not allowed to exceed a prespecified limit. That limit is essentially the SFG SIZE specified on this form. This limit is usually less than the number of members in the physical facility, e.g., the number of terminals in an INWATS MLHG. It is possible to set the SFG SIZE to a number that is equal to or greater than the physical members available. However, calls would never be blocked at the simulated level.

1.1 OUTWATS Simulated Facility Groups

An OUTWATS SFG may be associated with either an ARS (Automatic Route Selection) route list, a PFA (Private Facility Access) dial access, or, for 5E4(2) and later, EDSL trunk groups. For any of these features, the MCRTIDX form (5304 Record) contains the SFG Number that points to this form. When the SFG is used for OUTWATS, two additional fields of the PFASFG form are used if access of an SFG "port"is successful. These are the WATS BILLING NUMB/SPECIAL BILL NBR and SCREENING INDEX/SCRN IDX. The Screening Index is required so that band screening may be done and the appropriate Charge Index may be determined in the RAR form (5301 Record). The WATS Billing Number is an optional entry if it is desired that a Special Billing Number associated with the SFG be used.

It is possible to avoid duplicating RAR forms for physical OUTWATS lines and OUTWATS SFGs even though different billing is to be done. This is done by using a WATS Charge Index ("FGDWBL"or "WATSB") described as Group Billing. These Charge Indexes were designed so that if a Group Billing Number (i.e., the WATS BILLING NUMB/SPECIAL BILL NBR on the PFASFG form) is not found, the Billing Number of the terminal is used. Because the physical OUTWATS line does not access the PFASFG form, it can never collect the WATS BILLING NUMB/SPECIAL BILL NBR and, therefore, will always use the terminal billing number.

For ARS and PFA OUTWATS calls which do access the PFASFG form, if the Charge Index indicates Group Billing but no WATS Billing Number has been entered, the Terminal Billing Number is used.

1.2 INWATS Simulated Facility Groups

An INWATS SFG can be used to terminate INWATS calls to a MLHG (Multi-Line Hunt Group). For 5E4(2) and later, it also can be used to terminate INWATS calls to a trunk group. For an INWATS SFG, the MCRTIDX form contains the SFG Number that points to this form. The PFAINWT form (5609-4 Record), is the initial trigger for using an SFG for terminating INWATS calls to a Multi-Line Hunt Group.

For 5E4(2) and later, INWATS SFGs used for terminating to non-EDSL trunk groups use the called (terminating) number as the billing number if no billing number is specified in the SFG, EDSL trunk groups use the billing number of the trunk group if no billing number is specified in the SFG.

The WATS BILLING NUMB/SPECIAL BILL NBR may also be used for an INWATS SFG. If access of an

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INWATS SFG "port"is successful, the WATS BILLING NUMB/SPECIAL BILL NBR entered will be used for the terminating INWATS billing record. If an entry is not made in WATS BILLING NUMB/SPECIAL BILL NBR, the billing number of the Multi-Line Hunt line terminal that the call terminates to will be used.

1.3 ESSX and Six-Port Conference Circuit SFGs

ESSX and six-port conference circuit SFGs are associated with a Terminal Group on a PFATG form (5609-2 Record). For six-port conference SFGs, the PFATG form contains the SFG Number that points to this form. For ESSX (incoming, outgoing, or two-way), the MCRTIDX form contains the SFG Number.

1.4 Selective Customer Control of Facilities and Trunk Group Busy Lamps

SCCOF (Selective Customer Control of Facilities) and TGBL (Trunk Group Busy Lamps) may be used for Simulated Facility Groups similar to the way they are used for physical equipment groups. With SCCOF, by operating a key on the customer premises, the customer can prevent calls from using a given facility (including simulated) by making the facility appear to be in an all-members-busy condition. Normal operation of the facility resumes when the key is released. If the facility is equipped with a TGBL on the customer premises, the lamp will be lit when the key is operated and extinguished when the key is released just as it is when all of the SFG members are really in use. MAKE BUSY KEY and BUSY LAMP should be entered for SCCOF and TGBL, respectively. They are both optional fields and one may be entered without the other if only one of the capabilities is desired.

1.5 Intercom Calling Restriction SFGs

For ICR (Intercom Calling Restriction) SFGs, an IDPLPA form (5601-6 Record) or an IDPMPA form (5601-7 Record), contains the SFG Number that points to this form. Additional fields (TRACK SM, AMA BILL, ICR ACTIVATE, ATT TN, ICR ACTION and ICR OVFL BILL) have been added for ICR SFGs.

The values entered in the ICR ACTION field must not be duplicated for one or more SFG numbers.

If a busy lamp is used to indicate when all members of the ICR SFG are busy, one of the following must be true.

Terminal Type	Field		
	BUSY LAMP	ATT TN	ICR ACTION
Analog Terminal	req entry	blank	blank
ISDN Attendant Console	blank	req entry	req entry

If a busy lamp is not used, then the BUSY LAMP, ATT TN and ICR ACTION fields must all be blank.

1.6 Recent Change View

The corresponding Recent Change View for this form is 7.3.

2. FORM ENTRIES - 5609-3A RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SFG NBR

Description: Enter the SFG (Simulated Facility Group) Number.
Valid Entries: 1 - 2000

Data Rules:

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If SFG SIZE is in the range of 97 to 1984, then the SFG NBR must be 1 - 500.

If SFG SIZE is in the range of 1 to 96, then the SFG NBR may be 1 - 2000.

2.3 # SFG TYPE

Description: Enter the Type of SFG.

Required Field.

Valid SFG TYPE Entries

Entry	Definition
CNSOVFL	Software Release: 5E9(2) and later . CENTREX Network Special overflow used with an MC route index for Network overflow. This value supports the CENTREX Network secured features. For more information on these features see Division 2, Sections 4A181, 4A182, and 4A183.
EDSL	Software Release: 5E4(2) and later. Extended Digital Subscriber Line.
EOPAT	Software Release: 5E3 and later. End Office Precedence Access Threshold.
E911LNE	Software Release: 5E7 and later. Enhanced 911 Line SFG. Required for E911, this SFG limits the total number of simultaneously active 911 calls that originated from lines or from PBX trunks (trunk groups assigned an E911 TYPE of "PBXNONDED"on the TKGRP form). When the number of active calls exceeds SFG SIZE, additional 911 call attempts from lines and PBX trunks will receive reorder treatment.
E911TRK	Software Release: 5E7 and later. Enhanced 911 Trunk SFG. Required for E911, this SFG limits the total number of simultaneously active 911 calls originated from trunk groups assigned an E911 TYPE of "NONDED"on the TKGRP form. When the maximum number of calls are active, additional 911 call attempts from non-dedicated trunks will receive reorder treatment.
ICR	Software Release: 5E4(2) and later. Intercom Calling Restriction.
IESSX	Incoming ESSX service associated with a Terminal Group.
INCCSA	Software Release: 5E3 and later. Incoming CCSA service associated with a Terminal Group.
INFX	Software Release: 5E9(1) and later. Incoming EDSL (Extended Digital Subscriber Line) SFG from a Foreign Exchange trunk.
INTIE	Software Release: 5E9(1) and later. Incoming EDSL SFG from a Tie trunk.
INWATS	Used for Terminating INWATS service to a MLHG; or, for 5E4(2) and later, terminating INWATS to a trunk group.
MEGACOM	Software Release: 5E6 and later. Megacom.
M800	Software Release: 5E6 and later. Megacom 800.
NETPAT	Software Release: 5E3 and later. Network Precedence Access Threshold.
OESSX	Outgoing ESSX service associated with a Terminal Group.
OUTCCSA	Software Release: 5E3 and later. Outgoing CCSA service associated with a Terminal Group.
OUTFX	Software Release: 5E9(1) and later. Outgoing EDSL SFG to a Foreign Exchange trunk.
OUTTIE	Software Release: 5E9(1) and later. Outgoing EDSL SFG to a Tie trunk.
OUTWATS	Outward WATS service associated with PFA or ARS Groups; or, for 5E4(2) and later, OUTWATS service associated with an EDSL Hunt Group.
SDN	Software Release: 5E3 and later. Software Defined Networks.
2WCCSA	Software Release: 5E3 and later. Two-Way CCSA, an SFG used for both Incoming and Outgoing CCSA.
2WESSX	Two-Way ESSX, an SFG used for both Incoming and Outgoing ESSX.
2WFX	Software Release: 5E9(1) and later. 2-way EDSL SFG and/or a Foreign Exchange trunk.

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2WTIE	Software Release: 5E9(1) and later. 2-way EDSL SFG and/or a Tie trunk.
6PORT	Six-Port conference circuits associated with a Terminal Group.
HM	Software Release: 5E11 and later. Hotel Motel This entry supports the ISDN PRI Hotel/Motel and Selected Class of Call Screening secured feature, see Diviision 2, Section 4A219.
SCOCS	Software Release: 5E11 and later. Selected Class of Call Screening This entry supports the ISDN PRI Hotel/Motel and Selected Class of Call Screening secured feature, see Diviision 2, Section 4A219.

Data Rules:

When SFG TYPE is "HM", "M800", "MEGACOM", "OUTWATS" or "SCOCS", SCRN IDX must be entered.

If SFG TYPE is "HM"or "SCOCS", "QUEUE ALLOWED" must be "N"or not entered.

ISDN PRI Hotel/Motel and Selected Class of Call Screening are secured features. They must be purchased before "HM"or "SCOCS" can be entered in the SFG TYPE field on the PFASFG form. The ACT field for SFID 219 on the SFSYS form must be set to "Y".

For 5E7 and later, if SFG TYPE is "E911LNE"or "E911TRK", SFG SIZE must be 1 through 511; BUSY LAMP, MAKE BUSY KEY, and ISAT MLHG must be left blank; and BW LAMP and MK BUSY must be "N" or blank. These SFG NBRs are specified in the E911 LN SFG and E911 TRK SFG fields on the OFCOPT form (5509 Record) and must not appear on MCRTIDX forms.

For 5E9(1) and later, if SFG TYPE is "OUTFX", "OUTTIE", "2WFX", or "2WTIE", RTI must be entered. The RTI must be defined as ROUTE INDEX on an RTIDX form where a TRUNK GROUP NUMBER is entered and is defined as TGN on a TKGRP form. If SFG TYPE on this PFASFG form is "OUTFX"or "2WFX", FACILITY TYPE on the TKGRP form must be "FX"; if SFG TYPE is "OUTTIE" or "2WTIE", FACILITY TYPE must be "TIE".

If SFG TYPE is not "OUTFX", "OUTTIE", "2WFX", or "2WTIE", RTI cannot be entered.

SFG RTIs assigned on a PFASFG form must be defined on an RTIDX form.

If MCRTIDX forms have an SFG NUMBER defined on a PFASFG form with an SFG TYPE of "INFX", "INTIE", "OUTFX", "OUTTIE", "2WFX", or "2WTIE", then

- NEXT ROUTE cannot be entered on the MCRTDIX form.
- the MCRTIDX form with NEXT MC ROUTE INDEX entered may overflow to another MCRTIDX form keyed by this MC ROUTE INDEX value (call this overflow form MCRTDIX'). This MCRTDIX' form must also have an SFG NUMBER defined on a PFASFG form (call it PFASFG') where the SFG TYPE is as follows:

	SFG TYPE
PFASFG	**PFASFG'**
2WFX, 2WTIE	2WFX, 2WTIE
INFX, INTIE	INFX,INTIE, INWATS, 2WFX, 2WTIE, EDSL
OUTFX, OUTTIE	OUTFX, OUTTIE, OUTWATS, 2WFX, 2WTIE, EDSL
HM	HM
SCOCS	SCOCS

CONSOVFL:
For 5E9(2) and later, if "CNSOVFL" is entered, then:
- BUSY LAMP must not be entered
- BW LAMP must be "N"or not entered
- ENQUEUE ACT must be "N"

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- MAKE BUSY KEY must not be entered
- MDR ACT must not be entered
- MK BUSY must be "N"or not entered
- Q FEATURE must not be entered
- QUEUE ALLOWED must be "N"

2.4 # SFG SIZE

Description: Enter the number of members in the SFG.

Required Field.
Valid Entries:
- For 5E7 and earlier: 1 - 1984
- For 5E8 and later: 1 - 1984, 9999

Data Rules:

When SFG TYPE is "E911LNE" or "E911TRK", SFG SIZE must be 1 to 511.

For 5E8 and later, when SFG SIZE is 9999, indicating that the SFG is of unlimited size, then

- SFG TYPE must be "INWATS", "OUTWATS", "INCCSA", "OUTCCSA" or "2WCCSA"
- QUEUE ALLOWED must be N or not entered
- WARN THRESH can not be entered.

2.5 BUSY LAMP

Description: Enter a DPN (Distribute Point Number) if a lamp at the customer premises is provided to indicate to the customer when all members of the SFG are busy.
Valid Entries: 9 digits. See the following table for the format of a Distribute Point Number.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

The pack that the scan point resides on must be defined on an EQMSP or an EQMMSP form (5750 Record) with a PACK TYPE of "DIST".

A DPN, if entered, must be unique. Refer to Division 8, Section 43 of this guide.

2.6 MAKE BUSY KEY

Description: Enter an SPN (Scan Point Number) if a key at the customer premises is provided to enable the customer to make the Simulated Facility Group in an all-members-busy condition by activating the key.
Valid Entries: 9 digits. See the following table for the format of a Scan Point Number.

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SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	SPN	XX	00-30

Data Rules:

For offices equipped with CM1 (Communications Module 1), valid SM entries are 1 - 48; for offices equipped with CM2 (Communications Module 2), valid SM entries are 1 - 192.

If SFG TYPE is "ICR", this field must be blank.

The pack that the scan point resides on must be defined on an EQMSP or an EQMMSP form (5750 Record) with a PACK TYPE of "SCAN".

An SPN, if entered, must be unique. Refer to Division 8, Section 42 of this guide.

2.7 SFG BILL NUM

Description: SFG BILL NUM field is used to specify the ten digit number used when billing SFG (Simulated Facility Groups) services.

Software Release: 5E11 and later
Valid Entries: NPAXXXXXXX.

Data Rules:

When SFG BILL NUM is entered, SFG TYPE must be "HM", "INCCSA", "INWATS", "OUTCCSA", "OUTWATS", "SCOCS" or "2WCCSA".

2.8 SPECIAL BILL NBR

Description: Enter a ten-digit TN (Telephone Number) to be used for billing when the SFG TYPE is "OUTWATS", "INWATS", "INCCSA", "OUTCCSA" or "2WCCSA".

If this is an OUTWATS SFG, an OUTWATS Billing TN may be entered. It will be used for billing even if a group billing AMA CALL TYPE is not entered on a CGIDX form (5302-1 Record).

If this is an INWATS SFG, an INWATS Billing TN may be entered. It will be used in place of the Multi-Line Hunt line billing number to bill the terminating call. For 5E4(2) and later, this TN will be used for billing the terminating call instead of the trunk group billing number if the SFG is associated with a trunk group.

If a CCSA SFG is specified, an alternate billing number may be entered. It will be used instead of the terminal billing number.

Software Release: 5E10 and earlier.
Valid Entries: 10 digits

2.9 SCRN IDX

Description: Enter a Screening Index Number.
Valid Entries: 1 - 4095

Data Rules:

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The Screening Index entered must be defined on a RAR form (5301 Record).

If the SFG TYPE is "OUTWATS", "M800" or "MEGACOM", this is a required entry. If the SFG TYPE is "EDSL"or "SDN", this is an optional entry. If the SFG TYPE is not "OUTWATS", "M800", "MEGACOM", "EDSL" or "SDN", an entry is prohibited.

When SCRN IDX is entered, SFG TYPE must be "EDSL", "HM", "M800", "MEGACOM", "OESSX", "OUTWATS", "SCOCS", "SDN" or "2WESSX".

For 5E4(2) and later, if this field is entered, the SFG TYPE must be set to "OUTWATS", "EDSL", "IESSX" or "OESSX".

2.10 QUEUE ALLOWED

Description: Is queuing allowed for this SFG Group?

Software Release: 5E3 and later.
Valid Entries: Y, N

Data Rules:

If Y is entered, the QUEUE FEATURE name must be defined on a QUFD form (5617-1 Record).

If this field is "Y", then SFG TYPE must be "OUTWATS" and the Q FEATURE must be entered.

For 5E3 and later, if the SFG TYPE field is not "OUTWATS", the QUEUE ALLOWED and Q FEATURE fields must not be entered.

For 5E3 and later, if this field is set to "Y", then the Q FEATURE entry on this form must appear in the FEATURE field on a QUFD form (5617-1 Record) where the GROUP TYPE entry is set to "SFG".

2.11 ENQUEUE ACT

Description: Should queuing be enabled? This field is used to enable or disable queuing for the SFG. It is also used in conjunction with the AP Facilities Management feature to enable and disable queuing. If this field is left blank, it will be set to a "Y"by ODA.

If ENQUEUE ACT is set to "N"and the queuing feature has been assigned, queuing will not be allowed on the SFG.

Software Release: 5E3 and later.
Valid Entries: Y, N

2.12 Q FEATURE

Description: Enter the queue name assigned to this SFG Group.

Software Release: 5E3 and later.
Valid Entries: 1 - 8 characters

Data Rules:

This feature must be defined on a QUFD form.

If this field is entered, then QUEUE ALLOWED must be "Y".

For 5E9(2) and later, if a QFEATURE on this MLHG form is assigned to the same QUEUE MODULE on a QUFD form (5617-1/2 Record) or a QUGPA form (5617-3/4 Record), the QUEUE SIZE must not exceed

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255 per QUEUE MODULE if the corresponding EQIM form (5700 Record), where SM matches QUEUE MODULE, has UNIT TYPE set to a value other than "SM2000". Queue Size is the sum of the BASIC SIZE + EXTENDED SIZE + ROUTINE SIZE + PRIORITY SIZE on the QUFD or QUGPA forms for each of the Q FEATURES assigned to the same QUEUE MODULE.

2.13 TRACK SM

Description: Enter the SM on which this ICR SFG data will reside. ICR SFG data will be located in this SM, making it unnecessary to go to the AM (Administration Module) to hunt for an ICR SFG number.

Software Release: 5E4(2) and later
Valid Entries: 1 - 192

Data Rules:

The value entered in this field must be defined in the SM field on an EQIM form (5700-1 Record) where the EQSTATUS field is set to "O" (Operational).

If SFG TYPE is not "ICR", then this field must be blank.

For 5E9(1) and later:

A TRACK SM can only support a maximum of 65535 ICR (Intercom Calling Restriction) Members (SFG SIZE).

If AMA BILL is set to "Y", then no more than 50 PFASFG forms can have the same TRACK SM value.

2.14 AMA BILL

Description: Is an AMA Billing record of all intercom calls allowed?

Software Release: 5E4(2) and later.
Valid Entries: Y, N

Data Rules:

If SFG TYPE is not "ICR", this field must be blank

2.15 ICR ACTIVATE

Description: Should the ICR (Intercom Calling Restriction) feature be activated? This field is used to activate and deactivate the ICR feature.

Software Release: 5E4(2) and later.
Valid Entries: Y, N

Data Rules:

If SFG TYPE is not "ICR", then this field must be blank.

2.16 ATT TN

Description: Enter an ISDN Attendant Console telephone number.

Software Release: 5E4(2) and later
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9

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- and X is 0 - 9

Data Rules:

If SFG TYPE is not "ICR", this field must be blank. If ATT TN is entered, ICR ACTION must be entered and the BUSY LAMP field must be blank.

For 5E5 and later, the ATT TN entry must be defined as a CKT TN with a TERM TYPE of "ATND"and the CONFIG GRP field entered on a DSLUSR form (5908-1 Record). The associated CLASS OF SERVICE on a LCC form must be "ISATND".

For 5E12 and later, if the first 3 digits of the 7-digit ATT TNs on the PFASFG form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE or the NOC form does not exist, the 7-digit ATT TN(s) must be entered as a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.17 ICR ACTION

Description: Enter an ICR (Intercom Calling Restriction) Action to indicate which lamp will be lit on the ISDN Attendant Console when all members of the ICR SFG are busy.

Software Release: 5E4(2) and later
Valid Entries:

Valid ICR ACTION Entries

Entry	Definition
ICRBL1	Intercom Calling Restriction Busy Lamp 1
ICRBL2	Intercom Calling Restriction Busy Lamp 2
ICRBL3	Intercom Calling Restriction Busy Lamp 3
ICRBL4	Intercom Calling Restriction Busy Lamp 4
ICRBL5	Intercom Calling Restriction Busy Lamp 5
ICRBL6	Intercom Calling Restriction Busy Lamp 6

Data Rules:

If SFG TYPE is not "ICR", then this field must be blank. If ICR ACTION is entered, then ATT TN must be entered.

The combination of an ATT TN entry and an ICR ACTION entry must be unique. The combination can appear on only one PFASFG form instance.

If an ICR ACTION is entered, then it must be defined on a CFGGRP form.

2.18 ICR OVFL BILL

Description: Is ICR Overflow Billing desired?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y"is entered in this field, the entry in the SFG TYPE field must be "ICR".

2.19 ALT SFC

Description: Enter an Alternate SFC (Service Feature Code) for an INWATS SFG. When an ALT SFC is

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entered for a particular SFG, it will be substituted for the default SFC of 8 in the AMA records for that SFG. If an ALT SFC is not entered, then the default SFC of 8 will be used in the AMA record.

Software Release: 5E6 and later
Valid Entries: 800 - 999

Data Rules:

ALT SFC can only be entered when SFG TYPE is "INWATS". A maximum of 150 PFASFG forms in an office can have ALT SFC entered.

ALT SFC is used by the Enhanced INWATS-Type AMA Records secured feature and hence cannot be entered unless this feature has been purchased. This is indicated by setting FEATURE ID 39 to "S"(for 5E9(1) and later, SFID 39 must have ACT set to "Y") on the SFSYS form (5713 Record).

2.20 LINE DAS

Description: Enter the Line DAS associated with this SFG. An entry in this field requires an SFG TYPE of "OUTWATS". LINE DAS, added with the DAS on an OUTWATS SFG feature, allows users access to more than one PDIT, INDIT or LDIT and routes calls using a different dialing plan than the one associated with the originating line. Division 2, Section 1BE contains a full feature description of this capability.

Software Release: 5E7 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

A LINE DAS must be defined on a DAS form (5604-3 Record).

If LINE DAS is entered, then SFG TYPE must be "OUTWATS".

If entered, LINE DAS must not have the same entry as the PVN DAS on the OFCOPT form (5509 Record).

- **WARNING:** The corresponding LOCAL DIT on the matching DAS form should be entered on an SMLDIT form (5106 Record) where the List of Switching Modules contains all SMs in the office. Note: If all potential users of this SFG reside in a subset of SMs in the office then the entry of this subset of SMs on the SMLDIT form is sufficient.

2.21 TRK DAS

Description: Enter the Trunk DAS associated with this SFG. An entry in this field requires an SFG TYPE of "OUTWATS". TRK DAS, added with the DAS on an OUTWATS SFG feature, allows users access to more than one PDIT, INDIT or LDIT and routes calls using a different dialing plan than the one associated with the originating trunk.

Software Release: 5E7 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

TRK DAS, if entered, must be defined on a DAS form (5603-4 Record).

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If TRK DAS is entered, then SFG TYPE must be entered.

A TRK DAS must not have the same entry as a PVN DAS on the OFCOPT form.

WARNING: The corresponding LOCAL DIT on the matching DAS form should be entered on an SMLDIT form (5106 Record) where the List of Switching Modules contains all SMs in the office. Note: If all potential users of this SFG reside in a subset of SMs in the office, the entry of this subset of SMs on the SMLDIT form is sufficient.

2.22 MDR GRP

Description: Enter the MDR GRP associated with this SFG. The entries of MDR GRP and MDR ACT allow the end customer to assign an MDR GRP on an SFG basis. This enables them to generate MDR records on a group basis and only when the SFG is utilized for the call.

Software Release: 5E8 and later
Valid Entries: 1 - 8 characters

Data Rules:

This field should be left blank if this capability is not used. An entry in this field requires SFG TYPE to be "OUTWATS". When MDR GRP is entered, MDR ACT must also be entered.

The MDR GRP entered must be defined on the MDRGP form (5624-2 Record), and either ORIG PRIV or INC PRIV on the MDRGP form must be "Y".

MDR GROUP STATUS on the MDRGP form (5624-2 Record) is not applicable to MDR GRP which is assigned SFG TYPE "OUTWATS".

2.23 MDR ACT

Description: Should the Message Detail Recording group be activated?

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field should be left blank if the MDR capability is not used. When MDR ACT is entered, MDR GRP must also be entered.

2.24 RTI

Description: Enter the route index for PRI Call-by-Call originations.

Software Release: 5E9(1) and later.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382.

Data Rules:

For 5E9(1) and later, if SFG TYPE is "OUTFX", "OUTTIE", "2WFX", or "2WTIE", RTI must be entered.

If SFG TYPE is not "OUTFX", "OUTTIE", "2WFX", or "2WTIE", RTI cannot be entered.

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3. FORM ENTRIES - 5609-3B RECORD

ISDN ATTENDANT

The MK BUSY, BW LAMP, ISAT GRP and WARN THRESH fields (Section 3.1 - Section 3.4) are applicable to ISDN Attendant Simulated Facility Groups. The fields are available with 5E4(2) and later.

3.1 MK BUSY

Description: Is Selective Customer Control of Facilities on? This feature allows the attendant to deny access to a Simulated Facility Group.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(2) and later, when this field is "Y", the MAKE BUSY KEY field must be entered on this form.

3.2 BW LAMP

Description: Are Simulated Facility Group busy warning lamp(s) provided for this group on the attendant's console? If "Y"is entered, the lamp will light whenever the threshold of idle members in an SFG is less than or equal to the threshold value entered in the WARN THRESH field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", an ISAT GRP must be entered.

3.3 ISAT GRP

Description: Enter the ISDN Attendant MLHG that can busy monitor this SFG.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

If the BW LAMP field is set to "Y", then this field must be entered.

If an ISAT GRP is entered, it must be defined on a MLHG form (5110-1 Record) with a MLHG FEATURE defined on a MLHGFD form (5604 Record) with a HUNT TYPE of "ISAT".

3.4 WARN THRESH

Description: Indicate the threshold of members of this group that must be idle at any given time before the Simulated Facility Group busy warning lamp(s) will light at the attendant's console.
Valid Entries: 0 - 1984

Data Rules:

If the BW LAMP field is set to "Y", then the WARN THRESH field must be entered.

If the BW LAMP field is set to "N", then the WARN THRESH field must not be entered.

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```
pfasfg                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5609-3a/b)           SIMULATED FACILITY GROUP

*1. SFG NBR      ____     12. AMA BILL     _          ISDN ATTENDANT
#2. SFG TYPE     _______  13. ICR ACTIVATE _        23. MK BUSY     N
#3. SFG SIZE     ____     14. ATT TN       __________ 24. BW LAMP     N
 4. BUSY LAMP    _________ 15. ICR ACTION  ______     25. ISAT MLHG  ____
 5. MAKE BUSY KEY _________ 16. ICR OVFL BILL N       26. WARN THRESH ____
 6. SFG BILL NUM _________ 17. ALT SFC     ___
 7. SCRN IDX     ____     18. LINE DAS     __
 8. QUEUE ALLOWED _       19. TRK DAS      __
 9. ENQUEUE ACT  _        20. MDR GRP      _________
10. Q FEATURE    _________ 21. MDR ACT      _
11. TRACK SM     ___      22. RTI          ____
```

Figure 1 SAMPLE PFASFG FORM 5E12 - 5E14 SOFTWARE RELEASES

```
AND LATERpfasfg           5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5609-3a/b)           SIMULATED FACILITY GROUP

*1. SFG NBR      ____     12. AMA BILL     _          ISDN ATTENDANT
#2. SFG TYPE     _________ 13. ICR ACTIVATE _        23. MK BUSY     N
#3. SFG SIZE     ____     14. ATT TN       __________ 24. BW LAMP     N
 4. BUSY LAMP    _________ 15. ICR ACTION  ______     25. ISAT MLHG  ____
 5. MAKE BUSY KEY _________ 16. ICR OVFL BILL N       26. WARN THRESH ____
 6. SFG BILL NUM _________ 17. ALT SFC     ___
 7. SCRN IDX     ____     18. LINE DAS     ___
 8. QUEUE ALLOWED _       19. TRK DAS      ___
 9. ENQUEUE ACT  _        20. MDR GRP      _________
10. Q FEATURE    _________ 21. MDR ACT      _
11. TRACK SM     ___      22. RTI          _____
```

Figure 2 SAMPLE PFASFG FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10D: 5609-4 RECORD
INWATS SIMULATED FACILITY TN FORM - PFAINWT

1. GENERAL

The 5609-4 Record is available with 5E2 and later Software Releases. It is used to associate an MLHG (Multi-Line Hunt Group) with an SFG (Simulated Facility Group) to limit the quantity of simultaneous calls terminating to the MLHG as INWATS calls. For 5E4(2) and later Software Releases, it is used to limit the quantity of calls terminating to a trunk group as INWATS calls.

When an incoming call is terminating to a Multi-Line Hunt Group, it first must be determined if this is an INWATS MLHG. This is defined on the associated MLHGFD form (5604 Record), with INWATS equal to "Y" or "N". If it is "Y", then the PFAINWT form is checked to see if there is limited access via an SFG. When an incoming call is terminating to a trunk group, the terminating TN is used as a key to determine whether or not a search for a matching PFAINWT form is performed. This TN must be defined on a LINE form (5109 Record); this LINE form must have a corresponding LCC form (5306 Record) where the TERMINATING TREATMENT is "TINWATS". The terminating Telephone Number also is used as the key to this information when terminating to an MLHG. If the PFAINWT form is not found, there is unlimited access to the terminals in the Multi-Line Hunt Group or trunk group.

If the form is found, the MC Route Index is used to access the MCRTIDX form (5304 Record) to determine which SFG to use. If all the "ports" of this SFG are busy, the NEXT MC ROUTE INDEX on the MCRTIDX form is checked to see if another INWATS SFG should be tried next or if the call should route to Reorder tone.

The terminals of the INWATS MLHG must all have a Line Class Code defined with a terminating treatment of "INWATS". However, they do not require any specific BRCS feature for INWATS termination.

- ***NOTE:*** AMA Call Code 008 is generated for any terminating port marked "INWATS" or "TINWATS". The 008 AMA record is used to bill the terminating subscriber for these types of calls (typically 800 calls).

1.1 Recent Change View

The corresponding Recent Change view for this form is 7.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number used to access the Multi-Line Hunt Group or Trunk Group as a terminating INWATS call. The TN may be any valid seven-digit Telephone Number served by this office.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits of the TN must be defined in the OFFICE CODE field of a NOC form (5501 Record).

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If the TN is defined in the LISTED TN or in a SUBTN field on an MLHG form (5110 Record), then the associated MLHGFD form must have the INWATS field set to "Y".

If this TN is defined on a MULTITN form (5114 Record), then the value for INWATS on the corresponding MULTITN form must be "Y".

If the TN is defined on a LINE form (5109 Record), then the associated LCC form (5306 Record) must have the TERMINATING TREATMENT field set to "TINWATS". If the TN is defined on an MLHLN form (5111 Record), then the associated MLHGFD form must have the INWATS field set to "Y".

For 5E12 and later, TNs on different PFAINWT forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the PFAINWT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 MC ROUTE INDEX

Description: Enter the MC Route Index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

The MC ROUTE INDEX entered must be defined on an MCRTIDX form (5304 Record) with an MC ROUTE TYPE of "SFG".

The MC ROUTE INDEX entered must not be assigned to a TERMINAL GROUP ID on a PFATG form (5609-2 Record).

5ESS Switch _
OFFICE DATA ADMINISTRATION
(5609-4) INWATS SIMULATED FACILITY TN

*1. TN _____
#2. MC ROUTE INDEX ____

Figure 1 SAMPLE PFAINWT FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 10E: 5609-5 RECORD
PRIVATE FACILITY ACCESS GROUP FORM - PFAGPA

1. GENERAL

1.1 Terminal Assignments

The 5609-5 Record is available with 5E2 and later Software Releases. It is used to define the group information for PFA (Private Facilities Access). Each terminal (line or trunk) which is to use the PFA capability must be assigned a PFA feature name defined on the PFAFD form (5609-1 Record) on the BFG, LINEFA, MLHLNFA, TKGRPFA, or TRUNKFA forms.

In addition, each terminal must be assigned to a PFA Group which may be defined as the default parameter of the PFAFD form, or on an individual terminal basis with the PFALPA, PFAMPA, or PFATPA forms. The preconstructed PFA feature provided does not define the PFA Group. Therefore, if the preconstructed feature is used, individual parameter forms must be entered for each terminal. PFA constructed features do not count toward the Constructed Feature Limit. See the CFL form (5712 Record) in Division 8 of this guide.

1.2 Circuit-Switched Calls

One PFA Group name is used for multiple PFA Access Codes on a group basis. However, for 5E6 and later Software Releases, one PFA group applies to either CSV (Circuit-Switched Voice) or CSD (Circuit-Switched Data) calls; one group cannot be used for both types (GROUP TYPE is "VOICE" or "CSD"). If the PFA call originator belongs to an IDP (Individualized Dialing Plan) Group, the PFA Access Codes are first translated in the IDPDCA form (5601-1/2 Record) with ACTION of "PFUSE", and the associated PFA feature name.

- ***NOTE:*** In the IDPDCA form, the Dialing State should equal "NORMAL", even though additional digits may be dialed. With an ACTION of "PFUSE",the responsibility of collecting digits is passed to the PFA capability. "PFUSE" is also allowed in the ODP (Office Dialing Plan) (see the PDIT form (5300-2 Record)) for customers who do not have an IDP.

1.3 Routing and Screening

In addition to specifying digit collection on a per Access Code basis, the PFAGPA also defines the RI (Route Index) or MC RI and the Code Index to use when the call enters the RAR form (5301 Record). (PFA dial codes used to access OUTWATS are an exception; special routing and screening in this case are discussed in Section 1.4 .)

For 5E6 and later Software Releases, the same RI can be used for CSV and CSD calls. However, if the same index is used, all calls must be routed through a PRI.

An MC RI is required for access to OUTWATS so the SFG (Simulated Facility Group) can be determined. An MC RI might also be used if for some reason an overflow route is an MC RI.

In all other cases, the additional information found on the MCRTIDX form (5304 Record) is not required, and therefore a RI should be entered and defined on an RTIDX form (5303 Record).

The CI (Code Index) entered on the PFAGPA form, and the originator's SI (Screening Index) are used in combination with a Prefix of "NONE" to determine the appropriate entry in the RAR form (5301 Record) to read. The primary purpose of reading the RAR form is to determine the CI. Usually, "REGL" would be found on the RAR form to indicate that the RI (or MC RI) from the PFAGPA form should be used. The Dialing Plan Access Treatment categories may be used on the IDPDCA form (5601-1/2 Record) to allow or disallow certain members of the IDP from accessing the PFA routes. Therefore, it should not be necessary to "screen out" originators via a Special RI in the RAR.

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1.4 OUTWATS

When the PFA dial code is used to access OUTWATS, the call does not go directly to the RAR form. In this case, the Digit Collection Type is "P" for POTS digit analysis. The MCRTIDX form is accessed which would be defined with an SFG and a Carrier ID. The PFASFG form (5609-3 Record) contains the SI to be used. If access of an SFG "port" is successful, the call processing uses the originator's ODP to collect the additional digits. The call from this point on looks like a POTS call with a PIC of the Carrier ID on the MCRTIDX form, accessing the ICF and CDIM forms as necessary, and entering the RAR form. The SI from the PFASFG form will be used and line screening will be set to "Y" so that WATS band screening will be done. See the MCRTIDX and PFASFG forms for additional information on OUTWATS.

1.5 Senderized Tie Trunks

When the PFA dial code is used to access a nonoverlap senderized Tie Trunk, the PFA Group information needs to define specific digit collection items so that it can be determined when the proper number of digits have been dialed. For this case, DIG COLL is usually "FIX" or "VAR". "XY" might also be appropriate. Signal conversion and OLP (Overlap Outpulsing) should be "N". When dialing is done (and the correct number of digits have been dialed or received based on DIG COLL), the RI, or MC RI and Code Index, are used to continue call processing as described in Section 1.3 .

When the PFA dial code is used to access an overlap senderized Tie Trunk, the same information as the nonoverlap case is needed, except that OVLP OPLS, attempt OLP, is "Y". The number of digits to collect before attempting to overlap outpulse must also be known. This is entered in OVLP DIGS. For OLP to occur, the RTIDX (or MCRTIDX) specified must have OLP equal to "Y". If it is "N", the call will proceed like the nonoverlap case.

1.6 Cut-through Tie Trunks

When the PFA dial code is used to access a cut-through Tie Trunk, DIG COLL will be "N" for collect no digits. After normal routing and screening procedures, an outgoing trunk is seized and the talking connection completed. This trunk must belong to a TG with Cut-Through equal to "Y" (see the TKGRP form (5202-3 Record)). When the call originator dials succeeding digits, the 5ESS Switch does not analyze or count the digits, but must pass them through the switch and out on to the trunk.

If the originating digits are Touch-Tone and the digits sent out on the trunk are Touch-Tone, the 5ESS Switch will pass the digits through the switch. If either end (or both ends) are not Touch-Tone (e.g., DP (Dial Pulse)), then the 5ESS Switch must perform signal conversion. Signal conversion is only used for access to cut-through facilities. This is indicated by setting SIG CONV to "Y". The value entered in SIG CONV TIME is the end of dialing time out in seconds. This specifies the amount of time that the 5ESS Switch will wait between digits dialed. When this time expires, the 5ESS Switch assumes that the end of dialing has occurred and signal conversion is no longer provided. If the SIG CONV is "Y", and both ends are Touch-Tone, the 5ESS Switch knows that signal conversion is not needed and ignores the entry. However, if SIG CONV is "N", and either end is DP, the call will fail. Therefore, it is recommended that SIG CONV equals "Y" for all cut-through cases.

For private facility cut-through trunks that are not FX (Foreign Exchange) or CPE (Customer Premises Equipment), valid combinations of IN START DIAL and OUT START DIAL values are described in the TRUNK form. When the IN START DIAL and OUT START DIAL are both "WINK", the customer will not receive second dial tone from the far office. If the SCND DIAL TONE field is "Y", the customer will receive second dial tone before the trunk has been set up and may result in the first several digits dialed being dropped if the customer dials immediately after receiving second dial tone. Therefore, it is not recommended to enter "Y" in the SCND DIAL TONE field for cut-through facilities. In general, PFA allows the prefixing of digits on cut-through trunking, however, its use may produce undesirable results. When an OUT START DIAL of "IMED" and an IN START DIAL of "DLTN" is assigned and digits are prefixed, second dial tone will not be heard by the originator. Deletion of dial tone will not be heard by the originator. Deletion of digits on the RTIDX form is not allowed for cut-through facilities.

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1.7 Common Control Switching Arrangement Networks

When the PFA dial code is used to access a CCSA (Common Control Switching Arrangement) network, the information required is either the overlap or nonoverlap senderized Tie Trunk application. For CCSA access, DIG COLL may be XY, where X equals 7 digits for on network, and Y equals 10 digits for off network. The typical application has the following fields with the indicated values:

Field	Value
X DIGS	7
Y DIGS	10
NTH POS	2
NTH DIG1	0
NTH DIG2	1

This table indicates that if the 2nd digit received (NTH POS) is a 0 or 1 (NTH DIG1 and 2), collect 10 digits (Y DIGS). If the 2nd digit received is not a 0 or 1 (i.e., it is not an Numbering Plan Area), then this call is on the private network so collect 7 digits (X DIGS).

1.8 Electronic Tandem Switching Networks

When the PFA dial code is used to access an ETS (Electronic Tandem Switching) network, the call should be treated as a cut-through Tie Trunk.

1.9 Enhanced Private Switched Communication Service Networks

When the PFA dial code is used to access an EPSCS (Enhanced Private Switched Communication Service) network, the information required for cut-through Tie Trunk is applicable. A special requirement for EPSCS access is the need to outpulse the Billing Number of the originating terminal to the receiving switch before the call is cut-through. This is called Automatic Station Calling Identification, and is invoked when the TG that this call is outgoing on has ANI (Automatic Number Identification) equal to "Y". See the TKGRP form (5202-3 Record).

1.10 Foreign Exchange Access

When the PFA dial code is used to access an FX trunk, the information is basically the same as the Tie Trunk applications. FX service allows a customer to have a line appearance on a Central Office which is in a service area different than the one that normally serves the customer. When the call originator dials an FX PFA Access Code, the FX trunk is seized (this is the normal serving office), and the far end (the foreign office) is cross connected to line equipment. Seizure on the trunk causes an origination on the line, similar to a regular line going off hook. Special signaling takes place between the two offices and must be specified as GS (Ground Start) or LS (Loop Start). This is indicated on the TRUNK form (5204-1 Record) for IN START DIAL and OUT START DIAL. The OUT START DIAL assigned to the FX trunk and the FX line must be configured compatibly. For example, if OUT START DIAL is "GRND", then the FX line should be GS. Outpulsing on an FX trunk can be "TT" or "DP". An FX trunk can be cut-through or senderized.

If this is one-way incoming or two-way FX trunk, additional information is required. Someone calls the DN (Directory Number) associated with the line in the foreign office. Termination to the line causes a trunk origination at the normal serving office. By entering a Direct Connected DN on the TKGRP form (5202-3 Record), the call may terminate to a line in this office. The IN START DIAL on the TRUNK form has "DIRC" which triggers this. Because the signaling of Ground or Loop must be known for a one-way incoming, "GRND" or "LOOP" is entered in OUT START DIAL.

1.11 Customer Premises Equipment Access

When the PFA dial code is used to access CPE, the information required is similar to the cut-through Tie Trunk application. CPE trunks may be configured senderized, but the more common arrangement is cut-through. Examples of CPE are Radio Paging which broadcasts a radio signal to a pocket pager, and Recorded Telephone Dictation which allows the originator to record and edit verbal dictation sessions.

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Interpretation of any dialed digits following cut-through of the connection that control the page or dictation session are the responsibility of an interface trunk circuit which resides on customer premises. If the trunks require Sleeve Lead Scan Points for supervision of the trunks, then the TG must be defined with a Trunk Class of PFCPE. Otherwise, the Trunk Class PF may be used (see the TKGRP form). The only special requirement on the PFAGPA form is in the case of recorded dictation, the signal conversion should not be released. This is accomplished by setting SIG CONV TIME to 0. Office-to-office trunking with SIG CONV TIME of 0 and the use of call pickup for recorded dictation trunks is not allowed.

1.12 Trunk Access

Two Trunk Classes are for Tie Trunks and FX Trunks. These are PF and PFLASH. PFLASH allows flash repeating capabilities. PFCPE is for CPE that require Sleeve Lead supervision. To enable incoming calls from a Tie Trunk to access preliminary digit analysis types that are available in PDIT but not INDIT, it is permitted for Trunk Classes of PF and PFLASH to enter a Line Type Digit Analysis Selector on the TKGRP form (5202-1 Record).

1.13 PFA Trunk Access

When alternate routing is required for PFA trunk access, the trunk associated with the alternate route must have the same characteristics as the primary route's trunk. For example, if a primary route points to a cut-through trunk, then the alternate RI should also point to a cut-through trunk. A recorded dictation trunk can only have another recorded dictation trunk as the alternate route.

CFPF (Call Forwarding Over Private Facilities) calls may be routed to an ETS over non-senderized trunks (cut-through) assuming the terminating trunk has the ARS (Automatic Route Selection) feature assigned to it.

1.14 Recent Change View

The corresponding Recent Change View for this form is 7.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *PFA GROUP

Description: Enter the name of the PFA Group.

Required Field.
Valid Entries: 1 - 8 characters (no restriction)

2.3 *DIALCODE

Description: Enter the Dial Code used to access PFA.

Required Field.
Valid Entries: 1 - 5 digits (#, *, 0 - 9)

Data Rules:

This Access Code must be defined with action equal to PFUSE in the IDPDCA form (5601-1/2 Record) or in the PDIT form (5300-2 Record), depending on whether the call originator has an IDP or uses the ODP.

2.4 SAVE ACD

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Description: Is the Access Code to be saved?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the entry is "Y", then the Access Code is part of the called number. Subsequent digits collected will be appended to the Access Code, and subsequent digit counts must include the quantity of digits in the Access Code.

2.5 SCND DIAL TONE

Description: Should Second Dial Tone be given?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

It is recommended that this field be "N" for access to cut-through trunks.

2.6 DIG COLL

Description: Enter the Digit Collection type.

Required Field.

Valid DIG COLL Entries

Entry	Definition
N	Used for cut-through. Subsequent digits are not analyzed or collected. SIG CONV and SIG CONV TIME are usually entered.
P	Used for the OUTWATS case, digits should be collected based on POTS digit analysis. ROUTE TYPE must be "MC".
FIX	Used when a fixed number of digits are to be collected. The fixed number must be entered in NUMB DIGS.
VAR	Used when a variable number of digits are to be collected. MAX DIGS, MIN DIGS, and INT DIG TIME must have entries.
XY	Used when two quantities of digits are to be collected based on the value of a digit collected. May be used for CCSA access. X DIGS, Y DIGS, NTH POS, NTH DIG1, and NTH DIG2 must have entries.

Data Rules:

For 5E5 and later:
If the DIG COLL is equal to "VAR", "XY", or "FIX", and the ROUTE TYPE on this PFAGPA form is equal to "MC", then the MC ROUTE INDEX on the matching MCRTIDX form (5304 Record) must equal the ROUTE INDEX on this PFAGPA form, and, the TRUNK GROUP NUMBER on the MCRTIDX form (5304 Record) must match the TGN on the TKGRP form (5202 Record), and, the CUT THRU field on the TKGRP form (5202 Record) must be "N" or blank.

If DIG COLL is "N" and ROUTE TYPE is "HUNT", then the ROUTE INDEX on this PFAGPA form must equal the ROUTE INDEX on the matching RTIDX form (5303 Record) and the TRUNK GROUP NUMBER on the RTIDX form (5303 Record) must match the TGN on the TRKGP form (5202 Record), and, CUT THRU on the TRKGP form (5202 Record) must be "Y".

If DIG COLL is "N" and ROUTE TYPE is "MC", then the ROUTE INDEX on this PFAGPA form must equal the MC ROUTE INDEX on the matching MCRTIDX form (5304 Record), and, the TRUNK GROUP NUMBER on the MCRTIDX form (5304 Record) must equal the TGN on the TKGRP form (5202 Record),

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and, CUT THRU on the TKGRP form (5202 Record) must be "Y".

If DIG COLL is "VAR", "XY", or "FIX" and ROUTE TYPE is "HUNT", then the ROUTE INDEX on this PFAGPA form must equal the ROUTE INDEX on the matching RTIDX form (5303 Record), and, the TRUNK GROUP NUMBER on the RTIDX form (5303 Record) must equal the TGN on the TKGRP form (5202 Record), and, CUT THRU on the TKGRP form (5202 Record) must be "N" or unknown.

2.7 ROUTE INDEX

Description: Enter the value of the RI or MC RI. The field ROUTE TYPE indicates which this is.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

PFA Access to OUTWATS requires an MC RI. Other types of access may use either, but it is normally a RI.

2.8 GROUP TYPE

Description: Enter the type of call the PFA group is applicable to.

Software Release: 5E6 and later
Required Field.
Default: VOICE
Valid Entries:

Valid GROUP TYPE Entries

Entry	Definition
VOICE	"CSV calls
CSD	"CSD calls

Data Rules:

Defining a CSV PFA group is not required, however, if a CSD PFA group is defined, then a CSV PFA group also must be defined.

2.9 ROUTE TYPE

Description: Enter the Type of Route entered in ROUTE INDEX.

Required Field.

Valid ROUTE TYPE Entries

Entry	Definition
HUNT	The number is a POTS RI defined on the RTIDX form (5303 Record).
MC	The number is an MC RI defined on the MCRTIDX form (5304 Record).

Data Rules:

For 5E5 and later, if ROUTE TYPE is "MC" and DIG COLL is "P", the matching MCRTIDX form (5304 Record) must have a MC ROUTE TYPE set to "SFG."

2.10 CODE INDEX

Description: Enter the Code Index to be used to enter the RAR form (5301 Record).

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Required Field.
Valid Entries: 1 - 4095

Data Rules:

For all types of Digit Collection, this is a required entry.

For 5E4(2) and later, if CODE INDEX is blank, ROUTE TYPE must be "MC".

2.11 SIG CONV

Description: Is signal conversion needed?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When DIG COLL is "N", indicating a cut-through mode, signal conversion is required if either the originating or terminating side of the call is not Touch-Tone. "Y" is normally expected to be entered when DIG COLL is "N" because there is no interference with the call when both ends are Touch-Tone but will be available in case one end is not. If "Y" is entered, SIG CONV TIME must also be entered. For types of DIG COLL other than "N", enter "N".

2.12 SIG CONV TIME

Description: Enter the time in seconds to wait after each digit before deciding that dialing is over and no more signal conversion is required.
Valid Entries: 0, 4 - 12

Data Rules:

Leave this field blank unless SIG CONV is "Y". A value of 0 is used for cases where the Signal Conversion is required for the length of the call, such as would be the case for recorded dictation.

2.13 OVLP OPLS

Description: Is OLP to be attempted on this route?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, OVLP DIGS must be entered. In order for OLP to be successful, the RTIDX (or MCRTIDX) form must be defined with OLP equal to "Y".

If DIG COLL is "P" or "N", OVLP OPLS must be "N".

For 5E5 and later if OVLP OPLS is "Y", DIG COLL may not be "P" or "N".

2.14 OVLP DIGS

Description: Enter the number of digits to collect before starting OLP.
Valid Entries:

- For 5E9(2) and earlier: 1 - 15

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- For 5E10 and later: 1 - 18

Data Rules:

Leave this field blank unless OVLP OPLS equals "Y".

When a value is entered and DIG COLL is:

- "FIX", the value must be less than the value entered in NUMB DIGS.
- "VAR", the value must be less than the value entered in MIN DIGS.
- "XY", the value must be greater than or equal to the NTH POS, and less than or equal to the value in both X DIGS and Y DIGS.

For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.15 NUMB DIGS

Description: Enter the number of digits to collect.
Valid Entries:
- For 5E9(2) and earlier: 1 - 15
- For 5E10 and later: 1 - 18

Data Rules:

Leave this field blank unless DIG COLL is "FIX".

For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.16 MAX DIGS

Description: Enter the maximum number of digits to collect.
Valid Entries: 1 - 15

Data Rules:

Leave this field blank unless DIG COLL is "VAR". If entered, the value must be greater than the value entered in MIN DIGS.

2.17 MIN DIGS

Description: Enter the minimum number of digits to collect.
Valid Entries:
- For 5E9(2) and earlier: 1 - 15
- For 5E10 and later: 1 - 18

Data Rules:

Leave this field blank unless DIG COLL is "VAR". If entered, the value must be less than the value entered in MAX DIGS.

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For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.18 INT DIG TIME

Description: Enter the interdigital timing in seconds.
Valid Entries: 4 - 12

Data Rules:

Leave this field blank unless DIG COLL is "VAR". Digit collection through the MIN DIGS value is done by regular office timing defined on the TIMING form (5520 Record). The seconds entered here specify the interdigital timing interval for collection of any further digits up to the quantity specified in MAX DIGS. An interdigital timeout after the reception of the minimum digits signifies that dialing is complete.

2.19 X DIGS

Description: Enter the digits to collect if there is no match of dialed number to the number in NTH DIG1 or NTH DIG2 for the NTH POS.
Valid Entries:
- For 5E9(2) and earlier: 1 - 15
- For 5E10 and later: 1 - 18

Data Rules:

Leave this field blank unless DIG COLL is "XY".

For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.20 Y DIGS

Description: Enter the digits to collect if there is a match of dialed number to the number in either NTH DIG1 or NTH DIG2 for the NTH POS.
Valid Entries:
- For 5E9(2) and earlier: 1 - 15
- For 5E10 and later: 1 - 18

Data Rules:

Leave this field blank unless DIG COLL is "XY". If entered, this value must not equal the value in X DIGS.

For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.21 NTH POS

Description: Enter the digit position of the dialed number to check the values found in NTH DIG1 and NTH DIG2 to see if X DIGS should be collected or Y DIGS should be collected.
Valid Entries:
- For 5E9(2) and earlier: 1 - 15
- For 5E10 and later: 1 - 18

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Data Rules:

Leave this field blank unless DIG COLL is "XY". If entered, this value must be less than or equal to both of the values found in X DIGS and Y DIGS.

For 5E10 and later, this field cannot have a value greater than 15 unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record). For more information on this feature, see Division 2, Section 4A223.

2.22 NTH DIG1

Description: Enter the first value of the nth digit, in the NTH POS.
Valid Entries: 0 - 9

Data Rules:

Leave this field blank unless DIG COLL is "XY". If the Nth Digit of the dialed digit string is equal to either the digit entered in NTH DIG1 or NTH DIG2, the number of digits to collect is the value of Y DIGS. If the nth digit does not match, the number of digits to collect is the value of X DIGS.

2.23 NTH DIG2

Description: Enter the second value of the nth digit, in the NTH POS.
Valid Entries: 0 - 9

Data Rules:

Leave this field blank unless DIG COLL is "XY". If the Nth Digit of the dialed digit string is equal to either the digit entered in NTH DIG1 or NTH DIG2, the number of digits to collect is the value of Y DIGS. If the nth digit does not match, the number of digits to collect is the value of X DIGS.

2.24 QUEUE REQUEST

Description: Is queuing requested for this PFA group?

Software Release: 5E3 and later
Default: N
Valid Entries: Y, N

CFPF

Fields Section 2.25 - Section 2.33 are fields associated with CFPF (Call Forwarding Over Private Facilities).

2.25 ETS TRK IND

Description: Is this PFA GROUP associated with an ETS trunk for the CFPF?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

To have CFPF this field must be "Y".

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When "Y" is selected, the termination side of the trunk must have Auto ARS.

When ETS TRK IND is "Y", then DIG COLL must be "N".

When ETS TRK IND is "N", the fields associated with CFPF via ETS cut-through trunks must be entered as follows:

Field	Entry
ACCT CODE LNGTH	blank
ATH CODE LNGTH	blank
ATH ALW	N
ATH PROMPT	NONE
LEAD ACCT CODE	blank
PAUSE1	0
PAUSE2	0
PAUSE3	0

When ETS TRK IND is set to "Y", the TRUNK GROUP NUMBER on the associated TKGRP form (5202 Record) must have CUT THRU set to "Y".

2.26 ACCT CODE LNGTH

Description: Enter the number of digits in the Account Code used with the Account Code Feature assigned to the associated ETS cut-through trunk.

The ACCT CODE LENGTH will consist of the number of digits in the LEAD ACCT CODE plus the number of digits used for an account code. These are the digits that are expected at the destination end of the trunk.

Software Release: 5E5 and later
Valid Entries: 1 - 15

Data Rules:

When an ACCT CODE LNGTH is entered, PAUSE2 must have a nonzero value and ETS TRK IND must be "Y".

2.27 ATH CODE LNGTH

Description: Enter the number of digits in the Authorization Code that are to be saved and outpulsed if ATH ALW is set to "Y". These digits are the digits that are expected at the destination end of the trunk.

Software Release: 5E5 and later
Valid Entries: 1 - 15

Data Rules:

This field must be entered when the destination trunk is expecting an authorization code (ATH ALW of "Y").

When an ATH CODE LNGTH is entered, PAUSE3 must have a nonzero value and ETS TRK IND must be "Y".

2.28 ATH ALW

Description: Is the destination end of the trunk is expecting an Authorization Code to be sent?

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

When ATH ALW is "Y", ATH CODE LNGTH must be entered, ATH PROMPT must not be "NONE" and ETS TRK IND must be "Y".

2.29 ATH PROMPT

Description: Enter the type of prompt that will be given to the user to indicate that the Authorization Code should be entered.

Software Release: 5E5 and later
Required Field.
Default: NONE
Valid Entries:

Valid ATH PROMPT Entries

Entry	Definition
BEEP1	One Beep
BEEP2	Two Beeps
BEEP3	Three Beeps
LEAVE	Party Leaving Tone
DIAL	Dial Tone
NONE	No Tones

Data Rules:

When this field is not "NONE", ETS TRK IND must be "Y" and ATH ALW must be "Y".

2.30 LEAD ACCT CODE

Description: Enter the three digits which may precede the account code digits. These are the digits that are expected at the destination end of the trunk.

Software Release: 5E5 and later
Valid Entries: 0 - 9 (the first digit may also be * or #)

Data Rules:

If this field is entered, the length of this field must be less than or equal to the ACCT CODE LNGTH and ETS TRK IND must be "Y".

2.31 PAUSE1

Description: Enter the length of time in seconds used to delay the digit outpulsing so that the termination end of a CFPF ETS is ready to collect digits. This is the time that is expected at the destination end of the trunk.

Software Release: 5E5 and later
Required Field.
Default: 0
Valid Entries: 0 - 10

Data Rules:

When PAUSE1 has a nonzero value, DIG COLL must be "N" and ETS TRK IND must be "Y".

2.32 PAUSE2

Description: Enter the first intermediate pause in seconds required for CFPF/ETS segmented signaling. It

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is used to cause a delay between the account code and the DN digit sequences for CFPF. This is the time that is expected at the destination end of the trunk.

Software Release: 5E5 and later
Required Field.
Default: 0
Valid Entries: 0 - 10

Data Rules:

When PAUSE2 has a nonzero value, ACCT CODE LNGTH must be greater than zero, DIG COLL must be "N" and ETS TRK IND must be "Y".

2.33 PAUSE3

Description: Enter the second intermediate pause in seconds required for CFPF/ETS segmented signaling. It is used to cause a delay between the DN and the authorization code digit sequences for the use of CFPF. This is the time that is expected at the destination end of the trunk.

Software Release: 5E5 and later
Required Field.
Default: 0
Valid Entries: 0 - 10

Data Rules:

When PAUSE3 has a nonzero value, ATH CODE LNGTH must be greater than zero, DIG COLL must be "N" and ETS TRK IND must be "Y".

```
 pfagpa                  5ESS Switch          _
(5609-5)             OFFICE DATA ADMINISTRATION
                  PRIVATE FACILITY ACCESS GROUP

 * 1. PFA GROUP      1PFA1   12. OVLP OPLS     N      CFPF
 * 2. DIALCODE       555     13. OVLP DIGS     __
   3. SAVE ACD       N       14. NUMB DIGS     __  24. ETS TRK IND     N
   4. SCND DIAL TONE N       15. MAX DIGS      15  25. ACCT CODE LNGTH  __
   5. DIG COLL       VAR     16. MIN DIGS      03  26. ATH CODE LNGTH   __
   6. ROUTE INDEX    0056    17. INT DIG TIME  04  27. ATH ALW         N
   7. GROUP TYPE     VOICE   18. X DIGS        __  28. ATH PROMPT      NONE
   8. ROUTE TYPE     HUNT    19. Y DIGS        __  29. LEAD ACCT CODE  ___
   9. CODE INDEX     0004    20. NTH POS       __  30. PAUSE1          00
  10. SIG CONV       N       21. NTH DIG1      _   31. PAUSE2          00
  11. SIG CONV TIME  __      22. NTH DIG2      _   32. PAUSE3          00
                             23. QUEUE REQUEST  N
```

Figure 1 SAMPLE PFAGPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 10F: 5609-6 RECORD
PRIVATE FACILITY ACCESS LINE (TN)
PARAMETER FORM - PFALPA

1. GENERAL

The 5609-6 Record is available with 5E2 and later Software Releases and is used to define Private Facility Access Line Parameters. The Line Parameter Form is used when a PFA constructed feature is assigned to a non-Multi-Line Hunt line and the desired parameters are different from the default parameters on the PFAFD form (5609-1 Record).

It is recommended that the default parameter, PFA Group name, be defined on the PFAFD form for the specific (constructed) PFA feature name. Then when the PFA feature name is assigned to a line on the LINEFA form (5112 Record) the default parameter will apply to that line without submitting a PFALPA form.

PFA constructed features do not count toward the office's Constructed Feature Limit. Therefore, there is no advantage to be gained in submitting a -PFALPA form. It is shown here for consistency with other BRCS features.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the line.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	Definition
ATND	50B Non-data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Software Release: 5E3 and later. Line to a PBX.

For 5E12 and later, TN/FEATURE combinations on different PFALPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the PFALPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or

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the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the PFA feature for which the parameters are to be assigned.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a PFA feature defined on the PFAFD form (5609-1 Record).

2.4 PFA GROUP

Description: For 5E6 and later, this field is renamed CSV PFA GRP.

Enter the name of the PFA Group of which this line is a member.

Software Release: 5E5 and earlier
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of a PFA Group defined on one or more PFAGPA forms (5609-5 Record).

2.5 CSV PFA GRP

Description: Enter the name of the Circuit-Switched Voice PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must match a PFA GROUP defined on the PFAGPA form (5609-5 Record) with a GROUP TYPE of "VOICE". Defining a CSV PFA GRP for this port is not required; however, if a CSD PFA GRP is defined on this form, then a CSV PFA GRP also must be defined.

2.6 CSD PFA GRP

Description: Enter the name of the Circuit-Switched Data PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must match a PFA GROUP on the "PFAGPA form (5609-5 Record) that has a GROUP TYPE of "CSD". There cannot be CSD only groups for PFA service. This field can only be entered if CSV PFA GRP is entered.

The CSD PFA GRP name must differ from the CSV PFA GRP name; they cannot be the same.

2.7 QUEUE ALLOWED

Description: Is queuing allowed for this PFA feature? If "N" is entered, then calls originating from this PFA feature cannot be queued.

Software Release: 5E3 and later

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Required Field.
Default: N
Valid Entries: Y, N

2.8 PRIORITY QUEUE

Description: Does this PFA feature have a priority option? An entry of "Y" indicates that the calls in queue for this feature can be prioritized.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PRIORITY QUEUE is "Y", then QUEUE ALLOWED must be "Y".

```
 pfalpa                  5ESS Switch          _  No errors/warnings
(5609-6)              OFFICE DATA ADMINISTRATION
            PRIVATE FACILITY ACCESS LINE (TN) PARAMETERS

* 1. TN           9792019
* 2. FEATURE      PFA1

  3. CSV PFA GRP    PFA2
  4. CSD PFA GRP    PFA1
  5. QUEUE ALLOWED  N
  6. PRIORITY QUEUE N
```

Figure 1 SAMPLE PFALPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
pfalpa                   5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5609-6)         PRIVATE FACILITY ACCESS LINE (TN) PARAMETERS

*1. TN     __________
*2. FEATURE _________

 3. CSV PFA GRP    _________
 4. CSD PFA GRP    _________
 5. QUEUE ALLOWED  N
 6. PRIORITY QUEUE N
```

Figure 2 SAMPLE PFALPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 10G: 5609-7 RECORD
PRIVATE FACILITY ACCESS LINE (MLHG/TERM)
PARAMETER FORM - PFAMPA

1. GENERAL

The 5609-7 Record is available with 5E2 and later Software Releases and is used to define Private Facility Access Multi-Line Hunt line parameters. The Line Parameter Form is used when a PFA constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters are different from the default parameters on the PFAFD form (5609-1 Record).

It is recommended that the default parameter, PFA Group name, be defined on the PFAFD form for the specific (constructed) PFA feature name. Then when the PFA feature name is assigned to a Multi-Line Hunt line on the MLHLNFA form (5113 Record) the default parameter will apply without submitting a PFAMPA form.

PFA constructed features do not count toward the office's Constructed Feature Limit. Therefore, there is no advantage to be gained in submitting a PFAMPA form. It is shown here for consistency with other BRCS features.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Member Number of the line.
Valid Entries: 1 - 2015; 3001 - 3999 (for Outdial Terminals only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	Definition
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Software Release: 5E3 and later. Line to a PBX.

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2.4 *FEATURE

Enter the name of the PFA feature for which the parameters are to be assigned.

Data Rules:
The name entered here must be that of a PFA feature defined on the PFAFD form (5609-1 Record).

2.5 PFA GROUP

Description: For 5E6 and later, this field has been renamed CSV PFA GRP.

Enter the name of the PFA Group of which the Multi-Line Hunt line is a member.

Software Release: 5E5 and earlier
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of a PFA Group defined on one or more PFAGPA forms (5609-5 Record).

2.6 CSV PFA GRP

Description: Enter the name of the Circuit-Switched Voice PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must match a PFA GROUP defined on the PFAGPA form (5609-5 Record) with a GROUP TYPE of "VOICE". Defining a CSV PFA GRP for this port is not required; however, if a CSD PFA GRP is defined on this form, then a CSV PFA GRP also must be defined.

2.7 CSD PFA GRP

Description: Enter the name of the Circuit-Switched Data PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must match a PFA GROUP on the PFAGPA form (5609-5 Record) with a GROUP TYPE of "CSD". There cannot be CSD only groups for PFA service; this field can only be entered if CSV PFA GRP is entered.

The CSD PFA GRP name must differ from the CSV PFA GRP name; they cannot be the same.

2.8 QUEUE ALLOWED

Description: Is queuing allowed for this PFA feature? If "N" is entered, then any calls originating from this PFA feature cannot be queued.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

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2.9 PRIORITY QUEUE

Description: Does this PFA feature have a priority option? An entry of "Y" indicates that the calls in queue for this feature can be prioritized.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PRIORITY QUEUE is "Y", then QUEUE ALLOWED must be "Y".

```
 pfampa                    5ESS Switch          _
(5609-7)              OFFICE DATA ADMINISTRATION
          PRIVATE FACILITY ACCESS LINE (MLHG/TERM) PARAMETERS

 * 1. MLHG          0012
 * 2. TERM          0007
 * 3. FEATURE       PFA
   4. PFA GROUP     ABC
   5. QUEUE ALLOWED  Y
   6. PRIORITY QUEUE  Y
```

Figure 1 SAMPLE PFAMPA FORM 5E2 SOFTWARE RELEASE

```
 pfampa                    5ESS Switch          _
(5609-7)              OFFICE DATA ADMINISTRATION
          PRIVATE FACILITY ACCESS LINE (MLHG/TERM) PARAMETERS


 * 1. MLHG          1234
 * 2. TERM          1092
 * 3. FEATURE       PFA1
   4. CSV PFA GRP    PFA2
   5. CSD PFA GRP    PFAD
   6. QUEUE ALLOWED  N
   7. PRIORITY QUEUE  N
```

Figure 2 SAMPLE PFAMPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 10H: 5609-8 RECORD
PRIVATE FACILITY ACCESS TRUNK (TGN/MEMB)
PARAMETER FORM - PFATPA

1. GENERAL

The 5609-8 Record is available with 5E2 and later Software Releases and is used to define Private Facility Access Trunk parameters. The Trunk Parameter Form is used when a PFA constructed feature is assigned to a trunk and the desired parameters are different from the default parameters on the PFAFD form (5609-1 Record).

It is recommended that the default parameter, PFA Group name, be defined on the PFAFD Form for the specific (constructed) PFA feature name. Then when the PFA feature name is assigned to the Trunk Group via the TKGRPFA form (5206 Record) or to the individual trunk via the TRUNKFA form (5205 Record) the default parameter will apply to that trunk without submitting a PFATPA Form.

PFA constructed features do not count toward the office's Constructed Feature Limit. Therefore, there is no advantage to be gained in submitting a -PFATPA Form. It is shown here for consistency with other BRCS features.

1.1 Recent Change View

The corresponding Recent Change View for this form is 6.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number of the trunk.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202-1 Record) must be one of the following.

TRKCLS	Definition
PF	Private Facility.
PFCPE	Private Facility Customer premise Equipment.
PFLASH	Private Facility Feature Flash.
PFITT	Software Release: 5E3 and later. Private Facility Inter-Tandem Trunk.
EDSL	Software Release: 5E8 and later. Extended Digital Subscriber Line trunk.
EDSLHM	Software Release: 5E8 and later. EDSL for Hotel/Motel TSPS service.

2.3 * MEMB

Description: Enter the Trunk Group Member Number of the trunk.
Valid Entries:

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For 5E3 and later: 0 - 1951

2.4 * FEATURE

Description: Enter the name of the PFA feature for which the parameter is to be assigned.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a PFA feature defined on the PFAFD form (5609-1 Record).

2.5 CSV PFA GRP

Description: Enter the name of the Circuit-Switched Voice PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must match a PFA GROUP defined on a PFAGPA form (5609-5 Record) with a GROUP TYPE of "VOICE". Defining a CSV PFA GRP for this port is not required; however, if a CSD PFA GRP is defined on this form, then a CSV PFA GRP also must be defined.

2.6 CSD PFA GRP

Description: Enter the name of the Circuit-Switched Data PFA group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name must match a PFA GROUP on the PFAGPA form (5609-5 Record) with a GROUP TYPE of "CSD". There cannot be CSD only groups for PFA service; this field can only be entered if CSV PFA GRP is entered.

The CSD PFA GRP name must differ from the CSV PFA GRP name; they cannot be the same.

2.7 QUEUE ALLOWED

Description: Is queuing allowed for this PFA feature? If "N" is entered, then any calls originating from this PFA feature cannot be queued.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.8 PRIORITY QUEUE

Description: Does this PFA feature have a priority option? An entry of "Y" indicates that the calls in queue for this feature can be prioritized.

Software Release: 5E3 and later
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If PRIORITY QUEUE is "Y", then QUEUE ALLOWED must be "Y".

```
 pfatpa                    5ESS Switch          _
(5609-8)              OFFICE DATA ADMINISTRATION
          PRIVATE FACILITY ACCESS TRUNK (TGN/MEMB) PARAMETERS

 * 1. TGN           0079
 * 2. MEMB          1291
 * 3. FEATURE       PFA3

   4. CSV PFA GRP    PFAV
   5. CSD PFA GRP    PFA3
   6. QUEUE ALLOWED  N
   7. PRIORITY QUEUE N
```

Figure 1 SAMPLE PFATPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 10I: 5609-9 RECORD
PRIVATE FACILITY ACCESS GROUP DATA FORM - PFAGD

This section has been removed from the TG-5.

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SEC. 11: TIME OF DAY FORMS

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SEC. 11A: 5610-1 RECORD
TIME OF DAY FEATURE DEFINITION FORM - TODFD

1. GENERAL

The TODFD form is available with 5E2 and later Software Releases. The TOD feature allows a subscriber to control (i.e., preschedule) various aspects of other BRCS (business/residential) features through the use of dial codes. This feature allows the customer to set both the time and day for a particular action to occur. For example, for a specified day and time, a subscriber may wish to use the TOD feature to change an Interexchange Carrier for an IDP (Individual Dialing Plan) group, or simply, to activate or deactivate a feature, such as call forward night service. The TOD feature cannot be included in a BRCS Feature Group or assigned to a line that has a BRCS Feature Group.

Each TOD feature which is to act upon another BRCS feature must be defined. For each TOD Feature established, the TODFD form provides three basic types of feature information:

- Maximum Action Points, and Zero and One Parameter Codes - limitations on the feature.
- Control Group Data - BRCS features that TOD can have an effect upon.
- Subscriber-controlled functions - changes to the TOD schedule that the subscriber can effect.

It should be noted that, although the TODFD form establishes the unique permissions and contraints on a particular TOD Feature, a TODCL (Time of Day Code List) form (5610-2 Record) is required to identify the features and actions that are scheduled to occur on a particular line, terminal, or trunk (see Feature Name below).

1.1 Maximum Action Points and Parameter Codes

Action Points are tags used to identify each action or set of actions that are to occur on a given day and time. Each unique line, terminal, or trunk can have from one to thirty-two Action Points, but cannnot have more than eight TOD actions occurring at a single time for a specific Action Point.

Specific TOD Actions are designated via the Zero and One Parameter Codes on the TODCL form. Zero Parameter Codes designate "activate" and "deactivate" actions on a feature; One Parameter Codes designate actions which modify selected attributes of a BRCS feature. The TODFD form establishes limitations on the number of Action Points and Parameter Codes for a TOD feature; the TODCL form assigns specific actions to a given line, terminal of trunk. For a listing of the valid entries for TOD actions (i.e., Zero and One Parameter Codes), see the TODCL form.

For more detailed information on customer interaction with BRCS features for both the (ODP) Office Dialing Plan and the IDP Plan, see Divsion 2, Section 1F. For information defining dialed codes associated with ODPs (Office Dialing Plans), see Division 3, Section 3B (PDIT form, 5300-2 Record). For information defining codes associated with IDPs (Individual Dialing Plans), see the IDPDCA form (5601-1/2 Record; Division 4, Section 2B).

1.2 Control Group Data

The Control Group fields include: Control Line Private, Control Trunk, Control IDP Group, Control ARS Group, Control ATH Group, Control ACCT Group, Control ACVT Group, and Customer Activation. These parameters specify the BRCS features and/or groups that TOD can have an effect upon. These permissions are specific to the Feature Name. When a particular control field is set to "Y", this indicates that the TOD feature can control various options of that feature.

1.3 Subscriber-Controlled Parameters

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The subscriber-controlled parameters define the allowable TOD Code Lists parameters that can be changed by the subscriber using dial codes. Dial codes must be defined in the PDIT form (5300-2 Record) or the IDPDCA form (5601-1/2 Record). Subscriber-controlled parameters include: Change Action Time, Change OWS (One Week Schedule), Change Code List, Add 0 Parm Code, Add 1 Parm Code, Delete 0 Parm Code List, Delete 1 Parm Code List, Delete All Lists, Default Code List Name. These parameters provide the subscriber with internal control assigned by the switch owner.

1.4 Feature Name

TOD features are assigned to a given line, terminal, or trunk via the LINEFA (Line Feature Assignment) form (5112 Record), the MLHLNFA (Multi-Line Hunt Group Member Feature Assignment) form (5113 Record), or to the TKGRPFA (Feature Assignment Trunk Group (5206 Record), respectively.

In addition, the TOD Code List associated with this feature must be assigned to the TODLPA (TOD Line Parameter) form (5610-3 Record), the TODMPA (TOD MLHG Terminal Parameter) form (5610-4 Record), and the TODTPA (TOD Trunk (TGN/MEMB) Parameter form (5610-5 Record) for line, terminal, or trunk, respectively.

1.5 Time of Day and Allocation of Memory

When the TOD feature is being used to control a group type of data, the feature is normally assigned to only one line or terminal for that group. When the TORC (Time Of Day Originated Recent Change) is applied to the group data, any line/terminal that uses that group will be affected. If the TOD feature controls group type data, the control field for the affected feature(s) should be set to "Y". All other control fields are set to "N". In this case, it is only necessary to assign the TOD feature to a single line (control line) that uses the group data. All other lines that use the group data do not require assignment to the TOD feature. This means, in terms of memory, that even though group data is redundantly populated as described above, the group data consists of only one line and thus memory allocation is kept to a minimum.

If the TOD feature controls line private data, the control field for the Line Private would be marked "Y". If TOD controls both group and line private data, only the affected control fields should be marked "Y". If any of the group type control fields are invalidly set to "Y" and the TOD feature does not control the features(s), significant additional memory allocation could result requiring unexpected and needless memory growth. This situation could result when TOD controls line private data (e.g., activation/deactivation of CFW (Call Forward) feature and one or more of the group control fields is also set to "Y" but TOD group control is not required. For example, if a hundred line centrex only desires TOD control of CFW on each line, and those same 100 lines are assigned to an ARS feature with the CONTROL ARS GROUP field set to "Y", then in addition to allocating memory for the line private data, significant additional memory will be allocated for ARS group data for 100 lines as described above. This additional allocation could ultimately result in Recent Change failure and a need for memory growth.

Another data item that significantly impacts on memory allocation is the MAX ACTION POINTS field. This field should only be set to the actual number of action points required by a TOD customer. This field has a default value of eight on all the preconstructed TOD features. If the customer requires only two action points (e.g., activation of CFW at 1800 and deactivation of CFW at 0800 on a dialy basis), then customization should be used to build a TOD feature specifying only two action points. Memory for TOD code list data for each line assigned a TOD feature is allocated based on the number of action points. In the above example, if MAX ACTION POINTS is eight, then memory is required for 800 code list entries, whereas if MAX ACTION POINTS is two, only 200 code list entries are required.

1.6 Recent Change View

The corresponding Recent Change View for this form is 12.22.

2. FORM AND RECORD ENTRIES

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2.1 BASE AND CONTROL, UNIT

Enter the BASE and CONTROL GROUP number and office name (UNIT) on each record.

2.2 *FEATURE NAME

Description: Enter the TOD Feature Name. There are no restrictions on the valid characters except that feature names with a slash (/) are reserved for preconstructed features.
Valid Entries: 1 - 8 characters.

2.3 REMARKS

Description: Enter a descriptive comment as necessary.
Valid Entries: 1 - 32 characters

2.4 MAX ACTION POINTS

Description: Enter the maximum number of Action Points for this TOD feature.

Required Field.
Default: 8
Valid Entries: 1 - 32

2.5 MAX ZERO PARM CODES

Description: Zero Parameter Codes are defined on the TODCL form. They are used to specify TOD "activate" and "deactivate" actions that can be associated with a TOD Code List. Enter the maximum number of Zero Parameter codes that can be entered on each TODCL form for this TOD Feature. For 5E2 only, the only allowed value is zero and this field cannot be entered.

- ***NOTE:*** The sum of the two fields must not equal zero. Thus, for 5E2 only, since the Max Zero Parm Code is defaulted to zero and cannot be changed, the Max One Parm Code must be greater than zero.

Required Field.
Default:
- For 5E2 only: 0
- For 5E3 and later: 8

Valid Entries: 0 - 8

2.6 MAX ONE PARM CODES

Description: One Parameter Codes are defined on the TODCL form. They are used to specify TOD actions which can modify a feature. (e.g., change the active pattern group for an ARS group, or change the Interexchange Carrier for an IDP group). Enter the maximum number of One Parameter Codes that can be entered on each TODCL form for this TOD Feature.

Required Field.
Default:
- For 5E2 only: 1
- For 5E3 and later: 8

Valid Entries: 0 - 8

2.7 CONTROL LINE PRIVATE

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Description: Can the TOD feature change line private data? For 5E2 only, "N" is the only allowed value and this field cannot be entered.

Required Field.
Default: N
Valid Entries: Y, N

- ***NOTE:*** For CONTROL LINE PRIVATE, CONTROL TRUNK, CONTROL IDP GROUP, CONTROL ARS GROUP, CONTROL ATH GROUP, CONTROL ACCT GROUP, and CONTROL ACVT all seven fields cannot be set to "N". At least one of these fields must be set to "Y".

2.8 CONTROL TRUNK

Description: Can the TOD feature change trunk data?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.9 CONTROL IDP GROUP

Description: Can the TOD feature change IDP (Individual Dialing Plan) Group data? For 5E2 through 5E6, "N" is the only allowed value and this field cannot be entered.

Required Field.
Default: N
Valid Entries:
- For 5E7 and later: Y, N

2.10 CONTROL ARS GROUP

Description: Can the TOD feature change ARS (Automatic Route Selection) Group data? For 5E2 only, "Y" is the only allowed value and this field cannot be entered.

Required Field.
Default: N

- For 5E2 only: Y
- For 5E3 and later: N

Valid Entries: Y, N

2.11 CONTROL ATH GROUP

Description: Can the TOD feature change ATH Group data?

- ***NOTE:*** TOD for CONTROL ATH GROUP can be temporary deactivated via the "INHIBIT TOD" field on the ATHGP (Authorization Code Group Definition) form (5619-2 Record).

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.12 CONTROL ACCT GROUP

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Description: Can the TOD feature change Account Group data?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

2.13 CONTROL ACVT

Description: Can the TOD feature change the Attendant Control of Voice Terminals feature?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

2.14 CUSTOMER ACTIVATION

Description: Can the customer activate/deactivate the TOD feature via a dialed code?

Required Field.
Default: N
Valid Entries: Y, N

2.15 CHANGE ACTION TIME

Description: Can the customer change the Action Time (for a given Action Point) via a dialed code?

Required Field.
Default: Y
Valid Entries: Y, N

2.16 CHANGE OWS

Description: Can the customer change the One Week Schedule (for a given Action Point) via a dialed code?

Required Field.
Default: Y
Valid Entries: Y, N

2.17 CHANGE CODE LIST

Description: Can the customer change the TOD code list?

Software Release: 5E3 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

When CHANGE CODE LIST is "N" the fields ADD 0 PARM CODE, ADD 1 PARM CODE, DELETE 0 PARM LIST, DELETE 1 PARM LIST, and DELETE ALL LISTS must be "N".

When CHANGE CODE LIST is "Y", at least one of the fields: ADD 0 PARM CODE, ADD 1 PARM CODE, DELETE 0 PARM LIST, DELETE 1 PARM LIST, and DELETE ALL LISTS must be "Y".

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When either of the add or delete parameter code fields, or the DELETE ALL LISTS field is "Y", the CHANGE CODE LIST field must be "Y".

2.18 ADD 0 PARM CODE

Description: Can the customer add to the Zero Parameter Code List (for a given Action Point) via a dialed code? For 5E2 only, "N" is the only allowed value and this field cannot be entered.

Required Field.
Default:
- For 5E2 only: N
- For 5E3 and later: Y

Valid Entries: Y, N

Data Rules:

When ADD 0 PARM CODE is "Y", the DELETE 0 PARM LIST must be "Y".

When ADD 0 PARM CODE is "N", the DELETE 0 PARM LIST must be "N".

2.19 ADD 1 PARM CODE

Description: Can the customer add to the One Parameter Code List (for a given Action Point) via a dialed code?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

When ADD 1 PARM CODE is "Y", the DELETE 1 PARM LIST must be "Y".

When ADD 1 PARM CODE is "N", the DELETE 1 PARM LIST must be "N".

2.20 DELETE 0 PARM LIST

Description: Can the customer delete the Zero Parameter Code List (for a given Action Point) via a dialed code? For 5E2 only, "N" is the only allowed value and this field cannot be entered.

Required Field.
Default:
- For 5E2 only: N
- For 5E3 and later: Y

Valid Entries: Y, N

Data Rules:

When DELETE 0 PARM CODE is "Y", the ADD 0 PARM LIST, and CHANGE CODE LIST must be "Y".

If CHANGE CODE LIST is "Y" and DELETE ALL LISTS is "N", then both the ADD 0 PARM CODE field and the DELETE 0 PARM LIST fields must be equal.

2.21 DELETE 1 PARM LIST

Description: Can the customer delete the One Parameter Code List (for a given Action Point) via a dialed

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code?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If CHANGE CODE LIST is "Y" and DELETE ALL LISTS is "N", then the ADD 1 PARM CODE field must equal the DELETE 1 PARM LIST field.

2.22 DELETE ALL LISTS

Description: Can the customer delete the Zero Parameter Code List and the One Parameter Code List (for a given Action Point) via a dialed code?

For 5E2 only, "N" is the only allowed value and this field cannot be entered.

- ***NOTE:*** This is a single dialed code which will delete both Parameter Code Lists of a given Action Point.

Required Field.
Default:

For 5E2 only: N
- For 5E3 and later: Y

Valid Entries: Y, N

Data Rules:

If CHANGE CODE LIST is "Y" and DELETE ALL LISTS is "N", then the ADD 0 PARM CODE and the ADD 1 PARM CODE must be equal.

2.23 DEFAULT CODE LIST NAME

Description: This field designates the method used by system processing to determine a default TOD Code List Name when no Code List Name has been specified on a corresponding TOD parameter assignment record (i.e., TODLPA, TODMPA, or TODTPA). If this field has been entered and if no code list name for this feature has been specified on a line, terminal, or trunk parameter form, the system will create a unique TOD code list name as outlined in the table below. If this field has been left blank, no default code list name will be created and a TOD code list name must be entered on the line, terminal, or trunk form.
Default: TN

The following table identifies the method used by system processing to determine a TOD code list name when one of the three valid entry values (TN, EN, or TK) is entered.
Valid Entries:

Valid DEFAULT CODE LIST NAME Entries

Entry	Definition
TN	If TN is entered, a TOD Code List Name will be generated (defaulted) which will consist of the letter "T" followed by the TN assigned to the corresponding LINE or MLHLN form.
EN	Software Release: 5E7 and earlier. If EN (Equipment Number) is entered, a TOD Code List Name will be generated (defaulted) which will consist of the TEN, DEN, LEN, or SLEN fields associated with the corresponding LINE, TRUNK, or MLHLN form.
TK	

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ESS 5610-1(01)TG-5 TIME OF DAY FEATURE DEFINITION RECORD DATE _____
TODFD 5ESS SWITCH
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	MAPXOIANCTSIO N	MAPXAZMECRCOODE S	MAPXAROMNECCOODE S	CONTROL DATA: LPIRNIEVATE	TRUNK	IGDRPOUP	AGRRSOUP	AGTRHOUP	AGCRCOTUP	AGCRVOTUP	CAUCSTIOVMAETRIO N	CATHCIATMNIEGVEATIO N	COHWASNG E	CCHOADNEGELIS T	APDADR0CO D E	APDADR1CO D E	DEPLAERTMEL0IS T	DEPLAERTMEL1IS T	DEALLELTELIS TS	DELFIASUTLTNAME	REMARKS
/TD*	08	0	1	N	N	N	Y	N	N	N	N	N	N	Y	N	N	N	N	N		WILD CARD TOD
/TDA CVT	08	8	0	Y	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	TN	TD FOR ACVT
/TDA RS	08	0	1	N	N	N	Y	N	N	N	N	N	N	Y	N	N	N	N	N	TN	TD FOR ARS
/TDD LX	08	8	8	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	TN	DELUXE TOD

Figure 1 PRECONSTRUCTED TIME OF DAY FEATURE LIST 5E7 SOFTWARE RELEASE

---

todfd 5ESS Switch _
(5610-1) OFFICE DATA ADMINISTRATION
TIME OF DAY FEATURE DEFINITION

*2. FEATURE NAME TODIDP 3. REMARKS _____

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```
 4. MAX ACTION POINTS    08       15. CHANGE ACTION TIME     Y
 5. MAX ZERO PARM CODES  8        16. CHANGE OWS             Y
 6. MAX ONE PARM CODES   8        17. CHANGE CODE LIST       Y
                                  18. ADD 0 PARM CODE        Y
 7. CONTROL LINE PRIVATE Y        19. ADD 1 PARM CODE        Y
 8. CONTROL TRUNK        N        20. DELETE 0 PARM LIST     Y
 9. CONTROL IDP GROUP    Y        21. DELETE 1 PARM LIST     Y
10. CONTROL ARS GROUP    N        22. DELETE ALL LISTS       Y
11. CONTROL ATH GROUP    N
12. CONTROL ACCT GROUP   N        23. DEFAULT CODE LIST NAME TN
13. CONTROL ACVT GROUP   N

14. CUSTOMER ACTIVATION  N
```

Figure 2 SAMPLE TODFD FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 11B: 5610-2 RECORD
TIME OF DAY CODE LIST DEFINITION FORM - TODCL

1. GENERAL

The TODCL form is available with the 5E2 and later Software Releases. It is used to define the TOD activities that will occur on a particular line, terminal, or trunk group at a specified time. This is done by associating these activities to a TOD Code List Name established for the line, terminal, or trunk. Each time interval is identified by assigning a unique Action Point. The two key fields for the TODCL form are: the CODE LIST NAME and the ACTION POINT number.

1.1 Code List Name

A Code List Name is assigned to each Line, Trunk or MLHG Terminal that is to have a TOD feature. This is accomplished using the appropriate TOD Parameter form: TODLPA (5610-3 Record) for lines, TODMPA (5610-4 Record) for terminals, or TODTPA (5610-5 Record) for trunks. The Code List Name is used to define the TOD activities that will occur for a Line, Terminal, or Trunk. The Code List Name entered on the TODCL must be the same as the Code List Name assigned to the respective parameter form, if any. If no parameter form is available, and if "TN" has been designated as the DEFAULT CODE LIST NAME on the TODFD form (5610-1 Record), for 5E11 and earlier software releases, the Code List Name will default to a "T", followed by a 7-digit Telephone Number. For 5E12 and later, a "T" is followed by a 10-digit Telephone Number. If "EN" is designated, the Code List Name will default to an 8-digit Equipment Number; if "TK" is designated, the Code List Name will default to a Trunk Group Member and Member Number.

1.2 Action Point

Action Points are assigned to the Code List Name to distinguish TOD activities occurring at different times. An Action Point is an identifying number assigned to an Action Time to associate one or more TOD feature activities scheduled to occur at the same time. Each Code List Name can have up to thirty-two Action Points. However, the number of TOD feature actions which can occur within a given Action Point (day/time) is limited to eight. The switch owner may also limit the actual number of Action Points that can exist for a specific TOD feature. This is done via the MAX ACTION POINTS field on the TODFD (TOD Feature Definition) form (5610-1 Record).

The scheduling parameters which define each Action Point consists of an ACTION TIME, ONE-WEEK SCHEDULE, a ZERO PARAMETER CODE LIST, and/or a ONE PARAMETER CODE LIST.

TOD feature can have as many TODCL forms as numerically specified by the MAXIMUM ACTION POINTS field on the TODFD form that defines the TOD feature.

1.3 Parameter Code Lists

The ZERO and ONE PARAMETER CODE LISTS are used to specify four major fields for the TOD feature: the dial CODE the customer would use to manually trigger the activity, the BRCS FEATURE affected, the ACTION to take place, and the USE IDP? indicator which specifies whether the customer's IDP (Individual Dialing Plan) is to be used to analyze the dial code. If any one of these four fields is populated, all must be populated.

For the ODP, the dial CODE, BRCS FEATURE, and ACTION are defined using the PDIT (Prefix/Feature Digit Interpreter) form (5300-2 Record) (See Division 3, Sections 3B.) For the IDP, the dial CODE, BRCS FEATURE, and ACTION are defined using the IDPDCA (Individualized Dialing Plan Dialed Code Assignment) form (5601-1/2 Records). (See Division 4, Section 2B.)

The ZERO PARAMETER CODE LIST is used to specify either an "activate" or "deactivate" type of activity on a specified BRCS feature. The ONE PARAMETER CODE LIST is used to specify a "modify" type

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activity on a specified BRCS feature. In addition to the dial CODE, the ONE PARAMETER CODE LIST also requires that an additional code (called PARAMETER) be entered to specify the type of modifying activity. Recall that the maximum number of activate/deactivate and/or modify actions that can be assigned to an Action Point for a given Code List Name cannot exceed eight.

When the customer uses the dial codes, the feature is said to be CORCable (Customer Originated Recent Change). When the TOD feature uses these dial codes, the feature is TORCed (Time of Day Originated Recent Change). Thus, the feature that TOD is to affect must be CORCable. See Division 2, Section 1F for a composite list of all dial code actions.

For 5E9(1) and later, if the code list is applied to a trunk group, USE IDP? on this form is "N", and DAS from the TKGRP form is defined on a DAS form where a PDIT is entered, then the PDIT and the corresponding CODE, FEATURE, and ACTION from this TODCL form must be defined in the ODP on a PDIT form as PDIT, DIGITS TO INTERPRET, FEATURE, and ACTION, respectively.

1.4 Recent Change View

The corresponding Recent Change View for this form is 4.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and office name (UNIT) on each record.

2.2 *CODE LIST NAME

Description: Enter the unique Code List Name assigned to the TOD feature for this line, trunk, or MLHG terminal.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: 1 - 11 characters

2.3 *ACTION POINT

Description: Enter the Action Point Number for this TODCL form.
Valid Entries: 1 - 32

Data Rules:

The number entered here must not exceed the value of the MAX ACTION POINTS entry on the TODFD form that defines the TOD Feature for this line or terminal.

2.4 ACTION TIME

Description: Enter the Action Time for this Action Point. This specifies the actual time that the TORCs specified on this TODCL form are to be executed.

The time entered must be military time and only at quarter hour intervals (i.e., 0015 specifies 12:15 a.m., 0230 specifies 2:30 a.m., 1200 specifies 12 noon, 2045 specifies 8:45 p.m., and 2400 specifies 12 midnight). A special value of 9999 designates a null action time.

Required Field.
Valid Entries: 0015 - 2400, 9999

2.5 IDP NAME

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Description: Enter the IDP Name if an Individualized Dialing Plan is to translate CORCs (Customer Originated Recent Changes) to the TODCL form. The IDP Name should be the same as the IDP Group Name if an IDP feature was assigned to this line or terminal (IDP Group Name is assigned on either the IDPLPA form (5601-6 Record), IDPMPA form (5601-7 Record), IDPTPA form (5601-8 Record) or IDFD form (5601 Record)).
Valid Entries: 1 - 8 characters

Data Rules:

If an IDP Name was entered on any other TODCL form with this Code List Name, the IDP Name should be consistent and must also be the IDP group associated with the line, terminal or group. For 5E7 and later, if any USE IDP? is "Y", an IDP Name must be entered.

For 5E6 only, the IDP NAME and the corresponding CODE, FEATURE and ACTION list entries must be defined in the IDP on the IDPDCA form, or, the PDIT on a corresponding DAS form and the CODE, FEATURE and ACTION must be defined in the ODP on the PDIT form as PDIT, DIGITS TO INTERPRET, FEATURE and ACTION, respectively. The PDIT can be found by matching DAS on the TODCL form with DAS on a DAS form where PDIT is entered.

2.6 DAS

Description: Enter the Digit Analysis Selector to be used when an Office Dialing Plan is used to translate CORCs to the TODCL form.

Required Field.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

If entered, this should be the same DAS that appears on the LCC form (5306 Record) for this line or MLHG terminal. For Trunk Terminals, the DAS entered should be the same DAS that appears on the TKGRP form (5202-1/2 Record) for the associated TGN/MEMB.

2.7 VALID LIST

Description: Is the TODCL form a valid Code List and is it to be linked to the customer's TOD feature? For ODA, this entry should always be entered as Y.

Required Field.
Default: Y
Valid Entries: Y, N

ONE WEEK SCHEDULE

The following fields (2.8 - 2.14) define the days of the week (Monday through Sunday) that this TOD Code List will be active.

Enter "Y" in the following fields which correspond to the days of the week that the codes in this action point are to be executed, otherwise enter "N".

For example, if this TOD Code List is to be active Monday through Friday, the fields SAT and SUN would both be entered as "N" while the remaining fields (MON-FRI) would be entered as "Y".

2.8 MON

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Description: Will the Code List be active Monday?

Required Field.
Default: N
Valid Entries: Y, N

2.9 TUE

Description: Will the Code List be active Tuesday?

Required Field.
Default: N
Valid Entries: Y, N

2.10 WED

Description: Will the Code List be active Wednesday?

Required Field.
Default: N
Valid Entries: Y, N

2.11 THU

Description: Will the Code List be active Thursday?

Required Field.
Default: N
Valid Entries: Y, N

2.12 FRI

Description: Will the Code List be active Friday?

Required Field.
Default: N
Valid Entries: Y, N

2.13 SAT

Description: Will the Code List be active Saturday?

Required Field.
Default: N
Valid Entries: Y, N

2.14 SUN

Description: Will the Code List be active Sunday?

Required Field.
Default: N
Valid Entries: Y, N

ZERO PARAMETER CODE LIST

The following fields (2.15 - 2.18) define the Zero Parameter Codes consisting of 1) the Dial CODE, 2)

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whether or not an IDP is used to translate the Code, 3) the FEATURE that this Code will affect, and 4) the ACTION represented by this Code.

If a Wild Card feature is used, the feature must be of the type assigned to the line, terminal, or trunk, otherwise, the feature must be the exact feature assigned to the line, terminal, or trunk. Each non-null entry must have a corresponding entry in the IDP or ODP.

The number of rows completed on this TODCL must not exceed the number specified in the MAX ZERO PARM CODES on the TODFD form for this TODCL form.

The fields CODE, FEATURE, and ACTION are all required if any one of these fields are entered for a given row. For 5E7 and later, the USE IDP? field must also be entered.

For 5E3 and later, at least one entry must be populated in either the Zero Parameter Code List or the One Parameter Code List.

2.15 CODE

Description: Enter the dial code the customer would dial to activate or deactivate a BRCS feature. The first digit entered can be a *, # or a 0-9. All remaining digits must be 0-9.

Software Release: 5E3 and later
Valid Entries: 1 - 4 digits

2.16 USE IDP?

Description: Will an IDP be used to translate this CODE into a FEATURE and ACTION? If "N" is entered, an ODP (Office Dialing Plan) is used to translate this code.

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

For 5E7 and later, if USE IDP? is "Y", IDP NAME must be entered.

2.17 FEATURE

Description: Enter the BRCS Feature name that will be activated/deactivated by the CODE in this row. The Feature name entered here must be assigned to this line or terminal and it must have customer activation/deactivation capability.

Software Release: 5E3 and later
Valid Entries: 1 - 8 characters

Data Rules:

The feature entered must also be defined on a LINEFA form (5112 Record), MLHLNFA form (5113 Record), TRUNKFA form (5205 Record), or an associated CLUSTR form (5600 Record).

For 5E9(1) and later, when a scheduled call forwarding feature activation (or deactivation) is assigned to a Standard DSL line or a Standard DSL Multi-Line Hunt Group line, the ACT TYPE on the CFWFD form must be "CODE", "CDDN", "CDDNC", "CDDNCA", or "CDCA1A", and the DACT TYPE must be "CODE". If the scheduled call forwarding feature is assigned to a Custom DSL line or Custom DSL MLHG line, both ACT TYPE and DACT TYPE must be "CODE".

2.18 ACTION

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Description: Enter the activate/deactivate Action to be taken by the CODE.

Required Field.

- ***NOTE:*** The Software Release in the Valid Entries table below refers to the use of these features for TOD.

Valid Zero Parameter ACTION Entries

Entry	Definition
ACCTACT	Software Release: 5E3 and later. Account Code feature activation.
ACCTDCT	Software Release: 5E3 and later. Account Code feature deactivation.
ACTCPNBN	Software Release: 5E6 and later. Activate CPN/BN feature.
ALTACT	Software Release: 5E3 and later. Activate Alternate Parameter set.
ATHACT	Software Release: 5E3 and later. Authorization Code feature activation.
ATHDCT	Software Release: 5E3 and later. Authorization Code feature deactivation.
ATHINS	Software Release: 5E3 and later. Authorization Code in service.
ATHOOS	Software Release: 5E3 and later. Authorization Code out of service.
CNDACT	Software Release: 5E6 and later. ICLID Calling Number Delivery activation.
CNDDCT	Software Release: 5E6 and later. ICLID Calling Number Delivery deactivation.
DALTACT	Software Release: 5E6 and later. Activate alternate parameter set for CSD (ARS).
DCTCPNBN	Software Release: 5E6 and later. Deactivate CPN/BN feature.
DFRLALT	Software Release: 5E6 and later. Alternate FRL feature is active for CSD (ARS).
DGPACT	Software Release: 5E6 and later. Activate an ARS group for CSD.
DGPDCT	Software Release: 5E6 and later. Deactivate an ARS group for CSD.
DMAINACT	Software Release: 5E6 and later. Activate main parameter set for CSD (ARS).
FRLALT	Software Release: 5E3 and later. Alternate FRL (Facility Restriction Levels) feature is active.
FRLDMAIN	Software Release: 5E6 and later. Main FRL feature is active for CSD (ARS).
FRLMAIN	Software Release: 5E3 and later. Alternate FRL (Facility Restriction Levels) feature is not active.
FTACT	Activate BRCS feature.
FTDCT	Deactivate BRCS feature.
GPACT	Software Release: 5E3 and later. Activate an ARS group. Software Release: 5E4(2) and later. Activate an ACVT group. Software Release: 5E7 and later. Activate IDP Group.
GPDCT	Software Release: 5E3 and later. Deactivate an ARS group. Software Release: 5E4(2) and later. Deactivate an ACVT group. Software Release: 5E7 and later. Deactivate IDP Group.
MAINACT	Software Release: 5E3 and later. Activate Main Parameter set.

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TGACT	Software Release: 5E6 and later. Activate a Terminal Group feature.
TGDCT	Software Release: 5E6 and later. Deactivate a Terminal Group feature.

Data Rules:

When ACTION is "ACCTACT", "ACCTDCT", "ATHACT", "ATHDCT", "ATHINS", "ATHOOS", the CONTROL LINE PRIVATE or CONTROL TRUNK fields must be "Y" on the TODFD form (5610-1 Record).

When ACTION is "ACTCPNBN", "CNDACT", "CNDDCT", "DCTCPNBN", "FTACT", "FTDCT", "TGACT", or "TGDCT", the CONTROL LINE PRIVATE field must be "Y" on the TODFD form (5610-1 Record).

When ACTION is "ALTACT" or "MAINACT", the CONTROL ATH GROUP or CONTROL ACCT GROUP fields must be "Y" on the TODFD form (5610-1 Record).

When ACTION is "DALTACT" or "DMAINACT", the CONTROL ATH GROUP field must be "Y" on the TODFD form (5610-1 Record).

When ACTION is "DFRLALT", "DGPACT", "DGPDCT", "FRLALT", "FRLDMAIN", or "FRLMAIN", the CONTROL ARS GROUP field on the TODFD form (5610-1 Record).

When ACTION is "GPACT" or "GPDCT", the CONTROL ARS GROUP, CONTROL ACVT GROUP, or CONTROL IDP GROUP fields must be "Y" on the TODFD form (5610-1 Record).

ONE PARAMETER CODE LIST

For 5E3 and later, the ONE PARAMETER CODE LIST fields (2.20 - 2.24) are displayed in the following order: 1) the dial CODE the customer will use to activate the feature, 2) a USE IDP? indicator, 3) a FEATURE, 4) an ACTION, and 5) a PARAMETER to be passed to the One Parameter Feature. If any one of these five fields is entered, all of them must be entered.

If a Wild Card feature is used, the feature must be of the type assigned to the line, terminal, or trunk, otherwise, the feature must be the exact feature assigned to the line, terminal, or trunk. Each non-null entry must have a corresponding entry in the IDP or ODP.

The number of rows completed on this TODCL form must not exceed the number specified in the MAX ONE PARM CODES on the TODFD form that defines this TOD feature.

For 5E3 and later, there must be at least one entry in either the Zero Parameter Code List or the One Parameter Code List. For 5E7 and later, if USE IDP? is "Y", IDP NAME must be entered.

2.19 CODE

Description: Enter the dial code the customer will enter to identify the action to be taken with the One Parameter Feature. The first digit entered can be a *, # or a 0-9. All remaining digits must be 0-9.
Valid Entries: 1 - 4 digits

2.20 USE IDP?

Description: Will an IDP be used to translate this CODE into a FEATURE and ACTION? If "N" is entered, an ODP (Office Dialing Plan) is used to translate this code.
Valid Entries: Y, N

Data Rules:

For 5E7 and later, if USE IDP? is "Y", IDP NAME must be entered.

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2.21 FEATURE

Description: Enter the BRCS feature name that will be affected by the associated ACTION.

Software Release: 5E3 and later
Valid Entries: 1 - 8 characters

Data Rules:

The feature entered here must also be defined on a LINEFA, MLHLNFA, TRUNKFA, or an associated CLUSTR form.

2.22 ACTION

Description: Enter the ACTION representing the type of change that will occur for the BRCS feature.

Valid One Parameter ACTION Entries

Entry	Definition
ACTON	
ACTOFF	Software Release: 5E7 and later. Set ACT in IDP off.
ARSCP	
ATHREQ	
ATHNRQ	
DARSCP	Software Release: 5E6 and later. Change ARS pattern group number for CSD.
GRPCARCH	Software Release: 5E7 and later. Change carrier group in IDP.

Data Rules:

If ACTION is "ARSCP" or "DARSCP":

- The PARAMETER entry must be in the range 1 - 6, and
- the CONTROL ARS GROUP field must be "Y" on the TODFD form (5610-1 Record).

If ACTION is "ACTON" or "ACTOFF", then the PARAMETER entry must be in the range of 01 - 32.

If ACTION is "ACTON", "ACTOFF", or "GRPCARCH", the CONTROL IDP GROUP field must be "Y" on the TODFD form (5610-1 Record).

If ACTION is "ATHREQ" or "ATHNRQ", CONTROL LINE PRIVATE or CONTROL TRUNK fields must be "Y" on the TODFD form (5610-1 Record) and the feature name assigned to the line, terminal, or trunk.

For 5E8 and earlier, if ACTION is "GRPCARCH", then the PARAMETER entry must be in the range 000 - 999. For 5E9(1) and later, if ACTION is "GRPCARCH", then the PARAMETER entry must be in the range 0000 - 9999.

2.23 PARAMETER

Description: Enter the parameter to be passed to the One Parameter Feature for this code.

Required Field.

Valid PARAMETER Entries

Entry	Definition
1 - 6	Parameter designation for ARS patterns only.
01 - 32	Software Release: 5E3 and later. Parameter designation for ACT category.
000 - 999	Software Release: 5E3 - 5E8.

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	Primary Carrier.
0000 - 9999	Software Release: 5E9(1) and later. Primary Carrier.
1 - 8 Characters	Software Release: 5E3 and later. Name of the feature assigned to the line owning this code list.

Data Rules:

For 5E3 and later, if the One Parameter ACTION is "ATHREQ" or "ATHNRQ", then the PARAMETER may be a feature name defined on the ATHFCOS form (5619-4 Record).

When the PARAMETER is 1 - 6 and ACTION is "ARSCP" or "DARSCP", then the parameter entered must be less than or equal to the NUMBER PATTERN GROUPS ALLOWED field on the ARSGPA form (5608-2 Record) for the associated ARS GROUP NAME.

When the PARAMETER is 000 - 999 (5E3 - 5E8) or 0000 - 9999 (5E9(1) and later), it must equal CARRIER ID (the key) on an ICF form (5305 Record), and for 5E8 and later, FEAT GRP on the ICF form must also equal "D".

When the PARAMETER field is 01 - 32, the A.C.T. ALLOWED? field must be "Y" on the IDPGP form (5601-4 Record) for the IDP group that is on the line that owns this code list.

```
SCREEN 1 OF 3        5ESS OFFICE DATA ADMINISTRATION
todcl                TIME OF DAY
(5610-2)             CODE LIST DEFINITION

* 1. CODE LIST NAME  WHO            ONE WEEK SCHEDULE

* 2. ACTION POINT    02              7. MON  Y
                                     8. TUE  Y
                                     9. WED  Y
  3. ACTION TIME     1800           10. THU  Y
                                    11. FRI  Y
  4. IDP NAME        ________       12. SAT  N
                                    13. SUN  N
  5. DAS             01
```

```
SCREEN 2 OF 3        5ESS OFFICE DATA ADMINISTRATION  _
todcl                TIME OF DAY
(5610-2)             CODE LIST DEFINITION

                  > 14. ZERO PARAMETER CODE LIST

          row    CODE   USE IDP?   FEATURE      ACTION
          01     20       N        HI           FTACT
          02     21__     Y        IDP2____     FTDCT__
          03     ____     _        _________    ________
          04     ____     _        _________    ________
          05     ____     _        _________    ________
          06     ____     _        _________    ________
          07     ____     _        _________    ________
          08     ____     _        _________    ________
```

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```
SCREEN 3 OF 3        5ESS OFFICE DATA ADMINISTRATION  _
todcl                TIME OF DAY
(5610-2)             CODE LIST DEFINITION

                19. ONE PARAMETER CODE LIST

      row  CODE   USE IDP?  FEATURE      ACTION     PARAMETER
      01   30       N      HG           ACTON       AB
      02   ____     _      ________     ________    ________
      03   ____     _      ________     ________    ________
      04   ____     _      ________     ________    ________
      05   ____     _      ________     ________    ________
      06   ____     _      ________     ________    ________
      07   ____     _      ________     ________    ________
      08   ____     _      ________     ________    ________
```

Figure 1 SAMPLE TODCL FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
todcl                    5ESS Switch
SCREEN 1 OF 3              OFFICE DATA ADMINISTRATION
(5610-2)           TIME OF DAY CODE LIST DEFINITION

*1. CODE LIST NAME _____________   ONE WEEK SCHEDULE
*2. ACTION POINT   __            7. MON N
#3. ACTION TIME    ____           8. TUE N
 4. IDP NAME      &dH________     9. WED N
#5. DAS           __             10. THU N
 6. VALID LIST    Y              11. FRI N
                                  12. SAT N
                                  13. SUN N
```

```
todcl                    5ESS Switch
SCREEN 2 OF 3              OFFICE DATA ADMINISTRATION
(5610-2)           TIME OF DAY CODE LIST DEFINITION

 14. ZERO PARAMETER CODE LIST
       USE
ROW CODE IDP? FEATURE  ACTION
 1  ____  _  ________ ________
 2  ____  _  ________ ________
 3  ____  _  ________ ________
 4  ____  _  ________ ________
 5  ____  _  ________ ________
 6  ____  _  ________ ________
 7  ____  _  ________ ________
 8  ____  _  ________ ________
```

```
todcl                    5ESS Switch          _
SCREEN 3 OF 3              OFFICE DATA ADMINISTRATION
(5610-2)           TIME OF DAY CODE LIST DEFINITION
```

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```
     19. ONE PARAMETER CODE LIST
       USE
ROW CODE IDP? FEATURE  ACTION   PARAMETER
 1 ____ _  ________ ________ ________
 2 ____ _  ________ ________ ________
 3 ____ _  ________ ________ ________
 4 ____ _  ________ ________ ________
 5 ____ _  ________ ________ ________
 6 ____ _  ________ ________ ________
 7 ____ _  ________ ________ ________
 8 ____ _  ________ ________ ________
```

Figure 2 SAMPLE TODCL FORM 5E12 - 5E14 SOFTWARE RELEASES

```
todcl                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5610-2)           TIME OF DAY CODE LIST DEFINITION

*1. CODE LIST NAME ___________   ONE WEEK SCHEDULE
*2. ACTION POINT   __          7. MON N
#3. ACTION TIME    ____        8. TUE N
 4. IDP NAME       ________    9. WED N
#5. DAS            ___        10. THU N
 6. VALID LIST     Y          11. FRI N
                              12. SAT N
                              13. SUN N
```

```
todcl                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5610-2)           TIME OF DAY CODE LIST DEFINITION

 14. ZERO PARAMETER CODE LIST
       USE
ROW CODE IDP? FEATURE  ACTION
 1 ____ _  ________ ________
 2 ____ _  ________ ________
 3 ____ _  ________ ________
 4 ____ _  ________ ________
 5 ____ _  ________ ________
 6 ____ _  ________ ________
 7 ____ _  ________ ________
 8 ____ _  ________ ________
```

```
todcl                    5ESS Switch        _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5610-2)           TIME OF DAY CODE LIST DEFINITION

     19. ONE PARAMETER CODE LIST
```

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ROW	CODE	USE IDP?	FEATURE	ACTION	PARAMETER
1	____	_	_____	_____	_____
2	____	_	_____	_____	_____
3	____	_	_____	_____	_____
4	____	_	_____	_____	_____
5	____	_	_____	_____	_____
6	____	_	_____	_____	_____
7	____	_	_____	_____	_____
8	____	_	_____	_____	_____

Figure 3 SAMPLE TODCL FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 11C: 5610-3 RECORD
TIME OF DAY LINE PARAMETER FORM - TODLPA

1. GENERAL

The 5610-3 Record is available with the 5E2 and later Software Releases. A TODLPA form must be entered for each individual line that is to have a TOD (Time of Day) feature. The TODLPA form specifies the TOD feature name and the TOD Code List name for a specific line. The key to this form is the Telephone Number of the line that is to have a TOD feature.

The other two entries are the feature name and the Code List name. The feature name assigned to this line must also appear on the LINEFA form or on a CLUSTR form assigned to this line. This TOD feature name must be defined on the TODFD (TOD feature Definition) form. Each Code List name assigned to a line, a Trunk Group member or an MLHG terminal must be unique. To insure that unique Code List names are used, it is recommended that the telephone number assigned to this line on the LINE form be used as the Code List name. The Code List name assigned here will be used as one of the keys to the TODCL (TOD Code List) form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the line that is to have a TOD feature.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

	Class of Service
ATND	50B non-data link console line or attendant line.
INDIV	Individual line.
PBX	Line to a PBX.
SATSTLN	Stand-alone test line.
4WINDIV	4-wire individual line or 4-wire manual PBX.
ISDN	ISDN Digital Subscriber Line.

For 5E12 and later, TN/FEATURE combinations on different TODLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the TODLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 FEATURE

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Description: Enter the TOD feature name.

Required Field.
Valid Entries: 1 - 8 characters

2.4 CODE LIST NAME

Description: Enter the TOD Code List name. If the DEFAULT CODE LIST NAME entry on the TODFD form that defines this TOD feature is marked "EN" (Equipment Number), the Equipment Number that is assigned to this line must be entered. If the DEFAULT CODE LIST NAME entry on the TODFD form (5610-1 Record) that defines this TOD feature is marked "TN" (Telephone Number), the Telephone Number that is assigned to this line must be entered.
Valid Entries:

- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: 1 - 11 characters

---

todlpa 5ESS Switch _
(5610-3) OFFICE DATA ADMINISTRATION
TIME OF DAY LINE (TN) PARAMETERS

* 1. TN 3211234

2. FEATURE ABCTOD
3. CODE LIST NAME 3211234

Figure 1 SAMPLE TODLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

---

todlpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5610-3) TIME OF DAY LINE (TN) PARAMETERS

*1. TN _____

#2. FEATURE _____
3. CODE LIST NAME _____

Figure 2 SAMPLE TODLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 11D: 5610-4 RECORD TIME OF DAY MLHG TERMINAL PARAMETER FORM - TODMPA

1. GENERAL

The 5610-4 Record is available with the 5E2 and later Software Releases. A TODMPA form must be entered for each MLHG terminal that is to have a TOD feature. The TODMPA form defines the TOD feature name and the TOD Code List name for a specific MLHG terminal. The two keys to this form are the MLHG number and the terminal number of the MLHG terminal that is to have a TOD feature.

The other two entries are the feature name and the Code List name. The feature name assigned to this MLHG terminal must also appear on the MLHLNFA form or on a CLUSTR form assigned to this MLHG terminal. This TOD feature name must be defined on the TODFD form. Each Code List name assigned to an MLHG terminal, a Trunk Group member or a line must be unique. To insure that unique Code List names are used, it is recommended that the LEN or SLEN assigned to this MLHG terminal on the MLHLN form be used as the Code List name. The Code List name assigned here will be used as one of the keys to the TODCL form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group of the terminal that is to have a TOD feature.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Terminal number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated CLASS OF SERVICE on a LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
PBX	Line to a PBX.
SATSTLN	Stand-Alone Test Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
ISDN	ISDN Digital Subscriber Line.

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2.4 FEATURE

Description: Enter the TOD Feature name.

Required Field.
Valid Entries: 1 - 8 characters

2.5 CODE LIST NAME

Description: Enter the TOD Code List Name. If the DEFAULT CODE LIST NAME entry on the TODFD form that defines this TOD feature is marked "EN", the LEN or SLEN that is assigned to this MLHG terminal must be entered.

Required Field.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: 1 - 11 characters

```
todmpa                    5ESS Switch          _
(5610-4)              OFFICE DATA ADMINISTRATION
              TIME OF DAY LINE (MLHG/TERM) PARAMETERS


* 1. MLHG          0048

* 2. TERM          0026

  3. FEATURE        XYTOD
  4. CODE LIST NAME  00114221
```

Figure 1 SAMPLE TODMPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
todmpa                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5610-4)              TIME OF DAY LINE (MLHG/TERM) PARAMETERS

*1. MLHG ____
*2. TERM ____

#3. FEATURE      ________
#4. CODE LIST NAME ____________
```

Figure 2 SAMPLE TODMPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 11E: 5610-5 RECORD
TIME OF DAY TRUNK (TGN/MEMB)
PARAMETER FORM - TODTPA

1. GENERAL

The 5610-5 Record is available with 5E3 and later Software Releases. A TODTPA form must be entered for each trunk that is to have a TOD feature. The TODTPA form defines the TOD feature name and the TOD Code List name for a specific trunk.

The FEATURE NAME assigned to this trunk must also appear on the TRUNKFA form or the TKGRPFA form or on a CLUSTR form assigned to this trunk. This TOD feature name must be defined on the TODFD form. Each Code List name assigned to the trunk, MLHG terminal or a line must be unique. To ensure that unique Code List names are used, it is recommended that the DEN or TEN assigned to this trunk on the TRUNK form be used as the Code List name. The Code List name assigned here will be used as one of the keys to the TODCL form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202 Record) must be "PF" (Private facility) or "PFLASH" (Private facility feature flash).

2.3 * MEMB

Description: Enter the Trunk Group Member number of the trunk.

Required Field.
Valid Entries: 0 - 1951

2.4 FEATURE

Description: Enter the TOD Feature name. There are no restrictions on the valid characters, except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

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2.5 CODE LIST NAME

Description: Enter the TOD Code List Name. If the Default Code List Name on the TODFD form is "TK", then the TGN should be entered in the first four characters of the field and the Member Number should be entered in the last four characters of the field.

Required Field.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: 1 - 11 characters

```
todtpa                    5ESS Switch          _
(5610-5)              OFFICE DATA ADMINISTRATION
              TIME OF DAY TRUNK (TGN/MEMB) PARAMETERS


* 1. TGN          0025
* 2. MEMB         0043

  3. FEATURE       /TDARS
  4. CODE LIST NAME  XYZ
```

Figure 1 SAMPLE TODTPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
todtpa                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5610-5)              TIME OF DAY TRUNK (TGN/MEMB) PARAMETERS

*1. TGN  ____
*2. MEMB ____

#3. FEATURE      ________
#4. CODE LIST NAME ___________
```

Figure 2 SAMPLE TODTPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 12: TERMINAL GROUP ATTENDANT FORMS

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SEC. 12A: 5611 RECORD
TERMINAL GROUP ATTENDANT FORM - TGATTD

1. GENERAL

The 5611 Record is available with 5E2 and later Software Releases. It is used to define information (such as attendant DN, Source Billing, and SDN DAS) on a Terminal Group basis.

The Terminal Groups (Group IDs) must be defined on TGSRFD forms (5607-2 Record). The Attendant TN can be an individual line or a Multi-Line Hunt Group, with a CLASS OF SERVICE of "ATND" on the LCC form (5306 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *GROUP ID

Description: Enter the Terminal Group Identification Number.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

This number must be defined on the TGSRFD, TGSRLPA or TGSRMPA forms (5607 Records). All members of a Multi-Line Hunt Group must be in one Terminal Group.

2.3 ATTENDANT TN

Description: Enter the Telephone Number of the Attendant of the BRCS (Business and Residence Custom Services) Terminal Group.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

If ATTENDANT TN is assigned on this form, it must also be defined on the LINE form, the MLHLN form, or the DSLUSR form as CKT TN or CKT MLHG TN, or on the MLHG form as a listed TN or as a MUPH SUBGROUP TN with an associated equipment number on member 1.

For 5E12 and later, if the first 3 digits of the 7-digit ATND TNs on the TGATTD form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE or the NOC form does not exist, the 7-digit ATND TN(s) must be entered as a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.4 SRC BILL

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Description: Will the source party's billing TN replace the attendant's billing TN in the billing record during an intra-terminal group call extension via the attendant?

If "Y" is entered, the attendant's TN will be replaced in the billing record by the source party's billing TN. If "N" is entered, the attendant TN will remain in the billing record.

Software Release: 5E6 and later
Default: N
Valid Entries: Y, N

2.5 SDN DAS

Description: Enter the DAS (Digit Analysis Selector) that will be used for SDN (Software Defined Network) Originations from analog and BRI lines within this Terminal Group. This DAS is used to route only SDN calls originated via a dialed code (ACTION on the PDIT form (5300-2 Record) or IDPDCA form (5601-1 Record) is set to "SDNUSE") or a feature button (ACTION on the CFGGRP form (5964 Record) is set to "SDNUSE"). This DAS is not used to route SDN calls via Automatic Route Selection.

When SDN calls are routed via this SDN DAS, the route indexes and code indexes on the ICF form (5305 Record) do not replace any previously obtained route index and code index.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

The SDN DAS must be defined as the DIGIT ANALYSIS SELECTOR on a DAS form (5300-1 Record). The LOCAL DIT entered on that DAS form cannot appear on an LDIT or MLDIT form (5300-3 Record) where the TYPE OF CI CALL is "PSNCI" or "PSCAR". The LOCAL DIT must also appear on the SMLDIT form (5315 Record) along with all SMs which have Lines or MLHG Terminals which are members of the Terminal Groups specified by GROUP ID. The SM number may be obtained from the first three digits of the OE NUMBER field on the LINE, MLHLN and DSLUSR forms.

Also, on the LDIT or MLDIT form, CALL TYPE should be set to "NORMAL".

For 5E12 and later, each SDN DAS assigned on the TGATTD form assigns an LDIT (via the LOCAL DIT field on the corresponding DAS form) to one or more SMs (via the first three digits of the OE or OE NUMBER field on the specified LINE, MLHLN, and DSLUSR forms). When the LINE, MLHLN, and DSLUSR forms have been assigned a TGSR feature (defined on a TGSRFD form), and the GROUP ID from the TGATTD form has been assigned on a corresponding BFG, TGSRFD, TGSRLPA, or TGSRMPA form, then each LDIT assigned in this way, and its associated SMs, must be defined on the SMLDIT form.

2.6 MBG ID

Description: This field cannot be entered. It is a Recent Change verify field for View 4.4. For more information on MBG see CENTREX Network secured feature section in Division 2, Section 4A181. Also see the MBG form, Division 4, Section 22A.

The MBG ID uniquely identifies a Multiswitch Business Group on a switch wide basis. It is defined on the MBG form, which is used by the CENTREX Network. CENTREX Network is a Secured Feature that must be purchased by the office before CENTREX Network data can be entered on this form. Therefore, the ACT field for SFID 181 on the SFSYS form (5713-1 Record) must be set to "Y".

Software Release: 5E9(2) and later.

MUSIC ON HOLD

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The TGN and MEMB fields (Section 2.7 - Section 2.9) are applicable to the Music on Hold secured feature and define the music source that is to provide music to the held party once a call has been placed on hold. These fields are only applicable when Secured Feature ID 64 is set to "S" ("Y" for 5E9(1) and later) on the SFSYS form (5713-1 Record).

2.7 TGN

Description: Enter the trunk group used as the music source.

Software Release: 5E7 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

Before data can be entered in this field, the ACT field for Secured Feature ID 64 must be set to "Y" on the SFSYS form (5713-1 Record).

If either TGN or MEMB is entered, then both must be entered.

When a GROUP ID is defined on this form with MUSIC ON HOLD TGN and MEMB entered, the TGN and MEMB must be defined on a corresponding TRUNK form (5204 Record) with MUSIC SOURCE set to "Y".

WARNING: For 5E11 and later, the selected music (on hold) source (TGN and MEMB) must not be shared by any other music source. Therefore, the TGN from the TGATTD form (5611 Record) should not match the TRUNK GROUP MEMBER from the RTIDX form (5643 Record).

2.8 MEMB

Description: Enter the trunk member used as the music source.

Software Release: 5E7 and later
Valid Entries: 1 - 1951

Data Rules:

Before data can be entered in this field, the ACT field for Secured Feature ID 64 must be set to "Y" on the SFSYS form (5713-1 Record).

If either TGN or MEMB is entered, then both must be entered.

When a terminal GROUP ID is defined on this form with MUSIC ON HOLD TGN and MEMB entered, the TGN and MEMB must be defined on a corresponding TRUNK (5204 Record) form with MUSIC SOURCE set to "Y".

2.9 NO SOFT HOLD

Description: Prohibit Music on Hold during soft hold? This field specifies whether to prohibit music on soft hold for custom ISDN lines in this terminal group. Enter "Y" to prohibit or "N" to allow music on soft hold for custom ISDN lines in this terminal group that are being either transferred or conferenced.

WARNING: MOH (Music On Hold) is a Secured Feature that must be enabled. If the MOH feature is not enabled, music will not be provided even if this field is set to "N". For more information on the MOH feature, see Division 2, Section 4A64.

Software Release: 5E10 and later

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Required Field.
Default Values: N
Valid Entries: Y, N

Data Rules:

When NO SOFT HOLD is "Y", TGN and MEMB must be entered.

CALL PARK

The following fields (Section 2.10 - Section 2.11) specify the answer back or retrieve timeout limit for ring back of a parked call. These fields are applicable when SFID 124 ACT field is set to "Y" on the SFSYS form (5713-1 Record).

2.10 PARK TIME

Description: Enter the answer back or retrieve timeout limit for ring back of a parked call for non-attendant lines in the terminal group.

Software Release: 5E9(1) and later
Valid Entries: 30 - 360 in 30 second increments

2.11 ATND PARK TIME

Description: Enter the attendant answer back or retrieve timeout limit for ring back of a call parked against the terminal group attendant's DN or a DN with attendant class of service.

Software Release: 5E9(1) and later
Valid Entries: 30 - 360 in 30 second increments

2.12 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the OFCOPT (Office Option) form (5509 Record), RC view (8.1).

NUMBER PORTABILITY

2.13 *PORTED

Description: The PORTED field is used to indicate whether members of a given terminal group have been ported into this office via the Number Portability (NP) feature. This indicator is used by call processing to determine whether or not to generate an NP Bellcore AMA Format (BAF) module for originating and terminating IXC (Inter-Exchange Carrier) access records.

Required Field.

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Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

2.14 OVRD DNY XFER

Description: The OVRD DNY XFER field was added to allow terminal groups to override the "Deny Transfer of Digit Screened Calls" feature.

Required Field.

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

When OVRD DNY XFER is set to "Y", this indicates that this terminal group is allowed to override denials during a call transfer.

When the OVRD DNY XFER field is set to "Y", the ACT field for SFID 291 on the SFSYS form must also be set to "Y".

2.15 CONTEXT ID

Description: This field is used to indicate whether or not a terminal group is "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E12 and 5E13: N
- For 5E14: NATIVE

Valid Entries:

Valid CONTEXT ID Entries

Entry for 5E12, 5E13	Entry for 5E14 and later	Description
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the TGAATD form, the ACT field for SFID (Secured Feature ID) 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

2.16 CTE ALW

Description: The CTE (Call Transfer Enhancement) ALW (Allowed) field is used to indicate whether or not the CTE option is allowed on this Terminal Group.

Software Release: 5E16(2) and later
Default: N

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Valid Entries: Y, N

Data Rules:

When the CTE ALW is set to "Y", the ACT field for SFID 588 on the SFSYS form (5713-1 Record) must also be set to "Y".

```
tgattd                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5611)             TERMINAL GROUP ATTENDANT AND DATA

*1. GROUP ID _____              CALL PARK
 2. ATND TN ___________    9. PARK TIME     ___
 3. SRC BILL N          10. ATND PARK TIME ___
 4. SDN DAS __
    MBG ID  _____       11. CNIGI NULL

    MUSIC ON HOLD       NUMBER PORTABILITY
 6. TGN        ____     12. PORTED N
 7. MEMB       ____
 8. NO SOFT HOLD N       13. OVRD DNY XFER N
                   14. CONTEXT ID    N
```

Figure 1 SAMPLE TGATTD FORM 5E12 - 5E13 SOFTWARE RELEASES

```
tgattd                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5611)             TERMINAL GROUP ATTENDANT AND DATA

*1. GROUP ID _____              CALL PARK
 2. ATND TN ___________    9. PARK TIME     ___
 3. SRC BILL N          10. ATND PARK TIME ___
 4. SDN DAS __
    MBG ID  _____       11. CNIGI NULL

    MUSIC ON HOLD       NUMBER PORTABILITY
 6. TGN        ____     12. PORTED-IN AMA N
 7. MEMB       ____
 8. NO SOFT HOLD N       13. OVRD DNY XFER N
                   14. CONTEXT ID    NATIVE
```

Figure 2 SAMPLE TGATTD FORM 5E14 SOFTWARE RELEASE

```
tgattd                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5611)             TERMINAL GROUP ATTENDANT AND DATA

*1. GROUP ID _____              CALL PARK
 2. ATND TN ___________    9. PARK TIME     ___
 3. SRC BILL N          10. ATND PARK TIME ___
 4. SDN DAS ___
    MBG ID  _____       11. CNIGI NULL
```

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```
   MUSIC ON HOLD          NUMBER PORTABILITY
 6. TGN          ____     12. PORTED-IN AMA N
 7. MEMB         ____
 8. NO SOFT HOLD N        13. OVRD DNY XFER N
                  14. CONTEXT ID    NATIVE
```

Figure 3 SAMPLE TGATTD FORM 5E15 THROUGH 5E16(1) SOFTWARE RELEASES

```
tgattd                  5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5611)             TERMINAL GROUP ATTENDANT AND DATA

*1. GROUP ID _____              CALL PARK
 2. ATND TN ___________    9. PARK TIME     ___
 3. SRC BILL N           10. ATND PARK TIME ___
 4. SDN DAS  ___
   MBG ID  _____        11. CNIGI NULL

   MUSIC ON HOLD          NUMBER PORTABILITY
 6. TGN          ____     12. PORTED-IN AMA N
 7. MEMB         ____
 8. NO SOFT HOLD N        13. OVRD DNY XFER N
                  14. CONTEXT ID    NATIVE
```

Figure 4 SAMPLE TGATTD FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 13: MULTIPOSITION HUNT BUSY KEY FORM

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SEC. 13A: 5612 RECORD
MULTIPOSITION HUNT BUSY KEY FORM - MUPHKEY

1. GENERAL

The 5612 Record is available with 5E2 and later Software Releases. It is used to assign Position Make Busy Keys on a Multi-Line Hunt Group and Position basis.

The MUPHKEY form is used only when the field HUNT TYPE is equal to "MUPH" on the MLHGFD form (5604 Record). If the MUPHKEY form is present, the Multi-Line Hunt Group is found on the MLHG form (5110 Record) by matching the FEATURE NAMEs between the MLHGFD and the MLHG forms.

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

Examine all MLHGFD forms for HUNT TYPE equal to "MUPH", then use an MLHGFD preconstructed feature to match an entry on the MLHGFD form (5604 Record) to get the associated Multi-Line Hunt Group value. This MLHG value must then be defined in this field.

2.3 * POSITION

Description: Enter the position of the console which is assigned the Position Make Busy Key.

Required Field.
Valid Entries: 1 - 16

2.4 POS BUSY SPN

Description: Enter the unique position scan point for each position.
Valid Entries: a 9 digit scan point in the following format.

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192 (See Note)
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
Scan Point Number	SPN	XX	00-30

NOTE: For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1 -

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48; for offices equipped with CM2, valid entries are 1 - 192.

```
muphkey                    5ESS Switch
(5612)              OFFICE DATA ADMINISTRATION
                 MULTIPOSITION HUNT BUSY KEY

* 1. MLHG          0031
* 2. POSITION      02
  3. POS BUSY SPN  012010205
```

Figure 1 SAMPLE MUPHKEY FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 14: FEATURE KEY FUNCTION LIST FORM

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SEC. 14A: 5613 RECORD
FEATURE KEY FUNCTION LIST FORM - FTRKEY

1. GENERAL

The 5613 Record is available with 5E2 and later Software Releases. This miscellaneous record is used to assign a scan point which controls a state of a feature on a line. It allows any line to be associated with a scan point that is tied to a feature key which can be turned on or off for any call forwarding or IDP features. A particular SPN must be associated with a feature key.

1.1 Recent Change View

The corresponding Recent Change view for this form is 4.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * FTR SPN

Description: Enter the Feature Key Scan Point Number.

Required Field.
Valid Entries: a 9-digit scan point in the following format.

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192 (See Note)
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
Scan Point Number	SPN	XX	00-30

- ***NOTE:*** For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1-48; for offices equipped with CM2, valid entries are 1-192.

2.3 TN

Description: Enter the Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

Either TN or MLHG and MEMB must be entered. If a TN is entered, MLHG and MEMB must not be entered.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the FTRKEY form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.4 MLHG

Description: Enter the Multi-Line Hunt Group Number.

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Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

2.5 TERM

Description: Enter the Multi-Line Hunt Group terminal number.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only).

2.6 FEATURE

Description: Enter the feature name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

Each entry in this field must be defined on a CFWFD form (5614-1/2 Record) or IDPFD form (5601 Record).

ON/OFF HOOK FUNCTION

The following fields (Section 2.7 - Section 2.10) define the on/off hook key function. The hook function will look through that line's keys to see if the currently deleted feature is referenced. If such a reference is found, the scan point will be deassigned and the key will no longer function.

The on hook action indicates the key is depressed and the off hook action indicates the key is released.

ON HOOK FUNCTION

2.7 ACTION

Description: Enter the Attendant and Multi-Line Hunt Group feature action for the on hook action function.

Required Field.

Valid ACTION Entries

Entry	Definition
FTACT	Activate BRCS feature.
FTDCT	Deactivate BRCS feature.
ACTON	Activate Alternate Code Treatment.
ACTOFF	Deactivate Alternate Code Treatment.

Data Rules:

If the on hook ACTION is activate, then the off hook ACTION must be deactivate. If the off hook ACTION is deactivate, off hook ACTION must be activate.

For 5E8 and later, if on hook ACTION is "FTACT" or "FTDCT", the feature must be defined on the CFWFD form with ACT TYPE set to "KEY".

2.8 PARAMETER

Description: Enter the Alternate Code treatment set for the on hook parameter function.
Valid Entries: 1 - 32

Data Rules:

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If on hook parameter is not entered, then off hook parameter must not be entered.

If the on hook parameter is not specified, the off hook action must be activate or deactivate.

If the on hook parameter is entered, then the off hook parameter must also be entered.

With 5e7 and later, if the on hook parameter is entered, then the off hook parameter must also be entered and equal to the on hook parameter.

OFF HOOK FUNCTION

2.9 ACTION

Description: Enter the Attendant and Multi-Line Hunt Group feature action for the off hook action function.

Required Field.

Valid ACTION Entries

Entry	Definition
FTACT	Activate BRCS feature
FTDCT	Deactivate BRCS feature
ACTON	Activate Alternate Code Treatment
ACTOFF	Deactivate Alternate Code Treatment

Data Rules:

If on hook action is activate, off hook action must be deactivate. If on hook action is deactivate, off hook action must be activate.

For 5E8 and later, if off hook ACTION is "FTACT" or "FTDCT", the feature must be defined on the CFWFD form with ACT TYPE set to "KEY".

2.10 PARAMETER

Description: Enter the Alternate Code treatment set for off hook parameter function.
Valid Entries: 1 - 32

Data Rules:

If the on hook parameter is not entered, then the off hook parameter must not be entered.

If the on hook parameter is not specified, the off hook action must be activate or deactivate.

If the on hook parameter is entered, then the off hook parameter must also be entered.

With 5E7 and later, if the on hook parameter is entered, the off hook parameter must be entered and equal to the on hook parameter.

```
ftrkey                  5ESS Switch
(5613)              OFFICE DATA ADMINISTRATION
                  FEATURE KEY FUNCTION LIST


* 1. FTR SPN      028100409
  2. TN
  3. MLHG          0032
  4. TERM          0015
  5. FEATURE        /TD
```

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```
 ON HOOK FUNCTION
 6. ACTION       FTDCT
 7. PARAMETER    __

 OFF HOOK FUNCTION
 8. ACTION       FTACT
 9. PARAMETER    __
```

Figure 1 SAMPLE FTRKEY FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
ftrkey                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5613)              FEATURE KEY FUNCTION LIST

*1. FTR SPN _________       OFF HOOK FUNCTION
 2. TN     ___________   #8. ACTION   ________
 3. MLHG   ____          9. PARAMETER __
 4. TERM   ____
#5. FEATURE ________

  ON HOOK FUNCTION
#6. ACTION   ________
 7. PARAMETER __
```

Figure 2 SAMPLE FTRKEY FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 15: CALL FORWARDING FORMS

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SEC. 15A: 5614-1/2 RECORD
CALL FORWARDING FEATURE DEFINITION FORM - CFWFD

1. GENERAL

The 5614-1/2 Records are available with the 5E2 and later Software Releases. In general, the Call Forwarding feature allows calls completing to a customer's Directory Number to be redirected to another number. It is used to define a number of separate, but related features, by selecting various feature options for Call Forwarding. The provided features are Call Forwarding Variable for POTS, Call Forwarding within group only, Call Forwarding Variable for Centrex, Call Forwarding Incoming only, Call Forwarding over Private Facilities, Call Forwarding Busy Line all calls, Call forwarding Busy Line incoming only, Call Forwarding Don't Answer all calls variable timing, Call Forwarding Don't Answer incoming only variable timing, remote Call Forwarding, night service, power failure transfer attendant, Call Forwarding Variable with Confirmation Tone similar to 1A ESS. Each feature is given a feature name from one to eight characters which is used to assign the constructed (defined) feature to lines. Certain Call Forwarding features are predefined, and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed Call Forwarding features is attached.

1.1 Multi-Line Hunt Groups

If the Call Forwarding feature is to be applied to a Multi-Line Hunt Group, the following applies: Call Forwarding Features, Call Forward Variable or Call Forward Busy Line, with FWD CONDITION of "BOTH", "PRCV", "BUSY", "PRCB" or "PBSY"can only be assigned to members whose TERM value is 1. These features are assigned to Terminal 1, but they apply to all members of the group in the same manner. Call Forward Don't Answer features can be assigned to any member of the group, but apply only to the terminal assigned.

1.2 Lines

A terminal (line) must be assigned a Call Forwarding feature on the appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), or CLUSTR (5600 Record).

1.3 Circuit Switched Data

For 5E6 and later, the Call Forwarding feature is available to CSD (Circuit Switched Data) subscribers. This means that a subscriber on an ISDN BRI (Basic Rate Interface) can now receive CSD calls that would normally terminate to the subscriber's base station.

1.4 Call Forwarding Busy Line Options

For 5E7 and later, the IMB (Inhibit Make Busy) and ILB (Inhibit Line Busy) options are available for Call Forwarding Busy Line features. These options (implemented through fields CFIMB, CFILB, and OVF CFI) can be used to eliminate operational differences between CFBL (Call Forwarding Busy Line) features on the 1A ESS Switch and 5ESS Switch.

If a CFBL-IMB feature is assigned to a line or MLHG (Multi-Line Hunt Group), it will inhibit CFBL treatment when the make busy key or feature button is on. If a CFBL-ILB feature is assigned to a line or MLHG, it will inhibit CFBL when the line is busy and the make busy key or feature button is off.

CFBL-IMB: The CFBL-IMB option inhibits CFBL when the subscriber activates a make busy key. If the feature is assigned to an individual line, the line must have an individual make busy key. If the feature is assigned to an MLHG, the MLHG must have a group make busy key or feature button.

When a subscriber on an individual line activates the make busy key, all calls to that line are routed to a

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busy (or overflow) tone. When the make busy key is off, if the phone is on hook, calls are received normally; if the phone is off hook, calls are forwarded, i.e. CFBL occurs,

Similarly for an MLHG, when the group make busy key is activated, all huntable calls to the MLHG are routed to busy (or overflow). When the group make busy key is off, if a huntable member is available, calls are received normally; if no huntable member is available, calls are forwarded.

CFBL-ILB: The CFBL-ILB option forwards all calls when the make busy key is on and inhibits CFBL when the make busy key is off. When a subscriber on an individual line activates the make busy key, all calls are forwarded. When the subscriber's make busy key is off, if the phone is on hook, calls are received normally; if the phone is off hook, calls receive busy (or overflow) tone. The scenario is similar for an MLHG with a group make busy key.

MLHG Notes: Because CFBL for an MLHG applies only to the entire group, make busy keys that apply only to individual members of an MLHG do not interact with CFBL-IMB and CFBL-ILB. Also, group make busy keys/feature buttons do not make no-hunt DNs in an MLHG busy; therefore, an IMB/ILB feature does not apply to these no-hunt DNs.

1.5 Recent Change View

The corresponding Recent Change View for this form is 12.12.

2. FORM ENTRIES - 5614-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *FEATURE NAME

Description: Enter the feature name.
Valid Entries: Feature names may be from one to eight characters long, with no restrictions on the valid characters except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: Up to 32 characters

ACTIVATION

The following fields (Section 2.4 - Section 2.7) specify when and how the call forwarding feature will be activated.

2.4 FWD CONDITION

Description: Forward condition specifies the condition under which a called line should be forwarded.

Required Field.
Default: BOTH
Valid Entries:

Valid FWD CONDITION Entries

Entry	Definition
ACDI	Software Release: 5E9(1) and later. Forward when idle back to the head of the same ACD queue. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.

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BUSY	Forward only when the line associated with the Directory Number is busy.
IDLE	Forward only when the line associated with the Directory Number is idle, after a specified number of seconds of ringing has occurred.
BOTH	Forward if the line associated with the Directory Number is busy or if the line is idle after a specified number of seconds of ringing has occurred.
DBSY	Software Release: 5E6 and later. Forward when busy for CSD (Circuit Switched Data) calls.
DIDL	Software Release: 5E6 and later. Forward when Idle for CSD.
DBTH	Software Release: 5E6 and later. Forward when Busy or Idle for CSD.
PBSY	Used only for lines which have also been assigned a Precedence and Preemption BRCS feature; see the PPFD form (5618-1 Record). Forward to the AUTOVON attendant when the line associated with the Directory Number is busy, the terminating call is a Precedence call and the line does not have the PP parameter IMMED PREEMPTION equal to yes.
PIDL	Used only for lines which have also been assigned a Precedence and Preemption BRCS feature; see the PPFD form (5618-1 Record). Forward to the AUTOVON attendant when the line associated with the Directory Number is idle after a specified number of seconds of ringing has occurred and the terminating call is a Precedence call.
PRCB	Software Release: 5E3 and later. Forward precedence calls when busy.
PRCI	Software Release: 5E3 and later. Forward precedence calls when idle.
PRCV	Software Release: 5E3 and later. Forward precedence calls when busy or idle.

Data Rules:

If "DBSY", "DIDL", or "DBTH" is entered, ATTENDANT must be "N", CFPF ALW must be "N", and ACT TYPE must be "CODE", "AUTO" or "CDDN".

If "PBSY" or "PIDL" is entered, then ACT TYPE must equal "AUTO", DACT TYPE must equal "NONE" and Attendant must equal "N".

If "BUSY", "PBSY", "PRCB", "BOTH", or "PRCV" is entered in this field, then 0 must be entered in the DON'T ANSWER TIMING field.

Only one in the following pairs of Call Forwarding Variable Features can be assigned to a BFG (5625 Record) or an associated CLUSTR (5600 Record) form: "BUSY" or "DBSY", "IDLE" or "DIDL", "BOTH" or "DBTH".

A maximum of one feature from each of the types described below is allowed to be assigned to a BFG(s) or the associated CLUSTR(s) with more than one Call Forwarding Variable Feature defined on this form.

- Type 1:
  - FWD CONDITION = "BUSY", "DBSY", "PRCB"or "PBSY".
- Type 2:
  - FWD CONDITION = "IDLE", "DIDL", "ACDI", "PRCI" or "PIDL".
- Type 3:
  - FWD CONDITION = "BOTH", "DBTH", or "PRCV".

If TNs on the LINEFA form (5112 Record) are assigned either a Call Forwarding when Idle, Call Forwarding when Idle for CSD, Call Forwarding Precedence Call to Attendant when Idle, Call Forwarding Precendence Call when Idle, or a Call Forwarding when Idle Return to Queue feature on this form, i.e., "IDLE", "DIDL", "PIDL", "PRCI", or "ACDI" is entered in this field, then DON'T ANSWER TIMING on the

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CFWLPA form (5614-3 Record) must be in the range of 4 - 60 seconds.

When assigning a Call Forwarding Busy Feature ("BUSY"), Call Forward Busy or Idle Feature ("BOTH"), or Forward Precedence When Busy or Idle Feature ("PRCV") to an MLHG/TERM, the feature must have the CALL SELECTION fields on this form set to "Y". When assigning a Forward When Busy for CSD Feature ("DBSY"), Forward When Busy or Idle for CSD Feature ("DBTH"), Forward When Busy For PP Feature ("PBSY"), or Forward Precedence Call When Busy Feature ("PRCB") to an MLHG/TERM, ATTENDANT must be "N"and the remaining CALL SELECTION fields must be "Y".

When any of the following features is assigned to an MLHG/TERM on an MLHNFA form, DON'T ANSWER TIMING must be 0 or blank on the CFWFD or CFWMPA form: Call Forwarding When Busy ("BUSY"), Call Forwarding When Busy for PP ("PBSY"), Call Forwarding Precedence Call When Busy ("PRCB"), Call Forwarding When Busy for CSD ("DBSY"), Call Forwarding When Busy or Idle for CSD ("DBTH"), Call Forwarding When Busy or Idle ("BOTH").

MLHGs assigned a Call Forwarding Busy, Call Forwarding Data Busy or Call Forwarding Precedence Busy feature on the MLHNFA form must have CF BUSY set to "Y"on the MLHGFD form.

When an MLHG/TERM has been assigned a Call Forwarding Busy feature via an MLHLNFA, BFG, or associated CLUSTR form, and the feature has FWD CONDITION set to "DBSY", "DIDL", or "DBTH", then the BEARER field on the MLHGFD form (5604 Record) must be "CSD". If the FWD CONDITION is not "DBSY", "DIDL", or "DBTH", then BEARER must be "VOICE". If FWD CONDITION is "BOTH" or "PRCV", all CALL SELECTION fields on the CFWFD form must be "Y".

For 5E6 and later, an MLHG/TERM may not be assigned a Call Forwarding feature that has FWD CONDITION set to "PRCI"or "PRCV".

ACDI - For 5E9(1) and later, if "ACDI"is entered, then:

- ACT TYPE must be "AUTO"
- ATTENDANT must be "Y"
- BASE STA RING IND must be "N"
- CFPF ALW must be "N"
- CHANGE FWD TO DN must be "N"
- DACT TYPE must be "NONE"
- DN SCREENING must be "N"
- DON'T ANSWER TIMING must be 4 - 60 seconds
- FWD TO DN cannot be entered
- INTRA OFFICE must be "Y"
- INTRA TERMINAL GROUP must be "Y"
- INTER OFFICE must be "Y"
- MDNL EMSI must be "N"
- PRIVATE FACILITY ACCESS must be "Y"
- SEQ ACT FWD LEGS must be 1
- SIMUL INTEROFF FWD CALLS must be 1
- SIMUL INTRAOFF FWD CALL must be 1.

CKT TNs on the DSLUSR form that have an entry in the ACD POS NUM field must have one and only one CFW feature with FWD CONDITION of "ACDI" on the associated CFWFD form, that is assigned on the LINEFA form, CLUSTR form or associated BFG form, and ACTIVE must be "Y".

CFW features with a FWD CONDITION of "ACDI"may only be assigned to CKT TNs defined on the DSLUSR form with ACD POS NUM entered.

If Telephone Numbers are assigned a CFW feature on the LINEFA form, CLUSTR form or BFG form, with FWD CONDITION of "ACDI"on this form, then:

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- BASE STA RING IND must be "N", and SIMUL INTEROFF FWD CALLS, SIMUL INTRAOFF FWD CALLS and SEQ ACT FWD LEGS must all be 1 on the associated CFWLPA form. LINEFA, CLUSTR, or BFG form (associated by the name of the cluster, or BFG on the LINEFA form) is associated with CFWLPA form with the same TN.

- the FORWARD TO DN field must not be entered on the associated CFWLPA form.

If lines are assigned a Call Forwarding feature with FWD CONDITION set to a value other than "ACDI", then the FORWARD TO DN should be assigned on the CFWLPA form or in the default parameters of this form when ACT TYPE is "AUTO" or "KEY"or when ACT TYPE is "CODE"and CHANGE FWD TO DN is set to "N".

MLHG/TERMs which are assigned a CFW Feature on the MLHLNFA form, CLUSTR form or BFG form, may not have a CFW feature with a FWD CONDITION of "ACDI"on the associated CFWFD form.

For 5E8 and later, if TNs on the LINEFA form(s) or Multiline Hunt Group Terminals on the MLHLNFA are assigned a Call Forwarding Feature with both

- FWD CONDITION value other than "ACDI"

- and the Initial Activation Status and Master Activation Status on the LINEFA or MLHLNFA, BFG or associated CLUSTER form(s) are set to "Y" (Note that neither BFG nor CLUSTR forms have Master Activation Status) then the TN(s) or MLHG/TERM(s) must be defined with a Forward to DN on either CFWLPA or CFWFD form.

For 5E10 and later, when TNs have a Call Waiting Deluxe feature assigned on the LINEFA, CLUSTR and/or BFG form, and the Call Waiting Deluxe feature has the DFLT OPT parameter set to "CALLFWD" on either the CWTFD, CWTLPA or BFG form, this requires that a Call Forwarding feature with FWD CONDITION equal to "IDLE"must also be assigned to these TNs.

For 5E12 and later:

- When FWD CONDITION is "ACDI", "PIDL", or "PRCI", DON'T ANSWER TIMING must be 4 - 60.

- When FWD CONDITION is "DIDL" or "IDLE", DON'T ANSWER TIMING must be either 0 or 4 - 60.

- When FWD CONDITION is "ACDI", "PIDL", or "PRCI", and TNs on the LINEFA form (5112 Record) are assigned one of these features, the corresponding CFWLPA form (5614-3 Record) must have DON'T ANSWER TIMING set to 4 - 60.

- When FWD CONDITION is "PIDL", and MLHGs/TERMs on the MLHLNFA form (5113 Record) are assigned the PIDL feature, the corresponding CFWMPA form (5614-4 Record) must have DON'T ANSWER TIMING set to 4 - 60.

- When FWD CONDITION is either "DIDL" or "IDLE", and TNs on the LINEFA form (5112 Record) are assigned one of these features, the corresponding CFWLPA form (5614-3 Record) must have DON'T ANSWER TIMING set to either 0 or 4 - 60.

- When FWD CONDITION is either "DIDL" or "IDLE", and MLHGs/TERMs on the MLHLNFA form (5113 Record) are assigned one of these features, the corresponding CFWMPA form (5614-4 Record) must have DON'T ANSWER TIMING set to either 0 or 4 - 60.

For 5E15 and later, when the FEATURE NAME field value equals the value in the USCF FEAT field on the OFCOPT form (5509 Record), FWD CONDITION must be "BOTH".

2.5 ACT TYPE

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Description: Enter the Activation type.

Required Field
Default: CODE
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	Automatic Activation. The feature is active and ready to use when assigned. It is not activated by the subscriber.
CODE	Dialed Code Activation. The feature is activated when the subscriber dials a code.
CDDN	The feature is activated when the subscriber dials a code followed by the DN to which calls are to be forwarded.
CDDNC	The feature is activated when the subscriber dials a code followed by the DN to which calls are to be forwarded. A call is automatically completed to the DN but does not require an answer to complete activation.
CDDNCA	The feature is activated when the subscriber dials a code followed by the DN to which calls are to be forwarded. A call is automatically completed to the DN. Unless the forward-to DN is in the same terminal group as the originator, an answer is required to complete activation on the first attempt. The feature may be activated in the event of a no-answer condition by making a second activation attempt to the same DN within two minutes of the first.
CDCA1A	The feature is similar to CFW features with ACT TYPE "CDDNCA", but it provides transparency between CFW activation on the 5ESS Switch and the 1A ESS Switch.
KEY	The feature is activated by a scan point connected to a subscriber controlled key.

CODE: The feature is activated by the subscriber dialing a code. Calls are forwarded to a prestored DN. When the system recognizes the activation code, a confirmation tone followed by Dial Tone is returned to indicate successful activation. In the instance of an unsuccessful activation attempt, reorder is returned to the station.

CDDN: The feature is activated by the subscriber dialing a code. When the system recognizes the activation code, it returns recall Dial Tone to the customer, who then enters the Telephone Number to which calls will be forwarded. The system checks that the TN meets the Directory Number screening criteria. If the screening criteria are not met, the system returns reorder and the feature remains inactive. If the screening criteria are met, the system returns a confirmation tone signifying that the feature is active. After the confirmation tone has been provided, Dial Tone is returned to the station.

CDDNC: The feature is activated by the subscriber dialing a code. When the system recognizes the activation code, it returns recall Dial Tone to the customer, who then enters the Telephone Number to which calls will be forwarded. The system checks that the TN meets the Directory Number screening criteria. If the screening criteria are not met, the system returns reorder and the feature remains inactive. If the screening criteria are met, the system returns a confirmation tone signifying that the feature is active. After the confirmation tone has been provided, the system automatically completes a call to the entered Telephone Number. Normal call processing follows, allowing the customer to verify the forwarded to Directory Number.

CDDNCA: The feature is activated by the subscriber dialing a code. When the system recognizes the activation code, it returns recall Dial Tone to the customer, who then enters the Telephone Number to which calls will be forwarded. The system checks that the TN meets the Directory Number screening criteria. If the screening criteria are not met, the system returns reorder and the feature remains inactive. If the screening criteria are met, the system automatically completes a "courtesy"call to the entered Telephone Number. Unless the forward-to DN is in the same terminal group as the originator, the call must be answered. When the call is answered, the feature is activated. If the call is not answered, the dialing party has two minutes to begin a second attempt. If the customer repeats the previous steps within the two minute period, a confirmation tone is returned to the station followed by a Dial Tone, activating the feature. No automatic call completion is performed on this second activation attempt. If the forwarded to Telephone Number proves to be invalid, the station is notified of the fact and the feature remains inactive.

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When the forward-to DN is in the same terminal group as the originating DN, the confirmation tone is given on the first activation attempt and a courtesy call is completed. The feature is activated whether or not the courtesy call is answered.
During CFV activation if the forward-to DN is that of a Message Service Center, the feature is activated, confirmation is given, and no courtesy call is made.

CDCA1A The feature is activated by dialing a code. This feature provides CFV (Call Forwarding Variable) as it is provided in the 1A ESS Switch. Functionally, this feature is identical to the current CFV feature provided in the 5ESS Switch with the following exceptions:

- Confirmation tone is applied to the Call Forwarding Subscriber on the first activation attempt immediately after the forward to DN (Directory Number) is dialed, when activating the CFV feature to a station outside the subscriber's group.

- Error treatment is applied to the Call Forwarding Subscriber if the forward to DN given on the second activation attempt is different from the forward to DN given on the first attempt. Used to indicate the type of activation allowed for this feature is by dialing a code. Then, once the system recognizes the activation code, recall Dial Tone is returned to the station. The station then enters the Telephone Number. The system checks whether or not the specified Telephone Number meets the Directory Number Screening criteria. If the Directory Number Screening criteria are not met, the system returns reorder and the feature remains inactive. However, if the Directory Number Screening criteria are met, the system returns a confirmation tone to the station. The confirmation tone signifies the feature is active. After the confirmation tone has been provided, Dial Tone is returned to the station.

Data Rules:

If a CFW feature with ACT TYP "CODE"is assigned to a line, then if FWD TO DN is not entered, CHANGE FWD TO DN must be set to "Y"(Yes).

If a CFW feature with ACT TYPE other than "KEY"or "AUTO" is assigned to a line, the line should normally be assigned an IDP (Individualized Dialing Plan); at least one dialed code on the corresponding IDPDCA form (5601-1/2 Record) should have ACTION equal to "FTACT" and FEATURE equal to this Call Forwarding feature.

If the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "FTACT" and FEATURE equal to this Call Forwarding feature.

For 5E7 and later, if ACT TYPE is "AUTO", the corresponding initiation activation status (i.e., Feature Active or Not-Act?) entry on the MLHLNFA, BFG, or CLUSTR form must be "Y".

For 5E15 and later, when the FEATURE NAME field value equals the value in the USCF FEAT field on the OFCOPT form (5509 Record), ACT TYPE must be "CDDNCA" or "CDCA1A".

2.6 DACT TYPE

Description: Enter the Deactivation type.

Required Field.
Default: CODE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
CODE	The feature is deactivated by dialing a code.
NONE	The feature cannot be deactivated from the customer's station. It can only be deactivated by a service order request through the switch owner.
AUTO	The switch automatically deactivates the feature. This option is valid only after an activate code has been dialed. After the customer activates the feature and completes a call, the switch automatically deactivates

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	the feature.
KEY	The feature is deactivated by scan point, where scan point is controlled by keys.

Data Rules:

If ACT TYPE is "AUTO", then DACT TYPE must equal "NONE" or "CODE".

If ACT TYPE is "CODE"or "CDDN", then DACT TYPE must equal " CODE"or "AUTO".

If ACT TYPE is "CDCA1A", "CDDNC"or "CDDNCA", then DACT TYPE must equal "CODE".

If ACT TYPE is "KEY", then DACT TYPE must equal "KEY".

If DACT TYPE is "CODE"and this feature is assigned to a line, then the line should normally be assigned an IDP (Individualized Dialing Plan); at least one dialed code of the IDP on the IDPDCA form (5601-1/2 Record) should have ACTION equal to "FTDCT"and a FEATURE associated with the dialed code on the IDPDCA form equal to this Call Forwarding feature. If the ACTION is equal to "CFDCT", the FEATURE associated with the dialed code on the IDPDCA form must be that of the Call Forward "wild-card" feature (/CF*).

Alternatively, if the line is not assigned an IDP, then the PDIT form (5300-2 Record) used by the line should contain at least one dialed code with an ACTION equal to "FTDCT"and a FEATURE associated with the dialed code on the PDIT form equal to this Call Forwarding feature, or an ACTION equal to "CFDCT"and the FEATURE associated with the dialed code on the PDIT form must be than of the Call Forward "wild-card"feature (/CF*).

For 5E15 and later, when the FEATURE NAME field value equals the value in the USCF FEAT field on the OFCOPT form (5509 Record), DACT TYPE must be "CODE".

2.7 CFPF ALW

Description: Is a customer allowed to forward calls over private facilities? The private facilities may be accessed via FX, CCSA, OUTWATS, PFA, or ARS.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A customer with a CFPF (Call Forward over Private Facilities) feature may also have an Account and/or Authorization feature defined on the appropriate Feature Assignment form. When CFPF ALW is "Y", the ACT TYPE must not be "CDDNCA"or "CDCA1A".

When CFPF ALW is "Y", the FWD CONDITION must NOT be:

- "PRCI",
- "DBSY",
- "DIDL", or
- "DBTH".

For 5E9(1) and later, if CFPF ALW is "Y", FWD CONDITION must not be "PRCI".

For CFPF/DA:

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For 5E9(1) and later, the CFPF/DA (Call Forwarding Over Private Facilities/Don't Answer) feature is available as a secured feature (SFID 155). If this feature is purchased, FWD CONDITION must be "IDLE" and CFPF ALW must be "Y". The following restrictions also apply:

- if CFPF ALW is "Y", and FWD CONDITION is not "IDLE", and DN SCREENING is "Y", then DNSK, DNSL or DNSO must be "Y".
- if CFPF ALW is "Y", and FWD CONDITION is "IDLE", and DN SCREENING is "Y", then DNSK must be "N"and DNSL or DNSO must be "Y".
- if CFPF ALW is "N"and DN SCREENING is "Y", DNSK, DNSL and DNSO must be "N".

For more information on the CFPF/DA feature, See Division 2, Section 4A155.

For 5E10 and later, when CKT TN(s) and or CKT MLHG/TERMs on the DSLUSR form have DSL CLS set to "STD"on the DSL form (OE from DSLUSR form matches DSL OE on the DSL form), and are assigned a CFWFD feature with CFPF ALW set to "Y"on the CFWFD form, a SFSYS form must exist with SFID 225 (National ISDN 5E10 BRI Package) set to "Y". This feature is a Secured Feature that must be purchased by the office before a CFWFD feature with CFPF ALW set to "Y"may be assigned.

For 5E15 and later, when the FEATURE NAME field value equals the value in the USCF FEAT field on the OFCOPT form (5509 Record), CFPF ALW must be "N".

CHANGE OPTIONS

Fields Section 2.8 - Section 2.9 determine if the subscriber will be able to change specific call forwarding options.

2.8 CHANGE DON'T ANSWER TIMING

Description: Should the customer be allowed to change the don't answer timing on the Call Forwarding feature? When this field is "Y" (Yes), the customer may dial a code and then specify the value of the don't answer ringing time.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CHANGE DON'T ANSWER TIMING is "Y"(Yes) and this feature is assigned to a line, then the line should normally be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP on the IDPDCA form should have ACTION equal to "CFDATCH" and have FEATURE associated with the dialed code on the IDPDCA form equal to this Call Forwarding feature.

Alternately, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "CFDATCH"and FEATURE associated with the dialed code on the PDIT form equal to this Call Forwarding feature.

2.9 CHANGE FWD TO DN

Description: Change Forward to Directory Number. Should the customer be allowed to change the "forward to"Telephone Number on a specific Call Forwarding feature without first having to deactivate and then re-activate the specific feature?

Required Field.
Valid Entries: Y, N

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Data Rules:

If CHANGE FWD TO DN is "Y"(Yes) and this feature is assigned to a line, then the line should normally be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP (on the IDPDCA) should have ACTION equal to "CFDNCH"and have FEATURE associated with the dialed code on the IDPDCA form equal to this Call Forwarding feature.

Alternatively, if the line is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "CFDNCH"and FEATURE associated with the dialed code on the PDIT form equal to this Call Forwarding feature.

- ***NOTE:*** The only allowed value is "N", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

CALL SELECTION

Call selection specifies the conditions under which a called line should be forwarded, based on the Class Of Service of the incoming call. Any combination of the following five non-exclusive options (Section 2.10 - Section 2.14) may be specified.

If the Call Forwarding feature is assigned to a Multi-Line Hunt line, then ATTENDANT, INTRA OFFICE, INTER OFFICE, INTRA TERMINAL GROUP, and PRIVATE FACILITY ACCESS must equal "Y"(Yes).

2.10 ATTENDANT

Description: Should forwarding of calls from an attendant within the same Terminal Group be allowed?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If two or more Call Forwarding features with the same FWD CONDITION are assigned to a subscriber, only one of the features may have ATTENDANT set to "Y". An exception to this rule is the /CFNS feature which may be assigned in conjunction with another Call Forwarding feature which has ATTENDANT set to "Y".

2.11 INTRA OFFICE

Description: Will the customer be allowed to forward an intraoffice call? The incoming call is an intraoffice, non-private facility call; the incoming call and the called line are not members of the same Terminal Group.
Default: Y
Valid Entries: Y, N

Data Rules:

If two or more Call Forwarding features with the same FWD CONDITION are assigned to a subscriber, only one of the features may have INTRA OFFICE set to "Y". An exception to this rule is the /CFNS feature which may be assigned in conjunction with another Call Forwarding feature that has INTRA OFFICE set to "Y".

- ***NOTE:*** The default and only value for this field is "Y", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

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2.12 INTER OFFICE

Description: Will the customer be allowed to forward an interoffice call? The incoming call is an interoffice, non-private facility call, and the trunk bringing the call to the switch and the called line are not members of the same Terminal Group.
Default: Y
Valid Entries: Y, N

Data Rules:

If two or more Call Forwarding features with the same FWD CONDITION are assigned to a subscriber, only one of the features may have INTER OFFICE set to "Y". An exception to this rule is the /CFNS feature which may be assigned in conjunction with another Call Forwarding feature that has INTER OFFICE set to "Y".

- ***NOTE:*** The default and only value for this field is "Y", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

2.13 INTRA TERMINAL GROUP

Description: Will the customer be allowed to forward an intraterminal group call? The incoming call belongs to the same Terminal Group as the called line and neither are part of a private facility.
Default: Y
Valid Entries: Y, N

Data Rules:

If two or more Call Forwarding features with the same FWD CONDITION are assigned to a subscriber, only one of the features may have INTRA TERMINAL GROUP set to "Y". An exception to this rule is the /CFNS feature which may be assigned in conjunction with another Call Forwarding feature that has INTRA TERMINAL GROUP set to "Y".

- ***NOTE:*** The default and only value for this field is "Y", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

2.14 PRIVATE FACILITY ACCESS

Description: Will the customer be allowed to forward a call from a private facility? The incoming call must be from a private facility.
Default: Y
Valid Entries: Y, N

Data Rules:

If two or more Call Forwarding features with the same FWD CONDITION are assigned to a subscriber, only one of the features may have PRIVATE FACILITY ACCESS set to "Y". An exception to this rule is the /CFNS feature which may be assigned in conjunction with another Call Forwarding feature that has PRIVATE FACILITY ACCESS set to "Y".

- ***NOTE:*** The default and only value for this field is "Y", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

3. FORM ENTRIES - 5614-2 RECORD

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3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

3.2 DN SCREENING

Description: Will the DNs (Directory Numbers) to which calls are forwarded be screened? "Y"(Yes) indicates that one or more of the following fields (DNSA through DNSQ) will prohibit calls from being forwarded to certain types of DNs. "N"(No) indicates there will be no screening; calls can be forwarded to any DN.

Required Field for 5E9(1) and later.
Default: Y
Valid Entries: Y, N

Data Rules:

When DN SCREENING is "Y", at least one of the DNSA through DNSQ fields must be "N".

For 5E9(1) and later, if DN SCREENING is "N", all options (DNSA through DNSQ) must be "Y".

For 5E9(1) and later, if DN SCREENING is "Y"and CFPF ALW is "Y", then DNSK, DNSL, or DNSO must be "Y". If DN SCREENING is "Y"and CFPF ALW is "N", then DNSK, DNSL and DNSO must be "N".

3.3 DNSA

Description: Should the customer be allowed to forward calls to members of the same Terminal Group?
Default: Y
Valid Entries: Y, N

- ***NOTE:*** The only allowed value is "Y", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

3.4 DNSB

Description: Should the customer be allowed to forward calls to an intraoffice DN that is not an intragroup DN?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.5 DNSC

Description: Should the customer be allowed to forward calls to an intra-LATA DN that is not an intragroup or intraoffice DN?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.6 DNSD

Description: Should the customer be allowed to forward calls to an inter-LATA DN that is not an international DN?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.7 DNSE

Description: Should the customer be allowed to forward calls to an international DN?

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Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.8 DNSF

Description: Should the customer be allowed to forward calls to a type X11 DN (e.g. 411, 911)?
Default: N
Valid Entries: Y, N

NOTE: The only allowed value is "N", except for Call Forwarding features derived from the preconstructed features using the ODA change-insert mode of the review operation.

3.9 DNSG

Description: Should the customer be allowed to forward calls to the POTS or IC (Interexchange Carrier) operator?
Default: N
Valid Entries: Y, N (See Note in Section 3.8)

3.10 DNSH

Description: Should the customer be allowed to forward calls to an ODP (Office Dialing Plan) or IDP (Individualized Dialing Plan) feature code? The code may be with or without subsequent parameters.
Default: N
Valid Entries: Y, N (See Note in Section 3.8)

3.11 DNSI

Description: Should the customer be allowed to forward calls to an IDP Intercom number?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.12 DNSJ

Description: Should the customer be allowed to forward calls to an IDP Abbreviated Dial code?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.13 DNSK

Description: Should the customer be allowed to forward calls to a Private Facility Access Code for a nonsenderized facility? The Private Facility Access Code may be followed by additional digits, but these digits are not subject to screening. The forward to DN is screened during the entry for a speed call list entry and during the activation of CFPF (Call Forwarding over Private Facilities).

Required Field.
Default: N
Valid Entries: Y, N

For 5E5 and later, both "Y"and "N" may be entered. (See Note in Section 3.8).

3.14 DNSL

Description: Should the customer be allowed to forward calls to a Private Facility Access Code for a senderized facility? The PFA Code may be followed by additional digits, but these digits are not subject to screening. This entry is screened during the entry of a speed call list entry and during the activation of CFPF (Call Forwarding over Private Facilities).

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Required Field.
Default: N
Valid Entries: Y, N

For 5E5 and later, both "Y"and "N"may be entered. (See Note in Section 3.8).

Data Rules:

For 5E5 and later, if "Y"is entered, then CFPF ALW must be "Y".

3.15 DNSM

Description: Should the customer be allowed to forward calls to an IDP POTS Access Code?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.16 DNSN

Description: Should the customer be allowed to forward calls to a specific Carrier Access Code (10xxx) followed by parameters that conform to other DN screening options?
Default: Y
Valid Entries: Y, N (See Note in Section 3.3)

3.17 DNSO

Description: Should the customer be allowed to forward calls to an ARS Access Code? The Private Facility Access Code may be followed by additional digits, but these digits are not subject to screening. This entry is screened during the entry of a speed call list entry and during the activation of CFPF (Call Forwarding over Private Facilities).

Required Field.
Default: N
Valid Entries: Y, N

For 5E5 and later, both "Y"and "N"may be entered. (See Note in Section 3.8).

Data Rules:

For 5E5 and later Software Releases, if "Y" is entered, then CFPF ALW must be "Y".

3.18 DNSP

Description: Should a PP precedence code (followed by a telephone number) be allowed to be stored in the Abbreviated Dial List?
Default: N
Valid Entries: Y, N

3.19 DNSQ

Description: Is the forward to number restricted to a port that can receive AUTOVON calls?
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then DNSA must be "Y".

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DEFAULT PARAMETERS

The following fields (Section 3.20 - Section 3.36) define the default parameters assigned with the feature to lines. These parameters will be assigned to the line unless they are overridden by entries on the CFWLPA (5614-3 Record) or CFWMPA (5614-4 Record) forms.

3.20 FORWARD TO DN

Description: The Directory Number to which calls will be forwarded.
Valid Entries: Up to 32 characters (0 - 9, *, and/or #)

Data Rules:

The FORWARD TO DN will be translated during call processing using the originator's dialing plan(s). Therefore, if the originator has an Individualized Dialing feature with an IDP group, the digits entered must be successful using the IDPDCA form entries. For example, if the originator normally dials an intercom digit string of four digits to call a phone, then the four digits should be entered here to forward to the same phone.

If FWD TO DN is specified, then ACT TYPE must equal "AUTO", "CODE", or "KEY".

For 5E5 and later, when CFPF ALW is "Y", this field can contain the following codes in many different dialing sequences:

- PFA access code
- Account Code use code
- Authorization Code use code
- ARS use code
- Directory Number

The account and authorization codes are entered in the ACCT CODE and ATH CODE fields.

3.21 ACCT CODE

Description: Enter the Account Code used by Call Forwarding Over Private Facility for the invocation of CFPF.

Software Release: 5E5 and later
Valid Entries: Up to 15 characters (0 - 9, #, and *)

Data Rules:

When ACCT CODE is entered, then CFPF ALW must be "Y"and FORWARD TO DN must contain an Account Use code along with the DN and other use codes.

When this field is entered, an associated Account feature (5623-1 Record) must be assigned to the associated LINEFA, MLHLNFA, BFG or associated CLUSTR form with the feature active to allow calls to be forwarded with this account code.

3.22 ATH CODE

Description: This field allows the Authorization Code used by Call Forwarding Over Private Facilities to be defaulted for CFPF invocations.

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Software Release: 5E5 and later
Valid Entries: 1 - 15 digits

Data Rules:

When ATH CODE is entered, then CFPF ALW must be "Y"and FORWARD TO DN must contain an Authorization Use code along with the DN and other use codes.

When this field is entered, an associated Authorization feature (5619-1 Record) must be assigned to the associated LINEFA, MLHLNFA, BFG or associated CLUSTR form with the feature active to allow calls to be forwarded with this authorization code.

3.23 DON'T ANSWER TIMING

Description: This field specifies the Don't Answer Ring Time, the maximum time (seconds) the phone will ring before an unanswered call is forwarded.

Required Field for 5E5 and later.
Default: 0
Valid Entries: 0 - 60

Data Rules:

With 5E5 and later, this field must have a value of 4 to 60 when FWD CONDITION has a value of "IDLE"or "PIDL" to allow the terminal to be rung at least once before it is considered idle and the call is forwarded.

If FWD CONDITON is "IDLE", "DIDL", "PIDL", "PRCI", or "ACDI", then the entry in this field must be in the range of 4 - 60 seconds.

3.24 SIMUL INTEROFF FWD CALLS

Description: Enter the maximum number of simultaneously active interoffice calls allowed between the base station and the forward to DN.
Default: 1
Valid Entries: 1 - 99

Data Rules:

If the forward to directory number resides in an MLHG, it is recommended that the valid entries are from 1 to the maximum number of lines within the MLHG. Entering the value of the maximum size of the MLHG allows efficient use of all terminals within the forward to MLHG. If the base TN is terminal 1 in an MLHG, the entry can be defined as the size of the base MLHG to ensure that the number of simultaneously forwarded calls is equivalent to the number of calls that could be completed to the MLHG without the call forwarding feature being present.

3.25 SIMUL INTRAOFF FWD CALLS

Description: Enter maximum number of simultaneously active intraoffice calls allowed between the base station and forward to DN.
Default: 99
Valid Entries: 1 - 99

3.26 SEQ ACT FWD LEGS

Description: Enter the maximum number of Call Forwarding legs allowed to be sequentially forwarded. The SEQ ACT FWD LEGS limit is exceeded if any individual line in a Call Forwarding chain has its limit exceeded.
Default: 5

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Valid Entries: 1 - 32

3.27 BASE STA RING IND

Description: Should the Base Station Ring Indicator be allowed? Base station ringing indicator is a normal ring of 0.5 second duration which is applied to an idle line indicating that an incoming call to that line is being forwarded.
Default: Y
Valid Entries: Y, N

3.28 MDNL ENHANCED

Description: Is the enhanced version of the MDNL (Multiple Directory Numbers Per Line) feature supported? If "Y"is entered, the enhanced version of MDNL service is supported. If "N"is entered, the basic MDNL service or no MDNL service is supported.

This field replaces the DDNCFI field.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y"is entered, the FWD CONDITION field must have a value of "BOTH".

If "Y" is entered, the associated LINE form must have a "Y" entered in the SHARE field.

If "N" is entered, the MDNL FWD and MDNL RCF fields must have the same value.

3.29 MDNL FWD

Description: This field indicates which TNs will be forwarded for lines assigned MDNL features.

Software Release: 5E6 and later
Required Field.
Default: ALL
Valid Entries:

Valid MDNL FWD Entries

Entry	Definition
ALL	The Master TN and its Dependent TNs will be forwarded.
DEPEND	The Dependent TNs will be forwarded only.
MASTER	The Master TN will be forwarded only.

Data Rules:

If "DEPEND"is entered, the MDNL ENHANCED field must have a value of "Y".

If "MASTER"is entered and the MDNL ENHANCED field has a value of "N", the FWD CONDITION field must have a value of "BOTH".

3.30 MDNL RCF

Description: For lines that have the MDNL feature, this field specifies if calls to the Master TN and/or Dependent TNs can be forwarded via Remote Activation (e.g., RACF, ACF).

Software Release: 5E6 and later

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Required Field.
Default: ALL
Valid Entries:

Valid MDNL RCF Entries

Entry	Definition
ALL	The Master TN and its Dependent TNs can be forwarded.
DEPEND	Only the Dependent TNs can be forwarded.
MASTER	Only the Master TN can be forwarded.

Data Rules:

If "DEPEND"is entered, the MDNL ENHANCED field must have a value of "Y".

3.31 CFDA AFTER CW

Description: Will unanswered call waiting calls be forwarded to a remote DN when a CFDA feature is assigned to the line?

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

If CFDA AFTER CW is "Y"then FWD CONDITION must be "IDLE".

If the Secured Feature ID is not set to "S"on the SFSYS form (5713 Record), the value of CFDA AFTER CW must be blank or "Y" when FWD CONDITION equals "IDLE"and must be "N"for all other cases.

If CFDA AFTER CW is set to "Y", the line cannot be defined on a DSLUSR form (5908 Record).

If CFDA AFTER CW is set to "Y", the TN cannot be defined on the LINE form (5109-1/2/3 Records) with SHARED equal to "Y".

When CFDA AFTER CW is not entered, it is set to "Y"for unshared analog lines with CFDA features and "N"for all other lines.

3.32 CFIMB

Description: Should the Call Forward Inhibit Make Busy option be included in this feature? When a Call Forwarding Busy Line feature has the CFIMB option, it inhibits call forwarding while the Make Busy Key (or Feature Button) is on. Calls arriving after the subscriber has activated the make busy key or feature button receive busy or reorder tone as specified in the OVF CFI field. For more information on the IMB feature, refer to Section 1.4 , "Call Forwarding Busy Line Options", at the beginning of this section.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A Call Forward feature may not have both the Inhibit Make Busy and Inhibit Line Busy options. When CFILB is "Y", CFIMB must be "N".

The Inhibit Make Busy option applies only to Call Forwarding Busy Line features. When CFIMB is "Y", FWDCOND must be "BUSY".

A CFBL-IMB feature is assigned to a line or MLHG by service order and cannot be activated or deactivated by the subscriber. When CFIMB is "Y", ACT TYPE must be "AUTO", and DACT TYPE must

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be "NONE".

A TN that is assigned a CFBL-IMB feature must have a make busy key. When a TN is assigned a CFBL feature (via a LINEFA, BFG, or associated CLUSTR form) that has the IMB option set to "Y", the MAKE BUSY KEY must be entered on the LINE form (5109 Record).

An MLHG that is assigned a CFBL-IMB feature must have a group make busy key or feature button. When an MLHG/TERM is assigned a CFBL feature (via an MLHLNFA, BFG, or associated CLUSTR form) that has the IMB option set to "Y", it must also be assigned a group make busy key/button in one of two ways:

- the GROUP MAKE BUSY KEY on the corresponding MLHG form (5110 Record) may be entered; or
- if Member 1 of the MLHG is defined on a DSLUSR form (5908 Record), there may be a corresponding entry on a CFGGRP form (5964 Record) with ACTION set to "BYGP".

A CFBL-IMB feature may be assigned to regular, circular, and UCD Multi-Line Hunt Groups. The MLHG FEATURE assigned on the MLHG form must be defined on an MLHGFD form (5604 Record) with HUNT TYPE equal to "REG", "HTC", or "UCD".

3.33 CFILB

Description: Should the Call Forward Inhibit Line Busy option be included in this feature? When a Call Forwarding Busy Line feature has the CFILB option, it inhibits call forwarding while the Make Busy Key (or Feature Button) is off.

Calls arriving when the make busy key is on will be forwarded. Calls arriving when the line is busy, but the make busy key is off, will not be forwarded; the caller will receive busy or reorder tone as specified in the OVF CFI field. For more information on the ILB feature, refer to Section 1.4 , "Call Forwarding Busy Line Options", at the beginning of this section.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A Call Forward feature may not have both the Inhibit Make Busy and Inhibit Line Busy options. When CFIMB is "Y", CFILB must be "N".

The Inhibit Line Busy option applies only to Call Forwarding Busy Line features. When CFILB is "Y", FWDCOND must be "BUSY".

A CFBL-ILB feature is assigned to a line or MLHG by service order and cannot be activated or deactivated by the subscriber. When CFILB is "Y", ACT TYPE must be "AUTO", and DACT TYPE must be "NONE".

A TN that is assigned a CFBL-ILB feature must have a make busy key. When a TN is assigned a CFBL feature (via a LINEFA, BFG, or associated CLUSTR form) that has the ILB option set to "Y", the MAKE BUSY KEY must be entered on the LINE form.

An MLHG that is assigned a CFBL-ILB feature must have a group make busy key or feature button. When an MLHG/TERM is assigned a CFBL feature (via an MLHLNFA, BFG, or associated CLUSTR form) that has the IMB option set to "Y", it must also be assigned a group make busy key/button in one of two ways:

- the GROUP MAKE BUSY KEY on the corresponding MLHG form may be entered; or
- if Member 1 of the MLHG is defined on a DSLUSR form, there may be a corresponding entry on a

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CFGGRP form with ACTION set to "BYGP".

A CFBL-ILB feature may be assigned to regular, circular, and UCD Multi-Line Hunt Groups. The MLHG FEATURE assigned on the MLHG form must be defined on an MLHGFD form with HUNT TYPE equal to "REG", "HTC", or "UCD".

3.34 OVF CFI

Description: Should overflow (reorder) tone be returned to a caller when the call is not forwarded because of CFIMB or CFILB? If this field is "N", the caller will receive a busy tone.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This option only applies to Call Forward Busy Line features having the Inhibit Make Busy or the Inhibit Line Busy option. If OVF CFI is "Y", either CFIMB or CFILB must be "Y".

3.35 FCCS OPT

Description: Is the Forwarded Call - Call Screening option active for this call forwarding feature?

Software Release: 5E14 and later
Required field.
Default: N
Valid Entries: Y, N

Data Rules:

When FCCS OPT is "Y", the following must be true:

- ACT TYPE must be "AUTO" or "CODE"
- DACT TYPE must be "CODE" or "NONE"
- CHANGE FWD TO DN must be "N"
- FWD CONDITION must be "BUSY"or "IDLE"
- The ACT field must be "Y" for SFID 526 on the SFSYS form

For 5E16 and later, when FCCS OPT is set to "Y" and ACT TYPE is set to "CODE" or DACT TYPE is set to "CODE", then the ACT field for SFID 592 on the SFSYS form (5713-1 Record) must be set to "Y".

For 5E16 and later, when the ACT field for SFID 592 is set to "Y" on the SFSYS form, the ACT field for SFID526 on the SFSYS form must also be set to "Y".

3.36 CFDARC

Description: Activate the Call Forward Don't Answer Ring Control option? This field specifies whether or not the Call Forwarding Don't Answer Ring Control is active for this line.

Software Release: 5E12 and later

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When CFDARC is "Y":

- the ACT field for SFID 335 on the SFSYS form (5713-1 Record) must be set to "Y".
- FWD CONDITION must be "DIDL", "IDLE", "PIDL", or "PRCI".
- CHANGE DON'T ANSWER TIMING must be "Y".

3.37 CFV ALERT

Description: This field indicates whether the Call Forwarding Variable Alert option is active for this feature.

Software Release: 5E12 and later
Valid Entries: Y, N

Data Rules:

When CFV ALERT is set to "Y":

- the ACT field for SFID 341 on the SFSYS form (5713-1 Record) must also be set to "Y".
- FWD CONDITION must be set to "BOTH".

MDNL CALL WAITING

The following fields (Section 3.38 - Section 3.40) support the MDR/CW/CF Interaction Enhancement (FAX Ring) Feature. This is a secured feature using SFID 535. For more information on this feature, see Division 2, Section 4A535.

3.38 INH CF MASTER

Description: Is Call Forwarding inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CF MASTER must be "N".

If INH CF MASTER is "Y", then INH CF DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

When INH CF MASTER is "Y" FWD CONDITION must be BOTH, BUSY, or IDLE.

3.39 INH CF DEPEND

Description: Is Call Forwarding inhibited for the depend TN of a line using MDR?

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Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CF DEPEND must be "N".

If INH CF DEPEND is "Y", then INH CF MASTER must be "N".

When INH CF DEPEND is "Y" FWD CONDITION must be BOTH, BUSY, or IDLE.

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

3.40 INHIBIT MDNL CF

Description: This field is used in determining whether or not Call Forwarding is inhibited for the master telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CF must be "NONE".

When INHIBIT MDNL CF is DEPEND OR MASTER, FWD CONDITION must be BOTH, BUSY, OR IDLE.

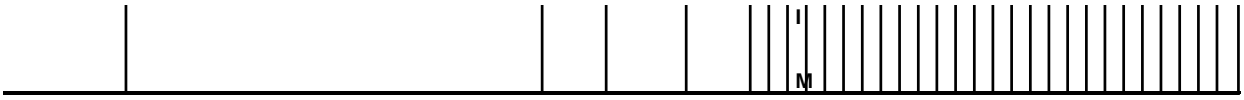
ESS 5614-1 (11/2002) TG-5 CALL FORWARDING DATE _____

FEATURE DEFINITION RECORD

CFWFD 5ESS SWITCH
12.12

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	ACTIVATION			CHG	CALL SELECT							DDDDDDDDDDDDDDDDDDDDD NNNNNNNNNNNNNNNNNNNNN SSSSSSSSSSSSSSSSSSSSS ABCDEFGHIJKLMNOPQRSCREENING
		FWD COND	ACT TYPE	DACT TYPE	CDFA LAWN T	FOWT PNDT F' TODA LANT SGFC TGC	NNNF TTTA NRER RA OOT FFG C						



ESS 5614-2a (11/20002) CALL FORWARDING DATE _____

TG-5 FEATURE DEFINITION RECORD
CFWFD 5ESS SWITCH
12.12
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	DEFAULT PARAMETERS						
		ACCT CODE	ATH CODE	DONT ANS TIMING	SFIWMDULCAILNLTSER	SFIWMDULCAILNLTSRA	MRDEWQDNEGWBEATNGDSD
FORWARD TO DN							

ESS 5614-2b (11/20002) CALL FORWARDING DATE _____

TG-5 FEATURE DEFINITION RECORD
CFWFD 5ESS SWITCH
12.12
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	DEFAULT PARAMETERS							
	CFDA AFTER CW	CFIMB	CFILB	OVFCFI	CFDARC	CFVALERT	FCSO PT	IMC NDF HN IL B I T

Figure 1 PRECONSTRUCTED CF FEATURES 5E9(1) AND LATER SOFTWARE RELEASES

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```
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5614-1,2a/b)       CALL FORWARDING FEATURE DEFINITION

*1. FEATURE NAME                              CALL SELECTION
 3. REMARKS      _____________________________ 10. ATTENDANT          Y
                                 INTRA OFFICE          Y
     ACTIVATION                  INTER OFFICE          Y
 4. FWD CONDITION BOTH                INTRA TERMINAL GROUP    Y
 5. ACT TYPE     CODE                 PRIVATE FACILITY ACCESS Y
 6. DACT TYPE    CODE
 7. CFPF ALW     N

       CHANGE OPTIONS
 8. CHANGE DON'T ANSWER TIMING N
 9. CHANGE FWD TO DN          N
```

```
cfwfd                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5614-1,2a/b)       CALL FORWARDING FEATURE DEFINITION

15. DN SCREENING Y    27. DNSL N
   DNSA        Y       DNSM Y
   DNSB        Y       DNSN Y
   DNSC        Y    30. DNSO N
   DNSD        Y       DNSP N
   DNSE        Y       DNSQ N
   DNSF        N
   DNSG        N                DEFAULT PARAMETERS
   DNSH        N    33. FORWARD TO DN     _____________________________
   DNSI        Y    34. ACCT CODE         _________________
   DNSJ        Y    35. ATH CODE          _________________
26. DNSK        N    36. DON'T ANSWER TIMING 00
```

```
cfwfd                    5ESS Switch       _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5614-1,2a/b)       CALL FORWARDING FEATURE DEFINITION

       DEFAULT PARAMETERS          49. CFDARC       N
37. SIMUL INTEROFF FWD CALLS 01       50. CFV ALERT    N
38. SIMUL INTRAOFF FWD CALLS 99       51. FCCS OPT     N
39. SEQ ACT FWD LEGS        05        52. INH CF MASTER N
40. BASE STA RING IND       Y         53. INH CF DEPEND N
41. MDNL ENHANCED           N
42. MDNL FWD                ALL
43. MDNL RCF                ALL
45. CFDA AFTER CW           _
46. CFIMB                   N
47. CFILB                   N
48. OVF CFI                 N
```

Figure 2 SAMPLE CFWFD FORM 5E14 SOFTWARE RELEASES

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```
cfwfd                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5614-1,2a/b)      CALL FORWARDING FEATURE DEFINITION

*1. FEATURE NAME ________                    CALL SELECTION
 3. REMARKS      _____________________________ 10. ATTENDANT          Y
                                 INTRA OFFICE          Y
     ACTIVATION                  INTER OFFICE          Y
 4. FWD CONDITION BOTH           INTRA TERMINAL GROUP  Y
 5. ACT TYPE     CODE            PRIVATE FACILITY ACCESS Y
 6. DACT TYPE    CODE
 7. CFPF ALW     N

       CHANGE OPTIONS
 8. CHANGE DON'T ANSWER TIMING N
 9. CHANGE FWD TO DN          N
```

```
cfwfd                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5614-1,2a/b)      CALL FORWARDING FEATURE DEFINITION

15. DN SCREENING Y    27. DNSL N
   DNSA        Y       DNSM Y
   DNSB        Y       DNSN Y
   DNSC        Y    30. DNSO N
   DNSD        Y       DNSP N
   DNSE        Y       DNSQ N
   DNSF        N
   DNSG        N              DEFAULT PARAMETERS
   DNSH        N    33. FORWARD TO DN    ____________________________
   DNSI        Y    34. ACCT CODE        ________________
   DNSJ        Y    35. ATH CODE         ________________
26. DNSK        N    36. DON'T ANSWER TIMING 00
```

```
cfwfd                    5ESS Switch      _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5614-1,2a/b)      CALL FORWARDING FEATURE DEFINITION

       DEFAULT PARAMETERS          49. CFDARC        N
37. SIMUL INTEROFF FWD CALLS 01       50. CFV ALERT     N
38. SIMUL INTRAOFF FWD CALLS 99       51. FCCS OPT      N
39. SEQ ACT FWD LEGS        05        52. INHIBIT MDNL CF NONE
40. BASE STA RING IND       Y
41. MDNL ENHANCED           N
42. MDNL FWD                ALL
43. MDNL RCF                ALL
45. CFDA AFTER CW           _
46. CFIMB                   N
47. CFILB                   N
48. OVF CFI                 N
```

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Figure 3 SAMPLE CFWFD FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 15B: 5614-3 RECORD
CALL FORWARDING LINE (TN) PARAMETER FORM - CFWLPA

1. GENERAL

The 5614-3 Record is available with 5E2 and later Software Releases. It defines parameters for a constructed Call Forwarding Feature that will be assigned to lines (which are not multi-line hunt group lines). This record is required only if the default parameters assigned on the CFWFD (Call Forwarding Feature Definition) form are inappropriate.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *TN

Description: Enter the Telephone Number of the line.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The line may not be an MLHG line.

The associated CLASS OF SERVICE on a LCC form (5306 Record) must be one of the following:

Class of Service	
ATND	50B Non-Data Link Console Line or Attendant Line
INDIV	Individual Line
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
SATSTLN	Stand-Alone Test Line
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Software Release: 5E3 and later. Line to a PBX.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the CFWLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 *FEATURE

Description: Enter the Feature Name.
Valid Entries: 1 - 8 characters

Data Rules:

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This field must be defined on the CFWFD form (5614-1/2 Record).

For 5E12 and later, TN/FEATURE combinations on different CFWLPA forms cannot be duplicated.

2.4 FORWARD TO DN

Description: Enter the Forward To Directory Number.
Valid Entries: Up to 32 characters (0 - 9, *, and/or #)

Data Rules:

If FORWARD TO DN is specified, then ACT TYPE on the CFWFD form must equal "AUTO", "CODE", or "KEY".

If FORWARD TO DN is specified as a 7-digit Telephone Number, then FORWARD TO DN must not equal the 7-digit Telephone Number which was entered in the TN field; Call Forwarding does not allow forwarding to itself.

The FORWARD TO DN entered will be translated during call processing using the originator's dialing plan(s). Therefore, if the originator has an Individualized Dialing feature with an IDP group, the digits entered must be successful using the IDPDCA form (5601-1 Record) entries. For example, if the originator normally dials an intercom digit string of four digits to call a phone, then the four digits should be entered here to forward to the same phone.

For 5E5 and later, when CFPF ALW is "Y" on the associated CFWFD form, this field can contain the following codes in many different dialing sequences:

- PFA access code
- Account Code use code
- Authorization Code use code
- ARS use code
- Directory Number

The account and authorization codes are entered in the ACCT CODE and ATH CODE fields.

2.5 ACCT CODE

Description: Enter the Account Code used by Call Forwarding Over Private Facility for the invocation of CFPF.

Software Release: 5E5 and later
Valid Entries: Up to 15 characters (0 - 9, #, and/or *)

Data Rules:

When ACCT CODE is entered, then CFPF ALW must be "Y" on the associated CFWFD form and FORWARD TO DN must contain an Account Use code along with the DN and other use codes.

When this field is entered, an associated Account Code feature defined on the ACCTFD form (5623-1 Record), must be assigned on the associated LINEFA, MLHLNFA, BFG, or CLUSTR form with the feature active to allow calls to be forwarded with this account code.

2.6 ATH CODE

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Description: Allows the Authorization Code used by Call Forwarding Over Private Facilities to be defaulted for CFPF invocations.

Software Release: 5E5 and later
Valid Entries:
- For 5E5 - 5E7: 1 - 15 characters (0 - 9, #, *)
- For 5E8 and later: 1 - 15 digits

Data Rules:

When ATH CODE is entered, then CFPF ALW must be "Y" on the associated CFWFD form and FORWARD TO DN must contain an Authorization Use code along with the DN and other use codes.

When this field is entered, an associated Authorization feature (5619-1 Record) must be assigned on the associated LINEFA, MLHLNFA, BFG, or CLUSTR form with the feature active to allow calls to be forwarded with this authorization code.

2.7 DON'T ANSWER TIMING

Description: For the Call Forward Don't Answer feature, enter the time delay (in seconds) before a call will be forwarded.
Default: 30
Valid Entries: 0 - 60

Data Rules:

If DON'T ANSWER TIMING is greater than 0, then FWD CONDITION on the CFWFD form must equal "IDLE", "PRCI" or "PIDL".

For 5E5 and later, this field must have a value of 4 to 60 when the associated CFWFD form has a FWD CONDITION with a value of "IDLE" or "PIDL". This allows the terminal to be rung at least once before it is considered idle and the call is forwarded. During a retrofit to 5E5, if this field has a value of 0 to 3 and the above conditions are met, the field will be evolved to the value of 4.

2.8 SIMUL INTEROFF FWD CALLS

Description: Enter the maximum number of simultaneously active interoffice calls allowed between base station and forward to DN.
Default: 1
Valid Entries: 1 - 99

Data Rules:

If the forward to directory number resides in an MLHG, it is recommended that the valid entries are from 1 to the maximum number of lines within the MLHG. Entering the value of the maximum size of the MLHG allows efficient use of all terminals within the forward to MLHG. If the base TN is terminal 1 in an MLHG, the entry can be defined as the size of the base MLHG to ensure that the number of simultaneously forwarded calls is equivalent to the number of calls that could be completed to the MLHG without the call forwarding feature being present.

2.9 SIMUL INTRAOFF FWD CALLS

Description: Enter the maximum number of simultaneously active intraoffice calls allowed between base station and forward to DN.
Default: 99
Valid Entries: 1 - 99

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2.10 SEQ ACT FWD LEGS

Description: Enter the maximum number of Call Forwarding legs allowed to be sequentially forwarded.
Default: 5
Valid Entries: 1 - 32

Data Rules:

The SEQ ACT FWD LEGS limit is exceeded if any individual line in a Call Forwarding chain has its own limit exceeded.

2.11 BASE STA RING IND

Description: Should the Base Station Ringing Indicator be allowed? The Base Station Ringing Indicator is a normal ring of 0.5 seconds duration which is applied to an idle line indicating that an incoming call to that line is being forwarded.
Default: Y
Valid Entries: Y, N

2.12 # FORWARD MULTIPLE TN'S?

Description: For lines that are assigned the MDNL (Multiple Directory Numbers Per Line) feature, should calls that terminate to the Dependent TNs defined on the MTNDR form (5550 Record) be Call Forwarded? A value of "Y" indicates that calls to both the Master TN and Dependent TNs will be call forwarded. A value of "N" indicates that only calls that terminate to the Master TN will be call forwarded; calls to the Dependent TNs will not be call forwarded.

If there are no multiple TNs associated with the TN defined on this form, then enter the default value.

Software Release: 5E4(2) only
Required Field.
Default: Y
Valid Entries: Y, N

2.13 DDNCFI

Description: Dependent DN Call Forwarding Inhibit. Should Call Forwarding be inhibited for Dependent TNs on lines assigned the MDNL (Multiple Directory Numbers Per Line) feature? A value of "Y" indicates that only calls terminating to the Master TN will be call forwarded; calls to the Dependent TNs will not be call forwarded. A value of "N" indicates that calls to both the Master TN and Dependent TNs will be call forwarded.

Software Release: 5E5 only
Default: N
Valid Entries: Y, N

Data Rules:

When this field is "Y", the FWD CONDITION on the associated CFWFD form must be "BOTH".

2.14 ANNC RTI

Description: This field is not used. For 5E7 and later, it was removed from the form.

Software Release: 5E5 and 5E6 only

2.15 MDNL ENHANCED

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Description: Is the enhanced version of the MDNL (Multiple Directory Numbers Per Line) feature supported? If "Y" is entered, the enhanced MDNL service is supported. If "N" is entered, only basic MDNL service or no MDNL service is supported.

This field replaces the DDNCFI field.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, the FWD CONDITION field on the CFWFD form must have a value of "BOTH", and the associated LINE form must have a "Y" in the SHARE field.

If "N" is entered, the MDNL FWD and MDNL RCF fields must have the same value.

For 5E9(1) and later, when CFWLPA form(s) exist for the office with MDNL ENHANCED set to "Y"', SFID 37 on the SFSYS form must have ACT set to "Y"'.

2.16 MDNL FWD

Description: For lines that have the MDNL feature, this field indicates if calls to the Master TN and/or Dependent TNs will be forwarded.

Software Release: 5E6 and later
Required Field.
Default: "ALL"
Valid Entries:

Valid MDNL FWD Entries

Entry	Definition
ALL	The Master TN and its Dependent TNs will be forwarded.
DEPEND	The Dependent TNs will be forwarded only.
MASTER	The Master TN will be forwarded only.

Data Rules:

If "DEPEND" is entered, the MDNL ENHANCED field must have a value of "Y".

If "MASTER" is entered and the MDNL ENHANCED field has a value of "N", the FWD CONDITION field must have a value of "BOTH".

2.17 MDNL RCF

Description: For lines that have the MDNL feature, this field indicates if calls to the Master TN and/or Dependent TNs will be forwarded when activated via a Remote Access feature, e.g. RACF, ACF.

Software Release: 5E6 and later
Required Field.
Default: ALL
Valid Entries:

Valid MDNL RCF Entries

Entry	Definition
ALL	The Master TN and its Dependent TNs will be forwarded.
DEPEND	The Dependent TNs will be forwarded only.
MASTER	The Master TN will be forwarded only.

Data Rules:

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If "DEPEND" is entered, the MDNL ENHANCED field must have a value of "Y".

2.18 CFDA AFTER CW

Description: Will the line have unanswered call waiting calls forwarded to a remote DN when there is a CFDA feature assigned to the line?

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

If the Secured Feature ID is not set to "S" on the SFSYS form (5713 Record) the value of CFDA AFTER CW must be either blank or set to "Y" for unshared analog lines that have a CFDA feature FWD CONDITION equal to "IDLE".

If CFDA AFTER CW is set to "Y", the TN must be assigned to a CFDA feature that is defined on the CFWFD form (5614-1/2 Records) with a FWD CONDITION of "IDLE".

If CFDA AFTER CW is set to "Y", the line cannot be defined on a DSLUSR form (5908 Record).

If CFDA AFTER CW is set to "Y", the TN cannot be defined on the LINE form (5109-1/2/3 Records) with SHARED equal to "Y".

When CFDA AFTER CW is not entered, it is set to "Y" for unshared analog lines with CFDA features and "N" for all other lines.

For 5E9(1) and later, the CFDA AFTER CW field on the CFWLPA form is used by the Call Forwarding Don't Answer after Call Waiting feature. It is a secured feature and must be purchased by the office before the default values may be changed. If an SFSYS form does not exist with SFID 62 ACT set to "Y"', the CFDA AFTER CW field must be set to either blank or "Y"' if the TN is defined on the LINE form with the SHARED field equal to "N"' and the feature is defined on the CFWFD form with the FWD CONDITION field set to "IDLE"'.

2.19 CFIMB

Description: Should the Call Forward Inhibit Make Busy option be activated? If CFIMB is "Y", the CFBL (Call Forwarding Busy Line) feature assigned to this line will be inhibited when the subscriber has made the line busy by activating the Make Busy Key. Incoming calls in that case will be routed to busy (or overflow) tone as determined by the OVF CFI field. If the make busy key is off, incoming calls receive the normal CFBL treatment.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A Call Forward feature may not have both the Inhibit Make Busy and Inhibit Line Busy options. If CFILB is "Y", CFIMB must be "N".

The Inhibit Make Busy option applies only to Call Forwarding Busy Line features. If CFIMB is "Y", the CFBL feature assigned to this line must be defined on a CFWFD form with FWDCOND set to "BUSY".

A CFBL-IMB feature is assigned to a line by service order and cannot be activated or deactivated by the subscriber. If CFIMB is "Y", the CFBL feature assigned to this line must be defined on a CFWFD form

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with ACT TYPE "AUTO" and DACT TYPE "NONE".

A TN that is assigned a CFBL-IMB feature must have a make busy key. When a TN is assigned a CFBL feature (via a LINEFA, BFG, or associated CLUSTR form) and has the IMB option set to "Y", the MAKE BUSY KEY must be entered on the LINE form (5109 Record).

2.20 CFILB

Description: Should the Call Forward Inhibit Line Busy option be activated? If CFILB is "Y", the CFBL (Call Forwarding Busy Line) feature assigned to this line will be inhibited when the line is busy and the subscriber has not activated the Make Busy Key. Incoming calls in that case will be routed to busy or overflow tone, as determined by the OVF CFI field. If the make busy key is on, incoming calls receive the normal CFBL treatment.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A Call Forward feature may not have both the Inhibit Make Busy and Inhibit Line Busy options. If CFIMB is "Y", CFILB must be "N".

The Inhibit Line Busy option applies only to Call Forwarding Busy Line features. If CFILB is "Y", the CFBL feature assigned to this line must be defined on a CFWFD form with FWDCOND set to "BUSY".

A CFBL-ILB feature is assigned to a line by service order and cannot be activated or deactivated by the subscriber. If CFILB is "Y", the CFBL feature assigned to this line must be defined on a CFWFD form with ACT TYPE "AUTO" and DACT TYPE "NONE".

A TN that is assigned a CFBL-ILB feature must have a make busy key. When a TN is assigned a CFBL feature (via a LINEFA, BFG, or associated CLUSTR form) and has the ILB option set to "Y", the MAKE BUSY KEY must be entered on the LINE form (5109 Record).

2.21 OVF CFI

Description: Should overflow (reorder) tone be returned to a caller when the call is not forwarded because of CFIMB or CFILB? If this field is "N", the caller will receive a busy tone.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This option only applies to Call Forward Busy Line features having the Inhibit Make Busy or the Inhibit Line Busy option. If OVF CFI is "Y", either CFIMB or CFILB must be "Y".

2.22 FCCS OPT

Description: Is the Forwarded Call - Call Screening feature option active on this line?

Software Release: 5E14 and later
Required field.
Default: N
Valid Entries: Y, N

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Data Rules:

When FCCS OPT is "Y", the following must be true:

On the CFWFD form:

- ACT TYPE must be "AUTO" or "CODE"
- DACT TYPE must be "CODE" or "NONE"
- CHANGE FWD TO DN must be "N"
- FWD CONDITION must be "BUSY"or "IDLE"

On the LINE form:

- SHARED must "N"
- SERHLN must be unknown
- ASSOC OE must be unknown
- this TN must be defined

On the LCC form, LINE CLASS CODE and TERMINATING TREATMENT must both be "INDIV".

This TN must not be defined on the MLHLN form.

For 5E16 and later:

When FCCS OPT is "Y" and on the CFWFD form (5614-1 Record) the ACT TYPE or DACT TYPE field is set to "CODE", the ACT field for SFID 592 on the SFSYS form (5713-1 Record) must be set to "Y".

When FCCS OPT is "Y" and on the CFWFD form (5614-1 Record) the ACT TYPE field is set to "AUTO" or the DACT TYPE is set to "NONE", the ACT field for SFID 526 on the SFSYS form must be set to "Y".

When FCCS OPT is "Y" and on the CFWFD form (5614-1 Record), FWD CONDITION must be set to "BUSY" or "IDLE", ACT TYPE must be set to "AUTO" or "CODE", DACT TYPE must be set to "CODE" or "NONE", and CHANGE FWD TO DN must be set "N".

On the SFSYS form the ACT field must be "Y" for SFID 526.

2.23 CFDARC

Description: Activate the Call Forward Don't Answer Ring Control option? This field specifies whether or not the Call Forwarding Don't Answer Ring Control is active for this line.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When CFDARC is "Y":

- the ACT field for SFID 335 on the SFSYS form (5713-1 Record) must be "Y".
- the corresponding CFWFD form (5614-1/2 Record) must have FWD CONDITION set to "DIDL",

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"IDLE", "PIDL", or "PRCI", and CHANGE DON'T ANSWER TIMING set to "Y".

2.24 CFV ALERT

Description: This field indicates whether the Call Forwarding Variable Alert option is active for this line.

Software Release: 5E12 and later
Valid Entries: Y, N

Data Rules:

When CFV ALERT is set to "Y", the ACT field for SFID 341 on the SFSYS form (5713-1 Record) must also be set to "Y".

When CFV ALERT is set to "Y", FWD CONDITION on the CFWFD form (5614-1/2 Record) must be set to "BOTH".

2.25 INH CF MASTER

Description: Is Call Forwarding inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CF MASTER must be "N".

If INH CF MASTER is "Y", then INH CF DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.26 INH CF DEPEND

Description: Is Call Forwarding inhibited for the dependent TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CF DEPEND must be "N".

If INH CF DEPEND is "Y", then INH CF MASTER must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.27 INHIBIT MDNL CF

Description: This field is used in determining whether or not Call Forwarding is inhibited for the master telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

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Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CF must be "NONE".

```
cfwlpa                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5614-3a/b)       CALL FORWARDING LINE (TN) PARAMETERS

*1. TN                 __________
*2. FEATURE            _________
 3. FORWARD TO DN      ____________________________________
 4. ACCT CODE          ________________
 5. ATH CODE           ________________
 6. DON'T ANSWER TIMING     30
 7. SIMUL INTEROFF FWD CALLS 01
 8. SIMUL INTRAOFF FWD CALLS 99
 9. SEQ ACT FWD LEGS        05
10. BASE STA RING IND?      Y
11. MDNL ENHANCED           N
12. MDNL FWD              ALL
```

```
cfwlpa                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5614-3a/b)       CALL FORWARDING LINE (TN) PARAMETERS

13. MDNL RCF      ALL
15. CFDA AFTER CW _
16. CFIMB         N
17. CFILB         N
18. OVF CFI       N
19. CFDARC        N
20. CFV ALERT     N
```

Figure 1 SAMPLE CFWLPA FORM 5E12 THROUGH 5E13 SOFTWARE RELEASES

```
cfwlpa                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5614-3a/b)       CALL FORWARDING LINE (TN) PARAMETERS

*1. TN                 __________
*2. FEATURE            _________
 3. FORWARD TO DN      ____________________________________
 4. ACCT CODE          ________________
 5. ATH CODE           ________________
 6. DON'T ANSWER TIMING     30
 7. SIMUL INTEROFF FWD CALLS 01
 8. SIMUL INTRAOFF FWD CALLS 99
 9. SEQ ACT FWD LEGS        05
10. BASE STA RING IND?      Y
11. MDNL ENHANCED           N
```

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12. MDNL FWD ALL

---

cfwlpa 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5614-3a/b) CALL FORWARDING LINE (TN) PARAMETERS

13. MDNL RCF ALL
15. CFDA AFTER CW _
16. CFIMB N
17. CFILB N
18. OVF CFI N
19. FCCS OPT N
20. CFDARC N
21. CFV ALERT N
22. INH CF MASTER N
23. INH CF DEPEND N

Figure 2 SAMPLE CFWLPA FORM 5E14 SOFTWARE RELEASES

---

cfwlpa 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5614-3a/b) CALL FORWARDING LINE (TN) PARAMETERS

*1. TN _____
*2. FEATURE _____
3. FORWARD TO DN _____
4. ACCT CODE _____
5. ATH CODE _____
6. DON'T ANSWER TIMING 30
7. SIMUL INTEROFF FWD CALLS 01
8. SIMUL INTRAOFF FWD CALLS 99
9. SEQ ACT FWD LEGS 05
10. BASE STA RING IND? Y
11. MDNL ENHANCED N
12. MDNL FWD ALL

---

cfwlpa 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5614-3a/b) CALL FORWARDING LINE (TN) PARAMETERS

13. MDNL RCF ALL
15. CFDA AFTER CW _
16. CFIMB N
17. CFILB N
18. OVF CFI N
19. FCCS OPT N
20. CFDARC N
21. CFV ALERT N
22. INHIBIT MDNL CF NONE

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Figure 3 SAMPLE CFWLPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 15C: 5614-4 RECORD
CALL FORWARDING LINE (MLHG/TERM) PARAMETER FORM - CFWMPA

1. GENERAL

The 5614-4 Record is available with the 5E2 and later Software Releases. It is used to define specific parameters assigned to every Multi-Line Hunt Line assigned a specific constructed Call Forwarding feature. It is required only if the default parameters assigned on the CFWFD form are inappropriate.

1.1 CFW Assignment Restrictions

The following are restrictions for Call Forwarding features assigned to Multi-Line Hunt lines:

- Only one Call Forwarding Busy (FWD CONDITION equals "BUSY" on the CFWFD form) and one Call Forwarding Variable (FWD CONDITION equals "BOTH" on the CFWFD form) can be assigned to Multi-Line Hunt lines.
- If a Call Forwarding Busy is assigned to a Multi-Line Hunt line, then CF BUSY on the associated MLHGFD form must be "Y".
- If a Call Forwarding Variable feature is assigned to Multi-Line Hunt lines, then CF VARIABLE on the associated MLHGFD form must be "Y".
- If a Call Forwarding feature with forward to Directory Number specified on either CFWFD form or CFWMPA form is assigned to Multi-Line Hunt lines, and the associated HUNT TYPE on the MLHGFD form does not equal "MUPH", then forward to Directory Number must not be the same as LISTED TN on the associated MLHG form.
- If a Call Forwarding feature with forward to Directory Number specified on either CFWFD form or CFWMPA form is assigned to Multi-Line Hunt Lines, and the associated Hunt Type on MLHGFD form equals MUPH, then forward to Directory Number must not be the same as SUBTN(i), where i ranges from 1 to 6 and SUBTN(i) is specified on the associated MLHG form.

1.2 Recent Change View

The corresponding Recent Change View for this form is 3.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *MLHG

Description: Enter a four digit Multi-Line Hunt Group Number.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 *TERM

Description: Enter the Multi-Line Hunt Member Number.

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Valid Entries: 4-digits

Data Rules:

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be one of the following:

CLASS OF SERVICE	
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network (ISDN) digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
SATSTLN	Stand-Alone Test Line.
4WINDIV	Software Release: 5E3 and later. 4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Software Release: 5E3 and later. Line to a PBX.

2.4 *FEATURE

Description: Enter the Feature Name.
Valid Entries: 1 - 8 characters

2.5 FORWARD TO DN

Description: Enter the Forward To Directory Number.
Valid Entries: up to 32 characters (0 - 9, *, and/or #)

Data Rules:

If FORWARD TO DN is specified, then ACT TYPE on the CFWFD form must equal "AUTO", "CODE", or "KEY".

For 5E3 and later, the FORWARD TO DN is required when the FWD CONDITION on the CFWFD form (5614-1 Record) is "BUSY", "IDLE", or "BOTH".

The FORWARD TO DN will be translated during call processing using the originator's dialing plan(s). Therefore, if the originator has an Individualized Dialing feature with an IDP group, the digits entered must be successful using the IDPDCA form entries. For example, if the originator normally dials an intercom digit string of four digits to call a phone, then the four digits should be entered here to forward to the same phone.

For 5E5 and later, when CFPF ALW is "Y" on the associated CFWFD form, this field can contain the following codes in many different dialing sequences:

- PFA access code
- Account Code use code
- Authorization Code use code
- ARS use code
- Directory Number

The account and authorization codes are entered in the ACCT CODE and ATH CODE fields.

2.6 ACCT CODE

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Description: Enter the Account Code used by Call Forwarding Over Private Facility for the invocation of CFPF.

Software Release: 5E5 and later
Valid Entries: up to 15 characters (0 - 9, *, and/or #)

Data Rules:

When ACCT CODE is entered, then CFPF ALW must be "Y" on the associated CFWFD form and FORWARD TO DN must contain an Account Use code along with the DN and other use codes.

When this field is entered, an associated Account Code feature defined on the ACCTFD form (5623-1 Record) must be assigned on the associated LINEFA, MLHLNFA, BFG, or CLUSTR form with the feature active to allow calls to be forwarded with this account code.

2.7 ATH CODE

Description: This field allows the Authorization Code used by Call Forwarding Over Private Facilities to be defaulted for CFPF invocations.

Software Release: 5E5 and later
Valid Entries:
- For 5E5 - 5E7: 1 - 15 characters (0 - 9, *, #)
- For 5E8 and later: 1 - 15 digits

Data Rules:

When ATH CODE is entered, then CFPF ALW must be "Y" on the associated CFWFD form and FORWARD TO DN must contain an Authorization Use code along with the DN and other use codes.

When this field is entered, an associated Authorization feature defined on the ATHFD form (5619-1 Record) must be assigned to the associated LINEFA, MLHLNFA, BFG, or CLUSTR form with the feature active to allow calls to be forwarded with this authorization code.

2.8 DON'T ANSWER TIMING

Description: For the Call Forward Don't Answer feature, enter the time delay (in seconds) before a call will be forwarded.
Default: 30
Valid Entries: 0 - 60

Data Rules:

If this field is greater than 0, then FWD CONDITION on the CFWFD form must be equal to "IDLE", "PRCI" or "PIDL".

For 5E5 and later, this field must have a value of 4 to 60 when the associated CFWFD form has a FWD CONDITION with a value of "IDLE" or "PIDL" to allow the terminal to be rung at least once before it is considered idle and the call is Forwarded. During a retrofit to 5E5, if this field has a value of 0 to 3 and the above conditions are met, this field will be evolved to the value of 4.

2.9 SIMUL INTEROFF FWD CALLS

Description: Enter maximum number of simultaneously active interoffice calls allowed between base station and forward to DN.
Default: 1
Valid Entries: 1 - 99

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Data Rules:

If the forward to directory number resides in a MLHG, it is recommended that the valid entries are from 1 to the maximum number of lines within the MLHG. Entering the value of the maximum size of the MLHG allows efficient use of all terminals within the forward to MLHG. If the base TN is terminal 1 in a MLHG, the entry can be defined as the size of the base MLHG to ensure that the number of simultaneously forwarded calls is equivalent to the number of calls that could be completed to the MLHG without the call forwarding feature being present.

2.10 SIMUL INTRAOFF FWD CALLS

Description: Enter maximum number of simultaneously active intraoffice calls allowed between the base station and forward to DN.
Default: 99
Valid Entries: 1 - 99

2.11 SEQ ACT FWD LEGS

Description: Enter maximum number of Call Forwarding legs allowed to be sequentially forwarded. The SEQ ACT FWD LEGS limit is exceeded if any individual line in a Call Forwarding chain has its limit exceeded.
Default: 5
Valid Entries: 1 - 32

2.12 BASE STA RING IND

Description: Should the Base Station Ringing Indicator be allowed? The Base Station Ringing Indicator is a normal ring of 0.5 seconds duration which is applied to an idle line indicating that an incoming call to that line is being forwarded.
Default: Y
Valid Entries: Y, N

2.13 ANNC RTI

Description: This field is not used. For 5E7 and later, it was removed from the form.

Software Release: 5E5 and 5E6 only

2.14 CFDA AFTER CW

Description: Will the line have unanswered call waiting calls forwarded to a remote DN when there is a CFDA feature assigned to the line?

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

If the Secured Feature ID is not set to "S" on the SFSYS form (5713 Record) the value of the CFDA AFTER CW must be either blank or set to "Y" for unshared analog MLHG terminals.

If CFDA AFTER CW is set to "Y", the MLHG/TERM must be assigned a CFDA feature that is defined on the CFWFD form with a FWD CONDITION of "IDLE".

If CFDA AFTER CW is set to "Y", the MLHG/TERM cannot be defined on a DSLUSR form (5908 Record).

When CFDA AFTER CW is not entered, it is set to "Y" for unshared analog lines with CFDA features and

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"N" for all other lines.

2.15 CFIMB

Description: Should the Call Forward Inhibit Make Busy option be activated? If CFIMB is "Y", the CFBL (Call Forwarding Busy Line) feature assigned to this MLHG will be inhibited when the subscriber has made the line busy by activating the group Make Busy Key or Feature Button. Incoming calls in that case will be routed to busy (or overflow) tone as determined by the OVF CFI field. When the make busy key or feature button is not activated, incoming calls receive the normal CFBL treatment.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A Call Forward feature may not have both the Inhibit Make Busy and Inhibit Line Busy options. If CFILB is "Y", CFIMB must be "N".

The Inhibit Make Busy option applies only to Call Forwarding Busy Line features. If CFIMB is "Y", the FEATURE on this form must be defined on a CFWFD form with FWDCOND set to "BUSY".

A CFBL-IMB feature is assigned to a MLHG by service order and cannot be activated or deactivated by the subscriber. If CFIMB is "Y", the FEATURE on this form must be defined on a CFWFD form with ACT TYPE "AUTO" and DACT TYPE "NONE".

An MLHG that is assigned a CFBL-IMB feature must have a group make busy key or feature button. When an MLHG/TERM is assigned a CFBL feature (via an MLHLNFA, BFG, or associated CLUSTR form) and has the IMB option set to "Y", it must also be assigned a group make busy key/button in one of two ways:

- the GROUP MAKE BUSY KEY on the corresponding MLHG form (5110 Record) may be entered; or
- if Member 1 of the MLHG is defined on a DSLUSR form (5908 Record), there may be a corresponding entry on a CFGGRP form (5964 Record) with ACTION set to "BYGP".

A CFBL-IMB feature may be assigned to regular, circular, and UCD Multi-Line Hunt Groups. The MLHG FEATURE assigned on the MLHG form must be defined on an MLHGFD form (5604 Record) with HUNT TYPE equal to "REG", "HTC", or "UCD".

2.16 CFILB

Description: Should the Call Forward Inhibit Line Busy option be activated? If CFILB is "Y", the CFBL (Call Forwarding Busy Line) feature assigned to this MLHG will be inhibited when the MLHG is busy and the subscriber has NOT activated the group Make Busy Key or Feature Button. Incoming calls in that case will be routed to busy (or overflow) tone, as determined by the OVF CFI field, when the MLHG is busy. If the make busy key or feature button is on, incoming calls receive the normal CFBL treatment.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

A Call Forward feature may not have both the Inhibit Make Busy and Inhibit Line Busy options. If CFIMB is

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"Y", CFILB must be "N".

The Inhibit Line Busy option applies only to Call Forwarding Busy Line features. If CFILB is "Y", the FEATURE on this form must be defined on a CFWFD form with FWDCOND set to "BUSY".

A CFBL-ILB feature is assigned to a MLHG by service order and cannot be activated or deactivated by the subscriber. If CFILB is "Y", the FEATURE on this form must be defined on a CFWFD form with ACT TYPE "AUTO" and DACT TYPE "NONE".

An MLHG that is assigned a CFBL-ILB feature must have a group make busy key or feature button. When an MLHG/TERM is assigned a CFBL feature (via an MLHLNFA, BFG, or associated CLUSTR form) and has the IMB option set to "Y", it must also be assigned a group make busy key/button in one of two ways:

- the GROUP MAKE BUSY KEY on the corresponding MLHG form may be entered; or
- if Member 1 of the MLHG is defined on a DSLUSR form, there may be a corresponding entry on a CFGGRP form with ACTION set to "BYGP".

A CFBL-ILB feature may be assigned to regular, circular, and UCD Multi-Line Hunt Groups. The MLHG FEATURE assigned on the MLHG form must be defined on an MLHGFD form with HUNT TYPE equal to "REG", "HTC", or "UCD".

2.17 OVF CFI

Description: Should overflow (reorder) tone be returned to a caller when the call is not forwarded because of CFIMB or CFILB? If this field is "N", the caller will receive a busy tone.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This option only applies to Call Forward Busy Line features having the Inhibit Make Busy or the Inhibit Line Busy option. If OVF CFI is "Y", either CFIMB or CFILB must be "Y".

2.18 FCCS OPT

Description: This field is used to determine whether or not THE FCCS (Forwarded Call - Call Screening) feature option be used. This is a No Change field.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

2.19 CFDARC

Description: Activate the Call Forward Don't Answer Ring Control option? This field specifies whether or not the Call Forwarding Don't Answer Ring Control is active for this line.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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When CFDARC is "Y":

- the ACT field for SFID 335 on the SFSYS form (5713-1 Record) must be set to "Y".
- the corresponding CFWFD form (5614-1/2 Record) must have FWD CONDITION set to "DIDL", "IDLE", "PIDL", or "PRCI", and CHANGE DON'T ANSWER TIMING set to "Y".

2.20 CFV ALERT

Description: This field indicates whether the Call Forwarding Variable Alert option is active for this line.

Software Release: 5E12 and later
Valid Entries: Y, N

Data Rules:

When CFV ALERT is set to "Y", the ACT field for SFID 341 on the SFSYS form (5713-1 Record) must also be set to "Y".

When CFV ALERT is set to "Y", FWD CONDITION on the CFWFD form (5614-1/2 Record) must be set to "BOTH".

2.21 INH CF MASTER

Description: Is Call Forwarding inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CF MASTER must be "N".

If INH CF MASTER is "Y", then INH CF DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.22 INH CF DEPEND

Description: Is Call Forwarding inhibited for the depend TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CF DEPEND must be "N".

If INH CF MASTER is "Y", then INH CF DEPEND must be "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

2.23 INHIBIT MDNL CF

Description: This field is used in determining whether or not Call Forwarding is inhibited for the master

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telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CF must be "NONE".

```
cfwmpa                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5614-4)       CALL FORWARDING LINE (MLHG/TERM) PARAMETERS

*1. MLHG              ____                  13. CFIMB     N
*2. TERM              ____                  14. CFILB     N
*3. FEATURE           ________                  15. OVF CFI   N
 4. FORWARD TO DN     ____________________________  16. CFDARC    N
 5. ACCT CODE         ________________          17. CFV ALERT N
 6. ATH CODE          ________________
 7. DON'T ANSWER TIMING     30
 8. SIMUL INTEROFF FWD CALLS 01
 9. SIMUL INTRAOFF FWD CALLS 99
10. SEQ ACT FWD LEGS        05
11. BASE STA RING IND?      Y
12. CFDA AFTER CW           _
```

Figure 1 SAMPLE CFWMPA FORM 5E12 AND 5E13 SOFTWARE RELEASES

```
cfwmpa                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5614-4)       CALL FORWARDING LINE (MLHG/TERM) PARAMETERS

*1. MLHG              ____
*2. TERM              ____
*3. FEATURE           ________
 4. FORWARD TO DN     ____________________________
 5. ACCT CODE         ________________
 6. ATH CODE          ________________
 7. DON'T ANSWER TIMING     30
 8. SIMUL INTEROFF FWD CALLS 01
 9. SIMUL INTRAOFF FWD CALLS 99
10. SEQ ACT FWD LEGS        05
11. BASE STA RING IND?      Y
12. CFDA AFTER CW           _
```

```
cfwmpa                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5614-4)       CALL FORWARDING LINE (MLHG/TERM) PARAMETERS

13. CFIMB       N
14. CFILB       N
```

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15. OVF CFI N
FCCS OPT N
17. CFDARC N
18. CFV ALERT N
INH CF MASTER N
INH CF DEPEND N

Figure 2 SAMPLE CFWMPA FORM 5E14 SOFTWARE RELEASES

cfwmpa 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5614-4) CALL FORWARDING LINE (MLHG/TERM) PARAMETERS

*1. MLHG ____
*2. TERM ____
*3. FEATURE _____
4. FORWARD TO DN _____
5. ACCT CODE _____
6. ATH CODE _____
7. DON'T ANSWER TIMING 30
8. SIMUL INTEROFF FWD CALLS 01
9. SIMUL INTRAOFF FWD CALLS 99
10. SEQ ACT FWD LEGS 05
11. BASE STA RING IND? Y
12. CFDA AFTER CW _

cfwmpa 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5614-4) CALL FORWARDING LINE (MLHG/TERM) PARAMETERS

13. CFIMB N
14. CFILB N
15. OVF CFI N
FCCS OPT N
17. CFDARC N
18. CFV ALERT N
INHIBIT MDNL CF NONE

Figure 3 SAMPLE CFWMPA FORM 5E15 - 5E16 SOFTWARE RELEASES

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SEC. 16: MEASUREMENTS PARAMETER DEFINITION FORM

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SEC. 16A: 5615 RECORD
MEASUREMENTS PARAMETER DEFINITION RECORD - MEASPDF

1. GENERAL

The 5615 Record is available with the 5E2 and later Software Releases. It is used to define measurements for various groups of features. With this capability the customer will be able to determine the impact of a given feature environment on the office with a great deal of flexibility. The features that the customer can control measurements for are:

- Constructed BRCS Features
- Individualized Dialing Plan Groups
- Terminal Groups
- Multi-Line Hunt Groups
- Attendant Multi-Line Hunt Groups
- Simulated Facility Groups (PFA)

Measurement groups must correspond to group numbers or feature names defined on the proper feature definition or parameter forms. The following list of modular features and their forms correspond to features that can be measured. If a measurement type is selected for measurement it must have been defined on one of these forms:

A. CONFT (Constructed Features)

Following is a list of feature definition forms for the constructed (including preconstructed) features which can be measured. These are the only constructed features which can be measured as such. The MLHG, Terminal Group and ARS constructed features cannot be measured as constructed feature members.

1. CFWFD - Call Forwarding

   Feature Definition form

   (5614-1/2 Record)

2. CWTFD - Call Waiting

   Feature Definition form

   (5603-1 Record)

3. DRFD - Distinctive Ringing

   Feature Definition form

   (5606-1 Record)

4. IDFD - Individualized Dialing

   Feature Definition form

   (5601 Record)

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5. MWFD - Multiway Calling

   Feature Definition form

   (5602-1/2 Record)

6. PUOFD - Call Pick-up Originating

   Feature Definition form

   (5605-1a/b Record)

7. PUTFD - Call Pick-up Terminating

   Feature Definition form

   (5605-2a/b Record)

B. IDP Group Names must be defined on an IDFD form.

C. Terminal Groups must be defined as a GROUP ID with values of 1 - 65535 on either a TGSRFD form (5607-1/2 Record), a TGSRLPA form (5607-3 Record), a TGSRMPA form (5607-4 Record) or a TGSRTPA form (5607-5 Record).

D. Multi-Line Hunt Groups must be defined on an MLHG form (5110-1 Record).

E. Attendant Multi-Line Hunt Groups are MLHG Numbers defined on an MLHG form where the associated MLHG Members are assigned on MLHLN forms (5111-1 Record) with an LCC and RAX combination that is defined on an LCC form (5306 Record) with a CLASS OF SERVICE equal to "ATND".

1.1 Recent Change View

The corresponding Recent Change view for this form is 13.3.

2. FORM AND RECORD ENTRIES

2.1 * MEASUREMENT TYPE

Description: Enter the type of measurement.

Valid MEASUREMENT TYPE Entries

Entry	Definition
ACSR	Software Release: 5E5 and later. Automatic Customer Station Rearrangement Group, which is defined on an ACSRGP form (5959-2 Record). A maximum of 25 MEASPDF forms may be entered with MEASUREMENT TYPE set to "ACSR".
ATTGP	Multi-Line Hunt Groups defined on an MLHG form whoseassociated Members or Terminal Numbers are assigned a Classof Service of "ATND" or "ISATND"for Attendant Service. A maximum of 200 measurement-type entries of "ATTGP" are allowed.
CONFT	Preconstructed or switch constructed Feature Names. A maximum of 100 measurement-type entries of "CONFT" are allowed.
IDGP	Individualized Dialing Plan Group Name defined on an IDPGP and associated Individualized Dialing Feature Definition forms. A maximum of 150 measurement-type entries of "IDGP" are allowed.
LNQAN	Line Queue Announcements defined on a QUGPA form with matching GROUP NUMBER and a GROUP TYPE of "LINE". A maximum of 100 measurement-type entries of "LNQAN" are allowed.
LNQU	Line Queue defined on a QUGPA form (5617-3/4 Record) with matching GROUP NUMBER and a GROUP TYPE of "LINE". A maximum of 100 measurement-type entries of "LNQU" are allowed.
MLHGP	Multi-Line Hunt Group Numbers defined on an MLHG form. A maximum of 200 measurement-type

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	entries of "MLHGP" are allowed.
PFAGP	Simulated Facility Group Number defined on a PFASFG form (5609-3 Record) associated with the Private Facility capability. A maximum of 200 measurement-type entries of "PFAGP" are allowed.
PPGP	Precedence and Preemption Group which is defined as a special Terminal Group on a PPSCRN form (5618-2 Record) where all associated members are also assigned a PP feature. Up to 10 PP Groups may be specified.
SFQAN	Software Release: 5E3 and later. SFG Queue Announcements defined on a QUGPA form with matching GROUP NUMBER and a GROUP TYPE of "SFG". A maximum of 75 measurement-type entries of "SFQAN" are allowed.
SFQU	Software Release: 5E3 and later. SFG Queue defined on a QUGPA form with matching GROUP NUMBER and a GROUP TYPE of "SFG". A maximum of 75 measurement-type entries of "SFQU" are allowed.
TERMGP	Terminal Group Numbers, defined as a GROUP ID on the Terminal Group Station Restriction forms. A maximum of 200 measurement-type entries of "TERMGP" are allowed.
TKQAN	Software Release: 5E3 and later. Trunk Queue Announcements defined on a QUGPA form with matching GROUP NUMBER and a GROUP TYPE of "TRK". A maximum of 75 measurement-type entries of "TKQAN" are allowed.
TKQU	Software Release: 5E3 and later. Trunk Queue defined on a QUGPA form with matching GROUP NUMBER and a GROUP TYPE of "TRK". A maximum of 75 measurement-type entries of "TKQU" are allowed.

Data Rules:

For every MEASUREMENT TYPE entered, either a NAME or a GROUP NUMBER must be specified. Both of these fields cannot be entered for a single MEASUREMENT TYPE.

If MEASUREMENT TYPE is "ATTGP", "PFAGP", "MLHGP", "TERMGP", "PPGP", "LNQU", "LNQAN", "TKQU", "TKQAN", "SFQU" or "SFQAN", then a GROUP NUMBER must be specified.

If MEASUREMENT TYPE is "ACSR", "CONFT" or "IDGP", then NAME must be specified with an ACSR Group Name, a BRCS Feature Name or an IDP Group Name.

For 5E7 and later if MEASUREMENT TYPE is "LNQU" OR "LNQAN", at least one MLHG member must be assigned to the MLHG represented by the GROUP NUMBER.

2.2 (*) NAME

Description: Optional key field which is dependent on the value of the MEASUREMENT TYPE field as follows.

MEASUREMENT TYPE	NAME
ACSR	Software Release: 5E5 and later. Enter the ACSR GRP defined on an ACSRGP form.
CONFT	Enter valid BRCS Feature Names from any of the following Feature Definition forms: CFWFD, CWTFD, DRFD, IDFD, MWFD, PUOFD, PUTFD.
IDGP	Enter the IDP GROUP NAME defined on an IDPGP form (5601-4 Record).

2.3 (*) GROUP NUMBER

Description: Optional key field which is dependent on the value of the MEASUREMENT TYPE field as follows.

MEASUREMENT TYPE	GROUP NUMBER
MLHGP, ATTGP, LNQU, or LNQAN	Enter valid MLHG Number in the range of 1 - 1 for 5E14 and earlier or 1 - 8191 for 5E15 and later.
PFAGP, SFQU, or SFQAN	Enter a valid SFG Number in the range 1 - 2000.
TERMGP or PPGP	Enter a valid Terminal Group ID in the range 1 - 65535.
TKQU or TKQAN	Enter a valid Trunk Group Number in the range 1 - 2000.

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(5615) OFFICE DATA ADMINISTRATION
MEASUREMENT PARAMETER DEFINITION

* 1. MEASUREMENT TYPE ACSR
(*)2. NAME ACSRGP1
(*)3. GROUP NUMBER _____

Figure 1 SAMPLE MEASPDF FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 17: AUTOMATIC CALL-BACK FEATURE FORMS

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SEC. 17A: 5616-1 RECORD
AUTOMATIC CALL-BACK FEATURE DEFINITION FORM - ACBFD

1. GENERAL

The 5616-1 Record is available with the 5E2 and later Software Releases. It is used to define various combinations of Automatic Call-Back options for assignment to lines and/or trunks. Each combination is given a feature name of one to eight characters which is used to assign the constructed (defined) feature to lines. Certain ACB features are pre-defined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/) and the slash may not be used as the first character is any feature other than preconstructed features. A list of the preconstructed ACB features is contained in Figure 1 .

The Automatic Call-Back feature enables a calling party encountering a busy station to dial an activation code and be automatically called back when the called station becomes idle.

The ACB features can be assigned only to lines that have a Class of Service of "INDIV", "PBX" or "4WINDIV" on the LCC form (5306 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 12.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name.

2.2 * FEATURE

Description: Enter the automatic call-back feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed, or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

2.4 INTRAGROUP CALLBACK ONLY

Description: Is camp-on allowed only within the originator's Terminal Group? Enter "N" to indicate that a line assigned this feature can camp-on a line outside of the originator's terminal group (but within the 5ESS office).
Valid Entries: Y, N

Data Rules:

If this field is "Y", then this ACB Feature, which is assigned on the associated feature form (LINEFA, MLHLNFA or CLUSTR), must also have a TGSR (Terminal Group Station Restriction) feature defined on the TGSRFD form.

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2.5 FLAT RATE

Description: Is billing at a flat rate? "Y" is the default and only value allowed.
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered, neither a camp-on charge nor a connection charge is allowed. If "N" is entered, either a camp-on or a connection charge, or both must be "Y".

2.6 CAMP-ON CHARGE

Description: Is the customer billed for each use of Automatic Call-Back, i.e. each time the customer camps on to another line? Enter "N" if not. "N" is the default and only allowed entry.
Default: N
Valid Entries: Y, N

Data Rules:

This item must be "N" if FLAT RATE is "Y".

2.7 CONNECTION CHARGE

Description: Is the customer billed for each connection to a camped-on line? Enter "N" if not. "N" is the default and only allowed entry.
Default: N
Valid Entries: Y, N

Data Rules:

This item must be "N" if FLAT RATE is "Y".

DEFAULT PARAMETERS

The default parameters (fields Section 2.8 - Section 2.9) are automatically assigned to lines when the lines are assigned the Automatic Call-Back feature unless an ACBLPA form is entered with the line to specify a different set of parameters.

2.8 RINGING PATTERN

Description: Enter the pattern of ringing to be given to the originator when the camped-on line becomes idle.
Default: C
Valid Entries:

Valid RINGING PATTERN Entries

Entry	Definition
A	For a ringing pattern of 2 seconds on, 4 seconds off, repeated for the duration of the ringing interval.
B	For a ringing pattern of 0.8 seconds on, 0.4 seconds off, repeated for the duration of the ringing interval.
C	For a ringing pattern of 0.4 seconds on, 0.2 seconds off, repeated for the duration of the ringing interval.
D	For a ringing pattern of 1 second on, 1 second off, 1 second on, 3 seconds off, repeated for the duration of the ringing interval.
E	For a routine ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
F	For a priority ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
P	For a precedence ringing pattern of 1640 milliseconds on, 360 milliseconds off, repeated for the duration of the ringing interval.

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2.9 RINGING INTERVAL

Description: Enter the interval (in seconds) of ringing to be provided to the originator when the camped-on line becomes idle.
Default: 24
Valid Entries: 24, 30, 36, 42 and 48 (seconds)

ESS 5616-1 TG-5 AUTOMATIC CALL - BACK DATE _____
FEATURE DEFINITION RECORD
ACBFD
5ESS SWITCH
12.10
BASE_____CONT GR____ 5ESS UNIT _____

FEATURE NAME	REMARKS	IGONRN TOL RUY AP	BILLING FCOLAN TM P	CONAN NTG	DEF PARAM RPOIA NTG	RINNTG
/ACBC	AUTO CALL-BACK CALLING	Y	Y N	N	C	24
/CB*	WILD CARD AUTO CALL BACK	Y	Y N	N	C	24

Figure 1 PRECONSTRUCTED ACB FEATURES 5E5 AND LATER SOFTWARE RELEASES

---

acbfd 5ESS Switch _
(5616-1) OFFICE DATA ADMINISTRATION
AUTOMATIC CALL-BACK FEATURE DEFINITION

* 2. FEATURE NAME ACB3 3. REMARKS _____

4. INTRAGROUP CALLBACK ONLY Y
5. FLAT RATE Y
6. CAMP-ON CHARGE N
7. CONNECTION CHARGE N

DEFAULT PARAMETERS:
8. RINGING PATTERN C
9. RINGING INTERVAL 24

Figure 2 SAMPLE ACBFD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 17B: 5616-2 RECORD AUTOMATIC CALL-BACK LINE (TN) PARAMETERS FORM - ACBLPA

1. GENERAL

The 5616-2 Record is available with 5E2 and later Software Releases. It is used when assigning ACB features to non-Multi-Line Hunt lines when the default parameters associated with the ACB feature (defined on an ACBFD form) are inappropriate or unspecified. Do not enter this record if the ACBFD form (5616-1 Record) default parameters are acceptable.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the line.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The Telephone Number entered here must be defined on a LINE form (5109 Record).

The TN entered must also be entered in the TN field on a LINEFA form (5112 Record).

The associated CLASS OF SERVICE on an LCC form (5306 Record) must be one of the following.

Class of Service	
Entry	**Definition**
INDIV	Individual Line
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Line to a PBX.

For 5E12 and later, TN/FEATURE combinations on different ACBLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ACBLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the ACB feature for which the parameters are to be assigned. The name entered here must be that of a non-"wild card" ACB feature defined on an ACBFD form.

Required Field.

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Valid Entries: 1 - 8 characters

Data Rules:

The feature entered must appear on a LINEFA form or a CLUSTR form (5600 Record) or a BFG form (5625 Record) which is associated with the TN on this form.

2.4 RINGING PATTERN

Description: Enter the pattern of ringing to be given to the originator when the camped-on line becomes idle.

Required Field.
Default: C
Valid Entries:

Valid RINGING PATTERN Entries

Entry	Definition
A	For a ringing pattern of 2 seconds on, 4 seconds off, repeated for the duration of the ringing interval.
B	For a ringing pattern of 0.8 seconds on, 0.4 seconds off, repeated for the duration of the ringing interval.
C	For a ringing pattern of 0.4 seconds on, 0.2 seconds off, repeated for the duration of the ringing interval.
D	For a ringing pattern of 1 second on, 1 second off, 1 second on, 3 seconds off, repeated for the duration of the ringing interval.
E	For a routine ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a CLASS OF SERVICE of "4WINDIV" on an LCC form.
F	For a priority ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a CLASS OF SERVICE of "4WINDIV" on an LCC form.
P	For a precedence ringing pattern of 1640 milliseconds on, 360 milliseconds off, repeated for the duration of the ringing interval.

2.5 RINGING INTERVAL

Description: Enter the interval (in seconds) of ringing to be provided to the originator when the camped-on line becomes idle.

Required Field.
Default: 24
Valid Entries: 24, 30, 36, 42 and 48 (seconds)

```
acblpa                    5ESS Switch                _
(5616-2)              OFFICE DATA ADMINISTRATION
                AUTOMATIC CALL-BACK LINE (TN) PARAMETERS


* 1. TN              7265301
* 2. FEATURE         ACB1

  3. RINGING PATTERN   A
  4. RINGING INTERVAL  48
```

Figure 1 SAMPLE ACBLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
acblpa                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(5616-2)          AUTOMATIC CALL-BACK LINE (TN) PARAMETERS
```

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*1. TN _____
*2. FEATURE _____

3. RINGING PATTERN C
4. RINGING INTERVAL 24

Figure 2 SAMPLE ACBLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 17C: 5616-3 RECORD
AUTOMATIC CALL-BACK LINE (MLHG/TERM)
PARAMETER FORM - ACBMPA

1. GENERAL

The 5616-3 Record is available with the 5E2 and later Software Releases. It is used when assigning ACB feature parameters to Multi-Line Hunt lines if the default parameters associated with the ACB feature (on the ACBFD Form) are inappropriate or unspecified. Do not enter this record if the ACBFD default parameters are acceptable.

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group member number of the line.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
INDIV	Individual Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
PBX	Line to a PBX.

2.4 * FEATURE

Description: Enter the name of the ACB feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ACB feature defined on the ACBFD Form. The name of the ACB "wild-card" feature may not be used here.

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2.5 RINGING PATTERN

Description: Enter the pattern of ringing to be given to the originator when the camped-on line becomes idle.
Default: C
Valid Entries:

Valid RINGING PATTERN Entries

Entry	Definition
A	For a ringing pattern of 2 seconds on, 4 seconds off, repeated for the duration of the ringing interval.
B	For a ringing pattern of 0.8 seconds on, 0.4 seconds off, repeated for the duration of the ringing interval.
C	For a ringing pattern of 0.4 seconds on, 0.2 seconds off, repeated for the duration of the ringing interval.
D	For a ringing pattern of 1 second on, 1 second off, 1 second on, 3 seconds off, repeated for the duration of the ringing interval.
E	For a routine ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
F	For a priority ringing pattern associated with the Customer Premise Equipment. Valid with DSN (Defense Switched Network) Offices with a Class of Service of "4WINDIV" on the LCC form.
P	For a precedence ringing pattern of 1640 milliseconds on, 360 milliseconds off, repeated for the duration of the ringing interval.

2.6 RINGING INTERVAL

Description: Enter the interval (in seconds) of ringing to be provided to the originator when the camped-on line becomes idle.
Default: 24
Valid Entries: 24, 30, 36, 42 and 48 (seconds)

```
acbmpa                    5ESS Switch                    _
(5616-3)              OFFICE DATA ADMINISTRATION
          AUTOMATIC CALL-BACK LINE (MLHG/TERM) PARAMETERS


* 1. MLHG              0017
* 2. TERM              0027
* 3. FEATURE             MYOWN

  4. RINGING PATTERN     B
  5. RINGING INTERVAL    36
```

Figure 1 SAMPLE ACBMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 18: MODULAR QUEUING FORMS

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SEC. 18A: 5617-1a/b/c RECORD
MODULAR QUEUING FEATURE DEFINITION FORM - QUFD

1. GENERAL

The 5617-1a/b/c Records are available with 5E2 and later Software Releases to define Modular Queuing features.

Certain Modular Queuing features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. The preconstructed Modular Queuing features are shown beginning with Figure 1.

1.1 MLHG Queuing Features

Modular Queuing provides queuing for calls attempting to terminate to the listed Directory Number of an MLHG (Multi-Line Hunt Group) when all of the terminals of the MLHG are busy.

When queuing is desired for a Multi-Line Hunt Group, the Modular Queuing Feature is assigned on the MLHG form (5110-1 Record) as the QUEUING FEATURE. Queuing is allowed for MLHGs that have a circlular or uniform call distribution hunt type specified by the MLHG FEATURE and defined on the MLHGFD form (5604 Record).

Call Waiting Lamps may be associated with this feature to give a visual indication at the customer premise of the MLHG that at least one queued call has been waiting on queue for the specified threshold.

If the MLHG which is assigned a queuing feature is also assigned an OVERFLOW PEG COUNT REG, the message register will peg when calls terminating to the group are given busy treatment because the queue was full.

1.2 Trunk Group and SFG Queuing Features

For 5E3 and later, in addition to queuing for MLHGs, Modular Queuing may be defined to provide queuing for outgoing private facilities, either a physical trunk group or an SFG (Simulated Facility Group). Queuing may be either Off-Hook or Ringback.

Off-Hook Queuing provides that when queuing is invoked, the originating port must remain off-hook while waiting for the queued-for facility.

Ringback Queuing provides that when the busy facility may be queued for, the originator of the call will be given a confirmation tone indicating that if the customer hangs up within 6 seconds, the call will be put on queue. If the originator remains off-hook longer than 6 seconds, the call will not be queued. If the originator has invoked queuing by going on-hook, when the queued-for facility becomes available, the originating station is rung with a distinctive pattern and upon answer, the original call is completed. Only non-priority lines may use Ringback Queuing.

Dial codes may be provided in association with Ringback Queuing so that the originator may verify that the call has been queued or, if the call has been queued, to cancel queuing. These codes, specified with an ACTION of "RBQVFY" or "RBQCAN", respectively, may be defined on either the IDPDCA form (5601-1/2 Records) or on the PDIT form (5300-2 Record).

The queue may be divided into two sections, routine and priority, each with its own delay treatment and size. The priority section, if provided, must be off-hook while the routine section may be either off-hook or ringback.

Queuing for outgoing private facilities is associated with either PFA (Private Facility Access) or ARS

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(Automatic Route Selection) BRCS feature capabilities.

When queuing is desired for a facility associated with PFA, the PFAGPA form (5609-5 Record) must be specified with QUEUE REQUEST equal to "Y". The facility designated by the ROUTE INDEX and ROUTE TYPE must have a Modular Queuing Feature assigned. If the facility is a trunk group, the feature is assigned on the TKGRP form (5202 Record) as QUEUE FEATURE. If the facility is an SFG, the feature is assigned on the PFASFG form (5609-3 Record) also as QUEUE FEATURE. Queuing will then be invoked if the facility is busy and the port which originated the PFA call has QUEUE ALLOWED equal to "Y" as its PFA parameter. Another PFA parameter, PRIORITY QUEUE, specifies whether the call should be placed in the routine section of the queue when equal to "N", or in the priority section when equal to "Y".

When queuing is desired for ARS, the facility specified for a first route in an ARS route list must have a Modular Queuing feature assigned. If the facility is a trunk group, the feature is assigned on the TKGRP form (5202 Record) as QUEUE FEATURE. If the facility is an SFG, the feature is assigned on the PFASFG form (5609-3 Record) also as QUEUE FEATURE. To enable ARS queuing, the port which originated the ARS call must have its ARS parameter, QUEUE ALLOWED, equal to "Y" and PRIORITY QUEUE is "Y" or "N". Queuing for the facility of the first route will then be invoked if all the routes in the route list are busy or if the call has failed to route because of insufficient FRL (Facility Restriction Level). Queuing caused by insufficient FRL will take place after a possible FRL upgrade through an Authorization Code feature if provided. When an ARS call has been queued for the first route and an idle port in the facility is not available before timeout (see ROU Q TIMEOUT and PRI Q TIMEOUT), a second attempt through the route list will be made if the Modular Queuing parameter of POST Q TREAT equals "ALTR". The originating ARS port may have its FRL upgraded for this second attempt through the route list if the port has an FRL equal to or greater than the value specified as THRESH FRL on the associated ARSGPA form (5608-2 Record). The port FRL will then be changed to the POST QUEUE FRL also specified on the ARSGPA form.

1.3 Switching (Queuing) Modules

Switching Modules (SMs) provide the queuing mechanism or place for the calls to queue while waiting for an idle port in the queued for group. The SM that holds the queue is specified by QUEUE MODULE.

All announcements that are used for the queuing feature must be located on the Queue Module. That is, the announcement trunks must have an equipment number specified on the TRUNK form (5204 Record) which have the Switching Module equal to the associated Queue Module.

Each Queue Module has a maximum of 255 queue slots to hold calls for queuing. Therefore, the sum of BASIC SIZE plus EXTENDED SIZE (for MLHGs) and ROUTINE SIZE plus PRIORITY SIZE (for trunk groups and SFGs) of all queuing specified with the same QUEUE MODULE must not exceed 255.

A maximum of 100 MLHG queues may be assigned to the same Queue Module. A maximum of 100 TGN and/or SFG queues may be assigned to the same Queue Module. A maximum of 500 queues may be defined in any office.

1.4 ISAT MLHG Queuing Features

ISAT (ISDN Attendant) console Multi-Line Hunt Groups, with modular queuing, use ICIs (Incoming Call Identifiers) and priorities associated with each ICI, defined on the ICIPF form (5903 Record), to queue calls. Calls to a busy attendant in an ISAT group will be placed in a queue. When an attendant becomes idle that serves the particular ICI of the queued call, the call will be removed from the queue and placed to the idle attendant. Priorities, assigned on the ICIPF form, will be used to determine the order in which queued calls are served. For more information, see the "ISDN Attendant Features" section in Division 2, Section 1T.

ISDN Attendant consoles also make use of call waiting lamps. The call waiting lamps on the ISAT console operate based on the number of calls in the queue. The Calls Waiting lamp will light whenever one or

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more calls are queued. The Calls Waiting Warning lamp will light based on a specified threshold of calls queued. Two fields have been added to accommodate these types of call waiting lamps; they are, LAMP TYPE and THRESHOLD TYPE. The lamp type entry for ISDN Attendant consoles is "FB" (for feature button) and the threshold type is "N" (for number of calls in queue). The calls waiting threshold value is specified as a default parameter in the first row of the CALL WAITING LAMPS fields, in the field titled THRESHOLD. The DPN field is left blank for feature button applications.

The CFGGRP form (5964 Record) is used to assign modular queuing actions to feature buttons for ISDN Attendant consoles. Actions "QCWT" (Calls Waiting) and "QCWW" (Calls Waiting Warning) are used to assign the call waiting lamps to the ISDN Attendant configuration group(s). Action "QCUSE" may also be used in conjunction with an appropriate display feature. The feature button assigned the "QCUSE" action will be used to display the number of calls waiting in queue for each ICI.

1.5 ISDN Non-Attendant Queuing Features

ISDN station sets, other than attendant consoles, also make use of modular queuing, but threshold values are based on time in queue, not number of calls in queue. The LAMP TYPE for these sets would also be "FB" and THRESHOLD TYPE would be "T" (for time in queue). The threshold entry for these call waiting lamps represents a timing value (in seconds). Actions associated with the modular queuing feature buttons on these sets are, "QCW1L" (first threshold), "QCW2L" (second threshold), "QCW3L" (third threshold) and "QCUSE", if desired.

1.6 Recent Change View

The corresponding Recent Change View for this form is 12.40.

2. FORM ENTRIES - 5617-1a RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * FEATURE NAME

Description: Enter the Modular Queuing Feature Name. Feature Names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Modular Queuing Features associated with Multi-Line Hunt Groups are assigned on the MLHG form (5110 Record). For 5E3 and later, Modular Queuing Features may also be associated with a Trunk Group or a Simulated Facility Group and are assigned, respectively, on the TKGRP form (5202 Record) or the PFASFG form (5609-3 Record).
Valid Entries: 1 - 8 characters

Data Rules:

Modular Queuing Feature names defined on the QUFD form are not assigned to individual ports (TNs, MLHG Terminals, or Trunk Group Members) on the Feature assignment forms. Therefore, these features may not be assigned on any of the following forms: CLUSTR, LINEFA, MLHLNFA, TKGRPFA or TRUNKFA.

If a feature name is defined on the QUFD form and is assigned as a Queuing Feature on the MLHG form, but no corresponding feature name is defined on the QUGPA form, either the BASIC SIZE or EXTENDED SIZE values must be defined on the QUFD form.

When FEATURE is "/QRERTE", QUEUE TYPE must be "REROUTE".

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When FEATURE is "/QRERTE", ROU Q TIMEOUT must be 2.

When QUEUE FEATURE is known on the TKGRP form and the QUEUE TYPE is set to "REROUTE" on the corresponding QUFD form, the Reroute Queuing feature must be purchased by the office. A SFSYS form must exist with SFID 249 ACT set to "Y".

For 5E13 and later, when FEATURE is "/HPCQ30":

- QUEUE TYPE must be "HPCOHQ".
- SPECIAL DELAY TREATMENT must be "Y".
- PRIORITY DELAY TREATMENT must be"N".
- ROUTINE SIZE must be 5.
- ROU Q TIMEOUT must be 30.
- PRE DELAY TONES must be "IDLE".
- INTER DELAY TONES must be "IDLE".
- POST DELAY TONES must be "IDLE".

For 5E13 and later, when FEATURE is "/HPCQ15":

- QUEUE TYPE must be "HPCOHQ".
- SPECIAL DELAY TREATMENT must be "N".
- PRIORITY DELAY TREATMENT must be "N".
- ROUTINE SIZE must be 5.
- ROU Q TIMEOUT must be 15.

For 5E13 and later, when the FEATURE NAME on the QUGPA form equals a FEATURE NAME on the QUFD form where QUEUE TYPE is "HPCOHQ", the GROUP TYPE must be "TRK" and the SERV PROT TIME must be 0 on the corresponding QUGPA form. In addition, when FEATURE NAME is "/HPCQ15" and the QUEUE TYPE is "HPCOHQ" on the QUFD form, the ROUTINE SIZE must be 5 and the ROU Q TIMEOUT must be 15 on the corresponding QUGPA form. When FEATURE NAME is "/HPCQ30" and the QUEUE TYPE is "HPCOHQ" on the QUFD form, the ROUTINE SIZE must be 5 and the ROU Q TIMEOUT must be 30 on the corresponding QUGPA form.

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.12) define modular queuing feature options.

2.4 # GROUP TYPE

Description: Enter the type of group to which queuing will be applied.

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Required Field.

Valid GROUP TYPE Entries

Entry	Definition
LINE	Software Release: 5E2 and later. Multi-Line Hunt Groups.
TRK	Software Release: 5E3 and later. Trunk Groups.
SFG	Software Release: 5E3 and later. Simulated Facility Groups.

Data Rules:

For 5E3 and later, if the GROUP TYPE is "LINE", then QUEUE TYPE must be "MLHG" (or for 5E6 and later, it may also be "CSD"), PRIORITY QUEUE and PRIORITY DELAY TREATMENT must be "N", and the following fields must be blank: SERV PROT TIME, ROUTINE SIZE, ROU Q TIMEOUT, PRIORITY SIZE, PRI Q TIMEOUT, NUMBER OF PRI ANNOUNCEMENTS, RINGBACK TYPE, RINGBACK INTERVAL, RETRY TIMEOUT and POST Q TREAT.

If the GROUP TYPE is "TRK" or "SFG", QUEUE TYPE must be "OFFHK", "RGBK", "BLV" or "DSU", and the following fields must be blank: BASIC SIZE (for 5E6 and later, BASIC SIZE may be 1), EXTENDED SIZE, and NUM OF CALL WAITING LAMPS.

For 5E13 and later, when GROUP TYPE is "TRK", QUEUE TYPE must be "BLV", "DSU", "HPCOHQ", "OFFH", "REROUTE", or "RGBK".

2.5 # QUEUE TYPE

Description: Enter the Queue Type.

When QUEUE TYPE is "BLV" or "DSU", the following fields will be set automatically to "N": SPECIAL DELAY TREATMENT, PRIORITY QUEUE, and PRIORITY DELAY TREATMENT.

Required Field.

Valid QUEUE TYPE Entries

Entry	Definition
BLV	Software Release: 5E4(2) and later. Busy Line Verify.
CSD	Software Release: 5E6 and later. Circuit-Switched Data call.
DSU	Software Release: 5E4(2) and later. Digital Services Unit 2 - Recorded Announcement Function.
MLHG	Multi-Line Hunt Group.
OFFHK	Off-Hook.
RGBK	Ringback.
REROUTE	Software Release: 5E12 and later. Reroute Queuing - The LDP switch searches all outgoing routes within the route search limit for an available route.
HPCOHQ	Software Release: 5E13 and later. GETS HPC (Government Emergency Telecommunications Service High Probability of Completion) off-hook queuing. For more information, see Division 2, Section 4A279.

Data Rules:

When QUEUE TYPE is "CSD", GROUP TYPE must be "LINE".

If GROUP TYPE is "TRK" or "SFG", this field must be "OFFHK", "RGBK", "BLV" or "DSU", to describe whether the call originator must remain off-hook while the call is queued or whether the originator must go on-hook to invoke queuing and will subsequently be rung back when ready to dequeue. These entries apply only to the routine section of a queue. If a priority section is defined for the queue, it is always off-hook and does not have a field to define the type of queue. Note that if a priority section is not defined

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for the queue, the entire queue is considered routine. Also, a priority section may not exist without a routine section.

CSD:
When "CSD" is entered, EXTENDED SIZE must be blank, SPECIAL DELAY TREATMENT must be "N", and GROUP TYPE must be "LINE".

RGBK:
When "RGBK" is entered, SPECIAL DELAY TREATMENT must be "N" and the associated trunk group must be one-way outgoing. "error: QUEUING (62)"

QUEUE TYPE must equal "RGBK" if the QUEUING FEATURE(s) has been assigned through TKGRP or PFASFG form(s) and the corresponding QUEUING FEATURE(s) is defined with RETRY TIMEOUT greater than zero on the QUGPA form.

REROUTE:
When QUEUE TYPE is "REROUTE", GROUP TYPE must be "TRK"

When QUEUE TYPE is "REROUTE", PRIORITY QUEUE must be "N".

When QUEUE TYPE is "REROUTE", SPECIAL DELAY TREATMENT must be "N".

When QUEUE TYPE is "REROUTE", PRIORITY DELAY TREATMENT must be "N".

When QUEUE TYPE is "REROUTE", ROUTINE SIZE must be 1 - 10.

When QUEUE TYPE is "REROUTE", ROU Q TIMEOUT must be 1 - 15.

HPCOHQ:
When QUEUE TYPE is "HPCOHQ",

- GROUP TYPE must be "TRK"
- PRIORITY QUEUE must be "N"
- THRESHOLD VALUE must not be entered

When QUEUE TYPE is "HPCOHQ" on the QUFD form, and the QUEUE FEATURE is known on the TKGRP form, the TRKCLS must be "IC", "LATA", "LTOLLCON", or "TTOLLCON", the LN TYPE must be "NONE" or unknown on the corresponding TKGRP form where QUEUE FEATURE matches FEATURE NAME on the QUFD form. In addition, the TERM MC ROUTE INDEX and CCS TERM MC RTI must not be entered on the associated PFATG form. This Trunk Group cannot be assigned a Terminal Group ID.

2.6 QUEUE INTERFLOW

Description: Is Queue Interflow allowed? Queue Interflow provides for one queue requesting help from another queue and giving help to another queue.

- ***NOTE:*** The default and only value is "N", except for Modular Queuing features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Valid Entry: N

2.7 CALL WAITING LAMPS

Description: Are Call Waiting Lamps allowed?

Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

Call Waiting Lamps are applicable only when GROUP TYPE is "LINE". If GROUP TYPE is "SFG" or "TRK", CALL WAITING LAMP must be "N".

If this field is "N", the NUMBER OF CALL WAITING LAMPS, LAMP TYPE, and THRESHOLD TYPE fields must be blank. If this field is "Y", values must be entered in LAMP TYPE and THRESHOLD TYPE.

For 5E6 and later, this field must be "N" when QUEUE TYPE is "CSD". Also, for 5E6 and later, when an MLHG form has assigned a HUNT TYPE of "ISAT" on a corresponding MLHGFD form and CALL WAITING LAMPS is set to "Y", then LAMP TYPE must be "FB" and THRESHOLD TYPE must be "N" on the QUFD form.

2.8 # SPECIAL DELAY TREATMENT

Description: Is Special Delay Treatment allowed?

Standard audible ringing is applied to the call originator

- when QUEUE TYPE is "MLHG" and this field equals "N",
- or when QUEUE TYPE is "MLHG" or "OFFHK" and no announcements are associated with the queue when this field equals "Y".

Silence (i.e. no treatment) is given to the call originator, when QUEUE TYPE is "OFFHK" and this field equals "N".

Required Field.
Valid Entries: Y, N

Data Rules:

When QUEUE TYPE equals "RGBK", SPECIAL DELAY TREATMENT is not applicable and must equal "N".

When SPECIAL DELAY TREATMENT is "Y", announcements may be associated with the queue and may be defined as parameters on this form or on the QUGPA form (5617-3/4 Records). If the QUEUE TYPE is "OFFHK", the announcements are applicable to the routine section of the queue.

If SPECIAL DELAY TREATMENT is "N", then the NUMBER OF ANNOUNCEMENTS must be blank.

When QUEUE TYPE is "CSD", SPECIAL DELAY TREATMENT must be "N".

2.9 PRIORITY QUEUE

Description: Does this queue have a priority section?

If this field equals "Y", terminals that access this queue and are defined as priority originators will use the priority section of the queue which, on the average, experience a shorter delay time in the queue than non-priority originators using the routine section of the queue. To define an originator as priority, the parameter, PRIORITY QUEUE, should be defined as "Y" on the associated ARS (Automatic Route Selection) or PFA (Private Facility Access) forms. Attendant lines and trunks are usually considered candidates for priority queuing when it is defined.

Software Release: 5E3 and later

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When GROUP TYPE is "LINE", this field must equal "N".

PRIORITY QUEUE must equal "N" if QUEUING FEATURE(s) that have been assigned through TKGRP or PFASFG form(s) and corresponding QUEUING FEATURE(s) are defined with SERV PROT TIME equals zero or is not entered on the QUGPA or on the QUFD form.

If the SERV PROT TIME is greater than zero, then PRIORITY QUEUE must equal "Y" .

2.10 PRIORITY DELAY TREATMENT

Description: Can announcements be defined for the priority section of the queue?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PRIORITY QUEUE equals "N", this field must equal "N".

2.11 LAMP TYPE

Description: Enter the type of call waiting lamp(s) associated with this feature.

Software Release: 5E4(2) and later
Valid Entries:

Valid LAMP TYPE Entries

Entry	Definition
FB	Used with ISDN station sets to indicate that the call waiting lamp is provided via a feature button on the set. An appropriate action must be assigned on the CFGGRP form associated with lines using this lamp type. The CALL WAITING LAMPS DPN field must be left blank for feature button applications.
DP	Used to indicate that the call waiting lamps associated with this feature are provided via a distribute point.

Data Rules:

For 5E6 and later, when a QFEATURE is assigned on an MLHG form (5110 Record) and is defined on the QUFD form with a LAMP TYPE of "DP", the first DPN for CALL WAITING LAMPS on the QUFD form must be entered.

2.12 THRESHOLD TYPE

Description: Enter the type of threshold value for the call waiting lamps associated with this feature. An entry in this field will determine whether the CALL WAITING LAMPS THRESHOLD field represents a timing value or a number of calls in queue.

Software Release: 5E4(2) and later
Valid Entries:

Valid THRESHOLD TYPE Entries

Entry	Definition
N	Call waiting lamps will operate based on a threshold of the number of calls queued.
T	Call waiting lamps will operate based on a threshold of the amount of time calls are queued.

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Data Rules:

For 5E5 and later, when THRESHOLD TYPE is "N", only one call waiting lamp may be defined; no more than one THRESHOLD may be entered.

CHARGES

The following fields (Section 2.13 - Section 2.16) define charges associated with the queuing feature.

2.13 USAGE SENSITIVE

Description: Is there a usage sensitive charge? This field is used for billing purposes.

- ***NOTE:*** The default and only value is "N", except for Modular Queuing features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Valid Entry: N

2.14 DEACTIVATION

Description: Is there a usage charge for deactivation?

- ***NOTE:*** The default and only value is "N", except for Modular Queuing features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Valid Entry: N

2.15 USAGE FREQUENCY

Description: Is there a usage charge for usage frequency?

- ***NOTE:*** The default and only value is "N", except for Modular Queuing features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Valid Entry: N

2.16 DURATION

Description: Is there a usage charge for duration of use?

- ***NOTE:*** The default and only value is "N", except for Modular Queuing features derived from the preconstructed features using the ODA change-insert mode of the review operation.

Valid Entry: "N"

DEFAULT PARAMETERS

The following fields (Section 2.17 - Section 4.14) define the default parameters assigned with the feature to the Multi-Line Hunt Group, Trunk Group or Simulated Facility Group. These parameters will be assigned to the group unless they are overridden by entries on the QUGPA form (5617-3/4 Record).

If a QUGPA parameter assignment form is entered for any given group, all entries on that form will be used for the group. None of the default parameters entered here on the QUFD form will be used.

2.17 BASIC SIZE

Description: Enter the Basic Size of the queue when the queue is defined for a group type of "LINE".

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BASIC SIZE plus EXTENDED SIZE is the total size or number of queue slots made available to queue calls simultaneously for this MLHG queue. For instance, if BASIC SIZE is 10 and EXTENDED SIZE is left blank, 10 calls may be queued while waiting for an idle MLHG terminal. If the queue is full with 10 queued calls, an attempt to queue the eleventh call will overflow the queue and the originator is given busy tone.
Default: 1
Valid Entries: 1 - 255

Data Rules:

For a group type of "SFG" or "TRK", this field must be blank.

2.18 EXTENDED SIZE

Description: Enter the extended size of the queue when the queue is defined for a group type of "LINE".
Valid Entries: 1 - 255

Data Rules:

EXTENDED SIZE is specified only when the incoming side of any FX trunk group is defined with the listed directory number of the queued-for MLHG in DIR CON DN on the TKGRP form (5202 Record). In this case, the EXTENDED SIZE is defined as the size of the trunk group(s), so that an incoming seizure on any of these trunks and subsequent completion to the MLHG direct connect telephone number ensures that the trunk call will be queued.

EXTENDED SIZE must be blank when GROUP TYPE is "SFG" or "TRK", or QUEUE TYPE is "CSD".

2.19 QUEUE MODULE

Description: Enter the Queue Module to indicate which switching module in this office will be designated to hold and service the queue being defined.
Valid Entries: 1 - 192

Data Rules:

The value entered must be defined as a valid switching module on the EQIM form (5700-1/2 Records).

If QUEUE MODULES are defined with a TGN and MEMB combination on one or more of Delay, Flexible First or Priority Announcements, then for each TGN and MEMB combination a matching TRUNK form should be defined with the corresponding first three digits of the TEN or DEN equal to QUEUE MODULE.

2.20 QMON THRESHOLD

Description: Depending on whether the number of calls in the queue is greater or less than the threshold warning value, the QTWL (Queue Threshold Warning Lamp) on the console monitoring of this MLHG is turned on or off. The QTWL does not indicate how long the calls have been queued. A lit threshold warning lamp simply indicates that the number of calls in the queue has exceeded the threshold value.

The QTWLs provided by the CSD (Circuit-Switched Data) feature and existing call waiting lamps are not related. Call waiting lamps are only provided for voice queues and not for CSD queues. Call waiting warning lamps are lit when the call is in the queue for some specified time. QTWLs are available for both CSD and voice queuing.

Software Release: 5E6 and later
Valid Entries: 1 - 255

Data Rules:

When this field is entered, either BASIC SIZE or EXTENDED SIZE must be entered. QMON THRESHOLD

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must not be greater than the sum of BASIC SIZE and EXTENDED SIZE.

EXTENDED SIZE must be blank when QUEUE TYPE is "CSD". The extended queue size reserves room in the queue for calls arriving over FX (foreign exchange) facilities. FX facilities do not support CSD calls.

2.21 NUMBER OF CALL WAITING LAMPS

Description: Enter the Number of Call Waiting Lamps allowed.
Valid Entries: 1 - 3

Data Rules:

This field may be entered only if the GROUP TYPE is "LINE". When GROUP TYPE is "TRK" or "SFG", this field must be blank.

If CALL WAITING LAMPS is "N", this field must be blank.

When a number is entered in this field, no more than that number of CALL WAITING LAMPS (THRESHOLD and DPN) may be defined.

For 5E4(2) and later, when "N" is entered in the THRESHOLD TYPE field, the NUMBER OF CALL WAITING LAMPS must be 1 or not entered.

CALL WAITING LAMPS

One, two or three lamps (fields Section 2.22 - Section 2.23) may be associated with each queue. One queue is identified for each MLHG. Up to three delay thresholds, in ascending order may be specified. Only one lamp will be lit, corresponding to the longest delay currently experienced.

For 5E5 and later, when "N" is entered in the THRESHOLD TYPE field, define one row or leave blank.

2.22 THRESHOLD

Description: Enter the Call Waiting Threshold.

For 5E4(2) and later, the threshold specified here may represent either an amount of time calls are in queue or a number of calls in queue. When the THRESHOLD TYPE field is set to "N", the threshold value entered here will represent the acceptable number of calls in queue before the ISDN Attendant's calls waiting warning lamp lights (the lamp will light when this threshold has been exceeded). When "T" is entered in the THRESHOLD TYPE field, the threshold value entered here will represent an amount of time (in 6-second intervals) calls are in queue.
Valid Entries: 1 - 255

Data Rules:

For 5E4(2) and later, when a THRESHOLD value is entered and LAMP TYPE is "DP", the corresponding DPN must be entered; if LAMP TYPE is "FB", the DPN may not be entered.

For 5E5 and later, when THRESHOLD TYPE is "N", THRESHOLD may be 1 - 255; when THRESHOLD TYPE is "T", THRESHOLD may be 1 - 31.

2.23 DPN

Description: For each Call Waiting Lamp Threshold specified, enter a unique DPN (Distribute Point Number) in the following format.

DISTRIBUTE POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192

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Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU) 00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

In offices equipped with CM1 (Communication Module 1), valid entries for SM are 1-48. In offices equipped with CM2 (Communication Module 2), valid entries are 1-192.

A DPN may be entered only if the corresponding THRESHOLD has been entered.

Each DPN must be unique. It cannot be assigned on another form except that DPNs can be duplicated between QUFD and QUGPA forms when these forms have the same FEATURE and GROUP TYPE.

For 5E4(2) and later, when "FB" (feature button) is entered in the LAMP TYPE field, DPN must be blank.

3. FORM ENTRIES - 5617-1b RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

3.2 FEATURE NAME

Description: Enter the Modular Queuing Feature Name. This name must be the same as that from the corresponding 5617-1 Record entry. This information is not required on the QUFD input form.

3.3 NUMBER OF ANNOUNCEMENTS

Description: Enter the Number of Announcements allowed (excluding the flexible first announcement).
Valid Entries: 1 - 4

Data Rules:

If this field is entered, then SPECIAL DELAY TREATMENT must be equal to "Y". The announcement or announcements to be used are defined in DELAY ANNOUNCEMENTS, one row for each announcement.

If this field is not entered, then the tone interval before the first announcement must not be specified in PRE DELAY TIMING or it must equal 0.

If this field is not entered or is equal to 1, then the tone interval between announcements must not be specified in INTER DELAY TIMING or it must equal 0.

3.4 PRE DELAY TONES

Description: Indicate the Tone emitted before the first announcement.
Default: AUD
Valid Entries:

Valid PRE DELAY TONES Entries

Entry	Definition
AUD	Audible Ringing Tone
IDLE	No tone

3.5 PRE DELAY TIMING

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Description: Enter the Tone intervals before the first announcement, where each interval represents a 6-second duration.

If the DELAY ANNOUNCEMENTS TYPE is "BARGE", then the tone interval before the first announcement will be equal to the number of 6-second intervals indicated in this field.

If the DELAY ANNOUNCEMENTS TYPE is "NBARGE", then the tone interval before the first announcement will be equal to the number of 6-second intervals indicated in this field plus the amount of time it takes to cycle to the beginning of the announcement.
Default: 0
Valid Entries: 0 - 20 (6-second intervals)

3.6 INTER DELAY TONE

Description: Enter the Tone emitted between announcements.
Default: AUD
Valid Entries:

Valid INTER DELAY TONE Entries

Entry	Definition
AUD	Audible Ringing Tone
IDLE	No Tone
MUS	Music

3.7 INTER DELAY TIMING

Description: Enter the Tone intervals between announcements where each interval represents a 6-second duration.
Default: 0
Valid Entries: 0 - 20 (6-second intervals)

3.8 POST DELAY TONES

Description: Enter the Tone emitted after the announcement(s).
Default: AUD
Valid Entries:

Valid POST DELAY TONES Entries

Entry	Definition
AUD	Audible Ringing Tone
IDLE	No Tone
MUS	Music

MUSIC SOURCE

The following fields (Section 3.9 - Section 3.10), which are available for 5E6 and later software releases, are used to describe the music source for delay tones of "MUS".

3.9 TGN

Description: Enter the trunk group number of the trunk to be used as a music source for music delay tones.

Software Release: 5E6 and later
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

If TGN is entered, then music source MEMB must also be entered. A TGN can only be entered when GROUP TYPE is "LINE", QUEUE TYPE is "MLHG", and INTER or POST DELAY TONES is "MUS", and must be entered when INTER or POST delay tones equal "MUS". The TGN and MEMB must be defined on the TRUNK form (5204-1/2 Records) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE and MUSIC SOURCE is "Y" on the TRUNK form.

3.10 MEMB

Description: Enter the trunk group member number of the trunk to be used as a music source for music delay tones.

Software Release: 5E6 and later
Valid Entries: 0 - 1951

Data Rules:

If music source MEMB is entered, then music source TGN must also be entered.

ISDN ATTENDANT

The next two fields (Section 3.11 - Section 3.12) define warning lamps for the ISDN Attendant Group Overload Warning feature. For information on this feature refer to Division 2, Section 1T.

3.11 QWARN THRESHOLD

Description: Enter the threshold for the QWARN feature button lamp. When the number of calls in the queue exceeds the threshold value, the QWARN feature button lamps on the appropriate ISAT terminals are turned on. When the number of calls in the queue falls below the threshold value, the QWARN feature button lamps on the appropriate ISAT terminals are turned off.

The QWARN feature button lamp is defined on the CFGGRP form (5964 Record) using an ACTION of "QCWARN". Refer to Division 6, Section 7A, for more information on this ACTION value.

Software Release: 5E8 and later
Valid Entries: 1 - 251

Data Rules:

If QWARN THRESHOLD is entered, BASIC SIZE must be entered; the QWARN THRESHOLD value must be less than (BASIC SIZE - 3). The number 3 indicates the number of queue slots reserved from the basic portion of the queue for emergency calls. This value is hard-coded in the call processing code.

The QWARN THRESHOLD is applicable only to ISAT Multi-Line Hunt Groups. If QWARN THRESHOLD is entered, FEATURE NAME can be assigned in the QFEATURE field of an MLHG form only if HUNT TYPE is set to "ISAT" on the corresponding MLHGFD form.

If QWARN THRESHOLD is entered, CALL WAITING LAMP must be "Y", GROUP TYPE must be "LINE", and QUEUE TYPE must be "MLHG".

3.12 QBUSY DPN

Description: Enter a unique ISAT Queue Busy DPN (Distribute Point Number). When QBUSY DPN is entered, if the queue is full, the distribution point will cause a lamp to be lit. This lamp is not the same as the QBUSY feature button lamp on the ISAT terminal.

Software Release: 5E8 and later

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Valid Entries: a 9-digit Distribute Point equipment number in the following format.

DISTRIBUTE POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

If QBUSY DPN is entered, CALL WAITING LAMP must be "Y", GROUP TYPE must be "LINE", and QUEUE TYPE must be "MLHG".

If QBUSY DPN is entered, it must be unique, i.e., it cannot be assigned on any other form.

If QBUSY DPN is entered, it must be a distribution point defined on the EQMSP or EQMMSP form with TYPE set to "DIST".

The QBUSY DPN is applicable only to ISAT Multi-Line Hunt Groups. If QBUSY DPN is entered, FEATURE NAME can be assigned in the QFEATURE field of an MLHG form only if HUNT TYPE is set to "ISAT" on the corresponding MLHGFD form.

DELAY ANNOUNCEMENTS

Delay Announcements (fields Section 3.13 - Section 3.16) are assigned on a per queue basis. Delay Announcements can be shared by several queues.

Each row under DELAY ANNOUNCEMENTS defines the announcement trunk to be used. The quantity of announcements (rows) specified must not exceed the value entered in NUMBER OF ANNOUNCEMENTS. When any field in a row is specified, all of the fields in the row must be entered.

3.13 TYPE

Description: Enter the Announcement Type.

Valid TYPE Entries	
Entry	**Definition**
BARGE	Barge-In.
NBARGE	No Barge-In, where the customer will hear the announcement from the beginning of the message.

3.14 CYCLES

Description: Enter the number of times the announcement is to be given.
Valid Entries: 0 - 4

3.15 TGN

Description: Enter the Trunk Group Number of the announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

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The TGN must be defined on the TKGRP form (5202 Record) with a TRK DIR equal to "ANN".

3.16 MEMB

Description: Enter the Trunk Member of the Announcement Trunk Group.
Valid Entries: 0 - 2047.

Data Rules:

This member must be defined on the TRUNK form (5204 Record) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE.

FLEXIBLE FIRST ANNOUNCEMENT

The Flexible First Announcement (fields Section 3.17 - Section 3.21) may be specified to provide an alternate announcement to the first announcement defined in DELAY ANNOUNCEMENTS. If specified, the Flexible First Announcement is used for the next call into the queue when the longest call already queued has been waiting in the queue for the amount of time as specified by THRESHOLD VALUE. If any field under Flexible First Announcement is entered, they all must be entered.

3.17 TYPE

Description: Enter the Announcement Type of the Flexible First Announcement.

Valid TYPE Entries

Entry	Definition
BARGE	Barge-In.
NBARGE	No Barge-In, where the customer will hear the announcement from the beginning of the message.

3.18 CYCLES

Description: Enter the number of times the Flexible First Announcement is to be given.
Valid Entries: 0 - 4

3.19 TGN

Description: Enter the Trunk Group Number of the Flexible First Announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN must be defined on the TKGRP form (5202 Record) with a TRK DIR equal to "ANN".

3.20 MEMB

Description: Enter the Trunk Member of the Flexible First Announcement Trunk Group.
Valid Entries: 0 - 1951

Data Rules:

This member must be defined on the TRUNK form (5204 Record) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE.

3.21 THRESHOLD VALUE

Description: Enter the Threshold Value associated with the Flexible First Announcement. When the

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longest queued call has waited this value, the next call into the queue will hear the Flexible First Announcement.
Valid Entries: 1 - 200 (6-second intervals)

DEFAULT PARAMETERS FOR TGN/SFG

The following fields (Section 3.22 - Section 4.14) define parameters for queuing features associated with trunk groups and simulated facility groups.

3.22 SERV PROT TIME

Description: Enter the Service Protection Time in seconds.

This field is called SERV PROT CLK on the Recent Change View and in the 5ESS Switch feature documents.

It is used when a queue has both a routine section and a priority section. It provides a means of ensuring that routine calls are not completely blocked from being serviced because of priority calls. Service Protection applies to both off-hook and ringback queuing. The expiration of the Service Protection Time does not cause routine calls to be dequeued immediately. Rather, this will cause the appropriate indicators to be set so that the next available port in the queued for facility will be used for the call waiting at the head of the routine queue section instead of a priority call. 0 indicates no timing or Service Protection.

Software Release: 5E3 and later
Valid Entries: 0 - 2047 (seconds)

Data Rules:

If GROUP TYPE equals "LINE", this field must be left blank.

If a non-zero value is entered in this field, then PRIORITY QUEUE must be equal to "Y".

3.23 ROUTINE SIZE

Description: Enter the size of the routine section of the queue when the queue is defined for a group type of "TRK" or "SFG". ROUTINE SIZE indicates the number of queue slots made available to queue routine calls simultaneously for the queued-for trunk group or Simulated Facility Group. The routine section of a queue may be either Ringback or Off-Hook.

Software Release: 5E3 and later
Valid Entries: 1 - 255

Data Rules:

For a group type of "LINE", this field must be blank.

For 5E6 and later, when both PRIORITY SIZE and ROUTINE SIZE are entered, their sum must not exceed 255.

3.24 ROU Q TIMEOUT

Description: Enter the Routine Queue Timeout in seconds. 0 indicates no timeout.

This field indicates the maximum time that a routine call can remain in the queue. If a Private Facility Access call has been dequeued because of this timeout and the queue is off-hook, the originator will be given reorder tone. An Automatic Route Selection call on timeout is subject to POST Q TREAT which will indicate either Reorder or Alternate Treatment.

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Because of the software scanning function, the timeout value specified is the approximate time which timeout will occur within thirty seconds.

Software Release: 5E3 and later
Valid Entries: 0 - 4095 (seconds)

Data Rules:

If group type is "LINE", this field must be blank.

If QUEUE TYPE is "RGBK", this field, if entered, must be less than or equal to 1770.

4. FORM ENTRIES - 5617-1c RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

4.2 PRIORITY SIZE

Description: Enter the Size of the priority section of the queue. 0 indicates no priority queuing.

Priority Size indicates the number of queue slots made available to queue priority calls simultaneously for the queued-for Trunk Group or Simulated Facility Group. If a Priority Section is provided, it will be off-hook.

Software Release: 5E3 and later
Valid Entries: 0 - 255

Data Rules:

If PRIORITY QUEUE equals "Y" and this field is entered, it must be greater than zero. If PRIORITY QUEUE is "N", this field must be 0 or blank.

For 5E6 and later, when both PRIORITY SIZE and ROUTINE SIZE are entered, their sum must not exceed 255.

4.3 PRI Q TIMEOUT

Description: Enter the Priority Queue Timeout in seconds. 0 indicates no timeout.

This field indicates the maximum time that a priority call can remain in the queue. If a Private Facility Access call has been dequeued because of this timeout, the originator will be given Reorder tone. An Automatic Route Selection call on timeout is subject to POST Q TREAT which will indicate either reorder ("REORDER") or alternate treatment ("ALTR").

Because of the software scanning function, the timeout value specified is the approximate time which timeout will occur within thirty seconds.

Software Release: 5E3 and later
Valid Entries: 0 - 4095 (seconds)

Data Rules:

If group type is "LINE", this field must be blank.

4.4 NUMBER OF PRI ANNCMTS

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Description: Enter the Number of Priority Announcements allowed for the priority section of the queue.

Software Release: 5E3 and later
Valid Entries: 0 - 3

Data Rules:

If this field is nonzero, then PRIORITY DELAY TREATMENT must equal "Y". The announcement or announcements to be used are defined in PRIORITY ANNOUNCEMENTS, one row for each announcement.

PRIORITY ANNOUNCEMENTS

Priority Announcements (fields Section 4.5 - Section 4.8) are applicable to 5E3 and later Software Releases and are assigned on a per-queue basis for those queues that have priority sections. These announcements do not have to be unique and may be shared with other queues. Each row under PRIORITY ANNOUNCEMENTS defines the announcement trunk to be used. The quantity of announcements (rows) specified must not exceed the value entered in NUMBER OF PRI ANNCMTS. When any field in a row is specified, all of the fields in the row must be entered.

4.5 TYPE

Description: Enter the Announcement Type of the Priority Announcement.

Software Release: 5E3 and later
Valid Entries:

Valid TYPE Entries

Entry	Definition
BARGE	Barge-In.
NBARGE	No Barge-In, where the customer will hear the announcement from the beginning of the message.

4.6 CYCLES

Description: Enter the number of times the Priority Announcement is to be given.

Software Release: 5E3 and later
Valid Entries: 0 - 4

4.7 TGN

Description: Enter the Trunk Group Number of the Priority Announcement.

Software Release: 5E3 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN must be defined on the TKGRP form (5202 Record) with a TRK DIR equal to "ANN".

4.8 MEMB

Description: Enter the Trunk Member of the Priority Announcement Trunk Group.

Software Release: 5E3 and later
Valid Entries: 0 - 1951.

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Data Rules:

This member must be defined on the TRUNK form (5204 Record) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE.

4.9 RINGBACK TYPE

Description: Enter the distinctive ringing pattern to be used to ringback customers in a Ringback Queue. The pattern, when entered, is independent of the Distinctive Ringing BRCS feature capability and, thus, does not require the queuing customer to have a Distinctive Ringing feature assigned.

Software Release: 5E3 and later
Valid Entries:

Valid RINGBACK TYPE Entries

Entry	Definition
A	2 seconds on, 4 seconds off (normal ringing).
B	800 ms on, 400 ms off, 800 ms on, 4 seconds off.
C	400 ms on, 200 ms off, 400 ms on, 200 ms off, 800 ms on, 4 seconds off.
D	1 second on, 1 second off, 1 second on, 3 seconds off.
P	Software Release: 5E4(2) and later. 1640 ms on, 360 ms off.

Data Rules:

This field may be entered only when the QUEUE TYPE is "RGBK".

4.10 RINGBACK INTRVL

Description: Enter the time limit in seconds for ringing back customers in a Ringback Queue. This field, when entered, indicates how long to apply ringing to the customer's telephone when that customer is in a Ringback Queue and can be dequeued or serviced with the queued-for facility. If the customer does not answer the telephone within the time limit, the call will be removed from the queue without being served.

Software Release: 5E3 and later
Valid Entries: 18, 24, 30, 36, 42, and 48 (seconds)

Data Rules:

This field may be entered only when the QUEUE TYPE is "RGBK".

4.11 RETRY TIMEOUT

Description: Enter the Retry Timeout in seconds for attempting to ringback customers in a Ringback Queue when they have gone back off-hook. This field, when entered, indicates how long to wait for a customer who is in a ringback queue if, while waiting for the queued-for facility, the customer answers or originates another call. With the customer's line busy, it cannot be rung-back. If the customer does not hang up within the time specified, the call will be removed from the queue without being served. 0 indicates no timeout.

Because of the software scanning function, the timeout value specified is the approximate time which timeout will occur within thirty seconds.

Software Release: 5E3 and later
Valid Entries: 0 - 1023 (seconds)

Data Rules:

This field may be entered only when the QUEUE TYPE is "RGBK".

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4.12 POST Q TREAT

Description: Enter the Post Queue Treatment to be given ARS (Automatic Route Selection) calls that have timed out of the queue. A call in the routine section of the queue will time out based on the value entered in ROU Q TIMEOUT. A call in the priority section of the queue will time out based on the value entered in PRI Q TIMEOUT.

When "ALTR" is entered and the call that has been queued was invoked through ARS, then the queued-for facility is the first route in a route list. Alternate Treatment indicates that upon timeout, a second attempt should be made through the route list. The FRL (Facility Restriction Level) of the ARS originator may be upgraded for this second attempt through the entries POST QUEUE FRL and THRESH FRL of the originator's ARS Group Data on the ARSGPA form (5608-2 Record).

Software Release: 5E3 and later
Valid Entries:

Valid POST Q TREAT Entries

Entry	Definition
REORDER	Reorder Tone
ALTR	Alternate Treatment

Data Rules:

If group type is "LINE", this field must be blank.

4.13 SADA

Description: Should the Service After Delay Announcement feature be activated?

This feature allows the first announcement of a delay treatment be completely played before the call is made available to a hunt group. This field must be set to "Y" if the Service After Delay Announcement feature is active for any hunt group with queuing; otherwise, enter "N".

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If SADA is "Y", GROUP TYPE must be "LINE". If GROUP TYPE is not "LINE", or the NUMBER OF ANNOUNCEMENTS field is blank, then SADA must be "N".

4.14 ANNC BILL

Description: Does billing occur at the time of announcement? This Announcement Billing indicator field is part of the Service After Delay Announcement feature.

Software Release: 5E5 and later
Required Field.
Default: Y

Value Entries: Y, N

Data Rules:

Enter "N" if billing occurs when the call is connected to a hunt group member. Also, enter "N" if the GROUP TYPE is "SFG" or "TRK".

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ESS 5617-1a(8/98)TG-5 MODULAR QUEUING FEATURE DEFINITION RECORD DATE _____
QUFD 5ESS SWITCH
12.40
BASE_____CONT GR____ 5ESS UNIT _____

FEATURE NAME	REMARKS	FEATURE OPTIONS									CHARGES				DEFAULT PARAMETERS							
		GROUP TYPE	QUEUE TYPE	QUEUE ELEMENT	CALL WAITING	PRIORITY QUEUED CALLS	PRIORITY QUEUED CALLS	ATTEMPT QUEUING	ALTERNATE FACILITY QUEUING	TRUNK GROUP QUEUING	TRUNK GROUP QUEUING	HOLDING TIMER	USAGE CHARGE	SERVICE OBSERVATION	USAGE CHARGE	BUSY QUEUING	EXTENDED QUEUING	QUEUE MUSIC	QUEUE ANNOUNCEMENTS	CW LAMPS THRESHOLD	CW LAMPS DPN
																				ROW 1 ROW 2 ROW 3	ROW 1 ROW 2 ROW 3
/QISATCW	QUEUING FOR ISAT MLHG WITH CWLS	LINE	MLHG	N	Y	N	N	N	FB	N	N	N	N								
/QISCWL	QUEUING FOR ISDN MLHG WITH CWLS	LINE	MLHG	N	Y	N	N	N	FB	T	N	N	N								
/QL	QUEUING FOR LINES	LINE	MLHG	N	N	N	N	N		N	N	N	N								

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/QLCSD	QUEUING FOR CSD LINES	LINE	CSD	N	N	N	N	N			N	N	N	N												
/QLCWL	QUEUING FOR LINES WITH CWL	LINE	MLHG	N	Y	N	N	N	DP	T	N	N	N	N												
/QLCWLDA	QUEUING FOR LINES WITH CWL & DA	LINE	MLHG	N	Y	Y	N	N	DP	T	N	N	N	N												
/QLDA	QUEUING FOR LINES WITH DELAY ANN	LINE	MLHG	N	N	Y	N	N			N	N	N	N												
/QSOH	OFFHOOK QUEUING FOR SFG'S	SFG	OFFHK	N	N	N	N	N			N	N	N	N												
/QSOHP	OFHK Q FOR SFG'S W/PRIORITY	SFG	OFFHK	N	N	N	Y	N			N	N	N	N												
/QSOHPD	OFHK Q FOR SFG'S S/ PRI AND DA	SFG	OFFHK	N	N	Y	Y	Y			N	N	N	N												
/QSRB	RINGBACK QUEUING FOR SFG'S	SFG	RGBK	N	N	N	N	N			N	N	N	N												
/QSRBP	RGBK Q FOR SFG W/ PRIORITY	SFG	RGBK	N	N	N	Y	N			N	N	N	N												
/QTACCS	OSPS ACCS DSU2-RAF QUEUING	TRK	DSU	N	N	N	N	N			N	N	N	N												
/QTBLV	OSPS BLV TRUNK QUEUING	TRK	BLV	N	N	N	N	N			N	N	N	N												
/QTOH	OFFHOOK QUEUING FOR TRKS	TRK	OFFHK	N	N	N	N	N			N	N	N	N												
/QTOHP	OFHK Q TRKS WITH PRIORITY	TRK	OFFHK	N	N	N	Y	N			N	N	N	N												
/QTOHPD	OFHK Q FOR TRK'S W/ PRI AND DA	TRK	OFFHK	N	N	Y	Y	Y			N	N	N	N												
/QTRB	RINGBACK QUEUING FOR TRKS	TRK	RGBK	N	N	N	N	N			N	N	N	N												
/QTRBP	RGBK Q FOR TRKS WITH PRIORITY	TRK	RGBK	N	N	N	Y	N			N	N	N	N												
/QU*	MODULAR QUEUING - WILD CARD	TRK	RGBK	N	N	N	N	N			N	N	N	N												
/QRERTE	LDP REROUTE QUEUEING	TRK	REROUTE		N	N	N	N																		
/HPCQ30	HPC OFFHK FOR CSV/CSD	TRK	HPCOHQ		N	Y	N	N																		
/HPCQ15	HPC OFFHK FOR CSV/CSD	TRK	HPCOHQ		N	N	N	N																		

Figure 1 PRECONSTRUCTED MODULAR QUEUING FEATURES 5E6 AND LATER SOFTWARE RELEASES

ESS 5617-1b(8/98)TG-5 MODULAR QUEUING FEATURE DEFINITION RECORD DATE _____
QUFD 5ESS SWITCH
12.40
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

| FEATURE NAME | DEFAULT PARAMETERS | | | | | | | | | | | | | | | | | | |

		POST	X			ROW2 ROW3 ROW4 ROW5	W1 ROW2 ROW3 ROW4 ROW5	W1 ROW2 ROW3 ROW4 ROW5	W1 ROW2 ROW3 ROW4 ROW5	XX ROW5	OTIME	SIZE	UT	YSIZE	MEOUT	RANONFCMTS	ROW2 ROW3 XXX	W1 ROW2 ROW3 XX	W1 ROW2 ROW3 XX	W1 ROW2 ROW3 XX		KKTIYNPTERVL	IMEOUT
/QISATCW		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QISCWL		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QL		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QLCSD		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QLCWL		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QLCWLDA		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QLDA		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QSOH		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QSOHP		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
																			""				

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		""	""														""	"		""			
/QSOHPD		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QSRB		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QSRBP		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTACCS		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTBLV		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTOH		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTOHP		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTOHPD		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTRB		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QTRBP		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QU*		AUD	0							""													
		AUD	0							""													
		AUD	""							""													
		""	""							""							""	"	""	""			
		""	""														""	"	""	""			
/QRERTE														1	2								
/HPCQ30												5	30										
/HPCQ15												5	15										

Figure 2 PRECONSTRUCTED MODULAR QUEUING FEATURES 5E6 AND LATER SOFTWARE RELEASES

ESS 5617-1c(8/98)TG-5 MODULAR QUEUING FEATURE DEFINITION RECORD DATE _____
QUFD 5ESS SWITCH
12.40
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	DEFAULT	REMARKS

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NAME	PARAMETERS			
	POST Q TREAT	S A A D A	N N C B I L L	
/QRERTE		N	Y	
/HPCQ30		N	Y	
/HPCQ15		N	Y	

Figure 3 PRECONSTRUCTED MODULAR QUEUING FEATURES 5E6 AND LATER SOFTWARE RELEASES

```
Screen 1 of 3                5ESS Switch
qufd                 OFFICE DATA ADMINISTRATION
(5617-1a/b/c)         MODULAR QUEUING FEATURE DEFINITION

* 2. FEATURE NAME  ________       3. REMARKS ____________________________________

  FEATURE OPTIONS:                  DEFAULT PARAMETERS:
# 4. GROUP TYPE             ____     17. BASIC SIZE              001
# 5. QUEUE TYPE             _____    18. EXTENDED SIZE           ___
  6. QUEUE INTERFLOW        N        19. QUEUE MODULE            ___
  7. CALL WAITING LAMPS     N        20. QMON THRESHOLD          ___
# 8. SPECIAL DELAY TREATMENT _       21. NUM OF CALL WAITING LAMPS _
  9. PRIORITY QUEUE         N        22. CALL WAITING LAMPS
 10. PRIORITY DELAY TREATMENT N              THRESHOLD      DPN
 11. LAMP TYPE              __        1     ___      _________
 12. THRESHOLD TYPE         _         2     ___      _________
CHARGES:                              3     ___      _________
 13. USAGE SENSITIVE        N
 14. DEACTIVATION           N
 15. USAGE FREQUENCY        N
 16. DURATION               N
```

```
Screen 2 of 3                5ESS Switch
qufd                 OFFICE DATA ADMINISTRATION
(5617-1a/b/c)         MODULAR QUEUING FEATURE DEFINITION

 25. NUMBER OF ANNOUNCEMENTS  _          37. DELAY ANNOUNCEMENTS
                                 row   TYPE   CYCLES  TGN     MEMB
          DELAY TONES    DELAY TIMING      1  ______   _    ____    ____
```

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```
26. PRE      AUD        00       2  ______  _   ____  ____
29. INTER    AUD        00       3  ______  _   ____  ____
32. POST     AUD                 4  ______  _   ____  ____
  MUSIC SOURCE
33. TGN  ____                    FLEXIBLE FIRST ANNOUNCEMENT
34. MEMB ____                    42. TYPE        ______
  ISDN ATTENDANT                 43. CYCLES      _
35. QWARN THRESHOLD ___          44. TGN         ____
36. QBUSY DPN  _________         45. MEMB        ____
                                 46. THRESHOLD VALUE ___
```

```
Screen 3 of 3              5ESS Switch          _
qufd                 OFFICE DATA ADMINISTRATION
(5617-1a/b/c)         MODULAR QUEUING FEATURE DEFINITION

                  DEFAULT PARAMETERS FOR TGN/SFG

47. SERV PROT TIME        ____      58. RINGBACK TYPE      _
48. ROUTINE SIZE          ___       59. RINGBACK INTRVL    __
49. ROU Q TIMEOUT         ____      60. RETRY TIMEOUT      ____

50. PRIORITY SIZE         ___       61. POST Q TREAT       _______
51. PRI Q TIMEOUT         ____      62. SADA               N
52. NUMBER OF PRI ANNCMTS _         63. ANNC BILL          Y

53. PRIORITY ANNOUNCEMENTS
row    TYPE   CYCLES  TGN   MEMB
1      ______  _     ____  ____
2      ______  _     ____  ____
3      ______  _     ____  ____
```

Figure 4 SAMPLE QUFD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 18B: 5617-3/4 RECORD
MODULAR QUEUING GROUP PARAMETER FORM - QUGPA

1. GENERAL

The 5617-3/4 Records are available with 5E2 and later Software Releases. They define the Modular Queuing parameters for a group if the default parameters associated with the Modular Queuing feature on the QUFD form (5617-1 Record) are inappropriate or unspecified. This record need not be filled out if the Modular Queuing default parameters are acceptable.

For 5E3 and later, in addition to queuing for MLHGs, Modular Queuing may be defined to provide queuing for outgoing private facilities, either a physical Trunk Group or an SFG (Simulated Facility Group).

If a QUGPA parameter assignment form is entered for any given group, all entries on that form will be used for the group. None of the default parameters entered on the QUFD form will be used.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.40.

2. FORM ENTRIES - 5617-3 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * GROUP NUMBER

Description: Enter the number of the group that the Modular Queuing feature is assigned to and that these parameters are associated with.
Valid Entries: Valid entries for GROUP NUMBER are dependent upon the software release and the value of GROUP TYPE. Refer to the following table for a breakdown:

Valid GROUP NUMBER Entries			
GROUP TYPE	5E10	5E11	5E15
LINE	1 - 2000	1 - 2000	1 - 8191
TRK	1 - 2000	1 - 4000	0 - 4000
SFG	1 - 2000	1 - 2000	1 - 2000

Data Rules:

When GROUP TYPE is "LINE", the number entered is a Multi-Line Hunt Group that must be defined with the specified Modular Queuing feature on the MLHG form (5110 Record).

When GROUP TYPE is "TRK", the number entered is a Trunk Group that must be defined with the specified Modular Queuing feature on the TKGRP form (5202 Record).

When GROUP TYPE is "SFG", the number entered is a Simulated Facility Group that must be defined with the specified Modular Queuing feature on the PFASFG form (5609-3 Record).

For 5E15 and later:

When GROUP NUMBER does not equal 0,

- OFC Q NUM TRK GRPS must be 0.
- EGR Q NUM TRK GRPS must be 0.
- OFC Q TIMEOUT must be 0.

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- EGR Q TIMEOUT must be 0.
- OFC Q SIZE must be unknown.
- EGR Q SIZE must be unknown.

When GROUP NUMBER equals 0,

- GROUP TYPE must be "TRK".
- ROUTINE SIZE must not be specified.
- PRIORITY SIZE must not be specified.
- ROU Q TIMEOUT must not be specified.
- PRI Q TIMEOUT must not be specified.

When GROUP NUMBER equals 0, GROUP TYPE is "TRK", and OFC Q NUM TRK GRPS equals 0, then EGR Q NUM TRK GRPS must not be 0.

When GROUP NUMBER equals 0, GROUP TYPE is "TRK", and EGR Q NUM TRK GRPS equals 0, then OFC Q NUM TRK GRPS must not be 0.

When GROUP NUMBER equals 0 and GROUP TYPE is "TRK", then SERV PROT TIME must not be specified.

When GROUP NUMBER equals 0 and GROUP TYPE is "TRK", both OFC Q NUM TRK GRPS and EGR Q NUM TRK GRPS must not be 0.

When GROUP NUMBER equals 0 and OFC Q NUM TRK GRPS does not equal 0, both OFC Q TIMEOUT and OFC Q SIZE must not be 0.

When GROUP NUMBER equals 0 and EGR Q NUM TRK GRPS does not equal 0, both EGR Q TIMEOUT and EGR Q SIZE must not be 0.

2.3 * GROUP TYPE

Description: Enter the type of group to which queuing will be applied.

Valid GROUP TYPE Entries

Entry	Definition
LINE	Multi-Line Hunt Groups.
TRK	Software Release: 5E3 and later. Trunk Groups.
SFG	Software Release: 5E3 and later. Simulated Facility Groups.

Data Rules:

For 5E11 through 5E14, when GROUP TYPE is "LINE" or "SFG", GROUP NUMBER must be 1 - 2000. For 5E15 and later, when GROUP TYPE is "LINE", GROUP NUMBER must be 1 - 8191; when GROUP TYPE is "SFG", GROUP NUMER must be 1 - 2000.

When the value entered in the GROUP TYPE field is "LINE", then the value entered in the GROUP NUMBER field must appear in the MLHG field on an MLHG form. Additionally, the entry in the FEATURE NAME field on this form must appear in the QUEUING FEATURE field on the MLHG form.

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When GROUP TYPE is "LINE", then the BASIC SIZE and/or the EXTENDED SIZE fields must have entries.

For 5E15 and later, when GROUP TYPE is defined as "TRK" or "SFG" and GROUP NUMBER does not equal 0, then ROUTINE SIZE must be defined.

2.4 FEATURE NAME

Description: Enter the Feature Name which has been defined on the QUFD form.

Required Field.
Valid Entries: 1 - 8 characters

2.5 BASIC SIZE

Description: Enter the Basic Size of the queue when the queue is defined for a Group Type of "LINE".

Basic Size plus Extended Size is the total size or number of queue slots made available to queue calls simultaneously for this MLHG queue. For instance, if Basic Size is 10 and Extended Size is left blank, 10 calls may be queued while waiting for an idle MLHG terminal. If the queue is full with 10 queued calls, an attempt to queue the eleventh call will overflow the queue and the originator is given busy tone.
Valid Entries: 1 - 255

Data Rules:

For a Group Type of "SFG" or "TRK", this field must be blank.

2.6 EXTENDED SIZE

Description: Enter the Extended Size of the queue when the queue is defined for a GROUP TYPE of "LINE".

Extended Size is specified only when the incoming side of any FX Trunk Group is defined with the listed Directory Number of the queued-for MLHG in DIR CON DN on the TKGRP form (5202 Record). In this case, the Extended Size is defined as the size of the Trunk Group(s), so that an incoming seizure on any of these trunks and subsequent completion to the MLHG direct connect telephone number ensures that the trunk call will be queued.
Valid Entries: 1 - 255

Data Rules:

For a GROUP TYPE of "SFG" or "TRK", this field must be blank.

2.7 QUEUE MODULE

Description: Enter the Queue Module to indicate which Switching Module in this office will be designated to hold and service the queue being defined.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The value entered must be defined as a valid Switching Module on the EQIM form (5700-1/2 Records).

If QUEUE MODULE is entered with a TGN and MEMB combination on one or more of the DELAY ANNOUNCEMENTS, FLEXIBLE FIRST ANNOUNCEMENT or PRIORITY ANNOUNCEMENTS then for each TGN and MEMB combination a matching TRUNK form should be defined with corresponding

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TEN[1,3], DEN[1,3] or NEN[1,3] equal to QUEUE MODULE.

2.8 QMON THRESHOLD

Description: Depending on whether the number of calls in the queue is greater or less than the threshold warning value, the QTWL (Queue Threshold Warning Lamp) on the console monitoring this MLHG is turned on or off. The QTWL does not indicate how long the calls have been queued. A lit threshold warning lamp simply indicates that the number of calls in the queue has exceeded the threshold value.

The QTWLs provided by the CSD (Circuit-Switched Data) feature and existing call waiting lamps are not related. Call waiting lamps are only provided for void queues and not for CSD queues. Call waiting warning lamps are lit when the call is in the queue for some specified time. QTWLs are available for both CSD and voice queuing.

Software Release: 5E6 and later
Valid Entries: 1 - 255

Data Rules:

When this field is entered, either BASIC SIZE or EXTENDED SIZE must be entered. QMON THRESHOLD must not be greater than the sum of BASIC SIZE and EXTENDED SIZE.

EXTENDED SIZE must be blank when QUEUE TYPE is "CSD". The extended queue size is used to reserve room in the queue for calls arriving over FX (Foreign Exchange) facilities. FX facilities do not support CSD calls.

2.9 NUM OF CALL WAITING LAMPS

Description: Enter the Number of Call Waiting Lamps.
Valid Entries: 1 - 3

Data Rules:

This field may be entered only if the GROUP TYPE is "LINE". When GROUP TYPE is "TRK" or "SFG", this field must be blank.

A value in NUM OF CALL WAITING LAMPS determines the maximum number of THRESHOLD values that may be entered in CALL WAITING LAMP rows.

For 5E4(2) and later, when "N" is entered in the THRESHOLD TYPE field on a QUFD form, this field must be 1.

CALL WAITING LAMPS

One, two or three lamps (fields Section 2.10 - Section 2.11) may be associated with each queue. There is one queue identified for each MLHG. Up to three delay thresholds, in ascending order, may be specified. Only one lamp will be lit, corresponding to the longest delay currently experienced.

2.10 THRESHOLD

Description: Enter the Call Waiting threshold.

For 5E4(2) and later, the THRESHOLD value may represent either an amount of time calls are in queue or the quantity of calls in queue. When the THRESHOLD TYPE field on a QUFD form is set to "N", THRESHOLD represents the acceptable number of calls in queue before the ISDN Attendant's call waiting warning lamp will light (the lamp will light when this threshold has been exceeded). When "T" is entered in the THRESHOLD TYPE field on a QUFD form, threshold represents an amount of time calls are in queue.

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For 5E5 and later, when "N" is entered in THRESHOLD TYPE, THRESHOLD may be 1 - 255 (calls). When "T" is entered in THRESHOLD TYPE, THRESHOLD may be 1 - 31 (6-second intervals).
Valid Entries: 1 - 255

Data Rules:

For 5E5 and later, if THRESHOLD is entered and DPN is not entered, the QUFD form for the FEATURE assigned to this group must have LAMP TYPE set to "FB".

2.11 DPN

Description: If a DPN (Distribute Point Number) is to be associated with the corresponding Call Waiting Lamp Threshold, enter a unique DPN in the following format.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

For offices equipped with CM1 (Communication Module 1), valid entries for SM are 1-48. For offices equipped with CM2 (Communication Module 2), valid entries are 1-192.

For 5E4(2) and later, when "FB" (Feature Button) is entered in the LAMP TYPE field on a QUFD form, DPN must be blank.

For 5e5 and later, if DPN is entered, the QUFD form for the FEATURE assigned to this group must have LAMP TYPE set to "DP".

2.12 NUMBER OF ANNOUNCEMENTS

Description: Enter the Number of Announcements allowed (excluding the flexible first announcement).
Valid Entries: 1 - 4

Data Rules:

If this field is entered, then SPECIAL DELAY TREATMENT must be equal to "Y" on the associated QUFD form (5617-1/2 Records). The announcement or announcements to be used are defined in DELAY ANNOUNCEMENTS, one row for each announcement.

If this field is not entered, then Tone Interval before the First Announcement must not be specified in PRE DELAY TIMING or it must equal 0.

If this field is not entered or is equal to 1, then the Tone Interval Between Announcements must not be specified in INTER DELAY TIMING or it must equal 0.

For 5E9(1) and later, if NUMBER OF ANNOUNCEMENTS is not entered, then TGN from DELAY ANNOUNCEMENTS must not be entered.

2.13 PRE DELAY TONES

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Description: Enter the Tone emitted before the first announcement.
Default: AUD
Valid Entries:

Valid PRE DELAY TONES Entries

Entry	Definition
AUD	Audible Ringing Tone
IDLE	No Tone

2.14 PRE DELAY TIMING

Description: Enter the Tone intervals before the first announcement where each interval represents a six-second duration.
Default: 0
Valid Entries: 0 - 20 (6-second intervals)

2.15 INTER DELAY TONE

Description: Enter the Tone emitted between announcements.
Default: AUD
Valid Entries:

Valid INTER DELAY TONE Entries

Entry	Definition
AUD	Audible Ringing Tone
IDLE	No Tone
MUS	Music

2.16 INTER DELAY TIMING

Description: Enter the Tone interval between announcements where each interval represents a six-second duration.
Default: 0
Valid Entries: 0 - 20 (6-second intervals)

2.17 POST DELAY TONE

Description: Enter the Tone emitted after the announcements.
Default: AUD
Valid Entries:

Valid POST DELAY TONE Entries

Entry	Definition
AUD	Audible Ringing Tone
IDLE	No Tone
MUS	Music

MUSIC SOURCE

The following fields (Section 2.18 - Section 2.19) are used to describe the music source for delay tones of "MUS".

2.18 TGN

Description: Enter the trunk group number of the trunk to be used as a music source for music delay tones.

Software Release: 5E6 and later
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

If TGN is entered, then music source MEMB must also be entered. A TGN can only be entered when GROUP TYPE is "LINE" and INTER or POST DELAY TONES is "MUS".

The TGN and MEMB must be defined on the TRUNK form with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE and MUSIC SOURCE equals "Y" on TRUNK form.

2.19 MEMB

Description: Enter the trunk group member number of the trunk to be used as a music source for music delay tones.

Software Release: 5E6 and later
Valid Entries: 0 - 1951

Data Rules:

If music source MEMB is entered, then music source TGN must also be entered.

ISDN ATTENDANT

The next two fields (Section 2.20 - Section 2.21) define warning lamps for the ISDN Attendant Group Overload Warning feature. For information on this feature, refer to Division 2, Section 1T.

2.20 QWARN THRESHOLD

Description: Enter the threshold for the QWARN feature button lamp. When the number of calls in the queue exceeds the threshold value, the QWARN feature button lamps on the appropriate ISAT (ISDN Attendant) terminals are turned on. When the number of calls in the queue falls below the threshold value, the QWARN feature button lamps on the appropriate ISAT terminals are turned off.

The QWARN feature button lamp is defined on the CFGGRP form (5964 Record) using an ACTION of "QCWARN". Refer to Division 6, Section 7A, for more information on this ACTION value.

Software Release: 5E8 and later
Valid Entries: 1 - 251

Data Rules:

If QWARN THRESHOLD is entered, BASIC SIZE must be entered; the QWARN THRESHOLD value must be less than (BASIC SIZE - 3). The number 3 indicates the number of queue slots reserved from the basic portion of the queue for emergency calls. This value is hard-coded in the call processing code.

The QWARN THRESHOLD is applicable only to ISAT Multi-Line Hunt Groups. If QWARN THRESHOLD is entered, GROUP NUMBER can only be defined as a Multi-Line Hunt Group on an MLHG form if HUNT TYPE is set to "ISAT" on the corresponding MLHGFD form.

If QWARN THRESHOLD is entered, the corresponding QUFD form must have CALL WAITING LAMPS set to "Y" and QUEUE TYPE set to "MLHG".

2.21 QBUSY DPN

Description: Enter a unique ISAT Queue Busy DPN (Distribute Point Number). When QBUSY DPN is entered, if the queue is full, the distribution point will cause a lamp to be lit. This lamp is not the same as

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the QBUSY feature button lamp on the ISAT terminal.

Software Release: 5E8 and later
Valid Entries: a 9-digit Distribute Point equipment number in the following format.

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

Data Rules:

If QBUSY DPN is entered, GROUP TYPE must be "LINE".

If QBUSY DPN is entered, it must be unique, i.e., it cannot be assigned on any other form.

If QBUSY DPN is entered, it must be a distribution point defined on the EQMSP or EQMMSP form with TYPE set to "DIST".

The QBUSY DPN is applicable only to ISAT Multi-Line Hunt Groups. If QBUSY DPN is entered then GROUP NUMBER can only be defined as a Multi-Line Hunt Group on an MLHG form with HUNT TYPE set to "ISAT" on the corresponding MLHGFD form.

If QBUSY DPN is entered, the corresponding QUFD form must have CALL WAITING LAMPS set to "Y" and QUEUE TYPE set to "MLHG".

3. FORM ENTRIES - 5617-4 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

3.2 GROUP NUMBER

Description: Enter the Group Number. This number must be the same as that from the corresponding 5617-3 Record entry. This information is not required on the QUFD form.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 through 5E14: 1 - 4000
- For 5E15 and later: 1 - 8191 for LINE (MLHG), 1 - 2000 for SFG, or 1 - 4000 for TRK.

3.3 GROUP TYPE

Description: Enter the type of group to which queuing will be applied. This entry must be the same as that from the corresponding 5617-3 Record entry. This information is not required on the QUFD form.

Valid GROUP TYPE Entries

Entry	Definition
LINE	Multi-Line Hunt Groups.
TRK	Software Release: 5E3 and later. Trunk Groups.
SFG	Software Release: 5E3 and later. Simulated Facility Groups.

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Data Rules:

When GROUP TYPE is "LINE", the following conditions must be true on a corresponding QUFD form: the QUEUE TYPE field must be "CSD" or "MLHG" when EXTENDED SIZE is blank; if EXTENDED SIZE is entered, QUEUE TYPE cannot be "CSD".

3.4 FEATURE NAME

Description: Enter the Modular Queuing Feature Name.
Valid Entries: 1 - 8 characters

DELAY ANNOUNCEMENTS

Delay Announcements (fields Section 3.5 - Section 3.8) are assigned on a per-queue basis but can be shared by several queues.

Each row under DELAY ANNOUNCEMENTS defines the announcement trunk to be used. The quantity of announcements (rows) specified must not exceed the value entered in NUMBER OF ANNOUNCEMENTS. When any field in a row is specified, all of the fields in the row must be entered.

3.5 TYPE

Description: Enter the Announcement Type.

Valid TYPE Entries

Entry	Definition
BARGE	Barge-In.
NBARGE	No Barge-In, where the customer will hear the announcement from the beginning of the message.

3.6 CYCLES

Description: Enter the number of times the Announcement is to be given.
Valid Entries: 0 - 4

3.7 TGN

Description: Enter the Trunk Group Number of the Announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN must be defined on the TKGRP form (5202 Record) with a TRK DIR equal to "ANN".

For 5E9(1) and later, the quantity of DELAY ANNOUNCEMENTS TGN must be the same as the NUMBER OF ANNOUNCEMENTS.

3.8 MEMB

Description: Enter the Trunk Member of the Announcement Trunk Group.
Valid Entries: 0 - 1951

Data Rules:

This member must be defined on the TRUNK form (5204 Record) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE.

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FLEXIBLE FIRST ANNOUNCEMENT

The Flexible First Announcement (fields Section 3.9 - Section 3.13) may be specified to provide an alternate announcement to the first announcement defined in DELAY ANNOUNCEMENTS. If specified, the Flexible First Announcement is used for the next call into the queue when the longest call already queued has been waiting in the queue for the amount of time as specified by THRESHOLD VALUE. If any field under Flexible First Announcement is entered, they all must be entered.

3.9 TYPE

Description: Enter the Announcement Type of the Flexible First Announcement.

Valid TYPE Entries

Entry	Definition
BARGE	Barge-In.
NBARGE	No Barge-In, where the customer will hear the announcement from the beginning of the message.

3.10 CYCLES

Description: Enter the number of times the Flexible First Announcement is to be given.
Valid Entries: 0 - 4

3.11 TGN

Description: Enter the Trunk Group Number of the Flexible First Announcement.
Valid Entries:

- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN must be defined on the TKGRP form (5202 Record) with a TRK DIR equal to "ANN".

3.12 MEMB

Description: Enter the Trunk Member of the Flexible First Announcement Trunk Group.
Valid Entries: 0 - 1951

Data Rules:

This member must be defined on the TRUNK form (5204 Record) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE.

3.13 THRESH VALUE

Description: Enter the Threshold Value associated with the Flexible First Announcement. When the longest queued call has waited this value, the next call into the queue will hear the Flexible First Announcement.
Valid Entries: 1 - 200 (6-second intervals)

3.14 SERV PROT TIME

Description: Enter the Service Protection Time in seconds. 0 indicates no timing or Service Protection.

This field is used when a queue has both a routine section and a priority section. It provides a means of ensuring that routine calls are not completely blocked from being serviced because of priority calls. Service Protection applies to both off-hook and ringback queuing. The expiration of the Service

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Protection Time does not cause routine calls to be dequeued immediately. Rather, this will cause the appropriate indicators to be set so that the next available port in the queued-for facility will be used for the call waiting at the head of the routine queue section instead of a priority call.

Software Release: 5E3 and later
Valid Entries: 0 - 2047 (seconds)

Data Rules:

If GROUP TYPE equals "LINE", this field must be left blank.

If a non-zero value is entered in this field, then PRIORITY QUEUE must be equal to "Y" on the associated QUFD form.

3.15 ROUTINE SIZE

Description: Enter the size of the Routine section of the queue when the queue is defined for a group type of "TRK" or "SFG". The Routine section of a queue may be either ringback or off-hook.

Software Release: 5E3 and later
Valid Entries: 1 - 255

Data Rules:

For a group type of "LINE", this field must be blank.

For 5E6 and later, when both PRIORITY SIZE and ROUTINE SIZE are entered, their sum cannot exceed 255.

3.16 ROU Q TIMEOUT

Description: Enter the Routine Queue Timeout in seconds. 0 indicates no timeout.

This field indicates the maximum time that a routine call can remain in the queue. If a Private Facility Access call has been dequeued because of this timeout and the queue is off-hook, the originator will be given reorder tone. An Automatic Route Selection call on timeout is subject to POST Q TREAT, which will indicate either Reorder or Alternate Treatment.

Because of the software scanning function, the timeout value specified is the approximate time which timeout will occur within thirty seconds.

Software Release: 5E3 and later
Valid Entries: 0 - 4095 (seconds)

Data Rules:

If group type is "LINE", this field must be blank.

If QUEUE TYPE on the associated QUFD form is "RGBK", this entry must be less than or equal to 1770.

3.17 PRIORITY SIZE

Description: Enter the size of the Priority section of the queue. 0 indicates no priority queuing.

Software Release: 5E3 and later
Valid Entries: 0 - 255

Data Rules:

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If a Priority Section is provided, it should be off-hook.

If PRIORITY QUEUE on the associated QUFD form is equal to "Y", this entry must be greater than zero.

For 5E6 and later, when both PRIORITY SIZE and ROUTINE SIZE are entered, their sum cannot exceed 255.

3.18 PRI Q TIMEOUT

Description: Enter the Priority Queue Timeout in seconds. 0 indicates no timeout.

This field indicates the maximum time that a priority call can remain in the queue. If a Private Facility Access call has been dequeued because of this timeout, the originator will be given Reorder tone. An Automatic Route Selection call on timeout is subject to POST Q TREAT which will indicate either Reorder or Alternate Treatment.

Because of the software scanning function, the timeout value specified is the approximate time which timeout will occur within thirty seconds.

Software Release: 5E3 and later
Valid Entries: 0 - 4095

Data Rules:

If GROUP TYPE is "LINE", this field must be blank.

3.19 NUM OF PRI ANNCMTS

Description: Enter the number of Priority Announcements allowed for the Priority Section of the queue.

Software Release: 5E3 and later
Valid Entries: 0 - 3

Data Rules:

If this field is non-zero, PRIORITY DELAY TREATMENT must "Y". The announcement or announcements to be used are defined in PRIORITY ANNOUNCEMENTS, one row for each announcement.

PRIORITY ANNOUNCEMENTS

Priority Announcements (fields Section 3.20 - Section 3.23) are applicable to 5E3 and later Software Releases and are assigned on a per-queue basis for those queues that have Priority sections. These announcements do not have to be unique and may be shared with other queues. Each row under PRIORITY ANNOUNCEMENTS defines the announcement trunk to be used. The quantity of announcements (rows) specified must not exceed the value entered in NUM OF PRI ANNCMTS. When any field in a row is specified, all of the fields in the row must be entered.

3.20 TYPE

Description: Enter the Announcement Type of the Priority Announcement.

Software Release: 5E3 and later
Valid Entries:

Valid TYPE Entries

Entry	Definition
BARGE	Barge-In
NBARGE	No Barge-In, where the customer will hear the announcement from the beginning of the message.

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3.21 CYCLES

Description: Enter the number of times the Priority Announcement is to be given.

Software Release: 5E3 and later
Valid Entries: 0 - 4

3.22 TGN

Description: Enter the Trunk Group Number of the Priority Announcement.

Software Release: 5E3 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN must be defined on the TKGRP form (5202 Record) with a TRK DIR equal to "ANN".

3.23 MEMB

Description: Enter the Trunk Member of the Priority Announcement Trunk Group.

Software Release: 5E3 and later
Valid Entries: 0 - 1951

Data Rules:

This member must be defined on the TRUNK form (5204 Records) with an equipment number specified such that the SM of the trunk is equal to the value entered in QUEUE MODULE.

3.24 RINGBACK TYPE

Description: Enter the distinctive ringing pattern to be used to ringback customers in a Ringback Queue. The pattern is independent of the Distinctive Ringing BRCS feature capability and thus does not require the queuing customer to have a Distinctive Ringing feature assigned.

Software Release: 5E3 and later
Valid Entries:

Valid RINGBACK TYPE Entries

Entry	Definition
A	2 seconds on, 4 seconds off (normal ringing).
B	800 ms on, 400 ms off, 800 ms on, 4 seconds off.
C	400 ms on, 200 ms off, 400 ms on, 200 ms off, 800 ms on, 4 seconds off.
D	1 second on, 1 second off, 1 second on, 3 seconds off.
P	Software Release: 5E4(2) and later. 1640 ms on, 360 ms off.

Data Rules:

This field may be entered only when the QUEUE TYPE on the QUFD is "RGBK".

3.25 RINGBACK INTRVL

Description: Enter the time limit in seconds for ringing back customers in a Ringback Queue. This field indicates how long to apply ringing to the customer's telephone when that customer is in a Ringback Queue and can be dequeued or serviced with the queued-for facility. If the customer does not answer the

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telephone within the time limit, the call will be removed from the queue without being served.

Software Releases: 5E3 and later
Valid Entries: 18, 24, 30, 36, 42, and 48 (seconds)

Data Rules:

This field may be entered only when the QUEUE TYPE on the QUFD form is "RGBK".

3.26 RETRY TIMEOUT

Description: Enter the Retry Timeout in seconds for attempting to ringback customers in a Ringback Queue when they have gone back off-hook. 0 indicates no timeout.

This field indicates how long to wait for a customer who is in a Ringback Queue, if while waiting for the queued-for facility, the customer answers or originates another call. With the customer's line busy, it cannot be rungback. If the customer does not hang up within the time specified, the call will be removed from the queue without being served.

Because of the software scanning function, the timeout value specified is the approximate time which timeout will occur within thirty seconds.

Software Release: 5E3 and later
Valid Entries: 0 - 1023 (seconds)

Data Rules:

This field may be entered only when the QUEUE TYPE on the QUFD form is "RGBK".

3.27 POST Q TREAT

Description: Enter the Post Queue Treatment to be given ARS (Automatic Route Selection) calls that have timed out of the queue. A call in the routine section of the queue will timeout based on the value entered in ROU Q TIMEOUT. A call in the priority section of the queue will timeout based on the value entered in PRI Q TIMEOUT.

When "ALTR" is entered and the call that has been queued was invoked through ARS, then the queued-for facility is the first route in a route list. Alternate Treatment indicates that upon timeout, a second attempt should be made through the route list. The FRL (Facility Restriction Level) of the ARS originator may be upgraded for this second attempt through the entries POST QUEUE FRL and THRESH FRL of the originators ARS Group Data on the ARSGPA form (5608-2 Record).

Software Release: 5E3 and later
Valid Entries:

Valid POST Q TREAT Entries

Entry	Definition
REORDER	Reorder Tone
ALTR	Alternate Treatment

Data Rules:

If GROUP TYPE is "LINE", this field must be blank.

3.28 OFC Q NUM TRK GRPS

Description: This field indicates the total number of trunk groups for which GETS calls can be queued in the Office Queuing Resource at any one time.

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Software Release: 5E15 and later.
Valid Entries: 0 - 500

Data Rules:

When GROUP NUMBER equals 0 and OFC Q NUM TRK GRPS does not equal 0, both OFC Q TIMEOUT and OFC Q SIZE must not be 0.

3.29 EGR Q NUM TRK GRPS

Description: This field indicates the total number of trunk groups for which GETS calls can be queued in the Egress Queuing Resource at any one time.

Software Release: 5E15 and later.
Valid Entries: 0 - 500

Data Rules:

When GROUP NUMBER equals 0 and GROUP TYPE is "TRK", either OFC Q NUM TRK GRPS or EGR Q NUM TRK GRPS must not be 0.

When GROUP NUMBER equals 0 and EGR Q NUM TRK GRPS does not equal 0, both EGR Q TIMEOUT and EGR Q SIZE must not be 0.

Both the EGR Q NUM TRK GRPS and the OFC Q NUM TRK GRPS on the QUGPA form must be 0 to 255 for a Classic SM and 0 to 500 for SM2000.

3.30 OFC Q TIMEOUT

Description: This field indicates the maximum number of seconds that a call can remain in the GETS Queuing Resourse for Office Queuing.

Software Release: 5E15 and later.
Default: 15
Valid Entries: 0 - 90 seconds

3.31 EGR Q TIMEOUT

Description: This field indicates the maximum number of seconds that a call can remain in the GETS Queuing Resourse for Egress Queuing.

Software Release: 5E15 and later.
Default: 30
Valid Entries: 0 - 90 seconds

3.32 OFC Q SIZE

Description: This field indicates the number of queue slots made available to GETS OFC Q calls.

Software Release: 5E15 and later.
Default: 5
Valid Entries: 0 - 255

3.33 EGR Q SIZE

Description: This field indicates the number of queue slots made available to GETS EGR Q calls.

Software Release: 5E15 and later.

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Default: 5
Valid Entries: 0 - 255

Data Rules:

For 5E15 and later, when the sum of (EGR Q SIZE * EGR Q NUM TRK GRPS) and (OFC Q SIZE * OFC Q NUM TRK GRPS) on the QUGPA form must not be greater than 255 on an SM, and 4000 on an SM-2000.

3.34 SADA

Description: Should the Service After Delay Announcement feature be activated?

The feature allows the first announcement of a delay treatment to be completely played before the call is made available to a hunt group. This field must be set to "Y" if the Service After Delay Announcement feature is active for any hunt group with queuing; otherwise, enter "N".

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the NUMBER OF ANNOUNCEMENTS field is blank or GROUP TYPE is not "LINE", then SADA must be "N". If SADA is "Y", GROUP TYPE must be "LINE".

3.35 ANNC BILL

Description: Does billing occur at the time of announcement? This Announcement Billing indicator field is part of the Service After Delay Announcement feature.

Software Release: 5E5 and later
Required Field.
Default: Y

Value Entries: Y, N

Data Rules:

Enter "N" if billing occurs when the call is connected to a hunt group member. Also, enter "N" if the GROUP TYPE is "SFG" or "TRK".

```
SCREEN 1 OF 3                5ESS Switch
qugpa                 OFFICE DATA ADMINISTRATION
(5617-3/4)          MODULAR QUEUING GROUP PARAMETERS

* 1. GROUP NUMBER           0022      12. NUMBER OF ANNOUNCEMENTS  _
* 2. GROUP TYPE             TRK              DELAY TONES   DELAY TIMING
  3. FEATURE NAME           /QTRB     13. PRE      AUD         00
  4. BASIC SIZE             ___       16. INTER    AUD         00
  5. EXTENDED SIZE          ___       19. POST     AUD
  6. QUEUE MODULE           024
  7. QMON THRESHOLD         ___           MUSIC SOURCE
  8. NUM OF CALL WAITING LAMPS _          20. TGN  ____
  9. CALL WAITING LAMPS                   21. MEMB ____
  row    THRESHOLD     DPN                ISDN ATTENDANT
```

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```
 1     ___   _________        22. QWARN THRESHOLD ___
 2     ___   _________        23. QBUSY DPN     _________
 3     ___   _________
```

```
SCREEN 2 OF 3                5ESS Switch
qugpa                 OFFICE DATA ADMINISTRATION
(5617-3/4)          MODULAR QUEUING GROUP PARAMETERS

 24. DELAY ANNOUNCEMENTS                FLEXIBLE FIRST ANNOUNCEMENT
 row   TYPE   CYCLES   TGN    MEMB     29. TYPE      ______
  1   ______   _    ____   ____       30. CYCLES     _
  2   ______   _    ____   ____       31. TGN        ____
  3   ______   _    ____   ____       32. MEMB       ____
  4   ______   _    ____   ____       33. THRESH VALUE ___
```

```
SCREEN 3 OF 3                5ESS Switch          _
qugpa                 OFFICE DATA ADMINISTRATION
(5617-3/4)          MODULAR QUEUING GROUP PARAMETERS

 34. SERV PROT TIME       ____       45. RINGBACK TYPE      B
 35. ROUTINE SIZE         030        46. RINGBACK INTRVL    36
 36. ROU Q TIMEOUT        0000       47. RETRY TIMEOUT      0180

 37. PRIORITY SIZE        ___        48. POST Q TREAT       ALTR
 38. PRI Q TIMEOUT        ____
 39. NUM OF PRI ANNCMTS   _          49. SADA               N
                                     50. ANNC BILL          Y
 40. PRIORITY ANNOUNCEMENTS
row   TYPE    CYCLES   TGN    MEMB
 1   ______    _    ____   ____
 2   ______    _    ____   ____
 3   ______    _    ____   ____
```

Figure 1 SAMPLE QUGPA FORM 5E8 THROUGH 5E14 SOFTWARE RELEASES

```
qugpa                        5ESS Switch
SCREEN 1 OF 4          OFFICE DATA ADMINISTRATION
(5617-3/4)         MODULAR QUEUING GROUP PARAMETER FORM

*1. GROUP NUMBER            ____        9. CALL WAITING LAMPS
*2. GROUP TYPE              ____       ROW THRESHOLD DPN
#3. FEATURE NAME            _________    1    ___   _________
 4. BASIC SIZE              ___          2    ___   _________
 5. EXTENDED SIZE           ___          3    ___   _________
#6. QUEUE MODULE            ___
 7. QMON THRESHOLD          ___        12. NUMBER OF ANNOUNCEMENTS _
 8. NUM OF CALL WAITING LAMPS _         DELAY    TONES TIMING
                                  13. PRE   AUD  00
                                  16. INTER AUD  00
                                  19. POST  AUD
```

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```
qugpa                    5ESS Switch
SCREEN 2 OF 4          OFFICE DATA ADMINISTRATION
(5617-3/4)       MODULAR QUEUING GROUP PARAMETER FORM

 MUSIC SOURCE                24. DELAY ANNOUNCEMENTS
20. TGN ____               ROW TYPE   CYCLES TGN  MEMB
21. MEMB ____                1 ______  _   ____ ____
      ISDN ATTENDANT         2 ______  _   ____ ____
22. QWARN THRESHOLD ___      3 ______  _   ____ ____
23. QBUSY DPN  _________     4 ______  _   ____ ____
```

```
qugpa                    5ESS Switch
SCREEN 3 OF 4          OFFICE DATA ADMINISTRATION
(5617-3/4)       MODULAR QUEUING GROUP PARAMETER FORM

FLEXIBLE FIRST ANNOUNCEMENT    37. PRIORITY SIZE     ___
29. TYPE       ______          38. PRI Q TIMEOUT     ____
30. CYCLES     _               39. NUM OF PRI ANNCMTS _
31. TGN        ____
32. MEMB       ____            40. PRIORITY ANNOUNCEMENTS
33. THRESH VALUE ___           ROW TYPE   CYCLES TGN  MEMB
                    1 ______  _  ____ ____
34. SERV PROT TIME ____        2 ______  _   ____ ____
35. ROUTINE SIZE   ___         3 ______  _   ____ ____
36. ROU Q TIMEOUT  ____
```

```
qugpa                    5ESS Switch      _
SCREEN 4 OF 4          OFFICE DATA ADMINISTRATION
(5617-3/4)       MODULAR QUEUING GROUP PARAMETER FORM

45. RINGBACK TYPE  _           55. SADA      N
46. RINGBACK INTRVL __           56. ANNC BILL Y
47. RETRY TIMEOUT  ____

48. POST Q TREAT     _______
49. OFC Q NUM TRK GRPS ___
50. EGR Q NUM TRK GRPS ___
51. OFC Q TIMEOUT    __
52. EGR Q TIMEOUT    __
53. OFC Q SIZE       ___
54. EGR Q SIZE       ___
```

Figure 2 SAMPLE QUGPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 19: PRECEDENCE AND PREEMPTION FORMS

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SEC. 19A: 5618-1A/1B RECORD PRECEDENCE & PREEMPTION FEATURE DEFINITION FORM - PPFD

1. GENERAL

The 5618-1 Precedence and Preemption Feature Definition Record is available with the 5E2 and later Software Release. The Precedence and Preemption feature is used in DSN (Defense Switched Network) Interface switches to provide direct precedence dialing of calls and precedence treatment for terminating calls such as automatic preemption and the redirection of calls to an DSN Interface attendant associated with the dialed line.

A terminal (line or trunk) must be assigned a Precedence and Preemption Feature on the appropriate feature assignment forms: LINEFA form (5112 Record), MLHLNFA form (5113 Record), BFG form (5625 Record), TKGRPFA form (5206 Record) or TRUNKFA form (5205 Record).

Lines served by the 5ESS Switch (excluding a Satellite PBX) may have rotary, 12 or 16 button DTMF (Dual Tone Multi Frequency) terminals. The 16-button set, which is applicable only to DSN subscribers includes 4 additional digit values of "O" "F" I" and "P" used to indicate precedence level.

Precedence Level	Definition
O	Flash Override
F	Flash
I	Immediate
P	Priority

Special dialing patterns include DSN access codes, route codes, and DSN area codes. These special digits and codes must be translated in the Individualized Dialing Plan Dial Code Assignment IDPDCA form (5601-1/2 Records). With 5E3 and earlier, every line that has a Precedence and Preemption feature assigned to it must have an Individualized Dialing Feature with IDP Group equal to "Y". A PP (Precedence and Preemption) group is a Terminal Group where all of the members have a PP feature. With 5E3 and earlier, the line must also have a Terminal Group/Station Restriction Feature TGSRFD form (5607-1 Record). When defining the line on the LINE form (5109-1 Record), or the MLHLN form (5111-1 Record), the Line Class Code and Rate Area assigned must result in a Class of Service of "INDIV" or "ATND" on an LCC form (5306 Record) and Party must be "I" for Individual. When Multi-Line Hunt Lines have a Precedence and Preemption Feature assigned, all terminals of the group must have a PPFD and the Multi-Line Hunt Group must be assigned an MLHG Feature which has been defined on the MLHGFD form (5604 Record) with HUNT TYPE equal to "PRRG".

Lines which are defined for the Satellite PBX subscribers must also belong to the IDP Group and Terminal Group defined for the line at the 5ESS DSN Interface and, therefore, require the IDFD and TGSRFD Features described above. However, the satellite subscriber may only directly place routine DSN calls. When precedence calls are desired, these subscribers must access the DSN Attendant at the Interface Switch. The Class of Service may be "PBX" or "INDIV" and Party must be "I".

When a PPFD is defined with default parameters and the feature is assigned on a LINEFA form (5112 Record) or a MLHLNFA form (5113 Record), the line will be assigned all of the default parameters except TRUNK TYPE (this parameter is only applicable to trunks) unless the default parameters are overridden by values specified on a PPLPA form (5618-3 Record) or a PPMPA form (5618-4 Record), as appropriate.

1.1 Tie Trunks

For tie trunks to and/or from the DSN Network Switch, the Trunk Group must be defined on a TKGRP form (5202-1 Record) with a TRKCLS of "LTOLLCON". OUTPULSING must be "TT" and INPULSING may be "DP" or "TT". All trunks in the Trunk Group must belong to the Terminal Group of the lines via a TGSR feature. These Trunk Groups may be Incoming, Outgoing, or Two-Way and must have an TRUNK TYPE defined on either this form, the PPFD as a default parameter or on the PPTPA form (5618-5 Record). The TRUNK TYPE must be either "VONPNID" or "VONRNID" where the latter may be used only for routine

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DSN calls. When the TRUNK TYPE is "VONPNID", all levels of precedence are appropriate. On an incoming call from the DSN Network Switch with the TRUNK TYPE "VONPNID", the first digit received is the precedence digit and the subsequent digits must translate to an ACTION of "ICMUSE" in the IDPDCA. (If not, the Fixed Route Type of "PPVAC" is invoked.) With 5E3 and earlier, these trunks must have an Individualized Dialing Feature with IDP Group equal to Yes.

1.2 MLPP on PRI Trunks

For 5E9(2) and later, the MLPP (Multi-level Precedence and Preemption) feature allows a call with higher priority to preempt a PRI B-channel.If the preempted B-channel is needed for the subsequent connection, it is preempted for reuse. If it is not needed for the subsequent connections, it is preempted to clear. MLPP has the ability to mark each B-channel with a precedence level which uniquely identifies the current call. It also provides the transport of precedence level across the PRI. Each B-channel supports the five precedence levels.

In order for the MLPP feature to operate and the unique dialing plan of the DSN to be handled, a contructed BRCS feature is assigned to each end of a trunk group. The MLPP feature defines the MLPP trunk type. The switch uses the trunk type to decide how to populate the SETUP message.

The originating switch can be a DSN (Defense Switched Network) or a commercial office. A PRI MLPP trunk type ("MLPPCQ", "MLPPDQI , "MLPPDQO", "MLPPPQ") must be assigned, with a TRKCLS of "EDSL" on the TKGRP form. The Precedence limit (PREC LIMIT field) must be assigned.

1.3 Trunks to a Satellite PBX

For trunks outgoing to a Satellite PBX, the Trunk Group must be defined on the TKGRP form (5202-1 Record) with a TRKCLS of "PBXDID". With 5E3 and earlier, all trunks in the Trunk Group must belong to the Terminal Group of the lines via a TGSR Feature. These trunks must have an TRUNK TYPE defined on either this form, the PPFD, as a default parameter or on the PPTPA form (5618-5 Record). The TRUNK TYPE must be either "SATINID" or "SATPID". Since only routine calls can terminate directly to the "SATINID" type, precedence calls are redirected to the Attendant via the ATDN CDI specified on this form. Precedence calls may terminate directly on a "SATPID" type and, additionally, if the precedence call is not answered within a specified time, the call is routed to the Attendant via entries in FORWARD TIME and ATDN CDI.

1.4 Attendant Lines

The Attendant lines for the PP Group are expected to be defined in a Multiposition Hunt Type MLHG. Using unique DN (Directory Numbers) for different call types, which may be directed to the six subgroups of the MUPH group, enables the attendant to prioritize the answering of calls at the console. Examples of six possible subgroups are:

- DN for precedence calls.
- DN for routine calls.
- DN for non-DSN calls.
- Call Forwarding to an Attendant DN for precedence calls to a busy line.
- Call Forwarding to an Attendant DN for precedence calls to an idle line.
- Dial 0 for the Attendant, reconstructed DN.

A PP member defined with an Attendant Class of Service has the ability to override the precedence level of a line by Attendant Through Dialing, i.e., by dialing the precedence access code (subject to the authorized precedence level of the Attendant) and then dialing the remaining digits or cutting out of the

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call allowing the originating line to dial subsequent digits.

1.5 Digit Interpretation

Initial digit interpretation for a member of a PP group must be done in the IDPDCA form (5601-1/2 Record). Provisions have been made in the IDP to translate the special digit sequence of an DSN user. The general format of an DSN Interface user originating a precedence call to the DSN Network Switch is a feature code which may be combined with a precedence digit, a Route Code, an DSN area code, followed by a seven-digit DSN telephone number. This digit string may be represented as follows:

Where: (F+)(P) + (1X) + (NYX) + NNX + XXXX

Digit String	Definition
F	Feature access code
P	Precedence digit, usually any single digit 0 to 4
1X	Route code, where X = 0 to 9
NYX	DSN area code, same structure as an NPA
NNX	DSN switch center code
XXXX	Line number

The IDP is normally built with a feature code (e.g., 7) for routine DSN calls. Another feature code (e.g., 8) is designated for precedence calls, however, there are several important differences. In this case, this code is normally translated together with several second digits signifying the level of precedence. As an example, 80 could be used for flash override precedence calls, while 81 through 83 are used for the other precedence levels. These may be translated for a second dial tone following the 8 or without by selecting the appropriate ACTION in IDPDCA, such as "PAFO" or "PPFO".

Alternately, subscribers may be equipped with 16-button telephone sets which include the DTMF (Dual Tone Multi Frequency) digits of O, F, I, and P. These digits may also be translated in the IDP to indicate access to Flash Override, Flash, Immediate and Priority precedence calls.

Each time a PP user attempts to make a precedence call, the dialed precedence is checked against that user's authorized precedence. The user's authorization may be specified either as a default parameter on this form or on the appropriate parameter form, PPLPA or PPMPA.

When the precedence digit is not dialed but instead retrieved as part of a stored DN from an Abbreviated Dial List, no check is made on the user's authorized level. (If the DNs are stored in ADLIST through an "AD1CH" or "AD2CH" IDP Action, a precedence level check is made at the time of the CORC (Customer Originated Recent Change). This means that an originator may place an Abbreviated Dial call with a higher than authorized level of precedence to certain numbers if the originator shares a list but does not CORC the stored DNs or the DNs are stored via Recent Change.)

If a Route Code is subsequently dialed, these digits must also be translated in the IDP. The DIALING STATE of "PAUSE" was added to the IDPDCA to tell call processing it is necessary to go back through the IDPDCA with the next set of digits. PAUSE would be used with the above example of the digits 80, so the information can be collected on the feature access plus precedence level and then another pass through IDPDCA is made to translate the Route Code which indicates the routing treatment to be given specific types of calls.

If the next digits are an DSN area code, these will be translated in the IDPDCA as any of PP1AREA through PP5AREA. These are representations of the five possible geographic areas for DSN. These IDP designations are mapped into a corresponding Code Index value defined on this form.

For any given DSN call, the Code Index translated from the DSN area code indicator, the Route Code and the Precedence Level are used as keys along with the originator's Screening Index and the Terminal Group ID of the PP Group as an index into the PPSCRN form (5618-2 Record). The output of the PPSCRN form is the route or destination to take. Destinations include the tie trunk to the DSN Network Switch, the Attendant, or a failure route to an announcement or to Reorder. An DSN call does not get translated in the RAR form (5301 Record) as normal calls do.

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1.6 Auto ARS and PP Features

Auto ARS and PP features are incompatible on the same line. If the PP feature is assigned, then ARS is not recognized and the call proceeds as a PP call. For additional information about the interaction of these features, see the "Automatic Route Selection" section of the Business and Residence Modular Features Feature Document, AT&T 235-190-101.

1.7 Recent Change View

The corresponding Recent Change View for this form is 12.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and the Office Name on each record.

2.2 *FEATURE NAME

Description: This field is used to enter the Precedence and Preemption Feature Name. The first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA data base, but may not be deleted, changed or inserted.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: This field is used to enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (2.4 - 2.12) define the available feature options.

2.4 NON AV PREC LEVEL

Description: This field is used to enter the precedence level of calls involving a non-DSN line or trunk. If a line with this feature is involved in a call with a non-DSN line (or trunk), only calls with a higher precedence level than the one entered here may preempt the call.

Required Field.

Valid entries in order of increasing precedence are:

Valid NON AV PREC LEVEL Entries

Entry	Definition
R	Routine
P	Priortiy
I	Immediate
F	Flash
FO	Flash Override

2.5 FORWARD TIME

Description: This field is used to enter the number of seconds before a precedence call on a trunk from the end office to a satellite PBX is forwarded to an attendant. 0 means to immediately forward. Used for PBXDID outgoing trunks to a PP Trunk Group with a TRUNK TYPE of "SATPID". The call will be translated based on the entry in ATDN CDI.

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Valid Entries: 0 - 60 seconds

2.6 ATDN CDI

Description: This field is used to enter a Code Index to be used to route precedence calls to an Attendant. For 5E3 and later, do not enter a Code Index if there is not an attendant to route calls to.

Required Field for 5E2 only.
Valid Entries: 1 - 4095

Data Rules:

The Code Index entered here must be specified on the PPSCRN form for each terminal group in which this feature is assigned.

2.7 AREA1 CDI

Description: This field is used to enter a Code Index to be used to route calls made to DSN geographic area 1.
Valid Entries: 1 - 4095

Data Rules:

The Code Index entered here must be on a PPSCRN form for each Terminal Group in which this feature is assigned.

If AREA1 CDI is specified and this feature is assigned to a line, then the line should be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP (on the IDPDCA form) should have ACTION equal to "PP1AREA" and a FEATURE associated with the dialed code on the IDPDCA form must be the precedence and preemption wild-card feature (/PP*) or equal to this precedence and preemption feature.

2.8 AREA2 CDI

Description: This field is used to enter a Code Index to be used to route calls made to DSN geographic area 2.
Valid Entries: 1 - 4095

Data Rules:

The Code Index entered here must be on a PPSCRN form for each Terminal Group in which this feature is assigned.

If AREA2 CDI is specified and this feature is assigned to a line, then the line should be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP (on the IDPDCA form) should have ACTION equal to "PP2AREA" and a FEATURE associated with the dialed code on the IDPDCA form must be the precedence and preemption wild-card feature (/PP*) or equal to this precedence and preemption feature.

2.9 AREA3 CDI

Description: This field is used to enter a Code Index to be used to route calls made to DSN geographic area 3.
Valid Entries: 1 - 4095

Data Rules:

The Code Index entered here must be on a PPSCRN form for each Terminal Group in which this feature is

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assigned.

If AREA3 CDI is specified and this feature is assigned to a line, then the line should be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP (on the IDPDCA form) should have ACTION equal to "PP3AREA" and a FEATURE associated with the dialed code on the IDPDCA form must be the precedence and preemption wild-card feature (/PP*) or equal to this precedence and preemption feature.

2.10 AREA4 CDI

Description: This field is used to enter a Code Index to be used to route calls made to DSN geographic area 4.
Valid Entries: 1 - 4095

Data Rules:

The Code Index entered here must be on a PPSCRN form for each Terminal Group in which this feature is assigned.

If AREA4 CDI is specified and this feature is assigned to a line, then the line should be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP (on the IDPDCA form) should have ACTION equal to "PP4AREA" and a FEATURE associated with the dialed code on the IDPDCA form must be the precedence and preemption wild-card feature (/PP*) or equal to this precedence and preemption feature.

2.11 AREA5 CDI

Description: This field is used to enter a Code Index to be used to route calls made to DSN geographic area 5.

Valid Entires: 1 - 4095

Data Rules:

The Code Index entered here must be on a PPSCRN form for each Terminal Group in which this feature is assigned.

If AREA5 CDI is specified and this feature is assigned to a line, then the line should be assigned an IDP (Individualized Dialing Plan) and at least one dialed code of the IDP (on the IDPDCA form) should have ACTION equal to "PP5AREA" and a FEATURE associated with the dialed code on the IDPDCA form must be the precedence and preemption wild-card feature (/PP*) or equal to this precedence and preemption feature.

2.12 CROSSOVER

Description: Can ports without DSN network privileges be connected to DSN trunks without assistance from the attendant? This field must be "Y" in a DSN office.

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

LINE DEFAULT PARAMETERS

The following fields (2.13-2.27) define the default parameters assigned with the feature to lines. These parameters will be assigned to the lines unless they are overridden by entries on the PPLPA or PPMPA forms. The default parameters are optional; however, if any are entered, the default parameter entries

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must be consistent with one another.

2.13 AV TIE TRUNK PREC LEVEL

Description: This field is used to indicate the highest authorized Precedence Level of a call originated by a line with this feature to the DSN Network over an DSN Tie Trunk.

If a value is not entered (here or on the PPLPA or PPMA form), the line may not originate calls to the DSN Network.

When a line with this feature originates an DSN call to the DSN Network, the precedence of the digits analyzed in the IDPDCA will be checked against this entry to determine if the originator has sufficient permission.

Software Release: 5E2 only
Valid Entries: Valid entries in order of increasing precedence are:

Valid AV TIE TRUNK PREC LEVEL Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash
FO	Flash Override

Data Rules:

If ORIGINATE AV CALLS is "Y" then AV TIE TRUNK PREC LEVEL must be entered. If ORIGINATE AV CALLS is "N" then AV TIE TRUNK PREC LEVEL must not be entered.

Related Actions specified on the IDPDCA are as follows, where the first ACTION includes a second Dial Tone and the latter does not:

Action	Second Dial Tone	No Second Dial Tone
R(Routine)	PAR	PPR
P(Priortiy)	PAP	PPP
I(Immediate)	PAI	PPI
F(Flash)	PAF	PPF
F(Flash Override)	PAFO	PPFO

2.14 PREC COI

Description: This field is used to indicate the highest authorized precedence of a call originating on this line to a port in the same community of interest group.

If a value is not entered (here or on the PPLPA or PPMPA form), the line may not originate calls to the DSN Network.

When a line with this feature originates an DSN call to the DSN Network, the precedence of the digits analyzed in the IDPDCA will be checked against this entry to determine if the originator has sufficient permission.

Software Release: 5E3 and later
Valid Entries: Valid entries in order of increasing precedence are:

Valid PREC COI Entries

Entry	Definition
R	Routine
P	Priortiy
I	Immediate
F	Flash
FO	Flash Override

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Data Rules:

If this field or COI GROUP ID is entered, then both fields must be entered.

Related Actions specified on the IDPDCA are as follows, where the first ACTION includes a second Dial Tone and the latter does not:

Action	Second Dial Tone	No Second Dial Tone
R(Routine)	PAR	PPR
P(Priortiy)	PAP	PPP
I(Immediate)	PAI	PPI
F(Flash)	PAF	PPF
F(Flash Override)	PAFO	PPFO

2.15 LOCAL AV PREC LEVEL

Description: This field is used to enter the highest authorized Precedence Level of a call originated by a line with this feature to another line in the 5ESS office with a PP feature.

Software Release: 5E2 only
Required Field.
Default: R

Valid entries in order of increasing precedence are:
Valid Entries:

Valid LOCAL AV PREC LEVEL Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash
FO	Flash Override
E	Executive

Data Rules:

Related Actions specified in the IDPDCA form are as follows:

Action	Second Dial Tone	No Second Dial Tone
R(Routine)	PAR	PPR
P(Priortiy)	PAP	PPP
I(Immediate)	PAI	PPI
F(Flash)	PAF	PPF
FO(Flash Overide)	PAFO	PPFO
E(Executive)	PAEO	PPEO

2.16 PREC NON COI

Description: This field is used to indicate the highest authorized precedence level of a call originating on this line to a non-community of interest group destination.

Software Release: 5E3 and later
Required Field.
Default: R

Valid entries in order of increasing precedence are:
Valid Entries:

Valid PREC NON COI Entries

Entry	Definition
R	Routine
P	Priortiy
I	Immediate
F	Flash

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FO	Flash Overide
E	Executive

Related Actions specified in the IDPDCA form are as follows:

Action	Second Dial Tone	No Second Dial Tone
R(Routine)	PAR	PPR
P(Priortiy)	PAP	PPP
I(Immediate)	PAI	PPI
F(Flash)	PAF	PPF
FO(Flash Overide)	PAFO	PPFO
E(Excutive)	PAEO	PPEO

2.17 PREEMPTABLE LINE

Description: Can a line with this feature be preempted? If a line is assigned this feature and a PPLPA form (5618-3 Record) or PPMPA form (5618-4 Record)is not submitted and no entry is made in this field, "Y" will be assumed.
Valid Entries: Y, N

Data Rules:

If Multi-Line Hunt lines are assigned PP features, all preemptable lines in the group must have higher terminal numbers than nonpreemtable lines.

2.18 IMMED PREEMPTION

Description: Is immediate preemption in effect for preemption lines? Immediate preemptable allows calls of an appropriate priority terminating to the line to preempt regardless of call waiting or call forwarding - busy line being in effect.

If a line is assigned this feature and a PPLPA or PPMPA form is not submitted and no entry is made in this field, "Y" will be assumed.
Valid Entries: Y, N

Data Rule
If PREEMPTABLE LINE is "N", then this field must be equal to "N".

2.19 PREC CPU

Description: Can precedence calls to the line be picked up using the call pickup feature?

If a line is assigned this feature and a PPLPA or PPMPA form is not submitted and no entry is made in this field, "N" will be assumed. If a "Y" is entered and a PPLPA or PPMPA form is not submitted, a line with this feature also requires a call pickup terminating feature.
Valid Entries: Y, N

2.20 FWD IAGP PREC

Description: Will an intra-terminal group precedence call to a line with this feature be forwarded when the line is busy or does not answer?

If a line is assigned this feature and a PPLPA or PPMPA form is not submitted and no entry is made in this field, "N" will be assumed. If a "Y" is entered here or on a PPLPA or PPMPA form, a line with this feature also requires either a Call Forwarding - Don't Answer PP feature or a Call Forwarding Busy PP feature.
Valid Entries: Y, N

2.21 RECEIVE AV CALLS

Description: Can a PP line with this feature receive calls from the DSN Network? For a DSN office, "Y"

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must be entered. If "Y" is entered, this line also requires a Call Forwarding - Don't Answer PP feature.

Software Release: 5E2 only
Required Field.
Default: Y
Valid Entries: Y, N

2.22 TERM NETWK CALLS

Description: Can a PP line with this feature receive calls from the DSN Network? If "Y" is entered, this line also requires a Call Forwarding - Don't Answer PP feature. For a DSN office, "Y" must be entered.

Software Release: 5E3 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.23 ORIGINATE AV CALLS

Description: Can a PP line with this feature originate calls to the DSN Network?

Software Release: 5E2 only
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then AV TIE TRUNK PREC LEVEL must be entered. If "N" is entered, then AV TIE TRUNK PREC LEVEL must not be entered.

2.24 ORIG NETWK CALLS

Description: Can a PP line with this feature originate calls to the DSN Network?

Software Release: 5E3 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the office is a DSN office, "Y" must be entered.

2.25 DIRECT STA SELECT

Description: Can a line with this feature have the Direct Station Select feature?

A line with Direct Station Select may not dial anything other than the abbreviated dial codes. No more than one digit is recognized by the switch for any single phone call.

If "Y" is entered, this line must also have a 1-digit no change abbreviated dial list and an IDP that will accommodate the abbreviated dial codes.

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

When a PP feature with DIRECT STA SELECT set to "Y" on this form or on a PPLPA of BFG form is assigned to a line, a 1-digit speed call feature must be assigned to the line on a LINEFA, BFG, or associated CLUSTR form; when the PP feature is assigned to an MLHG/TERM, the 1-digit speed call feature must be assigned to the terminal on an MLHLNFA, BFG or associated CLUSTR form. For 5E7 and later, if the line or MLHG terminal is a Secondary Only Shared TN (MLHG/TERM), the Speed Call feature must be assigned to the Primary TN (MLHG/TERM).

2.26 COI GROUP ID

Description: This field is used to enter the Community of Interest Group ID. A COI is a group of subscribers who generate the majority of their traffic in calls to each other.

Software Release: 5E3 and later
Valid Entries: 1 - 20.

Data Rules:

If this field or PREC COI is entered, then both fields must be entered.

2.27 HOT LINE

Description: This field must have an entry if the line is a hot line. Hot line service is used when the forward number is that of another hot line or when a station only wishes to accept calls from other hot lines.

Hot line subscribers can be described as master, slave or neither. Typically, hot line subscribers are paired, where each hot line has the number of the other stored as its forward number. When both subscribers attempt to originate calls at the same time, the master hot line takes precedence over the slave hot line.

Software Release: 5E3 and later
Valid Entries:

Valid HOT LINE Entries

Entry	Definition
MV	Master voice hot line used for pairing.
MD	Master data hot line used for pairing.
SV	Slave voice hot line used for pairing.
SD	Slave data hot line used for pairing.
HV	Voice hot line that is neither a master or slave, used when hot lines are not paired.
HD	Data hot line that is neither a master or slave, used when hot lines are not paired.

Data Rules:

If entry is made in this field, the LCC form associated with the TN or MLHG/TERM must have a CLASS OF SERVICE of either "INDIV" or "4WINDIV".

A CKT TN or a CKT MLHG / CKT TERM defined on the DSLUSR form (5908 Record) cannot be assigned a hot line Precedence and Preemption feature.

TRUNK DEFAULT PARAMETERS

The following fields (2.28 - 2.32) define the default parameters assigned with the feature to trunks. These parameters will be assigned to the trunks unless they are overridden by entries on the PPLPA, PPMPA or PPTPA forms. The default parameters are optional, however, if any are entered, the default parameter entries must be consistent with one another.

2.28 TRUNK TYPE

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Description: This field is used to indicate the DSN trunk type for trunks that are assigned this feature.

Software Release: 5E3 and later
Valid Entries:

Valid TRUNK TYPE Entries

Entry	Definition
EOINID	End Office Immediate Diversion Network In-Dialing.
EOPNID	End Office Precedence Diversion Network In-Dialing.
EORNID	End office Immediate Dialing Diversion Network In-Dialing.
MLPPCQ	Software Release: 5E9(2) and later. MLPP (Multi-Level Precedence and Preemption) Commercial Q.931/DSS1 for PBX or LEC. DSS1 (Digital Subscriber Signaling Number 1) is layer 3 ISDN protocol on BRIs and PRIs. The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
MLPPDQI	Software Release: 5E9(2) and later. Multi-Level Precedence and Preemption DSN Q.931/DSS1 IPR (Incoming PRI). The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
MLPPDQO	Software Release: 5E9(2) and later. Multi-Level Precedence and Preemption DSN Q.931/DSS1 OPR (Outgoing PRI). The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
MLPPPQ	Software Release: 5E9(2) and later. Multi-Level Precedence and Preemption Polygrid Q.931/DSS1. The Polygrid trunk is used to interconnect DSN switches. The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
NONRCD	Inter Switch Trunks without Route control digit.
OFFNET	Off-Network.
RCD	Route Control Digit.
SATINID	Satellite Immediate Network In-Dialing.
SATPID	Satellite Priority In-Dialing.
TIERNID	Tie Trunk Routine Network In-Dialing.
TIEPNID	Tie Trunk Precedence Network In-Dialing.
VONPNID	Tandem Precedence Network In-Dialing.
VONRNID	Tandem Routine Network In-Dialing.

Data Rules:

If a trunk is assigned this feature, either this field must be entered, or a PPTPA form must be submitted with an entry in its corresponding field.

For 5E9(2) and later:

- if TRUNK TYPE is "MLPPCQ", "MLPPDQI , "MLPPDQO", "MLPPPQ", NONRCD", "OFFNET", "RCD", "SATINID", SATPID", "TIERNID" ,"TIEPNID", "VONPNID" or "VONRNID", then ESP must be "N".

- If TRUNK TYPE is "MLPPCQ", "MLPPDQI , "MLPPDQO" or "MLPPPQ", then PREC LIMIT must be "F", "FO", "I", P" or "R".

- If a trunk group is assigned to a Precedence and Preemption Feature on either the TKGRPFA form or an associated CLUSTR form with a TRUNK TYPE of"MLPPCQ", "MLPPDQI", "MLPPDQO or "MLPPPQ" on either the PPFD form or PPTPA form; then the TGN must also be defined on the TKGRP form with a HUNT TYPE of "PRFL", "PRBL", PLFL", or "PLBL".

When trunks are assigned a Precedence and Preemption Feature on either the TRUNKFA form or an associated CLUSTR form with a TRUNK TYPE on either the PPFD form or the PPTPA form, then the TRKCLS on the associated TKGRP form must be as follows:

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TRUNK TYPE	TRKCLS TKGRP FORM
EOINID	TTOLLCON
EOPNID	TTOLLCON
EORNID	TTOLLCON
MLPPCQ	EDSL
MLPPDQI	EDSL
MLPPDQO	EDSL
MLPPPQ	EDSL
NONRCD	PRINTOLL
OFFNET	LTOLLCON
RCD	PRINTOLL
SATINID	PBXDID
SATPID	PBXDID
TIEPNID	LTOLLCON
TIERNID	LTOLLCON
VONRNID	PF
	PFLASH
	PFITT
	LTOLLCON

2.29 PREC LIMIT

Description: This field is used to indicate the maximum authorized precedence level for the trunk.

Software Release: 5E3 and later
Default: R
Valid Entries:

Valid PREC LIMIT Entries

Entry	Definition
I	Immediate
F	Flash
FO	Flash Override
P	Priortiy
R	Routine

Data Rules:

Each TRUNK TYPE can only have the following values:

TRUNK TYPE	Value
EOINID	FO, F, I, P, R
EOPNID	FO, F, I, P, R
EORNID	R
MLPPCQ	F, FO, I, P, or R
MLPPDQI	F, FO, I, P, or R
MLPPDQO	F, FO, I, P, or R
MLPPPQ	F, FO, I, P, or R
NONRCD	FO
OFFNET	FO
RCD	FO
SATINID	FO
SATPID	FO
TIERNID	FO, F, I, P, R
TIEPNID	FO, F, I, P, R
VONPNID	FO, F, I, P, R
VONRNID	FO, F, I, P, R

2.30 ESP

Description: Is this trunk allowed preferential treatment under load conditions?

Software Release: 5E3 and later
Default: N

Valid Entries; Y, N

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Data Rules:

If TRUNK TYPE is "MLPPCQ", MLPPDQI", "MLPPDQO", "MLPPPQ", "NONRCD", OFFNET", "RCD", "SATINID", "SATPID", TIERNID" ,"TIEPNID", "VONRNID" or, "VONPNID", ESP must be "N".

2.31 PRIORITY RINGING

Description: This field is used to enter the type of trunk signal required to cause a priority ring.

Software Release: 5E3 and later
Required Field.
Valid Entries:

Valid PRIORTIY RINGING Entries

Entry	Definition
4WOFF	Off-hook alerting.
4W350	Simple wink 350 milliseconds off-hook, 350 milliseconds on-hook,,off-hook.
4W1650	Continuous 1650 milliseconds off-hook, 350 milliseconds on-hook.
NORING	No ringing is to be supplied.

Data Rules:

If TRUNK TYPE is "EOINID", then "4WOFF", "4W350" or "4W1650" must be entered.

ESS 5618-1(01)TG-5 PRECEDENCE & PREEMPTION DATE _____
FEATURE DEFINITION RECORD
5ESS SWITCH

PPFD
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	REMARKS	NPORNE CAVLE V	FWDTIME	ATDNCDI	AREA1CDI	AREA2CDI	AREA3CDI	AREA4CDI	AREA5CDI	DEFAULT PARAMETERS: AVPRECLVL	LOCALPRECLVL	PREEMPI	IMMEDPRREEMPT	PRECPU	FWDIAGPPRECL	RECCALLS	DSITRAECSTELE	ORIQAVCALLS	TRUNKTYPE

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		E L														C T		
/PP*	WILD CARD PRECED & PREEMPT	R	00	0001														

Figure 1 PRECONSTRUCTED PRECEDENCE AND PREEMPTION FEATURE

Screen 1 of 2 5ESS Switch
ppfd OFFICE DATA ADMINISTRATION
(5618-1A) PRECEDENCE & PREEMPTION FEATURE DEFINITION

* 2. FEATURE NAME PP3 3. REMARKS _____

FEATURE OPTIONS:
4. NON AV PREC LEVEL F
5. FORWARD TIME 10
6. ATDN CDI 0005
7. AREA1 CDI 0005
8. AREA2 CDI 0003
9. AREA3 CDI ____
10. AREA4 CDI ____
11. AREA5 CDI ____
12. CROSSOVER _

Screen 2 of 2 5ESS Switch _
ppfd OFFICE DATA ADMINISTRATION
(5618-1B) PRECEDENCE & PREEMPTION FEATURE DEFINITION

LINE DEFAULT PARAMETERS: TRUNK DEFAULT PARAMETERS:
13. PREC COI E 24. TRUNK TYPE _____
14. PREC NON COI __ 25. PREC LIMIT __
15. PREEMPTABLE LINE Y 26. ESP _
16. IMMED PREEMPTION Y 27. PRIORITY RINGING STD
17. PREC CPU _
18. FWD IAGP PREC _
19. TERM NETWK CALLS _
20. ORIG NETWK CALLS _
21. DIRECT STA SELECT _
22. COI GROUP ID 05
23. HOT LINE __

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Figure 2 SAMPLE PPFD FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 19B: 5618-2 RECORD
PRECEDENCE AND PREEMPTION SCREENING FORM - PPSCRN

1. GENERAL

The 5618-2 Precedence and Preemption Screening Record is available with the 5E2 and later Software Releases. It is used to define the routing treatment for calls associated with the DSN (Defense Switched Network) Precedence and Preemption feature.

When call processing attempts to route an DSN (Defense Switched Network) call, the data on this form is used to obtain the route or destination and to screen the call. On a POTS call, most of this data would be obtained in the RAR form (5301 Record). The RAR form is not used for an DSN (Defense Switched Network) call.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SCR

Description: Enter a screening index.

The Screen Indexes entered on this form are generally also entered on the RAR form since the originating line (or trunk) may be making either an DSN (Defense Switched Network) or a non-DSN (Defense Switched Network) call. A Screening Index is assigned to a line via the LCC form (5306 Record), and to a Trunk Group on the TKGRP form (5202 Record).

Required Field.
Valid Entries: 1 - 4095

2.3 * CDI

Description: Enter the Code Index.

The Code Index may be associated with either an Attendant or one of the DSN (Defense Switched Network) geographic areas 1-5. These Code Indexes are specified on the PPFD form (5618-2 Record) and are triggered through digit analysis entries in the IDPDCA form (5601-1/2 Records). For more information on DSN (Defense Switched Network) digit analysis see the section on PPFD.

Required Field.
Valid Entries: 1 - 4095

2.4 * AV ROUTE CODE

Description: Enter the DSN (Defense Switched Network) Route Code.

The values entered here correspond to the PNTRC action code in the originator's Individualized Dialing Plan defined on a IDPDCA form.

Required Field.
Valid Entries: 0 - 9

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2.5 * PRECEDENCE LEVEL

Description: Enter an DSN (Defense Switched Network) Precedence Level.

The values entered here correspond to the PNTR, PNTP, PNTI, PNTF, PNTFO, and PNTEO (or the PDTR, PDTP, PDTI, PDTF, PDTFO, and PDTEO second dial tone versions) action codes in the originator's Individualized Dialing Plan defined on a IDPDCA form.

Required Field.

Valid entries appear in the following table in order of increasing precedence.

Valid PRECEDENCE LEVEL Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash
FO	Flash Override
E	Executive

Data Rules:

When the Precedence Level is "E", then Route Type must not equal "MC", "HUNT" or "POLYGRD".

2.6 # ROUTE TYPE

Description: Enter the Route Type for calls accessing this entry.

Required Field.

Valid ROUTE TYPE Entries

Entry	Definition
ATDN	Used when the call is to complete to an attendant of the Terminal Group.
DN	Used when the call is to complete to a telephone within this 5ESS Switch office.
HUNT	Hunt for an idle trunk member.
MC	Used when the call is to route via an MC Route Index.
POLYGRD	Used for Polygrid routing in DSN (Defense Switched Network) offices.
REGL	Used when the call is to route via a regular Route Index.
REORD	Routes the call to Reorder Tone.

Data Rules:

See Figure 1 for dependencies between this and other fields on the form.

If ROUTE INDEX TYPE is "REGL", then RTIDX must not be entered.

For 5E11 and later, when the PPSCRN forms have a ROUTE TYPE of "POLYGRD" and a known ROUTE INDEX, there must be a PPPOLY form with a matching POLY RT NUM.

For 5E11 and later, when PPSCRN forms have a ROUTE TYPE of "HUNT" and a known ROUTE INDEX, there must be RTIDX form with a matching ROUTE INDEX.

2.7 MC ROUTE INDEX

Description: When Route Type is "MC", enter an MC Route Index to route the call to the DSN (Defense Switch Network) Switch.

Software Release: 5E2 only.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

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Data Rules:

Any entry here must be defined on the MCRTIDX form (5304 Record).

2.8 REGL ROUTE INDEX

Description: When Route Type is "REGRI", enter a REGL Route Index to route the call to a POTS Route Index usually for an announcement to block the call or to a satellite PBX Trunk Group.

Software Release: 5E2 only.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

Any entry here must be defined on the RTIDX form (5303 Record).

2.9 ROUTE INDEX

Description: When Route Type is "MC", enter an MC Route Index to route the call to the DSN (Defense Switched Network) Switch.

This field replaces the MC ROUTE INDEX and REGL ROUTE INDEX fields.

Software Release: 5E3 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The entry must be defined on an MCRTIDX form (5304 Record).

2.10 NPA

Description: The NPA field is used to specify the numbering plan area code. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: 200 - 999

Data Rules:

When NPA is entered, OFFICE CODE must be entered.

2.11 OFFICE CODE

Description: When Route Type is "ATDN", enter the Office Code of an Attendant's Telephone Number served by the 5ESS Switch office.
Valid Entries: 3 digits

Data Rules:

Any entry here must be defined on the NOC form (5501 Record).

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For 5E12 and later, if the PPSCRN forms have an OFFICE CODE defined and there are multiple NOC forms with the same value for OFFICE CODE, NPA must also be defined on the PPSCRN form.

For 5E12 and later, when the PPSCRN forms have an OFFICE CODE or NPA/OFFICE CODE combination assigned they must be defined on the NOC form.

2.12 DIGITS

Description: When Route Type is "ATDN", enter the four-digit line number of an Attendant's Telephone Number. The entry in OFFICE CODE, together with the entry in this field, are used to route the call to a line served by this office. (This is expected to be to a subgroup of the MUPH Multi-Line Hunt Group used for the DSN Attendant.)
Valid Entries: 4 digits

2.13 # CHARGE INDEX

Description: Enter the Charge Index for this call.

Required Field.
Valid Entries: 1 - 2047

Data Rules:

This field must be defined on the CGIDX form (5302-1 Record).

2.14 CODE CONTROL

Description: Are DSN (Defense Switch Network) Management Controls in effect?
Valid Entries: Y, N

Data Rules:

This field should equal "N" if the DSN OPTION field on the OFCOPT form (5509 Record) is also "N".

2.15 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 16 characters

Requirements for Route Type			
Route Type	**Route Index**	**Office Code**	**Digits**
ATDN	prohibited	required	required
DN	prohibited	prohibited	prohibited
HUNT	required	prohibited	prohibited
MC	required	prohibited	prohibited
POLYGRD	required	prohibited	prohibited
REGL	required	prohibited	prohibited
REORD	prohibited	prohibited	prohibited

Figure 1 REQUIREMENTS FOR ROUTE TYPE 5E3 AND LATER SOFTWARE RELEASES

```
ppscrn                  5ESS Switch          _
(5618-2)          OFFICE DATA ADMINISTRATION
                PRECEDENCE & PREEMPTION SCREENING

* 1. SCR            0010
* 2. CDI            0010
* 3. AV ROUTE CODE     0
```

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```
* 4. PRECEDENCE LEVEL    E
# 5. ROUTE TYPE          REGL
  6. ROUTE INDEX         ____
  7. OFFICE CODE         ___
  8. DIGITS              ____
# 9. CHARGE INDEX        0010
 10. CODE CONTROL        N
 11. REMARKS             _________________
```

Figure 2 SAMPLE PPSCRN FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
ppscrn                      5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5618-2)               PRECEDENCE & PREEMPTION SCREENING

 *1. SCR               ____
 *2. CDI               ____
 *3. AV ROUTE CODE     _
 *4. PRECEDENCE LEVEL __
 #5. ROUTE TYPE        _______
  6. ROUTE INDEX       ____
  7. NPA               ___
  8. OFFICE CODE       ___
  9. DIGITS            ____
#10. CHARGE INDEX      ____
 11. CODE CONTROL      _
 12. REMARKS           _________________
```

Figure 3 SAMPLE PPSCRN FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 19C: 5618-3 RECORD PRECEDENCE AND PREEMPTION LINE (TN) PARAMETER FORM - PPLPA

1. GENERAL

The 5618-3 Precedence and Preemption Line (TN) Parameter Record is available with 5E2 and later Software Releases. It is used to assign specific DSN (Defense Switched Network) PP (Precedence and Preemption) feature parameters to non-Multi-Line Hunt lines. It is required only if the default parameters entered on the PPFD form are inappropriate. If this form is submitted for a given line, all the parameters on this form override all the parameters specified on the PPFD form (5618-1 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the non-Multi-Line Hunt line.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated CLASS OF SERVICE on the LCC form (5306 Record) must be one of the following.

Valid Class of Service	
ATND	50B Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.

For 5E12 and later, TN/FEATURE combinations on different PPLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the PPLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the PP feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

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Data Rules:

The name entered here must be that of a PP feature defined on a PPFD form.

2.4 PREC COI

Description: This field is used to indicate the highest authorized precedence of a call originating on this line to a port in the same Community of Interest group.

When a line with this feature originates an DSN Call to the DSN Network, the precedence of the digits analyzed in the IDPDCA will be checked against this entry to determine if the originator has sufficient permission.

Related Actions specified in the IDPDCA are as follows, where the first Action includes a second Dial Tone and the latter does not:

- R - PAR, PPR
- P - PAP, PPP
- I - PAI, PPI
- F - PAF, PPF
- FO - PAFO, PPFO

Valid entries for PREC COI appear in the following table in order of increasing precedence.

Valid PREC COI Entries

Entry	Definition
R	Routine
E	Executive
P	Priority
I	Immediate
F	Flash
FO	Flash Override

Data Rules:

If this field is not entered, then the COI GROUP ID field must not be entered. However, if a value is entered in this field, then a COI GROUP ID value must also be entered. If a value is not entered (here or on the PPFD or PPMPA form), the line can still originate calls to the DSN Network.

2.5 PREC NON COI

Description: This field is used to indicate the highest authorized precedence level of a call originating on this line to a non Community of Interest group destination.

Related actions specified in the IDPDCA are the same as those listed under PREC COI with the addition of:

E - PAEO, PPEO

Required Field.
Default: R

Valid entries for PREC NON COI appear in the following table in order of increasing precedence.
Valid Entries:

Valid PREC NON COI Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash

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FO	Flash Override
E	Executive.

2.6 PREEMPTABLE LINE

Description: Can a line with this feature be preempted?

Required Field.
Default: Y
Valid Entries: Y, N

2.7 IMMED PREEMPTION

Description: For preemptable lines, is Immediate Preemption in effect? Immediate Preemption allows calls of an appropriate priority terminating to the line to preempt regardless of Call Waiting or Call Forwarding - Busy Line being in effect.

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If PREEMPTABLE LINE is "N", then this field must be equal to "N".

2.8 PREC CPU

Description: Can precedence calls to the line be picked up using the Call Pickup feature?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, this line requires a Call Pickup Terminating feature.

2.9 FWD IAGP PREC

Description: Will an intra-Terminal Group precedence call to a line with this feature be forwarded when the line is busy or does not answer?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, this line also requires either a Call Forwarding - Don't Answer PP feature or a Call Forwarding Busy PP feature.

2.10 TERM NETWK CALLS

Description: Can a PP line with this feature receive calls from the DSN Network?

Required Field.
Default: Y
Valid Entries: Y, N

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Data Rules:

If "Y" is entered, this line also requires a Call Forwarding - Don't Answer PP feature. For a DSN office, "Y" must be entered.

2.11 ORIG NETWK CALLS

Description: Can a PP line with this feature originate calls to the DSN Network?

Required Field.
Default: N
Valid Entries: Y, N

2.12 DIRECT STA SELECT

Description: Does a line with this feature have the Direct Station Select feature?

A line with Direct Station Select may not dial anything other than the abbreviated dial codes. No more than one digit is recognized by the switch for any single phone call.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, this line must also have a 1-digit no change abbreviated dial list and an IDP that will accommodate the abbreviated dial codes.

2.13 COI GROUP ID

Description: Enter the Community of Interest Group ID. A COI is a group of subscribers who generate the majority of their traffic in calls to each other.
Valid Entries: 1 - 20

Data Rules:

If a COI GROUP ID is entered, then a value should be entered in the PREC COI field. However, if the PREC COI field is not entered, then this field must not be entered.

2.14 HOT LINE

Description: For 5E4(2) and later, this field must have an entry if the line is a hot line. Hot line service is used when the forward number is that of another hot line or when a station only wishes to accept calls from other hot lines.

Hot line subscribers can be described as master, slave or neither. Typically, hot line subscribers are paired, where each hot line has the number of the other stored as its forward number. When both subscribers attempt to originate calls at the same time, the master hot line takes precedence over the slave hot line.

Valid HOT LINE Entries

Entry	Definition
MV	Master voice hot line used for pairing
MD	Master data hot line used for pairing
SV	Slave voice hot line used for pairing
SD	Slave data hot line used for pairing
HV	Voice hot line that is neither a master or slave; used when hot lines are not paired
HD	data hot line that is neither a master or slave; used when hot lines are not paired

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Data Rules:

When an entry is made to this field, the LCC form associated with the TN or MLHG/TERM must have a CLASS OF SERVICE of either "INDIV" or "4WINDIV".

A CKT TN defined on the DSLUSR form (5908 Record) cannot be assigned a hot line Precedence and Preemption feature.

```
pplpa                    5ESS Switch                _
(5618-3)              OFFICE DATA ADMINISTRATION
            PRECEDENCE & PREEMPTION LINE (TN) PARAMETERS

* 1. TN                  4546000
* 2. FEATURE               PP

  3. PREC COI              F
  4. PREC NON COI          R
  5. PREEMPTABLE LINE      Y
  6. IMMED PREEMPTION      Y
  7. PREC CPU              N
  8. FWD IAGP PREC         N
  9. TERM NETWK CALLS      Y
 10. ORIG NETWK CALLS      N
 11. DIRECT STA SELECT     N
 12. COI GROUP ID          01
 13. HOT LINE              HV
```

Figure 1 SAMPLE PPLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
pplpa                    5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(5618-3)        PRECEDENCE & PREEMPTION LINE (TN) PARAMETERS

*1. TN     __________     12. COI GROUP ID __
*2. FEATURE ________      13. HOT LINE     __

 3. PREC COI        __
 4. PREC NON COI    R
 5. PREEMPTABLE LINE  Y
 6. IMMED PREEMPTION  Y
 7. PREC CPU        N
 8. FWD IAGP PREC   N
 9. TERM NETWK CALLS  Y
10. ORIG NETWK CALLS  N
11. DIRECT STA SELECT N
```

Figure 2 SAMPLE PPLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 19D: 5618-4 RECORD
PRECEDENCE AND PREEMPTION
LINE (MLHG/TERM) PARAMETER FORM - PPMPA

1. GENERAL

The 5618-4 Precedence and Preemption Line (MLHG/TERM) Parameter Record is available with the 5E2 and later Software Releases. It is used to assign specific DSN (Defense Switched Network) PP (Precedence and Preemption) feature parameters to Multi-Line Hunt lines. It is required only if the default parameters entered on the PPFD form are inappropriate. If this form is submitted for a given line, all the parameters on this form override all parameters specified on the PPFD form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number.

Required Field.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter a Multi-Line Hunt Group Terminal number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line
INDIV	Individual Line
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines
ISATND	ISDN Attendant Terminal
PBX	Line to a PBX
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX

2.4 * FEATURE

Description: Enter the name of the PP feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

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Data Rules:

The name entered here must be that of a PP feature defined on the PPFD form (5618-1 Record).

2.5 PREC COI

Description: This field is used to indicate the highest authorized precedence of a call originating on this line to a port in the same Community of Interest group. If a value is not entered (here or on the PPFD or PPLPA form), the line may not originate calls to the DSN (Defense Switch Network).

When a line with this feature originates an DSN Call to the DSN, the precedence of the digits analyzed in the IDPDCA will be checked against this entry to determine if the originator has sufficient permission.

Related actions specified in the IDPDCA are as follows where the first action includes a second Dial Tone and the latter does not:

- R - PAR, PPR
- P - PAP, PPP
- I - PAI, PPI
- F - PAF, PPF
- FO - PAFO, PPFO

Valid entries for PREC COI appear in the following table in order of increasing precedence.

Valid PREC COI Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash
FO	Flash Override

Data Rules:

If a PREC COI is specified, then a COI GROUP ID must be entered.

If ORIGINATE AV CALLS is allowed, then PREC COI must be specified. If ORIGINATE AV CALLS is not allowed, then PREC COI must be unspecified.

2.6 PREC NON COI

Description: This field is used to indicate the highest authorized precedence level of a call originating on this line to a non-Community of Interest group destination.

Related actions specified in the IDPDCA are the same as those listed under PREC COI with the addition of:

E - PAEO, PPEO

Required Field.
Default: R

Valid entries for PREC NON COI appear in the following table in order of increasing precedence.
Valid Entries:

Valid NON PREC COI Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate

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F	Flash
FO	Flash Override
E	Executive

2.7 PREEMPTABLE LINE

Description: Can a line with this feature be preempted?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If Multi-Line Hunt lines are assigned PP features, all preemptable lines in the group must have higher Terminal Numbers than non-preemptable lines.

2.8 IMMED PREEMPTION

Description: For preemptable lines, is Immediate Preemption in effect? Immediate Preemption allows calls of an appropriate priority terminating to the line to preempt regardless of Call Waiting or Call Forwarding - Busy Line being in effect.

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If PREEMPTABLE LINE is "N", this field must equal to "N".

2.9 PREC CPU

Description: Can precedence calls to the line be picked up using the Call Pickup feature?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Since Multi-Line Hunt lines may not be assigned a Call Pickup Terminating feature, this field must be "N".

2.10 FWD IAGP PREC

Description: Will an intra-Terminal Group precedence call to a line with this feature be forwarded when the line is busy or does not answer?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This is inappropriate for Multi-Line Hunt lines and this field must be "N".

2.11 RECEIVE AV CALLS

Description: Can a line with this feature receive calls from the DSN?

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Required Field.
Default: Y
Valid Entries: Y, N

2.12 DIRECT STA SELECT

Description: Does a line with this feature have the Direct Station Select feature? A line with Direct Station Select may not dial anything other than the abbreviated dial codes. No more than one digit is recognized by the switch for any single phone call.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, this Multi-Line Hunt line must also have a 1-digit no change abbreviated dial list and an IDP that will accommodate the abbreviated dial codes.

2.13 ORIGINATE AV CALLS

Description: Can a line with this feature originate calls to the DSN?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then PREC COI must be specified.

2.14 COI GROUP ID

Description: Enter the Community of Interest Group ID. A COI is a group of subscribers who generate the majority of their traffic in calls to each other.
Valid Entries: 1 - 20

Data Rules:

If a COI GROUP ID is entered, then a value should be entered in the PREC COI field.

2.15 HOT LINE

Description: This field must have an entry if the line is a hot line. Hot line service is used when the forward number is that of another hot line or when a station only wishes to accept calls from other hot lines.

Hot line subscribers can be described as master, slave or neither. Typically, hot line subscribers are paired, where each hot line has the number of the other stored as its forward number. When both subscribers attempt to originate calls at the same time, the master hot line takes precedence over the slave hot line

Valid HOT LINE Entries

Entry	Definition
MV	Master Voice hot line used for pairing
MD	Master Data hot line used for pairing
SV	Slave Voice hot line used for pairing
SD	Slave Data hot line used for pairing
HV	Voice hot line that is neither a master or slave; used when hot lines are not paired

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HD	Data hot line that is neither a master or slave; used when hot lines are not paired

Data Rules:

If an entry is made in this field, the LCC form associated with the TN or MLHG/TERM must have a CLASS OF SERVICE of either "INDIV" or "4WINDIV".

A CKT MLHG / CKT TERM defined on the DSLUSR form (5908 Record) cannot be assigned a hot line Precedence and Preemption feature.

```
ppmpa                    5ESS Switch          _
(5618-4)            OFFICE DATA ADMINISTRATION
          PRECEDENCE & PREEMPTION LINE (MLHG/TERM) PARAMETERS


* 1. MLHG                0003
* 2. TERM                0004
* 3. FEATURE              /DSN

  4. PREC COI             R
  5. PREC NON COI         R
  6. PREEMPTABLE LINE     Y
  7. IMMED PREEMPTION     Y
  8. PREC CPU             N
  9. FWD IAGP PREC        N
 10. TERM NETWK CALLS     Y
 11. ORIG NETWK CALLS     N
 12. DIRECT STA SELECT    N
 13. COI GROUP ID         03
 14. HOT LINE             HD
```

Figure 1 SAMPLE PPMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 19E: 5618-5 RECORD PRECEDENCE AND PREEMPTION TRUNK PARAMETER FORM - PPTPA

1. GENERAL

The 5618-5 Precedence and Preemption Trunk Parameter Record is available with the 5E2 and later Software Releases. It is used to assign specific DSN (Defence Switched Network) PP (Precedence and Preemption) feature parameters to trunks. It is required only if the default parameters entered on the PPFD form are inappropriate. If this form is submitted for a given trunk, all the parameters on this form override all parameters specified on the PPFD Form.

If any member of a analog Trunk Group is assigned an DSN Precedence and Preemption feature, then all members of the Trunk Group must be assigned such features with the same Hunt Type, which must be one of the following types: "PRFL", "PRBL", "PLFL", and "PLBL".

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TRUNK GROUP

Description: Enter the Trunk Group Number.

Requied Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

2.3 * MEMBER

Description: Enter a Trunk Group Member number.

Required Field.
Valid Entries: 0 - 1951

2.4 * FEATURE

Description: Enter the name of the PP feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a PP feature defined on the PPFD Form (5618-1 Record).

2.5 TRUNK TYPE

Description: Indicate the DSN Trunk Type for trunks that are assigned this feature.

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Required Field.

Valid TRUNK TYPE Entries

Entry	Definition
EOINID	End Office - Immediate Network In-Dialing.
EOPNID	End Office/DSN interface Precedence Network In-Dialing.
EORNID	End Office/DSN interface Routine Network In-Dialing.
MLPPCQ	Software Release: 5E9(2) and later. MLPP (Multi-Level Precedence and Preemption) Commercial Q.931/DSS1 for PBX or LEC. DSS1 (Digital Subscriber Signaling Number 1) is layer 3 ISDN protocol on BRIs and PRIs
MLPPDQI	Software Release: 5E9(2) and later. Multi-Level Precedence and Preemption DSN Q.931/DSS1 IPR (Incoming PRI). The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
MLPPDQO	Software Release: 5E9(2) and later. Multi-Level Precedence and Preemption DSN Q.931/DSS1 OPR (Outgoing PRI). The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
MLPPPQ	Software Release: 5E9(2) and later. Multi-Level Precedence and Preemption Polygrid Q.931/DSS1. The Polygrid trunk is used to interconnect DSN switches. The MLPP trunk types are used to support the DSN (Defense Switched Network) MLPP on PRI feature. See Division 2 Section 6G for more information on the MLPP on PRI feature.
NONRCD	Inter Switch Trunks without Route control digit.
OFFNET	Non-DSN Trunks.
RCD	Inter-Switch Trunks with Route Control Digit.
SATINID	Satellite Immediate Network In-Dialing.
SATPID	Satellite Priority In-Dialing.
TIEPNID	Tie Trunk Precedence Network In-Dialing.
TIERNID	Tie Trunk Routine Network In-Dialing.
VONPNID	Tandem Precedence Network In-Dialing.
VONRNID	Tandem Routing Network In-Dialing.

Data Rules:

For 5E9(2) and later, if TRUNK TYPE is "MLPPCQ", "MLPPDQI", "MLPPDQO", "MLPPPQ", "NONRCD", "OFFNET", "RCD", "SATINID", "SATPID", "TIERNID" ,"TIEPNID", "VONPNID" or "VONRNID", then ESP must be "N".

If TRUNK TYPE is "MLPPCQ", "MLPPDQI", "MLPPDQO" or "MLPPPQ", then PREC LIMIT must be "F", "FO", "I", "P" or "R".

Before TRUNK TYPE on the PPTPA form can be set to either "MLPPCQ", "MLPPDQI", "MLPPDQO" or "MLPPPQ", the CENTREX PRI secured feature must be activated on the SFSYS form (5713-1 Record), i.e. the ACT field for SFID 105 must be set to "Y".The assignment of an ID feature to a PRI with an MLPP trunk type is used to analyze the called DN and the precedence level. Therefore, the CENTREX PRI Enhancement secured feature must be activated for proper assignment and operation of the MLPP on PRI feature.

If a trunk group is assigned to a Precedence and Preemption Feature on either the TKGRPFA form or an associated CLUSTR form with a TRUNK TYPE of"MLPPCQ", "MLPPDQI", "MLPPDQO" or "MLPPPQ" on either the PPFD form or PPTPA form; then the TGN must also be defined on the TKGRP form with a HUNT TYPE of "PRFL", "PRBL", "PLFL" or "PLBL".

When trunks are assigned a Precedence and PreemptionFeature on either the TRUNKFA form or an associated CLUSTR form with a TRUNK TYPE on either the PPFD form or the PPTPA form, then the TRKCLS on the associated TKGRP form must be as follows:

TRUNK TYPE	TRKCLS TKGRP FORM
EOINID	TTOLLCON
EOPNID	TTOLLCON

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EORNID	TTOLLCON
MLPPCQ	EDSL
MLPPDQI	EDSL
MLPPDQO	EDSL
MLPPPQ	EDSL
NONRCD	PRINTOLL
OFFNET	LTOLLCON
RCD	PRINTOLL
SATINID	PBXDID
SATPID	PBXDID
TIEPNID	LTOLLCON
TIERNID	LTOLLCON
VONRNID	PF
	PFLASH
	PFITT
	LTOLLCON

2.6 PREC LIMIT

Description: Indicate the Precedence Level for Precedence and Preemption Limit.

Required Field.

Valid PREC LIMIT Entries

Entry	Definition
F	Flash
FO	Flash Override
I	Immediate
P	Priority
R	Routine

Data Rules:

If TRUNK TYPE is "SATINID", "SATPID", "OFFNET", "RCD" or "NONRCD", then PREC LIMIT must be "FO".

2.7 ESP

Description: Is a trunk with this feature essential service protected?
Default: N
Valid Entries: Y, N

Data Rules:

If TRUNK TYPE is "MLPPCQ", "MLPPDQI", "MLPPDQO", "MLPPPQ", "NONRCD", "OFFNET", "RCD", "SATINID", "SATPID", "TIERNID" ,"TIEPNID", "VONPNID", or "VONRNID", ESP must be "N".

2.8 PRIORITY RING

Description: Enter a Routine and Priority Ringing Pattern.

Required Field.

Valid PRIORITY RING Entries

Entry	Definition
4WOFF	Off-hook Alerting.
4W24	Continuous 2-second off-hook, 4-second on-hook.
4W350	Simple Wink 350 milliseconds off-hook, 350 milliseconds on-hook, off-hook.
4W1650	Continuous 1650 milliseconds off-hook, 350 milliseconds on-hook.
NORING	No Ringing is to be supplied.

Data Rules:

If TRUNK TYPE is "EOINID", then Priority Ringing must be "4WOFF", "4W350" or "4W1650".

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```
pptpa                    5ESS Switch          _
(5618-5)              OFFICE DATA ADMINISTRATION
            PRECEDENCE & PREEMPTION TRUNK PARAMETERS


* 1. TRUNK GROUP       0001
* 2. MEMBER           0000
* 3. FEATURE          PP1

  4. TRUNK TYPE        RCD
  5. PREC LIMIT       FO
  6. ESP            N
  7. PRIORITY RING     NORING
```

Figure 1 SAMPLE PPTPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 19F: 5618-6 RECORD PRECEDENCE AND PREEMPTION COMMUNITY OF INTEREST FORM - PPCOI

1. GENERAL

The 5618-6 Record is available with the 5E3 and later Software Releases. It is used to define the code index for a COI (Community of Interest). A COI in the DSN (Defense Switched Network) is a grouping of subscribers who generate the majority of their traffic in calls to each other.

Each DN/MS (DSN Nodal/Multifunction Switch) is required to support twenty different COIs. Each user on the switch can belong to at most one COI, however a user need not belong to any COI.

Each DN/MS can define its own COIs. These can consist of Area Codes, Switch Center Codes, Individual Telephone Numbers or any combination of these.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * CODE INDEX

Description: Enter the Code Index.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

The maximum number of code indices for any one COI (Community of Interest) is 170.

2.3 COMMUNITY OF INTEREST GROUP

Description: This is a list of the twenty COIs, 1 to 20. Enter a "Y" if this Code Index is in the COI.
Valid Entries: Y

---

ppcoi 5ESS Switch _
(5618-6) OFFICE DATA ADMINISTRATION
PRECEDENCE & PREEMPTION COMMUNITY OF INTEREST

* 1. CODE INDEX 0211

2. COMMUNITY OF INTEREST GROUP

COI (row)		COI (row)	
1	Y	11	_
2	_	12	_
3	_	13	_

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4 _ 14 _
5 _ 15 _
6 _ 16 _
7 _ 17 _
8 _ 18 _
9 _ 19 _
10 _ 20 _

Figure 1 SAMPLE PPCOI FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 19G: 5618-7 RECORD
PRECEDENCE & PREEMPTION POLYGRID ROUTING FORM - PPPOLY

1. GENERAL

The 5618-7 Record, available with the 5E3 and later Software Releases, defines routing in the DSN (Defense Switched Network) polygrid network. This form and record are only valid in offices that have the DSN OPTION field on the OFCOPT form set to "Y". The DSN polygrid network is composed of overlapping grids of interconnected switching centers. The polygrid scheme is used for switching between DSN switching centers. All switches in the polygrid network have equal rank; the public switching network, in contrast, is a hierarchical arrangement.

The polygrid pattern has as its fundamental unit the "home grid". The home grid is a set of switches surrounding, and directly connected to, a destination center. The number of switching centers in the home grid can vary according to the home grid's location and traffic needs. In addition to this network of grids, direct trunk groups are established between widely separated centers when the traffic between those centers is sufficient to justify the expense.

For a given destination center, an originating switch checks all predefined routes until an available trunk is selected for the call. The far end of the trunk then becomes the controlling switch, while the previous switch relinquishes control of the routing. The selection process then repeats for the next trunk in the route.

The polygrid plan distinguishes between:

- "exterior routing", used when the originating switch is *not* in the home grid of the destination switch, and
- "interior routing", used when the originating switch is in the destination's home grid.

There are ten possible routes (the direct route plus three triples) that can be defined from the originating switch to the destination switch.

Route control in the polygrid network, depends on the use of the RCD (Route Control Digit) assigned to each route. This decimal digit is generated by each DSN Tandem Switch along a call route. The RCD immediately precedes the address digits transmitted over interswitch trunks. The RCD performs these functions:

- Exercises control over the alternate routing at the next switching center;
- Prevents "shuttle" and "ring around the rosy" ("shuttle" refers to the process of switching a call back-and-forth between the same two switching systems. "Ring around the rosy" refers to the process of switching a call to an office, which then switches to another office, which then switches back to the original office. This can be expanded to any number of offices.); and
- Assists in limiting the number of successive interoffice trunks that may be used on a call.

The administrators of the DSN run a computer program that outputs a listing of the polygrid data to be used at each DSN Tandem Switch. For each destination from a given switch, this listing specifies the trunk groups that comprise the direct route and the three triples of alternate routes, as well as the RCDs to be associated with each route.

The RCDs are assigned based on the following polygrid rules:

- RC-0 (Route Control digit 0) is always used on forward routes;

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- RC-1, RC-2, and RC-3 must be used on lateral routes;
- RC-1 and RC-2 are used on the first lateral route, RC-3 on the second or only lateral route; and
- The RCDs are assigned to ensure that once a call arrives at, or originates in, the home grid of the destination switch, subsequent routing does not cause the call to leave the home grid.

A forward route is considered to be a route that advances a call to a switching center that is geographically nearer the destination. Once a call progresses to the home grid of the destination switch, the only forward route available is the direct route to the destination switch. Lateral routes are defined as routes that do not advance the call geographically by the factor required for forward routing.

1.1 Routine Polygrid Routing

Routine calls in the polygrid network use different routing when within the home grid than when outside of it. The possible routes that are searched are controlled by the RCD received from the previous switch (RC-0 is assumed if the call is at the originating switch). This is summarized as follows:

Interior Routing:

- RC-0 - Use direct route plus first triple;
- RC-1 - Use direct route only;
- RC-2 - Use direct route only;
- RC-3 - Use direct route only.

Exterior Routing:

- RC-0 - Use direct route plus first triple;
- RC-1 - Use direct route plus first triple;
- RC-2 - Use direct route plus first triple;
- RC-3 - Use direct route plus first triple.

On routine calls, the routes that make up the first triple are always searched in a fixed order.

1.2 Precedence Polygrid Routing

Precedence calls in the polygrid network also use different routing when within the home grid than when outside of it. The possible routes that are searched are controlled by the RCD received from the previous switch (RC-0 is assumed if the call is at the originating switch). This is summarized as follows:

Interior Routing:

- RC-0 - Use all programmed routes;
- RC-1 - Use direct route plus first triple;
- RC-2 - Use direct route plus second triple;
- RC-3 - Use direct route only.

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Exterior Routing:

- RC-0 - Use all programmed routes;
- RC-1 - Use direct route plus first triple, plus second triple;
- RC-2 - Use direct route plus first triple, plus third triple;
- RC-3 - Use direct route plus first triple.

A precedence call originating in an exterior office may have up to ten routes available for routing. This drops to seven available routes once inside the home grid.

1.3 Recent Change View

The corresponding Recent Change View for this form is 10.34.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * POLY RT NUM

Description: Enter the Polygrid route pattern index number.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

2.3 GRID

Description: Enter the Grid type.

Required Field.

Valid GRID Entries

Entry	Definition
INT	Interior to the home grid.
EXA	Software Release: 5E4(2) and later. Exterior A grid route pattern to the home grid.
EXB	Software Release: 5E4(2) and later. Exterior B grid route pattern to the home grid.
EXC	Software Release: 5E4(2) and later. Exterior C grid route pattern to the home grid.
EXT	Software Release: 5E3 only. An exterior grid route pattern.

2.4 ROTATE

Description: Is rotation to be used to select the initial route of a triple on a precedence call?

Required Field.
Default: Y
Valid Entries: Y, N

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2.5 IMMED PREEMPT

Description: Is immediate preemptable search required on this route?

Required Field.
Default: N
Valid Entries: Y, N

2.6 ROUTE INDEX

Description: Enter the Route Index for each of the DIRECT and 1ST TRIPLE 1 through 3RD TRIPLE 3 fields.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

At least one of these ten ROUTE INDEXs must be defined.

If the ROUTE INDEX for 1ST TRIPLE 1 through 3RD TRIPLE 3 is blank, ROTATE and IMMED PREEMPT must be "N".

The ROUTE INDEX within each set of triples (e.g., 1ST TRIPLE 1 through 3RD TRIPLE 1) must be unique.

If ROUTE INDEX is specified, all ROUTE CONTROL DIGITS must be entered.

Each ROUTE INDEX must be defined on a RTIDX form (5303 Record).

NOTE: For ROUTE INDEXES populated on this form, the NEXT ROUTE field on the RTIDX form must be left blank in ODA (or set to 0 in Recent Change) for DSN Network Management control CANF (Cancel From).

2.7 ROUTE CONTROL DIGITS

Description: Enter a set of four RCDs (Route Control Digits) for each of the DIRECT and 1ST TRIPLE 1 through 3RD TRIPLE 3 fields.

An explanation of how RCDs are used is contained in Section 1
Valid Entries: 0, 1, 2, or 3

Data Rules:

If the associated ROUTE INDEX is not entered, the ROUTE CONTROL DIGITS must be blank.

```
pppoly                    5ESS Switch                _
(5618-7)              OFFICE DATA ADMINISTRATION
              PRECEDENCE & PREEMPTION POLYGRID ROUTING

* 1. POLY RT NUM       3600
  2. GRID              INT
  3. ROTATE              Y
  4. IMMED PREEMPT       N
```

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	ROUTE INDEX	ROUTE CONTROL DIGITS 3 2 1 0
5. DIRECT	____	_ _ _ _
11. 1ST TRIPLE 1	0020	1 0 0 1
17. 1ST TRIPLE 2	0300	1 1 0 0
23. 1ST TRIPLE 3	____	_ _ _ _
29. 2ND TRIPLE 1	____	_ _ _ _
35. 2ND TRIPLE 2	____	_ _ _ _
41. 2ND TRIPLE 3	____	_ _ _ _
47. 3RD TRIPLE 1	____	_ _ _ _
53. 3RD TRIPLE 2	____	_ _ _ _
59. 3RD TRIPLE 3	____	_ _ _ _

Figure 1 SAMPLE PPPOLY FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 19H: 5618-8 RECORD
DEFENSE SWITCHED NETWORK
CONNECTED OFFICES FORM - DSNCO

1. GENERAL

The 5618-8 Record is available with the 5E3 and later Software Releases. It is used to define the DSN (Defense Switched Network) offices that have direct routes with this switch and are subject to ARC (Alternate Route Cancellation). The ARC is implemented at the switch having direct trunk groups to the switch in congestion. The ARC can take two forms.

- CANF (Cancel Alternate Route From) - Traffic that terminates in a congested switch is not allowed to alternate route via other switches that reach that switch. However, traffic that is routed through a congested switch is allowed to alternate route.
- CANT (Cancel Alternate Route To) - Traffic that does not terminate in the congested switch is not allowed to access the direct trunks to that switch.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.36.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * KEY

Description: Enter the key value which is always 0.

Required Field.
Valid Entries: 0

NAME/ID PAIRS

This is a list of up to 63 pairs of NAME/ID values (fields Section 2.3 - Section 2.4). The NAME and ID are the DSN ARC identifier and must be unique. If the NAME attribute is defined, the ID must be defined and vice versa.

2.3 NAME

Description: This is the name of a directly connected DSN office subject to ARC.
Valid Entries: 3 alphabetic characters

2.4 ID

Description: This is the ID of a directly connected DSN office subject to ARC.
Valid Entries: 1 - 63

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*1. KEY 0

row	3. NAME ID	6. NAME ID	9. NAME ID	12. NAME ID	15. NAME ID	18. NAME ID	21. NAME ID
1	ABC 01	___ __	___ __	___ __	___ __	___ __	___ __
2	DEF 02	___ __	___ __	___ __	___ __	___ __	___ __
3	GHI 03	___ __	___ __	___ __	___ __	___ __	___ __
4	JKL 04	___ __	___ __	___ __	___ __	___ __	___ __
5	MNO 05	___ __	___ __	___ __	___ __	___ __	___ __
6	PQR 06	___ __	___ __	___ __	___ __	___ __	___ __
7	STU 07	___ __	___ __	___ __	___ __	___ __	___ __
8		___ __	___ __	___ __	___ __	___ __	___ __
9		___ __	___ __	___ __	___ __	___ __	___ __

Figure 1 SAMPLE DSNCO FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 20: AUTHORIZATION CODE FORMS

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SEC. 20A: 5619-1 RECORD
AUTHORIZATION CODE FEATURE DEFINITION FORM - ATHFD

1. GENERAL

The 5619-1 Record is available with 5E3 and later Software Releases. It is used to define an ATH (Authorization Code) feature that will restrict dialing privileges to authorized personnel.

A terminal (line or trunk) may be assigned an ATH feature on the appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), TKGRPFA (5206 Record), TRUNKFA (5205 Record), or BFG (5625 Record). The terminal should be assigned to an ATH Group which may be defined as a default parameter of the ATHFD form or on an individual terminal basis with the ATHLPA (5619-5 Record), ATHMPA (5619-6 Record), or ATHTPA form (5619-7 Record).

Each authorization Code Group should have an entry on the ATHAC form (5619-3 Record) to indicate the authorization code associated with the group. An ATHFCOS form (5619-4 Record) should then be entered for each ATH group and FCOS. Each FEATURE entry on the appropriate LINEFA, MLHLNFA, TRUNKFA, TKGRPFA, CLUSTR form(s), which has AC set to "Y", must be entered in the FEATURE LIST on the ATHFCOS form.

Certain Authorization Code features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/); the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed Authorization Code features is contained in Figures 1 and 2.

1.1 ISDN Circuit-Switched Data Calls

The BRCS Supplementary Services for the ISDN CSD (Circuit-Switched Data) calls feature, which is available in 5E6 and later Software Releases, allows the Authorization Codes feature originally developed for CSV (Circuit-Switched Voice) calls to apply to CSD calls as well.

Use of the BRCS Supplementary Services for the CSD calls feature provides the means to establish CSD calls between BRIs (Basic Rate Interfaces) or PRIs (Primary Rate Interfaces) that are making use of the Authorization Codes services. When a line or trunk is assigned Authorization Code service, the service may apply to both CSV and CSD calls for that BRI or PRI.

All group options available to a CSV ATH user are also available to a CSD ATH user. The values of these options, which are entered on the ATHGP form (5608-2 Record), can differ or be the same for each group.

There can be several lines or trunks assigned to a specific ATH group. The subscriber can dial any of the authorization codes defined for the group from any line or trunk in the group. The same or separate, if desired, authorization codes can be used for both CSD and CSV calls.

CSD ATH groups may also be assigned through BFGs (BRCS Feature Groups) in the same manner CSV ATH groups are currently assigned.

Existing preconstructed features for CSV calls will also be used for CSD calls (no new preconstructed ATH features). For more information concerning the assignment of BRCS features, see Division 2, Section 1F.

1.2 Recent Change View

The corresponding Recent Change View for this form is 12.41.

2. FORM AND RECORD ENTRIES

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2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and the office name on each record.

2.2 * FEATURE NAME

Description: Enter the Authorization Code Feature Name. The only restriction on the Feature Name is that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 to 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.10) specify feature options for the Authorization Code Feature.

2.4 ATH PROMPT

Description: Enter the type of prompt that will be given to the user to indicate when an Authorization Code should be entered.

Required Field.
Default: BEEP1
Valid Entries:

Valid ATH PROMPT Entries

Entry	Definition
BEEP1	One beep
BEEP2	Two beeps
BEEP3	Three beeps
LEAVE	Party leaving tone
DIAL	Dial tone

2.5 CHANGE FCOS

Description: Will the subscriber be allowed to change the FCOS (Feature Class of Service) from "MAIN" to "ALTERNATE" and vice versa via a dialed code?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CHANGE FCOS is "Y" and the feature is assigned to a line or trunk, then the line/trunk should normally be assigned an Individualized Dialing Plan. At least one dialed code of the IDP specified on the IDPDCA form (5601-1/2 Record) must have ACTION equal to "MAINACT" or "ALTACT". The FEATURE associated with these dialed codes should be the FEATURE NAME defined on this form.

Alternately, if the line/trunk is not assigned an IDP, then the PDIT used by the line must contain at least one dialed code with ACTION set to "MAINACT" or "ALTACT". The feature associated with these dialed codes should be the FEATURE NAME defined on this form.

2.6 CHANGE ATH FIRST

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Description: Will the subscriber be allowed to change the ATH FIRST field via a dialed code?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CHANGE ATH FIRST is "Y", and the feature is assigned to a line or trunk, then the line/trunk should normally be assigned an Individualized Dialing Plan. At least one dialed code of the IDP specified on the IDPDCA form (5601-1/2 Record) must have an ACTION of "ATHOOS" or "ATHINS". The FEATURE associated with these dialed codes should be the FEATURE NAME defined on this form.

Alternately, if the line/trunk is not assigned an IDP, then the PDIT used by the line must contain at least one dialed code with ACTION "ATHOOS" or "ATHINS". The FEATURE associated with these dialed codes on the PDIT form should be the FEATURE NAME defined on this form.

2.7 ACT TYPE

Description: This field is used to indicate whether or not the ATH feature can be activated by the customer.

Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	No customer activation. Upon assignment the feature is made active and is ready to be used.
CODE	The ATH feature is activated by dialing a code.

Data Rules:

If ACT TYPE is "CODE" and the feature is assigned to a line or trunk, then the line/trunk should normally be assigned an Individualized Dialing Plan. At least one dialed code of the IDP specified on the IDPDCA form (5601-1/2 Record) should have ACTION equal to "ATHACT". The FEATURE associated with the dialed code should be the FEATURE NAME defined on this form.

Alternately, if the line/trunk is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "ATHACT". The FEATURE associated with the dialed code on the PDIT form should be the FEATURE NAME defined on this form.

If Telephone Numbers on the LINEFA forms are assigned an ATH Feature with the ACT TYPE entry set to "AUTO" on the ATHFD form the corresponding Initial Activation Status entry on the BFG, LINEFA or an associated CLUSTR form(s) must be equal to "Y".

If Multi-Line Hunt Group Terminal Numbers are assigned an ATH Feature via MLHLNFA, BFG, or an associated CLUSTR form(s), they also must have the ACT TYPE set to "AUTO" on the ATHFD form. Also the corresponding Initial Activation Status entry via MLHLNFA, BFG or an associated CLUSTR form(s) must be equal to "Y".

If TGN/MEMB(s) are assigned an ATH (Authorization Code) Feature on either the TRUNKFA form or an associated CLUSTR form, the ATH Feature must also be defined on the ATHFD form with ACT TYPE equal to "AUTO". Also the corresponding Initial Activation Status entry on the TRUNKFA or CLUSTR form must be set to "Y".

2.8 DACT TYPE

Description: This field is used to indicate whether or not the subscriber assigned this feature can

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deactivate the feature.

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
NONE	No customer deactivation is allowed. The feature can never be deactivated from the customer's station.
CODE	The ATH feature is deactivated by dialing a code.

Data Rules:

The subscriber either must be restricted from activating and deactivating the Authorization Code feature or must have the ability to do both. If ACT TYPE is "AUTO", DACT TYPE must be "NONE"; if ACT TYPE is "CODE", DACT TYPE must be "CODE".

If DACT TYPE is "CODE" and the feature is assigned to a line or trunk, then the line/trunk should normally be assigned an Individualized Dialing Plan. At least one dialed code of the IDP specified on the IDPDCA form (5601-1/2 Record) must have ACTION equal to "ATHDCT". The FEATURE associated with the dialed code on the IDPDCA form should be the FEATURE NAME defined on this form.

Alternately, if the line/trunk is not assigned an IDP, then the PDIT used by the line should contain at least one dialed code with ACTION equal to "ATHACT". The FEATURE associated with the dialed code on the PDIT form should be the FEATURE NAME defined on this form.

2.9 AMA OVERRIDE

Description: Should the Authorization Code override the Account Code in the AMA record? If this field is "Y", the Authorization Code will be stored in the Account Code field of the record.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If AMA OVERRIDE is "Y", AMA LENGTH must be entered. If AMA OVERRIDE is "N", AMA LENGTH must be blank.

2.10 AMA LENGTH

Description: This field specifies the length of the Authorization Code that will override the Account Code field in the AMA record. The Authorization Code may be 8 digits or 15 characters.
Valid Entries: 8 or 15

DEFAULT PARAMETERS

The following fields (Section 2.11 - Section 2.16) define the default parameters assigned with the feature to terminals (lines or trunks). These parameters will be assigned to the terminal unless they are overridden by entries on the ATHLPA (5619-5 Record), ATHMPA (5619-6 Record), ATHTPA forms (5619-7 Record).

2.11 ATH GROUP NAME

Description: For 5E6 and later, this field has been renamed CSV ATH GRP.

Enter the name of the ATH Group.

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Software Release: 5E3 - 5E5
Valid Entries: 1 - 8 characters

2.12 CSV ATH GRP

Description: Enter the name of the Circuit-Switched Voice ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

Defining a CSV ATH GRP is not required; however, if a CSD ATH GRP is defined on this form, then a CSV ATH GRP must also be defined.

2.13 CSD ATH GRP

Description: Enter the name of the Circuit-Switched Data ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

CSD only groups for ATH service are not allowed. This field can only be entered if CSV ATH GRP is entered.

If a CSD group is defined, the CSD ATH GRP name must not be the same as the CSV ATH GRP name.

2.14 ATH FIRST

Description: Will the customer be required to enter an Authorization Use Code and the Authorization Code before a TN can be dialed on the line?

- ***NOTE:*** 911 calls may be made without an Authorization Use Code and an Authorization Code when this field is set to "Y".

Valid Entries: Y, N

2.15 ATH FOR AMA

Description: Will an Authorization Code be required before allowing AMA recorded calls to proceed?
Valid Entries: Y, N

2.16 ATH FOR MDR

Description: Will an Authorization Code be required before allowing Message Detail Recording to proceed?
Valid Entries: Y, N

ESS 5619-1(5E6)TG-5 AUTHORIZATION CODE FEATURE DEFINITION DATE _____
ATHFD 5ESS SWITCH
12.41
BASE_____CONT GR____ 5ESS UNIT _____

FEATURE NAME	REMARKS	ATH PRO	CFHC	CFHI	AT CAYT	DT AYC	AOM	ALME	DEFAULT PARAMETERS				
									CSV ATH	CSD ATH	AT HFI	A TH F	AT HFO

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		MPT	AONSGE	ARNSGTEATH	PE	PTE	VAERRIDE	ANGTH	GRP	GRP	RST	ORAMA	RMDR
/AH*	AUTHORIZATION CODE WILD CARD	DIAL	N	N	AUTO	NONE	N						
/ATHACF	ATH CODE LINE OUT OF SERVICE	DIAL	N	Y	AUTO	NONE	N						
/ATHCDE	ETS AUTHORIZATION CODES	DIAL	N	N	AUTO	NONE	N						

Figure 1 PRECONSTRUCTED ATH FEATURES 5E3 - 5E5 SOFTWARE RELEASES

ESS 5619-1(02)TG-5 AUTHORIZATION CODE FEATURE DEFINITION DATE _____
ATHFD 5ESS SWITCH
12.41
BASE_____CONT GR____ 5ESS UNIT _____

FEATURE NAME	REMARKS	ATH PROMPT	CFHCAONSGE	CFHIARNSGTE	ATCYTPE	DTAYCPTE	AOMVAERR	ALMEANGT	DEFAULT PARAMETERS CSV ATHGRP	CSD ATHGRP	ATHFIRST	ATHFORAMA	ATHFORMDR

				A T H			I D E	H					
ABC		BEEP1	N	N	AUT O	NON E	Y	8	ABC	CBA	Y	Y	Y

Figure 2 PRECONSTRUCTED ATH FEATURES 5E6 AND LATER SOFTWARE RELEASES

athfd 5ESS Switch
(5619-1) OFFICE DATA ADMINISTRATION
AUTHORIZATION CODE FEATURE DEFINITION

* 2. FEATURE NAME ABC 3. REMARKS _____

FEATURE OPTIONS: DEFAULT PARAMETERS:
4. ATH PROMPT BEEP1 11. CSV ATH GRP ABC
5. CHANGE FCOS N 12. CSD ATH GRP CBA
6. CHANGE ATH FIRST N 13. ATH FIRST Y
7. ACT TYPE AUTO 14. ATH FOR AMA Y
8. DACT TYPE NONE 15. ATH FOR MDR Y
9. AMA OVERRIDE N
10. AMA LENGTH __

Figure 3 SAMPLE ATHFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 20B: 5619-2 RECORD
AUTHORIZATION CODE GROUP DEFINITION FORM - ATHGP

1. GENERAL

The 5619-2 Record is available with 5E3 and later Software Releases. The ATHGP form is used to define the group level of information required for the Authorization Code capability.

A terminal (line or trunk) may be assigned an ATH feature, defined on the ATHFD form (5619-1 Record), through an appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), TKGRPFA (5206 Record), or TRUNKFA form (5205 Record). In addition, each terminal should be assigned to an ATH Group which may be defined as a default parameter of the ATHFD form (5619-1 Record) or on an individual terminal basis through the ATHLPA (5619-5 Record), ATHMPA (5619-6 Record), or ATHTPA form (5619-7 Record).

Each authorization Code Group should have an entry on the ATHAC form (5619-3 Record) to indicate the authorization code associated with each group. An ATHFCOS form (5619-4 Record) should then be entered for each ATH group and FCOS. Each feature requiring an authorization code for this group must be entered on the ATHFCOS form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and the office name on each record.

2.2 * ATH GROUP NAME

Description: Enter the name of the ATH Group.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E5 and later, the number of unique ATH Group names is limited to 255 on the corresponding ATHAC form (5619-1 Record).

For 5E6 and later, if a CSV ATH GROUP or CSD ATH GROUP is defined as a default parameter on the ATHFD form, that corresponding name must be entered in this field for the ATHGP form.

2.3 ATH LENGTH

Description: Enter the length of the authorization code(s) assigned to this group.

Required Field.
Valid Entries: 1 - 15

Data Rules:

All authorization codes for an ATH Group must be the same length. An ATHAC form (5619-3 Record) should be entered for each authorization code in the ATH Group. The lengths of the authorization codes must match the length entered in this field.

2.4 ACTIVE FCOS

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Description: This field is used to indicate whether the main or alternate FCOS (Feature Class Of Service) is active.

Required Field.
Default: M
Valid Entries:

Valid ACTIVE FCOS Entries	
Entry	**Definition**
M	Main
A	Alternate

Data Rules:

When this field is "A", the ALTERNATE ATH field must be "Y".

2.5 NEST FCOS

Description: This field is used to indicate whether the FCOS (Feature Class Of Service) entries will have a nested structure, i.e., FCOS n contains all features in FCOS 1 through n.

For example, if NEST FCOS is "Y", then an Authorization Code assigned on the ATHAC form, with an FCOS of 3 on the associated ATHFCOS form, authorizes the features and facilities in FCOS 1, 2, and 3. If NEST FCOS is "N", only features and facilities for FCOS 3 are authorized.

Required Field.
Default: N
Valid Entries: Y, N

2.6 ALTERNATE ATH

Description: Does an alternate set of authorization codes and associated privilege sets exist?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When this field is set to "N", ACTIVE FCOS must be "M".

2.7 FAIL MODE

Description: Should calls that require an authorization code be allowed to proceed during a communication failure (e.g., when an SM is in stand-alone, communication is lost to the AM, but enough information is available to process the call)?

Required Field.
Default: N
Valid Entries: Y, N

2.8 ERROR TREATMENT

Description: Enter the error treatment to be given when a call requiring an authorization code in this group fails.

Required Field.
Default: REORD
Valid Entries:

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Valid ERROR TREATMENT Entries	
Entry	**Definition**
ANNC	Announcement
REORD	Reorder

Data Rules:

When this field is "ANNC", ANNC ROUTE INDEX must be known.

2.9 ANNC ROUTE INDEX

Description: Enter the route index to be used when ERROR TREATMENT is "ANNC".
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

This route index must be defined on an RTIDX form (5303 Record) with a known Trunk Group Number. The Trunk Group Number on the RTIDX form must match the TGN value on a TKGRP form (5202 Record) with TRK DIR equal to "ANN".

2.10 INHIBIT TOD

Description: Should TOD (Time of Day) be inhibited? This field is used for temporary deactivation of TOD schedules.

Required Field.
Default: N
Valid Entries: Y, N

---

athgp 5ESS Switch
(5619-2) OFFICE DATA ADMINISTRATION
AUTHORIZATION CODE GROUP DEFINITION

* 1. ATH GROUP NAME XYZ

2. ATH LENGTH 05
3. ACTIVE FCOS M
4. NEST FCOS N
5. ALTERNATE ATH N
6. FAIL MODE Y
7. ERROR TREATMENT ANNC
8. ANNC ROUTE INDEX 0050
9. INHIBIT TOD N

Figure 1 SAMPLE ATHGP FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 20C: 5619-3 RECORD
AUTHORIZATION CODE DEFINITION FORM - ATHAC

1. GENERAL

The 5619-3 Record is available with 5E3 and later Software Releases. The ATHAC form is used to define each authorization code associated with a specific Authorization Code Group, and its main or alternate feature class of service values. This form should not be entered without an Authorization code feature defined on the ATHFD form (5619-1 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.18.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Group number and the office name on each record.

2.2 * ATH GROUP NAME

Description: Enter the name of the ATH Group.
Valid Entries: 1 - 8 characters

Data Rules:

The ATH GROUP NAME entered here should be that of an ATH GROUP NAME defined on the ATHGP form (5619-2 Record).

2.3 * ATH CODE

Description: This field represents one of the possible authorization codes that can be associated with a given authorization code group(s). The Authorization codes can belong to one or several authorization code groups. All authorization codes belonging to the same group(s) must be the same length, i.e. have the same quantity of digits.
Valid Entries: 1 - 15 digits

Data Rules:

A LEC office may have 1 to 100,000 unique Authorization codes. A TOLL office may have 1 to 250000 unique Authorization Codes. The OFFICE TYPE is defined on the OFCOPT form (5509 Record).

The ATH CODE length (quantity of digits) here must correspond to the ATH LENGTH entry on the ATHGRP form.

2.4 MAIN FCOS

Description: Enter the main FCOS (Feature Class of Service).
Valid Entries: 1 - 16

Data Rules:

The MAIN FCOS or ALTERNATE FCOS must be entered, or both. If MAIN FCOS is entered, an ATHFCOS form (5619-4 Record) must be entered for this ATH GROUP NAME and FCOS.

2.5 ALTERNATE FCOS

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Description: Enter the alternative Feature Class of Service.
Valid Entries: 1 - 16

Data Rules:

The MAIN or ALTERNATE FCOS must be entered, or both. If ALTERNATE FCOS is entered, an ATHFCOS form (5619-4 Record) must be entered for this ATH GROUP NAME and FCOS.

---

athac 5ESS Switch
(5619-3) OFFICE DATA ADMINISTRATION
AUTHORIZATION CODE DEFINITION

* 1. ATH GROUP NAME MOE
* 2. ATH CODE 1257
3. MAIN FCOS 02
4. ALTERNATE FCOS 04

Figure 1 SAMPLE ATHAC FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 20D: 5619-4 RECORD AUTHORIZATION CODE FEATURE CLASS OF SERVICE PARAMETER FORM - ATHFCOS

1. GENERAL

The 5619-4 Record is available with 5E3 and later Software Releases. The ATHFCOS form is used to define the restriction and features associated with each FCOS (Feature Class of Service), main/alternate, assigned at an authorization code group.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.19.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control number and the office name on each record.

2.2 *ATH GROUP NAME

Description: This field is used to enter the name of the ATH Group.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH GROUP defined on the ATHGP form (5619-2 Record).

When the TGN/MEMB(s) have the AC field set to "Y" for one or more FEATUREs on the TRUNKFA form or an associated CLUSTR form, all of these specific FEATUREs must exist on the ATHFCOS form for the CSV ATH GROUP NAME associated with this TGN/MEMB.

When the TGN(s) have the AC field set to "Y" for one or more FEATUREs on the TKGRPFA form or an associated CLUSTR form, all of these specific FEATUREs must exist on the ATHFCOS form for the CSV ATH GROUP NAME associated with this TGN.

When the TGN(s) have the AC field set to "Y" for one or more FEATUREs on the TKGRPFA form or an associated CLUSTR form, all of these specific FEATUREs must exist on the ATHFCOS form for the CSD ATH GROUP NAME associated with this TGN.

When the TGN/MEMB(s) have the AC field set to "Y" for one or more FEATUREs on the TRUNKFA form or an associated CLUSTR form, all of these specific FEATUREs must exist on the ATHFCOS form for the CSD ATH GROUP NAME associated with this TGN/MEMB.

2.3 *FCOS

Description: This field is used to enter the Feature Class of Service. Each FCOS entered here may correspond to a main or alternate FCOS on the ATHAC form (5619-3 Record).
Valid Entries: 1 - 16

2.4 FRL

Description: This field is used to enter the Facility Restriction Level value to be used to override the existing FRL value whenever an authorization code is entered.

This FRL may not override the originating FRL if an Alternate FRL is allowed (already active). If an Alternate FRL is active, the ALTFRL value defined for this overriding FRL is used. This ALTFRL value still

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may be insufficient in overriding the originating FRL, so the terminal is still denied access to the line (route to Reorder). For information concerning originating and overriding alternate FRLs, see Division 4, Section 9G.
Valid Entries:
- For 5E6 and earlier: 1 - 16
- For 5E7 and later: 0 - 16

Data Rule:
A blank value means do not override.

2.5 DPAT OVR

Description: Is the existing DPAT value to be overridden?
Valid Entries: Y, N

Data Rule:
If "Y" is entered, then there must be an entry for DPAT. If DPAT OVR is "N" or blank, then DPAT must be blank.

2.6 DPAT

Description: This field is used to enter a DPAT value to overrride the dialing plan access treatment. A value of 0 entered here will remove the original DPAT value and set it to null. If the initial DPAT value is 4 and the value entered in this field is 8, then the new DPAT value will be 8.
Valid Entries: 0 - 32

Data Rule:
A value is entered only if DPAT OVR is "Y".

2.7 RESTRICTION TYPE OVR

Description: Is the existing RESTRICTION TYPE value to be overridden?
Valid Entries: Y, N

Data Rule:
If "Y" is entered, then there must be an entry for DPAT. If RESTRICTION TYPE OVR is "N" or blank, then RESTRICTION TYPE must be blank.

2.8 RESTRICTION TYPE

Description: This field is used to enter the station restriction type that will override the present restriction type.
Default: NOVRD
Valid Entries:

Valid RESTRICTION TYPE Entries

Entry	Definition
FULL	Fully restricted origination
NONE	No origination call restriction
SEMI	Semi-restricted origination
NOVRD	Software Release: 5E3 and later. No override of Terminal Group privileges

Data Rules:

A value is entered only if RESTRICTION TYPE OVR is "Y". If the initial RESTRICTION TYPE is "FULL" and the value entered here is "SEMI", then the new RESTRICTION TYPE will be "SEMI".

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2.9 TOLL SCREEN INDEX

Description: If a user enters an ATH code when prompted after dialing a DN, then this screen index is used to override the screen index associated with a toll diverted terminal.

If a user enters an ATH code prior to dialing a DN, this screen index will be used to route the call regardless of whether the call placed would have been toll diverted or not.
Valid Entries: 1 - 4095

2.10 AMA

Description: Is the FCOS sufficient to override the AMA (Automatic Message Accounting) restriction?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ATH FOR AMA on the associated ATHFD form (5619-1 Record), ATHLPA form (5619-5 Record), ATHMPA form (5619-6 Record) or ATHTPA form (5619-7 Record) is "Y", then for at least one FCOS, this field should be "Y". If ATH FOR AMA on the associated form is "N", then this field will not be looked at.

2.11 MDR

Description: Is the FCOS sufficient to override the MDR (Message Detail Recording) restriction?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ATH FOR MDR on the associated ATHFD, ATHLPA, ATHMPA or ATHTPA form is "Y", then for at least one FCOS, this field should be "Y". If ATH FOR MDR on the associated form is "N", then this field will not be looked at.

FEATURE LIST

The Feature list (2.12) consists of a list of up to 48 BRCS Feature names (48 rows, each containing a unique BRCS Feature name).

Each terminal (line or trunk) which is to use the ATH capability must be assigned an ATH feature name defined on the ATHFD form, on the appropriate feature assignment form, LINEFA (5112 Record), MLHLNFA (5113 Record), TKGRPFA (5206 Record), TRUNKFA (5205 Record). In addition, each terminal should be assigned to an ATH Group which may be defined as a default parameter of the ATHFD form or on an individual terminal basis with the ATHLPA, ATHMPA, ATHTPA forms.

Each authorization Code Group should have an entry on the ATHAC form, to indicate the authorization code associated with each group. An ATHFCOS form should then be entered for each ATH group and FCOS. Then each FEATURE entry on the appropriate LINEFA, MLHLNFA, TRUNKFA, TKGRPFA, CLUSTR (5600 Record) form(s) with AC set to "Y" must be entered in the FEATURE LIST on the ATHFCOS form.

2.12 FEATURE

Description: This field is used to enter the unique BRCS Feature Name. The FEATURE entered here cannot be a wildcard feature or a Cluster Name.

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Valid Entries: 1 - 8 alphanumeric characters

```
athfcos                    5ESS Switch
(5619-4)              OFFICE DATA ADMINISTRATION
                AUTHORIZATION CODE FCOS PARAMETERS
 * 1. ATH GROUP NAME ABC       5. DPAT              __      9. AMA  Y
 * 2. FCOS          03         6. RESTRICTION TYPE OVR N      10. MDR Y
   3. FRL           05         7. RESTRICTION TYPE  _____
   4. DPAT OVR      N          8. TOLL SCREEN INDEX ____
  11. FEATURE LIST
   row FEATURE      row FEATURE      row FEATURE      row FEATURE
    01 _________     13 _________     25 _________     37 _________
    02 _________     14 _________     26 _________     38 _________
    03 _________     15 _________     27 _________     39 _________
    04 _________     16 _________     28 _________     40 _________
    05 _________     17 _________     29 _________     41 _________
    06 _________     18 _________     30 _________     42 _________
    07 _________     19 _________     31 _________     43 _________
    08 _________     20 _________     32 _________     44 _________
    09 _________     21 _________     33 _________     45 _________
    10 _________     22 _________     34 _________     46 _________
    11 _________     23 _________     35 _________     47 _________
    12 _________     24 _________     36 _________     48 _________
```

Figure 1 SAMPLE ATHFCOS FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 20E: 5619-5 RECORD
AUTHORIZATION CODE LINE PARAMETER FORM - ATHLPA

1. GENERAL

The 5619-5 Record is available with 5E3 and later Software Releases. The ATHLPA form is used to assign ATH feature parameters to non-Multi-Line Hunt lines when the default parameters of the ATHFD form (5619-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.41.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and the office name on each record.

2.2 * TN

Description: Enter the telephone number of the line.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	Definition
ATND	50B Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.

For 5E12 and later, TN and FEATURE NAME combinations on different ATHLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ATHLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE NAME

Description: Enter the Authorization Code Feature Name.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH feature defined on the ATHFD form (5619-1 Record).

2.4 ATH GROUP NAME

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Description: For 5E6 and later, this field has been renamed CSV ATH GRP.

Enter the name of the ATH Group.

Software Release: 5E3 - 5E5
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP Forms (5619-2 Record).

2.5 # CSV ATH GRP

Description: Enter the name of the Circuit-Switched Voice ATH group.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record).

2.6 CSD ATH GRP

Description: Enter the name of the Circuit-Switched Data ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record). Defining a CSD ATH GRP for this port is optional. If a CSD group is defined, the CSD ATH GRP name must not be the same as the CSV ATH GRP name.

2.7 # ATH FIRST

Description: Will the customer be required to enter an Authorization Use Code and the Authorization Code before a TN can be dialed on the line? If CHANGE ATH FIRST is "Y" on the associated ATHFD form, the customer may dial a code to change this field.

- ***NOTE:*** 911 calls may be made without an Authorization Use Code and an Authorization Code when this field is set to "Y".

Required Field.
Valid Entries: Y, N

2.8 # ATH FOR AMA

Description: Will an Authorization Code be required before allowing any AMA recorded calls to proceed?

Required Field.
Valid Entries: Y, N

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2.9 # ATH FOR MDR

Description: Will an Authorization Code be required before allowing a call recorded by MDR (Message Detail Recording) to proceed?

Required Field.
Valid Entries: Y, N

```
athlpa                    5ESS Switch
(5619-5)              OFFICE DATA ADMINISTRATION
              AUTHORIZATION CODE LINE (TN) PARAMETERS

 * 1. TN           6681158
 * 2. FEATURE NAME    MOEH

   3. ATH GROUP NAME  ABC
   4. ATH FIRST       Y
   5. ATH FOR AMA     Y
   6. ATH FOR MDR     Y
```

Figure 1 SAMPLE ATHLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
athlpa                    5ESS Switch
(5619-5)              OFFICE DATA ADMINISTRATION
              AUTHORIZATION CODE LINE (TN) PARAMETERS

 * 1. TN           5105674
 * 2. FEATURE NAME  ABC

 # 3. CSV ATH GRP    ABC
   4. CSD ATH GRP    ABC2
 # 5. ATH FIRST     Y
 # 6. ATH FOR AMA   Y
 # 7. ATH FOR MDR   Y
```

Figure 2 SAMPLE ATHLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 20F: 5619-6 RECORD AUTHORIZATION CODE LINE (MLHG/TERM) PARAMETER FORM - ATHMPA

1. GENERAL

The 5619-6 Record is available with 5E3 and later Software Releases. The ATHMPA form is used to assign ATH (Authorization Code) parameters to Multi-Line Hunt lines when the default parameters of the ATHFD form (5619-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.41.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and the office name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Member Number of the line.
Valid Entries: 1 - 2015;
- 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	Definition
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	Software Release: 5E4(2) and later. Integrated Services Digital Network digital subscriber lines.
ISATND	Software Release: 5E4(2) and later. ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.

2.4 * FEATURE NAME

Description: Enter the Authorization Code Feature Name.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH feature defined on the ATHFD form (5619-1 Record).

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2.5 ATH GROUP NAME

Description: For 5E6 and later, this field has been renamed CSV ATH GRP.

Enter the name of the ATH Group.

Software Release: 5E5 and earlier
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record).

2.6 # CSV ATH GRP

Description: Enter the name of the Circuit-Switched Voice ATH group.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record).

2.7 CSD ATH GRP

Description: Enter the name of the Circuit-Switched Data ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record).

Defining a CSD ATH GRP for this port is optional. If a CSD group is defined, the CSD ATH GRP name must not be the same as the CSV ATH GRP name.

2.8 # ATH FIRST

Description: Will the customer have to enter an Authorization Use Code and the Authorization Code before a TN can be dialed on the line? If CHANGE ATH FIRST is "Y" on the associated ATHFD form, the customer may dial a code to change this field.

- ***NOTE:*** 911 calls may be made without an Authorization Use Code and an Authorization Code when this field is set to "Y".

Required Field.
Valid Entries: Y, N

2.9 # ATH FOR AMA

Description: Is an Authorization Code required before allowing AMA recorded calls to proceed?

Required Field.

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Valid Entries: Y, N

2.10 # ATH FOR MDR

Description: Is an Authorization code required before allowing a call recorded by MDR (Message Detail Recording) to proceed?

Required Field.
Valid Entries: Y, N

```
athmpa                    5ESS Switch
(5619-6)              OFFICE DATA ADMINISTRATION
          AUTHORIZATION CODE LINE (MLHG/TERM) PARAMETERS

 * 1. MLHG          0032
 * 2. TERM          0021
 * 3. FEATURE        ATHMA

   4. ATH GROUP NAME   XYZ
   5. ATH FIRST       Y
   6. ATH FOR AMA     Y
   7. ATH FOR MDR     Y
```

Figure 1 SAMPLE ATHMPA FORM 5E3 - 5E5 SOFTWARE RELEASES

```
athmpa                    5ESS Switch
(5619-6)              OFFICE DATA ADMINISTRATION
          AUTHORIZATION CODE LINE (MLHG/TERM) PARAMETERS

 * 1. MLHG         1100
 * 2. TERM         1100
 * 3. FEATURE      ABC

 # 4. CSV ATH GRP   ABC1
   5. CSD ATH GRP   ABC2
 # 6. ATH FIRST     N
 # 7. ATH FOR AMA   N
 # 8. ATH FOR MDR   N
```

Figure 2 SAMPLE ATHMPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 20G: 5619-7 RECORD
AUTHORIZATION CODE TRUNK (TGN/MEMB)
PARAMETER FORM - ATHTPA

1. GENERAL

The 5619-7 Record is available with 5E3 and later Software Releases. The ATHTPA form is used to assign ATH feature parameters to trunks when the default parameters of the ATHFD form (5619-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.41.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group number and the office name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number of the trunk.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202-1 Record) must be one of the following.

TRKCLS	Description
PF	Private Facility.
PFLASH	Private Facility Feature Flash.

2.3 * MEMB

Description: Enter the Trunk Group Member Number of the trunk.
Valid Entries:
- For 5E2: 0 - 1983
- For 5E3 and later: 0 to 1951

2.4 * FEATURE NAME

Description: Enter the Authorization Code Feature Name.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH feature defined on the ATHFD form (5619-1 Record).

2.5 ATH GROUP NAME

Description: For 5E6 and later, this field has been renamed CSV ATH GRP.

Enter the name of the ATH Group.

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Software Release: 5E5 and earlier
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ATH Group defined on one or more ATHGP forms (5619-4 Record).

2.6 # CSV ATH GRP

Description: Enter the name of the Circuit-Switched Voice ATH group.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record).

2.7 CSD ATH GRP

Description: Enter the name of the Circuit-Switched Data ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ATH Group defined on one or more ATHGP forms (5619-2 Record). Defining a CSD ATH GRP for this port is optional.

If CSD ATH GRP is entered, then CSV ATH GRP must also be entered.

2.8 # ATH FIRST

Description: Will the customer have to enter an Authorization Use Code and the Authorization Code before a TN can be dialed on the trunk? If CHANGE ATH FIRST is "Y" on the associated ATHFD form, the customer may dial an access code to change this field.

Required Field.
Valid Entries: Y, N

2.9 # ATH FOR AMA

Description: Is an Authorization code required before allowing AMA recorded calls to proceed?

Required Field.
Valid Entries: Y, N

2.10 # ATH FOR MDR

Description: Is an Authorization Code required before allowing a call recorded by MDR (Message Detail Recording) to proceed?

Required Field.
Valid Entries: Y, N

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```
athtpa                    5ESS Switch
(5619-7)              OFFICE DATA ADMINISTRATION
          AUTHORIZATION CODE TRUNK (TGN/MEMB) PARAMETERS

 * 1. TGN          0076
 * 2. MEMB         1900
 * 3. FEATURE NAME  ABC

 # 4. CSV ATH GRP   ABC
   5. CSD ATH GRP   CBA
 # 6. ATH FIRST     N
 # 7. ATH FOR AMA   N
 # 8. ATH FOR MDR   N
```

Figure 1 SAMPLE ATHTPA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 21: APPLICATION PROCESSOR FORMS

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SEC. 21A: 5620-1 RECORD
APPLICATION PROCESSOR CUSTOMER ASSIGNMENT FORM - APCA

1. GENERAL

The 5620-1 Record is available with 5E3 and later Software Releases. This is a BRCS (Business and Residence Custom Services) capability. This record is used to indicate whether or not the features, Traffic Data to Customer Location, Automatic Circuit Assurance 100 second scan, and/or Facilities Management have been purchased.

1.1 Recent Change View

The corresponding Recent Change view for this form is 24.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * BCID

Description: Enter the Business Customer Identification number.

Required Field.
Valid Entries: 1 - 65535

2.3 * AP SITE ID

Description: Enter the Application Processor Site Identification number. This identifies the AP to which the measurements are to be sent.

Required Field.
Valid Entries: 1 - 255

Data Rules:

For the 5E3 Software Release, each BCID and AP SITE ID entered should have a matching combination on the APGFP form (5620-2 Record).

For 5E4(2) - 5E5, if a "Y" is entered in the TRAFFIC DATA TO CUSTOMER LOCATION, AUTOMATIC CIRCUIT ASSURANCE, or FACILITIES MANAGEMENT field, then the BCID/AP SITE ID values must be defined on an APGFP form (5620-2 Record).

2.4 # TRAFFIC DATA TO CUSTOMER LOCATION

Description: Has the Traffic Data to Customer Location feature been activated for this customer?

Required Field.
Default: N
Valid Entries: Y, N

2.5 # AUTOMATIC CIRCUIT ASSURANCE

Description: Has the Automatic Circuit Assurance feature been activated for this customer?

Required Field.

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Default: N
Valid Entries: Y, N

2.6 # FACILITIES MANAGEMENT

Description: Has the Facilities Management feature been activated for this customer?

Required Field.
Default: N
Valid Entries: Y, N

2.7 # HSS

Description: Is the 100 Second Scan feature assigned to this customer?

Software Release: 5E4(2) and later
Required Field.
Default:

For 5E4(2) and 5E5: N
□ For 5E6 and later: Y

Valid Entries: Y, N

Data Rules:

If this field is "Y", the AP SITE ID must also be defined on the DSLAP form (5963 Record).

```
apca                    5ESS Switch
(5620-1)            OFFICE DATA ADMINISTRATION
            APPLICATION PROCESSOR CUSTOMER ASSIGNMENT

*1. BCID                    00235
*2. AP SITE ID                001

#3. TRAFFIC DATA TO CUSTOMER LOCATION   Y
#4. AUTOMATIC CIRCUIT ASSURANCE         N
#5. FACILITIES MANAGEMENT               Y
#6. HSS                     Y
```

Figure 1 SAMPLE APCA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 21B: 5620-2 RECORD
APPLICATION PROCESSOR GROUP/FACILITY PARAMETER FORM - APGFP

1. GENERAL

The 5620-2 record is available with 5E3 and later Software Releases. This record defines parameters for those customers with ACA (Automatic Circuit Assurance), TDCL (Traffic Data to Customer Location) and FM (Facilities Management) features assigned to them.

The Automatic Circuit Assurance feature provides the customer with traffic and trunk measurements pertaining to their private features and facilities. These measurements are useful to the customer for administering engineering and forecasting equipment and trunk needs and can also be used to identify faulty trunks. It allows the customer to specify trunks to be scanned for usage and the trunks that should have their holding times monitored. The customer can specify short and long holding time threshold values and a short holding time call count threshold.

The Traffic Data to Customer Location feature allows customers to specify which private features and/or facilities they wish to receive measurements on, what type of measurements they want and how often they wish to receive the measurement reports. At the times specified by the customer (the end customer) reports containing the measurements requested will be sent to the customer's location.

The Facilities Management feature will permit the customer to manipulate the data for the various features listed on the APFMA form (5620-3 Record).

1.1 Recent Change View

The corresponding Recent Change View is 24.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * BCID

Description: Enter the Business Customer Identification number.

Required Field.
Valid Entries: 1 - 65535

2.3 * AP SITE ID

Description: Enter the Application Processor Site Identification number. This identifies the AP that the measurements are to be sent to.

Required Field.
Valid Entries: 1 - 255

Data Rules:

If the AP SITE ID is entered here and on the APCA (5620 Record) form with "Y" in the HSS field, a matching AP SITE ID should be entered on the DSLAP form (5963 Record). Otherwise, the AP SITE ID entered here should have a matching AP SITE ID on the APCOMM form (5507 Record) or DSLAP form.

2.4 * GROUP/FACILITY TYPE

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Description: This entry identifies the groups that are using the various facilities.

Required Field.

Valid GROUP/FACILITY TYPE Entries

Entry	Definition
ACCT	Account Code Groups
ATTG	Attendant Groups
ARSG	Automatic Route Selection Groups
ARSPAT	Software Release: 5E3 and later. Automatic Route Selection Pattern
AUTH	Authorization Code Groups
IDPG	Individualized Dialing Plan Groups
MDR	Message Detail Recording Groups
MLHG	Multi-Line Hunt Groups
MLHGAC	Software Release: 5E4(2) and later. Attendant counts for MLHG
MLHGQC	Software Release: 5E4(2) and later. Queuing counts for MLHG
MQMLHG	Modular Queues for MLHG
MQSF	Modular Queues for SFG
MQT	Modular Queues for Trunks
SFG	Simulated Facility Groups
TERMG	Terminal Groups
TOD	Time Of Day Schedule
TRKG	Trunk Groups

Data Rules:

If GROUP/FACILITY TYPE is "ARSG" then BCID and GROUP NO/GROUP NAME must match ARS GROUP NAME on the ARSGPA form (5608-2 Record).

If GROUP/FACILITY TYPE is "IDPG" then BCID and GROUP NO/GROUP NAME must match IDP GROUP NAME on the IDPGP form (5601-4 Record).

If GROUP/FACILITY TYPE is "ARSPAT" then GROUP NO/GROUP NAME must match the MCRTI on the ARSSCRN form (5608-6 Record).

If GROUP/FACILITY TYPE is "AUTH" then BCID and GROUP NO/GROUP NAME must match BCID and ATH GROUP NAME on the ATHGP form (5619-2 Record).

If GROUP/FACILITY TYPE is "TOD" then GROUP NO/GROUP NAME must match the FEATURE NAME on TODFD form (5610-1 Record).

If GROUP/FACILITY TYPE is "MDR" on the APGFP form and the GROUP NO/GROUP NAME assigned on the APGFP form is also assigned on the MDRGP form (5624-2 Record) as MDR GROUP NAME, then the BCID and AP SITE ID on the MDRGP form must be the same as the BCID and AP SITE ID on the APGFP form.

If GROUP/FACILITY TYPE is "MQSF" or "SFG" then GROUP NO/GROUP NAME must match with the SFG NUMBER on the PFASFG form (5609-3 Record).

If GROUP/FACILITY TYPE is "MQT" or "TRKG" then GROUP NO/GROUP NAME must match with the TGN on the TKGRP form (5202 Record).

If GROUP/FACILITY TYPE is "MLHG" "MQMLHG" or "ATTG" then GROUP NO/GROUP NAME must match with the MLHG on the MLHG form (5110 Record).

If GROUP/FACILITY TYPE is "ATTG" then GROUP NO/GROUP NAME must match with the GROUP NUMBER with MEASUREMENT TYPE of "ATTGP" on MEASPDF form (5615 Record).

If GROUP/FACILITY TYPE is "IDPG" then GROUP NO/GROUP NAME must match with the NAME with MEASUREMENT TYPE of "IDGP" on the MEASPDF form.

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If GROUP/FACILITY TYPE is "MLHG" then GROUP NO/GROUP NAME must match with the GROUP NUMBER with MEASUREMENT TYPE of "MLHGP" on the MEASPDF form.

If GROUP/FACILITY TYPE is "TERMG" then:

- For 5E6 only, BCID and GROUP NO / GROUP NAME must match the BCID and GROUP ID on a TGATTD form (5611 record).
- GROUP NO / GROUP NAME must match the GROUP NUMBER with MEASUREMENT TYPE of "TERMGP" on the MEASPDF form.
- For 5E7 and later, the GROUP NO / GROUP NAME must match a GROUP ID on the TGSRLPA, TGSRMPA, TGSRTPA, or BFG form, or on the TGSRFD form if none of the other forms exist.

2.5 * GROUP NO/GROUP NAME

Description: This entry is either the group name or group number depending upon the group entered.

Required Field.

Valid GROUP NO/GROUP NAME Entries 5E11 and Earlier

Entry	Definition
1 - 65535	GROUP NUMBER
1 - 8 characters	GROUP NAME

Valid GROUP NO/GROUP NAME Entries 5E12 through 5E14

Facility Type	Entry	Definition
ARSG, IDPG,AUTH, ACCT, or MDR	1 - 8 character	GROUP NAME
TOD	1 - 11 character	GROUP NAME
TERMG	1 - 65535	GROUP NUMBER
ARSPAT	1 - 4095	GROUP NUMBER
TRKG	1 - 4000	GROUP NUMBER
All Others	1 - 2000	GROUP NUMBER

Valid GROUP NO/GROUP NAME Entries 5E15 and Later

Facility Type	Entry	Definition
ARSG, IDPG,AUTH, ACCT, and MDR	1 - 8 character	GROUP NAME
TOD	1 - 11 character	GROUP NAME
TERMG	1 - 65535	GROUP NUMBER
ARSPAT	1 - 4095	GROUP NUMBER
TRKG and MQT	1 - 4000	GROUP NUMBER
MQSF and SFG	1 - 2000	GROUP NUMBER
All Others	1 - 8191	GROUP NUMBER

Data Rules:

If GROUP/FACILITY TYPE is "TERMG" then the GROUP NUMBER must be in 1-65535. For 5E10 and earlier, if GROUP/FACILITY TYPE is "ACCT" "ARSG", "AUTH", "IDPG", "MDR", "TERMG", or "TOD", then GROUP NUMBER must be 1 to 65535.

For 5E11, when GROUP/FACILITY TYPE is "MQSF" or "SFG", GROUP NO/GROUP NAME must be 1 - 2000.

For 5E15 and later, when GROUP/FACILITY TYPE is "ATTG", "MLHGAC", "MLHGQC", "MQMLHG", or "MLHG", GROUP NO/GROUP NAME must be 1 - 2000.

For 5E11, when GROUP/FACILITY TYPE is "MQT" or "TRKG", GROUP NO/GROUP NAME must be 1 - 4000.

If GROUP/FACILITY TYPE is "ARSPAT", then GROUP NUMBER must be in 1 - 3617.

For 5E11 and later, if GROUP/FACILITY Type is "MLHGAC" or "MLHGQC", then GROUP NUMBER must

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correspond to an MLHG on the MLHG form (5110 Record). The corresponding MLHG FEATURE on the MLHG form must be defined on the MLHGFD (5604 Record) such that HUNT TYPE is "ISAT".

For all other Types, GROUP NAME must be 1 to 8 characters.

2.6 # AUTOMATIC CIRCUIT ASSURANCE USE

Description: Will traffic and trunk measurements pertaining to private features and facilities be used?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry is "Y", then GROUP/FACILITY must be "TRKG".

If this entry is "Y", then BCID and AP SITE ID must be defined on the APCA form (5620-1 Record) with AUTOMATIC CIRCUIT ASSURANCE USE set to "Y".

The ACA (Automatic Circuit Assurance) feature must not be assigned to an Announcement Trunk. When AUTOMATIC CIRCUIT ASSURANCE USE is entered as "Y", the GROUP NO entered on the APGFP form must be defined on a TKGRP form (5202 Record) as TGN, and the associated TRKCLS must not be entered as "RAFANNC", "RAFDTA", or "RAFCTR" on the TKGRP form.

2.7 # NUTS/LUTS ACTIVE

Description: Is the NUTS/LUTS (Non-Usage Trunk Scan/Locked-Up Trunk Scan) scanning activated on this trunk group?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry is set to "Y", then AUTOMATIC CIRCUIT ASSURANCE USE must be set to "Y".

If this entry is set to "Y", then GROUP/FACILITY must be "TRKG".

2.8 # SHT ACTIVE

Description: Is Short Holding Threshold active?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry is set to "Y", then AUTOMATIC CIRCUIT ASSURANCE USE must be set to "Y".

If this entry is set to "Y", then GROUP/FACILITY must be "TRKG".

2.9 # LHT ACTIVE

Description: Is Long Holding Threshold active?

Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

If this entry is set to "Y", then AUTOMATIC CIRCUIT ASSURANCE USE must be set to "Y".

If this entry is set to "Y", then GROUP/FACILITY must be "TRKG."

2.10 # SHT THRESHOLD

Description: Enter the short holding time threshold value from 0 to 160 seconds, by increments of 2 seconds.

Required Field.
Default: 0
Valid Entries: 0 - 160 (seconds) in increments of 2

Data Rules:

If this entry is greater than 0, then SHT ACTIVE must be "Y".

2.11 # SHT CALL THRESHOLD COUNT

Description: Enter the short holding time call count threshold, by increments of 2 calls.

Required Field.
Default: 0
Valid Entries: 0 - 30 in increments of 2

Data Rules:

If this entry is greater than 0, then SHT ACTIVE must be "Y".

2.12 # LHT THRESHOLD

Description: Enter the long holding time threshold value in hours, by increments of 1 hour.

Required Field.
Default: 0
Valid Entries: 1 - 10 (hours)

If this entry is greater than 0, then LHT ACTIVE must be "Y".

2.13 # TRAFFIC DATA TO CUST LOC USE

Description: Should traffic data measurement reports be sent to customer location?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry is "Y", then BCID and AP SITE ID must be defined on the APCA (5620-1 Record) with TRAFFIC DATA TO CUST LOC USE set to "Y".

2.14 # MEASUREMENT ACTIVE

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Description: Will traffic measurements for this group be sent to the AP?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This entry can be "Y" only if TRAFFIC DATA TO CUST LOC USE is set to "Y".

If this entry is "Y", then BCID and AP SITE ID must be defined on the APCA (5620-1 Record) with TRAFFIC DATA TO CUST LOC USE set to "Y".

2.15 # FACILITIES MANAGEMENT USE

Description: Will this feature allow the customer to manipulate the data for the various features listed on the APFMA form (5620-3 Record)?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry is "Y", then BCID and AP SITE ID must be defined on the APFMA form (5620-3 Record).

If this entry is "Y", then BCID and AP SITE ID must be defined on the APGFP form (5620-1 Record) with FACILITIES MANAGEMENT USE set to "Y".

```
apgfp                        5ESS Switch
(5620-2)                OFFICE DATA ADMINISTRATION
              APPLICATION PROCESSOR GROUP/FACILITY PARAMETERS

 *1. BCID                          00055
 *2. AP SITE ID                      055
 *3. GROUP/FACILITY TYPE              ATTG
 *4. GROUP NO/GROUP NAME               00000001


 #5. AUTOMATIC CIRCUIT ASSURANCE USE  N   #12. TRAFFIC DATA TO CUST LOC USE  Y
 #6. NUTS/LUTS ACTIVE                 N   #13. MEASUREMENT ACTIVE           N
 #7. SHT ACTIVE                       N
 #8. LHT ACTIVE                       N   #14. FACILITIES MANAGEMENT USE     N
 #9. SHT THRESHOLD                    000
#10. SHT CALL THRESHOLD COUNT         00
#11. LHT THRESHOLD                    00
```

Figure 1 SAMPLE APGFP FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
apgfp                        5ESS Switch
                        OFFICE DATA ADMINISTRATION
(5620-2)          APPLICATION PROCESSOR GROUP/FACILITY PARAMETERS
```

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*1. BCID _____ 12. TRAFFIC DATA TO CUST LOC USE N
*2. AP SITE ID ___ 13. MEASUREMENT ACTIVE N
*3. GROUP/FACILITY TYPE _____
*4. GROUP NO/GROUP NAME _____ 14. FACILITIES MANAGEMENT USE N

5. AUTOMATIC CIRCUIT ASSURANCE USE N
6. NUTS/LUTS ACTIVE N
7. SHT ACTIVE N
8. LHT ACTIVE N
9. SHT THRESHOLD 000
10. SHT CALL THRESHOLD COUNT 00
11. LHT THRESHOLD 00

Figure 2 SAMPLE APGFP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 21C: 5620-3 RECORD
APPLICATION PROCESSOR FACILITIES MANAGEMENT
ASSIGNMENT FORM - APFMA

1. GENERAL

The 5620-3 Record is available with 5E3 and later Software Releases. This is a BRCS (Business and Residence Custom Services) Capability.

The private network or business customer is given some administrative control over certain assignable features. The 5620-3 Record is used by the switch owner to define which features a particular customer can control.

These features are:

- AC (Authorization Codes)
- ACCT (Account Codes)
- MQ (Modular Queuing)
- ARS (Automatic Route Selection)
- ACA (Automatic Circuit Assurance)
- TDCL (Traffic Data to Customer Location)
- MDR (Message Detail Recording)
- TOD (Time of Day)

1.1 Recent Change View

The corresponding Recent Change view for this form is 24.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * BCID

Description: Enter the Business Customer Identification number.

Required Field.
Valid Entries: 1 - 65535

2.3 * AP SITE ID

Description: Enter the Application Processor Site Identification number. This identifies the AP to which the measurements are to be sent.

Required Field.
Valid Entries: 1 - 255

Data Rules:

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Each BCID and AP SITE ID must have a matching BCID and AP SITE ID on the APGFP form (5620-2 Record).

2.4 # AUTOMATIC ROUTE SELECTION

Description: Is Automatic Route Selection administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.5 # AUTOMATIC CIRCUIT ASSURANCE

Description: Is Automatic Circuit Assurance administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.6 # AUTHORIZATION CODES

Description: Is Authorization Code administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.7 # ACCOUNT CODES

Description: Is Account Code administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.8 # MESSAGE DETAIL RECORDING

Description: Is Message Detail Recording administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.9 # MODULAR QUEUING

Description: Is Modular Queuing administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.10 # TRAFFIC DATA TO CUST LOC

Description: Is Traffic Data to Customer Location administration and control allowed?

Required Field.
Default: N

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Valid Entries: Y, N

2.11 # TIME OF DAY

Description: Is Time of Day administration and control allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.12 # MAXIMUM SESSIONS

Description: This indicates the maximum number of simultaneous sessions allowed per BCID.

Required Field.
Default: 1
Valid Entries: 1 - 4

2.13 # TIME OUT

Description: This indicates the automatic FM session termination when no action is seen within the specified time.

Required Field.
Default: 60
Valid Entries: 2 - 120 (minutes)

2.14 # ACSR

Description: Is ACSR (Automatic Customer Station Rearrangement) administration and control allowed?

Currently, the AT&T Application Processor does not support this application. However, other vendors may support it.

Required Field.
Default: N
Valid Entries: Y, N

---

apfma 5ESS Switch
(5620-3) OFFICE DATA ADMINISTRATION
APPLICATION PROCESSOR FACILITIES MANAGEMENT ASSIGNMENT

*1. BCID 00055
*2. AP SITE ID 055

#3. AUTOMATIC ROUTE SELECTION N #8. MODULAR QUEUING N
#4. AUTOMATIC CIRCUIT ASSURANCE N #9. TRAFFIC DATA TO CUST LOC N
#5. AUTHORIZATION CODES N #10. TIME OF DAY N
#6. ACCOUNT CODES N #11. MAXIMUM SESSIONS 1
#7. MESSAGE DETAIL RECORDING N #12. TIME OUT 060
#13. ACSR N

Figure 1 SAMPLE APFMA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 21D: 5620-4 RECORD
100 SECOND SCAN (HSS) ACTIVATION FORM - APHSS

1. GENERAL

The 5620-4 Record is available with 5E4(2) and later Software Releases. The APHSS form is used to define if the HSS (100 Second Scan) feature is activated. For 5E5 and earlier Software Releases, the HSS feature collects usage data on a switching module basis for Leased Network trunk groups. For 5E6 and later, it is expanded to collect usage data on MLHGs, i.e., the number of lines busy within the MLHG.

The HSS capability allows the 5ESS Switch to serve as a switch in a leased network.

Leased network services provide customers with a variety of call processing features as well as centralized NM (Network Management) capabilities.

They are tailored for large business customers and provide dedicated networks to interconnect customer locations and the PSN (Public Switched Network).

HSS is an NM feature which allows customers to monitor the call load on their networks. Information provided from the HSS feature is useful to the customer for the administration and engineering of their private networks.

The HSS capability is responsible for collecting usage data for leased network trunk groups and ISDN BRI (Basic Rate Interface) Multi-Line Hunt Groups every 100 seconds, and sending it to the leased network OS (Operational Support System) via an API (Application Processor Interface).

1.1 Recent Change View

The corresponding Recent Change view for this form is 24.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * GROUP TYPE

Description: Enter the group type to be scanned by the HSS feature.

Required Field.
Default: TRKG
Valid Entries:

Valid GROUP TYPE Entries

Entry	Definition
TRKG	Trunk Groups
MLHG	Software Release: 5E6 and later. Multi-Line Hunt Groups

2.3 * GROUP NBR

Description: Enter the number of the trunk group or MLHG to be scanned by the HSS feature.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later for TRKG: 1 - 4000

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- For 5E11 through 5E14 for MLHG: 1 - 2000
- For 5E15 and later for MLHG: 1 - 8191

Data Rules:

For 5E11 through 5E14, when GROUP TYPE is "MLHG", GROUP NBR must be 1 through 2000.

For 5E15 and later, when GROUP TYPE is "MLHG", GROUP NBR must be 1 through 8191.

When GROUP TYPE is "TRKG", GROUP NBR must be defined as a TGN on a TKGRP form (5202 Record) with TRK DIR equal to "OUT", "INC" or "2W". The Trunk Group must also have at least one TRUNK form with a TEN, DEN, or NEN defined.

When GROUP TYPE is "MLHG", GROUP NBR must be defined on the MLHG form (5110 Record) and LOCAL SM must be entered. That is, the MLHG must be a local Multi-Line Hunt Group whose members are all located on the same Switching Module.

2.4 # BCID

Deswcription: Enter a Business Customer Identification.

Required Field.

Data Rules:
The BCID/AP SITE ID values entered must also be defined on the APCA form.

2.5 # AP SITE ID

Description: Enter the Application Processor Site Identification number. This identifies the AP to which the measurements are to be sent.

Required Field.
Valid Entries: 1 - 255

Data Rules:

The AP SITE ID entered here should have a matching AP SITE ID on the DSLAP form (5963 Record).

2.6 # HSS ACTIVE

Description: Is the HSS feature activated on this trunk group or MLHG?

Required Field.
Default: Y
Valid Entries: Y, N

---

aphss 5ESS Switch
(5620-4) OFFICE DATA ADMINISTRATION
AP EPSCS 100 SECOND SCAN ACTIVATION

*1. GROUP TYPE TRKG
*2. GROUP NBR 0020
#3. BCID 00025
#4. AP SITE ID 002
#5. HSS ACTIVE Y

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Figure 1 SAMPLE APHSS FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 22: MULTISWITCH BUSINESS GROUP FORMS

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SEC. 22A: 5633 RECORD
MULTISWITCH BUSINESS GROUP - MBG

1. GENERAL

The 5633 Record is available with 5E9(2) and later Software Releases. The MBG (Multiswitch Business Group) form defines the data associated with an MBG and the following features:

- CN (CENTREX Network) provides the ability to define a CENTREX group on multiple switches and have CENTREX group features operate across switches.
- CN ISVM (CENTREX Network Interswitch Voice Messaging) provides for the centralized MSS (Mail Service System) for CN MBG customers.
- CN-S (CENTREX Network Special) provides requirements needed by the federal government's DTS-W (Defense Telecommunications System - Washington).

All three of the above are secured features and must be purchased before the feature can be assigned.

The secured feature IDs are as follows:
- CN SFID181
- CN ISVM SFID182
- CN-S SFID183

These features can be assigned to an MBG on this form, if the SFID ACT field for the specific feature has been set to "Y" on the SFSYS form (5713-1 Record).

For more information on these secured features, see Division 2, Section 4A181, Division 2, Section 4A182, and Division 2, Section 4A183.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MBG ID

Description: Enter the MBG ID (Multiswitch Business Group Identifier). The MBG ID uniquely identifies a Multiswitch Business Group on a switch wide basis and implicitly defines a CENTREX Network.

Required Field.
Valid Entries: 2 - 65535

Data Rules:

The MBG form is used by the CENTREX Network feature to define a CENTREX Network. It is a Secured Feature that must be purchased by the office before CENTREX Network data can be entered on this form. Therefore, the ACT field for SFID 181 on the SFSYS form (5713-1 Record) must be set to "Y".

2.3 # TGID

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Description: Enter the Terminal Group Identifier. The TGID identifies the terminal group associated with the MBG. All terminals in the terminal group are associated with the MBG if the terminal group is associated with the MBG.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

The TGID must be defined on either the TGSRFD, TGSRLPA, TGSRMPA, TGSRTPA or BFG form.

The TGID cannot be entered on more than one MBG form.

2.4 CNS

Description: Is the CENTREX Network Special feature for Government Screening active for the MBG?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

CN-S is a Secured Feature that must be purchased by the office before CNS can be set to "Y". The ACT for SFID 183 must be set to "Y" on the SFSYS form (5713-1 Record) before "Y" can be entered in the CNS field.

2.5 CNISVM

Description: Is the CENTREX Network for ISVM feature active?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then BCID must be entered. If "N" is entered, then BCID cannot be entered.

The CN ISVM (CENTREX Network Interswitch Voice Mail) feature is a Secured Feature that must be purchased by the office before CNISVM can be set to "Y". The ACT field for SFID 182 on the SFSYS form (5713-1 Record) must be set to "Y", before "Y" can be entered in this field.

2.6 BCID

Description: Enter the BCID (Business Customer Identifier), which is used to send an incoming MBG call to the appropriate voice mail service. This field is used in conjunction with the CN ISVM feature.
Valid Entries: 1 - 65535

Data Rules:

If CNISVM is "Y", then BCID must be entered. If CNISVM is "N", BCID must not be entered.

2.7 PP DISP ONLY

Description: Should the PP (Precedence and Preemption) Display only be used for all calls? The PP format is used for display on an ISAT terminal when a PP feature is assigned to that terminal. If "Y" is entered, then the PP display is used for all calls. If "N" is entered, only PP calls will use the PP display.

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Required Field.
Default: Y
Valid Entries: Y, N

2.8 CAMPON CWO

Description: Enter the Camp-on CWO (Call Waiting Originating) feature to be used for ISAT invoked camp-on for an MBGE (Multiswitch Business Group Element). The specified CWO feature applies the call waiting tone to an incoming ISUP7 MBG call.

Required Field.
Default: /CWO
Valid Entries: 1 - 8 characters

Data Rules:

The CWO feature entered must be a preconstructed feature or it must be constructed on the CWTFD form (5603-1 Record). The specified CWO feature must also have the INVOCATION field set to "ORIG" on the CWTFD form.

2.9 CAMPON CWD

Description: Enter the Camp-on CWD (Call Waiting Dialed) feature name used for ISAT invoked camp-on for MBGE. The CWD feature applies the call waiting tone to an incoming ISUP7 MBG call.

Required Field.
Default: /CWD
Valid Entries: 1 - 8 characters

Data Rules:

The CWD feature must be a preconstructed feature or must be constructed on the CWTFD form (5603-1 Record). The CWD feature must also have the INVOCATION field set to "CODE" on the CWTFD form.

2.10 NAME

Description: Enter the network name to be associated with the MBG ID. The name should identify the company name associated with the MBG ID.
Valid Entries: 1 - 8 characters

```
mbg                        5ESS Switch
                     OFFICE DATA ADMINISTRATION
(5633)                  MULTISWITCH BUSINESS GROUP

*1. MBG ID       _____
#2. TGID         _____
 3. CNS          N
 4. CNISVM       N
 5. BCID         _____
 6. PP DISP ONLY Y
 7. CAMPON CWO   /CWO
 8. CAMPON CWD   /CWD
 9. NAME         ________
```

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Figure 1 SAMPLE MBG FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 24: ACCOUNT CODE FORMS

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SEC. 24A: 5623-1 RECORD
ACCOUNT CODE FEATURE DEFINITION FORM - ACCTFD

1. GENERAL

The 5623-1 Record is available with 5E3 and later Software Releases. It is used to define the various combination of options associated with Account Codes.

1.1 ACCT Capabilities

The ACCT (Account Code) capability allows a customer to include an account number in AMA (Automatic Message Accounting) records, and in MDR (Message Detail Recording) records to the Revenue Accounting office or to customer location. An ACCT is entered as part of the dialing sequence and may be included with the information on the customer's bill. This provides a customer with a mechanism for cost allocation of incoming and outgoing calls, by associating a particular call with a specific customer business account. See Figure 2 for Account Code Dialing Sequence.

1.2 ACCT Requirements

Each terminal (line or trunk) which is to use the ACCT capability must be assigned an ACCT feature name (defined on this form) on the appropriate feature assignment form, LINEFA, MLHLNFA, TKGRPFA, TRUNKFA. In addition, each terminal must be assigned to an ACCT Group which may be defined as a default parameter of the ACCTFD form, or on an individual terminal basis with the "ACCTLPA, ACCTMPA, ACCTTPA forms.

An Account Code Group defines the account code length, routing or private facility access code association prompt treatment and error treatment for all lines using that group.

Each terminal may also be assigned to an ACCT Code Association table, defined on the ACCTRTP form (5623-3 Record).

Lines assigned to ACCT features must have an associated Class of Service on the LCC form of "ATND", "INDIV", "ISDN", "ISATND", "PBX" or "4WINDIV".

Certain Account Code features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a (/) and the slash may not be used as the first character of any feature name other than preconstructed features. A list of the preconstructed Account Code features is contained in Figure 1 .

1.3 Recent Change View

The corresponding Recent Change View for this form is 12.42.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 *FEATURE NAME

Description: Enter the Account Code Feature Name. The first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.
Valid Entries: 1 - 8 characters

2.3 REMARKS

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Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.8) specify feature options for the Account Code Feature.

2.4 ACT TYPE

Description: Can the ACCT feature be activated by the customer?

Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	Used to indicate no customer activation. Upon assignment the feature is made active and is ready to be used.
CODE	The ACCT feature is activated by dialing a code.

Data Rules:

If ACT TYPE is "CODE", then DACT TYPE must be "CODE". If ACT TYPE is "AUTO", then DACT TYPE must be "NONE".

If ACT TYPE is "CODE", and this feature is assigned to a line/trunk, then the line/trunk must be assigned at least one dialed code (on the PDIT and/or IDPDCA Form) with ACTION equal to "ACCTACT", and a FEATURE associated with the dialed code on the PDIT/IDPDCA form equal to this ACCT feature.

2.5 DACT TYPE

Description: Can the subscriber assigned this feature deactivate the feature?

Required Field.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
NONE	Used to indicate no customer deactivation is allowed. The feature can never be deactivated from the customer's station.
CODE	The ACCT feature is deactivated by dialing a code.

Data Rules:

If DACT TYPE is "CODE", then ACT TYPE must be "CODE". If DACT TYPE is "NONE", then ACT TYPE must be "AUTO".

If DACT TYPE is "CODE", and this feature is assigned to a line/trunk, then the line/trunk must be assigned at least one dialed code (on the PDIT and/or IDPDCA Form) with ACTION equal to "ACCTDCT", and a FEATURE associated with the dialed code on the PDIT/IDPDCA Form equal to this ACCT feature.

2.6 AMA LENGTH

Description: Will a 15-character Account Code or an 8-digit CDAR (Customer Dialed Account Recording) be included in the AMA structure code? If an 8 is entered, a 2 followed by the CDAR will be placed in the AMA record. If a 15 is entered, an 8 followed by the Account Code will be placed in the AMA record.

Required Field.

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Default: 8
Valid Entries: 8, 15

Data Rules:

In a DSN office (DSN OPT = "Y" on the OFCOPT form (5509 Record)) if the AMA LENGTH is 15, then the ACCT LENGTH field on the ACCTGP form (5623-2 Record) must be less than or equal to 14. If the AMA LENGTH is 8, then the ACCT LENGTH must be less than or equal to 7.

2.7 CODE ASSOC ALW

Description: Can a dialable sequence be associated with an ACCT use code?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CODE ASSOC ALW is "N", then CODE TABLE NAME must be blank.

2.8 PARM ACT TYPE

Description: Can the active parameter set defined on the ACCTGP form (5623-2 Record) be changed via a dialed code?

Required Field.

Default Values: AUTO

Valid PARM ACT Entries

Entry	Definition
AUTO	The ACCT feature active parameter set defined on the ACCTGP form (5623-2 Record) cannot be changed via a dialed code.
CODE	The ACCT feature active parameter set defined on the ACCTGP form (5623-2 Record) can be changed from main to alternate or alternate to main via a dialed code.

Data Rules:

If PARM ACT TYPE is "CODE", and this feature is assigned to a line/trunk, then the line/trunk must be assigned at least one dialed code (on the PDIT and/or IDPDCA Form) with ACTION equal to "MAINACT" and one with ACTION equal to "ALTACT", and a FEATURE associated with the dialed code on the PDIT/IDPDCA Form equal to this ACCT feature.

DEFAULT PARAMETERS

The following fields (Section 2.9 - Section 2.10) define the default parameters assigned with the feature to terminals (lines or trunks). These parameters will be assigned to the terminal unless they are overriden by entries on the ACCTLPA, ACCTMPA, ACCTTPA Forms.

2.9 #ACCT GROUP NAME

Description: Enter the name of the ACCT Group. The name may be from 1 - 8 characters, with no restrictions on the valid characters. The name entered here must be that of an ACCT Group defined on an ACCTGP form (5623-2 Record).

Required Field.
Valid Entries: 1 - 8 characters

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2.10 #CODE TABLE NAME

Description: This field is used to identify the ACCT associated code table name for the port. The name may be from 1 to 8 characters, with no restrictions on the valid characters.
Valid Entries: 1 - 8 characters

Data Rules:

If a CODE TABLE NAME is entered here, then an ACCTRTP form (5623-3 Record), must be entered for this CODE TABLE NAME. If CODE ASSOC ALW is "N", then CODE TABLE NAME must be left blank.

ESS 5623-1(05/92)TG-5 ACCOUNT CODE DATE _____

FEATURE DEFINITION RECORD

ACCTFD 5ESS SWITCH

12.42

BASE_____CONT GR____ 5ESS UNIT _____

FEATURE NAME	FEATURE OPTIONS					DEFAULT PARAMETERS		REMARKS
	ACT TY PE	DACT TY PE	AMA LE NG TH	CODE ASS OC ALW	PAR M AC T TY PE	ACCT GRO UP NAM E	CODE TABL E NAM E	
/ACCTETS	AUT O	NON E	8	N	AUT O			ETS ACCOUNT CODE FEATURE
/ACCTDLX	COD E	COD E	15	Y	COD E			ACCOUNT CODE DELUXE
/AC*	AUT O	NON E	8	N	AUT O			WILDCARD ACCT FEATURE

Figure 1 PRECONSTRUCTED ACCT FEATURES

FUNCTION	**DIALING SEQUENCE**
Individual Station Call	Dial Tone
	Account Code Access Code
	ACCT Prompt**
	Account Code
	Dial Tone
	Called Number*
Outgoing Attendant Call	Dial Tone
	Account Code Access Code
	ACCT Prompt**
	Account Code
	Dial Tone
	Called Number*
Incoming Attendant Call	Answer Incoming Call
	Flash
	Dial Tone
	Account Code Access Code
	ACCT Prompt**
	Account Code
	Dial Tone
	Called Number*
Senderized Tie Trunk Call	Dial Tone
	Account Code Access Code
	ACCT Prompt**
	Account Code
	Dial Tone
	Tie Trunk Access Code
	Dial Tone
	Called Number*
Nonsenderized Tie Trunk Call	Dial Tone
	Dial Tone
	Tie Trunk Access Code
	Dial Tone

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	ACCT Code Access Code
	ACCT Prompt**
	ACCT Code
	Dial Tone
	Called Number
Call Restricted Without an Account Code	Dial Tone
	Called Number
	ACCT Pompt
	Account Code
Activation	Dial Tone
	Control Code
	Confirmation Tone
Deactivation	Dial Tone
	Control Code
	Confirmation Tone

* For example, private network number, DDD number or feature activation.
** ACCT Prompt can be 1, 2, or 3 beeps, dial tone, or no tone.

Figure 2 ACCOUNT CODE DIALING SEQUENCE

acctfd 5ESS Switch _
(5623-1) OFFICE DATA ADMINISTRATION
ACCOUNT CODE FEATURE DEFINITION

* 2. FEATURE NAME ACCTDLX1 3. REMARKS _____

FEATURE OPTIONS: DEFAULT PARAMETERS:
4. ACT TYPE CODE 9. ACCT GROUP NAME _____
5. DACT TYPE CODE 10. CODE TABLE NAME _____
6. AMA LENGTH 15
7. CODE ASSOC ALW Y
8. PARM ACT TYPE AUTO

Figure 3 SAMPLE ACCTFD FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 24B: 5623-2 RECORD
ACCOUNT CODE GROUP DEFINITION FORM - ACCTGP

1. GENERAL

The 5623-2 Record is available with 5E3 and later Software Releases. It is used to define the group level of information required for the Account Code capability.

Each terminal (line or trunk) which is to use the ACCT capability must be assigned an ACCT feature name (defined on the ACCTFD form, 5623-1 Record) on the appropriate feature assignment form, LINEFA, MLHLNFA, TKGRPFA, TRUNKFA. In addition, each terminal must be assigned to an ACCT Group which may be defined as a default parameter of the ACCTFD form, or on an individual terminal basis with the ACCTLPA, ACCTMPA, ACCTTPA forms.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 *ACCT GROUP NAME

Description: Enter the name of the ACCT Group. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

2.3 ACCT LENGTH

Description: Enter the length of the Account code(s) assigned to this group. All Account codes for an ACCT GROUP must be the same length.

Required Field.
Valid Entries: 1 - 15

2.4 ACTIVE PARM SET

Description: Enter whether the main or alternate parameter set is active.

Required Field.
Default: M
Valid Entries:

Valid ACTIVE PARM SET Entries

Entry	Definition
M	Main
A	Alternate

2.5 TOD INHIBIT

Description: Should the Time of Day schedules be temporarily deactivated? Enter "Y" to inhibit TOD.

Required Field.
Default: N

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Valid Entries: Y, N

2.6 TOLL SI

Description: Enter the Toll Screening Index to override toll diversion to an attendant. For more information about this field, see Division 2, Section 4C28, which describes the "Account Code - Toll Diversion to an Attendant/DPAT" transparency feature.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 4095

2.7 DPAT OVRD

Description: Should DPAT (Dialing Plan Access Treatment) restrictions be overridden? For more information about this field, see Division 2, Section 4C28, which describes the "Account Code - Toll Diversion to an Attendant/DPAT" transparency feature.

Software Release: 5E9(1) and later.
Default: N
Valid Entries: Y, N

PARAMETERS MAIN/ALTERNATE

Both a MAIN and ALTERNATE parameter set must be defined for each ACCT group. The ACTIVE PARM SET field will determine which set is active for this ACCT group. Only one parameter set can be active at a given time. Use the following fields (Section 2.8 - Section 2.16) to define both a MAIN and an ALTERNATE PARAMETER set.

2.8 AMA RECORD

Description: Is the dialed ACCT stored in the AMA record(s) made for the call?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If AMA RECORD is "N", then MDR RECORD must be "Y".

2.9 MDR RECORD

Description: Is the dialed ACCT stored in the MDR record(s) made for the call?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If MDR RECORD is "N", then AMA RECORD must be "Y".

2.10 AMA REQUIRED

Description: Does dialing an ACCT force an AMA record for a call that is not normally recorded?

Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If AMA REQUIRED is "Y", then AMA RECORD must be "Y".

2.11 MDR REQUIRED

Description: Does dialing an ACCT force an MDR record for a call that is not normally recorded?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If MDR REQUIRED is "Y", then MDR RECORD must be "Y".

2.12 AMA RESTRICT

Description: Are AMA recorded calls restricted if dialed without an ACCT?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This parameter must be "N" for both MAIN and ALTERNATE parameter sets for those terminals assigned a Precedence and Preemption Feature in addition to an Account Code Feature.

2.13 MDR RESTRICT

Description: Are MDR recorded calls restricted if dialed without an ACCT?

Required Field.
Default: N
Valid Entries: Y, N

This parameter must be "N" for both MAIN and ALTERNATE parameter sets for those terminals assigned a Precedence and Preemption Feature in addition to an Account Code Feature.

2.14 RESTRICT TRT

Description: Enter the error treatment to be given for AMA or MDR restricted calls which fail because an ACCT code was not dialed or an incorrect ACCT code was dialed.

Required Field.
Default: REORD
Valid Entries:

Valid RESTRICT TRT Entries

Entry	Definition
REORD	Reorder
ANNC	Announcement

Data Rules:

If this field is "ANNC", then ANNC INDEX must be known.

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2.15 ANNC INDEX

Description: Enter the Announcement Route Index.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

If RESTRICT TRT is "ANNC", then an ANNC INDEX must be entered. If RESTRICT TRT is not "ANNC", then ANNC INDEX must be blank. This ANNC INDEX must be defined on the RTIDX form with a Route Type of "HUNT".

2.16 ACCT PROMPT

Description: Enter the type of prompt that will be given to the user to indicate that the Account Code should be entered.

Required Field.
Default: DIAL
Valid Entries:

Valid ACCT PROMPT Entries

Entry	Definition
BEEP1	One Beep
BEEP2	Two Beeps
BEEP3	Three Beeps
DIAL	Dial Tone
NONE	No Tone

```
acctgp                  5ESS Switch
(5623-2)            OFFICE DATA ADMINISTRATION
                  ACCOUNT CODE GROUP PARAMETERS

*1. ACCT GROUP NAME _________      PARAMETERS     MAIN      ALTERNATE
 2. ACCT LENGTH     01
 3. ACTIVE PARM SET M            AMA RECORD     7. Y       16. Y
 4. TOD INHIBIT     N            MDR RECORD     8. N       17. N
 5. TOLL SI         ____         AMA REQUIRED   9. N       18. N
 6. DPAT OVRD       N            MDR REQUIRED  10. N       19. N
                                 AMA RESTRICT  11. N       20. N
                                 MDR RESTRICT  12. N       21. N
                                 RESTRICT TRT  13. REORD   22. REORD
                                 ANNC INDEX    14. ____    23. ____
                                 ACCT PROMPT   15. BEEP1   24. BEEP1
```

Figure 1 SAMPLE ACCTGP FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 24C: 5623-3 RECORD
ACCOUNT CODE ASSOCIATED CODE TABLE PARAMETERS FORM - ACCTRTP

1. GENERAL

The 5623-3 Record is available with 5E3 and later Software Releases. It is used to define the code sequence associated with an ACCT (Account Code) use code for a particular code association table.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 *CODE TABLE NAME

Description: Enter the Code Table Name.
Valid Entries: 1 - 8 characters

3. CODE ASSOCIATIONS

3.1 USE CODE

Description: Enter the unique ACCT use code.
Valid Entries:
- 5E5 and earlier: 1 - 9, # or *
- 5E6 and later: 1 - 9, # or *

Data Rules:

For each USE CODE entered there must be a corresponding CODE SEQ.

If USE CODE is known, then the associated line/trunk (from the ACCTLPA, ACCTMPA, or ACCTTPA form) must have at least one dialed coded (on the PDIT and/or IDPDCA form) with ACTION equal to "ACCTUSE" and a FEATURE associated with the dialed code on the PDIT/IDPDCA form equal to this ACCT feature (from the associated ACCTMPA or ACCTTPA form).

3.2 CODE SEQ

Description: Enter the code sequence. The sequence of digits must be a complete dialable sequence of no more than 10 characters. The sequence can be a TN (Telephone Number), 10XXX, feature code, routing information, ect. Multiple sequences can be stored within the 10 characters if the sequences are complete. An ARS (Automatic Route Service) use code followed by only 3 digits of a 7-digit TN is not allowed.
Valid Entries:
- 5E5 and earlier: 1 - 9, # or *
- 5E6 and later: 1 - 9, # or *

Examples:

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83571234 - Where "8" is an ARS access code and
3571234 is the called 7-digit number.

10288 - Where 10288 is a Carrier access code.

3571234 - A 7-digit number.

9 - Escape to POTS.

Data Rules:

For each CODE SEQ entered there must be a corresponding USE CODE.

The associated code(s) must be defined on the PDIT and/or IDPDCA and/or PNDP form.

---

acctrtp 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5623-3) ACCOUNT CODE ASSOCIATED CODE TABLE PARAMETERS

*1. CODE TABLE NAME _____

2. CODE ASSOCIATIONS

ROW	USE CODE	CODE SEQ	ROW	USE CODE	CODE SEQ
1	_____	_____	6	_____	_____
2	_____	_____	7	_____	_____
3	_____	_____	8	_____	_____
4	_____	_____	9	_____	_____
5	_____	_____	10	_____	_____

Figure 1 SAMPLE ACCTRTP FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 24D: 5623-4 RECORD
ACCOUNT CODE LINE PARAMETER FORM - ACCTLPA

1. GENERAL

The 5623-4 Record is available with 5E3 and later Software Releases. The ACCTLPA form is used when assigning ACCT features to non-Multi-Line Hunt lines to assign ACCT feature parameters to the lines if the default parameters of the ACCTFD form (5623-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.42.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *TN

Description: Enter the Telephone Number of the line.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be:

LCC FORM Entries

Entry	Definition
ATND	50B Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.

For 5E12 and later, TN and FEATURE NAME combinations on different ACCTLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ACCTLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 *FEATURE NAME

Description: Enter the Account Code Feature Name. Feature Name may be from one to eight characters long with no restrictions on the valid characters, except that the first character may not be a slash (/). Feature Names starting with a slash are reserved for preconstructed features.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ACCT feature defined on the ACCTFD form (5623-1 Record).

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2.4 ACCT GROUP NAME

Description: Enter the name of the ACCT Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ACCT Group defined on an ACCTGP form (5623-2 Record).

2.5 CODE TABLE NAME

Description: This field is used to identify the ACCT associated CODE TABLE NAME for the port.
Valid Entries: 1 - 8 characters

Data Rules:

If a CODE TABLE NAME is entered here, then an ACCTRTP form (5623-3 Record) must be entered for this CODE TABLE NAME.

If CODE ASSOC ALW defined on the associated ACCTFD form (5623-1 Record) is set to "N", then CODE TABLE NAME must be left blank.

TNs are assigned ACCT (Account Code) features with CODE TABLE NAME entered either on an ACCTLPA, ACCTFD or BFG form. The CODE TABLE NAME is defined on an ACCTRTP form with USE CODEs entered. These USE CODEs and either the specific assigned ACCT feature or the ACCT wild-card feature (/AC*) which is assigned to the line must be defined in the Individualized Dialing Plan (defined on the IDPDCA form) or the Office Dialing Plan (defined on the PDIT form) with an ACTION of "ACCTUSE".

```
acctlpa                  5ESS Switch
(5623-4)            OFFICE DATA ADMINISTRATION
                ACCOUNT CODE LINE (TN) PARAMETERS



* 1. TN              _______
* 2. FEATURE NAME    ________

  3. ACCT GROUP NAME   ________
  4. CODE TABLE NAME   ________
```

Figure 1 SAMPLE ACCTLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
acctlpa                  5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5623-4)              ACCOUNT CODE LINE (TN) PARAMETERS

*1. TN          ___________
*2. FEATURE NAME ________
```

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#3. ACCT GROUP NAME _____
4. CODE TABLE NAME _____

Figure 2 SAMPLE ACCTLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 24E: 5623-5 RECORD
ACCOUNT CODE LINE (MLHG/TERM) PARAMETER FORM - ACCTMPA

1. GENERAL

The 5623-5 Record is available with 5E3 and later Software Releases. The ACCTMPA form is used when assigning ACCT features to Multi-Line Hunt lines to assign ACCT parameters to the lines if the default parameters of the ACCTFD form (5623-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.42.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 *MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 *TERM

Description: Enter the Multi-Line Hunt Group Member Number of the line.

Required Field.
Valid Entries: 1-2015 and 3001-3999 (Outdial Terminals Only).

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be:

LCC FORM Entries	
Entry	**Definition**
ATND	50B Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines.
ISATND	ISDN Attendant Terminal.
PBX	Line to a PBX.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.

2.4 *FEATURE NAME

Description: Enter the Account Code Feature Name. Feature Name may be from one to eight characters long with no restrictions on the valid characters, except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

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The name entered here must be that of an ACCT feature defined on the ACCTFD form (5623-1 Record).

2.5 ACCT GROUP NAME

Description: Enter the name of the ACCT Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ACCT Group defined on an ACCTGP form (5623-2 Record).

2.6 CODE TABLE NAME

Description: This field is used to identify the ACCT associated code table name for the port.
Valid Entries: 1 - 8 characters

Data Rules:

If a CODE TABLE NAME is entered here, then an ACCTRTP form (5623-3 Record) must be entered for this CODE TABLE NAME.

If CODE ASSOC ALW defined on the associated ACCTFD form (5623-1 Record) is set to "N", then CODE TABLE NAME must be left blank.

MLHG/TERM (s) are assigned ACCT (Account Code) features with CODE TABLE NAME entered either on an ACCTLPA, ACCTFD or BFG form. The CODE TABLE NAME is defined on an ACCTRTP form with USE CODEs entered. These USE CODEs and either the specific assigned ACCT feature or the ACCT wild-card feature (/AC*) which is assigned to the MLHG/TERM must be defined in the Individualized Dialing Plan (defined on the IDPDCA form) or the Office Dialing Plan (defined on the PDIT form) with an ACTION of "ACCTUSE".

```
acctmpa                    5ESS Switch
(5623-5)              OFFICE DATA ADMINISTRATION
                ACCOUNT CODE LINE (MLHG/TERM) PARAMETERS




* 1. MLHG            ____
* 2. TERM            ____
* 3. FEATURE NAME    ________


  4. ACCT GROUP NAME  ________
  5. CODE TABLE NAME  ________
```

Figure 1 SAMPLE ACCTMPA FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 24F: 5623-6 RECORD
ACCOUNT CODE TRUNK (TGN/MEMB) PARAMETER FORM - ACCTTPA

1. GENERAL

The 5623-6 Record is available with 5E3 and later Software Releases, and is used to assign ACCT feature parameters to trunks if the default parameters of the ACCTFD Form, 5623-1 Record, are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.42.

2. FORM AND RECORD ENTRIES - 5623-6 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202-1 Record) must be "PF" or "PFLASH".

2.3 * MEMB

Description: Enter the Trunk Group Member Number of the trunk.

Required Field.
Valid Entries: 0 - 1951

2.4 * FEATURE NAME

Description: Enter the Account Code Feature Name. Feature Name may be from one to eight characters long with no restrictions on the valid characters, except that the first character may not be a slash (/). Feature Names starting with a slash are reserved for pre-contructed features.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of a ACCT feature defined on the ACCTFD Form.

2.5 ACCT GROUP NAME

Description: Enter the name of the ACCT Group.

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Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be that of an ACCT Group defined on an ACCTGP Form.

2.6 CODE TABLE NAME

Description: Enter the ACCT associated Code Table Name for the port.
Valid Entries: 1 - 8 characters

Data Rules:

If a CODE TABLE NAME is entered, an ACCTRTP Form must be entered for this CODE TABLE NAME. If CODE ASSOC ALW defined on the associated ACCTFD Form is set to "N", then CODE TABLE NAME must be left blank.

TGNs are assigned ACCT (Account Code) Features on the TKGRPFA form. The ACCT Feature has CODE TABLE NAME entered either on an ACCTTPA or ACCTFD form. The CODE TABLE NAME is defined on an ACCTRTP form with USE CODEs entered. These USE CODEs and either the specific assigned ACCT Feature or the ACCT wildcard feature (/AC*) which is assigned to the trunk must be defined in the Individualized Dialing Plan (defined on the IDPDCA form) or the Office Dialing Plan (defined on the PDIT form) with an Action of "ACCTUSE".

TGN/MEMB(s) are assigned ACCT (Account Code) Features on the TRUNKFA form. The ACCT Feature has CODE TABLE NAME entered either on an ACCTTPA or ACCTFD form. The CODE TABLE NAME is defined on an ACCTRTP form with USE CODEs entered. These USE CODEs and either the specific assigned ACCT Feature or the ACCT wildcard feature (/AC*) which is assigned to the trunk must be defined in the Individualized Dialing Plan (defined on the IDPDCA form) or the Office Dialing Plan (defined on the PDIT form) with an Action of "ACCTUSE".

---

accttpa 5ESS Switch
(5623-6) OFFICE DATA ADMINISTRATION
ACCOUNT CODE TRUNK (TGN/MEMB) PARAMETERS

* 1. TGN 1032
* 2. MEMB 0022
* 3. FEATURE NAME DAWN

4. ACCT GROUP NAME D224
5. CODE TABLE NAME _____

Figure 1 SAMPLE ACCTTPA FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 25: MESSAGE DETAIL RECORDING FORMS

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SEC. 25A: 5624-1 RECORD
MESSAGE DETAIL RECORDING FEATURE DEFINITION FORM - MDRFD

1. GENERAL

The 5624-1 Record is available with 5E3 and later Software Releases. It is used to define various combinations of options associated with MDR (Message Detail Recording), a BRCS feature.

The MDR to CL (Message Detail Recording to Customer Location) feature supplies detailed call records directly to a customer's location. The MDR records are shipped, in real time, to an AP (Applications Processor) via dedicated data links from the 5ESS switch. The 5ESS switch is responsible for collecting the information for an MDR record, placing it in the proper record format, and shipping the record out over a data link. The AP is responsible for storing and processing the MDR records.

Each combination of MDR options is given a 1 - 8 character feature name, which is used to assign the constructed (switch owner defined) feature to lines or trunks. Each terminal (line or trunk) may be assigned only one MDR feature name.

One MDR feature has been predefined and is automatically provided in the office database at the time of office registration. This is the preconstructed feature. All preconstructed feature names start with a slash (/) which may not be used to start any other feature name. The MDR preconstructed feature appears in Figure 1.

To use the MDR capability, a terminal must be assigned an MDR feature on the appropriate feature assignment form (LINEFA, MLHLNFA, TKGRPFA, TRUNKFA or BFG) and must belong to an MDR group. The MDR group name is assigned either as a default parameter defined with a MDR feature on the MDRFD form or on an MDRLPA, MDRTPA or MDRMPA form.

The MDR group information, defined on the MDRGP form (5624-2 Record), is used to indicate the group name, the group status, the customer's identification, the Application Processor to which the group is assigned, the attempt types allowed and the types of MDR records allowed by the group. The group Application Processor information (AP SITE ID) and the business customer identification (BCID) must also be specified on the APCA form (5620 Record).

The count of the sum total of all MDR records generated and the sum total of all MDR records lost is available to up to twenty-five MDR customers on a daily basis. The MDR customer identification and associated Applications Processor identification for these customers are specified on the MDRCNT form (5624-3 Record).

For 5E6 and later Software Releases, a Trunk Group that is assigned an MDR feature must be defined on a TKGRP form (5202 Record) with one of the following Trunk Classes (TRKCLS): "PF", "PFITT", "PFLASH", "LTOLLCON", "TTOLLCON", "PRINTOLL", "CAMAANI", "LATA", "EDSL" or "EDSLHM".

A Trunk that is assigned an MDR feature must belong to a Trunk Group defined on a TKGRP form with one of the above Trunk Classes or with INTEROFC.

1.1 Recent Change View

The corresponding Recent Change View for MDRFD is 12.33. For more information on Recent Change Views that correspond to ODA forms, please see Division 0, Section 2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

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2.2 * FEATURE

Description: Enter the MDR (Message Detail Recording) Feature name. MDR Feature names may be from one to eight characters long, with no restrictions on the valid characters, except that the first character may not be a slash (/) which is reserved for preconstructed features. Preconstructed features may be reviewed but may not be deleted, changed or inserted in the ODA database.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter (optionally) a descriptive comment of up to 32 characters.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.6) define the feature options available to the MDR feature.

2.4 ACT TYPE

Description: Enter the Activation Type of the MDR Feature.

Valid ACT TYPE Entries

Entry	Definition
AUTO	Automatic activation
CODE	Dial code

Data Rules:

AUTO:
If the ACT TYPE is "AUTO", the DACT type must be "NONE" or "CODE".

- If the DACT TYPE is "NONE", MDR is always active.
- If the DACT TYPE is "CODE", MDR can be deactivated for one call by a dialed code.

CODE:
If the ACT TYPE is "CODE", the DACT type must be "AUTO" or "CODE".

- If the DACT TYPE is "CODE", MDR can be activated or deactivated by a dialed code.
- If the DACT TYPE is "AUTO", MDR can be activated for one call by a dial code.

When "CODE" is entered for ACT TYPE, the dialed code must be defined in the subscribers IDP (Individualized Dialing Plan) Dialed Code Assignment on the IDPDCA form (5601-1/2 Record) (if a member of an IDP) or in the Office Dialing Plan on the PDIT form (5300-2 Record) as ACTION equal to "MDRACT".

2.5 DACT TYPE

Description: Enter the Deactivation Type of the MDR Feature.
Default: NONE
Valid Entries:

Valid DACT TYPE Entries

Entry	Definition
AUTO	Automatic deactivation

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CODE	Dial code
NONE	No deactivation allowed

Data Rules:

See ACT TYPE description for interactions between ACT TYPEs and DACT TYPEs.

When "CODE" is entered for DACT TYPE the dialed code entered must be defined in the subscribers IDP (Individualized Dialing Plan) Dialed Code Assignment on the IDPDCA form (5601-1/2 Record) (if a member of an IDP) or in the Office Dialing Plan on the PDIT form (5300-2 Record) with ACTION equal to "MDRDCT".

2.6 GRP CHANGE ALLOWED?

Description: Can a dialed code can be used to change the MDR group status? If Group Change Allowed is permitted, MDR group status can be controlled by a dialed code.
Default: N
Valid Entries: Y, N

DEFAULT PARAMETERS

The following field defines the default parameter assigned with the feature to terminals (lines or trunks). This parameter will be assigned to the terminal unless it is overridden by entries on the MDRLPA, MDRMPA or MDRTPA Forms.

2.7 MDR GROUP NAME

Description: Enter the NAME of the MDR Group.
Valid Entries: 1 - 8 characters

ESS 5624-1(01)TG-5 MESSAGE DETAIL RECORDING DATE _____
FEATURE DEFINITION RECORD
12.33 5ESS SWITCH
MDRFD
BASE_____CONT GR____ 5ESS UNIT _____

FEATURE	REMARKS	FEATURE OPTIONS			DEFAULT PARAMETERS
		ACT TYPE	DACT TYPE	GRP CHANGE ALLOWED?	MDR GROUP NAME
/MD*	MDR to CL - Wildcard	AUTO	NONE	N	
/MDRTOCL	MDR to CL always active	AUTO	NONE	N	

Figure 1 PRECONSTRUCTED MESSAGE DETAIL RECODING FEATURE

---

mdrfd 5ESS Switch
(5624-1) OFFICE DATA ADMINISTRATION
MESSAGE DETAIL RECORDING FEATURE DEFINITION

* 2. FEATURE _____ 3. REMARKS _____

FEATURE OPTIONS:

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4. ACT TYPE AUTO DEFAULT PARAMETERS:
5. DACT TYPE NONE 7. MDR GROUP NAME _____
6. GRP CHANGE ALLOWED? N

Figure 2 SAMPLE MDRFD FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 25B: 5624-2 RECORD
MESSAGE DETAIL RECORDING GROUP FORM - MDRGP

1. GENERAL

The 5624-2 Record is available with 5E3 and later Software Releases. It is used to define the group information for MDR (Message Detail Recording).

Each terminal (line or trunk) that will use the MDR capability must be assigned an MDR feature identification (defined on the MDRFD form (5624-1 Record)) on a LINEFA, MLHLNFA, TKGRPFA, BFG or TRUNKFA form. In addition, each terminal must be assigned to an MDR group which may be defined as the default parameter on the MDRFD form or on an individual terminal basis with the MDRLPA, MDRMPA or MDRTPA forms. The preconstructed MDR feature provided does not specify the MDR group. Therefore, if the preconstructed feature is used, individual parameter forms must be entered for each terminal.

1.1 Recent Change View

The corresponding Recent Change View for MDRGP is 24.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MDR GROUP NAME

Description: Enter the NAME of the MDR Group.
Valid Entries: 1 - 8 characters

2.3 MDR GROUP STATUS

Description: Enter the MDR status.
Default: ON
Valid Entries:

Valid MDR GROUP STATUS Entries

Entry	Definition
ON	The MDR capability is turned on.
OFF	The MDR capability is turned off.

Data Rules:

If the MDR GROUP STATUS is "ON", the MDR RECORD TYPE ALLOWED? fields are treated as specified for this group (i.e., "Y" or "N"). However, if the MDR GROUP STATUS is "OFF", the MDR RECORD TYPE ALLOWED? fields are all treated as "N".

2.4 #BCID

Description: Enter the Business Customer Identification Number.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

For 5E5 and 5E6, the BCID and AP SITE ID must be defined on an APCA form (5620 Record).

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2.5 #AP SITE ID

Description: Enter the Application Processor Site Identification Number to which this MDR group reports.

Required Field.
Valid Entries: 1 - 255

Data Rules:

This AP SITE ID must also be defined on the APCA form (5620 Record), APCOMM form (5507 Record) or the DSLAP form (5963 Record) as AP SITE ID.

2.6 8 HR PASSED

Description: Is an 8-Hour Passed MDR Record is to be generated? An 8-hour passed MDR Record is an additional MDR Record generated for calls that have been in progress for 8 hours or more.

Software Releases: 5E5 and later
Required field.
Default Value: N.
Valid Entries: Y, N

Data Rules:

In order for an 8-Hour Passed MDR Record to be generated, this field must be "Y" and the 8 HR SCAN field on the OFCOPT form must be "Y". If the 8 HR SCAN field on the OFCOPT form is "N", an 8-Hour Passed MDR Record will not be generated, even if the value entered in this field is "Y".

CKT ATTEMPT TYPES

This field group was ATTEMPT TYPES ALLOWED? in 5E5 and earlier Software Releases. The fields Section 2.7 - Section 2.8 are for ATTEMPT TYPES ALLOWED? The field group CKT ATTEMPT TYPES was added with 5E6 and later Software Releases. Fields Section 2.9 - Section 2.14 refer to CKT ATTEMPT TYPES.

2.7 EFFECTIVE ATTEMPTS

Description: Will effective call attempts be recorded for this MDR group?

Software Release: 5E5 and earlier
Default: Y
Valid Entries: Y, N

Data Rules:

Either this and/or INEFFECTIVE ATTEMPTS must be "Y".

2.8 INEFFECTIVE ATTEMPTS

Description: Will ineffective call attempts be recorded for this MDR group? An ineffective attempt is defined as a call with a valid dialing sequence (i.e., not partial dial) that does not complete for some reason (e.g., all facilities are busy).

Software Release: 5E5 and earlier
Default: N
Valid Entries: Y, N

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Data Rules:

Either this and/or EFFECTIVE ATTEMPTS must be chosen "Y".

2.9 EFF ORIG PRIV

Description: Will effective originating private calls be recorded for this MDR group?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

Either this or INEFF ORIG PRIV must be "Y".

2.10 INEFF ORIG PRIV

Description: Will ineffective Originating Private calls be recorded for this MDR group?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Either this and/or EFF ORIG PRIV must be "Y".

2.11 EFF INC PRIV

Description: Will Effective Incoming Private calls be recorded for this MDR group?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

Either this and/or INEFF INC PRIV must be "Y".

2.12 INEFF INC PRIV

Description: Will Ineffective Incoming Private calls be recorded for this MDR group?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Either this and/or EFF INC PRIV must be "Y".

2.13 EFF PUBLIC

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Description: Will Effective Public Calls be recorded for this MDR group?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

Either this and/or INEFF PUBLIC must be "Y".

2.14 INEFF PUBLIC

Description: Will Ineffective Public Calls be recorded for this MDR group?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Either this and/or EFF PUBLIC must be "Y".

2.15 EFF STA STA

Description: This field is reserved for future use.

2.16 INEFF STA STA

Description: This field is reserved for future use.

CKT MDR RECORD TYPES

In 5E5 and earlier Software Releases, this field group was called MDR RECORD TYPE ALLOWED? The fields Section 2.17 - Section 2.19 determine the types of MDR Records that are allowed for this MDR group. At least one of the following MDR Record types must be chosen.

2.17 ORIG PRIV

Description: In 5E5 and earlier Software Releases, this field was called ORIGINATING PRIVATE.

Is the Originating Private MDR Record allowed? An Originating Private MDR Record is generated for calls originating at the 5ESS Switch using an ARS access code (on-net access code or off-net access code), automatic ARS, implied on-net access code (i.e., network access trunk) or a PFA (Private Facility Access) code for a tie trunk, FX, WATS, CCSA or ETS access. A call using an ARS access code (on-net or off-net) or automatic ARS is routed via ARS. If an ARS routed call overflows to DDD, a Public MDR Record is generated instead of an Originating Private MDR Record. The Originating Private MDR Record is available to customers with or without a private network.
Default: Y
Valid Entries: Y, N

2.18 INC PRIV

Description: In 5E5 and earlier Software Releases, this field was called INCOMING PRIVATE.

Is the Incoming Private MDR Record allowed? An Incoming Private MDR Record is generated for calls incoming to the 5ESS Switch via intertandem tie trunk facilities. These calls may be routed over

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private/public trunk facilities or terminated at the 5ESS Switch over private/public line facilities. Calls incoming to the 5ESS Switch via intertandem tie trunk facilities are tandem type calls in that they originated at another node in the customers private network. As intertandem tie trunk facilities are applicable only to private networks, the Incoming Private MDR Record is available only to customers with a private network.
Default: N
Valid Entries: Y, N

2.19 PUBLIC

Description: Is the Public MDR Record allowed? A Public MDR Record is generated for calls originating at the 5ESS Switch using an "escape to POTS" access code (e.g., *9) or an implied DDD access (dials straight DDD). This record is also generated for ARS routed calls which overflow to DDD. The Public MDR Record is available to customers with or without a private network.
Default: N
Valid Entries: Y, N

2.20 STA STA

Description: This field is reserved for future use.

PACKET MDR INFORMATION

The following fields Section 2.21 - Section 2.23 determine Message Detail Recording information for packet data calls. These fields were added with the 5E7 Software Release for the Packet MDR.

2.21 PACKET MDR

Description: Can users assigned to this Packet MDR group generate MDR records?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PACKET MDR is "N", MODEM POOL and INTRA PB GRP must also be "N".

Either the PACKET MDR, ORIG PRIV, INC PRIV, or PUBLIC field must be "Y".

If PACKET MDR is "Y", ORIG PRIV is "N", IN PRIV is "N", and PUBLIC "N", then MDR GROUP NAME field must not be entered as MDR GROUP NAME on the following forms:

- the MDRFD form,
- the MDRMPA form,
- the MDRTPA form,
- the MDRLPA form, and
- the BFG form.

2.22 MODEM POOL

Description: Can Modem Pool usage MDR records be generated for the packet lines assigned to this MDR group?

Software Release: 5E7 and later
Required Field.

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Default: N
Valid Entries: Y, N

2.23 INTRA PB GRP

Description: Can Packet MDR records for Intra-Packet Business Groups be generated?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

```
mdrgp            5ESS OFFICE DATA ADMINISTRATION
(5624-2)            MESSAGE DETAIL RECORDING
                 GROUP DEFINITION FORM


*1. MDR GROUP NAME       MDR1

 2. MDR GROUP STATUS     ON          MDR RECORD TYPE ALLOWED?
 3. BCID             00067        7. ORIGINATING PRIVATE     Y
 4. AP SITE ID         033        8. INCOMING PRIVATE        N
                                  9. PUBLIC                  N

 ATTEMPT TYPES ALLOWED?
 5. EFFECTIVE          Y
 6. INEFFECTIVE        N
```

Figure 1 SAMPLE MDRGP FORM 5E4(2) SOFTWARE RELEASE

```
mdrgp                  5ESS Switch
(5624-2)            OFFICE DATA ADMINISTRATION
          MESSAGE DETAIL RECORDING GROUP DEFINITION


*1. MDR GROUP NAME       MDR0

 2. MDR GROUP STATUS     ON          MDR RECORD TYPE ALLOWED?
 3. BCID             00067        7. ORIGINATING PRIVATE     Y
 4. AP SITE ID         009        8. INCOMING PRIVATE        N
                                  9. PUBLIC                  N

 ATTEMPT TYPES ALLOWED?           10. 8 HR PASSED            Y
 5. EFFECTIVE          Y
 6. INEFFECTIVE        N
```

Figure 2 SAMPLE MDRGP FORM 5E5 SOFTWARE RELEASE

```
mdrgp                  5ESS Switch
```

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```
 (5624-2)              OFFICE DATA ADMINISTRATION
              MESSAGE DETAIL RECORDING GROUP DEFINITION

*1. MDR GROUP NAME   MDR0           ATTEMPT TYPES       MDR RECORD TYPES
 2. MDR GROUP STATUS ON         6. EFF   ORIG PRIV Y    14. ORIG PRIV Y
#3. BCID           00067       7. INEFF ORIG PRIV N    15. INC PRIV  N
#4. AP SITE ID      009         8. EFF   INC PRIV  Y    16. PUBLIC    N
 5. 8 HR PASSED      N          9. INEFF INC PRIV  N        STA STA
                               10. EFF   PUBLIC    Y
                               11. INEFF PUBLIC    N
                                  EFF   STA STA
                                  INEFF STA STA
```

Figure 3 SAMPLE MDRGP FORM 5E6 SOFTWARE RELEASE

```
 mdrgp                    5ESS Switch
 (5624-2)              OFFICE DATA ADMINISTRATION
              MESSAGE DETAIL RECORDING GROUP DEFINITION

*1. MDR GROUP NAME   MDR21       CKT ATTEMPT TYPES       CKT MDR RECORD TYPES
 2. MDR GROUP STATUS ON         6. EFF   ORIG PRIV Y    14. ORIG PRIV Y
#3. BCID           00455       7. INEFF ORIG PRIV N    15. INC PRIV  N
#4. AP SITE ID      012         8. EFF   INC PRIV  Y    16. PUBLIC    N
 5. 8 HR PASSED      Y          9. INEFF INC PRIV  N        STA STA
                               10. EFF   PUBLIC    Y
                               11. INEFF PUBLIC    Y     PACKET MDR INFO
                                  EFF   STA STA        18. PACKET MDR   N
                                  INEFF STA STA        19. MODEM POOL   N
                                                       20. INTRA PB GRP N
```

Figure 4 SAMPLE MDRGP FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 25C: 5624-3 RECORD
MESSAGE DETAIL RECORDING COUNTS FORM - MDRCNT

1. GENERAL

The 5624-3 Record is available with the 5E3 and later Software Releases. It is used to identify up to twenty-five MDR (Message Detail Recording) customers who are to receive MDR counts. Two counts are provided on a daily basis; they are:

- the sum total of all MDR Originating Private, Incoming Private and/or Public records generated;
- the sum total of all MDR Originating Private, Incoming Private and/or Public records lost.

The MDR customer identification and associated Applications Processor identification for these customers are specified on this form. A definition of the MDR record types is provided with the MDRGP form (5624-2 Record) description.

1.1 Recent Change View

The corresponding Recent Change view for this form is 24.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * KEY

Description: Enter the KEY value which is always "N", and is supplied as the default value.

Required Field.
Default: N
Valid Entries: N

MDR COUNTS LIST

The MDR counts list (fields Section 2.3 - Section 2.4) is a list of up to twenty-five MDR customers that are to receive MDR record counts on a daily basis. This list is made up of the BCID (Business Customer Identification) and the associated APID (AP Identification) of these customers. Each set of BCID/APID specified here must also be specified on the MDRGP form (5624-2 Record) and on the APCA form (5620-1 Record).

2.3 BCID 1 - BCID 25

Description: Enter the Business Customer ID of the customer receiving the MDR counts record.
Valid Entries: 1 - 65535

2.4 APID 1 - APID 25

Description: Enter the Attached Processor ID of the customer receiving the MDR counts record.
Valid Entries: 1 - 255

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(5624-3) OFFICE DATA ADMINISTRATION
MESSAGE DETAIL RECORDING COUNTS

* 1. KEY N
2. MDR COUNTS LIST

3. BCID 1 00010 APID 1 010	16. BCID 14 _____ APID 14 ___
4. BCID 2 00020 APID 2 020	17. BCID 15 _____ APID 15 ___
5. BCID 3 00030 APID 3 030	18. BCID 16 _____ APID 16 ___
6. BCID 4 00040 APID 4 040	19. BCID 17 _____ APID 17 ___
7. BCID 5 00050 APID 5 050	20. BCID 18 _____ APID 18 ___
8. BCID 6 00060 APID 6 060	21. BCID 19 _____ APID 19 ___
9. BCID 7 00070 APID 7 070	22. BCID 20 _____ APID 20 ___
10. BCID 8 00080 APID 8 080	23. BCID 21 _____ APID 21 ___
11. BCID 9 00090 APID 9 090	24. BCID 22 _____ APID 22 ___
12. BCID 10 00100 APID 10 100	25. BCID 23 _____ APID 23 ___
13. BCID 11 00110 APID 11 110	26. BCID 24 _____ APID 24 ___
14. BCID 12 00120 APID 12 120	27. BCID 25 _____ APID 25 ___
15. BCID 13 00130 APID 13 130	

Figure 1 SAMPLE MDRCNT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 25D: 5624-4 RECORD
MESSAGE DETAIL RECORDING
LINE (TN) PARAMETER FORM - MDRLPA

1. GENERAL

The 5624-4 Record is available with 5E3 and later Software Releases. It is used when assigning MDR (Message Detail Recording) features to non-Multi-Line Hunt lines if the default parameter of the MDRFD form (5624-1 Record) is inappropriate or unspecified.

The line to which this MDR feature is assigned must have a CLASS OF SERVICE of either "INDIV", "PBX", "4WINDIV", or "ATND" defined on an LCC form (5306 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * TN

Description: Enter the seven-digit Telephone Number of the line.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

	Class of Service
ATND	50B Non-Data Link Console Line or Attendant Line
INDIV	Individual Line
ISDN	Integrated Services Digital Network digital subscriber lines
ISATND	ISDN Attendant Terminal
PBX	Line to a PBX
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX

For 5E12 and later, TN/FEATURE combinations on different MDRLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the MDRLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the MDR feature for which the parameter is to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

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Data Rules:

The name entered here must be that of an MDR feature defined on the MDRFD form (5624-1 Record).

2.4 MDR GROUP NAME

Description: Enter the name of the MDR Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an MDR group defined on the MDRGP form (5624-2 Record).

```
mdrlpa                    5ESS Switch
(5624-4)              OFFICE DATA ADMINISTRATION
          MESSAGE DETAIL RECORDING LINE (TN) PARAMETERS


 * 1. TN            5551010
 * 2. FEATURE       MDRTOCL


   3. MDR GROUP NAME   MYGROUP
```

Figure 1 SAMPLE MDRLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
mdrlpa                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5624-4)       MESSAGE DETAIL RECORDING LINE (TN) PARAMETERS

*1. TN     __________
*2. FEATURE ________

#3. MDR GROUP NAME ________
```

Figure 2 SAMPLE MDRLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 25E: 5624-5 RECORD
MESSAGE DETAIL RECORDING
LINE (MLHG/TERM) PARAMETER FORM - MDRMPA

1. GENERAL

The 5624-5 Record is available with 5E3 and later Software Releases. It is used when assigning MDR (Message Detail Recording) features to Multi-Line Hunt lines if the default parameter of the MDRFD form (5624-1 Record) is inappropriate or unspecified.

The line to which this MDR feature is assigned must have a CLASS OF SERVICE of either "4WINDIV", "INDIV", "PBX", or "ATND" defined on an LCC form (5306 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM

Description: Enter the Multi-Line Hunt Group Member number of the line.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line
INDIV	Individual Line
ISDN	Integrated Services Digital Network digital subscriber lines
ISATND	ISDN Attendant Terminal
PBX	Line to a PBX
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX

2.4 * FEATURE

Description: Enter the name of the MDR feature for which the parameter is to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

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Data Rules:

The name entered here must be that of an MDR feature defined on the MDRFD form (5624-1 Record).

2.5 MDR GROUP NAME

Description: Enter the name of the MDR Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an MDR group defined on the MDRGP form (5624-2 Record).

---

mdrmpa 5ESS Switch
(5624-5) OFFICE DATA ADMINISTRATION
MESSAGE DETAIL RECORDING LINE (MLHG/TERM) PARAMETERS

* 1. MLHG 0027
* 2. TERM 0001
* 3. FEATURE MDRTOCL

4. MDR GROUP NAME MYGROUP

Figure 1 SAMPLE MDRMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 25F: 5624-6 RECORD
MESSAGE DETAIL RECORDING
TRUNK (TGN/MEMB) PARAMETER FORM - MDRTPA

1. GENERAL

The 5624-6 Record is available with 5E3 and later Software Releases. It is used when assigning MDR (Message Detail Recording) parameters to a trunk group member if the default parameter of the MDRFD form (5624-1 Record) is inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.33.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated TRKCLS entry on the TKGRP form (5202 Record) must be one of the following.

TRKCLS	
LTOLLCON	Toll Connecting
PF	Private Facility
PFITT	Private Facility Intertandem Trunk
PFLASH	Private Facility Feature Flash
PRINTOLL	Primary Intertoll
TTOLLCON	Toll Completing

2.3 * MEMB

Description: Enter the Trunk Group Member number of the trunk.

Required Field.
Valid Entries: 0 - 1951

2.4 * FEATURE

Description: Enter the name of the MDR feature for which the parameter is to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an MDR feature defined on the MDRFD form (5624-1 Record).

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2.5 MDR GROUP NAME

Description: Enter the name of the MDR Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an MDR group defined on the MDRGP form (5624-2 Record).

```
mdrtpa                    5ESS Switch
(5624-6)            OFFICE DATA ADMINISTRATION
        MESSAGE DETAIL RECORDING TRUNK (TGN/MEMB) PARAMETERS


 * 1. TGN          0022
 * 2. MEMB         0001
 * 3. FEATURE      MDRTOCL


   4. MDR GROUP NAME  MYGROUP
```

Figure 1 SAMPLE MDRTPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 26: BRCS FEATURE GROUPING FORMS

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SEC. 26A: 5625-1/2/3/4/5/6/7 RECORD BFG (BRCS FEATURE GROUPING) CONSTRUCTION FORM - BFG

1. GENERAL

The 5625-1/8 Record is available with 5E4(2) and later Software Releases. It is used to specify and construct BFGs for use when assigning subscriber features to analog lines or ISDN terminals. BFG is designed to assist the switch owner in the conservation of Switching Module memory and the improvement of Recent Change response time, and it cannot be used with trunks.

1.1 Speed Call Features

With 5E6 and later, Speed Call (Abbreviated Dialing) features are assigned separately from IDP (Individualized Dialing Plan) features. Prior to this disassociation, a line can be assigned an IDP feature with a Speed Call feature which counts as one feature for that line. However, for 5E6 and later, this line can be assigned up to three features: an IDP feature and up to two SC (Speed Call) features.

After retrofit, an existing IDP feature with Speed Call counts as three separate features. This may raise the count of Terminal features for that line above the maximum of thirty features. A line only may be assigned up to thirty Terminal features, therefore, use discretion with a BFG form that has more than twenty-eight Terminal features (IDP feature included) at the time of retrofit. If the feature count is greater than thirty after retrofit, the one-digit SC1 (Speed Call) feature, if it has been assigned, will be canceled. If SC1 has not been assigned, then two-digit SC2 (Speed Call) will be canceled. If both features have been assigned to this line, both may be canceled.

1.2 Feature Parameter Fields

The feature parameter fields are located on various screens of this form. The BFG form (Screen 1) contains a table of Modular Feature abbreviations and the screen number where their associated parameters are located.

Refer to Figure 1 for the definitions of the parameter types associated with each Modular Feature. For further information on using BFG, please refer to the BFG Feature Definition (Division 2, Section 1U).

1.3 Recent Change View

The Recent Change View for this form is 12.9.

2. FORM ENTRIES - 5625-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

BFG NAME

The following fields (Section 2.2 - Section 2.3) are used to enter a BFG name. BFGN (BFG Name) is the name assigned to a particular constructed BFG. It is recommended that the switch owner establish a consistent naming convention to be used when establishing BFG names. Refer to the BFG feature description, Division 2, Section 1U, for some recommendations.

Restriction: The following names are reserved for internal BFG usage and cannot be assigned as BFG names for either a SELECTION BFGN or a UNIQUE BFGN: ABORT, NONTGID, ACTBFG, SETUP, CLEANUP, TEMP, and NULL.

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BFGNs must not be duplicated; a SELECTION BFGN may not match a UNIQUE BFGN.

2.2 (*) SELECTION BFGN

Description: This field is used to enter the SELECTION BFGN and SUFFIX chosen to represent the BFG under construction. BFGN SUFFIX is a number between one and nine that permits the user to construct up to nine BFGs that are related by a common BFG NAME.
Valid Entries: 1 - 7 alphanumeric characters

Data Rules:

If a SELECTION BFGN is entered, then a SUFFIX must be entered. If a SUFFIX is entered, then a SELECTION BFGN must be entered. If a SELECTION BFGN and SUFFIX are entered, then the UNIQUE BFGN must be blank.

2.3 (*) UNIQUE BFGN

Description: This field is used to enter the UNIQUE BFGN chosen to represent the BFG under construction.
Valid Entries: 1 - 7 alphanumeric characters

Data Rules:

If a UNIQUE BFGN is entered, then the SELECTION BFGN and SUFFIX must be blank.

2.4 # LCC

Description: This field is used to enter the LCC (Line Class Code). The LCC entered will be used to do error checks on the constructed BFGN. The BFGN LCC does not have to exactly match the LCC of the subscribers that are assigned this BFGN. The LCC/RAX combination entered must be defined on an LCC form (5306 Record).
Valid Entries: 3 alphanumeric characters

2.5 # RAX

Description: This field is used to enter the RAX (Rate Area Number). The RAX entered will be used to do error checks on the constructed BFGN. The RAX assigned does not have to exactly match the RAX of the subscribers assigned to the BFGN. The LCC/RAX combination entered must be defined on an LCC form (5306 Record).
Valid Entries: For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 999

Data Rules:

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

FEATURE LIST

The following fields (Section 2.6 - Section 2.9) are used to specify the feature names that are to be associated with the BFG under construction. The FEATURE LIST consists of up to 30 Feature/ Cluster names with the associated initial activation state. A minimum of one Feature/Cluster name must be assigned to a BFG.

Assume that only one feature, of a modular feature type, can be assigned to a subscriber line using BFG. If more than one feature of the type can be assigned, the required conditions for assignment will be stated in the BFG feature description (Division 2, Section 1U). If the feature does not require BFG-defined

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parameters, then the existing restrictions on the quantity of features are not affected by BFG.

2.6 FEATURE

Description: This field is used to enter the feature or cluster name.

If the name used in one of the feature list rows is a constructed feature, it must be defined on a feature definition form.

If the name used in one of the feature list rows is a cluster name, it must be defined on a CLUSTR form (5600 Record). More than one cluster name may be entered on the BFG Construction form to define BFG features. If a cluster name is the only entry, the cluster name must have at least one feature name defined. A maximum of 30 features, using a combination of individual and cluster name defined features, can be assigned to each BFG.

The cluster name is used for input purposes only. The cluster name entered on the BFG Construction form will not be retained in the switch database. Only the features defined by the cluster name will be stored. Valid Entries: 1 - 8 alphanumeric characters including "/"

Data Rules:

If this field contains a cluster name, the AC fields on the CLUSTR form may not be "Y".

The /LIRDAMU, /LIRDNMU, and /LIRMDU preconstructed features which were created to support the Calling Name Delivery feature were not available for the 5E7 Software Release.

For 5E15 and later, when FEATURE is entered on this form, it must not be defined on the MWFD form (5602 Record) where the appropriate fields on the MWFD form are set as follows:

- FEATURE OPTIONS fields: ACT/INACT OPTION must be set to "ACT1CA", MULTIWAY CONTROL must be set to "NWAY", and AMAC must be set to "USAGE",
- ENTRY POINT fields: FLASH must be set to "Y", IN MIDDLE must be set to "Y", and OFF HOOK must be set to "Y", and
- DEFAULT PARAMETER field: N-WAY MAXIMUM must be set to "6".

The feature options on the MWFD form define a USSWC (Usage Sensitive Six-Way Calling) feature which cannot be assigned on this form. USSWC must be assigned on the OFCOPT form (5509 Record). For more information on the USSWC feature, see Division 2, Section 4A553.

2.7 A

Description: Is the BRCS feature initially active? If a Cluster name is entered in the FEATURE field, then this field should be "Y". The actual activity status for each feature name assigned by the Cluster name is defined on the CLUSTR form.

Refer to the LINEFA, MLHLNFA and CLUSTR forms for further details regarding restrictions and requirements for feature name assignment and activity status.

Valid Entries are: Y, N

2.8 AC

Description: Is an Authorization Code required for this feature? For the Authorization Code feature to operate correctly, an authorization code group must be defined on the Authorization Code Definition form and this feature must be assigned to an authorization group on the Authorization Codes Feature Class of

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Service Parameters. There must also be an Authorization Code feature present on the line. (See Data Rules below.)

Software Release: 5E9(1) an later.
Valid Entries: Y, N

Data Rules:

If FEATURE, A, AC or R is entered, then all fields must be entered.

If the AC field is set to "Y", then:

- an Authorization Code Feature must also exist on either an MLHLNFA form, LINEFA form, a BFG form, or an associated CLUSTR form. The Authorization Code Feature must be defined on the ATHFD form, and entered on an MLHLNFA form, a BFG form, a LINEFA form or an associated CLUSTR form.
- the FEATURE must exist on the ATHFCOS form for the CSV ATH GROUP NAME and the CSD ATH GROUP NAME defined on the ATHMPA, BFG or ATHFD form associated with this MLHG/TERM.

When a BFG input form is assigned a feature that is defined on an ACSRFD, ACVTFD, BCLIDFD, CPNBNFD, DISPFD, EDSFD, HIFD, ICMFD, LIDFD, MSFD, or RNDFD form on a BFG form, then AC must be set to "N".

2.9 R

Description: Is Remote Access Service requested on this feature?

Software Release: 5E9(1) and later.
Valid Entries: Y, N

Data Rules:

If FEATURE, A, AC or R is entered, then all fields must be entered.

3. FORM ENTRIES - 5625-2 RECORD

INDIVIDUAL DIALING PLAN

This following fields (Section 3.1 - Section 3.2) are the parameter fields for the Individual Dialing Plan feature.

3.1 IDP GROUP NAME

Description: This field is used to enter the name of the IDP (Individualized Dialing Plan) group.
Valid Entries: 1 - 8 alphanumeric characters

3.2 DPAT CATEGORY

Description: This field is used to enter the DPAT (Dialing Plan Access Treatment) Category.
Valid Entries: 1 - 32

Data Rules:

If this field is entered, the IDP GROUP NAME must be entered.

SPEED CALLING

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The following fields (Section 3.3 - Section 3.8) are the parameter fields for the Speed Calling feature.

3.3 SC1 LIST

Description: This field is used to enter the 1-digit Speed Call list name. If the list is shared the SC1 LIST may be any one- to eight-character name except those names that are valid for unshared lists. SC1 LIST may duplicate SC2 LIST. Unshared list names must not be entered for this BFG. If the list is unshared (SC SHARED = "N"), an SC LIST will be reserved for and assigned to each user of the BFG.

Software Release: 5E6 and later
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: up to 11 characters

Data Rules:

Shared SC1 LIST may not be either "A" followed by a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

3.4 SC1 SHARED

Description: Can the 1-digit SC1 LIST be shared among two or more users? If "N" is entered (indicating an unshared list), the SC LIST name must not be entered; an SC LIST will be reserved for and assigned to each user of the BFG.

Software Release: 5E6 and later
Valid Entries: Y, N

3.5 SC1 CODES

This field is used by Recent Change/Verify only.

3.6 SC2 LIST

Description: This field is used to enter the 2-digit Speed Call list name. If the list is shared, then the SC2 LIST may be any one- to eight-character name except those names that are valid for unshared lists. SC2 LIST may duplicate SC1 LIST. Unshared list names must not be entered for this BFG. If the list is unshared (SC SHARED = "N", an SC LIST will be reserved for and assigned to each user of the BFG.

Software Release: 5E6 and later
Valid Entries: For 5E11 and earlier: 1 - 8 characters
For 5E12 and later: up to 11 characters

Data Rules:

Shared SC2 LIST may not be either "A" followed by a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

3.7 SC2 SHARED

Description: Can the 2-digit Speed Call list be shared among two or more users? If "N" is entered (indicating an unshared list), the SC LIST name must not be entered; an SC LIST will be reserved for and assigned to each user of the BFG.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

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3.8 SC2 CODES

This field is used by Recent Change/Verify only.

4. FORM ENTRIES - 5625-3 RECORD

TERMINAL GROUP

The following fields (Section 4.1 - Section 4.2) contain the parameter field for the Terminal Group and Station Restriction feature.

4.1 GROUP ID

Description: This field is used to enter the TGID (Terminal Group Identification) number.
Valid Entries: 1 - 65535

4.2 MOH ALW

Description: Is Music on Hold allowed?

Once a call has been placed on hold, this field indicates whether or not music is to be provided to the held party during the hold period. This field is only applicable when Secured Feature ID 64 is set to "S" on the SFSYS form (5713-1 Record).

Software Release: 5E7 and later
Required Field.
Default Values: N
Valid Entries: Y, N

Data Rules:

When MOH ALW is "Y", a non-zero GROUP ID must be entered, and the GROUP ID specified must have a MUSIC ON HOLD TGN and MEMB assigned on the TGATTD form.

If MOH ALW is "Y" for a TGSR feature assigned to a TN or an MLHG/TERM on a LINEFA, MLHLNFA, CLUSTR, or BFG form, then:

- the LCC and RAX of the TN or MLHG/TERM must be defined on a corresponding LCC form with CLASS OF SERVICE of "INDIV", "ATND", "ISDN", "ISATND".
- a GROUP ID must be specified on either the BFG or corresponding TGSRFD, TGSRLPA or TGRSMPA form and have a MUSIC ON HOLD TGN and MEMB assigned on the TGATTD form.

FORWARD TO DN

The following fields (Section 4.3 - Section 4.4) are the Forward to DN parameters for the TGSR (Terminal Group and Station Restriction) feature.

4.3 ORIGINATING

Description: This field is used to enter the Originating Forward To Directory Number.
Valid Entries: 1 - 32 digits, consisting of 0 - 9, * or #

4.4 TERMINATING

Description: This field is used to enter the Terminating Forward To Directory Number.

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Valid Entries: 1 - 32 digits, consisting of 0 - 9, * or #

ERROR ANNCMT ROUTE INDEX

The following fields (Section 4.5 - Section 4.6) are error announcement route index parameters for the TGSR (Terminal Group and Station Restriction) feature.

4.5 ORIGINATING

Description: This field is used to enter the originating error announcement route index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

4.6 TERMINATING

Description: This field is used to enter the terminating error announcement route index.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

4.7 DISP RESTRICT

Description: The Display Restriction field is used to indicate the restriction that displays on an ISAT's console for an incoming MBG (Multiswitch Business Group) call. The DISP RESTRICT field was added to support the CENTREX Network feature. For more information on the CENTREX Network secured features, see Division 2, Sections 4A181, 4A182, and 4A183.

Software Release: 5E9(2) and later.
Valid Entries:

Valid DISP RESTRICT Entries

Entry	Definition
TOLL	Attendant display indicates toll calls are restricted.

4.8 CNIGI

Description: The CNIGI (Calling Number Identification Services Intragroup Delivery Only) field indicates whether members of the terminal group have restrictions on delivery of CPN (Calling Party Number), RN (Redirecting Number), CPS (Calling Party Subaddress), and ICLID (Incoming Call Line Identification). Based on the CNIGI field, these may be restricted to intragroup calls only.

Software Release: 5E10 and later
Default: NULL
Valid Entries:

Valid CNIGI Entries - 5E10 and later

Entry	Definition
INTRAONLY	The above items are delivered only on intra-group calls.
NORSTRCT	No restrictions apply.
NULL	Consult the CNIGI field value on the TGATTD (Terminal Group Attendant and Data) form (5611 Record), RC view (4.4); but if that form does not exist or is NULL consult OFCOPT.

Data Rule:
When CNIGI is entered, a non-zero GROUP ID must be entered.

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5. FORM ENTRIES - 5625-4 RECORD

PRIVATE FACILITIES

The following fields (Section 5.1 - Section 5.4) are the parameter fields for the Private Facilities Access feature.

5.1 CSV PFA GRP

Description: This field is used to enter the name of the circuit-switched voice PFA (Private Facilities Access) group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

This name must be defined on a PFAGPA form with GROUP TYPE set to "VOICE". For 5E6 and later, if a CSD PFA GRP is defined on this form, then a CSV PFA GRP also must be defined.

For 5E7 and later, if a PFA feature is assigned to the BFG on a BFG or CLUSTR form, the CSV PFA GRP must be defined either on the BFG form or on the associated PFAFD form.

5.2 CSD PFA GRP

Description: This field is used to enter the name of the circuit-switched data PFA (Private Facilities Access) group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

This name must be defined on a PFAGPA form with GROUP TYPE set to "CSD". There cannot be CSD-only groups for PFA service; this field can only be entered if CSV PFA GRP is entered.

5.3 QUEUE ALLOWED

Description: Are calls from this PFA feature allowed to queue?
Valid Entries: Y, N

Data Rules:

This field must be entered if a PFA GROUP has been entered.

5.4 PRIORITY QUEUE

Description: Does this PFA feature have the priority queuing option?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this entry is "Y", then QUEUE ALLOWED must be "Y". This field must be entered if a PFA GROUP has been entered.

ADVANCED SERVICE INTERFACE

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Fields Section 5.5 - Section 5.9 refer to the Advanced Service Interface Proxy feature. If one or more is entered, the FEATURE LIST on either the BFG or associated CLUSTR form must contain the appropriate feature type.

5.5 ASI GRP

Description: Enter the name of the ASI Proxy group to be used by the ASI Proxy feature assigned within this BFG.

Software Release: 5E8 and later
Valid Entries: 1 - 8 characters

Data Rules:

If ASI GRP is not entered, SERV CODE, ASI SID, IP DIAL BILL, EXP DIAL BILL, RMT BILL, RMT SERV CODE and REC SERV CODE cannot be entered.

This ASI GRP must be defined on a corresponding ASIGP form.

5.6 SERV CODE

Description: Enter the service code digits defining the services allowed during implicit mode access to the IP.

Software Release: 5E8 and later
Valid Entries: 1 - 5 characters consisting of:
- 0 - 9, *, #

Data Rules:

If ASI GRP and SERV CODE are both entered, they must be defined on a corresponding ASIGP form.

If an ASI Proxy feature is assigned to a TN and defined on an ASIFD form with IMP ACC equals "Y", then SERV CODE must be entered, if not entered on that ASIFD form, an ASILPA form , or ASIMPA form.

5.7 ASI SID

Description: Enter the Subscriber Identification used to identify the subscriber to the IP. If not specified, the SID is the station TN of the line.

Software Release: 5E8 and later
Valid Entries: 1 - 10 characters consisting of:
- 0 - 9, *, #

5.8 IP DIAL BILL

Description: Does the subscriber want AMA (Automatic Message Accounting) billing records for an otherwise non-billable call dialed by the IP?

Software Release: 5E8 and later
Valid Entries: Y, N

5.9 EXP DIAL BILL

Description: Does the subscriber want AMA records for an explicit connection to the IP?

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Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

If EXP DIAL BILL equals "Y", EXP ACC must equal "Y" on the corresponding ASIFD form.

REMOTE ACCESS

The following fields (Section 5.10 - Section 5.12) define translations which were added to support the Remote Access to ASI feature. For more information on this feature, see Division 2, Section 4A93.

5.10 RMT BILL

Description: Should an AMA billing record be generated for remote access to Intelligent Peripheral calls?

Software Release: 5E9(1) and later.
Valid Entries: Y, N

5.11 RMT SERV CODE

Description: Enter the Remote Access Service Code used to define the set of services allowed during remote access to the Intelligent Peripheral.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 5 characters consisting of:
- 0 - 9, *, #

Data Rules:

If RMT SERV CODE is entered, then REC SERV CODE must be entered.

5.12 REC SERV CODE

Description: Enter the Remote Access Reconnect Service Code used to define the set of services allowed during a remote reconnect to the Intelligent Peripheral.

Software Release: 5E9(1) and later.
Valid Entries: 1 - 5 characters consisting of:
- 0 - 9, *, #

Data Rules:

If REC SERV CODE is entered, then RMT SERV CODE must be entered.

6. FORM ENTRIES - 5625-5 RECORD

CALL PICKUP ORIG

The Loud Speaker Paging and Code Calling features are not available in BFG at this time. The following fields (Section 6.1 - Section 6.5) are the parameter fields for the Call Pickup Originating feature.

Data Rules:
Only one Call Pickup Originating feature is allowed on a given BFG form or on its associated CLUSTR form(s).

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6.1 DIRECT PICKUP TN

Description: This field is used to enter the telephone number of the station that will be directly picked up.

Software Release: 5E11 and earlier.
Valid Entries: 7 digits

6.2 ORIG PICKUP GROUP 1

Description: This field is used to enter the queue (group) that the customer can originate to pickup.
Valid Entries:
- For 5E11 and earlier: 2 - 65535
- For 5E12 and later: 2 - 65534

Data Rules:

If this field is entered, the quantity of pickup groups on the PUOFD form (5605-1 Record) must be 1, 2, 3 or 4.

6.3 ORIG PICKUP GROUP 2

Description: This field is used to enter the queue (group) that the customer can originate to pickup.
Valid Entries: For 5E11 and earlier: 2 - 65535
For 5E12 and later: 2 - 65534

Data Rules:

If this field is entered, the quantity of pickup groups on the PUOFD form (5605-1 Record) must be 2, 3 or 4.

6.4 ORIG PICKUP GROUP 3

Description: This field is used to enter the queue (group) that the customer can originate to pickup.
Valid Entries: For 5E11 and earlier: 2 - 65535
For 5E12 and later: 2 - 65534

Data Rules:

If this field is entered, the quantity of pickup groups on the PUOFD form (5605-1 Record) must be 3 or 4.

6.5 ORIG PICKUP GROUP 4

Description: This field is used to enter the queue (group) that the customer can originate to pickup.
Valid Entries: For 5E11 and earlier: 2 - 65535
For 5E12 and later: 2 - 65534

Data Rules:

If this field is entered, the quantity of pickup groups on the PUOFD form (5605-1 Record) must be 4.

6.6 DPU TN

Description: This field is used to enter the telephone number of the station that will be directly picked up.

Software Release: 5E12 and later.
Valid Entries: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

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Data Rules:

When DPU TN is entered or DPU DA DGTS is entered both must be entered.

When DPU TN is entered, ORIG PICKUP GROUP 1 must not be entered.

For 5E12 and later, NXX(s) (the first 3 digits of a 7-digit TN) and/or NPA/NXX combinations (the first 6 digits of a 10-digit TN) from the DPU TN on the BFG form must be defined as OFFICE CODE and/or NPA/OFFICE CODE on the NOC form.

For 5E12 and later, if the first 3 digits of the 7-digit DPU TNs on the BFG form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit DPU TN(s) must be entered as a 10-digit DPU TN(s).

CALL PICKUP TERM

The following fields (Section 6.7 - Section 6.9) are the parameter fields for the Call Pickup Terminating feature.

6.7 TERM PICKUP GROUP

Description: This field is used to enter the Terminating Call Pickup group number.
Valid Entries: 2 - 65535

Data Rules:

When this field has an entry, the FEATURE must be a Call Pickup Terminating feature defined on the PUTFD form (5605-2 Record) with a FEATURE FUNCTION of "CALPU".

Only one Call Pickup Terminating feature is allowed on a given BFG form or on its associated CLUSTR form(s).

6.8 TONE INTERVAL

Description: This field is used to enter the barge-in tone interval in seconds. Zero indicates no repetition.
Valid Entries: 0, blank

6.9 TONE DURATION

Description: This field is used to enter the barge-in tone duration in milliseconds.
Valid Entries: 900, blank

7. FORM ENTRIES - 5625-6 RECORD

DISTINCTIVE RINGING

The following field (Section 7.1) is the parameter field for the DR (Distinctive Ringing) feature. If a subscriber requires multiple DR features, only one DR feature may be defined by a BFG and all others must be defined outside of BFG.

7.1 RING PTN

Description: This field is used to enter the DR (Distinctive Ringing) Pattern Type.

Valid RING PTN Entries

Entry	Definition
A	
B	Indicates a repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on and 4 seconds off.
C	Indicates a repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8

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	seconds on and 4 seconds off.
D	Indicates a repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (code 2 ringing).
E	For routing ringing pattern associated with Customer Premise Equipment. Valid with DSN (Defense Switched Network) offices with a Class of Service of "4WINDIV" on the LCC form.
F	For a priority ringing pattern associated with Customer Premise Equipment. Valid with DSN (Defense Switched Network) offices with a Class of Service of "4WINDIV" on the LCC form.
P	For a precedence ringing pattern of 1.64 seconds on and 0.36 seconds off repeated for the duration of the ringing interval.

AUTO CALL BACK

The following fields (Section 7.2 - Section 7.3) are the parameter fields for the Automatic Callback feature.

7.2 RINGING PATTERN

Description: This field is used to enter the ACB (Automatic Call Back) ringing pattern.

Valid RINGING PATTERN Entries

Entry	Definition
A	
B	Indicates a repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on and 4 seconds off.
C	Indicates a repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Indicates a repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (code 2 ringing).
E	For routing ringing pattern associated with Customer Premise Equipment. Valid with DSN (Defense Switched Network) offices with a Class of Service of "4WINDIV" on the LCC form.
F	For a priority ringing pattern associated with Customer Premise Equipment. Valid with DSN (Defense Switched Network) offices with a Class of Service of "4WINDIV" on the LCC form.
P	For a precedence ringing pattern of 1640 milliseconds on and 360 milliseconds off repeated for the duration of the ringing interval.

7.3 RINGING INTERVAL

Description: This field is used to enter the ACB ringing interval for the ringing provided to the originator when the camped-on line becomes idle.
Valid Entries: 24, 30, 36, 42, and 48 (seconds)

AUTOMATIC ROUTE SELECTION

The following fields (Section 7.4 - Section 7.14) contain the parameter fields for the Automatic Route Selection feature.

7.4 CSV ARS GRP

Description: This field is used to enter the name of the circuit-switched voice ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

The name must be defined on an ARSGPA form with GROUP TYPE set to "VOICE". Defining a CSV ARS GRP is not required; however, if a CSD ARS GRP is defined on this form, then a CSV ARS GRP also must be defined.

7.5 CSD ARS GRP

Description: This field is used to enter the name of the circuit-switched data ARS group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

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Data Rules:

The name must be defined on an ARSGPA form with a GROUP TYPE of "CSD". There cannot be CSD-only groups for ARS service; this field can only be entered if CSV ARS GRP is entered.

7.6 TONE TYPE

Description: This field is used to enter the type of warning tone to be supplied to the originator if a route is marked as an expensive route.

Valid TONE TYPE Entries

Entry	Definition
BEEP1	A single beep tone
NONE	

Data Rule:
For 5E6 and later "BEEP1" is the CSV call response; "NONE" is the CSD response.

If TONE TYPE is entered, then the ARS GROUP NAME must be specified.

7.7 FRL LINE

Description: This field is used to enter the FRL (Facility Restriction Level) of the privilege assigned to the terminal. Each ARS route has an FRL assigned to indicate the minimum FRL needed to access the facility. The terminal must have an FRL number equal to or greater than the FRL assigned to the route.
Valid Entries: 0 - 16

Data Rules:

If FRL LINE is entered, then the ARS GROUP NAME must be specified.

7.8 USE ALT FRL

Description: Should the calling terminal's FRL be changed when the Alternate FRL Table has been activated?
Valid Entries: Y, N

Data Rules:

If USE ALT FRL is entered, then the ARS GROUP NAME must be specified.

For 5E6 and later, if this field is "Y", ALW ALT FRL must also be set to "Y" on the ARSGPA form.

7.9 ARS SI

Description: This field is used to indicate the ARS screening index associated with the terminal.
Valid Entries: 1 - 16

Data Rules:

If ARS SI is entered, then the ARS GROUP NAME must be specified.

7.10 ALW MDR RAO

Description: Should an AMA billing record be produced when the terminal originates a call that finds a charge index with an AMA Call Type of "CCSAS", "ETSMDR" or "ETSCCSA"?
Valid Entries: Y, N

Data Rules:

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If ALW MDR RAO is entered, then the ARS GROUP NAME must be specified.

7.11 PRIVATE DN

Description: This field is used to enter the private billing Directory Number to be used for MDR (Message Detail Recording) of private billing records. This directory number can be used for either CL (Customer Location) or RAO (Revenue Accounting Office) entries.
Valid Entries:
- For 5E11 and earlier: enter up to 7 digits, 0 - 9
- For 5E12 and later: enter up to 10 digits, 0 - 9

7.12 QUEUE ALLOWED

Description: Is the terminal allowed to queue for the first available route in the ARS route list when queuing is active and all routes are busy?
Valid Entries: Y, N

Data Rules:

If QUEUE ALLOWED is entered, then the ARS GROUP NAME must be specified.

7.13 PRIORITY QUEUE

Description: Should the terminal be allowed to enter the priority queue?
Valid Entries: Y, N

Data Rules:

If PRIORITY QUEUE is "Y", then QUEUE ALLOWED must be "Y" and the ARS GROUP NAME must be specified.

7.14 DIAL PLAN

Description: This entry specifies the Dialing Plan to be used to analyze the ARS dialed number.

Valid DIAL PLAN Entries

Entry	Definition
ODP	Office Dialing Plan
1	Private Network Dialing Plan 1
2	Private Network Dialing Plan 2

Data Rule:
If ENTRY on the ARSFD form is "CODE", this entry should be blank. The ARS access code will be used to determine the dialing plan to be used.

This entry is only valid when ENTRY on the ARSFD form equals "AUTO".

For 5E6 and later, the DIAL PLAN value and CSV ARS GROUP name defined on this form must be defined on the PNINFO form (5608-12 Record). Also, for 5E6 and later, if this BFG form is entered and CCSA LIMITATION is "Y" on the ARSFD form, the CSV ARS GROUP assigned on this form must match the ARS GROUP NAME defined on the PNINFO form (5608-12 Record) where DIAL PLAN is 1.

8. FORM ENTRIES - 5625-7 RECORD

AUTHORIZATION CODES

The following fields (Section 8.1 - Section 8.5) are the parameter fields for the Authorization Code feature.

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8.1 CSV ATH GRP

Description: This field is used to enter the name of the circuit-switched voice ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

Defining a CSV ATH GRP is not required; however, if a CSD ATH GRP is defined on this form, then a CSV ATH GRP also must be defined.

8.2 CSD ATH GRP

Description: This field is used to enter the name of the circuit-switched data ATH group.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

There cannot be CSD-only groups for ATH service; this field can only be entered if CSV ATH GRP is entered.

8.3 ATH FIRST

Description: Should the authorization code be entered immediately following the feature access code?
Valid Entries: Y, N

Data Rules:

If ATH FIRST is entered, then the ATH GROUP NAME must be specified.

8.4 ATH FOR AMA

Description: Should the authorization code be entered before any AMA recorded calls are allowed to proceed?
Valid Entries: Y, N

Data Rules:

If ATH FOR AMA is entered, then the ATH GROUP NAME must be specified.

8.5 ATH FOR MDR

Description: Should the Authorization Code be entered before allowing MDR (Message Detail Recording) to proceed?
Valid Entries: Y, N

Data Rules:

If ATH FOR MDR is entered, then the ATH GROUP NAME must be specified.

ACCOUNT CODE

The following fields (Section 8.6 - Section 8.7) are the parameter fields for the Account Code feature.

8.6 ACCT GROUP NAME

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Description: This field is used to enter the Account Code group name.
Valid Entries: 1 - 8 alphanumeric characters

8.7 CODE TABLE NAME

Description: This field is used to indicate the Account Code table name to be used.
Valid Entries: 1 - 8 alphanumeric characters

MESSAGE DETAIL RECORDING

The following field (Section 8.8) is the parameter field for the Message Detail Recording feature.

8.8 MDR GROUP NAME

Description: This field is used to enter the MDR (Message Detail Recording) group name.
Valid Entries: 1 - 8 alphanumeric characters

ELECTRONIC DIRECTORY SERVICE

The following field (Section 8.9) is the parameter field for the Electronic Directory Service feature.

8.9 EDS GRP

Description: This field is used to enter the EDS (Electronic Directory Service) group name.
Valid Entries: 1 - 8 alphanumeric characters

MULTI-WAY CALLING

The following fields (Section 8.10 - Section 8.12) are the parameter fields for the Multi-Way Calling feature.

It is possible to assign more than one Multi-Way Calling feature to a subscriber line using BFG. The first Multi-Way feature encountered on the BFG Construction form will be defined as a part of the BFG. The first Multi-Way feature will use the parameters defined on the BFG Construction form. The second and all additional Multi-Way features, while they are part of the BFG, must reference feature definition forms if they require parameters.

8.10 N-WAYS

Description: This field is used to enter the maximum quantity of terminals allowed in a Multi-Way N-Way call.
Valid Entries: 0, 3, 4, 5, and 6

8.11 TONE DURATION

Description: This field is used to enter the duration of the party departure tone (single beep only) in milliseconds. The normal duration is 300 milliseconds.
Valid Entries: 0, 200, 300, 600, 900, 1200,

- 1500, 1800, 2100, 2400, 2700, 3000,
- 3300, 3600, 3900, 4000

8.12 DIRECT CONN DN

Description: This field is used to enter the direct connection Directory Number. Entries are typically 1, 3, 7, 8, 10, or 11 digits or an IDDD number.
Valid Entries: 1 - 15 digits

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Data Rule:
If DIRECT CONN DN is entered, the corresponding MWFD form must have a MULTIWAY CONTROL of "DIRCON".

9. FORM ENTRIES - 5625-8 RECORD

CALL WAITING

Fields Section 9.1 - Section 9.2 refer to the parameter fields for the Call Waiting feature.

9.1 CDPTY TONE INTERVAL

Description: This field is used to enter the interval at which the called party receives beeps when there is a call waiting.
Valid Entries: 0 - 60 seconds

9.2 LONG DIST DT

Description: Long Distance Distinctive Tone specifies whether a distinctive call waiting tone is given when the called party receives a long distance incoming call. This field supports the Call Waiting with Distinctive Tones and Distinctive Ringing for Long Distance Calls special feature. For more information on this feature, see Division 2, Section 4A91.

Software Release: 5E8 and later.
Valid Entries:

Valid LONG DST DT Entries

Entry	Definition
DTONE	Provide normal call waiting treatment for non-long distance calls and call waiting distinctive tone pattern E for long distance calls.
NORMAL	Both local and long distance calls receive the "normal" call waiting tones as specified by the CALLED PTY TONE INTERVAL field on the CWTFD form (5603-1 Record).
ONLY	Provide call waiting distinctive tone pattern E only for long distance calls.

Data Rules:

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before the LONG DST DT field can be entered. A SFSYS form does not exist with If the SFID 91 ACT field is not set to "Y", then the LONG DST DT field must not be entered.

If a CWT Feature assigned on either the TN, LINEFA, MLHLNFA, CLUSTR, or BFG form and the feature has either the INVOCATION field set to "PTRM" or "RTRM" or the INTER OFFICE field set to "N" on the CWTFD form (5603-1 Record), then LONG DST DT must be "NORMAL" or unknown on either the BFG or the corresponding CWTLPA or CWTMPA form. If a CWT feature is assigned through a BFG that has any of the CWT parameters entered, then all CWT parameters on the BFG form are used.

CALL WAITING DELUXE

The following fields define the office parameters for Call Waiting Deluxe. These fields support the Call Waiting Deluxe Phase II Feature. This is a secured feature with SFID 145. For more information on this feature, see Division 2, Section 4A145.

For 5E10 and later, when BFG forms, keyed by BFGN, have a known value other than "OFCALERT" in field ALERT TYPE or have a known value other than "OFCDFLTOPT" in field DFLT OPT or have a known value other than "OFCCONF" in field USG SENS CONF, the Call Waiting feature assigned on this BFG form must be defined on CWTFD form with CW DELUXE equal to "Y".

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9.3 ALERT TYPE

Description: Enter the Call Waiting Deluxe Alerting Type. The user and/or the CPE is alerted of an incoming call by way of a tone.

Software Release: 5E10 and later.
Valid Entries:

Valid ALERT TYPE Entries - 5E10 and later

Entry	Definition
OFCALERT	Office value
CWD	SAS only with non-ADSI per-call options allowed
CWD1	SAS & CAS with non-ADSI per-call options restricted
CWD2	SAS & CAS with non-ADSI allowed

9.4 DFLT OPT

Description: Default Service Option is a treatment applied to incoming calls when the user does not select a per-call option.

Software Release: 5E10 and later.
Valid Entries:

Valid DFLT OPT Entries - 5E10 and later

Entry	Definition
OFCDFLTOPT	Office value
CONTRING	Continue providing waiting party audible ringing
CALLFWD	Forward waiting call to CFDA destination
DEFANNC	Connect waiting call to default announcement

9.5 USG SENS CONF

Description: Usage Sensitive Conference is used to track the usage of conferencing.

Software Release: 5E10 and later.
Valid Entries:

Valid USG SENS CONF Entries - 5E10 and later

Entry	Definition
OFCCONF	Office value
NO	Do not provide usage sensitive AMA for conferencing on this line
YES	Provide usage sensitive AMA for conferencing on this line

TALKING CALL WAITING

9.6 TCW

Description: This field is used in determining whether or not Talking Call Waiting is assigned to the Call Waiting feature.

Software Release: 5E12 and later.
Default: N
Valid Entries: Y, N

9.7 INH CW MASTER

Description: Is Call Waiting inhibited for the master TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

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Data Rules:

If INVOCATION is not in "TERM" then INH CW MASTER must be "N".

If INH CW MASTER is "Y", then INH CW DEPEND must be "blank" or "N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

The following TNs on the LINEFA, BFG or an associated CLUSTR form have been assigned a Call Forwarding feature on the CWTLPA form with INH CW MASTER or INH CW DEPEND set to "Y". If TNs on the LINE form have a PTY value of 0, then with this feature assignment, this TN must have a LCC/RAX combination defined on the LCC form with a TERMINATING TREATMENT of "INDIV" or "INWATS".

The following BFGs have either INH CW MASTER or INH CW DEPEND set to "Y" and therefore must have a feature associated with this BFG defined on the CWTFD Feature Definition form either directly or through a CLUSTER Name on an associated CLUSTR form.

9.8 INH CW DEPEND

Description: Is Call Waiting inhibited for the depend TN of a line using MDR?

Software Release: 5E14
Default: N
Valid Entries: Y, N

Data Rules:

If INVOCATION is not in "TERM" then INH CW DEPEND must be "N".

If INH CW DEPEND is "Y", then INH CW MASTER must be blank or N".

To enable this feature, the ACT field for SFID 535 must be set to "Y" on the SFSYS form (5713-1 Record).

9.9 INHIBIT MDNL CW

Description: This field is used in determining whether or not Call Forwarding is inhibited for the master telephone number, the dependent telephone number, or either.

Software Release: 5E15 and later.
Default: NONE
Valid Entries: D, M, or N

Data Rules:

If INVOCATION is not in "TERM", then INHIBIT MDNL CW must be "NONE".

PRECEDENCE AND PREEMPTION

The following fields (Section 9.10 - Section 9.20) are the parameter field for the Precedence and Preemption feature.

Many of the parameters associated with the Precedence and Preemption feature have dependencies. If a parameter entry is made for one of the following, then parameter entries are required for all the following: PREC COI, PREC NON COI, PREEMPTABLE LINE, IMMED PREEMPTION, PREC CPU, FWD IAGP PREC, RECEIVE AV CALLS, DIRECT STA SELECT, ORIGINATE AV CALLS, COI GROUP ID, HOT LINE.

9.10 PREC COI

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Description: This field is used to enter the highest authorized precedence level of a call originated from this line to a port in the same COI (Community Of Interest). If a value is not entered, the line may not originate calls to the Autovon Network.

Valid entries are in order of increasing precedence.

Valid PREC COI Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash
FO	Flash Override

Data Rule:
If a PREC COI is specified, then a COI GROUP ID must be entered.

9.11 PREC NON COI

Description: This field is used to enter the highest authorized precedence level of a call originated from this line to a port in a different COI (Community Of Interest). If a value is not entered, the line may not originate calls to the Autovon Network.

Valid entries are in order of increasing precedence.

Valid PREC NON COI Entries

Entry	Definition
R	Routine
P	Priority
I	Immediate
F	Flash
FO	Flash Override
E	Executive

9.12 PREEMPTABLE LINE

Description: Can a line with this feature be preempted?
Valid Entries: Y, N

Data Rule:
If "N" is entered, then IMMED PREEMPTION must also be "N".

9.13 IMMED PREEMPTION

Description: Is Immediate Preemption in effect? Immediate Preemption allows calls of the appropriate priority to preempt, even if Call Waiting or Call Forwarding - Busy Line is in effect.
Valid Entries: Y, N

9.14 PREC CPU

Description: Can Precedence calls be picked up using the Call Pickup feature?
Valid Entries: Y, N

9.15 FWD IAGP PREC

Description: Can an intra-terminal group precedence call, to a line with this feature, be forwarded when the line is Call Forward - Busy or Call Forward - Don't Answer forwarded?
Valid Entries: Y, N

9.16 TERM NETWK CALLS

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Description: Can a line with this feature receive incoming calls from the Autovon Network?
Valid Entries: Y, N

Data Rules:

If the DSN OPTION field on the OFCOPT form is "Y", and a Precedence and Preemption feature (defined on a PPFD form) is assigned to this BFG, then TERM NETWK CALLS must be "Y".

9.17 ORIG NETWK CALLS

Description: Can a line with this feature originate calls to the Autovon Network?
Valid Entries: Y, N

Data Rules:

If the DSN OPTION field on the OFCOPT form is "Y", and a Precedence and Preemption feature (defined on a PPFD form) is assigned to this BFG, then ORIG NETWK CALLS must be "Y".

9.18 DIRECT STA SELECT

Description: Can a line with Precedence and Preemption have the Direct Station Selection feature?
Valid Entries: Y, N

Data Rules:

If a "Y" is entered, the line must have an Individualized Dialing feature with a 1-digit no change permitted abbreviated dial list, assigned. A line with this feature may only dial the 1-digit abbreviated dial codes.

9.19 COI GROUP ID

Description: This field is used to enter the COI (Community Of Interest) group ID. A COI is a group of subscribers that originate the majority of their traffic in calls to each other.
Valid Entries: 1 - 20

Data Rules:

If a COI GROUP ID is specified, then a value should be entered in the PREC COI field.

For 5E8 and later, when COI GROUP ID is entered, it must match the CODE INDEX on a PPCOI form (5618-6 Record).

9.20 HOT LINE

Description: This field is used to indicate the type of hot line.

Hot line service is used when the forward number is that of another hot line or when the station only wishes to accept calls from other hot lines. Hot line subscribers can be described as master, slave or neither.

Valid HOT LINE Entries

Entry	Definition
MV	
MD	
SV	
SD	
HV	
HD	

Data Rules:

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If HOT LINE is "Y", any TN that is assigned this BFG on a LINEFA form must be associated with an LCC assigned on the LINE form and defined on an LCC form with CLASS OF SERVICE set to "INDIV" or "4WINDIV".

If HOT LINE is "Y", this BFG may not be assigned to a CKT TN or CKT MLHG/TERM defined on a DSLUSR form, nor to an MLHG/TERM defined on an MLHG form. (Hotline Precedence and Preemption features may not be assigned to DSL circuit TNs or to MLHG terminals.)

LASS AUTO CALLBACK

The following field (Section 9.21) is the parameter field for the LASS AUTO CALLBACK feature.

9.21 AC RNGBK TYPE

Description: This field indicates the AC (Automatic Callback) ringback type.

Valid AC RNGBK TYPE Entries

Entry	Definition
A	
B	Indicates a repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on and 4 seconds off.
C	Indicates a repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Indicates a repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (code 2 ringing).

LASS AUTO RECALL

The following field (Section 9.22) is the parameter field for the LASS AUTO RECALL feature.

9.22 AR RNGBK TYPE

Description: This field indicates the AR (Automatic Recall) ringback type.

Valid AR RNGBK TYPE Entries

Entry	Definition
A	
B	Indicates a repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on and 4 seconds off.
C	Indicates a repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Indicates a repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (code 2 ringing).

BFG (BRCS Feature Grouping) Parameter Types

Modular Feature Name	Abbreviation	Parameter Type	Record
Account code	ACCT	Group	5625-7
Advanced Service Interface	ASI	Either	5625-4
Attendant Control of Voice Terminals	ACVT	Line	
Authorization Code	ATH	Group	5625-7
Automatic Call Back	ACB	Group	5625-6
Automatic Route Selection	ARS	Either	5625-6
Bulk Calling Line Identification	BCLID	Line	
Call Forwarding	CFW	Line	
Call Pickup - Originating	PUO	Either	5625-5
Call pickup - Terminating	PUT	Either	5625-5
Call Waiting	CWT	Group	5625-8
Calling Party Number/Billing Number	CPNBN	Neither	
Display	DISP	Neither	
Distinctive Ringing	DR	Group	5625-6
Electronic Directory Service	EDS	Either	5625-7
Home Intercom	HI	Neither	5628
Individualized Dialing	ID	Either	5625-3
Intercom	ICM	Line	
LASS Auto Callback	AC	Group	5625-8
LASS Auto Recall	AR	Group	5625-8
Line Identification	LID	Neither	
Message Detail Recording	MDR	Group	5625-7

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Message Service System	MS	Line	
Multi-Way Calling	MW	Group	5625-7
Precedence & Preemption	PP	Group	5625-8
Private Facility Access	PFA	Group	5625-4
Terminal Group & Station Restriction	TGSR	Group	5625-3
Time of Day	TOD	Not Allowed	

Figure 1 BFG PARAMETER TYPES

SCREEN 1 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

(*)1. SELECTION BFGN 1 1 #5. LCC AAA USE CNT
(*)4. UNIQUE BFGN _____ #6. RAX 01

FEATURE TYPE PARAMETERS - SCREEN NUMBER

AC	8	ATH	6	MDR	6
ACBC	5	CPU	4	MW	6
ACCT	6	CWT	7	PP	7
AR	8	DR	5	PFA	4
ARS	5	EDP	6	SC	3
ASI	4	IDP	3	TGR	3

SCREEN 2 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

7. FEATURE LIST (FEATENT)

ROW	FEATURE	A	AC	R	ROW	FEATURE	A	AC	R	ROW	FEATURE	A	AC	R
1	_____	_	_	_	11	_____	_	_	_	21	_____	_	_	_
2	_____	_	_	_	12	_____	_	_	_	22	_____	_	_	_
3	_____	_	_	_	13	_____	_	_	_	23	_____	_	_	_
4	_____	_	_	_	14	_____	_	_	_	24	_____	_	_	_
5	_____	_	_	_	15	_____	_	_	_	25	_____	_	_	_
6	_____	_	_	_	16	_____	_	_	_	26	_____	_	_	_
7	_____	_	_	_	17	_____	_	_	_	27	_____	_	_	_
8	_____	_	_	_	18	_____	_	_	_	28	_____	_	_	_
9	_____	_	_	_	19	_____	_	_	_	29	_____	_	_	_
10	_____	_	_	_	20	_____	_	_	_	30	_____	_	_	_

SCREEN 3 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

INDIVIDUAL DIALING PLAN TERMINAL GROUP
23. IDP GROUP NAME _____ 38. GROUP ID _____ 44. DISP RESTRICT ____
24. DPAT CATEGORY __ 39. MOH ALW _ 45. CNIGI _____
25. ICR SFG ____
FORWARD TO DN
SPEED CALLING 40. ORIGINATING _____

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```
28. SC1 LIST _____________    41. TERMINATING ____________________________
29. SC1 SHARED _
    SC1 CODES                 ERROR ANNCMT ROUTE INDEX
31. SC2 LIST _____________    42. ORIGINATING ____
32. SC2 SHARED _              43. TERMINATING ____
    SC2 CODES
```

```
SCREEN 4 OF 8                 5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)      BRCS FEATURE GROUP CONSTRUCTION

    PRIVATE FACILITIES                      CALL PICKUP ORIG
49. CSV PFA GRP  _________                  67. ORIG PICKUP GROUP 1 __
50. CSD PFA GRP  _________                  68. ORIG PICKUP GROUP 2 __
51. QUEUE ALLOWED  _                        69. ORIG PICKUP GROUP 3 __
52. PRIORITY QUEUE _                        70. ORIG PICKUP GROUP 4 __
                                  71. DPU TN  ___________
          ADVANCED SERVICE INTERFACE          CALL PICKUP TERM
53. ASI GRP  _________                  72. TERM PICKUP GROUP ____
54. SERV CODE  _____          REMOTE ACCESS
55. ASI SID  ___________ 58. RMT BILL  _
56. IP DIAL BILL  _          59. RMT SERV CODE _____
57. EXP DIAL BILL _          60. REC SERV CODE _____
```

```
SCREEN 5 OF 8                 5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)      BRCS FEATURE GROUP CONSTRUCTION

    DISTINCTIVE RINGING           AUTOMATIC ROUTE SELECTION
 75. RING PTN _          78. CSV ARS GRP  _________   88. DIAL PLAN ___
                         79. CSD ARS GRP  _________
    AUTO CALL BACK       80. TONE TYPE    _____
 76. RINGING PATTERN  _  81. FRL LINE     __
 77. RINGING INTERVAL __ 82. USE ALT FRL  _
                         83. ARS SI       __
                         84. ALW MDR RAO  _
                         85. PRIV DN      ___________
                         86. QUEUE ALLOWED  _
                         87. PRIORITY QUEUE _
```

```
SCREEN 6 OF 8                 5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)      BRCS FEATURE GROUP CONSTRUCTION

    AUTHORIZATION CODES           MESSAGE DETAIL RECORDING
 89. CSV ATH GRP _________        96. MDR GROUP NAME _________
 90. CSD ATH GRP _________
 91. ATH FIRST  _              ELECTRONIC DIRECTORY SERVICE
 92. ATH FOR AMA _             97. EDS GRP _________
 93. ATH FOR MDR _
                          MULTI-WAY CALLING
```

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```
   ACCOUNT CODE                98. N-WAYS        _
94. ACCT GROUP NAME _________      99. TONE DURATION  ____
95. CODE TABLE NAME _________     100. DIRECT CONN DN _________________
```

```
SCREEN 7 OF 8                5ESS Switch
bfg                 OFFICE DATA ADMINISTRATION
(5625-1 thru 8)       BRCS FEATURE GROUP CONSTRUCTION

      CALL WAITING                PRECEDENCE AND PREEMPTION
101. CDPTY TONE INTERVAL __          109. PREC COI        __
102. LONG DST DT        _______      110. PREC NON COI    __
                            111. PREEMPTABLE LINE  _
   CALL WAITING DELUXE              112. IMMED PREEMPTION  _
103. ALERT TYPE   __________          113. PREC CPU        _
104. DFLT OPT     ___________         114. FWD IAGP PREC   _
105. USG SENS CONF _______            115. TERM NETWK CALLS  _
                            116. ORIG NETWK CALLS  _
TALKING CALL WAITING                117. DIRECT STA SELECT _
106. TCW _                     118. COI GROUP ID     __
                            119. HOT LINE         __
```

```
SCREEN 8 OF 8                5ESS Switch
bfg                 OFFICE DATA ADMINISTRATION
(5625-1 thru 8)       BRCS FEATURE GROUP CONSTRUCTION

   LASS AUTO CALLBACK
120. AC RNGBK TYPE _

   LASS AUTO RECALL
121. AR RNGBK TYPE _
```

Figure 2 SAMPLE BFG FORM 5E13 SOFTWARE RELEASE

```
SCREEN 1 OF 8                5ESS Switch
bfg                 OFFICE DATA ADMINISTRATION
(5625-1 thru 8)       BRCS FEATURE GROUP CONSTRUCTION


(*)1. SELECTION BFGN _______ _   #5. LCC ___    USE CNT
(*)4. UNIQUE BFGN    _______     #6. RAX __

            FEATURE TYPE PARAMETERS - SCREEN NUMBER
     AC        8        ATH        6        MDR        6
     ACBC      5        CPU        4        MW         6
     ACCT      6        CWT        7        PP         7
     AR        8        DR         5        PFA        4
     ARS       5        EDP        6        SC         3
     ASI       4        IDP        3        TGR        3
```

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SCREEN 2 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

7. FEATURE LIST (FEATENT)

ROW	FEATURE	A	AC	R	ROW	FEATURE	A	AC	R	ROW	FEATURE	A	AC	R
1	_____	_	_	_	11	_____	_	_	_	21	_____	_	_	_
2	_____	_	_	_	12	_____	_	_	_	22	_____	_	_	_
3	_____	_	_	_	13	_____	_	_	_	23	_____	_	_	_
4	_____	_	_	_	14	_____	_	_	_	24	_____	_	_	_
5	_____	_	_	_	15	_____	_	_	_	25	_____	_	_	_
6	_____	_	_	_	16	_____	_	_	_	26	_____	_	_	_
7	_____	_	_	_	17	_____	_	_	_	27	_____	_	_	_
8	_____	_	_	_	18	_____	_	_	_	28	_____	_	_	_
9	_____	_	_	_	19	_____	_	_	_	29	_____	_	_	_
10	_____	_	_	_	20	_____	_	_	_	30	_____	_	_	_

SCREEN 3 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

INDIVIDUAL DIALING PLAN TERMINAL GROUP
23. IDP GROUP NAME _____ 30. GROUP ID _____ 36. DISP RESTRICT ____
24. DPAT CATEGORY __ 31. MOH ALW _ 37. CNIGI _____
25. ICR SFG ____
FORWARD TO DN
SPEED CALLING 32. ORIGINATING _____
26. SC1 LIST _____ 33. TERMINATING _____
27. SC1 SHARED _
SC1 CODES ERROR ANNCMT ROUTE INDEX
28. SC2 LIST _____ 34. ORIGINATING _____
29. SC2 SHARED _ 35. TERMINATING _____
SC2 CODES

SCREEN 4 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

PRIVATE FACILITIES CALL PICKUP ORIG
38. CSV PFA GRP _____ 50. ORIG PICKUP GROUP 1 _____
39. CSD PFA GRP _____ 51. ORIG PICKUP GROUP 2 _____
40. QUEUE ALLOWED _ 52. ORIG PICKUP GROUP 3 _____
41. PRIORITY QUEUE _ 53. ORIG PICKUP GROUP 4 _____
54. DPU TN _____
ADVANCED SERVICE INTERFACE CALL PICKUP TERM
42. ASI GRP _____ 55. TERM PICKUP GROUP _____
43. SERV CODE _____ REMOTE ACCESS
44. ASI SID _____ 47. RMT BILL _
45. IP DIAL BILL _ 48. RMT SERV CODE _____
46. EXP DIAL BILL _ 49. REC SERV CODE _____

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```
SCREEN 5 OF 8                5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)        BRCS FEATURE GROUP CONSTRUCTION

    DISTINCTIVE RINGING            AUTOMATIC ROUTE SELECTION
 56. RING PTN _           59. CSV ARS GRP  _________    69. DIAL PLAN ___
                          60. CSD ARS GRP  _________
    AUTO CALL BACK        61. TONE TYPE    _____
 57. RINGING PATTERN  _   62. FRL LINE     __
 58. RINGING INTERVAL __  63. USE ALT FRL  _
                          64. ARS SI       __
                          65. ALW MDR RAO  _
                          66. PRIV DN      ___________
                          67. QUEUE ALLOWED  _
                          68. PRIORITY QUEUE _
```

```
SCREEN 6 OF 8                5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)        BRCS FEATURE GROUP CONSTRUCTION

    AUTHORIZATION CODES              MESSAGE DETAIL RECORDING
 70. CSV ATH GRP _________          77. MDR GROUP NAME _________
 71. CSD ATH GRP _________
 72. ATH FIRST  _                ELECTRONIC DIRECTORY SERVICE
 73. ATH FOR AMA _               78. EDS GRP _________
 74. ATH FOR MDR _
                              MULTIWAY CALLING
    ACCOUNT CODE                 79. N-WAYS        _
 75. ACCT GROUP NAME _________     80. TONE DURATION  ____
 76. CODE TABLE NAME _________     81. DIRECT CONN DN _________________
```

```
SCREEN 7 OF 8                5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)        BRCS FEATURE GROUP CONSTRUCTION

      CALL WAITING                PRECEDENCE AND PREEMPTION
 82. CDPTY TONE INTERVAL __           90. PREC COI        __
 83. LONG DST DT        _______       91. PREC NON COI    __
                              92. PREEMPTABLE      _
    CALL WAITING DELUXE               93. IMMED PREEMPTION  _
 84. ALERT TYPE  __________           94. PREC CPU          _
 85. DFLT OPT    ___________          95. FWD IAGP PREC     _
 86. USG SENS CONF ________           96. TERM NETWK CALLS  _
                              97. ORIG NETWK CALLS  _
 87. TCW          _                98. DIRECT STA SELECT _
 88. INH CW MASTER _                  99. COI GROUP ID    __
 89. INH CW DEPEND _                  100. HOT LINE       __
```

```
SCREEN 8 OF 8                5ESS Switch        _
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)        BRCS FEATURE GROUP CONSTRUCTION
```

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LASS AUTO CALLBACK
101. AC RNGBK TYPE_

LASS AUTO RECALL
102. AR RNGBK TYPE _

Figure 3 SAMPLE BFG FORM 5E14 SOFTWARE RELEASE

SCREEN 1 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

(*)1. SELECTION BFGN _____ _ #5. LCC ___ USE CNT
(*)4. UNIQUE BFGN _____ #6. RAX ___

FEATURE TYPE PARAMETERS - SCREEN NUMBER

AC	8	ATH	6	MDR	6
ACBC	5	CPU	4	MW	7
ACCT	6	CWT	7	PP	8
AR	8	DR	5	PFA	4
ARS	5	EDP	6	SC	3
ASI	4	IDP	3	TGR	3

SCREEN 2 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

7. FEATURE LIST (FEATENT)

ROW	FEATURE	A	AC	R	ROW	FEATURE	A	AC	R	ROW	FEATURE	A	AC	R
1	_____	_	_	_	11	_____	_	_	_	21	_____	_	_	_
2	_____	_	_	_	12	_____	_	_	_	22	_____	_	_	_
3	_____	_	_	_	13	_____	_	_	_	23	_____	_	_	_
4	_____	_	_	_	14	_____	_	_	_	24	_____	_	_	_
5	_____	_	_	_	15	_____	_	_	_	25	_____	_	_	_
6	_____	_	_	_	16	_____	_	_	_	26	_____	_	_	_
7	_____	_	_	_	17	_____	_	_	_	27	_____	_	_	_
8	_____	_	_	_	18	_____	_	_	_	28	_____	_	_	_
9	_____	_	_	_	19	_____	_	_	_	29	_____	_	_	_
10	_____	_	_	_	20	_____	_	_	_	30	_____	_	_	_

SCREEN 3 OF 8 5ESS Switch
bfg OFFICE DATA ADMINISTRATION
(5625-1 thru 8) BRCS FEATURE GROUP CONSTRUCTION

INDIVIDUAL DIALING PLAN TERMINAL GROUP
23. IDP GROUP NAME _____ 30. GROUP ID _____ 36. DISP RESTRICT ____
24. DPAT CATEGORY __ 31. MOH ALW _ 37. CNIGI _____

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```
25. ICR SFG      ____
                    FORWARD TO DN
    SPEED CALLING        32. ORIGINATING _____________________________
26. SC1 LIST  ___________     33. TERMINATING _____________________________
27. SC1 SHARED _
    SC1 CODES            ERROR ANNCMT ROUTE INDEX
28. SC2 LIST  ___________     34. ORIGINATING _____
29. SC2 SHARED _          35. TERMINATING _____
    SC2 CODES
```

```
SCREEN 4 OF 8              5ESS Switch
bfg              OFFICE DATA ADMINISTRATION
(5625-1 thru 8)     BRCS FEATURE GROUP CONSTRUCTION

    PRIVATE FACILITIES                  CALL PICKUP ORIG
38. CSV PFA GRP   ________              50. ORIG PICKUP GROUP 1 _____
39. CSD PFA GRP   ________              51. ORIG PICKUP GROUP 2 _____
40. QUEUE ALLOWED _                     52. ORIG PICKUP GROUP 3 _____
41. PRIORITY QUEUE _                    53. ORIG PICKUP GROUP 4 _____
                              54. DPU TN  __________
        ADVANCED SERVICE INTERFACE          CALL PICKUP TERM
42. ASI GRP   ________                55. TERM PICKUP GROUP _____
43. SERV CODE   _____       REMOTE ACCESS
44. ASI SID   __________ 47. RMT BILL    _
45. IP DIAL BILL _       48. RMT SERV CODE _____
46. EXP DIAL BILL _      49. REC SERV CODE _____
```

```
SCREEN 5 OF 8              5ESS Switch
bfg              OFFICE DATA ADMINISTRATION
(5625-1 thru 8)     BRCS FEATURE GROUP CONSTRUCTION

    DISTINCTIVE RINGING          AUTOMATIC ROUTE SELECTION
56. RING PTN _          59. CSV ARS GRP   ________    69. DIAL PLAN ___
                        60. CSD ARS GRP   ________
    AUTO CALL BACK      61. TONE TYPE     _____
57. RINGING PATTERN _   62. FRL LINE      __
58. RINGING INTERVAL __ 63. USE ALT FRL   _
                        64. ARS SI        __
                        65. ALW MDR RAO   _
                        66. PRIV DN       __________
                        67. QUEUE ALLOWED _
                        68. PRIORITY QUEUE _
```

```
SCREEN 6 OF 8              5ESS Switch
bfg              OFFICE DATA ADMINISTRATION
(5625-1 thru 8)     BRCS FEATURE GROUP CONSTRUCTION

    AUTHORIZATION CODES          MESSAGE DETAIL RECORDING
70. CSV ATH GRP ________         77. MDR GROUP NAME ________
71. CSD ATH GRP ________
72. ATH FIRST   _            ELECTRONIC DIRECTORY SERVICE
```

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```
 73. ATH FOR AMA _                78. EDS GRP ________
 74. ATH FOR MDR _                     MULTIWAY CALLING
                            79. N-WAYS       _
    ACCOUNT CODE                  80. TONE DURATION  ____
 75. ACCT GROUP NAME _________         81. DIRECT CONN DN _________________
 76. CODE TABLE NAME _________
```

```
SCREEN 7 OF 8                  5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)        BRCS FEATURE GROUP CONSTRUCTION

        CALL WAITING                  PRECEDENCE AND PREEMPTION
 82. CDPTY TONE INTERVAL __               89. PREC COI          __
 83. LONG DST DT        ______            90. PREC NON COI      __
                                91. PREEMPTABLE LINE   _
    CALL WAITING DELUXE                 92. IMMED PREEMPTION   _
 84. ALERT TYPE    _________              93. PREC CPU          _
 85. DFLT OPT      __________             94. FWD IAGP PREC     _
 86. USG SENS CONF _______                  95. TERM NETWK CALLS   _
                                96. ORIG NETWK CALLS   _
TALKING CALL WAITING                    97. DIRECT STA SELECT  _
 87. TCW           _                  98. COI GROUP ID       __
                                99. HOT LINE          __
 88. INHIBIT MDNL CW ______
```

```
SCREEN 8 OF 8                  5ESS Switch
bfg                  OFFICE DATA ADMINISTRATION
(5625-1 thru 8)        BRCS FEATURE GROUP CONSTRUCTION

LASS AUTO CALLBACK
  100. AC RNGBK TYPE_

 LASS AUTO RECALL
 101. AR RNGBK TYPE _
```

Figure 4 SAMPLE BFG FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 26B: 5626 RECORD
BFG (BRCS FEATURE GROUPING) SUMMARY REPORT

1. GENERAL

The 5626 Record is available with 5E4(2) and later Software Releases. It is designed to provide information that will be used to aid in the construction of BFGs that will provide the maximum usefulness in the switch. The BFG capability can be used to improve Recent Change response time and conserve Switching Module memory. Please refer to the BFG Feature Description (Division 2, Section 1U) for additional information on BFG.

The information on this record is derived from the following forms:

- LINEFA form (5112 Record)
- MLHLNFA form (5113 Record)
- CLUSTR form (5600 Record)
- TGSRFD form (5607-1/2 Record)
- TGSRLPA form (5607-3 Record)
- TGSRMPA form (5607-4 Record)

1.1 BRCS

The BRCS feature assignment forms (LINEFA and MLHLNFA), where the BFGN is not entered, are examined to determine the features assigned. If a Cluster name was used to assign the features, the feature(s) on the CLUSTR form are retrieved.

1.2 TGSR

A master list of the features from each source for each subscriber is created. The master list is examined to determine if a TGSR (Terminal Group and Station Restriction) feature has been assigned to the subscriber. The TGSR forms (TGSRLPA, TGSRMPA, TGSRFD) are referenced to determine the TGID (Terminal Group Identification Number) assigned to the subscriber. Subscriber lines with a TGID are placed in a category and are grouped by their TGID into sub-categories. Subscriber lines without a TGID are placed in another category. Within both categories, subscribers with identical features are grouped together. After all subscriber lines are examined, the report provides the quantity of users, for subscribers with and without TGIDs, by each unique grouping of assigned features.

1.3 BFG Construction

The purpose of the report is to provide information that will aid in the construction of BFGs that will provide the maximum usefulness in the switch.

The following paragraphs describe the contents of the sample 5626 Record in Figure 1.

The first four output lines are related to subscriber lines with BRCS features but without a TGID assigned. These are typically POTS or small business type service lines.

The remainder of the sample report lines are related to subscriber lines with a TGID assigned. The information is sorted by the TGID.

The USER TOTALS column contains the quantity of users for each group of features listed. Example: 12,100 subscribers with features /CFV and /CWC1 and 450 subscribers in TGID 00005 with features

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CFWFEAT5, IDFEAT5 and TGSFEAT5. Within each category the report lines are sorted in ascending quantity of users.

The five FEATURE columns list the feature names derived from the various feature assignment forms. The feature names are sorted with pre-constructed features before constructed features.

2. REPORT HEADING INFORMATION

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 TERMINAL GROUP ID

Description: This column contains the TGID (Terminal Group ID) number associated with the lines. The report is sorted by TGID.

2.3 USER TOTALS

Description: This column contains the quantity of users for each group of features listed. Within each TGID the report lines are sorted in ascending quantity of users.

2.4 FEATURE

Description: The five FEATURE columns list the feature names derived from the various feature assignment forms. The feature names are sorted with pre-constructed features before constructed features.

ESS 5626(5/95)TG-5 BRCS FEATURE GROUPING (BFG) SUMMARY REPORT DATE _____
clustr, linefa, mlhlnfa, tgsrfd, 5ESS SWITCH
tgsrlpa, tgsrmpa
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

SUMMARY REPORT FOR POTENTIAL BFG CONSTRUCTION							REMARKS
TERMINAL GROUP ID	USER TOTALS	FEATURE	FEATURE	FEATURE	FEATURE	FEATURE	
	00500	/CFV	/CWC1	/MW3WC			
	00700	/CWC1					
	01000	/CFV					
	12100	/CFV	/CWC1				
00005	00025	ACCTFT1	ARSFEAT3	CWTFEAT2	CWTFEAT3	DRFEAT2	
		EDSFEAT1	IDFEAT5	MDRFEAT1	MWFEAT1	MWFEAT7	
		PFAFEAT2	PPFEAT3	TGSFEAT5			
00005	00200	ACBFEAT5	ACCTFT1	ARSFEAT4	CFWFEAT5	DISFEAT5	
		DRFEAT5	EDSFEAT1	IDFEAT5	MDRFEAT8	MWFEAT1	
		PFAFEAT3	PPFEAT4	PUOFT8	PUTFT5	TGSFEAT5	
00005	00300	/MW6WC	CWTFEAT3	CWTFEAT4	DRFEAT4	IDFEAT5	
		TGSFEAT5					
00005	00400	ARSFEAT5	CFWFEAT5	IDFEAT5	PUTFT5	TGSFEAT5	
00005	00450	CFWFEAT5	IDFEAT5	TGSFEAT5			
00005	00600	IDFEAT5	TGSFEAT5				
00010	00004	/ACBC	/CPUDO	/CWACODT	/MWACH2	CFWFEAT5	
		IDFEA10	PPFEAT4	TGSFEA10			
00010	00032	/ACBC	/CPUDO	/CWACODT	/MWACH2	IDFEA10	
		PPFEAT4	TGSFEA10				
00010	00038	/ACBC	/CPUDO	/CPUDT	/CWACODT	/DRATT	
		/MWACH2	CFWFEAT3	CFWFEAT4	IDFEA10	PPFEAT2	
		TGSFEA10					
00010	00040	/ACBC	/CPUDO	/CPUDT	/CWACODT	/DRATT	

Figure 1 SAMPLE 5626 RECORD

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SEC. 27: SPEED CALLING FORMS

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SEC. 27A: 5627-1 RECORD
SPEED CALLING FEATURE DEFINITION FORM - SCFD

1. GENERAL

1.1 Speed Calling Assignments

The SCFD form (5627-1 Record) is used to define various combinations of Speed Call parameters for lines and trunks. For 5E6 and later Software Releases, it is used instead of the IDFD form (5601 Record) which is used in 5E2 and later Software Releases for defining Individualized Dialing Plan features and 5E5 and earlier Software Releases for defining Speed Calling features.

The need to use a separate form for defining Speed Calling parameters is due to the Disassociate Speed Calling from Individualized Dialing Plan feature. This feature is available in 5E6 and later and allows operating companies to make Speed Call assignments independently from IDP assignments.

For example, disassociating Speed Calling assignments from IDP assignments allows the operating company to assign a different Speed Calling feature, for example two-digit Speed Calling (SC2), to a line or trunk that already has been assigned a Speed Calling feature (SC1) without having to manually delete the existing feature and Speed Call list.

Subscribers can still select Speed Calling while being part of an IDP, however, the operating company no longer has to make the Speed Calling assignments as part of the IDP assignments. Therefore, this disassociation is transparent to the subscriber and does not affect the functionality of either feature.

1.2 Class of Service

For 5E6 and later, when a TN on a LINE form or a CKT TN on a DSLUSR form is assigned an SC feature on the LINEFA, BFG, or associated CLUSTR form, the TN must have an LCC/RAX defined on an LCC form with one of the following values: "4WINDIV", "INDIV", "PBX", "ATND", "TWOPTY", "HOTMOTL", "MODEM", "ISDN", "ISATND".

When an MLHG/TERM on an MLHLN form or a CKT MLHG / CKT TERM on a DSLUSR form is assigned an SC feature on the MLHLNFA, BFG, or associated CLUSTR form, the MLHG/TERM must have an LCC/RAX defined on an LCC form with one of the following values: "4WINDIV", "INDIV", "PBX", "ATND", "HOTMOTL", "MODEM", "ISDN", "ISATND".

1.3 Constructed/Preconstructed Features

Each combination of parameters serves as a constructed (switch owner defined) feature and it is given a feature name of one- to eight-characters. This defined feature name is used to assign the combination of parameters to a particular line or trunk on one of the following forms: the SCLPA form (5627-2 Record), SCMPA form (5627-3 Record) or SCTPA form (5627-4 Record). One of these forms is entered per line or trunk if the default parameters for this line or trunk on the SCFD form are undefined or inappropriate (see Figure 5). When referring to Figure 5, assume all necessary ODP or IDP data has been entered prior to the assignment of the Speed Calling feature.

For 5E6 and later, a line can be assigned up to two SC features (one 1-digit SC feature and/or one 2-digit SC feature). However, assigning two of the same features to one line is not allowed.

Also, if any member of an IDP Group has Speed Calling options, all Speed Calling codes must be defined on the IDPDCA form (5601 Record) for that IDP Group.

Certain SC features are preconstructed by ODA and automatically provided in the ODD (Office Dependent Database) at the time of office registration (see Figure 1). Preconstructed feature names begin with a slash (/); the slash may not be used as the first character of any other feature name except preconstructed feature names.

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During a retrofit to the 5E6 Software Release, existing preconstructed and constructed IDP features that are assigned to any lines or trunks will be automatically converted to separate IDP and Speed Calling features. Preconstructed features in the 5E5 Software Release will be converted to two IDP preconstructed features (one for customer change, /IDP1 and one for no customer change, /IDP) and eleven Speed Calling preconstructed features (see Figure 2).

Constructed IDP features with Speed Calling options in the 5E5 Software Release will retain their IDP feature name along with their associated IDP feature data in 5E6 and later . However, any Speed Calling options defined as part of constructed IDP features will be moved automatically to corresponding preconstructed Speed Calling features (see Figure 2). This "evolution" of Speed Calling data includes any parameter data defined on IDPLPA, IDPMPA or IDPTPA forms.

1.4 Recent Change View

The corresponding Recent Change View for this form is 12.51.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: This field is used to enter the Speed Call feature name. The first character of the feature name cannot be the slash (/) character. All BRCS feature names must be unique.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: This field is used for any pertinent descriptive remarks.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.5) define speed calling options.

2.4 SC

Description: Enter the Speed Call option.

Required Field.

Valid SC Entries

Entry	Definition
SC1	One-digit Speed Call
SC2	Two-digit Speed Call

2.5 SCC

Description: Is the Speed Call list changeable by the subscriber?

Required Field.
Valid Entries: Y, N

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DN SCREENING OPTIONS

The following fields (Section 2.6 - Section 2.23) define Speed Call sequence screening with SC options DNSA through DNSQ for subscribers using one-digit or two-digit changeable Speed Call list codes.

2.6 DN SCREEN

Description: Will Speed Call sequences be screened with SC options DNSA through DNSQ for subscribers using one-digit or two-digit changeable Speed Call list codes?

Required Field.
Valid Entries: Y, N

Data Rules:

Since only customer changeable Speed Calling features are affected by the DN screening options, the value for this field is set by the value of the SCC field. For example, if SCC is set to "Y", DN SCREEN is then set to "Y" and the subscriber is allowed to change their Speed Call list. Conversely, if SCC is "N", then DN SCREEN is "N".

2.7 DNSA

Description: This no-change field is set to "Y" by ODA to allow the Directory Number of another member of the subscriber's terminal group to be stored in the Speed Call list.
Valid Entries: Y, N
Default Value: Y

2.8 DNSB

Description: This no-change field is set to "Y" by ODA to allow a 7- to 10-digit intraoffice number that is not screened by DNSA to be stored in the Speed Call list.
Valid Entries: Y, N
Default Value: Y

2.9 DNSC

Description: This no-change field is set to "Y" by ODA to allow an IntraLATA interoffice number to be stored in the SC list.
Valid Entries: Y, N
Default Value: Y

2.10 DNSD

Description: This no-change field is set to "Y" by ODA to allow an InterLATA number (not including international numbers) to be stored in the SC list.
Valid Entries: Y, N
Default Value: Y

2.11 DNSE

Description: To allow an international number to be stored in the SC list, this no-change field is set to "Y" by ODA.
Valid Entries: Y, N
Default Value: Y

2.12 DNSF

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Description: To allow an X-1-1 number (411, 911, etc.) where N is any digit in the range 0-9, this no-change field is set to "Y" by ODA.
Valid Entries: Y, N
Default Value: Y

2.13 DNSG

Description: This no-change field is set to "Y" by ODA to allow a POTS operator number (0, 0 + 7/10 digits or 10XXX + 0 + 7/10 digits) to be stored in the SC list.
Valid Entries: Y, N
Default Value: Y

2.14 DNSH

Description: A POTS feature code with or without subsequent parameters is allowed in the SC list since this field is set to "Y" by ODA.
Valid Entries: Y, N
Default Value: Y

2.15 DNSI

Description: An IDP intercom number is allowed to be stored in the SC list since this field is set to "Y" by ODA. The number remaining after the deleting and prefixing done on the IDPICM form (5601-5 Record) will be subsequently screened by other DN options.
Valid Entries: Y, N
Default Value: Y

2.16 DNSJ

Description: When call processing recognizes an SC code as the dialed number, the stored number referenced by the code is retrieved and screened for other DN options. This retrieved number cannot be another SC code, therefore, this no-change field is set to "N" by ODA.
Valid Entries: Y, N
Default Value: N

2.17 DNSK

Description: Since a PFA (Private Facility Access) code that accesses a non-senderized facility is allowed to be stored in the SC list, this no-change field is set to "Y" by ODA. However, any subsequent digits received after the code has been received may not be stored in the list.
Valid Entries: Y, N
Default Value: Y

2.18 DNSL

Description: Since a PFA (Private Facility Access) code that accesses a senderized facility is allowed to be stored in the SC list, as well as the subsequent digits received after the code is received, this no-change field is set to "Y" by ODA. However, the number of subsequent digits to store is determined on the PFAGPA form (5609-5 Record).
Valid Entries: Y, N
Default Value: Y

2.19 DNSM

Description: An IDP escape to ODP access code is allowed to be stored in the SC list, therefore, this no-change field is set to "Y" by ODA. Subsequent digits received after the code are screened using other

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DN options.
Valid Entries: Y, N
Default Value: Y

2.20 DNSN

Description: Since an IDP carrier specific code followed by an SC code is allowed to be stored in the SC list, this no-change field is set to "Y". Since the SC code is included, the DNSJ option must be used (no-change DNSJ = "Y") in conjunction with this option.
Valid Entries: Y, N
Default Value: Y

2.21 DNSO

Description: ARS (Automatic Route Selection) codes are allowed to be stored in the SC list, therefore, this no-change field is set to "Y". Digits received after the ARS code are screened with other DN options.
Valid Entries: Y, N
Default Value: Y

2.22 DNSP

Description: Is a PP (Precedence and Preemption) code allowed to be stored in the SC list?

Required Field.
Valid Entries: Y, N
Default Value: Y

2.23 DNSQ

Description: Must the number being forwarded to be connected to a terminal that can receive DSN (Defense Switched Network) calls?

Required Field.
Valid Entries: Y, N
Default Value: Y

DEFAULT PARAMETERS

The following fields (Section 2.24 - Section 2.25) define default parameters that are assigned to a terminal (line or trunk) along with the SC feature. However, if SCLPA, SCMPA and/or SCTPA forms are entered for a particular terminal, the entries made on those forms are used instead of the default parameters entered on this SCFD form.

2.24 SC LIST

Description: Optionally enter a default SC list. Do not enter a value in this field if SCC is "N" (unshared list). When the list is unshared, the SC LIST value is entered by ODA instead of the operating company and will be entered in the following format: the letter "A" followed by a seven-digit TN if the SC list is used by subscriber lines or the letter "A" and a four-digit TGN (for 5E10 and earlier, 0001 to 2000 or for 5E11 and later, 0001 to 4000) followed by a four-digit MEMB (0000 to 1951) if the list is used by trunks.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: up to 11 characters

Data Rules:

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For 5E12 and later, when SC SHARED is "Y", SC LIST may not be either "A" followed by a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

If the SC list is a shared list (SCC = "Y") the SC LIST field must be entered.

2.25 SC SHARED

Description: Is the SC list shared among two or more subscribers?
Valid Entries: Y, N

Data Rules:

An SC LIST name must be entered for shared lists (SC SHARED = "Y").

Feature Type	5E5 Features (before retrofit)	5E6 Features (after retrofit)
Preconstructed CENTREX (Business)	/IDCTX1	/IDP1, /SC1C, /SC2C
	/IDCTX2	/IDP, /SC1C, /SC2
	/IDCTX3	/IDP
	/IDCTX4	/IDP, /SC1C, /SC2C
	/IDCTX5	/IDP, /SC1
	/IDCTX6	/IDP, /SC1, /SC2
	/IDCTX7	/IDP, /SC1, /SC2C
	/IDCTX8	/IDP, /SC1C
	/IDCTX9	/IDP, /SC2C
	/IDCTX10	/IDP, /SC2
Preconstructed POTS (Residential)	/IDMVP1	/IDP, /SC1
	/IDMVP2	/IDP, /SC1, /SC2
	/IDMVP3	/IDP, /SC1, /SC2C
	/IDSC1D	/SC1
	/IDSC2D	/SC2
	/IDSCBD	/SC1, /SC2
	/IDSC1C	/SC1C
	/IDSC2C	/SC2C
	/IDSCB1C	/SC1C, /SC2
	/IDSCB2C	/SC1, /SC2C
	/IDSCBBC	/SC1C, /SC2C
Constructured Features	ATTIDP	ATTIDP, /SC1(C) and/or /SC2(C)

Figure 1 PRECONSTRUCTED AND CONSTRUCTED FEATURE ASSIGNMENT CONVERSION TABLE

ESS 5627-1(01)TG-5 SPEED CALLING DATE _____

FEATURE DEFINITION RECORD
5ESS SWITCH

scfd
12.51
BASE_____CONT CR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS		DN SCREENING OPTIONS																DEFAULT PARAMETERS	
		SC	SCC	DNSCRE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	SCLIST	SCSHARED

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				EN																		
/SC*	WILD CARD FEATURE	SCW	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y		
/SC1	1-DIGIT SC. NOT CHANGEABLE	SC1	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y		
/SC1C	1-DIGIT SC. DNSP = Y DNSQ = Y	SC1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y		
/SC1CP	1-DIGIT SC. DNSP = N DNSQ = Y	SC1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y		
/SC1CPQ	1-DIGIT SC. DNSP = N DNSQ = N	SC1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N		
/SC1CQ	1-DIGIT SC. DNSP = Y DNSQ = N	SC1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N		
/SC2	2-DIGIT SC. NOT CHANGEABLE	SC2	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y		
/SC2C	2-DIGIT SC. DNSP = Y DNSQ = Y	SC2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y		
/SC2CP	2-DIGIT SC. DNSP = N DNSQ = Y	SC2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y		
/SC2CPQ	2-DIGIT SC. DNSP = N DNSQ = N	SC2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N		
/SC2CQ	2-DIGIT SC. DNSP = Y DNSQ = N	SC2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N		

Figure 2 PRECONSTRUCTED SPEED CALLING FEATURES 5E6 AND LATER SOFTWARE RELEASES

SCREEN 1 OF 2 5ESS Switch
scfd OFFICE DATA ADMINISTRATION
(5627-1) SPEED CALLING FEATURE DEFINITION

*2. FEATURE _____ 3. REMARKS _____

========== FEATURE OPTIONS ==========

#4. SC ___
#5. SCC _

SCREEN 2 OF 2 5ESS Switch
scfd OFFICE DATA ADMINISTRATION
(5627-1) SPEED CALLING FEATURE DEFINITION

========== DN SCREENING OPTIONS ==========

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```
 6. DN SCREEN _
 7. DNSA Y     11. DNSE Y     15. DNSI Y     19. DNSM Y     23. DNSQ Y
 8. DNSB Y     12. DNSF Y     16. DNSJ N     20. DNSN Y
 9. DNSC Y     13. DNSG Y     17. DNSK Y     21. DNSO Y
10. DNSD Y     14. DNSH Y     18. DNSL Y     22. DNSP Y

============================== DEFAULT PARAMETERS ==============================

24. SC LIST  ________
25. SC SHARED _
```

Figure 3 SAMPLE SCFD FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
SCREEN 1 OF 2              5ESS Switch
scfd                OFFICE DATA ADMINISTRATION
(5627-1)            SPEED CALLING FEATURE DEFINITION

*2. FEATURE   ________          3. REMARKS ____________________________________

================================ FEATURE OPTIONS ================================

#4. SC       ___
#5. SCC       _
```

```
SCREEN 2 OF 2              5ESS Switch          _
scfd                OFFICE DATA ADMINISTRATION
(5627-1)            SPEED CALLING FEATURE DEFINITION

============================ DN SCREENING OPTIONS ============================

 6. DN SCREEN _
 7. DNSA Y     11. DNSE Y     15. DNSI Y     19. DNSM Y     23. DNSQ Y
 8. DNSB Y     12. DNSF Y     16. DNSJ N     20. DNSN Y
 9. DNSC Y     13. DNSG Y     17. DNSK Y     21. DNSO Y
10. DNSD Y     14. DNSH Y     18. DNSL Y     22. DNSP Y

============================== DEFAULT PARAMETERS ==============================

24. SC LIST  ___________
25. SC SHARED _
```

Figure 4 SAMPLE SCFD FORM 5E12 AND LATER SOFTWARE RELEASES

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Figure 5 SPEED CALLING FORM FLOW DIAGRAM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 27B: 5627-2 RECORD
SPEED CALLING LINE PARAMETER FORM - SCLPA

1. GENERAL

The 5627-2 Record, which is available with 5E6 and later Software Releases, is used to assign Speed Call parameters to non-Multi-Line Hunt lines when the default parameters on the corresponding SCFD form (5627-1 Record) are inappropriate or unspecified. When this record is entered, the line uses the SC (Speed Call) parameters entered on this form instead of the default parameters defined on the SCFD form, however, the line still uses the DN Screening options defined on the SCFD form.

For switch offices undergoing a retrofit from the 5E5 Software Release to the 5E6 Software Release, ODA will change existing constructed and preconstructed features to one of the eleven preconstructed features depending upon the DN screening options and whether or not the SC lists are changeable lists. For 5E6 and later, a line can be assigned up to two SC features (one 1-digit SC feature and/or one 2-digit SC feature). However, assigning two of the same features to one line is not allowed.

1.1 Recent Change View

The corresponding Recent Change view for this form is 1.51.

2. BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.1 * TN

Description: Enter the Telephone Number of the line.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The associated service class defined on the LCC form (5306 Record) must one of the following.

Class of Service	
ATND	50B nondata link console line or attendant line
HOTMOTL	Line termination at motel office equipment
INDIV	Individual line
ISDN	ISDN (Integrated Services Digital Network) digital subscriber lines
ISATND	ISDN Attendant Terminal
PBX	Line termination to a Private Branch Exchange
TWOPTY	Two-party line
MODEM	MODEM pool origination for analog line
4WINDIV	Four-wire individual line or four-wire manual PBX

For 5E12 and later, TN/FEATURE combinations on different SCLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the SCLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.2 * FEATURE

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Description: Enter the SC (Speed Call) feature for which the SC parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This SC feature must be defined on an SCFD form (5627-1 Record).

2.3 SC LIST

Description: If the line subscribes to a shared list, enter an SC LIST name.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: up to 11 characters

Data Rules:

For 5E11 and earlier, the letter "A" cannot be the first character preceding the seven-digit TN or an eight-digit TN where the first four digits are in the range (for 5E10 and earlier, 0001 to 2000 or for 5E11 and later, 0001 to 4000) while the last four digits are in the range 0001-1951.

For 5E11 and earlier, if the line subscribes to an unshared list, leave this field blank and enter "N" in the SC SHARED field. If the list is unshared, ODA will automatically assign a list name in the following format: the letter "A" followed by the seven-digit TN.

For 5E12 and later:

- When SC LIST is specified, SC SHARED must be entered.
- When SC SHARED is "N" and SC LIST is not entered, SC LIST must be the letter "A" followed by the NPA plus TN.
- When SC SHARED is "N", SC LIST must be the letter "A" followed by the TN.
- When SC SHARED is "N", SC LIST must be the letter "A" followed by NPA plus TN.
- When SC SHARED is "Y" then SC LIST must be entered.
- When SC SHARED is "Y", SC LIST may not be either "A" plus by a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

For 5E12 and later, when the SCLPA forms have a 7-digit TN and SC SHARED is "N", the SC LIST TN must be "A" followed by the value of the 7-digit TN prefixed with the NPA from the corresponding NOC form.

2.4 SC SHARED

Description: Can the SC list be shared among two or more users?
Valid Entries: Y, N

Data Rules:

If the list is shared, then SC LIST must be entered.

2.5 NUMBER OF SC CODES

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Description: This field is used only by Recent Change.

```
                        5ESS Switch
sclpa                 OFFICE DATA ADMINISTRATION
(5627-2)           SPEED CALLING (TN) LINE PARAMETERS

*1. TN              9791091
*2. FEATURE           SC1

 3. SC LIST           SCLIST1
 4. SC SHARED         Y
   NUMBER OF SC CODES
```

Figure 1 SAMPLE SCLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
sclpa                      5ESS Switch
                     OFFICE DATA ADMINISTRATION
(5627-2)           SPEED CALLING (TN) LINE PARAMETERS

*1. TN     __________
*2. FEATURE _________

 3. SC LIST          ___________
 4. SC SHARED        _
   NUMBER OF SC CODES ____
```

Figure 2 SAMPLE SCLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 27C: 5627-3 RECORD
SPEED CALLING
MLHG/TERM LINE PARAMETER FORM - SCMPA

1. GENERAL

The 5627-3 Record, which is available with 5E6 and later Software Releases, is used to assign Speed Call features to Multi-Line Hunt lines when the default parameters defined on the corresponding SCFD form (5627-1 Record) are inappropriate or unspecified. When this record is entered, the line uses the SC (Speed Call) parameters entered on this form instead of the default parameters defined on the SCFD form.

For switch offices undergoing a retrofit from the 5E5 Software Release to the 5E6 Software Release, ODA will change existing constructed or preconstructed features to one of the eleven preconstructed features depending upon DN screening options and whether or not the SC lists are changeable lists. For 5E6 and later, a line can be assigned up to two SC features (one 1-digit SC feature and/or one 2-digit SC feature). However, assigning two of the same features to one line is not allowed.

1.1 Recent Change View

The corresponding Recent Change view for this form is 3.51.

2. BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.1 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.2 * TERM

Description: Enter the MLHG member number of the line.

Required Field.
Valid Entries: 1 - 2015 and 3001-3999

Data Rules:

The associated class of service defined on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B non-data link console line or attendant line
HOTMOTL	Line termination at motel office equipment
INDIV	Individual line
ISDN	Integrated Services Digital Network digital subscriber lines
ISATND	ISDN Attendant Terminal
PBX	Line termination to a Private Branch Exchange
TWOPTY	Two-party line
MODEM	MODEM pool origination for analog line
4WINDIV	Four-wire individual line or four-wire manual PBX

2.3 * FEATURE

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Description: Enter the SC (Speed Call) feature for which the SC parameters are to be assigned.
Valid Entries: 1 - 8 characters

Data Rules:

This SC feature must be defined on an SCFD form (5627-1 Record).

2.4 SC LIST

Description: If the line subscribes to a shared list, enter an SC LIST name. The name is subject to the following restriction: the letter "A" cannot be the first character preceding the seven-digit TN or an eight-digit TN where the first four digits are in the range (for 5E10 and earlier, 0001 to 2000 or for 5E11 and later, 0001 to 4000) while the last four digits are in the range 0001-1951.

If the line subscribes to an unshared list, enter an SC LIST name with the letter "A" as the first digit followed by the seven-digit TN assigned to the Multi-Line Hunt line. Unshared lists may not be assigned to Multi-Line Hunt lines unless the lines have defined Member TNs.
Valid Entries:

- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: up to 11 characters

Data Rules:

When SC LIST is specified, SC SHARED must be entered.

When SC SHARED is "N", SC LIST must be the letter "A" followed by the user's 10-digit TN.

When SC SHARED is "Y", SC LIST may not be "A" followed by a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

2.5 SC SHARED

Description: Can the SC list be shared among two or more users?
Valid Entries: Y, N

Data Rules:

If the list is shared, then SC LIST must be entered.

2.6 NUMBER OF SC CODES

Description: This field is used by only RC/V (Recent Change/Verify).

```
                        5ESS Switch
scmpa                OFFICE DATA ADMINISTRATION
(5627-3)        SPEED CALLING (MLHG/TERM) LINE PARAMETERS

*1. MLHG             0021
*2. TERM             0001
*3. FEATURE           SC2

 4. SC LIST          A9791090
 5. SC SHARED           N
   NUMBER OF SC CODES
```

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Figure 1 SAMPLE SCMPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
scmpa                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5627-3)        SPEED CALLING (MLHG/MEMB) LINE PARAMETERS

*1. MLHG   ____
*2. TERM   ____
*3. FEATURE ________

 4. SC LIST          ___________
 5. SC SHARED        _
    NUMBER OF SC CODES ____
```

Figure 2 SAMPLE SCMPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 27D: 5627-4 RECORD
SPEED CALLING TRUNK PARAMETER FORM - SCTPA

1. GENERAL

The 5627-4 Record, which is available with 5E6 and later Software Releases, is used to assign Speed Call features to trunks when the default parameters on the SCFD form (5627-1 Record) are inappropriate or unspecified. When this record is entered, the trunk uses the SC (Speed Call) parameters entered on this form instead of the default parameters defined on the SCFD form.

For switch offices undergoing a retrofit from the 5E5 Software Release to the 5E6 Software Release, ODA will change existing features to one of the eleven preconstructed features depending upon DN screening options and whether or not the SC lists are changeable lists. For 5E6 and later Software Releases, a trunk can be assigned up to two SC features (one 1-digit SC feature and/or one 2-digit SC feature). However, assigning two of the same features to one trunk is not allowed.

1.1 Recent Change View

The corresponding Recent Change view for this form is 5.51.

2. BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.1 * TGN

Description: Enter the Trunk Group number of the trunk.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The associated trunk class defined on the TKGRP form (5202 Record) must be one of the following.

TRKCLS	
Entry	**Definition**
LTOLLCON	Toll connecting
PDID	PBX direct inward dialing, 1-way outgoing
PF	Private Facility
PFITT	Private Facility Intertandem Trunk
PFLASH	Private Facility Feature Flash
PRINTOLL	Primary Intertoll
TTOLLCON	Toll completing
EDSL	Software Release: 5E8 and later. Extended Digital Subscriber Line trunk.
EDSLHM	Software Release: 5E8 and later. EDSL for Hotel/Motel TSPS service.

2.2 * MEMB

Description: Enter the Trunk Group Member number of the trunk.

Required Field.
Valid Entries: 0 - 1951

2.3 * FEATURE

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Description: Enter the SC (Speed Call) feature for which the SC parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This SC feature must be defined on an SCFD form (5627-1 Record).

2.4 SC LIST

Description: If the trunk subscribes to a shared list, enter an SC LIST name.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: up to 11 characters

Data Rules:

For 5E11 and earlier, the letter "A" cannot be the first character preceding the seven-digit TN or an eight-digit TN where the first four digits are in the range (for 5E10 and earlier, 0001 to 2000 or for 5E11 and later, 0001 to 4000) while the last four digits are in the range 0001-1951.

For 5E11 and earlier, if the line subscribes to an unshared list, leave this field blank and enter "N" in the SC SHARED field. If the list is unshared, ODA will automatically assign a list name in the following format: the letter "A" followed by the seven-digit TN.

For 5E12 and later:

- When SC LIST is specified, SC SHARED must be entered.
- When SC SHARED is "Y", SC LIST must be entered.
- Unshared SC LIST must be the trunk's TGN followed by its MEMB.
- When SC SHARED is "Y", SC LIST may not be "A" plus a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

2.5 SC SHARED

Description: Can the SC list be shared among two or more users?
Valid Entries: Y, N

Data Rules:

If the list is shared, then SC LIST must be entered.

2.6 NUMBER OF SC CODES

Description: This field is used only by Recent Change.

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```
*1. TGN              0031
*2. MEMB             1940
*3. FEATURE          SC1

 4. SC LIST          SCLIST2
 5. SC SHARED        Y
   NUMBER OF SC CODES
```

Figure 1 SAMPLE SCTPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
sctpa                      5ESS Switch
                    OFFICE DATA ADMINISTRATION
(5627-4)              SPEED CALLING TRUNK PARAMETERS

*1. TGN    ____
*2. MEMB   ____
*3. FEATURE ________

 4. SC LIST          ___________
 5. SC SHARED        _
   NUMBER OF SC CODES ____
```

Figure 2 SAMPLE SCTPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 27E: 5627-5 RECORD
SPEED CALLING LIST FORM - SCLIST

1. GENERAL

The SCLIST form (5627-5 Record), which is available in 5E6 and later Software Releases, is used for assigning telephone numbers to Speed Calling codes and replaces the ADLIST form (5601-9 Record). The ADLIST form is still used for assigning TNs to Speed Calling codes in 5E5 and earlier Software Releases.

When the STORED SEQUENCE numbers (TNs) are not known at ODA time, and an IDP feature is also asigned to the line or trunk, and this form was *not* entered for any given SC List, memory will be reserved for the list entries for codes 2 through 7 (1-digit lists) or codes 20 through 49 (2-digit lists).

If an IDP feature is not assigned, and this form was *not* entered for any given SC List, then memory will be reserved for the list entries for codes 2 through 9 (1-digit lists) or codes 20 through 49 (2-digit lists).

When any forms are submitted for any given SC List, memory will only be reserved for the codes (1-digit) or ten-code blocks (2-digit) which are entered on the forms. Therefore, when any data is submitted for a 1-digit list, for example, extreme care must be taken to enter all eight codes (or more, if desired) even though the STORED SEQUENECE DNs may not be known for all of the codes. Customer originated changes to the SC Lists will be allowed only for those codes (or ten-code blocks) for which memory has been reserved.

1.1 Shared SC Lists

This form may be submitted for shared SC Lists which are unassigned. However, it may not be submitted for unshared SC Lists which are unassigned. That is, if the SC SHARED field is "N", one LINEFA or MLHLNFA form must also be submitted for a line with the Telephone Number indicated after the "A" in SC LIST. For trunks, either a TRUNKFA form must be submitted for the indicated Trunk Group and Member Number or a TKGRPFA form must be submitted for the indicated Trunk Group and the indicated Member Number defined on a TRUNK form.

1.2 Codes for Office Dialing Plan

The codes 2 through 9 and 20 through 49 are also provided in PDIT-1 defined on the PDIT form (5300-2 Record). If other codes are to be used by subscribers in the ODP (Office Dialing Plan), those codes must be added.

If any member of an IDP Group has Speed Calling options, all Speed Calling codes must be defined on the IDPDCA form (5601 Record) for that IDP Group.

1.3 Recent Change View

The corresponding Recent Change View for this form is 4.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SC LIST

Description: Enter the Speed Call List name.

SC LIST entries for 1-digit and 2-digit lists must be unique. However, the same name may be used for a

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1-digit list as for a 2-digit list.

Required Field.
Valid Entries:
- For 5E11 and earlier: 1 - 8 characters
- For 5E12 and later: up to 11 characters

Data Rules:

For unshared lists assigned to lines, the SC LIST must be the letter "A" followed by the Telephone Number of the line. For this reason, unshared lists may not be assigned to Multi-Line Hunt lines unless the members have Telephone Numbers.

For unshared lists assigned to a trunk, the SC LIST must be the four-digit Trunk Group Number (for 5E10 and earlier, 0001 to 2000 or for 5E11 and later, 0001 to 4000) followed by the four-digit Member Number (0000 to 2015).

For 5E12 and later, when SC SHARED is "Y", SC LIST may not be either "A" followed by a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit member (0000-1951).

For 5E12 and later, when SC SHARED is "N", SC LIST must be "A" plus a 10-digit telephone number or a 4-digit TGN (0001-4000) followed by a 4-digit MEMB (0000-1951).

2.3 *SC CODE BLOCK

Description: Enter 1 or 2 digit SC CODE.

For 1-digit Speed Call lists, enter a "0".

For 2-digit lists, enter the tens digit of the codes which are entered in the SC CODE BLOCK fields, followed by a "0". For example, for the ten SC List codes 20 through 29, enter 20 in SC CODE BLOCK. For 2-digits lists, the valid values of the first digit are *, # and 0 to 9.
Valid Entries: 0 - 9, *, or #

2.4 SC SHARED

Description: Is the list shared? Enter "N" if the list is not shared.
Valid Entries: Y, N

2.5 NUMBER OF SC CODES

Description: This field is for Recent Change/Verify (RC/V) use only.

2.6 TGSR OV

Description: Should the Terminal Group Station Restrictions be overridden when a call is originated using this Speed Calling block? If ORIGINATING RESTRICTION is "FULL" or "SEMI" on the TGSRFD form (5607-1/2 Record), and a call is originated using this Speed Call block, the call is processed as if ORIGINATING RESTRICTION was set to "NONE". Calls originating outside of this SC block are still subject to the specified ORIGINATING RESTRICTION.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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This field may be set to "Y" only when SC SHARED is "Y".

SC LIST

The following fields (Section 2.7 - Section 2.8) define SC LIST entries.

2.7 SC CODE

Description: Enter the Speed Call code to be dialed. This code must be defined on an IDPDCA form (5601 Record). For 1-digit lists, up to twelve codes may be specified (*, # and 0 to 9). Since the characters # and * are cursor control codes for the ODA system, it is necessary to follow each of these characters by a blank (space bar) when entering it into the ODA system. For 2-digit lists, the first digit must be the same as the first digit of the SC CODE BLOCK and only ten codes may be specified with each code's last digit in the range 0 to 9. For 2-digit lists where the SC CODE BLOCK starts with a # or *, do not enter the blank, SC CODEs may not be duplicated in the list.

Caution should be used when defining the SC CODEs. If a line uses the ODP (Office Dialing Plan) and "0" is used as an SC CODE, then this subscriber will not be able to reach the operator on a zero minus call. If a terminal (line or trunk) uses an IDP (Individualized Dialing Plan), use discretion when defining codes in the IDPDCA. For instance, if "0" is used for attendant access, or "9" is used for escape to POTS, then those codes can not also be used for SC CODEs.
Valid Entries: 0 - 9, *, or #

Data Rules:

At least one SC CODE must be assigned in the SPEED CALL LIST. For 5E8 only, a minimum of six SC CODEs must be assigned.

For 5E9(1) and later, the entire block of SC CODEs (n0 - n9, where n is the first digit of the SC CODE BLOCK) must be entered for a 2-digit speed call list.

2.8 STORED SEQUENCE

Description: Leave this field blank if the STORED SEQUENCE (Directory Number) is unknown. If the DN is known, enter a string of up to 32 digits which the SC CODE is to access. 0, F, I and P which are applicable to terminals are assigned a Precedence and Preemption feature. See the PPFD form (5618-1 Record).
Valid Entries: 0 - 9, *, #, O, F, I, P

---

sclist 5ESS Switch
(5627-5) OFFICE DATA ADMINISTRATION
SPEED CALL LIST

*1. SC LIST SCLIST1 6. SC LIST:
*2. SC CODE BLOCK 10 ROW SC CODE STORED SEQUENCE (SEQ)
3. SC SHARED Y 1 10 9791090
NUMBER OF SC CODES 2 11 12004441212
5. TGSR OV N 3 __ _____
4 __ _____
5 __ _____
6 __ _____
7 __ _____
8 __ _____
9 __ _____
10 __ _____

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```
11   __  _____________________________________
12   __  _____________________________________
```

Figure 1 SAMPLE SCLIST FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
sclist                  5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5627-5)                SPEED CALL LIST

*1. SC LIST        ____________          6. SC LIST:
*2. SC CODE BLOCK    __          ROW SC CODE STORED SEQUENCE (SEQ)
 3. SC SHARED        _       1  __  _____________________________
   NUMBER OF SC CODES ____      2  __  _____________________________
 5. TGSR OV         N         3  __  _____________________________
                              4  __  _____________________________
                              5  __  _____________________________
                              6  __  _____________________________
                              7  __  _____________________________
                              8  __  _____________________________
                              9  __  _____________________________
                             10  __  _____________________________
                             11  __  _____________________________
                             12  __  _____________________________
```

Figure 2 SAMPLE SCLIST FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 28: HOME INTERCOM FORMS

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SEC. 28A: 5628 RECORD
HOME INTERCOM FEATURE DEFINITION FORM - HIFD

1. GENERAL

HI/SVP (Home Intercom/Single Line Variety Package) is available with 5E6 and later Software Releases. The feature consists of two options: the Home Intercom Basic feature and the Single Line Variety Package.

The Home Intercom Basic feature allows users to establish a talking path between two or more extensions on a single-party analog line. To create a Home Intercom Basic call, the end-user goes off-hook, receives dial tone, dials their own telephone number and hangs up after receiving busy-tone. After the phone is put on-hook, the switch applies distinctive ringing pattern B (the default pattern) to all extensions on that line. When one or more extensions go off-hook, the ringing stops on all extensions and a voice path is established between all extensions that go off-hook. The voice path remains established until all extensions go on-hook or until the MAX TALK TIME value, defined on the OFCOPT form (5509 Record), is exceeded.

The Single Line Variety Package includes the following enhancements.

- Intercom Code Dialing: allows users to create a Home Intercom call via dial code rather than dialing their own phone number. This enhancement provides the default ringing pattern.
- Selective Intercom Dialing: allows subscribers to create a Home Intecom call by dialing an access code which will provide one of four distinctive ringing patterns.
- Selective Call Transfer: allows subscribers to transfer an outside call to another extension on the same line by flashing to place an outside call on hold, invoking one of the four ringing patterns via dial code and hanging up.
- Dialable Hold: allows subscribers to flash to place an outside call on hold, dial the Dialable Hold dial code, go on-hook and resume the call from any extension.

The Home Intercom feature may be assigned only to analog lines. On the associated LINE form (5109 Record) SHARED and MFRI must be "N", while SERHLN and ASSOC must be blank.

A CLASS OF SERVICE of "INDIV" and a TERMINATING TREATMENT of "AGING" or "INDIV" must be assigned on the associated LCC form (5306 Record).

The feature must be assigned to the line via the LINEFA form (5112 Record), CLUSTR form (5600 Record), or the BFG form (5625 Record). The AC field on the associated LINEFA or CLUSTR form must be set to "N".

The associated lines must not be assigned a Precedence and Preemption feature.

For more information on Home Intercom feature assignment, refer to Division 2, Section 1AT.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.53.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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2.2 * FEATURE

Description: Enter the Home Intercom/Single Line Variety feature name. Feature names have no restrictions except feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

2.4 ICM CODE DIAL

Description: Is ICD (Intercom Code Dialing) allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.5 SEL ICM DIAL

Description: Is SID (Selective Intercom Dialing) allowed?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, ICM CODE DIAL must be "Y".

2.6 SEL CALL TRANS

Description: Is SCT (Selective Call Transfer) allowed?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, SEL ICM DIAL must be "Y" to allow dial code activation of the ringing patterns.

2.7 PRIV CONF

Description: Is private conference allowed during SCT (Selective Call Transfer)? Private conference allows subscribers on the same line to talk before reconnecting the outside call. If "N" is entered, the subscriber will be automatically connected to the held call without using any dial codes.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If "Y" is entered, SEL CALL TRANS must be "Y" to allow dial code activation of the ringing patterns.

2.8 DIAL HOLD

Description: Is DH (Dialable Hold) allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.9 CF ENABLE

Description: Can Home Intercom be activated when call forward variable is active on the line? If "Y" is entered and call forward variable is active, any attempt by the subscriber to dial his/her TN, the call will be forwarded. If "N" is entered, the call will not be forwarded.

Required Field.
Default: N
Valid Entries: Y, N

2.10 MDNL RING

Description: This field determines the ringing pattern that will be used during Home Intercom for lines that have multiple TNs with distinctive ringing (defined on the MTNDR form, 5550 Record).

If "Y" is entered, the master telephone number will receive the Home Intercom default ringing pattern and the dependent TNs will receive the patterns assigned on the MTNDR form.

If "N" is entered, the master telephone number will receive the default Multi-Distinctive Ringing pattern and the dependent TNs will receive the patterns assigned on the MTNDR form.

Required Field.
Default: N
Valid Entries: Y, N

PRECONSTRUCTED HOME INTERCOM FEATURE DEFINITION

FEATURE	REMARKS	FEATURE OPTIONS						
		ICM CODE DIAL	SEL ICM DIAL	SEL CALL TRAN	PRIV CONF	DIAL HOLD	CF ENABLE	MDNL RING
	HOME INTERCOM WILD CARD	Y	Y	Y	Y	Y	Y	Y
/HIBAS1A	HOME INTERCOM BASIC 1A	N	N	N	N	N	Y	Y
/HIBASIC	HOME INTERCOM BASIC	N		N	N	N	N	N
/HISVP	HI SINGLE LINE VARIETY	Y	Y	Y	Y	Y	N	N
/HISVP1A	HI SINGLE LINE VARIETY 1A	Y	Y	Y	Y	Y	Y	Y

Figure 1 PRECONSTRUCTED HOME INTERCOM FEATURES 5E6 AND LATER SOFTWARE RELEASES

---

hifd 5ESS Switch
(5628) OFFICE DATA ADMINISTRATION
HOME INTERCOM FEATURE DEFINITION

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*2. FEATURE /HISVP1A 3. REMARKS HI SINGLE LINE VARIETY 1A

============================== FEATURE OPTIONS ================================

4. ICM CODE DIAL Y
5. SEL ICM DIAL Y
6. SEL CALL TRANS Y
7. PRIV CONF N
8. DIAL HOLD Y
9. CF ENABLE Y
10. MDNL RING Y

Figure 2 SAMPLE HIFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 29: BULK CALLING LINE IDENTIFICATION FORMS

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SEC. 29A: 5629-1 RECORD
BULK CALLING LINE IDENTIFICATION FEATURE DEFINITION FORM - BCLIDFD

1. GENERAL

The 5629-1 Record is available with 5E8 and later Software Releases, and defines various combinations of options available with the BCLID (Bulk Calling Line Identification) feature.

BCLID is a LASS (Local Area Signaling Service) feature providing call-related information on incoming calls for BRCS/Centrex, Multi-Line Hunt Group, and PBX customers. BCLID provides data only for calls from outside BRCS/Centrex Groups, MLHGs, or PBXs. PBX customers must either have DID (Direct Inward Dialing) capability or be part of an MLHG. This information includes the calling and called party directory number, the time the call was received, the calling line's multi-status indicator (indicating whether the true calling party DN is identified), and the called line's busy/idle status.

For interoffice calls, BCLID requires use of CCS (Common Channel Signaling) so that calling party information can be provided by the originating switch.

See Division 2, Section 1Y for more information on BCLID.

Each feature is given a feature name used to assign the constructed (defined) feature to lines. Certain BCLID features are pre-defined and automatically provided in the ODA database for initial offices, retrofit, or Large Terminal Growth. These are called preconstructed features. Preconstructed feature names all start with a slash (/); therefore, the slash may not be used as the first character of any feature other than preconstructed features. The preconstructed BCLID features are shown in Figure 1.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.62.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the BCLID feature name. Constructed feature names have no restrictions on characters, except the slash (/) cannot be the first character. Feature names starting with a slash are reserved for preconstructed features. All BRCS feature names must be unique.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

Only one feature name is allowed to be assigned for a given LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), or associated CLUSTR form (5600 Record).

All BCLID feature names assigned to a BFG must be defined on a BCLIDFD form or be entered in the FEATURE field on an associated CLUSTR form.

All BCLID feature names defined on a BCLIDFD form:

- must not be defined as CLUSTER NAME on a CLUSTR form;

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- may not be assigned to trunks via the CLUSTR, TKGRPFA (5206 Record) , or TRUNKFA forms (5205 Record).

Any BCLID feature assigned on a CLUSTR form must be defined on a BCLIDFD form.

Any BCLID feature assigned on a LINEFA or MLHLNFA form must be defined on a BCLIDFD form or as CLUSTER NAME on a CLUSTR form.

If a BCLID feature is assigned on a LINEFA, MLHLNFA, BFG, or associated CLUSTR form with:

- a TN on a LINE form (5109 Record),
- CKT TN on a DSLUSR form (5908 Record),
- MLHG on an MLHLN form (5111 Record), or
- CKT MLHG on a DSLUSR form,

then the LCC or RAX on the LINE, MLHLN, or DSLUSR form must correspond to one of the following as CLASS OF SERVICE on the LCC form (5306 Record): "4WINDIV",

- "ATND",
- "CALLBK" for 5E6 through 5E8 or
- "LTPCLBCK" for 5E9(1) and later,
- "CHGCALL",
- "HOTMOTL",
- "HOTPBX",
- "INDIV",
- "ISATND",
- "ISDN",
- "PBX", and
- "SATSTLN".

For 5E8 only, if an MLHG member is assigned a Bulk Calling Line Identification feature on an MLHLNFA form, the MLHG TERM must be 0001. For 5E9(1) and later, a BCLID feature may be assigned to an MLHG TERM greater than 0001, but in such cases a TN must be entered on the associated MLHLN form, or a CKT MLHG TN must be entered on the associated DSLUSR form; the NONHUNT field on the associated form must be "Y".

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

Fields Section 2.4 -Section 2.6 refer to feature options for BCLID.

2.4 AMA REC

Description: Is the billing "usage-sensitive" and not flat rate? A "Y" means "usage-sensitive", an "N" flat rate.

Required Field.
Default: N
Valid Entries: Y, N

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2.5 INTER GRP ONLY

Description: Are BCLID messages sent to the CPE only for inter-terminal group calls? If INTER GRP ONLY is "Y", the BCLID messages are sent for calls originated outside of the terminal group, and no messages are generated for calls originated inside the terminal group of the BCLID termination. If "N", BCLID generates a message for every incoming call (from inside or outside the terminal group) to this terminal group.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If INTER GRP ONLY equals "Y",

- FEATURE on the BFG form associated with this feature must also have FEATURE NAME on the TGSRFD form (5607-1/2 Record) assigned ,
- TN on the LINEFA, BFG, or associated CLUSTR form associated with this feature must also have FEATURE NAME on the TGSRFD form assigned , and
- MLHG on the MLHLNFA, BFG, or associated CLUSTR form associated with this feature must also have FEATURE NAME on the TGSRFD form assigned.

2.6 INCL DATE

Description: Is the date to be included in the BCLID message?

Required Field.
Default: N
Valid Entries: Y, N

DEFAULT PARAMETERS

Field Section 2.7 refers to default parameters.

2.7 BCLID GRP

Description: Enter the name of the BCLID group.
Valid Entries: 1 - 8 characters

Data Rules:

BCLID GRP must match a BCLID GRP on the BCLIDGP form.

If a TN defined on a LINEFA form has a BCLID feature assigned to it on a LINEFA, BFG (5625 Record), or associated CLUSTR form (5600 Record), and there is no TN assigned on a BCLIDLPA form, then BCLID GRP on the BCLIDFD form must be entered.

If an MLHG/MEMB defined on an MLHLNFA form has a BCLID feature assigned to it on an MLHLNFA, BFG (5625 Record), or associated CLUSTR form (5600 Record), and there is no MLHG/MEMB assigned on a BCLIDMPA form, then BCLID GRP on the BCLIDFD form must be entered.

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BCLIDFD 5ESS SWITCH
12.62
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	AMA REC	INTER GRP ONL Y	INCL DAT E	BCLID GRP
/BC	FLAT RATE, NO DATE, NO IG	N	Y	N	
/BCDT	FLAT RATE, DATE, NO IG	N	Y	Y	
/BCDTIG	FLAT RATE, DATE, IG	N	N	Y	
/BCIG	FLAT RATE, NO DATE, IG	N	N	N	
/BCU	USAGE SENSITIVE, NO DATE, NO IG	Y	Y	N	
/BCUDT	USAGE SENSITIVE, DATE, NO IG	Y	Y	Y	
/BCUDTIG	USAGE SENSITIVE, DATE, IG	Y	N	Y	
/BCUIG	USAGE SENSITIVE, NO DATE, IG	Y	N	N	

Figure 1 PRECONSTRUCTED BCLID FEATURES - 5E8 AND LATER SOFTWARE RELEASES

ESS 5629-1(10/92)TG-5 BULK CALLING LINE IDENTIFICATION DATE _____
FEATURE DEFINITION RECORD
BCLIDFD 5ESS SWITCH
12.62
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	AMA REC	INTER GRP ONL Y	INCL DAT E	BCLID GRP
/BC	FLAT RATE, NO DATE, NO IG	N	Y	N	

Figure 2 SAMPLE 5629-1 RECORD

---

bclidfd 5ESS Switch
5629-1 OFFICE DATA ADMINISTRATION
BULK CALLING LINE IDENTIFICATION FEATURE DEFINITION

*2. FEATURE /BC 3. REMARKS FLAT RATE, NO DATE, NO IG

========== FEATURE OPTIONS ==========

4. AMA REC N
5. INTER GRP ONLY Y
6. INCL DATE N

========== DEFAULT PARAMETERS ==========

7. BCLID GRP _____

Figure 3 SAMPLE BCLIDFD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 29B: 5629-2 RECORD
BULK LINE CALLING IDENTIFICATION GROUP PARAMETERS FORM - BCLIDGP

1. GENERAL

The 5629-2 Record is available with 5E8 and later Software Releases, and defines the group information associated with the BCLID (Bulk Calling Line Identification) feature.

See Division 2, Section 1Y for more information on BCLID.

Each terminal (line or trunk) that will use the BCLID capability must be assigned a BCLID feature identification (defined on the BCLIDFD form (5629-1 Record)) on a LINEFA (5112 Record), MLHLNFA (5113 Record), TKGRP (5202 Record), BFG (5625 Record) or CLUSTR form (5600 Record). In addition, each terminal must be assigned to a BCLID group which may be defined as the default parameter on the BCLIDFD form or on an individual terminal basis with the BCLIDLPA (5629-3 Record) or BCLIDMPA (5629-4 Record) forms. The preconstructed BCLID feature provided does not specify the BCLID group. Therefore, if the preconstructed feature is used, individual parameter forms must be entered for each terminal.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.62.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * BCLID GRP

Description: Enter the name of BCLID Group.

Required Field.
Valid Entries: 1 - 8 characters

2.3 # BCID

Description: Enter a BCID (Business Customer Identification).

Required Field.
Valid Entries: 1 - 65535

2.4 # AP SITE ID

Description: Enter the AP (Application Processor) Identification number associated with this BCLID Group.

Required Field.
Valid Entries: 1 - 255

Data Rules:

An AP SITE ID assigned on this form must not equal AP SITE ID on a DSLAP form (5963 Record) having E911 SITE equal to "Y".

2.5 ALT AP SITE ID

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Description: Enter the alternate Application Processor Identification number associated with this BCLID Group. This ID specifies an alternate destination AP to send BCLID messages when the primary AP is unavailable to receive messages.
Valid Entries: 1 - 255

Data Rules:

ALT AP SITE ID cannot equal AP SITE ID.

An ALT AP SITE ID assigned on this form must not equal AP SITE ID on a DSLAP form having E911 SITE equal to "Y".

2.6 GRP ACTIVE

Description: Is BCLID GRP active?

If the group is active, all the incoming calls to all the terminals associated with this group are recorded normally by BCLID.

Required Field.
Default: Y
Valid Entries: Y, N

NPA - NXX GROWTH

2.7 BCLID TN 10

Description: This field indicates whether or not a 10 digit called party TN is to be sent over the AP link. Enter "Y" if a 10 digit called party TN is to be sent; otherwise, enter "N". This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: Y, N

ESS 5629-2(06/97)TG-5 BULK LINE CALLING LINE IDENTIFICATION DATE _____

GROUP PARAMETERS
5ESS SWITCH

BCLIDGP
4.62
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

BCLID GRP	BCID	AP SITE ID	ALT AP SITE ID	G R P I V E A C T	B C L I D T N 1 0
BCLID GRP	BCID	AP SITE ID	ALT AP SITE ID	G R P I V E A C T	B C L I D T N 1 0

Figure 1 SAMPLE 5629-2 RECORD

---

bclidgp 5ESS Switch
(5629-2) OFFICE DATA ADMINISTRATION

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BULK CALLING LINE IDENTIFICATION GROUP PARAMETERS

*1. BCLID GRP AT&T
#2. BCID 00001
#3. AP SITE ID 001
4. ALT AP SITE ID ___
5. GRP ACTIVE Y

Figure 2 SAMPLE BCLIDGP FORM 5E11 AND EARLIER SOFTWARE RELEASES

bclidgp 5ESS Switch
OFFICE DATA ADMINISTRATION
(5629-2) BULK CALLING LINE IDENTIFICATION GROUP PARAMETERS

*1. BCLID GRP _____
#2. BCID _____
#3. AP SITE ID ___
4. ALT AP SITE ID ___
5. GRP ACTIVE Y

NPA-NXX GROWTH
6. BCLID TN 10 N

Figure 3 SAMPLE BCLIDGP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 29C: 5629-3 RECORD
BULK CALLING LINE IDENTIFICATION LINE PARAMETER FORM - BCLIDLPA

1. GENERAL

The 5629-3 Record is available with 5E8 and later Software Releases, and defines BCLID (Bulk Calling Line ID) Line Parameters. The Line Parameter Form is used when a BCLID constructed feature is assigned to a "non-Multi-Line Hunt line and the desired parameters are different from the default parameters on the BCLIDFD form (5629-1 Record).

See Division 2, Section 1Y for more information on BCLID.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.62.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the BCLID customer.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

A TN assigned to a BCLID feature on this form must equal the TN defined on the LINEFA form where the BCLID feature is assigned to that feature via a LINEFA, BFG (5625 Record), or associated CLUSTR form (5600 Record).

For 5E9 and later, when TN(s) have a FEATURE assigned on the BCLIDLPA form, the FEATURE must be defined on the corresponding BCLIDFD form.

For 5E12 and later, TNs on different BCLIDLPA forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the BCLIDLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 # FEATURE

Description: Enter the BCLID feature name for which the BCLID group parameter is to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

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This feature name must be defined on the BCLIDFD form.

2.4 # BCLID GRP

Description: Enter the name of the BCLID group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

BCLID GRP must equal BCLID GRP on a BCLIDGP form (5629-2 Record).

ESS 5629-3(8/97)TG-5 BULK LINE CALLING LINE IDENTIFICATION DATE _____

TN PARAMETERS

BCLIDLPA 5ESS SWITCH

1.62

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

TN	FEATURE	BCLID GRP
TN	FEATURE	BCLID GRP

Figure 1 SAMPLE 5629-3 RECORD

---

bclidlpa 5ESS Switch
5629-3 OFFICE DATA ADMINISTRATION
BULK CALLING LINE IDENTIFICATION TN PARAMETERS

*1. TN _____
#2. FEATURE _____
#3. BCLID GRP _____

Figure 2 SAMPLE BCLIDLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

---

bclidlpa 5ESS Switch
OFFICE DATA ADMINISTRATION
(5629-3) BULK CALLING LINE IDENTIFICATION TN PARAMETERS

*1. TN _____
#2. FEATURE _____
#3. BCLID GRP _____

Figure 3 SAMPLE BCLIDLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 29D: 5629-4 RECORD
BULK CALLING LINE IDENTIFICATION MULTI-LINE HUNT GROUP PARAMETERS FORM - BCLIDMPA

1. GENERAL

The 5629-4 Record is available with 5E8 and later Software Releases, and defines BCLID (Bulk Calling Line Identification) Multi-Line Hunt line parameters. The Line (MLHG/TERM) Parameter Form is used when a BCLID constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters are different from the default parameters on the BCLIDFD form (5629-1 Record).

See Division 2, Section 1Y for more information on BCLID.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.62.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

An MLHG assigned to a BCLID feature on this form must equal the combination of MLHG and MEMB defined on an MLHLNFA form, where the BCLID feature is assigned to that MLHG via an MLHLNFA, BFG (5625 Record), or associated CLUSTR form (5600 Record).

For 5E9 and later, when MLHG/TERMS have a FEATURE assigned on the BCLIDMPA form, the FEATURE must be defined on the corresponding BCLIDFD form.

2.3 MEMB

Description: This is a no change field and is defaulted to 0001. This is because the BCLID feature cannot be assigned to Multi-Line Hunt Group members other than 1.
Default: 1
Valid Entries: 1

2.4 # FEATURE

Description: Enter the BCLID feature name for which the BCLID group parameter is to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

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This feature name must be defined on the BCLIDFD form.

2.5 # BCLID GRP

Description: Enter the name of the BCLID group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

BCLID GRP must equal BCLID GRP on a BCLIDGP form (5629-2 Record).

ESS 5629-4(10/92)TG-5 BULK LINE CALLING LINE IDENTIFICATION DATE _____

MLHG/MEMB PARAMETERS

BCLIDMPA 5ESS SWITCH

1.62

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

MLHG	MEMB	FEATURE	BCLID GRP
MLHG	MEMB	FEATURE	BCLID GRP

Figure 1 SAMPLE 5629-4 RECORD

---

bclidmpa 5ESS Switch
5629-4 OFFICE DATA ADMINISTRATION
BULK CALLING LINE IDENTIFICATION MLHG/MEMB PARAMETERS

*1. MLHG 0369
MEMB 0001
#3. FEATURE /BCUDTIG
#4. BCLID GRP AT&T

Figure 2 SAMPLE BCLIDMPA FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 30: ADVANCED SERVICE INTERFACE FORMS

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SEC. 30A: 5630-1 RECORD
ADVANCED SERVICE INTERFACE FEATURE DEFINITION FORM - ASIFD

1. GENERAL

The 5630-1 Record is available with the 5E8 and later Software Releases, and contains information needed to describe the ASI (Advanced Service Interface) Proxy.

The ASI (Advanced Service Interface) Proxy is a secured feature providing a 5ESS Switch-based platform for connecting non-ISDN customers to an IP (Intelligent Peripheral). The IP provides automated call handling to subscribers. The ASI Proxy capability on the Switch does not provide the automated call handling by itself; rather, the IP acts as a subscriber "proxy" and provides the switch with the sequences of instructions for call handling, call extension and feature access.

The ASI Proxy capability, which is implemented as a BRCS terminal feature, provides two modes of operation:

- *Implicit Mode* allows the IP to be silently, directly connected onto the subscriber's phone upon origination or secondary dial tone. In this mode, the IP may:
  - Provide information to the subscriber upon origination of a call (through an announcement, dial tone, etc.);
  - Accept non-dialed (such as verbal) non-DTMF user requests and initiate dialing on the subscriber's behalf (dialing by the customer disconnects the IP);
  - Remain silent and wait for explicit invocation.

The subscriber can activate or deactivate the implicit mode feature by a CORC (Customer Originated Recent Change) toggle defined in the ODP. This toggle reverses the current status of the implicit mode feature. The subscriber must have the Implicit ASI Proxy feature assigned.

In this mode, the IP may also be used to provide auto dialing (call extension, feature activation) functions for the subscriber.

- *Explicit Mode* allows the subscriber to dial an ASI Proxy access code to communicate at length with the IP. In this mode, the Switch provides dial pulse to Touch-Tone conversion when necessary and passes along any customer dialed digits ending with "#" to the IP. The IP is also able to dial on behalf of the subscriber.

See Division 2, Section 4A93 for more information on ASI Proxy.

Each feature is given a feature name used to assign the constructed (defined) feature to lines. Certain ASI Proxy features are predefined and automatically provided in the ODA database for initial offices, retrofit, or Large Terminal Growth. These are called preconstructed features. Preconstructed feature names all start with a slash (/); therefore, the slash may not be used as the first character of any feature other than preconstructed features. The preconstructed ASI Proxy features are shown in Figure 1.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.61.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the name of the ASI Proxy feature being constructed. Constructed feature names have no restrictions on characters, except the slash (/) cannot be the first character. Feature names starting with a slash are reserved for preconstructed features. All BRCS feature names must be unique.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

ASI Proxy features must not be assigned to trunks, nor to a Secondary Only TN or Secondary Only MLHG/TERM NBR on an SHTN form (5902 Record).

All ASI Proxy feature names defined on an ASIFD form must not be defined as CLUSTER NAME on a CLUSTR form (5600 Record), and any ASI Proxy feature assigned on a CLUSTR form must be defined on an ASIFD form.

Any ASI Proxy feature assigned on a LINEFA (5112 Record) or MLHLNFA (5113 Record) form must be defined on an ASIFD form, or as CLUSTER NAME on a CLUSTR form.

All ASI Proxy feature names assigned to a BFG must be defined on an ASIFD form, or be entered in the FEATURE field on an associated CLUSTR form.

An ASIFD feature name:

- may not be assigned to an MLHG/TERM via the MLHLNFA, CLUSTR, or BFG form (5625 Record)
  - unless the MLHG/TERM has a TN entered on the associated MLHLN form (5111 Record);
  - unless the LCC and RAX entered on the associated MLHLN form is defined on an LCC form (5306 Record) with a CLASS OF SERVICE of "INDIV";
  - when SHARED equals "Y" on the associated MLHLN form;
  - when an HIFD Feature Name is assigned to the line.
- may not be assigned to a line via the LINEFA, CLUSTR, or BFG form
  - unless the LCC and RAX entered on the associated LINE form (5109 Record) is defined on an LCC form with a CLASS OF SERVICE of "INDIV";
  - when SHARED equals "Y" on the associated LINE form;
  - using LTSB (Line Time Slot Bridging).
- may not be assigned to a TN
  - via the LINEFA, CLUSTR, or BFG form when an HIFD Feature Name is assigned to the line;
  - (or CKT TN) defined on a DSLUSR form (5908 Record).
- may not be assigned to a CKT MLHG defined on a MLHLNFA, CLUSTER, or BFG form.

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Only one ASIFD Feature Name:

- is allowed to be assigned to a line via the MLHLNFA,LINEFA, BFG, or CLUSTR form(s);
- is allowed for a given BFG or its associated CLUSTR form(s).

For 5E9(1) and later, FEATUREs assigned on a BFG form, CLUSTR form, LINEFA form or an MLHLNFA form and have R set to "Y" indicating that RAS (Remote Access Services) are desired, the FEATURE must be defined on a CFWFD form or on an ASIFD form.

For 5E9(1) and later, when BFG forms or associated CLUSTR form(s) have the field R set to "Y" for one or more FEATUREs defined on an ASIFD form one of the following conditions must be true:

- When ASI GRP is entered on the BFG form RMT SERV CODE and REC SERV CODE must be entered on the BFG form.
- When ASI GRP is not entered on the BFG form RMT SERV CODE and REC SERV CODE must be entered on the ASIFD form.

2.3 REMARKS

Description: Enter a descriptive comment about the feature.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

Fields Section 2.4 - Section 2.5 refer to feature options.

2.4 # IMP ACC

Description: Is implicit access to the IP desired?

Required Field.
Valid Entries: Y, N

Data Rules:

IMP ACC and EXP ACC cannot both be "N", but may both be "Y".

2.5 # EXP ACC

Description: Is explicit access to the IP desired?

Required Field.
Valid Entries: Y, N

Data Rules:

IMP ACC and EXP ACC cannot both be "N", but may both be "Y".

For a TN assigned an ASI Proxy feature on either the LINEFA, CLUSTR, or BFG form, or an MLHG/TERM assigned an ASI Proxy feature on either the MLHLNFA, CLUSTR, or BFG form, if EXP ACC equals "Y", then ACTION on the IDPDCA (5601-1/2 Record) or PDIT form (5300-2 Record) must equal "ASIUSE", and FEATURE on the IDPDCA or PDIT form must be the ASI Proxy feature assigned on this ASIFD form, or the ASI Proxy wild-card feature (/AS*).

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DEFAULT PARAMETERS

Fields Section 2.6 - Section 2.10 refer to default parameters.

2.6 ASI GRP

Description: Enter the name of the ASI Proxy group to be used by the ASI Proxy feature.
Valid Entries: 1 - 8 characters

Data Rules:

ASI GRP must be defined on a corresponding ASIGP form (5630-4 Record).

2.7 SERV CODE

Description: Enter the service code defining the services allowed during implicit mode access to the IP.
Valid Entries: up to 5 digits, consisting of 0 - 9, * , or #

Data Rules:

If ASI GRP and SERV CODE are both entered, they must be defined on a corresponding ASIGP form.

If an ASI feature is assigned to a TN and defined on an ASIFD form with IMP ACC equals "Y", then SERV CODE must be entered, if not entered on an ASILPA,ASIMPA, or BFG form.

2.8 SID

Description: Enter the Subscriber ID used to identify the subscriber to the IP. If not specified, the SID is the TN of the line.
Valid Entries: up to 10 digits, consisting of 0 - 9, *, or #

2.9 IP DIAL BILL

Description: Does the subscriber want AMA (Automatic Message Accounting) billing records for an otherwise non-billable call dialed by the IP?
Default: N
Valid Entries: Y, N

2.10 EXP DIAL BILL

Description: Does the subscriber want AMA records for an explicit connection to the IP?
Default: N
Valid Entries: Y, N

Data Rules:

If EXP DIAL BILL is "Y", EXP ACC must be "Y".

REMOTE ACCESS

The RASI (Remote Access to ASI) feature is built upon the base ASI-Proxy (Advanced Service Interface) capability. The Remote Access to ASI will allow remote access to automated call handling, call extension and feature access.

Fields Section 2.11 - Section 2.13 refer to remote access capability.

2.11 RMT BILL

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Description: Is billing for remote access to intelligent peripheral required?
Default: N
Valid Entries: Y, N

2.12 RMT SERV CODE

Description: Enter the Remote Service Code used to define the set of services allowed during remote access to the Intelligent Peripheral.
Valid Entries: Blank, or up to 5 characters of 0 - 9, *, or #

Data Rules:

When RMT SERV CODE is entered, REC SERV CODE must be entered.

For 5E9(1) and later, TN(s) that have the field R set to "Y" for one or more FEATUREs on the LINEFA form, CLUSTR form or an associated BFG form and the FEATURE is defined on an ASIFD form, the RMT SERV CODE and REC SERV CODE must be entered on an ASILPA form or on an ASIFD form (if an ASILPA form does not exist.).

For 5E9(1) and later, MLHG/TERM(s) that have the field R set to "Y" for one or more FEATUREs on the MLHLNFA form, CLUSTR form or an associated BFG form and the FEATURE is defined on an ASIFD form, the RMT SERV CODE and REC SERV CODE must be entered on an ASIMPA form or on an ASIFD form (if an ASIMPA form does not exist.).

CODE are entered, the R field for the associated feature must be set to "Y" on the MLHLNFA, or CLUSTR forms.

2.13 REC SERV CODE

Description: Enter the Remote Reconnect Service Code used to define the set of services allowed during a remote reconnect to the Intelligent Peripheral.
Valid Entries: Blank, or up to 5 characters of 0 - 9, *, or #

Data Rules:

When REC SERV CODE is entered, RMT SERV CODE must be entered.

ESS 5630-1(12/94)TG-5 ADVANCED SERVICE INTERFACE DATE _____
FEATURE DESCRIPTION RECORD
ASIFD 5ESS SWITCH
12.61
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS		DEFAULT PARAMETERS					REMOTE ACCESS		
		IMPACT	EXPACT	ASI GRP	SERVCODE	SID	IPDIA	EXPDI	RMTBI	RMT SERVCODE	REC SERVCODE

		C	C				L B I L L	A L B I L L	L L		
/AS*	ASI WILDCARD FEATURE	Y	Y				N	N	N		
/ASEX	ASI EXPLICIT	N	Y				N	N	N		
/ASIM	ASI IMPLICIT	Y	N				N	N	N		
/ASIX	ASI IMPLICIT AND EXPLICIT	Y	Y				N	N	N		

Figure 1 PRECONSTRUCTED ASI FEATURES - 5E8 AND LATER SOFTWARE RELEASES

ESS 5630-1(12/94)TG-5 ADVANCED SERVICE INTERFACE DATE _____

FEATURE DESCRIPTION RECORD

ASIFD 5ESS SWITCH

12.61

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS		DEFAULT PARAMETERS						REMOTE ACCESS		
		IMPACC	EXPACC	ASI GRP	SERVCODE	SID	IPDIALBILL	EXPDIALBILL	RMTBILL	RMT SERVCODE	REC SERV CODE

Figure 2 SAMPLE 5630-1 RECORD

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```
asifd                    5ESS Switch
(5630-1)              OFFICE DATA ADMINISTRATION
            ADVANCED SERVICE INTERFACE FEATURE DEFINITION

*2. FEATURE ________          3. REMARKS ____________________________

============================  FEATURE OPTIONS  ================================
#4. IMP ACC _
#5. EXP ACC _

============================ DEFAULT PARAMETERS ================================
 6. ASI GRP      ________          REMOTE ACCESS
 7. SERV CODE    _____         11. RMT BILL      N
 8. SID          ___________    12. RMT SERV CODE _____
 9. IP DIAL BILL  N            13. REC SERV CODE _____
10. EXP DIAL BILL N
```

Figure 3 SAMPLE ASIFD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 30B: 5630-2 RECORD
ADVANCED SERVICE INTERFACE LINE (TN) PARAMETER FORM - ASILPA

1. GENERAL

The 5630-2 Record is available with 5E8 and later Software Releases, and provides a means to create an ASI (Advanced Service Interface) Proxy Line form which overrides the Default Parameters on the corresponding ASIFD form (5630-1 Record).

See Division 2, Section 4A93 for more information on ASI Proxy.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.61.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TN

Description: Enter the TN of the line.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E9(1) and later, TN(s) assigned an Advanced Service Interface Feature on the ASILPA form must have the TN assigned on a corresponding LINEFA form with the same FEATURE defined on either the LINEFA, BFG or associated CLUSTR form.

For 5E12 and later, TN/FEATURE combinations on different ASILPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit digit TNs on the ASILPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the ASI Proxy feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

FEATURE must be defined on the corresponding ASIFD form.

2.4 # ASI GRP

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Description: Enter the name of the ASI Proxy group to be used by the ASI Proxy feature.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

ASI GRP must be defined on a corresponding ASIGP form (5630-4 Record).

2.5 SERV CODE

Description: Enter the service code defining the services allowed during implicit mode access to the IP (Intelligent Peripheral).
Valid Entries: up to 5 digits, consisting of 0 - 9, *, or #

Data Rules:

If ASI GRP and SERV CODE are both entered, they must be defined on a corresponding ASIGP form.

If an ASI Proxy feature is assigned to a TN and defined on an ASIFD form with IMP ACC equals "Y", then SERV CODE must be entered, if not entered on that ASIFD form or a BFG form.

2.6 SID

Description: Enter the Subscriber ID used to identify the subscriber to the IP. If not specified, the SID is the TN of the line.
Valid Entries: up to 10 digits, consisting of 0 - 9, *, or #

2.7 IP DIAL BILL

Description: Does the subscriber want AMA (Automatic Message Accounting) billing records for an otherwise non-billable call dialed by the IP?

Required Field.
Default: N
Valid Entries: Y, N

2.8 EXP DIAL BILL

Description: Does the subscriber want AMA records for an explicit connection to the IP?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If EXP DIAL BILL equals "Y", EXP ACC on the corresponding ASIFD form must equal "Y".

REMOTE ACCESS

The RASI (Remote Access to ASI) feature is built upon the base ASI-Proxy (Advanced Service Interface) capability. The Remote Access to ASI will allow remote access to automated call handling, call extension and feature access.

Fields Section 2.9 - Section 2.11 refer to remote access capability.

2.9 RMT BILL

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Description: Is billing for remote access to intelligent peripheral required?
Default: N
Valid Entries: Y, N

2.10 RMT SERV CODE

Description: Enter the Remote Service Code used to define the set of services allowed during remote access to the Intelligent Peripheral.
Valid Entries: Blank, or up to 5 characters of 0 - 9, *, or #

Data Rules:

When RMT SERV CODE is entered, REC SERV CODE must be entered.

For 5E9(1) and later, TN(s) that have the field R set to "Y" for one or more FEATUREs on the LINEFA form, CLUSTR form or an associated BFG form and the FEATURE is defined on an ASIFD form, the RMT SERV CODE and REC SERV CODE must be entered on an ASILPA form or on an ASIFD form (if an ASILPA form does not exist.).

2.11 REC SERV CODE

Description: Enter the Remote Reconnect Service Code used to define the set of services allowed during a remote reconnect to the Intelligent Peripheral.
Valid Entries: Blank, or up to 5 characters of 0 - 9, *, or #

Data Rules:

When REC SERV CODE is entered, RMT SERV CODE must be entered.

ESS 5630-2(12/94)TG-5 ADVANCED SERVICE INTERFACE DATE _____

LINE (TN) PARAMETER FORM
5ESS SWITCH

ASILPA
1.61
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

TN	FEATURE	ASI GRP	SERV CODE	SID	IP DIAL BILL	EXP DIAL BILL	REMOTE ACCESS		
							RMT BILL	RMT SERV CODE	REC SERV CODE

Figure 1 SAMPLE 5630-2 RECORD

```
asilpa                    5ESS Switch
(5630-2)              OFFICE DATA ADMINISTRATION
          ADVANCED SERVICE INTERFACE LINE (TN) PARAMETERS

*1. TN          _______          DEFAULT SID
*2. FEATURE     ________
#3. ASI GRP     ________          REMOTE ACCESS
 4. SERV CODE   _____            8. RMT BILL     N
 5. SID         __________       9. RMT SERV CODE _____
 6. IP DIAL BILL  N              10. REC SERV CODE _____
 7. EXP DIAL BILL N
```

Figure 2 SAMPLE ASILPA FORM 5E11 AND EARLIERR SOFTWARE RELEASES

```
asilpa                    5ESS Switch
                      OFFICE DATA ADMINISTRATION
(5630-2)      ADVANCED SERVICE INTERFACE LINE (TN) PARAMETERS

*1. TN          __________        REMOTE ACCESS
*2. FEATURE     ________          8. RMT BILL     N
#3. ASI GRP     ________          9. RMT SERV CODE _____
 4. SERV CODE   _____            10. REC SERV CODE _____
 5. SID         __________
 6. IP DIAL BILL  N
 7. EXP DIAL BILL N
   DEFAULT SID
```

Figure 3 SAMPLE ASILPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 30C: 5630-3 RECORD
ADVANCED SERVICE INTERFACE LINE (MLHG/TERM) PARAMETER FORM - ASIMPA

1. GENERAL

The 5630-3 Record is available with 5E8 and later Software Releases, and provides a means to create an ASI (Advanced Service Interface) Proxy Line form which overrides the Default Parameters on the corresponding ASIFD form (5630-1 Record).

See Division 2, Section 4A93 for more information on ASI Proxy.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.61.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

For 5E9(1) and later, MLHG/TERM(s) assigned an Advanced Service Interface FEATURE on the ASIMPA form must have the MLHG/TERM assigned on a corresponding MLHLNFA form with the same FEATURE defined on either the MLHLNFA, BFG or on their associated CLUSTR form(s).

2.3 * TERM

Description: Enter the Multi-Line Hunt Group member number of the line.

Required Field.
Valid Entries: 1 - 2000 or 3001 - 3999 (outdial terminals)

2.4 * FEATURE

Description: Enter the name of the ASI Proxy feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

FEATURE must be defined on the corresponding ASIFD form.

2.5 # ASI GRP

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Description: Enter the name of the ASI Proxy group to be used by the ASI Proxy feature.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

ASI GRP must be defined on a corresponding ASIGP form (5630-4 Record).

2.6 SERV CODE

Description: Enter the service code defining the services allowed during implicit mode access to the IP (Intelligent Peripheral).
Valid Entries: up to 5 digits, consisting of 0 - 9, *, or #

Data Rules:

If ASI GRP and SERV CODE are both entered, they must be defined on a corresponding ASIGP form.

If an ASI Proxy feature is assigned to an MLHG/TERM and defined on an ASIFD form with IMP ACC equals "Y", then SERV CODE must be entered, if not entered on the ASIFD form, or a BFG form.

2.7 SID

Description: Enter the Subscriber ID used to identify the subscriber to the IP. If not specified, the SID is the TN of the line.
Valid Entries: up to 10 digits, consisting of 0 - 9, *, or #

2.8 IP DIAL BILL

Description: Does the subscriber want AMA (Automatic Message Accounting) billing records for an otherwise non-billable call dialed by the IP?

Required Field.
Default: N
Valid Entries: Y, N

2.9 EXP DIAL BILL

Description: Does the subscriber want AMA records for an explicit connection to the IP?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If EXP DIAL BILL equals "Y", EXP ACC on the corresponding ASIFD form must equal "Y".

REMOTE ACCESS

The RASI (Remote Access to ASI) feature is built upon the base ASI-Proxy (Advanced Service Interface) capability. The Remote Access to ASI will allow remote access to automated call handling, call extension and feature access.

Fields 2.10 - 2.12 refer to remote access capability.

2.10 REMOTE BILL

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Description: Is billing for remote access to intelligent peripheral required?
Default: N
Valid Entries: Y, N

2.11 RMT SERV CODE

Description: Enter the Remote Service Code used to define the set of services allowed during remote access to the Intelligent Peripheral.
Valid Entries: Blank, or up to 5 characters of 0 - 9, *, or #

Data Rules:

When RMT SERV CODE is entered, REC SERV CODE must be entered.

For 5E9(1) and later, MLHG/TERM(s) that have the field R set to "Y" for one or more FEATUREs on the MLHLNFA form, CLUSTR form or an associated BFG form and the FEATURE is defined on an ASIFD form, the RMT SERV CODE and REC SERV CODE must be entered on an ASIMPA form or on an ASIFD form (if an ASIMPA form does not exist.).

2.12 REC SERV CODE

Description: Enter the Remote Reconnect Service Code used to define the set of services allowed during a remote reconnect to the Intelligent Peripheral.
Valid Entries: Blank, or up to 5 characters of 0 - 9, *, or #

Data Rules:

When REC SERV CODE is entered, RMT SERV CODE must be entered.

ESS 5630-3(12/94)TG-5 ADVANCED SERVICE INTERFACE LINE DATE _____

(MLHG/TERM) PARAMETER FORM

ASIMPA 5ESS SWITCH
1.61
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

ML HG	TE RM	FEATURE	ASI GRP	SER VCODE	SID	IP DIAL BILL	EX PDIAL BIL	REMOTE ACCESS: RMT BILL	REMOTE ACCESS: RMT SERV CODE	REMOTE ACCESS: REC SERV CODE

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Figure 1 SAMPLE 5630-3 RECORD

asimpa 5ESS Switch
(5630-3) OFFICE DATA ADMINISTRATION
ADVANCED SERVICE INTERFACE LINE (MLHG/TERM) PARAMETERS

*1. MLHG ____ DEFAULT SID
*2. TERM ____
*3. FEATURE _____ REMOTE ACCESS
#4. ASI GRP _____ 9. REMOTE BILL N
5. SERV CODE _____ 10. RMT SERV CODE _____
6. SID _____ 11. REC SERV CODE _____
7. IP DIAL BILL N
8. EXP DIAL BILL N

Figure 2 SAMPLE ASIMPA FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 30D: 5630-4 RECORD
ADVANCED SERVICE INTERFACE GROUP DEFINITION FORM - ASIGP

1. GENERAL

The 5630-4 Record is available with 5E8 and later Software Releases, and contains information needed to define the routing and signal conversion characteristics of an ASI (Advanced Service Interface) Proxy group.

See Division 2, Section 4A93 for more information on ASI Proxy.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.61.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ASI GRP

Description: Enter the name of the ASI Proxy group to be used by the ASI Proxy feature.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The ASI GRP and CODE defined on the ASIGP form must be entered on the ASILPA, ASIMPA, ASIFD and/or BFG forms as ASI GRP and RMT SERV CODE respectively.

The ASI GRP and CODE defined on the ASIGP form must be entered on the ASILPA, ASIMPA, ASIFD and/or BFG forms as ASI GRP and REC SERV CODE respectively.

2.3 * CODE

Description: Enter either the dialed access code digits to invoke explicit access to the IP (Intelligent Peripheral), or a service code defining the set of services allowed during implicit access to the IP.

Required Field.
Valid Entries: up to 5 digits, consisting of 0 - 9, *, or #

2.4 # RTI

Description: Enter the Route Index used to route to the IP.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

RTI must be defined on an RTIDX form (5303 Record) with ROUTE TYPE equal to "HUNT". Additionally,

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the RTI must route to a trunk group with ASI PROXY equal to "Y" on the associated TKGRP form (5202 Record).

2.5 SIG CONV

Description: Is signal conversion needed for access to "cut-through facilities?
Default: N
Valid Entries: Y, N

2.6 SIG CNVT TIME

Description: Enter the time to wait after each dialed digit before deciding that dialing is complete and no more signal conversion is needed. A value of 0 may be used to indicate infinite timing.
Default: 0
Valid Entries: 4 - 900 (seconds)

2.7 MEA

Description: Is Modified Extended Access required?

If "Y", this ASI group provides Modified Extended Access which will provide DP to TT conversion for applicable subscribers. This allows DP subscribers to make ``extended calls'' through the IP.

This ASI enhancement is part of SFID 93 and is in addition to the original DP to TT conversion that was supported solely between an IP and a subscriber. This enhancement, controlled by the MEA field, allows DP to TT conversion past the IP for any call extensions.

If "N", this ASI group does not support MEA.
Default: N
Valid Entries: Y, N

ESS 5630-4(12/94)TG-5 ADVANCED SERVICE INTERFACE GROUP DEFINITION FORM DATE _____

ASIGP 4.61 5ESS SWITCH

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

ASI GRP	CODE	RTI	SIG CONV	SIG CNVT TIME	MEA	REMARKS

Figure 1 SAMPLE 5630-4 RECORD

---

asigp 5ESS Switch
(5630-4) OFFICE DATA ADMINISTRATION
ADVANCED SERVICE INTERFACE GROUP DEFINITION

*1. ASI GRP _____

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*2. CODE _____
#3. RTI ____
4. SIG CONV N
5. SIG CNVT TIME 000
12. MEA N

Figure 2 SAMPLE ASIGP FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 31: ASP ADVANCED SERVICES PLATFORM

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SEC. 31A: 5632-1 RECORD
ADVANCED SERVICES PLATFORM FEATURE DEFINITION FORM - ASPFD

1. GENERAL

The ASPFD Record is available with 5E9(1) and later Software Releases, and defines various combinations of options available with the ASP (Advanced Services Platform) feature.

Lucent Technologies A-I-Net□ ASP provides true service-independent central office switch and interworking capabilities based on industry-standard AIN (Advanced Intelligent Network) requirements. ASP had been available since 5E6 as a secured feature, and enhancements were made in 5E8. For 5E9(1) and later, ASP is provisioned as a BRCS feature. In addition, several enhancements were made. These two changes created the need for a feature definition form.

See Division 2, Section 4A126 for more information on ASP.

1.1 Preconstructed Features

Each feature is given a feature name of from one to eight characters used to assign the constructed (defined) feature. Certain ASPFD features are pre-defined and automatically provided in the ODA database for initial offices, retrofit, or Large Terminal Growth. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. The preconstructed ASPFD features are shown in Figure 1.

1.2 Recent Change View

The corresponding Recent Change View for this form is 12.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the ASP feature Name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

An ASP feature assigned to a TRUNK GROUP on a TKGRPFA form (5206 Record), TN on a LINEFA form (5112 Record), an MLHG on an MLHLNFA form (5113 Record), or a TGN/MEMB on a TRUNKFA form (5205 Record), must be defined on this form or as CLUSTER NAME on the CLUSTR form (5600 Record).

An ASP feature assigned to a CLUSTR form must be defined on this form.

Only one ASPFD form may exist for a feature name.

For an ASP feature assigned to a TGN/MEMB on the TRUNKFA, TKGRPFA, or an associated CLUSTR form, IN START DIAL on the corresponding TRUNK form (5204 Record) must be other than "DIRC", "GRND", or "LOOP".

For 5E14 and earlier, an ASP feature assigned to a TN on the LINEFA form, an MLHG on the MLHLNFA

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form, or a TGN on the TRUNKFA form must have at least one TRIG NBR (OHI, OHD, or TA) entered or one ALLOWED field (FCD or CDP) set to "Y" on the ASPFD, ASPLPA (5632-2 Record), ASPMPA (5632-3 Record), ASPTPA or ASPDP (5632-5 Record) (for 5E9(1)) forms (5632-4 Record).

An ASP feature assigned to a TGN/MEMB on either the TRUNKFA form or an associated CLUSTR form when an ASPFD, ASPTPA, or ASPDP (for 5E9(1)) form exists with OHD TRIG NBR entered must have TGN defined on a TKGRP form (5202 Record) with TRKCLS equal to "PF", "PFITT", or "PFLASH", "EDSL" or "EDSLHM".

ASP features may not be assigned to BRCS feature groups on the BFG form (5625 Record).

An ASP feature assigned to a TGN on the TRUNKFA or associated CLUSTR form, or TRUNK GROUP on the TKGRPFA form, must have an associated TKGRP form where TRK DIR equal to "INC" or "2W", since ASP features can be assigned only to incoming or two-way trunks.

ASP terminating features, where CONTROL is "TERM", may not be assigned to trunks via the TRUNKFA (5206 Record) or TKGRPFA (5205 Record) form or in a CLUSTER assigned via the TRUNKFA or TKGRPFA form)

2.3 REMARKS

Description: Enter a descriptive remark.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

Field Section 2.4 refers to feature options.

2.4 # CONTROL

Description: Enter the ASP feature type control.

Required Field.

Valid CONTROL Entries

Entry	Definition
ORIG	Feature is applied to the originator.
TERM	Feature is applied to the terminator.
NESS	Software Release: 5E9(2) and later. Network Element Services Signaling.

Data Rules:

If CONTROL is "TERM", only TERMINATING TRIGGERS can be entered. If CONTROL is "ORIG", only ORIGINATING TRIGGERS can be entered. For 5E9(2) and later, if CONTROL is "NESS", only NESS TRIGGERS can be entered.

If CONTROL equals "TERM", OHI TRIG NBR, OHD TRIG NBR, and, for 5E9(2) and later, NESS TRIG NBR must not be entered. Also FCD ALLOWED and CDP ALLOWED cannot be "Y" on the associated ASPLPA or ASPMPA forms.

If CONTROL equals "ORIG", no terminating and, for 5E9(2) and later, no NESS triggers can be assigned on an ASPLPA or ASPMPA form, i.e., TA TRIG NBR and, for 5E9(2) and later, NESS TRIG NBR must not be entered.

If multiple ASP features are assigned to a TN on a LINEFA form, a TGN/MEMB on the TRUNKFA form, or an MLHG on the MLHLNFA form or a CLUSTER containing multiple ASP features assigned, then only one ASP feature may have CONTROL set to "ORIG" on the associated ASPFD form. There can be only one originating ASP feature.

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If multiple ASP features are assigned to a TN on a LINEFA form or an MLHG on the MLHLNFA form or a CLUSTER containing multiple ASP features assigned, then only one ASP feature may have CONTROL set to "TERM" on the associated ASPFD form. There can be only one terminating ASP feature.

If an ASP feature is assigned to an MLHG/TERM on the MLHLNFA or a corresponding CLUSTR form, and defined on an ASPFD from with CONTROL set to "TERM", then the MLHG/TERM must be defined on an MLHLN from with the TN entered or on a DSLUSR form as CKT MLHG/TERM with CKT MLHG TN entered.

For an ASP feature assigned to a TN or MLHG/TERM on the LINEFA or MLHLNFA or a corresponding CLUSTR form, and defined on an ASPFD from with CONTROL set to "TERM", then

- if the TN or MLHG/TERM is defined on a LINE or MLHLN form with LCC/RAX entered where LCC/RAX is defined on an LCC form, the LCC form associated with this line or Multi-Line Hunt Group line must have a CLASS OF SERVICE of "2PTY", "4WINDIV", "ATND", "CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "INDIV", "MODEM", "PBX", or "TWOPTY", and TERMINATING TREATMENT on the LCC form must be "AGING", "INDIV", "INWATS", "MLHG", or "PARTY".

For the ASP Interworking with National ISDN and Custom ISDN Attendant secured feature (See Division 2, Section 4A139):

- if SFID 139 ACT is "Y" on the SFSYS form and the TN or MLHG/TERM is defined on a LINE, MLHLN, or DSLUSR form, then the LCC form associated with this line or Multi-Line Hunt Group can additionally have a CLASS OF SERVICE of "ISATND" or "ISDN" , and if CLASS OF SERVICE is "ISDN", then DSL CLS must be "STD" on the corresponding DSL form.
- if the TN or MLHG is defined on a DSLUSR form as CKT TN or CKT MLHG, then the ASP Interworking with National ISDN and Custom ISDN Attendants secured feature must be purchased and SFID ACT 139 must be "Y" on the SFSYS form.

NESS:
For 5E9(2) and later, if a TN is on the LINEFA (or an MLHG/TERM) form with an ASP feature

- assigned on either the LINEFA (or MLHLNFA) form or corresponding CLUSTR form
- and defined on the ASPFD form with CONTROL set to "NESS",

then

- the ASP NESS (Network Element Services Signaling) secured feature must be purchased and the ACT field for SFID 185 must be "Y" on the SFSYS form.
- the TN (or MLHG/TERM) must be defined on a DSLUSR form as CKT TN (or CKT MLHG/TERM) and LN TYPE must be "NONE" or not entered.

If CONTROL is set to "NESS", then on all associated ASPLPA and/or ASPLPA forms OHI TRIG NBR, OHD TRIG NBR, and TA TRIG NBR must not be entered; FCD ALLOWED and CDP ALLOWED must be "N".

If a TN (or MLHG/TERM) is defined on the LINEFA (or an MLHLNFA) form with multiple ASP features assigned on either the LINEFA (or MLHLNFA) form or corresponding CLUSTR form and the ASP features are defined on this form with CONTROL set to "NESS", then at most one ASP NESS feature can be assigned to a TN (or MLHG/TERM).

If a TN (or MLHG/TERM) is defined on the LINEFA (or an MLHLNFA) form with an ASP feature assigned

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on either the LINEFA (or MLHLNFA) form or corresponding CLUSTR form, the TN (or MLHG/TERM)is defined on a DSLUSR form as CKT TN (or CKT MLHG/TERM) and this form has CONTROL set to "NESS", then the corresponding DSL form must have a DSL CLS of "STD".

DEFAULT PARAMETERS

Fields Section 2.5 - Section 2.31 refer to default parameters.

ORIGINATING TRIGGERS

Fields Section 2.5 - Section 2.18 refer to originating triggers. Originating triggers launch a query based on the calling number.

An ASP feature assigned to a TRUNK GROUP on the TKGRPFA form or associated CLUSTR form must have OHD TRIG NBR entered, or FCD ALLOWED or CDP ALLOWED equal to "Y" on an ASPFD, ASPTPA, or ASPDP (for 5E9(1)) form.

2.5 OHI TRIG NBR

Description: Enter the trigger number for Off-Hook Immediate triggers. The Off-Hook Immediate trigger is a subscribed trigger, that queries the SCP (Service Control Point) without referencing a dialing plan after the subscriber goes off-hook. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHI TRIG NBR is entered,

- OHD TRIG NBR must not be entered, and
- FCD ALLOWED and CDP ALLOWED must be "N".

For an ASP feature assigned to a TN on the LINEFA form or MLHG/TERM on the MLHLNFA form, if OHI TRIG NBR is entered on the ASPFD, ASPLPA, ASPMPA, or ASPDP (for 5E9(1)) forms,

- the only other BCRS feature that may be assigned is a terminating ASP feature.
- SERHLN on the corresponding LINE or DSLUSR must not be entered.

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if OHI TRIG NBR is entered on the ASPFD, ASPLPA, ASPMPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form (5306 Record) must have CLASS OF SERVICE of "INDIV".

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if the corresponding LCC form (5306 Record) has CLASS OF SERVICE of "ISDN", OHI TRIG NBR must not be entered on the associated ASPFD, ASPLPA, or ASPDP (for 5E9(1)) form. An OHI TRIG NBR is not allowed for lines with CLASS OF SERVICE of "ISDN".

For an ASP feature assigned to a TGN/MEMB on the TRUNKFA or TKGRPFA forms or an associated CLUSTR form, if OHI TRIG NBR or TA TRIG NBR is entered on an ASPFD or ASPDP (for 5E9(1)) form, an ASPTPA form must exist for this TGN/MEMB(s)/FEATURE combination, since an OHI TRIG NBR or a TA TRIG NBR cannot be assigned to a trunk.

For 5E9(2) and earlier, OHI TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form (5324 Record) where APPLICATION is "ASP", and when AIN REL is "R0" on the NSTRIG form, SERV KEY

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must be "ANI".

For 5E10 and later, for every OHI TRIG NBR on the ASPFD form there must be a corresponding TRIG NBR entered on a NSTRIG form, APPLICATION must be "ASP" and SERVICE ALWD must not be "CSD". In addition, on the NSTRIG form when AIN REL equals "R0", SERV KEY must be "ANI".

For 5E9(2) and later, if

- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")

and

- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a CLUSTR form containing an ASP feature assigned

and

- the associated ASPFD or ASPLPA (or ASPMPA) form has OHI TRIG NBR entered,

then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

2.6 OHI TRIG ACT

Description: Is the Off-Hook Immediate trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHI TRIG ACT is "Y", OHI TRIG NBR must be entered.

2.7 OHD TRIG NBR

Description: Enter the Off-Hook Delay trigger number. The Off-Hook Delay trigger is a subscribed originating trigger that queries the SCP data base after all dialed/signaled digits have been collected and validated from the originating line/trunk. If the dialed/signaled digits have been defined as an escape code digit string, a query is not launched; rather, normal call processing treatment is applied. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHD TRIG NBR is entered, CDP ALLOWED must be "N".

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if OHD TRIG NBR is entered on the ASPFD, ASPLPA, ASPMPA, ASPDP (for 5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

For an ASP feature assigned to a TN on the LINEFA form, TGN/MEMB on the TRUNKFA form, TRUNK GROUP on the TKGRPFA form, or MLHG on the MLHLNFA form, if OHD TRIG NBR is entered on the ASPFD, ASPLPA, ASPMPA, ASPTPA ASPDP (for 5E9(1)) forms, then

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- no other BRCS feature may be assigned to the line or Multi-Line Hunt Group except one terminating ASP feature with CONTROL set to "TERM", and no other features may be assigned to the trunk or trunk group.

For the ASP BRCS Off-Hook Delayed Interworking secured feature (See Division 2, Section 4A137):

- if SFID 137 ACT is "Y" on the SFSYS form and the TN or MLHG/TERM is either defined on a LINE, MLHLN form or on a DSLUSR form as CKT TN or CKT MLHG/TERM where DSL CLS on the corresponding DSL form is "STD", the only other BRCS features allowed to be assigned to the line or Multi-Line Hunt Group are those defined on the following forms:
  - ASPFD form with CONTROL set to "TERM"
  - CFWFD form with FWD COND set to "BUSY", "IDLE" or "BOTH"
  - CWTFD form with INVOKE set to "TERM"
  - MWFD form with CONTROL not set to "CODEALT".

NOTE: No other ASP originating features may be assigned to the line or Multi-Line Hunt Group.

- if BFGN is entered on the LINEFA or MLHLNFA form, the ASP (Advanced Service Platform) BRCS/OHD Interworking secured feature must be purchased and SFID ACT 137 must be "Y" on the SFSYS form.
- if SFID 137 ACT is "Y" on the SFSYS form and the TN or MLHG/TERM is either defined on a LINE, MLHLN form or on a DSLUSR form as CKT TN or CKT MLHG/TERM where DSL CLS on the corresponding DSL form is not set to "STD", no other BRCS features may be assigned except at most one ASP terminating feature with CONTROL set to "TERM".

OHD TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION is "ASP".

For an ASP feature assigned to a TGN/MEMB on the TKGRPFA or an associated CLUSTR form, if OHD TRIG NBR is entered on an ASPFD, ASPTPA, or ASPDP (for 5E9(1)) form, the TGN must be defined on the TKGRP form with TRKCLS of "PF", "PFITT", "PFLASH", "EDSL" or "EDSLHM".

When an ASP feature is assigned to a TN or MLHG/TERM on the LINEFA, MLHLNFA or a corresponding CLUSTR form, and an associated ASPFD, ASPLPA, ASPMPA, or ASPDP (for 5E9(1)) form has OHD TRIG NBR entered, and the TN or MLHG/TERM is defined on a DSLUSR form as CKT TN or CKT MLHG/TERM, then

- if CKT LCC/RAX on the DSLUSR form is defined on an LCC form with CLASS OF SERVICE of "ISDN" and the OHD TRIG NBR is defined on an NSTRIG form with APPLICATION set to "ASP", AIN REL on the NSTRIG form must be "R0D1" if a corresponding DSL form has DSL CLS of "STD", AIN REL must be "R0" if DSL CLS not set to "STD".

The only other BRCS features allowed to be assigned to a line are those defined on the ACCTFD, ASPFD (CONTROL is "TERM"), CPNBNFD or RNDFD when:

- ASP OHD Interactions with Account Code and CPN/BN secured feature is active (see Division 2, Section 4A150) and
- the TN(s) (or MLHG/TERM(s)) appear on the LINEFA (or MLHLNFA) form with an ASP feature

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assigned or a CLUSTER containing an ASP feature assigned and

- OHD TRIG NBR is entered on the associated ASPFD or ASPLPA form and
- the TN (or MLHG/TERM) is either defined on a LINE (or MLHLN) form or on a DSLUSR form as CKT TN (or CKT MLHG/TERM) where DSL CLS on the corresponding DSL from is "STD".

For 5E9(2) and later, if

- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")

and

- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a CLUSTR form containing an ASP feature assigned

and

- the associated ASPFD or ASPLPA (or ASPMPA) form has OHD TRIG NBR entered

and

- the TN (or MLHG/TERM) is either defined on the LINE (or MLHLN) or DSLUSR form as CKT TN (or CKT MLHG/TERM) where DSL CLS on the corresponding DSL form is "STD",

then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

No other BRCS features may be assigned except at most one ASP terminating feature where CONTROL on the ASPFD form is "TERM" when the following conditions hold:

- ASP BRCS/OHD Interworking secured feature has been purchased with SFID ACT 137 field set to "Y" on the SFSYS form,

and/or

- ASP OHD Interactions with Account Code and CPN/BN secured feature has been purchased with SFID ACT 150 field set to "Y" on the SFSYS form,

and/or

- ASP NESS secured feature has been purchased with SFID ACT 185 field set to "Y" on the SFSYS form,

and/or

- ASP BRCS/OHD Interworking Extensions secured feature has been purchased with SFID ACT 226 field set to "Y" on the SFSYS form

and

- TN (or MLHG/TERM) appears on the LINEFA (or MLHLNFA) form with an ASP feature assigned on

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the LINEFA (or MLHLNFA) or corresponding CLUSTR form

and

- the ASP feature is defined on the ASPFD, ASPLPA (or ASPMPA) with OHD TRIG NBR entered

and

- the TN (or MLHG/TERM) is defined on a DSLUSR form as CKT TN (or CKT MLHG/TERM) and DLS CLS on the corresponding DSL form is not "STD".

2.8 OHD TRIG ACT

Description: Is the Off-Hook Delay trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHD TRIG ACT is "Y", OHD TRIG NBR must be entered.

2.9 OHD DFLT ROUTE

Description: Is the Off-Hook Delay Default Route active? See Division 2, Section 4A516.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

If OHD DFLT ROUTE is "Y",
SFID 516 must be activated on the SFSYS form (5713 Record)

OHD TRIG NBR must be entered.

2.10 FCD ALLOWED

Description: Is the feature code dialing trigger allowed? Feature Code Dialing (formerly the ODP Prefix/Code trigger) is a subscribed trigger, querying the SCP when a subscriber goes off-hook and dials an ASP FCD access code. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if FCD ALLOWED or CDP ALLOWED is "Y" on the ASPFD, ASPMPA, or ASPDP (for 5E9(1)) forms, then

- the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

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For the ASP Interworking with National ISDN and Custom ISDN Attendant secured feature (See Division 2, Section 4A139):

- if SFID 139 ACT is "Y" on the SFSYS form and the TN or MLHG/TERM is defined on a LINE form or a DSLUSR form with LCC/RAX entered and the LCC/RAX is defined on an LCC form, then the LCC form associated with this line can additionally have a CLASS OF SERVICE of "ISATND" and if CLASS OF SERVICE is "ISDN", DSL CLS can be "STD" on the corresponding DSL form.

If TGN/MEMB(s) are assigned an ASP feature on the TKGRPFA form or an associated CLUSTR form and

- FCD ALLOWED

  or

- CDP ALLOWED (for 5E14 and earlier)

is set to "Y" on the ASPFD or ASPTPA form, then the TGN must be defined on the TKGRP form with TRKCLS set to "PF", "PFITT" or "PFLASH".

2.11 FCD TRIG ACT

Description: Is the feature code dialing trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If FCD TRIG ACT is "Y", FCD ALLOWED must be "Y".

2.12 CDP ALLOWED

Description: Is the customized dialing plan trigger allowed? Customized Dialing Plan (formerly the IDP trigger) uses the IDP capabilities to access ASP. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

See Data Rules for FCD ALLOWED field.

For 5E15 and later, before TGN/MEMB(s) are assigned an ASP feature on either the TRUNKFA or TKGRPFA form or an associated CLUSTR form and an ASPFD or ASPTPA form exist with this feature where CDP ALLOWED is "Y" and the associated TGN defined on the TKGRP form with a TRKCLS value of "EDSL" or "EDSLHM", the following must be set to "Y" on the SFSYS form (Record 5713-1):

- ACT SFID 254 - Restrict Usage of ASP Trigger feature

  or

- ACT SFID 255 - ASP Originating Triggers feature

  and

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- ACT SFID 557 - ASP CDP Trigger on PRI feature.

When TGN/MEMB(s) are assigned and ASP feature on either the TRUNKFA form or an associated CLUSTR form and an ASPFD or ASPTPA form exists with this feature where CDP ALLOWED is "Y", the TGN must be defined on the TKGRP form with a TRKCLS that corresponds to one of the following: "PF", "PFITT", "PFLASH", "EDSL", or "EDLSHM".

2.13 CDP TRIG ACT

Description: Is the customized dialing plan trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDP TRIG ACT is "Y", CDP ALLOWED must be "Y".

2.14 OBL TRIG NBR

Description: This field contains the originating busy line trigger number. The trigger number is a pointer to access the particular trigger. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Valid Entries: Blank or 1-255

Data Rules:

If OBL TRIG NBR is entered, the LCC form associated with this line must have a Class Of Service of "ATND", "CHGCALL", "COIN", "HOTMOTL", "INDIV", "ISATND", "MODEM", "PBX", "TWOPTY", "2PTY", "4WINDIV", "ISDN" or "HOTPBX".

OBL TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "R0D1".

2.15 OBL TRIG ACT

Description: This field contains the originating busy line trigger status. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OBL TRIG ACT is "Y", then OBL TRIG NBR must be entered.

2.16 ONA TRIG NBR

Description: This field contains the originating no answer trigger number. The trigger number is a pointer to access the particular trigger. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

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Software Release: 5E12 and later
Valid Entries: Blank or 1-255

Data Rules:

If ONA TRIG NBR is entered, the LCC form associated with this line must have a Class Of Service of "ATND", "CHGCALL", "COIN", "HOTMOTL", "INDIV", "ISATND", "MODEM", "PBX", "TWOPTY", "2PTY", "4WINDIV", "ISDN" or "HOTPBX".

OBL TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "R0D1".

2.17 ONA TRIG ACT

Description: This field contains the originating no answer trigger status. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ONA TRIG ACT is "Y", then ONA TRIG NBR must be entered.

2.18 ONA TIMER

Description: This field contains the originating no answer trigger timer. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Valid Entries: Blank or 1-120 seconds

Data Rules:

If ONA TIMER is entered, then ONA TRIG NBR must be entered.

TERMINATING TRIGGERS

For 5E15 and later, the following fields (Section 2.19 - Section 2.21) refer to Terminating Trunk Group Triggers. The ASP Terminating Trunk Group Trigger allows the 5ESS to provide an ASP trigger for calls terminating to designated Private Facility and Primary Rate Interface trunk groups.

See Div. 2, Sec. 4A546 for more information on the Terminating Trunk Group Trigger feature.

The following fields (Section 2.22 - Section 2.24) refer to terminating triggers. Terminating triggers launch a query based on the number called.

2.19 TGT TRIG NBR

Description: Enter the terminating trunk group trigger number.

Software Release: 5E15 and later
Valid Entries: 1 - 255

Data Rules:

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When TGT TRIG ACT is Y, TGT TRIG NBR must be entered.

When TGT DFLT ROUTE is Y, TGT TRIG NBR must be entered.

When TGT TRIG NBR is entered, TAT TRIG NBR, TBL TRIG NBR, and TNA TRIG NBR must not be entered.

The secured feature Terminating Trunk Group Trigger must be purchased before TGT TRIG NBR can be set to a valid value, therefore the ACT field for SFID 546 on the SFSYS form must be "Y".

2.20 TGT TRIG ACT

Description: Is the terminating trunk group trigger active?

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TGT TRIG ACT is "Y", TGT TRIG NBR must be entered.

2.21 TGT DFLT ROUTE

Description: Is the terminating trunk group trigger default routing active?

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

If TGTDFLT ROUTE is "Y", TGT TRIG NBR must be entered.

2.22 TA TRIG NBR

Description: Enter the terminating attempt trigger number. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

For an ASP feature assigned to a TGN/MEMB on the TRUNKFA or TKGRPFA forms or an associated CLUSTR form, if OHI TRIG NBR or TA TRIG NBR is entered on an ASPFD or ASPDP (for 5E9(1)) form, an ASPTPA form must exist for this TGN/MEMB(s)/FEATURE combination. since an OHI TRIG NBR or a TA TRIG NBR cannot be assigned to a trunk.

TA TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "R0D1".

No more than one ASP feature with a TA TRIG NBR entry on an ASPFD, ASPLPA, ASPMPA, or ASPDP (for 5E9(1)) form may be assigned to a TN on a LINEFA, an MLHG/TERM on an MLHLNFA, or associated CLUSTR form.

2.23 TA TRIG ACT

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Description: Is the terminating attempt trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA TRIG ACT is "Y", TA TRIG NBR must be entered.

2.24 TA DFLT ROUTE

Description: Is the terminating attempt trigger default routing active?

Required Field.
Default Value: N
Valid Entries: Y, N

Data Rules:
If TA DFLT ROUTE is "Y", TA TRIG NBR must be entered.

The TA DFLT ROUTE field is used by the ASP Default Routing for Terminating Attempt Triggers Special Feature. It is a secured feature and must be purchased by the office before this field can be set to "Y" on the ASPFD, ASPLPA, ASPMPA, or ASPDP (for 5E9(1)) If this field is set to "Y", a SFSYS form must exist with SFID 136 ACT field set to "Y".

2.25 TBL TRIG NBR

Description: This field is used to locate the unique network service for the ASP terminating busy line trigger.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 255

Data Rules:

When TBL TRIG NBR is entered, the SFSYS form (5713-1 Record) must have the ACT field for SFID 507 set to "Y".

If TBL TRIG NBR matches TRIG NBR on the NSTRIG form (5324 Record), then the fields listed must be defined on the NSTRIG form as follows:

- APPLICATION must be set to "ASP",
- AIN REL must be set to "R0D1",
- SERVICE must not be set to "CSD".

2.26 TBL TRIG ACT

Description: Is terminating busy line trigger active? This field is used to indicate whether the ASP terminating busy line trigger is active or inactive.

Required Field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

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Data Rules:

When TBL TRIG ACT is "Y", TBL TRIG NBR must be entered.

2.27 TNA TRIG NBR

Description: This field is used to locate the unique network service for the ASP terminating no answer trigger.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 255

Data Rules:

When TNA TRIG NBR is entered, the SFSYS form (5713-1 Record) must have the ACT field for SFID 507 set to "Y".

If TNA TRIG NBR matches TRIG NBR on the NSTRIG form (5324 Record), then the fields listed must be defined on the NSTRIG form as follows:

- APPLICATION must be set to "ASP",
- AIN REL must be set to "R0D1",
- SERVICE must not be set to "CSD".

2.28 TNA TRIG ACT

Description: Is terminating no answer trigger active? This field is used to indicate whether the ASP terminating no answer trigger is active or inactive.

Required Field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TNA TRIG ACT is "Y", TNA TRIG NBR must be entered.

2.29 TNA TIMER

Description: This field is used to set up terminating no answer trigger timer.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 120 in seconds

Data Rules:

When TNA TIMER is entered, TNA TRIG NBR must be entered.

2.30 INTRA OFFICE FWD

Description: Enter the number of intra-office calls that can be forwarded.
Valid Entries: 1 - 99

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2.31 INTER OFFICE FWD

Description: Enter the number of inter-office calls that can be forwarded.
Valid Entries: 1 - 99

NESS TRIGGERS

Fields Section 2.32 - Section 2.34 refer to NESS (Network Element Services Signaling) triggers. NESS triggers launch a query on an external database based on the calling number. These fields support the ASP NESS secured feature. For information on this feature, see Division 2, Section 4A185.

2.32 NESS TRIG NBR

Description: Enter the Network Element Services Number.

Software Release 5E9(2) and later.
Valid Entries: 1 - 255

Data Rules:

Only one type of TRIG NBR may be entered: "ORIG", "TERM", or "NESS".

When NESS TRIG NBR is entered, it must be defined on an NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "ROD1".

2.33 NESS TRIG ACT

Description: Is the Network Element Services Signaling active?

Software Release 5E9(2) and later.
Required Field.
Default Value: N
Valid Entries: Y, N

Data Rules:

When NESS TRIG ACT is "Y", NESS TRIG NBR must be entered.

When the ASP NESS secured feature is assigned to a line, the SFID ACT field must be set to "Y" on the SFSYS form (5713-1 Record).

2.34 NESS SCRN GRP

Description: Enter the Network Element Services Signaling screening group.

Software Release 5E9(2) and later.
Valid Entries: 1 - 255

Data Rules:

When NESS SCRN GRP is entered, it must be defined on an ASPGRP form (5634 Record)

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E		O N T R O L	TRIG NBR	TRIG ACT	TRIG NBR	TRIG ACT	DALD TRIG ACT	ALAD TRIG ACT	TRIG ACT	LTR TRIG NBR	LTR TRIG ACT	ATR TRIG NBR	ATR TRIG ACT	NAT IMER TRIG ACT	TRIG NBR	TRIG ACT	DFLT CODE	NREARR OFFWD	NREEF OFFWD	STR TRIG NBR	STR TRIG ACT	SCRN GRP
/AO*	WILD CARD	ORIG		N		N	N	N	N	N							N					
/ASPORIG	ASP ORIGINATING FEATURE	ORIG		N		N	N	N	N	N							N					
/ASPTERM	ASP TERMINATING FEATURE	TERM		N		N	N	N	N	N							N	N	99	1			
/ASPNESS	ASP NESS FEATURE	NESS		N		N	N	N	N	N							N	N				N	

Figure 1 PRECONSTRUCTED ASP FEATURES 5E10 AND LATER SOFTWARE RELEASES

SCREEN 1 OF 3 5ESS Switch
aspfd OFFICE DATA ADMINISTRATION
(5632-1) ADVANCED SERVICES PLATFORM FEATURE DEFINITION

*2. FEATURE _____ 3. REMARKS _____

========== FEATURE OPTIONS ==========
#4. CONTROL ____
========== DEFAULT PARAMETERS ==========

ORIGINATING TRIGGERS			ORIGINATING TRIGGERS		
TRIG TYPE	TRIG NBR	TRIG ACT	TRIG TYPE	TRIG NBR	TRIG ACT
5. OHI	___	N	13. OBL	___	N
7. OHD	___	N	15. ONA	___	N
TRIG TYPE	ALLOWED	TRIG ACT			
9. FCD	N	N	17. ONA TIMER ___		
11. CDP	N	N			

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```
SCREEN 2 OF 3                5ESS Switch
aspfd                OFFICE DATA ADMINISTRATION
(5632-1)       ADVANCED SERVICES PLATFORM FEATURE DEFINITION

            TERMINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  DFLT ROUTE
18. TA        ___       N          N


21. INTRA OFFICE FWD __
22. INTER OFFICE FWD __
```

```
SCREEN 3 OF 3                5ESS Switch
aspfd                OFFICE DATA ADMINISTRATION
(5632-1)       ADVANCED SERVICES PLATFORM FEATURE DEFINITION

            NESS TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  SCRN GRP
23. NESS      ___       N         ___
```

Figure 2 SAMPLE ASPFD FORM 5E12 - 5E13 SOFTWARE RELEASES

```
SCREEN 1 OF 3                5ESS Switch
aspfd                OFFICE DATA ADMINISTRATION
(5632-1)       ADVANCED SERVICES PLATFORM FEATURE DEFINITION

*2. FEATURE ________             3. REMARKS ____________________________________

============================  FEATURE OPTIONS  ================================
#4. CONTROL ____
============================ DEFAULT PARAMETERS ================================
     ORIGINATING TRIGGERS                    ORIGINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  DFLT ROUTE   TRIG TYPE  TRIG NBR  TRIG ACT
  5. OHI       ___       N              14. OBL       ___       N
  7. OHD       ___       N        N     15. ONA       ___       N
 TRIG TYPE  ALLOWED   TRIG ACT
 10. FCD       N         N              18. ONA TIMER ___
 12. CDP       N         N
```

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SCREEN 2 OF 3 5ESS Switch
aspfd OFFICE DATA ADMINISTRATION
(5632-1) ADVANCED SERVICES PLATFORM FEATURE DEFINITION

TERMINATING TRIGGERS
TRIG TYPE TRIG NBR TRIG ACT DFLT ROUTE
19. TAT ___ N N
22. TBL ___ N
25. TNA ___ N

28. TNA TIMER ___

29. INTRA OFFICE FWD __
30. INTER OFFICE FWD __

SCREEN 3 OF 3 5ESS Switch _
aspfd OFFICE DATA ADMINISTRATION
(5632-1) ADVANCED SERVICES PLATFORM FEATURE DEFINITION

NESS TRIGGERS
TRIG TYPE TRIG NBR TRIG ACT SCRN GRP
31. NESS ___ N ___

Figure 3 SAMPLE ASPFD FORM 5E14 SOFTWARE RELEASES

aspfd 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION

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```
(5632-1)       ADVANCED SERVICES PLATFORM FEATURE DEFINITION

*2. FEATURE ________            3. REMARKS ____________________________

========================== FEATURE OPTIONS ================================
#4. CONTROL ____
========================== DEFAULT PARAMETERS ================================
     ORIGINATING TRIGGERS                  ORIGINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT DFLT ROUTE   TRIG TYPE  TRIG NBR  TRIG ACT
 5. OHI       ___       N             14. OBL      ___       N
 7. OHD       ___       N       N     16. ONA      ___       N
 TRIG TYPE  ALLOWED   TRIG ACT
 10. FCD      N         N             18. ONA TIMER ___
 12. CDP      N         N
```

```
aspfd                      5ESS Switch
SCREEN 2 OF 3           OFFICE DATA ADMINISTRATION
(5632-1)       ADVANCED SERVICES PLATFORM FEATURE DEFINITION

           TERMINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  DFLT ROUTE
19. TGT       ___       N         N
23. TAT       ___       N         N
26. TBL       ___       N
29. TNA       ___       N

32. TNA TIMER  ___
33. INTRA OFFICE FWD __
34. INTER OFFICE FWD __
```

```
aspfd                      5ESS Switch         _
SCREEN 3 OF 3           OFFICE DATA ADMINISTRATION
(5632-1)       ADVANCED SERVICES PLATFORM FEATURE DEFINITION

           NESS TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  SCRN GRP
35. NESS      ___       N         ___
```

Figure 4 SAMPLE ASPFD FORM 5E15 AND SOFTWARE RELEASES

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SEC. 31B: 5632-2 RECORD
ADVANCED SERVICES PLATFORM (TN) PARAMETERS FORM - ASPLPA

1. GENERAL

The 5632-2 Record is available with 5E9(1) and later Software Releases, and defines ASP Line Parameters. The Line Parameter Form is used when an ASPFD constructed feature is assigned to a non-Multi-Line Hunt line and the desired parameters are different from the default parameters on the ASPFD form (5632-1 Record).

See Division 2, Section 1AP for more information on ASP.

It is recommended that the default parameter for the name of the ASP feature group be defined on the ASPFD form for the specific (constructed) ASP feature name. Then when the ASP feature name is assigned to a line on the LINEFA form (5112 Record) the default parameter will apply to that line without submitting an ASPLPA form.

For 5E14 and earlier, at least one of OHI TRIG NBR, OHD TRIG NBR, or TA TRIG NBR must be entered, or one of FCD ALLOWED or CDP ALLOWED must equal "Y".

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TN

Description: Enter the TN.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9
- and X is 0 - 9

Data Rules:

TNs assigned an ASP feature on this form must have a corresponding LINEFA or CLUSTR form with the same feature name.

For 5E12 and later, TN/FEATURE combinations on different ASPLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ASPLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the feature name.

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Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E14 and earlier, an ASP feature assigned to a TN on the LINEFA form must have at least one TRIG NBR (OHI, OHD, or TA) entered or one ALLOWED field (FCD or CDP) set to "Y" on the ASPFD, ASPLPA, or ASPDP (for 5E9(1)) forms.

FEATURE must be defined on the corresponding ASPFD form.

ORIGINATING TRIGGERS

Fields Section 2.4 - Section 2.17 refer to originating triggers. Originating triggers launch a query based on the calling number.

If CONTROL on the ASPFD form equals "TERM", OHI TRIG NBR, OHD TRIG NBR, FCD ALLOWED, and CDP ALLOWED cannot be "Y".

2.4 OHI TRIG NBR

Description: Enter the Off-Hook Immediate trigger number. The Off-Hook Immediate trigger is a subscribed trigger, that queries the SCP without referencing a dialing plan after the subscriber goes off-hook.
Valid Entries: 1 - 255

Data Rules:

If OHI TRIG NBR is entered:

- OHD TRIG NBR must not be entered, and
- FCD ALLOWED and CDP ALLOWED must be "N".

For 5E9(2) and earlier, for every OHI TRIG NBR on this form there must be a corresponding TRIG NBR on the NSTRIG form (5324 Record), and APPLICATION must equal "ASP". If AIN REL is "R0" on the NSTRIG form, then SERV KEY must be "ANI".

For 5E10 and later, for every OHI TRIG NBR on the ASPLPA form there must be a corresponding TRIG NBR entered on a NSTRIG form, APPLICATION must be "ASP" and SERVICE ALWD must not be "CSD". In addition, on the NSTRIG form when AIN REL equals "R0", SERV KEY must be "ANI".

For an ASP feature assigned to a TN on the LINEFA form, if OHI TRIG NBR is entered on the ASPFD, or ASPLPA, or ASPDP (for 5E9(1)), the only other BCRS feature that may be assigned is a terminating ASP feature.

For an ASP feature assigned to a TN on the LINEFA form or an associated CLUSTR form (5600 Record), if OHI TRIG NBR is entered on the ASPFD, or ASPLPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form (5306 Record) must have CLASS OF SERVICE of "INDIV".

For 5E9(2) and later, if

- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")

and

- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a CLUSTR form containing an ASP

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feature assigned

and

- the associated ASPFD or ASPLPA (or ASPMPA) form has OHI TRIG NBR entered,

then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

2.5 OHI TRIG ACT

Description: Is the Off-Hook Immediate trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHI TRIG ACT is "Y", OHI TRIG NBR must be entered.

2.6 OHD TRIG NBR

Description: Enter the Off-Hook Delay trigger number. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHD TRIG NBR is entered, CDP ALLOWED must be "N".

OHD TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION equals "ASP".

For an ASP feature assigned to a TN on the LINEFA form or an associated CLUSTR form, if OHD TRIG NBR is entered on the ASPFD, or ASPLPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

For an ASP feature assigned to a TN on the LINEFA form, if OHD TRIG NBR is entered on the ASPFD, or ASPLPA, or ASPDP (for 5E9(1)) forms, the only other BCRS feature that may be assigned is at most one terminating ASP feature.

For 5E9(2) and later, no other BRCS features may be assigned except at most one ASP terminating feature where CONTROL on the ASPFD form is "TERM" when the following conditions hold:

- ASP BRCS/OHD Interworking secured feature has been purchased with SFID ACT 137 field set to "Y" on the SFSYS form,

and/or

- ASP OHD Interactions with Account Code and CPN/BN secured feature has been purchased with SFID ACT 150 field set to "Y" on the SFSYS form,

and/or

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- ASP NESS secured feature has been purchased with SFID ACT 185 field set to "Y" on the SFSYS form,

and/or

- ASP BRCS/OHD Interworking Extensions secured feature has been purchased with SFID ACT 226 field set to "Y" on the SFSYS form

and

- TN (or MLHG/TERM) appears on the LINEFA (or MLHLNFA) form with an ASP feature assigned on the LINEFA (or MLHLNFA) or corresponding CLUSTR form

and

- the ASP feature is defined on the ASPFD, ASPLPA (or ASPMPA) with OHD TRIG NBR entered

and

- the TN (or MLHG/TERM) is defined on a DSLUSR form as CKT TN (or CKT MLHG/TERM) and DLS CLS on the corresponding DSL form is not "STD".

If the following conditions exists:

- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")

and

- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a CLUSTR form containing an ASP feature assigned

and

- the associated ASPFD or ASPLPA (or ASPMPA) form has OHD TRIG NBR entered

and

- the TN (or MLHG/TERM) is either defined on the LINE (or MLHLN) or DSLUSR form as CKT TN (or CKT MLHG/TERM) where DSL CLS on the corresponding DSL form is "STD",

then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

2.7 OHD TRIG ACT

Description: Is the Off-Hook Delay trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If OHD TRIG ACT is "Y", OHD TRIG NBR must be entered.

2.8 OHD DFLT ROUTE

Description: Is the Off-Hook Delay Default Route active for the purpose? See Division 2, Section 4A516.

Software Release: 5E14 and later.
Default: N
Valid Entries: Y, N

Data Rules:

If OHD DFLT ROUTE is "Y", OHD TRIG NBR must be entered.

For 5E14 and later, if OHD DFLT ROUTE is "Y", SFID 516 must be activated on the SFSYS form (5713 Record).

2.9 FCD ALLOWED

Description: Is the feature code dialing trigger allowed? Feature Code Dialing (formerly the ODP Prefix/Code trigger) is a subscribed trigger, querying the SCP when a subscriber goes off-hook and dials an ASP FCD access code. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For an ASP feature assigned to a TN on the LINEFA form or an associated CLUSTR form, if FCD ALLOWED is "Y" on the ASPFD, or ASPLPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

2.10 FCD TRIG ACT

Description: Is the feature code dialing trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If FCD TRIG ACT is "Y", FCD ALLOWED must be "Y".

2.11 CDP ALLOWED

Description: Is the customized dialing plan trigger allowed? Customized Dialing Plan (formerly the IDP trigger) uses the IDP capabilities to access ASP. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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For an ASP feature assigned to a TN on the LINEFA form or an associated CLUSTR form, if CDP ALLOWED is "Y" on the ASPFD, or ASPLPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

2.12 CDP TRIG ACT

Description: Is the customized dialing plan trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDP TRIG ACT is "Y", CDP ALLOWED must be "Y".

2.13 OBL TRIG NBR

Description: Enter the originating busy line trigger number. This field indicates the unique location of the network service for the ASP originating busy line trigger. This field has been added to support the Advanced Service Platform Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later.
Valid Entries: Blank or 1 - 255

Data Rules:

If OBL TRIG NBR is entered, the LCC form associated with this line must have a Class Of Service of "ATND", "CHGCALL", "COIN", "HOTMOTL", "INDIV", "ISATND", "MODEM", "PBX", "TWOPTY", "2PTY", "4WINDIV", "ISDN" or "HOTPBX". Otherwise, the ASP BLNA feature is only allowed for lines with Class Of Service of "INDIV", "ISDN", "ATND" or "ISATND".

OBL TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "RODI".

2.14 OBL TRIG ACT

Description: Is the ASP originating busy line trigger active? This field has been added to support the Advanced Service Platform Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When OBL TRIG ACT is "Y", OBL TRIG NBR must be entered.

2.15 ONA TRIG NBR

Description: Enter the originating no answer trigger number. This field specifies the number used to locate the unique network service for the ASP originating no answer trigger. This field has been added to support the Advanced Service Platform Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later.
Valid Entries: Blank or 1 - 255

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Data Rules:

If ONA TRIG NBR is entered, the LCC form associated with this line must have a Class Of Service of "ATND", "CHGCALL", "COIN", "HOTMOTL", "INDIV", "ISATND", "MODEM", "PBX", "TWOPTY", "2PTY", "4WINDIV", "ISDN" or "HOTPBX". Otherwise, the ASP BLNA feature is only allowed for lines with Class Of Service of "INDIV", "ISDN", "ATND" or "ISATND".

ONA TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "RODI".

2.16 ONA TRIG ACT

Description: Is the ASP originating no answer trigger active or inactive?

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ONA TRIG ACT is "Y", ONA TRIG NBR must be entered.

2.17 ONA TIMER

Description: Enter the no answer timeout value in seconds for ASP busy line no answer. The ONA TIMER field is used to set up originating no answer trigger timer.

Software Release: 5E12 and later.
Valid Entries: 1 - 120 in seconds

Data Rules:

When ONA TIMER is entered, ONA TRIG NBR must be entered.

TERMINATING TRIGGERS

Fields Section 2.18 - Section 2.20 refer to terminating triggers. Terminating triggers launch a query based on the number called.

If CONTROL on the ASPFD form equals "ORIG", no terminating triggers can be assigned.

2.18 TA TRIG NBR

Description: Enter the terminating attempt trigger number. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If TA TRIG NBR is entered:

- OHI TRIG NBR and OHD TRIG NBR must not be entered,
- OBL TRIG NBR, ONA TRIG NBR and NESS TRIG NBR, and
- FCD ALLOWED and CDP ALLOWED must be "N".

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TA TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "R0D1".

No more than one ASP feature with a TA TRIG NBR entry on an ASPFD, or ASPLPA, or ASPDP (for 5E9(1)) form may be assigned to a TN on a LINEFA or associated CLUSTR form.

2.19 TA TRIG ACT

Description: Is the terminating attempt trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA TRIG ACT is "Y", TA TRIG NBR must be entered.

2.20 TA DFLT ROUTE

Description: Is the terminating attempt trigger default routing active?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA DFLT ROUTE is "Y", TA TRIG NBR must be entered.

The TA DFLT ROUTE field is used by the ASP Default Routing for Terminating Attempt Triggers Special Feature. It is a secured feature and must be purchased by the office before this field can be set to "Y". If this field is set to "Y", a SFSYS form must exist with SFID 136 ACT field set to "Y".

2.21 TBL TRIG NBR

Description: This field is used to locate the unique network service for the ASP terminating busy line trigger.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 255

Data Rules:

When TBL TRIG NBR is entered:

- OHI TRIG NBR, OHD TRIG NBR, OBL TRIG NBR, ONA TRIG NBR, and NESS TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".
- the SFSYS form (5713-1 Record) must have the ACT field for SFID 507 set to "Y".

If TBL TRIG NBR matches TRIG NBR on the NSTRIG form (5324 Record), then the fields listed must be defined on the NSTRIG form as follows:

- APPLICATION must be set to "ASP",
- AIN REL must be set to "R0D1",

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- SERVICE must not be set to "CSD".

2.22 TBL TRIG ACT

Description: Is terminating busy line trigger active? This field is used to indicate whether the ASP terminating busy line trigger is active or inactive.

Required Field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TBL TRIG ACT is "Y", TBL TRIG NBR must be entered.

2.23 TNA TRIG NBR

Description: This field is used to locate the unique network service for the ASP terminating no answer trigger.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 255

Data Rules:

When TNA TRIG NBR is entered:

- OHI TRIG NBR, OHD TRIG NBR, OBL TRIG NBR, ONA TRIG NBR, and NESS TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".
- the ACT field for SFID 507 on the SFSYS form (5713-1 Record) must be set to "Y".

If TNA TRIG NBR matches TRIG NBR on the NSTRIG form (5324 Record), then the fields listed must be defined on the NSTRIG form as follows:

- APPLICATION must be set to "ASP",
- AIN REL must be set to "R0D1",
- SERVICE must not be set to "CSD".

2.24 TNA TRIG ACT

Description: Is terminating no answer trigger active? This field is used to indicate whether the ASP terminating no answer trigger is active or inactive.

Required Field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

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When TNA TRIG ACT is "Y", TNA TRIG NBR must be entered.

2.25 TNA TIMER

Description: This field is used to set up terminating no answer trigger timer.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 120 in seconds

Data Rules:

When TNA TIMER is entered, TNA TRIG NBR must be entered.

2.26 INTRA OFFICE FWD

Description: Enter the number of intra-office calls that can be forwarded.
Valid Entries: 1 - 99

2.27 INTER OFFICE FWD

Description: Enter the number of inter-office calls that can be forwarded.
Valid Entries: 1 - 99

NESS TRIGGERS

Fields Section 2.28 - Section 2.30 refer to NESS (Network Element Services Signaling) triggers. NESS triggers launch a query on an external database based on the calling number. These fields support the NESS ASP secured feature. For information on this feature, see Division 2, Section 4A185.

2.28 NESS TRIG NBR

Description: Enter the Network Element Services Number.

Software Release: 5E9(2) and later.
Valid Entries: 1 - 255

Data Rules:

When NESS TRIG NBR is entered, NESS SCRN GRP must be entered.

Only one type of TRIG NBR may be entered: ORIGINATING, TERMINATING, or NESS.

When TN on a LINEFA form with an ASP feature assigned on the LINEFA or corresponding CLUSTR form has the NESS TRIG NBR entered on the associated ASPFD or ASPLPA form, then the NESS TRIG NBR must be defined on an NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "ROD1".

For 5E14 and later, when NESS TRIG NBR is entered, OHI TRIG NBR, OHD TRIG NBR, OBL TRIG NBR, ONA TRIG NBR, TAT TRIG NBR, TNA TRIG NBR, and TBL TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".

2.29 NESS TRIG ACT

Description: Is the Network Element Services Signaling active?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

When NESS TRIG ACT is "Y", NESS TRIG NBR must be entered.

When the ASP NESS secured feature is assigned to a line, the SFID ACT 185 field must be set to "Y" on the SFSYS form (5713-1 Record).

2.30 NESS SCRN GRP

Description: Enter the Network Element Services Signaling screening group.

Software Release: 5E9(2) and later.
Valid Entries: 1 - 255

Data Rules:

Data Rules:

When NESS SCRN GRP is entered, NESS TRIG NBR must be entered.

When NESS SCRN GRP is entered, it must be defined on an ASPGRP form (5634 Record).

---

asplpa 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5632-2) ADVANCED SERVICES PLATFORM (TN) PARAMETERS

*1. TN _____
*2. FEATURE _____

ORIGINATING TRIGGERS

TRIG TYPE	TRIG NBR	TRIG ACT	TRIG TYPE	TRIG NBR	TRIG ACT
3. OHI	___	N	11. OBL	___	N
5. OHD	___	N	13. ONA	___	N

TRIG TYPE	ALLOWED	TRIG ACT	15. ONA TIMER ___
7. FCD	N	N	
9. CDP	N	N	

---

asplpa 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5632-2) ADVANCED SERVICES PLATFORM (TN) PARAMETERS

TERMINATING TRIGGERS

TRIG TYPE	TRIG NBR	TRIG ACT	DFLT ROUTE
16. TA	___	N	N

19. INTRA OFFICE FWD __
20. INTER OFFICE FWD __

---

asplpa 5ESS Switch

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SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5632-2) ADVANCED SERVICES PLATFORM (TN) PARAMETERS

NESS TRIGGERS
TRIG TYPE TRIG NBR TRIG ACT SCRN GRP
21. NESS ___ N ___

Figure 1 SAMPLE ASPLPA FORM 5E12 -5E13 SOFTWARE RELEASES

asplpa 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5632-2) ADVANCED SERVICES PLATFORM (TN) PARAMETERS

*1. TN _____
*2. FEATURE _____

ORIGINATING TRIGGERS

TRIG TYPE TRIG NBR TRIG ACT DFLT ROUTE TRIG TYPE TRIG NBR TRIG ACT
3. OHI ___ N 12. OBL ___ N
5. OHD ___ N N 13. ONA ___ N

TRIG TYPE ALLOWED TRIG ACT 16. ONA TIMER ___
8. FCD N N
10. CDP N N

asplpa 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5632-2) ADVANCED SERVICES PLATFORM (TN) PARAMETERS

TERMINATING TRIGGERS
TRIG TYPE TRIG NBR TRIG ACT DFLT ROUTE
17. TAT ___ N N
20. TBL ___ N
23. TNA ___ N

26. TNA TIMER ___

27. INTRA OFFICE FWD __
28. INTER OFFICE FWD __

asplpa 5ESS Switch _

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SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5632-2) ADVANCED SERVICES PLATFORM (TN) PARAMETERS

NESS TRIGGERS
TRIG TYPE TRIG NBR TRIG ACT SCRN GRP
29. NESS ___ N ___

Figure 2 SAMPLE ASPLPA FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 31C: 5632-3 RECORD
ADVANCED SERVICES PLATFROM (MLHG/TERM) PARAMETERS FORM - ASPMPA

1. GENERAL

The ASPMPA Record is available with 5E9(1) and later Software Releases, and defines ASP Multi-Line Hunt line parameters. The Line (MLHG/Term) Parameter Form is used when an ASP constructed feature is assigned to a Multi-Line Hunt line, and the desired parameters are different from the default parameters on the ASPFD form (5632-1 Record).

See Division 2, Section 1AP for more information on ASP.

It is recommended that the default parameter for the name of the ASP feature Group be defined on the ASPFD form for the specific (constructed) ASP feature name. Then when the ASP feature name is assigned to a Multi-Line Hunt line on the MLHLNFA form (5113 Record), the default parameter will apply without submitting an ASPMPA form.

For 5E14 and earlier, at least one of OHI TRIG NBR, OHD TRIG NBR, or TA TRIG NBR must be entered, or one of FCD ALLOWED or CDP ALLOWED to "Y".

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

MLHG/TERM(s) assigned an ASP feature on this form must have a corresponding MLHG/TERM on an MLHLNFA or an associated CLUSTR form with the same feature name.

2.3 * TERM

Description: Enter the Member Number of the MLHG.

Required Field.
Valid Entries: 1 - 2015
- 3001-3999 (outdial terminals)

Data Rules:

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MLHG/TERM(s) assigned an ASP feature on this form must have a corresponding MLHG/TERM on an MLHLNFA or an associated CLUSTR form with the same feature name.

2.4 * FEATURE

Description: Enter the feature name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

FEATURE must equal FEATURE on the corresponding ASPFD form.

For 5E14 and earlier, an ASP feature assigned to an MLHG on the MLHLNFA form must have at least one TRIG NBR (OHI, OHD, or TA) entered or one ALLOWED field (FCD or CDP) set to "Y" on the ASPFD, or ASPMPA, or ASPDP (for 5E9(1)) forms.

ORIGINATING TRIGGERS

Fields Section 2.5 - Section 2.15 refer to originating triggers. Originating triggers launch a query based on the calling number.

If CONTROL on the ASPFD form equals "TERM", OHI TRIG NBR, OHD TRIG NBR, FCD ALLOWED, and CDP ALLOWED cannot be "Y".

2.5 OHI TRIG NBR

Description: Enter the Off-Hook Immediate trigger number. The Off-Hook Immediate trigger is a subscribed trigger, that queries the SCP without referencing a dialing plan after the subscriber goes off-hook. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHI TRIG NBR is entered:

- OHD TRIG NBR must not be entered, and
- FCD ALLOWED and CDP ALLOWED must be "N".

For 5E9(2) and earlier, for every OHI TRIG NBR there must be a corresponding TRIG NBR entered on the NSTRIG form (5324 Record), and APPLICATION equal "ASP". If AIN REL is "R0" on the NSTRIG form, then SERV KEY must be "ANI".

For 5E10 and later, for every OHI TRIG NBR on the ASPMPA form there must be a corresponding TRIG NBR entered on a NSTRIG form, APPLICATION must be "ASP" and SERVICE ALWD must not be "CSD". In addition, on the NSTRIG form when AIN REL equals "R0", SERV KEY must be "ANI".

For an ASP feature assigned to an MLHG/TERM on the MLHLNFA form, if OHI TRIG NBR is entered on the ASPFD, or ASPMPA, or ASPDP (for 5E9(1)) forms, the only other BCRS feature that may be assigned is a terminating ASP feature.

For an ASP feature assigned to an MLHG/TERM on the MLHLNFA form or an associated CLUSTR form (5600 Record), if OHI TRIG NBR is entered on the ASPFD, or ASPMPA, or ASPDP (for 5e9(1)) forms, the corresponding LCC form (5306 Record) must have CLASS OF SERVICE of "INDIV".

For 5E9(2) and later, if

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- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")
- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a corresponding CLUSTR form with an ASP feature assigned
- the associated ASPFD or ASPLPA (or ASPMPA) form has OHI TRIG NBR entered,

then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

2.6 OHI TRIG ACT

Description: Is the Off-Hook Immediate trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHI TRIG ACT is "Y", OHI TRIG NBR must be entered.

2.7 OHD TRIG NBR

Description: Enter the Off-Hook Delay trigger number. The Off-Hook Delay trigger is a subscribed originating trigger that queries the SCP data base after all dialed/signaled digits have been collected and validated from the originating line/trunk. If the dialed/signaled digits have been defined as an escape code digit string, a query is not launched; rather, normal call processing treatment is applied. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHD TRIG NBR is entered, CDP ALLOWED must be "N".

OHD TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION equals "ASP".

For an ASP feature assigned to an MLHG/TERM on the MLHLNFA form or an associated CLUSTR form, if OHD TRIG NBR is entered on the ASPFD, or ASPMPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

For an ASP feature assigned to an MLHG on the MLHLNFA form, if OHD TRIG NBR is entered on the ASPFD, or ASPMPA, or ASPDP (for 5E9(1)) forms, the only other BCRS feature that may be assigned is at most one terminating ASP feature.

For 5E9(2) and later, if

- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")
- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a corresponding CLUSTR form with an ASP feature assigned
- the associated ASPFD or ASPLPA (or ASPMPA) form has OHD TRIG NBR entered
- the TN (or MLHG/TERM) is either defined on the LINE (or MLHLN) or DSLUSR form as CKT TN (or CKT MLHG/TERM) where DSL CLS on the corresponding DSL form is "STD",

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then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

No other BRCS features may be assigned except at most one ASP terminating feature where CONTROL on the ASPFD form is "TERM" when the following conditions hold:

- one of the following secured features is active:
  - ASP BRCS/OHD Interworking secured feature has been purchased with SFID ACT 137 field set to "Y" on the SFSYS form,
  - ASP OHD Interactions with Account Code and CPN/BN secured feature has been purchased with SFID ACT 150 field set to "Y" on the SFSYS form,
  - ASP NESS secured feature has been purchased with SFID ACT 185 field set to "Y" on the SFSYS form,
  - ASP BRCS/OHD Interworking Extensions secured feature has been purchased with SFID ACT 226 field set to "Y" on the SFSYS form
- TN (or MLHG/TERM) appears on the LINEFA (or MLHLNFA) form with an ASP feature assigned on the LINEFA (or MLHLNFA) or corresponding CLUSTR form
- the ASP feature is defined on the ASPFD, ASPLPA (or ASPMPA) with OHD TRIG NBR entered
- the TN (or MLHG/TERM) is defined on a DSLUSR form as CKT TN (or CKT MLHG/TERM) and DLS CLS on the corresponding DSL form is nor "STD".

2.8 OHD TRIG ACT

Description: Is the Off-Hook Delay trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHD TRIG ACT is "Y", OHD TRIG NBR must be entered.

2.9 OHD TRIG NBR

Description: Enter the Off-Hook Delay trigger number. The Off-Hook Delay trigger is a subscribed originating trigger that queries the SCP data base after all dialed/signaled digits have been collected and validated from the originating line/trunk. If the dialed/signaled digits have been defined as an escape code digit string, a query is not launched; rather, normal call processing treatment is applied. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHD TRIG NBR is entered, CDP ALLOWED must be "N".

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if OHD TRIG NBR is entered on the ASPFD, ASPLPA, ASPMPA, ASPDP (for

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5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

For an ASP feature assigned to a TN on the LINEFA form, TGN/MEMB on the TRUNKFA form, TRUNK GROUP on the TKGRPFA form, or MLHG on the MLHLNFA form, if OHD TRIG NBR is entered on the ASPFD, ASPLPA, ASPMPA, ASPTPA ASPDP (for 5E9(1)) forms, then

- no other BRCS feature may be assigned to the line or Multi-Line Hunt Group except one terminating ASP feature with CONTROL set to "TERM", and no other features may be assigned to the trunk or trunk group.

For the ASP BRCS Off-Hook Delayed Interworking secured feature (See Division 2, Section 4A137):

- if SFID 137 ACT is "Y" on the SFSYS form and the TN or MLHG/TERM is either defined on a LINE, MLHLN form or on a DSLUSR form as CKT TN or CKT MLHG/TERM where DSL CLS on the corresponding DSL form is "STD", the only other BRCS features allowed to be assigned to the line or Multi-Line Hunt Group are those defined on the following forms:
  - ASPFD form with CONTROL set to "TERM"
  - CFWFD form with FWD COND set to "BUSY", "IDLE" or "BOTH"
  - CWTFD form with INVOKE set to "TERM"
  - MWFD form with CONTROL not set to "CODEALT".

NOTE: No other ASP originating features may be assigned to the line or Multi-Line Hunt Group.

- if BFGN is entered on the LINEFA or MLHLNFA form, the ASP (Advanced Service Platform) BRCS/OHD Interworking secured feature must be purchased and SFID ACT 137 must be "Y" on the SFSYS form.
- if SFID 137 ACT is "Y" on the SFSYS form and the TN or MLHG/TERM is either defined on a LINE, MLHLN form or on a DSLUSR form as CKT TN or CKT MLHG/TERM where DSL CLS on the corresponding DSL form is not set to "STD", no other BRCS features may be assigned except at most one ASP terminating feature with CONTROL set to "TERM".

OHD TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION is "ASP".

For an ASP feature assigned to a TGN/MEMB on the TKGRPFA or an associated CLUSTR form, if OHD TRIG NBR is entered on an ASPFD, ASPTPA, or ASPDP (for 5E9(1)) form, the TGN must be defined on the TKGRP form with TRKCLS of "PF", "PFITT", "PFLASH", "EDSL" or "EDSLHM".

When an ASP feature is assigned to a TN or MLHG/TERM on the LINEFA, MLHLNFA or a corresponding CLUSTR form, and an associated ASPFD, ASPLPA, ASPMPA, or ASPDP (for 5E9(1)) form has OHD TRIG NBR entered, and the TN or MLHG/TERM is defined on a DSLUSR form as CKT TN or CKT MLHG/TERM, then

- if CKT LCC/RAX on the DSLUSR form is defined on an LCC form with CLASS OF SERVICE of "ISDN" and the OHD TRIG NBR is defined on an NSTRIG form with APPLICATION set to "ASP", AIN REL on the NSTRIG form must be "R0D1" if a corresponding DSL form has DSL CLS of "STD", AIN REL must be "R0" if DSL CLS not set to "STD".

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The only other BRCS features allowed to be assigned to a line are those defined on the ACCTFD, ASPFD (CONTROL is "TERM"), CPNBNFD or RNDFD when:

- ASP OHD Interactions with Account Code and CPN/BN secured feature is active (see Division 2, Section 4A150) and
- the TN(s) (or MLHG/TERM(s)) appear on the LINEFA (or MLHLNFA) form with an ASP feature assigned or a CLUSTER containing an ASP feature assigned and
- OHD TRIG NBR is entered on the associated ASPFD or ASPLPA form and
- the TN (or MLHG/TERM) is either defined on a LINE (or MLHLN) form or on a DSLUSR form as CKT TN (or CKT MLHG/TERM) where DSL CLS on the corresponding DSL from is "STD".

For 5E9(2) and later, if

- the ASP NESS secured feature has been purchased (SFID ACT 185 on the SFSYS form is set to "Y")

and

- a TN (or MLHG/TERM) on the LINEFA (or MLHLNFA) form with a CLUSTR form containing an ASP feature assigned

and

- the associated ASPFD or ASPLPA (or ASPMPA) form has OHD TRIG NBR entered

and

- the TN (or MLHG/TERM) is either defined on the LINE (or MLHLN) or DSLUSR form as CKT TN (or CKT MLHG/TERM) where DSL CLS on the corresponding DSL form is "STD",

then the only BRCS features allowed to be assigned to the line (or MLHG/TERM) are those defined on the ASPFD form with CONTROL set to "TERM" or "NESS".

No other BRCS features may be assigned except at most one ASP terminating feature where CONTROL on the ASPFD form is "TERM" when the following conditions hold:

- ASP BRCS/OHD Interworking secured feature has been purchased with SFID ACT 137 field set to "Y" on the SFSYS form,

and/or

- ASP OHD Interactions with Account Code and CPN/BN secured feature has been purchased with SFID ACT 150 field set to "Y" on the SFSYS form,

and/or

- ASP NESS secured feature has been purchased with SFID ACT 185 field set to "Y" on the SFSYS form,

and/or

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- ASP BRCS/OHD Interworking Extensions secured feature has been purchased with SFID ACT 226 field set to "Y" on the SFSYS form

and

- TN (or MLHG/TERM) appears on the LINEFA (or MLHLNFA) form with an ASP feature assigned on the LINEFA (or MLHLNFA) or corresponding CLUSTR form

and

- the ASP feature is defined on the ASPFD, ASPLPA (or ASPMPA) with OHD TRIG NBR entered

and

- the TN (or MLHG/TERM) is defined on a DSLUSR form as CKT TN (or CKT MLHG/TERM) and DLS CLS on the corresponding DSL form is not "STD".

2.10 OHD TRIG ACT

Description: Is the Off-Hook Delay trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHD TRIG ACT is "Y", OHD TRIG NBR must be entered.

2.11 OHD DFLT ROUTE

Description: Is the Off-Hook Delay Default Route active? See Division 2, Section 4A516.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

If OHD DFLT ROUTE is "Y", OHD TRIG NBR must be entered.

For 5E14 and later, if OHD DFLT ROUTE is "Y", SFID 516 must be activated on the SFSYS form (5713 Record).

2.12 FCD ALLOWED

Description: Is the feature code dialing trigger allowed? Feature Code Dialing (formerly the ODP Prefix/Code trigger) is a subscribed trigger, querying the SCP when a subscriber goes off-hook and dials an ASP FCD access code. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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For an ASP feature assigned to an MLHG/TERM on the MLHLNFA form or an associated CLUSTR form, if FCD ALLOWED is "Y" on the ASPFD, or ASPMPA, or ASPDP (for 5E9(1)) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

2.13 FCD TRIG ACT

Description: Is the feature code dialing trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If FCD TRIG ACT is "Y", FCD ALLOWED must be "Y".

2.14 CDP ALLOWED

Description: Is the customized dialing plan trigger allowed? Customized Dialing Plan (formerly the IDP trigger) uses the IDP capabilities to access ASP. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For an ASP feature assigned to an MLHG/TERM on the MLHLNFA form or an associated CLUSTR form, if CDP ALLOWED is "Y" on the ASPFD, or ASPMPA, or ASPDP (for 5E9(1) forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

2.15 CDP TRIG ACT

Description: Is the customized dialing plan trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDP TRIG ACT is "Y", CDP ALLOWED must be "Y".

2.16 OBL TRIG NBR

Description: This field contains the originating busy line trigger number. The trigger number is a pointer to access the particular trigger. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Valid Entries: Blank or 1-255

Data Rules:

If OBL TRIG NBR is entered, the LCC form associated with this line must have a Class Of Service of "ATND", "CHGCALL", "COIN", "HOTMOTL", "INDIV", "ISATND", "MODEM", "PBX", "TWOPTY", "2PTY", "4WINDIV", "ISDN" or "HOTPBX".

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OBL TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "RODI".

2.17 OBL TRIG ACT

Description: This field contains the originating busy line trigger status. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OBL TRIG ACT is "Y", then OBL TRIG NBR must be entered.

2.18 ONA TRIG NBR

Description: This field contains the originating no answer trigger number. The trigger number is a pointer to access the particular trigger. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Valid Entries: Blank or 1-255

Data Rules:

If ONA TRIG NBR is entered, the LCC form associated with this line must have a Class Of Service of "ATND", "CHGCALL", "COIN", "HOTMOTL", "INDIV", "ISATND", "MODEM", "PBX", "TWOPTY", "2PTY", "4WINDIV", "ISDN" or "HOTPBX".

OBL TRIG NBR must equal TRIG NBR on a corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "RODI".

2.19 ONA TRIG ACT

Description: This field contains the originating no answer trigger status. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ONA TRIG ACT is "Y", then ONA TRIG NBR must be entered.

2.20 ONA TIMER

Description: This field contains the originating no answer trigger timer. It was added to support the ASP Provisioning of Busy/No Answer Triggers feature.

Software Release: 5E12 and later
Valid Entries: Blank or 1-120 seconds

Data Rules:

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If ONA TIMER is entered, then ONA TRIG NBR must be entered.

TERMINATING TRIGGERS

Fields Section 2.21 - Section 2.23 refer to terminating triggers. Terminating triggers launch a query based on the number called.

If CONTROL on the ASPFD form equals "ORIG", no terminating triggers can be assigned.

2.21 TA TRIG NBR

Description: Enter the terminating attempt trigger number. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If TA TRIG NBR is entered:

- OHI TRIG NBR and OHD TRIG NBR must not be entered, and
- FCD ALLOWED and CDP ALLOWED must be "N".

TA TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "R0D1".

No more than one ASP feature with a TA TRIG NBR entry on an ASPFD, or ASPMPA, or ASPDP (for 5E9(1)) form may be assigned to an MLHG/TERM on an MLHLNFA or associated CLUSTR form.

2.22 TA TRIG ACT

Description: Is the terminating attempt trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA TRIG ACT is "Y", TA TRIG NBR must be entered.

2.23 TA DFLT ROUTE

Description: Is the terminating attempt trigger default routing active?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA DFLT ROUTE is "Y", TA TRIG NBR must be entered.

The TA DFLT ROUTE field is used by the ASP Default Routing for Terminating Attempt Triggers Special Feature. It is a secured feature and must be purchased by the office before this field can be set to "Y". If this field is set to "Y", a SFSYS form must exist with SFID 136 ACT field set to "Y".

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2.24 TBL TRIG NBR

Description: This field is used to locate the unique network service for the ASP terminating busy line trigger.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 255

Data Rules:

When TBL TRIG NBR is entered:

- OHI TRIG NBR, OHD TRIG NBR, OBL TRIG NBR, ONA TRIG NBR, and NESS TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".
- the SFSYS form (5713-1 Record) must have the ACT field for SFID 507 set to "Y".

If TBL TRIG NBR matches TRIG NBR on the NSTRIG form (5324 Record), then the fields listed must be defined on the NSTRIG form as follows:

- APPLICATION must be set to "ASP",
- AIN REL must be set to "R0D1",
- SERVICE must not be set to "CSD".

2.25 TBL TRIG ACT

Description: Is terminating busy line trigger active? This field is used to indicate whether the ASP terminating busy line trigger is active or inactive.

Required Field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TBL TRIG ACT is "Y", TBL TRIG NBR must be entered.

2.26 TNA TRIG NBR

Description: This field is used to locate the unique network service for the ASP terminating no answer trigger.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 255

Data Rules:

When TNA TRIG NBR is entered:

- OHI TRIG NBR, OHD TRIG NBR, OBL TRIG NBR, ONA TRIG NBR, and NESS TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".
- the SFSYS form (5713-1 Record) must have the ACT field for SFID 507 set to "Y".

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If TNA TRIG NBR matches TRIG NBR on the NSTRIG form (5324 Record), then the fields listed must be defined on the NSTRIG form as follows:

- APPLICATION must be set to "ASP",
- AIN REL must be set to "R0D1",
- SERVICE must not be set to "CSD".

2.27 TNA TRIG ACT

Description: Is terminating no answer trigger active? This field is used to indicate whether the ASP terminating no answer trigger is active or inactive.

Required Field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TNA TRIG ACT is "Y", TNA TRIG NBR must be entered.

2.28 TNA TIMER

Description: This field is used to set up terminating no answer trigger timer.

Software Release: 5E14 and later.
Valid Entries: Blank, or 1 - 120 in seconds

Data Rules:

When TNA TIMER is entered, TNA TRIG NBR must be entered.

2.29 INTRA OFFICE FWD

Description: Enter the number of intra-office calls that can be forwarded.
Valid Entries: 1 - 99

2.30 INTER OFFICE FWD

Description: Enter the number of inter-office calls that can be forwarded.
Valid Entries: 1 - 99

NESS TRIGGERS

Fields Section 2.31 - Section 2.33 refer to NESS (Network Element Services Signaling) triggers. NESS triggers launch a query on an external database based on the calling number. These fields support the ASP NESS secured feature. For information on this feature, see Division 2, Section 4A185.

2.31 NESS TRIG NBR

Description: Enter the Network Element Services Number.

Software Release: 5E9(2) and later.

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Valid Entries: 1 - 255

Data Rules:

When NESS TRIG NBR is entered, NESS SCRN GRP must be entered.

Only one type of TRIG NBR may be entered: ORIGINATING, TERMINATING, or NESS.

When an MLHG/TERM on a MLHLNFA form with an ASP feature assigned on the MLHLNFA or corresponding CLUSTR form has the NESS TRIG NBR entered on the associated ASPFD or ASPMPA form, then the NESS TRIG NBR must be defined on an NSTRIG form with APPLICATION set to "ASP" and AIN REL set to "ROD1".

For 5E14 and later, when NESS TRIG NBR is entered, OHI TRIG NBR, OHD TRIG NBR, OBL TRIG NBR, ONA TRIG NBR, TAT TRIG NBR, TNA TRIG NBR, and TBL TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".

2.32 NESS TRIG ACT

Description: Is the Network Element Services Signaling active?

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When NESS TRIG ACT is "Y", NESS TRIG NBR must be entered.

When the ASP NESS secured feature is assigned to a line, the SFID ACT 185 field must be set to "Y" on the SFSYS form (5713-1 Record).

2.33 NESS SCRN GRP

Description: Enter the Network Element Services Signaling screening group.

Software Release: 5E9(2) and later.
Valid Entries: 1 - 255

Data Rules:

When NESS SCRN GRP is entered, NESS TRIG NBR must be entered.

When NESS SCRN GRP is entered, it must be defined on an ASPGRP form (5634 Record)

SCREEN 1 OF 3 5ESS Switch
aspmpa OFFICE DATA ADMINISTRATION
(5632-3) ADVANCED SERVICES PLATFORM (MLHG/TERM) PARAMETERS

*1. MLHG ____
*2. TERM ____
*3. FEATURE _____

ORIGINATING TRIGGERS

TRIG TYPE	TRIG NBR	TRIG ACT	TRIG TYPE	TRIG NBR	TRIG ACT
4. OHI	___	N	12. OBL	___	N

```
 6. OHD       ___       N          14. ONA       ___       N

 TRIG TYPE  ALLOWED   TRIG ACT      16. ONA TIMER ___
 8. FCD       N         N
10. CDP       N         N
```

```
SCREEN 2 OF 3                  5ESS Switch
aspmpa                 OFFICE DATA ADMINISTRATION
(5632-3)     ADVANCED SERVICES PLATFORM (MLHG/TERM) PARAMETERS

            TERMINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT   DFLT ROUTE
17. TA        ___       N          N


20. INTRA OFFICE FWD __
21. INTER OFFICE FWD __
```

```
SCREEN 3 OF 3                  5ESS Switch          _
aspmpa                 OFFICE DATA ADMINISTRATION
(5632-3)     ADVANCED SERVICES PLATFORM (MLHG/TERM) PARAMETERS

            NESS TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  SCRN GRP
22. NESS      ___       N         ___
```

Figure 1 SAMPLE ASPMPA FORM 5E12 - 5E13 SOFTWARE RELEASES

```
SCREEN 1 OF 3                  5ESS Switch
aspmpa                 OFFICE DATA ADMINISTRATION
(5632-3)     ADVANCED SERVICES PLATFORM (MLHG/TERM) PARAMETERS

*1. MLHG    ____
*2. TERM    ____
*3. FEATURE _______

                  ORIGINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT    DFLT ROUTE    TRIG TYPE  TRIG NBR  TRIG ACT
```

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```
 4. OHI      ___      N                13. OBL      ___      N
 6. OHD      ___      N          N     15. ONA      ___      N

 TRIG TYPE  ALLOWED   TRIG ACT              17. ONA TIMER ___
 9. FCD       N         N
11. CDP       N         N
```

```
SCREEN 2 OF 3                5ESS Switch
aspmpa                OFFICE DATA ADMINISTRATION
(5632-3)     ADVANCED SERVICES PLATFORM (MLHG/TERM) PARAMETERS

            TERMINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT   DFLT ROUTE
18. TAT      ___       N          N
21. TBL      ___       N
24. TNA      ___       N

27. TNA TIMER ___

28. INTRA OFFICE FWD __
29. INTER OFFICE FWD __
```

```
SCREEN 3 OF 3                5ESS Switch          _
aspmpa                OFFICE DATA ADMINISTRATION
(5632-3)     ADVANCED SERVICES PLATFORM (MLHG/TERM) PARAMETERS

            NESS TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  SCRN GRP
30. NESS     ___       N         ___
```

Figure 2 SAMPLE ASPMPA FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 31D: 5632-4 RECORD
ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS FORM - ASPTPA

1. GENERAL

The 5632-4 Record is available with 5E9(1) and later Software Releases, and assigns ASP feature parameters to trunks if the default parameters of the ASPFD form (5632-1 Record) are inappropriate or unspecified.

See Division 2, Section 1AP for more information on ASP.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

TGN must equal TRUNK GROUP on the corresponding TKGRPFA form (5206 Record).

TGN and MEMB must equal TGN and MEMB on the corresponding TRUNK (5204 Record) or TRUNKFA form (5205 Record).

2.3 * MEMB

Description: Enter the Trunk Group Member Number.

Required Field.
Valid Entries: 0 - 1951

Data Rules:

TGN and MEMB must equal TGN and MEMB on the corresponding TRUNK or TRUNKFA form.

2.4 * FEATURE

Description: Enter the feature name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

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FEATURE must equal FEATURE on the corresponding ASPFD form, and CONTROL on that ASPFD form cannot equal "TERM".

For 5E14 and earlier, an ASP feature assigned to a TGN on the TRUNKFA form must have at least one TRIG NBR (OHI, OHD, or TA) entered or one ALLOWED field (FCD or CDP) set to "Y" on the ASPFD, ASPDP (5632-5 Record), or ASPTPA forms.

ORIGINATING TRIGGERS

Fields Section 2.5 - Section 2.11 refer to originating triggers. Originating triggers launch a query based on the calling number.

OHD TRIG NBR must be entered, or FCD ALLOWED or CDP ALLOWED must equal "Y".

An ASP feature assigned to a TRUNK GROUP on the TKGRPFA form or associated CLUSTR form (5600 Record) must have OHD TRIG NBR entered, or FCD ALLOWED or CDP ALLOWED equal "Y" on an ASPFD, ASPDP, or ASPTPA form.

2.5 OHD TRIG NBR

Description: Enter the Off-Hook Delay trigger number. The Off-Hook Delay trigger is a subscribed originating trigger that queries the SCP data base after all dialed/signaled digits have been collected and validated from the originating line/trunk. If the dialed/signaled digits have been defined as an escape code digit string, a query is not launched; rather, normal call processing treatment is applied. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHD TRIG NBR is entered, CDP ALLOWED must be "N".

For an ASP feature assigned to a TGN/MEMB on the TRUNKFA form, if OHD TRIG NBR is entered on the ASPFD, ASPDP, or ASPTPA forms, the only other BCRS feature that may be assigned is a terminating ASP feature.

OHD TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form (5324 Record), where APPLICATION equals "ASP".

2.6 OHD TRIG ACT

Description: Is the Off-Hook Delay trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHD TRIG ACT is "Y", OHD TRIG NBR must be entered.

2.7 OHD DFLT ROUTE

Description: Is the Off-Hook Delay Default Route active? See Division 2, Section 4A516.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

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Data Rules:

If OHD DFLT ROUTE is "Y", OHD TRIG NBR must be entered.

For 5E14 and later, if OHD DFLT ROUTE is "Y", SFID 516 must be activated on the SFSYS form (5713 Record).

2.8 FCD ALLOWED

Description: Is the feature code dialing trigger allowed? Feature Code Dialing (formerly the ODP Prefix/Code trigger) is a subscribed trigger, querying the SCP when a subscriber goes off-hook and dials an ASP FCD access code. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

2.9 FCD TRIG ACT

Description: Is the feature code dialing trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If FCD TRIG ACT is "Y", FCD ALLOWED must be "Y".

2.10 CDP ALLOWED

Description: Is the customized dialing plan trigger allowed? Customized Dialing Plan (formerly the IDP trigger) uses the IDP capabilities to access ASP. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E15 and later, before TGN/MEMB(s) are assigned an ASP feature on either the TRUNKFA or TKGRPFA form or an associated CLUSTR form and an ASPFD or ASPTPA form exist with this feature where CDP ALLOWED is "Y" and the associated TGN defined on the TKGRP form with a TRKCLS value of "EDSL" or "EDSLHM", the following must be set to "Y" on the SFSYS form (Record 5713-1):

- ACT SFID 254 - Restrict Usage of ASP Trigger feature

  or

- ACT SFID 255 - ASP Originating Triggers feature

  and

- ACT SFID 557 - ASP CDP Trigger on PRI feature.

2.11 CDP TRIG ACT

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Description: Is the customized dialing plan trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDP TRIG ACT is "Y", CDP ALLOWED must be "Y".

TERMINATING TRIGGERS

For 5E15 and later, the following fields (Section 2.12 - Section 2.14) refer to Terminating Trunk Group Triggers. The ASP Terminating Trunk Group Trigger allows the 5ESS to provide an ASP trigger for calls terminating to designated Private Facility and Primary Rate Interface trunk groups.

See Div. 2, Sec. 4A546 for more information on the Terminating Trunk Group Trigger feature.

2.12 TGT TRIG NBR

Description: Enter the terminating trunk group trigger number.

Software Release: 5E15 and later
Valid Entries: 1 - 255

Data Rules:

When TGT TRIG ACT is "Y", TGT TRIG NBR must be entered.

When TGT DFLT ROUTE is "Y", TGT TRIG NBR must be entered.

When TGT TRIG NBR is entered, OHD TRIG NBR must not be entered and FCD ALLOWED and CDP ALLOWED must be "N".

For every TGT TRIG NBR on the ASPTPA form there must be a corresponding TRIG NBR entered on a NSTRIG form where APPLICATION equals "ASP" and AIN REL equals "R0D1".

The secured feature Terminating Trunk Group Trigger must be purchased before TGT TRIG NBR can be set to a valid value, therefore the ACT field for SFID 546 on the SFSYS form must be "Y".

2.13 TGT TRIG ACT

Description: Is the terminating trunk group trigger active?

Required Field.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When TGT TRIG ACT is "Y", TGT TRIG NBR must be entered.

2.14 TGT DFLT ROUTE

Description: Is the terminating trunk group trigger default routing active?

Software Release: 5E15 and later

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Default: N
Valid Entries: Y, N

Data Rules:

If TGTDFLT ROUTE is "Y", TGT TRIG NBR must be entered.

```
asptpa                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5632-4)      ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS

*1. TGN     1945
*2. MEMB    1948
*3. FEATURE SDG2

     ORIGINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT
 4. OHD       007       N

 TRIG TYPE  ALLOWED   TRIG ACT
 6. FCD       N         N
 8. CDP       N         N
```

Figure 1 SAMPLE ASPTPA FORM 5E9(1) - 5E13 SOFTWARE RELEASES

```
asptpa                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5632-4)      ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS

*1. TGN     ____
*2. MEMB    ____
*3. FEATURE ________

     ORIGINATING TRIGGERS
 TRIG TYPE  TRIG NBR  TRIG ACT  DFLT ROUTE
 4. OHD       ___       N         N

 TRIG TYPE  ALLOWED   TRIG ACT
 7. FCD       N         N
 9. CDP       N         N
```

Figure 2 SAMPLE ASPTPA FORM 5E14 SOFTWARE RELEASES

```
SCREEN 1 OF 2                5ESS Switch
asptpa                OFFICE DATA ADMINISTRATION
(5632-4)      ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS

*1. TGN     ____
```

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*2. MEMB ____
*3. FEATURE _____

ORIGINATING TRIGGERS

TRIG TYPE	TRIG NBR	TRIG ACT	DFLT ROUTE
4. OHD	___	N	N

TRIG TYPE	ALLOWED	TRIG ACT
7. FCD	N	N
9. CDP	N	N

SCREEN 2 OF 2 5ESS Switch _
asptpa OFFICE DATA ADMINISTRATION
(5632-4) ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS

TERMINATING TRIGGERS

TRIG TYPE	TRIG NBR	TRIG ACT	DFLT ROUTE
11. TGT	___	N	N

Figure 3 SAMPLE ASPTPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 31E: 5632-5 RECORD
ADVANCED SERVICES PLATFORM FEATURE DEFAULT PARAMETERS FORM - ASPDP

1. GENERAL

The 5632-5 Record is available with the 5E9(1) Software Release only, and defines ASP (Advanced Services Platform) parameter data on a feature basis. It recovers existing (5E8) default parameter ASP data into the new BRCS format. This form can change default parameter data, but the data cannot be changed for preconstructed ASP features on the ASPFD form (5632-1 Record).

See Division 2, Section 1AP for more information on ASP.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the ASP feature Name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

FEATURE must equal FEATURE on the corresponding ASPFD form.

An ASP feature assigned to a TN on the LINEFA form (5112 Record), an MLHG on the MLHLNFA form (5113 Record), or a TGN on the TRUNKFA form (5205 Record) must have at least one TRIG NBR (OHI, OHD, or TA) entered or one ALLOWED field (FCD or CDP) set to "Y" on the ASPFD, ASPDP, ASPLPA (5632-2 Record), ASPMPA (5632-3 Record), or ASPTPA forms (5632-4 Record).

ORIGINATING TRIGGERS

Fields Section 2.3 - Section 2.10 refer to originating triggers. Originating triggers launch a query based on the calling number.

An ASP feature assigned to a TRUNK GROUP on the TKGRPFA form (5206 Record) or associated CLUSTR form (5600 Record) must have OHD TRIG NBR entered, or FCD ALLOWED or CDP ALLOWED equal "Y" on an ASPFD, ASPDP, or ASPTPA form.

2.3 OHI TRIG NBR

Description: Enter the trigger number for Off-Hook Immediate triggers. The Off-Hook Immediate trigger is a subscribed trigger, that queries the SCP without referencing a dialing plan after the subscriber goes off-hook. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

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If OHI TRIG NBR is entered,

- OHD TRIG NBR must not be entered, and
- FCD ALLOWED and CDP ALLOWED must be "N".

OHI TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form (5324 Record), where APPLICATION equals "ASP", and when AIN REL is "R0" on the NSTRIG form, SERV KEY must be "ANI".

For an ASP feature assigned to a TN on the LINEFA form or MLHG/TERM on the MLHLNFA form, if OHI TRIG NBR is entered on the ASPFD, ASPDP, ASPLPA, or ASPMPA forms, the only other BCRS feature that may be assigned is a terminating ASP feature.

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if OHI TRIG NBR is entered on the ASPFD, ASPDP, ASPLPA, or ASPMPA forms, the corresponding LCC form (5306 Record) must have CLASS OF SERVICE of "INDIV".

2.4 OHI TRIG ACT

Description: Is the Off-Hook Immediate trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHI TRIG ACT is "Y", OHI TRIG NBR must be entered.

2.5 OHD TRIG NBR

Description: Enter the Off-Hook Delay trigger number. The Off-Hook Delay trigger is a subscribed originating trigger that queries the SCP data base after all dialed/signaled digits have been collected and validated from the originating line/trunk. If the dialed/signaled digits have been defined as an escape code digit string, a query is not launched; rather, normal call processing treatment is applied. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If OHD TRIG NBR is entered, CDP ALLOWED must be "N".

OHD TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION equals "ASP".

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if OHD TRIG NBR is entered on the ASPFD, ASPDP, ASPLPA, or ASPMPA forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

For an ASP feature assigned to a TN on the LINEFA form, TGN/MEMB on the TRUNKFA form, TRUNK GROUP on the TKGRPFA form, or MLHG on the MLHLNFA form, if OHD TRIG NBR is entered on the ASPFD, ASPDP, ASPLPA, ASPMPA, or ASPTPA forms, the only other BCRS feature that may be assigned is a terminating ASP feature.

For an ASP feature assigned to a TGN/MEMB on the TRUNKFA or TKGRPFA forms or an associated CLUSTR form, if OHI TRIG NBR or TA TRIG NBR is entered on an ASPFD or ASPDP form, an ASPTPA form must exist for this TGN/MEMB(s)/FEATURE combination. since an OHI TRIG NBR or a TA TRIG

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NBR cannot be assigned to a trunk.

2.6 OHD TRIG ACT

Description: Is the Off-Hook Delay trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If OHD TRIG ACT is "Y", OHD TRIG NBR must be entered.

2.7 FCD ALLOWED

Description: Is the feature code dialing trigger allowed? Feature Code Dialing (formerly the ODP Prefix/Code trigger) is a subscribed trigger, querying the SCP when a subscriber goes off-hook and dials an ASP FCD access code. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if FCD ALLOWED is "Y" on the ASPFD, ASPDP, ASPLPA, or ASPMPA forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

2.8 FCD TRIG ACT

Description: Is the feature code dialing trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If FCD TRIG ACT is "Y", FCD ALLOWED must be "Y".

2.9 CDP ALLOWED

Description: Is the customized dialing plan trigger allowed? Customized Dialing Plan (formerly the IDP trigger) uses the IDP capabilities to access ASP. The query method depends on which digit collection method is provisioned.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For an ASP feature assigned to a TN on the LINEFA form, MLHG/TERM on the MLHLNFA form, or an associated CLUSTR form, if CDP ALLOWED is "Y" on the ASPFD, ASPDP, ASPLPA, or ASPMPA forms, the corresponding LCC form must have CLASS OF SERVICE of "INDIV", "ATND" or "ISDN".

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2.10 CDP TRIG ACT

Description: Is the customized dialing plan trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CDP TRIG ACT is "Y", CDP ALLOWED must be "Y".

TERMINATING TRIGGERS

Fields Section 2.11 - Section 2.13 refer to terminating triggers. Terminating triggers launch a query based on the number called.

2.11 TA TRIG NBR

Description: Enter the terminating attempt trigger number. The trigger number is a pointer to access the particular trigger.
Valid Entries: 1 - 255

Data Rules:

If TA TRIG NBR is entered,

- OHI TRIG NBR and OHD TRIG NBR must not be entered, and
- FCD ALLOWED and CDP ALLOWED must be "N".

TA TRIG NBR must equal TRIG NBR on the corresponding NSTRIG form, where APPLICATION equals "ASP" and AIN REL equals "R0D1".

For an ASP feature assigned to a TGN/MEMB on the TRUNKFA or TKGRPFA forms or an associated CLUSTR form, if OHI TRIG NBR or TA TRIG NBR is entered on an ASPFD or ASPDP form, an ASPTPA form must exist for this TGN/MEMB(s)/FEATURE combination. since an OHI TRIG NBR or a TA TRIG NBR cannot be assigned to a trunk.

No more than one ASP feature with a TA TRIG NBR entry on an ASPFD, ASPDP, ASPLPA, or ASPMPA form may be assigned to a TN on a LINEFA, an MLHG/TERM on an MLHLNFA, or associated CLUSTR form.

2.12 TA TRIG ACT

Description: Is the terminating attempt trigger active for the purpose of launching an SCP query?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA TRIG ACT is "Y", TA TRIG NBR must be entered.

2.13 TA DFLT ROUTE

Description: Is the terminating attempt trigger default routing active?

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If TA DFLT ROUTE is "Y", TA TRIG NBR must be entered.

The TA DFLT ROUTE field is used by the ASP Default Routing for Terminating Attempt Triggers Special Feature. It is a secured feature and must be purchased by the office before this field can be set to "Y". If this field is set to "Y", a SFSYS form must exist with SFID 136 ACT field set to "Y".

2.14 INTRA OFFICE FWD

Description: Enter the number of intra-office calls that can be forwarded.
Valid Entries: 1 - 99

2.15 INTER OFFICE FWD

Description: Number of inter-office calls that can be forwarded.
Valid Entries: 1 - 99

---

aspdp 5ESS Switch
OFFICE DATA ADMINISTRATION
(5632-5) ADVANCED SERVICES PLATFORM DEFAULT PARAMETERS

*1. FEATURE _____

ORIGINATING TRIGGERS			TERMINATING TRIGGERS			
TRIG TYPE	TRIG NBR	TRIG ACT	TRIG TYPE	TRIG NBR	TRIG ACT	DFLT ROUTE
2. OHI ___	N	10. TA ___	N	N		
4. OHD ___	N					

TRIG TYPE	ALLOWED	TRIG ACT	13. INTRA OFFICE FWD __
6. FCD	N	N	14. INTER OFFICE FWD __
8. CDP	N	N	

Figure 1 SAMPLE ASPDP FORM 5E9(1) SOFTWARE RELEASE

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SEC. 31F: 5634 RECORD
ADVANCED SERVICES PLATFORM NESS GROUP SCREENING LIST FORM - ASPGRP

1. GENERAL

The 5634 Record is available with 5E9(2) and later Software Releases, and defines a list of TN values that are allowed to be called for a given screening list group. This screening list group is used by terminals that have the ASP (Advanced Services Platform) NESS (Network Element Services Signaling) secured feature assigned to them.

See Division 2, Section 4A185 for more information on concerning this feature.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.64.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * SCRN GRP

Description: Enter the ASP NESS screening group number.

Required Field.
Valid Entries: 1 - 255

2.3 TN

Description: Enter the a 10-digit telephone number.

Required Field.
Valid Entries: 10-digit number

Data Rules:

TN entries must be unique.

There must be at least one TN entry in the TN LIST.

SCREEN 1 OF 4 5ESS SWITCH
aspgrp OFFICE DATA ADMINISTRATION
5634 ASP NESS GROUP SCREENING LIST

*1. SCRN GRP ___

2. TN LIST

ROW	TN	ROW	TN	ROW	TN	ROW	TN
1	_____	9	_____	17	_____	25	_____
2	_____	10	_____	18	_____	26	_____
3	_____	11	_____	19	_____	27	_____
4	_____	12	_____	20	_____	28	_____

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5	_____	13	_____	21	_____	29	_____
6	_____	14	_____	22	_____	30	_____
7	_____	15	_____	23	_____	31	_____
8	_____	16	_____	24	_____	32	_____

SCREEN 2 OF 4 5ESS SWITCH
aspgrp OFFICE DATA ADMINISTRATION
5634 ASP NESS GROUP SCREENING LIST

2. TN LIST

ROW	TN	ROW	TN	ROW	TN	ROW	TN
33	_____	43	_____	53	_____	63	_____
34	_____	44	_____	54	_____	64	_____
35	_____	45	_____	55	_____	65	_____
36	_____	46	_____	56	_____	66	_____
37	_____	47	_____	57	_____	67	_____
38	_____	48	_____	58	_____	68	_____
39	_____	49	_____	59	_____	69	_____
40	_____	50	_____	60	_____	70	_____
41	_____	51	_____	61	_____	71	_____
42	_____	52	_____	62	_____	72	_____

SCREEN 3 OF 4 5ESS SWITCH
aspgrp OFFICE DATA ADMINISTRATION
5634 ASP NESS GROUP SCREENING LIST

2. TN LIST

ROW	TN	ROW	TN	ROW	TN	ROW	TN
73	_____	83	_____	93	_____	103	_____
74	_____	84	_____	94	_____	104	_____
75	_____	85	_____	95	_____	105	_____
76	_____	86	_____	96	_____	106	_____
77	_____	87	_____	97	_____	107	_____
78	_____	88	_____	98	_____	108	_____
79	_____	89	_____	99	_____	109	_____
80	_____	90	_____	100	_____	110	_____
81	_____	91	_____	101	_____	111	_____
82	_____	92	_____	102	_____	112	_____

SCREEN 4 OF 4 5ESS SWITCH
aspgrp OFFICE DATA ADMINISTRATION
5634 ASP NESS GROUP SCREENING LIST

2. TN LIST

ROW	TN	ROW	TN
113	_____	123	_____
114	_____	124	_____
115	_____	125	_____
116	_____	126	_____
117	_____	127	_____
118	_____	128	_____

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119 _____
120 _____
121 _____
122 _____

Figure 1 SAMPLE ASPGRP FORM 5E9(2) SOFTWARE RELEASE AND LATER

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SEC. 31G: 5670 RECORD
ADVANCED SERVICES PLATFORM OPTIONS - ASPOPT

1. GENERAL

The 5670 Record is available with 5E12 and later Software Releases, and is used to set the ASP office parameters for the office.

See Division 2, Section 4A126 for more information on ASP.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.49.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 *KEY

Description: Enter the key value which is always 0.

Software Release: 5E12 and later
Required Field.

2.3 MAX TRIG

Description: Enter the number of times an ASP protocol call can serially trigger.

Software Release: 5E12 and later
Valid Entries: 1 - 6

Data Rules:

When MAX TRIG is entered, then ASP OFC must be "SSP".

2.4 ACG FNL TRMT

Description: Enter the ACG (Automatic Call Gap) final treatment for calls blocked due to ACG controls.

Software Release: 5E12 and later
Required Field.
Default: RT
Valid Entries:

Valid ACG FNL TRMT Entries

Entry	Definition
RT	Reorder tone.
VA	Voice announcement. Routed to the "NCA" (National Congestion Announcement (no circuits available) Fixed Route Type.

2.5 RDRCT THRES

Description: Enter the Forward Call Redirection Threshold, the number of times an ASP call can be forwarded.

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Software Release: 5E12 and later
Valid Entries: 1 - 9

Data Rules:

When RDRCT THRES is entered, then ASP OFC must be "SSP".

Since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, RDRCT THRES must not be entered until SFID 126 ACT on the SFSYS form has been set to "Y".

2.6 ESC CD CNTL

Description: Is the escape code shared with interoffice trunk triggers? The ESC CD CNTL field is used to specify on a per SSP (Service Switching Point) basis if an escape code applies to both an OHD (Off-Hook Delay) trigger and a shared interoffice trunk trigger.

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ESC CD CNTL is entered, then ASP OFC must be "SSP".

Since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, ESC CD CNTL must be "N" until SFID 126 ACT on the SFSYS form has been set to "Y".

2.7 SCP DAS

Description: Enter the single DAS value for SCP return route trunk ASP calls. The SCP DAS field is used as the DAS (Digit Analysis Selector) for retranslating ASP (Advanced Services Platform) calls after querying the external SCP (Service Control Point) database. At an ASP office, a query is made to an external SCP database to obtain routing information necessary to complete the call. The SCP DAS indicates where translations should begin in digit analysis for routing numbers which are returned from the SCP database.

Software Release: 5E12 and later
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

When SCP DAS is entered, then ASP OFC must be "SSP".

When an SCP DAS is entered, it must be defined on an associated DAS form.

2.8 ASP OFC

Description: Enter the type of ASP (Advanced Services Platform) support to be provided by this office.

Software Release: 5E12 and later
Required Field.
Default: NONE
Valid Entries:

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Valid ASP OFC Entries	
Entry	**Definition**
NONE or N	This office does not support ASP.
SSP or S	This office is an ASP SSP (Service Switching Point).

Data Rules:

Since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, ASP OFC must be "NONE" until SFID 58 on the SFSYS form has been set to "S" or "Y".

When ASP OFC is "NONE",

- MAX CONV must be 5.
- NSTRIG forms must have APPLICATION equal to "E911" or 800.
- No ICF forms may exist with ASP CDI or ASP RTI entered.
- No MCRTIDX forms (5304 Record) may exist with MC ROUTE TYPE equal to "ASP".
- No IDPDCA forms may exist with ACTION or CONFLICT ACTION equal to "IDPASP" (For 5E9(1) and later, "ASPDNC", "ASPNORM", "ASPVAR").
- No PDIT forms may exist with ACTION equals "ASPDNC", "ASPNORM", or "ASPVAR".
- There is no office support for ASP. The ICF forms can have neither ASP TF CDI nor ASP TF RTI entered.

When ASP OFC is "SSP",

- SCP DAS must be entered
- PSEUDO CARR must be entered
- ASP ANI must be entered
- INT OFC TRIG must be entered
- MAX TRIG must be entered
- and APPLICATION equals "ASP" (and for 5E9(1) and later, AIN REL equals "R0") on an NSTRIG form (5324 Record), SERV KEY on that NSTRIG form must equal "CDPN" or "ANI".
- Any MCRTIDX forms where MC ROUTE TYPE equals "ASP" must not have TRUNK GROUP NUMBER, DIGITS TO BE DELETED, PREFIX DIGITS, NEXT ROUTE, or NEXT MC ROUTE INDEX entered.
- A DSAPP form must exist with APPLIC set to "ASP" or "AINR0D1".
- since ASP is a secured feature and must be purchased by the office before ASP data can be assigned, MAX TRIG must equal 3 unless SFID 126 ACT on the SFSYS form has been set to "Y".

When ASP OFC is not "SSP",

- NATURE OF NBR on all LDIT, MLDIT (5300-3 Record), PDIT (5300-2 form), or RDIT forms (5300-7/8 Record), and NON for CONFLICT RESOLUTION ENTRY on all LDIT or RDIT forms must not be entered.
- there must be no SCFAM forms where STRUCT CODE FAMILY equals "ASP".

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- NATURE OF NBR on all LDIT, MLDIT (5300-3 Record), or RDIT forms (5300-7/8 Record), and NON on all LDIT or RDIT forms must not be entered.
- there must be no SSPANN forms where CUST HDRID or CUST TRLID is entered.

2.9 PSEUDO CARR

Description: Enter the carrier ID that is to be outpulsed in the EA (Equal Access) signaling stream to the SSP. This carrier must also be defined in the Access Tandem as a pseudo carrier.

Software Release: 5E12 and later
Valid Entries: 0 - 9999

Data Rules:

PSEUDO CARR must equal CARRIER ID on an ICF form, with the ICF form's FEAT GRP equal to "D".

2.10 ASP ANI

Description: Enter the digits to be used as the ASP (Advanced Services Platform) ANI (Automatic Number Identifier). This ANI is used to distinguish an incoming EAMF/CCS7 trunk call as ASP. It is also used as the ANI II digits on an outgoing EAMF/CCS7 trunk when the SCP does not provide an OST (Originating Station Type) parameter to be outpulsed as the ANI II.

Software Release: 5E12 and later
Valid Entries: 00 - 99, but value 100 may be input to represent a "null" ASP ANI.

2.11 MAX CONV

Description: Enter the maximum number of conversations an ASP call is allowed to have, per transaction, with the SCP. (See Division 2, Section 4A on Secured Features for more information.)

Software Release: 5E12 and later
Required Field.
Default: 5
Valid Entries: 1 - 30

Data Rules:

When ASP OFC is "NONE", MAX CONV must be 5.

This parameter is used by the Advanced Services Platform feature, which is a Secured Feature. Before this field may be set to a value other than the default, SFID 51 on the SFSYS form (5713 Record) must be set to "Y".

2.12 ASP RESP

Description: Enter the ASP (Advanced Services Platform) SCP response timer. This is the number of seconds an ASP call will suspend, waiting for the SCP to respond to the ASP query. When the SCP fails to respond in this specified time interval, the call is routed to reorder.

Software Release: 5E12 and later
Required Field.
Default: 3
Valid Entries: 1 - 5

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2.13 IGN OHD 0+PQSCR

Description: Should pre-query screening be ignored for 0+ prefix calls on a line with an Off-Hook Delay trigger? This field supports the ASP Pre-Query Screening for OHD Triggers secured feature. For more information on this feature, see Division 2, Section 4A178.

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries:

Valid PRE QUERY SCR Entries

Entry	Definition
Y	0+ calls will not be part of the pre-query screening.
N	0+ calls will be subject to screening.

Data Rules:

This field supports the ASP Pre-Query Screening for OHD Triggers secured feature. Before this field can be changed, the ACT field for SFID 178 on the SFSYS form (5713-1 Record) must be set to "Y".

2.14 INT OFC TRIG

Description: Enter the shared interoffice trigger number.

Software Release: 5E12 and later
Valid Entries: 1 - 255

Data Rules:

When INT OFC TRIG is entered, then ASP OFC must be "SSP".

When INT OFC TRIG is entered, it must equal TRIG NBR on an NSTRIG form, where APPLICATION equals "ASP".

2.15 ORIG BL TRIG

Description: Enter the originating busy line trigger number. The ORIG BL TRIG field is used to specify the trigger number used to locate the unique network service when a busy line condition is encountered. Population of this field indicates that a query will be launched to an external database. This field supports the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature. For more information concerning this feature, see Division 2, Section 4A189.

Software Release: 5E12 and later
Valid Entries: 1 - 255

Data Rules:

This field supports the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature. The SFID 189 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before the ORIG BL TRIG or ORIG NA TRIG field may be entered.

When this field is entered, the ORIG BL TRIG must be defined on the NSTRIG form (5324 form) as TRIG NBR. On the NSTRIG form, APPLICATION must be "ASP" and AIN REL must be "R0D1".

2.16 ORIG NA TRIG

Description: Enter the originating no answer trigger number. The ORIG NA TRIG field is used to specify the trigger number used to locate the unique network service when a no answer condition is encountered.

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Population of this field indicates that a query will be launched to an external database. This field supports the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature. For more information concerning this feature, see Division 2, Section 4A189.

Software Release: 5E12 and later
Valid Entries: 1 - 255

Data Rules:

This field supports the ASP Originating Busy/No Answer Triggers with Extended Ringing secured feature. The SFID 189 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before the ORIG BL TRIG or ORIG NA TRIG field may be entered.

When this field is entered, the ORIG NA TRIG must be defined on the NSTRIG form (5324 form) as TRIG NBR. On the NSTRIG form, APPLICATION must be "ASP" and AIN REL must be "R0D1"

2.17 ORIG NO ANS TIME

Description: Enter the timeout value in seconds for the ASP Originating No Answer timer. The timer may be superceded by SCP provided "No Answer Timer" parameter if received by the SSP. This field supports the ASP BLNA (Busy Line No Answer) secured feature. For more information on this feature see Division 2, Section 4A147. This field also supports the Originating Busy Line/No Answer Office Triggers with Extended Ringing feature. For more information on this feature see Division 2, Section 4A189.

Software Release: 5E12 and later.
Valid Entries: 1 - 120 (seconds)

Data Rules:

This field is used by the ASP BLNA and ASP Originating Busy/No Answer Triggers with Extended Ringing secured features. Therefore, before this field can be entered, the ACT field for either SFID 147 or SFID 189 on the SFSYS form (5713-1 Record) must be set to "Y".

2.18 INH OFC OBL OOL

Description: Is the ASP office busy line trigger out of LATA inhibited? The INH OFC OBL OOL field was added to support ASP Call Screening of Busy/No Answer (BLNA) Office Triggers. The feature was first made available in a 5E11 Software Update. This field was moved to this form for the 5E12 Software Release.

Required Field.

2.19 INH OFC ONA OOL

Description: Is the ASP office no answer trigger out of LATA inhibited? The INH OFC ONA OOL field was added to support ASP Call Screening of Busy/No Answer (BLNA) Office Triggers. The feature was first made available in a 5E11 Software Update. This field was moved to this form for the 5E12 Software Release.

Required Field.

2.20 TERM NO ANS TIME

Description: This field is used to indicate the no answer timeout value in seconds for the ASP Terminating Busy Line/No Answer feature.

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Software Release: 5E14 and later
Required Field.
Default: 18
Valid Entries: 1 - 120 in seconds

2.21 AMA AIN BUSY NA

Description: Is the AMA Recording - AIN Busy and Don't Answer feature active? The AMA AIN BUSY NA field supports the AMA Recording - AIN Busy and Don't Answer secured feature. For more information concerning this feature, see Division 2, Section 4A166.

Required Field.

Data Rules:
The AMA AIN BUSY NA field supports the AMA Recording - AIN Busy and Don't Answer secured feature. The SFID 166 ACT field on the SFSYS form (5713-1 Record) must be set to "Y" before this field may be set to "Y".

ORIG DAS FOR ASP TRIGGERS

The following fields (Section 2.22 - Section 2.24) define the parameters which support the ASP Multiple Rate Center Support feature. This is a secured feature with SFID 162. For more information on this feature, see Division 2, Section 4A162.

For 5E15 and later the TGT (Trunk Group Trigger) was added to Section 2.24 to extend the ASP Triggers to include support of the Terminating Trunk Group Triggers feature, see Division 2, Section 4A546.

2.22 ARS FCD CDP

Description: Is the DAS (Digit Analysis Selector) assigned to the originator used after ARS (Automatic Route Selection) FCD (Feature Code Dialing), and CDP (Customized Dialing Plan) triggers? If "Y" is entered, the DAS assigned to the originator is used to interpret digits after an ASP query for ARS, FCD, and CDP triggers. If "N" is entered, the SCP DAS is used to interpret digits after an ASP query for ARS, FCD, and CDP triggers.

Software Release: 5E12 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

SFID 162 on the SFSYS form (5713-1 Record) must have the ACT field set to "Y" before the ARS FCD CDP or OHI OHD TAT field can be set to "Y".

2.23 OHI OHD TAT

Description: Is the DAS (Digit Analysis Selector) assigned to the originator used after OHI (Off-Hook Immediate), OHD (Off-Hook Demand), and TAT (Termination Attempt Triggers) triggers? If "Y" is entered, the DAS assigned to the originator is used to interpret digits after an ASP query for OHI, OHD, and TAT triggers. If "N" is entered, the SCP DAS is used to interpret digits after an ASP query for OHI, OHD, and TAT triggers.

Software Release: 5E12 through 5E14.
Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

SFID 162 on the SFSYS form (5713-1 Record) must have the ACT field set to "Y" before the ARS FCD CDP or OHI OHD TAT field can be set to "Y".

2.24 OHI OHD TAT TGT

Description: Is the DAS (Digit Analysis Selector) assigned to the originator used after OHI (Off-Hook Immediate), OHD (Off-Hook Demand), TAT (Termination Attempt Triggers), and TGT (Trunk Group Triggers) triggers? If "Y" is entered, the DAS assigned to the originator is used to interpret digits after an ASP query for OHI, OHD, TAT, and TGT triggers. If "N" is entered, the SCP DAS is used to interpret digits after an ASP query for OHI, OHD, TAT and TGT triggers.

Software Release: 5E15 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

SFID 162 on the SFSYS form (5713-1 Record) must have the ACT field set to "Y" before the ARS FCD CDP or OHI OHD TAT TGT field can be set to "Y".

ASP IP TIMERS

The following fields (Section 2.25 - Section 2.26) are used to set the maximum duration of a STOR (Send To Outside Resource) connection and the maximum amount of time the switch will wait for the IP (Intelligent Peripheral) to send the Disconnect message. These fields support the AIN SSP Send To Outside Resource (Local) feature. For more information on this feature, see Division 2, Section 4A229.

2.25 TSTRC

Description: Enter the STOR (Sent To Outside Resource (Local)) connection time. This field indicates the maximum duration of a STOR connection, as measured from the Connect message received from the IP. 0 indicates no timing.

Software Release: 5E12 and later
Required Field.
Default: 06
Valid Entries:
- For 5E12 thru 5E14: 0 - 60 minutes
- For 5E15 and later: 0 - 300 minutes

Data Rules:

STOR (Send To Outside Resource (Local) is a secured feature. Before STOR data can be assigned, TSTRC must be 06 until SFID 126 ACT and SFID 229 ACT on the SFSYS form have been set to "Y".

For 5E15 and later, when TSTRC is set to a value greater than 60, then the ACT field for SFID 560 on the SFSYS form has to be set to "Y".

2.26 TDISC

Description: Enter the STOR (Sent To Outside Resource (Local) disconnection time. This field indicates the maximum amount of time the switch will wait for the IP to send the Disconnect message after a facility

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message with a Cancel IP Resource operation is sent from the SSP (Service Switching Point) to the IP.

Software Release: 5E12 and later
Required Field.
Default: 4.0
Valid Entries: 1.0 - 4.0 (in increments of 0.5)

Data Rules:

STOR (Send To Outside Resource (Local)) is a secured feature. Before STOR data can be assigned, TDISC must be 4.0 until SFID 126 ACT and SFID 229 ACT on the SFSYS form have been set to "Y".

EON DAS ASP TRIGGERS

The following fields (Section 2.27 - Section 2.29) are proprietary.

2.27 EON APN DAS

Description: Proprietary field.

Software Release: 5E14 and later

2.28 EON LOCAL DAS

Description: Proprietary field.

Software Release: 5E14 and later

2.29 EON TOLL DAS

Description: Proprietary field.

Software Release: 5E14 and later

ASP TIMEOUT ALARM

The following fields (Section 2.30 - Section 2.31) are used to specify the interval of time within which ASP queries are counted and to indicate the percentage of ASP timeout queries within a specified interval. These fields support the ASP (Advanced Services Platform) Timeout Alarm feature. For more information on this feature, see Division 2, Section 2Y.

2.30 TIME INTERVAL

Description: The TIME INTERVAL field indicates the interval of time within which ASP queries are counted.

Software Release: 5E15 and later
Default: 60
Valid Entries: Blank, or enter 5 - 60 in five-minute increments.

2.31 ALARM THRESHOLD

Description: The ALARM THRESHOLD indicates the percentage of ASP timeout queries within a specified interval.

Software Release: 5E15 and later

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Default: 100
Valid Entries: Blank, or enter 1 - 100 percent.

ASP MID CALL EVENT

The following fields (Section 2.32 - Section 2.33) are used to specify the timing interval (for 5E13 and later) and indicate the activity of the Mid Call Events (for 5E15 and later). These fields support the ASP (Advanced Services Platform) Mid Call Event Detection feature. For more information on this feature, see Division 2, Section 4A343.

2.32 ODTMF INTERDIG TIM

Description: The ODTMF INTERDIG TIM (Originating Dual Tone Multi-Frequency Interdigit Timing) field is used to specify the originating dual tone multi-frequency interdigit timing interval for Mid Call Event digits.

Software Release: 5E13 and later
Required Field.
Default: 4
Valid Entries: 2 - 10 seconds

Data Rules:

For 5E13 and later, when the ODTMF INTERDIG TIM field is set to a valid value other than 4, the ACT field for SFID 345 on the SFSYS form (5713-1 Record) must be set to "Y".

2.33 MID CALL EVENT ON

Description: The MID CALL EVENT ON field indicates whether one or both Mid Call Events (O_Disconnect_Called and O_DTMF_Entered) are active and to increase the SRE (Software Resource Engineering).

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the MID CALL EVENT ON field is set to "Y", either the ACT field for SFID 343 or the ACT field for SFID 345 must also be set to "Y".

CRITICAL INDICATORS

The following fields (Section 2.34 - Section 2.43) support the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY.

For 5E15 and later the TGT (Trunk Group Trigger) was added to Section 2.43 to extend the CRITICAL INDICATORS to include support of the Terminating Trunk Group Triggers feature, see Division 2, Section 4A546.

2.34 CRIT MAX TRIG

Description: The CRIT MAX TRIG field is used to indicate whether the MAX TRIG field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

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2.35 CRIT RDRCT THRES

Description: The CRIT RDRCT THRES field is used to indicate whether the RDRCT THRES field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.36 CRIT SCP DAS

Description: The CRIT SCP DAS field is used to indicate whether the SCP DAS field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.37 CRIT ASP OFC

Description: The CRIT ASP OFC field is used to indicate whether the ASP OFC field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.38 CRIT MAX CONV

Description: The CRIT MAX CONV field is used to indicate whether the MAX CONV field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.39 CRIT ORIG BL TRIG

Description: The CRIT ORIG BL TRIG field is used to indicate whether the ORIG BL TRIG field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.40 CRIT ORIG NA TRIG

Description: The CRIT ORIG NA TRIG field is used to indicate whether the ORIG NA TRIG field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.41 CRIT ARS FCD CDP

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Description: The CRIT ARS FCD CDP field is used to indicate whether the ARS FCD CDP field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.42 CRIT OHI OHD TAT

Description: The CRIT OHI OHD TAT field is used to indicate whether the OHI OHD TAT field is critical.

Software Release: 5E13 through 5E14
Required Field.
Default: N
Valid Entries: Y, N

2.43 CRIT OHI OHD TAT TGT

Description: The CRIT OHI OHD TAT TGT field is used to indicate whether the OHI OHD TAT TGT field is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
aspopt                      5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5670)            ADVANCED SERVICES PLATFORM OPTIONS

*1. KEY          0          13. INT OFC TRIG    ___
 2. MAX TRIG      _          14. ORIG BL TRIG    ___
 3. ACG FNL TRMT  RT         15. ORIG NA TRIG    ___
 4. RDRCT THRES   _          16. ORIG NO ANS TIME ___
 5. ESC CD CNTL   N          17. INH OFC OBL OOL  N
 6. SCP DAS       __         18. INH OFC ONA OOL  N
 7. ASP OFC       NONE       19. AMA AIN BUSY NA  N
 8. PSEUDO CARR   ____
 9. ASP ANI       __
10. MAX CONV      5
11. ASP RESP      3
12. IGN OHD 0+PQSCR N
```

```
aspopt                      5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5670)            ADVANCED SERVICES PLATFORM OPTIONS

ORIG DAS FOR ASP TRIGGERS
20. ARS FCD CDP N
21. OHI OHD TAT N

ASP IP TIMERS
22. TSTRC 06
```

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23. TDISC 4.0

ASP MID CALL EVENT
24. ODTMF INTERDIG TIM 4

---

aspopt 5ESS Switch
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

CRITICAL INDICATORS
26. CRIT MAX TRIG N
27. CRIT RDRCT THRES N
28. CRIT SCP DAS N
29. CRIT ASP OFC N
30. CRIT MAX CONV N
31. CRIT ORIG BL TRIG N
32. CRIT ORIG NA TRIG N
33. CRIT ARS FCD CDP N
34. CRIT OHI OHD TAT N

Figure 1 SAMPLE ASPOPT FORM 5E13 SOFTWARE RELEASE

---

aspopt 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

*1. KEY 0 13. INT OFC TRIG ___
2. MAX TRIG _ 14. ORIG BL TRIG ___
3. ACG FNL TRMT RT 15. ORIG NA TRIG ___
4. RDRCT THRES _ 16. ORIG NO ANS TIME 18
5. ESC CD CNTL N 17. INH OFC OBL OOL N
6. SCP DAS __ 18. INH OFC ONA OOL N
7. ASP OFC NONE 19. TERM NO ANS TIME 18
8. PSEUDO CARR ____ 20. AMA AIN BUSY NA N
9. ASP ANI __
10. MAX CONV 5
11. ASP RESP 3

---

aspopt 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

ORIG DAS FOR ASP TRIGGERS ASP MID CALL EVENT
21. ARS FCD CDP N 28. ODTMF INTERDIG TIM 4
22. OHI OHD TAT N

ASP IP TIMERS
23. TSTRC 06
24. TDISC 4.0

EON DAS FOR ASP TRIGGERS

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25. EON APN DAS __
26. EON LOCAL DAS __
27. EON TOLL DAS __

---

aspopt 5ESS Switch
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

CRITICAL INDICATORS
30. CRIT MAX TRIG N
31. CRIT RDRCT THRES N
32. CRIT SCP DAS N
33. CRIT ASP OFC N
34. CRIT MAX CONV N
35. CRIT ORIG BL TRIG N
36. CRIT ORIG NA TRIG N
37. CRIT ARS FCD CDP N
38. CRIT OHI OHD TAT N

Figure 2 SAMPLE ASPOPT FORM 5E14 SOFTWARE RELEASE

---

aspopt 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

*1. KEY 0 13. INT OFC TRIG ___
2. MAX TRIG _ 14. ORIG BL TRIG ___
3. ACG FNL TRMT RT 15. ORIG NA TRIG ___
4. RDRCT THRES _ 16. ORIG NO ANS TIME 18
5. ESC CD CNTL N 17. INH OFC OBL OOL N
6. SCP DAS ___ 18. INH OFC ONA OOL N
7. ASP OFC NONE 19. TERM NO ANS TIME 18
8. PSEUDO CARR ____ 20. AMA AIN BUSY NA N
9. ASP ANI __
10. MAX CONV 5
11. ASP RESP 3
12. IGN OHD 0+PQSCR N

---

aspopt 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

ORIG DAS FOR ASP TRIGGERS ASP TIMEOUT ALARM
21. ARS FCD CDP N 28. TIME INTERVAL 60
22. OHI OHD TAT TGT N 29. ALARM THRESHOLD 100

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ASP IP TIMERS ASP MID CALL EVENT
23. TSTRC 006 30. ODTMF INTERDIG TIM 4
24. TDISC 4.0 31. MID CALL EVENT ON N

EON DAS FOR ASP TRIGGERS
25. EON APN DAS ___
26. EON LOCAL DAS ___
27. EON TOLL DAS ___

---

aspopt 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5670) ADVANCED SERVICES PLATFORM OPTIONS

CRITICAL INDICATORS
32. CRIT MAX TRIG N
33. CRIT RDRCT THRES N
34. CRIT SCP DAS N
35. CRIT ASP OFC N
36. CRIT MAX CONV N
37. CRIT ORIG BL TRIG N
38. CRIT ORIG NA TRIG N
39. CRIT ARS FCD CDP N
40. CRIT OHI OHD TAT TGT N

Figure 3 SAMPLE ASPOPT FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 31H: 5649 RECORD
BLOCKED LINE ASP FCD CODES - LNBLKCOD

1. GENERAL

The 5649 Record is available with 5E15 and later Software Releases, and provides analog and ISDN circuit TNs the capability of blocking selected (unrestricted FCD) triggers by those users who show no interest in using specific services and do not want to access them by inadvertently dialing the trigger code. This form was added to support the ASP Unrestricted FCD Trigger feature. See Division 2, Section 4A572 for more information.

The secured feature ASP Unrestricted FCD Trigger must be purchased before the LNBLKCOD form can be entered, the ACT field for SFID 572 on the SFSYS form must be set to "Y".

1.1 Recent Change View

The corresponding Recent Change Views for this form is 4.40.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number for which certain ASP FCD codes will be blocked.
Valid Entries: Enter XXXXXXX or NXXXXXXXXX where N equals 2 - 9 and X equals 0 - 9.

Data Rules:

When a TN is entered at least one FCD CODE must be entered.

A LNBLKCOD form cannot be entered if the corresponding LINE form URT FCD BLK field is set to "Y". LNBLKCOD corresponds with the LINE form when the TNs match.

When a TN is entered on the LNBLKCOD form, it must be entered as a TN on the LINE form, MLHLN form, or a CKT TN/CKT MLHG TN on the DSLUSR form.

When a TN is entered on the LNBLKCOD FORM it also must be entered as a TN on the LINE form or MLHLN form with a CLASS OF SERVICE of "INDIV" or "ATND" on the correponding LCC form, or as a CKTN or CKT MLHG TN on the DSLUSR form with a CLASS OF SERVICE of "ISDN" or "ISATND" on the corresponding LCC form. Forms correspond when the LCC and RAX fields match.

BLOCKED CODES LIST

The following field refers to the BLOCKED CODES LIST, consisting of up to 32 FCD triggers.

2.3 FCD CODE

Description: Enter the ASP unrestricted FCD code to be blocked.
Valid Entries: Enter Blank, or 1 to 7 dialable digits (0 - 9,* or #). If # or * are entered as single characters, they must be preceded by a space.

Data Rules:

At least one FCD CODE must be entered.

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FCD CODE must be unique in BLOCKED CODES LIST.

The FCD CODE entered on the LNBLKCOD form must be entered as DIGITS TO INTERPRET on a PDIT form, where FEATURE is set to "/*" and ACTION is "ASPDNC", "ASPNORM", or "ASPVAR".

---

lnblkcod 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5649) BLOCKED LINE ASP FCD CODES

*1. TN _____

2. BLOCKED CODES LIST (BLKCODESLIST)

FCD ROW	CODE	FCD ROW	CODE	FCD ROW	CODE	FCD ROW	CODE	FCD ROW	CODE	FCD ROW	CODE
1	_____	7	_____	13	_____	19	_____	25	_____	31	_____
2	_____	8	_____	14	_____	20	_____	26	_____	32	_____
3	_____	9	_____	15	_____	21	_____	27	_____		
4	_____	10	_____	16	_____	22	_____	28	_____		
5	_____	11	_____	17	_____	23	_____	29	_____		
6	_____	12	_____	18	_____	24	_____	30	_____		

Figure 1 SAMPLE LNBLKCOD FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 31I: 5650 RECORD
SIMULTANEOUS RINGING FEATURE DEFINITION - SRFD

1. GENERAL

The 5650 Record is available with 5E16 and later Software Releases, and provides the ability to define Simultaneous Ringing features. This form was added to support the Simultaneous Ringing feature. See Division 2, Section 4A587 for more information.

The Simultaneous Ringing feature is a secured feature and must be purchased before the SRFD form can be entered. ACT must be set to "Y" for SFID 587 on the SFSYS form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.65.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE NAME

Description: This field identifies a particular Simultaneous Ringing feature by name.

Software Release: 5E16 and later
Valid Entries: Enter up to 8 alphanumeric characters. Feature name entries must be unique. Preconstructed features always begin with a slash (/).

2.3 REMARKS

Description: An optional field used to provide any additional information regarding this feature.

Software Release: 5E16 and later
Valid Entries: Enter up to 32 alphanumeric characters.

FEATURE OPTIONS

Fields Section 2.4 - Section 2.5 refer to the feature activation and deactivation options.

2.4 ACT TYPE

Description: This is a display only field which indicates the feature activation type.

Software Release: 5E16 and later
Default: CODE
Valid Entries: The only valid value is "CODE".

2.5 DACT TYPE

Description: This is a display only field which indicates the feature deactivation type.

Software Release: 5E16 and later
Default: CODE
Valid Entries: The only valid value is "CODE".

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srfd 5ESS Switch
OFFICE DATA ADMINISTRATION
(5650) SIMULTANEOUS RINGING FEATURE DEFINITION

*1. FEATURE NAME _____
3. REMARKS _____

FEATURE OPTIONS
ACT TYPE CODE
DACT TYPE CODE

Figure 1 SAMPLE SRFD FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 31J: 5651 RECORD
SIMULTANEOUS RINGING MDN (MEMBER DIRECTORY NUMBER) LIST- SRDN

1. GENERAL

The 5651 Record is available with 5E16 and later Software Releases. It provides the ability to edit a list of MDNs (Member Directory Numbers) that are associated with a specific TN. A list of up to four MDNs is allowed. This form was added to support the Simultaneous Ringing feature. See Division 2, Section 4A587 for more information.

The Simultaneous Ringing feature is a secured feature and must be purchased before the SRDN form can be entered. ACT must be "Y" for SFID 587 on the SFSYS form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.65.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 *TN

Description: Telephone number.

Software Release: 5E16 and later
Valid Entries: Enter a 7 or 10 digit telephone number of the form XXXXXXX or NXXXXXXXXX, where N is a number from 2 to 9 and X is a number from 0 to 9.

Data Rules:

The TN must exist on a LINE form and must not be any of the following:

- MLHG (Multiline Hunt Group) Member
- Multi-party Line
- Coin Phone
- PSAP (Public Safety Answering Point)
- Analog Attendant
- Shared analog
- Secondary only
- ACD (Automatic Call Distributor) Agent
- Series Completion Member
- ISDN (Integrated Services Digital Network)

ACT must be "Y" for SFID 587 on the SFSYS form (Record 5713-1).

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TN must equal TN on a LINEFA form (Records 5121, 5122, 5112, 5113, 5123, and 5124).

FEATURE must be defined in the FEATURE LIST on the LINEFA form.

2.3 * FEATURE

Description: This field identifies a particular Simultaneous Ringing feature by name.

Software Release: 5E16 and later
Valid Entries: Enter up to 8 alphanumeric characters. Feature name entries must be unique. Preconstructed features always begin with a slash (/).

Data Rules:

FEATURE must equal FEATURE NAME on an SRFD form (Record 5650).

MDN LIST

The MDN LIST allows up to four member directory numbers to be assigned to the specified TN.

2.4 MDN

Description: Member directory number.

Software Release: 5E16 and later
Valid Entries: Enter from up to 32 digits of 0 - 9, plus special characters "*" or "#".

---

srdn 5ESS Switch
OFFICE DATA ADMINISTRATION
(5651) SIMULTANEOUS RINGING MDN LIST

*1. TN _____
*2. FEATURE _____

3. MDN LIST
ROW MDN
1 _____
2 _____
3 _____
4 _____

Figure 1 SAMPLE SRDN FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 32: ACD BRCS

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SEC. 32A: 5631-1 RECORD
ACD/BRCS AND DAA TN ASSIGNMENT FORM - ACDTN

1. GENERAL

The 5631 Record is available with the 5E9(1) Software Release. It is used by the ACD/BRCS (Automatic Call Distributor/Business and Residential Custom Services) feature to define the ACD directory number or the DAA (Direct Agent Access) directory number. For more information on the secured feature ACD/BRCS and ACD/BRCS Interworking II see Division 2, Section 4A121.

ACD TN is a telephone number that gets standard queuing and delay treatment or vectoring treatment. This TN is dialed by a customer to be routed through an ACD to any agent. In addition the ACD TN calls can be interflowed. Interflow allows for immediate or permanent close down of one, some or all agent serving teams at a specific position. Call traffic requiring agent assistance that is otherwise handled by the closed serving teams is subsequently interflowed to another destination.

DAA TN is the telephone number that is associated with a specific agent ID. The calls are routed to that agent.

1.1 Provisioning ACD TN and DAA TN for 5E11 and Later

For 5E11 and later, the forms for provisioning an ACD TN or DAA TN are listed below. Before using the corresponding RC View to provision an ACD or DAA TN, it is necessary to set up required information for these TNs on other RC views. The order in which the ODA forms and Recent Change views are listed below must be the order that Recent Change follows for entering the necessary information prior to using the 6.10 view.

Provision ACD TN or DAA TN

Form	Record	RC View	Data
DAS	5300-1	9.1	Define a valid DAS (Digit Analysis Selector) with the Packet Switch indicator set to "N".
SMLDIT	5315	9.25	Distribute the LDIT associated with the DAS to all operational SMs in the office.
ICF	5305	10.3	Define a valid carrier ID specified in the PIC field.
RAR	5301	10.10	Define a valid screening index specified in the SCR field.
STPARM	5638	6.1	Define a valid ACD serving team.
AGNTID	5639	6.3	Define a valid ACD agent identifier specified in the AGENT ID field.
CQPARM	5640	6.4	Define a valid ACD call queue specified in the CALL QUEUE field.
SZDISP	5641	6.5	Define a valid display index specified in the DISPX field.
ACDVCT	5643	6.7	Define a valid vector identifier specified in the VECTOR ID field.

1.2 Recent Change View

The corresponding Recent Change View for this form is 6.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TN

Description: Enter the ACD (Automatic Call Distributor) or DAA (Direct Agent Access) Telephone Number.

Required Field.
Valid Entries: For 5E11 and earlier: 7 digits

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For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

ACD and DAA TNs are used for the secured feature ACD/BRCS. "Y" must be entered in the SFIDs 16 and 121 on the SFSYS form (5713-1 Record) for DAA TNs, and SFID 121 on the SFSYS form for ACD TNs.

For 5E12 and later, TNs on different ACDTN forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ACDTN form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

ACD and DAA TNs may not appear as the series completed to TN on any form. Therefore, they may not be entered in the SERHLN field on the LINE (5109 Record), MLHLN (5111 Record), DSLUSR (5908 Record), or SHTN forms (5902 Record).

ACD TN must not be entered as the TN on the PIDEF form.

A NOC form (5501 Record) is required for the NXX of each TN on this form.

TN cannot be duplicated on any of the following forms:
- ACQS (5425 Record)
- AMLBDSL (5447 Record)
- DSL (5907 Record)
- DSLUSR (5908 Record)
- LINE (5109 Record)
- MLHG (5110 Record)
- MLHLN (5111 Record)
- MTNDR (5550 Record)
- MULTITN (5114 Record)
- NPOOL (5177 Record)
- PSMTN (5925/5925A Record)
- RDTAPORT (5911A/B Record)
- SHTN (5902 Record)
- XAT (5909-1/2 Record)

2.3 #CALL TYPE

Description: Enter a valid Call Type (queue number). This field identifies the call queue that handles calls for this ACD TN or DAA TN. DAA TNs are given queue treatment if the DAA agent is not logged in and FWD TO DN or VECTOR ID is not assigned. A CALL TYPE is always required since the TGID (Terminal Group) for this TN is obtained from the primary serving team of this call type queue. See CALL QUEUE field for 5E11 and later.

Software Release: 5E9(1) - 5E10
Required Field.
Valid Entries: 1 - 128

Data Rules:

This CALL TYPE must be defined on the OSPSCT form (5404 Record) with a matching OSPS CALL TYPE value and AUTO CALL DIST field must be "Y". Also, the SERVING TEAM value on the OSPSCT form must have TGID defined for the associated Serving Team on the STINFO form.

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2.4 CALL QUEUE

Description: Enter the ACD (Automatic Call Distributor) call queue number. This field identifies the call queue that handles calls for this ACD TN or DAA TN. DAA TNs are given queue treatment if the DAA agent is not logged in and FWD TO DN or VECTOR ID is not assigned. An incoming ACD call is placed in a queue specified by this number if no agents are available to handle this type of call. The CQPARM form is used to define a valid ACD call queue to be entered in this field.

Software Release: 5E11 and later.
Valid Entries: 1 - 999

Data Rules:

If CALL QUEUE is not entered, then:
- E911 PSAP must be "N"
- Q DIALING TN must be "N"

The CALL QUEUE value must be defined on a corresponding CQPARM form with a matching SERVING TEAM entered. In addition, the SERVING TEAM value on the CQPARM form must be defined on a corresponding STPARM form with TGID entered.

2.5 #PIC

Description: Enter a valid Presubscribed inter-LATA carrier. This field is used for ACD TN and DAA TN call redirection.

Required Field.
Valid Entries: 0 - 9999

Data Rules:

This PIC must be defined on the ICF form with "D" entered in the FEAT GRP field on that form.

2.6 PTC

Description: Enter the presubscribed intra-LATA toll carrier. This field supports the ICLATA secured feature for ACD/BRCS. For more information on the ICLATA feature, see Division 2, Section 4A149. For more information on the ACD/BRCS features, see Division 2, Section 4A141.

Software Release: 5E11 and later.
Valid Entries: 0 - 9999

Data Rules:

The PTC field is used by the ICLATA secured feature, which must be purchased by the office before the field can be entered. The ACT field for SFID 149 on the SFSYS form must be set to "Y" before PTC can be entered.

The PTC value must be defined on an ICF form as CARRIER ID and the FEAT GRP field on that ICF form must be set to "D".

2.7 PLC

Description: Enter the PLC (Presubscribed Local Carrier) code. The PLC field supports the Alternate Local Service Provider Routing feature. For more information on the Alternate Local Service Provider Routing feature, see Division 2, Section 4A269.

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Software Release: 5E12 and later.
Valid Entries: Blank, or 0 - 9999.

Data Rules:

The PLC value must be defined on an ICF form as CARRIER ID with FEAT GRP equal to "D" .

2.8 UNBUNDLED

Description: Has this line been unbundled from the LEC?

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

If UNBUNDLED is "Y", then PLC must be entered.

2.9 #SCR

Description: Enter a valid Screening Index for busy line verification. This field is used for routing and charging redirected ACD or DAA calls.

Required Field.
Valid Entries: 1 - 4095

Data Rules:

There must be an RAR form entry with this screen index and code index combination. The code index is obtained from the LDIT form and the DAS value below.

2.10 #DAS

Description: Enter a valid Digit Analysis Selector. This field is used for digit analysis of redirected ACD and DAA calls.

Required Field.
Valid Entries:

For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 254

Data Rules:

The DAS assigned on this form must be defined on the DAS form (5300 Record).

Also , the LDIT value associated with this DAS (either LINE DAS LOCAL DIT or TRUNK DAS LOCAL DIT) must be distributed to all operational SMs. This is accomplished by entering an SMLDIT form with this LDIT value as the key and by entering each operational SM (as defined on EQIM forms where EQSTATUS is "O") into the LIST OF SWITCHING MODULES.

The DAS values entered on the ACDTN form cannot be associated with an LDIT used for packet routing. Therefore, "PSNCI" or "PSCAR" cannot be entered in the TYPE OF CI CALL field on an LDIT form or an MLDIT form if the LDIT value is associated with this DAS (either LINE DAS LOCAL DIT or TRUNK DAS LOCAL DIT); also, the the CI TYPE entries in the CONFLICT RESOLUTION ENTRIES cannot be equal a "PSNCI" or "PSCAR" on the corresponding LDIT form.

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Entries in the DAS and SCR fields on this form require that a DAS form must exist with a DATREE that matches the DAS value, and a corresponding RAR form which requires the combinations of CODE INDEX from one or more LDIT, RDIT, PDIT, IDDD, INDIT, or MLDIT forms, and SCR on this form.

2.11 #DISPX

Description: Enter a valid Display Index. This field identifies the display index for calls to this ACD/DAA TN.

Required Field.
Valid Entries:
- For 5E9(1) - 5E10: 1 - 276
- For 5E11 and later: 1 - 2047

Data Rules:

For 5E9(1) - 5E10, the DISPX value must match a DISPLAY INDEX value on the OBSTS form (5408 Record).

For 5E11 and later, DISPX value(s) must match the DISPX value on the SZDISP form (5641 Record).

2.12 LINE SCREEN

Description: Is Toll diversion, code restriction, or WATS band screening activated? This field is used for ACD/DAA call redirection. See the C BLK attribute on the RAR form (5301 Record), Division 3, Section 3F, and the LINE SCREENING attribute on the LCC form (5306 Record) in Division 3, Section 3S for additional information.

Required Field.
Default: N
Valid Entries: Y, N

2.13 VECTOR ID

Description: Enter a valid Vector ID. This field identifies the vector which provides call handling while waiting for an ACD/DAA agent.
Valid Entries:
- For 5E9(2) and earlier: 1 - 256
- For 5E10: 1 - 1024
- For 5E11 and later: 1 - 2048

Data Rules:

For 5E9(1) - 5E10, the VECTOR ID entered here must be defined on a CVECT form (5460 Record).

For 5E11 and later, if VECTOR ID is entered, it must be defined on the ACDVCT form (5643 Record).

2.14 Q DIALING TN

Description: Is the ACD TN associated with the CALL QUEUE used for Queue Dialing? A value of "N" means that the ACD TN or DAA TN will not be used for Queue Dialing. When Q DIALING TN is "Y", the ACD TN or DAA TN may be accessed by the queue number indicated in the CALL TYPE field.

For 5E11 and later, if this field is set to "Y" on the Recent Change View, then the TN is displayed on the

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Call Queue RC View 6.4 as the queue TN for the CALL QUEUE. When a TN with Q DIALING TN is set to "Y" is deleted, then the verify only field ACD TN on RC View 6.4 will be blank for that queue.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(1) - 5E10, only one TN per unique CALL TYPE may have Q DIALING TN set to "Y".

For 5E11 and later, only one TN per unique CALL QUEUE may have Q DIALING TN set to "Y".

2.15 INWATS

Description: Is INWATS (Inward Wide Area Telecommunications Service) is allowed?

Required Field.
Default: N
Valid Entries: Y, N

2.16 FLS

Description: Are calls to this ACD TN or DAA TN free? A value of "Y" entered in FLS (Free Line Service) indicates that calls to this ACD TN or DAA TN are not billed. A value of "N" means that calls to this ACD TN or DAA TN get standard billing treatment.

Required Field.
Default: N
Valid Entries: Y, N

2.17 CALL TRACE

Description: Will Call Tracing be activated? When CALL TRACE is "Y", all incoming calls to the ACD TN or DAA TN are traced and a record is typed on the Maintenance TTY.

Required Field.
Default: N
Valid Entries: Y, N

2.18 CALL CLASS

Description: This field is used by the MIS (Management Information System) to track ACD/DAA calls. Enter a valid CALL CLASS.
Valid Entries:

- For 5E9(1) - 5E10: 1 - 511
- For 5E11 and later: 1 - 2048

Data Rules:

For 5E11 and later, if CALL CLASS is entered, CALL QUEUE and DISPX must be entered.

2.19 CPND TO MIS

Description: Are calling numbers for calls to this ACD/DAA TN sent to the MIS?

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Required Field.
Default: N
Valid Entries: Y, N

2.20 CPND TO AGENT

Description: Are calling numbers displayed on the agent's terminal?

Required Field.
Default: N
Valid Entries: Y, N

2.21 CHNG TN

Description: This is a recent change only field that allows the user to update or insert a value for TN, which is the key field for this view. The update and insert operations are not allowed for key fields; however, the TN field can be changed through this field. This is a Text Only field for ODA. For 5E9(1) - 5E10 see Recent Change view 4.15. For 5E11 and later, see Recent Change View 6.10.

2.22 E911 PSAP

Description: Is this an ACD E911 Public Safety Answering Point? This field is used by the Pinnacle ACD E911 Special Feature.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

To activate this secured feature, the ACT field for SFID 143 on the SFSYS form (5713-1 Record) must be "Y".

For 5E9(1) - 5E10, the value entered for E911 PSAP must equal the value entered for E911 PSAP on the STINFO form.

For 5E11 and later:
If CALL QUEUE is defined as a CALL QUEUE on the CQPARM form with SERVING TEAM entered and this SERVING TEAM is defined on the STPARM form as SERVING TEAM, then the value entered for E911 PSAP on this form must equal the value entered for E911 PSAP on the STPARM form.

If CALL QUEUE is entered and E911 PSAP is set to "Y", then the CALL QUEUE must be defined on the CQPARM form with an entry in the SERVING TEAM field.

DIRECT AGENT ACCESS

The following fields (Section 2.23 - Section 2.24) define attributes for a DAA TN.

2.23 AGENT ID

Description: This field identifies the agent associated with this Direct Agent Access TN. An entry in the AGENT ID field identifies this TN as a DAA DN. Enter one to four digits.

For 5E9(1) - 5E10, leading zeros have significance, i.e., 01 is different from 1.
Valid Entries:
- For 5E9(1) - 5E10: 1 - 8999
- For 5E11 and later: 1 - 32768

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Data Rules:

An entry in the AGENT ID field identifies this TN as a DAA DN, therefore, SFIDs 16 and 121 must be "Y" on the SFSYS form.

When AGENT ID is blank, FWD TO DN must be blank.

For 5E9(1) - 5E10, the AGENT ID entered here must be defined as an OPERATOR ID on an OSPSOA form with an OPER TYPE of "DA".

For 5E11 and later, an AGENT ID must be defined on a corresponding AGNTID form (5639 Record).

2.24 FWD TO DN

Description: When the corresponding agent is not logged in, calls terminating to DAA TN will be forwarded to the telephone number entered in this field.
Valid Entries:
- For 5E9(1) - 5E10: 7 or 10 digits
- For 5E11 and later: 1 - 15 digits

Data Rules:

FWD TO DN must not be entered unless there is an entry in AGENT ID.

For 5E9(1) - 5E10, FWD TO DN must not equal the entry in the TN field; digits 4-10 cannot be equal to the TN.

For 5E9(1) and later, the first three digits of the FWD TO DN must not equal an NPA CODE on the corresponding NOC form.

INTERFLOW

The following field assigns the destination directory number for interflowed calls.

2.25 DEST DN

Description: Enter the destination telephone number for ACD Interflowed calls. Interflow allows for immediate or permanent close down of one, some, or all agent serving teams at a specific location. Call traffic requiring agent assistance that is otherwise handled by the closed serving teams is subsequently interflowed to another call center.
Valid Entries:
- For 5E9(1) - 5E10: 7 or 10 digits
- For 5E11 and later: 1 - 15 digits

Data Rules:

DEST DN cannot equal the entry in the TN field; digits 4-10 cannot be equal to the TN.

For 5E9(1) and later, the first three digits of the DEST DN must not equal the NPA CODE on the corresponding NOC form.

When DEST DN is entered, AGENT ID and FWD TO DN must not be entered.

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```
acdtn                    5ESS Switch
(5631-1)            OFFICE DATA ADMINISTRATION
                  ACD AND DAA TN ASSIGNMENT

*1. TN        ________   13. CALL CLASS    ___
#2. CALL TYPE   ___       14. CPND TO MIS   N
#3. PIC         ____      15. CPND TO AGENT N
#4. SCR         ____          CHNGTN
#5. DAS         __        17. E911 PSAP     N
#6. DISPX       ___
 7. LINE SCREEN  N           DIRECT AGENT ACCESS
 8. VECTOR ID    ____      18. AGENT ID  ____
 9. Q DIALING TN N         19. FWD TO DN ___________
10. INWATS       N
11. FLS          N             INTERFLOW
12. CALL TRACE   N         20. DEST DN ___________
```

Figure 1 SAMPLE ACDTN FORM 5E10 SOFTWARE RELEASES

```
acdtn                    5ESS SWITCH
                  OFFICE DATA ADMINISTRATION
(5631-1)            ACD/BRCS AND DAA TN ASSIGNMENT

*1. TN        ________  13. CALL TRACE    N          INTERFLOW
2. CALL QUEUE   ___      14. CALL CLASS    ____     21. DEST DN _________________
#3. PIC         ____     15. CPND TO MIS   N
 4. PTC         ____      16. CPND TO AGENT N
#5. SCR         ____         CHNGTN
#6. DAS         __       18. E911 PSAP     N
 7. DISPX       ____
 8. LINE SCREEN  N           DIRECT AGENT ACCESS
 9. VECTOR ID    ____      19. AGENT ID  _____
10. Q DIALING TN N         20. FWD TO DN _________________
11. INWATS       N
12. FLS          N
```

Figure 2 SAMPLE ACDTN FORM 5E11 SOFTWARE RELEASE

```
acdtn                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5631-1)            ACD/BRCS AND DAA TN ASSIGNMENT

*1. TN        ___________   13. INWATS       N
 2. CALL QUEUE  ___          14. FLS          N
#3. PIC         ____         15. CALL TRACE    N
 4. PTC         ____         16. CALL CLASS    ____
 5. PLC         ____         17. CPND TO MIS   N
 6. UNBUNDLED    N           18. CPND TO AGENT N
#7. SCR         ____            CHNGTN       ___________
#8. DAS         __           20. E911 PSAP     N
```

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```
 9. DISPX       ____
10. LINE SCREEN  N              DIRECT AGENT ACCESS
11. VECTOR ID    ____          21. AGENT ID  _____
12. Q DIALING TN N             22. FWD TO DN _________________
```

```
acdtn                      5ESS Switch
SCREEN 2 OF 2               OFFICE DATA ADMINISTRATION
(5631-1)                ACD/BRCS AND DAA TN ASSIGNMENT

       INTERFLOW
23. DEST DN _________________
```

Figure 3 SAMPLE ACDTN FORM 5E12 - 5E14 SOFTWARE RELEASES

```
acdtn                      5ESS Switch
SCREEN 1 OF 2               OFFICE DATA ADMINISTRATION
(5631)                  ACD/BRCS AND DAA TN ASSIGNMENT

*1. TN          ___________    13. INWATS       N
 2. CALL QUEUE   ___            14. FLS          N
#3. PIC          ____          15. CALL TRACE   N
 4. PTC          ____          16. CALL CLASS   ____
 5. PLC          ____          17. CPND TO MIS  N
 6. UNBUNDLED    N             18. CPND TO AGENT N
#7. SCR          ____          CHNGTN      ___________
#8. DAS          ___           20. E911 PSAP    N
 9. DISPX        ____
10. LINE SCREEN  N              DIRECT AGENT ACCESS
11. VECTOR ID    ____          21. AGENT ID  _____
12. Q DIALING TN N             22. FWD TO DN _________________
```

```
acdtn                      5ESS Switch       _
SCREEN 2 OF 2               OFFICE DATA ADMINISTRATION
(5631)                  ACD/BRCS AND DAA TN ASSIGNMENT

       INTERFLOW
23. DEST DN _________________
```

Figure 4 SAMPLE ACDTN FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 32B: 5637 RECORD
ACD MANAGEMENT INFORMATION SYSTEM LINK - MISLINK

1. GENERAL

The 5637 Record is available with 5E9(1) and later Software Releases. It is used to make MIS LINK assignments, providing the capability to provision an MIS (Management Information System) SM Event Link for ACD/BRCS on all valid DSLs. For more information on ACD/BRCS see Division 2, Section 4A121. Note that as additional OE (Office Equipment) types are supported, additional time slot and related data rules are implemented. See the specific OE type for additional rules.

1.1 Time Slots

The following discussion of time slots is intended to illustrate the general rules for time slot assignment. In this discussion, ISLU and IDCU equipment are referenced. For rules pertaining to subsequent OE types, see the OE field.

ODA assigns time slot values to the MISLINK forms that have unassigned time slots. The ODA assignment requires that LKCENs ("K" type Equipment Numbers) assigned to LGs 0 - 7 (the sixth and seventh digit of the Equipment Number) are assigned time slots on odd numbered EQISLU PIDBs and that LCKENs assigned to LGs 8 - 15 are assigned time slots on even numbered EQISLU PIDBs, each with a PIDB TYPE of "PSU".

D and/or B Channel time slots cannot be assigned by ODA unless a sufficient number of DPIDBs are assigned on the EQISLU form (5731 Record) with a PIDB TYPE of "PSU" time slots. If the number of time slots available is 0, there are no DPIDB assignments on the EQISLU form for the combination of SM/ISLU2. Or, for example, if the number of time slots available is 4 and the number of time slots assigned is 5 then the data must be examined to determine why more than the available number of time slots have been assigned. Error correction may require regrouping ISCN assignments more efficiently or possibly the DPIDB assignments on the EQISLU form may need modification. B and/or D channel assignments made manually may conflict with the ODA assignment algorithm.

The ODA algorithm is allocated 4 time slots per DPIDB per SM/ISLU2/LG. The LGs 00 - 07 are allocated time slots on the odd numbered DPIDBs while LGs 08 - 15 are allocated time slots on the even numbered DPIDBs. Manual time slot assignments do not have to follow this algorithm. However, if manual assignments are made, they use one or more time slots. These manual assignments diminish (and may conflict with) the time slots available for the ODA assignment algorithm.

The LCEN's assigned on the AMLBDSL, DSLAP or OSPSDSL forms, or DSL OE's on the DSL form or OE's on the MISLINK form can not have their D and/or B Channels assigned to conflicting DPIDB time slots or quarter timeslots due to manual (vs ODA) time slot assignments. Each SM/ISLU or SM/IDCU DPIDB time slot may be assigned only once. (Note, D channels are allocated to quarter time slots; therefore up to four unique assignments can be made before a time slot is considered full.

Time slots for DPIDBs, which are assigned and reserved on an ISLU(2), cannot exceed the maximum number of 32 time slots available for the DPIDB. Time slots are allocated for DSL D and/or B channels on the following forms:

- AMLBDSL
- DSL (where DSL OE type equals "I" or "K")
- DSLAP
- MISLINK (where OE type equals "I" or "K")
- OSPSDSL forms

Time slots are allocated either on the form or by the ODA automatic time slot assignment algorithm. Time slots may also be reserved for On Demand B channel usage on the ODBTS form. If more than 32 time slots are assigned or reserved, time slots on the ODBTS form will need to be re-assigned to correct the DPIDBs in error.

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The IDCU DPIDBs connect the IDCU to the PSU. They carry IDCU control information (EOC and TMC channels); the DSL D channel control and packet data; and the DSL B channel packet switching and voice data. Each DPIDB has 32 time slots. The EOC, TMC and B channels each occupy a full TS. The D channels each occupy one-quarter TS but should be packed (up to) four to a TS if they

- originate on the same TR303 RT,
- are assigned to the same DPIDB and
- belong to the same DSL group (ISCN 1,3).

They must also occupy a unique IDCU DS1 TS and have the same positioning in that TS. In other words, D channel quarter TS can not be switched. The required number of DPIDB time slots must be available for the following forms:

- DSL
- MISLINK
- ODBTS
- RTERM

The following data rule is not executed on an SM-2000, provisioning of nailed-up time slots is not required on an SM-2000. On a PSU1, each Data Interface in a SM can have a maximum of 128 nailed-up time slots reserved for the following applications:

Data Interface for Nailed-up Time Slots

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms (CMDA application).
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3 digits of LCEN match SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3 digits of LCEN (on the DSLAP or OSPSDSL form) or OE (on the DSL or MISLINK form) match SM on an EQRISLU form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms (CMDA application).
X.25	Defined on the XAT forms.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

These time slots can be reserved by entering the rows RPTSS0 to RPTSS7 on the EQPSU form. The quantity of time slots reserved (i.e. the number entered) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D channel only takes a quarter of a time slot.

Also, the reserved time slots must be entered such that for any given SHELF, (defined by the first digit of ISCN field or by the SHELF field on the MISLINK form), the time slots assigned to that SHELF must not be duplicated in the same vertical (column) position if they appear in more than one row (RPTSS0 through RPTSS7).

1.2 Recent Change View

For 5E9(1) - 5E10, the corresponding Recent Change View for this form is 23.19. For 5E11 and later, the corresponding Recent Change View for this form is 6.11.

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2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *OE

Description: Enter the OE (DSL) equipment number (a composite of the equipment type and number).

Required Field.

Valid OE Type Entries

Entry	Definition
A	Software Release: 5E12 and later. INEN - TR-303 on DNU-S.
E	Software Release: 5E12 and later. AIUEN - AIU (Access Interface Unit) ISDN U-Interface).
G	Software Release: 5E9(1) and later. GEN - GAMA IDCU (Integrated Digital Carrier Unit).
I	Software Release: 5E9(1) and later. ISDN Digital (U & T Card) - ISLU (Integrated Services Line Unit).
K	Software Release: 5E10 and later. LCKEN - ISDN ISLU2.
M	Software Release: 5E9(1) - 5E9(2). MEN - IDCU (Integrated Digital Carrier Unit).

If OE is "A", the INEN Equipment Number consists of the following:

TR-303 on DNU-S, Type A

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	LINE	XXXX	0001-2048

If OE is "E", the AIUEN Equipment Number consists of the following:

AIU ISDN U-Interface, Type E

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	AIU	XXX	000-127
Pack	PACK	XX	00-19
Circuit	CKT	XX	00-15

If OE is "G", the GEN Equipment Number consists of the following:

IDCU, Type G

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Integrated Digital Carrier Unit	IDCU	XX	00-42
Remote Terminal	RT	XX	01-31
Remote Line	LINE	XXXX	0001-2048

If OE is "I", the LCEN Equipment Number consists of the following:

ISLU, Type I

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
(Remote) Integrated Services Line Unit	(R)ISLU	X	0-7
Line Group Controller	LGC	XX	00-15
Line Card	LC	XX	00-31

If OE is "K", the LCKEN Equipment Number consists of the following:

ISLU2 , Type K

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Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Integrated Services Line Unit	ISLU2	XX	00 - 42
Line Group	LG	XX	00 - 15
Line Board	LBD	X	0 - 7
Line Circuit	LCKT	XX	00 - 07

Data Rules:
OE TYPE:

A:
If OE is type "A",

- DNU-S DSLs defined on the DSL or MISLINK form which have the same identical entries for the first four digits of the OE (SM,DNUS) and which also have the same DS1 and DS1 TS entries, must also have the same RT (OE[5,6]) and SHELF/CHL GRP (also defined as the first through third digits of the D ISCN) entries.

- D and/or B Channels cannot be assigned to conflicting DS1 time slots or quarter time slots due to manual (vs system) time slot assignments among the DSL, MISLINK, or NAILUP forms.

E:
If OE is type "E",

- DPIDB must be 1 - 5.

- the AIU must be defined on the EQAIUP form with an equipage status of "O" and a type of "AIULP" or "AIURPLP".

- an EQAIU form must be defined with a matching TSGRP NO whose PSU SHLF matches the first digit of the SHELF on the MISLINK form.

G:
If OE is type "G", DPIDB must be 12 - 22.

For the following forms:
- DSL
- LINE
- MISLINK
- MLHLN
- TRUNK

- Originating Equipment Numbers cannot be duplicated on thefor the IDCU (Integrated Digital Carrier Unit) equipment.

- OE ports which have SM/IDCU/RT values (the OE NUMBER[1,7]), then they must correspond to the SM/UNIT NUMBER/RT EX values assigned on an RTERM form (5174 Record). In addition, the DSL, DSLUSR, and MISLINK OE ports must be located on equipment identified on an RTERM form where RT INTERFACE is "TR303".

  - For all TR303 remote terminals, OEs can be assigned to the RT only if the TR303 is equipped (i.e, RT EQSTAT must equal "O" or "G"). In addition, OEs assigned to any TR303 cannot have the assigned line value exceed the RT LINE SIZE on the related RTERM form. (The line value is OE NUMBER[8,11] for an OE TYPE of "G".)

  - All IDCU MISLINKs that have "TR303" remote terminals assigned are prohibited from using the "303ZCS" suppression method, i.e., the SUP MTHD on the RTERM form can not be "303ZC".

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If OE type is "G":

- each ISCN or SHELF/CHL GRP/CHL combination must have a proper Packet Switching Unit shelf assigned on the EQIDCU form (5846 Record). The PSU shelf specified by the entry in the SHELF field must be defined on the EQIDCU form with a PIDB TYPE of "PSU".
- on IDCU equipment, when packing QTR TS on an MISLINK form (up to 4 QTR TSs to a TS) on an SM/IDCU/RT (OE NUMBER[1,7])
  - the set of DPIDB, TIMESLOT, DS1 and DS1 TS must each be identical, i.e., DS1 = DS1, etc.).
  - the fields SHELF and CHL GRP (concatenated) must also be the same on all the MISLINK forms in the group. If the DPIDB/TIMESLOT combination is the same on any forms, the DS1/DS1 TS combinations must also be the same across those MISLINK forms.
  - (with known D channel assignments) the assigned QTR TS andthe CHL must be unique across the identical set of forms.

I:
If OE is type "I",
- DPIDB must be 2 - 11
- DS1 and DS1 TS cannot be entered

An OE type of "I" must be defined as an equipped and operational U or T card on the ISLULC form (5942 Record).

For OEs with an OE TYPE of "I" which are assigned a Protocol Handler on the EQPSU form, it is recommended that those equipped in a given SLG (Sub Line Group), belong to the same DSL group (first three digits of ISCN which is a combination of SHELF, CHLGRP, and CHL). An SLG is a set of 4 (R)ISLU LCs (Line Cards) assigned to the same LGC (Line Group Controller). The LCs are (0,2,4,6) or (8,10,12,14) or (16,18,20,22) or (24,26,28,30).

K:
If OE type is "K",

- the assigned TIMESLOT may not be equal to the LG part of the OE or the LG part plus 16.
- DS1 and DS1 TS cannot be entered.
- DPIDB must be 2 - 11.
- Equipment Numbers with OE type of "K" must be defined as an equipped and operational U or T Board on the ISLULB form (5952 Record).

OE NUMBER:

For 5E9(2) and earlier, the value assigned in TERMLIM defines the maximum number of ISDN Terminals that are allowed to be simultaneously active per SM. TERMLIM is a no display field on the EQIM form with a default of 2047. In most cases TERMLIM should be set to this value. The ISDN Terminals are defined as follows:

ISDN Terminal Assignments

Form	SM	Number of Assignments
DSL	OE[1,3]	MTERM defines the quantity of ISDN Terminals per DSL form.

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DSLAP	LCEN[1,3]	number of ISDN Terminals is incremented by 1 for each LCEN list element defined.
MISLINK	OE[1,3]	1
OSPSDSL	LCEN[1,3]	1 where SERVICE CLASS is not "XDB"

ACD data links assigned to the same SM must be assigned to different line group controllers.

The OE must be defined on the ISLULC (5942 Record) with an equipage state of Operational and a card type of "PULC", "ULC", or "TLC".

The following form(s) cannot have duplicate Line Card or Line Board assignments:

- DSL - OE
- DSLAP - LCEN
- MISLINK - OE
- OSPSDSL - LCEN/MATE LCEN
- RDTAPORT - OE

The following combination of fields

- OE
- DATA LINK GRP
- DATA LINK NBR

must be unique on MISLINK input forms.

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks). The following applications define the possible LLCB assignments:

		LLCB	
Form	**SM**	**SHELF CHL GRP**	**Increment**
AMLBDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	OE[1,3]	PPB1 ISCN[1,3]	by 1 for each PPB1 ISCN defined.
		PPB2 ISCN[1,3]	by 1 for each PPB2 ISCN defined.
		D ISCN[1,3]	by 1 if a matching DSLUSR form is not found
DSLUSR	OE[1,3]	D ISCN[1,3] on the correspond-ing DSL form	by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered.
			by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
		ODB ISCN1[1,3] ODB ISCN2	by 1 if only ODB ISCN1 is entered.
			by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
DSLAP	LCEN[1,3]	ISCN[1,3]	by 1 for each unique LCEN/ISCN combination.
MISLINK	OE[1,3]	SHELF and CHL GRP	by 1 for each MISLINK form.
OSPSDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined.
			by 1 for each unique OSPSDSL form.
RTERM where RT INTERFACE is "TR303"	SM	ISCN[1,3]	by 2 for each TMC PRI ISCN and each TMC NPRI ISCN entry.
			by 3 for each EOC PRI ISCN and each EOC NPRI ISCN entry.
TRUNK Where TRKCLS is "IFOPER", "IFTERM" or "EDSL"	DEN[1,3]	ISCN[1,3]	1 for each unique TRUNK form.
XAT	DEN[1,3]	ISCN[1,3]	by 1 for each unique XAT form.

The ODA automatic time slot assignment algorithm allocates four TS to each SM/ISLU2/LG configuration for each PIDB from the ISLU2 to the PSU as follows:

- for LGs entered between 0 - 7, the time slots are assigned to odd numbered PSU PIDBs and

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- for LGs entered between 8 - 15, the time slots are assigned to even numbered PSU PIDBs (PIDBs are assigned on the EQISLU form).

A SLG (Sub Line Group) is a group of no more than 4 LC (Line Cards) per LGC (Line Group Controller). It is recommended that for every (R)ISLU, SLGs be installed in the following order as growth occurs:

Growth Order Of SLGs

SLG	LGC 5th And 6th Digit Of LCEN	Line Cards Last 2 Digits Of LCEN
0-15	0-15	16, 18, 10, 22
16-31	0-15	08, 10, 12, 14
32-47	0-15	24, 26, 28, 30
48-63	0-15	00, 02, 04, 06

No more than three MISLINK forms can be assigned to a single SM.

For each set of MISLINK forms having equipment numbers with the same SM (first 3 digits of the OE), the set of DATA LINK NBR values must be consecutive starting from 0.

All of the DSLs -
- IDCU DSLs defined on
- DSL
- MISLINK
- and ISLU/ISLU2 DSLs as defined on
- DSL
- DSLAP
- MISLINK
- OSPSDSL

on an SM which have identical entries for the first five digits of the OE for ISLU2 or IDCU or first four digits for ISLU; and which also have the same D REL PIDB and D TIMESLOT entries; must, additionally, have the same
- RT for IDCU
- OE[5,6] for ISLU
- LGC for ISLU2

and SHELF/CHL GRP (also defined as the first through third digits of the [D] ISDN) entries.

For the following applications:

Time Slots Reserved for Applications

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on

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	TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

The following data rule is not executed on an SM-2000, because provisioning of nailed-up time slots is not required on an SM-2000.

- For the above applications (except the RPA application), each Data Interface in an SM can have a maximum for 256 nailed-up time slots for a PSU2 or a maximum of 128 nailed-up time slots for a PSU1.

  These time slots can be reserved by setting rows RPTSS0 - RPTSS7 to 1 on the EQPSU form (5741 Record). The quantity of time slots reserved (i.e. the number of entries set to 1) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D channel only takes a quarter of a time slot.

  Also, the reserved time slots must be entered such that for any given SHELF the time slots assigned for a SHELF may be duplicated in the same vertical (column) position only as many times as the SHELF has PIDBs assigned. For example, if SHELF 1 has 2 DI0 PIDBs assigned in the PIDB field, then a given vertical position (0-31) in the DI0 PSU TSIU TIMESLOTs field (RPTSS0 - RPTSS7) may not be used more than twice for that shelf.

- Each Switching Module can have up to 5 PSU SHELFs. On the EQIM form, when UNIT TYPE is not "SM2000" each PSU SHELF can be assigned up to (32 times X) time slots for the above table of applications. (Note: X represents the number of PIDBs, 0 to 4, provisioned per shelf.)

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

2.3 # SERVCLASS

Description: Enter the service class applied to the digital subscriber line specified in the OE (OE for LCENs) field. For this form the only service class supported is "MISLNK" for the Management Information System Link.

Required Field.
Default: MISLNK
Valid Entries: MISLNK

Data Rules:

If "MISLNK" is entered, then CONFIGURATION on the corresponding EQIM form must have a value which supports this SERVICE CLASS value shown in the table for Configurations for Facilities and Applications. (SM on the EQIM form matches the first 3 digits of the OE on the MISLINK form).

2.4 # SHELF

Description: Enter the PSU shelf number where the protocol handler that services the line is located.

Required Field.
Valid Entries: 0 - 4

Data Rules:

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Each SM can have up to 5 PSU Shelfs.
Each Shelf can have up to 16 PH (Protocol Handlers).
Each PH can be assigned up to 32 time slots.
On Demand B Channel, Packet B Channel, Packet D Channel, EDSL, IFOPER, and IFTERM on PHs can be assigned on the following forms:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- OSPSDSL
- RTERM
- TRUNK
- XAT

The combination of SM (OE NUMBER[1,3]), SHELF, and CHL GRP must be entered on the PSUGP form (5949 Record).

An ISCN (Integrated Services Channel Number) is the combination of SHELF, CHL GRP, and CHL. ISCNs require a PIDB with a PIDB TYPE of "PSU" assigned on the same Packet Switching Unit shelf on the EQISLU form as the PSU shelf specified by the entry in the SHELF field.

Each ISCN entry must have the SHELF value assigned on an EQPSUPH form (5742 Record) on the same SWITCHING MODULE and having a matching PSU SHELF.

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

- AMLBDSL
- DSL
- DSLAP
- MISLINK
- DSLUSR
- ODBRES
- OSPSDSL
- RTERM
- XAT

with all TRUNK forms which have a TRKCLS of:

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- "EDSL"
- "IFTERM"
- "IFOPER"

However, they can not have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of

- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form
- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form.
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2,
- MISLINK - where , SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form.
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is "TAOPER" or "DAOPER".
- XAT - where SHELF/CHL GRP is the first three digits of ISCN.

For 5E11 and later, the following data rules apply for the Automatic ISDN Line Assignment feature (For more information on this feature, see Division 2, Section 1BO).

SHELF, CHL GRP and CHL must all be entered for the existing form tuple in Large Terminal Growth. Former data rules still apply to the existing form tuples in Large Terminal growth.

When SHELF, CHL GRP or CHL is entered, all must be entered.

When SHELF is not entered, DPIDB, TIMESLOT, QTR TS, DS1 and DS1 TS must not be entered.

For a given SM, the SHELF, CHL GRP and CHL fields on a MISLINK form must not be entered when ACT on FOSYS form (5713-2 Record), where FID is 695, is set to "Y".

For a given SM, the SHELF, CHL GRP and CHL fields on a MISLINK form must be entered when ACT on FOSYS form, where FID is 695, is set to "N".

2.5 # CHL GRP

Description: Enter the PSU channel group number of the protocol handler on the PSU shelf.

Required Field.
Valid Entries: 0 - 15

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Data Rules:

The ISCN (Integrated Services Channel Number), which consists of the SHELF, CHL GRP and CHL, must exist in the same loaded SM as specified by the OE NUMBER[1,3] on this form.

For 5E11 and later, the following data rules apply for the Automatic ISDN Line Assignment feature (For more information on this feature, see Division 2, Section 1BO).

SHELF, CHL GRP and CHL must all be entered for the existing form tuple in Large Terminal Growth. Former data rules still apply to the existing form tuples in Large Terminal growth.

When SHELF, CHL GRP or CHL is entered, all must be entered.

For a given SM, the SHELF, CHL GRP and CHL fields on a MISLINK form must not be entered when ACT on FOSYS form (5713-2 Record), where FID is 695, is set to "Y".

For a given SM, the SHELF, CHL GRP and CHL fields on a MISLINK form must be entered when ACT on FOSYS form, where FID is 695, is set to "N".

2.6 # CHL

Description: Enter the PSU channel member number of the PH (Protocol Handler) on the PSU shelf.

Required Field.
Valid Entries: 0 - 127

Valid CHL Entries per PH

Entry	PH
0 - 3	PH16
6 - 9	PH16
12 - 15	PH16
0 - 127	PH128

Data Rules:

For 5E11 and later, the following data rules apply for the Automatic ISDN Line Assignment feature (For more information on this feature, see Division 2, Section 1BO).

SHELF, CHL GRP and CHL must all be entered for the existing form tuple in Large Terminal Growth. Former data rules still apply to the existing form tuples in Large Terminal growth.

When SHELF, CHL GRP or CHL is entered, all must be entered.

For a given SM, the SHELF, CHL GRP and CHL fields on a MISLINK form must not be entered when ACT on FOSYS form (5713-2 Record), where FID is 695, is set to "Y".

For a given SM, the SHELF, CHL GRP and CHL fields on a MISLINK form must be entered when ACT on FOSYS form, where FID is 695, is set to "N".

2.7 FWCLI

Description: Enter the FW CLI (Firmware Change Level Indicator) of the digital line being serviced.
Default: 0
Valid Entries: 0

2.8 DPIDB

Description: Enter the DPIB (Directly Connected Peripheral Interface Data Bus) number for ISLU(2) or IDCU SG 0. This data bus is the vehicle that links the D-channel of the DSL, resident on an ISLU(2) or

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IDCU in an SM, to the SM's peripheral PSU (Packet Switching Unit).

- ***NOTE:*** The field must be non-zero for DSLs on an ISLU(2) or IDCU but must be zero for DSLs on a RISLU. If the field is left blank the DPIDB value will be chosen by the system.

Valid DPIDB Entries

Entry	Definition
1 - 5	AIU ISDN U-Interface.
2 - 11	ISLU(2); "I" or "K".
12 - 22	IDCU; "G".

Data Rules:

Manually assigned DPIDBs require an EQISLU form with a matching PIDB whose PSU SHELF matches the SHELF entry on this form.

The DPIDB must be previously grown in as a DPIDB before it can be used. For ISLU, the DPIDB is grown using the EQISLU form (5731 Record, RC view 22.5); for IDCU, the DPIDB is grown using the EQIDCU form (5846 Record, RC view 19.12).

DPIDBs must have a corresponding PIDB with a PIDB TYPE of "PSU" assigned on the EQISLU form (5731 Record).

A RISLU does not have a DPIDB. Therefore, DPIDB cannot be entered for an OE which is resident on a RISLU (as opposed to an EQISLU defined ISLU), and which is defined on an EQRISLU input form.

Manually assigned DPIDBs with an OE type of "G", must have the proper PSU Shelf assigned with a matching PIDB NO. on an EQIDCU form (5846 Record). The PSU Shelf number, specified by the SHELF entry, must be defined as DI/PSU SHELF on the matching EQIDCU form and the PIDB TYPE on the EQIDCU form must be "PSU".

2.9 TIMESLOT

Description: Enter a time slot on the DPIDB (Directly Connected Peripheral Interface Data Bus) to carry signals for the D-channel between the ISLU(2) (Integrated Service Line Unit(2) or the IDCU (Integrated Digital Carrier Unit) and a PSU (Packet Switch Unit). If this field is not entered, an available time slot will be automatically assigned. (See also time slot information under the "Time Slot" heading in the "GENERAL" section.)
Valid Entries: Blank (computed automatically), or 0 - 31

Data Rules:

The assigned TIMESLOT is either equal to the LGC part of the DSL OE or the LGC plus 16.

If DS1, DS1 TS or TIMESLOT is entered, all must be entered.

If the DSL is resident on a RISLU, this field must not be entered.

Time slots for a given combination of SM, ISLU(2) or IDCU, and PIDB, may not be duplicated for other DSLs.

DSL lines cannot be assigned duplicate time slots on the following forms:
- DSL
- MISLINK
- RTERM

If the OE defined on a MISLINK form is associated with an EQRISLU form, the TIMESLOT information must not be assigned.

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2.10 QTR TS

Description: Enter the D-channel Quarter Time Slot number. All quarter time slots in a time slot must be assigned (if possible) to a time slot before another time slot is used. If this field is not entered, an available QTR TS will be automatically assigned.
Valid Entries: 0 - 3

Data Rules:

Digital subscriber lines cannot be assigned duplicate D-channel quarter time slots.

The quarter time slot may not be duplicated for the same combination of SM, ISLU or IDCU, DPIDB, and TS for another DSL.

The digital subscriber lines must be assigned on local ISLU(2)s, if QTR TS have been assigned.

2.11 # LVL2 PROF

Description: Enter the Level 2 profile. However, for an MIS (Management Information System), this field is used to indicate packet switching. Since packet switching is not yet supported for MIS Links, the only valid value is "DASC" to indicate "no packet switching".

Required Field.
Default: DASC
Valid Entries: DASC

2.12 DS1

Description: Enter the data facility which connects an RT (Remote Terminal) to an IDCU (Integrated Digital Carrier Unit). This field is not used for ISLU(2)s.
Valid Entries: 1 - 28

Data Rules:

If DS1, DS1 TS, or TIMESLOT are entered, all must be entered.

If DS1 or DS1 TS are entered, the following must be entered:
- DPIDB
- DS1
- DS1 TS
- QTR TS
- TIMESLOT

If 1 is entered, DS1 TS cannot be 11 or 23.

The DS1 for a given IDCU RT is assigned by the RTERM form (5174 Record RC view 18.15). On the RTERM form the RT DS1 is connected to an FAC (IDCU Facility) where IFAC is a DS1 number viewed from the IDCU point of view (0 - 39), instead of a DS1 number viewed from the remote terminal point of view (1 - 28). On the RTERM form, the RT DS1 number is called RT Terminal number (RT TERM). If the DS1 is not assigned to an IFAC, no time slot on this DS1 can be assigned to a DSL.

If the OE is defined on a TR303 remote terminal and the DS1 entered on this form corresponds with the IFAC entered in the RT IFAC TERMINATION list on the RTERM form with ROW RT TERM equal to the DS1, then this IFAC can not equal PROT LINE on the same RTERM form.

2.13 DS1 TS

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Description: Enter the D channel DS1 time slot number on the DS1 data channel which connects an RT (Remote Terminal) and an IDCU (Integrated Digital Carrier Unit). 24 time slots are available. This field is used to assign one time slot to the D channel for circuit switching or D channel packet switch user. This field is not used for ISLU(2)s.

NOTE: Time Slot 11 and 23 on the number 1 DS1 of a remote terminal is reserved for the IDCU EOC (Embedded Operation Channel) and TMC (Time-slot Management Channel).

Valid Entries: 0 - 23

Data Rules:

If DS1, DS1 TS, or TIMESLOT is entered, all must be entered.

IDCU remote terminal ports cannot be assigned duplicate IFAC (DS1) time slots on the following forms:

- DSL
- MISLINK
- NAILUP
- RTERM

ISDN applications (DSL and MISLINK form) are not allowed when ZCS signaling is used.

EXTERNAL DATA LINK

The following fields (Section 2.14 - Section 2.15) define the external data links.

2.14 # DATA LINK GRP

Description: Enter the data link identification number.
Valid Entries: 1 - 999

Data Rules:

For 5E9(1) - 5E9(2), for each set of MISLINK forms having the same DATA LINK GRP, the set of DATA LINK NBR values must be consecutive starting from 0.

2.15 # DATA LINK NBR

Description: Enter the relative data link number.
Valid Entries: 0 - 2

Data Rules:

For a given SM, the following SHELF, CHL GRP and CHL fields on a MISLINK form must not be entered when ACT on FOSYS form, where FID is 695, is set to "Y" (AILA feature active).

```
mislink                    5ESS SWITCH
                    OFFICE DATA ADMINISTRATION
(5637)                      MIS LINK

 *1. OE       _ ____________      EXTERNAL DATA LINK
 #4. SERVCLASS MISLNK         #15. DATA LINK GRP ____
 #5. SHELF     _              #16. DATA LINK NBR ____
 #6. CHL GRP   __
 #7. CHL       ___
  8. FWCLI     000000000
```

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```
 9. DPIDB    __
10. TIMESLOT  __
11. QTR TS    _
#12. LVL2 PROF DASC
13. DS1      __
14. DS1 TS    __
```

Figure 1 SAMPLE MISLINK FORM 5E9(1) - 5E10 SOFTWARE RELEASES

```
mislink                    5ESS SWITCH
                    OFFICE DATA ADMINISTRATION
(5637)           ACD MANAGEMENT INFORMATION SYSTEM LINK

 *1. OE       _ ____________       EXTERNAL DATA LINK
 #4. SERVCLASS MISLNK         #15. DATA LINK GRP ____
  5. SHELF    _              #16. DATA LINK NBR ____
  6. CHL GRP   __
  7. CHL      ___
  8. FWCLI    000000000
  9. DPIDB    __
 10. TIMESLOT  __
 11. QTR TS    _
#12. LVL2 PROF DASC
 13. DS1      __
 14. DS1 TS    __
```

Figure 2 SAMPLE MISLINK FORM 5E11 SOFTWARE RELEASE

```
mislink                    5ESS Switch
                    OFFICE DATA ADMINISTRATION
                ACD MANAGEMENT INFORMATION SYSTEM LINK

*1. OE       _ ____________       EXTERNAL DATA LINK
 4. SERVCLASS MISLNK         #15. DATA LINK GRP ____
 5. SHELF    _              #16. DATA LINK NBR ____
 6. CHL GRP   __
 7. CHL      ___
 8. FWCLI    000000000
 9. DPIDB    __
10. TIMESLOT  __
11. QTR TS    _
12. LVL2 PROF DASC
13. DS1      __
14. DS1 TS    __
```

Figure 3 SAMPLE MISLINK FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 32C: 5638 RECORD
ACD SERVING TEAM PARAMETERS - STPARM

1. GENERAL

The 5638 Record is available with 5E11 and later Software Releases. It is to provide information about a serving team. A serving team is a group of agent positions that services one or more call queues. This form supports the ACD/BRCS Interworking II feature. For more information on the ACD/BRCS feature see Division 2, Section 4A121.

1.1 Recent Change View

The corresponding Recent Change View for this form is 6.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SERVING TEAM

Description: Enter the number of the serving team that will service this call queues.

Required Field.
Valid Entries: 1 - 999

2.3 SA Q

Description: Enter the service assistance call queue number. This number allows the serving team to conference with a service assistant associated with the call queue. If this field is not entered, it indicates that no service assistance is available.
Valid Entries: 1 - 999

Data Rules:

If SA Q entered, the value must be defined as a CALL QUEUE on a CQPARM form (5640 Record).

2.4 EMRG CF

Description: Does this team have a conference capability on an emergency call queue? If "Y" is entered in this field, this team has conference queue capability during an emergency call. When the EMRG button is pressed at an agent position, a conference call is set up with an emergecy assistant associated with an emergency call queue.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, EMRG CF Q must be entered.

If "N" is entered, EMRG CF Q must not be entered.

2.5 EMRG CF Q

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Description: Enter the emergency conference call queue number, if emergency call conference capability is available.
Valid Entries: 1 - 999

Data Rules:

IF EMRG CF Q entered, the value must be defined as a CALL QUEUE on a CQPARM form.

2.6 INTRAFLOW ALW

Description: Is this serving team allowed to receive intraflowed calls?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered:

- PCT INTRAFLOW must be entered.
- INTRAFLOW ALW on the ACDBPARM form is set to "Y".

2.7 PCT INTRAFLOW

Description: This field indicates the maximum percentage of currently logged-in agents of this serving team that is allowed to handle calls from supporting calls queues.
Valid Entries: 1 - 100 (%)

2.8 AFTER CALL WK

Description: Should the after-call work-state (auto make busy) be allowed? If "Y" is entered, then the ACD/BRCS position enters the "Make Busy with ACD call" state whenever the agent answers a hunted call. For more information on the ACD/BRCS feature see Division 2, Section 4A121.

Required Field.
Default: N
Valid Entries: Y, N

2.9 LIVE MIKE

Description: Should a live mike be allowed during service observing? If "Y" is entered then the ACD/BRCS service observer is by default given a 2-way connection when service observing. If "N" is entered, then the ACD/BRCS service observer is by default given a 1-way connection when service observing.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the Live Mike secured feature must be purchased, therefore, the ACT field for SFID 4 must be set to "Y".

2.10 WARN TONE

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Description: This field specifies whether, during an ACD/BRCS service observe session, a warning tone is provided to the observed agent, or it is provided to the observed agent and far party, or it is not provided to either the agent or the far party. No entry in this field indicates a warning tone is not provided.

Valid WARN TONE Entries

Entry	Definition
1ALL	A warning tone is provided once to the agent and the far end.
AGENT	Only the agent being observed hears a warning tone.
ALL	The agent being observed and far end hear a warning tone.

2.11 # TGID

Description: Enter the Terminal Group Identification used to assign the serving team to an ACD/BRCS customer.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

The TGID entered on this form must be defined as a GROUP ID on either the TGSRFD, TGSRLPA, TGSRMPA, TGSRTPA or BFG form.

2.12 ACD GROUP

Description: Enter the sub-terminal group which allows customers (or end-users) to divide their call centers into smaller groups. This allows different groups to exist within the same ACD customer with the same level of security that exists between different ACD customers. Security, in this case, refers to the agents' inability to log-in to ACD groups other than the one to which they are assigned.

Required Field.
Default: 001
Valid Entries: 1 - 999

2.13 E911 PSAP

Description: Is this an ACD E911 Public Safety Answering Point serving team?

Required Field.
Default: N
Valid Entries: Y, N

```
stparm                    5ESS SWITCH
                  OFFICE DATA ADMINISTRATION
(5638)              ACD SERVING TEAM PARAMETERS

 *1. SERVING TEAM   ___
  2. SA Q           ___
  3. EMRG CF         N
  4. EMRG CF Q      ___
  5. INTRAFLOW ALW   N
  6. PCT INTRAFLOW  ___
  7. AFTER CALL WORK N
  8. LIVE MIKE       N
  9. WARN TONE      _____
#10. TGID           _____
 11. ACD GROUP      001
```

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12. E911 PSAP N

Figure 1 SAMPLE STPARM FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 32D: 5639 RECORD
ACD AGENT ID ASSIGNMENT - AGNTID

1. GENERAL

The 5639 Record is available with 5E11 and later Software Releases. It is used to associate an Agent ID with a serving team. Multiple agents are typically assigned to a given serving team. In addition, this form specifies if the agent has monitoring capabilities and, if so, the password required to enable the monitoring (service observing) capabilities. This form supports the ACD/BRCS Interworking II feature. For more information on this feature, see Division 2, Section 4A121.

The value specified in the SERVING TEAM field must be defined on the STPARM form (5638 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 6.3

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * AGENT ID

Description: Enter the agent login identification.

Required Field.
Valid Entries: 1 - 32768

2.3 # SERVING TEAM

Description: Enter the serving team number to which this agent is assigned.

Required Field.
Valid Entries: 1 - 999

Data Rules:

The SERVING TEAM must be defined on an STPARM form (5638 Record).

2.4 MON PERMISSION

Description: Does this agent have permission to monitor (service observer) other agents?
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then PASSWORD must be entered.

2.5 PASSWORD

Description: Enter the 6-digit password required by the agent to perform monitoring.
Valid Entries: 6 digits from 0 - 9

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```
agntid                  5ESS SWITCH
                    OFFICE DATA ADMINISTRATION
(5639)                ACD AGENT ID ASSIGNMENT

*1. AGENT ID      _____
#2. SERVING TEAM  ___
 3. MON PERMISSION N
 4. PASSWORD      ______
```

Figure 1 SAMPLE AGNTID FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 32E: 5640 RECORD
ACD CALL QUEUE PARAMETERS FORM - CQPARM

1. GENERAL

The 5640 Record is available with the 5E11 and later Software Releases. It is used to assign administrative data to be applied to call queues. All serving teams specified on the SERVING TEAM field must be defined on the STPARM form (5638 Record, RC View 6.1).

This form supports the ACD/BRCS Interworking II feature. For more information on this feature, see Division 2, Section 4A121.

1.1 Intraflow Background Information

The supporting teams are searched in order until either

- the queue delay of the call does not exceed a delay outflow threshold of a supporting serving team,
- the call checks all its supporting teams without success,
- or the call is assigned to a serving team.

For example:

Assume the following for a call arriving for call queue 1:

- Call queue one has serving team 2 as the principal serving team and supporting serving teams 3 and 4, with delay outflow thresholds of 5 and 15, respectively.
- Call queue one has two calls on queue and there are no available servers on principle team 2.
- The call at the head of call queue one has waited 17 seconds.
- Serving team 3's threshold is 50% for maximum percentage of currently logged-in operators allowed to handle calls from supporting call queues (PCT INTRAFLOW on STPARM form). It has four agents logged-in and two are busy with calls from supporting serving teams.
- Serving team 4's team threshold is 75%. It has ten agents logged-in. One is busy with a call from a supporting queue. The new call is queued because other calls are already queued.

The ACD (Automatic Call Distributor) checks the call at the head of the queue and finds that it has waited longer than the delay outflow threshold for the first supporting serving team 3. The call cannot be intraflowed to team 3, because doing so would cause more than 50% of the agents on the serving team to be handling calls from supporting queues simultaneously. So, the ACD checks the next supporting team. The call has also waited longer than the delay outflow threshold for its second supporting team team 4. The call is intraflowed to team 4 because team 4 will have only 20% of its agents handling calls from its supporting queues, which is much less than its team threshold of 75%.

1.2 Recent Change View

The corresponding Recent Change View for this form is 6.4

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and the Office Name on each record.

2.2 * CALL QUEUE

Description: Enter the ACD (Automatic Call Distributor) call queue number.

Required Field.
Valid Entries: 1 - 999

Data Rules:

CALL QUEUE(s) that are defined on this form and have a SERVING TEAM entered and one or more SUP TEAM(s) entered, then each SERVING TEAM and SUP TEAM must be defined on the STPARM form with the same E911 PSAP value.

2.3 SERVING TEAM

Description: Enter the principal serving team number for the call queue.
Valid Entries: 1 - 999

Data Rules:

If a value is entered for SERVING TEAM, then it must be defined as a SERVING TEAM on the STPARM form (5638 Record).

2.4 # CD RTI

Description: Enter the route index for the close-down announcement.

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

An entry for CD RTI must be defined as a ROUTE INDEX on the RTIDX form. In addition, the RTIDX form must have an entry for TRUNK GROUP NUMBER. The TRUNK GROUP NUMBER must be defined as TGN on a TKGRP form with TRK DIR set to "ANN" or "OUT", and LOCAL SM must be unknown.

2.5 # ANN1 RTI

Description: Enter the first delay announcement route index.

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

An entry for ANN1 RTI must be defined as a ROUTE INDEX on the RTIDX form. In addition, the RTIDX form must have an entry for TRUNK GROUP NUMBER. The TRUNK GROUP NUMBER must be defined as TGN on a TKGRP form with TRK DIR set to "ANN" and LOCAL SM must be unknown.

2.6 # ANN2 RTI

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Description: Enter the second delay announcement route index.

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

An entry for ANN2 RTI must be defined as a ROUTE INDEX on the RTIDX form. In addition, the RTIDX form must have an entry for TRUNK GROUP NUMBER. The TRUNK GROUP NUMBER must be defined as TGN on a TKGRP form with TRK DIR set to "ANN" and LOCAL SM must be unknown.

2.7 # ANN3 RTI

Description: Enter the third delay announcement route index.

Required Field.
Valid Entries:
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

An entry for ANN3 RTI must be defined as a ROUTE INDEX on the RTIDX form. In addition, the RTIDX form must have an entry for TRUNK GROUP NUMBER. The TRUNK GROUP NUMBER must be defined as TGN on a TKGRP form with TRK DIR set to "ANN" and LOCAL SM must be unknown.

2.8 CQ NAME

Description: Enter up to ten characters for the Call Queue name. This name must be unique for all call queues on the switch.
Valid Entries: 1 - 10 aphanumeric characters

Data Rules:

The CQ NAME entries on the CQPARM form must be unique.

2.9 SERV OBJ

Description: Enter the average delay in tenths of a second that calls of this type should expect before reaching a server.
Default: 100 (tenths of a second)
Valid Entries: 1 - 600 (tenths of a second)

2.10 MAX CALLS

Description: Enter the maximum number of calls allowed in the call queue. The sum of MAX CALLS for all call queues on the switch cannot exceed 40,000.
Valid Entries: 0 - 40000

Data Rules:

The sum of MAX CALLS on all CQPARM forms cannot exceed the maximum value of 40,000.

2.11 CWON SEC

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Description: Enter the elapsed time in seconds, during a queue delay, after which the call waiting indicator will be displayed at the serving team positions for this call queue.
Default: 11 (seconds)
Valid Entries: 1 - 1800 (seconds)

Data Rules:

CWON SEC must be greater than CWOFF SEC.

2.12 WCOFF SEC

Description: Enter the elapsed time in seconds, during a queue delay, after which the call waiting indicator will not be displayed at the serving team positions for this call queue.
Default: 9 (seconds)
Valid Entries: 1 - 1800 (seconds)

2.13 CQ STATE

Description: Enter the availability of the call queue.

Required Field.
Default: CLOSED
Valid Entries:

Valid CQ STATE Entries

Entry	Definition
CLOSED	Call queue is not available
OPEN	Call queue is available
TOD	Call queue availability depends on the Time of Day.

Data Rules:

If CQ STATE is not "CLOSED", SERVING TEAM must be entered.

If "TOD" is entered, STATE in the CALL QUEUE TOD LIST must have an entry for every day of the week.

2.14 DEL1 THR

Description: Enter the threshold of the number of seconds of delay before the first announcement is played. 0 is used to force the first announcement.

Required Field.
Default: 15
Valid Entries: 1 - 1800 or 0 seconds

Data Rules:

DEL1 THR must be less than DEL2 THR.

2.15 DEL2 THR

Description: Enter the threshold of the number of seconds of delay before the second announcement is played.

Required Field.
Default: 40 (seconds)
Valid Entries: 1 - 1800 (seconds)

Data Rules:

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DEL2 THR must be less than DEL3 THR.

2.16 DEL3 THR

Description: Enter the threshold of the number of seconds of delay before the third announcement is played.

Required Field.
Default: 60 (seconds)
Valid Entries: 1 - 1800 (seconds)

2.17 INTRAFLOW ALW

Description: Is intraflow allowed for this call queue? This field indicates whether the call queue may intraflow calls to other serving teams. Intraflow allows an ACD administrator to designate for each call queue a single principal serving team and up to 8 supporting serving teams with associated delay outflow thresholds.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered:

- at least one SUP TEAM must have a value of 1 - 999.
- SUP TEAMs in SUPPORT TEAM LIST which are defined on an STPARM form must have INTRAFLOW ALW set to "Y" on the STPARM form.

2.18 QUEUE BUSY

Description: Should a busy tone be given when call queue is full? This field indicates if busy tone should be given, instead of announcement or re-order, when a call is routed to the specified call queue and there are no queue slots available for that queue.

Required Field.
Default: N
Valid Entries: Y, N

2.19 DELAY BUSY

Description: Should a busy tone be given when delay threshold is exceeded? This field indicates if busy tone should be given, instead of announcement or re-order, when the "DEL3 THR" threshold for the specified call queue has been exceeded.

Required Field.
Default: N
Valid Entries: Y, N

2.20 TGID

Description: The TGID field displays the TGID (Terminal Group Identifier) (if it is assigned) to an ACD/BRCS serving team on the RC View 6.4. (It is not displayed on this ODA form.) When a TGID is assinged on the STPARM form (RC View 6.1), and that serving team is associated with a CALL QUEUE

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on this form, then any subsequent updates of the TGID value on View 6.1 will cause the terminal group to be updated for all the CALL QUEUEs that are associated with the SERVING TEAM having this TGID.
Valid Entries: 1 - 65535

2.21 ACD GROUP

Description: This is a Recent Change only field to display the ACD group identification. This field uniquely identifies a sub-terminal group to allow call centers to be divided into smaller groups. This allows different groups to exist within the same ACD customer with the same level of security that exists between different ACD customers.
Default: 1
Valid Entries: 1 - 999

Q DIALING

The following field (Section 2.22) applies to queue-dialed calls.

2.22 ACD OR DAA TN

Description: This is a Recent Change display-only field. The automatic call distribution or direct agent access telephone number to the call queue is displayed on the 6.4 RC View, if it has been assigned. This field is assigned by setting the Q DIALING TN field on RC View 6.10 (ACDTN form 5631-1 Record). When the Q DIALING TN field on View 6.10 is set to "N", then no value will be displayed in this field on the RC View 6.4. The ACD OR DAA TN is not displayed on this ODA form.

SUPPORT TEAM LIST (SUPTEAMLIST)

The following fields (Section 2.23 - Section 2.24) list supporting serving team numbers and dealy thresholds for supporting teams. A call queue may have 0 - 8 supporting serving teams.

2.23 SUP TEAM

Description: Enter the supporting serving team number for the intraflow supporting team.
Valid Entries: 1 - 999

Data Rules:

The supporting serving team entered in SUP TEAM, must not equal the value entered in SERVING TEAM.

SUP TEAM entries must be unique. Supporting serving team numbers must be unique.

When SUP TEAM in SUPTEAMLIST is entered, SERVING TEAM must be entered.

Each SUP TEAM in SUPPORT TEAM LIST assigned on a CQPARM form must be defined on an STPARM form.

Each SERVING TEAM and SUP TEAM assigned on this form must be defined on the STPARM form with the same E911 PSAP value.

2.24 DELAY THRSH

Description: Enter the delay outflow threshold in seconds for intraflow to the supporting serving team. See Intraflow Background Information under the GENERAL section.
Valid Entries: 0 - 1800 (seconds)

Data Rules:

If DELAY THRSH is greater than 0, the corresponding SUP TEAM must contain a value of 1 - 999.

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DELAY THRSH 8 must be greater than or equal to DELAY THRSH 7, DELAY THRSH 7 must be greater than or equal to DELAY THRSH 6, DELAY THRSH 6 must be greater than or equal to DELAY THRSH 5, DELAY THRSH 5 must be greater than or equal to DELAY THRSH 4, etc.

CALL QUEUE TOD LIST (CQTODLIST)

The following fields (Section 2.25 - Section 2.28) list the call queue availability states, begin times and end times for call queues that are available depending on the TOD (Time Of Day).

2.25 DAY

Description: The day of the week is given at the beginning of the Call Queue TOD list.
Valid Entries: SUN, MON, TUE, WED, THR, FRI, SAT

2.26 STATE

Description: Enter the call queue time of day availability state of the call queue.

Valid TOD STATE Entries

Entry	Definition
CLSD	Closed state
OEXC	Open exclusive state - closed between begin time and end time
OINC	Open inclusive state - open between begin time and end time, closed otherwise.

Data Rules:

If STATE is not entered, BEGIN TIME and END TIME must not be entered.

If "CLSD" is entered and BEGIN TIME or END TIME is entered, both must be entered and BEGIN TIME must be less than END TIME.

If "OINC" or "OEXC" is entered, then BEGIN TIME and END TIME must both be entered and BEGIN TIME must be less than END TIME.

2.27 BEGIN TIME

Description: Enter the beginning time for the call queue time of day availability for this call queue. The time is specified in military time, which is a 24 hour HHMM format, where HH:00 - 23 MM:00 - 59. For example, 2315 hours is 11:15 P.M. and 0000 is 12:00 A.M..
Valid Entries: 0000 - 2359

2.28 END TIME

Description: Enter the ending time for the call queue time of day availability for this call queue. The time is specified in military time, which is a 24 hour HHMM format, where HH:00 - 23 MM:00 - 59. For example, 2315 hours is 11:15 P.M. and 0000 is 12:00 A.M..
Valid Entries: 0000 - 2359

```
cqparm                    5ESS SWITCH
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5640)              ACD CALL QUEUE PARAMETERS

 *1. CALL QUEUE  ___              13. DEL1 THR      0015
  2. SERVING TEAM ___             14. DEL2 THR      0040
 #3. CD RTI       ____           15. DEL3 THR      0060
 #4. ANN1 RTI     ____             16. INTRAFLOW ALW N
```

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```
#5. ANN2 RTI     ____          17. QUEUE BUSY    N
#6. ANN3 RTI     ____          18. DELAY BUSY    N
 7. CQ NAME      __________          TGID
 8. SERV OBJ     100           ACD GROUP
 9. MAX CALLS    00030
10. CWON SEC     0011               Q DIALING
11. CWOFF SEC    0009          ACD OR DAA TN
12. CQ STATE     CLOSED
```

```
cqparm                    5ESS SWITCH
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5640)              ACD CALL QUEUE PARAMETERS

 22. SUPPORT TEAM LIST (SUPTEAMLIST)     25. CALL QUEUE TOD LIST (CQTODLIST)
 ROW SUP TEAM  DELAY THRSH            DAY  STATE  BEGIN TIME  END TIME
  1   ___      ____                   SUN  ____    ____       ____
  2   ___      ____                   MON  ____    ____       ____
  3   ___      ____                   TUE  ____    ____       ____
  4   ___      ____                   WED  ____    ____       ____
  5   ___      ____                   THR  ____    ____       ____
  6   ___      ____                   FRI  ____    ____       ____
  7   ___      ____                   SAT  ____    ____       ____
  8   ___      ____
```

Figure 1 SAMPLE CQPARM FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 32F: 5641 RECORD
ACD SEIZURE DISPLAY - SZDISP

1. GENERAL

The 5641 Record is available with the 5E11 Software Release. This form defines the display parameters provided when the operator position is seized for an incoming ACD/BRCS call. This form supports the ACD/BRCS Interworking II feature. For more information on this feature, see Division 2, Section 4A121.

1.1 Recent Change View

The corresponding Recent Change View for this form is 6.5

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * DISPX

Description: Enter the display index.
Valid Entries: 1 - 2047

TEXTUAL DISPLAY

The following field defines the text display.

2.3 DISPLAY

Description: Enter text of up to ten characters that are displayed at the agent position when the position is seized. Only alphanumeric, -, / characters or blank may be entered.
Valid Entries: 1 - 10 alphanumeric characters, -, /, or blank

CALLING/CALLED NUMBER DISPLAY

The following fields (Section 2.4 - Section 2.5) define the display for the calling or called number.

2.4 DN START

Description: Enter the calling or called number display start. The first digit of the incoming dialed digits that is displayed on the agent terminal must be specified.
Valid Entries: 1 - 10

Data Rules:

If DN START is entered, DN LENGTH must be entered.

If DN START is not entered, DN LENGTH must not be entered.

The sum of DN START and DN LENGTH must be less than or equal to 11. A maximum of 10 characters are allowed for display.

2.5 DN LENGTH

Description: Enter the calling or called number display length. This specifies the number of digits to be displayed on the agent terminal. The sum of DN START and DN LENGTH cannot be greater than the

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number of digits remaining after digit analysis, plus one.
Valid Entries: 1 - 10

DISPLAY CALLING/CALLED DN

The following fields (Section 2.6 - Section 2.7) define parameters for the display of the calling or called directory number.

2.6 CALLING DN

Description: Is the calling number directory number displayed?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered,
- CALLED DN must be "N".
- DN START must be entered.

2.7 CALLED DN

Description: Is the called number directory number displayed?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, DN START must be entered.

---

szdisp 5ESS SWITCH
OFFICE DATA ADMINISTRATION
(5641) ACD SEIZURE DISPLAY

*1. DISPX ____

TEXTUAL DISPLAY
2. DISPLAY _____

CALLING/CALLED NUMBER DISPLAY
3. DN START __
4. DN LENGTH __

DISPLAY CALLING/CALLED DN
5. CALLING DN N
6. CALLED DN N

Figure 1 SAMPLE SZDISP FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 32H: 5643 RECORD
ACD CALL VECTORS FORM - ACDVCT

1. GENERAL

The 5643 record is available with 5E11 and later Software Releases. This form is used to define the Call Vectoring steps that determine how an incoming call is to be treated while waiting for a ACD (Automatic Call Distributor) agent. This form supports the ACD/BRCS Interworking II feature. For more information on this feature, see Division 2, Section 4A121.

This record is used to identify the vector steps to be applied to a call that has been routed for call vectoring. Included among the steps that can be applied to a call are:

- placing the call in queue,
- playing an announcement or music,
- rerouting the caller to an alternate destination or
- branching to another step within the current vector or to a step in a different vector.

1.1 Activate the Feature

To apply Call Vectoring treatment to a call, the ACTIVATE field must be set to "Y". If the initial vector is not activated, all calls associated with that vector receive standard queueing and delay treatment.

1.2 Redirecting the Vector

The REDIR VECTOR field diverts calls to another VECTOR ID to receive alternate Call Vectoring treatment. If the vector specified in the redirection parameter does not exist, the call is placed in its call queue and receives standard queueing and delay treatment. Only one level of redirection is permitted. If the second vector also has a VECTOR ID populated in its REDIR VECTOR field, the second redirection is ignored and the call is provided with Call Vectoring treatment as defined by the second vector.

The initial vector, which redirects to another vector, must be activated. Any vector steps that are associated with a vector referenced during branching to a second vector are performed regardless of the activation state of the second vector.

1.3 Chaining Vectors

On a single ACDVCT form, up to 15 steps or commands can be identified in each vector. However, longer step sequences can be created by chaining vectors together using GOTO commands. The table in Figure 1 Call Vectoring Commands and Associated Arguments, displays the vector commands and their corresponding arguments to allow for the proper handling of the vector command.

The office maximum limits for the vector steps are set on the ACDBPARM form (5645 Record). Only one ACDBPARM form is entered per office.

Examples of Call Vectoring are given in Figures 2 and 3 at the end of this section.

1.4 Recent Change View

The corresponding Recent Change view for this form is 6.7.

2. BASE AND CONTROL, ESS UNIT

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Enter the Base and Control number and office name on each record.

2.1 * VECTOR ID

Description: Enter the call vector number.

Required Field.
Valid Entries: 1 - 2048

2.2 ACTIVATE

Description: Should this vector be activated? Enter "Y" to activate this vector; enter "N" to deactivate it. When this attribute is "N", all calls assigned to this vector receive standard queueing and delay treatment.

Required Field.
Default: N
Valid Entries: Y, N

2.3 REDIR VECTOR

Description: Enter the alternate Vector ID for redirection. Calls that would ordinarily receive call vectoring treatment on this form are redirected to the alternate vector number, defined on another ACDVCT form.
Valid Entries: 1 - 2048

Data Rules:

If the REDIR VECTOR is entered, then another ACDVCT form must exist which has a VECTOR ID equal to the REDIR VECTOR value on this form.This field entry cannot equal the VECTOR ID on this form.

CALL VECTOR STEPS

The following fields (Section 2.4 - Section 2.10) define the call vectoring steps for this VECTOR ID.

2.4 CMD CD

Description: Enter the call vector command code for steps 1 -15. This field defines the function to be performed by this vector step.

Valid CMD CD Entries

Entry	Definition
ANNOUNC	Connect call to announcement. This command is used to route a caller to an announcement identified by the RTI (Route Index). An optional error step may be defined to provide alternate treatment to the caller when an announcement channel cannot be obtained. If no error step is specified, vector processing will continue on to the next step.
ANSWER	Return answer supervision. This command is used to return answer supervision if it has not yet been returned.
BUSY	Forced busy. This command is used to disconnect a caller from any active delay treatment, remove the caller from queue and return busy tone to the caller prior to disconnecting the call. This command causes the call to be removed from vector processing.
DISC	Forced disconnect. This command is used to disconnect a caller from any active delay treatment, remove the caller from queue and optionally route the caller to an announcement prior to disconnecting the call. This command causes the call to be removed from vector processing. See ANNOUNC command for routing to an announcement.
GOTO	Unconditional GOTO. This command is used to unconditionally branch to a step in the current vector or to a step in another vector.

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GOTOAGE	Conditional GOTO based on the age of the call at the head of a queue. This command is a conditional GOTO step used to branch to a step in the current vector or to a step in another vector when the specified condition is met. The decision to branch is based on the age of the first call in the specified Call Queue (length of time the first call has been in that queue). An optional error step can be executed if the AM/CMP is in overload or the query for the queue status fails. If the query for the queue status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the age of the first call in queue is greater than 8191 seconds.
GOTOAVL	Conditional GOTO based on available agents. This conditional GOTO command is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on the current number of agents who are not busy with a call or made busy in the specified Serving Team. An optional error step can be executed if the AM/CMP is in overload or the query for the serving team status fails. If the query for the serving team status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the number of available agents is zero.
GOTODLY	Conditional GOTO based on expected delay. This command is a conditional GOTO step used to branch to a step in this VECTOR ID or to a step in another VECTOR ID when the specified condition is met. The decision to branch is based on the expected delay for attaching a caller to an agent for calls in the specified Call Queue. An optional error step can be executed if the AM/CMP is in overload or the query for the queue status fails. If the query for the queue status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the expected delay for calls in the queue to be serviced is greater than 8191 seconds.
GOTODOW	Conditional GOTO based on the day of the week. This conditional GOTO command is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on the current Day-of-Week. One of five conditions can be identified: the current day is Less than or Equal to, "LE", Greater Than, "GT" or Equal to, "EQ", the specified day or the current day is Included in, "IN" or Excluded from, "EX", the specified day range. If the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed.
GOTONUM	Conditional GOTO based on TOUCH-TONE number(s) entered by caller. This command is used in conjunction with the PROMPT command to provide branching on caller-entered digits. It is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on evaluation of the digits entered by the caller.
GOTOQUE	Conditional GOTO based on the number of calls in a queue. This command may branch to a step in the current vector or to a step in another vector if the number of calls that currently reside in the specified Call Queue is greater than "GT", less than "LE" or equal to "EQ", the specified amount in CARG2. An optional error step can be executed if the AM/CMP is in overload or the query for the queue status fails. If the query for the queue status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this vector ID is executed. If an error step is not specified, the condition is evaluated assuming that number of calls in queue is greater than 40,000.
GOTOSTA	Conditional GOTO based on staffed agents. This command is a conditional GOTO step used to branch to a step in the current vector or to a step in another vector when the specified condition is met. The decision to branch is based on the current number of agents logged-in to the specified Serving Team. An optional error step can be executed if the AM/CMP is in overload or the query for the serving team status fails. If the query for the serving team status is successful and the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed. If an error step is not specified, the condition is evaluated assuming the number of agents logged-in is zero.

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GOTOTOD	Conditional GOTO based on the time of day. This conditional GOTO command is used to branch to a step in this VECTOR ID or to a step in another vector when the specified condition is met. The decision to branch is based on the current Time-of-Day. One of four conditions can be identified: the current time is Less than or Equal to, "LE" or Greater Than "GT", the specified time or the current time is Included in "IN" or Excluded from, "EX" the specified time range. If the condition is met, vector processing branches to the specified step. If the condition is not met, the next step in this VECTOR ID is executed.
MUSIC	Delay caller with music. This command provides delay treatment to a caller by routing the call to a music source identified by the Route Index. The route index must be valid and correspond to a terminating port. This route index is also owned by the ACD/BRCS customer. An optional error step may be defined to provide alternate treatment to the caller if a music channel cannot be obtained. If the route attempt to the music source is unsuccessful and no error step is specified, the caller is provided with audible ring. The length of time that music is to be provided to the caller may be defined.
NOOP	No operation. This is the initial state for vectoring commands. This command can be used to temporarily disable steps rather than deleting them. The given step(s) remains intact but they are passed over during vector processing rather than executed.
PROMPT	Prompt caller for a number via TOUCH-TONE digit entry. This feature provides ACD customers with the ability to route callers to an announcement prior to delivery to an agent. The announcement is used to prompt callers for Touch-Tone input. The PROMPT command is a secured feature. The PROMPT command will not be activated until the ACT field for SFID 41 must be set to "Y" on the SFSYS form. See Division 2, Section 4A41 for more information on this feature. See also, Vector Prompt Enhancements (SFID 138) in Division 2, Section 4A138.
QUEUE	Queue or transfer call. This command causes a call to be placed in queue if it is not in a queue or transferred to the identified queue if the call has been queued. An error step is executed if the queue attempt fails either because the AM/CMP is in overload or the call could not be queued (e.g. the queue is full).
QUIET	Delay caller with silence. This command provides delay treatment to a caller in the form of silence. The length of time that silence is provided to the caller must be specified.
REQRTE	Request route call vectoring command for Third Party Call Control. The REQRTE command is a secured feature (SFID 222) used to route calls to another destination based on the routing information sent by the customer's host computer to the switch. Routing choices allow the system administrator of the host computer to specify a 1 - 10 digit TN, an ACD/BRCS call queue ID, an ACD/BRCS vector ID, or an ACD/BRCS agent ID. See Division 2, Section 4A222 for more information.
RING	Delay caller with audible ring. This command provides delay treatment to a caller in the form of audible ring.
ROUTE	Route call to remote destination. When this command is executed, the call is removed from queue and vector processing is terminated. ARG1 for the ROUTE step is the Destination Number Index and must be defined in the ACDVCTN form (5644 Record). The ACDVCTN form assigns either a 1 - 15 digit telephone number for routing the call. The intended use of this command is to reroute calls to another destination when the queue is either closed or full and cannot handle the call.
STOP	Stop vector processing. This command is used to halt further vector processing. If the call has not been queued, the caller is provided with reorder. If the call has been queued, any active delay treatment continues and the call remains in queue. The call remains in this state until the caller abandons or the caller is attached to an agent.

Data Rules:

ANNOUNC:

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If "ANNOUNC" is entered:
- ARG1 must be a valid route index:
  - For 5E12 and earlier: 1 - 4095
  - For 5E13 and later: 1 - 16382
- The following must not be entered:
  - ARG2
  - CARG1
  - CARG2, or
    for 5E12 and later, CARG2 must be 1 - 165 (for the Immediate Start Announcement feature) or not entered
  - COND

If "ANNOUNC" or "DISC" is entered on the ACDVCT form, ARG1 of the same CALL VECTOR STEP on this form must match ROUTE INDEX on a RTIDX form where CI ROUTE TYPE is "GENANN" and TRUNK GROUP NUMBER is entered.
The TRUNK GROUP NUMBER on the RTIDX form must be defined as TGN on a TKGRP form with
- TRK DIR set to "ANN", and
- CYCLES must be greater than 0.

In addition, there must be a TRUNK form defined for this TKGRP where TGN on the TKGRP form matches TGN on the TRUNK form and MEMB is 0.

For 5E12 SU and later, if "ANNOUNCE", "DISC", or PROMPT is entered, and CARG2 is entered with a value from 1 - 165, ARG1 must be defined as ROUTE INDEX on the RTIDX form and each of the RTIDX forms must have a TRUNK GROUP NUMBER that corresponds to a TGN on the TKGRP form where IMM START ANN is "Y".

ANSWER:
If "ANSWER" is entered, the following cannot be entered:
- ARG1
- ARG2
- CARG1
- CARG2
- COND
- ERR

BUSY:
If "BUSY" is entered, the following cannot be entered:
- ARG1
- ARG2
- CARG1
- CARG2
- COND
- ERR

DISC:
If "DISC" is entered:

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- ARG1 must be a valid route index:
  - For 5E12 and earlier: 1 - 4095
  - For 5E13 and later: 1 - 16382
- The following must not be entered:
- ARG2
- CARG1
- CARG2, or
  for 5E12 and later, CARG2 must be 1 - 165 (for the Immediate Start Announcement feature) or not entered
- COND
- ERR

If "DISC" or "ANNOUNC" is entered on the ACDVCT form, ARG1 of the same CALL VECTOR STEP on this ACDVCT form must match ROUTE INDEX on a RTIDX form where CI ROUTE TYPE is "GENANN" and TRUNK GROUP NUMBER is entered.
The TRUNK GROUP NUMBER on the RTIDX form must be defined as TGN on a TKGRP form with
- TRK DIR set to "ANN", and
- CYCLES must be greater than 0

In addition, there must be a TRUNK form defined for this TKGRP where TGN on the TKGRP form matches TGN on the TRUNK form and MEMB is 0.

For 5E12 SU and later, if "DISC", "ANNOUNCE", or PROMPT is entered, and CARG2 is entered with a value from 1-165, ARG1 must be defined as ROUTE INDEX on the RTIDX form and each of the RTIDX forms must have a TRUNK GROUP NUMBER that corresponds to a TGN on the TKGRP form where IMM START ANN is "Y".

GOTO:
If "GOTO" is entered,
- either ARG1 must not be entered, or
- it must be a valid vector number: 1 - 2048.
- ARG2 must be a valid step number: 1 - 15.
- The following must not be entered:
  - CARG1
  - CARG2
  - COND
  - ERR

GOTOAGE If "GOTOAGE" is entered:
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048.
- ARG2 must be a valid step number: 1 - 15.
- CARG1 must be a valid queue number: 1 - 999
- CARG2 must be a valid queued-call-age
- threshold: 1 - 8191
- COND must be a valid condition: "GT" or "LE"

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If "GOTOQUE", "GOTOAGE" or "GOTODLY" is entered, one CQPARM form must be entered where CALL QUEUE equals CARG1 of that same CALL VECTOR STEP on this form.

GOTOAVL:
If "GOTOAVL" is entered:
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048.
- ARG2 must be a valid step number: 1 - 15
- CARG1 must be a serving team: 1 - 999
- CARG2 must be a valid serving team
- threshold: 0 - 9999
- COND must be a valid condition: "GT" or "LE"

If "GOTOSTA" or "GOTOAVL" are entered, then one STPARM form must be entered where SERVING TEAM equals CARG1 of that same CALL VECTOR STEP on this form.

GOTODLY:
If "GOTODLY" is entered:
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048.
- ARG2 must be a valid step number: 1 - 15.
- CARG1 must be a valid queue number: 1 - 999
- CARG2 must be a valid queued-call-age
- threshold: 1 - 8191
- COND must be a valid condition: "GT" or "LE"

If "GOTOQUE", "GOTOAGE" or "GOTODLY" is entered, one CQPARM form must be entered where CALL QUEUE equals CARG1 of that same CALL VECTOR STEP on this form.

GOTODOW:
If "GOTODOW" is entered:
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048
- ARG2 must be a valid step number: 1 - 15
- CARG1 must be a valid day of week: 1 - 7
- ERR must not be entered.
- COND must be a valid condition:
-
    - "EQ", "EX", "GT", "IN", or "LE"
    - if COND is "IN" or "EX" then:

      CARG2 must be a valid day of week1 - 7
    - if COND is "EQ", "GT", "LE" then:

      CARG2 must not be entered.

GOTONUM:
If "GOTONUM" is entered
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048
- ARG2 must be a valid step number: 1 - 15

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- CARG1 must be a valid number of digits: 0 - 32.
- CARG2 must be a valid number of
- digits value: 0 - 16
- COND must be a valid condition: "EQ", "GT",
- or "LE"

If an entry is made in the CARG1 field, the entry specifies the caller-entered digit to be examined as part of the conditional evaluation. If no entry is made in this field, the first digit is examined.

Vector Processing branches to the step specified by the optional error step of a GOTONUM command when the number of caller-entered digits is less than the value populated in the CARG1 field. When this occurs, the branch occurs immediately and evaluation of the condition is bypassed. If no error step is identified, the condition is evaluated even if the specified number of digits are not entered by the customer (the digits not entered by the caller are padded with 'empty' digits and used in the evaluation).

The entry in the CARG2 field identifies a digit value which is used in the evaluation of the condition. This value is compared against the specified caller-entered digit (or the first digit if no entry exists in the CARG1 field) to determine if the condition evaluates to TRUE or FALSE.

GOTOQUE:
If "GOTOQUE" is entered,
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048
- ARG2 must be a valid step number: 1 - 15
- CARG1 must be a valid queue number: 1 - 999
- CARG2 must be a valid calls-in-queue
- threshold: 0 - 40000
- COND must be a valid condition: "GT" or "LE"

If "GOTOQUE", "GOTOAGE" or "GOTODLY" is entered, one CQPARM form must be entered where CALL QUEUE equals CARG1 of that same CALL VECTOR STEP on this form.

GOTOSTA:
If "GOTOSTA" is entered:
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048.
- ARG2 must be a valid step number: 1 - 15
- CARG1 must be a serving team: 1 - 999
- CARG2 must be a valid serving team
- threshold: 0 - 9999
- COND must be a valid condition: "GT" or "LE"

If "GOTOSTA" or "GOTOAVL" are entered, then one STPARM form must be entered where SERVING TEAM equals CARG1 of that same CALL VECTOR STEP on this form.

GOTOTOD:
If "GOTOTOD" is entered:
- ARG1 must not be entered, or
- must be a valid vector number: 1 - 2048
- ARG2 must be a valid step number: 1 - 15
- ERR must not be entered
- CARG1 must be a valid time of day in
- HHMM: 0000 - 2359
- COND must be a valid condition:

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- "EX", "GT", "IN", or "LE"
- If COND is "EX" or "IN", CARG2 must be a valid time of day in HHMM: 0000 - 2359
- If COND is "GT" or "LE" CARG2 must not be entered.

MUSIC:
The length of time that music is to be provided to the caller may be defined.

- If no time limit is specified and the call has been previously queued, vector processing is stopped and the caller continues to hear music until an agent is available or until the caller abandons.
- If no time limit is specified and the caller is not in a queue, the caller will get reorder.
- If no time limit is specified, and the caller is not in a queue and the A NOT QUEUED SEC set to 0 on the ACDBPARM form, the caller will get reorder.

If "MUSIC" is entered:
- ARG1 must be a valid route index:
  - For 5E12 and earlier: 1 - 4095
  - For 5E13 and later: 1 - 16382
- ARG2 must not be entered, or
- be a valid duration in seconds: 15 - 1023
- The following must not be entered:
  - CARG1
  - CARG2
  - COND

If "MUSIC" is entered, then ARG1 of the same CALL VECTOR STEP on this ACDVCT form must match ROUTE INDEX on a RTIDX form where CI ROUTE TYPE is "GENANN" and TRUNK GROUP NUMBER is entered.
The TRUNK GROUP NUMBER on the RTIDX form must be defined as TGN on a TKGRP form with
- TRK DIR set to "ANN",
- BARGE IN set to "Y", and
- CYCLES must be 0 or unknown.

In addition, there must be a TRUNK form defined for this TKGRP where TGN on the TKGRP form matches TGN on the TRUNK form and MEMB is 0.

- **WARNING:** For 5E11 and later, if "MUSIC" is entered, the selected music (on hold) source (defined on the TGATTD form (5611 Record) via the TGN and MEMB fields) must not be shared by any other music source. Therefore, the TGN from the TGATTD form should not match the TRUNK GROUP MEMBER from the RTIDX form (5643 Record).

PROMPT:
The PROMPT command routes the caller to an announcement which prompts the called for TOUCH-TONE digit entry. The digits are collected and then used to provide the following functions:

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- to determine the appropriate call queue (and ultimately serving team) to handle the call. This allows a caller to be connected to an agent trained specifically to handle the caller's needs.

- to provide front-end digit collection (such as a credit card number, social security number or zip code). This allows faster call handling as data is available to the agent upon position seizure.

The announcement is provided to a caller through a 13A or similar unit. Digit collection is accomplished through the use of UTDs (Universal Tone Decoders) equipped in the OSM (Originating Switching Module). When a PROMPT command is encountered in a vector, the caller is routed to the announcement unit as specified by the route index given in ARG1. ARG2 specifies the maximum number of digits to collect. Digits entered after the maximum value has been reached are not collected in this PROMPT step. An optional error step may be specified to identify call treatment if an announcement unit cannot be accessed or a UTD is not available.

The UTD is connected to the call prior to routing to the announcement. This allows callers to begin digit entry prior to the completion of the announcement. The path to the announcement is dropped once the first digit is entered. On variable length multi-digit entries, the "#" key may be used to signal early input termination before the specified maximum number of digits has been entered. The "*" key may be used to delete all previously entered digits. This key may be depressed at any time until the caller has entered the maximum number of digits as specified in the PROMPT command. The caller can then begin reentry of the number.

Upon termination of the prompting announcement, the caller has the number of seconds entered in the FIRST DIGIT field on on the ACDBPARM form (5645 Record) to begin digit entry. (See also the OTHER DIGITS field on the ACDBPARM form.) Failure to begin digit entry within 8 seconds causes Touch-Tone entry to be terminated and Vector Processing to proceed to the next step. Once digit entry has begun, the caller has 5 seconds between each digit to continue digit entry. Touch-Tone entry is terminated and Vector processing proceeds to the next step if the caller pauses for more than 5 seconds between digits. Failure to obtain an 8 second timer prior to entry of the first digit is treated as an immediate timeout and entry is terminated. Failure to obtain a timer for subsequent digits is ignored and the PROMPT command waits indefinitely for the next digit. Early input termination may also occur:

- when an agent is attached to the call prior to entry of all digits (this may only occur when the call has been queued prior to the PROMPT step)

- when the prompting announcement exceeds the length of time that an announcement can last for a call that has not been previously placed in a queue (this may only occur when the call has not been queued prior to the PROMPT step).

On multi-digit entries, the caller-entered digits are sent to the MIS as part of the vector PROMPT message. The determination of whether an entry is multi-digit or not is based on the value populated in the ARG2 field. The MIS receives a vector PROMPT message for all PROMPT steps in which the value of the ARG2 field is greater than one even if the caller enters only one digit. Single digit entries are not sent to the MIS as they are typically associated with the selection of a call queue and would not be useful to the ACD customer. A partial multi-digit entry is sent to the MIS for any of the early input termination cases discussed above.

Once the caller-entered digits have been collected, the GOTONUM command maybe used. The GOTONUM command contains a conditional argument used to determine the proper handling of a call. If the condition evaluates to TRUE, Call Vectoring treatment branches to the specified step in this VECTOR ID or to a step in another vector. If the condition evaluates to FALSE, the next step in the current vector is processed.

See Figure 2 and Figure 3 for examples of PROMPT command.

If "PROMPT" is entered:

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- ARG1 must be a valid route index:
  - For 5E12 and earlier: 1 - 4095
  - For 5E13 and later: 1 - 16382
- ARG2 must be a valid number of digits: 1 - 32
- CARG2 must not be entered, or for 5E12 and later, CARG2 must be 1 - 165 (for the Immediate Start Announcement feature) or not entered
- COND must not be entered

NOTE: A 1 entered in CARG1 will be used for the Vector Prompt Enhancement secured feature. For more information on this feature, see Division 2, Section 4A138.

If "PROMPT" is entered, ARG1 of the same CALL VECTOR STEP on this ACDVCT form must match ROUTE INDEX on a RTIDX form where CI ROUTE TYPE is "GENANN" and TRUNK GROUP NUMBER is entered. The TRUNK GROUP NUMBER on the RTIDX form must be defined as TGN on a TKGRP form with

- TRK DIR set to "ANN", and
- CYCLES must be 1.

In addition, there must be a TRUNK form defined for this TKGRP where TGN on the TKGRP form matches TGN on the TRUNK form and MEMB is 0.

For 5E12 SU and later, if "PROMPT", "DISC", or "ANNOUNC" is entered, and CARG2 is entered with a value from 1 - 165, ARG1 must be defined as ROUTE INDEX on the RTIDX form and each of the RTIDX forms must have a TRUNK GROUP NUMBER that corresponds to a TGN on the TKGRP form where IMM START ANN is "Y".

QUEUE:
If "QUEUE" is entered:

- ARG1 must be a valid queue number: 1 - 999
- ARG2 must not be entered, or
- must be a valid display index: 1 - 2047
- ERR must be a valid error step number: 1 - 15
- CARG1 must not be entered
- CARG2 must not be entered
- COND must not be entered

If "QUEUE" is entered:

- ARG1 of the same CALL VECTOR STEP on this ACDVCT form must match CALL QUEUE on a CQPARM form.
- and if the corresponding ARG2 element has an entry, a SZDISP form must be defined where ARG2 on this ACDVCT form matches DISPX on the SZDISP form.

QUIET:
If "QUIET" is entered:

- ARG2 must be a valid duration in seconds: 5 -1023
- The following must not be entered:
  - ARG1
  - CARG1

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- CARG2
- COND
- ERR

REQRTE:
If "REQRTE" is entered:
- ARG1 must not be entered, or
- must be 1 - 1000.
- ARG2 must not be entered
- CARG1 must not be entered
- CARG2 must not be entered
- COND must not be entered
- ERR must be a valid step number: 1 - 15

RING:
The length of time that audible ring is to be provided to the caller may be defined.

- If no time limit is specified and the call has been previously queued, vector processing is stopped and the caller continues to hear audible ring until an agent is available or until the caller abandons.
- If no time limit is specified and the caller is not in a queue, the caller will get reorder.
- If no time limit is specified, and the caller is not in a queue and the A NOT QUEUED SEC is set to 0 on the ACDBPARM form, the caller will get reorder.

If "RING" is entered:
- ARG2 must not be entered, or
- must be a valid duration in seconds: 5 - 1023
- The following must not be entered:
  - ARG1
  - CARG1
  - CARG2
  - COND
  - ERR

ROUTE:
If "ROUTE" is entered:
ARG1 must be a valid destination number: 1 - 2048
- The following must not be entered:
  - ARG2
  - CARG1
  - CARG2

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- COND
- ERR

If "ROUTE" is entered, and the corresponding ARG1 element has an entry, an ACDVCTN form must be defined where ARG1 on the ACDVCT form matches DEST NBR on the ACDVCTN form.

STOP:
If "STOP" is entered, the following cannot be entered:
- ARG1
- ARG2
- CARG1
- CARG2
- COND
- ERR

2.5 ARG1

Description: Enter the first argument for the vector step. See Figure 1 for types of ARG1 arguments associated with a specific vector command.
Valid Entries:
- For 5E12 and earlier: 0 - 4095
- For 5E13 and later: Blank, or 1 - 16382

2.6 ARG2

Description: Enter the second argument for the vector step. See Figure 1 for types of ARG2 arguments associated with a specific vector command. ARG2 of the GOTO steps cannot branch back to the same step.
Valid Entries: 1 - 2047

Data Rules:

ARG2 of a GOTO-type step should not branch back to the same step.

2.7 ERR

Description: Enter the error treatment vector step number. For example, "MUSIC" can fail to route to a music port if is is already connected to the maximum number of calls it can support. When such a failure occurs, vector processing can be diverted to another vector step by specifying that step in the ERR field.
Valid Entries: 1 - 15

2.8 COND

Description: Enter the conditional specification for a conditional GOTO statement. For example, if "LE" is entered, the branch step occurs if the condition being tested is less than or equal to the entry in CARG1 / CARG2.

Valid COND Entries

Entry	Definition
EX	Excluded from a range of values
EQ	Equal to a value
GT	Greater than a value
IN	Included in a range of values
LE	Less than or equal to a value

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2.9 CARG1

Description: Enter the first conditional GOTO argument of the vector step. See Figure 1 for types of CARG1 arguments associated with a specific Vector Command.
Valid Entries: 0 - 2359

2.10 CARG2

Description: Enter the second conditional GOTO argument of the vector step. See Figure 1 for types of CARG2 arguments associated with a specific Vector Command.

For 5E12 SU and later, CARG2 also supports the Immediate Start Announcement feature (see Division 2, Section 1BX).
Valid Entries:

0 - 40000
1 - 165 (Immediate Start Announcement)

CALL VECTORING COMMANDS AND ASSOCIATED ARGUMENTS

CMD CD	ARG1	ARG2	ERR	COND	CARG1	CARG2
ANNOUNC	RTI		[Step #]			1 - 165 (Immediate Start Announcement feature)
ANSWER						
BUSY						
DISC	[RTI]					1 - 165 (Immediate Start Announcement feature)
GOTO	[Vector #]	Step #				
GOTOAGE	[Vector #]	Step #	[Step #]	GT/LE	Queue #	1-8191
GOTOAVL	[Vector #]	Step #	[Step #]	GT/LE	Serv Team #	0-9999
GOTODLY	[Vector #]	Step #	[Step #]	GT/LE	Queue #	1-8191
GOTODOW	[Vector #]	Step #		GT/LE/EQ	1-7	
GOTODOW	[Vector #]	Step #		IN/EX	1-7	1-7
GOTONUM	[Vector #]	Step #	[Step #]	GT/LE/EQ	[Digit Index]	0-16
GOTOQUE	[Vector #]	Step #	[Step #]	GT/LE	Queue #	0-40000
GOTOSTA	[Vector #]	Step #	[Step #]	GT/LE	Serv Team #	0-9999
GOTOTOD	[Vector #]	Step #		GT/LE	HHMM	
GOTOTOD	[Vector #]	Step #		IN/EX	HHMM	HHMM
MUSIC	RTI	[15-1023]	[Step #]			
NOOP						
PROMPT	RTI	1-32	[Step #]		[Flag]	1 - 165 (Immediate Start Announcement feature)
QUEUE	Queue #	[DISPX]	Step #			
QUIET		5-1023				
RING		[5-1023]				
ROUTE	DEST NBR					
STOP						

[ ] - Arguments or error steps enclosed in [ ] are optional.
Queue # - Call Queue Number of call type ID
DISPX - Display index
Flag - 1 is used be the Vector Prompt Enhancement feature step to collect digits for display at agent terminal.
Serv Team - Serving Team Number
HHMM - Hours and Minutes
RTI - Route index

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Figure 1 CALL VECTORING COMMANDS AND ASSOCIATED ARGUMENTS

EXAMPLE 1: CALL VECTOR SCENARIO							
Step	**CMD CD**	**ARG1**	**ARG2**	**ERR Step**	**COND**	**CARG1**	**CARG2**
1	PROMPT	304	2	6			
2	GOTONUM		4		LE		5
3	BUSY						
4	QUEUE	75		6			
5	MUSIC	2015					
6	STOP						

1. When the above vector is processed, the caller is routed to the announcement associated with ROUTE INDEX 304.
2. The announcement prompts the caller for input. A maximum of 2 digits are accepted, as specified by the value in the ARG2 field.
3. After the caller-entered digits have been collected, the "GOTONUM" command is evaluated. Because CARG1 is blank, the first digit entered is compared against the digit 5, the value identified in the CARG2 field.
4. If the first digit entered is less than or equal to 5, then the condition is evaluated as TRUE and Vector Processing branches to Step 4 in the current VECTOR ID, as specified by the value in the ARG2 field. Step 4 places the caller in call queue 75 and then provides the caller with the music source associated with ROUTE INDEX 2015 and vector processing stops because a time limit has not been specified in ARG2 of the MUSIC step (step 5). The caller is connected to the music until an agent becomes available for the call or the calling party abandons.

   If the first digit entered is not less than or equal to 5, the condition is evaluated as FALSE and the next step, Step 3 is processed. Step 3 causes Vector Processing to stop and busy tone to be returned to the caller.

Figure 2 CALL VECTOR SCENARIO 1

EXAMPLE 2: CALL VECTOR SCENARIO							
Step	**CMD CD**	**ARG1**	**ARG2**	**ERR Step**	**COND**	**CARG1**	**CARG2**
1	PROMPT	305	32				
2	GOTONUM		5		EQ		11
3	GOTONUM		5		EQ	32	2
4	BUSY						
5	QUEUE	75		7			
6	MUSIC	2015					
7	STOP						

1. When the above vector is processed, the caller is routed to the announcement associated with ROUTE INDEX 305.
2. The announcement prompts the caller for input. A maximum of 32 digits will be accepted, as specified by the value in the ARG2 field.
3. After the caller-entered digits have been collected, the GOTONUM command identified in Step 2 is evaluated. The first digit entered, (CARG1 is blank) is compared against the "#" key, the value identified in the CARG2 field.
4. If the first digit entered is equal to "#", then the condition is evaluated as TRUE and Vector Processing branches to Step 5 in the current VECTOR ID, as specified by the value in the ARG2 field. Step 5 indicates that the caller is to be placed in call queue 75 and then Step 6 provided with the music source associated with ROUTE INDEX 2015 and vector processing stops.

   If the first digit entered is not equal to "#", then the condition is evaluated as FALSE and the next step, Step 3 is processed. Step 3 specifies that another "GOTONUM" command is to be evaluated.
5. When Step 3 is processed, the 32nd caller-entered digit, as specified by the value in the CARG1 field, is compared against the digit 2, the value identified in the CARG2 field. If the 32nd digit is equal to 2, then the condition is evaluated as TRUE and Vector Processing branches to Step 5 in the current VECTOR ID, as specified by the value in the ARG2 field. If the 32nd digit entered is not equal to 2, the condition is evaluated as FALSE and the next step, Step 4 is processed. Step 4 causes Vector Processing to stop and busy tone to be returned to the caller.

Figure 3 CALL VECTOR SCENARIO 2

---

acdvct 5ESS SWITCH
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION

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(5643) ACD CALL VECTORS

*1. VECTOR ID ____
2. ACTIVATE N
3. REDIR VECTOR ____
4. CALL VECTOR STEPS

ROW	CMD	CD	ARG1	ARG2	ERR	COND	CARG1	CARG2
1	_____	____	____	__	__	____	_____	
2	_____	____	____	__	__	____	_____	
3	_____	____	____	__	__	____	_____	
4	_____	____	____	__	__	____	_____	
5	_____	____	____	__	__	____	_____	
6	_____	____	____	__	__	____	_____	
7	_____	____	____	__	__	____	_____	

---

acdvct 5ESS SWITCH
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5643) ACD CALL VECTORS

4. CALL VECTOR STEPS

ROW	CMD	CD	ARG1	ARG2	ERR	COND	CARG1	CARG2
8	_____	____	____	__	__	____	_____	
9	_____	____	____	__	__	____	_____	
10	_____	____	____	__	__	____	_____	
11	_____	____	____	__	__	____	_____	
12	_____	____	____	__	__	____	_____	
13	_____	____	____	__	__	____	_____	
14	_____	____	____	__	__	____	_____	
15	_____	____	____	__	__	____	_____	

Figure 4 SAMPLE ACDVCT FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 32I: 5644 RECORD
ACD CALL VECTORING DESTINATION TN FORM - ACDVCTN

1. GENERAL

The 5644 Record is available with 5E11 and later Software Releases. It is used to define and administer remote telephone numbers. In call vector processing, a ROUTE step is used to send a call to another ACD site. The ROUTE step contains a specified destination number which is mapped to a TN. (See the ACDVCT form, 5643 Record).

This form supports the ACD BRCS Interworking II feature. For more information on this feature, see Division 2, Section 4A121.

1.1 Recent Change View

The corresponding Recent Change View for this form is 6.8.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * DEST NBR

Description: Enter the destination index (ROUTE step Destination Number). When the CMD CD element of CALL VECTOR STEPS is "ROUTE" on the ACDVCT form, and the corresponding ARG1 element has an entry, ARG1 on the ACDVCT form matches DEST NBR on this form.

Required Field.
Valid Entries: 1 - 2048

2.3 # TN

Description: Enter the telephone directory number the ACD site. The ROUTE step on the ACDVCT form is used to send a call to this remote ACD site.

Required Field.
Valid Entries: 1 - 15 digit

---

acdvctn 5ESS SWITCH
OFFICE DATA ADMINISTRATION
(5644) ACD CALL VECTORING DESTINATION TN

*1. DEST NBR ____
#2. TN _____

Figure 1 SAMPLE ACDVCTN FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 32K: 5645 RECORD
ACD/BRCS OFFICE PARAMETERS - ACDBPARM

1. GENERAL

The 5645 Record is available with 5E11 and later Software Releases. It is used to define the office parameters for ACD/BRCS (Automatic Call Distribution / Business and Residential Custom Services) features, ACD users, and define limits for call vectoring. Only one ACDBPARM form is entered for an office. This view supports the ACD/BRCS Interworking II features For more information on these features see Division 2, Section 4A121.

1.1 Call Vectoring

The ACDVCT form (5643 Record) defines the Call Vectoring Steps. The maximum limits for Call Vectoring steps and delays are defined on this form. The TCA (Telephone Company Administration) can limit the number of vector steps for a call. These limits prevent any infinite loops that may be defined in call vectoring by the ACD/BRCS customer from consuming unlimited real-time resources. When a given limit is reached, vector processing stops, reorder tone is given to a caller if the call has not yet been queued; or if the call has been queued, it remains in queue. If no limit is specified, no limit is enforced.

Call vectoring steps are divided into a set of categories reflecting their use and real-time load. The vector step categories are:

- Queuing or transferring the call between queues
- Conditional GOTOs based on call queue or serving team state, age of the call at head of the queue or expected delay
- GOTO based on time-of-day or day-of-week
- Announcement or delay with music
- Conditional or unconditional GOTO to another vector

Any vector step that does not fall into one of these categories does not have a limit associated with it other than the limit on total vector steps. Each category has a resettable limit such that if, during vector processing, the limit for the allowable number of steps in that category is reached and vector processing is paused. The pause lasts an amount of time identified for all Call Vectoring pauses established by the TCA. If no pause limit is specified, the pause period shall be five seconds. Each forced pause resets the limits for all categories. In addition, the limits are reset each time a delay step is successfully executed or the call is successfully routed to an announcement.

In addition to the resettable limits, each category has an absolute limit on the number of steps that each call can sequence. This limit is not reset by the successful execution of a delay step or successful route to an announcement. If a step is encountered during vector processing that exceeds the limit on that step's category, vector processing is stopped for the call. If no limit is specified for steps in a given category, no limit is enforced for steps in that category.

In addition to the above limits, there is a global limit on the length of time that a call can be vectored without being placed in queue. The intent of this limit is to prevent calls from receiving endless vector treatment.

1.2 Recent Change View

The corresponding Recent Change View for this form is 6.9

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2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: This field is the Processor ID and is always 1. Enter 1 or just press the return key.

Required Field.
Valid Entries: 1

2.3 CALL VECTORING

Description: Should the Call Vectoring feature be activated? Enter "Y" if Call Vectoring should be activated and "N" if it should not be activated.

Required Field.
Default: N
Valid Entries: Y, N

2.4 SIMINTRA

Description: Enter the maximum number of simultaneous intraoffice forwarded calls allowed as an action of ACD re-routing for ACD/BRCS. For more information on ACD/BRCS feature see Division 2, Section 4A121.

Required Field.
Default: 99
Valid Entries: 1 - 99

2.5 SIMINTER

Description: Enter the maximum number of simultaneous interoffice forwarded calls allowed as an action of ACD re-routing for ACD/BRCS. For more information on ACD/BRCS feature see Division 2, Section 4A121.

Required Field.
Default: 99
Valid Entries: 1 - 99

2.6 CFMAX

Description: Enter the maximum number of call forwardings as an action of ACD re-routing for ACD/BRCS. For more information on ACD/BRCS feature see Division 2, Section 4A121.

Required Field.
Default: 5
Valid Entries: 1 - 32

2.7 INTRAFLOW ALW

Description: Should intraflow be turned on? Intraflow allows an ACD (Automatic Call Distributor) administrator to designate a single principal serving team and up to eight supporting serving teams with associated delay outflow thresholds for each call queue.

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Required Field.
Default: N
Valid Entries: Y, N

CALL QUEUE SLOTS

The following fields (Section 2.8 - Section 2.9) define call queue data blocks.

2.8 ACTUAL CQDB

Description: This field is a "display only" field for both Recent Change and ODA. This global parameter contains a count of the total number of initialized ACD/BRCS Call Queue Data Blocks. If the initialization succeeds, then this parameter is set to the value of the REQUIRED CQDB parameter. In case of an initialization failure, this parameter reflects the actual number of data blocks that were successfully initialized. This parameter is supported by ODA, but the value does NOT appear on the ODA form. It is initialized by ODA to equal the value of the REQUIRED CQDB parameter. This parameter is a Recent Change verify only field.
Valid Entries: 0 - 40000

2.9 REQUIRED CQDB

Description: This field is a "display only" field for both Recent Change and ODA. This global parameter (Call Queue Maximum Calls Sum) contains the sum of the ACD/BRCS Call Queue's maximum number of data blocks. This is a Recent Change only field. This parameter is supported by ODA but the value does NOT appear on any ODA form.
Valid Entries: 0 - 40000

CALL VECTORING FIELDS

The following fields (Section 2.10 - Section 2.23) specify the maximum limits for Call Vectoring commands (steps) and delays.

ABSOLUTE MAXIMUM LIMITS (A)

The following fields (Section 2.10 - Section 2.22) preceded by an "A" specify the maximum limits for call vectoring steps.

2.10 A VECTOR XFERS

Description: This field specifies the maximum number of intervector GOTOs that can be processed for a given call. An intervector GOTO is any conditional or unconditional GOTO to a step in another vector. Vector processing is stopped when this limit is reached. If the call has not been previously queued, the caller is provided with reorder. If the call has been previously queued, the caller continues to receive any active delay treatment and remains in the queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If this field has no entry no limit is enforced.
Default: 20
Valid Entries: 1 - 255

2.11 A ACD STAT QRYS

Description: This field specifies the maximum number of GOTO status queries based on are or queue/team state, i.e., "GOTOAGE", "GOTOQUE", "GOTOSTA", "GOTOAVL" and "GOTODLY" steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call has not been place in a queue, the caller is given reorder. If the call has been queued, the caller continues to receive any active delay treatment, such as music, ring or quiet, and remains in queue. The call remains

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in this state until the caller abandons or the call is connected to an agent.

If this field has no entry, no limit is enforced.
Default: 4
Valid Entries: 1 - 255

2.12 A TOD DOW STPS

Description: This field specifies the maximum number of "GOTOTOD" and "GOTODOW" steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is given reorder. If the call is in a queue, the caller receives any active delay treatment and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If this field has no entry, no limit is enforced.
Default: 10
Valid Entries: 1 - 255

2.13 A MUS ANNC STPS

Description: This field specifies the maximum number of "MUSIC", "ANNOUNC" or "PROMPT" steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is provided with reorder. If the call is in a queue, the caller receives any active delay treatment, such as music, ringing, or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If this field is not entered, no limit is enforced.
Default: 10
Valid Entries: 1 - 255

2.14 A QUEUE STPS

Description: This field specifies the maximum number of QUEUE steps that can be processed for a given call. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is provided with reorder. If the call is in a queue, the caller receives any active delay treatment, such as music, ringing, or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If this field is not entered, no limit is enforced.
Default: 4
Valid Entries: 1 - 255

2.15 A VECTOR STPS

Description: This field specifies the total number of vector steps a call can go through while waiting for an available agent. The purpose of this field is to detect and terminate endless loops in an ACD/BRCS customer's vector program. Vector processing is stopped when this limit is reached. If the call is not in a queue, the caller is provided with reorder. If the call is in a queue, the caller receives any active delay treatment, such as music, ringing, or quiet, and remains in queue. The call remains in this state until the caller abandons or the call is connected to an agent.

If this field is not entered, no limit is enforced.
Default: 100
Valid Entries: 1 - 255

2.16 A NOT QUEUED SEC

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Description: This field specifies the maximum number of seconds a call can be vectored without being placed in a queue. When this limit is reached, call vector processing is stopped and the caller is provided with reorder.

If this field is not entered, no limit is enforced.
Default: 120
Valid Entries: 1 - 255 (seconds)

2.17 A ANNC SEC

Description: This field specifies the maximum number of seconds an announcement can last, if the call was routed to that announcement and had not been placed in a queue. An announcement is stopped when this limit is reached.

If this field is not entered, no limit is enforced.
Default: 120
Valid Entries: 1 - 255 (seconds)

BETWEEN DELAYS MAXIMUM LIMITS (B)

The following fields (Section 2.18 - Section 2.22) preceded by an "B" specify the maximum limits for steps that can be processed without pausing.

2.18 B VECTOR XFERS

Description: This field specifies the maximum number of intervector GOTOs that can be processed without pausing. An intervector GOTO step is vector processing a conditional or unconditional GOTO another step in another vector. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step, defined on the ACDVCT form (5643 Record) is successfully processed. If the counter reaches the specified limit, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early, if an agent becomes available during the pause. Any currently active delay treatment continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If this field is note entered, no limit is enforced.
Default: 2
Valid Entries: 1 - 255

2.19 B ACD STAT QRYS

Description: This field specifies the maximum number of "GOTOAGE", "GOTOQUE", "GOTOAVL", "GOTOSTA" and "GOTODLY" steps that can be processed without pausing. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment, such as music, ringing or quiet, continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If this field is not entered, no limit is enforced.
Default: 2
Valid Entries: 1 - 255

2.20 B TOD DOW QRYS

Description: This field specifies the maximum number of "GOTOTOD" and "GOTODOW" steps that can

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be processed without pausing. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step defined on the ACDVCT form (5643 Record) is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment, such as music, ringing or silence, continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If this field is not entered, no limit is enforced.
Default: 6
Valid Entries: 1 - 255

2.21 B MUS ANNC STPS

Description: This field specifies the maximum number of "MUSIC", "ANNOUNC" or "PROMPT" steps that can be processed without pausing. The counter used to count the steps is reset whenever an "ANNOUNC", "MUSIC", "RING" or "QUIET" step, defined on the ACDVCT form (5643 Record) is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment, such as music, ringing or silence, continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If this field is not entered, no limit is enforced.
Default: 1
Valid Entries: 1 - 255

2.22 B QUEUE STPS

Description: This field specifies the maximum number of "QUEUE" steps that can be processed without pausing. The counter used to count the steps is reset whenever an ANNOUNC, MUSIC, RING or QUIET step, defined on the ACDVCT form, is successfully processed. If the counter reaches the limit specified, vector processing is paused for the number of seconds defined in the PAUSE SEC field on this form and all resettable limit counters are cleared. If the call has been placed into a queue, the pause ends early if an agent becomes available during the pause. Any currently active delay treatment continues during the pause. If no delay treatment is active, the caller hears silence during the pause.

If this field is not entered, no limit is enforced.
Default: 1
Valid Entries: 1 - 255

FORCE PAUSE DELAY

The Call Vectoring Global Pause Period is defined in the following field (Section 2.23).

2.23 PAUSE SEC

Description: This field specifies the length of time (in seconds) that a call can be paused if any of the resettable limits are reached. The value entered in this field must be greater than or equal to 5.

Required Field.
Default: 5
Valid Entries: 5 - 255 (seconds)

VECTOR PROMPT TIMING

The following fields (Section 2.24 - Section 2.25) define timing limits for prompting. These fields support

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the Vector Prompt features. For more information on these features, see Division 2, Section 4A41 and Section4A138.

2.24 FIRST DIGIT

Description: Enter the number of seconds the Vector Prompt waits for the first digit in any prompt step.

Required Field.
Default: 8
Valid Entries: 1 - 64 (seconds)

2.25 OTHER DIGITS

Description: Enter the number of seconds the Vector Prompt will wait for all other digits in a multi-digit prompt step.

Required Field.
Default: 5
Valid Entries: 1 - 64 (seconds)

```
acdbparm                    5ESS SWITCH
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5645)              ACD/BRCS OFFICE PARAMETERS

*1. KEY          1
 2. CALL VECTORING N
 3. SIMINTRA      99
 4. SIMINTER      99
 5. CFMAX         05
 6. INTRAFLOW ALW  N

   CALL QUEUE SLOTS
    ACTUAL CQDB
    REQUIRED CQDB
```

```
acdbparm                    5ESS SWITCH
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5645)              ACD/BRCS OFFICE PARAMETERS

                        CALL VECTORING

      ABSOLUTE              BETWEEN DELAYS            FORCED
   MAXIMUM LIMITS (A)       MAXIMUM LIMITS (B)        PAUSE DELAY
 9. A VECTOR XFERS   20    17. B VECTOR XFERS  2     22. PAUSE SEC 5
10. A ACD STAT QRYS  4     18. B ACD STAT QRYS 2
11. A TOD DOW STPS   10    19. B TOD DOW STPS  6     VECTOR PROMPT TIMING
12. A MUS ANNC STPS  10    20. B MUS ANNC STPS 1     23. FIRST DIGIT  8
13. A QUEUE STPS     4     21. B QUEUE STPS    1     24. OTHER DIGITS 5
14. A VECTOR STPS    100
15. A NOT QUEUED SEC 120
16. A ANNC SEC       120
```

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Figure 1 SAMPLE ACDBPARM FORM 5E11 AND LATER SOFTWARE RELEASES

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DIV. 5: ISDN/PACKET SWITCHING FORMS

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SEC. 1: ISDN LINE FORMS

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SEC. 1C: 5902-1/2 RECORD
PRIMARY OR SECONDARY ONLY KEY SYSTEM FORM - SHTN

1. GENERAL

The 5902 Record is available with 5E4(2) and later Software Releases. A telephone number which appears on more than one terminal is called a Shared TN or MLHG/TERM. Shared TNs or MLHG/TERMs are divided into Primary and Secondary TN or MLHG/TERM. This form is used to assign a Primary or Secondary TN or MLHG/TERM to ISDN Terminals.

Each ISDN terminal where the telephone appears will be provided with an indication of the status of each shared Call Appearance. Manual Exclusion, Automatic Call Exclusion, Abbreviated/Delayed Ringing, and Bridging features are also provided.

Bridging allows two terminals to talk on the same call.

Manual Exclusion allows the user to restrict members of the group from bridging on to an existing call, or from retrieving a call on hold.

Automatic Call Exclusion prevents members of the SHDN (Shared DN) group from bridging onto an active call or from remotely retrieving a call on hold.

The Abbreviated/Delayed Ringing feature provides various options for audible and visual alerting at each terminal that shares a TN.

A telephone number can only be a primary TN on one station set but it can be a call appearance on other station sets. A secondary only TN has no assigned physical equipment but can be a call appearance on other station sets.

Secondary Only TNs and MLHG/TERMs cannot be assigned any of the following features on the LINEFA, MLHLNFA, BFG or associated CLUSTR forms: ACB, ACCT, ACSR, ACVT, ARS, ASI (5E8 and later), ASP (5E9(1) and later), ATH, CWT, DISP, HI (5E6 and later), ICM, IDP, LSAC, LSAR, LSCOT, MDR, MWY, PFA, PUO, SC (5E6 and later), or TOD.

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.20.

2. FORM ENTRIES - 5902-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 (*) TN

Description: Enter the Primary or Secondary Telephone Number of the customer. If the TN entered in this field is defined on a LINE form or DSLUSR form (5E5 and later), then this TN is a Primary TN. If the TN is not defined on one of these forms, this is a Secondary Only TN.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

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For 5E8 and later, if this TN is a Secondary Only TN, and the Shared List contains a TN or MLHG/TERM that is defined on a DSLUSR form assigned to a Standard BRI (DSL CLS is "STD" on the associated DSL form), then on this SHTN form SAR NUM must not be entered; and SAR ORIG, SAR TERM, INCOMING, INTERCOM, ORIG CALL WAIT, and PP must be "N"; for 5E8 only, SERHLN must not be entered, and ASP ALW must be "N".

For 5E8 only, if this TN is a Primary analog TN defined on a LINE form, and any of the Shared List TNs or MLHG/TERMs are defined on a DSLUSR form assigned to a Standard BRI (DSL CLS is "STD" on the associated DSL form), then on the LINE form, SERHLN must not be entered and ASP ALW must be "N".

When the SHTN form has one or more lines terminating to an RSM, all lines on the SHTN form must terminate to the same RSM cluster (the REMOTE SITE entry on the EQIM forms must be the same).

For 5E12 and later, if the first 3 digits of the 7-digit Key TNs on the SHTN form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the TN must be a 10-digit TN.

For 5E12 and later, when the Key TN(s) on the SHTN form have an NXX and/or NPA/NXX combination assigned, an OFFICE CODE and/or NPA/OFFICE CODE combination must be assigned on a NOC form.

For 5E12 and later, Key TNs, Key MLHG, Key TERM NBR combinations on different SHTN forms cannot be duplicated.

For 5E12 and later, if the KEY TNs on the SHTN form have SERHLN entered, the equivalent 10-digit SERHLN cannot equal the equivalent 10-digit Key TN.

For 5E12 and later, the Key TNs on the SHTN form cannot match a TN in the SHARED LIST in a position other than row 1.

For 5E12 and later, the SHTN forms, where Key TN matches SHARED LIST TN in row 1 and Key MLHG is not entered, the following requirements must be met:

- At least two SHARED LIST TN or MLHG/TERM NBR combinations must be entered.
- CALL APP in row 1 of the SHARED LIST must not be entered.
- NBR in row 1 of the SHARED LIST must not be entered.
- SP DNA in row 1 of the SHARED LIST must not be entered.
- AU DNA in row 1 of the SHARED LIST must not be entered.
- BRCS must not be entered.
- E911 PSAP must not be entered.
- BILL TN must not be entered.
- DNYBV must not be entered.
- SUST must not be entered.
- INWATS must be "N".
- TRC must be "N".
- ICP must not be entered.
- BUSY MONITOR must be "N".

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- ATT MLHG must not be entered.
- RBV TGN must not be entered.
- RMK must not be entered.
- SAR NUM must not be entered.
- SAR ORIG must be "N".
- SAR TERM must be "N".
- INCOMING must be "N".
- INTERCOM must be "N".
- ORIG CALL WAIT must be "N".
- PP must be "N".
- NON-HUNT TN must not be entered.
- MMB SUBGP must not be entered.
- RND SUBGP must not be entered.
- NI SAR LIST entries must not be entered.
- CONTEXT ID must be "N" for 5E12 and 5E13 and "NATIVE" for 5E14.

For 5E12 and later, when two (or more) Key TN and/or Key MLHG/TERM NBR combinations on two (or more) SHTN forms have the same last 7 digits of the TN for Key TNs or the same last 7 digits of CKT MLHG TN found on the corresponding DSLUSR forms for Key MLHG/TERM NBRs, then the SHARED LIST elements TN or MLHG/TERM NBR (2 - 32 for a primary MLHLN, or 1 - 32 for a secondary only terminal) cannot be duplicated between SHTN lists of those SHTN forms if EKTS is "BASIC" on DSLUSR forms which correspond to the SHARED LIST TN or MLHG/TERM NBR.

The corresponding DSLUSR form for the SHTN form Key MLHG/TERM NBR is found by matching the DSLUSR CKT MLHG/CKT TERM entries with the SHTN Key MLHG/TERM NBR entries. The corresponding DSLUSR form for SHTN Key TN is found by matching the DSLUSR CKT TN entries with the SHTN Key TN entries.

The corresponding DSLUSR form for the SHTN SHARED LIST elements is found by matching the SHARED LIST TN with the CKT TN on the DSLUSR form, or the SHARED LIST MLHG/TERM NBR on the SHTN form with the CKT MLHG/CKT TERM on the DSLUSR form.

These same rules apply to Primary MLHG/TERM NBR SHTN forms and Secondary MLHG/TERM NBR SHTN forms. A Primary SHTN form exists when the Key MLHG/TERM NBR are known and match the MLHG/TERM NBR which are entered in the first row of the SHARED LIST or the Key TN is known, the Key MLHG/TERM NBR is unknown and Shared LIST 1 TN equals the Key TN. The known SHARED LIST elements from 2 - 32 are examined to determine the conflict. A Secondary SHTN form exists when the Key MLHG/TERM NBR are entered and TN is entered in the first row in the SHARED LIST or the Key TN is entered and the TN entered in the first row is different for the Key TN. The known SHARED LIST elements from 1 - 32 are examined to determine the conflict.

2.3 (*) MLHG

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Description: Enter the Multi-Line Hunt Group Number. If the MLHG and TERM NBR entered on this form is defined on an MLHLN form or a DSLUSR form (5E5 and later) , then this MLHG/TERM is a Primary shared terminal. If the MLHG and TERM NBR is not defined on one of these forms, this is a Secondary-Only terminal.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

All three optional key fields may be entered for Secondary terminals only. This allows a TN to be associated with a Secondary Only terminal.

For a Secondary Only MLHG terminal, a corresponding MLHG form must be defined.

For 5E5 and later, if both this field and the ATT MLHG field are entered, then the MLHG must be defined in the MLHG field of an MLHG form such that the MLHG FEATURE is defined on an MLHGFD form (5604 Record) with a HUNT TYPE that is neither "ISAT" nor "MUPH".

For 5E8 only, if this MLHG/TERM is a Primary analog MLHG/TERM defined on a MLHLN form, and any of the Shared List TNs or MLHG/TERMs are defined on a DSLUSR form assigned to a Standard BRI (DSL CLS is "STD" on the associated DSL form), then on the MLHLN form, SERHLN must not be entered and ASP ALW must be "N".

For 5E8 and later, if this is a Secondary Only MLHG/TERM, and the Shared List contains a TN or MLHG/TERM that is defined on a DSLUSR form assigned to a Standard BRI (DSL CLS is "STD" on the associated DSL form), then on this SHTN form SAR NUM must not be entered; SAR ORIG, SAR TERM, INCOMING, INTERCOM, ORIG CALL WAIT, and PP must be "N"; for 5E8 only SERHLN must not be entered, and ASP ALW must be "N".

For 5E8 and later, MLHGs that include Secondary Only terminals shared to Standard BRI terminals may not have a Precedence Hunt Type. That is, if this form defines a Secondary Only MLHG/TERM, and any member of the Shared List is defined on a DSLUSR form that is associated with a DSL form where DSL CLS is "STD", then the MLHG, as defined on the MLHG form, may not be assigned an MLHG FEATURE with HUNT TYPE set to "PMHG" on the MLHGFD form.

If a member of the Shared List is defined as a CKT TN or CKT MLHG/TERM on a DSLUSR form where EKTS is "BASIC", then the key MLHG and TERM NBR on this SHTN form must be defined as CKT MLHG and TERM on a DSLUSR form where a value is entered in CKT SWITCHING MLHG TN.

For a Secondary Only terminal where the key MLHG/TERM fields are entered, and a member of the Shared List is defined as CKT TN or CKT MLHG/TERM on a DSLUSR form where EKTS is "BASIC", then the key TN must be entered on this SHTN form.

2.4 (*) TERM NBR

Description: Enter the Multi-Line Hunt Terminal Number.
Valid Entries: 1 - 2015

2.5 ADR TIME

Description: Enter the Abbreviated/Delayed Ringing Time in seconds. Abbreviated Ringing time indicates the length of time before audible ringing stops. Delayed Ringing indicates the length of time before ringing begins.
Valid Entries: 0 - 255 (seconds)

Data Rules:

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When ADR PAT is "DEL", "ABR", or "DRI", ADR TIME must be greater than 0; when ADR PAT is any other value, ADR TIME must be 0 or blank.

SHARED LIST

For 5E7 and earlier, a maximum of 8 entries may be defined in the SHARED LIST (fields Section 2.6 - Section 2.15). For 5E8 and later, the list has been expanded to accept 32 entries.

For 5E8 and later, the list entries will be sorted before being loaded into the 5ESS Switch. The first row will be left in place, to be followed by 1) entries that reside on the same SM and connect to the same PH (Protocol Handler) as the first entry; 2) entries that reside on the same SM but do not connect to the same PH, sorted by PH; and 3) all other entries, sorted by SM and PH.

- ***NOTE:*** The PH identifier is composed of the Shelf and Channel Group numbers from the D ISCN field on the associated DSL form.

For 5E5 and later, each TN assigned in the list must be defined in the TN field of the LINE form or in the CKT TN field of the DSLUSR form. Each MLHG and TERM assigned in the list must be defined in the MLHG and TERM fields of the MLHLN form or in the CKT MLHG and TERM fields of the DSLUSR form (TERM TYPE and OE fields must be entered).

If a TN defined on the LINE form (or an MLHG/TERM defined on the MLHLN form) is entered in the SHARED LIST, it must be a primary TN (MLHG/TERM).

For 5E8 and later, Standard and Custom DSL terminals may not appear in the same Shared List. All terminals that are in the Shared List and are defined on DSLUSR forms must be associated with DSL forms where DSL CLS is "STD", or all must be associated with DSL forms where DSL CLS is "PP" or "MP".

For 5E8 only, analog and Custom ISDN terminals may not series complete to Standard IDSN terminals. If members of the Shared List on this SHTN form are associated with Standard DSLs, the key TN may not be assigned as a series completion number in the SERHLN field on a LINE, MLHLN, DSLUSR, or another SHTN form.

PRIMARY: A primary TN or MLHG/TERM is designated by duplicating the key TN or MLHG/TERM in row 1 of the SHARED LIST. The CALL APP, NBR, SP DNA (5E9(1) and later), and AU DNA (5E9(1) and later) fields must be blank. For ISDN terminals, values from the FIRST CA and NUM CA fields on the DSL or DSMLHLN form will be used for the CALL APP and NBR fields on this form. For analog lines, a 1 will be used for the CALL APP and NBR fields.

The TN or MLHG/TERM listed in rows 2 through 32 are the primary TNs or MLHG/TERMs associated with the station sets that the primary TN or MLHG/TERM listed in row 1 is to appear on.

At least two row entries must be entered in the SHARED LIST. Only the default values assigned on Screen 2 are allowed.

SECONDARY/SECONDARY ONLY: A secondary only TN or MLHG/TERM is defined by entering the Secondary TN in the key TN or MLHG/TERM. The Secondary TN or MLHG/TERM entered in the key field must not be entered in the first row of the SHARED LIST. The TNs or MLHG/TERMs entered in the SHARED LIST are the primary TNs or MLHG/TERMs associated with the station sets that the Secondary TN or MLHG/TERM is to appear on.

Secondary only TNs or MLHG/TERMs must not be assigned to any physical equipment, therefore they should not be assigned on a LINE, MLHLN, DSL or DSMLHLN form. At least one row entry must be entered in the SHARED LIST.

2.6 TN

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Description: Enter the SHARED LIST Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

At least one SHARED LIST TN or MLHG/TERM NBR combination must be specified. The TNs specified within the SHARED LIST must be unique.

For 5E8 only, if the SHARED LIST TN is defined on a DSLUSR form (5908 Record) as a CKT TN, then if EKTS on the DSLUSR form is "BASIC", CALL APP must not be entered in this shared list item, and NBR must be 1.

For 5E8 and later, if the SHARED LIST TN is defined on a DSLUSR form (5908 Record) as a CKT TN, then:

- If EKTS is "CACH", and the user is assigned to a Standard DSL (DSL CLS is "STD" on the associated DSL Form), CALL APP must be entered;

- If EKTS is not entered and DSL CLS is not "STD", CALL APP must be entered for this shared list item.

For 5E9(1) and later, if SHARED LIST TN is defined on a DSLUSR form as a CKT TN, with EKTS on DSLUSR as "BASIC", both CALL APP and NBR must be blank; if EKTS is other than "BASIC", both CALL APP and NBR must be entered.

For 5E12 and later, if the first 3 digits of the 7-digit SHARED LIST TNs on the SHTN form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE or the NOC form does not exist, the SHARED LIST TN must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

For 5E12 and later, the SHARED LIST TNs on the SHTN form can not match another SHARED LIST TN in the SHARED LIST.

For 5E12 and later, when the SHTN forms have Key TN, MLHG and TERM NBR entered, the SHARED LIST TN in row 1 cannot match the Key TN on the same SHTN form.

2.7 MLHG

Description: Enter the SHARED LIST Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

At least one SHARED LIST TN or MLHG/TERM NBR combination must be specified. The MLHG/TERM NBR combination specified in the SHARED LIST must be unique.

For 5E8 only, if the SHARED LIST MLHG and TERM are defined on a DSLUSR form (5908 Record) as a CKT MLHG/TERM, and EKTS on the DSLUSR form is "BASIC", CALL APP must not be entered in this shared list item, and NBR must be 1.

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For 5E8 and later, if the SHARED LIST MLHG and TERM are defined on a DSLUSR form (5908 Record) as a CKT MLHG/TERM, then:

- If EKTS is "CACH", and the user is assigned to a Standard DSL (DSL CLS is "STD" on the associated DSL Form), CALL APP must be entered;
- If EKTS is not entered and DSL CLS is not "STD", CALL APP must be entered.

For 5E9(1) and later, if SHARED LIST MLHG is defined on a DSLUSR form as a CKT MLHG, with EKTS on DSLUSR as "BASIC", both CALL APP and NBR must be blank; if EKTS is other than "BASIC", both CALL APP and NBR must be entered.

2.8 TERM NBR

Description: Enter the SHARED LIST Multi-Line Hunt Terminal Number.
Valid Entries: 1 - 2015

2.9 CALL APP

Description: Enter the button number where the first Call Appearance will appear.
Valid Entries: 1 - 254

Data Rules:

The sum of the CALL APP and NBR fields must not exceed 255. If the SHARED LIST TN or MLHG/TERM NBR entered is not primary, a CALL APP must be specified.

For 5E8 and later, a CALL APP must be entered for EKTS CACH or custom TNs or MLHG/TERM NBRs.

For 5E9(1) and later, if CALL APP is entered, SP DNA and AU DNA must not be entered.

2.10 NBR

Description: Enter the Number of Call Appearances.
Valid Entries: 1 - 16

Data Rules:

The sum of the CALL APP and NBR fields must not exceed 255. If the SHARED LIST TN or MLHG/TERM NBR entered is not primary, a NBR must be specified.

For Secondary TNs, the first row entry of NBR must be the maximum NBR value or share the maximum NBR value entered on the form.

For 5E8 and later, NBR must be entered for EKTS CACH or custom TNs or MLHG/TERM NBRs.

For 5E9(1) and later, if NBR is entered, SP DNA and AU DNA must not be entered.

2.11 MAN EXCL

Description: Is Manual Exclusion allowed? Manual Exclusion can be activated by an access code or button.

Software Release: 5E6 and earlier
Valid Entries: Y, N

2.12 SP DNA

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Description: Enter the DN (Directory Number) CA for speech. This is a field for ATS (Automatic Terminal Setup). See Division 2, Section 1AM for more information on ATS. ISDN routing and digit analysis require speech and audio (voiceband data, e.g., facsimile and modems) calls to be routed differently. Speech treatments should not be applied to an audio call to maintain the integrity of the bit stream. See Division 2, Section 1W for more information on audio and speech calls.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If SP DNA and AU DNA are both entered, they must not be equal.

SP DNAs may be entered for Basic EKTS terminals.

2.13 AU DNA

Description: Enter the DN CA for audio. This is a field for ATS (Automatic Terminal Setup). See Division 2, Section 1AM for more information on ATS.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If SP DNA and AU DNA are both entered, they must not be equal.

AU DNAs may be entered for Basic EKTS terminals.

2.14 CALL EXCL

Description: Is Call Exclusion allowed?

Software Release: 5E7 and later
Valid Entries:

Valid CALL EXCL Entries

Entry	Definition
N	Indicates that Call exclusion is not allowed.
M	Indicates that Call Exclusion is allowed, however, this option must be activated manually by pressing a feature button or dialing a code.
A	This option automatically activates Call Exclusion upon origination and termination on this Secondary only/Primary TN or MLHG/TERM NBR.

Data Rules:

For 5E8 and later, when members of the same Shared List are Standard DSL users, they may not have a mixture of manual and automatic call exclusion options. All members must have CALL EXCL set to "M", "N", or blank; or all must have it set to "A", "N", or blank.

2.15 ADR PAT

Description: Abbreviated and Delayed Ringing Pattern. Indicate the Ringing pattern assigned to this terminal which shares a TN.

Valid ADR PAT Entries

Entry	Definition
NOR	Normal Ringing indicates that both visual and audible ringing are assigned.
NON	No Ringing indicates visual ringing is provided with no audible ringing.
DEL	Delayed Ringing indicates that both audible and visual ringing will be delayed for a given amount of time. The length of the delay must be defined in the ADR TIME field.

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ABR	Abbreviated Ringing indicates that audible ringing will stop after a given amount of time. Although the audible ringing stops, visual ringing continues. The length of time that audible ringing is provided must be defined in the ADR TIME field.
DRI	Software Release: 5E7 and later. Delayed Ringing with Immediate Display indicates that visual ringing will begin immediately, but audible ringing will be delayed for the length of time defined in the ADR TIME field.
NRN	Software Release: 5E7 and later. No Ring, No Display, indicates that neither audible nor visual ringing will be provided.

2.16 EPO ON

Description: Should call and event information be tracked on calls to or from the call appearances of the TN or MLHG and TERM NBR specified as the key on the terminal on which the TN or MLHG and TERM NBR in the SHARED LIST is primary.

When EPO ON is set to "Y" and at least one of the terminals in the SHARED LIST is designated as an EPO position (EPO POS NUM on DSLUSR is entered), event information for calls and events to and from the call appearances of the TN or MLHG and TERM NBR (specified as key) on the terminal on which the TN or MLHG and TERM NBR in the SHARED LIST is primary is sent to the MIS (Management Information Systems). The information includes reports on terminal usage, status, event codes, and call-related events associated with the tracked TN or MLHG and TERM NBR. The MIS compiles the call data and provides user reports and displays to the customer.

When EPO ON is set to "Y" in the SHARED LIST and the TN or MLHG and TERM NBR are specified as the key and is shared on at least one terminal in the SHARED LIST which is an EPO position terminal (has EPO POS NUM entered on DSLUSR), then the TN or MLHG and TERM NBR specified as the key has the capability of being tracked on any terminal on which it has call appearances. Complete information for calls originating from or terminating to these call appearances on the terminal specified in the SHARED LIST is sent to the MIS only when the terminal in the SHARED LIST is defined as an EPO position terminal (EPO POS NUM is entered on DSLUSR). If the terminal in the SHARED LIST is not defined as an EPO position terminal (EPO POS NUM is not entered on DSLUSR):

- Calls from the call appearances of the TN or MLHG and TERM NBR specified as the key on the terminal in the SHARED LIST are not tracked.
- Calls to the call appearances of the TN or MLHG and TERM NBR specified as the key on the terminal in the SHARED LIST are tracked for shared call information.

When EPO ON in the SHARED LIST is set to "N", calls to or from the call appearances of the TN or MLHG and TERM NBR on the terminal in the SHARED LIST are not tracked.

Software Release: 5E11 and later.
Default: N
Valid Entries: Y, N

Data Rules:

When the SHTN form primary TNs match a DSLUSR form CKT TN, the entry in the DSLUSR form EPO ON field must be the same as the entry in the SHTN form SHARED LIST row 1 EPO ON field.

When the SHTN form primary MLHG/TERM NBRs matches the DSLUSR form CKT MLHG/TERMs, the entry in the DSLUSR form EPO ON field must be the same as the entry in the SHTN form SHARED LIST row 1 EPO ON field.

When the SHARED LIST Row TN on the SHTN form is associated with a CKT TN on a DSLUSR form that has an ACD POS NUM entry, the EPO ON field for that SHARED LIST Row must be "N".

When the SHTN forms have one or more SHARED LIST TNs defined on a DSLUSR form where the

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corresponding DSL form (DSL form DSL OE matches DSLUSR form OE) has DSL CLS set to "STD", the EPO ON entry in the SHARED LIST row involved in the match to DSLUSR must be "N".

When the SHTN forms have one or more SHARED LIST MLHG/TERM NBR combinations defined on a DSLUSR form where the corresponding DSL form (DSL form DSL OE matches DSLUSR form OE) has DSL CLS set to "STD", the EPO ON entry in the SHARED LIST row involved in the match to DSLUSR must be "N".

When the SHTN form Key MLHG/TERM NBR combination matches the MLHG/TERM NBR entry in Row 1 of the same SHTN form SHARED LIST and also matches an MLHLN form MLHG/TERM combination, this scenario is defined as a shared analog MLHG. In such a case, the entry in the SHTN SHARED LIST Row 1 EPO ON field must be "N".

3. FORM ENTRIES - 5902-2 RECORD

SECONDARY ONLY

Secondary Only fields (Section 3.1 - Section 3.30) should be defined for Secondary Only TNs and MLHG/TERMs.

Data Rules:
For 5E12 and later, the Secondary Only TNs on the SHTN form (where Key TN does not match SHARED LIST TN from row 1 or SHARED LIST MLHG from row 1 is entered), must meet all of the following requirements:

- If BUSY MONITOR is "Y", ATT MLHG must be entered.
- The first row entry must have the maximum value or share the maximum value of NBR.
- INWATS must be "N".
- NON-HUNT TN cannot be entered.
- ATT MLHG and RBV TGN cannot be entered at the same time.
- When RBV TGN is entered, BUSY MONITOR must be "N".
- MMB SUBGP cannot be entered.
- RND SUBGP cannot be entered.

3.1 BRCS

Description: Can BRCS features be assigned to this line? This field applies to secondary only TNs and MLHG/TERMs.
Valid Entries: Y, N

Data Rules:

If "Y" is entered, the Primary TN or Primary MLHG/TERM must be assigned on the LINEFA or MLHLNFA forms, respectively.

For 5E8, if the lead TN or MLHG/TERM NBR has been assigned an LCC/RAX on a LINE, MLHLN or DSLUSR form where the corresponding LCC form has DIGIT ANALYSIS SELECTOR equal to the ASP DAS on the OFCOPT form, then BRCS must be "N".

3.2 E911 PSAP

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Description: Is this an E911 Public Safety Answering Point? This field applies to the secured feature, ISDN PSAP Support. For information on the feature, see Division 2, Section 4A114.

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

This field can be "Y" only if the ISDN PSAP Support secured feature has been purchased; SFID 114 ACT must be set to "Y" on the SFSYS form (5713-1 Record).

When the first TN (or MLHG/TERM NBR) entry in the SHARED LIST is the same as the key TN (MLHG/TERM NBR), E911 PSAP cannot be entered.

If a primary E911 PSAP TN (or MLHG/TERM NBR) is assigned in the key TN (or MLHG/TERM NBR) field (i.e., the key TN (MLHG/TERM NBR) matches the SHARED LIST ROW 1 TN (MLHG/TERM NBR) and is defined as a CKT TN (CKT MLHG/TERM) on a DSLUSR form where E911 PSAP is "Y"), then all TN or MLHG/TERM NBR entries in the SHARED LIST must also be defined as CKT TNs or CKT MLHG/TERMs on DSLUSR forms where E911 PSAP is "Y".

When values are entered in the MLHG/TERM NBR and E911 PSAP fields, the value entered for E911 PSAP must match the E911 PSAP entry on the corresponding MLHG form.

When E911 PSAP for Secondary Only is "Y", the following rules apply.

- SUST must be "N", and SERHLN cannot be entered.
- All entries in the SHARED LIST must be defined on DSLUSR forms (SHARED LIST TN or MLHG/TERM NBR matches CKT TN or CKT MLHG/TERM on the DSLUSR form) where E911 PSAP is "Y".
- The OE of the SHARED LIST ROW 1 TN or MLHG/TERM NBR (entered on the corresponding DSLUSR form) must be defined on a DSL form where DSL CLS is "MP" or "PP"; that is, it must be a custom DSL. If DSL CLS is "PP", ACSR GRP must be blank.
- The CKT SWITCHING LCC and RAX of the SHARED LIST ROW 1 TN or MLHG/TERM NBR (entered on the corresponding DSLUSR form) must be defined on an LCC form where CLASS OF SERVICE is "ISDN".
- The TN may not be a series completion DN on another form; that is, it may not appear in the SERHLN field on a LINE, MLHLN, DSLUSR, or SHTN form.
- The TN may not be assigned the following types of BRCS features on the LINEFA, CLUSTR, or BFG form: ACCT, ACSR, ARS, ATH, CFW (where CFPF ALW is "Y"), ICM, MDR, MS, PFA, PP, PUO, PUT, TGSR, or TOD.
- The MLHG/TERM NBR may not be assigned the following types of BRCS features on the MLHLNFA, CLUSTR, or BFG form: ACCT, ACSR, ARS, ATH, CFW (where CFPF ALW is "Y"), ICM, MDR, MS, PFA, PP, PUO, PUT, TGSR, or TOD.

3.3 BAUTO

Description: This is a Recent Change only field.

3.4 SAR NUM

Description: The next three fields provide the option of reserving call appearances for originating or

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terminating calls.

Reservations can be one of three types:

- Origination only: SAR ORIG field equal to "Y"
- Termination only: SAR TERM field equal to "Y"
- Origination and priority terminations: SAR ORIG and SAR TERM fields equal to "Y". Priority terminations are defined in the INCOMING, INTERCOM, ORIG CALL WAIT and PP fields. One or more priority terminations must be defined.

The SAR NUM field is the number of subaddresses reserved. It applies to secondary only TNs and defines the number of call appearances to be reserved for originating or terminating calls. The number of subaddress reservations is less than or equal to the largest value in the NBR field. The highest numbered subaddresses are reserved. For example, if CALL APP is 1, NBR is 3 and SAR NUM is 2, then call appearances 2 and 3 are reserved.
Valid Entries: 1 - 16

Data Rules:

If SAR NUM is blank, then SAR ORG and SAR TERM must be "N".

3.5 # SAR ORIG

Description: Will call appearances be reserved for originating calls? Any attempt to terminate to the subaddress reserved for originating calls will result in a busy signal. Originations will be handled normally.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

3.6 # SAR TERM

Description: Will call appearances be reserved for terminating calls? Any attempt to originate on a subaddress reserved for terminating calls will be denied. Calls will terminate normally.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

3.7 # INCOMING

Description: Are incoming calls to a terminal group a priority? This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If INCOMING is "Y", then SAR ORIG and SAR TERM must be "Y".

3.8 # INTERCOM

Description: Are ISDN Intercom calls a priority? This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If INTERCOM is "Y", then SAR ORIG and SAR TERM must be "Y".

3.9 # ORIG CALL WAIT

Description: Are originating calls a priority? This is the ISDN equivalent of call waiting origination. This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ORIG CALL WAIT is "Y", then SAR ORIG and SAR TERM must be "Y".

3.10 # PP

Description: Are Priority and Preemption calls a priority? This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PP is "Y", then SAR ORIG and SAR TERM must be "Y".

3.11 BILL TN

Description: Enter a 7 or 10-digit telephone number if billing is to be charged to a number other than the key TN. This field applies to secondary only TNs and MLHG/TERMs.
Valid Entries: 7 digits (0 - 9); or ten digits (first digit 2 - 9, second digit 0 - 1, remaining digits 0 - 9)

3.12 IBV

Description: Is Busy Verification allowed for this secondary only TN or MLHG/TERM? If this field is set to "N", Busy Verification will be denied. IBV applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.
Valid Entries: Y, N

3.13 SUST

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Description: Is terminating service allowed for this secondary only TN or MLHG/TERM? If this field is set to "N", terminating service will be suspended; the TN or MLHG/TERM will not be allowed to receive calls. SUST applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.
Valid Entries: Y, N

3.14 # INWATS

Description: Is the MLHG Inwats? Only Secondary MLHG/TERMs with an associated TN can have a "Y" in this field.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then ICP must be "N".

3.15 ICP

Description: Should terminating calls be routed to regular intercept? This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.
Valid Entries: Y, N

3.16 # TRC

Description: Is Call Tracing on calls allowed? This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

Required Field.
Default: N
Valid Entries: Y, N

3.17 # BUSY MONITOR

Description: Can the key TN be monitored by the Busy Lamps of an ISDN Attendant MLHG?

Required Field.
Default: N

Data Rules:

An ISDN Attendant Multi-Line Hunt Group can busy monitor a Hundreds Group (Telephone Numbers that share the same first five digits) only if those Telephone Numbers that can be busy monitored do not physically terminate to more than 12 processors (SMs and/or AM). Entering a LISTED TN on an MLHG form causes the AM to be counted as one of the processors.

The following Telephone Numbers can be included in the Hundreds Group, if the BUSY MONITOR field on the form is set to "Y":

- A TN from a LINE form;
- A TN from a MLHLN form;
- A CKT TN from a DSL form;
- A CKT TN from a DSMLHLN form;

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- A LISTED TN from an MLHG form.

The following physical terminations can be included in the Processor count, if the BUSY MONITOR field on the form is set to "Y":

- The first three digits (SM) of the OE NUMBER from a LINE form;
- The first three digits (SM) of the OE NUMBER from a MLHLN form;
- The first three digits (SM) of the LCEN or ILEN from a DSL form;
- A LISTED TN from an MLHG form will cause the AM to be counted;
- The first TN in the SHARED LIST on a SHTN form has three possible cases:
  - If the TN matches the CKT TN on a DSL form, then the corresponding first three digits (SM) of the LCEN or ILEN on that DSL form will be counted;
  - If the TN matches the CKT TN on a DSMLHLN form, then the corresponding first three digits (SM) of the LCEN or ILEN on that DSMLHLN form will be counted;
  - If the MLHG and TERM NBR match the CKT MLHG and CKT TERM on a DSMLHLN form, then the corresponding first three digits (SM) of the LCEN or ILEN on that DSMLHLN form will be counted.

This field must be "N" if 1 is entered in the key TERM field. For 5E4(2), if this field is "Y", an ISAT GRP must be entered. This field applies to secondary only TNs and secondary only MLHG/TERMs with an associated TN.

For 5E5 and later, if this field is "Y", the ATT MLHG field must be entered.

3.18 ATT MLHG

Description: Enter the Attendant MLHG that can control the TN that is shared on this form.

Software Release: 5E5 and later
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

The ATT MLHG must have a service class of "ISATND" or "ATND" defined on the LCC form (5306 Record).

If this field is entered, it must be defined in the MLHG field on an MLHG form (5110-1 Record) with an MLHG FEATURE associated with a HUNT TYPE of "ISAT" or "MUPH" on an MLHGFD form (5604 Record). If the HUNT TYPE is not "ISAT", BUSY MONITOR must be "N".

If this field is entered and TERM NBR is "001", then the MLHG must be defined on an MLHG form with ATT MLHG equal to the ATT MLHG on this form.

For 5E8 and later, if ATT MLHG is entered, RBV TGN must not be entered.

3.19 RBV TGN

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Description: Enter the number of the incoming trunk group used to Remote Busy Verify the Secondary Only TN (DN) or the TN associated with a Secondary Only terminal on this form. Remote Busy Verify cannot be assigned to Primary TNs or Primary Terminals on this form. This TGN allows an ISAT (ISDN Attendant) on another 5ESS switch to Busy Verify this DN if the TGN is associated with a Secondary Only TN (DN).

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If RBV TGN is entered, ATT MLHG must not be entered, BUSY MONITOR must be "N", and TN must be entered.

If TN(key) matches SHARED LIST row 1 TN, RBV TGN must not be entered. If MLHG/TERM NBR(key) matches SHARED LIST row 1 MLHG/TERM NBR, RBV TGN must not be entered. If RBV TGN is entered and a Secondary Only MLHG/TERM is entered, the TN key field must be entered.

If RBV TGN is entered, there must be a corresponding TKGRP form (5202 Record) with that TGN defined, and that TKGRP form must have TRKCLS set to "ATNDVFY", and TRK DIR must be "INC". Also, for the TGN on the TKGRP form, there must be at least one corresponding TRUNK form (5204 Record) with QTY entered.

If RBV TGN is entered, MLHG must equal MLHG on a corresponding MLHG form. That MLHG form must have MLHG FEATURE equal to FEATURE NAME on a corresponding MLHGFD form, which in turn must not have HUNT TYPE set to "MUPH", "ISAT", or "PSUCD".

If RBV TGN is entered, the corresponding DSLUSR form must have CSV entered and greater than zero.

3.20 PORTED

Description: The PORTED field is used to indicate whether the TN has been ported into this office via the NP (Number Portability) feature. The indicator is used by call processing to determine whether or not to generate an BAF (NP Bellcore AMA Format) module for originating and terminating IXC (Inter-Exchange Carrier) access records.

Software Release: 5E11 and later
Valid Entries: Y, N

3.21 NON COND TRIG

Description: The NON COND TRIG field is used to indicate whether or not a call to this DN requires a non-conditional query of the SCP (Service Control Point) prior to routing the call.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When SERHLN exists, NON COND TRIG must be "N".

When ICP is "Y", NON COND TRIG must be "N".

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When NON COND TRIG is set to "Y", the ACT field for SFID 216 on the SFSYS form must be set to "Y". And if SFID 216 is set to "Y", SFID 174 must also be set to "Y".

NON COND TRIG must be "N" for Primary TNs, Primary MLHG members, Secondary only MLHG members, and Secondary only MLHG members with a DN.

NON COND TRIG can only be "Y" for Secondary only TNs.

3.22 PVN ALW

Description: The name of this field was changed to ASP ALW in 5E8. This field name applies to 5E6 - 5E7. See ASP ALW for usage information.

3.23 ASP ALW

Description: Is this Secondary Only TN allowed to originate ASP (Advanced Services Platform; previously PVN (Private Virtual Network)) calls via an ODP Feature/Prefix Code trigger? (This field was called PVN ALW for 5E6 - 5E7).

Software Release: 5E6 - 5E8
Required Field.
Default: N

Data Rules:

If PVN OFC on the OFCOPT form (5509 Record) is set to "NONE", then this office does not support ASP and PVN ALW must be "N".

A line dedicated to ASP services should not be entered as part of a Series Completion Group. When PVN ALW is set to "Y" and SERHLN is entered, then the DIGIT ANALYSIS SELECTOR on the corresponding LCC form (5306 Record) cannot be equal to PVN DAS on the OFCOPT form (5509); note that the LCC form will be found by using the LCC and RAX from the DSLUSR form (5908 Record) defining this line's lead TN or MLHG Member (as assigned by TN or MLHG and TERM NBR in the first element of the SHARED LIST). Likewise, DIGIT ANALYSIS SELECTOR should not be equal to a DAS equivalent in functionality to the PVN DAS (i.e., a virtual ASP DAS).

3.24 SERHLN

Description: SERHLN defines a Series Completing to Telephone Number. Series Completion supports BRI (Basic Rate Interface) lines for CSV (Circuit-Switched Voice) calls. The feature hunts a linked-list DN until an idle line is found or until 16 Series Completion attempts are made. A maximum of 50 TNs can Series Complete to a single TN defined on this form or on the DSLUSR, LINE or MLHLN forms.

Software Release: 5E6 and later
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

When this field is entered, the following conditions must be true: ICP must be "N", the TN field must be entered, SERHLN cannot equal the TN field, PVN ALW must be "N" (5E6 - 5E8). SERHLN cannot be entered when either CKT ICP or PVN ALW (5E6 -5E8) is "Y".

When SERHLN, MLHG and TERM NBR are entered, NON-HUNT TN must be "Y".

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For 5E8 only, the SERHLN cannot be a Standard BRI line, an analog line shared to a Standard BRI, or a Secondary Only TN associated with a Standard BRI. That is, the SERHLN may not be defined as a CKT TN or CKT SWITCHING MLHG TN on a DSLUSR form when DSL CLS is "STD" on the corresponding DSL form. It may not be defined as a TN on a LINE or MLHLN form if the TN or MLHG is a key on an SHTN form, and a shared list entry on that form is defined on a DSLUSR form with DSL CLS "STD" on the corresponding DSL form. It may not be defined as a Secondary Only key TN on another SHTN form where any shared list entry is defined on a DSLUSR form with DSL CLS "STD" on the corresponding DSL form.

For 5E9(1) and later, TN(s) on the SHTN form that have Series Completion allowed (SERHLN is known). One of the following conditions must be satisfied:

- The SERHLN matches an STN on the SHTN form with SMLHG/SMEMB unknown, STN does not match TN in row 1 of the SHARED LIST, and ICP is "N".
- The SERHLN matches an STN on the SHTN form with SMLHG/SMEMB known, SMLHG/SMEMB does not match MLHG/MEMB in row 1 of the SHARED LIST, and ICP is "N".
- The SERHLN matches a CKTTN on the DSLUSR form with ICP equal to "N".
- The SERHLN matches a CKT MLHG TN on the DSLUSR with ICP equal to "N".
- The SERHLN assigned on the SHTN form must be defined on the MLHLN form with ICP (intercept) equal to "N". The LCC/RAX must match LCC/RAX on the LCC form with a TERMINATING TREATMENT equal to "INWATS" or "MLHG".
- The SERHLN must be defined on a LINE form (as TN) with ICP equal to "N". The LCC/RAX must match LCC/RAX on an LCC form with a TERMINATING TREATMENT equal to "INWATS", "PARTY", "RI", or "INDIV".
- The SERHLN assigned on the SHTN form must be defined on a LINE, MLHLN, DSLUSR, or SHTN form, or as a LISTED TN on an MLHG form.

For 5E12 and later, if the 3 digits of the 7-digit SERHLNs on the SHTN form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE or the NOC form does not exist, the SERHLN must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

3.25 MONITORED TN

Description: The MONITORED TN field is used to indicate whether or not this line is monitored by one or more ISDN terminals. This field supports the Telephone Status Monitor and Select Feature. For more information, see Div. 2 Sec. 4A264. The field is used by Recent Change only and cannot be accessed by ODA.

3.26 CONTEXT ID

Description: This field is used to indicate whether or not a shared directory number is "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E12 and 5E13: N
- For 5E14: NATIVE

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Valid Entries:

Valid CONTEXT ID Entries		
Entry for 5E12, 5E13	**Entry for 5E14 and later**	**Description**
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

For 5E12 and later:

When the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" on the SHTN form, the ACT field for SFID (Secured Feature ID) 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

When the first TN entry from the SHARED LIST is equal to the key TN, CONTEXT ID must be set to "N" or "NATIVE".

When the first MLHG/TERM entry from the SHARED LIST is equal to the key MLHG/TERM, CONTEXT ID must be set to "N" or "NATIVE".

3.27 RMK

Description: Enter a descriptive comment. This field applies to secondary only TNs.
Valid Entries: up to 16 characters.

MLHG TERM

The following fields (Section 3.28 - Section 3.30) apply to Secondary Only MLHG terminals.

3.28 NON-HUNT TN

Description: Is this Terminal a Non-Hunt Terminal? Non-hunt allows a line in an MLHG to receive direct calls that do not hunt if the called line is busy. This field applies to secondary only MLHG/TERMs with an associated TN.
Valid Entries: Y, N

3.29 MMB SUBGP

Description: Enter the Member Make Busy Subgroup number for the Secondary MLHG Terminal. The number here designates a subgroup. All members in the same subgroup have the same Make Busy Subgroup number. Subgroups exist within an MLHG; MMB SUBGP values can appear in multiple MLHGs, but each combination of MLHG and MMB SUBGP defines a unique subgroup.
Valid Entries: 1 - 255

3.30 RND SUBGP

Description: Enter the Random Make Busy Subgroup number for the Secondary MLHG Terminal. The number here designates a subgroup. All members in the same subgroup have the same Random Make Busy Subgroup number. Subgroups exist within an MLHG; RND SUBGP values can appear in multiple MLHGs, but each combination of MLHG and RND SUBGP defines a unique subgroup.
Valid Entries: 1 - 255

NI SAR LIST (SARLIST)

The following fields (Section 3.31 - Section 3.32) describe the NI SAR LIST. These fields support the

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ISDN Call Appearance Reservation Feature. See Division 2, Section 1BM for more information.

Subaddress reservation list contains up to 3 entries which consist of type of subaddresses to reserve, the order in which the type of reservation specified should appear with respect to the other types of subaddresses reserved, if any, and the number of subaddresses to reserve for that type of subaddress reservation.

3.31 TYPE AND ORDER

Description: The TYPE AND ORDER field is used to specify the type and order of subaddresses to reserve for call appearance reservation. The subaddress types can be reserved in any order with respect to one another; however, all subaddresses within one category must be reserved contiguously (i.e. each reservation type may appear only once in NI SAR LIST(SARLIST) field). The location of the list entry determines the ordering of the reservation type with respect to the other types of subaddresses reserved, if any. The reserved subaddresses are assigned to the highest numbered subaddresses associated with the circuit telephone number specified in the CKT TN field.

Example 1:
The following is an example of the assignment of call appearance reservation to a non-shared secondary-only TN.

A secondary-only TN is inserted on the SHTN form (the key is the secondary-only TN), and is assigned to appear on a terminal where a Standard ISDN circuit TN is primary and the EKTS field is set to "CACH" on the DSLUSR form. This is accomplished by putting the circuit TN in the SHARED LIST and assigning a value in the CA and CA QTY fields. The secondary-only TN is assigned to appear on the circuit TN's terminal starting at CA 10 for a CA QTY of 4. Therefore, four appearances of the secondary-only TN will appear on the terminal where the circuit TN is primary.

The NI SAR LIST for the secondary-only TN is set up as follows:

NI SAR LIST		
ROW	TYPE AND ORDER	QTY
1	ORIG	1
2	TERM	1

In this example, the secondary-only TN is a non-shared secondary-only, since the TN only appears on one terminal, the circuit TN's primary terminal. The secondary-only TN has four subaddresses, since it appears for four call appearances on the terminal. Therefore, the secondary-only may have up to four subaddresses reserved for call appearance reservation. In this example, only two of the secondary-only TN's subaddresses are to be reserved (sum of QTYcolumn). Since the reserved subaddresses are the highest numbered subaddresses of the TN, it is the last two of the four subaddresses (subaddresses 3 and 4 of the TN) which will have subaddress reservation. The order of the types of reservation follows the order specified in the NI SAR LIST field. Therefore, subaddress 3 of the TN will be reserved for originations ("ORIG") since a QTY of 1 subaddress is specified to be reserved for "ORIG" and it is the first TYPE in the NI SAR LIST. Subaddress 4 will be reserved for terminations ("TERM"), since a QTY of 1 subaddress is specified to be reserved for TERM and it is the second TYPE in the NI SAR LIST. Any non-reserved subaddresses are the lowest numbered subaddresses of the TN (in this example, subaddresses 1 and 2 are not reserved).

On the Standard "CACH" terminal (where the circuit TN is primary), the subaddresses correspond to call appearances as follows:

- CA 10 is subaddress 1 of secondary-only TN (not reserved)
- CA 11 is subaddress 2 of secondary-only TN (not reserved)
- CA 12 is subaddress 3 of secondary-only TN (reserved for originations)
- CA 13 is subaddress 4 of secondary-only TN (reserved for terminations)

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Example 2:
Assigning call appearance reservation to a shared TN (secondary-only or primary).

When a TN (secondary-only or primary) is shared, its subaddresses and corresponding subaddress reservation is also shared. The following example will demonstrate the shared scenario when call appearance reservation is assigned.

A circuit TN has been defined on the DSLUSR form to have 5 call appearances (CA QTY is 5) starting at call appearance 3 (CA is 3) on the terminal on which the circuit TN is primary, and NI SAR LIST is set up as follows.

NI SAR LIST		
ROW	TYPE AND ORDER	QTY
1	PRIO	1
2	TERM	2
3	ORIG	1

In this example, the circuit TN has five subaddresses (CA QTY is 5). Four of the circuit TN's five subaddresses are to be reserved (sum of the QTY column). Since the reserved subaddresses are the highest numbered subaddresses of the circuit TN, it is the last four of the five subaddresses (subaddresses 2, 3, 4, and 5 of the circuit TN) which will have subaddress reservation. The order of the types of reservation follows the order specified in the NI SAR LIST field. Therefore, subaddress 2 of the circuit TN will be reserved for originations and priority incoming terminations ("PRIO") since a QTY of 1 subaddress is specified to be reserved for "PRIO" and it is the first TYPE in the NI SAR LIST. Subaddresses 3 and 4 will be reserved for terminations ("TERM"), since a QTY of 2 subaddresses is specified to be reserved for TERM and it is the second TYPE in the NI SAR LIST. Finally, subaddress 5 will be reserved for originations ("ORIG"), since a QTY of 1 subaddress is specified to be reserved for ORIG and it is the third type in the NI SAR LIST. Any non-reserved subaddresses are the lowest numbered subaddresses of the circuit TN (in this example, subaddress 1 is not reserved).

On this terminal (the circuit TN's terminal), the subaddresses correspond to call appearances as follows:

- CA 3 is subaddress 1 (not reserved)
- CA 4 is subaddress 2 (reserved for "ORIG" and "PRIO" terminations)
- CA 5 is subaddress 3 (reserved for terminations only)
- CA 6 is subaddress 4 (reserved for terminations only)
- CA 7 is subaddress 5 (reserved for originations only)

Next, the circuit TN (circuit TN A) is shared onto another terminal where circuit TN B is primary. This is accomplished through this form and circuit TN A is assigned to appear on the terminal where circuit TN B is primary starting at call appearance 20 (CA is 20) for three call appearances (CA QTY is 3). Therefore, only three of circuit TN A's subaddresses are to be shared, and they will be the lowest numbered subaddresses of circuit TN A, in this case subaddresses 1, 2, and 3. The subaddresses will also carry any subaddress reservation they have assigned to the terminal(s) on which they are shared. So in this example, subaddress 1 of circuit TN A will appear on circuit TN B's terminal and will be non-reserved (because subaddress 1 of circuit TN A is non-reserved). Subaddress 2 of circuit TN A on circuit TN B's terminal will be reserved for originations and priority terminations (because subaddress 2 of circuit TN A is reserved for this type of reservation). Similarly, subaddress 3 of circuit TN A on circuit TN B's terminal will be reserved for terminations. If subaddresses 4 and 5 were also shared, the reservation type for those subaddresses would be carried, but in this case those subaddresses do not appear on circuit TN B's terminal, so circuit TN A has no subaddresses reserved for originations- only on circuit TN B's terminal.

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On circuit TN B's terminal, the subaddresses correspond to call appearances as follows:

- CA 20 is subaddress 1 of circuit TN A (non-reserved)
- CA 21 is subaddress 2 of circuit TN A (reserved for originations and priority terminations)
- CA 22 is subaddress 3 of circuit TN A (reserved for terminations only)

Software Release: 5E11 and later.
Valid Entries:

Valid TYPE AND ORDER Entries

Entry	Definition
ORIG	Subaddress(es) reserved for originations only.
PRIO	Subaddress(es) reserved for originations and priority incoming terminations.
TERM	Subaddress(es) reserved for terminations only.
blank	No subaddress reservation.

Data Rules:

When TYPE AND ORDER is "ORIG" and QTY is equal to the highest value of SHARED LIST NBR, BUSY MONITOR must not be "Y".

When the first row TN entry from SHARED LIST is equal to the key TN (ie. Primary TN), the NI SAR LIST entries cannot be made.

When the first TN or MLHG/TERM entry from SHARED LIST is equal to the key TN or MLHG/TERM on this form, the NI SAR LIST entries must not be specified.

Secondary MLHG/TERMs cannot make entries to the NI SAR LIST.

If TYPE AND ORDER or QTY is entered, both must be entered.

All known values of TYPE AND ORDER must be unique.

Entry on the NI SAR LIST must not be made when TN, MLHG and TERM NBR are entered.

When a TN is assigned via the SHARED LIST on a SHTN form that has one or more NI SAR LIST entries, the TN must be defined (as CKT TN) on a DSLUSR form. In addition, the DSLUSR form EKTS field must have an entry, and the following must be true:

- When the EKTS entry is "BASIC", if an NI SAR LIST entry is made, only one entry is permitted and that one entry must have an NI SAR LIST QTY equal to 1.
- When the EKTS entry is "CACH", the sum of the values entered in the NI SAR LIST QTY fields must not exceed the entry in the NBR field in row 1 of the SHTN form SHARED LIST.

3.32 QTY

Description: The QTY field is used to specify the quantity of subaddresses to be reserved for the type of subaddress designated for the secondary-only TN. Secondary-only TN's do not have a terminal on which the TN is primary, so the number of subaddresses allowed to be reserved is determined by the terminal on which the secondary-only TN appears the most times (i.e. for the most call appearances). Therefore, the total number of subaddresses reserved for the secondary-only TN must not exceed the highest value specified in the CA QTY field on the DSLUSR form.

Software Release: 5E11 and later.
Valid Entries: 1 - 16

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SCREEN 1 OF 6 5ESS Switch
shtn OFFICE DATA ADMINISTRATION
(5902-1/2/3) PRIMARY OR SECONDARY ONLY KEY SYSTEM

(*)1. TN 2201000 (*)3. TERM NBR ____ OE
(*)2. MLHG ____ 4. ADR TIME ___
8. SHARED LIST

ROW	TN	TERM MLHG	CALL NBR	SP APP	AU NBR	CALL DNA	ADR DNA	EPO EXCL	PAT	ON
1	_____	____	____	___	__	___	___	_	___	_
2	_____	____	____	___	__	___	___	_	___	_
3	_____	____	____	___	__	___	___	_	___	_
4	_____	____	____	___	__	___	___	_	___	_
5	_____	____	____	___	__	___	___	_	___	_
6	_____	____	____	___	__	___	___	_	___	_
7	_____	____	____	___	__	___	___	_	___	_

SCREEN 2 OF 6 5ESS Switch
shtn OFFICE DATA ADMINISTRATION
(5902-1/2/3) PRIMARY OR SECONDARY ONLY KEY SYSTEM

ROW	TN	TERM MLHG	CALL NBR	SP APP	AU NBR	CALL DNA	ADR DNA	EPO EXCL	PAT	ON
8	_____	____	____	___	__	___	___	_	___	_
9	_____	____	____	___	__	___	___	_	___	_
10	_____	____	____	___	__	___	___	_	___	_
11	_____	____	____	___	__	___	___	_	___	_
12	_____	____	____	___	__	___	___	_	___	_
13	_____	____	____	___	__	___	___	_	___	_
14	_____	____	____	___	__	___	___	_	___	_
15	_____	____	____	___	__	___	___	_	___	_
16	_____	____	____	___	__	___	___	_	___	_
17	_____	____	____	___	__	___	___	_	___	_

SCREEN 3 OF 6 5ESS Switch
shtn OFFICE DATA ADMINISTRATION
(5902-1/2/3) PRIMARY OR SECONDARY ONLY KEY SYSTEM

ROW	TN	TERM MLHG	CALL NBR	SP APP	AU NBR	CALL DNA	ADR DNA	EPO EXCL	PAR	ON
18	_____	____	____	___	__	___	___	_	___	_
19	_____	____	____	___	__	___	___	_	___	_
20	_____	____	____	___	__	___	___	_	___	_
21	_____	____	____	___	__	___	___	_	___	_
22	_____	____	____	___	__	___	___	_	___	_
23	_____	____	____	___	__	___	___	_	___	_
24	_____	____	____	___	__	___	___	_	___	_
25	_____	____	____	___	__	___	___	_	___	_
26	_____	____	____	___	__	___	___	_	___	_
27	_____	____	____	___	__	___	___	_	___	_

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SCREEN 4 OF 6                5ESS Switch
shtn                 OFFICE DATA ADMINISTRATION
(5902-1/2/3)         PRIMARY OR SECONDARY ONLY KEY SYSTEM

                TERM   CALL        SP      AU     CALL    ADR   EPO
 ROW    TN     MLHG   NBR    APP    NBR    DNA     DNA    EXCL    PAT   ON
 28 __________ ____  ____   ___    __    ___     ___     _     ___    _
 29 __________ ____  ____   ___    __    ___     ___     _     ___    _
 30 __________ ____  ____   ___    __    ___     ___     _     ___    _
 31 __________ ____  ____   ___    __    ___     ___     _     ___    _
 32 __________ ____  ____   ___    __    ___     ___     _     ___    _
```

```
SCREEN 5 OF 6                5ESS Switch
shtn                 OFFICE DATA ADMINISTRATION
(5902-1/2/3)         PRIMARY OR SECONDARY ONLY KEY SYSTEM

                       SECONDARY ONLY
  50. BRCS _                    BAUTO          51. E911 PSAP _
                     TELEPHONE NUMBER (TN)
  52. SAR NUM        __         60. DNYBV       _
# 53. SAR ORIG       N          61. SUST        _
# 54. SAR TERM       N        # 62. INWATS      N
# 55. INCOMING       N          63. ICP         _
# 56. INTERCOM       N        # 64. TRC          N
# 57. ORIG CALL WAIT N        # 65. BUSY MONITOR N
# 58. PP             N          66. ATT MLHG    ____
  59. BILL TN        __________  67. RBV TGN     ____
                       68. PORTED       N
                       69. NON COND TRIG N
```

```
SCREEN 6 OF 6                5ESS Switch          _
shtn                 OFFICE DATA ADMINISTRATION
(5902-1/2/3)         PRIMARY OR SECONDARY ONLY KEY SYSTEM

                       SECONDARY ONLY
  TELEPHONE NUMBER (TN)    TELEPHONE NUMBER (TN)          MLHG TERM
70. SERHLN  __________     75. NI SAR LIST (SARLIST)    78. NON-HUNT TN _
    BCK LNK ___                ROW  TYPE AND ORDER  QTY     79. MMB SUBGP   ___
                     1  ____       __          80. RND SUBGP   ___
    MONITORED TN _           2  ____       __
73. CONTEXT ID   N           3  ____       __          CHANGE FIELDS
74. RMK _____________________                          CHNG TN
                                                       CHNG MLHG
                                                       CHNG TERM NBR

                                                       NEW TN
```

Figure 1 SAMPLE SHTN FORM 5E12 - 5E13 SOFTWARE RELEASES

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SCREEN 1 OF 6 5ESS Switch
shtn OFFICE DATA ADMINISTRATION
(5902-1/2/3) PRIMARY OR SECONDARY ONLY KEY SYSTEM

(*)1. TN 2200000 (*)3. TERM NBR ____ OE
(*)2. MLHG ____ 4. ADR TIME ___
8. SHARED LIST

ROW	TN	TERM MLHG	CALL NBR	SP APP	AU NBR	CALL DNA	ADR DNA	EXCL	PAT	ON
1	_____	____	____	___	__	___	___	_	___	_
2	_____	____	____	___	__	___	___	_	___	_
3	_____	____	____	___	__	___	___	_	___	_
4	_____	____	____	___	__	___	___	_	___	_
5	_____	____	____	___	__	___	___	_	___	_
6	_____	____	____	___	__	___	___	_	___	_
7	_____	____	____	___	__	___	___	_	___	_

SCREEN 2 OF 6 5ESS Switch
shtn OFFICE DATA ADMINISTRATION
(5902-1/2/3) PRIMARY OR SECONDARY ONLY KEY SYSTEM

ROW	TN	TERM MLHG	CALL NBR	SP APP	AU NBR	CALL DNA	ADR DNA	EXCL	PAT	ON
8	_____	____	____	___	__	___	___	_	___	_
9	_____	____	____	___	__	___	___	_	___	_
10	_____	____	____	___	__	___	___	_	___	_
11	_____	____	____	___	__	___	___	_	___	_
12	_____	____	____	___	__	___	___	_	___	_
13	_____	____	____	___	__	___	___	_	___	_
14	_____	____	____	___	__	___	___	_	___	_
15	_____	____	____	___	__	___	___	_	___	_
16	_____	____	____	___	__	___	___	_	___	_
17	_____	____	____	___	__	___	___	_	___	_

SCREEN 3 OF 6 5ESS Switch
shtn OFFICE DATA ADMINISTRATION
(5902-1/2/3) PRIMARY OR SECONDARY ONLY KEY SYSTEM

ROW	TN	TERM MLHG	CALL NBR	SP APP	AU NBR	CALL DNA	ADR DNA	EXCL	PAR	ON
18	_____	____	____	___	__	___	___	_	___	_
19	_____	____	____	___	__	___	___	_	___	_
20	_____	____	____	___	__	___	___	_	___	_
21	_____	____	____	___	__	___	___	_	___	_
22	_____	____	____	___	__	___	___	_	___	_
23	_____	____	____	___	__	___	___	_	___	_
24	_____	____	____	___	__	___	___	_	___	_
25	_____	____	____	___	__	___	___	_	___	_
26	_____	____	____	___	__	___	___	_	___	_
27	_____	____	____	___	__	___	___	_	___	_

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```
SCREEN 4 OF 6                5ESS Switch
shtn                 OFFICE DATA ADMINISTRATION
(5902-1/2/3)         PRIMARY OR SECONDARY ONLY KEY SYSTEM

                  TERM   CALL        SP     AU     CALL    ADR   EPO
 ROW    TN        MLHG   NBR    APP    NBR    DNA     DNA    EXCL   PAT   ON
 28 __________   ____   ____   ___    __     ___     ___    _      ___   _
 29 __________   ____   ____   ___    __     ___     ___    _      ___   _
 30 __________   ____   ____   ___    __     ___     ___    _      ___   _
 31 __________   ____   ____   ___    __     ___     ___    _      ___   _
 32 __________   ____   ____   ___    __     ___     ___    _      ___   _
```

```
SCREEN 5 OF 6                5ESS Switch
shtn                 OFFICE DATA ADMINISTRATION
(5902-1/2/3)         PRIMARY OR SECONDARY ONLY KEY SYSTEM

                       SECONDARY ONLY
  50. BRCS _                    BAUTO          51. E911 PSAP _
                     TELEPHONE NUMBER (TN)
  52. SAR NUM          __          60. DNYBV        _
# 53. SAR ORIG        N           61. SUST         _
# 54. SAR TERM        N         # 62. INWATS       N
# 55. INCOMING        N           63. ICP          _
# 56. INTERCOM        N         # 64. TRC           N
# 57. ORIG CALL WAIT N          # 65. BUSY MONITOR  N
# 58. PP             N          66. ATT MLHG     ____
  59. BILL TN        __________  67. RBV TGN      ____
                       68. PORTED        N
                       69. NON COND TRIG N
```

```
SCREEN 6 OF 6                5ESS Switch          _
shtn                 OFFICE DATA ADMINISTRATION
(5902-1/2/3)         PRIMARY OR SECONDARY ONLY KEY SYSTEM

                       SECONDARY ONLY
  TELEPHONE NUMBER (TN)    TELEPHONE NUMBER (TN)          MLHG TERM
70. SERHLN __________      75. NI SAR LIST (SARLIST)    78. NON-HUNT TN _
    BCK LNK ___                ROW  TYPE AND ORDER  QTY     79. MMB SUBGP   ___
                          1  ____       __          80. RND SUBGP   ___
    MONITORED TN _        2  ____       __
73. CONTEXT ID   NATIVE   3  ____       __            CHANGE FIELDS
74. RMK ____________________                          CHNG TN
                                                      CHNG MLHG
                                                      CHNG TERM NBR

                                                      NEW TN
```

Figure 2 SAMPLE SHTN FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 1D: 5903 RECORD
INCOMING CALL IDENTIFICATION PARAMETER FORM - ICIPF

1. GENERAL

The 5903 Record is available with 5E4(2) and later Software Releases. This record is used to assign ICI (Incoming Call Identification) parameters to ISDN Attendant Multi-Line Hunt Groups and Terminal Groups.

1.1 ISDN Attendant Hunt Groups

ISAT (ISDN Attendant) hunt groups use ICIs to determine the types of calls served by each attendant. The ICIs assigned on this form define which ICIs the Multi-Line Hunt Group serves and the ICIs assigned on the DSLUSR form define which ICIs the individual member (Multi-Line Hunt Group terminal number) serves.

1.2 Queuing

If queuing is provided for the ISAT Multi-Line Hunt Group, the ICIs and priorities assigned to them are used to determine how calls will be removed from the queue. For more information on ISDN Attendant Hunting and Queuing, please refer to the feature sections in Division 2.

1.3 TGID

This form is also used to assign ICIs to a TGID (Terminal Group Identification) number. ICIs assigned to a TGID are used with the display feature to identify the type of incoming call to an ISDN terminal. For example, if the ICI "TIE1" is assigned to a particular trunk group that belongs to TGID 10, it will be displayed to ISDN terminals in this group that have an appropriate display feature whenever they receive a call over this trunk group.

The total combination of all ICIs assigned (HUNTING, PREC, FX, TIE and CNET) to any given group in the following fields must not exceed sixteen.

A maximum of 16 ICI's may be assigned on the ICIPF form, i.e., the total combination of all ICIs assigned (HUNTING, PREC, FX, TIE and CNET) to any given group in the following fields must not exceed 16.

1.4 Recent Change View

The corresponding Recent Change view for this form is 3.43.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * GRP TYP

Description: Enter the Group Type.

Required Field.

Valid GRP TYP Entries

Entry	Definition
HUNT	Multi-Line Hunt Group
TGSR	Terminal Group ID

Data Rules:

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HUNT - For 5E9(2) and later , if GRP TYP is "HUNT":

- and FTS PRIO is entered then FTS TGN must also be entered.
- and one or more of the HUNTING ICI PRIO, PREC ICI PRIO, FX TRK GRPS PRIO, TIE TRK GRPS PRIO, CNET TRK CRP PRIO, or FTS TRK GRP PRIO fields have been entered, then the corresponding MLHG form (5110 Record) must have an entry for QFEATURE.
- and the values entered for FX TRK GRPS, TIE TRK GRPS, CNET TRK, or FTS TRK GRP are not assigned to a CKT MLHG or CKT TERM field on the corresponding DSLUSR forms, then each must be assigned to the ICI's on at least one DSLUSR form where ICIPF GRP NBR matches DSLUSR CKT MLHG.

TGSR - If GRP TYP is "TGSR", then PRIO must not be entered for the following TRK GRPs:
- FX
- TIE
- CNET
- FTS

2.3 * GRP NBR

Description: Enter the Multi-Line Hunt Group Number or Terminal Group ID.

Required Field.
Valid Entries:
- For MLHGs:
  - 5E14 and earlier: 1 - 2000
  - 5E15 and later: 1 - 8191
- For Terminal Groups: 1 - 65535

Data Rules:

If GRP TYP is "HUNT", GRP NUM must be less than 2001 and the group number must be defined on the MLHG form with a hunting feature (from the MLHGFD form) which has a hunt type of "ISAT".

If the group type is TGSR, the valid range is 1-65535 and the group number must be defined on the TGSRMPA or TGSRLPA form.

HUNTING ICI

The following fields (Section 2.4 - Section 2.5) define the Hunting ICIs. Up to sixteen Hunting ICIs may be assigned on an ICIPF form. A priority must be assigned along with each ICI defined. The group type must be "HUNT" to allow Hunting ICI entries.

2.4 ICI

Description: Enter the Hunting ICI.

Valid ICI Entries

Entry	Definition
CFBL	calls that have been call forwarded via a call forward busy line feature.
CFDA	Calls that have been call forwarded via a call forward don't answer feature.
CFOH	Calls that have been forwarded via a call forward don't answer feature.
CFV	Calls that have been call forwarded via a call forward variable feature.
DCL	Identifies a call originating from manual (no-dial) line.
EMER	Identifies a call where the user dialed the attendant using a prespecified IDP (Individualized Dialing Plan)

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	code which was defined as an emergency code (has an ACTION of "EMER"). When the EMER ICI is assigned, it must also be assigned to all terminals of the Multi-Line Hunt Group on the DSLUSR form.
FTSICN	Software Release: 5E9(2) and later. FTS-2000 trunk to CENTREX Network. An incoming call is terminating in a CENTREX Network from a trunk group marked as an FTS trunk group.
FXICN	Software Release: 5E9(2) and later. FX trunk to CENTREX Network. An incoming call is terminating in a CENTREX Network from a trunk group marked as an FX trunk group.
ICPT	Call is intercepted and redirected to the attendant. This may ICPT
LDNx	Call arrived on (LDN1 - LDN8) one of the eight sub-groups (x = 1 to 8). These ICIs are used for calls arriving at a Multi-Line Hunt Group which have no other ICI. LDN (Listed Directory Number) ISAT (ISDN Attendant) Multi-Line Hunt Groups may have up to eight sub-group TNs (defined on the MLHG form). LDN ICIs have a one-to-one relationship to SUBTN fields one through eight on the MLHG form; therefore, for each LDN ICI defined here, there must be a corresponding SUBTN entry on the MLHG form. If LDN ICIs are assigned, WAT ICIs cannot also be assigned (you cannot mix LDN and WAT ICIs).
QUE	Software Release: 5E6 and later. Calls queued to individual hunted TNs.
RBQ	Calls that have terminated after the ring back queuing feature was used to camp on to a busy trunk group.
RLT	Release Link Services associated with Centralized Attendant Services.
TIEICN	Software Release 5E9(2) and later. TIE trunk to CENTREX Network. An incoming call is terminating in a CENTREX Network from a trunk group marked as a TIE trunk group.
WATx	(WAT1 - WAT5) are used for calls arriving at the ISAT group as INWATS calls. The WATS ICIs have a one-to-one relationship with SUBTN fields one through five on the MLHG form; therefore, for each WAT ICI defined here, there must be a corresponding SUBTN entry on the MLHG form. ISAT INWATS Multi-Line Hunt Groups can have no more than five subgroup TNs.

Data Rules:

If a Precedence and Preemption ICI is entered in the PREC ICI list, then only "EMER", "QUE" and either "LDN" or "WAT" can be entered as HUNTING ICIs.

If one or more "QUE" ICIs are entered, then GRP NBR must be defined on an MLHG form (5110 Record) with Q INDI HNT TNS set to "Y".

2.5 PRIO

Description: Enter a priority for the Hunting ICI, where 1 is the highest priority and 8 is the lowest. Calls to an ISDN Attendant group that cannot be terminated to an available attendant who serves the ICI may be placed on a queue. Calls that are queued in this manner are served based on their priority, length of time in the queue and availability of an attendant serving the particular ICI.
Valid Entries: 1 - 8

PREC ICI

The following fields (Section 2.6 - Section 2.7) define the Precedence and Preemption ICIs. Up to six Precedence and Preemption ICIs may be assigned per group. The GRP TYP must be "TGSR" to allow PREC ICI entries.

2.6 ICI

Description: Enter the Precedence and Preemption ICI.

Valid ICI Entries

Entry	Definition
PPEXEC	The precedence "Executive" is used on this call.
PPFLSH	The precedence "Flash" is used on this call.
PPFOVR	The precedence "Flash Override" is used on this call.
PPIMMD	The precedence "Immediate" is used on this call.
PPPRIO	The precedence "Priority" is used on this call.
PPROUT	The precedence "Routine" is used on this call.

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2.7 PRIO

Description: Enter a priority for the Precedence ICI, where 1 the highest priority and 8 the lowest. Calls to an ISDN Attendant group that cannot be terminated to an available attendant who serves the ICI may be placed on a queue. Calls that are queued in this manner are served based on their priority, length of time in the queue and availability of an attendant serving the particular ICI.
Valid Entries: 1 - 8

FX TRK GRPS

The following fields (Section 2.8 - Section 2.9) define the Foreign Exchange Trunk Group ICIs. Up to eight Foreign Exchange Trunk Group ICIs (FX1 - FX8) may be assigned per group. These ICIs are used for calls that have arrived from a trunk group which is recognized as an FX trunk group.

If a TGN is entered for FX TRK GRPS, TIE TRK GRPS, or CNET TRK GRPS, then it must be assigned to a CKT MLHG/CKT TERM on the corresponding DSLUSR form. Each of the FX TRK GRPS , TIE TRK GRPS or CNET TRK GRPS with GRP TYP of "HUNT" on an ICIPF form must be assigned to the ICIs on at least one DSLUSR form where ICIPF GRP NBR matches DSLUSR CKT MLHG.

2.8 TGN

Description: Enter the Trunk Group Number of the foreign exchange trunk group.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

If TGN is entered, it must be defined on a TKGRP form (5202 Record).

2.9 PRIO

Description: Enter a priority for the Foreign Exchange Trunk Group ICI, where 1 is the highest priority and 8 the lowest. Calls to an ISDN Attendant group that cannot be terminated to an available attendant who serves the ICI may be placed on a queue. Calls that are queued in this manner are served based on their priority, length of time in the queue and availability of an attendant serving the particular ICI.
Valid Entries: 1 - 8

TIE TRK GRPS

The following fields (Section 2.10 - Section 2.11) define the Tie Trunk Group ICIs. Up to eight Tie Trunk Group ICIs (TIE1 - TIE8) may be assigned per group. These ICIs are used for calls that have arrived from a trunk group recognized as a TIE trunk group.

If a TGN is entered for FX TRK GRPS, TIE TRK GRPS, or CNET TRK GRPS, then it must be assigned to a CKT MLHG/CKT TERM on the corresponding DSLUSR form. Each of the FX TRK GRPS , TIE TRK GRPS or CNET TRK GRPS with GRP TYP of "HUNT" on an ICIPF form must be assigned to the ICIs on at least one DSLUSR form where ICIPF GRP NBR matches DSLUSR CKT MLHG.

2.10 TGN

Description: Enter the Trunk Group Number of the TIE Trunk Group.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

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The trunk group entered here must be defined on the TKGRP form (5202 Record).

2.11 PRIO

Description: Enter a priority for the TIE Trunk Group ICI, where 1 is the highest priority and 8 the lowest. Calls to an ISDN Attendant group that cannot be terminated to an available attendant who serves the ICI may be placed on a queue. Calls that are queued in this manner are served based on their priority, length of time in the queue and availability of an attendant serving the particular ICI.
Valid Entries: 1 - 8

CNET TRK GRP

The following fields (Section 2.12 - Section 2.13) define the CNET Trunk Group ICI. A single CNET Trunk Group ICI can be assigned per group. These ICIs are used for calls that have arrived from a trunk group designated as a CENTREX Network Trunk Group.

If a TGN is entered for FX TRK GRPS, TIE TRK GRPS, or CNET TRK GRPS, then it must be assigned to a CKT MLHG/CKT TERM on the corresponding DSLUSR form. Each of the FX TRK GRPS , TIE TRK GRPS or CNET TRK GRPS with GRP TYP of "HUNT" on an ICIPF form must be assigned to the ICIs on at least one DSLUSR form where ICIPF GRP NBR matches DSLUSR CKT MLHG.

2.12 TGN

Description: Enter the Trunk Group Number of the CNET Trunk Group.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The trunk group entered here must be defined on the TKGRP form (5202 Record).

2.13 PRIO

Description: Enter a priority for the CNET Trunk Group ICI, where 1 is the highest priority and 8 the lowest. Calls to an ISDN Attendant group that cannot be terminated to an available attendant who serves the ICI may be placed on a queue. Calls that are queued in this manner are served based on their priority, length of time in the queue and availability of an attendant serving the particular ICI.
Valid Entries: 1 - 8

FTS TRK GRP

The following fields (Section 2.14 - Section 2.15) define a Federal Telecommunications System 2000 Trunk Group composite structure consisting of TGN and PRIO. These ICIs are used for calls that have arrived from a trunk group designated as an FTS-2000 trunk group. These fields are used by the CENTREX Network secured features. For more information on the CENTREX Network features, see Division 2, Sections 4A181, 4A182, and 4A183.

2.14 TGN

Description: Enter the single FTS-2000 trunk group ICI to the specified trunk group.

Software Release: 5E9(2) and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

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Data Rules:

The trunk group entered here must be defined on the TKGRP form (5202 Record).

2.15 PRIO

Description: Enter the priority of the FTS-2000 Trunk Group ICI. Calls to an ISDN Attendant group that cannot be terminated to an available attendant who serves the ICI may be placed on a queue. Calls that are queued in this manner will be served based on their priority, length of time in the queue and availability of an attendant serving the particular ICI. A priority of 1 represents the highest priority.

Software Release: 5E9(2) and later
Valid Entries: 1 - 8

```
SCREEN 1 OF 2                5ESS Switch
icipf                 OFFICE DATA ADMINISTRATION
(5903)          INCOMING CALL IDENTIFICATION PARAMETERS


*1. GRP TYP HUNT             *2. GRP NBR 00001

      3. HUNTING ICI              10. PREC ICI
    ICI  PRIO     ICI  PRIO          ICI   PRIO
 1. ____ _    9. ____ _         1. _____ _
 2. ____ _   10. ____ _         2. _____ _
 3. ____ _   11. ____ _         3. _____ _
 4. ____ _   12. ____ _         4. _____ _
 5. ____ _   13. ____ _         5. _____ _
 6. ____ _   14. ____ _         6. _____ _
 7. ____ _   15. ____ _
 8. ____ _   16. ____ _
```

```
SCREEN 2 OF 2                5ESS Switch
icipf                 OFFICE DATA ADMINISTRATION
(5903)          INCOMING CALL IDENTIFICATION PARAMETERS

   13. FX TRK GRPS       16. TIE TRK GRPS         CNET TRK GRP
    ICI TGN  PRIO         ICI  TGN  PRIO        ICI  TGN  PRIO
 1. FX1 ____ _         1. TIE1 ____ _       19. CNET ____ _
 2. FX2 ____ _         2. TIE2 ____ _
 3. FX3 ____ _         3. TIE3 ____ _
 4. FX4 ____ _         4. TIE4 ____ _
 5. FX5 ____ _         5. TIE5 ____ _
 6. FX6 ____ _         6. TIE6 ____ _
 7. FX7 ____ _         7. TIE7 ____ _
 8. FX8 ____ _         8. TIE8 ____ _
```

Figure 1 SAMPLE ICIPF FORM 5E6 - 5E9(1) SOFTWARE RELEASES

```
SCREEN 1 OF 2                5ESS Switch
```

```
icipf                OFFICE DATA ADMINISTRATION
(5903)          INCOMING CALL IDENTIFICATION PARAMETERS


*1. GRP TYP HUNT              *2. GRP NBR 00001

      3. HUNTING ICI                10. PREC ICI
    ICI   PRIO     ICI   PRIO         ICI   PRIO
 1. _____ _   9. _____ _          1. _____ _
 2. _____ _  10. _____ _          2. _____ _
 3. _____ _  11. _____ _          3. _____ _
 4. _____ _  12. _____ _          4. _____ _
 5. _____ _  13. _____ _          5. _____ _
 6. _____ _  14. _____ _          6. _____ _
 7. _____ _  15. _____ _
 8. _____ _  16. _____ _
```

```
SCREEN 2 OF 2                5ESS Switch
icipf                OFFICE DATA ADMINISTRATION
(5903)          INCOMING CALL IDENTIFICATION PARAMETERS

   13. FX TRK GRPS        16. TIE TRK GRPS          CNET TRK GRP
    ICI TGN  PRIO          ICI  TGN  PRIO         ICI  TGN  PRIO
 1. FX1 ____ _          1. TIE1 ____ _       19. CNET ____ _
 2. FX2 ____ _          2. TIE2 ____ _
 3. FX3 ____ _          3. TIE3 ____ _            FTS TRK GRP
 4. FX4 ____ _          4. TIE4 ____ _          ICI  TGN  PRIO
 5. FX5 ____ _          5. TIE5 ____ _       22. FTS  ____ _
 6. FX6 ____ _          6. TIE6 ____ _
 7. FX7 ____ _          7. TIE7 ____ _
 8. FX8 ____ _          8. TIE8 ____ _
```

Figure 2 SAMPLE ICIPF FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 1E: 5904 RECORD
DSL QUEUE MONITOR FORM - DSLQMON

1. GENERAL

The 5904 Record lists the MLHGs (Multi-Line Hunt Groups) that are to be monitored by a DSL monitor for queue status. A DSL queue monitor is any ISDN terminal that can request or display MLHG queue status. This form was added with the Circuit-Switched Data Queuing feature available with 5E6 and later Software Releases. (Refer to the feature description for CSD Queuing in Division 2, Section 1BB for further information.)

MLHG queues are monitored via a QSFB (Queue Status Feature Button) and the terminal display on a queue monitor console. Lamps on the console are turned on and off automatically to show the number of calls queued. The queue monitor console may or may not be an ISAT (ISDN Attendant) console. Also, the queue monitor console does not have to be a member of an MLHG.

The queue display status is intended for use on an ISDN terminal with a 40 character or more display. If the terminal display is less than 40 characters, the queue status information may be truncated. This feature can also be assigned to a terminal without display capabilities.

The queue monitor console contains a separate QSFB (Queue Status Feature Button) for each MLHG that it monitors. The QSFB is used to request the display for a particular MLHG queue. The monitor has from one to eight QSFBs. Each QSFB is always associated with a QTWL (Queue Threshold Warning Lamp). The value for QTWL is defined in the QMON THRESHOLD field on either the QUFD (5617-1/2 Record) or the QUGPA (5617-3/4 Record) form. When the number of calls in the queue is greater than the threshold warning value, the QTWLs on all consoles monitoring this particular MLHG are turned on. Each QSFB is also associated with an action defined on the CFGGRP form (5964 Record). These actions are LQxDISP (where x is from 1 to 8) and are associated with QSFBx respectively.

Up to eight MLHGs (MLHG1 through MLHG8) to be monitored can be entered on this form. Monitored MLHGs can be analog or ISDN, voice or CSD. ISAT MLHGs cannot be monitored. Each MLHG can be monitored by three separate queue monitor consoles.

Either the TN field or the MLHG/TERM NBR fields must be entered. Both TN and MLHG/TERM NBR cannot be entered. For each DSLQMON form with TN or MLHG/TERM NBR entered, there must be a corresponding DSLUSR form (5908 Record) with known values for CONFIG GRP and TERM TYPE.

The queue monitor consoles defined on this form must not exceed the number of consoles allowed per office (indicated by the MAX MON field on the ISDN OPT form (5941 Record)).

1.1 Recent Change View

The corresponding Recent Change view for this form is 23.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 (*) TN

Description: Enter the telephone number of the DSLQMON (if it has one).
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

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Data Rules:

The first three digits of the TN must be defined on the NOC form.

When this field is entered, there must be a corresponding CKT TN defined on the DSLUSR form (5908 Record).

For 5E12 and later, TNs on different DSLQMON forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the DSLQMON form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 (*) MLHG

Description: Enter the Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

This field must be defined on the MLHG form (5110 Record). When this field is entered, there must be a corresponding CKT MLHG defined on the DSLUSR form (5908 Record).

2.4 (*) TERM NBR

Description: Enter the MLHG Terminal Number.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals only)

Data Rules:

When this field is entered, there must be a corresponding CKT TERM defined on the DSLUSR form (5908 Record).

2.5 MONITORED MLHGS

Description: Enter from 1 to 8 unique MLHGs that can be monitored by the console defined on this form.
Valid Entries: For 5E14 and earlier: 1 - 2000

For 5E15 and later: Blank or 1 - 8191

Data Rules:

The MLHGs entered in this list cannot be monitored by more than three consoles.

Each MLHG entered in the list must be defined on the MLHG form (5110-1 Record) with QFEATURE entered. Also, the associated MLHGFD form (5604 Record) must not have "ISAT" entered in the HUNT TYPE field.

---

dslqmon 5ESS Switch _
(5904) OFFICE DATA ADMINISTRATION
DSL MONITOR FOR MLHG QUEUES

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```
(*)1. TN       5109876        4. MONITORED MLHGS
(*)2. MLHG     ____
(*)3. TERM NBR ____           1.  0003
                              2.  0023
                              3.  ____
                              4.  ____
                              5.  ____
                              6.  ____
                              7.  ____
                              8.  ____
```

Figure 1 SAMPLE DSLQMON FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
dslqmon                    5ESS Switch          _
                   OFFICE DATA ADMINISTRATION
(5904)                DSL MONITOR FOR MLHG QUEUES

(*)1. TN       ___________   4. MONITORED MLHGS(MLHG_LIST)
(*)2. MLHG     ____          ROW MLHG
(*)3. TERM NBR ____            1  ____
                               2  ____
                               3  ____
                               4  ____
                               5  ____
                               6  ____
                               7  ____
                               8  ____
```

Figure 2 SAMPLE DSLQMON FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1F: 5905 RECORD
ODB ISLU(2) IDCU TS ALLOCATION - ODBTS

1. GENERAL

The 5905 Record is applicable with 5E5 and later Software Releases. This form is used to reserve DPIDB (Directly connected Peripheral Interface Data Bus) time slots for DSL (Digital Subscriber Line) users with the ODB (On-demand B-channel Packet Switching) feature. The time slot allocation is provided on a per SM (Switching Module) and unit type basis.

A DSL user is assigned the ODB feature when an ODB TN is entered on the DSLUSR form (5908 Record). However, the reserved time slots are not initially allocated to the user. Instead, the time slots become part of a DPIDB time slot "pool" to be accessed later by a DSL user with the ODB feature on the same SM and unit.

Note that unit types defined on this form must be defined on the respective unit form. See the UNIT TYPE field for appropriate assignments.

1.1 Recent Change View

The Recent Change View for this form is 23.13.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

If an ODB ISCN is entered on the DSLUSR form, the SM entered on this form must equal the first three digits of the OE (Office Equipment) number entered on the DSLUSR form.

The SM number entered on this form must be defined on the EQIM form (5700 Record) with EQSTATUS set to "O" (operational).

2.3 * UNIT TYPE

Description: Enter the unit type. For 5E5 - 5E7, this field was called ISLU.

Required Field.

Valid UNIT TYPE Entries

Entry	Description
AIU or A	Software Release: 5E12 and later. Access Interface Unit ISDN U-Interface.
IDCU or ID	Software Release: 5E8 and later Integrated Digital Carrier Unit.
ISLU or IS	Software Release: 5E5 and later Integrated Services Line Unit.
ISLU2 or ISL	Software Release: 5E10 and later Integrated Services Line Unit 2.

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Data Rules:

AIU ISDN:
For 5E12 and later, when UNIT TYPE is "AIU", SM, UNIT, DPIDB and PSU SHELF must be defined on an EQAIU form (5745-1/2 Record) as SM, AIU, TSGRP NO, and PIDB/PSU SHLF, respectively, with a PIDB TYPE of "PSU" and an AIU TYPE of "AIU" .

IDCU:
For 5E8 and later, when UNIT TYPE is "IDCU" then SM, UNIT, DPIDB and PSU SHELF must be defined on an EQIDCU form as SM, IDCU, PIDB NO. and DI/PSU SHLF, respectively, with a PIDB TYPE of "PSU".

ISLU:
For 5E10 and later, when SM, UNIT TYPE, UNIT, DPIDB and PSU SHELF(s) are assigned on an ODBTS form and the UNIT TYPE is "ISLU" or "ISLU2" then SM, UNIT, DPIDB and PSU SHELF must be defined on an EQISLU form as SWITCHING MODULE, ISLU NUMBER, PIDB NO. and PSU SHELF, respectively, with a PIDB TYPE of "PSU".

2.4 * UNIT

Description: Enter the unit number.

Required Field.
Valid Entries:
- For 5E9(2) and earlier: 0 - 7 for ISLU/2 or IDCU
- For 5E10 - 5E11: 0 - 42 for ISLU/2 or IDCU
- For 5E12 and later:
- 0 - 7 for ISLU/2
- 0 - 42 for IDCU
- 0 - 104 for AIU

ODB TS LIST

The ODB TS LIST consists of three entries: the MIN TS/DPIDB, DPIDB, PSU SHELF. The MIN TS/DPIDB, DPIDB and PSU SHELF fields must all have an entry or must all be left blank.

Values for the MAX TS/SHELF and USRS/SHELF fields are used only for verification purposes by Recent Change. The MAX TS/SHELF field shows the maximum number of time slots assigned to a PSU Shelf for ODB use, and the USRS/SHELF field shows the number of ODB users per PSU Shelf.

2.5 MIN TS/DPIDB

Description: Enter the minimum number of timeslots to be assigned to a DPIDB for ODB use.

There must be at least one MIN TS/DPIDB value entered in order to reserve time slots for the PSU SHELF defined on this form if an ODB ISCN number is entered on the DSLUSR form.

A value of 0 means that all available time slots for the corresponding DPIDB can be allocated for DSL B and/or D channels on the AMLBDSL (5447 Record), DSL (5907 Record), DSLAP (5963 Record) and/or OSPSDSL (5411 Record) forms. A non-zero value reserves time slots for ODB use only. Also, the total number of allocated time slots (including those reserved for ODB) cannot exceed the total amount of available time slots (32) per DPIDB.
Valid Entries: 0 - 32

2.6 DPIDB

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Description: Enter the DPIDB number.

All DPIDB entries must be unique. The DPIDB connects the ISLU/IDCU/AIU to the PSU.
Valid Entries:
- 0 - 11, or blank (for ISLU)
- 5E8 - 5E11: 12 - 22, or blank (for IDCU)
- 5E12 and later: 1 - 5 for AIU, 0 - 11 for ISLU,
- or 12 - 22 for IDCU

Data Rules:

For UNIT TYPE of "AIU", the total number of timeslots, per DPIDB, cannot be greater than 32.ODA error message "ISDN(287a/b/c)" is generated whenever more than 32 timeslots have been assigned/reserved. ISDN(287a) details the overloaded DPIDBs and ISDN(287b) lists all the nailed up timeslots that have been manually or automatically assigned. ISDN(287c) provides all the timeslots reserved on the ODBTS form. Timeslots reserved on the ODBTS form will need to be re-assigned to correct the DPIDBs in error. ISDN(287a/b/c) is a companion error message to "ISDN(288a/b/c)" which is generated when D and/or B Channel TIMESLOTSs cannot be assigned by ODA because of a lack of DPIDB timeslots (DPIDBs are assigned on the EQAIU form with a PIDB TYPE of "PSU").

2.7 PSU SHELF

Description: Enter the Packet Switch Unit Shelf number.
Valid Entries: 0 - 4

Data Rules:

If an ODB ISCN number is entered on the DSLUSR form, the PSU SHELF number defined on this form must equal the first digit of the ODB ISCN number.

SCREEN 1 OF 2 5ESS Switch
odbts OFFICE DATA ADMINISTRATION
(5905) ODB TS ALLOCATION

*1. SM 001
*2. UNIT TYPE IDCU
*3. UNIT 0 4. ODB TS LIST

	MIN TS/ DPIDB	DPIDB	PSU SHELF	MAX TS/ SHELF	USRS/ SHELF
1.	01	11	4		
2.	02	10	3		
3.	__	__	_		
4.	__	__	_		
5.	__	__	_		
6.	__	__	_		

SCREEN 2 OF 2 5ESS Switch _
odbts OFFICE DATA ADMINISTRATION
(5905) ODB TS ALLOCATION

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```
                    4. ODB TS LIST

   MIN TS/                PSU       MAX TS/     USRS/
   DPIDB       DPIDB      SHELF     SHELF       SHELF

 7. __         __         _
 8. __         __         _
 9. __         __         _
10. __         __         _
11. __         __         _
```

Figure 1 SAMPLE ODBTS FORM 5E8 - 5E9(2) SOFTWARE RELEASES

```
SCREEN 1 OF 2              5ESS Switch
odbts                OFFICE DATA ADMINISTRATION
(5905)                   ODB TS ALLOCATION

*1. SM      ___
*2.  UNIT TYPE _____
*3. UNIT     __          4. ODB TS LIST

   MIN TS/                PSU       MAX TS/     USRS/
   DPIDB       DPIDB      SHELF     SHELF       SHELF

 1. __         __         _
 2. __         __         _
 3. __         __         _
 4. __         __         _
 5. __         __         _
 6. __         __         _
```

```
SCREEN 2 OF 2              5ESS Switch          _
odbts                OFFICE DATA ADMINISTRATION
(5905)                   ODB TS ALLOCATION

                    4. ODB TS LIST

   MIN TS/                PSU       MAX TS/     USRS/
   DPIDB       DPIDB      SHELF     SHELF       SHELF

 7. __         __         _
 8. __         __         _
 9. __         __         _
10. __         __         _
11. __         __         _
```

Figure 2 SAMPLE ODBTS FORM 5E10 - 5E11 SOFTWARE RELEASES

```
SCREEN 1 OF 2              5ESS Switch
odbts                OFFICE DATA ADMINISTRATION
(5905)               ODB ISLU(2) IDCU TS ALLOCATION
```

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*1. SM ___
*2. UNIT TYPE _____
*3. UNIT ___ 4. ODB TS LIST

	MIN TS/ DPIDB	MAX TS/ DPIDB	PSU SHELF	USRS/ SHELF
1.	__	__	_	
2.	__	__	_	
3.	__	__	_	
4.	__	__	_	
5.	__	__	_	
6.	__	__	_	

SCREEN 2 OF 2 5ESS Switch _

odbts OFFICE DATA ADMINISTRATION
(5905) ODB ISLU(2) IDCU TS ALLOCATION

4. ODB TS LIST

	MIN TS/ DPIDB	MAX TS/ DPIDB	PSU SHELF	USRS/ SHELF
7.	__	__	_	
8.	__	__	_	
9.	__	__	_	
10.	__	__	_	
11.	__	__	_	

Figure 3 SAMPLE ODBTS FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1G: 5906 RECORD
ODB ISCN RESERVATION - ODBRES

1. GENERAL

The 5906 ODB ISCN Reservation Record is available with 5E5 and later Software Releases. The ODBRES form is used to reserve ISCNs (Integrated Services Channel Numbers) for DSL (Digital Subscriber Line) users of the ODB (On Demand B-Channel Packet Switching) feature. A DSL user is assigned the ODB feature when an ODB TN is entered on a DSLUSR form (5908 Record) where an ISCN is initially allocated to the ODB user. The ISCNs reserved by this form become part of an ISCN "pool" to be accessed later by RC/V for ODB assignment on the RC view 23.2 and by ACSR (Automatic Customer Station Rearrangement) to assign an ISCN to the ODB user. (See ACSR feature Section Division 2, Section 1AD).

When an ODB user is defined in RC view 23.2 and an ISCN is not entered, this ISCN "pool" will be accessed automatically and an ISCN will be assigned to the user. If the BAND field on the RC view 23.2 is entered, an ISCN with the same BAND on this form will be assigned. Otherwise, an ISCN with a BAND of 0 will be assigned.

The ISCN must be assigned on RC view 23.14 (ODBRES form) before an ISCN can be manually assigned to an ODB user on RC view 23.2.

- ***NOTE:*** The ISCNs allocated in this pool or assigned to an ODB user must have time-slots reserved between the ISLU (Integrated Services Line Unit), or the IDCU (Integrated Digital Carrier Unit), and PSU shelves (same shelves as the ISCNs assigned on this form) on the ODBTS form (RC view 23.13).

ISCNs do not represent the exact physical location of the hardware in the PSU (Packet Switching Unit); the numbers only define that the hardware exists in the unit. Every defined ISCN must be unique per SM, (ISCNs defined on this form cannot be used on any other form). Also, the first digit of the ISCN defined on this form, which represents the PSU shelf number, and its corresponding SM number must be assigned on an EQPSUPH form (5742 Record) as PSU SHELF and SM respectively. ISCNs are defined on this form as XYYZZZ according to the following format.

ISCN (INTEGRATED SERVICES CHANNEL NUMBER)

Equipment		Format
Shelf	SHELF	X
Channel Group	CHL GRP	YY
Channel	CHL	ZZZ

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.14.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: Enter the Switching Module number; each SM contains an ISLU, or an IDCU.

Required Field.
Valid Entries: 1 - 192

Data Rules:

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This SM number must be defined on an EQIM form (5700 Record), and the EQSTATUS field on the EQIM form must equal "O" (Operational).

For 5E9(1) and later, the SM, SHELF, and CHL GRP must be defined in the SM, PSU SHELF, and GRP fields on a PSUGP form (5949 Record) where PH TYPE is set to "PH3".

2.3 * SHELF

Description: Enter the Packet Switching Unit shelf number.

Required Field.
Valid Entries: 0 - 4

Data Rules:

ISCNs cannot be duplicated on one or more of the following forms:
- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:
- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- RTERM
- XAT

with all TRUNK forms which have a TRKCLS of:
- "EDSL"
- "IFTERM"
- "IFOPER"

However, they can not have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from
- PSISM forms,
- PSULNK forms, or
- TRUNK forms which have a TRKCLS of
- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"

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- "X75"
- "X75P"

Each ISCN entry (defined as the combination SHELF, CHL GRP, and CHL fields) must have the SHELF value assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

If an SM/ISCNs combination has been assigned, then the corresponding combination of SM, PSU, PSU SHELF and GRP must be entered on the PSUGP form.

2.4 * CHL GRP

Description: Enter the Channel Group number.

Required Field.
Valid Entries: 0 - 15

CHL BAND LIST

Both of the fields (Section 2.5 - Section 2.6) under CHL BAND LIST (CHL and BAND) must have a value entered or they both must be left blank.

2.5 CHL

Description: Enter the PH channel number assigned to the user of the ODB feature.
Valid Entries: 0 - 124, in increments of 4 (0,4,8,...)

Data Rules:

All CHL entries must be unique.

2.6 BAND

Description: Enter the band number. This number indicates the amount of PH (Protocol Handler) usage each user will need. The number is used as a load balancing mechanism to segregate lighter users from heavier users.
Valid Entries: 0 - 15

---

odbres 5ESS Switch _
(5906) OFFICE DATA ADMINISTRATION
ODB ISCN RESERVATION

*1. SM 100 *2. SHELF 4 *3. CHL GRP 00

4. CHL BAND LIST

CHL	BAND	CHL	BAND	CHL	BAND	CHL	BAND
1. 000	00	9. ___	__	17. ___	__	25. ___	__
2. 004	02	10. ___	__	18. ___	__	26. ___	__
3. 008	04	11. ___	__	19. ___	__	27. ___	__
4. 016	05	12. ___	__	20. ___	__	28. ___	__
5. 024	06	13. ___	__	21. ___	__	29. ___	__
6. 020	08	14. ___	__	22. ___	__	30. ___	__
7. 032	09	15. ___	__	23. ___	__	31. ___	__
8. 036	15	16. ___	__	24. ___	__	32. ___	__

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Figure 1 SAMPLE ODBRES FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 1H: 5907 RECORD
DIGITAL SUBSCRIBER LINE - DSL

1. GENERAL

The 5907-1/2/3/4/5/6/7 DSL Records are available with 5E5 and later Software Releases.

It is imperative to refer to the Multipoint DSL (Digital Subscriber Line) Feature Description (Division 2, Section 1AA in this document) before entering these Records.

1.1 PURPOSE

The 5907 Record series has two major purposes.

First, it is used to define the attributes of a DSL. A DSL is also referred to as a BRI (Basic Rate Interface). Second, it is used to define the attributes of the B1 and/or B2 channel of the DSL, if either or both of those channels are to be used on a Permanent Packet basis (dedicated to X.25 Packet Switching).

The DSL OE field on the DSL form is the field which associates a DSL with the users of the DSL. The users are defined on DSLUSR forms (5908 Records). The OE field on the DSLUSR form indicates which DSL the user employs. The aforementioned two fields are the only link between a DSL form and a DSLUSR form.

If the ODB TN, ODB MLHG/TERM, CKT TN, or CKT MLHG TN fields on a DSLUSR form are entered, this indicates that one or both B-channels are to be used on a Demand basis. Therefore, a DSL form must be submitted, for the DSL, with the D SERV field set to "SX". If ODB on the DSLUSR form is 1, the B1 SERV or B2 SERV field must be set to "DMD" (Demand); if ODB is 2, B1 SERV and B2 SERV must be "DMD".

Duplicate values are not allowed among the DPKT MLHG field on a DSLUSR form, the ODB MLHG field on a DSLUSR form, the CKT MLHG field on a DSLUSR form, the PPB1 MLHG field on a DSL form, the PPB2 MLHG field on a DSL form, and the MLHG field on an MLHLN form (5111 Record), with the following exceptions:

- a CKT MLHG on a DSLUSR form may duplicate an MLHG on an MLHLN form if the CKT TERM on the DSLUSR form is different from the TERM on the MLHLN form, thus allowing a mixture of digital and analog users in the same MLHG;
- a DPKT MLHG on a DSLUSR form may duplicate an MLHG on an MLHLN form if the DPKT TERM on the DSLUSR form is the same as the TERM on the MLHLN form (as used for a Modem Pool group member);
- PPB1 MLHG and PPB2 MLHG on the DSL form and DPKT MLHG (Non-Modem Pooling) and ODB MLHG on the DSLUSR form and PKT MLHG on the XAT form may be the same. The corresponding TERM entries must be different if their CHL SEL fields are "N". If the corresponding CHL SEL fields are "Y" and the channels are defined for the same user, then the TERM entries must be the same. (CHL SEL is not valid with XAT.)

1.2 CCITT TERMINOLOGY

Fields Section 3.11 - Section 3.14 relate to CCITT terminology.

A brief description of the CCITT recommendation for the X.25 protocol is required before proceeding. Data Terminating Equipment, in CCITT parlance, is equivalent to the CPE (Customer Premises Equipment) device connected to the DSL. Data Circuit Equipment is equivalent to a PH (Protocol Handler) on a PSU (Packet Switch Unit) within the 5ESS Switch.

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Level 2 of the X.25 protocol is used to describe the linkage between a CPE device and the PH on the 5ESS Switch.

Level 3 of the X.25 protocol is used to describe the linkage between two CPE devices.

1.3 LOGICAL CHANNEL NUMBER

Fields Section 4.1 - Section 4.7 refer to LCNs (Logical Channel Numbers).

Each B-channel can define 127 possible LCNs for the purpose of establishing simultaneously active SVCs (Switched Virtual Circuits) and/or PVCs (Permanent Virtual Call/Circuits). The circuits are used to connect CPE devices with each other in order to transmit Packet-Switched Data.

SVCs exist only for the period of the call. The CPE device and the PH must interact, through CCITT specified packet communication, to set up each call, and clear the SVC after each call.

A PVC exists between CPE devices until the customer deems otherwise. There is no need to set up each call or to clear the PVC after each call.

There is a system limitation of 128 simultaneously active SVCs and/or PVCs for each PH. Congestion on the network, due to contention for available SVCs or PVCs, is handled through CCITT specified procedures, which will be explained later.

There are four categories of LCNs (PVCs and SVCs). A PVC is a permanent, two-way connection between CPE devices. An incoming SVC can only receive incoming data. A two-way SVC can transmit outgoing data or receive incoming data. An outgoing SVC can only transmit outgoing data. The terms incoming and outgoing are used from the perspective of the PH.

The CCITT has specified a required order of assigning the four categories of LCNs.

The lowest numbers (1 to x) can be used for the PVCs, if the customer wishes to have PVCs. The H PVC LCN field (Highest PVC LCN) indicates the highest numbered LCN that is a PVC. For example, if the H PVC LCN field is 7, that means that LCNs 1 through 7 are PVCs.

The next highest range of numbers for LCNs belongs to the incoming only SVCs. This range is indicated in the L IN LCN field (Lowest Incoming LCN) and the H IN LCN field (Highest Incoming LCN).

The next highest range of numbers for LCNs belongs to the two-way SVCs. This range is indicated in the L 2W LCN field (Lowest Two-Way LCN) and the H 2W LCN field (Highest Two-Way LCN).

The highest range of numbers for LCNs belongs to the outgoing only SVCs. This range is indicated in the L OUT LCN field (Lowest Outgoing LCN) and the H OUT LCN field (Highest Outgoing LCN).

As an example, an ISCN (Integrated Services Channel Number) could define its 127 associated LCNs as follows:

H PVC LCN = 7

(LCNs 1 to 7 are PVCs)

L IN LCN = 8
H IN LCN = 15

(LCNs 8 to 15 are incoming SVCs)

L 2W LCN = 16
H 2W LCN = 100

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(LCNs 16 to 100 are two-way SVCs)

L OUT LCN = 101
H OUT LCN = 127

(LCNs 101 to 127 are outgoing SVCs)

If PVCs are not desired, LCN 1 is available for an incoming SVC.

If PVCs and incoming SVCs are not desired, LCN 1 is available for a two-way LCN.

If PVCs, incoming SVCs, and two-way SVCs are not desired, LCN 1 is available for outgoing LCNs.

The CCITT, to minimize "call collisions", has specified that a CPE device should start its search algorithm for an available LCN (SVCs only) with a two-way SVC or outgoing SVC. The PH should start its search algorithm with the highest numbered SVC that is in a ready state.

Either the H PVC LCN field or the L IN LCN and H IN LCN field combination or the L 2W LCN and H 2W LCN field combination, or the L OUT LCN and H OUT LCN field combination must be entered. If this is not done, there will not be any LCNs to carry packets.

1.4 CLOSED USER GROUPS

A CUG is a sub-network of CPE devices which can communicate with each other. A CPE device can belong to multiple CUGs. The primary purpose of a CUG is to provide security to its members, since a CUG member cannot communicate with a CPE device which is not in the same CUG. A CPE device which belongs to multiple CUGs may indicate the CUG of choice, in the call request packet or the incoming call packet, for transmitting and receiving packets, respectively. If a CUG is not specified, the Preferential CUG will be selected. Refer to the description of the CUGPX (Closed User Group Preferential Index) field.

A CUG with Outgoing Access allows its member CPE devices to originate virtual calls to CPE devices that do not belong to any CUG (e.g., public network), or to CPE devices that belong to a CUG with Incoming Access.

A CUG with Incoming Access allows its member CPE devices to receive virtual calls from a CPE device that does not belong to any CUG (e.g., public network), or from CPE devices that belong to a CUG with Outgoing Access.

1.5 PROVISIONING DIFFERENCES BETWEEN ODA AND RECENT CHANGE

ODA will support the provisioning of DSLs without any users or services (PPBs or default service); for example, in the case of Large Terminal Growth. Recent Change will not support such provisioning, but will support the addition of users/services on DSLs grown by ODA without any services.

Recent Change will also support the following in regard to DSLs grown without users/services:

- the DSLs may be deleted;
- if brought up in a Recent Change View but not changed, the DSLs will be saved; and
- nothing in the DSL can be changed if users/services are not added.

Recent Change will not allow deletion of all users and services from a DSL already having services.

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1.6 LOGICAL LINK CONTROL BLOCKS

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks). The following applications define the possible LLCB assignments. These applications cannot use more than 384 LLCBs.

LLCB Assignments

Form	SM SHELF CHL GRP	LLCB Count
AMLBDSL	SM is the first three digits of LCEN SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of PPB1 ISCN.	The count is incremented by 1 for each PPB1 ISCN defined.
DSL	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of PPB2 ISCN.	The count is incremented by 1 for each PPB2 ISCN defined.
DSL	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of D ISCN.	If a matching DSLUSR form is not found the count is incremented by 1.
DSLAP	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 1 for each unique OE/ISCN combination.
DSLUSR	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of D ISCN on the corresponding DSL form.	The count is incremented by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered. The count is incremented by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
DSLUSR	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of ODB ISCN1 and/or ODB ISCN2.	The count is incremented by 1 if only ODB ISCN1 is entered. The count is incremented by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
MISLINK	SM is the first three digits of OE SHELF and CHL GRP are the SHELF and CHL GRP fields, respectively.	The count is incremented by 1 for each MISLINK form.
OSPSDSL	SM is the first three digits of LCEN SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined. Else the count is incremented by 1 for each unique OSPSDSL form.
RTERM	Where RT INTERFACE is "TR303" SM is SM SHELF/CHL GRP is the first three digits of TMC PRI ISCN, TMC NPRI ISCN, EOC PRI ISCN or EOC NPRI ISCN.	The count is incremented by 2 for each TMC PRI ISCN and for each TMC NPRI ISCN entry. The count is incremented by 3 for each EOC PRI ISCN and for each EOC NPRI ISCN entry.
TRUNK	TRKCLS equals to "IFOPER", "IFTERM" or "EDSL" on the TKGRP form. SM is the first three digits of DEN or NEN SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 1 for each unique TRUNK form.
XAT	SM is the first three digits of OE SHELF/CHL GRP is the first three digits of ISCN.	The count is incremented by 1 for each unique XAT form.

1.7 RECENT CHANGE VIEW

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The corresponding Recent Change View for this form is 23.2.

2. FORM ENTRIES - 5907-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * DSL OE

Description: This field is comprised of an equipment Type and Number. For the ISLU (Integrated Services Line Unit) or the RISLU (Remote Integrated Services Line Unit), the DSL equipment number is referred to an "LCEN" (Line Card Equipment Number). Available with 5E8 and later, the IDCU (Integrated Digital Carrier Unit) capability is introduced for interface with RT (Remote Terminals). The IDCU equipment number is referred to as an ILEN (IDCU Line Equipment Number) which may be either 8 digits (referred to as a "MEN") or 10 digits (referred to as a "GEN" (see Valid DSL OE Types table below).

IDCU DSLs have the same capabilities as the ISLU DSLs. The functionality defined on the DSL form is the same as the functionality for ISLU, except that IDCU does not support OSPS. For IDCU, the DSL form will only be used by TR303 RTs (Remote Terminal). The RT INTERFACE on the RTERM form (5714 Record) must be "TR303". Other IDCU applications do not support ISDN. The SM and IDCU must be defined on an EQIDCU form (5846 Record) with this SM and IDCU. The RT must be defined on an RTERM form with this SM, a UNIT TYPE of IDCU, a UNIT NUMBER corresponding to the IDCU number and the RT EX (Remote External) number corresponding to the RT number.

Required Field.

Valid DSL OE Type Entries

Entry	Definition
A	Software Release: 5E12 and later. The DSL OE is associated with a 10-digit TR-303 on DNU-S (INEN).
E	Software Release: 5E12 and later. The DSL OE is associated with the AIU-ISDN equipment number (AIUEN).
G	Software Release: 5E8 and later. The DSL OE is associated with a 10-digit ILEN (GEN) for an IDCU RT. This designation accommodates up to 2048 lines.
I	The DSL OE is associated with an 8-digit ISLU or RISLU (LCEN).
K	Software Release: 5E10 and later. The DSL is associated with the ISDN ISLU2 line card equipment number (LCKEN).
X	Software Release: 5E16 and later. The DSL OE (Digital Subscriber Line card Equipment Number (composite line card equipment number consisting of LCENTYPE and LCEN)).

The OE SIZE is defined on the OFCOPT form (5509 Record). All OE types "M" or "G" in an office must correspond with the OFCOPT form OE SIZE field and only one OE type is allowed in an office.

If DSL OE is set to "A", the 10-digit INEN consists of the following components:

For 5E16 and later, when DSL OE is "X", SERV TYPE must be "CFS" on the ENETLINK form (5827 Record) for SM of OE.

TR-303 On DNU-S, Type A

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	CKT	XXXX	0001-2048

If DSL OE is set to "E", the 10-digit AIUEN consists of the following components:

ACCESS INTERFACE UNIT, Type E

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Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Access Interface Unit	AIU	XXX	000-127
Pack	PACK	XX	00-19
Circuit	CKT	XX	00-15

If DSL OE is set to "I", the 8-digit LCEN consists of the following components:

LINE CARD EQUIPMENT NUMBER, Type I

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
(Remote) Integrated Services Line Unit	(R)ISLU	X	0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

If DSL OE is set to "G", the IDCU Equipment Number consists of:

IDCU Remote Terminal Number, Type G

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	IDCU	X	0-42
Remote Terminal	RT	XX	01-31
Line	LINE	XXXX	0001-2048

If DSL OE is set to "M", the IDCU Equipment Number consists of:

IDCU Remote Terminal Number, Type M

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	IDCU	X	0-42
Remote Terminal	RT	XX	01-31
Line	LINE	XX	01-99

If DSL OE is set to "K", the ISLU2 Equipment Number consists of:

ISLU2, Type K

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	LU	XX	00 - 42
Line Group	LG	XX	00 - 15
Line Board	LBD	X	0 - 7
Line Circuit	LCKT	XX	00 - 07

Data Rules:

The SM entered must appear in the SWITCHING MODULE field on an EQPSU form (5741 Record). An EQPSU form defines the PSU peripheral to the SM.

The LCEN must be unique and must not appear on another DSL form, an OSPSDSL form (5411 Record), a DSLAP form (5963 Record), or RDTAPORT form. These forms cannot have duplicate Line Cards or Line Boards assigned.

For 5E8 and later:
IDCU (ILEN) DSL OE numbers cannot be duplicated on the LINE, MLHLN, or TRUNK forms.

DSL OE numbers and TRK OE numbers must be mutually exclusive for IDCU equipment on the DSL, LINE, MLHLN, RDTAPORT, and TRUNK forms.

All of the digital subscriber lines on an SM :
IDCU DSLs OE TYPE "G"
ISLU DSLs OE TYPE "I"
ISLU2 DSLs OE TYPE "K"

1. which have identical entries for the first five digits of the OE for OE TYPEs "G" and "K" or first four digits for OE TYPE "I"

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2. and which also have the same D RELPIDB and D TIMESLOT entries

3. must additionally have the same

   RT for OE TYPE "G"

   LG for OE TYPE "I"

   LGC for OE TYPE "K"

4. and the same SHELF/CHL GRP defined as the 1-3 digits of the D ISCN entries.

5E9(1) and later:

A SLG (Sub Line Group) is a group of no more than 4 LC (Line Cards)

Growth Order Of SLGs

SLG	LGC 5th And 6th Digit Of LCEN	Line Cards Last 2 Digits Of LCEN
0-15	0-15	16, 18, 10, 22
16-31	0-15	08, 10, 12, 14
32-47	0-15	24, 26, 28, 30
48-63	0-15	00, 02, 04, 06

Each SM (Switching Module) can have up to 5 PSU SHELFs (defined by the first digit in the ISCN field). On the EQIM form, when UNIT TYPE is not "SM2000" each PSU SHELF can be assigned up to (32 times X) time slots for the following applications: (Note: X represents the number of PIDBs, 0 to 4, provisioned per shelf)

Applications Assigned Timeslots

Form	Definition
EDSL	defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	defined on the PSISM form.
PKTPIPE	Software Release: 5E10 and later. Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Software Release: 5E10 and later. Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	defined on the XAT form.
X75	defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

For 5E10 and later, on a PSU2, each Data Interface in a SM can have a maximum of 256 nailed-up time slots.

- The following data rule is not applicable on an SM-2000 processors, since provisioning of PSU

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nailed-up timeslots is not required on an SM-2000. Each Data Interface in a SM can have a maximum of 256 nailed-up timeslots reserved for the applications listed in the table below. These timeslots can be reserved by entering rows RPTSS0 to RPTSS7 on the EQPSU form. The quantity of timeslots reserved (i.e. the number of entries) must be greater than or equal to the quantity of timeslots assigned for the above applications. Note that a D channel only takes a quarter of a timeslot.

Timeslots Reserved for Applications

Application	Defined on Form(s)
RISLU B Channel	DSL and AMLBDSL
RISLU D Channel	DSL, DSLAP, MISLINK, and OSPSDSL
X.25	XAT
ISM	PSISM
IP	TRKCLS set to "PACKET" on the TKGRP form
X75	TRKCLS set to "X75" on the TKGRP form
X75P	TRKCLS set to "X75P" on the TKGRP form
EDSL	TRKCLS set to "EDSL" on the TKGRP form
IFOPER	TRKCLS set to "IFOPER" on the TKGRP form
IFTERM	TRKCLS set to "IFTERM" on the TKGRP form
PKTPIPE	TRKCLS set to "PKTPIPE" on TKGRP form
SPCHNDLR	TRKCLS set to "SPCHNDLR" on TKGRP form

- A PSU SHELF may be assigned more than 1 DI; one for DI 0 and a second for DI 1. Since a given PSU SHELF may have as many as 128 time slots on a DI, it is not possible for each timeslot to have a unique vertical (column) position (i.e., unique time slot value of 0 - 31 on different PIDBs).

Type is "G" or "M":
The "M" and "G" DSL OEs are associated with the OE SIZE on the OFCOPT form. If OE SIZE is 8, DSL OE will be "M"; if OE SIZE is 10, DSL OE will be "G". All IDCU equipment in an office must use the same DSL OE type, either "G" or "M".

OEs for all TR303 RTs, can only be assigned if the TR303 is equipped (RT EQSTAT must be set to "O" or "G") on the RTERM form.

Type is "G":
For 5E9(1) and later, if "G" is entered:

- Originating Equipment Numbers cannot be duplicated on DSL, LINE, MLHLN, TRUNK or MISLINK forms for IDCU (Integrated Digital Carrier Unit) equipment. DSL OE(s), NUMBER(s), TRK OE(s) and OE(s) must be mutually exclusive for IDCU equipment on the DSL, LINE, MLHLN, TRUNK and MISLINK forms. The IDCU Originating Equipment Numbers are located:
  - in the DSL OE field on the DSL forms (where DSL OE type is equal to "G");
  - in the NUMBER field on the LINE/MLHLN forms (where OE TYPE is equal to "G");
  - in the TRK OE field on the TRUNK forms (where TRK OE type is equal to "G");
  - in the OE field on the MISLINK forms (where OE type is equal to "G").

- the SM/IDCU/RT values assigned to OE NUMBER[1,7] must correspond to the SM/UNIT NUMBER/RT EX values assigned on an RTERM form. OE ports must be located on equipment identified on an RTERM form where the RT INTERFACE is "TR303".

- have SM/IDCU/RT values assigned to OE NUMBER[1,7] which correspond to the SM/UNIT NUMBER/RT EX values assigned on an RTERM form where RT INTERFACE is "TR303". For all TR303 remote terminals, OEs can be assigned to the RT only if the TR303 is equipped (i.e, RT EQSTAT must equal "O" or "G"). In addition, OEs assigned to any TR303 cannot have the assigned line value exceed the RT LINE SIZE on the related RTERM form. (The line value is OE NUMBER[8,11] for an OE TYPE of "G".)

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- and the OE is defined on a TR303 remote terminal on the RTERM form, the DS1 entered on the DSL form must correspond with the IFAC entered on the RTERM form in the RT IFAC TERMINATION list with ROW RT TERM equal to the DS1. Also, this IFAC can not equal PROT LINE on this same RTERM form.

- and the corresponding RTERM form has an RT INTERFACE of "TR303" all IDCU DSLs and MISLINKs that have "TR303" remote terminals assigned are prohibited from using "303ZCS" suppression method. Therefore, the SUP MTHD on the RTERM form can not be "303ZC".

If "G" is entered for IDCU equipment on this form with D channel assignments, when packing QTR TS on these forms (up to 4 to a TS) for an SM/IDCU/RT (the first seven digits of the OE),

- the assigned QTR TS and the Channel must be unique across the identical set of forms. Channel is the last three digits of D ISCN.

- the set of D RELPIDB, D TIMESLOT DS1 and DS1 TS must each be identical (i.e., DS1 = DS1, etc.).

  In addition, the first three digits of the ISCN must also be the same on all the DSL forms in the group. If the DSL form D RELPIDB/D TIMESLOT combination is the same on any forms, the DS1/DS1 TS combinations must also be the same across those DSL forms.

For 5E10 and later:
If OE is type "G":

- then D RELPIDB must be 12 - 22.

- and PPB1 DS1 or PPB1 DS1 TS is entered, both must be entered.

- PPB1 DPIDB must be 12 - 22.

- and PPB2 DS1 or PPB2 DS1 TS is entered, both must be entered.

- PPB2 DPIDB must be 12 - 22.

For manually assigned D RELPIDBs and/or PPB1/PPB2 DPIDBs, with DSL OE originating equipment type of "G":

- each PIDB must have proper Packet Switching Unit shelf assigned with matched PIDB NO. on the EQIDCU form. The PSU shelf, which is specified by the first digit of the D ISCN and/or PPB1/PPB2 ISCN on the DSL forms, must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

- must have a corresponding PIDB NO. with a PIDB TYPE of "PSU" assigned on the EQIDCU form.

Type is "I":
For the "I" type, the LCEN must be defined on an ISLULC form (5942 Record) with an "O" in the EQST field, and a TYPE of "PULC", "ULC", or "TLC". "PULC" and "ULC" are U-cards, and "TLC" is a T-card.

For 5E9(1) and later, an OE type of "I"

- must be defined as an equipped and operational U or T card on the ISLULC input form.

- the ODA automatic time slot assignment algorithm allocates four TS to each SM/ISLU/LGC configuration for each PIDB from the ISLU to the PSU as follows:

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- for LGCs (digits 5 & 6 of the Equipment Number) numbered between 0 and 7 the time slots are assigned to odd numbered PSU PIDBs and for
- LGCs numbered between 8 and 15 the time slots are assigned to even numbered PSU PIDBs (PIDBs are assigned on the EQISLU form).
- time slots for DPIDBs, which are assigned and reserved on an ISLU(2), cannot exceed the maximum number of 32 time slots available for the DPIDB. Timeslots (TS) are allocated for DSL D and/or B channels on the following forms:

  AMLBDSL

  DSL (where DSL OE type equals "I" or "K")

  DSLAP

  MISLINK (where OE type equals "I" or "K")

  OSPSDSL forms

  Timeslots are allocated either on the form or by the ODA automatic time slot assignment algorithm. Timeslots may also be reserved for On Demand B channel usage on the ODBTS form.

Type is "K":
For 5E9(1) and later, for an OE type of "K"

- must be defined as an equipped and operational U or T Board on the ISLULB input form.
- time slots for DPIDBs, which are assigned and reserved on an ISLU(2), cannot exceed the maximum number of 32 time slots available for the DPIDB. Timeslots (TS) are allocated for DSL D and/or B channels on the following forms:

  AMLBDSL

  DSL (where DSL OE type equals "I" or "K")

  DSLAP

  MISLINK (where OE type equals "I" or "K")

  OSPSDSL forms

  Timeslots are allocated either on the form or by the ODA automatic time slot assignment algorithm. Timeslots may also be reserved for On Demand B channel usage on the ODBTS form.

The ODA automatic time slot assignment algorithm allocates four TS to each SM/ISLU2/LG configuration for each PIDB from the ISLU2 to the PSU as follows:

- for LGs (digits 6 & 7 of the Equipment Number) numbered between 0 and 7 the time slots are

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assigned to odd numbered PSU PIDBs

- for LGs numbered between 8 and 15 the time slots are assigned to even numbered PSU PIDBs (PIDBs are assigned on the EQISLU form).

For 5E10 and later:
When OE type is "K":

- the assigned D TIMESLOT may not be equal to the LG part of the DSL OE or the LG plus 16.
- DS1 and DS1 TS cannot be entered.
- D RELPIDB must be 2 - 11.

For 5E12 and later:

When OE type is "A":

When DSL OE is "A", and QTR TS, DS1 or DS1 TS is entered, all must be entered.

When DSL OE is "A", D RELPIDB and D TIMESLOT must not be entered.

When DSL OE is "A", and PPB1 DS1 or PPB1 DS1 TS is entered, both must not be entered.

When DSL OE is "A", and PPB2 DS1 or PPB2 DS1 TS is entered, both must not be entered.

When DSL OE is "A", both PPB1 DPIDB and PPB1 TS must not be entered.

When DSL OE is "A", both PPB2 DPIDB and PPB2 TS must not be entered.

When DSL OE is not "A", and DS1 or DS1 TS is entered, then D RELPIDB, D TIMESLOT, QTR TS, DS1 and DS1 TS must be entered.

When DSL OE is not "A", and D RELPIDB, D TIMESLOT or QTR TS is entered, all must be entered.

When DSL OE is not "A", and PPB1 DPIDB or PPB1 TS is entered, both must be entered.

When DSL OE is not "A", and PPB2 DPIDB or PPB2 TS is entered, both must be entered.

When DSL OE is not "A", and PPB1 DS1 or PPB1 DS1 TS is entered, then PPB1 DPIDB, PPB1 TS, PPB1 DS1 and PPB1 DS1 TS must be entered.

When DSL OE is not "A", and PPB2 DS1 or PPB2 DS1 TS is entered, then PPB21 DPIDB, PPB2 TS, PPB21 DS1 and PPB2 DS1 TS must be entered.

When OE type is "E":

Each SM/AIU DPIDB time slot may be assigned only once (i.e., D and/or B Channels cannot be assigned to conflicting DPIDB time slots or quarter time slots due to manual (vs ODA) time slot assignments). Note that D channels are allocated to quarter time slots, therefore, up to four unique assignments can be made before a time slot is considered full. (Time slot conflicts are generated by system message "ISDN288a/b/c" which will assist in resolving conflicts.)

- DS1 and DS1 TS cannot be entered.
- PPB1 DS1 and PPB1 DS1 TS cannot be entered.
- PPB2 DS1 and PPB2 DS1 TS cannot be entered.

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- D RELPIDB must be 1 - 5.
- PPB1 DPIDB must be 1 - 5.
- PPB2 DPIDB must be 1 - 5.
- AIU OEs must be defined as operational on the EQAIUP form as SM/AIU/APPL PACK NUM with TYPE set to "AIULP" or "AIURPLP".

2.3 # D ISCN

Description: Enter the D-channel ISCN, on the PSU, which is conjoined to the DSL.

The DSL is connected, via a PIDB (Peripheral Interface Data Bus) to a PSU.

Required Field.
Valid Entries: The 6-digit ISCN consists of the following components:

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		Format	Valid Entries
Shelf		X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127

Data Rules:

For the shelf, enter the PSU PH shelf number. The SHELF must correspond to a PSU SHELF field on an EQPSU form, where the value in the SWITCHING MODULE field is the SM portion (first three digits) of the DSL OE, which has a SHLF SIDE 0/1 with EQST set to "O".

For CHL GRP, enter the PSU PH number on the PSU shelf. PHs are assigned as a component of an ISCN on AMLBDSL forms (5447 Record), DSL forms (5907 Record), DSLAP forms (5963 Record), DSLUSR forms (5908 Record), OSPSDSL forms (5411 Record), PSISM forms (5920 Record), and TRUNK forms (5204 Record). PHs are also assigned in the CHL GRP field on ODBRES forms (5906 Record). The total quantity of PHs assigned on these forms must not exceed the quantity of PHs defined for the given SWITCHING MODULE and PSU SHELF on an EQPSUPH form (5742 Record) with EQST set to "O". The CHL GRP is a "logical" value. The number that is assigned in this field will not always be the number of the PH that is used. The quantity of PHs defined on the EQPSUPH form relative to the quantity of PHs assigned on the aforementioned forms is critical; the actual values are not of importance.

Each ISCN entry (D/PPB1/PPB2 ISCN on the DSL form) must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

For CHL, enter the PSU PH member number.

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM

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- RTERM
- TRUNK
- XAT.

This field cannot have the same SHELF and CHL GRP, within the same SM, as an ISCN from a PSISM form (5920 Record), or a TRUNK form (5204 Record) with an associated TRKCLS of "PACKET" or "X75P" defined on a TKGRP form (5202 Record).

Each SM can have up to 5 PSU shelves. Each Shelf can have up to 16 protocol handlers. Shelves and protocol handlers are defined by the first 3 digits of the ISCN field. Each protocol handler can be assigned up to 32 time slots (or 128 quarter time slots).

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

AMLBDSL, DSL, DSLAP, DSLUSR, ODBRES, OSPSDSL, RTERM, and XAT forms along with all TRUNK forms which have a TRKCLS of "EDSL", "IFTERM", or "IFOPER" defined on the TKGRP form can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM. However, they cannot have an ISCN SHELF and CHL GRP which are mixed with ISCNs from PSISM forms or TRUNK forms that have a TRKCLS of "PACKET" or "X75" or "X75P" defined on the TKGRP form.

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form
- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2
- MISLINK - where , SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is "TAOPER" or "DAOPER"
- XAT - where SHELF/CHL GRP is the first three digits of ISCN.

For 5E9(1) and later, if the OE is defined on a DSLUSR form with DPKT TN or DPKT MLHG and TERM entered, then the first three digits of the OE, the first digit of D ISCN, and the second two digits of D ISCN must be defined in the SM, PSU SHELF, and GRP fields on a PSUGP form (5949 Record) where PH TYPE is set to "PH3".

For 5E9(1) and later, if D ISCN and/or PPB1/PPB2 ISCN are assigned with an originating equipment type of "G", each ISCN or SHELF/CHL GRP/CHL combination must have a proper Packet Switching Unit shelf assigned on the EQIDCU form. The PSU shelf specified by the first digit of the ISCN on either the DSL form ..sx mlh sep 95> must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

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- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- RTERM
- XAT

with all TRUNK forms which have a TRKCLS of:

- "EDSL"
- "IFTERM"
- "IFOPER"

However, they can not have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of

- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

For 5E11 and later, D ISCN must be entered for the existing form tuple in Large Terminal Growth. (AILA (Automatic ISDN Line Assignment) existing form tuples in Large Terminal Growth should still keep the old checks whether AILA feature active or not). For more information on this feature, see Division 2, Section 1BO.

When D ISCN is not entered, D RELPIDB, D TIMESLOT, QTR TS, DS1 and DS1 TS must not be entered.

For 5E12 and later, for OE TYPE of "E", ISCNs assigned on the DSL, DSLUSR, DSLAP, or MISLINK forms, must have a PIDB with a PIDB TYPE of "PSU" assigned on the same Packet Switching Unit shelf on the EQAIU form as the PSU shelf specified by the first digit of the ISCN.

For 5E13 and later, ISCNs assigned on the DSL, DSLUSR, DSLAP, IPDSL or MISLINK forms must have a PIDB with a PIDB TYPE of "PSU" assigned on the same Packet Switching Unit shelf on the EQAIU form as the PSU shelf specified by the first digit of the ISCN (on the MISLINK form, ISCN is the combination of SHELF, CHL GRP, and CHL; on the IPDSL form, ISCN is the combination of PSIU SHELF, DSL GRP and PH CHAN or B PH CHAN).

2.4 # D SERV

Description: Enter the service on the D-channel.

Required Field.

Valid D SERV Entries

Entry	Definition
ADMIN	No Q.931 control signaling or X.25 signaling; therefore, no D-channel service.
SONLY	Q.931 control signaling only; used for an ISDN Attendant (applicable for Point-to-Point only).
SX	Q.931 signaling and X.25 packet signaling.
XMP	D-channel Packet Switching for Modem Pooling.

Data Rules:

ADMIN:
If this field is set to "ADMIN", then the B1 SERV and/or B2 SERV fields must either not be entered, or be set to "X25". The MDPKT field must be set to 0, which indicates that D-channel service is not allowed for

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any user of this DSL.

SONLY:
If this field is set to "SONLY" (ISDN Attendant use), then the B1 SERV field must be "DMD", and the B2 SERV field must not be entered. The ACSR GRP field must not be entered; the ACSR (Automatic Customer Station Rearrangement) feature does not support ISDN attendants. All the DSLUSR forms, for this DSL, must have TERM TYPE set to "ATND".

For 5E12 and later, when a DSL form has DSERV set to "SONLY", all of the DSLUSR forms with an OE that matches the DSL OE must have TERM TYPE set to "ATND" or "TYPED".

SX:
If this field is set to "SX", then the B1 SERV and B2 SERV fields must both be entered.

XMP:
If this field is set to "XMP" (Modem Pool member):

- then the B1 SERV and B2 SERV fields must not be entered, the MDPKT field must be set to 1, and the DSL CLS field must be set to "PP". The digital portion of a Modem Pool member (a Terminal Adaptor) is a single user that only applies the D-channel service.

- then only one DSLUSR form, for this DSL, must exist with only the DPKT MLHG and DPKT TERM optional keys entered. Only the D-channel is applied. On the sole DSLUSR form, DPKT HUNT NOTIF must be blank, DPKT HUNT DEACT must be "N", DPKT NOTIF must not equal "COND", and DPKT CHL SEL must equal "N". The DSLUSR form must not have the DPKT H PVC LCN, DPKT L IN LCN, DPKT H IN LCN, DPKT L OUT LCN, and DPKT H OUT LCN fields entered, and must have the DPKT L 2W LCN and DPKT H 2W LCN fields set to 1. A Modem Pool group member is allowed a single two-way LCN, which is an SVC. (Refer to the paragraphs, in Division 5, Section 1I of this document which describe LCNs used with D-channels.) The DPKT CUGPX field must be entered. (Refer to the paragraphs, in Division 5, Section 1I of this document which describe CUGs.) For 5E9(1) and later, DPKT MLHG TN must be blank. Division 5, Section 1I of this document describes the DSLUSR form.

- for 5E9(1) and later, DPKT MLHG(s) assigned on a corresponding DSLUSR input form must have all corresponding DPKT TERM(s) defined on a PSCUG form as PKT MLHG/TERM. The DNIC/ICN entries on the PSCUG form must be identical for all DPKT TERM(s) within a DPKT MLHG. (The corresponding forms are found by matching OE from the DSLUSR form to DSL OE on a DSL form.)

- ***NOTE:*** For Modem Pool Terminal Adapters (D SERV = XMP), there must be only one DNIC/ICN combination defined per DPKT MLHG and only one PSCUG form defined per DPKT MLHG/TERM. The CUG IDX on the PSCUG form must match the DPKT CUGPX on the corresponding DSLUSR form.

2.5 B1 SERV

Description: Enter the service on the B1-channel.
Default: DMD
Valid Entries:

Valid B1 SERV Entries

Entry	Definition
DMD	Demand access to CSD (Circuit-Switched Data), CSV (Circuit-Switched Voice), or X.25 Packet-Switched Data.
X25	Permanent Packet (dedicated to X.25 Packet-Switched Data).

Data Rules:

This field must be set to "DMD" if a DSLUSR form has been submitted, for this DSL, with the CSV CHL and/or the CSD CHL fields set to "B1". The "B1" choice indicates that a user of this DSL wants Demand

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service on the B1-channel.

This field must be set to "DMD" if a DSLUSR form has been submitted, for this DSL, with the CSV and/or the CSD fields set to 2. The choice of 2 indicates that a user of this DSL wants Demand service on both B-channels.

This field must be set to "X25" if a DSLUSR form has been submitted, for this DSL, with the PPB1 USR field set to "Y". The "Y" in the PPB1 USR field indicates that a user of this DSL wants to use the B1-channel on a Permanent Packet Basis (dedicated to X.25 Packet-Switched Data).

When B1 SERV is "X25", PPB1 LCC/RAX/RATE/N2/T1/T3/WNDSZ must be entered.

2.6 B2 SERV

Description: Enter the service on the B2-channel.
Default: DMD
Valid Entries:

Valid B2 SERV Entries

Entry	Definition
DMD	Demand access to Circuit-Switched Data, Circuit-Switched Voice, or X.25 Packet-Switched Data.
X25	Permanent Packet (dedicated to X.25 Packet-Switched Data).

Data Rules:

This field must be set to "DMD" if a DSLUSR form has been submitted, for this DSL, with the CSV CHL and/or the CSD CHL fields set to "B2". The "B2" choice indicates that a user of this DSL wants Demand service on the B2-channel.

This field must be set to "DMD" if a DSLUSR form has been submitted, for this DSL, with the CSV and/or the CSD fields set to 2. The choice of 2 indicates that a user of this DSL wants Demand service on both B-channels.

This field must be set to "X25" if a DSLUSR form has been submitted, for this DSL, with the PPB2 USR field set to "Y". The "Y" in the PPB2 USR field indicates that a user of this DSL wants to use the B2-channel on a Permanent Packet Basis (dedicated to X.25 Packet-Switched Data).

For 5E11 and later, when B2 SERV is "X25", PPB2 LCC/RAX/RATE/N2/T1/T3/WNDSZ must be entered.

2.7 BRI TYPE

Description: This field is used only by Recent Change to display the type of line card used by this BRI. For 5E8 and later, this field is left blank for IDCU DSLs.

Software Release: 5E6 and later

2.8 PM GRP

Description: This field is used to define a PM (Performance Measurement) GRP (Group) name.
Valid Entries: 1 - 8 characters

Data Rules:

When PM GRP is entered, a corresponding PMTHRESH form (5948 Record) must be entered with PM TYPE of "DSL".

2.9 ACSR GRP

Description: Enter the name of the Automatic Customer Station Rearrangement group.

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The assignment of an ACSR group allows the users to move from DSL to DSL or change the User Service Order Profile associated with a DSL.
Valid Entries: 1 - 8 characters

Data Rules:

If an entry is made in this field, then the entry must be defined in the ACSR GRP field on an ACSRGP form (5959-2 Record).

A CKT TN that has an ACSR feature assigned to it and is defined on a DSLUSR form, associated with this DSL, must have the same ACSR group assigned to it on an individual basis as the ACSR group entered in this field. An ACSR feature (with a group) is defined on an ACSRFD form (5959-1 Record), or an ACSRLPA form (5959-3 Record) and then assigned to the CKT TN on a LINEFA form (5112 Record), BFG form (5625 Record), or associated CLUSTR form (5600 Record).

2.10 DFLT SRV

Description: Default Service allows unknown CPE (Customer Premise Equipment) on a DSL (Digital Subscriber Line) which has subscribed to Default Service to originate ACSR, BRI Test Line, 108 Test Line, BRI Verification, Repair (611), Business Office (811), and Emergency (911) calls. Terminations to the user are denied with Default Service. For more information on the NI-3 Default Service Feature, see Division 2, Section 1AM. Also for 5E10 and later, see Division 2, Section 4A238 for information on the Automatic Association of Default Service feature.

Enter the name of the Default Service that is available to this DSL.
Valid Entries: 1 - 7 characters. The first character must not be a slash (/).

Data Rules:

The entry must be defined in the DFLT SRV field on a DFLTSRV form (5974 Record).

If the ACSR GRP field has an entry, this field must have an entry.

If an entry is made in this field, then the B1 SERV and/or B2 SERV fields must be set to "DMD". The ACSR feature does not support Permanent Packet B-channels.

If an entry is made in this field, the entry may not be "ACTBFG", "NONTGID", "CLEANUP", "TEMP", "SETUP" or "ABORT". The 5ESS Switch software treats Default Service as a BFG (BRCS Feature Group) and gives it an internal BFG identifier. This is transparent to the ODA user. The ODA user will define the group on a DFLTSRV form and then assign the group to a DSL on the DSL form. A BFG form (5625 Record) will never be applied. However, the six prohibited group names are reserved BFG names.

2.11 DSL CLS

Description: This field specifies the DSL class as a single user, multiple users under the Lucent Technologies custom protocol, or multiple users under the Bellcore standard protocol.

The Bellcore standard protocol does not support PODs (Plain Old Data) service.

Required Field.
Default: STD
Valid Entries:

Valid DSL CLS Entries

Entry	Definition
MP	Multipoint BRI. The DSL supports multiple active users (maximum of 8). A Lucent Technologies proprietary (custom) protocol is used.
PP	Point-to-Point BRI. The DSL supports a single active user.
STD	Software Release: 5E8 and later.

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	Standard BRI. The DSL supports multiple active users (maximum of 8). The Standard (Bellcore compliant) protocol is used.

Data Rules:

The MTERM field on this form indicates the maximum number of provisioned users, regardless of the quantity of active users indicated in the ACT USR fields on the DSLUSR forms associated with this DSL.

MP:
If this field is set to "MP", and the MTERM field has no entry, then the MTERM field will be assigned a value of 2.

If this field is set to "MP", then the D SERV field must be set to "SX". For 5E6 and later, if this field is "MP" and RSTR MP is "N" or blank, then ACT USR must be "Y" on all corresponding DSLUSR forms (DSL OE on this form matches the OE on the DSLUSR forms).

PP:
If this field is set to "PP", and the D SERV field is not set to "ADMIN" (there are no users associated with the "ADMIN" case, only Permanent Packet B-channels), and the MTERM field is not entered, then the MTERM field will be assigned a value of 1, since a Point-to-Point DSL can only have one active user.

If this field is set to "PP", and the D SERV field is set to "ADMIN", and the MTERM field is not entered, then the MTERM field will be assigned a value of 0, since there are no users associated with the "ADMIN" case.

This field must be set to "PP" if a DSLUSR form has been submitted, for this DSL, with the CSV CHL and/or the CSD CHL fields set to "B1" or "B2".

STD:
For 5E8 and later, when DSL CLS is "STD":
- ACSR GRP must not be entered.
- CUT DGTS must be entered,
- D SERV must be "SX",
- MTERM must be 1 - 8
- RSTR MP must be "N" or not entered
- DFLT SRV must not be entered.(5E8 - 5E9(2))

- For (R)ISLU, the associated Line Card defined on the ISLULC form must have TYPE set to

  "AULC"

  "SAULC"

  "TLC"

- For IDCU, the associated RT defined on the RTERM form must be set to "TR303".

All DSLUSR forms assigned to this DSL (where OE field values match) must observe the following rules:

- The DSL users must be assigned an "ISDN" CLASS OF SERVICE on the associated LCC form;
- If CKT TN or CKT MLHG/TERM are entered,

  ACT USR must be "Y"

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BRITL ALW must be "N"

or not entered

LN TYPE must be "NONE"

or not entered

SAR NUM must not be entered

SERHLN must not be entered

and the following fields must be "N"

ASP ALW

INCOMING

INTERCOM

LONG DST DR ORIG CW

PP

SAR ORIG

SAR TERM

- If CONFIG GRP is entered on the DSLUSR form, it must be defined on a CFGGRP form where CPE COMPONENT is not greater than 0, and GRP TYPE is "STD";
- If CKT MLHG is entered on the DSLUSR form, it must be defined on an MLHG form where AP SITE ID and BCID1 - BCID6 are not entered, and where the MLHG FEATURE does not have HUNT TYPE "ISAT" or "PMHG" defined on an MLHGFD form;
- If the EKTS field is entered on the DSLUSR form, TERM TYPE must be "TYPEC"; if EKTS is not entered, TERM TYPE must be "TYPEA", CA and CA QTY must be 0;

Standard Only BRI Features:
The following features may be assigned only to Standard BRI users (None of these features may be assigned to non-standard BRI users.):

- LASS Automatic Recall for Data features defined on an LSARFD form (5971-1 Record) where CSD ALW is "Y"
- For 5E9(1) and later, Multiway features defined on MWFD forms (5602-1/2 Record) with MULTIWAY

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TRANSFER set to "ET" may be assigned only to Standard BRI users.

Standard BRI and Shared Analog Features:
The following features can only be assigned to a DSLUSR from to Standard BRI or a primary analog line shared to a Standard BRI via the SHTN form.

- BRCS RND (Redirecting Number Delivery) features defined on an RNDFD form (5983 Record) may be assigned only to Standard BRI users and to analog lines shared to those users on the SHTN form.

Blocked Standard BRI and Shared Analog Features:
The following BRCS feature types may not be assigned to Standard BRI users or to analog lines shared on the SHTN form to Standard BRI users:

The following are totally blocked:

- TERM feature - Automatic Call-Back features defined on the ACBFD form (5616-1 Record);
- TERM feature - ISDN ACSR features defined on the ACSRFD form (5959-1 Record),
- Precedence and Preemption features defined on the PPFD form (5618-1 Record);

The following are conditionally blocked.

- For 5E9(1) and later when the SFID 139 ACT field is not "Y" on the SFSYS form (5713-1 Record), Advanced Services Platform features defined on the ASPFD form (5632-1 Record).
- Intercom features defined on the ICMFD form (5960-1 Record) may not be assigned unless EKTS is "CACH" on the DSLUSR form ;
- For 5E9(2) and earlier, Call Forwarding features defined on a CFWFD form (5614-1/2 Record) where CFPF ALW is "Y".

  However, for 5E10 and later, if the ACT field for SFID 225 is "Y" indicating National ISDN-3 BRI features are activated, then this feature is not blocked.
- For 5E9(1) and later, Call Forwarding features defined on a CFWFD form with FWD CONDITION set to "ACDI";
- Display and Privacy features defined on a DISPFD form (5965 Record) where either TIME DATE or INSPECT is "Y"
- Line Identification features defined on an LIDFD form (5966 Record) where CALL NBR DELIV PRIM is "Y"
- Message Service System features defined on an MSFD form (5962-1 Record) where

  LW CALLING is "INOUT" or "OUT"

  MSG RTRVL DISP is "Y"

  PRNT ON DEMAND is "Y" or AUTO CALL is "Y";
- Calling Party Number / Billing Number features defined on a CPNBNFD form (5982 Record) where CPN BN is not "CPNONLY" or "CPNPREF";

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- For 5E9(1) and later, Call Pickup Originating features defined on a PUOFD form (5605-1 Record) where INITIATE is one of the following:

  "ANSBACK"

  "BPARK"

  "DPARK"

  "RTRV"

- For 5E10 and later, if the ACT field for SFID 225 on the SFSYS form (5713-1 Record) is "Y", then:

  CND SHAR DN must be "N"

  or CDN PRIM DN must be "Y"

  or DQD must be "Y"

  or AUTO CALL must be "Y".

  Electronic Delivery Services features may only be assigned on the EDSFD form if SFID 225 ACT field is "Y".

Blocked Standard BRI Only:
The following BRCS features may not be assigned with the indicated option to Standard BRI users:

Totally blocked features:

- For 5E9(1) and later, Call Waiting features defined on the CWTFD form

Conditionally blocked features:

- Multiway calling features defined on an MWFD form (5602-1/2 Record) where DIAL CODE OR BUTTON is "Y";

EKTS Features:
ISDN Intercom Features that can only be assigned to a DSLUSR form if the EKTS field on DSLUSR is "CACH".

- ISDN Intercom features defined on the ICMFD form (5960-1 Record) cannot be assigned to DSL users when EKTS is blank on the DSLUSR form.

If the DSL user is a member of an EKTS group listed on an SHTN form, SHARED must be "Y", and EKTS must be "BASIC" or "CACH";

NOTE: Features that can be assigned only to Standard BRI users or to analog lines shared to those users may not appear on the same CLUSTR or BFG forms as features that cannot be

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assigned to standard BRI users. Mixing these features will cause assignment errors on the LINEFA or MLHLNFA forms.

For 5E8 and later, when DSL CLS is not "STD", all DSLUSR forms assigned to this DSL (OE field values match) must observe the following rules:

- The following DSLUSR fields must not be entered;

  AGI

  CSV ACO

  CSV LIMIT

  CSD ACO

  CSD LIMIT

  EKTS

- if TERM TYPE is other than "TYPEE", CA QTY must be entered; CA must be entered if TERM TYPE is:

  "ATND"

  "TYPEB"

  "TYPEC"

  "TYPED"

SERHLN on the DSLUSR form may not be defined on another DSLUSR form that is assigned to a DSL with DSL CLS of "STD";

2.12 RSTR MP

Description: Is this Multipoint DSL restricted to a single active user?
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the DSL CLS field must be set to "MP". This field has no meaning for a Point-to-Point DSL since it can have only one active user.

If "Y" is entered, then only one DSLUSR form, for this DSL, can exist with the ACT USR field set to "Y".

2.13 ACSR INH

Description: Should use of the Automatic Customer Station Rearrangement feature be inhibited on this DSL?

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Valid Entries: Y, N

2.14 MDPKT

Description: This field indicates the maximum number of users of this DSL that are allowed X.25 Packet Switching services on the D-channel.
Valid Entries: 0 - 8

Data Rules:

If this field has no entry, and the D SERV field is "ADMIN", then this field will be assigned a value of 0. There are no users associated with a D SERV value of "ADMIN". For 5E6 and later, if D SERV is "ADMIN" or "SONLY", MDPKT must be 0.

For 5E6 and later, if D SERV is "XMP" and DSL CLS is "PP", then MDPKT must be 8.

The MDPKT entries on DSL form(s) are used to indicate the maximum number of DSLUSR forms that can be defined with an entry for DPKT TN or DPKT MLHG/TERM and an OE that matches the DSL OE entered on the DSL form. The number of DSLUSR forms, meeting the above conditions, cannot be greater than the value of MDPKT field.

2.15 MTERM

Description: Indicate the maximum number of active users, on this DSL, regardless of the quantity of active users indicated in the ACT USR fields on the DSLUSR forms associated with this DSL, that will simultaneously receive services. The users are handled on a "first plugged in", "first serviced" basis.
Valid Entries: 0 - 8

Data Rules:

If this field is not entered, and the DSL CLS field is set to "PP", and the D SERV field is not set to "ADMIN" (which is not associated with users) this field must equal 1.

If the D SERV field is set to "ADMIN", this field must equal 0. The "ADMIN" case is not associated with users.

If the DSL CLS field is equal to "MP", and this field is not entered, then this field will be assigned a value of 2.

If the DSL CLS field is equal to "MP", then this field must have a value between 2 and 8.

For 5E9(2) and earlier, the value assigned in TERMLIM defines the maximum number of ISDN Terminals that are allowed to be simultaneously active per SM. TERMLIM is a no display field on the EQIM form with a default of 2047. In most cases TERMLIM should be set to this value. The ISDN Terminals are defined as follows:

ISDN Terminal Assignments

Form	SM	Number of Assignments
DSL	OE[1,3]	MTERM defines the quantity of ISDN Terminals per DSL form.
DSLAP	LCEN[1,3]	number of ISDN Terminals is incremented by 1 for each LCEN list element defined.
MISLINK	OE[1,3]	1
OSPSDSL	LCEN[1,3]	1 where SERVICE CLASS is not "XDB"

2.16 D RELPIDB

Description: The Peripheral Interface Data Bus is the vehicle that links the D-channel of the DSL, resident on an ISLU or IDCU in an SM, to the SM's peripheral PSU.

NOTE: For (R)ISLU and IDCU, the manual entry of the D RELPIDB, D TIMESLOT, QRT TS,

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DS1, and DS1 TS fields is optional. ODA will mechanically enter this data if not entered by the customer. However, if entered by the customer, when one of these time slot fields is entered, all of the appropriate fields for the equipment type (i.e., ISLU or IDCU) must be entered. For example, for ISLU, the D RELPIDB, D TIMESLOT, and QRT TS fields must be entered. For IDCU, the D RELPIDB, D TIMESLOT, QTR TS, DS1, and DS1 TS fields must be entered. Additionally, if populated by the customer, the D RELPIDB must be connected to the PSU shelf assigned to a D ISCN. Also, if the D RELPIDB/D TIMESLOT is the same on any form, the DS1/DS1 TS must also be the same across the DSL forms and vice versa. When D channel assignments are made, the set of D RELPIDB, D TIMESLOT, DS1 AND DS1 TS must also be the same across the DSL forms.

For IDCU, it is also important to note that IDCU remote terminal ports must not have duplicate IFAC (IDCU Facility), that is, DS1 time slot assignments. This may occur on any of the following forms: DSL, DSLUSR (5908 Record), ODBTS (5905 Record), NAILUP (5207), RTERM (5174).
Valid Entries: 12 - 22, or blank (for IDCU)

Data Rules:

For ISLU, the PIDB number entered must be assigned on an EQISLU form (5731 Record) with the PIDB TYPE field equal to "PSU", and the SHELF field equal to the first digit of the D ISCN field on this DSL form. For IDCU, the identical condition must exist on the EQIDCU form (5846 Record).

If D RELPIDBs and/or B RELPIDBs are assigned, then a corresponding PIDB with a PIDB TYPE of "PSU" must be assigned on the EQISLU form.

For 5E9(1) and later, for manually assigned D RELPIDBs, there must be an EQISLU form with a matching PIDB whose PSU SHELF matches the first digit of D ISCN and/or PPB1/PPB2 ISCN.

If the DSL is resident on a RISLU, this field must not be entered.

For 5E10 and later:

For manually assigned D RELPIDBs and/or PPB1/PPB2 DPIDBs, with DSL OE originating equipment type of "G":

- each PIDB must have proper Packet Switching Unit shelf assigned with matched PIDB NO. on the EQIDCU form. The PSU shelf, which is specified by the first digit of the D ISCN and/or PPB1/PPB2 ISCN on the DSL forms, must be defined on the EQIDCU form with a PIDB TYPE of "PSU".
- must have a corresponding PIDB NO. with a PIDB TYPE of "PSU" assigned on the EQIDCU form.

For 5E12 and later:

When the following forms have D RELPIDBs and/or B RELPIDBs assigned , there must be a TSGRP NO with a PIDB TYPE of "PSU" assigned on the EQAIU form (5745-1/2 Record): DSL, DSLAP, or MISLINK.

For manually assigned D RELPIDBs and/or PPB1/PPB2 DPIDBs, with DSL OE originating equipment type of "E":

- there must be a EQAIU form assigned with a matching TSGRP NO whose PSU SHLF matches the first digit of D ISCN and/or PPB1/PPB2 ISCN (on the DSL form), and/or the LINK DATA ISCN (on the DSLAP form), and/or SHELF (on the MISLINK form), and/or the PSIU SHELF (on the IPDSL form; 5E13 and later).
- assigned AIU DSLs which have identical entries for the first six digits of the OE, and also have the same D REL PIDB and D TIMESLOT entries, must also have the same PACK (OE[7,8]), and SHELF/CHL GRP (also defined as the first through third digits of the [D] ISDN).

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For 5E13 and later:

When the following forms have D RELPIDBs and/or B RELPIDBs assigned , there must be a TSGRP NO with a PIDB TYPE of "PSU" assigned on the EQAIU form: DSL, DSLAP, IPDSL or MISLINK.

2.17 D TIMESLOT

Description: Enter the D-channel Time Slot.

Manual entry of this field is optional; ODA will select the data if not entered by the customer. However, if entered by the customer, the appropriate assignment rules for the equipment type must be followed

- ***NOTE:*** See "Note:" in the D RELPIDB field above.

When making manual assignments, care must be taken to use assignments as shown in Figure 1, *D TIMESLOT Assignment vs LCG and D REL PIDB Entries.* For example, if manual assignments are being made on the DSL form and the D REL PIDB selected is 11 and the LGC from the OE is 0, then the D TIMESLOT assignment must be 1, 9, 17, or 25. B and/or D channel assignments made manually cannot conflict with the ODA assignment algorithm. The ODA algorithm is allocated 4 time slots per DPIDB per SM/ISLU/LGC. The LGCs 00 thru 07 are allocated time slots on the odd numbered DPIDBs while LGCs 08 thru 15 are allocated time slots on the even numbered DPIDBs Manual time slot assignments do not have to follow this algorithm. However, if manual assignments are made, they will use one or more time slots. These manual assignments diminish and may conflict with, the time slots available for the ODA assignment algorithm. For example, TS 1, 9, 17 and 25 are the 4 time slots that are allocated to ODA for LGC 0 in any ISLU which has a DPIDB 11 assigned. If a manual assignment is made to TS 9 on DPIDB 11 from any LGC in this ISLU there will only be 3 TS left on PIDB 11 for ODA assignments. Of course other odd numbered DPIDBs will have 4 TS for ODA assignments to LGC 0.
Valid Entries: 0 - 31

Data Rules:

For ISLU, if this field is entered, the value must not equal the value expressed by the fifth and sixth digits of the DSL OE field (the LGC), nor that value plus 16.

For ISLU, if the DSL is resident on a RISLU, this field must not be entered.

For ISLU, time slots, for a given combination of SM, ISLU, and PIDB, may not be be duplicated more than three times (D-channels utilize up to four Quarter Time Slots) on other DSL forms, DSLAP forms, or OSPSDSL forms.

For ISLU and IDCU, all the DSLs on an SM that have the same values of D RELPIDB and D TIMESLOT must have the same SHELF and CHL GRP number (the first three digits of the D ISCN).

The LCEN's assigned on the AMLBDSL, DSLAP or OSPSDSL forms, or DSL OE's on the DSL form or OE's on the MISLINK form can not have their D and/or B Channels assigned to conflicting DPIDB time slots or quarter time slots due to manual (vs ODA) time slot assignments. Each time slot may be assigned only once. (Note, D channels are allocated to quarter time slots; therefore up to four unique assignments can be made before a time slot is considered full.

For 5E9(1) and later, the combination of SM, IDCU, DPIDB and TIMESLOT must be unique. DSLs cannot be assigned duplicate time slots on the following forms:

- DSL form - D-channel and B-channel time slots
- MISLINK form - D-channel time slots
- RTERM form - EOC and TMC PRI/NPRI time slots

All of the digital subscriber lines on an SM, i.e.,

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- IDCU DSLs defined on the DSL or
- MISLINK forms
- ISLU/ISLU2 DSLs as defined on the DSL,
- DSLAP, MISLINK or OSPSDSL forms

which have identical entries for the first five digits of the OE
- (LCEN[1,5] for ISLU2, or
- (DSL) OE[1,5] for IDCU) or
- OE[1,4] for ISLU

and which also have the same D REL PIDB and D TIMESLOT entries, must also have the same LGC, i.e.,
- (LCEN[6,7] for ISLU2) or
- RT (OE NUMBER[6,7] for IDCU or
- OE[5,6] for ISLU), and
- SHELF/CHL GRP (also defined as the first
- through third digits of the [D] ISDN) entries.

For 5E9(1) and later, unassigned D TIMESLOTs and/or B TIMESLOTS require that ODA assign these values. The ODA assignment requires that LKCENs ("K" type Equipment Number) assigned to LGs 0 - 7 (Note: the sixth and seventh digit of the Equipment Number is the LG) get time slots on odd numbered EQISLU PIDBs and that LCKENs assigned to LGs 8 - 15 get time slots on even numbered EQISLU PIDBs, each with a PIDB TYPE of "PSU".

For 5E10 and later, when the DSL or DSLAP forms have unassigned D TIMESLOTs and/or B TIMESLOTS, ODA assigns these values. The ODA assignment requires that LKCENs (DSL OE on the DSL for "K" TYPE) assigned to LGs 0 - 7 (Note: the sixth and seventh digit of the LCKEN/DSL OE is the LG) get time slots on odd numbered EQISLU PIDBs and that LCKENs assigned to LGs 8 - 15 get time slots on even numbered EQISLU PIDBs, each with a PIDB TYPE of "PSU". If there are either no odd numbered PIDBs for LG 0 - 7 or even numbered PIDBs for LG 8 - 15 on this ISLU2, a cross check error will occur.

2.18 QTR TS

Description: Enter the D-channel Quarter Time Slot.

Manual entry of this field is optional; ODA will populate the data if not entered by the customer. However, if entered by the customer, the appropriate assignment rules for the equipment type must be followed (see Note: in the D RELPIDB field above).

The QTR TS, in the case of IDCU, requires a quarter time slot on the D RELPIDB and a quarter channel on the DS1.

A time slot is assignable in four quarters and can be assigned to either of the following fields: D RELPIDB, D TIMESLOT, DS1, and DS1 TS. For efficiency, quarter time slots should be packed four to a time slot. When doing this the D RELPIDB, D TIMESLOT, DS1, and DS1 TS must be the same across all of the four quarter time slots being packed.
Valid Entries: 0 - 3

Data Rules:

If any of the D RELPIDB, D TIMESLOT, or QTR TS fields are entered, then all three must be entered.

If the DSL is resident on a RISLU, this field must not be entered.

For 5E9(1) and later, QTR TS may only be assigned ISLU(2) DSLs.

The QTR TS may not be duplicated for the same combination of SM, ISLU/ IDCU, D RELPIDB and D

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TIMESLOT on another DSL form, or a DSLAP form, or an OSPSDSL form.

In order to conserve resources, the assignment of quarter time slots must be "packed". That is, all quarter time slots in a time slot must be assigned (if possible) to a time slot before another time slot is used. To pack the time slot, all D-channels on an LGC are candidates for assignments to the same time slot. No D-channels can be assigned to a time slot to which a D-channel from another LGC has been assigned. The D-channels which are assigned to a time slot must all be in the same CHL GRP. The only restriction on the D ISCN is that all members assigned to a given time slot must be in the same CHL GRP and have the same SHELF assignment (first three digits of the D ISCN).

5E10 and later:
QTR TS may only be assigned ISLU(2) DSLs.

Digital subscriber lines cannot be assigned duplicate D-channel quarter time slots.

For the Originating Equipment Types of "G", when packing QTR TS on DSL forms (up to 4 to a TS) on an SM/IDCU/RT (the first seven digits of the DSL OE):

- the assigned QTR TS and the D ISCN (last three digits) must be unique across the identical set of the DSL form (SM/IDCU/RT) in question.
- the set of D RELPIDB D TIMESLOT, DS1, DS1 TS must each be identical (ie: DS1 = DS1, etc.) and the first three digits of the D ISCN must also be the same on these DSL forms. If the D RELPIDB/D TIMESLOT is the same on any forms the DS1/DS1 TS must also be the same across those DSL forms. The converse is also true. The first three digits of the D ISCN must be consistent also.

2.19 DS1

Description: Enter the RT DS1 which carries the D-channel time slot. Refer to the RT IFAC TERMINATION field on the RTERM form (5174 Record) to correlate an RT DS1 to its associated IFAC, and vice versa.

Manual entry of this field is optional; ODA will populate the data if not entered by the customer. However, if entered by the customer, the appropriate assignment rules for the equipment type must be followed (see Note: in the D RELPIDB field above).

For IDCU (DSL OE "M" or "G"), the IDCU DS1 selection is optional, if not populated by the customer, ODA will select a DS1. If populated by the customer the D RELPIDB, D TIMESLOT, QTR TS and DS1 TS must be populated.
Valid Entries: 1 - 28

2.20 DS1 TS

Description: Enter the IDCU DS1 IFAC time slot.

Manual entry of this field is optional; ODA will populate the data if not entered by the customer. However, if entered by the customer, the appropriate assignment rules for the equipment type must be followed (see Note: in the D RELPIDB field above).

- ***NOTE:*** To pack QTR TS, the D TIMESLOT, D RELPIDB, DS1 and DS1 TS must be identical. The first three characters of the ISCN must also be identical. The first character of the ISCN must correspond to the DPIDB shelf assignment on the EQIDCU form for D RELPIDB. Also, the SM, IDCU and RT from the DSL OE must be identical.

For IDCU (DSL OE is set to "M" or "G"), the IDCU DS1 TS selection is optional. If not populated by the customer, ODA will populate it. If populated by the customer, the D RELPIDB, D TIMESLOT, QTR TS and DS1 must be populated. This DS1 TS should be one of the time slots on the selected DS1. For an ISLU

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(DSL OE is set to "I"), the DS1 TS field must be blank.
Valid Entries: 0 - 23

Data Rules:

The combination of SM, IDCU, IFAC and TIMESLOT must be unique. The following IDCU remote terminal ports cannot be assigned duplicate IFAC (DS1) time slots:

IFAC TIMESLOTS

Form	Timeslots
DSL	D-channel (DS1 and DS1 TS) and B-channel (PPB1/2 DS1 and DS1 TS) time slots
MISLINK	D-channel time slots (DS1 and DS1 TS)
NAILUP	nailup/hairpin time slots: C PATH DS1 and NC PATH DS1 for the IFACs. C PATH1 DS0, C PATH2 DS0, NC PATH1 DS0, NC PATH2 DS0 for the time slots.
RTERM	Fixed time slots for the primary and secondary TMC and EOC are assigned by ODA on the primary IFAC (the 1st IFAC in the RT TERM/IFAC list) and backup IFAC (EOC/TMC BKUP TERM) for the RT.

The fixed time slots are TS 11 for EOC and TS 23 for TMC. If ZCS (SUP METHOD is "303ZC" on the RTERM form) signaling is used by the IFAC, additional guard channels (TS) are required; they are TS 10 for EOC and TS 0 and 22 for TMC. ISDN applications (DSL and MISLINK form) are not allowed when ZCS signaling is used.

2.21 CUT NPA

Description: The CUT NPA field is used to specify the NPA (Numbering Plan Area) code to be used during cutover activities. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

Software Release: 5E12 and later
Valid Entries: Enter 3 digits of the form (2-9)(0-9)(0-9).

Data Rules:

For 5E12 and later, CUT NPA and/or the first three digits of CUT DGTS(s) entered on the DSL form must match an NPA and/or OFFICE CODE defined on the NOC form.

2.22 CUT DGTS

Description: Enter the four digits to be used during cutover activities to determine the line state of this DSL (active or inactive). It is suggested that the digits entered be the first four digits from one of the telephone numbers associated with the DSL.
Valid Entries: Each of the four digits may range from 0 to 9.

Data Rules:

The first three digits must be defined in the OFFICE CODE field on an NOC form (5501 Record). The fourth digit is the companion thousands digit.

If this field is entered, one of the following four conditions must be true:

- The DSL CLS field on this form is set to "MP";
- The DSL CLS field on this form is set to "PP" and there is no Circuit Switching done by this DSL (the CKT TN field or the combination of the CKT MLHG and CKT TERM fields are not entered);
- The DFLT SRV field on this form is entered;
- The D SERV field on this form is set to "ADMIN", and the B1 SERV or B2 SERV fields on this form

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are set to "X25".

For 5E12 and later, if the first 3 digits of CUT DGTS on the DSL form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, CUT NPA must also be entered on the DSL form.

2.23 TSTLINE

Description: Is this DSL put into service while the 5ESS Switch is in the Pre-Cutover mode?

A value of "Y" would be an exception to a group of lines in a Switching Module that have been set to a Pre-Cutover status equal to "INACTIVE". This is normally done for test lines, not "live" customers. It is recommended that all lines submitted at the time of Selected Line And Trunk Translations be set to "Y".

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When this field has a value of "N", refer to the IMINFO form (5510 Record) and the COTH form (5513 Record) for the Pre-Cutover and Post-Cutover status of all telephone numbers in the office.

2.24 EL

Description: Is this an ESP (Essential Service Protection) DSL?

A value of "Y" marks the DSL as "essential". The DSL is covered by ESP, a priority service which guarantees ESP lines a greater probability of origination than non-ESP lines during extreme system overload. When EL is "Y" in extreme system overload, ESP will give a 5 to 1 call origination priority to ESP lines over non-ESP lines.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

2.25 PREX

Description: Should REX be prohibited for this BRI? This field supports the Prohibit Routine Exercise secured feature (SFID 267). Note that this field interacts with the PREX ON BRI field on the ISDNOPT form which supports the Prohibit REX on BRI Lines Per Office feature (SFID 266).

See Division 2, Sections 4A266/267.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E11, when PREX is "Y", DSL OE TYPE cannot be "G".

For 5E12 and later, when PREX is "Y", DSL OE TYPE cannot be "A" or "G".

If this field is entered, SFID 267 ACT on the SFSYS form (5713 Record) must be "Y".

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3. FORM ENTRIES - 5907-2, 5 RECORDS

PERMANENT PACKET B-CHANNEL ASSIGNMENTS

Fields Section 3.1 - Section 5.15 refer to fields for the Permanent Packet B-channel assignments.

Permanent Packet B-channels are dedicated to X.25 Packet Switching and to usage by a single user. They do not handle CSV or CSD services. They cannot be shared by multiple users in a Pure Multipoint environment.

If the B1 SERV field is not set to "X25", then the B1-channel is not used for Permanent Packet service. Thus, the customer should not visit any field under the PPB1 (PERMANENT PACKET B1) heading. Non-defaulted fields must not be entered and defaulted fields must be left as defaulted. The SUST field, which is used to deny termination, will be assigned a value of "Y".

If the B1 SERV field is "X25", then the B1-channel is used for Permanent Packet service. Thus, the customer must visit many of the fields under the PPB1 heading. The TN field and/or the MLHG and TERM field combination must be entered. The LCC, RAX, ISCN, RATE, N2, T1, T3, and WNDSZ fields must be entered. The D SERV field must be "SX" or "ADMIN".

If the B2 SERV field is not set to "X25", then the B2-channel is not used for Permanent Packet service. Thus, the customer should not visit any field under the PPB2 (PERMANENT PACKET B2) heading. Non-defaulted fields must not be entered and defaulted fields must be left as defaulted. The SUST field, which is used to deny termination, will be assigned a value of "Y".

If the B2 SERV field is "X25", then the B2-channel is used for Permanent Packet service. Thus, the customer must visit many of the fields under the PPB2 heading. The TN field and/or the MLHG and TERM field combination must be entered. The LCC, RAX, ISCN, RATE, N2, T1, T3, and WNDSZ fields must be entered. The D SERV field must be "SX" or "ADMIN".

The LCC and RAX combination assigned to a Permanent Packet B-channel must have an associated DIGIT ANALYSIS SELECTOR entered on a DAS form (5300-1 Record), which in turn has associated PREFIX / FEATURE DIT(s) entered on PDIT form(s) (5300-2 Record), or LOCAL DIT(s) entered on LDIT form(s) (5300-3 Record). If the TYPE OF CI CALL is entered on the PDIT/LDIT form(s), it must be set to either "PSNCI" (Packet Switching Non-Carrier), or "PSCAR" (Packet Switching Carrier).

The fields related to the PERMANENT PACKET B1 and PERMANENT PACKET B2 sections are identical. Thus, the instructions for the two sections are merged into a common set. The instructions assume that the requisite to be in either section (B1 SERV/B2 SERV is "X25) has been met.

3.1 TN

Description: Enter the Packet TN of the DSL (if it has one).
Valid Entries:

- For 5E11 and earlier: 7 digits: the first digit
- cannot be a 0 or 1 (the remaining 6 digits may
- range from 0 - 9)
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The first three digits of the TN must be defined in the OFFICE CODE field on an NOC form. If the MLHG, TERM, and H PVC LCN fields are entered, then this field must have an entry.

For 5E8 and later, when MLHG and TERM are entered, and CHL SEL is "Y" or HUNT NOTIF is "YES",

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then a TN must be entered in this field.

When CHL SEL is "N", this TN must be unique within the 5ESS Switch with the following exception:

- It can duplicate the CKT TN or the MLHG TN (under the CKT SWITCHING header) on a DSLUSR form for the DSL if the PPB1/PPB2 USR field is set to "Y".

When CHL SEL is "Y", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can duplicate the CKT TN or CKT MLHG TN (under the CKT SWITCHING header) on a DSLUSR form for the DSL if the PPB1/PPB2 USR field is set to "Y".
- It must equal DPKT TN or DPKT MLHG TN on a DSLUSR form for the DSL if the DPKT CHL SEL is set to "Y" and PPB1/PPB2 USR is set to "Y".
- It must equal ODB TN or ODB MLHG TN on a DSLUSR form for the DSL if the ODB CHL SEL is set to "Y" and PPB1/PPB2 USR is set to "Y".
- It must equal PPB1/PPB2 TN (on the same DSL form) if the corresponding PPB1/PPB2 CHL SEL equals "Y" and if PPB1 and PPB2 are defined for the same user or are not assigned on a DSLUSR.

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN, or member TN. Multiple TNs are defined in the TN field on a MULTITN form (5114 Record). For 5E5 and later, the TN entered in this field on the DSLUSR form may not duplicate a TN entered in the TN field on a MULTITN form.

Multiple TNs that are defined on the MULTITN form may not be assigned to modem pools, PPB1 MLHG/TERMS, or PPB2 MLHG/TERMS.

For 5E5 and later, if a value is entered in this field, the LCC and RAX combination on this form must be defined on an LCC form (5306 Record) with a CLASS OF SERVICE of "ISDN", and a TERMINATING TREATMENT of "INDIV".

If a value is not entered in this field, then the LCC and RAX combination on this form must be defined on an LCC form (5306 Record) with a CLASS OF SERVICE of "ISDN".

For 5E12 and later, when the DSL forms have PPB1 TN and PPB2 TN entered, and PPB1 CHL SEL or PPB2 CHL SEL equal "N", PPB1 TN must not be equal to PPB2 TN.

For 5E12 and later, if the first 3 digits of the 7-digit PPB1 TNs on the DSL form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit PPB1 TN(s) must be entered as a 10-digit PPB1 TN(s).

For 5E12 and later, if the first 3 digits of the 7-digit PPB2 TNs on the DSL form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit PPB2 TN(s) must be entered as a 10-digit PPB2 TN(s).

For 5E12 and later, the Permanent Packet TN(s) on the DSL form must have an NXX or NPA/NXX combination that is an OFFICE CODE or NPA/OFFICE CODE combination defined on a NOC form.

3.2 MLHG

Description: Enter the MLHG Number.
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

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Data Rules:

The entry must be defined in the MLHG field on an MLHG form. The associated MLHGFD form must have the HUNT TYPE field set to "PSUCD".

If the MLHG field is entered, then the TERM field must be entered, and if the TERM field is entered, the MLHG field must be entered.

For 5E5 and later, if the LOCAL SM field on the defining MLHG form is entered, then the SM portion (first three digits) of the DSL OE on this form must equal the value in the LOCAL SM field.

For 5E7 and later, if PPB1 MLHG is entered then PPB1 L IN LCN or PPB1 L 2W LCN must be entered. Also, if PPB2 MLHG is entered then PPB2 L IN LCN or PPB2 L 2W LCN must be entered.

For 5E8 and later, if MLHG/TERM are not entered, then HUNT NOTIF, BUSY LIMIT, and LNR HNT TN must not be entered, and HUNT DEACT must be "N".

PPB1 MLHG and PPB2 MLHG on the DSL form and DPKT MLHG (Non-Modem Pooling) and ODB MLHG on the DSLUSR form and PKT MLHG on the XAT form may be the same. The corresponding TERM entries must be different if their CHL SEL fields are "N". If the corresponding CHL SEL fields are "Y", and the channels are defined for the same user, then the TERM entries must be the same. (CHL SEL is not valid with XAT.)

3.3 TERM

Description: Enter the MLHG Terminal Number.
Valid Entries: 1 - 2015

Data Rules:

If the MLHG and TERM fields are entered, then the ICB (Incoming Calls Barred) field must be set to "N".

For 5E8 and later, if the PPB1 MLHG equals the PPB2 MLHG and either PPB1 CHL SEL or PPB2 CHL SEL equals "N", then the PPB1 TERM must not equal the PPB2 TERM. If the PPB1 MLHG equals the PPB2 MLHG, both CHL SEL fields equal "Y", and both channels are defined for the same user, then PPB1 TERM must equal PPB2 TERM.

For 5E6 and later, if an MLHG and TERM combination is entered, then the LCC and RAX combination on this form must be defined on an LCC form with a CLASS OF SERVICE of "ISDN".

If an MLHG and TERM combination is entered, then the TN field must be entered on this form, or the LISTED TN field on the associated MLHG form must be entered.

3.4 LCC

Description: Enter a 3-character Packet Line Class Code.
Valid Entries: Each of the three characters may be a number or letter.

Data Rules:

The entry must be defined in the LINE CLASS CODE field of an LCC form.

3.5 RAX

Description: Enter a Packet Rate Area.

The RAX and LCC are used to determine the Digit Analysis Selector and Screening Index used for packet calls originating from this device and the terminating treatment of packet calls to this device.

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Valid Entries: For 5E14 and earlier: 1 - 99
For 5E15 and later: 1 - 999

Data Rules:

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

3.6 LNR HNT TN

Description: Enter the Linear Hunt TN of a Multi-Line Hunt Group member. This LNR HNT TN serves as a linear entry point to the MLHG. Hunting always begins at the member associated with the called TN; it hunts sequentially through the members of the hunt group until either it reaches a non-busy member, or it reaches the last member and all hunted members were hunt-busy.

If the member TN is on intercept, the LNR HNT TN will not be on intercept.

Software Release: 5E8 and later
Valid Entries:

- For 5E11 and earlier: 7 digits: the first digit
- cannot be a 0 or 1 (the remaining 6 digits may
- range from 0 - 9)
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

If LNR HNT TN is entered, the following must be true:

- MLHG and TERM must be entered.
- The first three digits of LNR HNT TN must be defined in the OFFICE CODE field on the NOC form.
- For any "PSUCD" MLHGs, if LNR HNT TN for member 1 is not entered, then no other members can have LNR HNT TN entered.
- LNR HNT TN must be unique within the 5ESS Switch with the following exceptions:
  - If PPB1/PPB2 CHL SEL equals "Y", then it must equal DPKT LNR HNT TN on a DSLUSR form for the DSL if the DPKT CHL SEL is set to "Y" and PPB1/PPB2 USR is set to "Y".
  - If PPB1/PPB2 CHL SEL equals "Y", then it must equal ODB LNR HNT TN on a DSLUSR form for the DSL if the ODB CHL SEL is set to "Y" and PPB1/PPB2 USR is set to "Y".
  - If PPB1/PPB2 CHL SEL equals "Y", then it must equal PPB1/PPB2 LNR HNT TN (on the same DSL form) if PPB1 and PPB2 are defined for the same user, or if neither is assigned to any user.

For 5E12 and later, when the DSL forms have B1 SERV set to "X25", PPB1 LNR HNT TN entered, and PPB1 TN and/or PPB2 TN entered, PPB1 LNR HNT TN must not be equal to PPB1 TN or PPB2 TN.

For 5E12 and later, when the DSL forms have B2 SERV set to "X25", PPB2 LNR HNT TN entered, and PPB1 TN and/or PPB2 TN entered, PPB2 LNR HNT TN must not be equal to PPB1 TN or PPB2 TN.

For 5E12 and later, when the DSL forms have PPB1 LNR HNT TN and PPB2 LNR HNT TN entered, and PPB1 CHL SEL or PPB2 CHL SEL equal "N", PPB1 LNR HNT TN must not be equal to PPB2 LNR HNT TN.

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For 5E12 and later, if the first 3 digits of the 7-digit PPB1 LNR HNT TNs on the DSL form are equivalent to an OFFICE CODE on the NOC form, but there is more than one NOC form with the same value for OFFICE CODE, the following 7-digit PPB1 LNR HNT TN(s) must be entered as a 10-digit PPB1 LNR HNT TN(s).

For 5E12 and later, if the first 3 digits of the 7-digit PPB2 LNR HNT TNs on the DSL form are equivalent to an OFFICE CODE on the NOC form, but there is more than one NOC form with the same value for OFFICE CODE, the 7-digit PPB2 LNR HNT TN(s) must be entered as a 10-digit PPB2 LNR HNT TN(s).

For 5E12 and later, when the PPB1/PPB2 LNR HNT TN(s) on the DSL form have an NXX and/or NPA/NXX combination assigned, there must be a matching OFFICE CODE or NPA/OFFICE CODE defined on a NOC form.

3.7 HUNT DEACT

Description: Should the MLHG member be deactivated (marked busy) for hunted calls? A value of "N" indicates the Multi-Line Hunt Group member is active (available) for hunting.

The deactive/active status has no effect on call originations or on non-hunted calls made to the MLHG member using its individual TN.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If MLHG and TERM are not entered, HUNT DEACT must be "N".

3.8 CHL SEL

Description: Is the TN a Common TN that is shared by at least two channels on the DSL? When a call terminates to a Common TN, an Active Channel Selection algorithm is performed to determine the channel on which the call will be offered.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PPB1 CHL SEL and PPB2 CHL SEL are both "Y" and PPB1 and PPB2 are defined for the same user, then the following PPB1 and PPB2 fields must be set the same: TN, MLHG, TERM, LCC, RAX, first three digits of ISCN, LNR HNT TN, HUNT DEACT, BILL TN, BUSY LIMIT, ICB, OCB, PMDR GRP, PMDR ACT, SEND PKTSZ, SEND PKTWD, RCV PKTSZ, RCV PKTWD, FCPN, TPCN, REV CHARGE, LCP, IECPDNIC, FSA, IA, PB GRP, X25VER, CALL TN, CALL ID, DIS SCR, ICP, HUNT NOTIF, SUST, CUGPX, CUGOA, and CUGIA.

If CHL SEL is "Y", H PVC LCN must not be entered.

At least two channels (PPB1 CHL SEL, PPB2 CHL SEL, ODB CHL SEL, or DPKT CHL SEL) of the DSL for a user must have Channel Selection set to "Y", or none of the channels may be set.

If DPKT CHL SEL (DSLUSR form), ODB CHL SEL (DSLUSR form), PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) are set to "Y" for a user of the DSL, then the following must be true for that user:

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- The following parameters associated with CHL SEL equal to "Y" must be the same: MLHG, TERM, LNR HNT TN, LCC, RAX, HUNT DEACT, first three digits of ISCN, BILL TN, BUSY LIMIT, ICB, OCB, PMDR GRP, PMDR ACT, FCPN, TPCN, REV CHARGE, LCP, IECPDNIC, FSA, IA, PB GRP, X25VER, ICP, HUNT NOTIF, SUST, CUGPX, CUGOA, and CUGIA.

- If MLHG and TERM are entered, all the associated Channel Types with CHL SEL set to "Y" must have the same DPKT MLHG TN, ODB MLHG TN, PPB1 TN and/or PPB2 TN.

- If MLHG and TERM are not entered, all the associated Channel Types with CHL SEL set to "Y" must have the same DPKT TN, ODB TN, PPB1 TN and/or PPB2 TN.

- All the associated B-Channel Types with CHL SEL set to "Y" must have the same SEND PKTSZ, SEND PKTWD, RCV PKTSZ, and RCV PKTWD.

- If PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) equals "Y", and there exists a DSLUSR form for the DSL where DPKT NOTIF and/or ODB NOTIF is set to "COND" and PPB1 USR and/or PPB2 USR equals "Y", then of all the associated Channel Types with CHL SEL set to "Y" at least one Channel must have 2W LCN or IN LCN entered.

- If PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) equals "Y" and there exists a DSLUSR form for the DSL where DPKT CHL SEL or ODB CHL SEL equals "Y", and PPB1 USR and/or PPB2 USR equals "Y", then the appropriate PPB1 and/or PPB2 fields CALL TN, CALL ID, and DIS SCR (DSL form) must equal "N".

- If MLHG and TERM are entered then of all the associated packet services (PPB1, PPB2, DPKT, ODB) with CHL SEL set to "Y" for this user, at least one packet service must have 2W LCN or IN LCN entered.

3.9 ISCN

Description: Enter the B-channel Integrated Services Channel Number, on the PSU, which is conjoined to the DSL.

The DSL is connected, via a PIDB to a PSU.

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		Format	Valid Entries
Shelf		X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	0-127

Data Rules:

For the shelf, enter the PSU PH shelf number. The SHELF must correspond to a PSU SHELF field on an EQPSU form, where the value in the SWITCHING MODULE field is the SM portion (first three digits) of the DSL OE, which has a SHLF SIDE 0/1 with EQST set to "O".

For CHL, enter the PSU PH number on the PSU shelf. PHs are assigned, as a component of an ISCN, on AMLBDSL forms (5447 Record), DSL forms (5907 Record), DSLAP forms (5963 Record), DSLUSR forms (5908 Record), OSPSDSL forms (5411 Record), PSISM forms (5920 Record), and TRUNK forms (5204 Record). PHs are also assigned in the CHL GRP field on ODBRES forms (5906 Record). The total quantity of PHs assigned on these forms must not exceed the quantity of PHs defined for the given SWITCHING MODULE and PSU SHELF on an EQPSUPH form (5742 Record) with EQST set to "O". The CHL GRP is a "logical" value. The number that is assigned in this field will not always be the number of the PH that is used. The quantity of PHs defined on the EQPSUPH form relative to the quantity of PHs assigned on the aforementioned forms is critical; the actual values are not of importance.

Each ISCN entry (D/PPB1/PPB2 ISCN on the DSL form) must have the SHELF value (the first character

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of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

For CHL, enter the PSU PH member number. A B-channel requires four (4) PH channels for service.

The ISCN must be a unique value within an SM.

Any combination of the SHELF and CHL GRP entries must be defined on an EQPSUPH form.

This field cannot have the same SHELF and CHL GRP, within the same SM, as an ISCN from a PSISM form, or a TRUNK form with an associated TRKCLS of "PACKET", or "X75P", defined on a TKGRP form.

Each SM can have up to 5 PSU Shelfs. Each Shelf can have up to 16 Protocol Handlers (PH). Shelfs and PHs are defined by the first 3 digits of the ISCN field. Each PH can be assigned up to 32 time slots. up to 16 Protocol Handlers (PH).

For 5E9(1) and later:
The first three digits of OE, the first digit of ISCN, and the second two digits of ISCN must be defined in the SM, PSU SHELF, and GRP fields on a PSUGP form where PH TYPE is set to "PH3".

The following D ISCN and/or PPB1/PPB2 ISCN are assigned on with an originating equipment type of "G". Each ISCN or SHELF/CHL GRP/CHL combination must have a proper Packet Switching Unit shelf assigned on the EQIDCU form. The PSU shelf specified by the first digit of the ISCN on either the DSL form must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

If ISCNs are assigned, then a PIDB with a PIDB TYPE of "PSU" must be assigned on the same Packet Switching Unit shelf on the EQISLU form as the PSU shelf specified by the first digit of the ISCN.

For 5E10 and later, the following forms
- AMLBDSL
- DSL
- MISLINK
- DSLAP
- DSLUSR
- ODBRES
- OSPSDSL
- RTERM
- XAT

and TRUNK forms which have a TRKCLS of "EDSL", "IFTERM" or "IFOPER" defined on the TKGRP form can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM. However, they can not have an ISCN SHELF and CHL GRP which are mixed with ISCNs from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of
- "PACKET",
- "X75",
- "X75P",
- "PKTPIPE",
- "SPCHNDLR" defined on the TKGRP form.

For 5E11 and later, PPB1 ISCN must be entered for the existing form tuple in Large Terminal Growth. (AILA (Automatic ISDN Line Assignment) feature existing form tuples in Large Terminal Growth should still keep the old checks whether the AILA feature is active or not). For more information on this feature, see Division 2, Section 1BO.

When PPB1 ISCN is not entered, PPB1 DPIDB, PPB1 TS, PPB1 DS1 and PPB1 DS1 TS must not be entered.

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For 5E11 and later, PPB2 ISCN must be entered for the existing form tuple in Large Terminal Growth. (Automatic ISDN Line Assignment feature existing form tuples in Large Terminal Growth should still keep the old checks whether the AILA feature is active or not.

When PPB2 ISCN is not entered, PPB2 DPIDB, PPB2 TS, PPB2 DS1 and PPB2 DS1 TS must not be entered.

When ACT on FOSYS form (5713-2 Record), where FID is 695, is set to "Y" (i.e., the AILA feature is active) and ODB TN, ODB MLHG and ODB TERM are not entered on the corresponding DSLUSR form, the D ISCN field on the matching DSL form must not be entered.

When ACT on FOSYS form (5713-2 Record), where FID is 695, is set to "N" (i.e., the AILA feature is not active) and ODB TN, ODB MLHG and ODB TERM are not entered on the corresponding DSLUSR form, the D ISCN field on the matching DSL form must be entered.

3.10 RATE

Description: Enter the DSL baud rate.
Valid Entries: 56KB, 64KB

3.11 N2

Description: Enter the N2 value.

The N2 value, per CCITT specifications, is the maximum number of attempts made by the CPE device or the PH to successfully transmit a frame at the LAPB (Link Access Procedure B) Level 2. Following N2 failures, the PH attempts to restore the link, which is either an SVC or a PVC. If the PH cannot restore the link, the PH will clear the SVCs and reset the PVCs.

Refer to Section 1.2 for background information.
Valid Entries: 2 - 15

3.12 T1

Description: Enter the T1 timer.

The T1 timer, per CCITT specifications, is the period of time before retransmission of a frame may be initiated at the LAPB Level 2.

Refer to Section 1.2 for background information.
Valid Entries: 2 - 200, even only, in units of a tenth of a second.

3.13 T3

Description: Enter the T3 timer.

The T3 timer, per CCITT specifications, is the period of time at which an idle channel is considered to have been in the idle state excessively long. The indication of this situation is passed to the PH to assure that the channel is idle and ready to be set for operation once again. The duration of the T3 timer must be greater than one tenth of the duration of the T1 timer to ensure that retransmission efforts are not aborted.

Refer to Section 1.2 for background information.
Valid Entries: 3 - 30, in units of a full second.

3.14 WNDSZ

Description: Enter the WNDSZ value.

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This value, named "I frames k" in CCITT terminology, is the maximum quantity of sequentially numbered LAPB Level 2 I-frames (Information) which the CPE device or PH can have unacknowledged at any time. I-frames, which are data packets, are number sequentially applying modulo 8 arithmetic. Modulo 8 arithmetic is strictly concerned with remainders when dividing by 8. For example, 27 modulo 8 equals 3 because three is the remainder when 27 is divided by eight. The possible remainders when dividing by 8 are 0 through 7. Hence, every I-frame has a number between 0 and 7.

Refer to Section 1.2 for background information.
Valid Entries: 0 - 7

3.15 DPIDB

Description: Enter the number of the PIDB which links the B-channel of the DSL resident on the unit (ISLU, IDCU, AIU) to the SM's PSU.

- ***NOTE:*** See "Note:" in the D RELPIDB field above.

Valid DPIDB Entries

Entry	Definition
1 - 5	Software Rlease: 5E12 and later: For OE type "E".
2 - 11	Software Release: 5E8 - 5E9(2) For OE type "I" Software Release: 5E10 and later. For OE type "I" or "K".
12 - 22	Software Release: 5E8 - 5E9(2) For OE type "G" or "M". Software Release: 5E10 and later. For OE type "G".

Data Rules:

If this field is entered, then the TS field must be entered.

This field must not be entered if the DSL is resident on a RISLU.

For ISLU, if this field is entered, the value must not equal the value expressed by the fifth and sixth digits of the DSL OE, or that value plus 16.

If this field is entered, then the DPIDB field must be entered.

B-channel Time Slots, for a given combination of SM, ISLU, and PIDB, may not be duplicated on other DSL forms or AMLBDSL forms.

If the DSL is resident on a RISLU, this field must not be entered.

For 5E9(1) and later, the combination of SM, IDCU, DPIDB and TIMESLOT must be unique. DSLs cannot be assigned duplicate time slots on the following forms:

- DSL form - D-channel and B-channel time slots
- MISLINK form - D-channel time slots
- RTERM form - EOC and TMC PRI/NPRI
- time slots

For 5E10 and later:

For manually assigned D RELPIDBs and/or PPB1/PPB2 DPIDBs, with DSL OE originating equipment type of "G":

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- PIDB must have proper Packet Switching Unit shelf assigned with matched PIDB NO. on the EQIDCU form. The PSU shelf, which is specified by the first digit of the D ISCN and/or PPB1/PPB2 ISCN on the DSL forms, must be defined on the EQIDCU form with a PIDB TYPE of "PSU".
- must have a corresponding PIDB NO. with a PIDB TYPE of "PSU" assigned on the EQIDCU form.

3.16 TS

Description: Enter the B-channel Time Slot.

NOTE: See "Note:" in the D RELPIDB field above.
Valid Entries: 0 - 31

3.17 DS1

Description: Enter the IDCU DS1 which carries the D-channel time slot.

For IDCU (DSL OE "M" or "G"), the IDCU DS1 selection is optional, if not populated by the customer, ODA will select a DS1. If populated by the customer the D RELPIDB, D TIMESLOT, QTR TS and DS1 TS must be populated.
Valid Entries: 1 - 28

Data Rules:

If entered, this DS1 must be assigned as an IFAC row in the RT IFAC TERMINATION list on the RTERM form with SM, UNIT NUMBER and RTEX matching the corresponding values in the DSL OE.

For ISLU (DSL OE is set to "I", the DS1 field must be blank.

3.18 DS1 TS

Description: Enter the IDCU DS1 time slot.

For IDCU (DSL OE "M" or "G"), the IDCU DS1 TS selection is optional. If not populated by the customer, ODA will populated it. If populated by the customer, the D RELPIDB, D TIMESLOT, QTR TS and DS1 must be populated. This DS1 TS should be one of the time slots on the selected DS1. For ISLU (DSL OE is set to "I"), the DS1 TS field must be blank.
Valid Entries: 0 - 23, or blank

Data Rules:

The combination of SM, IDCU, IFAC and TIMESLOT must be unique. The following IDCU remote terminal ports cannot be assigned duplicate IFAC (DS1) time slots:

IFAC TIMESLOTS

Form	Timeslots
DSL	D-channel (DS1 and DS1 TS) and B-channel (PPB1/2 DS1 and DS1 TS) time slots
MISLINK	D-channel time slots (DS1 and DS1 TS)
NAILUP	nailup/hairpin time slots: C PATH DS1 and NC PATH DS1 for the IFACs. C PATH1 DS0
RTERM	Fixed time slots for the primary and secondary TMC and EOC are assigned by ODA on the primary IFAC (the 1st IFAC in the RT TERM/IFAC list) and backup IFAC (EOC/TMC BKUP TERM) for the RT.

The fixed time slots are TS 11 for EOC and TS 23 for TMC. If ZCS (SUP METHOD is "303ZC" on the RTERM form) signaling is used by the IFAC, additional guard channels (TS) are required; they are TS 10 for EOC and TS 0 and 22 for TMC. ISDN applications (DSL and MISLINK form) are not allowed when ZCS

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signaling is used.

3.19 NEW TN

This is a Recent Change field added in 5E7.

3.20 BILL TN

Description: Enter a 7 or 10-digit TN to be billed if the TN to be billed is different from the TN on this form.

Enter a valid 7-digit TN if calls are to be billed to a TN within the local office.

Enter a valid 10-digit number if calls are to be billed to a TN outside the local office.

Valid BILL TN Entries

Entry	Definition
NXXXXXX	NXX is a valid office code defined in the OFFICE CODE field on an NOC form.
NPANXXXXXX	Any 10-digit number is acceptable; however, normal expected values are valid NPA and NXX codes.
ZXXXXXX	Z is 0 or 1. This is normally used for OUTWATS billing purposes. The first three digits must be defined in the OFFICE CODE field on an NOC form.

Data Rules:

For 5E12 and later, if the BILL TN(s) on the DSL form have an NXX or NPA/NXX combination without a matching OFFICE CODE and/or NPA/OFFICE CODE combination defined on the NOC form of this office, then this condition is valid only if you allow billing to NXX codes served by other offices or if the first digit of the NXX code is 0 or 1 showing OUTWATS billing.

3.21 RMK

Description: This field may be used for any descriptive comment.
Valid Entries: A maximum of sixteen characters may be entered.

4. FORM ENTRIES - 5907-3, 6 RECORDS

4.1 H PVC LCN

Description: Enter the Highest Logical Channel Number that can be assigned to a Permanent Virtual Circuit.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If the H PVC LCN field is entered, then a corresponding PSPVC form (5923 Record) must be entered with a value entered in the LCN field which is less than or equal to the value entered in this field.

4.2 L IN LCN

Description: Enter the Lowest Incoming Logical Channel Number.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If the H PVC LCN field is entered, and this field is entered, then the value in this field must be one greater

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than the value in the H PVC LCN field.

If this field is entered, then the H IN LCN field must be entered in order to indicate the range of incoming LCNs.

If the H PVC LCN field is not entered, and this field is entered, then the value in this field must equal 1.

If MLHG and TERM are entered and CHL SEL equals "N", L IN LCN or L 2W LCN must be entered.

4.3 H IN LCN

Description: Enter the Highest Incoming Logical Channel Number.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If this field is entered, then the L IN LCN field must be entered in order to indicate the range of incoming LCNs.

If the L IN LCN field is entered, then the value in the H IN LCN field must be greater than or equal to the value in the L IN LCN field.

4.4 L 2W LCN

Description: Enter the Lowest Two-Way Logical Channel Number.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If the H IN LCN field is entered, and this field is entered, then the value in this field must be greater than the value in the H IN LCN field. Thus, there may be a gap between the Incoming LCN range and the Two-way LCN range.

If the H IN LCN field is not entered, and the H PVC LCN field is entered and this field is entered, then the this field must have a value greater than the H PVC LCN value.

If this field is entered, then the H 2W LCN field must be entered in order to indicate the range of two-way LCNs.

If MLHG and TERM are entered and CHL SEL equals "N", L IN LCN or L 2W LCN must be entered.

4.5 H 2W LCN

Description: Enter the Highest Two-Way Logical Channel Number.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If this field is entered, then the L 2W LCN field must be entered in order to indicate the range of two-way LCNs.

If the L 2W LCN field is entered, then the value in this field must be greater than or equal to the value in the L 2W LCN field.

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4.6 L OUT LCN

Description: Enter the Lowest Outgoing Logical Channel Number.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If this field is entered, then the H OUT LCN field must be entered in order to indicate the range of outgoing LCNs.

If the H 2W LCN field is entered, and this field is entered, then the value entered in this field must be greater than the value entered in the H 2W LCN field. Thus, there may be a gap between the incoming Two-way LCN range and the Outgoing LCN range.

If this field and the H PVC LCN field are entered, and the H IN LCN and the H 2W LCN fields are not entered, then the value entered in this field must be greater than the value entered in the H PVC LCN field.

4.7 H OUT LCN

Description: Enter the Highest Outgoing Logical Channel Number.

Refer to Section 1.3 for background information.
Valid Entries: 1 - 127

Data Rules:

If this field is entered, then the L OUT LCN field must be entered in order to indicate the range of outgoing LCNs.

If the L OUT LCN field is entered, then the value entered in this field must be greater than or equal to the value entered in the L OUT LCN field.

4.8 BUSY LIMIT

Description: Enter the busy limit for this MLHG terminal. The busy limit represents the maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included in the incoming call count but are not restricted by the busy limit.

Software Release: 5E8 and later
Valid Entries:
- If CHL SEL is "Y": 1 - 269
- If CHL SEL is "N": 1 - 127

Data Rules:

This parameter is applicable to MLHG members only. If MLHG and TERM are not entered, BUSY LIMIT must not be entered.

If MLHG and TERM are entered, BUSY LIMIT should be set according to the rules that follow. When BUSY LIMIT is not entered, the maximum value for the applicable rule will be assigned.

- If the DSL is on a PH3 and CHL SEL equals "N", BUSY LIMIT must be less than or equal to the sum of IN LCNs plus 2W LCNs.

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- If CHL SEL equals "Y", BUSY LIMIT must be less than or equal to the sum of IN LCNs and 2W LCNs of all associated packet services (PPB1, PPB2, DPKT, and ODB) with CHL SEL set to "Y" for this user.

4.9 ICB

Description: Is the ICB feature desired?

The ICB feature prevents the user from receiving incoming virtual calls. The user may still originate outgoing virtual calls.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(1) and earlier, if this field is "Y", then the L IN LCN and H IN LCN fields must not be entered.

4.10 OCB

Description: Is the OCB (Outgoing Calls Barred) feature desired?

The OCB feature prevents the user from originating outgoing virtual calls. The user may still receive incoming virtual calls.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(1) and earlier, if this field is "Y", then the L OUT LCN and H OUT LCN fields must not be entered.

If the ICB field is "N", and the OCB field is "Y", then the L IN LCN and H IN LCN fields must be entered to provide the incoming data transmission.

If the ICB field is "Y", and the OCB field is "N", then the L OUT LCN and H OUT LCN fields must be entered to provide the outgoing data transmission.

4.11 PMDR GRP

Description: Enter the Packet MDR (Message Detail Recording) group name associated with the TN for PPB1 or PPB2.

Software Release: 5E7 and later
Valid Entries: 1 - 8 characters

Data Rules:

When PMDR GRP is entered, PMDR ACT must be entered. When PMDR GRP is not entered, PMDR ACT must not be entered.

If B1 SERV/B2 SERV is not entered or is not "X25", PMDR GRP and PMDR ACT must not be entered.

4.12 PMDR ACT

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Description: Is the Packet MDR Group associated with the PPB1 or PPB2 TN activated? This field does not have a default value.

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

When PMDR GRP is entered, PMDR ACT must be entered. When PMDR GRP is not entered, PMDR ACT must not be entered.

If B1 SERV/B2 SERV is not entered or is not "X25", PMDR GRP and PMDR ACT must not be entered.

4.13 SEND TPC

Description: The Send Throughput Class is the bits per second that a virtual call sends data.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200,
- 2400, 4800, 9600, or 19200

4.14 SEND PKTSZ

Description: The Send Packet Size is the maximum number of bytes of data in a packet (excluding control type information) that can be sent.
Default: 128
Valid Entries: 128, 256

Data Rules:

If the FCPN (Flow Control Parameter Negotiation) field is "N", then this field must be 128. Refer to the description of the FCPN field.

4.15 SEND PKTWD

Description: Enter the number of data packets that the CPE device can have unacknowledged, on a sending basis, at any time.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if PPB1/PPB2 SEND PKTWD is not 2, PPB1/PPB2 FCPN must be "Y".

4.16 SEND MCT

Description: Enter the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 64 - 128 (kbps), in increments of 8

4.17 RCV TPC

Description: The Receive Throughput Class is the bits per second that a virtual call receives data.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200,

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- 2400, 4800, 9600, or 19200

4.18 RCV PKTSZ

Description: The Receive Packet Size is the maximum number of bytes of data in a packet (excluding control type information) that can be received.
Default: 128
Valid Entries: 128, 256

Data Rules:

If the FCPN is "N", then this field must be 128. Refer to the description of the FCPN field.

4.19 RCV PKTWD

Description: Enter the number of data packets that the CPE device can have unacknowledged, on a receiving basis, at any time.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if PPB1/PPB2 RCV PKTWD is not 2, PPB1/PPB2 FCPN must be "Y".

4.20 RCV MCT

Description: Enter the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds the RCV MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 64 - 128 (kbps), in increments of 8

4.21 FCPN

Description: Is Flow Control Parameter Negotiation desired?

The transmission of data between a CPE device and a PH is controlled separately for each direction and is controlled by the receiver of the data. This is, in CCITT nomenclature, referred to as flow control. An additional aspect of flow control is the ability of the PH to limit the rate at which it accepts packets, when it recognizes network congestion. FCPN allows the PH and the CPE device to negotiate the Window Size and the Packet Size (128 or 256 bytes) on a per-call basis.

Required Field.
Default: N
Valid Entries: Y, N

4.22 TPCN

Description: Is TPCN (Throughput Class Negotiation) desired?

TPCN allows the sending and receiving entities to negotiate the bits per second to be transmitted in either direction, on a per-call basis. Both the sending and receiving party must subscribe to this service for the negotiation to transpire.

Required Field.
Default: N

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Valid Entries: Y, N

4.23 REV CHARGE

Description: Will the called CPE device accept the charge for a call from a Protocol Handler?

Required Field.
Default: N
Valid Entries: Y, N

5. FORM ENTRIES - 5907-4, 7 RECORDS

5.1 LCP

Description: Will Local Charge Prevention be activated? When LCP is "Y", all the X.25 outgoing calls from this user will be Reverse Charged and any X.25 incoming calls that contain Reverse Charge will be cleared.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

LCP is not allowed with Reverse Charge. If LCP is "Y", then REV CHARGE must be "N".

5.2 IECPDNIC

Description: Enter a 4-digit Data Network ID Code for Interexchange Carrier Pre-select.
Valid Entries: 0001 - 9999

Data Rules:

This entry must be defined in the DNIC field on a PSDNICRI form (5921 Record).

5.3 FSA

Description: Is FSA (Fast Select Acceptance) desired?

The Fast Select feature allows a CPE (customer premise equipment) device to receive up to 128 bytes of user data with call setup and clearing packets.

Required Field.
Default: N
Valid Entries: Y, N

5.4 IA

Description: Is IA (Intercom Addressing) desired?

ISDN Intercom Addressing permits the ISDN user to access other users on the 5ESS Switch with a 4-digit or 7-digit number.

Required Field.
Default: N
Valid Entries: Y, N

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5.5 PB GRP

Description: Enter the PBG (Packet Business Group). Do not enter a value if this channel is not a member of a PBG.

The Packet Switching Data Business Group Service feature enables the customer to set up and administer intra-switch PBGs by assigning a PBG number to each X.25 termination to distinguish between intra-PBG and other calls on the AMA record.

An MLHG will be assigned to a PBG by associating the PBG with an MLHG on an MLHG form. The DSL form should only be used to assign a PBG if the TN or MLHG member has an associated TN.
Valid Entries: 1 - 100

Data Rules:

If this field is entered, then the TN field must be entered.

5.6 X25VER

Description: Enter the X.25 CCITT version supported for this DTE (Data Terminating Equipment).

Software Release: 5E6 and later
Required Field.
Default: 1984
Valid Entries: 1980, 1984

5.7 CALL TN

Description: For this DTE, will the Calling TN be used as the Billing TN in the AMA record? The Calling TN is received in the Call Request Packet. For more information see Division 2, Section 5B, "Enhancements To X.25 Packet Switching For Trusted DTE".

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

CALL TN must be "N" if B1 SERV/B2 SERV is unknown or if B1 SERV/B2 SERV is not "X25".

5.8 CALL ID

Description: Should the Calling ID be allowed to be received from the DTE as a Lucent Technologies Defined Facility Marker? If "Y" is entered , the Call ID received in the call request packet will be used as the Call ID for the call. If "N" is entered, the 5ESS Switch generates a Call ID for the call.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

CALL ID must be "N" if B1 SERV/B2 SERV is unknown or if B1 SERV/B2 SERV is not "X25".

5.9 DIS SCR

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Description: Will the Directory Number Screening Indicator be disabled? The DN Screening Indicator checks the Calling TN received in the Call Request Packet for the correct 11-digit format. With the Trusted DTE feature enabled, it is assumed that the calling DTE has already screened the Calling TN.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

DIS SCR must be "N" if B1 SERV/B2 SERV is unknown or if B1 SERV/B2 SERV is not "X25".

5.10 ICP

Description: Are originating or terminating packet calls denied? Intercept, in the packet-switched world, is a packet message denying service.

Required Field.
Default: N
Valid Entries: Y, N

5.11 HUNT NOTIF

Description: Indicate the Hunting Notification procedure to be used for processing an X.25 CLAMN (Called Line Address Modified Notification) facility and a modified address for this Multi-Line Hunt Group member.

The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet-mode hunt terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed.

If HUNT NOTIF is blank, the CLAMN feature is not applicable.

Software Release: 5E8 and later
Valid Entries:

Valid HUNT NOTIF Entries

Entry	Definition
YES	The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
NO	The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
OLD	The X.25 CLAMN procedure that existed prior to the 5E8 Software Release is used.

Data Rules:

This parameter is applicable to MLHG members only. If MLHG and TERM are not entered, HUNT NOTIF must not be entered.

If MLHG and TERM are entered, HUNT NOTIF must be entered.

If HUNT NOTIF is "YES", TN must be entered.

5.12 SUST

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Description: Is packet termination denied?

Required Field.
Default: N
Valid Entries: Y, N

5.13 CUGPX

Description: Enter the Preferential Customer CUG Index.

Refer to Closed User Groups description in Section 1 of this form for background information.
Valid Entries: 0 - 99

Data Rules:

If a CUGPX is entered, then it must be defined in the CUG IDX field on a PSCUG form (5924 Record).

If a TN and CUGPX are entered, then a PSCUG form must exist such that the PKT TN and CUG IDX fields equal, respectively, the TN and CUGPX on this form.

If an MLHG, TERM, and CUGPX are entered, then a PSCUG form must exist such that the PKT MLHG, PKT TERM, and CUG IDX fields equal, respectively, the MLHG, TERM, and CUGPX on this form.

5.14 CUGOA

Description: Is CUGOA (Closed User Group Outgoing Access) desired?

The CUGOA indicator permits CUG members to access CPE devices that do not belong to a CUG (e.g., public network), or CPE devices that belong to a CUG with Incoming Access.

Refer to Closed User Groups description in Section 1 of this form for background information.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CUGOA is "Y", the corresponding PSCUG form (5924A Record) must be defined with the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services, respectively.

5.15 CUGIA

Description: Is CUGIA (Closed User Group Incoming Access) desired?

The CUGIA indicator permits CUG members to access CPE devices that do not belong to a CUG (e.g., public network), or CPE devices that belong to a CUG with Outgoing Access.

Refer to Closed User Groups description in Section 1 of this form for background information.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CUGIA is "Y", the corresponding PSCUG form (5924A Record) must be defined with the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services, respectively.

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TS	LGC															
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
0				3	5	7	9	11				2	4	6	8	10
1	11				3	5	7	9	10				2	4	6	8
2	9	11				3	4	7	8	10				2	4	6
3	7	9	11				3	5	6	8	10				2	4
4	5	7	9	11				3	4	6	8	10				2
5	3	5	7	9	11				2	4	6	8	10			
6		3	5	7	9	11				2	4	6	8	10		
7			3	5	7	9	11				2	4	6	8	10	
8				3	5	7	9	11				2	4	6	8	10
9	11				3	5	7	9	10				2	4	6	8
10	9	11				3	4	7	8	10				2	4	6
11	7	9	11				3	5	6	8	10				2	4
12	5	7	9	11				3	4	6	8	10				2
13	3	5	7	9	11				2	4	6	8	10			
14		3	5	7	9	11				2	4	6	8	10		
15			3	5	7	9	11				2	4	6	8	10	
16				3	5	7	9	11				2	4	6	8	10
17	11				3	5	7	9	10				2	4	6	8
18	9	11				3	4	7	8	10				2	4	6
19	7	9	11				3	5	6	8	10				2	4
20	5	7	9	11				3	4	6	8	10				2
21	3	5	7	9	11				2	4	6	8	10			
22		3	5	7	9	11				2	4	6	8	10		
23			3	5	7	9	11				2	4	6	8	10	
24				3	5	7	9	11				2	4	6	8	10
25	11				3	5	7	9	10				2	4	6	8
26	9	11				3	4	7	8	10				2	4	6
27	7	9	11				3	5	6	8	10				2	4
28	5	7	9	11				3	4	6	8	10				2
29	3	5	7	9	11				2	4	6	8	10			
30		3	5	7	9	11				2	4	6	8	10		
31			3	5	7	9	11				2	4	6	8	10	

Figure 1 TIMESLOT ASSIGNMENT VS LGC AND D REL PIDB ENTRIES

---

dsl 5ESS Switch
SCREEN 1 OF 5 OFFICE DATA ADMINISTRATION
(5907-1/2) DIGITAL SUBSCRIBER LINE

*1. DSL OE _ _____ 14. ACSR INH _ 26. PREX N
15. MDPKT _
4. D ISCN _____ 16. MTERM _
#5. D SERV _____ 17. D RELPIDB __
6. B1 SERV DMD 18. D TIMESLOT __
7. B2 SERV DMD 19. QTR TS _
BRI TYPE ___ 20. DS1 __
9. PM GRP _____ 21. DS1 TS __
10. ACSR GRP _____ 22. CUT NPA ___
11. DFLT SRV _____ 23. CUT DGTS ____
12. DSL CLS STD 24. TSTLINE N
13. RSTR MP _ 25. EL N

---

dsl 5ESS Switch
SCREEN 2 OF 5 OFFICE DATA ADMINISTRATION
(5907-1/2) DIGITAL SUBSCRIBER LINE

PPB1 PPB1 PPB1

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27. TN _____ 38. T1 ___ 49. L IN LCN ___
28. MLHG ____ 39. T3 __ 50. H IN LCN ___
29. TERM ____ 40. WNDSZ _ 51. L 2W LCN ___
30. LCC ___ 41. DPIDB __ 52. H 2W LCN ___
31. RAX __ 42. TS __ 53. L OUT LCN ___
32. LNR HNT TN _____ 43. DS1 __ 54. H OUT LCN ___
33. HUNT DEACT N 44. DS1 TS __ 55. BUSY LIMIT ___
34. CHL SEL N NEW TN _____ 56. ICB N
35. ISCN _____ 46. BILL TN _____ 57. OCB N
36. RATE ____ 47. RMK _____
37. N2 __ 48. H PVC LCN ___

---

dsl 5ESS Switch
SCREEN 3 OF 5 OFFICE DATA ADMINISTRATION
(5907-1/2) DIGITAL SUBSCRIBER LINE

PPB1 PPB1 PPB1
58. PMDR GRP _____ 69. TPCN N 80. ICP N
59. PMDR ACT _ 70. REV CHARGE N 81. HUNT NOTIF ___
60. SEND TPC 9600 71. LCP N 82. SUST N
61. SEND PKTSZ 128 72. IECPDNIC ____ 83. CUGPX __
62. SEND PKTWD 2 73. FSA N 84. CUGOA N
63. SEND MCT ___ 74. IA N 85. CUGIA N
64. RCV TPC 9600 75. PB GRP ___
65. RCV PKTSZ 128 76. X25VER 1984
66. RCV PKTWD 2 77. CALL TN N
67. RCV MCT ___ 78. CALL ID N
68. FCPN N 79. DIS SCR N

---

dsl 5ESS Switch
SCREEN 4 OF 5 OFFICE DATA ADMINISTRATION
(5907-1/2) DIGITAL SUBSCRIBER LINE

PPB2 PPB2 PPB2
86. TN _____ 97. T1 ___ 107. H PVC LCN ___
87. MLHG ____ 98. T3 __ 108. L IN LCN ___
88. TERM ____ 99. WNDSZ _ 109. H IN LCN ___
89. LCC ___ 100. DPIDB __ 110. L 2W LCN ___
90. RAX ___ 101. TS __ 111. H 2W LCN ___
91. LNR HNT TN _____ 102. DS1 __ 112. L OUT LCN ___
92. HUNT DEACT N 103. DS1 TS __ 113. H OUT LCN ___
93. CHL SEL N NEW TN _____ 114. BUSY LIMIT ___
94. ISCN _____ 105. BILL TN _____ 115. ICB N
95. RATE ____ 106. RMK _____ 116. OCB N
96. N2 __

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```
dsl                        5ESS Switch          _
SCREEN 5 OF 5              OFFICE DATA ADMINISTRATION
(5907-1/2)                 DIGITAL SUBSCRIBER LINE

        PPB2                    PPB2                    PPB2
117. PMDR GRP  ________   128. TPCN       N      139. ICP        N
118. PMDR ACT  _          129. REV CHARGE N      140. HUNT NOTIF ___
119. SEND TPC  9600       130. LCP        N      141. SUST       N
120. SEND PKTSZ 128       131. IECPDNIC   ____   142. CUGPX      __
121. SEND PKTWD 2         132. FSA        N      143. CUGOA      N
122. SEND MCT  ___        133. IA         N      144. CUGIA      N
123. RCV TPC   9600       134. PB GRP     ___
124. RCV PKTSZ 128        135. X25VER     1984
125. RCV PKTWD 2          136. CALL TN    N
126. RCV MCT   ___        137. CALL ID    N
127. FCPN      N          138. DIS SCR    N
```

Figure 2 SAMPLE DSL FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1I: 5908-1/2/3/4/5/6/7/8/9/10/11/12/13 RECORD DIGITAL SUBSCRIBER LINE USER - DSLUSR

1. GENERAL

The 5908 Digital Subscriber Line User Records are available with 5E5 and later Software Releases. Refer to the Multipoint Digital Subscriber Line Feature Description (Division 2, Section 1AA) before entering these records. Note: A DSL (Digital Subscriber Line) can also be referred to as a BRI (Basic Rate Interface).

5908 Records need not be entered when a DSL is used solely for B-channel Permanent Packet services or when a DSL is provisioned for users that will be added later.

1.1 Major Purposes of DSLUSR

The 5908 Records are used for four major purposes:

1. DSLUSR defines the associated TN(s) and status of a DSL user. The OE field on this form is the field that associates a user with a particular DSL. This DSL is defined on a DSL form (5907-1 Record) in the DSL OE field. These two fields are the only link between a DSL form and a DSLUSR form.
2. DSLUSR defines the circuit switching (voice and data) attributes of a DSL user.
3. DSLUSR defines the D-channel packet switching attributes of a DSL user.
4. DSLUSR defines the On Demand B-channel packet switching attributes of a DSL user.

1.2 Optional Keys

The DSLUSR form has nine optional keys that are grouped into six "functions" (explained below). The optional keys are:

1. CKT TN (Circuit Telephone Number)
2. DPKT TN (D-channel Packet Telephone Number)
3. ODB TN (On Demand B-channel Telephone Number)
4. CKT MLHG (Circuit Multi-Line Hunt Group Number)
5. CKT TERM (Circuit Multi-Line Hunt Group Terminal Number)
6. DPKT MLHG (D-channel Packet Multi-Line Hunt Group Number)
7. DPKT TERM (D-channel Packet Multi-Line Hunt Group Terminal Number)
8. ODB MLHG (On Demand B-channel Multi-Line Hunt Group Number). This key is available for 5E8 and later Software Releases.
9. ODB TERM (On Demand B-channel Multi-Line Hunt Group Terminal Number). This key is available for 5E8 and later Software Releases.

The combination of CKT MLHG/CKT TERM is considered one function. DPKT MLHG/DPKT TERM is considered one function. ODB MLHG/ODB TERM is considered one function. CKT TN, DPKT TN, and ODB TN are each considered separate functions.

At least one function must be entered for each DSL user (i.e., a CKT TN entry, a DPKT TN entry, an ODB

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TN entry, a CKT MLHG and a CKT TERM entry, a DPKT MLHG and a DPKT TERM entry, or an ODB MLHG and an ODB TERM entry).

Any combination of keys or functions that does not violate the following conditions is valid:

- An entry cannot be made in both the CKT TN field and the CKT MLHG and CKT TERM fields.
- An entry cannot be made in both the DPKT TN field and the DPKT MLHG and DPKT TERM fields.
- An entry cannot be made in both the ODB TN field and the ODB MLHG and ODB TERM fields.

For a given DSL, the number of DSLUSR forms with either a DPKT TN entry or a combined DPKT MLHG/DPKT TERM entry must not exceed the value entered in the MDPKT field on the DSL form. The MDPKT field indicates how many users are allowed D-channel X.25 Packet Switching service on a DSL.

1.3 Maximum Users

The (R)ISLU's ((Remote)Integrated Services Line Unit) LCEN (Line Card Equipment Number) or IDCU's (Integrated Digital Carrier Unit) ILEN (Line Equipment Number) entered in the OE field of this form directly affects the quantity of users permitted on a DSL. If the LCEN is defined on an ISLULC form with the TYPE field set to "PULC" or "ULC" (U-card), a maximum of eight active users may use the DSL. The IDCU is also restricted to a maximum of eight users to a DSL.

1.4 Modem Pool Restrictions

If a DSL form has an entry of "XMP" in the D SERV field, indicating that the DSL will be used for the Terminal Adaptor component in a Modem Pool group, then the following must be true.

- There must a DSLUSR form associated with the DSL (the OE on this form must match the DSL OE on a DSL form).
- The Pool is a Hunt Group (the only key fields defined on this form are DPKT MLHG / DPKT TERM).
- The H PVC LCN, L IN LCN, H IN LCN, L OUT LCN and H OUT LCN fields (under the D-CHANNEL PACKET SWITCHING header) must not be entered.
- The DPKT L 2W LCN and DPKT H 2W LCN fields must equal 1; this item, in conjunction with the previous item, limits the DSL to the use of a single Two-way SVC (Switched Virtual Circuit).
- The DPKT CUGPX field must be entered since access to Modem Pools, either Public or Private, must be carefully restricted; a Preferential CUG (Closed User Group) provides a secure sub-network.
- DPKT HUNT NOTIF must be blank, DPKT HUNT DEACT must be "N", DPKT NOTIF must not equal "COND", and DPKT CHL SEL must equal "N".
- For 5E9(1) and later, DPKT MLHG TN must be blank.

1.5 Shared TNs

Shared TNs are TNs that can be assigned to multiple ISDN terminals. If a TN from the SHARED LIST on an SHTN form (5902 Record) appears in the CKT TN field of this form, then the TERM TYPE and OE fields on this form must be entered.

1.6 Duplicate Values

Duplicate values are not allowed among the DPKT MLHG field on a DSLUSR form, the ODB MLHG field

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on a DSLUSR form, the CKT MLHG field on a DSLUSR form, the PPB1 MLHG field on a DSL form, the PPB2 MLHG field on a DSL form, and the MLHG field on an MLHLN form (5111 Record), with the following exceptions:

- A CKT MLHG on a DSLUSR form may duplicate an MLHG on an MLHLN form, CKT TERM on the DSLUSR form and TERM on the MLHLN form are different values;
- A DPKT MLHG on a DSLUSR form may duplicate an MLHG on an MLHLN form, if DPKT TERM on a DSLUSR form and TERM on an MLHLN form are the same, as used for Modem Pooling;
- For 5E8 and later, PPB1 MLHG and PPB2 MLHG on the DSL form and DPKT MLHG (Non-Modem Pooling) and ODB MLHG on the DSLUSR form and PKT MLHG on the XAT form may be the same. The corresponding TERM entries must be different if their CHL SEL fields are "N". If the corresponding CHL SEL fields are "Y", the TERM entries must be the same. (CHL SEL is not valid with XAT.)

1.7 Closed User Groups

A CUG (Closed User Group) is a sub-network of CPE devices that can communicate with each other. A CPE device can belong to multiple CUGs. The primary purpose of a CUG is to provide security to its members, since a CUG member cannot communicate with a CPE device which is not in the same CUG. A CPE device that belongs to multiple CUGs can indicate the CUG of choice, in the call request packet or the incoming call packet, for transmitting and receiving packets, respectively. If a CUG is not specified, the Preferential CUG will be selected. Refer to the description of the CUGPX field (4.32).

A CUG with Outgoing Access allows its member CPE devices to originate virtual calls to CPE devices that do not belong to any CUG (e.g., public network) or to CPE devices that belong to a CUG with Incoming Access.

A CUG with Incoming Access allows any CUG or from CPE devices that belong to a CUG with Outgoing Access.

The CUGPX, CUGOA, and CUGIA fields in this form implement CUG access features.

1.8 CCITT Terminology

This section briefly describes the CCITT (International Telegraph and Telephone Consultative Committee) recommendation for the X.25 protocol. DTE (Data Terminal Equipment), in CCITT parlance, is equivalent to the CPE (Customer Premises Equipment) attached to the DSL. DCE (Data Circuit Equipment) is equivalent to a PH (Protocol Handler) on a PSU (Packet Switching Unit) within the 5ESS Switch.

Level 2 of the X.25 protocol is used to describe the linkage between a CPE device and the PH on the 5ESS Switch.

Level 3 of the X.25 protocol is used to describe the linkage between two CPE devices.

1.9 Figure 1 References

The conditions that affect the LCC and RAX combinations entered on this form are contained in Figure 1.

Figure 1 also lists the CLASS OF SERVICE required on an LCC form (5306 Record) for BRCS features assigned to optional key fields on this DSLUSR form and the CLASS OF SERVICE required for assignments other than BRCS features.

1.10 Duplication of Call Appearance Assignments

CA (Call Appearance) button assignments previous to 5E9(1) could be made with the DSLUSR (using the

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CA and CA QTY fields) and SHTN forms (using the CA and NUM fields).

For 5E9(1) and later, several CA fields defining DNAs (Directory Number Appearances) which formerly had been manually programmed at the terminal were added to the DSLUSR, SHTN, and CAICOM forms. Button assignments now can be made with the AU DNA and AU DNA QTY, DNA and DNA QTY for DPKT, K56 DNA and K56 DNA QTY, K64 DNA and K64 DNA QTY, DNA and DNA QTY for ODB, SP DNA and SP DNA QTY fields on DSLUSR, the SP DNA and AU DNA fields on the SHTN form, as well as the CA and CA QTY fields on the CAICOM form (5984 Record).

Each CA must be unique. See Division 2, Section 1AM for more information on how to determine if call appearances are duplicated.

Duplicate button assignments are not allowed when:

- CKT TN on DSLUSR equals SHARED LIST TN on SHTN; or
- CKT MLHG and TERM on DSLUSR equals MLHG and TERM NBR (both SHARED LIST) on SHTN.

For 5E9(1) and later, duplicate button assignments are not allowed when:

- at least two of the fields CKT TN on DSLUSR, SHARED LIST TN on SHTN, or TN on CAICOM are equal;
- CKT MLHG and TERM on DSLUSR equals MLHG and TERM NBR (both SHARED LIST) on SHTN; or
- CKT MLHG TN on DSLUSR equals TN on CAICOM.

1.11 Recent Change View

The corresponding Recent Change View for this form is 23.2.

2. FORM ENTRIES, 5908-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 (*) CKT TN

Description: The Circuit Telephone Number of the DSL (if it has one).
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits must be defined in the OFFICE CODE field on a NOC form (5501 Record).

This field or the MLHG TN field must have an entry if the BUSY MONITOR field is "Y". BUSY MONITOR indicates that this terminal can be monitored via the Busy Lamps of an ISDN Attendant MLHG.

This field must not be entered if the B1 SERV and B2 SERV fields on the DSL form for this DSL are set to "X25". This combination indicates that both B-channels are Permanent Packet, solely used for X.25

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Packet Switched Data. Thus, there can be no circuit-switched (Voice or Data) services on either B-channel.

If CKT TN has an associated CLASS OF SERVICE that is not "ISDN", all MWFD forms assigned on the LINEFA, BFG or an associated CLUSTR form must have FEATURE BUTTON, DIAL CODE OR BUTTON, and ISDN CALL PICKUP set to "N".

For 5E8 and later, the entry in the CKT TN field must be unique within the 5ESS Switch, with the exception that it may match only one of the following:

- The DPKT TN or DPKT MLHG TN entry on the same DSLUSR form, where DPKT CHL SEL is "N".
- The ODB TN or ODB MLHG TN entry on the same DSLUSR form, where ODB CHL SEL is "N".
- The PPB1 TN on the DSL form, for this DSL, where PPB1 CHL SEL is "N", if the PPB1 USR entry on this DSLUSR form is "Y".
- The PPB2 TN on the DSL form, for this DSL, where PPB2 CHL SEL is "N", if the PPB2 USR entry on this DSLUSR form is "Y".

For 5E8 and later, if no matches are made above, the entry in the CKT TN field must be unique within the 5ESS Switch, with the exception that it may match only one, two, or three of the following:

- The DPKT TN or DPKT MLHG TN entry on the same DSLUSR form, where DPKT CHL SEL is "Y".
- The ODB TN or ODB MLHG TN entry on the same DSLUSR form, where ODB CHL SEL is "Y".
- The PPB1 TN on the DSL form, for this DSL, where PPB1 CHL SEL is "Y", if the PPB1 USR entry on this DSLUSR form is "Y".
- The PPB2 TN on the DSL form, for this DSL, where PPB2 CHL SEL is "Y", if the PPB2 USR entry on this DSLUSR form is "Y".

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN or member TN. Multiple TNs are defined in the TN field on a MULTITN form (5114 Record). The TN entered in this field on the DSLUSR form may not duplicate a TN entered in the TN field on a MULTITN form.

The CKT TN must not have an ACSR (Automatic Customer Station Rearrangement) feature assigned to it if the PPB1 USR and/or PPB2 USR fields on this form are "Y". The ACSR feature does not support Permanent Packet B-channels.

If this field and the CKT MLHG and CKT TERM fields are not entered, then circuit switching services are not required. Therefore, under the CKT SWITCHING header, the SUST (deny termination) field will be assigned a value of "Y" and all the other fields must either not be entered or they must be left with their default values.

If this field or the combination of the CKT MLHG and CKT TERM fields are entered, then under the CKT SWITCHING header, the LCC, RAX, CSV CHL and CSD CHL fields must be entered. The LCC and RAX combination must be defined on a LCC form with a CLASS OF SERVICE of "ISDN" and a TERMINATING TREATMENT of "INDIV".

If the CKT TN has been assigned a Precedence and Preemption feature on a LINEFA form (5112 Record), a BFG form (5625 Record) or an associated CLUSTR form (5600 Record), then the Switching Module (first three digits of the OE field) must be defined on an EQIM form (5700 Record) with an entry in the CONFIGURATION field other than "BASIC". The "BASIC" SM configuration is available in 5E5 and later Software Releases. Refer to Division 8, Section 2 of this guide for a complete explanation of SM configurations. Note that SMs used for ISDN have a configuration of "LOADED".

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For 5E8 and later, if the CKT TN has been assigned a Call Pickup Terminating feature on a LINEFA form (5112 Record), a BFG form (5625 Record), or an associated CLUSTR form (5600 Record), and if the feature was defined on the PUTFD form (5605-2a/b Record) with FEATURE FUNCTION set to "HDIRPUBRG", then:

- if the DSL CLS is "STD" on the corresponding DSL form, and on this DSLUSR form EKTS is blank, then CSV LIMIT must be 1;
- for all other cases, CA QTY must be 1 or not entered.

If the CKT TN is entered, neither CSV LIMIT nor EKTS is entered, and DSL CLS is "STD" on the corresponding DSL form, then this CKT TN cannot be assigned a Call Pickup Terminating feature (defined on the PUTFD form) on the LINEFA form or on an associated BFG or CLUSTR form.

For 5E10 and later:
If CKT TN is entered and has either the DFLT TN USER field set to "Y" or the DPKT FIXED TEI field entered, then the corresponding LINEFA form (DSLUSR form CKT TN matches LINEFA form TN) cannot have BRCS features assigned on the LINEFA, BFG, or CLUSTR forms which are not allowed with NIT (Non-Initializing Terminal) features. NIT BRCS features, defined on the following forms:

- ASPFD form with CONTROL set to "NESS"
- EDSFD form
- MSFD form

are not allowed. They require the use of Initializing Terminals.

For 5E12 and later, if the first 3 digits of the 7-digit CKT TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, CKT TN must be 10 digits.

For 5E12 and later, when the TN(s) on the DSLUSR form have an NXX and/or NPA/NXX combination entered, the OFFICE CODE and/or NPA/OFFICE CODE combination must be defined on a NOC form.

For 5E12 and later, if the CKT TN(s) or CKT MLHG/CKT TERM(s) are assigned to an EPO POS NUM, the CKT LC/CKT RAX values on the DSLUSR form:

- Must have a CLASS OF SERVICE of "ISDN" on the associated LCC form.

or

- May have a CLASS OF SERVICE of "ISATND" with a TERM TYPE of "TYPED" on the DSLUSR form.

For 5E16 and later, when the CKT TN has been assigned a Direct Call Transfer to Voice Mail feature on a LINEFA form (5112 Record), a BFG form (5625 Record) or an associated CLUSTR form (5600 Record), then the CKT TN must also be defined on the DSLUSR form with a LCC/RAX value that corresponds to the "ISDN" CLASS OF SERVICE on the LCC form.

2.3 (*) DPKT TN

Description: The D-channel Packet Telephone Number of the DSL (if it has one).
Valid Entries:

- For 5E11 and earlier: NXXXXXX,
- where N is 2 - 9 and X is 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and

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- X is 0 - 9

Data Rules:

The first three digits must be defined in the OFFICE CODE field on a NOC form.

If this field is entered, then the DPKT MLHG and DPKT TERM fields must not be entered.

If this field and the DPKT MLHG and DPKT TERM fields are not entered, then D-channel services are not required. Therefore, under the DPKT (D-CHANNEL PACKET SWITCHING) header, the SUST field (deny termination) will be assigned a value of "Y" and the other fields must either not be entered or they must be left with their default values.

If this field is entered, then the following conditions apply to fields under the DPKT (D-CHANNEL PACKET SWITCHING) header:

- The LCC and RAX fields must be entered;
- The H PVC LCN field or the combination of the L IN LCN and H IN LCN fields or the combination of the L 2W LCN and H 2W LCN fields or the combination of the L OUT LCN and H OUT LCN fields must have an entry and if they are entered, their value must be from 1 to 15. LCN (Logical Channel Number) assignment for a D-channel is explained immediately preceding the LCN fields under the DPKT (D-CHANNEL PACKET SWITCHING) header.

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN or member TN. Multiple TNs are defined in the TN field on a MULTITN form. The TN entered in this field on the DSLUSR form may not duplicate a TN entered in the TN field on a MULTITN form.

For 5E8 and later, If DPKT TN is entered and OE is entered, DPKT NOTIF must be entered.

For 5E8 and later, when DPKT CHL SEL is "N", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form.
- It can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.

For 5E8 and later, when DPKT CHL SEL is "Y", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form.
- It can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.
- It must equal ODB TN if the corresponding ODB CHL SEL is set to "Y" on the same instance of the DSLUSR form.
- It must equal PPB1 TN (on the DSL form) if the corresponding PPB1 CHL SEL is set to "Y" and PPB1 USR on the DSLUSR form equals "Y".
- It must equal PPB2 TN (on the DSL form) if the corresponding PPB2 CHL SEL is set to "Y" and PPB2 USR on the DSLUSR form equals "Y".

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For 5E12 and later, when the DSLUSR forms have DFLT TN USER set to "N" and either DPKT CHL SEL or ODB CHL SEL set to "N", DPKT TN, ODB TN, DPKT MLHG TN, ODB MLHG TN, DPKT LNR HNT TN, and ODB LNR HNT TN must be unique.

For 5E12 and later, when the DSLUSR forms have DFLT TN USER set to "Y" and both DPKT TN and ODB TN are entered, DPKT TN must equal ODB TN.

For 5E12 and later, when the DSLUSR forms have DPKT CHL SEL and ODB CHL SEL set to "Y", and DPKT TN and/or ODB TN are entered, DPKT TN and ODB TN must both be entered and DPKT TN must equal ODB TN.

For 5E12 and later, if the first 3 digits of the 7-digit DPKT TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, DPKT TN must be 10 digits.

For 5E12 and later, when the DPKT and/or ODB LNR HNT TNs on the DSLUSR form have an NXX and/or NPA/NXX combination assigned, the NXX and/or NPA/NXX combination must be defined on the NOC form.

2.4 (*) ODB TN

Description: The On Demand B-channel Telephone Number of the DSL (if it has one).
Valid Entries:

- For 5E11 and earlier: NXXXXXX,
- where N is 2 - 9 and X is 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits must be defined in the OFFICE CODE field on a NOC form.

This telephone number must be unique within the 5ESS Switch with the following two exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form;
- it can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN or member TN. Multiple TNs are defined on in the TN field on a MULTITN form. The TN entered in this field on the DSLUSR form may not duplicate a TN entered in the TN field on a MULTITN form.

This field must not be entered if the PPB1 USR and PPB2 USR fields are "Y". This would indicate that both B-channels are dedicated to Permanent Packet, thus precluding the use of either B-channel in an On Demand mode. Another indication of the same case would be the B1 SERV and B2 SERV fields on the DSL form, for this DSL, both "X25".

If the MAXB CHL field is not entered, then this field must not be entered. The MAXB CHL indicates the number of B-channels to be used in a Demand basis; if none are to be used, there is no ODB (On Demand B-channel) service available.

If this field is not entered, then X.25 Packet Switching on the B-channel (On Demand) is not desired. Therefore, under the ODB (ON DEMAND B-CHANNEL) header, the SUST (deny termination) field will be assigned a value of "Y" and the other fields must either not be entered or they must be left with their

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default values.

If this field is entered, then the combination of the L IN LCN and H IN LCN fields or the combination of the L 2W LCN and H 2W LCN fields or the combination of the L OUT LCN and H OUT LCN fields must have entries. LCN (Logical Channel Number) assignment for an On Demand B-channel is explained immediately preceding the LCN fields in the ODB (ON DEMAND B-CHANNEL) portion of this TG-5 section.

If the field is entered, the LCC and RAX fields, under the ON DEMAND B-CHANNEL heading, must have entries which are defined on a LCC form where the corresponding CLASS OF SERVICE field is "ISDN" and the TERMINATING TREATMENT field is "INDIV".

If this field is entered, then the DSL form, for this DSL, must have the D SERV field "SX" and the B1 SERV and/or B2 SERV fields "DMD". The B1/B2 SERV field value of "DMD" indicates that the B-channel is to be used on a Demand basis.

For 5E7 and later, if this field is entered, ODB LCC and RAX must be entered. If this field and the OE field are entered, then the following fields under the ODB (ON DEMAND B-CHANNEL) header must also be entered:

- BAND
- ISCN1 (5E8 and later)
- N2,
- NOTIF (5E8 and later)
- ODB (5E8 and later)
- RATE
- T1,
- T3,
- WNDSZ

For 5E8 and later, when ODB CHL SEL is "N", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form.
- It can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.

For 5E8 and later, when ODB CHL SEL is "Y", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form.
- It can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.
- It must equal DPKT TN if the corresponding DPKT CHL SEL is set to "Y".
- It must equal PPB1 TN (on the DSL form) if the corresponding PPB1 CHL SEL is set to "Y" and PPB1 USR on the DSLUSR form equals "Y".
- It must equal PPB2 TN (on the DSL form) if the corresponding PPB2 CHL SEL is set to "Y" and PPB2 USR on the DSLUSR form equals "Y".

For 5E12 and later, if the first 3 digits of the 7-digit ODB TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE

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CODE, ODB TN must be 10 digits.

For 5E11 and later, when ACT on FOSYS form (5713-2 Record) where FID is 695 is set to "Y" (i.e., the AILA (Automatic ISDN Line Assignment) feature active) and ODB TN is entered or ODB MLHG and ODB TERM are entered, and ODB CHL SEL is "Y" on the corresponding DSLUSR form, the ODB ISCN fields on the DSLUSR form must be entered. For more information on this feature, see Division 2, Section 1BO.

2.5 (*) CKT MLHG

Description: The Multi-Line Hunt Group number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

This field must be defined in the MLHG field on the MLHG form (5110-1 Record).

If the CKT TERM is entered, then this field must be entered.

The entry in the CKT MLHG field must not be the same as the entry in the DPKT MLHG field.

This field must not be entered if the PPB1 USR and PPB2 USR fields are "Y". That would indicate that both B-channels are used for Permanent Packet and therefore circuit-switched services would not be available.

This field must be entered if the RMB (Remote Make Busy) field or the STH (Stop Hunt) field or the MMB SUBGROUP (Make Busy Subgroup) fields are entered, since these fields are only applicable to circuit-switched service for hunt groups and require a TN for identification.

If the LOCAL SM field on the defining MLHG form is entered, then the SM portion (first three digits) of the OE on this form must equal the value in the LOCAL SM field.

If this field and the CKT TERM and CKT TN fields are not entered, then circuit-switched services are not desired. Therefore, under the CKT SWITCHING header, the SUST field (deny termination) will be assigned a value of "Y" and all the other fields either must not be entered or they must be left with their default values.

If this field is entered, then under the CKT SWITCHING header, the LCC and RAX fields must be entered.

If this field is entered and the LCC and RAX (under the CKT SWITCHING header) are defined on a LCC form with a CLASS OF SERVICE "ISATND", then the CKT MLHG must be defined in the MLHG field of an MLHG form such that the MLHG FEATURE is defined on an MLHGFD form (5604 Record) with a HUNT TYPE of "ISAT". This is used for ISDN Attendants.

If both this field and the ATT MLHG field are entered, then the CKT MLHG must be defined in the MLHG field of an MLHG form such that the MLHG FEATURE is defined on an MLHGFD form (5604 Record) with a HUNT TYPE that is neither "ISAT" nor "MUPH".

For 5E8 and later, if the CKT MLHG/TERM has been assigned a Call Pickup Terminating feature on an MLHLNFA form (5113 Record), a BFG form (5625 Record), or an associated CLUSTR form (5600 Record), and if the feature was defined on the PUTFD form (5605-2a/b Record) with FEATURE FUNCTION set to "HDIRPUBRG", then:

- if the DSL CLS is "STD" on the corresponding DSL form, and on this DSLUSR form EKTS is blank, then CSV LIMIT must be 1;

- for all other cases, CA QTY must be 1 or not entered.

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If the CKT MLHG/TERM is entered, neither CSV LIMIT nor EKTS is entered, and DSL CLS is "STD" on the corresponding DSL form, then this CKT MLHG/TERM cannot be assigned a Call Pickup Terminating feature (defined on the PUTFD form) on the MLHLNFA form or on an associated BFG or CLUSTR form.

For 5E9(1) and later, if CKT MLHG is entered, ACD POS NUM cannot be entered.

For 5E11 and later, if CKT MLHG is entered, NI SAR LIST entries are not permitted.

2.6 (*) CKT TERM

Description: The MLHG terminal number.
Valid Entries: 1 - 2015 or 3001 - 3999 (for outdial terminals only)

Data Rules:

Outdial terminals must not belong to an MLHG (defined on an MLHG form) whose MLHG FEATURE is defined on an MLHGFD form with a HUNT TYPE of "MUPH".

If the CKT MLHG is entered, then this field must be entered.

This field must not be entered if the PPB1 USR and PPB2 USR fields are "Y". This combination would indicate that both B-channels are Permanent Packet, solely used for X.25 Packet Switched Data. Thus, there cannot be any circuit-switched (Voice or Data) services on either B-channel.

For 5E9(1) and earlier, ISAT (ISDN Attendant) MLHGs are limited to 40 terminals; CKT TERM in an ISAT MLHG may not exceed 40. For 5E9(2) and later, ISAT groups may have a maximum of 63 terminals; CKT TERM may not exceed 63. ISAT MLHGs are identified by a HUNT TYPE of "ISAT" on the associated MLHGFD form.

If the CKT MLHG and CKT TERM combination have been assigned a Precedence and Preemption feature on an MLHLNFA form (5113 Record), a BFG form or an associated CLUSTR form, then the Switching Module (first three digits of the OE field) must be defined on an EQIM form (5700 Record) with an entry in the CONFIGURATION field other than "BASIC".

2.7 (*) DPKT MLHG

Description: The Multiline Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

If the DPKT TERM field is entered, then this field must be entered.

The entry in the DPKT MLHG field must not be the same as the entry in the CKT MLHG field.

If the MLHG TN field, under the DPKT (D-CHANNEL PACKET SWITCHING) header, is entered, then this field must be entered.

If this field is entered, then under the DPKT (D-CHANNEL PACKET SWITCHING) header, the LCC and RAX fields must be entered.

If this field is entered, then DPKT L IN LCN or DPKT L 2W LCN must be entered.

If this field and the DPKT TERM and DPKT TN fields are not entered, then D-channel Packet Switching

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services are not desired. Therefore, under the DPKT (D-CHANNEL PACKET SWITCHING) header, the SUST field (deny termination) is assigned a value of "Y" and the other fields either must not be entered or must contain default values.

The DPKT MLHG and DPKT TERM fields must not be duplicated in the DSL NAME ID and (5411 Record) when the SERVICE CLASS entry on the OSPSDSL form is "XDB".

If the LOCAL SM field on the defining MLHG form is entered, then the SM portion (first three digits) of the OE on this form must equal the value in the LOCAL SM field.

If the DPKT MLHG and DPKT TERM fields are entered, then the MLHG TN field must be entered or the LISTED TN field on the associated MLHG form must be entered.

If the DPKT MLHG/TERM(s) are entered and the DPKT MLHG TN is not entered, and D SERV is not equal to "XMP" on a corresponding DSL form; then the Line Class Code and Rate Center combination (DPKT LCC/DPKT RAX) must be defined on the LCC form with a corresponding CLASS OF SERVICE of "ISDN". (The DSL form is found by matching OE from the DSLUSR form to DSL OE on a DSL form.)

For 5E8 and later, when DPKT CHL SEL or ODB CHL SEL is "N", DPKT MLHG/TERM must not equal ODB MLHG/TERM. If DPKT MLHG/TERM are not entered, the following must not be entered:

- DPKT HUNT NOTIF
- DPKT BUSY LIMIT
- DPKT LNR HNT TN

and DPKT HUNT DEACT must be "N".

2.8 (*) DPKT TERM

Description: The MLHG terminal number.
Valid Entries: 1 - 2015

Data Rules:

If the DPKT MLHG field is entered, then this field must be entered.

If the DPKT MLHG and DPKT TERM fields are entered and the corresponding OE is defined on a DSL form with the D SERV field a value other than "XMP", then the value entered in the DPKT MLHG field must be defined on a MLHG form with an MLHG FEATURE that is defined on a MLHGFD form with HUNT TYPE "PSUCD".

If the DPKT MLHG and DPKT TERM fields are entered and the associated OE is with the D SERV field set to "XMP" (indicating a Modem Pool terminal adaptor), then:

- The combination of the DPKT MLHG and DPKT TERM fields must appear, respectively, in the PKT MLHG and PKT TERM fields of a PSCUG form (5924 Record).

- The DNIC (Data Network ID Code) and ICN (International CUG Number) fields, on PSCUG forms, must be the same combination for every DPKT TERM within a DPKT MLHG.

- An MLHLN form (5111 Record) must exist such that the combination of the MLHG and TERM fields match, respectively, the DPKT MLHG and DPKT TERM fields on this DSLUSR form. A Modem Pool member has an analog and a digital component, defined on an MLHLN form and a DSLUSR form, respectively.

- The MLHG form, where the MLHG entry matches the DPKT MLHG entry on this DSLUSR form, must have an entry in the corresponding MPTYPE field. The MPTYPE field is used exclusively by Modem Pool Hunt Groups.

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- The corresponding DPKT MLHG must be defined on an MLHG form whose corresponding MLHG FEATURE is defined on an MLHGFD form with a HUNT TYPE of "UCD".

2.9 (*) ODB MLHG

Description: On Demand B-channel Multi-Line Hunt Group.

Software Release: 5E8 and later
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

If ODB MLHG is entered, OE and ODB TERM must be entered; ODB TN must not be entered.

When DPKT CHL SEL or ODB CHL SEL is "N", DPKT MLHG/TERM must not be the same as ODB MLHG/TERM.

The entry in the ODB MLHG field must not be the same as the entry in the CKT MLHG field.

If this field is entered, then ODB L IN LCN or ODB L 2W LCN must be entered.

If this field and ODB TERM and ODB TN are not entered, On Demand B-channel services are not desired. Therefore, under the ODB header, the fields either must not be entered or must contain default values.

If this field is entered, the following fields under the ODB (On Demand B-channel) header, must be entered: ISCN1, ODB, LCC, RAX, RATE, N2, T1, T3, WNDSZ, and BAND.

This field must not be entered if the PPB1 USR and PPB2 USR fields are "Y".

If the MAXB CHL field is not entered, this field must not be entered. The MAXB CHL indicates the number of B-channels to be used on a demand basis. If none are to be used, there is no ODB service available.

If ODB MLHG and TERM are not entered, ODB HUNT NOTIF, ODB BUSY LIMIT, and ODB LNR HNT TN must not be entered; ODB HUNT DEACT must be "N".

If the LOCAL SM field on the defining MLHG form is entered, the SM portion (first three digits) of the OE on this form must equal the value in the LOCAL SM field.

If ODB MLHG is entered, the MLHG must be defined on an MLHG form with an MLHG FEATURE that is defined on an MLHGFD form with HUNT TYPE set to "PSUCD".

For 5E8 and later, if the ODB MLHG/TERM(s) are entered and ODB MLHG TN is not entered; then the Line Class Code and Rate Center combination (ODB LCC/ODB RAX) must be defined on the LCC form with a corresponding CLASS OF SERVICE of "ISDN".

For 5E11 and later, when ACT on FOSYS form (5713-2 Record) where FID is 695 is set to "Y" (i.e., the AILA (Automatic ISDN Line Assignment) feature active) and ODB TN is entered or ODB MLHG and ODB TERM are entered, and ODB CHL SEL is "Y" on the corresponding DSLUSR form, the ODB ISCN fields on the DSLUSR form must be entered. For more information on this feature, see Division 2, Section 1BO.

For 5E12 and later, when the ODB MLHG TNs on the DSLUSR form have an NXX and/or NPA/NXX combination assigned, the NXX or NPA/NXX must be defined as an OFFICE CODE and/or NPA/OFFICE CODE on a NOC form.

2.10 (*) ODB TERM

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Description: On Demand B-channel Multi-Line Hunt Group member.

Software Release: 5E8 and later
Valid Entries: 1 - 2015

Data Rules:

If ODB TERM is entered, ODB MLHG must be entered.

For 5E8 and later, if the ODB MLHG/TERM(s) are entered and ODB MLHG TN is not entered; then the Line Class Code and Rate Center combination (ODB LCC/ODB RAX) must be defined on the LCC form with a corresponding CLASS OF SERVICE of "ISDN".

For 5E11 and later, when ACT on FOSYS form (5713-2 Record) where FID is 695 is set to "Y" (i.e., the AILA (Automatic ISDN Line Assignment) feature active) and ODB TN is entered or ODB MLHG and ODB TERM are entered, and ODB CHL SEL is "Y" on the corresponding DSLUSR form, the ODB ISCN fields on the DSLUSR form must be entered. For more information on this feature, see Division 2, Section 1BO.

2.11 OE

Description: Equipment type and number.
Valid Entries: This is a two segment field comprised of an equipment type and number for the (R)ISLU LCEN of the DSL. For 5E8 and later, the ILEN equipment type and number was added for IDCU.

Valid OE Type Entries

Entry	Definition
A	Software Release: 5E12 and later. TR-303 on DNU-S (i.e., INEN).
E	Software Release: 5E12 and later. Access Interface Unit (i.e., AIUEN).
G	Software Release: 5E8 and later. The OE type is associated with a 10-digit ILEN for an IDCU RT (Remote Terminal). This IDCU designation (GEN) accommodates up to 2048 lines.
I	The OE is associated with an 8-digit (R)ISLU LCEN.
K	Software Release: 5E10 and later. ISDN ISLU2 line card equipment number (LCKEN).
X	Software Release: 5E16 and later. The DSL OE (Digital Subscriber Line card Equipment Number (composite line card equipment number consisting of LCENTYPE and LCEN)).

If "A" is entered, the OE consists of:

TR-303 on DNU-S, Type A

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	DNUS	X	0-7
Remote Terminal	RT	XX	01-99
Line	LINE	XXXX	0001-2048

If "E" is entered, the OE consists of:

For 5E16 and later, when OE is "X", SERV TYPE must be "CFS" on the ENETLINK form (5827 Record) for SM of OE.

AIU-ISDN, Type E

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Access Interface Unit	AIU	XXX	00-127
Pack	PACK	XX	00-19
Circuit	CKT	XX	00-15

If "G" is entered, the OE consist of:

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IDCU Remote Terminal Number, Type G			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Unit Number	IDCU	X	0-42
Remote Terminal	RT	XX	01-31
Line	LINE	XXXX	0001-2048

If "I" is entered, the OE consist of:

(R)ISLU Equipment Number	Type I		
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
(Remote) Integrated Service Line Unit	(R) ISLU	X	0-7
Line Group Controller	LGC	XX	00-15
Line Card	LC	XX	00-31

If OE is set to "K", this OE Equipment number consists of:

ISLU2 Remote Terminal Number, Type K			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Unit Number	LU	XX	00 - 42
Line Group	LG	XX	00 - 15
Line Board	LBD	X	0 - 7
Line Circuit	LCKT	X	0 - 7

If an "M" is entered, the OE consist of:

IDCU Remote Terminal Number, Type M			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Unit Number	IDCU	X	0-7
Remote Terminal	RT	XX	01-31
Line	LINE	XX	01-99

The length of the equipment number is defined in the OE SIZE field on the OFCOPT form (5509 Record). Only one OE type is allowed in an office.

Data Rules:

This field must be entered if the CKT ICP (Intercept), DPKT ICP or ODB ICP fields are "N".

The SM entered must appear in the SWITCHING MODULE field on an EQPSU form (5741 Record). An EQPSU form defines the PSU (Packet Switching Unit) peripheral to the SM. The PSU is an integral part of ISDN (Integrated Services Digital Network) hardware.

The OE must appear in the DSL OE field on a DSL form. A DSL user cannot be indicated without the DSL itself defined.

For 5E8 and later, when the CKT TN or CKT MLHG/TERM fields are entered, and DSL CLS is "STD" on the associated DSL form, the following rules apply:

- TERM TYPE cannot be "TYPEB", "TYPED", "TYPEE", or "ATND";
- ACT USR must be "Y";
- BRITL ALW must be "N" or not entered;
- SAR NUM must not be entered.
- LN TYPE must be "NONE or not entered;
- The following fields must be "N": SAR ORIG, SAR TERM, INCOMING, INTERCOM, ORIG CW, PP, and LONG DST DR.

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For 5E8 and later, when DSL CLS is "PP" or "MP", the following rules apply:

- if the CKT TN or CKT MLHG/TERM fields are entered, and if TERM TYPE is "TYPEA", "TYPEB", "TYPEC", "TYPED", or "ATND", then CA QTY must be entered;
- if TERM TYPE is "TYPEB", "TYPEC", "TYPED", or "ATND" CA must be entered. (DSL CLS is not "STD").

For a Modem Pool member, the modem and terminal adaptor must be on the same SM. Therefore, the SM entered in this field, which is for the DSL for the terminal adaptor, must be the same as the SM entered in the OE NUMBER field with an OE TYPE of "C", "L" or "S" on the MLHLN form, which is the analog of interest must match the DPKT MLHG and DPKT TERM fields on this form.

All LCENs and ILENs that appear on a DSLUSR form must be defined on a DSL form.

Type is "G":
If "G" is entered,

- the SM/IDCU/RT values assigned to OE NUMBER[1,7] must correspond to the SM/UNIT NUMBER/RT EX values assigned on an RTERM form (5174 Record).
- the first three digits and the fourth and fifth digits of OE NUMBER must be defined on an EQIDCU form as SM and IDCU.
- and if the DSL has manually assigned D RELPIDBs and/or PPB1/PPB2 DPIDBs, there must be a corresponding PIDB NO. With PIDB TYPE of PSU on the EQIDCU form.

NOTE: The IDCU DPIDBs connect the IDCU to the PSU. They carry IDCU control information (EOC and TMC channels), the DSL D channel control and packet data, and the DSL B-channel packet switching and voice data. Each DPIDB has 32 TS (time slots). The EOC, TMC and B-channels each occupy a full TS. The D-channels each occupy one-quarter TS but should be packed (up to) four to a TS if they originate on the same TR303 RT, if they are assigned to the same DPIDB and they belong to the same DSL group (ISCN 1,3). They must also occupy a unique IDCU DS1 TS and have the same positioning in that TS. In other words, D-channel quarter TS cannot be switched.

OE is "I":
If OE TYPE is "I" then the first three digits and the fourth digit of OE NUMBER must be defined on an EQISLU form as SWITCHING MODULE and ISLU NUMBER.

OE is "K" :
If OE TYPE is "K" then the first three digits and the fourth and fifth digits of OE NUMBER must be defined on an EQISLU form as SWITCHING MODULE and ISLU NUMBER.

For 5E10 and later, the ODA automatic time slot assignment algorithm allocates four TS to each SM/ISLU2/LG configuration for each PIDB from the ISLU2 to the PSU as follows: For LGs (OE[6,7] or DSL OE[6,7]) numbered between 0 and 7 the time slots are assigned to odd numbered PSU PIDBs and for LGs (OE[6,7] or DSL OE[6,7]) numbered between 8 and 15 the time slots are assigned to even numbered PSU PIDBs (PIDBs are assigned on the EQISLU form). If there are too many time slots assigned for the number of PIDBs on either the ODD or EVEN numbered PIDBs a cross check error will occur.

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form

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- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2
- MISLINK - where SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is "TAOPER" or "DAOPER"
- XAT - where SHELF/CHL GRP is the first three digits of ISCN.

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks). The following applications define the possible LLCB assignments:

LLCB			
Form	**SM**	**SHELF CHL GRP**	**Increment**
AMLBDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	OE[1,3]	PPB1 ISCN[1,3]	by 1 for each PPB1 ISCN defined.
		D ISCN[1,3]	by 1 if a matching DSLUSR form is not found
DSLUSR	OE[1,3]	D ISCN[1,3] on the cor- responding DSL form	by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered.
			by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
		ODB ISCN1[1,3]	by 1 if only ODB ISCN1 is entered.
		ODB ISCN2	by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
DSLAP	LCEN[1,3]	ISCN[1,3]	by 1 for each unique LCEN/ISCN combination.
MISLINK	OE[1,3]	SHELF and CHL GRP	by 1 for each MISLINK form.
OSPSDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined.
			by 1 for each unique OSPSDSL form.
RTERM RT INTERFACE is "TR303"	SM	ISCN[1,3]	by 2 for each TMC PRI ISCN and each TMC NPRI ISCN entry.
			by 3 for each EOC PRI ISCN and each EOC NPRI ISCN entry.
TRUNK Where TRKCLS is "IFOPER", "IFTERM" or "EDSL"	DEN[1,3]	ISCN[1,3]	by 1 for each unique TRUNK form.
XAT	DEN[1,3]	ISCN[1,3]	by 1 for each unique XAT form.

USER INFO

Fields Section 2.12 - Section 2.18 refer to user information.

For 5E12 and later, when more than one DSLUSR form with the same value of OE have CKT LCC and CKT RAX values defined on an associated LCC form, all DSLUSR forms must have the same CLASS OF SERVICE assigned.

2.12 USPID

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Description: Enter the User Service Profile Identifier. The USPID is the provisioned part of the SPID, which identifies a terminal to the switch during initialization. It is a unique identifier for each DSL user in the office.

For custom DSLs (where DSL CLS is not "STD" on the DSL form), the USPID may be no longer than 10 digits. For Standard DSLs the USPID may be 1 - 18 digits in length. Leading zeros are significant. For example, 10 and 0010 are not identical, but are two different identifiers. Likewise, 0 and 0000000000 are different.

For 5E9(1) and later, the Telephone Company is responsible for determining and entering a value for this field. Besides appearing on this DSLUSR form (5908 Record), the USPID values also appear on output-only records (5908A and 5908B) described in Division 5, Section 1K.

For more information about the 5E9(1) USPID field, see Division 2, Section 1AA.

For 5E10 and later, the value 010101010101 cannot be entered. It is reserved to support the Automatic SPID Download feature. For more information on this feature, see Division 2, Section 4A200.

Software Release: 5E9(1) and later
Valid Entries: 1 - 18 digits

Data Rules:

If USPID is entered, OE TYPE and NUMBER must be entered; likewise, if the OE fields are entered, USPID must be entered.

The USPID must be unique for each DSLUSR form in the office.

When DSL CLS on the corresponding DSL form is other than "STD", the USPID is limited to a maximum length of ten digits.

2.13 MAXB CHL

Description: The maximum number of B-channels to be used on a Demand basis for circuit-switched services.
Valid Entries: 1 or 2

Data Rules:

If the ODB TN field is entered, then this field must be entered.

If this field is not entered, then the CSV CHL and CSD CHL fields must not be entered or must be "NO", because that indicates that circuit-switched services on the B-channel are not desired.

If a value is entered in this field, the value must equal or exceed the value entered in the CSV or CSD fields. circuit-switched services cannot use more B-channels than have been appropriated.

2.14 ACT USR

Description: Is this user an active user on a DSL?
Valid Entries: Y, N

Data Rules:

A Point-to-Point DSL or Restricted MP-DSL (Multipoint DSL) must only have a single active user. Pure DSL Multipoint has every user as an active user.

2.15 DFLT TN USER

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Description: Is this user a default telephone number user? This field supports the Non-Initializing Terminals secured feature on a Standard ISDN interface. For more information on this feature, see Division 2, Section 1AM.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Default DN Service for Non-Initializing Terminals is a feature that must be purchased by the office before the DFLT TN USER field can be set to "Y". The ACT field for SFID 225 on the SFSYS form (5713-1 Record) must be set to "Y", before "Y" can be entered in this field.

DFLT TN USER must be "N", if DPKT FIXED TEI is entered.

If DFLT TN USER is "Y" :

- and CKT services are entered, then

  CKT TN must be entered.

- and DPKT services are entered, then

  DPKT TN must be entered.

- and ODB services are entered, then

  ODB TN must be entered.

- and both DPKT TN and ODB TN are entered, then

  DPKT CHL SEL must be "Y"

  ODB CHL SEL must be "Y"

  DPKT TN must equal ODB TN.

- the following must not be entered:

  CKT MLHG

  CONFIG GRP

  DPKT H PVC LCN

  EKTS

  PASC

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- the following must be "N":

  SHARED

  SCP ALW

  NIT does not allow the user to have a terminal key system.

- and a CKT TN, or a DPKT TN or ODB TN is entered, only one packet DSLUSR form is allowed per BRI at a time. Only one DSLUSR form on a DSL with DFLT TN USER set to "Y", can have a CKT TN and only one DSLUSR form can have a DPKT and/or an ODB TN, i.e., one packet DFLT TN and one circuit DFLT TN. The TNs can be for separate users or the same user.

- and a CKT TN is entered , then on the corresponding DSL form (DSL OE matches DSLUSR form OE) the DFLT SRV field must not have an entry. A BRI cannot have Default Service (DFLT SRV) and a Circuit Default DN (DFLT TN USER) at the same time. Note, this data rules is for 5E10 only. It will be deleted for 5E10 Software Updates.

- then on the corresponding DSL form (DSL form DSL OE matches DSLUSR form OE) the DSL CLS field must be set to "STD". A BRI cannot have a Default DN (DFLT TN USER) unless its Class of Service is "STD".

CAICOM form can only be entered when "CACH" is entered for EKTS. Therefore, if CKT TN is entered with either the DFLT TN USER field set to "Y" or the DPKT FIXED TEI field entered, a corresponding CAICOM form (where DSLUSR form CKT TN matches CAICOM form TN) can not be entered. ISDN Call Appearance Intercom is not allowed with either a Circuit Default DN (DFLT TN USER) or a Fixed Terminal Endpoint Identifier (DPKT FIXED TEI).

If either the DFLT TN USER field is set to "Y" or the DPKT FIXED TEI field entered, the CKT TN cannot have BRCS features assigned on the LINEFA, BFG, or CLUSTR forms which are not allowed with NIT (Non-Initializing Terminal) features. In addition, BRCS features defined on the following forms:

- ASPFD with CONTROL set to "NESS"
- EDSFD
- MSFD

are not allowed for NIT, because they require the use of Fully Initializing Terminals.

2.16 PPB1 USR

Description: Is Permanent Packet B1 associated with this user?
Valid Entries: Y, N

Data Rules:

One and only one DSLUSR form, per unique DSL, may have this field "Y".

If Permanent Packet B1 is associated with this user, then the DSL, defined on a DSL form, must have an entry of "X25" in the B1 SERV field. The "X25" entry indicates a Permanent Packet B-channel.

2.17 PPB2 USR

Description: Is Permanent Packet B2 associated with this user?
Valid Entries: Y, N

Data Rules:

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One and only one DSLUSR form, per unique DSL, may have this field "Y".

If Permanent Packet B2 is associated with this user, then the DSL, defined on a DSL form, must have an entry of "X25" in the B2 SERV field. The "X25" entry indicates a Permanent Packet B-channel.

Both PPB1 USR and PPB2 USR can be "Y" on the same instance of this form.

If both PPB1 USR and PPB2 USR are "Y", then the CKT TN, CKT MLHG, CKT TERM, ODB TN, and ODB MLHG/TERM, fields must not be entered. A user that indicates that both B-channels are to be used for Packet Switching has precluded the use of any circuit-switched services or On Demand B-channel Packet Switched services.

2.18 AGI

Description: The AGI (Associated Group Indicator) designates the group to which a Demand B-channel user is assigned. When users of the same BRI are assigned to the same AGI group, they will be treated as one logical Demand B-channel user.

AGI applies only to Demand B-channel users on Standard BRIs: the user subscribes to CSV, CSD, or ODB services; and DSL CLS is set to "STD" on the associated DSL form.

Software Release: 5E8 and later
Valid Entries: 1 or 2

Data Rules:

If a value is entered in AGI, DSL CLS must be "STD" on the corresponding DSL form.

When DSLUSR forms share a common OE, and the OE is assigned on a Standard DSL form where

- neither B1 SERV nor B2 SERV is "X25", then all AGI fields on the DSLUSR forms must have a value or all must be blank
- either B1 SERV or B2 SERV is "X25", then all AGI fields on the DSLUSR forms must have the same value (either 1 or 2) or all must be blank
- both B1 SERV and B2 SERV are "X25", then no AGI field on the DSLUSR forms may have an entry.

When a value is entered in AGI, MAXB CHL must be 1; and CSV, CSD, or ODB must be 1.

If both PPB1USR and PPB2USR are "Y", AGI must be blank.

2.19 INHIBIT DEL

Description: This field is used to indicate whether or not deletion is inhibited for this DSL.

Software Release: 5E13 and later
Valid Entries: Y, N

- ***NOTE:*** INHIBIT DEL must be set to "N" before deletion is allowed.

CKT SWITCHING

The following fields (Section 2.20 - Section 8.9) contain entries used in circuit-switched calls.

2.20 MLHG TN

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Description: The Hunt Telephone Number of the DSL (if it has one).
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits must be defined in the OFFICE CODE field on a NOC form.

If this field is entered, then the CKT MLHG and CKT TERM fields must be entered.

This field or the CKT TN field must have an entry if the BUSY MONITOR field is "Y", which indicates that the terminal can be monitored via the Busy Lamps of an ISDN Attendant MLHG.

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN or member TN. Multiple TNs are defined in the TN field on a MULTITN form. The TN entered in this field on the DSLUSR form may not duplicate a TN entered in the TN field on a MULTITN form.

For 5E8 and later, the CKT MLHG TN must duplicate the LISTED TN on the associated MLHG form if this is member 1 of the MLHG, and the associated MLHG FEATURE has a HUNT TYPE of "REG", "HTC", or "PMHG" indicated on the MLHGFD form (5604 Record); otherwise, the entry in the CKT MLHG TN field must be unique within the 5ESS Switch, with the exception that it may match only one of the following:

- The DPKT TN or DPKT MLHG TN entry on the same DSLUSR form, where DPKT CHL SEL is "N".
- The ODB TN or ODB MLHG TN entry on the same DSLUSR form, where ODB CHL SEL is "N".
- The PERMANENT PACKET B1 TN on the DSL form, for this DSL, where PPB1 CHL SEL is "N", if the PPB1 USR entry on this DSLUSR form is "Y".
- The PERMANENT PACKET B2 TN on the DSL form, for this DSL, where PPB2 CHL SEL is "N", if the PPB2 USR entry on this DSLUSR form is "Y".

If no matches are made above, the entry in the CKT MLHG TN field must be unique within the 5ESS Switch, with the exception that it may match only one, two, or three of the following:

- The DPKT TN or DPKT MLHG TN entry on the same DSLUSR form, where DPKT CHL SEL is "Y".
- The ODB TN or ODB MLHG TN entry on the same DSLUSR form, where ODB CHL SEL is "Y".
- The PERMANENT PACKET B1 TN on the DSL form, for this DSL, where PPB1 CHL SEL is "Y", if the PPB1 USR entry on this DSLUSR form is "Y".
- The PERMANENT PACKET B2 TN on the DSL form, for this DSL, where PPB2 CHL SEL is "Y", if the PPB2 USR entry on this DSLUSR form is "Y".

For 5E12 and later, if the first 3 digits of the 7-digit CKT MLHG TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE or the NOC form does not exist, CKT MLHG TN must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.21 LCC

Description: The Line Class Code. Line Class Codes are defined on the LCC form (5306 Record).

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Valid Entries: 3 alphanumeric characters.

Data Rules:

If the CKT MLHG and CKT TERM fields are entered, then the LCC and RAX combination must be defined on a LCC form with a CLASS OF SERVICE "ISDN" or "ISATND" and a TERMINATING TREATMENT "MLHG" or "INWATS".

If the CKT MLHG and CKT TERM fields are entered and the CKT MLHG is defined on an MLHG form whose MLHG FEATURE is defined on an MLHGFD form whose BEARER field is "CSD" (Circuit-Switched Data), then the LCC associated with the CKT MLHG must be defined on an LCC form whose TERMINATING TREATMENT is "MLHG".

If the CKT MLHG and CKT TERM fields are entered and the CKT MLHG is defined on an MLHG form whose MLHG FEATURE is defined on an MLHGFD form whose BEARER field is "CSD", then the TERM TYPE field on the DSLUSR field must be "TYPEA", "TYPEB", "TYPEC", "TYPED" or "TYPEE".

For 5E8 and later, if the CKT TN or CKT MLHG/TERM fields are entered, and DSL CLS is "STD" on the associated DSL form, then the LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "ISDN".

For 5E8 and later, TNs (Telephone Numbers) on a LINE form or CKT TNs (Circuit Telephone Numbers) on a DSLUSR form that are assigned to a Terminal Group & Station Restriction Feature on either the LINEFA, BFG form or an associated CLUSTR form(s), the TN must also be defined on the LINE form or DSLUSR form with a LCC/RAX value that corresponds to one of the following Service Classes on the LCC form:

- "4WINDIV"
- "ATND"
- "INDIV"
- "HOTPBX"
- "HOTMOTL"
- "ISATND"
- "MODEM"
- "ISDN"
- "PBX"
- "SATSTLN"

2.22 RAX

Description: The Rate Area. The LCC and RAX determine the Digit Analysis Selector and Screening Index used for calls originating from this line and the terminating treatment of calls to this line.
Valid Entries:

- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

If the LCC and RAX combination, under the CKT SWITCHING header, are defined on an LCC form with a CLASS OF SERVICE of "ISATND", then "ATND" must be entered in the TERM TYPE field on this DSLUSR form.

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.23 BILL TN

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Description: A TN to be billed if the Circuit TN to be billed is different from the CKT TN of this DSL.
Valid Entries: A 7-digit Circuit TN for calls billed to a Circuit TN within the local office; a 10-digit Circuit TN for calls billed to a Circuit TN outside the local office. Valid TNs must be in one of the following formats:

Valid BILL TN Entries

Entry	Definition
NXXXXXX	Where the first three digits are a valid office code defined in the OFFICE CODE field on a NOC form.
ZXXXXXX	Z is 0 or 1. This is normally used for OUTWATS billing purposes. The first three digits must be defined in the OFFICE CODE field on a NOC form.
NPAXXXXXXX	A 10-digit number with valid NPA and NXX codes.

2.24 CPN SCRN

Description: Will user-provided Calling Party Numbers (CPNs) be screened?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CPN SCRN is "Y", the user-provided CPN is screened against the primary DN for the terminal. If the CPN does not match the primary DN, it is replaced with a switch-provided CPN.

If CPN SCRN is "N", the switch always provides the CPN, even if the terminal sends a CPN.

CPN SCRN should be "Y" only for those ISDN terminals that supply a user-provided CPN.

For terminals connected to a PBX, this attribute should always be "N", since screening should not be done in a PBX.

2.25 RMK

Description: Remarks entered for administrative purposes.
Valid Entries: Up to 16 alphanumeric characters.

3. FORM ENTRIES, 5908-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

CIRCUIT VOICE (CSV)

The following fields (Section 3.2 -Section 3.10) apply to Circuit Switched Voice service.

3.2 CSV

Description: The number of Circuit-Switched Voice channels allowed.
Valid Entries: 1 or 2

Data Rules:

If the CSV CHL field is "B1", "B2" or "ANY", then this field must be entered.

The value entered in this field must not exceed the value entered in the MAXB CHL field.

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If a Multi-Line Hunt Group is defined on an MLHG form where BEARER on the corresponding MLHGFD form for the MLHG FEATURE is "VOICE", and the MLHG is assigned as CKT MLHG on this DSLUSR form, or as the key MLHG on an SHTN form where TN from the first row matches the CKT TN on this DSLUSR form, then a value must be entered in this CSV field.

For 5E8 and later, when either the CKT TN or CKT MLHG/TERM is entered, if the CSV field is entered, the EKTS field is not entered, and the DSL CLS is "STD" on the associated DSL form, then CSV LIMIT on this DSLUSR form must be entered.

For 5E11 and later:

When CSV is set to "2" and TERM TYPE is "TYPEA" or "TYPEC", DSL CLS is set to "STD" on the corresponding DSL form, then the ACT field for SFID 268 must be set to "Y".

When CSV is set to "2" and TERM TYPE is set to "TYPEA" or "TYPEC", then DSL CLS must be set to "STD" on a corresponding DSL form.

3.3 CSV CHL

Description: The channel(s) allowed for Circuit-Switched Voice.
Valid Entries: B1, B2, ANY (B1 and B2) or NO (neither B1 or B2).

Data Rules:

If the CSV field is entered, then this field must be "B1", "B2", or "ANY".

If the CSV field is equal to 2, then this field must be "ANY".

If the B1 SERV field on the DSL form for this DSL is "X25", this field must not be "B1". The B1 SERV entry of "X25" indicates the channel is to be used on a Permanent Packet basis, thus precluding the use of circuit-switched services.

If the B2 SERV field on the DSL form for this DSL is "X25", this field must not be "B2", The B2 SERV entry of "X25" indicates the channel is to be used on a Permanent Packet basis, thus precluding the use of circuit-switched services.

3.4 CSV ACO

Description: The CSV ACO (Circuit Switched Voice Additional Call Offering) indicates the type of CSV ACO service provided. ACO is an optional feature for type A BASIC CALL CPE's. Not all BASIC CALL CPE's will operate correctly with ACO. If the CPE is not compatible with ACO this field may be left blank.

CSV ACO applies only to Standard BRI users.

Software Release: 5E8 and later
Valid Entries:

Valid CSV ACO Entries

Entry	Definition
U	Unrestricted version of ACO.
INTRA	Software Release: 5E9(1) and later. Unrestricted Intra-Basic Business Group.
INCOM	Software Release: 5E9(1) and later. Unrestricted Incoming to Basic Business Group Only.

Data Rules:

If a value is entered in this field, DSL CLS must be "STD" on the associated DSL form. On this DSLUSR form, TERM TYPE must be "TYPEA"; CSV LIMIT must be entered; EKTS and CKT MLHG/TERM cannot be entered.

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For 5E9(1) and later if CSV ACO is entered, CSV LIMIT must be greater than CSV NBLIMIT; if CSV LIMIT is greater than 1, CSV NBLIMIT must be greater than 0. When CSV NBLIMIT is not entered and CSV LIMIT is 1, the software will automatically set CSV NBLIMIT to 0; when CSV LIMIT is greater than 1, the software will set CSV NBLIMIT to 1.

If CSV ACO is not entered, CSV NBLIMIT must not be entered.

If CSV ACO is "INTRA" or "INCOM", BRCS must be "Y"; and the CKT TN must be assigned a Terminal Group Station Restriction feature, defined on a TGSRFD form (5607-1/2 Record) and assigned to the TN on a LINEFA, CLUSTR, or BFG form.

3.5 CSV LIMIT

Description: This field specifies the CSV Call Reference Busy Limit.

Software Release: 5E8 and later
Valid Entries: 1 - 16

Data Rules:

If a value is entered in this field, DSL CLS must be "STD" on the associated DSL form. On this DSLUSR form TERM TYPE must be "TYPEA" and CSV must be entered.

3.6 CSV NBLIMIT

Description: Enter the maximum number of simultaneous waiting voice calls. (See data rules under the CSV ACO field.)

Software Release: 5E9(1) and later
Valid Entries: 0 - 15

3.7 SP DNA

Description: Enter the first DN (Directory Number) CA for speech. This field, along with SP DNA QTY, is used to set the range of speech DNAs. Each DNA must be unique. See Division 2, Section 1AM for more information on how to determine if CAs are duplicated.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If SP DNA is entered, SP DNA QTY must be entered. When SP DNA and SP DNA QTY are both entered, CSV must be 1.

The range of SP DNAs and the range of any of the following cannot overlap: AU DNAs, DPKT DNAs, K56 DNAs, K64 DNAs, or ODB DNAs.

If SP DNA or SP DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

3.8 SP DNA QTY

Description: Enter the number of DN CAs for speech.

Software Release: 5E9(1) and later
Valid Entries: 1 - 16

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Data Rules:

If SP DNA QTY is entered, SP DNA must be entered. If SP DNA and SP DNA QTY are both entered, CSV must be 1.

SP DNA QTY cannot exceed CSV LIMIT.

The sum of SP DNA and SP DNA QTY cannot exceed 255.

When EKTS is "BASIC" and SP DNA QTY is entered, SP DNA QTY must be 1.

If SP DNA or SP DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

3.9 AU DNA

Description: Enter the first DN CA for audio. This field, along with AU DNA QTY, is used to set the range of audio DNAs. Each DNA must be unique. See Division 2, Section 1AM for more information on how to determine if CAs are duplicated.

Software Release: 5E9(1) and later
Valid Entries: 1 - 255

Data Rules:

If AU DNA is entered, AU DNA QTY must be entered.

The range of AU DNAs cannot overlap with the range of any of the following: DPKT DNAs, K56 DNAs, K64 DNAs, ODB DNAs, or AU DNAs.

If AU DNA or AU DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

3.10 AU DNA QTY

Description: Enter the number of DN CAs for audio.

Software Release: 5E9(1) and later
Valid Entries: 1 - 16

Data Rules:

If AU DNA QTY is entered, AU DNA must be entered. If AU DNA and AU DNA QTY are both entered, CSV must be 1. If EKTS is "BASIC" and AU DNA QTY is entered, AU DNA QTY must be 1.

AU DNA QTY cannot exceed CSV LIMIT.

The sum of AU DNA and AU DNA QTY cannot exceed 255.

If AU DNA or AU DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

CIRCUIT DATA (CSD)

The following fields (Section 3.11 -Section 3.19) apply to Circuit Switched Data service.

3.11 CSD

Description: The number of Circuit-Switched Data channels allowed.
Valid Entries: 1 or 2

Data Rules:

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If the CSD CHL field is "B1", "B2", or "ANY", then this field must be entered.

The value entered in this field must not exceed the value entered in the MAXB CHL field.

If a Multi-Line Hunt Group is defined on an MLHG form where BEARER on the corresponding MLHGFD form for the MLHG FEATURE is "CSD", and the MLHG is assigned as CKT MLHG on this DSLUSR form, or as the key MLHG on an SHTN form where TN from the first row matches the CKT TN on this DSLUSR form, then a value must be entered in this CSD field.

For 5E8 and later, when either the CKT TN or CKT MLHG/TERM is entered, if the CSD field is entered, and DSL CLS is "STD" on the associated DSL form, then CSD LIMIT on this DSLUSR form must be entered.

3.12 CSD CHL

Description: The channel(s) allowed for Circuit-Switched Data.
Valid Entries: B1, B2, ANY (B1 and B2) or NO (neither B1 or B2).

Data Rules:

If the CSD field is entered, then this field must be "B1", "B2", or "ANY".

If the CSD field is equal to 2, then this field must be "ANY".

If the B1 SERV field on the DSL form for this DSL is "X25", this field must not be "B1", The B1 SERV entry of "X25" indicates the channel is to be used on a Permanent Packet basis, thus precluding the use of circuit-switched services.

If the B2 SERV field on the DSL form for this DSL is "X25", this field must not be "B2". The B2 SERV entry of "X25", indicates the channel is to be used on a Permanent Packet basis, thus precluding the use of circuit-switched services.

3.13 CSD ACO

Description: The CSD ACO (Circuit Switched Data Additional Call Offering) indicates the type of CSD ACO service provided. ACO is an optional feature for type A BASIC CALL CPE's. Not all BASIC CALL CPE's will operate correctly with ACO. If the CPE is not compatible with ACO this field may be left blank.

CSD ACO applies only to Standard BRI users.

Software Release: 5E8 and later
Valid Entries:

Valid CSD ACO Entries

Entry	Definition
U	Unrestricted version of ACO.
INTRA	Software Release: 5E9(1) and later. Unrestricted Intra-Basic Business Group.
INCOM	Software Release: 5E9(1) and later. Unrestricted Incoming to Basic Business Group Only.

Data Rules:

If a value is entered in this field, DSL CLS must be "STD" on the associated DSL form. On this DSLUSR form, TERM TYPE must be "TYPEA"; CSD LIMIT must be entered; EKTS and CKT MLHG/TERM cannot be entered.

For 5E9(1) and later if CSD ACO is entered, CSD LIMIT must be greater than CSD NBLIMIT; if CSD LIMIT is greater than 1, CSD NBLIMIT must be greater than 0. When CSD NBLIMIT is not entered and CSD

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LIMIT is 1, the software will automatically set CSD NBLIMIT to 0; when CSD LIMIT is greater than 1, the software will set CSD NBLIMIT to 1.

If CSD ACO is not entered, CSD NBLIMIT must not be entered.

If CSD ACO is "INTRA" or "INCOM", BRCS must be "Y"; and the CKT TN must be assigned a Terminal Group Station Restriction feature, defined on a TGSRFD form (5607-1/2 Record) and assigned to the TN on a LINEFA, CLUSTR, or BFG form.

3.14 CSD LIMIT

Description: This field specifies the CSD Call Reference Busy Limit. An entry in this field is necessary to originate or terminate CSD calls on all types of Standard lines: Basic, ACO, EKTS Basic, and EKTS CACH.

Software Release: 5E8 and later
Valid Entries: 1 - 16

Data Rules:

If a value is entered in this field, DSL CLS must be "STD" on the associated DSL form. On this DSLUSR form CSD must be entered; if CSD LIMIT is greater than 1, EKTS must be blank.

3.15 CSD NBLIMIT

Description: Enter the maximum number of simultaneous waiting data calls. (See data rules under the CSD ACO field.)

Software Release: 5E9(1) and later
Valid Entries: 0 - 15

3.16 K56 DNA

Description: Enter the first DN CA for K56 CSD. This field, along with K56 DNA QTY, is used to set the range of K56 CSD DNAs. Each DNA must be unique. See Division 2, Section 1AM for more information on how to determine if CAs are duplicated.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If K56 DNA is entered, K56 DNA QTY must be entered. If K56 DNA and K56 DNA QTY are both entered, CSD must be 1 or 2.

The range of K56 DNAs cannot overlap with the range of any of the following: AU DNAs, CAs, DPKT DNAs, K64 DNAs, ODB DNAs, or SP DNAs.

If K56 DNA or K56 DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

3.17 K56 DNA QTY

Description: Enter the number of DN CAs for 56K CSD.

Software Release: 5E9(1) and later
Valid Entries: 1 - 16

Data Rules:

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If K56 DNA QTY is entered, K56 DNA must be entered. If K56 DNA and K56 DNA QTY are both entered, CSD must be 1 or 2.

K56 DNA QTY cannot exceed CSD LIMIT.

The sum of K56 DNA and K56 DNA QTY cannot exceed 255.

If EKTS is "BASIC" and K56 DNA QTY is entered, K56 DNA QTY must be 1. If EKTS is "CACH" and K56 DNA QTY is entered, K56 DNA QTY must be 1.

If K56 DNA or K56 DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

3.18 K64 DNA

Description: Enter the first DN CA for K64 CSD. This field, along with K64 DNA QTY, is used to set the range of K64 CSD DNAs. Each DNA must be unique. See Division 2, Section 1AM for more information on how to determine if CAs are duplicated.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If K64 DNA and K64 DNA QTY are both entered, CSD must be 1 or 2. If K64 DNA is entered, K64 DNA QTY must be entered.

The range of K64 DNAs cannot overlap with the range of any of the following: AU DNAs, CAs, K56 DNAs, DPKT DNAs, ODB DNAs, or SP DNAs.

If K64 DNA or K64 DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

3.19 K64 DNA QTY

Description: Enter the number of DN CAs for 64K CSD.

Software Release: 5E9(1) and later
Valid Entries: 1 - 16

Data Rules:

If K64 DNA QTY is entered, K64 DNA must be entered. If K64 DNA and K64 DNA QTY are both entered, CSD must be 1 or 2.

K64 DNA QTY cannot exceed CSD LIMIT. The sum of K64 DNA and K64 DNA QTY cannot exceed 255.

When EKTS is "BASIC" and K64 DNA QTY is entered, K64 DNA QTY must be 1. When EKTS is "CACH" and K64 DNA QTY is entered, K64 DNA QTY must be 1.

If K64 DNA or K64 DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

4. FORM ENTRIES, 5908-3 RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

4.2 SUST

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Description: Is termination denied for circuit-switched services?

Required Field.
Default: N
Valid Entries: Y, N

4.3 ICP

Description: Are terminating calls to be routed to regular intercept?

Required Field.
Default: N
Valid Entries: Y, N

4.4 CA

Description: The button number associated with the first Call Appearance for a CKT TN or CKT MLHG/TERM. A single TN in a voice application can have several appearances at an ISDN set and can be associated with a primary TN or an MLHG member. The CA field and the CA QTY field define the buttons on the ISDN set where multiple call appearances are located.
Valid Entries: 1 - 254

Data Rules:

For 5E9(1) and later, the range of CAs (see description of CA QTY) cannot overlap with the range of any of the following: DPKT DNAs, K56 DNAs, K64 DNAs, or ODB DNAs.

4.5 CA QTY

Description: Call Appearance Quantity. The consecutive number of buttons that this CKT TN or CKT MLHG/CKT TERM combination appears at on the CPE. These consecutive buttons start with the entry assigned in the CA field. For example, if CA is 12 and CA QTY is 6, then buttons 12 through 17 would represent call appearances for the given CKT TN or CKT MLHG and TERM.
Valid Entries: 1 - 16

Data Rules:

Because a CPE terminal has a maximum of 254 buttons, the sum of the values entered in the CA and CA QTY field cannot exceed 255. For example, if CA is 240 and CA QTY is 15, then buttons 240 through 254 would represent call appearances for the given CKT TN or CKT MLHG and TERM. The sum of the CA and CA QTY fields is 255 and the last available ISDN set button has been appropriated.

If the CSV field is "2", then this field must not be entered.

If a SHTN form (5902 Record) has an entry in the TN field and no entry in either the MLHG or TERM fields, and this TN appears in the CKT TN field of a DSLUSR form, then the CA QTY must be greater than or equal to any NBR entered in the SHARED LIST on the SHTN form. Thus, when a primary TN on a given ISDN set with a particular quantity of call appearances is also a secondary TN on another ISDN set, the secondary TN must have an equal or greater quantity of call appearances entered.

If the CKT TN has been assigned an Electronic Directory Service feature that is defined on a EDSFD form (5961-1 Record) with at least one of the four FEATURE OPTIONS "Y", then the CA and CA QTY fields on this DSLUSR form must both be entered.

If the CKT TN has been assigned an ISDN Intercom feature, then the CA and the CA QTY field must be entered.

If the CKT TN or the CKT MLHG/TERM has been assigned a Multiway Feature that will be invoked by

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dialing a code or optionally pressing a feature button, then the ISDN terminal must have at least two call appearances. That is, if the Multiway Feature is defined on the MWFD form (5602 Record) with the DIAL CODE or BUTTON field "Y", then one of the following must be true. Either CA QTY on the DSLUSR form must be greater than 1 or the CKT TN (or MLHG/TERM) must appear in the SHARED LIST of an SHTN form (5902 Record) where the CKT TN (MLHG/TERM) is not the key TN (MLHG/TERM).

If a directory number or a multiline hunt group member is assigned a directed call pickup feature that can barge-in on held calls, then that number or member must have only one call appearance. That is, if a CKT TN or CKT MLHG/CKT TERM is assigned a Call Pickup Terminating feature on the LINEFA, MLHLNFA, BFG or CLUSTR form and the feature was defined on a PUTFD form with a FEATURE FUNCTION of "HDIRPUBRG", then the CA QTY field must be either blank or "1".

4.6 BRCS

Description: Are BRCS features assigned to this line?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then either the CKT TN on this form must appear in the TN field on a LINEFA form or the CKT MLHG and CKT TERM must appear in the MLHG and TERM fields, respectively, on an MLHLNFA (5113 Record). Enter "N" if either of the above cases does not apply.

Note: More than two Circuit-Switched Voice users with BRCS features on the same DSL will affect MP-DSL performance.

4.7 TERM TYPE

Description: The ISDN Customer Premises Equipment terminal type.

Valid TERM TYPE Entries

Entry	Definition
ATND	ISDN Attendant Terminal.
TYPEA	Terminal with a single Telephone Number or MLHG member where the subscriber can control multiple concurrent calls.
TYPEB	Terminal with a single Telephone Number or MLHG member and TMF (Terminal Management Function). TMF provides management capabilities of call appearance buttons on the terminal.
TYPEC	Terminal with TMF and button management within the terminal itself. The terminal translates call appearance numbers to specific buttons on the terminal.
TYPED	Terminal C with TMF performed by the 5ESS Switch. This terminal may have multiple DNs and must have TMF capabilities on the 5ESS Switch.
TYPEE	Circuit-Switch Data Terminal. If the RMB or STH field are entered, then "TYPEE" must be entered in this field.

Data Rules:

If the DSL form (for this DSL) has D SERV "SONLY", indicating an ISDN Attendant, then this field must be "ATND". Conversely, if TERM TYPE on this form is "ATND", then the DSL form, for this DSL, must have the D SERV field "SONLY".

Numerous dependencies exist between the TERM TYPE field and other fields on this form. Refer to Figure 2, which illustrates these dependencies.

PODs service requires that this field be left blank.

For 5E8 and later, since entry to any of the National ISDN fields AGI, CSV ACO, CSV LIMIT, CSD ACO, CSD LIMIT, or EKTS requires a TERM TYPE of "TYPEA" or "TYPEC", National ISDN does not directly

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support PODs service. The equivalent of PODs service may be achieved by not assigning BRCS features and by not entering any of the "STD" specific fields on the DSLUSR form when DSL CLS is "STD" on the associated DSL form.

For 5E8 and later, when either CKT TN or CKT MLHG/TERM is entered:

- if EKTS is entered, TERM TYPE must be "TYPEC";
- if CSV ACO, CSD ACO, or CSV LIMIT is entered, or if CSD LIMIT is entered and EKTS is not entered, then TERM TYPE must be "TYPEA";
- if DSL CLS is "STD" on the associated DSL form, then on this DSLUSR form TERM TYPE must be "TYPEA" or "TYPEC";if EKTS is not entered, TERM TYPE must be "TYPEA";
- if TERM TYPE is "TYPEB", "TYPEC", "TYPED", or "ATND", and DSL CLS is not "STD" on the associated DSL form, then CA must be entered on this DSLUSR form ;
- if DSL CLS is not "STD" on the associated DSL form, and TERM TYPE on this form is not "TYPEE", then CA QTY must be entered.

For 5E11 and later:
When TERM TYPE is "ATND", "TYPEB", or "TYPED", CSV must not equal "2".

For 5E12 and later:
If TERM TYPE is "ATND", and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", and the value of DSL OE on the DSLUSR form matches the DSL OE field on the DSL form, then the DSL CLS field on the DSL form must be set to "PP".

If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND" and the value of DSL OE on the DSLUSR form matches the DSL OE field on the DSL form, then the DSL CLS field on the DSL form must be set to "PP" or "MP".

If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", the following fields must be set to "N" on the DSLUSR form.

- INCOMING
- INTERCOM
- ORIG CW
- PP

If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", the ERCO ASGN and SHARED fields must be set to "N" on the DSLUSR form.

If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", the CKT MLHG must be entered.

If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", the SAR NUM must not be entered.

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If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", the ATT MLHG and RBV TGN fields must not be entered, and the SAR ORIG and SAR TERM fields must be set to "N".

If TERM TYPE is "TYPED" and CKT LCC and CKT RAX values match the LINE CLASS CODE and RATE AREA values on the associated LCC form having the CLASS OF SERVICE of "ISATND", the CKT MLHG and CKT TERM fields from the DSLUSR form must not be SHARED LIST MLHG and SHARED LIST TERM NBR on the SHTN form.

When the DSLUSR form has TERM TYPE set to "TYPED", and entries for CKT LCC and CKT RAX values are defined on the LCC form with the CLASS OF SERVICE set to "ISATND", Secured Feature SFID 292 ACT field must be set to "Y" on the SFSYS form. If this Secured Feature is not purchased, the DSLUSR forms must have TERM TYPE set to "ATND".

When the DSLUSR form has TERM TYPE set to "TYPED", and D SERV on the associated DSL form is "SONLY", CLASS OF SERVICE on the corresponding LCC form must be "ISATND".

When a DSLUSR form has a value of CKT MLHG, and has CKT LCC and CKT RAX values that match the LINE CLASS CODE and RATE AREA values of an associated LCC form, and the LCC form has a CLASS OF SERVICE of " ISATND", the TERM TYPE must be "ATND" or "TYPED" on the DSLUSR form.

When the LINE CLASS CODE and RATE AREA are assigned on the LCC form with a CLASS OF SERVICE of "ISATND", the corresponding TERM TYPE on the DSLUSR form must be set to "ATND" or "TYPED".

When the MLHG form has an MLHG FEATURE value that matches FEATURE NAME on the associated MLHGFD form, and MLHG on the MLHG form matches the value of one or more DSLUSR forms, and the HUNT TYPE on the MLHGFD form is ISAT, then the TERM TYPE on the corresponding DLSUSR form must be "ATND" or "TYPED".

4.8 CONFIG GRP

Description: The Configuration Group name that describes feature actions assigned to CPE terminal buttons.
Valid Entries: 1 - 8 characters.

Data Rules:

The Configuration Group entered must be defined in the CONFIG GRP field on a CFGGRP form (5964 Record).

If the Configuration Group has an ACTION of "BYGP" (Group Make Busy) specified where the MLHG FEATURE is defined on an MLHGFD form with a HUNT TYPE not equal to "ISAT". Only the first member of an MLHG can activate must not be entered.

If the CKT MLHG is defined on an MLHG form with an MLHG FEATURE defined on an MLHGFD form with a HUNT TYPE of "ISAT" (ISDN Attendant), this field must be entered.

For 5E8 and later, when CONFIG GRP is entered, and DSL CLS is "STD" on the associated DSL form, the CONFIG GRP must be defined on a CFGGRP form where GRP TYPE is set to "STD"; if DSL CLS is not "STD", GRP TYPE must be "CUSTOM".

5. FORM ENTRIES, 5908-4 RECORD

5.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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5.2 DISPLAY

Description: Is there a display module on the station set?

For 5E9(1) and later, the meaning of the DISPLAY field is changed for Standard DSL users. If DISPLAY is "Y", the user will receive all Standard Displays (incoming, outgoing, and feature displays). Assigning an ICLID feature merely provides the user the calling DN in the Standard Display.

For Custom DSL users to receive call-related displays, Line Identification features (ICLID/OCLID) must be assigned to the user, and DISPLAY must be set to "Y".

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "Y" if the CKT TN or the CKT MLHG/CKT TERM combination are assigned a Display feature on a DISPFD form (5965 Record) where the INSPECT field and/or the TIME DATE field are "Y".

This field must be "Y" if the CONFIG GRP field has an entry which is defined on a CFGGRP form with a LASS Customer Originated Trace feature assigned to a button. The LASS Customer Originated Trace feature is defined in the FEATURE field on a LSCOTFD form (5972 Record). The feature displays a number to call to report harassing phone calls.

If the CKT TN or the CKT MLHG/CKT TERM are assigned a Message Service System feature and the feature is defined on a MSFD form (5962-1 Record) with the MSG RTRVL DISP field "Y", then this field must be "Y".

If the TIME MODE field is "Y", indicating the use of a 24-hour clock, then this field must be "Y".

5.3 EKTS

Description: This field specifies the type of EKTS (Electronic Key Telephone Service) provided for Standard DSL users.

Software Release: 5E8 and later
Valid Entries:

Valid EKTS Entries

Entry	Definition
BASIC	Restricts the user to one call appearance.
CACH	Permits access to more than one call appearance for each telephone number.

Data Rules:

If either CKT TN or CKT MLHG/TERM is entered:

- if EKTS is entered, DSL CLS must be "STD" on the associated DSL form; on this DSLUSR form, TERM TYPE must be "TYPEC"; CSV LIMIT cannot be entered; CPN SCRN must be "Y"; furthermore,
  - if EKTS is "BASIC, and CKT MLHG is entered, CKT SWITCHING MLHG TN must be entered;
  - if EKTS is "CACH", both CA and CA QTY must be entered;
  - if the EKTS user is assigned CSD service, CSD LIMIT must be 1 for service to be available;

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- if EKTS is not "BASIC" and TERM TYPE is "TYPEC", CA must be entered;
- if EKTS is not entered:
  - if CSD LIMIT is entered, TERM TYPE must be "TYPEA";
  - if DSL CLS is "STD" on the DSL form, neither CA nor CA QTY can be entered;
- if DSL CLS is "STD" on the associated DSL form, and the CKT TN or CKT MLHG/TERM from this DSLUSR form appears in the SHARED LIST on an SHTN form, then a value must be entered in EKTS.

For 5E9(1) and later, if EKTS is "BASIC", CA and CA QTY must not be entered. If EKTS is "CACH", SP DNA, SP DNA QTY, AU DNA, and AU DNA QTY must not be entered.

5.4 SHARED

Description: Is this CKT TN or this CKT MLHG/CKT TERM combination shared (i.e., appear on more than one terminal)?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then the CKT TN or the CKT MLHG/CKT TERM combination must be defined in the optional key TN field or in the optional key MLHG and TERM NBR combination on an SHTN form.

If "N" is entered, then the CKT TN or the CKT MLHG and CKT TERM combination must not be defined in the optional key TN field or in the optional key MLHG and TERM NBR combination on an SHTN form.

If the CKT MLHG and CKT TERM combination appear in the MLHG and TERM fields of a MULTITN form (5114 Record), and the associated LCC is defined on a LCC form with a CLASS OF SERVICE of "ISATND" or "ISAT", this field must be "N".

MLHGs which are used as Message Service Centers, in conjunction with the Application Processor, must have all their members with this field set to "N". The MLHG which is used for this purpose is defined on an MLHG form with the AP SITE ID field or one of the BCID fields entered.

5.5 PRIVACY

Description: Is all-call privacy allowed? PRIVACY prevents TN information from being displayed to the called party for all calls.

For 5E6 and later, this field is optional. If this field is set to "Y", the presentation status of the calling number will be private. When this field is set to "N", the presentation status of the calling number is public. If the CPNP (Calling Party Number Presentation) feature has not been purchased (FID 50 on the SFSYS form (5713-1 Record) is not set to "S"), a blank PRIVACY field will default to "N". When the CPNP feature has been purchased (FID 50 on the SFSYS form (5713-1 Record) is set to "S"), a blank PRIVACY field will remain blank allowing the presentation status to be determined by either the PRIVACY field on the SCRIDXPA form (5543 Record) or the DN PRIVACY field on the OFCOPT form (5509 Record).

For 5E6 and later, the precedence for determination of call privacy is dependent on the purchase of the CPNP special feature. When the CPNP special feature has not been purchased, the precedence hierarchy is:

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1. If DN PRIVACY on the OFCOPT form is "Y", the calling party number presentation status is private.

2. If DN PRIVACY on the OFCOPT form is "N", the calling party number presentation status is determined by the PRIVACY field on this form.

When the CPNP special feature has been purchased, the precedence hierarchy is:

1. If PRIVACY on this form has been entered, it is used to determine the calling party number presentation status.

2. If PRIVACY on this form has not been entered, but an SCRIDXPA form has been entered for the SCREENING INDEX assigned to the LCC form whose LCC and RAX are assigned to this form, then that SCRIDXPA form may be used. If PRIVACY on the SCRIDXPA form has been entered, then that value is used to determine the calling party number presentation status.

3. If PRIVACY on the SCRIDXPA form has not been entered, or no corresponding SCRIDXPA form was found, then DN PRIVACY on the OFCOPT form will be used to determine the calling party number presentation status.

Default: N (5E9(1) and later)
Valid Entries: Y, N

Data Rules:

All-call privacy can be deactivated on a per-call basis by the per-call privacy feature. See the PCP ALW field.

5.6 TIME MODE

Description: Should the time displayed on ISDN Terminals be in a 12-hour format? If so, enter "Y". If not, the default ("N"), is a 24-hour format. All features that display the time use the format entered in this field.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the TERM TYPE field is not entered, then the TIME MODE field must be "N".

To display the time on an ISDN Terminal, the DISPLAY field must be "Y".

5.7 AC ALW

Description: Does the customer want access to the LASS (Local Area Signaling Services) Automatic Callback indicator feature?
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN" or "ISATND", then ODA assigns a "Y" in this field.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form permitted access to the feature are "ISDN" or "ISATND".

If the TERM TYPE field is not entered, this field is assigned a "N" by ODA.

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For 5E6 and later, if the CKT TN (or CKT MLHG/TERM) is assigned a LASS Automatic Callback feature on the LINEFA (or MLHLNFA), BFG, or associated CLUSTR form, AC ALW may not be "N".

5.8 AR ALW

Description: Does the customer want access to the LASS Automatic Recall indicator feature?
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN" or "ISATND", then ODA will assign a Y in this field.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN" or "ISATND".

If the TERM TYPE field is not entered, this field is assigned a "N" by ODA.

For 5E6 and later, if the CKT TN (or CKT MLHG/TERM) is assigned a LASS Automatic Recall feature on the LINEFA (or MLHLNFA), BFG, or associated CLUSTR form, AR ALW may not be "N".

5.9 COT ALW

Description: Does the customer want access to the LASS Customer Originated Trace?
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN" or "ISATND", ODA assigns a "Y" in this field.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN" or "ISATND".

If the TERM TYPE field is not entered, this field will be assigned a "N" by ODA.

For 5E6 and later, if the CKT TN (or CKT MLHG/TERM) is assigned a LASS Customer Originated Trace feature on the LINEFA (or MLHLNFA), BFG, or associated CLUSTR form, COT ALW may not be "N".

5.10 PCP ALW

Description: Does the customer want access to the LASS Per-Call Privacy?
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN" or "ISATND", then ODA will assign a Y in this field.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN" or "ISATND".

If the TERM TYPE field is not entered, this field is assigned a "N" by ODA.

For 5E6 and later:
"Y" may be entered for the additional classes of service: "TWOPTY", "HOTMOTL", "COIN", or "2PTY".

When left blank, this field will be treated as having a value of "Y" for the following additional classes of service: "TWOPTY", "HOTMOTL", "COIN", or "2PTY".

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PCP general availability may be allowed or denied via the LASSFA form (5973 Record) and the SCRIDXPA form (5543 Record).

If CKT TN or CKT MLHG/TERM(s) have a PCP ALW value of "Y", the CKT TN or CKT MLHG/TERM must also be entered on this form with an LCC/RAX value that corresponds to one of the following CLASS OF SERVICEs on the LCC form (5306 Record):

- "2PTY"
- "4WINDIV"
- "ATND"
- "B911"
- "CHGCALL"
- "COIN"
- "HOTMOTL"
- "HOTPBX"
- "INDIV"
- "ISATND"
- "ISDN"
- "LTPCLBK"
- "PBX
- "SATSTLN"
- "TWOPTY"

In addition, the CLASS OF SERVICESs

- "2PTY",
- "CHGCALL",
- "COIN",
- "HOTMOTL",
- "HOTPBX", and
- "TWOPTY"

are valid only when the SFSYS form (5713-1 Record) has SFID 50 ACT field set to "Y".

5.11 SCA GA ALW

Description: Does the customer want access to the LASS Selective Call Acceptance feature?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV" or "PBX", then ODA assigns a "Y" in this field. Otherwise, "N" is assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", "4WINDIV" or "PBX".

If the TERM TYPE field is not entered, this field will be assigned a "N" by ODA.

5.12 SCF GA ALW

Description: Does the customer want access to the Generally Available LASS Selective Call Forwarding feature?

Software Release: 5E6 and later
Valid Entries: Y, N

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Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV" or "PBX", ODA assigns a "Y" in this field. Otherwise, "N" is assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", "4WINDIV" or "PBX".

If the TERM TYPE field is not entered, this field is assigned a "N" by ODA.

5.13 SCR GA ALW

Description: Does the customer want access to the Generally Available LASS Selective Call Rejection feature?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", "4WINDIV" or "PBX", then ODA assigns a "Y" in this field. Otherwise, "N" is assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV", "4WINDIV" or "PBX".

If the TERM TYPE field is not entered, this field is assigned a "N" by ODA.

5.14 SDA GA ALW

Description: Does the customer want access to the Generally Available LASS Selective Distinctive Alert feature?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

If this field is left blank and the associated CLASS OF SERVICE on the LCC form is "ISDN", "INDIV", or "PBX", ODA assigns a "Y" in this field. Otherwise, "N" is assigned.

The only service classes, indicated in the CLASS OF SERVICE field on an associated LCC form, permitted access to the feature are "ISDN", "INDIV" or "PBX".

If the TERM TYPE field is not entered, this field is assigned a "N" by ODA.

5.15 ALT LANG

Description: Should the alternate language DSU2-RAF LASS announcements be used? This field supports the Alternate Language LASS Announcement feature, for more information on this feature see Division 2, Section 4A119.

Software Release: 5E8 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If ALT LANG is set to "Y", then two FIXRT forms must be defined: one with "ALSLE" entered in FIXED ROUTE TYPE and one with "AL2LVL" entered in FIXED ROUTE TYPE.

DSLUSR forms with an ALT LANG field set to "Y" indicate that the Alternate Language LASS Announcement Special Feature is to be used. It is a secured feature and must be purchased by the office before this field can be set to "Y". An SFSYS form must exist with SFID 119 ACT set to "Y".

5.16 FLS

Description: Will free terminating service be activated? With FLS, all calls terminating to this TN are not billed.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The "Y" option usually applies only to direct connect and manual lines.

5.17 SUSO

Description: Should originating service be denied or suspended?

Required Field.
Default: N
Valid Entries: Y, N

Data Rule:
This field must be "N" if 2 PARTY ANI is "N" on the associated IMINFO form and the CLASS OF SERVICE is either "2PTY" or "TWOPTY" on the associated LCC form. This form corresponds with the IMINFO form if the first 3 digits of the OE field match the SWITCHING MODULE field on the IMINFO form. This form corresponds with the LCC form if LCC/RAX fields match.

5.18 CONTEXT ID

Description: This field is used to indicate whether or not a DSL (Digital Subscriber Line) is set to "NATIVE", "RESOLD", or "UNBUNDLED" for the AMA Recording for Resale and Unbundling feature. For more information on this feature, see Division 2, Section 4A321.

Software Release: 5E12 and later
Required Field.
Default:
- For 5E12 and 5E13: N
- For 5E14: NATIVE

Valid Entries:

Valid CONTEXT ID Entries

Entry for 5E12, 5E13	Entry for 5E14 and later	Description
N	NATIVE	Line owned by ILEC/Switch Owner with no additional recording.
R	RESOLD	Unbundled Line with Service Provider and Timing Module
U	UNBUNDLED	Resale Line with Service Provider and NO Timing Module

Data Rules:

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For CKT TNs or CKT MLHG/CKT TERMs on the DSLUSR form, when the CONTEXT ID field is set to "R" or "RESOLD" or, "U" or "UNBUNDLED" , the ACT field for SFID (Secured Feature ID) 321 on the SFSYS form (5713-1 Record) must also be set to "Y".

For CKT TNs or CKT MLHG/CKT TERMs on the DSLUSR form, when the CONTEXT ID field is set to "R" or RESOLD" or, "U" or "UNBUNDLED", there must be an LCC form (5306 Record) where the RAX and LCC has a CLASS OF SERVICE of "ISATND" or "ISDN".

5.19 COMPL

Description: Complaint observing is used for customers who question their message rate bills. Does the customer want a detailed AMA record generated on all originating calls from this line, either answered or unanswered, except when the call encounters a Charge Index defined with a Call Type of "FREE"?

Required Field.
Default: N
Valid Entries: Y, N

5.20 SLUS

Description: Subscriber Line Usage is used for customers who question their message rate bills. Does the customer want a detailed AMA record generated on all originating calls from this line, either answered or unanswered, except when the call encounters a Charge Index defined with a Call Type of "FREE"?

Required Field.
Default: N
Valid Entries: Y, N

5.21 BRITL ALW

Description: Should the user be allowed to call a billed BRITL (BRI Dial Up Test Line)? If BRITL ALW is "Y", the circuit-switched voice user may test the operation of the DSL by placing a call to a preassigned DN. The bill for accessing the test line will be based on the duration of the call.

This field does not affect access to nonbilled BRITLs.

For more information about the BRITL feature, see Division 2, Section 2U.

Software Release: 5E6 and later
Valid Entries: Y, N

5.22 DTLBILL

Description: Detailed Billing is used for customers who question their message rate bills. Does the customer want a detailed AMA record generated on all originating calls from this line, either answered or unanswered, except when the call encounters a Charge Index defined with a Call Type of "FREE"?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

The only difference between COMPL, SLUS and DTLBILL is the designation set in the AMA record.

5.23 TRAFFIC

Description: Should a Traffic Sampling Study be activated?

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Required Field.
Default: N
Valid Entries: Y, N

5.24 SAR NUM

Description: This field defines the number of call appearances to be reserved (subaddresses) for originating or terminating calls.
Valid Entries: 1 - 16

Data Rules:

The value entered in this field must not be greater than the value entered in the CA QTY field. If the number of subaddress reservations is less than the value in the CA QTY field, the subaddresses reserved are the last call appearances. For example, if CA is 1, CA QTY is 6 and SAR NUM is 2, then call appearances 5 and 6 are reserved.

If the SAR NUM field is not entered, then the SAR ORIG and SAR TERM fields must be "N".

If the SAR ORIG and SAR TERM are both "N", then this field must not be entered.

5.25 SAR ORIG

Description: The subaddress origination reservation. Any attempt to terminate to the subaddress results in a busy signal. Originations are handled normally.

Required Field.
Default: N
Valid Entries: Y, N

5.26 SAR TERM

Description: The subaddress termination reservation. Any attempt to originate on this subaddress will be denied. Calls terminate normally.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If one of the INCOMING, INTERCOM, ORIG CW or PP fields is "Y", then the SAR ORIG and SAR TERM fields must be "Y". Conversely, if the SAR ORIG and SAR TERM fields are both "Y", then at least one of the INCOMING, INTERCOM, ORIG CW or PP fields must be "Y".

5.27 NONHUNT

Description: Is this terminal a non-hunt terminal? NONHUNT allows a line in a CKT MLHG to receive direct calls that do not hunt if the called line is busy.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Non-hunt TNs may be assigned to terminals within a MLHG. Any terminal may be assigned a non-hunting

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TN.

Non-hunt TNs interact with the group features in the following way:

- The group CFV (Call Forwarding Variable) has no effect on the non-hunt TN. If CFV is active for the group, calls to the non-hunt TN will not be forwarded as a result of the group CFV.
- The group and member make-busy keys have no effect on the non-hunt TN. If the make-busy keys are operated, calls can still complete to the non-hunt TN.

All non-outdial terminals (CKT TERM is 1 to 2015) with this field "Y" must have a CKT MLHG TN entered.

All outdial terminals (CKT TERM is 3001-3999) must have this field "Y".

If NONHUNT is "Y", then the associated TERMINATING TREATMENT on a LCC form must be "MLHG" or "INWATS".

If NONHUNT is "Y", then the CKT MLHG, defined on the MLHG form, must have an MLHG FEATURE that is defined on an MLHGFD form with a HUNT TYPE of "HTC", "REG", "UCD", "ISAT" or "PMHG".

NONHUNT must be "Y" when the fields MLHG and TERM NBR are defined on the SHTN form (5902 Record).

5.28 CA PREF

Description: The ISDN Terminal Call Appearance Preference. This field indicates the call appearance to select when a user goes off-hook.

Required Field.
Default: I
Valid Entries:

Valid CA PREF Entries

Entry	Definition
I	Idle call appearance preference. When a user goes off-hook, the call appearance which is currently idle is automatically selected and the user receives dial tone. If no call appearances are idle, then no call appearance is selected.
R	Ringing call appearance preference. When a user goes off-hook, the call appearance which was alerting first is automatically selected and the user is connected to the calling party. If no call appearances are alerting, then an idle call appearance is selected.

5.29 DNY BV

Description: Should the Deny Busy Verification feature be activated?

Required Field.
Default: N
Valid Entries: Y, N

5.30 TRC

Description: Should call tracing on calls to this line be activated?

Required Field.
Default: N
Valid Entries: Y, N

5.31 DNY ROH

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Description: Should Deny Receiver Off-Hook tone be activated?

Required Field.
Default: Y
Valid Entries: Y, N

6. FORM ENTRIES, 5908-5 RECORD

6.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

6.2 BUSY MONITOR

Description: Can the CKT TN entered for this DSL Multiline terminal be monitored by the Busy Lamps of an ISDN Attendant MLHG?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the CKT TERM or DPKT TERM fields are "1", then this field must be "N".

If this field is "Y", then either a CKT TN and OE or an MLHG TN and OE must be entered.

If the SAR NUM and CA QTY fields have equal entries, this field must be "N".

If this field is "Y", then the LCC and RAX (under the CKT SWITCHING header) must be defined on a LCC form with a CLASS OF SERVICE of "ISDN".

If BUSY MONITOR is "Y", ATT MLHG must be entered.

6.3 ATT MLHG

Description: The ISDN Attendant MLHG that can busy monitor this TN.

Software Release: 5E7 and later.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

The value entered in this field can also appear in the ATT MLHG field on a LINE form, an MLHLN form, an MLHG form or an SHTN form. When it appears on any of the previously mentioned forms or this form, and also appears in the CKT MLHG field on this form, the LCC and RAX for the ATT MLHG must be defined on an LCC form with a CLASS OF SERVICE of "ISATND" or "ATND".

If this field is entered and CKT TERM is "001", then the CKT MLHG must be defined on an MLHG form with ATT MLHG equal to the ATT MLHG on this form.

An ISDN Attendant cannot busy monitor a Hundreds Group if the Hundreds Group has physical terminations on more than 13 Switching Modules.

For 5E8 and later, if ATT MLHG is entered, RBV TGN must not be entered.

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6.4 RBV TGN

Description: Enter the RBV TGN of the incoming trunk group used to Remote Busy Verify the CKT TN (DN) or the CKT SWITCHING MLHG TN of this form. This TGN allows an ISAT (ISDN Attendant) on another 5ESS switch to Busy Verify this DN if the TGN is associated with a CKT TN (DN) or CKT SWITCHING MLHG TN.

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

If RBV TGN is entered, either a CKT TN or a CKT SWITCHING MLHG TN must be entered, BUSY MONITOR must be "N", and CSV must be entered and greater than zero.

If RBV TGN is entered, there must be a corresponding TKGRP form (5202 Record) with that TGN defined, and that TKGRP form must have TRKCLS set to "ATNDVFY", and TRK DIR must be "INC". Also, for the TGN on the TKGRP form, there must be at least one corresponding TRUNK form (5204 Record) with QTY entered.

If RBV TGN is entered, and CKT MLHG and CKT TERM are entered, CKT MLHG must equal MLHG on a corresponding MLHG form. That MLHG form must have MLHG FEATURE equal FEATURE NAME on a corresponding MLHGFD form, which must not have HUNT TYPE set to "MUPH", "ISAT", or "PSUCD".

6.5 SERHLN

Description: A Series Completing to Telephone Number. Series Completion supports BRI (Basic Rate Interface) lines for CSV (Circuit-Switched Voice) calls. SERHLN hunts a linked-list DN until an idle line is found or until 16 Series Completion attempts are made. A maximum of 50 TNs can Series Complete to a single TN defined on this form or on the LINE, MLHLN or SHTN forms.

Software Release: 5E6 and later
Valid Entries:
- For 5E11 and earlier: 7-digit number, 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

SERHLN cannot be entered when CKT ICP is "Y".

A maximum of 512 TN(s) are allowed to Series Complete to a single TN which is entered in the SERHLN field on the the LINE, MLHLN, DSLUSR or SHTN forms.

When SERHLN is entered, the CKT TN field or the CKT MLHG TN must be entered; however, SERHLN cannot have the same entry as CKT TN or CKT MLHG TN. When each of these three fields are entered, NONHUNT must be "Y".

When SERHLN is entered the following must be true:

- TERM TYPE and LCEN (or ILEN) must be entered,

- The LCC must be defined on an LCC form where:

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- for a CKT TN, TERMINATING TREATMENT must be "INDIV";
- for a CKT MLHG/TERM, TERMINATING TREATMENT must be "MLHG" or "INWATS".

For 5E7 and later, if Series Completion is allowed (SERHLN is entered), one of the following conditions must be satisfied:

1. the SERHLN assigned on this form matches a CKT MLHG TN on a DSLUSR with ICP (intercept) of "N".
2. the SERHLN must be defined on a LINE form (as TN) with ICP (intercept) of "N". The LCC/RAX must match LCC/RAX on LCC form with a TERMINATING TREATMENT of "INWATS", "PARTY", "RI", or "INDIV".
3. the SERHLN matches a CKT TN on a DSLUSR form with ICP of "N".
4. the SERHLN must be defined on an MLHLN form (as TN) with ICP of "N". The LCC/RAX must match LCC/RAX on an LCC form with a TERMINATING TREATMENT of "INWATS" or "MLHG".
5. the SERHLN matches an STN on an SHTN form where SMLHG/SMEMB is not entered, STN does not match TN in row 1 of the SHARED LIST, and ICP is "N".
6. the SERHLN matches an STN on an SHTN form where SMLHG/SMEMB is entered, SMLHG/SMEMB does not match MLHG/MEMB in row 1 of the SHARED LIST, and ICP is "N".
7. the SERHLN assigned on a DSLUSR form must be defined on the LINE form, MLHLN form, DSLUSR form, SHTN form or as LISTED TN on an MLHG form.

For 5E12 and later, if the SERHLNs on the DSLUSR form have SERHLN entered, the equivalent 10-digit SERHLN cannot equal the equivalent 10-digit CKT TN on the same DSLUSR form.

For 5E12 and later, if the SERHLNs on the DSLUSR form have SERHLN entered, the equivalent 10-digit SERHLN cannot equal the equivalent 10-digit CKT MLHG TN on the same DSLUSR form.

For 5E12 and later, if the first 3 digits of the 7-digit SERHLNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE or the NOC form does not exist, SERHLN must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

6.6 BCK LNK

Description: Does any other TN series complete to this CKT TN? This is a Recent Change only field on the 23.2 view. It cannot be entered on the ODA form.

Software Release: 5E6 and later.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, then ICP must be "N" and TERM TYPE must be entered.

6.7 QUEUE MONITOR

Description: Does the ISDN terminal monitor MLHG queuing data? This is a Recent Change only field on

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view 23.2. It cannot be entered on the ODA form.

Software Release: 5E6 and later.
Valid Entries: Y, N

Data Rules:

If QUEUE MONITOR is "Y", then CONFIG GRP and TERM TYPE must be entered.

6.8 EPO POS NUM

Description: Enter the EPO (Enhanced Professional Office) position number. This number is used to associate an EPO position number with a Custom ISDN terminal and uniquely identifies each EPO terminal. When a terminal is designated as an EPO position, circuit telephone numbers and circuit MLHG (Multi-line Hunt Group) members, which have call appearances on the terminal, can be tracked for call and event information. This information is sent to the MIS (Management Information System). Assigning an EPO POS NUM to a terminal provides the ability to track circuit telephone numbers or circuit MLHG members. Whether or not each individual telephone number or MLHG member is tracked depends on how the EPO ON field is set. Tracking can be assigned for the primary CKT TN of the terminal by setting EPO ON to "Y" on this form. For circuit telephone numbers or circuit MLHG member which share call appearances on this terminal, tracking is determined by the EPO ON fields on SHTN form (23.20 or 23.21 views). This field supports the Enhanced Professional Office secured feature (SFID 179). For more information on this feature, see Division 2, Section 4A179.

Software Release: 5E11 and later.
Valid Entries: 1 - 15000

Data Rules:

The EPO POS NUM field on the DSLUSR form is used by the Enhanced Professional Office Feature. It is a Secured Feature that must be purchased by the office before EPO POS NUM can be entered. An SFSYS form must exist with SFID 179 ACT set to "Y".

EPO POS NUM(s) must be unique, they cannot be duplicated on another DSLUSR form.

EPO POS NUM and ACD POS NUM cannot both be entered.

If EPO POS NUM is entered:
- CSV must be entered
- TERM TYPE must be "TYPEB" or "TYPED"

If a CKT TN, CKT MLHG, or CKT MLHG/CKT TERM field is entered and also has an entry in EPO POS NUM, then:

- the corresponding DSL form (where DSLUSR OE matches DSL form DSL OE) must not have a DSL CLS of "STD".

- the CKT LCC/CKT RAX values on the DSLUSR form must have a CLASS OF SERVICE of "ISDN" on the associated LCC form.

6.9 EPO ON

Description: Should the CKT TN or the CKT MLHG and CKT TERM be tracked? When "Y" is entered and the terminal has been designated as an EPO position, event information for calls and events to this CKT TN or CKT MLHG and CKT TERM is sent to the MIS (Management Information System). The information

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includes reports on terminal usage, status, event codes, and call-related events associated with the tracked CKT TN or CKT MLHG and CKT TERM. The MIS compiles the call data and provides user reports and display to each customer.

The information is sent to the MIS only when EPO ON is "Y" and EPO POS NUM is entered on this form. If "N" is entered or the terminal is not defined as an EPO position, no tracking will be performed for calls to or from this terminal.

The value of EPO ON can be modified for the CKT TN on the SHTN form (5902 Record) (23.20 or 23.21 views). For CKT TN or CKT MLHG members other than the primary CKT TN, which share call appearances on this terminal, tracking is always determined by the EPO ON fields on the SHTN form.

Software Release: 5E11 and later.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, ACD POS NUM cannot be entered.

When DSLUSR forms have the CKT TN or CKT MLHG field entered and also have the EPO ON field set to "Y", the corresponding DSL form (where DSLUSR OE matches DSL form DSL OE) must not have a DSL CLS of "STD".

6.10 ACD POS NUM

Description: This attribute uniquely identifies an ACD/BRCS position. When this attribute has a value other than 0, this terminal is an ACD/BRCS position.

ACD/BRCS positions are required to have the following characteristics:
- circuit switch voice service
- service class of "ISDN"
- position DN which is primary

ACD/BRCS positions are not allowed to have the following characteristics or features:
- assigned to a Bellcore Standard BRI
- a shared primary (position) DN
- assigned series completion DNs
- a primary or secondary DN that is a MLHG member
- a circuit switched MLHG member

For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E9(1) - 5E10: 1 - 4095
- For 5E11 and later: 1 - 9999

Data Rules:

ACD POS NUM on the DSLUSR form must be a unique entry and cannot be entered on another DSLUSR form.

For 5E9(1) - 5E10, it cannot be entered as POS NUM on the OSPSOP form.

No more than 512 ACD POS NUM values may be assigned to the same SM on the DSLUSR form.

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If ACD POS NUM is entered
- BRCS must be "Y"
- CSV must be entered.
- CKT MLHG cannot be entered
- CKT TN must be entered.
- SERHLN cannot be entered
- SHARED must be "N"
- TERM TYPE must be "TYPEB" or "TYPED"

For 5E11 and later:
- ACD GROUP must be entered
- EPO POS NUM cannot be entered

If ACD POS NUM and CKT TN fields are entered, then:

- the corresponding DSL form (where DSLUSR OE matches DSL form DSL OE) must not have a DSL CLS of "STD".

- The telephone number must have the required IDP and/or TGSR features must be assigned on the LINEFA form, CLUSTR form or associated BFG form.

- For the IDP feature, A (ACTIVE) should be "Y". For the TGSR feature, if A (ACTIVE) is "Y", then the nondefault TGSR attributes remain active when an agent is logged in or logged off. However, if A (ACTIVE) is "N", then the default TGSR attributes are active when the agent is logged off and the nondefault TGSR attributes are active when the agent is is logged on.

- this CKT TN must have one and only one CFW feature with FWD CONDITION of "ACDI" on the associated CFWFD form, which is assigned on the LINEFA form, CLUSTR form or associated BFG form with "Y" entered in the A (ACTIVE) field.

- the CKT TN must not be assigned to a PP feature, an ACVT feature, or an ACSR feature on the LINEFA form, CLUSTR form or associated BFG form.

- the CKT TN must have exactly one MW feature with MULTIWAY CONTROL of "3WAY" and FEATURE BUTTON set to "Y" on the associated MWFD form, which is assigned on the LINEFA form, CLUSTR form or associated BFG form.

- the CKT TN may not be the PRIMARY TN (in SHARED LIST position 1) for any Key MLHG/TERM NBR on the SHTN form.

- the associated LCC/RAX value on the DSLUSR form must have the SERVICE CLASS of "ISDN" on the LCC form.

ACD POS NUM may not be entered on the DSLUSR form unless "Y" is entered in SFIDs 121 and 122 on the SFSYS form (5713-1 Record). ACD POS NUM assignment is for the secured feature ACD/BRCS and must therefore be purchased by the Office before they may be assigned on the DSLUSR form.

5E11 and later.
If EPO ON is "Y", ACD POS NUM cannot be entered.

6.11 ACD GROUP

Description: Enter the Automatic call distributor group. This field uniquely identifies a sub-terminal group to allow customers to divide their call centers into smaller groups. This allows different groups to exist within the same ACD customer with the same level of security that exists between different ACD

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customers. This field supports the ACD/BRCS Position Provisioning secured feature (SFID 122). For more information on this secured feature, see Division 2, Section 4A122.

Over a retrofit from 5E10 to 5E11, if ACD POS NUM is entered, this field is set to 1. If ACD POS NUM is not entered, this field is also not entered.

Software Release: 5E11 and later.
Valid Entries: 1 - 999

Data Rules:

If ACD POS NUM or ACD GROUP is entered, both must be entered.

7. FORM ENTRIES, 5908-6 RECORD

7.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

7.2 CIDIAL

Description: Carrier Interconnect Dialing Permissions.

Required Field.
Default: ALLOW
Valid Entries:

Valid CIDIAL Entries

Entry	Definition
ALLOW	The customer can dial an FGD CAC (Carrier Access Code) or use a PIC (Pre-subscribed InterLATA Carrier) identification number if one is assigned when making a carrier interconnect call.
DENY	The customer cannot dial an FGD CAC.
REQ	The customer is required to dial an FGD CAC when making a carrier interconnect call. A PIC may not be assigned to lines with this CIDIAL type.
TALLOW	Same as ALLOW, but used for a CI test line only.
TDENY	Same as DENY, but used for a CI test line only.
TREQ	Same as REQ, but used for a CI test line only.

Data Rules:

For 5E9(2) and later, PIC is not allowed for lines that require carrier access code dialing, therefore, if "TREQ" or "REQ" is entered, PIC cannot be entered..

If "REQ" or "TREQ" is entered, PTC must not be entered.

7.3 PIC

Description: A PIC (Pre-subscribed InterLATA Carrier identification number) assigned to a DSL.
Valid Entries: 0 - 9999

Data Rules:

This entry is not valid when CIDIAL is "REQ" or "TREQ".

For 5E8 and later, if PIC is entered, then on the ICF form (5305 Record) the CARRIER ID must match the PIC entry and FEAT GRP must be "D".

For 5E9(1) and later, PIC is not allowed for lines that require carrier access code dialing.

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7.4 PTC

Description: Enter the PTC (Presubscribed IntraLATA Toll Carrier). This field supports the ICLATA (InterLATA Carrier's IntraLATA Capability) secured feature. For more information on the ICLATA feature, see Division 2, Section 4A149.

Software Release: 5E9(1) and later.
Valid Entries: 0 - 9999

Data Rules:

The PTC field is used by the ICLATA Secured Feature. This feature must be purchased by the office before the field can be entered. The SFID 149 ACT field must be set to "Y" on the SFSYS form (5713-1 Record), before PTC can be entered.

If the PTC field is entered, then the PTC must be entered as a CARRIER ID on the ICF form (5305 Record).

7.5 PLC

Description: Enter the PLC (Presubscribed Local Carrier) code. The PLC field supports the Alternate Local Service Provider Routing feature. For more information on the Alternate Local Service Provider Routing feature, see Division 2, Section 4A269.

Software Release: 5E12 and later.
Valid Entries: Blank, or 0 - 9999.

Data Rules:

The PLC field on the DSLUSR form must be defined as CARRIER ID on the ICF form with FEAT GRP equal to "D".

7.6 UNBUNDLED

Description: Has this line been unbundled from the LEC?

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

Data Rules:

If UNBUNDLED is "Y", then PLC must be entered.

7.7 INCOMING

Description: Are incoming calls to a terminal group a priority?

Required Field.
Default: N
Valid Entries: Y, N

7.8 INTERCOM

Description: Are ISDN Intercom calls a priority?

Required Field.
Default: N

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Valid Entries: Y, N

Data Rules:

If this field is "Y", the SAR ORIG and SAR TERM fields must be "Y".

7.9 ORIG CW

Description: Are originating call waiting calls a priority? This is the ISDN equivalent of call waiting origination.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", the SAR ORIG and SAR TERM fields must be "Y".

7.10 PP

Description: Are Precedence and Preemption calls a priority?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", the SAR ORIG and SAR TERM fields must be "Y".

7.11 AUTO HOLD

Description: Does auto hold apply? Auto hold allows an existing call to be placed on hold. If "N" is entered, auto drop applies. Auto drop allows an existing call to be disconnected and a new call appearance to be connected.

Required Field.
Default: N
Valid Entries: Y, N

7.12 ONE TOUCH

Description: Will ONE TOUCH be activated? If "Y", a switch is associated with this feature that will automatically turn on the terminal's speaker phone to answer or originate a call.

Required Field.
Default: N
Valid Entries: Y, N

7.13 LN TYPE

Description: Depending on the line type entered, does the line belong to a Leased Network and does it query the NCP (Network Control Point) data base for routing and charging information?

Software Release: 5E6 and later
Default: NONE
Valid Entries:

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Valid LN TYPE Entries

Entry	Definition
IMT	Software Release: 5E9(1) and later. An Inter-Machine Trunk.
NONE	Not a Leased Network line.
NOQRY	A Leased Network line that does not query the NCP data base.
QRY	A Leased Network line that queries the NCP data base.

Data Rules:

If a CKT TN (or MLHG/TERM) is defined with LN TYPE of "QRY", the CKT TN (MLHG/TERM) must not be assigned a BRCS Authorization Code Feature on the BFG, LINEFA (MLHLNFA) or an associated CLUSTR form.

For a Leased Network line, LN TYPE "QRY" or "NOQRY", the following restrictions apply:

- If a CKT TN is defined and is entered on both an ATHLPA form (5619-5 Record) and a MDRLPA form (5624-4 Record), the corresponding ATH FOR MDR on the ATHLPA form must be "N".
- If a CKT TN is defined, it must also be on at least one ARSLPA form or be assigned an ARS (Automatic Route Selection) Feature on the BFG, LINEFA or an associated CLUSTR form.
- If an MLHG/TERM is defined and is assigned both ATH and MDR Features on MLHLNFA, CLUSTR or BFG (except MDR may not be on BFG), then the ATH FOR MDR on the associated ATHFD or ATHMPA or BFG form must be equal to "N".
- If a CKT MLHG/TERM is defined, it must be assigned an ARS feature on a BFG, MLHLNFA or associated CLUSTR form.
- If a CKT TN (or MLHG/TERM) is defined, the LCC and RAX must be defined on a LCC form with CLASS OF SERVICE equal to "ISDN".
- If a CKT TN is defined and is assigned both ATH and MDR Features on a LINEFA or associated CLUSTR form (excluding the BFG form), then the ATH FOR MDR on the associated ATHFD or ATHLPA form must be equal to "N".

If a CKT TN defined on this form is entered on an ATHLPA form with ATH FOR MDR equal to "Y" and is also entered on a MDRLPA form, then the LN TYPE field on this form must be "NONE" or blank.

The LN TYPE must be "NONE" or blank if: a CKT TN defined on this form is assigned both ATH and MDR Features on BFG, LINEFA or associated CLUSTR forms and the ATH feature is defined on the ATHFD form with ATH FOR MDR equal "Y".

The LN TYPE must be "NONE" or blank if: an MLHG/TERM defined on this form is assigned both ATH and MDR Features on BFG, MLHLNFA or associated CLUSTR forms and it has the parameter ATH FOR MDR "Y" on an ATHMPA, BFG or ATHFD form.

7.14 BLK 1PLUS

Description: Enter the type of blocking on a line if the office has the 1+ blocking/1+ split blocking feature.

Software Release: 5E7 and later
Required Field.
Default: NONE
Valid Entries:

Valid BLK 1PLUS Entries

Entry	Definition
FULL	Block all 1+ dialing.

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SPLIT	Block 10xxx-1+ if the carrier dialed is not the pre-subscribed carrier.
NONE	No blocking for 1+ on the line.

Data Rules:

BLK 1PLUS must be "NONE", if the OE TYPE and NUMBER are not entered.

If CKT TN, CKT MLHG, and CKT TERM are not entered, then BLK 1PLUS must be "NONE".

If BLK 1PLUS is set to either "FULL" or "SPLIT", then LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "INDIV", "4WINDIV", "PBX", "HOTPBX", "HOTMOTL", "COIN", "ATND", "ISDN", "ISATND", or "SATSTLN".

7.15 RMB

Description: The Scan Point Number for CKT MLHG/CKT TERM combinations requiring a Member Make Busy Key assignment (previously called Remote Make Busy).
Valid Entries:

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	XX	0-1
Board	BRD	XX	00-31
Scan Point Number	SPN	XX	00-31

Data Rules:

A CKT MLHG can have up to 32 terminals sharing one Scan Point Number for Member Make Busy Keys (previously called Remote Make Busy). Available assignments can be found on the 5840 Record.

For 5E6 and later, RMB can be entered only when CKT MLHG is entered and TERM TYPE is "TYPEE".

7.16 RND MKB

Description: Specify the Random Make Busy scan point.
Valid Entries: A scan point number consisting of:

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
Scan Point Number	SPN	XX	00-31

Data Rules:

RND MKB can be entered only when CKT MLHG and CKT TERM are entered and CKT TERM is 1 - 2015 (not an Outdial terminal).

RND MKB can only be entered when TERM TYPE is "TYPEE".

This field cannot be entered when the MLHG form has HUNT TYPE equal "ISAT".

RND MKB and RND SUBGP cannot be both entered simultaneously.

7.17 STH

Description: The Scan Point Number for CKT MLHG/CKT TERM combinations requiring a Stop Hunt Key assignment (which stops hunting at the member).

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Valid Entries:

SCAN POINT NUMBER			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	XX	0-1
Board	BRD	XX	00-31
Scan Point Number	SPN	XX	00-31

Data Rules:

The Scan Point Number for Stop Hunt Keys must be unique. Available assignments can be found on the 5840 Record.

8. FORM ENTRIES, 5908-7 RECORD

8.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

8.2 MMB SUBGROUP

Description: For 5E6 and later this field has been renamed as MMB SUBGP.

8.3 MMB SUBGP

Description: The Member Make Busy Subgroup number for the MLHG Terminal.
Valid Entries: 1 - 255

Data Rules:

The number entered here designates a subgroup. All members in the same subgroup must have the same MMB SUBGP number.

This field cannot be entered when the MLHG form has HUNT TYPE equal "ISAT".

CKT TERM must be entered when MMB SUBGP is entered.

The CONFIG GRP entered must be defined on a CFGGRP form with a feature button assigned an ACTION of "BYMB" (Member Make Busy).

It is recommended that if one of the subgroup members resides on a RSM (Remote Switching Module), then all members of the subgroup should reside on the same RSM.

8.4 RND SUBGP

Description: Enter the Make Busy Subgroup Number for the Make Busy ISDN Buttons.

Software Release: 5E7 and later
Valid Entries: 1 - 255

Data Rules:

When TERM TYPE is "ATND", a RND SUBGP cannot be entered.

RND MKB and RND SUBGP cannot both be entered.

If MMB SUBGP or RND SUBGP is entered, then CKT MLHG/TERM must be specified.

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8.5 ERCO ASGN

Description: Assign Executive Ringer Cutoff to a shared DN BRCS line. ERCO allows an ISDN keyset user to press a feature button to turn audible ringing on or off for all incoming voice calls except for ICOM, 911 and Auto Call Back. When ringing is turned off by ERCO, visual alerting at the principal's terminal and the ability to pick up the call still occurs.

The operation of the Executive Ringer Cutoff feature button does not alter call treatment at any of the coverage terminals. In addition, while ERCO is in effect, all other functions on the ISDN keyset are unaffected. Incoming Calls are lighted normally and given standard displays.

ERCO, which is a Secured System Optional feature, and its translation requirements are described in Division 2, Section 4A.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ERCO ASGN is "Y", then TERM TYPE must not be "ATND" and SHARED must be "Y".

A feature button with its ACTION field "ERCO" is assigned on a CFGGRP form (5964 Record). should be entered in the CONFIG GRP field on this form, if a feature button on the CFGGRP form will be assigned "ERCO".

ERCO can only be assigned if the SFSYS form (5713 Record) indicates that the feature has been purchased and enabled.

8.6 ERCO ACT

Description: This is a Recent Change only field. It is used to activate and deactivate ERCO.

8.7 LONG DST DR

Description: Is distinctive ringing supplied for long distance calls?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If LONG DST DR is set to "Y", then LCC and RAX must be defined on an LCC form with a CLASS OF SERVICE of "ATND", "INDIV", "ISATND", "ISDN", or "PBX".

The Call Waiting Distinctive Tones and Distinctive Ringing for Long Distance Calls feature is a Secured Feature that must be purchased by the office before the LONG DST DR field can be changed from its default value on either the LINE, MLHLN, or DSLUSR forms. The SFID 91 ACT field on the SFSYS form (5713-1 Record) must be set to "Y", before the LONG DST DR field can be set to "Y".

8.8 E911 PSAP

Description: Is this an E911 Public Safety Answering Point? This field applies to the secured feature, ISDN PSAP Support. For information on the feature, see Division 2, Section 4A114.

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Software Release: 5E8 and later.
Valid Entries: Y, N

Data Rules:

This field can be "Y" only if the ISDN PSAP Support secured feature has been purchased; SFID 114 ACT must be set to "Y" on the SFSYS form (5713-1 Record).

If "Y" is entered, then
- ACD POS NUM must not be entered.
- CKT TERM must not be greater than 2015.
- CSV must be entered.
- TERM TYPE must be "TYPEB" or "TYPED".
- SERHLN must not be entered.
- SUSO must not be "Y".
- SUST must not be "Y".

In addition, if "Y" is entered, the following restrictions apply.

- The CKT SWITCHING LCC and RAX must be defined on the LCC form with CLASS OF SERVICE set to "ISDN".
- OE must be defined on the DSL form with DSL CLS set to "MP" or "PP". If DSL CLS is "PP", ACSR GRP on the DSL form must be blank.
- For 5E9(1) and later, if a CKT TN is entered and
  - ACD POS NUM is not entered, then the following types of BRCS features cannot be assigned to the CKT TN (via the LINEFA, CLUSTR, or BFG form):

    ACCT

    ACSR

    ARS

    ATH

    CFW (CFPF ALW is "Y")

    ICM

    MDR

    MS

    PFA

    PP

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PUO

PUT

TGSR

TOD

- ACD POS NUM is entered, the following types of BRCS features cannot be assigned to the CKT TN (via the LINEFA, CLUSTR, or BFG form):

  ACCTFD

  ACSRFD

  ARSFD

  ATHFD

  CFPF (CFPF ALW is "Y")

  ICMFD

  MDRFD

  MSFD

  PFAFD

  PPFD

  PUOFD

  PUTFD

  TODFD

- If CKT MLHG / CKT TERM are entered, then:

  - the value entered for E911 PSAP must match the E911 PSAP entry on the corresponding MLHG form;

  - the MLHG member may not be assigned the following types of BRCS features on the MLHLNFA, CLUSTR, or BFG form: ACCT, ACSR, ARS, ATH, CFW (where CFPF ALW is "Y"), ICM, MDR,

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MS, PFA, PP, PUO, PUT, TGSR, or TOD.

- The CKT TN and CKT MLHG TN may not be series completion DNs on other forms; that is, they may not appear in the SERHLN field on a LINE, MLHLN, DSLUSR, or SHTN form.

For 5E9(1) and later, if "Y" is entered and ACD POS NUM is entered, then the SFID 143 ACT field must be set to "Y" on the SFSYS form (5713-1 Record). This data combination is used by the Pinnacle ACD E911 secured feature that must be purchased by the office before this data combination can be entered.

If "Y" is entered and ACD POS NUM is entered for a CKT TN, then the CKT TN must have a fully unrestricted TGSR (Terminal Group Station Restriction) feature assigned via the LINEFA, CLUSTR, or BFG form. The TGSR feature must be defined on the TGSRFD form with ORIGINATING RESTRICTION field, the ORIGINATING DEFAULT field, the TERMINATING RESTRICTION field, and the TERMINATING DEFAULT field set to "NONE".

8.9 SCP ALW

Description: Is the DSL allowed to receive messages from the SCP (Service Control Point)? This field supports the Network Element Services Signaling secured feature. For more information on this feature, see Division 2, Section 4A185.

Software Release: 5E9(2) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Before "Y" can be entered in this field, the ASP (Advanced Service Platform) NESS (Network Element Services Signaling) secured feature must be purchased and the SFID 185 ACT field must be "Y" on the SFSYS form (5713-1 Record).

If "Y" is entered:

- CKT TN or CKT MLHG TN must be entered.
- and CKT MLHG is entered, then NONHUNT must be "Y".
- the corresponding DSL form (DSLUSR OE matches DSL OE) must have a DSL CLS of "STD".

8.10 PASC

Description: Is Personal Communications Access Service - C Interface available? This field is used to indicate if the PCS (Personal Communications Services)/ISDN feature is available on the DSL. Note that effective with the implementation of the PCS/ISDN Interworking feature, the IHN DSL MAINT field was added to the RTERM form to allow several types of DSL testing to be inhibited (see the RTERM form (5174 Record), Division 3, Section 1S). For more information on PCS and INH DSL MAINT, see NI-3 (National ISDN 3) in Division 2, Section 1AM.

The PCS/ISDN Interworking feature is a secured feature and SFID 228 on the SFSYS form must be "Y".

Software Release: 5E10 and later.
Valid Entries: PCSI

Data Rules:

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If "PCSI" is entered, CKT TN must be entered.

If "PCSI" is entered, the following fields must not be entered:

AGI
- SPDNA
- AUDNA
- K56DNA
- K64DNA
- ATTMLHG
- RBVTGN
- SERHLN
- ODB TN
- EKTS
- ODB MLHG/ODB TERM

If "PCSI" is entered, the following fields must be as indicated:

BRCS must be "Y"
- SHARED must be "N"
- CSV must be 1
- CSV CHL must be "ANY"
- E911PSAP must be "N"
- TERM TYPE must be "TYPEA"
- AC ALW must be "N"
- AR ALW must be "N"
- COT ALW must be "N"
- SCA GA ALW must be "N"
- SCF GA ALW must be "N"
- SCR GA ALW must be "N"
- SDA GA ALW must be "N"

If "PCSI" is entered for a CKT TN, the CKT TN may not be entered as SERHLN on a LINE, SHTN, or MLHLN form or as a SERHLN on another DSLUSR form.

If "PCSI" is entered, each DSLUSR form must have a corresponding DSL form where the following conditions are met:

DSL CLS is set to "STD"
- B1 SERV must not be "X25"
- B2 SERV must not be "X25"

If "PCSI" is entered, the assignment of BRCS features to a TN (LINEFA form) are prohibited EXCEPT for:
- RNDFD features
- ASPFD features
- DISPFD features
- CPNBNFD features

Multiway Calling features are also prohibited except Three-Way Calling with MULTIWAY CONTROL set to "3WAY" and MULTIWAY TRANSFER is set to "N".

If "PCSI" is entered, a CKT TN must appear as TN on a LINEFA form which has an ASP feature or a CLUSTER containing an ASP feature assigned. Additionally, the associated ASPFD form must have CONTROL set to "ORIG" and the OHD TRIG NBR field on the ASPFD or ASPLPA forms must be

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entered.

8.11 ALT

Description: Is Automatic Link Transfer available?

This field supports the PCS/ISDN Interworking feature. It is used to indicate whether this user on the DSL is allowed to comply with a request for an Automatic Link Transfer. The purpose of the ALT is to move a PCS call from one RPCU (Radio Port Control Unit) to another RPCU. For more information, see Division 2, Section 1AM.

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ALT is "Y", PASC must be "PCSI".

8.12 LRN INDEX

Description: Enter an index into the LRNINDEX form (5328 Record) to obtain the LRN associated with this DN. LRNs are used to route DNs that have been ported into the office from other switches. An LRN uniquely identifies an office and rate center. This field supports the Local Number Portability secured feature (SFID 174). For more information on this feature, see Division 2, Section 4A174.

Software Release: 5E11 and later.
Valid Entries: 1 - 127

Data Rules:

When this field is entered, LRN INDEX must also be entered on the LRNINDEX form (5328 Record).

8.13 PORTED

Description: The PORTED field is used to indicate whether the TN has been ported into this office via the NP (Number Portability) feature. The indicator is used by call processing to determine whether or not to generate an NP BAF (Bellcore AMA Format) module for originating and terminating IXC (Inter-Exchange Carrier) access records.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

8.14 NON COND TRIG

Description: The NON COND TRIG field is used to indicate whether or not a call to this DN requires a non-conditional query of the SCP (Service Control Point) prior to routing the call.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

NON COND TRIG must be "N" when:

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- ICP is "Y"
- E911 PSAP is "Y"

When NON COND TRIG is "Y", then:

- CKT TN and DPKT/ODB/PPB1/PPB2 TN must not be the same.
- CKT TN must be entered but CKT MLHG and CKT TERM must be blank.
- the ACT field for SFID 216 must be set to "Y" on the SFSYS form, and if SFID 216 is set to "Y", SFID 174 must also be set to "Y".
- the CLASS OF SERVICE and TERMINATING TREATMENT on the LCC form should be as follows:
  - Valid CLASS OF SERVICE
    - "10PTY", "2PTY", "4PFS", "4PSS", "5PTY", "8PSS", "ATND", "CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN", "TWOPTY", "4WINDIV"
  - Valid TERMINATING TREATMENT
    - "INDIV", "INWATS", "MLHG", "PARTY"

NI SAR LIST (SARLIST)

The following fields (Section 8.15 - Section 8.16) describe the NI SAR LIST. These fields support the ISDN Call Appearance Reservation feature. See Division. 2, Section 1BM for more information.

The subaddress reservation list contains up to 3 entries which consist of the type of subaddresses to reserve, the order in which the type of reservation specified should appear with respect to the other types of subaddresses reserved, if any, and the number of subaddresses to reserve for that type of subaddress reservation.

8.15 TYPE AND ORDER

Description: The TYPE AND ORDER field is used to specify the type and order of subaddresses to reserve for call appearance reservation. The subaddress types can be reserved in any order with respect to one another; however, all subaddresses within one category must be reserved contiguously (i.e. each reservation type may appear only once in NI SAR LIST(SARLIST) field). The location of the list entry determines the ordering of the reservation type with respect to the other types of subaddresses reserved, if any. The reserved subaddresses are assigned to the highest numbered subaddresses associated with the circuit telephone number specified in the CKT TN field. Following is an example of the assignment of call appearance reservation on a terminal on which the circuit TN specified is primary.

The circuit TN has 5 call appearances (CA QTY is 5) starting at call appearance 3 (CA is 3) and the NI SAR LIST field is set up as follows:

NI SAR LIST		
ROW	TYPE AND ORDER	QTY
1	PRIO	1
2	TERM	2
3	ORIG	1

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In this example, the circuit TN has five subaddresses (CA QTY is 5). Four of the circuit TN's five subaddresses are to be reserved (sum of QTY column). Since the reserved subaddresses are the highest numbered subaddresses of the circuit TN, it is the last four of the five subaddresses (subaddresses 2, 3, 4, and 5 of the circuit TN) which will have subaddress reservation. The order of the types of reservation follows the order specified in the NI SAR LIST field. Therefore, subaddress 2 of the circuit TN will be reserved for originations and priority incoming terminations ("PRIO") since a QTY of 1 subaddress is specified to be reserved for "PRIO" and it is the first type in the NI SAR LIST. Subaddresses 3 and 4 will be reserved for terminations ("TERM"), since a QTY of 2 subaddresses are specified to be reserved for TERM and it is the second type in the NI SAR LIST. Finally, subaddress 5 will be reserved for originations ("ORIG"), since a QTY of 1 subaddress is specified to be reserved for "ORIG" and it is the third type in the NI SAR LIST. Any non-reserved subaddresses are the lowest numbered subaddresses of the circuit TN (in this example, subaddress 1 is non-reserved).

On this terminal, the subaddresses correspond to CA (Call Appearances) as follows:

- CA 3 is subaddress 1 (non-reserved)
- CA 4 is subaddress 2 (reserved for "ORIG" and "PRIO" terminations)
- CA 5 is subaddress 3 (reserved for terminations)
- CA 6 is subaddress 4 (reserved for terminations)
- CA 7 is subaddress 5 (reserved for originations)

NOTE: See SHTN form (Division 5 Section 1C) for a description of call appearance reservation when the circuit TN is shared.

Software Release: 5E11 and later.
Valid Entries:

Valid TYPE AND ORDER Entries

Entry	Definition
ORIG	Subaddress(es) reserved for originations only.
PRIO	Subaddress(es) reserved for originations and priority incoming terminations.
TERM	Subaddress(es) reserved for terminations only.
blank	No subaddress reservation.

Data Rules:

TYPE AND ORDER and QTY must be entered together, e.g. if TYPE AND ORDER is entered, QTY must be entered for that TYPE AND ORDER.

When EKTS is "BASIC" and TYPE AND ORDER is "ORIG", BUSY MONITOR must not be "Y".

TYPE AND ORDER must be unique in the NI SAR LIST.

NI SAR LIST entries are not permitted when a CKT MLHG is entered.

When an NI SAR LIST entry is made, CKT TN must be entered.

When a CKT MLHG is entered, NI SAR LIST entries are not permitted.

When an NI SAR LIST entry is made, EKTS must be "BASIC" or "CACH".

- When EKTS is "BASIC"
  - no more than one NI SAR LIST row entry is permitted.
  - if one NI SAR LIST entry is made, the QTY field entry must be 1.

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- When EKTS is "CACH", and SARLIST has only one row entry, and that entry has both a TYPE AND ORDER of "ORIG" and a QTY entry equal to the CA QTY entry, then BUSY MONITOR must not be "Y".

8.16 QTY

Description: The Quantity of subaddresses to be reserved for Call Appearance Reservation field is used to specify the quantity of subaddresses to be reserved for the type of subaddress designated in the TYPE AND ORDER field. The number of subaddresses reserved may not exceed the total number of subaddresses specified in the CA QTY field for the circuit TN. The reserved subaddresses will be assigned to the highest numbered subaddresses of the circuit TN.

Software Release: 5E11 and later.
Valid Entries: 1 - 16, or leave blank.

Data Rules:

When EKTS is "CACH", the sum of the NI SAR LIST QTY fields must not exceed the entry in the CA QTY field.

ADVANCED SERVICES PLATFORM

The following fields (Section 8.17 - Section 8.20) were added to accommodate the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. This is a secured feature with SFID 210. For more information on this feature, see Division 2, Section 4A210.

8.17 OFC OBL INH

Description: The OFC OBL INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by individual lines. It indicates whether the ASP Office Originating Busy Line Office Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating Busy Line Office Trigger is inhibited.

This field was added for the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division 2, Section 4A210.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC OBL INH must be "N".

8.18 OFC ONA INH

Description: The OFC ONA INH field is used to enhance the functionality provided by the ASP Originating Busy/No Answer Triggers with Extended Ringing feature. This field allows inhibiting by individual lines. It indicates whether the ASP Office Originating No Answer Office Trigger should be inhibited. If this field is set to YES, it means that the ASP Office Originating No Answer Office Trigger is inhibited.

This field was added for the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature. For more information on the ASP Inhibiting of Originating Busy/No Answer Office Triggers feature, see Division

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2, Section 4A210.

Software Release: 5E11 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When the inhibiting feature has not been purchased, OFC ONA INH must be "N".

8.19 URT FCD BLK

Description: Should all Unrestricted FCD Codes be blocked from this CKT TN or CKT MLHG TN?

- ***NOTE:*** On the LINE, MLHLN, and DSLUSR forms this URT FCD BLK field is intended for use on individual or line attendant lines only.

This field was added for the ASP Unrestricted FCD Trigger feature. For more information, see Division 2, Section 4A572.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When URT FCD BLK is "Y", either CKT TN or CKT MLHG must be entered.

When URT FCD BLK is "Y" and CKT MLHG is entered, CKT MLHG TN must be entered.

When the CKT TN or CKT MLHG/TERM is entered on a DSLUSR form where URT FCD BLK is set to "Y", the ACT field for SFID 572 on the SFSYS form must be "Y". This field is used by the ASP Unrestricted FCD Codes secured feature, which must be purchased before URT FCD BLK can be set to "Y".

When "Y" is entered in the URT FCD BLK field on the DSLUSR form, the CKT TN or the CKT MLHG TN on the DSLUSR form cannot be entered as a TN on the LNBLKCOD form.

When "Y" is entered in the URT FCD BLK field on the DSLUSR form, the CLASS OF SERVICE on the corresponding LCC form must be "ISDN" or "ISATND".

When a DSLUSR form is entered, indicating this is an ISDN office, and secured feature ASP Unrestricted FCD Trigger has been purchased, the ACT field for SFID572, is "Y", then the ACT field for SFID 139, Advanced Service Platform Interworking with Nation ISDN and Custom ISDN, must also be "Y" on the SFSYS form.

8.20 BLK LN CODE

Description: This is a text only field that indicates if a LNBLKCOD form exists for this TN.

This field was added for the ASP Unrestricted FCD Trigger feature. For more information on, see Division 2, Section 4A572.

Software Release: 5E15 and later

9. FORM ENTRIES, 5908-8 RECORD

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9.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

DPKT

The following fields (Section 9.2 - Section 11.16)

contain entries used in DPKT (D-Channel packet-switched) calls.

9.2 MLHG TN

Description: The packet telephone number of the DSL (if it has one).
Valid Entries:

- For 5E11 and earlier: NXXXXXX,
- where N is 2 - 9 and X is 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9
- and X is 0 - 9

Data Rules:

The first three digits must be defined in the OFFICE CODE field on a NOC form.

When this field is entered, DPKT MLHG/TERM, LCC, and RAX must be entered. When DPKT MLHG/TERM and DPKT H PVC LCN are entered, MLHG TN must be entered.

The Telephone Number entered here cannot duplicate the Telephone Number entered in the ODB TN field.

This Telephone Number must be unique within the 5ESS Switch with the following two exceptions:

- It can match the CKT TN or the MLHG TN (under the CKT SWITCHING header) on the same instance of a DSLUSR form;

- it can match the LISTED TN on the associated MLHG form if this is member 1 of the MLHG.

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN or member TN. Multiple TNs are defined in the TN field on a MULTITN form. The TN entered in this field on the DSLUSR form may not duplicate a TN entered in the TN field on a MULTITN form.

Multiple TNs that are defined on the MULTITN form may not be assigned to modem pools, PPB1 MLHG/TERMs or PPB2 MLHG/TERMs.

For 5E8 and later, this field must be entered when DPKT MLHG and TERM are entered and DPKT CHL SEL equals "Y" or DPKT HUNT NOTIF is "YES".

For 5E8 and later, when DPKT CHL SEL is "N", this TN must be unique within the 5ESS Switch with the exception that it can equal the CKT TN or MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.

When DPKT CHL SEL is "Y", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form.

- It can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the

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DSLUSR form.

- It must equal ODB MLHG TN if the corresponding ODB CHL SEL is set to "Y".
- It must equal PPB1 TN (on the DSL form) if the corresponding PPB1 CHL SEL is set to "Y" and PPB1 USR on the DSLUSR form equals "Y".
- It must equal PPB2 TN (on the DSL form) if the corresponding PPB2 CHL SEL is set to "Y" and PPB2 USR on the DSLUSR form equals "Y".

For 5E12 and later, when the DSLUSR forms have DPKT CHL SEL and ODB CHL SEL set to "Y" ,and DPKT MLHG TN and/or ODB MLHG TN are entered, DPKT MLHG TN and ODB MLHG TN must both be entered and DPKT MLHG TN must equal ODB MLHG TN.

For 5E12 and later, if the first 3 digits of the 7-digit DPKT MLHG TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE or the NOC form does not exist, DPKT MLHG TN must be a 10-digit TN with the NPA/OFFICE CODE defined in the NOC form.

9.3 LCC

Description: The Line Class Code. LCCs are defined on the LCC form (5306 Record).
Valid Entries: 3 alphanumeric characters.

Data Rules:

This field must be entered if the DPKT TN or DPKT MLHG/DPKT TERM fields are entered.

9.4 RAX

Description: The rate area. The LCC and RAX determine the Digit Analysis Selector and Screening Index used for calls originating from this line and the terminating treatment of calls to this line.
Valid Entries:

- For 5E14 and earlier: 1 - 99
- For 5E15 and later: 1 - 999

Data Rules:

This field must be entered if the DPKT TN or DPKT MLHG/DPKT TERM fields are entered.

If an MLHG TN (under the D-CHANNEL PACKET SWITCHING header) is not entered and the D SERV field on the DSL form for this DSL, is not "XMP" (indicating no Modem Pooling), then the LCC and RAX combination must be defined on a LCC form with an associated CLASS OF SERVICE of "ISDN" and a TERMINATING TREATMENT of "MLHG".

If an MLHG TN (under the D-CHANNEL PACKET SWITCHING header) is entered and the D SERV field on the associated DSL form is not "XMP", then the LCC and RAX must be defined on a LCC form with a CLASS OF SERVICE of "ISDN" and a TERMINATING TREATMENT of "INDIV".

If the D SERV field, on the DSL form for this DSL is "XMP" (indicating Modem Pooling), then the LCC and RAX combination entered under the DPKT (D-CHANNEL PACKET SWITCHING) with an associated CLASS OF SERVICE of "ISDN" and a TERMINATING TREATMENT of "AGING".

9.5 LNR HNT TN

Description: The Linear Hunt TN of a Multi-Line Hunt Group member. This LNR HNT TN serves as a

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linear entry point to the MLHG. Hunting always begins at the member associated with the called TN; it hunts sequentially through the members of the hunt group until either it reaches a non-busy member, or it reaches the last member and all hunted members were hunt-busy.

If the member TN is on intercept, the LNR HNT TN will not be on intercept.

Software Release: 5E8 and later
Valid Entries:
- For 5E11 and earlier: NXXXXXX,
- where N is 2 - 9
- and X is 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

If DPKT LNR HNT TN is entered, the following must be true:

- OE must be entered.
- DPKT MLHG and TERM must be entered.
- The first three digits of the LNR HNT TN must be defined in the OFFICE CODE field on the NOC form.
- For a "PSUCD" MLHG, if LNR HNT TN for member 1 is not entered, no other members can have LNR HNT TN entered.
- LNR HNT TN must be unique within the 5ESS Switch with the following exceptions:
  - If DPKT CHL SEL is "Y", it must match ODB LNR HNT TN on the same DSLUSR form, where the corresponding ODB CHL SEL is "Y".
  - If DPKT CHL SEL is "Y" and PPB1 USR on this DSLUSR form is "Y", it must match the PPB1 LNR HNT TN on the DSL form, for this DSL, where PPB1 CHL SEL is "Y".
  - If DPKT CHL SEL is "Y" and PPB2 USR on this DSLUSR form is "Y", it must match the PPB2 LNR HNT TN on the DSL form, for this DSL, where PPB2 CHL SEL is "Y".

For 5E12 and later, when the DSLUSR forms have DPKT CHL SEL and ODB CHL SEL set to "Y" ,and DPKT LNR HNT TN and/or ODB LNR HNT TN are entered, DPKT LNR HNT TN and ODB LNR HNT TN must both be entered and DPKT LNR HNT TN must equal ODB LNR HNT TN.

For 5E12 and later, when the DSLUSR forms have DPKT TN or DPKT MLHG and DPKT TERM entered, and also have an entry for DPKT LNR HNT TN, DPKT LNR HNT TN must not equal CKT TN, DPKT TN, ODB TN, CKT MLHG TN, DPKT MLHG TN, or ODB MLHG TN.

For 5E12 and later, if the first 3 digits of the 7-digit DPKT LNR HNT TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, DPKT LNR HNT TN must be 10 digits.

9.6 HUNT DEACT

Description: Should the MLHG member be deactivated (marked busy) for hunted calls? A value of "N" indicates the Multi-Line Hunt Group member is active (available) for hunting.

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The deactive/active status has no effect on non-hunted calls, calls made to the MLHG member using its individual TN.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DPKT MLHG and TERM are not entered, DPKT HUNT DEACT must be "N".

If DPKT MLHG and TERM are defined for Modem Pooling, DPKT HUNT DEACT must be "N".

9.7 CHL SEL

Description: Is the TN a Common TN that is shared by at least two channels on the DSL? When a call terminates to a Common TN, an Active Channel Selection algorithm is performed to determine the channel on which the call will be offered.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DPKT CHL SEL and ODB CHL SEL are both "Y", the following DPKT and ODB fields must be set the same:

- (DPKT/ODB) TN
- (DPKT/ODB) MLHG
- (DPKT/ODB) TERM
- BILL TN
- BUSY LIMIT
- CHARGE
- CUGPX
- CUGOA
- CUGIA
- FCPN
- FSA
- HUNT DEACT
- HUNT NOTIF
- IA
- ICB
- ICP
- IECPDNIC
- LCC
- LCP
- LNR HNT TN
- MLHG TN
- NOTIF
- OCB
- PB GRP
- PMDR GRP
- PMDR ACT
- RAX

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- REV
- SUST
- TPCN
- X25VER

If CHL SEL is "Y", OE must be entered.

If DPKT CHL SEL is "Y", DPKT H PVC LCN must not be entered.

DPKT CHL SEL must equal "N" when the DPKT MLHG and TERM is defined for Modem Pooling.

At least two channels of the DSL for a user must have Channel Selection (PPB1 CHL SEL, PPB2 CHL SEL, ODB CHL SEL, or DPKT CHL SEL) set to "Y", or none of the channels should be set.

If DPKT CHL SEL is "Y", service must be on a PH3. The first three digits of OE, the first digit of D ISCN, and the second two digits of D ISCN must match SM, PSU SHELF, and GRP, respectively, on a PSUGP form. PH TYPE on the PSUGP form must be set to "PH3".

If DPKT CHL SEL (DSLUSR form), ODB CHL SEL (DSLUSR form), PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) are set to "Y" for a user of the DSL, the following must be true for that user:

- The following parameters associated with CHL SEL equal to "Y" must be the same: MLHG, TERM, LNR HNT TN, LCC, RAX, HUNT DEACT, first three digits of ISCN, BILL TN, BUSY LIMIT, ICB, OCB, PMDR GRP, PMDR ACT, FCPN, TPCN, REV CHARGE, LCP, IECPDNIC, FSA, IA, PB GRP, X25VER, ICP, HUNT NOTIF, SUST, CUGPX, CUGOA, and CUGIA.
- If MLHG and TERM are entered, all the associated Channel Types with CHL SEL set to "Y" must have the same: DPKT MLHG TN, ODB MLHG TN, PPB1 TN, and/or PPB2 TN.
- If MLHG and TERM are not entered, all the associated Channel Types with CHL SEL set to "Y" must have the same: DPKT TN, ODB TN, PPB1 TN and/or PPB2 TN.
- All the associated B-Channel Types with CHL SEL set to "Y" must have the same SEND PKTSZ, SEND PKTWD, RCV PKTSZ, and RCV PKTWD.
- If DPKT NOTIF (DSLUSR form) and/or ODB NOTIF (DSLUSR form) is set to "COND", then of all the associated Channel Types with CHL SEL set to "Y", at least one Channel must have 2W LCN or IN LCN entered.
- If PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) equals "Y" and DPKT CHL SEL (DSLUSR form) or ODB CHL SEL (DSLUSR form) equals "Y", the appropriate PPB1 and/or PPB2 fields CALL TN, CALL ID, and DIS SCR (DSL form) must equal "N".
- If MLHG/TERM are entered, then of all the associated packet (PPB1, PPB2, DPKT, ODB) services with CHL SEL set to "Y" for this user, at least one packet service must have 2W LCN or IN LCN entered.

9.8 NEW TN

This field is a Recent Change field added in 5E7.

9.9 BILL TN

Description: A TN to be billed if the PKT TN to be billed is different from the PKT TN of this DSL.
Valid Entries: A 7-digit PKT TN if calls are to be billed to a PKT TN within the local office; a valid 10-digit number if calls are to be billed to a PKT TN outside the local office. Entries must be in one of the

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following formats:

Valid BILL TN Entries

Entry	Definition
NXXXXXX	Where NXX is a valid office code defined in the OFFICE CODE field on a NOC input form.
NPANXXXXXX	Any 10-digit number is acceptable; however, normal expected values are valid NPA and NXX codes.
ZXXXXXX	Where Z is 0 or 1. This is normally used for OUTWATS billing purposes. The first three digits must be defined in the OFFICE CODE field on a NOC input form.

9.10 FIXED TEI

Description: Enter the Fixed terminal endpoint identifier. If this field is not entered it indicates there is no support for NIT access to a PVC (Permanent Virtual Circuit). This field supports the Non-Initializing Terminals secured feature on a Standard ISDN interface. For more information on this feature, see Division 2, Section 1AM.

Software Release: 5E10 and later.
Valid Entries: 0 - 63

Data Rules:

Fixed Terminal Endpoint Identifier for use with Permanent Virtual Circuits and Non-Initializing Terminals is a feature that must be purchased by the office before the DPKT FIXED TEI field on the DSLUSR form can have an entry. The SFID 225 ACT field on the SFSYS form (5713-1 Record) must be set to "Y", before this field can be entered.

If FIXED TEI is entered then the following must be entered:
- DPKT TN
- DPKT H PVC LCN

and the following must not be entered:
- CONFIG GRP
- CKT MLHG
- EKTS
- PASC

and the following must be "N":
- DFLT TN USER
- SCP ALW
- SHARED.

If DPKT FIXED TEI is entered and ODB services are also entered, then ODB TN must be entered.

If the DPKT FIXED TEI field is entered, then on the corresponding DSL form (DSL form DSL OE matches DSLUSR form OE) the DSL CLS field must be set to "STD". A BRI cannot have a Fixed Terminal Endpoint Identifier (DPKT FIXED TEI) unless its Class of Service is "STD".

The DPKT FIXED TEI field value cannot be duplicated for DSLUSR forms with the same OE value. The same Fixed Terminal Endpoint Identifier value cannot be assigned to more than one terminal on a BRI.

CAICOM form can only be entered when "CACH" is entered for EKTS. Therefore, if CKT TN is entered with either the DFLT TN USER field set to "Y" or the DPKT FIXED TEI field entered, corresponding CAICOM form (where DSLUSR form CKT TN matches CAICOM form TN) can not be entered. ISDN Call Appearance Intercom is not allowed with either a Circuit Default DN (DFLT TN USER) or a Fixed Terminal Endpoint Identifier (DPKT FIXED TEI).

If either the DFLT TN USER field is set to "Y" or the DPKT FIXED TEI field entered, then the CKT TN

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cannot have BRCS features (assigned on the LINEFA, BFG or CLUSTR forms) which are not allowed with Non-Initializing Terminal features. In addition, BRCS features defined on the following forms:

- ASPFD with CONTROL set to "NESS"
- EDSFD
- MSFD

are not allowed for NIT, because they require the use of Fully Initializing Terminals.

9.11 RMK

Description: Remarks entered for administrative purposes.
Valid Entries: Up to 16 alphanumeric characters.

Logical Channel Numbers

Fields Section 9.12 -Section 9.18 refer to D-Channel LCNs. Each D-channel can define 15 possible LCNs to establish simultaneously active SVCs (Switched Virtual Circuits) or PVCs (Permanent Virtual Circuits). The circuits connect CPEs together for packet switched data transmission.

SVCs exist only during the call. The CPE and the PH must interact through CCITT (International Telegraph and Telephone Consultative Committee) specified packet communication to set up each call and clear the SVC for each call.

A PVC exists between CPE devices until the customer deems otherwise. There is no need to set up each call or to clear the PVC for each call.

There is a system limitation of 128 simultaneously active SVCs or PVCs for each PH. Congestion on the network, due to contention for available SVCs or PVCs, is handled through CCITT specified procedures.

There are four categories of LCNs (PVCs and SVCs). A PVC is a permanent, two-way connection between CPE devices. An incoming SVC can only receive incoming data. A two-way SVC can transmit outgoing data or receive incoming data. An outgoing SVC can only the perspective of the PH.

The CCITT has specified a required order of assigning the four categories of LCNs.

The lowest numbers (1 to x) can be used for the PVCs, if the customer wishes to have PVCs. The H PVC LCN field (highest PVC LCN) indicates the highest numbered LCN that is a PVC. For example, if the H PVC LCN field is 7, that means that LCNs 1 through 7 are PVCs.

The next highest range of numbers for LCNs belongs to the incoming only SVCs. This range is indicated in the L IN LCN field (Lowest Incoming LCN) and the H IN LCN field (Highest Incoming LCN).

The next highest range of numbers for LCNs belongs to the two-way SVCs. This range is indicated in the L 2W LCN field (Lowest Two-way LCN) and the H 2W LCN field (Highest Two-way LCN).

The highest range of numbers for LCNs belongs to the outgoing only SVCs. This range is indicated in the L OUT LCN field (Lowest Outgoing LCN) and the H OUT LCN field (Highest Outgoing LCN).

As an example, an ISCN could define its 15 associated LCNs as follows:

H PVC LCN = 2 (LCNs 1 and 2 are PVCs)

L IN LCN = 3

H IN LCN = 4 (LCNs 3 and 4 are incoming SVCs)

L 2W LCN = 8

H 2W LCN = 9 (LCNs 8 and 9 are two-way SVCs)

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L OUT LCN = 10

H OUT LCN = 12 (LCNs 10 to 12 are outgoing SVCs)

If PVCs are not desired, LCN 1 is available for an incoming SVC.

If PVCs and incoming SVCs are not desired, LCN 1 is available for a two-way SVC.

If PVCs, incoming SVCs and two-way SVCs are not desired, LCN 1 is available for outgoing SVCs.

The CCITT, to minimize "call collisions", has specified that a CPE device should start its search algorithm for an available LCN (SVCs only) with the highest numbered SVC that is in a ready state.

The H PVC LCN field or the L IN LCN and H IN LCN field combination or the L 2W LCN and H 2W LCN field combination or the L OUT LCN and H OUT LCN field combination must be entered.

9.12 H PVC LCN

Description: The Highest Logical Channel Number that can be assigned to a Permanent Virtual Circuit.
Valid Entries: 1 - 15

Data Rules:

When the DPKT TN or DPKT MLHG/TERM is assigned on a PSPVC form where the LCN is entered, the LCN must be less than or equal to the H PVC LCN entered here.

9.13 L IN LCN

Description: The Lowest Incoming Logical Channel Number.
Valid Entries: 1 - 15

Data Rules:

If the L IN LCN field is entered, then the H IN LCN field must be entered in order to specify the range of incoming LCNs.

If the H PVC LCN field is not entered and L IN LCN is entered, then L IN LCN field must be "1".

If the H PVC LCN field is entered and L IN LCN is entered, then L IN LCN must be 1 greater than the H PVC LCN field.

9.14 H IN LCN

Description: The Highest Incoming Logical Channel Number.
Valid Entries: 1 - 15

Data Rules:

The value entered in this field must be greater than or equal to the value entered in the L IN LCN field in order to specify a single Incoming LCN or a range of Incoming LCNs.

9.15 L 2W LCN

Description: The Lowest Two-Way Logical Channel Number.
Valid Entries: 1 - 15

Data Rules:

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If the L 2W LCN field is then the H 2W LCN field must be entered in order to specify the range of Two-Way LCNs.

If this field and the H IN LCN field are entered, the value entered in L 2W LCN must be greater than the value entered in the H IN LCN field.

If this field and the H PVC LCN fields are entered, but the H IN LCN field is not entered, the value entered in L 2W LCN must be greater the value entered in the H PVC LCN field.

9.16 H 2W LCN

Description: The Highest Two-Way Logical Channel Number.
Valid Entries: 1 - 15

Data Rules:

The value entered in this field must be greater than or equal to the value entered in the L 2W LCN field in order to specify a single Two-Way LCN or a range of Two-Way LCNs.

9.17 L OUT LCN

Description: The Lowest Outgoing Logical Channel Number.
Valid Entries: 1 - 15

Data Rules:

If the L OUT LCN field is entered, then the H OUT LCN field must be entered in order to specify a range of Outgoing LCNs.

If this field and the H 2W LCN fields are entered, the value entered in L OUT LCN must be greater than the value entered in the H 2W LCN field.

If this field and the H PVC LCN fields are entered and the H IN LCN and H 2W LCN fields are not entered, then the value entered in this field must be greater than the value entered in the H PVC LCN field.

9.18 H OUT LCN

Description: The Highest Outgoing Logical Channel Number.
Valid Entries: 1 - 15

Data Rules:

The value entered in this field must be greater than or equal to the value entered in the L OUT LCN field in order to specify a single Outgoing LCN or a range of Outgoing LCNs.

9.19 BUSY LIMIT

Description: Enter the busy limit for this MLHG terminal. The busy limit represents the maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included in the incoming call count but are not restricted by the busy limit.

Software Release: 5E8 and later
Valid Entries:
- If CHL SEL is "Y": 1 - 269
- If CHL SEL is "N": 1 - 15

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Data Rules:

This field is applicable to MLHG members only. If DPKT MLHG and TERM are not entered, DPKT BUSY LIMIT must not be entered.

If DPKT MLHG and TERM are entered, BUSY LIMIT should be set according to the rules that follow. When BUSY LIMIT is not entered, the maximum value for the applicable rule will be assigned (but not for Modem Pooling):

- If the DSL is on a PH3 and DPKT CHL SEL is set to "N", DPKT BUSY LIMIT must be less than or equal to the sum of DPKT IN LCNs plus DPKT 2W LCNs.
- If DPKT CHL SEL is set to "Y", DPKT BUSY LIMIT must be less than or equal to the sum of IN LCNs and 2W LCNs of all associated packet (PPB1, PPB2, DPKT, and ODB) services with CHL SEL set to "Y" for this user. If two ODBs are provisioned, add twice the value of the first ODB's IN LCNs plus 2W LCNs to the count.

9.20 ICB

Description: Will the Incoming Calls Barred feature be activated? ICB prevents the user from receiving incoming virtual calls. The user can still originate outgoing virtual calls.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the DPKT MLHG and DPKT TERM fields are entered, then this field must be "N".

For 5E9(1) and earlier, if this field is "Y", then the L IN LCN, H IN LCN, L 2W LCN and H 2W LCN fields must not be entered.

9.21 OCB

Description: Will the Outgoing Calls Barred feature be activated? OCB prevents the user from originating outgoing virtual calls. The user can still receive incoming virtual calls.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

for 5E9(1) and earlier, if this field is "Y", the L OUT LCN, H OUT LCN, L 2W LCN and H 2W LCN fields must not be entered.

If the OCB field is "Y" and the ICB field is "N", the L IN LCN and H IN LCN fields must be entered.

If the OCB field is "N" and the ICB field is "Y", the L OUT LCN and H OUT LCN fields must be entered.

10. FORM ENTRIES, 5908-9 RECORD

10.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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10.2 PMDR GRP

Description: Enter the MDR (Message Detail Recording) group name associated with the D-Channel Packet TN. This field was added with the Packet MDR feature.

Software Release: 5E7 and later
Valid Entries: 1 - 8 characters

Data Rules:

If DPKTTN, DPKTMLHG or DPKTTERM are not entered, PMDR GRP should not be entered.

If ODBTN is not entered, PMDR GRP should not be entered.

If PMDR GRP is entered, PMDR ACT must be entered, and it must be defined on the MDRGP form as the MDR GROUP NAME where PACKET MDR is "Y". If PMDR GRP is not entered, then PMDR ACT must not be entered.

If PMDR GRP(s) are entered for DPKT (Packet Switch D-Channel) on the DSLUSR input form, then the corresponding DSL form must not have D SERV set to "XMP".

10.3 PMDR ACT

Description: Is the Packet MDR Group active for the D-Channel TN?

Software Release: 5E7 and later.
Valid Entries: Y, N

Data Rules:

If PMDR GRP is not entered, PMDR ACT should not be entered.

10.4 SEND TPC

Description: The Throughput Class of a virtual call from the terminal to the switch.

Required Field.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800 or 9600

10.5 SEND PKTSZ

Description: The maximum number of bytes of data in a packet (excluding control type information) that can be sent.

Required Field.
Default: 128
Valid Entries: 128 or 256 bytes

Data Rules:

If the FCPN field is "N", this field must equal 128.

10.6 SEND PKTWD

Description: The number of data packets that the CPE device can have unacknowledged, on a sending basis, at any time.

Required Field.

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Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if DPKT SEND PKTWD or DPKT RCV PKTWD is not 2, DPKT FCPN must be "Y".

10.7 SEND MCT

Description: Enter the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 16 - 32 (kbps), in increments of 2

10.8 RCV TPC

Description: The Throughput Class of a virtual call to the terminal from the switch.

Required Field.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800 or 9600

10.9 RCV PKTSZ

Description: The maximum number of bytes of data in a packet (excluding control type information) that can be received.

Required Field.
Default: 128
Valid Entries: 128 or 256 bytes

Data Rules:

If the FCPN field is "N", this field must equal 128.

10.10 RCV PKTWD

Description: The number of data packets that the CPE device can have unacknowledged, on a receiving basis, at any time.

Required Field.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if DPKT SEND PKTWD or DPKT RCV PKTWD is not 2, DPKT FCPN must be "Y".

10.11 RCV MCT

Description: Enter the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds the RCV MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 16 - 32 (kbps), in increments of 2

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10.12 FCPN

Description: Will the Flow Control Parameter Negotiation feature be activated? FCPN allows the PH and the CPE device to negotiate the Window Size (2 or 3) and the Packet Size (128 or 256 bytes) on a per-call basis. Data transmission between a CPE and a PH is controlled separately for each direction and is controlled by the receiver of the data. This is, in CCITT nomenclature, referred to as flow control. An additional aspect of flow control is the ability of the PH to limit the rate at which it accepts packets when it recognizes network congestion.

Required Field.
Default: N
Valid Entries: Y, N

10.13 TPCN

Description: Will the Throughput Class Negotiation feature be activated? TPCN allows sending and receiving entities to negotiate the bits/second that are transmitted in either direction on a per-call basis. Both the sending and receiving party must subscribe to this service.

Required Field.
Default: N
Valid Entries: Y, N

10.14 REV CHARGE

Description: Will the called CPE device accept the charge for a call from a PH?

Required Field.
Default: N
Valid Entries: Y, N

10.15 LCP

Description: Will Local Charge Prevention be activated? When LCP is "Y", all the X.25 outgoing calls from this user will be Reverse Charged, and any X.25 incoming calls that contain Reverse Charge will be cleared.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

LCP is not allowed with Reverse Charge. If LCP is "Y", then REV CHARGE must be "N".

D SERV on the DSL form associated with this form must not equal "XMP" when LCP is "Y".

11. FORM ENTRIES, 5908-10 RECORD

11.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

11.2 IECPDNIC

Description: A 4-digit DNIC (Data Network ID Code) for Inter-Exchange Carrier Pre-select.

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Valid Entries: 1 - 9999

Data Rules:

This entry must be defined in the DNIC field on the PSDNICRI form (5921 Record).

11.3 FSA

Description: Will the Fast Select Acceptance feature be activated? FSA allows a CPE device to receive up to 128 bytes of user data with call setup and clearing packets. The feature cannot be applied if the target CPE Device does not have Fast Select Acceptance.

Required Field.
Default: N
Valid Entries: Y, N

11.4 IA

Description: Will the ISDN Intercom Addressing feature be activated? IA permits the ISDN user to access other users on the 5ESS Switch with a 4- or 7-digit number.

Required Field.
Default: N
Valid Entries: Y, N

11.5 PB GRP

Description: The Packet Switching Data Business Group Service feature enables the customer to set up and administer intra-switch PBG (Packet Business Groups) by assigning a PBG number to each X.25 termination to distinguish between intra-PBG and other calls on the AMA record.
Valid Entries: 1 - 100

Data Rules:

An MLHG is assigned to a PBG by associating the PBG with an MLHG on an MLHG form. The DSLUSR form should only be used to assign a PBG if the MLHG member has a known MLHG TN.

Do not enter a value if this user is not a member of a PBG.

For 5E8 and later when DPKT PB GRP is entered, OE must be entered, and the PB GRP must be defined on a PBGRP form (5931 Record).

If DPKT PB GRP and DPKT MLHG are both entered, DPKT MLHG TN must be entered.

11.6 X25VER

Description: The Packet Switch D-Channel X.25 CCITT Version Supported for this DTE.

Software Release: 5E6 and later
Required Field.
Default: 1984
Valid Entries: 1980, 1984

Data Rules:

If DPKTTN is known, and DPKT MLHG and DPKTTERM is unknown, DPKT X25VER must be 1984.

11.7 NOTIF

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Description: Enter the Notification Class.

If a call is routed to a channel with Conditional Notification when Layer 1 is up on the channel, but Layer 2 is down for the channel, the channel will be notified of the incoming call. The channel is notified by sending a Q.931 message on the D-channel. If the user accepts the call by responding to the Q.931 message, the switch will initiate Layer 2 setup procedures on the channel and offer the call.

If DPKT service is not subscribed to, this field must not be entered.

Software Release: 5E8 and later
Valid Entries:

Valid NOTIF Entries

Entry	Definition
COND	Conditional notification
NO	No notification

Data Rules:

This field is required when DPKT TN and OE are entered.

If NOTIF is "COND", the following must be true:

- DPKT MLHG and TERM must not be entered.
- DPKT H PVC LCN must not be entered.
- DPKT ICB must be "N".
- If DPKT CHL SEL is "N", DPKT L IN LCN or DPKT L 2W LCN must be entered.

11.8 ICP

Description: Are originating or terminating calls to be denied? Intercept, in the packet switched world, is a packet message denying service.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DPKT ICP is "Y" and DPKT MLHG is entered, then OE must be entered.

11.9 HUNT NOTIF

Description: Indicate the Hunting Notification procedure to be used for processing an X.25 CLAMN (Called Line Address Modified Notification) facility and a modified address for this Multi-Line Hunt Group member.

The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet-mode hunt terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed.

If HUNT NOTIF is blank, the CLAMN feature is not applicable.

Software Release: 5E8 and later
Valid Entries:

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Valid HUNT NOTIF Entries

Entry	Definition
YES	The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
NO	The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
OLD	The X.25 CLAMN procedure that existed prior to the 5E8 Software Release is used.

Data Rules:

This field is applicable to MLHG members only. If DPKT MLHG and TERM are not entered, DPKT HUNT NOTIF must not be entered.

If DPKT MLHG and TERM (Non-Modem Pooling) are entered, DPKT HUNT NOTIF must be entered. If DPKT MLHG and TERM are defined for Modem Pooling, DPKT HUNT NOTIF must not be entered.

If DPKT HUNT NOTIF is "YES", DPKT MLHG TN must be entered.

11.10 TCID

Description: Enter the TCID (Throughput Class Indicator) for the D-channel. All incoming calls to the Common DN with a throughput class less than or equal to the TCID are routed to the D-channel. If 0 is entered, the TCID is not subscribed to.

Software Release: 5E8 and later
Valid Entries: 0, 75, 150, 300, 600, 1200, 2400, 4800, or 9600 (kbps)

Data Rules:

DPKT CHL SEL must be "Y" when DPKT TCID is entered. If DPKT CHL SEL is "Y", and TCID is left blank, a value of 9600 kbps will be assigned.

11.11 SUST

Description: Is termination denied or suspended for packet switched services?

Required Field.
Default:
Valid Entries: Y, N

Data Rules:

This field must be "N" if the DPKT TN or the DPKT MLHG/DPKT TERM fields are entered.

11.12 DNA

Description: Enter the first DN CA for DPKT. This field, along with DNA QTY, is used to set the range of DPKT DNAs. Each DNA must be unique. See Division 2, Section 1AM for more information on how to determine if CAs are duplicated.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If DPKT DNA is entered, DPKT DNA QTY must be entered.

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The range of DPKT DNAs cannot overlap the range of any of the following: AU DNAs, CAs, ODB DNAs, K56 DNAs, K64 DNAs, and SP DNAs.

If DPKT DNA or DPKT DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

11.13 DNA QTY

Description: Enter the number of DN CAs for DPKT.

Software Release: 5E9(1) and later
Valid Entries: 1 - 4

Data Rules:

If DPKT DNA QTY is entered, DPKT DNA must be entered. The sum of DPKT DNA and DPKT DNA QTY cannot exceed 255.

If DPKT DNA QTY and ODB DNA QTY are both entered, and either DPKT MLHG equals ODB MLHG or DPKT TN equals ODB TN, the sum of DPKT DNA QTY and ODB DNA QTY cannot exceed 4.

If DPKT DNA or DPKT DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

11.14 CUGPX

Description: The Preferential Customer CUG Index. Refer to the Closed User Group explanation in the General section of this form for more information on CUGs.
Valid Entries: 0 - 99

Data Rules:

The entry must be defined in the CUG IDX field on a PSCUG form (5924 Record).

11.15 CUGOA

Description: Will the CUG Outgoing Access indicator be activated? CUGOA permits CUG members to access CPE devices that do not belong to a CUG, or CPE devices that belong to a CUG with Incoming Access.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CUGOA is "Y", the corresponding PSCUG form (5924A Record) must be defined with the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services, respectively.

11.16 CUGIA

Description: Will the CUG Incoming Access indicator be activated? CUGIA permits CUG members to access CPE devices that do not belong to a CUG, or CPE devices that belong to a CUG with Outgoing Access.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If CUGIA is "Y", the corresponding PSCUG form (5924A Record) must be defined with the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services, respectively.

12. FORM ENTRIES, 5908-11 RECORD

12.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

ODB (On Demand B-Channel)

The following fields (Section 12.2 - Section 14.28) contain entries for calls using ODB.

12.2 MLHG TN

Description: Enter the On Demand B-channel Multi-Line Hunt Group member Telephone Number.

Software Release: 5E8 and later
Valid Entries:
- For 5E11 and earlier: NXXXXXX,
- where N is 2 - 9 and X is 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits must be defined in the OFFICE CODE field on the NOC form.

If this field is entered, ODB MLHG and ODB TERM must be entered.

This field must be entered when ODB MLHG and TERM are entered, and ODB CHL SEL equals "Y" or ODB HUNT NOTIF is "YES".

When ODB CHL SEL is "N", this TN must be unique within the 5ESS Switch with the exception that it can equal the CKT TN or MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.

When ODB CHL SEL is "Y", this TN must be unique within the 5ESS Switch with the following exceptions:

- It can equal the CKT TN on the same instance of the DSLUSR form.
- It can equal the MLHG TN (under the CKT SWITCHING header) on the same instance of the DSLUSR form.
- It must equal DPKT MLHG TN if the corresponding DPKT CHL SEL is set to "Y".
- It must equal PPB1 TN (on the DSL form) if the corresponding PPB1 CHL SEL is set to "Y" and PPB1 USR on the DSLUSR form equals "Y".
- It must equal PPB2 TN (on the DSL form) if the corresponding PPB2 CHL SEL is set to "Y" and PPB2 USR on the DSLUSR form equals "Y".

Multiple TNs allow the assignment of additional TNs to an MLHG's main TN, subgroup TN, or member TN. Multiple TNs are defined in the TN field on a MULTITN form. The TN entered in this field on the DSLUSR form must not duplicate a TN entered in the TN field on a MULTITN form.

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Multiple TNs that are defined on the MULTITN form may not be assigned to modem pools, PPB1 MLHG/TERMs or PPB2 MLHG/TERMs.

For 5E12 and later, if the first 3 digits of the 7-digit ODB MLHG TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, ODB MLHG TN must be 10 digits.

12.3 LCC

Description: The Line Class Code. LCCs are defined on the LCC form (5306 Record).
Valid Entries: 3 alphanumeric characters.

Data Rules:

The LCC and RAX combination associated with the ODB TN or ODB MLHG/TERM must be defined on an LCC form with CLASS OF SERVICE of "ISDN" and TERMINATING TREATMENT of "INDIV".

12.4 RAX

Description: The Packet Rate Area. The LCC and RAX are used to determine the Digit Analysis Selector and Screening Index used for calls originating from this line and the terminating treatment of calls to this line.
Valid Entries:
- For 5E14 and earlier: 1 -99
- For 5E15 and later: 1 -999

12.5 LNR HNT TN

Description: The Linear Hunt TN of a Multi-Line Hunt Group member. This LNR HNT TN serves as a linear entry point to the MLHG. Hunting always begins at the member associated with the called TN; it hunts sequentially through the members of the hunt group until either it reaches a non-busy member, or it reaches the last member and all hunted members were hunt-busy.

If the member TN is on intercept, the LNR HNT TN will not be on intercept.

Software Release: 5E8 and later
Valid Entries:
- For 5E11 and earlier: NXXXXXX,
- where N is 2 - 9 and X is 0 - 9
- For 5E12 and later: XXXXXXX or
- NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

If ODB LNR HNT TN is entered, the following must be true:

- OE must be entered.
- ODB MLHG and TERM must be entered.
- The first three digits of the LNR HNT TN must be defined in the OFFICE CODE field on the NOC form.
- For a "PSUCD" MLHG, if LNR HNT TN for member 1 is not entered, no other members can have LNR HNT TN entered.

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- LNR HNT TN must be unique within the 5ESS Switch with the following exceptions:
  - If ODB CHL SEL is "Y", ODB LNR HNT TN must match DPKT LNR HNT TN on the same DSLUSR form when the corresponding DPKT CHL SEL is "Y".
  - If ODB CHL SEL is "Y" and PPB1 USR on this DSLUSR form is "Y", it must match the PPB1 LNR HNT TN on the DSL form, for this DSL, where PPB1 CHL SEL is "Y".
  - If ODB CHL SEL is "Y" and PPB2 USR on this DSLUSR form is "Y", it must match the PPB2 LNR HNT TN on the DSL form, for this DSL, where PPB2 CHL SEL is "Y".

For 5E12 and later, when the DSLUSR forms have ODB TN or ODB MLHG and ODB TERM entered, and also have an entry for ODB LNR HNT TN, ODB LNR HNT TN must not equal CKT TN, DPKT TN, ODB TN, CKT MLHG TN, DPKT MLHG TN, or ODB MLHG TN.

For 5E12 and later, if the first 3 digits of the 7-digit ODB LNR HNT TNs on the DSLUSR form are equal to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value of OFFICE CODE, ODB LNR HNT TN must be 10 digits.

12.6 HUNT DEACT

Description: Should the MLHG member be deactivated (marked busy) for hunted calls? A value of "N" indicates the Multi-Line Hunt Group member is active (available) for hunting.

The deactive/active status has no effect on non-hunted calls, calls made to the MLHG member using its individual TN.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If ODB MLHG and TERM are not entered, ODB HUNT DEACT must be "N".

12.7 CHL SEL

Description: Is the TN a Common TN that is shared by at least two channels on the DSL? When a call terminates to a Common TN, an Active Channel Selection algorithm is performed to determine the channel on which the call will be offered.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DPKT CHL SEL and ODB CHL SEL are both "Y", the following DPKT and ODB fields must be set the same: (DPKT/ODB) TN, (DPKT/ODB) MLHG, (DPKT/ODB) TERM, LCC, RAX, MLHG TN, LNR HNT TN, HUNT DEACT, BILL TN, BUSY LIMIT, ICB, OCB, PMDR GRP, PMDR ACT, FCPN, TPCN, REV CHARGE, LCP, IECPDNIC, FSA, IA, PB GRP, X25VER, NOTIF, ICP, HUNT NOTIF, SUST, CUGPX, CUGOA, and CUGIA.

If CHL SEL is "Y", OE must be entered.

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At least two channels of the DSL for a user must have Channel Selection (PPB1 CHL SEL, PPB2 CHL SEL, ODB CHL SEL, or DPKT CHL SEL) set to "Y", or none of the channels should be set.

If DPKT CHL SEL (DSLUSR form), ODB CHL SEL (DSLUSR form), PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) are set to "Y" for a user of the DSL, the following must be true for that user:

- The following parameters associated with CHL SEL equal to "Y" must be the same: MLHG, TERM, LNR HNT TN, LCC, RAX, HUNT DEACT, first three digits of ISCN, BILL TN, BUSY LIMIT, ICB, OCB, PMDR GRP, PMDR ACT, FCPN, TPCN, REV CHARGE, LCP, IECPDNIC, FSA, IA, PB GRP, X25VER, ICP, HUNT NOTIF, SUST, CUGPX, CUGOA, and CUGIA.
- If MLHG and TERM are entered, all the associated Channel Types with CHL SEL set to "Y" must have the same: DPKT MLHG TN, ODB MLHG TN, PPB1 TN, and/or PPB2 TN.
- If MLHG and TERM are not entered, all the associated Channel Types with CHL SEL set to "Y" must have the same: DPKT TN, ODB TN, PPB1 TN and/or PPB2 TN.
- All the associated B-Channel Types with CHL SEL set to "Y" must have the same SEND PKTSZ, SEND PKTWD, RCV PKTSZ, and RCV PKTWD.
- If DPKT NOTIF (DSLUSR form) and/or ODB NOTIF (DSLUSR form) is set to "COND", then of all the associated Channel Types with CHL SEL set to "Y", at least one Channel must have 2W LCN or IN LCN entered.
- If PPB1 CHL SEL (DSL form) and/or PPB2 CHL SEL (DSL form) equals "Y" and DPKT CHL SEL (DSLUSR form) or ODB CHL SEL (DSLUSR form) equals "Y", the appropriate PPB1 and/or PPB2 fields CALL TN, CALL ID, and DIS SCR (DSL form) must equal "N".
- If MLHG/TERM are entered, then of all the associated packet (PPB1, PPB2, DPKT, ODB) services with CHL SEL set to "Y" for this user, at least one packet service must have 2W LCN or IN LCN entered.

12.8 ISCN1

Description: The number of the first B-channel ISCN (Integrated Services Channel Number) on the PSU conjoined to the DSL. The DSL is connected, via a PIDB (Peripheral Interface Data Bus), to the PSU (Packet Switching Unit).
Valid Entries: A 6-digit number in the following format

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		Format	Valid Entries
Shelf	SHELF	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127, in multiples of 4

Data Rules:

ISCNs cannot be duplicated on one or more of the following forms:
- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL

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- PSISM
- RTERM
- TRUNK and XAT.

The SHELF is the PSU PH shelf number. It must correspond to a PSU SHELF field on an EQPSU form.

The CHL GRP is the number of the PH (Protocol Handler) on the PSU shelf. The CHL GRP is a "logical" value that will not always correspond to the physical number of a PH. PHs are assigned, as a component of an ISCN, on AMLBDSL forms (5447 Record), DSL forms (5907 Record), DSLAP forms (5963 Record), DSLUSR forms (5908 Record), OSPSDSL forms (5411 Record), PSISM forms (5920 Record), and TRUNK forms (5204 Record). PHs are also assigned in the CHL GRP field on ODBRES forms (5906 Record). The total quantity of PHs assigned on these forms must not exceed the quantity of PHs defined for the given SWITCHING MODULE and PSU SHELF on an EQPSUPH form (5742 Record) with EQST "O".

The CHL is the PH channel number.

- D/PPB1/PPB2 ISCN on the DSL form - ISCN on the AMLBDSL, DSLAP, OSPSDSL, XAT, TRUNK form - ISCN and MATE ISCN on the PSISM form - ISCN on the ODBRES form defined as the combination SHELF||CHL GRP||CHL - ISCN on the MISLINK form defined as the combination SHELF||CHL GRP||CHL - TMC PRI, TMC NPRI, EOC PRI or EOC NPRI ISCN(s) on the RTERM form

Each ISCN entry (the first character of the (ODB ISCN1 on the DSLUSR form) must have the SHELF value assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

PSU SHELF and GRP have not been entered on the PSUGP form. The ISCN must be unique within an SM.

This field cannot have the same SHELF and CHL GRP, within the same SM, as an ISCN from a PSISM form (5920 Record) or a TRUNK form (5204 Record) with an associated TRKCLS of "PACKET" or "X75P" defined on the TKGRP form (5202 Record).

If this field is entered, the SM (first three digits of the OE) and the ISLU LCEN, or IDCU ILEN, (fourth digit of the OE) and the PSU SHELF (first digit of the ISCN) must appear, respectively, in the SM, ISLU/IDCU, and PSU SHELF fields of an ODBTS form (5905 Record). The corresponding MIN TS/PIDB field must be greater than zero.

For 5E8 and later, if both ODB ISCN1 and ODB ISCN2 are entered, the first three digits of ISCN1 and ISCN2 must be equal, and the last three digits of ISCN1 and ISCN2 must not be equal.

For 5E9(1) and later, the first digit of the OE, the second two digits of the OE, and the first three digits of the ISCN1 must be defined in the SM, PSU SHELF, and GRP fields on a PSUGP form where PH TYPE is set to "PH3".

The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL

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- RTERM
- XAT

with all TRUNK forms which have a TRKCLS of:
- "EDSL"
- "IFTERM"
- "IFOPER"

However, they cannot have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of
- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form
- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2
- MISLINK - where SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is "TAOPER" or "DAOPER"
- XAT - where SHELF/CHL GRP is the first three digits of ISCN

12.9 ISCN2

Description: The number of the second On Demand B-channel ISCN (Integrated Services Channel Number) on the PSU conjoined to the DSL. The DSL is connected, via a PIDB (Peripheral Interface Data Bus), to the PSU (Packet Switching Unit).
Valid Entries: A 6-digit number in the following format

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		Format	Valid Entries
Shelf	SHELF	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127, in multiples of 4.

Data Rules:

The SHELF is the PSU PH shelf number. It must correspond to a PSU SHELF field on an EQPSU form.

The CHL GRP is the number of the PSU PH on the PSU shelf. PHs are assigned, as a component of an ISCN, on AMLBDSL forms (5447 Record), DSL forms (5907 Record), DSLAP forms (5963 Record),

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DSLUSR forms (5908 Record), OSPSDSL forms (5411 Record), PSISM forms (5920 Record) and TRUNK forms (5204 Record). PHs are also assigned in the CHL GRP field on ODBRES forms (5906 Record). The CHL is the PSU PH channel number.

If ODB ISCN2 is entered, ODB must be 2.

If both ODB ISCN1 and ODB ISCN2 are entered, the first three digits of ISCN1 and ISCN2 must be equal; the last three digits must not be equal.

The SM, PSU, SHELF, and CHLGRP must be defined on a PH3 on a PSUGP form (5949 Record).

The ISCN must be unique within an SM.

This field cannot have the same SHELF and CHL GRP, within the same SM, as an ISCN from a PSISM form (5920 Record) or a TRUNK form (5204 Record) with an associated TRKCLS of "PACKET", "X75", or "X75P" defined on the TKGRP form (5202 Record).

If this field is entered, the SM (first three digits of the OE) and the ISLU , or IDCU, (fourth digit of the OE), and the PSU SHELF (first digit of the ISCN) must appear, respectively, in the SM, ISLU/IDCU), and PSU SHELF fields of an ODBTS form (5905 Record). The corresponding MIN TS/PIDB field must be greater than zero.

For 5E9(1) and later, the first three digits of the OE and the first three digits of ISCN2 must be defined on a PSUGP form with PH TYPE set to "PH3".

The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- RTERM
- XAT

with all TRUNK forms which have a TRKCLS of:

- "EDSL"
- "IFTERM"
- "IFOPER"

However, they cannot have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of

- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form

- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN

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- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2
- MISLINK - where SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is "TAOPER" or "DAOPER"
- XAT - where SHELF/CHL GRP is the first three digits of ISCN

12.10 BAND

Description: The On Demand B-Channel Band number. Entries represent the PSU PH number. This field is used for load balancing and determines the volume of use that clients need. 5ESS Switch owners can assign the bands according to their definitions of "light" through "heavy" users.
Default: 0
Valid Entries: 0 - 15

12.11 ODB

Description: Enter the number of On Demand B-channels this user subscribes to.

Software Release: 5E8 and later
Valid Entries: 1, 2

Data Rules:

If ODB is not entered, no ODB channels are subscribed to; neither ODB ISCN1 nor ODB ISCN2 may be entered.

If ODB is 1, one ODB channel is subscribed to, and the following must be true:

- ODB TN or ODB MLHG and TERM must be entered.
- ODB ISCN1 must be entered, and ODB ISCN2 must not be entered.
- D SERV on the corresponding DSL form must be "SX", and B1 SERV or B2 SERV must be "DMD".

If ODB is 2, two ODB channels are subscribed to, and the following must be true:

- ODB TN or ODB MLHG and TERM must be entered.
- ODB ISCN1 and ODB ISCN2 must be entered.
- PPB1 USR and PPB2 USR must be "N" or not entered.
- ODB CHL SEL must be "Y".
- D SERV, on the corresponding DSL form, must be "SX", and B1 SERV and B2 SERV must be "DMD".

ODB must be less than or equal to MAXB CHL.

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For 5E10 and later, when DSLUSR form(s) have ODB ISCN1 entered; an ODBTS form must be defined where SM, UNIT and PSU SHELF matches the first three digits of OE, the fourth digit of OE (for DSL OE type equal to "I"), the fourth and fifth digits of OE (for DSL OE type equal to "G", "K"), and the first digit of ODB ISCN1 respectively from the DSLUSR form. The OE type on DSLUSR must correspond to UNIT TYPE on the ODBTS form (OE type "I" equal to ISLU; OE type "K" equal to ISLU2; OE type "G" equal to IDCU; OE type "E" equal to AIU). There must also be at least one MIN TS/DPIDB reserved on the ODBTS for this PSU SHELF. An ODBTS form, meeting the above conditions, must exit.

12.12 RATE

Description: The DSL baud rate.
Valid Entries: 56KB or 64KB

12.13 N2

Description: The maximum number of attempts made by the CPE device or the PH to successfully transmit a frame at the LAPB (Link Access Procedure B) Level 2. Following N2 failures, the PH attempts to restore the link, which is either a SVC (Switched Virtual Circuit) or a PVC (Permanent Virtual Circuit). SVCs and PVCs are explained later in this section, immediately before those fields which involve LCN (Logical Channel Numbers). If the PH cannot restore the link, the PH will clear the SVCs and reset the PVCs. The N2 value is per CCITT specifications.
Valid Entries: 2 - 15

12.14 T1

Description: The period of time before retransmission of a frame can be initiated at the LAPB (Link Access Procedure B) Level 2. The T1 timer is per CCITT specifications.
Valid Entries: 20 - 200; even numbers only, in units of a tenth of a second.

12.15 T3

Description: The amount of time when a channel is considered idle for too long. This indication is passed to the PH to assure that the channel is idle and ready to be set for operation once again. The T3 timer is per CCITT specifications.
Valid Entries: 3 - 30 (in full seconds)

Data Rules:

The duration of the T3 timer must be greater than the duration of the T1 timer to ensure that retransmission efforts are not aborted.

12.16 WNDSZ

Description: The maximum quantity of sequentially numbered LAPB Level 2 I-frames (Information), or "I frames k" in CCITT terminology, which the CPE device or PH can have unacknowledged at any time. I-frames, which are data packets, are number sequentially applying modulo 8 arithmetic. Modulo 8 arithmetic is strictly concerned with remainders when dividing by 8. For example, 27 modulo 8 equals 3 because three is the remainder when 27 is divided by eight. The possible remainders when dividing by 8 are 0 through 7. Hence, every I-frame has a number between 0 and 7, inclusive.
Valid Entries: 1 - 7

13. FORM ENTRIES, 5908-12 RECORD

13.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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13.2 NEW TN

This field is a recent change field added in 5E7.

13.3 BILL TN

Description: A TN to be billed if the ODB TN or ODB MLHG TN to be billed is different from the ODB TN or ODB MLHG TN of this DSL.
Valid Entries: A 7-digit TN for calls billed to a TN within the local office; a 10-digit TN for calls billed to a TN outside the local office. Valid TNs must be in one of the following formats:

Valid BILL TN Entries

Entry	Definition
NXXXXXX	Where NXX is a valid office code defined in the OFFICE CODE field on a NOC form.
NPANXXXXXX	Any 10-digit number is acceptable; however, normal expected values are valid NPA and NXX codes.
ZXXXXXX	Where Z is 0 or 1. This is normally used for OUTWATS billing purposes. The first three digits must be defined in the OFFICE CODE field on a NOC form.

13.4 RMK

Description: Remarks entered for administrative purposes.
Valid Entries: Up to 16 alphanumeric characters.

Logical Channel Numbers

Fields Section 13.5 -Section 13.10 refer to On Demand B-Channel LCNs. Each On Demand B-channel can define 127 possible LCNs to establish simultaneously active SVCs (Switched Virtual Circuits). The circuits connect CPEs together for packet switched data transmission. PVCs (Permanent Virtual Circuits) are not defined for On Demand B-channels. Since On Demand B-channels are not dedicated to packet switching full-time, PVCs for this type of service are contradictory.

SVCs exist only during the call. The CPE and the PH must interact through CCITT specified packet communication to set up each call and clear the SVC for each call.

The system limits each PH to 128 simultaneously active SVCs and/or PVCs. Congestion on the network, due to contention for available SVCs or PVCs, is handled through CCITT procedures.

There are three categories of LCNs that can be associated with an On Demand B-channel. An incoming SVC can only receive incoming data. A two-way SVC can transmit outgoing data or receive incoming data. An outgoing SVC can only the perspective of the PH.

CCITT has a required order of assigning the categories of LCNs. In the case of the On Demand B-channel, if Incoming LCNs are used, the L IN LCN (Lowest Incoming LCN) must be LCN 1. The H IN LCN (Highest Incoming LCN) is used to define the range of Incoming LCNs.

The next highest range of numbers for LCNs belongs to the two-way SVCs. This range is indicated in the L 2W LCN field (Lowest Two-way LCN) and the H 2W LCN field (Highest Two-way LCN).

The highest range of numbers for LCNs belongs to the outgoing only SVCs. This range is indicated in the L OUT LCN field (Lowest Outgoing LCN) and the H OUT LCN field (Highest Outgoing LCN).

As an example, an ISCN could define its 127 associated LCNs as follows:

L IN LCN = 1

H IN LCN = 4 (LCNs 1-4 are incoming SVCs)

L 2W LCN = 8

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H 2W LCN = 50 (LCNs 8-50 are two-way SVCs)

L OUT LCN = 62

H OUT LCN = 72 (LCNs 62-72 are outgoing SVCs)

The CCITT, to minimize "call collisions", has specified that a CPE device should start its search algorithm for an available LCN (SVCs only) with the highest numbered SVC that is in a ready state.

The L IN LCN and the H IN LCN field combination or the L 2W LCN and the H 2W LCN field combination or the L OUT LCN and the H OUT LCN field combination must be entered.

13.5 L IN LCN

Description: The Lowest Incoming LCN (Logical Channel Number).
Valid Entries: If an entry is made in this field, the entry must be 1.

Data Rules:

For 5E8 and later, if ODB MLHG and TERM are entered and ODB CHL SEL equals "N", ODB L IN LCN or L 2W LCN must be entered.

13.6 H IN LCN

Description: The Highest Incoming Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

The L IN LCN and H IN LCN fields must both be entered in order to define a range of incoming LCNs.

The value entered in this field must be greater than or equal to the value entered in the L IN LCN field.

13.7 L 2W LCN

Description: The Lowest Two-Way Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If this field and the H IN LCN fields are entered, then the value entered in this field must be greater than the value entered in the H IN LCN field.

For 5E8 and later, if ODB MLHG and TERM are entered and ODB CHL SEL equals "N", ODB L IN LCN or L 2W LCN must be entered.

13.8 H 2W LCN

Description: The Highest Two-way Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If the L 2W LCN field is entered, then the H 2W LCN field must be entered in order to define a range of Two-way LCNs.

The value entered in this field must be greater than or equal to the value entered in the L 2W LCN field.

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13.9 L OUT LCN

Description: The Lowest Outgoing Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If this field and the H 2W LCN fields are entered, than the value entered in this field must be greater than the value entered in the H 2W LCN field.

13.10 H OUT LCN

Description: The Highest Outgoing Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If the L OUT LCN field is entered, then the H OUT LCN field must be entered in order to define a range of Outgoing LCNs.

The value entered in this field must be greater than or equal to the value entered in the L OUT LCN field.

13.11 BUSY LIMIT

Description: Enter the busy limit for this MLHG terminal. The busy limit represents the maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included in the incoming call count but are not restricted by the busy limit.

Software Release: 5E8 and later
Valid Entries:
- If CHL SEL is "Y": 1 - 269
- If CHL SEL is "N": 1 - 127

Data Rules:

This field is applicable to MLHG members only. If ODB MLHG and TERM are not entered, ODB BUSY LIMIT must not be entered.

If ODB MLHG and TERM are entered, BUSY LIMIT should be set according to the rules that follow. When BUSY LIMIT is not entered, the maximum value for the applicable rule will be assigned.

- If the DSL is on a PH3 and ODB CHL SEL is set to "N", ODB BUSY LIMIT must be less than or equal to the sum of ODB IN LCNs plus ODB 2W LCNs.

- If ODB CHL SEL is set to "Y", ODB BUSY LIMIT must be less than or equal to the sum of IN LCNs and 2W LCNs of all associated packet (PPB1, PPB2, DPKT, and ODB) services with CHL SEL set to "Y" for this user. If two ODBs are provisioned, add twice the value of the first ODB's IN LCNs plus 2W LCNs to the count.

13.12 ICB

Description: Will the Incoming Calls Barred feature be activated? ICB prevents the user from receiving incoming virtual calls. The user can still originate outgoing virtual calls.

Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then the L IN LCN, H IN LCN, L 2W LCN and H 2W LCN fields must not be entered.

13.13 OCB

Description: Will the Outgoing Calls Barred feature be activated? OCB prevents the user from originating outgoing virtual calls. The user can still receive incoming virtual calls.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is "Y", then the L OUT LCN, H OUT LCN, L 2W LCN and H 2W LCN fields must not be entered.

If the OCB field is "Y" and the ICB field is "N", then the L IN LCN and H IN LCN fields must be entered.

If the OCB field is "Y" and the ICB field is "N", then the L IN LCN and H IN LCN must be entered.

13.14 PMDR GRP

Description: Enter the MDR group name associated with the On Demand B-Channel Packet TN.

Software Release: 5E7 and later
Valid Entries: 1 - 8 characters

Data Rules:

If ODBTN is not entered, PMDR GRP should not be entered.

If PMDR GRP is entered, PMDR ACT must be entered, and it must be defined on the MDRGP form as MDR GROUP NAME where PACKET MDR is "Y". If PMDR GRP is not entered, PMDR ACT must not be entered.

13.15 PMDR ACT

Description: Is the Packet MDR Group active for the On Demand B-Channel TN?

Software Release: 5E7 and later.
Valid Entries: Y, N

Data Rules:

If PMDR GRP is not entered, PMDR ACT must not be entered.

14. FORM ENTRIES, 5908-13 RECORD

14.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

14.2 SEND TPC

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Description: The Throughput Class of a virtual call from the terminal to the switch.

Required Field.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800,
 9600 or 19200

14.3 SEND PKTSZ

Description: Send Packet Size is the maximum number of bytes of data in a packet (excluding control type information) that can be sent.

Required Field.
Default: 128
Valid Entries: 128 or 256 bytes

Data Rules:

If the FCPN field is "N", than this field must equal 128.

14.4 SEND PKTWD

Description: The number of data packets that the CPE device can have unacknowledged, on a sending basis, at any time.

Required Field.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if ODB SEND PKTWD or ODB RCV PKTWD is not 2, ODB FCPN must be "Y".

14.5 SEND MCT

Description: Enter the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 64 - 128 (kbps), in increments of 8

14.6 RCV TPC

Description: The Throughput Class of a virtual call to the terminal from the switch.

Required Field.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800,
 9600 or 19200

14.7 RCV PKTSZ

Description: The Receive Packet Size is the maximum number of bytes of data in a packet (excluding control type information) that can be received.

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Required Field.
Default: 128
Valid Entries: 128 or 256 bytes

Data Rules:

If the FCPN field is "N", than this field must equal 128.

14.8 RCV PKTWD

Description: The number of data packets that the CPE device can have unacknowledged, on a receiving basis, at any time.

Required Field.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if ODB SEND PKTWD or ODB RCV PKTWD is not 2, ODB FCPN must be "Y".

14.9 RCV MCT

Description: Enter the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds the RCV MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 64 - 128 (kbps), in increments of 8

14.10 FCPN

Description: Will the Flow Control Parameter Negotiation feature be activated? FCPN allows the PH and the CPE device to negotiate the Window Size (2 or 3) and the Packet Size (128 or 256 bytes) on a per-call basis. Data transmission between a CPE and a PH is controlled separately for each direction and is controlled by the receiver of the data. This is, in CCITT nomenclature, referred to as flow control. An additional aspect of flow control is the ability of the PH to limit the rate at which it accepts packets when it recognizes network congestion.

Required Field.
Default: N
Valid Entries: Y, N

14.11 TPCN

Description: Will the Throughput Class Negotiation feature be activated? TPCN allows sending and receiving entities to negotiate the bits/second that are transmitted in either direction on a per-call basis. Both the sending and receiving party must subscribe to this service.

Required Field.
Default: N
Valid Entries: Y, N

14.12 REV CHARGE

Description: Will the called CPE device accept the charge for a call from a PH?

Required Field.

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Default: N
Valid Entries: Y, N

14.13 LCP

Description: Will Local Charge Prevention be activated? When LCP is "Y", all the X.25 outgoing calls from this user will be Reverse Charged, and any X.25 incoming calls that contain Reverse Charge will be cleared.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

LCP is not allowed with Reverse Charge. If LCP is "Y", then REV CHARGE must be "N".

D SERV on the DSL form associated with this form must not equal "XMP" when LCP is "Y".

14.14 IECPDNIC

Description: The DNIC (Data Network ID Code) for Inter-Exchange Carrier Pre-select.
Valid Entries: 1 - 9999

Data Rules:

This entry must be defined in the DNIC field on a PSDNICRI form.

14.15 FSA

Description: Will the Fast Select Acceptance feature be activated? FSA allows a CPE device to receive up to 128 bytes of user data with call setup and clearing packets.

Required Field.
Default: N
Valid Entries: Y, N

14.16 IA

Description: Will the ISDN Intercom Addressing feature be activated? IA permits the ISDN user to access other users on the 5ESS Switch with a 4- or 7-digit number.

Required Field.
Default: N
Valid Entries: Y, N

14.17 PB GRP

Description: The Packet Switching Data Business Group Service feature. PB GRP enables the customer to set up and administer intra-switch PBG (Packet Business Groups) by assigning a PBG number to each X.25 termination to distinguish between intra-PBG and other calls on the AMA record.
Valid Entries: 1 - 100

Data Rules:

An MLHG is assigned to a PBG by associating the PBG with an MLHG on an MLHG form. The DSLUSR form should only be used to assign a PBG if the MLHG member has a known MLHG TN.

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Do not enter a value if this user is not a member of a PBG.

For 5E8 and later when ODB PB GRP is entered, OE must be entered, and the PB GRP must be defined on a PBGRP form (5931 Record).

If ODB PB GRP and ODB MLHG are entered, ODB MLHG TN must also be entered.

14.18 X25VER

Description: The Packet Switch D-Channel X.25 CCITT Version Supported for this DTE.

Software Release: 5E6 and later
Required Field.
Default: 1984
Valid Entries: 1980, 1984

14.19 NOTIF

Description: Enter the Notification Class.

If a call is routed to a channel with Conditional Notification when the Layer 1 is up on the channel, but Layer 2 is down for the channel, the channel will be notified of the incoming call. The channel is notified by sending a Q.931 message on the D-channel. If the user accepts the call by responding to the Q.931 message, the switch will initiate Layer 2 setup procedures on the channel and offer the call.

If ODB service is not subscribed to, this field must not be entered.

Software Release: 5E8 and later
Valid Entries:

Valid NOTIF Entries

Entry	Definition
COND	Conditional notification
NO	No notification

Data Rules:

This field is required when ODB TN and OE are entered.

If NOTIF is "COND", the following must be true:

- ODB MLHG and TERM must not be entered.
- ODB T3XX must be 0.
- ODB ICB must be "N".
- If ODB CHL SEL is "N", ODB L IN LCN or ODB L 2W LCN must be entered.

14.20 T3XX

Description: This timer is invoked when an On Demand B-channel connection exists between the CPE and the PH, but no virtual calls are taking place. The timer is started when the ODB connection is first established, stopped any time the number of active X.25 virtual calls on that ODB connection changes from zero to one, and restarted any time the number of active X.25 virtual calls on that ODB connection changes from one to zero.

If the timeout value is reached, the connection between the CPE and the PH is torn down. This allows

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other users in a Multipoint scenario to use the B-channel and saves the end customer from unnecessary connection tariffs.

A value of 0 indicates that the ODB user does not subscribe to the T3XX timer; in this case, the timer is not used.

Required Field for 5E9(1) and later.
Default:

For 5E9(1) and later: 0
Valid Entries: 0, or 10 - 60 (minutes)

14.21 ICP

Description: Are originating or terminating packet calls to be denied? Intercept, in the packet switched world, is a packet message denying service.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ICP must be "N" when a TN is defined on the LINE (5109 Record) or MLHG (5110 Record) form.

If ODB ICP is "Y" and ODB MLHG is entered, then OE must be entered.

14.22 HUNT NOTIF

Description: Indicate the Hunting Notification procedure to be used for processing an X.25 CLAMN (Called Line Address Modified Notification) facility and a modified address for this Multi-Line Hunt Group member.

The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet-mode hunt terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed.

If HUNT NOTIF is blank, the CLAMN feature is not applicable.

Software Release: 5E8 and later
Valid Entries:

Valid HUNT NOTIF Entries

Entry	Definition
YES	The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
NO	The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
OLD	The X.25 CLAMN procedure that existed prior to the 5E8 Software Release is used.

Data Rules:

This field is applicable to MLHG members only. If ODB MLHG and TERM are not entered, ODB HUNT NOTIF must not be entered.

If ODB MLHG and TERM are entered, ODB HUNT NOTIF must be entered.

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If ODB HUNT NOTIF is "YES", ODB MLHG TN must be entered.

14.23 SUST

Description: Is termination denied for packet switched services?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the ODB TN field is entered, this field must be "N".

14.24 DNA

Description: Enter the first DN CA for ODB. This field, along with DNA QTY, is used to set the range of ODB DNAs. Each DNA must be unique. See Division 2, Section 1AM for more information on how to determine if CAs are duplicated.

Software Release: 5E9(1) and later
Valid Entries: 1 - 254

Data Rules:

If ODB DNA is entered, ODB DNA QTY must be entered.

The range of ODB DNAs cannot overlap with the range of any of the following: AU DNAs, CAs, DPKT DNAs, K56 DNAs, K64 DNAs, or SP DNAs.

If ODB DNA or ODB DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

14.25 DNA QTY

Description: Enter the number of DN CAs for ODB.

Software Release: 5E9(1) and later
Valid Entries: 1 - 4

Data Rules:

If ODB DNA QTY is entered, ODB DNA must be entered. The sum of ODB DNA and ODB DNA QTY cannot exceed 255.

If DPKT DNA QTY and ODB DNA QTY are both entered, and either DPKT MLHG equals ODB MLHG or DPKT TN equals ODB TN, then the sum of DPKT DNA QTY and ODB DNA QTY cannot exceed 4.

If ODB DNA or ODB DNA QTY is entered, DSL CLS must be "STD" on the corresponding DSL form.

14.26 CUGPX

Description: The Preferential Customer CUG (Closed User Group) Index.
Valid Entries: 0 - 99

Data Rules:

This entry must appear in the CUG IDX field on a PSCUG form.

14.27 CUGOA

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Description: The Closed User Group Outgoing Access indicator. CUGOA permits CUG members to access CPE devices that do not belong to a CUG or CPE devices that belong to a CUG with Incoming Access.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the Packet Service types DPKT and ODB have CUGOA or CUGIA set to "Y". then a corresponding PSCUG form must have entries in the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services.

14.28 CUGIA

Description: Will the Closed User Group Incoming Access indicator be activated? CUGIA permits CUG members to access CPE devices that do not belong to a CUG or CPE devices that belong to a CUG with Outgoing Access.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If the Packet Service types DPKT and ODB have CUGOA or CUGIA set to "Y". then a corresponding PSCUG form must have entries in the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services.

15. FORM ENTRIES, 5908-14, 15 RECORD

15.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

ICI

The ICI LIST field (Section 15.2) is used in connection with the ICI (Incoming Call Identification) feature. ICIs assigned here determine the types of calls an ISDN attendant serves. For more detail on these fields, refer to ISDN Attendant Hunting and Queuing (Division 2, Section 1T). The ICI List is continued on the 5908-11 Record.

15.2 ICI LIST

Description: ICI 1 through ICI 16 list ICI values assigned to an ISDN Attendant Terminal.

Valid ICI LIST Entries

Entry	Definition
CFBL	For calls that have been call forwarded via a call forward busy line feature.
CFDA	For calls that have been call forwarded via a call forward don't answer feature.
CFOH	For calls that have been forwarded via a call forward don't answer feature; in this case, the terminal the call was forwarded from was "off hook" (on another call appearance).
CFV	For calls that have been call forwarded via a call forward variable feature.
CNET	CNET Trunk Group ICI. Identifies calls originating from a trunk group designated as a Corporate Network trunk group.
DCL	Identifies a call originating from a manual (no-dial) line.
EMER	Identifies a call where the user dialed the attendant using a prespecified IDP code defined for emergencies (ACTION = "EMER"). When assigned, EMER ICI must be assigned to all terminals on an

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	MLHG.
FTS	Software Release: 5E9(2) and later. Federal Telecommunications System. Used for calls that have arrived from a trunk group recognized as an FTS trunk group.
FTSICN	Software Release: 5E9(2) and later. Identifies calls on an FTS incoming trunk to a CENTREX Network. For more information on the CENTREX Network features see Division 2, Sections 4A181, 4A182, and 4A183.
FXICN	Software Release: 5E9(2) and later. Identifies calls on an FX incoming trunk to a CENTREX Network. For more information on the CENTREX Network features see Division 2, Sections 4A181, 4A182, and 4A183.
FX1-8	Foreign Exchange Trunk Group ICIs (FX1 through FX8). Used for calls that have arrived from a trunk group recognized as FX.
ICPT	Used for calls intercepted and redirected to the attendant because of the IDP
LDNx	The subgroup (LDN1 through LDN8x) that the call arrived on. LDN is the Listed Directory Number. LDNx is used for calls arriving at MLHGs with no other ICI. ISAT MLHGs may have up to 8 subgroup TNs defined on the MLHG form. LDN ICIs have a one-to-one relationship to SUBTN fields. For each LDN ICI defined here, there must be a corresponding SUBTN entry on the MLHG form. If LDN ICIs are assigned, WAT ICIs cannot be assigned (i.e., they cannot be mixed).
PPEXEC	Indicates that the precedence "Executive" was used on this call.
PPFLSH	Indicates that the precedence "Flash" was used on this call.
PPFOVR	Indicates that the precedence "Flash Override" was used on this call.
PPIMMD	Indicates that the precedence "Immediate" was used on this call.
PPPRIO	Indicates that the precedence "Priority" was used on this call.
PPROUT	Indicates that the precedence "Routine" was used on this call.
PRIO	Identifies an MCA (Multiple Call Appearance) Priority Call.
QUE	Software Releases: 5E6 and later. Queues calls to individual hunted TNs.
RBQ	Calls that have terminated after the ring back queuing feature was used to camp on to a busy trunk group.
RLT	RLT (Release Link Trunk) service for ISDN attendants.
TIE1-8	Tie Trunk Group ICIs (TIE1 through TIE8). Used for calls that have arrived from a trunk group recognized as a TIE trunk group.
TIEICN	Software Release: 5E9(2) and later. Identifies calls on a TIE incoming trunk to a CENTREX Network. For more information on the CENTREX Network features see Division 2, Sections 4A181, 4A182, and 4A183.
WATx	(WAT1 through WAT5) Used for calls arriving at the ISAT group as INWATS calls. The WATs ICIs have a one-to-one relationship with SUBTN fields one through five on the MLHG form; therefore, for each WAT ICI defined, there must be a corresponding SUBTN entry on the MLHG form. ISAT INWATS MLHGs can have no more than five subgroup TNs.

Data Rules:

If an ICI is entered in the ICI LIST, then the CKT MLHG and CKT TERM fields must be entered.

ICIs are used by ISDN Attendants. Therefore, if any ICIs are entered on this form, the CKT MLHG must be defined on an MLHG form where the MLHG FEATURE is defined on an MLHGFD form with a HUNT TYPE of "ISAT".

If precedence ICIs (PPxxxx) are entered, then one or more WATs ICIs or LDN ICIs must be entered; but not both types. EMER and QUE ICIs can also be entered with precedence ICIs (PPxxxx). For 5E9(1) and later, only "EMER", "QUE", "WAT" or "LDN" ICIs are valid with precedence (PPxxxx) ICIs on the ICI LIST.

At least one EMER ICI must be entered in the list if there is an ICIPF form (5903 Record) where the GRP TYP field is "HUNT", the GRP NBR field is the same value as the CKT MLHG on this DSLUSR form and at least one "EMER" has been entered in the HUNTING ICI list.

For 5E6 and later, at least one QUE ICI must be entered in the list if there is an ICIPF form (5903 Record) where the GRP TYP field is "HUNT", the GRP NBR is the same value as the CKT MLHG on this DSLUSR form and at least one "QUE" has been entered in the HUNTING ICI list.

An ICI assigned here must be assigned to a MLHG on a corresponding ICIPF form where the GRP TYP field is "HUNT". Forms correspond if the GRP NBR field on the ICIPF form is the same value as the CKT

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MLHG on this DSLUSR form.

FEATURE	DSLUSR FIELD(s)	LCC CLASS OF SERVICE
Account Code	CKT TN, MLHG/TERM	ISDN, ISATND
Authorization Code	CKT TN, MLHG/TERM	ISDN, ISATND
Automatic Call-Back	CKT TN, MLHG/TERM	ISDN
ACSR (Automatic Customer Station Rearrangement)	CKT TN	ISDN
ARS (Automatic Route Selection)	CKT TN, MLHG/TERM	ISDN, ISATND
ACVT (Attendant Control of Voice Terminal). CONTROL="TERM" on the ACTVFD form; the ACVT feature is defined on this form.	CKT TN, MLHG/TERM	ISDN
ACVT. CONTROL="ORIG" on the ACTVFD form.	CKT TN, MLHG/TERM	ISATND
ACVT. ACT TYPE="CODE" and DEACT TYPE="AUTO" on ACTVFD form.	CKT TN, MLHG/TERM	ISDN, ISATND
Call Forwarding	CKT TN, MLHG/TERM	ISDN, ISATND
Call Pickup Originating	CKT TN, MLHG/TERM	ISDN, ISATND
PUO (Call Pickup Originating)	INITIATE="BSYVFY" or "EMEROVR" on the PUOFD form.	CKT TN, MLHG/TERM
Call Pickup Terminating	CKT TN, MLHG/TERM	ISDN, ISATND
Call Pickup Terminating. Defined on PUTFD form with FEATURE FUNCTION="HDIRPUBRG"and a MULTIWAY FEATURE entered.	CKT TN, MLHG/TERM	ISDN
Call Pickup Terminating. Defined on PUTFD form with FEATURE FUNCTION="TEMEROVR" and a MULTIWAY FEATURE entered.	CKT TN, MLHG/TERM	ISDN
Call Waiting	CKT TN, MLHG/TERM	ISDN, ISATND
Calling Party Number/Billing Number	CKT TN, MLHG/TERM, DPKT	ISDN, ISATND INDIV
Display. INSPECT="Y" on the DISPFD form.	CKT TN, MLHG/TERM	ISDN, ISATND. If "ISDN", TERM TYPE on DSLUSR form must be TYPEA
Display TIMEDATE="Y" on the DISPFD form.	CKT TN, MLHG/TERM	ISDN, ISATND. If "ISDN", must be TYPEA.
Display	CKT TN, MLHG/TERM	ISDN, ISATND
Distinctive Ringing	CKT TN, MLHG/TERM	ISDN
Individualized Dialing Plan		ISDN, ISATND
LINE Identification	CKT TN, MLHG/TERM	ISDN, ISATND
Message Detail Recording	CKT TN	ISDN, ISATND
Message Service System	CKT TN, MLHG/TERM	ISDN, ISATND
Message Service System MSG RTRVL DISP="Y" on MSFD form;this feature is defined on the MSFD form	CKT TN, MLHG/TERM	ISATND, ISDN
Message Service System. AUTO CALL="Y" on MSFD form; this feature is defined on the MSFD form	CKT TN, MLHG/TERM	ISATND, ISDN
Multiway Calling	CKT TN, MLHG/TERM	ISDN, ISATND
Precedence & Preemption	CKT TN, MLHG/TERM	ISDN, ISATND
Private Facility Access	CKT TN, MLHG/TERM	ISDN, ISATND
	ODB TN	ISDN. TERMINATING TREATMENT="INDIV" on LCC form.
	CKT MLHG/TERM. TERM TYPE="ATND" on DSLUSR form.	ISATND. TERMINATING TREATMENT="MLHG" or "INWATS" on LCC
	CKT TN; DPKT TN	MLHG/TERM
	CKT MLHG/TERM	ISDN, ISATND. TERMINATING TREATMENT="MLHG" or "INWATS".
	DPKT MLHG/TERM. DPKT MLHG TN is blank and D SERV is not "XMP" on DSL	ISDN. TERMINATING TREATMENT="MLHG" on LCC form.

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	form (DSL is found by matching DSL on DSLUSR form to DSL on DSL form).	
	DPKT MLHG/TERM. DPKT MLHG TN is entered and D SERV is not "XMP" on the DSL form.	
	DPKT MLHG/TERM. D SERV="XMP" on the DSL form (DSL is found by matching OE value on DSLUSR form to the OE value on DSL form).	ISDN. TERMINATING TREATMENT= "AGING" on the LCC form.
Terminal Group & Station Restriction	CKT TN, MLHG/TERM	ISDN, ISATND
	CKT MLHG/TERM; DPKT MLHG/TERM.INWATS="Y" on MLHGFD form.	DSLUSR LCC/RAX must point to LCC form with TERMINATING TREATMENT= "INWATS".
	CKT MLHG TN. ATT TNs assigned on the PFASFG form are defined on DSLUSR form.	ISATND
	CKT MLHG/TERM; NONHUNT="Y".	

NOTE: Non-Hunt members and Terminal numbers greater than 3000 require TERMINATING TREAMENT="INDIV".

Figure 1 DSLUSR LCC/RAX VALUES AND CORRESPONDING CLASS OF SERVICE

DSLUSR FIELD	TERM TYPE						
	none	ATND	TYPEA	TYPEB	TYPEC	TYPED	TYPEE
AUTO HOLD	N	N	N		N		N
BRCS	N						
CA	-	*	-	*	*	*	-
CA PREF	I	I	I		I		I
CA QTY	-	*	*	*	*	*	-
CKT MLHG	-	*					
CKT TERM	-	*					
CKT TN		-					
CONFIG GRP	-						
CSD		Note 3	Note 3	Note 3	Note 3	Note 3	*
CSV		not=2	not=2	not=2	not=2	not=2	-
DISPLAY	N						
DPKT MLHG		-					
DPKT TERM		-					
DPKT TN		-					
INCOMING	N	N					N Note 4
INTERCOM	N	N					N Note 4
ODB TN		-					
ONE TOUCH	N	N	N		N		N
ORIG CW	N	N					N Note 4
PP	N	N					N Note 4
PPB1 USR		N					
PPB2 USR		N					
PRIVACY	N						
SAR NUM	-	-					- Note 4
SAR ORIG	N	N					N Note 4
SAR TERM	N	N					N Note 4
SHARED	N	N	N	N			N
TIME MODE	N						

Note 1: The "N" and "I" in the above table refer to the values for those fields
Note 2: A dash (-) indicates that the field must not have an entry; an asterisk (*) indicates that the field must have an entry.
Note 3: If TERM TYPE field is "ATND", "TYPEA", "TYPEB", "TYPEC" or "TYPED", a value must be entered for the CSV and/or CSD fields.
Note 4: TYPEE must be "N" for 5E8 and earlier and for 5E9(2) and later, but not for 5E9.

Figure 2 TERMINAL TYPE DEPENDENCIES

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```
SCREEN 1 OF 10              5ESS Switch
dslusr              OFFICE DATA ADMINISTRATION
(5908-1 through 15)     DIGITAL SUBSCRIBER LINE USER

(*)1. CKT TN  __________       USER INFO
(*)2. DPKT TN  __________   13. USPID      ____________________
(*)3. ODB TN  __________   14. MAXB CHL    _
(*)4. CKT MLHG  ____       15. ACT USR     Y
(*)5. CKT TERM  ____       16. DFLT TN USER N
(*)6. DPKT MLHG ____       17. PPB1 USR    _
(*)7. DPKT TERM ____       18. PPB2 USR    _
(*)8. ODB MLHG  ____       19. AGI         _
(*)9. ODB TERM  ____       20. INHIBIT DEL  N
 10. OE       _ __________
```

```
SCREEN 2 OF 10              5ESS Switch
dslusr              OFFICE DATA ADMINISTRATION
(5908-1 through 15)     DIGITAL SUBSCRIBER LINE USER (CKT)

21. MLHG TN  __________       CIRCUIT VOICE (CSV)     CIRCUIT DATA (CSD)
22. LCC     ___           27. CSV        _       36. CSD        _
23. RAX     __            28. CSV CHL    ___     37. CSD CHL    ___
   NEW TN                 29. CSV ACO    _____   38. CSD ACO    _____
24. BILL TN  __________       30. CSV LIMIT  __      39. CSD LIMIT  __
25. CPN SCRN N             31. CSV NBLIMIT __     40. CSD NBLIMIT __
26. RMK     _________________ 32. SP DNA     ___     41. K56 DNA    ___
                       33. SP DNA QTY  __      42. K56 DNA QTY __
                       34. AU DNA      ___     43. K64 DNA    ___
                       35. AU DNA QTY  __      44. K64 DNA QTY __
```

```
SCREEN 3 OF 10              5ESS Switch
dslusr              OFFICE DATA ADMINISTRATION
(5908-1 through 15)     DIGITAL SUBSCRIBER LINE USER (CKT)

45. SUST       N           57. AC ALW     _
46. ICP        N           58. AR ALW     _
47. CA         ___         59. COT ALW    _
48. CA QTY     __          60. PCP ALW    _
49. BRCS       N           61. SCA GA ALW _
50. TERM TYPE  _____       62. SCF GA ALW _
51. CONFIG GRP _________   63. SCR GA ALW _
52. DISPLAY    N           64. SDA GA ALW _
53. EKTS       _____       65. ALT LANG   N
54. SHARED     N           66. FLS        N
55. PRIVACY    _           67. SUSO       N
56. TIME MODE  N           68. CONTEXT ID NATIVE
```

```
SCREEN 4 OF 10              5ESS Switch
dslusr              OFFICE DATA ADMINISTRATION
(5908-1 through 15)     DIGITAL SUBSCRIBER LINE USER (CKT)
```

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```
69. COMPL     N        81. DNY ROH      Y          91. PIC      ____
70. SLUS      N        82. BUSY MONITOR  N         92. PTC      ____
71. BRITL ALW _        83. ATT MLHG      ____      93. PLC      ____
72. DTLBILL   N        84. RBV TGN       ____      94. UNBUNDLED N
73. TRAFFIC   N        85. SERHLN        __________
74. SAR NUM   __           BCK LNK
75. SAR ORIG  N            QUEUE MONITOR
76. SAR TERM  N        86. EPO POS NUM   _____
77. NONHUNT   N        87. EPO ON        N
78. CA PREF   I        88. ACD POS NUM   ____
79. DNY BV    N        89. ACD GROUP     ___
80. TRC       N        90. CIDIAL        ALLOW
```

```
SCREEN 5 OF 10                5ESS Switch
dslusr                OFFICE DATA ADMINISTRATION
(5908-1 through 15)      DIGITAL SUBSCRIBER LINE USER (CKT)

 95. INCOMING  N         106. MMB SUBGP      ___   117. NI SAR LIST (SARLIST)
 96. INTERCOM  N         107. RND SUBGP      ___   ROW  TYPE AND ORDER  QTY
 97. ORIG CW   N         108. ERCO ASGN      N     1      ____       __
 98. PP        N              ERCO ACT             2      ____       __
 99. AUTO HOLD N         109. LONG DST DR    N     3      ____       __
100. ONE TOUCH N         110. E911 PSAP      _
101. LN TYPE   NONE       111. SCP ALW       N            ASP
102. BLK 1PLUS NONE       112. PASC          ____  120. OFC OBL INH   N
103. RMB       __________ 113. ALT           N     121. OFC ONA INH   N
104. RND MKB   __________ 114. LRN INDEX     ___         MONITORED TN  _
105. STH       __________ 115. PORTED-IN AMA  N          MONITORING TN _
                          116. NON COND TRIG  N
```

```
SCREEN 6 OF 10                5ESS Switch
dslusr                OFFICE DATA ADMINISTRATION
(5908-1 through 15)  DIGITAL SUBSCRIBER LINE USER (DPKT)

124. MLHG TN   __________        133. H PVC LCN  ___
125. LCC       ___               134. L IN  LCN  ___
126. RAX       __                135. H IN  LCN  ___
127. LNR HNT TN __________       136. L 2W  LCN  ___
128. HUNT DEACT N                137. H 2W  LCN  ___
129. CHL SEL    N                138. L OUT LCN  ___
     NEW TN                      139. H OUT LCN  ___
130. BILL TN   __________        140. BUSY LIMIT ___
131. RMK       ________________  141. ICB        N
132. FIXED TEI __                142. OCB        N
                          143. PMDR GRP   ________
                          144. PMDR ACT   _
```

```
SCREEN 7 OF 10                5ESS Switch
dslusr                OFFICE DATA ADMINISTRATION
(5908-1 through 15)  DIGITAL SUBSCRIBER LINE USER (DPKT)
```

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145. SEND TPC 9600 157. IECPDNIC ____ 169. CUGPX __
146. SEND PKTSZ 128 158. FSA N 170. CUGOA N
147. SEND PKTWD 2 159. IA N 171. CUGIA N
148. SEND MCT __ 160. PB GRP ___
149. RCV TPC 9600 161. X25VER 1984
150. RCV PKTSZ 128 162. NOTIF ____
151. RCV PKTWD 2 163. ICP N
152. RCV MCT __ 164. HUNT NOTIF ___
153. FCPN N 165. TCID ____
154. TPCN N 166. SUST N
155. REV CHARGE N 167. DNA ___
156. LCP N 168. DNA QTY _

SCREEN 8 OF 10 5ESS Switch
dslusr OFFICE DATA ADMINISTRATION
(5908-1 through 15) DIGITAL SUBSCRIBER LINE USER (ODB)

172. MLHG TN _____ 182. RATE ____ 189. L IN LCN ___
173. LCC ___ 183. N2 __ 190. H IN LCN ___
174. RAX __ 184. T1 ___ 191. L 2W LCN ___
175. LNR HNT TN _____ 185. T3 __ 192. H 2W LCN ___
176. HUNT DEACT N 186. WNDSZ _ 193. L OUT LCN ___
177. CHL SEL N NEW TN 194. H OUT LCN ___
178. ISCN1 _____ 187. BILL TN _____ 195. BUSY LIMIT ___
179. ISCN2 _____ 188. RMK _____ 196. ICB N
180. BAND __ 197. OCB N
181. ODB _

SCREEN 9 OF 10 5ESS Switch
dslusr OFFICE DATA ADMINISTRATION
(5908-1 through 15) DIGITAL SUBSCRIBER LINE USER (ODB)

198. PMDR GRP _____ 210. REV CHARGE N 222. DNA ___
199. PMDR ACT _ 211. LCP N 223. DNA QTY _
200. SEND TPC 9600 212. IECPDNIC ____ 224. CUGPX __
201. SEND PKTSZ 128 213. FSA N 225. CUGOA N
202. SEND PKTWD 2 214. IA N 226. CUGIA N
203. SEND MCT ___ 215. PB GRP ___
204. RCV TPC 9600 216. X25VER 1984
205. RCV PKTSZ 128 217. NOTIF ____
206. RCV PKTWD 2 218. T3XX 0
207. RCV MCT ___ 219. ICP N
208. FCPN N 220. HUNT NOTIF ___
209. TPCN N 221. SUST N

SCREEN 10 OF 10 5ESS Switch _
dslusr OFFICE DATA ADMINISTRATION
(5908-1 through 15) DIGITAL SUBSCRIBER LINE USER

227. ICI LIST
ROW ICI ROW ICI

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```
 1  ICI 1 ______          9  ICI  9 ______
 2  ICI 2 ______         10  ICI 10 ______
 3  ICI 3 ______         11  ICI 11 ______
 4  ICI 4 ______         12  ICI 12 ______
 5  ICI 5 ______         13  ICI 13 ______
 6  ICI 6 ______         14  ICI 14 ______
 7  ICI 7 ______         15  ICI 15 ______
 8  ICI 8 ______         16  ICI 16 ______
```

Figure 3 SAMPLE DSLUSR FORM 5E14 SOFTWARE RELEASES

```
dslusr                    5ESS Switch
SCREEN 1 OF 11         OFFICE DATA ADMINISTRATION
(5908)              DIGITAL SUBSCRIBER LINE USER

(*)1. CKT TN  ___________              USER INFO
(*)2. DPKT TN ___________      13. USPID      ____________________
(*)3. ODB TN  ___________      14. MAXB CHL   _
(*)4. CKT MLHG ____            15. ACT USR    Y
(*)5. CKT TERM ____            16. DFLT TN USER N
(*)6. DPKT MLHG ____           17. PPB1 USR   _
(*)7. DPKT TERM ____           18. PPB2 USR   _
(*)8. ODB MLHG ____            19. AGI        _
(*)9. ODB TERM ____            20. INHIBIT DEL  N
 10. OE      _ ___________
```

```
dslusr                    5ESS Switch
SCREEN 2 OF 11         OFFICE DATA ADMINISTRATION
(5908)           DIGITAL SUBSCRIBER LINE USER (CKT)

21. MLHG TN ___________        CIRCUIT VOICE (CSV)      CIRCUIT DATA (CSD)
22. LCC    ___             28. CSV        _       37. CSD        _
23. RAX    ___             29. CSV CHL    ___     38. CSD CHL    ___
   NEW TN  ___________     30. CSV ACO    _____   39. CSD ACO    _____
25. BILL TN ___________    31. CSV LIMIT  __      40. CSD LIMIT  __
26. CPN SCRN N             32. CSV NBLIMIT __     41. CSD NBLIMIT __
27. RMK    _________________  33. SP DNA     ___     42. K56 DNA    ___
                          34. SP DNA QTY  __      43. K56 DNA QTY __
                          35. AU DNA      ___     44. K64 DNA     ___
                          36. AU DNA QTY  __      45. K64 DNA QTY __
```

```
                                                  dslusr                    5ESS Switch

SCREEN 3 OF 11         OFFICE DATA ADMINISTRATION
(5908)           DIGITAL SUBSCRIBER LINE USER (CKT)

46. SUST     N        58. AC ALW    _
47. ICP      N        59. AR ALW    _
```

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48. CA ___ 60. COT ALW _
49. CA QTY __ 61. PCP ALW _
50. BRCS N 62. SCA GA ALW _
51. TERM TYPE _____ 63. SCF GA ALW _
52. CONFIG GRP _____ 64. SCR GA ALW _
53. DISPLAY N 65. SDA GA ALW _
54. EKTS _____ 66. ALT LANG N
55. SHARED N 67. FLS N
56. PRIVACY _ 68. SUSO N
57. TIME MODE N 69. CONTEXT ID NATIVE

---

dslusr 5ESS Switch
SCREEN 4 OF 11 OFFICE DATA ADMINISTRATION
(5908) DIGITAL SUBSCRIBER LINE USER (CKT)

70. COMPL N 82. DNY ROH Y 94. PIC ____
71. SLUS N 83. BUSY MONITOR N 95. PTC ____
72. BRITL ALW _ 84. ATT MLHG ____ 96. PLC ____
73. DTLBILL N 85. RBV TGN ____ 97. UNBUNDLED N
74. TRAFFIC N 86. SERHLN _____
75. SAR NUM __ BCK LNK ___
76. SAR ORIG N QUEUE MONITOR ___
77. SAR TERM N 89. EPO POS NUM _____
78. NONHUNT N 90. EPO ON N
79. CA PREF I 91. ACD POS NUM ____
80. DNY BV N 92. ACD GROUP ___
81. TRC N 93. CIDIAL ALLOW

---

dslusr 5ESS Switch
SCREEN 5 OF 11 OFFICE DATA ADMINISTRATION
(5908) DIGITAL SUBSCRIBER LINE USER (CKT)

98. INCOMING N 109. MMB SUBGP ___ 121. NI SAR LIST (SARLIST)
99. INTERCOM N 110. RND SUBGP ___ ROW TYPE AND ORDER QTY
100. ORIG CW N 111. ERCO ASGN N 1 ____ __
101. PP N ERCO ACT N 2 ____ __
102. AUTO HOLD N 113. LONG DST DR N 3 ____ __
103. ONE TOUCH N 114. E911 PSAP _
104. LN TYPE NONE 115. SCP ALW N MONITORED TN _
105. BLK 1PLUS NONE 116. PASC ____ MONITORING TN _
106. RMB _____ 117. ALT N
107. RND MKB _____ 118. LRN INDEX ___
108. STH _____ 119. PORTED N
120. NON COND TRIG N

---

dslusr 5ESS Switch
SCREEN 6 OF 11 OFFICE DATA ADMINISTRATION
(5908) DIGITAL SUBSCRIBER LINE USER (CKT)

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```
      ASP
126. OFC OBL INH N
127. OFC ONA INH N
128. URT FCD BLK N
   BLK LN CODE _
```

```
dslusr                    5ESS Switch
SCREEN 7 OF 11          OFFICE DATA ADMINISTRATION
(5908)            DIGITAL SUBSCRIBER LINE USER (DPKT)

130. MLHG TN  __________        140. H PVC LCN  ___
131. LCC      ___               141. L IN LCN   ___
132. RAX      ___               142. H IN LCN   ___
133. LNR HNT TN __________      143. L 2W LCN   ___
134. HUNT DEACT N               144. H 2W LCN   ___
135. CHL SEL   N                145. L OUT LCN  ___
   NEW TN     __________        146. H OUT LCN  ___
137. BILL TN  __________        147. BUSY LIMIT ___
138. RMK      ________________  148. ICB       N
139. FIXED TEI __               149. OCB       N
                          150. PMDR GRP  ________
                          151. PMDR ACT  _
```

```
                                    dslusr                    5ESS Switch
SCREEN 8 OF 11          OFFICE DATA ADMINISTRATION
(5908)            DIGITAL SUBSCRIBER LINE USER (DPKT)

152. SEND TPC   9600    164. IECPDNIC  ____   176. CUGPX __
153. SEND PKTSZ 128     165. FSA       N      177. CUGOA N
154. SEND PKTWD 2       166. IA        N      178. CUGIA N
155. SEND MCT   __      167. PB GRP    ___
156. RCV TPC    9600    168. X25VER    1984
157. RCV PKTSZ  128     169. NOTIF     ____
158. RCV PKTWD  2       170. ICP       N
159. RCV MCT    __      171. HUNT NOTIF ___
160. FCPN       N       172. TCID      ____
161. TPCN       N       173. SUST      N
162. REV CHARGE N       174. DNA       ___
163. LCP        N       175. DNA QTY   _
```

```
                                    dslusr                    5ESS Switch
SCREEN 9 OF 11          OFFICE DATA ADMINISTRATION
(5908)            DIGITAL SUBSCRIBER LINE USER (ODB)

179. MLHG TN  __________  191. T1    ___          197. L IN LCN  ___
180. LCC      ___         192. T3    __           198. H IN LCN  ___
181. RAX      ___         193. WNDSZ _            199. L 2W LCN  ___
```

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182. LNR HNT TN _____ NEW TN _____ 200. H 2W LCN ___
183. HUNT DEACT N 195. BILL TN _____ 201. L OUT LCN ___
184. CHL SEL N 196. RMK _____ 202. H OUT LCN ___
185. ISCN1 _____ 203. BUSY LIMIT ___
186. ISCN2 _____ 204. ICB N
187. BAND __ 205. OCB N
188. ODB _
189. RATE ____
190. N2 __

---

dslusr 5ESS Switch
SCREEN 10 OF 11 OFFICE DATA ADMINISTRATION
(5908) DIGITAL SUBSCRIBER LINE USER (ODB)

206. PMDR GRP _____ 218. REV CHARGE N 230. DNA ___
207. PMDR ACT _ 219. LCP N 231. DNA QTY _
208. SEND TPC 9600 220. IECPDNIC ____ 232. CUGPX __
209. SEND PKTSZ 128 221. FSA N 233. CUGOA N
210. SEND PKTWD 2 222. IA N 234. CUGIA N
211. SEND MCT ___ 223. PB GRP ___
212. RCV TPC 9600 224. X25VER 1984
213. RCV PKTSZ 128 225. NOTIF ____
214. RCV PKTWD 2 226. T3XX 0
215. RCV MCT ___ 227. ICP N
216. FCPN N 228. HUNT NOTIF ___
217. TPCN N 229. SUST N

---

dslusr 5ESS Switch
SCREEN 11 OF 11 OFFICE DATA ADMINISTRATION
(5908) DIGITAL SUBSCRIBER LINE USER (ISAT)

>235. INCOMING CALL INDENTIFIER LIST (ICILIST)

ROW	ICI	ROW	ICI
1	_____	9	_____
2	_____	10	_____
3	_____	11	_____
4	_____	12	_____
5	_____	13	_____
6	_____	14	_____
7	_____	15	_____
8	_____	16	_____

Figure 4 SAMPLE DSLUSR FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 1J: 5909-1/2/3 RECORD
X.25 PACKET SWITCHING CHANNEL ASSIGNMENT FORM - XAT

1. GENERAL

The 5909-1/2 Record is available with 5E6 and later Software Releases. It is used to provision T1 facilities (digital lines and trunks) with X.25 Packet Switching services on a subscription basis using Q.931 signaling. When this form is entered, ports are defined for each channel of the T1 facility selected for packet switching. For 5E6 and later Software Releases, T1 facility channels can be provisioned and supported like BRI (Basic Rate Interface) Permanent Packet B-channels, which includes membership in MLHGs (Multi-line Hunt Groups).

The term and form name XAT refer to X.25 access to T1 facility DS0 channels. The term "DS0" refers to a single data channel or single digitally transmitted voice channel.

A T1 facility contains up to twenty-four separate DS0 channels. Each channel can be provisioned for packet switching. Any DS0 channels not being used for packet switching can still be used for other digital services (anywhere an individual Digital Equipment Number is assigned) on the 5ESS switch. The number of channels chosen to carry packet switched data also can be changed on a subscription basis, however, On-demand B-channel packet switching services are not available on XAT channels.

Circuit switching and packet switching services (XAT channels) can coexist on the same T1 facility. If circuit-switched services are not desired, signaling via the D-channel is not needed and channel 24 becomes available for packet switching. However, if any channels of the T1 facility are provisioned for PRI use, no packet switching services are allowed on the PRI D-channel (channel 24). No circuit switching services are allowed on DS0 channels selected for B-channel packet switching and, likewise, no packet services are allowed on DS0 channels selected for circuit switching.

1.1 LCN (Logical Channel Numbers)

LCNs represent SVCs and/or PVCs. These circuits connect CPE devices with each other to transmit packet switched data.

SVCs exist only for the period of the call. The CPE device and the PH interact through CCITT (International Telegraph and Telephone Consultative Committee) specified packet communication to connect and clear the SVC for each call. A PVC is a permanent, two-way connection between CPE devices. There is a system limitation of 128 simultaneously active LCNs (SVCs and/or PVCs) for each PH.

The CCITT has specified an order of assigning the four categories of LCNs. The lowest numbers (1 to x) can be used for the PVCs, if PVCs are desired. The H PVC LCN field (highest PVC LCN) indicates the highest numbered LCN that is a PVC. For example, if the H PVC LCN field is 7, LCNs 1 through 7 are PVCs.

The next highest range of numbers for LCNs belongs to the incoming only SVCs. This range is indicated in the Lowest Incoming LCN (L IN LCN) field and the Highest Incoming LCN (H IN LCN) field.

The next highest range of numbers for LCNs belongs to the two-way SVCs. This range is indicated in the Lowest Two-way LCN (L 2W LCN) field and the Highest Two-way LCN (H 2W LCN) field.

The highest range of numbers for LCNs belongs to the outgoing only SVCs. This range is indicated in the Lowest Outgoing LCN (L OUT LCN) field and the Highest Outgoing LCN (H OUT LCN) field.

For example, LCNs could be defined as follows:

- H PVC LCN = 2 (LCN 1 & 2 are PVC)

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- IN LCN = 3
- IN LCN = 4 (LCN 3 & 4 are incoming SVC)
- L 2W LCN = 8
- H 2W LCN = 9 (LCNs 8 & 9 are 2-way SVC)
- L OUT LCN = 10
- H OUT LCN = 12 (LCNs 10-12 are outgoing SVC)

If PVCs are not desired, LCN 1 is available for an incoming SVC.

If PVCs and incoming SVCs are not desired, LCN 1 is available for a two-way SVC.

If PVCs, incoming SVCs and two-way SVCs are not desired, LCN 1 is available for outgoing SVCs.

1.2 Recent Change View

The corresponding Recent Change view for this form is 23.40.

2. FORM ENTRIES - 5901-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 (*) PKT TN

Description: Enter the packet telephone number if this individual port is to be configured for X.25 service.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9
- and X is 0 - 9

Data Rules:

A PKT TN must be entered if a PKT MLHG/TERM NBR and a H PVC LCN are entered. A PKT TN and a PKT MLHG/TERM NBR both can be entered if an individual PKT TN is defined for the MLHG member.

The first three digits of this TN must be defined on the NOC form (5501 Record). The packet TN defined on this XAT form must be unique, that is, it cannot be defined on any other XAT, DSL, DSLUSR, LINE, MLHLN, PSMTN, ACQS, AMLBDSL, MLHG, SHTN, MULTITN or MTNDR form.

If PKT TN is defined on this form and PKT MLHG and TERM NBR are not entered, then the LCC and RAX must be defined on the LCC form with a corresponding CLASS OF SERVICE of "XAT", a TERMINATING TREATMENT of "INDIV", and LINE SCREENING set to "N".

For 5E10 and later, when PKT TN(s) on the PSPVC form match PKT TN(s) on XAT form(s), the OE must be specified.

For 5E12 and later, PKT TN or PKT TN and PKT MLHG/TERM NBR combinations on different XAT forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit PKT TNs on the XAT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE,

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the 7-digit PKT TN(s) must be entered as a 10-digit PKT TN(s).

For 5E12 and later, PKT TN and LNR HNT TN on the XAT form must be unique within the same XAT form.

For 5E12 and later, when the PKT TN(s) on the XAT form have an NXX (the first 3 digits of a 7-digit PKT TN) or an NPA/NXX combination (first 6-digits of a 10-digit PKT TN) entered, the OFFICE CODE or an NPA/OFFICE CODE combination must be defined on a NOC form.

2.3 (*) PKT MLHG

Description: Enter the packet MLHG number. A combination of XAT channels (possibly from more than one T1 facility) and BRI packet switching B-channels can coexist in the same MLHG.

Required Field (if a PKT TN is not entered).
Valid Entries:

- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

The PKT MLHG number entered on this XAT form must be defined on a corresponding MLHG form (5110 Record). This corresponding MLHG form must have a LISTED TN entered. This matching MLHG form also must have an MLHG FEATURE entered which has been defined on the MLHGFD form (5604 Record) with a HUNT TYPE of "PSUCD".

For 5E8 and later, PKT MLHG may be the same as PPB1 MLHG and PPB2 MLHG on the DSL form and DPKT MLHG (Non-Modem Pooling) and ODB MLHG on the DSLUSR form. The corresponding PKT TERM must be different.

If PKT MLHG and TERM NBR are not entered, HUNT DEACT must be "N", and the following fields must not be entered: HUNT NOTIF, BUSY LIMIT, and LNR HNT TN.

If PKT MLHG/TERM NBR(s) are entered, then the Line Class Code and Rate Center combination (LCC/RAX) must be defined on the LCC form with a corresponding CLASS OF SERVICE of "XAT", a TERMINATING TREATMENT of "INDIV" or "MLHG", and LINE SCREENING of "N".

For 5E10 and later, when PKT MLHG is entered, OE must be entered.

2.4 (*) TERM NBR

Description: Enter the packet MLHG member number. A TERM NBR must be specified if a PKT MLHG has been defined.

Required Field (if a PKT TN has not been entered).
Valid Entries: 1 - 2015

Data Rules:

If a PKT MLHG and TERM NBR are entered, a DEN must be entered.

2.5 DEN

Description: Enter the Digital Equipment Number representing the SM, DLTU (Digital Line and Trunk Unit), DFI (Digital Facilities Interface) and channel number. Each DEN must be unique.

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Software Release: 5E9(2) and earlier
Valid Entries: The DEN is an 8-digit number consisting of:

DIGITAL EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Line and Trunk Unit	DLTU	X	0-5
		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	01-10
Channel Number	CH	XX	01-48

Data Rules:

If the channel number is greater than 24, a DLTU TYPE of "DLTU48" must be defined on the EQDU form. There can be a maximum of 160 XATs per SM.

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs (Logical Link Control Blocks). The following applications define the possible LLCB assignments:

LLCB

Form	SM	SHELF CHL GRP	Increment
AMLBDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	OE[1,3]	PPB1 ISCN[1,3]	by 1 for each PPB1 ISCN defined.
		PPB2 ISCN[1,3]	by 1 for each PPB2 ISCN defined.
		D ISCN[1,3]	by 1 if a matching DSLUSR form is not found
DSLUSR	OE[1,3]	D ISCN[1,3] on the cor-responding DSL form	by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered.
			by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
		ODB ISCN1[1,3] ODB ISCN2	by 1 if only ODB ISCN1 is entered.
			by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
DSLAP	LCEN[1,3]	ISCN[1,3]	by 1 for each unique LCEN/ISCN combination.
MISLINK	OE[1,3]	SHELF and CHL GRP	by 1 for each MISLINK form.
OSPSDSL	LCEN[1,3]	ISCN[1,3]	by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined.
			by 1 for each unique OSPSDSL form.
RTERM RT INTERFACE is "TR303"	SM	ISCN[1,3]	by 2 for each TMC PRI ISCN and each TMC NPRI ISCN entry.
			by 3 for each EOC PRI ISCN and each EOC NPRI ISCN entry.
TRUNK Where TRKCLS is "IFOPER", "IFTERM" or "EDSL"	DEN[1,3]	ISCN[1,3]	by 1 for each unique TRUNK form.
XAT	DEN[1,3]	ISCN[1,3]	by 1 for each unique XAT form.

2.6 OE

Description: Enter the Orignating Equipment Number. The OE field is used to specify the originating equipment number (composite equipment number consisting of OETYPE and OEN). Enter one alphabetic character (OETYPE) followed by up to 10 digits (OEN) of the following format:

Software Release: 5E10 and later
Valid Entries:

Valid OE Type Entries

Entry	Definition

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D	Digital Trunk Equipment Number for PRI (DEN)
N	Networking Equipment Number (NEN).
U	Software Release 5E16(20 and later. XAT PH Channel Group Member.

If OE is set to "D", this OE Number consists of:

OE Number, Type D

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Line Trunk Unit	DLTU	X	0 - 5
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	DCHAN	XX	01 - 48

If OE is set to "N", this OE Number consists of:

OE Number, Type N - 5E12 and earlier

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNUS	X	0 - 5
Data Group	DG	X	0 - 1
Synchronous Transport Signal number	STS	X	0 - 5
Virtual Tributary	VT	XX	01 - 28
Digital Signal Level 0 channel	DS0	XX	01 - 24

OE Number, Type N - 5E13 and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNUS	X	0 - 7
Data Group	DG	X	0 - 1
SONET Termination Equipment number	STE	X	1 - 6
Synchronous Transport Signal number	STS	X	1
Virtual Tributary Group	VTG	X	1 - 7
Virtual Tributary Member	VTM	X	1 - 4
Digital Signal Level 0 channel	DS0	XX	01 - 24

For 5E16(2) and later, if OE is set to "U", this OE Number consists of:

OE Number, Type U (5E16(2) and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Packet Switching Unit	PSU	X	0 - 1
Shelf	SH	X	0 - 4
Channel Group	CHGRP	XX	01 - 15
Channel	CHAN	XXX	001 - 127

Data Rules:

A maximum of 128 ALCBs (Access Link Control Blocks) can used per SM, Shelf and Channel Group. The following applications use one ALCB:

- AMLBDSL - first three digits of ISCN where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form
- DSL - where SHELF/CHL GRP is the first three digits of PPB1 ISCN or PPB2 ISCN
- DSLUSR
  - where SHELF/CHL GRP is the first three digits of D ISCN on a corresponding DSL form
  - where SHELF/CHL GRP is the first three digits of ODB ISCN1 or ODB ISCN2
- MISLINK - where, SHELF and CHL GRP are the SHELF and CHL GRP fields (respectively) on the form
- OSPSDSL - where SHELF/CHL GRP is the first three digits of ISCN where SERVICE CLASS is

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"TAOPER" or "DAOPER"

- XAT - where SHELF/CHL GRP is the first three digits of ISCN

For 5E10 and later:

A maximum of 160 XAT forms can be assigned to a given Switching Module. The Switching module is determined from the first three characters of the OE field on the XAT form.

Type D

When the XAT form(s) has an OE TYPE of "D" and a DEN specified, the DFI(s) that exist on the EQDUP form must have a FAC 0 or FAC 1 EQUIPMENT STATUS of "O" on the EQDUP form.

When the XAT forms have an OE TYPE of "D" and an OE entered, indicating a DEN assignment, the corresponding EQDUP form for this DEN must be defined. The EQDUP key fields: SWITCHING MODULE, DLTU and DFI PACK NUMBER correspond to OE[1,3], OE[4,4] and OE [5,6] respectively, when OE TYPE is "D".

Type N

When XAT form(s) have an OE TYPE of "N" and a NEN specified, there must be a corresponding EQVT form with VT EQSTAT and DS1S EQSTAT both set to "O".

- ***NOTE:*** For 5E13 and later, the associated EQVT form may be found by matching OE[1,3] with EQVT SM, OE[4] with EQVT DNUS, OE[5] with EQVT DATA GROUP, OE[6] with EQVT STE, OE[7] with EQVT STS, OE[8] with EQVT VT GROUP, and OE[9] with EQVT VT MEMBER.

Type U

When OE is "U":

- PKT MLHG, OCU and CSU LOOPBACK, CUGOA, FSA, REV CHARGE "N".
- L OUT LCN and H OUT LCN must be entered.
- L IN LCN, H IN LCN, H PVC LCN, L 2W LCN, H 2W LCN, and PBGRP must not be entered.

For 5E16(2) and later, when OE is "U" and a UEN is specified a PSU must exist on the EQPSU form (5741 Record).

When OE is "U", there must be a matching IPINTF fom where PKT TN equals the PKT TN on this form, and the LCN on the IPINTF form must be greater than or equal to the L OUT LCN on the XAT form, and must be less than or equal to the H OUT LCN on the XAT form.

When OE is "U", there must exist a matching IPINTF form where PKT TN equals PKT TN on this form, and SEND PKT SIZE on the XAT form must be greater than or equal to the MTU SIZE on the IPINTF form.

2.7 CHNG PKT TN

Description: This field is used by Recent Change only. No ODA input is required.

2.8 CHNG PKT MLHG

Description: This field is used by Recent Change only. No ODA input is required.

2.9 CHNG TERM NBR

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Description: This field is used by Recent Change only. No ODA input is required.

2.10 CHNG DEN

Description: This field is used by Recent Change only. No ODA input is required.

Software Release: 5E9(2) and earlier

2.11 CHNG OE

Description: This field is used by Recent Change only. No ODA input is required.

Software Release: 5E10 and later

MLHG ONLY

The next two fields (Section 2.12 - Section 2.13) apply only to Multi-Line Group members.

2.12 LNR HNT TN

Description: Enter the Linear Hunt TN of a Multi-Line Hunt Group member. This LNR HNT TN serves as a linear entry point to the MLHG. Hunting always begins at the member associated with the called TN; it hunts sequentially through the list of members of the hunt group until either it reaches a non-busy hunt group member, or it reaches the last member and all members were hunt-busy.

If the member TN is on intercept the LNR HNT TN will not be on intercept.

Software Release: 5E8 and later
Valid Entries: 7 digits

Data Rules:

If LNR HNT TN is entered, the following must be true:

- DEN, PKT MLHG, and TERM NBR must be entered.
- The first three digits must be defined in the OFFICE CODE field on the NOC form.
- For any "PSUCD" MLHG, if LNR HNT TN for member 1 is not entered, no other members can have LNR HNT TN entered.
- LNR HNT TN must be unique within the 5ESS Switch.

For 5E12 and later, if the first 3-digits of the 7- digit LNR HNT TNs on the XAT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit LNR HNT TN(s) must be entered as a 10-digit LNR HNT TN(s).

For 5E12 and later, when the LNR HNT TNs on the XAT form have an NXX (the first 3 digits of a 7-digit LNR HNT TN) or NPA/NXX combination (the first 6 digits of a 10-digit LNR HNT TN) assigned, the NXX or NPA/NXX must be defined on a NOC form.

2.13 HUNT DEACT

Description: Should the MLHG member be deactivated (marked busy) for hunted calls? A value of "N" indicates the Multi-Line Hunt Group member is active (available) for hunting.

The deactive/active status has no effect on non-hunted calls, calls made to the MLHG member using its

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individual TN.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PKT MLHG and TERM NBR are not entered, HUNT DEACT must be "N".

2.14 ISCN

Description: Enter the ISCN (Integrated Services Channel Number) representing a shelf, CHL GRP (channel group) and CHL (channel, in multiples of 4 [e.g. 0, 4, 8...]) in the PSU (Packet Switching Unit). This entry represents one of the five shelves in the PSU.

The ISCN Assignment Record (5844 Record) lists all assigned ISCNs.
Valid Entries: The ISCN is a six-digit number consisting of:

ISCN NUMBER			
Equipment		**Format**	**Valid Entries**
Shelf	SHELF	X	0 - 4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127 (0, 4, 8, ...)

Data Rules:

The SHELF number must be defined on the EQPSU form (5741 Record) where a SHELF SIDE 0/1 EQST has been set to "O" operational) for the same SM (first three digits of DEN on XAT form equals SM on EQPSU form).

The CHL GRP entry represents one of sixteen PH (Protocol Handler) circuit packs on one of the PSU shelves.

The CHL entry represents the PSU PH member number within the PH. The entry must be in multiples of 4.

The DLTU, DFI and ISCN must exist in the same loaded SM as specified by the DEN for this PKT TN or PKT MLHG member.

For 5E9(2) and earlier, an ISCN must be assigned on this form if a DEN has been assigned on this form.

For 5E9(1) - 5E9(2), the first three digits of DEN, the first digit of ISCN, and the second two digits of ISCN must match the SM, PSU SHELF, and GRP, respectively, on a PSUGP form (5949 Record) where PH TYPE is "PH3".

The following forms can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- RTERM
- XAT

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with all TRUNK forms which have a TRKCLS of:
- "EDSL"
- "IFTERM"
- "IFOPER"

However, they can not have an ISCN SHELF and CHL GRP which are mixed with Protocol Handler assignments from PSISM forms, PSULNK forms, or TRUNK forms which have a TRKCLS of
- "PACKET"
- "PKTPIPE"
- "SPCHNDLR"
- "X75"
- "X75P"

For 5E10 and later, when OE is entered, ISCN must be entered.

For 5E10 and later, when OE is not entered, ISCN cannot be entered.

A PIDB (Peripheral Interface Data Bus) must be defined for the hardware represented by the ISCN. For an (R)ISLU, the PIDB is defined on the EQISLU form (5731 Record) with a PIDB TYPE of "PSU" and a PSU SHELF number equal to the SHELF number assigned on this XAT form. For 5E8 and later, the IDCU PIDB is defined on the EQIDCU form (5846 Record) with a PIDB TYPE of "PSU" and a PSU SHELF number equal to the SHELF number assigned on this XAT form.

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:
- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

For 5E10 and later, the following data rule is not executed on an SM-2000, because provisioning of nailed-up time slots is not required on an SM-2000. Each Data Interface in a SM can have a maximum of 256 nailed-up time slots reserved for the application in the following table. These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the following applications. Note that a D channel only takes a quarter of a time slot.

The time slots are reserved for the applications in the table that follows.

In addition, on a PSU1 , each Data Interface in a SM can have a maximum of 128 nailed-up time slots reserved for the following applications:

Timeslots Reserved for Applications

Application	Definition

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EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

These time slots can be reserved by entering the rows RPTSS0 to RPTSS7 on the EQPSU form. The quantity of time slots reserved (i.e. the number entered) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D channel only takes a quarter of a time slot.

Also, the reserved time slots must be entered such that for any given SHELF, (defined by the first digit of ISCN field or by the SHELF field on the MISLINK form), the time slots assigned to that SHELF must not be duplicated in the same vertical (column) position if they appear in more than one row (RPTSS0 through RPTSS7).

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

2.15 # LCC

Description: Enter a packet Line Class Code. (See the LCC form (5306 Record) for LCC definitions.)
Valid Entries: 1 - 3 characters

Data Rules:

The LCC and RAX assigned on this XAT form must be defined on the LCC form (5306 Record) with a CLASS OF SERVICE of "XAT", a TERMINATING TREATMENT of "INDIV", and LINE SCREENING set to "N".

2.16 # RAX

Description: Enter a packet Rate Area. The Rate Area and LCC determine the DAS (Digit Analysis Selector) and Screening Index used for calls originating from this line and terminating treatment of calls to this line.

Required Field.
Valid Entries:

- For 5E14 and earlier: 1-99
- For 5E15 and later: 1 - 999

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Data Rules:

Since the DAS points to packet switching digit interpreter tables, the LDIT, MLDIT and PDIT tables used by this PKT TN or PKT MLHG member must be packet switching tables (TYPE OF CI CALL is "PSNCI" or "PSCAR").

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.17 RATE

Description: Enter the XAT Channel Data Rate.

Required Field.
Valid Entries:

5E13 and earlier: 56K, 64K or 64IK
5E14 and later: 56KB, 64KB or 64IK

- ***NOTE:*** For 5E14 and later, the Data Rate names were updated to be consistent with Recent Change.

Data Rules:

For 5E9(2) and earlier, a RATE must be entered if a DEN has been assigned on this form.

For 5E10 and later, when OE is entered, RATE must be entered.

For 5E10 and later, when OE is not entered, RATE cannot be entered.

For 5E9(2) and earlier the DENs assigned on this XAT form and defined on the EQDUP form, only the following combinations of DFI MODEs on the EQDUP form and RATEs from the XAT form are allowed:

- When the XAT RATE is "56K", the EQDUP DFI MODE must be "D4", "FEB7", "D464", "FE64", "64K" or "FE8Z";
- when the XAT RATE is "64IK", the EQDUP DFI MODE must be "D464", "FE64", "64K" or "FE8Z";
- when the XAT RATE is "64K", the EQDUP DFI MODE must be "64K" or "FE8Z".

RATE must be "56K" when OCU LOOPBACK or CSU LOOPBACK is "Y".

For 5E10 and later, when the XAT forms have DEN(s) assigned on the corresponding EQDUP form, only the following XAT RATE/EQDUP DFI MODE combinations are valid: When the XAT RATE is "56K", the EQDUP DFI MODE must be "D4", "FEB7", "D464", "FE64 70, "64K" or "FE8Z". When the XAT RATE is "64IK", the EQDUP DFI MODE must be "D464", "FE64", "64K" or "FE8Z". When the XAT RA TE is "64K", the EQDUP DFI MODE must be "64K" or "FE8Z".Note:

- ***NOTE:*** The EQDUP key fields SWITCHING MODULE, DLTU and DFI PACK NUMBER correspond to OE[1,3], OE[4,4] and OE [5,6] respectively, when OE TYPE is "D".

For 5E10 and later, when XAT form(s) have an OE TYPE of "N" and a NEN assigned, and XAT RATE is "64K", the ZCS on the associated EQVT form must be "N".

2.18 N2

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Description: The N2 value, per CCITT specifications, is the maximum number of attempts made by the CPE device or the PH to successfully transmit a frame at the LAPB (Link Access Procedure B) Level 2. Following N2 failures, the PH attempts to restore the link, which is either a SVC or a PVC. If the PH cannot restore the link, the PH will clear the SVCs and reset the PVCs.
Valid Entries: 2 - 15

Data Rules:

For 5E9(2) and earlier, N2 must be entered if a DEN has been assigned on this form.

For 5E10 and later, when OE is entered, N2 must be entered.

For 5E10 and later, when OE is not entered, N2 cannot be entered.

2.19 T1

Description: The T1 timer, per CCITT specifications, is the period of time before retransmission of a frame may be initiated at the LAPB Level 2.
Valid Entries: 20 - 200, even numbers only, in tenths of a second.

Data Rules:

For 5E9(2) and earlier, T1 must be entered if a DEN has been assigned on this form.

For 5E10 and later, when OE is entered, T1 must be entered.

For 5E10 and later, when OE is not entered, T1 cannot be entered.

2.20 T3

Description: The T3 timer, per CCITT specifications, is the period of time at which an idle channel is considered to have been in the idle state excessively long. The indication of this situation is passed to the PH to assure that the channel is idle and ready to be set for operation once again. The duration of the T3 timer must be greater than the duration of the T1 timer to ensure that retransmission efforts are not aborted.
Valid Entries: 3 - 30 in full seconds

Data Rules:

For 5E9(2) and earlier, T3 must be entered if a DEN has been assigned on this form.

For 5E10 and later, when OE is entered, T3 must be entered.

For 5E10 and later, when OE is not entered, T3 cannot be entered.

The duration entered in the T3 field must be greater than one-tenth the duration entered in the T1 field.

2.21 WNDSZ

Description: The maximum quantity of sequentially numbered LAPB Level 2 I-frames (Information) that the CPE device or PH can have unacknowledged at any time. This field is "I frames k" in CCITT terminology.
Valid Entries: 1 - 7

Data Rules:

For 5E9(2) and earlier, WNDSZ must be entered if a DEN has been assigned on this form.

For 5E10 and later, when OE is entered, WNDZ must be entered.

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For 5E10 and later, when OE is not entered, WNDZ cannot be entered.

2.22 SUST

Description: Will all packet terminations to this line be denied?
Default: N
Valid Entries: Y, N

Data Rules:

When a PKT MLHG and TERM NBR are entered, SUST must be "N".

2.23 OCU LOOPBACK

Description: Is Loopback testing allowed at the OCU (Office Channel Unit)?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered, RATE must be "56K".

For 5E10 and later, when OE is not entered, OCU LOOPBACK must be "Y".

2.24 CSU LOOPBACK

Description: Is Loopback testing allowed at the CSU (Channel Service Unit)?
Default: Y
Valid Entries: Y, N

Data Rules:

If "Y" is entered, RATE must be "56K".

For 5E10 and later, when OE is not entered, CSU LOOPBACK must be "Y".

2.25 X25VER

Description: Enter the X.25 CCITT version supported for this CPE.
Default: 1984
Valid Entries: 1980, 1984

Data Rules:

For 5E9(2) and earlier, leave this field blank if DEN has not been entered.

For 5E10 and later, when OE is not entered, X25VER must be "1984".

2.26 ICB

Description: Will the ICB (Incoming Calls Barred) option be activated? ICB prevents users from receiving incoming virtual calls. The user may still originate outgoing virtual calls.
Default: N
Valid Entries: Y, N

Data Rules:

Enter "N" if PKT MLHG and TERM NBR have been entered.

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For 5E10 and later, when OE is not entered, ICB must be "N".

2.27 OCB

Description: Will the OCB (Outgoing Calls Barred) feature be activated? OCB prevents the user from originating outgoing virtual calls. The user may still receive incoming virtual calls.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when OE is not entered, OCB must be "N".

2.28 BILL TN

Description: Enter a TN to be billed if the TN is is different from the PKT TN associated with this port.
Valid Entries: A 7-digit TN (if calls are to be billed to a TN within the local office); a 10-digit TN (if calls are to be billed to a TN outside the local office)

Valid 7 and 10-digit numbers can be the following formats:

- NXXXXXX - Where NXX is a valid office code defined in the OFFICE CODE field on a NOC form.
- NPANXXXXXX - Any 10-digit number; however, expected values are NPA and NXX codes.
- ZXXXXXX - Where Z is 0 or 1 (normally used for OUTWATS billing purposes). The first three digits must be defined in the OFFICE CODE field on a NOC form.

Data Rules:

If the BILL TN field is left blank and a DEN is assigned, the PKT TN will be used as the BILL TN.

For 5E10 and later, when OE is not entered, BILL TN cannot be entered.

For 5E12 and later, when the BILL TN(s) on the XAT form have an NXX value (the first 3 digits of a 7-digit BILL TN) or an NPA/NXX combination (the first 6-digits of a 10-digit BILL TN) without a matching OFFICE CODE or NPA/OFFICE CODE defined on the NOC form of this office, is valid only if you allow billing to NXX codes served by other offices or if the first digit of the NXX code is 0 or 1 designating OUTWATS billing.

2.29 RMK

Description: Remarks consisting of alphanumeric, blank or special characters except double quotes.
Valid Entries: 1 - 16 characters

3. FORM ENTRIES - 5902-2 RECORD

3.1 H PVC LCN

Description: Enter the highest LCN that can be assigned to a PVC. For 5E9(2) and earlier, at least one LCN field must be entered if a DEN is assigned. For 5E10 and later, when OE is entered, H PVC LCN, or L IN LCN, or H IN LCN, or L 2W LCN, or H 2W LCN, or L OUT LCN, or H OUT LCN must be entered.
Valid Entries: 1 - 127

Data Rules:

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If H PVC LCN is entered, there must be a corresponding PSPVC form (5923 Record) with an LCN value less than or equal to this H PVC LCN value. If a PSPVC form is not entered, ODA will default the corresponding attribute values for the data.

For 5E10 and later, when OE is not entered, H PVC LCN cannot be entered.

3.2 L IN LCN

Description: Enter the Lowest Incoming LCN.
Valid Entries: 1 - 127

Data Rules:

If H PVC LCN is entered and this field is entered, the L IN LCN value must be one greater than the H PVC LCN value. If an entry is made in this field and H PVC LCN is not entered, the entry must be 1.

For 5E8 and later, if PKT MLHG and TERM NBR are entered, L IN LCN or L 2W LCN must be entered.

For 5E10 and later, when OE is not entered, L IN LCN cannot be entered.

3.3 H IN LCN

Description: Enter the Highest Incoming Logical Channel Number. The L IN LCN and H IN LCN fields must both be entered in order to define a range of incoming LCNs. If one is left blank, they must both be left blank.
Valid Entries: 1 - 127

Data Rules:

The value entered in this field must be greater than or equal to the value entered in the L IN LCN field.

For 5E10 and later, when OE is not entered, H IN LCN cannot be entered.

3.4 L 2W LCN

Description: Enter the Lowest Two-Way Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If this field and the H IN LCN fields are entered, then the value entered in this field must be greater than the value entered in the H IN LCN field.

If this field is entered, H IN LCN is blank and H PVC LCN is entered. The entry in this field must be greater than the H PVC LCN. Also, if this field is blank, H 2W LCN must be blank. However, if either field is entered, both must be entered.

For 5E8 and later, if PKT MLHG and TERM NBR are entered, L IN LCN or L 2W LCN must be entered.

For 5E10 and later, when OE is not entered, L 2W LCN cannot be entered.

3.5 H 2W LCN

Description: Enter the Highest Two-way Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If the L 2W LCN field is entered, then the H 2W LCN field must be entered in order to define a range of

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Two-way LCNs. The value entered in this field must be greater than or equal to the value entered in the L 2W LCN field.

For 5E10 and later, when OE is not entered, H 2W LCN cannot be entered.

3.6 L OUT LCN

Description: Enter the Lowest Outgoing Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If either L OUT LCN or H OUT LC is not entered, they both must not be entered. If one is entered, then both must be entered.

If this field and the H 2W LCN fields are entered, then the value entered in this field must be greater than the value entered in the H 2W LCN field.

The value in this field must be greater than the previously entered H PVC LCN value if L IN LCN and L 2W LCN are blank. Also, L OUT LCN must be greater than H IN LCN if H IN LCN is entered.

For 5E10 and later, when OE is not entered, L OUT LCN cannot be entered.

3.7 H OUT LCN

Description: Enter the Highest Outgoing Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

If the L OUT LCN field is entered, then the H OUT LCN field must be entered in order to define a range of Outgoing LCNs. If this field is not entered, L OUT LCN must not be entered.

The value entered in this field must be greater than or equal to the value entered in the L OUT LCN field.

For 5E10 and later, when OE is not entered, H OUT LCN cannot be entered.

3.8 BUSY LIMIT

Description: Enter the busy limit for this MLHG terminal. The busy limit represents the maximum number of concurrent incoming virtual calls an MLHG member may receive before the member is marked busy for hunting purposes. Calls to non-hunt DNs are included in the incoming call count but are not restricted by the busy limit.

Software Release: 5E8 and later
Valid Entries: 1 - 127

Data Rules:

This parameter is applicable to MLHG members only. If PKT MLHG and TERM NBR are not entered, BUSY LIMIT must not be entered.

If PKT MLHG and TERM NBR are entered, BUSY LIMIT should be set according to the rules that follow. When BUSY LIMIT is not entered, the maximum value for the applicable rule will be assigned.

- If the XAT is on a PH3, BUSY LIMIT must be less than or equal to the sum of IN LCNs plus 2W LCNs.

3.9 HUNT NOTIF

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Description: Indicate the Hunting Notification procedure to be used for processing an X.25 CLAMN (Called Line Address Modified Notification) facility and a modified address for this Multi-Line Hunt Group member.

The X.25 CLAMN feature allows the terminating CPE or switch to return the X.25 CLAMN facility, along with a modified Called Address field containing the non-hunt DN for the end-point, to the calling party. When a call is offered to a packet-mode hunt terminal as part of hunting, CLAMN signaling is returned to the calling party to indicate that a hunt was performed.

If HUNT NOTIF is blank, the CLAMN feature is not applicable.

Software Release: 5E8 and later
Valid Entries:

Valid HUNT NOTIF Entries

Entry	Definition
YES	The switch initiates CLAMN procedures when the terminating DTE does not. If neither the CLAMN nor the modified address is present, the switch will insert the CLAMN and non-hunt telephone number into the X.25 call request packet and allow the X.25 call to proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
NO	The switch does not initiate CLAMN procedures. If neither the CLAMN facility nor the modified address is present, or if both are present, the X.25 call will proceed. When the terminating DTE uses CLAMN procedures, the switch screens the CLAMN usage according to BELLCORE defined rules.
OLD	The X.25 CLAMN procedure that existed prior to the 5E8 Software Release is used.

Data Rules:

HUNT NOTIF is applicable to MLHG members only. If PKT MLHG and TERM NBR are not entered, HUNT NOTIF must not be entered.

If PKT MLHG and TERM NBR are entered, HUNT NOTIF must be entered.

If HUNT NOTIF is "YES", TN must be entered.

3.10 PMDR GRP

Description: Enter a Packet MDR Group name for associated with a XAT. The PMDR is used to generate Message Detail Recording records for packet data calls.

Software Release: 5E7 and later
Valid Entries: 1 - 8 characters

Data Rules:

For 5E9(2) and earlier, if DEN is not entered, PMDR GRP must not be entered. PMDR GRP and PMDR ACT must both be entered or neither can be entered.

For 5E10 and later, when OE is not entered, PMDR GRP cannot be entered.

3.11 PMDR ACT

Description: Is the Packet MDR Group associated with the XAT activated?

Software Release: 5E7 and later
Valid Entries: Y, N

Data Rules:

IF PMDR GRP is not entered or if DEN is not entered, PMDR ACT must not be entered. PMDR ACT must be entered when PMDR GRP is entered.

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For 5E10 and later, when OE is not entered, PMDR ACT cannot be entered.

3.12 SEND TPC

Description: Enter the Throughput Class of a virtual call from the terminal to the switch.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600, or 19200.

Data Rules:

For 5E10 and later, when OE is not entered, SEND TPC must be 9600.

3.13 SEND PKTSZ

Description: Enter the maximum number of bytes of data that can be sent in a packet (excluding control type information).
Default: 128
Valid Entries: 128 or 256 bytes

Data Rules:

If the FCPN field is "N", this field must be 128.

For 5E10 and later, when OE is not entered, SEND PKTSZ must be 128.

3.14 SEND PKTWD

Description: Enter the number of data packets that the CPE device can have unconfirmed on a sending basis at any time.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if SEND PKTWD is not 2, FCPN must be "Y".

For 5E10 and later, when OE is not entered, SEND PKTWD must be 2.

3.15 SEND MCT

Description: Enter the maximum combined throughput in kilobits per second for the sending direction. When the sum of the sending throughput of virtual calls exceeds the SEND MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 64 - 128 (kbps), in increments of 8

Data Rules:

For 5E10 and later, when OE is not entered, SEND MCT can not be entered.

3.16 RCV TPC

Description: Enter the Throughput Class of a virtual call to the terminal from the switch.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600, or 19200.

Data Rules:

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For 5E10 and later, when OE is not entered, RCV TPC must be 9600.

3.17 RCV PKTSZ

Description: Enter the maximum number of bytes of data that can be received in a packet (excluding control type information).
Default: 128
Valid Entries: 128 or 256 bytes

Data Rules:

Enter 128 when FCPN is "N". If the FCPN field is "N", this field must be 128.

For 5E10 and later, when OE is not entered, RCV PKTSZ must be 128.

3.18 RCV PKTWD

Description: Enter the number of data packets that the CPE device can have unconfirmed on a receiving basis at any time.
Default: 2
Valid Entries: 1 - 7

Data Rules:

For 5E9(1) and later, if RCV PKTWD is not 2, FCPN must be "Y".

For 5E10 and later, when OE is not entered, RCV PKTWD must be 2.

3.19 RCV MCT

Description: Enter the maximum combined throughput in kilobits per second for the receiving direction. When the sum of the receiving throughput of virtual calls exceeds the RCV MCT (Maximum Combined Throughput), the user is considered busy.

Software Release: 5E8 and later
Valid Entries: 64 - 128 (kbps), in increments of 8

Data Rules:

For 5E10 and later, when OE is not entered, RCV MCT cannot be entered.

3.20 ICP

Description: Will terminating calls be routed to regular intercept?
Default: N
Valid Entries: Y, N

Data Rules:

For 5E9(2) and earlier, if "N" is entered, a DEN must be entered. If "Y" is entered, a PKT TN or PKT MLHG/TERM must be entered. However, when PKT MLHG/TERM is entered when ICP is "Y", a DEN also must be entered.

For 5E9(2) and earlier, DEN does not have to be entered if ICP is "Y" and PKT TN is entered. If the DEN is unassigned in this case (ICP is "Y" and PKT TN assigned), all fields on this form should be left blank or entered with their corresponding default values.

For 5E10 and later, when ICP is "N", OE must be entered.

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For 5E10 and later, when ICP is "Y", PKT TN or PKT MLHG/TERM NBR and OE must be entered.

3.21 PB GRP

Description: Enter the number associated with the Packet Switching Data Business Group Service. This feature enables the customer to set up and administer intra-switch PBGs (Packet Business Groups) by assigning a PBG number to each X.25 termination to distinguish between intra-PBG and other calls on the AMA record. Do not enter a value if this user is not a member of a PBG.
Valid Entries: 1 - 100

Data Rules:

If a PB GRP is entered, a PKT TN must be entered.

For 5E10 and later, when OE is not entered, PB GRP cannot be entered.

An MLHG will be assigned to a PBG by associating the PBG with an MLHG on an MLHG form (5110 Record). The DSLUSR form (5908 Record) or XAT form should only be used to assign a PBG if the MLHG member has a known member TN.

3.22 REV CHARGE

Description: Will the called CPE accept the charge for a call from a PH?
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when OE is not entered, REV CHARGE MUST be "N".

3.23 LCP

Description: Will Local Charge Prevention be activated? When LCP is "Y" all the X.25 outgoing calls from this user will be Reverse Charged and any X.25 incoming calls that contain Reverse Charge will be cleared.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

LCP must be "N" when DEN is blank.

LCP is not allowed with Reverse Charge. If LCP is "Y" then REV CHARGE must be "N".

For 5E10 and later, when OE is not entered, LCP must be "N".

3.24 FCPN

Description: Will FCPN (Flow Control Parameter Negotiation) be activated? The transmission of data between a CPE device and a PH is controlled separately for each direction and is controlled by the receiver of the data. This is, in CCITT nomenclature, referred to as flow control. An additional aspect of flow control is the ability of the PH to limit the rate at which it accepts packets when it recognizes network congestion. FCPN allows the PH and the CPE device to negotiate the Window Size (2 or 3) and the Packet Size (128 or 256 bytes) on a per-call basis.

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Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when OE is not entered, FCPN must be "N".

3.25 TPCN

Description: Will TPCN (Throughput Class Negotiation) be activated? TCPN allows the sending and receiving entities to negotiate the bits per second to be transmitted in either direction on a per-call basis. Both the sending and receiving party must subscribe to this service for the negotiation to transpire.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when OE is not entered, FCPN must be "N".

3.26 FSA

Description: Will the FSA (Fast Select Acceptance) feature be activated? FSA allows a CPE device to receive up to 128 bytes of user data with call setup and clearing packets.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when OE is not entered, FSA must be "N".

3.27 IA

Description: Will the ISDN IA (Intercom Addressing) be activated? IA permits the ISDN user to access other users on the 5ESS Switch with a 4-digit or 7-digit number.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when OE is not entered, IA must be "N".

3.28 IECP DNIC

Description: Enter a 4-digit DNIC (Data Network ID Code) for Inter-Exchange Carrier Pre-select.
Valid Entries: 1 - 9999

Data Rules:

This entry must be defined in the DNIC field on a PSDNICRI form (5921 Record).

For 5E10 and later, when OE is not entered, IECP DNIC cannot be entered.

4. FORM ENTRIES - 5902-3 RECORD

4.1 CUGPX

Description: Enter the Preferential Customer CUG (Closed User Group) Index.
Valid Entries: 0 - 99

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Data Rules:

CUGPX must be entered if CUGOA is "Y" or CUGIA is "Y" and X25VER is "1980".

This CUGPX entry must equal the CUG IDX field on a PSCUG form (5924 Record) where the PKT MLHG and PKT TERM entries on PSCUG form equal the the PKT MLHG and TERM NBR (if entered) on this XAT form.

Also, this CUGPX entry must equal the CUG IDX field on a PSCUG form where the PKT TN entry on the PSCUG form equals the PKT TN (if entered) on this XAT form.

If the PKT TN or PKT MLHG/TERM NBR assigned on this XAT form equals the PKT TN or PKT MLHG/PKT TERM on the PSCUG form, this CUGPX field should be entered and CUGOA and CUGIA have to be set to "Y".

For 5E10 and later, when OE is not entered, CUGPX cannot be entered.

4.2 CUGOA

Description: Will the CUG Outgoing Access indicator be activated? CUGOA permits CUG members to access CPE devices that do not belong to a CUG or CPE devices that belong to a CUG with Incoming Access.
Default: N
Valid Entries: Y, N

Data Rules:

If CUGOA is "Y", the corresponding PSCUG form (5924A Record) must be defined with the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services, respectively.

For 5E10 and later, when OE is not entered, CUGOA must be "N".

4.3 CUGIA

Description: Will the CUG Incoming Access indicator be activated? CUGIA permits CUG members to access CPE devices that do not belong to a CUG or CPE devices that belong to a CUG with Outgoing Access.
Default: N
Valid Entries: Y, N

Data Rules:

If CUGIA is "Y", the corresponding PSCUG form (5924A Record) must be defined with the PKT TN or PKT MLHG/PKT TERMs equal to the TNs or MLHG/TERMs of these Packet Services, respectively.

For 5E10 and later, when OE is not entered, CUGIA must be "N".

4.4 CUGHX

Description: This field is used by only Recent Change to display the highest used CUG index. It is a display only field. No ODA input is required. For more information concerning Closed User Groups see Division 2, Section 1AL.

---

xat 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5909-1/2/3) X.25 (XAT) PACKET SWITCHING CHANNEL ASSIGNMENT

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```
(*)1. PKT TN  __________      PKT NEW TN __________     25. OCU LOOPBACK Y
(*)2. PKT MLHG ____        14. ISCN      ______        26. CSU LOOPBACK Y
(*)3. TERM NBR ____        #15. LCC      ___
  4. OE      _ __________ #16. RAX      __
   CHANGE FIELDS           17. RATE     ____
    CHNG PKT TN  ___       18. N2       __
    CHNG PKT MLHG ___      19. T1       ___
    CHNG TERM NBR ___      20. T3       __
    CHNG OE      ___       21. WNDSZ    _
      MLHG ONLY            22. SUST     N
 11. LNR HNT TN __________  23. BILL TN  __________
 12. HUNT DEACT N          24. RMK      ____________________
```

```
xat                        5ESS Switch        _
SCREEN 2 OF 2              OFFICE DATA ADMINISTRATION
(5909-1/2/3)   X.25 (XAT) PACKET SWITCHING CHANNEL ASSIGNMENT

27. X25VER    1984   39. PMD GRP   _________   51. REV CHARGE N
28. ICB       N      40. PMDR ACT  _           52. LCP       N
29. OCB       N      41. SEND TPC  9600        53. FCPN      N
30. H PVC LCN ___    42. SEND PKTSZ 128        54. TPCN      N
31. L IN LCN  ___    43. SEND PKTWD 2          55. FSA       N
32. H IN LCN  ___    44. SEND MCT  ___         56. IA        N
33. L 2W LCN  ___    45. RCV TPC   9600        57. IECP DNIC ____
34. H 2W LCN  ___    46. RCV PKTSZ  128
35. L OUT LCN ___    47. RCV PKTWD  2          CLOSED USER GROUP
36. H OUT LCN ___    48. RCV MCT   ___         58. CUGPX __
37. BUSY LIMIT ___   49. ICP       N          59. CUGOA N
38. HUNT NOTIF ___   50. PB GRP    ___        60. CUGIA N
```

Figure 1 SAMPLE XAT FORM 5E12 THROUGH 5E14 SOFTWARE RELEASES

```
xat                        5ESS Switch
SCREEN 1 OF 3              OFFICE DATA ADMINISTRATION
(5909)         X.25 (XAT) PACKET SWITCHING CHANNEL ASSIGNMENT

(*)1. PKT TN  __________      PKT NEW TN __________
(*)2. PKT MLHG ____        14. ISCN      ______
(*)3. TERM NBR ____        #15. LCC      ___
  4. OE      _ ___________ #16. RAX      ___
   CHANGE FIELDS           17. RATE     ____
    CHNG PKT TN  ___       18. N2       __
    CHNG PKT MLHG ___      19. T1       ___
    CHNG TERM NBR ___      20. T3       __
    CHNG OE      ___       21. WNDSZ    _
      MLHG ONLY            22. SUST     N
 11. LNR HNT TN __________  23. BILL TN  __________
 12. HUNT DEACT N          24. RMK      ____________________
```

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```
xat                        5ESS Switch
SCREEN 2 OF 3            OFFICE DATA ADMINISTRATION
(5909)        X.25 (XAT) PACKET SWITCHING CHANNEL ASSIGNMENT

25. OCU LOOPBACK Y
26. CSU LOOPBACK Y
```

```
xat                        5ESS Switch        _
SCREEN 3 OF 3            OFFICE DATA ADMINISTRATION
(5909)        X.25 (XAT) PACKET SWITCHING CHANNEL ASSIGNMENT

27. X25VER    1984   39. PMDR GRP  ________   51. REV CHARGE N
28. ICB       N      40. PMDR ACT  _          52. LCP       N
29. OCB       N      41. SEND TPC  9600       53. FCPN      N
30. H PVC LCN ___    42. SEND PKTSZ 128       54. TPCN      N
31. L IN LCN  ___    43. SEND PKTWD 2         55. FSA       N
32. H IN LCN  ___    44. SEND MCT  ___        56. IA        N
33. L 2W LCN  ___    45. RCV TPC   9600       57. IECP DNIC ____
34. H 2W LCN  ___    46. RCV PKTSZ  128
35. L OUT LCN ___    47. RCV PKTWD  2          CLOSED USER GROUP
36. H OUT LCN ___    48. RCV MCT   ___        58. CUGPX __
37. BUSY LIMIT ___   49. ICP       N          59. CUGOA N
38. HUNT NOTIF ___   50. PB GRP    ___        60. CUGIA N
```

Figure 2 SAMPLE XAT FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 1K: 5908A-1/2 RECORD
PPB/USER RECORD
5908B RECORD
DSL USER RECORD

1. GENERAL

The 5908A and 5908B Records are output-only records that list all DSL users in the office.

The 5908A Record, available in the 5E5 through 5E8 Software Releases, was replaced by the 5908A-1 and 5908A-2 Records for 5E9(1) and later. The data on these records is sorted by Office Equipment number.

The 5908B Record is available with 5E9(1) and later Software Releases and is sorted by USPID (User Service Profile Identifier).

2. RECORD ENTRIES - 5908A-1

2.1 OE

Description: This field is comprised of an equipment type and number for the ISLU, RISLU, or IDCU LCEN (Line Card Equipment Number) of the DSL. For a detailed description of this field, see the DSL OE field on the DSL form (5907 Record).

2.2 DSL CLS

Description: This field specifies the DSL class as a single user, multiple users under the AT&T custom protocol, or multiple users under the Bellcore Standard protocol. Its values are "PP" for custom Point-to-Point, "MP" for custom Multipoint, and "STD" for the Bellcore compliant Standard multipoint.

2.3 RSTR MP

Description: Is the Multipoint DSL restricted to a single active user ("Y" or "N")?

2.4 MTERM

Description: This field reports the maximum number of active users on the DSL, regardless of the quantity of active users indicated in the ACT USR fields on the DSLUSR forms associated with the DSL, that will simultaneously receive services. Users are handled on a "first plugged in", "first serviced" basis.

2.5 CKT TN or MLHG/TERM

Description: If the DSL user has a Circuit Telephone Number or is a member of a Circuit Multi-Line Hunt Group, the Circuit TN or the MLHG and terminal number are reported here.

2.6 DPKT TN or MLHG/TERM

Description: If the DSL user has a Packet Telephone Number or is a member of a Packet Multi-Line Hunt Group, the Packet TN or the MLHG and terminal number are reported here.

2.7 ODB TN or MLHG/TERM

Description: If the DSL user has an ODB (On Demand B-channel) Telephone Number or is a member of an ODB Multi-Line Hunt Group, the ODB TN or the MLHG and terminal number are reported here.

2.8 CKT MLHG TN

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Description: If the DSL user has a Circuit Multi-Line Hunt Group Telephone Number, it is reported here.

2.9 DPKT MLHG TN

Description: If the DSL user has a Packet Multi-Line Hunt Group Telephone Number, it is reported here.

2.10 ODB MLHG TN

Description: If the DSL user has an ODB Multi-Line Hunt Group Telephone Number, it is reported here.

2.11 ACT USR

Description: Is the user an active user on the DSL ("Y" or "N")?

2.12 PPB1 USR

Description: Is Permanent Packet B1 associated with this user ("Y" or "N")?

2.13 PPB2 USR

Description: Is Permanent Packet B2 associated with this user ("Y" or "N")?

2.14 AGI

Description: The AGI (Associated Group Indicator) designates the group to which a Demand B-channel user is assigned. When users of the same BRI are assigned the same AGI, they are treated as one logical Demand B-channel user. AGI applies only to Standard BRIs.

2.15 USPID

Description: The USPID (User Service Profile Identifier) is the provisioned part of the SPID, which identifies a terminal to the switch during initialization. It uniquely identifies the DSL user in the office.

2.16 SUPPL

Description: This field indicates whether or not supplemental information for this OE appears on the 5908A-2 Record. If SUPPL is blank, no data exists for the OE on the second record.

3. RECORD ENTRIES - 5908A-2

3.1 OE

Description: This field duplicates an OE number that appears on the 5908A-1 Record.

3.2 PPB1 TN

Description: If the DSL has a PPB1 (Permanent Packet B1) Telephone Number, the PPB1 TN is reported here.

3.3 PPB1 MLHG

Description: If the DSL is assigned a PPB1 Multi-Line Hunt Group, the MLHG number appears here and the member number appears in the PPB1 TERM column.

3.4 PPB1 TERM

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Description: If the DSL is assigned a PPB1 Multi-Line Hunt Group, the terminal number appears here and the MLHG appears in the PPB1 MLHG column.

3.5 PPB2 TN

Description: If the DSL has a PPB2 (Permanent Packet B2) Telephone Number, the PPB2 TN is reported here.

3.6 PPB2 MLHG

Description: If the DSL is assigned a PPB2 Multi-Line Hunt Group, the MLHG number appears here and the member number appears in the PPB2 TERM column.

3.7 PPB2 TERM

Description: If the DSL is assigned a PPB2 Multi-Line Hunt Group, the terminal number appears here and the MLHG appears in the PPB2 MLHG column.

4. RECORD ENTRIES - 5908B

4.1 USPID

Description: The USPID (User Service Profile Identifier) is the provisioned part of the SPID, which identifies a terminal to the switch during initialization. It uniquely identifies the DSL user in the office.

4.2 OE

Description: This field is comprised of an equipment type and number for the ISLU, RISLU, or IDCU LCEN (Line Card Equipment Number) of the DSL. For a detailed description of this field, see the DSL OE field on the DSL form (5907 Record).

4.3 DSL CLS

Description: This field specifies the DSL class as a single user, multiple users under the AT&T custom protocol, or multiple users under the Bellcore Standard protocol. Its values are "PP" for custom Point-to-Point, "MP" for custom Multipoint, and "STD" for the Bellcore compliant Standard multipoint.

4.4 RSTR MP

Description: Is the Multipoint DSL restricted to a single active user ("Y" or "N")?

4.5 MTERM

Description: This field reports the maximum number of active users on the DSL, regardless of the quantity of active users indicated in the ACT USR fields on the DSLUSR forms associated with the DSL, that will simultaneously receive services. Users are handled on a "first plugged in", "first serviced" basis.

4.6 CKT TN or MLHG/TERM

Description: If the DSL user has a Circuit Telephone Number or is a member of a Circuit Multi-Line Hunt Group, the Circuit TN or the MLHG and terminal number are reported here.

4.7 DPKT TN or MLHG/TERM

Description: If the DSL user has a Packet Telephone Number or is a member of a Packet Multi-Line Hunt Group, the Packet TN or the MLHG and terminal number are reported here.

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4.8 ODB TN or MLHG/TERM

Description: If the DSL user has an ODB (On Demand B-channel) Telephone Number or is a member of an ODB Multi-Line Hunt Group, the ODB TN or the MLHG and terminal number are reported here.

4.9 CKT MLHG TN

Description: If the DSL user has a Circuit Multi-Line Hunt Group Telephone Number, it is reported here.

4.10 DPKT MLHG TN

Description: If the DSL user has a Packet Multi-Line Hunt Group Telephone Number, it is reported here.

4.11 ODB MLHG TN

Description: If the DSL user has an ODB Multi-Line Hunt Group Telephone Number, it is reported here.

4.12 ACT USR

Description: Is the user an active user on the DSL ("Y" or "N")?

4.13 PPB1 USR

Description: Is Permanent Packet B1 associated with this user ("Y" or "N")?

4.14 PPB2 USR

Description: Is Permanent Packet B2 associated with this user ("Y" or "N")?

4.15 AGI

Description: The AGI (Associated Group Indicator) designates the group to which a Demand B-channel user is assigned. When users of the same BRI are assigned the same AGI, they are treated as one logical Demand B-channel user. AGI applies only to Standard BRIs.

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SEC. 1L: 5911A/B Record
REMOTE DIGITAL TEST ACCESS PORT/TN ASSIGNMENT RECORD - RDTAPORT

1. GENERAL

The 5911A and 5911B Records are available with 5E7 and later Software Releases. They are used to set up the data for the RPA (Remote Protocol Access) feature at the Access Switch. The Access Switch is defined as a switch that is maintained by a CSC (Customer Service Center). The CSC is a work center where protocol analysis is done.

RPA allows a craft at a CSC to troubleshoot a customer problem by setting up an RDTA (Remote Digital Test Access) connection on the customer's ISDN BRI (Basic Rate Interface) lines or PRI (Primary Rate Interface) lines, trunks, and packet trunks.

Note that RPA and RDTA can be used interchangeably. Division 2, Section 5F contains a full feature description for the RPA feature.

For each instance of the RDTAPORT form, two records are generated: the 5911A and the 5911B Record. Each record contains the same information; however, the 5911A Record is sorted by the RDTA OE field, and the 5911B is sorted by the CSC ID field.

If an RDTAPORT form is defined for an office, the fields RDTA DAS and RDTA SCRN IDX must be entered on the OFCOPT form (5509 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 22.17.

2. FORM AND RECORD ENTRIES

2.1 * RDTA OE

Description: This is a two segment field comprised of an equipment type and number.

Required Field.

Valid RDTA OE Entries

Entry	Definition
D	Software Release 5E9(2) and later: The RDTA OE is associated with a Digital Trunk Number (DEN) for PRI (Private Rate Interface).
E	Software Release 5E12 and later: The RDTA OE is associated with an AIU ISDN U-Interface (Access Interface Unit).
I	Software Release 5E9(2) and later: The RDTA OE is for a Pseudo BRI associated with (R)ISLU Line Card Equipment Number.
K	Software Release 5E10 and later: The RDTA OE is for a Pseudo BRI associated with ISLU2 Line Card Equipment Number and the number must be an 11-digit equipment number.
N	Software Release 5E10 and later: The RDTA OE is associated with a Networking Equipment Number (NEN).

If RDTA OE is set to "D", the equipment number must consist of:

OE Number, TYPE "D"

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Line & Trunk Unit	DLTU	X	0 - 5
Digital Facility Interface	DFI	XX	01 - 10
D Channel	DCHAN	XX	01 - 24
			25 - 48

If RDTA OE is "E", this AIU Equipment Number must consists of:

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OE Number, TYPE "E"			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Access Interface Unit	AIU	XXX	000 - 127
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 35

Data Rules:

If RDTA OE is set to "I", the equipment number must consist of:

OE Number, TYPE "I"			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Integrated Services Line Unit	ISLU	X	0 - 7
Line Group Controller	LGC	XX	00 - 15
Line Card	LC	XX	00 - 31

If RDTA OE is set to "K", the equipment number must consist of:

OE Number, TYPE "K" - 5E10 and later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Integrated Services Line Unit	ISLU	XX	00 - 42
Line Group Controller	LGC	XX	00 - 15
Line Board	LBD	X	0 - 7
Line Circuit	LCKT	XX	00 - 07

IF RDTA OE is set to "N", the equipment number must consist of:

OE Number, TYPE "N" - 5E10 - 5E12			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Digital Networking Unit - SONET	DNUS	X	0 - 7
Data Group	DG	X	0 - 1
Synchronous Transport Signal number	STS	X	0 - 5
Virtual Tributary	VT	XX	01 - 28
Digital Signal Level 0 Channel	DS0	XX	01 - 24

OE Number, TYPE "N" - 5E13 and later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
SONET Termination Equipment	STE	X	1-6
Synchronous Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1-7
Virtual Tributary Member	VTM	X	1-4
Digital Signal Level 0 channel	DS0	XX	01-24

The Pseudo BRI OE must be defined on an ISLULC form (5942 Record) with an "O" in the EQST field and a TYPE of "TLC" "ULC", "PULC" or "AULC".

The Pseudo BRI OE must be unique and must not appear on another RDTAPORT form, a DSL form (5907 Record), an OSPSDSL form (5411 Record) or a DSLAP form (5962 Record).

For 5E9(2) and earlier, if RDTA OE TYPE is "D" then PRI TN must be entered. Also, D CHAN TN, B1 CHAN TN and B2 CHAN TN must not be entered.

If RDTA OE TYPE is "I", "K", or "E", then D CHAN TN, B1 CHAN TN and B2 CHAN TN must all be entered and PRI TN must be blank.

The PRI OE number must be defined on a TRUNK form (5204 Record) with the field BRCS set to "N". The corresponding TKGRP form (5202 Record) must have the field RDTA GRP set to "Y".

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For 5E10 and later, when RDTA OE TYPE is "D", the last two digits of RDTA OE cannot be 24 or 48.

For 5E10 and later, when RDTA OE TYPE is "N", the last two digits of RDTA OE cannot be 24.

For 5E10 and later, when RDTA OE TYPE is "D" or "N", D CHAN TN, B1 CHAN TN and B2 CHAN TN cannot be entered.

For 5E10 and later, when RDTA OE TYPE is "D" or "N", PRI TN must be entered.

For 5E10 and later, when RDTAPORT forms are defined with RDTA OE TYPE set to "D" or "N", the RDTA OE NUMBER must be defined on a TRUNK form as either DEN or NEN respectively. The corresponding TKGRP form must have RDTA GRP set to "Y".

For 5E12 and later, when RDTA OE TYPE is "E", an EQAIUP form must be defined as SM/AIU/APPL PACK NUM with TYPE set to "AIULP" or "AIURPLP.

2.2 # CSC ID

Description: The Customer Service Center ID where the RPA test equipment is located.

Required Field.
Valid Entries: 1 - 8 characters

2.3 PAIR

Description: Enter the paired number for an RPA facility. Pairing allows the craft to add distinct paired numbers to sets of BRIs or PRIs for easy identification on printed office records. From 1 to 24 pairs may be defined. No entry means that the output facility does not have a paired number assigned.
Valid Entries: 1 - 24

PSEUDO BRI

2.4 D CHAN TN

Description: Enter the TN associated with the D channel of the Pseudo BRI port. The TN must be unique within the 5ESS Switch.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits of the D CHAN TN must be defined in the OFFICE CODE field on the NOC form (5501 Record).

For 5E12 and later, if the first 3 digits of the 7-digit D CHAN TNs on the RDTAPORT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit D CHAN TN(s) must be entered as a 10-digit TN(s).

For 5E12 and later, the D CHAN TN, B1 CHAN TN, B2 CHAN TN, and PRI TN on the RDTAPORT form must be unique.

For 5E12 and later, 10-digit D CHAN TNs, B1 CHAN TNs, B2 CHAN TNs and/or PRI TNs defined on a RDTAPORT form must have an NPA/NXX (the first six digits of the TN) that is defined as an NPA/OFFICE CODE on a NOC form.

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For 5E12 and later, the 7-digit D CHAN TNs, B1 CHAN TNs, B2 CHAN TNs and/or PRI TNs defined on a RDTAPORT form must have an NXX (the first three digits of the TN) that is an OFFICE CODE defined on a NOC form.

2.5 B1 CHAN TN

Description: The TN associated with the B1 channel of the Pseudo BRI port. The TN must be unique within the 5ESS Switch.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits of the B1 CHAN TN must be defined in the OFFICE CODE field on a NOC form.

For 5E12 and later, if the first 3 digits of the 7-digit B1 CHAN TNs on the RDTAPORT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit B1 CHAN TN(s) must be entered as a 10-digit TN(s).

2.6 B2 CHAN TN

Description: The TN associated with the B2 channel of the Pseudo BRI port. The TN must be unique within the 5ESS Switch.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits of the B2 CHAN TN must be defined in the OFFICE CODE field on a NOC form.

For 5E12 and later, if the first 3 digits of the 7-digit B2 CHAN TNs on the RDTAPORT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, the 7-digit B2 CHAN TN(s) must be entered as a 10-digit TN(s).

PRI

2.7 PRI TN

Description: The TN associated with the Primary Rate Interface B channel port. The TN must be unique within the 5ESS Switch.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

The first three digits of the PRI TN must be defined in the OFFICE CODE field on a NOC form.

For 5E12 and later, if the first 3 digits of the 7-digit PRI TNs on the RDTAPORT form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE

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CODE, the 7-digit PRI TN(s) must be entered as a 10-digit TN(s).

```
rdtaport                    5ESS SWITCH          _
(5911-A/B)              OFFICE DATA ADMINISTRATION
            REMOTE DIGITAL TEST ACCESS PORT/TN ASSIGNMENT

*1. RDTA OE _ ____________
#4. CSC ID  _________
 5. PAIR    __

       PSEUDO BRI                    PRI
 6. D CHAN TN  _______          9. PRI TN _______
 7. B1 CHAN TN _______
 8. B2 CHAN TN _______
```

Figure 1 SAMPLE RDTAPORT FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
rdtaport                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5911-A/B)      REMOTE DIGITAL TEST ACCESS PORT/TN ASSIGNMENT

*1. RDTA OE _ ____________          PRI
#4. CSC ID  _________       9. PRI TN ___________
 5. PAIR    __

       PSEUDO BRI
 6. D CHAN TN  ___________
 7. B1 CHAN TN ___________
 8. B2 CHAN TN ___________
```

Figure 2 SAMPLE RDTAPORT FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 1M: 5910A and 5910B RECORD
REMOTE DIGITAL TEST ACCESS TELEPHONE NUMBER - RDTATN

1. GENERAL

The 5910A and the 5910B records are available with the 5E7 and later Software Releases. They are used as part of the RPA (Remote Protocol Access) feature to allow an operating company at a Remote Switch to document the TN (Telephone Number) of a Protocol Analyzer at an Access Switch. The Access Switch is defined as a switch that maintains the connections to the protocol analyzer equipment is the CSC (Customer Service Center). The Remote Switch is a switch that does not maintain physical RPA connections to the CSC. The CSC is a work center where protocol analysis is done.

The RPA feature, also referred to as RDTA (Remote Digital Test Access), provides a craft at a CSC with the ability to troubleshoot a customer problem by a setting up an RDTA connection on the customer's ISDN facilities. For more information, refer to the RPA Feature Description in Division 2, Section 5F.

For each RDTATN form instance, two office records are generated: 5910A and 5910B. The 5910A Record contains the TN, CSC ID, CHANNEL, and PAIR fields. The record is sorted by TN. The 5910B Record contains the same information but is sorted by the CSC ID.

1.1 Recent Change View

The corresponding Recent Change view for this form is 22.18.

2. FORM AND RECORD ENTRIES

2.1 * TN

Description: Enter the TN associated with a particular Pseudo-BRI or PRI B-channel port that has been defined for the RDTA capability.
Valid Entries: A 7-, 10- or 15-digit TN

Data Rules:

If the value entered is a 10-digit TN, it must not match any combinations of NPA and 7-digit TNs entered on the RDTAPORT form (5911-A/B Record).

2.2 # CSC ID

Description: Enter the Customer Service Center ID where protocol analysis is done.

Required Field.
Valid Entries: 1 - 8 characters

2.3 # CHANNEL

Description: Enter the channel associated with the TN. If the TN is associated with a Pseudo-BRI D channel, the value must be 0. If the TN is associated with a Pseudo-BRI B1 the value must be 1. If it is associated with a Pseudo-BRI B2 channel, the value must be 2.

If the TN is associated with a PRI B channel then the value is 1 to 23 depending on the PRI B channel.

Required Field.
Valid Entries: 0 - 23

2.4 PAIR

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Description: Enter the paired number for an RPA output facility. Pairing allows the craft to add distinct paired numbers to sets of Pseudo-BRI or PRI pairs for easy identification on printed office records. No entry indicates that the craft has chosen not to assign a paired number to the facility.
Valid Entries: 1 - 24

---

rdtatn 5ESS Switch _
(5910-A/B) OFFICE DATA ADMINISTRATION
REMOTE DIGITAL TEST ACCESS TN/REMARKS

*1. TN 120244902024103
#2. CSC ID 98DKE
#3. CHANNEL 20
4. PAIR 4

Figure 1 SAMPLE RDTATN FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 1N: 5915 RECORD
ODB CUT THROUGH TS ALLOCATION - ODBCTUR

1. GENERAL

The On-Demand B-Channel Cut Through Time Slot Allocation form is available with the 5E12 and later Software Releases. It supports the TR-303 RDT (Remote Digital Terminal) on the DNU-S (Digital Networking Unit - Synchronous Optical Network) feature. It is used to reserve cut through time slots for DSL (Digital Subscriber Line) users with the On-Demand B-Channel Packet Switching feature.

Reserved time slots are not initially allocated to the user. Instead, the time slots become part of a cut through time slot "pool" to be accessed later by a DSL user with the ODB feature on the same SM and DNU-S. Prior to reserving cut through time slots, the PSU must be defined on the EQPSU form (5741 Record).

1.1 Recent Change View

The Recent Change/Verify view for this form is 23.19.

1.2 * SM

Description: Enter the SM (Switching Module) number on which the On-demand B-Channel service resides.

Required Field.
Valid Entries: 1 - 192

Data Rules:

If an ODB ISCN is entered on the DSL, the SM entered on this view must equal the first three digits of the Office Equipment number entered on the DSL form. The SM number entered on this view must be defined on the EQIM form (5700 Record) with EQSTAT set to "O".

1.3 * PSU

Description: Enter the Packet Switch Unit number.

Required Field.
Valid Entries: 0

For 5E16 and later, PSU must be "0".

ODB TS LIST

The following fields (Section 1.5 - Section 1.7) provide information for defining the time slot list.

1.4 PSU SHELF

Description: Enter the Packet Switch Shelf number.
Valid Entries: 0 - 4

Data Rules:

PSU SHELF entries must be unique.

If an ODB ISCN number is entered on the DSL form, the PSU SHELF number on this form should equal the first digit of the ODB ISCN number.

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If PSU SHELF is entered, RESERVED TS must be entered.

1.5 RESERVED TS

Description: Enter the number of time slots which have been assigned to the associated cut through peripheral.
Valid Entries: 0 - 768

Data Rules:

If RESERVED TS is entered, SHELF must be entered.

At least one RESERVED TS and PSU SHELF value must be entered.

1.6 AVAILABLE TS

Description: This field defines the maximum number of remaining time slots which may be assigned out of the cut through time slot "pool".
Valid Entries: 0 - 768

1.7 ODB USER

Description: This is a Recent Change only field. It specifies the number of On-Demand B time slots being used on a per shelf basis.

```
                    5ESS SWITCH                _
odbctur           OFFICE DATA ADMINISTRATION
(5915)          ODB CUT THROUGH TS ALLOCATION

*1. SM ___
*2. PSU 0            3. ODB TS LIST

        PSU  RESERVED    AVAILABLE    ODB
    ROW  SHELF   TS        TS      USER
     1     _    ___
     2     _    ___
     3     _    ___
     4     _    ___
     5     _    ___
```

Figure 1 SAMPLE ODBCTUR FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3: PACKET SWITCHING FORMS

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SEC. 3A: 5920 RECORD
PACKET SWITCHING INTER SM
NAIL-UP FORM - PSISM

1. GENERAL

The 5920 Record is applicable for 5E3 and later Software Releases.The PSISM form is used to define a dedicated path from an ISCN (Integrated Services Channel Number) in one SM (Switching Module) to an ISCN in another SM.

The two ISCNs have a master and mate (slave) relationship. The master controls the state of the path and initiates the vast majority of the work. The mate can detect problems, but can only report the problems to the master.

It is strongly suggested that every effort be made to balance the quantity of masters on each ISDN SM. Though not as critical, it is advisable to balance the quantity of mates on each ISDN SM.

An individual ISDN SM can support a maximum of 160 nail-up endpoints (master or mate). There cannot be more than 32 links between a pair of ISDN SMs.

The combination of SM and DLT or the combination of MATE SM and MATE DLT must be unique within the 5ESS Switch.

1.1 Recent Change View

The corresponding Recent Change view for this form is 22.13.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * SM

Description: Enter a valid Switching Module number. This field refers to the MASTER.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM and the MATE SM cannot be equal.

For 5E9(2) and later, each value of SM and MATE SM entered on the PSISM form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports Packet Switching. For the CONFIGURATION that supports Packet Switching, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

The value entered in this field must appear in the SWITCHING MODULE field on an EQPSU form (5741 Record).

The following data rules are not executed on an SM-2000, because provisioning of nailed-up time slots is not required on an SM-2000. Each DI (Data Interface) in a SM can have a maximum of 256 nailed-up timeslots reserved for the application in the following table. These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the following applications.

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Note that a D channel only takes a quarter of a time slot.

In addition, onn a PSU1 , each Data Interface in a SM can have a maximum of 128 nailed-up time slots reserved for the following applications:

Data Interface for Nailed-up Timeslots

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms (CMDA application).
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3 digits of LCEN match SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3 digits of LCEN (on the DSLAP or OSPSDSL form) or OE (on the DSL or MISLINK form) match SM on an EQRISLU form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms (CMDA application).
X.25	Defined on the XAT forms.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

These time slots can be reserved by entering the rows RPTSS0 to RPTSS7 on the EQPSU form. The quantity of time slots reserved (i.e. the number entered) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D channel only takes a quarter of a time slot.

Also, the reserved time slots must be entered such that for any given SHELF, (defined by the first digit of ISCN field or by the SHELF field on the MISLINK form), the time slots assigned to that SHELF must not be duplicated in the same vertical (column) position if they appear in more than one row (RPTSS0 through RPTSS7).

2.3 * DLT

Description: Enter a valid Data Link Terminal number. The DLT (Data Link Terminal) is a logical port that has no relationship to a physical port. An ISDN SM can support 160 nail-up endpoints, and the DLT is used as an identifier for each logical port. This field refers to the MASTER.

Required Field.
Valid Entries: 1 - 160

2.4 ISCN

Description: Enter a valid Integrated Services Channel Number.

Required Field.
Valid Entries: a 6-digit number in the ISCN format

ISCN (INTEGRATED SERVICES CHANNEL NUMBER)

Equipment		Format	Valid Entries
Shelf	-	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127 (See note below.)

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NOTE: For 5E9(1) and later, the valid Channel entries for a PH2 are 000 - 012.

Data Rules:

The SHELF, PSU protocol handler shelf number, must correspond to a shelf on an EQPSU form which has a SHLF SIDE 0/1 EQST of 0.

The CHL is the PSU protocol handler number on the shelf. Each DSL GROUP corresponds to a PROTOCOL HANDLER assigned to the PSU SHELF on an EQPSUPH form (5742 Record) with the SWITCHING MODULE equal to this SM and the PSU SHELF equal to the PSU protocol handler shelf number.

The CHL is the PSU protocol handler member number within the protocol handler. For 5E4(2) and later, the CHL must be a multiple of 4.

The combination of SM and the last three digits of the ISCN (the CHL) or the combination of MATE SM and the last three digits of MATE ISCN must be unique within the 5ESS Switch. The combination may not be duplicated on any

- AMLBDSL form (5447 Record),
- DSL form (5900 Record),
- DSLAP form (5963 Record),
- OSPSDSL form (5411 Record),
- another PSISM form (5920 Record)
- QPHPIPE form (5828 Record) or,
- TRUNK form (5204 Record).

The combination of SM and ISCN or the combination of MATE SM and MATE ISCN may not be duplicated on any of the forms listed above.

PSISM forms cannot have combinations of ISCN (or MATE ISCN) SHELF and CHL GRP entries that duplicate those for the same SM on AMLBDSL, DSL, DSLAP, DSLUSR, ODBRES, OSPSDSL, QPHPIPE, RTERM, or XAT forms, or on TRUNK forms where TRKCLS is "EDSL", "IFTERM", or "IFOPER".

The Protocol Handlers specified on the PSISM forms (combination of SM, with first 3 digits of the ISCN and MATE SM with the first 3 digits of the MATE ISCN) cannot be mixed with Protocol Handlers assigned on other forms. PSISM forms cannot have common SHELF and CHL GRP with the following forms :

- CCLNK
- DSLUSR
- MDLNK
- MISLINK
- PSULNK
- TRUNK
- XAT

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES

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- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

If the SM and three left-most digits of ISCN assigned on this form have been defined on a PSUGP form as SM and PSU SHELF and GRP respectively, then the corresponding value of PH TYPE must not be:

"PHV1" or "PHV2" for 5E10

"PHV1", "PHV2", or "PHV3" for 5E11

"PHV1", "PHV2", "PHV3", "PHV4", "PHV5", "PHV6", or "VIRT" for 5E18

on the PSUGP form.

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

2.5 MASTER

Description: Is the SM controller of the path? This field defaults to "Y" and cannot be changed.
Default: Y
Valid Entries: Y

2.6 MATE SM

Description: Enter a valid Mate Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM and MATE SM cannot be equal.

For 5E9(2) and later, each value of SM and MATE SM entered on the PSISM form must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports Packet Switching. For the CONFIGURATION that supports Packet Switching, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

The value entered in this field must appear in the SWITCHING MODULE field on an EQPSU form (5741 Record).

2.7 MATE DLT

Description: Enter a valid Mate Data Link Terminal number. The DLT (Data Link Terminal) is a logical port that has no relationship to a physical port. An ISDN SM can support 160 nail-up endpoints, and the DLT is used as an identifier for each logical port.

Required Field.
Valid Entries: 1 - 160

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2.8 MATE ISCN

Description: Enter a valid Mate Integrated Services Channel Number.

Required Field.
Valid Entries: a 6-digit number in the ISCN format

ISCN (INTEGRATED SERVICES CHANNEL NUMBER)			
Equipment		**Format**	**Valid Entries**
Shelf	-	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127 (See note below.)

NOTE: For 5E9(1) and later, the valid Channel entries for a PH2 are 000 - 012.

Data Rules:

Refer to the Data Rules for the ISCN field.

---

psism 5ESS Switch
(5920) OFFICE DATA ADMINISTRATION
PACKET SWITCHING INTER SM NAIL-UP

* 1. SM 001
* 2. DLT 005
  3. ISCN 400024
  4. MASTER Y

  5. MATE SM 004
  6. MATE DLT 001
  7. MATE ISCN 010120

Figure 1 SAMPLE PSISM FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3B: 5921 RECORD
PACKET SWITCHING DNIC TO RI ASSIGNMENT FORM - PSDNICRI

1. GENERAL

The 5921 Record is applicable to 5E3 and later Software Releases. The PSDNICRI form is used to assign a Route Index that routes to a Packet Switching trunk, and then outside the 5ESS Switch to another Packet Network and its associated Data Network Identification Code.

1.1 Recent Change View

The corresponding Recent Change View for this form is 10.35.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and the Office Name on each record.

2.2 * DNIC

Description: Enter a valid Packet Switching Data Network ID Code.
Valid Entries:
- For 5E3 and 5E4(2): 0 - 9999
- For 5E5: 1111 - 1114 and 2000 - 9999
- For 5E6 and later: 0001-9999

2.3 ROUTE INDEX

Description: Enter a valid Route Index.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

The Route Index must be defined on the RTIDX form (5303 Record) and that Route Index must point to a Trunk Group with a HUNT TYPE of "PSUCD".

---

psdnicri 5ESS OFFICE DATA ADMINISTRATION
(5921) PACKET SWITCHING
DNIC TO RI ASSIGNMENT FORM

* 1. DNIC 0001
2. ROUTE INDEX 0005

Figure 1 SAMPLE PSDNICRI FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 3C: 5922 RECORD
PACKET SWITCHING
BILLING RATE PERIODS FORM - PSRATE

1. GENERAL

The 5922 Record is available with 5E3 and later Software Releases. It is used to define the billing rates for Packet Switching. The input form provides billing rate data for each day of the week and for holidays. The billing rate data is specified in one-hour increments.

For 5E3 and 5E4(2), an SM with Packet Switching capabilities is specified on the EQPSU form (5741-1/2 Record). For 5E5 and later, the EQPSUPH form (5742 Record) defines the Packet Switching Protocol Handlers equipped in a 5ESS Switch. If the EQST field does not have at least one entry of "O" (Operational) on the EQPSUPH form, then the PSRATE form must not be entered.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * DAY

Description: Enter holiday or the day of the week. If this office applies the Packet Switching feature, this form must be completed for all eight days.

Required Field.

Valid DAY Entries

Entry	Definition
MON	Monday
TUE	Tuesday
WED	Wednesday
THU	Thursday
FRI	Friday
SAT	Saturday
SUN	Sunday
HOL	Holiday

2.3 TIME OF DAY

Description: The 24 hours of the day, in one-hour increments, are preprinted on the PSRATE input form. The Billing Rate must be entered for each hour.

Required Field.
Default: 1
Valid Entries:

Valid TIME OF DAY Entries

Entry	Definition
1	Billing rate 1
2	Billing rate 2
3	Billing rate 3
4	Billing rate 4

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psrate 5ESS OFFICE DATA ADMINISTRATION _
(5922) PACKET SWITCHING BILLING RATE PERIODS FORM

* 1. DAY MON

2. 00:00-00:59 1	10. 08:00-08:59 4	18. 16:00-16:59 4
3. 01:00-01:59 1	11. 09:00-09:59 4	19. 17:00-17:59 3
4. 02:00-02:59 1	12. 10:00-10:59 4	20. 18:00-18:59 3
5. 03:00-03:59 1	13. 11:00-11:59 4	21. 19:00-19:59 3
6. 04:00-04:59 1	14. 12:00-12:59 4	22. 20:00-20:59 2
7. 05:00-05:59 1	15. 13:00-13:59 4	23. 21:00-21:59 2
8. 06:00-06:59 1	16. 14:00-14:59 4	24. 22:00-22:59 1
9. 07:00-07:59 3	17. 15:00-15:59 4	25. 23:00-23:59 1

Figure 1 SAMPLE PSRATE FORM 5E3 AND LATER SOFTWARE RELEASES

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SEC. 3D: 5923 RECORD
PACKET SWITCHING
PERMANENT VIRTUAL CIRCUIT ASSIGNMENT FORM - PSPVC

1. GENERAL

The 5923 Record is applicable to 5E3 and later Software Releases. The PSPVC form is used to assign PVC (Permanent Virtual Circuit) Logical Channel Numbers to DSLs (Digital Subscriber Lines) that have Packet Switching. The sending and receiving parties must be set up in an identical manner.

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 (*) PKT TN

Description: Enter a valid Packet Switching Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

Either a PKT TN or a PKT MLHG/TERM must be entered.

For 5E5 and later Software Releases, this Packet Switching TN must be defined on a DSLUSR form (5908 Record) in the DPKT TN field or defined on a DSL form (5907 Record) in the PPB1 TN or PPB2 TN field. The value entered in the LCN field must not be greater than the value entered in the H PVC LCN field on the DSL or DSLUSR form.

For 5E12 and later, PKT TN/LCN combinations on different PSPVC forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit PKT TNs on the PSPVC form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit PKT TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 (*) PKT MLHG

Description: Enter a valid Packet Switching Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

Either a PKT TN or a PKT MLHG/TERM must be entered.

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For 5E5 and later Software Releases, this PKT MLHG/TERM must be defined on one of the following forms:

- DSLUSR form in the DPKT MLHG/TERM field. The value entered in the LCN field must not be greater than the value entered in the H PVC LCN field on the DSLUSR form.
- DSL form in the PPB1 MLHG/TERM or PPB2 MLHG/TERM field. The value entered in the LCN field must not be greater than the value entered in the H PVC LCN field on the DSL form.
- OSPSDSL form (5411 Record) in the DSL NAME ID/DSL NAME RL field with a SERVICE CLASS of "XDB". The value entered in the LCN field must not be greater than the value entered in the HIGH PVC LCN field on the associated AMLBDSL form (5447 Record).

2.4 (*) PKT TERM

Description: Enter a valid Packet Switching Multi-Line Hunt Group Terminal (Member) number.
Valid Entries: 1 - 2015

Data Rules:

If this field is entered, the associated PKT MLHG field must be entered.

2.5 * LCN

Description: Enter a valid packet switching Logical Channel Number.

Required Field.
Valid Entries: 1 - 127

2.6 SEND PKT SIZE

Description: Enter the Send Packet Size which is the maximum number of bytes of data in a packet that can be sent.

Required Field.
Default: 128
Valid Entries: 128 or 256 (bytes)

2.7 RCV PKT SIZE

Description: Enter the Receive Packet Size which is the maximum number of bytes of data in a packet that can be received.

Required Field.
Default: 128
Valid Entries: 128 or 256 (bytes)

2.8 SEND WINDOW SIZE

Description: Enter the number of data packets that the CPE device can have unacknowledged, on a sending basis, at any time.

Required Field.
Default: 2
Valid Entries:
- 5E8 and earlier: 2 - 3
- 5E9(1) and later: 1 - 7

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2.9 RCV WINDOW SIZE

Description: Enter the number of data packets that the CPE device can have unacknowledged, on a receiving basis, at any time.

Required Field.
Default: 2
Valid Entries:
- 5E8 and earlier: 2 or 3
- 5E9(1) and later: 1 - 7

2.10 # CALL IND

Description: Enter a valid PVC Logical Channel Number call indicator.

Required Field.

Valid CALL IND Entries

Entry	Definition
CALLING	Calling indicator.
CALLED	Called indicator.

Data Rules:

For 5E13 and earlier, when CALL IND is "CALLING", then REMOTE TN must be entered.

2.11 BILLABLE

Description: Is the logical channel number billable?

Required Field.
Default: Y
Valid Entries: Y, N

2.12 # FCL TYPE

Description: Enter a valid destination facility type. The FCL TYPE (Facility Type) indicates what the interface is on the far end of a PVC (Permanent Virtual Circuit). The PVC is supported for Packet Switching with the layer 3 protocol being either X.25, X.75 or X.75P, the later two enumerations being for packet trunks.

Required Field.

Valid FCL TYPE Entries

Entry	Definition
X25	defines the interface on the far end of the PVC to be an X.25 line
X75	defines the interface on the far end of the PVC to be an X.75 trunk
X75P	defines the interface on the far end of the PVC to be an X.75P trunk
INET	For 5E14 and later. INET stands for Internet Protocol which is the TCP/IP protocol stack. INET - defines the interface on the far end of the PVC to be an interface to TCP/IP. This interface is internal to the switch and is not associated with a physical external interface.

Data Rules:

When FCL TYPE is "INET" or "X25", REMOTE DNIC and LINK ID must not be entered.

When FCL TYPE is not "INET" or "X25", REMOTE DNIC and LINK ID must be entered.

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When FCL TYPE is "INET" or "X75", REMOTE TN must not be entered.

When FCL TYPE is not "INET", REMOTE LCN must be entered.

When FCL TYPE is "INET":

- CALL IND must be "CALLING".
- SEND PKT SIZE must be 256.
- RCV PKT SIZE must be 256.
- SEND WINDOW SIZE must be 7.
- RCV WINDOW SIZE must be 7.

For 5E14 and later, when the FCL TYPE on the PSPVC form is set to "INET", there must exist a matching IPINTF form (case 1) where PKT TN equals PKT TN and LCN equals LCN, or a matching IPINTF form (case 2) where PKT MLHG/PKT TERM equals PKT MLHG/PKT MEMB and LCN equals LCN. In either case 1 or case 2 above, the SEND PKT SIZE on the PSPVC form must be greater than or equal to the MTU SIZE on the corresponding IPINTF form.

2.13 LINK ID

Description: Enter the gateway Link ID. When the FCL TYPE is X75 or X75P, the LINK ID points to the Remote Trunk Gateway.
Valid Entries: 1 - 255

2.14 REMOTE LCN

Description: Enter a valid Remote packet switching Logical Channel Number.
Valid Entries: 1 - 4095

2.15 REMOTE TN

Description: Enter a valid Remote Directory Number in NPANXXXXXX format.
Valid Entries: 10 digits

2.16 REMOTE DNIC

Description: Enter a valid Packet Switching Data Network ID Code.

The DESTINATION PSN will be used for routing. The REMOTE DNIC may be used at the far end of the PVC for billing purposes.
Valid Entries: 1111 - 1114 and 2000 - 9999

2.17 DESTINATION PSN

Description: Enter the Destination Packet Switch Number. The PSN entered must be a Packet Switch Number of a 5ESS Switch that resides in the same IP (Internal Protocol) subnetwork as this switch. The PSN entered will be the switch that provides the gateway trunk group which is either:

- the PSN of the 5ESS Switch which connects the IP subnetwork to the PPSN via an X.75' trunk group, or
- the PSN of a 5ESS Switch that is connected to a 1PSS which connects to the PPSN.

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Software Release: 5E5 and later
Valid Entries: 1 - 255

Data Rules:

The PSN entered must be defined on the RTIDX form in the DESTINATION PSN field.

2.18 INTRA GROUP

Description: The INTRA GROUP field applies to the Packet Switching Data Business Group Service feature. This feature enables a customer to set up and administer intra-switch PBGs (Packet Business Groups) by assigning a PBG number to each X.25 termination to distinguish between intra-group calls and other calls on the AMA billing record. An MLHG (Multi-Line Hunt Group) will be assigned to a PBG by associating a PBG number with the MLHG TN.

An entry in this field indicates whether or not the PVC is considered intra-group for billing purposes.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

DEPENDENCIES BETWEEN THE FCL TYPE FIELD AND OTHER FIELDS

	FCL TYPE			
	X25	**X75**	**X75P**	**INET**
CALL IND	Required	Required	Required	CALLING
LINK ID	Prohibited	Required	Required	Prohibited
REMOTE LCN	Optional for 5E6 and earlier. Required for 5E7 and later.	Required	Optional for 5E6 and earlier. Required for 5E7 and later.	Prohibited
REMOTE TN	Required	Prohibited	Required	Prohibited
REMOTE DNIC	Prohibited	Required	Required	Prohibited
DESTINATION PSN	Prohibited	Required	Required	Prohibited

Figure 1 DEPENDENCIES BETWEEN THE FCL TYPE FIELD AND OTHER FIELDS

```
pspvc                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5923)      PACKET SWITCHING PERMANENT VIRTUAL CIRCUIT ASSIGNMENT

(*)1. PKT TN  _____________    #11. FCL TYPE ____
(*)2. PKT MLHG ____            12. LINK ID  ___
(*)3. PKT TERM ____
 *4. LCN     ___               13. REMOTE LCN  ____
                    14. REMOTE TN  ___________
  5. SEND PKT SIZE   128      15. REMOTE DNIC ____
  6. RCV PKT SIZE    128
  7. SEND WINDOW SIZE 2        16. DESTINATION PSN ___
  8. RCV WINDOW SIZE  2        17. INTRA GROUP     N

 #9. CALL IND _______
 10. BILLABLE Y
```

Figure 2 SAMPLE PSPVC FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3E: 5924/5924A RECORDS
PACKET SWITCHING CLOSED USER GROUP
ASSIGNMENT FORM - PSCUG

1. GENERAL

The 5924/5924A Record is applicable to 5E3 and later Software Releases. The PSCUG form is used to assign DSLs (Digital Subscriber Lines), that have Packet Switching, to a Closed User Group.

There are two records associated with this form. The 5924 Record is arranged in the format of the ODA input form. The 5924A Record is arranged by DNIC/ICN and is an output record only.

1.1 Recent Change View

The corresponding Recent Change view for this form is 23.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PKT TN

Description: Enter a valid Packet Switching Telephone Number. Either a PKT TN or a PKT MLHG/TERM must be entered.

Required Field
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

For 5E5 and later Software Releases, this Packet Switching TN must be defined on a DSLUSR form in the DPKT TN or ODB TN field or defined on a DSL form in the PPB1 TN or PPB2 TN field.

For 5E7 and later, this Packet Switching TN must be defined on a DSLUSR form in the DPKT TN or ODB TN field, or, defined on a DSL form in the PPB1 TN or PPB2 TN field, or, defined on the XAT form (5924 Record) in the PKT TN field.

For 5E10 and later, when PKT TN(s) on the PSCUG form match PKT TN(s) on the XAT form(s) the OE must be specified.

For 5E12 and later, PKT TN/CUG IDX combinations on different PSCUG forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit PKT TNs on the PSCUG form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit PKT TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * PKT MLHG

Description: Enter a valid Packet Switching Multi-Line Hunt Group Number. Either a PKT TN or a PKT MLHG/TERM must be entered.

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Required Field
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

For 5E5 and later Software Releases, this PKT MLHG/TERM must be defined on a DSLUSR form in the DPKT MLHG/TERM field or on a DSL form in the PPB1 MLHG/TERM or PPB2 MLHG/TERM field.

2.4 * PKT TERM

Description: Enter a valid Packet Switching Multi-Line Hunt Terminal Number.

Required Field
Valid Entries: 1 - 2015

Data Rules:

If a Packet Switching TERM is entered, the associated Packet Switching MLHG field must be entered.

2.5 * CUG IDX

Description: Enter a valid Preferential Customer Closed User Group Index.

Required Field.
Valid Entries: 0 - 99

Data Rules:

For each unique PKT TN, as the CUG IDX varies from 0 to 99, the combination of DNIC and ICN values should be unique.

CLOSED USER GROUP

2.6 DNIC

Description: Enter a valid Packet Switching Data Network ID Code.

Required Field.
Valid Entries: 1111 - 1114 and 2000 - 9999

2.7 ICN

Description: Enter a valid International Closed User Group Number.

Required Field.
Valid Entries: 0 - 65535

---

pscug 5ESS Switch _
(5924,5924A) OFFICE DATA ADMINISTRATION
PACKET SWITCHING CLOSED USER GROUP ASSIGNMENT

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```
* 1. PKT TN   _______
* 2. PKT MLHG 0005
* 3. PKT TERM 0006
* 4. CUG IDX  02

    CLOSED USER GROUP
  5. DNIC     1111
  6. ICN      00001
```

Figure 1 SAMPLE PSCUG FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
pscug                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5924,5924A)    PACKET SWITCHING CLOSED USER GROUP ASSIGNMENT

(*)1. PKT TN   ___________
(*)2. PKT MLHG ____
(*)3. PKT TERM ____
  *4. CUG IDX  __

CLOSED USER GROUP
  #5. DNIC ____
  #6. ICN  _____
```

Figure 2 SAMPLE PSCUG FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3F: 5925/5925A RECORD PACKET SWITCHING ISDN MODEM TN TO DSL ASSIGNMENT FORM - PSMTN

1. GENERAL

The 5925 and 5925A Records are applicable to 5E4(2) and later Software Releases. The PSMTN form is used to assign Modem Pool access TNs to DSLs (Digital Subscriber Lines) that have Packet Switching.

Two records are associated with this form. The 5925 Record is arranged in the format of the ODA input form. The 5925A Record is arranged by ACCESS TN and is an output record only.

For more information on ISDN Modem Pools see Division 2, Section 1AL, "ISDN Closed User Groups and Modem Pooling."

1.1 Recent Change View

The corresponding Recent Change view for this form is 23.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 (*) PKT TN

Description: Enter a valid Packet Switching Telephone Number.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

Either a PKT TN or a PKT MLHG/TERM must be entered.

For 5E4(2), this Packet Switching TN must be defined as a PKT TN on a DSL form (5900 Record) or DSMLHLN form (5901 Record).

For 5E5 and later,

- this Packet Switching TN must be defined on either a DSLUSR form (5908 Record) in the DPKT TN or ODBTN field or on a DSL form (5907 Record) in the PPB1 TN or PPB2 TN field.

- the PKT TN must be defined on the DSL form (5907 Record) as PPB1 TN or PPB2 TN, or on the DSLUSR form (5908 Record) as DPKT TN, DPKT MLHG TN, or ODB TN, or on the MLHG form (5110 Record) within the range of TNs specified by LISTED TN to HIGHEST LISTED TN where HUNT TYPE is "PSUCD" on the corresponding MLHGFD form (5604 Record). For 5E6 and later, PKT TN can also be defined on the XAT form. For 5E8 and later, it can also be defined on the DSL form as PPB1 LNR HNT TN or PPB2 LNR HNT TN, or on the DSLUSR form as DPKT LNR HNT TN, ODB MLHG TN, or ODB LNR HNT TN, or on the XAT form as LNR HNT TN.

For 5E12 and later,

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- PKT TNs on different PSMTN forms cannot be duplicated.

- if the first 3 digits of the 7-digit PKT TNs on the PSMTN form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit PKT TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 ACCESS TN

Description: Enter a valid Modem Pooling Access Telephone Number without prefix.

ACCESS TN must contain at least one Modem Pooling Access TN, and each ACCESS TN must be a unique number. There can be a total of 11 ACCESS TNs.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

For 5E12 and later,

- the ACCESS TN(s) on the PSMTN form cannot match another ACCESS TN on the same PSMTN form.

- the first three digits of a 7-digit TN or the first six digits of a 10-digit TN must be assigned on the NOC form as the OFFICE CODE or the NPA/OFFICE CODE, respectively.

For 5E12 and later,

- if the first 3 digits of the 7-digit ACCESS TNs on the PSMTN form are equivalent to an OFFICE CODE on the NOC form, but there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7- digit ACCESS TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.4 MODEM POOL GROUP

Description: Enter a valid Packet Switching Modem Pool Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

MODEM POOL GROUP is a required entry when ACCESS TN is defined.

The MODEM POOL GROUP must be defined as an MLHG (5110 Record) with a value in the MPTYPE field. It must also appear on a PSCUG form (5924 Record) in the PKT MLHG field.

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(5925,5925A) PACKET SWITCHING ISDN MODEM TN TO DSL ASSIGNMENT

*1. PKT TN _____ 2.

ROW	ACCESS TN	MODEM POOL GROUP
1	_____	____
2	_____	____
3	_____	____
4	_____	____
5	_____	____
6	_____	____
7	_____	____
8	_____	____
9	_____	____
10	_____	____
11	_____	____

Figure 1 SAMPLE PSMTN FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3G: 5926 RECORD
TRUNK PACKET SWITCHING PVC LCN ASSIGNMENT FORM - X75PVC

1. GENERAL

The 5926 Record is available with 5E5 and later Software Releases. The X75PVC form is used to assign PVC (Permanent Virtual Circuit) Logical Channel Numbers to X.75P and X.75 packet switching trunks.

Trunks defined on this form must be X.75P or X.75 trunks (TRKCLS must be "X75P" or "X75" on the TKGRP form).

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.13.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TGN

Description: Enter the Trunk Group Number of the trunk to be assigned to a PVC.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN entered in this field must be defined on the TKGRP form with a TRKCLS of "X75P" or "X75".

2.3 * MEMB

Description: Enter the Trunk Group Member Number.
Valid Entries: 0 - 23

Data Rules:

The TGN/MEMB must be defined on a TRUNK form.

2.4 * LCN

Description: Enter a packet switching Logical Channel Number.
Valid Entries: 1 - 127

Data Rules:

The value entered in this field must be less than or equal to the value entered in the HIGH PVC LCN field on the TRUNK form.

2.5 # CALL IND

Description: Enter a PVC Call Indicator to determine which end of the PVC is calling or being called.

Required Field.

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Valid CALL IND Entries	
Entry	**Definition**
CALLING	PVC calling end
CALLED	PVC called end

2.6 FCL TYPE

Description: Enter the Tandem Trunk Remote Facility Type. The FCL TYPE (Facility Type) indicates what the interface is on the far end of a PVC (Permanent Virtual Circuit). The PVC is supported for Packet Switching with the layer 3 protocol being either X.25, or X.75P, the later enumeration being for packet trunks.

Software Release: 5E8 and later
Required Field.
Valid Entries:

Valid FCL TYPE Entries	
Entry	**Definition**
X75P	defines the interface on the far end of the PVC to be an X.75P trunk
X25	defines the interface on the far end of the PVC to be an X.25 line
INET	For 5E14 and later. INET stands for Internet Protocol which is the TCP/IP protocol stack. INET - defines the interface on the far end of the PVC to be an interface to TCP/IP. This interface is internal to the switch and is not associated with a physical external interface.

Data Rules:

If FCL TYPE is "X75P", then LINK ID and PSN must be entered, and PVC ID NUMBER and BILLABLE must not be entered. Also, TRKCLS on the corresponding TKGRP must be set to "X75P".

If FCL TYPE is "X25", REMOTE TN must be entered.

When FCL TYPE is "INET", REMOTE LCN must not be entered.

When FCL TYPE is "INET":

- CALL IND must be "CALLING".
- SEND PKT SIZE must be 256.
- RCV PKT SIZE must be 256.
- SEND WINDOW SIZE must be 7.
- RCV WINDOW SIZE must be 7.

For 5E14 and later, when the FCL TYPE on the X75PVC form is set to "INET", there must exist a matching IPINTF form where TGN equals TGN, MEMB equals TGN MEMB and LCN equals LCN. The SEND PKT SIZE on the X75PVC form must be greater than or equal to the MTU SIZE on the corresponding IPINTF form.

For 5E14 and later, when the FCL TYPE on the X75PVC form is set to "INET", there must exist a matching TRUNK form where TGN/MEMB equals TGN/MEMB. The TRUNK form must have a matching PSUGP form where the first three digits of DEN or NEN, and the first digit of ISCN and the second two digits of ISCN equal SM, PSU SHELF and GRP respectively. The PH TYPE on the corresponding PSUGP form must be set to "PH3" or "PH4".

2.7 # ACCESS TN

Description: The name of this field was changed to REMOTE TN in 5E8. This field name applies to 5E5 - 5E7. See REMOTE TN for usage information.

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2.8 # ACCESS LCN

Description: The name of this field was changed to REMOTE LCN for 5E8. This field name applies to 5E5 - 5E7. See REMOTE LCN for usage information.

2.9 REMOTE LCN

Description: Enter a Remote (Access) LCN (Logical Channel Number). The Remote LCN is the LCN associated with the far end of the PVC. (This field was called ACCESS LCN for 5E5 - 5E7.)
Valid Entries: 1 - 4095

X25 FCL TYPE

The following field must only be defined when the FCL TYPE is set to X25.

2.10 REMOTE TN

Description: Enter a valid Remote (Access) Telephone Number. The Remote TN is the telephone number at the remote end of the PVC. The format of the 10-digit TN is NPANXXXXXX where the digits are as follows:

- N is (2 - 9)
- P is (0 - 1)
- A and X are (0-9).

(This field was called ACCESS TN for 5E5 - 5E7).

Required Field.
Valid Entries: ten digit number

X75P FCL TYPE

The following fields (Section 2.11 - Section 2.12) must only be defined when the FCL TYPE is set to X75P.

2.11 LINK ID

Description: Enter the Tandem Trunk Remote Gateway Link ID. This field is used to designate the destination (remote) gateway link ID of a tandem X.75P to X.75P trunk group PVC.
Valid Entries: 1 - 255

Data Rules:

If FCL TYPE is "X75P", LINK ID and PSN must be entered.

2.12 PSN

Description: Enter the Packet Switch Number of the far end X75P PVC. This field identifies the destination packet switch that provides the IP interface with another packet switching network. The destination packet switch is a switch that resides in the same IP subnetwork as this switch.
Valid Entries: 1 - 255

Data Rules:

If FCL TYPE is "X75P", LINK ID and PSN must be entered.

The PSN assigned on this form must be defined on an RTIDX form.

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2.13 SEND THRUPUT CLASS

Description: Enter the Sending Throughput Class which is the bits per second at which a virtual call will send data.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600 or 19200.

2.14 RCV THRUPUT CLASS

Description: Enter the Receive Throughput Class which is the bits per second at which a virtual call will receive data.
Default: 9600
Valid Entries: 75, 150, 300, 600, 1200, 2400, 4800, 9600 or 19200.

2.15 SEND PKT SIZE

Description: Enter the Send Packet Size which is the maximum number of bytes of data in a packet that can be sent.
Default: 128
Valid Entries: 128 or 256 bytes.

2.16 RCV PKT SIZE

Description: Enter the Receive Packet Size which is the maximum number of bytes of data in a packet that can be received. Default Value: 128
Valid Entries: 128 or 256 bytes

2.17 SEND PKT WINDOW SIZE

Description: Enter the number of data packets that the STE can have unacknowledged, on a sending basis, at any time.
Default: 2
Valid Entries:
- 5E8 and earlier: 2 - 3
- 5E9(1) and later: 1 - 7

2.18 RCV PKT WINDOW SIZE

Description: Enter the number of data packets that the STE can have unacknowledged, on a receiving basis, at any time.
Default: 2
Valid Entries:
- 5E8 and earlier: 2 - 3
- 5E9(1) and later: 1 - 7

X.75 ONLY

The name of this heading was changed to X.75 TGN for 5E8 and later. This heading name is for 5E6 and 5E7 only. See X.75 TGN for usage information.

X75 TGN

The following fields (Section 2.19 - Section 2.20) must only be defined when TRKCLS on the TKGRP form is "X75" for the same TGN. (This heading was called X.75 ONLY for 5E6 and 5E7.)

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2.19 PVC ID NUMBER

Description: Enter a Permanent Virtual Circuit ID number. This ID is assigned to an X.75 PVC to be used for AMA inter-network billing records.

Software Release: 5E6 and later
Valid Entries: 1 - 9999

Data Rules:

Trunks with a TRKCLS other than "X75" should leave this field blank.

2.20 BILLABLE

Description: Is this X.75 PVC the billable user?

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

Trunks with a TRKCLS other than "X75" should leave this field blank.

```
x75pvc                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5926)         TRUNK PACKET SWITCHING PVC LCN ASSIGNMENT

*1. TGN       0085            10. SEND THRUPUT CLASS   9600
*2. MEMB       00             11. RCV  THRUPUT CLASS   9600
*3. LCN       121             12. SEND PKT SIZE        128
#4. CALL IND   CALLING          13. RCV  PKT SIZE       128
#5. FCL TYPE   X75P             14. SEND PKT WINDOW SIZE 2
 6. REMOTE LCN 0005             15. RCV  PKT WINDOW SIZE 2
      X25 FCL TYPE
 7. REMOTE TN __________                X75 TGN
                        16. PVC ID NUMBER ____
  X75P FCL TYPE               17. BILLABLE     _
 8. LINK ID 100
 9. PSN     20
```

Figure 1 SAMPLE X75PVC FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 3I: 5928 RECORD
TRANSIT NETWORK IDENTIFICATION CODE FORM - TNICLIST

1. GENERAL

The 5928 Record is available with the 5E8 Software Release and it is used to provision a list of up to 20 shared INICs/DNICs (ISDN Network Identification Codes / Data Network Identification Codes) for the entire switch.The list of shared INICs/DNICs are referred to as TNIs (Transit Network Identifiers). The number of entries may vary from 0 to 20. The list can be empty, i.e., 0, or the list may contain up to 20 TNI entries. The entries in the list must be unique.

This form can only be entered for ISDN offices, and only one form is entered for an office.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.15.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: This field is the designated key to the form. It must always be 0.

Valid Entry: 0

2.3 INIC/DNIC

Description: Enter the INIC (ISDN Network Identification Code) or DNIC (Data Network Identification Code). Each entry must be unique; duplicate entries cannot be made.
Valid Entries: 1 - 9999

Data Rules:

For 5E9(1) and earlier, the TNICLIST form can only be entered for offices that contain ISDN SMs; therefore, at least one SM on the EQIM form (5700 Record) must have a CONFIGURATION of "LOADED".

For 5E9(2) and later, the TNICLIST form can only be entered for offices that support Transit Network Identification; therefore, at least one SM on the EQIM form must have a CONFIGURATION that supports Transit Network Identification.

---

tniclist 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5928) TRANSIT NETWORK IDENTIFICATION CODES

*1. KEY 0
2. TNIC LIST

ROW	INIC/DNIC	ROW	INIC/DNIC	ROW	INIC/DNIC	ROW	INIC/DNIC
1	0132	6	0239	11	____	16	____
2	0133	7	____	12	____	17	____
3	0134	8	____	13	____	18	____

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4	0165	9	____	14	____	19	____
5	0238	10	____	15	____	20	____

Figure 1 SAMPLE TNICLIST FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 3J: 5949 RECORD
PACKET SWITCHING UNIT LOGICAL GROUP FORM - PSUGP

1. GENERAL

The 5949 Record is available with 5E6 and later Software Releases. It is used to specify the PH (Protocol Handler) type for a defined logical channel group on a PSU (Packet Switching Unit) shelf. Any ISCNs assigned on the following forms must be represented on this form: the AMLBDSL form (5447 Record), the CCLNK form (6004 Record), the DSL form (5907 Record), the DSLAP form (5963 Record), the DSLUSR form (5908 Record), the IPDSL form (6430 Record), the MDLNK (5637 Record), the MISLNK (5637), the ODBRES form (5906 Record), the OSPSDSL form (5411 Record), the PSISM form (5920 Record), the PSULNK form (5057 Record), the PSUPIPE form (5990 Record), the QPHPIPE (5828 Record), the RTERM (5174 Record), the TRUNK form (5204 Record), and the XAT form (5909 Record). Also, a combination of SM, PSU, PSU SHELF, and GRP must be entered with VIRTUAL set to "N".

PH types can be mixed on the PSU shelf making it necessary to specify the PH TYPE per logical channel group. The logical channel group does not represent the exact physical location of the PH circuit pack; it represents the existence of the pack on a PSU shelf in the PSU.

1.1 Recent Change View

The corresponding Recent Change view for this form is 22.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: Enter the Switching Module where this PSU resides.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E18 and later, when SM, PSU, PSU SHELF, GRP TYPE, and PH TYPE are entered on the PSUGP form, and SG 0 TYPE and SG 1 TYPE are set to "PSU2E" on the EQPSU form (5741 Record), the following forms must be set accordingly:

- CCLNK (6004 Record)
  - GSM, SHELF, and CHANNEL GROUP must be entered.
- MDLNK (6009 Record)
  - SM, SHELF, and CHANNEL GROUP must be entered.
- ATMLNK (5592 Record)
  - SM, PSU, SHELF, and CHL GRP must be entered and CON TYPE is set to "ATMNET" or "ATMPP".

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- PSULNK (5057 Record)
  - NEAR SM, NEAR PSU, NEAR SHELF, and NEAR CHL GRP must be entered and CON TYPE is set to "ATMNET" or "POINT".
  - FAR SM, FAR PSU, FAR SHELF, and FAR CHL GRP must be entered and CON TYPE is set to "POINT".

- TRUNK (5204 Record)
  - The first seven digits of TRKOE must be entered on the TRUNK form where TRKOE type is "U" and TRKCLS is "FRBC" or "PKTPIPE" on the TKGRP form (5202 Record).
  - The first seven digits of TRKOE must be entered on the TRUNK form where TRKOE type is "U" and TRKCLS is "SPCHNDLR" and SERV TYPE is "8K", "13K", or "EVRC"on the TKGRP form.
  - The first seven digits of TRKOE must be entered on the TRUNK form where TRKOE type is "U" and TRKCLS is "SPCHNDLR" and SERV TYPE is "13K" or "EVRC"on the TKGRP form.
  - The first seven digits of TRKOE must be entered on the TRUNK form where TRKOE type is "U" and TRKCLS is "SPCHNDLR" and SERV TYPE is "13K", "EVRC", or "CEV13" on the TKGRP form.
  - The first seven digits of TRKOE must be entered on the TRUNK form where TRKOE type is "U" and TRKCLS is "A5", "IS41", or "3GPD" on the TKGRP form.
  - the first seven digits of TRKOE have been assigned on the TRUNK form where TRKOE type is "U"' and TRKCLS is "SPCHNDLR" and SERV TYPE is not "13", "EVRC", "CEV13", or "SME13" (on the TKGRP form).

- ETHIP (5995 Record)
  - SM, PSU, SHELF, and CHANNEL GROUP must be entered.

2.3 * PSU

Description: Enter the Packet Switching Unit number.

Required Field.
Default: 0
Valid Entries:

5E15 and earlier: 0
5E16 and later: 0 - 1

2.4 * PSU SHELF

Description: Enter the PSU Shelf number.

Required Field.
Valid Entries: 0 - 4

2.5 AVAILABLE PH2

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Description: This is a Recent Change only field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available PH2s in the PSU. This number is determined by subtracting the number of spare and assigned PH2s from the total number of operational PH2s.
Valid Entries: 0 - 16

2.6 AVAILABLE PH3

Description: This is a Recent Change only field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available PH3s in the PSU. This number is determined by subtracting the number of spare and assigned PH3s from the total number of operational PH3s.
Valid Entries: 0 - 16

2.7 AVAILABLE PH4

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available channel groups for protocol handler 4.

Software Release: 5E10 and later
Valid Entries: 0 - 16

2.8 AVAILABLE PH22

Description: This is a Recent Change only field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available PH22s in the PSU. This number is determined by subtracting the number of spare and assigned PH22s from the total number of operational PH22s. This field supports the Protocol Handler 22 Base System feature. For more information on this feature, see Division 2, Section 5L.

Software Release: 5E14 and later
Valid Entries: 0 - 16

2.9 AVAILABLE PH31

Description: This is a Recent Change only field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available PH31s in the PSU. This number is determined by subtracting the number of spare and assigned PH31s from the total number of operational PH31s. This field supports the SAAL (Signaling Link ATM (Asynchronous Transfer Mode) Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature. For more information on this feature, see Division 2, Section 4A670.

Software Release: 5E16 and later
Valid Entries: 0 - 16

2.10 AVAILABLE PH33

Description: This is a Recent Change only field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available PH33s in the PSU. This number is determined by subtracting the number of spare and assigned PH33s from the total number of operational PH33s. This field supports the SIP (Session Initiation Protocol) for Packet Trunking feature. For more information see Division 2, Section 4A684.

Software Release: 5E16(2) FR 3 and later
Valid Entries: 0 - 16

2.11 AVAILABLE PHV1

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA

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input is required. It displays the number of available channel groups for protocol handlers for voice 1. The verify fields AVAILABLE PHV1 and AVAILABLE PHV2 were added to support the new PH types for the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B. PHV1 protocol handler supports the 8 KB/S vocoder.

Software Release: 5E10 and later
Valid Entries: 0 - 16

2.12 AVAILABLE PHV2

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available channel groups for protocol handlers for voice. This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B. The PHV2 protocol handler supports the 13KB/S vocoder.

Software Release: 5E10 and later
Valid Entries: 0 - 16

2.13 AVAILABLE PHV3

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available channel groups for protocol handlers for voice. This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B. The PHV3 protocol handler supports the 13KB/S vocoder.

Software Release: 5E11 and later
Valid Entries: 0 - 16

2.14 AVAILABLE PHV4

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of available channel groups for protocol handlers for voice. This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B. The PHV4 protocol handler supports the 13KB/S vocoder.

Software Release: 5E12 and later
Valid Entries: 0 - 16

2.15 AVAILABLE PHV5

Description: This is a Recent Change Verify field. It is a display-only field in ODA. Therefore, no ODA input is required. It displays the number of available protocol handlers for voice 5. This field supports the PHV5 (Downloadable Protocol Handler for Voice 5) feature. For more information on this feature, see Division 2, Section 8AB.

Software Release: 5E16.1 and later
Valid Entries: 0 - 16

2.16 AVAILABLE PHV6

Description: This is a Recent Change Verify field. It is a display-only field in ODA. Therefore, no ODA input is required. It displays the number of available protocol handlers for voice 5. This field supports the PHV6 (Protocol Handler for Voice 6) feature. For more information on this feature see, Division 2, Section 7CD.

Software Release: 5E18(1) and later
Valid Entries: 0 - 16.

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2.17 AVAILABLE PHA1

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of protocol handlers for asynchronous transfer mode (type 1) which are available to be assigned to channel groups. This field supports the PHA (Protocol Handler Asynchronous Transfer) feature. For more information on this feature, see Division 2, Section 4A224.

Software Release: 5E10 and later
Valid Entries: 0 - 16.

2.18 AVAILABLE PHA2

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of channel groups for PH (Protocol Handler) A2 (ATM (Asynchronous Transfer Mode) - version 2. This field supports the PHA2/PHE2 on PH30 feature. For more information on this feature, see Division 2, Section 5BM.

Software Release: 5E16 and later
Valid Entries: 0 - 16

2.19 AVAILABLE PHE2

Description: This is a Recent Change Verify field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the number of channel groups for PH (Protocol Handler) E2 (Ethernet - version 2). This field supports the PHA2/PHE2 on PH30 feature. For more information on this feature, see Division 2, Section 5BM.

Software Release: 5E16 and later
Valid Entries: 0 - 16

2.20 VIRTUAL

Description: The Virtual packet switch interface unit shelf that specifies whether or not the PSU shelf number is virtual.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

Data Rules:

When VIRTUAL is "Y", an ENETLINK form (5827 Record) must exist on the same SM with a SERV TYPE value of "CFS".

CHANNEL GROUPS (GP)

Each PSU Shelf can contain up to sixteen logical channel groups, numbered 0 - 15. A PH TYPE must be entered for at least one channel group on this PSUGP form. At least one PROTOCOL HANDLER GROUP entry must be specified.

2.21 PH TYPE

Description: Enter the type of PH circuit pack.

PH3 provides the equivalent functionality of PH2 and can be equipped on the same PSU shelf with PH2.

Valid PH TYPE Entries

Entry	Definition

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PH2	Protocol Handler 2 which is a 80186-based PH with 128 channels.
PH3	Software Release: 5E6 and later. Protocol Handler 3 which is a 68030-based PH with 128 channels.
PH4	Software Release: 5E10 and later. Protocol Handler version 4, which is a 68030-based PH with 128 channels.
PH22	Software Release: 5E14 and later. Protocol Handler version 22, which is a 68060-based PH.
PH31	Software Release: 5E16(2) and later. Protocol Handler with 31 channels.
PH33	Software Release: 5E16(2)FR 3 and later. Protocol Handler with 33 channels. This field supports the OIU (Optical Interface Unit) SIP-T (Session Initiation Protocol for Telephones) feature. For more information see Division 2, Section 4A684.
PHV1	Software Release: 5E10 and later. Protocol handler for Voice 1 (8 kilobit vocoder). This enumeration supports the CDMA (Code Division Multiple Access) feature. For more informaton on this feature, see Division 2, Section 8B.
PHV2	Software Release: 5E10 and later. Protocol handler for Voice 2 (13 kilobit vocoder). This enumeration supports the CDMA feature. For more information on CDMA see Division 2, Section 8B.
PHV3	Software Release: 5E11 and later. The PHV3 feature increases the number of voice channels provided per PHV circuit pack from the 12 voice channels on the PHV1 and PHV2 to 16. For more information on this feature see Division 2, Section 8F.
PHV4	Software Release: 5E14 and later. Protocol Handler for Voice 4 provides 32 speech vocoders per circuit board. For more information on this feature see Division 2, Section 8J.
PHV5	Software Release: 5E16 and later. Protocol Handler for Voice 5. Provides 64 vocoders for voice and supports simultaneous voice and data. Refer to Division 2, Section 8AB for more information.
PHV6	Software Release: 5E18(1) and later. Protocol Handler for Voice 6. Provides 128 vocoder and supports the PHV6 feature. Refer to Division 2, Section 7CD.
PHA1	Software Release: 5E10 and later. Protocol handler for ATM (Asynchronous Transfer Mode) 1. This enumeration supports the PHA (Protocol Handler for Asynchronous Transfer) feature. For more information on this feature see Division 2, Section 4A224.

Data Rules:

Speech Handler Trunk group members must have a corresponding PSUGP form or the corresponding PSUGP form must have a PH TYPE (on PSUGP) which is appropriate for the value of SERV TYPE (on TKGRP). The following table defines the PH TYPEs (on PSUGP) which are valid for each value of SERV TYPE (on TKGRP).

For 5E18(1) andd later:

When PH TYPE is "PHV5" or "PHV6" on this form, SERV TYPE on the TKGRP form (5502 Record) must be "CEV13", or "PHV6", respectively.

When PH TYPE is "PHV5" on this form, SERV TYPE on the TKGRP form must not be "ACELP" or "VSELP".

Valid PH TYPE Entries

SERV TYPE	PH TYPE
8K	PHV1, PHV3, PHV4
13K	PHV2, PHV3, PHV4, PHV5
ACELP	PHV4
CEV13	PHV5
EVRC	PHV3, PHV4, PHV5
SME13	PHV6
TACVS	PHV5
VSELP	PHV4

When at least one Multi-Line Hunt Member has a PH TYPE of "PH2", the corresponding PBGRP form

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LCN AGGREGATE and TPC AGGREGATE must be blank and OVERFLOW TREAT must be "NONE".

When TGNs are defined with a TRKCLS of
- "PACKET",
- "X75P", or
- "X75"

on a TKGRP form and the corresponding Trunk Members defined on TRUNK forms have the first three digits of the DEN or the NEN, the first digit of ISCN, and the second two digits of ISCN matching SM, PSU SHELF and GRP, respectively, on a PSUGP form, if the PH TYPE on the PSUGP form is "PH2", the last three digits of the ISCN field on the TRUNK forms must be 000.

PH3:
The number of operational PH3s assigned for a given PSU Shelf minus the number of PH3 Logical groups assigned to that PSU Shelf must be greater than or equal to the entry in the PH3 MIN SPARE fields specified for that PSU Shelf.

Operational PH3s - PH3 Logical Groups = PH3 MIN SPARE

- The number of operational PH3s is obtained from the EQPSUPH form, where PH CLI is 00000200 and EQST is "O".

- The number of PH3 logical groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH3".

- The PH3 MIN SPARE field is specified on the EQPSUPH form.

When TGNs are defined with a TRKCLS of
- "PACKET",
- "X75P", or
- "X75"

on a TKGRP form and the corresponding Trunk Members defined on TRUNK forms have the first three digits of the DEN or the NEN, the first digit of ISCN, and the second two digits of ISCN matching SM, PSU SHELF and GRP, respectively, on a PSUGP form, and if the PH TYPE on the PSUGP form is set to "PH3" or "PH4", the last three digits of the ISCN field on the TRUNK forms must be
- 000
- 004
- 008
- 012
- 016 or
- 020.

PH4:
The number of operational PH4s assigned for a given PSU Shelf minus the number of PH4 Logical groups assigned to that PSU Shelf, must be greater than or equal to the PH4 MIN SPARE specified for that PSU Shelf. For a given PSU Shelf:

Operational PH4s - PH4 Logical Groups = PH4 MIN SPARE

- The number of operational PH4s is obtained from the EQPSUPH form where PH CLI is 00001800 and EQST is "O".

- The number of PH4 logical groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH4".

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- The PH4 MIN SPARE is specified on the EQPSUPH form.

When TGNs are defined with a TRKCLS of
- "PACKET",
- "X75P", or
- "X75"

on a TKGRP form and the corresponding Trunk Members defined on TRUNK forms have the first three digits of DEN or NEN, the first digit of ISCN, and the second two digits of ISCN matching SM, PSU SHELF and GRP, respectively, on a PSUGP form, and if the PH TYPE on the PSUGP form is set to "PH3" or "PH4", the last three digits of the ISCN field on the TRUNK forms must be
- 000
- 004
- 008
- 012
- 016 or
- 020.

When TRKCLS is "FRBC" on the TKGRP form (5202-1/2/3/4/5/6/7/8/9 Record) and PH TYPE is "PH4", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 015 for all corresponding trunk members of this trunk group.

When TRKCLS is "PKTPIPE" on the TKGRP form and PH TYPE is "PH4", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 031 for all corresponding trunk members of this trunk group.

For PSUGP forms representing PH4s which have exceeded their capacity for CDMA trunk routing, the count of Packet Pipe Member trunks assigned to all Packet Pipe trunks which use this PH4 may not exceed 32. The number of CDMA calls the PH4 can handle may not exceed 64. The number of possible CDMA calls is dependent upon the presence of Trunk Group SERV TYPEs of:

"13K" or "8K", for 5E10 and 5E11

"13K", "8K", "ACELP170, "DATA", "EVRC", or "VSELP" for 5E12

in the switch, the DATA RATE of the Packet Pipe Member Trunks and the number of Packet Pipe Member trunks which point to this PH4.

PH22:
The number of operational PH22s assigned for a given PSU Shelf minus the number of PH22 Logical groups assigned to that PSU Shelf must be greater than or equal to the entry in the PH22 MIN SPARE fields specified for that PSU Shelf.

Operational PH22s - PH22 Logical Groups = PH22 MIN SPARE

- The number of operational PH22s is obtained from the EQPSUPH form, where PH CLI is 00002800 and EQST is "O".

- The number of PH22 logical groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH22".

- The PH22 MIN SPARE field is specified on the EQPSUPH form.

When TRKCLS is "PKTPIPE" on the TKGRP form and PH TYPE is "PH22", the channel component (the last three digits) of TRKOE NUMBER on the TRUNK form must be in the range of 000 to 063 for all

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corresponding trunk members of this trunk group.

PHVs
ISCNs entered on the TRUNK form, which are associated with a PH TYPE of "PHV1", "PHV2", "PHV3", "PHV4", or "PHV5" on the associated PSUGP form, are exclusively used for Speech Handler trunks via UEN assignment on the TRUNK form (TRKOE where OE TYPE is equal to "U");

The following table indicates which PH TYPEs are valid for a given SERV TYPE:

SERV TYPE	PH TYPE
8K	PHV1, PHV3, PHV4
13K	PHV2, PHV3, PHV4,PHV5
ACELP	PHV3, PHV4
EVRC	PHV3, PHV4,PHV5
VSELP	PHV3, PHV4

The following TGNs (on TKGRP form) are defined with a TRKCLS of "SPCHNDLR". All corresponding trunk members of this trunk group (on TRUNK form), must have a TRKOE entered with an OE TYPE of 'U'. In addition the last three digits of the OE must be in a specific range, dependent upon the type of Protocol Handler for which the specific trunk resides.

PH TYPE	OE
PHV1	000 - 011
PHV2	000 - 011
PHV3	000 - 015
PHV4	000 - 031
PHV5	000 - 63

All members of a trunk group where TRKCLS is "ADT" on the TKGRP form must have TRKOE TYPE equal to "U" on the TRUNK form and TRKOE NUMBER, on the TRUNK form, must correspond to a Protocol Handler Logical Channel Group where PH TYPE equals "PHV1", "PHV2", "PHV3", "PHV4" or "PHV5".

All members of a trunk group where TRKCLS is "A5" or "IS41" on the TKGRP form must have TRKOE TYPE equal to "U" on the TRUNK form and TRKOE NUMBER, on the TRUNK form, must correspond to a Protocol Handler Logical Channel Group with a PH TYPE of "PHV4" or "PHV5".

PHV1
The number of operational PHV1s assigned for a given PSU Shelf minus the number of PHV1 Logical groups assigned to that PSU Shelf, must be greater than or equal to the PHV1 MIN SPARE specified for that PSU Shelf.

In other words, for a given PSU Shelf:
Operational PHV1s - PHV1 Logical Groups >= PHV1 MIN SPARE

- The number of operational PHV1s is obtained from the EQPSUPH form where PH CLI is 00000001 and EQST is "O".
- The number of PHV1 logical groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PHV1".
- The PHV1 MIN SPARE is specified on the EQPSUPH form.

PHV2
The number of operational PHV2s assigned for a given PSU Shelf minus the number of PHV2 Logical groups assigned to that PSU Shelf, must be greater than or equal to the PHV2 MIN SPARE specified for that PSU Shelf.

In other words, for a given PSU Shelf:
Operational PHV2s -- PHV2 Logical Groups >= PHV2 MIN SPARE

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- The number of operational PHV2s is obtained from the EQPSUPH form where PH CLI is:

00000002 or 00000004 and EQST is "O", for 5E10

00000002 and EQST is "O", for 5E11 and later.

- The number of PHV2 logical groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PHV2".
- The PHV2 MIN SPARE is specified on the EQPSUPH form.

When the ISCNs entered on the TRUNK form are associated with a PH TYPE of "PHV1", "PHV2", or "PHV3" on the associated PSUGP form, the PHV1s, PHV2s, and PHV3s are exclusively used for Speech Handler trunks via the UEN assignment on the TRUNK form (TRKOE where OE TYPE is equal to "U").

PHV3:
For all Speech Handler trunk group members assigned to channels of a given PHV3 (PHV3 PH TYPE), the corresponding value of SERV TYPE must be consistent (i.e., if one channel of a PHV3 is assigned to a Speech Handler trunk group member where the corresponding TKGRP entry SERV TYPE is "EVRC", all other Speech Handler trunk group members assigned to channels of this same PH must reside in a Speech Handler trunk group where the corresponding TKGRP entry SERV TYPE is "EVRC" as well).

The number of operational PHV3s assigned for a given PSU Shelf minus the number of PHV3 Logical groups assigned to that PSU Shelf, must be greater than or equal to the PHV3 MIN SPARE specified for that PSU Shelf.

In other words, for a given PSU Shelf:
Operational PHV3s - PHV3 Logical Groups >= PHV3 MIN SPARE

PHV4:
For all Speech Handler trunk group members assigned to channels of a given PHV4 (PH TYPE is "PHV4"), the corresponding value of SERV TYPE on the TKGRP form must be consistent. For example, when one channel of a PHV4 is assigned to a Speech Handler trunk group member where the corresponding SERV TYPE entry on the TKGRP form is "ACELP", all other Speech Handler trunk group members assigned to channels of this same PHV must reside in a Speech Handler trunk group where the corresponding SERV TYPE entry on the TKGRP form is "ACELP" also.

PHV5:

When PH TYPE is "PHV5", SM must not be defined on a PSISM form (5920 Record) with ISCN. SHELF and ISCN.CHL GRP equal to PSU SHELF and GRP respectively.

For all Speech Handler trunk group members assigned to channels of a given PHV5 (PH TYPE is "PHV5"), the corresponding value of SERV TYPE must be the same.

The channel component of TRKOE NUMBER (the last three digits) on the TRUNK form must be 064 - 095 for all members of a trunk group with TRKCLS equal to "ADT" on the TKGRP form when the value in TRKOE NUMBER on the TRUNK form corresponds to a Protocol Handler Logical Channel Group where PH TYPE is "PHV5".

2.22 GRP TYPE

Description: This is a Recent Change only field. It is a display-only field in ODA, therefore, no ODA input is required. It displays the type of digital service (any service requiring a Digital Equipment Number) supported by this channel group.

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2.23 AUTO ASSIGN

Description: Allow automatic assignments of ISCNs on MISLINK, DSL and DSLAP? The AUTO ASSIGN field is used to indicate whether automatic ISCN assignment is to be used to assign ISCNs from this channel group. This assignment will only apply to channel groups of type DSLG or NULL. If the assignment is allowed for this channel group, then the channels on this channel group will be potential candidates for automatic ISCN assignment from the following views: ACD Management Information System Link (RC/V 6.11), DSL Assignment (RC/V 23.2), DSL/BRCS Assignment (RC/V 23.8), DSL/USER Copy (RC/V 23.30), and DSLAP (DSL Application Processor Communication Data) (RC/V 24.7).

This field was added for the Automatic ISDN Line Assignment feature. For more information on this feature, see Division 2, Section 1BO.

Software Release: 5E11 and later
Valid Entries: Y, N

Data Rules:

When PH TYPE is not "PH2", "PH3", or "PH4", AUTO ASSIGN must be "N".

---

psugp 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(psugp) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

*1. SM ___ AVAILABLE PH2 __ AVAILABLE PHV1 __
*2. PSU 0 AVAILABLE PH3 __ AVAILABLE PHV2 __
*3. PSU SHELF _ AVAILABLE PH4 __ AVAILABLE PHV3 __
AVAILABLE PH22__ AVAILABLE PHV4 __
AVAILABLE PHA1 __
13. CHANNEL GROUPS (GP)

ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK	ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK
1	0	____	____	_	_____	5	4	____	____	_	_____
2	1	____	____	_	_____	6	5	____	____	_	_____
3	2	____	____	_	_____	7	6	____	____	_	_____
4	3	____	____	_	_____	8	7	____	____	_	_____

---

psugp 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(psugp) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

13. CHANNEL GROUPS (GP)

ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK	ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK
9	8	____	____	_	_____	13	12	____	____	_	_____
10	9	____	____	_	_____	14	13	____	____	_	_____
11	10	____	____	_	_____	15	14	____	____	_	_____
12	11	____	____	_	_____	16	15	____	____	_	_____

Figure 1 SAMPLE PSUGP FORM 5E14 SOFTWARE RELEASE

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psugp 5ESS Switch

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SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5949) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

*1. SM ___ AVAILABLE PH2 __ AVAILABLE PHV1 __ AVAILABLE PHV5 __
*2. PSU 0 AVAILABLE PH3 __ AVAILABLE PHV2 __ AVAILABLE PHA1 __
*3. PSU SHELF _ AVAILABLE PH4 __ AVAILABLE PHV3 __
AVAILABLE PH22 __ AVAILABLE PHV4 __

14. CHANNEL GROUPS (GP)

ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK	ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK
1	0	____	____	_	_____	5	4	____	____	_	_____
2	1	____	____	_	_____	6	5	____	____	_	_____
3	2	____	____	_	_____	7	6	____	____	_	_____
4	3	____	____	_	_____	8	7	____	____	_	_____

---

psugp 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5949) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

14. CHANNEL GROUPS (GP)

ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK	ROW	PH GRP	GRP TYPE	AUTO TYPE	ASSIGN	RMK
9	8	____	____	_	_____	13	12	____	____	_	_____
10	9	____	____	_	_____	14	13	____	____	_	_____
11	10	____	____	_	_____	15	14	____	____	_	_____
12	11	____	____	_	_____	16	15	____	____	_	_____

Figure 2 SAMPLE PSUGP FORM 5E15 SOFTWARE RELEASE

---

psugp 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5949) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

*1. SM ___ AVAILABLE PH2 __ AVAILABLE PHV1 __
*2. PSU 0 AVAILABLE PH3 __ AVAILABLE PHV2 __
*3. PSU SHELF _ AVAILABLE PH4 __ AVAILABLE PHV3 __
AVAILABLE PH22 __ AVAILABLE PHV4 __
AVAILABLE PH31 __ AVAILABLE PHV5 __
AVAILABLE PH33 __ AVAILABLE PHA1 __
AVAILABLE PHA2 __
AVAILABLE PHE2 __
18. VIRTUAL N

---

psugp 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5949) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

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```
                19. CHANNEL GROUPS (GP)
      PH   GRP  AUTO                PH   GRP  AUTO
ROW GRP TYPE TYPE ASSIGN RMK     ROW GRP TYPE TYPE ASSIGN RMK
 1   0 ____ ____  _   _________  5   4 ____ ____  _   _________
 2   1 ____ ____  _   _________  6   5 ____ ____  _   _________
 3   2 ____ ____  _   _________  7   6 ____ ____  _   _________
 4   3 ____ ____  _   _________  8   7 ____ ____  _   _________
```

```
psugp                    5ESS Switch        _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5949)         PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

                19. CHANNEL GROUPS (GP)
      PH   GRP  AUTO                PH   GRP  AUTO
ROW GRP TYPE TYPE ASSIGN RMK     ROW GRP TYPE TYPE ASSIGN RMK
 9   8 ____ ____  _   _________  13  12 ____ ____  _   _________
10   9 ____ ____  _   _________  14  13 ____ ____  _   _________
11  10 ____ ____  _   _________  15  14 ____ ____  _   _________
12  11 ____ ____  _   _________  16  15 ____ ____  _   _________
```

Figure 3 SAMPLE PSUGP FORM 5E16 THROUGH 5E17 SOFTWARE RELEASES

```
psugp                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5949)         PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

*1. SM       ___    AVAILABLE PH2  __       AVAILABLE PH31 __
*2. PSU       0     AVAILABLE PH3  __       AVAILABLE PHV1 __
*3. PSU SHELF _     AVAILABLE PH4  __       AVAILABLE PHV2 __
                AVAILABLE PH22 __       AVAILABLE PHV3 __
                                        AVAILABLE PHV4 __
                                        AVAILABLE PHV5 __
                                        AVAILABLE PHV6 __
                                        AVAILABLE PHA1 __
                                        AVAILABLE PHA2 __
                                        AVAILABLE PHE2 __
                                      18. VIRTUAL       N
```

```
psugp                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5949)         PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

                19. CHANNEL GROUPS (GP)
      PH   GRP  AUTO                PH   GRP  AUTO
ROW GRP TYPE TYPE ASSIGN RMK     ROW GRP TYPE TYPE ASSIGN RMK
 1   0 ____ ____  _   _________  5   4 ____ ____  _   _________
 2   1 ____ ____  _   _________  6   5 ____ ____  _   _________
 3   2 ____ ____  _   _________  7   6 ____ ____  _   _________
```

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4 3 ____ ____ _ _____ 8 7 ____ ____ _ _____

psugp 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5949) PSU PROTOCOL HANDLER CHANNEL GROUP ASSIGNMENT

19. CHANNEL GROUPS (GP)

ROW	PH GRP	GRP TYPE	AUTO ASSIGN	RMK	ROW	PH GRP	GRP TYPE	AUTO ASSIGN	RMK
9	8	____	_	_____	13	12	____	_	_____
10	9	____	_	_____	14	13	____	_	_____
11	10	____	_	_____	15	14	____	_	_____
12	11	____	_	_____	16	15	____	_	_____

Figure 4 SAMPLE PSUGP FORM 5E18(1) AND LATER SOFTWARE RELEASES

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SEC. 3K: 5930 RECORD
X75 CLOSED USER GROUP FORM - X75CUG

1. GENERAL

The 5930 Record is available with the 5E8 Software Release. This form assigns the X.75 trunk group CUG (Closed User Group) IIC (International Interlock Code) lists. The lists are identified by a unique CUG List ID number. Each list ID number may have up to 100 unique IICs provisioned. The entire switch can have a maximum of 1600 IICs defined. These can be spread across all provisioned X.75 trunk groups.

This form is only used for X.75 trunk groups.

1.1 Recent Change View

The corresponding Recent Change View for this form is 5.14

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *CUG LIST ID

Description: Enter the CUG LIST ID number associated with a list of CUG IICs (International Interlock Codes). The CUG LIST ID is assigned to X.75 trunk groups and may have up to 100 list entries.
Valid Entries: 1 - 1600

Data Rules:

At least one entry is required in the CUG LIST.

If CUG LIST ID is entered, then an SM must be defined on the EQIM form (5700 Record) with "LOADED" entered in the CONFIGURATION field. X75CUG forms can only be entered for offices that contain an ISDN SM.

CUG LIST

The following fields (Section 2.3 - Section 2.4) define the entries in the CUG LIST. Up to 100 CUGs may be entered in the list. The entries consist of the DNIC (Data Network Identification Code) and the ICN (International Closed User Group Number). These pairs are used in establishing a virtual call by the CPE (Customer Premise Equipment) that are members of a CUG. At least one DNIC/ICN combination must be entered.

2.3 DNIC

Description: Enter the CUG (Closed User Group) DNIC (Data Network Identification Code) of the network of the coordinating administration or RPOA (Recognized Private Operating Agency). The DNIC must be unique.

If all the members of a CUG are within the same network, the DNIC is that of the home network. Otherwise, one of the networks involved is designated as the coordinating administration.
Valid Entries: 1 - 9999

Data Rules:

If this list element is entered, then the corresponding ICN list element must be entered. Each combination

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of DNIC and ICN must be unique in the CUG LIST.

2.4 ICN

Description: Enter International CUG number. This number is assigned by the CUG coordinating administration or RPOA. The number must be unique for each CUG belonging to the same network.

No more than 1600 DNIC/ICN combinations can be entered on all to the X75CUG forms in an office.
Valid Entries: 0 - 65535

Data Rules:

If this list element is entered, then the corresponding DNIC list element must be entered. Each combination of DNIC and ICN must be unique in the CUG LIST.

No more than 1600 DNIC/ICN combinations can be entered on all to the X75CUG forms in an office.

---

x75cug 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5930) X75 CLOSED USER GROUP ASSIGNMENTS

*1. CUG LIST ID 1 2. CUG LIST

ROW	DNIC	ICN	ROW	DNIC	ICN	ROW	DNIC	ICN	ROW	DNIC	ICN	ROW	DNIC	ICN
1	3100	00001	11			21			31			41		
2	3101	00002	12			22			32			42		
3	3102	00003	13			23			33			43		
4			14			24			34			44		
5			15			25			35			45		
6			16			26			36			46		
7			17			27			37			47		
8			18			28			38			48		
9			19			29			39			49		
10			20			30			40			50		

---

x75cug 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5930) X75 CLOSED USER GROUP ASSIGNMENTS

2. CUG LIST

ROW	DNIC	ICN	ROW	DNIC	ICN	ROW	DNIC	ICN	ROW	DNIC	ICN	ROW	DNIC	ICN
51			61			71			81			91		
52			62			72			82			92		
53			63			73			83			93		
54			64			74			84			94		
55			65			75			85			95		
56			66			76			86			96		
57			67			77			87			97		
58			68			78			88			98		
59			69			79			89			99		
60			70			80			90			100		

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Figure 1 SAMPLE X75CUG FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 3L: 5931 RECORD
PACKET BUSINESS GROUP FORM - PBGRP

1. GENERAL

The 5931 Record is available with 5E8 and later Software Releases. It is used to construct PBGs (Packet Business Groups) that may be assigned to packet Multi-Line Hunt Groups or to packet switching services (D-Channel, On Demand B-Channel, Permanent Packet B-Channel, and X.25 Access on a T1 facility). Any PBG assigned on an MLHG (5110 Record), DSL (5907 Record), DSLUSR (5908 Record), or XAT form (5909 Record) must be defined on this PBGRP form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * PB GRP

Description: Enter a PB GRP number to identify the Packet Business Group. This number is assigned to packet Multi-Line Hunt Groups or packet switching services, indicating membership in the Packet Business Group.

Required Field.
Valid Entries: 1 - 100

Data Rules:

A PB GRP must be defined here if it is entered in any of the following fields: PB GRP on the MLHG form, PPB1 PB GRP or PPB2 PB GRP on the DSL form, DPKT PB GRP or ODB PB GRP on the DSLUSR form, or PB GRP on the XAT form.

2.3 ABBR DIAL LENGTH

Description: Enter the number of digits to be used for abbreviated dialing within the group. This feature allows members of the PB GRP to originate calls to other members by using the last n digits of the called DN (Directory Number). The length (n) of the abbreviated code is determined by the ABBR DIAL LENGTH field.

When a call is originated using an abbreviated code, the switch will expand the code to a full packet DN by prefixing the abbreviated digits with the corresponding digits of the calling user's address. All members of the PB GRP must have the same initial digits. If the number expands to 11 digits, the first (11 - n) digits must be the same for all members of the PB GRP.

If the ABBR DIAL LENGTH field is left blank, abbreviated dialing cannot be used by members of the PB GRP.
Valid Entries: 1 - 6

Data Rules:

If a value is entered in this field, all members of the PBG must be assigned to PH3s on the PSUGP form (5949 Record).

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2.4 ABBR NBR DELIVERY

Description: Should an abbreviated calling number be delivered to the called party when one group member calls another member? If abbreviated number delivery is provisioned ("Y"), and both the calling and called DNs have the same leading digits, then only the trailing digits of the originator's DN are placed in the Calling Address field of the Incoming Call Packet. The number of trailing digits is determined by the ABBR DIAL LENGTH field; therefore, a PB GRP that subscribes to Abbreviated Number Delivery must also subscribe to Abbreviated Dialing.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this entry is "Y", a value must be entered in ABBR DIAL LENGTH.

2.5 PBG AMA

Description: Should AMA records be generated for intra-PBG calls?

Required Field.
Default: Y
Valid Entries: Y, N

2.6 BILL TN

Description: Enter a 7- or 10-digit DN (Directory Number) to be used for billing record purposes. If the PBG AMA MODULE is set to "Y" on the ISDNOPT form (5509 Record), the BILL TN will be appended to the AMA records of calls for the PB GRP.
Valid Entries: 7 or 10 digits

Data Rules:

If 10 digits are entered, the first three digits must be an NPA where N is 2 - 9, P is 0 - 1, and A is 0 - 9.

BILL TN must be entered when PBG AMA MODULE is "Y" on the ISDNOPT form.

SIMULATED FACILITY GROUP DATA

The following fields (Section 2.7 - Section 2.9) determine if the LCN (Logical Channel Number) and TPC (Throughput Class) usage will be limited for the PBG.

2.7 LCN AGGREGATE

Description: Enter the aggregate logical channel number limit. This field is used to limit the number of LCNs simultaneously utilized by the members of the PB GRP.
Default: 1024
Valid Entries: 1 - 65536

Data Rules:

If a value is entered in this field, all members of the PBG must be assigned to PH3s on the PSUGP form.

2.8 TPC AGGREGATE

Description: Enter the aggregate throughput class limit in kilobits. This field limits the TPC simultaneously utilized by the members of the PB GRP.

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Default: 8192
Valid Entries: 1 - 524288 (kilobits)

Data Rules:

If a value is entered for this field, all members of the PBG must be assigned to PH3s on the PSUGP form.

2.9 OVERFLOW TREAT

Description: Enter the overflow treatment. This entry specifies the treatment that will apply to calls originated or terminated by the PB GRP when one or both of the above aggregate limits is exceeded.

Only as many characters as make the entry unique need to be entered in this field, e.g. enter "N" for "NONE".
Default: BLOCK
Valid Entries:

Valid OVERFLOW TREAT Entries

Entry	Definition
BLOCK	The call will be denied.
NONE	The aggregates are not monitored, so no special call treatment is required.
PREMIUM	If the billable party is a member of the PBG, the AMA record will indicate a premium charge. If the billable party is not a member of the PBG, the call will be denied.

Data Rules:

When OVERFLOW TREAT is "PREMIUM" or "BLOCK", TPC AGGREGATE or LCN AGGREGATE must be entered.

If this entry is other than "NONE", all members of the PBG must be assigned to PH3s on the PSUGP form.

```
pbgrp                  5ESS Switch          _
(5931)               OFFICE DATA ADMINISTRATION
                   PACKET BUSINESS GROUP


* 1. PB GRP          1
  2. ABBR DIAL LENGTH _
  3. ABBR NBR DELIVERY N
  4. PBG AMA         Y
  5. BILL TN         __________
  SIMULATED FACILITY GROUP DATA
  6. LCN AGGREGATE    01024
  7. TPC AGGREGATE    008192
  8. OVERFLOW TREAT   BLOCK
```

Figure 1 SAMPLE PBGRP FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 3M: 5932 RECORD
TSM MONITORING TO MONITORED FORM - TELMON

1. GENERAL

The 5932 Record is available with 5E12 and later Software Releases. It is used to specify the telephone numbers which are being monitored by this ISDN line.

This form supports the Telephone Status Monitor and Select Feature. For more information, see Div. 2 Sec. 4A264.

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and office name on each record.

2.2 * MONITORING TN

Description: Enter the telephone number of the monitoring terminal.
Valid Entries: XXXXXXX or NXXXXXXXXX where N = 2 - 9 and X = 0 - 9

Data Rules:

If the first 3 digits of the 7-digit MONITORING TN(s) on the TELMON form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit MONITORING TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 CONFIG GRP

Description: This field is used to indicate the configuration group to which the terminal belongs. This is a no change field.
Valid Entries: 1 - 8 characters

MONITORED LIST

The following fields (Section 2.4) - (Section 2.8) comprise the MONITORED LIST.

2.4 CPE

Description: This field indicates the terminal component. The Component number identifies a unit which is comprised of a maximum of 254 buttons on a Customer Premises Equipment terminal. Up to eight components on a terminal are allowed. This is a no change field.
Valid Entries: 0 - 7

2.5 BUTTON

Description: This field indicates the button number to which telephone monitor status is assigned. This is a no change field.
Valid Entries: 1 - 254

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2.6 TN

Description: Enter the telephone number which is to be monitored by the monitoring ISDN terminal.
Valid Entries: XXXXXXX or NXXXXXXXXX where N = 2 - 9 and X = 0 - 9

Data Rules:

At least one TN must be specified in the MONITORED LIST.

When TN is not entered, DSS and RING must not be entered.

If the first 3 digits of the 7-digit MONITORED TN(s) on the TELMON form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit MONITORED TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.7 DSS

Description: Is this terminal allowed to use this TSM button for Direct Station Select?
Valid Entries: Y, N

2.8 RING

Description: Is a ping ring to be heard at the monitoring terminal?

Valid Values: Y, N

---

telmon 5ESS Switch
SCREEN 1 OF 8 OFFICE DATA ADMINISTRATION
(5932) TSM MONITORING TO MONITORED

*1. MONITORING TN _____ CONFIG GRP _____

3. MONITORED LIST

ROW	CPE	BUTTON	TN	DSS	RING	ROW	CPE	BUTTON	TN	DSS	RING
1	_	___	_____	_	_	9	_	___	_____	_	_
2	_	___	_____	_	_	10	_	___	_____	_	_
3	_	___	_____	_	_	11	_	___	_____	_	_
4	_	___	_____	_	_	12	_	___	_____	_	_
5	_	___	_____	_	_	13	_	___	_____	_	_
6	_	___	_____	_	_	14	_	___	_____	_	_
7	_	___	_____	_	_	15	_	___	_____	_	_
8	_	___	_____	_	_	16	_	___	_____	_	_

---

telmon 5ESS Switch
SCREEN 2 OF 8 OFFICE DATA ADMINISTRATION
(5932) TSM MONITORING TO MONITORED

3. MONITORED LIST

ROW	CPE	BUTTON	TN	DSS	RING	ROW	CPE	BUTTON	TN	DSS	RING
17	_	___	_____	_	_	27	_	___	_____	_	_
18	_	___	_____	_	_	28	_	___	_____	_	_
19	_	___	_____	_	_	29	_	___	_____	_	_
20	_	___	_____	_	_	30	_	___	_____	_	_

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21	_	___	_____	_	_	31	_	___	_____	_	_
22	_	___	_____	_	_	32	_	___	_____	_	_
23	_	___	_____	_	_	33	_	___	_____	_	_
24	_	___	_____	_	_	34	_	___	_____	_	_
25	_	___	_____	_	_	35	_	___	_____	_	_
26	_	___	_____	_	_	36	_	___	_____	_	_

---

telmon 5ESS Switch
SCREEN 3 OF 8 OFFICE DATA ADMINISTRATION
(5932) TSM MONITORING TO MONITORED

3. MONITORED LIST

ROW	CPE	BUTTON	TN		DSS RING	ROW	CPE	BUTTON	TN		DSS RING
37	_	___	_____	_	_	47	_	___	_____	_	_
38	_	___	_____	_	_	48	_	___	_____	_	_
39	_	___	_____	_	_	49	_	___	_____	_	_
40	_	___	_____	_	_	50	_	___	_____	_	_
41	_	___	_____	_	_	51	_	___	_____	_	_
42	_	___	_____	_	_	52	_	___	_____	_	_
43	_	___	_____	_	_	53	_	___	_____	_	_
44	_	___	_____	_	_	54	_	___	_____	_	_
45	_	___	_____	_	_	55	_	___	_____	_	_
46	_	___	_____	_	_	56	_	___	_____	_	_

---

telmon 5ESS Switch
SCREEN 4 OF 8 OFFICE DATA ADMINISTRATION
(5932) TSM MONITORING TO MONITORED

3. MONITORED LIST

ROW	CPE	BUTTON	TN		DSS RING	ROW	CPE	BUTTON	TN		DSS RING
57	_	___	_____	_	_	67	_	___	_____	_	_
58	_	___	_____	_	_	68	_	___	_____	_	_
59	_	___	_____	_	_	69	_	___	_____	_	_
60	_	___	_____	_	_	70	_	___	_____	_	_
61	_	___	_____	_	_	71	_	___	_____	_	_
62	_	___	_____	_	_	72	_	___	_____	_	_
63	_	___	_____	_	_	73	_	___	_____	_	_
64	_	___	_____	_	_	74	_	___	_____	_	_
65	_	___	_____	_	_	75	_	___	_____	_	_
66	_	___	_____	_	_	76	_	___	_____	_	_

---

telmon 5ESS Switch
SCREEN 5 OF 8 OFFICE DATA ADMINISTRATION
(5932) TSM MONITORING TO MONITORED

3. MONITORED LIST

ROW	CPE	BUTTON	TN		DSS RING	ROW	CPE	BUTTON	TN		DSS RING
77	_	___	_____	_	_	87	_	___	_____	_	_
78	_	___	_____	_	_	88	_	___	_____	_	_
79	_	___	_____	_	_	89	_	___	_____	_	_
80	_	___	_____	_	_	90	_	___	_____	_	_

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```
 81 _ ___ __________ _ _   91 _ ___ __________ _ _
 82 _ ___ __________ _ _   92 _ ___ __________ _ _
 83 _ ___ __________ _ _   93 _ ___ __________ _ _
 84 _ ___ __________ _ _   94 _ ___ __________ _ _
 85 _ ___ __________ _ _   95 _ ___ __________ _ _
 86 _ ___ __________ _ _   96 _ ___ __________ _ _
```

```
telmon                    5ESS Switch
SCREEN 6 OF 8             OFFICE DATA ADMINISTRATION
(5932)                TSM MONITORING TO MONITORED

                  3. MONITORED LIST
ROW CPE BUTTON TN       DSS RING ROW CPE BUTTON TN       DSS RING
 97 _ ___ __________ _ _ 107 _ ___ __________ _ _
 98 _ ___ __________ _ _ 108 _ ___ __________ _ _
 99 _ ___ __________ _ _ 109 _ ___ __________ _ _
100 _ ___ __________ _ _ 110 _ ___ __________ _ _
101 _ ___ __________ _ _ 111 _ ___ __________ _ _
102 _ ___ __________ _ _ 112 _ ___ __________ _ _
103 _ ___ __________ _ _ 113 _ ___ __________ _ _
104 _ ___ __________ _ _ 114 _ ___ __________ _ _
105 _ ___ __________ _ _ 115 _ ___ __________ _ _
106 _ ___ __________ _ _ 116 _ ___ __________ _ _
```

```
telmon                    5ESS Switch
SCREEN 7 OF 8             OFFICE DATA ADMINISTRATION
(5932)                TSM MONITORING TO MONITORED

                  3. MONITORED LIST
ROW CPE BUTTON TN       DSS RING ROW CPE BUTTON TN       DSS RING
117 _ ___ __________ _ _ 127 _ ___ __________ _ _
118 _ ___ __________ _ _ 128 _ ___ __________ _ _
119 _ ___ __________ _ _ 129 _ ___ __________ _ _
120 _ ___ __________ _ _ 130 _ ___ __________ _ _
121 _ ___ __________ _ _ 131 _ ___ __________ _ _
122 _ ___ __________ _ _ 132 _ ___ __________ _ _
123 _ ___ __________ _ _ 133 _ ___ __________ _ _
124 _ ___ __________ _ _ 134 _ ___ __________ _ _
125 _ ___ __________ _ _ 135 _ ___ __________ _ _
126 _ ___ __________ _ _ 136 _ ___ __________ _ _
```

```
telmon                    5ESS Switch       _
SCREEN 8 OF 8             OFFICE DATA ADMINISTRATION
(5932)                TSM MONITORING TO MONITORED

                  3. MONITORED LIST
ROW CPE BUTTON TN       DSS RING ROW CPE BUTTON TN       DSS RING
137 _ ___ __________ _ _ 144 _ ___ __________ _ _
138 _ ___ __________ _ _ 145 _ ___ __________ _ _
139 _ ___ __________ _ _ 146 _ ___ __________ _ _
140 _ ___ __________ _ _ 147 _ ___ __________ _ _
```

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141 _ ___ _____ _ _ 148 _ ___ _____ _ _
142 _ ___ _____ _ _ 149 _ ___ _____ _ _
143 _ ___ _____ _ _ 150 _ ___ _____ _ _

Figure 1 SAMPLE TSM MONITORING TO MONITORED FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3N: 5987 RECORD
INTERNET PROTOCOL (IP) PROCESSOR ASSIGNMENT - IPPROC

1. GENERAL

1.1 IP (Internet Protocol) Processor Assignment

The IP (Internet Protocol) Processor Assignment form provides the capability to provision up to five IP addresses and subnet masks, and associated IP, TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) parameters to a processor (SM or PH). This form was created to support the CALEA TCP/IP Core feature. For more information on this feature see Division 2, Section 4A509. This feature was first made available in the 5E14 Software Release.

1.2 Recent Change View

The corresponding Recent Change View for IPPROC is 33.1.

2. FORM ENTRIES - 5987 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *PROCESSOR ID

Description: This field specifies the ID of the processor. For SM, the SM number. For PH, the number of the SM on which the PH resides.
Valid Entries: 1 - 192

Data Rules:

The PROCESSOR ID(s) assigned on the IPPROC form, must be defined on a EQIM form with EQSTATUS of "O".

2.3 *PROCESSOR TYPE

Description: This field specifies the type of processor.
Valid Entries:

Enter SM or PH
For 5E16(2) and later, enter OIU, PH, or SM (Future MH, OKP)

WARNING: For 5E16(2) and later, set REASSEM TIMER, ICMP ERR CNT, MTU ENABLE, MTU DISC, TCP MSS, TCP START PORT, TCP DEF TTL, UDPCHKSUM EN, UDP DEF TTL, REFRESH INTRVL, and CLEANUP INTRVL to blank for PROCESSOR TYPE "OIU".

Data Rules:

When PROCESSOR TYPE is "SM", QUALIFIER 2 must not be entered.

When PROCESSOR TYPE is "SM", QUALIFIER 3 must not be entered.

When PROCESSOR TYPE is "PH", QUALIFIER 2 must be entered.

When PROCESSOR TYPE is "PH", QUALIFIER 3 must be entered.

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When the IPPROC form has PROCESSOR TYPE set to "PH", the PROCESSOR ID must be defined on a EQPSU form as SWITCHING MODULE. Also, the corresponding QUALIFIER 2 entry must be assigned on the same EQPSU form as SWITCHING MODULE and COM ADDR.

When the IPPROC form has PROCESSOR TYPE set to "PH", the combination of PROCESSOR ID (SM) and QUALIFIER 3 (SHELF/CHL GRP) must be defined on at least one of the following forms:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- ETHIP
- MISLINK
- OSPSDSL
- PCRGRP
- PSISM
- RTERM
- XAT
- TRUNK

where TRKCLS is "EDSL", "IFTERM", "IFOPER", "PACKET", "PCF", "X75", or "X75P". The PROCESSOR ID must also match the SM or the three left-most digits of OE. QUALIFIER 3 must match the three left-most digits of ISCN or SHELF/CHL GRP entered on the same form. In the case of the Trunk form where TRKCLS is "PCF", QUALIFIER 3 must match digits 5-7 of the TRKOE.

When the IPPROC forms have PROCESSOR TYPE set to "PH", and PROCESSOR ID (SM) and QUALIFIER 3 (SHELF/CHL GRP) are defined on a PSUGP form as SM and PSU SHELF/GRP respectively, the corresponding PH TYPE on the PSUGP form must be "PH3", "PH4", or "PHE2".

For 5E16(2) and later:

- when PROCESSOR TYPE is "PH",
  - QUALIFIER 2 must be entered.
  - QUALIFER 3 must be entered.
- when PROCESSOR TYPE is "OIU",
  - QUALIFIER 2 must be 0 - 7.
  - QUALIFIER 3 must be 0 - 9.
  - ROW 2 - 5 of IP ADDRESS must be blank.
  - MTU ENABLE and UPD CHKSUM must be blank.
  - OVLD TRIG must be 80 - 95.

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- UDP START PORT must be 1024 - 61503.

- when PROCESSOR TYPE is "PH" or "SM":
  - OVLD TRIG must be blank.
  - PM GROUP must be blank.
  - UDP START PORT must be 32768 - 65535.

2.4 QUALIFIER 2

Description: This field specifies the second qualifier of the processor address. For a PH, this field is the COM ADDR (PSU community address) found on the EQPSU form, Packet Switch Unit. For an SM, leave blank.
Valid Entries: For a PH enter a number from 0 - 254.

Data Rules:

The corresponding QUALIFIER 2 entry must be assigned on the same EQPSU form as COM ADDR.

2.5 QUALIFIER 3

Description: This field specifies the third qualifier of the processor's address. For an SM, leave blank.
Valid Entries:

For a PH, enter PSU shelf 0-4 and channel group 00-15.
For 5E16(2) and later, blank, or enter 000 - 009 for an OIU protection group or PSU shelf (0 - 4) and channel group (00 - 1) for PH.

IP ADDRESS

IP (Internet Protocol) addresses consisting of a Local IP address and subnet mask. At least one IP address must be specified. Refer to Section 2.6 - Section 2.7 for individual field information.

2.6 LOCAL IP ADDR

Description: Enter the Local IP Address which is to be assigned to the processor.
Valid Entries: For LOCAL IP ADDR set 1, for Class A, enter 001 - 126, for Class B, enter 128 - 191, or for Class C, enter 192 - 223. For LOCAL IP ADDR set 2, 3, and 4, enter 0 - 254; 000.000.000.000 or 255.255.255.255 is not allowed. If one set is blank they all must be blank.

Data Rules:

When LOCAL IP ADDR is entered, IP SUBNET MASK must be entered.

LOCAL IP ADDR must be 001.000.000.001 - 126.255.255.254, 128.001.000.001 - 191.254.255.254 or 192.000.001.001 - 223.255.254.254.

When LOCAL IP ADDR set 1 is 001 - 126, IP SUBNET MASK must be 255.000.000.000 or 255.192.000.000 - 255.255.255 .000.

When LOCAL IP ADDR set 1 is 128 - 191, IP SUBNET MASK must be 255.255.000.000 or

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255.255.192.000 - 255.255.255 .000.

When LOCAL IP ADDR set 1 is 192 - 223, IP SUBNET MASK must be 255.255.255.000 or 255.255.255.192 - 255.255.255 .240.

At least one LOCAL IP ADDR must be entered in the IP ADDRESS list.

LOCAL IP ADDRs in the IP ADDRESS list must be unique.

2.7 IP SUBNET MASK

Description: Enter the IP Subnet Mask to be assigned to the processor.
Valid Entries: Blank, or enter 255 for IP subnet mask set 1. Blank, or enter 0 - 255 for IP subnet mask set 2, 3, and 4.

Data Rules:

When IP SUBNET MASK is entered, LOCAL IP ADDR must be entered.

IP PARAMETER ASSIGNMENT

IP (Internet Protocol) Parameter Assignment. Refer to Section 2.8 - Section 2.11 for individual field information.

2.8 REASSEM TIMER

Description: Enter the time in seconds that the processor waits to process a packet.
Default: 60
Valid Entries: 1 - 255 seconds

2.9 ICMP ERR CNT

Description: Enter the number of bytes returned in ICMP (Internet Control Message Protocol) error reporting message for this processor.

Software Release: 5E16(2) and later
Default: 64
Valid Entries: 20 - 255 bytes.

2.10 MTU ENABLE

Description: Is the flag to indicate the maximum transmission unit discovery algorithm enabled?
Default: N
Valid Entries: Y, N

2.11 MTU DISC

Description: Enter the interval in seconds at which the path MTU (Maximum Transmission Unit) discovery algorithm tries to increase the MTU.
Default: 30
Valid Entries: 10 - 10000 seconds

2.12 OVLD TRIG

Description: This field is used to indicate the IP overload control occupancy trigger. The OVLD TRIG field supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). See Division 2, Section 7BX.

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Software Release: 5E16(2) and later
Default: 95
Valid Entries: Blank, or enter 80 - 95

TCP PARAMETER ASSIGNMENT

TCP (Transmission Control Protocol) Parameter Assignment. Refer to Section 2.13 - Section 2.15 for individual field information.

2.13 TCP MSS

Description: Enter the maximum segment size for the transmission control protocol in bytes.
Default: 536
Valid Entries: 108 - 8000 bytes

2.14 TCP START PORT

Description: Enter the lowest automatically allocated port number for a transmission control protocol connection. Modifying the TCP START PORT field may result in the tear down of any/all currently existing sockets.
Default: 49152
Valid Entries: Enter a number from 32768 - 65535.

2.15 TCP DEF TTL

Description: Enter the number of intermediate hops a packet can make before being discarded (one hop is assumed to take one second).
Default: 255
Valid Entries: Enter 1 to 255.

UDP PARAMETER ASSIGNMENT

UPD (User Datagram Protocol) Parameter Assignment. Refer to Section 2.16 - Section 2.18 for individual field information.

2.16 UDP CHK SUM EN

Description: Is the datagram protocol checksum option enabled?
Default: Y
Valid Entries: Y, N

2.17 UDP START PORT

Description: Enter the lowest automatically allocated port number for a datagram protocol connection. Modifying the UDP START PORT field may result in the tear down of any/all currently existing sockets.
Default: 49152
Valid Entries:

Enter a number from 32768 to 65535.
For 5E16(2) and later, enter a number from 0 to 65535.

2.18 UDP DEF TTL

Description: Enter the number of intermediate hops a packet can make before being discarded (one hop is assumed to take one second).
Default: 255

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Valid Entries: Enter 1 to 255.

ARP PARAMETER ASSIGNMENT

The following fields, Section 2.19 - Section 2.20 supports the PCF on PHE2 feature. For more information, see Division 2, Section 8AC.

2.19 REFRESH INTRVL

Description: This field identifies the interval (in minutes) for ARP (Address Resolution Protocol) information to be unconditionally refreshed from cache.

Software Release: 5E16(2) and later
Required Field.
Default: 20
Valid Entries: 0 - 60

2.20 CLEANUP INTRVL

Description: This field indicates the interval (in minutes) for ARP information to be discarded from the cache.
Required field.

Software Release: 5E16(2) and later
Valid Entries: 0 - 60

2.21 PM GROUP

Description: This field is used to assign a performance monitoring group to the PPPLK associated with this OIU PG.

Software Release: 5E16(2) and later
Valid Entries: Enter up to 8 alphanumeric characters.

Data Rules:

For 5E16(2) and later, PM GROUP must not equal:

- "PPPLNKG", "OSTEGDF", "OSTS1GD", "OVT1DEF", "OVT1GDF", "ODS1EDF", "ODS1SDF", "ODS1EGD", "ODS1SGD", "OSTS1DEF", "OSTS3CDF", "OC3CSTDF", "OSTS3CG", "OC3CSTDF", or "OC3CSTG".

2.22 ICMP ERR GEN

Description: This field indicates whether or not error generation is enabled or disabled. This field supports the SIP (Session Initiation Protocol) for Packet Trunking feature. For more information see Division 2, Section 4A684.
Required field.

Software Release: 5E16(2) FR 3 and later
Default: Y
Valid Entries: Y, N

2.23 IP FRAGMENT

Description: This field indicates whether or not the IP (Internet Protocol) fragmentation is enabled or disabled. This field supports the SIP (Session Initiation Protocol) for Packet Trunking feature.

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Required field.

Software Release: 5E16(2) FR 3 and later
Default: Y
Valid Entries: Y, N

2.24 MTU INTVL AFT FAIL

Description: This field indicates the interval between attemped MTU(Maximum Transmission Unit) increases, when the previous attempt to increase the PMTU {Previous MTU) has failed. This field supports the SIP (Session Initiation Protocol) for Packet Trunking feature.
Required field.

Software Release: 5E16(2) FR 3 and later
Default: 600
Valid Entries: 30 - 2400

```
ipproc                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5987)        INTERNET PROTOCOL (IP) PROCESSOR ASSIGNMENT

  *1. PROCESSOR ID   ___
  *2. PROCESSOR TYPE __
(*)3. QUALIFIER 2    ___
(*)4. QUALIFIER 3    ___

        5. IP ADDRESS
ROW LOCAL IP ADDR   IP SUBNET MASK
 1  ___.___.___.___ ___.___.___.___
 2  ___.___.___.___ ___.___.___.___
 3  ___.___.___.___ ___.___.___.___
 4  ___.___.___.___ ___.___.___.___
 5  ___.___.___.___ ___.___.___.___
```

```
ipproc                    5ESS Switch          _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5987)        INTERNET PROTOCOL (IP) PROCESSOR ASSIGNMENT

IP PARAMETER ASSIGNMENT     UDP PARAMETER ASSIGNMENT
16. REASSEM TIMER 60        23. UDP CHKSUM EN  Y
17. ICMP ERR CNT  64        24. UDP START PORT 49152
18. MTU ENABLE    N         25. UDP DEF TTL    255
19. MTU DISC      30

TCP PARAMETER ASSIGNMENT
20. TCP MSS       536
21. TCP START PORT 49152
22. TCP DEF TTL   255
```

Figure 1 SAMPLE IPPROC FORM 5E14 THROUGH 5E15 SOFTWARE RELEASES

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```
ipproc                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5987)        INTERNET PROTOCOL (IP) PROCESSOR ASSIGNMENT

 *1. PROCESSOR ID   001
 *2. PROCESSOR TYPE OIU
(*)3. QUALIFIER 2    0
(*)4. QUALIFIER 3    000

        5. IP ADDRESS
ROW LOCAL IP ADDR   IP SUBNET MASK
 1 ___.___.___.___ ___.___.___.___
 2 ___.___.___.___ ___.___.___.___
 3 ___.___.___.___ ___.___.___.___
 4 ___.___.___.___ ___.___.___.___
 5 ___.___.___.___ ___.___.___.___
```

```
ipproc                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5987)        INTERNET PROTOCOL (IP) PROCESSOR ASSIGNMENT

IP PARAMETER ASSIGNMENT     UDP PARAMETER ASSIGNMENT
16. REASSEM TIMER ___       24. UDP CHKSUM EN  _
17. ICMP ERR CNT  ___       25. UDP START PORT 49152
18. MTU ENABLE    _         26. UDP DEF TTL    ___
19. MTU DISC      _____
20. OVLD TRIG     95        ARP PARAMETER ASSIGNMENT
                         27. REFRESH INTRVL __
TCP PARAMETER ASSIGNMENT    28. CLEANUP INTRVL __
21. TCP MSS       ____
22. TCP START PORT _____    29. PM GROUP _________
23. TCP DEF TTL   ___
```

```
ipproc                    5ESS Switch          _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5987)        INTERNET PROTOCOL (IP) PROCESSOR ASSIGNMENT

30. ICMP ERR GEN       Y
31. IP FRAGMENT        Y
32. MTU INTVL AFT FAIL 600
```

Figure 2 SAMPLE IPPROC FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 3O: 5988 RECORD
INTERNET PROTOCOL (IP) INTERFACE ASSIGNMENT - IPINTF

1. GENERAL

1.1 Internet Protocol (IP) Interface Assignment

The Internet Protocol (IP) Interface Assignment form provides the capability to provision up to five IP addresses and subnet masks, and associated IP parameters to an internet interface. This form was created to support the CALEA TCP/IP Core feature. For more information on this feature see Division 2, Section 4A509. This feature was first made available in the 5E14 Software Release.

1.2 Recent Change View

The corresponding Recent Change View for IPINTF is 33.2.

2. FORM ENTRIES - 5988 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 PKT TN

Description: Enter the packet switching telephone number. that can either be an individual packet TN on a DSL (PPB1 or PPB2) or an XAT TN.
Valid Entries: Enter a 7 or 10 digit telephone number of the form NXXXXXX or NXXNXXXXXX, where N is a number from 2 to 9 and X is a number from 0 to 9.

Data Rules:

When PKT TN(s) are assigned on the IPINTF form, the PKT TN(s) must be defined on a DSL form (as PPB1 TN where PPB1 MLHG/TERM are left blank or as PPB2 TN where PPB2 MLHG/TERM are left blank), or on a XAT form (as PKT TN where PKT MLHG and TERM NBR are left blank).

When the PKT TN and LCN(s) are assigned on the IPINTF form, the PKT TN and LCN(s) must be defined on a PSPVC form with FCL TYPE equal to "INET".

2.3 PKT MLHG

Description: This field specifies the group number for a packet switching multiline hunt group.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

When the PKT MLHG/TERM(s) are assigned on the IPINTF form, they must be defined on a DSL form (as PPB1 MLHG/TERM or PPB2 MLHG/TERM), or on a XAT form (as PKT MLHG/TERM NBR).

When the PKT MLHG/PKT MEMB and LCN(s) are assigned on the IPINTF form, the PKT MLHG/PKT MEMB and LCN(s) must be defined on a PSPVC form with FCL TYPE equal to "INET".

2.4 PKT MEMB

Description: This field specifies the number of a particular member within the specified packet switching

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multiline hunt group. The PKT MLHG and PKT MEMB combination can either be an individual packet service on a DSL (PPB1 or PPB2) or an XAT.
Valid Entries: 1 - 2015

2.5 TGN

Description: This field specifies the group number for the trunk associated with the IP interface.
Valid Entries: 1 - 4000

Data Rules:

When the TGN, TGN MEMB and LCN(s) are assigned on the IPINTF form, the TGN, TGN MEMB and LCN(s) must be defined on a X75PVC form with FCL TYPE equal to "INET".

2.6 TGN MEMB

Description: This field specifies the number of a particular trunk member within the specified trunk group. Enter a number from 0 to 23.
Valid Entries: 0 - 23

2.7 OE

Description: This is a no change field that contains one alphabetic character followed by an equipment number of the following format:

Valid OE Type Entries

Entry	Definition
A	INEN [IDLC (Integrated Digital Loop Carrier) Network Equipment Number]
E	AIUEN [Digital (U Circuit) AIU (Access Interface Unit) Equipment Number]
G	GEN [GAMA-IDCU (Integrated Digital Carrier Unit) Equipment Number]
I	ISDN [Digital (U & T Card) ISLU (Integrated Services Line Unit) Equipment Number]
K	LCKEN [Digital (T & U Circuit) ISLU2 Integrated Services Line Unit 2 Equipment Number]
U	Software Release 5E16(2) and later. XAT PH Channel Group Member.

For type A, INEN [Integrated Digital Loop Carrier (IDLC) Network Equipment Number], enter (1-192) (0-7) (01-99) (0001-2048) where:

Type A, INEN [IDLC (Integrated Digital Loop Carrier) Network Equipment Number]

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Network Unit-Synchronous Optical Network	DNUS	X	0-7
Remote terminal	RT	XX	01-99
Remote Terminal	LINE	XXXX	0001-2048

For type E, AIUEN [Digital (U Circuit) AIU (Access Interface Unit) Equipment Number], enter (1-192) (000-104) (00-19) (00-15) where:

Type E, AIUEN [Digital (U Circuit) AIU (Access Interface Unit) Equipment Number]

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Access Interface Unit Two	AIU	XXX	000-104
Pack Number	PACK	XX	00-19
Circuit number	CKT	XX	00-15

For RT GEN [GAMA-Integrated Digital Carrier Unit (IDCU) Equipment Number], enter (1-192) (00-42) (01-31) (0001-2048) where:

Type G, GEN [GAMA-IDCU (Integrated Digital Carrier Unit) Equipment Number]

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Integrated Digital Carrier Unit	IDCU	XX	00-42
Remote Terminal	RT	XX	01-31

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Remote Line	LINE	XXXX	0001-2048

For ISDN [Digital (U & T Card) Integrated Services Line Unit (ISLU) Equipment Number], enter (1-192) (0-7) (00-15) (00-31) where:

Type I, ISDN [Digital (U & T Card) ISLU (Integrated Services Line Unit) Equipment Number]

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Integrated Services Line Unit	ISLU	X	0-7
Line Group Card	LGC	XX	00-15
Line card	LC	XX	00-31

For LCKEN [Digital (T & U Circuit) Integrated Services Line Unit 2 (ISLU2) Equipment Number], enter (1-192) (00-42) (00-15) (0-7) (00-07) where:

Type K, LCKEN [Digital (T & U Circuit) ISLU2 Integrated Services Line Unit 2 Equipment Number]

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Integrated Services Line Unit Two	ISLU2	XX	00-42
line group card	LGC	X	00-15
line board	L Board	X	0-7
Line Circuit	L Circuit	XX	00-07

For 5E16(2) and later, if OE is set to "UEN", this OE Number consists of:

OE Number, Type U (5E16(2) and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Packet Switching Unit	PSU	X	0 - 1
Shelf	SH	X	0 - 4
Channel Group	CHGRP	XX	01 - 15
Channel	CHAN	XXX	001 - 127

2.8 ISCN

Description: This is a no change field. This field specifies the ISCN to which the address is to be assigned.
Valid Entries: SU shelf [0-4] CHL group [00-15] PH chan [000-127]

2.9 LCN

Description: This field defines the Logical Channel Number for the packet switching interface.
Valid Entries: 1 - 27

2.10 INTERFACE NAME

Description: This field specifies the name of the interface.
Valid Entries: Enter name starting with an alphanumeric character followed by 4 to 18 characters including ".", "_" or "-".

Data Rules:

The INTERFACE NAMEs entered on the IPINTF form cannot be duplicated on one or more IPINTF forms.

IP ADDRESS

Enter the gateway or interface addresses consisting of an IP address and subnet mask. At least one IP address must be specified. Refer to Section 2.11 - Section 2.12 for individual field information.

2.11 GATEWAY IP ADDR

Description: IP address to be assigned to the interface.
Valid Entries: For Gateway IP address set 1, for Class A enter 001 - 126, for Class B 128 - 191, or for

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Class C 192 - 223. For Gateway IP address set 2, 3, and 4, enter 0 - 255; 000.000.000.000 or 255.255.255.255 is not allowed.

Data Rules:

When GATEWAY IP ADDR is entered, IP SUBNET MASK must be entered.

GATEWAY IP ADDR must be 001.000.000.001 - 126.255.255.254, 128.001.000.001 - 191.254.255.254 or 192.000.001.001 - 223.255.254.254.

When GATEWAY IP ADDR set 1 is 001 - 126, IP SUBNET MASK must be 255.000.000.000 or 255.192.000.000 - 255.255.255 .000.

When GATEWAY IP ADDR set 1 is 128 - 191, IP SUBNET MASK must be 255.255.000.000 or 255.255.192.000 - 255.255.255 .000.

When GATEWAY IP ADDR set 1 is 192 - 223, IP SUBNET MASK must be 255.255.255.000 or 255.255.255.192 - 255.255.255 .240.

At least one GATEWAY IP ADDR must be entered in the IP ADDRESS list.

GATEWAY IP ADDRs in the IP ADDRESS list must be unique.

The GATEWAY IP ADDR(s) entered on the ETHIP and IPINTF forms cannot equal the LOCAL IP ADDR(s) entered on the IPPROC form, all GATEWAY IP ADDR(s) and LOCAL IP ADDR(s) must be unique in the office.

2.12 IP SUBNET MASK

Description: IP subnet mask to be assigned to the interface.
Valid Entries: Enter 255 for IP subnet mask set 1. Enter 0 - 255 for IP subnet mask set 2, 3, and 4.

Data Rules:

When IP SUBNET MASK is entered, GATEWAY IP ADDR must be entered.

2.13 MCAST ADDR

Description: This field defines the multicast address for the interface.
Valid Entries: Blank, or enter 224 - 239 for Multicast IP address set 1. Blank, or enter 0 - 255 for Multicast IP address set 2, 3, and 4.

2.14 MTU SIZE

Description: This field defines the maximum number of bytes per transfer from this interface.

Required field.
Default: 256
Valid Entries: 128 - 1600

2.15 CALEA IN USE

Description: Is this interface in use by the CALEA Application?

Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

The Communication Assistance for Law Enforcement Act is a secured feature that must be purchased by the office before the CALEA IN USE field on the IPINTF form can be set to "Y".

```
ipintf                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5988)          INTERNET PROTOCOL (IP) INTERFACE ASSIGNMENT

(*)1. PKT TN        __________              12. IP ADDRESS
(*)2. PKT MLHG      ____                ROW GATEWAY IP ADDR IP SUBNET MASK
(*)3. PKT MEMB      ____                 1 ___.___.___.___ ___.___.___.___
(*)4. TGN           ____               2 ___.___.___.___ ___.___.___.___
(*)5. TGN MEMB      __                   3 ___.___.___.___ ___.___.___.___
    OE            _ ____________         4 ___.___.___.___ ___.___.___.___
    ISCN          ______               5 ___.___.___.___ ___.___.___.___
 *10. LCN         ___
 #11. INTERFACE NAME ____________________   23. MCAST ADDR    ___.___.___.___
                          28. MTU SIZE    256
                          29. CALEA IN USE N
```

Figure 1 SAMPLE IPINTF FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 3P: 5989 RECORD
INTERNET PROTOCOL (IP) ROUTING TO INTERFACE - IPROUT

1. GENERAL

1.1 Internet Protocol (IP) Interface Routing to Interface

The Internet Protocol (IP) Interface Routing form provides the capability to provision an IP gateway between an external IP destination and a local IP interface. This form was created to support the CALEA TCP/IP Core feature. For more information on this feature see Division 2, Section 4A509. This feature was first made available in the 5E14 Software Release.

1.2 Recent Change View

The corresponding Recent Change View for IPROUT is 33.3 .

2. FORM ENTRIES - 5989 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 DEST IP ADDR

Description: This field specifies one of the network or host IP addresses that can be reached via this route.
Valid Entries: For Destination IP address set 1, enter 001 - 126 for Class A, 128 - 191 for Class B, or 192 - 223 for Class C, or 000. For Destination IP address set 2, 3, and 4, enter 0 - 255. All four sets must be entered; 000.000.000 or 255.255.255.255 is not allowed.

2.3 INTERFACE NAME

Description: This field specifies the name of an interface.
Valid Entries: Enter name starting with an alphanumeric character followed by 4 to 18 characters including ".", "_" or "-".

Data Rules:

The INTERFACE NAMEs entered on the IPROUT form must be defined on a ETHIP or IPINTF form with the same GATEWAY IP ADDR(s) on the IPINTF only. If a ETHIP form,was found, then the GATEWAY IP ADDR on the IPROUT form must be defined on the same ETHIP form (where INTERFACE NAMEs match) as GATEWAY IP ADDRESS.

If a IPINTF form was found, then the GATEWAY IP ADDR on the IPROUT form must be defined on the same IPINTF form (where INTERFACE NAMEs match) as one of the GATEWAY IP ADDR(s) from the list.

The KEY FIELDS lists the keys for the ETHIP or IPINTF form. If neither form was found with the same INTERFACE NAME value then KEY FIELDS will be blank."

2.4 NET OR HOST

Description: This field indicates if the destination IP address given is a network or host IP address.
Default: NET
Valid Entries: Enter NET or HOST.

Data Rules:

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When NET OR HOST is "NET", DEST IP ADDR must be [001 - 126].000.000.000, [128.001 - 191.254].000.000 or [192.000.001 - 223.255.254].000.

When NET OR HOST is "HOST", DEST IP ADDR must be 001.000.000.001 - 126.25 5.255.254, 128.001.000.001 - 191.254.255.254 or 192.000.001.001 - 223.255.254.254.

When NET OR HOST is "NET" and DEST IP ADDR set 1 is 001 - 126, IP SUBNET MASK must be 255.000.000.000 or 255.192.000.000 - 255.255.255 .000.

When NET OR HOST is "NET" and DEST IP ADDR set 1 is 128 - 191, IP SUBNET MASK must be 255.255.000.000 or 255.255.192.000 - 255.255.255 .000.

When NET OR HOST is "NET" and DEST IP ADDR set 1 is 192 - 223, IP SUBNET MASK must be 255.255.255.000 or 255.255.255.192 - 255.255.255 .240.

When NET OR HOST is "NET", IP SUBNET MASK must be entered.

2.5 IP SUBNET MASK

Description: This field specifies the subnetwork mask associated with the destination IP address.
Default: set 1 is 255 for "NET", blank for "HOST"
Valid Entries: Blank, or enter 255 for IP subnet mask set 1. Blank, or enter 0 - 255 for IP subnet mask set 2, 3, and 4.

Data Rules:

If set 1 is blank, all must be blank.

If set 1 is known, all must be known.

2.6 GATEWAY IP ADDR

Description: This field specifies the IP address of the gateway through which data is sent to the destination.
Valid Entries: For Gateway IP address set 1, enter 001 - 126 for Class A, 128 - 191 for Class B, or 192 - 223 for Class C. For Gateway IP address set 2, 3, and 4, enter 0 - 255.

2.7 ROUTE METRIC

Description: This field specifies the route metric associated with the routing path. This is used for load balancing in multi-routing.
Default: 1
Valid Entries: Enter 1 - 255

```
iprout                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(5989)          INTERNET PROTOCOL (IP) ROUTING TO INTERFACE

 *1. DEST IP ADDR     ___.___.___.___
 *6. INTERFACE NAME _____________________
  7. NET OR HOST    NET
  8. IP SUBNET MASK   ___.___.___.___
#13. GATEWAY IP ADDR  ___.___.___.___
 18. ROUTE METRIC   1
```

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Figure 1 SAMPLE IPROUT FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 3Q: 5991 RECORD - PACKET SWITCH UNIT GATEWAY PSUGW

1. GENERAL

Available for 5E15 FR4 and later, this form supports the PSU (Packet Switching Unit) CA (Community Address) Expansion (99-5E-8012) feature. It is used to assign a gateway community address to a PSU in a wireless network. See Division 2, Section 7BH.

1.1 Recent Change View

The corresponding Recent Change View for this view is 22.26.

2. FORM ENTRIES - 5991 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the SM number.
Valid Entries: 0 - 192

2.3 *PSU 0

Description: Enter the PSU (Packet Switch Unit) number.
Default: 0
Valid Entries:

5E15 and earlier: 0
5E16 and later: 0 - 1

GATEWAY ADDRESSES

The following fields (Section 2.4 - Section 2.7) allow assignment of gateway community addresses to a PSU. Note also that NETWORK 0 - 3 must not be equal to the COM ADDR on the associated EQPSU form.

2.4 NETWORK 0

Description: Enter the Gateway Address of Network 0.
Valid Entries: Blank, or 1 - 254

Data Rules:

NETWORK 0 and 1 cannot be identical.

NETWORK 0 and 2 cannot be identical.

NETWORK 0 and 3 cannot be identical.

For 5E17(1) FR1 and later, twice the value of every GATEWAY ADDRESS on this form cannot equal to VPI on the INTERPSU form (5993 Record).

For 5E17(1) FR1 and later, twice the value of every GATEWAY ADDRESS on this form cannot equal to

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HIGH PRIORITY VPI on the INTRAPSU form (5992 Record).

2.5 NETWORK 1

Description: Enter the Gateway Address of Network 1.
Valid Entries: Blank, or 1 - 254

Data Rules:

NETWORK 1 and 2 cannot be identical.

NETWORK 1 and 3 cannot be identical.

2.6 NETWORK 2

Description: Enter the Gateway Address of Network 2.
Valid Entries: Blank, or 1 - 254

Data Rules:

NETWORK 2 and 3 cannot be identical.

2.7 NETWORK 3

Description: Enter the Gateway Address of Network 3.
Valid Entries: Blank, or 1 - 254

2.8 FEATURE ACTIVE

Description: Is the PSU Community Expansion feature active?
Default: N
Valid Entries: Y, N

Data Rules:

When Y is entered,

- there must be a matching PSULNK form for each GATEWAY PHA where CON TYPE is "ATMGW".
- all of the PSUGW forms in the 5ESS office must have the same SUBNETWORK ID.
- one of the gateway addresses must be entered.

For 5E17(1) FR1 and later, for every PSUGW form where FEATURE ACTIVE is "Y", there must be a matching ATMLNK (5592 Record) or PSULNK (5057 Record) form with CHANNELS CON TYPE set to "ATMNET".

For 5E17(1) FR1 and later, every PSUGW form where FEATURE ACTIVE is "Y" with a matching ATMLNK form, and if this ATMLNK form has a CHANNELS list with CON TYPE equal to "ATMNET"., then the ATMLNK must have a corresponding INTERPSU form with FAR SUBNET ID different from SUBNET ID on the CDMAOPT form.

2.9 SUBNETWORK ID

Description: Enter the Subnetwork ID number.
Default: 0
Valid Entries: 0 - 3

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Data Rules:

When SUBNETWORK is 0, NETWORK 0 must not be entered.

When SUBNETWORK is 1, NETWORK 1 must not be entered.

When SUBNETWORK is 2, NETWORK 2 must not be entered.

When SUBNETWORK is 3, NETWORK 3 must not be entered.

```
psugw                    5ESS Switch        _
                   OFFICE DATA ADMINISTRATION
(5991)                   PSU COMMUNITY EXPANSION

*1. SM ___          7. FEATURE ACTIVE N
*2. PSU 0           8. SUBNETWORK ID  0

GATEWAY ADDRESSES
 3. NETWORK 0 ___
 4. NETWORK 1 ___
 5. NETWORK 2 ___
 6. NETWORK 3 ___
```

Figure 1 SAMPLE PSUGW FORM 5E15 FR4 THROUGH 5E16(2) SOFTWARE RELEASES

```
psugw                    5ESS Switch        _
                   OFFICE DATA ADMINISTRATION
(5991)                   PSU COMMUNITY EXPANSION

*1. SM ___          7. FEATURE ACTIVE N
*2. PSU 0

GATEWAY ADDRESSES
 3. NETWORK 0 ___
 4. NETWORK 1 ___
 5. NETWORK 2 ___
 6. NETWORK 3 ___
```

Figure 2 SAMPLE PSUGW FORM 5E17(1) FR 1 AND LATER SOFTWARE RELEASES

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SEC. 3R: PACKET SWITCH COMPONENT - PSCOMP

1. GENERAL

This form is available with the 5E16 and later Software Releases. It is used to define hardware assignments within packet components.

1.1 Recent Change View

This form has no corresponding Recent Change View.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM NUMBER

Description: This field is used to indicate the Switching Module number associated with the component.

Software Release: 5E16 and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

The combination of SM NUMBER, COMPONENT TYPE, and COMPONENT ID on this form, must be defined on the MGPCOMP form (6921 Record).

2.3 * COMPONENT TYPE

Description: This field identifies the type of component.

Software Release: 5E16 and later
Required Field.
Valid Entries:

Valid TMS COMPONENT TYPE Entries

Entry	Description
LAG	Line Access Gateway
TAG	Trunk Access Gateway

Data Rules:

When COMPONENT TYPE is "LAG":

- only slots 1 - 14 may be entered.
- CARD TYPE must not be "STS-1".

When COMPONENT TYPE is "TAG":

- only slots 11 - 14 may be entered.
- CARD TYPE must be blank or "STS-1".

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2.4 * COMPONENT ID

Description: This field identifies the ID of the component assigned to the packet line/trunk.

Software Release: 5E16 and later
Required Field.
Valid Entries: 1 - 105

2.5 # COMPONENT NAME

Description: This field identifies the name of the component.

Software Release: 5E16 and later
Required Field.
Valid Entries: 1 - 20 characters

Data Rules:

COMPONENT NAME can not be duplicated on another PSCOMP form.

2.6 EMS NAME

Description: This field is the element manager name assigned to the LAG/TAG.

Software Release: 5E16 and later
Valid Entries: 1 - 11 characters

2.7 NEXT LAG

Description: This field indicated the next lag in the daisy chain.

Software Release: 5E16 and later
Valid Entries: 1 - 20 characters

2.8 PREVIOUS LAG

Description: This field indicated the previous lag in the daisy chain.

Software Release: 5E16 and later
Valid Entries: 1 - 20 characters

2.9 CLEI

Description: The Common Language Equipment Identifier field is a 10 character alphanumeric code assigned to telecommunication equipment.

Software Release: 5E16 and later
Valid Entries: blank or 1 - 10 characters

2.10 CARD TYPE

Description: This field indicates the type of card provisioned in a particular slot of the component. This is a Display Only field.

Software Release: 5E16 and later
Valid Entries: COIN, ISDN BRI, POTS, POTS+ADSL, or STS-1

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```
pscomp                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
                    PACKET SWITCH COMPONENT

*1. SM NUMBER      ___                      SLOT
*2. COMPONENT TYPE ___                SLOT CARD     SLOT CARD
*3. COMPONENT ID   ___               NO   TYPE     NO   TYPE
#4. COMPONENT NAME _____________________     1 _________    9 _________
 5. EMS NAME       ___________               2 _________   10 _________
                                3 _________   11 _________
                                4 _________   12 _________
                                5 _________   13 _________
                                6 _________   14 _________
                                7 _________   15 _________
                                8 _________   16 _________
```

Figure 1 SAMPLE PSCOMP FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 3S: 5995 RECORD
INTERNET PROTOCOL (IP) INTERFACE ASSIGNMENT - ETHIP

1. GENERAL

This form provides the ethernet capability to provision IP addresses, subnet masks, and associated IP parameters to an internet interface. This form was created to support the PCF (Packet Control Function) on PHE2 (PH30 with Ethernet Link) feature. For more information on this feature see Division 2, Section 8AC. This feature was first made available in the 5E16(1) FR1 (Feature Release 1) Software Release.

1.1 Recent Change View

The corresponding Recent Change View for ETHIP is 33.4.

2. FORM ENTRIES - 5995 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: This field identifies the Switching Module number.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

SM, PSU, SHELF and CHANNEL GROUP must correspond to a Protocol Handler Logical Channel Group with a PH TYPE of "PHE2" on the PSUGP form (5949 Record).

When SM, PSU, SHELF, and CHANNEL GROUP matches the first seven digits of the TRKOE on the TRUNK form (5204 Record), and the TRKGRP form (5202 Record) has TRKCLS equal to "PCF", RATE must be 100, MODE must be "F", and MTU SIZE must be 1500 on the ETHIP form.

2.3 * PSU

Description: This field identifies the Packet Switching Unit associated with the SM.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 or 1

2.4 * SHELF

Description: This field specifies the Shelf number where the PSU is located.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 - 4

2.5 * CHANNEL GROUP

Description: This field specifies the Channel Group number.

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Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 - 15

2.6 # INTERFACE NAME

Description: This field specifies the name of the interface.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 1 - 19 alphanumeric characters

Data Rules:

The INTERFACE NAMEs entered on the IPINTF form must be unique in a given office.

2.7 # PHE LINK

Description: This field specifies the Protocol Handler Ethernet link number.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 1 - 48

Data Rules:

PHE LINK cannot be duplicated for a given combination of SM/PSUon this and the PCRGRP form (5883 Record)..

The total number of ETHIP forms cannot exceed 48 per SM.

For 5E16(2) FR 3 and later, when PHE LINK is greater than 10, the ACT field for SFID 684 on the SFSYS form (5713-1 Record) must be "Y".

2.8 # GATEWAY IP ADDR

Description: This field specifies the IP Address to be assigned to the interface. For 5E16(2) FR 3 and later, this field is being replaced with 2 new fields and renamed GATEWAY IP ADDRESS 1 and GATEWAY IP ADDRESS 2. This change supports the SIP (Session Initiation Protocol) for Packet Trunking feature. For more information see Division 2, Section 4A684.

2.9 # GATEWAY IP ADDR 1

Description: This field specifies the IP Address 1 to be assigned to the interface.

Software Release: 5E16(1) and later
Required Field.
Valid Entries:

Set 1 (001 - 126 for Class A; 128 - 191 for Class B; or 192 - 223 for Class C)
Set 2,3, and 4 (0 - 255)

Data Rules:

For 5E16(2) FR 3 and later, GATEWAY IP ADDRESSes on the ETHIP and IPINTF forms (5988 Record), and the LOCAL IP ADDRs on the IPPROC form (5987 Record) must be unique in a given office.

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GATEWAY IP ADDRESS 1 cannot be equal to GATEWAY IP ADDRESS 2.

2.10 # IP SUBNET MASK

Description: This field specifies the IP Subnet Mask to be assigned to the interface. For 5E16(2) FR 3 and later, this field is being replaced with 2 new fields and renamed IP SUBNET MASK 1 and IP SUBNET MASK 2. This changes support the SIP (Session Initiation Protocol) for Packet Trunking feature.

2.11 # IP SUBNET MASK 1

Description: This field specifies the IP Subnet Mask 1 to be assigned to GATEWAY IP ADDRESS 1 of the interface.

Software Release: 5E16(2) and later
Required Field.
Valid Entries:

Set 1 (255)
Set 2, 3, and 4 (0 -255)

2.12 # GATEWAY IP ADDR 2

Description: This field specifies the IP Address 2 to be assigned to the interface.

Software Release: 5E16(2) and later
Valid Entries:

Set 1 (001 - 126 for Class A; 128 - 191 for Class B; or 192 - 223 for Class C)
Set 2,3, and 4 (0 - 255)

Data Rules:

For 5E16(2) FR 3 and later, GATEWAY IP ADDRs must not match LOCAL IP ADDRs and all GATEWAY IP ADDRs and LOCAL IP ADDRs must be unique in a given office.

When GATEWAY IP ADDR 2 is 001 - 126, IP SUBNET MASK 2 must be 255.000.000.000 - 255.255.255.252.

A Class A GATEWAY IP ADDR 2 cannot be XXX.000.000.000 or XXX.255.255.

When GATEWAY IP ADDR 2 is 128 - 191, IP SUBNET MASK 2 must be 255.255.000.000 - 255.255.255.252.

A Class B GATEWAY IP ADDR 2 cannot be XXX.XXX.000.000 or XXX.XXX.255.

When GATEWAY IP ADDR 2 is 192 - 223, IP SUBNET MASK 2 must be 255.255.255.000 - 255.255.255.252.

A Class C GATEWAY IP ADDR 2 cannot be XXX.XXX.XXX.000 or XXX.XXX.XXX.255.

When GATEWAY IP ADDRESS 2 is blank, IP SUBNET MASK 2 must be blank.

2.13 # IP SUBNET MASK 2

Description: This field specifies the IP Subnet Mask 2 to be assigned GATEWAY IP ADDRESS 1 of the interface.

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Software Release: 5E16(2) and later
Valid Entries:

Set 1 (255)
Set 2, 3, and 4 (0 -255)

2.14 MCAST ADDR

Description: This field defines the Multicast Address for the interface.
Valid Entries: Blank, or enter 224 - 239 for Multicast IP ddress set 1. Blank, or enter 0 - 255 for Multicast IP address set 2, 3, and 4.

2.15 MTU SIZE

Description: This field defines the maximum number of bytes per transfer from this interface.

Software Release: 5E16(1) and later
Required Field.
Default: 1500
Valid Entries: 256 - 1600

Data Rules:

MTU SIZE must be 1500 for any SM+PSU+SHELF+CHANNEL GROUP combination entered on the PCRGRP form (5883 Record).

ETHERNET DATA

The following fields, Section 2.16 - Section 2.17 , are used to indicate the rate and mode of the data flow for individual field information.

2.16 # RATE

Description: This field is used to indicate the rate associated with the speed of the ethernet link.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 10 - 100

Data Rules:

When RATE is "A" then MODE must also be "A".

2.17 # MODE

Description: This field identifies the mode used for the data flow of the ethernet connection.
Valid Entries:

Valid MODE Entries

Entry	Definition
A	Auto
F	Full
H	Half
N	Null

Data Rules:

When MODE is "A" then RATE must also be "A".

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```
ethip                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5995)     ETHERNET INTERNET PROTOCOL (IP) INTERFACE ASSIGNMENT

*1. SM          ___              #7. GATEWAY IP ADDRESS ___.___.___.___
*2. PSU          _               #12. IP SUBNET MASK    ___.___.___.___
*3. SHELF        _
*4. CHANNEL GROUP  __                17. MCAST ADDR ___.___.___.___
#5. INTERFACE NAME _____________________   22. MTU SIZE   0256
#6. PHE LINK      __                23. RATE      100
                            #24. MODE      _
```

Figure 1 SAMPLE ETHIP FORM 5E16(1) SOFTWARE RELEASE

```
ethip                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5995)     ETHERNET INTERNET PROTOCOL (IP) INTERFACE ASSIGNMENT

*1. SM          ___
*2. PSU          _
*3. SHELF        _
*4. CHANNEL GROUP  __
#5. INTERFACE NAME _____________________
#6. PHE LINK      __
```

```
ethip                    5ESS Switch          _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5995)     ETHERNET INTERNET PROTOCOL (IP) INTERFACE ASSIGNMENT

 #7. GATEWAY IP ADDRESS 1 ___.___.___.___
#12. IP SUBNET MASK 1    ___.___.___.___
 17. GATEWAY IP ADDRESS 2 ___.___.___.___
 22. IP SUBNET MASK 2    ___.___.___.___

 27. MCAST ADDR ___.___.___.___
 32. MTU SIZE   0256
 33. RATE       A
 34. MODE       A
```

Figure 2 SAMPLE ETHIP FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 3T: 5996 RECORD
PCF OFFICE PARAMETERS - PCFOPT

1. GENERAL

The PCF (Packet Control Function) Office Parameters form is used to assign office-wide PCF parameters. This form was created to support the PCF on PHE2 (PH30 with Ethernet Link) feature. For more information on this feature see Division 2, Section 8AC. This feature was first made available in the 5E16(1) FR1 (Feature Release 1) Software Release.

1.1 Recent Change View

The corresponding Recent Change View for PCFOPT is 34.1.

2. FORM ENTRIES - 5996 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * KEY

Description: The KEY field is the key for accessing the appropriate relation. In this case it is always 0.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0

2.3 UDP PORT

Description: This field specifies the User Datagram Protocol port number. It is used for both source and destination.

Software Release: 5E16(1) and later
Valid Entries: 0 - 65535

2.4 MS FWD DORM BUF

Description: This field specifies the MS (Mobile Station) Forward Dormancy Buffer number.

Software Release: 5E16(1) and later
Valid Entries: 0 - 32

2.5 BUSY REACT TIMER

Description: This field specifies the Busy Reactivation Timer number.

Software Release: 5E16(1) and later
Valid Entries: 0 - 255

2.6 PDSN RETRY

Description: This PDSN (Packet Data Serving Node) Retry field specifies the number of attempts to resend.

Software Release: 5E16(1) and later
Valid Entries: 1 - 10

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2.7 PDSN OOS INTRVL

Description: This field specifies the PCF PDSN out-of-service (OOS) periodic interval used to retry new connections to a failed PDSN.

Software Release: 5E16(1) and later
Valid Entries: 5 - 65535

2.8 PDSN LIFETIME

Description: This field specifies the PDSN life time in seconds.

Software Release: 5E16(1) and later
Valid Entries: 600 - 65535

2.9 PDSN TIME TOL

Description: This field specifies the PDSN time tolerance in seconds.

Software Release: 5E16(1) and later
Valid Entries: 1 - 255

2.10 ACCOUNT WAIT TMR

Description: The PCF Accounting Wait Timer field specifies the delay from the actual time the mobile begins using the airlink.

Software Release: 5E16(1) and later
Valid Entries: 1 - 10

2.11 TREGREQ TIMEOUT

Description: This field is the maximum time the PCF waits for a PDSN reply message from another PDSN.

Software Release: 5E16(1) and later
Valid Entries: 1000 - 5000

2.12 TREGREQ DELAY TMR

Description: The Tregreq Delay Timer field represents the delay timer for the ECP (Executive Cellular Processor) dormant link layer connection closure.

Software Release: 5E16(1) and later
Valid Entries: 0 - 30

2.13 BS/MSC ID

Description: This field specifies the BS/MSC (Base Station/Mobile Switching Center) identification to be sent to the PDSN in registration request messages.

Software Release: 5E16(1) and later
Valid Entries: 0 - 12 characters

2.14 MAX DORM SESSIONS

Description: This field specifies the total number of dormant sessions for each PCF in an office.

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Software Release: 5E16(1) and later
Valid Entries: 1 - 100000

2.15 PER MIN THRESHOLD

Description: This field specifies the PCF A11/A10 PER (Protocol Error Record) minimum threshold.

Software Release: 5E16(1) and later
Valid Entries: 1 - 4094

2.16 PER MAX THRESHOLD

Description: This field specifies the PCF A11/A10 PER (Protocol Error Record) maximum threshold.

Software Release: 5E16(1) and later
Valid Entries: 2 - 4095

2.17 PER LEAK COUNT

Description: This field specifies the PER Leaky Bucket leak count.

Software Release: 5E16(1) and later
Valid Entries: 0 - 511

GRE PARAMETERS

The following fields, Section 2.18 Section 2.20 , are used to indicate the information about the Generic Routing Encapsulation fields.

2.18 GRE MAX BUFFER

Description: This field specifies the max PER (Protocol Errror Record) flow sequence buffer for the GRE protocol. This is a no change field.

Software Release: 5E16(1) and later

2.19 GRE OUT OF ORDER

Description: This field specify the out of timeout for the GRE protocol. This is a no change field.

Software Release: 5E16(1) and later

2.20 GRE PKT DISC LIMIT

Description: This field specifies the consecutive packet discard limit for GRE protocol.

Software Release: 5E16(1) and later
Valid Entries: N/A

2.21 CELL ID ENABLE

Description: This field indicates whether or not the Cell ID is enabled.

Software Release: 5E16(1) and later
Default: N
Valid Entries: Y, N

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2.22 CELL FACE ENABLE

Description: This field indicates whether or not the Cell Face is enabled.

Software Release: 5E16(1) and later
Default: N
Valid Entries: Y, N

When CELL FACE ENABLE is "Y", CELL ID ENABLE must also be "Y".

2.23 CELL INFO ORDER

Description: This field informs the PCF how to structure the BSID Cell Identifier Type 2 Octets when CELL ID ENABLE is set to "Y".

Software Release: 5E17(1) and later
Default: N
Valid Entries: Y, N

Y (to switch order)
N (to not switch order)

2.24 ACT TIME PARM

Description: This field determines if the Active Timer Parameter in the Active Stop Airlink record is sent using the IS-835 or IS-835-B standard.

Software Release: 5E17(1) and later
Default: N
Valid Entries: Y, N

Y (IS-835-B)
N (IS-835))

2.25 HDLC FRAMING

Description: This field indicated whether or not the HDLC (High Data Levell Link Control) is on or off.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

PCF SECURITY

These fields (Section 2.26 - Section 2.28) support the PCF (Packet Control Function) Security on PHE2 (Protocol Handler Ethernet 2) feature. For more information on this feature see, Division 2, Section 8AI. All of these fields are no_change fields.

2.26 PCF PHE2 LIMIT

Description: This field specifies the number of allowed PCF PHEs in the office.

Software Release: 5E17(1) FR 2 and later
Valid Entries: No Change

2.27 PCF PHE2 PROV

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Description: This field specifies the number of provisioned PCF PHEs in the office.

Software Release: 5E17(1) FR 2 and later
Valid Entries: No Change

2.28 PCF PHE2 PSWD

Description: This field provides the password for changing PCF PHE LIMIT.

Software Release: 5E17(1) FR 2 and later
Valid Entries: No Change

APIT PARAMATERS

These fields (Section 2.29 - Section 2.34) support the 3G-1X HSPD (High Speed Packet Data) Performance for Chatty Applications feature. For more information on this feature see, Division 2, Section 8AL.

2.29 INIT TIMER

Description: This field is used to specify the initial timer value of APIT (Adaptive Packet Inactivity Timer) when it is recalculated by PCF.

Software Release: 5E17(1) FR 3
Default: 15,000
Valid Entries: 5000 - 60000 milliseconds

2.30 INACT TIME

Description: This field is used to specify the inactivity time for APIT after it is initialized.

Software Release: 5E17(1) FR 3
Default: 10,000
Valid Entries: 0 - 60000 milliseconds

2.31 REACT COST

Description: This field is used to specify the cost of call release and reactivation when PCF recalculates the APIT.

Software Release: 5E17(1) FR 3
Default: 7500
Valid Entries: 1000 - 30000 milliseconds

2.32 LOCAL MARGIN

Description: This field is used to specify the margin of a locality when PCF recalculates the APIT.

Software Release: 5E17(1) FR 3
Default: 2000
Valid Entries: 0 - 10000 milliseconds

2.33 INTER ARRIVAL

Description: This field is used to specify the average chatty inter-arrival time when PCF recalculates the APIT.

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Software Release: 5E17(1) FR 3
Default: 5000
Valid Entries: 0 - 25000 milliseconds

2.34 STEP DOWN SIZE

Description: This field is used to specify the step size for timer reduction when PCF recalculates the APIT.

Software Release: 5E17(1) FR 3
Default: 10
Valid Entries: 1 - 50 percent

```
pcfopt                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5996-1)      PACKET CONTROL FUNCTION (PCF) OFFICE PARAMETERS

 *1. KEY           0          13. MAX DORM SESSIONS 020000
  2. UDP PORT      699
  3. MS FWD DORM BUF  08             PER PARAMETERS
  4. BUSY REACT TMR   30         14. PER MIN THRESHOLD 100
  5. PDSN RETRY       3          15. PER MAX THRESHOLD 0400
  6. PDSN OOS INTRVL  00600      16. PER LEAK COUNT    50
  7. PDSN LIFETIME    01800
  8. PDSN TIME TOL    7              GRE PARAMETERS
  9. ACCOUNT WAIT TMR 3          18. GRE OUT OF ORDER  500
 10. TREGREQ TIMEOUT  2000       19. GRE MAX BUFFER    6
 11. TREGREQ DELAY TMR 10        20. GRE PKT DISC LIMIT 5
#12. BSID          ____________
```

```
pcfopt                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5996-1)      PACKET CONTROL FUNCTION (PCF) OFFICE PARAMETERS

21. CELL ID ENABLE   N
22. CELL FACE ENABLE N
```

Figure 1 SAMPLE PCFOPT FORM 5E16(1) THROUGH 5E16(2) SOFTWARE RELEASES

```
pcfopt                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5996-1)      PACKET CONTROL FUNCTION (PCF) OFFICE PARAMETERS

 *1. KEY           0          13. MAX DORM SESSIONS 020000
  2. UDP PORT      699
  3. MS FWD DORM BUF  08             PER PARAMETERS
  4. BUSY REACT TMR   30         14. PER MIN THRESHOLD 100
  5. PDSN RETRY       3          15. PER MAX THRESHOLD 0400
  6. PDSN OOS INTRVL  00600      16. PER LEAK COUNT    50
  7. PDSN LIFETIME    01800
  8. PDSN TIME TOL    7              GRE PARAMETERS
```

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```
 9. ACCOUNT WAIT TMR  3          18. GRE OUT OF ORDER   500
10. TREGREQ TIMEOUT   2000       19. GRE MAX BUFFER     6
11. TREGREQ DELAY TMR 10         20. GRE PKT DISC LIMIT 5
#12. BSID          ____________
```

```
pcfopt                  5ESS Switch        _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5996-1)       PACKET CONTROL FUNCTION (PCF) OFFICE PARAMETERS

21. CELL ID ENABLE   N                APIT PARAMETERS
22. CELL FACE ENABLE N             29. INIT TIMER     15000
23. CELL INFO ORDER  N             30. INACT TIME     10000
24. ACT TIME PARM    N             31. REACT COST      7500
                                   32. LOCAL MARGIN    2000
25. HDLC FRAMING N                 33. INTER ARRIVAL   5000
                                   34. STEP DOWN SIZE 10
        PCF SECURITY
   PCF PHE LIMIT ___
   PCF PHE PROV  ___
   PCF PHE PSWD  ________________
```

Figure 2 SAMPLE PCFOPT FORM 5E17(1) AND LATER SOFTWARE RELEASES

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SEC. 3U: 5996-2 RECORD
PCF PDSN IP ASSIGNMENT - PCFPDSN

1. GENERAL

The PCF (Packet Control Function) IP Assignment form provides the capability to provision a PDSN (Packet DataServing Node) IP address to PCF. This form was created to support the PCF on PHE2 (PH30 with Ethernet Link) feature. For more information on this feature see Division 2, Section 8AC. This feature was first made available in the 5E16(1) FR1 (Feature Release 1) Software Release.

1.1 Recent Change View

The corresponding Recent Change View for PCFOPT is 34.2.

2. FORM ENTRIES - 5996 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: The field represents the Switching Module number.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

When SM, PSU, SHELF, and CHANNEL GROUP is entered, these fields must be defined on the ETHIP form (5995 Record).

When this form is entered, the PCFOPT form (5996-1 Record) must also be entered.

There can only be a maximum of 1024 PCFPDSN forms.

SM, PSU, SHELF, and CHANNEL GROUP must match the first seven digits of TRKOE on at least one TRUNK form (5204 Record), where the TKGRP form has TRKCLS equal to "PCF".

2.3 * PSU

Description: This field specifies the Packet Switching Unit number.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 or 1

2.4 * SHELF

Description: This field specifies the Packet Switching Unit shelf number.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 - 4

2.5 * CHANNEL GROUP

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Description: This field specifies the Channel Group position.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 - 15

2.6 * IP ADDRESS

Description: This field specifies the Channel Group position.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 0 - 255 for each set

Data Rules:

When IP ADDRESS is entered, it must be defined on the PDSNCNFG form (5997 Record).

---

pcfpdsn 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5996-2) PCF PDSN IP ASSIGNMENT

*1. SM ___
*2. PSU _
*3. SHELF _
*4. CHANNEL GROUP __
*5. IP ADDRESS ___.___.___.___

Figure 1 SAMPLE PCFPDSN FORM 5E16(1) AND LATER SOFTWARE RELEASES

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SEC. 3V: 5997 RECORD
PDSN CONFIGURATION - PDSNCNFG

1. GENERAL

The PDSN (Packet Data Serving Node) Configuration form is used to assign PDSN configuration parameters. This form was created to support the PCF (Packet Control Function) on PHE2 (PH30 with Ethernet Link) feature. For more information on this feature see Division 2, Section 8AC. This feature was first made available in the 5E16(1) FR1 (Feature Release 1) Software Release.

1.1 Recent Change View

The corresponding Recent Change View for PDSNCNFG is 34.3.

2. FORM ENTRIES - 5997 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * IP ADDRESS

Description: IP (Internet Protocol) Address to be assigned to the PDSN interface.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: For IP address set 1, for Class A enter 001 - 126, for Class B 128 - 191, or for Class C 192 - 223.

2.3 IP SUBNET MASK

Description: This field specifies the IP Subnet Mask assigned to the PDSN.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 255 for set 1 and 0 - 255 for all other sets

2.4 SHARED SECRET

Description: This field is used for authentication.

Software Release: 5E16(1) and later
Required Field.
Valid Entries: 255 for set 1 and 0 - 255 for all other sets

2.5 MOB HOME AUTH EXT

Description: This field indicates whether or not the PCF (Packet Control Function) should authenticate all registration reply messages.

Software Release: 5E16(1) and later
Required Field.
Default: Y
Valid Entries: Y, N

2.6 REG UPD AUTH EXT

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Description: This field indicates whether or not the PCF (Packet Control Function) should authenticate all registration update messages.

Software Release: 5E16(1) and later
Required Field.
Default: Y
Valid Entries: Y, N

2.7 SPI AUTHENT PROTECT

Description: This field indicates whether or not the SPI (Security Parameter Index) is protected during authentication.

Software Release: 5E16(1) and later
Required Field.
Default: Y
Valid Entries: Y, N

2.8 SPI

Description: This field indicates the Security Parameter Index.

Software Release: 5E16(1) and later
Required Field.
Default: 3
Valid Entries: 1 - ffffffff hex

Data Rules:

SPI must be a value greater than 0.

2.9 VEND/ORG SPEC EXT

Description: This field indicates whether or not a vendor/organization specific extension is allowed to be sent with multiple attributes.

Software Release: 5E16(1) and later
Required Field.
Default: N
Valid Entries: Y, N

2.10 ESN ACCT ENABLE

Description: This field indicates whether or not the ESN (Equipment Serial Number) accounting is enabled.

Software Release: 5E16(1) and later
Required Field.
Default: N
Valid Entries: Y, N

2.11 IS-835 VERSION 0

Description: This field indicates whether or not the IS-835 (Interim Standard-835) version 0 standard is applicable.

Software Release: 5E16(1) and later
Required Field.
Default: N

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Valid Entries: Y, N

2.12 GRE CHKSUM ENABLE

Description: This field indicates whether or not the GRE (Generic Routing Encapsulation) checksum is enabled.

Software Release: 5E16(1) and later
Required Field.
Default: N
Valid Entries: Y, N

```
pdsncnfg                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5997)                 PDSN CONFIGURATION

*1. IP ADDRESS         ___.___.___.___
 6. IP SUBNET MASK     ___.___.___.___
11. SHARED SECRET       _ ____________________________________
14. MOB HOME AUTH EXT   Y
15. REG UPD AUTH EXT    Y
16. SPI AUTHENT PROTECT Y
17. SPI              00000003
18. VEND/ORG SPEC EXT   N
19. ESN ACCT ENABLE     N
20. IS-835 VERSION 0    N
21. CELL ID ENABLE      N
22. GRE CHKSUM ENABLE   N
```

Figure 1 SAMPLE PDSNCNFG FORM 5E16(1) AND LATER SOFTWARE RELEASES

```
pdsncnfg                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5997)                 PDSN CONFIGURATION

*1. IP ADDRESS         001.001.001.001
11. SHARED SECRET       _ ____________________________________
14. MOB HOME AUTH EXT   Y
15. REG UPD AUTH EXT    Y
16. SPI AUTHENT PROTECT Y
17. SPI              00000003
18. VEND/ORG SPEC EXT   N
19. ESN ACCT ENABLE     N
20. IS-835 VERSION 0    N
22. GRE CHKSUM ENABLE   N
```

Figure 2 SAMPLE PDSNCNFG FORM 5E17(1) AND LATER SOFTWARE RELEASES

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SEC. 3W: 5918 RECORD
VOICE AND DATA CHANNELS

1. GENERAL

The Voice and Data Channel Counts form provides records of the RC (Recent Change) 22.32 transactions and it supports the Voice and Data Channel Counts feature.. For more information on this feature, see Division 2, Section 4A635.

1.1 Recent Change View

The corresponding Recent Change View is 22.32.

2. FORM ENTRIES - 5988 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Inserts, updates, and deletes will ONLY be allowed for RC. This form can only be reviewed by ODA.

2.2 * KEY

Description: This field is used to review and insert a voice and data channel licensed record.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: 0 - 2047

2.3 * PURCHASE ORDER

Description: This field is used to specify the purchase order number of new voice or data channels purchased.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: 0 - 20 alphanumeric characters

2.4 * NEW VOICE LICENSED

Description: This field is used to specify new voice channels for a particular purchase order.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: -32768 - 32767

2.5 * NEW DATA LICENSED

Description: This field is used to specify new licensed data channels for a particular purchase order.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: -32768 - 32767

2.6 FEATURE ACTIVE

Description: This field is used to specify whether or not to enable the Voice and Data Channel Counts feature. This is a no_change field.

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Software Release: 5E16(2) and later

2.7 DATE

Description: This field is used to specify the date of particular transaction. This is a no_change field.

Software Release: 5E16(2) and later

2.8 REMARKS

Description: This field is used to add any remarks for a particular purchase order. This is a no_change field.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: 0 - 32 characters

VOICE

The following fields (Section 2.9 - Section 2.10) are no_change fields that indicate the voice provision and the total license channels.

2.9 PROVISIONED

Description: This field is used to specify total voice channels in an office.

2.10 TOTAL LICENSED

Description: This field is used to specify total licensed channels in an office.

DATA

The following fields (Section 2.11 - Section 2.12) are no_change fields that indicate the data provision and the total license channels.

2.11 PROVISIONED

Description: This field is used to specify total provisioned data channels in an office.

2.12 TOTAL LICENSED

Description: This field is used to specify total licensed data channels in an office.

2.13 CONFIRM NEW VOICE

Description: This field is used to confirm new licensed voice channels of a particular purchase order.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: -32768 - 32767

2.14 CONFIRM NEW DATA

Description: This field is used to confirm new licensed data channels of a particular purchase order.

Software Release: 5E16(2) and later
Required Field.

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Valid Entries: -32768 - 32767

```
vdchn                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5918)              VOICE AND DATA CHANNELS

(*)1. KEY          ____                    VOICE
(*)2. PURCHASE ORDER  _____________________      PROVISIONED   _____
(*)3. NEW VOICE LICENSED ______             TOTAL LICENSED _____
(*)4. NEW DATA LICENSED  ______
                                    DATA
    FEATURE ACTIVE _                    PROVISIONED   _____
    DATE        __________              TOTAL LICENSED _____
    REMARKS     ___________________________________
                                CONFIRM NEW VOICE ______
                                CONFIRM NEW DATA  ______
```

Figure 1 SAMPLE PDSNCNFG FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 3X: 5992 RECORD
INTRA NETWORK PSU CONNECTIVITY - INTRAPSU

1. GENERAL

This form is made available with the 5E17(1) FR1 (Feature Release 1) and later Software Releases. It allows a user to define and specify parameters needed for intra network PSU (Packet Switching Unit) connectivity. This form supports the PHA2 (Protocol Handler for ATM (Asynchronous Transfer Mode) 2) PSU to PSU Connectivity feature. For more information on this feature, see Division 2, Section 7BY.

1.1 Recent Change View

The corresponding Recent Change View is 22.29.

2. FORM ENTRIES - 5992 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: This field represents the Switching Module number.

Software Release: 5E17(1) and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

Every INTRAPSU form must have a matching ATMLNK form (5592 Record) where CHANNELS CON TYPE is "ATMNET".

When INTRAPSU forms exist, CDMAOPT forms must also exist.

2.3 * PSU

Description: This field represents the Packet Switching Unit.

Software Release: 5E17(1) and later
Required Field.
Valid Entries: 0 - 1

2.4 * LINK

Description: This field specifies the Packet Switch Unit link number.

Software Release: 5E17(1) and later
Required Field.
Valid Entries: 1 - 10

2.5 # NETWORK CON TYPE

Description: This field is used to indicate how the PSUs in the same subnet are connected.

Software Release: 5E17(1) and later
Required Field.

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Valid Entries:

Valid NETWORK CON TYPE Entries	
Entry	**Definition**
VCC	Virtual Channel Connection
VPC	Virtual Path Connection

Data Rules:

NETWORK CON TYPE must be "VCC" or "VPC".

When NETWORK CON TYPE is "VCC" or one of the CON TYPE of COMMUNITY ADDRESS CONNECTION OVERRIDES is "VCC", HIGH and LOW PRIORITY VPI must be entered.

2.6 HIGH PRIORITY VPI

Description: This field is used to specify the high priority Virtual Path Identifier.

Software Release: 5E17(1) and later
Valid Entries: 0 - 528

Data Rules:

The values for HIGH PRIORITY VPI and LOW PRIORITY VPI must be different.

2.7 LOW PRIORITY VPI

Description: This field is used to specify the low priority Virtual Path Identifier.

Software Release: 5E17(1) and later
Valid Entries: 0 - 528

COMMUNITY ADDRESS CONNECTION OVERRIDES

This list is used to override the default values of the connection type for each PSU Community Address.

2.8 CON TYPE

Description: This field is used to specify the connection type of each PSU community address.

Software Release: 5E17(1) and later
Valid Entries:

Valid CON TYPE Entries	
Entry	**Definition**
VCC	Virtual Channel Connection
VPC	Virtual Path Connection

```
intrapsu                    5ESS Switch
SCREEN 1 OF 8          OFFICE DATA ADMINISTRATION
(5992)              INTRA NETWORK PSU CONNECTIVITY

*1. SM          ___
*2. PSU          _
*3. LINK         __
#4. NETWORK CON TYPE  ___
 5. HIGH PRIORITY VPI ___
 6. LOW PRIORITY VPI  ___
```

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intrapsu 5ESS Switch
SCREEN 2 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE
1	1	___	11	11	___	21	21	___	31	31	___
2	2	___	12	12	___	22	22	___	32	32	___
3	3	___	13	13	___	23	23	___	33	33	___
4	4	___	14	14	___	24	24	___	34	34	___
5	5	___	15	15	___	25	25	___	35	35	___
6	6	___	16	16	___	26	26	___	36	36	___
7	7	___	17	17	___	27	27	___	37	37	___
8	8	___	18	18	___	28	28	___	38	38	___
9	9	___	19	19	___	29	29	___	39	39	___
10	10	___	20	20	___	30	30	___	40	40	___

intrapsu 5ESS Switch
SCREEN 3 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE
41	41	___	51	51	___	61	61	___	71	71	___
42	42	___	52	52	___	62	62	___	72	72	___
43	43	___	53	53	___	63	63	___	73	73	___
44	44	___	54	54	___	64	64	___	74	74	___
45	45	___	55	55	___	65	65	___	75	75	___
46	46	___	56	56	___	66	66	___	76	76	___
47	47	___	57	57	___	67	67	___	77	77	___
48	48	___	58	58	___	68	68	___	78	78	___
49	49	___	59	59	___	69	69	___	79	79	___
50	50	___	60	60	___	70	70	___	80	80	___

intrapsu 5ESS Switch
SCREEN 4 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE
81	81	___	91	91	___	101	101	___	111	111	___
82	82	___	92	92	___	102	102	___	112	112	___
83	83	___	93	93	___	103	103	___	113	113	___
84	84	___	94	94	___	104	104	___	114	114	___
85	85	___	95	95	___	105	105	___	115	115	___
86	86	___	96	96	___	106	106	___	116	116	___
87	87	___	97	97	___	107	107	___	117	117	___
88	88	___	98	98	___	108	108	___	118	118	___

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89 89	___	99 99	___	109 109	___	119 119	___
90 90	___	100 100	___	110 110	___	120 120	___

---

intrapsu 5ESS Switch
SCREEN 5 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW CA	CON TYPE	ROW CA	CON TYPE	ROW CA	CON TYPE	ROW CA	CON TYPE
121 121	___	131 131	___	141 141	___	151 151	___
122 122	___	132 132	___	142 142	___	152 152	___
123 123	___	133 133	___	143 143	___	153 153	___
124 124	___	134 134	___	144 144	___	154 154	___
125 125	___	135 135	___	145 145	___	155 155	___
126 126	___	136 136	___	146 146	___	156 156	___
127 127	___	137 137	___	147 147	___	157 157	___
128 128	___	138 138	___	148 148	___	158 158	___
129 129	___	139 139	___	149 149	___	159 159	___
130 130	___	140 140	___	150 150	___	160 160	___

---

intrapsu 5ESS Switch
SCREEN 6 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW CA	CON TYPE	ROW CA	CON TYPE	ROW CA	CON TYPE	ROW CA	CON TYPE
161 161	___	171 171	___	181 181	___	191 191	___
162 162	___	172 172	___	182 182	___	192 192	___
163 163	___	173 173	___	183 183	___	193 193	___
164 164	___	174 174	___	184 184	___	194 194	___
165 165	___	175 175	___	185 185	___	195 195	___
166 166	___	176 176	___	186 186	___	196 196	___
167 167	___	177 177	___	187 187	___	197 197	___
168 168	___	178 178	___	188 188	___	198 198	___
169 169	___	179 179	___	189 189	___	199 199	___
170 170	___	180 180	___	190 190	___	200 200	___

---

intrapsu 5ESS Switch
SCREEN 7 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW CA	CON TYPE	ROW CA	CON TYPE	ROW CA	CON TYPE	ROW CA	CON TYPE
201 201	___	211 211	___	221 221	___	231 231	___
202 202	___	212 212	___	222 222	___	232 232	___
203 203	___	213 213	___	223 223	___	233 233	___
204 204	___	214 214	___	224 224	___	234 234	___

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205 205 ___ 215 215 ___ 225 225 ___ 235 235 ___
206 206 ___ 216 216 ___ 226 226 ___ 236 236 ___
207 207 ___ 217 217 ___ 227 227 ___ 237 237 ___
208 208 ___ 218 218 ___ 228 228 ___ 238 238 ___
209 209 ___ 219 219 ___ 229 229 ___ 239 239 ___
210 210 ___ 220 220 ___ 230 230 ___ 240 240 ___

---

intrapsu 5ESS Switch _
SCREEN 8 OF 8 OFFICE DATA ADMINISTRATION
(5992) INTRA NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES
ROW CA CON TYPE ROW CA CON TYPE
241 241 ___ 248 248 ___
242 242 ___ 249 249 ___
243 243 ___ 250 250 ___
244 244 ___ 251 251 ___
245 245 ___ 252 252 ___
246 246 ___ 253 253 ___
247 247 ___ 254 254 ___

Figure 1 SAMPLE INTRAPSU FORM 5E17(1) AND LATER SOFTWARE RELEASES

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SEC. 3Y: 5993 RECORD
INTER NETWORK PSU CONNECTIVITY - INTERPSU

1. GENERAL

This form is made available with the 5E17(1) FR1 (Feature Release 1) and later Software Releases. It allows a user to define and specify parameters needed for inter network PSU (Packet Switching Unit) connectivity. This form supports the PHA2 (Protocol Handler for ATM (Asynchronous Transfer Mode) 2) PSU to PSU Connectivity feature. For more information on this feature, see Division 2, Section 7BY.

1.1 Recent Change View

The corresponding Recent Change View is 22.30.

2. FORM ENTRIES - 5993 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SM

Description: This field represents the Switching Module number.

Software Release: 5E17(1) and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

Every INTERPSU form must have a matching ATMLNK form (5592 Record) where CHANNELS CON TYPE is "ATMNET".

When INTERPSU, INTRAPSU, PSUGW, or PSUPM forms exist, the CDMAOPT form (5599 Record) must also exist.

2.3 * PSU

Description: This field represents the Packet Switching Unit.

Software Release: 5E17(1) and later
Required Field.
Valid Entries: 0 - 1

2.4 * LINK

Description: This field specifies the Packet Switch Unit link number.

Software Release: 5E17(1) and later
Required Field.
Valid Entries: 1 - 10

2.5 * FAR SUBNET ID

Description: This field is used to indicate the far subnet identifier.

Software Release: 5E17(1) and later

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Required Field.
Valid Entries: 0 - 3

Data Rules:

When FAR SUBNET ID on this form is not equal to SUBNET ID on the CDMAOPT form (5599 Record), and NETWORK CON TYPE or COMMUNITY ADDRESS CONNECTION OVERRIDES CON TYPE on the INTERPSU form is "GW", then the PSUPM form (5998 Record) must not be entered.

FAR SUBNET ID on this form must not equal to SUBNET ID on the CDMAOPT form.

2.6 # NETWORK CON TYPE

Description: This field is used to indicate how the PSUs are connected to the far network.

Software Release: 5E17(1) and later
Required Field.
Valid Entries:

Valid NETWORK CON TYPE Entries

Entry	Definition
GW	Gateway connection
VCC	Virtual Channel Connection

- **WARNING:** Inhibit all the active PM sessions of this SM/PSU/LINK/FAR SUBNET ID before updating NETWORK CON TYPE from "VCC" to "GW".

Data Rules:

When NETWORK CON TYPE or COMMUNITY ADDRESS CONNECTION OVERRIDES CON TYPE on the INTERPSU form is "GW", and FEATURE ACTIVE on the PSUGW form (5991 Record) is "Y", then GATEWAY ADDRESSES associated with the FAR SUBNET ID on the INTERPSU form must be entered.

When NETWORK CON TYPE or COMMUNITY ADDRESS CONNECTION OVERRIDES CON TYPE on the INTERPSU form is "GW", or NEWWORK CON TYPE or COMMUNITY ADDRESS CONNECTION OVERRIDES CON TYPE on the INTRAPSU form is "VPC", there must be an ATMLNK form (5592 Record) with matching SM, PSU, and LINK, and also with VPC SUPPORT set to "Y".

When NETWORK CON TYPE is "VCC" or one of CON TYPE of COMMUNITY ADDRESS CONNECTION OVERRIDES is "VCC", VPI must be entered.

2.7 VPI

Description: This field is used to specify the Virtual Path Identifier.

Software Release: 5E17(1) and later
Valid Entries: 0 - 528

Data Rules:

VPI on this form and HIGH PRIORITY VPI and LOW PRIORITY VPI on the INTRAPSU form (5992 Record) must be unique per PSU.

COMMUNITY ADDRESS CONNECTION OVERRIDES

This list is used to override the default values of the connection type for each PSU Community Address.

2.8 CON TYPE

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Description: This field is used to specify the connection type of each PSU community address.

Software Release: 5E17(1) and later
Valid Entries:

Valid CON TYPE Entries	
Entry	**Definition**
GW	Gateway Connection
VCC	Virtual Channel Connection

```
interpsu                    5ESS Switch
SCREEN 1 OF 8          OFFICE DATA ADMINISTRATION
(5993)              INTER NETWORK PSU CONNECTIVITY

*1. SM          ___
*2. PSU          _
*3. LINK         __
*4. FAR SUBNET ID  _
#5. NETWORK CON TYPE ___
 6. VPI          ___
```

```
interpsu                    5ESS Switch
SCREEN 2 OF 8          OFFICE DATA ADMINISTRATION
(5993)              INTER NETWORK PSU CONNECTIVITY

          7. COMMUNITY ADDRESS CONNECTION OVERRIDES
ROW CA  CON TYPE ROW CA  CON TYPE ROW CA  CON TYPE ROW CA  CON TYPE
 1  1   ___    11  11   ___    21  21   ___    31  31   ___
 2  2   ___    12  12   ___    22  22   ___    32  32   ___
 3  3   ___    13  13   ___    23  23   ___    33  33   ___
 4  4   ___    14  14   ___    24  24   ___    34  34   ___
 5  5   ___    15  15   ___    25  25   ___    35  35   ___
 6  6   ___    16  16   ___    26  26   ___    36  36   ___
 7  7   ___    17  17   ___    27  27   ___    37  37   ___
 8  8   ___    18  18   ___    28  28   ___    38  38   ___
 9  9   ___    19  19   ___    29  29   ___    39  39   ___
10  10  ___     20  20  ___     30  30  ___     40  40  ___
```

```
interpsu                    5ESS Switch
SCREEN 3 OF 8          OFFICE DATA ADMINISTRATION
(5993)              INTER NETWORK PSU CONNECTIVITY

          7. COMMUNITY ADDRESS CONNECTION OVERRIDES
ROW CA  CON TYPE ROW CA  CON TYPE ROW CA  CON TYPE ROW CA  CON TYPE
 41  41  ___    51  51   ___    61  61   ___    71  71   ___
 42  42  ___    52  52   ___    62  62   ___    72  72   ___
 43  43  ___    53  53   ___    63  63   ___    73  73   ___
 44  44  ___    54  54   ___    64  64   ___    74  74   ___
 45  45  ___    55  55   ___    65  65   ___    75  75   ___
 46  46  ___    56  56   ___    66  66   ___    76  76   ___
```

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47	47	___	57	57	___	67	67	___	77	77	___
48	48	___	58	58	___	68	68	___	78	78	___
49	49	___	59	59	___	69	69	___	79	79	___
50	50	___	60	60	___	70	70	___	80	80	___

---

interpsu 5ESS Switch
SCREEN 4 OF 8 OFFICE DATA ADMINISTRATION
(5993) INTER NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE
81	81	___	91	91	___	101	101	___	111	111	___
82	82	___	92	92	___	102	102	___	112	112	___
83	83	___	93	93	___	103	103	___	113	113	___
84	84	___	94	94	___	104	104	___	114	114	___
85	85	___	95	95	___	105	105	___	115	115	___
86	86	___	96	96	___	106	106	___	116	116	___
87	87	___	97	97	___	107	107	___	117	117	___
88	88	___	98	98	___	108	108	___	118	118	___
89	89	___	99	99	___	109	109	___	119	119	___
90	90	___	100	100	___	110	110	___	120	120	___

---

interpsu 5ESS Switch
SCREEN 5 OF 8 OFFICE DATA ADMINISTRATION
(5993) INTER NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE
121	121	___	131	131	___	141	141	___	151	151	___
122	122	___	132	132	___	142	142	___	152	152	___
123	123	___	133	133	___	143	143	___	153	153	___
124	124	___	134	134	___	144	144	___	154	154	___
125	125	___	135	135	___	145	145	___	155	155	___
126	126	___	136	136	___	146	146	___	156	156	___
127	127	___	137	137	___	147	147	___	157	157	___
128	128	___	138	138	___	148	148	___	158	158	___
129	129	___	139	139	___	149	149	___	159	159	___
130	130	___	140	140	___	150	150	___	160	160	___

---

interpsu 5ESS Switch
SCREEN 6 OF 8 OFFICE DATA ADMINISTRATION
(5993) INTER NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE	ROW	CA	CON TYPE
161	161	___	171	171	___	181	181	___	191	191	___
162	162	___	172	172	___	182	182	___	192	192	___
163	163	___	173	173	___	183	183	___	193	193	___

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164 164 ___	174 174 ___	184 184 ___	194 194 ___
165 165 ___	175 175 ___	185 185 ___	195 195 ___
166 166 ___	176 176 ___	186 186 ___	196 196 ___
167 167 ___	177 177 ___	187 187 ___	197 197 ___
168 168 ___	178 178 ___	188 188 ___	198 198 ___
169 169 ___	179 179 ___	189 189 ___	199 199 ___
170 170 ___	180 180 ___	190 190 ___	200 200 ___

interpsu 5ESS Switch
SCREEN 7 OF 8 OFFICE DATA ADMINISTRATION
(5993) INTER NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW CA CON TYPE	ROW CA CON TYPE	ROW CA CON TYPE	ROW CA CON TYPE
201 201 ___	211 211 ___	221 221 ___	231 231 ___
202 202 ___	212 212 ___	222 222 ___	232 232 ___
203 203 ___	213 213 ___	223 223 ___	233 233 ___
204 204 ___	214 214 ___	224 224 ___	234 234 ___
205 205 ___	215 215 ___	225 225 ___	235 235 ___
206 206 ___	216 216 ___	226 226 ___	236 236 ___
207 207 ___	217 217 ___	227 227 ___	237 237 ___
208 208 ___	218 218 ___	228 228 ___	238 238 ___
209 209 ___	219 219 ___	229 229 ___	239 239 ___
210 210 ___	220 220 ___	230 230 ___	240 240 ___

interpsu 5ESS Switch _
SCREEN 8 OF 8 OFFICE DATA ADMINISTRATION
(5993) INTER NETWORK PSU CONNECTIVITY

7. COMMUNITY ADDRESS CONNECTION OVERRIDES

ROW CA CON TYPE	ROW CA CON TYPE
241 241 ___	248 248 ___
242 242 ___	249 249 ___
243 243 ___	250 250 ___
244 244 ___	251 251 ___
245 245 ___	252 252 ___
246 246 ___	253 253 ___
247 247 ___	254 254 ___

Figure 1 SAMPLE INTERPSU FORM 5E17(1) AND LATER SOFTWARE RELEASES

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SEC. 3Z: 5219 RECORD
PACKET GROUP DEFINITION - PKTGRP

1. GENERAL

This form supports ATM (Assynchronous Transfer Mode) Packet groups for BICC (Bearer Independent Call Control) signaling and IP (Internet Protocol) Packet Group for SIP-T (Session Initiation Protocol for Telephones) signaling. It is used to insert, update, review, and delete ATM or IP (Internet Protocol) packet groups. This form is made available with the 5E16(2) and later Software Releases.

1.1 Recent Change View

The corresponding Recent Change View for PKTGRP is 5.71.

2. FORM ENTRIES - 5219 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PKT GRP

Description: This field is used to specify the Packet Group.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: 7000 - 7999

Data Rules:

When DEST PT CODE and ORIG PT CODE are entered, and ASSOC SET NAME, SIP-T GSM, and SIP-T PARM SET NAME fields are not entered on this form (signifying BICC Packet Group):

- a CICDIST form (5217 Record) must be defined.
- at least one SM2K MODULE must be entered on the CIC DISTRIBUTION list on the CICDIST form.
- the ACT field for SFID 567 on the SFSYS form (5713-1 Record) must be set to "Y".

When ASSOC SET NAME, SIP-T GSM, and SIP-T PARM SET NAME fields are entered, and DEST PT CODE and ORIG PT CODE are not entered on this form (signifying SIP-T Packet Group):

- the ACT field for SFID 684 on the SFSYS form (5713-1 Record) must be set to "Y".

2.3 RMK

Description: This field is used to specify an optional remark up to 16 characters.

Software Release: 5E16(2) and later
Valid Entries: 1 - 16 alphanumeric characters

2.4 # BEARER NET ID

Description: This field is used to specify the Bearer Network ID.

Software Release: 5E16(2) and later

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Required Field.
Valid Entries: 1 - 512

2.5 # FAR CLLI

Description: This field is used to specify an 11-character Far End Common Language Location Identifier.
Required field.

Software Release: 5E16(2) and later
Valid Entries: 11 characters

2.6 # NEAR CLLI

Description: This field is used to specify an 11-character Near End Common Language Location Identifier.
Required field.

Software Release: 5E16(2) and later
Valid Entries: 11 characters

2.7 # HUNT TYPE

Description: This field is used to specify the type of hunting.
Required field.

Software Release: 5E16(2) and later
Required Field.
Default: 2WF
Valid Entries:

Valid TMS COMPONENT TYPE Entries

Entry	Description
2WB	Two-Way Backward hunt.
2WF	Two-Way Forward hunt.

Data Rules:

HUNT TYPE must be"'2WF" for SIP-T Group.

HUNT TYPE must be "2WB" or "2WF" for BICC Group.

2.8 # CONTROL TYPE

Description: This field is used to specify the Control Type.

Software Release: 5E16(2) and later
Required Field.
Valid Entries: [C]ANCEL or [S]KIP

BICC FIELDS

The following fields (Section 2.9 - Section 2.13) are used to indicate that a BICC Packet Group has been defined.

2.9 DEST PT CODE

Description: This field is used to specify the Destination Point Code value.

Software Release: 5E16(2) and later

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Data Rules:

For 5E16(2) and later:

- DEST PT CODE must not equal ORIG PT CODE.
- If DEST PT CODE is known and in the IMT (Inter-Module Trunking) format, then seventh, eighth, and nineth digits of the DEST PT CODE must not be equal to fourth, fifth and sixth digits of DEST PT CODE.
- Either all BICC fields must be entered, or all SIP-T fields must be entered.
- DEST PT CODE and ORIG PT CODE pair must be unique between all BICC Packet Groups.

  When the TGN is defined with PKT GRP entered on the TKGRP form (5202 Record), and the PKT GRP is associated with a SIP-T Packet Group (defined on the PKTGRP form (5219 Record), DEST PT CODE and ORIG PT CODE must not be entered

2.10 ORIG PT CODE

Description: This field is used to specify the Originating Point Code value.

Software Release: 5E16(2) and later

Data Rules:

For 5E16(2) and later, the ORIG PT CODE and DEST PT CODE specify different networks in the first three digits of the point code, thus the DEST PT CODE must be in ANSI format and the fourth, fifth and sixth digits of the DEST PT CODE must be between 0 and 255.

When a BICC Packet Group is defined (DEST PT CODE and ORIG PT CODE entered), all groups must use the same CCS platform, either "CNI" or "PSU" (identified by ORIG PT CODE).

When a BICC Packet Group is defined (DEST PT CODE and ORIG PT CODE entered) that uses a PSU platform, then GSM derived from the ORIG PT CODE must be entered either as GLOBAL SM on the CMTMH form (6021 Record) or SM on the MDLNK form (6009 Record), and all SM2K MODULEs on the CICDIST form must be entered either as NON GLOBAL SMs on the CMTMH form, or SM on the MDLNK form.

In a non-VCDX office, when a BICC Packet Group is defined that uses the PSU platform, then GSM derived from ORIG PT CODE must be entered on the CCGSM form (6008 Record) as a Host GSM (Global Switching Module).

When a BICC Packet Group is defined and it uses the CNI platform, DLN on the OFCOPT form (5509 Record) must be set to "Y".

2.11 PLATFORM

Description: This field is used to indicate CNI (Common Network Interface) or PSU (Packet Switching Unit) for BICC/CCS7 (Signaling System 7) Signaling Platform. This is a no_change field that only applies to BICC packet groups.

Software Release: 5E16(2) and later

2.12 BASE CIC

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Description: This field is used to specify the Base Call Instance Code.

Software Release: 5E16(2) and later
Valid Entries: 0 - 4294966912

Data Rules:

For 5E16(2) and later:

- BASE CIC cannot exceed 4294966912.
- BASE CIC must be divisible by 128.

2.13 TOTAL CICS

Description: This field is used to specify the Total Call Instance Codes.

Software Release: 5E16(2) and later
Valid Entries: 0, or 256 - 65536, in multiples of 128

SIP-T FIELDS

The following fields (Section 2.14 - Section 2.16) are used to support the SIP (Session Initiation Protocol) for Packet Trunking feature. For more information see Division 2, Section 4A684.

2.14 ASSOC SET NAME

Description: This field is used to indicate the association set name.

Software Release: 5E16(2) and later
Valid Entries: 1 - 20 characters

Data Rules:

When ASSOC SET NAME and SIP-T GSM is entered, they must be defined on the ASSOCSET form (5890 Record) with GSM equal to SIP-T GSM.

ASSOC SET NAME ans SIP-T GSM pair must be unique between all SIP-T Packet Groups defined on this form.

2.15 SIP-T GSM

Description: This field is used to indicate the SIP-T (Session Initiation Protocol for Telephones) Global Switching Module.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

When SIP-T GSM is entered, it must be defined on the SIPGSM and SIPTSMS forms (5880/5881 Records).

2.16 SIP-T PARM SET NAME

Description: This field is used to indicate the global SIP-T parameters set name.

Software Release: 5E16(2) and later

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Valid Entries: 1 - 20 characters

Data Rules:

SIP-T PARM SET NAME must be defined on the SIPTPARM form (5882 Record).

2.17 TGN

Description: This field indicates the Service Group associated with the Packet Group. This is a no_change field.

Software Release: 5E16(2) and later
Valid Entries:

---

pktgrp 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5219) PACKET GROUP DEFINITION

*1. PKT GRP ____ 11. BASE CIC _____
2. RMK _____ 12. TOTAL CICS _____
#3. BEARER NET ID ___
#4. FAR CLLI _____ SIP-T FIELDS
#5. NEAR CLLI _____ 13. ASSOC SET NAME _____
#6. HUNT TYPE 2WF 14. SIP-T GSM ___
#7. CONTROL TYPE _____ 15. SIP-T PARM SET NAME _____

BICC FIELDS TGN ____
8. DEST PT CODE _____
9. ORIG PT CODE _____
PLATFORM ___

Figure 1 SAMPLE PKTGRP FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 3AA: 5998 RECORD
PSU TO PSU PERFORMANCE MONITORING SESSION - PSUPM

1. GENERAL

Available for 5E17(1) FR1 and later, this form supports the PHA2 (Protocol Handler for ATM (Asynchronous Transfer Mode) 2) PSU (Packet Switching Unit) to PSU Connectivity feature (99-5E-8048). This form is used to define the parameters used in a session to monitor the performance of the ATM connection for this feature.. For more information, see Division 2, Section 7BY.

1.1 Recent Change View

The corresponding Recent Change View for this view is 22.31.

2. FORM ENTRIES - 5998 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PMS NUMBER

Description: The PMS NUMBER field represents the number used to identify a performance monitoring session.

Software Release: 5E17(1) FR1 and later
Required field.
Valid Entries: 1 - 1024

Data Rules:

Each PSUPM form must have a corresponding EQIM form (5700 Record) where the EQSTATUS is "O".

2.3 # NEAR COM ADDR

Description: This field is used to specify the community address of the near PSU.

Software Release: 5E17(1) FR1 and later
Required field.
Valid Entries: 1 - 254

Data Rules:

The combination of NEAR COM ADDR, LINK, FAR SUBNET ID, and FAR COM ADDR must be unique between the PSUPM forms.

The combination of NEAR COM ADDR, FAR SUBNET ID, FAR COM ADDR, and CONN PRIORITY must be unique between the PSUPM forms.

Every NEAR COM ADDR, LINK, FAR SUBNET ID, FAR COM ADDR, and CONN PRIORITY combination on the PSUPM form where AUTO REPORT and ENABLED are "Y", these fields must be associated with START1COMP, START3COMP, (Far Subnet ID, Far PSU Community Address), and Connection Priority of START2COMP on the MEASSUM form (5563 Record) where SECTION NAME is "ATMQOSPS".

When NEAR COM ADDR is entered, it must be defined with the same value as COM ADDR on the EQPSU form (5741 Record).

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2.4 # LINK

Description: This field identifies the PSU link number.

Software Release: 5E17(1) FR1 and later
Required field.
Valid Entries: 1 - 10

2.5 FAR SUBNET ID

Description: The CDMA (Code Division Multiple Access) sub-network ID assigned to the far end.

Software Release: 5E17(1) FR1 and later
Valid Entries: 0 - 3

Data Rules:

When FAR SUBNET ID is not entered, NEAR COM ADDR must not equal FAR COM ADDR.

Every PSUPM form where FAR SUBNET ID is entered and not equal to SUBNET ID on the CDMAOPT form must have a corresponding PSUGW form (5991 Record) with FEATURE ACTIVE set to "Y".

Every PSUPM form where FAR SUBNET ID is entered must have a corresponding INTRAPSU form.

2.6 # FAR COM ADDR

Description: This field is used to specify the community address of the far PSU.

Software Release: 5E17(1) FR1 and later
Required field.
Valid Entries: 1 - 254

2.7 # CONN PRIORITY

Description: This field specifies the connection priority.

Software Release: 5E17(1) FR1 and later
Required field.
Valid Entries: H (High), L (Low)

2.8 # TYPE

Description: This field specifies the type of monitoring to apply.

Software Release: 5E17(1) FR1 and later
Required field.
Valid Entries:

Valid TYPE Entries

Entry	Definition
B	Both incoming and outgoing
I	Incoming only.
O	Outgoing only.

2.9 BLOCK SIZE

Description: This field indicates how many ATM cells are transmitted before a performance monitoring cell is transmitted.

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Software Release: 5E17(1) FR1 and later
Required field.
Default: 1024
Valid Entries: 128, 256, 512, 1024, 2048, 4096, 8192, 16384, or 32768.

2.10 SECB

Description: The SECB (Severly Errored Cell Blocks Threshold) field indicates the number of SECBs that can be encountered before firing an alarm in the office.

Software Release: 5E17(1) FR1 and later
Required field.
Default: OFF
Valid Entries:

Valid TYPE Entries

Entry	Definition
OFF	Threshold is off.
1	Minimum threshold level.
4294967295	Maximum threshold level.

2.11 IMPBLCK

Description: The Impaired Block Thrreshold field indicates the number of impaired blocks that can be encountered before firing an alarm in the office.

Software Release: 5E17(1) FR1 and later
Required field.
Default: OFF
Valid Entries:

Valid TYPE Entries

Entry	Definition
OFF	Threshold is off.
1	Minimum threshold level.
4294967295	Maximum threshold level.

2.12 AUTO REPORT

Description: This field indicates whether a performance monitoring session is reported automatically.

Software Release: 5E17(1) FR1 and later
Required field.
Default: N
Valid Entries: Y, N

2.13 ENABLED

Description: This field indicates whether a performance monitoring session is enabled. This is a display only field.

Software Release: 5E17(1) FR1 and later.
Default: N
Valid Entries: Y, N

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```
*1. PMS NUMBER    ____
#2. NEAR COM ADDR ___
#3. LINK          __
 4. FAR SUBNET ID _
#5. FAR COM ADDR  ___
#6. CONN PRIORITY _
#7. TYPE OF MON   _
 8. BLOCK SIZE    1024
 9. SECB          OFF
10. IMPBLCK       OFF
11. AUTO REPORT   N
    ENABLED       N
```

Figure 1 SAMPLE PSUPM FORM 5E17(1) FR1 AND LATER SOFTWARE RELEASES

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SEC. 3AB: 5880 RECORD
SIP-T GLOBAL SM - SIPGSM

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking SIP-T (Session Initiation Protocol for Telephones) feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to insert, review, update, or delete the SIP GSM (Global Switching Module).

1.1 Recent Change View

The corresponding Recent Change View for this view is 5.80.

2. FORM ENTRIES - 5880 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * GSM

Description: The GSM field is used to specify the global switching module used to support SIP signaling.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

Data Rules:

GSM must be an SM with UNITTYPE set to "SM2000" or "SM2005" and have EQSTATUS set to "O" on the EQIM form (5700 Record).

Every defined (SIPT) GSM must have PI SG 0 EQSTATUS and PI SG 1 EQSTATUS set to "O" on the EQIM form.

When GSM is associated with a SIP-T Packet Group on the PKTGRP form (5219 Record), it must be defined on this form with the no_display field APPLSIPT set to "Y".

SIP-T modules cannot exist for a GSM when SIP-T application is not active on the GSM (i.e.,no_display field APPLSIPT on the SIPGSM form is "N").

2.3 # DEMO

Description: The DEMO field is used to specify whether or not the demonstration mode should be on.

Software Release: 5E16(2) FR3 and later
Required field.
Default: N
Valid Entries: Y, N

Data Rules:

When DEMO is "N", SM USAGE on the EQIM form must be "HIM" or "IM" for this SM.

---

sipgsm 5ESS Switch _

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```
                    OFFICE DATA ADMINISTRATION
(5880)                      SIP GLOBAL SM

*1. GSM          ___
#2. ENABLE SIP PROC N
#3. DEMO         N
```

Figure 1 SAMPLE SIPGSM FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AC: 5881 RECORD
SIP-T CALL PROCESSING SMS - SIPTSMS

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to specify SM-2000 modules in an office for SIP-T call processing.

1.1 Recent Change View

The corresponding Recent Change View for this view is 5.81.

2. FORM ENTRIES - 5881 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * GSM

Description: The GSM field is used to specify the global switching module used to support SIP signaling.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

Data Rules:

GSM must be an SM with UNITTYPE set to "SM2000" or "SM2005" and have EQSTATUS set to "O" on the EQIM form (5700 Record).

SIP-T modules cannot exist for a GSM which has DEMO on the SIPGSM form (5880 Record) set to "Y".

When GSM is entered it must be defined as SIP-T GSM on the SIPGSM form (5880 record).

SIP-T SMS (SIPTSMS)

The following fields (Section 2.3 - Section 2.4) provide information in an office for SIP-T call processing. For more information on this feature, see Division 2, Section 4A684.

2.3 SM2K MODULE

Description: The SM2K MODULE field specifies the SM-2000 call processing SM.

Software Release: 5E16(2) FR3 and later
Valid Entries: 1 - 192

Data Rules:

- **WARNING:** SM2K MODULE in SIP-T SMS list must not equal GSM.

At least one SM2K MODULE in SIP-T SMS list must be entered.

SM2K MODULE in SIP-T SMS list must be unique.

All SIP-T SM2K MODULEs entered on this form must be defined on the NON-GSM LIST list on the QGCON form (5829 Record).

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SM2K MODULE must be an SM with UNITTYPE set to "SM2000" or "SM2005" , and have EQSTATUS set to "O" on the EQIM form (5700 Record).

2.4 ROUTE

Description: The ROUTE field specifies if message routing is allowed.

Software Release: 5E16(2) FR3 and later
Valid Entries: Y, N

Data Rules:

When ROUTE is known the SM2K MODULE must be entered.

---

siptsms 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5881) SIP-T CALL PROCESSING SMS

*1. GSM ___ 2. SIP-T SMS (SIPTSMS)

ROW	SM2K MODULE	ROUTE	ROW	SM2K MODULE	ROUTE	ROW	SM2K MODULE	ROUTE
1	___	_	9	___	_	17	___	_
2	___	_	10	___	_	18	___	_
3	___	_	11	___	_	19	___	_
4	___	_	12	___	_	20	___	_
5	___	_	13	___	_	21	___	_
6	___	_	14	___	_	22	___	_
7	___	_	15	___	_	23	___	_
8	___	_	16	___	_			

Figure 1 SAMPLE SIPTSMS FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AD: 5882 RECORD
SIP-T PARAMETERS DEFINITION - SIPTPARM

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to insert, review, update, or delete the SIP-T parameters.

1.1 Recent Change View

The corresponding Recent Change View for this view is 5.82.

2. FORM ENTRIES - 5882 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PARM SET NAME

Description: The PARM SET NAME field specifies the global SIP-T parameter set name.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 20 alphanumeric characters

TIMERS

The following fields (Section 2.3 - Section 2.6) provide information on the transaction times related to the SIP-T feature. For more information on this feature, see Division 2, Section 4A684.

2.3 INVITE TMR

Description: The INVITE TMR field specifies the SIP-T invite transaction timer in seconds.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 32
Valid Entries: 5 - 45

2.4 NON INVITE TMR

Description: The NON INVITE TMR field specifies the SIP-T non invite transaction timer in seconds.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 32
Valid Entries: 5 - 45

2.5 WAIT FOR ACK

Description: The WAIT FOR ACK field specifies the SIP-T acknowledgement wait timer in seconds.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 32

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Valid Entries: 5 - 45

2.6 WAIT FOR UPDATE

Description: The WAIT FOR UPDATE field specifies the length of time in seconds that SIP-T waits for updates.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 32
Valid Entries: 5 - 45

PARAMETERS

The following fields (Section 2.7 - Section 2.10) provide information on the parameters related to the SIP-T feature. For more information on this feature, see Division 2, Section 4A684.

2.7 SIG SERVICE

Description: The SIG SERVICE field specifies the type of signaling service being used..

Software Release: 5E16(2) FR3 and later
Required field.
Default: TOS
Valid Entries:

Valid SIG SERVICE Entries	
Entry	**Definition**
[D]IFFSERV	Differential Service
[T]OS	Type of Service

Data Rules:

When SIG SERVICE is "DIFFSERV", SERVICE CDPT must be between 0 and 63.

2.8 SERVICE CDPT

Description: The SERVICE CDPT field indicates TOS (Type of Service) or DIFFSERV (Differential Service) code point.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 0
Valid Entries: 0 - 127

2.9 # TRUST ISUP

Description: The TRUST ISUP field indicates whether or not the value in ISUP MIME should be used for call processing when a value is also present in the SIP-T header.

Software Release: 5E16(2) FR3 and later
Required field.
Default: Y
Valid Entries: Y, N

2.10 # MSG BUNDLE DELAY

Description: The BUNDLE field indicates if outgoing messages should be delayed or sent immediately.

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Software Release: 5E16(2) FR3 and later
Required field.
Default: N
Valid Entries: Y, N

```
siptparm                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5882)              SIP-T PARAMETERS DEFINITION

*1. PARM SET NAME _____________________          PARAMETERS
                              7. SIG SERVICE     TOS
      TIMERS                      8. SERVICE CDPT    0
 2. INVITE TMR      32              #9. TRUST ISUP      Y
 3. NON INVITE TMR  32                #10. MSG BUNDLE DELAY N
 4. WAIT FOR ACK    32
 5. WAIT FOR UPDATE 32
 6. WAIT FOR PRACK  20
```

Figure 1 SAMPLE SIPTPARM FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AE: 5883 RECORD
PROCESSOR GROUP - PCRGRP

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to insert, review, update, and delete the Processor Group corresponding to either one or two SIP PHs (Protocol Handlers) that function as a serving/non-serving pair.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.16.

2. FORM ENTRIES - 5883 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PCR GRP

Description: The PCR GRP field specifies the Processor Group number.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 24

2.3 * SM

Description: The SM field specifies from which SM (Switching Module) data will be read.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

2.4 APPL TYPE

Description: The APPL TYPE field specifies the application type.

Software Release: 5E16(2) FR3 and later
Required field.
Default: SIPT
Valid Entries: SIPT

Data Rules:

For each PROTOCOL HANDLER field entered on this form with APPL TYPE set t o "SIPT", SM, PSU, SHELF, and POSITION must match SWITCHING MODULE, PSU, PSU SHELF, and PH on the EQPSUPH form (5742 Record), and the corresponding PROTOCOL HANDLER entry on the EQPSUPH form must have EQST set to "O" (Operational) and PH CLI set to 00020000 (PHE2).

2.5 PSU

Description: The PSU field specifies the Packet Switch Unit number.

Software Release: 5E16(2) FR3 and later

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Required field.
Default: 0
Valid Entries: 0

PROTOCOL HANDLERS

The following fields (Section 2.6 - Section 2.8) provide the shelf number, channel group, and the associated position of the PH (Protocol Handler) as it relates to the SIP-T feature. For more information on this feature, see Division 2, Section 4A684.

2.6 SHELF

Description: The SHELF field specifies the Protocol Handler shelf number.

Software Release: 5E16(2) FR3 and later
Valid Entries: 0 - 4

Data Rules:

At least one SHELF/CHGRP/POSITION must be entered.

SHELF/CHGRP/POSITION in PROTOCOL HANDLERS list must be unique.

When SHELF/CHGRP is entered on this form, it must be used on the IPPROC form (5987 Record) as QUALIFIER 3.

Each SHELF/CHGRP combination and each SHELF/CHGRP/POSITION combination on the same SM entered on the PCRGRP form, must be unique.

PHs (SHELF/CHGRP) with the same PCR GRP ans SM entered on this form, must have the same values for parameters on the ETHIP form (5995 Record).

2.7 CHGRP

Description: The CHGRP field specifies the Protocol Handler channel group.

Software Release: 5E16(2) FR3 and later
Valid Entries: 0 - 15

2.8 POSITION

Description: The POSITION field specifies the associated position for Protocol Handler channel groups.

Software Release: 5E16(2) FR3 and later
Valid Entries: 0 - 15

---

pcrgrp 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5883) PROCESSOR GROUP

*1. PCR GRP __
*2. SM ___
3. APPL TYPE SIPT
4. PSU 0

5. PROTOCOL HANDLERS

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ROW SHELF CHGRP POSITION
1 _ __ __
2 _ __ __

Figure 1 SAMPLE PCRGRP FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AF: 5884 RECORD
INTERNET PROTOCOL (IP) PING PARAMETERS - IPPING

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to manage the IP Ping Parameters.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.17.

2. FORM ENTRIES - 5884 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * INTERFACE NAME

Description: This field identifies the name associated with an IP (Internet Protocol).

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: an alphanumeric character followed by 4 to 18 characters including a comma, a underscore, or a dash.

Data Rules:

When INTERFACE NAME is entered, it must be defined on the ETHIP or IPROUT forms (5995/5884 Records).

2.3 * IP ADDRESS

Description: This field represents the IP address of the IP node to be pinged.IP Address used to ping some other IP node through the interface specified.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries:

001 - 126 for Class A,
128 - 191 for Class B,
or 192 - 223 for Class C

Data Rules:

ROUTE METRIC on the IPROUT form (5989 Record) must be defined for each IP address specified in the IP ADDRESS field on this form.

IP ADDRESS must be 001.000.000.001- 126.255.255.254, 128.001.000.001 - 191.254.255.254, or 192.000.001.001 - 223.255.254.254.

A Class A IP ADDRESS cannot be XXX.000.000.000 or XXX.255.255.255

A Class B IP ADDRESS cannot be XXX.XXX.000.000 or XXX.XXX.255.255

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A Class C IP ADDRESS cannot be XXX.XXX.XXX.000 or XXX.XXX.XXX.255

2.4 # PING

Description: This field gives the user the ability to periodically enable/disable the pinging to the gateway routers.

Software Release: 5E16(2) FR3 and later
Required field.
Default: N
Valid Entries: Y, N

2.5 PING INTVL

Description: This field indicates the interval between pings to the gateway routers.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 5
Valid Entries: 2 - 20

2.6 MAX FAIL PINGS

Description: This field represents the maximum number of consecutive failed pings before determining that the router has failed.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 3
Valid Entries: 2 - 5

```
ipping                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5884)          INTERNET PROTOCOL (IP) PING PARAMETERS

*1. INTERFACE NAME _____________________
*2. IP ADDRESS    ___.___.___.___
#7. PING          N
 8. PING INTVL    05
 9. MAX FAIL PINGS 3
```

Figure 1 SAMPLE IPPING FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AG: 5885 RECORD
SCTP ENDPOINT PARAMETERS - SCTPPARM

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form supports the definition of SCTP (Stream Control Transport Protocol) endpoint parameters.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.18.

2. FORM ENTRIES - 5885 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PARM SET NAME

Description: The PARM SET NAME field specifies the SCTP endpoint parameters set name.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 20 alphanumeric characters

2.3 RTO INI

Description: The RTO INI field specifies the initial value of retransmission timer (each stored unit is 100 milliseconds).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 10
Valid Entries: 5 - 100

2.4 RTO MIN

Description: The RTO MIN field specifies the minimum value of retransmission timer (each stored unit is 100 milliseconds).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 7
Valid Entries: 5 - 30

2.5 RTO MAX

Description: The RTO MAX field specifies the maximum value in seconds, of retransmission timer (each stored unit is one second).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 10
Valid Entries: 3 - 60

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2.6 RTO ALPHA

Description: The RTO ALPHA field specifies the retransmission constant alpha (each stored unit is one millisecond).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 125
Valid Entries: 80 - 500

2.7 RTO BETA

Description: The RTO BETA field specifies the retransmission constant beta (each stored unit is one millisecond).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 250
Valid Entries: 80 - 500

2.8 VALD COOKIE LIFE

Description: The VALD COOKIE LIFE field specifies the life time of a cookie (each stored unit is one millisecond).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 500
Valid Entries: 200 - 1000

2.9 HB INTRVL

Description: The HB INTRVL field specifies the heartbeat interval (each stored unit is one millisecond).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 10
Valid Entries: 8 - 120

2.10 MAX INIT RETRANS

Description: The MAX INIT RETRANS field specifies the maximum number of retransmissions of INIT (Initialized) datagrams.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 7
Valid Entries: 1 - 20

2.11 BURST SIZE

Description: The BURST SIZE field specifies the maximum number of bytes that the sender is allowed to transmit.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 4

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Valid Entries: 1 - 20

2.12 DELAY ACK TMR

Description: The DELAY ACK TMR (Delay of acknowledgement timer) field specifies how long SCTP will wait before generating an SCTP packet specifically for a SACK (Selective Acknowledge) chunk (each stored unit is one millisecond).

Software Release: 5E16(2) FR3 and later
Required field.
Default: 200
Valid Entries: 100 - 500

2.13 FAST RETRANS CNT

Description: The FAST RETRANS CNT (Fast Retransmit Count) field specifies the number of successive SACKs received indicating a gap before retransmitting a packet.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 8
Valid Entries: 4 - 20

```
sctpparm                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5885)                SCTP ENDPOINT PARAMETERS

*1. PARM SET NAME   ____________________
 2. RTO INI         10
 3. RTO MIN         7
 4. RTO MAX         10
 5. RTO ALPHA       125
 6. RTO BETA        0250
 7. VALD COOKIE LIFE 0500
 8. HB INTRVL       10
 9. MAX INIT RETRANS  7
10. BURST SIZE      4
11. DELAY ACK TMR   0200
12. FAST RETRANS CNT  8
```

Figure 1 SAMPLE SCTPPARM FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AH: 5886 RECORD
SCTP NEAR ENDPOINT DEFINITION - SCTPNEPD

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to provide information about the SCTP (Stream Control Transport Protocol) near endpoint.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.19.

2. FORM ENTRIES - 5886 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NEAR ENDPOINT NAME

Description: This field specifies the near SCTP endpoint.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

Data Rules:

When NEAR ENDPOINT NAME is entered, MTU ENABLE must be "Y" and PROCESSOR TYPE must be "PH" on the IPPROC form (5987 Record).

2.3 # GSM

Description: The GSM (Global Switching Module) specifies which GSM data is read.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

Data Rules:

GSM must be defined on the SIPGSM form (5880 Record).

2.4 # PCR GRP

Description: This field specifies the processor group number.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 24

Data Rules:

PCR GRP must be defined on the PCRGRP form (5883 Record).

2.5 SCTP PORT

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Description: This field specifies the SCTP PORT number (identifier) for the SCTP near endpoint.number of associated SCTP ports to the near endpoint.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 5060
Valid Entries: 0 - 65535

2.6 ENDPOINT PARM SET NAME

Description: This field specifies the SCTP endpoint parameter set.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

Data Rules:

When ENDPOINT PARM SET NAME is entered, it must be defined on the SCTPPARM form (5885 Record).

---

sctpnepd 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5886) SCTP NEAR ENDPOINT DEFINITION

*1. NEAR ENDPOINT NAME _____
#2. GSM ___
#3. PCR GRP __
4. SCTP PORT 5060
5. ENDPOINT PARM SET NAME _____

Figure 1 SAMPLE SCTPNEPD FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AI: 5887 RECORD
SCTP ASSOCIATION PARAMETER SET - ASSCPARM

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form provides information about a set of parameters that will be used for SCTP (Stream Control Transmission Protocol) associations.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.20.

2. FORM ENTRIES - 5887 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * PARM SET NAME

Description: This field specifies the SCTP association parameter set name.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

2.3 # STREAM NEGO

Description: This field specifies whether or not an association may be established if the desired number of outbound streams are not available.

Software Release: 5E16(2) FR3 and later
Required field.
Default: Y
Valid Entries: Y, N

2.4 # PERMANENT

Description: This field specifies whether or not an association will be maintained as a permanent connection.

Software Release: 5E16(2) FR3 and later
Required field.
Default: Y
Valid Entries: Y, N

2.5 INBOUND STREAMS

Description: This field specifies the number of offered inbound streams.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 32
Valid Entries: 0 - 128

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2.6 OUTBOUND STREAMS

Description: This field specifies the number of offered outbound streams.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 32
Valid Entries: 0 - 128

2.7 MAX ASSOC RETRANS

Description: This field specifies the maximum number of retransmissions for an association before the association is declared out-of-service.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 4
Valid Entries: 0 - 32

Data Rules:

MAX ASSOC RETRANS must be between MAX PATH RETRANSS and 2 * MAX PATH RETRANS.

2.8 MAX PATH RETRANS

Description: This field specifies the maximum number of retransmissions of datagrams for an SCTP path before the path is declared out-of-service.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 4
Valid Entries: 0 - 20

```
asscparm                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5887)              SCTP ASSOCIATION PARAMETER SET

*1. PARM SET NAME    ____________________
#2. STREAM NEGO      Y
#3. PERMANENT        Y
 4. INBOUND STREAMS  32
 5. OUTBOUND STREAMS 32
 6. MAX ASSOC RETRANS 04
 7. MAX PATH RETRANS  04
```

Figure 1 SAMPLE ASSCPARM FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AJ: 5888 RECORD
SCTP FAR ENDPOINT DEFINITION - SCTPFEPD

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684.This form is used to provide information about the SCTP (Stream Control Transport Protocol) far endpoint.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.21.

2. FORM ENTRIES - 5888 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FAR ENDPOINT NAME

Description: This field specifies the SCTP far endpoint.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

Data Rules:

When FAR ENDPOINT NAME is entered, DEST SCTP PORT cannot have identical DEST IP ADDR 1 and/or DEST IP ADDR 2.

2.3 # DEST SCTP PORT

Description: This field specifies the associated SCTP port to this far endpoint.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 5060
Valid Entries: 0 - 65535

2.4 # DEST IP ADDR 1

Description: This field specifies the primary IP address associated with this far endpoint.

Software Release: 5E16(2) FR3 and later
Required field.
Default: 000 000 000 000
Valid Entries: 0 - 255 (for each set)

Data Rules:

DEST IP ADDR 1 must have a different value from DEST IP ADDR 2.

DEST IP ADDR1 must be 001.000.000.001- 126.255.255.254, 128.001.000.001 - 191.254.255.254, or 192.000.001.001 - 223.255.254.254.

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2.5 DEST IP ADDR 2

Description: This field specifies the primary IP address associated with this far endpoint.

Software Release: 5E16(2) FR3 and later
Valid Entries: 0 - 255 (for each set)

Data Rules:

DEST IP ADDR2 must be 001.000.000.001- 126.255.255.254, 128.001.000.001 - 191.254.255.254, or 192.000.001.001 - 223.255.254.254.

---

sctpfepd 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5888) SCTP FAR ENDPOINT DEFINITION

*1. FAR ENDPOINT NAME _____
#2. DEST SCTP PORT 5060
#3. DEST IP ADDR 1 ___.___.___.___
8. DEST IP ADDR 2 ___.___.___.___

Figure 1 SAMPLE SCTPFEPD FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AK: 5889 RECORD
SCTP ASSOCIATION - SCTPASSC

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form is used to provide information about the SCTP (Stream Control Transport Protocol) association.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.22.

2. FORM ENTRIES - 5889 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ASSOC NUMBER

Description: This field specifies the SCTP association identification number.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 1023

Data Rules:

When ASSOC NUMBER is entered with a single IP address far endpoint and SCTP ASSOC PARM SET NAME on this form is equals PARM SET NAME on the ASSCPARM form (5887 Record), MAX ASSOC RETRANS must equal MATH PATH RETRANS on the ASSCPARM form.

When ASSOC NUMBER is entered with multiple IP address far endpoint and SCTP ASSOC PARM SET NAME on this form equals PARM SET NAME on the ASSCPARM form (5887 Record), MAX ASSOC RETRANS must be greater than MATH PATH RETRANS and MAX ASSOC RETRANS must be equal to or less than double MAX PATH RETRANS on the ASSCPARM form.

When ASSOC NUMBER is entered with multiple IP address far endpoint defined on the SCTPFEPD form (5888 Record), SCTP ASSOC PARM SET NAME cannot be set to "DEFAULT".

2.3 # GSM

Description: This field specifies the GSM (Global Switching Module) where data is read.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

Data Rules:

GSM must be defined on the SIPGSM form (5880 Record).

2.4 # NEAR ENDPOINT NAME

Description: This field specifies the near SCTP endpoint.

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Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

Data Rules:

NEAR ENDPOINT NAME and FAR ENDPOINT NAME must be unique.

When NEAR ENDPOINT NAME is entered, it must be defined on the SCTPNEPD form (5886 Record).

2.5 # FAR ENDPOINT NAME

Description: This field specifies the far SCTP endpoint.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

Data Rules:

When FAR ENDPOINT NAME is entered, it must be defined on the SCTPFEPD form (5888 Record).

2.6 SCTP ASSOC PARM SET NAME

Description: This field specifies the set of parameters that are used for association.

Software Release: 5E16(2) FR3 and later
Valid Entries: Up to 20 characters

Data Rules:

When SCTP ASSOC PARM SET NAME is entered it must be defined on the ASSCPARM form (5887 Record).

2.7 ASSOCIATION SET NAME

Description: This field specifies the corresponding association set index which identifies association sets that this association is a member of. This is a no_change field.

Software Release: 5E16(2) FR3 and later
Valid Entries: Up to 20 characters.

```
sctpassc                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5889)                   SCTP ASSOCIATION

*1. ASSOC NUMBER          ____
#2. GSM                   ___
#3. NEAR ENDPOINT NAME    _____________________
#4. FAR ENDPOINT NAME     _____________________
 5. SCTP ASSOC PARM SET NAME _____________________
   ASSOCIATION SET NAME   _____________________
```

Figure 1 AMPLE SCTPASSC FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AL: 5890 RECORD
ASSOCIATION SET - ASSOCSET

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684.This form is used to provide information about a SCTP (Stream Control Transport Protocol) association set.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.23.

2. FORM ENTRIES - 5890 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ASSOCIATION SET NAME

Description: This field specifies the name of the set of SCTP associations.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: Up to 20 characters

2.3 # GSM

Description: This field specifies the GSM (Global Switching Module).

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

Data Rules:

When GSM is entered on this form, it must be defined on the SIPGSM form (5880 Record).

ASSCID (ASSOCIATION IDENTIFICATION NUMBER)

2.4 NBR

Description: This field specifies the identification number of the association.

Software Release: 5E16(2) FR3 and later
Valid Entries: 1 - 1023

Data Rules:

At least one NBR in the ASSOCIATION IDENTIFICATION NUMBER list must be entered.

NBR in ASSOCIATION IDENTIFICATION NUMBER list must be unique.

When NBR is entered, it must be defined on the SCPTPASSC form (5889 Record).

SCTP association must not appear in more than one association set (ASSOCIATION IDENTIFICATION

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NUMBER list).

assocset 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5890) ASSOCIATION SET

*1. ASSOCIATION SET NAME _____ #2. GSM ___

3. ASSOCIATION IDENTIFICATION NUMBER (ASSCID)

ROW NBR	ROW NBR	ROW NBR	ROW NBR	ROW NBR	ROW NBR	ROW NBR	ROW NBR
1 ____	9 ____	17 ____	25 ____	33 ____	41 ____	49 ____	57 ____
2 ____	10 ____	18 ____	26 ____	34 ____	42 ____	50 ____	58 ____
3 ____	11 ____	19 ____	27 ____	35 ____	43 ____	51 ____	59 ____
4 ____	12 ____	20 ____	28 ____	36 ____	44 ____	52 ____	60 ____
5 ____	13 ____	21 ____	29 ____	37 ____	45 ____	53 ____	61 ____
6 ____	14 ____	22 ____	30 ____	38 ____	46 ____	54 ____	62 ____
7 ____	15 ____	23 ____	31 ____	39 ____	47 ____	55 ____	63 ____
8 ____	16 ____	24 ____	32 ____	40 ____	48 ____	56 ____	64 ____

Figure 1 SAMPLE ASSOCSET FORM 5E16(2) FR3 AND LATER SOFTWARE RELEASES

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SEC. 3AM: 5935 RECORD
BEARER NETWORK DEFINITION - BEARERNET

1. GENERAL

The 5935 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete bearer networks. This form supports the OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. For more information on this feature, see Division 2, Section 7BX.

1.1 Recent Change View

The corresponding Recent Change View for this view is 33.15.

2. FORM ENTRIES - 5935 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * BNID

Description: This field is used to specify a bearer network.

Software Release: 5E16 (2) and later
Required field.
Valid Entries: 1 - 512

2.3 SERVICE TYPE

Description: This field is used to define the type of traffic that will be carried.

Software Release: 5E16(2) and later
Required field.
Default: IPV4
Valid Entries: Enter IPV4

RTP

This section contains information about RTP (Real-Time Transport Protocol).

2.4 RTP PKT INT

Description: This field is used to specify the size, in milliseconds, of a RTP packet.

Software Release: 5E16(2) and later
Required field.
Default: 20
Valid Entries: 10, 20 or 30

2.5 JITTER BUF SZ

Description: This field is used to specify the size of the jitter buffer in milliseconds.

Software Release: 5E16(2)and later
Required field.
Default: 100

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Valid Entries: Enter a multiple of 5 from 10 - 300

2.6 SILENCE SUP

Description: This field is used to specify whether or not silence suppression is enabled.

Software Release: 5E16(2)and later
Required field.
Default: N
Valid Entries: Y, N

When SILENCE SUPP IS "Y", COMFORT NOISE must be "SPEC".

UDP

This section contains information about UDP (User Datagram Protocol).

2.7 ENA UDP CHKSM

Description: This field is used to specify whether or not checksums are enabled.

Software Release: 5E16(2)and later
Required field.
Default: Y
Valid Entries: Y, N

IP

This section contains information about IP (Internet Protocol).

2.8 TIME TO LIVE

Description: This field is used to specify the time to live field in IP datagrams for this bearer network.

Software Release: 5E16(2)and later
Required field.
Default: 64
Valid Entries: 1 - 255

2.9 TYPE OF SERVICE

Description: This field is used to specify the service type used in IP datagrams for this bearer network.

Software Release: 5E16(2) and later
Required field.
Default: 00
Valid Entries: Enter a hexadecimal number from 0 to 7F.

Data Rules:

For 5E16(2) and later, when TYPE OF SERVICE is not "0", ENA DIFF SERV must be "N".

2.10 ENA DIFF SERV

Description: This field is used to specify whether or not diffserv is enabled.

Software Release: 5E16(2)and later
Required field.

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Default: N
Valid Entries: Y, N

ICMP

This section contains information about ICMP (Internet Control Message Protocol.

2.11 ENA ICMP ERR

Description: This field is used to specify whether or not ICMP error message generation is enabled.

Software Release: 5E16(2)and later
Required field.
Default: Y
Valid Entries: Y, N

2.12 COMFORT NOISE

Description: This field is used to specify the type of comfort noise generated.

Software Release: 5E16(2) and later
Required field.
Default: IDLE
Valid Entries:

Valid TYPE Entries	
Entry	**Definition**
HOTH	Hoth Noise
IDLE	Idle Code
SPEC	Spectral Noise

2.13 GROUP CNT

Description: This field is used to indicate the number of packet groups utilizing this bearer network. This is a no change field.

Software Release: 5E16(2) and later
Required field.
Valid Entries: 0 - 65535

2.14 DIFF SERV CNT

Description: This field is used to indicate the number of trunk groups utilizing differentiated services on this bearer network. This is a no change field.

Software Release: 5E16(2) and later
Valid Entries: 0 - 65535

```
bearernet                    5ESS Switch
                    OFFICE DATA ADMINISTRATION
(5935)                  BEARER NETWORK DEFINITION

*1. BNID          ___              IP
 2. SERVICE TYPE IPV4     8. TIME TO LIVE    64
                    9. TYPE OF SERVICE 00
       RTP            10. ENA DIFF SERV   N
 3. RTP PKT INT   20
```

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4. JITTER BUF SZ 100 ICMP
6. SILENCE SUPP N 11. ENA ICMP ERR Y

UDP 21. COMFORT NOISE IDLE
7. ENA UDP CHKSM Y
GROUP CNT _____
DIFF SERV CNT _____

Figure 1 SAMPLE BEARERNET FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 4: MEDIA GATEWAY PROXY FORMS

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SEC. 4A: 6920 RECORD
MGP GROWTH - MGPGROWTH

1. GENERAL

The 6920 Record is available with the 5E16 and later Software Releases. It is used to define a MGP (Media Gateway Proxy). The MGP is associated with an SM2000 to create a packet SM (Switching Module).

1.1 Recent Change View

The corresponding Recent Change View for this form is 50.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * MGP NAME

Description: This field is used to specify the MGP (Media Gateway Proxy) name.

Required Field.

Software Release: 5E16 and later
Valid Entries: 1 - 16 alphanumeric characters

2.3 * SM NUMBER

Description: This field is used to indicate the SM (Switching Module) number associated with the MGP.

Required Field.

Software Release: 5E16 and later
Valid Entries: 1 - 192

Data Rules:

SM NUMBER must be defined on the EQIM form (5700 Record).

Only one MGPGROWTH form can exist per SM NUMBER.

2.4 WELL KNOWN IP ADDR

Description: This field is used to specify the well known IP (Internal Protocol) address of the MGP. This is a Display Only field.

Software Release: 5E16 and later
Valid Entries: 0 - 255

2.5 PRIMARY IP ADDR

Description: This field is used to specify the primary IP address of the MGP. This is a Display Only field.

Software Release: 5E16 and later
Valid Entries: 0 - 255

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2.6 SECONDARY IP ADDR

Description: This field is used to specify the secondary IP address of the IWU (Inter-Working Unit). This is a Display Only field.

Software Release: 5E16 and later
Valid Entries: 0 - 255

```
mgpgrowth                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(6920)                       MGP GROWTH

*1. MGP NAME          ____________________
*2. SM NUMBER         ___
   WELL KNOWN IP ADDR ___.___.___.___
   PRIMARY IP ADDR    ___.___.___.___
   SECONDARY IP ADDR  ___.___.___.___
```

Figure 1 SAMPLE MGPGROWTH FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 4B: 6921 RECORD
MGP COMPONENT ASSOCIATION - MGPCOMP

1. GENERAL

The 6921 Record is available with the 5E16 and later Software Releases. It is used to define a MGP (Media Gateway Proxy) component association.

1.1 Recent Change View

The corresponding Recent Change View for this form is 50.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * COMPONENT IP ADDR

Description: This field is used to specify the component IP (Internal Protocol) address of the end unit component.

Required Field.

Software Release: 5E16 and later
Valid Entries: 0 - 255

Data Rules:

COMPONENT IP ADDR must be unique.

2.3 * SM NUMBER

Description: This field is used to indicate the SM (Switching Module) number associated with the MGP.

Required Field.

Software Release: 5E16 and later
Valid Entries: 1 - 192

2.4 # MGP NAME

Description: This field is used to specify the MGP name.

Required Field.

Software Release: 5E16 and later
Valid Entries: 1 - 16 alphanumeric characters

Data Rules:

The combination of MGP NAME and SM NUMBER must be defined on the MGPGROWTH form (6920 Record).

2.5 # COMPONENT TYPE

Description: This field is used to specify the type of component.

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Required Field.

Software Release: 5E16 and later
Valid Entries:

Valid COMPONENT TYPE Entries

Entry	Description
IWU	Interworking Unit
LAG	Line Access Gateway
PAG	Packet Access Gateway
TAG	Trunk Access Gateway

Data Rules:

When COMPONENT TYPE is "IWU", COMPONENT ID must be 1 - 5.

When COMPONENT TYPE is "LAG":

- COMPONENT ID must be 1 - 105.
- AESA row 2 must not be entered.

When COMPONENT TYPE is "PAG":

- COMPONENT ID must be 1 - 2.
- EQSTAT must be "O".
- AESA row 1 and 2 must be entered as pairs.
- AESA row 3 and 4 must be entered as pairs.
- AESA row 5 and 6 must be entered as pairs.
- AESA row 7 and row 8 must not be entered.
- AESA row 3 and 4 must be entered before AESA rows 5 and 6.

When COMPONENT TYPE is "TAG", COMPONENT ID must be 1 - 9.

AESA row 1 must be entered for all COMPONENT TYPEs.

When COMPONENT TYPE is "IWU", "LAG", or "TAG":

- AESA row 3 through row 8 must not be entered.

COMPONENT TYPE and COMPONENT ID must be unique per MGP NAME.

- ***NOTE:*** Although checks have been added there that supports LAG, it is for future development. LAG is not support in PS4.0.

2.6 # COMPONENT ID

Description: This field identifies the number of the MGP.

Required.

Software Release: 5E16 and later

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Valid Entries:

Valid COMPONENT ID Entries	
COMPONENT TYPE	**Value**
IWU	1 - 5
LAG	1 - 105
PAG	1 - 2
TAG	1 - 9

2.7 # NETWORK PROTOCOL

Description: This field is used to specify the type of network protocol used by the end unit component.

Required.

Software Release: 5E16 and later
Valid Entries:

Valid NETWORK PROTOCOL	
Entry	**Description**
IPDC	Internet Protocol Device Control
SAPP	Sapphire messaging

Data Rules:

When NETWORK PROTOCOL is "SAPP", COMPONENT TYPE must be "IWU", "PAG", or "TAG".

When NETWORK PROTOCOL is "IPDC", COMPONENT TYPE must be "LAG".

2.8 # EQSTAT

Description: This field is used to specify the equipment status of the end unit component.

Required Field.

Software Release: 5E16 and later
Valid Entries:

Valid NETWORK PROTOCOL	
Entry	**Definition**
G	Growth
O	Operational

END SYSTEM ADDRESS

2.9 AESA

Description: The ATM (Asynchronous Transfer Mode) End System Address field is an ATM and system address. For PAG, TAG, and IWU the address is defined per OC3 1+1 pair on the component. For TAG and IWU, the address only applies to the network side, while PAG also deals with the fabric side.

Software Release: 5E16 and later
Valid Entries: blank, or 00 - ff (hexadecimal)

```
mgpcomp                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(6921)              MGP COMPONENT ASSOCIATION

 *1. COMPONENT IP ADDR ___.___.___.___
 *6. SM NUMBER         ___
```

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```
 #7. MGP NAME          _________________
 #8. COMPONENT TYPE    ___
 #9. COMPONENT ID      ___
#10. NETWORK PROTOCOL  ____
#11. EQSTAT            _
```

```
mgpcomp                    5ESS Switch          _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(6921)                MGP COMPONENT ASSOCIATION

                  12. END SYSTEM ADDRESS
ROW AESA
 1 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 2 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 3 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 4 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 5 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 6 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 7 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 8 __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
```

Figure 1 SAMPLE MGPCOMP FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 4C: 6922 RECORD
MGP PACKET LINE - MGPLINE

1. GENERAL

The 6922 Record is available with the 5E16 and later Software Releases. It is used to add the MGP (Media Gateway Proxy) routing data for packet lines. These packet lines exist on a LAG (Line Access Gateway).

1.1 Recent Change View

The corresponding Recent Change View for this form is 50.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OE

Description: This field identifies the equipment number type.

Software Release: 5E16 and later
Required Field.
Valid Entries:

Valid OE Entries

Entry	Description	Value
X	ISDN (Intergrated Services Digital Network) virtual equipment number type.	(1 - 192) (00001 - 03840) where: (1 -192) = SM (00001 - 03840) = LINE (line)
Y	Analog line virtual equipment number type.	(1 - 192) (00001 - 28800) where: (1 -192) = SM (00001 - 28800) = LINE (line)

WARNING: When the SM portion of the OE is less than 3 digits and the overall length of the OE is less than 8 digits, leading zeros will be added to the left side of the OE to create an OE that is 8 digits in length.

Data Rules:

OE must be defined on the LINE form (5109 Record), MLHLN (5111 Record), DSL (5907 Record), or DSLUSR (5908 Record). When the OE type is "Y", this OE must be defined on either the LINE or MLHLN form. When the OE type is "X", this OE must be defined on either the DSL or DSLUSR form.

2.3 # COMPONENT ID

Description: This field identifies the number of MGPs.

Software Release: 5E16 and later
Required Field.
Valid Entries: 1 - 105

Data Rules:

COMPONENT ID must be defined on the MGPCOMP form with COMPONENT ID set to "LAG".

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2.4 ESP

Description: This field identifies whether the packet line has ESP (Essential Service Protection) enabled.

Software Release: 5E16 and later
Required Field.
Default: N
Valid Entries: Y, N

PHYSICAL PORT

2.5 MODULE

Description: This field identifies the physical slot of the packet line.

Software Release: 5E16 and later
Valid Entries: 1 - 16

Data Rules:

MODULE and LINE must both be entered when either one is entered.

2.6 LINE

Description: This field identifies the physical port number of the packet line.

Software Release: 5E16 and later
Valid Entries: 1 - 16

```
mgpline                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(6922)                    MGP PACKET LINE

*1. OE          X 192000001
#4. COMPONENT ID 1
 5. ESP          N

PHYSICAL PORT
 6. MODULE __
 7. LINE   __
```

Figure 1 SAMPLE MGPLINE FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 4D: 6923 RECORD
MGP PACKET TRUNK - MGPTRUNK

1. GENERAL

The 6923 Record is available with the 5E16 and later Software Releases. It is used to add the MGP (Media Gateway Proxy) routing data for packet trunks. These packet trunks exist on a TAG (Trunk Access Gateway).

1.1 Recent Change View

The corresponding Recent Change View for this form is 50.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OE

Description: This field identifies the equipment number type.

Required Field.

Software Release: 5E16 and later
Valid Entries:

Valid OE Entries

Entry	Description	Definition
V	Trunk virtual equipment number type	(1 - 192) (0001 - 1008) (01 - 24) where: (1 -192) = SM (0001 - 1008) = FAC (Virtual Facility) (01 - 24) = CHAN (channel)

WARNING: When the SM portion of the OE is less than 3 digits and the overall length of the OE is less than 8 digits, leading zeros are added to the left side of the OE to create an OE that is 8 digits in length.

2.3 * COMPONENT ID

Description: This field identifies the component ID assigned to the packet trunk. These packet trunks exist on a TAG (Trunk Access Gateway).

Required.

Software Release: 5E16 and later
Valid Entries: 1 - 9

Data Rules:

COMPONENT ID must be defined on the MGPCOMP form (6921 Record) with a COMPONENT TYPE of "TAG".

2.4 * TRUNK TYPE

Description: This field identifies the trunk type assigned to the packet trunk.

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Required Field.

Software Release: 5E16 and later
Valid Entries:

Valid TRUNK TYPE Entries

Entry	Description
ISUP	ISDN (Intergrated Services Digital Network) User Part
PRIB	Primary Rate Interface B Channel
PRID	Primary Rate Interface D Channel

Data Rules:

When TRUNK TYPE is "PRIB" or "PRID", INTERNAL PROTOCOL must be "PRI".

When TRUNK TYPE is "ISUP", INTERNAL PROTOCOL must be "ISUP".

When TRUNK TYPE is "ISUP", the OE must be defined on a TRUNK from (5204 Record), where the TKGRP form (5202 Record) has INPULSING or OUTPULSING equal to "ISUP7".

When TRUNK TYPE is "PRID", the OE must be defined on the TRUNK form (5204 Record) with DCHN DESG equal to an unknown value, and the TKGRP form (5202 Record) must have a TRKCLS equal to "EDSL".

When TRUNK TYPE is "PRIB", the OE must be defined on the TRUNK form (5204 Record). The TKGRP form (5202 Record) must have a TRKCLS equal to "EDSL" or "EDSLHM". If the TRKCLS is "EDSL", the DCHN DESG on the TRUNK form must be blank.

2.5 # INTERNAL PROTOCOL

Description: This field identifies the internal protocol assigned to the packet line.

Required Field.

Software Release: 5E16 and later
Valid Entries: ISUP or PRI

PHYSICAL PORT

2.6 # MODULE

Description: This field identifies the physical port module (or slot) number of the packet trunk.

Software Release: 5E16 and later
Valid Entries: 1 - 17

2.7 # LINE

Description: This field identifies the physical port line (or span) number of the packet trunk.

Software Release: 5E16 and later
Valid Entries: 1 - 28

2.8 # CHANNEL

Description: This field identifies the physical port channel number of the packet trunk.

Software Release: 5E16 and later
Valid Entries: 1 - 24

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```
mgptrunk                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(6923)                  MGP PACKET TRUNK

*1. OE              _ _________
*4. COMPONENT ID     ___
*5. TRUNK TYPE       ____
#6. INTERNAL PROTOCOL ____

 PHYSICAL PORT
#7. MODULE  __
#8. LINE    __
#9. CHANNEL __
```

Figure 1 SAMPLE MGPTRUNK FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 5: ISDN MISCELLANEOUS FORMS

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SEC. 5A: 5940 RECORD
REMOTE PERIPHERAL ALARMS
- RISITE

1. GENERAL

The 5940 Record is available with 5E5 and later Software Releases. It is used to define remote line units. Prior to 5E12, this form was used to define RISLUs (Remote Integrated Services Line Units). Effective with the 5E12 Software Release, this form is also used to remote AIUs (Access Interface Units). For 5E12 and later, the name of this form was changed from Remote Integrated Services Line Unit Site to Remote Peripheral Alarms. Also, a RP NO (Remote Peripheral Number) field was added to distinguish the two units, the ALARM SM field was changed to SM, and the ALARM RISLU field was removed.

A remote unit defined on a RISITE form where RAS EQUIPPED? is "Y" and RAS DUPLEX ACC? is "N" requires that one OSPSDSL form (5411 Record) be submitted where the DSL NAME ID on the OSPSDSL form matches the SITE ID on the RISITE form and the SM portion (first three digits) of the LCEN on the OSPSDSL form matches the SM on the RISITE form.

An RISITE form where RAS EQUIPPED? is "Y" and RAS DUPLEX ACC? is "Y" requires that two OSPSDSL forms be submitted where the DSL NAME ID on the OSPSDSL form matches the SITE ID on the RISITE form and the SM portion (first three digits) of the LCEN on the OSPSDSL form matches the SM on the RISITE form.

1.1 Recent Change View

The corresponding Recent Change view for this form is 22.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SITE ID

Description: Enter the remote peripheral unit Site ID. (This range of Site ID values was chosen to avoid confusion with the RSM Site ID range.)

Required Field.
Valid Entries: 500 - 999

Data Rules:

No more than 8 remote peripherals can be assigned from the EQAIU form (with an AIU TYPE of "EAIU" for remote AIU) or the EQRISLU form.

SITE IDs defined on this form for an AIU remote peripheral unit must also have the same SITE ID defined on the EQAIU form.

2.3 SITE TITLE

Description: Enter the remote peripheral unit Site Title (e.g., name of town).
Valid Entries: 1 - 15 alphanumeric characters

BUILDING/POWER ALARMS

The following fields (Section 2.5 - Section 2.9) define the building and power alarms. Every Remote

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Integrated Services Line Unit scans its own fan and fuse alarms, but one RISLU per site must be selected to scan power and battery alarms for the RISLU site. The same RISLU will also scan building and miscellaneous (office defined) alarms if the RISLU site is equipped with the optional LAU (Link Adapter Unit) RAS (Remote Alarm Section).

2.4 ALARM SM

Description: The name of this field was changed to SM in 5E12. This field name applies to 5E11 and earlier. See SM for usage information.

2.5 SM

Description: Enter the number of the SM that hosts the RISLU responsible for the building and power alarms at the RISLU site. This field was changed from ALARM SM to SM in 5E12.
Valid Entries: 1 - 192

Data Rules:

The SM entered in this field must be defined on an EQRISLU form (5732 Record).

2.6 ALARM RISLU

Description: Enter the number of the RISLU responsible for building and power alarms at the RISLU site. For 5E12 and later, this field was removed.

Software Release: 5E9(2) - 5E11
Valid Entries: 0 - 7

Data Rules:

The RISLU entered in this field must be defined on an EQRISLU form.

2.7 RP NO

Description: Enter the unit number of the RP (Remote Peripheral) which provides the alarms.

Software Release: 5E12 and later
Valid Entries:

Blank or enter 0 - 7 for RISLU.

Data Rules:

The RP NO must be unique for each SM.

2.8 RAS EQUIPPED?

Description: Is this RISLU site equipped with Remote Alarm Section?
Default: N
Valid Entries: Y, N

2.9 RAS DUPLEX ACC?

Description: Is this RISLU site equipped with RAS (Remote Alarm Section) containing duplex ACC (Alarm Conversion Circuits)?
Default: N
Valid Entries: Y, N

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Data Rules:

Enter "N" if the RISLU site is not equipped with RAS or if the site has simplex ACC.

ON-SITE PERIPHERALS

The following fields (Section 2.10 - Section 2.12) are Recent Change only fields added with the Remote AIU feature.

2.10 SM

Description: This field provides the SM number.

2.11 RP NO

Description: This field provides the remote peripheral number.

2.12 RP TYPE

Description: It provides the type of remote peripheral ("ISLU" or "AIU") responsible for building and power alarms at the remote site.

```
risite                    5ESS Switch                _
(5940)                OFFICE DATA ADMINISTRATION
              REMOTE INTEGRATED SERVICES LINE UNIT SITE

* 1. SITE ID      501
  2. SITE TITLE   ANY TOWN


     BUILDING AND POWER ALARMS

  3. ALARM SM  003
  4. ALARM RISLU  4
  5. RAS EQUIPPED?   Y
  6. RAS DUPLEX ACC? Y
```

Figure 1 SAMPLE RISITE FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
risite                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5940)                  REMOTE PERIPHERAL ALARMS

*1. SITE ID   ___              ON-SITE PERIPHERALS
 2. SITE TITLE _________________       RP RP
                          SM  NO TYPE
BUILDING/POWER ALARM HOST        ___ _  _______
 3. SM          ___         ___ _  _______
 4. RP NO       _           ___ _  _______
 5. RAS EQUIPPED?   N             ___ _  _______
 6. RAS DUPLEX ACC? N             ___ _  _______
                           ___ _  _______
                           ___ _  _______
```

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Figure 2 SAMPLE RISITE FORM 5E12 AND LATER SOFTWARE RELEASES

SEC. 5B: 5941 RECORD
ISDN OFFICE OPTIONS FORM - ISDNOPT

1. GENERAL

For 5E3 and later, the 5941 Record defines a set of office parameters that must be entered when the office is an ISDN (Integrated Services Digital Network) switch. The office can provide ISDN service if:

- an EQPSU form (5741 Record) is entered, with an EQISLU form (5731 Record) and/or EQRISLU form (5732 Record), and/or an EQIDCU form (5846 Record).
- the office contains an ISDN Switching Module, an SM defined on the EQIM form with the CONFIGURATION field set to "LOADED".

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * KEY

Description: This field is required by the software; its value should always be 0.
Default: 0

DSL DFLT SRV

The following field defines the DSL default service group. Available for 5E10 and later, this field supports the Default Service feature. For more information on this feature and other NI-3 features, see the National ISDN section Division 2, Section 1AM.

2.3 DFLT SRV

Description: Enter the name of the default service group that will be assigned to a custom or standard DSL if the DFLT SRV field on the DSL form (5907 Record) is not entered.

The DFLT SRV field supports the Default Service feature, which is a secured feature (SFID 225). For more information on this feature, see Division 2, Section 1AM on National ISDN features. Also see the secured feature Automatic Association of Default Services, Division 2, Section 4A238.

Software Release: 5E10 and later.
Valid Entries: 1 - 7 characters

Data Rules:

DFLT SRV cannot have "/" as the first character.

DFLT SRV must not be one of the following:
- "ABORT"
- "ACTBFG"
- "CLEANUP"
- "NONE"

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- "NONTGID"
- "SETUP"
- "TEMP"

If the DFLT SRV field is entered on the ISDNOPT form, it must be defined on a DFLTSRV form.

PACKET SWITCHING

The following fields (Section 2.4 - Section 2.11) define a set of parameters for packet switching.

2.4 PSN

Description: This field specifies the packet switch number of this 5ESS Switch in a Packet Switching network. A packet switching network consists of 5ESS Switches connected via IP (Internal Protocol) trunks. This is called the IP subnetwork. In order for calls to be routed across the network, each switch connected in the subnetwork must have a unique PSN.
Valid Entries: 1 - 255

Data Rules:

If PSN is entered, it supports packet switched trunks, therefore, PSN trunks must have a TRKCLASS of "X75", "X75P"or "PACKET" on the TKGRP form, and the CONFIGURATION on the EQIM form must support packet switching. For the CONFIGURATION that supports the packet switching trunk TRKCLS values,see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E9(1) and later, if a trunk group is defined with TRKCLS "PACKET" on the TKGRP form, and a trunk in the group is assigned to a loaded SM (SM in the equipment number on the TRUNK form is defined on an EQIM form where CONFIG is "LOADED"), then a value must be entered in this PSN field; the PSN may not be the same as the NEXT PSN on the TKGRP form.

2.5 IMPLIED NPA

Description: This field specifies the Implied NPA (Numbering Plan Area) of the office for ISDN packet switching. This NPA allows a switch owner to assign an implied NPA for packet switching which may be different from that for circuit switching (e.g., voice call). The area code chosen should be the NPA most often implied by 7-digit packet switching calls originating from or incoming to this office.
Valid Entries: 200 - 999

2.6 FRAMES RETRANSMITTED

Description: This field specifies the percentage of the threshold value for the ratio of information frames retransmitted to total information frames transmitted.
Valid Entries: 0 - 5

2.7 SEGMENT SIZE

Description: This field specifies the office packet segment size for Intranetwork ISDN Packet Switching.

NOTE: The SEGMENT SIZE field on the TKGRP form (5202 Record) that is applicable for X.75 trunk groups only, will be used for Internetwork ISDN Packet Switching. (See Division 2, Section 5C for more information on Packet Trunk Interface Standardization.)

Required Field.
Default: 16
Valid Entries: 16, 64, 128, or 256 (bytes)

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2.8 ILC

Description: Is intraLATA call screening permitted on ISDN SMs (CONFIGURATION set to "LOADED" on associated EQIM form)?

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.9 PP IDLE

Description: Enter the Packet Pipe IDLE timer, which is the time (in seconds) without flags before Packet Pipe trunk members go to the idle-channel state. When the PH being used by a packet pipe trunk member detects that a previously active packet pipe has gone idle at layer 1 (i.e. no 0/1 transitions), an "idle" timer of duration PP IDLE is started. If the "idle" timer expires before any activity is detected on the packet pipe, the "idle" condition of the packet pipe is reported to TM (Terminal Maintenance). TM reports the status of the packet pipe as "OOS BLKD IDLE".

This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature see Division 2, Section 8B.

Software Release: 5E10 and 5E11.
Required Field.
Default: 4
Valid Entries: 1 - 30 (seconds)

2.10 PER RATE

Description: Enter the PER (Protocol Error Record) leak rate for the speech handler channel trunks. The field applies to all trunks on a switch. The leak rate represents the number of PERs to be leaked in a period of time.

Example: If the value of this global parameter is set to 5 and the time interval is 3 minutes, then every 3 minutes 5 PERs will be leaked.

This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature see Division 2, Section 8B.

Software Release: 5E10 and 5E11.
Required Field.
Default: 5
Valid Entries: 0 - 255

2.11 PER THRESH

Description: Enter the PER (Protocol Error Record) threshold for speech handler channel trunks. The parameter applies to all the trunks on a switch. A report is generated when the defined PER threshold value is met.

Example:If this global parameter is set to 15, a report is generated when the PER count for a trunk reaches 15. An internal counter is reset so that the next report is only generated when a new PER count of 15 is reached.

This field supports the CDMA (Code Division Multiple Access) feature. For more information on this feature see Division 2, Section 8B.

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Software Release: 5E10 and 5E11.
Required Field.
Default: 15
Valid Entries: 0 - 255

X75P ONLY

The following fields (Section 2.12 - Section 2.13) define Subnetwork Parameters used for Internetwork ISDN Packet Switching. (For more information see Division 2, Section 5C, Packet Trunk Interface Standardization.)

2.12 SUBNET ID

Description: Enter the clearing Subnetwork Identifier (PVC ID (Permanent Virtual Circuit ID)). When a subnetwork clears a virtual call that is active or in progress, this value is inserted in the Clearing Subnetwork Identification Utility to identify the subnetwork. This ID helps in localizing and detecting problems at the subnetwork level.

Software Release: 5E8 and later.
Required Field.
Valid Entries: 0 - 9999

Data Rules:

For 5E9(2) and later, if the SUBNET ID field is entered, the CONFIGURATION on the corresponding EQIM form must support ISDN. For the CONFIGURATION that supports ISDN see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

2.13 SUBNET CNT

Description: Enter the Transit Subnetwork Count. This threshold value is used to detect invalid looping in the subnetwork within the LATA. It is the service provider's responsibility to ensure that the same value is provisioned for this parameter across the subnetwork.

Software Release: 5E8 and later.
Required Field.
Valid Entries: 0 - 14

Data Rules:

For 5E9(2) and later, if the SUBNET CNT field is entered, the CONFIGURATION on the corresponding EQIM form must support ISDN. For the CONFIGURATION that supports ISDN see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

2.14 #ODB AMA

Description: Are AMA billing entries desired while a B-Channel is being set up for On Demand packet switching via Q.931 signaling? This field applies to a DSL that has the ODB (On Demand B-Channel) feature.

Software Release: 5E5 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.15 PBG AMA MODULE

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Description: Should the Billing TNs and PBGs (Packet Business Groups) specified on PBGRP forms (5931 Record) be included in packet business group AMA (Automatic Message Accounting) records?

Software Release: 5E8 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If this field is "Y", a BILLING TN must be entered on each PBGRP form.

NETWORK ID CODES

Fields Section 2.16 - Section 2.18 indicate the type of network in which the switch resides.

2.16 INIC

Description: This field indicates the INIC (ISDN Network Identification Code) of the ISDN network where this switch resides. Also, this field is used for the CNIC (Clearing Network Identification Code) in the PH (Protocol Handler).

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 9999

2.17 TNIC

Description: This field indicates the TNIC (Transit Network Identification Code) value to be used on X.75 trunks when the 5ESS Switch acts as a transit network.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 9999

2.18 PPSN DNIC

Description: This field indicates the DNIC (Data Network Identification Code) of the local telephone company PPSN (Public Packet Switch Network). This parameter will be used in the Protocol Handler to determine whether or not a packet call has crossed an X.75 trunk gateway.

Software Release: 5E6 and later
Required Field.
Valid Entries: 1 - 9999

SWITCH SENSOR ID

The next fields (Section 2.19 - Section 2.20) indicate the Switch Sensor ID used in the AMA billing of packet calls.

2.19 SENSOR ID 1

Description: This field indicates the 1-digit portion of the Switch Sensor ID used in the AMA billing of packet calls.

Software Release: 5E6 and later
Default: 0

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Valid Entries: 0 - 9

Data Rules:

For ISDN SMs, SENSOR ID 1 or SENSOR ID 2 must be entered and must have a value greater than 0. An ISDN SM is any SM where CONFIGURATION on the EQIM form has a value which supports ISDN.

2.20 #SENSOR ID 2

Description: This field indicates the 5-digit portion of the Switch Sensor ID used in the AMA billing of packet calls.

Software Release: 5E6 and later
Required Field.
Valid Entries: 0 - 32767

2.21 MAX MON

Description: This field indicates the maximum number of MLHG (Multi-Line Hunt Group) queue monitor consoles allowed in the office. A queue monitor console is an ISDN terminal which can display MLHG queue status data.

Software Release: 5E6 and later
Default: 20
Valid Entries: 0 - 255

ISDN BRI Q.931 TIMERS

For 5E7 and later, the ISDN basic call procedures are enhanced to include excessive call delay procedures. Timers associated with this feature are defined in this field group (fields Section 2.22 - Section 2.28).

2.22 T303

Description: This field sets the Q.931 setup response timer value for BRIs (Basic Rate Interfaces). The timer is initiated when a Q.931 setup message is sent to the CPE (Customer Premise Equipment) on a BRI. The timer is canceled when further call progress messages are received, e.g. alerting, connect, disconnect. If the timer expires, then excessive call delay procedures apply; a second setup is sent and if no call proceeding message is received, the T303 timer is restarted. If no response is received before the second T303 expires, then the terminating BRI is cleared.

The time is specified in seconds.

Software Release: 5E7 and later
Default: 2.5
Valid Entries: 1 - 4 in steps of 0.5 (seconds)

Data Rules:

The T303 timer value must be less than the T310 timer value.

2.23 T310

Description: This field sets the Q.931 call proceeding timer value for BRI. This timer is started when a Q.931 call proceeding message is received in response to a Q.931 setup message sent on a BRI. This timer is canceled when additional call progress messages are received, e.g. alerting, progress, connect, disconnect. If T310 expires before any response is received, then the terminating BRI is cleared.

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The time is specified in seconds.

Software Release: 5E7 and later
Default: 5
Valid Entries: 3 - 10 (seconds)

Data Rules:

The T310 timer value must be greater than the T303 timer value.

2.24 T301

Description: This field sets the Q.931 ringing timer value for BRIs. The timer is initiated when a Q.931 alerting message, indicating that the CPE is "ringing," is received on a BRI. If T301 expires before receiving any messages, e.g. Q.931 connect or disconnect, then the terminating BRI is cleared.

The time is specified in minutes.

Software Release: 5E7 and later
Default: 5
Valid Entries: 3 - 7 (minutes)

2.25 T320

Description: The T320 timer is used by a packet switching On Demand B-channel with Conditional Notification. For information about the Conditional Notification feature, see Division 2, Section 5I.

T320 is an office timer defined by Bellcore TR 268. It is used for B-channel access to the PH. It is started when the switch sends or receives a CONNect message or after the clearing of the last virtual circuit on the B-channel. It is canceled when a new virtual call is established or when the user initiates B-channel disconnection procedures for the B-channel. The T320 timer is applicable only when the user has subscribed to Conditional Notification.

Software Release: 5E8 and later
Required Field.
Default: 30
Valid Entries: 20 - 60 (seconds) in increments of 5

2.26 TI T1

Description: This field sets the TI T1 timer. The timer determines the maximum time (in seconds) a Standard BRI will wait for an initializing terminal to send an initialization request to the switch.

Software Release: 5E8 and later
Required Field.
Default: 20
Valid Entries: 1 - 30 (seconds)

2.27 FC T1

Description: This field sets the FC T1 timer. The timer determines the maximum time (in seconds) the switch will wait for a Standard CPE to send a HOLD ACKNOWLEDGE message after the switch has sent a HOLD message.

Software Release: 5E8 and later
Required Field.
Default: 4
Valid Entries: 1 - 10 (seconds)

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2.28 DISP T2

Description: This field determines the length of time certain displays will appear on a BRI (Basic Rate Interface) CPE. It represents the TD-2 timer specified for ISDN displays in Bellcore TR-NWT-000865 for call control and selected services.

Software Release: 5E9(1) and later
Required Field.
Default: 30
Valid Entries: 10 - 60 (seconds)

ISDN PRI Q.931 TIMERS

2.29 T316

Description: This field determines the time to wait for a Q.931 REST ACK (Restart Acknowledgement) message after sending a Q.931 REST (Restart) message.

Software Release: 5E9(1) and later
Required Field.
Default: 30
Valid Entries: 10 - 20 (seconds, in 10 second intervals)

ISDN TONE/ANNOUNCEMENT

The following field defines ISDN tone and announcement parameters.

2.30 T306

Description: This field sets the ISDN Tone and Announcement timer value. The timer is initiated when a tone or announcement is applied to the calling party on a BRI voice call. If the timer expires prior to the user disconnecting, then the BRI is cleared.

The time is specified in seconds.

Software Release: 5E7 and later
Default: 60
Valid Entries: 30 - 150 in steps of 30 (seconds)

PASC TIMER

The following timer is used to support the PCS/ISDN Interworking feature. The term "PASC" (Personal Communications Access Service - C Interface) is used to refer to this feature on the DSLUSR form.

2.31 ALT REQUEST

Description: Enter the ALT (Automatic Link Transfer) Request Timer in increments of 0.5 seconds. It is used to specify the time allowed for the ALT bridging to complete. When the switch recognizes an ALT request, the old RPCU (Radio Control Port Unit) is sent a facility message requesting permission to perform ALT bridging and a timer is started. The switch expects a facility message indicating that ALT bridging has been completed before the timer expires. If the timer expires, the ALT has failed and the call at the new RPCU is cleared. This field supports the the ISDN PCS Interworking feature. For more information on this feature, see Division 2, Section 1AM.

Software Release: 5E10 and later
Required Field.

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Default: 1.0
Valid Entries: 0.5 - 5.0 (in 0.5 second increments)

ISDN INSPECT TIMER

The following field Section 2.32 defines the parameters for the ISDN Inspect feature. For more information on ISDN Inspect, see Division 2, Section 1BH.

2.32 ISDN INSPECT

Description: Enter the length of time (in seconds) that a user has, after initial depression of the Inspect feature button, to select another button or call appearance for inspection. The timer starts when the user presses the Inspect button and stops either when the timer expires or the user presses another feature button or call appearance.

Software Release: 5E11 and later.
Required Field.
Default: 3 (seconds)
Valid Entries: 1 - 10 (seconds)

PRI B CHL AVAIL SIG

2.33 RETRY SERV

Description: Enter the number of Service Message Retries. This field was added to support the PRI B Channel Availability Signaling Procedures feature (99-5E-3621) which provides the capability, on a National ISDN Primary Rate Interface, to send SERVICE and SERVice ACKnowledgement messages, from either end of the PRI, reporting the service status of a B-channel. This field is used to set the number of times a SERV message is resent seeking a SERV ACK message. See Division 2, Section 6I.

Software Release: 5E12 and later
Default: 2
Valid Entries: 1 - 4

2.34 PREX ON BRI

Description: Should REX (Routine Exercise) be prohibited for DSLs in the office? This field supports the Prohibit Routine Exercise on Basis Rate Interface Lines Per Office secured feature (SFID 266). Note that this field interacts with the PREX field on the DSL form which supports the Prohibit REX Per DSL Line feature (SFID 267).

See Division 2, Sections 4A266/267.

Software Release: 5E11 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is entered, SFID 266 ACT on the SFSYS form (5713 Record) must be "Y".

CRITICAL INDICATORS

The following fields (Section 2.35 - Section 2.42) support the RC Translations Protection for Highly Critical Elements feature. For more information on this feature, see Division 2, Section 1BY.

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2.35 CRIT PSN

Description: The CRIT PSN field is used to indicate whether the PSN field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.36 CRIT IMPLIED NPA

Description: The CRIT IMPLD NPA field is used to indicate whether the IMPLIED NPA field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.37 CRIT INIC

Description: The CRIT INIC field is used to indicate whether the INIC field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.38 CRIT PPSN DNIC

Description: The CRIT PPSN DNIC field is used to indicate whether the PPSN DNIC field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.39 CRIT TNIC

Description: The CRIT TNIC field is used to indicate whether the TNIC field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.40 CRIT SENSOR ID 1

Description: The CRIT SENSOR ID 1 field is used to indicate whether the SENSOR ID 1 field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.41 CRIT SENSOR ID 2

Description: The CRIT SENSOR ID 2 field is used to indicate whether the SENSOR ID 2 field is critical.

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Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

2.42 CRIT ILC

Description: The CRIT ILC field is used to indicate whether the ILC field is critical.

Software Release: 5E13 and later
Required Field.
Default: N
Valid Entries: Y, N

```
isdnopt                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5941)                 ISDN  OFFICE OPTIONS

*1. KEY 0                    X75P ONLY          NETWORK ID CODES
                       #8. SUBNET_ID ____     #12. INIC     ____
   DSL DFLT SRV           #9. SUBNET CNT __      #13. TNIC     ____
 2. DFLT SRV _______                          #14. PPSN DNIC ____
                       10. ODB AMA       Y
    PACKET SWITCHING       11. PBG AMA MODULE Y      SWITCH SENSOR ID
 3. PSN              ___                   15. SENSOR ID 1 0
 4. IMPLIED NPA      ___                       #16. SENSOR ID 2 _____
 5. FRAMES RETRANSMITTED _
 6. SEGMENT SIZE       016                     17. MAX MON 20
 7. ILC              Y
```

```
isdnopt                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5941)                 ISDN  OFFICE OPTIONS

ISDN BRI Q.931 TIMERS    ISDN TONE/ANNOUNCEMENT    30. PREX ON BRI N
18. T303    2.5          26. T306 060
19. T310    05
20. T301    5              PASC TIMER
21. T320    30           27. ALT REQUEST 1.0
22. TI T1   20
23. FC T1   04           ISDN INSPECT TIMER
24. DISP T2 30           28. ISDN INSPECT 03

ISDN PRI Q.931 TIMERS    PRI B CHL AVAIL SIG
25. T316 30              29. RETRY SERV 2
```

Figure 1 SAMPLE ISDNOPT FORM 5E12 SOFTWARE RELEASE

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```
isdnopt                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5941)               ISDN  OFFICE OPTIONS

*1. KEY 0                    X75P ONLY          NETWORK ID CODES
                      #8. SUBNET_ID  0000    #12. INIC      0001
   DSL DFLT SRV          #9. SUBNET CNT 0      #13. TNIC      0001
 2. DFLT SRV _______                          #14. PPSN DNIC 0001
                    10. ODB AMA       Y
     PACKET SWITCHING       11. PBG AMA MODULE Y      SWITCH SENSOR ID
 3. PSN              ___                  15. SENSOR ID 1 0
 4. IMPLIED NPA      ___                  #16. SENSOR ID 2     1
 5. FRAMES RETRANSMITTED _
 6. SEGMENT SIZE       016                   17. MAX MON 20
 7. ILC              Y
```

```
isdnopt                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5941)               ISDN  OFFICE OPTIONS

ISDN BRI Q.931 TIMERS    ISDN TONE/ANNOUNCEMENT    30. PREX ON BRI N
18. T303    2.5          26. T306 060
19. T310    05
20. T301    5               PASC TIMER
21. T320    30           27. ALT REQUEST 1.0
22. TI T1   20
23. FC T1   04            ISDN INSPECT TIMER
24. DISP T2 30           28. ISDN INSPECT 03

ISDN PRI Q.931 TIMERS    PRI B CHL AVAIL SIG
25. T316 30              29. RETRY SERV 2
```

```
isdnopt                    5ESS Switch
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5941)               ISDN  OFFICE OPTIONS

  CRITICAL INDICATORS
31. CRIT PSN         N
32. CRIT IMPLIED NPA N
33. CRIT INIC        N
34. CRIT PPSN DNIC   N
35. CRIT TNIC        N
36. CRIT SENSOR ID 1 N
37. CRIT SENSOR ID 2 N
38. CRIT ILC         N
```

Figure 2 SAMPLE ISDNOPT FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 5C: 5942 RECORD
(REMOTE) INTEGRATED SERVICES LINE UNIT
LINE CARD FORM - ISLULC

1. GENERAL

The 5942 (Remote) Integrated Services Line Unit Line Card Record is available with the 5E4(2) and later Software Releases. It is used to define the Line Cards equipped on Remote or local Integrated Services Line Unit Line Group Controllers in a 5ESS Switch.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.7.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 * (R)ISLU

Description: Enter the ISLU (Integrated Services Line Unit) or RISLU (Remote Integrated Services Line Unit) number.

Required Field.
Valid Entries: 0 - 7

2.4 * LGC

Description: Enter the Line Group Controller pack number on which the Line Cards are equipped.

Required Field.
Valid Entries: 0 - 15

Data Rules:

The LGC must be defined on an EQLGC form corresponding to the specified SM and (R)ISLU.

LINE CARDS

Up to thirty-two Line Cards can be equipped on each Line Group Controller. For each POS (Position) in which a Line Card is equipped, enter the following fields (Section 2.5 - Section 2.8).

2.5 TYPE

Description: Enter the Line Card type.

Valid TYPE Entries

Entry	Definition
TLC	ISLU T-Card

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ZLC	ISLU Analog Line Card (Z-CARD)
SZLC	ISLU Spare Z-Card
ULC	ISLU Phase 2 U-Card
ULCS	ISLU Phase 2 Spare U-Card
APC	ISLU Auxiliary Power Converter
AULC	Software Releases: 5E6 and later. ISLU ANSI U-Card
SAULC	Software Releases: 5E6 and later. ISLU Spare ANSI U-Card

Data Rules:

Spare Z-Cards can only be populated in positions 15 or 31. Spare Phase 2 U-Cards can only be in Position 15. Each spare Line Card that is equipped reduces the total number of lines available for customers by 1. Only two spare Line Cards (secondary and primary pair are counted as 1) may be operational per (R)ISLU at any given time.

Whenever a line group controller is equipped with the LGP KCD2 power circuit pack and with one or more Z-cards (ZLC, SZLC), or Phase 2 U-cards (ULC, ULCS), an APC (Auxiliary Power Converter) can only be defined in Position 8 of every line group controller. A maximum of 16 APCs are allowed per (R)ISLU.

If a line group controller is equipped with the LGP 553A or the LGP 553B power circuit pack, an APC should not be equipped for that LGC.

If the line group controller is equipped with only T-cards, an APC does not need to be equipped for that LGC, but equip Position 8 last; in case Z/U-cards are added later to that LGC, there will be no growth of T-cards required.

Dial Tone First service for analog lines (defined on the LINE form with COIN set to "DTF") requires an ISLU Z-card (defined on this form with a CLI value of 0) with EXPANDED INBAND SGNLING? set to "Y" on the OFCOPT form.

If an ISLULC form is submitted with any of Z or U-Cards, the EQISAP input form must be submitted with circuit pack type of "ISMAN".

For 5E6 and later, an ANSI U-Card occupies one position in the LGC; it can be used with only LGP 553B model power circuit pack, defined on the EQLGC form (5733 Record) with a CLI value of 02.

The spare ANSI U-Card can only be equipped in slot 15 of the LGC (enter "SAULC" in position 15, only).

2.6 EQST

Description: Enter the Equipment Status of the Line Card.

Valid EQST Entries

Entry	Definition
G	Growth Status.
O	Operational Status.
U	Unequipped Status.

Data Rules:

New 5ESS Switch offices and equipment additions require the Operational status.

During off-line ODA data base retrofits, values other than 'O' may exist, but if they do, the EQST value here must be lower than, or equal to, the EQST on the EQLGC form entry for the LGC. The hierarchy of equipment status, from lowest to highest, are Unequipped, Growth and Operational.

2.7 CLI

Description: Enter the Change Level Indicator of the Line Card. For a complete listing of valid CLI values,

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J-Drawing and list combinations, see Division 8, Section 1.
Valid Entries: 0 - 7fffffff (hexadecimal)

2.8 PM GRP

Description: Enter the name of the Performance Monitoring group.

If PM GRP is not entered when TYPE is "AULC", "SAULC", "ULC", "ULCS", "PULC", or "SPULC", the threshold value from the PMDEF group defined on the PMTHRESH form (5948 Record) will be used.

Software Release: 5E6 and later
Valid Entries: 1 - 8 characters

Data Rules:

If this field is entered, TYPE must be "AULC", "SAULC", "ULC", or "ULCS".

For 5E8 and later, when PM GRP is entered, the corresponding PMTHRESH form (5948 Record) must be entered with PM TYPE of "DSL".

SCREEN 1 OF 2 5ESS Switch
islulc OFFICE DATA ADMINISTRATION
(5942) (REMOTE) INTEGRATED SERVICES LINE UNIT LINE CARD

* 1. SM 004
* 2. (R)ISLU 7
* 3. LGC 00

4. LINE CARDS

row	POS	TYPE	EQST	CLI	PM GRP	row	POS	TYPE	EQST	CLI	PM GRP
1	0	ZLC	O	00000000	_____	9	8	_____	_	_____	_____
2	1	AULC	O	00000000	PMDEF	10	9	_____	_	_____	_____
3	2	_____	_	_____	_____	11	10	_____	_	_____	_____
4	3	_____	_	_____	_____	12	11	_____	_	_____	_____
5	4	_____	_	_____	_____	13	12	_____	_	_____	_____
6	5	_____	_	_____	_____	14	13	_____	_	_____	_____
7	6	_____	_	_____	_____	15	14	_____	_	_____	_____
8	7	_____	_	_____	_____	16	15	_____	_	_____	_____

SCREEN 2 OF 2 5ESS Switch _
islulc OFFICE DATA ADMINISTRATION
(5942) (REMOTE) INTEGRATED SERVICES LINE UNIT LINE CARD

4. LINE CARDS

row	POS	TYPE	EQST	CLI	PM GRP	row	POS	TYPE	EQST	CLI	PM GRP
17	16	_____	_	_____	_____	25	24	_____	_	_____	_____
18	17	_____	_	_____	_____	26	25	_____	_	_____	_____
19	18	_____	_	_____	_____	27	26	_____	_	_____	_____
20	19	_____	_	_____	_____	28	27	_____	_	_____	_____
21	20	_____	_	_____	_____	29	28	_____	_	_____	_____
22	21	_____	_	_____	_____	30	29	_____	_	_____	_____
23	22	_____	_	_____	_____	31	30	_____	_	_____	_____

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24 23 _____ _ _____ _____ 32 31 _____ _ _____ _____

Figure 1 SAMPLE ISLULC FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 5E: 5944 RECORD
RISLU REMOTE ALARM SECTION BUILDING/MISCELLANEOUS ALARM SCAN POINT FORM - RIBMSC

1. GENERAL

The 5944 Record is available with the 5E4(2) and later Software Releases. It provides information about RISLU RAS (Remote Alarm Section) Building/Miscellaneous scan points. One RISLU at each RISLU site may be optionally equipped with a RAS that provides building/miscellaneous alarm scanning.

1.1 Recent Change View

The corresponding Recent Change view for this form is 26.15.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SITE

Description: Enter the Remote Integrated Services Line Unit Site ID. The Site ID range of values is not to be confused with the RSM Site ID range.

Required Field.
Valid Entries: 500 - 999

2.3 * POINT NBR

Description: Enter the RAS alarm scan point number.

Scan points 0 and 1 are always required when a RISLU site has a RAS. These records are initialized for initial offices only from the RISITE form (5940 Record) when RAS EQUIPPED? is set to "Y".

Required Field.
Valid Entries: 2 - 31

2.4 IN USE

Description: Is the alarm operational? "Y" means that the alarm is operational; "N" means that no alarms will be reported.
Default: Y
Valid Entries: Y, N

2.5 MCC NAME

Description: Enter the name of the alarm as it should appear on the MCC (Master Control Center).
Valid Entries: 1 - 9 characters

2.6 TTY NAME

Description: Enter the name of the alarm as it should appear on the tty. This is an office-assignable label to be included in craft output messages concerning the alarm scan point.
Valid Entries: 1 - 20 characters

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2.7 ALARM LEVEL

Description: Enter the alarm level to be sounded when the scan point goes off-normal. This is office-assigned, based on the relative importance of the device being monitored.
Default: MIN
Valid Entries:

Valid ALARM LEVEL Entries

Entry	Definition
CRIT	Critical
MAJ	Major
MIN	Minor
ACT	Action
INFO	Information

2.8 PROTECT FROM RC

Description: This field is generated by the ODA system; it is not on the input form. It protects the record from Recent Change activity.

When set to 1, the record cannot be deleted or updated. This field is set to 1 for records where POINT NBR is 0 or 1 and is set to 0 for records where POINT NBR is 2 to 31.

---

ribmsc 5ESS Switch _
(5944) OFFICE DATA ADMINISTRATION
OSPS RISLU REMOTE ALARM ASSIGNMENT

*1. SITE 501
*2. POINT NBR 02
3. IN USE Y
4. MCC NAME _____
5. TTY NAME FIRE
6. ALARM LEVEL CRIT

Figure 1 SAMPLE RIBMSC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5F: 5945 RECORD
LASS OFFICE PARAMETERS FORM - LASSOP

1. GENERAL

The 5945 Record is available with 5E5 and later Software Releases. The LASSOP form is an ODA (Office Data Administration) input form that is used to supply global office options and parameters for the LASS features.

The LASS features, AC (Automatic Callback), AR (Automatic Recall), COT (Customer Originated Trace) and ICLID (Individual Calling Line Identification), are available with 5E5 and later Software Releases.

The LSFs (LASS Selective Feature), SCA (Selective Call Acceptance), CAR (Computer Access Restriction), SCF (Selective Call Forwarding), SCR (Selective Call Rejection), and SDA (Selective Distinctive Alert), are available with 5E6 and later Software Releases.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and office name on each record.

2.2 * KEY

Description: The only valid entry is defaulted to 0.

CUST ORIG TRACE

The following fields (Section 2.3 - Section 2.12) furnish information regarding the COT (Customer Originated Trace) feature.

2.3 AGENCY

Description: Enter the TN of the agency to be contacted to find information regarding a trace. The TN will be displayed upon successful invocation of the COT feature.
Valid Entries: 10 digit TN (0 - 9) or blank

2.4 COT GA FEAT

Description: This field contains the COT Feature Name when the feature is generally available (defined on RC/V View 8.18).

Required Field.
Default: /COTGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

The feature names must be defined on the LSCOTFD form (5972 Record).

2.5 ACTIVATE RTI

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Description: This field contains the route index used to access the successful activation announcement after a COT request.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form (5303 Record).

2.6 TRC NA RTI

Description: This field contains the route index used to access the trace not available announcement after a COT request.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form (5303 Record).

2.7 NO RESRC RTI

Description: This field contains the route index used to access the buffer full announcement after attempting a COT activation.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form (5303 Record).

2.8 COT ACT LVL

Description: Enter the level of COT activation that is supplied by the office.

Software Release: 5E7 and later
Required Field.
Default: 1
Valid Entries:

Valid COT ACT LVL Entries

Entry	Definition
1	Standard COT activation introduced with the 5E5 Software Release.
2	Software Release: 5E7 and later. Announcements and displays for COT activation.

Data Rules:

If a 2 is entered in this field, the following fields must be assigned:

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- The FIXRT (5301-1 Record) form must have a FIXED ROUTE TYPE of "2LEVEL".
- The ANNAPL (5529 Record) form must have an APPLICATION of "2LEVEL" and at least 1 SM entered.
- On the EQRAP form (5822 Record), the DSU2-RAF must have the MICROCODE 5D142A20, L22 pack equipped, and APPLICATION must be "BRCS-2LV".

TWO LEVEL ONLY

The following fields (Section 2.9 - Section 2.12) are available with 5E7 and later and will be used only when 2-Level COT is provided by the office.

2.9 COT WAIT TIME

Description: Enter the amount of time (seconds) the switch will wait for the customer's response during a 2-Level COT activation request.

Software Release: 5E7 and later
Required Field.
Default: 7
Valid Entries: 1 - 15 seconds

2.10 COT MAX TIMEOUT

Description: This field is used to indicate how many times a customer is allowed to timeout during the interactive recorded announcements for 2-Level COT activation.

Software Release: 5E7 and later
Required Field.
Default: 3
Valid Entries: 1 - 5

2.11 COT MAX ERRS

Description: This field is used to indicate how many times a customer will be allowed to enter incorrect digits during the interactive recorded announcements for 2-Level COT activation.

Software Release: 5E7 and later
Required Field.
Default: 3
Valid Entries: 1 - 5

2.12 COT COST

Description: This field is used to indicate whether the cost amount of the 2-Level COT activation will be included in the announcement.

If a value is not entered, a general announcement will be played indicating that the customer will be charged for the trace. If a value is supplied, the recorded announcement will include the value entered in this field.

Software Release: 5E7 and later
Valid Entries: 00.00 - 99.99 dollars

INDIV CLG LINE ID

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The following fields (Section 2.13 - Section 2.14) furnish information regarding the ICLID feature.

2.13 PRI PRVT

Description: Will the originating users private TN be delivered to a Primary Rate Interface?

If "Y" is entered, the user's private TN will be delivered over the Primary Rate Interface along with a Common Channel Signaling presentation indicator set to "restricted". PRI PRVT is only used when STA ID on a TKGRP form (5202 Record) is "TRAN". When STA ID on a TKGRP form is set to "TRAN", and if PRI PRVT is set to "Y", private TNs will be delivered to the terminating trunk. If PRI PRVT is set to "N", private TNs will not be delivered to the terminating trunk. If STA ID is blank, PRI PRVT is not used.

NOTE: PRI PRVT is not used in conjunction with CPN BN OPT, only with STA ID. If PRI PRVT is set to "Y", CPN BN OPT must be set to "NONE".

Software Release: 5E5 and later
Default: 5E9(2) and earlier, Y

5E10 and later, N
Valid Entries: Y, N

2.14 PCP GA FEAT

Description: This field contains the PCP Feature Name when the feature is generally available (defined on RC/V View 8.18).

Required Field.
Default: /DIGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

The feature names must be defined on the DISPFD form (5965 Record).

BULK CLG LINE ID

Field Section 2.15 refers to the BCLID (Bulk Calling Line Identification) feature. For further information on BCLID, see Division 2, Section 1Y.

2.15 BILLING CYCLE

Description: Enter the Billing Cycle in hours. This entry specifies the interval for collection of BCLID AMA records. This parameter applies only for BCLID customers with usage-sensitive billing. Any change in the Billing Cycle will not take effect until the following midnight.

Software Release: 5E8 and later
Default: 24
Valid Entries: 1, 2, 3, 4, 6, 8, 12, or 24 (hours)

AUTOMATIC CALLBACK AND AUTOMATIC RECALL

The following fields (Section 2.16 - Section 2.47) furnish information regarding the AC and AR features.

The AC feature enables a user to automatically place a call to the LICDN (Last Incoming Calling Directory Number) of the terminal. The LICDN is defined as the address of the last party that called. Automatic Callback feature activation enables an end-user to automatically call back the last incoming calling directory number currently associated with the end-user's terminal.

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The AR feature enables a calling terminal to automatically place a call to the LOCDN (Last Outgoing Directory Number) currently associated with the terminal and/or to camp on the LOCDN upon receiving busy treatment. The LOCDN is defined as the address of the last party called by a user of the calling terminal.

2.16 B/I SCAN

Description: This field indicates the busy/idle status scan rate for AC and AR.
Default: 60
Valid Entries:
- 5E6 and earlier: 45, 60, 75, 90, 105 and
- 120 seconds
- 5E7 and later: 30, 45, 60, 75, 90, 105 and
- 120 seconds

2.17 TIMEOUT

Description: This field indicates how long scanning will be performed during AC and AR.
Default: 30
Valid Entries: 15 - 45 minutes, in 1 minute intervals.

2.18 SCAN MODE

Description: This field indicates the type of scanning to be used during AC and AR.
Default: TERM
Valid Entries:

Valid SCAN MODE Entries

Entry	Definition
ORIG	Originating Scanning consists of the originating switch sending queries to the terminating switch at regular intervals (defined in the B/I SCAN field), until the idle status of the called TN is returned from the terminating switch.
TERM	Terminating Scanning consists of the originating switch asking the terminating switch to monitor the busy/idle status of the called TN, and to inform the originating switch when the called TN is found idle.

2.19 REINIT SCAN

Description: This field is used to specify the threshold which is used to determine whether or not the T1 timer should be reinitialized during reactivation of AC or AR.

The T1 timer is initialized during activation of AC and AR via the TIMEOUT field.

The T13 timer is initialized by the MAX CAMP field.

During reactivation of AC or AR, if the T13 timer is less than the value specified in this field, the T1 timer will not be reinitialized.

Software Release: 5E7 and later
Required Field.
Default: 300
Valid Entries:
- 0 - 300 in 15 second increments;
- (e.g., 0, 15, ..., 270, 300)

2.20 TCAP

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Description: This field indicates the time period the originating switch will wait for a response, after an AC/AR CCS (Common Channel Signaling) TCAP query has been sent to the terminating switch.
Default: 3
Valid Entries: 1 - 10 seconds

2.21 RNGBK TYPE

Description: This field indicates the type of distinctive ringing used for ringback. This field only applies to the Generally Available case, when the AC and AR feature is not assigned to the line.
Default: C
Valid Entries:

Valid RNGBK TYPE Entries

Entry	Definition
A	repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.
C	repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	repeated pattern 1.0 second on, 1.0 second off, 1.0 second on and 3.0 seconds off (also known as code 2 ringing).

2.22 RNG CYCLE

Description: This field indicates the number of AC or AR ringback ring cycles of a distinctive ringing pattern for one ringback attempt. Each ring cycle is 6 seconds.
Default: 4
Valid Entries: 2 - 7 ring cycles

2.23 MAX RNGBK

Description: This field is used by AC and AR to indicate the maximum number of ringback attempts per activation of the feature.

For Standard BRI users (DSL CLS is "STD" on the DSL form), Call Processing software will ignore this field and make only one ringback attempt.
Default: 1
Valid Entries: 1 - 12 ringbacks

2.24 RNGBK WAIT

Description: This field is used by AC and AR to indicate the wait period between ringbacks after the initial unanswered ringback in minutes and seconds. For example, if 3 :15 is entered, ringbacks will occur every 3 minutes and 15 seconds.

This field does not apply to Standard BRI users (DSL CLS is "STD" on the DSL form) since only one ringback attempt will be made. For these users, Call Processing software will ignore any entry in MAX RNGBK and RNGBK WAIT.

Default Value 0 :0
Valid Entries: 0 :0, 3 - 12:SS min:sec; where SS is
0 - 45 in 15 second increments.

Data Rules:

This field must not be greater than 0 if MAX RNGBK is equal to 1.

2.25 AC TO COIN

Description: Will the customer be allowed to invoke the LASS AC feature towards coin phones?

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Default: Y
Valid Entries: Y, N

2.26 AC TN UNIQ IGN

Description: Will the checking of the uniqueness of the LASS incoming calling TN (MLHG, PBX, shared TNs, and multiparty lines with the exception of two-party ANI lines are considered non-unique) be ignored upon AC invocation?
Default: N
Valid Entries: Y, N

2.27 AC GA FEAT

Description: This field contains the AC Feature Name when the feature is generally available (defined on RC/V View 8.18).

Required Field.
Default: /LACGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

The feature names must be defined on the LSACFD form (5970-1 Record).

2.28 AR GA FEAT

Description: This field contains the AR Feature Name when the feature is generally available (defined on RC/V View 8.18).

Required Field.
Default: /LARGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

The feature names must be defined on the LSARFD form (5971-1 Record).

2.29 AC CNFRM RTI

Description: This field contains the route index used to access the AC confirmation announcement after an AC request.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form.

2.30 AR CNFRM RTI

Description: This field contains the route index used to access the AR confirmation announcement after an AR request.
Valid Entries:

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- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form.

2.31 CF ACTIVE DNY RTI

Description: This field indicates the route index used to access the Call Forwarding Active Denial announcement. This announcement is provided when AC/AR activation is attempted on a line that has one of the following active: Call Forwarding Variable, LASS Selective Call Forwarding, Call Forwarding Night Service, LASS Selective Call Acceptance with forwarding, or LASS Computer Access Restriction with forwarding.

If this field is left blank, reorder tone will be provided.

Software Release: 5E7 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index specified in this field must be defined on the RTIDX form.

2.32 LNG TRM DNY RTI

Description: This field contains the route index used to access the AC/AR timed-out without completion announcement after an AC or AR request.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form.

2.33 AC CNCL RTI

Description: This field contains the route index used to access the AC cancellation announcement after the AC cancellation has been requested.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form.

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2.34 AR CNCL RTI

Description: This field contains the route index used to access the AR cancellation announcement after the AR cancellation has been requested.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form.

2.35 PTY BUSY RTI

Description: This field contains the route index used to access the AC/AR party is busy announcement after AC or AR has been requested.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form.

2.36 INTER LATA AC/AR

Description: Are AC/AR CCS7 TCAP (Transactions Capabilities Application Part) queries permitted across LATA boundaries?

Software Release: 5E6 and later
Default: N
Valid Entries: Y, N

2.37 AC ORIG CAMP LIM

Description: This field is used to indicate the maximum number of AC camp-ons that can be originated by a line. Short term denial (reorder tone) will be provided to the customer when the limit is exceeded.

Software Release: 5E7 and later
Required Field.
Default: 10
Valid Entries: 1 - 30

2.38 AR ORIG CAMP LIM

Description: This field is used to indicate the maximum number of AR camp-ons that can be originated by a line. Short term denial (reorder tone) will be provided to the customer when the limit is exceeded.

Software Release: 5E7 and later
Required Field.
Default: 10
Valid Entries: 1 - 30

2.39 TERM CAMP LIM

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Description: This field is used to indicate how many AC/AR activations may camp-on to a single line. Short term denial (reorder tone) will be provided to the customer when the limit is exceeded.

Software Release: 5E7 and later
Required Field.
Default: 10
Valid Entries: 1 - 20

2.40 MAX CAMP TIME

Description: This field is used to indicate how long an AC or AR camp-on may remain active when the feature has been reactivated.

During an initial activation of AC and AR, the T13 timer is initialized to the value specified in this field.

An initial activation of AC or AR may be active for as long as the value specified in the TIMEOUT field. Reactivations of AC or AR to the same line may continue as long as the T13 timer has not expired.

Software Release: 5E7 and later
Required Field.
Default: 180
Valid Entries:
- 120 - 240 in 15 minute increments;
- (e.g., 120, 135, ..., 225, 240)

2.41 AC ACT LVL

Description: Enter the level of AC (Automatic Callback) activation that is supplied by the office.

Software Release: 5E7 and later
Required Field.
Default: 1
Valid Entries:

Valid AC ACT LVL Entries

Entry	Definition
1	Standard AC activation introduced with the 5E5 Software Release.
2	Software Release: 5E7 and later. Announcements and displays for AC activation.

Data Rules:

If a 2 is entered in this field, the following fields must be assigned:

- The FIXRT (5301-1 Record) form must have a FIXED ROUTE TYPE of "2LEVEL".
- The ANNAPL (5529 Record) form must have an APPLICATION of "2LEVEL" and at least 1 SM entered.
- On the EQRAP form (5822 Record), the DSU2-RAF must have the MICROCODE 5D142A20, L22 pack equipped, and APPLICATION must be "BRCS-2LV".

2.42 AC BLOCK TO PRIV N

Description: Is Automatic Callback blocked to private DNs? This field is used to activate the Automatic Callback Block to Private Number special feature. For more information on this feature, see Division 2,

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Section 4A111.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

2.43 AC BLOCK RTI

Description: Enter the blocked Automatic Callback announcement route index. This field specifies the route index of the announcement to be played when Automatic Callback Blocked to Private Number occurs.

Software Release: 5E8 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

For 5E 8 only, if AC BLOCK RTI is assigned on the LASSOP form, then the AC BLOCK RTI must be defined on a RTIDX form.

TWO LEVEL ONLY

The following fields (Section 2.44 - Section 2.47) are available with 5E7 and later and will be used only when 2-Level AC is provided by the office.

2.44 AC WAIT TIME

Description: Enter the amount of time (in seconds) the switch will wait for the customer's response during an AC request.

Software Release: 5E7 and later
Required Field.
Default: 7
Valid Entries: 1 - 15 seconds

2.45 AC MAX TIMEOUT

Description: This field is used to indicate how many times a customer is allowed to timeout during the interactive recorded announcements for 2-Level AC.

Software Release: 5E7 and later
Required Field.
Default: 3
Valid Entries: 1 - 5

2.46 AC MAX ERRS

Description: This field is used to indicate how many times a customer will be allowed to enter incorrect digits during the interactive recorded announcements for 2-Level AC.

Software Release: 5E7 and later
Required Field.
Default: 3

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Valid Entries: 1 - 5

2.47 AC VOICE BACK

Description: Is the date and time of the last call returned to the customer for a 2-Level AC activation?

Software Release: 5E7 and later
Required Field.
Default: Y
Valid Entries: Y, N

SCREEN LIST EDITING

The following fields (Section 2.48 - Section 2.52) are available with 5E6 and later Software Releases. They are used to define the global parameters for the LASS Selective Features.

2.48 INTER LATA SCREEN

Description: Will the CPN (Calling Party Number) be screened across LATA boundaries?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.49 MAX ERROR RETRY

Description: This field indicates how many user errors will be allowed before the Screen List Editing session will be terminated.

Software Release: 5E6 and later
Default: 4
Valid Entries: 1 - 10

2.50 RESP WAIT TIME

Description: This field indicates how long the switch will wait for a response from a CCS7 (Common Channel Signaling 7) TCAP (Transactions Capabilities Application Part) query during TN validation.

Software Release: 5E6 and later
Default: 10
Valid Entries: 1 - 10 seconds

2.51 VALIDATE LIST ENTRY

Description: Will interswitch Screen List entries be validated via CCS7 TCAP queries during a Screen List Editing session?

- ***NOTE:*** If this field is set to "Y", the switch will attempt to validate the screen list entry via a CCS7 TCAP query. Consequently, interoffice PRI calls will not pass validation even though its CPN (Calling Party Number) can be screened during LSF screening.

Software Release: 5E6 and later
Required Field.
Default: Y
Valid Entries: Y, N

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2.52 USE BELLCORE SLE

Description: Should the new Bellcore standard SLE interface be used? If "N", the AT&T Standard SLE Interface will be used.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

SELECTIVE CALL ACCEPT

The following fields (Section 2.53 - Section 2.56) are available with 5E6 and later Software Releases. They are used to define the global parameters for the LASS SCA (Selective Call Acceptance) feature.

2.53 SCA MAX SZE

Description: This field indicates how many TNs may be entered into the SCA Screen List.

Software Release: 5E6 and later
Required Field.
Default: 6
Valid Entries: 3 - 31

2.54 SCA REJ RTI

Description: This field indicates the route index used to access the SCA call rejection announcement. The announcement is provided after the CPN (Calling Party number) has failed LASS SCA screening.

Software Release: 5E6 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

This route index must be defined on the RTIDX form (5303 Record).

2.55 SCA REJ BILL

Description: Will the calling party be billed for the SCA call rejection announcement, which is given when a TN has failed SCA screening?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.56 SCA GA FEAT

Description: This field contains the Generally Available SCA Feature.

Software Release: 5E6 and later
Required Field.
Default: /SCAGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names

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starting with a slash (/) are reserved for preconstructed features.

Data Rules:

If a preconstructed feature is not used the constructed feature must be defined on the LSCAFD form (5975 Record).

COMPUTER ACCESS RESTRICT

The following fields (Section 2.57 -Section 2.59) are available with 5E6 and later Software Releases. They are use to define the global parameters that pertain to the LASS CAR (Computer Access Restriction) feature.

2.57 CAR MAX SZE

Description: This field indicates how many LASS CAR Screening List entries are permitted.

Software Release: 5E6 and later
Required Field.
Default: 6
Valid Entries: 3 - 31

2.58 CAR REJ RTI

Description: This field indicates the route index used to the CAR announcement. The announcement is provided after the CPN (Calling Party number) has failed LASS CAR screening.

Software Release: 5E6 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

The route index must be defined on the RTIDX form (5303 Record).

2.59 CAR REJ BILL

Description: Will the calling party be billed for the LASS CAR announcement given after a CAR screening failure?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

SELECTIVE CALL REJECTION

The following fields (Section 2.60 -Section 2.65) are available with 5E6 and later Software Releases. They are used to define the global parameters that pertain to the LASS SCR (Selective Call Rejection) feature.

2.60 SCR MAX SZE

Description: This field indicates how many LASS SCR Screening List entries will be permitted.

Software Release: 5E6 and later

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Required Field.
Default: 6
Valid Entries: 3 - 31

2.61 HARSH RTI

Description: This field indicates the route index used to access the SCR harsh announcement. The announcement is provided after the CPN (Calling Party Number) has failed LASS SCR screening.

Software Release: 5E6 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

This route index must be defined on the RTIDX form (5303 Record).

2.62 HARSH BILL

Description: Will the calling party be billed for the LASS SCR harsh announcement given after a SCR screening failure?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.63 GENTLE RTI

Description: This field indicates the route index used to access the SCR gentle announcement. The announcement is provided after the CPN (Calling Party Number) has failed LASS SCR screening.

Software Release: 5E6 and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

This route index must be defined on the RTIDX form (5303 Record).

2.64 GENTLE BILL

Description: Will the calling party be billed for the LASS SCR gentle announcement given after a SCR screening failure?

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

2.65 SCR GA FEAT

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Description: This field contains the Generally Available SCR Feature Name.

Software Release: 5E6 and later
Required Field.
Default: /SCRGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

If a preconstructed feature is not used, the constructed feature must be defined on the LSCRFD form (5977 Record).

SELECTIVE DISTINCTIVE ALERT

The following fields (Section 2.66 - Section 2.67) are available with 5E6 and later Software Releases. They are used to define the global parameters that pertain to the LASS SDA (Selective Distinctive Alert) feature.

2.66 SDA MAX SZE

Description: This field indicates how many TNs may be entered into the SDA Screen List.

Software Release: 5E6 and later
Required Field.
Default: 6
Valid Entries: 3 - 31

2.67 SDA GA FEAT

Description: This field contains the Generally Available SDA Feature Name.

Software Release: 5E6 and later
Default: /SDAGA

Required Field.
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

If a preconstructed feature is not used the constructed feature must be defined on the LSDAFD form (5978 Record).

SELECTIVE CALL FORWARD

The following fields (Section 2.68 - Section 2.69) are available with 5E6 and later Software Releases. They are used to define the global parameters that pertain to the LASS SCF (Selective Call Forwarding) feature.

2.68 SCF MAX SZE

Description: This field indicates how many TNs may be entered into the SCF Screen List.

Software Release: 5E6 and later
Required Field.
Default: 6
Valid Entries: 3 - 31

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2.69 SCF GA FEAT

Description: This field contains the Generally Available SCF Feature Name.

Software Release: 5E6 and later
Required Field.
Default: /SCFGA
Valid Entries: 1 to 8 characters long, with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Data Rules:

If a preconstructed feature is not used the constructed feature must be defined on the LSCFFD form (5976 Record).

FORWARDING TREATMENT

The following fields (Section 2.70 - Section 2.72) are available with 5E6 and later Software Releases. They are used to define the global parameters that pertain to the LASS SCF and SCA/CAR features.

2.70 FORWARDING MAX

Description: This field indicates how many times a single call may forwarded sequentially.

Software Release: 5E6 and later
Required Field.
Default: 5
Valid Entries: 1 - 32

2.71 SIM INTER OFC FWD

Description: This field indicates how many simultaneous interoffice calls may be forwarded before busy tone is provided to the calling party.

Software Release: 5E6 and later
Default: 1
Valid Entries: 1 - 99

2.72 SIM INTRA OFC FWD

Description: This field indicates how many simultaneous intraoffice calls may be forwarded before busy tone is provided to the calling party.

Software Release: 5E6 and later
Default: 99
Valid Entries: 1 - 99

DISPLAY

The following field(s) (Section 2.73 -Section 2.74) applies to information displayed on CPEs (Customer Premises Equipment).

2.73 CNAM TCAP

Description: Enter the CNAM CCS TCAP query wait period (in seconds). When the CNAM TCAP timer is 3 seconds or less, there is no customer perceived delay to power ringing. If the CNAM TCAP timer value is set to greater than 3 seconds, the customer can experience a delay of as much as 3 seconds before the

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start of power ringing. The delay can be as large as the difference between the CNAM TCAP timer value and 3. For example, a CNAM TCAP timer value of 5 could result in a delay of as much as 2 seconds. This delay is caused by waiting for the TCAP response before power ringing.

Software Release: 5E7 and later
Required Field.
Default: 3
Valid Entries: 1 - 6 (seconds)

2.74 CNAM SRC

Description: This field is used by the Originating Switch Calling Name feature to indicate whether the source for obtaining the calling name is from the SCP (Service Control Point) or from ODD (Office Dependent Data) stored locally on the switch. If CNAM SRC field is set to the default value of "Blank" then the Originating Switch Calling Name feature will be inactive.

Software Release: 5E13 and later
Default: Blank (feature inactive)
Valid Entries: Blank, ODD, or SCP

Data Rules:

The Originating Switch Calling Name feature is a secured feature. The ACT field for SFID 318 must be set to "Y" on the SFSYS form (Record 5713-1) before "ODD" or "SCP" can be entered in the CNAM SRC field.

GENERAL

The following field is available for 5E9(1) and later Software Releases. This field applies to information for LASS error treatment.

2.75 ERROR TREAT RTI

Description: Enter the route index for LASS error treatment. The LASS error announcement is provided by a 13A announcement channel via the RTI specified in this field. If the field is blank, reorder tone is provided. This field applies only to analog lines.

Software Release: 5E9(1) and later
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

CALL WAITING DELUXE

The following field defines the office parameter for Call Waiting Deluxe. This field supports the Call Waiting Deluxe Phase II Feature. This is a secured feature with SFID 145. For more information on this feature, see Division 2, Section 4A145.

2.76 AMA AGGR TIME

Description: Call Waiting Deluxe AMA Aggregation Time. A certain time of day is selected in which usage of the Call Waiting Deluxe conferencing is calculated for the purpose of billing.

Software Release: 5E10 and later
Default: 0
Valid Entries: 0 to 23 (selectable on the hour).

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*AUDIBLE CALLING NAME ON *69 (AUTOMATIC CALLBACK)*

The following fields (Section 2.77 - Section 2.81) are available with 5E14 and later Software Releases. They are used to define the global parameters that pertain to the Audible Calling Name on *69 (Automatic Callback) feature.

2.77 IP DN

Description: Intelligent Peripheral's Dialing Number. This field is used to make a call to the Intelligent Peripheral for audible calling name treatment.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 15

Data Rules:

When IP DN is entered:

- IP DAS must be entered.
- IP SCR must be entered.

For 5E14 and later, Audible Calling Name on *69 (Automatic Callback) is a secured feature and must be purchased by the office before this field can be entered. Consequently, the ACT field for SFID 549 must be set to "Y" on the SFSYS form (5713-1 Record) before IP DN can be entered.

2.78 IP DAS

Description: Intelligent Peripheral's Directory Number Digit Analysis Selector. This field defines a digit analysis selector. It indicates which digit interpreter tables to use for analyzing intelligent peripheral's directory number.

Software Release: 5E14 and later
Valid Entries:

For 5E14 and earlier: Blank, or 1 - 99
For 5E15 and later: Blank, or 1 - 254

Data Rules:

When IP DAS or IP SCR is known, IP DN must be entered.

For 5E14 and later,

- if IP DAS entered on this form is defined on the DAS form (5300-1 Record), then LOCAL DIT (under LINE DAS) on the DAS form must be entered on the LDIT form (5300 Record) where CODE INDEX or CDI is entered, and all combinations of IP SCR entered on this form and CODE INDEX or CDI entered on the LDIT form must be entered on the RAR form (5301 Record) in the SCR and CDI fields respectively.
- the IP DAS assigned on this form must be defined on the DAS form.

2.79 IP SCR

Description: Intelligent Peripheral's Directory Number Screening Index. This field defines a screening index

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used for digit analysis of the intelligent peripheral's directory number.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 4095

Data Rules:

When IP DN is entered:

- IP DAS must be entered.
- IP SCR must be entered.

2.80 IP ANS TIMER

Description: Intelligent Peripheral Audible Calling Answer Timer. This field defines a length of time after the switch initiates a call to the Intelligent Peripheral that the switch will wait for an answer before beginning error treatment.

Software Release: 5E14 and later
Required Field.
Default: 2.0
Valid Entries: 0.1 - 10.0 (in increments of 0.1 seconds)

2.81 IP DISC TIMER

Description: Intelligent Peripheral's Audible Calling Disconnect Timer. This field defines a length of time after the switch receives answer from the Intelligent Peripheral that the switch will wait for a disconnect from the Intelligent Peripheral before the switch itself initiates a disconnect to the intelligent Peripheral.

Software Release: 5E14 and later
Required Field.
Default: 3.0
Valid Entries: 0.1 - 10.0 (in increments of 0.1 seconds)

```
SCREEN 1 OF 4                5ESS Switch
lassop                OFFICE DATA ADMINISTRATION
5945                   LASS OFFICE PARAMETERS

*1. KEY 0

        CUSTOMER ORIGINATED TRACE (COT)              INDIV CLG LINE ID
 2. AGENCY          __________       TWO LEVEL ONLY      14. PRI PRVT    N
 3. COT GA FEAT  /COTGA     8. COT WAIT TIME   7     15. PCP GA FEAT /DIGA
 4. ACTIVATE RTI ____         9. COT MAX TIMEOUT 3
 5. TRC NA RTI   ____        10. COT MAX ERRS    3        BULK CLG LINE ID
 6. NO RESRC RTI ____        11. COT COST        __.__  16. BILLING CYCLE 24
 7. COT ACT LVL  1
```

```
SCREEN 2 OF 4                5ESS Switch
lassop                OFFICE DATA ADMINISTRATION
5945                   LASS OFFICE PARAMETERS
```

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```
          AUTOMATIC CALLBACK (AC) AND AUTOMATIC RECALL (AR)
17. B/I SCAN    60     29. AC TN UNIQ IGN    N       40. AC ORIG CAMP LIM 10
18. TIMEOUT     30     30. AC GA FEAT        /LACGA   41. AR ORIG CAMP LIM 10
19. SCAN MODE   TERM   31. AR GA FEAT        /LARGA   42. TERM CAMP LIM    10
20. REINIT SCAN 300    32. AC CNFRM RTI      ____     43. MAX CAMP TIME    180
21. TCAP        3      33. AR CNFRM RTI      ____     44. AC ACT LVL       1
22. RNGBK TYPE  C      3. CF ACTIVE DNY RTI ____      45. AC BLOCK TO PRIV N
23. RNG CYCLE   4      35. LNG TRM DNY RTI   ____     46. AC BLOCK RTI     ____
24. MAX RNGBK   1      36. AC CNCL RTI       ____
25. RNGBK WAIT  0 :0   37. AR CNCL RTI       ____
28. AC TO COIN  Y      38. PTY BUSY RTI      ____
                       39. INTER LATA AC/AR  N
```

```
SCREEN 3 OF 4                  5ESS Switch
lassop                 OFFICE DATA ADMINISTRATION
5945                    LASS OFFICE PARAMETERS

   TWO LEVEL AC          SELECTIVE CALL ACCEPT      SELECTIVE CALL REJECT
47. AC WAIT TIME   7      6. SCA MAX SZE  06         63. SCR MAX SZE 06
48. AC MAX TIMEOUT 3      57. SCA REJ RTI ____       64. HARSH RTI   ____
49. AC MAX ERRS    3      58. SCA REJ BILL N         65. HARSH BILL  N
50. AC VOICE BACK  Y      59. SCA GA FEAT  /SCAGA    66. GENTLE RTI  ____
                                67. GENTLE BILL N
SCREEN LIST EDITING       COMPUTER ACCESS RESTRICT    68. SCR GA FEAT /SCRGA
51. INTER LATA SCREEN  N  60. CAR MAX SZE  06
52. MAX ERROR RETRY    4  61. CAR REJ RTI  ____
53. RESP WAIT TIME     10 62. CAR REJ BILL N
54. VALIDATE LST ENTRY Y
55. USE BELLCORE SLE   N
```

```
SCREEN 4 OF 4                  5ESS Switch
lassop                 OFFICE DATA ADMINISTRATION
5945                    LASS OFFICE PARAMETERS

SELECTIVE DISTINCT ALERT          DISPLAY
69. SDA MAX SZE 06          76. CNAM TCAP 3
70. SDA GA FEAT /SDAGA
                          GENERAL
SELECTIVE CALL FORWARD       77. ERROR TREAT RTI ____
71. SCF MAX SZE 06
72. SCF GA FEAT /SCFGA        CALL WAITING DELUXE
                     78. AMA AGGR TIME  0
FORWARDING TREATMENT
73. FORWARDING MAX    05
74. SIM INTER OFC FWD 01
75. SIM INTRA OFC FWD 99
```

Figure 1 SAMPLE LASSOP FORM 5E10 THROUGH 5E12 SOFTWARE RELEASES

```
SCREEN 1 OF 4                  5ESS Switch
lassop                 OFFICE DATA ADMINISTRATION
```

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```
5945                LASS OFFICE PARAMETERS

*1. KEY 0

        CUSTOMER ORIGINATED TRACE (COT)              INDIV CLG LINE ID
 2. AGENCY  __________      TWO LEVEL ONLY      14. PRI PRVT    N
 3. COT GA FEAT  /COTGA     8. COT WAIT TIME   7     15. PCP GA FEAT /DIGA
 4. ACTIVATE RTI _____      9. COT MAX TIMEOUT 3
 5. TRC NA RTI   _____     10. COT MAX ERRS    3        BULK CLG LINE ID
 6. NO RESRC RTI _____     11. COT COST       __.__  16. BILLING CYCLE 24
 7. COT ACT LVL  1
```

```
SCREEN 2 OF 4                5ESS Switch
lassop               OFFICE DATA ADMINISTRATION
5945                 LASS OFFICE PARAMETERS

          AUTOMATIC CALLBACK (AC) AND AUTOMATIC RECALL (AR)
17. B/I SCAN    60     29. AC TN UNIQ IGN    N       40. AC ORIG CAMP LIM 10
18. TIMEOUT     30     30. AC GA FEAT       /LACGA   41. AR ORIG CAMP LIM 10
19. SCAN MODE   TERM   31. AR GA FEAT       /LARGA   42. TERM CAMP LIM    10
20. REINIT SCAN 300    32. AC CNFRM RTI     _____    43. MAX CAMP TIME    180
21. TCAP        3      33. AR CNFRM RTI     _____    44. AC ACT LVL       1
22. RNGBK TYPE  C      34. CF ACTIVE DNY RTI _____   45. AC BLOCK TO PRIV N
23. RNG CYCLE   4      35. LNG TRM DNY RTI  _____    46. AC BLOCK RTI     _____
24. MAX RNGBK   1      36. AC CNCL RTI      _____
25. RNGBK WAIT  0 :0   37. AR CNCL RTI      _____
28. AC TO COIN  Y      38. PTY BUSY RTI     _____
                       39. INTER LATA AC/AR  N
```

```
SCREEN 3 OF 4                5ESS Switch
lassop               OFFICE DATA ADMINISTRATION
5945                 LASS OFFICE PARAMETERS

   TWO LEVEL AC          SELECTIVE CALL ACCEPT       SELECTIVE CALL REJECT
47. AC WAIT TIME   7      56. SCA MAX SZE  06        63. SCR MAX SZE 06
48. AC MAX TIMEOUT 3      57. SCA REJ RTI  _____     64. HARSH RTI   _____
49. AC MAX ERRS    3      58. SCA REJ BILL N         65. HARSH BILL  N
50. AC VOICE BACK  Y      59. SCA GA FEAT  /SCAGA    66. GENTLE RTI  _____
                                                     67. GENTLE BILL N
SCREEN LIST EDITING       COMPUTER ACCESS RESTRICT    68. SCR GA FEAT /SCRGA
51. INTER LATA SCREEN  N  60. CAR MAX SZE  06
```

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52. MAX ERROR RETRY 4 61. CAR REJ RTI _____
53. RESP WAIT TIME 10 62. CAR REJ BILL N
54. VALIDATE LST ENTRY Y
55. USE BELLCORE SLE N

SCREEN 4 OF 4 5ESS Switch
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

SELECTIVE DISTINCT ALERT DISPLAY
69. SDA MAX SZE 06 76. CNAM TCAP 3
70. SDA GA FEAT /SDAGA 77. CNAM SRC ___

SELECTIVE CALL FORWARD GENERAL
71. SCF MAX SZE 06 78. ERROR TREAT RTI _____
72. SCF GA FEAT /SCFGA
CALL WAITING DELUXE
FORWARDING TREATMENT 79. AMA AGGR TIME 0
73. FORWARDING MAX 05
74. SIM INTER OFC FWD 01
75. SIM INTRA OFC FWD 99

Figure 2 SAMPLE LASSOP FORM 5E13 SOFTWARE RELEASE

SCREEN 1 OF 5 5ESS Switch
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

*1. KEY 0

CUSTOMER ORIGINATED TRACE (COT) INDIV CLG LINE ID
2. AGENCY _____ TWO LEVEL ONLY 14. PRI PRVT N
3. COT GA FEAT /COTGA 8. COT WAIT TIME 7 15. PCP GA FEAT /DIGA
4. ACTIVATE RTI _____ 9. COT MAX TIMEOUT 3
5. TRC NA RTI _____ 10. COT MAX ERRS 3 BULK CLG LINE ID
6. NO RESRC RTI _____ 11. COT COST __.__ 16. BILLING CYCLE 24
7. COT ACT LVL 1

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```
SCREEN 2 OF 5                5ESS Switch
lassop              OFFICE DATA ADMINISTRATION
5945                 LASS OFFICE PARAMETERS

          AUTOMATIC CALLBACK (AC) AND AUTOMATIC RECALL (AR)
17. B/I SCAN   60    29. AC TN UNIQ IGN   N      40. AC ORIG CAMP LIM 10
18. TIMEOUT    30    30. AC GA FEAT       /LACGA  41. AR ORIG CAMP LIM 10
19. SCAN MODE  TERM  31. AR GA FEAT       /LARGA  42. TERM CAMP LIM    10
20. REINIT SCAN 300  32. AC CNFRM RTI     _____   43. MAX CAMP TIME    180
21. TCAP       3     33. AR CNFRM RTI     _____   44. AC ACT LVL       1
22. RNGBK TYPE C     34. CF ACTIVE DNY RTI _____  45. AC BLOCK TO PRIV N
23. RNG CYCLE  4     35. LNG TRM DNY RTI  _____   46. AC BLOCK RTI     _____
24. MAX RNGBK  1     36. AC CNCL RTI      _____
25. RNGBK WAIT 0 :0  37. AR CNCL RTI      _____
28. AC TO COIN Y     38. PTY BUSY RTI     _____
                     39. INTER LATA AC/AR  N
```

```
SCREEN 3 OF 5                5ESS Switch
lassop              OFFICE DATA ADMINISTRATION
5945                 LASS OFFICE PARAMETERS

   TWO LEVEL AC          SELECTIVE CALL ACCEPT      SELECTIVE CALL REJECT
47. AC WAIT TIME  7      56. SCA MAX SZE  06        63. SCR MAX SZE 06
48. AC MAX TIMEOUT 3     57. SCA REJ RTI  _____     64. HARSH RTI   _____
49. AC MAX ERRS   3      58. SCA REJ BILL N         65. HARSH BILL  N
50. AC VOICE BACK Y      59. SCA GA FEAT  /SCAGA    66. GENTLE RTI  _____
                                                    67. GENTLE BILL N
SCREEN LIST EDITING      COMPUTER ACCESS RESTRICT   68. SCR GA FEAT /SCRGA
51. INTER LATA SCREEN  N  60. CAR MAX SZE  06
52. MAX ERROR RETRY    4  61. CAR REJ RTI  _____
53. RESP WAIT TIME     10 62. CAR REJ BILL N
54. VALIDATE LST ENTRY Y
55. USE BELLCORE SLE   N
```

```
SCREEN 4 OF 5                5ESS Switch
lassop              OFFICE DATA ADMINISTRATION
5945                 LASS OFFICE PARAMETERS

SELECTIVE DISTINCT ALERT         DISPLAY
69. SDA MAX SZE 06          76. CNAM TCAP 3
70. SDA GA FEAT /SDAGA      77. CNAM SRC  ___

SELECTIVE CALL FORWARD           GENERAL
71. SCF MAX SZE 06          78. ERROR TREAT RTI _____
```

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72. SCF GA FEAT /SCFGA
CALL WAITING DELUXE
FORWARDING TREATMENT 79. AMA AGGR TIME 0
73. FORWARDING MAX 05
74. SIM INTER OFC FWD 01
75. SIM INTRA OFC FWD 99

SCREEN 5 OF 5 5ESS Switch _
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

AUDIBLE CALLING NAME FOR AC
80. IP DN _____
81. IP DAS __
82. IP SCR ____
83. IP ANS TIMER 2.0
84. IP DISC TIMER 3.0

Figure 3 SAMPLE LASSOP FORM 5E14 SOFTWARE RELEASE

SCREEN 1 OF 5 5ESS Switch
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

*1. KEY 0

CUSTOMER ORIGINATED TRACE (COT) INDIV CLG LINE ID
2. AGENCY _____ TWO LEVEL ONLY 14. PRI PRVT N
3. COT GA FEAT /COTGA 8. COT WAIT TIME 7 15. PCP GA FEAT /DIGA
4. ACTIVATE RTI _____ 9. COT MAX TIMEOUT 3
5. TRC NA RTI _____ 10. COT MAX ERRS 3 BULK CLG LINE ID
6. NO RESRC RTI _____ 11. COT COST __.__ 16. BILLING CYCLE 24
7. COT ACT LVL 1

SCREEN 2 OF 5 5ESS Switch
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

AUTOMATIC CALLBACK (AC) AND AUTOMATIC RECALL (AR)
17. B/I SCAN 60 29. AC TN UNIQ IGN N 40. AC ORIG CAMP LIM 10
18. TIMEOUT 30 30. AC GA FEAT /LACGA 41. AR ORIG CAMP LIM 10
19. SCAN MODE TERM 31. AR GA FEAT /LARGA 42. TERM CAMP LIM 10
20. REINIT SCAN 300 32. AC CNFRM RTI _____ 43. MAX CAMP TIME 180
21. TCAP 3 33. AR CNFRM RTI _____ 44. AC ACT LVL 1
22. RNGBK TYPE C 34. CF ACTIVE DNY RTI _____ 45. AC BLOCK TO PRIV N
23. RNG CYCLE 4 35. LNG TRM DNY RTI _____ 46. AC BLOCK RTI _____
24. MAX RNGBK 1 36. AC CNCL RTI _____
25. RNGBK WAIT 0 :0 37. AR CNCL RTI _____

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28. AC TO COIN Y 38. PTY BUSY RTI _____
39. INTER LATA AC/AR N

SCREEN 3 OF 5 5ESS Switch
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

TWO LEVEL AC	SELECTIVE CALL ACCEPT	SELECTIVE CALL REJECT
47. AC WAIT TIME 7	56. SCA MAX SZE 06	63. SCR MAX SZE 06
48. AC MAX TIMEOUT 3	57. SCA REJ RTI _____	64. HARSH RTI _____
49. AC MAX ERRS 3	58. SCA REJ BILL N	65. HARSH BILL N
50. AC VOICE BACK Y	59. SCA GA FEAT /SCAGA	66. GENTLE RTI _____
	67. GENTLE BILL N	
SCREEN LIST EDITING	COMPUTER ACCESS RESTRICT	68. SCR GA FEAT /SCRGA
51. INTER LATA SCREEN N	60. CAR MAX SZE 06	
52. MAX ERROR RETRY 4	61. CAR REJ RTI _____	
53. RESP WAIT TIME 10	62. CAR REJ BILL N	
54. VALIDATE LST ENTRY Y		
55. USE BELLCORE SLE N		

SCREEN 4 OF 5 5ESS Switch
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

SELECTIVE DISTINCT ALERT	DISPLAY
69. SDA MAX SZE 06	76. CNAM TCAP 3
70. SDA GA FEAT /SDAGA	77. CNAM SRC ___
SELECTIVE CALL FORWARD	GENERAL
71. SCF MAX SZE 06	78. ERROR TREAT RTI _____
72. SCF GA FEAT /SCFGA	
CALL WAITING DELUXE	
FORWARDING TREATMENT	79. AMA AGGR TIME 0
73. FORWARDING MAX 05	
74. SIM INTER OFC FWD 01	

SCREEN 5 OF 5 5ESS Switch _
lassop OFFICE DATA ADMINISTRATION
5945 LASS OFFICE PARAMETERS

AUDIBLE CALLING NAME FOR AC
80. IP DN _____
81. IP DAS ___
82. IP SCR ____
83. IP ANS TIMER 2.0
84. IP DISC TIMER 3.0

Figure 4 SAMPLE LASSOP FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5G: 5946 RECORD
LASS CHOKE LIST FORM - LASSCK

1. GENERAL

The 5946 Record is available with 5E5 and later Software Releases. This form allows an office to construct a list of TNs that cannot be camped-on during an AC (Automatic Callback) or AR (Automatic Recall) invocation because they are reserved for special applications like mass calling triggered by radio stations.

This form allows TNs to be entered uniquely on an NPA basis, a NOC basis, or an individual line basis.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.19.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * KEY

Description: Enter the key value which is always 0.

Required Field.
Valid Entries: 0

2.3 CHOKE NUMBERS

Description: The choke number list allows a maximum of 16 entries. This list of numbers will not be allowed to be camped-on to during an AC or AR invocation. The digits must be entered uniquely by a 3-digit NPA, a 6-digit NPA-NXX and/or a 10-digit NPA-NXX-XXXX.
Valid Entries: 3, 6, or 10 digits

- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

---

lassck 5ESS Switch _
5946 OFFICE DATA ADMINISTRATION
LASS CHOKE LIST

*1. KEY 0

2. CHOKE NUMBERS

1. 3123554000	7. _____	13. _____
2. _____	8. _____	14. _____
3. _____	9. _____	15. _____
4. _____	10. _____	16. _____
5. _____	11. _____	
6. _____	12. _____	

Figure 1 SAMPLE LASSCK FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5H: 5947 RECORD
LASS PREFIX EXCEPTION LIST - LASSPFX

1. GENERAL

The 5947 Record is available with 5E5 and later Software Releases. A prefix of 1 may be required by offices when dialing an NPA or an NPA-NXX. If an office selects to use a prefix, there may be some exceptions where a prefix cannot be used. If an office chooses not to use a prefix, there may be some exceptions where a prefix is needed. This form allows an office to create a list of TNs which are exceptions to the office standard.

This form allows the user to set aside a maximum of ten entries in the list which are an exception to the office prefix dialing standard. Each of the entries may be 3 (NPA) or 6 (NPA-NXX) digits in length.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * KEY

Description: The key value is always 0.

Required Field.
Valid Entries: 0

2.3 1+ PFX USED

Description: Is the office standard to accept DNs dialed with a 1 prefixed to a particular NPA or NPA-NXX?

If PFX USED is set equal to "Y", then 1+ NPA and/or 1+NPA-NXX is defined in the office dialing plan and will route to the DN.

If PFX USED is set equal to "N", then NPA and/or NPA-NXX is defined in the office dialing plan and will route to the DN.

Required Field.
Default: Y
Valid Entries: Y, N

2.4 EXCEPTIONS

Description: This is a list of up to ten dialable codes within an office that are exceptions to what the office prefix standard is for AC invocations. The Exception digits in each entry specify either a 3-digit NPA or a 6-digit NPA-NXX.

Any entries with only an NPA value will supersede the same NPA entered with an NXX value, thus wasting one exception entry (NPA-NXX).
Valid Entries: 3 or 6 digits

- For 5E7 and earlier: 200 - 919 middle digit 0 - 1
- For 5E8 and later: 200 - 999

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Data Rules:

The Exception List entries must be unique.

---

lasspfx 5ESS Switch _
5947 OFFICE DATA ADMINISTRATION
LASS PREFIX EXCEPTION LIST

*1. KEY 0
2. 1+ PFX USED Y

3. EXCEPTIONS

1. 312411 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

Figure 1 SAMPLE LASSPFX FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5I: 5948-1/2/3 RECORD PERFORMANCE MONITORING - THRESHOLD GROUP FORM - PMTHRESH

1. GENERAL

The PMTHRESH form (5948 Record) is available with 5E6 and later Software Releases. It is used to define a set of performance monitoring thresholds to be used by an individual BRI (Basic Rate Interface) or group of BRIs with ISLU (Integrated Services Line Unit) terminal facilities (DSL OE type "I"). (Any reference to ISLU also applies to RISLU (Remote Integrated Services Line Unit) terminal facilities.) For more information on ISLU assignments, see the DSL form (5907 Record).

For 5E8 and later, the PMTHRESH form was modified to include performance monitoring for IDCU (Integrated Digital Carrier Unit) facilities (DSL OE types "G" and "M") and DFI-2 (Digital Facility Interface-2) terminal facilities. To accommodate these additional facilities, the 5948 Record was expanded to 5948-1/2/3. For information on IDCU and DFI-2, see the EQIDCU form (5846 Record) and the EQDUP form (5730 Record), respectively.

Performance monitoring is the ability to collect and report performance data for terminal facilities. The operating company has the ability to inhibit and allow the setting and reporting of performance monitoring thresholds.

Performance monitoring applies to all U-cards (5E4(2) and later Software Releases), however, not all of the performance monitoring threshold values apply to each individual U-card. If a certain threshold does not apply, no alert or report data will be generated for that particular U-card.

For 5E6 and later, two types of thresholds are defined on this form: Alert Thresholds and Report Thresholds. Alert thresholds are provided for autonomous alerting when the corresponding current hour or current daily threshold values are reached. The two types of current hour and current daily thresholds are ES (Errored Seconds) and SES (Severely Errored Seconds). These values apply to both directions of BRI transmission, and can be set per performance monitoring group or per U-BRI. Both threshold types should be updated periodically via special port conditioning to ensure their correctness.

The two types of ALE (Automated Line Evaluation) Report thresholds are current interval thresholds and current daily thresholds. The current interval threshold can be set in increments of one hour up to twenty-four hours; if the interval is twenty-four hours, the daily interval report will be generated in place of the current interval report. When one of these report threshold values is exceeded for a particular U-BRI, report data will be sent to the MCC (Maintenance Control Console), SCCS (Switching Control Center System), or ALIT (Automatic Line Insulation Test) channel. Both the current interval and current daily reports contain the following data:

- Line equipment identification
- Current interval or current daily ES or SES counts for both directions of transmission (upstream and downstream)
- Interval or daily threshold for this particular U-BRI
- Indication if counts have been corrupted by either clearing or corrupting Cyclic Redundancy Code tests.

For DSL, the DSL INH GRP field allows you to inhibit performance monitoring for a particular PM GRP name. If activated, all other "inhibit" values for that same DSL PM GRP set on this form will be overridden. (This capability is not available for IFAC and DFI-2 PM groups.)Manual on-demand performance monitoring reports are also available, but require no specific data entered via the 5948 Record. However, if an interval report is being generated at the time of an on-demand request for a

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manually generated report, the craft will be informed to retry their request at another time.

Only one report threshold applies to the ANSI U-card; this threshold is the Daily Report Threshold.

For 5E8 and later, additional performance monitoring thresholds were added for IDCU/IFAC and DFI-2 facilities, as follows:

For IDCU/IFAC:

- FLS (Frame Loss Second) - A loss of frame alignment occurs when there are 2 or more framing bit errors out of 4 consecutive framing bits.
- SS (Slip Second) - A slip second is counted whenever one or more slip events occur during a given 10-second interval. A slip event is the insertion or deletion of data bits into or from the data stream and is the direct result of equipment buffer overflow or underflow resulting from improperly timed network equipment.
- UAS (Unavailable Second) - A second with a failed signal condition.

For DFI-2 facilities:

- BPV (Bipolar Violation) - A BPV is a violation of bipolar line coding in which two logically level consecutive pulses occur with the same polarity, excluding B8Zs coding.
- BES (Bursty Errored Second) - A second with at least one, but less than 320, CRC-6 errors.
- COFA (Change of Frame Alignment) - One COFA count is pegged for one or more COFA events in a 10 second interval. A COFA event is declared after a LOFA (Loss of Frame Alignment) (2 or more framing bit errors out of 4 consecutive framing bits) if the current frame alignment is incorrect.
- FS (Failed Second) - A second with a Failed Signal condition: Local "red alarm", AIS (Alarm Indication Signal) "blue alarm", or framing bit error (FER). During a failed second, ES, SES, BES, and SS are not accumulated.
- CRC (Cyclic Redundancy Check) - A cyclic redundancy check error occurs when the computed CRC-6 code for the incoming signal does not match the received code. This event applies only to DS1 Extended Superframe Format (ESF).

For 5E6 and later, the following preconstructed and office default PM groups were available for DSL: /PMGDEF, PMDEF. For 5E8 and later, the DFI-2 PM group was enhanced to include data support. In addition, the following preconstructed groups and office default PM groups were added for IFAC (IDCU Facilities) and DFI-2 facilities, respectively: /FACGDEF; FACDEF and /DF2GDEF; DF2DEF. These are shown in Figures 1 and 2. The maximum number of PM GRPs per PM TYPE is 256 including the switch-owner default group. (Note that the switch-owner default group cannot be deleted via Recent Change.)

Each DSL, IFAC, or DFI-2 PM GRP name must also have associated threshold values defined on this form. If a value is not entered for a particular threshold, a threshold value will be set with the default values from the switch-owner default group record. If switch-owner default thresholds are also not entered, the ODA preconstructed thresholds will be used.

Values from the ODA preconstructed PM GRP records can be used as "templates" to enter and change thresholds for a DSL, IFAC, or DFI-2 group. These values cannot be directly assigned for a PM GRP on the respective ISLULC form (5942 Record), DSL form (5907 Record), EQIFAC form (5847 Record), or the EQDUP form (5730 Record).

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1.1 Recent Change View

This record is equivalent to Recent Change view 22.15.

2. FORM ENTRIES - 5948-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *PM GRP

Description: Define the performance monitoring group.

This field is used to define a name for a PM group. The name defined must be different from the ODA preconstructed default groups and the switch-owner default groups shown in Figures 1 and 2. The maximum number of PM GRPs allowed per PM type is 256 including the switch owner default group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

Performance Monitoring groups entered on the ISLULC form (5942 Record) with PM TYPE of "DSL" must be defined on this form.

Performance Monitoring groups entered on the EQIFAC form (5847 Record) with PM TYPE of "IFAC" must be defined on this form.

Performance Monitoring groups entered on the EQDUP form (5730 Record) with PM TYPE of "DFI2" must be defined on this form.

For 5E6 and later, if an ISDNOPT form (5941 Record) is entered indicating ISDN SMs in a switch office, PM GRP must have "PMDEF" entered.

For 5E7 and later, the total number of PM forms, which is the sum of the number of PMTHRESH forms and (for 5E9(2) and later) the number of DNUPM forms (5951 Record), must not exceed the MAX NO THR GRPSon the OFCOPT form (5509 Record).

For 5E8 and later, if an ISDNOPT form (5941 Record) is entered indicating ISDN SMs in a switch office, PM GRPs must have "PMDEF", "FACDEF", or "DF2DEF" entered.

2.3 #PM TYPE

Description: Enter the Performance Monitoring Type.

Required Field.

Valid PM TYPE Entries	
DSL	Digital Subscriber Line.
IFAC	Software Release: 5E8 and later IDCU Facility.
DFI2	Software Release: 5E8 and later DFI-2 Facility.

Data Rules:

When PM TYPE is "DSL", only the fields under PERFORMANCE MONITORING (DSL) can be entered.

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When PM TYPE is "IFAC", only the fields under PERFORMANCE MONITORING (IFAC) can be entered.

When PM TYPE is "DFI2", only the fields under PERFORMANCE MONITORING (DFI2) can be entered.

2.4 INH PM

The name of this field was changed to DSL INH GRP in 5E8. This field name applies to 5E6 - 5E7. See DSL INH GRP for usage information.

2.5 DSL INH GRP

Description: Is Performance Monitoring inhibited for the DSL group? (This field was called INH PM for 5E6 - 5E7.) If "Y" is entered, all other inhibited entries for DSL on this form will be overridden.

Software Release: 5E8 and later
Valid Entries: Y, N

2.6 REMARKS

Description: Enter any desired remarks up to thirty-two characters in length.
Valid Entries: 1 - 32 characters.

PERFORMANCE MONITORING THRESHOLDS (DSL)

DSL PATH ALERT

The following fields (Section 2.7 - Section 2.12) are used to set DSL Alert threshold values. If values are not entered, switch-owner default or ODA preconstructed values will be defaulted, respectively.

2.7 CUR HR ES

Description: Enter the Alert Threshold for Current Hour Errored Seconds.

This threshold entry represents the number of errored seconds allowed before the current hour alert count is considered to have too many errors.
Valid Entries: 1 - 255

2.8 CUR HR SES

Description: Enter the Alert Threshold for Current Hour Severely Errored Seconds.

This threshold entry represents the number of severely errored seconds allowed before the current hour alert count is considered to have too many errors.
Valid Entries: 1 - 127

2.9 INH CUR HR

Description: Are performance monitoring current hour reports inhibited for all ANSI U-interface cards associated with this PM group?
Valid Entries: Y, N

2.10 CUR DAY ES

Description: Enter the Alert Threshold for Current Day Errored Seconds.

This threshold entry represents the number of errored seconds allowed before the current day alert count is considered to have too many errors.

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Valid Entries: 1 - 4095

2.11 CUR DAY SES

Description: Enter the Alert Threshold for Current Day Severely Errored Seconds.

This threshold entry represents the number of severely errored seconds allowed before the current day alert count is considered to have too many errors.
Valid Entries: 1 - 2047

2.12 INH CUR DAY

Description: Are performance monitoring current day reports inhibited for all ANSI U-interface cards associated with this PM group?
Valid Entries: Y, N

DSL REPORTS

The following fields (Section 2.13 - Section 2.18) are used to set Report threshold values for DSL reports.

2.13 CUR INT ES

Description: Enter the Alert Threshold for Current Interval Errored Seconds.

This threshold entry represents the number of errored seconds allowed before the current interval alert count is considered to have too many errors.
Valid Entries: 1 - 255

2.14 CUR INT SES

Description: Enter the Alert Threshold for Current Hour Severely Errored Seconds.

This threshold entry represents the number of severely errored seconds allowed before the current interval alert count is considered to have too many errors.
Valid Entries: 1 - 127

2.15 INH CUR INT

Description: Are performance monitoring reports for current interval reports inhibited for all ANSI U-interface cards associated with this PM group?
Valid Entries: Y, N

2.16 CUR DAY ES

Description: Enter the Report Threshold for Current Daily Errored Seconds.

This threshold entry represents the number of errored seconds allowed before the current day alert count is considered to have too many errors.
Valid Entries: 1 - 4095

2.17 CUR DAY SES

Description: Enter the Report Threshold for Current Day Severely Errored Seconds.

This threshold entry represents the number of severely errored seconds allowed before the current day alert count is considered to have too many errors.
Valid Entries: 1 - 2047

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2.18 INH CUR DAY

Description: Are performance monitoring current day reports inhibited for all ANSI U-interface cards associated with this PM group?
Valid Entries: Y, N

3. FORM ENTRIES - 5948-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 *PM GRP

Description: Define the performance monitoring group.

PERFORMANCE MONITORING THRESHOLDS (IFAC)

IDCU FACILITY LINE ALERTS

The following fields (Section 3.3 - Section 3.8) are used to set IDCU performance monitoring threshold values for line alerts. If values are not entered, switch-owner default or ODA preconstructed values will be defaulted, respectively.

3.3 CUR INT ES

Description: Enter the alert threshold for the IDCU line Current Interval Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.4 CUR INT SES

Description: Enter the alert threshold for the IDCU line Current Interval Severely Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.5 INH CUR INT

Description: Is the IDCU line Current Interval alerts Inhibited?

Software Release: 5E8 and later.
Valid Entries: Y, N

Data Rules:

When IDCU line INH CUR INT is entered, IDCU path INH CUR INT must be entered and must be identical.

When IDCU line INH CUR INT is not entered, IDCU path INH CUR INT must not be entered.

3.6 CUR DAY ES

Description: Enter the alert threshold for the IDCU line Current Daily Errored Seconds.

Software Release: 5E8 and later.

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Valid Entries: 1 - 65535

3.7 CUR DAY SES

Description: Enter the alert threshold for the IDCU line Daily Severely Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

3.8 INH CUR DAY

Description: Is the IFAC line Current Daily alerts inhibited?

Software Release: 5E8 and later.
Valid Entries: Y, N

Data Rules:

When IFAC line INH CUR DAY is entered, IFAC path INH CUR DAY must be entered and identical.

When IDCU line INH CUR DAY is not entered, IDCU path INH CUR DAY must not be entered.

IDCU FACILITY PATH ALERTS

The following fields (Section 3.9 - Section 3.20) are used to set IDCU performance monitoring threshold values for path alerts.

3.9 CUR INT ES

Description: Enter the alert threshold for IFAC path Current Interval Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.10 CUR INT SES

Description: Enter the alert threshold for IFAC path Current Interval Severely Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.11 CUR INT FLS

Description: Enter the alert threshold for IFAC path Current Interval Frame Loss Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.12 CUR INT SS

Description: Enter the alert threshold for IFAC path Current Interval Slip Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.13 CUR INT UAS

Description: Enter the alert threshold for IDCU path Current Interval Unavailable Seconds.

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Software Release: 5E8 and later.
Valid Entries: 1 - 4095

3.14 INH CUR INT

Description: Is the alert threshold for the IDCU path Current Interval inhibited?

Software Release: 5E8 and later.
Valid Entries: Y, N

Data Rules:

When IFAC path INH CUR INT is entered, IDCU line INH CUR INT must be entered and identical.

When IDCU path INH CUR INT is not entered, IDCU line INH CUR INT must not be entered.

3.15 CUR DAY ES

Description: Enter the IFAC path alert threshold for Current Daily Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

3.16 CUR DAY SES

Description: Enter the IFAC path alert threshold for Current Daily Severely Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

3.17 CUR DAY FLS

Description: Enter the IFAC path alert threshold for Current Daily Frame Loss Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

3.18 CUR DAY SS

Description: Enter the IFAC path alert threshold for Current Daily Slip Seconds. A slip is counted whenever one or more slip events occur during a given 10-second interval.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

3.19 CUR DAY UAS

Description: Enter the IFAC path alert threshold for Current Daily Unavailable Seconds (a failed signal condition).

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

3.20 INH CUR DAY

Description: Is the IFAC path Current Daily alerts inhibited?

Software Release: 5E8 and later.

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Valid Entries: Y, N

Data Rules:

When IDCU path INH CUR DAY is entered, IDCU line INH CUR DAY must be entered and identical.

When IDCU path INH CUR DAY is not entered, IDCU line INH CUR DAY must not be entered.

4. FORM ENTRIES - 5948-3 RECORD

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

4.2 *PM GRP

Description: Define the performance monitoring group.

PERFORMANCE MONITORING THRESHOLDS (DFI-2)

DFI-2 FACILITY LINE ALERTS

The following fields (Section 4.3 - Section 4.6) are used to set DFI-2 performance monitoring threshold values for line alerts. If values are not entered, switch-owner default or ODA preconstructed values will be defaulted, respectively.

4.3 CUR INT BPV

Description: Enter the DFI-2 line alert threshold for Interval Bipolar Violation.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.4 INH CUR INT

Description: Is the DFI-2 line alert threshold for Current Daily alerts inhibited?

Software Release: 5E8 and later.
Valid Entries: Y, N

Data Rules:

When DFI-2 line INH CUR INT is entered, DFI-2 path INH CUR INT must be entered and identical.

When DFI-2 line INH CUR INT is not entered, DFI-2 path INH CUR INT must not be entered.

4.5 CUR DAY BPV

Description: Enter the DFI-2 line alerts threshold for Current Daily Bipolar Violation.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

4.6 INH CUR DAY

Description: Is the DFI-2 line Current Daily alerts inhibited?

Software Release: 5E8 and later.

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Valid Entries: Y, N

Data Rules:

When DFI-2 line INH CUR DAY is entered, DFI-2 path INH CUR DAY must be entered and identical.

When DFI-2 path INH CUR DAY is not entered, DFI-2 line INH CUR DAY must not be entered.

DFI-2 FACILITY PATH ALERTS

The following fields (Section 4.7 - Section 4.22) are used to set the DFI-2 performance monitoring threshold value for path alerts.

4.7 CUR INT ES

Description: Enter the DFI-2 path alert threshold for Current Interval Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.8 CUR INT BES

Description: Enter the DFI-2 path alert threshold for Bursty Errored Seconds (seconds with at least one but less than 320 CRC-6 errors.)

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.9 CUR INT SES

Description: Enter the DFI-2 path alert threshold for Current Interval Severely Errored Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.10 CUR INT COFA

Description: Enter the DFI-2 path alert threshold for the Current Interval Change of Frame Alignment.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.11 CUR INT SS

Description: Enter the DFI-2 path alert threshold for Current Interval Slip Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.12 CUR INT FS

Description: Enter the DFI-2 path alert threshold for the Current Interval Failed Seconds.

Software Release: 5E8 and later.
Valid Entries: 1 - 4095

4.13 CUR INT CRC

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Description: Enter the DFI-2 path alert threshold for the Current Interval Cyclic Redundancy Code.

Software Release: 5E8 and later
Valid Entries: 1 - 4095

4.14 INH CUR INT

Description: Is the DFI-2 path Current Interval alerts inhibited?

Software Release: 5E8 and later
Valid Entries: Y, N

Data Rules:

When DFI-2 path INH CUR INT is entered, DFI-2 line INH CUR INT must be entered and identical.

When DFI-2 path INH CUR INT is not entered, DFI-2 line INH CUR INT must not be entered.

4.15 CUR DAY ES

Description: Enter the DFI-2 path alert threshold for Current Daily Errored Seconds.

Software Release: 5E8 and later
Valid Entries: 1 - 65535

4.16 CUR DAY BES

Description: Enter the DFI-2 path alert threshold for Current Daily Bursty Errored Seconds.

Software Release: 5E8 and later
Valid Entries: 1 - 65535

4.17 CUR DAY SES

Description: Enter the DFI-2 path alert threshold for Current Daily Severely Errored Seconds.

Software Release: 5E8 and later
Valid Entries: 1 - 65535

4.18 CUR DAY COFA

Description: Enter the DFI-2 path alert threshold for Current Daily Change of Frame Alignment.

Software Release: 5E8 and later
Valid Entries: 1 - 65535

4.19 CUR DAY SS

Description: Enter the DFI-2 path alert threshold for Current Daily Slip Seconds.

Software Release: 5E8 and later
Valid Entries: 1 - 65535

4.20 CUR DAY FS

Description: Enter the DFI-2 path alert threshold for Current Daily Failed Seconds.

Software Release: 5E8 and later.

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Valid Entries: 1 - 65535

4.21 CUR DAY CRC

Description: Enter the DFI-2 Path alert threshold for Daily Cyclic Redundancy Code.

Software Release: 5E8 and later.
Valid Entries: 1 - 65535

4.22 INH CUR DAY

Description: Is the DFI-2 Current Daily Alerts inhibited.

Software Release: 5E8 and later.
Valid Entries: Y, N

Data Rules:

When DFI-2 path INH CUR DAY is entered, DFI-2 line INH CUR DAY must be entered and identical.

When DFI-2 path INH CUR DAY is not entered, DFI-2 line INH CUR DAY must not be entered.

ESS 5948-1(9/92)TG-5 PERFORMANCE MONITORING - THRESHOLD GROUP DATE _____
PMTHRESH 5ESS SWITCH
22.15
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

PM GRP	PM TYPE	D SLIN H GRP	REMARKS	PERFORMANCE MONITORING THRESHOLDS (DSL)											
				DSL PATH ALERT						DSL REPORT					
				CUR HR			CUR DAY			CUR INT			CUR DAY		
				ES	SES	INH	ES	SES	INH	ES	SES	INH	ES	SES	INH
/PMGDEF	DSL	N	PM GENERIC DEFAULTS	040	010	N	0100	0025	N	020	005	N	0050	0015	N
PMDEF	DSL	N	PM OFFICE DEFAULTS	020	005	Y	050	0012	Y	010	002	Y	0025	0007	N

Figure 1 PRECONSTRUCTED/OFFICE DEFAULT PM GROUPS - 5948-1 RECORD 5E6 - 5E7 SOFTWARE RELEASES

ESS 5948-1(9/92)TG-5 PERFORMANCE MONITORING - THRESHOLD GROUP DATE _____
PMTHRESH 5ESS SWITCH
22.15
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

PM GRP	PM	D	REMARKS	PERFORMANCE MONITORING THRESHOLDS (DSL)

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	TYPE	SLINHGRP		DSL PATH ALERT						DSL REPORT					
				CUR HR			CUR DAY			CUR INT			CUR DAY		
				ES	SES	INH	ES	SES	INH	ES	SES	INH	ES	SES	INH
/PMGDEF	DSL	N	PM GENERIC DEFAULTS	040	010	N	0100	0025	N	020	005	N	0050	0015	N
PMDEF	DSL	N	PM OFFICE DEFAULTS	020	005	N	0050	0013	Y	010	003	Y	0025	0008	N
/FACGDEF	IFAC		IFAC GENERIC DEFAULTS												
FACDEF	IFAC		IFAC OFFICE DEFAULTS												
/DF2GDEF	DFI2		DFI2 GENERIC DEFAULTS												
DF2DEF	DFI2		DFI2 OFFICE DEFAULTS												

Figure 2 PRECONSTRUCTED/OFFICE DEFAULT PM GROUPS - 5948-1 RECORD 5E8 AND LATER SOFTWARE RELEASES

ESS 5948-2(9/92)TG-5 PERFORMANCE MONITORING - THRESHOLD GROUP DATE _____
PMTHRESH 5ESS SWITCH
22.15
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

PM GRP	PERFORMANCE MONITORING THRESHOLDS (IFAC)																	
	IDCU FACILITY LINE ALERTS						IDCU FACILITY PATH ALERTS											
	CUR INT			CUR DAY			CUR INT						CUR DAY					
	ES	SES	INH	ES	SES	INH	ES	SES	FLS	SS	UAS	INH	ES	SES	FLS	SS	UAS	INH
/FACGDEF	0065	0010	N	648	100	N	0065	0010	0002	0001	0003	N	648	100	17	4	10	N
FACDEF	0020	0050	Y	300	100	N	0040	0005	0002	0004	0006	N	650	100	34	8	20	Y

Figure 3 PRECONSTRUCTED/OFFICE DEFAULT PM GROUPS - 5948-2 RECORD 5E8 AND LATER SOFTWARE RELEASES

ESS 5948-3(9/92)TG-5 PERFORMANCE MONITORING - THRESHOLD GROUP DATE _____
PMTHRESH 5ESS SWITCH
22.15
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

PM	PERFORMANCE MONITORING THRESHOLDS (DFI2)

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GRP	LINE ALERTS				DFI2 FACILITY PATH ALERTS															
	CUR INT		CUR DAY		CUR INT								CUR DAY							
	BPV	I N H	BPV	I N H	ES	BES	SES	COFA	SS	FS	CRC	I N H	ES	BES	SES	COFA	SS	FS	CRC	I N H
/DF2GDEF	4095	N	65535	N	0075	0100	0030	0017	0004	0030	4095	N	1706	600	90	511	255	90	65535	N
DF2DEF	2095	Y	32222	Y	0025	0750	0015	0017	0002	0015	2045	Y	1000	300	45	511	255	45	30000	Y

Figure 4 PRECONSTRUCTED/OFFICE DEFAULT PM GROUPS - 5948-3 RECORD 5E8 AND LATER SOFTWARE RELEASES

---

pmthresh 5ESS Switch _
(5948) OFFICE DATA ADMINISTRATION
PERFORMANCE MONITORING - THRESHOLD GROUP

*1. PM GRP _____ 2. INH PM _
3. REMARKS _____

ALERT REPORT
□□□□□□□□ □□□□□□□□
4. CUR HR ES ___ 10. CUR INT ES ___
5. CUR HR SES ___ 11. CUR INT SES ___
6. INH CUR HR _ 12. INH CUR INT _

7. CUR DAY ES ____ 13. CUR DAY ES ____
8. CUR DAY SES ____ 14. CUR DAY SES ____
9. INH CUR DAY _ 15. INH CUR DAY _

Figure 5 SAMPLE PMTHRESH FORM 5E6 - 5E7 SOFTWARE RELEASES

---

pmthresh 5ESS SWITCH
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5948-1/3) PERFORMANCE MONITORING - THRESHOLD GROUP

*1. PM GRP FACGRP1 #2. PM TYPE IFAC 3. DSL INH GRP
4. REMARKS 5E8 FEATURE

PERFORMANCE MONITORING THRESHOLDS (DSL)
DSL PATH ALERTS DSL REPORTS
5. CUR HR ES ___ 11. CUR INT ES ___
6. CUR HR SES ___ 12. CUR INT SES ___
7. INH CUR HR _ 13. INH CUR INT _
8. CUR DAY ES ___ 14. CUR DAY ES ____
9. CUR DAY SES ___ 15. CUR DAY SES ____
10. INH CUR DAY _ 16. INH CUR DAY _

---

pmthresh 5ESS SWITCH
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION

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(5948-1/3) PERFORMANCE MONITORING - THRESHOLD GROUP

PERFORMANCE MONITORING THRESHOLDS (IFAC)

IDCU FACILITY LINE ALERTS	IDCU FACILITY PATH ALERTS	
17. CUR INT ES 0065	23. CUR INT ES 0065	29. CUR DAY ES 648
18. CUR INT SES 0010	24. CUR INT SES 0010	30. CUR DAY SES 100
19. INH CUR INT N	25. CUR INT FLS 0002	31. CUR DAY FLS 17
20. CUR DAY ES 648	26. CUR INT SS 0001	32. CUR DAY SS 4
21. CUR DAY SES 100	27. CUR INT UAS 0003	33. CUR DAY UAS 10
22. INH CUR DAY N	28. INH CUR INT N	34. INH CUR DAY N

---

pmthresh 5ESS SWITCH _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5948-1/3) PERFORMANCE MONITORING - THRESHOLD GROUP

PERFORMANCE MONITORING THRESHOLDS (DFI-2)

DFI-2 FACILITY LINE ALERTS	DFI-2 FACILITY PATH ALERTS	
35. CUR INT BPV ____	39. CUR INT ES ____	47. CUR DAY ES _____
36. INH CUR INT _	40. CUR INT BES ____	48. CUR DAY BES _____
37. CUR DAY BPV _____	41. CUR INT SES ____	49. CUR DAY SES _____
38. INH CUR DAY _	42. CUR INT COFA ____	50. CUR DAY COFA _____
	43. CUR INT SS ____	51. CUR DAY SS _____
	44. CUR INT FS ____	52. CUR DAY FS _____
	45. CUR INT CRC ____	53. CUR DAY CRC _____
	46. INH CUR INT _	54. INH CUR DAY _

Figure 6 SAMPLE PMTHRESH FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 5K: 5950 RECORD
REMOTE BUSY VERIFY ROUTING FORM - RBVRTI

1. GENERAL

The 5950 Record is available with 5E8 and later Software Releases, and is used to specify routing parameters for RBV (Remote Busy Verify). RBV provides the ISAT (ISDN Attendant) on a 5ESS Switch the ability to busy verify any analog or ISDN line on a remote 5ESS Switch using a dedicated network of ISAT BVTs (Busy Verify Trunks). Lines on the remote 5ESS Switch are busy verifiable only if associated with an incoming ISAT BVT. For how various types of TNs are associated, see Division 2, Section 1T.

1.1 Expanded Definition

ISAT RBV is similar to ISAT Busy Verification of DNs introduced in the 5E4(2) Software Release, with the added capability allowing busy verification of DNs on a remote 5ESS Switch. The following scenario occurs:

1. When the ISAT verifies a DN on a remote 5ESS Switch, the originating 5ESS Switch routes the call to an ISAT BVT. The translated digits of the DN to be busy verified are outpulsed over the outgoing ISAT BVT to the remote 5ESS Switch.

2. The terminating 5ESS Switch checks that the DN is valid and is remote busy verifiable.

3. If the DN is busy and verifiable, the incoming call from the ISAT across the ISAT BVT is bridged onto the active call. The bridging capability is possible only if the busy verifiable DN has a busy verify terminating feature assigned. (where verification barge-in cannot occur, tones are returned from the far 5ESS Switch: high tone for OOS, reorder tone for all else.)

4. If the DN is idle and verifiable, the call alerts as a normal incoming call and the ISAT hears audible alerting.

5. If the called party answers, the ISAT and the called party can converse.

In both the barge-in and idle case, all parties hear a 300 msec, 440 Hz tone from the ISAT's 5ESS Switch every 6 seconds while the ISAT is connected. After 30 seconds, the ISAT is automatically disconnected by the ISAT's 5ESS Switch. During the busy verification call, the ISAT display indicates Remote Busy Verify. This limited display capability is due to the remote 5ESS Switch's inability to provide information over an ISAT BVT to fully populate the DN status display.

DNs may be associated with an ISAT BVT group (via an RBV TGN) or an Attendant Multi-Line Hunt Group (via an ATT MLHG), but not both. Also, ISAT BVTs cannot be of the CCS6 (Common Channel Signaling System 6) or SS7 (Signaling System 7) type.

1.2 Differences Between Remote and Local Busy Verify

Note that operation of the Local Busy Verify feature is not changing. All aspects, except the administration of the types of tones, of the Local Busy Verify feature mentioned in this section describe the existing operation of the feature. Local Busy Verify, in order to be compatible with Remote Busy Verify, changes in terms of what kind of tone is administered for certain failure cases. Upon implementation of RBV, reorder tone is applied for all failure cases when barge-in is not allowed due to the state of the line (Note: An OOS line still is administered high tone.). Reorder tone is applied for the Local Busy Verify case where the DN is not associated with an ISAT group.

The purpose of this section is to identify the differences between operation of the Busy Verify feature whether it is applied to a DN on the attendant's switch, or on a remote switch. The differences are listed below:

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- For an ISDN attendant to do busy verification on a remote switch, the DN on the remote switch must be associated with an ISAT BVT. For the Local Busy Verify case, the DN to be busy verified must be associated with the ISAT.
- When busy verifying a DN on a remote switch, the ISAT's display indicates Remote Busy Verify. For a DN on the attendant's switch, the display shows a special Busy Verify display which indicates the status of the DN.
- In the case where the DN being busy verified is idle, the attendant may converse with the party as long as desired with no tones being given if the DN is local to the attendant's switch. However, if the DN is remote, the attendant may only be connected for 30 seconds, and barge-in tones are given to all parties every 6 seconds while they are conversing.
- Using FORCED RELEASE during the busy verification of a local DN forcibly disconnects all parties during a barge-in. For a remote DN, FORCED RELEASE simply drops the attendant from the call.

1.3 Recent Change View

The corresponding Recent Change View for this form is 4.63.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ISAT MLHG

Description: Enter the ISAT Attendant MLHG on this switch that can busy verify TNs in a remote switch.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

The ISAT MLHG entered must equal MLHG on an MLHG form (5110 Record), and MLHG FEATURE on that MLHG form must equal FEATURE NAME on a corresponding MLHGFD form (5604 Record), with that MLHGFD form having a HUNT TYPE of "ISAT".

2.3 * RTI

Description: Enter the route index which normally routes a call to the switch for non-data calls.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E13 and earlier: 1 - 4095
- For 5E14 and later: 1 - 16382

Data Rules:

The values entered for RTI and REMOTE RTI cannot be the same.

The RTI entered must equal ROUTE INDEX on the RTIDX form (5303 Record), and TRUNK GROUP NUMBER on that RTIDX form must equal TGN on the TKGRP form (5202 Record).

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2.4 # REMOTE RTI

Description: Enter the route index used to route across an ISAT BVT to busy verify a TN on a remote switch.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: 1 - 16382

Data Rules:

The values entered for RTI and REMOTE RTI cannot be the same.

The REMOTE RTI entered must equal ROUTE INDEX on the RTIDX form, and TRUNK GROUP NUMBER on the RTIDX form must equal TGN on the TKGRP form. Also, on the TKGRP form, TRK DIR must be "OUT", TRKCLS must be "ATNDVFY", and ISAT MLHG must equal the ISAT MLHG on the RBVRTI form.

2.5 RTI TGN

Description: This is a Recent Change field only.

2.6 REMOTE RTI TGN

Description: This is a Recent Change field only.

---

rbvrti 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5950) REMOTE BUSY VERIFY ROUTING

*1. ISAT MLHG 0711
*2. RTI 2211 RTI TGN
#3. REMOTE RTI 2689 REMOTE RTI TGN

Figure 1 SAMPLE RBVRTI FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 5L: 5951-1/2 RECORD
DNUS PERFORMANCE MONITORING - THRESHOLD GROUP (SM-2000) - DNUPM

1. GENERAL

The 5951 Record is available with 5E9(2) and later Software Releases. It is used to define the performance monitoring thresholds on a DS1 (Digital Signal Level 1), VT (Virtual Tributary), and STSX-1 (Synchronous Transport Signal DNU-S interface) for the DNU-S (Digital Networking Unit - SONET). For more information on DNU-S, see Division 2, Section 9C.

The SONET digital switch interface terminates the STSX-1 interface for the intraoffice environment. It is a 51.84 Mb/s electrical interface and it is limited to a maximum of 900 feet. DNU-S only supports digital trunks.

The STSX-1 interface is made up of the following layers:

- STE (SONET Termination Equipment)
  - Section
  - Line
- STS-1 Path
- VT1.5 Path (Virtual Tributary)
- DS1 Path

The Section and Line layers have been combined and are referred to as the STE (SONET Termination Equipment). The STE, as well as the STS-1, VT1.5, and DS1 can each be considered a separate "facility". The STE, VT, and DS1 facilities can have failures (and thus alarms) associated with them, each can have performance monitoring, and each can be removed from service. Therefore, the STSX-1 interface is operated, administered, provisioned, and maintained based on these subtending facilities. Each of these facilities are defined as follows:

- **STE**

  The STE represents the termination of the Section and Line on the DNU-S. The STSX-1 interface carries a single STS-1.

- **STS-1**

  The STS-1 represents the termination of the STS-1 path on the DNU-S. The STS-1 carries up to 28 VT1.5 tributaries.

- **VT1.5**

  The VT1.5, a 1.728 Mb/s facility, carries one DS1. The VT1.5 tributaries consist of asynchronous mapped DS1s in a floating mode of operation.

- **DS1**

  The DS1 facility is similar to existing DS1 (Digital Signal Level 1) facilities. It is a 1.544 Mb/s facility which carries up to 24 DS0s (64 kb/s).

1.1 Performance Monitoring Threshold Group

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The DS1S (Digital Signal Level 1 SONET), VT1, and STE facilities may be monitored. The DNU-S Performance Monitoring Threshold Group allows a user to review, insert, update, and delete performance monitoring groups on a DNU-S for these facilities.

Two types of default PM (Performance Monitoring) groups contain the default data for the PM Group. The Generic default PM group contains the default data for the switch, and it cannot be changed. It is for review only. The PM Group name begins with a "/" for Generic default data. The Office default PM Group can be updated or reviewed, but it cannot be deleted. (See PM GROUP field for an explanation of the Office default PM group versus the Generic default PM group.)

In addition to the default PM Group data, data can be defined for customized PM Groups. In defining a customized PM Group, the fields that are not entered are automatically populated from the Office Default PM Group data. If the field is not defined in the Office Default PM Group (e.g. were nulled out) then the corresponding value from the Generic PM Group will be used.

1.2 Recent Change View

The corresponding Recent Change View for this form is 20.25.

2. FORM ENTRIES - 5951-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * PM GROUP

Description: The Performance Monitoring Group name defines the group for the error thresholds that will be inherited by every facility assigned to this group. Users may set their own performance monitoring office defaults by customizing the office default PM (Performance Monitoring) groups: DS1SDEF, STEDEF, and VT1DEF.

There are two pre-defined performance monitoring groups each for DS1, VT1, and STE. PM GROUPs beginning with a "/" are Generic default groups. The Generic default groups may not be assigned to a facility, nor may they be updated or deleted. PM GROUPs that do not begin with a "/" are Office default groups. These may be assigned and/or updated, but may not be deleted. In addition, customized PM GROUPs can be created.

The following Generic default PM GROUPs designated as
- /STEGDEF - STE Generic Default
- /VT1GDEF - VT Generic Default
- /DS1SGDF - DS1S Generic Default

are for review only and cannot be updated or deleted.

The fields in the following Office default PM GROUPs designated as
- STEDEF - STE Office Default
- VT1DEF - VT Office Default
- DS1SDEF - DS1S PM Office Default

are for review and can be updated. The form/record cannot be deleted. (See Figure 1 and Figure 2 for the default data for PM groups.)

Required Field.

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Valid Entries: 1 - 8 characters

Data Rules:

For every office, DNUPM forms must be defined with a PM GROUP of "/DS1SGDF", "DS1SDEF", "/STEGDEF", "STEDEF", "/VT1GDEF" and "VT1DEF".

PM GROUP entries on the DNUPM form must not be duplicated with PM GRP entries on the PMTHRESH form.

No more than 50 unique PM GROUP names are allowed per SM from the combination of PM GROUP(S) defined on EQSTE form(s) (5857 Record) as STE PM GROUP, and defined on EQVT form(s) (5858 Record) as VT PM GROUP and DS1S PM GROUP.

The "Total Number of PM forms" (the sum of the number of PMTHRESH forms and the number of DNUPM forms) must NOT exceed the entry in the MAX NO THR GRPS field on the OFCOPT form (5509 Record).

2.3 # PM TYPE

Description: The Performance Monitoring Group Type indicates the type of equipment to monitor.

Required Field.

Valid PM TYPE Entries

Entry	Definition
DS1S	Digital Signal Level 1 SONET facility
VT1	Virtual Tributary 1.5 facility
STE	SONET Termination Equipment facility (Section and Line)

Data Rules:

DS1S
If "DS1S" is entered, then only the fields on this form for DS1S can be entered.

The DS1S PM GROUP defined on an EQVT form must have a corresponding DNUPM form with a PM TYPE of "DS1S". The forms correspond if the DS1S PM GROUP entry on the EQVT form is the same as the PM GROUP entry on this form.

STE
If "STE" is entered, then only the fields on this form for the STE can be entered.

The STE PM GROUP defined on an EQSTE form must have a corresponding DNUPM form with a PM TYPE of "STE". The forms correspond if the STE PM GROUP entry on the EQSTE form is the same as the PM GROUP entry on this form.

VT1
If "VT1" is entered, then only the fields on this form for the VT can be entered.

The VT PM GROUP defined on an EQVT form msut have a corresponding DNUPM form with PM TYPE of "VT1". The forms correspond if the VT PM GROUP entry on the EQVT form is the same as the PM GROUP entry on this form.

2.4 REMARKS

Description: Enter any remark for the Performance Monitoring group. This remark is associated with the data used for defining performance monitoring groups.
Valid Entries: 1 - 32 characters.

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STE SECTION ALERTS (SSA)

The following fields (Section 2.5 - Section 2.6) define the thresholds for STE Section.

2.5 CUR INT SEFS

Description: Enter the threshold for DNU-S STE section alerts for severely-errored frame seconds in the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

2.6 CUR DAY SEFS

Description: Enter the threshold for DNU-S STE section alerts for severely-errored frame seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

STE LINE ALERTS (SLA)

The following fields (Section 2.7 - Section 2.10) define the thresholds for STE Line.

2.7 CUR INT ES

Description: Enter the STE Line alert threshold for errored seconds in the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

2.8 CUR INT SES

Description: Enter the threshold for DNU-S STE line alerts for severely-errored seconds in the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

2.9 CUR DAY ES

Description: Enter STE Line alert threshold for errored seconds in the current day.
Valid Entries: 1 - 21600 (seconds)

2.10 CUR DAY SES

Description: Enter the threshold for DNU STE line alerts for severely-errored seconds in the current day.
Valid Entries: 1 - 21600 (seconds)

2.11 STE INH CUR DAY

Description: Should the performance monitoring alerts for the DNU-S STE Line and Section for the current day be inhibited?
Valid Entries: Y, N

2.12 STE INH CUR INT

Description: Should the performance monitoring alerts for DNU-S STE Line and Section for the current 15 minute interval be inhibited?
Valid Entries: Y, N

3. FORM ENTRIES - 5951-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and the Office Name on each record.

VT PATH ALERTS (VT)

The following fields (Section 3.2 - Section 3.9) define the thresholds for the near-end of the VT1.5 and the far-end of the VT1.5 facility.

3.2 CUR INT ES

Description: Enter the VT path alert threshold for errored seconds in the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.3 CUR INT SES

Description: Enter the VT path alert threshold for the DNU-S virtual tributary path alerts for severely-errored seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.4 CUR INT UAS

Description: Enter the VT path alert threshold for DNU-S virtual tributary path alerts for unavailable seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.5 INH CUR INT

Description: Should performance monitoring alerts for the DNU-S virtual tributary path for the current 15 minute interval (for both the near-end and the far-end) be inhibited?
Valid Entries: Y, N

3.6 CUR DAY ES

Description: Enter the VT path alert threshold for DNU-S virtual tributary path alerts for errored seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.7 CUR DAY SES

Description: Enter the VT path alert threshold for virtual tributary path alerts for severely errored seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.8 CUR DAY UAS

Description: Enter the VT path alert threshold for DNU-S virtual tributary path alerts for unavailable seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.9 INH CUR DAY

Description: Should the performance monitoring alerts be inhibited for the DNU-S virtual tributary path (near-end and far-end) for the current day?
Valid Entries: Y, N

DS1S PATH ALERTS (D)

The following fields (Section 3.10 - Section 3.21) define the thresholds for the DS1S (Digital Signal Level

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1 SONET).

3.10 CUR INT ES

Description: Enter the threshold for DNU-S DS1S facility path alerts for errored seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.11 CUR INT SES

Description: Enter the threshold for DNU-S DS1S facility path alerts for severely-errored seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.12 CUR INT SEFS

Description: Enter the threshold for DNU-S DS1S facility path alerts for severely-errored frame seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.13 CUR INT CSS

Description: Enter the threshold for DNU-S DS1S facility path alerts for controlled-slip seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.14 CUR INT UAS

Description: Enter the threshold for DNU-S DS1S facility path alerts for unavailable seconds for the current 15 minute interval.
Valid Entries: 1 - 225 (seconds)

3.15 INH CUR INT

Description: Should the performance monitoring alerts for DS1S path for the current 15 minute interval be inhibited?
Valid Entries: Y, N

3.16 CUR DAY ES

Description: Enter the threshold for DNU-S DS1S facility path alerts for errored seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.17 CUR DAY SES

Description: Enter the threshold for DS1S facility path alerts for severely-errored seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.18 CUR DAY SEFS

Description: Enter the threshold for DS1S facility path alerts for severely errored frame seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

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3.19 CUR DAY CSS

Description: Enter the threshold for DNU-S DS1S facility path alerts for controlled slip-seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.20 CUR DAY UAS

Description: Enter the threshold for DNU-S DS1S facility path alerts for unavailable seconds for the current day.
Valid Entries: 1 - 21600 (seconds)

3.21 INH CUR DAY

Description: Should the performance monitoring alerts for DS1S path alerts for the current day be inhibited?
Valid Entries: Y, N

ESS 5951-1(10/94)TG-5 DNUS PERFORMANCE MONITORING - DATE _____
THRESHOLD GROUP (SM-2000) RECORD
DNUPM 5ESS SWITCH
20.25
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

PM GROUP	PM TYPE	REMARKS	STE SECTION ALERTS (SSA)		STE LINE ALERTS (SLA)				STE INH CUR DAY	STE INH CUR INT
			CUR INT SEFS	CUR DAY SEFS	CUR INT ES	CUR INT SES	CUR DAY ES	CUR DAY SES		
/DS1SGDF	DS1S	DS1S GENERIC DEFAULTS		00017	065	010	00648	00100	N	N
/STEGDEF	STE	STE GENERIC DEFAULTS	002							
/VT1GDEF	VT1	VT1 GENERIC DEFAULTS								
DS1SDEF	DS1s	DS1S OFFICE DEFAULTS								
STEDEF	STE	STE OFFICE DEFAULTS	002	00017	065	010	00648	00100	N	N
VT1DEF	VT1	VT1 OFFICE DEFAULTS								

Figure 1 DEFAULT DATA FOR 5951-1 RECORD

ESS 5951-2(10/94)TG-5 DNUS PERFORMANCE MONITORING - DATE _____
THRESHOLD GROUP (SM-2000) TABLE
DNUPM 5ESS SWITCH
20.25
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

PM GROUP	VT PATH ALERTS (VT)								DS1S PATH ALERTS (D)											
	CUR INT	CUR INT	CUR INT	INH CUR I	CUR DAY E	CUR DAY S	CUR DAY U	INH CUR D	CUR INT	CUR INT	CUR INT	CUR INT	CUR INT	INH CUR I	CUR DAY E	CUR DAY S	CUR DAY S	CUR DAY C	CUR DAY U	INH CUR D

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	ES	SES	UAS	NT	S	ES	AS	AY	ES	SES	SES	SEFS	UAS	NT	S	ES	EFS	SS	AS	AY
/DS1SGDF									065	010	002	001	010	N	00648	00100	00017	00004	00010	N
/STEGDEF																				
/VT1GDEF	065	010	010	N	00648	00100	00010	N												
DS1SDEF									065	010	002	001	010	N	00648	00100	00017	00004	00010	N
STEDEF																				
VT1DEF	065	010	010	N	00648	00100	00010	N												

Figure 2 DEFAULT DATA FOR 5951-2 RECORD

```
dnupm                    5ESS SWITCH
SCREEN 1 OF 2            OFFICE DATA ADMINISTRATION
(5951-1/2)  DNUS PERFORMANCE MONITORING - THRESHOLD GROUP (SM2000)

*1. PM GROUP ________
#2. PM TYPE  ____
 3. REMARKS  _____________________________

STE SECTION ALERTS (SSA)      STE LINE ALERTS (SLA)
 4. CUR INT SEFS ___          6. CUR INT ES  ___      10. STE INH CUR DAY _
 5. CUR DAY SEFS _____        7. CUR INT SES ___      11. STE INH CUR INT _
                              8. CUR DAY ES  _____
                              9. CUR DAY SES _____
```

```
dnupm                    5ESS SWITCH          _
SCREEN 2 OF 2            OFFICE DATA ADMINISTRATION
(5951-1/2)  DNUS PERFORMANCE MONITORING - THRESHOLD GROUP (SM2000)

 VT PATH ALERTS (VT)                DS1S PATH ALERTS (D)
12. CUR INT ES  ___          20. CUR INT ES  ___      26. CUR DAY ES  _____
13. CUR INT SES ___          21. CUR INT SES ___      27. CUR DAY SES _____
14. CUR INT UAS ___          22. CUR INT SEFS ___     28. CUR DAY SEFS _____
15. INH CUR INT _            23. CUR INT CSS ___      29. CUR DAY CSS _____
16. CUR DAY ES  _____        24. CUR INT UAS ___      30. CUR DAY UAS _____
17. CUR DAY SES _____        25. INH CUR INT _        31. INH CUR DAY _
18. CUR DAY UAS _____
19. INH CUR DAY _
```

Figure 3 SAMPLE DNUPM FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 5M: 5952 RECORD
ISLU2 LINE BOARD FORM - ISLULB

1. GENERAL

The 5952 Integrated Services Line Unit 2 Line Board Record is available with the 5E10 and later Software Releases. It is used to define the Line Boards equipped in an ISLU-2.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 *ISLU

Description: Enter the Integrated Services Line Unit Number.

Required Field.
Valid Entries: Enter 0 - 7 for an ISLU2 on an SM or 0 - 42 for an ISLU2 on an SM2000.

Data Rules:

An ISLU unit number entered on the ISLULB form must be defined on an EQISLU form with a UNIT TYPE of "ISLU2".

2.4 * LG

Description: Enter the ISLU2 Line Group.

Required Field.
Valid Entries: 0 - 15

LINE BOARDS

Up to eight Line Boards can be equipped on each Line Group. Each Line Board has eight circuits. For each Line Board entered, the TYPE, EQST, CLI and SPARE CKT fields must be entered. At least one Line Board must be specified.

When an ISLU2 is mounted at EQUIPMENT VERTICAL "41" or when two ISLU2s are mounted in the same SWITCHING MODULE and EQUIPMENT BAY, a secondary LIBD cannot be assigned to the unit(s). Therefore ISLU2 LINE Boards 4-7 cannot be assigned on any of the ISLULB forms associated with the unit(s).

For each POS (Position) in which a line card is equipped, enter the following fields.

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2.5 TYPE

Description: Enter the Line Card type.

Valid TYPE Entries

Entry	Definition	J-Drawing/List
ULBD	5E10 MPU1B ISLU-2 U line board	J5D004AL-1, L60-A CLI: 20000
	5E10 MPU2 ISLU-2 U line board	J5D004AL-1, L61 CLI: 40000
TLBD	5E10 MPT1 ISLU-2 T line board	J5D004AL-1, L80 CLI: 80000
WLBD	ISLU-2 W line board	Not determined. CLI: 0

Data Rules:

When TYPE is "TLBD" or "WLBD", SPARE CKT must be "N".

For RDTAPORT forms that are defined with RDTA OE TYPE set to "K", the RDTA OE NUMBER must be defined on a ISLULB form as SM or ISLU or LG or LB with TYPE set to "TLBD" or "ULBD" and EQST set to "O". (Note: RDTA OE is aaabbccd□, where aaa is SM, bb is ISLU, cc is LG and d is LB POS)

An OE defined on the DSLAP form with OE type of "K" and/or DSL OE defined on the DSL form with a DSL OE type of "K" must be defined as an equipped and operational U or T Board on the ISLULB input form.

When the ISLULB form has an SM/ISLU/LG/LBD combination value that matches a DSL form DSL OE field, where OE TYPE is set to "K", and the DSL CLS field is set to "STD", the ISLULB form, TYPE field indicated by the POS field matched, must be "ULBD" or "TLBD".

2.6 EQST

Description: Enter the Equipment Status of the Line Board.

Valid EQST Entries

Entry	Definition
G	Growth Status.
O	Operational Status.
U	Unequipped Status.

Data Rules:

Only "O", status is allowed in new offices and equipment additions.

For Preliminary Retrofit or Retrofit Processing, equipment can not be marked as "G".

ISLULB forms that have at least one LINE BOARD list element entry with an EQST of "O" or "G", the corresponding EQISLU form must have COMMON DATA EQST equal to "O".

2.7 CLI

Description: Enter the Change Level Indicator of the Line Board. For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.
Valid Entries: 0 - 7fffffff (hexadecimal)

2.8 SPARE CKT

Description: Is a spare line circuit available on this line board. Enter "Y" or "N". "Y" can only be used in POS 0 on LG 0, 8 or in POS 3 on LG 7, 15.
Valid Entries: Y - N

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Data Rules:

For 5E10 and later, when SPARE CKT equals "Y" on a line board on the ISLULB forms, circuit 0 associated with the board cannot be used for DSL assignments.

```
SCREEN 1 of 2                5ESS Switch
islulb                OFFICE DATA ADMINISTRATION
(5952)                     ISLU2 LINE BOARD

*1. SM  ___
*2. ISLU __
*3. LG  __
```

```
SCREEN 2 of 2                5ESS Switch
islulb                OFFICE DATA ADMINISTRATION
(5952)                     ISLU2 LINE BOARD

 4. LINE BOARDS
          TYPE  EQST   CLI      SPARE CKT
    1) POS 0 ____  _  _________     _
    2) POS 1 ____  _  _________     _
    3) POS 2 ____  _  _________     _
    4) POS 3 ____  _  _________     _
    5) POS 4 ____  _  _________     _
    6) POS 5 ____  _  _________     _
    7) POS 6 ____  _  _________     _
    8) POS 7 ____  _  _________     _
```

Figure 1 SAMPLE ISLULB FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 5N: 5957 RECORD
REMOTE PERIPHERAL SITE MISCELLANEOUS ALARMS - RPMA

1. GENERAL

The 5957 Record is available with 5E12 and later Software Releases. It is used to define information about RPMA (Remote Peripheral Miscellaneous Alarm) scan points. This form was implemented with the Remote AIU (Access Interface Unit) feature (99-5E-3506). See Division 2, Section 9O.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.24.

2. FORM AND RECORD ENTRIES

3. BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

3.1 *SM

Description: Enter the Switch Module identification number.

3.2 *RP NO

Description: Enter the Remote Peripheral Number.

Required Field.
Valid Entries: 1 - 127

3.3 *RP TYPE

Description: Enter the Remote Peripheral Number.

Required Field.

Valid RP TYPE Entries

Entry	Description
EAIU	Remote AIU.
RISLU	Remote ISLU (ISDN Line Unit).

Data Rules:

When "EAIU" is entered, the corresponding SM/AIU/AIU TYPE must exist on the EQAIU form.

3.4 *POINT NBR

Description: Enter the Point Number.

Required Field.
Valid Entries: 1 - 5

3.5 IN USE

Description: Is the Scan Point operational?

Required Field.

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Default: Y
Valid Entries: Y, N

3.6 #NORMAL STATE

Description: Enter the state of the alarm point.

Required Field.

Valid NORMAL STATE Entries

Entry	Description
OPEN	Activated.
CLOSED	Not Activated.

3.7 MCC NAME

Description: Enter the alarm name to be displayed on the MCC (Master Control Center).
Valid Entries:

Blank, or up to 8 characters (backslash and quotes not allowed)

3.8 TTY NAME

Description: Enter the alarm name to be displayed on the TTY (Teletypewriter).
Valid Entries:

Blank, or up to 20 characters (quotes not allowed)

3.9 ALARM LEVEL

Description: Enter the Alarm Level.

Required Field.

Default: MIN

Valid ALARM LEVEL Entries

Entry	Description
CRIT	Critical.
MAJ	Major.
MIN	Minimum.

```
rpma                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5957)        REMOTE PERIPHERAL SITE MISCELLANEOUS ALARMS

*1. SM        ___
*2. RP NO     ___
*3. RP TYPE   _______
*4. POINT NBR  _
 5. IN USE     Y
#6. NORMAL STATE _____
 7. MCC NAME   ________
 8. TTY NAME   ____________________
 9. ALARM LEVEL  MIN
```

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Figure 1 SAMPLE RMPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 5O: 5990 RECORD
PSU PIPE - PSUPIPE

1. GENERAL

The PSU (Packet Switching Unit) Pipe form (5990 Record) is available with the 5E16(2) FR 1 and later Software Releases. It is used to define a PSU Pipe consisting of a T1 or E1 facility terminating on a PH (Protocol Handler). This form supports the SAAL (Signaling ATM (Asynchronous Transfer Mode) Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature (99-5E-7451). For more information on this feature, see Division 2, Section 4A670.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.25.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: The SM (Switching Module) field is used to specify a SM number associated with the PSU (Packet Switching Unit).

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

For each PSUPIPE form, there must exist a matching PSUGP form (5949 Record) with the PH TYPE for the CHANNEL GROUPS set to "PH31".

2.3 * PSU PIPE

Description: This field is used to identify which PSU PIPE is used for the SAAL.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: Enter up to 8 alphanumeric characters.

2.4 PSU

Description: This field is used to identify the PSU number.

Software Release: 5E16(2) and later
Valid Entries: 0

2.5 # SHELF

Description: This field is used to indicate the PSU shelf that the PH (Protocol Handler) is equipped with.

Software Release: 5E16(2) and later
Valid Entries: 0 - 4

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2.6 # CHAN GROUP

Description: This field is used to specify the logical shelf position of the PH.

Software Release: 5E16(2) and later
Valid Entries: 0 - 15

2.7 CH GRP MEMBER

Description: This field is used to specify the channel group member.

Software Release: 5E16(2) and later
Valid Entries: 0

2.8 # OE

Description: This field is used to specify the equipment type.

Software Release: 5E16(2) and later
Valid Entries:

Valid OE Entries

Entry	Definition
D	NEN (Networking Equipment Number)
N	DEN (Digital Equipment Numbers)

OE TYPE D

Entry	Definition
SM	[001-192]
DLTU	[000-011]
DFI	[01-10]
DBCHAN	[01-48]

OE TYPE N

Entry	Definition
SM	[001-192]
DNUS	[0-7]
DG	[0-1]
STE	[1-6]
STS	[1]
VTG	[1-7]
VTM	[1-4]
DS0	[01-24]

Data Rules:

When OE is "D":

- the DBCHAN part of the OEN must be "01" or "25".
- there must be a matching EQDUP form (5730 Record). If the EQDUP form exists, then DFI USAGE must be "TRUNK", "APPL" must be unknown, and DFI MODE must be "FE8Z" on this EQDUP form.

  - ***NOTE:*** An associated EQDUP form is found by matching the first 8 digits of the DEN on the PSUPIPE form with the concatenated value of SM, DLTU and DFI PACK NBR on the EQDUP form. Also, use FAC 0 on the EQDUP form if the last 2 digits of DEN on the PSUPIPE form is "01"', else use FAC 1 if the last 2 digits of DEN on the PSUPIPE form is "25".

When OE is "N":

- the ds0 part of the OEN must be "01".

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- there must be a matching EQVT form (5858 Record). If the EQVT form exists, then APPLICATION TYPE must be "TRUNK", FRAME must be "ESF", and ZCS must be "N" on the EQVT form.

The NENs (Networking Equipment Numbers) must be uniquely assigned on the EQVT form.

The DENs (Digital Equipment Numbers) must be uniquely assigned on the EQVT form.

2.9 MAC LAYER

Description: This field is the Media Access Control Layer of a PSU PIPE.

Software Release: 5E16(2) and later
Valid Entries: ATM

Data Rules:

MAC LAYER must be "ATM".

2.10 APPL LAYER

Description: This field indicates the application type residing on the PSU PIPE. This is a display only field.

Software Release: 5E16(2) and later

ATM LAYER

The following fields (Section 2.11 - Section 2.21) are display only fields used as virtual path indicators.

2.11 MAC VPCS

Description: This field is used to display the maximum number of Virtual Path connections.

Software Release: 5E16(2) and later

2.12 MAX VCCS

Description: This field is used to display the maximum number of Virtual Channel connections.

Software Release: 5E16(2) and later

2.13 VPI BITS

Description: This field is used to display the number of VPI (Virtual Path Indicator) bits allocated for storing the Virtual Path Indicator.

Software Release: 5E16(2) and later

2.14 VCI BITS

Description: This field is used to indicate the number of VCI (Virtual Circuit Indicator) bits allocated for storing the Virtual Path Indicator.

Software Release: 5E16(2) and later

2.15 VPI

Description: This field is used to display the ATM (Asynchronous Transfer Mode) VPI.

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Software Release: 5E16(2) and later

2.16 VCI

Description: This field is used to display the ATM VCI.

Software Release: 5E16(2) and later

2.17 PCPS

Description: This field is used to display the bandwidth of a point-to-point connection divided by 53 bytes per ATM cell for a T1 ATM PSU PIPE supporting SAAL (Signaling Link ATM Adaptation Layer) High Speed Links.

Software Release: 5E16(2) and later

2.18 SCPS

Description: This field is used to indicate the bandwidth of a point-to-point connection divided by 53 bytes per ATM cell for a T1 ATM PSU PIPE supporting SAAL High Speed Links.

Software Release: 5E16(2) and later

2.19 BT

Description: This field is used to indicate the maximum number of consecutive calls permitted onto the ATM interface.

Software Release: 5E16(2) and later

2.20 CDVT

Description: This field is used to indicate the Cell Delay Variation Tolerance for a point-to-point T1 ATM PSU Pipe supporting SAAL High Speed Links.

Software Release: 5E16(2) and later

2.21 QOSC

Description: This field indicates the Quality of Service Class for an ATM PSU Pipe supporting SAAL High Speed Links.

Software Release: 5E16(2) and later

```
psupipe                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5990)                     PSU PIPE

*1. SM          ___              ATM LAYER
*2. PSU PIPE     _________        MAX VPCS 0
 3. PSU         0                MAX VCCS 1
#4. SHELF        _                VPI BITS 1
#5. CHAN GROUP   __               VCI BITS 3
 6. CH GRP MEMBER 0               VPI      0
#7. OE          _ _____________   VCI      5
```

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```
                        PCPS    3622
10. MAC LAYER  ATM              SCPS    3622
   APPL LAYER _______            BT      210
                        CDVT    100
                        QOSC    3
```

Figure 1 SAMPLE PSUPIPE FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 5P: 5592 RECORD
ATM LINK ASSIGNMENT - ATMLNK

1. GENERAL

The The ATM (Asynchronous Transfer Mode) Link Assignment form is available with the 5E17(1) FR 1 and later Software Releases. It allows a user to define and specify parameters for an ATM link. For duplex operations, two channels (CHAN 1 and CHAN 0) are provisioned, each terminating on a PHA2 (Protocol Handler for Asynchronous Transfer Mode). For simplex operations, a single channel (CHAN 1) is provisioned. This form supports the PHA2 (Protocol Handler for ATM PSU to PSU Connectivity feature. For more information on this feature, see Division 2, Section 7BY.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: The SM (Switching Module) field is used to specify a SM number associated with the PSU.

Software Release: 5E17(1) FR1 and later
Valid Entries: 1 - 192

2.3 * PSU

Description: This field is used to identify the PSU number.

Software Release: 5E17(1) FR1 and later
Valid Entries: 0 - 1

2.4 * LINK

Description: This field is used to identify the PSU link number.

Software Release: 5E17(1) FR1 and later
Valid Entries: 1 - 10

2.5 APS TYPE

Description: The APS TYPE field is used to indicate the type of automatic protection switch used on the link.

Software Release: 5E17(1) FR1 and later
Default: UNIDIRECT
Valid Entries:

Valid ASP TYPE Entries

Entry	Definition
BIDIRECT	Bidirectional
NONE	No automatic protection switch type
UNIDIRECT	Unidirectional

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2.6 ATM INTF

Description: The ATM INTERFACE field is used to specify whether or not the ATM (Assynchronous Transfer Mode) interface is a User to Network interface, or a Network to Network interface.

Software Release: 5E17(1) FR1 and later
Default: UNI
Valid Entries:

Valid ATM INTF Entries

Entry	Definition
NNI	Network-Network Interface
UNI	User-Network Interface

CHANNELS

These fields (Section 2.7 - Section 2.10) are used to define both channels of the PSU (Packet Switch Unit) link. The channels are defined by assigning physical PHA2s (Protocol Handler for ATM (Asynchronous Transfer Mode) 2s) and channel groups.

2.7 SHELF

Description: The SHELF field is used to define the PSU shelf where the protocol handler for ATM type PHA2 (Protocol Handler for ATM level 2) is located.

Software Release: 5E17(1) FR1 and later
Valid Entries: 0 - 4

Data Rules:

For each channel, when one field is entered, then all fields must be entered.

For each channel, when SHELF or POSITION is entered, then SHELF, POSITION, and CON TYPE must be entered.

The combination of SHELF and POSITION must be unique for both channels.

When SHELF for CHAN 0 equals SHELF for CHAN 1, CHL GRP for CHAN 0 must not equal CHL GRP for CHAN 1.

2.8 POSITION

Description: The POSITION field is used to define the position number where the protocol handler for ATM type 2 (PHA2) is located.

Software Release: 5E17(1) FR1 and later
Valid Entries: 0 - 15

2.9 CHL GRP

Description: The CHL GRP field is used to designate a channel group on the SHELF for the current ATM link channel.

Software Release: 5E17(1) FR1 and later
Valid Entries: 0 - 15

2.10 CON TYPE

Description: The CON TYPE field specifies the connection type of each channel.

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Software Release: 5E17(1) FR1 and later
Valid Entries:

Valid CON TYPE Entries	
Entry	**Definition**
ATMNET	PSU connectivity is via ATM Networks.

Data Rules:

When CHANNELS CON TYPE on the ATMLNK form and/or PSULNK form (5057 Record) is "ATMNET", the NEAR PSU on the PSULNK form, and/or PSU on the ATMLNK form must be unique between the ATMLNK and PSULNK forms.

- ***NOTE:*** If NEAR PSU on the PSULNK form is blank, its value is derived from PSU on the EQPSU form (5741 Record) where the PSULNK form's key, NEAR COM ADDR, is matched to the COM ADDR field on the EQPSU form.

CON TYPE for CHAN 0 must be the same as CON TYPE for CHAN 1.

When CON TYPE is "ATMNET", ATM INTF must be "NNI".

AAL2 PARAMETERS

These fields (Section 2.11 - Section 2.15) are used to define both channels of the PSU (Packet Switch Unit) link. The channels are defined by assigning physical PHA2s (Protocol Handler for ATM (Asynchronous Transfer Mode) 2s) and channel groups.

2.11 MAX VCCS

Description: The CHL GRP field is used to designate a channel group on the SHELF for the current ATM link channel. This is a no change field.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Valid Entries: 1024

2.12 START VPI

Description: The START VPI (Virtual Path Identifiers) field is used to specify the starting value of the VPI.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Default: 0
Valid Entries: 0 - 255

Data Rules:

The sum of START VPI and NUM VPI must not be greater than 256.

2.13 NUM VPI

Description: The NUM VPI (Number of the Virtual Path Identifiers) field is used to specify how many VPIs are needed.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Default: 32
Valid Entries: 0, 1, 2, 4, 8, 16, 32, 64, 128, or 256

Data Rules:

NUM VPI multiplied by NUM VCI must be equal to MAX VCCS.

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2.14 START VCI

Description: The START VCI (Virtual Channel Identifier) field is used to specify the starting value of the VCI.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Default: 32
Valid Entries: 0 or 32 - 65532

Data Rules:

The sum of START VCI and NUM VCI must not be greater than 65536.

2.15 NUM VCI

Description: The NUM VCI (Number of Virtual Channel Identifiers) field is used to specify how many VCIs are needed.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Default: 32
Valid Entries: 0, 4, 8, 16, 32, 64, 128, 256, 512, or 1024

AAL5 PARAMETERS

2.16 VPC SUPPORT

Description: The Virtual Path Connection Support field is used to specify whether or not the VPC is supported.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Default: Y
Valid Entries: Y, N

CELL DISCARDED THRESHOLDS

These fields (Section 2.17 - Section 2.21) are used to define various cell discarded thresholds needed to support the PHA2 PSU to PSU Connectivity feature. For more information, see Division 2, Section 7BY.

2.17 HEC VIOLATIONS

Description: The HEC (Header Error Control) Violation field identifies the threshold for HEC violations.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.18 ATM LYR HDR ERR

Description: The ATM Layer Header Error field identifies the threshold for ATM layer header errors.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

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2.19 CRC 10 ERR

Description: The Cyclic Redundancy Check Error field identifies the threshold for CRC 10 errors.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.20 OAM CELL TYP ERR

Description: The Operations Administration and Maintenance Cell Type Error field identifies the threshold for OAM Cell Type errors.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.21 NOT SUPP REQ

Description: The Not Supported Request field identifies the threshold for unsuported requests.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

MISC THRESHOLDS

These fields (Section 2.22 - Section 2.24) are used to define various miscelanous thresholds needed to support the PHA2 PSU to PSU Connectivity feature. For more information, see Division 2, Section.

2.22 OCD ANOMALIES

Description: The Out of Cell Delineation Anomalies field uses the ATM Cell HEC to locate the received cells in a payload. When 7 cell in a row are discarded because of HEC violations, and OCD anomaly occurs, the OCD counter is incremented. The counter is not incremented again until the next OCD anomaly which only occurs after cell delineation is re-established and then lost again. The threshold is a threshold value for the OCD counter.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.23 SD THRESH

Description: The Signal Degrade field indicates the SD bit-errorr threshold that is used for each channel of the ATM link. When this threshold is reached for a channel, the channel has a degraded signal.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 9
Valid Entries:

Valid SD THRESH Entries	
Entry	**Definition**

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5	10E - 5 or .00001
6	10E - 6 or .000001
7	10E - 7 or .0000001
8	10E - 8 or .00000001
9	10E - 9 or .000000001

2.24 SF THRESH

Description: The Signal Fail field indicates the SF bit-errorr threshold that is used for each channel of the ATM link. When this threshold is reached for a channel, the channel goes into a signal fail condition.

Software Release: 5E17(1) FR1 and later (Not currently supported)
Required field.
Default: 3
Valid Entries:

Valid SF THRESH Entries

Entry	Definition
3	10E - 3 or .001
4	10E - 4 or .0001
5	10E - 5 or .00001

AAL5 PROTOCOL THRESHOLDS

These fields (Section 2.25 - Section 2.29) are used to define various AAL5 (ATM Adaptation Layer 5) Protocol thresholds needed to support the PHA2 PSU to PSU Connectivity feature. For more information, see Division 2, Section.

2.25 CRC32 VIOLATION

Description: The Cyclic Redundancy Check 32 Violation field identifies the threshold for CRC 32 violations.

Software Release: 5E17(1) FR1 and later
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.26 OVERSIZED SDU

Description: The Oversized Software Data Unit field identifies the threshold for the SDU.

Software Release: 5E17(1) FR1 and later
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.27 LENGTH VIOLATION

Description: This field identifies the threshold for AAL 5 length.

Software Release: 5E17(1) FR1 and later
Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.28 INVALID CPI

Description: The Invalid Channel Path Identifier field identifies the threshold for an invalid CPI.

Software Release: 5E17(1) FR1 and later

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Required field.
Default: 0
Valid Entries: 0 - ffffffff hex

2.29 LEVEL 2 QUALITY

Description: This field indicates the AAL5 level 2 quality thresholds.

Software Release: 5E17(1) FR1 and later
Required field.
Default: 100
Valid Entries: 0 - 100

```
atmlnk                      5ESS Switch
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5592)                  ATM LINK ASSIGNMENT

*1. SM      001                 AAL2 PARAMETERS
*2. PSU     1                12. MAX VCCS  1024
*3. LINK    1                13. START VPI   0
 4. APS TYPE UNIDIRECT             14. NUM VPI    32
 5. ATM INTF UNI                15. START VCI    32
                           16. NUM VCI     32
         6. CHANNELS
                  CHL CON       AAL5 PARAMETERS
ROW CHAN SHELF POSITION GRP TYPE      17. VPC SUPPORT Y
 1   0    _     __    __ ______
 2   1    _     __    __ ______
```

```
atmlnk                      5ESS Switch       _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5592)                  ATM LINK ASSIGNMENT

  CELL DISCARDED THRESHOLDS        AAL5 PROTOCOL THRESHOLDS
18. HEC VIOLATIONS   00000000    26. CRC32 VIOLATION  00000000
19. ATM LYR HDR ERR  00000000    27. OVERSIZED SDU    00000000
20. CRC 10 ERR       00000000    28. LENGTH VIOLATION 00000000
21. OAM CELL TYP ERR 00000000    29. INVALID CPI      00000000
22. NOT SUP REQ      00000000    30. LEVEL 2 QUALITY  100

     MISC THRESHOLDS
23. OCD ANOMALIES 00000000
24. SD THRESH     9
25. SF THRESH     3
```

Figure 1 SAMPLE ATMLNK FORM 5E17(1) AND LATER SOFTWARE RELEASES

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DIV. 6: ISDN BRCS FORMS

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SEC. 2: AUTOMATIC CUSTOMER STATION REARRANGEMENT FORMS

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SEC. 2A: 5959-1 RECORD
ISDN ACSR FEATURE DEFINITION FORM - ACSRFD

1. GENERAL

The 5959-1 Record is available with 5E5 and later Software Releases. The ACSRFD form is used to define the various combination of options associated with the ISDN ACSR (Automatic Customer Station Rearrangement) feature.

The ISDN ACSR feature provides a user the ability to change their physical location and retain their current TN (telephone Number), features and group memberships and restrictions without using a service order.

Each terminal (line) which is to use the ACSR feature must be assigned an ACSR feature name, defined on the ACSRFD form, on the appropriate feature assignment form, LINEFA form, BFG form, or an associated CLUSTR form. Only one ACSR feature can be assigned per line. ACSR features can only be assigned to ISDN lines (other than ISDN Attendants and Multi-Line Hunt).

The line (TN) which is assigned an ISDN ACSR feature must be defined on a DSLUSR form (5908 Record) as CKT TN. Both PPB1 USR and PPB2 USR must be set to "N" or blank on the DSLUSR form. ACSR GRP entered on the ACSRFD or ACSRLPA form must match the ACSR GRP entered on an associated DSL form (5907 Record) for this TN.

Certain ISDN ACSR features are predefined and automatically provided in the ODA database at the time of office origination. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than the preconstructed feature. A list of the preconstructed features is contained in Figure 1 .

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.50.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the ISDN Automatic Customer Station Rearrangement Feature name. There are no restrictions on the valid characters except that the first character may not be a slash (/). Feature names starting with a slash are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.5) define the feature options.

2.4 AMA REC

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Description: Will an AMA billing record be generated for lines assigned the ACSR feature after an ACSR move?

Required Field.
Default: N
Valid Entries: Y, N

2.5 GRP CNTRL

Description: Is the line assigned this ACSR feature allowed to modify the ACSR group status via a dialed code? The group status is assigned on the ACSRGP form (5959-2 Record) in field GRP ACTIVE.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If GRP CNTRL is "Y", and this feature is assigned to a line, then the line should be assigned a dialing code (on an associated PDIT and/or IDPDCA form) with ACTION equal to "ACSRON" and "ACSROFF".

DEFAULT PARAMETERS

The following fields (Section 2.6 - Section 2.7) define the default parameters assigned with the feature to terminals (lines). These parameters will be assigned to the terminal unless they are overriden by entries on the ACSRLPA forms.

2.6 ACSR GRP

Description: Enter the name of the ACSR Group. There are no restrictions on valid characters.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ACSR Group defined on an ACSRGP form and assigned on the DSL form.

If the ACSR GRP is not assigned on this form, it must be individually assigned to each member via the ACSRLPA form (5959-3 Record).

2.7 PIN REQ

Description: Is a PIN (Personal Identification Number) required by the user before invocation of the ACSR feature?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PIN REQ is set to "Y", then a PIN must be defined on the PIDEF form (5117 Record) for the line associated with this ACSR feature.

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BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS		DEFAULT PARAMETERS	
		AMA REC	GRP CNTRL	ACSR GRP	PIN REQ
/SR*	WILD CARD ACSR FEATURE	N	Y		N
/SRAG	ACSR-SENSITIVE BILLING GRP - CONTROL	Y	Y		N
/SRAMA	ACSR-SENSITIVE BILLING GRP - NON-CONTROL	Y	N		N
/SRGC	ACSR - FLAT RATE - GROUP CONTROL	N	Y		N
/SRNAG	ACSR - FLAT RATE - NON-CONTROL	N	N		N

Figure 1 PRECONSTRUCTED ISDN ACSR FEATURES

---

acsrfd 5ESS Switch _
(5959-1) OFFICE DATA ADMINISTRATION
ISDN ACSR FEATURE DEFINITION

*2. FEATURE ACSRFT1 3. REMARKS _____

========== FEATURE OPTIONS ==========
4. AMA REC N
5. GRP CNTRL Y

========== DEFAULT PARAMETERS ==========
6. ACSR GRP ACSRGP1
7. PIN REQ Y

Figure 2 SAMPLE ACSRFD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2B: 5959-2 RECORD
ISDN ACSR GROUP PARAMETERS FORM - ACSRGP

1. GENERAL

The 5959-2 Record is available with 5E5 and later Software Releases. The ACSRGP form is used to define the group level of information required for the ISDN ACSR (Automatic Customer Station Rearrangement) capability.

Each terminal (line) which is to use the ISDN ACSR capability must be assigned an ISDN ACSR feature name, defined on the ACSRFD form (5959-1 Record), on the appropriate feature assignment form, LINEFA, BFG or an associated CLUSTR form. In addition, each terminal must be assigned to an ISDN ACSR Group which may be defined as a default parameter of the ACSRFD form, or on an individual terminal basis with the ACSRLPA forms. The ACSR Group must also be assigned on the DSL form (5907 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.47.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ACSR GRP

Description: Enter the name of the ISDN ACSR Group. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

2.3 RNGBK TYPE

Description: Enter the ISDN ACSR Ringback Type. This field indicates the type of ringing to be applied for the ISDN ACSR ringback call. After the completion of an ACSR move, whether successful or unsuccessful, the user will be rung back.

Required Field.
Default: A
Valid Entries:

Valid RNGBK TYPE Entries

Entry	Definition
A	A repeated pattern of 2 seconds on followed by 4 seconds off.
B	A repeated pattern of 0.8 seconds on, 0.4 seconds off,
C	A repeated pattern of 0.4 seconds on, 0.2 seconds off,
D	A repeated pattern of 1 second on, 1 second off, 1 second on,
E	4-wire ringing pattern 2 seconds on followed by 4 seconds off.
F	4-wire ringing pattern of 1.65 seconds on, 0.35 seconds off.
P	A ringing pattern of 1.64 seconds on, 0.36 seconds off.

2.4 RNG MAX

Description: Enter the ISDN ACSR ringback interval. This field indicates the number of seconds to allow ringing to occur during an ISDN ACSR ringback call.

Required Field.

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Default: 24
Valid Entries: 24, 30, 36, 42, or 48 (seconds)

2.5 GRP ACTIVE

Description: Is the ISDN ACSR Group active?

A user with GRP CNTRL set to "Y" on an associated ACSRFD form can modify this group status via dialed codes.

Required Field.
Default: Y
Valid Entries: Y, N

2.6 BCID

Description: Enter the Business Customer Identifier. Messages sent to an external processor (i.e., AP) concerning ACSR moves will include this number for identifying the user on the external processor.
Valid Entries: 1 - 65535

Data Rules:

BCID and AP SITE ID must both be entered or both be blank.

2.7 AP SITE ID

Description: Enter the Application Processor ID. The AP SITE ID specifies the destination AP (or external processor) that messages are sent to regarding ACSR moves from users associated with this ISDN ACSR group.
Valid Entries: 1 - 255

Data Rules:

Both BCID and AP SITE ID must be entered or left blank. The AP SITE ID entered here must be defined on a DSLAP form (5963 Record).

```
acsrgp                  5ESS Switch          _
(5959-2)            OFFICE DATA ADMINISTRATION
                  ISDN ACSR GROUP PARAMETERS

*1. ACSR GRP   ACSRGP1
 2. RNGBK TYPE A
 3. RNG MAX    24
 4. GRP ACTIVE Y
 5. BCID       _____
 6. AP SITE ID ___
```

Figure 1 SAMPLE ACSRGP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2C: 5959-3 RECORD
ISDN ACSR LINE PARAMETERS FORM - ACSRLPA

1. GENERAL

The 5959-3 Record is available with 5E5 and later Software Releases. The ACSRLPA form is used when assigning ISDN ACSR (Automatic Customer Station Rearrangement) features to ISDN lines (other than ISDN Attendants and Multi-Line Hunt). The ACSRLPA form is used to assign ISDN ACSR feature parameters to lines if the default parameters on the ACSRFD form (5959-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.49.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the line.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E12 and later, TN/FEATURE combinations on different ACSRLPA forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ACSRLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the ISDN ACSR Feature name. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an ISDN ACSR Feature defined on the ACSRFD form.

2.4 ACSR GRP

Description: Enter the name of the ISDN ACSR Group. There are no restrictions on the valid characters.
Valid Entries: 1 - 8 characters

Data Rules:

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The name entered here must be that of an ISDN ACSR Group defined on an ACSRGP form (5959-2 Record).

When an ISDN ACSR feature is assigned to a line, then the ACSR GRP must be defined, either on the ACSRFD form or the ACSRLPA form. The ACSR GRP must also be assigned on the DSL form (5907 Record).

If the ACSR GRP is not assigned on the associated ACSRFD form, it must be entered on this form.

2.5 PIN REQ

Description: Is a PIN (Personal Identification Number) required by the user before invocation of the ACSR feature?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PIN REQ is set to "Y", then a PIN must be defined on the PIDEF form (5117 Record) for the line associated with this ACSR feature.

```
acsrlpa                    5ESS Switch          _
(5959-3)                OFFICE DATA ADMINISTRATION
                      ISDN ACSR LINE PARAMETERS

*1. TN        5109999
*2. FEATURE    ACSRFT1
 3. ACSR GRP   ACSRGP1
 4. PIN REQ    N
```

Figure 1 SAMPLE ACSRLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
acsrlpa                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5959-3)                 ISDN ACSR LINE PARAMETERS

*1. TN     __________
*2. FEATURE _________
 3. ACSR GRP _________
 4. PIN REQ  N
```

Figure 2 SAMPLE ACSRLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3: ISDN INTERCOM FORMS

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SEC. 3A: 5960-1 RECORD
ISDN INTERCOM FEATURE DEFINITION FORM - ICMFD

1. GENERAL

The 5ESS Switch 5960-1 Record is available with 5E4(2) and later Software Releases. ISDN Intercom is a form of ISDN station to station calling. It is a dedicated feature button approach using general call appearances. ISDN Intercom calling requires a feature button.

1.1 CA-ICOM Features

The ICMFD form is used to define FB-ICOM (Feature Button Intercom) features. These are distinct from the CA-ICOM (Call Appearance Intercom) feature that is available for 5E9(1) and later. The CA-ICOM feature, which meets the Bellcore requirements for National ISDN, is available for Standard DSL users with CACH terminals. It is not a BRCS feature and is not defined on this ICMFD form or its related forms; rather, it is assigned on the CAICOM form (5984 Record).

To accommodate the transition from FB-ICOM to CA-ICOM features, both types of ICOM features will be available for Standard DSL users in the 5E9(1) Software Release. For 5E9(2) and later, FB-ICOM features will not be assignable to Standard DSL users.

For 5E9(1) only, when an FB-ICOM feature is assigned to a Standard DSL user, a warning will indicate that the assignment will not be supported after 5E9(1) and will suggest that a CAICOM feature be assigned. For 5E9(2) and later, this FB-ICOM assignment will not be allowed.

FB-ICOM and CA-ICOM may not both be assigned to the same line.

1.2 FB-ICOM Features

A Feature Button Intercom user can originate a call to the Intercom group member by pushing the Intercom feature button, then going off-hook (or vice versa) and optionally dialing one or two digits.

Certain Feature Button Intercom features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/) and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed Intercom features is contained in Figure 1 .

Each terminal (line) which is to use a Feature Button Intercom feature must be assigned the feature (defined on this ICMFD form) on the appropriate LINEFA form (5112 Record) or associated CLUSTR form (5600 Record) or BFG form (5625 Record). The corresponding AC field, on the appropriate LINEFA form or associated CLUSTR or BFG form, must be set to "N".

Feature Button Intercom features may not be assigned to Multi-Line Hunt Group lines and therefore cannot be assigned on an MLHLNFA form.

A maximum of ten ICMFD forms may be defined for the office.

1.3 ICM Feature Assignment Rules

A line may be assigned no more than one Feature Button Intercom feature.

When a TN is assigned an ISDN Feature Button Intercom feature on a LINEFA (5112 Record), BFG (5625 Record), or associated CLUSTR form (5600 Record), it must also be assigned a TGSR feature, defined on the TGSRFD form (5607-1/2 Record). The GROUP ID associated with the TGSR feature on the TGSRFD, BFG, or TGSRLPA form (5607-3 Record) must match the TG ID defined on the ISDN Intercom feature's ICMGP form (5960-2 Record).

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For 5E8 and later, when a TN is assigned an ISDN Feature Button Intercom feature, the TN must be defined as a CKT TN on a DSLUSR form (5908 Record) that meets one of the following conditions:

- if DSL CLS on the associated DSL form (where the OE on the DSLUSR form matches the DSL OE on the DSL form) is not "STD", then either CA or CA QTY on the DSLUSR form must have an entry;
- if DSL CLS on the associated DSL form is "STD", EKTS on the DSLUSR form must have an entry.

1.4 Recent Change View

The corresponding Recent Change View for this form is 12.45.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter an ISDN Intercom feature name. The FEATURE entry must be unique. It may not start with a slash (/).

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter an optional remark.
Valid Entries: 1 - 32 characters

2.4 AMA CHRG

Description: AMA charging. This field is automatically set to "FLAT" and may not be changed.
Default: FLAT
Valid Entries: FLAT

DEFAULT PARAMETERS

The following fields (Section 2.5 - Section 2.8) define the DEFAULT PARAMETERS assigned with the feature to lines. These parameters will be assigned to the line unless they are overridden by entries on the ICMLPA form (5960-3 Record).

GROUP LIST

The four members of the GROUP LIST (Section 2.5 - Section 2.8) correspond to four buttons on ISDN Customer Premises Equipment terminal(s). The buttons are dedicated to ISDN Intercom by entering "I1ICOM", "I2ICOM", "I3ICOM" and "I4ICOM", respectively, in the ACTION field of the BUTTON LIST on a CFGGRP form (5964 Record). The four buttons are the maximum allowed for an entire Configuration Group.

For 5E5 and later, for each member in the GROUP LIST, an entry must be made in the ICM GRP, the ICM TYPE, and the SOURCE fields.

2.5 ICM GRP

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Description: Enter an ISDN Intercom Group Name.
Valid Entries: 1 - 8 characters

Data Rules:

An ICM GRP entry may only be used once in a GROUP LIST. The entry for ICM GRP must be defined in the ICM GRP field on the ICMGP form.

When several Intercom Groups are associated with the same FEATURE, the TG IDs on the corresponding ICMGP forms must be identical.

2.6 ICM TYPE

Description: This field determines whether or not the ISDN Intercom Group will have a maximum of 10 or 100 members.

Software Release: 5E5 and later
Valid Entries:

Valid ICM TYPE Entries

Entry	Definition
ONE	The ISDN Intercom Group allows a maximum of tenmembers.
TWO	The ISDN Intercom Group allows a maximum of 100 members.

2.7 SOURCE

Description: Source of digits for an ISDN Intercom Call.

Valid SOURCE Entries

Entry	Definition
DIAL	A digit or digits are to be dialed after the ISDN Intercom button is pressed.
AUTO	Stored digits.

Data Rules:

If SOURCE is "DIAL", then an entry for AUTO DIAL POSITION must not be made. If SOURCE is "AUTO", then an entry for AUTO DIAL POSITION must be made.

2.8 AUTO DIAL POSITION

Description: The value entered in this field corresponds to the relative position of the called party within an ISDN Intercom Group. The position is defined on an ICMGP form (5960-2 Record).

A group may have up to 100 members; thus, two digits are entered in this field. The first digit points to the key field ICM BLOCK on an ICMGP form. The ICM BLOCK indicates the "tens" group of the position number.

The second digit points to a POSITION on the ICMGP form. The POSITION indicates the "ones" place of the position number. For example, if "89" is entered in this field, the ICM BLOCK field on the ICMGP form would be set to "80" and the POSITION field would be "9". The associated PRIMARY TN on the ICMGP form is the number of the called party. The ICM GRP key field, on the ICMGP form, will have the same entry as the ICM GRP field on this ICMFD form.
Valid Entries: 00-99

Data Rules:

If SOURCE is "DIAL", this field must not be entered. If SOURCE is "AUTO", this field must have an entry.

For 5E5 and later Software Releases, if the SOURCE field is "AUTO" and the ICM TYPE field is "ONE", then the AUTO DIAL POSITION must be "00" to "09". If the SOURCE field is "AUTO" and the ICM TYPE

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is "TWO", the AUTO DIAL POSITION must be "00" to "99". If an entry is made for AUTO DIALED POSITION, entries must also be made for ICM GRP and SOURCE.

ESS 5960-1(1/93)TG-5 ISDN INTERCOM FEATURE DEFINITION RECORD DATE _____
ICMFD 5ESS SWITCH
12.45
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	FEATURE OPTIONS	DEFAULT PARAMETERS				REMARKS
	AMA CHRG	GROUP LIST				
		ICM GRP	ICM TYPE	SOURCE	AUTO DIAL POSITION	
/IC*	ICOM WILDCARD FEATURE	FLAT	.	.	.	
/IC*			.	.	.	
/IC*			.	.	.	
/IC*			.	.	.	
/ICM	ISDN INTERCOM	FLAT	.	.	.	
/ICM			.	.	.	
/ICM			.	.	.	
/ICM			.	.	.	

Figure 1 PRECONSTRUCTED ICM FEATURES 5E5 AND LATER SOFTWARE RELEASES

icmfd 5ESS Switch _
(5960-1) OFFICE DATA ADMINISTRATION
ISDN INTERCOM FEATURE DEFINITION

*1. FEATURE ICMFEAT 2. REMARKS _____

========== FEATURE OPTIONS ==========
AMA CHRG FLAT
========== DEFAULT PARAMETERS ==========

4. GROUP LIST

	ICM GRP	ICM TYPE	SOURCE	AUTO DIAL POSITION
1.	GRP1	ONE	AUTO	09
2.	GRP2	TWO	DIAL	__
3.	_____	___	____	__
4.	_____	___	____	__

Figure 2 SAMPLE ICMFD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 3B: 5960-2 RECORD
ISDN INTERCOM GROUP DIALING PLAN FORM - ICMGP

1. GENERAL

The 5ESS Switch 5960-2 Record is available with 5E4(2) and later Software Releases. The ISDN Intercom Group Dialing Plan form contains information needed to describe the ISDN Intercom group parameters. Information will be entered which will identify the Intercom group name and the Terminal Group identification number.

Up to ten (10) PRIMARY TNs may be entered for this Intercom group. The ten are within the same ICM BLOCK. The ICM BLOCK is the ten's group for the POSITIONs. For example, if the ICM BLOCK is set to 80 and all ten PRIMARY TNs are entered, then the positions 80 through 89 are defined for this Intercom group. An ISDN Intercom group may have a maximum of 100 (10 * 10) members.

For 5E4(2) and later Software Releases, each PRIMARY TN entry in the TN LIST must be unique.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * ICM GRP

Description: Enter an ISDN Intercom Group Name. The entry for ICM GRP must be unique.

For 5E8 and earlier, a maximum of 1023 groups can be defined; for 5E9(1) and later, 4095 groups can be defined.

Required Field.
Valid Entries: 1 - 8 characters

2.3 * ICM BLOCK

Description: This field identifies the ten's group that contains the PRIMARY TNs assigned on this form. For example, if 70 were entered in this field, then the PRIMARY TNs would be in POSITIONs 70 through 79 in the ISDN Intercom Group. To enter the maximum of 100 PRIMARY TNs in an ISDN Intercom Group, ten ICMGP forms would have to be submitted.

Required Field.

Software Release: 5E5 and later
Valid Entries: 0, 00, 10, 20, 30, 40, 50, 60, 70, 80, and 90.

2.4 # ICM TYPE

Description: This field is used to indicate if one or two digits will be dialed to access a member of the group.

Software Release: 5E5 and later
Required Field.
Valid Entries:

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Valid ICM TYPE Entries	
Entry	**Definition**
ONE	one digit is to be dialed.
TWO	two digits are to be dialed.

Data Rules:

If the ICM BLOCK is 0, this field must be set to "ONE". If the ICM BLOCK is not 0, then this field must be set to "TWO".

2.5 TG ID

Description: Enter a Terminal Group Identification number.

Required Field for 5E8 and earlier.
Valid Entries: 1 - 65535

Data Rules:

For 5E9(1) and later, a TG ID must be entered when the ICM GRP is assigned on an ICMFD (5960-1 Record) or ICMLPA (5960-3 Record) form.

2.6 PRIMARY TN

Description: Enter a Primary Telephone Number that can be called in the intercom group.
Valid Entries:

- For 5E11 and earlier: 7 digits
- For 5E12 and later: YXXXXXX or NXXYXXXXXX where N is 2 - 9, Y is 1 - 9 and X is 0 - 9.

Data Rules:

The Primary TN must be unique per form entry and per ICM GRP.

For 5E8 and earlier the entry must be defined in the CKT TN field on a DSLUSR form; for 5E9(1) and later, it must be defined in either the CKT TN, or (for CA-ICOM only) in the CKT MLHG TN field.

For 5E7 and earlier, the FIRST CA and NUM CA fields on the DSLUSR form must have values entered.

For 5E8 and later, the DSLUSR form must meet one of the following conditions:

- if DSL CLS on the associated DSL form (where the OE on the DSLUSR form matches the DSL OE on the DSL form) is not "STD", then either CA or CA QTY on the DSLUSR form must have an entry;

- if DSL CLS on the associated DSL form is "STD", EKTS on the DSLUSR form must have an entry. If the PRIMARY TN is defined in the CKT MLHG TN field, it is assigned a Call Appearance Intercom feature available only for Standard DSL CACH terminals; therefore, on the DSLUSR form, EKTS must be "CACH".

For 5E9(1) and later, the PRIMARY TN is assigned either an ISDN Feature Button Intercom feature or an ISDN Call Appearance Intercom feature.

If a Feature Button Intercom feature is assigned to the TN (on a LINEFA, BFG, or associated CLUSTR form), it must be defined on an ICMFD form (5960-1 Record). The ICM GRP from this ICMGP form must appear on the associated ICMFD or ICMLPA form (5960-3 Record).

For a Call Appearance Intercom feature, the TN and the ICM GRP must be entered on the CAICOM form (5984 Record).

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For 5E12 and later, the PRIMARY TN's in the TN LIST on the ICMGP form must be unique.

```
icmgp                    5ESS Switch        _
(5960-2)              OFFICE DATA ADMINISTRATION
                   ISDN INTERCOM GROUP DIALING PLAN

                              5. TN LIST
                            POSITION     PRIMARY TN
*1. ICM GRP   GRP1             1.      0         5550849
*2. ICM BLOCK 20               2.      1         5556268
#3. ICM TYPE  TWO              3.      2         5554700
 4. TG ID     00003            4.      3         5551234
                               5.      4         _______
                               6.      5         _______
                               7.      6         _______
                               8.      7         _______
                               9.      8         _______
                              10.      9         _______
```

Figure 1 SAMPLE ICMGP FORM 5E11 AND EARLER SOFTWARE RELEASES

```
icmgp                    5ESS Switch        _
                      OFFICE DATA ADMINISTRATION
(5960-2)                ISDN INTERCOM GROUP DIALING PLAN

*1. ICM GRP   _________          5. TN LIST
*2. ICM BLOCK __            ROW POSITION PRIMARY TN
#3. ICM TYPE  ___             1     0    ___________
 4. TG ID     _____           2     1    ___________
                              3     2    ___________
                              4     3    ___________
                              5     4    ___________
                              6     5    ___________
                              7     6    ___________
                              8     7    ___________
                              9     8    ___________
                             10     9    ___________
```

ISDN Intercom Group Name. Enter from 1 to 8 characters.

Figure 2 SAMPLE ICMGP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3C: 5960-3 RECORD
ISDN INTERCOM (LINE PARAMETERS) FORM - ICMLPA

1. GENERAL

The 5ESS Switch 5960-3 Record is available with 5E4(2) and later Software Releases. It is used when assigning Intercom features to non-Multi-Line Hunt lines. ISDN Intercom feature parameters are assigned to the lines if the default parameters of the ICMFD form (5960-1 Record) are inappropriate or unspecified.

For 5E9(1) and later, an ISDN Call Appearance Intercom feature is available for Standard DSL terminals. Parameters for that feature, which apply only to EKTS CACH terminals, are defined on the CAICOM form (5984 Record).

This ICMLPA form defines parameters only for ISDN Feature Button Intercom features.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.45.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * TN

Description: Enter a valid Telephone Number.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The combination entered for TN and FEATURE must be unique.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ICMLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the TN must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter a feature name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The feature must be an ISDN Feature Button Intercom feature, that is, defined in the FEATURE field on an ICMFD form (5960-1 Record). The TN on this form must be assigned the same FEATURE on a LINEFA form, associated CLUSTR form (5600 Record), or BFG form (5625 Record).

For 5E12 and later, TN/FEATURE combinations on different ICMLPA forms cannot be duplicated.

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GROUP LIST

For the 5E4(2) Software Release, the GROUP LIST (Section 2.4 - Section 2.8) consists of up to four unique ISDN Intercom Group Names, Digit Source and Dialed Position. The 5E5 and later, it also contains a field to indicate the ISDN Intercom Type.

The four members of the GROUP LIST correspond to four buttons on an ISDN CPE (Customer Premise Equipment) terminal(s). The buttons are dedicated to ISDN Intercom by entering "I1ICOM", "I2ICOM", "I3ICOM", and "I4ICOM", respectively, in the ACTION field of the BUTTON LIST on a CFGGRP form (5964 Record). The four buttons are the maximum allowed for an entire Configuration Group.

2.4 ICM GRP

Description: Enter an ISDN Intercom Group Name.
Valid Entries: 1 - 8 characters

Data Rules:

The entry must be defined in the ICM GRP field on an ICMGP form (5960-2 Record). When several Intercom Groups are associated with the same FEATURE, the TG IDs on the corresponding ICMGP forms must be identical.

An ICM GRP entry may be used only once in a GROUP LIST. For 5E4(2), an entry in ICM GRP requires an entry in the SOURCE field and the DIALED POSITION field. For 5E5 and later, an entry in ICM GRP requires an entry in the ICM TYPE, the SOURCE and the AUTO DIALED POSITION fields.

2.5 ICM TYPE

Description: This field indicates the number of digits that must be dialed to access a group member.

Software Release: 5E5 and later
Valid Entries: ONE or TWO

Data Rules:

ICM TYPE must be entered for each Intercom group assigned.

2.6 SOURCE

Description: Source of digits for an ISDN Intercom Call.

Valid SOURCE Entries

Entry	Definition
DIAL	Dialed digits.
AUTO	Stored digits.

Data Rules:

If SOURCE is "DIAL", then an entry for AUTO DIALED POSITION must not be made. If SOURCE is "AUTO", then an entry for AUTO DIALED POSITION must be made.

2.7 AUTO DIAL POSITION

Description: The value entered in this field corresponds to the relative position of the called party within an ISDN Intercom Group. The position is defined on an ICMGP form (5960-2 Record).

For 5E4(2), a group may have up to 10 members, each corresponding to a single digit 0 through 9 entered in this field. This single digit points to a POSITION and its associated PRIMARY TN on the ICMGP form

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whose single key field, ICM GRP, has the same entry as the ICM GRP field on this ICMFD form.

For 5E5 and later, a group may have up to 100 members; thus, two digits are entered in this field. The first digit points to the key field ICM BLOCK on an ICMGP form; the ICM BLOCK indicates the "tens" group of the position number. The second digit points to a POSITION on the ICMGP form; the POSITION indicates the "ones" place of the position number. For example, if 89 is entered in this field, the ICM BLOCK field on the ICMGP form would be set to 80 and the POSITION field would be 9. The associated PRIMARY TN on the ICMGP form is the number of the called party. The ICM GRP key field, on the ICMGP form, will have the same entry as the ICM GRP field on this ICMFD form.
Valid Entries: 00 - 99

Data Rules:

If SOURCE is "DIAL", then this field must not be entered. If SOURCE is "AUTO", then this field must have an entry.

2.8 TN POSITION

Description: This is a Recent Change verify-only field. This field represents the location of the TN in the corresponding ICM GRP's TN LIST on the ICMGP form (5960-2 Record). The TN is the originating party in the ISDN Intercom call.

```
icmlpa                    5ESS Switch          _
(5960-3)              OFFICE DATA ADMINISTRATION
                   ISDN INTERCOM LINE PARAMETERS

*1. TN      5551234
*2. FEATURE  ABC

                        3. GROUP LIST
                                AUTO DIAL        TN
    ICM GRP     ICM TYPE     SOURCE       POSITION        POSITION
 1. DEF          ONE        DIAL          __
 2. XYZ          TWO        AUTO           05
 3. GHI          TWO        DIAL          __
 4. ________      ___        ____          __
```

Figure 1 SAMPLE ICMLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
icmlpa                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5960-3)               ISDN INTERCOM LINE PARAMETERS

*1. TN     ___________
*2. FEATURE _________

              3. GROUP LIST
                     AUTO DIAL TN
ROW ICM GRP  ICM TYPE SOURCE POSITION  POSITION
 1 _________  ___    ____    __        __
 2 _________  ___    ____    __        __
 3 _________  ___    ____    __        __
 4 _________  ___    ____    __        __
```

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Figure 2 SAMPLE ICMLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 3D: 5984 RECORD
ISDN CALL APPEARANCE INTERCOM FORM - CAICOM

1. GENERAL

The CAICOM form (5984 Record) is available with 5E9(1) and later Software Releases. It is used to assign the CA-ICOM (Call Appearance Intercom) feature and associate an intercom group on a Standard ISDN EKTS (Electronic Key Telephone Service) CACH (Call Appearance Call Handling) terminal. Unlike the FB-ICOM (Feature Button Intercom) feature, CA-ICOM is not a BRCS feature and is not assigned to a line on the LINEFA or other BRCS feature assignment forms.

The CA-ICOM feature requires dedicated call appearances which are identified on this CAICOM form and which may not appear on another form for the TN.

The CAICOM form is keyed by TN and ICM GRP. The TN must be the ISDN primary TN of a Standard EKTS CACH terminal defined on a DSLUSR form as CKT TN or CKT MLHG TN. The ICM GRP must be defined on the ICMGP form.

This form supports the CA-ICOM feature of the National ISDN 2 EKTS feature for service uniformity compliance. For more information, see Division 2, Section 1AM.

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter a ISDN EKTS CACH telephone number.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The TN must be defined as either a CKT TN or CKT MLHG TN on a DSLUSR form (5908 Record) where EKTS is "CACH".

For 5E9(1), a TN may be assigned either a Feature Button Intercom feature or a Call Appearance Intercom feature, but not both.

The TN can be entered on no more than four CAICOM forms.

For 5E12 and later, the key pairs, TN and ICM GRP, can not be duplicated on the CAICOM form.

For 5E12 and later, if the first 3-digits of the 7- digit TNs on the CAICOM form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE or the NOC form does not exist, the 7-digit TN(s) must be entered as a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

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2.3 * ICM GRP

Description: Enter an ISDN Intercom Group Name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The ICM GRP must be defined on an ICMGP form (5960-2 Record). If SOURCE is "AUTO", and ICM TYPE on the ICMGP form is "ONE", then AUTO DIAL POSITION on this form must be in the range 0 - 9, inclusive.

2.4 ICM TYPE

Description: This is a Recent Change only field. It represents the number of digits that must be dialed to access a member of the intercom group.

The ICM TYPE is defined on the ICMGP form and indicates whether the group is a one- or two-digit group. One-digit intercom groups can have up to ten members, assigned to positions 0 through 9 in the intercom group dialing plan. Two-digit intercom groups can have up to one hundred members, assigned to positions 0 through 99 in the intercom group dialing plan.

2.5 # SOURCE

Description: Enter the source of digits for an ISDN Intercom call.

Required Field.

Valid SOURCE Entries

Entry	Definition
DIAL	Intercom calls originated from call appearances require dialing the digit or digits in the intercom group associated with the TN being called. In a one-digit intercom group (ICM TYPE "ONE"), only one digit must be dialed since there can only be ten members in the intercom group. In a two-digit intercom group, (ICM TYPE "TWO"), two digits may be needed since there can be up to one hundred members in the intercom group.
AUTO	Intercom calls originated from call appearances do not require dialing of digits since the call appearance has a direct connection to one member of the intercom group.

2.6 AUTO DIAL POSITION

Description: Enter the position in the intercom group dialing plan to which intercom calls can be placed automatically from the intercom call appearance(s). The auto dialing capability allows the TN on this form to have a direct connection to the TN associated with the position in the intercom group dialing plan specified in AUTO DIAL POSITION. An auto dial position number may be specified even though no TN has been associated with that position in the intercom group dialing plan on the ICMGP form.

The value entered in this field corresponds to the relative position of the called party within an ISDN Intercom Group. A group may have up to 100 members. Thus, two digits are entered in this field. The first digit points to the ICM BLOCK on the ICMGP form. The ICM BLOCK indicates the "tens" group of the position number. The second digit points to a POSITION on the ICMGP form. The POSITION indicates the "ones" place of the position number. For example, if 89 is entered in this field, the ICM BLOCK field on the associated ICMGP form would be set to 80 and the POSITION field would be 9. The CAICOM TN would match the ICMGP form PRIMARY TN for POSITION 9 where the ICM BLOCK is 80 and the ICM GRP fields on the CAICOM and ICMGP forms match.
Valid Entries: 00 - 99

Data Rules:

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If SOURCE is "DIAL", AUTO DIAL POSITION must not be entered; if SOURCE is "AUTO", AUTO DIAL POSITION must be entered.

2.7 TN POSITION

Description: This is a Recent Change only field. It represents the location of the TN in the corresponding TN LIST on the ICM GRP form. The TN is the called party in the ISDN Intercom call.

2.8 # CA

Description: Enter the button number associated with the first call appearance for the Intercom Group. The CA and CA QTY fields are used to specify the number of consecutive call appearances dedicated to the Intercom Group. See Division 2, Section 1AM for information on calculating the range of call appearances.

Required Field.
Valid Entries: 1 - 254

Data Rules:

Because a CPE terminal has a maximum of 254 buttons, the sum of the values entered in the CA and CA QTY fields cannot exceed 255.

Call appearances dedicated to CA-ICOM may not be used for other purposes and therefore may not appear for the same TN on another form. When the TN appears on more than one form, the CA from one form may not be in the range of call appearances, which is CA and (CA + (CA QTY -1)), inclusive, on another form, and may not overlap with the range of K56, K64, DPKT, and ODB DNAs from the DSLUSR form.

2.9 # CA QTY

Description: Enter the call appearance quantity, the number of consecutive call appearances dedicated to the intercom group on the terminal for the TN. The call appearances start at the button specified in the CA field. For example, if CA is 12 and CA QTY is 2, buttons 12 and 13 are dedicated to the Intercom Group.

Required Field.
Valid Entries: 1 - 16

Data Rules:

Because a CPE terminal has a maximum of 254 buttons, the sum of the values entered in the CA and CA QTY fields cannot exceed 255.

```
                    5ESS Switch
caicom             OFFICE DATA ADMINISTRATION
(5984)          ISDN CALL APPEARANCE INTERCOM

*1. TN             5107764
*2. ICM GRP        GRP1

   ICM TYPE
#4. SOURCE         DIAL
 5. AUTO DIAL POSITION __
   TN POSITION
#7. CA             003
```

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#8. CA QTY 02

Figure 1 SAMPLE CAICOM FORM 5E9(2) THROUGH 5E11 SOFTWARE RELEASES

```
caicom                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5984)              ISDN CALL APPEARANCE INTERCOM

*1. TN    __________
*2. ICM GRP _________

   ICM TYPE         ___
#4. SOURCE          ____
 5. AUTO DIAL POSITION __
   TN POSITION       __
#7. CA              ___
#8. CA QTY          __
```

Figure 2 SAMPLE CAICOM FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 4: ELECTRONIC DIRECTORY SERVICE FORMS

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SEC. 4A: 5961-1 RECORD
EDS (ELECTRONIC DIRECTORY SERVICE)
FEATURE DEFINITION FORM - EDSFD

1. GENERAL

The 5961-1 Record is available in 5E4(2) and later Software Releases. It is used to define Electronic Directory Service features with various combinations of options.

Each terminal (line) which is to use the EDS service must be assigned an EDS feature on the appropriate LINEFA form (5112 Record) or MLHLNFA form (5113 Record) or associated CLUSTR form (5600 Record). Only one EDS FEATURE is allowed on a given LINEFA form and a given MLHLNFA form or associated CLUSTR form(s).

Certain Electronic Directory Service features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed Electronic Directory Service features is contained in Figure 1 .

The maximum number of EDS features that may be defined is 10.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.38.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * FEATURE

Description: Enter the EDS (Electronic Directory Service) Feature Name. Feature Names have no restrictions on valid characters, except that Feature Names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed, or inserted.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E9(1) and later, when an EDS feature with DIR QRY DISP or AUTO CALL set to "Y" is assigned to a Multi-Line Hunt Group terminal on an MLHLNFA, BFG, or CLUSTR form, the MLHG/TERM must be defined on the DSLUSR form as CKT MLHG / CKT TERM.When an EDS feature with DIR QRY DISP or AUTO CALL set to "Y" is assigned to a TN on a LINEFA, BFG or CLUSTR form, the TN must be defined on the DSLUSR form as CKT TN.

For 5E10 and later, if a CKT TN(s) or CKT MLHG/CKT TERM(s) on the DSLUSR form has DSL CLS set to "STD" on the DSL form (OE from DSLUSR form matches DSL OE on the DSL form) and is assigned an EDS feature on the LINEFA, BFG, or CLUSTR form, then it is a secured feature that must be purchased by the office. In order to make this assignment to a "STD" DSL, SFID 225 ACT field must be "Y" on the SFSYS form (5713-1 Record), and the EDS feature must have the following:

- DIR QRY DISP set to "N"
- AUTO CALL set to "N"
- DISP PRIM CLG NAME set to "N"

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- DISP SHRD CLG NAME set to "Y"

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.7) define the feature options assigned to terminals (lines): DIR QRY DISP, AUTO CALL, DISP PRIM CLG NAME, and DISP SHRD CLG NAME.

2.4 DIR QRY DISP

Description: Is the Directory Query Display feature option allowed?

The DIR QRY DISP feature requires an ISDN station set or attendant console with a minimum 40-character display and feature buttons. Data capability is not required. The user inputs the name to be queried through a 12-button keypad, receives instructions and responses from the 40 character display and then steps through possible matches. When the option is allowed, a station user with the EDS feature assigned to the primary DN is able to invoke DIR QRY DISP.
Default: N
Valid Entries: Y, N

2.5 AUTO CALL

Description: Is the Auto Call feature option allowed?

When AUTO CALL is "Y", an ISDN user with the EDS feature may place a call, without dialing the destination telephone, to the party associated with a message displayed during message query. The user can set up a call by depressing a CALL button or dialing a code.
Default: N
Valid Entries: Y, N

Data Rules:

Lines that are assigned EDS features with the AUTO CALL option require access to an activation code defined in the Office Dialing Plan on the PDIT form (5300-2 Record) or in the Individualized Dialing Plan on the IDPDCA form (5601-1/2 Record) or access to a Feature Button defined on the CFGGRP form (5964 Record). The activation code must have an ACTION code of "AUCUSE".

When an EDS feature with AUTO CALL set to "Y" is assigned to a member of a Multi-Line Hunt Group on an MLHLNFA form (5113 Record), BFG form (5625 Record), or CLUSTR form (5600 Record), the MLHG/TERM must be defined on a DSLUSR form (5908 Record). If the CKT TN is not entered on the MLHG/TERM definition form, either the TERM must be 1 or the EDS feature must be defined with the DIR QRY DISP field set to "Y".

2.6 DISP PRIM CLG NAME

Description: Is the Calling Name Display Primary Dialing Number feature option allowed?

If this option is "Y" for a TN (Telephone Number), then only the primary TN will receive Calling Name Display.

Calling Name Display Primary Dialing Number provides a calling party's name and TN for display at the called party's ISDN station set when the incoming call begins alerting. Both the calling party and the

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called party must be in the same BCID (Business Customer Identification) group to receive the calling party's name.
Default: N
Valid Entries: Y, N

Data Rules:

If the DISP PRIM CLG NAME is set to "Y", then the DISP SHRD CLG NAME must be "N".

2.7 DISP SHRD CLG NAME

Description: Is the Calling Name Display Shared Dialing Number feature option allowed?

If this option is "Y" for a TN, then Calling Name Display is available for all ISDN terminals which share this TN.
Default: N
Valid Entries: Y, N

DEFAULT PARAMETERS

The following field (Section 2.8) defines the default parameters assigned with the feature to terminals (lines). These parameters will be assigned to the terminal unless they are overridden by entries on the EDSLPA or EDSMPA forms.

2.8 EDS GRP

Description: Enter the name of the EDS Group, with no restrictions on the valid characters.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered here must be that of an EDS Group defined on the EDSGP form (5961-2 Record).

ESS 5961-1(4/96)TG-5 ELECTRONIC DIRECTORY SERVICE (EDS) DATE _____

FEATURE DEFINITION RECORD

EDSFD 5ESS SWITCH
12.38
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTION				DEFAULT PARAMETERS	SOFTWARE RELEASE
		DD IIRS PQ	ACUATL OL	DISP PN RAIM ME	DISP SN HARM DE	EDS GRP	

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		RY		CLG	CLG		
/ED*	WILD-CARD FEATURE	Y	Y	Y	N		
/EDA	AUTO CALL	N	Y	N	N		
/EDAP	AUTO CALL, PRIMARY CLG NAME	N	Y	Y	N		
/EDNULL	NO OPTIONS	N	N	N	N		
/EDP	PRIMARY CLG NAME	N	N	Y	N		
/EDQA	QUERY, AUTO CALL	Y	Y	N	N		
/EDQAP	QUERY, AUTO CALL PRIMARY NAME	Y	Y	Y	N		
/EDS	SHARED CLG NAME	N	N	N	Y		5E10 and later

Figure 1 PRECONSTRUCTED EDS FEATURES

---

edsfd 5ESS Switch _
(5961-1) OFFICE DATA ADMINISTRATION
ELECTRONIC DIRECTORY SERVICE (EDS) FEATURE DEFINITION

*2. FEATURE EDSDIR 3. REMARKS _____

FEATURE OPTIONS

4. DIR QRY DISP Y
5. AUTO CALL Y
6. DISP PRIM CLG NAME Y
7. DISP SHRD CLG NAME N

DEFAULT PARAMETERS

8. EDS GRP _____

Figure 2 SAMPLE EDSFD FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 4B: 5961-2 RECORD
EDS (ELECTRONIC DIRECTORY SERVICE)
GROUP PARAMETERS FORM - EDSGP

1. GENERAL

The 5961-2 Record is available with 5E4(2) and later Software Releases. It is used to define the group information associated with the EDS (Electronic Directory Service) feature.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.38.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * EDS GRP

Description: Enter the name of the EDS group. There are no restrictions on the valid characters.

Required Field.
Valid Entries: 1 - 8 characters

2.3 # BCID

Description: Enter a valid Business Customer Identification.

Required Field.
Valid Entries: 1 - 65535

2.4 # AP SITE ID

Description: Enter the Application Processor Site Identification Number associated with this EDS group.

Required Field.
Valid Entries: 1 - 255

Data Rules:

The AP SITE ID must also be assigned on the DSLAP form.

2.5 PASSWORD

Description: Is the Password option assigned? If the Password option is "Y", a password is required to initiate a query.
Default: N
Valid Entries: Y, N

---

edsgp 5ESS Switch _
(5961-2) OFFICE DATA ADMINISTRATION
ELECTRONIC DIRECTORY SERVICE (EDS) GROUP PARAMETERS

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*1. EDS GRP ABC
#2. BCID 00032
#3. AP SITE ID 002
4. PASSWORD Y

Figure 1 SAMPLE EDSGP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4C: 5961-3 RECORD
EDS (ELECTRONIC DIRECTORY SERVICE)
TN PARAMETERS FORM - EDSLPA

1. GENERAL

The 5961-3 Record is available in 5E4(2) and later Software Releases. The EDSLPA form associates a Telephone Number with an EDS (Electronic Directory Service) feature and group. It is used when assigning EDS features to non-Multi-Line Hunt lines if the default parameters of the EDSFD form (5961-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.38.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the EDS group.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

For 5E12 and later, TN/FEATURE combinations on different EDSLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the EDSLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the EDS feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the EDSFD form.

2.4 # EDS GRP

Description: Enter the name of an EDS group of which this line is a member.

Required Field.

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Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be defined on the EDSGP form.

```
edslpa                    5ESS Switch          _
(5961-3)              OFFICE DATA ADMINISTRATION
          ELECTRONIC DIRECTORY SERVICE (EDS) TN PARAMETERS

*1. TN      5204334
*2. FEATURE EDSDIR
#3. EDS GRP ABC
```

Figure 1 SAMPLE EDSLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
edslpa                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5961-3)      ELECTRONIC DIRECTORY SERVICES (EDS) TN PARAMETERS

*1. TN     __________
*2. FEATURE _________
#3. EDS GRP _________
```

Figure 2 SAMPLE EDSLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 4D: 5961-4 RECORD
EDS (ELECTRONIC DIRECTORY SERVICE)
MLHG PARAMETERS FORM - EDSMPA

1. GENERAL

The 5961-4 Record is available in 5E4(2) and later Software Releases. The EDSMPA form associates a Multi-Line Hunt line with an EDS (Electronic Directory Service) feature and group. It is used when assigning EDS features to Multi-Line Hunt lines to assign EDS feature parameters to the lines if the default parameters of the EDSFD form are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.38.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM NBR

Description: Enter the Multi-Line Hunt Group Member Number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

2.4 * FEATURE

Description: Enter the name of the EDS feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the EDSFD form.

2.5 # EDS GRP

Description: Enter the name of an EDS group of which this line is a member.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

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The name entered must be defined on the EDSGP form.

---

edsmpa 5ESS Switch _
(5961-4) OFFICE DATA ADMINISTRATION
ELECTRONIC DIRECTORY SERVICE (EDS) MLHG PARAMETERS

*1. MLHG 0003
*2. TERM NBR 0002
*3. FEATURE EDSDIR
#4. EDS GRP XYZ

Figure 1 SAMPLE EDSMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 4E: 5961-5 RECORD ELECTRONIC DIRECTORY SERVICE MEASUREMENTS FORM - EDSCNT

1. GENERAL

The 5961-5 Record is available in 5E4(2) and later Software Releases. It is used to identify up to twenty-five Electronic Directory Service Groups that are to receive measurement counts.

1.1 Recent Change View

The corresponding Recent Change View for this form is 24.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * KEY

Description: Enter the KEY value which is always 0.

Required Field.
Default: 0
Valid Entries: 0

2.3 EDS GRP LIST

Description: The EDS GRP LIST is a list of up to twenty-five Electronic Directory Service groups that are to receive measurement counts. Enter the names of the EDS groups.
Valid Entries: 1 - 8 characters

Data Rules:

Each EDS GRP entered must be unique and defined on the EDSGP form.

---

edscnt 5ESS Switch _
(5961-5) OFFICE DATA ADMINISTRATION
ELECTRONIC DIRECTORY SERVICE MEASUREMENTS

*1. KEY 0
2. EDS GRP LIST

1. ABC	6. _____	11. _____	16. _____	21. _____
2. XYZ	7. _____	12. _____	17. _____	22. _____
3. MYOWN	8. _____	13. _____	18. _____	23. _____
4. EDS1	9. _____	14. _____	19. _____	24. _____
5. EDS2	10. _____	15. _____	20. _____	25. _____

Figure 1 SAMPLE EDSCNT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5: MESSAGE SERVICE SYSTEM FORMS

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SEC. 5A: 5962-1 RECORD
MESSAGE SERVICE SYSTEM FEATURE DEFINITION FORM - MSFD

1. GENERAL

The 5962-1 Record is available in 5E4(2) and later Software Releases. It is used to define the various combinations of options associated with the MSS (Message Service System).

Each terminal (line) which is to use the MSS feature must be assigned only one MSS feature (defined on the MSFD form (5962-1 Record)) on the appropriate feature assignment form: LINEFA form (5112 Record), CLUSTR form (5600 Record), BFG form (5625 Record), or MLHLNFA form (5113 Record).

For 5E6 and later, up to four Message Service features may be assigned to a line or hunt group member.

When a TN or MLHG member is assigned an MSS feature that has MSG RTRVL DISP, PRINT ON DEMAND, or AUTO CALL set to "Y", or LW CALLING set to "OUT" or "INOUT", then the associated MSS GRP from this or the MSSLPA form must be defined on the MSGP form with a MSG SRV CNTR that is an MLHG. The MLHG must be defined on an MLHG form with a value entered in the AP SITE ID field.

When a TN is assigned more than one MSS feature with an MLHG in the MSG SRV CNTR field of the associated MSGP form, then for those MLHGs with the same AP SITE ID, the SRV ID on the associated MSGP forms must be unique for the TN and AP SITE combination.

1.1 Preconstructed Features

Certain Message Service features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a (/) and the slash may not be used as the first character of any feature other than preconstructed features. A list of preconstructed features is contained in Figure 2.

1.2 Recent Change View

The corresponding Recent Change View for this form is 12.37.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the Message Service Feature Name.

There are no restrictions on the valid characters, except that Feature Names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment as locally necessary.
Valid Entries: up to 32 characters

FEATURE OPTIONS

Section 2.4 - Section 2.12 refer to the feature options. An analog terminal (line) must have AUTO CALL

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and MSG RTRVL DISP set to "N".

2.4 ATT COVERAGE

Description: Is Attendant Call Coverage allowed?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If ATT COVERAGE is "Y" and the FEATURE is assigned to a Multi-Line Hunt line, then the TERM field on the MLHLNFA form (5113 Record) must be 1.

If ATT COVERAGE is "Y", either a Call Forwarding feature must be assigned to the line or MLHG member, or, for 5E8 and later, a LASS feature may be assigned. For 5E6 and later, the Call Forwarding feature must be defined on a CFWFD form (5614-1/2 Record) where the FWD CONDITION is "BUSY", "IDLE", "BOTH", "PRCB", "PBSY", or "PIDL"; if assigned to a line, it may also be "PRCI" or "PRCV". The LASS feature must be defined on an LSCAFD (5975 Record) or LSCFFD form (5976 Record).

2.5 LW CALLING

Description: Enter the type of LWC (Leave Word Calling) allowed.

Required Field.
Default: NONE
Valid Entries:

Valid LW CALLING Entries

Entry	Definition
INOUT	LWC Incoming/Outgoing. Enables messages to be sent and received to/from users within the same business group.
OUT	LWC Outgoing. Enables messages to only be sent within the same business group.
NONE	No LWC.

Data Rules:

If LW CALLING is "INOUT", then AUD MSG WAIT IND or VIS MSG WAIT IND field must be "Y".

If LW CALLING is "OUT" or "INOUT", and this feature is assigned to a line, then the line must be assigned at least one dialed code (on the PDIT (5300-2 Record) and/or IDPDCA form (5601-1/2 Record)) or a Button Feature (on the CFGGRP form (5964 Record)) with ACTION equal to "LWCUSE" and an ACTION equal to "CLWCUSE" and a FEATURE associated with the dialed code on the PDIT/IDPDCA/CFGGRP form equal to this MSS feature or the MSS wild-card feature (/MS*).

For 5E6 and later, if a line or hunt group has more than one Message Service feature assigned, only one of the features may have this field set to "OUT" or "INOUT". The other Message Service features must have "NONE" entered.

If LW CALLING is "INOUT" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

2.6 MSG RTRVL DISP

Description: Is MRD (Message Retrieval Display) allowed?

MRD allows the text to be displayed when messages are retrieved.

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If MSG RTRVL DISP is "Y", then ATT COVERAGE must be "Y" or LW CALLING must be "INOUT".

If MSG RTRVL DISP is "Y" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

If an MLHG/TERM is assigned a Message Service System feature (on an MLHLNFA, BFG, or associated CLUSTR form) with MSG RTRVL DISP set to "Y", then the MLHG/TERM must be defined as CKT MLHG / CKT TERM on a DSLUSR form where DISPLAY is "Y".

If TNs are assigned a Message Service System feature (on a LINEFA form, the BFG form, or an associated CLUSTR form) with MSG RTRVL DISP set to "Y", then:

- for 5E9(1) and later, the TN must be defined on the DSLUSR form as CKT TN and DISPLAY must be "Y".

For 5E6 and later, if "Y" is entered and the associated lines or hunt groups have more than one Message Service feature, each Message Service group must have a unique AP SITE ID. The MLHG assigned to the MSS GRP on the MSGP form is associated with the AP SITE ID on the MLHG form.

2.7 PRNT ON DEMAND

Description: Is POD (Printout on Demand) allowed?

POD allows a printout to be requested of all undelivered messages.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If PRNT ON DEMAND is "Y", and this feature is assigned to a line, then the line must be assigned at least one dialed code (on the PDIT and/or IDPDCA form) or a Button Feature (on the CFGGRP form) with ACTION equal to "PODUSE" and a FEATURE associated with the dialed code on the PDIT/IDPDCA/CFGGRP form equal to this MSS Feature or the MSS wild-card feature (/MS*).

If PRNT ON DEMAND is "Y" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

For 5E6 and later, if "Y" is entered and the associated lines or hunt groups have more than one Message Service feature, each Message Service group must have a unique AP SITE ID. The MLHG assigned to the MSS GRP on the MSGP form is associated with the AP SITE ID on the MLHG form.

2.8 AUD MSG WAIT IND

Description: Is the Audible MWI (Message Waiting Indicator) activated when messages are left?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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If AUD MSG WAIT IND is "Y", then ATT COVERAGE must be "Y" or LW CALLING must be "INOUT".

If AUD MSG WAIT IND is "Y" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

2.9 VIS MSG WAIT IND

Description: Is the Visual MWI (Message Waiting Indicator) activated when messages are left?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If VIS MSG WAIT IND is "Y", then ATT COVERAGE must be "Y" or LW CALLING must be "INOUT".

If VIS MSG WAIT IND is "Y" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

If the VIS MSG WAIT IND is set to "Y" and this feature is assigned to an analog line or MLHG/TERM, then

- an EQDS2P input form(s) must be defined where the sum of the CIRCUITS EQUIPPED is greater than or equal to five for circuit TYPE equal to "LDSU2TX" for a given SM,
- or, for 5E9(2) and later, an EQDSC3 form (5852 Record) must be defined where the sum of the TONE XCVRS is greater than or equal to five for the given SM.

2.10 DEACT MSG WAIT IND

Description: Is the user allowed to deactivate the MWI (Message Waiting Indicator) from their own station set?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If DEACT MSG WAIT IND is "Y", then AUD MSG WAIT IND or VIS MSG WAIT IND must be "Y".

If DEACT MSG WAIT IND is "Y", and this feature is assigned to a line, then the line must be assigned at least one dialed code (on the PDIT and/or IDPDCA form) or a Button Feature (on the CFGGRP form) with ACTION equal to "DCTMWI" and a FEATURE associated with the dialed code on the PDIT/IDPDCA/CFGGRP form equal to this MSS Feature or the MSS wild-card feature (/MS*).

If DEACT MSG WAIT IND is "Y" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

2.11 AUTO CALL

Description: Is Auto Call Set-up allowed?

This feature allows the user to place a call to the caller associated with a message being displayed during message retrieval without dialing the destination telephone number.

Required Field.

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Default: N
Valid Entries: Y, N

Data Rules:

If AUTO CALL is "Y" and the FEATURE is assigned to a Multi-Line Hunt Line, then TERM on the MLHLNFA form must be 1.

If an MLHG/TERM is assigned a Message Service System feature (on an MLHLNFA, BFG, or associated CLUSTR form) with AUTO CALL set to "Y", then the MLHG/TERM must be defined as CKT MLHG/CKT TERM on a DSLUSR form.

If a TN is assigned a Message Service System feature (on a BFG form, LINEFA form, or associated CLUSTR form) with AUTO CALL set to "Y", then the TN must be defined as CKT MLHG/CKT TN on a DSLUSR form.

2.12 MSG WAIT IND SCTY

Description: Is MWI (Message Waiting Indicator) security activated? This field was added as part of the ISVM (Inter-Switch Voice Messaging) feature described in Division 2, Section 1BG. If MSG WAIT IND SCTY is "Y", the MWI request is processed only if the BCID of the VM system matches the BCID of the destination DN of the user requiring the MWI indication. If "N" is entered, no security check is made.

Software Release: 5E7 and later.
Valid Entries: Y, N

Data Rules:

When AUD MSG WAIT IND or VIS MSG WAIT IND is "Y", MSG WAIT IND SCTY must be entered.

When AUD MSG WAIT IND and VIS MSG WAIT IND are "N", MSG WAIT IND SCTY must not be entered.

DEFAULT PARAMETERS

The following field defines the default parameters assigned with the feature to terminals (lines). These parameters will be assigned to the terminal (line) unless they are overridden by entries on MSLPA (5962-3 Record) or MSMPA forms (5962-4 Record).

2.13 MSS GRP

Description: Enter the name of the MSS Group.

The name entered here must be an MSS Group defined on the MSGP form.
Valid Entries: 1 - 8 characters

2.14 EAVM ALW

Description: This field indicates whether Easy Access to Voice Mail is allowed or denied for the particular MSS/ISVM (Message Service System/Interswitch Voice Messaging) feature.

Software Release: 5E15 and later
Default: Y
Valid Entries: Y, N

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BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTION								MISNGD WSACITTY	DEFAULT PARAMETERS	
		ATTCOVERAGE	LCWALLING	MSDGISRPTRVL	PRDNETMAON ND	AUWDAIMTSGIND	VIWSAIMTSGIND	DEWAACITMISNGD	AUTOCALL		MSS GRP	EAVMALW
/MS*	MSS WILD CARD FEATURE	Y	INOUT	Y	Y	Y	Y	Y	Y	Y		
/MSAA	ATND CVRG, AMWI	Y	NONE	N	N	Y	N	N	N	N		
/MSAAD	BASIC-ATTCOV, AMWI, DMWI	Y	NONE	N	N	Y	N	Y	N	Y		
/MSAAM	ATND CVRG, AMWI, MWI DCT	Y	NONE	N	N	Y	N	Y	N	N		
/MSAAVM	ATND CVRG, AMWI, VMWI, MWI DCT	Y	NONE	N	N	Y	Y	Y	N	N		
/MSAIPAD	DELX-ATTCOV, LWCI, POD, AMWI, DMWI	Y	INOUT	N	Y	Y	N	Y	N	Y		
/MSAIPV	DELX-ATTCOV, LWCI, POD, VMWI	Y	INOUT	N	Y	N	Y	N	N	Y		
/MSALL	DELX-ALL OPTIONS, NO AMWI	Y	INOUT	Y	Y	N	Y	Y	Y	Y		
/MSAV	BASIC-ATTCOV, VMWI	Y	NONE	N	N	N	Y	N	N	Y		
/MSAVM	ATND CVRG,	Y	NONE	N		N	Y	Y	N			

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	VMWI, MWI DCT				N					N		
/MSIMPVA	DELX-LWCI, MRD, POD, VMWI, AC	N	INOUT	Y	Y	N	Y	N	Y	Y		
/MSIPAD	DELX-LWCI, POD, AMWI, DMWI	N	INOUT	N	Y	Y	N	Y	N	Y		
/MSIPV	DELX-LWCI, POD, VMWI	N	INOUT	N	Y	N	Y	N	N	Y		
/MSNONE	NO OPTIONS	N	NONE	N	N	N	N	N	N			
/MSO	DELX-LWCO	N	OUT	N	N	N	N	N	N			

Figure 1 PRECONSTRUCTED MSS FEATURES 5E7 AND LATER SOFTWARE RELEASES

---

msfd 5ESS Switch _
(5962-1) OFFICE DATA ADMINISTRATION
MESSAGE SERVICE SYSTEM FEATURE DEFINITION

*2. FEATURE JPGR1 3. REMARKS _____

FEATURE OPTIONS

4. ATT COVERAGE Y 7. PRNT ON DEMAND N 10. DEACT MSG WAIT IND N
5. LW CALLING NONE 8. AUD MSG WAIT IND N 11. AUTO CALL N
6. MSG RTRVL DISP N 9. VIS MSG WAIT IND Y 12. MSG WAIT IND SCTY Y

DEFAULT PARAMETERS

13. MSS GRP ABC

Figure 2 SAMPLE MSFD FORM 5E7 - 5E14 SOFTWARE RELEASES

---

msfd 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5962-1) MESSAGE SERVICE FEATURE DEFINITION

*1. FEATURE _____ FEATURE OPTIONS
3. REMARKS _____ 9. VIS MSG WAIT IND Y
10. DEACT MSG WAIT IND N
FEATURE OPTIONS 11. AUTO CALL N
4. ATT COVERAGE Y 12. MSG WAIT IND SCTY _
5. LW CALLING NONE
6. MSG RTRVL DISP N DEFAULT PARAMETERS
7. PRINT ON DEMAND N 13. MSS GRP _____
8. AUD MSG WAIT IND N 14. EAVM ALW Y

Figure 3 SAMPLE MSFD FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5B: 5962-2 RECORD
MESSAGE SERVICE SYSTEM GROUP PARAMETERS FORM - MSGP

1. GENERAL

The 5962-2 Record is applicable to 5E4(2) and later Software Releases. It is used to define the group information associated with the MSS (Message Service System) feature.

Each terminal (line) which is to use the MSS feature must be assigned an MSS feature name (defined on the MSFD form) on the appropriate feature assignment form, LINEFA or MLHLNFA. In addition, each terminal should be assigned to an MSS Group which may be defined as a default parameter of the MSFD form, or on an individual terminal basis with the MSLPA or MSMPA forms.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.37.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * MSS GRP

Description: Enter the name of the MSS Group. There are no restrictions on valid characters entered. For 5E8 and later, a maximum of 1000 groups can be assigned.
Valid Entries: 1 - 8 characters

2.3 #GRP TYPE

Description: Enter the Message Service Group Type. MSS (Message Service System) defines the group as an intra-switch MSC serving users on the same switch. ISVM (Inter-Switch Voice Messaging) defines the group as in inter-switch MSC serving users on other switches.

Software Release: 5E7 and later.
Required Field.
Default: MSS
Valid Entries:

Valid GRP TYPE Entries

Entry	Definition
MSS	Message Service System
ISVM	Inter-Switch Voice Messaging

Data Rules:

If GRP TYPE is "MSS", then BCID, DELUXE, MSG SRV CNTR, PASSWORD, and SRV ID must all be entered.

If GRP TYPE is "ISVM", then BCID, MSG SRV CNTR, and SRV ID must all be blank and DELUXE and PASSWORD must be "N".

If GRP TYPE is "ISVM", LW CALLING must be "NONE", and MSG RTRVL DISP, PRNT ON DEMAND, and AUTO CALL must all be "N" on the MSFD form for TNs and MLHG/TERM(s) assigned a Message Service System Feature (on the LINE, MLHLNFA, CLUSTR or BFG forms).

2.4 BCID

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Description: Enter a valid Business Customer Identification.

Required Field.
Valid Entries: 1 - 65535

Data Rules:

The BCID defined here must match one of the BCIDs 1 - 6 defined on the MLHG form (5110 Record) and the MSG SRV CNTR field matches the MLHG field on the MLHG form.

2.5 DELUXE

Description: Is Deluxe MSS activated?

Required Field.
Valid Entries: Y, N

Data Rules:

If DELUXE is "Y", then the MSG SRV CNTR field must be an MLHG defined on the MLHG form with an AP SITE ID entered.

For 5E4(2) and later, if the MSG SRV CNTR field on this form is defined as a hunt group on the MLHG form (5110 Record) with an AP SITE ID entered, this field must have a value of "Y". Otherwise, DELUXE must be "N".

2.6 MSG SRV CNTR

Description: Enter a Message Service Center Multi-Line Hunt Group Number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

The MSG SRV CNTR defined here must be an MLHG defined on the MLHG form where BCID matches one of the BCID 1 - 6 fields entered on the MLHG form.

2.7 PASSWORD

Description: Is the Password option assigned? If the Password option is Yes, a password is required to retrieve messages.

Required Field.
Default: N
Valid Entries: Y, N

2.8 SRV ID

Description: Enter the Message Service System that is providing message service for this group when the AP is providing more than one message service. When the AP is providing only one message service, SRV ID is optional.

Software Releases, 5E6 and later
Valid Entries: 1 - 255

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Data Rules:

When multiple message service systems are being assigned to a terminal and the AP SITE IDs are identical, the SRV IDs entered in this field must not be the same.

```
msgp                        5ESS Switch
(5962-2)              OFFICE DATA ADMINISTRATION     _
              MESSAGE SERVICE SYSTEM GROUP PARAMETERS

*1. MSS GRP      MDRGL
#2. GRP TYPE     MSS
 3. BCID         00016
 4. DELUXE       Y
    AP SITE ID
 6. MSG SRV CNTR 0147
 7. PASSWORD     Y
 8. SRV ID       230
```

Figure 1 SAMPLE MSGP FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 5C: 5962-3 RECORD
MESSAGE SERVICE PARAMETER FORM - MSLPA

1. GENERAL

The 5962-3 Record is available with 5E4(2) and later Software Releases. It is used when assigning MSS (Message Service System) features to non-Multi-Line Hunt lines to assign MSS feature parameters to the lines if the default parameters of the MSFD form are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.37.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number of the MSS group.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Non-Data Link Console Line or Attendant Line.
INDIV	Individual Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
ISDN	Digital Subscriber Line associated ISDN (Integrated Service Digital Network) service.
ISATND	ISDN (Integrated Service Digital Network) attendant terminal.

For 5E12 and later, TN/FEATURE combinations on different MSLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the MSLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the MSS feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the MSFD form.

2.4 # MSS GRP

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Description: Enter the name of an MSS group of which this line is a member.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be defined on the MSGP form.

For 5E6 and later, if the associated line has more than one Message Service feature assigned and the AP is providing more than one Message Service, the associated MSGP forms (5962-2 Record) must have unique SRV IDs.

2.5 EAVM ALW

Description: This field indicates whether Easy Access to Voice Mail is allowed or denied for a specific line.

Software Release: 5E15 and later
Default: Y
Valid Entries: Y, N

```
mslpa                    5ESS Switch                _
(5962-3)              OFFICE DATA ADMINISTRATION
                  MESSAGE SERVICE LINE (TN) PARAMETERS

*1. TN      5551000
*2. FEATURE MSALL
#3. MSS GRP ABCD
```

Figure 1 SAMPLE MSLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
mslpa                    5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(5962-3)              MESSAGE SERVICE LINE (TN) PARAMETERS

*1. TN     ___________
*2. FEATURE _________
#3. MSS GRP _________
```

Figure 2 SAMPLE MSLPA FORM 5E12 - 5E14 SOFTWARE RELEASES

```
mslpa                    5ESS Switch                _
                      OFFICE DATA ADMINISTRATION
(5962-3)              MESSAGE SERVICE LINE (TN) PARAMETERS

*1. TN     ___________
*2. FEATURE _________
#3. MSS GRP _________
 4. EAVM ALW Y
```

Figure 3 SAMPLE MSLPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5D: 5962-4 RECORD
MESSAGE SERVICE SYSTEM LINE (MLHG/TERM NBR)
PARAMETER FORM - MSMPA

1. GENERAL

The 5962-4 Record is available with 5E4(2) and later Software Releases. It is used when assigning MSS (Message Service System) features to Multi-Line Hunt lines to assign MSS feature parameters to the lines if the default parameters of the MSFD form are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.37.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM NBR

Description: Enter the Multi-Line Hunt Group Member Number.
Valid Entries: 1 - 2015 and 3001 - 3999 (outdial terminals)

Data Rules:

The associated Class of Service on the LCC form (5306 Record) must be one of the following.

Class of Service	
ATND	50B Nondata Link Console Line or Attendant Line.
INDIV	Individual Line.
4WINDIV	4-Wire Individual Line or 4-Wire Manual PBX.
ISDN	Digital Subscriber Line associated ISDN Service.
ISATND	ISDN (Integrated Service Digital Network) attendant.

2.4 * FEATURE

Description: Enter the name of the MSS feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the MSFD form.

2.5 # MSS GRP

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Description: Enter the name of an MSS group of which this line is a member.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

The name entered must be defined on the MSGP form.

For 5E6 and later, if the associated hunt group has more than one Message Service feature assigned and the AP provides more than one service, the associated MSGP forms (5962-2 Record) must have unique SRV IDs.

2.6 EAVM ALW

Description: This field indicates whether Easy Access to Voice Mail is allowed or denied for a specific Multiline Hunt Group.

Software Release: 5E15 and later
Default: Y
Valid Entries: Y, N

---

msmpa 5ESS Switch _
(5962-4) OFFICE DATA ADMINISTRATION
MESSAGE SERVICE LINE (MLHG/TERM) PARAMETERS

* 1. MLHG 0004
* 2. TERM NBR 0002
* 3. FEATURE MSCALL
# 4. MSS GRP ABC

Figure 1 SAMPLE MSMPA FORM 5E5 - 5E14 SOFTWARE RELEASES

---

msmpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5962-4) MESSAGE SERVICE LINE (MLHG/MEMB) PARAMETERS

*1. MLHG ____
*2. TERM NBR ____
*3. FEATURE _____
#4. MSS GRP _____
5. EAVM ALW Y

Figure 2 SAMPLE MSMPA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 5E: 5962-5 RECORD
MESSAGE SERVICE MEASUREMENTS FORM - MSCNT

1. GENERAL

The 5962-5 Record is available with 5E4(2) and later Software Releases. It is used to identify up to twenty-five Message Service System Groups that are to receive measurement counts.

1.1 Recent Change View

The corresponding Recent Change View for this form is 24.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * KEY

Description: Enter the KEY value 0 which is the default and only value.

Required Field.
Default: 0
Valid Entries: 0

MSS GRP LIST

The MSS GRP LIST is a list of up to twenty-five Message Service groups which are to receive measurement counts.

2.3 MSS GRP

Description: Enter the name of the MSS group.
Valid Entries: 1 - 8 characters

Data Rules:

Each MSS GRP entered must be unique and defined on the MSGP form.

```
mscnt                  5ESS Switch
(5962-5)          OFFICE DATA ADMINISTRATION
                MESSAGE SERVICE MEASUREMENTS

*1. KEY 0
                    2. MS GRP LIST

 1. ABC     6. _____  11. _____  16. _____  21. _____
 2. MS1     7. _____  12. _____  17. _____  22. _____
 3. MS2     8. _____  13. _____  18. _____  23. _____
 4. XYZ     9. _____  14. _____  19. _____  24. _____
 5. _____  10._____  15. _____  20. _____  25. _____
```

Figure 1 SAMPLE MSCNT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5F: 5962-6 RECORD
MESSAGE SERVICE CENTERS MEASUREMENTS FORM - MSCCNT

1. GENERAL

The 5962-6 Record is available with 5E4(2) and later Software Releases. It is used to identify up to twenty-five Message Service Center Multi-Line Hunt Groups that are to receive measurement counts.

1.1 Recent Change View

The corresponding Recent Change View for this form is 24.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * KEY

Description: Enter the KEY value 0 which is the default and only value.

Required Field.
Default: 0
Valid Entries: 0

MS MLHG LIST

The MS MLHG LIST is a list of up to twenty-five Message Service Center Multi-Line Hunt Groups which are to receive measurement counts.

2.3 MS MLHG

Description: Enter a Message Service Center Multi-Line Hunt Group Number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

Each MS MLHG entered must be unique and defined on the MSGP form.

---

msccnt 5ESS Switch _
(5962-6) OFFICE DATA ADMINISTRATION
MESSAGE SERVICE CENTERS MEASUREMENTS

*1. KEY 0
2. MS MLHG LIST

1. 0002	6. ____	11. ____	16. ____	21. ____
2. 0005	7. ____	12. ____	17. ____	22. ____
3. 0020	8. ____	13. ____	18. ____	23. ____
4. ____	9. ____	14. ____	19. ____	24. ____
5. ____	10. ____	15. ____	20. ____	25. ____

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Figure 1 SAMPLE MSCCNT FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 6: DSLAP COMMUNICATIONS DATA FORMS

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SEC. 6A: 5963 RECORD
DSL AP COMMUNICATIONS DATA FORM - DSLAP

1. GENERAL

The 5963 Record is available with 5E4(2) and later Software Releases. It is used to define the data links connecting an AP (Application Processor) and the 5ESS Switch. Each AP is connected to one ISDN SM with DSL data links. If the Application Processor Link Diversification Secured Feature (SFID 103) is purchased, the AP links may terminate to two different ISDN SMs. See Division 2, Section 4A103.

If a DSLAP form is submitted, then the APPLICATION PROCESSOR field on the OFCOPT form (5509 Record) must be "SM" or "AMSM". IDCU does not support AP.

1.1 Recent Change View

The corresponding Recent Change view for this form is 24.7.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * AP SITE ID

Description: Enter an Application Processor Site ID.

This ID uniquely identifies the AP to the switch and is used internally for message routing.
Valid Entries: 1 - 255

Data Rules:

5E8 and later:

If AP SITE ID is defined on a DSLAP form with SEC E911 SITE set to "Y", there must be a second DSLAP form with PRIM E911 SITE set to "Y".

A maximum of 10 AP SITE IDs may be defined for a single SM.

5E10 and later:

No more than 10 DSLAP form entries may be submitted for an SM that is not an SM-2000 (i.e. UNIT TYPE on the EQIM form is not "SM2000".

If UNIT TYPE is "SM2000", no more than 30 DSLAP form entries may be submitted.

5E11 and later:

If UNIT TYPE designates an SM-2000 class processor (i.e., "SM2000", "SM2005", etc.), no more than 30 DSLAP form entries may be submitted.

2.3 # SM

Description: Enter the number of the ISDN Switching Module connected to the Application Processor.

Required Field.
Valid Entries: 1 - 192

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Data Rules:

A maximum of 16 DSL LINKs can be assigned per SM; a maximum of 30 DSL LINKs can be assigned per SM if UNIT TYPE on the EQIM form designates an SM-2000 class processor.

2.4 SEC AP SITE ID

Description: Enter the secondary application processor site ID.

The secondary application processor site ID is used to define backup links to a separate ISDN SM.

Software Release: 5E8 and later
Valid Entries: 1 - 255

Data Rules:

The AP Link Diversification feature is a Secured Feature that must be purchased by the office, and an SFSYS form (5713-1 Record) must have the ACT field for SFID 103 set to "Y" before the SEC AP SITE field is set to "Y". For more information on the AP Link Diversification secured feature, see Division 2, Section 4A103.

SEC AP SITE ID cannot be the same as AP SITE ID.

If SEC AP SITE ID is entered on a DSLAP form, then:

- Neither the AP SITE ID or the SEC AP SITE ID can be entered as a SEC AP SITE ID on any other DSLAP form,
- For 5E8 - 5E9(2), this SEC AP SITE ID must be defined on its own DSLAP form with a different SM value, the same ISVM value, SEC AP SITE ID blank, SEC E911 SITE set to "N", and PRIM E911 SITE set to "N".

  For 5E10 and later, this SEC AP SITE ID must be defined on a second DSLAP form, where this SEC AP SITE ID entry matches the AP SITE ID field on the second DSLAP form. The second form must have a different SM value, SEC AP SITE ID must not be entered, PRIM E911 SITE must be "N", SEC E911 SITE must be "N", and the entries in the ISVM field and the IDDD15 ALW field must match the values on this form.

2.5 # ALARM

Description: Should alarms be activated when the DSL data links between the AP and ISDN SM are out of service?

Required Field.
Default: Y
Valid Entries: Y, N

2.6 PRIM E911 SITE

Description: Is this AP SITE ID for the primary ESA (E911 Service Adjunct)? This field is used to designate a set of links for the primary emergency services adjunct.

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

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Data Rules:

If PRIM E911 SITE is "Y", the AP SITE ID cannot be used for other applications.

When E911 OPTION on the OFCOPT form is "ESA", a DSLAP form must be specified with PRIM E911 SITE set to "Y".

PRIM E911 SITE may be "Y" on only one DSLAP form.

If PRIM E911 SITE is "Y", ALARM should be "Y" and ISVM must be "N".

If PRIM E911 SITE is "Y", then SEC AP SITE ID must not be entered.

If PRIM E911 SITE is "Y", then SEC E911 SITE must be "N".

If PRIM E911 SITE is "Y" on a DSLAP form, then AP SITE ID may not be entered as a SEC AP SITE ID on any other DSLAP form.

2.7 SEC E911 SITE

Description: Is this AP SITE ID a link to the secondary E911 Service Adjunct?

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If SEC E911 SITE is "Y", then SEC AP SITE ID must not be entered.

If SEC E911 SITE is "Y", ISVM must be "N".

If SEC E911 SITE is "Y", ALARM should be "Y".

SEC E911 SITE may be "Y" on only one DSLAP form.

If SEC E911 SITE is "Y" on a DSLAP form, then AP SITE ID may not be entered as a SEC AP SITE ID on any other DSLAP form.

If SEC E911 SITE is "Y", a second DSLAP form must exist with PRIM E911 SITE set to "Y".

When SEC E911 SITE is "Y", the AP SITE ID cannot be used for other applications.

The Dual ESA (Emergency Services Adjunct) feature is a Secured Feature that must be purchased by the office, and an SFSYS form (5713-1 Record) must have the ACT field for SFID 108 set to "Y" before the SEC E911 SITE field is set to "Y".

2.8 ISVM

Description: Is this AP associated with ISVM (Inter-Switch Voice Messaging)? (See Div. 2, Sec. 1BG for ISVM Feature Description).

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

Data Rules:

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If PRIM E911 SITE is "Y", ISVM must be "N".

2.9 RMK

Description: This field may be used for any

descriptive comment.
Valid Entries: 1 - 8 characters

2.10 AP IDX

Description: This field is used by Recent Change as a verify only field.

2.11 IDDD15 ALW

Description: Is 15 Digit International Direct Distance Dialing allowed ? This field is used to indicate which format message (existing or expanded) is used for the MDR (Message Detail Recording) feature. "Y" should be entered if the expanded format should be used. This field supports the 15 Digit IDDD secured feature. For more information on this feature, see Division 2, Section 4A223.

Software Release: 5E10 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "N" if PRIM E911 SITE or SEC E911 SITE is "Y".

For 5E10 and later, this field cannot be "Y" unless the 15 Digit IDDD secured feature has been purchased by the office. Therefore, the SFID 223 ACT field must be set to "Y" on the SFSYS form (5317-1 Record) before "Y" can be entered in this field.

2.12 ALW DUP NXX

Description: This field is used to indicate if the client process on the Switch can accept 7-digit DNs with non-unique NXXs transmitted over the AP link. This field supports the Number Portability - NPA-NXX Growth secured feature, see Division 2, Section 4A198.

When this field is set to "N", the client process will accept 7-digit DNs that will map to the base NPA for that NXX. When this field is set to "Y", DNs with non-unique NXXs will be transmitted over the AP link. In this case, 7-digit DNs are no longer allowed since the client process is unable to determine the correct NXX.

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

LINK DATA

Use the following fields (Section 2.13 - Section 2.19) to describe up to 16 digital data links that connect the AP to the 5ESS Switch. At least one link must be assigned for each AP, but two are recommended for reliability. When a link is assigned to an AP, it cannot be assigned to any other AP; it must not appear on another DSLAP form.

Data Rules:
A maximum of 16 DSL LINKs can be assigned per SM. For 5E10 and later, 30 AP links are allowed on an SM-2000.

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2.13 LCEN

Description: Enter the ISLU LCEN (Line Card Equipment Number) of the DSL.
Valid Entries: 8 digits. See the following table for the LCEN format.

LCEN (LINE CARD EQUIPMENT NUMBER)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Integrated Services Line Unit	ISLU	X	0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

Data Rules:

The SM entered here must match the SM field on this form.

For 5E9(2) and earlier, the value assigned in TERMLIM defines the maximum number of ISDN Terminals that are allowed to be simultaneously active per SM. TERMLIM is a no display field on the EQIM form with a default of 2047. In most cases TERMLIM should be set to this value. The ISDN Terminals are defined as follows:

ISDN Terminal Assignments

Form	SM	Number of Assignments
DSL	OE[1,3]	MTERM defines the quantity of ISDN Terminals per DSL form.
DSLAP	LCEN[1,3]	number of ISDN Terminals is incremented by 1 for each LCEN list element defined.
MISLINK	OE[1,3]	1
OSPSDSL	LCEN[1,3]	1 where SERVICE CLASS is not "XDB"

LCEN values entered on DSLAP forms must be unique.

The LCEN must be assigned to an operational Line Card specified on the ISLULC form (5942 Record) with an EQST (equipment status) of "O" and a LINE CARD TYPE of "PULC", "ULC", or "TLC".

If LCEN is entered, the corresponding ISCN value must be entered.

All of the DSLs (Digital Subscriber Lines) on an SM, where the first four numbers of the OE values (first four digits of the LCEN) match for ISLU and IDCU, (i.e., SM/ISLU for ISLUs or SM/IDCU for IDCU) and have the same D REL PIDB and D TIMESLOT, they must also have the same the fifth and sixth digits of the LCEN (LGC for ISLU and RT for IDCU) SHELF and CHL GRP number (the 1 - 3 digits of the D ISCN).

For 5E9(1) and later, an SLG (Sub Line Group) is a group of no more than 4 LC (Line Cards) per LGC (Line Group Controller).As growth occurs, every (R)ISLU, SLGs must be installed in the order shown in the following table. LGC is the fifth and sixth digit of the LCEN. LINE CARDS are the last two digits of the LCEN

Installation Order for SLG

SLG	LGC	LINE CARDS
0-15	0-15	16, 18, 20, 22
16-31	0-15	08, 10, 12, 14
32-47	0-15	24, 26, 28, 30
48-63	0-15	00, 02, 04, 06

2.14 OE

Description: Equipment type and number.
Valid Entries: This is a two segment field comprised of an equipment type and number.

Valid DSL OE Type Entries

Entry	Definition
E	Software Release: 5E12 and later. The DSL-OE is associated with an Access Interface Unit-ISDN equipment number (AIUEN).
I	Software Release: 5E10 and later.

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	The DSL OE is associated with an 8-digit ISLU or RISLU (LCEN).
K	Software Release: 5E10 and later. The DSL OE is associated with an ISDN ISLU2 line card equipment number (LCKEN).

If OE is "E", Equipment Number consists of:

ACCESS INTERFACE UNIT, TYPE E

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Access Interface Unit	AIU	XXX	000-127
Pack	PACK	XX	00-19
Circuit	CKT	XX	00-15

Data Rules:

When OE is "E":

- the REL PIDB must be 1 - 5.
- each SM/AIU DPIDB time slot may be assigned only once (i.e., D and/or B Channels cannot be assigned to conflicting DPIDB time slots or quarter time slots due to manual (vs ODA) time slot assignments). Note that D channels are allocated to quarter time slots, therefore, up to four unique assignments can be made before a time slot is considered full. (Time slot conflicts are generated by system message "ISDN288a/b/c" which will assist in resolving conflicts.)

If DSL OE Type is set to "I", the 8-digit OE number consists of the following components:

LINE CARD EQUIPMENT NUMBER, TYPE I

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
(Remote) Integrated Services Line Unit	(R)ISLU	X	0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

If DSL OE Type is set to "K", the ISLU2 Equipment Number consists of:

ISLU2 REMOTE TERMINAL NUMBER, TYPE K

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Unit Number	LU	XX	00 - 42
Line Group	LG	XX	00 - 15
Line Board	LBD	X	0 - 7
Line Circuit	LCKT	XX	00 - 07

For 5E11 and later, when OE is entered, a corresponding ISCN value must be entered. (This check only applies to the existing form tuples in Large Terminal Growth whether the AILA (Automatic ISDN Line Assignment) feature is active or not). For more information on this feature, see Division 2, Section 1BO.

The LCEN's assigned on the AMLBDSL, DSLAP or OSPSDSL forms, or DSL OE's on the DSL form or OE's on the MISLINK form can not have their D and/or B Channels assigned to conflicting DPIDB time slots or quarter time slots due to manual (vs ODA) time slot assignments. Each SM/ISLU or SM/IDCU DPIDB time slot may be assigned only once. (Note, D channels are allocated to quarter time slots; therefore up to four unique assignments can be made before a time slot is considered full.

Each SM / SHELF / CHL GRP can use a maximum of 384 LLCBs. (Logical Link Control Blocks) The following applications define the possible LLCB assignments.

LLCB Assignments

Entry	Definition
AMLBDSL	SM is the first three digits of LCEN, SHELF/CHL GRP is the first three digits of ISCN. The count is incremented by 2 for each unique AMLBDSL form where SERVICE CLASS is "XDB" on a corresponding OSPSDSL form.
DSL	SM is the first three digits of OE Number, SHELF/CHL GRP is the first three digits of PPB1 ISCN.

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	The count is incremented by 1 for each PPB1 ISCN defined.
DSL	SM is the first three digits of OE, SHELF/CHL GRP is the first three digits of PPB2 ISCN. The count is incremented by 1 for each PPB2 ISCN defined.
DSL	SM is the first three digits of OE, SHELF/CHL GRP is the first three digits of D ISCN. If a matching DSLUSR form is not found the count is incremented by 1.
DSLAP	Software Release 5E10 and later. SM is the first three digits of OE, SHELF/CHL GRP is the first three digits of ISCN. The count is incremented by 1 for each unique OE/ISCN combination.
DSLUSR	SM is the first three digits of OE, SHELF/CHL GRP is the first three digits of D ISCN on the corresponding DSL form. The count is incremented by 2 for each DSLUSR form where DPKT TN or DPKT MLHG/TERM is entered. The count is incremented by 1 for each DSLUSR form where DPKT TN and DPKT MLHG/TERM are blank.
DSLUSR	SM is the first three digits of OE, SHELF/CHL GRP is the first three digits of ODB ISCN1 and/or ODB ISCN2. The count is incremented by 1 if only ODB ISCN1 is entered. The count is incremented by 2 if both ODB ISCN1 and ODB ISCN2 are entered.
MISLINK	Software Release 5E9(1) and later. SM is the first three digits of OE; SHELF and CHL GRP are the SHELF and CHL GRP fields, respectively. The count is incremented by 1 for each MISLINK form.
OSPSDSL	SM is the first three digits of LCEN, SHELF/CHL GRP is the first three digits of ISCN. The count is incremented by 2 for each unique OSPSDSL form where SERVICE CLASS is "TAOPER" or "DAOPER" and a corresponding AMLBDSL form is defined. Else the count is incremented by 1 for each unique OSPSDSL form.
RTERM	Where RT INTERFACE is "TR303", SM is SM, SHELF/CHL GRP is the first three digits of TMC PRI ISCN, TMC NPRI ISCN, EOC PRI ISCN or EOC NPRI ISCN. The count is incremented by 2 for each TMC PRI ISCN and for each TMC NPRI ISCN entry. The count is incremented by 3 for each EOC PRI ISCN and for each EOC NPRI ISCN entry.
TRUNK	Where TRKCLS equals to "IFOPER", "IFTERM" or "EDSL" on the TKGRP form. SM is the first three digits of DEN or NEN, SHELF/CHL GRP is the first three digits of ISCN. The count is incremented by 1 for each unique TRUNK form.
XAT	SM is the first three digits of OE, SHELF/CHL GRP is the first three digits of ISCN. The count is incremented by 1 for each unique XAT form.

OE Type "I" or "K":
For 5E10 and later, time slots for the DPIDBs, assigned and reserved on an ISLU(2), cannot exceed the maximum number of 32 time slots available for the DPIDB. Timeslots are allocated for DSL D and/or B channels on the OSPSDSL and on the following forms where DSL OE Type is "I" or "K"

- AMLBDSL
- DSL
- DSLAP
- MISLINK

These can also be allocated by the ODA automatic time slotassignment algorithm. Timeslots may also be reserved for On Demand B channel usage on the ODBTS form.

OE Type "I":
When OE Type is "I", the assigned TS may not be equal to the LGC part of the OE or the LGC plus 16.

For 5E10 and later, this data rule applies to an "I" Equipment Type. The ODA automatic time slot assignment algorithm allocates 4 TS to each SM, ISLU (Integrated Services Line Unit), or LGC (Line Group Controller) configuration for each PIDB from the ISLU to the PSU (Packet Switch Unit) as follows:

- for LGCs (digits 5 & 6 of the Equipment Number) numbered between 0 - 7 the time slots are assigned to odd numbered PSU PIDBs and
- for LGCs numbered between 8 - 15 the time slots are assigned to even numbered PSU PIDBs (PIDBs are assigned on the EQISLU form).

For 5E10 and later, an OE with OE Type of "I" must be defined as an equipped and operational U or T card on the ISLULC input form

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OE TYPE "K":
When OE Type is "K", the assigned TS may not be equal to the LG part of the OE or the LG plus 16.

For 5E10 and later an OE with OE Type of "K" must be defined as an equipped and operational U or T Board on the ISLULB input form.

For forms with a "K" OE Type, the ODA automatic time slot assignment algorithm allocates four TS to each SM, ISLU2, or LG configuration for each PIDB from the ISLU2 to the PSU as follows:

- for LGs (digits 6 & 7 of the Equipment Number) numbered between 0 - 7 the time slots are assigned to odd numbered PSU PIDBs and
- for LGs numbered between 8 - 15 the time slots are assigned to even numbered PSU PIDBs (PIDBs are assigned on the EQISLU form).

If the DSL, DSLAP, and MISLINK forms have unassigned D TIMESLOTs and/or B TIMESLOTS, ODA is required to assign these values. The ODA assignment requires that a "K" Type OE Number is assignedto LGs 0 - 7 (Note: the sixth and seventh digit of the Equipment Number is the LG) get time slots on odd numbered EQISLU PIDBs and that LCKENs assigned to LGs 8 - 15 get time slots on even numbered EQISLU PIDBs, each with a PIDB TYPE of "PSU".

2.15 ISCN

Description: Enter the D-channel Integrated Services Channel Number.

Each SM can have up to 5 PSU Shelves. Each Shelf can have up to 16 protocol handlers. Shelves and protocol handlers are defined by the first 3 digits of the ISCN field. Each protocol handler can be assigned up to 32 time slots.
Valid Entries: 6 digits. See the following table for the ISCN format.

ISCN (INTEGRATED SERVICES CHANNEL NUMBER)

Equipment		Format	Valid Entries
Shelf	-	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127

Data Rules:

ISCN values entered on DSLAP forms must be unique. (ISCNs can be defined on the following forms but may not be duplicated:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT

If an SM/ISCNs combination has been assigned, then the corresponding combination of SM, PSU, PSU SHELF and GRP must be entered on the PSUGP form.

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Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form on the same SWITCHING MODULE and having a matching PSU SHELF.

The Shelf in the ISCN field represents the number of the cabinet shelf on which the PSU protocol handler is located. It must correspond to the PSU SHELF on an EQPSU form (5741 Record) that has a SHLF SIDE 0/1 EQST of "O".

The Channel Group is the number of the PSU protocol handler on the shelf. It corresponds to a PROTOCOL HANDLER assigned on an EQPSUPH form (5942 Record) for the corresponding SM and PSU SHELF.

The Channel is the PSU protocol handler member number within the protocol handler.

AMLBDSL, DSL, DSLAP, DSLUSR, ODBRES, OSPSDSL, RTERM, and XAT forms along with all TRUNK forms which have a TRKCLS of "EDSL", "IFTERM", or "IFOPER" defined on the TKGRP form can share an ISCN SHELF and CHL GRP (the first three characters of the ISCN) with ISCNs from other forms from this set in the same SM, but they cannot be mixed with an ISCN SHELF and CHL GRP on a PSISM form or a TRUNK form that has a TRKCLS of "PACKET" or "X75" or "X75P" defined on the TKGRP form.

Each Switching Module can have up to 5 PSU SHELFs. On the EQIM form, when UNIT TYPE is not "SM2000", each PSU SHELF can be assigned up to (32 times X) time slots for the following table ofapplications. (Note: X represents the number of PIDBs, 0 to 4, provisioned per shelf.)

Timeslots Reserved for Applications

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

For 5E10 and later, for the above applications (except the RPA application), each DI (Data Interface) in a SM can have a maximum of 256 nailed-up time slots reserved for the application in the preceding table. These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the following applications. Note that a D channel only takes a quarter of a time slot. This data rule is not executed on an SM-2000, because provisioning of nailed-up time slots is not required on an SM2000.

For 5E11 and later, when the ACT field for FID 695 is set to "Y" on the FOSYS form (5713-2 Record) (i.e., the AILA (Automatic ISDN Line Assignment) feature is active), this field on the corresponding DSLAP form must not be entered. For more information on this feature, see Division 2, Section 1BO.

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When the ACT field for FID 695 is set to "N" (i.e., the AILA (Automatic ISDN Line Assignment) feature is not active), this field on the corresponding DSLAP form must be entered for LINK numbers where LINK OE is entered.

2.16 TS

Description: Enter the D-channel time slot number.
Valid Entries: 0 - 31

Data Rules:

If any of the TS, QTR TS, or REL PIDB fields are entered, all three must be entered.

The TS must not equal the LGC part of the LCEN/LCKEN or the LGC + 16.

When making manual assignments, care must be taken to use assignments as shown in Figure 1, TS Assignments vs LGC Entry and D PIDB Entry. For example, if manual assignments were being made and the REL PIDB selected is 11 and LGC from the OE is 0, then the TS assignment must be 1, 9, 17, or 25. B and/or D channel assignments made manually cannot conflict with the ODA assignment algorithm. The ODA algorithm is allocated 4 time slots per DPIDB per SM/ISLU/LGC. The LGCs 00 thru 07 are allocated time slots on the odd numbered DPIDBs while LGCs 08 thru 15 are allocated time slots on the even numbered DPIDBs. Manual time slot assignments do not have to follow this algorithm. However, if manual assignments are made, they will use one or more time slots. These manual assignments diminish and may conflict with the time slots available for the ODA assignment algorithm. For example, TS 1, 9, 17 and 25 are the 4 time slots that are allocated to ODA for LGC 0 in any ISLU which has a DPIDB 11 assigned. If a manual assignment is made to TS 9 on DPIDB 11 from any LGC in this ISLU there will only be 3 TS left on PIDB 11 for ODA assignments. Of course other odd numbered DPIDBs will have 4 TS for ODA assignments to LGC 0.

2.17 QTR TS

Description: Enter the D-channel quarter time slot number.
Valid Entries: 0 - 3

Data Rules:

If any of the TS, QTR TS, or REL PIDB fields are entered, all three must be entered.

In order to conserve resources, the assignment of QTR TSs must be "packed". That is, all quarter time slots in a time slot must be assigned (if possible) to a TS (Timeslot) before another TS is used. To pack the TS all D-channels on an LGC are candidates for assignments to the same TS. No D-channels can be assigned to a TS to which a D-channel from another LGC has been assigned. The D-channels which are assigned to a TS must all be in the same DSL GROUP. Furthermore, if the PROTOCOL HANDLER TYPE on the EQPSU form (5742 Record) is "PH16", the DSL MEMBERs of this DSL GROUP, when divided by six, must be equal (when dividing, disregard the remainder). For example, ISCNs 106000 through 106005 could be assigned to two TSs in any combination of two and four or three and three. However, ISCN 106006 (the next member of DSL GROUP 06 assigned to PSU SHELF 1) could not be assigned to either of these TSs and neither could any other ISCN be assigned to either of these TSs. If the PROTOCOL HANDLER TYPE is "PH128", the only restriction on the ISCN is that all members assigned to a given TS must be in the same DSL GROUP and have the same PSU SHELF assignment (ISCN [1,3] must be equal).

2.18 REL PIDB

Description: Enter the PIDB (Peripheral Interface Data Bus) number.

Valid REL PIDB Entries

Entry	Description

0 - 11	Software Release 5E11 and earlier: OE types "I" or "K".
1 - 5	Software Release 5E12 and later: OE type "E".

Data Rules:

If any of the TS, QTR TS, or REL PIDB fields are entered, all three must be entered.

The REL PIDB number must be assigned on the EQISLU form (5731 Record) with a PIDB TYPE of "PSU" and a PSU SHELF matching the PSU SHELF entered in the ISCN field.

The D and/or B Channels that are assigned manually (i.e. not assigned by ODA) cannot be assigned to conflicting DPIDB time slots or quarter time slots. Each SM/ISLU or SM/IDCU DPIDB time slot can only be assigned once. (Note, D channels are allocated to quarter time slots, therefore up to four assignments can be made before a time slot is considered full. However, these four assignments must be unique.)

2.19 EXTERNAL NAME

This field is used by Recent Change as a verify only field.

TS	LGC															
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
0				3	5	7	9	11				2	4	6	8	10
1	11				3	5	7	9	10				2	4	6	8
2	9	11				3	4	7	8	10				2	4	6
3	7	9	11				3	5	6	8	10				2	4
4	5	7	9	11				3	4	6	8	10				2
5	3	5	7	9	11				2	4	6	8	10			
6		3	5	7	9	11				2	4	6	8	10		
7			3	5	7	9	11				2	4	6	8	10	
8				3	5	7	9	11				2	4	6	8	10
9	11				3	5	7	9	10				2	4	6	8
10	9	11				3	4	7	8	10				2	4	6
11	7	9	11				3	5	6	8	10				2	4
12	5	7	9	11				3	4	6	8	10				2
13	3	5	7	9	11				2	4	6	8	10			
14		3	5	7	9	11				2	4	6	8	10		
15			3	5	7	9	11				2	4	6	8	10	
16				3	5	7	9	11				2	4	6	8	10
17	11				3	5	7	9	10				2	4	6	8
18	9	11				3	4	7	8	10				2	4	6
19	7	9	11				3	5	6	8	10				2	4
20	5	7	9	11				3	4	6	8	10				2
21	3	5	7	9	11				2	4	6	8	10			
22		3	5	7	9	11				2	4	6	8	10		
23			3	5	7	9	11				2	4	6	8	10	
24				3	5	7	9	11				2	4	6	8	10
25	11				3	5	7	9	10				2	4	6	8
26	9	11				3	4	7	8	10				2	4	6
27	7	9	11				3	5	6	8	10				2	4
28	5	7	9	11				3	4	6	8	10				2
29	3	5	7	9	11				2	4	6	8	10			
30		3	5	7	9	11				2	4	6	8	10		
31			3	5	7	9	11				2	4	6	8	10	

Figure 1 TIMESLOT ASSIGNMENT VS LGC ENTRY AND REL PIDB ENTRY

SCREEN 1 OF 2 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

*1. AP SITE ID 001 4. ALARM Y 7. ISVM N
#2. SM 020 5. PRIM E911 SITE N 8. RMK _____

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3. SEC AP SITE ID ___ 6. SEC E911 SITE N AP IDX

10. LINK DATA (LINK)

LINK NBR	LCEN	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
1	02000010	110100	01	2	03	
2	_____	_____	__	_	__	
3	_____	_____	__	_	__	
4	_____	_____	__	_	__	
5	_____	_____	__	_	__	
6	_____	_____	__	_	__	

SCREEN 2 OF 2 5ESS Switch _
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

10. LINK DATA (LINK)

LINK NBR	LCEN	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
7	_____	_____	__	_	__	
8	_____	_____	__	_	__	
9	_____	_____	__	_	__	
10	_____	_____	__	_	__	
11	_____	_____	__	_	__	
12	_____	_____	__	_	__	
13	_____	_____	__	_	__	
14	_____	_____	__	_	__	
15	_____	_____	__	_	__	
16	_____	_____	__	_	__	

Figure 2 SAMPLE DSLAP FORM 5E9(2) SOFTWARE RELEASE

SCREEN 1 OF 4 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

*1. AP SITE ID ___ 4. ALARM Y 7. ISVM N
#2. SM ___ 5. PRIM E911 SITE N 8. RMK _____
3. SEC AP SITE ID ___ 6. SEC E911 SITE N AP IDX
10. IDDD15 ALW N

11. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
1	_ _____	_____	__	_	__	
2	_ _____	_____	__	_	__	
3	_ _____	_____	__	_	__	
4	_ _____	_____	__	_	__	
5	_ _____	_____	__	_	__	
6	_ _____	_____	__	_	__	

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SCREEN 2 OF 4 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
Enter Y for yes, enter N for no. COMMUNICATIONS DATA

11. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
7	_	_____	____	__	_	__
8	_	_____	____	__	_	__
9	_	_____	____	__	_	__
10	_	_____	____	__	_	__
11	_	_____	____	__	_	__
12	_	_____	____	__	_	__
13	_	_____	____	__	_	__
14	_	_____	____	__	_	__
15	_	_____	____	__	_	__
16	_	_____	____	__	_	__

SCREEN 3 OF 4 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

11. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
17	_	_____	____	__	_	__
18	_	_____	____	__	_	__
19	_	_____	____	__	_	__
20	_	_____	____	__	_	__
21	_	_____	____	__	_	__
22	_	_____	____	__	_	__
23	_	_____	____	__	_	__
24	_	_____	____	__	_	__

SCREEN 4 OF 4 5ESS Switch _
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

11. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
25	_	_____	____	__	_	__
26	_	_____	____	__	_	__
27	_	_____	____	__	_	__
28	_	_____	____	__	_	__
29	_	_____	____	__	_	__
30	_	_____	____	__	_	__

Figure 3 SAMPLE DSLAP FORM 5E10 AND 5E11 SOFTWARE RELEASES

SCREEN 1 OF 4 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

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*1. AP SITE ID ___
#2. SM ___
3. SEC AP SITE ID ___
4. ALARM Y
5. PRIM E911 SITE N
6. SEC E911 SITE N
7. ISVM N
8. RMK _____
AP IDX
10. IDDD15 ALW N
11. ALW DUP NXX N

SCREEN 2 OF 4 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

12. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
1	_	_____	___	__	_	___
2	_	_____	___	__	_	___
3	_	_____	___	__	_	___
4	_	_____	___	__	_	___
5	_	_____	___	__	_	___
6	_	_____	___	__	_	___
7	_	_____	___	__	_	___
8	_	_____	___	__	_	___
9	_	_____	___	__	_	___
10	_	_____	___	__	_	___

SCREEN 3 OF 4 5ESS Switch
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

12. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
11	_	_____	___	__	_	___
12	_	_____	___	__	_	___
13	_	_____	___	__	_	___
14	_	_____	___	__	_	___
15	_	_____	___	__	_	___
16	_	_____	___	__	_	___
17	_	_____	___	__	_	___
18	_	_____	___	__	_	___
19	_	_____	___	__	_	___
20	_	_____	___	__	_	___

SCREEN 4 OF 4 5ESS Switch _
dslap OFFICE DATA ADMINISTRATION
(5963) DSL AP COMMUNICATIONS DATA

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12. LINK DATA (LINK)

LINK NBR	OE	ISCN	TS	QTR TS	REL PIDB	EXTERNAL NAME
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

Figure 4 SAMPLE DSLAP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 7: MULTILINE HUNT GROUP FORMS

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SEC. 7A: 5964 RECORD
CONFIGURATION GROUP DEFINITION FORM - CFGGRP

1. GENERAL

The 5964 Record is available with 5E4(2) and later Software Releases. It is used to assign BRCS (Business and Residence Customer Service) feature actions to CPE (Customer Premises Equipment) user terminal buttons.

This form allows the user to assign BRCS feature actions to a maximum of 2032 buttons. The 2032 buttons are divided into 8 components with 254 buttons in each component. Features are assigned to the 254 buttons in groups of 30.

The features assigned to a feature button must be assigned to the terminal that this Configuration Group is associated with on the appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), CLUSTR (5600 Record) or BFG (5625-1/7 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

This field is used to enter the Base and Control Number and office name on each record.

2.2 * CONFIG GRP

Description: This field is used to enter the name of the configuration group. For 5E5 and later, the configuration group must be assigned on DSLUSR forms (5908 Records) to provide common button features to groups of ISDN terminals.
Valid Entries: 1 - 8 characters

2.3 * CPE COMPONENT

Description: This field is used to enter the component number. The component number identifies a unit which is comprised of a maximum of 254 buttons on a CPE (Customer Premises Equipment) terminal. Please refer to the documentation provided with the CPE to determine the proper component number.
Valid Entries: 0 - 7

2.4 * RANGE

Description: This field is used to enter the range value. The value entered is a number within a 30 button range. The BUTTON fields will then be numbered accordingly. Each form accommodates 30 button assignments within the 254 BUTTONs of a COMPONENT.

For example, if RANGE is any value from 1 to 30, the BUTTON fields will be numbered from 1 to 30. If RANGE is any number between 241 and 254 the BUTTON fields will be numbered from 241 to 254. BUTTON numbers above 254 are illegal.
Valid Entries: 1 - 254

2.5 GRP TYPE

Description: This field indicates whether the Configuration Group is applicable to Standard (Bellcore) BRI users or Custom (AT&T) BRI users.

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Software Release: 5E8 and later
Required Field.
Default: STD
Valid Entries:

Valid GRP TYPE Entries

Entry	Definition
CUSTOM	This configuration is valid only for Custom (AT&T) BRI users.
STD	This configuration is valid only for Standard (Bellcore) BRI users.

Data Rules:

All CFGGRP forms for the same CONFIG GRP must have the same GRP TYPE.

CUSTOM:
If GRP TYPE is "CUSTOM", the CONFIG GRP can be assigned only on DSLUSR forms defined for custom BRI users, where DSL CLS is not set to "STD" on the corresponding DSL form.

STD:
If "STD" is entered, CPE COMPONENT must be 0.

If GRP TYPE is "STD", the CONFIG GRP can be assigned only on DSLUSR forms defined for standard BRI users, where DSL CLS is set to "STD" on the corresponding DSL form; also, CPE COMPONENT on this CFGGRP form must be 0.

For 5E9(2) and later, Feature Button ICOM (Intercom) features may not be assigned to standard BRI users; only Call Appearance ICOM features may be assigned. If GRP TYPE is "STD", features entered in the BUTTON LIST FEATURE field must be defined on a CAICOM form (5984 Record), and not on an ICMFD form (5960-1 Record).

2.6 RMK

Description: This field is used for any descriptive comment.
Valid Entries: 1 - 32 characters

BUTTON LIST

The following fields (Section 2.7 - Section 2.10) comprise the BUTTON LIST. The BUTTON LIST is a list of buttons (from 1 to 254 in groups of 30) to which BRCS FEATURES may be assigned. The ACTION and PARAM values entered will determine the functionality of the button.

2.7 BUTTON

Description: This field is populated automatically depending on the value of RANGE.

2.8 FEATURE

Description: This field is used to enter a BRCS feature name. The FEATURE must be assigned on a feature definition form (e.g., MWFD (5606-1/2 Record), DRFD (5606-1 Record), etc.) with the same FEATURE name.
Valid Entries: 1 - 8 characters

For 5E15 and later, when FEATURE is entered on this form, it must not be defined on the MWFD form (5602 Record) where the appropriate fields on the MWFD form are set as follows:

- FEATURE OPTIONS fields: ACT/INACT OPTION must be set to "ACT1CA", MULTIWAY CONTROL must be set to "NWAY", and AMAC must be set to "USAGE",
- ENTRY POINT fields: FLASH must be set to "Y", IN MIDDLE must be set to "Y", and OFF HOOK must

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be set to "Y", and

- DEFAULT PARAMETER field: N-WAY MAXIMUM must be set to "6".

The feature options on the MWFD form define a USSWC (Usage Sensitive Six-Way Calling) feature which cannot be assigned on this form. USSWC must be assigned on the OFCOPT form (5509 Record). For more information on the USSWC feature, see Division 2, Section 4A553.

2.9 ACTION

Description: This field is used to enter an ACTION code.
Valid Entries: See Figure 1 for valid entries.

Data Rules:

Data rules that apply to specific ACTIONs are included with the ACTION descriptions in Figure 1. FEATURE and PARAM dependencies for ACTION values are shown in Figure 2.

For 5E12 and later, when the CFGGRP forms have an ACTION of "IEHGS" or "IHGS" and the length of PARAM for these BUTTON LIST entries is 3 or 5 digits respectively, the leftmost 3 digits must be an OFFICE CODE defined on the NOC form. When the length of PARAM is 6 or 8 digits respectively, the leftmost 6 digits must be defined as NPA/OFFICE CODE combination on the NOC form.

For 5E12 and later, in addition to previous rule, if there is more than one NOC form with the same value for OFFICE CODE, NPA must be added as the first 3 digits of PARAM (making PARAM 6 or 8 digits).

2.10 PARAM

Description: This field is used to enter a parameter.
Valid Entries:

- For 5E12 and later: 1 - 8 characters (0 - 9, *, #, I, F, O or P)

Data Rules:

PARAM values are required for all of the following ACTIONs except "ACCTUSE":

ACTION	PARAM Values
ACCTUSE	One to four digits. This parameter is optional; it is the dial code that is used to access Account Codes.
AD1USE	One- to four-digit number. First digit in the range 0 - 9, # or *. Digits two to four in the range 0-9. When the first digit is * or #, at least another digit must be entered.
AD2USE	Two- to four-digit number. First digit in the range 0 - 9, # or *. Digits two to four in the range 0-9. When the first digit is * or #, at least two more digits must be entered.
DTPOTSA	One- to four-digit number. First digit in the range 0 - 9, # or *. Digits two to four in the range 0-9. When the first digit is * or #, at least another digit must be entered.
IACOF	01 - 32. This value indicates the IDP alternate code treatment set for the particular dialed code.
IDSS	0. IDSS action must be assigned to Button 1. Buttons 2 to 100 will be built automatically with the IDSS action.
IDTGS	One- to four-digit access code for PFA.
IEHGS	Three-digit office code.
IHGS	Five-digit Hundreds group.
IHOLD	First two digits 00-99 and last digit 0 or 1. The first two digits indicate the amount of time in seconds that a call may remain on hold and the third digit indicates whether this configuration group has Serial Calling. (0 for No, 1 for Yes).
IRLL	Two digit number in the range 00 - 99 indicates the amount of time in seconds that a transferred call may remain unanswered before it will return alerting tone to an ISDN attendant console.
PFUSE	One- to four-digit number. First digit in the range 0-9, # or *. Digits two to four in the range 0-9. When the first digit is * or #, the second digit must be entered.

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For 5E5 and later, for offices in retrofit: for each unique CFG GRP, if an action of "IHGS" or "IEHGS" is entered in the ACTION field, there must exist exactly 100 buttons defined with the ACTION of "IDSS" for the same value of CFG GRP.

For 5E10 and later, when ACTION is "ARSUSE", "ARS1USE" or "ARS2USE" and PARAM is entered, GRP TYPE must be "STD".

For 5E10 and later, when ACTION is "ATHUSE" and PARAM is entered, GRP TYPE must be "STD".

Valid ACTION Entries

Entry	Definition
AATOG	Software Release: 5E9(1) and later. Auto Answer On/Off via toggle feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
ACBFBP	Activate/Deactivate/Answer Auto Call-Back. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ACBFBP".
ACCFB	Software Release: 5E5 and later. LASS Automatic Callback deactivation. This feature button allows the user to deactivate the AC (Automatic Callback) feature two ways: The user goes off-hook, receives dial tone, and depresses the feature button; a cancellation announcement is returned and the feature button lamp goes off. The user is on-hook and depresses the feature button; the feature button lamp goes off. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ACCFB".
ACCTUSE	Account code use code.
ACUFB	Software Release: 5E5 and later. LASS Automatic Callback activation. This feature button can be used in two ways: First, to activate the AC (Automatic Callback) feature. The user goes off-hook, receives dial tone, and depresses the feature button; an appropriate response is returned. Possible responses are: Audible alerting - Called party is alerted immediately because the called station is found to be idle. Short-term denial - Reorder tone is given to the user to indicate that network resources are temporarily exhausted or the called party has a feature active that causes the Automatic Callback attempt to be denied (e.g., Call Forwarding Variable). A subsequent attempt by the user to activate the feature may succeed. Long-term denial - An announcement is returned indicating that the Automatic Callback feature is not allowed to the user. Confirmation - An announcement is returned indicating that the Automatic Callback feature has been activated. Second, if the user has one-touch service (ONE TOUCH field on the DSLUSR form (5908 Record) is "Y"), the user may choose to answer the AC ringback while on-hook by depressing this feature button which will activate the speaker-phone. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ACUFB".
AD1CH	Change 1 digit abbreviated dial list.

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AD1USE	Use 1 digit abbreviated dial.
AD2CH	Change 2 digit abbreviated dial list.
AD2USE	Use 2 digit abbreviated dial.
ANSBACK	Software Release: 5E9(1) and later. Call Park Answer Back. This action allows the user to answer back a call from any DN within the same terminal group. For more information on Call Park, see Division 2, Section 4A124, or for National ISDN Call Park (5E12 and later), see Division 2, Section 4A258. Data Rules: For 5E12 and later, before a BUTTON LIST ACTION of "ANSBACK" can be assigned to a GRP TYPE of "STD", the National ISDN Call Park feature must be purchased by the office. An SFSYS form must exist with SFID 258 set to "Y".
ARCFB	Software Release: 5E5 and later. LASS Automatic Recall deactivation. This feature button allows the user to deactivate the AR (Automatic Recall) feature two ways: The user goes off-hook, receives dial tone, and depresses the feature button; a cancellation announcement is returned, and the feature button lamp goes off. The user is on-hook, and depresses the feature button; the feature button lamp goes off. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ARCFB".
ARS1USE	Use ARS Phase II Dial Plan 1.
ARS2USE	Use ARS Phase II Dial Plan 2.
ARSUSE	Use ARS via ODP (Office Dialing Plan).
ARUFB	Software Release: 5E5 and later. Lass Automatic Recall activation. For 5E8 and later, this feature button is available for both Custom and Standard ISDN station sets, but its operation is CPE-dependent. Standard BRI users may apply AR to both voice and data service, while custom users are restricted to voice. One-touch service is not available for Standard BRI users. For 5E7 and earlier, this feature button is available to Custom AT&T BRI users and can be used in three ways. First, to activate the AR (Automatic Recall) feature. The user goes off-hook, receives dial tone, depresses the feature button and an appropriate response is returned. Second, to activate the AR (Automatic Recall) feature; while the user is off-hook and receiving busy tone, the feature button is depressed and an appropriate response is returned. Possible responses are: Audible alerting - Called party is alerted immediately because the called station is found to be idle. Short-term denial - Reorder tone is given to the user to indicate that network resources are temporarily exhausted or the called party has a feature active that causes the Automatic Recall attempt to be denied (e.g., Call Forwarding Variable). A subsequent attempt by the user to activate the feature may succeed. Long-term denial - An announcement is returned indicating that the Automatic Recall feature is not allowed to the user. Confirmation - An announcement is returned indicating that the Automatic Recall feature has been activated. Third, if the user has one-touch service (ONE TOUCH field on the DSLUSR form (5908 Record) is "Y"), the user may choose to answer the AR ringback while on-hook by depressing this feature button which will activate the speaker-phone. Data Rules:

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	No other ACTION field for the same CONFIG GRP can have an entry of "ARUFB".
ATACTMWI	Activate Message Waiting Indicator by attendant. This feature button is used by an MSC (Message Service Center) attendant to activate the MWI (Message Waiting Indicator) at the user's station set. This feature button can be used in two ways: The call has been forwarded to the attendant. The attendant, while active on the call, depresses the button and the MWI is activated at the user's station set which the call was forwarded from. The attendant depresses the feature button, receives stutter dial tone and then dials the number of the telephone the MWI is to be activated on. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ATACTMWI".
ATDCTMWI	Deactivate Message Waiting Indicator by attendant. This feature button works similarly to the "ATACTMWI" action. The attendant, while active on a call with the message service user, can depress this feature button and deactivate the MWI or the attendant can depress this feature button, receive stutter dial tone and then dial the number of the telephone the MWI is to be deactivated on. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ATDCTMWI".
ATFACT	Software Release: 5E8 and later. Used when a DN wants to activate the ISDN ACVT (Attendant Control of Voice Terminals) feature on itself. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ATFACT".
ATFDCT	Software Release: 5E8 and later. Used when a DN wants to deactivate the ISDN ACVT feature on itself. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ATFDCT".
ATGACT	Software Release: 5E8 and later. Used when a DN wants to activate the ISDN ACVT feature for a group of DNs. The ACVT feature assigned must have an associated restriction group defined. A DN can only activate the ACVT feature for the group it belongs to. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ATGACT".
ATGDCT	Software Release: 5E8 and later. Used when a DN wants to deactivate the ISDN ACVT feature for a group of DNs. The ACVT feature assigned must have an associated restriction group defined. A DN can only deactivate the ACVT feature for the group it belongs to. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ATGDCT".
ATHUSE	Authorization code use code dialed.
AUCUSE	Use Auto-Call Set-Up used with Message Service and Electronic Directory Service features. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "AUCUSE".
AWTUSE	Aggregate work time use. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "AWTUSE".
BITOG	Software Release: 5E9(1) and later. Barge-In via toggle feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".

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BNTOG	Activate/Deactivate Call Forward. Data Rules: The FEATURE associated with this feature button must be defined on the CFWFD Form with an ACT TYPE of "CODE" and a DACT TYPE of "CODE".
BPARK	Software Release: 5E9(1) and later. Basic Call Park. This action allows the user active on a call to park the call against the user's DN. For more information on Call Park see Division 2, Section 4A124. When the ACTION is "BPARK", GRP TYPE must be "CUSTOM".
BYGP	Group make busy. This action is used to make all members of an MLHG (Multi-Line Hunt Group) busy. Although a configuration group name with this action may be assigned to all the members of an MLHG the only member that can activate this feature is member number one. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "BYGP".
BYMB	Member make busy. This action is used to make individual members of a hunt group busy. Data Rules: Configuration groups with this action cannot be assigned to terminals of MLHGs with a HUNT type of "ISAT" defined on the MLHGFD form (5604 Record). No other ACTION field for the same CONFIG GRP can have an entry of "BYMB".
BYPO	Position make busy. This action is used with ISDN Attendant Consoles. When the button is depressed, the particular console (position) is made busy. Active calls on the console can be served and calls may be originated from the busy console. Data Rules: Configuration groups with this action can be assigned only to terminals of MLHGs with a HUNT TYPE of "ISAT" defined on the MLHGFD form (5604 Record). No other ACTION field for the same CONFIG GRP can have an entry of "BYPO".
BYRB	Software Release: 5E6 and later. Random make busy. This action is used to make individual members of a hunt group busy. Data Rules: Configuration groups with this action cannot be assigned to terminals of MLHGs with a HUNT TYPE of "ISAT" defined on the MLHGFD form (5604 Record). No other ACTION field for the same CONFIG GRP can have an entry of "BYRB".
CCL	Code calling for call pickup.
CFBN	Software Release: 5E9(1) and later. Call Forwarding Button Action. Data Rules: When the ACTION is "CFBN", GRP TYPE must be "STD"; the corresponding feature must be defined on a CFWFD form with ACT TYPE set to "CDDN", "CDDNC", "CDDNCA", or "CDCA1A", and with DACT TYPE set to "CODE".
CLTOG	Software Release: 5E9(1) and later. Closed On/Off via toggle feature button. For more information on the ACD/BRCS secured feature, see Divison 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
CLWCUSE	Cancel Leave Word Calling. Used with the Message Service feature. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "CLWCUSE".
CNDFBP	Software Release: 5E5 and later. ICLID (Individual Calling Line Identification Calling Number Delivery) activation/ deactivation. This feature button allows the user to activate or deactivate the Calling Number Delivery feature which allows the called party to receive data on an incoming call. The feature button can be used two ways:

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	The user goes off-hook, depresses the feature button and an appropriate display message is returned and the button lamp goes on/off. The user is on-hook, depresses the feature button and the button lamp goes on/off. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "CNDFBP".
CNPUSE	Software Release: 5E10 and later. Per-call Calling Name privacy use and cancel (toggle). This value is used by the I-CNAM (ISDN Calling Name) feature. For more information on this feature, see Division 2, Section 1AM on National ISDN features. Data Rules: This ACTION requires the Display WILDCARD feature.
CONF	Software Release: 5E8 and later. Multiway Conference feature for "STD" DSLs when used with Standard ISDN terminals that do not have functional message capability. Data Rules: When ACTION is "CONF", GRP TYPE must be "STD"; no other ACTION field for the same CONFIG GRP can have an entry of "CONF".
COTFBP	Software Release: 5E5 and later. Customer Originated Trace activation. This feature button allows the user to activate the Customer Originated Trace feature. For the COT feature a display module must be available on the station set (DISPLAY field is "Y" on the DSLUSR form). The feature button allows the user to activate the COT feature two ways: The user goes off-hook, depresses the feature button and an appropriate display message is returned. The user can activate COT while active on the call by depressing the feature button during the call and an appropriate display message is returned. Possible display messages are: Successful Activation - A message is displayed indicating a successful activation of the COT request and provides information on any further action the user should take. Trace not Available - A message is displayed indicating that the call has already been traced or invalid data about the call is stored in the history block (e.g., originating and terminating switches are not connected by CCS7 trunks). Buffer full - A message is displayed indicating that the COT message buffer is full and the user should attempt the trace again later. Short-term denial - A message is displayed indicating that network resources are exhausted. A subsequent attempt by the user to activate the feature may succeed. Feature denial - A message is displayed indicating that the Customer Originated Trace feature is not available to the user. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "COTFBP".
CPNBNFBT	Software Release: 5E6 and later. Activate/deactivate Calling Party Number/Billing Number feature by toggle button. Data Rules: The corresponding FEATURE entry must appear on a CPNBNFD form with ACT and DEACT both set to "CODE". No other ACTION field for the same CONFIG GRP can have an entry of "CPNBNFBT".
CPQ1	Use call pickup feature with queue 1.
CPQ2	Use call pickup feature with queue 2.
CPQ3	Use call pickup feature with queue 3.

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CPQ4	Use call pickup feature with queue 4.
CTT	Software Release: 5E7 and later. Allows the attendant to make a test call from an Analog line that has been assigned an attendant class of service. The test call will verify the operation of the selected trunk member and the switch translations. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "CTT".
CWDLU	Use a dial call waiting feature. For ISDN Attendant Consoles, this action is used to assign the camp-on feature button. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "CWDLU".
CWLMP	Software Release: 5E9(1) and later. Call Waiting Lamp. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
DCDTVM	Software Release: 5E16 and later. DTVM Direct Connect.
DCTMWI	Software Release: 5E6 and later. Deactivate Message Waiting Indicator. Used with the Message Service feature. A feature button with a built-in lamp assigned this action provides the user with a visual indication that a message is waiting. The MWI (Message Waiting Indicator) can be deactivated by depressing this feature button. If an MWI lamp is provided with the particular set, this action may be associated with the lamp but will not provide the ability of depressing the feature button on the previous case to deactivate the MWI. In this case, it may be desirable to provide a dialed code with this action the PDIT form or IDPDCA form to serve this function. Data Rules: For 5E6 and later, if this action is assigned to two or more feature buttons, the wildcard feature may not be used. For 5E7 and later, if the associated feature is an MDS wildcard feature (/MS*), the same ACTION cannot be assigned to any other BUTTON for the given CONFIG GRP. If the feature is not an MDS wildcard feature, the ACTION and FEATURE combination must be unique across all CFGGRP forms for a given CONFIG GRP.
DLVRMSG	Next segment of the message or match.
DNPUSE	Software Release: 5E4(2) and later. Per-call DN privacy on (use). For 5E5 and later, this action is used for per-call TN privacy. This feature button can be used in two ways: The calling party subscribes to all-call privacy which allows the calling party to prevent delivery of their TN to the called party for all calls (PRIVACY field on the LINE, MLHLN or DSLUSR form is "Y"). The calling party can deactivate all-call privacy on a per-call basis (TN PRIVACY field on the DISPFD form is "Y"), allowing the calling TN to be displayed to the called party. To deactivate all-call privacy on a per-call basis, the user goes off-hook, depresses the feature button, receives a confirmation tone, receives dial tone and then dials the TN. The terminal may not subscribe to all-call privacy which allows the TN of the calling party to be delivered to the called party for all calls (PRIVACY field on the LINE, MLHLN or DSLUSR form is "N"). The calling party can activate per-call privacy on a per-call basis (TN PRIVACY field on the DISPFD form is "Y"), not allowing the calling TN to be displayed to the called party. To activate per-call privacy on a per-call basis, the user goes off-hook, depresses the feature button, receives a confirmation tone, receives dial tone and then dials the telephone number.
DPARK	Software Release: 5E9(1) and later. Directed Call Park. This action allows the user active on a call to park the call against the user's DN or to direct the call to be parked against another directory number within the same terminal group. For more information on Call Park, see Division 2, Section 4A124, or for National ISDN Call Park (5E12 and later), see Division 2, Section 4A258. Data Rules: For 5E12 and later, before a BUTTON LIST ACTION of "DPARK" can be assigned to a GRP TYPE of "STD",

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	the National ISDN Call Park feature must be purchased by the office. An SFSYS form must exist with SFID 258 set to "Y".
DPN	Use direct pickup without barge-in.
DPU	Use directed pickup with barge-in. Data Rules: If "DPU" is entered FEATURE must not be the Pickup Originating WILDCARD feature ("/PO*").
DQDUSE	Use Directory Query Display. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "DQDUSE".
DROP	Software Release: 5E8 and later. Multiway Drop feature for "STD" DSLs when used with Standard ISDN terminals that do not have functional message capability. Data Rules: When ACTION is "DROP", GRP TYPE must be "STD"; no other ACTION field for the same CONFIG GRP can have an entry of "DROP".
DTPOTSA	Escape to POTs and give dial tone.
DTVMCF	Software Release: 5E16 and later. DTVM Call Forward.
ECUSE	Software Release: 5E9(1) and later. Event Code via feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
EMUSE	Software Release: 5E9(1) and later. Emergency via dial code or feature button. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
ERCO	Software Release: 5E5 and later. ISDN Executive Ringer Cutoff. This is a secured system optional feature that allows an ISDN keyset user to press a feature button to turn audible ringing on or off for all emergency calls and ring backs from Auto Call Back. When power ringing is turned off by ERCO, a visual alerting at the principal's terminal and the ability to pick up the call will still occur. Data Rules: This feature can only be assigned to an ISDN keyset for a primary shared DN that is assigned on a DSLUSR form (5908 Record). In addition the Configuration Group name defined on this form must be entered in the CONFIG GRP field on the DSLUSR form. No other ACTION field for the same CONFIG GRP can have an entry of "ERCO". ERCO can only be activated when the Secured Feature System Assignment form (5713 Record) indicates that the feature has been purchased.
I1ICOM	ISDN Intercom Group 1 action. This action is related to an entry on an ICMFD form (5960-1 Record) or an ICMLPA form (5960-3 Record) in row one of the GROUP LIST. Data Rules: Terminals assigned this action must have the preconstructed feature /ICM or an equivalent constructed feature assigned on an LINEFA form (5112 Record). No other ACTION field for the same CONFIG GRP can have an entry of "I1ICOM". GRP TYPE must be "CUSTOM."
I2ICOM	ISDN Intercom Group 2 action. This action is related to an entry on an ICMFD or an ICMLPA form in row two of the GROUP LIST. Data Rules:

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	Terminals assigned this action must have the preconstructed feature /ICM or an equivalent constructed feature assigned on an LINEFA form. No other ACTION field for the same CONFIG GRP can have an entry of "I2ICOM". GRP TYPE must be "CUSTOM".
I3ICOM	ISDN Intercom Group 3 action. This action is related to an entry on an ICMFD form (5960-1 Record) or an ICMLPA form (5960-3 Record) in row three of the GROUP LIST. Data Rules: Terminals assigned this action must have the preconstructed feature /ICM or an equivalent constructed feature assigned on an LINEFA form. No other ACTION field for the same CONFIG GRP can have an entry of "I3ICOM". GRP TYPE must be "CUSTOM".
I4ICOM	ISDN Intercom Group 4 action. This action is related to an entry on an ICMFD or an ICMLPA form in row four of the GROUP LIST. Data Rules: Terminals assigned this action must have the preconstructed feature /ICM or an equivalent constructed feature assigned on a LINEFA form. No other ACTION field for the same CONFIG GRP can have an entry of "I4ICOM". GRP TYPE must be "CUSTOM".
IACOF	ISDN Attendant Control of Facility action. The feature button assigned this action can be used by the attendant to activate/deactivate the alternate code treatment set for a particular dialed code defined in the IDP. The parameter associated with this action represents the IDP alternate code treatment set for the particular dialed code. Data Rules: An ACOFRF form (5968 Record) must be entered for each feature button defined with this action. A maximum of 32 feature buttons with this action may be assigned per configuration group.
IASPNORM	Software Release: 5E9(1) and later. Normal dialing plan treatment (IDP). For more information on ASP features, see Division 2, Section 1AP. Data Rules: When ACTION is "IASPNORM", GRPTYPE must be "CUSTOM". For every PARAM on this form where ACTION is "IASPNORM", there must be a corresponding TRIG NBR entered on an NSTRIG form (5324 Record) where APPLICATION is "ASP" and AIN REL is "R0". If CONFIG GRP, CPE COMPONENT, and RANGE appear on this form with a BUTTON LIST having ACTION set to "IASPNORM", the FEATURE for that BUTTON LIST must match FEATURE on an ASPFD form (5632-1 Record). For restricted access, this action can be associated with anyone of the following: ASP wildcard feature (/AO*) ASP preconstructed feature ASP constructed feature For unrestricted access, this action can be associated with IDP wildcard feature (/ID*)
IBSYVFY	ISDN Busy Verify action. This action is used with the ISDN Attendant Console Busy Verification of Directory Numbers and Trunks. Data Rules: The FEATURE associated with this attendant action must be a call pickup originating feature (/CPUVO or an equivalent constructed feature) defined on a PUOFD form (5605-1 Record). In order for the barge-in feature to

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	be implemented, the terminating line/trunk must have a call pickup terminating feature (/CPUIVT for digital. /CPUVT for analog or an equivalent constructed feature defined on PUTFD form (5605-2 Record). No other ACTION field for the same CONFIG GRP can have an entry of "IBSYVFY".
ICANCEL	ISDN MW Cancel Call action. This action enables the attendant to disconnect the last call of an added call. This button when used in conjunction with call splitting allows the attendant to disconnect the called number of a transferred call and be joined with the calling party.
ICONF	ISDN Conference action. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICONF".
ICRBL1	Intercom Calling Restriction Busy Lamp 1. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICRBL1".
ICRBL2	Intercom Calling Restriction Busy Lamp 2. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICRBL2".
ICRBL3	Intercom Calling Restriction Busy Lamp 3. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICRBL3".
ICRBL4	Intercom Calling Restriction Busy Lamp 4. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICRBL4".
ICRBL5	Intercom Calling Restriction Busy Lamp 5. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICRBL5".
ICRBL6	Intercom Calling Restriction Busy Lamp 6. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ICRBL6".
ICTT	Software Releases: 5E4(2) through 5E6. ISDN Call Through Test action.
IDNACT	Activate/deactivate ISDN ACVT (Attendant Control of Voice Terminals) restrictions for an individual terminal (line). Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "IDNACT".
IDSS	ISDN DSS (Direct Station Select) action. When assigning this action, it is only necessary to assign button one. The other 99 buttons will be automatically assigned by ODA. Button one should be assigned only by an initial office. It is not recommended that you assign button one for retrofit offices, because if you assign button one, you must then assign all the other 99 buttons.
IDTGS	ISDN Direct Trunk Group Selection allows the attendant to select an idle member of a trunk group or simulated facility by depressing a single button on the terminal set. The parameter associated with this action represents up to a four-digit PFA dialed code. Depressing this button is the same as dialing an access code. This feature button may be used in conjunction with a feature button assigned an action of "ISCCOF". In this case, the "ISCCOF" feature button would be depressed first and then the IDTGS button which will restrict the use of a particular trunk group/facility. Data Rules: When this action is entered, a corresponding IPFDCA form (5969 Record) must be defined.
IEHGS	ISDN Extended Hundreds Group Select action. This action is used with the DSS (Direct Station Select) module of an ISDN Attendant Console. This action provides extended selection capabilities to the DSS module by allowing the attendant to select up to 10,000 directory numbers. The parameter associated with this action is the NXX and the parameter associated with the buttons assigned the IDSS action in this case will provide both the hundreds group (thousands and hundreds digits) and station (00-99 within the hundreds group) selected. When

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	using the feature button associated with this action, the attendant depresses the button first to select the NXX, next the attendant depresses an IDSS button to select the hundreds group and, finally, the attendant depresses another IDSS button that represents the station to be selected.
IEMEROVR	ISDN Attendant Emergency Override action. The attendant will be able to use the feature button to override terminating restrictions such as Call Forwarding, Series Completion or members of a Multi-Line Hunt Group. Data Rules: The FEATURE associated with this attendant action must be a call pickup originating feature (/CPUEO or an equivalent constructed feature) defined on a PUOFD form. The lines to be overridden must have a call pickup terminating feature (/CPUIEOT for digital, /CPUEOT for analog, or an equivalent constructed feature) defined on a PUTFD form. No other ACTION field for the same CONFIG GRP can have an entry of "IEMEROVR".
IFRLS	ISDN Forced Release Call action. The attendant will be able to use the feature button to tear down a stable call when necessary.
IGACT	Activate/deactivate ISDN ACVT (Attendant Control of Voice Terminals) restrictions for a group of lines. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "IGACT".
IHGS	ISDN Attendant Hundreds Group Select action. The action is used with the DSS (Direct Station Select) module of an ISDN Attendant Console. The parameter associated with this action is the NXX and the thousands and hundreds digits of the hundreds group to be selected. This feature button along with the feature buttons assigned the IDSS action are used to select the desired station (00-99 within the hundreds group). When using the feature button associated with this action, the attendant depresses the button first to select the hundreds group and then depresses an IDSS button to select the station.
IHOLD	ISDN Hold action. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "IHOLD".
IJOIN	ISDN Join Call action. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "IJOIN".
IME	ISDN MW Manual Exclusion action. This action is used with the "IJOIN", "ISPLIT" and "ISTART" actions in order to do attendant call transfer. Manual exclusion is provided for customers that have the automatic bridging transfer option. Manual exclusion allows the attendant to inhibit automatic bridging for one call, therefore, the attendant must manually join the calling and called parties together. When three-way calling with manual bridging is assigned to the ISTART button, then the same multiway feature must be assigned to this button. When automatic bridging is assigned to the ISTART button, then this button must have a manual bridging override assigned. Refer to Figure 2 for the valid combinations between three-way multiway features assigned to the "ISTART" and "IME" ACTIONs. Data Rules: If an ACTION of "IME" is entered, an ACTION of "ISTART" must be defined on this form. No other ACTION field for the same CONFIG GRP can have an entry of "IME".
INIGHT	ISDN Call Forward Night Service action. For the ISDN Attendant Console, the feature button associated with this action provides the Fixed Night Service feature. Data Rules: Member number one of this Multi-Line Hunt (ISAT) Group must have a call forwarding feature (/CFNS or an equivalent constructed feature) defined on the CFWFD form (5614 Record). No other ACTION field for the same CONFIG GRP can have an entry of "INIGHT".
INSUSE	Inspect use. The feature button associated with this action allows the user to display call-related information about any call appearance that has been placed on hold, alerting or active. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "INSUSE".
IRLL	ISDN Release Loop Call action. The attendant uses this feature button to disconnect from a call that has been transferred and to be alerted if the transferred call remains unanswered for a specified amount of time.

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	Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "IRLL".
IRLS	ISDN Release Call action. This action disconnects the attendant from the active call and allows the attendant to be available for another call.
ISCCOF	ISDN SCCOF (Selective Customer Control of Facilities) action. This action allows the attendant to impose and remove an access restriction to trunks/facilities. The ISCCOF button may be used in conjunction with the IDTGS button or dialed code to provide this capability. See the "IDTGS" action for more information. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "ISCCOF".
ISPLIT	ISDN Split Call action. Call splitting allows the attendant to consult privately with a called party or a calling party before transferring a call without the other party hearing the conversation. An "ISPLIT" button assigned to an attendant's terminal will activate a lamp when a call goes on splithold. Two types of call splitting are available: 1-way and 2-way. 1-way call splitting does not allow the attendant to toggle between the two parties. 2-way call splitting allows the attendant to toggle between the called party and calling party without the other party hearing. To transfer a call using 1-way automatic call splitting, the attendant will depress the "ISTART" button and the "ISPLIT" button will light steadily, then the attendant depresses the "IME" button and dials the transfer number. If the station is idle, the calling party is still split from the call until the attendant depresses the "ISPLIT" button. After announcing the call, if the called party wishes to talk to the calling party, the attendant depresses the "IJOIN" button and all three parties are connected. The attendant can the disconnect from the call. 1-way manual call splitting is the same as the 1-way automatic call splitting except the "IME" button does not need to be depressed. Transferring a call using 2-way automatic call splitting is the same as 1-way automatic call splitting except that the attendant has the option of either joining all three parties using the "IJOIN" button or toggling between the parties without joining them together by using the "ISPLIT" button. Data Rules: If an action of "ISPLIT" is entered, an ACTION of "ISTART" must be defined on this form. No other ACTION field for the same CONFIG GRP can have an entry of "ISPLIT".
ISTART	ISDN Start action. This action allows the attendant to originate or transfer calls. When used to originate calls, the attendant will depress the button and an idle call appearance will be selected. This action is used with "IJOIN", "ISPLIT" and "IME" actions in order to do attendant call transfer. Three multiway features may be assigned to the "ISTART" button. Refer to Figure 2 for the "IME" action description for valid combinations of multiway features between the "IME" and "ISTART" actions. Data Rules: If an ACTION of "ISTART" is entered, an ACTION of "IME" must be defined on this form. No other ACTION field for the same CONFIG GRP can have an entry of "ISTART".
LGNTOG	Software Release: 5E9(1) and later. Login via toggle feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
LQxDISP	Display status of a numbered MLHG queue (where x represents 1 through 8; i.e., LQ1DISP ... LQ8DISP) on the DSLQMON form (5904 Record). When a feature button associated with a particular action is pressed, the queue

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	status data associated with that MLHG is displayed. Data Rules: For 5E6 and later, no other ACTION field for the same CONFIG GRP can have an entry of "LQxDISP".
LSP	Loudspeaker paging for call pick up. The paged party may depress a feature button and be connected to the calling party.
LWCUSE	Use Leave Word Calling. The feature button associated with this action allows a message to be left from the calling party for the called party. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "LWCUSE".
MBTOG	Software Release: 5E9(1) and later. Make Busy via toggle feature button. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
METOG	Toggle Manual Exclusion status. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "METOG". For 5E6 and later, if this action is assigned to two or more feature buttons, the wildcard feature may not be used.
MRDUSE	Start/end Message Retrieval Display. Data Rules: For 5E7 and later, if the associated feature is an MDS wildcard feature (/MS*), the same ACTION cannot be assigned to any other BUTTON for the given CONFIG GRP. If the feature is not an MDS wildcard feature, the ACTION and FEATURE combination must be unique across all CFGGRP forms for a given CONFIG GRP.
MWITD	ISDN Terminal Dialed Code. Data Rules: The FEATURE associated with this action must be a multiway feature (/MWI6WC or an equivalent constructed feature) defined on an MWFD form. For 5E8 and later, ACTION may be "MWITD" only when GRP TYPE is "CUSTOM"; the FEATURE on the MWFD form must have DIAL CODE or BUTTON set to "Y".
NNPRV	Software Release 5E10 and later. Calling Name per-call calling number and name private use. This value supports the I-CNAM (ISDN Calling Name) feature. For more information on this feature, see Division 2, Section 1AM on National ISDN features.
NNPUB	Software Release 5E10 and later. Calling number and name public use. This value supports the I-CNAM (ISDN Calling Name) feature. For more information on this feature, see Division 2, Section 1AM on National ISDN features.
NRMLUSE	Set display mode to normal. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "NRMLUSE".
NXTMSG	Next message.
NXTSEG	Next segment of the message.
OASPNORM	Software Release: 5E9(1) and later. Normal dialing plan treatment (ODP). For more information on ASP features, see Division 2, Section 4A126. Data Rules: When ACTION is "OASPNORM", GRPTYPE must be "CUSTOM". For every PARAM on this form where ACTION is "OASPNORM", there must be a corresponding TRIG NBR entered on an NSTRIG form (5324 Record) where APPLICATION is "ASP" and AIN REL is "R0". If CONFIG GRP, CPE COMPONENT, and RANGE appear on this form with a BUTTON LIST having ACTION set to "OASPNORM", the FEATURE for that BUTTON LIST must match FEATURE on an ASPFD form (5632-1 Record). When this feature is provisioned, it can be associated with anyone of the following:

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	ASP wildcard feature (/AO*) ASP preconstructed feature ASP constructed feature
PDTEO	Executive Override Access code.
PDTF	Flash Access code.
PDTFO	Flash Override Access code.
PDTI	Immediate Access code.
PDTP	Priority Access code.
PDTR	Routine Access code.
PFUSE	Use private facilities.
PNTEO	Executive Override precedence code.
PNTF	Flash precedence code.
PNTFO	Flash Override precedence code.
PNTI	Immediate precedence code.
PNTP	Priority precedence code.
PNTR	Routine precedence code.
PODUSE	Print on Demand. Used with the Message Service feature. Data Rules: For 5E6 and later, if this action is assigned to two or more feature buttons the wildcard feature may not be used. For 5E7 and later, if the associated feature is an MDS wildcard feature (/MS*), the same ACTION cannot be assigned to any other BUTTON for the given CONFIG GRP. If the feature is not an MDS wildcard feature, the ACTION and FEATURE combination must be unique across all CFGGRP forms for a given CONFIG GRP.
QCANC	Ringback Queuing Cancel. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCANC".
QCBUSY	Software Release: 5E8 and later. ISAT Queue Busy. ISAT MLHGs with modular queuing may use this action. When the queue for the MLHG is full, the QBUSY lamp is lit on each console having the feature button for the QBUSY lamp. The lamp is extinguished when a queue slot becomes available. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCBUSY".
QCPCWT	Software Release: 5E8 and later. ISAT QUEUE Precedence Call Waiting. ISAT MLHGs with modular queuing may use this action. When one or more calls of priority level higher than routine are in the MLHG queue, the PCWT lamp is lit on each console capable of handling MLPP (Multi-Level Precedence Preemption) and having the feature button for the PCWT lamp. The PCWT lamp is extinguished when no precedence calls higher than routine level remain in the queue for that member. Priority higher than routine is defined as one of the following: executive, priority, immediate, flash, or flash override. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCPCWT".
QCUSE	Calls on queue use. This action is used to display the number of calls in queue. The terminal assigned a feature button with this action must also have an appropriate modular queuing feature and an appropriate display feature in order for this feature button to function properly. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCUSE".
QCW1L	Call Waiting 1st Threshold. The feature button associated with this action will alert the user when a call (or calls) have exceeded the prespecified amount of time in the queue. Data Rules: This threshold value is defined on either a QUFD form (5617-1/2 Records) or a QUGPA form (5617-3/4 Records) in the first row of the CALL WAITING LAMPS field. This action is not used for ISDN Attendant consoles. No other ACTION field for the same CONFIG GRP can have an entry of "QCW1L".
QCW2L	Call Waiting 2nd Threshold. The feature button associated with this action will alert the user when a call (or calls) have exceeded the prespecified amount of time in the queue.

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	Data Rules: This threshold value is defined on either a QUFD form or a QUGPA form in the second row of the CALL WAITING LAMPS field. This action is not used for ISDN Attendant consoles. No other ACTION field for the same CONFIG GRP can have an entry of "QCW2L".
QCW3L	Call Waiting 3rd Threshold. The feature button associated with this action will alert the user when a call (or calls) have exceeded the prespecified amount of time in the queue. Data Rules: This threshold value is defined on either a QUFD form or a QUGPA form in the third row of the CALL WAITING LAMPS field. This action is not used for ISDN Attendant consoles. No other ACTION field for the same CONFIG GRP can have an entry of "QCW3L".
QCWARN	Software Release: 5E8 and later. ISAT Queue Warning. ISAT MLHGs with modular queuing may use this action. When a predetermined number of calls are queued, the QWARN lamp is lit on each console having the feature button for the QWARN lamp. The lamp is extinguished when the number of calls in the queue falls below this predetermined number. This threshold is defined on the QUFD or QUGPA form as QWARN THRESHOLD. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCWARN".
QCWT	Call Waiting. ISDN Attendant Multi-Line Hunt Groups with modular queuing (for example, the preconstructed feature /QISATCW) may use this action with a lamp on a console, to indicate that calls are in the queue (the lamp will light upon the first call queued). Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCWT".
QCWW	Call Waiting Warning. ISDN Attendant Multi-Line Hunt Groups with modular queuing (for example, the preconstructed feature /QISATCW) may use this action with a lamp on the console, to indicate that the number of calls in the queue has exceeded a prespecified threshold value defined either on a QUFD form or a QUGPA form. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "QCWW".
RTRV	Software Release: 5E9(1) and later. Call Park Retrieve. This action allows the user to answer a call that is parked against the user's DN. For more information on Call Park see Division 2, Section 4A124. Data Rules: When the ACTION is "RTRV", GRP TYPE must be "CUSTOM".
SAUSE	Software Release: 5E9(1) and later. Service Assist via dial code or feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
SCAFB	Software Release: 5E6 and later. Activate/Deactivate LASS Selective Call Acceptance and Computer Access Restriction Feature Button. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "SCAFB".
SCFFB	Software Release: 5E6 and later. Activate/Deactivate LASS Selective Call Forwarding Feature Button. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "SCFFB".
SCRFB	Software Release: 5E6 and later. Activate/Deactivate LASS Selective Call Rejection Feature Button. Data Rules:

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	No other ACTION field for the same CONFIG GRP can have an entry of "SCRFB".
SDAFB	Software Release: 5E6 and later. Activate/Deactivate LASS Selective Distinctive Alert Feature Button. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "SDAFB".
SDNUSE	Invoke a Software Defined Network call. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "SDNUSE".
SEL1XFER	Software Release: 5E8 and later. Transfer to Selective Transfer TN 1 from E911 PSAP (Public Safety Answering Point). Data Rules: When ACTION is "SEL1XFER", GRP TYPE must be "CUSTOM".
SEL2XFER	Software Release: 5E8 and later. Transfer to Selective Transfer TN 2 from E911 PSAP. Data Rules: When ACTION is "SEL2XFER", GRP TYPE must be "CUSTOM".
SEL3XFER	Software Release: 5E8 and later. Transfer to Selective Transfer TN 3 from E911 PSAP. Data Rules: When ACTION is "SEL3XFER", GRP TYPE must be "CUSTOM".
SEL4XFER	Software Release: 5E8 and later. Transfer to Selective Transfer TN 4 from E911 PSAP. Data Rules: When ACTION is "SEL4XFER", GRP TYPE must be "CUSTOM".
SEL5XFER	Software Release: 5E8 and later. Transfer to Selective Transfer TN 5 from E911 PSAP. Data Rules: When ACTION is "SEL5XFER", GRP TYPE must be "CUSTOM".
SEL6XFER	Software Release: 5E8 and later. Transfer to Selective Transfer TN 6 from E911 PSAP. Data Rules: When ACTION is "SEL6XFER", GRP TYPE must be "CUSTOM".
SOTOG	Software Release: 5E9(1) and later. Service Observe via toggle feature button. For more information on the ACD/BRCS secured feature, see Division 2, Section 4A121. Data Rules: This ACTION requires the (/*) NULL FEATURE and it requires that GRP TYPE must be "CUSTOM".
STPH	Stop hunt. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "STPH".
TCUSE	Total calls handled use. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "TCUSE".
TODUSE	Time and date use. The feature button assigned this action, when depressed, will display the time and date in the display component on the user's terminal. An appropriate display feature must be assigned to the terminal. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "TODUSE".

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TOGDCT	Deactivate all CF Features on line. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "TOGDCT".
TRKUSE	ISDN Attendant Trunk Identification action. The attendant uses the feature button associated with this action to identify the trunk group and the member number that the console is currently active on. This may be a public or private trunk group. This information is displayed on the attendant's terminal; therefore, a display feature must be assigned to the terminal. Data Rules: No other ACTION field for the same CONFIG GRP can have an entry of "TRKUSE".
TSM	For 5E12 and later. Telephone Status Monitor and Select (TSM). This enumeration supports the Telephone Status Monitor and Select Feature. This enumeration requires that the null feature (/*) be used. For more information, see Div. 2 Sec. 4A264.
XFER	Software Release: 5E8 and later. Multiway Transfer feature for "STD" DSLs when used with Standard ISDN terminals which do not have functional message capability. Data Rules: When ACTION is "XFER", GRP TYPE must be "STD"; no other ACTION field for the same CONFIG GRP can have an entry of "XFER".

Figure 1 VALID ACTION ENTRIES

ACTION Value Dependencies

Action	Feature	Param Required	Feature Type
AATOG	/*	N	NULL
* ACBFBP	Wildcard Optional	N	ACB
ACCFB	Wildcard Optional	N	AC
ACCTUSE	Wildcard Optional	N	ACCT
ACUFB	Wildcard Optional	N	AC
**** AD1CH	Wildcard Optional	N	IDP (5E5 and earlier) SC (5E6 and later)
**** AD1USE	Wildcard Optional	Y	IDP (5E5 and earlier) SC (5E6 and later)
**** AD2CH	Wildcard Optional	N	IDP (5E5 and earlier) SC (5E6 and later)
**** AD2USE	Wildcard Optional	Y	IDP (5E5 and earlier) SC (5E6 and later)
ANSBACK	No Wildcard	N	PUO
ARCFB	Wildcard Optional	N	AR
ARS1USE		N	ARS
ARS2USE		N	ARS
ARSUSE	Wildcard Optional	N	ARS
ARUFB	Wildcard Optional	N	AR
ASPUSE	/*		NULL (5E8 and earlier)
* ATACTMWI		N	NULL
* ATDCTMWI		N	NULL
ATFACT	Wildcard Optional	N	ACVT
ATFDCT	Wildcard Optional	N	ACVT
ATGACT	Wildcard Optional	N	ACVT
ATGDCT	Wildcard Optional	N	ACVT
ATHUSE	Wildcard Optional	N	ATH
* AUCUSE	/*	N	NULL
* AWTUSE	/*	N	NULL
BITOG	/*	N	NULL
** BNTOG	No Wildcard	N	CFW
BPARK	No Wildcard	N	PUO
* BYGP	Wildcard (/MH*)	N	MLHG
* BYMB	Wildcard (/MH*)	N	MLHG
* BYPO	Wildcard (/MH*)	N	MLHG
* BYRB	Wildcard (/MH*)	N	MLHG
CCL	No Wildcard	N	PUO
CFBN	No Wildcard	N	CF
CLTOG	/*	N	NULL
* CLWCUSE	Wildcard (/MS*)		MDS
CNDFBP	Wildcard Optional	N	LID

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CNPUSE	Display WILDCARD feature	N	NULL
CONF	/*	N	NULL
COTFBP	Wildcard Optional	N	COT
CPNBNFBT	Wildcard (/CP*)		CPNBN
CPQ1		N	PUO
CPQ2	Wildcard Optional	N	PUO
CPQ3		N	PUO
CPQ4		N	PUO
* CTT	Wildcard (/PF*)	N	PFA
* CWDLU	No Wildcard	N	CWT
CWLMP	/*	N	NULL
DCDMCF	No Wildcard	N	MWY
*** DCTMWI	Wildcard (/MS*)		MDS
DLVRMSG			MDS
DNPUSE			DISP
DPARK	No Wildcard	N	PUO
DPN	No Wildcard		
DPU	No Wildcard Cannot be used with PUO feature /PO*	N	PUO
* DQDUSE	Wildcard (/ED*)		EDS
DROP	/*	N	NULL
DTPOTSA			IDP
DTVMCF	No Wildcard	N	MWY
ECUSE	/*	N	NULL
EMUSE	/*	N	NULL
ERCO			NULL
* I1ICOM	Wildcard (/IC*)		ICM
* I2ICOM	Wildcard (/IC*)		ICM
* I3ICOM	Wildcard (/IC*)		ICM
* I4ICOM	Wildcard (/IC*)		ICM
IACOF	No Wildcard		IDP
IASPNORM	ASP wildcard (/AO*) ASP preconstructed feature (e.g., /ASPORIG) ASP constructed originating feature IDP wildcard (/ID*)		ASP/IDP (An ASP feature is not needed on the line for this feature button to operate when the action is associated with the IDP wildcard feature /ID*.)
* IBSYVFY	No Wildcard	N	PUO
ICANCEL			NULL
* ICONF	No Wildcard		MWY
* ICRBL1	/*		NULL
* ICRBL2	/*		NULL
* ICRBL3	/*		NULL
* ICRBL4	/*		NULL
* ICRBL5	/*		NULL
* ICRBL6	/*		NULL
* ICTT			PFA
* IDNACT	Wildcard Optional		ACTR
IDPASP	Wildcard Optional	N	IDP (5E8 and earlier)
IDPPVN	Wildcard Optional	N	IDP (5E8 and earlier)
IDSS		Y	NULL
IDTGS	No Wildcard		PFA
IEHGS	/*		NULL
* IEMEROVR			PUO
IFRLS	/*		NULL
* IGACT	Wildcard Optional	N	ACTR
IHGS			NULL
* IHOLD	/*		NULL
* IJOIN	/*		NULL
* IME	No Wildcard		MWY
* INIGHT	No Wildcard	N	CFW
* INSUSE	Wildcard (/DI*)		DISP
* IRLL			NULL
IRLS			NULL
* ISCCOF	Wildcard (/PF*)		PFA
* ISPLIT	/*	N	NULL
* ISTART	No Wildcard	N	MWY
LGNTOG	/*	N	NULL
LQ1DISP			NULL
LQ2DISP			NULL
LQ3DISP			NULL
LQ4DISP			NULL
LQ5DISP			NULL
LQ6DISP			NULL

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LQ7DISP			NULL
LQ8DISP			NULL
LSP	No Wildcard	N	PUO
* LWCUSE	Wildcard (/MS*)		MDS
MBTOG	/*	N	NULL
* METOG	/*	N	NULL
*** MRDUSE	Wildcard Optional	N	MDS
** MWITD	No Wildcard	N	MWY
* NRMLUSE	/*		NULL
NNPRV	Display WILDCARD feature	N	NULL
NNPUB	Display WILDCARD feature	N	NULL
NXTMSG	/*		NULL
NXTSEG	/*		NULL
OASPNORM	ASP wildcard (/AO*) ASP preconstructed feature (e.g., /ASPORIG) ASP constructed originating feature		ASP
PDTEO	Wildcard Optional		PP
PDTF	Wildcard Optional		PP
PDTFO	Wildcard Optional		PP
PDTI	Wildcard Optional		PP
PDTP	Wildcard Optional		PP
PDTR	Wildcard Optional		PP
PFUSE	No Wildcard		PFA
PNTEO	Wildcard Optional		PP
PNTF	Wildcard Optional		PP
PNTFO	Wildcard Optional		PP
PNTI	Wildcard Optional		PP
PNTP	Wildcard Optional		PP
PNTR	Wildcard Optional		PP
*** PODUSE	Wildcard Optional	N	MDS
PVNUSE	/*		NULL (5E8 and earlier)
* QCANC	Wildcard (/QU*)		QU
* QCBUSY	Wildcard (/QU*)	N	QU
* QCPCWT	Wildcard (/QU*)	N	QU
* QCUSE	/*	N	NULL
* QCW1L	Wildcard (/QU*)		QU
* QCW2L	Wildcard (/QU*)		QU
* QCW3L	Wildcard (/QU*)		QU
* QCWARN	Wildcard (/QU*)	N	QU
* QCWT	Wildcard (/QU*)		QU
* QCWW	Wildcard (/QU*)		QU
RTRV	No Wildcard	N	PUO
SAUSE	/*	N	NULL
* SCAFB	Wildcard (/SA*)		SCA/CAR
* SCFFB	Wildcard (/SF*)		SCF
* SCRFB	Wildcard (/SJ*)		SCR
* SDAFB	Wildcard (/SD*)		SDA
* SDNUSE	/*		NULL
SOTOG	/*	N	NULL
* STPH	Wildcard (/MH*)		MLHG
* TCUSE	/*	N	NULL
* TODUSE	Wildcard (/DI*)		DISP
* TOGDCT	Wildcard (/CF*)		CFW
* TRKUSE	/*	N	NULL
XFER	/*	N	NULL

Notes:"*, -" CONFIG GRP and ACTION must be unique.
"**,-" CONFIG GRP, ACTION and FEATURE must be unique.
"***, -" With 5E6 and later Software Releases, the FEATURE cannot be a wildcard when two or more of these ACTIONs appear within a CONFIG GRP.

Figure 2 ACTION VALUE DEPENDENCIES

Multiway Feature Combinations

Start Button (ISTART)	MANEX Button (IME)	Join Button (IJOIN)	Description
/MWIA3WC	/MWIA3WC	NO	One-Way Call Splitting with Manual Bridging
/MWIAA3W	/MWIA3WC	NO	One-Way Call Splitting with Auto Bridging
/MWIAHA3	/MWIAHA3	YES	Two-Way Call Splitting with Manual Bridging
/MWIAA3W	/MWIAHA3	YES	Two-Way Call Splitting with Auto Bridging

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Figure 3 MULTIWAY FEATURE COMBINATIONS

cfggrp 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5964) CONFIGURATION GROUP DEFINITION

*1. CONFIG GRP _____ 5. RMK _____
*2. CPE COMPONENT _
*3. RANGE _____
4. GRP TYPE STD

6. BUTTON LIST

ROW	BUTTON	FEATURE	ACTION	PARAM	ROW	BUTTON	FEATURE	ACTION	PARAM
1	___	_____	_____	_____	6	___	_____	_____	_____
2	___	_____	_____	_____	7	___	_____	_____	_____
3	___	_____	_____	_____	8	___	_____	_____	_____
4	___	_____	_____	_____	9	___	_____	_____	_____
5	___	_____	_____	_____	10	___	_____	_____	_____

cfggrp 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5964) CONFIGURATION GROUP DEFINITION

6. BUTTON LIST

ROW	BUTTON	FEATURE	ACTION	PARAM	ROW	BUTTON	FEATURE	ACTION	PARAM
11	11	_____	_____	_____	21	21	_____	_____	_____
12	12	_____	_____	_____	22	22	_____	_____	_____
13	13	_____	_____	_____	23	23	_____	_____	_____
14	14	_____	_____	_____	24	24	_____	_____	_____
15	15	_____	_____	_____	25	25	_____	_____	_____
16	16	_____	_____	_____	26	26	_____	_____	_____
17	17	_____	_____	_____	27	27	_____	_____	_____
18	18	_____	_____	_____	28	28	_____	_____	_____
19	19	_____	_____	_____	29	29	_____	_____	_____
20	20	_____	_____	_____	30	30	_____	_____	_____

Figure 4 SAMPLE CFGGRP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 8: DISPLAY AND PRIVACY FORMS

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SEC. 8A: 5965 RECORD
DISPLAY AND PRIVACY FEATURE DEFINITION FORM - DISPFD

1. GENERAL

The 5965 Record is available with 5E4(2) and later Software Releases, and allows the calling or called number and the time and date to be displayed at an ISDN station set. This feature pertains only to calls which originate or terminate on the same switch.

With the 5E5 and later Software Releases, this feature expanded to analog lines with special Customer Premises Equipment to display the calling directory number and to inter-switch calls with use of the CCS7 signaling network.

With 5E9(1) and later when the MLHG/TERM(s) on an MLHLN form or CKT MLHG/TERM(s) on a DSLUSR form are assigned a Display feature (as defined on the DISPFD form) on either the MLHLNFA, BFG or an associated CLUSTR form, the MLHG/TERM or CKT MLHG/TERM must also be defined on the MLHLN or DSLUSR form with a CKT LCC/RAX value that corresponds to the following CLASS OF SERVICE on the LCC form:

"ATND", "B911", "LTPCLBCK", "CHGCALL", "COIN", "4WINDIV", "HOTMOTL", "HOTPBX", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN", "TWOPTY", "2PTY".

1.1 TN Privacy Feature

The TN Privacy feature allows the calling party to control display of TN information at the called party's terminal.

Two types of TN Privacy are possible: all-call and per-call.

All-call privacy prevents the TN information from being displayed to the called party for all calls unless the feature is deactivated on a per-call basis.

Per-call privacy allows the TN information to be displayed unless the TN Privacy feature is activated on a per-call basis.

Only one Display feature name is allowed on a LINEFA (5112 Record), MLHLNFA (5113 Record), BFG (5625 Record), or CLUSTR form (5600 Record).

1.2 Preconstructed Display Features

Certain Display features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/) and the slash may not be used as the first character of any feature name other than preconstructed features. A list of preconstructed Display features is contained in Figure 1.

1.3 CLASS OF SERVICE Assignment

For the 5E5 Software Release, if a TN or an MLHG/TERM defined on a corresponding LINE, MLHLN, or DSLUSR form (5908 Record) is assigned a Display Feature on a LINEFA, MLHLNFA, BFG, or associated CLUSTR form, the TN or MLHG/TERM must have an associated LCC/RAX on the LCC form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV", "PBX", "CHGCALL", "SATSTLN", "CALLBK" or "B911".

For 5E6 and later Software Releases, if a TN or an MLHG/TERM defined on a corresponding LINE, MLHLN, or DSLUSR form (5908 Record) is assigned a Display Feature (as defined by the DISPFD form) on either a LINEFA, MLHLNFA, BFG, or an associated CLUSTR form, the TN or MLHG/TERM must have an associated LCC/RAX on the LCC form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND",

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"ATND", "4WINDIV", "PBX", "CHGCALL", "SATSTLN", "CALLBK" (for 5E6 through 5E8) or "LTPCLBCK" (for 5E9(1) and later), "B911", "COIN", "HOTMOTL", "TWOPTY", or "2PTY".

1.4 Recent Change View

The corresponding Recent Change View for this form is 12.43.

2. FORM AND RECORD ENTRIES

2.1 * FEATURE

Description: Enter the Display Feature name. There are no restrictions on the valid characters except feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.2 REMARKS

Description: Enter a descriptive comment.
Valid Entries: up to 32 characters

FEATURE OPTIONS

Section 2.3 -Section 2.4 refer to the display feature. These are "no change" fields for information only. The customer is not permitted to change them.

2.3 ACT TYPE

Description: This field indicates if the Display feature can be activated by the customer. An entry of "AUTO" means the feature is always active, and the customer is not permitted to activate the feature.
Default: AUTO
Valid Entries: AUTO

2.4 DEACT TYPE

Description: This field indicates if the Display feature can be deactivated by the customer for one call. An entry of "NONE" means the customer is not permitted deactivation.
Default: NONE
Valid Entries: NONE

PRIVACY

Section 2.5 -Section 2.6 refer to the TN Privacy feature.

2.5 TN PRIVACY

Description: Can the calling party control TN privacy on a per-call basis?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E4(2) only, if this field is "Y", and this feature is assigned to a line form (MLHLN, LINE, DSL or

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DSMLHLN), the line must be assigned at least one dialed code (on the PDIT (5300-2 Record) and/or IDPDCA form (5601-1/2 Record)) or a feature button (on the CFGGRP form (5964 Record)) with an ACTION of "DNPUSE" and/or "DNPCAN". The action performed by the dialed code or feature button is determined as follows:

1. If the PRIVACY field on the appropriate line form is "Y" and the dialed code or feature button is defined with an ACTION of "DNPCAN", the calling TN is displayed to the called party on a per-call basis.

2. If the PRIVACY field on the appropriate line form is "N" and the dialed code or feature button is defined with an ACTION of "DNPUSE", the calling TN is not displayed to the called party on a per-call basis.

For 5E5 and later, if this field is "Y", and this feature is assigned to a line form (DSLUSR, LINE or MLHLN), the line must be assigned at least one dialed code (on the PDIT and/or IDPDCA form) or a feature button (on the CFGGRP form) with an ACTION of "DNPUSE". The action performed by the dialed code or feature button is determined as follows:

1. If the PRIVACY field on the appropriate line form is "Y", the calling TN is displayed to the called party on a per-call basis.

2. If the PRIVACY field on the appropriate line form is "N", the calling TN is not displayed to the called party on a per-call basis.

For 5E7 and later Software Releases, if TNs on the LINEFA form have been assigned a display feature (either through LINEFA, BFG, or an associated CLUSTR form(s)) defined on the DISPFD form with TN PRIVACY set to "Y", then there must be a dialed code defined on the IDPDCA or PDIT form with ACTION of "DNPUSE", "CNPUSE", "NNPRV", or "NNPUB".

When the Telephone Numbers (TN) on a LINE form or Circuit Telephone Numbers (CKT TN) on a DSLUSR form are assigned a Per Call Privacy feature on either the LINEFA form, BFG form, or an associated CLUSTR form, and if the PCP feature is defined on a DISPFD form with TN PRIVACY set to "Y", then the TN or CKT TN must also be defined on the LINE form or DSLUSR form with an LCC/RAX value that corresponds to one of the following CLASS OF SERVICEs on the LCC form:

"ATND", "B911", "CALLBK" (for 5E6 through 5E8) or "LTPCLBCK" (for 5E9(1) and later), "B911", "COIN", "CHGCALL", "COIN", "4WINDIV", "HOTMOTL", "HOTPBX", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN", "TWOPTY", "2PTY".

Additionally, the following CLASS OF SERVICEs are valid only when the SFSYS form has SFID 50 set to "S" or (for 5E9(1) and later) has the ACT field for SFID 50 set to "Y":

"CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "TWOPTY", "2PTY".

When the MLHG/TERM(s) on an MLHLN form or CKT MLHG/TERM(s) on a DSLUSR form are assigned to a PCP (Per Call Privacy) feature on the MLHLNFA form, BFG form or an associated CLUSTR form, and if the PCP feature is defined on a DISPFD form with TN PRIVACY set to "Y", then the MLHG/TERM or CKT MLHG/TERM must also be defined on the MLHLN or DSLUSR form with an LCC/RAX value that corresponds to the following CLASS OF SERVICE on the LCC form:

"ATND", "B911", "CALLBK", "CHGCALL", "COIN", "4WINDIV", "HOTMOTL", "HOTPBX", "INDIV", "ISATND", "ISDN", "PBX", "SATSTLN", "TWOPTY", "2PTY".

Additionally, the following CLASS OF SERVICEs are valid only when the SFSYS form has SFID 50 set to "S":

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"CHGCALL", "COIN", "HOTMOTL", "HOTPBX", "TWOPTY", "2PTY".

2.6 AMA REC

Description: Will billing be usage-sensitive and an AMA record be created?

The billing can be done according to how the subscribing user prefers to be billed or how the Telephone Company decides to bill if the Display feature is generally available.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries:

Valid AMA REC Entries

Entry	Definition
Y	Billing will be usage-sensitive and an AMA record will be created.
N	Billing will be done on a flat-rate basis with no AMA record created.

DISPLAY

Section 2.7 -Section 2.8 refer to the Display feature.

2.7 INSPECT

Description: Can the call information be inspected without answering the call?

INSPECT allows the user to display call information associated with a call appearance placed on hold, alert or active.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E5 and later, TNs and MLHG/TERMs defined on the DSLUSR form (5908-2 Record) and assigned a Display Feature on either a LINEFA, MLHLNFA, BFG, or associated CLUSTR form with this field set to "Y" must have the DISPLAY field set to "Y" on the corresponding DSLUSR form.

For 5E5 and later, if a TN or an MLHG/TERM defined on a corresponding LINE, MLHLN, or DSLUSR form is assigned a Display Feature on a LINEFA, MLHLNFA, BFG, or associated CLUSTR form and this field is set to "Y", the TN or MLHG/TERM must have an associated LCC/RAX on the LCC form with a CLASS OF SERVICE of "ISDN" or "ISATND". In addition, if the CLASS OF SERVICE is "ISDN", the TERM TYPE on the corresponding DSLUSR form must be "TYPEA", "TYPEB", "TYPEC" or "TYPED".

If INSPECT is "Y", and this feature is assigned to a line, the line must be assigned a feature button (on the CFGGRP form) with an ACTION of "INSUSE".

2.8 TIME DATE

Description: Is the time and date allowed to be displayed when a button is pressed?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

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For 5E5 and later, TNs and MLHG/TERMs defined on the DSLUSR form (5908-2 Record) and assigned a Display Feature on either a LINEFA, MLHLNFA, BFG, or associated CLUSTR form with this field set to "Y" must have the DISPLAY field set to "Y" on the corresponding DSLUSR form.

For 5E5 and later, if a TN or an MLHG/TERM defined on a corresponding LINE, MLHLN, or DSLUSR form is assigned a Display Feature on a LINEFA, MLHLNFA, BFG, or associated CLUSTR form and this field is set to "Y", the TN or MLHG/TERM must have an associated LCC/RAX on the LCC form with a CLASS OF SERVICE of "ISDN" or "ISATND". In addition, if the CLASS OF SERVICE is "ISDN", the TERM TYPE on the corresponding DSLUSR form must be "TYPEA", "TYPEB", "TYPEC" or "TYPED".

If TIME DATE is "Y", and this feature is assigned to a line, the line must be assigned a feature button (on the CFGGRP form) with an ACTION of "TODUSE".

2.9 INSPECT AMA

Description: Should the billing for ISDN Inspect be usage sensitive? This field supports the ISDN Inspect feature. For more information on this feature, see Division 2, Section 1BH.

Required Feild

Software Release: 5E11 and later.
Default: Default Value: N
Valid Entries: Y, N

Data Rules:

When LINEFA or MLHLNFA form(s) have an ISDN Inspect feature, as defined on the DISPFD form with INSPECT AMA set to "Y", the LINEFA form(s) must match a DSLUSR form (TN from the LINEFA matches CKT TN from the DSLUSR form) or (MLHG/TERM from the MLHLNFA matches CKT MLHG/CKT TERM from the DSLUSR form) where the DSL CLS on the corresponding DSL form (OE on the DSLUSR form matches DSL OE on the DSL form) is "STD".

- ***NOTE:*** The ISDN Inspect feature can be assigned on either the LINEFA, MLHLNFA, BFG or CLUSTR forms.

ESS 5965(8/96)TG-5 DISPLAY AND PRIVACY DATE _____

FEATURE DEFINITION RECORD

DISPFD 5ESS SWITCH
12.43
BASE _____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS					
		ACT TY PE	DEACT TYP E	PRIVACY		DISPLAY	
				TN PRIVACY	AM A R E C	INSPECT	TIME DAT E
/DI*	WILD CARD FEATURE	AUT O	NONE	N	N	N	N
/DIDLX	DELUXE DISPLAY FEATURE	AUT O	NONE	Y	N	Y	Y
/DIDNP	PER-CALL TN PRIVACY	AUT O	NONE	Y	N	N	N
/DIGA	GENERALLY AVAILABLE	AUT O	NONE	Y	Y	N	N
/DIINSP	INSPECT FEATURE	AUT O	NONE	N	N	Y	N
/DITD	TIME AND DATE FEATURE	AUT	NONE		N	N	Y

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		O		N			

Figure 1 PRECONSTRUCTED DISPLAY AND PRIVACY FEATURES 5E9 THROUGH 5E10 SOFTWARE RELEASES

ESS 5965(8/96)TG-5 DISPLAY AND PRIVACY FEATURE DEFINITION RECORD 5ESS SWITCH DATE _____

DISPFD
12.43
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS						
		ACT TYPE	DEACT TYPE	PRIVACY		DISPLAY		
				TN PRIVACY	AMA REC	INSPECT	TIME DATE	INSPECT AMA
/DISP	WILD CARD FEATURE	AUTO	NONE	N	N	N	N	N
/DIDLX	DELUXE DISPLAY FEATURE	AUTO	NONE	Y	N	Y	Y	N
/DIGA	GENERALLY AVAILABLE	AUTO	NONE	Y	Y	N	N	N
/DIINSP	INSPECT FEATURE	AUTO	NONE	N	N	Y	N	N
/DITD	TIME AND DATE FEATURE	AUTO	NONE	N	N	N	Y	N
/DIINSPA	USAGE SENSITIVE BILLING	AUTO	NONE	N	N	Y	N	Y

Figure 2 PRECONSTRUCTED DISPLAY AND PRIVACY FEATURES 5E11 AND LATER SOFTWARE RELEASES

dispfd 5ESS Switch _
(5965) OFFICE DATA ADMINISTRATION
DISPLAY AND PRIVACY FEATURE DEFINITION

*2. FEATURE DISP1 3. REMARKS _____

FEATURE OPTIONS

4. ACT TYPE AUTO
5. DEACT TYPE NONE

PRIVACY DISPLAY
------- -------
6. TN PRIVACY Y 8. INSPECT N
7. AMA REC Y 9. TIME DATE N

Figure 3 SAMPLE DISPFD FORM 5E9 THROUGH 5E10 SOFTWARE RELEASES

dispfd 5ESS Switch _
(5965) OFFICE DATA ADMINISTRATION
DISPLAY AND PRIVACY FEATURE DEFINITION

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*2. FEATURE _____ 3. REMARKS _____

FEATURE OPTIONS

4. ACT TYPE AUTO
5. DEACT TYPE NONE

PRIVACY DISPLAY
□□□- □□□-
6. TN PRIVACY N 8. INSPECT N
7. AMA REC N 9. TIME DATE N
10. INSPECT AMA N

Figure 4 SAMPLE DISPFD FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 9: LINE IDENTIFICATION FORMS

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SEC. 9A: 5966 RECORD
LINE IDENTIFICATION FEATURE DEFINITION FORM - LIDFD

1. GENERAL

The 5966 Record is available with 5E4(2) and later Software Releases. It is used to allow the calling number to be displayed at an ISDN station set. This feature pertains only to calls which originate or terminate on the same switch.

For 5E5 and later, this feature will be expanded to analog lines and to inter-switch calls with the use of the CCS7 signaling network.

For 5E5 later, TNs and MLHG/TERMs defined on the DSLUSR form (5908-2 Record) and assigned a Line Identification Feature on either a LINEFA form, MLHLNFA form, BFG form or an associated CLUSTR form must have the DISPLAY field set to "Y" on the corresponding DSLUSR form.

For 5E5 and later, if a TN or an MLHG/TERM defined on a corresponding LINE form, MLHLN form or DSLUSR form is assigned a LID (Line Identification Feature) on a LINEFA form, MLHLNFA form, BFG form or an associated CLUSTR form, then the TN or MLHG/TERM must have an associated LCC/RAX on the LCC form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV", "PBX" or "B911".

Only one Line Identification feature name is allowed on a LINEFA form, MLHLNFA form, BFG form or CLUSTR form.

Certain Line Identification features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature name other than preconstructed features. A list of preconstructed Display features is contained in Figure 1.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.44.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * FEATURE

Description: Enter the Line Identification Feature name.

There are no restrictions on valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Software Release: 5E4(2) and later
Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

If a Line Identification Feature is assigned to a TN on the LINEFA form (5112 Record) or an MLHG/TERM on the MLHLNFA form via a BFG form (5625 Record) or an associated CLUSTR form (5600 Record), then the SM(s) from NUMBER on the LINE form (5109 Record) or MLHLN form (5111) must be defined either

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- on an EQDS2P form (5740 Record) with TYPE set to "LDSU2TX"
- or for 5E9(2) and later, on an EQDSC3 form with non-zero TONE XCVRS.

For 5E7 only, TNs may not have the preconstructed features /LIRDAMU, /LIRDNMU, and /LIRMDU, which support the Calling Name Delivery usage sensitive billing option, assigned on either the LINEFA, CLUSTR, or BFG form. These features may only be assigned in 5E8 and later Software Releases.

For 5E6 and later, if TN/SM(s) defined on a LINE input form that are assigned a Line Identification Feature on either a LINEFA form, a BFG form, or an associated CLUSTR form then either

- an EQDS2P input form which has TYPE set to "LDSU2TX" must be defined where the sum of the CIRCUITS EQUIPPED is greater than or equal to five for the given SM
- or for 5E9(2) and later, an EQDSC3 input form(s) must be defined where the sum of the TONE XCVRS is greater than or equal to five for the given SM.

If MLHG/TERM/SM(s) are defined on a MLHLN input form, the MLHG/TERM(s) are assigned a Line Identification Feature on the MLHLNFA, BFG or an associated CLUSTR form, and (for 5E9(2) and later) the corresponding EQIM form has the UNIT TYPE set to a value other than "SM2000", then an EQDS2P input form(s) must be defined where the sum of the CIRCUITS EQUIPPED is greater than or equal to five for the given SM.

For 5E10 and later, if this FEATURE is assigned on a CLUSTER form then, P (autoparm) on the CLUSTR form must be set to "N".

2.3 REMARKS

Description: Enter a descriptive comment of up to 32 characters.

Software Release: 5E4(2) and later
Valid Entries: 1 - 32 characters

2.4 ACT TYPE

Description: This field indicates if the feature can be activated by the customer.

Software Release: 5E4(2) and later
Required Field.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	Customer is not permitted to activate the feature.
CODE	Customer is permitted to activate feature with a dial code.

2.5 DEACT TYPE

Description: This field indicates if the Display feature can be deactivated by the customer for one call.

Software Release: 5E4(2) and later
Required Field.
Default: NONE
Valid Entries:

Valid DEACT TYPE Entries

Entry	Definition

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NONE	Customer is not permitted deactivation.
CODE	Customer is permitted to activate feature with a dial code.

Data Rules:

"NONE" must be entered when ACT TYPE is "AUTO".

"CODE" must be entered when ACT TYPE is "CODE".

2.6 CALL NBR DELIV PRIM

Description: Should incoming call information only be sent to the terminal where the called TN is the primary TN?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "N" if the CALL NBR DELIV ALL field is "Y".

For the 5E4(2) Software Release, TNs must be defined on the DSL form or the DSMLHLN form if they are assigned a LID (Line Identification Feature) on a LINEFA form, BFG form or an associated CLUSTR form and the corresponding LIDFD form (5966 Record) has the CALL NBR DELIV PRIM field set to "Y".

If a TN or an MLHG/TERM is assigned a LID (Line Identification Feature) and an Electronic Directory Service on a LINEFA form, MLHLNFA form, BFG form or an associated CLUSTR form and the corresponding EDSFD form (5961-1 Record) has the DISP SHRD CLG NAME set to "Y", then this field must be set to "N".

If CID CW set to "Y" on the LINE form, the TN must be assigned a Call Waiting Terminating feature (defined on the CWTFD form with INVOCATION set to "TERM"). Also, the TN must be assigned a Line Identification feature on this form with OUTGO CLD LINE ID set to "N" and either CALL NBR DELIV PRIM set to "Y", CALL NBR DELIV ALL set to "Y", or CNAM set to "Y".

2.7 CALL NBR DELIV ALL

Description: Should incoming call information be sent to all terminals which share the called TN?

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

This field must be "N" if the CALL NBR DELIV PRIM field is "Y".

For the 5E4(2) Software Release, if a TN or an MLHG/TERM is assigned a Line Identification Feature on either a LINEFA form, MLHLNFA form, BFG form or an associated CLUSTR form and the CALL NBR DELIV ALL field is set to "Y" on the corresponding LIDFD form, then the TN or MLHG/TERM must be defined on the corresponding LINE form, MLHLN form or DSLUSR form with the SHARED field set to "Y". If SHARED is "N", the value in the CALL NBR DELIV ALL field is ignored.

For 5E5 and later Software Releases, if a TN (defined on the LINE form or DSLUSR form) or an MLHG/TERM (defined on the MLHLN form or DSLUSR form) is assigned a Line Identification Feature on either a LINEFA form, MLHLNFA form, BFG form or an associated CLUSTR form and the CND NBR

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DELIV ALL field is set to "Y" on the corresponding LIDFD form, then the SHARED field must be set to "Y" on the corresponding LINE form, MLHLN form or DSLUSR form.

If a TN or a MLHG/TERM is assigned a LID (Line Identification) feature and an Electronic Directory Service on a LINEFA form, MLHLNFA form, BFG form or an associated CLUSTR form and the corresponding EDSFD form has the DISP PRIM CLG NAME set to "Y", then this field must be set to "N".

If CID CW set to "Y" on the LINE form, the TN must be assigned a Call Waiting Terminating feature (defined on the CWTFD form with INVOCATION set to "TERM". Also, the TN must be assigned a Line Identification feature on this form with OUTGO CLD LINE ID set to "N" and either CALL NBR DELIV PRIM set to "Y", CALL NBR DELIV ALL set to "Y", or CNAM set to "Y".

2.8 OUTGO CLD LINE ID

Description: Is OCLID (Outgoing Called Lined Identification) allowed?

This feature allows the originator of the call to display information about the called party. The information provided consists of the call appearance identifier, called TN, ICI (ISDN Call Identification) and permissions of the called TN.

Software Release: 5E4(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If CID CW set to "Y" on the LINE form, the TN must be assigned a Call Waiting Terminating feature (defined on the CWTFD form with INVOCATION set to "TERM"). Also, the TN must be assigned a Line Identification feature on this form with OUTGO CLD LINE ID set to "N" and either CALL NBR DELIV PRIM set to "Y", CALL NBR DELIV ALL set to "Y", or CNAM set to "Y".

2.9 AMA REC

Description: Will CND billing be done on a usage-sensitive basis? This field indicates the type of billing to be performed. If AMA REC is "Y", CND billing will be done on a usage-sensitive basis with an AMA record created. If AMA REC is "N", CND billing will be done on a flat-rate basis with no AMA record created.

Software Release: 5E5 and later
Required Field.
Default: N
Valid Entries: Y, N

2.10 CNAM

Description: Should the calling name be delivered to the terminating line?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

ACT SFID 40 field (for 5E9(1) and later) must be set to "Y" on the SFSYS form (5713-1 Record) before non-preconstructed features can have the field CNAM set to "Y".

For 5E8 and later, this field must be "Y" if the CNAM AMA field is "Y".

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If CID CW set to "Y" on the LINE form, the TN must be assigned a Call Waiting Terminating feature (defined on the CWTFD form with INVOCATION set to "TERM"). Also, the TN must be assigned a Line Identification feature on this form with OUTGO CLD LINE ID set to "N" and either CALL NBR DELIV PRIM set to "Y", CALL NBR DELIV ALL set to "Y", or CNAM set to "Y".

2.11 CNAM AMA

Description: Will CNAM billing be done on a usage-sensitive basis? This field indicates the type of billing to be performed. If CNAM AMA is "Y", CNAM billing will be done on a usage-sensitive basis with an AMA record created. If CNAM AMA is "N", CNAM billing will be done on a flat-rate basis with no AMA record created.

Software Release: 5E8 and later
Required Field.
Default: N
Valid Entries: Y, N

FEATURE	REMARKS	FEATURE OPTIONS							
		ACTTYPE	DEACTTYPE	CALL NBR DELIV PRIM	CALL NBR DELIV ALL	OUTGO CLD LINE ID	AMAREC	CNAM	CNAMAMA
/LI*	LINE ID WILD-CARD FEATURE	AUTO	NONE	N	N	N	N	N	N
/LICNDA	CALLING NUM DEL ALL TERMS	AUTO	NONE	N	Y	N	N	N	N
/LICNDP	CALLING NUM DEL PRIM TERM ONLY	AUTO	NONE	Y	N	N	N	N	N
/LIDADA	CND ALL TERMINALS ACT & DEACT	CODE	CODE	N	Y	N	Y	N	N
/LIDADAO	ICLID ALL TERMINALS & OCLID	CODE	CODE	N	Y	Y	Y	N	N
/LIDADP	CND PRIMARY TERMINAL ACT & DEACT	CODE	CODE	Y	N	N	Y	N	N
/LIDADPO	ICLID PRIM & OCLID ACT & DEACT	CODE	CODE	Y	N	Y	Y	N	N
/LIDLXA	ICLID ALL TERMS + OCLID	AUTO	NONE	N	Y	Y	N	N	N
/LIDLXP	ICLID PRIM TERM ONLY + OCLID	AUTO	NONE	Y	N	Y	N	N	N
/LIOCLID	OUTGOING CALL ID FEATURE	AUTO	NONE	N	N	Y	N	N	N
/LIRCNMA	NAME; NUM DEL ALL TERMS	AUTO	NONE	N	Y	N	N	Y	N
/LIRCNMP	NAME; NUM DEL PRIM TERM ONLY	AUTO	NONE	Y	N	N	N	Y	N
/LIRDAMU	NAME/NUM, NAME USE SENS, ACT/DCT PRIM	CODE	CODE	N	Y	N	N	Y	Y
/LIRDNMA	NAME; NUM, DISP ACT/DCT - ALL	CODE	CODE	N	Y	N	Y	Y	N
/LIRDNMP	NAME; NUM, DISP ACT/DCT PRIM	CODE	CODE	Y	N	N	Y	Y	N
/LIRDNMU	NAME/NUM, USE SENS, ACT/DCT	CODE	CODE	N	Y	N	Y	Y	Y
/LIRMA	CALLING NAME DELIVERY ONLY	AUTO	NONE	N	N	N	N	Y	N
/LIRMDU	NAME ONLY USE SENS, ACT/DCT	CODE	CODE	N	N	N	N	Y	Y

Figure 1 PRECONSTRUCTED LINE IDENTIFICATION FEATURE DEFINITIONS 5E8 AND LATER

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SOFTWARE RELEASES

```
lidfd                    5ESS Switch
(5966)              OFFICE DATA ADMINISTRATION
              LINE IDENTIFICATION FEATURE DEFINITION

*2. FEATURE LIDORIG              3. REMARKS LID ORIGINATING

                       FEATURE OPTIONS

 4. ACT TYPE           AUTO
 5. DEACT TYPE         NONE
 6. CALL NBR DELIV PRIM Y
 7. CALL NBR DELIV ALL  N
 8. OUTGO CLD LINE ID   Y
 9. AMA REC            Y
10. CNAM               Y
11. CNAM AMA           Y
```

Figure 2 SAMPLE LIDFD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 10: ISDN ATTENDANT CONTROL OF VOICE TERMINALS FORMS

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SEC. 10A: 5967-1 RECORD
ISDN ATTENDANT CONTROL OF VOICE TERMINALS
FEATURE DEFINITION FORM - ACVTFD

1. GENERAL

The 5967-1 Record is applicable to 5E4(2) and later Software Releases. The ACVTFD form is used to define the various combinations of options associated with an ACVT (Attendant Control of Voice Terminals) feature.

The Attendant Control of Voice Terminals feature enables the attendant to place or remove a restriction on a TN or a group of TNs, enables the switch to automatically activate or deactivate a restriction on TNs or group of TNs, and allows screening to determine whether the originator and terminator are allowed to communicate with each other.

The feature can be activated manually or automatically. Manual activation by an attendant can be done through a dialed code (on the PDIT and/or IDPDCA form) or a feature button (on the CFGGRP form) with an ACTION of "IDNACT" for an individual TN or "IGACT" for a group of TNs. Automatic activation can be done for customer-specified telephone numbers and times through the Time of Day feature.

Each terminal (line) which is to use the ACVT feature must be assigned an ACVT feature name (defined on the ACVTFD Form, 5967-1 Record) on the appropriate BFG, LINEFA, MLHLNFA form or associated CLUSTR form. A line may not be assigned more than one ACVT feature.

1.1 Feature Assignment

For 5E6 only, when a TN is assigned an ACVT feature (on the LINEFA, BFG, or associated CLUSTR form), an ATT MLHG must be entered on the LINE or DSLUSR form where the TN is defined as TN or CKT TN.

For 5E6 only, when a member of an MLHG is assigned an ACVT feature (on the MLHLNFA, BFG, or associated CLUSTR form), the ATT MLHG must be entered on either the MLHG form or the MLHLN or DSLUSR form as follows:

- For a "UCD" hunt group:
  - ATT MLHG for Member 0001 may be entered on either the MLHG form or on the MLHLN or DSLUSR form.
  - For all other members, ATT MLHG must be entered on the MLHLN or DSLUSR form.
- For an "HTC", "REG", or "PMHG" hunt group:
  - ATT MLHG for Member 0001 must be entered on the MLHG form.
  - For all other members, ATT MLHG must be entered on the MLHLN or DSLUSR form.

For 5E7 and later, when a TN is assigned an ACVT feature that is defined with CONTROL set to "TERM", an ATT MLHG must be entered on the LINE or DSLUSR form where the TN is defined as TN or CKT TN. The ATT MLHG must be defined on a corresponding MLHG form that has an MLHG FEATURE which in turn is defined on an MLHGFD form that has HUNT TYPE set to "ISAT".

For 5E7 and later, when a member of an MLHG is assigned an ACVT feature that is defined with CONTROL set to "TERM", the ATT MLHG must be entered on either the MLHG form or the MLHLN or DSLUSR form as specified below. Also, the ATT MLHG must be defined on a corresponding MLHG form

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with an MLHG FEATURE defined on an MLHGFD form that has HUNT TYPE set to "ISAT".

- For a "UCD" hunt group:
  - ATT MLHG for Member 0001 may be entered on either the MLHG form or on the MLHLN or DSLUSR form.
  - For all other members, ATT MLHG must be entered on the MLHLN or DSLUSR form.

- For an "HTC", "REG", or "PMHG" hunt group:
  - ATT MLHG for Member 0001 must be entered on the MLHG form.
  - For all other members, ATT MLHG must be entered on the MLHLN or DSLUSR form.

1.2 Preconstructed Features

Certain ACVT features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature other than preconstructed features. A list of the preconstructed ACVT features is contained in Figure 1 .

1.3 Recent Change View

The corresponding Recent Change View for this form is 12.46.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * FEATURE

Description: Enter the Attendant Control of Voice Terminals feature name. Feature name may not start with a slash (/); names starting with a slash are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.7) define the feature options assigned with the feature to terminals (lines).

2.4 # CONTROL

Description: Indicates the controller of the restrictive attendant feature.

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Required Field.
Default: TERM
Valid Entries:

Valid CONTROL Entries

Entry	Definition
ORIG	This entry is used to assign the feature entered in the FEATURE field to an attendant.
TERM	This entry is used to assign the feature entered in the FEATURE field to a non-attendant terminal.

Data Rules:

When CONTROL is set to "ORIG", the following field entries apply:

- ACVT GRP must be blank
- ROUTE INDEX must be blank
- RESTRICT must be "NONE"
- ERROR TYPE must be "TONE"
- ERROR TN must be blank.

Class of Service on the associated LCC form must be set to "ISATND", and an associated CKT TN or CKT MLHG/TERM must be defined on the DSLUSR form.

NOTE: Attendant Controlled Restriction Groups may only be set to "Y" when CONTROL is "ORIG".

When CONTROL is "TERM", the line must have an associated CLASS OF SERVICE on the LCC form of "INDIV", "ISDN" or "4WINDIV".

2.5 AMA CHRG

Description: This field indicates the AMA charging. The default and only value for this field is "FLAT".
Default: FLAT
Valid Entries: FLAT

2.6 ACT TYPE

Description: This field is used to indicate whether or not the Attendant Control feature can be activated by the customer.
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	Automatic activation of feature.
CODE	Dial code activation of feature.

Data Rules:

When ACT TYPE is "AUTO", DEACT TYPE must be "NONE". When ACT TYPE is "CODE", DEACT TYPE must be "CODE" or "AUTO".

If ACT TYPE is "CODE", and the feature is assigned to a line, there must be at least one dialed code defined on either the PDIT form (5300-2 Record) or on the IDPDCA form (5601-1/2 Record), with an ACTION of "FTACT" and FEATURE equal to this ACVT feature.

An ACVT feature with ACT TYPE "CODE" and DEACT TYPE "AUTO" cannot be assigned to a CKT TN

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defined on a DSLUSR form that has a CLASS OF SERVICE (on the corresponding LCC form) of "ISDN" or "ISATND".

2.7 DEACT TYPE

Description: This field is used to indicate whether or not the Attendant Control feature can be deactivated by the customer.
Default: NONE
Valid Entries:

Valid DEACT TYPE Entries

Entry	Definition
AUTO	Automatic deactivation of feature by dial code for (1) call.
CODE	Dial code deactivation of feature.
NONE	No deactivation allowed for feature.

Data Rules:

When DEACT TYPE is "AUTO" or "CODE", ACT TYPE must be "CODE". When DEACT TYPE is "NONE", ACT TYPE must be "AUTO".

If DEACT TYPE is "AUTO", and the feature is assigned to a line, there must be at least one dialed code defined on either the PDIT form (5300-2 Record) or on the IDPDCA form (5601-1/2 Record), with an ACTION of "FTDCT".

If DEACT TYPE is "CODE", and the feature is assigned to a line, there must be at least one dialed code defined on either the PDIT form (5300-2 Record) or on the IDPDCA form (5601-1/2 Record), with an ACTION of "FTDCT" and FEATURE equal to this ACVT feature.

DEFAULT PARAMETERS

The following fields (Section 2.8 - Section 2.12) define the default parameters assigned with the feature to terminals (lines). These parameters will be assigned to the terminal unless they are overridden by entries on the ACVTLPA or ACVTMPA forms.

2.8 ACVT GRP

Description: Enter an ACVT group name.
Valid Entries: 1 - 8 characters

Data Rules:

The ACVT GRP(s) must be defined on the ACVTGP form if the ACVT GRP(s) are assigned as DEFAULT PARAMETERS on the ACVTFD form. If ACVT GRP is entered, then RESTRICT must be "NONE".

2.9 RESTRICT

Description: Enter a valid type of restriction for Attendant Control of Voice Terminals.
Default: NONE
Valid Entries:

Valid RESTRICT Entries

Entry	Definition
NONE	No attendant control of voice terminal restriction .
OUTGOING	Denies direct dialed calls to the public and private networks. Calls to the attendant, incoming calls and calls to other terminals within the same group are not affected by this restriction.
TRM2TRM	Denies incoming calls from other terminals in the same terminal group. Calls from the attendant and calls from outside the terminal group are allowed. Origination of calls is not affected.
T2OUT	A combination of OUTGOING and TRM2TRM. The terminal can call the attendant or other stations within the terminal group. The terminal can receive calls from the attendant or from other

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	terminals that are outside the terminal group.
ALL	Denies all service to an extension number. All incoming and outgoing calls are blocked. In addition the user is not allowed to dial access codes associated with a feature (e.g., activate call forwarding).
INCOMING	Denies all incoming calls from outside or within the terminal group to provide a form of "do-not-disturb" service.
INOUT	A combination of OUTGOING and INCOMING restrictions. All incoming calls are blocked. The user can call the attendant or other terminals within the terminal group.

ERROR TREATMENT

The following fields (Section 2.10 - Section 2.12) define the error treatment assigned with the feature to terminals (lines). These treatments will be assigned to the terminal (lines) unless they are overridden by entries on the ACVTLPA or ACVTMPA forms.

2.10 ERROR TYPE

Description: Enter a valid type of error treatment type.
Default: TONE
Valid Entries:

Valid ERROR TYPE Entries

Entry	Definition
TONE	Tone
ANNC	Announcement
RERTE	Reroute to another TN

Data Rules:

When ERROR TYPE is "TONE", ROUTE INDEX and ERROR TN must be blank. When ERROR TYPE is "ANNC", ROUTE INDEX must be entered and ERROR TN must be blank. When ERROR TYPE is "RERTE", ERROR TN must be entered and ROUTE INDEX must be blank.

2.11 ROUTE INDEX

Description: Enter a valid route index for routing of restricted calls.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and later: 1 - 4095

Data Rules:

If this field is entered, ERROR TN must be blank.

The ROUTE INDEX entered here must also be defined on an RTIDX form with a ROUTE TYPE of "HUNT".

2.12 ERROR TN

Description: Enter a valid Telephone Number for routing restricted calls.
Valid Entries: 1 - 10 digits (0 to 9, * or #)

Data Rules:

This field is only entered when ERROR TYPE is "RERTE". If ERROR TN is entered, ROUTE INDEX must be blank.

2.13 ATTENDANT CONTROLLED RESTRICTION GROUPS (1-63)

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Description: The Attendant Controlled Restriction Groups list consists of a list of up to 63 restriction groups and is used to indicate whether or not this ISDN attendant can control this restriction group.
Default: N
Valid Entries: Y, N

Data Rules:

If any of the 63 restriction groups is "Y", the ISDN attendant must have CONTROL set to "ORIG".

When an MLHG member is assigned an ACVT feature with at least one of the ATTENDANT CONTROLLED RESTRICTION GROUPS set to "Y" on this form or on an ACVTMPA form, then for each restriction group set to "Y", the RESTRICTION GROUP and the MLHG must be specified as RSTRCT GRP and ISAT GRP, respectively, on an ACVTGP form.

ESS 5967-1(3/93)TG-5 ISDN ATTENDANT CONTROL OF VOICE TERMINALS FEATURES DEFINITION RECORD 5ESS SWITCH DATE _____

ACVTFD
12.46
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	FEATURE OPTIONS				DEFAULT PARAMETERS		ERROR TREATMENT			ATTENDANT CONTROLLED RESTRICTION GROUPS				
		CONTROL	AMA CHRG	ACT TYPE	DEACT TYPE	ACVT GRP	RESTRICT	ETR RYPOER	RING UDTEEX	ETR NROR	R1	R2	R3	R4	R5
/ACVTO	ACVT ORIGINATING FEATURE.	ORIG	FLAT		NONE		NONE	TONE			01 17	18 01	19 35	40 55	56 63

											2840
											0135
											3951
											0235
											4062
											0235
											5173
											0235
											6284
											0235
											7395
											0245
											8406
											0245
											9517
/ACVTT	ACVT TERMINATING FEATURE.	TERM	FLAT		NONE		NONE	TONE			1245
											0628
											1245
											1739
											1246
											2840
											1246
											3951
											1346
											4062
											1346
											5173
											1346
/AT*	ATTENDANT CONTROL WILDCARD.	TERM	FLAT		NONE		NONE	TONE			0134
											1739
											0135
											2840
											0135
											3951
											0235
											4062
											0235
											5178
											0235
											6284
											0235
											7395
											0245
											8406
											0245
											9517
											1245
											0628
											1245
											1739
											1246
											2840
											1246
											3951
											1346
											4062
											1346
											5178
											1346
											0134
											1739
											0135

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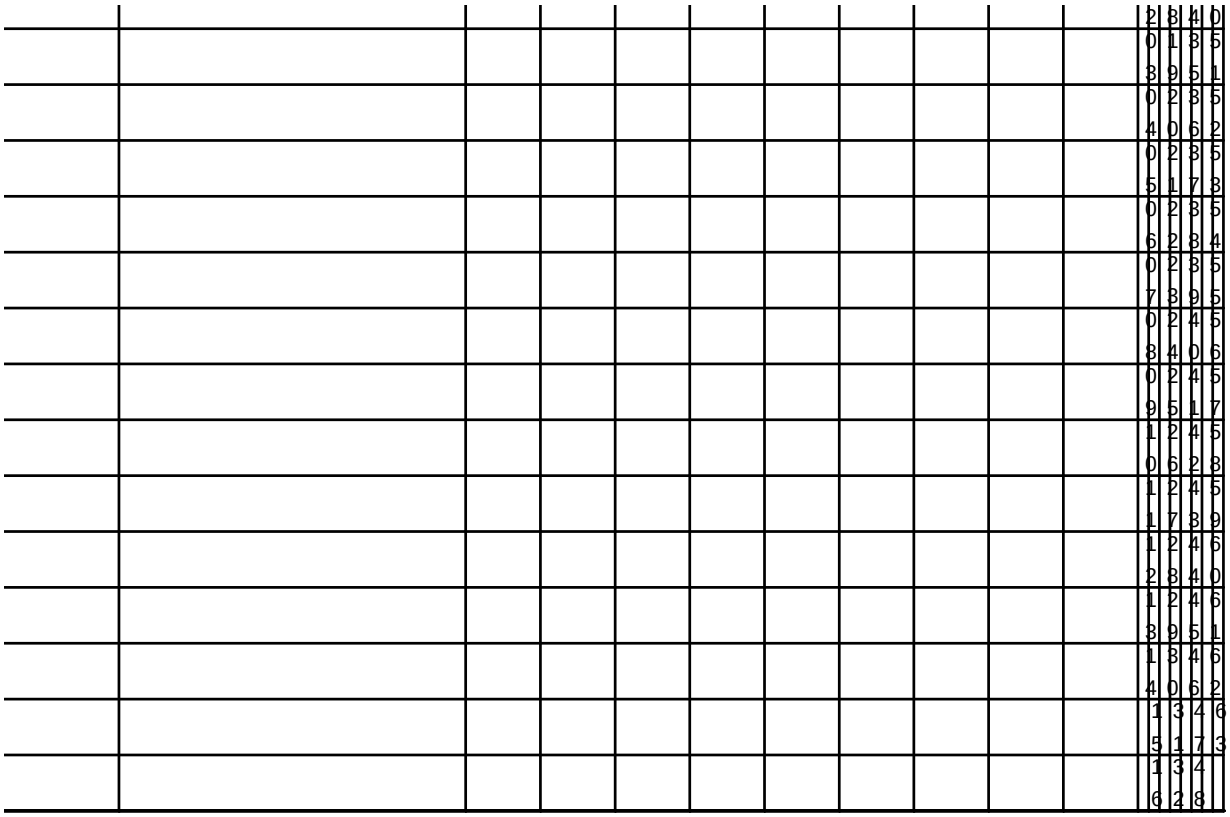

Figure 1 PRECONSTRUCTED ACVT FEATURES

SCREEN 1 of 2 5ESS Switch
acvtfd OFFICE DATA ADMINISTRATION
(5967-1) ISDN ATTENDANT CONTROL OF VOICE TERMINALS FEATURE DEFINITION

*2. FEATURE 1ACVTO 3. REMARKS ORIGINATE ATTENDANT

FEATURE OPTIONS
#4. CONTROL ORIG 6. ACT TYPE CODE
5. AMA CHRG FLAT 7. DEACT TYPE CODE

DEFAULT PARAMETERS
ERROR TREATMENT:
8. ACVT GRP _____ 10. ERROR TYPE TONE
9. RESTRICT NONE 11. ROUTE INDEX ____
12. ERROR TN _____

SCREEN 2 of 2 5ESS Switch _
acvtfd OFFICE DATA ADMINISTRATION
(5967-1) ISDN ATTENDANT CONTROL OF VOICE TERMINALS FEATURE DEFINITION

13. ATTENDANT CONTROLLED RESTRICTION GROUPS

1. N 10. N 19. N 28. N 37. N 46. N 55. N
2. N 11. N 20. N 29. N 38. N 47. N 56. N

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3. N	12. N	21. N	30. N	39. N	48. N	57. N
4. N	13. N	22. N	31. N	40. N	49. N	58. N
5. N	14. N	23. N	32. N	41. N	50. N	59. N
6. N	15. N	24. N	33. N	42. N	51. N	60. N
7. N	16. N	25. N	34. N	43. N	52. N	61. N
8. N	17. N	26. N	35. N	44. N	53. N	62. N
9. N	18. N	27. N	36. N	45. N	54. N	63. N

Figure 2 SAMPLE ACVTFD FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 10B: 5967-2 RECORD
ISDN ATTENDANT CONTROL OF VOICE TERMINALS
GROUP PARAMETERS FORM - ACVTGP

1. GENERAL

The 5967-2 record is applicable to 5E4(2) and later Software Releases. The ACVTGP form is used to define the group parameter data associated with an ACVT (Attendant Control of Voice Terminals) group.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.46.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * ACVT GRP

Description: Enter an ACVT group name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

Each ACVT GRP must have a unique RSTRCT GRP/ISAT GRP combination.

2.3 # RSTRCT GRP

Description: Enter a valid ACVT restrictive group number associated with this ACVT group.

Required Field.
Valid Entries: 1 - 63

2.4 # ISAT GRP

Description: Enter a valid ISDN Attendant MLHG number.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

Data Rules:

The ISAT GRP entered here must also be defined on an MLHG form with a HUNT TYPE of "ISAT" on a corresponding MLHGFD Form.

2.5 RESTRICT

Description: Enter a valid type of restriction for Attendant Control of Voice Terminals.
Default: NONE
Valid Entries:

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Valid RESTRICT Entries

Entry	Definition
NONE	No attendant control of voice terminal restriction
OUTGOING	Denies direct dialed calls to the public and private networks. Calls to the attendant, incoming calls and calls to other terminals within the same group are not affected by this restriction.
TRM2TRM	Denies incoming calls from other terminals in the same terminal group. Calls from the attendant and calls from outside the terminal group are allowed. Origination of calls is not affected.
T2OUT	A combination of OUTGOING and TRM2TRM. The terminal can call the attendant or other stations within the terminal group. The terminal can receive calls from the attendant or from other terminals that are outside the terminal group.
ALL	Denies all service to an extension number. All incoming and outgoing calls are blocked. In addition the user is not allowed to dial access codes associated with a feature (e.g. activate call forwarding).
INCOMING	Denies all incoming calls from outside or within the terminal group to provide a form of "do-not-disturb" service.
INOUT	A combination of OUTGOING and INCOMING restrictions. All incoming calls are blocked. The user can call the attendant or other terminals within the terminal group.

2.6 ACTIVE

Description: Is this restriction active for this group? The default and only value for this field is "Y".
Default: Y
Valid Entries: Y

ERROR TREATMENT

The following (Section 2.7 - Section 2.9) define the error treatment assigned with the feature to terminals.

2.7 ERROR TYPE

Description: Enter a valid error treatment type.
Default: TONE
Valid Entries:

Valid ERROR TYPE Entries

Entry	Definition
TONE	Tone
ANNC	Announcement
RERTE	Reroute to another TN.

Data Rules:

When ERROR TYPE is "TONE", ROUTE INDEX and ERROR TN must be blank. When ERROR TYPE is "ANNC", ROUTE INDEX must be entered. When ERROR TYPE is "RERTE", ERROR TN must be entered.

2.8 ROUTE INDEX

Description: Enter a valid route index for routing restricted calls.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

If this field is entered, ERROR TN must be blank.

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The ROUTE INDEX entered here must also be defined on an RTIDX Form.

2.9 ERROR TN

Description: Enter a valid Telephone Number for routing restricted calls. The TN is a 7-digit number XXXXXXX or a 10 digit number NPAXXXXXXX.
Valid Entries: 7 or 10 digits

Data Rules:

This field is only entered when ERROR TYPE is set to "RERTE". If ERROR TN is entered, ROUTE INDEX must be blank.

```
acvtgp                    5ESS Switch          _
(5967-2)              OFFICE DATA ADMINISTRATION
        ISDN ATTENDANT CONTROL OF VOICE TERMINALS GROUP PARAMETERS

*1. ACVT GRP    GROUP1
#2. RSTRCT GRP  01
#3. ISAT GRP    0001
 4. RESTRICT    NONE
 5. ACTIVE      Y

ERROR TREATMENT:

 6. ERROR TYPE  TONE
 7. ROUTE INDEX ____
 8. ERROR TN    __________
```

Figure 1 SAMPLE ACVTGP FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 10C: 5967-3 RECORD
ISDN ATTENDANT CONTROL OF VOICE TERMINALS
TN PARAMETERS - ACVTLPA

1. GENERAL

The 5967-3 record is applicable to 5E4(2) and later Software Releases. The ACVTLPA form associates a Telephone Number with an ACVT (Attendant Control of Voice Terminals) feature and an ACVT group. The ACVTLPA form is used when assigning ACVT feature parameters to non Multi-Line Hunt lines when the default parameters of the ACVTFD form (5967-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.46.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * TN

Description: Enter a valid Telephone Number for the ACVT group.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E12 and later, TN/FEATURE combinations on different ACVTLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the ACVTLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the ACVT feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the ACVTFD form.

2.4 ACVT GRP

Description: Enter the name of the ACVT group of which this line is a member.
Valid Entries: 1 - 8 characters

Data Rules:

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This ACVT group name must be defined on the ACVTGP form (5967-2 Record) and must not be on the ACVTFD form.

2.5 ISAT GRP

Description: This is a Recent Change Verify (display) only field. The ISDN Attendant MLHG number is in the range of 1 - 2000 for 5E14 and earlier releases and in the range of 1 - 8191 for 5E15 and later release.

2.6 RESTRICT

Description: Enter a valid type of restriction for Attendant Control of Voice Terminals.
Default: NONE
Valid Entries:

Valid RESTRICT Entries

Entry	Definition
NONE	No attendant control of voice terminal restriction.
OUTGOING	Denies direct dialed calls to the public and private networks. Calls to the attendant, incoming calls and calls to other terminals within the same group are not affected by this restriction.
TRM2TRM	Denies incoming calls from other terminals in the same terminal group. Calls from the attendant and calls from outside the terminal group are allowed. Origination of calls is not affected.
T2OUT	A combination of OUTGOING and TRM2TRM. The terminal can call the attendant or other stations within the terminal group. The terminal can receive calls from the attendant or from other terminals that are outside the terminal group.
ALL	Denies all service to an extension number. All incoming and outgoing calls are blocked. In addition, the user is not allowed to dial access codes associated with a feature (e.g. activate call forwarding).
INCOMING	Denies all incoming calls from outside or within the terminal group to provide a form of "do-not-disturb" service.
INOUT	A combination of OUTGOING and INCOMING restrictions. All incoming calls are blocked. The user can call the attendant or other terminals within the terminal group.
ODCTNRES	Software Release: 5E8 and later. Originating Direct Connect, unrestricted terminations.

Data Rules:

If ACVT GRP is known, RESTRICT must be "NONE".

ERROR TREATMENT

The following fields (Section 2.7 - Section 2.9) define the error treatment assigned with the feature to lines.

2.7 ERROR TYPE

Description: Enter a valid error treatment type.
Default: TONE
Valid Entries:

Valid ERROR TYPE Entries

Entry	Definition
TONE	Tone
ANNC	Announcement
RERTE	Reroute to another TN

Data Rules:

When ERROR TYPE is "TONE", ROUTE INDEX and ERROR TN must be blank. When ERROR TYPE is "ANNC", ROUTE INDEX must be entered. When ERROR TYPE is "RERTE", ERROR TN must be entered.

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2.8 ROUTE INDEX

Description: Enter a valid route index for routing restricted calls.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

  For 5E13 and later: 1 - 16382

Data Rules:

If this field is entered, ERROR TN must be blank.

The ROUTE INDEX entered here must also be defined on the RTIDX form (5303 Record) and have the ROUTE TYPE on the RTIDX form set to "HUNT".

2.9 ERROR TN

Description: Enter a valid Telephone Number for routing restricted calls.
Valid Entries: up to 10 digits (0 to 9, * or #)

Data Rules:

This field is only entered when ERROR TYPE is "RERTE".

If ERROR TN is entered, ROUTE INDEX must be blank.

2.10 ATTENDANT CONTROLLED RESTRICTION GROUPS (1-63)

Description: The Attendant Controlled Restriction Groups list consists of a list of up to 63 ACVT restriction groups and indicates whether or not this ISDN attendant can control this ACVT group number.
Default: N
Valid Entries: Y, N

Data Rules:

If any of the 63 restriction groups is "Y", the TN/FEATURE on the ACVTLPA form must be on an ACVTFD input form with CONTROL set to "ORIG".

When any of the 63 restrictive groups is "Y", the following field entries are required:

- ISAT GRP must be blank
- ERROR TN must be blank
- ROUTE INDEX must be blank
- ACVT GRP must be blank
- RESTRICT must be "NONE"
- ERROR TYPE must be "TONE".

SCREEN 1 of 2 5ESS Switch
acvtlpa OFFICE DATA ADMINISTRATION

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(5967-3) ISDN ATTENDANT CONTROL OF VOICE TERMINALS TN PARAMETERS

*1. TN 5552345
*2. FEATURE CONTROL1
3. ACVT GRP GROUP1
ISAT GRP
5. RESTRICT NONE

ERROR TREATMENT:

6. ERROR TYPE TONE
7. ROUTE INDEX ____
8. ERROR TN _____

SCREEN 2 of 2 5ESS Switch _
acvtlpa OFFICE DATA ADMINISTRATION
(5967-3) ISDN ATTENDANT CONTROL OF VOICE TERMINALS TN PARAMETERS

9. ATTENDANT CONTROLLED RESTRICTION GROUPS

1. N	10. N	19. N	28. N	37. N	46. N	55. N
2. N	11. N	20. N	29. N	38. N	47. N	56. N
3. N	12. N	21. N	30. N	39. N	48. N	57. N
4. N	13. N	22. N	31. N	40. N	49. N	58. N
5. N	14. N	23. N	32. N	41. N	50. N	59. N
6. N	15. N	24. N	33. N	42. N	51. N	60. N
7. N	16. N	25. N	34. N	43. N	52. N	61. N
8. N	17. N	26. N	35. N	44. N	53. N	62. N
9. N	18. N	27. N	36. N	45. N	54. N	63. N

Figure 1 SAMPLE ACVTLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

---

acvtlpa 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5967-3) ISDN ATTENDANT CONTROL OF VOICE TERMINALS TN PARAMETERS

*1. TN _____
*2. FEATURE _____
3. ACVT GRP _____
ISAT GRP ____
5. RESTRICT NONE

ERROR TREATMENT
6. ERROR TYPE TONE
7. ROUTE INDEX ____
8. ERROR TN _____

---

acvtlpa 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5967-3) ISDN ATTENDANT CONTROL OF VOICE TERMINALS TN PARAMETERS

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9. ATTENDANT CONTROLLED RESTRICTION GROUPS(ACVTGRP)

ROW	RESGRP	ROW	RESGRP	ROW	RESGRP	ROW	RESGRP	ROW	RESGRP	ROW	RESGRP	ROW	RESGRP
1	N	10	N	19	N	28	N	37	N	46	N	55	N
2	N	11	N	20	N	29	N	38	N	47	N	56	N
3	N	12	N	21	N	30	N	39	N	48	N	57	N
4	N	13	N	22	N	31	N	40	N	49	N	58	N
5	N	14	N	23	N	32	N	41	N	50	N	59	N
6	N	15	N	24	N	33	N	42	N	51	N	60	N
7	N	16	N	25	N	34	N	43	N	52	N	61	N
8	N	17	N	26	N	35	N	44	N	53	N	62	N
9	N	18	N	27	N	36	N	45	N	54	N	63	N

Figure 2 SAMPLE ACVTLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 10D: 5967-4a/4b RECORD
ISDN ATTENDANT CONTROL OF VOICE TERMINALS
MLHG PARAMETERS FORM - ACVTMPA

1. GENERAL

The 5967-4a/4b record is applicable to 5E4(2) and later Software Releases. The ACVTMPA form associates a Multi-Line Hunt Group line with an ACVT (Attendant Control of Voice Terminals) feature and an ACVT group. The ACVTMPA form is used, when assigning ACVT feature parameters to Multi-Line Hunt lines, if the default parameters of the ACVTFD form (5967-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

For 5E6 and earlier, the corresponding Recent Change View for this form is 3.46; for 5E7 and later, the Recent Change View is 1.46.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * MLHG

Description: Enter a valid Multi-Line Hunt Group number.

Required Field.
Valid Entries: For 5E14 and earlier: 1 - 2000

For 5E15 and later: 1 - 8191

2.3 * TERM NBR

Description: Enter a valid Multi-Line Hunt Group Terminal Number.

Required Field.
Valid Entries:
- 1 - 2015, for normal terminals
- 3001 - 3999, for out dial terminals only

Data Rules:

When TERM NBR is set to 3001 - 3999, RESTRICT must not be "TRM2TRM", "ALL", "INCOMING", or "INOUT".

2.4 * FEATURE

Description: Enter the name of the ACVT feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the ACVTFD form.

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2.5 ACVT GRP

Description: Enter a name of the ACVT group that this Multi-Line Hunt Group line number is to belong to.
Valid Entries: 1 - 8 characters

Data Rules:

This ACVT group name must be defined on the ACVTGP form and the ACVTFD form.

2.6 ISAT GRP

Description: Enter a valid ISDN Attendant MLHG number.
Valid Entries:

- For 5E14 and earlier: Blank or 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

If ISAT GRP is entered, ACVT GRP must be blank.

The ISAT GRP entered here must also be defined on an MLHG Form with a HUNT TYPE of "ISAT" on a corresponding MLHGFD Form.

2.7 RESTRICT

Description: Enter a valid type of restriction for Attendant Control of Voice Terminals.
Default: NONE
Valid Entries:

Valid RESTRICT Entries

Entry	Definition
NONE	No attendant control of voice terminal restriction.
OUTGOING	Denies direct dialed calls to the public and private networks. Calls to the attendant, incoming calls and calls to other terminals within the same group are not affected by this restriction.
TRM2TRM	Denies incoming calls from other terminals in the same terminal group. Calls from the attendant and calls from outside the terminal group are allowed. Origination of calls is not affected.
T2OUT	A combination of OUTGOING and TRM2TRM. The terminal can call the attendant or other stations within the terminal group. The terminal can receive calls from the attendant or from other terminals that are outside the terminal group.
ALL	Denies all service to an extension number. All incoming and outgoing calls are blocked. In addition the user is not allowed to dial access codes associated with a feature (e.g. activate call forwarding).
INCOMING	Denies all incoming calls from outside or within the terminal group to provide a form of "do-not-disturb" service.
INOUT	A combination of OUTGOING and INCOMING restrictions. All incoming calls are blocked. The user can call the attendant or other terminals within the terminal group.
ODCTNRES	Software Release: 5E8 and later. Originating Direct Connect, unrestricted terminations.

ERROR TREATMENT

The following fields (Section 2.8 - Section 2.10) define the error treatment assigned with the feature to terminals.

2.8 ERROR TYPE

Description: Enter a valid error treatment type.
Default: TONE

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Valid Entries:

Valid ERROR TYPE Entries	
Entry	**Definition**
TONE	Tone
ANNC	Announcement
RERTE	Reroute to another TN

Data Rules:

When ERROR TYPE is "TONE", ROUTE INDEX and ERROR TN must be blank. When ERROR TYPE is "ANNC", ROUTE INDEX must be entered. When ERROR TYPE is "RERTE", ERROR TN must be entered.

2.9 ROUTE INDEX

Description: Enter a valid route index for routing restricted calls.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095

  For 5E13 and later: 1 - 16382

Data Rules:

If this field is entered, ERROR TN must be blank.

The ROUTE INDEX entered here must also be defined on RTIDX Form.

2.10 ERROR TN

Description: Enter a valid Telephone Number for routing restricted calls.
Valid Entries: 7 or 10 digits

Data Rules:

This field is only entered when ERROR TYPE is set to "RERTE". If ERROR TN is entered, ROUTE INDEX must be blank.

2.11 ATTENDANT CONTROLLED RESTRICTION GROUPS

Description: The Attendant Controlled Restriction Groups list consists of a list of up to 63 ACVT restriction groups and indicates whether or not this ISDN attendant can control this ACVT group number.
Default: N
Valid Entries: Y, N

Data Rules:

If any of the 63 restrictive groups is "Y", the FEATURE on the ACVTMPA form must be on an ACVTFD form with CONTROL set to "ORIG".

When any of the 63 restrictive groups is "Y", the following conditions are required:

- ISAT GRP must be blank
- ERROR TN must be blank
- ROUTE INDEX must be blank

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- ACVT GRP must be blank
- RESTRICT must be "NONE"
- ERROR TYPE must be "TONE".

SCREEN 1 of 2 5ESS Switch
acvtmpa OFFICE DATA ADMINISTRATION
(5967-4) ISDN ATTENDANT CONTROL OF VOICE TERMINALS MLHG PARAMETERS

*1. MLHG 0025
*2. TERM NBR 0005
*3. FEATURE CONTROL2
4. ACVT GRP GROUP7
ISAT GRP
6. RESTRICT NONE

ERROR TREATMENT:

7. ERROR TYPE RERTE
8. ROUTE INDEX ____
9. ERROR TN 5559999

SCREEN 2 of 2 5ESS Switch _
acvtmpa OFFICE DATA ADMINISTRATION
(5967-4) ISDN ATTENDANT CONTROL OF VOICE TERMINALS MLHG PARAMETERS

10. ATTENDANT CONTROLLED RESTRICTION GROUPS

1. N	10. N	19. N	28. N	37. N	46. N	55. N
2. N	11. N	20. N	29. N	38. N	47. N	56. N
3. N	12. N	21. N	30. N	39. N	48. N	57. N
4. N	13. N	22. N	31. N	40. N	49. N	58. N
5. N	14. N	23. N	32. N	41. N	50. N	59. N
6. N	15. N	24. N	33. N	42. N	51. N	60. N
7. N	16. N	25. N	34. N	43. N	52. N	61. N
8. N	17. N	26. N	35. N	44. N	53. N	62. N
9. N	18. N	27. N	36. N	45. N	54. N	63. N

Figure 1 SAMPLE ACVTMPA FORM 5E4(2) AND LATER SOFTWARE RELEASES

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SEC. 11: ISDN ATTENDANT CONTROL OF FACILITIES FEATURES

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SEC. 11A: 5968 RECORD
ISDN ATTENDANT CONTROL OF FACILITIES FEATURE ATTRIBUTES FORM - ACOFRF

1. GENERAL

The 5968 Record is available with the 5E4(2), and later Software Releases. It is used to assign the Controling Line for an Attendent Control of Facility Restriction.

For each Feature Button on the CFGGRP form (5964 Record) where ACTION is "IACOF", it is necessary to have a corresponding ACOFRF form. Use the CONFIG GRP, COMPONENT and BUTTON values from the CFGGRP form to build the key field values for this ACOFRF form. It is necessary to define the Equipment Number, Party value and the Alternate Code Treatment Set Number for the line which will control the ACOF Restriction.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.6.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * CONFIG GRP

Description: Enter the name of the Configuration Group.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This Configuration Group Name must exist on a CFGGRP form where this "IACOF" feature button has been defined.

2.3 * CPE COMPONENT

Description: Enter the Terminal Configuration Component number where this "IACOF" feature button has been defined.

Required Field.
Valid Entries: 0 - 7

2.4 * BUTTON

Description: Enter the Feature Button value for this "IACOF" feature button.

Required Field.
Valid Entries: 1 to 254.

2.5 # OE TYPE

Description: Enter the Office Equipment Type for the line that controls this ACOF restriction.

Required Field.

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Valid OE TYPE Entries	
Entry	**Definition**
L	Telephone Number is associated with an analog-type Line Equipment Number and NUMBER field must contain an 8- or 10-digit LEN. For 5E9(2) and later the Equipment Number must contain an 10 or 11-digit LEN.
C	Telephone Number is associated with ISLU Line Card Equipment Number and NUMBER field must contain an 8-digit equipment number.
E	

2.6 # NUMBER

Description: Enter the OE Number. This Office Equipment Number must be assigned on a LINE (5109-1 Record), MLHLN (5111-1 Record), DSL (5900-1 Record) or DSMLHLN (5901-1 Record) form.

Required Field.

If OE TYPE is "L", this Line Unit Equipment Number consists of:

OE NUMBER, TYPE L			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7
		XXX	000 - 042 (5E9(2) and later)
Concentrator	CONC	X	0 - 9
Switch Group	SWG	X	0 - 1
Switch	SW	X	0 - 7
Level	LEV	X	0 - 3

If OE TYPE is "C", this ISLU Line Card Equipment Number consists of:

OE NUMBER, TYPE C			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Line Unit	LU	X	0 - 7
Line Group Controller	LGC	XX	00 - 15
Line Card	LC	XX	00 - 31

If OE TYPE is "E", this AIU Equipment Number consists of:

OE NUMBER, TYPE E - 5E11 and later			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1 - 192
Unit Number	AIU	XXX	000 - 042
Pack	PACK	XX	00 - 19
Circuit	CKT	XX	00 - 31
			Coin 00-15

Data Rules:

The Equipment Number entered here must have an ID Feature with an IDP Group assigned.

2.7 # PTY

Description: Enter the Party Identifier.

Required Field.

Valid PTY Entries	
Entry	**Definition**
I	Individual
T	Tip
R	Ring
1 - 9, 0	MFR Multi-party

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NOTE: Standard 4 and 8 Multiparty Service are not applicable here.

Data Rules:

The PTY value entered here must correspond with the Party value on the LINE or MLHLN form for the above Office Equipment Number. If the Office Equipment Number is a LCEN defined on the DSL or DSMLHLN form, then the PTY value must be "I".

2.8 # ACT SET

Description: Enter the Alternate Code Treatment Set number.

Required Field.
Valid Entries: 1 - 32

Data Rules:

The value entered here must be entered on the CFGGRP form in the PARAM field.

WARNING: Non-BFG Case - Changing the IDP of a port may affect the usage of the ACOF (Attendant Control of Facilities) feature by an ISDN Attendant terminal which uses this port as an ACOF control port.

BFG Case - Changing the IDP group ID of a BFG may affect the usage of the ACOF (Attendant Control of Facilities) feature by an ISDN Attendant terminal which uses a port within the BFG group as an ACOF control port.

```
acofrf                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5968)     ISDN ATTENDANT CONTROL OF FACILITIES FEATURE ATTRIBUTES

*1. CONFIG GRP   ________
*2. CPE COMPONENT _
*3. BUTTON       ___
#4. OE          _ ___________
#7. PTY          _
#8. ACTSET       __
```

Figure 1 SAMPLE ACOFRF FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 12: ISDN ATTENDANT PFA DIAL CODE ASSIGNMENT

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SEC. 12A: 5969 RECORD
ISDN ATTENDANT PFA DIAL CODE
ASSIGNMENT FORM - IPFDCA

1. GENERAL

The 5969 Record is available with 5E4(2) and later Software Releases. It is used to define the Trunk Group or Simulated Facility Group for a specific PFA dialed code associated with an ISDN Attendant Configuration Group.

For PFA Dial Codes that are associated with a Feature Button, a CFGGRP form (5964 Record) will have an ACTION of "IDTGS" and the PARAM value will be the PFA Dial Code entered in the DIAL CODE field on an IPFDCA form. The value of COMPONENT and BUTTON on this IPFDCA form must match the corresponding CFGGRP form. The IPFDCA form will be keyed by this CONFIG GRP and DIAL CODE.

For PFA Dial Codes that are not associated with a Feature Button on a CFGGRP form, the CONFIG GRP for the ISDN Attendant Group must be entered and the PFA Dial Code must be entered as DIAL CODE; a COMPONENT and BUTTON number must not be entered.

Each CONFIG GRP defined on this form may have a maximum of 16 IPFDCA forms entered with a button assigned.

The combination of CONFIG GRP, PFTYPE and GRPNUM fields entered on this form must be unique.

1.1 Recent Change View

The corresponding Recent Change view for this form is 12.7.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * CONFIG GRP

Description: Enter the ISDN Attendant Configuration Group name.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This configuration name must exist on one or more CFGGRP forms.

2.3 * DIAL CODE

Description: Enter a PFA Dial Code, which is a maximum of 5 characters from the following set of characters: 0 - 9, #, *, O, F, I, P.

- ***NOTE:*** The Dial Code may be 5 characters in length only if not associated with a Feature Button.

Required Field.
Valid Entries: 1 - 5 characters

2.4 # PFTYPE

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Description: Enter the Private Facility Type.

Required Field.

Valid PFTYPE Entries	
Entry	**Definition**
PHYS	Trunk Group.
SFG	Simulated Facility Group.

2.5 # GRPNUM

Description: Enter the Private Facility Group Number.

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000 for trunk group
- number, or 1 - 2000 for SFG number.

Data Rules:

For 5E11 and later, when PFTYPE is "SFG", GRPNUM must be 1 - 2000.

If PFTYPE is "PHYS", this value of GRPNUM must be a TGN defined on a TKGRP form (5202 Record). If PFTYPE is "SFG" this value of GRPNUM must be an SFG NBR defined on a PFASFG form (5609-3 Record) with the associated SFG TYPE not equal to "ICR".

The combination of PFTYPE and GRPNUM must be unique if the associated TKGRP form or PFASFG form has the BW LAMP field equal to "Y".

2.6 COMPONENT

Description: If the Dial Code is defined on a Feature Button, enter the COMPONENT number for which the Feature Button appears.

If the Dial Code is not associated with a Feature Button (DIAL CODE field is 5 characters long), leave this field blank.
Valid Entries: 0 - 7

2.7 BUTTON

Description: If the Dial Code is defined on a Feature Button, enter the BUTTON number for which the Feature Button appears.

If the Dial Code is not associated with a Feature Button (DIAL CODE field is 5 characters long), leave this field blank.
Valid Entries: 1 - 254

GROUP FEATURES (VERIFY ONLY)

The following fields (Section 2.8 - Section 2.11) are used in Recent Change as verify-only fields. These fields can be defined on the PFASFG form and TKGRP form.

2.8 MK BUSY

Description: This field is used in Recent Change as a verify-only field to indicate if SCCOF (Selective Customer Control of Facilities) is on. This allows the attendant to deny access to a privately owned trunk

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group or simulated facility group.

2.9 BW LAMP

Description: This field is used in Recent Change as a verify-only field to indicate if busy warning lamp(s) are provided on the attendant's console.

2.10 ISAT MLHG

Description: This field is used in Recent Change as a verify-only field to indicate the ISDN Attendant MLHG that can busy monitor the trunk group or simulated facility group.

2.11 WARN THRSH

Description: This field is used in Recent Change as a verify-only field to indicate the threshold of members in this group that must be busy at any given time before the group busy warning lamp(s) light at the attendant's console.

```
ipfdca                    5ESS Switch                _
(5969)                OFFICE DATA ADMINISTRATION
                ISDN ATTENDANT PFA DIAL CODE ASSIGNMENT

*1. CONFIG GRP _________       GROUP FEATURES (VERIFY ONLY)
*2. DIAL CODE  _____           ----------------------------
#3. PFTYPE     ____             7. MK BUSY
#4. GRPNUM     ____             8. BW LAMP
 5. COMPONENT  _                 9. ISAT MLHG
 6. BUTTON     ___              10. WARN THRESH
```

Figure 1 SAMPLE IPFDCA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 13: LASS AUTOMATIC CALLBACK FORMS

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SEC. 13A: 5970-1 RECORD
LASS AUTOMATIC CALLBACK FEATURE DEFINITION - LSACFD

1. GENERAL

The 5970-1 Record is available with 5E5 and later Software Releases. AC (Automatic Callback) allows the subscriber to automatically call back the last calling party. If the party called back by AC is busy, the network will automatically camp on it. This feature is available between parties served by the same office and between parties served by different offices in the same LATA (Local Access Transport Area) provided there is CCS7 (Common Channel Signaling - Version 7) connectivity between the offices. This feature applies to voice calls only.

Only one AC feature name is allowed on a LINEFA form (5112 Record), MLHLNFA form (5113 Record), BFG form (5625-1 Record) or CLUSTR form (5600 Record).

Certain AC features are predefined and automatically provided in the ODA (Office Database Adminstrator) database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature name other than preconstructed features. A list of preconstructed AC features is contained in Figure Figure 1 .

If the TNs on a LINE form or the CKT TNs on a DSLUSR form are assigned an AC Feature on a LINEFA form, BFG form, or an associated CLUSTR form, then the TN or CKT TN must be defined on the LINE form or DSLUSR form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV" or "PBX" on an LCC form with an associated LCC/RAX value.

If the MLHG/TERMs on an MLHLN form or the CKT MLHG/TERMs on a DSLUSR form are assigned an AC Feature on an MLHNFA form, BFG form, or an associated CLUSTR form, then the MLHG/TERM or CKT MLHG/TERM must be defined on the MLHLN form or DSLUSR form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV" or "PBX" on an LCC form with an associated LCC/RAX value.

For more information on LASS features, refer to Division 2, Section 1Y.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.47.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the AC Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

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FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.7) define the feature options.

2.4 AMA REC

Description: Will billing be performed on a usage-sensitive basis with AMA (Automatic Message Accounting) records being created?

If this field is "Y", billing will be usage sensitive and an AMA record will be created. If this field is "N", billing will be done on a flat-rate basis with no AMA record created.

If the AC feature is generally available, billing can be done on a flat rate or usage-sensitive basis according to how the subscribing user prefers to be billed.

Required Field.
Default: N
Valid Entries: Y, N

2.5 INTRA GRP

Description: Is this feature restricted to intra-terminal groups?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If this field is equal to "Y", the lines that are assigned this feature must have a Terminal Group Station Restriction feature assigned to them.

2.6 ACT TYPE

Description: Can the AC feature be activated by the customer? The default and only valid entry is "AUTO".
Default: AUTO
Valid Entries:

Valid ACT TYPE Entries

Entry	Definition
AUTO	The AC feature is always active. The customer is not permitted to activate this feature.

2.7 DEACT TYPE

Description: Can the AC feature be deactivated by the customer for a single call? The default and only valid entry is "NONE".
Default: NONE
Valid Entries:

Valid DEACT TYPE Entries

Entry	Definition
NONE	The customer is not permitted to deactivate the AC feature for one call.

DEFAULT PARAMETERS

The following field defines the default parameters.

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2.8 RNGBK TYPE

Description: This field indicates the AC ringback type.

Required Field.
Default: C
Valid Entries:

Valid RNGBK TYPE Entries

Entry	Definition
A	Repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	Repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.
C	Repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (also known as code 2 ringing).

ESS 5970-1(01)TG-5 LASS AUTOMATIC CALLBACK FEATURE DATE _____

DEFINTION RECORD

LSACFD 5ESS SWITCH

12.47

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	AMA REC	INTR A GRP	ACT TYPE	DEACT TYPE	RNGBK TYPE	REMARKS
LSAC	N	N	AUTO	NONE	A	

Figure 1 PRECONSTRUCTED LASS AC FEATURES

---

lsacfd 5ESS Switch _
5970-1 OFFICE DATA ADMINISTRATION
LASS AUTOMATIC CALLBACK FEATURE DEFINITION

*2. FEATURE AC1 3. REMARKS _____

========== FEATURE OPTIONS ==========

4. AMA REC Y 6. ACT TYPE AUTO
5. INTRA GRP Y 7. DEACT TYPE NONE

========== DEFAULT PARAMETERS ==========

8. RNGBK TYPE C

Figure 2 SAMPLE LSACFD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 13B: 5970-2 RECORD
LASS AUTOMATIC CALLBACK
TN PARAMETERS FORM - LSACLPA

1. GENERAL

The 5970-2 Record is available in 5E5 and later Software Releases. The LSACLPA form associates a Telephone Number with an AC (Automatic Callback) feature. This form is used when assigning AC features to non-Multi-Line Hunt lines when the default parameters of the LSACFD form (5970-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.47.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number for the AC user.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and
- X is 0 - 9

Data Rules:

For 5E12 and later, TN/FEATURE combinations on different LSACLPA forms cannot be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the LSACLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the name of the AC feature for which the parameters are to be assigned.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the LSACFD form.

2.4 RNGBK TYPE

Description: This field indicates the AC ringback type.

Required Field.

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Default: C
Valid Entries:

Valid RNGBK TYPE Entries

Entry	Definition
A	Repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	Repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.
C	Repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (also known as code 2 ringing).

lsaclpa 5ESS Switch _
5970-2 OFFICE DATA ADMINISTRATION
LASS AUTOMATIC CALLBACK TELEPHONE NUMBER PARAMETERS

*1. TN 3994000
*2. FEATURE AC1
3. RNGBK TYPE D

Figure 1 SAMPLE LSACLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

lsaclpa 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5970-2) LASS AUTOMATIC CALLBACK TELEPHONE NUMBER PARAMETERS

*1. TN _____
*2. FEATURE _____
3. RNGBK TYPE C

Figure 2 SAMPLE LSACLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 13C: 5970-3 RECORD
LASS AUTOMATIC CALLBACK MLHG PARAMETERS FORM - LSACMPA

1. GENERAL

The 5970-3 Record is available in 5E5 and later Software Releases. The LSACMPA form assigns an AC (Automatic Callback) feature to a Multi-Line Hunt Group line. It is used when assigning AC features to Multi-Line Hunt lines when the default parameters of the LSACFD form (5970-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.47.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group Number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM NBR

Description: Enter the Multi-Line Hunt Group Member Number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

2.4 * FEATURE

Description: Enter the AC Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the LSACFD form.

2.5 RNGBK TYPE

Description: This field indicates the AC ringback type.

Required Field.
Default: C
Valid Entries:

Valid RNGBK TYPE Entries

Entry	Definition
A	Repeated pattern of 2 seconds on and 4 seconds off(normal ringing pattern).

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B	Repeated pattern of 0.8 seconds on, 0.4 seconds off,
C	Repeated pattern of 0.4 seconds on, 0.2 seconds off,
D	Repeated pattern of 1 second on, 1 second off,

lsacmpa 5ESS Switch _
5970-3 OFFICE DATA ADMINISTRATION
LASS AUTOMATIC CALLBACK MULTILINE HUNT GROUP PARAMETERS

*1. MLHG 0010
*2. TERM NBR 2000
*3. FEATURE AC1

4. RNGBK TYPE C

Figure 1 SAMPLE LSACMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 14: LASS AUTOMATIC RECALL FORMS

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SEC. 14A: 5971-1 RECORD
LASS AUTOMATIC RECALL FEATURE DEFINITION - LSARFD

1. GENERAL

The 5971-1 Record is available with 5E5 and later Software Releases. The AR (Automatic Recall) feature allows the subscriber to automatically call back the last called party. If the recalled party is busy, the network will automatically camp on to it. This feature is available between parties served by the same central office and also between parties served by different offices in the same LATA (Local Access Transport Area) provided there is CCS7 connectivity between the switches. For 5E7 and earlier, this feature applies to voice calls only.

Only one AR feature name is allowed on a LINEFA form, MLHLNFA form, BFG form or CLUSTR form.

1.1 Preconstructed AR Features

Certain AR features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/); the slash may not be used as the first character of any feature name other than preconstructed features. The preconstructed AR features are listed beginning in Figure 1.

1.2 Class of Service

If the TNs on a LINE form or the CKT TNs on a DSLUSR form are assigned an AR Feature on a LINEFA form, BFG form, or an associated CLUSTR form, then the TN or CKT TN must be defined on the LINE form or DSLUSR form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV" or "PBX" on an LCC form with an associated LCC/RAX value.

If the MLHG/TERMs on an MLHLN form or the CKT MLHG/TERMs on a DSLUSR form are assigned to an AR Feature on an MLHNFA form, BFG form, or an associated CLUSTR form, then the MLHG/TERM or CKT MLHG/TERM must be defined on the MLHLN form or DSLUSR form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV", or "PBX" on an LCC form with an associated LCC/RAX value.

1.3 LASS Feature Information

For more information on LASS features, refer to Division 2, Section 1Y.

1.4 Recent Change View

The corresponding Recent Change View for this form is 12.48.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the AR feature name. A feature name cannot start with a slash (/), which is reserved for preconstructed feature names. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed, or inserted.

Required Field.
Valid Entries: 1 - 8 characters

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2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

Section 2.4 - Section 2.9 define the feature options.

2.4 AMA REC

Description: Should the billing be done on a usage sensitive basis? If the AR feature is generally available, the billing can be done on either a usage sensitive or flat rate basis. If "Y" is entered in this field, billing will be usage sensitive and an AMA record will be created; if "N" is entered, billing will be a flat rate and no AMA record will be created.

Required Field.
Default: N
Valid Entries: Y, N

2.5 INTRA GRP

Description: Is this feature restricted to intra-terminal groups only?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If INTRA GRP is "Y", all lines that are assigned this AR feature must also be assigned a TGSR (Terminal Group Station Restriction) feature that is defined on the TGSRFD form (5607-1/2 Record).

2.6 CSV ALW

Description: Will LASS Automatic Recall be allowed for voice service on lines using this feature?

The feature may be assigned on a generally available or subscription basis.

Software Release: 5E8 and later
Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

If CSV ALW is "N", CSD ALW must be "Y".

2.7 CSD ALW

Description: Will LASS Automatic Recall be allowed for circuit switched data service on lines using this feature?

The feature may be assigned on a generally available or subscription basis.

Software Release: 5E8 and later
Required Field.
Default: Y

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Valid Entries: Y, N

Data Rules:

If CSD ALW is "N", CSV ALW must be "Y".

When CSD ALW is "Y", DSL CLS must be "STD" on the DSL form associated with the DSLUSR line assigned the feature.

2.8 ACT TYPE

Description: This field indicates whether or not the AR feature can be activated by the customer. The default and only value is "AUTO"; the feature is always active and cannot be activated by the subscriber.
Default: AUTO
Valid Entries: AUTO

2.9 DEACT TYPE

Description: This field indicates if the AR feature can be deactivated by the customer for a single call. The default and only value is "NONE"; the subscriber is not permitted to deactivate the feature.
Default: NONE
Valid Entries: NONE

DEFAULT PARAMETERS

The following field (Section 2.10) defines the default parameter assigned with the feature to a line. This parameter will be assigned to the line unless it is overridden by an entry on the LSARLPA (5971-2 Record) or LSARMPA (5971-3 Record) form.

2.10 RNGBK TYPE

Description: This field indicates the AR ringback type.

Required Field.
Default: C
Valid Entries:

Valid RNGBK TYPE Entries

Entry	Definition
A	Repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	Repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.
C	Repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (also known as code 2 ringing).

ESS 5971-1(5E5)TG-5 LASS AUTOMATIC RECALL FEATURE DATE _____
DEFINTION RECORD
LSARFD 5ESS SWITCH
12.48
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	AMA REC	INTR A GRP	ACT TYPE	DEACT TYPE	RNGBK TYPE	REMARKS
/LAR*	N	N	AUTO	NONE	C	WILD CARD
/LAR1	N	N	AUTO	NONE	C	SUBSCRIPTION
/LARGA	Y	N	AUTO	NONE	C	GENERALLY AVAILABLE

Figure 1 PRECONSTRUCTED AR FEATURES 5E5 - 5E7 SOFTWARE RELEASES

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ESS 5971-1(8/92)TG-5 LASS AUTOMATIC RECALL FEATURE DATE _____

DEFINTION RECORD

LSARFD 5ESS SWITCH

12.48

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	AMA REC	INTR A GR P	CS V A L W	CS D A L W	ACT TYP E	DEACT TYP E	RNGBK TYP E	REMARKS
/LAR*	N	N	Y	N	AUTO	NONE	C	WILD CARD
/LAR1	N	N	Y	N	AUTO	NONE	C	SUBSCRIPTION
/LAR1D	N	N	N	Y	AUTO	NONE	C	SUBSCRIPTION (DATA ONLY)
/LAR1VD	N	N	Y	Y	AUTO	NONE	C	SUBSCRIPTION (VOICE/DATA)
/LARGA	Y	N	Y	N	AUTO	NONE	C	GENERALLY AVAILABLE
/LARGAD	Y	N	N	Y	AUTO	NONE	C	GENERALLY AVAILABLE (DATA ONLY)
/LARGAVD	Y	N	Y	Y	AUTO	NONE	C	GENERALLY AVAILABLE (VOICE/DATA)

Figure 2 PRECONSTRUCTED AR FEATURES 5E8 AND LATER SOFTWARE RELEASES

lsarfd 5ESS Switch _

5971-1 OFFICE DATA ADMINISTRATION

LASS AUTOMATIC RECALL FEATURE DEFINITION

*2. FEATURE AR1 3. REMARKS _____

========== FEATURE OPTIONS ==========

4. AMA REC N 6. CSV ALW Y 8. ACT TYPE AUTO

5. INTRA GRP N 7. CSD ALW N 9. DEACT TYPE NONE

========== DEFAULT PARAMETERS ==========

10. RNGBK TYPE C

Figure 3 SAMPLE LSARFD FORM 5E5 - 5E7 SOFTWARE RELEASES

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SEC. 14B: 5971-2 RECORD
LASS AUTOMATIC RECALL
TN PARAMETERS FORM - LSARLPA

1. GENERAL

The 5971-2 Record is available in 5E5 and later Software Releases. The LSARLPA form associates a Telephone Number with an AR (Automatic Recall) feature. This form is used when assigning AR features to non-Multi-Line Hunt lines when the default parameters of the LSARFD form (5971-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 1.48.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * TN

Description: Enter the Telephone Number for the AR user.

Required Field.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

For 5E12 and later, TN/FEATURE combinations on different LSARLPA forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the LSARLPA form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 * FEATURE

Description: Enter the AR Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the LSARFD form.

2.4 RNGBK TYPE

Description: This field indicates the AR ringback type.

Required Field.
Default: C
Valid Entries:

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Valid RNGBK TYPE Entries	
Entry	**Definition**
A	Repeated pattern of 2 seconds on and 4 seconds off (normal ringing pattern).
B	Repeated pattern of 0.8 seconds on, 0.4 seconds off, 0.8 seconds on followed by 4 seconds off.
C	Repeated pattern of 0.4 seconds on, 0.2 seconds off, 0.4 seconds on, 0.2 seconds off, 0.8 seconds on and 4 seconds off.
D	Repeated pattern of 1 second on, 1 second off, 1 second on and 3 seconds off (also known as code 2 ringing).

```
lsarlpa                    5ESS Switch                _
5971-2                  OFFICE DATA ADMINISTRATION
          LASS AUTOMATIC RECALL TELEPHONE NUMBER PARAMETERS

*1. TN        3994000
*2. FEATURE   AR1
 3. RNGBK TYPE B
```

Figure 1 SAMPLE LSARLPA FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
lsarlpa                    5ESS Switch                _
                        OFFICE DATA ADMINISTRATION
(5971-2)       LASS AUTOMATIC RECALL TELEPHONE NUMBER PARAMETERS

*1. TN        ___________
*2. FEATURE   _________
 3. RNGBK TYPE C
```

Figure 2 SAMPLE LSARLPA FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 14C: 5971-3 RECORD
LASS AUTOMATIC RECALL
MLHG PARAMETERS FORM - LSARMPA

1. GENERAL

The 5971-3 Record is available in 5E5 and later Software Releases. The LSARMPA form associates a Multi-Line Hunt line with an AR (Automatic Recall) feature. This form is used when assigning AR features to Multi-Line Hunt lines when the default parameters of the LSARFD form (5971-1 Record) are inappropriate or unspecified.

1.1 Recent Change View

The corresponding Recent Change View for this form is 3.48.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * MLHG

Description: Enter the Multi-Line Hunt Group number of the line.

Required Field.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: 1 - 8191

2.3 * TERM NBR

Description: Enter the Multi-Line Hunt Group Member Number.

Required Field.
Valid Entries: 1 - 2015 and 3001 - 3999 (Outdial Terminals Only)

2.4 * FEATURE

Description: Enter the AR Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

This feature name must be defined on the LSARFD form.

2.5 RNGBK TYPE

Description: This field indicates the AC ringback type.

Required Field.
Default: C
Valid Entries:

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Valid RNGBK TYPE Entries	
Entry	**Definition**
A	Repeated pattern of 2 seconds on and 4 seconds off(normal ringing pattern).
B	Repeated pattern of 0.8 seconds on, 0.4 seconds off,
C	Repeated pattern of 0.4 seconds on, 0.2 seconds off,
D	Repeated pattern 1 second on, 1 second off,

lsarmpa 5ESS Switch _
5971-3 OFFICE DATA ADMINISTRATION
LASS AUTOMATIC RECALL MULTILINE HUNT GROUP PARAMETERS

*1. MLHG 0001
*2. TERM NBR 2000
*3. FEATURE AR1
4. RNGBK TYPE C

Figure 1 SAMPLE LSARMPA FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 15: LASS CUSTOMER ORIGINATED TRACE FORMS

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SEC. 15A: 5972 RECORD
LASS CUSTOMER ORIGINATED TRACE
FORM DEFINITION - LSCOTFD

1. GENERAL

The 5972 Record is available with 5E5 and later Software Releases. The COT (Customer Originated Trace) feature permits the analog and ISDN user to trace an obscene, threatening or harassing call without the intervention of Telephone Company personnel. This feature will not only be available between parties served by the same office, but also between parties served by different offices in the same LATA (Local Access Transport Area) provided there is CCS7 connectivity between the offices.

Only one COT feature name is allowed on a LINEFA form, MLHLNFA form, BFG form or a CLUSTR form.

Certain COT features are predefined and automatically provided in the ODA database at the time of office registration. These are called preconstructed features. Preconstructed feature names all start with a slash (/), and the slash may not be used as the first character of any feature name other than preconstructed features. A list of preconstructed COT features is contained in Figure 1 .

If the TNs on a LINE form or the CKT TNs on a DSLUSR form are assigned a COT Feature on a LINEFA form, BFG form, or an associated CLUSTR form, then the TN or CKT TN must be defined on the LINE form or DSLUSR form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV" or "PBX" on an LCC form with an associated LCC/RAX value.

If the MLHG/TERMs on an MLHLN form or the CKT MLHG/TERMs on a DSLUSR form are assigned a COT Feature on an MLHNFA form, BFG form, or an associated CLUSTR form, then the MLHG/TERM or CKT MLHG/TERM must be defined on the MLHLN form or DSLUSR form with a CLASS OF SERVICE of "INDIV", "ISDN", "ISATND", "ATND", "4WINDIV" or "PBX" on an LCC form with an associated LCC/RAX value.

If CONFIG GRP on the DSLUSR form is defined on the CFGGRP form (5964 Record) with a button assigned the COT feature, then the corresponding DSLUSR form must have DISPLAY set to "Y".

For more information on LASS features, refer to Division 2, Section 1Y.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.49.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the COT Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.

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Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.6) define the feature options.

2.4 ACT TYPE

Description: Can the COT feature be activated by the customer? "AUTO" is the only valid entry.

Valid ACT TYPE Entries

Entry	Definition
AUTO	Feature is always active. Customer is not permitted to activate the feature.

2.5 DEACT TYPE

Description: Can the COT feature be deactivated by the customer for one call? The only valid entry is "NONE".

Valid DEACT TYPE Entries

Entry	Definition
NONE	Customer is not permitted deactivation.

2.6 AMA REC

Description: Will the billing be usage-sensitive and will an AMA record be created?

This field indicates the type of billing to be performed. The billing can be done on a flat rate or usage-sensitive basis according to how the subscribing user prefers to be billed or how the Telephone Company decides it will bill if the COT feature is generally available.

If AMA REC is equal to "Y", billing will be usage-sensitive and an AMA record will be created. If AMA REC is equal to "N", billing will be done on a flat rate basis with no AMA record created.

Required Field.
Default: Y
Valid Entries: Y, N

ESS 5972(01)TG-5 LASS CUSTOMER ORIGINATED TRACE FEATURE DATE _____

DEFINTION RECORD
LSCOTFD 5ESS SWITCH
12.49
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	ACT TYPE	DEACT TYPE	AMA REC	REMARKS
/COT*	AUTO	NONE	Y	Wild Card
/COT1	AUTO	NONE	N	Subscription
/COTGA	AUTO	NONE	Y	Generally Available

Figure 1 PRECONSTRUCTED LASS COT FEATURES

---

lscotfd 5ESS Switch _
5972 OFFICE DATA ADMINISTRATION
LASS CUSTOMER ORIGINATED TRACE FEATURE DEFINITION

*2. FEATURE COT1 3. REMARKS _____

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```
============================== FEATURE OPTIONS ================================

 4. ACT TYPE   AUTO        6. AMA REC Y
 5. DEACT TYPE NONE
```

Figure 2 SAMPLE LSCOTFD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 16: LASS FEATURE ACCESS FORMS

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SEC. 16A: 5973 RECORD
LASS FEATURE ACCESS - LASSFA

1. GENERAL

The 5973 Record is available with the 5E5 Software Release and defines the access modes for each of the LASS features on an SM basis. It is used only for an office retrofit in 5ODA.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.18.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the SM number. Intitally "ALL" should be entered to initialize all SMs and the AM with the same values. This is the only way to enter values into the AM. If "ALL" is not entered, the default value of "UNAVAIL" will be retained on the AM. When "LASSDEF" is entered for the feature fields on this form, the value will default to the value in the AM.

Required Field.
Valid Entries: 1 - 192, or ALL

2.3 # AC

Description: Enter the status of the LASS AC (Automatic Callback) access.

Required Field.
Default: UNAVAIL
Valid Entries:

Valid AC Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

2.4 # AR

Description: Enter the status of the AR (Auto Recall) feature access.

Required Field.
Default: UNAVAIL
Valid Entries:

Valid AR Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)

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SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

2.5 # COT

Description: Enter the status of COT (Customer Originated Trace) feature access.

Required Field.
Default: UNAVAIL
Valid Entries:

Valid COT Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

2.6 # PCP

Description: Enter the status of ICLID PCP (Per Call DN Privacy) feature access.

Required Field.
Default: UNAVAIL
Valid Entries:

Valid PCP Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

2.7 # SCA

Description: Enter the status of LASS SCA (Selective Call Acceptance) feature access.

Software Release: 5E6 and later
Required Field.
Default: UNAVAIL
Valid Entries:

Valid SCA Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

Data Rules:

For Recent Change: Before "GENAVAIL" or "SUBSCR" may be entered, all LASS office parameters on RC view 8.21 must be set.

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2.8 # SCF

Description: Enter the status of LASS SCF (Selective Call Forwarding) feature access.

Software Release: 5E6 and later
Required Field.
Default: UNAVAIL
Valid Entries:

Valid SCF Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

Data Rules:

For Recent Change: Before "GENAVAIL" or "SUBSCR" may be entered, all LASS office parameters on RC view 8.21 must be set.

2.9 # SCR

Description: Enter the status of LASS SCR (Selective Call Rejection) feature access.

Software Release: 5E6 and later
Required Field.
Default: UNAVAIL
Valid Entries:

Valid SCR Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.
TEMPUNAVAIL	Feature is temporarily unavailable.

Data Rules:

For Recent Change: Before "GENAVAIL" or "SUBSCR" may be entered, all LASS office parameters on RC view 8.21 must be set.

2.10 # SDA

Description: Enter the status of LASS SDA (Selective Distinctive Alert) feature access.

Software Release: 5E6 and later
Required Field.
Default: UNAVAIL
Valid Entries:

Valid SDA Entries

Entry	Definition
UNAVAIL	Feature is not available for use.
GENAVAIL	Feature is generally available.
LASSDEF	Feature uses the default that was initialized in the AM. If the AM has not been initialized with a value, this enumeration will default to "UNAVAIL". (See SM description.)
SUBSCR	Feature must be purchased, a service order is required for availability.

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TEMPUNAVAIL	Feature is temporarily unavailable.

Data Rules:

For Recent Change: Before "GENAVAIL" or "SUBSCR" may be entered, all LASS office parameters on RC view 8.21 must be set.

---

lassfa 5ESS Switch _
OFFICE DATA ADMINISTRATION
LASS FEATURE ACCESS

*1. SM 001

#2. AC LASSDEF
#3. AR UNAVAIL
#4. COT GENAVAIL
#5. PCP UNAVAIL

Figure 1 SAMPLE LASSFA FORM 5E5 SOFTWARE RELEASE

---

lassfa 5ESS Switch _
OFFICE DATA ADMINISTRATION
LASS FEATURE ACCESS

*1. SM 002

#2. AC LASSDEF
#3. AR UNAVAIL
#4. COT GENAVAIL
#5. PCP UNAVAIL
#6. SCA UNAVAIL
#7. SCF SUBSCR
#8. SCR UNAVAIL
#9. SDA UNAVAIL

Figure 2 SAMPLE LASSFA FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 17: DSL DEFAULT SERVICE FORMS

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SEC. 17A: 5974 RECORD
DSL DEFAULT SERVICE FORM - DFLTSRV

1. GENERAL

The 5974 Record is available with 5E5 and later Software Releases. Default Service allows unknown CPE (Customer Premises Equipment) on a DSL (Digital Subscriber Line) subscribing to Default Service to originate ACSR, BRI Test Line, BRIV (Basic Rate Inferface Verification), Repair (611), Access to 108 Test Line, Business Office (811), and Emergency (911) calls. Terminations to the user will be denied with default service.

A DSL subscribes to Default Service by entering a DFLTSRV group name on a DSL form (5907 Record). A maximum of 255 DFLTSRV forms may be defined for the office.

1.1 Recent Change View

The corresponding Recent Change View for this form is 23.15.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * DFLT SRV

Description: Enter the default service group name. The first character of the DFLT SRV name may not be a slash (/).

The 5ESS Switch software treats the DFLT SRV group name as a BRCS Feature group name and gives it an internal identifier which is transparent to the user. A BFG form (5625 Record) will not be applied.
Valid Entries: 1 - 7 characters

Data Rules:

The DFLT SRV must not match a BFGN defined on a BFG form (5625-1). It must not be
- "ABORT",
- "ACTBFG",
- "CLEANUP",
- "NONTGID",
- "NONE"(for 5E10 and later),
- "SETUP" or
- "TEMP".

2.3 # LCC

Description: Enter the Line Class Code that describes the class-of-service.

Required Field.
Valid Entries: 3 alphanumeric characters

Data Rules:

The combination of LCC and RAX must be defined on an LCC form (5306 Record) where CLASS OF SERVICE is "ISDN", TERMINATING TREATMENT is "INDIV", and LINE SCREENING is "N".

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2.4 # RAX

Description: Enter the rate area number for routing and charging.

Required Field.
Valid Entries:

5E14 and earlier: 1 - 99

5E15 and later: 1 - 999

Data Rules:

The combination of LCC and RAX must be defined on an LCC form (5306 Record) where CLASS OF SERVICE is "ISDN", TERMINATING TREATMENT is "INDIV", and LINE SCREENING is "N".

For 5E15 and later, if RAX is greater than 99, SFID 561 ACT on the SFSYS form (5713-1 Record) must be "Y" (see Division 2, Section 4A561).

2.5 # BILL TN

Description: Enter a TN (Telephone Number) for billing. Enter a valid seven-digit TN if calls are to be billed to a TN within the local office. Enter a valid ten-digit number if calls are to be billed to a TN outside the local office.

The telephone number may be in any of the following formats:

- NXXXXXX - Where NXX is a valid office code defined on the NOC input form.
- NPANXXXXXX - Any ten digit number is acceptable, however normal expected values are valid NPA and NXX codes.
- ZXXXXXX - Where Z is 0 or 1. This is normally used for OUTWATS billing purposes.

Required Field.
Valid Entries: 7 or 10 digits

2.6 USE CNT

Description: This field represents the number of users this default service has. It is a Recent Change/Verify Only field.

```
dfltsrv                5ESS Switch
(5974)              OFFICE DATA ADMINISTRATION
                    DSL DEFAULT SERVICE

*1. DFLT SRV  _______
#2. LCC       ___
#3. RAX       ___
#4. BILL TN   __________
   USE CNT
```

Figure 1 SAMPLE DFLTSRV FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 18: LASS SELECTIVE CALL ACCEPTANCE FORMS

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SEC. 18A: 5975 RECORD
LASS SELECTIVE CALL ACCEPTANCE FEATURE DEFINITION RECORD - LSCAFD

1. GENERAL

This form is available with 5E6 and later Software Releases. It allows a business or residential subscriber the ability to only accept calls from a user-defined list of TNs. When the SCA (Selective Call Appearance) feature is activated, all calls terminating to the user will be screened. The TNs that fail LASS (Local Area Signaling Serivces) SCA screening will be routed to an announcement or forwarded to a customer changeable TN.

The screen list can be created, activated or deactivated during a user's SLE (Screen List Editing) session. An SLE session, which is accessed by dial code, enables the user to add or update the TN list, to change the NAT (Non-Acceptance Treatment), or to activate/deactivate the feature.

A feature button may be assigned to the user, but it will only provide toggle activation/deactivation capabilities.

This feature may be provided for:

- intraswitch calls.
- interswitch calls provided there is CCS7 or Primary Rate Interface connectivity between the originating and terminating offices.

Either this feature or a CAR (Computer Access Restriction) feature defined on the LSCARFD form may be assigned to a user. Only one SCA/CAR feature may be assigned to a line.

The line (defined on a LINE, DSLUSR or MLHLN form) this feature is assigned to must have a CLASS OF SERVICE of "INDIV", "4WINDIV", "ISDN", or "PBX" assigned on the associated LCC form (5306 Record).

For more information on LSF (LASS Selective Features), refer to Division 2, Section 1Z.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.55.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the SCA Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment as necessary.
Valid Entries: up to 32 characters

2.4 AMA REC

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Description: Is the type of billing to be performed usage sensitive?

An entry of "Y" means billing will be usage-sensitive and an AMA (Automatic Message Accounting) record will be created.

An entry of "N" means billing will be done on a flat-rate basis with no AMA record created.

Required Field.
Default: N
Valid Entries: Y, N

ESS 5975(01)TG-5 LASS SELECTIVE CALL ACCEPTANCE FEATURE DATE _____

DEFINITION RECORD

LSCAFD 5ESS SWITCH

12.55

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	AMA REC
/SA*	SCA WILDCARD FEATURE	Y
/SCAFR	SCA WITH FLAT RATE BILLING	N
/SCAGA	SCA GENERAL AVAILABLE FEATURE	Y

Figure 1 PRECONSTRUCTED SELECTIVE CALL ACCEPTANCE FEATURES

---

lscafd 5ESS Switch _
(5975) OFFICE DATA ADMINISTRATION
SELECTIVE CALL ACCEPTANCE FEATURE DEFINITION

* 2. FEATURE /SCAFR 3. REMARKS SCA WITH FLAT RATE BILLING

========== FEATURE OPTIONS ==========

4. AMA REC N

Figure 2 SAMPLE LSCAFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 19: LASS SELECTIVE CALL FORWARDING FORMS

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SEC. 19A: 5976 RECORD
LASS SELECTIVE CALL FORWARDING
FEATURE DEFINITION RECORD - LSCFFD

1. GENERAL

This form is available with 5E6 and later Software Releases. It allows a business or residential subscriber the ability to forward incoming calls where the CPN (Calling Party Number) matches a TN (Telephone Number) in a user-defined list of TNs. The TNs that fail LASS (Local Area Signaling Services) SCF (Selective Call Forwarding) screening will be forwarded to a customer-changeable TN.

The screen list can be created, activated or deactivated during a user's SLE (Screen List Editing) session. An SLE session, which is accessed by dial code, enables the user to add or update the TN list, to change the forward to DN or to activate/deactivate the feature.

A feature button may be assigned to the user but it will only provide toggle activation/deactivation capabilities.

This feature may be provided for intraswitch calls and for interswitch calls provided there is CCS7 (Common Channel Signaling 7) connectivity or PRI (Primary Rate Interface) connectivity between the originating and terminating offices.

The line (defined on a LINE, DSLUSR or MLHLN form) to which this feature is assigned must have a CLASS OF SERVICE of "INDIV", "4WINDIV", "ISDN" or "PBX" assigned on the associated LCC form (5306 Record).

For more information on LSF (LASS Selective Features), refer to Division 2, Section 1Z.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.56.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the SCF Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA (Office Database Adminstrator) database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following field defines the feature option.

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2.4 AMA REC

Description: Will billing be performed on a usage-sensitive basis, and will an AMA (Automatic Message Accounting) record be created?

If the SCF (Selective Call Forwarding) feature is generally available, then billing can be done on a flat rate or usage-sensitive basis according to how the subscribing user prefers to be billed.

If this field is equal to "N", billing will be done on a flat-rate basis with no AMA record created.

Required Field.
Default: N
Valid Entries: Y, N

DEFAULT PARAMETERS

The following field defines the default parameter.

2.5 BSRING

Description: Will a base station reminder ringing (Ping Ring) be provided?

Required Field.
Default: Y
Valid Entries: Y, N

ESS 5976(01)TG-5 LASS SELECTIVE CALL FORWARDING FEATURE DATE _____
DEFINITION RECORD
LSCFFD 5ESS SWITCH
12.56
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	AMA REC	BSRING	REMARKS
/SCFFR	N	N	SCF WITH FLAT RATE BILLING
/SCFFRR	N	Y	SCF WITH FLAT RATE AND PING RING
/SCFGA	Y	Y	SCF GENERALLY AVAILABLE FEATURE
/SCFUS	Y	N	SCF WITH USAGE SENSITIVE BILLING
/SF*	Y	Y	SCF WILDCARD FEATURE

Figure 1 PRECONSTRUCTED LASS SCF FEATURES

lscffd 5ESS Switch _
(5976) OFFICE DATA ADMINISTRATION
SELECTIVE CALL FORWARDING FEATURE DEFINITION

* 2. FEATURE /SCFFRR 3. REMARKS SCF WITH FLAT RATE AND PING RING

========== FEATURE OPTIONS ==========

4. AMA REC N
========== DEFAULT PARAMETERS ==========

5. BSRING Y

Figure 2 SAMPLE LSCFFD FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 20: LASS SELECTIVE CALL REJECTION FORMS

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SEC. 20A: 5977 RECORD
LASS SELECTIVE CALL REJECTION
FEATURE DEFINITION RECORD - LSCRFD

1. GENERAL

This form is available with 5E6 and later Software Releases. It allows a business or residential subscriber the ability to only reject calls from a user-defined list of TNs (Telephone Numbers). When the feature is activated, all calls terminating to the user will be screened. The TNs that fail LASS (Local Area Signaling Services) SCR (Selective Call Rejection) screening will be routed to either a gentle or harsh announcement.

The screen list can be created, activated or deactivated during a users SLE (Screen List Editing) session. An SLE session, which is accessed by dial code, enables the user to update the TN list or to activate/deactivate the feature.

A feature button may be assigned to the user but it will only provide toggle activation/deactivation capabilities.

This feature may be provided for intraswitch calls and for interswitch calls provided there is CCS7 (Common Channel Signaling 7) connectivity or PRI (Primary Rate Interface) connectivity between the originating and terminating offices.

The line (defined on a LINE, DSLUSR or MLHLN form) to which this feature is assigned must have a CLASS OF SERVICE of "INDIV", "4WINDIV", "ISDN" or "PBX" assigned on the associated LCC form (5306 Record).

For more information on LSF (LASS Selective Features), refer to Division 2, Section 1Z.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.57.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the SCR Feature name. There are no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 characters

2.4 AMA REC

Description: Will billing be usage-sensitive, and will an AMA record be created?

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If the SCR feature is generally available, then billing can be done on a flat rate or usage-sensitive basis according to how the subscribing user prefers to be billed.

If this field is "Y", billing will be usage-sensitive and an AMA record will be created. If this field is "N", billing will be done on a flat-rate basis with no AMA record created.

Required Field.
Default: N
Valid Entries: Y, N

2.5 HARSH TRMT

Description: Should a harsh announcement be provided to the calling party after failing LASS Selective Call Rejection screening? If this field is "N", a gentle announcement will be provided.

The route indexes for harsh and gentle announcements are assigned on the LASSOP form (5945 Record).

Required Field.
Default: N
Valid Entries: Y, N

ESS 5977(01)TG-5 LASS SELECTIVE CALL REJECTION FEATURE DATE _____

DEFINITION RECORD

LSCRFD 5ESS SWITCH

12.57

BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	AMA REC	HAR SH TR MT	REMARKS
/SCRFRG	N	N	SCR WITH FLAT RATE, GENTLE ANNC
/SCRFRH	N	Y	SCR WITH FLAT RATE, HARSH ANNC
/SCRGA	Y	N	SCR GA WITH GENTLE ANNOUNCEMENT
/SCRUSH	Y	Y	SCR GA WITH USAGE SENSITIVE, HARSH
/SJ*	Y	N	SCR WILDCARD FEATURE

Figure 1 PRECONSTRUCTED SCR FEATURES

---

lscrfd 5ESS Switch _
(5977) OFFICE DATA ADMINISTRATION
SELECTIVE CALL REJECTION FEATURE DEFINITION

* 2. FEATURE /SCRFRH 3. REMARKS SCR WITH FLAT RATE: HARSH ANNC:

========== FEATURE OPTIONS ==========
4. AMA REC N

========== DEFAULT PARAMETERS ==========

5. HARSH TRMT Y

Figure 2 SAMPLE LSCRFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 21: LASS SELECTIVE DISTINCTIVE ALERT FORMS

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SEC. 21A: 5978 RECORD
LASS SELECTIVE DISTINCTIVE ALERT
FEATURE DEFINITION RECORD - LSDAFD

1. GENERAL

This form is available with 5E6 and later Software Releases. It allows a business or residential subscriber the ability to provide distinctive ringing for incoming calls where the CPN (Calling Party Number) matches a TN(Telephone Numbers) on the user-defined list of TNs.

The screen list can be created, activated or deactivated during a users SLE (Screen List Editing) session. An SLE session, which is accessed by dial code, enables the user to add or update the TN list or to activate/deactivate the feature.

A feature button may be assigned to the user but it will only provide toggle activation/deactivation capabilities.

This feature may be provided for intraswitch calls and for interswitch calls provided there is CCS7 (Common Channel Signaling 7) connectivity or PRI (Primary Rate Interface) connectivity between the originating and terminating offices.

The line (defined on a LINE, DSLUSR or MLHLN form) to which this feature is assigned must have a CLASS OF SERVICE of "INDIV", "ISDN" or "PBX" assigned on the associated LCC (Line Class Code) form (5306 Record).

For more information on LSF (LASS Selective Features), refer to Division 2, Section 1Z.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.58.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the SDA (Selective Distinctive Alerting) feature name with no restrictions on the valid characters except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA (Office Database Adminstrator)database but may not be deleted, changed or inserted.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment
Valid Entries: 1 - 32 characters

2.4 AMA REC

Description: Will billing be usage-sensitive and will an AMA (Automatic Message Accounting)record be created?

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This field indicates the type of billing to be performed. If the SDA feature is generally available, then billing can be done on a flat rate or usage-sensitive basis according to how the subscribing user prefers to be billed.

If this field is "Y", billing will be usage-sensitive and an AMA record will be created. If this field is "N", billing will be done on a flat-rate basis with no AMA record created.

Required Field.
Default: N
Valid Entries: Y, N

ESS 5978(01)TG-5 LASS SELECTIVE DISTINCTIVE ALERT FEATURE DATE _____
DEFINITION RECORD
LSDAFD 5ESS SWITCH
12.58
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE NAME	AMA REC	REMARKS
/SD*	Y	SDA WILDCARD FEATURE
/SDAFR	N	SDA WITH FLAT RATE BILLING
/SDAGA	Y	SDA GENERAL AVAILABLE FEATURE

Figure 1 PRECONSTRUCTED SDA FEATURES

---

lsdafd 5ESS Switch _
(5978) OFFICE DATA ADMINISTRATION
SELECTIVE DISTINCTIVE ALERT FEATURE DEFINITION

* 2. FEATURE /SDAFR 3. REMARKS SDA WITH FLAT RATE BILLING

========== FEATURE OPTIONS ==========

4. AMA REC N

Figure 2 SAMPLE LSDAFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 22: LASS COMPUTER ACCESS RESTRICTION FORMS

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SEC. 22A: 5979 RECORD
LASS COMPUTER ACCESS RESTRICTION FEATURE DEFINITION RECORD - LSCARFD

1. GENERAL

This form is available with 5E6 and later Software Releases. It allows a business or residential subscriber to restrict the access of calling parties to the customer's computer. This provides the customer control over who can access the computer. CAR (Computer Access Restriction) allows the user to create a list of TNs which will be screened when the feature is active. The TNs that fail LASS (Local Area Signaling Services) CAR screening will be routed to an announcement or forwarded to a customer changeable TN.

The screen list can be created, activated or deactivated during a user's SLE (Screen List Editing) session. An SLE session, which is accessed by dial code, enables the user to add or update the TN list, to change the NAT (Non-Acceptance Treatment), or to activate/deactivate the feature.

A feature button may be assigned to the user but it will only provide toggle activation/deactivation capabilities.

This feature may be provided for:

- intraswitch calls.
- interswitch calls, provided there is CCS7 connectivity or Primary Rate Interface connectivity between the originating and terminating offices.

Either this feature or the SCA (Selective Call Acceptance) feature found on the LSCAFD form may be assigned to a user. Only one SCA/CAR feature may be assigned to a line.

The line (defined on a LINE, DSLUSR or MLHLN form) this feature is assigned to must have a CLASS OF SERVICE of "INDIV", "4WINDIV", "ISDN", or "PBX" assigned on the associated LCC form (5306 Record).

This feature is not available on a Generally Available basis.

For more information on LSF (LASS Selective Features), refer to Division 2, Section 1Z.

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.54.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the CAR Feature name. There are no restrictions on the valid characters, except that feature names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be deleted, changed, or inserted.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment as necessary.

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Valid Entries: up to 32 characters

2.4 AMA REC

Description: Is the type of billing to be performed usage sensitive?

An entry of "Y" means billing will be usage-sensitive and an AMA (Automatic Message Accounting) record will be created.

An entry of "N" means billing will be done on a flat-rate basis with no AMA record created.

Required Field.

Default Value: N
Valid Entries: Y, N

ESS 5979(01)TG-5 LASS COMPUTER ACCESS RESTRICTION FEATURE DATE _____
DEFINITION RECORD
LSCARFD 5ESS SWITCH
12.54
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	AMA REC
/CARFR	CAR WITH FLAT RATE BILLING	N
/CARUS	CAR WITH USAGE SENSITIVE BILLING	Y

Figure 1 PRECONSTRUCTED COMPUTER ACCESS RESTRICTION FEATURES

---

lscarfd 5ESS Switch _
(5979) OFFICE DATA ADMINISTRATION
COMPUTER ACCESS RESTRICTION FEATURE DEFINITION

* 2. FEATURE /CARFR 3. REMARKS CAR WITH FLAT RATE BILLING

========== FEATURE OPTIONS ==========

4. AMA REC N

Figure 2 SAMPLE LSCARFD FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 23: DISPLAY MESSAGE FORMS

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SEC. 23A: 5980 RECORD
DISPLAY MESSAGE RECORD - DISPMSG

1. GENERAL

The 5980 Record is available with 5E6 and later Software Releases. This record defines all of the ISDN display messages that will be displayed on the user's ISDN terminal for LASS (Local Area Signaling Services) features. These display messages are used by call processing when the customer using the LASS feature has an ISDN terminal with display capability. For more information on LASS Features, refer to Division 2, Section 1Y and Division 2, Section 1Z.

1.1 Default Input Data

With 5E6 and later Software Releases, a default set of input Displays are available for LASS features.

- ***NOTE:*** For 5E7 and later, if FEATURE ID 536 is activated on RC View 8.22, SLE displays marked as "5E7 and later" and SLE displays marked with an asterisk are supplied to the end user from Figure 2. When FEATURE ID 536 is active, pack position 2 on the EQRAP form (5822 Record) must have the MC5D143A30, L23 pack installed.

1.2 Recent Change View

The corresponding Recent Change View is 8.65.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * DISP TYPE

Description: Enter the feature that is going to receive the displays.

Software Release: 5E7 and later
Valid Entries:

Valid DISP TYPE Entries

Entry	Definition
AC	LASS Automatic Callback
COT	LASS Customer Originated Trace
INSP	Inspect LASS feature display messages
SLE	LASS Screen List Editing features

2.3 * DISP ID

Description: This field is used to uniquely define an ISDN display message. Figures 1 and 2 show the standard set of input data that is provided for this form.

Valid DISP ID Entries - 5E7 and later

Entry	Definition
1 - 5	DISP TYPE of "AC"
1 - 6	DISP TYPE of "COT"
1 - 12	Software Release: 5E9(2) and earlier. DISP TYPE of "INSP"
1 - 15	Software Release: 5E10 and later. DISP TYPE of "INSP"
1 - 189	DISP TYPE of "SLE"

2.4 MESSAGE

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Description: Enter a 1 to 40 character message that will be displayed to an ISDN user during a LASS SLE session. If a TN is to be displayed along with the message, the '~' character must be entered to represent the TN or the number of entries in the Screening List.
Valid Entries: 1 to 40 characters

Data Rules:

The user must have CLASS OF SERVICE with a value of "ISDN" assigned on the LCC Form (5306 Record). Also, the associated DSLUSR form must have the DISPLAY field set to "Y", indicating the terminal has display capabilities.

AC (Automatic Callback):
If DISP TYPE is "AC", DISP ID 2 must have a message with 31 or less characters if TN is a ten-digit number, or 29 or less characters if TN is a twelve-digit number.

COT (Customer Originated Call Trace):
If DISP TYPE is "COT", DISP ID 1 must have a message with 29 or less characters.

INSP (Inspect):
For 5E10 and later, if SFID ACT 225 on the SFSYS form is "Y", indicating National ISDN -3 features are activated, then MESSAGE on the DISPMSG form with keys of DISP TYPE equal "INSP" and DISP ID of 006 should read: "Activate/deactivate ID Features". This data rule supports the National ISDN - 3 Calling Name for BRI feature. For more information on this feature, see Division 2, Section 1AM on provisioning National ISDN features.

SLE (Screen List Editing):
If DISP TYPE is "SLE":

- DISP IDs, 150, 152, 155, 157, 171, 172, 173, 174, 175, and 176 must have a message with 39 or less characters.
- DISP IDs 116, 118, 119, 122, 135, 136, 137, 163 and 164 must have a message with 23 or less characters.

DISP TYPE	DISP ID	MESSAGE	Software Release
AC	001	To call last number, dial 1 now.	5E7 and later
AC	002	To call ~, dial 1 now.	5E7 and later
AC	003	To call ~, dial 1 now.	5E7 and later
AC	004	Dial 1 to call back otherwise hang up.	5E7 and later
AC	005	Please consult your written instructions	5E7 and later
COT	001	Call ~ for official follow-up	5E7 and later
COT	002	Contact authorities for follow-up.	5E7 and later
COT	003	Unable to trace call number unavailable	5E7 and later
COT	004	Temporarily unable to trace calls	5E7 and later
COT	005	Dial 1 to trace call, or else hang up.	5E7 and later
COT	006	Please consult your written instructions	5E7 and later
INSP	001	Redial last outgoing call	5E7 and later
INSP	002	Cancel - redial last outgoing call(s)	5E7 and later
INSP	003	Return last incoming call	5E7 and later
INSP	004	Cancel - return last incoming call(s)	5E7 and later
INSP	005	Customer originated trace	5E7 and later
INSP	006	Calling number display on/off	5E7 and later
INSP	007	Privacy on/off	5E7 and later
INSP	008	Computer access restriction on/off	5E7 and later
INSP	009	Selective call acceptance on/off	5E7 and later
INSP	010	Selective call forwarding on/off	5E7 and later
INSP	011	Selective call rejection on/off	5E7 and later
INSP	012	Selective distinctive alert on/off	5E7 and later
INSP	013	Activate name status toggle	5E10 and later.
INSP	014	Activate name & number private	5E10 and later.
INSP	015	Activate name & number public	5E10 and later.

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SLE	001	Sorry, try adding number again later.	5E6 and later
SLE	002	Add:	5E6 and later
SLE	003	Add:	5E6 and later
SLE	004	Number already on list. ext ~	5E6 and later
SLE	005	Number already on list. Private.	5E6 and later
SLE	006	Number already on list. ~	5E6 and later
SLE	007	Sorry, invalid number dialed.	5E6 and later
SLE	008	Sorry, invalid command dialed.	5E6 and later
SLE	009	Sorry, invalid number dialed.	5E6 and later
SLE	010	Sorry, invalid number dialed.	5E6 and later
SLE	011	Digits cleared. Please start again.	5E6 and later
SLE	012	CAR is on. Forwarding to: ~	5E6 and later
SLE	013	CAR is on. Recording selected.	*5E6 and later
SLE	014	CAR is off.	*5E6 and later
SLE	015	CAR is on.	*5E6 and later
SLE	016	Unaccepted callers will hear a recording	*5E6 and later
SLE	017	Please continue, or dial 0 for help.	5E6 and later
SLE	018	No entries on list.	5E6 and later
SLE	019	Please start again.	5E6 and later
SLE	020	Dial forward-to number:	5E6 and later
SLE	021	Dial forward-to number:	5E6 and later
SLE	022	Dial forward-to number:	5E6 and later
SLE	023	Sorry, no entries on list.	5E6 and later
SLE	024	End of list.	5E6 and later
SLE	025	Ext ~ added.	*5E6 and later
SLE	026	Ext ~ removed.	*5E6 and later
SLE	027	Unaccepted calls forward to: ~	5E6 and later
SLE	028	Unaccepted calls forward to: ~	5E6 and later
SLE	029	Calls forwarded to: ~	5E6 and later
SLE	030	Please hang up now and try again later.	*5E6 and later
SLE	031	Sorry, the number dialed is incorrect.	5E6 and later
SLE	032	# to add, * to remove, 0 instruction.	5E6 and later
SLE	033	08 to remove all, 09 to remove private.	5E6 and later
SLE	034	08 to remove all, 09 to remove private.	5E6 and later
SLE	035	Sorry, service interrupted.	*5E6 and later
SLE	036	Sorry, list full.	5E6 and later
SLE	037	Add entries to your list.	5E6 and later
SLE	038	Dial 1 for recording or 0 to forward.	*5E6 and later
SLE	039	Dial 1 for recording or 0 to forward.	*5E6 and later
SLE	040	No entries on list.	5E6 and later
SLE	041	Sorry, number is not available now.	5E6 and later
SLE	042	Sorry, no entries on your list.	5E6 and later
SLE	043	Private entries removed.	*5E6 and later
SLE	044	Number not listed. ~	5E6 and later
SLE	045	Number not listed.	5E6 and later
SLE	046	Number not listed. ext ~	5E6 and later
SLE	047	The number added is a private entry.	*5E6 and later
SLE	048	1 entry on list.	5E6 and later
SLE	049	~ entries on list.	5E6 and later
SLE	050	1 entry. Please start again.	5E6 and later
SLE	051	~ entries. Please start again.	5E6 and later
SLE	052	The number removed is a private entry.	*5E6 and later
SLE	053	~ added.	*5E6 and later
SLE	054	1 entry on list.	5E6 and later
SLE	055	~ entries on list.	5E6 and later
SLE	056	1 entry on list.	5E6 and later
SLE	057	~ entries on list.	5E6 and later
SLE	058	~ removed.	*5E6 and later
SLE	059	Dial 1 for recording or 0 to forward.	*5E6 and later
SLE	060	Dial 1 for recording or 0 to forward.	*5E6 and later
SLE	061	First entry: ~	*5E6 and later
SLE	062	First entry: ext ~	*5E6 and later
SLE	063	Next: ~	*5E6 and later
SLE	064	Next: ext ~	*5E6 and later
SLE	065	To reject last caller, dial # 01 #.	5E6 and later
SLE	066	Remove:	5E6 and later
SLE	067	Remove:	5E6 and later
SLE	068	SCA is on. Forwarding to: ~	5E6 and later
SLE	069	SCA is on. Recording selected.	*5E6 and later
SLE	070	SCA is off.	*5E6 and later
SLE	071	SCA is on.	*5E6 and later
SLE	072	Unaccepted callers will hear a recording	*5E6 and later
SLE	073	SCF is on. Forwarding to: ~	*5E6 and later
SLE	074	SCF is off.	*5E6 and later
SLE	075	SCF is on.	*5E6 and later

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SLE	076	SCR is off.	*5E6 and later
SLE	077	SCR is on.	*5E6 and later
SLE	078	SDA is off.	*5E6 and later
SLE	079	SDA is on.	*5E6 and later
SLE	080	Sorry, too few digits.	5E6 and later
SLE	081	Sorry, too many digits.	5E6 and later
SLE	082	~ entries on list.	5E6 and later
SLE	083	~ entries on list.	5E6 and later
SLE	084	~ private entries on list.	5E6 and later
SLE	085	~ entries on list.	5E6 and later
SLE	086	~ entries on list.	5E6 and later
SLE	087	~ private entries on list.	5E6 and later
SLE	088	To turn service off, dial 3.	5E6 and later
SLE	089	To turn service on, dial 3.	5E6 and later
SLE	090	Sorry, the number is not available.	5E6 and later
SLE	091	Computer Access Restriction	5E6 and later
SLE	092	Selective Call Acceptance	5E6 and later
SLE	093	Selective Call Forwarding	5E6 and later
SLE	094	Add:	5E6 and later
SLE	095	Add:	5E6 and later
SLE	096	Please start again.	5E6 and later
SLE	097	12 to add, 11 to remove, 0 instruction.	5E6 and later
SLE	098	Add entries to your list.	5E6 and later
SLE	099	Digits cleared	*5E6 and later
SLE	100	To reject last caller, dial 12 01.	5E6 and later
SLE	101	Remove:	5E6 and later
SLE	102	Remove:	5E6 and later
SLE	103	Store treatment for unaccepted callers.	*5E6 and later
SLE	104	Store forward-to number.	*5E6 and later
SLE	105	Spare - see DISP TYPE INSP, DISP ID 8	5E6 and later
SLE	106	Spare - see DISP TYPE INSP, DISP ID 9	5E6 and later
SLE	107	Spare - see DISP TYPE INSP, DISP ID 10	5E6 and later
SLE	108	Spare - see DISP TYPE INSP, DISP ID 11	5E6 and later
SLE	109	Spare - see DISP TYPE INSP, DISP ID 12	5E6 and later
SLE	110	Sorry, try adding number again later.	5E7 and later
SLE	111	Sorry, try adding number again later.	5E7 and later
SLE	112	Please dial a number, then #.	5E7 and later
SLE	113	Number already on list. ext ~	5E7 and later
SLE	114	Number already on list. Private.	5E7 and later
SLE	115	Number already on list. ~	5E7 and later
SLE	116	Sorry, ~ not permitted.	5E7 and later
SLE	117	Sorry, invalid command dialed.	5E7 and later
SLE	118	Sorry, ~ not permitted.	5E7 and later
SLE	119	Sorry, ~ not permitted.	5E7 and later
SLE	120	Digits cleared.	5E7 and later
SLE	121	Digits cleared.	5E7 and later
SLE	122	CAR on. Forward to: ~	5E7 and later
SLE	123	Please continue, or dial 0 for help.	5E7 and later
SLE	124	Please continue, or dial 0 for help.	5E7 and later
SLE	125	No more entries on your list.	5E7 and later
SLE	126	Please start again.	5E7 and later
SLE	127	Dial forward-to number:	5E7 and later
SLE	128	Dial forward-to number:	5E7 and later
SLE	129	Dial forward-to number:	5E7 and later
SLE	130	Sorry, no entries on your list.	5E7 and later
SLE	131	Your list is now empty.	5E7 and later
SLE	132	End of your list.	5E7 and later
SLE	133	Ext ~ added.	5E7 and later
SLE	134	Ext ~ removed.	5E7 and later
SLE	135	Calls forwarded to: ~	5E7 and later
SLE	136	Calls forwarded to: ~	5E7 and later
SLE	137	Calls forwarded to: ~	5E7 and later
SLE	138	Sorry, the number dialed is incorrect.	5E7 and later
SLE	139	Sorry, the number dialed is incorrect.	5E7 and later
SLE	140	3 to turn off, # to add, * to remove.	5E7 and later
SLE	141	3 to turn on, # to add	5E7 and later
SLE	142	Sorry, your list is full.	5E7 and later
SLE	143	Add an entry to your list.	5E7 and later
SLE	144	No entries on your list.	5E7 and later
SLE	145	Sorry, number is not available.	5E7 and later
SLE	146	Sorry, number is not available.	5E7 and later
SLE	147	Number not on your list.	5E7 and later
SLE	148	The number added is a private entry.	5E7 and later
SLE	149	One entry on your list.	5E7 and later
SLE	150	~ entries on your list.	5E7 and later

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SLE	151	One entry on your list.	5E7 and later
SLE	152	~ entries on your list.	5E7 and later
SLE	153	~ added.	5E7 and later
SLE	154	One entry on your list.	5E7 and later
SLE	155	~ entries on your list.	5E7 and later
SLE	156	One entry on your list. 0,7 to remove.	5E7 and later
SLE	157	~ entries on your list. 0,7 to remove.	5E7 and later
SLE	158	~ removed.	5E7 and later
SLE	159	Repeating: ~	5E7 and later
SLE	160	Repeating: ext ~	5E7 and later
SLE	161	To reject last caller, dial # 0,1 #.	5E7 and later
SLE	162	Remove one or more entries.	5E7 and later
SLE	163	SCA on. Forward to: ~	5E7 and later
SLE	164	SCF on. Forward to: ~	5E7 and later
SLE	165	Please start again, or dial 0 for help	5E7 and later
SLE	166	Please start again, or dial 0 for help	5E7 and later
SLE	167	Sorry, too few digits	5E7 and later
SLE	168	Sorry, too few digits	5E7 and later
SLE	169	Sorry, too many digits	5E7 and later
SLE	170	Sorry, too many digits	5E7 and later
SLE	171	~ entries on your list	5E7 and later
SLE	172	~ entries on your list	5E7 and later
SLE	173	~ entries on your list	5E7 and later
SLE	174	~ entries on your list. 0,7 to remove	5E7 and later
SLE	175	~ entries on your list. 0,7 to remove	5E7 and later
SLE	176	~ entries on your list. 0,7 to remove	5E7 and later
SLE	177	Please try other options	5E7 and later
SLE	178	Sorry, the number is not available	5E7 and later
SLE	179	Sorry, the number is not available	5E7 and later
SLE	180	Please dial a number	5E7 and later
SLE	181	Please start again	5E7 and later
SLE	182	Dial forward-to number	5E7 and later
SLE	183	Dial forward-to number	5E7 and later
SLE	184	Dial forward-to number	5E7 and later
SLE	185	3 to turn off, 1,2 to add, 1,1 to remov	5E7 and later
SLE	186	3 to turn on, 1,2 to add, 1,1 to remove	5E7 and later
SLE	187	Add an entry to your list	5E7 and later
SLE	188	To reject last caller, dial 1,2 then 0, 5E7 and later	
SLE	189	Remove one or more entries	5E7 and later

Figure 1 DEFAULT INPUT DATA PROVIDED BY ODA

5ESS Switch
dispmsg OFFICE DATA ADMINISTRATION
(5980) DISPLAY MESSAGE

*1. DISP TYPE SLE
*2. DISP ID 124
#3. MESSAGE Continue or dial 0 for help.

Figure 2 SAMPLE DISPMSG FORM 5E7 AND LATER SOFTWARE RELEASES

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SEC. 24: LASS SELECTIVE FEATURE SCREENING

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SEC. 24A: 5981 RECORD
LASS SELECTIVE FEATURE SCREENING LIST RECORD - LSSLE

1. GENERAL

This form is available with 5E6 and later Software Releases. It allows the operating company to define initial Screen List information (e.g., LASS Screen List TNs, Non-Acceptance Treatments for a particular user (line or multi-line hunt terminal)). This form is usually used during a retrofit , but it may be used by the operating company to set up a customer's Screening Lists if the information is known in advance.

For more information on LASS features, refer to Division 2, Section 1Z.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.48.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 (*) TN

Description: Enter the telephone number of the LSF (LASS Selective Feature) user.
Valid Entries:
- For 5E11 and earlier: 7 digits
- For 5E12 and later: XXXXXXX or NXXXXXXXXX where N is 2 - 9 and X is 0 - 9

Data Rules:

Either this field or the MLHG/TERM fields must be entered.

If the TN entered here is a Secondary Only TN defined on the SHTN form (5902 Record), the feature must be assigned to the line by subscription (not as a Generally Available feature) via a LINEFA, BFG or CLUSTR form.

For 5E12 and later, TN/FEATURE combinations on different LSSLE forms can not be duplicated.

For 5E12 and later, if the first 3 digits of the 7-digit TNs on the LSSLE form are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, the 7-digit TN(s) must be a 10-digit TN with the NPA/OFFICE CODE defined on the NOC form.

2.3 (*) MLHG

Description: Enter the Multi-Line Hunt Group number.
Valid Entries:
- For 5E14 and earlier: 1 - 2000
- For 5E15 and later: Blank or 1 - 8191

Data Rules:

Either the MLHG/TERM fields or the TN field must be entered.

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2.4 (*) TERM

Description: Enter the Multi-Line Hunt Group terminal number.
Valid Entries: 1 - 2047

Data Rules:

Either the MLHG/TERM fields or the TN field must be entered.

If this field has a value greater than 1, the associated TN must be defined on an MLHLN, DSLUSR or MULTITN form with the NONHUNT field set to "Y".

2.5 * FEATURE

Description: Enter the feature name of the LASS Selective Feature (i.e., SCA, CAR, SCR, SCF, or SDA).

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

If the MLHG/TERM fields are entered, the feature must be assigned to the Multi-Line Hunt Line via the MLHLNFA form (5113 Record). Otherwise, the feature must be assigned as a generally available feature on the LASSOP form, or it must be assigned on a subscription basis to the line via the LINEFA, BFG or CLUSTR form.

The TN or MLHG/TERM must not have more than one of the same LASS features assigned to it.

2.6 FEAT TYPE

Description: This field indicates what LSF (LASS Selective Feature) is assigned to the user. This field is a text-only field in ODA. It is a read-only field on RC View 4.48. The possible display values are "SCA" for Selective Call Acceptance, "CAR" for Computer Access Restriction, "SCF" for Selective Call Forwarding, "SCR" for Selective Call Rejection and "SDA" for Selective Distinctive Alert.

2.7 ACC MODE

Description: This field indicates the type of access that is provided to the user. This field is a text-only field in ODA. It is a read-only field on RC View 4.48. The possible display values are "SUBSCR" or "GENAVAIL".

2.8 MAX LST SZE

Description: This field indicates how many TNs may be entered on a Screen List. This field is a text-only field in ODA. It is a read-only field on RC View 4.48. The possible display values are from 3 - 31 and are provided from RC View 8.21.

2.9 NAT

Description: This field indicates the type of Non-Acceptance Treatment that will be provided to the called party after a LASS SLE screening failure. This field applies to SCA and CAR only.

Valid NAT Entries

Entry	Definition
ANNC	Announcement.
FWD	Call Forward.

Data Rules:

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If this field is entered, the corresponding FEATURE must be defined on the LSCAFD form (5975 Record) for SCA or the LSCARFD form (5979 Record) for CAR.

If "ANNC" is entered, a FWDTODN must not be specified.

If "FWD" is entered, a FWDTODN must be specified.

2.10 FWDTODN

Description: This field indicates where the calls will be forwarded for LASS Selective Call Forwarding. This field applies to the SCF and SCA/CAR features.
Valid Entries: 1 - 32 characters (0 - 9, *, #)

Data Rules:

If this field is entered, the corresponding FEATURE must be defined on the LSCAFD form (5975 Record) for SCA, the LSCARFD form (5979 Record) for CAR, or the LSCFFD form (5976 Record) for SCF.

2.11 BSRING

Description: Should the base station ringing (Ping Ring) be provided for forwarded calls?
Valid Entries: Y, N

Data Rules:

If this field is entered, the corresponding FEATURE must be defined on the LSCFFD form (5976 Record).

2.12 HARSH TRMT

Description: Should a harsh announcement be returned to the called party after a LASS SCR screening failure? If "N" is entered, a gentle announcement will be returned.
Valid Entries: Y, N

Data Rules:

If this field is entered, the corresponding FEATURE must be defined on the LSCRFD form (5977 Record) for SCR.

2.13 LST ACT

Description: Is the feature active for this user? This field is a text-only field in ODA, but it may be entered on RC View 4.48. The possible display values are "Y" or "N".

SCREENING LIST ENTRIES (SL)

The following two fields (Section 2.14 - Section 2.15) are used to enter the TNs and their type:

2.14 TN

Description: Enter a 10-digit TN, which will be screened during the activation of a LASS Selective Feature.
Valid Entries: 10 digits

Data Rules:

If this field is entered, the DN TYPE must be entered.

Duplicate TNs may not be entered on the list.

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2.15 DN TYPE

Description: This field indicates what type of TN was entered on the previous field.

Valid DN TYPE Entries

Entry	Definition
DNSEVEN	A 7-digit telephone number.
DNPRIV	A 7- or 10-digit private telephone number.
DNTEN	A 10-digit telephone number.
DNEXT	A 1- to 7-digit extension (not used by ODA or RC/V).
DNNUNXT	10-digit TN for the next extension on the Screening List.
NUEXT	The next extension (1- to 7-digit TN) on the Screening List.

Data Rules:

If this field is entered, the Selective Screening List TN must be entered.

For initial offices, only "DNTEN" and "DNPRIV" may be entered.

For every "NUEXT" entry there must be a "DNNUNXT" entered.

```
SCREENS 1 of 4                5ESS Switch
lssle                  OFFICE DATA ADMINISTRATION
(5981)            LASS SELECTIVE FEATURE SCREENING LIST

(*)1. TN       5106324       8. NAT        FWD
(*)2. MLHG      ____         9. FWDTODN    5106288
(*)3. TERM      ____        10. BSRING     Y
 * 4. FEATURE  LSCF1        11. HARSH TRMT _

     FEAT TYPE               LST ACT
     ACC MODE
     MAX LST SZE
```

```
SCREENS 2 OF 4                5ESS Switch
lssle                  OFFICE DATA ADMINISTRATION
(5981)            LASS SELECTIVE FEATURE SCREENING LIST

                  13. SCREENING LIST ENTRIES (SL)

     TN       DN TYPE          TN       DN TYPE          TN       DN TYPE
1. 7085103233  DNTEN       9. _____________  ________   17. _____________  ________
2. 7085106798  DNTEN      10. _____________  ________    18. _____________  ________
3. 7086264326  DNPRIV     11. _____________  ________    19. _____________  ________
4. _____________  ________  12. _____________  ________   20. _____________  ________
5. _____________  ________  13. _____________  ________   21. _____________  ________
6. _____________  ________  14. _____________  ________   22. _____________  ________
7. _____________  ________  15. _____________  ________   23. _____________  ________
8. _____________  ________  16. _____________  ________   24. _____________  ________
```

```
SCREENS 3 of 4                5ESS Switch
lssle                  OFFICE DATA ADMINISTRATION
(5981)                 LASS SELECTIVE SCREENING LIST
```

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SCREENING LIST ENTRIES (SL)

	TN	DN TYPE		TN	DN TYPE		TN	DN TYPE
25.	_____	_____	33.	_____	_____	41.	_____	_____
26.	_____	_____	34.	_____	_____	42.	_____	_____
27.	_____	_____	35.	_____	_____	43.	_____	_____
28.	_____	_____	36.	_____	_____	44.	_____	_____
29.	_____	_____	37.	_____	_____	45.	_____	_____
30.	_____	_____	38.	_____	_____	46.	_____	_____
31.	_____	_____	39.	_____	_____	47.	_____	_____
32.	_____	_____	40.	_____	_____	48.	_____	_____

SCREENS 4 OF 4 5ESS Switch _
lssle OFFICE DATA ADMINISTRATION
(5981) LASS SELECTIVE FEATURE SCREENING LIST

SCREENING LIST ENTRIES (SL)

	TN	DN TYPE		TN	DN TYPE
49.	_____	_____	57.	_____	_____
50.	_____	_____	58.	_____	_____
51.	_____	_____	59.	_____	_____
52.	_____	_____	60.	_____	_____
53.	_____	_____	61.	_____	_____
54.	_____	_____	62.	_____	_____
55.	_____	_____			
56.	_____	_____			

Figure 1 SAMPLE LSSLE FORM 5E11 AND EARLIER SOFTWARE RELEASES

lssle 5ESS Switch
SCREEN 1 OF 4 OFFICE DATA ADMINISTRATION
(5981) LASS SELECTIVE FEATURE SCREENING LIST

(*)1. TN _____ 8. NAT ____
(*)2. MLHG ____ 9. FWDTODN _____
(*)3. TERM ____ 10. BSRING _
*4. FEATURE _____ 11. HARSH TRMT _

FEAT TYPE ___ LST ACT ___
ACC MODE ___
MAX LST SZE ___

lssle 5ESS Switch
SCREEN 2 OF 4 OFFICE DATA ADMINISTRATION
(5981) LASS SELECTIVE FEATURE SCREENING LIST

13. SCREENING LIST ENTRIES (SL)

ROW	TN	DN TYPE	ROW	TN	DN TYPE	ROW	TN	DN TYPE
1	_____	_____	9	_____	_____	17	_____	_____
2	_____	_____	10	_____	_____	18	_____	_____

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3	_____ _____	11	_____ _____	19	_____ _____
4	_____ _____	12	_____ _____	20	_____ _____
5	_____ _____	13	_____ _____	21	_____ _____
6	_____ _____	14	_____ _____	22	_____ _____
7	_____ _____	15	_____ _____	23	_____ _____
8	_____ _____	16	_____ _____	24	_____ _____

lssle 5ESS Switch
SCREEN 3 OF 4 OFFICE DATA ADMINISTRATION
(5981) LASS SELECTIVE FEATURE SCREENING LIST

13. SCREENING LIST ENTRIES (SL)

ROW	TN	DN TYPE	ROW	TN	DN TYPE	ROW	TN	DN TYPE
25	_____	_____	33	_____	_____	41	_____	_____
26	_____	_____	34	_____	_____	42	_____	_____
27	_____	_____	35	_____	_____	43	_____	_____
28	_____	_____	36	_____	_____	44	_____	_____
29	_____	_____	37	_____	_____	45	_____	_____
30	_____	_____	38	_____	_____	46	_____	_____
31	_____	_____	39	_____	_____	47	_____	_____
32	_____	_____	40	_____	_____	48	_____	_____

lssle 5ESS Switch _
SCREEN 4 OF 4 OFFICE DATA ADMINISTRATION
(5981) LASS SELECTIVE FEATURE SCREENING LIST

13. SCREENING LIST ENTRIES (SL)

ROW	TN	DN TYPE	ROW	TN	DN TYPE
49	_____	_____	57	_____	_____
50	_____	_____	58	_____	_____
51	_____	_____	59	_____	_____
52	_____	_____	60	_____	_____
53	_____	_____	61	_____	_____
54	_____	_____	62	_____	_____
55	_____	_____			
56	_____	_____			

Figure 2 SAMPLE LSSLE FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 25: CALLING PARTY NUMBER/BILLING NUMBER FORMS

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SEC. 25A: 5982 RECORD
CALLING PARTY NUMBER/BILLING NUMBER FEATURE FORM - CPNBNFD

1. GENERAL

The 5982 Record is available in 5E6 and later Software Releases. It is used to define the options associated with the CPN/BN (Calling Party Number/Billing Number) feature. These options include the feature name, method of feature activation or deactivation, feature options, billing options and shared DN options.

Each line or MLHG that uses a CPN/BN feature must have a CPN/BN feature name definition on this form (5982 Record) and a feature assignment on the appropriate LINEFA (5112 Record) or MLHLNFA (5113 Record) form and associated CLUSTR (5600 Record) or BFG forms (5625-1/7 Record). The AC (Authorization Code) on these forms must be set to "N".

1.1 Predefined Features

Certain CPN/BN features are predefined and automatically provided in the ODA database at the time of office registration. These are preconstructed features. Preconstructed feature names all start with a slash (/) and the first character of any feature other than preconstructed features. A list of the preconstructed features is contained in Figure 1.

1.2 ISDN Button Or Dial Codes

When the ACT or DEACT fields on this form are set to "CODE", an ISDN button can be set up or dialed codes can be used to activate or deactivate a CPN/BN feature. When "CODE" is entered on this form, the ACTION field on the Individualized Dialing Plan (IDPDCA form (5601-1/2 Record)) or the Office Dialing Plan (PDIT form (5300-2 Record)) must have an entry of "ACTCPNBN" (activate) or "DCTCPNBN" (deactivate) and either the preconstructed CPN/BN wildcard feature (*/CP) or the specific feature assigned to the TN or MLHG MEMB.

1.3 Line And MLHG Considerations

Each line or MLHG which uses a CPN/BN feature must have a CLASS OF SERVICE of "INDIV", "ISDN" or "ISATND" assigned on an LCC form (5306 Record).

Since an analog line or MLHG cannot use CPN/BN data, a CPN/BN feature assigned to an unshared analog line or MLHG has no functionality. A CPN/BN feature also has no functionality when a SHRD DN is set to "PRIMARY" and is assigned to a shared analog line or MLHG that is primary.

1.4 Recent Change View

The corresponding Recent Change View is 12.52.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * FEATURE

Description: Enter the CPN/BN Feature Name. The Feature Name may be from 1 to 8 characters long with no restrictions on the valid characters, except that Feature Names starting with a slash (/) are reserved for preconstructed features. Preconstructed features may be reviewed in the ODA database but may not be inserted, deleted or changed.

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Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: This field may be used for any descriptive comment which consists of up to 32 alphanumeric, blank or special characters (except the double quote).
Valid Entries: 1 - 32 characters

FEATURE OPTIONS

The following fields (Section 2.4 - Section 2.8) define the options for this feature.

2.4 ACT

Description: This field indicates the activation type for this feature.

Required Field.
Default: AUTO
Valid Entries:

Valid ACT Entries

Entry	Definition
AUTO	This feature is automatically activated.
CODE	This feature can be activated through dialed code or feature buttons.

Data Rules:

When this field is "AUTO", DEACT must have an entry of "NONE".

When this field is "CODE", DEACT must also have an entry of "CODE".

2.5 DEACT

Description: This field indicates the deactivation type for this feature.

Required Field.
Default: NONE
Valid Entries:

Valid DEACT Entries

Entry	Definition
NONE	This feature cannot be deactivated.
CODE	This feature can be deactivated through dialed codes or feature buttons.

2.6 #CPN BN

Description: This field describes the CPN/BN option subscribed to by this feature.

Required Field.

Valid CPN BN Entries

Entry	Definition
CPNONLY	Calling Party Number Only Option
BNONLY	Billing Party Number Only Option
CPNPREF	Calling Party Number Preferred Option
BNPREF	Billing Number Preferred Option

2.7 BILLING

Description: This field describes the type of billing to be used for this CPN/BN feature.

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If "USAGESEN" is selected, a billing record is generated every 24 hours with a count of the number of CPNs and BNs delivered to the user. Also included is a count of the number of CPNs and BNs that could not be delivered because they were either unavailable or private.

If the feature is deactivated, the counts will not be made.

Required Field.
Default: FLATRATE
Valid Entries:

Valid BILLING Entries

Entry	Definition
FLATRATE	Flat rate billing
USAGESEN	Usage-sensative billing

2.8 SHRD DN

Description: This specifies whether CPN/BN data is sent to all terminals sharing a DN or to the primary terminal only.

Required Field.
Default: PRIMARY
Valid Entries:

Valid SHRD DN Entries

Entry	Definition
PRIMARY	Send CPN/BN data to primary terminal only.
ALL	Send CPN/BN data to all terminals sharing the DN.

Data Rules:

This field must be set to "ALL" for any analog shared DN, analog shared TN or analog shared MLHG terminal to use CPN/BN data.

FEATURE	REMARKS	FEATURE OPTIONS				
		ACT	DEACT	CPN/BN	BILLING	SHRD DN
/CP*	CPN/BN Wild Card Feature	CODE	CODE	CPNONLY	FLATRATE	PRIMARY
/CPCOFP	CPN Only, Flat, Prim	AUTO	NONE	CPNONLY	FLATRATE	PRIMARY
/CPCOAFP	CPN Only, Act/deact, Flat, Prim	CODE	CODE	CPNONLY	FLATRATE	PRIMARY
/CPBOFP	BN Only, Flat, Prim	AUTO	NONE	BNONLY	FLATRATE	PRIMARY
/CPBOAFP	BN Only, Act/deact, Flat, Prim	CODE	CODE	BNONLY	FLATRATE	PRIMARY
/CPCPFP	CPN Pref, Flat, Prim	AUTO	NONE	CPNPREF	FLATRATE	PRIMARY
/CPCPAFP	CPN Pref, Act/deact, Flat, Prim	CODE	CODE	CPNPREF	FLATRATE	PRIMARY
/CPBPFP	BN Pref, Flat, Prim	AUTO	NONE	BNPREF	FLATRATE	PRIMARY
/CPBPAFP	BN Pref, Act/deact, Flat, Prim	CODE	CODE	BNPREF	FLATRATE	PRIMARY
/CPCOUP	CPN Only, Usage, Prim	AUTO	NONE	CPNONLY	USAGESEN	PRIMARY
/CPCOAUP	CPN Only, Act/deact, Usage, Prim	CODE	CODE	CPNONLY	USAGESEN	PRIMARY
/CPBOUP	BN Only, Usage, Prim	AUTO	NONE	BNONLY	USAGESEN	PRIMARY
/CPBOAUP	BN Only, Act/deact, Usage, Prim	CODE	CODE	BNONLY	USAGESEN	PRIMARY
/CPCPUP	CPN Pref, Usage, Prim	AUTO	NONE	CPNPREF	USAGESEN	PRIMARY
/CPCPAUP	CPN Pref, Act/deact, Usage, Prim	CODE	CODE	CPNPREF	USAGESEN	PRIMARY
/CPBPUP	BN Pref, Usage, Prim	AUTO	NONE	BNPREF	USAGESEN	PRIMARY
/CPBPAUP	BN Pref, Act/deact, Usage, Prim	CODE	CODE	BNPREF	USAGESEN	PRIMARY
/CPCOFA	CPN Only, Flat, All	AUTO	NONE	CPNONLY	FLATRATE	ALL
/CPCOAFA	CPN Only, Act/deact, Flat, All	CODE	CODE	CPNONLY	FLATRATE	ALL
/CPBOFA	BN Only, Flat, All	AUTO	NONE	BNONLY	FLATRATE	ALL
/CPBOAFA	BN Only, Act/deact, Flat, All	CODE	CODE	BNONLY	FLATRATE	ALL
/CPCPFA	CPN Pref, Flat, All	AUTO	NONE	CPNPREF	FLATRATE	ALL
/CPCPAFA	CPN Pref, Act/deact, Flat, All	CODE	CODE	CPNPREF	FLATRATE	ALL
/CPBPFA	BN Pref, Flat, All	AUTO	NONE	BNPREF	FLATRATE	ALL
/CPBPAFA	BN Pref, Act/deact, Flat, All	CODE	CODE	BNPREF	FLATRATE	ALL
/CPCOUA	CPN Only, Usage, All	AUTO	NONE	CPNONLY	USAGESEN	ALL
/CPCOAUA	CPN Only, Act/deact, Usage, All	CODE	CODE	CPNONLY	USAGESEN	ALL
/CPBOUA	BN Only, Usage, All	AUTO	NONE	BNONLY	USAGESEN	ALL
/CPBOAUA	BN Only, Act/deact, Usage, All	CODE	CODE	BNONLY	USAGESEN	ALL
/CPCPUA	CPN Pref, Usage, All	AUTO	NONE	CPNPREF	USAGESEN	ALL
/CPCPAUA	CPN Pref, Act/deact, Usage, All	CODE	CODE	CPNPREF	USAGESEN	ALL

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/CPBPUA	BN Pref, Usage, All	AUTO	NONE	BNPREF	USAGESEN	ALL
/CPBPAUA	BN Pref, Act/deact, Usage, All	CODE	CODE	BNPREF	USAGESEN	ALL

Figure 1 PRECONSTRUCTED CPN/BN FEATURES

cpnbnfd 5ESS Switch _
(5982) OFFICE DATA ADMINISTRATION
CALLING PARTY NUMBER/BILLING NUMBER FEATURE DEFINITION

*2. FEATURE /CPCOFA 3. REMARKS CPN ONLY, FLAT, ALL

============================== FEATURE OPTIONS ==============================

4. ACT AUTO
5. DEACT NONE
#6. CPN BN CPNONLY
7. BILLING FLATRATE
8. SHRD DN ALL

Figure 2 SAMPLE CPNBNFD FORM 5E6 AND LATER SOFTWARE RELEASE

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SEC. 26: REDIRECTING NUMBER DELIVERY

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SEC. 26A: 5983 RECORD
REDIRECTING NUMBER DELIVERY FORM - RNDFD

1. GENERAL

The 5983 Record is available with 5E8 and later Software Releases. It is used to define feature options associated with the RND (Redirecting Number Delivery) feature.

When a customer assigned an RND feature receives a forwarded call, the first and last forwarded DNs (Directory Numbers) are delivered to the called party.

A line or MLHG (Multi-Line Hunt Group) member may be assigned an RND feature on the appropriate feature assignment form: LINEFA (5112 Record), MLHLNFA (5113 Record), CLUSTR (5600 Record), or BFG (5625).The A field on the feature assignment form must be set to "Y". On the LINE and MLHLNFA forms the M field must also be set to "Y".

Only one RND feature can be assigned per LINEFA or MLHLNFA form.The AC (Authorization Code) on these forms, or on the CLUSTR form, must be set to "N".

The RND feature may not be assigned to trunks via the TRUNKFA (5205 Record) or TKGRPFA form (5206 Record).

1.1 Recent Change View

The corresponding Recent Change View for this form is 12.59.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * FEATURE

Description: Enter the RND feature name. The feature name may not start with a slash (/), which is reserved for preconstructed features.

Required Field.
Valid Entries: 1 - 8 characters

2.3 REMARKS

Description: Enter a descriptive comment.
Valid Entries: 1 - 32 alphanumeric characters

2.4 ACT

Description: This field determines how the feature will be activated. On this form the default and only activation type is "AUTO". An RND feature is automatically active and ready to use when assigned. It cannot be activated by the subscriber.
Default: AUTO
Valid Entries: AUTO

2.5 DEACT

Description: This field determines how the feature will be deactivated. On this form the default and only deactivation type is "NONE". An RND feature cannot be deactivated by the subscriber.

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Default: NONE
Valid Entries: NONE

ESS 5983(4/92)TG-5 REDIRECTING NUMBER DELIVERY DATE _____
FEATURE DEFINITION RECORD
RNDFD 5ESS SWITCH
12.59
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

FEATURE	REMARKS	ACT	DEACT
/RND	NO RND WILD CARD	AUTO	NONE

Figure 1 PRECONSTRUCTED RND FEATURES 5E8 AND LATER SOFTWARE RELEASES

rndfd 5ESS SWITCH _
(5983) OFFICE DATA ADMINISTRATION
REDIRECTING NUMBER DELIVERY FEATURE DEFINITION

*2. FEATURE RND
3. REMARKS _____
ACT AUTO
DEACT NONE

Figure 2 SAMPLE RNDFD FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 27: ATS FEATURE BUTTON SERVICE DESCRIPTION

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SEC. 27A: 5985 RECORD
ATS FEATURE BUTTON SERVICE DESCRIPTION FORM - SRVCDESC

1. GENERAL

The 5985 Record is available with 5E9(1) and later Software Releases, and defines all actions and their service descriptions for ATS (Automatic Terminal Setup). This form is used to override the default service descriptions. Refer to Figure 1.

The ATS feature supports National ISDN 2, downloading certain parameters essential for terminal operation on a National ISDN (standard) BRI upon request from the terminal. This feature minimizes the number of steps the user or installer must take to establish service. ATS minimizes the number of parameters a customer must enter into an ISDN terminal.

Standard default data has been provided by the 5ESS Switch.

For further information about ATS, see Division 2, Section 1AM.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.32.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ACTION

Description: Enter the ATS feature button action ID. For a list of valid entries see Figure 1.

Required Field.

Data Rules:

One and only one SRVCDESC form for each of the ACTIONs in Figure 1 must exist in an office.

2.3 # SERVICE DESC

Description: Enter the ATS Feature Button Action Service Description. There is no lower to upper conversion for characters. In the default data, a text string with all capital letters is for a 5ESS-only feature action, and a text string with mixed upper and lower cases is for a Bellcore-defined feature action; but the customer may overwrite the text string according to local preference. Figure 1 shows the default Service Description for each ACTION.

Required Field.
Valid Entries: 1 - 20 characters

ESS 5985(4/96)TG-5 ATS FEATURE BUTTON SERVICE DESCRIPTION RECORD DATE _____

SRVCDESC 5ESS SWITCH
8.32
BASE_____CONT GR____ 5ESS UNIT _____ PAGE_____

ACTION	SERVICE DESC	SOFTWARE RELEASE
ACBFBP	Call Back	5E9(1) and later
ACCFB	Recall OFF	5E9(1) and later

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ACCTUSE	ACCT CODE	5E9(1) and later
ACUFB	Recall ON	5E9(1) and later
AD1CH	CHG SPEED CALL	5E9(1) and later
AD2CH	CHG SPEED CALL	5E9(1) and later
AD1USE	1-DIGIT SPEED CALL	5E9(1) and later
AD2USE	2-DIGIT SPEED CALL	5E9(1) and later
ANSWER	Answer Back	5E12 and later
ARCFB	CANCEL REDIAL	5E9(1) and later
ARSUSE	AUTO ROUTE SEL	5E9(1) and later
ARS1USE	AUTO ROUTE SEL 1	5E9(1) and later
ARS2USE	AUTO ROUTE SEL 2	5E9(1) and later
ARUFB	REDIAL LAST CALL OUT	5E9(1) and later
ATACTMWI	ACT MSG WAIT INDIC	5E9(1) and later
ATDCTMWI	DEACT MSG WAIT INDIC	5E9(1) and later
ATFACT	DENY DN ACC	5E9(1) and later
ATFDCT	ALLOW DN ACC	5E9(1) and later
ATGACT	DENY DN GRP ACC	5E9(1) and later
ATGDCT	ALLOW DN GRP ACC	5E9(1) and later
ATHUSE	AUTH CODE	5E9(1) and later
AUCUSE	AUTO CALL	5E9(1) and later
AWTUSE	AGGREGATE WORK TIME	5E9(1) and later
BNTOG	CALL FWD ON/OFF	5E9(1) and later
BYGP	GRP MAKE BUSY	5E9(1) and later
BYMB	Make Busy	5E9(1) and later
BYPO	POS MAKE BUSY	5E9(1) and later
BYRB	RANDOM MAKE BUSY	5E9(1) and later
CCL	ANSWER CODE CALL	5E9(1) and later
CFBN	CALL FWD W/FWD TO DN	5E9(1) and later
CLWCUSE	CANCEL LEAVE WRD CLG	5E9(1) and later
CNDFBP	CALLING NUMBER DISP	5E9(1) and later
CNPUSE	Name stat toggle	5E10 and later
CONF	Conference Size 3	5E9(1) and later
COTFBP	CALL TRACE	5E9(1) and later
CPNBNFBT	CALL OR BILL NUMBER	5E9(1) and later
CPQ1	Call Pickup	5E9(1) and later
CPQ2	Call Pickup Group 2	5E9(1) and later
CPQ3	Call Pickup Group 3	5E9(1) and later
CPQ4	Call Pickup Group 4	5E9(1) and later
CTT	CALL THRU TEST	5E9(1) and later
CWDLU	Priority Call	5E9(1) and later
DCTMWI	Message Waiting	5E9(1) and later
DLVRMSG	DELIVER MSG	5E9(1) and later
DNPUSE	Number Delivery	5E9(1) and later
DPARK	Directed Call Park	5E12 and later
DPN	Directed Call Pickup	5E9(1) and later
DPU	Pickup Active Call	5E9(1) and later
DQDUSE	DIR QUERY	5E9(1) and later
DROP	Drop Last Call	5E9(1) and later
DTPOTSA	OUTSIDE LINE	5E9(1) and later
ERCO	EXEC RINGER CUTOFF	5E9(1) and later
FLASH	WCTX WIRELESS FLASH	5E10 and later
I1ICOM	INTERCOM 1	5E9(1) and later
I2ICOM	INTERCOM 2	5E9(1) and later
I3ICOM	INTERCOM 3	5E9(1) and later
I4ICOM	INTERCOM 4	5E9(1) and later
IACOF	DENY LINE ACC-ATND	5E9(1) and later
IBSYVFY	BUSY VERIFY	5E9(1) and later
ICANCEL	CANCEL	5E9(1) and later
ICONF	6-WAY CONF	5E9(1) and later
ICRBL1	ICOM RESTR 1	5E9(1) and later
ICRBL2	ICOM RESTR 2	5E9(1) and later
ICRBL3	ICOM RESTR 3	5E9(1) and later
ICRBL4	ICOM RESTR 4	5E9(1) and later
ICRBL5	ICOM RESTR 5	5E9(1) and later
ICRBL6	ICOM RESTR 6	5E9(1) and later
IDNACT	DN CNTL	5E9(1) and later
IDSS	DIR STN SEL	5E9(1) and later
IDTGS	TRK GRP SEL	5E9(1) and later
IEHGS	EXT 100s GRP SEL	5E9(1) and later
IEMEROVR	EMER OVR	5E9(1) and later
IFRLS	FORCED REL	5E9(1) and later
IGACT	GRP CNTL	5E9(1) and later
IHGS	100s GRP SEL	5E9(1) and later
IHOLD	HOLD	5E9(1) and later
IJOIN	JOIN	5E9(1) and later

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IME	Change Call Privacy	5E9(1) and later
INIGHT	NIGHT SVC	5E9(1) and later
INSUSE	INSPECT	5E9(1) and later
IRLL	REL LOOP	5E9(1) and later
IRLS	REL	5E9(1) and later
ISCCOF	DENY TRK ACC - CUST	5E9(1) and later
ISPLIT	SPLIT	5E9(1) and later
ISTART	START	5E9(1) and later
LQ1DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ2DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ3DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ4DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ5DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ6DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ7DISP	QUEUE STAT HG XXXX	5E9(1) and later
LQ8DISP	QUEUE STAT HG XXXX	5E9(1) and later
LSP	ANSWER PAGE	5E9(1) and later
LWCUSE	LEAVE WORD CALLING	5E9(1) and later
MRDUSE	STRT/END MSG RET DIS	5E9(1) and later
METOG	Change Call Privacy	5E9(1) and later
NNPRV	Name & num private	5E10 and later
NNPUB	Name & num public	5E10 and later
NRMLUSE	NORMAL DISP	5E9(1) and later
NXTMSG	NEXT MSG	5E9(1) and later
NXTSEG	DISPLAY NEXT SEG	5E9(1) and later
PDTEO	EXEC OVR (DT)	5E9(1) and later
PDTF	FLASH (DT)	5E9(1) and later
PDTFO	FLASH OVR (DT)	5E9(1) and later
PDTI	IMMEDIATE (DT)	5E9(1) and later
PDTP	PRIORITY (DT)	5E9(1) and later
PDTR	ROUTINE (DT)	5E9(1) and later
PFUSE	PVT FACILITIES	5E9(1) and later
PODUSE	PRINT ON DEMAND	5E9(1) and later
PNTEO	EXEC OVERRIDE	5E9(1) and later
PNTF	FLASH	5E9(1) and later
PNTFO	FLASH OVERRIDE	5E9(1) and later
PNTI	IMMEDIATE	5E9(1) and later
PNTP	PRIORITY	5E9(1) and later
PNTR	ROUTINE	5E9(1) and later
QCANC	CANCEL QUEUED CALL	5E9(1) and later
QCBUSY	QUEUE BUSY	5E9(1) and later
QCPCWT	PREC CALL WAITING	5E9(1) and later
QCUSE	NUM OF QUEUED CALLS	5E9(1) and later
QCW1L	CALL WAIT THRESH 1	5E9(1) and later
QCW2L	CALL WAIT THRESH 2	5E9(1) and later
QCW3L	CALL WAIT THRESH 3	5E9(1) and later
QCWARN	QUEUE WARNING	5E9(1) and later
QCWT	CALL WAITING	5E9(1) and later
QCWW	CALL WAITING WARNING	5E9(1) and later
SCAFB	SEL CALL ACCEPT	5E9(1) and later
SCFFB	SEL CALL FORWARD	5E9(1) and later
SCRFB	SEL CALL REJECT	5E9(1) and later
SDAFB	DISTINCT ALERT	5E9(1) and later
SDNUSE	ACCESS PVT NTWK	5E9(1) and later
STPH	Stop Hunt	5E9(1) and later
TCUSE	OFFERED LOAD STATS	5E9(1) and later
TODUSE	TIME & DATE	5E9(1) and later
TOGDCT	Call Forward	5E9(1) and later
TRKUSE	TRUNK GRP ID	5E9(1) and later
TSM	BUSY LAMP FIELD	5E12 and later
XFER	Call Transfer	5E9(1) and later

Figure 1 STANDARD DEFAULT DATA 5E9(1) AND LATER SOFTWARE RELEASES

---

srvcdesc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5985) ATS FEATURE BUTTON SERVICE DESCRIPTION

*1. ACTION ACBFBP
#2. SERVICE DESC Call Back

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Figure 2 SAMPLE SRVCDESC FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 28: ORIGINATING SWITCH CALLING NAME

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SEC. 28A: 5986 RECORD
ORIGINATING SWITCH CALLING NAME

1. GENERAL

The 5986 Record is available with 5E13 and later Software Releases. The CNAM form allows calling names (corresponding to calling numbers) to be provisioned on the switch.

1.1 Recent Change View

The corresponding Recent Change View for this form is 4.65.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 CKT TN

Description: Enter the circuit telephone number of the calling party.

Required Field.
Valid Entries: XXXXXXX or NXXXXXXXXX, where N is 2 - 9 and X is 0 - 9

Data Rules:

When the first three digits of the 7-digit CKT TN(s) field are equivalent to an OFFICE CODE on the NOC form, and there is more than one NOC form with the same value for OFFICE CODE, or the NOC form does not exist, then the 7-digit CKT TN must be a 10-digit CKT TN with the NPA/OFFICE CODE defined on the NOC form.

The CNAM form is used by the Originating Switch Calling Name feature which is a secured feature. The ACT field for SFID 318 on the SFSYS form (Record 5713-1) must be set to "Y" before data can be entered on the CNAM form.

When CKT TN(s) are assigned on the CNAM form, the CKT TN(s) must be defined as a TN on the LINE form, a TN on the MLHLN form, a LISTED TN or SUBTN1 on the MLHG form, a CKT TN or CKT MLHG TN on the DSLUSR form, or a secondary only TN on the SHTN form.

When CKT TN(s) assigned on the CNAM form is also defined as a CKT TN on the LINE form with the INTERCEPT field (ICP) equal to "Y", the OE TYPE and NUMBER on the LINE form must be entered.

When CKT TN(s) are assigned on the CNAM form and also defined as a CKT TN on the MLHLN form with the INTERCEPT field (ICP) equal to "Y", the OE TYPE and NUMBER on the MLHGLN form must be entered.

When CKT TN(s) are assigned on the CNAM form and also defined as a CKT TN on the DSLUSR form with the INTERCEPT field (ICP) equal to "Y", the OE TYPE on the DSLUSR form must be entered.

When CKT TN(s) assigned on the CNAM form are also defined as a LISTED TN or SUBTN1 on the MLHG form, MPTYPE on the MLHG form must not be entered and the associated FEATURE NAME on the MLHLN must be "ISAT", "MUPH", or "UCD".

2.3 NAME

Description: Enter the name of the calling party.

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Valid Entries: Blank or up to 15 characters

2.4 PRIVACY IND

Description: Is the calling party a private name?

Required Field
Default: N
Valid Entries: Y, N

```
cnam                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5986)              ORIGINATING SWITCH CALLING NAME

*1. CKT TN     __________
 2. NAME       _______________
 3. PRIVACY IND N
```

Figure 1 CALLING NAME FORM 5E13 AND LATER SOFTWARE RELEASES

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DIV. 7: DCS (DIGITAL CELLULAR SWITCH) FORMS

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SEC. 1: DIGITAL CELLULAR SWITCH FORMS

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SEC. 1A: 5050 RECORD
DIGITAL CELLULAR SWITCH PARAMETERS FORM - APXPARM

1. GENERAL

The APXPARM form (5050 Record) is available for 5E9(1) and later Software Releases. It is used to administer global parameters that are required when a 5ESS Switch is functioning as a digital cellular switch in a cellular network.

1.1 Recent Change View

The corresponding Recent Change view for this form is 8.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 * OFFICE ID

Description: The office identifier may be the common language office name.

Required Field.
Valid Entries: 1 - 8 alphanumeric characters

Data Rules:

Only one APXPARM form may be defined for an office. Its OFFICE ID must match the OFFICE ID on the OFCOPT form (5509 Record).

2.3 DISC TIMER

Description: The disconnect acknowledgement timer is used to set the amount of time in seconds the 5ESS Switch will wait for a response from the ECP (Executive Cellular Processor) complex when a disconnect occurs.
Valid Entries: 5 - 25 (seconds)

2.4 INC CALL RESP TIMER

Description: The incoming call response timer is used to set the amount of time in seconds the 5ESS Switch will wait for a response from the ECP (Executive Cellular Processor) complex on an incoming call.
Valid Entries: 10 - 120 (seconds)

2.5 ECP POINT CODE

Description: This field is used to assign a point code to the ECP (Executive Cellular Processor) that connects to this 5ESS Switch which serves as a DCS (Digital Cellular Switch). The point code consists of three 3-digit segments (the Network Indicator, the Cluster Region and Type, and the Cluster Member number); each segment must be in the range 0 - 255.
Valid Entries: 9 digits

Data Rules:

When SFID ACT 130 on the SFSYS form (5713 Record) is "Y", ECP POINT CODE must be entered; when SFID ACT 130 is "N", ECP POINT CODE must not be entered.

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2.6 INTER VENDOR TRK LIMIT

Description: This field specifies the number of ATEP (Autoplex Task Execution Process) terminal processes available to the ECP (Executive Cellular Processor) when requesting the loopback or restoration of inter-vendor trunks.

This limit, therefore, specifies the maximum number of simultaneous test sessions.
Valid Entries: 1 - 20

2.7 MAX TRK TESTS PER HOUR

Description: This field limits the maximum duration (in hours) of tasks performed by the AATA (Autoplex Automatic Task Administrator). AATA tasks subject to this time limit include trunk test demand, inter-vendor loopback, and dedicated switch connection loopback requests.
Default: 24
Valid Entries: 0 - 168 (hours)

TERM MTCE TRK TST OPT

The following fields These fields (Section 2.8 - Section 2.12) are used for terminal maintenance trunk test options.

2.8 TIME

Description: This field indicates whether local time or Greenwich Mean Time will be used for ATTS (Automatic Trunk Test Scheduler) schedules.

Required Field.
Default: LOCAL
Valid Entries:

Valid TIME Entries

Entry	Definition
LOCAL or L	Local time.
UTC or U	Universal Time Coordinated (Greenwich Mean Time).

2.9 BSY TRK ON RETRY LIST

Description: Put busy trunks on the retry list? This field determines if test calls that abort due to a busy status during ATTS sessions will be put on a retry list.

Required Field.
Default: Y
Valid Entries: Y, N

2.10 DEFAULT LANGUAGE

Description: The DEFAULT LANGUAGE field is used to specify a default language code for playing announcements for the mobile subscribers.

Software Release: 5E13 and later
Valid Entries:

For 5E14 and earlier: 1, 2, 6, 7

For 5E15 and later: 1 - 255

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See tables below.

Valid LANGUAGE CODE Entries for 5E14 and Earlier

Entry	Definition
Blank	No value.
1	English
2	French
6	Mandarin
7	Cantonese

Valid LANGUAGE CODE Entries for 5E15 and Later

Entry	Definition
Blank	No value.
1	English
2	French
3	Spanish
4	German
5	Portuguese
6	Cantonese
7	Mandarin
8	Hangul (Korea)
9	Bahasa-Indonesia
10	Hindi
11	Urdu
12	Tagalog (Phillippines)
13	Youroba (West Africa)
14	Swahili
15	Gaelic
16	Hebrew
17	Nihongo (Japan)
18	Russian
19	Arabic
20	Dutch
21	Italian
22	Polish
23	Vietnamese
24	Greek
25	Yiddish
26	Thai
27	Laotian
28	Persian
29	French Creole
30	Armenian
31	Navaho
32	Hungarian
33	Mon-Khmer (Cambodian)
34	Gujarathi
35	Ukranian
36	Czech
37	Pennsylvania Dutch
38	Miao (Hmong)
39	Norwegian
40	Slovak
41	Swedish
42	Serbian
43	Kru
44	Rumanian
45	Lithuanian
46	Finnish
47	Punjabi
48	Formosan
49	Croatian
50	Bosnian
51	Turkish
52	Llocano
53	Bengali
54	Danish
55	Flemish
56	Syrian
57	Tamil
58	Samoan
59	Malayalam
60	Cajun
61	Amharic

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- ***NOTE:*** For 5E15 and later, any four languages can be selected.

Data Rules:

For 5E13 and later, when DEFAULT LANGUAGE is entered, it must be defined as "LANGUAGE CODE" on the FIXRTRAF form (5058 Record).

2.11 AMPS DCS GSM

Description: The AMPS (Advanced Mobile Phone Service) DCS (Digital Cellular Switch) GSM (Global Switching Module) field indicates the type of platform used within the DCS for CCS (Common Channel Signaling Subsystem) transport. The type is indicated by the number "0" for CNI (Common Network Interface) platform and a number from "1- 192" GSM for PSU platform. This field was added to support the Wireless Support of SS7/PSU feature. (For more detailed information about this feature, see Division 2, Section 7AY.)

Software Release: 5E15 FR 1and later
Valid Entries: Blank, or 0, or 1 - 192

- ***NOTE:*** Enter a number from 0 to 192; where 0 is for CNI Platform and 1 - 192 GSM is for PSU Platform.

Data Rules:

- When AMPS DCS GSM is entered, ECP POINT CODE must be entered.
- When a value of "1 - 192" is entered in the AMPS DCS GSM field on this form, "PSU" or "ALL" must be entered in the COMMON CHAN SIG field on the OFCOPT form (5509 Record).
- When "0" is entered in the AMPS DCS GSM field on this form, "CNI" or "ALL" must be entered in the COMMON CHAN SIG field on the OFCOPT form (5509 Record).
- When a value of "1 - 192" is entered in the AMPS DCS GSM field on this form, the GSM must be defined on the CCGSM form (6008 Record).

2.12 MAX REL CONFIG

Description: Is this AMPS DCS Global SM configured for maximum reliability? This field was added to support the Signaling Only GSM (99-5E-7776) feature. See Division 2, Section 8X.

Software Release: 5E15 FR 3 and later
Valid Entries: Y, N

Data Rules:

When "Y" is entered, the following non-signaling forms must not be defined for the corresponding Global SM:

EQLU (19.1)
EQTU (19.2)
EQDU (19.4)
EDQDNU-S (19.14)
EQAIU (19.16)
EQPLTU (19.24)

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```
                    5ESS Switch          _
apxparm             OFFICE DATA ADMINISTRATION
(5050)          DIGITAL CELLULAR SWITCH PARAMETERS

*1. OFFICE ID          OFFICE1
 2. DISC TIMER          __
 3. INC CALL RESP TIMER  ___
 4. ECP POINT CODE       _________
 5. INTER VENDOR TRK LIMIT __
 6. MAX TRK TESTS PER HOUR  24
 7. TIME             LOCAL
 8. BSY TRK ON RETRY LST   Y
```

Figure 1 SAMPLE APXPARM FORM 5E9(1) - 5E12 SOFTWARE RELEASES

```
apxparm                 5ESS Switch          _
                OFFICE DATA ADMINISTRATION
(5050)          DIGITAL CELLULAR SWITCH PARAMETERS

*1. OFFICE ID          ________
 2. DISC TIMER          20
 3. INC CALL RESP TIMER  ___
 4. ECP POINT CODE       _________
 5. INTER VENDOR TRK LIMIT __
 6. MAX TRK TESTS PER HOUR  24
 7. TIME             LOCAL
 8. BSY TRK ON RETRY LST   Y
 9. DEFAULT LANGUAGE     ___
```

Figure 2 SAMPLE APXPARM FORM 5E13 - 5E14 AND LATER SOFTWARE RELEASES

```
apxparm                 5ESS Switch          _
                OFFICE DATA ADMINISTRATION
(5050)          DIGITAL CELLULAR SWITCH PARAMETERS

*1. OFFICE ID          ________
 2. DISC TIMER          20
 3. INC CALL RESP TIMER  ___
 4. ECP POINT CODE       _________
 5. INTER VENDOR TRK LIMIT __
 6. MAX TRK TESTS PER HOUR  24

   TERM MTCE TRK TST OPT
 7. TIME             LOCAL
 8. BSY TRK ON RETRY LST   Y
 9. DEFAULT LANGUAGE     ___
10. AMPS DCS GSM         ___
11. MAX REL CONFIG       ___
```

Figure 3 SAMPLE APXPARM FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 1B: 5051 RECORD
ECP ANNOUNCEMENT ROUTE INDEX FORM - APXANNC

1. GENERAL

The APXANNC form (5051 Record) is available for 5E9(1) and later Software Releases. It is used to associate an identification number from the ECP (Executive Cellular Processor) to a route index for an announcement. This form is populated when the switch is serving as a digital cellular switch in a cellular network.

An APXANNC form can be entered only if SFID ACT 130 on the SFSYS form (5713 Record) is "Y". When SFID ACT 130 is "Y", at least one APXANNC form must be submitted.

1.1 Recent Change View

The corresponding Recent Change view for this form is 10.38.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 * ECP INDEX

Description: The Executive Cellular Processor index is an announcement number sent from the Executive Cellular Processor to a 5ESS Switch serving as a digital cellular switch in a cellular network.

Required Field.
Valid Entries: 1 - 127

2.3 BARGE IN RTI

Description: The Barge-in Route Index specifies a route to an announcement trunk that has barge-in capability.
Valid Entries:

- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

Either or both BARGE IN RTI and NON BARGE IN RTI must be entered.

When BARGE IN RTI is entered, it must be defined in the ROUTE INDEX field on an RTIDX form (5303 Record). The TRUNK GROUP NUMBER on the RTIDX form must be defined in the TGN field of a TKGRP form (5202 Record). On the TKGRP form the TRKCLS must be "ANNCMNT", BARGE IN must be "Y", and CYCLES must be 0 or not entered. TKGRP form is found by matching TGN on the TKGRP form with the TRUNK GROUP NUMBER on the RTIDX form. (RTIDX form is found by matching ROUTE INDEX with BARGE IN RTI on the APXANNC form).

For 5E10 and later, BARGE IN RTI must not equal NON BARGE IN RTI.

2.4 NON BARGE IN RTI

Description: The Non-Barge-in route index specifies a route to an announcement trunk that does not have

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barge-in capability.
Valid Entries:
- For 5E10 and earlier: 1 - 3617
- For 5E11 and 5E12: 1 - 4095
- For 5E13 and later: Blank, or 1 - 16382

Data Rules:

Either or both BARGE IN RTI and NON BARGE IN RTI must be entered.

When NON BARGE IN RTI is entered, it must be defined in the ROUTE INDEX field on an RTIDX form. The TRUNK GROUP NUMBER on the RTIDX form must be defined in the TGN field of a TKGRP form. On the TKGRP form the TRKCLS must be "ANNCMNT", BARGE IN must be "N", and CYCLES must be 0 or blank.

2.5 ROUTE TYPE

Description: The fixed route type is used to specify a fixed route type for the announcement.

Software Release: 5E13 and later
Required Field.
Default: APXTANN
Valid Entries:

Valid ROUTE TYPE Entries

Entry	Definition
APXTANN	Autoplex Tones and Announcements
DCSnnn	Digital Cellular Switch Treatment nnn.

Data Rules:

For 5E13 and later, when ROUTE TYPE is "APXTANN", BARGE IN RTE must not equal NON BARGE IN RTI.

```
                    5ESS Switch
apxannc             OFFICE DATA ADMINISTRATION
(5051)          ECP ANNOUNCEMENT ROUTE INDEX

*1. ECP INDEX       001
 2. BARGE IN RTI    0023
 3. NON BARGE IN RTI ____
```

Figure 1 SAMPLE APXANNC FORM 5E9(1) - 5E12 SOFTWARE RELEASES

```
apxannc                 5ESS Switch
                    OFFICE DATA ADMINISTRATION
(5051)              ECP ANNOUNCEMENT ROUTE INDEX

*1. ECP INDEX       ___
 2. BARGE IN RTI    _____
 3. NON BARGE IN RTI _____
 4. ROUTE TYPE      APXTANN
```

Figure 2 SAMPLE APXANNC FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 1C: 5052 RECORD
ATTS TEST SESSION SCHEDULE DATA FORM - ATSDATA

1. GENERAL

The ATSDATA form (5052 Record) is available for 5E9(1) and later Software Releases. It is used to provide data that defines a test session in a certain test schedule to be invoked by ATTS (Automatic Trunk Testing Scheduler) for the purpose of performing automated trunk testing over a specific range of equipped members of a specified trunk group.

Test sessions within the same ATTS schedule cannot overlap. The START HOUR and START MINUTE of one ATSDATA form cannot fall between the start and stop times of another ATSDATA form defined for the same SCHEDULE, WEEK, and DAY.

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.9.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 * SCHEDULE

Description: This field specifies the individual ATTS schedule for which this test session is defined.

Required Field.
Valid Entries: 1 - 20

2.3 * WEEK

Description: This field specifies the week within the individual ATTS schedule when the test session is to begin executing.

Required Field.
Valid Entries: 1 - 8

2.4 * DAY

Description: This field specifies the day within the given WEEK when the test session is to begin executing.

Required Field.
Valid Entries: 1 - 7

2.5 * START HOUR

Description: This field specifies the hour within the given DAY when the test session is to begin executing.

Required Field.
Valid Entries: 0 - 23

Data Rules:

START HOUR may not be greater than STOP HOUR.

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2.6 * START MINUTE

Description: This field specifies the minute within the given START HOUR when the test session is to begin executing.

Required Field.
Valid Entries: 0 - 59

2.7 # STOP HOUR

Description: This field specifies the hour within the given DAY when the test session is to stop executing.

Required Field.
Valid Entries: 0 - 23

Data Rules:

STOP HOUR must be greater than or equal to START HOUR.

2.8 # STOP MINUTE

Description: This field specifies the minute within the given STOP HOUR when the test session is to stop executing.

Required Field.
Valid Entries: 0 - 59

Data Rules:

When START HOUR and STOP HOUR are the same, STOP MINUTE must be greater than START MINUTE.

2.9 # TGN

Description: This field identifies the individual Trunk Group Number to be tested during the test session. Every ATSDATA form(s) must have a matching TKGRP form (matching TGN values).

Required Field.
Valid Entries:
- For 5E10 and earlier: 1 - 2000
- For 5E11 and later: 1 - 4000

Data Rules:

The TGN must be defined on a TKGRP form (5202 Record).

An ATSDATA form(s) must not have an associate TKGRP form where the TRKCLS is "IVBST", "A2", or "A5".

For 5E15 and later, an ATSDATA form(s) must not have an associated TKGRP form where the TRKCLS is "A5", "SVC", "FRBC", "BCM", "ADT", "PKTPIPE", "3GPD", "PCF", or "ISLPM".

2.10 MEMB LOW

Description: This field specifies the first in a range of members of the specified trunk group to be tested during this session.
Default: 0

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Valid Entries: 0 - 1951

Data Rules:

MEMB LOW may not be greater than MEMB HIGH.

2.11 MEMB HIGH

Description: This field specifies the last in a range of trunk group members to be tested during the session.

MEMB HIGH must be populated with a value in the range 0 through the member number of the highest numbered trunk equipped in the group, or 1952. When the special value 1952 is entered in MEMB HIGH, and MEMB LOW is 0, all equipped trunks in the specified trunk group will be tested.
Valid Entries: 0 - 1952

Data Rules:

The MEMB HIGH value must be less than the highest trunk member number assigned to the trunk group. The highest trunk member is determined by summing the MEMB and QTY fields on the TRUNK form (assigned to the TGN) that has the greatest MEMB number.

2.12 ORDER

Description: This field indicates the sequence in which the trunk group members will be tested, either ascending or descending.

Required Field.
Default: ASCENDING
Valid Entries:

Valid ORDER Entries

Entry	Definition
ASCENDING	Test the trunks in ascending order.
DESCENDING	Test the trunks in descending order.

2.13 LINK

Description: Should this test session begin executing immediately when the previous session completes its execution early?

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Two test sessions from the same ATTS schedule may be linked only if the stop time (STOP HOUR and STOP MINUTE) of the first form matches the start time (START HOUR and START MINUTE) of the second form. Test sessions are linked if their respective ATSDATA forms have the same SCHEDULE, WEEK, and DAY; and the LINK field of the later one is set to "Y".

2.14 SKIP

Description: Should the test session be skipped when its scheduled starting time arrives?

Required Field.
Default: N
Valid Entries: Y, N

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2.15 ATME TRAN TEST

Description: This field specifies the type of transmission test to be performed on all members of the trunk group equipped on ATME (Automatic Transmission Measuring Equipment).

This field is reserved for future use; currently, no value can be entered into it.

2.16 ATME SIG TEST

Description: This field specifies the type of signaling test to be performed on all members of the given trunk group equipped on ATME (Automatic Transmission Measuring Equipment).

This field is reserved for future use; currently, no value can be entered into it.

```
                        5ESS Switch          _
atsdata               OFFICE DATA ADMINISTRATION
(5052)             ATTS TEST SESSION SCHEDULE DATA

*1. SCHEDULE      1              13. SKIP N
*2. WEEK          1              14. ATME TRAN TEST __
*3. DAY           1              15. ATME SIG TEST  __
*4. START HOUR    0
*5. START MINUTE  0
#6. STOP HOUR     4
#7. STOP MINUTE   0
#8. TGN           0043
 9. MEMB LOW      0000
10. MEMB HIGH     1951
11. ORDER         ASCENDING
12. LINK          N
```

Figure 1 SAMPLE ATSDATA FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 1D: 5053 RECORD
ATTS TEST SESSION SCHEDULE PARAMETERS FORM - ATSPARM

1. GENERAL

The ATSPARM form (5053 Record) is available for 5E9(1) and later Software Releases. It is used to define parameters and options that control ATTS (Automatic Trunk Test Scheduler) test sessions on a per schedule basis.

The Automatic Trunk Test Scheduler is a secured feature that must be purchased before an ATSPARM form can be entered. ATTS can be purchased as a separate feature (SFID 134) or as part of the Autoplex secured feature (SFID 130). The ACT field must be set to "Y" for one of these features on the SFSYS form (5713 Record).

An ATSPARM form must be entered for each unique SCHEDULE that appears on an ATSDATA form (5052 Record).

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.10.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 * SCHEDULE

Description: This field specifies the individual ATTS schedule for which this test session is defined.

Required Field.
Valid Entries: 1 - 20

2.3 # TEST TYPE

Description: This field specifies the type of test to be performed during the test session associated with the ATTS Schedule.

Required Field.

Valid TEST TYPE Entries

Entry	Definition
CONT	Continue.
NINV	Non-inverting.
NSYS	Non-synchronous.
PB	Permanent Busy.
SHCT	Software Release: 5E10 and later. Speech Handler trunk PCM loop back test.This enumeration supports the CDMA (Code Division MultipleAccess) feature. For more information on this feature, seeDivision 2, Section 8B.
SYS	Synchronous.
102LB	102 loop-back test.
105	105 test.

2.4 MAX MISC ABORTS

Description: This field specifies the maximum number of consecutive aborted trunk test attempts allowed per test session. It is used as a threshold which, when reached, causes a test session to terminate.

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Required Field.
Default: 20
Valid Entries: 1 - 20

2.5 MAX CONGESTION

Description: This field specifies the maximum number of consecutive trunk test attempts per test session which are allowed to result in detection of congestion. It is used as a threshold which, when exceeded, causes a test session to terminate.

Required Field.
Default: 20
Valid Entries: 1 - 20

2.6 MAX ANS TIME OUT

Description: This field specifies the maximum number of consecutive trunk test attempts per test session which are allowed to result in the director timing out while waiting for an answer or equivalent signal from the far end. It is used as a threshold which, when exceeded, causes a test session to terminate.

Required Field.
Default: 20
Valid Entries: 1 - 20

2.7 MAX DIR TIME OUT

Description: This field specifies the maximum number of consecutive trunk test attempts per test session which are allowed to result in the director timing out while waiting for an event other than receipt of an answer or equivalent signal from the far end. It is used as a threshold which, when exceeded, causes a test session to terminate.

Required Field.
Default: 20
Valid Entries: 1 - 20

2.8 MAX LOOPS

Description: This field specifies the maximum number of passes that should be performed per test session through a list of trunks associated with aborted tests for which another test attempt should be made. It is used as a threshold which causes a test session to terminate when trunks remain on the list after the specified maximum number of passes through the list have been made. If this field is left blank, the retry list will be turned off.
Valid Entries: 1 - 20

2.9 RETRY ON ABORT

Description: Should the test be retried when it aborts?

Required Field.
Default: N
Valid Entries: Y, N

2.10 RETEST ON FAILURE

Description: Should the test be immediately repeated when it fails?

Required Field.

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Default: N
Valid Entries: Y, N

2.11 COUNT BUSY ABORTS

Description: Should tests that abort because the trunk is busy be included in the counter associated with the threshold for miscellaneous aborted tests?

Required Field.
Default: N
Valid Entries: Y, N

2.12 PRINT REPORT

Description: This field specifies how to output in real time the result of each test.

Valid PRINT REPORT Entries

Entry	Definition
PFA	Print all results.
FA	Print non-passing results only.
A	Print aborted results only.
F	Print failing results only.
P	Print passing results only.

2.13 SESSION COUNT

Description: This is a Recent Change only field which specifies the number of the test schedule defined on the ATSDATA form.

```
                    5ESS Switch
atsparm           OFFICE DATA ADMINISTRATION
(5053)      ATTS TEST SESSION SCHEDULE PARAMETERS

*1. SCHEDULE        1
#2. TEST TYPE       CONT
 3. MAX MISC ABORTS  20
 4. MAX CONGESTION   20
 5. MAX ANS TIME OUT 20
 6. MAX DIR TIME OUT 20
 7. MAX LOOPS
 8. RETRY ON ABORT   N
 9. RETEST ON FAILURE N
10. COUNT BUSY ABORTS N
11. PRINT REPORT
   SESSION COUNT
```

Figure 1 SAMPLE ATSPARM FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 1E: 5054 RECORD
DIGITAL CELLULAR SWITCH - DIGITAL TESTS FORM - DCSDT

1. GENERAL

The DCSDT form (5054 Record) is available for 5E9(1) and later Software Releases. It is used to define digital tests for an automatic trunk test table. The digital test result threshold specified on this form will be used to define the pass/marginal/fail criteria for the tests.

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 * ATTTN

Description: The ATTTN (Automatic Trunk Test Table Number) and its associated test data provides tests to be executed by Trunk APT (Automatic Progression Testing) and by manual trunk testing initiated at the 5ESS Switch.

Required Field.
Valid Entries: 1 - 999

2.3 DURATION

Description: This field specifies the total duration of the test in seconds.

Required Field.
Default: 20
Valid Entries: 1 - 240 (seconds)

Data Rules:

When BIT ERROR RATIO is 5, DURATION must be greater than 1; when 6, DURATION must be greater than 16; and when 7, DURATION must be greater than 159.

2.4 BLOCK SIZE

Description: This field specifies the block size of the digital bit streams used in the test.

Required Field.
Default: 2047
Valid Entries: 1 - 64000

2.5 BIT ERR RATIO

Description: This field specifies the acceptable bit error ratio for the test

Required Field.
Default: 6
Valid Entries: 1 - 7

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```
                    5ESS Switch
dcsdt             OFFICE DATA ADMINISTRATION
(5054)        DIGITAL CELLULAR SWITCH - DIGITAL TESTS

*1. ATTTN       001
 2. DURATION      20
 3. BLOCK SIZE  2047
 4. BIT ERR RATIO 6
```

Figure 1 SAMPLE DCSDT FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 1F: 5055 RECORD
DIGITAL CELLULAR SWITCH - TRANSMISSION TEST FORM - DCSTT

1. GENERAL

The DCSTT form (5055 Record) is available for 5E9(1) and later Software Releases. It is used to define transmission tests for an automatic trunk test table. Tone measurement thresholds and noise or return loss thresholds defined on this form will be used to define the pass/marginal/fail status for the test calls.

1.1 Recent Change View

The corresponding Recent Change view for this form is 14.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each page of the record.

2.2 * ATTTN

Description: The ATTTN (Automatic Trunk Test Table Number) and its associated test data provides tests to be executed by Trunk APT (Automatic Progression Testing) and by manual trunk testing initiated at the 5ESS Switch.

Required Field.
Valid Entries: 1 - 999

2.3 * TEST TYPE

Description: This field identifies the type of test to be performed.

Required Field.

Valid TEST TYPE Entries

Entry	Definition
102LB	102 loop-back test.
105	105 test.
PVELBK	Software Release: 5E15 and later. PHV Voice Encoding Loopback Test. This entry supports the One-Way Audio Detection Tool Phase 2 feature. For more information on this feature, see Division 2, Section 8V.

Data Rules:

When TEST TYPE is "102LB", all fields for the following must be blank: TONE 404 HZ DEV, TONE 2804 HZ DEV, NOISE FAR END, NOISE 1004 FILTER, ECHO RET LOSS, SINGING RET LOSS, HI FREQ RET LOSS.

When TEST TYPE is 105:

- All the TONE 1004 HZ LOSS fields must be in the range -32 to 3.
- Values must be entered in all fields for the following: TONE 404 HZ DEV, TONE 2804 HZ DEV, NOISE FAR END, NOISE 1004 FILTER, ECHO RET LOSS, SINGING RET LOSS, and HI FREQ RET LOSS.

TONE 1004 HZ LOSS AT 0 DBM

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These fields (Section 2.4 - Section 2.7) are used to set the TONE 1004 HZ LOSS values.

2.4 # FAIL MIN

Description: This field is used to specify the lower bound of the tone level deemed marginal passed. A tone lower than this value will be deemed failed.

Required Field.
Default: -10
Valid Entries: -48 - 3 (dB)

Data Rules:

FAIL MIN cannot be greater than MARG MIN.

2.5 # MARG MIN

Description: This field is used to specify the lower bound of the tone level deemed passed. A tone lower than this value, but higher than FAIL MIN will be deemed marginal passed.

Required Field.
Default: -9
Valid Entries: -48 - 3 (dB)

Data Rules:

MARG MIN cannot be greater than MARG MAX.

2.6 # MARG MAX

Description: This field is used to specify the upper bound of the tone level deemed passed. A tone higher than this value, but lower than FAIL MAX will be deemed marginal passed.

Required Field.
Default: 0
Valid Entries: -48 - 3 (dB)

Data Rules:

MARG MAX cannot be greater than FAIL MAX.

2.7 # FAIL MAX

Description: This field is used to specify the upper bound of the tone level deemed marginal passed. A tone higher than this value will be deemed failed.

Required Field.
Default: 0
Valid Entries: -48 - 3 (dB)

TONE 404 HZ DEV

These fields (Section 2.8 - Section 2.11) define the deviations for 404 Hz tones detected in the marginal and unacceptable ranges.

2.8 MARG POS

Description: This field is used to specify the positive deviation for a tone detected in the marginal passed

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range.
Valid Entries: 0 - 9

2.9 FAIL POS

Description: This field is used to specify the deviation for a tone detected in the failed range.
Valid Entries: 0 - 9

2.10 MARG NEG

Description: This field is used to specify the negative deviation for a tone detected in the marginal range.
Valid Entries: 0 - 9

2.11 FAIL NEG

Description: This field is used to specify the negative deviation for a tone detected in the failed range.
Valid Entries: 0 - 9

TONE 2804 HZ DEV

These fields (Section 2.12 - Section 2.15) define the deviations for 2804 Hz tones detected in the marginal and unacceptable ranges.

2.12 MARG POS

Description: This field is used to specify the positive deviation for a tone detected in the marginal passed range.
Valid Entries: 0 - 9

2.13 FAIL POS

Description: This field is used to specify the deviation for a tone detected in the failed range.
Valid Entries: 0 - 9

2.14 MARG NEG

Description: This field is used to specify the negative deviation for a tone detected in the marginal range.
Valid Entries: 0 - 9

2.15 FAIL NEG

Description: This field is used to specify the negative deviation for a tone detected in the failed range.
Valid Entries: 0 - 9

NOISE NEAR END

These fields (Section 2.16 - Section 2.17) are used to specify the minimum acceptable and minimum immediate action limits for noise at the near end. A value above MIN IACT will be deemed failed. A value above MIN ACC but below MIN IACT will be deemed marginal passed. A value below MIN ACC will be deemed passed.

2.16 # MIN ACC

Description: This field specifies the noise at near end minimum acceptance limit (in dBrnC, a measure in decibels using C-message filters).

Required Field.

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Default: 43
Valid Entries: 15 - 55 (dBrnC)

2.17 # MIN IACT

Description: This field specifies the noise at near end minimum immediate action limit (in dBrnC).

Required Field.
Default: 44
Valid Entries: 15 - 55 (dBrnC)

NOISE FAR END

These fields (Section 2.18 - Section 2.19) are used to specify the minimum acceptable and minimum immediate action limits for noise at far end. A value above MIN IACT will be deemed failed. A value above MIN ACC but below MIN IACT will be deemed marginal passed. A value below MIN ACC will be deemed passed.

2.18 MIN ACC

Description: This field specifies the noise at far end minimum acceptance limit (in dBrnC, a measure in decibels using C-message filters).
Valid Entries: 15 - 55 (dBrnC)

2.19 MIN IACT

Description: This field specifies the noise at far end minimum immediate action limit (in dBrnC).
Valid Entries: 15 - 55 (dBrnC)

NOISE 1004 FILTER

These fields (Section 2.20 - Section 2.21) are used to specify the minimum acceptable and minimum immediate action limits for noise with 1004 Hz filter. A value above MIN IACT will be deemed failed. A value above MIN ACC but below MIN IACT will be deemed marginal passed. A value below MIN ACC will be deemed passed.

2.20 MIN ACC

Description: This field specifies the noise with 1004 Hz filter minimum acceptance limit (in dBrnC, a measure in decibels using C-notch filters).
Valid Entries: 34 - 74 (dBrnC)

2.21 MIN IACT

Description: This field specifies the noise with 1004 Hz filter minimum immediate action limit (in dBrnC).
Valid Entries: 34 - 74 (dBrnC)

ECHO RET LOSS

These fields (Section 2.22 - Section 2.23) are used to specify the minimum acceptable and minimum immediate action limits for echo return loss. A value below MIN IACT will be deemed failed. A value above MIN IACT but below MIN ACC will be deemed marginal passed. A value above MIN ACC will be deemed passed.

2.22 MIN ACC

Description: This field specifies the echo return loss minimum acceptance limit.

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Valid Entries: 0 - 40 (dB)

2.23 MIN IACT

Description: This field specifies the echo return loss minimum immediate action limit.
Valid Entries: 0 - 40 (dB)

SINGING RET LOSS

These fields (Section 2.24 - Section 2.25) are used to specify the minimum acceptable and minimum immediate action limits for singing return loss. A value below MIN IACT will be deemed failed. A value above MIN IACT but below MIN ACC will be deemed marginal passed. A value above MIN ACC will be deemed passed.

2.24 MIN ACC

Description: This field specifies the singing return loss minimum acceptance limit.
Valid Entries: 0 - 40 (dB)

2.25 MIN IACT

Description: This field specifies the singing return loss minimum immediate action limit.
Valid Entries: 0 - 40 (dB)

HI FREQ RET LOSS

These fields (Section 2.26 - Section 2.27) are used to specify the minimum acceptable and minimum immediate action limits for high frequency signal return loss. A value below MIN IACT will be deemed failed. A value above MIN IACT but below MIN ACC will be deemed marginal passed. A value above MIN ACC will be deemed passed.

2.26 MIN ACC

Description: This field specifies the high frequency signal return loss minimum acceptance limit.
Valid Entries: 0 - 40 (dB)

2.27 MIN IACT

Description: This field specifies the high frequency signal return loss minimum immediate action limit.
Valid Entries: 0 - 40 (dB)

```
                        5ESS Switch
dcstt                OFFICE DATA ADMINISTRATION
(5055)         DIGITAL CELLULAR SWITCH - TRANSMISSION TEST

*1. ATTTN     001                    MARG POS  FAIL POS  MARG NEG  FAIL NEG
*2. TEST TYPE 105     7. TONE 404 HZ DEV     2        3        1        2
                 12. TONE 2804 HZ DEV    2        3        1        2
 TONE 1004 HZ LOSS AT 0 DBM
#3. FAIL MIN  -10
#4. MARG MIN   -9                       MIN ACC  MIN IACT
#5. MARG MAX    0   #17. NOISE NEAR END       43       44
#6. FAIL MAX    0    20. NOISE FAR END        43       44
                 23. NOISE 1004 FILTER     40       41
                 26. ECHO RET LOSS         40       39
```

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29. SINGING RET LOSS 40 39
32. HI FREQ RET LOSS 40 39

Figure 1 SAMPLE DCSTT FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 1G: 5056 RECORD
CELLULAR MOBILE CARRIER IDENTIFICATION (CHARGING)

1. GENERAL

The 5056 Record is available with the 5E9(1) Software Release and is Recent Change only. The Cellular Mobile Carrier Identification (Charging) view (10.16) is used to associate a 10-digit billing number with a 2-digit Cellular Mobile Carrier Identification number, in order to facilitate billing of a cellular mobile carrier. The ODA equivalent fields for this form are on the TKGRP form. See BILLING DN and the LATA/TTOLL field section on the TKGRP form.

1.1 Recent Change View

The Recent Change View for this record is 10.16

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CMC ID

Description: Enter the Cellular mobile carrier identification number.

Software Release: 5E9(1) and later.
Required Field.
Valid Entries: 1 - 60

Data Rules:

A CMC ID of 00 is not allowed.

2.3 CMC BILL

Description: Enter the Cellular mobile carrier 10-digit billing number.

Software Release: 5E9(1) and later.
Valid Entries: 10-digit TN

5ESS SWITCH
RECENT CHANGE 10.16
(5056) CELLULAR MOBILE CARRIER IDENTIFICATION (CHARGING)

*1. CMCID __
#2. CMC BILL _____

Figure 1 SAMPLE RC_CMCID FORM 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 1H: 5058 RECORD
FIXED ROUTE TYPE RECORDED ANNOUNCEMENT DATA FORM - FIXRTRAF

1. GENERAL

The 5058 Record is available with the 5E13 and later Software Update. The Fixed Route Type Recorded Announcement form provides capability for specifying announcement data of a fixed route type for a preferred language.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.68.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ROUTE TYPE

Description: The ROUTE TYPE field is used to specify a fixed route type for the announcement within a preferred language code.

Required Field.
Valid Entries: DCS001 - DCS099

2.3 * LANGUAGE CODE

Description: The LANGUAGE CODE field is used to specify the preferred language code using the phrase.

Required Field.
Valid Entries:

For 5E14 and earlier: 1, 2, 6, 7

For 5E15 and later: 1 - 255

See tables below.

Valid LANGUAGE CODE Entries for 5E14 and Earlier

Entry	Definition
Blank	No value.
1	English
2	French
6	Mandarin
7	Cantonese

Valid LANGUAGE CODE Entries for 5E15 and Later

Entry	Definition
Blank	No value.
1	English
2	French
3	Spanish
4	German
5	Portuguese
6	Cantonese
7	Mandarin
8	Hangul (Korea)
9	Bahasa-Indonesia
10	Hindi

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11	Urdu
12	Tagalog (Phillippines)
13	Youroba (West Africa)
14	Swahili
15	Gaelic
16	Hebrew
17	Nihongo (Japan)
18	Russian
19	Arabic
20	Dutch
21	Italian
22	Polish
23	Vietnamese
24	Greek
25	Yiddish
26	Thiai
27	Laotian
28	Persian
29	French Creole
30	Armenian
31	Navaho
32	Hungarian
33	Mon-Khmer (Cambodian)
34	Gujarathi
35	Ukranian
36	Czech
37	Pennsylvania Dutch
38	Miao (Hmong)
39	Norwegian
40	Slovak
41	Swedish
42	Serbian
43	Kru
44	Rumanian
45	Lithuanian
46	Finnish
47	Punjabi
48	Formosan
49	Croatian
50	Bosian
51	Turkish
52	Llocano
53	Bangali
54	Danish
55	Flemish
56	Syrian
57	Tamil
58	Samoan
59	Malayalsmm
60	Cajun
61	Amharic

- ***NOTE:*** For 5E15 and later, any four languages can be selected.

2.4 # ANNC HDR ID

Description: The ANNC HDR ID field is used to specify a unique announcement header within an announcement application.

Required Field.
Valid Entries: 1 - 131071

Data Rules:

When ANNC HDR ID is entered, it must be defined as HEADER ID on the ANNHD form (5531 Record) with APPLICATION set to "VARRRAF".

When the ANNC HDR ID matches the HEADER ID on the ANNHD form (5531 Record) and the PHR of the PHRASE_LIST on the ANNHD form matches the PHRASE ID on the PHRASE form (5534 Record), the LANGUAGE CODE entered on this form must match the PHRASE form.

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2.5 ANNC CYCLE LIMIT

Description: The ANNC CYCLE LIMIT field is used to specify number of cycles the announcement is to be played.
Valid Entries: 0 - 5

---

fixrtraf 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5058) FIXED ROUTE TYPE RECORDED ANNOUNCEMENT DATA

*1. ROUTE TYPE _____
*2. LANGUAGE CODE ___
#3. ANNC HDR ID _____
4. ANNC CYCLE LIMIT 1

Figure 1 SAMPLE QPHPIPE FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 2: PSU LINK ASSIGNMENT FORMS

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SEC. 2A: 5057 RECORD
PSU LINK ASSIGNMENT - PSULNK

1. GENERAL

The 5057 Record is available for 5E10 and later Software Releases. The PSU Link Assignment form is used to define links between packet switch units using PHAs (Protocol Handlers for Asynchronous Transfer Mode). The PHA feature is a Secured Feature that must be purchased by the office before data can be entered on this form. A SFSYS form must be entered with SFID 224 ACT field set to "Y". For more information on the PHA feature, see Division 2, Section 4A224. For more information on the CDMA (Code Division Multiple Access) feature, see Division 2, Section 8B.

The Interswitch Soft Hand-off feature (99-5E-3082) provides the means to interconnect packet switching units of different 5ESS-2000 Switches, either through a direct point-to-point (PSU link-to-PSU link) configuration or through a point-to-Multipoint ATM Network Connection configuration. With the Interswitch Soft Hand-off feature, more 5ESS-2000 switches can be involved which in effect expands the contiguous "soft hand-off" area (see Division 2, Section 8E). To support the Interswitch Soft Hand-off feature, the LINK TYPE field was added to this form to define the PSU link configuration.

Effective with the 5E11 Software Release, the Extended Soft Hand-off Through a Multipoint ATM Network Connection feature (99-5E-3081) provides a means for interconnecting large numbers of packet switching units of the 5ESS-2000 Switch. See Division 2, Section 8D. The CON TYPE field was moved to this form from the EQPSU form (5741-1/2 Record) (Division 8, Section 22) to indicate whether the connection terminates to a point-to-multipoint configuration or to a point-to-point PSU link.

The SD THRESH and SF THRESH fields were added to comply with SONET (Synchronous Optical Network) requirements to make Signal Degrade and Signal Failure parameters configurable by the user. The user can adjust these parameters to match signal conditions on a particular link.

The APS TYPE field was added to support APS (Automatic Protection Switching). When a link is provisioned as duplex (i.e., both channels equipped), APS can occur when SONET defects are detected. "Uni-directional" APS means that the selected channel at one end of the line does not have to be the same as the other end. "Bi-directional" APS means that both ends will always have the same line "on protection." An APS TYPE of "NONE" is similar to Unidirectional except that the PHA will always transmit zeroes in the K1/K2 bytes of the SONET overhead. "NONE" should normally be selected only when the link is provisioned simplex (i.e., one channel provisioned). When the link is duplex, the APS type should be selected to match the PHA or other equipment at the far end of the line. It should be noted that APS will NOT switch away from a defect on one channel if there is already a more severe defect on the other channel.

1.1 Optional Keys

When entering the optional keys for this form, one of the following must be entered:

- NEAR COM ADDR

or

- NEAR SM and PSU.

However, all three may be entered.

In addition, one of the following must be entered:

- FAR COM ADDR

or

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- FAR SM and PSU.

However, all three of these may be entered.

1.2 Derived Entries

The values for the 6 optional key fields on this form may be derived from the EQPSU form. The derived values in these fields cannot be duplicated.

The derived values from the EQPSU form are as follows:

- If NEAR COM ADDR is not entered, its derived value is COM ADDR from the EQPSU form via the corresponding PSULNK NEAR SM field.
- If NEAR SM is not entered, its derived value is SWITCHING MODULE from the EQPSU form, where NEAR COM ADDR is matched to EQPSU field COM ADDR.
- If NEAR PSU is not entered, its derived value is 0.
- If FAR COM ADDR is not entered, its derived value is COM ADDR from the EQPSU form via the corresponding PSULNK FAR SM.
- If FAR SM is not entered, and LINK TYPE is "INTRA", its derived value is SWITCHING MODULE from the EQPSU form, where FAR COM ADDR is matched to the EQPSU field COM ADDR.
- If FAR PSU is not entered, and LINK TYPE is "INTRA", its derived value is 0. If LINK TYPE is "INTER", leave FAR PSU blank.

1.3 Recent Change View

The corresponding Recent Change View for this form is 22.22

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 (*) NEAR COM ADDR

Description: Enter the Near Community Address Number that is used to specify the community address for the near PSU (Packet Switch Unit). This value is specified in the COM ADDR field on the Packet Switch Unit form EQPSU (5741 Record). When NEAR COM ADDR is entered, NEAR SM and NEAR PSU can be left blank. Either the one field NEAR COM ADDR, or the two fields NEAR SM and NEAR PSU is enough to designate the NEAR Packet Switching Unit.
Valid Entries: 0 - 254

Data Rules:

Either the one field NEAR COM ADDR, or the two fields NEAR SM and NEAR PSU must be entered.

If NEAR COM ADDR is entered and/or FAR COM ADDR is entered with LINK TYPE set to "INTRA" on the PSULNK form, the COM ADDR must match a COM ADDR on the EQPSU form, and CON TYPE on the PSULNK form must be "POINT".

NEAR COM ADDR must not match FAR COM ADDR. (Note that if NEAR COM ADDR is not entered, its

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value is derived from COM ADDR on the EQPSU form by the PSULNK NEAR SM. If FAR COM ADDR is entered, its value is derived from COM ADDR on the EQPSU form by the PSULNK FAR SM.)

If NEAR COM ADDR and NEAR SM are both entered on the PSULNK form, then COM ADDR on the corresponding EQPSU form must equal NEAR COM ADDR.

2.3 (*) NEAR SM

Description: Enter the Near Switching Module which is used to specify the near Switching Module on which the PSU (Packet Switch Unit) is located.

- ***NOTE:*** If NEAR SM is not entered, its value is derived from SWITCHING MODULE on the EQPSU form where the entry in NEAR COMADDR is matched to EQPSU field COM ADDR; NEAR PSU is assumed to be 0.

Valid Entries: 1 - 192

Data Rules:

If NEAR SM is entered, then NEAR PSU must also be entered.

The combination of entries for NEAR SM and NEAR PSU must not equal the FAR SM and FAR PSU entries.

If NEAR SM (and/or FAR SM) is entered, then the SM must be defined on the EQPSU form. On the EQPSU form (5741 Record), COM ADDR must be entered, and CON TYPE on the PSULNK form must be "POINT". Forms correspond if NEAR SM matches SWITCHING MODULE on the EQPSU form.

NEAR SM must not match FAR SM.

For each unique NEAR SM or FAR SM on the PSULNK form, the maximum number of PSULNK forms allowed is 10. Note that if NEAR SM is blank, its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key NEAR COMADR is matched to EQPSU field COM ADDR; NEAR PSU is assumed to be 0. If LINK TYPE is "INTER", it is not necessary to check the FAR SM. Otherwise, if LINK TYPE is "INTRA", and FAR SM is blank, its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key FAR COM ADDR is matched to the COM ADDR field on the EQPSU form; FAR PSU is assumed to be 0.

For each unique NEAR SM on the PSULNK form, the set of corresponding FAR COM ADDR values cannot contain duplicates.

2.4 (*) NEAR PSU

Description: Enter Near PSU (Packet Switch Unit) number.
Valid Entries:

5E15 and earlier: Blank, or enter 0
5E16 and later: Blank, or enter 0 - 1

Data Rules:

If NEAR PSU is entered, then NEAR SM must also be entered.

2.5 (*) FAR COM ADDR

Description: Enter the Far Community Address Number for the far packet switch unit. If FAR COM ADDR is entered, then FAR SM and FAR PSU do not need to be entered. Either the one field FAR COM ADDR, or the two fields FAR SM and FAR PSU, is enough to designate the FAR Packet Switching Unit.

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Valid Entries: 0 - 254

Data Rules:

Either this field FAR COM ADDR, or the two fields FAR SM and FAR PSU, must be entered. If NEAR SM and/or FAR SM is entered, then the SM must be defined on the EQPSU form. On the EQPSU form (5741 Record), COM ADDR must be entered; on the PSULNK form, CON TYPE must be "POINT". Forms correspond if FAR SM matches SWITCHING MODULE on the EQPSU form.

If FAR COM ADDR and FAR SM are both entered on the PSULNK form, then COM ADDR on the corresponding EQPSU form must equal FAR COM ADDR on this form.

For 5E11 and later, when FAR COM ADDR is 0 and CON TYPE is entered, CON TYPE must be "ATMNET."

For 5E11 and later, when FAR COM ADDR is not 0 and CON TYPE is entered, CON TYPE must be "POINT".

For 5E15 FR4 and later, when FAR COM ADDR is 0 and CON TYPE is entered, CON TYPE must be "ATMGW" or "ATMNET".

2.6 (*) FAR SM

Description: Enter the Far Switching Module on which the PSU (Packet Switch Unit) is located.

- ***NOTE:*** If FAR SM is not entered, its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key FAR COM ADDR is matched to EQPSU field COM ADDR; FAR PSU is assumed to be 0.

Valid Entries: 1 - 192

Data Rules:

If FAR SM is entered, then FAR PSU must also be entered.

For each unique NEAR SM or FAR SM on the PSULNK form, the maximum number of PSULNK forms allowed is 10.

For each unique FAR SM on the PSULNK form, the set of corresponding NEAR COM ADDR values cannot contain duplicates. (Note that if FAR SM is blank, and LINK TYPE is "INTRA", its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key FAR COM ADDR is matched to the COM ADDR on the EQPSU form. Otherwise, if LINK TYPE is "INTER", it is not necessary to check the FAR SM. If NEAR COM ADDR is blank, its value is derived from the COM ADDR field on the EQPSU form keyed by the PSULNK NEAR SM.

For 5E11 and later, when FAR SM is entered and CON TYPE is entered, CON TYPE must be "POINT".

2.7 (*) FAR PSU

Description: Enter the Far PSU (Packet Switch Unit) number..
Valid Entries:

5E15 and earlier: Blank, or enter 0
5E16 and later: Blank, or enter 0 - 1

Data Rules:

If FAR PSU is entered, then FAR SM must also be entered.

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2.8 LINK TYPE

Description: When PHAs are used in a "point-to-point" configuration, this field indicates whether the FAR PSU community address is in "this" (the same) switch office ("INTRA") or another switch office ("INTER"). When the PHA is used for the "Point-to-multipoint" configuration, this field must be set to "INTER" whether the link is carrying intra-office traffic, inter-office traffic, or both.

Software Release: 5E10 and later
Required Field.
Default: INTRA
Valid Entries:

Valid LINK TYPE Entries

Entry	Definition
INTRA	Link is between PSUs on the same switch.
INTER	Link is between PSUs on different switches.

Data Rules:

When "INTER" is entered and any NEAR field is entered for a channel, NEAR SHELF and NEAR POSITION must be entered.

When "INTER" is entered, FAR SHELF, FAR POSITION and FAR CHL GRP must not be entered for either channel.

When LINK TYPE is "INTER", FAR SM must not be entered.

When LINK TYPE is "INTRA", FAR SHELF must be entered in every row where NEAR SHELF is entered.

When LINK TYPE is "INTRA" and any field is entered for a channel, NEAR SHELF, NEAR POSITION, FAR SHELF, and FAR POSITION must be entered.

LINK TYPE must not be both "INTER" and "INTRA" between the same 2 FAR/NEAR COM ADDR values.

2.9 APS TYPE

Description: Enter the Automatic Protection Switching Type used on the link.

Software Release: 5E11 and later
Required Field.
Default: BIDIRECT
Valid Entries:

Valid APS TYPE Entries

Entry	Definition
NONE	No automatic protection switch type; used for simplex (one channel provisioned). When the link is duplex, the APS type should be selected to match the PHA or other equipment at the far end of the line.
BIDIRECT	Bi-directional; both ends will always have the same line protected.
UNIDIRECT	Uni-directional; the selected channel at one end of the line does not have to be the same as the other end.

2.10 SD THRESH

Description: Enter the Signal Degrade Threshold. This threshold is used to indicate the signal degrade bit-error threshold used for each channel of the PSU link. When this threshold is reached for a channel, the channel will go into a signal degrade condition where recovery action may be taken.

Software Release: 5E11 and later
Required Field.

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Default: TENEM9
Valid Entries:

Valid SD THRESH Entries

Entry	Definition
TENEM5	10E-5.
TENEM6	10E-6.
TENEM7	10E-7.
TENEM8	10E-8.
TENEM9	10E-9.

2.11 SF THRESH

Description: Enter the Signal Failure Threshold. This threshold is used to indicate the signal fail bit-error threshold used for each channel of the PSU link. When this threshold is reached for a channel, the channel will go into a signal fail condition. For example, with the default rate of "TENEM3" (or .001), a condition will be declared when (on the average) at least 1 out of every 1000 bits is received in error.

Software Release: 5E11 and later
Required Field.
Default: TENEM3
Valid Entries:

Valid SF THRESH Entries

Entry	Definition
TENEM3	10E-3.
TENEM4	10E-4.
TENEM5	10E-5.

CHANNELS

The following CHANNELS list fields (Section 2.12 - Section 2.18) define both channels of the packet switch unit link. The channels are defined by assigning physical PHA1s (Protocol Handlers for Asynchronous Transfer Mode Type 1) and channel groups.

Data Rules:
If any field is entered for a CHANNEL, then NEAR SHELF, NEAR POSITION, FAR SHELF and FAR POSITION must be entered.

NEAR fields must be entered for CHANNEL 1, and FAR fields must be entered for CHANNEL 1.

For each CHANNEL, NEAR fields must all be entered or all blank, the FAR fields must all be entered or all blank.

For each near or far CHANNEL entered:

- the NEAR SM, PSU, SHELF, CHL GRP or FAR SM, PSU, SHELF, CHL GRP must match respectively to SM, PSU, PSU SHELF, GRP on the PSUGP form where PH TYPE is "PHA1".
- the NEAR SM, SHELF, POSITION or FAR SM, SHELF, POSITION must match respectively to SWITCHING MODULE, PSU SHELF, PH on the EQPSUPH form. The corresponding EQPSUPH PROTOCOL HANDLERS entry must have "O" (Operational) entered for EQST and 00000010 (PHA1) entered for PH CLI.

2.12 NEAR SHELF

Description: Enter the packet switch unit shelf where the near PHA1 (Protocol Handler for ATM (Asynchronous Transfer Mode)) 1 is located.
Valid Entries: 0 - 4

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Data Rules:

NEAR SHELF and NEAR POSITION must be unique for both channels.

The combination of SHELF and POSITION may not be duplicated within an SM.

The combination of SHELF and CHL GRP may not be duplicated within an SM. Note that if NEAR SM is blank, its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key NEAR COM ADDR is matched to the COM ADDR field on the EQPSU form; NEAR PSU is assumed to be 0. If FAR SM is blank and LINK TYPE is "INTRA", its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key FAR COM ADDR is matched to the COM ADDR field on the EQPSU form, and FAR PSU is assumed to be 0. If LINK TYPE is "INTER", it is not necessary to check the FAR SM.

PSULNK forms can not have a SHELF and CHL GRP which are mixed with the same Protocol Handler from other BRI or PRI DSLs in the same SM, i.e., on the following ODA forms:

- DSLUSR
- MDLNK
- MISLINK
- PSULNK
- QPHPIPE
- TRUNK
- XAT

2.13 NEAR POSITION

Description: Enter the Near Position number where the near protocol handler for ATM (PHA1) is located.
Valid Entries: 0 - 15

Data Rules:

The PHA1 defined for the NEAR POSITION must have an EQSTAT of "O" on the Protocol Handler EQPSUPH form (5742 Record). And, for Recent Change, it must be out of service before adding it to a PSU link or removing it from a PSU link.

2.14 NEAR CHL GRP

Description: Enter the Near Channel Group on the NEAR SHELF for this PSU link channel.

- ***NOTE:*** For Recent Change only, this field can be left blank if desired and an available channel group number on the NEAR SHELF will be selected for the channel of the PSU link. If this field is entered and the PH TYPE on the PSUGP form (5949 Record) is blank for the channel group entered, the PH TYPE will be set to PHA1 on the PSUGP form.

Valid Entries: 0 - 15

2.15 FAR SHELF

Description: Enter the Packet Switch Unit shelf on which the far protocol handler for ATM (PHA1) is located.
Valid Entries: 0 - 4

Data Rules:

FAR SHELF and FAR POSITION must be unique for both channels.

The combination of SHELF and POSITION may not be duplicated within an SM. Note that if NEAR SM is blank, its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key NEAR

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COM ADDR is matched to the COM ADDR field on the EQPSU form; NEAR PSU is assumed to be 0. If FAR SM is blank, and LINK TYPE is "INTRA", its value is derived from SWITCHING MODULE on the EQPSU form where PSULNK key FAR COM ADDR is matched to the COM ADDR field on the EQPSU form, and FAR PSU is assumed to be 0. If LINK TYPE is "INTER", it is not necessary to check the FAR SM.

PSULNK forms can not have a SHELF and CHL GRP which are mixed with the SHELF and CHL GRP (the first three characters of ISCNs) from other BRI or PRI DSLs in the same SM, i.e. on the following ODA forms:

- DSLUSR
- MISLINK
- PSULNK
- TRUNK
- XAT

The combination of SHELF and CHL GRP may not be duplicated within an SM.

2.16 FAR POSITION

Description: Enter the position number where the far protocol handler for ATM (PHA1) is located.
Valid Entries: 0 - 15

2.17 FAR CHL GRP

Description: Enter the channel group on the FAR SHELF for this PSU link channel.

- ***NOTE:*** For Recent Change only, this field can be left blank if desired and an available channel group number on the FAR SHELF will be selected for the channel of the PSU link. If this field is entered and the PH TYPE on the PSUGP form (5949 Record) is blank for the channel group entered, the PH TYPE will be set to PHA1 on the PSUGP form.

Valid Entries: 0 - 15

2.18 CON TYPE

Description: Enter the connection type of the PSU links which are defined for this PSU. Both channels should always have the same CON TYPE value unless converting the link from point-to-point to a multipoint ATM Network. When the channel terminates to another PSU, CON TYPE must be "POINT". When the channel terminates to an ATM switch, the value should be ATMNET.

This field supports the PHA for CDMA. For more information on this feature, see Division 2, Section 4A224.

- ***NOTE:*** Effective with the 5E11 Software Release, this field was moved from the EQPSU form (5741-1/2 Record), Division 8, Section 22, and "NOCON" was eliminated as a valid entry.

Software Release: 5E10 and later.
Valid Entries:

Valid CON TYPE Entries

Entry	Name
N or NOCON	Software Release: 5E10 only. No connection type assigned to this PSU.
P or POINT	Software Release: 5E10 and later. Point-to-Point configuration. The PSU link terminates to another PSU link.
ATM[N]ET	Software Release: 5E11 and later. Point-to-Multipoint configuration. The PSU link terminates to an ATM switch.
ATM[G]W	Software Release: 5E15 FR 4 and later. ATM Gateway. The PSU link terminates to an ATM Gateway link. See Division 2, Section 7BH (PSU CA Expansion feature).

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Data Rules:

When CON TYPE is "ATMNET" or "ATMGW":

- FAR SM must not be entered.
- FAR fields must not be entered.
- FAR COM ADDR must be 0.
- FAR SHELF must not be entered.
- LINK TYPE must be "INTER".

When CON TYPE is "POINT", FAR COM ADDR must not be 0.

```
psulnk                    5ESS Switch          _
(5057)                 OFFICE DATA ADMINISTRATION
                       PSU LINK ASSIGNMENT

(*)1. NEAR COM ADDR ___    (*)4. FAR COM ADDR ___    7. LINK TYPE  INTRA
(*)2. NEAR SM       ___    (*)5. FAR SM       ___
(*)3. NEAR PSU      _      (*)6. FAR PSU      _


                    8. CHANNELS

          NEAR      NEAR      NEAR      FAR       FAR       FAR
ROW  CHAN   SHELF   POSITION    CHL GRP    SHELF    POSITION   CHL GRP
1    0      _       __        __        _        __        __
2    1      _       __        __        _        __        __
```

Figure 1 SAMPLE PSULNK FORM 5E10 SOFTWARE RELEASE

```
psulnk                    5ESS Switch          _
                       OFFICE DATA ADMINISTRATION
(5057)                    PSU LINK ASSIGNMENT

(*)1. NEAR COM ADDR ___    (*)4. FAR COM ADDR ___    7. LINK TYPE INTRA
(*)2. NEAR SM       ___    (*)5. FAR SM       ___    8. APS TYPE  UNIDIRECT
(*)3. NEAR PSU      _      (*)6. FAR PSU      _      9. SD THRESH 9
                                                    10. SF THRESH 3

                    11. CHANNELS
        NEAR  NEAR     NEAR    FAR   FAR      FAR     CON
ROW CHAN SHELF POSITION CHL GRP SHELF POSITION CHL GRP TYPE
 1   0   _    __     __     _    __    __    ______
 2   1   _    __     __     _    __    __    ______
```

Figure 2 SAMPLE PSULNK FORM 5E11 AND LATER SOFTWARE RELEASES

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DIV. 8: ENGINEERING ASSIGNMENTS

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SEC. 1: EQUIPMENT ASSIGNMENT

1. GENERAL

The sections of this division describe the assignment requirements for the various input forms and records that define the equipment arrangements for a 5ESS Switch office. The forms described here usually have a form name starting with the letters EQ (e.g., EQIM, EQLU, etc). The records are in the 5700 and 5800 Series.

1.1 VIRGOS

For new offices, the equipment data is populated using Lucent Technologies' VIRGOS (Visual Interactive Regional Generation of Specifications) system upon completion of the 384 specification. This may be done automatically using VIRGOS, or manually using the VIRGOS mock specification. The data generated by VIRGOS includes the following:

- Switching Module equipment configurations
- PICB (Peripheral Interface Control Bus) and PIDB (Peripheral Interface Data Bus) assignments
- Circuit pack types and locations
- CLEI (Common Language Equipment Identification) codes
- Equipment status
- CLI (Change Level Indicator) assignments

NOTE: VIRGOS does not generate scanner or distribute assignments.

2. CHANGE LEVEL INDICATORS

The CLIs (Change Level Indicators) are 32 bit numbers, in which each bit may be used independently of other bits in controlling the software. Although most circuits are presently limited to one or two options or versions, with a corresponding limitation in the number of valid CLIs, in general a circuit may be ordered with a combination of options, each with its own CLI bit position.

CLIs are used by the 5ESS Switch software for two purposes:

- To select various software subroutines used to control or diagnose the equipment; and
- To select the appropriate message content (e.g., the CLEI code and pack designation) for displaying TLPs (Trouble Locating Procedures) to the switching personnel.

BTSR CLIs are included with the MCTSI CLI. With the SM-2000 Switch, some core circuit CLIs have been separated. The units that now have unique CLIs include the TSI, TSIS, MH, DX, Memory, DLIs, (E)NLI, and BTSR. The CLNKs have unique CLIs, but are not used. The MCTSI CLI contains the CLI value for the following set of units: MCP, APC, BSN, CI, PI, C/D, and power.

2.1 CLI Assignment Table Layout

The CLI Assignment Tables (beginning with Figure 1) provide current CLI data. This table of valid CLI values is updated whenever new or changed CLI values are received.

Figure 1 is sorted by division and section. The data is displayed in the following manner:

CLI ASSIGNMENT TABLE Layout

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Column	Description
FORM	Name of each input form
FIELD	Individual field names for a particular input form.
DEPENDENCIES	When another field entry determines CLI value, a comment to that effect is be made here.
CLI	CLI hexadecimal value. When CLI values must be "OR"ed to obtain the correct value, a note is included in the table.
DESCRIPTION	Descriptive comments.
J-DRAWING	Valid J-Drawing and list combinations.

2.2 SMPU CLI Assignment Table

Figures 2, 3, 4 and 5 are designed to assist in determining the appropriate value for the SMPU CLI field located on the EQIM form. The SMPU CLI Assignment Table and Worksheet eliminate the need to "OR" hexadecimal values. To determine the appropriate SMPU CLI value, first use the Table in Figure 2 to determine the hardware configuration. Enter a check mark in the column titled "CHK" for each applicable hardware configuration. When the table is complete, enter a "1" in all bit positions checked ("BIT"column of the table) on the worksheet (Figure 3). Fill the remaining blank bit positions with zeroes. Using the binary to hexadecimal conversion table on the worksheet, determine the hexadecimal value of each of the sets of binary bits (four each). Some of the hexadecimal values have been filled in because many of the high order bits are not used. When the hexadecimal value has been determined, this is the actual value entered into the SMPU CLI field. Sample completed worksheet and table entries are given in Figures 4 and 5. Figure 6 provides a blank DLI CLI Assignment Table format.

Figure 7 provides translation assignment activity for TRCU2 OLI Boards. This table shows the history and movement of these CLI translations across various ODA screens and Software Releases.

3. SCAN POINT, DISTRIBUTE POINT AND METALLIC TEST BUS ASSIGNMENTS

Since both LUCENT and 5ESS Switch owners make Scan Point, Distribute Point, and Metallic Test Bus assignments to various input forms, the following procedures should be used to avoid duplication of assignments.

3.1 LUCENT ASSIGNMENTS

The equipment forms are populated automatically using VIRGOS or manually using the VIRGOS mock specification.

A. When the VIRGOS to ODA (Office Data Assembler) interface is utilized, the following activities are recommended.

1. Use the "records" command to obtain a copy of the following office records:

Office Record	Description
5840	Scan Point Number Assignment Record
5841	Distribute Point Number Assignment Record
5842	Metallic Test Bus Assignment Record

2. Use the office records to make any required scan, distribute and Metallic Test Bus assignments per engineering assignment rules (SD-5D007-01).

3. Enter data for the following:

- Metallic Test Bus for Line Units on the EQLU form,
- Metallic Test Bus for Trunk Units on the EQTU form,
- Metallic Test Bus for LTD (Local Test Desk) test trunks on the EQTUP form (for Circuit Type (CKTTYP) of TRKTST only),

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- Protocol Circuits on the EQPRO form,
- Miscellaneous scan points on the EQSPN form,
- Miscellaneous distribute points on the EQDPN form. Crosschecks may be run, and any errors resolved, at the discretion of the person responsible for the data.

When the data is manually entered from a VIRGOS mock specification, the following activities are recommended.

1. Populate the EQMSU and EQMSP forms.
2. Use the "records" command to obtain a copy of the following office records:

Office Record	Description
5840	Scan Point Number Assignment Record
5841	Distribute Point Number Assignment Record
5842	Metallic Test Bus Assignment Record

3. Use the office records to make any required scan, distribute and Metallic Test Bus assignments per engineering assignment rules (SD-5D007-01).
4. Populate the remaining equipment forms entering the Metallic Test Buses, miscellaneous scan and distribute assignments.
5. Crosschecks may be run, and any errors resolved, at the discretion of the person responsible for the data.

3.2 5ESS SWITCH OWNER ASSIGNMENTS

Throughout the input forms, scan, distribute, MTB (Metallic Test Bus) and LTP (Logical Test Port) assignments may be required. The following activities are recommended to obtain the necessary assignments.

1. Use the "records" command to obtain a copy of the following office records:

Office Record	Description
5271-3	Logical Test Port Assignment Record
5840	Scan Point Number Assignment Record
5841	Distribute Point Number Assignment Record
5842	Metallic Test Bus Assignment Record

2. The output will indicate which points are available for assignments, as well as those already assigned. Use the records to make any required scan, distribute and LTP (Logical Test Port) assignments. The only MTB (Metallic Test Buses) required are for the DC Jacks on the Test Access Unit mounted on the TLWS (Trunk and Line Work Station).
3. The assignments are then entered on the input forms.
4. Maintain a marked copy for use by other personnel responsible for data entry.

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
SM-2000 CLIs:	Enter the hexadecimal sum of appropriate hexadecimal bit values corresponding to the hardware ordered/equipped (also see Figures 43, 44, 45, 46, and 47).	00	(5E9(2)) SM-2000, Release 1, UN538 (32	J5D003NA-1, L10A

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MH 0/1 CLI			timeslots) Message Handler.	
		01	5E10(1) For VCDX on an SM-2000.	J9D003NA-1
TSICOM 0/1 CLI		00	(5E9(2)) SM-2000, Release 1. Designates a TSI common board (UM74) with DS 1 timing. Allows T1 to continue functioning when SM-2000 is in stand alone. Can be used for SM-2000 or EXM-2000, but not required for EXM-2000.	J5D003NB-1, L1A
		01	(5E9(2)) SM-2000, Release 1.1, TSIU4 common board UM74B/UM74C, power, and backplane.	J5D003NB-1, L2A
		03	(5E9(2)) SM-2000, Release 1.1, TSIU4 common board UM74B/UM74C, power, backplane, and equipped with T1 external clock references.	J5D003NB-1, L2A ED5D00-21, Grp 454 or Grp 455 and cable groups
		10	5E10 SM-2000 class processor, TSIU4-2 (initial release) common board UM74C, power, and backplane.	J5D003NB-2, L3
		11	5E10 SM-2000 class processor, TSIU4-2 common board UM74C, power, and backplane.	J5D003NB-2, L3
		13	5E10 SM-2000 class processor, TSIU4-2 common board UM74C, power, backplane, and equipped with T1 external clock references; and cable groups.	J5D003NB-2, L3 ED5D500-21, Grp 454 or Grp 455
		21	Initial value for TSIU4 (SM-2000) which includes the common board UM74D, power, and backplane changes. NOTE: J5D003NB-1, L15 is used to order a jumper for the backplane that activates 30 Channel Mode (jumper equipped) or 24 Channel Mode (not jumper equipped).	J5D003NB-1, L2C
		23	Initial value for TSIU4 (SM-2000) which includes the common board UM74D, power, and backplane changes and equipped with T1 external clock references, with Stratum 3 free-run capability.	J5D003NB-1, L2C and cable groups ED5D500-21, Grp 454 or Grp 455
		31	Initial value for TSIU4 Version 2 (SM-2000) which includes the common board UM74D, power, and backplane changes.	J5D003NB-2, L3A
		33	Initial value for TSIU4 (SM-2000) which includes the common board UM74D, power, and backplane changes and equipped with T1 external clock references, with Stratum 3 free-run capability. NOTE: J5D003NB-1, L15 is used to order a jumper for the backplane that activates 30 Channel Mode (jumper equipped) or 24 Channel Mode (not jumper equipped).	J5D003NB-2, L3A and cable groups ED5D500-21, Grp 464 or Grp 465.
TSIS CLI		00	(5E9(2) Time Slot Interchange Slice (KLU1). Recent Change only.	J5D003NB-1, L9A
NOTE: For 5E10 and later, "MCTU3" bit assignments can be 2, 3, 4, 6, 7, 12, 16, 18, 19, 24, 28 and 29; however, bit 7 must be set for "MCTU3" and "SMPU4".FOR MORE INFORMATION ON MCTU3 ASSIGNMENTS, SEE THE MCTU3 CLI VALUES TABLE AT THE END OF THIS SECTION.				
SMPU 0/1 (5E2 through 5E4) IMPU 0/1 (5E5 and later)	Non-SM-2000	01	MCTSI equipped with TN28 memory packs (and either TN875 or TN875B control pack).	J5D003AY-1, L7 or J5D003AA-2, L7

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Non-SM-2000	02	MCTSI equipped with TN56 memory packs and thus requires a TN875B (rather than TN875) control pack.	J5D003EC-1, L1 or J5D003AY-1, L8
Non-SM-2000	04	5E2 MCTSI supports Revertive Pulsing feature either as unit type SMSMP20,	J5D003LA-1, L7
		or as unit type SMIMPU3	J5D003EC-1, L1
		or has TN127B and TN315B (rather than TN127 and TN315) packs in earlier units.	J5D003AT-1, L6 or J5D003AB-1, L5
Non-SM-2000	08	5E2 MCTSI equipped for 5E2 power monitor feature either as unit type SMSMP20,	J5D003LA-1, L5
		or as unit type SMMCTU3, or as unit type SMIMPU3,	J5D003LB-1
		or with CN6810 wiring change and SN516 (rather than SN412) in earlier units.	J5D003EC-1, L1 J5D003AT-1, L7+LWA
Non-SM-2000	10	MCTSI equipped for possible connection to an ASU panel either as	
		MC5D154A1 for 5E5,	J5D003LA-1, L20
		or with MC5D153A1B for 5E5,	J5D003EC-1, L41 or J5D003AY-1, L33
		or with MC5D125A1 for 5E4(2),	J5D003LA-1, L5
		or with a MC5D132A1B for 5E4(2),	J5D003EC-1, L39 or J5D003AY-1, L32
		or with a MC5D113A1B for 5E3,	J5D003EC-1, L23 or J5D003AY-1, L24
		or with a MC5D080A1B for 5E2.	J5D003EC-1, L9 or J5D003AY-1, L16
		or with KBN17 (SB20CORE/MCTU3) for 5E10 or with KBN20, KBN21, KBN22 (replaces KBN17). NOTE: For the MCTU3 the CLI defines the total amount of memory on the SB20CORE (KBN17 or KBN20, 21, 22) pack. The memory portion of the CLI is built by or'ing different memory CLI values until the total memory is reached.	J5D003LB-1
Non-SM-2000	40	(5E3) MCTSI is equipped with TN1377 to support the ISLU, RISLU, or PSUCOM interfaces.	J5D003LA-1, L7 or J5D003EC-1, L27
		(5E8) MCTSI is equipped with TN1377 to support the IDCU interface.	

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Non-SM-2000	80	(5E2 w/Software Update 86-0052) MCTSI either as unit type SMSMP20	J5D003LA-1, L5
		or is equipped with TN871B and TN875C and wiring change for processor speed up	J5D003EC-1, L33+L34+LWB or J5D003AY-1, L27 + L28 + LM
		or with SMMCTU3	J5D003LB-1
Non-SM-2000	200	(5E2 w/Software Update 87-0057) MCTSI equipped with 4-Mbyte TN2012 memory packs.	J5D003EC-1, L31 + L32 or J5D003AY-1, L26 + LS
Non-SM-2000	400	(5E3) MCTSI is equipped with TN1397 core support pack.	J5D003EC-1, L29 or J5D003AY-1, L25
Non-SM-2000	400000	(SMP23) MCTSI equipped with TN1407 processor core board. MCTU with EMA with MC68020. When combined with DGV32MEGMEM, indicates the MCTSI is equipped with TN1423 processor core board which has 32MB of on-board memory.	J5D003AY-1, L35 or J5D003EC-1, L43
Non-SM-2000	800	(5E3) MCTSI equipped with 410AA power converter (410AA replaces 495FB and 494RA)	J5D003EC-1, LAY
Non-SM-2000	1000	(5E4(2)) MCTSI supports SDLC interrupt option either as unit type SMSMP20 or as SMIMPU3 with TN1617 (rather than TN872),	J5D003LA-1, L5 J5D003EC-1, L36 J5D003LB-1
		or as SMMCTU3 with (KBN20, 21, 22 (replaces KBN17).	
Non-SM-2000	8000	(5E6) MCTU2 is equipped with UN520, SMP20 speed-up (SMP20 DATA CACHE).	J5D003EC-1, L21A
Non-SM-2000	10000	(5E5/5E10) This is the MCTU2/MCTU3 of the second (upper) SM equipped in this cabinet. This is used when two complete SMs are equipped in one cabinet. (NOTE: The list number given specifies the fusing required to support this option - it does not require that this second MCTU2/MCTU3 be equipped.) (NOTE: SMTYPE must be HSM or LSM for two SMs per cabinet.)	J5D003L-1, LBY
Non-SM-2000	40000	Indicates (SMP23/MCTU3) core board is equipped with 32MB of on-board memory.	
Non-SM-2000	80000	(5E10) Indicates MCTU3 core board is equipped with 64MB of on-board memory.	
Non-SM-2000	c0000	(5E10) Indicates MCTU3 core board is equipped with 96 MB of on-board memory.	
Non-SM-2000	1000000	(5E10) Provides APR (Auto Power Recovery) for the service group (to be or'd). UN516B plus wiring.	J5D003LA-1, LDB with LWC.
Non-SM-2000	2000000	(5E10) Indicates SMP23CDMX. Used in combination with DGVSMP12, DGVSMP23, DGV32MEGMEM, DGVPRTI to indicate that the MCTSI is equipped with a TN1423 processor core board which has 32MB of on-board memory, has an extended memory capacity of up to 52MB, has expanded update address bus cable	TN1408(B) indicates ED5D133-20, ED5D715-30, 31. Update Bus Cable Set indicates ED5D647-25, G5.

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			set, and a TN1408(B) memory controller. The TN1418 bootstrapper is required for this configuration.	
	Non-SM-2000	4000000	(5E9(2)) TN1838 - Clock Sync. Circuit and UN362 Ethernet Interface Board for the Administrative Work Station.	J5D003LA-1, L28 or 28A and L29, respectively
	Non-SM-2000	10000000	UN395B pack to be used as a PI1 in a PSU1 or as a PI2 in a PSU2. Replaces 395 which is only used as a PI2 in a PSU2.	J5D003EC, L51B, J5D003LA, L41B, L43B, LEA, J5D003NA, L17B, L514B, J5D003LB, L8A
	Non-SM-2000	20000000	(5E10) Indicates the MCTU3 core board has the version of firmware that allows use with a CM1. KBN20B (32MB), KBN21B (64MB), or KBN22B (96MB).	J5D003LB-1

NOTE: The only valid bits for SM-2000 are: 0, 1, 2, 3, 6, and 28; either bit 0 or 1 must be set, but not simultaneously; the IMPU CLI 0/1 bit 1 cannot be set and bit 0 must be set for SM-2005; bit 2 cannot be set. Reference: ODA error message CLI338a,b,and c, respectively.

	SM-2000	00	(5E9(2)) SM-2000 Release 1, UN540 MCTSI, SMPU4. Not valid for "SM2005".	J5D003NA-1, L1A & L2A
	SM-2000	02	(5E10) MCTSI equipped with UN540B SMP SM-2000 circuit pack. Not valid for "SM2005".	J5D003NA-1, L7D, 506A
	SM-2000	05	(5E10) MCTSI equipped with UN560 Enhanced SMP core processor board with 64MB of on-board memory.	J5D003NA, L25,523 (GPI)
	SM-2005	00	(5E11) SM-2000 Release 2, MCTSI, SMPU5. NOTE: Bit 0 must be set; bit 1 and 2 are not allowed. (Reference: ODA error message CLI338c, 5E12 and later.)	J5D003NG-1
	SM-2000	45	(5E11) MCTSI CORE60 (MM), 64-Mbyte on-board memory UN594.	J5D003NA-1, L31
	SM-2005	49	(5E11) MCTSI CORE60 (MM), 128-Mbyte on-board memory UN588.	J5D003NG-1, L25
BRD CLI		200	(5E5) This memory board is a 4-Mbyte TN1374.	J5D003LA-1, L6
		4000	(5E5) This memory board is a 8-Mbyte TN1376.	J5D003LA-1, L19
		20000	(5E6) This memory board is a 16-Mbyte TN1661.	J5D003LA-1, L23
		02	(5E9(2)) SM-2000, Release 1. This memory board is a 32-Mbyte TN1685.	J5D003NA-1, L9B
		04	(5E10) SM-2000. This memory board is a 64-Mbyte TN1806	J5D003NA-1, L24
DLI (Remote)		00	Earlier vintage DLI (TN877) with SN412.	J5D003AT-1, L1+L4 w/o L7, LWA
		01	5E2 DLI or RLI with power monitor feature as unit type SMSMP20 or RSM with TN1077B, or as unit type SMIMPU3, or earlier vintage DLI with SN516.	J5D003LA-1, L7 J5D003EC-1, L1 J5D003AT-1, L7 + LWA
		02	4-link RLI without timeslot switches.	J5D003AT-1 w/o L4 or J5D003EC-1 w/o L2 or J5D003LA-1 w/o L12
			FOR TN1077 TYPE BOARDS:	
		05	(5E3-5E9(1) only) TN1077B-E type DLI	J5D003EC-1, L21 or

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			(needed for 5E3 ORM).	J5D003LA-1, L7, 7A-7C
		08	(5E5) TN1077B type DLI with timeslot select switches connected to an AKM3 type OLI board on a TRCU version 2. Valid with either J5D003EC-1,L1+L2+L21E or J5D003LA-1,L7+L12	J5D003ED-2,L5
		200	(5E10) for TN1077C, CEPT voltage compliant DLI.	J5D003EC-1,L21A J5D003LA-1,L7A
		800	(5E9(2)) TN1077F type DLI. Required only for External Timing Interface in the ORM and VCDX. Backward compatitible with TN1077A-E. The TN1077F can be used in an LSM, HSM, ORM, and TRM and with earlier vintage DLI with SN516 or SN412 (referenced above). DO NOT SET THIS CLI IF THE CABLE GROUPS ARE NOT EQUIPPED.	J5D003LA-1, L7+L12 or J5D003EC-1, L1+L2 +L21E
	SM USAGE = non "ORM" or "RSM"	800200	(5E10) Non-SM-2000 for TN1077D, EMC compliant	J5D003EC-1,L21B J5D003LA-1,L7B
	SM USAGE = non "ORM" or "RSM"	800600	(5E10) Non-SM-2000 for TN1077E, DLI with CEPT, EMC and APR .	J5D003EC-1,L21C J5D003LA-1,L7C
			FOR OLI TYPE BOARDS:	
NOTE: For 5E11 and earlier, DLI CLIs for OLI boards are equipped on the EQIM form. For 5E12 and later, this function is moved to the EQTRCUPTH form.				
		08	(5E5) AKM3 type OLI board on a TRCU version 2. Valid with either [J5D003EC-1,L1 + L2 + L21E] or [J5D003LA-1,L7 + L12].	J5D003ED-2, L5
		10	(5E5) Equipped with 16E type OLI board on a TRCU Version 2.	J5D003ED-2,L6
		10	(5E8) Equipped with 16E-2 (replaces L6) type OLI board on TRCU Version 2.	J5D003ED-2, L11
		10	(5E5) Equipped with 16F type OLI board on TRCU Version 2.	J5D003ED-2, L7
		20	(5E8) Equipped with 16F-2 (replaces L7) type OLI board on a TRCU Version 2.	J5D003ED-2, L12, L12A
		80	(5E5) Equipped with 16G type OLI board on a TRCU Version 2.	J5D003ED-2, L8
		80	(5E8) Equipped with 16F-2 (replaces 16G) type OLI board on a TRCU Version 2.	J5D003ED-2, L12
		100	(5E5) Equipped with 16K type OLI board on a TRCU Version 2.	J5D003ED-2, L9
			FOR FIU BOARDS:	
		40	5E4(2) for RLI with an FIU equipped with TN1510 (replaces 2 TN834 packs and a TN835). (5E3) with Software Update (88-0088) installed. (5E2) with Software Update (8800-95) installed.	J5D003AP-3, L7
		400	(5E5) For FIU equipped with TN1802 rather than TN619 for use when interfacing DLTU2 (J5D024AA-1 rather than DLTU (J5D003AA-1).	J5D003AP-3, L10
LDSU		00	(5E2) Equipped with MC5D073A1/TN833 DSU2 common board.	J5D003EA-1, L1+L2
		00	For TN128 pack. DSU Model 1.	J5D003AE-1, L1
		01	(5E3) Equipped with MC5D085A1/TN833	J5D003EA-1, L1+L3

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			DSU2 common board.	or J5D003LA-1, L10
		03	5E4(2) Equipped with MC5D140A1/TN1637 DSU2 common board in a DSU model 1 unit.	J5ED003AE-1, L17
		800009	(5E10) Equipped with TN833C/MC5D085A1C, pumpable and APR.	J5D003EA-1, L4B, L8A, L11A, L14A, L19A, L24A
		800019	(5E12) Equipped with TN1890, TDSC4 pumpable and APR, replaces TN833.	
			NOTE: If DSU on EQDSP form = 0, CLI values must be 0 or 1. If DSU = 0 on the EQDS2P form, CLI values must be 0, 1, 3, 800009, or 8000019.	
BSTR		00	For current production, TN878.	J5D003EC-1, L1 or J5D003LA-1, L5, J5D003AT-1 and J5D003AY-1
		01	5E10 Fast pump bootstrapper, TN1418 NOTE: BTSR cli value for the SMSMP20 and SMMCTU3 need to be populated to DGVNULL even though they do not support a bootstrapper pack.	ED5D715-30, G10

Figure 1 EQIM Form - Div. 8, Sec. 2

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
LINK INTERFACE UNIT CLI		00	Applicable only to an ONTC of CM1 vintage.	J5D006AB-1, L1 or L2 or L3 or L4 or L5 or L6
MESSAGE INTERFACE UNIT CLI		00	For current production.	J5D006AA, L1 and L2
		400	(5E10) SN516B C/D with APR for CM2(C) only. APR only available in CM2(C). Backwards compatible with SN516.	J5D020A-1, L46B, L50, L51; J5D020A-2, L1H

NOTES:

When bit number 10 is set for the MIU CLI (where bits are numbered from 0 to 31 and bit 0 is the right most bit), CM VINTAGE on the EQCORE form mut be 2.

When an office has APR, all CM2(C) until/circuit CLI's must have the APR bit(s) set, including MI, NC2, and TMS CLI's and all PC CLI's.

NETWORK CLOCK UNIT CLI	NOTE: The values listed for the Network Clock Unit CLIs are bitwise assignments. For a combination of hardware, the values must be "OR"ed together to get the actual CLI value.			
	AUTO SYNC = N OSC TYPE = "DOMMED"	00	CM2 Medium Stability Controller, MC5D215A1.	J5D020A-1, L3, L3A, L23, L23A
	AUTO SYNC = Y OSC TYPE = "DOMMED"	80	CM2 Medium Stability Controller, MC5D215A2.	J5D020A-1, L3B, L5B, L7B, L23B, L24B, J5D020A-2, L9, L10
	CLOCK TYPE = "24CHAN2" AUTO SYNC = N OSC TYPE = "DOMHI"	08	CM2 High Stability Controller, MC5D222A1.	J5D020A-1, L4, L4A, LCC
	CLOCK TYPE = "24CHAN2" AUTO SYNC = Y OSC TYPE = "DOMHI"	88	CM2 High Stability Controller, MC5D222A2.	J5D020A-1, L4B, L6B, L8B J5D020A-2, L7, L8

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		00	CM2 Medium Stability Oscillator, TN1286B.	J5D020A-1, L3B, L23B, J5D020A-2, L10
		08	CM2 High Stability Oscillator, TN1284B.	J5D020A-1, L4B, J5D020A-2, L8
		00	CM2 24 Channel Synchronization Board, TN1274B.	J5D020A-1, L3B, L4B, L5B, L6B, J5D020A-2, L5
		80	CM2C Medium Stability Controller, MC5D215A2.	J5D020AJ-5, L15A
	CM2 Compact? must be Y ECDOPT.CM TYPE MUST BE "CM2C" CLOCK TYPE = "24CHAN2" AUTO SYNC = Y OSC TYPE = "DOMHI"	88	CM2C High Stability Controller, MC5D222A2.	J5D020AJ-5, L16A
		00	CM2C Medium Stability Oscillator, TN1286B.	J5D020AJ-5, L9
		08	CM2C High Stability Oscillator, TN1284B.	J5D020AJ-5, L11
		00	CM2C 24 Channel Synchronization Board, TN1274B.	J5D020AJ-5, L13
		20	CM1 with NC2 (MICU2).	J5D006C-1
		28	5E2 CM1 w/MICU2 and Domestic High Stability 24-channel Reference Network Clock 2 (TN1274B, TN1284)	J5D006C-1, L16
		20	5E2 MICU2 in CM1 with domestic Network Clock 1.	J5D006C-1, L13 w/o L14 or LAH
		21	5E2 MICU2 in CM1 with stand-alone clock (TN249).	J5D006C-1, L14 or LAH
		00	MICU1 in CM1 with domestic Network Clock 1.	J5D006C-1, L3 or L7
		01	No external system clock reference connected, stand-alone clock board (TN249) required.	J5D006C-1, L1 w/o L3 or L7
		102	5E10 for SN516B; backwards compatible with SN516 and APR.	J5D003AT-1, L7A J5D003EC-1, L1B

NOTE: For 5E15 and later, with the introduction of the CM3 (Global Message Server), the TMS (Time Multiplex Switch) CLI information was moved from the EQCORE form to the EQTMS form..

Figure 2 EQCORE Form - Div. 8, Sec. 3

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	For current production FPC (Foundation Peripheral Controller) and PPC (Pump Peripheral Controller) with CM2.	J5D020AB-1, L1A
		00	For current production MMP with CM1.	J5D006AD-1, L6 or L3
		00	For current production MMP (Modular Message Processor) with CM2.	J5D020AC-1, L1A or L2A or L4A
		00	(5E9(2)) SM-2000, QLPS Gateway Processor, TN1683, PC 32 and 33 only.	J5D020A-2, L38 + J5D020A-1, L40
NOTE: The CMP is not required to be transatable at the ODA form level; Recent Change only.		00	For CMP/CM2 (5E6 and later Software Releases).	J5D006AF-1, L1 or L2A orL3

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		04	For current production CMP/CM1 (5E5 to 5E6 Retrofit Procedure).	J5D006AD-1, L8
		00	For current production CMP/CM1 (5E6 and later Software Releases).	J5D006AD-1, L8
		02	For current production CMP/CM1 with one TN1871 and one TN1369 (replaces TN1368).	J5D006AD-1, L8D
NOTE: In ODA, this CLI is translated using the EXPANDED CMP/APR field on the EQCORE form (5701 Record); Recent Change View 17.14		01	5E13 and earlier: For current production CMP/CM2 with one TN1800 Memory Board and one TN1369 (replaces TN1368).	J5D020AF-1, L4 or J5D020AF-2, L5
NOTE: For 5E14 and later, see the NUMBER OF MEM BOARDS field on the EQCORE form.		05	5E13 to 5E14 retrofit and later: TN1800, plus 2 TN1369s. **NOTE: Two TN1369s are required to retrofit to 5E14.**	J5D020AF-2, L1A, L2B, L5A, L8
		0d	5E14 and later: TN1800 plus 3 TN1369s (for future use).	J5D020AF-2, L1A, L2B, L5A, L8
	CM VINTAGE = 2	400	For current production CMP/CM2 and APR, SN516B/C/D.	J5D020A-1, L46B, L50, L51, J5D020A-2, L47, L1H
		NOTE: When CM VINTAGE on the EQCORE form is 2, the correct CLI values are 0, 5, d, 400, 405, or 40d (when bit 10 is set and where the bits are numbered from 0 to 31 and bit 0 is the right most bit).		

Figure 3 EQPC Form - Div. 8, Sec. 5

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
ASC/RAU CLI	If ALARM TYPE = "RAU"	00	For TN934 alarm circuit.	J5D005AD-1
	If ALARM TYPE = "ASC"	00	For ED5D587 alarm circuit.	ED5D586-10

Figure 4 EQRAU Form - Div. 8, Sec. 7

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
COMMON BOARD		01	5E2 and later for LU2 with TN842B (required for TN1048, TN1058 or TN1561 grid bds).	J5D004AC-2, L5+LP
		01	LU3 with domestic version common board (UN322) for 5E3 and later.	J5D004AD-1, L1
		00	LU and early LU2 with TN842.	J5D004AC-1, L1 or J5D004AB-1 (old LU)
CHANNEL CIRCUIT		00	LU, LU2, LU3, for TN335, TN335B, TN335C, TN335D, TN335E, etc. channel pack.	J5D004AC-1 J5D004AD-1 LBG, LBH or L1 or J5D004AC-2, LBR or J5D004AB-1 (old LU)
CHANNEL BOARD		00	LU, LU2, LU3, for TN335, TN335B-E, etc. channel pack.	J5D004AC-1 J5D004AD-1, LBG, LBH or L1 or J5D004AC-2, LBR or

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				J5D004AB-1
		00	LU3 SM; SM-2000 for TN335E.	J5D004AD-1, LBG, LBH
HLSC(SG_,PK_)		02	LU2 equipped with MC5D045-A4D pack needed to support Distinctive Ringing in 5E2 or later. NOTE: With 5E2, the -A4D pack requires Software Update (91-0002)	J5D004AC-2, L30A, L31A or L32A
		02	LU2 equipped with MC5D045-A3 pack needed to support Distinctive Ringing in 5E2 or later.	J5D004AC-2, L30, L31 or L32; or J5D004AC-1, LB or LC
		01	LU2 equipped with MC5D045-A2 pack needed to support Multi-frequency ringing.	J5D004AC-2, L27, L28, or L29
		00	LU2 equipped with MC5D045-A1 pack.	J5D004AC-2, L24, L25, or L26; or J5D004AC-1, L1 or L4
		02	LU3 for MC5D045-A4D on TN844, TN844B or TN844C HLSC. NOTE: With 5E2, the -A4 pack requires Software Update (91-0002)	J5D004AD-1, L45A or L46A or L47A
		02	LU3 for MC5D045-A3 on TN844 or TN844B HLSC.	J5D004AD-1, L45 or L46 or L47
	LINE UNIT = 7	02	5E9(2) LU3 with SM-2000 for 4AD1.	J5D004AD-1, L45 or L46 or L47 or L48
		00	TN844D, MC5D097A2D	J5D004AG-1,L3C
		B83	TN844E, MC5D097A3E	J5D004AL-1,L23
	LINE UNIT TYPE = 4AD1	1002	TN844E, MC5D194A1Rural Electrification Administration.	J5D004AD,L6,6A,6B, 9,9A,518
	LINE UNIT TYPE = 4AD1	2002	TN844E, MC5D195A1Rural Electrification Administration.	J5D004AD,L7,7A, 7B,10,10A,519
	LINE UNIT TYPE = 4AD1	3002	TN844E, MC5D196A1Rural Electrification Administration.	J5D004AD,L8,8A, 8B,11,11A,520
GDX ACCESS CKT	LINE UNIT TYPE = "4AC1" or "4AD1"	00	For current TN831/TN832.	J5D004AC-2, L5 or J5D004AD-1, L1, or J5D004AC-
	LINE UNIT TYPE = "4AD1"	01	5E10 for TN831B and TN832B CEPT.	J5D004AC-1, LZ, J5D004AC-2, LCA
	LINE UNIT TYPE = "4AD1"	03	5E10 TN831C and TN832C CEPT, and APR.	J5D004AC-2, LCM and J5D004AC-2, LCL, J5D004AD-2, L1F, LF
900 OHM TEST		00	For LU, LU2, and LU3.	Not applicable.
600 OHM TEST		00	For LU2 and LU3.	Not applicable.
2K OHM TEST		00	For LU, LU2, and LU3.	Not applicable.
LINEARIZATION		00	For LU, LU2, and LU3.	Not applicable.
LU GRID (x)	LINE UNIT TYPE = "4AC1"	00	LU equipped with TN838 grid board.	J5D004AC-2, L9, 10 or 11; or J5D004AC-2, L1, 2 or 3
	LINE UNIT TYPE = "4AC1"	01	LU2 or LU3 equipped with TN1048 grid board.	J5D004AC-2, L15, 16 or 17; or J5D004AD-1, L17, 18, 19, 20
	LINE UNIT TYPE = "4AC1"	02	LU2 or LU3 equipped with TN1058 (or TN1058B, etc.) grid board.	J5D004AC-2, L12, 13, 14 33, 34 or 35; or J5D004AD-1, L21, 22, 23, 24, 25, 26, 27 or 28
	LINE UNIT TYPE = "4AD1"	10	5E10 for TN1058C with APR.	J5D004AC-2, L33A, L34A, L35A,

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				J5D004AE-1, L64A, L65A, L66A, J5D004AD-2, LIF, L5A, LF

Figure 5 EQLUP Form - Div. 8, Sec. 10

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CONTROL/DATA CIRCUIT CLI (EQTU)		00	Equipped with SN101 and SN101B	J5D003AC-1, LF or LG
TEST ACCESS CIRCUIT CLI (EQTU)		00	Equipped with SN100	J5D003AC-1, L1
CLI (EQTUP)		00	Equipped with SN102,TRKLO	J5D003AC-1, L3
		00	Equipped with SN103,TRKLI	J5D003AC-1, L4
		00	Equipped with SN103B,TRKLI	J5D003AC-2, L3A
		00	Equipped with SN104,TRK4EM	J5D003AC-1, L5
		00	Equipped with SN105,TRK2EM	J5D003AC-1, L6
		00	Equipped with SN107,TSTTRK	J5D003AC-1, L7
			NOTE: For CIRCUIT TYPES: TRKLO, TRKLI, TRK2EM, TRK4EM, TRKTST, TKLOTOL, TKLITOL, TK2ETOL, or TK4ETOL, CLI must be 00.	

Figure 6 EQTU, EQTUP Forms - Div. 8, Sec. 13

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLOCK CLI	If OSCILLATOR TYPE = "DOMMED"	00	Standard Domestic Remote Clock Controller, Medium Stability MC5D215A1 or MC5D215A2.	J5D003FC-1, L1 or LK, respectively.
		00	Medium Stability Oscillator, TN1286B.	J5D003FC-1, L2A
		00	TN1274B 24 Channel Synchronization Board.	J5D020A-1, L5A or LA
		102	5E10 for SN516B; backwards compatible with SN516 and APR.	J5D003AT-1, L7A, J5D003EC-1, L1B

Figure 7 EQRCLK Form - Div. 8, Sec. 16

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	HDFIs and RDFIs may use ANN5.	J5D003AD-1, L4
		01	CDFIs, HDFIs and RDFIs may use the ANN5B or ANN5C Circuit Pack. 5E5 and later Software Releases.	
		00	Equipped with ANN1.	J5D003AD-1, L2
		03	Equipped with ANN3B/ANN3C.	J5D003AD-1, LH, L7
	If DFI USAGE = "H1"	00	For DSI (24-ch. Mu-law) type TN1306/TN1304 (remote) RISLU link pair.	J5D003FF-1, L2 and L4
		08	5E10 SN730 (Power Start), DLTU2 and DLTUR with APR (to be or'd)	J5D003FF, LAF, J5D024AA-1, L7
		800003	5E10 TN1305B/TN1307B, A-law (30 Ch.) DFI Link Pair (H1R1). CEPT and EMC compliant.	
	If DFI USAGE = "H2"	00	For DSI (24-ch. Mu-law) type TN1311/TN1309 RISLU link pair	J5D003FF-1, L3 and L5
		00	(5E5) For all DFI-2 board types for current production (TN1611 - MC5D223A1 or TN1612 - MC5D224A1)	J5D024AA-1, L2 and L3
		NOTE: If FAC IND = 1 or 3, CLI value must be 0, 1, 8, or 9.		

Figure 8 EQDUP Form - Div. 8, Sec. 17

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FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
COMMON CONTROL CLI		00	For current production.	J5D004AG-1, L1
COMMON DATA CLI		00	For current profuction.	J5D004AG-1, L1

Figure 9 EQISLU Form - Div. 8, Sec. 18

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
COMMON CONTROL CLI		00	For current production.	J5D004AG-1, L1
COMMON DATA CLI		00	For current production.	J5D004AG-1, L1
REMOTE CLOCK CLI		00	For RISLU equipped with TN1319 stratum 4 clock board.	J5D003FF-1, L10

Figure 10 EQRISLU Form - Div. 8, Sec. 19

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	For KCD2	J5D004AK-1, L6, F, H, K, M
		01	For LGP 553A	J5D004AK-1, L27, P, Q, R, S
		02	(5E4(2) and later) for LGP 553B Power Circuit Pack NOTES: 5E4(2) requires Software Update (91-0003) and 5E5 requires Software Update (91-0008) For 5E9(1) and later, when ANSI U cards are defined on the ISLULC form, the CLI must be 02.	J5D004AK-1, L31, AK, AL, AM, AN, 6A

Figure 11 EQLGC Form - Div. 8, Sec. 20

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
DSU COMMON CIRCUIT CLI (EQDS form)		00	For TN128 pack.	J5D003AE-1, L1
		03	Equipped with MC5D140A1/TN1637 DSU2 (5E4(2)) common board in a DSU model 1 unit	J5D003AE-1, L17
		01	Equipped with MC5D085A1/TN833 DSU2 common board	J5D003EA-1, L1 + L3 or J5D003LA-1, L10
		00	Equipped with MC5D0873A1/TN833 DSU2 common board	J5D003EA-1, L1 + L2
CLI (EQDSP)	If PACK TYPE = "UTG"	01	For TN892 rather than TN132	J5D003AE-1, L8 or L15
	If PACK TYPE = "UTG"	00	For earlier vintage with TN132 board	J5D003AE-1, L3
	If PACK TYPE = "UTD2"	00	For TN130 pack	J5D003AE-1, L4 or L13
	If PACK TYPE = "UTD4"	00	For TN133 pack	J5D003AE-1, L9, L14, L9 and LK, or L14 and LL
	If PACK TYPE = "RVPT"	00	For MC5D068A1 (TN853)	J5D003AE-1, L11
	If PACK TYPE = "TTFPROC"	01	Equipped with MC5D214-A1 (or later) version of TN305 (CN6657)	J5D003AE-1, L6
		00	Early version TN305 (w/o CN6657) non-production.	
	If PACK TYPE =	01	For current production HW with TN304B	J5D003AE-1, LE

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	"TTFRESP"		rather than TN304.	
		00	For earlier vintage TTF equipped with TN304.	J5D003AE-1, L6
	If PACK TYPE = "TTFINTF"	00	For current production.	J5D003AE-1, L6
	If PACK TYPE = "TTFTGEN"	00	For current production.	J5D003AE-1, L6
	If PACK TYPE = "CONF2"	00	For TN234 vintage UCC.	J5D003AE-1, L5
	If PACK TYPE = "CONF5"	01	For current production (TN841).	J5D003AE-1, L10
	If PACK TYPE = "UCC1032"	00	For current production (TN1032).	J5D003AE-1, L12
CLI (EQDS2P)	If TYPE = "LDSU2TG"	00	For current production.	J5D003EA-1, L1
CLI (EQDS2P)	If TYPE = "LDSU2TD"	00	For current production.	J5D003EA-1, L1
CLI (EQDS2P)	If TYPE = "LDSU2TX"	00	For current production.	J5D003EA-1, L1
CLI (EQDS2P)	If TYPE = "LDSU2CTD"	00	For current production.	J5D003JA

Figure 12 EQDS, EQDSP, and EQDS2P Forms - Div. 8, Sec. 21

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
COMMON	PSU TYPE =	00	For TN1082/MC5D102A1, Control Fanout	J5D003BL-1, L5
CONTROL CLI	"PSU1"			
	PSU TYPE = "PSU1"	01	For PSIU equipped with Enhanced B-channel Packet Service UN192/MC5D124A1B circuit pack	J5D003BL-1, L11
	PSU TYPE = "PSU1"	800004	TN1082B/MC5D102A1B, Control Fanout with APR.	
	PSU TYPE = "PSU1"	800006	TN1082B/MC5D123A1B, with FLEX and APR.	J5D003BL-1, LBJ
	PSU TYPE = "PSU2"	00	5E10. For TN1843	J5D003BY-1, L2
SHLF CLI		00	For production PSIU.	J5D003BL-1, L5
		00	5E10. For production PSIU with UN192 (MC5D124A1) with DF-FLEX.	J5D003BL, L11
	PSU TYPE must be "PSU2"	03	5E10. For UN399 Data Fanout with Multiple PIDBs, DF-MP circuit board.	J5D003BL-1, L14
	PSU TYPE must be "PSU2"	800006	5E10. For UN192B/TN1083C/MC5D124A1B PSU Shelf with DF-FLEX, APR.	J5D003BL-1, L11B, J5D003BL-1, L3B
	PSU TYPE must be "PSU2"	800007	5E10. For UN348B - Data Fanout with Mulitple PIDBs and APR.	J5D003BL-1
	PSU TYPE must be "PSU2"	104	5E12. For UN592 Data Fanout (DF2). Supports PCT link and APR.	J5D003BY-1, L14, L15, L106
		304	5E14. DF2 UN592B, supports APR.	J5D003BY-1,L14B

Figure 13 EQPSU Form - Div. 8, Sec. 22

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FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
PROTOCOL HANDLER CLI		00	5E4(2). For production 1-Megabyte TN1366 protocol handler (type PH1). (For lab test only.)	J5D003BL-1, L5
	PSU TYPE must be "PSU2"	01	5E10. TN1844 (type PHV1).	J5D003BY-1
	PSU TYPE must be "PSU2"	02	5E10 TN1856 (type PHV2).	J5D003BY-1
	PSU TYPE = "PSU2"	04	5E12 For TN1862 (type PHV3).	J5D003BY-l, L13
	PSU TYPE = "PSU2"	08	5E12 For TN1863 (type PHV4).	J5D003BY-l,, L16B
	PSU TYPE must be "PSU2"	10	5E10. TN1845 (type PHA1).	J5D003BY-1
	PSU TYPE = "PSU1"	100	For production 1-Megabyte TN1081 protocol handler (type PH2).	J5D003BL-1, L6
	PSU TYPE = "PSU1" or "PSU2"	a00	For production 4-Megabyte TN1367C protocol handler (type PH3APR).	J5D003BL-l , L12D J5D003BY-1, L11
	PSU TYPE must be "PSU2"	20	5E16.1 For TN1891 (type PHV5)	
		40	5E18.1 for TN1892 (type PHV6)	J5D003BY-1
	PSU TYPE = "PSU1" or "PSU2"	200	For production 4-Megabyte TN1367 protocol handler (type PH3).	J5D003BL-l, L12B
	PSU TYPE = "PSU1" or "PSU2"	1800	5E10 3-Megabyte TN1846 (type PH4).	J5D003BL-1, L15A (PSU1) J5D003BY-1, L5 (PSU2)
	PSU TYPE "PSU1" or "PSU2"	2800	5E13 16-Megabyte TN1873 (type PH22)	(being researched)
		8800	5E16(1) For TN13 (type PH31)	
		10000	5E16(1) For TN113(=PH33 + LLE1 paddle board) (type PHA2)	J5D003BY-1,L22
		20000	5E16(1) For TN13(=PH30 + LLE2 paddle board) (type PHE2)	J5D003BY-1,L20

Figure 14 EQPSUPH Form - Div. 8, Sec. 23

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI	If CIRCUIT PACK TYPE = "ISRG"	00	For TN1347 20HZ ringing generator board.	J5D004AG-1, L4
	If CIRCUIT PACK TYPE = "ISRG"	00	For TN1347B 20HZ ringing generator board.	J5D004AG-1, L4A
	If CIRCUIT PACK TYPE = "ISRG"	01	For TN1384 25HZ ringing generator board.	J5D004AG-1, L6
	If CIRCUIT PACK TYPE = "ISRG"	01	For TN1384B 25HZ ringing generator board.	J5D004AG-1, L6A
	If CIRCUIT PACK TYPE = "ISMAN"	00	For production TN1348 pack.	J5D004AG-1, L5
	If CIRCUIT PACK TYPE = "ISHLSC"	00	For production MC5D097A1/TN844B pack.	J5D004AG-1, L3
	If CIRCUIT PACK TYPE = "ISHLSC"	00	For production MC5D097A1C/TN844C pack.	J5D004AG-1, L3A
	If CIRCUIT PACK TYPE = "ISHLSC"	00	For production MC5D097A2C/TN844C pack.	J5D004AG-1, L3B
	If CIRCUIT PACK TYPE = "ISHLSC"	00	For production MC5D097A2D/TN844D pack.	J5D004AG-1, L3C
	If CIRCURIT PACK TYPE = "ISHLSC"	B83		J5D004AL-1, L23

Figure 15 EQISAP Form - Div. 8, Sec. 24

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FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI	If TYPE = "MACC"	00	Metallic Access Pack (TN138)	J5D003BD-1, L3 or L10
	If TYPE = "ALIT"	00	Equipped with TN329 or TN329B for medium humidity application.	J5D203BD-1, L8 or LJ
	If TYPE = "ALIT"	01	Equipped with TN328 or TN328B for high humidity applications.	J5D003BD-1, L9 or LK
	If TYPE = "ALIT"	02	Equipped with TN330 or TN330B for low humidity applications.	J5D003BD-1, L7 or LH
CLI	If TYPE = "DIST"	00		J5D003BD-1, L5
	If TYPE = "SCAN"	00		J5D003BD-1, L4
	If TYPE ="GDXC"	00		J5D003BD-1, L6
	If TYPE = "DFTC"	00		J5D003BD-1, L11
	If TYPE = "SLIM"	00	5E10 TN1422.	J5D003BD-1, L20
MTIB PACK CLI		00	(Same as TN138 metallic access.)	J5D003BD-1, L10
MSU COMMON CIRCUIT CLI		00	Equipped with TN879 Common Board.	J5D003BD-1, L1 + L2
		01	Equipped with TN879B Common Board.	J5D003BD-1, L1 + L2 + LL

Figure 16 EQMSU, EQMSP, and EQMMSP Forms - Div. 8, Sec. 25

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
DCTU CLI		00	For current production.	J1P023AM-1, L1

Figure 17 EQDCTU Form - Div. 8, Sec. 26

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
PMU CLI		00	For current production.	J1P023AM-1, L1, L2, L3

Figure 18 EQPMU Form - Div. 8, Sec. 27

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
EQUIPMENT CNI		00	For FIU with 24-channel links with ANN5 boards.	J5D003AD-1, L4 or L5
CC CLI		00	For current production.	J5D004AG-1, L1
CD CLI		00	For current production.	J5D004AG-1, L1
CLI		00	For current production.	

Figure 19 EQFIU Form - Div. 8, Sec. 28

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
COMMON CONTROL CIRCUIT		00	For current production.	J5D003AR-1; J5D003AR-2, L4; J5D003AS-2, L4
CLI		00	For current production.	J5D003AR-1

Figure 20 EQDCLU and EQDCLP Forms - Div. 8, Sec. 30

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
		NOTE: For 5E9(2) and later, TRC CLIs for the following OLI boards are equipped on the EQTMSLINK form.		
TRC CLI (Host)		00	(5E3) For TRCU1 Unit.	J5D003ED, L1 or L2
		01	(5E5) For AKM3 OLI Board.	J5D003ED-2, L5
		02	(5E5) For 16E OLI Board.	J5D003ED-2, L6

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		02	(5E8) For 16E-2 (replaces L6) OLI Board.	J5D003ED-2, L11
		04	(5E5) For 16F OLI Board.	J5D003ED-2, L7
		04	(5E8) For 16F-2 (replaces L7) OLI Board.	J5D003ED-2, L12
		08	(5E5) For 16G OLI Board.	J5D003ED-2, L8
		10	(5E5) For 16K OLI Board.	J5D003ED-2, L9

Figure 21 EQORMLINK Form - Div. 8, Sec. 33

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
COMMON		00	Not Used.	
CONTROL CLI MAIL BOX		00		J5D003EA-1, L4
CIRCUIT CLI RECORDED		00		J5D003EA-1, L4
ANNOUNCEMENT CLI DIAL THROUGH		00		J5D003EA-1, L4
ANNC CLI				
CLI	UNIT TYPE = "RAF"	00	5E10 TN833 DSU2-RAF Common Control Circuit.	J5D003EA-1, L24A
	UNIT TYPE = "RAF"	800009	5E10 TN833C pumpable and APR, DSU2-RAF Common Control	J5D003EA-1, L4B, L8A, L11A, L14A, L19A, L24A

Figure 22 EQRA Form - Div. 8, Sec. 35

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		01	(5E3) MC5D087A1 for OSPS Directory Assistance.	J5D003EA-1, L4
		02	(5E4) MC5D114A1 for OSPS Toll and Directory Assistance or OSPS Coin Tone Receiver.	J5D003EA-1, L10
		04	(5E3 with Software Update pending) MC5D114A1 for OSPS 1-800 Directory Assistance	J5D003EA-1, L11
		00	(5E5 and later) For TN1053 (carrier pack) and all subsequent firm-ware versions for OSPS Toll and Directory Assistance,CAS-3.	J5D003EA-1, L21, LF

Figure 23 EQRAP Form - Div. 8, Sec. 36

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	Not used.	

Figure 24 EQISTF Form - Div. 8, Sec. 37

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
NOTE: For 5E12 and later, TRC CLIs previously defined on the EQTMSLINK form (host) are defined on this form. Similarly, EVEN/ODD NLI CLIs (remote) previoulsy defined on the EQNLI form are defined on this form.				
TRCU FIRST PATH HOST CLI		00	(5E3) TRCU version 1	J5D003ED-1, L1 or L2
		01	For AKM3 OLI board	J5D003ED-2, L5
		02	For 16E-2 OLI board	J5D003ED-2, L11
		04	For 16F-2 OLI board	J5D003ED-2, L12, L12A
		08	For 16G OLI board	J5D003ED-2, L8
		10	For 16K OLI board	J5D003ED-2, L9
		00	(5E12) TRCU version 3	unavailable
TRCU FIRST PATH REMOTE CLI		00	(5E3) TRCU version 1	J5D003ED-1, L1 or L2
		08	(5E8) TRCU version 2: For BKD3 type ENLI with timeslot select switches connected to an AKM3 type OLI	J5D003ED-2, L5

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			board	
		10	For BKD3 type ENLI with timeslot select switches connected to 16E2 type OLI board	J5D003ED-2, L11, L11A
		20	Same as above except equipped with 16F2 type OLI board	J5D003ED-2, L12, L12A
		80	Same as above except equipped with 16G type OLI board	J5D003ED-2, L8
		100	Same as above except equipped with 16K type OLI board	J5D003ED-2, L9
		00	(5E12) TRCU version 3	unavailable
TRCU NEXT PATH HOST CLI		00	(5E3) TRCU version 1	J5D003ED-1, L1 or L2
		01	For AKM3 OLI board	J5D003ED-2, L5
		02	For 16E-2 OLI board	J5D003ED-2, L11
		04	For 16F-2 OLI board	J5D003ED-2, L12
		08	For 16G OLI board	J5D003ED-2, L8
		10	For 16K OLI board	J5D003ED-2, L9
		00	(5E12) TRCU version 3	unavailable
TRCU NEXT PATH REMOTE CLI		00	(5E3) TRCU version 1	J5D003ED-1, L1 or L2
			(5E8) TRCU version 2:	
		08	For BKD3 type ENLI with timeslot select switches connected to an AKM3 type OLI board	J5D003ED-2, L11
		10	For BKD3 type ENLI with timeslot select switches connected to 16E2 type OLI board	J5D003ED-2, L11
		20	Same as above except equipped with 16F2 type OLI board	J5D003ED-2, L12
		80	Same as above except equipped with 16F2 type OLI board	J5D003ED-2, L12
		100	Same as above except equipped with 16K type OLI board	J5D003ED-2, L9
		00	(5E12) TRCU version 3	unavailable

Figure 25 EQTRCUPTH Form - Div. 8, Sec. 38

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
IDCU CLI		00	(5E8) For 429AA, Power Unit	J5D003FL-1, L2
IDCU CLI		00	(5E8) For KBN6, PIDB Transmission Interface	J5D003FL-1, L3
IDCU CLI		00	(5E8) For UN359, Common Control Processor	J5D003FL-1, L4
SG0/1 CLI; LSI0/1 CLI		00	(5E8) For TN1670, Loop Side Interface	J5D003FL-1, L5
IDCU CLI		00	(5E8) For KBN7, Electrical Line Interface Circuit	J5D003FL-1, L6

Figure 26 EQIDCU Form - Div. 8, Sec. 48

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	Non-broadcast mode (UN71).	J5D003NF-1, L5
		01	5E11, SM-2000 Broadcast mode (to broadcast control signals to all ports) (UN71B/C)	J5D003NF-1, L6

Figure 27 EQCI Form - Div. 8, Sec. 50

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING

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CLI		00	5E9(2) SM-2000, Release 1, UM73 Data Expansion.	J5D003NB-1, L2A
		10	5E10 SM-2000, TSIU4-2, UN553 Data Expansion.	J5D003NB-2, L3
			NOTE: For 5E11 and later, for SM-2000, the CLI vlaue must be 10, if bit 4 of the TSICOM 0 CLI/TSICOM 1 CLI is set on the corresponding EQIM form, otherwise the CLI value entered must be 0.	
	Non-SM-2000		5E11 CLI must equal the IMPU CONTROLLER 0 or 1 CLI (depending on an MC value of 0 or 1) on the EQIM form.	

Figure 28 EQDI Form - Div. 8, Sec. 51

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
		00	(5E9(2)) SM-2000, KLU1 TSI Slice.	J5D003NB-1, L9A

Figure 29 EQTSI Form - Div. 8, Sec. 52

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
QLI CLI	CM2C = N, SM USAGE = NON-ORM, CM VINTAGE = 2, UNIT TYPE = SM2K; also CM2C = N, SM USAGE = ORM, CM VINTAGE = 2, TRCU3/SM2K	100	(5E9(2)) SM-2000, Release 1, TN1681, Quad Link Interface 2 for TMSU2.	J5D020AG-2, L10
	CM2C = Y	00		
	CMVINTAGE = 3	00		
		00	Equipped with TN888 for non-SM-2000.	J5D020AG-2, L4
TRC CLI		00	(5E3) for TRCU1 Unit.	J5D003ED-1, L1 or L2
NOTE: For 5E12 and later, the TRC CLI function was moved to the EQTRCUPTH form.				
			For TRCU2:	
		02	(5E5) For 16E OLI Board.	J5D003ED-2
		02	(5E8) For 16E-2 (replaces List 6) OLI Board.	J5D003ED-2, L11
		04	(5E5) For 16F OLI Board.	J5D003ED-2, L7
		04	(5E8) For 16F-2 (replaces List 7) OLI Board.	J5D003ED-2, L12
		08	(5E5) For 16G OLI Board.	J5D003ED-2, L8
		10	(5E5) For 16K OLI Board.	J5D003ED-2, L9

Figure 30 EQTMSLINK Form - Div. 8, Sec. 53

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	5E9(2) SM-2000, Release 1, with DSU3, UN363	J5D003NC-1, L2
	UNIT TYPE = SMPU4	01	(5E12) For UN590 pumpable UDSC4 with APR.	J5D003NC-1, L3, J5D003NG-1, L26

Figure 31 EQDSC3 Form - Div. 8, Sec. 54

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
NOTE: For 5E12 and later, the EVEN/ODD NLI CLI remote function for OLI boards was moved to the EQTRCUPTH form.				
EVEN/ODD NLI		00	5E9(2) SM-2000, Release 1, BKD1 paddle	J5D003NB-1, L10

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CLI Network Link Interface			board to terminate NCT2 links.	J5D003NB-2, L9
		02	BKD7 CDX (CM2C) SM-2000.	J5D003NB-1, L12
	NOTE: The values listed for the ENLI are bitwise assignments. For a combination of hardware, the values must be "OR"ed together to get the actual CLI value. ENLIs have the lowest bit set. NLIs have the lowest bit cleared. ENLIs are only valid for ORM-2000s. However, an NLI is used in ORM-2000s if connected with a TRCU3.			
	SM USAGE = "ORM" and UNIT TYPE"SM2000"	01	EXM-2000, BKD3 (E)NLI NCT link.	J5D003NB-1, L14 J5D003NB-2, L13
		08	BKD3 type GNLI with time slot select switches connected to an AKM3 type OLI board.	J5D003ED-2, L5
		10	BKD3 type ENLI with time slot select switches connected to an 16E2 type OLI board.	J5D003ED-2, L11, L11A
		20	BKD3 type ENLI with time slot select switches connected to an 16F2 type OLI board.	J5D003ED-2, L12, L12A
		80	BKD3 type ENLI with time slot select switches connected to an 16G type OLI board.	J5D003ED-2, L8
		100	BKD3 type ENLI with time slot select switches connected to an 16K type OLI board.	J5D003ED-2, L9
		04	BKD11 connectors on SM-2000 connected to CM3.	J5003NB-2, L16

Figure 32 EQNLI Form - Div. 8, Sec. 55

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	TN1682 TMSU2 for QLPS	J5D020AG-2, L5 & 6A

Figure 33 EQQLPS Form - Div. 8, Sec. 56

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CC 0/CC 1 CLI		00	KLU2 Common Controller.	J5D003FR-1, L2
CD 0/CD 1 CLI		00	KLU3 Common Data.	J5D003FR-1, L3
FI0/FI1 CLI		00	KTU2 STSX-1 Facility Interface.	J5D00FR-1, L5
STMX CLI		01	KTU1-B Transmission Multiplexer (spare).	J5D003FR-1, L4A
TMX CLI		00	KTU1 Transmission Multiplexer (service).	J5D003FR-1, L4
		01	5E13 SU KTU1-B replaces KTU1. Supports RSM on DNU-S.	J5D003FR-1, L4A

Figure 34 EQDNUS Form - Div. 8, Sec. 57

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
MH SIDE 0 CLI		00	Message Handler UN538.	J5D003NA-1, L10A
MH SIDE 1 CLI		00	Message Handler UN538.	J5D003NA-1, L10A

Figure 35 EQMH Form - Div. 8, Sec. 58

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
LI CLI		00	9822DY STSX-1 Link Interface.	J5D003FR-1, L6

Figure 36 EQSTE Form - Div. 8, Sec. 59

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FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	Subunit SAS (Service Announcement System) memory pack TN1841 common board.	J5D003FR-1, L7

Figure 37 EQSASP Form - Div. 8, Sec. 61

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI	UNIT TYPE = SMPU5	00	5E10 UN363	J5D003NG-1, L2
	UNIT TYPE = SMPU5	01	5E12 with UN590 pumpable UDSC4 with APR, replaces UN363.	J5D003NG-1, L26 J5D003NC-1, L3

Figure 38 EQGDSC3 Form - Div. 8, Sec. 63

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	5E11 AIU for DAC100 Common Data and Control (COMDAC) used to provide the interface between the SMP and the line packs.	J8G000AA-1, L2
		01	5E12 Remote (Extended) AIU COMDAC which supports T1 facilities.	J8G000AA-1, L11

Figure 39 EQAIU Form - Div. 8, Sec. 64

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	5E11 AIU for RGP100, Ring Generator which provides 100VA.	J8G000AA-1, L3
		00	5E11 AIU packs for LPZ100/B, standard POTS line pack, 32 LCs.	J8G00AA-1, L4, L4A
		00	5E11 AIU coin pack, 16 LCs.	J8G000AA-1, L4
		00	5E12 (R)AIU Test Application Pack	J8G000AA-1, L13
		00	5E12 AIU standard ETSI U-Interface (remote power) LPU112 Line Pack, 12 LCs.	J8G000AA01, L8A
		00	5E12 AIU standard ANSI U-Interface (non-remote power) LPU116 Line Pack, 16 LCs.	J8G000AA-1, L9

Figure 40 EQAIUP Form - Div. 8, Sec. 65

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
NOTES:				
For 5E15 and later, with the introduction of the CM3 (Global Message Server), the TMS (Time Multiplex Switch) CLI information was moved to the EQTMS form from the EQCORE form.				
The values listed for the TMS (Time Multiplexed Switch) CLIs are bitwise assignments. For a combination of hardware, the values must be "OR"ed together to get the actual CLI value. When bit number 10 is set (where bits are numbered from 0 to 31 and bit 0 is the right most bit), CM VINTAGE on the EQCORE form must be 2.				
For 5E11 and later, the TMS CLI for an SM-2000 class processor can be: 100, 102, 104, 106, 108, 10a, 10c, 10e, 500, 502, 504, 506, 508, 50a, 50c, or 50e.				
CLI		00	TMS vintage is of the following: 1) All double dual fabric offices with less than 94 SMs 2) Dual fabric offices with less than 30 SMs	J5D020A-1, L1 or L14; or J5D020B-1, L5 or L18
		02	5E2 TMS is equipped with KBN4 (vice KBN1) fabric boards; KBN5 for 5E7 and later.	J5D020A-1, L27 or J5D020B-1, L29 or L32
		00	CM1 TMS Model 1.	J5D001B or J5D001C w/o L12
		20	5E9(1)-5E9(2) CM2C is equipped with	J5D020AJ-5, L18 +

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			TN1812, TN1813, and TN1830 for CDX (Compact Digital Switch). For 5E15 and later, see the EQTMS form (Div. 8, Sec. 69); CLI field for more information.	L17 + L19, respectively.
		04	5E2 CM2 TMS is equipped with a UN321 board rather than a UN183.	J5D020A-1, L22
		08	5E2 CM2 TMS is equipped with UN503 and UN504 boards	J5D020B-1, L35+L36
		02	5E3 TMS Model 1 with redesigned test board. TN1575 (replaces TN276) for use with TRCU circuits.	J5D001C-1, L12
		100	(5E9(2) SM-2000, Release 1, CM2 is equipped with TN884C.	J5D020AG-2, L1
		500	5E15 CM3.	unavailable

Figure 41 EQTMS Form - Div. 8, Sec. 69

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
PCTDXO CLI		00	5E14	unavailable
PCTDX1 CLI		00	5E14	unavailable

Figure 42 EQPDXU Form - Div. 8, Sec. 72

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
TE0 CLI and TE1 CLI		00	5E15 Peripheral Link Interface (PLI) Board (BKD10).	J5D003NB-2, L15

Figure 43 EQPCTP Form - Div. 8, Sec. 74

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI		00	5E15 OXU (Optically Extended Control and Data Unit); APCO - UN599.	J5D003NH-1, SD5D565-01

Figure 44 EQAPCX Form - Div. 8, Sec. 83

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
MODCTL SG0 CLI		00	5E15 OXU Extended Control and Data Unit Common Board, UN651.	J5D003NH-1, SD5D565-01
MODCTL SG1 CLI		00	5E15 OXU Extended Control and Data Unit Common Board, UN651.	
DI0 SG0 CLI		00	5E15 OXU Extended Control and Data Unit Common Board, UN651.	
DI0 SG0 CLI		00	5E15 OXU Extended Control and Data Unit Common Board, UN651.	

Figure 45 EQXCDU Form - Div. 8, Sec. 84

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
		00	For 6A U-card.	J5D004AH-1, L8
		00	For KCB6 Z-card.	J5D004AK-1, L8
		2000	For KCB6B Z-card.	J5D004AK-1, LAY
		00	For KCB7 T-card.	J5D004AK-1, L7
		00	For KCB10 U-card.	J5D004AK-1, L28
		00	5E6 For KCB17 U-card.	J5D004AK-1, L33 or 33A

Figure 46 ISLULC Form - Div. 5, Sec. 5C

FIELD NAME	DEPENDENCIES	CLI (Hex)	DESCRIPTION	J-DRAWING
CLI	TYPE = "ULBD"	20000	5E10 MPU1B, U line circuit board.	J5D004AL-1, L60-A
	TYPE = "ULBD"	40000	5E10 MPU2, U line circuit board.	J5D004AL-1, L61
	TYPE = "TLBD"	80000	5E10 MPT1, T line circuit board, ISDN 4 Wire Digital Interface.	J5D004AL-1, L80
	TYPE = "WLBD"	00	5E10 MPW1, W line circuit board	NOT DETERMINED

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			YET.

Figure 47 ISLULB Form - Div. 5, Sec. 5M

CHK	BIT	HEX	DESCRIPTION	J-DRAWING
	0	1	MCTSI equipped with TN28 memory packs (and either TN875 or TN875B control pack).	J5D003AY-1, L7 or J5D003AA-2, L7
	1	2	MCTSI equipped with TN56 memory packs and thus requires a TN875B (rather than TN875) control pack.	J5D003EC-1, L1 or J5D003AY-1, L8
	2	4	5E2(1) MCTSI supports Revertive Pulsing feature either as unit type SMSMP20 or as unit type SMIMPU3 or has TN127B and TN315B (rather than TN127 and TN315) packs in earlier units.	J5D003LA-1, L7 J5D003EC-1, L1 J5D003AT-1, L6 or J5D003AB-1, L5
	3	8	5E2(2) MCTSI equipped for 5E2 power monitor feature either as unit type SMSMP20 or as unit type SMIMPU3 or with CN6810 wiring change and SN516 (rather than SN412) in earlier units.	J5D003LA-1, L5 J5D003EC-1, L1 J5D003AT-1, L7 + LWA
	4	10	MCTSI equipped for possible connection to an ASU panel either as MC5D154A1 for 5E5 or with MC5D153A1B for 5E5 or with MC5D125A1 for 5E4(2) or with a MC5D132A1B for 5E4(2) or with a MC5D113A1B for 5E3 or with a MC5D080A1B for 5E2(2)	 J5D003LA-1, L20 J5D003EC-1, L41 or J5D003AY-1, L33 J5D003LA-1, L5 J5D003EC-1, L39 or J5D003AY-1, L32 J5D003EC-1, L23 or J5D003AY-1, L24 J5D003EC-1, L9 or J5D003AY-1, L16
	5	20	Unused	
	6	40	5E3 MCTSI is equipped with TN1377 to support the ISLU, RISLU, or PSUCOM interfaces. (5E8) MCTSI is equippedwith TN1377 to support the IDCU interface.	J5D003LA-1, L7 or J5D003EC-1, L27
	7	80	5E2(2) with BWM 86-0052) MCTSI is equipped either as SMSMP20 or is equipped with TN871B and TN875C and wiring change for processor speed up	J5D003LA-1, L5 J5D003EC-1, L33 + L34 +LWB or J5D003AY-1, L27 + L28 + LM
	8	100	Unused	
	9	200	5E2(2) with BWM 86-0057) MCTSI is equipped with 4 Megabyte TN2012 memory packs.	J5D003EC-1, L31+L32
	10	400	5E3 MCTSI is equipped with TN1397 processor core board.	J5D003EC-1, L29 or J5D003AY-1, L25
	11	800	5E2(1) MCTSI is equipped with 410AA power converter (410AA replaces 495FB and 494RA).	J5D003EC-1, LAY
	12	1000	5E4(2) MCTSI supports SDLC interrupt option either as unit type SMSMP20	J5D003LA-1, L5

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			or as SMIMPU3 with TN1617 (rather than TN872)	J5D003EC-1, L36
	13	2000	Unused	
	14	4000	(5E4 and earlier) MCTSI is equipped with 8 Megabyte TN1376 memory packs.	J5D003LA-1, L19
	15	8000	(5E6) MCTU2 is equipped with SMP20 Speed Up (SMP20 DATA CACHE)	J5D003EC-1
	16	10000	(5E5) This is the MCTU2 of the second (upper) SM equipped in this cabinet. This is used when two complete SMs are equipped in one cabinet. (Note: The list number given specifies the fusing required to support this option - it does not require that this second MCTU2 be equipped.)	J5D003L1, LBT

Figure 48 BLANK SMPU CLI ASSIGNMENT TABLE

Binary Bit Position	**31**	**30**	**29**	**28**	**27**	**26**	**25**	**24**	**23**	**22**	**21**	**20**	**19**	**18**	**17**	**16**
State of each bit (0 or 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hexadecimal Conversion (Actual CLI)	0				0				0							

Binary Bit Position	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**
State of each bit (0 or 1)			0					0			0					
Hexadecimal Conversion (Actual CLI)																

Binary to Hexadecimal Conversion Table

Binary	Hex
0 0 0 0	0
0 0 0 1	1
0 0 1 0	2
0 0 1 1	3
0 1 0 0	4
0 1 0 1	5
0 1 1 0	6
0 1 1 1	7
1 0 0 0	8
1 0 0 1	9
1 0 1 0	A
1 0 1 1	B
1 1 0 0	C
1 1 0 1	D
1 1 1 0	E
1 1 1 1	F

Figure 49 BLANK SMPU CLI CONVERSION WORKSHEET

CHK	BIT	HEX	DESCRIPTION	J-DRAWING
	0	1	MCTSI equipped with TN28 memory packs (and either TN875 or TN875B control pack).	J5D003AY-1, L7 or J5D003AA-2, L7
	1	2	MCTSI equipped with TN56 memory packs and thus requires a TN875B (rather than TN875) control pack.	J5D003EC-1, L1 or J5D003AY-1, L8
X	2	4	5E2(1) MCTSI supports Revertive Pulsing feature either as unit type SMSMP20 or as unit type SMIMPU3 or has TN127B and TN315B (rather than TN127 and TN315) packs in earlier units.	J5D003LA-1, L7 J5D003EC-1, L1 J5D003AT-1, L6 or J5D003AB-1, L5

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X	3	8	5E2(2) MCTSI equipped for 5E2 power monitor feature either as unit type SMSMP20 or as unit type SMIMPU3 or with CN6810 wiring change and SN516 (rather than SN412) in earlier units.	J5D003LA-1, L5 J5D003EC-1, L1 J5D003AT-1, L7 + LWA
X	4	10	MCTSI equipped for possible connection to an ASU panel either as MC5D154A1 for 5E5 or with MC5D153A1B for 5E5 or with MC5D125A1 for 5E4(2) or with a MC5D132A1B for 5E4(2) or with a MC5D113A1B for 5E3 or with a MC5D080A1B for 5E2(2)	 J5D003LA-1, L20 J5D003EC-1, L41 or J5D003AY-1, L33 J5D003LA-1, L5 J5D003EC-1, L39 or J5D003AY-1, L32 J5D003EC-1, L23 or J5D003AY-1, L24 J5D003EC-1, L9 or J5D003AY-1, L16
	5	20	Unused	
X	6	40	(5E3) MCTSI is equipped with TN1377 to support the ISLU, RISLU, or PSUCOM interfaces. (5E8) MCTSI is equipped with TN1377 to support the IDCU interface.	J5D003LA-1, L7 or J5D003EC-1, L27
X	7	80	(5E2(2) with BWM 86-0052) MCTSI is equipped either as SMSMP20 or is equipped with TN871B and TN875C and wiring change for processor speed up	J5D003LA-1, L5 L5 J5D003EC-1, L33+L34+LWB or J5D003AY-1, L27+L28+LM
	8	100	Unused	
X	9	200	(5E2(2) with BWM 86-0057) MCTSI is equipped with 4 Megabyte TN2012 memory packs.	J5D003EC-1, L31+L32
X	10	400	5E3 MCTSI is equipped with TN1397 processor core board.	J5D003EC-1, L29 or J5D003AY-1, L25
	11	800	5E2(1) MCTSI is equipped with 410AA power converter (410AA replaces 495FB and 494RA).	J5D003EC-1, LAY
	12	1000	5E4(2) MCTSI supports SDLC interrupt option either as unit type SMSMP20 or as SMIMPU3 with TN1617 (rather than TN872)	J5D003LA-1, L5 J5D003EC-1, L36
	13	2000	Unused	
	14	4000	(5E4 and earlier) MCTSI is equipped with 8 Megabyte TN1376 memory packs.	J5D003LA-1, L19
	15	8000	(5E6) MCTU2 is equipped with SMP20 speed-up (SMP20 DATA CACHE)	J5D003EC-1
	16	10000	(5E5) This is the MCTU2 of the second (upper) SM equipped in this cabinet. This is used when two complete SMs are equipped in one cabinet. (Note: The list number given specifies the fusing required to support this option - it does not require that this second MCTU2 be equipped.)	J5D003LA-1, LBT

Figure 50 SAMPLE SMPU CLI ASSIGNMENT TABLE

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Binary Bit Position	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
State of each bit (0 or 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hexadecimal Conversion (Actual CLI)	0				0				0				0			

Binary Bit Position	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
State of each bit (0 or 1)	0	0	0	0	0	1	1	0	1	1	0	1	1	1	0	0
Hexadecimal Conversion (Actual CLI)	0				6				D				C			

Binary to Hexadecimal Conversion Table

Binary	Hex
0 0 0 0	0
0 0 0 1	1
0 0 1 0	2
0 0 1 1	3
0 1 0 0	4
0 1 0 1	5
0 1 1 0	6
0 1 1 1	7
1 0 0 0	8
1 0 0 1	9
1 0 1 0	A
1 0 1 1	B
1 1 0 0	C
1 1 0 1	D
1 1 1 0	E
1 1 1 1	F

Figure 51 SAMPLE SMPU CLI CONVERSION WORKSHEET

CHK	BIT	HEX	DESCRIPTION	J-DRAWING
	0	1	5E2(2) DLI or RLI with power monitor feature as unit type SMSMP20 or as unit type SMIMPU3 or earlier vintage DLI with SN516 vice SN412	J5D003LA-1, L7 or J5D003EC-1, L1 or J5D003AT-1, L7 +LWA
	1	2	4-link RLI without timeslot switches	J5D003AT-1 w\o L4 or J5D003EC-1 w\o L2 or J5D003LA-1 w\o L12
	2	4	(5E3) TN1077B type DLI (needed for 5E3 ORM) or RLI with TN1077B	J5D003EC-1, L21 or J5D003LA-1, L7
	3	8	(5E5) AKM3 type OLI board on a TRCU Version 2. Valid with either [J5D003EC-1, L1 + L2 + L21E] or [J5D003LA-1, L7 + L12]	J5D003ED-2, L5
	4	10	(5E5) Equipped with 16E type OLI board on a TRCU Version 2	J5D003ED-2, L6
	5	20	(5E5) Equipped with 16F type OLI board on a TRCU Version 2	J5D003ED-2, L7
	6	40	5E4(2) for RLI with an FIU equipped with TN1510 (replaces 2 TN834 packs and a TN835) (5E3) supported in 5E3 with BWM 88-0088 installed	J5D003AP-3, L7

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			(5E2(2)) supported in 5E2(2) with BWM 8800-95 installed	
	7	80	(5E5) Equipped with 16G type OLI board on a TRCU Version 2	J5D003ED-2, L8
	8	100	(5E5) Equipped with 16K type OLI board on a TRCU Version 2	J5D003ED-2, L9
	9-31		Unused	

Figure 52 BLANK DLI CLI ASSIGNMENT TABLE

The following table provides CLI assignments for the TRCU (Transmission Rate Converter Unit) by software release and form/view.

BOARD AND LISTS ARE SHOWN BELOW PER J5D003ED2	**Replaced with EQTMSLINK form. CLI values for TRCU unit only, ORd values are not used (host end)**	**BKD3 ENLI value of 01 must be ORd with TRCU values shown below (remote end).**	**TRCU & DLI values for the SM must be ORd together (remote end).**	**Both CLIs values for the QLI BD and the TRCU unit are shown in separate fields on this form (host end).**	**HOST end**	**REMOTE end**
FORM/VIEW	EQORMLINK (17.12)	EQNLI - SM-2000 (18.16)	EQIM - SM (18.1)	EQTMSLINK (17.12)	EQTMSLINK (17.12)	EQTRCUPTH (17.23)
FIELD	TRC CLI	Even/Odd NLI CLI	DLI CLI	TRC & OLI	HOST CLI	REMOTE CLI
GENERIC	5e8.1 to 5e9.1	5e9.2 to 5E11	5E11 and earlier	5E9.1 to 5E11	5E12 & later	5E12 and later
16E2 (L-11)	2	10	10	2	1	10
16E (L-6)	2	10	10	2	2	10
16F2 (L-12)	4	20	20	4	4	20
16F (L-7)	4	20	20	4	4	20
16G (L-8)	8	80	80	8	8	80
16K (L-9)	10	100	100	10	10	100
AKM3 (L-5)	1	8	8	1	1	8
	For 5E9 & later, this form is no longer used; replaced by the EQTMSLINK form.	5E12 & later, only the ENLI CLI value of 01 is shown on this form. Remote TRCU CLIs are shown on the remote section of the EQTRCUPTH (17.23) form.	For 5E12 & later, the value for the remote TRCU is no longer ORd with the CLI value but is shown on the EQTRCUPTH (17.23) for the first & second remote path CLIs (17.23)	For 5E12 & later, the TRCU CLI field is dropped from this form. Host TRCU CLI values are now shown on the first & second host path of the EQTRCUPTH (17.23) form.	For 5E9.1 and earlier, these CLIs are shown on EQORMLINK form. For 5E9.2 to 5E11, these CLIs are shown on the EQTMSLINK form.	For 5E11 & earlier, these CLIs for SMs are shown on the EQIM. For SM-2000, the se CLIs are shown on the EQNLI form.

Figure 53 TRCU ASSIGNMENT TABLE

The following table provides or'd MCTU3 CLI entries that are valid for 1) new installations of MCTU3 (J5D003LB) processors, 2) system upgrades (permanent replacements) of MCTU1 processors with MCTU3 processors (e.g., RSM), and 3) for replacing a MCTU1 processor with a transitional MCTU3 processor so that the MCTU1 and its SMC (Switching Module Controller) cabinet can be removed while the SM is using the MCTU3 processor, allowing the floorspace to be re-used for a SM-2000 SMC cabinet.

SM Usage (EQIM Form)	Circuit Boards	ODA Form	Field Name	CLI Value
Local/ Host/ RSM/	KBN21B/KBN21C (64Meg Core Board) TN1377	EQIM/18.1	MCTSI 0/1 CLI IMPU	0x200810dc

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ORM	TN1086B TN1424 TN1042B (if equipped, PI board needed for PSU1)			
	KBN22B/KBN22C (96Meg Core Board) TN1377 TN1086B TN1424 TN1042B (if equipped, PI board needed for PSU1)			0x200c10dc
	KBN21B/KBN21C (64Meg Core Board) TN1377 TN1086B TN1424 UN395B (if equipped, PI board needed for PSU2)			0x300810dc
	KBN22B/KBN22C (64Meg Core Board) TN1377 TN1086B TN1424 UN395B (if equipped, PI board needed for PSU2)			0x300c10dc
Local/Host	TN1077F	EQIM/18.1	DLI 0/1	0x800605
	UN71C	EQCI/18.2	CLI	0x01
	TN833C	EQIM/19.5	LDSU	0x800009
	TN1890	EQIM/19.5	LDSU	0x800019
RSM	**FIU2** with TN834 and TN835. Note: With TN1077F □ minimally configured; J5D003LB, L15 was ordered (paddle board, time slot selection switch required when the MCTU3 is used in minimally equipped RSM applications; two per service group).	EQIM/18.1	DLI 0/1	0x800605
	FIU3 with TN1510. Note: With TN1077F □ (same as above)	EQIM/18.1	DLI 0/1	0x800645
	FIU2 with TN834 and TN835. Note: With TN1077F □ fully equipped; without time slot selection.	EQIM/18.1	DLI 0/1	0x800607
	FIU3 with TN1510 Note: With TN1077F □ fully equipped; without time slot selection.	EQIM/18.1	DLI 0/1	0x800647
	UN71C	EQCI/18.2	CLI	0x1
	TN833C	EQIM/19.5	LDSU	0x800009
	TN1890	EQIM/19.5	LDSU	0x800019
ORM	TN1077F □ Without External Timing reference cable.	EQIM/18.1	DLI 0/1	0x800605
	TN1077F □ With External Timing reference cable,	EQIM/18.1	DLI 0/1	0x800e05

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	ordered by ED5D503-32, group 380 or 381.			
	UN71C	EQCI/18.2	CLI	0x01
	TN833C	EQIM/19.5	LDSU	0x800009
	TN1890	EQIM/19.5	LDSU	0x800019

Figure 54 MCTU3 CLI Values

ODA Form Depend`encies	J-drawing version	Cable Dependencies	Pack List	CLI Value
EQCORE.VCDX is "N" EQIM.SM USAGE is NOT "ORM" (Local or Host SM application	J5D003NB-1	None.	UM74 UM74B UM74C UM74D	0x0000 0x0000 0x0000 0x0000
	J5D003NB-2	None.	UM74C UM74D	0x0010 0x0010
EQCORE.VCDX is "N" EQIM.SM USAGE is "ORM" (EXM application)	J5D003NB-1	No external timing reference cables	UM74B UM74C UM74D	0x0001 0x0001 0x0021
		External timing reference cables equipped ED5D500-21 grp 454 or 455	UM74B UM74C UM74D	0x0003 0x0003 0x0023
	J5D003NB-2	No external timing reference cables	UM74C UM74D	0x0011 0x0031
		External timing cales equipped ED5D500-21 grp 454 or 455	UM74C UM74D	0x0013 0x0033
EQCORE.VCDX is "Y" (VCDX application)	J5D003NB-1	External timing reference cables requred ED5D500-21 grp 454 or 455	UM74B UM74C UM74D	0x0003 0x0003 0x0023
	J5D003NB-2	External timing reference cables required ED5D500-21 grp 454 or 455	UM74C UM74D	0x0013 0x003

Figure 55 NAR TSI CLI Value Decision Table

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SEC. 2: 5700-1/2 RECORD
SWITCHING MODULE EQUIPAGE FORM - EQIM

1. GENERAL

The 5700-1/2 Records are used to define Switching Module Equipage Assignments.

1.1 SM Time Slots

Each non-SM-2000 SM has 512 time slots (TS) available for various functions. Some of these 512 are available on call and some are reserved. In DNS (Digital Network Switch) offices, at least three TS are always required in each SM, one for audible ring, one for precedence audible ring, and one for idle code. Prior to DNS, only two TS were required, one for audible ring and one for idle code.

(Refer to Division 8, Section 22 for more TS information.)

If at least one EQIM form is entered, the IOMI BOARDS field on the ECDOPT form (5706 Record) and the number of EQIM forms submitted must correspond to the following table:

NO. OF EQIM FORMS	IOMI BOARDS
1 - 32	1
33 - 96	2
97 - 160	3
161 - 192	4

For 5E6 and later, MCTU2 SMs can be equipped with a mix of 4, 8, or 16 megabyte memory boards. For 5E9(2) and later, a 32 megabyte memory board was implemented for an SM-2000 class processor; it is not valid for an SM.

For 5E9(1) and later, if CMTYPE is "CM2C" on the ECDOPT form and the TIME MULTIPLEXED SWITCH CLI on the EQCORE form is 20:

- the maximum number of EQIM forms must be 8 or less.
- the maximum number of EQIM forms with SM USAGE of "IM", "" or "ORM" must be 2 or less.
- the maximum number of EQIM forms with SM USAGE of "RSM" must be 6 or less.

1.2 Required Configurations Values

For 5E9(2) and later, Figure 2 shows the valid configuration values for specific facilities and applications. Data rules for the application or facility on the corresponding forms reference this table for the appropriate CONFIGURATION values.

1.3 Maximum ISDN Terminals

For 5E9(2) and earlier, the value assigned in TERMLIM defines the maximum number of ISDN Terminals that are allowed to be simultaneously active per SM. TERMLIM is a no display field on the EQIM form with a default of 2047. In most cases, TERMLIM should be set to this value. The ISDN Terminals are defined as follows:

ISDN Terminal Assignments

Form	SM	Number of Assignments
DSL	OE[1,3]	MTERM defines the quantity of ISDN Terminals per DSL form.
DSLAP	LCEN[1,3]	number of ISDN Terminals is incremented by 1 for each LCEN list element defined.
MISLINK	OE[1,3]	1
OSPSDSL	LCEN[1,3]	1 where SERVICE CLASS is not "XDB"

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1.4 Recent Change View

The corresponding Recent Change View for this form is 18.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the SM (Switching Module) Number. For offices equipped with Communications Module 1 (CM1), valid entries are 1 - 48. For offices equipped with CM2 and CM3 valid entries are 1 - 192.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E15 and later, when SM is entered, and SM USAGE equals "ORM" and the processor is not "SM2000", there must not be more than four EQTMSLINK tuples matching the SM on the EQIM form.

The EQCORE form (5701 Record) must be inserted before this form can be inserted/updated.

2.3 SM USAGE

Description: Enter the type of SM (Switching Module).

An SM in a host office can have a mixture of local and host applications. If at least one DFI (Digital Facility Interface) of a DLTU (Digital Line and Trunk Unit) is being used as an umbilical link to an RSM, this field must be defined as "HIM".

An SM with SM USAGE of "ORM" represents an SM that can be physically remote from the host office over standard transmission facilities that connect to a TRCU (Transmission Rate Converter Unit) located in the host office.

An SM with SM USAGE of "TRM" represents an SM that can be remote over extended NCT (Network Control Timing) Links, which presently have a physical limitation of approximately two miles from the host office. This maximum distance will increase as hardware improvements are made to the physical paddle boards associated with the NCT Links.

The ORM and TRM Switching Module types are treated similarly to Local Switching Modules for most feature and call processing applications, but there are some restrictions and exceptions:

- ORM/TRM cannot serve as Host SM (HIM types); therefore, they cannot have a DLTU with associated DFIs that interconnect to RSMs.
- MSU/MMSUs (Metallic Service Unit/Modular Metallic Service Units) are allowed on ORM/TRMs but they cannot be interconnected to any other MSU/MMSU via MTIBs (Metallic Test Interconnect Buses). Colocated ORM/TRMs can share an MSU/MMSU.
- ORM/TRMs can be considered as Routing Modules for Distributed Call Processing.

Required Field.
Default: IM

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Valid Entries:

Valid SM USAGE Entries

Entry	Definition
IM	Local Switching Module. Also, enter IM when the SM is a VCDX or DRM.
HIM	Host Switching Module.
RSM	Remote Switching Module.
ORM	Software Release: 5E3 and later. Optically Remote Switching Module. Software Release: 5E9(2) and later: ORM with UNIT TYPE set to an SM-2000 class processor is used for EXM-2000.
TRM	Software Release: 5E3 and later. Two-Mile Optically Remote Switching Module.

Data Rules:

For 5E8 and later, when one or more SMs with SM USAGE of "IM" or "HIM" exist, and there is only one matching EQDCTU form, they must have the same DCTU ROUTE INDEX value entered on the associated IMINFO, excluding the DCTU ROUTE INDEX values that have ROUTE TYPE set to "REORDER" on the RTIDX form.

When SM USAGE is "IM" or "HIM", STAND ALONE and STAND ALONE BILLING must be known.

For 5E9(1) and later, SMs with line units that have SM USAGE of "IM", "ORM", or "TRM", must have a Dial Tone Delay Alarm (External Sanity Monitor) assigned via the LINE form. Two TNs are required, one of which must be a direct connect (NODL set to "HOT"). In addition, the following conditions must be met:

- SUSO must be "N"
- SUST must be "Y"
- PTY must be "I"
- HOT LINE TN must be known and a number
- OE TYPE = "C" or "L"

NOTE: The External Sanity Monitor has been discontinued and is no longer required after 1990.

5E9(2) and later:
SM USAGE must be set to "IM" for a VCDX (Very Compact Digital Exchange) office.

5E10 and later:
RSMs may only have ISTF loopback and ISTF transmit circuit assignments via the EQGDSC3 form (5860 record). See Division 8, Section 63 for RSM EQGDSC3 assignments.

ORM
If SM USAGE is "ORM":

- UNIT TYPE must be "SMPU3", "SMPU4", "MCTU3" or an SM-2000 class processor.
- and UNIT TYPE is "SM2000", then TRCCKT, TRCUNUM, and TRCCLI must be entered on the EQTMSLINK form (5851 Record).

For 5E10 and later, when SM USAGE is "HIM" and UNIT TYPE is "SM2000" on the EQIM form, the maximum number of Inter-SM Nail-Ups for packet switching is 30. If UNIT TYPE is not "SM2000" and SM USAGE is "HIM", the maximum number of Inter-SM Nail-Ups for packet switching is 5.

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For 5E11 and later, when SM USAGE is "ORM", then UNIT TYPE must be "SMPU3", "SMPU4", "MCTU3", "SM2000" or "SM2005".

For 5E12 and later, when SM USAGE is "ORM" with a UNIT TYPE of a SM-2000 class processor, the appropriate value for EVEN NLI NLI) CLI, EVEN NLI NLI 1 CLI, ODD NLI NLI 0 CLI, and ODD NLI NLI 1 CLI, depends on the type of TRCU (Transmission Rate Converted Unit) defined on the EQTRCUPTH form associated with that EQNLI form entry. When the TRCU is of type "TRCU3", then EVEN NLI NLI 0 CLI, EVEN NLI NLI 1 CLI, ODD NLI NLI 0 CLI, and ODD NLI NLI 1 CLI, must be 0 hex. When the TRCU is of type "TRCU2", then EVEN NLI NLI 0 CLI, EVEN NLI NLI 1 CLI, ODD NLI NLI 0 CLI, and ODD NLI NLI 1 CLI must be 1 hex.

For 5E15 and later:

When SM USAGE is "ORM" and the processor is not an SM-2000 class processor, the values of SM and NCT EVEN LINK (on EQIM form) must be entered twice on the EQTMSLINK form as SM and LINK (for SIDE 0 and SIDE 1). And the values of SM and NCT ODD LINK (i.e., NCT EVEN LINK plus 1) must be entered twice on the EQTMSLINK form as SM and LINK (for SIDE 0 and SIDE 1). Also, theTMSFP NUM on the EQTMSLINK form must be 0.

2.4 REMOTE SITE

Description: Enter the Remote Site number.
Valid Entries: 1 - 174

Data Rules:

For 5E5 and later, this field is required when the SM USAGE is "RSM", "ORM" or "TRM".

All Switching Modules in the same Remote Cluster must have the same REMOTE SITE value. The value entered in this field must be defined on an EQSITE form (5722 Record). Up to four RSMs can share the same REMOTE SITE if they are in the same Cluster. Each ORM/TRM must have its own unique REMOTE SITE even if co-located. It is suggested that the REMOTE SITE value for an ORM/TRM be the same as the ORM/TRM SM Number.

2.5 EQSTATUS

Description: Enter the Status of the Equipment.

Required Field.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.
S	Special Growth.

Data Rules:

For 5E9(2) and later, if UNIT TYPE is "SM2000" and EQSTAT is not equal to "O", only one EQNLI form can be entered.

2.6 INTERRUPT STATUS

Description: Enter the Interrupt-Inhibit Status.

Required Field.

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Default: ALLOW
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Definition
A	Allow.
I	Inhibit.

2.7 CONTROL GROUP 1 STATUS

Description: Enter the Control Group 1 Equipment Status. New offices should be "O" or blank. Enter "O" for Operational if Control Group 1 (second CI Board) is equipped on the SM; otherwise, leave blank.

Software Release: 5E9(1) and earlier
Valid Entries:

Valid CONTROL GROUP 1 STATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

If the SM USAGE is "RSM", this field must be "O".

2.8 NCT EVEN LINK

Description: Enter the unique NCT (Network Control Timing) even link number for the SM. Two NCT links, an even and an odd, are associated with each SM. Since the NCT odd link number is always one greater than the NCT even link number, only the even NCT link number is entered on this form.
Valid Entries: 2 - 380, even numbers only

- or for
- VCDX SM-2000: 0

Data Rules:

An entry in this field is required if SM USAGE is equal to "IM", "HIM", "ORM", or "TRM". If the SM USAGE is "RSM", an entry in this field is prohibited.

For 5E8 - 5E9(1), TMS LINKs are assigned on the EQIM form as NCT EVEN LINK. Additional TMS LINKs are derived from these same EQIM form entries in the following manner: an NCT EVEN LINK entry also produces a TMS LINK entry of NCT EVEN LINK + 1 (known as the NCT ODD LINK). All TMS LINK values either entered on these forms OR derived from these form entries must be unique.

For 5E9(1) and later, if CMTYPE on the ECDOPT form is "CM2C" and the TIME MULTIPLEXED SWITCH CLI on the EQCORE form is "20", NCT EVEN LINK must be either 2 or 4.

For 5E9(2) and later:
For an SM-2000 class processor, NCT EVEN LINK must be assigned to the EVEN NLI 0 and the EVEN NLI TMS 0 on the EQNLI form (5853 Record).

TMS LINKS can be assigned on the following three forms:

- EQIM form (5700-1/2 Record) as NCT EVEN LINK
- EQNLI form (5853 Record) as EVEN (or ODD) TMS LINK 0
- EQQLPS form as STARTING QTMSLINK.

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- EQTMS form (5866 Record) as FABRIC TYPE.

On each form additional TMS LINKS are derived from the specified link and the TMS configuration. All TMS LINKs entered or derived on these forms must be unique in the switch.

For 5E10 and later:
For a VCDX office on an SM-2000 class processor, the NCT EVEN LINK Number must be 0.

For 5E15 and later, when an office is equipped with a CM3, NCT EVEN LINK must be an even number in the range of 4 thru 368.

2.9 CTS EVEN LINK

Description: Enter the even Control Time Slot Number associated with the even NCT (Network Control Timing) Link. Each SM receives two CTS (Control Time Slot) assignments, an even CTS on the even NCT link, and an odd CTS on the odd NCT link. Since the odd CTS is always one greater than the even CTS, only the even CTS is entered on this form.

The CTS numbers are dependent on the Peripheral Controllers defined on the EQPC form (5703 Record). For the relationship between the Peripheral Controllers and the even and odd CTS numbers, see the section describing the equipage of Peripheral Controllers in Division 8 of this guide. The last Control Time Slot is 254.

The Peripheral Controllers are defined on the EQPC form (5703 Record). However, because of the relationship to the Control Time Slots, a column is shown on the 5700-1 Record for PC - Peripheral Controller. This is intended as an administrative aid. No PC entries are applicable for ODA on the EQIM form.

Required Field.
Valid Entries: 2 - 254, even numbers only

Data Rules:

Invalid Time Slot Numbers are every multiple of 8 (0,8,16,24,...).

For 5E9(1) and later, if CMTYPE on the ECDOPT form is "CM2C" and the TIME MULTIPLEXED SWITCH CLI on the EQCORE form is 20, CTS EVEN LINK must be either 2, 10, 18, 26, 34, 42, 50, or 58 (which corresponds to PC (PERIPHERAL CONTROLLER) NO on the EQPC form (5703 Record).

2.10 EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.11 LOCAL DSU VERTICAL

Description: Enter the vertical equipment location of the bottom of the Local Digital Service Unit on the Switching Module Controller Frame.

Required Field.
Valid Entries: 0 - 84

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Valid LOCAL DSU VERTICAL Entries	
Entry	**Definition**
15	6-foot cabinet with UNIT TYPE set to "SMPU4" or an SM-2000 class processor.
24	6-foot cabinet with UNIT TYPE set to "MCTU3" (if SM USAGE is not "ORM").
32	6-foot cabinet.
41	6-foot cabinet with UNIT TYPE set to "SMPU3" (if SM USAGE is not "ORM").
49	6-foot cabinet with 1 shelf IMP (UNIT TYPE set to "SMPU2". 6-foot cabinet with UNIT TYPE set to "SMPU3" (if SM USAGE is "ORM").
58	6-foot cabinet with 2 shelf IMP UNIT TYPE set to "SMPU".
64	7-foot cabinet.

Data Rules:

For 5E5 and later, if UNIT TYPE is "SMPU4" and the corresponding EQDS2P form has a DIGITAL SERVICE UNIT 2 field with the value of "O" and a PACK TYPE with the value of "RVPT", then the LOCAL DSU VERTICAL value must be either 32 or 41. If the corresponding EQDSP form with a DIGITAL SERVICE UNIT value of 0 does NOT have a PACK TYPE value of "RVPT", then the LOCAL DSU VERTICAL must be the same as the value for the MODULE PROCESSOR VERT field.

For UNIT TYPE of "SMPU4", the LDSU vertical position must be set to the cabinet location of the base of the MCTSI complex.

2.12 MODULE PROCESSOR VERT

Description: Enter the vertical equipment location of the bottom of the Switching Module Processor Unit on the Switching Module Controller Frame.

Required Field.
Valid Entries: 0 - 84

The following table provides unit types and appropriate vertical equipment location positions by cabinet size.

Unit Type	Verticle Position/Cabinet Size
SMPU	24 for 6-foot cabinet. 28 for 7-foot cabinet.
SMPU2	24 for 6-foot cabinet. 36 for 7-foot cabinet.
SMPU3	24 for 6-foot or 7-foot cabinet. 41 for 2nd SM in cabinet.
SMPU4/ MCTU2	15 for 6-foot cabinet. 41 for 2nd SM in cabinet.
SM2000	15 for 6-foot cabinet.
MCTU3	5E10 and later. 24 for 6-foot cabinet. 41 for 2nd SM in cabinet.
SM2005	5E11 and later. 15 for 6-foot cabinet.

Data Rules:

If UNIT TYPE is "SM2005", the LDSC3 and GDSC3 boards are located at Vertical Position 15 and UNIT OFFSET on the EQGSC3 and EQGDSC3 forms must be greater than 17, and the BAY field must be "0".

2.13 SMPU MODEL NUMBER

Description: The name of this field was changed to UNIT TYPE for 5E9(2) and later. This field name applies to 5E9(1) and earlier. See UNIT TYPE for usage information.

2.14 UNIT TYPE

Description: Enter the UNIT TYPE for this SM.

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NOTE: Prior to 5E9(2), UNIT TYPEs were referred to as SMPU MODEL NUMBERs 1 - 4. Effective with the 5E9(2) Software Release, UNIT TYPE is designated by "SMPU", "SMPU2", "SMPU3", "SMPU4", or "SM2000". All references to SMPU MODEL NUMBER have been changed to UNIT TYPE. Also see Figures 1, 2, and 3 for additional information.

Required Field.

Valid UNIT TYPE Entries

Entry	Definition
1	Software Release 5E9(1) and earlier. See SMPU.
2	Software Release 5E9(1) and earlier. See SMPU2.
3	Software Release 5E9(1) and earlier. See SMPU3.
4	Software Release 5E9(1) and earlier. See SMPU4.
SMPU	Software Release 5E9(2) and later. A two-shelf unit that resides on two shelves of the Switching Module Controller Frame. Associated with J5D003AA-2 and J5D003AB-1.
SMPU2	Software Release 5E9(2) and later. A single shelf unit which resides on a single shelf of the Switching Module Controller Frame. Associated with J5D003AT-1 and J5D003AY-1.
SMPU3	Software Release 5E9(2) and later. SMPU3 combines the Module Processor and Time Slot Interchanger into a single unit that resides on two shelves of the Switching Module Controller Frame. It is also known as the MCTU (Module Controller Time Slot Interchange Unit). Associated with J5D003EC-1.
SMPU4	Software Release 5E9(2) and later. The fourth hardware configuration of the MCTSI utilizing the MC68020 processor. Associated with J5D003LA-1.
SM2000	Software Release 5E9(2) and later. SM-2000 class processor unit; processor boards occupy the entire available space of the unit. Associated with J5D003NA-1 (Modular Fuse Filter Unit and Fan Unit).
MCTU3	Software Release 5E10 and later. MCTSI hardware associated with J-Drawing J5D003LB-1.
SM2005	Software Release 5E11 and later. SM-2000 class processor unit; accommodates as many as 6 LDSC3/GDSC3 boards. Associated with J-Drawing J5D003NG-1.

NOTE: Because the "SM2000" and the "SM2005" units denote the SM-2000 environment, they are referred to as a "SM-2000 class" of SMP units.

Data Rules:

For "SMPU", "SMPU2", and "SMPU3" only one memory board size (2MB or 4MB) can be assigned to an SM.

The maximum addressable memory on a non-SM-2000 SM is 32 MB.

Only the following unit types can have more than one Memory Board type (4MB, 8MB, etc.) specified by the CLI value: "SMPU4", "MCTU3", and an SM-2000 class processor .

If the SM USAGE field is "ORM" (Optically Remote Switching Module), the associated SMPU must be "SMPU3", "SMPU4", or an SM-2000 class processor.

If UNIT TYPE is "SMPU4" and CONFIGURATION is "STANDARD", at least 18 megabytes of memory are required per Controller.

If UNIT TYPE is "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor, BAY on the following equipment forms must be 1:

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- EQDCLU
- EQDCTU
- EQDS
- EQFIU
- EQLU
- EQMSU
- EQTU

For 5E9(2) and later:
UNIT TYPE must be set to "SMPU4" for a VCDX (Very Compact Digital Exchange) office.

SMPU:
If UNIT TYPE is "SMPU":

- DLI CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- MH 0/MH 1 CLI for SG0/SG1 must not be entered.

SMPU2:
If UNIT TYPE is "SMPU2":

- CONFIGURATION must not be "SM2000",
- LDSU CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- DLI CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- MH 0/MH 1 CLI for SG0/SG1 must not be entered.
- the bit number 7 (processor speed-up) of the IMPU CLI 0/1 must be set, where the bits are numbered from 0 to 31 and bit 0 is the right most bit.

SMPU3:
If UNIT TYPE is "SMPU3":

- CONFIGURATION cannot be "SM2000",
- DLI CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- MH 0/MH 1 CLI for SG0/SG1 must not be entered,
- TSICOM 0 CLI/TSICOM 1 CLI must not be entered,
- LOCAL DSU VERTICAL must be entered.
- the bit number 7 (processor speed-up) of the IMPU CLI 0/1 must be set, where the bits are numbered from 0 to 31 and bit 0 is the right most bit.

SMPU4:
If UNIT TYPE is "SMPU4/MCTU2":

- CONFIGURATION must not be "SM2000",
- LOCAL DSU VERTICAL must be entered,

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- LDSU CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- TSICOM 0 CLI/TSICOM 1 CLI must not be entered,
- DLI CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- MH 0/MH 1 CLI for SG0/SG1 must not be entered.

SM2000:
If UNIT TYPE is "SM2000":

- BRD4 CLI and BRD5 CLI for CONTROLLER 0 and CONTROLLER 1 must not be entered,
- if EQSTATUS is "O" for new offices, BRD0 CLI for CONTROLLER 0 and CONTROLLER 1 must be entered.
- CONFIGURATION must be "SM2000",
- NUMBER OF MEM BOARDS must not be entered,
- TSICOM 0 CLI and TSICOM 1 CLI must be entered,
- LDSU CLI on CONTROLLER 0 and CONTROLLER 1 must not be entered,
- LOCAL DSU VERTICAL must not be entered,
- DLI CLI for CONTROLLER 0 and CONTROLLER 1 must not be entered,
- MH 0/MH 1 CLI for SG0/SG1 must be entered,
- SM USAGE must be "IM" or "ORM" (5E9(2) only),
- SM USAGE must be "IM", "ORM", or "HIM" (5E10 and later),
- the EQCORE form must have CM VINTAGE set to 2,
- at least one EQNLI form (5853 Record) must be entered with EVEN NLI set to 0,
- the TMS LNK entry on the EQTMSLINK (5850 Record) form must match an EVEN/ODD NLI TMS LINK 0 value entered or an EVEN/ODD NLI TMS LINK 1 value derived on an EQNLI form,
- at least one pair of EQTSI forms must be entered with TSI BOARD set to 0,
- the SM value can only be entered on the following equipment forms:
  - EQCI
  - EQDCTU(5E9(2) only)
  - EQDI
  - EQDNUS
  - EQDSC3

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- EQDS
- EQDSP (where DSU is not 0)
- EQDSP2
- EQDU/EQDUP
- EQIDCU(5E10 and later)
- EQIFAC(5E10 and later)
- EQISAP(5E10 and later)
- EQISLU(5E10 and later)
- EQLU
- EQLUP
- EQMH
- EQMMSP/EQMSP
- EQMSU
- EQMTIB(5E10 and later)
- EQNLI
- EQPSU (5E10 and later)
- EQPSUPH(5E10 and later)
- EQRA(5E10 and later)
- EQSITE
- EQSTE
- EQTSI

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- EQTU (5E10 and later)
- EQTUP(5E10 and later)
- EQVT

5E10 and later:
If UNIT TYPE is "SM2000":

- on the corresponding EQPSU form(s), DI0/DI1 PSU TSIU TIMESLOTS must not be entered. It is not necessary to provision PSU TSIU TIMESLOTS on an SM-2000 class processor.
- if EQSTATUS is "O" and IMPU0 and IMPU1 are not 4 in a new office, BRD0 CLI for CONTROLLER 0 and 1 must be entered.
- memory boards must be equipped contiguously.

The maximum number of Network Side Timeslots for an SM-2000 can not be exceeded. The number of available Network Side Timeslots may be found as follows:

- If UNIT TYPE is "SM2000" and SM USAGE is "ORM" on the EQIM form, then the maximum number of Network Side Timeslots is (512 * the number of EQNLI forms with the same SM).
- If UNIT TYPE is "SM2000" and SM USAGE is not "ORM" on the EQIM form, then the maximum number of Network Side Timeslots is (512 * 2 * the number of EQNLI forms with the same SM).

The following forms use Network Side Timeslots as indicated:

- PSISM - Count 1 for each time SM on the EQIM form matches SM on the EQPSU form, and SM on the EQPSU form matches SM on the PSISM form.
- PSISM - Count 1 for each time SM on the EQIM form matches SM on the EQPSU form, and SM on the EQPSU form matches MATE SM on the PSISM form.
- TRUNK - For all TRUNK forms where the associated TRKCLS on the TKGRP form is "PKTPIPE" and TRKOE[1,3] matches the SM value on the EQIM form, count 1 for each

  PACKET PIPE MEMBER TRUNKS TGN/MEMB list entry (up to 8 entries for each TRUNK form are possible) if TRKOE[1,3] on the TRUNK form is not equal to DEN[1,3] on other associated TRUNK forms, newTRUNK, where PACKET PIPE MEMBER TRUNKS TGN/MEMB matches newTRUNK TGN and newTRUNK MEMB.

  Note: All PACKET PIPE MEMBER

  TRUNKS on a TRUNK form will have the same value for DEN[1,3] on the associated newTRUNK forms.

  Also, count 1 for each time SM on the EQIM form matches DEN[1,3] on the newTRUNK form, for each PACKET PIPE MEMBER TRUNKS entry found above, where TRKOE[1,3] for the original "PKTPIPE" TRUNK (TRUNK forms where the associated TRKCLS is "PKTPIPE") is not equal to DEN[1,3] on new TRUNK.

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5E10 and later:
If UNIT TYPE is "MCTU3":

- NUMBER OF MEM BOARDS must be blank.
- MODULE PROCESSOR VERT must be 15.
- when the CLI for IMPU0 indicates this SM is the second SM in a cabinet, MODULE PROCESSOR VERT must be 41.

5E11 and later: If UNIT TYPE is "SM2005":

- CONFIGURATION must be "SM2000",
- NUMBER OF MEM BOARDS must be blank,
- TSICOM 0 and TSICOM 1 CLIs must be entered,
- MHO SG0 and MHO SG1 CLIs must be entered,
- SM USAGE must be "HIM", "IM", or "ORM",
- when EQSTATUS is "O" in a new office, BRD0 CLI for CONTROLLER 0 and CONTROLLER 1 must be entered,
- Memory Boards must be equipped contiguously,
- BRD2, BRD3, BRD4 and BRD5 CLIs for CONTROLLER 0 and CONTROLLER 1 must not be entered,
- LDSU CLI on CONTROLLER 0 and CONTROLLER 1 must not be entered,
- LOCAL DSU VERTICAL must not be entered,
- MODULE PROCESSOR VERT must be 15.

5E15 and later:

When UNIT TYPE is "MCTU3", SM USAGE must be "RSM" for an office equipped with a CM3.

When at least one EQIM form (5700 Record) exists with the UNIT TYPE set to "SM2000", the CLI value on the EQTMS form should be entered.

5E16(2) and later:

When an office is equipped with a CM3, UNIT TYPE must be either "SM2000" or "SM2005", or SM USAGE must be "RSM" .

When UNIT TYPE is SM2000, BRD CLI must be 2, 4, or 8.

2.15 NUMBER OF MEM BOARDS

Description: Enter the number of memory boards in each controller of the SM. This field specifies the number of memory boards equipped in an SMPU2 and SMPU3 and should be blank for SMPU4 or an SM-2000 class processor. SMPU4 and SM-2000 memory boards are equipped using the SM MEMORY CONFIGURATION FOR SMPU4/SM2000 field group.

Refer to Figures 1, 2, and 3 for additional memory board configuration information. Also refer to the 5ESS

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Switch Administration and Engineering Guidelines (235-070-100) for SM Resource Utilization (Switching Module Processor and Switching Module Memory) for more detailed information.

- ***NOTE:*** For 2Mb boards, a maximum of 12 boards may be entered; for 4Mb boards, a max of 8 boards may be entered.

Valid Entries:

- For 5E8 and earlier: 1 - 12
- For 5E9(1) and later: 0 - 12

Data Rules:

For 5E5 and later, if UNIT TYPE is "SMPU4", this field must be blank and fields under the SM MEMORY CONFIGURATION FOR SMPU4 field group must be entered.

2.16 PI SG 0 EQSTATUS

Description: Enter the equipment status of Service Group 0 of the Packet Interface sub-unit if it is equipped on this SM; otherwise, leave blank.

Software Release: 5E3 and later
Valid Entries:

Valid PI SG 0 EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

An entry is allowed here only if UNIT TYPE is "SMPU3", "SMPU4", "SM2000", "MCTU3", or "SM2005"

New offices and SMs being added for factory testing require the Operational status. During off-line ODA database retrofits, values other than "O" are allowed.

For new offices and equipment additions, when PI SG 0 EQSTATUS is "O", CONFIGURATION must be "LOADED" for 5E9(1) and earlier. For 5E9(2) and later, CONFIGURATION must support Packet Interface, see the table for Configurations for Facilities and Applications.

This field must be "O" if there is a PSU (J5D003BL) equipped on the SM.

For 5E10 and later:
Packet Interface units may only be specified for a UNIT TYPE of "SMPU3", "SMPU4", "MCTU3" and "SM2000".

In new offices and equipment additions, if PI SG 0 EQSTATUS is "O", then CONFIGURATION must be "LOADED" or "SM2000" to support Packet Interface.

2.17 PI SG0 TYPE

Description: Enter the MCTSI (Module Controller/Time Slot Interchange) Unit Packet Interface Type for Side 0.

Software Release: 5E10 and later.
Valid Entries:

Valid PI SG0 TYPE Entries

Entry	Definition
PI1	MCTSI Packet Interface 1
PI2	MCTSI Packet Interface to Subunit Model 2, the enhanced PSU-2 (Packet Switching Unit-2). This value

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	supports the CDMA (Code Division Multiple Access) feature. For more information on this feature see Division 2, Section 8B.

Data Rules:

If PI SG0 EQSTATUS is entered, PI SG0 TYPE must be entered.

If PI SG0 EQSTATUS is not entered, PI SG0 TYPE must not be entered.

If CONFIGURATION is "SM2000", then PI SG0 TYPE and PI SG1 TYPE cannot be "PI1".

For 5E10 and later, when EQIM forms have PI SG0 TYPE and/or PI SG1 TYPE set to "PI2", PSU TYPE on the corresponding EQPSU form must not be "PSU1".

2.18 PI SG 1 EQSTATUS

Description: Enter the equipment status of Service Group 1 of the Packet Interface sub-unit if it is equipped on this SM; otherwise, leave blank.

Software Release: 5E3 and later
Valid Entries:

Valid PI SG 1 EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

New offices and SMs being added for factory testing require the Operational status. During off-line ODA database retrofits, values other than "O" are allowed.

For new offices and equipment additions, when PI SG 1 EQSTATUS is "O", CONFIGURATION must be "LOADED" for 5E9(1) and earlier. For 5E9(2) and later, CONFIGURATION must support Packet Interface, see the table for Configurations for Facilities and Applications.

An entry is allowed here only if the UNIT TYPE is "SMPU3" or "SMPU4".

For 5E10 and later:
Packet Interface units may only be specified for a UNIT TYPE of "SMPU3", "SMPU4", "MCTU3" and "SM2000".

In new offices and equipment additions, if PI SG 1 EQSTATUS is "O", CONFIGURATION must be "LOADED" or "SM2000" to support the Packet Interface.

2.19 PI SG1 TYPE

Description: Enter the MCTSI (Module Controller/Time Slot Interchange) Unit Packet Interface Type for Side 1.

Software Release: 5E10 and later.
Valid Entries:

Valid PI SG1 TYPE Entries

Entry	Definition
PI1	MCTSI Packet Interface 1
PI2	MCTSI Packet Interface Subunit Model 2 This value supports the CDMA (Code Division Multiple Access) feature. For more information on this feature see Division 2, Section 8B.

Data Rules:

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If PI SG1 EQSTATUS is entered, PI SG1 TYPE must be entered.

If PI SG1 EQSTATUS is not entered, PI SG1 TYPE must not be entered.

If CONFIGURATION is "SM2000", then PI SG0 TYPE and PI SG1 TYPE cannot be "PI1".

2.20 PERCENT OF FREE SM SPACE

Description: This field is used to define the percent of free space for this Switching Module's Static ODD (Office Dependent Data). For ODD data space exceeding 2 megabytes, 30% free space may be excessive (for further information, see the 5ESS Switch Administration and Engineering Guidelines).

Software Release: 5E3 and later
Required Field.
Default: 30
Valid Entries: 6 - 95

- ***NOTE:*** The percent of free SM space must always be at least 256 Kb. Thus, if 30% is less than 256 Kb, the system will automatically raise the percent of free space to equal at least 256 Kb.

  Also, only ODA personnel are allowed to enter the full range of free space values (16 - 95). Regional Engineers are limited to defining only 25 - 40 percent of free space.

SM2000 CLIs

The following Change Level Indicators (fields Section 2.21 - Section 2.25) are applicable to SM-2000 class processors for the MH (Message Handler), the TSICOM (Time Slot Interchanger Common) and TSIS (Time Slot Interchange Slice). For a complete listing of valid CLI values, J-Drawing and list combinations for this field group, see Division 8, Section 1.

For 5E12 and later, the SM-2000 class of processors (see the note following the UNIT TYPE field) have certain combination of bits which can be used together and certain combinations which cannot. There are three ODA data checks (CLI338a,b, and c) which enforce these conditions when populating the IMPU CLI 0/1 field. CLI338a enforces that only valid bits are set. CLI338b enforces the mutual exclusivity of bits 0 and 1. CLI338c enforces that: bit 1 cannot be set; bit 0 must be set for SM2005; bit 2 cannot be set. See the data rules for the IMPU 0/1 CLI fields for more detailed information.

2.21 MH 0 CLI

Description: Enter the Message Handler 0 CLI.

Software Release: 5E9(2) and later
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

If UNIT TYPE is "SM2000":

- this field must be entered
- for 5E10 and later, the MH 0 CLI and MH 1 CLI entries must be 0 for Release 1, on an SM-2000 class processor.

2.22 MH 1 CLI

Description: Enter the Message Handler 1 CLI.

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Software Release: 5E9(2) and later
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

If UNIT TYPE is "SM2000":

- this field must be entered
- for 5E10 and later, the MH 0 CLI and MH 1 CLI entries must be 0 for Release 1, or 1 for VCDX on an SM-2000).

2.23 TSICOM 0 CLI

Description: Enter the TSI COMMON 0 CLI.

Software Release: 5E9(2) and later
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

If UNIT TYPE is "SM2000", this field must be entered.

For 5E10 and later:
For a VCDX office on an SM-2000 class processor, TSICOM 0 CLI must be 3 when a TSIU4 is used; it must be 13 when a TSIU4-2 is used.

2.24 TSICOM 1 CLI

Description: Enter the TSI COMMON 1 CLI.

Software Release: 5E9(2) and later
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

If UNIT TYPE is "SM2000", this field must be entered.

For 5E10 and later:
For a VCDX office on an SM-2000 class processor, TSICOM 0 CLI must be 3 when a TSIU4 is used; it must be 13 when a TSIU4-2 is used.

2.25 TSIS CLI

Description: The Timeslot Interchange Slice CLI is a Recent Change Only field.

Software Release: 5E9(2) and later

EEC OPTIONS

2.26 EEC SM

Description: The EEC SM field is used to display whether or not external echo canceler ethernet links are equipped on the SM (Switching Module).

EQUIPMENT CLI'S CONTROLLER 0/1

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The Change Level Indicators applicable to various pieces of equipment (fields Section 2.27 - Section 2.30) are presented under each of two Controllers, 0 and 1. For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.27 IMPU

Description: Enter the Switching Module Processor Unit CLIs. Refer to Figures 1, and 2 for dependencies between IMPU CLI and CONFIGURATION fields.

Required Fields.
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

For 5E12 and later,

- only the following bits are valid: bit 0, 1, 2, 3, 6, and 28.
- either bit 0 or bit 1 must be set; however, bit 0 and bit 1 cannot be set simultaneously for "SM2000".
- bit 1 cannot be set and bit 0 must be set for "SM2005", and bit 2 cannot be set.

2.28 DLI

Description: Enter the Dual Link Interface CLIs.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Fields.
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

For 5E9(2) and later:
If "RSM" or "ORM" is NOT entered, and UNIT TYPE is not "SM2000" the CLI values for one or both of the DLI assignments must be 01, 02, 05, 08, 10, 20, 80, 100. 200, 800200, 800600.

If this is a VCDX office, CLI value must be 800.

If SM USAGE equal to "ORM" and UNIT TYPE is not"SM2000" CLI values for one or both of the DLI assignments on the EQIM form must be 0, 1, 2, 5, 8, 10, 20, 80, 100, 200, 800, 800200, or 800600.

2.29 LDSU

Description: Enter the Local Digital Service Unit CLIs. For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Fields.
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

When UNIT TYPE is "SM2000", the LDSU CLI must be blank.

The CLI hexidecimal values for the LDSU assignment0, 1, 3, and 800009.

2.30 BSTR

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Description: Enter the Bootstrap Board CLI. The BSTR only appears under Controller 0.

Required Field.
Valid Entries: 0 - 7fffffff (hexadecimal)

Data Rules:

"LOADED" must be entered if one of the following exists for the SM: an EQISLU form (5731 Record) with COMMON CONTROL EQST field equal to "O"; an EQRISLU form with COMMON CONTROL EQST field equal to "O"; an EQDCLU5 form (5808 Record) with CC EQSTAT field equal to "O"; an EQPSU form (5741 Record) with COMMON CONTROL EQST field equal to "O"; an EQRA form (5821 Record) with RAF SERVICE TYPE equal to "CTR" or "DTA", or an EQISTF form (5823 Record).

For 5E5 and later, the value "BASIC" is added. A "BASIC" SM is the same as a "STANDARD" SM with the following exceptions:

- A trunk member may not reside on the SM if it belongs to a trunk group defined on a TKGRP form (5202 Record) with the INPULSING and OUTPULSING fields set to "CCIS6" (non-ISDN Common Channel Signaling).
- The DSNOPT? field on the OFCOPT form (5509 Record) may not be set to "Y", which indicates a Defense Switched Network office.
- A trunk member may not reside on the SM if it belongs to a trunk group defined on a TKGRP form where the TRKCLS field is set to "RMSD3" (Remote Measurement System Device 3, used in TOPAS). TOPAS is the Testing, Operations, Provisioning and Administration System centralized operation for toll offices.
- A CKT TN defined on a DSLUSR form (5908 Record) or a TN defined on a LINE form (5109 Record) may not reside on the SM if it is assigned a Precedence and Preemption feature on a LINEFA form (5112 Record), CLUSTR form (5600 Record) or BFG form (5625 Record).

SM CONFIGURATION

The following fields (Section 2.31 - Section 2.34) describe the Switching Module configuration.

2.31 CONFIGURATION

Description: Enter the Switching Module configuration to support various switch services.

Refer to Figures 1, 2, and 3 for additional information.

Software Release: 5E4(2) and later
Required Field.
Default: STANDARD
Valid Entries:

Valid CONFIGURATION Entries

Entry	Definition
B or BASIC	Includes all analog features, but excludes OSPS, TOLL, and Government features, with the exception of two OSPS features: C-ACD (Commercial-Automatic Call Distributor) and ASHDN (Analog Shared DN).
ST or STANDARD	Includes all of the "Basic" programs, including analog features for OSPS, TOLL, and Government applications.
L or LOADED	Includes all of the "Basic" and "Standard" programs, plus features which provide ISDN services. An SM's configuration may be specified as "LOADED" even when the SM is NOT currently equipped with ISDN hardware
SI or	Software Release 5E11 and later:

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SIGNALING	
SM or SM2000	Software Release 5E9(2) and later: Includes "most" of the "Loaded" SM features except OSPS, and includes all ISDN features. OSPS features are not allowed to initiate from SM-2000 (no operator position interface), but an SM-2000 class processor can be used for trunking purposes.

Data Rules:

When CONFIGURATION is "LOADED" and the UNIT TYPE is "SMPU2" or "SMPU3", the CLI for IMPU0 must indicate SMP12 or SMP23.

For 5E9(2) and later:
In new offices and equipment additions, PI SG 0 EQSTATUS must be "O" when CONFIGURATION has a value which supports Packet Interface. (See the table Configurations for Facilities and Applications.)

For ISDN SMs, the ISDNOPT form (5941 Record) must be entered and SENSOR ID 1 and SENSOR ID 2 on the ISDNOPT form must be entered and must be greater than 0.

For 5E10 and later, when CONFIGURATION is "SM2000", PI SG0 TYPE and PI SG1 TYPE cannot be "PI1".

2.32 SM RETROFIT

Description: For 5E5 and later, this field is a Recent Change only field. It indicates which CONFIGURATION to assign a Switch Module when an office retrofits to a new Software Release. Field values are 0, 1, and 2.

For 5E5 and later, the following table illustrates the implications of the SM RETROFIT values:

CONFIGURATION PRE-RETROFIT	SM RETROFIT VALUE	CONFIGURATION POST-RETROFIT
STANDARD	0	STANDARD
STANDARD	1	BASIC
STANDARD	2	LOADED
LOADED	0	LOADED
LOADED	1	BASIC
LOADED	2	STANDARD
BASIC	0	BASIC
BASIC	1	STANDARD
BASIC	2	LOADED

2.33 STAND ALONE

Description: Has the Stand Alone feature been purchased?

The Stand Alone feature allows an SM, when the communication link with the host office is not functional, to continue to process intramodule calls and to optionally reroute an intermodule call to an announcement and to optionally reroute an emergency call.

Without the Stand Alone feature, the SM will route every call origination to reorder.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If the SM USAGE field is set to "IM" or "HIM", then this field must be entered.

If the SM USAGE field is set to "ORM", "RSM", or "TRM", then this field must not be entered. The STAND ALONE PURCHASED? field on an EQSITE form (5722 Record) should be entered.

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If the SM value appears in the LOCAL SM field on an EMRNM form (5108 Record) and the RI field has an entry, then this field must be "Y".

If the SM value appears in the LOCAL SM field of ten or more EMRNM forms, then this field must be "Y". If the SM value appears in the LOCAL SM field of an EMRNM form where the EMER TN entry contains an asterisk (*) or asterisks, then this field must be "Y".

For 5E9(1) and later, if a TGN defined with TRKCLS of "TCITT" on the TKGRP form (5202 Record) and is defined as an RSM (Remote Switching Module) on the EQIM form with STAND ALONE set to "Y" or the associated EQSITE form (5722 Record) has STAND ALONE PURCHASED set to "Y", then the corresponding TRUNK form must have REMOVE TRUNK set to "Y".

2.34 STAND ALONE BILLING

Description: Has Stand-Alone Billing been purchased?

The Stand-Alone Billing feature allows an SM, when the communication link with the host office is not functional, to store billing data. If the Stand-Alone Billing feature is not purchased, the amount of memory to store billing information is 50KB. If the feature is purchased, all the spare memory in the SM is used to store the information.

Software Release: 5E5 and later
Valid Entries: Y, N

Data Rules:

If the SM USAGE field is set to "IM" or "HIM", then this field must be entered. If the SM USAGE field is "ORM", "RSM", or "TRM", this field must not be entered. For 5E9(1) and earlier, if "Y" is entered in this field, the STAND ALONE BILLING field must be set to "Y".

RTCD OPTIONS

2.35 BILL SM

Description: The BILL SM field is used to display whether or not the SM supports a RTCD ethernet link to a billing collector system. For more information, see Division 2, Section 4A245.

Software Release: 5E12 and later
Default: N
Valid Entries: Y, N

SM MEMORY CONFIGURATION FOR SMPU4/SM2000

Valid with 5E5 and later Software Releases, the following fields (Section 2.36) are used to equip an MCTU2 SM with a mix of 4, 8, and 16 megabyte memory boards for Controllers 0 and 1. For 5E9(2) and later with SM-2000, a 32 megabyte board was added.

The BRDO through BRD5 CLI fields can only be entered if the UNIT TYPE is "SMPU4/MCTU2", or, for 5E9(2) and later, if UNIT TYPE is an SM-2000 class processor. For UNIT TYPE of "SM2000", only BRD0 - BRD3 CLIs are equipped; for UNIT TYPE of "SM2005", only BRD0 - BRD1 CLIs are equipped.

For 5E9(1) and earlier for non-VCDX offices, when the UNIT TYPE is "SMPU4", BRD0 CLI must be entered for Controllers 0 and 1. Memory board zero side 0 and side 1 (circuit positions 30h and 50h) cannot be populated in a VCDX office. These circuit positions are needed by the VCDX Ethernet. Circuit positions for memory boards must begin at 31h for side 0 and 51h for side 1. For VCDX and non-VCDX offices, the memory boards must be equipped contiguously.

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2.36 BRD0 through BRD5 CLI

Description: Enter the CLI value for a 4, 8, 16, or 32 megabyte memory board. See Figures 1, 2, and 3, for additional information.

Software Release: 5E5 and later
Valid Entries:

Valid CLI Entries

Entry	Definition
200	4-MB memory board (TN1374).
4000	8-MB memory board (TN1376).
20000	Software Release: 5E6 and later: 16-MB memory board (TN1661).
02	Software Release: 5E9(2) and later: 32-MB memory board (TN1685).
04	Software Release: 5E10 and later: 64-MB memory board (TN1806).

Data Rules:

5E9(2) and later:
Memory Boards for a UNIT TYPE of "SMPU4" must be equipped contiguously.

For a VCDX (Very Compact Digital Exchange) office:

- MEMORY BOARDS BRD0 CLI must not be specified.
- MEMORY BOARDS BRD1 CLI must be specified.

If the office is not a VCDX and UNIT TYPE is "SMPU4", MEMORY BOARDS BRD0 CLI must be specified.

For 5E10 and later:
For VCDX at an SM-2000 office, MEMORY BOARDS BRD0 CLI must not be specified.

2.37 OPSM

Description: This field is used to identify an OSPS Positional SM, so data can be built automatically for installation testing on new OSPS offices. After the testing is complete, the data will be removed unless a request is made to keep it.

Software Release: 5E6 and later
Default: N
Valid Entries: Y, N

Data Rules:

OSPS positions are assigned to ports that include the SM number on the OSPSOP form (5401 Record). Regular positions are assigned to LCENs and Interflow positions are assinged to DENs. For 5E7 and later, "Y" must be entered in the OSPS PSM field, if an OSPS position is assigned to this SM. However, "N" must be entered if OSPS positions are not assigned to this SM. The first three digits of the LCEN or DEN fields on the OSPSOP form match the SM number on the EQIM form.

For 5E7 and later, if OSPS PSM is set to "Y" and SM USAGE is set to "RSM", then it must be the only SM in the cluster.

For 5E8 and later,

- **WARNING:** If "Y" is entered then PSM (Position Switching Module) circuits should be located in the

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SM. PSM circuits are the following:

PSM Circuits

Circuit	Form	Field	Entry
Interflow pseudo operator trunks	TKGRP	TRKCLS	"IFOPER"
OSPS Directory Assistance Operator circuits	OSPSDSL	SERVICE CLASS	"DAOPER"
OSPS Directory Assistance Service Computer Data Link	OSPSDSL	SERVICE CLASS	"DASC"
OSPS Administrative Processor Data Link	OSPSDSL	SERVICE CLASS	"OAP"
OSPS Remote Alarm Section Data Link	OSPSDSL	SERVICE CLASS	"RAS"
OSPS Toll and Assistance Operator circuits	OSPSDSL	SERVICE CLASS	"TAOPER"

Navigation help:
To determine if there are any "IFOPER" trunks located in the SM find all of the TRUNK forms that assign trunks in the SM. The EQIM SM points to the first three digits (SM) of the TRUNK DEN. Then check the TKGRP TRKCLS of the trunk group (TKGRP TGN matches TRUNK TGN).

Check the OSPSDSL SERVICE CLASS for the rest of the PSM circuits where EQIM SM points to the first three digits of OSPSDSL LCEN (SM).

For 5E9(2) and later, when OSPS PSM is "Y", CONFIGURATION must support OSPS. (See the table Configurations for Facilities and Applications.)

IWG OPTIONS

2.38 VTOA SM

Description: This field indicates whether or not Voice Telephony over ATM (Asynchronous Transfer Mode) ethernet links are equipped on the SM (Switching Module). This is a no change field.

Software Release: 5E15 and later

BASIC CONFIGURATION

IMPU CLI Bit (hex)	Memory Board Size (in Megabytes)	Type of SM Processor	Maximum Boards Allowed	SMPU MODEL NUMBER Field
2	2	SMP1	8	1,2,3
2	2	SMP12	12	2,3
200	4	SMP1	4	1,2,3
200	4	SMP12	8	2,3
2	2	SMP23	12	2,3
200	4	SMP23	8	2,3

STANDARD CONFIGURATION

IMPU CLI Bit (hex)	Memory Board Size (in Megabytes)	Type of SM Processor	Maximum Boards Allowed	SMPU MODEL NUMBER Field
2	2	SMP12	12	2,3
200	4	SMP12	8	2,3
2	2	SMP23	12	2,3
200	4	SMP23	8	2,3

LOADED CONFIGURATION (Not Recommended)

IMPU CLI Bit (hex)	Memory Board Size (in Megabytes)	Type of SM Processor	Maximum Boards Allowed	SMPU MODEL NUMBER Field
200	4	SMP12	8	2,3
2	2	SMP23	12	2,3
200	4	SMP23	8	2,3

Note: SMP20 SM processor can be equipped with a mix of 4 and 8 megabyte memory boards which are assigned in the fields under the SM MEMORY CONFIGURATION FOR SMPU4.

If the SMP23CDM is equipped, only 32 megabytes of on board memory can be accessed. The maximum addressable memory on a non-SM-2000 SM is 32 megabytes.

Warning: The Loaded Configuration with SMP 12 and 23 Processors is NOT RECOMMENDED because

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of the maximum memory limit of 32 megabytes for these two processors.

VCDX CONFIGURATION (5E9(2) and later Software Releases)				
IMPU CLI Bit (hex)	**Memory Board Size (inMegabytes)**	**Type of SM Processor**	**Maximum boards Allowed**	**UNIT TYPE Field**
4000000	16	SMP20	5	SMPU4

Figure 1 DEPENDENCIES BETWEEN IMPU CLI AND CONFIGURATION FIELDS 5E8 AND LATER SOFTWARE RELEASES

Data Rules for the forms (and fields) listed in the table below require the corresponding SM to be configured as shown in the CONFIGURATION column. Note: The entry "SM2000" includes all SM-2000 class processors.

FORM	FIELD	FIELD ENTRY	APPLICATION or FACILITY	CONFIGURATION ENTRY	SOFTWARE RELEASE
ACQS	AQEST TEN		4-wire Lines	"STANDARD" "LOADED"	5E8 and later
CLUSTR	FEATURE	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
DSLUSR	CKT TN	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
	FEATURE				
DSLUSR	CKT TN	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
	FEATURE				
EISSM	EIS		External Information System	"LOADED"	5E7 and later
EQDNUS	SM		DNU-S (Digital Networking Unit - SONET)	"SM2000"	5E9(2) and later
EQIDCU	SM		IDCU (Integrated Digital Carrier Units)	"STANDARD" "LOADED"	5E9(1) and later
				"SM2000"	5E10 and later
EQIFAC	SM		IDCU (Integrated Digital Carrier Units)	"STANDARD" "LOADED"	5E9(1) and later
				"SM2000"	5E10 and later
EQISLU	SM		Integrated Services	"LOADED"	5E7 and later
				"SM2000"	5E10 and later
EQLU EQLUP	SM		Line Units	"BASIC" "STANDARD" "LOADED" "SM2000"	5E9(2) and later
EQPSU	SM		Packet Switching Unit	"LOADED"	5E9(2) and later
				"SM2000"	5E10 and later
EQRA	SERVICE TYPE	"CTR"	OSPS Automated Calling Card Services	"LOADED"	5E7 - 5E9(1)
	SVC GRP	"ACCS"			
EQRA	UNIT TYPE	"RAF"	OSPS Automated Calling Card Services and OSPS Announcement Only	"LOADED" "SM2000"	5E9(2) and later
	SERVICE TYPE	"ANN", "DTA", or "CTR"			
	SVC GRP	"ACCS" or "AOC"			
EQRA	UNIT TYPE	"SAS"	Calling Card Services and OSPS Announcement Only	"LOADED" "SM2000"	5E9(2) and later>
	CHANNEL LIST SERVICE	"ANN", "DTA", or "TDEC"			
	SVC GRP	"ACCS" or "AOC"			
EQRISLU	SM		Remote Intergrated Services for Line Units	"LOADED"	5E9(1) and later

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EQSTE	SM		DNU-S (Digital Networking Unit - SONET)	"SM2000"	5E9(2) and later
EQVT	SM		DNU-S (Digital Networking Unit - SONET)	"SM2000"	5E9(2) and later
HGRPAS	PKT SM		Packet Switching	"LOADED"	5E7 and later
				"SM2000"	5E10 and later
ISDNOPT	SM		ISDN	"LOADED"	5E7 and later
ISDNOPT	PSN		ISDN	"LOADED"	5E8 and later
ISDNOPT	SUBNET ID SUBNET CNT		ISDN	"LOADED"	5E9(2) and later
				"SM2000"	5E10 and later
LINE	OE TYPE	"T" or "D"	4-wire Lines	"STANDARD" "LOADED"	5E7 and later
LINE	TN	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
	FEATURE				
MISLINK	SERVICE CLASS	"MISLNK"		"LOADED"	5E9(1) and later
MLHLN	OE TYPE	"T" or "D"	4-wire Lines	"STANDARD" "LOADED"	5E8 and later
MLHLN	TN	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
	FEATURE				
ODAOPT	HUNDREDS GROUP SM ROUTING ASSIGNMENT	"PRESERVE"	Routing Modules for Hundreds Group	"LOADED"	5E7 and later
				"SM2000"	5E10 and later
OFCOPT	RM RTG RSTRCT		Restricted Routing Module	"LOADED"	5E7 and later
				"SM2000"	5E10 and later
OSPSDSL	SERVICE CLASS	"EIS", "MISLINK", or "RAS"		"LOADED"	5E7 and later
OSPSOPT	OSPS RAF	"Y"	DSU2-RAF for Automated Announcements	"LOADED"	5E7 and later
PRIGRP	FACILITY LIST SM		Primary Rate Interface	"LOADED"	5E9(1) and later
				"SM2000"	5E10 and later
PSISM	SM		Packet Switching	"LOADED"	5E9(2) and later
				"SM2000"	5E10 and later
RTERM	SM		IDCU (Integrated Digital Carrier Units)	"STANDARD" "LOADED"	5E9(2) and later
RTERM	RT INTERFACE	"TR303"	TR303 Remote Terminals	"LOADED"	5E9(2) and later
				"SM2000"	5E10 and later
TKGRP	INPULSING OUTPULSING	"CCIS6"	CCIS6 Signaling	"STANDARD" "LOADED"	5E7 and later
TKGRP	TRKCLS	"DIOR", "FIOPR", "FOPRI", or "INAISTRK"	Incoming AIS Trunks	"STANDARD" "LOADED"	5E7 and later
				"SM2000"	5E10 and later
TKGRP	TRKCLS	"PACKET", "X75", or "X75P"	Packet Switching	"LOADED"	5E8 and later
				"SM2000"	5E10 and later
TKGRP	TRKCLS	"RMSD3"	RMS-D3 Test Device	"STANDARD" "LOADED"	5E7 and later
TKGRPFA	FEATURE	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
TNICLIST	INIC TNIC		Transit Network Identification	"LOADED"	5E8 and later
				"SM2000"	5E10 and later
TRUNKFA	FEATURE	PPFD Feature	Precedence and Preemption	"STANDARD" "LOADED"	5E7 and later
X75CUG	CUG LIST ID		Packet Switching	"LOADED"	5E8 and later
				"SM2000"	5E10 and later

Figure 2 CONFIGURATIONS FOR FACILITIES AND APPLICATIONS

SCREEN 1 OF 4 5ESS Switch
eqim OFFICE DATA ADMINISTRATION

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```
(5700-1/2)            SWITCHING MODULE EQUIPAGE


* 1. SM  ___
                          8. EQUIPMENT AISLE        ____
  2. SM USAGE             IM        9. LOCAL DSU VERTICAL     __
  3. REMOTE SITE           ___        10. MODULE PROCESSOR VERT   __
                          11. UNIT TYPE             ______
  4. EQSTATUS             O         12. NUMBER OF MEM BOARDS    __
  5. INTERRUPT STATUS     ALLOW     13. PI SG 0 EQSTATUS        _
                          14. PI SG0 TYPE           ___
                          15. PI SG 1 EQSTATUS      _
  6. NCT EVEN LINK         ___       16. PI SG1 TYPE          ___
  7. CTS EVEN LINK         ___       17. PERCENT OF FREE SM SPACE 30
```

```
SCREEN 2 OF 4                5ESS Switch
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE


     SM2000 CLIs                    EEC OPTIONS
18. MH0 SG0 CLI _________                EEC SM N
19. MH0 SG1 CLI _________
20. TSICOM 0 CLI _________
21. TSICOM 1 CLI _________
    TSIS CLI
```

```
SCREEN 3 OF 4                5ESS Switch
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE

          EQUIPMENT CLI'S

      CONTROLLER 0   CONTROLLER 1        SM CONFIGURATION
      ------------   ------------        ----------------

IMPU:  23. _________   24. _________     30. CONFIGURATION      STANDARD
DLI:   25. _________   26. _________     SM RETROFIT
LDSU:  27. _________   28. _________     31. STAND ALONE        _
BSTR:  29. _________                     32. STAND ALONE BILLING _

                              RTCD OPTIONS
                                BILL SM N
```

```
SCREEN 4 OF 4                5ESS Switch        _
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE

SM MEMORY CONFIGURATION FOR SMPU4/SM2000

        CONTROLLER 0     CONTROLLER 1
```

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```
      ------------    ------------

BRD0 CLI 34. _________   40. _________   46. OSPS PSM N
BRD1 CLI 35. _________   41. _________
BRD2 CLI 36. _________   42. _________
BRD3 CLI 37. _________   43. _________
BRD4 CLI 38. _________   44. _________
BRD5 CLI 39. _________   45. _________
```

Figure 3 SAMPLE EQIM FORM 5E14 SOFTWARE RELEASE

```
SCREEN 1 OF 4                5ESS Switch
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE


* 1. SM  ___
                          8. EQUIPMENT AISLE        ____
  2. SM USAGE             IM          9. LOCAL DSU VERTICAL      __
  3. REMOTE SITE           ___        10. MODULE PROCESSOR VERT    __
                          11. UNIT TYPE              ______
  4. EQSTATUS             O          12. NUMBER OF MEM BOARDS     __
  5. INTERRUPT STATUS     ALLOW      13. PI SG 0 EQSTATUS         _
                          14. PI SG0 TYPE            ___
                          15. PI SG 1 EQSTATUS       _
  6. NCT EVEN LINK         ___       16. PI SG1 TYPE            ___
  7. CTS EVEN LINK         ___       17. PERCENT OF FREE SM SPACE 30
```

```
SCREEN 2 OF 4                5ESS Switch
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE


     SM2000 CLIs                    EEC OPTIONS
18. MH0 SG0 CLI _________                EEC SM N
19. MH0 SG1 CLI _________
20. TSICOM 0 CLI _________
21. TSICOM 1 CLI _________
    TSIS CLI
```

```
SCREEN 3 OF 4                5ESS Switch
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE

          EQUIPMENT CLI'S

      CONTROLLER 0   CONTROLLER 1        SM CONFIGURATION
      ------------   ------------        ----------------

IMPU:  23. _________  24. _________     30. CONFIGURATION      STANDARD
DLI:   25. _________  26. _________     SM RETROFIT
```

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```
LDSU:  27. _________  28. _________     31. STAND ALONE       _
BSTR:  29. _________                 32. STAND ALONE BILLING _

                          RTCD OPTIONS
                            BILL SM N
```

```
SCREEN 4 OF 4                5ESS Switch          _
eqim                 OFFICE DATA ADMINISTRATION
(5700-1/2)             SWITCHING MODULE EQUIPAGE

SM MEMORY CONFIGURATION FOR SMPU4/SM2000

      CONTROLLER 0     CONTROLLER 1
      ------------     ------------

BRD0 CLI 34. _________  40. _________  46. OSPS PSM N
BRD1 CLI 35. _________  41. _________
BRD2 CLI 36. _________  42. _________   IWG OPTIONS
BRD3 CLI 37. _________  43. _________     VTOA SM _
BRD4 CLI 38. _________  44. _________
BRD5 CLI 39. _________  45. _________
```

Figure 4 SAMPLE EQIM FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 3: 5701 RECORD
CORE UNITS RECORD - EQCORE

1. GENERAL

The 5701 Record is used to define Core Unit Assignments in a 5ESS Switch office. It is intended to be used as an Office Record for those 5ESS Switch offices that are not utilizing an Operational Support System (e.g., RMAS) for generation of Office Records.

The Core Units Record is used to define the Message Interface Control Unit, Time Multiplexed Switch and Message Interface Control Unit Subunits.

NOTE: Once this form is inserted for a CM3 (Communication Module Model 3) office, the EQCM3 should be the next form inserted. This allows form checks to be performed on the data in regards to an office being CM2 (Communication Module Model 2) or CM3, instead of appearing during the execution of cross checks.

1.1 Recent Change View

The corresponding Recent Change Views for this form is 17.14.

2. FORM ENTRIES

2.1 *KEY

Description: The only acceptable value for this field is zero.
Valid Entries: 0

2.2 VCDX OFFICE

Description: Is this a VCDX office?

Software Release: 5E9(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When VCDX OFFICE is "Y", the following fields are automatically populated:

- CM VINTAGE is set to 2
- NETWORK CLOCK UNIT CLI is set to 0
- NETWORK CLOCK UNIT CLOCK TYPE is set to "24CHAN2"
- NETWORK CLOCK UNIT OSC TYPE is set to "DOMMED"
- TIME MULTIPLEXED SWITCH CLI is set to 2

and the following must be true:

- VCDX on the ECDOP form must be "Y".
- On the EQIM form (5700 Record):

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- One and only one EQIM form must be entered with SM USAGE set to "IM" and CONFIGURATION set to either "SM2000" or "SIGNALING ".
- MEMORY BOARDS BRD0 CLI(s) must not be entered.
- STAND ALONE must be "N".
- STAND ALONE BILLING must be "Y".
- OSPS PSM must not be "Y".
- UNIT TYPE must be "SMPU4".
- MEMORY BOARDS BRD1 CLI(s) on the EQIM form must be specified, and MEMORY BOARDS BRD[2-5] CLI(s) must be assigned continuously.
- IMPU EQUIPMENT CLI's for CONTROLLER 0 and/or CONTROLLER 1 must have bit 26 set to 1 (i.e., IMPU EQUIPMENT CLI's of "*x*4*xxxxxx*" where *x* is any valid value).

- On the RALM form (5516 Record):
  - REMOTE MODULE must match the entry of SM on the EQIM form.
  - SM must match the entry for REMOTE SWITCHING MODULE on the EQRAU form and ALARM TYPE on the EQRAU form must be "ASC".
  - ALARM POINT values 0 - 1, 32 - 54, and 100 - 113, must be assigned on the RALM form.

- On the EQRAU form (5705 Record):
  - ALARM TYPE must be "ASC", and REMOTE SWITCHING MODULE must match the value of SM on the EQIM form.
  - ALARM TYPE must be "ASC" and ASC/RAU VERTICAL must be either 69 or 76.

- On the OFCOPT form (5509 Record):
  - ACG FNL TRMT must be "RT".
  - ASI ON must be "N".
  - ASP OFC must be "NONE".
  - COMMON CHAN SIG must be "N".
  - E911 DAS must be blank.
  - E911 OPTION must be "INACTIVE".
  - OFFICE TYPE must be "N".
  - For 5E12 and earlier, DSN OPTION must be "N".
  - For 5E11 and later, APPLICATION PROCESSOR can only be entered as "NO" or "SM".
  - For 5E10 and later, PRODUCT must be "WNC" or "VCDX".

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- On the TKGRP form (5202 Record):
  - LN VIRT cannot be "Y" on any TKGRP form since FTS2000 Network Management Network is not allowed in this office.
  - For 5E10 and earlier, QUEUE FEATURE cannot be entered since trunk queuing is not allowed in the office.
  - When TRKCLASS is not "INAISTRK", "LPTDCTU", "LPTISTFL", "LPTISTFX", "RMSD3", or "TOPAS", LOCAL SM must be entered.
  - HUNT TYPE must not be "UCD", "GUCD", or "BGUCD".
  - The following TRKCLASS entries are not allowed: "CAMOPKEY", "CAMOPTLK", and "CCIS6".
- The following forms must not be populated:
  - EQNLI form (5853 Record).
  - EQSITE form (5722 Record).
  - RDTAPORT form (5911-A Record).
  - RDTATN form (59110-A/B Record).
- ENTITY on the RXSCHD form (5515 Record) must not be 0.
- Since the secured feature ACD BRCS is not allowed in the office, no SFSYS form can exist with field ACT set to "Y" for SFID 121.
- Since the autoplex ECP (Executive Cellular Processor) feature is not allowed in the office, ECP POINT CODE cannot be defined on the APXPARM form (5050 Record).
- For 5E10 and earlier, since simulated facility groups are not allowed in this office, PFASFG forms must not exist.
- For 5E10 and earlier, since no ARS (Automatic Route Selection) feature can be assigned in this office, no TN(s), MLHG/TERM(s) or TGN/MEMB(s) TRUNK GROUP(S) may be assigned an ARS feature on any LINEFA, MLHLNFA, TRUNKFA, TKGRPFA, BFG or an associated CLUSTR form.
- Since polygrid routing is not allowed in a VCDX office, the PPPOLY form cannot be populated.
- For 5E10 and earlier, since no (PFA) Private Facility Access feature can be assigned in this office, no TN(s), MLHG/TERM(s), TGN/MEMB(s), or TRUNK GROUP(S) may be assigned a PFA feature on any LINEFA, MLHLNFA, TRUNKFA, TKGRPFA, BFG or an associated CLUSTR form.
- The equipment in Figure 2 is not allowed in this office.

When VCDX OFFICE is "Y", and UNIT TYPE is "SM2000":

- MH0 SG0 CLI and/or MH0 SG1 CLI on the EQIM form must have bit 0 set to 1 (i.e., MHO CLI's of "*xxxxxxx*1" where *x* is any valid value).
- IMPU EQUIPMENT CLI's, on the EQIM form, for CONTROLLER 0 and/or CONTROLLER 1 must have bit 1 set to 1.

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For 5E11 and later, when VCDX OFFICE is "Y", on the OFCOPT form (5509 Record):

- ASI ON must be "N".
- COMMON CHAN SIG must be "NO" or "PSU".
- E911 DAS must be not entered.
- E911 OPTION must be "INACTIVE".

For 5E11 and later, when VCDX OFFICE is "Y" and TRKCLS on the TKGRP form (5202-1/2 Record) is not in the table that follows, LOCAL SM on the TKGRP form must be known.

For 5E12 and later, when an office is being converted from VCDX to 5ESS-2000, VCDX OFFICE must be "N".

LOCAL SM Entries	
Software Release: 5E11 and later	
Data Condition	**Trunk Group Definition**
TRKCLS[1,3] = "LTP"	Local Test Port Trunk
TRKCLS = "EDS" and RDTA GRP = "Y"	Extended Digital Subscriber RDTA Trunk TRKCLS = "INAISTRK"
TRKCLS = "RMSD3"	TAT connected to RSM-D3 Trunk
TRKCLS = "TOPAS"	Test Access Trunk - TOPAS Interface

When VCDX OFFICE is "N",

- A dgn (diagnostic) test schedule must be defined on the RXSCHD form for the Administration Module (ENTITY = 0).
- REMOTE SWITCHING MODULE assigned on an EQRAU form or REMOTE MODULE assigned on an RALM form must be defined on the EQIM form or have SM USAGE on the EQIM form set to "RSM", "ORM" or "TRM".
- REMOTE SWITCHING MODULE assigned on an EQRAU form or REMOTE MODULE assigned on an RALM form must be defined on the EQSITE.
- When UNIT TYPE is "SMPU4" on the EQIM, MEMORY BOARDS BRD0 CLI(s) on the EQIM form must be specified and MEMORY BOARDS BRD[1-5] CLI(s) must be assigned continuously.

For 5E10 and later, PRODUCT (on OFCOPT form) is "WNC" or "VCDX", VCDX OFFICE must be "Y". The Wireless CENTREX and Very Compact Digital Exchange applications can be used only with the VCDX hardware configuration.

When VCDX OFFICE is "Y", TSI BOARD 0 and TSI SLOT 2 must not be assigned on the following forms:

- EQDI (for 5E10 and later),
- EQDNUS and EQPSU (for 5E12 and later) and,
- EQPDXU (for 5E14 and later).

For 5E10 and later, when VCDX OFFICE is "Y" and UNIT TYPE is "MCTU3", bit position 26 must not be set for the IMPU CLIs (controllers 0 and 1). When UNIT TYPE is not "MCTU3", bit position 26 must be set for the IMPU CLIs (controllers 0 and 1).

For 5E11 and later, when VCDX OFFICE is "Y", the EQDS form (5470 Record) should not have any tuples entered.

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For 5E12 through 5E13, when all of the following conditions are met:

- COMMON CHAN SIG is "ALL" on the OFCOPT form (5509 Record),
- VCDX OFFICE is "Y" on the EQCORE form and
- WB RATE is entered and INPULSING/OUTPULSING is "DCHN" on the TKGRP form (5202-1/2 Record),

LOCAL SM must be entered on the TKGRP form.

For 5E15 and later

- When VCDX OFFICE is "N" and CM VINTAGE is 2, EXPANDED CMP/APR must be "CMPMEONLY" or "BOTH".
- When either VCDX OFFICE or DRM is "Y":
  - CLI on the EQTMS form (5866 Record) must be 2.
  - neither the QPHPIPE form (5544 Record) nor the CMTMH form (6021 Record) can be entered.
  - a maximum of 8,000 NPOOL forms (5177 Record) may be entered.
- When VCDX OFFICE is "Y", APPLICATION on the CCSTCAP form (5567 Record) or APPLIC on the DSAPP form (5537 Record) must not be "LNACP" or "TNAI".
- When VCDX OFFICE is "N" and DRM is "N", a maximum of 800,000 NPOOL forms (5177 Record) may be entered .
- For 5E16(2) FR 3 and later, when VCDX OFFICE or DRM is set to "Y", ORIG PT CODE for BICC Packet Groups defined on the PKTGRP form (5219 Record) must have a matching OPC or ALIASCP on the CCGSM form 6008 Record).

2.3 DRM

Description: Is this a Distinctive Remote Module?

For more information on this feature see Division 2, Section 4A525.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When DRM is "Y", the following fields are automatically populated:

- CM VINTAGE is set to 2
- NETWORK CLOCK UNIT CLI is set to 0
- NETWORK CLOCK UNIT CLOCK TYPE is set to "24CHAN2"
- NETWORK CLOCK UNIT OSC TYPE is set to "DOMMED"
- TIME MULTIPLEXED SWITCH CLI is set to 2

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When an office is being converted from a VCDX office,VCDX OFFICE and DRM must both be "N".

When DRM is "N" and CM VINTAGE is 2, EXPANDED CMP/APR must be "BOTH" or "CMPMEONLY".

When DRM is "Y", VCDX OFFICE must be "N".

When PRODUCT on the OFCOPT form is "DRM", DRM on the EQCORE form must be "Y". DRM application can be used only with the DRM hardware configuration.

When DRM is "Y" the following apply:

- This table specifies the equipment not allowed in this office:

Form	Condition	Key Fields	Equipment Unit
EQDSP	DIGITAL SERVICE UNIT = 0	IM, DSU, SG	Local DSU1 Model 1
EQDU	DLTU TYPE = "DLTU24"	IM, DLTU	DLTU Model 1
EQDUP	FAC IND = 0 and FAC 0 DFI USAGE != "H1" or "H2"	IM, DLTU, DFIPK	DFI (24) Channel Model 1
EQLU	LINE UNIT TYPE = "4AB1"	IM, LU	Analog Line Unit Model 1
EQLU	LINE UNIT TYPE = "4AC1"	IM, LU	Analog Line Unit Model 2
EQMSP	Any form	IM, MSU, SG	MSU Model 1
PSUGP	PH TYPE = "PH1"	IM, PSU, PSUSHELF	Protocal Handler Model 1
PSUGP	PH TYPE = "PH2"	IM, PSU, PSUSHELF	PSUSHELF Protocal Handler Model 2

- On the EQIM form:
  - One and only one EQIM form must be entered with CONFIGURATION set to "SM2000".
  - STAND ALONE must be "N".
  - OSPS PSM must not be "Y".
  - STAND ALONE BILLING must be "Y".
  - When an SM-2000 class processor is specified,
    - MH0 SG0 CLI and MH0 SG1 CLI must be equal to 1 hex or C hex.
    - EQNLI form must not be populated.
    - TSICOM 0 CLI and TSICOM 1 CLI must be 3, 13, 23 or 33 hex.
- EQSITE form should not have any forms entered.
- When the RALM form is populated, SM on the EQIM form must equal REMOTE MODULE on each RALM form.
- TSI BOARD 0 and TSI SLOT 2 must not be assigned on the EQDI form, the EQDNUS form or the EQPSU form. This TSI BOARD and TSI SLOT is reserved in DRM call processing nodes.
- EQDS form should not have any forms entered.
- ENTITY on the RXSCHD form must notbe zero.
- When the RALM form is populated,
  - REMOTE MODULE on the RALM form must equal REMOTE SWITCHING MODULE on the

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EQRAU form,

- ALARM TYPE on the EQRAU form must be "ASC".

- When the EQRAU form is populated,
  - RAU VERTICAL on the EQRAU form must be either 69 or 76,
  - ALARM TYPE on the EQRAU form must be set to "ASC",
  - REMOTE SWITCHING MODULE on the EQRAU form must equal SM on the EQIM form.

- On the OFCOPT form:
  - The fields shown in the following table must be populated as specified:

Field	Value
ASI ON	N
COMMON CHAN SIG	NO or PSU
E911 DAS	unknown
E911 OPTION	INACTIVE

  - VIRTUAL SWITCH must be "Y".
  - APPLICATION PROCESSOR can only be entered as "NO" or "SM".
  - PRODUCT must be "DRM".
  - OFFICE TYPE must be "N".

- Polygrid routing is not allowed in the office. The PPPOLY form cannot be populated.
- The secured feature ACD BRCS is not allowed in the office. The SFSYS form cannot exist with SFID 121 set to "Y".
- The following TRKCLS entries are not allowed on the TKGRP form. "CAMOPKEY", "CAMOPTLK", "CCIS6"
- The FTS2000 Network Management Network is not allowed in this office. LN VIRT cannot be set to "Y" on any TKGRP form.
- For 5E15 and later, a maximum of 8,000 NPOOL forms (5177 Record) may be entered
- When TRKCLS on the TKGRP form is not in the table below, then LOCAL SM on the TKGRP form must be known.

Data Condition	Trunk Group Definition
TRKCLS[1,3] = "LTP"	Local Test Port Trunk
TRKCLS = "EDSL" and RDTA GRP = "Y"	Extended Digital Subscriber RDTA Trunk
TRKCLS = "INAISTRK"	Incoming Automatic Intercept Trunk
TRKCLS = "RMSD3"	TAT connected to RSM-D3 Trunk
TRKCLS = "TOPAS"	Test Access Trunk - TOPAS

When COMMON CHAN SIG is set to PSU on the OFCOPT form and DRM is set to "Y" on the EQCORE form and INPULSING and/or OUTPULSING is set to "ISUP7" on the TKGRP form, then the LOCAL SM must be entered on the TKGRP form, and LOCAL SM must have a matching GSM on the CCGSM form. Also, when WB RATE is known and INPULSING and/or OUTPULSING is set to "DCHN" on the TKGRP form and DRM is set to "Y" on the EQCORE form, then LOCAL SM must be entered on the TKGRP form,

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and LOCAL SM must have a matching GSM on the CCGSM form.

For offices where both VCDX OFFICE and DRM are "N":

- LOCAL SM must be unknown on the TKGRP form for the TGN that is associated with the terminating SFG.
- When TRK DIR is "2W", "INC" or "OUT", TRKCLS is "EDSL" or "EDSLHM" and LOCAL SM is known on the TKGRP form, NET SPEC FAC TYPE must not be "TPOTS" on the TKEDSLD form.
- For 5E15 and later, a maximum of 800,000 NPOOL forms (5177 Record) may be entered

When EQIM forms indicate a change in the software configuration of the SM after retrofit, and VCDX OFFICE or DRM is "Y" on the EQCORE form, the SM configuration cannot be changed during retrofit.

When the ENETPIPE form is entered, the corresponding EQIM form must specify an SM-2000 class processor and, if SERV TYPE is "RTCD", the EQCORE form must have VCDX OFFICE and DRM both set to "N".

For 5E15 and later, when DRM is set to "Y", the APPLICATION field on the CCSTCAP form (5567 Record) or the APPLIC field on the DSAPP form (5537 Record) must not be set to "LNACP" or "TNAI".

2.4 CM2 COMPACT

Description: Is this a CM2 Compact office? Note that the location of the CM2 Compact is entered in the EQUIPMENT BAY field below.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E14 and earlier, when CM2 COMPACT is "Y":

- for the EQCORE form (5701 Record)
  - TIME MULTIPLEXED SWITCH CLI must be 20,
  - MSG AISLE and TMS AISLE must be equal,
  - TIME MULTIPLEXED SWITCH AISLE must be unknown.
  - TMS CONFIGURATION must be "SNGL",
  - EQUIPMENT BAY must be entered,
  - TMS SHELF EQUIPAGE must not be entered,
  - CM VINTAGE must be 2,
- for the EQIM form (5700 Record)
  - NCT EVEN LINK must be 2 or 4,
  - CTS EVEN LINK must be 2, 10, 18, 26, 34, 42, 50, or 58,

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- The maximum number of EQIM forms must be 8,
- The maximum number of EQIM forms with SM USAGE of "IM", "HIM", "TRM" or "ORM" must be 2,
- The maximum number of EQIM forms with SM USAGE of "RM" must be 6,
- when SM USAGE on the EQIM form is not "ORM", NLI 0/1 CLI on the corresponding EQNLI form must have bit 1 set (hex value of 2).

- for the ECDOPT form (5706 Record)
  - CM TYPE must be "CM2C".

- for the EQTMSLINK form (5851 Record)
  - QLI CLI must be 0.

For 5E11 and later, when an office is being converted from a CDX to 5ESS-2000 office, cm2 compact must be "N".

For 5E15 and later:

When an office is CM3, CM2 COMPACT must be "N".

When CM2 COMPACT is "N":

- EQUIPMENT BAY must be blank.
- CM2C SM must be blank.

When CM2 COMPACT is "Y", the following data is required for the EQTMS form (5866 Record):

- FABRIC TYPE must be "SNGL"
- CLI must have a value with bit 5 set (as in 20 hex)
- there can be no entries in the SHELF EQUIPAGE - CM2 list
- AISLE on the EQTMS form must be equal to MSGS AISLE on the EQCORE form.
- QLI CLI must be 0 on all EQTMSLINK forms.

When CM2 COMPACT is "N" and CM VINTAGE is 2:

and SM USAGE is not "ORM" and UNIT TYPE is "SM2000" or "SM2005" on the EQIM form (5700 Record), QLI CLI on all EQTMSLINK forms (5851 Record), must be 100, otherwise QLI CLI must not be 100.

and SM USAGE is "ORM" on the EQIM form, the QLI CLI value on each EQTSMLINK form associated with the SM on this EQIM form, depends on the type of TRCU (Transmission Rate Converter Unit) used in this transmission path. If the TRCU is of type "TRCU3" on the EQTMSLINK form, and UNIT TYPE on the EQIM form is "SM2000" or "SM2005", then QLI CLI must be 100, otherwise QLI CLI must not be 100.

MICU / TMS

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The following fields designate Message Interface Control Unit and Time Multiplexed Switch parameters.

2.5 #EQSTATUS

Description: Enter the Status of the Equipment.

Required Field.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

For new offices and units destined for factory testing, "O" (Operational) is the only allowed value. During offline ODA database retrofits, the other values are valid.

2.6 #CM VINTAGE

Description: Enter the Communication Module Vintage number for the office.

Required Field.

Valid CM VINTAGE Entries

Entry	Description
1	CM1.
2	CM2. CM2 allows for the expanded SM range of 1-192. For offices with CM2, both MSG SIZE and TMS SIZE must be 6. For 5E9(1) and later, this value is used for the CDX/CM2C (Compact Digital Exchange).
3	CM3. For 5E15 and later, CM3 replaces the Communication Modules CM1 (Communication Module 1), CM2 (Communication Module 2), CM2C/CDX (Communication Module 2 Compact/Compact Digital Exchange) of the 5ESS switch.

Data Rules:

The CM VINTAGE value entered must be the same as the CM TYPE value entered on the ECDOPT form.

For 5E9(1) and later, when CM VINTAGE is 1, EQUIPMENT BAY on the EQCMTRCU form (5812 Record) must be between 0 and 7.

When CM VINTAGE on the EQCORE form is 2 and EXPANDED CMP/APR is set to "APRONLY" or "BOTH" on the EQCORE form, the bit number 10 (400h) for the CLI must be set on the EQPC form, where the bits are numbered from 0 to 31 and bit 0 is the right most bit.

When "2" is entered, and the CLI is 400 (bit number 10) on the EQPC form, where the bits are numbered from 0 to 31 and bit 0 is the right most bit, EXPANDED CMP/APR must be set to "APRONLY" or "BOTH" on the EQCORE form.

When "2" is entered, the CLI values on the EQPC forms must be 0 or 400 .

When "2" is entered, and QLPS is present, there must be a corresponding EQPIPE form for each SM-2000 as defined on the EQIM form. CTS overflow could result.

For 5E15 and later:

When CM VINTAGE is 2, CM2 COMPACT is "N", and FABRIC TYPE on the EQTMS form is "SNGL", then an entry for SHELF 0 in the SHELF EQUIPAGE - CM2 list on the EQTMS form must exist.

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When CM VINTAGE is 2, CM2 COMPACT is "N", and the SM is not equipped with an SM-2000 class processor, the SHELF EQUIPAGE - CM2 list on the EQTMS form (5866 Record) must have the correct entries to support the range of TMSLINKS in the office. Following is the required SHELF EQUIPAGE - CM2 rows for specific ranges of TMSLINKS (NCT EVEN LINK) defined on the EQIM form (5700 Record) needed for FABRIC TYPE of "DUAL" defined on the EQTMS form.

Shelf Equipage Row Requirements - SM
for "DUAL" Fabric Type

TMSLINKs Equipped	SHELF EQUIPAGE - CM2 (row required)
2 - 61	1 and 2
62 - 125	3 and 4
126 - 189	5 and 6
190 - 253	7 and 8
254 - 317	9 and 10
318 - 381	11 and 12

When CM VINTAGE is 2, and CM2 COMPACT is "N" on this form, and FABRIC TYPE on the EQTMS form is "SNGL", and the SM is not equipped with an SM-2000 class processor, the NCT EVEN LINK values assigned on the EQIM form requires the following SHELF EQUIPAGE - CM2 on the EQTMS form.

Shelf Equipage Row Requirements - SM
for "SNGL" Fabric Type

LINKs EQUIPPED	SHELF EQUIPAGE - CM2 (row required)
2 - 31	1
32 - 61	2
62 - 93	3
94 - 125	4
126 - 157	5
158 - 189	6

When CM VINTAGE is 2 and CM2 COMPACT is "N" on the EQCORE form, and FABRIC TYPE on EQTMS is "DUAL", and the SMs are equipped with SM-2000 class processors, the NLI TMS LINKs entered on the EQNLI form (5853 Record) requires the following SHELF EQUIPAGE - CM2 be entered on the EQTMS form.

Shelf Equipage Row Requirements - SM2000
for "DUAL" Fabric Type

TMSLINKs Equipped	SHELF EQUIPAGE - CM2 (row required)
2 - 61	1 and 2
62 - 125	3 and 4
126 - 189	5 and 6
190 - 253	7 and 8
254 - 317	9 and 10
318 - 381	11 and 12

When CM VINTAGE is 2 and CM2 COMPACT is "N" on the EQCORE form, and FABRIC TYPE on EQTMS is "SNGL", and the SMs are equipped with SM-2000 class processors, the NLI TMS LINKs entered on the EQNLI form (5853 Record) require the following SHELF EQUIPAGE - CM2 be entered on the EQTMS form.

Shelf Equipage Row Requirements - SM2000
for "SNGL" Fabric Type

LINKs EQUIPPED	SHELF EQUIPAGE - CM2 (row required)
2 - 31	1
32 - 61	2
62 - 93	3
94 - 125	4
126 - 157	5
158 - 189	6

When CM VINTAGE is 2:

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- MSGS CLI must not be entered.
- MSGS AISLE must be entered.
- CLOCK TYPE must be "24CHAN2" or "STDLNE2.
- for the SM-2000 SMs on the EQPIPE form (5544 Record), these SMs must exist on the EQIM form (5700 Record) with SM-2000 class processor and an EQSTATUS of "O" (Operational).
- a QLPS Gateway must first be defined on SIDE 0 with a PC NO. of 32 and on SIDE 1 with a PC NO. of 32 on the EQPC form before any other QLPS Gateways can be defined.
- the REFERENCE value on each NCLKREF form must be unique.
- QLPS Gateways for PC NO. of 33 can be defined on the EQPC form with an EQSTATUS of "O" (Operational) if there are QLPS Gateways of 32 defined as follows, on two EQPC forms with EQSTATUS of "O":
  - EQPC.SIDE = 0 and EQPC.PC = 32
  - EQPC.SIDE = 1 and EQPC.PC = 32

When CM VINTAGE is 2, and QGWP is "Y" on the EQPC form (5703 Record), an EQPC form must be defined with PC NO equal to 32 or 33.

When CM VINTAGE is 2, and any ENETLINK form tuple exists with SERV TYPE equal "RTCD", then for each EQIM form with an SM-2000 class processor, two corresponding EQPIPE forms (5544 Record) must exist where QLPS NETWORK equal 0 and 1.

When CM VINTAGE is 2, and the ENETPIPE form is entered with SERV TYPE "EEC", if the corresponding EQIM form has EQSTATUS set to "O" and SM USAGE is not set to "ORM", and if 4 EQQLPS form (5854 Record) tuples exist, then two corresponding EQPIPE forms must exist where QLPS NETWORK equal 0 and 1.

When CM VINTAGE is 2, and if a QLPS Gateway is defined on the EQPC form with SIDE equal 0 and PC NO. equal 32, then there must exist an EQPC form with SIDE equal 1 and PC NO. equal 32. Or if an EQPC form exists with SIDE equal 1 and PC NO. equal 32, then there must exist an EQPC form SIDE equal 0, PC NO. equal 32. Also, both EQPC forms must have the same value for EQSTATUS.

When CM VINTAGE is 2, and if a QLPS Gateway is defined on the EQPC form with SIDE equal 0 and PC NO. equal 33, then there must exist an EQPC form with SIDE equal 1 and PC NO. equal 33. Or if an EQPC form exists with SIDE equal 1 and PC NO. equal 33, then there must exist an EQPC form SIDE equal 0, PC NO. equal 33. Also, both EQPC forms must have the same value for EQSTATUS.

QLPS Gateway(s) defined on the EQPC form with a PC NO. of 32 or 33 can not exist unless 4 EQQLPS forms are defined as follows:

ONTC SIDE	QLPS NETWORK
0	0
1	0
0	1
1	1

And the EQSTATUS of these EQQLPS form entries must be "O".

For 5E15 and later, when CM VINTAGE is 3:

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- the EQCM3 form (5867 Record) must be inserted after the EQCORE form has been inserted.
- CLOCK TYPE can only be "NCLK3" or "SANC3".
- CLI must not be entered for LINK INTERFACE UNIT and MESSAGE INTERFACE UNIT.
- QLI CLI on all EQTMSLINK forms associated with valid SMs must be 0.
- MSGS CLI must be 0.
- MSGS AISLE must not be entered.
- VCDX OFFICE must be "N".
- EXPANDED CMP/APR must be "NEITHER".
- the EQPC (5703 Record) tuples for SIDE 0 PC N0. 8, and SIDE 1 PC NO. 12 are always required even though there is no need to input this form. The tuples will be built in forward mapping for CM3.
- REFERENCE TYPEs of "24CHAN" and "30CHAN" on NCLKREF forms cannot have the same REFERENCE values.
- four EQQLPS forms must be defined.

When CM VINTAGE is 3 on the EQCORE form, the LINK TYPE on the EQTMSLINK form must be "NCT1" when either:

- The SM is not an SM2000.
- The SM is an SM2000, the corresponding EQIM form's SM USAGE is "'ORM" and the NLI for this LINK has a TRCU PATH HOST TYPE other than "TRCU3" on the EQTRCUPTH form. The EQNLI form contains the TMS LINK number for each NLI.

NOTE:

Depending upon the value of the CM VINTAGE field on this form, an EQCM3 form either exists (indicating a CM3) or doesn't (indicating a CM2). The EQCM3 form's existence is queried by a number of form files to set up internal checks for validating the data required by the CM VINTAGE defined for this office. These form files include EQTMS, EQPC, EQPIPE, EQQLPS, EQNLI, EQTMSLINK and EQIM. This was done to reduce a significant number of crosschecks to form checks and assist in populating CM-related data at the form entry level.

The EQCORE/EQCM3 combination found is invalid and/or one or more of the above-listed form files contain invalid data for the CM defined in this office. A subset of these forms could contain invalid data even if the EQCORE/EQCM3 combination is valid if the combination was altered after some of the forms had been entered. DO NOT attempt to fix only the form files listed in error below. To insure data integrity, all of the form files should be validated via an ODA tool.

To correct this situation, make sure the CM VINTAGE on the EQCORE form is correct. If the value is 2, make sure the EQCM3 form does NOT exist. If the value is 3, make sure the EQCM3 form DOES exist. Then either run the "errforms -u" command against the database (recommended) or re-enter each of the form files listed above and validate the data either by updating each form instance or using the review/validate function on each form instance.

The "errforms" with the -u option ensures that all relevant forms with assignment statements are updated in a CM3 office.

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For 5E15 and later, when CM VINTAGE is 2 and NON GLOBAL SM on the CMTMH form (6021 Record) does not have an SM-2000 class processor on the corresponding EQIM form, there must be EQPC forms (5703 Record) entered on SIDE 0 and SIDE 1 with PC NO. set to 32 and EQSTATUS set to "O".

For 5E15 and later, when "3" is entered,

- all RSMs (Remote Switching Modules) in the office must be connected to the HSM (Host Switching Module) via a DNU-S facility. This connection is defined on the RSMLNK form.
- TRCU TYPE on the EQMTRCU form (5812 Record) must be "TRCU3".

2.7 #INTERRUPT STATUS

Description: Enter Interrupt-Inhibit Status.

Required Field.
Default: ALLOW
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Description
A	Allow.
I	Inhibit.

2.8 #MSG AISLE

Description: Enter the aisle location of the Message Switch Frame. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. The third and fourth digits, from the left, are the aisle number. It is recommended that floor 00 be used for equipment located in the basement, per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.9 #MSGS CLI

Description: This field is used to store the CM3 (Communication Module 3) MSGS Change Level Indicator.
Valid Entries: 0

2.10 MSGS IPDGN FILE

Description: The MSGS IPDGN FILE (Message Switch Input/Output Processor Diagnostic File) field is a No Change field for CM3 only, that contains the diagnostic image for the MSGS-IP.

Software Release: 5E15 and later

2.11 MSGS APDGN FILE

Description: The MSGS APDGN FILE (Message Switch Application Processor Diagnostic File) field is a No Change field for CM3 only, that contains the MSGS-IP ROM (Read Only Memory), FPGAs (Field-Programmable Gate Arrays), and MSGS-AP debugger code.

Software Release: 5E15 and later

2.12 MSGS IP FILE

Description: This field is a No Change field that contains the image for the MSCU/PPC (Message Switch Control Unit/Pump Peripheral Controller) operational image for the MSGS-IP (Message Switch -

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Input/Output Processer) for CM3 only.

Software Release: 5E15 and later

2.13 MSGS AP FILE

Description: This field is a No Change field that contains the operational images for the MSGS-AP (Message Switch -Application Processer) for CM3 only.

Software Release: 5E15 and later

2.14 MSGS ROM FILE

Description: The MSGS ROM FILE (Message Switch Read Only Memory Code File) field is a No Change field that contains the MSGS-IP ROM, FPGAs, and the MSGS-AP debugger code.

Software Release: 5E15 and later

2.15 #TMS AISLE

Description: Enter the aisle location of the Time Multiplexed Switch. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. The third and fourth digits, from the left, are the aisle number. It is recommended that floor 00 be used for equipment located in the basement, per floor plan designation.

- ***NOTE:*** This field is for 5E14 and earlier software releases.

Software Release: 5E14 and earlier
Required Field.
Valid Entries: 0000 - 9999

2.16 #TMS SIZE

Description: Enter the Time Multiplexed Switch Size in feet.

- ***NOTE:*** This field is for 5E14 and earlier software releases.

Software Release: 5E14 and earlier
Required Field.
Valid Entries: 6 or 7 (feet)

Data Rules:

If CM VINTAGE is 2, this field must have a value of 6.

2.17 TMS CONFIGURATION

Description: Enter the Time Multiplexed Switch Configuration.

- ***NOTE:*** This field is for 5E14 and earlier software releases.

Valid TMS CONFIGUATION Entries

Entry	Description
SNGL	Single-Fabric.
DUAL	Dual-Fabric.
DBDL	Software Release: 5E5 and earlier. Double Dual Fabric

Software Release: 5E14 and earlier

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Data Rules:

If CM VINTAGE is 1, TMS CONFIGURATION must be blank or "DUAL".

If CM VINTAGE is 2, TMS CONFIGURATION must not be blank.

If "SNGL" is entered and CM2 Compact? is "N", the first pair of Model Numbers must be assigned for UNIT NUMBER 0.

If "SNGL" is entered, the SIDE 0 and SIDE 1 values for UNIT NUMBERS 0 and 1 (if entered) must all be either "TMSU2" or "TMSU3".

If "DUAL" is entered, the first and second pairs of MODEL NUMBERS must be assigned for UNIT NUMBERS 0 and 1.

If "DUAL" is entered, the SIDE 0 and SIDE 1 values for UNIT NUMBERS 0 and 1 must all be either "TMSU2" or "TMSU3".

If "SNGL" is entered, Model Numbers are not valid for UNIT NUMBERS 6 through 11.

If "DUAL" is entered, all rows are valid in sets of two.

For 5E9(1) and later, if CMTYPE on the ECDOPT form (5706 Record) is "CM2C", and TIME MULTIPLEXED SWITCH CLI on the EQCORE form is 20, TMS CONFIGURATION must be "SNGL".

If "SNGL" is entered and CM2 Compact is "N", the first pair of MODEL NUMBERS must be assigned for UNIT NUMBER 0.

For 5E10 and later, if "SNGL" is entered, the following rules must be met when defining the primary NLI Link, EVEN NLI 0, on the EQNLI form:

- The TMS LINK 0 value assigned to EVEN NLI 0 must be a multiple of 8 when TMS LINK 0 is less than 32 (8, 16, 24).
- The {TMS LINK 0 + 2} value assigned to EVEN NLI 0 must be a multiple of 8 when TMS LINK 0 is greater than 31 (38, 46, 54, ...).

LINK INTERFACE UNIT

2.18 #LI CLI

Description: Enter the Change Level Indicator for the Link Interface Unit; eight characters in the hexadecimal numbering system.

Required Field.

Valid Entry: 0 - 7FFFFFFF

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

MESSAGE INTERFACE UNIT

2.19 #MI CLI

Description: Enter the Change Level Indicator for the Message Interface Unit; eight characters in the hexadecimal numbering system.

Required Field.

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Valid Entry: 0 - 7FFFFFFF

Data Rules:

For 5E10 and later, if the CLI value entered indicates that the bit number 10 (400h) is set, and/or CLI value entered on NETWORK CLOCK UNIT indicates that bit 1 and bit 8 are set (102h), where the bits are numbered from 0 to 31 and bit 0 is the right most bit, then EXPANDED CMP/APR must be "APRONLY" or "BOTH" on the EQCORE form.

If the CLI value entered indicates that the bit number 10 is set, where the bits are numbered from 0 - 31 and bit 0 is the right most bit, CM VINTAGE on the EQCORE form must be "2".

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

NETWORK CLOCK UNIT

The following fields (Section 2.20 - Section 2.22) provide the CLI (Change Level Indicator), CLOCK TYPE, and OSC TYPE for the Network Clock Unit.

2.20 #CLI

Description: Enter the Change Level Indicator for the Network Clock Unit; eight characters in the hexadecimal numbering system.

Required Field.

Valid Entry: 0 - 7FFFFFFF

Data Rules:

If CLI is "xyyyyyzy", where x is 0 - 7, y is 0 - f and z is 8 - f hex, AUTO SYNC must be "Y".

See Figure 1 for more Network Clock Unit dependencies.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.21 #CLOCK TYPE

Description: Enter the Clock Type.

Required Field.

Valid CLOCK TYPE Entries

Entry	Description
24CHAN2	24-Channel Network Clock 2.
DS1	24-Channel DS1 Clock.
NCLK3	Network Clock 3.
SANC3	NCLK3 Stand Alone.
STDALNE	Stand Alone Clock.
STDALNE2	Stand Alone Network Clock 2 (not currently available).

Data Rules:

For the 5E2 Software Release with CM1, "DS1" and "STDALNE" are the only entries allowed.

For 5E2 and later Software Release with CM2, "24CHAN2" and "STDALNE2" are the only entries allowed.

For 5E9(1) and later, if CMTYPE is "CM2" or "CM2C" on the ECDOPT form, and TIME MULTIPLEXED SWITCH CLI on the EQCORE form is 20, and CLOCK TYPE is "24CHAN2", the following conditions must be met:

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- The range of values for REFERENCE on the NCLKREF (Network Clock 2 Reference) form (5525 Record) must be 1 - 3.
- There must be at most 3 clock references:
  - At most, one analog and this analog reference must be the first one (i.e., REFERENCE on the NCLKREF form must be 1).
  - If one reference is analog, there must be, at most, 2 digital references.
  - If no reference is analog, there must be, at most, 3 digital references.

For 5E10 and later, if "24CHAN2" is entered, the following must be true:

- There must be at most 2 NCLKREF forms where REFERENCE TYPE is "24CHAN".
- When all of the NCLKREF forms entered have REFERENCE TYPE set exclusively to "24CHAN", the corresponding REFERENCE must be "1" if only 1 form is entered and must be in the range of "1" - "2" if 2 forms are entered.

For 5E15 and later,

When CLOCK TYPE is "24CHAN2" or "30CHAN2", a NCLKREF form (5525 Record) must exist.

When CLOCK TYPE is "24CHAN2" or "STDALNE2", OSC TYPE must be "DOMHI" or "DOMMED".

CLOCK TYPE must match the CLOCK TYPE value on the NCLKREF form (5525 Record).

When CLOCK TYPE is "NCLK3" there can be at most 8 NCLKREF forms.

When CLOCK TYPE is "NCLK3" or "SANC3", OSC TYPE must be "CM3HI".

When CLOCK TYPE is "NCLK3", CLI for NETWORK CLOCK UNIT must be 0.

When CLOCK TYPE is not "NCLK3" or "SANC3", and CLI for NETWORK CLOCK UNIT bit 7 is 0, AUTO SYNC must be "N".

2.22 OSC TYPE

Description: Enter the OSCILLATOR TYPE for the Network Clock.

Valid OSC TYPE Entries

Entry	Description
CM3HI	CM3 High Stability
DOMHI	High Stability.
DOMMED	Medium Stability.

Data Rules:

This field must be left blank when the CLOCK TYPE is "DS1" or "STDALNE". Otherwise, it must be entered.

For 5E15 and later, when OSC TYPE is "DOMMED", NC REF STAB must be "STRATUM3_NAR".

When OSC TYPE is "DOMHI", NC REF STAB must be "'STRATUM2_NAR".

2.23 AUTO SYNC

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Description: Is Network Clock 2 Automatic Syncronization available? This feature provides automatic restoration of out-of-service Network Clock references.

Software Release: 5E9(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When AUTO SYN is "Y", for 5E15 and later, and CM VINTAGE is 2NETWORK CLOCK UNIT CLI must contain "xyyyyyzy", where:

- x = 0 - 7
- y = 0 - f
- z = 8 - f (hexadecimal)

2.24 NC REF STAB

Description: The NC REF STAB field is used to indicate the Network Clock Reference Stability.

Required Field.

Software Release: 5E15 and later
Valid Entries: STRATUM2_NAR, STRATUM3E_NAR, STRATUM3_NAR, STRATUM2_INTL, or STRATUM3_INTL

TIME MULTIPLEXED SWITCH

2.25 #CLI

Description: Enter the Change Level Indicator for the Time Multiplexed Switch; eight characters in the hexadecimal numbering system.

Required Field.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

For 5E14 and earlier, if the CLI entered indicates that the bit number 10 is set, where the bits are numbered from 0 - 31 and bit 0 is the right most bit, CM VINTAGE on the EQCORE form must be 2.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

TMS SHELF EQUIPAGE MODEL NUMBER

The following fields (SIDE 0 and SIDE 1) are for 5e14 and earlier, and are used to equip additional packs. This positional list has two sides of 12 rows each, corresponding to the shelf/bay position in the frame. The TMS SHELF equipage is not used if CM VINT is 1. However, if CM VINT is 2, the TMS SHELF equipage is required.

The number of rows equipped is dependent upon the number of SMs in the office. The Model number must be the same for row 1 and 2 (all "TMSU2" or all "TMSU3"). Rows 3 through 12 can have the MODEL NUMBER mixed.

NOTE: Mixed model numbers are not a recommended configuration for rows 3 through 12. A warning will be issued if they are not the same.

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The following table shows the correspondence between the TMS Shelf Equippage and the equipment frame bay and vertical position.

Row	SIDE 0 Bay	SIDE 1 Bay	Vertical Position
1	5	6	32
2	5	6	15
3	4	7	32
4	4	7	15
5	3	8	32
6	3	8	15
7	2	9	32
8	2	9	15
9	1	10	32
10	1	10	15
11	0	11	32
12	0	11	15

Row 1 must be entered when CM VINT is 2 and TMS CONFIGURATION is "SNGL", therefore bays 5 and 6 will have "TMSU2" or "TMSU3" packs in vertical position 32. The vertical position is always 32 in the odd numbered rows and 15 in the even numbered rows.

Because rows 1 and 2 must be entered when CM VINT is 2 and TMS CONFIGURATION is DUAL, bays 5 and 6 will have "TMSU2" or "TMSU3" packs in vertical positions 32 and 15. The vertical position is always 32 in the odd numbered rows and 15 in the even numbered rows.

2.26 SIDE 0/SIDE 1

Description: Enter the MODEL NUMBER for the TMS Shelf equipage. The TMS SHELF equipage is not used if CM VINT is 1.

- ***NOTE:*** This field is for 5E14 and earlier software releases.

Valid UNIT NUMBER Entries

Entry	Description
TMSU2	Used to provision CP KBN2 and KBN24 (both required).
TMSU3	Used to provision CP KBN5 (replacement for CP KBN2 and KBN24).

The following table provides the number of SMs versus TMS SHELF row requirements when TMS CONFIGURATION is "SNGL", CM VINTAGE is 2, and TIME MULTIPLEXED SWITCH CLI is not "0x20h". The number of rows required is tied to the number of TMSU packs required for the size of the (non-CDX) office (i.e., the number of SMs).

SMs vs. TMS Shelf Row Requirements for "SNGL" TMS Configuration

SMs	Rows Required
1 - 15	1.
16 - 30	1 and 2.
31 - 46	1 through 3.
47 - 62	1 through 4.
63 - 78	1 through 5.
79 - 94	1 through 6.

RSMs (Remote Switching Modules) are not counted.

The following table provides the number of SMs versus TMS SHELF row requirements when TMS CONFIGURATION is "DUAL" and CM VINTAGE is 2. The number of rows required is tied to the number of TMSU packs required for the size of the (non-CDX) office (i.e., the number of SMs).

SMs vs. TMS Shelf Row Requirements for "DUAL" TMS Configuration

SMs	Rows Required
1 - 30	1 and 2.
31 - 62	1 through 4.

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63 - 94	1 through 6.
95 - 126	1 through 8.
127 - 158	1 through 10.
159 - 190	1 through 12.

RSMs (Remote Switching Modules) are not counted.

The following tables apply to the TMS SHELF EQUIPAGE to support the range of TMSLINKS in an SM-2000 office for "SNGL" configurations.

TMS Shelf Row Requirements - SM2000 for "SNGL" TMS Configuration

TMS LINKs EQUIPPED (EVEN NLI TMS LINK 0)	TMS SHELF EQUIPAGE (row required)
2 - 31	1
32 - 61	2
62 - 93	3
94 - 125	4
126 - 157	5
158 - 189	6

RSMs (Remote Switching Modules) are not counted.

The following tables apply to the TMS SHELF EQUIPAGE to support the range of TMSLINKS in an SM-2000 office for "DUAL" configurations.

TMS Shelf Row Requirements - SM2000 for "DUAL" TMS Configuration

TMSLINKs Equipped (EVEN NLI TMS LINK 0)	TMS SHELF EQUIPAGE (row required)
2 - 61	1 and 2
62 - 125	3 and 4
126 - 189	5 and 6
190 - 253	7 and 8
254 - 317	9 and 10
318 - 381	11 and 12

The NCT EVEN LINK is defined on the EQNLI form (5853 Record).

The following table applies to required TMS SHELF EQUIPAGE rows required for specific ranges of TMSLINKS (NCT EVEN LINK) for an SM using the "SNGL" TMS configuration, CM VINTAGE is 2, and CM2 Compact is "N".

TMS Shelf Row Requirements - SM for "SNGL" TMS Configuration

TMS LINKs EQUIPPED (NCT EVEN LINK)	TMS SHELF EQUIPAGE (row required)
2 - 31	1
32 - 61	2
62 - 93	3
94 - 125	4
126 - 157	5
158 - 189	6

The NCT EVEN LINK is defined on the EQIM form (5700 Record).

Data Rules:

If CM VINT is 1, the TMS SHELF equipage must be blank. If CM VINT is 2, the TMS SHELF equipage is required.

The SIDE 0 and SIDE 1 values for UNIT NUMBER(s) 0 and 1, if entered, must all be the same, either "TMSU2" or "TMSU3".

CM2 Compact

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The following field defines the location of the CM2 Compact.

- ***NOTE:*** These fields must be blank for CM3.

2.27 EQUIPMENT BAY

Description: Enter the CM2 Compact equipment location bay number.

Required Field.

Software Release: 5E9(1) and later
Valid Entries: 1, 2, 3, 4, or blank for CM3

Data Rules:

When VCDX OFFICE is set to "Y" on the EQCORE form and UNIT TYPE is set to "SM2000" on the EQIM form, EQNLI form must not be populated.

2.28 CM2C SM

Description: Enter the SM that the CM2 COMPACT resides on.

Software Release: 5E10 and later.
Valid Entries: 1 - 192, or blank for CM3

CMP

These fields are used to define elements of the Communication Module Processor.

2.29 #EXPANDED CMP/APR

Description: Is the Memory Expanded CMP equipped? This field indicates which CMP (Communications Module Processor) is equipped. For 5E8 and later, a memory-expanded CMP (TN1800) is available.

- ***NOTE:*** Recent Change implementation uses view 17.14 where the CLI field must be 1 and PC TYPE must be "CMP".

For 5E10 and later, the APR (Automatic Power Recovery) feature was added. For more information on APR, see Division 2, Section 2W.

With 5E12, the CMP runs out of core board memory if the TN1368 is used. Thus, the TN1800 is required for CM2 or the TN1871 is required for CM1.

- ***NOTE:*** For 5E14 and later, this field was moved from screen 1 to screen 3 in conjuction with the CMP Memory Expansion feature. See Division 2, Section 7AK and the NUMBER OF MEM BOARDS field.

Software Release: 5E10 and later.
Required Field.
Valid Entries: (see table below)

Valid EXPANDED CMP/APR Entries
Software Release: 5E10 and later

Entry	Description
APRONLY	APR (Automatic Power Recovery) is on, CMPME (CMP Memory Expanded) is off.
BOTH	APR is on, CMPME is on.
CMPMEONLY	APR is off, CMPME is on.
NEITHER	APR is off, CMPME is off.

Data Rules:

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For 5E10 and later, when EXPANDED CMP/APR is "APRONLY" or "BOTH", CM VINTAGE must be 2.

If "APRONLY" or "BOTH" is entered, and (for 5E15 and later) CM VINTAGE is 2, the bit number 10 (400h) for the CLI must be set on the EQPC form, where the bits are numbered from 0 - 31 and bit 0 is the right most bit.

For 5E14 and earlier, for a CM2 office, when the MESSAGE INTERFACE UNIT CLI on the EQCORE form and/or the TIME MULTIPLEX SWITCH CLI on the EQCORE form is 400 (bit number 10), or the NETWORK CLOCK UNIT CLI is 102 (bit 1 and bit 8; where the bits are numbered from 0 to 31 and bit 0 is the right most bit), EXPANDED CMP/APR must be "APRONLY" or "BOTH" on the EQCORE form.

For 5E15 and later, for a CM2 office, when the MESSAGE INTERFACE UNIT CLI on the EQCORE form and/or the EQTMS CLI is 400 (bit number 10), or the NETWORK CLOCK UNIT CLI is 102 (bit 1 and bit 8; where the bits are numbered from 0 to 31 and bit 0 is the right most bit), EXPANDED CMP/APR must be "APRONLY" or "BOTH" on the EQCORE form. The reverse is also true, that is, in a CM2 office, when EXPANDED CMP/APR is "APRONLY" or "BOTH", the aforementioned CLI values must be entered. Note that in 5E15, the TMS CLI was moved from the EQCORE form to the EQTMS form.

2.30 NUMBER OF MEM BOARDS

Description: This field is used to define the number of memory boards for the CM2. This field was added in conjunction with the CMP Memory Expansion feature. See Division 2, Section 7AK. This field is only valid for CM2 only.

Software Release: 5E14 and later
Valid Entries:

Valid NUMBER OF MEM BOARDS Entries

Entry	Description
2	Software Release: 5E13 to 5E14 retrofit and later: 1 TN1800, plus **2** TN1369s (CLI = 5).
3	Software Release: 5E14 and later 1 TN1800, plus **3** TN1369s (CLI = d); the third board is allowed, but is not required for 5E14 (future development).

Data Rules:

- **CAUTION:** When retrofitting from 5E13 to 5E14, the CMP is required to be equipped with at least two TN1369 boards **before** the retrofit. No ODA checks (i.e., error messages) are provided to test for the second TN1369 during retrofit. Although a third board can be provisioned, it is not required for the 5E14 Software Release. Note also that, for Recent Change, this entry is translated on RC view 17.14 by setting PC TYPE to "CMP", and entering the appropriate CLI value as indicated above.

CM3 ONTC

These fields are used to define or modify options associated with the ONTC (Office Network and Timing Complex) subunits.

2.31 IPDGN FILE

Description: The Input/Output Processor Diagnostic File Name field is a No Change field that contains the diagnostic image for the ONTC-IP.

Software Release: 5E15 and later

2.32 APDGN FILE

Description: The Application Processor Diagnostics File Name field is a No Change field for CM3 only, that contains the diagnostic image for the ONTC-AP.

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Software Release: 5E15 and later

2.33 IP FILE

Description: The Input/Output Processor File field is a No Change field for CM3 only, that contains the operational image for the ONTC-IP.

Software Release: 5E15 and later

2.34 AP FILE

Description: The Application Processor File field is a No Change field for CM3 only, that contains the operational image for the ONTC-AP.

Software Release: 5E15 and later

2.35 ROM FILE

Description: The Read Only Memory File field is a No Change field for CM3 only, that contains the ONTC-IP ROM, FPGAs, and the ONTC-AP debugger code.

Software Release: 5E15 and later

2.36 S0OSC0TBO

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later
Default: 0

2.37 S0OSC1TBO

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later
Default: 0

2.38 S1OSC0TBO

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later
Default: 0

2.39 S1OSC1TBO

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later
Default: 0

2.40 NC SYNC

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later

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2.41 CORE

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later
Default: "O"

2.42 MSG SIZE

Description: This is a no display field used for retrofit purposes.

Software Release: 5E15 and later
Default: 6

FORM	CONDITION NOT ALLOWED	KEY FIELDS	EQUIPMENT UNIT
EQDSP	DSU = 0	IM, DSU, SG	Local DSU1 Model 1
EQDU	DLTUTYP = "DLTU24"	IM, DLTU	DLTU Model 1
EQDUP	FACIND = 0 and DFI TYPE not equal "H1" or "H2"	IM, DLTU, DFIPK	DFI (24) Channel Model 1
EQLU	LUTYPE = "4AB1"	IM, LU	Analog Line Unit Model 1
EQLU	LUTYPE = "4AC1"	IM, LU	Analog Line Unit Model 2
EQMSP	Any entry	IM, DSU, SG	MSU Model 1
PSUGP	PHTYPE = "PH1"	IM, PSU, PSUSHELF	Protocal Handler Model 1
PSUGP	PHTYPE = "PH2"	IM, PSU, PSUSHELF	Protocal Handler Model 2

Figure 1 EQUIPMENT NOT ALLOWED FOR VCDX OFFICE

FORM	CONDITION NOT ALLOWED	KEY FIELDS	EQUIPMENT UNIT
EQDSP	DSU = 0	IM, DSU, SG	Local DSU1 Model 1
EQDU	DLTUTYP = "DLTU24"	IM, DLTU	DLTU Model 1
EQDUP	FACIND = 0 and DFI TYPE not equal "H1" or "H2"	IM, DLTU, DFIPK	DFI (24) Channel Model 1
EQLU	LUTYPE = "4AB1"	IM, LU	Analog Line Unit Model 1
EQLU	LUTYPE = "4AC1"	IM, LU	Analog Line Unit Model 2
EQMSP	Any entry	IM, DSU, SG	MSU Model 1
PSUGP	PHTYPE = "PH1"	IM, PSU, PSUSHELF	Protocal Handler Model 1
PSUGP	PHTYPE = "PH2"	IM, PSU, PSUSHELF	Protocal Handler Model 2

Figure 2 EQUIPMENT NOT ALLOWED FOR VCDX OFFICE

```
SCREEN 1 OF 2                5ESS Switch
eqcore                OFFICE DATA ADMINISTRATION
(5701)                     CORE UNITS


*  1. KEY            0
#  2. VCDX OFFICE     N              LINK INTERFACE UNIT
   3. CM2 COMPACT     N          # 13. CLI      ________

     MICU / TMS                   MESSAGE INTERFACE UNIT
#  4. EQSTATUS        O          # 14. CLI      ________
#  5. CM VINTAGE      _
#  6. EXPANDED CMP/APR _________          NETWORK CLOCK UNIT
#  7. INTERRUPT STATUS  ALLOW       # 15. CLI      ________
                              # 16. CLOCK TYPE ________
#  8. MSG AISLE       ____          17. OSC TYPE   ______
#  9. MSG SIZE        _             18. AUTO SYNC  N

  10. TMS AISLE       ____              TIME MULTIPLEXED SWITCH
# 11. TMS SIZE        _           # 19. CLI      ________
```

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```
 12. TMS CONFIGURATION ____
```

```
SCREEN 2 OF 2                5ESS Switch          _
eqcore                OFFICE DATA ADMINISTRATION
(5701)                      CORE UNITS
     20. TMS SHELF EQUIPAGE

           MODEL NUMBER              CM2 COMPACT
           ------------              -----------
     UNIT   22.    23.
 row NUMBER SIDE 0 SIDE 1          24. EQUIPMENT BAY ___
  1    0   _____  _____            25. CM2C SM      ___
  2    1   _____  _____
  3    2   _____  _____
  4    3   _____  _____
  5    4   _____  _____
  6    5   _____  _____
  7    6   _____  _____
  8    7   _____  _____
  9    8   _____  _____
 10    9   _____  _____
 11   10   _____  _____
 12   11   _____  _____
```

Figure 3 SAMPLE EQCORE FORM 5E10 - 5E13 SOFTWARE RELEASES

```
eqcore                       5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5701)                      CORE UNITS

 *1. KEY        0              #12. TMS SIZE        _
  2. VCDX OFFICE N                13. TMS CONFIGURATION ____
  3. DRM         N              LINK INTERFACE UNIT
  4. CM2 COMPACT N                >#14. CLI ________
        MICU / TMS             MESSAGE INTERFACE UNIT
  5. EQSTATUS        O          >#15. CLI ________
 #6. CM VINTAGE      _             NETWORK CLOCK UNIT
 #7. EXPANDED CMP/APR _________    >#16. CLI      _________
  8. INTERRUPT STATUS ALLOW       #17. CLOCK TYPE _________
 #9. MSG AISLE       ____          18. OSC TYPE   ______
#10. MSG SIZE        _             19. AUTO SYNC  N
 11. TMS AISLE       ____
```

```
eqcore                       5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5701)                      CORE UNITS

TIME MULTIPLEXED SWITCH    21. TMS SHELF EQUIPAGE - MODEL NUMBERS
#20. CLI ________          ROW UNIT NUM SIDE 0 SIDE 1
                            1    0   _____  _____
```

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```
2    1   _____ _____
3    2   _____ _____
4    3   _____ _____
5    4   _____ _____
6    5   _____ _____
7    6   _____ _____
8    7   _____ _____
9    8   _____ _____
10   9   _____ _____
11   10  _____ _____
12   11  _____ _____
```

```
eqcore                    5ESS Switch        _
SCREEN 3 OF 3             OFFICE DATA ADMINISTRATION
(5701)                    CORE UNITS

      CM2 COMPACT
 >24. EQUIPMENT BAY ___
  25. CM2C SM      ___

             CMP
>#26. EXPANDED CMP/APR    _________
  27. NUMBER OF MEM BOARDS 2
```

Figure 4 SAMPLE EQCORE FORM 5E14 SOFTWARE RELEASE

```
eqcore                    5ESS Switch
SCREEN 1 OF 3             OFFICE DATA ADMINISTRATION
(5701)                    CORE UNITS

*1. KEY        0                  MESSAGE SWITCH
 2. VCDX OFFICE N            >8. MSGS AISLE     ____
 3. DRM         N             9. MSGS CLI       ________
 4. CM2 COMPACT N               MSGS IPDGN FILE _______________
                           MSGS APDGN FILE _______________
>5. EQSTATUS         O          MSGS IP FILE    _______________
#6. CM VINTAGE       _          MSGS AP FILE    _______________
 7. INTERRUPT STATUS ALLOW       MSGS ROM FILE   _______________
```

```
eqcore                    5ESS Switch
```

```
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5701)                 CORE UNITS

 LINK INTERFACE UNIT              CM2 COMPACT
 >15. LI CLI ________         >22. EQUIPMENT BAY ___
                         23. CM2C SM      ___
 MESSAGE INTERFACE UNIT
 >16. MI CLI ________                  CMP
                        >24. EXPANDED CMP/APR    _________
      NETWORK CLOCK UNIT        25. NUMBER OF MEM BOARDS 2
>#17. CLI       _________
 #18. CLOCK TYPE  ________
  19. OSC TYPE    ______
  20. AUTO SYNC   N
 #21. NC REF STAB _______________
```

```
eqcore                  5ESS Switch        _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5701)                 CORE UNITS

        CM3 ONTC
IPDGN FILE _______________
APDGN FILE _______________
IP FILE    _______________
AP FILE    _______________
ROM FILE   _______________
```

Figure 5 SAMPLE EQCORE FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 4: 5702 RECORD
MESSAGE INTERFACE CONTROL UNIT NETWORK CLOCK REFERENCE RECORD

NETWORK CLOCK REFERENCE FORM (EQNCREF)

1. GENERAL

The 5702 Record is available with the 5E1 and later Software Releases. It is used to define the Message Interface Control Unit Network Clock Reference status assignments for the TMS (Time Multiplexed Switch) system side.

This record is intended to be used as an Office Record for those 5ESS offices that are not utilizing an Operational Support System (e.g., RMAS) for generation of Office Records.

2. FORM AND RECORD ENTIRES

2.1 *SIDE

Description: Enter the Message Interface Control Unit/Time Multiplexed Switch System Side Number.
Valid Entries: 0 - 1

PRIMARY CLOCK

2.2 EQSTATUS

Description: Enter the Status of the Equipment.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

For new offices and units destined for factory testing, operational is the only allowed value. During off-line ODA database retrofits, the other values are valid.

If the office has a stand alone clock (indicated in the CLOCK TYPE field on the EQCORE form), EQSTATUS should indicate Unequipped.

2.3 INTERRUPT STATUS

Description: Enter the Interrupt-Inhibit Status.
Default: Allow
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Definition
A	Allow.
I	Inhibit.

Data Rules:

If the office has a stand alone clock (indicated in the CLOCK TYPE field on the EQCORE form), INTERRUPT STATUS should indicate Inhibit.

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SECONDARY CLOCK

2.4 EQSTATUS

Description: Enter the Status of the Equipment.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

For new offices and units destined for factory testing, operational or unequipped are only allowed values. During off-line ODA database retrofits, the other values are valid.

If the office has a stand alone clock (indicated in the CLOCK TYPE field on the EQCORE form), EQSTATUS should indicate Unequipped.

2.5 INTERRUPT STATUS

Description: Enter the Interrupt-Inhibit Status.
Default: Allow
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Definition
A	Allow.
I	Inhibit.

Data Rules:

If the office has a stand alone clock (indicated in the CLOCK TYPE field on the EQCORE form), INTERRUPT STATUS should indicate Inhibit.

CROSS COUPLE CLOCK

2.6 EQSTATUS

Description: Enter the Status of the Equipment.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

For new offices and units destined for factory testing, operational or unequipped are only allowed values. During off-line ODA database retrofits, the other values are valid.

If the office has a stand alone clock (indicated in the CLOCK TYPE field on the EQCORE form), EQSTATUS should indicate Unequipped.

2.7 INTERRUPT STATUS

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Description: Enter the Interrupt-Inhibit Status.
Default: Allow
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Definition
A	Allow.
I	Inhibit.

eqncref 5ESS Switch _
5702 OFFICE DATA ADMINISTRATION
MICU NETWORK CLOCK REFERENCE

* 1. SIDE 0

PRIMARY CLOCK SECONDARY CLOCK

3. EQSTATUS O 7. EQSTATUS O
5. INTERRUPT STATUS ALLOW 9. INTERRUPT STATUS ALLOW

CROSS COUPLE CLOCK

11. EQSTATUS O
13. INTERRUPT STATUS ALLOW

Figure 1 SAMPLE EQNCREF FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 5: 5703 RECORD
PERIPHERAL CONTROLLER RECORD - EQPC

1. GENERAL

The 5703 Record is available with the 5E1 and later Software Releases. It is used to define Peripheral Controller Configuration Data.

Both Sides 0 and 1 of the Peripheral Controller Message Switch are identically defined if the office is equipped with Communication Module 1. When the office is equipped with Communication Module 2, the Peripheral Controller Message Switch is defined as stated in Figure 2 .

The table in Figure 1 illustrates the relationship of the Peripheral Controllers to CTSs (Control Time Slots). Each SM (Switching Module) receives two CTS assignments, an even CTS on the even NCT link, and an odd CTS on the odd NCT link. The even CTSs, as shown in the table, are defined on the EQIM form (5700 Record) and not on this EQPC form. They are presented in this section because of the dependency of the CTSs on the Peripheral Controller. The following paragraphs describe the table.

A community is an MSPU (Message Switch Peripheral Unit) in the MSGS (Message Switch) cabinet. Two community numbers are given in the table, the community number for the even CTS, and in parentheses, the community number for the odd CTS. Each community provides up to four PCs (Peripheral Controllers).

Two Peripheral Controller numbers are given in the table, the PC number for the even CTS, and in parentheses, the PC number for the odd CTS. Each PC provides up to eight CTSs as shown. (The odd CTS is always one greater than the even CTS and is not shown in the table.)

PC numbers 8 and above are used to provide CTSs to SMs. They are also known as MMPs (Module Message Processors). The PC numbers for both the even CTS and the odd CTS must be entered on this EQPC form.

PC numbers 4 and 5 in Community 1 are for special use. PC 4 is for the PPC (Pump Peripheral Controller). PC 5 is for the FPC (Foundation Peripheral Controller). Both PC's 4 and 5 must be entered on this EQPC form.

For 5E9(2) and later, PC numbers 32 and 33 are for QGPs (QLPS (Quad-Link Packet Switch) Gateway Processors).

- ***NOTE:*** When an office is equipped with CM3 (Communication Module Model 3), all information will be handled directly by ODA (Office Data Administration) with no input from this form.

1.1 Recent Change View

The corresponding Recent Change Views for this form are 17.2 and 17.14.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SIDE

Description: Enter the Peripheral Controller Message Switch Side.

Required Field.
Valid Entries: 0 - 1

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Data Rules:

This form can only be used in a non-CM3 office.

2.3 * PC NO.

Description: Enter the Peripheral Controller Number.

Required Field.

Valid PC NO. Entries

Entry	Definition
4	PPC (Pump Peripheral Controller)
5	FPC (Foundation Peripheral Controller)
8 - 31	MMP (Module Message Processors)
32 - 33	Software Release: 5E9(2) and later. QGP (QLPS (Quad-Link Packet Switch) Gateway Processor). Valid only with CM2.
40 - 63	MMP (Module Message Processors (MMP). Valid only with CM2.

Data Rules:

Zero, two, or four QGPs (QLPS Gateway Processors) may be equipped on a switch. If an EQPC form is defined with PC NO. set to 32 and SIDE set to 0, then another EQPC form must be defined with PC NO. set to 32 and SIDE set to 1; the opposite is also true. Both forms must have the same value for EQSTATUS. Both must be defined before other QLPS Gateway Processors can be defined.

If an EQPC form is defined with PC NO. set to 33 and SIDE set to 0, then another EQPC form must be defined with PC NO. set to 33 and SIDE set to 1; the opposite is also true. Both forms must have the same value for EQSTATUS.

A QLPS Gateway Processor can be defined on the EQPC form (PC NO. is 32 or 33) only if four EQQLPS forms (5854 Records) have been defined with the following key fields and with EQSTATUS set to "O".

ONTC SIDE	QLPS NETWORK
0	0
1	0
0	1
1	1

QLPS Gateway Processors for PC NO. 33 can be defined with EQSTATUS set to "O" only if QLPS Gateway Processors for PC NO. 32 are defined with EQSTATUS set to "O".

When EQPC forms are set to 32 or 33 (indicating QGWP Quad-link GateWay Processor), the QGWP field on the ECDOPT form must be set to "Y".

2.4 EQSTATUS

Description: Enter the Status of the Equipment.

Required Field.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

For new offices and units destined for factory testing, "O" (operational) is the only allowed value. During

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offline ODA database retrofits, EQSTATUS may be "O" or "U" but not "G".

2.5 CLI

Description: Enter the Change Level Indicator of the Peripheral Controller. For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Field.
Default: 0
Valid Entries: 0 - 7FFFFFFF

Data Rules:

CLI must be specified whenever EQSTATUS is entered.

2.6 INTERRUPT STATUS

Description: Enter the Interrupt-Inhibit Status.

Required Field.
Default: A
Valid Entries:

Valid INTERRUPT STATUS Entries

Entry	Definition
A	Allow.
I	Inhibit Status.

PERIPHERAL CONTROLLERS TO CONTROL TIME SLOTS TABLE

COMMUNITY NUMBER	PERIPHERAL CONTROLLER NUMBER	CONTROL TIME SLOTS ON EVEN NCT LINKS
0(1)	4, 5	Special Use
2(3)	8(12)	2 10 18 26 34 42 50 58
	9(13)	66 74 82 90 98 106 114 122
	10(14)	130 138 146 154 162 170 178 186
	11(15)	194 202 210 218 226 234 242 250
4(5)	16(20)	4 12 20 28 36 44 52 60
	17(21)	68 76 84 92 100 108 116 124
	18(22)	132 140 148 156 164 172 180 188
	19(23)	96 204 212 220 228 236 244 252
6(7)	24(28)	6 14 22 30 38 46 54 62
	25(29)	70 78 86 94 102 110 118 126
	26(30)	134 142 150 158 166 174 182 190
	27(31)	198 206 214 222 230 238 246 254
8	32, 33	Special Use
11(12)	44(40)	3 11 19 27 35 43 51 59
	45(41)	67 75 83 91 99 107 115 123
	46(42)	131 139 147 155 163 171 179 187
	47(43)	195 203 211 219 227 235 243 251
13(14)	52(48)	5 13 21 29 37 45 53 61
	53(49)	69 77 85 93 101 109 117 125
	54(50)	133 141 149 157 165 173 181 189
	55(51)	197 205 213 221 229 237 245 253
15(16)	60(56)	7 15 23 31 39 47 55 63
	61(57)	71 79 87 95 103 111 119 127
	62(58)	135 143 151 159 167 175 183 191
	63(59)	199 207 215 223 231 239 247 255

Figure 1 PERIPHERAL CONTROLLERS TO CONTROL TIME SLOTS

PERIPHERAL CONTROLLER MESSAGE SWITCH SIDE ASSIGNMENTS FOR CM2 OFFICES

PERIPHERAL CONTROLLER	SIDE DEFINED SINGLE MMPs	SIDE DEFINED DUAL MMPs (5E6 and later)
4,5	Both Sides 0 and 1	Both Sides 0 and 1
8,9,10,11	Side 0 only	Both Sides 0 and 1

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12,13,14,15	Side 1 only	Both Sides 0 and 1
16,17,18,19	Side 0 only	Both Sides 0 and 1
20,21,22,23	Side 1 only	Both Sides 0 and 1
24,25,26,27	Side 0 only	Both Sides 0 and 1
28,29,30,31	Side 1 only	Both Sides 0 and 1
32,33	Both Sides 0 and 1	Both Sides 0 and 1
40,41,42,43	Side 1 only	Both Sides 0 and 1
44,45,46,47	Side 0 only	Both Sides 0 and 1
48,49,50,51	Side 1 only	Both Sides 0 and 1
52,53,54,55	Side 0 only	Both Sides 0 and 1
56,57,58,59	Side 1 only	Both Sides 0 and 1
60,61,62,63	Side 0 only	Both Sides 0 and 1

Figure 2 PC MESSAGE SWITCH SIDE ASSIGNMENTS FOR CM2 OFFICES

```
eqpc                    5ESS Switch
5703                OFFICE DATA ADMINISTRATION
                   PERIPHERAL CONTROLLER


* 1. SIDE           0
* 2. PC NO.         31

  4. EQSTATUS       O
  5. CLI            00000000
  6. INTERRUPT STATUS  ALLOW
```

Figure 3 SAMPLE EQPC FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 7: 5705 RECORD
REMOTE ALARM UNIT EQUIPAGE RECORD - EQRAU

1. GENERAL

The 5705 Record is available with the 5E1 Release 2 and later Software Releases. It is used to define the information on the RAU (Remote Alarm Unit). This is not an actual unit, but a board in the office alarm unit in the miscellaneous cabinet of a Remote Switching Module.

With 5E2 and later Software Releases this record defines the type of Alarm Unit for a Master Remote Switching Module that has the Alarm Output Option (RSM SITE OPTIONS form). There are two different Alarm Units, the RAU (Remote Alarm Unit) for 5A RSMs and the ASC (Alarm and Status Circuit) for MMRSMs (Multi-module RSMs).

1.1 Recent Change View

The corresponding Recent Change Views for this form are 18.1 and 18.14.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *REMOTE SWITCHING MODULE

Description: Enter the SM (Switching Module) for the Remote Switching Module.

Required Field.

Valid REMOTE SWITCHING MODULE Entries

Entry	Description
1 - 48	Offices equipped with CM1 (Communications Module 1).
1 - 192	Offices equipped with CM2.

2.3 ALARM TYPE

Description: Enter the Alarm Type for this Master Remote Switching Module with the Alarm Output Option (RSM SITE OPTIONS form).

Required Field.

Valid ALARM TYPE Entries

Entry	Description
ASC	Alarm and Status Circuit, applicable to new MMRSMs (Multi-module Remote Switching Modules).
RAU	Remote Alarm Unit

Data Rules:

For 5E9(1) and earlier, when ALARM TYPE is "ASC", RAU BAY and RAU VERTICAL must not be entered.

When ALARM TYPE is "RAU", RAU BAY and RAU VERTICAL must be entered.

For 5E9(2) and later, RAU BAY and RAU VERTICAL must be entered for any ALARM TYPE.

2.4 ASC/RAU STATUS

Description: Enter the status of the Remote Alarm Unit board.

Required Field.

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Default: O
Valid Entries:

Valid ASC/RAU STATUS Entries

Entry	Description
G	Growth.
O	Operational. For new offices and units destined for factory testing, "O" is the only allowed value. During offline ODA data base retrofits, the other values are valid.
U	Unequipped.

Data Rules:

For new offices and equipment additions, only "O" is allowed.

2.5 ASC/RAU CLI

Description: Enter the Change Level Indicator for the Remote Alarm Unit board.

Required Field.
Valid Entries: 0 - 7FFFFFFF

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.6 RAU BAY

Description: Enter the Miscellaneous Frame Number on which the OAU (Office Alarm Unit) is mounted.

Required Field for 5E9(2) and later.
Valid Entries: 0 - 2

Data Rules:

For 5E9(1) and earlier, when ALARM TYPE is ASC, then this field should be left blank.

When ALARM TYPE is "RAU", then this field must be entered.

For 5E9(2) and later, RAU BAY and RAU VERTICAL must be entered for any ALARM TYPE.

2.7 RAU VERTICAL

Description: Enter the vertical equipment location of the bottom of the OAU (Office Alarm Unit) in which the RAU (Remote Alarm Unit) is located.

Required Field for 5E9(2) and later.
Valid Entries: 0 - 84

Data Rules:

For 5E9(1) and earlier, if ALARM TYPE is "ASC", then this field should be left blank.

When ALARM TYPE is "RAU", then this field must be entered.

For 5E9(2) and later, RAU BAY and RAU VERTICAL must be entered for any ALARM TYPE.

For 5E9(2) and later,when VCDX OFFICE is "Y" on the EQCORE form (5701 Record), this field must be 69 or 76.

2.8 ASC/RAU AISLE

Description: Enter the floor and aisle location of the miscellaneous cabinet in which the office alarm unit is

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located. The valid floor range is 00 - 99. The valid aisle range is 00 - 99.

Required Field.
Valid Entries: 0000 - 9999

```
eqrau                    5ESS Switch                    _
5705                  OFFICE DATA ADMINISTRATION
                    REMOTE ALARM UNIT EQUIPAGE


* 1. REMOTE SWITCHING MODULE      005


  2. ALARM TYPE        RAU
  3. ASC/RAU STATUS    O
  4. ASC/RAU CLI       00000000

  5. ASC/RAU BAY       1
  6. ASC/RAU VERTICAL  24
  7. ASC/RAU AISLE     0110
```

Figure 1 SAMPLE EQRAU FORM 5E2 AND LATER SOFTWARE RELEASES

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SEC. 8: 5706 RECORD
ECD OPTIONS FORM - ECDOPT

1. GENERAL

The ECDOPT form (Equipment Configuration Database Options) (5706 Record) is applicable to (and required for) all offices. It is required to translate all options in the AM (Administration Module) for initial offices. The translations include:

- The CC (Central Control) Unit
- The office disk system
- The IOPs (Input/Output Processors)
- The VIOPs (Virtual Input/Output Processors)
- The CNI (Common Network Interface) equipment
- The AM interface in the CM2 (Communications Module 2)
- The AM interface in the CM2C/CDX (Compact Digital Switch)

This form reflects the current hardware configuration of the system and describes the attributes and status of all processor and peripheral hardware entered into the UNIX-RTR (Real Time Reliable) Operating System, formerly DMERT (Duplex Multiple Environment Real Time). The fields on this form indicate which items are equipped and, in some cases, the type of equipment used. In effect, this form links the 5ESS to the UNIX-RTR Operating System.

The reproducible 5706 Record has been expanded into the 5706-1/2 Records to provide adequate space for data entry. The records may be reproduced and used as needed. However, if this record is requested in the ODA database using the "records" command, the screen image of the input form will be printed instead of the tabularized records that appear in Figures 1 and 2.

1.1 FLEXIBLE INPUT/OUTPUT PROCESSOR

Available with the 5E4(2) and later Software Releases, Flexible IOP selection is used to define the Input/Output Processor devices associated with the 5ESS Switch.

1.2 SCSI BUS DISK INTERFACE

The 5E6 Software Release introduces the SCSI Bus disk interface which can either replace or co-exist with the SMD (Storage Module Device) disk interface.

1.3 RETROFIT OFFICES

Retrofit offices are modified via the RETINFO form (5845 Record). This form provides an ordering mechanism for Disk Configurations and Optional Disk Layouts in a retrofitting office. For more information about RETINFO, consult the TG-5 Translation Guide, Division 8, Section 47.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL UNIT, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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2.2 *KEY

Description: The only valid entry is 0 and is supplied as the default value.

2.3 #AT&T LONG DISTANCE

Description: Specifies whether the office is an AT&T Office with NID (Network ID) 254 or 236. An answer of YES implies long distance. This field is used to determine which temporary CNI (Common Network Interface) data files will be supplied to the CNI database.

Software Release: 5E12 and later
Valid Entries: Y, N

2.4 #CUSTOMER TYPE

Description: This field indicates whether the office is owned by NSD (Network Services Division) or a LEC (Local Exchange Carrier). This field is used to determine which temporary CNI (Common Network Interface) data files will be supplied to the CNI database.

Software Release: 5E5 through 5E11
Required Field.
Valid Entries:

Valid CUSTOMER TYPE Entries

Entry	Definition
NSD	Network Services Division
LEC	Local Exchange Carrier

2.5 #TIME ZONE

Description: Enter the Time Zone in which the 5ESS Switch is located. This entry reflects the hour difference from GMT (Greenwich Mean Time).

Valid TIME ZONE Entries

Entry	Definition
-12 through +12	Hours different from GMT.
EST or -5	Eastern Standard Daylight Time.
CST or -6	Central Standard Daylight Time.
MST or -7	Mountain Standard Daylight Time.
PST or -8	Pacific Standard Daylight Time.
-5S	Software Release: 5E5 and later. Eastern Standard Time (no Daylight Savings Time).
-6S	
-7S	
-8S	

Data Rules:

The TIME ZONE entered on the ECDOPT form must equal the TIME ZONE entered on the OFCOPT form (5509 Record).

2.6 #VCDX

Description: This field specifies if this switch is a Very Compact Digital Exchange.

The 5ESS-2000 Switch VCDX switch is built on the 5ESS-2000 Switch platform. Most of the features supported by the 5ESS-2000 Switch are supported by the VCDX switch. The VCDX switch can meet market need for a highly reliable, very small switch, at a competitive price.

The VCDX switch uses only one SM and a simplex workstation. The workstation provides the AM/CM/CMP functionality. All call processing software runs on the SM (that is, it does not rely on the

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AM/CM/CMP) and therefore is not dependent on the simplex workstation.

Software Release: 5E9(2) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If VCDX is "Y",

- DEVICE TYPES can only be "TTY9-14", " SDL0" and "SDL13".

For 5E10 - 5E13, if VCDX is "Y", DEVICE TYPES can only be "TTY7", "TTY9 -14", "TTY21", "TTY43", " SDL0" and "SDL13".

For 5E14 and later, if VCDX is "Y", DEVICE TYPES can only be "TTY7, 9-14, 18-19, 21, 26-34, 43, 50", "SDL 0, 1, 13".

VCDX/SPC Device Type Restrictions - 5E9(2)

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
2	0232 or SPC2	TTYC11	TTY9
3	0233 or SPC3	TTYC11	TTY10
4	0302 or SPC4	TTYC12	TTY11
5	0303 or SPC5	TTYC12	TTY12
6	0312 or SPC6	TTYC13	TTY13
7	0313 or SPC7	TTYC13	TTY14

VCDX/SPC Device Type Restrictions - 5E10 - 5E11

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
2	0232 or SPC2	TTYC11	TTY9
3	0233 or SPC3	TTYC11	TTY10
4	0302 or SPC4	TTYC12	TTY11
5	0303 or SPC5	TTYC12	TTY12
			TTY21
6	0312 or SPC6	TTYC13	TTY7
			TTY13
7	0313 or SPC7	TTYC13	TTY14
			TTY43

VCDX/SPC Device Type Restrictions - 5E12 - 5E13

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
2	0202	TTYC11	TTY9
3	0203	TTYC11	TTY10
4	0212	TTYC12	TTY11
5	0213	TTYC12	TTY12
			TTY21
6	0222	TTYC13	TTY13
			TTY7
7	0223	TTYC13	TTY14
			TTY43

VCDX/HSI Device Type Restrictions - 5E9(2) - 5E11

HSI CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	2002 or HSI0	SDLC0	SDL0
1	2012 or HSI1	SDLC1	SDL13

VCDX/HSI Device Type Restrictions - 5E12 - 5E13

HSI CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	2002	SDLC0	SDL0
1	2012	SDLC1	SDL13

VCDX/SPC Device Type Restrictions - 5E14 and later

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
2	0202	TTYC11	TTY
3	0203	TTYC11	TTY
4	0212	TTYC12	TTY
5	0213	TTYC12	TTY

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6	0222	TTYC13	TTY
7	0223	TTYC13	TTY

VCDX/HSI Device Type Restrictions - 5E14

HSI CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	2002	SDLC0	SDL0
1	2012	SDLC1	SDL13
2	2022	SDLC2	SDL1

VCDX/HSI Device Type Restrictions - 5E15 and later

HSI CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	2002	SDLC0	SDL0
1	2012	SDLC1	SDL13
2	2022	SDLC2	SDL1
3	2023	SDLC3	SDL6

When VCDX is "Y":

- CM TYPE must not be entered.
- PROCESSOR MEMORY SIZE must be 64.
- PROCESSOR MODEL must be "WORKSTATION".
- IOMI BOARDS must be 1.
- UTIL CKT must be "N".
- RPCN000,320 must be "N".
- MHD4,5 through MHD15 must all be "N".
- SCC O must be "N" and SCC 1 must not be entered.
- MTO must be "DAT".
- MT1 must not be entered.
- IOP2 must be "Y" and IOP3 must be "N".
- For 5E9(2) through 5E13, SCSDC1 through SCSDC1011 must all be "N".
- CLLI must not be entered.
- COLORSCAN2 LINE COUNT must be 24.
- AM ODD MEMORY SIZE must be
  - 6144 (5E11 and earlier).
  - 9216 (5E12).
  - 10240 (5E13 and later).
- MCC BOARD TYPE must be "TN983".

For 5E13 and later:

When VCDX is "Y",

- ALT BOOT DSK must be "N".

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- PROCESSOR MEMORY SIZE must be 128.

For 5E14:

NOTE: TTYs are no longer fixed to a port.

When VCDX is "Y":

- SCSDC0 through SCSDC1011 must all be N.
- MCC BOARD TYPE must be UN597. UN597 is the only legal value in 5E14.1. TN983 is no longer valid.
- DEVICE TYPEs can only be "TTY(7, 9-14, 18-19, 21, 26-34, 43, 50)", "SDL0", "SDL1", or "SDL13".

For 5E15 and later:

NOTE: TTYs are no longer fixed to a port.

When VCDX is "Y":

- SCSDC0 through SCSDC1011 must all be N.
- MCC BOARD TYPE must be UN597. UN597 is the only legal value in 5E14.1. TN983 is no longer valid.
- DEVICE TYPEs can only be "TTY(7, 9-14, 18-19, 21, 26-34, 43, 50)", "SDL0", "SDL1", "SDL6" , or "SDL13".
- When DEVICE TYPE is "SDL6", the DEVICE CONTROLLER must be "SDLC3".
- When DEVICE TYPE is "SDL6" the IOP/PC/SLOT/P entry must be 2032.

For 5E13 and later:

When VCDX is "N",:

- CM TYPE must be entered.
- PROCESSOR MEMORY SIZE must be a minimum of:
  - 40 for 5E9(1) - 5E10
  - 48 for 5E11
  - 64 for 5E12 - 5E13
  - 128 for 5E14 and later
- PROCESSOR MODEL must be "3B21D".
- SCSDC1, SCSDC2, SCSDC3 and SCSDC45 must all be "Y".
- AM ODD MEMORY SIZE must be 10240 (5E12 and later)

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For 5E15 and later:

When VCDX is "N" and CM TYPE is not "CM3", SCSDC45 must be "Y".

When VCDX is "N" , SCSDC1, SCSDC2, and SCSDC3 must all be set to "Y".

2.7 DRM

Description: Is this a Distinctive Remote Module?

For more information on this feature see Division 2, Section 4A525.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

When DRM is "Y", DEVICE TYPEs can only be "TTY(7, 9-14, 18-19, 21, 26-34, 43, 50)", "SDL0", "SDL1", or "SDL13".

DRM/SPC Device Type Restrictions - 5E14 and later

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
2	0202	TTYC11	TTY
3	0203	TTYC11	TTY
4	0212	TTYC12	TTY
5	0213	TTYC12	TTY
6	0222	TTYC13	TTY
7	0223	TTYC13	TTY

DRM/HSI Device Type Restrictions - 5E14 and later

HSI CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	2002	SDLC0	SDL0
1	2012	SDLC1	SDL13
2	2022	SDLC2	SDL1

When DRM is "Y":

- VCDX must be "N".
- AM ODD MEMORY SIZE must be 10240.
- PROCESSOR MODEL must be "WORKSTATION".
- CM TYPE must not be entered.
- IOMI BOARDS must be 1.
- UTIL CKT must be "N".
- RPCN000, 320 must be "N".
- MHD4, 5 through MHD15 must all be "N".
- SCC O must be "N" and "SCC 1" must not be entered.
- MTO must be "DAT".
- MT1 must not be entered.
- IOP2 must be "Y" and IOP3 must be "N".
- SCSDC0 through SCSDC1011 must all be "N".

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- CLLI must not be entered.
- COLORSCAN2 LINE COUNT must be 24.
- ALT BOOT DSK must be "N".

When DRM is N:

- and VCDX is "N", CM TYPE must be entered.
- and VCDX is N, an IOP/PC/SLOT of 030 is not allowed.
- and VCDX is "N", PROCESSOR MODEL must be "3B21D".
- and VCDX is "N", SCSDC0, SCSDC1, SCSDC2, SCSDC3, SCSDC45 must all be "Y".
- and VCDX is "N", AM ODD MEMORY SIZE must be 10240.
- VIOP/PC/SLOT/P must not be entered.
- VIRTUAL DEVICE CONTROLLER must not be entered.
- VIRTUAL DEVICE TYPE must not be entered.

2.8 VCDX ADDL SERIAL PORTS

Description: Is this office equipped with additional VCDX serial ports? For 5E14 and later, this field is replaced by the ADDL SERIAL PORTS field.

Software Release: 5E12 through 5E13
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When VCDX ADDL SERIAL PORTS is "Y", VCDX must be "Y".

When VCDX is "Y" and VCDX ADDL SERIAL PORTS is "Y":

- DEVICE TYPEs can only be TTY: 7, 9-14, 18-19, 21, 28-34, 43, 50, SDL0 and SDL13.
- VCDX/SPC/ADDL SERIAL PORTS restrictions are provided in the following table:

VCDX/SPC Additional Serial Ports Device Type Restrictions - 5E12 - 5E13

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	0232	TTYC14	TTY18 TTY28
1	0233	TTYC14	TTY19 TTY29
2	0302	TTYC15	TTY30
3	0303	TTYC15	TTY31
4	0312	TTYC16	TTY32
5	0313	TTYC16	TTY33
6	0322	TTYC17	TTY34
7	0323	TTYC17	TTY50

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2.9 ADDL SERIAL PORTS

Description: Is this office equipped with additional serial ports? This field replaced the VCDX ADDL SERIAL PORTS field.

Software Release: 5E14 and later
Default: N
Valid Entries: Y, N

Data Rules:

For 5E14 and later, when ADDL SERIAL PORTS is "Y", VCDX must be "Y", or DRM must be "Y".

When VCDX or DRM is "Y" and ADDL SERIAL PORTS is "Y", DEVICE CONTROLLER can only be "TTYC(11-17)", "SDLC0", "SDLC1" or "SDLC2".

When VCDX or DRM is "Y" and ADDL SERIAL PORTS is "N", DEVICE CONTROLLER can only be "TTYC(11-13)", "SDLC0", "SDLC" or "SDLC2".

When VCDX or DRM is "Y", DEVICE TYPEs can only be "TTY(7, 9-14, 18-19, 21, 26-34, 43, 50)", "SDL0", "SDL1", or "SDL13".

VCDX AND DRM/SPC Additional Serial Ports Device Type Restrictions - 5E14 and later

SPC CARD PORT	IOP/PC/SLOT/P	CONTROLLER	DEVICE
0	0232	TTYC14	TTY
1	0233	TTYC14	TTY
2	0302	TTYC15	TTY
3	0303	TTYC15	TTY
4	0312	TTYC16	TTY
5	0313	TTYC16	TTY
6	0322	TTYC17	TTY
7	0323	TTYC17	TTY

2.10 AIR EXTENSION

Description: Is the office equipped with Air Extension?

Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

Data Rules:

When AIR EXTENSION is "Y", VCDX must be "Y".

2.11 CM TYPE

Description: Enter the Communication Module Type.

Required Field: 5E9(1) and earlier
Default:

For 5E6 - 5E8: 2
For 5E9(1) and later: CM2
For 5E15 and later: CM3

Valid Entries:

Valid CM TYPE Entries, 5E6 - 5E8

Entry	Definition
1	Communication Module 1.
2	Communication Module 2.

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Valid CM TYPE Entries - 5E9(1) and later	
Entry	**Definition**
CM2	Communication Module 2.
CM2C	Communication Module 2, Compact. (for CDX (Compact Digital Switch).

Valid CM TYPE Entries -5E15 and later	
Entry	**Definition**
CM3	Communication Module 3.

Data Rules:

For 5E4(2) and later, the value of CM VINTAGE on the EQCORE form (5701 Record) and the value of CM TYPE on the ECDOPT form must be the same.

For 5E8 and earlier:
If CM TYPE is 1, EQUIPMENT BAY on the EQCMTRCU form (5812 Record) must be between 0 and 7.

For 5E4(2) and later, if LN002,322 is "Y", this field must be 2 (or CM2).

For 5E9(1) and later, if CM TYPE is "CM2":

- EQUIPMENT BAY on the EQCMTRCU form (5812 Record) must be between 0 and 7.
- CM VINTAGE on the EQCORE form must be 2.
- the TIME MULTIPLEX SWITCH CLI on the EQCORE form must be 20.

For 5E9(2) and later, if CM TYPE is "CM2C":

- NLI 0/1 CLI on the EQCORE form must have bit 1 set (0x2).

For 5E10 and later:

- if CM TYPE is "CM2C", CM2C COMPACT on the EQCORE form must be "Y".

For 5E12 and later, if CM TYPE is "CM2C":

- NLI 0/1 CLI on the EQNLI form must have bit 1 set (0x2).

For 5E15 and later, when CM TYPE is CM3:

- IOMI BOARDS must be blank.
- QGWP must be "Y".

WARNING: For 5E15 and later, CM TYPE "CM2" and "CM2C" are being replaced with the "CM3".

2.12 #IOMI BOARDS

Description: Enter the number of IOMI (Input/Output Microprocessor Interface) Boards equipped.

Required Field.
Valid Entries: 1 - 4 (boards)

Data Rules:

If the CM TYPE is 1, the entry in this field must be less than 3.

If at least one EQIM form (5700 Record) is entered, the IOMI BOARDS field on the ECDOPT form and the number of EQIM forms submitted must correspond to the following table:

IOMI BOARDS	Number of EQIM Forms
1	1 - 32
2	33 - 96
3	97 - 160
4	161 - 192

2.13 #QGWP

Description: Is the office equipped with a Quad-link GateWay Processor?

Software Release: 5E9(2) and later.
Default: N
Valid Entries: Y, N

Data Rules:

If QGWP is "Y", CM TYPE must not be "CM2C" and IOMI BOARDS must be greater than 1.

When QGWP is "Y" an EQPC form (5703 Record) must be defined with PC NO equal to 32 or 33 (i.e., QGWP).

For 5E15 and later:

When QGWP is "Y", CM TYPE must be "CM2" or "CM3".

When QGWP is "Y" and CM TYPE is "CM2",

- IOMIBRDS must be greater than 1.
- SCSDC45 must be "Y".

2.14 #PROCESSOR MODEL

Description: The PROCESSOR MODEL field specifies the Administrative Module equipped. For 5E9(1) and later, the 3B21D replaced the 3B20D for all new start offices. For 5E9(1) and earlier, this is a non-entry field. For 5E9(2) and later, this is a required field.

Required Field

Software Release: 5E9(2) and later.
Default: For 5E9(2) and later: 3B21D
Valid Entries:

Valid PROCESSOR MODEL Entries - 5E9(2) and later

Entry	Definition
3B21D	Model 3B21D Processor.
WORK STATION	Workstation used with VCDX (Very Compact Digital Exchange) or DRM (Distinctive Remote Module).

2.15 AUTO PWR RCVY

Description: Is the office equipped with Automatic Power Recovery?

See Division 2, Section 2W for more information on APR.

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Software Release: 5E10 and later
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered, PROCESSOR MODEL must be "3B21D".

2.16 #PROCESSOR MEMORY TYPE

Description: Enter the type of memory board in the 3B Processor.

Required Field.
Default:

- For 5E4(2) and 5E5: TN56
- For 5E6 - 5E8: TN2012
- For 5E9(1) and later: KLW (non-entry)

Valid Entries:

Valid PROCESSOR MEMORY TYPE Entries - 5E4(2) and later

Entry	Definition
1 or TN56	Main Store Memory (UN59C or UN618 packs; 2MB).
2 or TN2012	Main Store Memory (UN618 packs; 4MB).
KLW	Software Release: 5E9(1) and later. "KLW" identifies a family of circuit packs.

Data Rules:

For 5E4(2) and later, if the entry in this field is "TN2012", the UN618 field on this form must be "Y".

2.17 #PROCESSOR MEMORY SIZE

Description: Enter the size of memory (in megabytes) of the Processor.

Required Field.
Default:

- For 5E5 - 5E8: 32
- For 5E9(1)-5E10: 40
- For 5E11 and later: 48
- For 5E12 and later: 64

Valid Entries:

- For 5E5 - 5E8: 32 or 36
- For 5E9(1): 40 (non-entry)
- For 5E9(2) - 5E10: 40 or 64
- For 5E10: 40, 48, 64, or 128
- For 5E11: 48, 64, or 128

  For 5E12 and 5E13: 64, or 128
- For 5E14 and later: 128

Data Rules:

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For 5E6 and later, if the PROCESSOR MEMORY TYPE is "TN56", the PROCESSOR MEMORY SIZE must not be greater than 32. If this field is 36, UN618 must be "Y" and PROCESSOR MEMORY TYPE must be "TN2012".

2.18 #UTIL CKT

Description: Is the dual Utility Circuit, equipped? For 5E6 - 5E8 the UN516 circuit pack is used. For 5E9(1) and later the UN379 circuit pack is used.

Software Release: 5E6 and later
Required Field.
Valid Entries: Y, N

2.19 #AM ODD MEMORY SIZE

Description: This field indicates the amount of memory (in kilobytes) to be reserved for the ODD (Office Dependent Data).

Required Field.
Default:

5E15 and earlier: 10240

5E16 and later: 16384

Valid Entries: (see table)

Valid AM ODD MEMORY SIZE Entries

Software Release	VCDX	3B21	DRM
5E9(2) - 5E11	6144	3584	-
5E12	9216	10240	-
5E13	10240	10240	-
5E14 - 5E15	10240	10240	10240
5E16 and later	16384	16384	16384

Data Rules:

The entry in this field must equal the AM ODD MEMORY SIZE entry on the OFCOPT form.

For 5E16 and later:

- When VCDX is "Y", AM ODD MEMORY SIZE must be "16384".
- When DRM is "Y", AM ODD MEMORY SIZE must be "16384".
- When VCDX is "N" and DRM is "N", AM ODD MEMORY SIZE must be "16384".

2.20 #DFC BOARD

Description: This field indicates the Disk File Control Board. Added in 5E11, this field was removed as a 5E12 Software Update.

Software Release: 5E11 - 5E12 Required Field.
Default: UN580B
Valid Entries: UN580 or UN580B

2.21 #DISK DRIVE TYPE

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Description: Enter the type of Disk Drive in the office.

Required Field.

Valid DISK DRIVE TYPE Entries - 5E6

Entry	Definition
1 or SCSI600	Small Computer Systems Interface.
2 or SCSI322	Small Computer Systems Interface.
3 or CDC340	340 Mb disk.
4 or CDC300	Control Data 300MB drive (KS-22048, L1).

Valid DISK DRIVE TYPE Entries - 5E7

Entry	Definition
1 or SCSI600	600 Mb Small Computer Systems Interface.
2 or CDC340	340 Mb disk.
3 or SCSI322	300 Mb Small Computer Systems Interface.

Valid DISK DRIVE TYPE Entries - 5E8

Entry	Definition
1 or SCSI600	600 Mb Small Computer Systems Interface.
2 or 3.5I_SCSI	3.5 inch format.

- ***NOTE:*** Effective for 5E6 - 5E8 new ship offices, SCSI600 is the only valid DISK DRIVE TYPE entry. Effective for 5E9(1) through 5E13 new ship offices, "SCSI1GB" (1000 MB) is the only valid DISK DRIVE TYPE entry. For 5E14 and later "SCSI2GB" is the only valid DISK DRIVE TYPE.

Valid DISK DRIVE TYPE Entries

Entry	Definition
SCSI1GB	5E9(1) through 5E13: One gigabyte (1000 Mb).
SCSI2GB	5E14 and later: Two gigabyte(2000 Mb).

2.22 #UN618

Description: Does the memory controller have UN618 or UN59C memory controller boards installed? A "Y" in this field indicates UN618 installed; "N" implies UN59C installed.

- ***NOTE:*** For 5E9(1) and later, with the implementation of the 3B21D processor, this field is not used.

Software Release: 5E4(2) - 5E8
Required Field.
Valid Entries: Y, N

Data Rules:

If the PROCESSOR MEMORY TYPE field is "TN2012", this field must be "Y".

If "N" is entered, "TN56" must be entered in the PROCESSOR MEMORY TYPE field.

CNI EQUIPAGE

The following fields (Section 2.23 - Section 2.25) are used for the Common Network Interface equipment.

2.23 #RPCN000,320

Description: Is the CNI Ring Processor Control Node equipped?

This field (two fields prior to 5E5) determines if the RPCN (Ring Processor Control Nodes) are equipped; they are directly linked to the LINK NODE 001/LINK NODE 326 fields.

Required Field.

Data Rules:

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A toll office must have RPCN000,320 equipped. If RPCN000,320 is "Y", at least one Link Node pair must be equipped (LN001,321 through LN006,326).

RPCN000,320 must be equipped before LN001,321 through LN006,326 can be assigned.

If COMMON CHAN SIG on the OFCOPT form is "Y", RPCN000,320 must be equipped (and vice versa).

For 5E8 and earlier, if RPCN000,320 is equipped, DSCH CHANNEL 12 must be equipped.

WARNING: For 5E15 and later, RPCN000,320 is not supported with CM TYPE of "CM3".

2.24 LINK EQUIP

Description: This field determines if the Link Nodes are equipped. With 5E9 (1) and earlier, 5 link node pairs can be provided. With 5E9(2) and later, the maxium number of link nodes is increased to 19 pairs.

Link Nodes are 4.8 or 56 kbs "A-links" to an STP (Signal Transfer Point) and are used for a CNI (Common Network Interface) ring associated with CCS (Common Channel Signaling). Link Nodes are equipped in pairs. For example, LN001 and LN321 equals one pair, etc. Link Node pairs are assigned in the same manner (LN001 and LN321; LN002 and LN322, etc.)
Default: N
Valid Entries: Y, N

2.25 LINK NODE USEAGE

Description: This field defines the way the CNI node operates.

Software Release: 5E3 and later.
Valid Entries:

Valid LINK NODE USEAGE Entries

Entry	Definition
4.8kbs	Software Release: 5E9(1) and earlier. Low-speed signaling link; connects to transmission equipment.
1 or 56kbs	High-speed signaling link; connects to transmission equipment.
IUN	Software Release: 5E9(1) and earlier. Interface Process Message Switch User Node.
DLN	Software Release: 5E3 and later. Direct Link Node; connects to switch; restricted to node 2 only.

Data Rules:

Link Node assignments must conform to the recommended CNI (Common Network Interface) ring configurations (as reflected in the Allowable Node Configuration table below). Nodes cannot be added randomly into the CNI ring, but rather, must be planned carefully to allow for graceful future growth.

For 5E9(1) and earlier, the chart below indicates the allowable equipped node (LN00*32*) configurations. All other node configurations are invalid. The 0 in the left column of the table indicates that RPCN000,320 is equipped (an entry of "Y" in the RPCN000,320 field). 1 through 6 indicate entries of "Y" in fields LN001,321 through LN006,326, respectively.

Allowable Node Configurations

0	1					
0	1		3			
0		2	3			
0	1	2	3			
0	1	2	3			6
0	1	2	3		5	6
0	1	2	3	4	5	6

The following rules reflect the node configurations reflected in the table above.

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If LN002,322 is equipped, the LINK NODE USEAGE must be "DLN".

If LN001,321, LN003,323, LN004,324, LN005,325 or LN006,326 are equipped, the corresponding LINK NODE USEAGE must be either "4.8KBS", "56KBS" or "IUN" (and not "DLN").

If either LN001,321, LN002,322, LN003,323, LN004,324, LN005,325 or LN006,326 are not equipped, the corresponding LINK NODE USEAGE must not be entered.

RPCN000,320 must be equipped if LN001,321 through LN006,326 are to be equipped.

If LN002,322 is equipped, LN004,324 must be equipped.

If LN004,324 is equipped, LN005,325 must be equipped.

If LN005,325 is equipped, LN006,326 must be equipped.

If LN006,326 is equipped, LN001,321 through LN003,323 must be equipped.

For 5E9(2) and later, if the Link Node is equipped, LINK NODE USEAGE must be provided.

If the Link Node is unequipped, then the LINK NODE USEAGE field must be blank.

If RPCN000,320 is not equipped. LN004,324 must not be equipped.

If RPCN000,320 is equipped. At least LN004,324 must be equipped.

Link Nodes must be added in the sequence depicted in the following table.

Link Node Equipage Sequence

Equipage Sequence	Link Node
1 (first)	LN004,324
2	LN003,323
3	LN002,322
4	LN001,321
5	LN018,338
6	LN017,337
7	LN016,336
8	LN015,335
9	LN014,334
10	LN013,333
11	LN012,332
12	LN011,331
13	LN028.348
14	LN027,347
15	LN026,346
16	LN025,345
17	LN024,344
18	LN023,343
19	LN022,342
20 (last)	LN021,341

NOTE: If LN001,321 is entered, LN003,323 is required to be equipped instead of LN002,322.

TCP/IP DATALINK SELECTION

The following field Section 2.26 is used to describe the type of link used.

2.26 TRFM RNM OPT

Description: The value of this field indicates which type of link is used for the TCP/IP link.

Software Release: 5E15 and later

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Default: NONE
Valid Entries:

Valid TRFM RNM OPT Entries - 5E15 and later

Entry	Definition
BOTH	TRFM and RNM links are the TCP/IP links.
NONE	No TCP/IP links.
RNM	Remote Network Management Link is the TCP/IP link.
TRFM	Traffic Measurement Link is the TCP/IP link.

Data Rules:

When TRFM RNM OPT is "BOTH", "RNM" or "TRFM", DRM must be "Y".

When TRFM RNM OPT is set to "BOTH", "RNM" or "TRFM", then the ACT field for SFID 532 must be set to "Y" on the SFSYS form (5713-1 Record).

The TRFM RNM OPT entered must be equal to the TRFM RNM OPT on the OFCOPT form (5509 Record).

2.27 CLLI

Description: Enter the CLLI (Common Language Location Identifier). The CLLI uniquely identifies existing and proposed buildings which contain personnel and/or equipment, and certain customer locations.

The format for CLLI is as follows:

Valid CLLI Entries

Entry	Definition
PLACE	Character positions 1 through 4.
STATE	Character positions 5 and 6.
BUILDING	Character positions 7 and 8.
ENTITY	Character positions 9 through 11.

Example CHCGILMOCO Entry

Entry	Definition
CHCG	PLACE (Chicago)
IL	STATE (Illinois)
MO	BUILDING (Monroe)
CO	ENTITY (Control Group 0)

For more detailed information on Common Language Location Identifiers, refer to Practice 795-100-100.

2.28 #DISK CONFIG

Description: This field determines the Disk Size.

Required Field.
Valid Entries:

- 5E3 through 5E6: 300A, 340A, 340B and 340C
- 5E7: 340A, 340B, 340C
- 5E8 - 5E9(2): 66 (non-entry)
- 5E10 through 5E13: 11 (non-entry)
- 5E14 - 5E15: 21 (non-entry)
- 5E16 and later: 22 (non-entry)

- ***NOTE:*** The "11" DISK CONFIG entry may be referred to as "1010" in other 5ESS Switch documentation.

The appropriate disk configuration for an office is based on formulas in 5E DOPS which relate to total SM ODD size and AMA requirements of the office. Related information is entered in ODD DISK SIZE on the OFCOPT form.

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The relationship between the DISK CONFIGURATION and the ODD DISK SIZE is as follows:

Valid DISK CONFIGURATION Entries

Software Release	Values	ODD DISK SIZE on OFCOPT form
5E5	300A, 340A	14000
	340B	20000
	340C	24000
5E6	300A, 340A	
	340B, 340C	24000
5E7	340A	
	340B, 340C	8992
5E8	SCSI600	8992
5E9(1) through 5E13	SCSI1GB	8992
5E14 and later	SCSI2GB	11600

MOVING HEAD DISKS - MHD 0-15

- ***NOTE:*** TOTAL SIZE IN MEGABYTES

  The fields SM ODD, AMA and DISK ODD (KB) are not enterable. The data in these fields are calculated internally from the DISK CONFIGURATION and MOVING HEAD DISKS fields (MHD 0-15).

  Refer to the 5E DOPs Users Guide (5D5-060-100) for more information.

The MHD fields (Section 2.29 - Section 2.30) are used indicate the equipage of Moving Head Disks. For 5E6 - 5E8, the MHD fields consist of two columns, "EQUIPAGE" and "OPTIONING". The values entered into these two fields are dependent upon the value entered into the DISK CONFIGURATION field. Fields MHD 0 through MHD 13 must be assigned in pairs (such as MHD 0,1 and MHD 4,5).

A minimum of two pairs of disks are required. "Y" must always be entered in the MHD0,1 EQUIPAGE and MHD2,3 EQUIPAGE fields.

All information must be entered in sequence. For example, if "Y" is entered in the MHD6,7 EQUIPAGE field, "Y" must be entered in the MHD4,5 EQUIPAGE field.

- ***NOTE:*** There is no OPTIONING field associated with the SCSI322 and SCSI600 DISK EQUIPAGE field for MHD 14, 15 because these are on-line spares which are not required to be equipped in sequence with, or in relation to, MHD0,1 thru MHD12,13 or MHD16,17 thru 30,31. MHD 14 provides an on-line backup for disk 0; disk 15 provides an on-line backup for disk 1.

2.29 OPTIONING

Description: The name of this field was changed to PCT SMODD/AMA (Percent Switching Module Office Dependent Data/Automatic Message Accounting) in 5E8. See PCT SMODD/AMA below for usage information.

2.30 PCT SMODD/AMA

Description: The PCT SMODD/AMA (disk optioning) column sets the use of disk memory.

For 5E6 and 5E7, multiple disk optioning (1,2, or 3) is supported in all 340 configurations for DISK CONFIGURATIONs "340A", "340B" or "340C". Other than the minimum required disk pairs (MHD0,1 and MHD2,3), additional disks can be configured as indicated in the 5E6 and 5E7 valid entries below.

For 5E8 and later, 8992 is the only valid DISK CONFIGURATION. Valid disk optioning (1 - 5) is indicated in the 5E8 and later valid entries below.

Software Release: 5E6 and later.

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Required Field.
Default:

- For MHD0,1: R
- For MHD2,3: R

NOTE: MHD0,1 and MHD2,3 cannot be entered.

Valid Entries:

Valid PCT SMODD/AMA Entries
5E6 - 5E7

Entry	Definition
blank	Unknown disk optioning.
R	Required.
1	AMA (Automatic Message Accounting).
2	Half AMA/half ODD (Office Dependent Data).
3	ODD (Office Dependent Data).

Valid PCT SMODD/AMA Entries
5E8 - 5E9(2)

Entry	Definition
1	00% SMODD; 100% AMA.
2	25% SMODD; 75% AMA.
3	50% SMODD; 50% AMA.
4	75% SMODD; 25% AMA.
5	100% SMODD; 0% AMA.

Valid PCT SMODD/AMA Entries
5E10 and later

Entry	Definition
1	00% SMODD; 100% AMA.
2	25% SMODD; 75% AMA.
3	50% SMODD; 50% AMA.

Data Rules:

For 5E8 - 5E9, SMODD, if equipped, must precede AMODD. That is, the following sequence must be used when defining the PCT SMODD/AMA. If a 5 is entered, it must be the first entry in the PCT SMODD/AMA field. Any other 5 used, must follow the first 5 entry. Then, a mixed option can be selected using 2, 3, or 4. Only one of these (2, 3, or 4) can be entered per office. Following the 2, 3, or 4 entry, one or more 1(s) can be entered. See table.

Valid PCT SMODD/AMA Sequence

SMODD	SMODD/AMODD	AMODD
Entry 1	Entry 2, 3, or 4	Entry 1
0 or more	0 or 1	0 or more

The 5 DOPS symbols can be related to the above choices in the following ways:

The DSK6100 field provides the number of Disk Pairs using the 5 option.

The DSKSPL6 field provides the mixed option in the following way:

- If the field contains the 0.00, make no entry;
- Or, if the field contains 0.25, enter a value of 2;
- Or, if the field contains 0.50, enter a value of 3;
- Or, if the field contains 0.75, enter a value of 4.
- The DSK6000 field provides the number of Disk Pairs using the 1 option.

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For 5E2 through 5E7, the following sequence must be used when defining the PCT SMODD/AMA. If "300A" is entered in the DISK CONFIGURATION field,

- The entries in the MHD0,1 and MHD2,3 OPTIONING fields must be "R" and the corresponding MHD EQUIPAGE field must be "Y".
- "N" must be entered in MHD4,5, MHD6,7, MHD8,9, MHD10,11 and MHD12,13 EQUIPAGE fields.
- No entries are permitted in the MHD4,5, MHD6,7, MHD8,9, MHD10,11 and MHD12,13 OPTIONING fields (these columns must each be blank).

If "340A" is entered in the DISK CONFIGURATION field,

- The entries in the MHD0,1 and MHD2,3 OPTIONING fields must be "R" and the corresponding MHD EQUIPAGE field must be "Y".
- If the MHD4,5 EQUIPAGE field is "Y", the entry in the MHD4,5 OPTIONING field must be 1 or 2.
- If the MHD6,7, MHD8,9, MHD10,11 or MHD12,13 EQUIPAGE field is "Y", the entry in the corresponding MHD OPTIONING field must be 1.
- If the MHD4,5, MHD6,7, MHD8,9, MHD10,11 or MHD12,13 EQUIPAGE field is "N", the entry in the corresponding MHD OPTIONING field must be left blank.
- If a MHD OPTIONING field is entered, the corresponding MHD EQUIPAGE field must have a value of "Y".

If "340B" or "340C" is entered in the DISK CONFIGURATION field,

- The entries in the MHD0,1, MHD2,3 and MHD4,5 OPTIONING fields must be "R" and the corresponding MHD EQUIPAGE field must be "Y".
- If the MHD6,7 EQUIPAGE field is entered as "Y", the entry in the MHD6,7 OPTIONING field must be either 1, 2, or 3.
- If the MHD8,9, MHD10,11, or MHD12,13 EQUIPAGE field is entered as "Y", the entry in the corresponding MHD OPTIONING field must be 1.
- If the MHD6,7, MHD8,9, MHD10,11, or MHD12,13 EQUIPAGE field is entered as "N", the entry in the corresponding MHD OPTIONING field must be blank.
- If a MHD OPTIONING field is entered, the corresponding MHD EQUIPAGE field must have a value of "Y".

For 5E10 and later,

- when MHD4,5 has PCT SMODD option of 2, then PCT SMODD for MHD6,7 can only be option 1.
- when MHD6,7 has PCT SMODD option of 2, then PCT SMODD for MHD8,9 can only be option 1.
- when MHD8,9 has PCT SMODD option of 2, then PCT SMODD for MHD10,11 can only be option 1.
- when MHD10,11 has PCT SMODD option of 2, then PCT SMODD for MHD12,13 can only be option 1.
- PCT SMODD for MHD6,7 can only be option 3 if MHD4,5 has PCT SMODD option of 3.

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- PCT SMODD for MHD8,9 can only be option 3 if MHD6,7 has PCT SMODD option of 3.
- PCT SMODD for MHD10,11 can only be option 3 if MHD8,9 has PCT SMODD option of 3.
- PCT SMODD for MHD12,13 can only be option 3 if MHD10,11 has PCT SMODD option of 3.
- When MHD4, 5 has PCT SMODD option of 1, then PCT SMODD for MHD6, 7 can only be option 1.
- When MHD6, 7 has PCT SMODD option of 1, then PCT SMODD for MHD8, 9 can only be option 1.
- When MHD8, 9 has PCT SMODD option of 1, then PCT SMODD for MHD10, 11 can only be option 1.
- When MHD10, 11 has PCT SMODD option of 1, then PCT SMODD for MHD12, 13 can only be option 1.

MOVING HEAD DISKS SCSI600 OR SCSI322 ONLY - MHD 16-31

For 5E6 - 5E8, for offices equipped with a SCSI600 or SCSI322 DISK DRIVE TYPE, the DISK EQUIPAGE field is used to indicate whether the MHD pairs are equipped. A "Y" or "N" is entered in each of the seven MHD pair fields: MHD16,17 through MHD30,31. There is no OPTIONING field for MHD 16-31 because they are entirely AMA-configured.

2.31 DISK EQUIPAGE

Description: Are any of the MHD pair fields MHD16,17 through MHD30, 31 equipped?

Software Release: 5E6 - 5E8
Required Field.
Valid Entries: Y, N
Default Value: N

Data Rules:

If any MHDs (16-31) are equipped, the office must have "IOP2" set to "Y".

- If "Y" is entered in the MHD16,17 DISK EQUIPAGE field, "Y" must be entered in the MHD12,13 DISK EQUIPAGE field. (As noted above, MHD14 and 15 are for on-line spares and thus may be equipped in any sequence.)
- If "Y" is entered in the MHD18,19 DISK EQUIPAGE field, "Y" must be entered in the MHD16,17 DISK EQUIPAGE field.
- If "Y" is entered in the MHD20,21 DISK EQUIPAGE field, "Y" must be entered in the MHD18,19 DISK EQUIPAGE field.
- If "Y" is entered in the MHD22,23 DISK EQUIPAGE field, "Y" must be entered in the MHD20,21 DISK EQUIPAGE field.
- If "Y" is entered in the MHD24,25 DISK EQUIPAGE field, "Y" must be entered in the MHD22,23 DISK EQUIPAGE field.
- If "Y" is entered in the MHD26,27 DISK EQUIPAGE field, "Y" must be entered in the MHD24,25 DISK EQUIPAGE field.

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- If "Y" is entered in the MHD28,29 DISK EQUIPAGE field, "Y" must be entered in the MHD26,27 DISK EQUIPAGE field.
- If "Y" is entered in the MHD30,31 DISK EQUIPAGE field, "Y" must be entered in the MHD28,29 DISK EQUIPAGE field.

EVEN/ODD SPU

For 5E9(1) and later, the following fields (Section 2.32 - Section 2.33) define the SPU (SCSI Peripheral Unit) position of the MHDs. When a pair of MHDs is added, there is an even one and an odd one (i.e., MHD4 is even and MHD5 is odd for MHD4,5). The even MHD is always positioned on the lower growth unit and the odd MHD is positioned on the upper growth unit.The lower growth unit uses SBUS 0 and SBUS 2. The upper growth unit uses SBUS 1 and 3. Each MHD pair which is equipped, must have an entry in the EVEN SPU field associated with its MHD number.

It is only necessary to enter EVEN SPU positions as the ODD one is automatically populated, based on its EVEN SPU entry. The ODD SPU is always 1 plus the EVEN SPU value.

The restrictions for designating SPU positions are provided in the table below. Also refer to the "Valid/Invalid IOP/PC/SLOT/P Entries" tables provided with the IOP/PC/SLOT/P field description for a summary of related even/odd SPU entries.

Disk Software Restrictions

MHD	SPU
4	4 or 20
6	18
8	20 or 24
10	22
12	26
14	4 or 20 or 24

Data Rules:
SPU assignments for the MHDs cannot be duplicated by IOP/PC/SLOT assignments on the FLEX IOP LIST. The following table summarizes invalid SPU combinations.

Invalid Combinations of SPUs and Flex PC Slots - 5E9(1) and later

EVEN SPU	IOP/PC/SLOT(P)	ODD SPU	IOP/PC/SLOT(P)
04	031 or 032	05	131 or 132
20	232 or 233	21	332 or 333
22	230 or 231	23	330 or 331
24	222 or 223	25	322 or 323
26	220 or 221	27	320 or 321

For 5E9(2) and later, MHD or IOP/PC/SLOT assignments in the above table must also not duplicate MT1 SPU assignments.

2.32 EVEN SPU

Description: Enter the EVEN SPU SCSI Peripheral Unit position.
Valid Entries: 4, 18, 20, 22, 24, 26

Data Rules:

If EQUIPAGE is "N", SPU must be blank.

If MHD8,9 is equipped and MHD14 is equipped, and MHD4 SPU is 20, then MHD14 SPU must be 4 and MHD8 SPU must be 24.

If MHD14 SPU is 20 then MHD8,9 must be unequipped.

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If MHD14 SPU is 4, MHD4,5 must be "N" or MHD4 SPU must be 20.

If MHD14 SPU is 20, MHD4,5 must be "N" or MHD4 SPU must be 4.

If MHD14 SPU is 24, MHD4 SPU must be 20 or MHD8 SPU must be 20.

If MHD4 SPU is 20 and MHD8,9 is equipped, MHD8 SPU must be 24.

For 5E9(1) and later,

- if MHD8,9 is equipped and MHD4 SPU is 4, MHD8 SPU must be 20.
- if MHD4 SPU is greater than 17, SCSDC16 must be "Y".
- if MHD6 SPU is entered, SCSDC16 must be "Y".
- if SCSDC16 is "Y", either MHD4 SPU must be greater than 17 or MHD6 SPU must be entered.

2.33 ODD SPU

Description: This is a non-entry field which is automatically calculated (EVEN SPU plus 1). Thus, the entries in this field will be 5, 19, 21, 23, 25, or 27.

SWITCHING CONTROL CENTER

The following fields (Section 2.34 - Section 2.35) are used to set up the SCC 0 and 1 (Switching Control Center 0 and 1). The SCC provides facilities to administer, monitor, control and maintain the 5ESS Switch from a centralized remote location.

2.34 #SCC 0

Description: Is SCC 0 (Switching Control Center 0) equipped on the office?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

SCC 0 is located on IOP 0, Community 0, Slot 0 and Channel Position 1.

2.35 SCC 1

Description: Is SCC 1 (Switching Control Center 1) equipped on the office?

Required Field.
Default: Y
Valid Entries: Y, N

Data Rules:

SCC 1 is located on IOP 1, Community 0, Slot 0 and Channel Position 1.

SCAN POINT & SIGNAL DISTRIBUTOR CONTROLLER

The following fields (Section 2.36 - Section 2.43) define indicate whether or not Scan Points exist for various hardware. SCSDC boards are used to monitor the operation of the system and are required in all offices.

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2.36 SCSDC0

Description: The only acceptable value in this field is "Y" to indicate that a scan point exists.

For 5E6 and later Software Releases, this field is automatically populated.

Required Field.
Valid Entries: Y
Default Value: Y

Data Rules:

SCSDC0 is located on IOP 0, COMMUNITY 0, SLOT 2.

2.37 SCSDC1

Description: The only acceptable value in this field is "Y" to indicate that a scan point exists.

For 5E6 and later Software Releases, this field is automatically populated.

Required Field.
Valid Entries: Y
Default Value: Y

Data Rules:

SCSDC1 is located on IOP 1, COMMUNITY 0, SLOT 2.

2.38 SCSDC2

Description: The only acceptable value in this field is "Y" to indicate that a scan point exists.

For 5E6 and later Software Releases, this field is automatically populated.

Data Rules:

SCSDC2 is located in IOP 0, COMMUNITY 0, SLOT 1.

Required Field.

Valid Entries: Y
Default Value: Y

2.39 SCSDC3

Description: The only acceptable value in this field is "Y" to indicate that a scan point exists.

For 5E6 and later Software Releases, this field is automatically populated.

Required Field.
Valid Entries: Y
Default Value: Y

Data Rules:

This entry is required when located in IOP 1, COMMUNITY 0, SLOT 1.

2.40 SCSDC45

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Description: The only acceptable entry for this field is "Y".

Required Field.
Default:

For 5E14 and earlier: Y
For 5E15 and later: N

Valid Entries: Y
Default Value: Y

Data Rules:

SCSDC4 is located in IOP 0, COMMUNITY 1, SLOT 0, and SCSDC5 is located in IOP 1, COMMUNITY 1, SLOT 0.

The SCSDC45 entry is required in all CM1 and CM2 offices for alarming and craft control of CM1 hardware.

For 5E5 and earlier, CM2 offices with 9 or more Module Message Processor (MMP) Communities (or greater than 128 SMs) per side installed should have SCSDC45 equipped.

For 5E6 and later, SCSDC45 is always required for the CMPU and is thus automatically populated.

WARNING: For 5E15 and later, SCSDC45 is not needed in and office with CM TYPE of "CM3".

2.41 #SCSDC67

Description: SCSDC 6 and 7 are optional telephone operating company-assigned boards. These SCSDCs can be ordered for miscellaneous alarms.

Required Field.
Valid Entries: Y, N
Default Value: 5E8 only: Y

Data Rules:

SCSDC6 is located in IOP 0, COMMUNITY 1, SLOT 1 and SCSDC7 is located in IOP 1, COMMUNITY 1, SLOT 1.

2.42 #SCSDC89

Description: SCSDC 8 and 9 are required for offices equipped with CNI (Common Network Interface) cabinets or CM2 offices. CNI cabinets are determined by the equipage of RPCN000,320.

Required Field.
Valid Entries: Y, N
Default Value: Y

Data Rules:

SCSDC8 is located in IOP 0, COMMUNITY 1, SLOT 2 and SCSDC9 is located in IOP 1, COMMUNITY 1, SLOT 2.

For 5E6 - 5E8, if CM TYPE on this form is 2, SCSDC89 must be "Y".

For 5E9(1) and later, if CM TYPE on this form is CM2, SCSDC89 must be "Y".

For 5E6 - 5E8, SCSDC89 are also required in offices equipped with SCSI322 disks having any of the

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MHDs in the second community equipped (MHDs 16-31).

2.43 #SCSDC1011

Description: Is the SCSDC1011 equipped?

Required Field.
Valid Entries: Y, N
Default Value: Y

Data Rules:

SCSD10 is located in IOP 0, COMMUNITY 1, SLOT 3 and SCSD11 is located in IOP 1, COMMUNITY 1, SLOT 3. If CM TYPE is 1, SCSDC1011 must be "N".

For 5E6 - 5E8, if CM TYPE on this form is 2, SCSDC1011 must be "Y". For 5E9(1) and later, if CM TYPE on this form is CM2, SCSDC1011 must be "Y".

2.44 #SCSDC16

Description: Is the SCSDC16 equipped?

Software Release: 5E9(1) and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When MHD4 SPU is greater than 17, SCSDC16 must be "Y".

When MHD6 SPU is entered, SCSDC16 must be "Y".

When SCSDC16 is "Y", either MHD4 SPU must be greater than 17, or MHD6 SPU must be entered.

For 5E10 and later, when SCSDC16 is "Y", either MHD4 or MHD14 or MHD15 or MT1 must be equipped in SPU 18-27 or MHD6 SPU must be known.

MAGNETIC TAPE DEVICES

The following optional fields (Section 2.45 - Section 2.49) are used to define Magnetic Tape Controllers 0 and 1.

2.45 #MTC0

Description: The MTC0 field name was changed to MT0 in 5E9(1). This field name applies to 5E8 and earlier. The MT0 is located in: IOP 0, COMMUNITY 0, SLOT 3. Enter the type of magnetic tape drive one. See MT0 for 5E9(1) and later usage information.

Valid MTC0 Entries, 5E6 - 5E8

Entry	Definition
1 or Keystone III	Read/write only in high density (6250bpi).
2 or Enhanced Keystone III	Buffered keyboard which offers significantly better performance than the unbuffered version.

2.46 #MT0

Description: Enter the type of magnetic tape controller for drive one. The MT0 is located in: IOP 0,

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COMMUNITY 0, SLOT 3.

Software Release: 5E9(1) and later.
Valid Entries:

Valid MT0 Entries, 5E9(1)

Entry	Definition
1 or SCSI9TRK	Keystone III; read/write only in high density (6250bpi) with SCSI9TRK interface.

Valid MT0 Entries, 5E9(2) and later

Entry	Definition
1 or SCSI9TRK	Keystone III; read/write only in high density (6250bpi) with SCSI9TRK interface.
2 or DAT	Digital Audio Tape.

2.47 MTC1

Description: The MTC1 field name was changed to MT1 in 5E9(1). This field name applies to 5E8 and earlier. See MT1 for 5E9(1) usage information.

Valid MTC1 Entries, 5E6 - 5E8

Entry	Definition
1 or Keystone III	Read/write only in high density (6250bpi).
2 or Enhanced Keystone III	Buffered keyboard which offers significantly better performance than the unbuffered version.

Data Rules:

If MTC1 is equipped, it is located in IOP 1, COMMUNITY 0, SLOT 3. IOP1, PCO 0, SLOT 3 has been assigned to MTC1 (second magnetic tape). If it is not installed, the slot can be used for other devices, SDL or TTY.

2.48 MT1

Description: This field indicates the type of magnetic tape drive two.

Valid MT1 Entries, 5E9(1) and later

Entry	Definition
1 or SCSI9TRK	Keystone III; read/write only in high density (6250bpi) with SCSI9TRK interface.

Valid MT1 Entries, 5E9(2) and later

Entry	Definition
1 or SCSI9TRK	Keystone III; read/write only in high density (6250bpi) with SCSI9TRK interface.
2 or DAT	Digital Audio Tape

Data Rules:

If MT1 is equipped, it is located in IOP 1, COMMUNITY 0, SLOT 3. IOP1, PCO 0, SLOT 3 has been assigned to MT1 (second magnetic tape). If it is not installed, the slot can be used for other devices, SDL or TTY.

If MT1 is "DAT", MT1 SPU must be entered.

2.49 MT1 SPU

Description: This field indicates the position of the DAT (Digital Audio Tape) for the MT1.

Software Release: 5E9(2) and later.

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Valid Entries: 5, 21, or 25

Data Rules:

The position of the MT1 SPU cannot duplicate the position of the MHD or IOP/PC/SLOT/P positions.

For 5E10 and later, when MT1 SPU is 21 or 25, SCSDC16 must be "Y".

MAINTENANCE TELETYPEWRITER

The following fields (Section 2.50 - Section 2.52) are used to determine the characteristics of the maintenance teletypewriter.

2.50 #MCC BOARD TYPE

Description: Enter the MCC (Master Control Center) Board Type. Note that the UN583 automatically equips the entire set of IOP/PC Replacement and DFC (Disk File Controller) Replacement boards. Note that this field was removed for 5E9(1)-5E9(2) and readded in 5E10.

Software Release: 5E10 and later.
Valid Entries:

- For 5E12 and earlier: TN983 or UN583
- For 5E13: TN983 or UN597
- For 5E14 and later: UN597

Data Rules:

For 5E10 through 5E13, when PROCESSOR MODEL is "3B21D", MCC BOARD TYPE must not be "TN983".

If "UN583" or "UN597" is not entered, the fourth digit of the IOP/PC/SLOT/P must be "2" or "3".

2.51 #MTTY TYPE

Description: Enter the type of MTTY (maintenance terminal) used in the office. The MTTY is also referred to as the MCC (Master Control Center).

Required Field.
Default:

5E4(2) - 5E8: COLOR SCAN2
Valid Entries:

Valid MTTY TYPE Entries, 5E4(2) - 5E8

Entry	Definition
1 or OLD B&W	Black and White terminal.
2 or COLOR SCAN10	Color Scan terminal.
3 or VT100	VT100 terminal.
4 or COLOR WECOKS	Color WECO KS terminal.
5 or COLOR SCAN2	Color Scan2 terminal.

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NOTE: For 5E4 - 5E8, for new ship offices, "COLOR SCAN2" is the only valid option.

Data Rules:

If "COLOR SCAN2" is entered, the COLOR SCAN2 LINE COUNT must be entered.

Valid MTTY TYPE Entries - 5E9(1) and later

Entry	Definition
1 or ATT/260C	Color terminal replacing Color Scan2.
2 or OLD B&W	Black and white terminal.
3 or COLOR SCAN10	Color Scan10 terminal.
4 or VT100	VT100 terminal.
5 or WECO KS	Color WECO KS terminal.
6 or COLOR SCAN2	Color Scan2 terminal.

NOTE: For 5E9(1) and later, for new ship offices, "ATT/260" is the only valid entry.

When MTTY TYPE is "COLOR SCAN2" or "ATT/260C", COLORSCAN2 LINE COUNT must be entered.

2.52 COLORSCAN2 LINE COUNT

Description: This field defines the number of lines that will appear on the terminal screen.

Software Release: 5E6 and later
Default: 24
Valid Entries: 24 or 47 (lines)

Data Rules:

For 5E6 - 5E8, if the MTTY TYPE is "COLORSCAN2", COLORSCAN2 LINE COUNT must be entered.

For 5E9(1) and later, if the MTTY TYPE is "COLOR SCAN2" or "ATT/260C", COLORSCAN2 LINE COUNT must be entered.

2.53 ALT BOOT DSK

Description: Is the Alternate Boot Disk feature equipped? Before this feature can be activated, Secured Feature 284 must be set to "Y". See Division 2, Section 4A284.

Software Release: 5E13 and later
Default: N
Valid Entries: Y, N

Data Rules:

When ALT BOOT DSK is "Y", SFID 284 ACT must be "Y" on the SFSYS form.

When ALT BOOT DSK is "Y", MCC BOARD TYPE must be "UN597".

When ALT BOOT DSK is "Y", MHD14 or MHD15 must be "Y".

INPUT/OUTPUT PROCESSOR EQUIPAGE

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The following fields (Section 2.54 - Section 2.55) are used to indicate if the office is equipped with additional IOPs. (IOPs 0 and 1 are equipped with all offices and thus are not specified on this form.) For 5E9(1) and later, SPUs 18-27 are logically part of the Disk File Controller System. Thus, equipping IOPs 2 and 3 is not required to support Disk Drives in SPUs 18-27. However, if Disk Drives are not equipped in SPUs 18-27 and IOP 2 or 3 is grown in, those slots are still available for use as IOP peripheral communities.

2.54 #IOP2

Description: Does the office have an IOP2? Each office may have 4 IOPs (numbered 0, 1, 2 and 3). IOPs 0 and 1 are required, while 2 and3 are optional.

Software Release: 5E6 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E6 - 5E8, IOP2 is required for equipped SCSI disks and for any equipped MHDs in 2nd community (MHDs 16-31).

2.55 #IOP3

Description: Does the office have an IOP3?

Software Release: 5E7 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E12 and earlier, IOP2 must be equipped before IOP3 can be equipped.

FLEXIBLE IOP SELECTION

The following fields (Section 2.56 - Section 2.63) are used to define the variable ports in the Input/Output Processor. The Flexible IOP Selection enables the addition and deletion of IOP devices within IOP communities. Available with 5E4(2) and later, Optional IOP devices are not restricted to preassigned slots.

The IOP/PC/SLOT is reserved for SCSDC17 (SCAN POINT and SIGNAL DISTRIBUTOR CONTROLLER). SCSDC17 will automatically be provided to the user if the DISK TYPE is a SCSI322. Entries 2122/2123 are not allowed.

Refer to ECD/SG Data Base Manual (No. 235-600-3XX, where XX is the generic) for the standard association of controller to device (what the recommended configuration was before Flexible IOP Selection). Note that Flexible IOP Selection may vary from the standard configuration presented in the document referenced above.

2.56 IOP/PC/SLOT/P

Description: This field is a 4-digit number that defines the IOP/PC/SLOT/P selection. Each office may have 4 IOPs (Input/Output Processors). Each IOP contains 4 PCs (Peripheral Controllers). Each PC contains 4 SLOTs. The SLOTs are occupied by a DEVICE CONTROLLER. For offices with MCC BOARD TYPE of "TN983", two ports are available (2 and 3). For offices with MCC BOARD TYPE of "UN583" or "UN597" , 4 ports are available (0, 1, 2, 3).

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Valid IOP/PC/SLOT/P Entries	
Component	**Entry**
IOP	0, 1, 2, or 3
PC	0, 1, 2 or 3
SLOT	0, 1, 2 or 3

Valid Port Entries	
Component	**Entry**
P(ORT)	2 or 3; when MCC BOARD TYPE is "TN983".
P(ORT)	0, 1, 2, or 3; when MCC BOARD TYPE is "UN583" or "UN597".

The following table contains invalid IOP/PC/SLOT/P entries that must not be used for FLEXIBLE IOP assignments:

Invalid IOP/PC/SLOT/P(ort) Entries	
Entry	**Entry**
0002/0003	1002/1003
0012/0013	1012/1013
0022/0023	1022/1023
0032/0033 Note: Valid for 5E9(1) and later	1102/1103
0102/0103	1112/1113
0112/0113	1122/1123
0122/0123	1132/1133
0132/0133	1332/1333
0302/0303, except for VCDX	0332/0333
2000/3000	

NOTE: Also refer to the Invalid Combinations of SPUs and FLEX PC Slots table provided in the discussion of the EVEN/ODD SPU fields.

Data Rules:

Once an IOP/PC/SLOT/P(ORT) is assigned, it may not be used again.

If the IOP/PC/SLOT/P(ORT) is entered, the DEVICE CONTROLLER and the DEVICE TYPE must also be entered.

If the IOP/PC/SLOT is unique, the DEVICE CONTROLLER must be unique.

If an IOP2 or IOP3 value is not assigned, the entry in the IOP/PC/SLOT/P field must not begin with a 2 or 3.

If there are two magnetic tape drives in the office, an entry in the IOP/PC/SLOT/P field of 1032 or 1033 may not be assigned.

2.57 DEVICE CONTROLLER

Description: Once an IOP/PC/SLOT/P(ORT) is assigned, a device controller is assigned. Two types of controllers are accepted: SDLC (Synchronous Data Link) and TTYC (Teletypewriter Controller). Any SDLC can be used to control an SDL DEVICE TYPE, and any TTYC can be used to control a TTY DEVICE TYPE.

Valid DEVICE CONTROLLER Entries	
Entry	**Entry**
SDLC0	TTYC11
SDLC2	TTYC12
SDLC3	TTYC13
SDLC4	TTYC14
SDLC5	TTYC15
SDLC6	TTYC16
SDLC7	TTYC17
SDLC8	TTYC18
SDLC9	TTYC19
SDLC32	TTYC20

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SDLC34	TTYC21
SDLC36	TTYC22
SDLC38	TTYC23
SDLC40	TTYC24
SDLC42	TTYC25
TTYC26	TTYC27
TTYC28	TTYC29

Data Rules:

If the DEVICE CONTROLLER is entered, the IOP/PC/SLOT/P(ORT) must be entered. If the DEVICE CONTROLLER is entered, the DEVICE TYPE must be entered. If the DEVICE TYPE is entered, the DEVICE CONTROLLER must be entered.

A teletypewriter controller must control a device of the same type (TTY). A synchronous data link controller must control a device of the same type (SDL). In other words, if the DEVICE CONTROLLER entry begins with "TTY...", the DEVICE TYPE entry must begin with "TTY...". (The same condition applies to "SDL..." entries.)

If DEVICE TYPE is "TTY7", LOCAL TRAF MEAS CHANNEL on the OFCOPT form must be equipped.

2.58 DEVICE TYPE

Description: For 5E9(2) and earlier, up to two DEVICE TYPES can be assigned to each DEVICE CONTROLLER. 5E10 and later with MCC BOARD TYPE of "UN583" or "UN597", up to four DEVICE TYPES can be assigned.

Once a DEVICE TYPE is assigned, it cannot be used again. If the DEVICE TYPE is entered, the IOP/PC/SLOT/P(ORT) must be entered. If the DEVICE TYPE is entered, the DEVICE CONTROLLER must be entered.

For offices with MCC BOARD TYPE of "TN983", an SDLC can control up to two SDLs. However, an SDLC is required for every AMA (Automatic Message Accounting) or NP (Network Protocol) type of SDLs. Note that NP, SDL, and AMA SDLs cannot share the same controller. However, SDL9 and SDL18 can share a controller. Each TTYC DEVICE CONTROLLER controls up to two TTY DEVICE TYPES. The BAUD RATE for each "TTY" must be known. The BAUD RATE range for the two "TTYs" controlled by a "TTYC" is 300, 1200, 2400, 4800 and 9600. The exceptions are the printer DEVICE TYPES (i.e., TTY43, TTY45). A device type must agree with its controller type; protocols should not be mixed.

- A TTYC (TN74B) supports all TTY types
- A SDLC (TN75C) supports all SDL types
- A SDLC (TN82) supports SDL8 and SDL13

For offices with MCC BOARD TYPE of "UN583" or "UN597", SDLCs can control up to 4 SDLs and therefore mixing restrictions are not applicable. The UN583 or the UN597 is a multi-purpose board which supports all device/controller options.

Customers are allowed to input either the **device type** or **device name**.

SDL Device Type/Device Name Cross-Reference

Device Type	Name	Protocol	Baud Rate
SDL0	SCAN	SDL	4800
SDL1	SCC	SDL	1200
SDL2	MLT2	SDL	2400
SDL3	EADAS	SDL	variable
SDL4	CTTU	SDL	1200
SDL5	RNMS	SDL	9600
SDL6	ATPRC	NP	9600
SDL8	AMADL2	AMA	variable
SDL9	RMAS	NP	2400

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SDL11	NO2SES	SDL	2400
SDL13	AMADLI	AMA	variable
SDL14	MACOSS	NP	9600
SDL18	OSPSRC	NP	4800
SDL20	RMS01	SDL	4800
SDL25	TOPASO	NP	9600
SDL26	TOPAS1	NP	9600
SDL32	APDL1	NP	9600
SDL34	APDL2	NP	9600
SDL36	APDL3	NP	9600
SDL38	APDL4	NP	9600
SDL40	APDL5	NP	9600
SDL42	APDL6	NP	9600

TTY Device Type/Device Name Cross-Reference

Device Type	Name	Alias	Baud Rate
TTY7	TRAFFPRT	ttyh	5E10 and earlier: 1200 5E11 and later: 300, 1200, 2400, 4800, 9600
TTY8	SLC96	ttyi	300
TTY9	STLWS5	ttyj	4800
TTY10	STLWS6	ttyk	4800
TTY11	STLWS1	ttyl	4800
TTY12	STLWS2	ttym	4800
TTY13	STLWS3	ttyn	4800
TTY14	STLWS4	ttyo	4800
TTY15	RCVRSB	ttyp	1200
TTY16	RCVNAC	ttyq	1200
TTY17	ALITRSB	ttyr	1200
TTY18	RCVSCC1	ttys	1200
TTY19	RCVSCC2	ttyt	1200
TTY20	BELTA	ttyu	300
TTY21	LOCRCV	ttyv	4800
TTY22	RMTRCV	ttyw	1200
TTY23	BALANCE	tty8	4800
TTY26	CALEASAS	tty9	9600
TTY27	CALEAPRT	ttyx	9600
TTY28	STLWS7	ttyC	4800
TTY29	STLWS8	ttyD	4800
TTY30	STLWS9	ttyE	4800
TTY31	STLWS10	ttyF	4800
TTY32	STLWS11	ttyG	4800
TTY33	STLWS12	ttyH	4800
TTY34	STLWS13	ttyI	4800
TTY43	OFFRECPRT	ttyR	1200
TTY45	COT	ttyT	1200
TTY46	BELTB	ttyU	300
TTY50	STLWS14	ttyY	4800

Entry	Definition
SDL0	This device type entry indicates whether SCANS is equipped. Software Change Administration and Notification System is the standard mechanism used for distribution of BWMs (Broadcast Warning Messages) to the SCCS (Switching Control Center System) and program updates (binary data) to the 5ESS Switch. SCANS provides generic overwrite information under control of the SCCS.
SDL1	Software Release : 5E14 and later. This device type entry indicates whether SCC (Switching Control Center) is equipped for this office. VCDX or DRM only.
SDL2	This device type entry indicates the equipage of a port for the Integrated MLT-2. The entry must be designated in the IMLT-2 field on the OFCOPT form.
SDL3	This device type entry indicates whether EADAS is equipped. If the EADAS LINK is equipped on the OFCOPT form, it must be equipped on the ECDOPT form (and vice versa). If SDL3 is equipped, the BAUD RATE (variable) must be entered. The EADAS (Engineering and Administration Data Acquisition System) collects, stores and analyzes traffic data and works with downstream systems like TDAS (Traffic Data Analysis System) for engineering reports and further analysis of data.
SDL4	This device type entry indicates whether any CTTU (Centralized Trunk Test Unit) is equipped for this office. If a CTTU form (5518 Record) exists, SDL4 must be equipped.
SDL5	This device type entry indicates whether a RNMS (Remote Network Management System) is equipped for this office.
SDL6	Software Release: 5E14 and later: This NP device type entry indicates whether ATPRC (CONNECTVU ATP Recent Change) is equipped.
SDL8	This device type entry indicates whether AMA Datalink2 is equipped. If SDL8 is equipped, the BAUD RATE

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	(variable) must be entered.
SDL9	This NP device type entry indicates whether RMAS is equipped. If RMAS SUPPORT is equipped on the OFCOPT form, it must be equipped on the ECDOPT form and vice versa. RMAS (Remote Memory Administration System) provides a centralized, improved human interface for the change, administration and verification of the database stored in Electronic Switching Systems.
SDL11	This SDL device type entry indicates whether SES (Service Evaluation System) 2 is equipped. If there is a TKGRP form with a TRKCLS of "SES", SDL11 must be equipped. The SES mechanizes the evaluation of network services by using large-scale sampling procedures and provides reports of equipment blockage and failure, no supervision and call completion analysis to downstream systems.
SDL13	This AMA device type entry indicates whether AMA Datalink1 is equipped. If SDL13 is equipped, the BAUD RATE (variable) must be entered.
SDL14	This NP device type entry indicates whether MACOSS is equipped. SDL14 can only be equipped in CNI-equipped offices. If SDL14 is assigned, RPCN000,320 must be equipped.
SDL18	This NP device type indicates whether OSPSRL is equipped.
SDL20	This SDL device type entry indicates whether RMS01 is equipped. If a trunk group has been defined on the TKGRP form with a TRKCLS of "RMSD3", SDL20 must be entered.
SDL25	This NP device type entry indicates whether TOPAS0 is equipped. SDL25 can only be equipped in CNI-equipped offices. If SDL25 is assigned, RPCN000,320 must be equipped. If a trunk group has been defined on the TKGRP form with a TRKCLS of "TOPAS", SDL25 or SDL26 must be entered.
SDL26	This NP device type entry indicates if TOPAS1 is equipped. SDL26 can only be equipped in CNI-equipped offices. If SDL26 is assigned, RPCN000,320 must be equipped. If a trunk group has been defined on the TKGRP form with a TRKCLS of "TOPAS", SDL25 or SDL26 must be entered.
SDL32	This NP device entry indicates whether APDL01 is equipped.
SDL34	This NP device type entry indicates whether APDL02 is equipped.
SDL36	This NP device type entry indicates whether APDL03 is equipped.
SDL38	This NP device type entry indicates whether APDL04 is equipped.
SDL40	This NP device type entry indicates whether APDL05 is equipped.
SDL42	This NP device type entry indicates whether APDL06 is equipped.
TTY7	This entry indicates whether TRAFFPRT is equipped. If the LOCAL TRAF MEAS CHANNEL field on the OFCOPT form is "Y", TTY7 must be equipped.
TTY8	This entry indicates whether SLC 96 FRED is equipped. This terminal is also entered as a TMT (Transmission Maintenance Terminal) which is used with integrated SLC 96 (Integrated Subscriber Loop Carrier 96) facilities.
TTY9	This entry indicates whether STLWS 5 is equipped. Software Release: 5E6 and earlier. If there is a TLWS form for STLWS 5 (Work Station Number 7), TTY9 must be equipped. Software Release: 5E7 - 5E8. If there is a TLWS form with a DEVICE ID of "j", TTY9 must be equipped.
TTY10	This entry indicates whether STLWS 6 is equipped. Software Release: 5E6 and earlier. If there is a TLWS form for STLWS 6 (Work Station Number 8), TTY10 must be equipped. Software Release: 5E7 - 5E8. If there is a TLWS form for STLWS 6 with a DEVICE ID of "k", TTY10 must be equipped.
TTY11	This entry indicates whether STLWS 1 is equipped. Software Release: 5E6 and earlier. If there is a TLWS form for STLWS 1 (Work Station Number 3), TTY11 must be equipped. Software Release: 5E7 - 5E8. If there is a TLWS form for STLWS 1 with a DEVICE ID of "l", TTY11 must be equipped.
TTY12	This entry indicates whether STLWS 2 is equipped. Software Release: 5E6 and earlier. If there is a TLWS form for STLWS 2 (Work Station Number 4), TTY12 must be equipped. Software Release: 5E7 - 5E8. If there is a TLWS form for STLWS 2 with a DEVICE ID of "l", TTY12 must be equipped.
TTY13	This entry indicates whether STLWS 3 is equipped. Software Release: 5E6 and earlier. If there is a TLWS form for STLWS 3 (Work Station Number 5), TTY13 must be equipped. Software Release: 5E7 - 5E8. If there is a TLWS form with a DEVICE ID of "n", TTY13 must be equipped.
TTY14	This entry indicates whether STLWS 4 is equipped. Software Release: 5E6 and earlier. If there is a TLWS form for STLWS 4 (Work Station Number 6), TTY14 must be equipped. Software Release: 5E7 - 5E8.

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	If there is a TLWS form with a DEVICE ID of "o", TTY14 must be equipped.
TTY15	This entry indicates whether RCV RSB is equipped. A RCV RSB (Recent Change and Verify, Repair Service Bureau) terminal is capable of performing all RCV operations as well as a subset of MCC commands.
TTY16	This entry indicates whether RCV NAC is equipped.
TTY17	This entry indicates whether ALIT/RSB is equipped. The Automatic Line Insulation Testing/Repair Service Bureau performs direct connect tests through the 5ESS Switch without the use of auxiliary test equipment. These results are available at RSBs, as well as at the office MCC, SCC and office belt line. The terminal is located at a remote site.
TTY18	This entry indicates whether RCV SCC is equipped. Recent Change and Verify, Switching Control Center (RCV SCC) is a general maintenance terminal. All commands can be executed from this terminal.
TTY19	This entry indicates whether RCV SCC/CIC is equipped. Recent Change and Verify, Switching Control Center/Circuit Input Center is a general maintenance terminal. All commands can be executed from this terminal.
TTY20	This entry indicates whether BELT LINE A is equipped. A belt line is provided in the Central Office to permit maintenance personnel to communicate with the system from locations other than the MCC.
TTY21	This entry indicates whether LOCAL RCV is equipped. Local Recent Change and Verify is a general maintenance terminal. All commands can be executed from this terminal.
TTY22	This entry indicates whether REMOTE RCV is equipped. Remote Recent Change and Verify is a Recent Change only terminal. It is restricted to Recent Change commands.
TTY23	Software Release: 5E11 and later. This entry indicates whether the BALANCE feature is equipped.
TTY26	Software Release: 5E14 and later. This entry equips the CALEA Input TTY
TTY27	Software Release: 5E14 and later. This entry equips the CALEA Output TTY
TTY28	Software Release: 5E7 and later. This entry equips STLWS 7.
TTY29	Software Release: 5E7 and later. This entry equips STLWS 8.
TTY30	Software Release: 5E7 and later. This entry equips STLWS 9.
TTY31	Software Release: 5E7 and later. This entry equips STLWS 10.
TTY32	Software Release: 5E7 and later. This entry equips STLWS 11.
TTY33	Software Release: 5E7 and later. This entry equips STLWS 12.
TTY34	Software Release: 5E7 and later. This entry equips STLWS 13.
TTY43	This entry equips a OFFRECPRT (On-line Office Record Print Channel) terminal.
TTY45	This entry equips a COT (Customer Originated Trace) terminal.
TTY46	This entry equips a BELT LINE B terminal.
TTY50	Software Release: 5E7 and later. This entry equips STLWS 14.

2.59 LOGIN TERMINAL

Description: Will the terminal have password protection?

This field allows the terminal to provide password protection. Each TTY DEVICE TYPE, except TTY7, TTY23, TTY27, TTY43, and TTY45 (terminals with printers), must specify if a login terminal and password may be enabled.
Default: N
Valid Entries: Y, N

Data Rules:

An entry is not allowed in the LOGIN TERMINAL field when "SDL" is entered in the DEVICE TYPE field.

If any SDL device type, or TTY7, TTY23, TTY27 TTY43, or TTY45 is entered, LOGIN TERMINAL must be blank and AUTH CHK must be blank.

If DEVICE TYPE is "TTY26" then LOGIN must be "N".

2.60 AUTH CHK

Description: Enter the type of Authority Checking for Flexible IOP. Authority checking defines the type of device security. This feature allows input messages to be divided into categories corresponding to different maintenance or administrative job functions which can then be assigned to specific devices.

Software Release: 5E9(1) and later.
Valid Entries:

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Valid AUTH CHK Entries

Entry	Description
U	User. The device is configured to have both login/password and user authority. Users in this mode are restricted to executing commands in command groups assigned both to their login and to the device. If no restrictions are placed on the device, user restrictions still apply and command logging and alarming can still occur.
T	Terminal. The device is configured to have both login/password and terminal authority. Users in this mode are restricted to executing commands in command groups assigned to the device. If no restrictions are placed on the device, command logging and alarming can still occur.
N	None. The device is configured with login/password enabled but authority checking disabled. (This is the mode which existed prior to 5E9(1).) Access to terminals configured this way is blocked until the system administrator assigns logins via "admin". Devices configured with neither login nor authority checking have a terminal display with no login prompt and with no restrictions.

Data Rules:

If LOGIN TERMINAL is "N", AUTH CHK must be "T" or "N".

If LOGIN TERMINAL is "Y", AUTH CHK must be "T", "N", or "U".

if DEVICE TYPE is "TTY26" then AUTH CHK must be "t"

2.61 QTYOF LINES

Description: This field indicates the number of lines that will appear on the screen. A Teletypewriter Controller can control up to two teletypewriters.

Software Release: 5E6 and later
Valid Entries: 24 or 47

Data Rules:

A QTYOF LINES must be entered for all TTY types except DEVICE TYPES TTY7, TTY43, and TTY45 (terminals with printers).

2.62 BAUD RATE

Description: This field sets the data-link speed. For the AMA (Automatic Message Accounting) channels only, the data-link connection is also set. The entry depends on the application (i.e., DEVICE TYPE).
Valid Entries:

Valid BAUD RATE Entries

Entry	Device Type
2400, 4800, or 9600	SDL3.
4800dial, 9600dial, or 9600pri	SDL8 and SDL13 for TN75C.
56000sw or 56000pri	SDL8 and SDL13 for TN82.
300, 1200, 2400, 4800, 9600, or 19200	
blank	TTY27, TTY43, or TTY45, and all SDLs except SDL3, SDL8, and SDL13.

"Dial" refers to a dial-up phone line, "PRI" refers to a private phone line and "SW" refers to an Accunet-switched 5B (Lucent Techologies).

Data Rules:

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If the DEVICE TYPE used by a particular DEVICE CONTROLLER has a BAUD RATE of 9600, no other DEVICE TYPE can be assigned to that DEVICE CONTROLLER, except VCDX, DRM or MCC BOARD type of "UN583" or "UN597".

If the DEVICE TYPE is "SDL8" or "SDL13", the BAUD RATE must be entered. If the DEVICE TYPE is not "SDL3", " SDL8", or "SDL13", the BAUD RATE must be blank. Note that this restriction does not exist for MCC BOARD TYPE of "UN583" or "UN597".

2.63 TERM TYPE

Description: If the assigned DEVICE TYPE is a Supplementary Work Station ("TTY9" to "TTY14"), the TERM TYPE must be entered. If the DEVICE TYPE is not from " TTY9" to "TTY14", the TERM TYPE must not be entered.

Valid TERM TYPE Entries

Entry	Definition
BW	Black and White.
CL	Color.

VIRTUAL IOP SELECTION

The following fields (Section 2.64 - Section 2.66) are used to define Virtual TTYs for the DRM (Distinctive Remote Module). Only DRM currently supports the ordering of VIRTUAL TTYs. Virtual IOP Selection allows a user at an ASM (Administrative Services Module) that is remotely located from the DRM to open a window that acts as a cut-through to the DRM and provides UNIX, RC/V, or STLWS (Supplementary Trunk Line Work Station) functionality as if a local physical TTY was being used. For more information on the DRM feature see Division 2, Section 4A525.

2.64 VIOP/PC SLOT/P

Description: This field is a 4-digit number that defines the VIOP/PC/SLOT/P selection. Only VIOP 0 is currently supported. All four ports are valid.

Software Release: 5E14 and later
Valid Entries:

Valid IOP/PC/SLOT/P Entries

Component	Entry
IOP	0
PC	0, 1, 2 or 3
SLOT	0, 1, 2 or 3
PORT	0, 1, 2 or 3

Data Rules:

VIOP/PC/SLOT/P must be unique.

If VIOP/PC/SLOT is unique, VIRTUAL DEVICE CONTROLLER must be unique. If VIOP/PC/SLOT is not unique, VIRTUAL DEVICE CONTROLLER must not be unique.

When VIOP/PC/SLOT/P are entered, VIRTUAL DEVICE CONTROLLER must be entered.

When VIOP/PC/SLOT/P are entered, VIRTUAL DEVICE TYPE must be entered.

2.65 VIRTUAL DEVICE CONTROLLER

Description: Enter the VTTYC (Virtual Teletypewriter Controller).

Software Release: 5E14 and later
Valid Entries: VTTYC0-10 or VTTYC30-34

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Data Rules:

When VIRTUAL DEVICE CONTROLLER is entered, VIOP/PC/SLOT/P must be entered.

When VIRTUAL DEVICE CONTROLLER is entered, VIRTUAL DEVICE TYPE must be entered.

2.66 VIRTUAL DEVICE TYPE

Description: Enter the Virtual Device Type. VTTY7 (Traffic Printer), VTTY23 (Balance), VTTY43 (Office Records Printer), and VTTY45 (COT) are permanently assigned devices. The remaining VTTYs are dynamically provisioned as UNIX, RC/V, or STLWS when a cut-through window is requested.

Software Release: 5E14 and later
Valid Entries:

NOTE: Users are allowed to input the device type or the device name.

NOTE: VTTYs and TTYs with the same channel ids cannot be equipped at the same time.

TTY Device Type/Device Name Cross-Reference

Device Type	Name
VTTY0	
VTTY2	
VTTY7	VTRAFFPRT
VTTY9	
VTTY10	
VTTY11	
VTTY12	
VTTY13	
VTTY14	
VTTY22	
VTTY23	VBALANCE
VTTY28	
VTTY29	
VTTY30	
VTTY31	
VTTY32	
VTTY33	
VTTY34	
VTTY43	VOFFRECPRT
VTTY50	
VTTY56	
VTTY57	
VTTY58	
VTTY59	
VTTY60	
VTTY61	
VTTY62	
VTTY63	
VTTY64	
VTTY65	
VTTY66	

Data Rules:

VIRTUAL DEVICE TYPE must be unique.

When VIRTUAL DEVICE TYPE is entered, VIOP/PC/SLOT/P must be entered.

When VIRTUAL DEVICE TYPE is entered, VIRTUAL DEVICE CONTROLLER must be entered.

TTYs AND VTTYs THAT CANNOT BE EQUIPPED AT THE SAME TIME

PHYSICAL TTY	VIRTUAL TTY A	VIRTUAL TTY B
TTY7	VTTY7	
TTY22	VTTY22	
TTY23	VTTY23	
TTY43	VTTY43	
TTY45	VTTY45	
TTY9	VTTY9	VTTY62
TTY10	VTTY10	

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TTY11	VTTY11	
TTY12	VTTY12	
TTY13	VTTY13	
TTY14	VTTY14	
TTY28	VTTY28	
TTY29	VTTY29	
TTY30	VTTY30	
TTY31	VTTY31	
TTY32	VTTY32	VTTY63
TTY33	VTTY33	VTTY64
TTY34	VTTY34	VTTY65
TTY50	VTTY50	VTTY66

If the physical TTY is equipped, the virtual TTY(s) on that row cannot be equipped. If either of the virtual TTYs on a row are equipped, the physical TTY cannot be equipped.

```
SCREEN 1 OF 11                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

*1. KEY                 0
#2. CUSTOMER TYPE          ___          11. AUTO PWR RCVY        N
#3. TIME ZONE              ___               PROCESSOR MEMORY TYPE KLW
#4. VCDX                N          #13. PROCESSOR MEMORY SIZE 64
#5. VCDX ADDL SERIAL PORTS N          #14. UTIL CKT            _
#6. AIR EXTENSION          N          #15. AM ODD MEMORY SIZE  10240
 7. CM TYPE             CM2             DISK DRIVE TYPE       SCSI1GB
#8. IOMI BOARDS            _
 9. QGWP                N
#10. PROCESSOR MODEL       3B21D
```

```
SCREEN 2 OF 11                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

                      CNI EQUIPAGE

                                          LINK NODE
#17. RPCN000,320 N                        LINK     EQUIP     USAGE
                              26. LN018,338   N     34. ______
                    LINK NODE         27. LN017,337   N     35. ______
    LINK      EQUIP     USAGE         28. LN016,336   N     36. ______
#18. LN004,324   N     22. ______       29. LN015,335   N     37. ______
 19. LN003,323   N     23  ______       30. LN014,334   N     38. ______
 20. LN002,322   N     24. ______       31. LN013,333   N     39. ______
 21. LN001,321   N     25. ______       32. LN012,332   N     40. ______
                              33. LN011,331   N     41. ______
```

```
SCREEN 3 OF 11                5ESS SWITCH
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

        CNI EQUIPAGE
```

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```
                LINK NODE
   LINK      EQUIP    USAGE
42. LN028,348   N    50. ______
43. LN027,347   N    51. ______
44. LN026,346   N    52. ______
45. LN025,345   N    53. ______
46. LN024,344   N    54. ______
47. LN023,343   N    55. ______
48. LN022,342   N    56. ______
49. LN021,341   N    57. ______
```

```
SCREEN 4 OF 11              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

                          MOVING  HEAD  DISKS
 58. CLLI ____________                              EVEN  ODD
              DISK   EQUIPAGE  PCT SMODD/AMA  DISK      SPU   SPU
             MHD0,1       Y       R     MHD0,1       00   01
 DISK CONFIG 11      MHD2,3       Y       R     MHD2,3       02   03
             MHD4,5    #65. N    74. _     MHD4,5    83. __   __
             MHD6,7    #66. N    75. _     MHD6,7    85. __   __
  TOTAL SIZE (MB)    MHD8,9    #67. N    76. _     MHD8,9    87. __   __
 SM ODD      _____   MHD10,11  #68. N    77. _     MHD10,11  89. __   __
 AMA         _____   MHD12,13  #69. N    78. _     MHD12,13  91. __   __
 DISK ODD (KB) _____  MHD14    #70. _            MHD14     93. __
             MHD15    #71. _            MHD15          __
```

```
SCREEN 5 OF 11              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

SWITCHING CONTROL CENTER            MAGNETIC TAPE DEVICES
#95. SCC 0 Y                  #106. MT0     SCSI9TRK
 96. SCC 1 Y                  107. MT1    ____________________
                              108. MT1 SPU __

   SCAN POINT & SIGNAL              MAINTENANCE TELETYPEWRITER
  DISTRIBUTOR CONTROLLER          #109. MCC BOARD TYPE      _____
    SCSDC0  Y   #101. SCSDC45   Y   #110. MTTY TYPE          ATT/260C
#98. SCSDC1  Y   #102. SCSDC67   _    111. COLORSCAN2 LINE COUNT __
#99. SCSDC2  Y   #103. SCSDC89   Y    112. ALT BOOT DSK         N
#100. SCSDC3 Y   #104. SCSDC1011 Y
            105. SCSDC16   N      INPUT/OUTPUT PROCESSOR EQUIPAGE
                              #113. IOP2 N
                              #114. IOP3 N
```

```
SCREEN 6 OF 11              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS
```

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115. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
1.	____	_____	_____	_	_	__	_____	__
2.	____	_____	_____	_	_	__	_____	__
3.	____	_____	_____	_	_	__	_____	__
4.	____	_____	_____	_	_	__	_____	__
5.	____	_____	_____	_	_	__	_____	__
6.	____	_____	_____	_	_	__	_____	__
7.	____	_____	_____	_	_	__	_____	__
8.	____	_____	_____	_	_	__	_____	__
9.	____	_____	_____	_	_	__	_____	__
10.	____	_____	_____	_	_	__	_____	__

SCREEN 7 OF 11 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

115. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
11.	____	_____	_____	_	_	__	_____	__
12.	____	_____	_____	_	_	__	_____	__
13.	____	_____	_____	_	_	__	_____	__
14.	____	_____	_____	_	_	__	_____	__
15.	____	_____	_____	_	_	__	_____	__
16.	____	_____	_____	_	_	__	_____	__
17.	____	_____	_____	_	_	__	_____	__
18.	____	_____	_____	_	_	__	_____	__
19.	____	_____	_____	_	_	__	_____	__
20.	____	_____	_____	_	_	__	_____	__

SCREEN 8 OF 11 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

115. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
21.	____	_____	_____	_	_	__	_____	__
22.	____	_____	_____	_	_	__	_____	__
23.	____	_____	_____	_	_	__	_____	__
24.	____	_____	_____	_	_	__	_____	__
25.	____	_____	_____	_	_	__	_____	__
26.	____	_____	_____	_	_	__	_____	__
27.	____	_____	_____	_	_	__	_____	__
28.	____	_____	_____	_	_	__	_____	__
29.	____	_____	_____	_	_	__	_____	__
30.	____	_____	_____	_	_	__	_____	__

SCREEN 9 OF 11 5ESS Switch

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ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

115. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
31.	____	_____	_____	_ _	__	_____	__	
32.	____	_____	_____	_ _	__	_____	__	
33.	____	_____	_____	_ _	__	_____	__	
34.	____	_____	_____	_ _	__	_____	__	
35.	____	_____	_____	_ _	__	_____	__	
36.	____	_____	_____	_ _	__	_____	__	
37.	____	_____	_____	_ _	__	_____	__	
38.	____	_____	_____	_ _	__	_____	__	
39.	____	_____	_____	_ _	__	_____	__	
40.	____	_____	_____	_ _	__	_____	__	

SCREEN 10 OF 11 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

115. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
41.	____	_____	_____	_ _	__	_____	__	
42.	____	_____	_____	_ _	__	_____	__	
43.	____	_____	_____	_ _	__	_____	__	
44.	____	_____	_____	_ _	__	_____	__	
45.	____	_____	_____	_ _	__	_____	__	
46.	____	_____	_____	_ _	__	_____	__	
47.	____	_____	_____	_ _	__	_____	__	
48.	____	_____	_____	_ _	__	_____	__	
49.	____	_____	_____	_ _	__	_____	__	
50.	____	_____	_____	_ _	__	_____	__	

SCREEN 11 OF 11 5ESS Switch _
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

115. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
51.	____	_____	_____	_ _	__	_____	__	
52.	____	_____	_____	_ _	__	_____	__	
53.	____	_____	_____	_ _	__	_____	__	
54.	____	_____	_____	_ _	__	_____	__	
55.	____	_____	_____	_ _	__	_____	__	
56.	____	_____	_____	_ _	__	_____	__	
57.	____	_____	_____	_ _	__	_____	__	
58.	____	_____	_____	_ _	__	_____	__	
59.	____	_____	_____	_ _	__	_____	__	

Figure 1 SAMPLE ECDOPT FORM 5E13 SOFTWARE RELEASE

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```
SCREEN 1 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

*1. KEY                 _
#2. AT&T LONG DISTANCE  _          12. AUTO PWR RCVY        _
#3. TIME ZONE           ___          PROCESSOR MEMORY TYPE ______
#4. VCDX                _            PROCESSOR MEMORY SIZE ___
#5. DRM                 _         #15. UTIL CKT            _
#6. ADDL SERIAL PORTS   _          #16. AM ODD MEMORY SIZE  _____
 7. AIR EXTENSION       _            DISK DRIVE TYPE        __________
 8. CM TYPE             ____
#9. IOMI BOARDS         _
```

```
SCREEN 2 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

                    CNI EQUIPAGE

                                        LINK NODE
#18. RPCN000,320 _                      LINK    EQUIP    USAGE
                              27. LN018,338  _    35. ______
                 LINK NODE    28. LN017,337  _    36. ______
    LINK    EQUIP    USAGE    29. LN016,336  _    37. ______
#19. LN004,324  _    23. ______  30. LN015,335  _    38. ______
 20. LN003,323  _    24  ______  31. LN014,334  _    39. ______
 21. LN002,322  _    25. ______  32. LN013,333  _    40. ______
 22. LN001,321  _    26. ______  33. LN012,332  _    41. ______
                              34. LN011,331  _    42. ______
```

```
SCREEN 3 OF 18              5ESS SWITCH
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

        CNI EQUIPAGE

                LINK NODE
   LINK    EQUIP    USAGE
43. LN028,348  _    51. ______
44. LN027,347  _    52. ______
45. LN026,346  _    53. ______
46. LN025,345  _    54. ______
47. LN024,344  _    55. ______
48. LN023,343  _    56. ______
49. LN022,342  _    57. ______
50. LN021,341  _    58. ______
```

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```
SCREEN 4 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

                          MOVING  HEAD  DISKS
59. CLLI _____________                          EVEN  ODD
              DISK   EQUIPAGE  PCT SMODD/AMA  DISK      SPU   SPU
             MHD0,1        _       _     MHD0,1        __   __
DISK CONFIG __       MHD2,3        _       _      MHD2,3        __   __
             MHD4,5    #66. _     75. _     MHD4,5    84. __   __
             MHD6,7    #67. _     76. _     MHD6,7    86. __   __
 TOTAL SIZE (MB)     MHD8,9    #68. _     77. _     MHD8,9    88. __   __
SM ODD       _____   MHD10,11  #69. _     78. _     MHD10,11  90. __   __
AMA          _____    MHD12,13  #70. _     79. _     MHD12,13  92. __   __
DISK ODD (KB) _____   MHD14     #71. _             MHD14     94. __
             MHD15     #72. _             MHD15           __
```

```
SCREEN 5 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

SWITCHING CONTROL CENTER            MAGNETIC TAPE DEVICES
#96. SCC 0 _                  #107. MT0    _____________________
 97. SCC 1 _                  108. MT1     _____________________
                             109. MT1 SPU __

   SCAN POINT & SIGNAL              MAINTENANCE TELETYPEWRITER
  DISTRIBUTOR CONTROLLER                 MCC BOARD TYPE       _____
    SCSDC0  _   #102. SCSDC45   _   #111. MTTY TYPE          _____________
#99. SCSDC1  _   #103. SCSDC67   _    112. COLORSCAN2 LINE COUNT __
#100. SCSDC2 _   #104. SCSDC89   _    113. ALT BOOT DSK        _
#101. SCSDC3 _   #105. SCSDC1011 _
            106. SCSDC16   _      INPUT/OUTPUT PROCESSOR EQUIPAGE
                          #114. IOP2 _
                          #115. IOP3 _
```

```
SCREEN 6 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

                    116. FLEXIBLE IOP SELECTION
  IOP/PC    DEVICE     DEVICE    LOGIN  AUTH  QTYOF   BAUD   TERM
  SLOT/P  CONTROLLER    TYPE   TERMINAL CHK   LINES   RATE   TYPE
 1. ____   ______   _________   _    _    __  ________  __
 2. ____   ______   _________   _    _    __  ________  __
 3. ____   ______   _________   _    _    __  ________  __
 4. ____   ______   _________   _    _    __  ________  __
 5. ____   ______   _________   _    _    __  ________  __
 6. ____   ______   _________   _    _    __  ________  __
 7. ____   ______   _________   _    _    __  ________  __
 8. ____   ______   _________   _    _    __  ________  __
 9. ____   ______   _________   _    _    __  ________  __
```

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10. ____ _____ _____ _ _ __ _____ __

SCREEN 7 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

116. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
11.	____	_____	_____	_	_	__	_____	__
12.	____	_____	_____	_	_	__	_____	__
13.	____	_____	_____	_	_	__	_____	__
14.	____	_____	_____	_	_	__	_____	__
15.	____	_____	_____	_	_	__	_____	__
16.	____	_____	_____	_	_	__	_____	__
17.	____	_____	_____	_	_	__	_____	__
18.	____	_____	_____	_	_	__	_____	__
19.	____	_____	_____	_	_	__	_____	__
20.	____	_____	_____	_	_	__	_____	__

SCREEN 8 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

116. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
21.	____	_____	_____	_	_	__	_____	__
22.	____	_____	_____	_	_	__	_____	__
23.	____	_____	_____	_	_	__	_____	__
24.	____	_____	_____	_	_	__	_____	__
25.	____	_____	_____	_	_	__	_____	__
26.	____	_____	_____	_	_	__	_____	__
27.	____	_____	_____	_	_	__	_____	__
28.	____	_____	_____	_	_	__	_____	__
29.	____	_____	_____	_	_	__	_____	__
30.	____	_____	_____	_	_	__	_____	__

SCREEN 9 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

116. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
31.	____	_____	_____	_	_	__	_____	__
32.	____	_____	_____	_	_	__	_____	__
33.	____	_____	_____	_	_	__	_____	__
34.	____	_____	_____	_	_	__	_____	__
35.	____	_____	_____	_	_	__	_____	__
36.	____	_____	_____	_	_	__	_____	__

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37. ____ _____ _____ _ _ __ _____ __
38. ____ _____ _____ _ _ __ _____ __
39. ____ _____ _____ _ _ __ _____ __
40. ____ _____ _____ _ _ __ _____ __

SCREEN 10 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

116. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
41.	____	_____	_____	_	_	__	_____	__
42.	____	_____	_____	_	_	__	_____	__
43.	____	_____	_____	_	_	__	_____	__
44.	____	_____	_____	_	_	__	_____	__
45.	____	_____	_____	_	_	__	_____	__
46.	____	_____	_____	_	_	__	_____	__
47.	____	_____	_____	_	_	__	_____	__
48.	____	_____	_____	_	_	__	_____	__
49.	____	_____	_____	_	_	__	_____	__
50.	____	_____	_____	_	_	__	_____	__

SCREEN 11 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

116. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
51.	____	_____	_____	_	_	__	_____	__
52.	____	_____	_____	_	_	__	_____	__
53.	____	_____	_____	_	_	__	_____	__
54.	____	_____	_____	_	_	__	_____	__
55.	____	_____	_____	_	_	__	_____	__
56.	____	_____	_____	_	_	__	_____	__
57.	____	_____	_____	_	_	__	_____	__
58.	____	_____	_____	_	_	__	_____	__
59.	____	_____	_____	_	_	__	_____	__

SCREEN 12 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

171. VIRTUAL IOP SELECTION

	VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	VIRTUAL DEVICE TYPE
1.	____	_____	_____
2.	____	_____	_____
3.	____	_____	_____

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4. ____ _____ _____
5. ____ _____ _____
6. ____ _____ _____
7. ____ _____ _____
8. ____ _____ _____
9. ____ _____ _____
10. ____ _____ _____

SCREEN 13 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

171. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
11.	____	_____	_____
12.	____	_____	_____
13.	____	_____	_____
14.	____	_____	_____
15.	____	_____	_____
16.	____	_____	_____
17.	____	_____	_____
18.	____	_____	_____
19.	____	_____	_____
20.	____	_____	_____

SCREEN 14 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

171. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
21.	____	_____	_____
22.	____	_____	_____
23.	____	_____	_____
24.	____	_____	_____
25.	____	_____	_____
26.	____	_____	_____
27.	____	_____	_____
28.	____	_____	_____
29.	____	_____	_____
30.	____	_____	_____

SCREEN 15 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

171. VIRTUAL IOP SELECTION

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```
          VIRTUAL    VIRTUAL
  VIOP/PC  DEVICE     DEVICE
  SLOT/P  CONTROLLER    TYPE
 31.____   _______  __________
 32.____   _______  __________
 33.____   _______  __________
 34.____   _______  __________
 35.____   _______  __________
 36.____   _______  __________
 37.____   _______  __________
 38.____   _______  __________
 39.____   _______  __________
 40.____   _______  __________
```

```
SCREEN 16 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                    ECD OPTIONS

                 171. VIRTUAL IOP SELECTION
          VIRTUAL    VIRTUAL
  VIOP/PC  DEVICE     DEVICE
  SLOT/P  CONTROLLER    TYPE
 41.____   _______  __________
 42.____   _______  __________
 43.____   _______  __________
 44.____   _______  __________
 45.____   _______  __________
 46.____   _______  __________
 47.____   _______  __________
 48.____   _______  __________
 49.____   _______  __________
 50.____   _______  __________
```

```
SCREEN 17 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                    ECD OPTIONS

                 171. VIRTUAL IOP SELECTION
          VIRTUAL    VIRTUAL
  VIOP/PC  DEVICE
  SLOT/P  CONTROLLER    TYPE
 51.____   _______  __________
 52.____   _______  __________
 53.____   _______  __________
 54.____   _______  __________
 55.____   _______  __________
 56.____   _______  __________
 57.____   _______  __________
 58.____   _______  __________
 59.____   _______  __________
 60.____   _______  __________
```

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```
SCREEN 18 OF 18              5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

                  171. VIRTUAL IOP SELECTION
          VIRTUAL    VIRTUAL
  VIOP/PC  DEVICE     DEVICE
  SLOT/P  CONTROLLER    TYPE
 61.____   _______  __________
 62.____   _______  __________
 63.____   _______  __________
 64.____   _______  __________
```

Figure 2 SAMPLE ECDOPT FORM 5E14 SOFTWARE RELEASE

```
SCREEN 1 OF 18               5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

*1. KEY                0
#2. AT&T LONG DISTANCE    Y          12. AUTO PWR RCVY       N
#3. TIME ZONE           -5           PROCESSOR MEMORY TYPE KLW
#4. VCDX                N            PROCESSOR MEMORY SIZE 128
#5. DRM                 N          #15. UTIL CKT           Y
#6. ADDL SERIAL PORTS   N            AM ODD MEMORY SIZE   10240
 7. AIR EXTENSION       N            DISK DRIVE TYPE      SCSI2GB
 8. CM TYPE             CM3
#9. IOMI BOARDS         _
 10. QGWP               N
#11. PROCESSOR MODEL    3B21D
```

```
SCREEN 2 OF 18               5ESS Switch
ecdopt              OFFICE DATA ADMINISTRATION
(5706)                   ECD OPTIONS

                      CNI EQUIPAGE

                                        LINK NODE
#18. RPCN000,320 N                      LINK    EQUIP    USAGE
                              27. LN018,338   N    35. _______
                   LINK NODE  28. LN017,337   N    36. _______
    LINK    EQUIP    USAGE    29. LN016,336   N    37. _______
#19. LN004,324   N   23. _____  30. LN015,335   N    38. _______
 20. LN003,323   N   24 _____   31. LN014,334   N    39. _______
 21. LN002,322   N   25. _____  32. LN013,333   N    40. _______
 22. LN001,321   N   26. _____  33. LN012,332   N    41. _______
                              34. LN011,331   N    42. _______
```

```
SCREEN 3 OF 18               5ESS SWITCH
ecdopt              OFFICE DATA ADMINISTRATION
```

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```
(5706)                    ECD OPTIONS

        CNI EQUIPAGE                    TCP/IP DATALINK SELECTION

                  LINK NODE             59. TRFM RNM OPT  NONE
    LINK      EQUIP    USAGE
43. LN028,348   N     51. _______
44. LN027,347   N     52. _______
45. LN026,346   N     53. _______
46. LN025,345   N     54. _______
47. LN024,344   N     55. _______
48. LN023,343   N     56. _______
49. LN022,342   N     57. _______
50. LN021,341   N     58. _______
```

```
SCREEN 4 OF 18                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                    ECD OPTIONS

                              MOVING  HEAD  DISKS
 60. CLLI _____________                                  EVEN  ODD
                  DISK   EQUIPAGE  PCT SMODD/AMA  DISK      SPU   SPU
                 MHD0,1        Y        R     MHD0,1       00   01
 DISK CONFIG 21       MHD2,3        Y        R     MHD2,3       02   03
                 MHD4,5    #67. N     76. _     MHD4,5    85. __   __
                 MHD6,7    #68. N     77. _     MHD6,7    87. __   __
  TOTAL SIZE (MB)     MHD8,9    #69. N     78. _     MHD8,9    89. __   __
 SM ODD        ____    MHD10,11  #70. N     79. _     MHD10,11  91. __   __
 AMA           ____    MHD12,13  #71. N     80. _     MHD12,13  93. __   __
 DISK ODD (KB) _____   MHD14     #72. Y             MHD14     95. __
                 MHD15     #73. Y             MHD15             __
```

```
SCREEN 5 OF 18                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                    ECD OPTIONS

SWITCHING CONTROL CENTER              MAGNETIC TAPE DEVICES
 #97. SCC 0 Y                    #108. MT0     SCSI9TRK
  98. SCC 1 Y                    109. MT1    _____________________
                                 110. MT1 SPU __

   SCAN POINT & SIGNAL                MAINTENANCE TELETYPEWRITER
  DISTRIBUTOR CONTROLLER                MCC BOARD TYPE        UN597
 #99. SCSDC0 Y   #103. SCSDC45   N   #112. MTTY TYPE           ATT/260C
 #100. SCSDC1Y   #104. SCSDC67   Y    113. COLORSCAN2 LINE COUNT __
#101. SCSDC2 Y   #105. SCSDC89   Y    114. ALT BOOT DSK         N
#102. SCSDC3 Y   #106. SCSDC1011 Y
              107. SCSDC16   N      INPUT/OUTPUT PROCESSOR EQUIPAGE
                                 #115. IOP2 N
                                 #116. IOP3 N
```

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SCREEN 6 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
1.	____	_____	_____	_	_	__	_____	__
2.	____	_____	_____	_	_	__	_____	__
3.	____	_____	_____	_	_	__	_____	__
4.	____	_____	_____	_	_	__	_____	__
5.	____	_____	_____	_	_	__	_____	__
6.	____	_____	_____	_	_	__	_____	__
7.	____	_____	_____	_	_	__	_____	__
8.	____	_____	_____	_	_	__	_____	__
9.	____	_____	_____	_	_	__	_____	__
10.	____	_____	_____	_	_	__	_____	__

SCREEN 7 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
11.	____	_____	_____	_	_	__	_____	__
12.	____	_____	_____	_	_	__	_____	__
13.	____	_____	_____	_	_	__	_____	__
14.	____	_____	_____	_	_	__	_____	__
15.	____	_____	_____	_	_	__	_____	__
16.	____	_____	_____	_	_	__	_____	__
17.	____	_____	_____	_	_	__	_____	__
18.	____	_____	_____	_	_	__	_____	__
19.	____	_____	_____	_	_	__	_____	__
20.	____	_____	_____	_	_	__	_____	__

SCREEN 8 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
21.	____	_____	_____	_	_	__	_____	__
22.	____	_____	_____	_	_	__	_____	__
23.	____	_____	_____	_	_	__	_____	__
24.	____	_____	_____	_	_	__	_____	__
25.	____	_____	_____	_	_	__	_____	__
26.	____	_____	_____	_	_	__	_____	__
27.	____	_____	_____	_	_	__	_____	__
28.	____	_____	_____	_	_	__	_____	__
29.	____	_____	_____	_	_	__	_____	__

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30. ____ _____ _____ _ _ __ _____ __

SCREEN 9 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
31.	____	_____	_____	_	_	__	_____	__
32.	____	_____	_____	_	_	__	_____	__
33.	____	_____	_____	_	_	__	_____	__
34.	____	_____	_____	_	_	__	_____	__
35.	____	_____	_____	_	_	__	_____	__
36.	____	_____	_____	_	_	__	_____	__
37.	____	_____	_____	_	_	__	_____	__
38.	____	_____	_____	_	_	__	_____	__
39.	____	_____	_____	_	_	__	_____	__
40.	____	_____	_____	_	_	__	_____	__

SCREEN 10 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
41.	____	_____	_____	_	_	__	_____	__
42.	____	_____	_____	_	_	__	_____	__
43.	____	_____	_____	_	_	__	_____	__
44.	____	_____	_____	_	_	__	_____	__
45.	____	_____	_____	_	_	__	_____	__
46.	____	_____	_____	_	_	__	_____	__
47.	____	_____	_____	_	_	__	_____	__
48.	____	_____	_____	_	_	__	_____	__
49.	____	_____	_____	_	_	__	_____	__
50.	____	_____	_____	_	_	__	_____	__

SCREEN 11 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
51.	____	_____	_____	_	_	__	_____	__
52.	____	_____	_____	_	_	__	_____	__
53.	____	_____	_____	_	_	__	_____	__
54.	____	_____	_____	_	_	__	_____	__
55.	____	_____	_____	_	_	__	_____	__
56.	____	_____	_____	_	_	__	_____	__

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57. ____ _____ _____ _ _ __ _____ __
58. ____ _____ _____ _ _ __ _____ __
59. ____ _____ _____ _ _ __ _____ __

SCREEN 12 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
1.	____	_____	_____
2.	____	_____	_____
3.	____	_____	_____
4.	____	_____	_____
5.	____	_____	_____
6.	____	_____	_____
7.	____	_____	_____
8.	____	_____	_____
9.	____	_____	_____
10.	____	_____	_____

SCREEN 13 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
11.	____	_____	_____
12.	____	_____	_____
13.	____	_____	_____
14.	____	_____	_____
15.	____	_____	_____
16.	____	_____	_____
17.	____	_____	_____
18.	____	_____	_____
19.	____	_____	_____
20.	____	_____	_____

SCREEN 14 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
21.	____	_____	_____

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22. ____ _____ _____
23. ____ _____ _____
24. ____ _____ _____
25. ____ _____ _____
26. ____ _____ _____
27. ____ _____ _____
28. ____ _____ _____
29. ____ _____ _____
30. ____ _____ _____

SCREEN 15 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
31.	____	_____	_____
32.	____	_____	_____
33.	____	_____	_____
34.	____	_____	_____
35.	____	_____	_____
36.	____	_____	_____
37.	____	_____	_____
38.	____	_____	_____
39.	____	_____	_____
40.	____	_____	_____

SCREEN 16 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
41.	____	_____	_____
42.	____	_____	_____
43.	____	_____	_____
44.	____	_____	_____
45.	____	_____	_____
46.	____	_____	_____
47.	____	_____	_____
48.	____	_____	_____
49.	____	_____	_____
50.	____	_____	_____

SCREEN 17 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

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172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
51.	____	_____	_____
52.	____	_____	_____
53.	____	_____	_____
54.	____	_____	_____
55.	____	_____	_____
56.	____	_____	_____
57.	____	_____	_____
58.	____	_____	_____
59.	____	_____	_____
60.	____	_____	_____

SCREEN 18 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
61.	____	_____	_____
62.	____	_____	_____
63.	____	_____	_____
64.	____	_____	_____

Figure 3 SAMPLE ECDOPT FORM 5E15 SOFTWARE RELEASE

SCREEN 1 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

*1. KEY 0
#2. AT&T LONG DISTANCE Y 12. AUTO PWR RCVY N
#3. TIME ZONE -5 PROCESSOR MEMORY TYPE KLW
#4. VCDX N PROCESSOR MEMORY SIZE 128
#5. DRM N #15. UTIL CKT Y
#6. ADDL SERIAL PORTS N AM ODD MEMORY SIZE 10240
7. AIR EXTENSION N DISK DRIVE TYPE SCSI2GB
8. CM TYPE CM3
9. IOMI BOARDS 1
10. QGWP N
#11. PROCESSOR MODEL 3B21D

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```
SCREEN 2 OF 18                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

                        CNI EQUIPAGE

                                                LINK NODE
#18. RPCN000,320 N                              LINK     EQUIP     USAGE
                                  27. LN018,338   N     35. _______
                       LINK NODE        28. LN017,337   N     36. _______
    LINK      EQUIP     USAGE          29. LN016,336   N     37. _______
#19. LN004,324   N    23. _______       30. LN015,335   N     38. _______
 20. LN003,323   N    24 _______        31. LN014,334   N     39. _______
 21. LN002,322   N    25. _______       32. LN013,333   N     40. _______
 22. LN001,321   N    26. _______       33. LN012,332   N     41. _______
                                  34. LN011,331   N     42. _______
```

```
SCREEN 3 OF 18                5ESS SWITCH
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

       CNI EQUIPAGE                    TCP/IP DATALINK SELECTION

                 LINK NODE             59. TRFM RNM OPT  NONE
    LINK      EQUIP     USAGE
43. LN028,348   N    51. _______
44. LN027,347   N    52. _______
45. LN026,346   N    53. _______
46. LN025,345   N    54. _______
47. LN024,344   N    55. _______
48. LN023,343   N    56. _______
49. LN022,342   N    57. _______
50. LN021,341   N    58. _______
```

```
SCREEN 4 OF 18                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

                          MOVING  HEAD  DISKS
 60. CLLI _____________                          EVEN  ODD
```

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```
                 DISK   EQUIPAGE  PCT SMODD/AMA  DISK      SPU   SPU
                MHD0,1       Y       R     MHD0,1       00   01
DISK CONFIG 22  MHD2,3       Y       R     MHD2,3       02   03
                MHD4,5   #67. N    76. _     MHD4,5    85. __   __
                MHD6,7   #68. N    77. _     MHD6,7    87. __   __
 TOTAL SIZE (MB)  MHD8,9   #69. N    78. _     MHD8,9    89. __   __
SM ODD       ____   MHD10,11  #70. N    79. _     MHD10,11  91. __   __
AMA          ____   MHD12,13  #71. N    80. _     MHD12,13  93. __   __
DISK ODD (KB) _____   MHD14    #72. _             MHD14     95. __
                MHD15    #73. _             MHD15           __
```

```
SCREEN 5 OF 18                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

SWITCHING CONTROL CENTER              MAGNETIC TAPE DEVICES
 #97. SCC 0 Y                    #108. MT0     SCSI9TRK
  98. SCC 1 Y                    109. MT1      _____________________
                                 110. MT1 SPU __

   SCAN POINT & SIGNAL                MAINTENANCE TELETYPEWRITER
  DISTRIBUTOR CONTROLLER                MCC BOARD TYPE        UN597
 #99. SCSDC0 Y   #103. SCSDC45   N   #112. MTTY TYPE           ATT/260C
#100. SCSDC1 Y   #104. SCSDC67   _    113. COLORSCAN2 LINE COUNT __
#101. SCSDC2 Y   #105. SCSDC89   Y    114. ALT BOOT DSK         N
#102. SCSDC3 Y   #106. SCSDC1011 N
              107. SCSDC16   N      INPUT/OUTPUT PROCESSOR EQUIPAGE
                                 #115. IOP2 N
                                 #116. IOP3 N
```

```
SCREEN 6 OF 18                5ESS Switch
ecdopt                OFFICE DATA ADMINISTRATION
(5706)                     ECD OPTIONS

                      117. FLEXIBLE IOP SELECTION
  IOP/PC    DEVICE      DEVICE     LOGIN  AUTH  QTYOF   BAUD   TERM
  SLOT/P  CONTROLLER     TYPE    TERMINAL CHK   LINES   RATE   TYPE
 1. ____   ______   _________    _    _    __  ________  __
 2. ____   ______   _________    _    _    __  ________  __
 3. ____   ______   _________    _    _    __  ________  __
 4. ____   ______   _________    _    _    __  ________  __
 5. ____   ______   _________    _    _    __  ________  __
```

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6. ____ _____ _____ _ _ __ _____ __
7. ____ _____ _____ _ _ __ _____ __
8. ____ _____ _____ _ _ __ _____ __
9. ____ _____ _____ _ _ __ _____ __
10. ____ _____ _____ _ _ __ _____ __

SCREEN 7 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
11.	____	_____	_____	_ _	__	_____	_____	__
12.	____	_____	_____	_ _	__	_____	_____	__
13.	____	_____	_____	_ _	__	_____	_____	__
14.	____	_____	_____	_ _	__	_____	_____	__
15.	____	_____	_____	_ _	__	_____	_____	__
16.	____	_____	_____	_ _	__	_____	_____	__
17.	____	_____	_____	_ _	__	_____	_____	__
18.	____	_____	_____	_ _	__	_____	_____	__
19.	____	_____	_____	_ _	__	_____	_____	__
20.	____	_____	_____	_ _	__	_____	_____	__

SCREEN 8 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
21.	____	_____	_____	_ _	__	_____	_____	__
22.	____	_____	_____	_ _	__	_____	_____	__
23.	____	_____	_____	_ _	__	_____	_____	__
24.	____	_____	_____	_ _	__	_____	_____	__
25.	____	_____	_____	_ _	__	_____	_____	__
26.	____	_____	_____	_ _	__	_____	_____	__
27.	____	_____	_____	_ _	__	_____	_____	__
28.	____	_____	_____	_ _	__	_____	_____	__
29.	____	_____	_____	_ _	__	_____	_____	__
30.	____	_____	_____	_ _	__	_____	_____	__

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SCREEN 9 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
31.	____	_____	_____	_ _	__	_____	__	
32.	____	_____	_____	_ _	__	_____	__	
33.	____	_____	_____	_ _	__	_____	__	
34.	____	_____	_____	_ _	__	_____	__	
35.	____	_____	_____	_ _	__	_____	__	
36.	____	_____	_____	_ _	__	_____	__	
37.	____	_____	_____	_ _	__	_____	__	
38.	____	_____	_____	_ _	__	_____	__	
39.	____	_____	_____	_ _	__	_____	__	
40.	____	_____	_____	_ _	__	_____	__	

SCREEN 10 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
41.	____	_____	_____	_ _	__	_____	__	
42.	____	_____	_____	_ _	__	_____	__	
43.	____	_____	_____	_ _	__	_____	__	
44.	____	_____	_____	_ _	__	_____	__	
45.	____	_____	_____	_ _	__	_____	__	
46.	____	_____	_____	_ _	__	_____	__	
47.	____	_____	_____	_ _	__	_____	__	
48.	____	_____	_____	_ _	__	_____	__	
49.	____	_____	_____	_ _	__	_____	__	
50.	____	_____	_____	_ _	__	_____	__	

SCREEN 11 OF 18 5ESS Switch

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(5706) ECD OPTIONS

117. FLEXIBLE IOP SELECTION

	IOP/PC SLOT/P	DEVICE CONTROLLER	DEVICE TYPE	LOGIN TERMINAL	AUTH CHK	QTYOF LINES	BAUD RATE	TERM TYPE
51.	____	_____	_____	_	_	__	_____	__
52.	____	_____	_____	_	_	__	_____	__
53.	____	_____	_____	_	_	__	_____	__
54.	____	_____	_____	_	_	__	_____	__
55.	____	_____	_____	_	_	__	_____	__
56.	____	_____	_____	_	_	__	_____	__
57.	____	_____	_____	_	_	__	_____	__
58.	____	_____	_____	_	_	__	_____	__
59.	____	_____	_____	_	_	__	_____	__

SCREEN 12 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	VIRTUAL DEVICE TYPE
1.	____	_____	_____
2.	____	_____	_____
3.	____	_____	_____
4.	____	_____	_____
5.	____	_____	_____
6.	____	_____	_____
7.	____	_____	_____
8.	____	_____	_____
9.	____	_____	_____
10.	____	_____	_____

SCREEN 13 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

VIOP/PC	VIRTUAL DEVICE
SLOT/P	CONTROLLER

	VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	VIRTUAL DEVICE TYPE
11.	____	_____	_____
12.	____	_____	_____
13.	____	_____	_____
14.	____	_____	_____
15.	____	_____	_____
16.	____	_____	_____
17.	____	_____	_____
18.	____	_____	_____
19.	____	_____	_____
20.	____	_____	_____

SCREEN 14 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	VIRTUAL DEVICE TYPE
21.	____	_____	_____
22.	____	_____	_____
23.	____	_____	_____
24.	____	_____	_____
25.	____	_____	_____
26.	____	_____	_____
27.	____	_____	_____
28.	____	_____	_____
29.	____	_____	_____
30.	____	_____	_____

SCREEN 15 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	VIRTUAL DEVICE TYPE
31.	____	_____	_____
32.	____	_____	_____
33.	____	_____	_____
34.	____	_____	_____
35.	____	_____	_____

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36. ____ _____ _____
37. ____ _____ _____
38. ____ _____ _____
39. ____ _____ _____
40. ____ _____ _____

SCREEN 16 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
41.	____	_____	_____
42.	____	_____	_____
43.	____	_____	_____
44.	____	_____	_____
45.	____	_____	_____
46.	____	_____	_____
47.	____	_____	_____
48.	____	_____	_____
49.	____	_____	_____
50.	____	_____	_____

SCREEN 17 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIRTUAL VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	DEVICE TYPE
51.	____	_____	_____
52.	____	_____	_____
53.	____	_____	_____
54.	____	_____	_____
55.	____	_____	_____
56.	____	_____	_____
57.	____	_____	_____
58.	____	_____	_____
59.	____	_____	_____
60.	____	_____	_____

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SCREEN 18 OF 18 5ESS Switch
ecdopt OFFICE DATA ADMINISTRATION
(5706) ECD OPTIONS

172. VIRTUAL IOP SELECTION

	VIOP/PC SLOT/P	VIRTUAL DEVICE CONTROLLER	VIRTUAL DEVICE TYPE
61.	____	_____	_____
62.	____	_____	_____
63.	____	_____	_____
64.	____	_____	_____

Figure 4 SAMPLE ECDOPT FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 9: 5710 RECORD
LINE UNIT EQUIPAGE FORM - EQLU

1. GENERAL

The 5710 Record is available with 5E2 and later Software Releases. It is used to define SM (Switching Module) and LU (Line Unit) assignments in a 5ESS Switch.

1.1 Recent Change View

The Recent Change View for this form is 19.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Each value entered in this field on the EQLU or EQLUP forms must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports Line Units.

2.3 *LINE UNIT

Description: Enter the Line Unit Number.

NOTE: For 5E9(2) and later, 0 - 7 is used for SMs; 0 - 42 is used for SM-2000.

Required Field.
Valid Entries:
- 5E9(1) and earlier: 0 - 7
- 5E9(2) and later: 0 - 42

Data Rules:

If LINE UNIT is greater than 7, LINE UNIT TYPE must be "4AC1" (Model 2), or "4AD1" (Model 3).

Line Units share the same unit number range with (R)ISLUs and IDCUs. Therefore, unit numbers assigned on this form may not be assigned on any EQISLU, EQRISLU, or EQIDCU form with the same SM number.

2.4 #EQUIPMENT STATUS

Description: Enter the status of the equipment. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid.

Required Field.

Valid EQUIPMENT STATUS Entries

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Entry	Definition
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

For 5E9(2) and later, the EQSTAT on a matching EQDI form (where DATA GROUP on this form is defined as DI on the EQDI form) must be greater than or equal to the EQUIPMENT STATUS value on this form (i.e., "O" is greater than "G" which is greater than "U").

2.5 #LINE UNIT TYPE

Description: Enter the Line Unit Type. The Line Unit Type corresponds to the last four characters of the J-Drawing identifying number.

Required Field.

Valid LINE UNIT TYPE Entries

Entry	Description
4AB1	2-Shelf Model 1 Line Unit.
4AC1 or 4AC2	2-Shelf Model 2 Line Unit.
4AD1	2-Shelf Model 3 Line Unit. Provides a 10:1 concentration ratio.

Data Rules:

For 5E9(2) and later, if UNIT TYPE on the EQIM form (5700 Record) is "SM2000", LINE UNIT TYPE must be "4AD1".

2.6 #EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries:

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinent aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

Data Rules:

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

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2.7 #UNIT VERTICAL

Description: Enter the Vertical Equipment Location that specifies the bottom of the unit. The recommended values for this are:

- 5E9(1) and earlier: 15, 24, 32, 41, 49, 58, 69, 76
- 5E9(2) and later: 7, 15, 24, 32, 41, 49, 58, 69, 76

Required Field.
Valid Entries: 0 - 84

2.8 #EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.9 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

SERVICE GROUPS 0 and 1

The following fields (Section 2.10 - Section 2.14) define the Control and Data Groups, the Control and Data Ports, and the Metallic Test Buses for Service Groups 0 and 1. All five entries for each Service Group must be assigned.

2.10 CONTROL GROUP

Description: Enter the Control Group Number.

- ***NOTE:*** For 5E9(2) and later, 0 - 1 is used for SMs; 0 - 3 is used for SM-2000.

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Required Field.
Valid Entries:
- 5E9(1) and earlier: 0 - 1
- 5E9(2) and later: 0 - 3

Data Rules:

The combination of Control Group and Control Port values must be unique for the two Service Groups.

The Control Group value must be the same for both Service Groups 0 and 1.

For 5E9(1) and earlier, if CONTROL GROUP is 0 for a SWITCHING MODULE (defined on an EQIM form) where UNIT TYPE is not "SM2000"), CONTROL PORT may not be 0 or 1; these ports are reserved for the LDSU (Local Digital Service Unit).

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.11 # CONTROL PORT

Description: Enter the Control Port Number. Even numbered Control Ports are in Service Group 0. Odd numbered Control Ports are in Service Group 1.

Required Field.
Valid Entries: 0 - 22

Data Rules:

The Control Group Number and Control Port Number combination must be unique for the two Service Groups.

Control Port 22 may not be assigned since consecutive even/odd Control Ports are required and Control Port 23 is invalid.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.12 #DATA GROUP

Description: Enter the Data Group Number.

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NOTE: For 5E9(2) and later, 0 - 1 is used for SMs; 0 - 5 is used for SM-2000.

Required Field.

Valid Entries:

- 5E9(1) and earlier: 0 - 1
- 5E9(2) and later: 0 - 5

Data Rules:

The Data Group value must be the same for both Service Groups 0 and 1.

For 5E9(2) and later, the Data Group value must be defined as DI on an EQDI form (5849 Record).

For 5E9(1) and earlier the combination of DATA GROUP 1 and DATA PORT 15 for Service Group 0 or Service Group 1 are reserved for SMs (i.e., cannot be assigned to SM-2000).

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.13 # DATA PORT

Description: Enter the Data Port Number. Even numbered Data Ports are in Service Group 0. Odd numbered Data Ports are in Service Group 1.

NOTE: For 5E9(2) and later, 0 - 15 is used for SMs; 0 - 23 is used for SM-2000.

Required Field.

Valid Entries:

- 5E9(1) and earlier: 0 - 15
- 5E9(2) and later: 0 - 23

Data Rules:

The Data Group Number and Data Port Number combination must be unique for the two Service Groups.

For 5E9(1) and earlier the combination of DATA GROUP 1 and DATA PORT 15 for Service Group 0 and Service Group 1 are reserved for SMs (i.e., cannot be assigned to SM-2000).

2.14 #METALLIC TEST BUS

Description: Enter the Metallic Test Bus Equipment assignment. Metallic Test Bus Point 15 of every MACC pack, is reserved for general internal MSU and MMSU diagnostics. Protocol or diode resistor tests are included in general internal diagnostics. Assign the Metallic Test Bus Equipment per SD-5D007-01.

Required Field.

This number consists of:

Valid METALLIC TEST BUS Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 5
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15

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			(Regular) 00 - 31 (Modular)
Bus	BUS	XX	00 - 14

Data Rules:

The Metallic Test Bus assignment must be a unique value for each Service Group.

For 5E9(2) and earlier, Line Unit Service Group 0 and 1 require MTB assignments from an MSU/MMSU associated with Service Group 0 and 1, respectively.

If the MTB pack resides upon an ORM, RSM, or TRM, the EQLU and the MTBs must share the same SITE ID (on the EQIM form). If this is a remote SITE ID (does not reside in the local office), the MTBs must reside on the Common Resource Module (denoted by MASTER MODULE on a corresponding EQSITE form (5722 Record)). This rule does not apply to co-located ORMs/TRMs sharing resources as co-located ORMs/TRMs and ORMs/TRMs which are not co-located are not distinguishable (in static data).

```
eqlu                    5ESS Switch
(5710)              OFFICE DATA ADMINISTRATION
                    LINE UNIT EQUIPAGE
*1. SWITCHING MODULE   ___
*2. LINE UNIT          __
 3. EQUIPMENT STATUS   _
 4. LINE UNIT TYPE     ____
 5. EQUIPMENT BAY      ___
 6. UNIT VERTICAL      __
 7. EQUIPMENT AISLE    ____

                  SERVICE GROUP 0   SERVICE GROUP 1
   CONTROL GROUP       8. _           13. _
   CONTROL PORT        9. __          14. __
   DATA GROUP         10. _           15. _
   DATA PORT          11. __          16. __
   METALLIC TEST BUS  12. _________   17. _________
```

Figure 1 SAMPLE EQLU FORM 5E6 - 5E14 SOFTWARE RELEASES

```
eqlu                    5ESS Switch          _
(5710)              OFFICE DATA ADMINISTRATION
                    LINE UNIT EQUIPAGE

 *1. SWITCHING MODULE   ___
 *2. LINE UNIT          __
 #3. EQUIPMENT STATUS   _
 #4. LINE UNIT TYPE     ____
 #5. EQUIPMENT BAY      ___
 #6. UNIT VERTICAL      __
 #7. EQUIPMENT AISLE    ____
 8. INTF UNIT           0

                  SERVICE GROUP 0   SERVICE GROUP 1
   CONTROL GROUP       9._            #14._
   CONTROL PORT       #10.__          #15.__
```

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DATA GROUP #11._ #16._
DATA PORT #12.__ #17.__
METALLIC TEST BUS #13._____ #18._____

Figure 2 SAMPLE EQLU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10: 5711 RECORD
LINE UNIT PACK EQUIPAGE FORM - EQLUP

1. GENERAL

The 5711 Record is available with the 5E1 and later Software Releases. It is used to define Line Unit pack assignments in a 5ESS Switch.

The Line Unit Pack Equipage Record contains information needed to initialize the pack equipment configuration of Line Units.

Line Units (EQLU (5710 Record) and EQLUP forms), Integrated Services Line Units (EQISLU form (5731 Record)) and Remote Integrated Services Line Units (EQRISLU form (5732 Record)) share the same unit number range.

1.1 Recent Change

The corresponding Recent Change/Verify view for this form is 20.1

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

2.3 *LINE UNIT

Description: Enter the Line Unit Number. For 5E9(2) and later, for Classic SMs, 0 - 7 is used; for SM-2000, 0 - 42 is used.

Required Field.
Valid Entries:
- 5E9(1) and earlier: 0 - 7
- 5E9(2) and later: 0 - 42

Data Rules:

Unit numbers assigned on this form may not be assigned on the EQISLU or EQRISLU forms with the same switching module number.

For 5E9(2) and later, when LINE UNIT is greater than 7 (i.e, SM-2000), LINE UNIT TYPE must be "4AD1".

2.4 LINE UNIT TYPE

Description: Enter the Line Unit Type.

Required Field.
Default: 4AC2
Valid Entries:

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Valid LINE UNIT TYPE Entries	
Entry	**Definition**
4AB1	2-shelf Model 1 Line Unit.
4AC1 or 4AC2	2-shelf Model 2 Line Unit. Note that the 4AC1 and 4AC2 LUs contain the same physical packs.
4AD1	2-Shelf Model 3 Line Unit. Provides a 10:1 concentration ratio.

Data Rules:

For 5E9(2) and later, if UNIT TYPE on the EQIM form (5700 Record) is "SM2000", LINE UNIT TYPE must be "4AD1".

2.5 LU CONC RATIO

Description: Enter one of the four Line Unit Concentration Ratios.

Required Field.
Default: 8:1
Valid Entries: 10:1, 8:1, 6:1, or 4:1

Data Rules:

Ratio 4:1 is not valid when the Line Unit Type is "4AB1".

Ratio 10:1 is valid only when Line Unit Type is "4AD1".

LINE UNIT GRIDS

The following fields (Section 2.6 - Section 2.7) define the STATUS and the CHANGE LEVEL INDICATOR for each Line Unit Grid (0 - 9).

The number of equipped (Operational) Grids is directly related to the desired Line Unit Concentration Ratio.

Line Unit Concentration Ratio	**Grids Equipped**
10:1	0-9
8:1	0-7
6:1	0-5
4:1	0-3

Only TN1058 and TN1058B Grid packs can be used with Carbon Block Protectors. TN1048, TN1058 and TN1058B Grid packs may be used with Gas Tube Protectors.

If LU CONC RATIO is "4AC1" or "4AC2" and TN1038, TN1048, TN1058, or TN1058B Grid packs are used, the TN842B Common Board must be used. The TN838 Grid pack may be used with either the TN842 or TN842B Common Board.

If LU CONC RATIO is "4AD1" and TN1048, TN1058, or TN1058B Grid packs are used, the UN322 Common Board must be used.

- ***NOTE:*** TN1048 and TN1058 (TN1058B, etc.) Grid packs cannot be mixed on the same Line Unit.

2.6 EQUIPMENT STATUS

Description: Enter the status of the Line Unit Pack.

Valid EQUIPMENT STATUS Entries	
Entry	**Definition**
G	Growth.
O	Operational.

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U	Unequipped.

For new offices and units destined for factory testing, Operational is the only allowed value. During offline ODA data base retrofits, the other values are valid.

2.7 CHANGE LEVEL INDICATOR

Description: For each Grid enter the Change Level Indicator.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Data Rules:

If EQUIPMENT STATUS contains an entry, CHANGE LEVEL INDICATOR must contain an entry and vice versa.

HIGH LEVEL SERVICE CIRCUIT

The following fields (Section 2.8 - Section 2.9) define the STATUS and the CHANGE LEVEL INDICATOR for High Level Service Units for Service Groups 0 and 1 for Packs 0, 1, and 2.

2.8 EQUIPMENT STATUS

Description: Enter the status of the High Level Service Circuit.

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

For 5E9(1) and earlier, High Level Service Circuits 00, 01, 10, and 11 must always be equipped (Operational).

For 5E9(2) and later, High Level Service Circuits 00, and 10, must always be equipped (Operational).

For new offices and units destined for factory testing, Operational is the only allowed value. During offline ODA data base retrofits, the other values are valid.

2.9 CHANGE LEVEL INDICATOR

Description: For each High Level Service Center enter the Change Level Indicator.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Data Rules:

If EQUIPMENT STATUS contains an entry, CHANGE LEVEL INDICATOR must contain an entry.

REQUIRED CIRCUIT PACKS - CLI

The following fields (Section 2.10 - Section 2.21) define the Change Level Indicator for each of the required circuit packs. For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1. The table below indicates required circuit packs by type of LU.

Required Circuit Packs by LU Type

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Circuit Pack	4AB1	4AC1	4AC2	4AD1
Common Board	X	X	X	X
Channel Board	X	X	X	X
Channel CKT	X	X	X	X
Linearization	X	X	X	X
Concentrator	X	-	-	-
GDX ACCESS CKT	X	X	X	X
600 OHM TEST	-	X	X	X
900 OHM TEST	X	X	X	X
2K OHM TEST	-	X	X	X
TEST PAD	X	-	-	-
GDX CONTROLLER	X	-	-	-
DIODE TEST	X	-	-	-

2.10 COMMON BOARD

Description: Enter the CLI for the Common Board circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.11 CHANNEL BOARD

Description: Enter the CLI for the Channel Board circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.12 CHANNEL CKT

Description: Enter the CLI for the Channel Circuit circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.13 LINEARIZATION

Description: Enter the CLI for the Linearization circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.14 CONCENTRATOR

Description: Enter the CLI for the Concentrator circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.15 GDX ACCESS CKT

Description: Enter the CLI for the GDX Access Circuit circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.16 600 OHM TEST

Description: Enter the CLI for the 600 OHM Test circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.17 900 OHM TEST

Description: Enter the CLI for the 900 OHM Test circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.18 2K OHM TEST

Description: Enter the CLI for the 2K OHM Test circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.19 TEST PAD

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Description: Enter the CLI for the Test Pad circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.20 GDX CONTROLLER

Description: Enter the CLI for the GDX Controller circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.21 DIODE TEST

Description: Enter the CLI for the Diode Test circuit pack.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

SCREEN 1 of 2 5ESS Switch
eqlup OFFICE DATA ADMINISTRATION
(5711) LINE UNIT PACK EQUIPAGE
*1. SWITCHING MODULE ___
*2. LINE UNIT _
3. LINE UNIT TYPE 4AC1
4. LU CONC RATIO 8:1

	EQUIPMENT STATUS	CHANGE LEVEL INDICATOR		EQUIPMENT STATUS	CHANGE LEVEL INDICATOR
LU GRID 0	5. _	6. _____	HLSC(SG0,PK0)	25. _	26. _____
LU GRID 1	7. _	8. _____	HLSC(SG0,PK1)	27. _	28. _____
LU GRID 2	9. _	10. _____	HLSC(SG0,PK2)	29. _	30. _____
LU GRID 3	11. _	12. _____	HLSC(SG1,PK0)	31. _	32. _____
LU GRID 4	13. _	14. _____	HLSC(SG1,PK1)	33. _	34. _____
LU GRID 5	15. _	16. _____	HLSC(SG1,PK2)	35. _	36. _____
LU GRID 6	17. _	18. _____			
LU GRID 7	19. _	20. _____			
LU GRID 8	21. _	22. _____			
LU GRID 9	23. _	24. _____			

SCREEN 2 of 2 5ESS Switch
eqlup OFFICE DATA ADMINISTRATION
(5711) LINE UNIT PACK EQUIPAGE

	REQUIRED CKT PACKS	CHANGE LEVEL INDICATOR
37. COMMON BOARD		_____
38. CHANNEL BOARD		_____
39. CHANNEL CKT		_____
40. LINEARIZATION		_____
41. CONCENTRATOR		_____
42. GDX ACCESS CKT		_____
43. 600 OHM TEST		_____
44. 900 OHM TEST		_____
45. 2K OHM TEST		_____
46. TEST PAD		_____
47. GDX CONTROLLER		_____
48. DIODE TEST		_____

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Figure 1 SAMPLE EQLUP FORM 5E6 AND LATER SOFTWARE RELEASES

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SEC. 11: 5712 RECORD
CONSTRUCTED FEATURE LIMIT FORM - CFL

1. GENERAL

The CFL (Constructed Feature Limit) form is applicable to 5E2(1) and later Software Releases. The input form is optional and is under control of the S.E.E. for insert, update and delete purposes. The switch owner can only read (review) the form to see if it is present or absent from the input data base. There is only one fixed value form instance which is based on whether the customer has purchased the BRCS Feature Construction package. (Refer to the appropriate DOPS output item.)

The S.E.E. is responsible for doing an insert on the CFL form if and only if the customer has purchased the BRCS Construction package. Inserting this form into the data base forces the internal Constructed Feature Limit to 9999. If the form is not submitted, then the CFL is set to zero.

Constructed Features are those BRCS Feature Names that are assigned on the following list of Feature Definition forms and do not start with the slash character "/". Features defined on the ID (Individualized Dialing) and PFA (Private Facility Access), are not counted towards the constructed Feature Limit.

Feature Definition Forms	
ACBFD	Automatic Callback Feature Definition
ACCTFD	Call Forwarding Feature Definition
ACVTFD	ISDN Attendant Control of Voice Terminals Feature Definition
ARSFD	Automatic Route Selection Feature Definition
ATHFD	Authorization Code Feature Definition
CFWFD	Call Forwarding Feature Definition
CWTFD	Call Waiting Feature Definition
DISPFD	Display and Privacy Feature Definition
DRFD	Distinctive Ringing Feature Definition
EDSFD	Electronic Directory Service Feature Definition
ICMFD	SDN Intercom Feature Definition
LIDFD	Line Identification Feature Definition
MDRFD	Message Detail Recording Feature Definition
MLHGFD	Multi-Line Hunt Group Feature Definition
MSFD	Message Service System Feature Definition
MWFD	Multiway Feature Definition
PPFD	Precedence and Preemption Feature Definition
PUOFD	Pickup Originating Feature Definition
PUTFD	Pickup Terminating Feature Definition
QUFD	Modular Queuing Feature Definition
TGSRFD	Terminal Group/Station Restriction Feature Definition
TODFD	Time of Day Feature Definition

The Constructed Feature Limit is set internally by the presence or absence of the CFL form and is not shown on either the input screen or on the 5712 Record.

The Record Number, 5712, has been assigned to this form to provide for output when the "records" command is used in the ODA data base. However, the screen image of the input form will be printed and a reproducible record is not provided. The record (screen) contains only the single key value of zero if the form is present.

2. FORM ENTRIES

2.1 * KEY

Enter the key value which is always 0 (zero). Insert form if BRCS Construction was purchased; else do not submit the form.

---

cfl 5ESS Switch _
(5712) OFFICE DATA ADMINISTRATION

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CONSTRUCTED FEATURE LIMIT

* 1. KEY 0

Figure 1 SAMPLE CONSTRUCTED FEATURE LIMIT FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 12: DIVISION 8, SECTION 12 IS MOVED TO DIVISION 3, SECTION 5AR

1. SECURED FEATURE SYSTEM ASSIGNMENT FORM - SFSYS MOVED TO DIVISON 3, SECTION 5AR

Division 8, Section 12 for the Secured Feature System Assignment Form - SFSYS (5713) has been moved to Division 3, Section 5AR.

2. REMOVE DIVISION 8, SECTION 12

Please remove Division 8, Section 12 and add the new section, Division 3, Section 5AR to your TG-5.

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SEC. 13: 5720 RECORD
TRUNK UNIT EQUIPMENT RECORD
TRUNK UNIT EQUIPAGE FORM (EQTU)
TRUNK UNIT PACK EQUIPAGE FORM (EQTUP)

1. GENERAL

The 5720 Record is available with 5E2(2) and later Software Releases. It is used to define Trunk Unit Assignments. For 5E10 and later, trunk units are applicable to SM2000.

This record is intended to be used as an Office Record for those 5ESS offices that are not utilizing an Operational Support System (e.g. RMAS) for generation of Office Records.

The Trunk Unit Equipment Record is used to define the Interface Module, Trunk Unit, Service Group, and Pack Position.

2. FORM ENTRIES - EQTU

2.1 BASE AND CONTROL GROUP, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Interface Module Number.

Required Field.
Valid Entries: 1 - 192

2.3 *TRUNK UNIT

Description: Enter the Trunk Unit Number.

Required Field.
Valid Entries: 0 - 7

2.4 *SERVICE GROUP

Description: Enter the Service Group Number.

Required Field.
Valid Entries: 0 - 1

Data Rules:

If SERVICE GROUP is 0, Control Port must be a even number.

If SERVICE GROUP is 1, Control Port must be a odd number.

For 5E2(2) through 5E9(2), if SERVICE GROUP is 0, the MTB assignment must be from SERVICE GROUP 0 of an MSU.

For 5E2(2) through 5E9(2), if SERVICE GROUP is 1, the MTB assignment must be from SERVICE GROUP 1 of an MSU.

2.5 EQUIPMENT STATUS

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Description: Enter the Status of the Equipment. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA data base retrofits, the other values are valid.

Required Field.
Default: 0
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

2.6 CONTROL GROUP

Description: Enter the Control Group Number.

Required Field.

NOTE: For 5E10 and later, 0 - 1 is used for SMs; 0 - 3 is used for SM-2000.

Required Field.
Valid Entries:
- 5E9(2) and earlier: 0 - 1
- 5E10 and later: 0 - 3

Data Rules:

If CONTROL GROUP is 0, Control Ports 0 and 1 must be blank; they are reserved for the Local DSU.

For 5E10 and later, if CONTROL GROUP is greater than 1, the associated EQIM form must has a UNIT TYPE set to "SM2000".

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.7 CONTROL PORT

Description: Enter the Control Port Number.

Required Field.
Valid Entries: 0 - 22

Data Rules:

Control Port assignments must be unique for the same SM.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are

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assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.8 DATA GROUP

Description: Enter the Data Group Number.

Required Field.

NOTE: For 5E10 and later, 0 - 1 is used for SMs; 0 - 5 is used for SM-2000.

Required Field.
Valid Entries:
- 5E9(2) and earlier: 0 - 1
- 5E10 and later: 0 - 5

Data Rules:

For 5E9(2) and earlier, the combination of DATA GROUP 1 and DATA PORT 15 cannot be assigned, it is reserved.

For 5E10 and later, if DATA GROUP is greater than 1, UNIT TYPE on the EQIM form must be set to an SM-2000 class processor.

For 5E10 and later, the combination of DATA GROUP set to 1 and DATA PORT set to 15 for SERVICE GROUP 0 or SERVICE GROUP 1 cannot be assigned where UNIT TYPE is set to an SM-2000 class processor on the corresponding EQIM form. DATA GROUP 1 and DATA PORT 15 are reserved for SMs.

2.9 DATA PORT

Description: Enter the Data Port Number.

Required Field.
Valid Entries: 0 - 15

Data Rules:

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.10 METALLIC TEST BUS

Description: Enter the Equipment assignment for the Metallic Test Bus.

This number consists of an 9-digit number as indicated below:

Valid MTS 0 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Regular MSU)

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			00-31 (Modular MSU)
BUS	BUS	XX	00-14
			00-14 (Modular MSU)

- ***NOTE:*** Metallic Test Bus Point 15 of every MACC pack is reserved for general MSU and MMSU diagnostics. Protocol test or diode resistor test are included in general internal diagnostics.

Data Rules:

For 5E9(1) and later, if this pack resides on an ORM, RSM or TRM, the MTB assigned to this unit must terminate to an SM with the same value of SITE ID on an EQIM form (5700 Record). And, if this is a remote SITE ID, the MTBs must reside on the Common Resource Module (denoted by MASTER MODULE on a corresponding EQSITE form (5722 Record).

2.11 EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries:

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

Data Rules:

EQUIPMENT BAY and UNIT VERTICAL values within the same SM must be unique.

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

2.12 UNIT VERTICAL

Description: Enter the Vertical Equipment Location that specifies the bottom of the unit. Enter the same Equipment Location for both Service Groups of a given unit number (e.g. Service Groups 0 and 1 of a Trunk Unit would indicate the same Vertical Equipment Location on the Trunk Unit Equipage Form (EQTU)).

Recommended positions are as follows:
- For 7-foot cabinets: 22, 30, 39, 48, 56, 65, 74
- For 6-foot cabinets: 7, 15, 24, 32, 41, 49, 58

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Required Field.
Valid Entries: 00 - 84

Data Rules:

EQUIPMENT BAY and UNIT VERTICAL values within the same SM must be unique.

2.13 EQUIPMENT AISLE

Description: Enter the Equipment Aisle Number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 00 - 99

2.14 CONTROL/DATA CIRCUIT CLI

Description: Enter the Control/Data Circuit Change Level Indicator. This circuit is provided as part of the basic unit per Service Group. Refer to Division 8, Section 1 for a list of CLI values.

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.15 TEST ACCESS CIRCUIT CLI

Description: Enter the Test Access Circuit Change Level Indicator. This circuit is provided as part of the basic unit per Service Group.

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

2.16 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

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3. FORM ENTRIES - EQTUP

3.1 *PACK POSITION

Description: Enter the Trunk Unit Pack Number.

Required Field.
Valid Entries: 0 - 7

3.2 CIRCUIT TYPE

Description: Enter the Circuit Type (Hardware).

Valid CIRCUIT TYPE Entries

Entry	Definition
TRKLO	Loop Outgoing Trunk.
TRKLI	Loop Incoming Trunk.
TRK2EM	2-Wire E&M Trunk.
TRK4EM	4-Wire E&M Trunk.
TRKTST	Test Trunk Circuit.
TKLOTOL	Loop Outgoing Trunk (Toll).
TKLITOL	Loop Incoming Trunk (Toll).
TK2ETOL	2-Wire E&M Trunk (Toll).
TK4ETOL	4-Wire E&M Trunk (Toll).

Data Rules:

If CIRCUIT TYPE is TRKTST, EQSTAT "2" and "3" must be blank, and MTB0 and MTB1 must be entered.

If CIRCUIT TYPE is not TRKTST, EQSTAT "2" and "3" must be entered, and MTB0 and MTB1 must be blank.

3.3 CHANGE LEVEL INDICATOR

Description: Enter CLI value.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

3.4 CLEI

Description: Enter the Common Language Equipment Identification. See the appropriate J-Drawing for the applicable CLEI codes.

3.5 CKT 0/1/2/3 STATUS

Description: Enter the status of the circuit. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA data base retrofits, the other values are valid.

Required Field (for CKT 0, 1).
Default: O (for CKT 0, 1)
Valid Entries:

Valid CKT 0/1/2/3 STATUS Entries

Entry	Definition
U	Unequipped.
O	Operational.
G	Growth.

3.6 MTB0

Description: For each Circuit 0 or 1 of a Test Trunk (CIRCUIT TYPE is TRKTST), enter the Equipment Assignment for Metallic Test Bus 0.

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This number consists of an 9-digit number as indicated below:

Valid MTS 0 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Non-Modular MSU)
			00-31 (Modular MSU)
BUS	BUS	XX	00-14
			00-15 (Modular MSU)

Data Rules:

The Metallic Test Bus 15 is a fixed assignment to a Diode/Resistor pair circuit and cannot be specified.

3.7 MTB1

Description: Enter the MTB1 value. For each Circuit 0 or 1 of a Test Trunk (CIRCUIT TYPE is TRKTST), enter the Equipment Assignment for Metallic Test Bus 1.

This number consists of an 9-digit number as indicated below:

Valid MTS 1 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
BUS	BUS	XX	00-14
			00-15 (Modular MSU)

Data Rules:

The Metallic Test Bus 15 is a fixed assignment to a Diode/Resistor pair circuit and cannot be specified.

MTB0 and MTB1 for circuits 0 and 1 must not be duplicated.

MTBs assigned to LTD test trunks must specify the same IM, MSU, PK POS, BUS and have MTB0 on MSU SG0 and MTB1 on MSU SG1.

```
eqtu                    5ESS Switch          _
5720                OFFICE DATA ADMINISTRATION
                    TRUNK UNIT EQUIPAGE

 *1. INTERFACE MODULE      ___
 *2. TRUNK UNIT            _
 *3. SERVICE GROUP         _
 #4. EQUIPMENT STATUS      O
 #5. CONTROL GROUP         _          #6. CONTROL PORT        __
 #7. DATA GROUP            _          #8. DATA PORT           __
 #9. METALLIC TEST BUS     _________
#10. EQUIPMENT BAY         ___
```

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#11. UNIT VERTICAL __
#12. EQUIPMENT AISLE ____
#13. CONTROL/DATA CIRCUIT CLI _____
#14. TEST ACCESS CIRCUIT CLI _____

Figure 1 SAMPLE EQTU FORM 5E14 AND EARLIER SOFTWARE RELEASES

eqtu 5ESS Switch _
(5720) OFFICE DATA ADMINISTRATION
TRUNK UNIT EQUIPAGE

*1. INTERFACE MODULE ___ #12. UNIT VERTICAL __
*2. TRUNK UNIT _ #13. EQUIPMENT AISLE ____
*3. SERVICE GROUP _ #14. CONTROL/DATA CIRCUIT CLI _____
4. EQUIPMENT STATUS O #15. TEST ACCESS CIRCUIT CLI _____

5. INTF UNIT 0
#6. CONTROL GROUP _
#7. CONTROL PORT __
#8. DATA GROUP _
#9. DATA PORT __
#10. METALLIC TEST BUS _____
#11. EQUIPMENT BAY ___

Figure 2 SAMPLE EQTU FORM 5E15 AND LATER SOFTWARE RELEASES

eqtup 5ESS Switch _
5720 OFFICE DATA ADMINISTRATION
TRUNK UNIT PACK EQUIPAGE

* 1. INTERFACE MODULE ___
* 2. TRUNK UNIT _
* 3. SERVICE GROUP _
* 4. PACK POSITION _
5. CIRCUIT TYPE _____
6. CHANGE LEVEL INDICATOR _____
7. CLEI _____

	MTB0	MTB1	
	----	----	
8. CKT 0 EQUIPMENT STATUS	O	12. _____	13. _____
9. CKT 1 EQUIPMENT STATUS	O	14. _____	15. _____
10. CKT 2 EQUIPMENT STATUS	_		
11. CKT 3 EQUIPMENT STATUS	_		

Figure 3 SAMPLE EQTUP FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 14: 5721 RECORD
TOPAS TERMINAL EQUIPMENT DSX ASSIGNMENT FORM - EQDSX

1. GENERAL

The 5ESS Switch 5721 Record is available with Release 5E4 and later Software Releases. The TOPAS CLLI (Common Language Location Identifier) Form is used by toll offices that employ the TOPAS (Testing, Operations, Provisioning and Administration System) Operations System. The TOPAS Operations System provides circuit order and testing administration for circuits terminating on a 5ESS Switch.

The 5ESS Switch 5721 Record is used to define Switching Module Equipment assignment to a DSX Frame Plate Connector. There will be one Record for each Switching Module, Digital Line/Trunk Unit and DFI Pack combination.

The combination of SM, DLTU and DFI, entered in the first three fields of the EQDSX input form, must be defined in the SWITCHING MODULE, DLTU and DFI PACK NUMBER fields, respectively, on an EQDUP Form (5730 Record).

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

2.3 * DLTU

Description: Enter the Digital Line/Trunk Unit number.

Required Field.
Valid Entries:
- 5E14 and earlier: 0 - 5
- 5E15 and later: 0 - 11

2.4 * DFI

Description: Enter the Digital Facility Interface pack number.

Required Field.
Valid Entries: 1 - 16

DSX FRAME LOCATION

The combination of the following fields (Section 2.5) -
(Section 2.9) define the DSX FRAME LOCATION and this instance of the EQDSX input form must not be duplicated on any other instance of the EQDSX input form.

2.5 # FLOOR NBR

Description: Enter the DSX frame floor location number.

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Required Field.
Valid Entries: 00 - 99, two alphabetic characters, including spaces or 1 character

2.6 # AISLE NBR

Description: Enter the DSX frame aisle location number.

Required Field.
Valid Entries:
- 000 - 999, or
- two or three alphabetic characters, including a space(s)

2.7 # BAY NBR

Description: Enter the DSX frame bay location number.

Required Field.
Valid Entries:
- 00 - 99, or
- two alphabetic characters, including a space

2.8 # PANEL NBR

Description: Enter the DSX panel (plate) location number.

Required Field.
Valid Entries: 00 - 99, or two letters characters form A - J

The combinations of the letters are as follows:

- "E" must be followed by any letter, except "I" or "O"
- "G" must be followed by any letter, except "I" or "O"
- "W" through "Z" or "H" followed by any letter, except "I", "O", or "W" through "Z"
- "H" followed by any letter except "I", "O", or "W" through "Z"
- "J" followed by "A" or "B"

2.9 # JACK POS NBR

Description: Enter the position number within the DSX panel (plate).

Required Field.
Valid Entries: 0 - 999

---

eqdsx 5ESS Switch _
(5721) OFFICE DATA ADMINISTRATION
TOPAS TERMINAL EQUIPMENT DSX ASSIGNMENT

*1. SM ___
*2. DLTU _

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*3. DFI __

DSX FRAME LOCATION

	FAC 0	FAC 1
FLOOR NBR	#4. __	9. __
AISLE NBR	#5. ___	10. ___
BAY NBR	#6. __	11. __
PANEL NBR	#7. __	12. __
JACK POS NBR	#8. ___	13. ___

Figure 1 SAMPLE TOPAS TERMINAL EQUIPMENT DSX ASSIGNMENT FORM

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SEC. 15: 5722 RECORD
REMOTE SITE OPTIONS FORM - EQSITE

1. GENERAL

With 5E4(2) and earlier Generic programs, Remote Modules can be contained in a cluster of 1-4 RSMs (Remote Switching Modules). Each of these clusters is called a Remote Site. For 5E5 and later Software Releases, Remote Site refers to a cluster of 1 to 4 RSMs, a single ORMs (Optically Remote Modules) or a single TRMs (Two-Mile Optically Remote Modules). Collocated ORM/TRMs will consist of multiple single module clusters.

The Stand-Alone call processing options will be applied on a Remote Site basis rather than on an individual Remote Module basis. In 5E5 and later Software Releases, to specify Stand-Alone call processing on a Host (SM USAGE is "HIM" on an EQIM form) or Local Switching Module (SM USAGE is "IM" on an EQIM form), the STAND ALONE field on an EQIM form (5700 Record) must be set to "Y". Additionally, if Stand-Alone billing is desired, the STAND ALONE BILLING field on an EQIM form must be set to "Y".

For 5E4(2) and earlier Software Releases, Remote Site refers to Remote Switching Modules (RSMs). For 5E5 and later Software Releases, Remote Site refers to Remote Switching Modules, Optically Remote Modules or Two-Mile Optically Remote Modules.

Remote Alarm Options for the Master Module can be designated on this form. For more information on Remote Alarm Options, please refer to Division 8, Section 7.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * REMOTE SITE

Description: Enter the identification number of the set of Remote Modules that comprise the Remote Site Cluster.
Valid Entries: 1 - 74

2.3 MASTER MODULE

Description: Enter the Switching Module number of the Master Module of this Remote Site, if one exists.
Valid Entries: 1 - 192

Data Rules:

The MASTER MODULE must be entered when the ALARM INPUT OPTION or the ALARM OUTPUT OPTION is "Y" and the MASTER MODULE must be defined on an EQRAU form (5705 Record).

If an EQRCLK form (5723 Record) exists for a Remote Module of this Remote Site, the RSM entered on the EQRCLK form must match the MASTER MODULE on this form for this Remote Site.

2.4 STAND ALONE PURCHASED?

Description: This field name is available with 5E5 and later Software Releases. If Stand-Alone call processing was purchased for this site, enter "Y". Otherwise enter "N". Caution should be observed when entering this field because this option may only be set with the ODA process; this is not a Recent Changeable item.

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Required Field
Valid Entries: Y - N

Data Rules:

When Stand-Alone is purchased, a Fixed Route Type of "RSMSA" must be defined on a FIXRT form (5301-1 Record).

For more detailed information on Stand-Alone operation, see the RSM Stand-Alone call processing section (Division 2, Section 1C).

2.5 STAND ALONE BILLING PURCHASED?

Description: If Stand-Alone Billing was purchased for this site, enter "Y"; otherwise, enter "N". Caution should be observed when entering this field because this option can only be set by the ODA process. This is not a Recent Changeable item.

Required Field.
Valid Entries: Y - N

Data Rules:

Stand-Alone Billing may only be "Y" if STAND ALONE PURCHASED is also "Y".

For more detailed information on Stand-Alone operation, see the RSM Stand-Alone call processing section (Division 2, Section 1C).

2.6 ALARM INPUT OPTION

Description: If the REMOTE SITE has the ALARM INPUT OPTION, enter "Y "; otherwise, enter "N".

Required Field.
Valid Entries: Y - N

Data Rules:

If this field is "Y", an entry in the MASTER MODULE field is required.

For more detailed information on the ALARM INPUT OPTION, see Division 3, Section 5P.

2.7 ALARM OUTPUT OPTION

Description: If the REMOTE SITE has the ALARM OUTUT OPTION, enter "Y"; otherwise, enter "N".

Required Field.
Valid Entries: Y - N

Data Rules:

If this field is "Y", an entry in the MASTER MODULE field is required.

For more detailed information on the ALARM OUTPUT OPTION, see Division 3, Section 5P.

2.8 ALARM AUDIBLE TIMING

Description: If the REMOTE SITE has the ALARM OUTPUT OPTION, enter the Remote Alarm Audible Timing in seconds.
Valid Entries: 5 - 300 (seconds)

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Data Rules:

If ALARM OUTPUT OPTION is "Y", this entry is required. If ALARM OUTPUT OPTION is "N", this field must not be entered.

2.9 ALARM OUTPUT SITE

Description: This field is only applicable to collocated ORMs or TRMs that are sharing the RAU (Remote Alarm Unit) of another collocated ORM/TRM. This field is populated in the collocated ORM/TRM not equipped with the RAU. Enter the ORM/TRM Remote Site where remote alarms from this Remote Site will be routed to. Valid entries are 1 to 174. The input value must represent an ORM or TRM Remote Site with the Remote Alarm Unit assigned.
Valid Entries: 1 - 174

Data Rules:

ALARM OUTPUT SITE must not equal REMOTE SITE.

ALARM OUTPUT SITE must be left blank if ALARM INPUT OPTION IS "Y" or ALARM OUTPUT OPTION IS "Y".

ALARM OUTPUT SITE, if entered, must be defined in the REMOTE SITE field on an EQIM form where SM USAGE is "ORM" or "TRM".

ALARM OUTPUT SITE, if entered, must be defined in the REMOTE SITE field on another EQSITE form where MASTER MODULE is entered.

2.10 REMARK

Description: This field may be used for any descriptive comment which consists of alphanumerics, blanks, or special characters.

```
eqsite                  5ESS Switch          _
(5722)               OFFICE DATA ADMINISTRATION
                    REMOTE SITE OPTIONS


* 1. REMOTE SITE ___

  2. MASTER MODULE              ___
  3. STAND ALONE PURCHASED?      _
  4. STAND ALONE BILLING PURCHASED? _
  5. ALARM INPUT OPTION          _
  6. ALARM OUTPUT OPTION         _
  7. ALARM AUDIBLE TIMING       ___
  8. ALARM OUTPUT SITE          ___
  9. REMARK _________________
```

Figure 1 SAMPLE REMOTE SITE OPTIONS FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 16: 5723-1/2 RECORD
REMOTE CLOCK DATA FORM (EQRCLK)

1. GENERAL

The RCU (Remote Clock Unit) is available with 5E2 and later Software Releases. It is an option of Multi-module Remote Switching Module Sites. The RCU meets the timing requirements for carrying data over digital trunks. These trunks, for example, might connect the RSM to another digital switch. Error free transmission of data over digital trunks requires that both switches be synchronized. The RCU for Multi-module RSMs provides the means for keeping the RSM Site synchronized during periods of stand-alone operation.

1.1 Recent Change View

The corresponding Recent Change View for this form is 20.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *RSM

Description: Enter the number of the Remote Switching Module where the RSM is physically located. This must be the Master Module of the RSM Site.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The RSM must also be defined on exactly two RCLKREF (5519 Record) forms with REFERENCE set to 1 and REFERENCE set to 2, respectively.

2.3 CLOCK TYPE

Description: Enter the type of clock.

Required Field.

Valid CLOCK TYPE Entries

Entry	Definition
24CHAN2	24-channel domestic clock.
STDALNE2	Stand-alone.

2.4 OSCILLATOR TYPE

Description: Enter the type of oscillator.

Required Field.
Default: DOMMED
Valid Entries:

Valid OSCILLATOR TYPE Entries

Entry	Definition
DOMMED	Medium stability; typically used for local offices.
DOMHI	High stability; typically used for toll applications.

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Data Rules:

For 5E3 and later, the only valid entry is "DOMMED".

2.5 CLOCK CLI

Description: Enter the Change Level Indicator.

Required Field.
Valid Entries: 0 - 7fffffff (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.6 EQPT STATUS

Description: Enter the status of the RCU. For new offices and units destined for factory testing, "O" is the only allowed value. During off-line ODA database retrofits, the other values are valid.

Required Field.

Valid EQPT STATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

2.7 EQPT BAY

Description: Enter the Equipment location Bay.

Required Field.
Valid Entries: 0 - 4

Data Rules:

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

2.8 EQPT UN VERT

Description: Enter the Equipment Vertical location that specifies the bottom of the Unit.

Valid EQPT UN VERT Entries

Entry	Definition
22,30,39,48,56,65,74	7 foot cabinets.
15,24,32,41,49,58	6 foot cabinets.

2.9 EQPT AISLE

Description: Enter the Equipment Aisle location. This entry consists of a floor and aisle number. The first and second digits are the floor number. The valid range for floor number is 00 - 99. The last two digits are the aisle number. The valid range for aisle number is 00 - 99. It is recommended that floor 00 be used for equipment located basement per floor plan designation.

Required Field.
Valid Entries: 0000-9999

2.10 INTF UNIT

Description: The Interface Unit field is a Recent Change only field. This field was added to support the

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5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.
Valid Entries: 0 -8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

2.11 CONT GRP SIDE 0

Description: Enter the Control Group number.

Required Field.
Valid Entries: 0 - 1

Data Rules:

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.12 CONT PORT SIDE 0

Description: Enter the Control Port number.

Required Field.
Valid Entries: 0 - 22.

Data Rules:

The control group and control port combination must be unique for the two sides of the clock.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.13 CONT GRP SIDE 1

Description: Enter the Control Group number.

Required Field.
Valid Entries: 0 - 1

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2.14 CONT PORT SIDE 1

Description: Enter the Control Port number.

Required Field.
Valid Entries: 0 - 22

Data Rules:

The control group and control port combination must be unique for the two sides of the clock.

SIDE 0 PRIMARY (MSU SG 0) POINTS

The following fields (Section 2.15 - Section 2.23) define the primary scan and distribute points assignments for Service Group 0. The formats of the scan and distribute point numbers are provided in the tables below.

SCAN POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU/MMSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Scan Point Number	DPN	XX	00-30

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU/MMSU		0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
Distribute Point Number	DPN	XX	00-31

2.15 CLK PWR W SP

Description: Enter the scan point assignment for SIDE 0 CLOCK POWER W. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.16 CLK PWR Y SP

Description: Enter the scan point assignment for SIDE 0 CLOCK POWER Y. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.17 CLK MAN OVERRIDE SP

Description: Enter the scan point assignment for SIDE 0 CLOCK MANUAL OVERRIDE. This point must be assigned on Service Group 0 of the MSU/MMSU.

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Required Field.
Valid Entries: (See Scan Point Table above)

2.18 CLK REQ OOS SP

Description: Enter the scan point assignment for SIDE 0 CLOCK REQUEST OUT OF SERVICE. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.19 OSC X PWR SP

Description: Enter the scan point assignment for SIDE 0 OSCILLATOR X POWER. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.20 OSC Y PWR SP

Description: Enter the scan point assignment for SIDE 0 OSCILLATOR Y POWER. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.21 CLK OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 0 CLOCK OUT OF SERVICE. This point must be assigned on Service Group 0 of the MSU/MMSU.

2.22 CLK REQ IN PROG DP

Description: Enter the distribute point assignment for SIDE 0 CLOCK REQUEST IN PROGRESS. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.23 OSC OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 0 OSCILLATOR OUT OF SERVICE. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

SIDE 1 PRIMARY (MSU SG 0) POINTS

The following fields (Section 2.24 - Section 2.32) define the primary scan and distribute points assigned to Service Group 0 of their Metallic Service Unit.

2.24 CLK PWR W SP

Description: Enter the scan point assignment for SIDE 1 CLOCK POWER W. This point must be assigned on Service Group 0 of the MSU.

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Required Field.
Valid Entries: (See Scan Point Table above)

2.25 CLK PWR Y SP

Description: Enter the scan point assignment for SIDE 1 CLOCK POWER Y. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.26 CLK MAN OVERRIDE SP

Description: Enter the scan point assignment for SIDE 1 CLOCK MANUAL OVERRIDE. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.27 CLK REQ OOS SP

Description: Enter the scan point assignment for SIDE 1 CLOCK REQUEST OUT OF SERVICE. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.28 OSC X PWR SP

Description: Enter the scan point assignment for SIDE 1 OSCILLATOR X POWER. This point must be assigned on Service Group 0 of the MSU/MMSU.

2.29 OSC Y PWR SP

Description: Enter the scan point assignment for SIDE 1 OSCILLATOR Y POWER. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.30 CLK OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 1 CLOCK OUT OF SERVICE. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.31 CLK REQ IN PROG DP

Description: Enter the distribute point assignment for SIDE 1 CLOCK REQUEST IN PROGRESS. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.32 OSC OUT OF SERV DP

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Description: Enter the distribute point assignment for SIDE 1 OSCILLATOR OUT OF SERVICE. This point must be assigned on Service Group 0 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

SIDE 0 DUPLEX (MSU SG 1) POINTS

The following fields (Section 2.33 - Section 2.41) define the duplex scan and distribute points assigned to Duplex Service Group 1 of the Metallic Service Unit.

Required Field.

2.33 CLK PWR W SP

Description: Enter the scan point assignment for SIDE 0 CLOCK POWER W. This point must be assigned on Service Group 1 of the MSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.34 CLK PWR Y SP

Description: Enter the scan point assignment for SIDE 0 CLOCK POWER Y. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.35 CLK MAN OVERRIDE SP

Description: Enter the scan point assignment for SIDE 0 CLOCK MANUAL OVERRIDE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.36 CLK REQ OOS SP

Description: Enter the scan point assignment for SIDE 0 CLOCK REQUEST OUT OF SERVICE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.37 OSC X PWR SP

Description: Enter the scan point assignment for SIDE 0 OSCILLATOR X POWER. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.38 OSC Y PWR SP

Description: Enter the scan point assignment for SIDE 0 OSCILLATOR Y POWER. This point must be assigned on Service Group 1 of the MSU/MMSU.

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Required Field.
Valid Entries: (See Scan Point Table above)

2.39 CLK OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 0 CLOCK OUT OF SERVICE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.40 CLK REQ IN PROG DP

Description: Enter the distribute point assignment for SIDE 0 CLOCK REQUEST IN PROGRESS. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.41 OSC OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 0 OSCILLATOR OUT OF SERVICE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

SIDE 1 DUPLEX (MSU SG 1) POINTS

The following fields (Section 2.42 - Section 2.50) define the primary scan and distribute points assignments for Service Group 1 of their Metallic Service Unit.

2.42 CLK PWR W SP

Description: Enter the scan point assignment for SIDE 1 CLOCK POWER W. This point must be assigned on Service Group 1 of the MSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.43 CLK PWR Y SP

Description: Enter the scan point assignment for SIDE 1 CLOCK POWER Y. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.44 CLK MAN OVERRIDE SP

Description: Enter the scan point assignment for SIDE 1 CLOCK MANUAL OVERRIDE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.45 CLK REQ OOS SP

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Description: Enter the scan point assignment for SIDE 1 CLOCK REQUEST OUT OF SERVICE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.46 OSC X PWR SP

Description: Enter the scan point assignment for SIDE 1 OSCILLATOR X POWER. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.47 OSC Y PWR SP

Description: Enter the scan point assignment for SIDE 1 OSCILLATOR Y POWER. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Scan Point Table above)

2.48 CLK OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 1 CLOCK OUT OF SERVICE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.49 CLK REQ IN PROG DP

Description: Enter the distribute point assignment for SIDE 1 CLOCK REQUEST IN PROGRESS. This point must be assigned on Service Group 1 of MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

2.50 OSC OUT OF SERV DP

Description: Enter the distribute point assignment for SIDE 1 OSCILLATOR OUT OF SERVICE. This point must be assigned on Service Group 1 of the MSU/MMSU.

Required Field.
Valid Entries: (See Distribute Point Table above)

```
eqrclk                    5ESS Switch
(5723-1/2)            OFFICE DATA ADMINISTRATION
SCREEN 1 OF 2              REMOTE CLOCK DATA

 * 1. RSM              010        7. EQPT UN VERT      15
   2. CLOCK TYPE        24CHAN2    8. EQPT AISLE        0001
   3. OSCILLATOR TYPE   DOMMED     9. CONT GRP SIDE 0   0
   4. CLOCK CLI         00000001   10. CONT PORT SIDE 0  02
   5. EQPT STATUS       O          11. CONT GRP SIDE 1   1
```

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```
 6. EQPT BAY          0        12. CONT PORT SIDE 1    01

SIDE 0 PRIMARY (MSU SG 0) POINTS        SIDE 1 PRIMARY (MSU SG 0) POINTS
 13. CLK PWR W SP       010000000   22. CLK PWR W SP       010000009
 14. CLK PWR Y SP       010000001   23. CLK PWR Y SP       010000010
 15. CLK MAN OVERRIDE SP 010000002  24. CLK MAN OVERRIDE SP 010000011
 16. CLK REQ OOS SP     010000003   25. CLK REQ OOS SP     010000012
 17. OSC X PWR SP       010000004   26. OSC X PWR SP       010000013
 18. OSC Y PWR SP       010000005   27. OSC Y PWR SP       010000014
 19. CLK OUT OF SERV DP 010000006   28. CLK OUT OF SERV DP  010000015
 20. CLK REQ IN PROG DP 010000007   29. CLK REQ IN PROG DP  010000016
 21. OSC OUT OF SERV DP 010000008   30. OSC OUT OF SERV DP  010000017
```

```
eqrclk                  5ESS Switch          _
(5723-1/2)          OFFICE DATA ADMINISTRATION
SCREEN 2 OF 2           REMOTE CLOCK DATA

 SIDE 0 DUPLEX (MSU SG 1) POINTS       SIDE 1 DUPLEX (MSU SG 1) POINTS

 31. CLK PWR W SP       010010000    40. CLK PWR W SP       010010009
 32. CLK PWR Y SP       010010001    41. CLK PWR Y SP       010010010
 33. CLK MAN OVERRIDE SP 010010002   42. CLK MAN OVERRIDE SP 010010011
 34. CLK REQ OOS SP     010010003    43. CLK REQ OOS SP     010010012
 35. OSC X PWR SP       010010004    44. OSC X PWR SP       010010013
 36. OSC Y PWR SP       010010005    45. OSC Y PWR SP       010010014
 37. CLK OUT OF SERV DP 010010006    46. CLK OUT OF SERV DP  010010015
 38. CLK REQ IN PROG DP 010010007    47. CLK REQ IN PROG DP  010010016
 39. OSC OUT OF SERV DP 010010008    48. OSC OUT OF SERV DP  010010017
```

Figure 1 SAMPLE EQRCLK FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqrclk                  5ESS Switch
SCREEN 1 OF 3             OFFICE DATA ADMINISTRATION
(5723-1/2)              REMOTE CLOCK DATA

*1. RSM          ___          INTF UNIT      0
#2. CLOCK TYPE   ________   #10. CONT GRP SIDE 0  _
 3. OSCILLATOR TYPE DOMMED    #11. CONT PORT SIDE 0 __
#4. CLOCK CLI    ________   #12. CONT GRP SIDE 1  _
#5. EQPT STATUS   _         #13. CONT PORT SIDE 1 __
#6. EQPT BAY      _
#7. EQPT UN VERT  __
#8. EQPT AISLE    ____
```

```
eqrclk                  5ESS Switch
SCREEN 2 OF 3             OFFICE DATA ADMINISTRATION
(5723-1/2)              REMOTE CLOCK DATA

 SIDE 0 PRIMARY (MSU SG 0) POINTS    SIDE 1 PRIMARY (MSU SG 0) POINTS
#14. CLK PWR W SP      _________   #23. CLK PWR W SP      _________
#15. CLK PWR Y SP      _________   #24. CLK PWR Y SP      _________
```

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#16. CLK MAN OVERRIDE SP _____ #25. CLK MAN OVERRIDE SP _____
#17. CLK REQ OOS SP _____ #26. CLK REQ OOS SP _____
#18. OSC X PWR SP _____ #27. OSC X PWR SP _____
#19. OSC Y PWR SP _____ #28. OSC Y PWR SP _____
#20. CLK OUT OF SERV DP _____ #29. CLK OUT OF SERV DP _____
#21. CLK REQ IN PROG DP _____ #30. CLK REQ IN PROG DP _____
#22. OSC OUT OF SERV DP _____ #31. OSC OUT OF SERV DP _____

---

eqrclk 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5723-1/2) REMOTE CLOCK DATA

SIDE 0 DUPLEX (MSU SG 1) POINTS SIDE 1 DUPLEX (MSU SG 1) POINTS
#32. CLK PWR W SP _____ #41. CLK PWR W SP _____
#33. CLK PWR Y SP _____ #42. CLK PWR Y SP _____
#34. CLK MAN OVERRIDE SP _____ #43. CLK MAN OVERRIDE SP _____
#35. CLK REQ OOS SP _____ #44. CLK REQ OOS SP _____
#36. OSC X PWR SP _____ #45. OSC X PWR SP _____
#37. OSC Y PWR SP _____ #46. OSC Y PWR SP _____
#38. CLK OUT OF SERV DP _____ #47. CLK OUT OF SERV DP _____
#39. CLK REQ IN PROG DP _____ #48. CLK REQ IN PROG DP _____
#40. OSC OUT OF SERV DP _____ #49. OSC OUT OF SERV DP _____

Figure 2 SAMPLE EQRCLK FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 17: 5730-1/2/3/4/5 RECORD
DIGITAL LINE/TRUNK UNIT EQUIPAGE FORM - EQDU
DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE FORM - EQDUP

1. GENERAL

For 5E5 and later, the 5730 Record was split into two records: 5730-1 for the EQDU form and 5730-2 for the EQDUP form. These forms are used to define equipment location information for the Digital Line/Trunk Units.

The Digital Line/Trunk Unit Record is used to define the Switching Module, Digital Line/Trunk Units, and the Digital Facility Interface Pack Number.

For 5E5 and later, a DFI-2 (Digital Facility Interface-2) is available. The DFI-2 allows two T1 lines to terminate on the DLTU2 (Digital Line and Trunk Unit-2). The two T1 lines are specified as Facility 0 and Facility 1 on the EQDUP form. Facility 0 utilizes channels 1 to 24. Facility 1 utilizes channels 25 to 48. For 5E8 and later, DFI-2 PM GRP was added to provide performance monitoring capability for DFI-2 facilities. For more information on the performance monitoring for DFI-2, see the PMTHRESH form (5948 Record).

1.1 Carrier Group Alarm Hash Indexes

TheCGA (Carrier Group Alarm) data is associated with the VT/DS1 and STE/STS facilities. For 5E9(2) and later, only 522 hash indexes are available per switching module. One hash index is allocated to each instance of the following for a specific SM:

- 1 per each pair STE/STS on a specified SM (EQSTE form). (The EQSTE form is associated with the DNU-S.)
- 1 per each VT (Virtual Tributary) on a specified SM (EQVT form). (The EQVT form is associated with the DNU-S.)
- 1 per each DFI (Digital Facility Interface) of a DLTU (Digital Line/Trunk Unit) where FAC IND is 0 or 1, and DFI TYPE is not "H1" or "H2", i.e., DFI USAGE of "H1" and "H2" are not counted (EQDUP form). (The EQDUP form is associated with DLTU.)
- 1 per each DFI-2 (2 per EQDUP form) where FAC IND is 3. (The EQDUP form is associated with DLTU.)
- 1 per pack - POS, EQST, CLI, CLEI combination. (30 packs per DCLU on EQDCLP form) (The EQDCLP form is associated with DCLU.)
- 1 per IFAC - EQSTAT, SUP MTHD, PUB43801 combination. (20 per IDCU on the EQIFAC form) (The EQIFAC form is associated with IDCU.)

1.2 Recent Change View

The corresponding Recent Change Views for this form are 19.4 and 20.4

2. FORM ENTRIES - EQDU FORM
5730-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

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2.2 * SM

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

Data Rules:

For 5E8 and later, each Switching Module (which is not an SM-2000 class processor) has 512 TS (Time Slots) available for variousfunctions. Some of these 512 are available on call and some are reserved.

- At least two TS are always required in each SM, one for audible ring and one for idle code.
- In DSN (Defense Switched Network) offices, at least three TS are always required in each SM, one for audible ring, one for precedence audible ring and one for idle code. SMs cannot have more than 509 time slots assigned to equipment.
- Each of the forms listed below may utilize a number of initialized time slots. These TS should NOT be shared with any other applications.
  - EQDCLU - Digital Carrier Line Unit Equipage Form
  - EQDSP - Digital Service Unit Pack Equipage Form
  - EQDUP - Digital Line/Trunk Unit Pack Equipage Form
  - EQIDCU - Integrated Digital Carrier Unit Equipage Form
  - EQISLU - Integrated Services Line Unit Equipage Form
  - EQISTF - Integrated Services Test Function Form
  - EQLU - Line Unit Equipage Form
  - EQPSU - Packet Switching Unit Equipage Form
  - EQRA - Recorded Announcement Function Common Circuit & Services Form
  - EQTUP - Trunk Unit Pack Equipage Form

For 5E9(2) and later, when the SM value matches the SM value on an EQIM form with an SM-2000 class processor UNIT TYPE , DLTU TYPE must be "DLTU48".

When the SM value matches the SM value on an EQIM form with an SM-2000 UNIT TYPE, and if DFI USAGE for FAC 0 or Fac 1 is entered on the EQDUP form, the value of the DFI USAGE must be "TRUNK" or "HOST" (for 5E10 and later).

For 5E10 and later, when XAT forms have an OE TYPE of "D" and an OE entered, indicating a DEN(s) assignment, and the CHAN for this DEN is greater than 24 (OE[7,8]) a DIGITAL LINE/TRUNK UNIT TYPE of "DLTU48" on the corresponding EQDU form is required.

2.3 * DLTU NUMBER

Description: Enter the Digital Line/Trunk Unit Number.
Valid Entries:

5E14 and earlier: 0 - 5

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5E15 and later: 0 - 11

2.4 # DLTU TYPE

Description: Enter the Digital Line/Trunk Unit Type.

Software Release: 5E3 and later
Required Field.
Valid Entries:

Valid DLTU TYPE Entries

Entry	Definition
DLTU24	DLTU with 10 DFIs.
DLTURH	Remote Integrated Services Line Unit DLTU with 16 DFIs.
DLTU48	Software Release: 5E5 and later. DLTU2 with 10 DFI2s.

Data Rules:

For 5E8 and later, when DLTU TYPE is "DLTU24" or "DLTU48" and the corresponding TKGRP form has:
- TRKCLS of "EDSL", "IFOPER", or "IFTERM",
- INPULSING or OUTPULSING of "DCHN",
- TRK DIR of "2W", "INC", or "OUT",
- ASP ALW of "N",

then DATA RATE on the TKGRP form must be "56K", "R64K", "64K", or must not be entered.

For 5E8 and later, when DLTU TYPE is "DLTU24" or "DLTU48" and the corresponding TKGRP form has:
- TRKCLS of "EDSL", "IFOPER", or "IFTERM",
- INPULSING or OUTPULSING of "DCHN",
- TRK DIR of "SGNL",
- ASP ALW of "N",

then DATA RATE on the TKGRP form must be entered.

For 5E8 and later, when DLTU TYPE is "DLTU24" or "DLTU48" and the corresponding TKGRP form has:
- TRKCLS of "EDSL", "IFOPER", or "IFTERM",
- INPULSING or OUTPULSING of "DCHN",
- TRK DIR of "2W", "INC", or "OUT"
- ASP ALW of "Y",

then DATA RATE on the TKGRP form must not be entered.

For 5E9(2) and later, a DLTU on an SM-2000 class processor must be a DLTU2; DLTU TYPE must be "DLTU48".

For 5E9(2) and later, when DLTU TYPE is "DLTU24" or "DLTU48", OUTPULSING on the corresponding TKGRP form must not be equal to "RPTO".

When DLTU TYPE is "DLTU48", CBL SERIES and CBL DISTANCE must be entered.

2.5 # EQUIPMENT BAY

Description: Enter the Equipment Bay location number.

Required Field.
Valid Entries:
- 5E9(1) and earlier: 0 - 4

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- 5E9(2) and later: 0 - 208

Valid EQLBAY Entries, 5E9(2) and later

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinent aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

2.6 # EQUIPMENT UNIT VERTICAL

Description: Enter the Vertical Equipment location that specifies the bottom of the unit. Recommended values are based on cabinet type:

5E9(1) and earlier:
- For 7-foot cabinets: 22, 30, 39, 48, 56, 65, 74
- For 6-foot cabinets: 15, 24, 32, 41, 49, 58

For 5E9(2) and later:
- For 7-foot cabinets: 22, 30, 39, 48, 56, 65, 74
- For 6-foot cabinets: 7, 15, 24, 32, 41, 49, 58

Required Field.
Valid Entries: 0 - 84

2.7 # EQUIPMENT AISLE

Description: Enter the Equipment Aisle, consisting of a floor and aisle number.

The first and second digits from the left are the floor number. Valid floor numbers are 00 - 99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

The third and fourth digits are the aisle number. Valid aisle numbers are 00 - 99.

Required Field.
Valid Entries: 0000 - 9999

2.8 CSU

Description: Is DLTU located on a Combined Services Unit? For more information on the Combined Services Unit feature, see Division 2, Section 7F.

Software Release: 5E10 and later
Required Field.
Default Value: N
Valid Entries: Y, N

Data Rules:
When CSU is "Y", DLTU TYPE must be "DLTU48".

When an EQDU form is entered with CSU set to "Y", no other EQDU form may be entered on the same SM that also has CSU set to "Y".

When an EQDU form is entered with CSU set to "Y", all corresponding EQDUP forms with matching SM and DLTU values must have DFI PACK NBR less than 6.

For an SM with a CSU (Combined Services Unit), all equipment assignments for the CSU on that SM must specify the same combination of AISLE, BAY, VERT POS values. Therefore, the EQDU, EQGDSC3,

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EQMSU, or EQRA forms which have CSU set to "Y" must have equipment assignments that specify one location for the same CSU on a particular SM.

2.9 CBL SERIES

Descrition: Indicate the series type of cable between the DLTU2 and the DSX (Digital Cross Connect Bay).

Data Rules:
This field can only be entered when DLTU TYPE is "DLTU48".

When CBL SERIES is "1249S", CBL DISTANCE must be 0 - 450.

When CBL SERIES and/or CBL DISTANCE are entered, DLTU TYPE must be "DLTU48".

2.10 CBL DISTANCE

Description: Enter the distance between the DLTU2 and the DSX (Digital Cross Connect Bay). This distance is measured from the center of the DSX bay to the center of the DLTU2 shelf.

Software Release: 5E5 and later
Valid Entries: 0 - 650 (feet)

Data Rules:

This field can only be entered when DLTU TYPE is "DLTU48".

3. FORM ENTRIES - EQDUP FORM 5730-2/3 RECORD

3.1 * SM

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

Data Rules:

For 5E8 and later, each Switching Module (which is not an SM-2000) has 512 TS (Time Slots) available for variousfunctions. Some of these 512 are available on call and some are reserved.

- At least two TS are always required in each SM, one for audible ring and one for idle code.
- In DSN (Defence Switched Network) offices, at least three TS are always required in each SM, one for audible ring, one for precedence audible ring and one for idle code. SMs cannot have more than 509 time slots assigned to equipment.
- Each of the forms listed below may utilize a number of initialized time slots. These TS should NOT be shared with any other applications.
  - EQDCLU - Digital Carrier Line Unit Equipage Form
  - EQDSP - Digital Service Unit Pack Equipage Form
  - EQDUP - Digital Line/Trunk Unit Pack Equipage Form
  - EQIDCU - Integrated Digital Carrier Unit Equipage Form
  - EQISLU - Integrated Services Line Unit Equipage Form

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- EQISTF - Integrated Services Test Function Form
- EQLU - Line Unit Equipage Form
- EQPSU - Packet Switching Unit Equipage Form
- EQRA - Recorded Announcement Function Common Circuit & Services Form

EQTUP - Trunk Unit Pack Equipage Form

3.2 * DLTU

Description: Enter the DLTU number.
Valid Entries:

5E14 and earlier: 0 - 5
5E15 and later: 0 - 11

3.3 * DFI PACK NBR

Description: Enter the Digital Facility Interface Pack Number.
Valid Entries: 1 - 16

Data Rules:

(See also the paragraph Section 1.1 on Carrier Group Alarm.)

If DFI USAGE is "H1", DFI PACK NUMBER must be less than 5. If DFI USAGE is "H2", DFI PACK NUMBER must be greater than 4. If DFI USAGE is "H1", then this field must be less than 5. If DFI USAGE is "H2", this field must be greater than 4.

If DFI USAGE is "HOST", "TRUNK", "RDFI" or "CDFI", this field must be less than 11.

3.4 FAC IND

Description: Indicate the facility to be used.

For a DFI, the valid entry is 0, which indicates that the DFI can terminate one T1 facility (24 channels) per DLTU circuit pack. This value must be entered when DFI USAGE is "H1" or "H2".

For a DFI-2, the valid entries are 1 and 3. The DFI-2 can terminate two T1 facilities (48 channels) per DLTU2 circuit pack. A value of 1 entered in this field indicates that Facility 0 (channels 1-24) is utilized. A value of 3 indicates that Facility 0 and Facility 1 are utilized. Facility 0 uses channels 1-24 and Facility 1 uses channels 25-48.

Required Field.
Default: 0
Valid Entries: 0, 1 or 3

Data Rules:

For 5E5 and later, on an RSM all Digital Facility Interface packs for umbilicals and/or ICLs (Intra-Cluster Links) must be the same type, i.e. they must all be DFIs or all be DFI-2s. The EQDUP forms with DFI USAGE "RDFI" or "CDFI" for the RSM must all have FAC IND 0 or all have FAC IND 1 or 3.

FAC IND on an SM2000 class processor (UNIT TYPE on the EQIM form is defined as an SM2000 class

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processor) must be 1 or 3.

For 5E10 and later, if 0 is entered, then the CLI value must be 0, 3, 8, or b.

3.5 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

3.6 # CONTROL GROUP

Description: Enter Control Group Number. For 5E9(2) and later, 0 - 1 is used for SMs; 0 - 3 is used for SM-2000s.

Required Field.
Valid Entries:
- 5E9(1) and earlier: 0 - 1
- 5E9(2) and later: 0 - 3

Data Rules:

If the DFI (DFI USAGE of "RDFI") is assigned to DLTU 0, then this field must be 1 when the DFI PACK NBR is 1 - 4.

For 5E9(2) and later, if CONTROL GROUP is 0 for an SM (SM is defined on an EQIM form where UNIT TYPE is not an SM-2000 class processor), CONTROL PORT may not be 0 or 1. These ports are reserved for the LDSU.

For 5E10 and later, CONTROL GROUP/PORT must not equal FAC 0 EC CI or FAC 1 EC CI.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

3.7 # CONTROL PORT

Description: Enter the Control Port Number.

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Required Field.
Valid Entries: 0 - 22

Data Rules:

For an SM (i.e., non-SM-2000), if CONTROL GROUP is 0, this field must not be 0 or 1.

If the DFI (DFI USAGE is "RDFI"), see Figure 2 for required assignments.

For 5E10 and later, CONTROL GROUP/PORT must not equal FAC 0 EC PICB or FAC 1 EC PICB.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

3.8 # CLI

Description: Enter the Change Level Indicator.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Field.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

The correct CLI values when FAC IND is 0 are listed in Division 8, Section 1 for DFI TYPEs "TRUNK", "CDFI", "RDFI", "H1", and "H2", a hexadecimal value of 0, 1, 3, 8 or b.

3.9 CLEI

Description: Enter the Common Language Equipment Identification. See the appropriate J-Drawing for the applicable CLEI codes.

Required Field.
Valid Entries: 10 characters

APT TESTING

The following fields (Section 3.10 - Section 3.11) are added to support the APT (Automatic Progression Testing) Enhancements feature. For more information see, Division 2, Section 2AD.

3.10 ALG FAC 0

Description: This field indicates the algorithm used in APT for the DS1s (Digital Signal Level 1) related to facility 0.

Software Release: 5E16 FR2 and later

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Valid Entries:

Valid ALG FAC 0 Entries

Entry	Definition
1ONLY	Test One Only (test one trunk only on the DS1, independently whether test passes or fails and then move to a trunk on another DS1).
FULL	Full (test all trunks on the DS1, independently whether test passes or fails, and then move to a trunk on another DS1).
NOTST	No Test (APT should not perform any tests on the DS1).
SUCC	Stop on Success (test one trunk on the DS1 and then move to a trunk on another DS1 if test passes, or test next trunk on the same DS1 if test fails).

Data Rules:

When ALG FAC 0 is entered, FAC 0 DFI USAGE must be "'TRUNK" and FAC 0 APPL must not be entered.

3.11 ALG FAC 1

Description: This field indicates the algorithm used in APT for the DS1 related to facility 1.

Software Release: 5E16 FR2 and later
Valid Entries:

Valid ALG FAC 1 Entries

Entry	Definition
1ONLY	Test One Only (test one trunk only on the DS1, independently whether test passes or fails and then move to a trunk on another DS1).
FULL	Full (test all trunks on the DS1, independently whether test passes or fails, and then move to a trunk on another DS1).
NOTST	No Test (APT should not perform any tests on the DS1).
SUCC	Stop on Success (test one trunk on the DS1 and then move to a trunk on another DS1 if test passes, or test next trunk on the same DS1 if test fails).

Data Rules:

When ALG FAC 1 is entered, FAC 1 DFI USAGE must be "'TRUNK" and FAC 1 APPL must not be entered.

All FAC 1 entries must be blank when FAC IND is 0 or 1.

FAC 0 / FAC 1

The following fields (Section 3.12 - Section 3.23) are used to define up to two T1 facilities. For 5E5 and later, a DFI-2 is available. The DFI-2 allows two T1 lines to terminate on the DLTU2 (Digital Line and Trunk Unit-2). The two T1 lines are specified as Facility 0 and Facility 1 on this form. Facility 0 utilizes channels 1 to 24. Facility 1 utilizes channels 25 to 48.

The FAC 0 column is used for defining a DFI (24 channels) or for defining Facility 0 on a DFI-2. The FAC 1 column is used for defining Facility 1 on a DFI-2.

3.12 DFI USAGE

Description: Enter the DFI Usage. This field is required when FAC 0 or FAC 1 is defined.

Valid DFI USAGE Entries

Entry	Definition
CDFI	The DFI is on an RSM and is providing an ICL (Intra-Cluster Link) to a mate RSM within the same RSM Site.
H1	The DFI is used with RISLU to remote a common control PICB and a TSI PIDB.
H2	The DFI is used with RISLU to remote a TSI PIDB.
HOST	The DFI is on a Host Switching Module and is providing an umbilical from the Host for the RSM.
RDFI	The DFI is on an RSM (Remote Switching Module) and is being used to provide an umbilical from the RSM

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	to the Host Switching Module. See Figure 2 for required RDFI assignments.
TRUNK	The DFI is being used to provide trunk circuits.

Data Rules:

(See also the paragraph Section 1.1 on Carrier Group Alarm.)

CDFI:
For 5E10 and later, if "RDFI" or "CDFI" is entered FAC 0/1 DFI MODE must be "ZCS" or "B8ZS" if FAC IND is 0, 1 or 3.

H1:
If DFI USAGE is "H1", DFI PACK NUMBER must be less than 5.

H2:
If DFI USAGE is "H2", DFI PACK NUMBER must be greater than 4. For a DFI2, the DFI USAGE defined for FAC 0 must be the same as the DFI USAGE for FAC 1.

HOST:
An SM (defined on an EQIM form where UNIT TYPE is not an SM-2000 class processor) may have no more than 20 FAC 0 and/or FAC 1 DFI USAGE(s) set to "TRUNK" or "HOST".

RDFI:
For 5E10 and later, if "RDFI" or "CDFI" is entered FAC 0/1 DFI MODE must be "ZCS" or "B8ZS" if FAC IND is 0, 1 or 3.

TRUNK:
An SM (defined on an EQIM form where UNIT TYPE is not an SM-2000 class processor) may have no more than 20 FAC 0 and/or FAC 1 DFI USAGE(s) set to "TRUNK" or "HOST".

For 5E9(2) and later, if DFI USAGE is entered for an SM-2000 class processor, DFI USAGE must be "TRUNK".

For 5E10 and later, if DFI USAGE is entered for an SM-2000 class processor, DFI USAGE must be "TRUNK" or "HOST".

For 5E10 and later, if "TRUNK" is entered, FAC 0/1 DFI MODE must be
- "64K"
- "D4"
- "D464"
- "D4NO"
- "FE"
- "FE8Z"
- "FE64"
- "FEB7"

3.13 EQUIPMENT STATUS

Description: Enter the Status of the Equipment. For new offices and units destined for factory testing, "O" (Operational) is the only allowed value. During off-line ODA database retrofits, the other values are valid.

Valid EQUIPMENT STATUS Entries

Entry	Definition
O	Operational (initial ODA)
G	Growth (ODA growth)
U	Unequipped

Data Rules:

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This field is required when FAC 0 or FAC 1 is defined.

With 5E5 and later, for a new office (operational) or an equipment addition (growth),

- when FAC IND is 0 or 1 and DFI USAGE is
  - "CDFI"
  - "HOST"

  "RDFI" or
  - "TRUNK",

  EQUIPMENT STATUS must be "O".
- when FAC IND is 3 and FAC 0 or 1 DFI USAGE is
  - "CDFI"
  - "HOST"

  "RDFI" or
  - "TRUNK",

  FAC 0 or 1 EQUIPMENT STATUS must be "O".
- when FAC IND is 3 and FAC 1 DFI USAGE is "RDFI" or "CDFI",

  FAC 1 EQUIPMENT STATUS must be "O" or "G".

3.14 DATA GROUP

Description: Enter the Data Group Number. For 5E9(2) and later, 0 - 1 is used for SMs; 0 - 5 is used for SM-2000s.
Valid Entries:
- 5E9(1) and earlier: 0 - 1
- 5E9(2) and later: 0 - 5

Data Rules:

The DATA GROUP/PORT combination entered for FAC 0 must not match the DATA GROUP/PORT combination entered for FAC 1.

This field must be blank if DFI USAGE is "RDFI" or "CDFI"; otherwise, this field must be entered.

3.15 DATA PORT

Description: Enter the Data Port Number. For 5E9(2) and later, 0 - 15 is used for SMs; 0 - 23 is used for SM-2000s.
Valid Entries:

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- 5E9(1) and earlier: 0 - 15
- 5E9(2) and later: 0 - 23

Data Rules:

If DATA GROUP is 1 for a non-SM-2000 class processor, DATA PORT may not be 15.

This field must be blank if DFI USAGE is "RDFI" or "CDFI"; otherwise, this field must be entered.

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

3.16 VRBS

Description: Will the CGA (Carrier Group Alarm) conditioning mode be Verbose?

The verbose conditioning mode prints an individual craft message as each carrier group port is removed from, or restored to, service by CGA.

If VRBS is "N", normal conditioning will occur.

- **WARNING:** CGA verbose messages, like other output messages on the 5ESS Switch, are subject to brevity control. If the number of messages printed has exceeded the limit for the message class during a 15 minute period, further messages will not print.

Valid Entries: Y, N

3.17 CLFI

Description: Enter a Common Language Facility ID or a name that identifies the T1 facility. The name will appear on the MCC (Master Control Center).

Valid Entry: 1 - 12 characters

3.18 STUFFING PATTERN

Description: Enter the Channel Assignment Stuffing pattern. Each Digital Facility Interface Pack is assigned to a PIDB (Peripheral Interface Data Bus) in one of two Data Groups (0 or 1). Since a Digital Facility Interface Pack has only 24 circuits, and the Data Group has 32 available Time Slots, eight Time Slots are unused (idle). The Stuffing Pattern indicates this Time Slot assignment.

To prevent Time Slot blockage, spread the four patterns (A, B, C, D) evenly over all the Digital Facility Interface Packs assigned to a Data Group. Each pattern can be repeated up to three times per Data Group.

Valid STUFFING PATTERN Entries

Entry	Definition
A	Indicates Time Slots 0, 4, 8, 12, 16, 20, 24 and 28 are idle.
B	Indicates Time Slots 1, 5, 9, 13, 17, 21, 25 and 29 are idle.
C	Indicates Time Slots 2, 6, 10, 14, 18, 22, 26 and 30 are idle.
D	Indicates Time Slots 3, 7, 11, 15, 19, 23, 27 and 31 are idle.

Data Rules:

DFIs assigned to OSPS RISLUs must have a STUFFING PATTERN of "A".

This field must be entered for RISLU DFIs (DFI USAGE is "H1" or "H2") defined in the FAC 0 column.

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This field must be blank for all other DFI USAGES; ODA will automatically assign stuffing patterns.

3.19 DFI MODE

Description: Enter the Digital Facility Interface (T1 carrier) transmission mode.

This field is required when FAC 0 or FAC 1 is defined. The DFI MODE entered for FAC 0 can be different from the DFI MODE entered for FAC 1.

Glossary for DFI Mode terms:

- B8ZS: Bipolar 8 Zero Substitution
- CCS: Common Channel Signaling
- ZCS: Zero Code Suppression

- ***NOTE:*** 1:Applications that do not send signaling along the same path as data, e.g., ISDN and CCS7, automatically upgrade a 56K data rate to 64K. The 5ESS Switch application software upgrades the data rate to 64K by disabling rob-bit signaling on a per-channel basis. (Rob-bit signaling is the method traditionally used by trunks to send control signals along the same path as data. When an application such as ISDN or CCS7 sends the signal along another route, the rob-bit signaling is inhibited, reclaiming the PCM (Pulse Coded Modulation) bits "robbed" for signaling, and increasing the data rate to 64K.) If a 56K restricted channel mode is upgraded in this manner by application software, the resulting mode is 64K restricted channel which means that the user still cannot send zero bytes.

- ***NOTE:*** 2: When the 56K/64K clear channel capability (B8ZS line coding) is enabled by an application, the user must ensure that ALL equipment in the transmission path, including multiplexers, repeaters, etc., are optioned for the B8ZS line coding. The failure to do so will result in interfaces such as RSMs, RISLUs, and PRI D-channels failing to initialize. All other types of data transmission sending zero octets will also be corrupted by failing to option the transmission path correctly.

The data rate is upgraded to 64K based on trunk group parameters such as the following:

- Common Channel Signaling System 7; OUTPULSING equal to "ISUP7"
- Extended Digital Subscriber Line Trunk; TRKCLS equal to "EDSL"
- EDSL Trunk for Hotel/Motel TSPS Service; TRKCLS equal to "EDSLHM"
- Two-Way Packet-Switched; Internal Protocol (Local and Toll); TRKCLS equal to "PACKET"

- ***NOTE:*** 3: For 5E9(1) only, the 56K clear/56K restricted modes (FE and FE8Z) for OSPS RISLUs can be changed to 64K clear/64K restricted modes (ZCS and B8ZS) but not vice versa.

Valid DFI MODE Entries	
D4 Compatible Modes	
Entry	**Definition**
D4	56K restricted channel transmission; cannot send zero bytes, rob-bit, with ZCS. Always 56K.
64K	56K/64K clear channel transmission; can send zero bytes, rob-bit, with B8ZS. See Notes 1 and 2 above.
D464	56K/64K restricted channel transmission; cannot send zero bytes, rob-bit, with ZCS. See Note 1 above.
D4NO	56K restricted channel transmission; cannot send zero bytes, rob-bit, no ZCS. Always 56K.

Valid DFI MODE Entries	
Extended Super Frame Compatible Modes	
Entry	**Definition**
B8ZS	64K clear channel transmission on the umbilical timeslots. B8ZS, CCS, 4K data link.

	Used in RISLUs and RSMs that are remoted over 24-channel facilities with or without multiplexers. All umbilicals to an RSM must be set to this mode to allow 64K clear data calls to and from the RSM. See Note 3 above.
FE	56K restricted channel transmission; cannot send zero bytes, rob-bit, no ZCS. Always 56K. If DFI USAGE is "H1" or "H2", this mode can only be used for OSPS RISLUs remoted over 24-channel facilities that require ZCS. OSPS initializes its DFI's such that ZCS is activated for this mode. See Note 3 above.
FE8Z	56K/64K clear channel transmission; can send zero bytes, rob-bit, with B8ZS. If DFI USAGE is "H1" or "H2", this mode can only be used for OSPS RISLUs remoted over 24-channel facilities that do not require ZCS. FE8Z is the recommended DFI mode for CCS7 and Primary Rate Interface trunks utilizing Extended Super Frame format with B8ZS. However, if the PRI DFI resides on an RSM, all RSM umbilicals must be set to B8ZS to allow inter-SM 64K clear data calls. See Notes 1, 2 and 3 above.
FEB7	56K restricted channel transmission; cannot send zero bytes, rob-bit, with ZCS. Always 56K.
FE64	56K/64K restricted channel transmission; cannot send zero bytes, rob-bit, with ZCS. See Note 1 above.
ZCS	64K restricted channel transmission on the umbilical timeslots. CCS, 4K data link. Used in RISLUs and RSMs that are remoted over 24-channel facilities that require ZCS, due to the presence of B8ZS-compatible multiplexers. See Note 3 above.

- ***NOTE:*** 4: All modes operate over 24-channel facilities and are equipped with AMI (Alternate Mark Inversion).

Data Rules:

Please refer to Figure 2 for valid combinations of DFI MODE, DFI USAGE and DLTU TYPE.

DFI MODE must be "ZCS", or "B8ZS" when DFI USAGE is "CDFI" or "RDFI".

3.20 FIU SUBGROUP

Description: Enter the Facility Interface Usage Subgroup assignment.
Valid Entries: A or B

Data Rules:

The FIU SUBGROUP/PORT combination entered for FAC 0 must not match the FIU SUBGROUP/PORT combination entered for FAC 1.

This field must be entered if DFI USAGE is "RDFI" or "CDFI"; otherwise, this field must be blank. If DFI USAGE is "RDFI", see Figure 2 for required assignments.

3.21 FIU PORT

Description: Enter the Facility Interface Usage Port assignment.
Valid Entries: 0 - 9

Data Rules:

This field must be entered if DFI USAGE is "RDFI" or "CDFI"; otherwise, this field must be blank.

3.22 DFI-2 PM GRP

Description: Enter the name of the DFI-2 performance monitoring group.

Software Release: 5E8 and later
Valid Entries: 1 - 8 characters

Data Rules:

FAC0 and FAC1 DFI-2 PM GRP must not equal "/DF2GDEF".

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When FAC IND is 0, FAC 0 and FAC 1 DFI-2 PM GRP must be blank.

When FAC IND is 1, FAC 1 DFI-2 PM GRP must be blank.

When DFI-2 PM GRP is entered, the corresponding PMTHRESH form (5948-3 Record) must be entered with PM TYPE of "DFI2".DC255

3.23 AFAC ID

Description: The AFAC ID (Advanced Mobile Phone Service Facility Identifier) is used to communicate maintenance information to the ECP (Executive Cellular Processor) complex for the facility of a DFI. A Digital Line/Trunk is assigned to an AUTOPLEX facility if there is an entry in the AFAC ID field. All users on the DFI must be DCS (Digital Cellular Switch) trunks when a value is entered in AFAC ID.

Software Release: 5E9(1) and later
Valid Entries:

- For 5E13 and earlier: 1 - 880
- For 5E14: 1 - 4080
- For 5E15 and later: 1 - 4500

Data Rules:

When an AFAC ID is entered, DFI USAGE must be "TRUNK".

AFAC IDs must be unique across EQDUP forms.

For 5E13 and later, AFAC IDs must be unique across EQDUP and EQVT forms.

DLTUs (Digital Line/Trunk Units) with Digital Line/Trunks assigned to AUTOPLEX facilities must:

- be located on SMs which are operational,
- have a CONFIGURATION on the EQIM form set to either "LOADED" or an SM-2000 class processor,
- be equipped with a pumpable LDSU (Local Digital Service Unit). (An SM is equipped with a pumpable LDSU if an EQDS2P form exists where SWITCHING MODULE on the EQDS2P form matches SM on the EQIM form.)The LDSU CLI on the EQIM form:
- where CONFIGURATION is "LOADED", must be 1, 3, or 80009 (hexadecimal) for CONTROLLER 0 and CONTROLLER 1.
- where CONFIGURATION is an SM-2000 class processor, must be 0 for CONTROLLER 0 and CONTROLLER 1.

For 5E11 and later, if the AFAC ID field is entered, the specified SM must meet one of the following sets of conditions:

- EQIM CONFIGURATION must be "LOADED" or "SIGNALING", EQIM EQSTATUS must be "O", EQIM CONTROLLER 0 LDSU CLI must have a value of 1, 3 or 80009 hex, and EQIM CONTROLLER 1 LDSU CLI must have a value of 1, 3 or 80009 hex, OR
- EQIM CONFIGURATION must be an SM-2000 class processor, EQIM EQSTATUS must be "O", and

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EQDSC3 CLI must have a value of 0 for the same SM.

4. FORM ENTRIES - EQDUP FORM 5730-4 RECORD

4.1 * SM

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

4.2 * DLTU

Description: Enter the DLTU number.
Valid Entries: 0 - 5

4.3 * DFI PACK NBR

Description: Enter the Digital Facility Interface Pack Number.
Valid Entries: 1 - 16

FAC 0/1 ECHO CANCELER PACKS

The following fields (Section 4.4 - Section 4.17) apply to Echo Canceler Units. These fields support the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.

Echo Canceler fields must all be known or all be unknown.

All FAC 1 entries must be blank when FAC IND is 0 or 1.

If Echo Cancelers are defined on this form, then a corresponding EQECSU form must be entered for this SM.

4.4 ECSU

Description: Enter the unit number for the ECU on Facility 0/1. The ECU (Echo Canceler Unit) is a single shelf unit which can contain up to 20 Echo Canceling circuits. The circuit for the Echo Canceler on DFI (Digital Facility Interface) Facility 0/1 is located on this unit.

Software Release: 5E10 and later.
Valid Entries: 0 - 5

Data Rules:

Echo Canceler fields must all be known or all be unknown.

If Echo Cancelers are defined on this form, then a corresponding EQECSU form must be entered for the same SM and the ECSU entries must match.

EQDUP form(s) cannot duplicate FAC 0 and/or FAC 1 Echo Canceler Board assignments on the same SM. FAC 0/1 ECSU and POS entries must be unique on the same SM.

4.5 POS

Description: Enter the EC5 (Echo Canceler 5) card slot number for the Echo Canceler circuit position on Facility 0/1. The Position for Facility 0/1 field indicates the Echo Canceler circuit for Facility 0/1 on the DFI.

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Software Release: 5E10 and later.
Valid Entries: 1 - 20

4.6 EC CI

Description: Enter the control interface number for Echo Canceler circuit for Facility 0/1 of the DFI.

Software Release: 5E10 and later.
Valid Entries:
- For SM: 0 - 1
- For SM-2000: 0 - 3

Data Rules:

CONTROL GROUP must not equal FAC 0 EC CI or FAC 1 EC CI.

FAC 0 EC CI must not equal FAC 1 EC CI.

4.7 EC PICB

Description: Enter the Peripheral Interface Control Bus for the Echo Canceler circuit on Facility 0/1 of the DFI.

Software Release: 5E10 and later.
Valid Entries: 0 - 22

Data Rules:

CONTROL PORT must not equal FAC 0 EC PICB or FAC 1 EC PICB.

FAC 0 EC PICB must not equal FAC 1 EC PICB.

4.8 EC CLI

Description: Enter the change level indicator value for echo canceler circuit on Facility 0/1 of the DFI.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Software Release: 5E10 and later.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

The CLI values for the FAC 0 EC CLI and/or FAC 1 EC CLI assignments for the ECHO CANCELER is a hexadecimal value of 0, 1, 2, 3, 8, 9, a, or b.

If FAC 0/1 EC CLI is an odd number designating it as the two board configuration, then FAC 0/1 POS must be an odd number.

4.9 END PATH

Description: Enter the end path value in MS (Milliseconds) that indicates how much Echo Canceler delay is needed for the echo canceler circuit.

Software Release: 5E10 and later.
Valid Entries: 16MS, 32MS, or 64MS.

4.10 TONE DIS

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Description: Enter the tone disabling value used to indicate the state of the tone disabling function for the Echo Canceler on facility 0/1.

Software Release: 5E10 and later.
Valid Entries:

Valid TONE DIS Entries	
Entry	**Definition**
NOTONE	No tone can disable echo cancellation.
RVRTONE	Reverse tone disables echo cancellation.
STRVTONE	Straight and reverse tones disable echo cancellation.

4.11 ALPHA VAL

Description: Enter the alpha value in DB (Decibells) that defines the alpha value or return loss used by the Echo Canceler for Facility 0/1.

Software Release: 5E10 and later.
Valid Entries: 0 - 6 (DB)

4.12 TRAN MATCH

Description: Is transient noise matching turned on for the Echo Canceler on Facility 0/1? An entry of "N" indicates the transient noise matching is off.

Software Release: 5E10 and later.
Valid Entries: Y, N

4.13 NB ENGDT

Description: Is narrow band energy detection turned on for the echo canceler on Facility 0/1? An entry of "N" indicates it is off.

Software Release: 5E10 and later.
Valid Entries: Y, N

4.14 RSD ECTL

Description: Is the residual echo control or center clipping turned on for the Echo Canceler on Facility 0/1? An entry of "N" indicates it is off.

Software Release: 5E10 and later.
Valid Entries: Y, N

4.15 TRAN EN

Description: Is the transient echo control enabled on the echo canceler on Facility 0/1? An entry of "N" indicates it is disabled.

Software Release: 5E10 and later.
Valid Entries: Y, N

4.16 EC BYP

Description: Will the Echo Canceler devices be bypassed? The Echo Canceler bypass setting is used to bypass the Echo Canceler devices on Facility 0/1.

WARNING: In order for the setting of this variable to take effect via Recent Change, the DFI which

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is paired with Echo Canceler must be restored or a full/selective initialization must take place.

Software Release: 5E10 and later.
Valid Entries: Y, N

4.17 EC MODE

Description: Enter the interface mode for the Echo Canceler on Facility 0/1.

Software Release: 5E10 and later.
Valid Entries:

Valid EC MODE Entries

Entry	Definition
FAC	Echo Canceler pointing towards the facility.
TSI	Echo Canceler pointing towards the time slot interchange (SM).

Data Rules:

If FAC 0/1 EC MODE is entered it must be "FAC".

An SM which has SM USAGE entered as "RSM" and bit 1 (where bit 0 is the least significant bit) of DLI CLI 0 set to 1 on the EQIM form, requires 4 Control Timeslot umbilicals to be defined on the EQDUP form as follows:

DLTU	DFI	DFI USAGE	CONTROL GROUP	CONTROL PORT	DFI TRANSMISSION MODE	FIU SUBGROUP	FIU PORT
0	1	RDFI	1	19	Note 1	A	0
0	2	RDFI	1	18	Note 1	B	0
0	3	RDFI	1	17	Note 1	A	1
0	4	RDFI	1	16	Note 1	B	1

An SM which has SM USAGE entered as "RSM" and bit 1 (where bit 0 is the least significant bit) of DLI CLI 0 set to 0 on the EQIM form, requires a maximum of 2 Control Timeslot umbilicals (Minimally Configured RSM) to be defined on the associated EQDUP form as follows:

DLTU	DFI	DFI USAGE	CONTROL GROUP	CONTROL PORT	DFI TRANSMISSION MODE	FIU SUBGROUP	FIU PORT
0	1	RDFI	1	19	Note 1	A	0
0	2	RDFI	1	18	Note 1	B	0

Note 1: ZCS, B8ZS or RZBTS for 5E5 and later.

Figure 1 REMOTE DIGITAL FACILITY INTERFACE ASSIGNMENTS 5E3 AND LATER SOFTWARE RELEASES

DFI MODE (EQDUP form)	DFI USAGE (EQDUP form)	DLTU TYPE (EQDU form)
B8ZS	H1/H2	DLTURH
B8ZS	HOST	DLTU24 or DLTU48
B8ZS	CDFI/RDFI	DLTU24 or DLTU48
D4	TRUNK	DLTU24 or DLTU48
D464	TRUNK	DLTU24 or DLTU48
D4NO	TRUNK	DLTU48
FE	TRUNK	DLTU24 or DLTU48
FE	H1/H2	DLTURH
FEB7	TRUNK	DLTU24 or DLTU48
FE8Z	TRUNK	DLTU24 or DLTU48
FE8Z	H1/H2	DLTURH
FE64	TRUNK	DLTU24 or DLTU48
ZCS	H1/H2	DLTURH
ZCS	HOST	DLTU24 or DLTU48
ZCS	CDFI/RDFI	DLTU24 or DLTU48
64K	TRUNK	DLTU24 or DLTU48

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Figure 2 VALID DFI MODE, DFI USAGE, AND DLTU TYPE COMBINATIONS 5E5 AND LATER SOFTWARE RELEASES

```
SCREEN 1 OF 3                5ESS SWITCH
eqdup                  OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

*1. SM          ___                        FAC 0          FAC 1
*2. DLTU         _          DFI USAGE       9. ______      21. ______
*3. DFI PACK NBR __         EQUIPMENT STATUS 10. _         22. _
 4. FAC IND      0          DATA GROUP      11. _          23. _
#5. CONTROL GROUP _         DATA PORT       12. __         24. __
#6. CONTROL PORT __         VRBS            13. _          25. _
#7. CLI          _________  CLFI            14. _____________ 26. _____________
 8. CLEI         __________ STUFFING PATTERN 15. _
                      DFI MODE        16. _____      27. _____
                      FIU SUBGROUP    17. _          28. _
                      FIU PORT        18. _          29. _
                      DFI-2 PM GRP    19. _________  30. _________
                      AFAC ID         20. ____       31. ____
```

```
SCREEN 2 OF 3                5ESS SWITCH
eqdup                  OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

 ECHO CANCELER PACKS          ECHO CANCELER PACKS
32. FAC 0 ECSU      _        43. FAC 0 TRAN EN _
33. FAC 0 POS       __       44. FAC 0 EC BYP  _
34. FAC 0 EC CI     _        45. FAC 0 EC MODE _____
35. FAC 0 EC PICB   __
36. FAC 0 EC CLI    _________
37. FAC 0 ENDPATH   __
38. FAC 0 TONE DIS  _________
39. FAC 0 ALPHA VAL _
40. FAC 0 TRAN MATCH _
41. FAC 0 NB ENGDT  _
42. FAC 0 RSD ECTL  _
```

```
SCREEN 3 OF 3                5ESS SWITCH          _
eqdup                  OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

 ECHO CANCELER PACKS          ECHO CANCELER PACKS
46. FAC 1 ECSU      _        57. FAC 1 TRAN EN _
47. FAC 1 POS       __       58. FAC 1 EC BYP  _
48. FAC 1 EC CI     _        59. FAC 1 EC MODE _____
49. FAC 1 EC PICB   __
50. FAC 1 EC CLI    _________
```

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51. FAC 1 END PATH __
52. FAC 1 TONE DIS _____
53. FAC 1 ALPHA VAL _
54. FAC 1 TRAN MATCH _
55. FAC 1 NB ENGDT _
56. FAC 1 RSD ECTL _

Figure 3 SAMPLE EQDUP FORM 5E10 - 5E14 SOFTWARE RELEASES

SCREEN 1 OF 3 5ESS SWITCH
eqdup OFFICE DATA ADMINISTRATION
(5730-2/3/4/5) DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

*1. SM ___ FAC 0 FAC 1
*2. DLTU __ DFI USAGE 10. _____ 23. _____
*3. DFI PACK NBR __ EQUIPMENT STATUS 11. _ 24. _
4. FAC IND 0 DATA GROUP 12. _ 25. _
5. INTF UNIT 0 DATA PORT 13. __ 26. __
#6. CONTROL GROUP _ VRBS 14. _ 27. _
#7. CONTROL PORT __ CLFI 15. _____ 28. _____
#8. CLI _____ APPL 16. ____ 29. ____
9. CLEI _____ STUFFING PATTERN 17. _
DFI MODE 18. _____ 30. _____
FIU SUBGROUP 19. _ 31. _
FIU PORT 20. _ 32. _
DFI-2 PM GRP 21. _____ 33. _____
AFAC ID 22. ____ 34. ____

SCREEN 2 OF 3 5ESS SWITCH
eqdup OFFICE DATA ADMINISTRATION
(5730-2/3/4/5) DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

ECHO CANCELER PACKS ECHO CANCELER PACKS
35. FAC 0 ECSU _ 46. FAC 0 TRAN EN _
36. FAC 0 POS __ 47. FAC 0 EC BYP _
37. FAC 0 EC CI _ 48. FAC 0 EC MODE _____
38. FAC 0 EC PICB __
39. FAC 0 EC CLI _____
40. FAC 0 ENDPATH __
41. FAC 0 TONE DIS _____
42. FAC 0 ALPHA VAL _
43. FAC 0 TRAN MATCH _
44. FAC 0 NB ENGDT _
45. FAC 0 RSD ECTL _

SCREEN 3 OF 3 5ESS SWITCH _
eqdup OFFICE DATA ADMINISTRATION
(5730-2/3/4/5) DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

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```
 ECHO CANCELER PACKS          ECHO CANCELER PACKS
49. FAC 1 ECSU      _        60. FAC 1 TRAN EN _
50. FAC 1 POS       __       61. FAC 1 EC BYP  _
51. FAC 1 EC CI     _        62. FAC 1 EC MODE _____
52. FAC 1 EC PICB   __
53. FAC 1 EC CLI    _________
54. FAC 1 END PATH  __
55. FAC 1 TONE DIS  _________
56. FAC 1 ALPHA VAL _
57. FAC 1 TRAN MATCH _
58. FAC 1 NB ENGDT  _
59. FAC 1 RSD ECTL  _
```

Figure 4 SAMPLE EQDUP FORM 5E15 SOFTWARE RELEASE

```
SCREEN 1 OF 4                5ESS SWITCH
eqdup                  OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

*1. SM           ___           APT TESTING
*2. DLTU         __          10. ALG FAC 0 _____
*3. DFI PACK NBR __          11. ALG FAC 1 _____
 4. FAC IND      0
 5. INTF UNIT    0
#6. CONTROL GROUP _
#7. CONTROL PORT  __
#8. CLI          _________
 9. CLEI         ___________
```

```
SCREEN 2 OF 4                5ESS SWITCH
eqdup                  OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

                 FAC 0                  FAC 1
DFI USAGE       12. ______             25. ______
EQUIPMENT STATUS 13. _                 26. _
DATA GROUP      14. _                  27. _
DATA PORT       15. __                 28. __
VRBS            16. _                  29. _
CLFI            17. _____________________________ 30. _____________________________
APPL            18. ____               31. ____
STUFFING PATTERN 19. _
DFI MODE        20. _____              32. _____
FIU SUBGROUP    21. _                  33. _
FIU PORT        22. _                  34. _
DFI-2 PM GRP    23. _________          35. _________
AFAC ID         24. ____               36. ____
```

```
SCREEN 3 OF 4                5ESS SWITCH
```

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```
eqdup                OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

 ECHO CANCELER PACKS          ECHO CANCELER PACKS
37. FAC 0 ECSU      _        48. FAC 0 TRAN EN _
38. FAC 0 POS       __       49. FAC 0 EC BYP  _
39. FAC 0 EC CI     _        50. FAC 0 EC MODE _____
40. FAC 0 EC PICB   __
41. FAC 0 EC CLI    ________
42. FAC 0 ENDPATH   __
43. FAC 0 TONE DIS  ________
44. FAC 0 ALPHA VAL _
45. FAC 0 TRAN MATCH _
46. FAC 0 NB ENGDT  _
47. FAC 0 RSD ECTL  _
```

```
SCREEN 4 OF 4                5ESS SWITCH          _
eqdup                OFFICE DATA ADMINISTRATION
(5730-2/3/4/5)     DIGITAL LINE/TRUNK UNIT PACK EQUIPAGE

 ECHO CANCELER PACKS          ECHO CANCELER PACKS
51. FAC 1 ECSU      _        62. FAC 1 TRAN EN _
52. FAC 1 POS       __       63. FAC 1 EC BYP  _
53. FAC 1 EC CI     _        64. FAC 1 EC MODE _____
54. FAC 1 EC PICB   __
55. FAC 1 EC CLI    ________
56. FAC 1 END PATH  __
57. FAC 1 TONE DIS  ________
58. FAC 1 ALPHA VAL _
59. FAC 1 TRAN MATCH _
60. FAC 1 NB ENGDT  _
61. FAC 1 RSD ECTL  _
```

Figure 5 SAMPLE EQDUP FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 18: 5731 RECORD
INTEGRATED SERVICES LINE UNIT EQUIPAGE FORM - EQISLU

1. GENERAL

The 5731 Integrated Service Line Unit Equipage Record and EQISLU form are available with the 5E3 and later Software Releases. They are used to define ISLU (Integrated Services Line Unit) assignments in a 5ESS Switch.

With 5E4(2) and later Software Releases, for every unique combination of Switching Module and PSU Shelf on the EQISLU form (5731 Record), there must be an EQPSUPH form (5742 Record) with a corresponding Switching Module and PSU Shelf.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.5.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Each Switching Module entered on this form must be defined on the EQIM form where the value entered for CONFIGURATION supports Integrated Services.

2.3 * ISLU NUMBER

Description: Enter the Integrated Services Line Unit Number.

Required Field.
Valid Entries: 0 - 7 for ISLU, or 0 - 41 for ISLU2

Data Rules:

ISLUs share the same unit number range with RISLUs, LUs, and IDCUs. Therefore, unit numbers assigned on this form may not be assigned on any EQRISLU, EQLU, or EQIDCU form with the same SM number.

For 5E10 and later, any EQISLU form(s) with ISLU NUMBER greater than 7 must be assigned to an SM where the corresponding UNIT TYPE is "SM-2000".

2.4 UNIT TYPE

Description: Enter the ISLU type.

Software Release: 5E10 and later.
Required Field.

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Valid Entries: ISLU or ISLU2

Data Rules:

ISLU NUMBER must be between 0 and 7 when UNIT TYPE is "ISLU".

2.5 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.6 CONTROL GROUP

Description: For 5E9(2) and earlier: Enter the Control Group Number. Both Service Groups are defined with the same input form so the value entered here represents the assigned Control Group for both Service Groups.

For 5E10 and later: Enter Control interface group number.

Required Field.
Valid Entries:

- For 5E9(2) and earlier: 0 - 1
- For 5E10 and later: 0 - 1 for SM
- or 0 - 3 for SM-2000

Data Rules:

For 5E10 and later, only SM-2000 can use CONTROL GROUP values greater than 1.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.7 CONTROL PORT

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Description: Enter the Control Port number assigned to Service Group 0. Since Service Group 0 and Service Group 1 require consecutive Control Port Numbers on the same Control Group, the value for the Service Group 1 will be inferred from the value entered here for Service Group 0. If the Control Group value is 0, Control Ports 00 and 01 cannot be assigned because they are reserved for the Local Digital Service Unit.

Required Field.
Valid Entries: 0 - 20, even numbers only

Data Rules:

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.8 EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries:

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

Data Rules:

When one ISLU is mounted in an EQUIPMENT BAY, it must be at EQUIPMENT VERTICAL position 36.

For 5E10 and later, when two ISLU2s are mounted in the same SWITCHING MODULE and EQUIPMENT BAY, the bottom ISLU2 must be mounted at EQUIPMENT VERTICAL position 7 and the top ISLU2 must be mounted at EQUIPMENT VERTICAL position 41.

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For 5E10 and later,

- when one ISLU2 is mounted in an EQUIPMENT BAY and PRODUCT on the OFCOPT form is NOT equal to "WNC" EQUIPMENT VERTICAL must be 7.
- when one ISLU2 is mounted in an EQUIPMENT BAY and PRODUCT on the OFCOPT form is equal to "WNC" EQUIPMENT VERTICAL must be either 7 or 41.

2.9 EQUIPMENT VERTICAL

Description: Enter the Vertical Equipment Location that specifies the bottom of the unit. Expected values are 36 for the first ISLU and 7 for a second ISLU. If two ISLUs are mounted in the same SM and Equipment Bay, the bottom ISLU is mounted in location 7, and the top ISLU is mounted in location 36.

Software Release: 5E4(2) and later
Required Field.
Valid Entries: 0 - 84

2.10 EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of a floor and aisle number. The first two digits are the floor number and the last two digits are the aisle number. Valid floor numbers are 00 to 99. It is recommended that Floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.11 COMMON CONTROL EQST

Description: Enter the Equipment Status of the ISLU's Common Control Boards. Both Common Control Boards have the same status.

New 5ESS Switch offices and units being added for factory testing require the Operational state.

Required Field.
Default: O.
Valid Entries:

Valid COMMON CONTROL EQST Entries

Entry	Definition
U	Unequipped
G	Growth
O	Operational

2.12 COMMON DATA EQST

Description: Enter the Equipment Status of the ISLU's Common Data Boards. Both Common Control Boards have the same status.

Required Field.
Default: O
Valid Entries:

Valid COMMON DATA EQST Entries

Entry	Definition
U	Unequipped
G	Growth
O	Operational

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Data Rules:

New 5ESS Switch Offices and units being added for factory testing require the Operational state. During off-line ODA database retrofits, values other than "O" may exist; but if they do, the EQST entered here must be lower than or equal to the COMMON CONTROL EQST. The hierarchy of Equipment Status, from lowest to highest, are Unequipped, Growth and Operational. The equipment status of the PIDBs on the PIDBs list must not be greater than the COMMON DATA EQST.

2.13 COMMON CONTROL CLI

Description: Enter the Change Level Indicator for the Common Control Boards (both boards must have the same CLI). For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Field.
Valid Entries: 0 - 7fffffff (hexadecimal)

2.14 COMMON DATA CLI

Description: Enter the Change Level Indicator for the Common Data Boards (both boards must have the same CLI). For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Field.
Valid Entries: 0 - 7fffffff (hexadecimal)

2.15 D-CHANNEL TYPE

Description: Enter the D-channel Type.

Required Field.

Valid D-CHANNEL TYPE Entries

Entry	Definition
TSIU	Cut-through the TSIU (Time Slot Interchange Unit)
PSU	Directly connected to a Packet Switching Interface Unit

Data Rules:

If "TSIU" is entered, there must be at least one PIDB TYPE of "DUAL", and there may not be any PIDB TYPEs of "PSU".

If "PSU" is entered, there must be at least one PSU PIDB TYPE entered.

2.16 CD CONFIGURATION

Description: Enter the Common Data configuration.

The "ACTSTBY" entry is the recommended option for OSPS and Pinnacle (Commercial) ACD. (For more information on CACD features see Division 2, Section 3D.)

Required Field.

Valid CD CONFIGURATION Entries

Entry	Definition
ACTSTBY	Active/Standby
LDSHRD	Load Shared

Data Rules:

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If "ACTSTBY" is entered, there must be at least one PIDB TYPE of "DUAL" entered, and a SHRD PIDB TYPE entry is not allowed.

If "LDSHRD" is entered, there must be at least one SHRD PIDB TYPE entered.

PIDBs

PIDBs (fields Section 2.17 - Section 2.21) are to be equipped in pairs of the same PIDB TYPE and relative PIDB NO. on the two sides. The entries on this form are for Side 0 only, since the assignments for Side 1 can be inferred from the assignments for Side 0. PIDB NO. 0 is always required and must have a PIDB TYPE of "DUAL" or "SHRD". If PIDB NO. 1 is entered, it must have a PIDB TYPE of "DUAL" or "SHRD".

PIDBs of PIDB TYPE "DUAL" or "SHRD" connect to the TSIU (Time Slot Interchange Unit) and the assignments to the same PIDB NO. on the two sides must be made to the same DATA GROUP with Side 0 assigned to an even numbered DATA PORT and Side 1 assigned to the next higher odd numbered DATA PORT. PIDBs of type "PSU" connect to the PSU with the same relative PIDB NO. assigned to the same PSU SHELF and DF POS Number.

If B-Channel traffic is to be carried on the ISLU, there must be at least one PIDB TYPE of either "DUAL" or "SHRD". D-Channel traffic requires at least one PIDB TYPE of either "DUAL" or "PSU".

Note that if D TIMESLOTs and/or B TIMESLOTs have not been assigned via DSL, DSLAP, MISLINK, or OSPSDSL forms, ODA's automatic time slot assignment algorithm allocates four timeslots to each SM/ISLU/LGC (Line Group Controller) configuration for each PIDB from the ISLU to the PSU as follows: EN (Equipment Numbers) assigned to LGCs 0 - 7 (the 5th and 6th digit of the EN is the LGC) get timeslots on odd numbered EQISLU PIDBs and EN assigned to LGCs 8 - 15 get timeslots on even numbered EQISLU PIDBs, each with a PIDB TYPE of "PSU".

2.17 PIDB TYPE

Description: Enter the type of PIDB.

Valid PIDB TYPE Entries

Entry	Definition
DUAL	Dual PIDB.
SHRD	Shared Load PIDB.
PSU	Direct PIDB to a PSU.

Data Rules:

For valid combinations of PIDB TYPE and other fields, see Figure 1.

If PIDB TYPE is "DUAL", CD CONFIGURATION must be "ACTSTBY".

For 5E8 and later, if PIDB TYPE is "PSU":

- the corresponding EQPSU form must have a matching PSU SHELF and the PSU SHELF 0/1 EQSTAT must be "O". An EQISLU form corresponds with an EQPSU form when the SM numbers are the same.
- there must be an EQPSUPH form with the same SWITCHING MODULE and PSU SHELF combination as this form.

For 5E10 and later, if PIDB TYPE is "PSU":

- neither the PSU SHELF SIDE 0 CLI or the PSU SHELF SIDE 1 CLI values may be 3 ("PSU" PIDB TYPEs cannot be associated with data fanout multiple PIDB PSU shelves).

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For 5E12 and later, if PIDB TYPE is "PSU":

- PSU SHELF/DF POS assignments cannot be duplicated among the EQAIU, EQIDCU, and/or the EQISLU forms for specified SMs.

2.18 DATA GROUP

Description: **For 5E9(2) and earlier:** For PIDBs of type "DUAL" or "SHRD", enter the assigned DATA GROUP Number.

For 5E10 and later: Enter the Data interface number.
Valid Entries:
- For 5E9(2) and earlier: 0 - 1
- For 5E10 and later: 0 or 1 for an SM
- or 0 to 5 for an SM-2000

Data Rules:

For PIDBs of type "PSU", leave this field blank.

For 5E10 and later, only SM-2000 SMs can use DATA GROUP values greater than 1.

For 5E10 and later, the combination of DATA GROUP 1 and DATA PORT 14 can not be assigned on the EQISLU forms whose corresponding EQIM form has a UNIT TYPE other than "SM-2000". Assigning this combination for SERVICE GROUP 0 automatically results in the combination of DATA GROUP 1 and DATA PORT 15 being assigned to SERVICE GROUP 1. The combination of DATA GROUP 1 and DATA PORT 15 is reserved for classic SMs.

2.19 DATA PORT

Description: For PIDBs of type "DUAL" or "SHRD", enter the Data Port Number.
Valid Entries:
- For 5E9(2) and earlier: 0 - 15, even numbers only For 5E10 and later: 0 - 15 for an SM, or enter 0 - 23 for an SM-2000.

Data Rules:

For PIDBs of type "PSU", leave this field blank.

For 5E10 and later, only SM-2000 can use DATA PORT values greater than 15.

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.20 PSU SHELF

Description: For PIDBs of type "PSU", enter the PSU SHELF to which the PIDB is connected.
Valid Entries: 0 - 5

Data Rules:

For PIDBs of types other than "PSU", leave this field blank.

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2.21 DF POS

Description: Enter the Data Fanout Position of the PIDB connection.
Valid Entries: 0 - 10

Data Rules:

For PIDBs of type "PSU", valid entries are 0 to 10. For PIDBs of types other than "PSU", leave this field blank.

VALID COMBINATIONS OF PIDB TYPE AND OTHER FIELDS

PIDB TYPE	DATA GROUP	DATA PORT	PSU SHELF	DF POS
DUAL	R	R (Note 2)	P	P
PSU	P	P	R	R (Note 1)
SHRD	R	R (Note 2)	P	P

Note 1: Valid values 0 - 5.
Note 2: Even numbered DATA PORTS only.

R = Required
P = Prohibited

Figure 1 VALID COMBINATIONS OF PIDB TYPE AND OTHER FIELDS

```
SCREEN 1 OF 2                5ESS Switch
eqislu              OFFICE DATA ADMINISTRATION
(5731)          INTEGRATED SERVICES LINE UNIT EQUIPAGE

*1. SWITCHING MODULE   ___
*2. ISLU NUMBER        __

#3. UNIT TYPE          _____        #9. COMMON CONTROL EQST O
#4. CONTROL GROUP      _              #10. COMMON DATA EQST    O
#5. CONTROL PORT       __           #11. COMMON CONTROL CLI  ________
#6. EQUIPMENT BAY      ___          #12. COMMON DATA CLI     ________
#7. EQUIPMENT VERTICAL __             #13. D-CHANNEL TYPE     PSU
#8. EQUIPMENT AISLE    ____          #14. CD CONFIGURATION    ________
```

```
SCREEN 2 OF 2                5ESS Switch          _
eqislu              OFFICE DATA ADMINISTRATION
(5731)          INTEGRATED SERVICES LINE UNIT EQUIPAGE


15. PIDBs          17.    18.    19.    20.    21.
          PIDB   PIDB    DATA    DATA   PSU    DF
      row   NO.   TYPE    GROUP   PORT   SHELF   POS
       1     0   _____    _     __     _     __
       2     1   _____    _     __     _     __
       3     2   _____    _     __     _     __
       4     3   _____    _     __     _     __
       5     4   _____    _     __     _     __
       6     5   _____    _     __     _     __
       7     6   _____    _     __     _     __
       8     7   _____    _     __     _     __
       9     8   _____    _     __     _     __
```

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```
      10    9  ____    _    __    _    __
      11   10  ____    _    __    _    __
      12   11  ____    _    __    _    __
```

Figure 2 SAMPLE EQISLU FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqislu                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5731)          INTEGRATED SERVICES LINE UNIT EQUIPAGE

*1. SWITCHING MODULE ___       10. COMMON CONTROL EQST_ O
*2. ISLU NUMBER      __        11. COMMON DATA EQST     O
                      #12. COMMON CONTROL CLI  ________
#3. UNIT TYPE         _____    #13. COMMON DATA CLI     ________
 4. INTF UNIT         0        14. D-CHANNEL TYPE       PSU
#5. CONTROL GROUP     _        #15. CD CONFIGURATION    ________
#6. CONTROL PORT      __
#7. EQUIPMENT BAY     ___
#8. EQUIPMENT VERTICAL __
#9. EQUIPMENT AISLE   ____
```

```
eqislu                    5ESS Switch          _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5731)          INTEGRATED SERVICES LINE UNIT EQUIPAGE

                  16. PIDBs (PIDB)

   PIDB PIDB DATA  DATA PSU   DF     PIDB PIDB DATA  DATA PSU   DF
ROW NO   TYPE GROUP PORT SHELF POS ROW NO   TYPE GROUP PORT SHELF POS
 1   0  ____  _   __   _  __    7   6 ____  _   __   _  __
 2   1  ____  _   __   _  __    8   7 ____  _   __   _  __
 3   2  ____  _   __   _  __    9   8 ____  _   __   _  __
 4   3  ____  _   __   _  __   10   9 ____  _   __   _  __
 5   4  ____  _   __   _  __   11  10 ____  _   __   _  __
 6   5  ____  _   __   _  __   12  11 ____  _   __   _  __
```

Figure 3 SAMPLE EQISLU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 19: 5732 RECORD
REMOTE INTEGRATED SERVICES LINE UNIT
EQUIPAGE FORM - EQRISLU

1. GENERAL

The EQRISLU form (Remote Integrated Services Line Unit Equipage (5732 Record)) is available with 5E3 and later Software Releases. It is used to define Remote Integrated Services Line Unit assignments in a 5ESS Switch.

For 5E10 and later, when the OE defined on a DSLAP form or LCEN defined on an OSPSDSL form or the DSL OE defined on a DSL form are associated with an EQRISLU form, the DSL, DSLAP or OSPSDSL input forms must not have the D TIMESLOT or B TIMESLOT information assigned.

For 5E10 and later, when the DSL, DSLAP and OSPSDSL forms have unassigned D TIMESLOTs and/or B TIMESLOTS, ODA assigns these values. The ODA assignment requires that LCENs (DSL OE on the DSL form) assigned to LGCs 0 - 7 (Note: the fifth and sixth digit of the LCEN/DSL OE is the LGC) get timeslots on odd numbered EQISLU PIDBs and that LCENs assigned to LGCs 8 thru 15 get timeslots on even numbered EQISLU PIDBs, each with a PIDB TYPE of "PSU". If there are either no odd numbered PIDBs for LGC 0 - 7 or even numbered PIDBs for LGC 8 - 15 on this ISLU, a cross check error occurs.

1.1 Recent Change View

The corresponding Recent Change View for this form is 22.9.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Each Switching Module entered on this form must be defined on an EQIM form (5700-1 Record). For 5E4(2) and later, the value must be defined on an EQIM form with the CONFIGURATION field set to "LOADED". For 5E9(2) and later, the value entered must be a configuration that supports RIS (Remote Integrated Services). See the Configurations for Facilities and Applications table in Division 8, Section 2.

For 5E9(1) and later, each SM (Switching Module) can have up to 5 PSU Shelfs. Each Shelf can have up to 16 PH (Protocol Handlers). Shelfs and PHs are defined by the first 3 digits of the ISCN field. Each PH can be assigned up to 32 timeslots. PH time slot for On Demand B Channel, Packet BChannel, Packet D Channel, EDSL, IFOPER, and IFTERM can be assigned on the following forms:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- MISLINK
- OSPSDSL
- RTERM

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- TRUNK
- XAT

The following data rule is not executed on an SM-2000, because provisioning of nailed-up time slots is not required on an SM-2000. On a PSU1 , each Data Interface in a SM can have a maximum of 128 nailed-up time slots reserved for the following applications:

Data Interface for Nailed-up Timeslots

Application	Definition
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms (CMDA application).
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3 digits of LCEN match SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3 digits of LCEN (on the DSLAP or OSPSDSL form) or OE (on the DSL or MISLINK form) match SM on an EQRISLU form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms (CMDA application).
X.25	Defined on the XAT forms.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

These time slots can be reserved by entering the rows RPTSS0 to RPTSS7 on the EQPSU form. The quantity of time slots reserved (i.e. the number entered) must be greater than or equal to the quantity of time slots assigned for the above applications. Note that a D channel only takes a quarter of a time slot.

Also, the reserved time slots must be entered such that for any given SHELF, (defined by the first digit of ISCN field or by the SHELF field on the MISLINK form), the time slots assigned to that SHELF must not be duplicated in the same vertical (column) position if they appear in more than one row (RPTSS0 through RPTSS7).

2.3 *RISLU NUMBER

Description: Enter the RISLU Number.

Required Field.
Valid Entries: 0 - 7

Data Rules:

RISLUs share the same unit number range with ISLUs, Line Units, and IDCUs. Therefore, unit numbers assigned on this form may not be assigned on any EQISLU, EQLU, or EQIDCU form with the same SM number.

2.4 #RISLU SITE

Description: Enter the Remote Integrated Services Line Unit Site Number.

Required Field.
Valid Entries: 500 - 999

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Data Rules:

The RISLU SITE must be defined on a RISITE form (5902 Record).

2.5 #HOST DLTU

Description: Enter the Remote Integrated Services Line Unit Digital Line/Trunk Unit Number.

Required Field.
Valid Entries: 0 - 5

Data Rules:

Only two matching entries are allowed per SM indicating that only two RISLUs can be hosted on an SM/DLTU.

This DLTU must be defined on an EQDU form (5730 Record) with a DIGITAL LINE/TRUNK UNIT TYPE of "DLTURH" in the same SM.

2.6 INTF UNIT

Description: The Interface Unit field was added to support the 5E15 Optically Extended Control and Data Unit feature. It is a Recent Change only field. See Division 2, Section 9V.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

2.7 #COMMON CONTROL GROUP

Description: Enter the Control Group Number of the PICB that is being remoted to the RISLU via a DFI-H1. Both sides (Service Groups) are defined by the same input form so the value entered here represents the assigned Control Group for both Service Groups.

Required Field.
Valid Entries: 0 and 1

2.8 #COMMON CONTROL PORT

Description: Enter the Control Port Number (Service Group 0) of the PICB that is being remoted to the RISLU via a DFI-H1. Since Side 0 and Side 1 require Consecutive Control Port Numbers on the same Control Group, the value for Side 1 will be inferred from the value entered here for Side 0.

Required Field.
Valid Entries: even numbers in the range 0 to 20

Data Rules:

Control Port 22 is not allowed since the next higher port assigned to Side 1 would be 23, which is not a valid assignment.

Control Ports 0 and 1 cannot be assigned to Control Group 0 since Control Group 0, Ports 0 and 1 are reserved for the Local Digital Service Unit (DSU).

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The COMMON CONTROL GROUP and COMMON CONTROL PORT combination must be unique, for the given SWITCHING MODULE, within the 5ESS Switch.

2.9 #EQUIPMENT BAY

Description: Enter the Equipment Location Bay number.

Required Field.

Software Release: 5E4(2) and later
Valid Entries:
- For 5E4(2) only: 0 - 4
- For 5E5 only: 0, 2, 3, 4
- For 5E6 and later: 0 - 4

2.10 #EQUIPMENT AISLE

Description: Enter the Equipment Aisle Number.

This entry consists of a floor and aisle number. The first and second digits from the left are the floor number. Valid floor numbers are 00 to 99. The third and fourth digits from the left are the aisle number. Valid aisle numbers are 00 to 99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation. The EQUIPMENT BAY and EQUIPMENT AISLE combination must be unique, for the given SWITCHING MODULE, within the 5ESS Switch.

Software Release: 5E4(2) and later
Required Field.
Valid Entries: 00 - 99

2.11 #CD CONFIGURATION

Description: Enter the Common Data Configuration.

For OSPS (Operator Service Position System) applications, the option "SPROSPS" designates that one of the RISLU remoting facilities be used as a spare, whereas the option "ROSPS" implies that there will be no spare remoting facility. Use of a spare facility is STRONGLY RECOMMENDED (option "SPROSPS"). If no spare facility is provided, then service disruption will occur whenever a facility carrying traffic is removed from service, whether due to a fault or manual request. The choice of providing a spare facility can be made ONLY when the RISLU is initially configured; that is, Recent Change CANNOT be used to update the Common Data Configuration option on a RISLU already configured in the system.

If the "SPROSPS" option is engineered for eight active plus one standby DFI pairs, diagnostic phases 11 and 20 of the spare DFI diagnostics will output the CATP (Conditional All Tests Pass) output message which indicates that all tests were not performed to avoid impact to customer service.

Valid CD CONFIGURATION Entries

Entry	Description
RACTSTBY	
ROSPS	RISLU active standby, OSPS application.
SPROSPS	RSILU active standby, OSPS with sparing.

Data Rules:

If the "SPROSPS" option is selected, all DFI-H1s and DFI-H2s must be connected to the same DI board (DATA GROUP on the EQDUP form - 5730 Record), and they must all have the same stuff code pattern (STUFFING PATTERN on the EQDUP form). This is a required form.

If RISLU is to be configured as a Universal RISLU (non-OSPS), "RACTSTBY" must be specified.

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RISLU OSPS applications are identified by the assignment of "ROSPS" or "SPROSPS" to the CD CONFIGURATION field of the EQRISLU form. Any and all D channels on an OSPS application will be mapped internally according to the following rules.

- The D channel assignments for RISLUs which are associated with OSPS are grouped, internally, into piggy-back groups. D channels which are in a piggy-back group will share time slots. D channels which are not in the same piggy-back group can not share timeslots.
- D channels are grouped together in threes (three to a time slot) if the HOST/REM DFIs have "ZCS" signaling (DFI MODE on the EQDUP form). Otherwise the D channels are grouped four to a time slot.
- D channels are in the same piggy-back group if they are assigned in the same SM, RISLU, LGC, if the first 3 digits of the ISCN are identical and if the LC number is grouped 0 - 7, 8 - 15, 16 - 23 or 24 - 31 (eg: LC 3 and 6 are in the same group, LC 9 and 17 are not). D channels should be packed (in the same piggy-back group) if possible. If they are not packed, an excessive number of time slots may be used.

2.12 #COMMON CONTROL EQST

Enter the Equipment Status of the RISLU's Common Control Boards (both Common Control Boards have the same status).

Required Field.

Valid COMMON CONTROL EQST Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:
New 5ESS Switches and units being added for factory testing require the Operational state.

If these boards are equipped in Service Group 1 (COMMON CONTROL GROUP is 1 on this form), the Equipment Status value cannot be greater than the CONTROL GROUP 1 STATUS value entered on the EQIM form. The hierarchy of Equipment Status, from lowest to highest, are Unequipped, Growth and Operational.

2.13 #COMMON DATA EQST

Description: Enter the Equipment Status of the RISLU's Common Data Boards (both Common Data Boards have the same status).

Required Field.

Default value: O (Operational)

Valid COMMON DATA EQST Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

New 5ESS Switches and units being added for factory testing require the Operational state. During off-line ODA database retrofits, values other than "O" may exist. If they do exist, the EQST entered here must be lower than or equal to the COMMON CONTROL EQST.

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If these boards are equipped in Service Group 1 (COMMON CONTROL GROUP is 1 on this form), the Equipment Status value cannot be greater than the CONTROL GROUP 1 STATUS value entered on the EQIM form.

The hierarchy of Equipment Status, from lowest to highest, are Unequipped, Growth and Operational. If the COMMON CONTROL EQST is "U", the COMMON DATA EQST must be "U". If COMMON CONTROL EQST is "G", then either "U" or "G" must be entered.

2.14 #REMOTE CLOCK EQST

Description: Enter the Equipment Status of the RISLU Remote Clock Boards (both boards have the same status).

Required Field.
Default: O (Operational)
Valid Entries:

Valid REMOTE CLOCK EQST Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

New 5ESS Switches and units being added for factory testing require the Operational state. During off-line ODA database retrofits, values other than "O" may exist. If they do exist, the EQST entered here must be lower than or equal to that of the DFI-H1 pack remoting the COMMON CONTROL PICB.

If these boards are equipped in Service Group 1 (COMMON CONTROL GROUP is 1 on this form), the Equipment Status value cannot be greater than the CONTROL GROUP 1 STATUS value entered on the EQIM form.

Furthermore, the Equipment Status of the Remote Clock boards cannot be greater than the EQUIPMENT STATUS value entered on the EQDUP form (5730 Record).

The hierarchy of Equipment Status, from lowest to highest, are Unequipped, Growth and Operational.

2.15 #COMMON CONTROL CLI

Description: Enter the Change Level Indicator for the Common Control Boards (both boards must have the same CLI).

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal).

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.16 COMMON DATA CLI

Description: Enter the Change Level Indicator for the Common Data Boards (both boards must have the same CLI).

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal).

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.17 REMOTE CLOCK CLI

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Description: Enter the Change Level Indicator for the RISLU Remote Clock Boards (both boards must have the same CLI).

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal).

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.18 PIDBs

Description: Enter the Peripheral Interface Data Buses.

Each of the two Common Data Boards on each side (Service Group) of the RISLU provide for termination of 6 PIDBs. The relative PIDB numbers are 0 to 5 on CD 1 and 6 to 12 on CD 2 (on each side). There is no indication of the CD number on the input form, since both CDs are always equipped. PIDBs are to be equipped in pairs with the same relative PIDB NO. on the two sides. The entries on this form are for Side 0 only, since the assignments for Side 1 can be inferred from the assignments for Side 0. PIDB NO. 0 and 1 are always required, and their respective HOST DFI PACK POS values must be between 1 and 4. Their respective REM. DFI PACK values must be between 1 and 2.

PIDB NO. 2 to 11 must have HOST DFI PACK POS values, if entered, between 5 and 16. Their respective REM. DFI PACK values, if entered, must be between 3 and 12.

The HOST DFI PACK POS and REM. DFI PACK values must be unique.

2.19 HOST DFI PACK POS

Description: Enter the Pack Position (within the DLTU-RH) of the DFI-H1 or DFI-H2 that is remoting the PIDB to the RISLU.
Valid Entries: 1 - 16.

Data Rules:

PIDB NO. 0 and 1 requires a DFI-H1 pack, and this pack must be in pack position 1-4. PIDB Nos. 2 to 11 are optionally equipped with DFI-H2 packs and these packs must be in pack positions 5-16. A DLTU-RH can accommodate up to 16 DFIs and 4 DFI-H1s (2 RISLUS) and up to a total of 12 DFI-H2s. The same DFI pack cannot use more than one PIDB.

The DFI-H1 and DFI-H2 packs have the following requirements:

All RISLU DFI packs on this RISLU must appear on the same DLTU-RH (HOST DLTU on this form).

All RISLU DFI Packs on this RISLU must have the same DFI TRANSMISSION MODE defined on an EQDUP form.

RISLU DFI packs must have the STUFFING PATTERN on the EQDUP form spread uniformly across the DFIs assigned to a particular RISLU with the exception of RISLUs with the OSPS sparing option (CD CONFIGURATION is "SPROSPS") which must have the same STUFFING PATTERN for all DFIs on a RISLU.

For 5E10 and later, HOST DFI PACK POS values must be in ascending order (packs must be assigned from left to right in the frame).

2.20 REM. DFI PACK POS

Description: Enter the Pack Position of the DFI-R1 or DFI-R2 (at the RISLU site) that carries the PIDB. Each DFI-H1 requires a DFI-R1 and each DFI-H2 requires a DFI-R2. They are equipped in matching pairs with each set remoting the same PIDB.

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Valid Entries: 1 - 12

Data Rules:

PIDB Nos. 0 and 1 must have DFI-R1 packs in pack position 1-2. PIDB Nos. 2-4 must have DFI-R2 packs in pack position 3-12.

For a given PIDB NO., the user must enter both the HOST DFI PACK POS and the REM. DFI PACK POS or the user must not enter both. An entry in only one of the fields is not permitted.

For 5E10 and later, REM. DFI PACK POS values must be in ascending order (packs must be assigned from left to right in the frame).

```
eqrislu                    5ESS Switch                _
(5732)              OFFICE DATA ADMINISTRATION
          REMOTE INTEGRATED SERVICES LINE UNIT EQUIPAGE
* 1. SWITCHING MODULE     001          16. PIDBs     17.       18.
* 2. RISLU NUMBER         2                PIDB   HOST DFI   REM. DFI
# 3. RISLU SITE           500          row   NO.   PACK POS   PACK POS
# 4. HOST DLTU            0            1     0      01        01
# 5. COMMON CONTROL GROUP  0            2     1      02        02
# 6. COMMON CONTROL PORT   00           3     2      __        __
# 7. EQUIPMENT BAY        2            4     3      __        __
# 8. EQUIPMENT AISLE      0001         5     4      __        __
# 9. CD CONFIGURATION     RACTSTBY     6     5      __        __
#10. COMMON CONTROL EQST   O            7     6      __        __
#11. COMMON DATA EQST      O            8     7      __        __
#12. REMOTE CLOCK EQST     O            9     8      __        __
#13. COMMON CONTROL CLI    00000000     10    9      __        __
#14. COMMON DATA CLI       00000000     11    10     __        __
#15. REMOTE CLOCK CLI      00000000     12    11     __        __
```

Figure 1 SAMPLE EQRISLU FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqrislu                    5ESS Switch
SCREEN 1 OF 2              OFFICE DATA ADMINISTRATION
(5732)          REMOTE INTEGRATED SERVICES LINE UNIT EQUIPAGE

 *1. SWITCHING MODULE     ___          13. REMOTE CLOCK EQST  O
 *2. RISLU NUMBER         _          #14. COMMON CONTROL CLI _________
 #3. RISLU SITE           ___        #15. COMMON DATA CLI    _________
 #4. HOST DLTU            __         #16. REMOTE CLOCK CLI   _________
   INTF UNIT          0
  #6. COMMON CONTROL GROUP _
 #7. COMMON CONTROL PORT  __
 #8. EQUIPMENT BAY        _
 #9. EQUIPMENT AISLE      ____
#10. CD CONFIGURATION     _________
 11. COMMON CONTROL EQST  O
 12. COMMON DATA EQST     O
```

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```
eqrislu                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5732)       REMOTE INTEGRATED SERVICES LINE UNIT EQUIPAGE

                17. PIDB

   PIDB HOST DFI REM. DFI     PIDB HOST DFI REM. DFI
ROW NO   PACK POS PACK POS ROW NO   PACK POS PACK POS
 1   0     __      __      7   6     __      __
 2   1     __      __      8   7     __      __
 3   2     __      __      9   8     __      __
 4   3     __      __     10   9     __      __
 5   4     __      __     11  10     __      __
 6   5     __      __     12  11     __      __
```

Figure 2 SAMPLE EQRISLU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 20: 5733 RECORD
(REMOTE) INTEGRATED SERVICES LINE UNIT
LINE GROUP CONTROLLER EQUIPAGE FORM - EQLGC

1. GENERAL

The 5733, (Remote) Integrated Services Line Unit Line Group Controller Equipage Record, is available with 5E4, Issue 1 and later Software Releases. It is used to define the Line Group Controllers equipped on Remote or Local Integrated Services Line Units in a 5ESS Switch.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * SWITCHING MODULE

Description: Enter the Switching Module number.
Valid Entries: 1 - 192.

Data Rules:

Each Switching Module entered on this form must be defined on the EQIM form.

2.3 * (R)ISLU NUMBER

Description: Enter the Integrated Services Line Unit (ISLU) or Remote Integrated Services Line Unit (RISLU) number.
Valid Entries: 0 - 7.

Data Rules:

Any value entered here must have a corresponding entry on the EQISLU or EQRISLU input form.

For 5E10 and later, ISLU numbers on the EQLGC form must either be defined on the EQISLU or the EQRISLU form, or be defined on an EQISLU form with a UNIT TYPE other than "ISLU".

LINE GROUP CONTROLLERS

Up to sixteen Line Group Controllers (LGCs) can be equipped on each ISLU or RISLU. For each equipped LGC, enter the following fields.

2.4 EQST

Description: Enter the equipment status of the LGC.

Valid EQST Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

New offices and equipment additions require the Operational status. During off-line ODA database retrofits, values other than "O" may exist; but if they do, the EQST value entered here must be lower than or equal to the COMMON DATA EQST value on the EQISLU or EQRISLU form. The hierarchy of

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equipment status, from lowest to highest, are Unequipped, Growth and Operational.

2.5 CLI

Description: Enter the Change Level Indicator of the LGC. For a complete listing of valid CLI values, J-Drawing and list combinations, see Division~8, Section~1.
Valid Entries: 0 - 7fffffff (hexadecimal).

```
eqlgc                    5ESS Switch                _
(5733)              OFFICE DATA ADMINISTRATION
                (R)ISLU LINE GROUP CONTROLLER EQUIPAGE

* 1. SWITCHING MODULE   010
* 2. (R)ISLU           0

 LINE GROUP CONTROLLERS
  4.        6.     7.          8.          10.     11.
 row   LGC   EQST    CLI          row   LGC   EQST     CLI
  1     0     O    00000000        9     8     _   _________
  2     1     O    00000000       10     9     _   _________
  3     2     O    00000000       11    10     _   _________
  4     3     O    00000000       12    11     _   _________
  5     4     O    00000000       13    12     _   _________
  6     5     _    _________      14    13     _   _________
  7     6     _    _________      15    14     _   _________
  8     7     _    _________      16    15     _   _________
```

Figure 1 SAMPLE INTEGRATED SERVICES LINE UNIT LINEGROUP CONTROLLER FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 21: 5740 RECORD
DIGITAL SERVICE UNIT EQUIPAGE FORM (EQDS)
DIGITAL SERVICE UNIT PACK EQUIPAGE FORM (EQDSP)
DIGITAL SERVICE UNIT 2 PACK EQUIPAGE FORM (EQDS2P)

1. GENERAL

The 5740 Record is available with the 5E2 and later Software Releases. It is used to define DSU (Digital Service Unit) assignments. Each DSU must have unique Equipment Bay and Vertical Equipment locations per Interface Module.

1.1 Recent Change View

The Recent Change View for this form is 18.0.

2. FORM ENTRIES FOR DIGITAL SERVICE UNIT EQUIPAGE - EQDS

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *INTERFACE MODULE

Description: Enter the Interface Module (i.e., Switching Module) Number.

Required Field.
Valid Entries: 1 - 192.

Data Rules:

Equipment units within the same SM must be assigned to unique Equipment Bay and Vertical Position values.

2.3 *DIGITAL SERVICE UNIT

Description: Enter the Digital Service Unit Number. This field is for GDSUs (Global DSUs) only as ODD (Office Dependent Data) for the Local DSU is automatically generated. Pack information for the Local DSU is defined on the EQDSP form.

Required Field.
Valid Entries: 0 -7

Data Rules:

No more than 128 GDSUs can be supported by the office.

2.4 *SERVICE GROUP

Description: Enter the Service Group Number.

Required Field.
Valid Entries: 0 or 1

2.5 EQUIPMENT STATUS

Description: Enter the status of the equipment.

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Valid EQUIPMENT STATUS Entries	
Entry	**Definition**
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

For new offices and units destined for factory testing, "O" is the only allowed value. During offline ODA database retrofits, the other values are valid.

2.6 INTF UNIT

Description: The Interface Unit field was added to support the 5E15 Optically Extended Control and Data Unit feature. This is a Recent Change only field. See Division 2, Section 9V.
Valid Entries: 0 -8

Data Rules:

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

2.7 CONTROL GROUP

Description: Enter the Control Group Number.

Required Field.
Valid Entries: 0 or 1

2.8 CONTROL PORT

Description: Enter the Control Port Number.

Required Field.
Valid Entries: 0 - 22.

Data Rules:

CONTROL PORT numbers entries must be unique per SM.

2.9 DATA GROUP

Description: Enter the Data Group Number. These entries must be unique per SM.

Required Field.
Valid Entries: 0 or 1

2.10 DATA PORT

Description: Enter the Data Port number.

Required Field.
Valid Entries: 0 - 15

Data Rules:

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Data Port numbers must be unique per SM.

2.11 EQUIPMENT BAY

Description: Enter the location of the Equipment Bay.

Required Field.
Valid Entries:
- 5E9(1) and earlier: 0 - 4

Valid EQUIPMENT BAY Entries,5E9(2) and later

Entry	Definition
0 - 14	SMC aisle.
100 - 014	Back panel; wiring position.
200 - 208	Front panel; door position.

Data Rules:

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

2.12 UNIT VERTICAL

Description: Enter the locations of the Vertical Unit which specifies the bottom of the unit.

Required Field.

Valid UNIT VERTICAL Entries, 5E9(1) and earlier

Entry	Definition
15 - 58	6 foot cabinets.
22 - 70	7 foot cabinets.

Valid UNIT VERTICAL Entries, 5E9(2) and later

Entry	Definition
7 - 58	6 foot cabinets.
22 - 70	7 foot cabinets.

Data Rules:

Locations of the Vertical Units must be identical for all of the same DSU and IM Service Groups.

2.13 EQUIPMENT AISLE

Description: Enter the Equipment Aisle Number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.14 DSU COMMON CIRCUIT CLI

Description: Enter the Digital Service Unit Common Circuit Change Level Indicator. This circuit is provided as part of the basic unit per Service Group.

Required Field.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

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For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

3. FORM ENTRIES FOR DIGITAL SERVICE UNIT PACK EQUIPAGE - EQDSP

3.1 *INTERFACE MODULE

Description: Enter the Interface Module Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The INTERFACE MODULE (Switching Module) value entered on this form must equal the INTERFACE MODULE value entered on the EQDS form (5740 Record).

This value must be defined on the EQIM form (5700 Record).

3.2 *DIGITAL SERVICE UNIT

Description: Enter the Digital Service Unit number. This field is for Local and Global Digital Service Units for EQDSP.

Required Field.
Valid Entries: 0 - 7

Data Rules:

The DSU value entered on this form must equal the DSU value entered on the EQDS form (5740 Record).

Global DSU's must be numbered consecutively beginning with 1 for each IM on the EQDS form.

3.3 *SERVICE GROUP

Description: Enter the Service Group Number.

Required Field.
Valid Entries: 0 or 1

Data Rules:

The SERVICE GROUP value entered on this form must equal the SERVICE GROUP value entered on the EQDS form (5740 Record).

PACK

The following fields (Section 3.4 - Section 3.9) define the circuit packs associated with the DSU.

3.4 POSITION

Description: Enter the pack position.
Valid Entries: 0 - 7

Data Rules:

If an entry is made in either POSITION, TYPE, STATUS, CLI or CLEI, then POSITION, TYPE, STATUS, CLI and CLEI must all have an entry for each equipped pack.

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3.5 TYPE

Description: Enter the Circuit Type (Hardware) for each Pack Position.

Valid TYPE Entries

Entry	Definition
UTD2	2 Circuit Universal Tone Decoder Pack.
UTD4	4 Circuit Universal Tone Decoder Pack.
UTG	Universal Tone Generator.
RVPT	Revertive Pulsing Transceiver Pack (2-way).
TTFRESP	Transmission Test Facility Responder.
TTFPROC	Transmission Test Facility Processor.
TTFTGEN	Transmission Test Facility Tone Generator.
CONF2	2-circuit Conference Pack.
CONF5	5-circuit Conference Pack.
TTFINTF	Transmission Test Facility Interface Board.
UCC1032	6-Port Conference Pack.

Data Rules:

For Local Digital Service Units, "UTD2", "UTD4", "UTG", and "RVPT" above are the only Pack Types permitted.

Each Service Group on the Local Digital Service Unit must have one "UTG" pack, and at least one "UTD2", or "UTD4" pack, and a maximum of one "RVPT".

With 5E2 and later Software Releases, Service Group 0 and 1 are not required to have the same number of UTD Circuits in each as long as they are off by only one. An "RVPT" pack should be provided on each Service Group of the LDSU servicing Revertive Pulsing Trunks. The "UTG" pack should be located in pack Position 0 with the "UTD2", and "UTD4" packs starting in pack Position 1. The RVPT pack must be located in pack Position 7.

The total number of UTD circuits ("UTD2" equals 2 circuits/packs; "UTD4" equals 4 circuits/packs) plus the number of equipped "RVPT" circuits (refer to CIRCUITS EQUIPPED in this section) must be equal to 32 or less.

If "UTG" or "RVPT" are entered, then CIRCUITS EQUIPPED must have an entry. For 5E5 and later Software Releases, if "RVPT" is entered, CIRCUITS EQUIPPED must be 2 through 24.

For each unique combination of INTERFACE MODULE and DIGITAL SERVICE UNIT, if SERVICE GROUP 0 (or 1) is equipped with one or more PACK TYPES of "RVPT", then SERVICE GROUP 1 (or 0) must also be equipped with one or more PACK TYPES of "RVPT".

The "UTD2" packs must not be mixed with "UTD4" packs in the same Service Group or Digital Service Unit.

Global Digital Service Units are equipped with the Transmission Test Facility (TTF) and Conference Packs. The basic Transmission Test Facility consists of four packs, designated by "TTFPROC", "TTFTGEN", "TTFINTF", and "TTFRESP", with provision for two additional responders.

Conference Packs are equipped as follows:

A. Transmission test facilities with one or two responders. Three valid combinations are allowed:

   1. 3 two-circuit conference packs only
   2. 1 two-circuit conference pack; 1 six-port conference pack
   3. 1 five-circuit conference pack

B. Transmission Test Facilities with three responders. Two configurations are allowed:

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1. A maximum of two 2-circuit 3-port conference packs only
2. One 6-port conference circuit pack only

C. No Transmission Test Facilities. The following five combinations are allowed:

1. Five two-circuit 3-port conference circuits packs
2. Two five-circuit 3-port conference circuits packs
3. 3 two-circuit 3-port conference circuit packs; 1 6-port conference circuit
4. One two-circuit 3-port conference circuit pack; 2 6-port conference circuit packs
5. 1 6-port conference pack; 1 five-circuit 3-port conference circuit pack

3.6 STATUS

Description: Enter the status of the equipment.

Valid STATUS Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

For new offices and units destined for factory testing, "O" is the only allowed value. During offline ODA database retrofits, the other values are valid.

3.7 CIRCUITS EQUIPPED

Description: Enter the number of circuits to be equipped for this pack type. This entry is required only for pack types "UTG" and "RVPT". Both of these pack types have a maximum number of 32 equipable circuits per pack. However, they are equipped on a per circuit basis.
Valid Entries: 0 - 32

Data Rules:

For 5E5 and later Software Releases, the sum of equipped "UTG" circuits and the number of equipped "RVPT" circuits must be 32. If "UTG" or "RVPT" is entered, then CIRCUITS EQUIPPED must have an entry. If "RVPT" is entered, then CIRCUITS EQUIPPED must be 2 through 24.

For RVPT, 0 or 2-32 may be entered; 1 is not allowed.

3.8 CLI

Description: Enter the Common Level Indicator.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

3.9 CLEI

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Description: Enter the Common Language Equipment Identification. See the appropriate J-Drawing for applicable CLEI codes.

4. FORM ENTRIES FOR DIGITAL SERVICE UNIT 2 PACK EQUIPAGE - EQDS2P

The DSU2-LDSUF (Digital Service Unit Model 2-Local Digital Service Unit Function) is applicable with 5E2 and later Software Releases and is a replacement of the original LDSU hardware (DSU1). The DSC (Digital Service Circuit) is the heart of the DSU2 architecture. This single circuit will perform all the functions of a service group of the LDSU. Each DSC of the DSU2-LDSUF has seven DSPs (Digital Signal Processors) on it. Each of these DSPs will perform a single function such as Tone Generation or Tone Decoder.

As of 5E4(2) and later Software Releases, this record is also used to assign CAMA (Centralized Automatic Message Accounting) tone decoder circuits for the OSPS (Operator Services Position System) toll and assistance feature.

If an incoming transfer CAMA trunk terminates on an SM, it should have a DSU2-LDSUF unit in the SM, and it should have a certain number of CAMA tone decoder circuits in both service groups of the DSU2-LDSUF unit of the same SM. CAMA tone decoder circuits are specified with a circuit type of "LDSU2CTD" on the EQDS2P form.

For 5E3 and later, this record is also used to assign Tone Transceiver circuits for the CCS (Common Channel Signaling) trunk signaling feature. If Common Channel Signaling (CCIS6 or ISUP7) trunks terminate on an SM, that SM must be equipped with a DSU2-LDSUF unit. The DSU2-LDUSF unit is typically equipped with five Tone Transceivers in each of its two Service Groups.

Tone Transceiver circuits are used to generate, loop back, and detect the tones used in Voice Path Assurance checks or Continuity Test calls over CCS trunks. The Tone Transceiver also provides VBDGs (Voice Band Data Generators) as part of the Analog Message Waiting Indicator feature, and provides signaling for the ICLID (Individual Calling Line Identification) feature. The Analog Message Waiting Indicator feature allows the called party to be notified of an incoming call by lighting an indicator on their analog phone set. The ICLID feature allows the called party to receive information about an incoming call or allows the calling party to prevent the delivery of their DN (Directory Number) to the terminating station set.

CAMA tone decoder circuits are used to decode the tone from a CAMA to identify whether the call is due to ANIF (Automatic Number Identification Failure) or ONI (Operator Number Identification).

4.1 *SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The entered SM value must be defined on the EQIM form (5700 Record).

4.2 *DIGITAL SERVICE UNIT 2

Description: Enter the Digital Service Unit Number for either the Local or Global Digital Service Unit for EQDSP. Global Digital Service Unit numbering begins with 1 for each Switching Module.

Required Field.
Valid Entries: 0 - 7

Data Rules:

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DSU must be zero if TYPE is equal to "LDSU2TG", "LDSU2TD", "LDSU2TX", or "LDSU2CTD".

4.3 *SERVICE GROUP

Description: Enter the Service Group number.

Required Field.
Valid Entries: 0 or 1

DIGITAL SERVICE CIRCUITS (DSC)

The following fields (Section 4.4 - Section 4.8) define the Digital Service Circuits for the DSU2.

4.4 DSP

Description: Enter the Digital Signal Processor number.
Valid Entries: 0 - 6

Data Rules:

Each DSP must be unique.

Only one DSP can be assigned to "LDSU2TG" per Service Group, but a "LDSU2TG" is not required in each SG. "LDSU2TG", "LDSU2TD", "LDSU2TX", or "LDSU2CTD" DSPs must be equipped in consecutive DSP positions beginning with DSP 0.

4.5 TYPE

Description: Enter the Type of DSP.

Valid TYPE Entries

Entry	Description
LDSU2TG	DSU Model 2 Tone Generator.
LDSU2TD	DSU Model 2 Tone Decoder.
LDSU2TX	Software Release: 5E3 and later. DSU Model 2 Tone Transceiver. There must be a Tone Transceiver in each Service Group (SG0 and SG1) per SM.
LDSU2CTD	Software Release: 5E4(2) and later. DSU Model 2 CAMA Transfer Decoder DSP.
LDSU2VBS	Software Release: 5E9(2) and later. DSU Model 2 Voice Band Service.

4.6 STATUS

Description: Enter the status of the equipment.

Valid STATUS Entries

Entry	Definition
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

For new offices and units destined for factory testing, "O" is the only allowed value. During offline ODA database retrofits, the other values are valid.

4.7 CLI

Description: Enter a valid Common Level Indicator value.

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Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For a list of valid CLI values, refer to Division 8, Section 1.

4.8 CIRCUITS EQUIPPED

Description: Enter the number of circuits to be equipped.

Valid CIRCUITS EQUIPPED Entries

Entry	Definition
1-5	
1-8	
1-10	For LDSU2CTD.
1-31	For LDSU2TG per DSP, where at least 9 per Service Group are required to complete calls and provide all system tones.

Data Rules:

Only one DSP may be assigned "LDSU2TG" per SG, but an "LDSU2TG" is not required in each SG.

For 5E9(1) and earlier, the seven DSPs located in the DSC can have a maximum of 31 "LDSU2TG" circuits, and a maximum of 30 "LDSU2TD", "LDSU2CTD", and "LDSU2TX" circuits, respectively or collectively.

However, if any DSPs are partially equipped with "LDSU2TD", "LDSU2TX," or "LDSU2CTD" circuits, it must be the last equipped DSP of that type.

For 5E9(2) and later, a maximum of 30 total equipped "LDSU2TD", "LDSU2CTD", "LDSU2TX", and "LDSU2VBS" circuits, are allowed.

```
eqds                    5ESS Switch                _
5740                 OFFICE DATA ADMINISTRATION
                  DIGITAL SERVICE UNIT EQUIPAGE



* 1.  INTERFACE MODULE        001
* 2.  DIGITAL SERVICE UNIT    1
* 3.  SERVICE GROUP           1
  4.  EQUIPMENT STATUS        O
  5.  CONTROL GROUP           0        6.  CONTROL PORT         17
  7.  DATA GROUP              1        8.  DATA PORT            10
  9.  EQUIPMENT BAY           2
  10. UNIT VERTICAL           24
  11. EQUIPMENT AISLE         0415
  12. DSU COMMON CIRCUIT CLI  00000000
```

Figure 1 SAMPLE EQDS FORM 5E6 AND LATER SOFTWARE RELEASES

```
eqds                    5ESS Switch                _
5740                 OFFICE DATA ADMINISTRATION
                  DIGITAL SERVICE UNIT EQUIPAGE
```

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```
* 1.  INTERFACE MODULE        001
* 2.  DIGITAL SERVICE UNIT    1
* 3.  SERVICE GROUP           1
  4.  EQUIPMENT STATUS        O
  5.  CONTROL GROUP           0       6.  CONTROL PORT        17
  7.  DATA GROUP              1       8.  DATA PORT           10
  9.  EQUIPMENT BAY           2
  10. UNIT VERTICAL           24
  11. EQUIPMENT AISLE         0415
  12. DSU COMMON CIRCUIT CLI  00000000
```

Figure 2 SAMPLE EQDSP FORM 5E6 AND LATER SOFTWARE RELEASES

```
eqds                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5740)              DIGITAL SERVICE UNIT EQUIPAGE

 *1. INTERFACE MODULE      ___
 *2. DIGITAL SERVICE UNIT  _
 *3. SERVICE GROUP         _
  4. EQUIPMENT STATUS      O
 #5. CONTROL GROUP         _
 #6. CONTROL PORT          __
 #7. DATA GROUP            _
 #8. DATA PORT             __
 #9. EQUIPMENT BAY         _
#10. UNIT VERTICAL         __
#11. EQUIPMENT AISLE       ____
#12. DSU COMMON CIRCUIT CLI ________
```

Figure 3 SAMPLE EQDS2P FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqds                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5740)              DIGITAL SERVICE UNIT EQUIPAGE

 *1. INTERFACE MODULE     001    #13. DSU COMMON CIRCUIT CLI ________
 *2. DIGITAL SERVICE UNIT 1
 *3. SERVICE GROUP        1
  4. EQUIPMENT STATUS     O
    INTF UNIT            0
 #6. CONTROL GROUP        _
 #7. CONTROL PORT         __
 #8. DATA GROUP           _
 #9. DATA PORT            __
#10. EQUIPMENT BAY        _
#11. UNIT VERTICAL        __
#12. EQUIPMENT AISLE      ____
```

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Figure 4 SAMPLE EQDS FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 22: 5741-1/2 RECORD
PACKET SWITCHING UNIT EQUIPAGE FORM - EQPSU

1. GENERAL

The Packet Switching Unit Equipage Record is available with 5E3 and later Software Releases. It is used to define the PSUs equipped in a 5ESS Switch. For 5E5 and later, it is also used to reserve a pool of dedicated peripheral timeslots for the exclusive use of the PSU equipped in a 5ESS Switch.

The PSU houses the Protocol Handlers and switches packet type data. Only one PSU may be equipped on any given SM (Switching Module). For 5E5 and later, the equipment status of the Protocol Handler circuit is entered on the EQPSUPH form (5742 Record) in the EQST field. When an EQPSUPH form contains an EQST entry of "O" (Operational), all eight possible days must be defined on the PSRATE form (5922 Record) in order to define billing. Conversely, if no EQPSUPH form is operational, the following constraints must be observed in order to avoid system errors indicating invalid (improper sequence) provisioning conditions:

- MLHG form (5110 Record) must not be entered with HUNT TYPE set to "PSUCD" on the corresponding MLHGFD form (5604 Record),
- PSRATE form must not be entered,
- RTIDX form (5303 Record) must not be entered with DESTINATION PSN entered,
- TKGRP form (5202 Record) must not be entered with HUNT TYPE set to "PSUCD".

Refer to Division 2, Section 1BK for a discussion of these two issues.

For 5E10 and later, when TGN(s) are defined with a TRKCLS of "PACKET" on the TKGRP form, the Switching Module (the first three digits of DEN or NEN on the TRUNK form) that is associated with the TGN(s) must contain a PSU (Packet Switch Unit) defined on the EQPSU form.

For 5E10 and later, when TGN/MEMB(s) on the TRUNK form have a TRKCLS of "X75" or "X75P" on the associated TKGRP form, the SWITCHING MODULE that is associated with the TGN (DEN[1,3] or NEN[1,3] on the TRUNK form), must contain a Packet Switch Unit (PSU) defined on the EQPSU form.

1.1 Recent Change View

The Recent Change View for this form is 22.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SWITCHING MODULE

Description: Enter the SM (Switching Module) number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Each SM entered on this form must be defined on an EQIM (Switching Module Equipage) form (5700 Record).

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For 5E4(2) - 5E9(1), the CONFIGURATION field on the corresponding EQIM form must be set to "LOADED".

For 5E9(2) and later, for the CONFIGURATION that supports this SM, see the table Configurations for Facilities and Applications for the EQIM form in Division 8, Section 2.

For 5E9(1) and later, each SM (Switching Module) can have up to 5 PSU Shelves. Each Shelf can have up to 16 PH (Protocol Handlers). Shelves and Channel Groups are defined by the first 3 digits of the ISCN field. Each PH can be assigned up to 32 timeslots. To determine PHs which have more than 32 timeslots assigned, check the On Demand B Channel, Packet B Channel, Packet D Channel, EDSL, IFOPER, and IFTERM on the over-loaded PHs in the following forms and fields:

Assigned PHs

Form	Fields
AMLBDSL	LCEN
DSL	DSL OE
DSLAP	AP SITE ID
DSLUSR	TN and CKTTN or CKTMLHG/CKTTERM, TN and DPKTTN or DPKTMLHG/DPKTTERM, TN and ODBTN or ODBMLHG/ODBTERM
MISLINK	OE
OSPSDSL	LCEN
RTERM	SM UNIT TYPE, UNIT NUMBER, RTEX
TRUNK	TGN, MEMB
XAT	PKT TN, PKT MLHG, TERM NBR

For 5E10 and later, if the UNIT TYPE (on the EQIM form) is not "SM2000", then:

- the following criteria must be met:

  value of EQUIPMENT BAY must be 0 - 4.

  value of CONTROL GROUP must be 0 or 1.

  values of PIDB 0/1/2/3 DG must be 0 or 1.

  values of PIDB 0/1/2/3 DP must be 0 - 14.

- the combination of the {CONTROL GROUP, CONTROL PORT} fields cannot be {0,0} or {0,1}. For SMs which are not SM-2000 class processors, PICB 0 and 1 are reserved for the local digital service unit.

For the applications in the table below:

- For 5E10 and later, each DI (Data Interface) in a SM can have a maximum of 256 nailed-up timeslots reserved for the application in the following table. These time slots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of time slots reserved (i.e. the number set to 1) must be greater than or equal to the quantity of time slots assigned for the following applications. Note that a D channel only takes a quarter of a time slot. This data rule is not executed on an SM-2000 class processor, because provisioning of nailed-up time slots is not required for SM-2000 class processors.

- To meet the "vertical assignment condition", the reserved timeslots must be entered such that for any given SHELF (defined by the first digit of ISCN field or by the SHELF field on the MISLINK form), the timeslots assigned for that SHELF may be duplicated in the same vertical (column) position only as many times as the SHELF has PIDBs assigned. That is, if SHELF 1 has 2 DIO PIDBs assigned, a given vertical position (0-31) in a row (DIO PSU TSIU, RPTSSO - RPTSS7) may not be used more than twice for that shelf.

- Each SM (Switching Module) can have up to 5 PSU SHELFs (defined by the first digit in the ISCN

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field). Each PSU SHELF can be assigned up to (32 times X) timeslots for the following applications (where X represents the number of PIDBs, 0 to 4, provisioned per shelf):

Assigned Timeslots	
Application	**Forms**
CCLNK	Software Release: 5E11 and later. Defined on the CCLNK form. This value supports the VCDX CCS7 on the PSU feature. For more information, see Division 2, Section 7L.
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3 digits of the LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3 digits of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

2.3 * PSU

Description: Packet Switching Unit Number. This field supports the Double PSU Packet Bus feature (99-5E-7797). For more information on this secured feature, see Division 2, Section 4A607.

Software Release: 5E16 and later.
Required Field.
Valid Entries: 0 - 1

Data Rules:

For 5E16 and later, when PSU is "1":

- PSU TYPE must be "PSU2".
- the ACT field on the SFSYS form (5713-1 Record) for SFID 607 must be set to "Y" (see the Double PSU Packet Bus feature in Division 2, Section 4A607).

2.4 # PSU TYPE

Description: As of the 5E18(1) release, the PSU TYPE field is replaced with the SG 0 TYPE and SG 1 TYPE fields. See SG 0 TPYE and SG 1 TYPE below for usage information.

2.5 INTF TYPE

Description: This field specifies the interface type for the Packet Switch Unit. This is a no_change field.

Software Release: 5E18(1) and later

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Default: PICB
Valid Entries: PICB, ETHERNET, or PKTBUS

2.6 COM ADDR

Description: Enter the Community Address assigned to a PSU. The COM ADDR specifies the community address assigned to this PSU. It is used as an address for this PSU in a PSU network.

Software Release: 5E10 and later.
Valid Entries: 0 - 254

Data Rules:

If a number is not entered in this field, the SM number is used as the address.

COM ADDR values on the EQPSU form must be unique.

2.7 CRIT PSU

Description: Is this PSU to be designated as a critical PSU? This field is used to designate whether or not a PSU is considered a critical unit to this SM. A "Y" in this field implies that the SM cannot perform call processing functions without the PSU. Thus, the SM will attempt everything possible, up to a full initialization, to get the PSU operational. If this field is "N", the PSU recovery does not escalate to SM initialization. This field supports the PSU Reliability Enhancements feature (99-5E-4553). See Division 2, Section 7AI.

Software Release: 5E14 and later.
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E14 and later, for each PSU on the EQPSU form with the CRIT PSU set to "Y", there must be at least one logical CHANNEL GROUP assigned on the CCLNK form. If no logical channel groups are assigned, CRIT PSU must be "N".

2.8 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

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For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.9 CON TYPE

Description: Enter the connection type of the PSU LINKs which are defined for this PSU. This field supports the PHA (Protocol Handler for Asynchronous Mode) feature for CDMA (Code Division Multiple Access). For more information on this feature see Division 2, Section 4A224.

- ***NOTE:*** For 5E11 and later, this field was moved to the PSULNK form (5057 Record), Division 7, Section 2A.

Software Release: 5E10 and later.
Required Field.
Default: NOCON
Valid Entries:

Valid CON TYPE Entries

Entry	Definition
NOCON	No connection type assigned to this PSU.
POINT	The links on this PSU are point-to-point links. Point-to-point links require that this PSU have direct connections to every other PSU it may communicate with.

2.10 #CONTROL GROUP

Description: Enter the Control Group Number. Since both Service Groups on the same unit must be assigned to the same Control Group, this entry is the Control Group for both Service Groups 0 and 1.

Required Field.
Valid Entries:
- For SM: 0 - 1
- For SM-2000: 0-3

Data Rules:

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.11 #CONTROL PORT

Description: Enter the Control Port number assigned to Service Group 0. The assignment for Service Group 1 of the unit is the next higher odd numbered control port on the same control group and is inferred from this entry for Service Group 0.

Required Field.
Valid Entries: even numbers in the 0 to 22 range

Data Rules:

If the CONTROL GROUP is set to 0, then the CONTROL PORT must be not be set to 0 or 1. Those ports are reserved for the LDSU (Local Digital Service Unit).

The combination of the SWITCHING MODULE, CONTROL GROUP and CONTROL PORT must not be

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duplicated within the 5ESS Switch.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.12 #EQUIPMENT BAY

Description: Enter the Equipment Location Bay number.

Required Field.
Valid Entries:

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

2.13 #EQUIPMENT VERTICAL

Description: Enter the Vertical Equipment Location that specifies the bottom of the unit.

Required Field.
Valid Entries: 0 - 84

The table below provides the expected values for 6- and 7-foot cabinents, respectively.

Valid EQUIPMENT VERTICAL Entries

Cabinet Size	Location
6-foot	7, 15, 24, 32, 41, 49, 58.
7-foot	22, 30, 39, 48, 56, 65, 74.

Data Rules:

The combination of the SWITCHING MODULE, EQUIPMENT BAY and EQUIPMENT VERTICAL must not be duplicated within the 5ESS Switch.

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2.14 #EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle number. This entry consists of a floor and aisle number. The first two digits are the floor number and the last two digits are the aisle number. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 to 9999.

2.15 SG 0 TYPE

Description: Enter the SG 0 TYPE. This field supports PSU2 which provides enhanced messaging capacity in the PSU. The new hardware is designed to be growable/degrowable into existing installations or equipped in new environments where performance needs dictate.

A PSU2 is allowed on an SM-2000 class processor. For 5E10 and later, the valid entry range for fields CI, DI, and PIDB have been expanded to allow a PSU2 to reside on an SM-2000 class processor. The following table provides the SM ranges of these fields compared to the new range allowed with an SM-2000 class processor.

Field Name	SM Range	SM2000 Range
CI	0 - 1	0 - 3
DI	0 - 1	0 - 5
PIDB	0 - 15	0 - 23

This field supports PSU2E (5E18(1)) and represents the side 0 type of the Packet Switching Unit.

Software Release: 5E10 and later.
Required Field.
Default: PSU1
Valid Entries:

Valid PSU TYPE Entries	
Entry	**Definition**
PSU1	Packet Switch Unit type 1
PSU2	Packet Switch Unit type 2. This enhanced PSU supports an improvement in the aggregate message handling capacity on the order of tenfold.
PSU2E	Packet Switch Unit type 2E. This entry supports the PSU2E PF3/CF3 feature. See Division 2, Section 7CE.

Data Rules:

PSU1:
For 5E10 and later, if "PSU1" is entered, a maximum of 160 DI0/DI1 PSU TSIU TIMESLOTS may be set on each EQPSU input form.

If "PSU1" is entered, the only types of Protocol Handlers that may be assigned to a PSU1 are:

- PH2, PH3 and PH4 for 5E13.
- PH2, PH3, PH4, and PH22 for 5E14.

(Protocol Handlers are assigned on the EQPSUPH form, designated by appropriate CLI values (See Division 8, Section 23).)

If "PSU1" is entered, the SG 0 COMMON CONTROL CLI and SG 1 COMMON CONTROL CLI values must be 0, 800006, or 80000000 hex.

5E18(1) and later:

- SG 0 TYPE and SG 1 TYPE must equal the same value.

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- when SG 0 TYPE and SG 1 TYPE is "PSU2E", the SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI values must be 104 or 304.
- when double PSU configurations (two tuples on the EQPSU form, one for PSU equal 0 and another for PSU equal 1) exist, SG 0 TYPE and SG 1 TYPE must not be "PSU1".
- when SG 0 TYPE and SG 1 TYPE is "PSU2" or "PSU2E", PI SG0 TYPE and PI SG1 TYPE on the EQIM form (5700 Record) must be "PI2".
- when SG 0 TYPE and SG 1 TYPE is "PSU1", the only Protocol Handlers that can be assigned to a PSU1 on the EQPSUPH form (5742 Record) are PH2, PH3, PH4, and PH22.
  - PH2 is designated by a PH CLI of 0x100.
  - PH3 is designated by a PH CLI of 0x200 or 0xa00.
  - PH4 is designated by a PH CLI of 0x1800.
  - PH22 is designated by a PH CLI of 0x2800.
- when SG 0 TYPE and SG 1 TYPE is "PSU1", the only Protocol Handlers that can be assigned to a PSU2E on the EQPSUPH form are PHV4, PHV5, PH3, PH4, PH22, PHA2, and PHE2.
  - PHV4 is designated by a PH CLI of 0x8.
  - PHV5 is designated by a PH CLI of 0x20.
  - PH3 is designated by a PH CLI of 0x200 0xa00.
  - PH4 is designated by a PH CLI of 0x1800.
  - PH22 is designated by a PH CLI of 0x2800.
  - PHA2 is designated by a PH CLI of 0x10000.
  - PHE2 is designated by a PH CLI of 0x20000.
- when SG 0 TYPE and SG 1 TYPE is "PSU1", the only Protocol Handlers that can be assigned to a PSU2E on the EQPSUPH form are PHV4, PHV5, PH4, PH22, PHA1, PHA2, and PHE2.
  - PHV4 is designated by a PH CLI of 0x8.
  - PHV5 is designated by a PH CLI of 0x20.
  - PH4 is designated by a PH CLI of 0x1800.
  - PH22 is designated by a PH CLI of 0x2800.
  - PHA1 is designated by a PH CLI of 0x10.
  - PHA2 is designated by a PH CLI of 0x10000.
  - PHE2 is designated by a PH CLI of 0x20000.
- when SG 0 TYPE and SG 1 TYPE is "PSU2E" , the EQPSUPH form can only have up to 5 PH22s per each half of the shelf (PH ROW 1 - 8 is the first half and ROW 9 - 16 is the second half). PH22 is designated by a PH CLI of 0x2800.

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When SG 0 TYPE and SG 1 TYPE is "PSU2E", the ACT field for SFID 130 on the SFSYS form (5713-1 Record) must be set to "Y".

The following data rule is not executed on an SM-2000 class processor, because provisioning of nailed-up timeslots is not required on SM-2000 class processors. For a PSU1, each Data Interface in a SM can have a maximum of 128 nailed-up timeslots reserved for the following applications:

Timeslots Reserved for Applications

Application	Definition
CCLNK	Software Release: 5E11 and later. Defined on the CCLNK form.
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

These timeslots can be reserved by setting rows RPTSS0 to RPTSS7 to 1 on the EQPSU form. The quantity of timeslots reserved (i.e. the number of entries set to 1) must be greater than or equal to the quantity of timeslots assigned for the above applications. Note that a D channel only takes a quarter of a timeslot.

Also, the reserved timeslots must be entered such that for any given SHELF (defined by the first digit of the ISCN), the timeslots assigned for a SHELF may be duplicated in the same vertical (column) position only as many times as the SHELF has PIDBs assigned. For example, if SHELF 1 has 2 DI0 PIDBs assigned in the PIDB field, then a given vertical position (0-31) in the DI0 PSU TSIU TIMESLOTS field (RPTSS0 - RPTSS7) may not be used more than twice for that shelf.

PSU2: "PSU2" must be entered if:

- DI is greater than 1
- PIDB is greater than 15
- EQUIPMENT BAY is greater than 4
- SG0 CI or SG1 CI is greater than 1.

If "PSU2" is entered, then :

- the SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI values must be 3.
- the values of PI SG0 TYPE and PI SG1 TYPE (on the EQIM form) must be "PI2"

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- the SG 0 COMMON CONTROL CLI and SG 1 COMMON CONTROL CLI value must be 0.
- the only types of Protocol Handlers that may be assigned to a PSU2 on the EQPSUPH form are:
  - PHV1, PHV2, PHV3, PHA1, PH3, and PH4 for 5E11.
  - PHV1, PHV2, PHV3, PHV4, PHA1, PH3, and PH4 for 5E12 and 5E13.
  - PHV1, PHV2, PHV3, PHA1, PH3, and PH4, and PH22 for 5E14.
  - PHV1, PHV2, PHV3, PHV4, PHV5, PHA2, PHE2, PH3, PH4, PH22, PH31, and PH33 for 5E16(2).
  - PHV1, PHV2, PHV3, PHV4, PHV5, PHV6, PHA1, PHA2, PHE2, PH3, PH4, PH22, and PH31 for 5E18.

  PHV1 is designated by a PH CLI of 1.

  PHV2 is designated by a PH CLI of 2 or 4.

  PHV3 is designated by a PH CLI of 4.

  PHV4 is designated by a PH CLI of 8.

  PHV5 is designated by a PH CLI of 20.

  PHV6 is designated by a PH CLI of 40.

  PHA1 is designated by a PH CLI of 10.

  PHA2 is designated by a PH CLI of 10000.

  PHE2 is designated by a PH CLI of 20000.

  PH3 is designated by a PH CLI of 200 or a00.

  PH4 is designated by a PH CLI of 1800.

  PH22 is designated by a PH CLI of 2800.

  PH31 is designated by a PH CLI of 8800.

  PH33 is designated by PH CLI of 880

For 5E12 and later:

- for DF2 connectivity, PSU2 must be entered.

For 5E16 and later:

- PH31's may only reside on DF2 (Data Fanout with PCT) versions on the PSU Shelf.

5E18(1) and later:

When SG 0 TYPE and SG 1 TYPE is not "PSU2E", INTF TYPE must be "PICB".

2.16 #SG 0 COMMON CONTROL EQST

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Description: Enter the Equipment Status of the PSU Service Group 0 Common Control Board. New 5ESS Switch offices and equipment additions require the Operational status. During off-line ODA database retrofits, values other than "O" may exist.

Required Field.
Default: O
Valid Entries:

Valid SG 0 COMMON CONTROL EQST Field

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

If the SG 1 COMMON CONTROL EQST field is "O" (Operational), then the SG 0 COMMON CONTROL EQST field must also be "O".

If the SG 1 COMMON CONTROL EQST field is "G" (Growth), then the SG 0 COMMON CONTROL EQST field must be "O" or "G".

2.17 #SG 0 COMMON CONTROL CLI

Description: Enter the Change Level Indicator of the PSU Service Group 0 Common Control Board.

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Data Rules:

For 5E10 and later:

- if "PSU1" is entered in the PSU TYPE field, the SG 0 COMMON CONTROL CLI and SG 1 COMMON CONTROL CLI values must be 0, 1, or 800006.
- if "PSU2" is entered in the PSU TYPE field, the CLI value for both service groups is 0.

2.18 SG 1 TYPE

Description: This field supports PSU2E (5E18(1) and represents the side 1 type of the Packet Switching Unit.

Software Release: 5E10 and later.
Required Field.
Default: PSU1
Valid Entries:

Valid PSU TYPE Entries

Entry	Definition
PSU1	Packet Switch Unit type 1
PSU2	Packet Switch Unit type 2. This enhanced PSU supports an improvement in the aggregate message handling capacity on the order of tenfold.
PSU2E	Packet Switch Unit type 2E. This entry supports the PSU2E PF3/CF3 feature. See Division 2, Section 7CE.

2.19 #SG 1 COMMON CONTROL EQST

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Description: Enter the Equipment Status of the PSU Service Group 1 Common Control Board. New 5ESS Switch offices and equipment additions require the Operational status. During off-line ODA database retrofits, values other than "O" may exist.

Required Field.
Default: O
Valid Entries:

Valid SG 1 COMMON CONTROL EQST Field

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.20 #SG 1 COMMON CONTROL CLI

Description: Enter the Change Level Indicator of the PSU Service Group 1 Common Control Board.

Required Field.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Data Rules:

For 5E10 and later, the SG 0 COMMON CONTROL CLI and SG 1 COMMON CONTROL CLI values for both service groups are 0 or 1.

PIDBs

The following fields (Section 2.21 - Section 2.26) define PIDBs (Peripheral Interface Data Buses). For 5E9(2) and earlier, each Service Group of the PSU provides for the termination of five PIDBs, one on each of five shelves. For 5E10 and later, up to 20 PIDBs can be terminated, up to 4 on each shelf.

PIDBs are to be equipped in pairs, one on each Service Group. All PIDBs entered on this form connect to the TSIU (Time Slot Interchange Unit). The PIDBs connecting the ISLU (Integrated Services Line Unit) and the PSU are assigned on the EQISLU form (5731 Record). Assignments to Side (Service Group) 1 of a PSU shelf of the PSIU are algorithmically related to the assignments for Side 0 and can be inferred from the Side 0 assignments. Therefore, only the Side 0 assignments are entered on this form. When the EQPSU form is entered, PIDB 0 entries are always required for PSU SHELF 0.

For 5E8 and later, the IDCU (Intergrated Digital Carrier Unit) was introduced for interface to RTs (Remote Terminals). IDCU PIDBs are assigned to the PSU on the EQIFAC form (5847 Record).

2.21 PIDBs

Description: Enter the PIDB field information for the shelf position. Each Switching Module can have up to 5 PSU SHELFs (defined by the first digit in the ISCN (Integrated Services Channel Number)).

Data Rules:

For 5E10 and later:
For each SHELF entry:

- all field segments for a particular PIDB (0 - 3) must be entered or left blank.
- all entered DI values must be the same.
- PIDB fields must be entered sequentially (PIDB 0 before PIDB 1, etc.; if PIDB 2 is operational, PIDB 1

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must be operational, etc.)

- if PIDB 1 entries are made, the SHLF SIDE0 CLI and SHLF SIDE1 CLI must designate DF-MP (Data Fanout-Multiple PIDBs) for a PSU shelf.
- the number of timeslots that can be assigned on each PSU SHELF is:
  - 32 times the number of PIDBs (0 - 4) for an SM, or
  - 31 times the number of PIDBs (0 - 4) for an SM-2000 class processor.

Timeslots can be assigned for the following applications:

Timeslots Assigned to Applications

Application	Definition
CCLNK	Software Release: 5E11 and later. Defined on the CCLNK form.
EDSL	Defined by setting TRKCLS equal to "EDSL" on the TKGRP form and defining members on TRUNK forms.
IFOPER	Defined by setting TRKCLS equal to "IFOPER" on the TKGRP form and defining members on TRUNK forms.
IFTERM	Defined by setting TRKCLS equal to "IFTERM" on the TKGRP form and defining members on TRUNK forms.
IP	Defined by setting TRKCLS equal to "PACKET" on the TKGRP form and defining members on TRUNK forms.
ISM	Defined on the PSISM form.
PKTPIPE	Defined by setting TRKCLS equal to "PKTPIPE" on the TKGRP form and defining members on TRUNK forms.
RISLU B Channel	Defined on the DSL/AMLBDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RISLU D Channel	Defined on the DSL/DSLAP/MISLINK/OSPSDSL forms where the first 3-digit of LCEN matches SM on an EQRISLU form.
RPA	Defined by setting BRI RDTA PIDB TS to a non-zero value on the EQPSUPH form.
SPCHNDLR	Defined by setting TRKCLS equal to "SPCHNDLR" on the TKGRP form and defining members on TRUNK forms.
X.25	Defined on the XAT form.
X75	Defined by setting TRKCLS equal to "X75" on the TKGRP form and defining members on TRUNK forms.
X75P	Defined by setting TRKCLS equal to "X75P" on the TKGRP form and defining members on TRUNK forms.

2.22 SHLF SIDE 0 EQST

Description: Enter the Equipment Status of Side 0 of the PSU shelf. New 5ESS Switch offices and equipment additions require the Operational status. During off-line ODA database retrofits, values other than "O" may exist; but if they do, the EQST value here must be lower than or equal to the lower of the two COMMON CONTROL EQST values. The hierarchy of equipment status, from lowest to highest, are Unequipped, Growth and Operational.

Valid SHLF SIDE 0 EQST Field

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.23 SHLF SIDE 0 CLI

Description: Enter the Change Level Indicator of Side 0 of the PSU shelf.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

Data Rules:

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For 5E10 - 5E11, valid CLI values for both SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI are 0, 3, 800006, or 800007.

For 5E12 and later, valid CLI values for both SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI are 0, 3, 104, 800006, or 800007.

For 5E12 and later, if SHLF SIDE0/1 CLI designates DF2 connectivity:

- PIDB/SLOT must be 0 - 3.
- PIDB 1, PIDB 2, and PIDB 3 fields must be blank.
- bit position 8 (100h) and bit position 2 (004h) must be "or'd" to yield a CLI value of 104.

When PH CLI on the EQPSUPH form is 2800 (PH22), the hexadeciaml value for both SHLF SIDE 0 CLI and SHLF SIDE 1 CLI must be 104 or 304.

For valid CLI values,Drawing and list combinations, see Division 8, Section 1.

For 5E18 and later, when SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI is 3, SG 0 TYPE and SG 1 TYPE must be "PSU2".

2.24 SHLF SIDE 1 EQST

Description: Enter the Equipment Status of Side 1 of the PSU shelf.

New 5ESS Switch offices and equipment additions require the Operational status. During off-line ODA database retrofits, values other than "O" may exist; but if they do, the EQST value here must be lower than or equal to the lower of the two COMMON CONTROL EQST values. The hierarchy of Equipment Status, from lowest to highest, are Unequipped, Growth and Operational.

Valid SHLF SIDE 1 EQST Field

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.25 SHLF SIDE 1 CLI

Description: Enter the Change Level Indicator of Side 1 of the PSU shelf.
Valid Entries: 0 to 7FFFFFFF (hexadecimal)

Data Rules:

For 5E10 - 5E11, valid CLI values for both SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI are 0, 3, 800006, or 800007.

For 5E12 and later, valid CLI values for both SHLF SIDE 0 CLI and/or SHLF SIDE 1 CLI are 0, 3, 104, 800006, or 800007.

For 5E12 and later, if SHLF SIDE0/1 CLI designates DF2 connectivity:

- PIDB/SLOT must be 0 - 3.
- PIDB 1, PIDB 2, and PIDB 3 fields must be blank.
- bit position 8 (100h) and bit position 2 (004h) must be "or'd" to yield a CLI value of 104.

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When PH CLI on the EQPSUPH form is 2800 (PH22), the hexadeciaml value for both SHLF SIDE 0 CLI and SHLF SIDE 1 CLI must be 104 or 304.

2.26 CONNECT TYPE

Description: The Connectivity Type field is a Recent Change only field. If DF2 (Data Fan 2) connectivity (defined by the CLI) is equipped, it must be equipped for both SHLF SIDE0 and SIDE1

Software Release: 5E12 and later

PIDB

For 5E9(2) and earlier, two fields (DATA GROUP and DATA PORT) were used to define the PIDB for each PSU shelf. For 5E10 and later, the following fields (Section 2.27 - Section 2.35) define the DG (Data Group), DP (Data Port), and ST (Equipment Status) for PIDB0 - PIDB3 on each PSU shelf.

For 5E12 and later, the field group of PIDB0/PCT was added to accommodate expansion of PSU capacity by increasing the number of time slots available between the SM-2000 TSIU and each PSU shelf from 128 to 768. Three fields were added to accommodate this change: DI/TSIS, PIDB/SLOT, and EQ.

2.27 DATA GROUP

Description: The name of this field was changed to DG in 5E10. This field name applies to 5E9(2) and earlier. See DG for usage information.

PIDB0/PCT

The following fields (Section 2.28 - Section 2.30) were added to support the Data Fan 2 PSU Capacity Expansion feature which increases the number of time slots available between the SM-2000 TSIU and each PSU shelf from 128 to 768. See Division 2, Section 7T.

2.28 DI/TSIS

Description: Enter the DI/TSIS.

Software Release: 5E12 and later
Valid Entries:
- For DI: 0 - 5
- For TSIS: 0 - 9

Data Rules:

Each PSU Shelf TSI/SLOT entered on the EQPSU form must be defined on the EQTSI form. The matching EQTSI form must have an EQSTAT value that is greater than or equal to the PIDB/PC EQ defined on the EQPSU form (i.e., "O" is greater than "G", which is greater than "U").

2.29 PIDB/SLOT

Description: Enter the PIDB/SLOT.

Software Release: 5E12 and later
Valid Entries:
- For PIDB: 0 - 22 (even)
- For SLOT: 0 - 3

Data Rules:

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If SHLF SIDE0/1 CLI designates DF2 connectivity, PIDB/SLOT must be 0 - 3.

2.30 EQ

Description: Enter status of the equipment.

Software Release: 5E12 and later
Valid Entries:

Valid EQ Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

2.31 DG

Description: Enter the assigned DATA GROUP (Data Interface) number for PIDB 1, PIDB 2, and/or or PIDB 3. This field was called DATA GROUP for 5E9(2) and earlier.

The corresponding field on the RC view 22.2 is DI (Data Interface).
Valid Entries:
- For SM: 0 and 1
- For SM-2000: 0 - 5

Data Rules:

The combination of DATA GROUP 1 and DATA PORT 14 can only be assigned on the EQPSU forms whose SM is equipped with an SM-2000 class processor. The DATA GROUP/DATA PORT assignment on the EQPSU form also reserves the next sequential DATA PORT value. DATA GROUP 1, DATA PORT 15 is reserved for classic SMs.

2.32 DATA PORT

Description: The name of this field was changed to DP in 5E10. This field name applies to 5E9(2) and earlier. See DP for usage information.

2.33 DP

Description: Enter the Data Port assignment (Peripheral Interface Data Bus number) for Service Group 0. This field was called DATA PORT for 5E9(2) and earlier.

The corresponding field on the RC view 22.2 is PIDB.
Valid Entries:
- For 5E9(2) and earlier: even numbers 0 - 15
- For 5E10 and later: even number 0 - 23

Data Rules:

The combination of the DG (DATA GROUP) and DP (DATA PORT) entries must be unique in the PIDB list.

The combination of the SWITCHING MODULE, DG (DATA GROUP) and DP (DATA PORT) entries must be unique in the 5ESS Switch.

Only even numbered Data Ports are allowed since the entries on this form are for shelf Service Group 0. The data port value is automatically incremented for Service Group 1.

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The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.34 ST

Description: For 5E12 and later, the name of this field was changed to EQ. See EQ for usage information.

2.35 EQ

Description: For 5E11 and earlier, this field was called ST (status). Enter the PIDB equipment status.

The corresponding field on the RC view 22.2 is PIDB EQSTAT.

Software Release: 5E10 and later.
Valid Entries:

Valid ST Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

If PSU EQSTAT is "G", PIDB ST in the PIDBs list must be "G" or "U". If PSU EQSTAT is "U", PIDB ST must be "U".

Only Operational, "O", status is allowed in new offices and equipment additions.

DI0 PSU TSIU TIMESLOTS and DI1 PSU TSIU TIMESLOTS

The DI0 PSU TSIU TIMESLOTS and DI1 PSU TSIU TIMESLOTS lists are used to reserve timeslots, on Data Interfaces 0 and 1 respectively, for those applications which require a reserved timeslot.

Each list has four rows (for 5E9(2) and earlier), or eight rows (for 5E10 and later). Each row consists of 32 positions with each position equating to a single time slot. The 32 positions are divided into eight groups of four positions each. The positions cannot be defined singly; they must be defined in groups of four. An entry of 1 in a position reserves the time slot. An entry of 0 in a position leaves the time slot available for applications other than those requiring a reserved time slot. The carriage return key can be used to skip over a group of four timeslots; this has the same affect as entering four zeros.

Each list is comprised of 256 timeslot positions (8 rows of 32). One Data Interface can reserve 128 out of the 256 available time slots. However, the total quantity of reserved time slots, on Data Interface 0 and Data Interface 1, cannot exceed 160; for 5E10 and later this applies if "PSU1" is entered as the PSU TYPE. Division 2, Section 1BK provides further information on engineering considerations needed to make these assignments.

See also the Data Rules for the SM field for more timeslot information.

2.36 DI0 PSU TSIU TIMESLOTS

Description: Enter the DI0 PSU TSIU TIMESLOTS.
Valid Entries: 0 or 1

Data Rules:

Each SM (which is not an SM-2000 class processor) has 2 DIs (Data Interfaces). Each DI has 16 Data

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Ports for terminating up to 16 PIDBs. The PIDBs are used as communication links between the peripheral units and a Data Interface. Each PIDB has 32 TSs (Time Slots), numbered 0 thru 31. Each DI is restricted to no more than 256 TSs: either 8 fully active Data Ports (8 * 32 TSs = 256 TSs) or a combination of fully active and partially active Data Ports (for a total of 256 TSs).

The SMs on the forms listed below cannot exceed the maximum capacity of 256 total TSs (with no more than 8 active parallel TSs) per Data Interface.

The following table specifies the number of PIDB TSs required by each peripheral unit and the name of the input form where the unit is defined:

Maximum Capacity Timeslots

Form	Peripheral Unit	Time Slots/Data Interface
EQDCLU	DCLU	32 TSs for LCRs 8:1 - 9:1.
EQDCLU	DCLU	64 TSs for LCRs 4.5:1 and lower.
EQDSP	DSU	Between 0 and 15 TSs (user-specified, where DSU 0).
EQDUP	DLTU	24 TSs per DFI-1 pack.
EQDUP	DLTU	24 or 48 TSs per DFI-2 pack.
EQGDSC3	GDSC3	32 TS.
EQIDCU	IDCU	32 TSs.
EQISLU	ISLU	32 TSs per DATA PORT.
EQISTF	DSU2-ISTF	31 TSs.
EQLU	LU	64 TSs.
EQPSU 5E10 and later	PSU	Between 0 and 256 TSs (user-specified).
EQRA	DSU2-RAF	32 TSs per DTA or CTR w/AOC.
EQRA	DSU2-RAF	20 TSs per DTA or CTR.
EQRA	DSU2-RAF	32 TSs per ANN.
EQTUP	TU	Between 0 and 4 TSs (user-specified).

Time Slots are assigned to the Peripheral units in sets of 32 (by PIDB).

2.37 DI1 PSU TSIU TIMESLOTS

Description: Enter the DI1 PSU TSIU TIMESLOTS.
Valid Entries: 0 or 1

Data Rules:

See Data Rule for DI0 PSU TSIU TIMESLOTS.

2.38 AVAILABLE TS

Description: This is a Recent Change Only field. In Recent Change, the AVAILABLE TIMESLOTS row indicates how many (0-8) channels are available for each timeslot on the specified DI. Channels may be reserved for other SM-units, or may have been reserved for this PSU.

```
Screen 1 of 4              5ESS Switch
eqpsu                OFFICE DATA ADMINISTRATION
(5741-1/2)           PACKET SWITCHING UNIT EQUIPAGE

 *1. SWITCHING MODULE      ___
 #2. PSU TYPE              PSU1
  3. COM ADDR              ___
  4. CRIT PSU              N
 #5. CONTROL GROUP         _
 #6. CONTROL PORT          __
 #7. EQUIPMENT BAY         ___
 #8. EQUIPMENT VERTICAL    __
```

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#9. EQUIPMENT AISLE ____
#10. SG 0 COMMON CONTROL EQST O
#11. SG 0 COMMON CONTROL CLI _____
#12. SG 1 COMMON CONTROL EQST O
#13. SG 1 COMMON CONTROL CLI _____

Screen 2 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

14. PIDBx

row	PSU SHELF	SHLF SIDE 0 EQST	CLI	SHLF SIDE 1 EQST	CLI	CONNECT TYPE
1	0	_	_____	_	_____	
2	1	_	_____	_	_____	
3	2	_	_____	_	_____	
4	3	_	_____	_	_____	
5	4	_	_____	_	_____	

row	PSU SHELF	PIDB0/PCT DI/TSIS	PIDB/SLOT	EQ	DG	DP	PIDB 1 EQ	DG	DP	PIDB 2 EQ	DG	DP	PIDB 3 EQ	DG	DP
1	0	_	__	_	_	__	_	_	__	_	_	__	_	_	__	_
2	1	_	__	_	_	__	_	_	__	_	_	__	_	_	__	_
3	2	_	__	_	_	__	_	_	__	_	_	__	_	_	__	_
4	3	_	__	_	_	__	_	_	__	_	_	__	_	_	__	_
5	4	_	__	_	_	__	_	_	__	_	_	__	_	_	__	_

Screen 3 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

38. DI0 PSU TSIU TIMESLOTS

	3322 2222 2222 1111 1111 1100 0000 0000 1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0	____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1	____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2	____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3	____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4	____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5	____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6	____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7	____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS	

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```
Screen 4 of 4                5ESS Switch                _
eqpsu                  OFFICE DATA ADMINISTRATION
(5741-1/2)             PACKET SWITCHING UNIT EQUIPAGE

                55. DI1 PSU TSIU TIMESLOTS
              3322 2222 2222 1111 1111 1100 0000 0000
              1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0     ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1     ____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2     ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3     ____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4     ____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5     ____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6     ____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7     ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS
```

Figure 1 SAMPLE EQPSU FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
Screen 1 of 4                5ESS Switch
eqpsu                  OFFICE DATA ADMINISTRATION
(5741-1/2)             PACKET SWITCHING UNIT EQUIPAGE

 *1. SWITCHING MODULE  ___         #11. SG 0 COMMON CONTROL EQST O
 #2. PSU TYPE          PSU1        #12. SG 0 COMMON CONTROL CLI ________
  3. COM ADDR          ___         #13. SG 1 COMMON CONTROL EQST O
  4. CRIT PSU          N           #14. SG 1 COMMON CONTROL CLI ________
  5. INTF UNIT         0
 #6. CONTROL GROUP     _
 #7. CONTROL PORT      __
 #8. EQUIPMENT BAY     ___
 #9. EQUIPMENT VERTICAL __
#10. EQUIPMENT AISLE   ____
```

```
Screen 2 of 4                5ESS Switch
eqpsu                  OFFICE DATA ADMINISTRATION
(5741-1/2)             PACKET SWITCHING UNIT EQUIPAGE


15. PIDBx

    PSU   SHLF SIDE 0   SHLF SIDE 1         CONNECT
row SHELF   EQST  CLI     EQST  CLI          TYPE
 1   0     _ ________   _ ________
```

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```
2  1    _ _________  _ _________
3  2    _ _________  _ _________
4  3    _ _________  _ _________
5  4    _ _________  _ _________
        PSU          PIDB0/PCT          PIDB 1      PIDB 2      PIDB 3
    row SHELF   DI/TSIS  PIDB/SLOT EQ    DG  DP EQ   DG  DP EQ   DG  DP EQ
     1   0        _     __    _    _ __ _   _ __ _   _ __ _   _ __ _
     2   1        _     __    _    _ __ _   _ __ _   _ __ _   _ __ _
     3   2        _     __    _    _ __ _   _ __ _   _ __ _   _ __ _
     4   3        _     __    _    _ __ _   _ __ _   _ __ _   _ __ _
     5   4        _     __    _    _ __ _   _ __ _   _ __ _   _ __ _
```

```
Screen 3 of 4              5ESS Switch
eqpsu                OFFICE DATA ADMINISTRATION
(5741-1/2)           PACKET SWITCHING UNIT EQUIPAGE

              39. DI0 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
          1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0 ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1 ____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2 ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3 ____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4 ____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5 ____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6 ____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7 ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS
```

```
Screen 4 of 4              5ESS Switch        _
eqpsu                OFFICE DATA ADMINISTRATION
(5741-1/2)           PACKET SWITCHING UNIT EQUIPAGE

              56. DI1 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
          1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0 ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1 ____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2 ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3 ____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4 ____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5 ____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6 ____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7 ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS
```

Figure 2 SAMPLE EQPSU FORM 5E15 SOFTWARE RELEASE

```
Screen 1 of 4              5ESS Switch
eqpsu                OFFICE DATA ADMINISTRATION
```

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(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

*1. SWITCHING MODULE 002 #12. SG 0 COMMON CONTROL EQST O
*2. PSU _ #13. SG 0 COMMON CONTROL CLI _____
#3. PSU TYPE PSU1 #14. SG 1 COMMON CONTROL EQST O
4. COM ADDR 002 #15. SG 1 COMMON CONTROL CLI _____
5. CRIT PSU N
6. INTF UNIT 0
#7. CONTROL GROUP _
#8. CONTROL PORT __
#9. EQUIPMENT BAY ___
#10. EQUIPMENT VERTICAL__
#11. EQUIPMENT AISLE ____

Screen 2 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

16. PIDBx

row	PSU SHELF	SHLF SIDE 0 EQST	CLI	SHLF SIDE 1 EQST	CLI	CONNECT TYPE
1	0	_	_____	_	_____	
2	1	_	_____	_	_____	
3	2	_	_____	_	_____	
4	3	_	_____	_	_____	
5	4	_	_____	_	_____	

row	PSU SHELF	PIDB0/PCT DI/TSIS	PIDB/SLOT EQ	DG	DP EQ	PIDB 1 DG	DP EQ	PIDB 2 DG	DP EQ	PIDB 3 DG	DP EQ
1	0	_	__	_	_	__	_	_	__	_	_
2	1	_	__	_	_	__	_	_	__	_	_
3	2	_	__	_	_	__	_	_	__	_	_
4	3	_	__	_	_	__	_	_	__	_	_
5	4	_	__	_	_	__	_	_	__	_	_

Screen 3 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

40. DI0 PSU TSIU TIMESLOTS
3322 2222 2222 1111 1111 1100 0000 0000
1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0 ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1 ____ ____ ____ ____ ____ ____ ____ ____

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```
3. RPTSS2   ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3   ____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4   ____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5   ____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6   ____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7   ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS
```

```
Screen 4 of 4              5ESS Switch          _
eqpsu                OFFICE DATA ADMINISTRATION
(5741-1/2)           PACKET SWITCHING UNIT EQUIPAGE

              57. DI1 PSU TSIU TIMESLOTS
          3322 2222 2222 1111 1111 1100 0000 0000
          1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0   ____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1   ____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2   ____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3   ____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4   ____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5   ____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6   ____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7   ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS
```

Figure 3 SAMPLE EQPSU FORM 5E16 SOFTWARE RELEASES

```
Screen 1 of 4              5ESS Switch
eqpsu                OFFICE DATA ADMINISTRATION
(5741-1/2)           PACKET SWITCHING UNIT EQUIPAGE

 *1. SWITCHING MODULE ___          #9. EQUIPMENT BAY          ___
 *2. PSU              _           #10. EQUIPMENT VERTICAL     __
    INTF TYPE       PICB         #11. EQUIPMENT AISLE        ____
  4. COM ADDR         ___          12. SG 0 TYPE             PSU1
  5. CRIT PSU         N          #13. SG 0 COMMON CONTROL EQST O
  6. INTF UNIT        0          #14. SG 0 COMMON CONTROL CLI ________
 #7. CONTROL GROUP    _            15. SG 1 TYPE             PSU1
 #8. CONTROL PORT     __         #16. SG 1 COMMON CONTROL EQST O
                          #17. SG 1 COMMON CONTROL CLI ________
```

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Screen 2 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

18. PIDBx

row	PSU SHELF	SHLF SIDE 0 EQST	CLI	SHLF SIDE 1 EQST	CLI	CONNECT TYPE
1	0	_	_____	_	_____	
2	1	_	_____	_	_____	
3	2	_	_____	_	_____	
4	3	_	_____	_	_____	
5	4	_	_____	_	_____	

row	PSU SHELF	PIDB0/PCT DI/TSIS	PIDB/SLOT EQ	PIDB 1 DG	DP EQ	PIDB 2 DG	DP EQ	PIDB 3 DG	DP EQ
1	0	_	__ _	_	_	_	_	_	_
2	1	_	__ _	_	_	_	_	_	_
3	2	_	__ _	_	_	_	_	_	_
4	3	_	__ _	_	_	_	_	_	_
5	4	_	__ _	_	_	_	_	_	_

Screen 3 of 4 5ESS Switch
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

42. DI0 PSU TSIU TIMESLOTS

	3322 2222 2222 1111 1111 1100 0000 0000 1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0	____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1	____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2	____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3	____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4	____ ____ ____ ____ ____ ____ ____ ____
6. RPTSS5	____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6	____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7	____ ____ ____ ____ ____ ____ ____ ____

AVAILABLE TS

Screen 4 of 4 5ESS Switch _
eqpsu OFFICE DATA ADMINISTRATION
(5741-1/2) PACKET SWITCHING UNIT EQUIPAGE

59. DI1 PSU TSIU TIMESLOTS

	3322 2222 2222 1111 1111 1100 0000 0000 1098 7654 3210 9876 5432 1098 7654 3210
1. RPTSS0	____ ____ ____ ____ ____ ____ ____ ____
2. RPTSS1	____ ____ ____ ____ ____ ____ ____ ____
3. RPTSS2	____ ____ ____ ____ ____ ____ ____ ____
4. RPTSS3	____ ____ ____ ____ ____ ____ ____ ____
5. RPTSS4	____ ____ ____ ____ ____ ____ ____ ____

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6. RPTSS5 ____ ____ ____ ____ ____ ____ ____ ____
7. RPTSS6 ____ ____ ____ ____ ____ ____ ____ ____
8. RPTSS7 ____ ____ ____ ____ ____ ____ ____ ____
AVAILABLE TS

Figure 4 SAMPLE EQPSU FORM 5E18(1) AND LATER SOFTWARE RELEASES

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SEC. 23: 5742 RECORD
PACKET SWITCHING UNIT PROTOCOL
HANDLER PACK EQUIPAGE FORM - EQPSUPH

1. GENERAL

The 5742 Packet Switching Unit Protocol Handler Pack Equipage Record is available with 5E3 and later Software Releases. It is used to define the Packet Switching Unit Protocol Handlers equipped in the 5ESS Switch.

The number of operational PHs (EQST 0) defined on the EQPSUPH form for this SWITCHING MODULE and PSU SHELF combination minus the number of DSL GROUPS (see next paragraph) for this SWITCHING MODULE and PSU SHELF must be greater than or equal to the MINIMUM NUMBER OF SPARE PHs.

DSL GROUPS are the value expressed in the second and third digits of the following fields:

- D ISCN, PPB1 and/or PPB2 ISCN on a DSL form (5907 Record);
- ODB ISCN, ISCN1 and ISCN2 on a DLSUSR form (5908 Record);
- ISCN on a OSPSDSL form (5411 Record);
- ISCN (in LINK DATA list) on a DSLAP form (5963 Record);
- TMC PRI and NPRI ISCNs, EOC PRI and NPRI ISCNs on an RTERM form (5174 Record).

1.1 Protocol Handler 3

The PH3 feature, available in 5E6 and later Software Releases, increases existing PH2 (Protocol Handler 2) processor memory from 1 MB to 4 MB to increase throughput and reduce packet delay. The PH3 will function the same as the existing PH2, therefore, PH2s and PH3s will be allowed on the same Packet Switching Unit (PSU) shelf in the PSU.

1.2 Recent Change View

The corresponding Recent Change views for this form are 22.3 and 22.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 *SWITCHING MODULE

Description: The SM Number.
Valid Entries: 1 - 192

Data Rules:

Each SM entered on this form must also be defined on the EQPSU form (5741-1/2 Record) for the PSU on this SM.

2.3 * PSU

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Description: Enter the Packet Switching Unit Number. This field supports the Double PSU Packet Bus feature (99-5E-7797). (See Division 2, Section 4A607.)

Software Release: 5E16(1) and later.
Required Field.
Valid Entries: 0 - 1

Data Rules:

When PSU is "1":

- PH CLI must be 00001800 (PH4), 00002800 (PH22), 00000010 (PHA1), 00000008 (PHV4), 00010000 (PHA2), 00000008 (PHV4), 00000020 (PHV5), or 00020000 (PHE2).
- PH2 MIN SPARE must be left blank.
- PH3 MIN SPARE must be left blank.
- PH31 MIN SPARE must be left blank.
- PH33 MIN SPARE must be left blank.
- PHV1 MIN SPARE must be left blank.
- PHV2 MIN SPARE must be left blank.
- PHV3 MIN SPARE must be left blank.

2.4 *PSU SHELF

Description: Enter the PSU SHELF number on which the Protocol Handler is equipped.
Valid Entries: 0 - 4

Data Rules:

The PSU SHELF defined here must also be defined on the EQPSU form.

The number of PHs on each shelf must be greater than or equal to the number of channel groups reserved on a SMPH (Switching Module Protocol Handler) hardware type.

PROTOCOL HANDLERS

These fields (Section 2.5 - Section 2.6) are used to define the Equipment Status of the Protocol Handlers.

For each Protocol Handler entry for 5E6 and later, both EQST and PH CLI must be entered. If both are not entered, then leave these fields blank.

2.5 EQST

Description: Enter the Equipment Status of the Protocol Handler circuit. New offices and equipment additions require the Operational status. The hierarchy of Equipment Status, from lowest to highest, are Unequipped, Growth and Operational.

Valid EQST Entries

Entry	Definition
U	Unequipped
G	Growth
O	Operational

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Data Rules:

During off-line ODA database retrofits, values other than 'O' may exist when the EQST value entered here is lower than or equal to the two SHLF SIDE EQST values for the given shelf on the EQPSU form.

2.6 PH CLI

Description: Enter the PH CLI (Change Level Indicator) value. For a listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Valid Entries: 0 - 7fffffff (hexadecimal)

Valid PH CLI Entries

PH	CLI Entry
PH2	100
PH3	200 or a00
PH4	1800
PH22	2800
PH31	8800
PH33	880
PHV1	1
PHV2	2
PHV3	4
PHV4	8
PHV5	20
PHV6	40
PHA1	10
PHA2	10000
PHE2	20000

Data Rules:

When PH CLI is 100, PH2 MIN SPARE must be entered and must be greater than 0. When PH CLI is 200, PH3 MIN SPARE must be entered and must be greater than 0.

The number of operational PHV2s assigned for a given PSU Shelf, minus the number of PHV2 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PHV2 MIN SPARE value specified for that PSU Shelf. (i.e., No. of Operational PHV2s - No. of PHV2 Logical Groups >= PHV2 MIN SPARE).

The number of PHV2 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PHV2". The PHV2 MIN SPARE value is specified on the EQPSUPH form.

The number of operational PH3s assigned for a given PSU Shelf, minus the number of PH3 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PH3 MIN SPARE value specified for that PSU Shelf (i.e., No. of Operational PH3s - No. of PH3 Logical Groups >= PH3 MIN SPARE). The number of PH3 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH3".

There can be at most 8 PH CLI fields with a value of 10 (hexadecimal) when EQST is "0".

The number of operational PHV3s assigned for a given PSU Shelf, minus the number of PHV3 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PHV3 MIN SPARE value specified for that PSU Shelf (i.e., No. of Operational PHV3s - No. of PHV3 Logical Groups >= PHV3 MIN SPARE). The number of operational PHV3s is obtained from the EQPSUPH form where PH CLI is 00000004 and EQST is "O". The number of PHV3 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PHV3". The PHV3 MIN SPARE is specified on the EQPSUPH form.

The number of operational PHV4s assigned for a given PSU Shelf, minus the number of PHV4 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PHV4 MIN SPARE value specified for that PSU Shelf (i.e., No.of Operational PHV4s - No.of PHV4 Logical Groups >= PHV4 MIN

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SPARE). The number of operational PHV4s is obtained from the EQPSUPH form where PH CLI is 00000008 and EQST is "O". The number of PHV4 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PHV4". The PHV4 MIN SPARE is specified on the EQPSUPH form.

The number of operational PHV5s assigned for a given PSU Shelf, minus the number of PHV5 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PHV5 MIN SPARE value specified for that PSU Shelf (i.e., No. of Operational PHV5s - No.of PHV5 Logical Groups >= PHV5 MIN SPARE). The number of operational PHV5s is obtained from the EQPSUPH form where PH CLI is 00000020 and EQST is "O". The number of PHV5 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PHV5". The PHV5 MIN SPARE is specified on the EQPSUPH form.

When PH CLI is 2800 (PH22), the hexadecimal value for both SHLF SIDE 0 CLI and SHLF SIDE 1 CLI on the EQPSU form must be 104 or 304.

When PH CLI on this form is 1 (PHV1), 2 (PHV2), 4 (PHV3), 8 (PHV4), 10000 (PHA2), or 20000 (PHE2), the hexadeciaml value for both SHLF SIDE 0 CLI and SHLF SIDE 1 CLI on the EQPSU form (5741 Record) must be 3, 104 or 304.

2.7 PH2 MIN SPARE

Description: Enter the number of PH2s that are to be designated as spares on this PSU shelf.

Software Releases: 5E6 and later
Valid entries are 0 - 15

Data Rules:

The number of spare and assigned PH2s cannot be greater than the number of PH2s actually equipped on the EQPSUPH form.

2.8 PH3 MIN SPARE

Description: Enter the number of PH3s that are to be designated as spares on this PSU shelf.

Software Releases: 5E6 and later
Valid entries: 0 - 15

Data Rules:

The number of spare and assigned PH3s cannot be greater than the number of PH3s actually equipped on the EQPSUPH form.

For 5E10 and later, the number of operational PH3s assigned for a given PSU Shelf minus the number of PH3 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PH3 MIN SPARE specified for that PSU Shelf.

For a given PSU Shelf:

The number of operational PH3s - the number of Ph3 Logical Groups greater than or equal to PH3 MIN SPARE.

The number of operational PH3s is obtained from the EQPSUPH form where PH CLI is 200 or a00, and EQST is "O". The number of PH3 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH3".

2.9 PH4 MIN SPARE

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Description: Enter the minimum number of spare PH4s for this PSU shelf. This field supports the provisioning of the minimum number of spare protocol handlers for PH4s.

Software Release: 5E10 and later
Valid Entries: 0 - 15

Data Rules:

The number of spare and assigned PH4s cannot be greater than the number of PH4s actually equipped on the EQPSUPH form.

For 5E10 and later, the number of operational PH4s assigned for a given PSU Shelf minus the number of PH4 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PH4 MIN SPARE specified for that PSU Shelf.

For a given PSU Shelf:

The number of operational PH4s - the number of PH4 Logical Groups = PH4 MIN SPARE.

The number of operational PH4s is obtained from the EQPSUPH form where PH CLI is 1800 and EQST is "O". The number of PH4 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH4".

2.10 PH22 MIN SPARE

Description: Enter the minimum number of spare PH22s for this PSU shelf.

Software Release: 5E14 and later
Valid Entries: 0 - 15

Data Rules:

The number of spare and assigned PH22s cannot be greater than the number of PH22s actually equipped on the EQPSUPH form.

For 5E14 and later, the number of operational PH22s assigned for a given PSU Shelf minus the number of PH22 Logical Groups assigned to that PSU Shelf, must be greater than or equal to the PH22 MIN SPARE specified for that PSU Shelf.

For a given PSU Shelf:

The number of operational PH22s - the number of PH22 Logical Groups = PH22 MIN SPARE.

The number of operational PH22s is obtained from the EQPSUPH form where PH CLI is 2800 and EQST is "O". The number of PH22 Logical Groups assigned is obtained from the corresponding PSUGP form where PH TYPE is "PH22".

2.11 PH31 MIN SPARE

Description: This field indicates the number of operational minimum PH31 spares to be set aside for backup use. This field is added to support the SAAL (Signaling ATM (Asynchronous Transfer Mode) Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature (99-5E-7451). For more information on this feature, see Division 2, Section 4A670.

Software Release: 5E16(2) and later
Valid Entries: 0 - 15

Data Rules:

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For 5E16(2) FR 1, the number of operational PH31s are obtained from the EQPSUPH form where PH CLI is "00008800" and EQST is "O". The number of PH31 logical groups assigned is obtained from the PSUGP form (5949 Record) where PH TYPE is "PH31".

PH31s and PH33s can only reside on DF2 (Data Fanout with PCT) versions of the PSU Shelf.

2.12 PH33 MIN SPARE

Description: This field indicates the number of operational minimum PH33 spares for this PSU shelf set aside for backup use. This field is added to support the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information on this feature, see Division 2, Section 4A684.

Software Release: 5E16(2) FR 3 and later
Valid Entries: 0 - 15

Data Rules:

For 5E16(2) FR 3, the number of operational PH33s are obtained from the EQPSUPH form where PH CLI is "0000880" and EQST is "O". The number of PH33 logical groups assigned is obtained from the PSUGP form (5949 Record) where PH TYPE is "PH33".

2.13 PHV1 MIN SPARE

Description: Enter the minimum number of spare protocol handlers for voice (version 1) (8 kilobit vocoder) for this PSU shelf. This field supports the provisioning of the minimum number of spare protocol handlers for voice for the CDMA feature. For more information on this feature see Division 2, Section 8B.

Software Release: 5E10 and later
Valid Entries: 0 - 15

2.14 PHV2 MIN SPARE

Description: Enter the minimum number of spare protocol handlers for voice (version 2) (13 kilobit vocoder) for this PSU shelf. This field was added to support the provisioning of the minimum number of spare protocol handlers for voice for the CDMA feature. For more information on this feature see Division 2, Section 8B.

Software Release: 5E10 and later
Valid Entries: 0 - 15

2.15 PHV3 MIN SPARE

Description: Enter the minimum number of spare protocol handlers for voice (version 3) (8 or 13 kilobit vocoder) for this PSU shelf. This field was added to support the provisioning of the minimum number of spare protocol handlers for voice for the CDMA feature. For more information on this feature, see Division 2, Section 8F.

Software Release: 5E11 and later
Valid Entries: 0 - 15

2.16 PHV4 MIN SPARE

Description: Enter the minimum number of spare protocol handlers for voice (version 4) (8 or 13 kilobit vocoder) for this PSU shelf. This field was added to support the provisioning of the minimum number of spare protocol handlers for voice for the CDMA feature. For more information on this feature, see Division 2, Section 8J.

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Software Release: 5E12 and later.
Valid Entries: 0 - 15

2.17 PHV5 MIN SPARE

Description: Enter the minimum number of spare protocol handlers for voice (version 5) (8 or 13 kilobit vocoder) for this PSU shelf. This field was added to support the provisioning of the minimum number of spare protocol handlers for voice for the PHV5 feature. For more information on this feature, see Division 2, Section 8AB.

Software Release: 5E16(1) and later.
Valid Entries: 0 - 15

2.18 PHA2 MIN SPARE

Description: This field indicates the number of PHA2s there are on a particular shelf. This field supports the PHA2/PHE2 on PH30 feature. For more information on this feature, see Division 2, Section 5BM.

Software Release: 5E16(1) and later.
Valid Entries: 0 - 15

2.19 PHE2 MIN SPARE

Description: This field indicates the number of PHE2s there are on a particular shelf. This field supports the PHA2/PHE2 on PH30 feature. For more information on this feature, see Division 2, Section 5BM.

Software Release: 5E16(1) and later.
Valid Entries: 0 - 15

Data Rules:

When the SIP for Packet Trunking has been purchased (SFID 684 has been acivated), then the total number of operational PHE2s on the EQPSUPH form (5744 Record) cannot exceed 48 per SWITCHING MODULE and PSU combination, else total number of operational PHE2s on the EQPSUPH form cannot exceed 10 per SWITCHING MODULE and PSU combination.

2.20 PHV6 MIN SPARE

Description: This field specifies the minimum number of spare PHV6s for the assigned PSU shelf.

Software Release: 5E18(1) and later
Valid Entries: 0 - 15

Data Rules:

The number of operational PHV6s assigned for a given PSU Shelf minus the number of PHV5 Logical groups assigned to that PSU Shelf, must be greater than or equal to the PHV6 MIN SPARE specified for that PSU Shelf.

2.21 BRI RDTA PIDB TS

Description: Enter the number of PIDB timeslots reserved for the BRI RDTA (Remote Digital Test Access) feature on this PSU Shelf.

Software Release: 5E7 and later
Valid Entries: 2, 4, or 6

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```
eqpsuph                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5742)          PSU PROTOCOL HANDLER PACK EQUIPAGE

*1. SWITCHING MODULE ___          3. PROTOCOL HANDLERS (PH)
*2. PSU SHELF     _     ROW PH  EQST PH CLI   ROW PH  EQST PH CLI
                  1  0  _  _________  9  8  _  _________
                  2  1  _  _________  10  9  _  _________
                  3  2  _  _________  11  10  _  _________
                  4  3  _  _________  12  11  _  _________
                  5  4  _  _________  13  12  _  _________
                  6  5  _  _________  14  13  _  _________
                  7  6  _  _________  15  14  _  _________
                  8  7  _  _________  16  15  _  _________
```

```
eqpsuph                    5ESS Switch          _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5742)          PSU PROTOCOL HANDLER PACK EQUIPAGE

12. PH2 MIN SPARE    __
13. PH3 MIN SPARE    __
14. PH4 MIN SPARE    __
15. PH22 MIN SPARE   __
16. PHV1 MIN SPARE   __
17. PHV2 MIN SPARE   __
18. PHV3 MIN SPARE   __
19. PHV4 MIN SPARE   __
20. BRI RDTA PIDB TS _
```

Figure 1 SAMPLE EQPSUPH FORM 5E14 THROUGH 5E15 SOFTWARE RELEASES

```
eqpsuph                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5742)          PSU PROTOCOL HANDLER PACK EQUIPAGE

*1. SWITCHING MODULE ___          4. PROTOCOL HANDLERS (PH)
*2. PSU           _     ROW PH  EQST PH CLI   ROW PH  EQST PH CLI
*3. PSU SHELF     _      1  0  _  _________  9  8  _  _________
                  2  1  _  _________  10  9  _  _________
                  3  2  _  _________  11  10  _  _________
                  4  3  _  _________  12  11  _  _________
                  5  4  _  _________  13  12  _  _________
                  6  5  _  _________  14  13  _  _________
                  7  6  _  _________  15  14  _  _________
                  8  7  _  _________  16  15  _  _________
```

```
eqpsuph                    5ESS Switch          _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5742)          PSU PROTOCOL HANDLER PACK EQUIPAGE
```

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13. PH2 MIN SPARE __
14. PH3 MIN SPARE __
15. PH4 MIN SPARE __
16. PH22 MIN SPARE __
17. PH31 MIN SPARE __
18. PHV1 MIN SPARE __
19. PHV2 MIN SPARE __
20. PHV3 MIN SPARE __
21. PHV4 MIN SPARE __
22. PHV5 MIN SPARE __
23. BRI RDTA PIDB TS _

Figure 2 SAMPLE EQPSUPH FORM 5E16(1) SOFTWARE RELEASES

eqpsuph 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5742) PSU PROTOCOL HANDLER PACK EQUIPAGE

*1. SWITCHING MODULE ___ 4. PROTOCOL HANDLERS (PH)
*2. PSU _ ROW PH EQST PH CLI ROW PH EQST PH CLI
*3. PSU SHELF _ 1 0 _ _____ 9 8 _ _____
2 1 _ _____ 10 9 _ _____
3 2 _ _____ 11 10 _ _____
4 3 _ _____ 12 11 _ _____
5 4 _ _____ 13 12 _ _____
6 5 _ _____ 14 13 _ _____
7 6 _ _____ 15 14 _ _____
8 7 _ _____ 16 15 _ _____

eqpsuph 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5742) PSU PROTOCOL HANDLER PACK EQUIPAGE

13. PH2 MIN SPARE __
14. PH3 MIN SPARE __
15. PH4 MIN SPARE __
16. PH22 MIN SPARE __
17. PH31 MIN SPARE __
18. PH33 MIN SPARE __
19. PHV1 MIN SPARE __
20. PHV2 MIN SPARE __
21. PHV3 MIN SPARE __
22. PHV4 MIN SPARE __
23. PHV5 MIN SPARE __
24. BRI RDTA PIDB TS _

Figure 3 SAMPLE EQPSUPH FORM 5E16(2) THROUGH 5E17 SOFTWARE RELEASES

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```
eqpsuph                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5742)          PSU PROTOCOL HANDLER PACK EQUIPAGE

*1. SWITCHING MODULE ___          4. PROTOCOL HANDLERS (PH)
*2. PSU          _     ROW PH  EQST PH CLI   ROW PH  EQST PH CLI
*3. PSU SHELF     _      1  0   _  ________   9  8  _  ________
                  2  1   _  ________  10  9  _  ________
                  3  2   _  ________  11 10  _  ________
                  4  3   _  ________  12 11  _  ________
                  5  4   _  ________  13 12  _  ________
                  6  5   _  ________  14 13  _  ________
                  7  6   _  ________  15 14  _  ________
                  8  7   _  ________  16 15  _  ________
```

```
eqpsuph                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5742)          PSU PROTOCOL HANDLER PACK EQUIPAGE

13. PH2 MIN SPARE   __
14. PH3 MIN SPARE   __
15. PH4 MIN SPARE   __
16. PH22 MIN SPARE  __
17. PH31 MIN SPARE  __
18. PHV1 MIN SPARE  __
19. PHV2 MIN SPARE  __
20. PHV3 MIN SPARE  __
21. PHV4 MIN SPARE  __
22. PHV5 MIN SPARE  __
23. PHV6 MIN SPARE  __
24. BRI RDTA PIDB TS _
```

Figure 4 SAMPLE EQPSUPH FORM 5E18(1) AND LATER SOFTWARE RELEASES

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SEC. 24: 5824 RECORD
INTEGRATED SERVICES ANALOG PACK EQUIPAGE FORM - EQISAP

1. GENERAL

The 5824 Record is available with the 5E3 and later Generic Programs. It is used to define ISLU (Integrated Services Line Unit) or RISLU (Remote Integrated Services Line Unit) analog circuit packs. The circuit packs that can be defined using this form are MAN (Metallic Access Network), RG (Ringing Generator) and HLSC (High Level Service Circuits). If the ISLULC (ISLU Line Card Assignment) form (5942 Record) is equipped with analog Z-Cards or digital U-Cards, the EQISAP form must be assigned with ISMAN (Integrated Services Metallic Access Network) and ISHLSC (Integrated Services High Level Services Circuit) Circuit Pack Types.

If the MTBs are assigned to ISAPs which reside upon an ORM, RSM or TRM, the EQISAP and the MTBs must share the same SITE ID (defined on the EQIM form). In addition, if this is a remote SITE ID (does not reside in the local office), the MTBs must reside on the Common Resource Module (denoted by MASTER MODULE on a corresponding EQSIT form). This rule does not apply to co-located ORMs/TRMs sharing resources (as co-located ORMs/TRMs are not distinguishable from ORMs/TRMs which are not co-located).

For 5E10 and later, when ISLULB form(s) are submitted with U Boards, 1 or 2 (2 if LG is in both 0-7 and 8-15 ranges, 1 if LG is in only one range) EQISAP input forms must be defined with:

- Matching SWITCHING MODULE
- ISLU TYPE is "ISLU2"
- Matching ISLU NUMBER
- CIRCUIT PACK TYPE is "ISMAN"
- CIRCUIT PACK NUMBER is 00 if LG is in 0 - 7; is 01 if LG is in 8 - 15
- EQUIPMENT STATUS associated with U Board. The following is the list of valid association of statuses between U Board and "ISMAN".

SPARE U BOARD STATUS	ISMAN STATUS
U	U, G, O
G	G, O
O	O

For 5E10 and later, when ISLULB form(s) are submitted with spare U Boards, 1 to 4 (depending on the LG and Board position) EQISAP input forms must be defined with

- Matching SWITCHING MODULE
- ISLU TYPE is "ISLU2"
- Matching ISLU NUMBER
- CIRCUIT PACK TYPE is "ISMAN"
- CIRCUIT PACK NUMBER is
  - 00 if LG is 0 and Board is 0
  - 01 if LG is 8 and Board is 0

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- 10 if LG is 7 and Board is 3
- 11 if LG is 15 and Board is 3

- EQUIPMENT STATUS associated with the spare U Board. The following is the list of valid association of statuses between the spare U Board and "ISMAN".

SPARE U BOARD STATUS	ISMAN STATUS
U	U, G, O
G	G, O
O	O

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Switching Module Number.
Valid Entries: 1 - 192

Data Rules:

The SWITCHING MODULE must be defined on an EQISLU form (5731 Record) or EQRISLU form (5732 Record).

2.3 *(R)ISLU TYPE

Description: Enter the type of this Switching Module.
Default: ISLU
Valid Entries:
- For 5E9(2) and earlier: ISLU or RISLU
- For 5E10 and later: ISLU, ISLU2 or RISLU

Data Rules:

For a (R)ISLU TYPE of "RISLU" or "ISLU", (R)ISLU NUMBER must be between 0 and 7.

If ISLU TYPE is "ISLU2", CIRCUIT PACK TYPE must not be "ISRG".

2.4 *(R)ISLU NUMBER

Description: Enter the Integrated Services Line Unit Number.
Valid Entries:
- For 5E9(2) and earlier: 0 to 7
- For 5E10 and later: 0 - 7 for ISLU, or 0 - 42 for ISLU2.

Data Rules:

The (R)ISLU NUMBER must be defined on an EQISLU form (5731 Record) or EQRISLU form (5732 Record).

2.5 *CIRCUIT PACK TYPE

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Description: Enter the type of Integrated Services Analog Circuit Pack.

Valid CIRCUIT PACK TYPE Entries

Entry	Description
ISMAN	Integrated Services Metallic Access Network.
ISRG	Integrated Services Ringing Generator.
ISHLSC	Integrated Services High Level Services Circuit.

Data Rules:

If the EQISAP form is submitted with Circuit Pack Type of "ISMAN", the ISLULC form must be submitted with Z/U-Cards in any one of the Line Group Controller (LGC) card positions for this SM and (R)ISLU.

If CIRCUIT PACK TYPE is "ISMAN", and if METALLIC TEST BUS 0 is entered, the CIRCUIT PACK NUMBER must be 00 or 11. If METALLIC TEST BUS 1 is entered, CIRCUIT PACK NUMBER must be 01 or 10.

If an ISLULC form is submitted with Z/U-cards and the LGC in the range of 0 - 7, EQISAP forms must be submitted with MAN Pack 0 assigned (CIRCUIT PACK NUMBER is 00 and 10). If LGC is in the range of 8 - 15, EQISAP forms must be submitted with MAN Pack 1 assigned (CIRCUIT PACK NUMBER is 01 and 11).

ISMAN Circuit Pack Types must be assigned in pairs of Circuit Pack Numbers. The pairs of Circuit Pack Numbers are 00 and 10 or 01 and 11. That is, if a MAN Pack 0 is assigned, then it must be assigned on both Service Groups. A similar rule applies to MAN Pack 1. If only "U" cards are equipped, MAN 00 is required for LGC 00-07 and MAN 01 is required for LGC 08-15.

Every MAN (Metallic Access Network) board has 16 Line Group Buses, 4 Test Buses, 1 Metallic Test Bus, 1 Spare Bus, 1 200 OHM Test Bus, 1 2K OHM Test Bus and 1 Ringing Generator Bus.

If the EQISAP form is submitted with Circuit Pack Type of "ISHLSC" or "ISRG", then another EQISAP form must be submitted with "ISMAN" Circuit Pack Type with the same SWITCHING MODULE, (R)ISLU TYPE and (R)ISLU NUMBER.

2.6 *CIRCUIT PACK NUMBER

Description: Enter the Circuit Pack Number. Circuit Pack Number is made up of the Service Group Number and the circuit number. Service Group is represented by the first character of this field and circuit number is represented by the second character.
Valid Entries: 00, 01, 02, 10, 11 and 12.

Data Rules:

A maximum of one Ringing Generator may be assigned per Service Group. Valid Circuit Pack Numbers for Circuit Pack Type of "ISRG" are 00 and 10.

The Metallic Access Network (MAN) consists of two circuit packs in each Service Group. The MAN contains the access buses used to connect circuits, to provide network paths for ringing, call tests, diagnostics and line testing. Valid Circuit Pack Numbers for Circuit Pack Type of "ISMAN" are 00, 01, 10 and 11.

Each Service Group can be equipped with a maximum of three High Level Service Circuits. Valid Circuit Pack Numbers for Circuit Pack Type of "ISHLSC" are 00, 01, 02, 10, 11 and 12.

2.7 EQUSTAT

Description: Enter the Equipment Status.

Required Field.

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Default: O
Valid Entries:

Valid EQUSTAT Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

For new offices and units destined for factory testing, Operational is the only allowed value. During off-line ODA database retrofits, the other values are valid.

Equipment Status for "ISRG" depends upon the "ISMAN" status. If status for ISMAN is U, G or O, then status for ISRG must be U. If status for ISMAN is G or O, then status for ISRG must be G. If status for ISMAN is O, then status for ISRG must be O.

Equipment Status for "ISMAN" and "ISHLSC" depend upon the associated COMMON CONTROL EQST field on either the EQISLU or EQRISLU forms. If status for COMMON CONTROL EQST is U, G or O, then status for ISMAN and ISHLSC must be U. If status for COMMON CONTROL EQST is G or O, then status for ISMAN and ISHLSC must be G. If status for COMMON CONTROL EQST is O, then status for ISMAN and ISHLSC must be O.

2.8 CLI

Description: Enter the eight-digit hexadecimal Change Level Indicator Number of the ISMAN, ISRG and ISHLSC Circuit Pack Types.

Required Field.
Valid Entries: 0 to 7FFFFFFF

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.9 METALLIC TEST BUS 0

Description: Enter the MTB 0.

Data Rules:

For 5E9(2) and earlier, Metallic Test Bus 0 must be assigned to Service Group 0.

If a METALLIC TEST BUS 0 value is assigned for Service Group 0, then another EQISAP form must be defined with the same SWITCHING MODULE, (R)ISLU TYPE and (R)ISLU NUMBER entered on this form for a METALLIC TEST BUS 1 value that is assigned to the corresponding pack in Service Group 1. If MTB0 is entered, then MTB1 must not be input on the same form. Valid Circuit Pack Numbers associated with MTB0 numeric are 00 and 11.

If CIRCUIT PACK NUMBERs 00 and 11 are assigned to the same SWITCHING MODULE, (R)ISLU TYPE and (R)ISLU NUMBER, then the METALLIC TEST BUS 0 value must be the same on the two EQISAP forms.

This number consists of an 9-digit number as indicated below:

Valid MTS 0 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0
Board	BRD	XX	00-15 (Regular MSU)

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			00-31 (Modular MSU)
BUS	BUS	XX	00-14

This field is valid only for Circuit Pack Type of "ISMAN". MTBs greater than 3000 ohms are not valid on RISLUs.

2.10 METALLIC TEST BUS 1

Description: For 5E9(2) and earlier, Metallic Test Bus 1 must be assigned to Service Group 1.

If a METALLIC TEST BUS 1 value is assigned for Service Group 1, then another EQISAP form must be defined with the same SWITCHING MODULE, (R)ISLU TYPE and (R)ISLU NUMBER entered on this form for a METALLIC TEST BUS 0 value that is assigned to the corresponding pack in Service Group 0. If MTB1 is entered, then MTB0 numeric must not be input on the same form. Valid Circuit Pack Numbers associated with MTB1 are 10 and 01.

If CIRCUIT PACK NUMBERs 10 and 01 are assigned to the same SWITCHING MODULE, (R)ISLU TYPE and (R)ISLU NUMBER, then the METALLIC TEST BUS 1 value must be the same on the two EQISAP forms.

This number consists of an 9-digit number as indicated below:

Valid MTS 1 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	1
Board	BRD	XX	00-15 (Regular MSU)
			00-31 (Modular MSU)
BUS	BUS	XX	00-14

This field is valid only for Circuit Pack Type of "ISMAN". MTBs greater than 3000 ohms are not valid on RISLUs.

```
eqisap                  5ESS Switch                _
(5824)              OFFICE DATA ADMINISTRATION
                INTEGRATED SERVICES ANALOG PACK EQUIPAGE

* 1. SWITCHING MODULE          001
* 2. (R)ISLU TYPE             ISLU
* 3. (R)ISLU NUMBER            0
* 4. CIRCUIT PACK TYPE        ISMAN
* 5. CIRCUIT PACK NUMBER       00

  6. EQUIPMENT STATUS          O
  7. CLI                  00000000
  8. METALLIC TEST BUS 0       001000014
  9. METALLIC TEST BUS 1       _________
```

Figure 1 SAMPLE EQISAP FORM 5E5 AND LATER SOFTWARE RELEASES

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SEC. 25: 5750 RECORD
METALLIC SERVICE UNIT EQUIPMENT RECORD
METALLIC SERVICE UNIT EQUIPAGE FORM (EQMSU)
METALLIC SERVICE UNIT PACK EQUIPAGE FORM (EQMSP)
MODULAR METALLIC SERVICE UNIT PACK EQUIPAGE FORM (EQMMSP)
METALLIC TEST INTERCONNECTION BUS EQUIPAGE FORM (EQMTIB)

1. GENERAL

The 5750 Record is used to define MSU (Metallic Service Unit) assignments from the EQMSU and the EQMTIB (5E10 and later), EQMSP or EQMMSP forms.

All MSUs in an office connect to an MTIB (Metallic Test Interconnection Bus). The MTIB provides the ability to interconnect MSUs and MSUSGs (Metallic Service Unit Service Groups) when more than one MSUSG must be used in a metallic connection. To provide this capability, the switch processing requires data defining the sequence in which the MSUs are connected to the MTIBs. Data describing this sequence is entered on the EQMSU form. For 5E9(2) and later, all MSU functions are provided by the Modular MSU.

For 5E14 and later, The FLEX DCTU CON field was added to provide additional MTIB paths to enhance availability of test setups in the MMSU. See Division 2, Section 7AL.

1.1 Recent Change View

The corresponding Recent Change View for the EQMSU and EQMTIB forms is 19.7. The corresponding Recent Change View for the EQMSP and EQMMSP forms is 20.7.

2. FORM ENTRIES - EQMSU

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 *INTERFACE MODULE

Description: Enter the Switching Module Number.
Valid Entries:
- 1 - 48: for CM1 (Communications Module 1)
- 1 - 192: for CM2 (Communications Module 2)

2.3 *METALLIC SERVICE UNIT

Description: Enter the Metallic Service Unit Number.
Valid Entries: 0 - 1

2.4 *SERVICE GROUP

Description: Enter the Service Group Number.
Valid Entries: 0 and 1

2.5 MSU TYPE

Description: Enter the Metallic Service Unit Type.

Required Field.

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Valid MSU TYPE Entries	
Entry	**Description**
R	Regular.
M	Modular. Note: For 5E9(2) and later, all MSU functions are provided by the Modular MSU.

2.6 EQUIPMENT STATUS

Description: Enter the status of the equipment. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid.

Required Field.
Default: O
Valid Entries:

Valid EQUIPMENT STATUS Entries	
Entry	**Description**
G	Growth.
O	Operational.
U	Unequipped.

2.7 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 -8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.8 CONTROL GROUP

Description: Enter the Control Group Number.

Required Field.
Valid Entries:

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Valid CONTROL GROUP Entries, 5E9(2) and later

Entry	Definition
0 - 1	SM.
0 - 3	SM-2000.

Data Rules:

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.9 CONTROL PORT

Description: Enter the Control Port Number.

Required Field.
Valid Entries: 0 - 22.

Data Rules:

The Control Group Number and Control Port Number combination must be unique for the two Service Groups.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.10 EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries:
- 5E9(2) and later: 0 - 208

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinent aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry	Type
000 - 004	SM

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000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

Data Rules:

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

2.11 EQUIPMENT VERTICAL

Description: Enter the Vertical Equipment Location that specifies the bottom of the unit.

Required Field.
Valid Entries: 0 - 84

5E9(2) and later:
- 7 foot cabinets - 22, 30, 39, 48, 56, 65, 74
- 6 foot cabinets - 7, 15, 24, 32, 41, 49, 58

2.12 EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement, per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.13 CSU

Description: Is the MSU located on a CSU (Combined Services Unit)? For more information on the Combined Services Unit feature, see Division 2, Section 7F.

Software Release: 5E10 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When CSU is "Y", SERVICE GROUP must be 0.

For an SM with a CSU, all equipment assignments for the CSU on that SM must specify the same combination of AISLE, BAY, VERT POS values. Therefore, the EQDU, EQGDSC3, EQMSU, or EQRA forms which have CSU set to "Y" must have equipment assignments that specify one location for the same CSU on a particular SM.

When an EQMSU form is entered with CSU set to "Y", no other EQMSU form may be entered on the same SM.

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When an EQMSU form is entered with CSU set to "Y", the corresponding EQMMSP form with matching INTERFACE MODULE, METALLIC SERVICE UNIT and SERVICE GROUP values

- must not have any entries for GROWTH SHELF 1, GROWTH SHELF 2 or GROWTH SHELF 3.
- must not have any entries in the PACK EQUIPMENT LIST for SHELF POSITIONS 8 - 31.
- must not have any entries in the PACK EQUIPMENT LIST with SHELF TYPE values other than "MACC", "SCAN", "DIST" or "GDXC" for SHELF POSITIONS 0 - 7.
- must have an entry for MTIB BASIC SHELF.

Any SERVICE GROUP assigned within an INTERFACE MODULE on an EQMSU form which has CSU set to "N" must be assigned in pairs and with the same EQUIPMENT VERTICAL and EQUIPMENT BAY.

2.14 FLEX DCTU CON

Description: Is the Flexible Directly Connected Test Unit Connection to MSU enabled? See Division 2, Section 7AL.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

Valid FLEX DCTU CON Entries

Entry	Definition
Y	Many to 1 MTB/PMU port connection.
N	1 to 1 MTB/PMU port connection.

Data Rules:

When "Y" is entered,

- for all EQPMU MTB AO - MTB D0 assignments for a particular MSU which has a MTB that resides on Shelf 0, the same pack position on shelves 1, 2 and 3 must either be equipped with a "MACC" pack or must be vacant.

  NOTE: The exception to the above data rule occurs in cases where the shelf is a non-metallic shelf (i.e., scan and distribute packs only). In such cases, the switch will allow scan or distribute packs in the slots reserved for the MACC pack; no cross check error will be encountered.

- all EQPMU MTB assignments to MSU's with Flexible DCTU Connectivity must be to MACC packs on shelf 0 only (pack numbers 0 - 7)

2.15 MTIB POSITION

Description: This field identifies the start, intermediate, and end position of the MTIB.

Valid MTIB POSITION Entries

Entry	Description
S or START	"START" is used if this Service Group equals 1, this MSU is not located on an RSM, and this Service Group is equipped with at least one MTIB pack.
E or END	"END" is used if this Service Group equals 0, this MSU is not located on an RSM, and this Service Group is equipped with at least one MTIB pack.

Data Rules:

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Leave blank if this Service Group (0 or 1) either occupies an intermediate point on the MTIB, is located on an RSM, or does not have at least one MTIB pack equipped (SCAN and/or Distribute Packs only).

When Service Group 0 is the end of the MTIB, enter END in the Position field. Otherwise leave the Position field blank. Position cannot be START for Service Group 0.

When the Service Group 1 is the start of the MTIB, enter START in the Position field. Otherwise leave the Position field blank. Position cannot be END for Service Group 1.

2.16 ADJACENT MTIB IM

Description: If this MSU is an intermediate point in the MTIB, indicate the adjacent SM number. A Service Group 1 is cabled from a preceding adjacent SM and a Service Group 0 is cabled to a succeeding adjacent SM.

Software Release: 5E9(2) and earlier.
Valid Entries:
- 1 - 48: For CM1 (Communications Module 1)
- 1 - 192: For CM2 (Communications Module 2)

Data Rules:

Leave blank for any one of the following conditions:

- If this Service Group is the start or end of the MTIB.
- If this MSU is located on an RSM.
- If this MSU is not equipped with an MTIB pack (SCAN and/or Distribute Packs only).

Refer to Figures 2 and 3 for examples.

2.17 ADJACENT MTIB MSU

Description: If this MSU is an intermediate point in the MTIB, indicate the adjacent MSU number. A Service Group 1 is cabled from a preceding adjacent MSU and a Service Group 0 is cabled to a succeeding adjacent MSU.

Software Release: 5E9(2) and earlier.
Valid Entries: 0 and 1

Data Rules:

Leave blank for any one of the following conditions:

- If this Service Group is the start or end of the MTIB.
- If this MSU is located on an RSM.
- If this MSU is not equipped with an MTIB Pack (SCAN and/or Distribute Packs only).

Refer to Figures 2 and 3 for examples.

2.18 MSU COMMON CIRCUIT CLI

Description: Enter the MSU Common Circuit Change Level Indicator. This circuit is provided as part of

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the basic unit per Service Group.
Valid Entries: 0 to 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

3. FORM ENTRIES - EQMSP

For 5E9(1) and earlier, when MSU TYPE is "R" on the EQMSU form, for a given Service Group, the following field information, for each equipped pack, is entered on the EQMSP form. The INTERFACE MODULE, MSU and SG key fields on this form must be the same as the associated fields on the EQSU form.

3.1 MTIB PACK EQSTATUS

Description: Enter the equipment status for the MTIB pack. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid. If MTIB pack is not equipped, leave blank.

Valid MTIB PACK EQSTATUS Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

3.2 MTIB PACK CLI

Description: Enter the MTIB PACK CLI. If MTIB pack is not equipped, leave blank.
Valid Entries: 0 to 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

PACK EQUIPMENT LIST

The following fields (Section 3.3 - Section 3.6) define the circuit packs associated with the MSU.

3.3 POS

Description: Enter the Metallic Service Unit Pack Position Number.
Valid Entries: 0 - 15

3.4 TYPE

Description: Enter the type of MSU Pack for each position.

Valid TYPE Entries

Entry	Description
SCAN	Scan Point Circuit Pack.
DIST	Distribute Point Circuit Pack.
ALIT	Automatic Line Insulation Test Pack.
GDXC	Gated Diode Crosspoint Compensator Pack.
MACC	Metallic Access Circuit Pack.
DFTC	Distributing Frame Test Access Circuit.

Data Rules:

To minimize metallic path cabling, MACC packs should be equipped in the first three positions of each MMSU shelf.

If a GDXC pack is equipped in Shelf 0-3, an ALIT pack must be equipped on the same MSU/SG, unless the ALIT is exclusively for SLC-96.

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A maximum of three MACC packs may be equipped per shelf. If a GDXC or ALIT pack is equipped in Shelf 0-3, a MACC pack on the same MSU/SG must also be equipped.

If Shelf 0, 1, 2 or 3 is equipped with at least one MACC, ALIT, DFTC, GDXC or SLIM pack, the MTIB pack must also be provided. If the shelf is unequipped or equipped with only SCAN and/or DIST packs, the MTIB pack is not required.

If a "MACC" pack is equipped and resides upon an ORM, TRM, or RSM, the remote modules must also be Common Resource Modules (denoted by MASTER MODULE on a corresponding EQSITE form).

3.5 EQST

Description: Enter the status of the equipment for each pack position. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid.
Default: O
Valid Entries:

Valid EQST Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

3.6 CLI

Description: Enter the Change Level Indicator for the pack position. This circuit is provided as part of the basic unit per Service Group.
Valid Entries: 0 - 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

For 5E3 and later, if the MSU Pack Type is MACC and EQST is "O", then the Modular MSU has Metallic Access capability and is equipped with an MA pack, MTIBAX (MTIB Access) pack and protocol circuit.

4. FORM ENTRIES - EQMMSP

When MSU type is "M" on the EQMSU form, for a given Service Group, the following field information, for each equipped pack, is entered on the EQMMSP form. The INTERFACE MODULE, MSU and SG key fields on this form must be identical to the same key fields on the EQSU form. Note that each EQMMSP form must have a corresponding EQMSU form.

MTIB SHELVES

There are four shelvesSection 4.1 - Section 4.2 consisting of a Basic Shelf and three Growth shelves.

The following is the Shelf and Pack Position Relationship:

Pack Equipment Relationship

Shelf	Shelf Number	Pack Position
Basic Shelf	0	00-07
Growth Shelf 1	1	08-15
Growth Shelf 2	2	16-23
Growth Shelf 3	3	24-31

A status and CLI value is required for each shelf.

4.1 EQST

Description: If MTIB (BASIC SHELF), MTIB (GROWTH SHELF 1), MTIB (GROWTH SHELF 2), or MTIB

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(GROWTH SHELF 3) is equipped with an MTIB pack, enter its equipment status.

For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid.
Default: O
Valid Entries:

Valid EQST Entries

Entries	Descriptions
G	Growth.
O	Operational.
U	Unequipped.

4.2 CLI

Description: If MTIB (BASIC SHELF), MTIB (GROWTH SHELF 1), MTIB (GROWTH SHELF 2), or MTIB (GROWTH SHELF 3) is equipped with an MTIB pack and its EQST is known, enter the CLI value.
Valid Entries: 0 - 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

PACK EQUIPMENT LIST

The following fields (Section 4.3 - Section 4.5) define the Pack Equipment List for Modular MSU for the combined pack entries on the EQMMSP form for MTIB (BASIC SHELF), MTIB (GROWTH SHELF 1), MTIB (GROWTH SHELF 2), or MTIB (GROWTH SHELF 3). If any of these are equipped, enter the TYPE, EQST, and CLI values for each.

4.3 TYPE

Description: Enter the type of MSU Pack for each position.

Valid TYPE Entries

Entry	Description
[AL]IT	Automatic Line Insulation Test Pack.
[DF]TC	Distributing Frame Test Access Circuit.
[DI]ST	Distribute Point Circuit Pack.
[GD]XC	Gated Diode Crosspoint Compensator Pack.
[MA]CC	Metallic Access Circuit Pack.
[SC]AN	Scan Point Circuit Pack.
[SL]IM	Software Release: 5E10 and later Subscriber Line and Instrument Measurement Pack.

Data Rules:

If TYPE is "SLIM":

- SLIM ROUTE INDEX must be entered on the IMINFO form.
- each pack entered must have 3 LTP assignments associated with a TRKCLS set to "LTPSLIM" on the TKGRP form. For these LTPs, the SM specified in the LTP on the TRUNK form must equal the SM on the EQMMSP form.
- and if, Basic Shelf and/or Growth Shelf 1, 2, or 3 is equipped, a MACC pack must also be equipped on the same MSU/SG.

When MSUs are mounted on either a Local SM or a Host SM and also have one or more MACC packs assigned via the corresponding EQMMSP form (PACK TYPE set to "MACC"), then MSUs require a corresponding EQMTIB form entered.

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4.4 EQST

Description: Enter the status of the equipment for each pack position. For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA database retrofits, the other values are valid.
Default: O
Valid Entries:

Valid EQST Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

4.5 CLI

Description: Enter the Change Level Indicator for the pack position. This circuit is provided as part of the basic unit per Service Group.
Valid Entries: 0 - 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

5. FORM ENTRIES - EQMTIB

5.1 *SM

Description: Enter the Switching Module Number.

Software Release: 5E10 and later.
Valid Entries: 1 - 192

Data Rules:

Each EQMTIB form must have at least one corresponding EQMSU form with matching SM and MSU values. In addition, EQMTIB forms must be associated with EQIM forms where SM USAGE is "HIM " or "IM" . All EQMTIB forms must be associated with Switching Modules that are not remote.

5.2 *MSU

Description: Enter the Metallic Service Unit
Valid Entries: 1 - 0

5.3 SHELF

Description: Enter the MSU type. This is a no change field.
Default: 0

5.4 EQSTST

Description: Enter the equipment status. This is a display only field.

5.5 CLI

Description: Enter the Change Level Indicator. This is a display only field.

5.6 PREV SM

Description: Enter the previous MTIB interface module.

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Valid Entries: 1 - 192

Data Rules:

When PREV SM is "SM", then PREV MSU must not equal "MSU".

When PREV SM equals NEXT SM, then PREV MSU must not equal NEXT MSU.

If and only if there is one EQMTIB form for the office, then the following fields must not be entered:

- MTIB CONNECTION PREV SM
- MTIB CONNECTION PREV MSU
- MTIB CONNECTION NEXT SM
- MTIB CONNECTION NEXT MSU

When there is only one EQMITB form for the office, the CSU field on the corresponding EQMSU form must be "N".(This represents an MTIB access network where the start is on service group 1 of this MSU and the end is on service group 0 of the same MSU).

For each EQMTIB form that specifies a NEXT SM, NEXT MSU combination, there must be a second EQMTIB form which has key fields SM and MSU equal to the NEXT SM and NEXT MSU of the first form and with PREV SM and PREV MSU equal to the SM and MSU values of the first form.

Example: If for one EQMTIB form SM/MSU is 001/0 and NEXT SM/MSU is 002/1, then there must be a second EQMTIB form where SM/MSU is 002/1 and PREV SM/MSU is 001/0. (See Figure 4).

The entries in PREV SM/MSU or NEXT SM/MSU must not be duplicated on more than one EQMTIB form.

There may be only one MTIB access network for a given office. Therefore, all EQMTIB form tuples should be linked together to form a single contiguous chain via the MTIB NEXT SM/MSU and MTIB PREV SM/MSU assignments. Breaks in the chain are not allowed. One and only one of the EQMTIB forms must have MTIB PREV SM/MSU blank (this is the start of the MTIB metallic access network). One and only one of the EQMTIB forms must have MTIB NEXT SM/MSU blank (this is the end of the MTIB metallic access network).

If the PREV SM/PREV MSU connection is entered, the NEXT SM/NEXT MSU connection must not be entered and vice versa.

5.7 PREV MSU

Description: Enter the previous MTIB metallic service unit.
Valid Entries: 0 - 1

Data Rules:

The PREV MSU and the NEXT MSU cannot be duplicated for the same SM.

5.8 NEXT SM

Description: Enter the next MTIB interface module.
Valid Entries: 1 - 192

Data Rules:

When NEXT SM is "SM", then NEXT MSU must not equal "MSU".

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5.9 NEXT MSU

Description: Enter the next MTIB metallic service unit.
Valid Entries: 0 - 1

Data Rules:

The NEXT MSU and the PREV MSU cannot be duplicated for the same SM.

Figure 1 MULTIPLE METALLIC SERVICE UNITS IN MULTI-MODULE OFFICE 5E10 AND LATER SOFTWARE RELEASES

```
eqmsu                    5ESS Switch          _
5750              OFFICE DATA ADMINISTRATION
                  METALLIC SERVICE UNIT EQUIPAGE

* 1.  INTERFACE MODULE        ___     13.  ADJACENT MTIB IM       ___
* 2.  METALLIC SERVICE UNIT   _       14.  ADJACENT MTIB MSU      _
* 3.  SERVICE GROUP           _    15.  MSU COMMON CIRCUIT CLI  ________
  4.  MSU TYPE                _
  5.  EQUIPMENT STATUS        O
  6.  CONTROL GROUP           _
  7.  CONTROL PORT            __
  8.  EQUIPMENT BAY           ___
```

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```
 9.  EQUIPMENT VERTICAL      __
10.  EQUIPMENT AISLE         ____
11.  CSU                  N
12.  MTIB POSITION           _____
```

Figure 2 SAMPLE EQMSU FORM 5E13 AND EARLIER SOFTWARE RELEASES

```
eqmsu                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5750)                METALLIC SERVICE UNIT EQUIPAGE

 *1. INTERFACE MODULE      ___     #13. MSU COMMON CIRCUIT CLI ________
 *2. METALLIC SERVICE UNIT _
 *3. SERVICE GROUP         _
 #4. MSU TYPE              _
  5. EQUIPMENT STATUS      O
 #6. CONTROL GROUP         _
 #7. CONTROL PORT          __
 #8. EQUIPMENT BAY         ___
 #9. EQUIPMENT VERTICAL    __
#10. EQUIPMENT AISLE       ____
 11. CSU                   N
 12. FLEX DCTU CON         N
```

Figure 3 SAMPLE EQMSU FORM 5E14 SOFTWARE RELEASE

```
eqmsu                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5750)                METALLIC SERVICE UNIT EQUIPAGE

 *1. INTERFACE MODULE      ___      13. FLEX DCTU CON         N
 *2. METALLIC SERVICE UNIT _      #14. MSU COMMON CIRCUIT CLI ________
 *3. SERVICE GROUP         _
 #4. MSU TYPE              _
  5. EQUIPMENT STATUS      O
  6. INTF UNIT             0
 #7. CONTROL GROUP         _
 #8. CONTROL PORT          __
 #9. EQUIPMENT BAY         ___
#10. EQUIPMENT VERTICAL    __
#11. EQUIPMENT AISLE       ____
 12. CSU                   N
```

Figure 4 SAMPLE EQMSU FORM 5E15 AND LATER SOFTWARE RELEASES

```
eqmsp                    5ESS Switch          _
```

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(5750) OFFICE DATA ADMINISTRATION
METALLIC SERVICE UNIT PACK EQUIPAGE

* 1. INTERFACE MODULE 001 4. MTIB PACK EQSTATUS O
* 2. METALLIC SERVICE UNIT 0 5. MTIB PACK CLI 00000000
* 3. SERVICE GROUP 0

6. PACK EQUIPMENT LIST

row	POS	TYPE	EQST	CLI	row	POS	TYPE	EQST	CLI
01	00	SCAN	O	00000000	09	08	MACC	O	00000002
02	01	SCAN	O	00000000	10	09	MACC	U	00000031
03	02	SCAN	U	00000000	11	10	GDXC	O	00000002
04	03	DIST	O	00000000	12	11	GDXC	O	00000002
05	04	DIST	O	00000000	13	12	GDXC	O	00000002
06	05	DIST	U	00000000	14	__	____	_	_____
07	06	ALIT	O	00000002	15	__	____	_	_____
08	07	GDXC	U	00000007	16	__	____	_	_____

Figure 5 SAMPLE EQMSP FORM 5E5 AND LATER SOFTWARE RELEASES

eqmmsp 5ESS Switch
(5750) OFFICE DATA ADMINISTRATION
Screen 1 of 2 MODULAR METALLIC SERVICE UNIT PACK EQUIPAGE

EQST CLI
* 1. INTERFACE MODULE ___ MTIB (BASIC SHELF) 4. _ 5. _____
* 2. MODULAR MSU _ MTIB (GROWTH SHELF 1) 6. _ 7. _____
* 3. SERVICE GROUP _ MTIB (GROWTH SHELF 2) 8. _ 9. _____
MTIB (GROWTH SHELF 3) 10. _ 11. _____

12. PACK EQUIPMENT LIST

BASIC SHELF					GROWTH SHELF 1				
row	POS	TYPE	EQST	CLI	row	POS	TYPE	EQST	CLI
01	00	____	_	_____	09	08	____	_	_____
02	01	____	_	_____	10	09	____	_	_____
03	02	____	_	_____	11	10	____	_	_____
04	03	____	_	_____	12	11	____	_	_____
05	04	____	_	_____	13	12	____	_	_____
06	05	____	_	_____	14	13	____	_	_____
07	06	____	_	_____	15	14	____	_	_____
08	07	____	_	_____	16	15	____	_	_____

eqmmsp 5ESS Switch
(5750) OFFICE DATA ADMINISTRATION
Screen 2 of 2 MODULAR METALLIC SERVICE UNIT PACK EQUIPAGE

12. PACK EQUIPMENT LIST

GROWTH SHELF 2					GROWTH SHELF 3				
row	POS	TYPE	EQST	CLI	row	POS	TYPE	EQST	CLI
17	16	____	_	_____	25	24	____	_	_____
18	17	____	_	_____	26	25	____	_	_____

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19	18	____	_	_____		27	26	____	_	_____					
20	19	____	_	_____		28	27	____	_	_____					
21	20	____	_	_____		29	28	____	_	_____					
22	21	____	_	_____		30	29	____	_	_____					
23	22	____	_	_____		31	30	____	_	_____					
24	23	____	_	_____		32	31	____	_	_____					

Figure 6 SAMPLE EQMMSP FORM 5E5 AND LATER SOFTWARE RELEASES

```
eqmtib                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5750)          METALLIC TEST INTERCONNECTION EQUIPAGE

*1. SM    ___
*2. MSU   _
   SHELF  0
   EQSTAT _
   CLI    ________

MTIB CONNECTIONS
 6. PREV SM  ___
 7. PREV MSU _

 8. NEXT SM  ___
 9. NEXT MSU _
```

Figure 7 SAMPLE EQMTIB FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 26: 5751 RECORD
DIRECTLY CONNECTED TEST UNIT FORM - EQDCTU

1. GENERAL

The DCTU (Directly Connected Test Unit) provides metallic access testing capabilities to users via a CRT (Cathode Ray Tube) at the TLWS (Trunk and Line Work Station). The DCTU is available with 5E1 and later Software Releases.

The DCTU performs both DC (Direct Current) and sub-audio measurement capabilities for the integrated testing of loops, trunks and special service facilities, office related maintenance testing capability measurements of Direct Current voltages, resistance and capacitance of facilities that is controlled by the SM (Switching Module).

A DCTU may be configured with a maximum of three PMUs (Precision Measurement Units). Each PMU has four ports. A metallic path is established from a port through a metallic access pack in a Metallic Service Unit to the line or trunk to be tested. The PMU assignments are entered on the 5752-1/2 Record, Precision Measurement Unit Form (EQPMU).

If the 5751 Record is supplied, there must be a Route Index defined on the IMINFO form (5510 Record).

For every DCTU circuit (as defined in the 5751 Record) defined in a SM, there must be a trunk defined on the TRUNK form (5202 Record) with a Logical Test Port defined on the SM containing the DCTU, and with a Trunk Class of "LTPDCTU" on the TKGRP form (5202 Record).

1.1 Recent Change View

The Recent Change View for this form is 19.9.

2. FORM AND RECORD ENTRIES

2.1 *SWITCHING MODULE

Description: Enter the SM in which the Directly Connected Test Unit is mounted.
Valid Entries: 1 - 192

2.2 DCTU STATUS

Description: Enter the equipage status of the DCTU. For new offices and units destined for factory testing, Operational is the only allowed value. During offline ODA database retrofits, the other values are valid.
Default: O
Valid Entries:

Valid DCTU STATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

2.3 DCTU CLI

Descrtiption: Enter the DCTU Change Level Indicator.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.4 INTF UNIT

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Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.5 CONTROL GROUP

Description: Enter the Control Group to which the DCTU is assigned.

NOTE: For 5E9(2) and later, 0 - 1 is used for SMs; 0 - 3 is used for SM-2000s.
Valid Entries:
- 5E9(1) and earlier: 0 - 1
- 5E9(2) and later: 0 - 3

Data Rules:

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.6 CONTROL PORT

Description: Enter the Control Port to which the DCTU is assigned.
Valid Entries: 0 - 22

Data Rules:

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors

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reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.7 EQUIPMENT BAY

Description: Enter the Bay of the frame in which the DCTU is mounted.
Valid Entries:
- 5E9(1) and earlier: 0 - 4
- 5E9(2) and later: 0 - 208

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinent aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

Data Rules:

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

2.8 EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle Number of the frame in which the DCTU is mounted. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.
Valid Entries: 0000 - 9999

```
eqdctu                  5ESS Switch          _
(5751)            OFFICE DATA ADMINISTRATION
                DIRECTLY CONNECTED TEST UNIT


* 1. SWITCHING MODULE  002


  2. DCTU STATUS      O
  3. DCTU CLI         00000000
```

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4. CONTROL GROUP 0
5. CONTROL PORT 15

6. EQUIPMENT BAY 4
7. EQUIPMENT AISLE 0105

Figure 1 SAMPLE EQDCTU FORM 5E6 - 5E14 SOFTWARE RELEASES

eqdctu 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5751) DIRECTLY CONNECTED TEST UNIT

*1. SWITCHING MODULE ___

2. DCTU STATUS O
#3. DCTU CLI _____
4. INTF UNIT 0

#5. CONTROL GROUP _
#6. CONTROL PORT __

#7. EQUIPMENT BAY ___
#8. EQUIPMENT AISLE ____

Figure 2 SAMPLE EQDCTU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 27: 5752 RECORD
PRECISION MEASUREMENT UNIT FORM (EQPMU)

1. GENERAL

The 5752 Record is available with the 5E1 and later Software Releases. It is used to defined PMUs (Precision Measurement Units) associated with the DCTU (Directly Connected Test Unit).

Prior to the 5E14 Software Release, each PMU has four ports/circuits. These ports/circuits furnish access to the MTB (Metallic Test Bus) and EAN (Equipment Access Network). These in turn connect any PMU port/circuit to any other PMU port/circuit on the same DCTU. Port/Circuit 0 and 1 information should be entered on the 5752-1 Record and Port/Circuit 2 and 3 information should be entered on 5752-2 Record. This form is used to make the metallic port assignments.

For new offices and units destined for factory testing, all EQSTATUS entries must be "O" (Operational). During offline ODA database retrofits, the other valid values are acceptable provided:

A. All EQSTATUS entries contain the same value, and

B. The EQSTATUS values on the EQPMU form are lower than, or equal to, in the equipment status hierarchy than the DCTU STATUS on the EQDCTU form (5751 Record). The hierarchy from lowest to highest is "U" (Unequipped), "G" (Growth) and "O" (Operational).

Effective with 5E14 and later Software Releases, the DCTU Bus Feature (99-5E-4720) is available (see Division 2, Section 7AL). This feature modified the screen format and functionality to allow each DCTU PMU port to access up to four MA packs on different MMSU (Multiple Metallic Service Unit) shelves within the same MMSU service group. Thus, four MTB fields and Ports A through D are used to define the DCTU PMUs and the LO DPN field was changed to LO DPN A - D to accommodate this feature modification.

1.1 Recent Change View

The Recent Change View for this form is 20.9.

2. FORM AND RECORD ENTRIES

2.1 *SWITCHING MODULE

Description: Enter the Switching Module in which the Precision Measurement Unit is mounted.

Required Field.
Valid Entries: 1 - 192

2.2 *PMU

Description: Enter the Precision Measurement Unit Number.

Required Field.
Valid Entries:
5E13 and earlier: 1 - 3
5E14 and later: 0 - 2

2.3 PMU EQSTATUS

Description: Enter the equipage status of the Precision Measurement Unit.

Required Field.

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Default: O

Valid PMU EQSTATUS Entries	
Entry	**Definition**
U	Unequipped.
G	Growth.
O	Operational.

2.4 PMU CLI

Description: Enter the Change Level Indicator of the Precision Measurement Unit.

Required Field.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)
For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.5 EAN EQSTATUS

Description: Enter the equipage status of the Equipment Access Network.

Required Field.

Default: O

Valid EAN EQSTATUS Entries	
Entry	**Definition**
U	Unequipped.
G	Growth.
O	Operational.

DCTU A-D/Port A-D/MTB

Effective with the 5E14 Software Release, the DCTU Bus Feature (99-5E-4720) is available (see Division 2, Section 7AL). This feature modified the existing MTB field to allow each DCTU PMU port to access up to four MA packs on different MMSU shelves within the same MMSU service group. Twelve new MTB fields were added to the screen to the existing 4 MTB fields. The MTB A0, B0, C0 and D0 (Section 2.7 - Section 2.10) are input fields. The remaining twelve MTB fields provide display-only, system-calculated data based on entries in the MTB A0, B0, C0, and D0 fields.

- ***NOTE:*** To avoid repetition, because the format and valid entries for the MTB A0 - AD fields are identical, data entry instructions are provided once (only at the MTB A0) field.

2.6 MTB

Description: Enter the Metallic Test Bus assignment for each metallic port/circuit.

- ***NOTE:*** For 5E14 and later, this field name was changed to MTB A0 through MTB D0. See the MTB A0 field for data entry information.

Required Field.

2.7 MTB A0

Description: Enter the Metallic Test Bus assignment for each metallic port/circuit.

Required Field.

Software Release: 5E14 and later
Valid Entries:

DISTRIBUTE POINT NUMBER		

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Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
Distribute Point Number	DPN	XX	00-14

Data Rules:

If the MTB for this pack resides on an ORM (Optically Remote Module) for an SM or an EXM-2000, an RSM (Remote Switching Module) or a TRM (Two-Mile Remote Module) unit, the MTB assigned to this unit must terminate to an SM with the same value of SITE ID and this SM must be the Common Resource Module (denoted by MASTER MODULE on a corresponding EQSITE form (5722 Record)). This check does not apply to co-located ORMs/TRMs sharing resources as it is not possible (in static data) to distinguish co-located ORMs/TRMs from ORMs/TRMs which are not co-located.

The MTB and DPN for DCTU A, B, C, and D, respectively, must reside on the same SM.

2.8 MTB B0

Description: Enter the Metallic Test Bus assignment for each metallic port/circuit.

Required Field.
Valid Entries: See the MTB A0 field, DISTRIBUT POINT table.

Data Rules:

The MTB and DPN for DCTU A, B, C, and D, respectively, must reside on the same SM.

2.9 MTB C0

Description: Enter the Metallic Test Bus assignment for each metallic port/circuit.

Required Field.
Valid Entries: See the MTB A0 field, DISTRIBUTE POINT table.

Data Rules:

The MTB and DPN for DCTU A, B, C, and D, respectively, must reside on the same SM.

2.10 MTB D0

Description: Enter the Metallic Test Bus assignment for each metallic port/circuit.

Required Field.
Valid Entries: See the MTB A0 field, DISTRIBUTE POINT table.

Data Rules:

The MTB and DPN for DCTU A, B, C, and D, respectively, must reside on the same SM.

LO DPN A - LO DPN D

Effective with the 5E14 Software Release, the DCTU Bus Feature (99-5E-4720) is available (see Division 2, Section 7AL). This feature modified the existing MTB field which in turn caused the existing LO DPN fields to be renamed (Section 2.12 - Section 2.15). See the LO DPN A field for usage information.

NOTE: To avoid repetition, because the format and valid entries for the LO DPN fields are identical, data entry instructions are provided once (only at the LO DPN A) field.

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2.11 LO DPN

Description: Enter the LO (Low) Distribute Point Number. The LO DPN actually designates two DPNs, the Low DPN and the High DPN (LO DPN + 1).

- ***NOTE:*** For 5E14 and later, this field name was changed to LO DPN A - LO DPN D. See the LO DPN A field for usage information.

Required Field.

2.12 LO DPN A

Description: Enter the LO DPN A number.

Required Field.

Software Release: 5E14 and later
Valid Entries:

DISTRIBUTE POINT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU	X	0-1
Service Group	SVG	X	0-1
Board	BRD	XX	00-31
Distribute Point Number	DPN	XX	00-14

Data Rules:

The MTB and DPN for DCTU A, B, C, and D, respectively, must reside on the same SM.

For 5E13 and earlier, the DPN for circuit 0, 1, 2, or 3 must not be assigned to point 31 on the MSU board.

LO DPN assignments for circuits 0, 1, 2 and 3 must be unique.

If one LO DPN is entered, all four LO DPNs must be entered.

For 5E14 and later, the DPN for DCTU A, B, C, and D, respectively, must not be assigned to point 31 on the MSU board.

LO DPN assignments for DCTU A, B, C, and D must be unique.

2.13 LO DPN B

Description: Enter the LO DPN B number.

Required Field.
Valid Entries: See the LO DPN A field, DISTRIBUTE POINT table.

2.14 LO DPN C

Description: Enter the LO DPN C number

Required Field.
Valid Entries: See the LO DPN A field, DISTRIBUTE POINT table.

2.15 LO DPN D

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Description: Enter the LO DPN D number.

Required Field.
Valid Entries: See the LO DPN A, DISTRIBUTE POINT table.

```
eqpmu                    5ESS Switch          _
(5752)                OFFICE DATA ADMINISTRATION
                   PRECISION MEASUREMENT UNIT


* 1. SWITCHING MODULE  ___
* 2. PMU              _

  3. PMU EQSTATUS     O            5. EAN EQSTATUS     O
  4. PMU CLI          _________

                     MTB         EQSTATUS         LO DPN
                   ----------    --------        --------
     circuit 0:    6. __________      7. _      8. __________
     circuit 1:    9. __________     10. _      11. __________
     circuit 2:   12. __________     13. _      14. __________
     circuit 3:   15. __________     16. _      17. __________
```

Figure 1 SAMPLE EQPMU FORM 5E13 AND EARLIER SOFTWARE RELEASES

```
eqpmu                    5ESS Switch
SCREEN 1 OF 2            OFFICE DATA ADMINISTRATION
(5752)                PRECISION MEASUREMENT UNIT FORM

*1. SWITCHING MODULE ___              DCTU A              DCTU B
*2. PMU              _              PORT A  __          PORT B  __
 3. PMU EQSTATUS     O        #7. MTB A0  __________  #13. MTB B0  __________
#4. PMU CLI          _________      MTB A1  __________      MTB B1  __________
 5. EAN EQSTATUS     O              MTB A2  __________      MTB B2  __________
                              MTB A3  __________      MTB B3  __________
                          11. LO DPN A __________  17. LO DPN B __________
```

```
eqpmu                    5ESS Switch          _
SCREEN 2 OF 2            OFFICE DATA ADMINISTRATION
```

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(5752) PRECISION MEASUREMENT UNIT FORM

DCTU C		DCTU D	
PORT C	__	PORT D	__
#19. MTB C0	_____	#25. MTB D0	_____
MTB C1	_____	MTB D1	_____
MTB C2	_____	MTB D2	_____
MTB C3	_____	MTB D3	_____
23. LO DPN C	_____	29. LO DPN D	_____

Figure 2 SAMPLE EQPMU FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 28: 5753 RECORD
FACILITY INTERFACE UNIT FORM - EQFIU

1. GENERAL

The Facility Interface Unit Form is used to provide Facility Interface Buses to a DLTU (Digital Line Trunk Unit) providing T1 Carrier umbilicals from a RSM (Remote Switching Module) and is available with the 5E1 and later Software Releases.

1.1 Recent Change View

The corresponding Recent Change View for this form is 20.4.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and the office name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

2.3 *FIU SERVICE GROUP

Description: Enter the Facility Interface Unit Service Group Number.

Required Field.
Valid Entries: 0 or 1

2.4 EQUIPMENT STATUS

Description: Enter the Status of the Equipment.

Valid EQUIPMENT STATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

For new offices and units destined for factory testing, operational is the only allowed value. During offline ODA data base retrofits, the other values are valid.

2.5 EQUIPMENT CLI

Description: Enter the Change Level Indicator of the equipment.
Valid Entries: 0 to 7FFFFFFF hex

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.6 INTF UNIT

Description: The Interface Unit field was added to support the 5E15 Optically Extended Control and Data Unit feature. This is a Recent Change only field. See Division 2, Section 9V.
Valid Entries: 0 - 8

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2.7 CONTROL GROUP

Description: Enter the Control Group Number.

Data Rules:

Both FIU Service Groups must be assigned to Control Group 1.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.8 CONTROL PORT

Description: Enter the Control Port Number.
Valid Entries: 20 or 21

Data Rules:

Service Group 0 must be assigned to Control Port 20. Service Group 1 must be assigned to Control Port 21.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.9 EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Valid Entries are: 0 - 4

2.10 UNIT VERTICAL

Description: Enter the Equipment Location Vertical Position Number.
Valid Entries: 0 - 84

2.11 EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of a floor and aisle number.
Valid Entries: 0000 - 9999

Data Rules:

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It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

```
eqfiu                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5753)              FACILITY INTERFACE UNIT

*1. INTERFACE MODULE  ___
*2. FIU SERVICE GROUP _

 3. EQUIPMENT STATUS O
#4. EQUIPMENT CLI   ________

 5. CONTROL GROUP 1
#6. CONTROL PORT  __

#7. EQUIPMENT BAY   _
#8. UNIT VERTICAL   __

 #9. EQUIPMENT AISLE ____
```

Figure 1 SAMPLE EQFIU FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqfiu                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5753)              FACILITY INTERFACE UNIT

 *1. INTERFACE MODULE  ___
 *2. FIU SERVICE GROUP _

  3. EQUIPMENT STATUS O
 #4. EQUIPMENT CLI   ________

    INTF UNIT      0
  6. CONTROL GROUP   1
 #7. CONTROL PORT    __
 #8. EQUIPMENT BAY   _
 #9. UNIT VERTICAL   __
#10. EQUIPMENT AISLE ____
```

Figure 2 SAMPLE EQFIU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 30: 5810 RECORD
DIGITAL CARRIER LINE UNIT EQUIPMENT RECORD
DIGITAL CARRIER LINE UNIT EQUIPAGE FORM (EQDCLU)
DIGITAL CARRIER LINE UNIT PACK EQUIPAGE FORM (EQDCLP)

1. GENERAL

The 5810 Record is used to define equipment information for the DCLU (Digital Carrier Line Unit). This record is generated by two input forms: EQDCLU and EQDCLP.

The DCLU terminates SLC-96 RTs (Remote Terminals). A maximum of six RTs (576 lines) can be connected to a DCLU, three per Service Group. A DCLU may be arranged with one of two LCRs (Line Concentration Ratios), 4.5:1 and 9:1. A DCLU with an LCR of 4.5:1 requires two data port assignments and a 9:1 DCLU requires only one. A DCLU can be arranged with only one LCR. For (5E9(2) and later, the FACILITY ID field was added to optionally identify the DCLU facility.

1.1 Carrier Group Alarm Hash Indexes

The CGA (Carrier Group Alarm) data is associated with the VT/DS1 and STE/STS facilities. For 5E9(2) and later, only 522 hash indexes are available per switching module. One hash index is allocated to each instance of the following for a specific SM:

- 1 per each pair STE/STS on a specified SM (EQSTE form). (The EQSTE form is associated with the DNU-S.)
- 1 per each VT (Virtual Tributary) on a specified SM (EQVT form). (The EQVT form is associated with the DNU-S.)
- 1 per each DFI (Digital Facility Interface) of a DLTU (Digital Line/Trunk Unit) where FAC IND is 0 or 1, and DFI TYPE is not "H1" or "H2", i.e. DFI USAGE of "H1" and "H2" are not counted (EQDUP form). (The EQDUP form is associated with DLTU.)
- 1 per each DFI-2 (2 per EQDUP form) where FAC IND is 3. (The EQDUP form is associated with DLTU.)
- 1 per pack - POS, EQST, CLI, CLEI combination. (30 packs per DCLU on EQDCLP form) (The EQDCLP form is associated with DCLU.)
- 1 per IFAC - EQSTAT, SUP MTHD, PUB43801 combination. (20 per IDCU on the EQIFAC form) (The EQIFAC form is associated with IDCU.)

The sum of the above total number of allocated hash indexes (instances) cannot be greater then 522 for any one specific SM.

1.2 Recent Change View

The corresponding Recent Change views for this form are 19.6 and 20.6.

2. FORM ENTRIES - EQDCLU

2.1 BASE AND CONTROL , ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *SWITCHING MODULE

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Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

2.3 *DIGITAL CARRIER LINE UNIT

Description: Enter the Digital Carrier Line Unit Number.

Required Field.
Valid Entries:

5E14 and earlier: 0 - 7 (SM)
5E15 and later: 0 - 15 (SM-2000)

Data Rules:

See paragraph Section 1.1 on Carrier Group Alarm Hash Indexes.

DCLUs share the same unit number range with IDCUs. Therefore, unit numbers assigned on this form may not be assigned on any EQIDCU form with the same SM number.

2.4 *SERVICE GROUP

Description: Enter the Service Group Number.

Required Field.
Valid Entries: 0 or 1

2.5 EQUIPMENT STATUS

Description: Enter the Equipment Status of the DCLU.

Required Field.

Valid EQUIPMENT STATUS Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

If S-DFIs are defined on the EQDCLP form, but the corresponding T1 lines and RT assignments from the SLCRT form (5106 Record) are not present at this time, then set the Equipment Status to "G". If the corresponding S-DFIs are assigned on the SLCRT form, the Equipment Status should equal "O".

2.6 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on

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the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.7 #CONTROL GROUP

Description: Enter the Control Group Number.

Required Field.
Valid Entries: 0 or 1

Data Rules:

CONTROL GROUP 0, Ports 0 and 1 may not be assigned on this form. They are reserved for the local DSU.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.8 CONTROL PORT A

Description: Enter the Control Port A Number.

Required Field.
Valid Entries: 0 - 22.

Data Rules:

Control Port A and B must not be identical.

Service Group 0 requires even port numbers, and Service Group 1 requires odd port numbers. For 5E4(2) and later, this field must be less than 22.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify

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Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.9 #CONTROL PORT B

Description: Enter the Control Port B Number.

Required Field.
Valid Entries: 0 - 22

Data Rules:

Control Port A and B must not be identical.

Service Group 0 requires even port numbers, and Service Group 1 requires odd port numbers. For 5E4(2) and later, this field must be less than 22.

2.10 #DATA GROUP

Description: Enter the Data Group number.

Required Field.
Valid Entries: 0 or 1

2.11 #DATA PORT A

Description: Enter the Data Port A number.

Required Field.
Valid Entries: 0 - 15

Data Rules:

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.12 DATA PORT B

Description: Enter the Data Port B number. Data Port B is required only if the DCLU is arranged with a 4.5:1 LCR (Line Concentration Ratio). Leave blank for a 9:1 LCR.
Valid Entries: 0 - 15

2.13 #EQUIPMENT BAY

Description: Enter the Equipment Location Bay number.

Required Field.
Valid Entries:

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000

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A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

Data Rules:

If 1 is entered, UNIT TYPE on the EQIM form (5700 Record) must be "MCTU3", "SMPU3", "SMPU4", or an SM-2000 class processor.

For 5E16 and later releases, when INTG UNIT is 0 EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.14 #EQUIPMENT VERTICAL

Description: Enter the vertical equipment location that specifies the bottom of the unit.

Required Field.
Valid Entries: 0 - 84

2.15 #EQUIPMENT AISLE

Description: Enter the Equipment Location Aisle number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.16 #COMMON CONTROL CIRCUIT CLI

Description: Enter the CLI (Change Level Indicator) for the Common Control Circuit.

Required Field.
Valid Entries: 0 to 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

3. FORM ENTRIES - EQDCLP

3.1 INTERFACE MODULE

Description: Enter the INTERFACE MODULE. This must be the same value as entered in the INTERFACE MODULE field on the EQDCLU form.

Required Field.
Valid Entries: 1 - 192

3.2 DCLU NUMBER

Description: Enter the DCLU NUMBER. This must be the same value as entered in the DIGITAL CARIER LINE UNIT field on the EQDCLU form.

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Required Field.
Valid Entries:
- 5E14 and earlier: 0 - 7
- 5E15 and later: 0 - 15

PACK

Up to 30 DCLU packs may be equipped on this form. The following fields (Section 3.3 - Section 3.7) define the position, equipment status, CLI and CLEI for each pack. For 5E9(2) and later, the FACILITY ID field was added to this form to optionally provide a description of the DCLU facility.

3.3 POSITION

Description: Enter the SLC DFI Pack Position.
Valid Entries:
- DCLU Service Group 0: 0 - 14
- DCLU Service Group 1: 15 - 29

3.4 EQST

Description: Enter the equipment status of the DCLU. For new offices and units destined for factory testing, "O" is the only allowed value. During offline ODA database retrofits, values "G" and "U" are valid.

Valid EQST Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

If the S-DFI is not assigned on an SLCRT form (5106 Record), EQST must be "G".

3.5 CLI

Description: Enter the CLI (Change Level Indicator) for the SLC DFI Pack.
Valid Entries: 0 - 7FFFFFFF, hexadecimal

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

3.6 CLEI

Description: Enter the Common Language Equipment Identification Number. See the appropriate J-drawing for the applicable CLEI code.
Valid Entries: 10 characters

3.7 FACILITY ID

Description: Enter the description for the DCLU facility. This field may be left blank.

Software Release: 5E9(2) and later.
Valid Entries: up to 25 characters.

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```
(5810)          DIGITAL CARRIER LINE UNIT EQUIPAGE

 *1. INTERFACE MODULE         ___    #13. EQUIPMENT AISLE          ____
 *2. DIGITAL CARRIER LINE UNIT _     #14. COMMON CONTROL CIRCUIT CLI ________
 *3. SERVICE GROUP            _
  4. EQUIPMENT STATUS          O
 #5. CONTROL GROUP            _
 #6. CONTROL PORT A           __
 #7. CONTROL PORT B           __
 #8. DATA GROUP               _
 #9. DATA PORT A              __
 10. DATA PORT B              __
#11. EQUIPMENT BAY            ___
#12. EQUIPMENT VERTICAL       __
```

Figure 1 SAMPLE EQDCLU FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqdclu                  5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5810)          DIGITAL CARRIER LINE UNIT EQUIPAGE

 *1. INTERFACE MODULE         ___    #13. EQUIPMENT VERTICAL       __
 *2. DIGITAL CARRIER LINE UNIT __    #14. EQUIPMENT AISLE          ____
 *3. SERVICE GROUP            _     #15. COMMON CONTROL CIRCUIT CLI ________
  4. EQUIPMENT STATUS          O
  5. INTF UNIT                0
 #6. CONTROL GROUP            _
 #7. CONTROL PORT A           __
 #8. CONTROL PORT B           __
 #9. DATA GROUP               _
#10. DATA PORT A              __
 11. DATA PORT B              __
#12. EQUIPMENT BAY            ___
```

Figure 2 SAMPLE EQDCLU FORM 5E15 AND LATER SOFTWARE RELEASES

```
SCREEN 1 OF 2                5ESS Switch
eqdclp               OFFICE DATA ADMINISTRATION
(5810)          DIGITAL CARRIER LINE UNIT PACK EQUIPAGE
* 1. INTERFACE MODULE        ___      * 2. DCLU NUMBER       _
  3. PACK
row POS EQST    CLI       CLEI       FACILITY ID
 1  __  _  ________  __________ ____________________________
 2  __  _  ________  __________ ____________________________
 3  __  _  ________  __________ ____________________________
```

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```
 4  __  _  ________  __________  ____________________________
 5  __  _  ________  __________  ____________________________
 6  __  _  ________  __________  ____________________________
 7  __  _  ________  __________  ____________________________
 8  __  _  ________  __________  ____________________________
 9  __  _  ________  __________  ____________________________
10  __  _  ________  __________  ____________________________
11  __  _  ________  __________  ____________________________
12  __  _  ________  __________  ____________________________
13  __  _  ________  __________  ____________________________
14  __  _  ________  __________  ____________________________
15  __  _  ________  __________  ____________________________
```

```
SCREEN 2 OF 2                5ESS Switch          _
eqdclp                 OFFICE DATA ADMINISTRATION
(5810)           DIGITAL CARRIER LINE UNIT PACK EQUIPAGE
  3. PACK
row POS EQST    CLI       CLEI       FACILITY ID
 16  __  _  ________  __________  ____________________________
 17  __  _  ________  __________  ____________________________
 18  __  _  ________  __________  ____________________________
 19  __  _  ________  __________  ____________________________
 20  __  _  ________  __________  ____________________________
 21  __  _  ________  __________  ____________________________
 22  __  _  ________  __________  ____________________________
 23  __  _  ________  __________  ____________________________
 24  __  _  ________  __________  ____________________________
 25  __  _  ________  __________  ____________________________
 26  __  _  ________  __________  ____________________________
 27  __  _  ________  __________  ____________________________
 28  __  _  ________  __________  ____________________________
 29  __  _  ________  __________  ____________________________
 30  __  _  ________  __________  ____________________________
```

Figure 3 SAMPLE EQDCLUP FORM 5E11 AND EARLIER SOFTWARE RELEASES

```
eqdclp                       5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5810)           DIGITAL CARRIER LINE UNIT PACK EQUIPAGE

*1. INTERFACE MODULE ___
*2. DCLU NUMBER      __
```

```
eqdclp                       5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5810)           DIGITAL CARRIER LINE UNIT PACK EQUIPAGE

                3. PACK (EQFDI)
ROW POS EQST CLI      CLEI       FACILITY ID
  1 __   _  ________ __________ ____________________________
```

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```
 2 __  _  ________ _________ ______________________________
 3 __  _  ________ _________ ______________________________
 4 __  _  ________ _________ ______________________________
 5 __  _  ________ _________ ______________________________
 6 __  _  ________ _________ ______________________________
 7 __  _  ________ _________ ______________________________
 8 __  _  ________ _________ ______________________________
 9 __  _  ________ _________ ______________________________
10 __  _  ________ _________ ______________________________
11 __  _  ________ _________ ______________________________
12 __  _  ________ _________ ______________________________
13 __  _  ________ _________ ______________________________
14 __  _  ________ _________ ______________________________
15 __  _  ________ _________ ______________________________
```

```
eqdclp                    5ESS Switch          _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5810)          DIGITAL CARRIER LINE UNIT PACK EQUIPAGE

                3. PACK (EQFDI)
ROW POS EQST CLI     CLEI      FACILITY ID
16 __  _  ________ _________ ______________________________
17 __  _  ________ _________ ______________________________
18 __  _  ________ _________ ______________________________
19 __  _  ________ _________ ______________________________
20 __  _  ________ _________ ______________________________
21 __  _  ________ _________ ______________________________
22 __  _  ________ _________ ______________________________
23 __  _  ________ _________ ______________________________
24 __  _  ________ _________ ______________________________
25 __  _  ________ _________ ______________________________
26 __  _  ________ _________ ______________________________
27 __  _  ________ _________ ______________________________
28 __  _  ________ _________ ______________________________
29 __  _  ________ _________ ______________________________
30 __  _  ________ _________ ______________________________
```

Figure 4 SAMPLE EQDCLUP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 31: 5811 RECORD
TEST BUS CONTROL UNIT EQUIPMENT RECORD - EQTBCU

1. GENERAL

The 5811 Record is used to define Metallic Test Bus, Scan Point and Distribute Point assignments for Test Bus Control Units.

Distribute and Scan points must be unique within the 5ESS Switch.

The assignment of MTBs (Metallic Test Buses) for TBCUs (Test Bus Control Units) should be evenly spread between MSU/MMSU (Metallic Service Unit/Modular MSU) shelves and service groups that have metallic testing. This should be done to increase efficiency of ALIT (Automatic Line Instilation Testing) and to prevent a loss of metallic testing if a service group goes out of service.

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL GROUP, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *METALLIC TEST BUS

Description: Enter the MTB (Metallic Test Bus) assignment for a TBCU (Test Bus Control Unit).

Required Field.

This number consists of:

Valid METALLIC TEST BUS Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular)
			00 - 31 (Modular)
Bus	BUS	XX	00 - 14

Data Rules:

Metallic Test Bus Point 15 of every MACC (Metallic Access) (pack is reserved for general internal MSU and MMSU diagnostics). Protocol test or diode resistor test are included in general internal diagnostics.

The MTB assignment must be defined on the EQMSP or EQMMSP form (5750 Record) with "MACC" entered in the TYPE field.

2.3 TBCU SCAN POINT

Description: Enter the Scan Point Number assigned to the TBCU.

Required Field.

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This number consists of:

Valid TBCU SCAN POINT Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular)
			00 - 31 (Modular)
SPN	Scan Point Number	XX	00 - 30

Data Rules:

The Scan Point must be assigned to the same SM, MSU and Service Group as the Metallic Test Bus.

The SPN (Scan Point Number) must be defined on the EQMSP or EQMMSP form with "SCAN" entered in the TYPE field.

2.4 DPN 1 TO REMOVE DIODE AND CUT THRU TO SLC MTB

Description: Enter the assigned Distribute Point Number.

Required Field.

This number consists of:

Valid DPN 1 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular)
			00 - 31 (Modular)
DPN	Distribute Point Number	XX	00 - 31

Data Rules:

The Distribute Point must be assigned to the same SM, MSU and SVG as the Metallic Test Bus.

The DPN (Distribute Point Number) must be defined on the EQMSP or EQMMSP form with "DIST" entered in the TYPE field.

2.5 DPN 2 TO CUT THRU AND GIVE CHNL TEST RESULT

Description: Enter the assigned Distribute Point Number.

Required Field.

This number consists of:

Valid DPN 2 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15

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			(Regular) 00 - 31 (Modular)
DPN/SPN	Distribute Point Number/Scan Point Number	XX	00 - 31

Data Rules:

The Distribute Point must be assigned to the same SM, MSU and SVG as the Metallic Test Bus.

The DPN must be defined on the EQMSP or EQMMSP form with "DIST" entered in the TYPE field.

2.6 DPN 3 TO GIVE CHNL TEST RESULT EXCEPT "NO RESPONSE"

Description: Enter the assigned Distribute Point Number.

Required Field.

This number consists of:

Valid DPN 3 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular) 00 - 31 (Modular)
DPN	Distribute Point Number	XX	00 - 31

Data Rules:

The Distribute Point must be assigned to the same SM, MSU and SVG as the Metallic Test Bus.

The DPN must be defined on the EQMSP or EQMMSP form with "DIST" entered in the TYPE field.

2.7 DPN 4 TO GIVE CHNL TEST RESULT OF GOOD MPTY OR COIN

Description: Enter the assigned Distribute Point Number.

Required Field.

This number consists of:

Valid DPN 4 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular) 00 - 31 (Modular)
DPN	Distribute Point Number	XX	00 - 31

Data Rules:

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The Distribute Point must be assigned to the same SM, MSU, and SVG as the Metallic Test Bus.

The DPN must be defined on the EQMSP or EQMMSP form with "DIST" entered in the TYPE field.

2.8 DPN 5 TO GIVE CHNL TEST RESULT OF "NO RESPONSE"

Description: Enter the assigned Distribute Point Number.

Required Field.

This number consists of:

Valid DPN 4 Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular)
			00 - 31 (Modular)
DPN	Distribute Point Number	XX	00 - 31

Data Rules:

The Distribute Point must be assigned to the same SM, MSU, and SVG as the Metallic Test Bus.

The DPN must be defined on the EQMSP or EQMMSP form with "DIST" entered in the TYPE field.

---

eqtbcu 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5811) TEST BUS CONTROL UNIT

*1. METALLIC TEST BUS _____
#2. TBCU SCAN POINT _____

#3. DPN1 TO REMOVE DIODE & CUT THRU TO SLC MTB _____
#4. DPN2 TO CUT THRU & GIVE CHNL TEST RESULT _____
#5. DPN3 TO GIVE CHNL TEST RESULT EXCEPT "NO RESPONSE" _____
#6. DPN4 TO GIVE CHNL TEST RESULT OF GOOD MPTY OR COIN _____

#7. DPN5 TO GIVE CHNL TEST RESULT OF "NO RESPONSE" _____

Figure 1 SAMPLE EQTBCU FORM SAMPLE 5811 RECORD

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SEC. 32: 5812 RECORD
TRANSMISSION RATE CONVERTER UNIT EQUIPAGE FORM - EQCMTRCU

1. GENERAL

The 5812 Record is available with the 5E3 and later Software Releases. It is used to define the physical location of the TRCU (Transmission Rate Converter Unit), TRCU2 (TRCU Version 2) or the TRCU3 (TRCU Version 3) for up to two ORMs (Optically Remote Switching Modules). For more information, see Division 2, Section 9N.

TRCUs are physically located in a Miscellaneous Cabinet in the host office. TRCUs are required if the Office has any ORMs. The TRCU connects between a CM2/TMS (Communication Module 2/Time Multiplexed Switch) via NCTs (Network Control Timing Links) and the external ORM.

For 5E9(2) and later, an SM field was added to this form to define a TRCU2 for an EXM-2000 (EXtended switching Module-2000) to provide SM-2000 functionality at a remote location through an optical connection.

NOTE: TRCU2 must be used when provisioning EXM-2000. In addition, the EQCMTRCU form must be entered for hardware residing on the TMS (Local TRCU, SM = 0) and for the hardware residing on the EXM (Remote TRCU, SM = 1 - 192). When specifying the local and remote TRCU information, the same TRCU number must be used for both sides. For ORM, the EQCMTRCU form must be entered for hardware residing on the TMS (Local TRCU, SM = 0) only. The following table illustrates this rule:

Valid TRCU Entries (5E12 and earlier)

TRCU Number	SM	TRCU Type	Defintion
1	000	TRCU	Local TRCU, ORM (SM 1).
2	000	TRCU2	Local TRCU2, EXM-2000 (SM 2).
2	002	TRCU2	Remote TRCU2, EXM-2000 (SM 2).

The TRCU2 for an SM and the TRCU2 for an EXM-2000 must be unique. EXM-2000 TRCU2s cannot be duplicated on two different SMs. In addition, the UNIT TYPE and SM USAGE fields on the EQIM form must be defined to reflect either an SM or SM-2000. Corresponding TRCU2 NCT links must be defined on the EQORMLINK form (5813 Record) for 5E9(1) and earlier, or the EQTMSLINK form (5851 Record) for 5E9(2) and later.

For 5E12 and later, a new TRCU3 replaces the discontinued TRCU2.

CAUTION: For 5E15 and later, with the introduction of CM3, the EQCORE form (5701 Record) must be defined before the EQCMTRCU form can be defined.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.18.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *TRCU NUMBER

Description: Enter the Transmission Rate Converter Unit Number. One TRCU can support two ORMs. The TRCU acts as an interface between the ORM's transmission facility and the TMS.

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It is recommended that TRCU values be assigned sequentially starting with 1.

Required Field.
Valid Entries:
- For 5E12 and earlier: 1 - 96
- For 5E12 and later: 1 for classic ORM, or
- 1 - 96 for SM-2000

Data Rules:

The value entered in this field must also appear in the TRCU NUMBER field on an EQORMLINK form. Each TRCU NUMBER on an EQORMLINK form must be defined in the TRCU NUMBER field of an EQCMTRCU form.

For 5E12 and later, when UNIT TYPE is "SM2000" or "SM2005" and IMTYPE is "ORM" on the EQIM form, and EQUIPMENT BAY and UNIT VERTICAL are entered on the corresponding EQCMTRCU form, these fields are required to have certain, specific values if the TRCU TYPE is "TRCU2". The following table shows these required combinations:

TRCU2 LOCATION COMBINATIONS

TRCU NUMBER	EQUIPMENT BAY	UNIT VERTICAL
1	1	45
2	1	53
3	1	62
4	2	45
5	2	53
6	2	62

2.3 *SM

Description: Enter the Switching Module number. This field is used to define local or remote TRCUs or TRCU2s for an SM, an SM-2000, or an EXM-2000.

Software Release: 5E9(2) and later.
Required Field.
Valid Entries:

Valid SM Entries

Entry	Defintion
0	Local TRCU/TRCU2; SMs and SM-2000.
1 - 192	Local/Remote TRCU2; Optically Remote SM-2000 (i.e., EXM-2000).

Data Rules:

If SM is greater than 0, the TRCU NUMBER must be defined on a corresponding EQTMSLINK form (5813 Record).

If SM is greater than 0, the value of the TRCU NUMBER cannot be duplicated on any other EQCMTRCU form where SM is greater than 0.

When SM is greater than 0, UNIT TYPE must be "SM2000" and SM USAGE must be ORM on the EQIM form (5700 Record).

When SM is greater than 0, TRCU TYPE must be TRCU2.

When SM is 0, EQLBAY must be 0 - 11.

For 5E12 and later, when SM is 0, EQLAISLE, EQLBAY and EQLUNVER must be entered.

For 5E12 and later, when SM is not 0 and TRCU TYPE is "TRCU" or "TRCU2", TRCU NUM must be 1 - 6.

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For 5E12 and later, when SM is not 0 and TRCU TYPE is "TRCU3", EQL AISLE, EQLBAY and EQLUNVER must all be entered.

For 5E12 and later, when SM is not 0 and TRCU TYPE is "TRCU3", TRCU NUMBER must be 1 or 7 - 14.

2.4 TRCU TYPE

Description: Enter the Transmission Rate Converter Unit Type.

Required Field
Default: TRCU
Valid Entries:

Valid TRCU TYPE Entries

Entry	Defintion
TRCU	Transmission Rate Converter Unit Type 1
TRCU2	Transmission Rate Converter Unit Type 2
TRCU3	Transmission Rate Converter Unit Type 3 (5E12 and later). For more information, see Division 2, Section 9N.

Data Rule:
When defining EQCMTRCU forms for an EXM-2000, TRCU TYPE must be "TRCU2" for both local TRCU (SM = 0) and remote TRCU (SM = the number of the EXM-2000).

When "TRCU" is entered, the assigned TRCU NUMBERs must be entered on the EQTMSLINK form with TRC CLI set to 0.

When "TRCU2" is entered, and is assigned to an ORM, the assigned TRCU NUMBERs must be entered on the EQTMSLINK form with TRC CLI values equal to 1, 2, 4, 8, or 10.

For 5E12 and later, when the entry CM VINTAGE is set to "1" on the EQCORE form, the entry TRCU TYPE cannot be "TRCU3" on the EQCMTRCU form(s) for CM1 offices.

For 5E12 and later, when EQUIPMENT BAY and UNIT VERTICAL are entered on the EQCMTRCU form, these fields are required to have certain, specific values if the TRCU TYPE is "TRCU" or "TRCU2". If the corresponding EQIM form has a UNIT TYPE that is not "SM2000" or "SM2005" and its IMTYPE is "ORM", then EQUIPMENT BAY must be "1" and UNIT VERTICAL must be equal to MODULE PROCESSOR VERT + 17 on EQIM.

2.5 EQLAISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of two, two-digit entries which define the floor and aisle number. The first and second digits (from the left) are the floor number. The third and fourth digits (from the left) are the aisle number. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 00 - 99 (for both the floor and the aisle number)

Data Rules:

For 5E12 and later, when SM is not 0 and TRCU TYPE is "TRCU" or "TRCU2" on the EQCMTRCU form, and EQUIPMENT AISLE is entered, EQUIPMENT AISLE is required to be equal to EQUIPMENT AISLE on the corresponding EQIM form.

Navigation help: SM on EQCMTRCU points to SM on EQIM.

2.6 EQLBAY

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Description: Enter the Equipment Location Bay number of the Miscellaneous Cabinet that contains the TRCU.

Required Field.
Valid Entries:

- 5E9(1) and earlier: 0 - 11
- 5E9(2) and later: 0 - 208

Valid EQLBAY Entries, 5E9(2) and later

Entry	Definition
0 - 11	Switching Module (non-SM-2000).
0 - 14	SM-2000/EXM-2000; SM Cabinent aisle.
100 - 104	SM-2000/EXM-2000; Back panel; wiring position.
200 - 208	SM-2000/EXM-2000; Front panel; door position.

2.7 EQLUNVER

Description: Enter the Vertical Equipment Location that specifies the bottom of the TRC Unit. The recommended values are based on cabinet type:

5E9(1) and earlier:
- 7-foot cabinets: 22, 30, 39, 48, 56, 65, 74.
- 6-foot cabinets: 15, 24, 32, 41, 49, 58.

5E9(2) and later:
- 7-foot cabinets: 22, 30, 39, 48, 56, 65, 74.
- 6-foot cabinets: 7, 15, 24, 32, 41, 49, 58.

Required Field.
Valid Entries: 0 - 84

```
eqcmtrcu                    5ESS Switch          _
(5812)              OFFICE DATA ADMINISTRATION
            TRANSMISSION RATE CONVERTER UNIT EQUIPAGE

*1. TRCU NUM   01
*2. SM         000
 3. TRCU TYPE  TRCU
#4. EQLAISLE   ____
#5. EQLBAY     ___
#6. EQLUNVER   __
```

Figure 1 SAMPLE EQCMTRCU FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 33: 5813 RECORD
NCT LINK BETWEEN CM2/TMS TRCU ORM EQUIPAGE FORM - EQORMLINK

1. GENERAL

The 5813 Record is available with 5E9(1) and earlier Software Releases to define an ORM (Optically Remote Switching Module) for an SM. Effective with the 5E9(2) Software Release, the functionality of this form was replaced by the EQTMSLINK form (5851 Record) to define an ORM for both the SM and an SM-2000. For SM-2000, an ORM is referred to as an EXM-2000 (EXtended SM-2000); see Division 8, Section 53. For 5E9(1) and earlier, this record is used to define the CLI (Circuit and Change Level Indicator) data for the NCT (Network Control Timing) Links to a TRCU (Transmission Rate Converter Unit). The ORM can be remoted up to 100 miles from the host office over a standard transmission facility. An ORM, indicated by an SM USAGE value equal to "ORM" on an EQIM form (5700 Record), requires TRCU hardware to provide a proper interface of the NCT Link to the standard transmission facility.

There are four TRC CKTs associated with a TRCU, and a maximum of two ORMs can be specified for a given TRCU. Each ORM requires two TRC CKTs. It is recommended to assign TRC CKTs 0 and 1 to the first required ORM and TRC CKTs 2 and 3 to the optional second ORM.

Whenever there is an SM USAGE of "ORM" defined on an EQIM form, then a corresponding EQORMLINK form must be entered.

The fields associated with the first, required ORM (ORM NUMBER, NCT EVEN LINK, TMS 0 TRC CKT, TMS 0 TRC CLI, TMS 1 TRC CKT and TMS 1 TRC CLI) are all required.

The fields associated with the second, optional ORM must all be entered or all be left blank.

1.1 Recent Change View

The Recent Change View for this form is 18.1.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control number and office name on each record.

2.2 *TRCU NUMBER

Description: Enter the TRCU Number. The TRCU Number is assigned in a sequential order starting with 1. These TRCU(s) are located in the Miscellaneous Cabinet in the host office as defined on an EQCMTRCU form (5812 Record).
Valid Entries: 1 - 96

Data Rules:

The value entered in this field must also appear in the TRCU NUMBER field on an EQCMTRCU form. Each TRCU NUMBER entered on an EQCMTRCU form must appear in the TRCU NUMBER field of an EQORMLINK form.

2.3 ORM NUMBER

Description: Enter the Switching Module Number of the ORM.
Valid Entries: 1 - 192

Data Rules:

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The value entered here must be defined in the SM field of an EQIM form with the corresponding SM USAGE equal to "ORM".

An ORM NUMBER entry may only appear once on an EQORMLINK form. Thus, if two ORM NUMBER entries are the same on one EQORMLINK form, or if an ORM NUMBER entry on one EQORMLINK form appears on another EQORMLINK form, an error will be induced.

2.4 NCT EVEN LINK

Description: Enter the Even NCT Link number which is connected between the TRCU and the TMS (Timed Multiplexed Switch). This should correspond to the NCT EVEN LINK value defined on an EQIM form where the SM entry equals the ORM NUMBER entry on this form.
Valid Entries: 2 - 380 (even numbers)

Data Rules:

The same value may not be used for both NCT EVEN LINKS on one EQORMLINK form.

2.5 TMS 0 TRC CKT

Description: Enter a TRC CKT value from the TMS Side 0. There are a maximum of four TRC CKTs defined on one EQORMLINK form. Each TRC CKT value on a single form must be unique.
Valid Entries: 0 - 3

2.6 TMS 0 TRC CLI

Description: Enter the eight-digit hexadecimal Change Level Indicator number of the TRCU from TMS Side 0.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

2.7 TMS 1 TRC CKT

Description: Enter a TRC CKT value from Side 1.
Valid Entries: 0 - 3

2.8 TMS 1 TRC CLI

Description: Enter the eight-digit hexadecimal Change Level Indicator number of the TRCU from TMS side 1.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

---

eqormlink 5ESS Switch _
(5813) OFFICE DATA ADMINISTRATION
NCT LINK BETWEEN CM2/TMS □ TRCU ORM EQUIPAGE

* 1. TRCU NUMBER 12

TMS 0 TMS 1
□□- □□-

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ORM NUMBER	NCT EVEN	LINK	TRC CKT	TRC CLI	TRC CKT	TRC CLI
2. 005	3. 006	4. 0	5. 00000000	6. 1	7.00000000	
8. 006	9. 008	10. 2	11. 00000000	12. 3	13.00000000	

Figure 1 SAMPLE EQORMLINK FORM 5E6 - 5E9(1) SOFTWARE RELEASES

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SEC. 34: 5820 RECORD
MISCELLANEOUS DISTRIBUTE POINT NUMBER EQUIPAGE FORM -EQDPN

1. GENERAL

The 5820 Record is available with the 5E1 and later Software Releases. It is used to define Miscellaneous Distribute Point Number Assignments.

One, and only one Distribute Point Number is required for the Dial Tone Delay Alarm Circuit.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.7.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL GROUP, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 *DISTRIBUTE POINT NUMBER

Description: Enter the Distribute Point Number.

Required Field.

This number consists of:

Valid Distribute Point Number Entries

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Metallic Service Unit	MSU	X	0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 15 (Regular)
			00 - 31 (Modular)
PT	Distribute Point Number	XX	00 - 31

2.3 ASSIGNED CIRCUIT NAME

Description: Enter the appropriate Circuit Name.

Default: DTDA (Dial Tone Delay Alarm)
Valid Entries: DTDA

2.4 ASSIGNED CIRCUIT LEAD DESIGNATION

Description: Enter the appropriate Circuit Lead Designation.
Default: RSTDP (Restore Distribute Point, Dial Tone Delay Alarm)
Valid Entries: RSTDP

---

eqdpn 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5820) MISCELLANEOUS DISTRIBUTE POINT NUMBER EQUIPAGE

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*1. DISTRIBUTE POINT NUMBER _____
2. ASSIGNED CIRCUIT NAME DTDA

3. ASSIGNED CIRCUIT LEAD DESIGNATION RSTDP

Figure 1 SAMPLE MISCELLANEOUS DISTRIBUTE POINT NUMBER EQUIPAGE FORM - EQDPN

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SEC. 35: 5821 RECORD
RECORDED ANNOUNCEMENT FUNCTION FORM - EQRA

1. GENERAL

The 5821 Record is available with 5E3 and later Software Releases. The Recorded Announcement Function Capability performs independent playback of pre-recorded, variable length and variable content announcements. The dial-through capability receives and detects Touch-Tone signals.

The EQRA form defines the RAF (Recorded Announcement Function) unit, and the SAS (Service Announcement System) services unit. If a RAF unit is defined on this form, then a corresponding EQRAP form (5822 Record) must be defined for the RAF circuit packs.

When this form is defined, a corresponding TRUNK form (5204 Record) must be entered with a RAF EN defined.

When an EQRA form is assigned to an SM where the value of UNIT TYPE is not an SM-2000 class processor (on the corresponding EQIM form), the following criteria must be met:

- CONTROL GROUP must be 0 or 1
- DATA GROUP must be 0 or 1
- DATA PORT must be 0 - 15
- EQUIPMENT BAY must be 0 - 4

1.1 Recent Change View

The corresponding RC/V view to this form is 19.10 and 20.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 * SWITCHING MODULE

Description: Enter the Switching Module number.
Valid Entries: 1 - 192

Data Rules:

Value must be defined on a EQIM form (5700 Record).

2.3 * RAF UNIT

Description: The name of this field was changed to UNIT NUMBER in 5E9(2). This field name applies to 5E3 - 5E9(1). See UNIT NUMBER for usage information.

2.4 * UNIT NUMBER

Description: Enter the Unit Number used to specify the announcement function number. (This field was called RAF UNIT for 5E3 - 5E9(1).)

Required Field.

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Valid Entries: 0 - 7

2.5 # UNIT TYPE

Description: Enter the Unit Type used to specify the announcement function unit type.

Software Release: 5E9(2) and later.
Required Field.
Default: RAF
Valid Entries:

Valid UNIT TYPE Entries

Entry	Definition
RAF	Recorded Announcement Function
SAS	Service Announcement System

Data Rules:

RAF - If UNIT TYPE is "RAF", then:
- ANN CNT must be 0.
- CLI must be entered (5E10 and later)
- DTA CNT must be 0.
- SERVICE TYPE must be entered.
- TDEC CNT must be 0.

SAS - If UNIT TYPE is "SAS," then:
- AOC must be "N".
- CLI must be entered (5E10 and later)
- SERVICE CNT must be 0.
- SERVICE TYPE must not be entered.

If EQUIPMENT STATUS is "O" and UNIT TYPE is "SAS", then the sum of the entries for DTA CNT + ANN CNT + TDEC CNT must be between 1 and 32.

The minimum configuration for a SAS PSG is one SAS control board and one SAS memory board. Every entry on the EQRA form with UNIT TYPE set to "SAS", must have a corresponding entry on the EQSASP form (the corresponding EQSASP form is found by matching SWITCHING MODULE and UNIT NUMBER on the EQRA form to SM and UNIT NUMBER on the EQSASP form).

The number of matching TRUNK forms for each EQRA form, where UNIT TYPE equals "SAS", must equal the sum of DTA CNT, ANN CNT, and TDEC CNT. The matching TRUNK forms are found by matching SWITCHING MODULE and UNIT NUMBER on the EQRA form to the first 3 digits of RAF EN and the 4th digit of RAF EN, respectively, on the TRUNK form.

For 5E10 and later, when UNIT TYPE is "SAS", DTA CNT, ANN CNT and TDEC CNT must all be entered.

When an EQRA(s) form is assigned to an SM where the value of UNIT TYPE is an SM-2000 class processor (on the corresponding EQIM form), the UNIT TYPE on the EQRA form must be "SAS".

2.6 # EQUIPMENT STATUS

Description: Enter the Equipment Status.

Required Field.

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth

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O	Operational
U	Unequipped

Data Rules:

For 5E9(2) and later, if EQUIPMENT STATUS is "O" and UNIT TYPE is "SAS", then the sum of the entries for DTA CNT + ANN CNT + TDEC CNT must be between 1 and 32.

2.7 CLI

Description: Enter the CLI indicator for the recorded announcement function.

Software Release: 5E10 and later
Valid Entries: 0 - 7fffffff

Data Rules:

CLI must be entered if UNIT TYPE is "RAF".

CLI must not be entered if UNIT TYPE is "SAS".

2.8 INTF UNIT

Description: This field provides the Interface Unit number.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.9 # CONTROL GROUP

Description: Enter the Control Group number.

Required Field.
Valid Entries:
- For 5E9(2) and earlier: 0 or 1

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- For 5E10 and later: SM: 0 - 1
- SM-2000: 0 - 3

Data Rules:

The Control Group and Control Port combinations must be unique for this RAF Unit and all other units assigned to a given SM value.

Control Group 0, Ports 00 and 01 may not be assigned on this form. They are reserved for the Local DSU.

2.10 # CONTROL PORT

Description: Enter the RAF Peripheral Control Port number.

Required Field.
Valid Entries: 0 - 22

Data Rules:

If CONTROL GROUP is O, then CONTROL PORT must not be 0 or 1 because they are reserved for the Local DSU.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.11 # DATA GROUP

Description: Enter the Data Group number.

Required Field.
Valid Entries:
- For 5E9(2) and earlier: 0 - 1
- For 5E10 and later: SM: 0 - 1
- SM-2000: 0 - 5

Data Rules:

The Data Group and Data Port combinations must be unique for this RAF or SAS Unit and all other units assigned to a given SM value.

2.12 # DATA PORT

Description: Enter the RAF or SAS Peripheral Data number.

Required Field.

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Valid Entries:
- For 5E9(2) and earlier: 0 - 15
- For 5E10 and later: SM: 0 - 15
- SM-2000: 0 - 23

Data Rules:

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.13 # UNIT OFFSET

Description: Enter the pack location number of the Common Board (TN1841) within the Digital Services Unit Shelf. The values that are normally used for a RAF are 1, 5, 10 or 14 or SAS for any value except 0 and 17.

Required Field.
Valid Entries: 1 - 16

2.14 # EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries:

Valid EQUIPMENT BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQUIPMENT BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

2.15 # EQUIPMENT UNIT VERTICAL

Description: Enter the Equipment Location Vertical Position Number that specifies the bottom of the unit. The only the following entries are expected for:

- 6-foot cabinets - 7, 15, 24, 32, 41, 49, 58
- 7-foot cabinets - 22, 30, 39, 48, 56, 65, 74

Required Field.

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Valid Entries: 0 - 84

2.16 # EQUIPMENT AISLE

Description: Enter the 4-digit Equipment Aisle Number.

Required Field.
Valid Entries: A 4-digit Equipment Aisle Number in the following format. It is recommended that floor 00 be used for equipment located in the basement.

EQUIPMENT AISLE NUMBER

Position	Format	Valid Entries
Floor	XX	00 - 99
Aisle	XX	00 - 99

2.17 CSU

Description: Is a SAS (Service Announcement System) unit located on a CSU (Combined Services Unit)? For more information on the Combined Services Unit feature, see Division 2, Section 7F.

Software Release: 5E10 and later
Required Field.
Valid Entries: Y, N
Default Value: N

Data Rules:

When CSU is "Y", UNIT TYPE must be "SAS" and UNIT OFFSET must be 11.

If CSU is "N" and UNIT TYPE is "RAF,

- if RAF is 0 or 4, then UNIT OFFSET must be 01.
- if RAF is 1 or 5, then UNIT OFFSET must be 10.
- if RAF is 2 or 6, then UNIT OFFSET must be 05.
- if RAF is 3 or 7, then UNIT OFFSET must be 14.

When an EQRA form is entered with CSU set to "Y", no other EQRA form may be entered on the same SM that also has CSU set to "Y".

RAF SERVICES

The following fields (Section 2.18 - Section 2.20) define RAF SERVICES attributes.

2.18 SERVICE TYPE

Description: Enter the RAF Service Type.

Required Field for 5E9(1) and earlier.

Valid SERVICE TYPE Entries

Entry	Definition
ANN	Announcement Service without the dial-through capability using thirty-two channels.
DTA	Dial through Service using twenty channels by digit receivers. This feature allows digits to be dialed while an announcement is being played. The announcement is terminated when the first digit is detected.
CTR	Coin Tone receiver using twenty channels. This feature allows coin tones to be received while an announcement is being played. The announcement is terminated when the first digit is detected.

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Data Rules:

Channels defined on the same SM and RAF Unit must be assigned to the same Trunk Group.

For 5E6 and later Software Releases, if "ANN" is entered, then AOC field must be "N" and SERVICE CNT must be 1-32.

For 5E8 and later:

- if "ANN" or "CTR" is entered, then the corresponding EQRAP form (corresponding forms have the same Switching Modules and same RAF Units) APPLICATION field cannot be "BRCS-RAS", "ISDN-ACS", "BRCS-SLE", "ASP", or "BRCS-2LV".
- if "DTA" (Dial Through Announcement) is entered and the AOC (Announcement Only Channels) field is set to "Y", then on the corresponding EQRAP form the RAF UNIT APPLICATION is either "BRCS-RAS", "ISDN-ACS", "BRCS-SLE", "BRCS-2LV" or "ASP". These APPLICATION(s) cannot have AOC set to "Y". There are no Announcement Only Channels for these APPLICATION(s).

For 5E9(2) and later:
If UNIT TYPE is "RAF", SERVICE TYPE must be entered.

If UNIT TYPE is "SAS", SERVICE TYPE must not be entered.

2.19 SERVICE CNT

Description: Enter the number of service channels to be initialized on this RAF for the SERVICE TYPE entry ("ANN", "DTA", or "CTR" services).

Required Field.
Default: 0
Valid Entries:

Valid SERVICE CNT Entries

Entry	Definition
1 - 32	for SERVICE TYPE of "ANN"
0 - 20	for SERVICE TYPE of "DTA" or "CTR"

Data Rules:

If the AOC field is "Y", then the valid entries are 0-20 for SERVICE TYPE of "DTA" or "CTR". If AOC field is "N", then for a SERVICE TYPE of "DTA" or "CTR", the valid entries are 1-20.

The quantity of RAF assignments on TRUNK forms cannot exceed the SERVICE CNT on the corresponding EQRA form. The TRKCLS on the associated TKGRP form is "RAFANNC".

For 5E9(2) and later, if UNIT TYPE is "SAS", then SERVICE CNT must be 0.

2.20 AOC

Description: Should the unused channels on RAF units of SERVICE TYPE "DTA" or "CTR" be initialized and assigned as AOC (Announcement Only Channels) on this DTA or CTR? If AOC is "Y", all channels not initialized as "DTA" or "CTR" service types will be initialized as AOC and can be assigned on the TRUNK form (5204 Record).

Example If SERVICE TYPE is "DTA", SERVICE CNT is 15 and AOC is "Y", then 15 channels on this RAF unit are initialized as service type "DTA" and up to 15 channels may be assigned on the TRUNK form to "DTA" service type. Seventeen channels will be initialized as AOC and up to 17 AOCs may be assigned on the TRUNK form.

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Example If SERVICE TYPE is "CTR", SERVICE CNT is 20 and AOC is "Y", then 20 channels on this RAF unit will be initialized as service type "CTR" and up to 20 channels may be assigned on the TRUNK form to "CTR" service type. Twelve channels will be initialized as AOC and up to 12 AOCs may be assigned on the TRUNK form.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

Channels on the same RAF unit of the same service type must be assigned to the same trunk group on the TKGRP form, with the exception of AOC (Announcement Only Channels) on "DTA" or "CTR" RAFs as defined on the EQRA form may be assigned to a different trunk group. The TRKCLS must be "RAFANNC" for the AOC trunk group.

2.21 PATTERN

This is an output-only field that appears only on the office record and specifies the stuffing pattern assigned to this RAF Unit. For information on stuffing pattern assignment, please refer to Division 3, Section 2Q.

SAS SERVICES

The following fields (Section 2.22 - Section 2.24) define SAS SERVICES RAFs.

2.22 DTA CNT

Description: Enter the number of the DTA (Dial Through Announcement) channels for the SAS.

Software Release: 5E9(2) and later.
Default: 0
Valid Entries: 0 - 32

Data Rules:

If UNIT TYPE is "RAF", then DTA CNT must be 0.

If EQUIPMENT STATUS is "O" and UNIT TYPE is "SAS", then the entries on the DTA CNT field plus the entries on the ANN CNT field and the TDEC CNT field must be between 1 and 32, e.g. DTA CNT + ANN CNT + TDEC CNT must equal a number between 1 and 32.

2.23 ANN CNT

Description: Enter the number of the ANN (Announcement) channels for the SAS.

Software Release: 5E9(2) and later.
Default: 0
Valid Entries: 0 - 32

Data Rules:

If UNIT TYPE is "RAF", then the ANN CNT must be 0.

If EQUIPMENT STATUS is "O" and UNIT TYPE is "SAS", then the entries on the DTA CNT field plus the entries on the ANN CNT field and the TDEC CNT field must be between 1 and 32, e.g. DTA CNT + ANN CNT + TDEC CNT must equal a number between 1 and 32.

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2.24 TDEC CNT

Description: Enter the number of the TDEC (Tone Decoder) channels for the SAS.

Software Release: 5E9(2) and later.
Default: 0
Valid Entries: 0 - 32

Data Rules:

If UNIT TYPE is "RAF", TDEC CNT must be 0.

If EQUIPMENT STATUS is "O" and UNIT TYPE is "SAS", then the entries on the DTA CNT field plus the entries on the ANN CNT field and the TDEC CNT field must be between 1 and 32, e.g. DTA CNT + ANN CNT + TDEC CNT must equal a number between 1 and 32.

CHANNEL LIST

For 5E9(2) and later, the following fields (Section 2.25 - Section 2.26) show the assignments of the SAS service type for channels 0 - 31. These (CHANNEL LIST) fields are display only and not for customer input. For initial offices these fields are automatically populated. For growth offices, SWITCHING MODULES which have SAS units will have the CHANNEL LIST populated with the appropriate SAS SERVICES. The CHANNEL LIST on the EQRA form provides the user with an easy way to verify the SAS SERVICES which are assigned on specific CHANNELS.

2.25 CHANNEL

Description: This is a no-change field showing the channel to which a SAS service has been assigned.

2.26 SERVICE

Description: This is a no-change field showing the SAS service that has been assigned to a specific channel.

```
SCREEN 1 OF 2                5ESS Switch
eqra                 OFFICE DATA ADMINISTRATION
(5821)        ANNOUNCEMENT FUNCTION COMMON CIRCUIT & SERVICES

* 1. SWITCHING MODULE        ___            RAF SERVICES
* 2. UNIT NUMBER             _          13. SERVICE TYPE ___
# 3. UNIT TYPE             RAF          14. SERVICE CNT  00
# 4. EQUIPMENT STATUS       _           15. AOC          N
# 5. CONTROL GROUP          _
# 6. CONTROL PORT           __               SAS SERVICES
# 7. DATA GROUP             _           17. DTA CNT      00
# 8. DATA PORT              __          18. ANN CNT      00
# 9. UNIT OFFSET            __          19. TDEC CNT     00
#10. EQUIPMENT BAY          _
#11. EQUIPMENT UNIT VERTICAL __
#12. EQUIPMENT AISLE        ____
```

```
SCREEN 2 OF 2                5ESS Switch          _
```

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```
eqra                OFFICE DATA ADMINISTRATION
(5821)        ANNOUNCEMENT FUNCTION COMMON CIRCUIT & SERVICES

                    CHANNEL LIST
CHANNEL SERVICE  CHANNEL SERVICE  CHANNEL SERVICE  CHANNEL SERVICE
 00     ____     10     ____      20     ____      30     ____
 01     ____     11     ____      21     ____      31     ____
 02     ____     12     ____      22     ____
 03     ____     13     ____      23     ____
 04     ____     14     ____      24     ____
 05     ____     15     ____      25     ____
 06     ____     16     ____      26     ____
 07     ____     17     ____      27     ____
 08     ____     18     ____      28     ____
 09     ____     19     ____      29     ____
```

Figure 1 SAMPLE EQRA FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqra                        5ESS Switch
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5821-1/2/3)    ANNOUNCEMENT FUNCTION COMMON CIRCUIT & SERVICES

 *1. SWITCHING MODULE ___      #13. EQUIMENT UNIT VERTICAL __   22. TDEC CNT 00
 *2. UNIT NUMBER      _        #14. EQUIPMENT AISLE       ____
  3. UNIT TYPE       RAF       15. CSU                    N
 #4. EQUIPMENT STATUS _
  5. CLI             ________      RAF SERVICES
  6. INTF UNIT       0         16. SERVICE TYPE ___
 #7. CONTROL GROUP   _          17. SERVICE CNT  00
 #8. CONTROL PORT    __         18. AOC          N
 #9. DATA GROUP      _
#10. DATA PORT       __             SAS SERVICES
#11. UNIT OFFSET     __         20. DTA CNT 00
#12. EQUIPMENT BAY   ___        21. ANN CNT 00
```

Switching module number. Enter 1 - 192.

```
eqra                        5ESS Switch        _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5821-1/2/3)    ANNOUNCEMENT FUNCTION COMMON CIRCUIT & SERVICES

                  23. CHANNEL LIST (CHANNEL_LIST)
ROW CHANNEL SERVICE ROW CHANNEL SERVICE ROW CHANNEL SERVICE ROW CHANNEL SER
VICE
 1   0   ____   11  10   ____   21  20   ____   31  30   ____
 2   1   ____   12  11   ____   22  21   ____   32  31   ____
 3   2   ____   13  12   ____   23  22   ____
 4   3   ____   14  13   ____   24  23   ____
```

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5	4	____	15	14	____	25	24	____
6	5	____	16	15	____	26	25	____
7	6	____	17	16	____	27	26	____
8	7	____	18	17	____	28	27	____
9	8	____	19	18	____	29	28	____
10	9	____	20	19	____	30	29	____

Figure 2 SAMPLE EQRA FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 36: 5822 RECORD
RECORDED ANNOUNCEMENT FUNCTION PACK FORM - EQRAP

1. GENERAL

The 5822 Record is available with 5E3 and later Software Releases.

This form is used to define the RAF (Recorded Announcement Function) circuit packs. The RAF unit is defined on the EQRA form (5821 Record).

1.1 Recent Change View

The corresponding Recent Change Views for this form are 20.10 and 20.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Group Number and
Office Name on each record.

2.2 * SWITCHING MODULE

Description: Enter the SM (Switching Module) number.
Valid Entries: 1 - 192

Data Rules:

The entry must be defined on an EQIM form (5700-1 Record).

2.3 * RAF UNIT

Description: The name of this field was changed to UNIT NUMBER in 5E9(2). This field name applies to 5E9(1) and earlier. See UNIT NUMBER for usage information.

2.4 UNIT NUMBER

Description: Enter the Metallic Service Unit number. (This field was called RAF UNIT for 5E9(1) and earlier.)
Valid Entries: 0 - 7

Data Rules:

For 5E9(1) and earlier, the SM and RAF combination must be defined on a EQRA form. For 5E9(2) and later, the SWITCHING MODULE and UNIT NUMBER pair(s) on the EQRAP form must be defined on an EQRA form where "RAF" must be entered as the UNIT TYPE on the EQRA form.

For 5E9(1) and earlier, an EQRA form cannot be submitted without a corresponding EQRAP form. For 5E9(2) and later, an EQRA form, with UNIT TYPE set to "RAF", cannot be submitted without a corresponding EQRAP form.

2.5 # APPLICATION

Description: Enter the type of announcements supported by the announcement storage circuit packs (TN1053 and TN1054).

For example, if the office requires RACF for a 5E5 office, the TN1053 pack 1 must have a MICROCODE of

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"5D142A10", "5D142A20" or equivalent. The TN1054 pack 2 must have a MICROCODE of "5D143A10", "5D143A20", "5D143A30" or equivalent. The TN1054 pack 3 may have a MICROCODE of "5D155XXX", if customized announcements are required. XXX is the CIN (Customer Identification Number). Refer to Figure Figure 1 for suggested values for the APPLICATION.

A service group is defined by the RAF packs that are controlled by the RAF controller pack TN833. All packs in a service group must have the same APPLICATION text entry. This entry may be any 8 characters. However, the values given in Figure Figure 1 are the recommended values with the caveat that if more than one pack is in a service group, only one of the recommended values can be used for that group, or a text entry that describes the service group, e.g., "BRCS".

The recommended values, with their corresponding J-drawings, can be found in Figure Figure 1 of this section. In Figure Figure 1 , the Software Release indicates when the particular feature (not the APPLICATION) is available.

- ***NOTE:*** RAFs with OSPS applications must reside on a loaded SM. The other applications may reside on a basic, standard, or loaded SM.

Software Release: 5E4(2) and later
Required Field.
Valid Entries: 1 - 8 characters (A - Z, 0 - 9, dash (-),
- or underscore (_))

Data Rules:

For 5E6 and 5E7, the ASP (Advanced Services Platform; previously PVN, Private Virtual Network) feature requires an APPLICATION of "ASP" or "PVN". For 5E8 and later, only "ASP" is allowed.

For 5E7 and later, to use the new announcements for the LASS Screen List Editing Feature or for the ACSR Feature the hardware must be upgraded. The EQRAP form for the APPLICATION of "BRCS-SLE", "BRCS_SLE" or "ISDN-ACS"must have the value 5D143A30 entered in the MICROCODE field for PACK 2. This corresponds to an upgraded TN1054 board which must be installed in the RAF before the 5E7 Software Release or subsequent retrofit.

If the EQRA form SERVICE TYPE field has either "ANN" or "CTR" entered, then the corresponding EQRAP form APPLICATION field cannot be "BRCS-RAS", "ISDN-ACS", "BRCS-SLE", "ASP", or "BRCS-2LV".

For 5E8 and later, OSPS-TA applications require two microcode entries. OSPS-TA customized announcements require three microcode entires.

PACK

Fields Section 2.6 - Section 2.7 relate to announcement storage circuit packs. A RAF is equipped with one to three announcement storage circuit packs. The TN1053 circuit pack should be defined as pack 1 and must always be entered. TN1054 circuit packs should be defined as Packs 2 and 3.

Each PACK entered must have EQSTAT (5E3 and later) and MICRO-CODE (5E4(2) and later) entered.

Each PACK entered, in a new office, must have EQSTAT set to "O" (Operational).

2.6 EQSTAT

Description: Enter the Equipment Status.

Valid EQSTAT Entries

Entry	Definition
G	Growth

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O	Operational
U	Unequipped

Data Rules:

The Equipment Status on the EQRAP form must be less than or equal to the Equipment Status on the EQRA form.

EQSTAT must be "O" for ODA initial offices.

2.7 MICRO-CODE

Description: Enter the micro-code number of the circuit pack.

See Figure 1 for the required microcode information needed for announcement applications.

Software Release: 5E4(2) and later
Valid Entries: 8 characters, (A - Z, 0 - 9)

Data Rules:

For each PACK entered, both EQSTAT and MICRO CODE must be entered.

DSU2-RAF Common Control for MC5D058A1 TN833 RAF Common Board (J5D003EA1, List 1)

First Release	Feature	List	APPLICATION (EQRAP)	MICRO-CODE (EQRAP)			SERVICE TYPE (EQRA)
				PACK1 (TN1053)	PACK2 (TN1054)	PACK3 (TN1054)	
5E3	OSPS DA	4	OSPS-DA	5D087A10	(Note 1)		ANN
5E3	800 DA	11	OSPS-DA	5D144A10	(Note 1)		ANN
5E4(2)	OSPS TA	10	OSPS-TA	5D114A10	(Note 1)		DTA
5E4(2)	OSPS CTR	10	OSPS-CTR	5D114A10	(Note 1)		CTR
5E6	OSPS TA, MECH	20 (Note 2)	OSPS-TA	5D114A30	(Note 1)		DTA/CTR
5E7	OSPS TA, MECH, CAS3	10	OSPS-TA	5D114A40			DTA
5E7	OSPS TA, VMS	10	OSPS-TA	5D114A40	5D155A10	5D172A10 (Note 9)	DTA
5E7 and 5E8	OSPS TA	10 24	OSPS-TA	5D114A40	5D172A10	(Note 10)	
5E8	OSPS TA	10 24	OSPS-TA	5D114A40	5D172A20	(Note 11)	
5E8	OSPS TA Customized Announcements	10 24	OSPS-TA	5D114A40	5D155A10	5D172A20	
5E6	ASP/PVN	14	ASP/PVN	5D151A10	(Note 1)		DTA
5E5	RACF	12	BRCS-RAS	5D142A10	(Note 1)		DTA
5E7 (Note 7)	2LEVEL	22 (Note 3)		5D142A20	(Note 1)		DTA
5E5	ACSR	16 (Note 4)	ISDN-ACS	5D142A10	5D143A10	(Note 1)	DTA
		13		5D142A10	5D143A10	(Note 1)	DTA
5E6	LASS	18 (Note 3, 4, 5)	BRCS-SLE	5D142A10	5D143A20	(Note 1)	DTA
5E7	LASS	23 (Note 3, 4,6)	BRCS-SLE	5D142A20	5D143A30	(Note 1)	DTA

1:A customized pack may be used for 5E6 and Later Software Releases: List 15A;

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(MICRO-CODE=5D155xxx; xxx indicates the Customer Identification Number shown on the label attached to the pack). For 5E5 and later Software Releases, the customized pack may be used for OSPS-TA (list 15A).

2:List 20 provides MECH (More Efficient Call Handling), OSPS-TA, and OSPS-CTR announcements.

3:List 22 provides RACF and 2-Level COT/AC announcements.

4:These packs must be used with List 12 (provides RACF only) or List 22.

5:List 18 provides the ACSR (Automatic Customer Station Rearrangement) and standard 5E6 LASS (Local Area Signaling Services) announcements.

6:List 23 provides ACSR and Bellcore Compliant SLE announcements.

7:With 5E6 only, Limited 2-Level COT/AC is available.

8 Memory board 5D172A10[L24] is an optional board containing additional OSPS-TA announcement phrases for 5e7 and later Software Releases. It must appear as the second board with 5D114A40[L10] as the first board.

9 When memory board 5D172A10[L24] is used with memory board 5D155A10[L15], the two may be equipped in any order in the second and third positions.

10 5D172A10 (list 24) is the optional board for 5E7 and 5E8.

11 5D172A20 (list 24) is the optional board for 5E8.

Figure 1 DSU2-RAF MICROCODE ASSIGNMENTS

```
eqrap                    5ESS Switch          _
(5822)              OFFICE DATA ADMINISTRATION
              RECORDED ANNOUNCEMENT FUNCTION PACK

* 1. SWITCHING MODULE       005
* 2. RAF UNIT               3
# 3. APPLICATION            OSPS-DA


  PACK   6. EQSTAT     7. MICRO CODE
  1      O             5D087A10
  2      _             ________
  3      _             ________
```

Figure 2 SAMPLE EQRAP FORM 5E6 - 5E9(1) SOFTWARE RELEASES

```
eqrap                    5ESS Switch          _
(5822)              OFFICE DATA ADMINISTRATION
              RECORDED ANNOUNCEMENT FUNCTION PACK

* 1. SWITCHING MODULE       ___
* 2. UNIT NUMBER            _
# 3. APPLICATION            ________

  PACK   6. EQSTAT     7. MICRO CODE
```

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1 _ _____
2 _ _____
3 _ _____

Figure 3 SAMPLE EQRAP FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 37: 5823 RECORD
INTEGRATED SERVICES TEST FUNCTION FORM - EQISTF

1. GENERAL

The 5823 Record is available with 5E3 and later Software Releases. The DSU2 RAF Integrated Services Test Function Assignment form is used to define the ISTF (Integrated Services Test Function) unit.The EQISTF form is used to provide Loopback and Transmission testing of the Digital trunks and ISDN type DSLs (Digital Subscriber Lines).

The ISTF is a single board which mounts in the DSU2 shelf in certain predefined slot (04, 13, 08 and 17) positions. Each ISTF board is capable of handling a maximum of 3 transmission services. The number of ISTF boards required depends upon the customer's needs. The ISTF can be co-located in a service group with RAF announcements as long as there is no announcement board in the second TN1054 slot. Note that the ISTF can only be mounted in the DSU2 shelf.

Loopback and transmission circuits for ISTF services are defined on this form. However, ports are allocated to these circuits on the TRUNK forms which belong to the trunk group of "LTPISTFL" (lookpback) or "LTPISTFX" (transmission) assigned on the TKGRP form. Each TRUNK form represents one port. The sum total of Trunk Group members (TRUNK forms) with an associated TKGRP TRKCLS of "LTPISTFL" (LOOPBACK SERVICES) and "LTPISTFX" (TRANSMISSION SERVICES) cannot exceed the sum total of LOOPBACKISTF SERVICES and TRANSMISSION services indicated on the EQISTF forms.

1.1 Recent Change View

The Recent Change View for this form is 19.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and office name on each record.

2.2 *SWITCHING MODULE

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

2.3 *ISTF NUMBER

Description: Enter the ISTF Unit Number.

Required Field.
Valid Entries: 0 - 3

Data Rules:

For 5E5 and later, when this field is entered, the LOOPBACKISTF SERVICES or the TRANSMISSION field must be entered.

2.4 EQUIPMENT STATUS

Description: Enter the status of the equipment. For new offices and units destined for factory testing, "0" (Operational) is the only allowed value. During offline ODA database retrofits, the other values are valid.
Default: O

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Required Field.
Valid Entries:

Valid EQUIPMENT STATUS Entries	
Entry	**Definition**
O	Operational.
G	Growth.
U	Unequipped.

2.5 EQUIPMENT BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries: 0 - 4

2.6 EQUIPMENT UNIT VERTICAL

Description: Enter the vertical equipment location that specifies the bottom of the unit. The recommended values for this are:

6-foot cabinets:
- 15, 24, 32, 41, 49, 58

7-foot cabinets:
- 22, 30, 39, 48, 56, 65, 74

Required Field.
Valid Entries: 0 - 84

2.7 EQUIPMENT AISLE

Description: Enter the equipment location aisle number. This entry consists of a floor and aisle number. The first and second digits from the left are the floor number. Valid floor numbers are 00-99. The third and fourth digits from the left is the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.8 UNIT OFFSET

Description: The Unit Offset field is displayed on the input EQISTF input screen, but cannot be manually accessed for data entry. The value is automatically generated at the time of form entry based upon the value entered in the corresponding ISTF NUMBER field (see the chart below). The values are 04, 08, 13 and 17. The UNIT OFFSET represents the slot number in the DSU2 shelf. This data is printed on the input screen and office record for informational purposes only.

UNIT OFFSET Values	
ISTF NUMBER	**UNIT OFFSET**
0	04
1	13
2	08
3	17

2.9 CHANGE LEVEL INDICATOR

Description: Enter the Change Level Indicator number. This is a hexadecimal number value in the range

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of 0 - 7FFFFFFF. For valid CLI values, see Division 8, Section 1 for equipment assignment.

Required Field.
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

2.10 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 -8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

2.11 CONTROL GROUP

Description: Enter the Control Group Number.

Required Field.
Valid Entries: 0 - 1

Data Rules:

The combination of Control Group and Control Port values must be unique for the two Service Groups.

Control Group 0, Ports 00,01 cannot be assigned, they are reserved for the local DSU.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.12 CONTROL PORT

Description: Required Field.

Data Rules:

The Control Group Number and Control Port Number combination must be unique for the two Service Groups.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form,

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the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.13 DATA GROUP

Description: Enter the data group number. Each ISTF unit requires a unique assignment of the combined Data Group/Port value per Switching Module.

Required Field.
Valid Entries: 0 - 1

Data Rules:

When this field is 1, CONTROL PORT cannot be 15.

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.14 DATA PORT

Description: Enter the Data Port Number.

Required Field.
Valid Entries: 0 - 15

2.15 LOOPBACKISTF SERVICES

Description: Enter the Number of ISTF Loopback Services required. It is recommended that the maximum value be entered in this field because each ISTF unit has a total of 32 channels (one is reserved for equipment testing) available for assignment at any one time for both the Loopback and Transmission services. The chances of encountering an equipment blockage are very low. Leave the field empty if no Loopback Services are to be assigned.
Valid Entries: 1 - 31

Data Rules:

For 5E9(1) and later, the sum total of Trunk Group members (TRUNK forms) with an associated TKGRP TRKCLS of "LTPISTFL" (LOOKBACK SERVICES) and "LTPISTFX" (TRANSMISSION SERVICES) cannot exceed the sum total of LOOPBACKISTF SERVICES and TRANSMISSION services indicated on the EQISTF forms.

2.16 TRANSMISSION

Description: Enter the Number of Transmission Services required. It is recommended that the maximum value be entered in this field because each ISTF unit has a total of 32 channels (one is reserved for equipment testing) available for assignment at any one time for both the Loopback and Transmission services. The chances of encountering an equipment blockage are very low. Leave the field empty if no transmission services are to be assigned.
Valid Entries: 1 - 3

Data Rules:

For 5E9(1) and later, the sum total of Trunk Group members (TRUNK forms) with an associated TKGRP

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TRKCLS of "LTPISTFL" (LOOKBACK SERVICES) and "LTPISTFX" (TRANSMISSION SERVICES) cannot exceed the sum total of LOOPBACKISTF SERVICES and TRANSMISSION services indicated on the EQISTF forms.

```
eqistf                  5ESS Switch          _
(5823)              OFFICE DATA ADMINISTRATION
                 INTEGRATED SERVICES TEST FUNCTION

* 1. SWITCHING MODULE        010
* 2. ISTF NUMBER             0
  3. EQUIPMENT STATUS        O
  4. EQUIPMENT BAY           1
  5. EQUIPMENT UNIT VERTICAL 15
  6. EQUIPMENT AISLE         0125
  7. UNIT OFFSET             04
  8. CHANGE LEVEL INDICATOR  00000004
  9. CONTROL GROUP           0
 10. CONTROL PORT            03
 11. DATA GROUP              0
 12. DATA PORT               15


 13. LOOPBACKISTF SERVICES   05
 14. TRANSMISSION            1
```

Figure 1 SAMPLE EQISTF FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqistf                  5ESS Switch          _
                     OFFICE DATA ADMINISTRATION
(5823)               INTEGRATED SERVICES TEST FUNCTION

 *1. SWITCHING MODULE       ___      #13. DATA PORT           __
 *2. ISTF NUMBER            _          14. LOOPBACKISTF SERVICES __
  3. EQUIPMENT STATUS       O          15. TRANSMISSION         _
 #4. EQUIPMENT BAY          _
 #5. EQUIPMENT UNIT VERTICAL __
 #6. EQUIPMENT AISLE        ____
    UNIT OFFSET             __
 #8. CHANGE LEVEL INDICATOR _______
    INTF UNIT               0
#10. CONTROL GROUP          _
#11. CONTROL PORT           __
#12. DATA GROUP             _
```

Figure 2 SAMPLE EQISTF FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 38: 5814-1/2/3 RECORD TRANSMISSION RATE CONVERTER UNIT PATH FORM - EQTRCUPTH

1. GENERAL

The TRCU (Transmission Rate Control Unit) Path view is used to define the path between the host and remote TRCU for a TRCU model 1, TRCU model 2, or TRCU model 3, in the SM, SM-2000 or SM-2005 unit types . This form is effective with the 5E12 and later Software Releases. For more information, see Division 2, Section 9N.

Data Rules:
Every EQTRCUPTH form must have a corresponding EQIM form that has an IM TYPE that is set to "ORM".

For 5E15 and later, the EQCORE form (5701 Record) must be defined before the EQTRCUPTH form can be defined.

1.1 Recent Change View

The corresponding Recent Change view for this form is 17.23.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: The SM field is used to specify a switching module to which the TRCU is connected. The SM must be an ORM, an SM-2000 or an SM-2005.
Valid Entries: 1 - 192

2.3 *EVEN LI

Description: The EVEN LI field specifies the even-numbered TRCU path connecting the host and remote TRCU units.
Valid Entries: 0 - 22

2.4 FIRST PATH

Description: The FIRST PATH field specifies the even-numbered TRCU path connecting the host and remote TRCU units. This is a no change field.

2.5 NEXT PATH

Description: The NEXT PATH field specifies the odd-numbered TRCU next path connecting the host and remote TRCU units. This is a no change field.

2.6 HOST RMK

Description: The FIRST PATH HOST RMK field can be used to specify a brief note about the first path host connection.
Valid Entries: Blank, or enter up to 49 alphanumeric characters.

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2.7 REMOTE RMK

Description: The FIRST PATH REMOTE RMK field can be used to specify a brief note about the first path remote connection.
Valid Entries: Blank, or enter up to 49 alphanumeric characters.

2.8 HOST RMK

Description: The NEXT PATH HOST RMK field can be used to specify a brief note about the next path host connection.
Valid Entries: Blank, or enter up to 49 alphanumeric characters.

TRCU FIRST PATH

Data Rules:
HOST NUM and HOST TYPE entries and REMOTE NUM and REMOTE TYPE entries under TRCU FIRST PATH and TRCU NEXT PATH on the EQTRCUPTH form require corresponding entries on the EQCMTRCU form.

Navigational help:

- HOST NUM entered under TRCU FIRST PATH or TRCU NEXT PATH points to TRCU NUMBER on EQCMTRCU where SM on EQCMTRCU is zero (0). HOST TYPE entered under TRCU FIRST PATH or TRCU NEXT PATH must match TRCU TYPE on that same EQCMTRCU form.
- REMOTE NUM entered under TRCU FIRST PATH or TRCU NEXT PATH points to TRCU NUMBER on EQCMTRCU where SM on EQCMTRCU is the same as SM on EQTRCUPTH. REMOTE TYPE entered under TRCU FIRST PATH or TRCU NEXT PATH must match TRCU TYPE on that same EQCMTRCU form.

Every EQTRCUPTH form must have unique HOST NUM/HOST CKT entries under TRCU FIRST PATH and TRCU NEXT PATH.

Every EQTRCUPTH form must have unique REMOTE NUM/REMOTE CKT entries under TRCU FIRST PATH and TRCU NEXT PATH for each SM.

2.9 EVEN TCTS

Description: The EVEN TCTS field specifies the even TRCU3 control time slot number. This is a no change field.

2.10 HOST TYPE

Description: The HOST TYPE field specifies the type, or model of host TRCU (Transmission Rate Converter Unit) Host unit.
Valid Entries: TRCU, TRCU2 or TRCU3

Data Rules:

When any one of HOST TYPE or REMOTE TYPE under TRCU FIRST PATH or TRCU NEXT PATH is "TRCU3", all must be "TRCU3".

When HOST TYPE under TRCU FIRST PATH is "TRCU3", HOST CKT under TRCU FIRST PATH must be 0 - 2.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2", HOST CKT under TRCU FIRST PATH must be 0 or 2.

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When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2", REMOTE CKT under TRCU FIRST PATH must be 0 or 2.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2", HOST CKT under TRCU NEXT PATH must be 1 or 3.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2", REMOTE CKT under TRCU NEXT PATH must be 1 or 3.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2" and HOST CKT under, TRCU FIRST PATH is 0, HOST CKT under TRCU NEXT PATH must be 1.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2" and HOST CKT under, TRCU FIRST PATH is 2, HOST CKT under TRCU NEXT PATH must be 3.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2" and REMOTE CKT under, TRCU FIRST PATH is 0, REMOTE CKT under TRCU NEXT PATH must be 1.

When HOST TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2" and REMOTE CKT under, TRCU FIRST PATH is 2, REMOTE CKT under TRCU NEXT PATH must be 3.

When HOST TYPE is "TRCU3", TIME MULTIPLEX SWITCH CLI on the EQCORE form must not be set to 20 hex.

When HOST TYPE is "TRCU3", the CLI value on the EQTMS form must not be 20.

2.11 HOST CLI

Description: The HOST CLI field is used to specify the change level indicator associated with the host TRCU first path.
Valid Entries: Enter hexadecimal 0 to 7FFFFFFF.

See Division 8, Section 1, for CLI values.

2.12 HOST NUM

Description: The HOST NUM field is used to specify the TRCU first path host TRCU unit number.
Valid Entries: 1 - 96

Data Rules:

When HOST NUM under TRCU FIRST PATH and TRCU NEXT PATH are equal, HOST TYPE under TRCU FIRST PATH and TRCU NEXT PATH must be of the same type.

HOST NUM and HOST CKT combinations under TRCU FIRST PATH and TRCU NEXT PATH must be unique.

2.13 HOST CKT

Description: The HOST CKT field is used to specify the TRCU first path host TRCU circuit number.
Valid Entries: 0-3

2.14 REMOTE TYPE

Description: The REMOTE TYPE field specifies the type, or model of remote TRCU unit.
Valid Entries: TRCU, TRCU2 or TRCU3

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Data Rules:

When REMOTE TYPE under TRCU FIRST PATH is "TRCU3", REMOTE NUM under TRCU FIRST PATH must be 1 or 7 - 14, or 254 for null unit.

When REMOTE TYPE under TRCU FIRST PATH is "TRCU3", REMOTE CKT under TRCU FIRST PATH must be 0 - 2.

When REMOTE TYPE under TRCU FIRST PATH is "TRCU" or "TRCU2", REMOTE NUM under TRCU FIRST PATH must be 1 - 6, or 254 for null unit.

2.15 REMOTE CLI

Description: The REMOTE CLI field is used to specify the change level indicator associated with the TRCU first path.
Valid Entries: Valid values are blank or hexadecimal 0 to 7FFFFFFF.

See Division 8, Section 1, for CLI values.

2.16 REMOTE NUM

Description: The REMOTE NUM field is used to specify the TRCU first path TRCU unit number.
Valid Entries: 1 - 14

Data Rules:

When REMOTE NUM under TRCU FIRST PATH and TRCU NEXT PATH are equal, REMOTE TYPE under TRCU FIRST PATH and TRCU NEXT PATH must be of the same type.

REMOTE NUM and REMOTE CKT combinations under TRCU FIRST PATH and TRCU NEXT PATH must be unique.

2.17 REMOTE CKT

Description: The REMOTE CKT field is used to specify the TRCU first path remote TRCU circuit number.
Valid Entries: 0 - 3

TRCU NEXT PATH

2.18 ODD TCTS

Description: The ODD TCTS field specifies the odd TRCU3 control time slot number. This is a no change field.

2.19 HOST TYPE

Description: The HOST TYPE field specifies the type, or model of host TRCU unit.
Valid Entries: TRCU, TRCU2 or TRCU3

Data Rules:

When HOST TYPE under TRCU NEXT PATH is "TRCU3", HOST CKT under TRCU NEXT PATH must be 0 - 2.

When HOST TYPE under TRCU NEXT PATH is "TRCU" or "TRCU2", HOST CKT under TRCU NEXT PATH must be 1 or 3.

2.20 HOST CLI

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Description: The HOST CLI field is used to specify the change level indicator associated with the host TRCU next path.
Valid Entries: Valid values are blank or hexadecimal 0 to 7FFFFFFF.

See Division 8, Section 1, for CLI values.

2.21 HOST NUM

Description: The HOST NUM field is used to specify the TRCU next path host TRCU unit number.
Valid Entries: 1 - 96

2.22 HOST CKT

Description: The HOST CKT field is used to specify the TRCU next path host TRCU circuit number.
Valid Entries: 0 - 3

2.23 REMOTE TYPE

Description: The REMOTE TYPE field specifies the type, or model of remote TRCU unit.
Valid Entries: TRCU, TRCU2, or TRCU3

Data Rules:

When REMOTE TYPE under TRCU NEXT PATH is "TRCU3", REMOTE NUM under TRCU NEXT PATH must be 1 or 7 - 14, or 254 for null unit.

When REMOTE TYPE under TRCU NEXT PATH is "TRCU3", REMOTE CKT under TRCU NEXT PATH must be 0 - 2.

When REMOTE TYPE under TRCU NEXT PATH is "TRCU" or "TRCU2", REMOTE NUM under TRCU NEXT PATH must be 1 - 6, or 254 for null unit.

2.24 REMOTE CLI

Description: The REMOTE CLI field is used to specify the change level indicator associated with the TRCU next path.
Valid Entries: Valid values are blank or hexadecimal 0 to 7FFFFFFF.

See Division 8, Section 1, for CLI values.

2.25 REMOTE NUM

Description: The REMOTE NUM field is used to specify the TRCU next path TRCU unit number.
Valid Entries: 1 - 96

2.26 REMOTE CKT

Description: The REMOTE CKT field is used to specify the TRCU next path remote TRCU circuit number.
Valid Entries: 0 - 3

---

eqtrcupth 5ESS Switch
SCREEN 1 OF 2 OFFICE DATA ADMINISTRATION
(5814) TRANSMISSION RATE CONVERTER UNIT (TRCU) PATH

*1. SM ___

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```
*2. EVEN LI   __
   FIRST PATH __
   NEXT PATH  __

                    FIRST PATH
 5. HOST RMK  ____________________________________________________
 6. REMOTE RMK ___________________________________________________

                    NEXT PATH
 7. HOST RMK  ____________________________________________________
 8. REMOTE RMK ___________________________________________________
```

```
eqtrcupth                  5ESS Switch        _
SCREEN 2 OF 2              OFFICE DATA ADMINISTRATION
(5814)          TRANSMISSION RATE CONVERTER UNIT (TRCU) PATH

    TRCU FIRST PATH              TRCU NEXT PATH
    EVEN TCTS  ___               ODD TCTS   ___
#10. HOST TYPE  _____       #19. HOST TYPE  _____
#11. HOST CLI   _________   #20. HOST CLI   _________
#12. HOST NUM   ___         #21. HOST NUM   ___
#13. HOST CKT   _           #22. HOST CKT   _
#14. REMOTE TYPE _____      #23. REMOTE TYPE _____
#15. REMOTE CLI _________   #24. REMOTE CLI _________
#16. REMOTE NUM ___         #25. REMOTE NUM ___
#17. REMOTE CKT _           #26. REMOTE CKT _
```

Figure 1 SAMPLE TRANSMISSION RATE CONVERTER UNIT PATH FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 42: 5840, 5840-1, 5840A RECORD
SCAN POINT NUMBER ASSIGNMENT RECORD
DUPLICATE SPN ASSIGNMENTS RECORD
CIRCUIT SPN ASSIGNMENT RECORD

1. GENERAL

1.1 Scan Point Number Assignment Record

The Scan Point Number Assignment Record (5840 Record) is generated from a combination of many ODA input forms and defines all the possible or available scan points that are defined as operational on the EQMSP or EQMMSP ODA input forms. This record also reflects the peripheral unit, trunk or line customer that any particular SPN is assigned to.

1.2 Duplicate SPN Assignments Record

The Duplicate SPN Assignments Record (5840-1 Record) defines the operational scan points that are assigned to the Multiple Carrier Group Alarm or Make Busy key customers. It is generated when specific SPN assignments are duplicated on the LINE, MLHLN or TRUNK ODA input forms.

1.3 Circuit SPN Assignment Record

The Circuit SPN Assignment Record (5840A Record) reformats and re-sorts the information that is defined on the 5840 Record. This format is used by installation for crossconnect definitions. The 5840A Record is sorted in order of circuit type and circuit reference number. Unassigned scan points are not presented.

2. ENTRIES - 5840 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 SM

Description: The Switching Module Number.
Valid Entries: 1 - 192

2.3 MSU

Description: The Regular or Modular Metallic Service Unit Number.
Valid Entries: 0 - 1

2.4 SG

Description: The Service Group Number.
Valid Entries: 0 - 1

2.5 PACK POSITION

Description: The Metallic Service Unit Pack Position Number.
Valid Entries:

- Regular MSU: 00 - 15
- Modular MSU: 00 - 31

2.6 SCAN POINT

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Description: The Scan Point Number.

SPN (Scan Point) 31 is reserved for current sensing and is not available for assignment purposes. It will always have a circuit type of DNA (Do Not Assign).
Valid Entries: 00 - 30

2.7 CIRCUIT TYPE

Description: A unique identifier which reflects the ODA input form or customer assigned to the particular Scan Point. There are three types that allow duplicate assignments for the same Scan Point. These valid duplications are Trunk Carrier Group Alarms, Line and MLHG Carrier Group Alarms and Individual Make Busy keys of a given MLHG. These three instances require the supplementary 5840-1 Record to provide the unique form identifiers (key fields) of all the duplicates.

Valid CIRCUIT TYPE Entries

Entry	Definition
LINE CGA	A unique Carrier Group Alarm associated with an analog line defined on the LINE input form. The line must be equipped with a LEN.
MLHG CGA	A unique Carrier Group Alarm associated with a member of a Multi-Line Hunt Group on the MLHLN input form. The member must be equipped with a LEN.
TRUNK CGA	A unique Carrier Group Alarm associated with an analog trunk member on the TRUNK input form.
MULT CGA	This Carrier Group Alarm SPN is duplicated on either the TRUNK form or on the LINE/MLHLN forms. Refer to 5840-1 for complete assignments. May be duplicated up to 24 times.
MISC	Scan Point associated with a general or miscellaneous alarm. The Scan Point is assigned on the MSUSP Form (5530 Record).
PROTOCOL	Fixed Scan Point for the Protocol Circuit which is associated with Metallic Access Packs located on a Regular Metallic Service Unit. Assigned to Point 00 of the SCAN pack located in the lowest Pack Position on the MSU. The SCAN Packs are assigned on the EQMSP form.
MKBYKEY	A unique Individual Make Busy key SPN value that is assigned to either a unique LINE form or a unique MLHLN form (Member of a Multi-Line Hunt Group).
MULT	This Individual Make Busy key has been validly duplicated on a maximum of 32 members of the particular Multi-Line Hunt Group on the MLHLN form. Refer to 5840-1 for assignments.
SPHTKEY	A unique Stop Hunt key associated with a member of a Multi-Line Hunt Group assigned on the MLHLN form.
GRPBSYKEY	A unique Group Make busy Key associated with a particular Multi-Line Hunt Group assigned on the MLHG form.
R13A	13A Recorded Announcement circuit assigned on the MSUSP Form (5530 Record). One unique SPN is required for each equipped Message Module (maximum of eight Message Modules per R13A Unit).
DNA	Do Not Assign. Point 31 of each equipped Scan Pack is reserved and not available for assignment.
TBCU	A unique Scan Point associated with the Test Bus Control Unit and assigned on the EQTBCU input form, one required for each unit. This point is associated with the SLC-96 Remote Terminals.
REM ALM	Remote Alarm Scan Points defined on the EQMSU input form and associated with RSMs (Remote Switching Modules). Two entire scan boards per Service Group of one MSU (Regular or Modular) are reserved for RSM alarms. Refer to RALM input form for specific Alarm SPN assignments on the RSM/Scan Board.
FTRKEY	A unique feature key SPN value that is assigned to a unique FTRKEY Form. It can turn on or off any BRCS Call Forwarding or IDP feature.
POSMKBUSY	A unique Position Make Busy SPN value associated with a particular Multi-Line Hunt Group and position assigned on the MUPHKEY Form. It is assigned when Hunt Type equals "MUPH" on the MLHGFD Form.
BDOC PWR	Scan Point associated with Broadcast Dynamic Overload Control power. The Scan Point is assigned on the MSUSP Form.
MSU PWR	Scan Point associated with an MSU Power alarm. The Scan Point is assigned on the MSUSP Form.
NMF PWR	Scan Point associated with Network Management frame power alarm. The Scan point is assigned on the MSUSP Form.
CSD MKBYKEY	Software Release: 5E5 and earlier.

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	A unique individual Circuit Switch Data Make Busy Key SPN that is assigned on a DSMLHLN or DSLUSR form.
CSD MBR MKB	Software Release: 5E6 and later. A unique individual Circuit Switch Data Make Busy Key SPN that is assigned on a DSLUSR form.
MULT CSD BSY KEY	Software Release: 5E5 and earlier. This individual Circuit Switch Data Make Busy Key has been validly duplicated on a maximum of 32 members of the particular Circuit Multi-Line Hunt Group on the DSMLHLN or DSLUSR form. Refer to the 5840-1 record for assignments.
MULT CSD RND MKB	Software Release: 5E6 and later. This individual Circuit Switch Data Make Busy Key has been validly duplicated on a maximum of 32 members of the particular Circuit Multi-Line Hunt Group on the DSLUSR form. Refer to the 5840-1 record forassignments.
CSD SHPTKEY	A unique Circuit Switch Data Stop Hunt Key associated with a member of a Circuit Multi-Line Hunt Group assigned on the DSMLHLN or DSLUSR form.

2.8 CIRCUIT REFERENCE NUMBER

Description: The unique identifier that corresponds to the key value of the input form that the Scan Point is assigned on.

Valid CIRCUIT REFERENCE NUMBER Entries

CIRCUIT TYPE	CIRCUIT REFERENCE NUMBER
LINE CGA	TN: 7-digit Telephone Number assigned on LINE input form that is associated with a unique Carrier Group Alarm SPN.
MLHG CGA	MLHG: Multi-Line Hunt Group Number, MEMB: Multi-Line Hunt Group Member Number which are assigned on the MLHLN input form and associated with a unique Carrier Group Alarm SPN.
TRUNK CGA	TGN: Trunk Group Number, MEMB: Trunk Group Member Number which are assigned on the TRUNK input form and associated with a unique Carrier Group Alarm SPN.
MULT CGA	Refer to 5840-1 Record for unique identifiers associated with duplicated CGA SPNS.
MISC CGA	Scan point as defined on the CGASP form: MJOP - Major Alarm point normally open MJCL - Major Alarm point normally closed MNOP - Minor Alarm point normally open MNCL - Minor Alarm point normally closed.
MISC	Scan Point as defined on the MSUSP Form: MJOP - Major Alarm Scan Point normally open. MJCL - Major Alarm Scan Point normally closed. MNOP - Minor Alarm Scan Point normally open. MNCL - Minor Alarm Scan Point normally closed.
PROTOCOL	Leave blank.
MKBYKEY	If the Make Busy key is associated with a unique SPN on the LINE input form, enter TN: 7-digit Telephone Number. If the Make Busy key is associated with a unique SPN on the MLHLN input form, enter MLHG: Multi-Line Hunt Group Number, MEMB: Multi-Line Hunt Group Member Number.
MULT BSY KEY	Refer to 5840-1 Record for unique identifiers associated with duplicated Make Busy keys in a Multi-Line Hunt Group.
SPHTKEY	MLHG: Multi-Line Hunt Group Number, MEMB: Multi-Line Hunt Group Member Number which are assigned on the MLHLN input form and associated with a unique Stop Hunt key SPN.
GRPBSYKEY	MLHG: Multi-Line Hunt Group Number assigned on the MLHG input form and associated with a unique Group Make Busy key SPN.
13RA	Refer to EQSPN input form.
R13A	Refer to MSUSP Form.
DNA	Reserved point.
TBCU	MTB: Metallic Test Bus key assigned on EQTBCU input form associated with a unique Test Bus Control SPN for SLC-96 testing.
REM ALM	SCANBD 0 if the SPN assigned to Remote Alarm Scan Board 0 on the EQMSU input form. SCAN BD 1 if the SPN is assigned to Remote Alarm Scan Board 1 on the EQMSU input form.

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FTRKEY	Leave blank - SPN is key to the form.
POSMKBUSY	Dual keys assigned on MUPHKEY input form: MLHG - Multi-Line Hunt Group Number 1 - 2000 MLPOS - Position of the console 1-16.
BDOC PWR	Refer to MSUSP input form.
MSU PWR	Refer to MSUSP input form.
NMF PWR	Refer to MSUSP input form.
CSD MKBYKEY	If the Circuit Switch Data Make Busy Key is associated with a unique SPN that is assigned on a DSMLHLN or DSLUSR form, enter: CKT MLHG/TERM: Circuit Multi-Line Hunt Group/Member PKT MLHG/TERM: Packet Multi-Line Hunt Group/Member.
MULT CSD BSY KEY	Refer to the 5840-1 record for unique identifiers associated with duplicated Circuit Switch Data Make Busy Keys in a Circuit Multi-Line Hunt Group.
CSD SPHTKEY	CKT MLHG/TERM: Circuit Multi-Line Hunt Group/Member PKT MLHG/TERM: Packet Multi-Line Hunt Group/Member. Which are assigned on the DSMLHLN or DSLUSR form and associated with a unique Circuit Switch Data Stop Hunt Key SPN.

3. ENTRIES - 5840-1 RECORD

3.1 GENERAL

The 5840-1 Record displays duplicate scan point information assigned to CGA (Carrier Group Alarms) and MLHG (Multi-Line Hunt Group) Member Make Busy and Random Make Busy keys. SPNs with duplicate assignments are initially captured on the 5840 Record. Circuit Type Mult CGA defines TRUNK and LINE/MLHLN form duplications. Circuit Type MULT RND MKB defines MLHLN Member Make Busy key duplications.

3.2 BASE AND CONTROL ESS UNIT

Enter the Base and Control Number and the office name on each record.

3.3 SM

Description: The Switching Module Number.
Valid Entries: 1 - 192

3.4 MSU

Description: The Regular or Modular Metallic Service Unit Number.
Valid Entries: 0 - 1

3.5 SG

Description: The Service Group Number.
Valid Entries: 0 - 1

3.6 PACK POSITION

Description: The Metallic Service Unit "SCAN" Pack position as defined on the EQMSP or EQMMSP form.
Valid Entries:

- 00 - 15 for Regular MSU
- 00 - 31 for Modular MSU

3.7 SCAN POINT

Description: The Scan Point Number that has been multiply assigned.

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Valid Entries: 00 - 30

3.8 NUMBER

Description: This field uses a fixed value of 01-32. Up to 24 trunks or lines may share the same Carrier Group Alarm SPN. Up to 32 MLHG Members in the same Multi-Line Hunt Group may share the same Member Make Busy key SPN. Up to 2015 MLHG Members may share the same Random Make Busy key SPN.

3.9 CIRCUIT TYPE

Description: A unique identifier that reflects the ODA input form the SPN is assigned to. The types are directly related to the 5840 Record based on the shared SPN value. Valid circuit type names for the duplicate SPNs associated with office record 5840:

Valid CIRCUIT TYPE Entries

5840	5840-1
MULT CGA and SPN duplication on the trunk. CGASPN	TRUNK CGA - Carrier Group Alarm SPN is duplicated on 2 - 24 trunk input form.
MULT CGA and SPN duplication on the line. CCGASPN	LINE CGA - Carrier Group Alarm SPN is duplicated on 2 - 24 LINE and/or MLHLN Input forms. This is one of the LINE duplicates.
MULT CGA and SPN duplication on the MLHLN. CGASPN	MLHG CGA - Carrier Group Alarm SPN is duplicated on 2 - 24 LINE and/or MLHLN input forms. This is one of the MLHLN duplicates.
MULT BSY KEY SPN duplication on the MLHLN MKBYKEY	MAKEBSYKEY - Individual Member Make Busy key SPN is duplicated on 2 - 32 MLHLN input forms with common MLHG value.
MULT MBR MKB duplication on the MLHLN. MKBYKEY	MBR MKB - Individual Member Make Busy key SPN is duplicated on 2 - 32 MLHLN input forms with common MLHG value.
MULT RND MKB duplication on the MLHLN form RNDMKB	RND MKB - Individual Random Make Busy key SPN is duplicated on 2 - 32 MLHLN input forms with common MLHG value.
MULT CSD MBR MKB duplication on the DSLUSR form. MKBYKEY	CSD MBR MKB Individual Member Make Busy key is duplicated up to 2015 Circuit Multi-Line Hunt Group members in the same Circuit Multi-Line Hunt group.
MULT CSD RND MKB duplication on the DSLUSR form. RNDMKB	CSD RND MKB - Individual Random Make Busy Key is duplicated up to 2015 Circuit Multi-Line Hunt Group in the same Circuit Multi-Line Hunt group.

3.10 ASSIGNED TO KEY

Description: The unique identifier or key that corresponds to the input form key that the SPN is assigned on.

Valid ASSIGNED TO KEY Entries

5840-1 CIRCUIT TYPE	ASSIGNED TO KEY
TRUNK CGA	
LINE CGA	TN: 7-digit Telephone Number assigned on the LINE input form.
MLHG CGA	MLHG: Multi-Line Hunt Group Number, MEMB: Multi-Line Hunt Group Member Number assigned on the MLHLN form.
RND MKB	Software Release 5E6 and later. MLHG: Multi-Line Hunt Group Number. MEMB: Multi_Line Hunt Group Member Number which are assigned on the MLHLN input form and associated with a unique Key SPN.
CSD RND MKB KEY	Software Release: 5E6 and later. CKT MLHG/TERM: Circuit Multi-Line Hung Group/Member. PKT MLHG/TERM: Packet Multi-Line Hunt Group/Member. Which are assigned on the DSMLHLN or DSLUSR form and associated with a unique Circuit Switch Data Random Make Busy Key SPN.
MAKE BUSY KEY	Software Release: 5E5 and earlier. MLHG: Multi-Line Hunt Group Number MEMB: Multi-Line Hunt Group Member Number assigned on the MLHLN form.
MBR MKB	Software Release: 5E6 and later. MLHG: Multi-Line Hunt Group Number MEMB: Multi-Line Hunt Group Member Number assigned on the MLHLN form. Previously called

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	MAKE BUSY KEY.
CSD MAKE BUSY KEY	Software Release: 5E5 and earlier. CKT MLHG/TERM: Circuit Multi-Line Hunt Group/Member assigned on the DSMLHLN or DSLUSR form. PKT MLHG/TERM: Packet Multi-Line Hunt Group/Member assigned on the DSMLHLN or DSLUSR form.
CSD MBR MAKE BUSY KEY	Software Release: 5E6 and later. CKT MLHG/TERM: Circuit Multi-Line Hunt Group/Member assigned on the DSMLHLN or DSLUSR form. PKT MLHG/TERM: Packet Multi-Line Hunt Group/Member assigned on the DSMLHLN or DSLUSR form. This Key replaces "CSD MAKE BUSY KEY".

4. ENTRIES - 5840A RECORD

Office Record 5840A reformats and re-sorts the same information that is defined on the 5840 Record. This format is used by installation for crossconnect definitions. Only the assigned scan points are to be shown.

This record is sorted by Circuit Type and Circuit Reference Number combination. The Scan Point Number (SPN) is defined as (SM, MSU, SG, Pack Position, Pack Number) and may be duplicated for certain Circuit Types.

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SEC. 43: 5841 RECORD
DISTRIBUTE POINT NUMBER ASSIGNMENT RECORD

1. GENERAL

The 5841 Record is available with 5E9 and later Software Releases.

The Distribute Point Number Assignment Record identifies all the possible or available distribute points that are defined as operational on either the EQDPN, EQMSP, EQMMSP, EQTBCU, RALM, PGTC, EQRCLK, LINE, MLHG, MLHLN, TLWS, TRUNK, PFASFG, or TKGRP ODA input forms.

1.1 Recent Change View

This form is not associated with a Recent Change View.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL GROUP, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 SM

Description: This field defines the Switching Module Number.

Required Field: Valid Entries: 1 - 192

2.3 MSU

Description: This field defines the Regular or Modular Metallic Service Unit Number.
Valid Entries: 0 - 1

2.4 SG

Description: This field defines the Service Group Number.
Valid Entries: 0 - 1

2.5 PACK POSITION

Description: This field defines the Metallic Service Unit Pack Position Number.
Valid Entries:
- 00-15 for Regular MSU
- 00-31 for Modular MSU

2.6 DISTRIBUTE POINT

Description: This field defines the Distribute Point Number.
Valid Entries: 0 - 31

2.7 CIRCUIT TYPE

Description: This field is a unique identifier that defines the type of circuit the distribute point is assigned.

Valid CIRCUIT TYPE Entries

Entry	Definition
PROTOCOL	Five fixed Distribute Points associated with one or more MACC (Metallic Access) packs on

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	a regular MSU (Metallic Service Unit). Assigned to points 00-04 of the DIST pack located in the lowest pack position on the MSU. The DIST packs are assigned on the EQMSP form.
MSGREG	Message Register distribute points assigned on the line and MLHLN (Multi-Line Hunt Line) forms.
SLVLDCKT	Sleeve Lead Circuit distribute points assigned on the line and MLHLN (Multi-Line Hunt Line) forms.
OVFMSGREG	Overflow Message Register distribute points assigned on the MLHG (Multi-Line Hunt Group) form.
JK1CUTTHRU	DC Jack 1 Cut Thru distribute point assigned on the TLWS(Trunk Line Work Station) form.
JK1DIODE	DC Jack 1 Diode distribute point assigned on the TLWS form.
JK2CUTTHRU	DC Jack 2 Cut Thru distribute point assigned on the TLWS form.
JK2DIODE	DC Jack 2 Diode distribute point assigned on the TLWS form.
DTDA	Dial Tone Delay Alarm circuits require two distribute points for 5E1
BTBDIST1	One of two distribute points required for Office-to-Office Trunk Testing and assigned on the TRUNK form.
BTBDIST2	One of two distribute points required for Office-to-Office Trunk Testing and assigned on the TRUNK form.
OTODPN1	One of two distribute points required for Office-to-Office Trunk Testing and assigned on the TRUNK form. Valid for 5E9 and later Software Releases.
OTODPN2	One of two distribute points required for Office-to-Office Trunk Testing and assigned on the TRUNK form. Valid for 5E9 and later Software Releases.
REM	Remote Alarm for RSM require 16 fixed assigned distribute points 00-15 specified on the EQMSU form.
TBCU	A Test Bus Control Unit requires 5 distribute points.

2.8 CIRCUIT REFERENCE NUMBER

Description: This field defines the unique identifier that corresponds to a key value of the input form that the distribute point is assigned.

Valid CIRCUIT REFERENCE NUMBER Entries

CIRCUIT TYPE	CIRCUIT REFERENCE NUMBER
PROTOCOL	Leave blank.
MSGREG	If the Message Register is associated with a unique DPN on the line form enter LINE: and the 7-digit Telephone Number. If the Message Register is associated with a unique DPN on the Multi-Line Hunt member form enter MLHLN: Multi-Line Hunt Group
SLVLDCKT	If the Sleeve Lead is associated with a unique DPN on the line form enter LINE: and the 7-digit Telephone Number. If the Sleeve Lead is associated with a unique DPN on the Multi-Line Hunt member form enter MLHLN: Multi-Line Hunt Group
REM	Enter "DIST BD:" signifying one of the Remote Alarm Distribute Point assignments from the EQMSU input form.
TBCU	Enter "MTB:" the Metallic Test Bus assigned on the EQTBCU input form
TBCU	Enter "MTB:" the Metallic Test Bus assigned on the EQTBCU input form
TBCU	Defines the "MTB:" the Metallic Test Bus assigned on the EQTBCU input form
OVFMSREG	Defines the "MLHG:" and the associated Multi-Line Hunt Group Number.
JK1CUTTHRU	Defines the "TLWS:" and the associated workstation number.
JK1DIODE	Defines the "TLWS:" and the associated workstation number.
JK2CUTTHRU	Defines the "TLWS:" and the associated workstation number.
JK2DIODE	Defines the "TLWS:" and the associated workstation number.
DTDA	Defines the "EQDPN:" and the assigned circuit lead designation.
BTBDIST1	Defines the "TGN:"
BTBDIST2	Defines the "TGN:"
OTODPN1	Defines the "TGN:" the Trunk Group Number from the TRUNK form
OTODPN2	Defines the "TGN:"
TBCU	Defines the "MTB:" the Metallic Test Bus assigned on the EQTBCU input form
TBCU	Defines the "MTB:" the Metallic Test Bus assigned on the EQTBCU input form

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SEC. 44: 5842, 5842A RECORD
METALLIC TEST BUS ASSIGNMENT RECORD
CIRCUIT MTB ASSIGNMENT RECORD

1. GENERAL

The 5842 and 5842A Records are output only records available with 5E2 and later Software Releases.

The Metallic Test Bus Assignment Record (5842 Record) identifies all Metallic Test Bus points that are defined as operational on either the EQMSP or EQMMSP forms. Each MACC (metallic access) pack defines 16 possible metallic access points which are printed on one page of the 5842 Record.

Each of the 16 metallic access points made operational by a MACC pack may be assigned to one of many peripheral type units. The 5842 Record shows the peripheral unit, trunk, or line associated with each MTB (Metallic Test Bus) assignment.

The Circuit MTB Assignment 5842A Record reformats and re-sorts the information defined on the 5842 Record. The 5842A is sorted in order of circuit type and circuit reference number.

2. ENTRIES - 5842 RECORD

2.1 BASE AND CONTROL, ESS UNIT

The Base and Control Number and the office name.

2.2 SM

Description: The Switching Module number.
Valid Entries: 1 - 127.

2.3 MSU

Description: The Regular or Modular Metallic Service Unit number.
Valid Entries: 0 - 1

2.4 SG

Description: The Service Group number.
Valid Entries: 0 - 1

2.5 PACK POSITION

Description: The Metallic Service Unit Pack Position number.

Valid entries are:
- For Regular MSU: 00-15
- For Modular MSU: 00-31

2.6 BUS POINT

Description: The MTB (Metallic Test Bus) point number.
Valid Entries: 00 - 16

2.7 CIRCUIT TYPE

Description: A unique identifier that defines the type of circuit the MTB point is assigned.

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Valid CIRCUIT TYPE Entries

Entry	Definition
DMTB PROTOCOL	Dedicated Metallic Test Bus Protocol. The reserve DMTB Protocol circuit assignment is point 15 on every MACC (Metallic Access) pack in a Regular or Modular MSU.
DCJK1	Direct Current Jack 1 MTB assignment is specified on the TLWS (Trunk Line Work Station) form.
DCJK2	Direct Current Jack 2 MTB assignment is specified on the TLWS (Trunk Line Work Station) form.
ISMAN	Software Release: 5E3 and later. Two MAN (Metallic Access Network) MTB point assignments are specified on the Integrated Services Analog Pack Equipage form, EQISAP (5824 Record).
LTDTST	Four Local Test Desk Test Trunk MTB point assignments are specified on the Trunk Unit Equipment form, EQTUP.
LU	Two Line Unit MTB point assignments are specified on the Line Unit Equipage form, EQLU.
NTTU	Two No Test Trunk Unit MTB point assignments are specified on the Trunk form, TRUNK.
PGTC	Two MTB point assignments are specified on the Pair Gain Test Controller Form, PGTC (5503 Record).
PMU	Four MTB point assignments are required for PMU (Precision Measurement Unit) and are specified on the Precision Measurement Unit form, EQPMU.
TBCU	The MTB point assignment on the Test Bus Control Unit form, EQTBCU, corresponds to a SLC-96 Remote Terminal specified on the SLC-96 Remote Terminal form, SLCRT.
TU	One Trunk Unit MTB point assignment is specified on the Trunk Unit Equipage form, EQTU.

2.8 CIRCUIT REFERENCE NUMBER

Description: The unique identifier that corresponds to a key value on the input form that the Metallic Test Bus point is assigned. Valid entries for the CIRCUIT REFERENCE NUMBER are dependent on the circuit type as shown in the following table.

Valid CIRCUIT REFERENCE NUMBER Entries

CIRCUIT TYPE	CIRCUIT REFERENCE NUMBER
DMTB PROTOCOL	Blank.
DCJK1	"TLWS:" work station number, "DEVID:" device identifier from the TLWS form.
DCJK2	"TLWS:" work station number, "DEVID:" device identifier from the TLWS form.
ISMAN	Software Release: 5E3 and later. "IM:" the Switching Module, "TYPE:" the Switching Module type, "ISLU:" the Integrated Services Line Unit number, "PKTYPE:" the Integrated Services analog circuit pack type, "PACK:" the Integrated Services analog circuit pack position number assigned on the EQISAP form.
LTDTST	"SM:" the Switching Module, "TU:" the trunk unit, "SG:" the service group, "PACK" the pack position number for test 0 MTB 0, or test 0 MTB 1, or test 1 MTB 0 and test 1 MTB 1 assigned on the EQTUP form.
LU	"SM:" the Switching Module, "LU:" the Line Unit, "SG:" the service group number from the LINE form.
NTTU	"TGN:" trunk group number. "MEMB:" trunk group member number. "DEN:" digital equipment number. "NEN:" network equipment number.
PGTC	"PGTC:" the Pair Gain Test Controller frame number, or "PGTCTRK:" the Pair Gain Test Controller trunk number assigned on the PGTC form.
PMU	"SM:" the Switching Module, "PMU:" the precision measurement unit, "MTB: 0" or "MTB: 1" or "MTB: 2" or "MTB: 3" for the MTB assignment on the EQPMU form.
TBCU	"SM:" the Switching Module,

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	"DCLU:" the digital carrier line unit, "RT:" the remote terminal assigned on the SLCRT form.
TU	"SM:" the Switching Module, "TU:" the trunk unit, "SG:" the service group number from the EQTU form.

3. ENTRIES - 5842A RECORD

The CIRCUIT MTB ASSIGNMENT RECORD (5842A Record) reformats and re-sorts the same information that is defined on the 5842 Record. This format is used by installation for crossconnect definitions.

This record is sorted by CIRCUIT TYPE and CIRCUIT REFERENCE NUMBER combination. The MTB (Metallic Test Bus) Point Number is defined as SM, MSU, SG, pack position, and point number for all circuit types.

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SEC. 45: 5843 RECORD
CONTROL, DATA AND FACILITY PORT ASSIGNMENT RECORD

1. GENERAL

The 5843 Record is an output-only record which displays the Control Port Assignments, Data Port Assignments, and Facility Port Assignments. Control Port and Data Port Assignments are defined for all Software Releases. These port assignments should be identified for each SM (Switching Module).

CONTROL PORT ASSIGNMENTS

1.1 BASE AND CONTROL, ESS UNIT

Description: Displays the Base and Control Number and the Office Name.

1.2 SM

Description: This is the Switching Module number from the EQIM form.

Valid Values: 1 - 192

1.3 CG0 and CG1

Description: These two columns display the port numbers of Control Group 0 and Control Group 1 (if equipped).

Valid Values: 0 - 22

1.4 UNIT TYPE

Description: These columns display the type of unit assigned to the port. The valid Unit Types are as follows:

Valid UNIT TYP Entries

Entry	Definition
DCLU	Digital Carrier Line Unit.
DCTU	Directly Connected Test Unit.
DLTU	Digital Line/Trunk Unit.
DSU	Digital Service Unit.
FIU	Facility Interface Unit.
IDCU	Software Release: 5E8 and later. Integrated Digital Carrier Unit.
ISLU	Integrated Services Line Unit.
ISTF	Integrated Services Test Function.
LU	Line Unit.
MSU	Metallic Service Unit.
PSU	Packet Switching Unit.1
RAF	Recorded Announcement Function Unit.
RCLK	Remote Clock Unit.
TU	Trunk Unit.

1.5 UNIT NUMBER

Description: These columns display the unit number of the named unit. Refer to the specific unit form for the valid unit numbers.

1.6 DFI OR SG

Description: These columns display the Digital Facility Interface pack number if the unit is a Digital Lines Trunk Unit, or the Service Group of the unit. Refer to the specific unit form for the valid Service Group

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Numbers.

DATA PORT ASSIGNMENTS

The second set of columns displays the Data Port Assignments.

1.7 DG0 AND DG1

Description: These columns display the port numbers of Data Group 0 and Data Group 1.

Valid Values: 0 - 15

1.8 UNIT TYPE

Description: These columns display the type of unit assigned to this Data Port. Because DCTU, FIU, MSU and RCLK do not receive Data Ports, these are not included in the following valid Unit Types.

Valid UNIT TYP Entries

Entry	Definition
DCLU	Digital Carrier Line Unit.
DLTU	Digital Line/Trunk Unit.
DSU	Digital Service Unit.
IDCU	Software Release: 5E8 and later. Integrated Digital Carrier Unit.
ISLU	Integrated Services Line Unit.
ISTF	Integrated Services Test Function.
LU	Line Unit.
PSU	Packet Switching Unit.1
RAF	Recorded Announcement Function Unit.
TU	Trunk Unit.

1.9 UNIT NUMBER

Description: These columns display the Unit Number of the named unit. Refer to the specific unit form for the valid Unit Numbers.

1.10 DFI OR SG

Description: These columns display the Digital Facility Interface pack number if the unit is Digital Line/Trunk Unit, or the Service Group of the unit.

Refer to the specific unit form for the valid Service Group Numbers.

1.11 STUFFPAT

Description: If the unit is a Digital Line/Trunk Unit, the Stuffing Pattern will be displayed.

Valid Values: A, B, C or D.

FACILITY PORT ASSIGNMENTS

The third set of columns displays the Facility Interface Port Assignments. This information is required only if the SM is a Remote Switching Module.

1.12 FIU SGA AND FIU SGB

Description: These columns display the port number of Facility Interface Unit Subgroup A and Subgroup B.

Valid Values: 0 - 9

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1.13 UNIT TYPE

Description: DLTU is the only valid unit type.

1.14 UNIT NUMBER

Description: These columns display the unit number of the Digital Line/Trunk Unit.

Valid Values: 0 and 1

1.15 DFI

Description: These columns display the Digital Facility Interface pack number assigned to the port.

Valid Values: 1 - 10

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SEC. 46: 5844 RECORD
ISCN ASSIGNMENT RECORD

1. GENERAL

The 5844 Record, available with 5E4(2) and later Software Releases, is used as an inventory of assigned ISCNs (Integrated Services Channel Numbers). This record is not used for ODA input.

ISCNs are placed on this record when the Switching Module value assigned on an EQPSUPH form (5742 Record) matches the first three digits of an LCEN assigned on a form where an ISCN is assigned and when the PSU SHELF value assigned on the EQPSUPH form matches the first digit of the assigned ISCN. This 5844 Record displays the ISCN, the associated form, and key field.

2. RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Description: The Base and Control Number and Office Name on each record.

2.2 SM

Description: The Switching Module number.

Valid Values: 1 - 192

2.3 PSU SHELF

Description: The Packet Switching Unit Shelf number.

valid values: 0 - 15

2.4 ISCN

Description: The Integrated Services Channel Number. The ISCN represents the PSU shelf, channel group, and channel located in the PSU. ISCNs are defined as follows:

INTEGRATED SERVICES CHANNEL NUMBER

Equipment		Format	Valid Entries
PSU Shelf	-	X	0-4
Channel Group	CHL GRP	XX	00-15
Channel	CHL	XXX	000-127

2.5 FORM

Description: This column contains the form names on which the ISCNs have been assigned. For 5E5 and later, the following forms are used to assign ISCNs:

- AMLBDSL (5447 Record)
- DSL (5907 Record)
- DSLAP (5963 Record)
- DSLUSR (5908 Record)
- ODBRES (5906 Record)
- OSPSDSL (5411 Record)

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- PSISM (5920 Record)
- RTERM (5174 Record)
- TRUNK (5204 Record)
- XAT (5909 Record)

2.6 LCEN

Description: The Line Card Equipment Number is an 8-digit equipment number. It is the key field from the AMLBDSL and OSPSDSL forms. See format below.

2.7 DSLOETYPE/DSLOE

Description: This is the DSL Office Equipment Type and Office Equipment Number from the DSL and DSLUSR forms. The DSL OE TYPEs are provided in the table below.

DSL OE TYPE/DSLOE

Value	Definition
I	The DSL OE TYPE is associated with an 8-digit LCEN for a (R)ISLU (Remote)Integrated Services Line Unit.
G	Software Release: 5E8 and later. The DSL OE is associated with a 10-digit ILEN for a remote terminal or PUB43801. This designation accommodates up to 2048 lines.
M	Software Release: 5E8 and later. The DSL OE is associated with an 8-digit ILEN for a remote terminal or PUB43801. This designation accommodates 99 lines or less.

If an "I" is entered, the OE number consist of:

LINE CARD EQUIPMENT NUMBER

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
(Remote) Integrated Services Line Unit	(R)ISLU	X	0-7
Line Group Card	LGC	XX	00-15
Line Card	LC	XX	00-31

If a "G" is entered, the OE number consist of:

IDCU REMOTE TERMINAL NUMBER, TYPE G

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	X	0-7
Remote Terminal	RT	XX	01-31
Line	LINE	XXXX	0001-2048

If an "M" is entered, the OE number consist of:

IDCU REMOTE TERMINAL NUMBER, TYPE M

Equipment		Format	Valid Entries
Switching Module	SM	XXX	001-192
Unit Number	IDCU	X	0-7
Remote Terminal	RT	XX	01-31
Line	LINE	XX	01-99

2.8 AP SITE ID

Description: This is the Application Processor Site ID value from the DSLAP form.

Valid Values: 1 - 255

2.9 CKT TN

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Description: This is the CKT TN value from the DSLUSR form.

Valid Values: 7 digits

2.10 CKT MLHG

Description: This is the CKT MLHG value from the DSLUSR form.

Valid Values: 1 - 2000

2.11 CKT TERM

Description: This is the CKT TERM value from the DSLUSR form.

Valid Values: 1 - 2015 or 3001 - 3999

2.12 DPKT TN

Description: This is D-channel Packet TN value from the DSLUSR.

Valid Values: 7 digits

2.13 DPKT MLHG

Description: This is the D-channel Packet MLHG value from the DSLUSR form.

Valid Values: 1 - 2000

2.14 DPKT TERM

Description: This is the D-channel Packet TERM value from the DSLUSR form.

Valid Values: 1 - 2015

2.15 ODB TN

Description: This is the On Demand B-channel TN value from the DSLUSR form.

Valid Values: 7 digits

2.16 ODB MLHG

Description: This is the On Demand B-channel MLHG value from the DSLUSR form.

Valid Values: 1 - 2000

2.17 ODB TERM

Description: The On Demand B-channel TERM value from the DSLUSR form.

Valid Values: 1 - 2015

2.18 SHELF

Description: This is the PSU SHELF value assigned on the ODBRES form. This value should match the PSU SHELF value defined on the EQPSUPH form.

Valid Values: 0 - 4

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2.19 CHL GRP

Description: This is the Channel Group value from the ODBRES form.

Valid Values: 00 - 15

2.20 DLT

Description: This is the Data Link Terminal value from the PSISM form.

Valid Values: 1 - 160

2.21 UNIT TYPE

Description: This field identifies the unit as an IDCU RT (Remote Terminal) from the RTERM form.

Software Release: 5E8 and later
Valid Entries: Valid Values: IDCU

2.22 UNIT NUMBER

Description: This is the IDCU RT number from the RTERM form.

Software Release: 5E8 and later
Valid Entries: Valid Values: 0 - 7

2.23 RT EX

Description: This is the RT External number.

Valid Values: 1 - 31

2.24 TGN

Description: This is the TGN value from the TRUNK form.

Valid Values: 1 - 2000

2.25 MEMB

Description: This is the MEMB value from the TRUNK form.

Valid Values: 0 - 1951

2.26 PKT TN

Description: This is the Packet TN value from the DSLUSR form.

Valid Values: 7 digits

2.27 PKT MLHG

Description: This is the Packet MLHG value from the DSLUSR or XAT form.

Valid Values: 1 - 2000

2.28 PKT TERM

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Description: This is the Packet TERM value from the DSLUSR or XAT form.

Valid Values: 1 - 2015

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SEC. 47: 5845 RECORD
RETROFIT INFORMATION FORM - RETINFO

1. GENERAL

The 5845 Record is available with 5E3 and later Software Releases. This form provides an ordering mechanism for Disk Configurations and Optional Disk Layouts in a retrofitting office. A retrofitting office cannot use this form to change a disk drive from simplex software backup to duplex active. This can be done using standard growth procedures between the preliminary and final ECD (Equipment Configuration Data) dumps. AMA and SM ODD capacities for each Disk Configuration and for each Optional Disk Layout are provided to the switch owner in the 5ESS Switch Administration Guidelines, 5D5-070-100, along with appropriate engineering rules. These guidelines are applicable to both installing and retrofitting offices.

An additional feature of the RETINFO form is to display the SM ODD, AMA and DISK ODD capacity that an office has requested on the form. Once the switch owner has completed the DISK TYPE and ("REQUIRED" OR "OPTIONAL") OPTIONING fields for MHD0,1 through MHD12,13, the total megabyte capacity is displayed in the SM ODD and AMA fields. This allows the switch owner to verify that the capacity they desire has in fact been ordered. The current PHYSICAL AM MEMORY SIZE, the DISK SIZE, and the EQUIPAGE fields for MHD0,1 through MHD12,13 are populated on the form from the retrofitting offices ECD dump. This information cannot change during a retrofit so these fields are no-change fields.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the office name on each record.

2.2 * KEY

Description: Enter the key value for this form. The only valid entry is 0 and is supplied as the default value.
Default: 0

2.3 OLD PHYSICAL AM MEMORY SIZE

Description: This field is automatically populated from the retrofitting office's ECD dump. This field is the size of old memory (in megabytes) of the 3B Processor. This is a no change field.

Software Release: 5E9(1) and later
Valid Entries: 48, 64, or 128

Data Rules:

For 5E11 thru 5E14, this field must be 48 for a "VCDX" HARDWARE PLATFORM.

For 5E15 and later, OLD PHYSICAL AM MEMORY SIZE must be 96 for "VCDX" HARDWARE PLATFORM.

2.4 HARDWARD PLATFORM

Description: This field is automaticaly populated from the retrofitting office's ECD dump. This is a no change field.

Software Release: 5E10 and later

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Data Rules:

For 5E15 and later, OLD PHYSICAL AM MEMORY SIZE must be 96 for VCDX

2.5 DISK CONFIGURATION

Description: This field replaces the DISK SIZE and DISK TYPE fields for 5E8 and later. It is populated automatically and cannot be changed. It applies only to the MHD0,1 - MHD30,31, excluding MHD14 and MHD15. For valid DISK CONFIGURATION information, refer to the DISK CONFIG field in Division 8, Section 8.

Software Release: 5E8 and later
Valid Entries:
- 5E10 and later: 66 or 11

TOTAL SIZE IN MEGABYTES

The following fields (Section 2.6 - Section 2.8) will automatically display the total SM ODD and the AMA capacity (in megabytes) the switch owner has requested by completing all other fields on this form. The DISK ODD (KB) field displays the total DISK ODD for the DISK CONFIGURATION (in kilobytes). Once all other fields on this form are completed and the switch owner activates the validate key, information for these three fields is displayed. Refer to the PCT SMODD/AMA field in Division 8, Section 9 for equippage information.

2.6 SM ODD

Description: The total SM ODD capacity is based on the Disk Configuration, the total number of disks equipped and optional layouts. This information is automatically displayed. This is a no change field.

Software Release: 5E6 and later

2.7 AMA

Description: The total AMA capacity is based on the Disk Configuration, the total number of disks equipped and optional layouts. This information will be automatically displayed. This is a no change field.

Software Release: 5E6 and later

2.8 DISK ODD (KB)

Description: Total Disk ODD per Disk Configuration in kilobytes. This is a no change field.

Software Release: 5E6 and later

MOVING HEAD DISKS

Moving Head Disks fields (Section 2.9 - Section 2.14) are automatically displayed. MHDs are displayed and equipped in pairs. The EQUIPAGE field is used to indicate whether or not a pair is equipped. MHD0,1 and MHD2,3 must always be equipped.

The NEW OPTIONING and OLD OPTIONING fields are used to indicate whether the MHD is required by the office to meet necessary memory requirements or if it is an optional disk pair to provide extra memory and/or extra AMA space. Note that the optioning fields only apply to MHD0,1 - MHD12,13.

For 5E8 and later, note that the NEW OPTIONING field name, applicable to MHD0,1 - MHD12,13, was changed to NEW PERCENT SMODD/AMA.

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2.9 MHD0,1 EQUIPAGE

Description: Is MHD0,1 equipped? This field will be automatically populated from the retrofitting office's ECD dump. This field indicates if Moving Head Disk 0 and 1 is equipped. This is a no change field.

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

This field must always be set to "Y".

2.10 MHD2,3 EQUIPAGE

Description: Is MHD2,3 equipped? This field will be automatically populated from the retrofitting office's ECD dump. This field indicates if Moving Head Disk 2 and 3 is equipped, "Y" (Yes) or "N" (No). This field must always be set to "Y". This is a no change field.

Software Release: 5E6 and later
Valid Entries: Y, N

Data Rules:

This field must always be set to "Y".

2.11 MHD4,5 - MHD30,31 EQUIPAGE

Description: This field will be automatically populated from the retrofitting office's ECD dump. They indicate which Moving Head Disk pairs are equipped. Refer to Division 8, Section 8 for equippage information.

2.12 DISK SIZE

Description: This field is automatically populated from the retrofitting office's ECD dump. A 3 represents 340 or SCSI322. A 6 represents SCSI600. This is a no change field.

Software Release: 5E8 and later

2.13 MHD4,5 - MHD12,13 NEW PERCENT SMODD/AMA

Description : MHD4,5 - MHD12,13 new disk usage optioning. This is a no change field.

Valid NEW PERCENT SMODD/AMA Entries
5E8 - 5E9(2)

Entry	Definition
R	Required
1	0% SMODD
2	25% SMODD
3	50% SMODD
4	75% SMODD
5	100% SMODD

Valid NEW PERCENT SMODD/AMA Entries
5E10 and later

Entry	Definition
R	Required
1	0% SMODD
2	25% SMODD
3	50% SMODD

For 5E10 and later, if DISK CONF is 11, enter 1 - 3. If DISK CONF is 63 or 66, enter 1 - 5.

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2.14 MHD4,5 - MHD12,13 OLD OPTIONING

Description: MHD4,5 - MHD12,13 old disk usage optioning. This is a no change field.

Software Release: 5E8 and later

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SEC. 48: 5846 RECORD
INTEGRATED DIGITAL CARRIER UNIT
EQIDCU FORM

1. GENERAL

The 5846 Record is available with the 5E8 Software Release. It is used to define the IDCU (Integrated Digital Carrier Unit) and the LSI (Loop Side Interface) packs, ELI (Electric Line Interface) packs, and the PIDBs (Peripheral Interface Data Buses) associated with the IDCU.

NOTE: In the absence of an IDCU feature section in Division 2, the following discussion (including EQIFAC and RTERM Requirements, and IDCU Originating Equipment) is provided for general information.

IDCU equipment can be attached to standard or loaded SMs (Switching Modules). However, when providing analog (as with DCLU), it may be mounted in an SM with a standard configuration, but when this unit functions with ISDN, it must be mounted in an SM with a loaded configuration.

Using IFACs (IDCU Facilities), IDCU equipment provides for both analog and ISDN ports which can be attached to either PUBs (Peripheral Unit Buses) or to RTs (Remote Terminals). IDCU equipment can be provisioned to accommodate up to 40 IFAC connections. Provisioning of PUBs requires only the EQIFAC form (5847 Record). There are no restrictions to the number of PUB IFAC connections.

Provisioning of RTs also requires that the RTERM form (5174 Record) be defined. The RTERM form identifies the IFAC connections defined on the EQIFAC form. After an RT is defined on the RTERM form, an IDCU port can be defined as indicated below:

IDCU Port/Equipment Assignments

ODA Form	RT/IFAC Type	OE Format
LINE (5109)	TR008 TR303	RT
LINE (5109)	DS1	PUB43801
MLHLN (5111)	TR008 TR303	RT
TRUNK (5204)	TR008 TR303	RT
DSL (5902)	TR303	RT
DSLUSR (5908)	TR303	RT

Port assignments cannot be assigned to IDCU equipment unless the related PUB43801 IFAC or RTERM IFACs are defined and are "operational". Port assignments cannot be duplicated on the same SM.

1.1 EQIFAC Requirements

Each EQIFAC form can define up to 20 IFAC connections. Two EQIFAC forms may be used with each EQIDCU form to define up to 40 IFACs per IDCU. IFACs defined on the EQIFAC form with PUB43801 set to "N" are connected to remote terminals. A TR008 remote terminal can have up to 5 IFACs connected to it. A TR303 remote terminal can have from 2 to 28 IFACs connected to it.

An IFAC defined on the EQIFAC form with PUB43801 set to "Y" will be connected to DAC equipment. PUB43801 ports can be defined on the LINE form directly from operational IFACs of the EQIFAC form.

1.2 RTERM Requirements

Two types of remote terminals can be defined on the RTERM form: TR008 and TR303. The TR008 remote terminal can have from 1 to 5 IFACs defined on the EQIFAC form connected to it. Up to 96 analog lines can be assigned on a TR008 when OE SIZE on the OFCOPT form (5509 Record) is set to accommodate an 8-digit Office Equipment number. A TR303 remote terminal can have from 2 to 28 IFACs defined on the EQIFAC form connected to it. Up to 2048 analog and ISDN lines can be assigned to a TR303 when OE

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SIZE on the OFCOPT form is set to accommodate a 10-digit Office Equipment number.

1.3 IDCU Originating Equipment

For operational TNs to be assigned via IDCU remote terminal ports, the EQIDCU must be operational, the EQIFAC must have operational IFACs assigned, and an RTERM form must be operational and connected to the IDCU equipment with the operational IFACs defined on the EQIFAC form.

If an IDCU remote terminal or PUB is to be provisioned, the same OE TYPE of either "G" (10-digit) or "M" (8-digit) must be specified for all associated assignment forms. The OE TYPE is dictated by the OE SIZE on the OFCOPT form (5509 Record).

IDCU ports can be assigned the functionality of all analog and ISDN ports. However, IDCU does not support OSPS.

1.4 PIDB Assignments

PIDB (Peripheral Interface Data Bus) assignments are equipped in pairs of the same PIDB TYPE and relative PIDB NO. on the two sides of both Service Groups. The entries on this form are only for SG0 (Service Group 0), since the assignments for SG1 (Service Group 1) can be inferred from the assignments for SG0.

Two types of PIDBs can be defined for IDCU on the EQIDCU form - DUAL or PSU. D-Channel traffic requires at least one PIDB TYPE of "PSU". For TR303 RTs, EOCs/TMCs also require at least one PIDB TYPE of "PSU".

PIDBs of PIDB TYPE "DUAL" connect to the TSIU (Time Slot Interchange Unit) and the assignments to the same PIDB NO. on the two sides must be made to the same DI SHLF with SG0 assigned to an even numbered PIDB and SG1 assigned to the next higher odd numbered PIDB. The PIDB TYPE of "DUAL" is the only type allowed in PIDB NO. positions of 1 - 11. PIDB NO. 0 is always required and must have a PIDB TYPE of "DUAL".

PIDBs of PIDB TYPE "PSU" connect to the PSU with the same relative PIDB NO. assigned to the same PSU SHLF and DFPOS. The PIDB TYPE of "PSU" is the only type allowed in PIDB No. positions of 16 - 22. PIDBs of type "PSU" must have the PSU SHELF and DFPOS defined on the EQPSU (5741 Record) and EQPSUPH (5742 Record) forms.

PIDB NO. 12 - 15 positions can be shared by both "DUAL" and "PSU". If the PIDB TYPE is "PSU", there are special restrictions due to space availability on the backplane. If positions 12 - 15 are "PSU", then a specific PIDB NO. must not be entered. The table below provides allowable configurations.

Valid LSI0 EQSTAT Entries

PIDB NO.	PIDB TYPE	PIDB NO.	PIDB TYPE
8	Dual	12	Dual or Unassigned
9	Dual	13	Dual or Unassigned
10	Dual	14	Dual or Unassigned
11	Dual	15	Dual or Unassigned
15	PSU	11	Unassigned
16	PSU	10	Unassigned
17	PSU	9	Unassigned
18	PSU	8	Unassigned

1.5 Recent Change View

The corresponding Recent Change View for this form is 19.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

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Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switch Module identification number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For each SM assignment, there must be a corresponding EQIM form (5700 Record).

For 5E9(2) and later, each value of SM entered on the EQIDCU and EQIFAC forms must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports Integrated Digital Carrier Units.

2.3 * IDCU

Description: Enter the Integrated Digital Carrier Unit identification number.

Required Field.
Valid Entries:
- 5E9(2) and earlier: 0 - 7
- 5E10 and later: 0 - 42 (SM-2000 only)

Data Rules:

Equipment unit number assignments cannot be duplicated among the EQIDCU (5846 Record), EQDCLU (5810 Record), EQISLU (5731 Record), EQLU (5710 Record), and EQRISLU (5732 Record) forms for a specified SM.

2.4 IDCU EQSTAT

Description: Enter the status of the IDCU equipment.

Required Field.
Default: O
Valid Entries:

Valid IDCU EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.5 #IDCU CLI

Description: Enter the Change Level Indicator for this IDCU.

Required Field.
Valid Entries: 0 - 7FFFFFFF

2.6 # EQL BAY

Description: Enter the equipment location bay number.

Required Field.

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Valid Entries:

Valid EQL BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQL BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

2.7 # EQL UNVER

Description: Enter the equipment location unit vertical position.

Required Field.
Valid Entries: 0 - 84

2.8 # EQL AISLE

Description: Enter both the equipment floor and aisle number.

Required Field.
Valid Entries: 0000-9999

2.9 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQL BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.10 #MAP X

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Description: This field is a Recent Change only field on View 19.12. It cannot be entered in ODA.

This field is used to hold data that will be given to the Lucent Secured Feature Administrator when obtaining a Passsword for PIDB growth. This field supports the PIDB Growth Control feature. For more information on this feature, see Division 2, Section 7E.

Software Release: 5E9(1) and later.

2.11 PIDB LIMIT

Description: Indicates the maximum number of operational Peripheral Interface Data Buses allowed on the IDCU. This field supports the PIDB Growth Control feature. For more information on this feature, see Division 2, Section 7E.

Software Release: 5E9(1) and later.
Required Field.
Valid Entries: 4, 8, 12, or 16

Data Rules:

More DI/PIDB assignments can not be made than are allowed by the value of PIDB LIMIT.

For 5E10 and later, if PIDB TYPE is "PSU", neither the PSU SHELF SIDE O CLI or the PSU SHELF SIDE 1 CLI values may be 3 ("PSU" PIDB TYPEs cannot be associated with data fanout multiple PIDB PSU shelves).

2.12 PASSWORD

Description: This field is a Recent Change only field on View 19.12. It cannot be entered in ODA.

IDCU PIDB limit control password. This field is used to specify the password required to make more PIDBs operational than allowed by the current limit. The password can be obtained from the Lucent Secured Feature Administrator in order to allow PIDB growth beyond the PIDB limit. This field supports the PIDB Growth Control feature. For more information on this feature, see Division 2, Section 7E.

Software Release: 5E9(1) and later.

SERVICE GROUP 0

The following fields (Section 2.13 - Section 2.18) define IDCU parameters specific to SG0.

2.13 # CTRL GROUP

Description: Enter the Control Group interface number.

Required Field.
Valid Entries:
- For 5E9(2) and earlier: 0 or 1
- For 5E10 and later: 0 - 1 for SM or
- 0 - 3 for SM-2000.

Data Rules:

If CTRL GROUP is 1, the EQSTAT assigned on this form must be less than or equal to the CONTROL GROUP 1 STATUS assigned on the corresponding EQIM form.

CONTROL GROUP numbers assigned on the following forms must be defined as CI on an EQCI

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form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O"' is greater than "G" which is greater than "U").

2.14 # CTRL PORT

Description: Enter the Control Port identification.

The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form.

Required Field.
Valid Entries: even number 0 - 20

Data Rules:

Control Port assignments cannot be duplicated on a SM.

Control Port assignments cannot be duplicated on the following forms: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQRISLU (5732 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record).

For 5E12 and later, for the EQAIU, EQIDCU, EQISLU, EQRISLU and EQPSU forms, two control ports are assigned based on the Control Port entered on the form. The first is the Control Port entered on the form, the second Control Port is one plus the Control Port entered on the form. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors. Non-SM-2000 class processors reserve Control Group/Control Port 0/0 and 0/1 for the Local Digital Service unit. No other unit may specify Control Group/Control Port 0/0 or 0/1 for non-SM-2000 class processors.

2.15 LSI0 EQSTAT

Description: Enter the equipment status of the SG0 LSI0 (Loop Side Interface 0) pack.

Valid LSI0 EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

SG0 LSI0 EQSTAT must be lower than or equal to ELI0 EQSTAT.

2.16 LSI1 EQSTAT

Description: Enter the equipment status of the SG0 LSI1 (Loop Side Interface 1) pack.

Valid LSI1 EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.17 LSI0 CLI

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Description: Enter the LSI0 CLI value.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

The correct CLI value is 00000000.

2.18 LSI1 CLI

Description: Enter the LSI1 CLI value.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

The correct CLI value is 00000000.

ELECTRIC LINE INTERFACE 0

The following fields (Section 2.19 - Section 2.21) define the ELI 0 packs.

2.19 EQSTAT

Description: Enter the status of the ELI0 equipment.

Valid ELI0 EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

ELI0 EQSTAT must be lower than or equal to IDCU EQSTAT.

2.20 CBL SERIES

Description: Enter the cable series used for this ELI0.
Valid Entries: 609S or 1249S

2.21 CBL DISTANCE

Description: Enter the distance (in feet) to the DSX panel for this ELI0.
Valid Entries:
- 0 - 655, for 609S Cable
- 0 - 450, for 1249S Cable

SERVICE GROUP 1

The following fields (Section 2.22 - Section 2.27) define IDCU parameters specific to Service Group 1.

2.22 CTRL GROUP

Description: This field is automatically entered with an identical value as CTRL GROUP for Service Group 0.

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2.23 CTRL PORT

Description: This field is automatically entered with a value one greater than CTRL GROUP for Service Group 0.

2.24 LSI0 EQSTAT

Description: Enter the equipment status of the SG1 LSI0 (Loop Side Interface 0) pack.

Valid LSI1 EQSTAT

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

SG0 LSI1 EQSTAT must be lower than or equal to ELI0 EQSTAT.

2.25 LSI1 EQSTAT

Description: Enter the equipment status of the SG1 LSI1 (Loop Side Interface 1) pack.

Valid LSI1 EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.26 LSI0 CLI

Description: Enter the SG1 LSI0 CLI value.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

The correct CLI value is 00000000.

2.27 LSI1 CLI

Description: Enter the SG1 LSI1 CLI value.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

The correct CLI value is 00000000.

ELECTRIC LINE INTERFACE 1

The following fields (Section 2.28 - Section 2.30) define the ELI1 packs.

2.28 EQSTAT

Description: Enter the status of the ELI 1 equipment.

Valid EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

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Data Rules:

ELI1 EQSTAT must be lower than or equal to IDCU EQSTAT.

2.29 CBL SERIES

Description: Enter the cable series used for this ELI1.
Valid Entries: 609S or 1249S

2.30 CBL DISTANCE

Description: Enter the distance (in feet) to the DSX panel for this ELI1.
Valid Entries:

- 0 - 655, for 609S cable
- 0 - 450, for 1249S cable

Data Rules:

For PIDB N0s 9 - 14, CBL SERIES and CBL DISTANCE are not required.

PIDB NUMBER (PIDB)

The following fields (Section 2.31 - Section 2.34) define the PIDBs (Peripheral Interface Data Buses). Before any DPIDBs can be assigned to the IDCU, a PSU with protocol handlers must exist on the IDCU's SM. PIDB and DFPOS (Data Fanout Positions) values depend upon the entry in the PIDB TYPE field. Allowable configurations are provided below in the Valid PIDB Number Combinations table (see the PIDB/DFPOS field).

2.31 PIDB TYPE

Description: The PIDB TYPE can be either a DUAL (Dual) unit or a PSU (Packet Switch Unit). Enter the type of PIDB.

Valid PIDB TYPE Entries

Entry	Description
DUAL	TSIU (Time Slot Interchange Unit) PIDB.
PSU	PSU (Packet Switched Unit) PIDB.

Data Rules:

If PIDB TYPE is "PSU", an EQPSU form (5741 Record) and a EQPSUPH form (5742 Record) must be defined with the same SM and PSU SHELF combination.

If PIDB TYPE is "PSU", a corresponding RTERM form (5714 Record) must exist with the following time slot management fields entered: TMC PRI DPIDB, TMC NPRI DPIDB, EOC PRI DPIDB and EOC NPRI DPIDB.

If PIDB TYPE is "PSU", the PSU SHELF/DF POS assignments on the EQIDCU, EQISLU, and/or EQAIU forms for a specified SM must be unique.

If PIDB TYPE is "PSU", a matching PSU SHELF must be assigned on the EQPSU form and EQSTAT must be "O".

EQAIU, EQIDCU, or EQISLU forms with PIDB TYPE of "PSU" must have a corresponding EQPSUPH form with the same SWITCHING MODULE and PSU SHELF combination.

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For 5E10 and later, when the D ISCN and/or PPB1/PPB2 ISCN are assigned on the DSL form, and/or ISCN1 and/or ISCN2 are assigned on the DSLUSR form, and/or SHELF/CHL GRP/CHL combinations are assigned on the MISLINK OE with an originating equipment type of "G", each ISCN or SHELF/CHL GRP/CHL combination must have a proper Packet Switching Unit shelf assigned on the EQIDCU form. The PSU shelf specified by the first digit of the ISCN on either the DSL or DSLUSR forms or by the entry in the SHELF field on the MISLINK form must be defined on the EQIDCU form with a PIDB TYPE of "PSU".

2.32 EQSTAT

Description: Enter the status of the ELI PIDB.

Valid EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.33 DI/PSU SHLF

Description: The DI/PSU SHLF field specifies whether the DI or the PSU is used. Enter the value of the DI or PSU SHLF used.
Valid Entries:

- For 5E9(2) and earlier: 0 - 1, DUAL, for DI (Direct)
- For 5E9(2) and earlier: 0 - 4, PSU, for Packet Switched Unit (PSU)
- For 5E10 and later: DI: 0 - 1 for SM or 0 - 5 for SM-2000
- For 5E10 and later: PSU SHLF: Enter 0 - 4.

Data Rules:

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

2.34 PIDB/DFPOS

Description: The PIDB/DFPOS (PIDB/Data Fanout Positions) field specifies whether a PIDB or a DFPOS is used.
Valid Entries: (see Valid PIDB Number Combinations table below)

The entries in this field depend upon the PIDB TYPE. If "DUAL" is entered, the PIDB data port must be populated. If "PSU" is entered, the DFPOS field must be populated. Enter the PIDB number or the Data Fanout Position.

Valid PIDB Number Combinations 5E9(2) and earlier

PIDB TYPE	Positions	EQSTAT	DI or PSU SHLF	PIDB or DFPOS
DUAL	11 - 0	O,G,U	DI=0,1	PIDB= 0-14
DUAL	15 - 12	O,G,U	DI=0,1	PIDB= 0-14
PSU	15 - 12	O,G,U	PSU SHLF=0-4	DFPOS= 0-5
PSU	22 - 16	O,G,U	PSU SHLF=0-4	DFPOS= 0-5

Valid PIDB Number Combinations 5E10 and later

PIDB	Pos	EQSTAT	DI or	DI or	PIDB or	PIDB or

TYPE			PSU SHLF for SM	PSU SHLF for SM2000	DFPOS for SM	DFPOS for SM2000
DUAL	11 - 0	O,G,U	DI=0,1	DI=0-5	PIDB = 0-14	PIDB = 0-22
DUAL	15 - 12	O,G,U	DI=0,1	DI=0-5	PIDB =0-14	PIDB = 0-22
PSU	15 - 12	O,G,U	PSU SHLF = 0-4	PSU SHLF = 0-4	DFPOS = 0-5	DFPOS = 0-5
PSU	22 - 16	O,G,U	PSU SHLF = 0-4	PSU SHLF = 0-4	DFPOS = 0-5	DFPOS = 0-5

```
eqidcu                    5ESS SWITCH
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5846)            INTEGRATED DIGITAL CARRIER UNIT

*1. SM        ___          SG0                SG1
*2. IDCU      _      #11. CTRL GROUP _          CTRL GROUP
 3. IDCU EQSTAT O     #12. CTRL PORT __          CTRL PORT
#4. IDCU CLI   _________ 13. LSI0 EQSTAT _      22. LSI0 EQSTAT _
#5. EQL BAY    _      14. LSI1 EQSTAT _      23. LSI1 EQSTAT _
#6. EQL UNVER  __     15. LSI0 CLI   _________ 24. LSI0 CLI   _________
#7. EQL AISLE  ____   16. LSI1 CLI   _________ 25. LSI1 CLI   _________

                      ELI0              ELI1
   MAP X           17. EQSTAT     _     26. EQSTAT     _
#9. PIDB LIMIT __     18. CBL SERIES  _____  27. CBL SERIES  _____
   PASSWORD        19. CBL DISTANCE ___   28. CBL DISTANCE ___
```

```
eqidcu                    5ESS SWITCH
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5846)            INTEGRATED DIGITAL CARRIER UNIT

                  29. PIDB NUMBER (PIDB)

   PIDB PIDB          DI/    PIDB/      PIDB PIDB          DI/    PIDB/
ROW  NO. TYPE   EQSTAT PSU SHLF DFPOS  ROW  NO. TYPE  EQSTAT PSU SHLF DFPOS
 1   0 ____     _     _    __    7    6 ____     _     _    __
 2   1 ____     _     _    __    8    7 ____     _     _    __
 3   2 ____     _     _    __    9    8 ____     _     _    __
 4   3 ____     _     _    __   10    9 ____     _     _    __
 5   4 ____     _     _    __   11   10 ____     _     _    __
 6   5 ____     _     _    __   12   11 ____     _     _    __
```

```
eqidcu                    5ESS SWITCH
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5846)            INTEGRATED DIGITAL CARRIER UNIT

                  29. PIDB NUBMER (PIDB)

   PIDB PIDB          DI/    PIDB/      PIDB PIDB          DI/    PIDB/
ROW  NO. TYPE   EQSTAT PSU SHLF DFPOS  ROW  NO. TYPE  EQSTAT PSU SHLF DFPOS
13   12 ____     _     _    __   19   18 ____     _     _    __
```

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```
14  13 ____    _   _   __    20  19 ____   _   _   __
15  14 ____    _   _   __    21  20 ____   _   _   __
16  15 ____    _   _   __    22  21 ____   _   _   __
17  16 ____    _   _   __    23  22 ____   _   _   __
18  17 ____    _   _   __
```

Figure 1 SAMPLE EQIDCU FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqidcu                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5846)             INTEGRATED DIGITAL CARRIER UNIT

 *1. SM        001            SG0                SG1
 *2. IDCU      01      #12. CTRL GROUP _        CTRL GROUP _
  3. IDCU EQSTAT U      #13. CTRL PORT __        CTRL PORT __
 #4. IDCU CLI   00000000  14. LSI0 EQSTAT _      23. LSI0 EQSTAT _
 #5. EQL BAY     0      15. LSI1 EQSTAT _      24. LSI1 EQSTAT _
 #6. EQL UNVER  76      16. LSI0 CLI  _________ 25. LSI0 CLI  _________
 #7. EQL AISLE  0000    17. LSI1 CLI  _________ 26. LSI1 CLI  _________
  8. INTF UNIT  0
                        ELI0              ELI1
    MAPX      _       18. EQSTAT     _    27. EQSTAT     _
#10. PIDB LIMIT __      19. CBL SERIES  _____  28. CBL SERIES  _____
    PASSWORD  _         20. CBL DISTANCE ___   29. CBL DISTANCE ___
```

```
eqidcu                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5846)             INTEGRATED DIGITAL CARRIER UNIT

                30. PIDB NUMBER (PIDB)
   PIDB PIDB      DI/    PIDB/    PIDB PIDB      DI/    PIDB/
ROW NO  TYPE EQSTAT PSUSHLF DFPOS ROW NO  TYPE EQSTAT PSUSHLF DFPOS
 1  0  ____  _     _   __    7  6  ____  _     _   __
 2  1  ____  _     _   __    8  7  ____  _     _   __
 3  2  ____  _     _   __    9  8  ____  _     _   __
 4  3  ____  _     _   __   10  9  ____  _     _   __
 5  4  ____  _     _   __   11 10  ____  _     _   __
 6  5  ____  _     _   __   12 11  ____  _     _   __
```

```
eqidcu                    5ESS Switch       _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5846)             INTEGRATED DIGITAL CARRIER UNIT

                30. PIDB NUMBER (PIDB)
   PIDB PIDB      DI/    PIDB/    PIDB PIDB      DI/    PIDB/
```

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ROW NO		TYPE	EQSTAT	PSUSHLF	DFPOS	ROW NO		TYPE	EQSTAT	PSUSHLF	DFPOS
13	12	____	_	_	__	19	18	____	_	_	__
14	13	____	_	_	__	20	19	____	_	_	__
15	14	____	_	_	__	21	20	____	_	_	__
16	15	____	_	_	__	22	21	____	_	_	__
17	16	____	_	_	__	23	22	____	_	_	__
18	17	____	_	_	__						

Figure 2 SAMPLE EQIDCU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 49: 5847 RECORD
IDCU FACILITY EQUIPMENT - EQIFAC

1. GENERAL

The 5847 Record is available with the 5E8 Software Release. It is used to initially provision and to support the growth of an IDCU (Integrated Digital Carrier Unit) Facility. The IFAC (IDCU Facility) is the connection between the IDCU and the RT (Remote Terminal) or PUB (Peripheral Unit Bus). A fully loaded IDCU system has four LSI (Loop Side Interface) packs (two LSI packs per Service Group). Each LSI pair terminates up to twenty IFACS, for a maximum of forty IFACs per IDCU.

Additional information about each IFAC which is defined on the EQIFAC form include: operational status, performance monitoring group, facility identification, suppression method and whether the IFAC is connected to an RT or to a PUB which includes switched or non-switched special circuits (burglar or fire alarms, ATM circuits, etc). Ports cannot be assigned through IDCU equipment unless the related IFACs are in the operational state on the EQIFAC form.

IFACs defined on the EQIFAC form may be attached to either RTs or to PUBs (i.e., PUB43801). IFACs defined on the EQIFAC form with the PUB43801 field set to "N" may be connected to RTs or reserved for later remote terminal use. An RT must be defined on the RTERM form (5174 Record).

IFACs defined on the EQIFAC form with the PUB43801 field set to "Y" may be connected to special circuit facilities such as DACS or reserved for later use. Special circuit facilities can be defined on the LINE form (5109 Record) directly from IFACs defined on the EQIFAC form.

Performance thresholds allowed for an IFAC (IDCU facility) are defined in the PM GRP (Performance Monitoring Group) field on the EQIFAC form. The office default threshold value is FACDEF. If a unique range is required for a given IFAC, a new PM GRP name is defined on the PMTHRESH form (5948 Record).

1.1 EQIDCU Requirements

Related IDCU equipment must be defined on an EQIDCU form (5846 Record) before an EQIFAC form is defined.

1.2 RTERM Requirements

Remote Terminals of type TR008 or TR303 are defined on the RTERM form (5174 Record). The TR008 remote terminal can have from 1 to 5 IFACs connected and will handle up to 96 analog lines. The TR303 remote terminal can have from 2 to 28 IFACs connected and will handle up to 2048 analog and ISDN lines.

After the related EQIDCU, EQIFAC and RTERM forms are defined and in the operational state, analog IDCU ports can be defined on the LINE (5109 Record), MLHLN (5111 Record), and TRUNK (5204 Record) forms. ISDN IDCU ports can be defined on the DSL form (5902 Record) or the DSLUSR form (5908 Record). PUB ports are defined on the LINE form.

1.3 Carrier Group Alarm Hash Indexes

The CGA (Carrier Group Alarm) data is associated with the VT/DS1 and STE/STS facilities. For 5E9(2) and later, only 522 hash indexes are available per switching module. One hash index is allocated to each instance of the following for a specific SM:

- 1 per each pair STE/STS on a specified SM (EQSTE form). (The EQSTE form is associated with the DNU-S.)
- 1 per each VT (Virtual Tributary) on a specified SM (EQVT form). (The EQVT form is associated with

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the DNU-S.)

- 1 per each DFI (Digital Facility Interface) of a DLTU (Digital Line/Trunk Unit) where FAC IND is 0 or 1, and DFI TYPE is not "H1" or "H2", i.e. DFI USAGE of "H1" and "H2" are not counted (EQDUP form). (The EQDUP form is associated with DLTU.)
- 1 per each DFI-2 (2 per EQDUP form) where FAC IND is 3. (The EQDUP form is associated with DLTU.)
- 1 per pack - POS, EQST, CLI, CLEI combination. (30 packs per DCLU on EQDCLP form) (The EQDCLP form is associated with DCLU.)
- 1 per IFAC - EQSTAT, SUP MTHD, PUB43801 combination. (20 per IDCU on the EQIFAC form) (The EQIFAC form is associated with IDCU.)

The sum of the above total number of allocated hash indexes (instances) cannot be greater then 522 for any one specific SM.

1.4 Recent Change View

The corresponding Recent Change View for this form is 20.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switching Module identification number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For each SM assignment, there must be a corresponding EQIM form (5700 Record).

2.3 * IDCU

Description: Enter the IDCU identification number.

Required Field.
Valid Entries: 0 - 7

Data Rules:

IDCUs share the same unit number range with Line Units, (R) ISLUs and DCLUs. Therefore, unit numbers assigned on this form may not be assigned on any EQLU, EQISLU, EQRISLU, or EQDCLU form with the same SM number.

2.4 * LSI

Description: Enter the Loop Side Interface circuit number identification.

Required Field.

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Valid Entries: 0 or 1

Data Rules:

If an IFAC position (0 - 19 for LSI 0, and 20-39 for LSI 1) is specified, EQSTAT and LSI must be entered.

IFAC

The following fields (Section 2.5 - Section 2.9) are rows in the IFAC field group used to define the IDCU facility (DS1) connections. From 1 to 20 IFACs can be connected to each LSI on the IDCU. If any field in an IFAC row is specified, then EQSTAT, SUP MTHD and PUB43801 must be specified.

- ***NOTE:*** The IFAC fields are completed by the switch owner. The switch owner will determine what type of interface is required for the remote equipment connected to the IDCU.

2.5 EQSTAT

Description: Enter the status of the equipment.

Valid EQSTAT Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

- ***NOTE:*** Only "O" is allowed in new offices and equipment additions.

Data Rules:

If EQSTAT is "G" or "O", a corresponding EQIDCU form (5846 Record) must exist with LSI EQSTAT defined as shown in the following table.

Valid LSI/EQSTAT Combinations

IFAC EQSTAT	LSI	IFAC NUM	IFAC	EQIDCU LSI EQSTAT
G	0	0 - 19	0 - 19	LSI0 = G,O
O	0	0 - 19	0 - 19	LSI0 = O
G	1	0 - 19	20 - 39	LSI1 = G,O
O	1	0 - 19	20 - 39	LSI1 = O

For 5E9(2) and later, see paragraph Section 1.3 on Carrier Group Alarms.

2.6 PM GRP

Description: Enter the group name of the Performance Monitoring threshold.
Valid Entries: 1 - 8 characters

Data Rules:

When PM GRP is entered, a corresponding PMTHRESH form (5948 Record) must exist with PM TYPE of "IFAC".

If PM GRP is not entered, the office default of FACDEF for IFAC is used. If the office default for IFAC is not defined, the generic default of /FACGDEF for IFAC is used.

2.7 FACILITY ID

Description: Enter the IDCU facility identifier.
Valid Entries: 1 - 25 characters

2.8 SUP MTHD

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Description: Enter the Suppression Method.

Valid SUP MTHD Entries

Entry	Description
D4	IDCU to PUB43801, D4 ZCS mode. 56K restricted transmission; cannot send zero bytes, D4, rob-bit, with ZCS (see Note below).
FE8Z	IDCU to PUB43801, FE B8ZS mode. 56K clear channel transmission; can send zero bytes, Fe, rob-bit, with B8ZS. FE8Z is the recommended SUP MTHD for CCS7 and Primary Rate Interface trunks utilizing extended super frame format with B8ZS.
64K	IDCU to PUB43801, D4 B8ZS mode. 64K clear channel transmission; can send zero bytes, Fe, with B8ZS. This value is the same as FE8Z, except rob-bit is disabled by nail-up software.
FEB7	IDCU to PUB43801, FE ZCS mode. 56K restricted transmission; cannot send zero bytes, Fe, rob-bit, with ZCS (see Note below).
TR8ZC	IDCU to TR008, ZCS mode. This mode is used in TR008 RTs that are remoted over 24-channel facilities which require ZCS. These 24-channel facilities include: Fs, ZCS, CCS, and 4K data links. (See SUP MTHD Note: below.)
TR8B8	IDCU to TR008, B8ZS mode. This mode is used in TR008 RTs that are remoted over 24-channel facilities which require B8ZS. These 24-channel facilities include: Fs, B8ZS, CCS, and 4K data links. (See SUP MTHD Note: below.)
303ZC	IDCU to TR303, ZCS mode. This mode is used in TR303 RTs that are remoted over 24-channel facilities which require ZCS. These 24-channels include: Fe, ZCS, CCS, and 4K data links. (See SUP MTHD Note: below.)
303B8	IDCU to TR303, B8ZS mode. This mode is used in TR303 RTs that are remoted over 24-channel facilities which require B8ZS. These 24-channel facilities include Fe, B8ZS, CCS, and 4K data links. (See SUP MTHD Note: below.)

- ***NOTE:*** Applications that do not send signaling along the same path as data, e.g., ISDN and CCS7, automatically upgrade a 56K data rate to 64K. The 5ESS Switch application software upgrades the data rate to 64K by disabling rob-bit signaling on a per-channel basis. (Rob-bit signaling is the method traditionally used by trunks to send control signals along the same path as data. When an application such as ISDN or CCS7 sends the signal along another route, the rob-bit signaling is inhibited, reclaiming the PCM bits "robbed" for signaling, and increasing the data rate to 64K.)

Data Rules:

When the IFAC defined on this form is assigned to an RT INTERFACE of "TR008" on the RTERM form (5714 Record), SUP MTHD must be "TR8ZC" or "TR8B8" on this form.

When the IFAC defined on this form is assigned to an RT INTERFACE is "TR303" on the RTERM form (5714 Record), SUP METHOD must be "303ZC" or "303B8" on this form.

If ISDN service is planned for this TR303, SUP MTHD must be "303B8".

The SUP METHOD defined for a "TR303" or a "TR008" RT must have IFACS of the same SUP METHOD assigned on the RTERM form.

- ***NOTE:*** As with all transmission facility connections, the SUP MTHD must be consistent across all equipment used throughout the connection from the RT to the 5ESS Switch. For example, for an RT with a SUP MTHD set to "ZCS" or "B8ZS", the type of transmission equipment used (e.g., T1 line repeaters, multiplexers, and fiber links) must be compatible (and optioned) with ZCS or B8ZS signaling, respectively, as well as the 5ESS Switch.

If PUB43801 is "Y", enter "FEB8", "FE8Z", "D4", or "64K".

If PUB43801 is "N", enter "TR8ZC", "TR8B8", "303ZC", or "303B8".

2.9 PUB43801

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Description: Is this IDCU facility used on a PUB43801 interface?
Valid Entries: Y, N

Data Rules:

If PUB43801 is "Y", the IFAC (number) cannot be defined on the RTERM form (5174 Record).

---

eqifac 5ESS SWITCH
SCREEN 1 of 3 OFFICE DATA ADMINISTRATION
(5847) IDCU FACILITY EQUIPMENT (IFAC)

*1. SM 004
*2. IDCU 4
*3. LSI 0

4. IFAC

ROW	NUM		EQSTAT	PM GRP	FACILITY ID	SUP MTHD	PUB43801
1	0	G	FACDEF	IFAC=4-4-0	TR8ZC	N	
2	1	G	FACDEF	IFAC=4-4-1	TR8ZC	N	
3	2	_	_____	_____	_____	_____	_
4	3	_	_____	_____	_____	_____	_
5	4	_	_____	_____	_____	_____	_
6	5	_	_____	_____	_____	_____	_

---

eqifac 5ESS SWITCH
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5847) IDCU FACILITY EQUIPMENT (IFAC)

4. IFAC

ROW	NUM		EQSTAT	PM GRP	FACILITY ID	SUP MTHD	PUB43801
7	6	_	_____	_____	_____	_____	_
8	7	_	_____	_____	_____	_____	_
9	8	_	_____	_____	_____	_____	_
10	9	_	_____	_____	_____	_____	_
11	10	_	_____	_____	_____	_____	_
12	11	_	_____	_____	_____	_____	_
13	12	_	_____	_____	_____	_____	_

---

eqifac 5ESS SWITCH _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5847) IDCU FACILITY EQUIPMENT (IFAC)

4. IFAC

ROW	NUM		EQSTAT	PM GRP	FACILITY ID	SUP MTHD	PUB43801
14	13	_	_____	_____	_____	_____	_
15	14	_	_____	_____	_____	_____	_
16	15	_	_____	_____	_____	_____	_
17	16	_	_____	_____	_____	_____	_
18	17	_	_____	_____	_____	_____	_

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19 18 _ _____ _____ _____ _
20 19 _ _____ _____ _____ _

Figure 1 SAMPLE EQIFAC FORM 5E8 AND LATER SOFTWARE RELEASES

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SEC. 50: 5848 RECORD CONTROL INTERFACE - EQCI

1. GENERAL

The 5850 Record is available with the 5E9(2) and later Software Releases. It is used to define PICBs (Peripheral Interface Control Buses). In the SM-2000 class processors, the CI is similar to the CI in the SM. The PICB allows the SMP (Switching Module Processor) to send messages to and get responses from the peripheral units. One CI is required in an SM-2000. The major difference between the CI in the SM-2000 class processors and in the SM is that the SM-2000 processors allow for up to 4 active CIs. This allows for a maximum of 92 PICBs.

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.2.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 *MC

Description: Enter the Module Control number.

Required Field.
Valid Entries: 0 - 1

2.4 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5853 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

2.5 *CI

Description: Enter the Control Interface group number.

Required Field.

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Valid CI Entries	
Entry	**Definition**
0 - 1	SM.
0 - 3	SM-2000 class procesors.

Data Rules:

The Control Interface numbers assigned on this form must have an associated CONTROL GROUP number defined on an equipment form.

CI values for an SM with an SM-2000 class processor must be entered in pairs, for MC 0 and MC 1.

CI pairs entered on this form for an SM-2000 class processor must be entered in sequential order (CI 0 must be entered before CI 1).

If CI is 0 - 1 (SM), the CI pair for CI 0 must be entered.

If CI is 0 - 3 (SM-2000 class processor), the CI pair for CI 0 must be entered.

If CI is 2 or 3, the corresponding EQIM form must have UNIT TYPE set to an SM-2000 class processor.

For RSMs which are not equipped with SM-2000 class processors, the CI pair for CI 0 and CI 1 must be entered.

2.6 EQSTAT

Description: Enter the status of the unit.

Required Field.
Default: O
Valid Entries:

Valid EQSTAT Entries	
Entry	**Definition**
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

The EQSTAT value assigned on this form must equal or be greater than ("O" is greater than "G", which is greater than "U") the EQSTAT value on a corresponding equipment form.

2.7 #CLI

Description: This is the Change Level Indicator. Prior to 5E11, this was a Recent Change only field. For 5E11 and later, this field was changed to a entry field.
Valid Entries: 5E10: non-entry 5E11 and later: 0 or 1

See the EQCI form in Division 8, Section 1.

---

eqci 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5848) CONTROL INTERFACE

*1. SM ___
*2. MC _
*3. CI _
4. EQSTAT O

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CLI

Figure 1 SAMPLE EQCI FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqci                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5848)            CONTROL INTERFACE (SM & RSM MODULES)

*1. SM       001
*2. MC       1
*3. INTF UNIT 0
*4. CI       _
 5. EQSTAT   O
#6. CLI      ________
```

Figure 2 SAMPLE EQCI FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 51: 5849 RECORD
DATA INTERFACE - EQDI

1. GENERAL

The 5849 Record is available with the 5E9(2) and later Software Releases. It is used to define both DIs (Data Interfaces) for the SM, and DXs (Data EXpansion) for the SM-2000 class processors. For SM-2000 class processors, the DX (Data EXpansion) terminates PIDBs (Peripheral Interface Data Buses) from peripheral units as does the DI (Data Interface) in the SM.

Like the DIs in the SM, the DXs are duplicated within the MCTSI (Module Control Time Slot Interchanger)—that is, the PCT (Peripheral Control and Timing) link to the TSI is not duplicated. The PIDB connections to the DX(s) in each MCTSI provide for duplication from the peripheral units. Any unit that requires PIDBs will impact the ports on the DXs. With a maximum of 6 DXs, there is a total of 144 PIDB ports (6 * 24) in the SM-2000. One DX is always required for LDSUF (DSU3, 2 DSC3 packs) in the SM-2000. Up to 6 DXs may be equipped. The table below shows the impact of the peripheral units on the DX ports compared to the DI in the SM.

EQUIPMENT	SM	SM-2000
LDSUF	0	4/DSC3 2DSC3 required
LU3	2	2
DLTU2	1-20	1-20
MMSU	0	0
DCTU	0	0
DNU-S	N/A	0
PIDB Ports	31 (on 2 DI)	24-144 (on -1 - 6 DX)

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.3.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 *MC

Description: Enter the Module Controller number.

Required Field.
Valid Entries: 0 or 1

2.4 *INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.

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Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQDI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

2.5 *DI

Description: Enter the Data Interface number.

Required Field.

Valid DI Entries

Entry	Definition
0 - 1	
0 - 5	SM-2000 class processors.

Data Rules:

For SMs not equipped with SM-2000 class processors, the DI values for DI 0 and DI 1 must be entered, and must be entered in pairs (for both MC of 0 and MC of 1), and must be entered sequentially (DI pair for DI 1 cannot be entered) before DI pair has been entered.

If DI is 2 - 5, or TSI BOARD and TSI SLOT are entered, the corresponding EQIM form must have UNIT TYPE set to an SM-2000 class processor.

For SMs with UNIT TYPE set to "SM2000", the TSI BOARD must be 0 and TSI SLOT must be 1.

2.6 EQSTAT

Description: Enter the status of the unit.

Required Field.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

2.7 #CLI

Description: Enter the Change Level Interface value.

Required Field.
Valid Entries: 0 - 7fffffff (hex)

Data Rules:

For 5E11 and later,

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- if an SM-2000 class processor is defined on the EQIM form, the CLI value entered must be 10 hex, if bit 4 of the TSICOM 0 CLI/TSICOM 1 CLI is set on the corresponding EQIM form. Otherwise the CLI value entered must be 0.

- if an SM-2000 class processor is not defined on the EQIM form, the CLI must equal the IMPU CONTROLLER 0 or 1 CLI (depending on an MC value of 0 or 1) entered on the EQIM form.

SM-2000 CLASS PROCESSORS

The following fields (Section 2.8 - Section 2.9) are used to define SM-2000 configurations.

2.8 TSI BOARD

Description: Enter the Time Slot Interchange Board.
Valid Entries: 0 - 9

Data Rules:

The combination of TSI BOARD and TSI SLOT on the EQDI form must be duplicated for each pair of DI values (i.e., when defining this DI on this SM for an MC of 0 and an MC of 1, the TSI BOARD and TSI SLOT must be the same.

For 5E14 and earlier, the combination of TSI BOARD and TSI SLOT entries on the EQDI form, the EQDNUS form, the EQOIUP form, the EQPSU form, and/or EQNLI form must not be duplicated on any other EQDI form (except if entered as the second of a DI pair), on the same or any other EQNLI form, or any EQPSU form, oa any EQDNUS form for a given SM.

For 5E15 and later, the combination of TSI BOARD and TSI SLOT entries on the EQDI form, EQDNUS form, EQIWG form, EQPDXU form, EQPSU form, EQPCTP form, EQXCDU form, and/or the EQNLI form, must not be duplicated on any other EQDI form (except if entered as the second of a DI pair) on the same or any other EQNLI form, on the same or any other EQPDXU form (except when entering a PCTDX1 entry on the EQPDXU form where the XAIU CONFIG field on the EQPDXU form is equal to "LOW"), or on any of the following forms for a given SM:

EQOIUP (5E16(2) and later)
EQPSU,
EQPCTP,
EQDNUS, or
EQXCDU.

For 5E16(2) and later, the combination of TSI BOARD and TSI SLOT entries on the EQDI form, the EQDNUS form, the EQOIUP form, the EQPSU form, and/or EQNLI form must not be duplicated on any other EQDI form (except if entered as the second of a DI pair), on the same or any other EQNLI form, or any EQPSU form, oa any EQDNUS form for a given SM.

2.9 TSI SLOT

Description: Enter the Time Slot Interchange Slot number.
Valid Entries: 0 - 3

For 5E10 and later, when TSI SLOT is 0, TSI BOARD must not be 0.

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```
                    OFFICE DATA ADMINISTRATION
(5849)                    DATA INTERFACE

*1. SM    ___
*2. MC    _
*3. DI    _
 4. EQSTAT O
#5. CLI   ________

     SM2000
 6. TSI BOARD _
 7. TSI SLOT  _
```

Figure 1 SAMPLE EQDI FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqdi                      5ESS Switch       _
                    OFFICE DATA ADMINISTRATION
(5849)                    DATA INTERFACE

*1. SM       001
*2. MC       1
*3. INTF UNIT 0
*4. DI       _
 5. EQSTAT   O
#6. CLI      ________

    SM2000
 7. TSI BOARD _
 8. TSI SLOT  _
```

Figure 2 SAMPLE EQDI FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 52: 5850 RECORD
TIME SLOT INTERCHANGE EQUIPAGE (SM-2000 MODULES) - EQTSI

1. GENERAL

The 5850 Record is available with the 5E9(2) and later Software Releases. It is used to define the Time Slot Interchange equipage for SM-2000 class processors. SMs equipped with SM-2000 class processors must have at least one pair of EQTSI forms entered with TSI BOARD set to 0. At least one TSI Board (Board 0) is required for each SM-2000 class processor. Up to 10 TSI Boards (also referred to as TSI Slices) can be assigned.

1.1 Recent Change View

The corresponding Recent Change View for this form is 18.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

SM-2000 units must be defined on the EQIM form (5700 Record) using the UNIT TYPE field.

SMs equipped with SM-2000 class processors must have at least one pair of EQTSI forms entered with TSI BOARD set to 0.

2.3 *MC

Description: Enter the Module Controller number.

Required Field.
Valid Entries: 0 - 1

2.4 *TSI BOARD

Description: Enter the Time Slot Interchange Board number. Each TSI BOARD value per SM must be entered for both an MC of 0 and an MC of 1. Each TSI board terminates up to 4 TSI links. TSI boards must be grown sequentially. See Figure 1.

Required Field.
Valid Entries: 0 - 9

Data Rules:

TSI BOARD values must be entered in pairs.

TSI Board 0 must be entered before TSI Board 1.

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2.5 EQSTAT

Description: Enter the status of the equipment.

Required Field.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

The EQSTAT value for the EVEN NLI TSI BOARD on the EQNLI form (5853 Record) must equal or be greater than ("O" is greater than "G", which is greater than "U") the EQSTAT value on this form.

2.6 #CLI

Description: Enter the Change Level Indicator value. See Division 8, Section 1 of the TG-5 for CLI values.

Required Field.
Valid Entries: 7fffffff (hex)

FIXED ASSIGNMENTS TO THE TSI ON AN SM2000

TSI BOARD/SLICE	TSI SLOT/LINK	USE	INDEX	COMMENTS
0	0	MCP	0	Always required
0	1	DX	0	Always required
0	2	NLI	0	Always required in non VCDX (see NOTE)
0	2	LOOP	0	Always required in VCDX (see NOTE)
0	3	NLI	1	Always required in non VCDX

Note: The NLI and LOOP usage of SLOT 2 on BOARD 0 is mutually exclusive.
Figure 1 FIXED ASSIGNMENTS TO THE TSI ON THE SM2000

---

eqtsi 5ESS Switch
OFFICE DATA ADMINISTRATION
(5850) TIME SLOT INTERCHANGE EQUIPAGE (SM2000 MODULES)

*1. SM ___
*2. MC _
*3. TSI BOARD _
4. EQSTAT O
#5. CLI _____

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Figure 2 SAMPLE EQTSI FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 53: 5851 RECORD
TMS LINK EQUIPAGE - EQTMSLINK

1. GENERAL

The 5851 Record is available with 5E9(2) and later Software Releases. For 5E9(2) and later, the 5851 Record is used instead of the EQORMLINK form (5813 Record). It is used to translate the TMS (Time Multiplexed Switch) links for the ORM (Optical Remote Module), the SM-2000, and the EXM-2000 (SM-2000 ORM).

This form is not required for an SM or an RSM (Remote Switching Module). However, this form replaces the EQORMLINK form for ORM applications. Particular fields on this form are unique to ORM/EXM-2000; they are identified in the field description.

For each odd QLI board on a given TMS SHELF, the preceding QLI board must be the same QLI type (i.e., if board 3 on TMS SHELF 0 is a QLI1, then QLI Board 2 on TMS SHELF 0 must be a QLI1). See Figure 2. The TMS LINKS are defined on the EQTMSLINK form for SM-2000 class processors and ORMs. The TMS LINKS for local SMs and host SMs are defined on the EQIM form (5700 Record).

Data Rules:
For 5E12 and later, SM(s) assigned on the EQIM input form where SM USAGE equals "ORM" and the processor is not an SM-2000 class processor, there can be no more than four EQTMSLINK input forms matching the SM on the EQIM input form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SIDE

Description: This field identifies the CM2 side of the link between the CM2 and the SM-2000. Enter the Controller Module number.

Required Field.
Valid Entries: 0 or 1

Data Rules:

A side 0 and a side 1 EQTMSLINK form must be entered for each TMS link.

2.3 * TMSFP NUM

Description: This field indicates the Time Multiplex Switch Fabric Pair number.

Required Field.

Software Release: 5E16(2) and later
Valid Entries:

0 for CM2
0 - 3 for CM3

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Data Rules:

When office has a CM2, TMSFP NUM must be 0.

When TMSFP NUM is entered, the value entered must be defined on the EQTMS form (5866 Record).

2.4 *TMS LNK

Description: The TMS LNK field was changed to LINK for 5E15 and later. See LINK below for usage information.

2.5 *LINK

Description: Prior to 5E15, the name of this field was TMS LNK. Enter the Time Multiplexed Switch Link number. For SM-2000 class processors, with a single fabric CM2, use 8 to 31 and 38 to 189; for SM-2000 class processors with a dual fabric CM2, use 6 to 381. See Figure 1.

Required Field.
Valid Entries:

For 5E14 and earlier, 2 - 381
For 5E15 and later, for CM2
Single Fabric: 2 - 189
Dual Fabric: 2 - 381
For 5E15 and later, for CM3: 4 - 371

Data Rules:

For SM-2000 and EXM-2000, the TMS LNK value entered on this form must have a corresponding value entered or derived on an EQNLI form (5853 Record) with a matching SM entry.

When a combination of TMSFP NUM and LINK entries are entered (or derived from an EQNLI form), the corresponding QLI CLI must match all other QLI CLI entries associated with other TMSFP NUM and LINK values on that same EQNLI form.

When a TMS LNK entry for a SIDE of 0 has a corresponding TRCCKT/TRCUNUM entry, the matching EQTMSLINK form for a SIDE of 1 must have the same TRCUNUM entry, and its TRCCKT entry must equal the TRCCKT entry for side 0 plus 1.

TMS LNK entries must have an associated entry on the EQCMTRCU form (5812 Record). For every ORM which is not an EXM-2000, the TRCU NUMBER entered on this form must exist as TRCU NUMBER on an associated EQCMTRCU form and SM must be 0.

For 5E15 and later, the TMSFP NUM and LINK combination on the EQTMSLINK form associated with an SM which is equipped with an SM2000 class processor must match a TMSFP NUM and EVEN/ODD NLI TMS LINK 0 value entered, or a TMSFP NUM and EVEN/ODD NLI TMS LINK 1 value derived on an EQNLI form. (NOTE: TMS LINK 1 values are NOT derived for CDX SM2000 or for optically remoted SM2000s.)

For 5E12 and later, each LINK entry on the EQTMSLINK form must have a matching EQTMSLINK form defined for the same SIDE and TMSFP NUM for LINK plus 1. Each odd LINK entry on the EQTMSLINK form must have a matching EQTMSLINK form defined for the same SIDE and TMSFP NUM for LINK minus 1.

For 5E13 and later, when the TMS LNK is set to 8-11, 16-19, or 24-27, and the QLICLI is 100, the NCT EVEN LINK of 6 and 7, 14 and 15, or 22 and 23 on the EQIM form must not be on the QLI1 board. Note

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also the following conditions:

- A QLICLI value of 0 on the EQTMSLINK form represents a QLI1 board.
- A QLICLI value of 100 on the EQTMSLINK form represents a QLI2 board.
- When IMTYPE is not "ORM" and UNIT TYPE is not "SM2000" on the EQIM form, a QLI1 board is used.
- When IMTYPE is "ORM" on the EQIM form, QLICLI on the EQTMSLINK form is used where NCT EVEN LINK matches TMSLNK on the EQTMSLINK form.

Also note that not all TMS link assignments are represented on the EQTMSLINK form. Some TMS link assignments are only represented on the EQIM form as an NCT EVEN LINK. All TMS links for SM-2000 and ORMs are represented on the EQTMSLINK form. All TMS links for non-SM-2000s that are also not ORMs are represented only as an NCT EVEN LINK on the EQIM form. (If an error message is encountered, the text of the message (pcd51) will indicate the TMS link assignment in error.)

For 5E15 and later:

TMSFP NUM and LINK values must be entered in pairs on the EQTMSLINK form. These LINK values must be defined on an EQTMSLINK form for both SIDE 0 and SIDE 1, and the SM must be the same on both forms.

Each LINK entry on the EQTMSLINK form associated with an SM which is equipped with an SM-2000 class processor, must match an EVEN/ODD NLI TMS LINK 0 value entered or EVEN/ODD NLI TMS LINK 1 value derived on an EQNLI form (5853 Record).

Each even LINK entry on the EQTMSLINK form must have a matching EQTMSLINK form defined for the same SIDE for LINK + 1. And each odd LINK entry on the EQTMSLINK form must have a matching EQTMSLINK form defined for the same SIDE for LINK - 1.

When a LINK value on the EQTMSLINK form is entered or derived on an EQNLI form, then the QLI CLI entry on the EQNLI form, must match all other QLI CLI entries associated with other LINK values on that same EQNLI form.

When CM VINTAGE on the EQCORE form is 2, the LINK values entered on the EQTMSLINK form where LINK TYPE is not "NCT1" must meet the following criteria:

- Use the TMSFP NUM value to find the corresponding EQTMS form. If FABRIC TYPE is "SNGL" then LINK must not equal 2, 3, 32 or 33
- Use the TMSFP NUM value to find the corresponding EQTMS form. If FABRIC TYPE is "DUAL" then LINK must not equal 2, 3, 4 or 5.

2.6 LNKTYPE

Description: The Link Type field is a Recent Change Only field. The name of this field is being changed to LINK TYPE for 5E15 and later.

2.7 #LINK TYPE

Description: Prior to 5E15, the name of this field was LNKTYPE and it was a Recent Change only field. For 5E15 and later it is used as a data format for the Time Mulitplexed Switch Link.
Valid Entries: NCT1 or NCT2

Data Rules:

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When an office is equipped with CM2 and QLI CLI is 100h, then LINK TYPE must be "NCT2".

LINK TYPE must be "NCT1" for a CM2 where QLI CLI is not 100h.

When CM VINTAGE is 3 on the EQCORE form, the LINK TYPE on the EQTMSLINK form must be "NCT1" when either:

- The SM is not an SM2000
- The SM is an SM2000, the corresponding EQIM form's SM USAGE is "ORM" and the NLI for this LINK has a TRCU PATH HOST TYPE other than "TRCU3" on the EQTRCUPTH form. The EQNLI form contains the TMS LINK number for each NLI.

-

- An NCT link can be viewed as the physical connection between the TMS and an SM. Prior to SM-2000, all non-remote SMs used NCT1 links with bandwidth equivalent to a single TMSLNK. Most SM-2000s, on the other hand, are connected to the TMS via NCT2 links which provide twice the bandwidth. Each NCT2 link is therefore associated with two TMSLNKs, and (at least) twice as many TMSLNKs must be allocated for an SM-2000 as a non-SM-2000.
- In the following case(s), SM-2000s are still connected to the TMS via NCT1 (rather than NCT2) links:
-
  - SM-2000s that are remoted via transmission rate converter unit model 2 (TRCU2) hardware.
  - an SM-2000 in a communication module model 2 compact (CM2C) office.

2.8 #QLI CLI

Description: Enter the Quad Link Interface CLI value.

Required Field.
Valid Entries: 0 - 7fffffff (hex)

Data Rules:

The QLI CLI entered must match all other QLI CLI entries associated with this TMS LNK.

If UNIT TYPE is set to a SM-2000 class processor on the corresponding EQIM form and the EQCORE form as a CM2 Compact value of "Y", the QLI CLI must be 0.

If UNIT TYPE is set to a SM-2000 class processor and SM USAGE is not "ORM", and the EQCORE form has a CM2 Compact value of "N", QLI CLI must be 100 on the form.

For 5E15 and later, when an office is equipped with CM3, QLI CLI must be set to 0 and LINK must be greater than or equal to 4, and less than or equal to 371.

See Division 8, Section 1 for CLI values.

2.9 #SM

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Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.10 EQSTAT

Description: Enter the status of the TMS LNK unit.

Required Field.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

Initial offices must have EQSTAT set to "O".

2.11 TRCU PATH

Description: This is a no change field showing the TRCU path index associated with this TMS link. For more information, see Division 2, Section 9N.

2.12 TRCCKT

Description: Enter the Transmission Rate Converter Unit Circuit number. For 5E12 and later, to support TRCU3, this field is now on the EQTRCUPATH form and is called HOST CKT.

Software Release: 5E11 and earlier
Valid Entries: 0 - 3

Data Rules:

When either TRCCKT, TRCUNUM, or TRCCLI is entered, all must be entered.

TRCCKT, TRCUNUM, and TRCCLI must be entered when SM USAGE on the EQIM form is "ORM" (for ORMs and EXM-2000s); otherwise this field must be blank.

The combination of TRCCKT and TRCUNUM must not be duplicated on any other EQTMSLINK form except when entering the second of a TMS LNK pair.

If TRCUNUM and TRCCKT are entered, a second EQTMSLINK form entry for the same SIDE value must be made where its TMS LNK entry equals the original TMS LNK entry plus or minus 1 (plus 1 if the original TMS LNK entry is an even value; minus 1 if the original TMS LNK entry was an odd value); and, the second EQTMSLINK form must have SM, TRCUNUM, and TRCCKT values that match those from the original EQTMSLINK form.

2.13 TRCUNUM

Description: Enter the Transmission Rate Converter Unit number to interface NCT Links to an ORM or EXM-2000. For 5E12 and later, to support TRCU3, this field is now on the EQTRCUPATH form and is called HOST NUM.

Software Release: 5E11 and earlier

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Valid Entries: Valid Entries: 1 - 96

Data Rules:

When either TRCCKT, TRCUNUM, or TRCCLI is entered, all must be entered.

The combination of TRCCKT and TRCUNUM must not be duplicated on any other EQTMSLINK form except when entering the second of a TMS LNK pair.

TRCCKT, TRCUNUM, and TRCCLI must be entered when SM USAGE on the EQIM form is "ORM".

For each matching EQTMSLINK form (using EVEN NLI TMs LINK 0 and ODD TMS LINK 0 from the EQNLI form), the TRCU NUMBERS on the EQTMSLINK form must be assigned on the EQCMTRCU form for the Local TRCU (SM equal to "0") and the EXM-2000 remote TRCU (SM equal to the value of the SM from the EQNLI form).

For the ORM that is an EXM-2000, the TRUC NUMBER entered on this form must exist as TRCU NUMBER on two separate EQCMTRCU forms. One EQCMTRCU form where SM is 0, the second EQCMTRCU form where SM equals SM from this EQTMSLINK form.

2.14 TRCCLI

Description: Enter the Transmission Rate Converter CLI value. For 5E12 and later, to support TRCU3, this field is now on the EQTRCUPATH form and is called HOST CLI.

Software Release: 5E11 and earlier
Valid Entries: Valid Entries: 0 - 7fffffff (hex)

Data Rules:

When either TRCCKT, TRCUNUM, or TRCCLI is entered, all must be entered.

See Division 8, Section 1 for CLI values.

2.15 FABRIC TYPE

Description: This is a Recent Change Only field.

FIXED ASSIGNMENTS TO THE TSI ON AN SM2000

TSI BOARD/SLICE	TSI SLOT/LINK	USE	INDEX	COMMENTS
0	0	MCP	0	Always required
0	1	DX	0	Always required
0	2	NLI	0	Always required in non VCDX (see NOTE)
0	2	LOOP	0	Always required in VCDX (see NOTE)
0	3	NLI	1	Always required in non VCDX

Note: The NLI and LOOP usage of SLOT 2 on BOARD 0 is mutually exclusive.
Figure 1 FIXED ASSIGNMENTS TO THE TSI ON AN SM2000

QLI BOARD

TMS SHELF	0	1	2	3	4	5	6	7
0	0-3*	4-7*	8-11	12-15	16-19	20-23	24-27	28-31
1	32-33*	34-37*	38-41	42-45	46-49	50-53	54-57	58-61
2	62-65	66-69	70-73	74-77	78-81	82-85	86-89	90-93
3	94-97	98-101	102-105	106-109	110-113	114-117	118-121	122-125

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4	126-129	130-133	134-137	138-141	142-145	146-149	150-153	154-157
5	158-161	162-165	166-169	170-173	174-177	178-181	182-185	186-189

*These boards must be QLI1 boards, if assigned, due to FPC and PPC.
This table shows the relationship between TMS LINKS and TMS SHELF/QLI board numbers. The left hand column represents the TMS SHELF number. Each TMS SHELF consists of 8 QLI boards, numbers 0-7. The header across the top represents the QLI board numbers for the TMS SHELF. Example, TMS LINK number 40 resides on TMS SHELF 1, QLI board number 2.

Figure 2 RELATIONSHIP BETWEEN TMS LINKS AND TMS SHELF/QLI BOARDS

```
eqtmslink                5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(5851)          Time Multiplexed Switch Link Equipage Form

*1. SIDE       _
*2. TMS LNK    ___
#3. QLICLI     _________
#4. SM         ___
 5. EQSTAT     O
   TRCU PATH   __
   FABRIC TYPE ____
```

Figure 3 SAMPLE EQTMSLINK FORM 5E12 - 5E14 SOFTWARE RELEASES

```
eqtmslink                5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(5851)          Time Multiplexed Switch Link Equipage

*1. SIDE       _
*2. LINK       ___
#3. LINK TYPE  ____
#4. QLI CLI    _________
#5. SM         ___
 6. EQSTAT     O
   TRCU PATH   __
   FABRIC TYPE ____
```

Figure 4 SAMPLE EQTMSLINK FORM 5E15 SOFTWARE RELEASES

```
eqtmslink                5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(5851)          Time Multiplexed Switch Link Equipage

*1. SIDE       _
*2. TMSFP NUM  _
*3. LINK       ___
#4. LINK TYPE  ____
#5. QLI CLI    _________
#6. SM         ___
 7. EQSTAT     O
   TRCU PATH   __
   FABRIC TYPE ____
```

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Figure 5 SAMPLE EQTMSLINK FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 54: 5852 RECORD
LOCAL DIGITAL SERVICE CIRCUIT 3 (SM-2000) - EQDSC3

1. GENERAL

The 5852 Record is available with the 5E9(2) and later Software Releases. It is used to define the DSC3 unit to provide the LDSUF (Local Digital Services Unit Function) to expand tone generators and decoders required for the expanded capacity of the SM-2000. Each DSC3 has four duplex PIDBs (Peripheral Interface Data Buses) for a total of 128 time slots of data and one duplex PICB (Peripheral Interface Control Buses) for control. This provides four times the number of time slots that the DSC2 supports. The DSC3 connects (via PIDBs/PICBs) to the TSI (Time Slot Interchanger) and the SMP (Switching Module Processor) via the DX (Data eXpander) and CI (Control Interface) links, respectively.

When this form is entered, UNIT TYPE on the EQIM form (5700 Record) must be set to an SM-2000 class processor. PACK NUMBER values for each combination of SM and DSU must be entered in sequential order. For example, PACK NUMBER 1 cannot be entered for an SM and DSU until PACK NUMBER 0 is entered for the same SM and DSU.

See Division 2, Section 9A for more detailed information on the DSC3.

1.1 Recent Change View

The Recent Change View for this form is 19.18.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E10 and later, the combination of SM, BAY, VERTPOS and UNIT OFFSET must be unique among EQDSC3 and EQGDSC3 forms (5860 Record).

2.3 *DSU

Description: Enter the DS Unit 3 number. The only valid entry is 0.

Required Field.
Valid Entries: 0

Data Rules:

All DSUs for a given SM must have the same AISLE, BAY and VERTPOS values.

2.4 *PACK NUMBER

Description: Enter the DS Circuit 3 pack number.

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Required Field.
Valid Entries: 0 - 5

Data Rules:

PACK NUMBER values for each combination of SM and DSU on this form must be entered in sequential order.

2.5 #UNIT OFFSET

Description: Enter the position of the DS Circuit 3 pack on the DSU3.

Required Field.
Valid Entries:
- 5E10 and earlier: 0 - 17
- 5E11 and later: 0 - 23

Data Rules:

UNIT OFFSET cannot be used on any other EQDSC3 form defined on the same DSU and SM.

For 5E11 and later, UNIT OFFSET must be 18 - 23 if UNIT TYPE is "SM2005".

2.6 EQSTAT

Description: Enter the status of the unit.

Required Field.

Default Value. O

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

When EQSTAT is not "O", DIGIT RCVRS, TONE OUTPLS, TONE XCVRS, CAMA and VOICE BAND DATA must be 0.

Low-Level Virtual Containers with trunks assigned to Autoplex facilities must have an EQSTAT of "O" for the associated Switching Module.

2.7 #CLI

Description: Enter the Change Level Indicator value.

Required Field.

Default: 0
Valid Entries: 0 - 7fffffff (hex)

2.8 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

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Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, EQUIPMENT BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.9 #CI

Description: Enter the Control Interface group number.

Required Field.
Valid Entries: 0 - 3

Data Rules:

When this field is entered, the CI pair for CI 0 must be entered on the EQCI form (5848 Record).

CI (or CONTROL GROUP) numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O" is greater than "G" which is greater than "U").

2.10 #PICB

Description: Enter the Peripheral Interface Control Bus number.

Required Field.
Valid Entries: 0 - 22

2.11 #AISLE

Description: Enter the aisle (and floor) where the DSU3 is located. The floor is designated 00 - 99 and the aisle is designated 00 - 99.

Required Field.
Valid Entries: 0000 - 9999

2.12 #BAY

Description: Enter the Bay number where the DSU3 is located.

Required Field.

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Valid Entries: 0 - 208

Valid BAY Entries 5E9(2) - 5E16(1)	
Entry	**Definition**
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000 class processor; SM Cabinent aisle.
100 - 104	SM-2000 class processor; Back panel; wiring position.
200 - 208	SM-2000 class processor; Front panel; door position.

Valid BAY Entries for 5E16(2) and later			
Entry			**Type**
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

2.13 #VERTPOS

Description: Enter the Vertical Position where the DSU3 is located. Recommended positions are as follows:

For 7-foot cabinets: 22,30, 39, 48, 56, 65, 74
- For 6-foot cabinets: 7, 15, 24, 32, 41, 49, 58

Required Field.
Valid Entries: 00 - 84

2.14 #DI

Description: Enter the Data Interface number.

Required Field.
Valid Entries: 0 - 5

Data Rules:

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

PIDB LIST/ROW PIDB

This field group defines the PIDB numbers for rows 1 - 4. Each PIDB row must be unique.

2.15 #PIDB

Description: Enter the PIDB for rows 1 - 4.

Required Field.
Valid Entries: 0 - 23

FEATURE GRP SVC CNT

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The following fields (Section 2.16 - Section 2.20) define the number (count) of feature group services assigned. Note that the values entered for service counts cannot exceed the 10 DSP (Digital Service Pack) limit. The following restrictions establish pack limitations:

- 1 DSP provides a maximum of 64 Tone Generators.
- 1 DSP provides a maximum of 16 Tone Decoders and/or CAMA tone generator.
- 1 DSP provides a maximum of 16 Tone Transceivers.
- 1 DSP provides a maximum of 8 VBS generators.

2.16 #DIGIT RCVRS

Description: Enter the number of Digit Receivers assigned to the DSC3. This service count defines the number of incoming circuits and uses incoming time slots.

Required Field.
Valid Entries: 0 - 127

Data Rules:

DIGIT RCVRS plus TONE XCVRS plus CAMA must not be greater than 127.

2.17 #TONE OUTPLS

Description: Enter the number of Tone Outplusers assigned to the DSC3. This service count defines the number of outpulsing circuits and uses outgoing time slots.

Required Field.
Valid Entries: 0 - 127

Data Rules:

TONE OUTPLS plus TONE XCVRS plus VOICE BAND DATA cannot be greater than 127.

2.18 #TONE XCVRS

Description: Enter the number of Tone Transceivers assigned to the DSC3. This service count defines the number of transceiver circuits and uses both incoming and outgoing time slots.

Required Field.
Valid Entries: 0 - 127

Data Rules:

TONE OUTPLS plus TONE XCVRS plus VOICE BAND DATA cannot be greater than 127.

DIGIT RCVRS plus TONE XCVRS plus CAMA must not be greater than 127.

2.19 #CAMA

Description: Enter the number of Centralized Automatic Message Accounting services assigned to the DSC3. This service count defines the number of CAMA tone generator circuits and uses incoming time slots.

Required Field.

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Valid Entries: 0 - 127

DIGIT RCVRS plus TONE XCVRS plus CAMA must not be greater than 127.

2.20 #VOICE BAND DATA

Description: Enter the number of Voice Band Data services assigned to the DSC3. This service count defines the number of VBD assurance circuits and uses outgoing time slots.

Required Field.
Valid Entries: 0 - 127

Data Rules:

TONE OUTPLS plus TONE XCVRS plus VOICE BAND DATA cannot be greater than 127.

```
eqdsc3                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5852)          LOCAL DIGITAL SERVICE CIRCUIT 3 (SM2000)

 *1. SM          ___      #13. PIDB LIST        FEATURE GRP      SVC CNT
 *2. DSU         _          ROW   PIDB         #18. DIGIT RCVRS    ___
 *3. PACK NUMBER _           1     __          #19. TONE OUTPLS    ___
 #4. UNIT OFFSET __          2     __          #20. TONE XCVRS     ___
  5. EQSTAT      O           3     __         #21. CAMA            ___
 #6. CLI         00000000    4     __          #22. VOICE BAND DATA ___
 #7. CI          _
 #8. PICB        __
 #9. AISLE       ____
#10. BAY         ___
#11. VERTPOS     __
#12. DI          _
```

Figure 1 SAMPLE EQDSC3 FORM 5E14 AND EARLIER SOFTWARE RELEASES

```
eqdsc3                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5852)          LOCAL DIGITAL SERVICE CIRCUIT 3 (SM2000)

 *1. SM          ___      #13. DI _             FEATURE GRP      SVC CNT
 *2. DSU         _        #14. PIDB LIST        #16. DIGIT RCVRS    ___
 *3. PACK NUMBER _          ROW   PIDB         #17. TONE OUTPLS    ___
 #4. UNIT OFFSET __         1     __           #18. TONE XCVRS     ___
  5. EQSTAT      O          2     __          #19. CAMA            ___
 #6. CLI         00000000   3     __           #20. VOICE BAND DATA ___
  7. INTF UNIT   _          4     __
 #8. CI          _
 #9. PICB        __
#10. AISLE       ____
#11. BAY         ___
#12. VERTPOS     __
```

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Figure 2 SAMPLE EQDSC3 FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 55: 5853 RECORD
NETWORK LINK INTERFACE GROWTH (SM-2000) - EQNLI

1. GENERAL

The 5853 Record is available with 5E9(2) and later Software Releases. It is used to define the NLI (Network Link Interface) which terminates the NCT2 (Network Control and Timing Links 2) from the SM-2000 (Switching Module-2000) TSI (Time Slot Interchanger) to the TMSU (Time Multiplexedn Switch Unit) of the CM2. For the SM-2000, the NLI is an optical interface; for the EXM-2000, the NLI is an electrical interface. One EQNLI form is required for each duplicated pair of NCT2 links for the SM-2000.

NOTE: Each EQNLI form that is associated with an optically remoted SM equipped with an SM-200 class processor must have EQCMTRCU assignments as follows: For each matching EQTMSLINK form (using EVEN NLI TMS LINK0 and ODD NLI TMS LINK0 from EQNLI), the TRCU NUMBERs on the EQTMSLINK form must be assigned on the EQCMTRCU form for the Local TRCU (key SM - 0) and the remote TRCU (key SM = SM from EQNLI).

1.1 Recent Change View

The Recent Change View for this form is 18.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the Switching Module.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM entered must have a corresponding EQIM form (5700) with UNIT TYPE set to an SM-2000 class processor.

The EQCORE form (5701 Record) must be inserted before this form can be inserted/updated.

2.3 *EVEN NLI

Description: Enter the even NLI. This field identifies the even network link interface number of the NCT2 links. An EVEN NLI of 0 represents the even NLI associated with the primary NCT2 links. The primary NCT2 links are always required. EVEN NLI 0 and ODD NLI 1 are referred to as "primary" NCT2 links. An EVEN NLI of 2 through 22 (even values only) represents an even NLI associated with a secondary NCT2 link. The secondary NCT2 links are optional.

Required Field.
Valid Entries: 0 - 22 (even values)

Data Rules:

All TMS LINK values entered and/or derived from these forms must be unique.

TMS LINKs are assigned on three forms: the EQIM form (5700-1/2 Record) as NCT EVEN LINK, on the

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EQNLI form (for SM-2000 only) as EVEN/ODD NLI TMS LINK 0, and on the EQQLPS form (per QLPS NETWORK) as STARTING QTMSLINK. Additional TMS LINKs are derived from these same form entries. An NCT EVEN LINK entry also derives a TMS LINK entry of NCT EVEN LINK +1 (known as the NCT ODD LINK). An EVEN or ODD NLI TMS LINK 0 entry on the EQNLI form derives another TMS LINK entry of either EVEN/ODD TMS LINK 0 +2 or EVEN/ODD TMS LINK 0 +4 (when the SM-2000 is not optically remoted, or is not CDX). This is dependent upon the value of the TMS TYPE on the EQCORE form. If TMS TYPE is "SNGL", 2 is added; if "DUAL", 4 is added.

QTMSLINK 2, QTMSLINK 3 and QTMSLINK 4 are derived from STARTING QTMSLINK (per QLPS NETWORK) on the EQQLPS form. The value of each of these derived QGMSLINKs is also dependent on TMS TYPE from the EQCORE form. If TMS TYPE is "SNGL", 1, 2 and 3, respectively, are added to the STARTING QTMSLINK value; if TMS TYPE is "DUAL", 2, 4 and 6, respectively, are added.

For 5e16(2) and later, the TMSFP NUM and TMS LINK combination entered and/or derived from the forms mentioned above must be unique.

When EVEN NLI is 0, the EVEN NLI TMS LINK 0 entry must match the NCT EVEN LINK value on the corresponding EQIM form and the ODD NLI TMS LINK 0 entry must match the NCT EVEN LINK value on the EQIM form plus 1.

For a single SM-2000 class processor, even NLIs must be equipped in sequential order (NLI 4 cannot be equipped before NLI 2.)

If EVEN NLI is 0, EQSTAT must be "O".

For 5e16(2) and later, when office is a CM2, EVEN NLI entries made on the EQNLI form must be made in sequential, even valued, order for an SM. For example, an EVEN NLI of 4 cannot be entered until an EVEN NLI of 2 is entered.

2.4 ODD NLI

Description: The ODD NLI is automatically populated with the next highest odd integer above the EVEN NLI value entered. The ODD NLI of 1 represents the odd NLI associated with the primary NCT/NCT2 links which are always required.

2.5 EQSTAT

Description: Enter the status of the equipment.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

2.6 * TMSFP NUM

Description: This field indicates the Time Multiplex Switch Fabric Pair number.

Required Field.

Software Release: 5E16(2) and later
Valid Entries:

0 for CM2
0 - 3 for CM3

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Data Rules:

When EVEN NLI is 0, TMSFP NUM must be 0.

When office has a CM2, TMSFP NUM must be 0.

EVEN NLI (E)

The following fields (Section 2.7 - Section 2.12) define the even NLI. Each NLI (even and odd) is assigned to a port on a TSI slice. A TSI link connects each NLI to a TSI slice. The TSI BOARD field identifies the TSI slice to which this NLI is assigned. The TSI BOARD field for the ODD NLI is automatically populated with the value equal to the TSI BOARD field for the EVEN NLI. The even and odd NCT2 links of the same NCT2 link pair must terminate to the same TSI slice.

2.7 #TSI BOARD

Description: Enter the TSI Board for the even NLI.

Required Field.
Valid Entries: 0 - 9

Data Rules:

When the EVEN NLI is 0, indicating the primary NCT2 links, the TSI Board must be 0.

When the EVEN NLI is 2 - 22 (even values only), indicating secondary NCT2 links, the TSI BOARD may be 1 - 19.

For a given SM, the combination of TSI BOARD and TSI SLOT entries on the EQDI form, the EQPDXU form, the EQDNUS form, and for the EQNLI form must not be duplicated on any other EQDI form (except if entered as the second of a DI pair), on the same or any other EQNLI form, on the same or any other EQPDXU form (except when entering a PCTDX1 where the XAIU CONFIG is equal to "LOW"), or on any EQDNUS form.

2.8 #TSI SLOT

Description: Enter the TSI Slot for the even NLI. Each NLI (even and odd) is assigned to a port on a TSI slice. The TSI SLOT field identifies the port on the TSI slice to which this NLI is assigned (i.e., slot equals port). The even and odd NCT2 links of the same NCT2 link pair must terminate to coupler port positions (e.g., ports 0,1 and/or 2,3) on the same TSI slice.

Required Field.
Valid Entries: 0 or 2

Data Rules:

When the EVEN NLI is 0, indicating the primary NCT2 links, the TSI SLOT must be 2.

When the EVEN NLI is 2 - 22 (even values only), indicating secondary NCT2 links, the TSI SLOT may be 0 or 2.

2.9 #TMS LINK 0

Description: Enter the Time Multiplex Switch Link 0 for the EVEN NLI. This field identifies the TMS link 0 number (first even TMS link or lowest even TMS link) associated with the even NLI. Even NLI TMS LINK 0 entries on this form are entered, and even NLI TMS LINK 1 entries are derived from them by adding either 2 or 4 to the TMS LINK 0 value based upon the value of the TMS CONFIGURATION on the EQCORE form (5701 Record). If TMS CONFIGURATION is "SNGL", 2 is added to the even NLI TMS LINK 0 entry;

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if TMS CONFIGURATION is "DUAL", 4 is added.

For example,

- for "SNGL" fabric, the valid entries range from 8 - 28 and 38 - 186 in increments of 4 (e.g., 8, 12, 16 or 38, 42, 46, etc.).
- for "DUAL" fabric, the valid enries range from 6 or 8 to 374 or 376 in increments of 8 (e.g., 6, 8, 14, 16, 22, 24, 30, 32, etc.).

Required Field.
Valid Entries:
- 5E9(2): 6 - 380 (even values)
- 5E10 and later: 2 - 380 (even values)

Data Rules:

Each combination of TMSFP NUM and EVEN/ODD NLI TMS LINK 0 value entered (and each combination of TMSFP NUM and EVEN/ODD NLI TMS LINK 1 value derived) on this EQNLI form must be entered as TMS LNK on a matching EQTMSLINK form for the appropriate SM. The matching EQTMSLINK forms must have an SM entry equal to the SM entry on the this EQNLI form.

For 5E15 and later:

When an office is equipped with a CM3 (Communication Module 3), the EQTMS form's (5866 Record) SHELF EQUIPAGE - CM3 SHELF defines the valid range of the TMS LINK O EVEN/ODD NLI assigned on the EQNLI form (5853 Record). The EQTMS form is found using the TMSFP NUM value on the EQNLI form. In addition, if the EQSTAT for this shelf is "G", then the EQSTAT on the EQNLI form must also be "G". The link to shelf relationship is as follows:

- If TMS LINK 0 EVEN NLI is an even number from 84-176, SHELF = 1
- If TMS LINK 0 EVEN NLI is an even number from 180-272, SHELF = 2
- If TMS LINK 0 EVEN NLI is an even number from 276-368, SHELF = 3

NOTE: The link range for SHELF 0 is not checked since EQSTAT for SHELF 0 must always be "O" in a CM3 office.

When an office is equipped with CM2, EVEN NLI TMS LINK 0 must be an even number between 4 and 376, and have FABRIC TYPE exceptions of 4 for "DUAL", and 32 for "SNGL".

When an office is equipped with CM3, EVEN NLI TMS LINK 0 must be an even number between 4 and 370.

2.10 TMS LINK 1

Description: The value displayed in this field is automatically populated and is derived from the EVEN NLI TMS 0 entry. It identifies the TMS link 1 number (second even TMS link or highest even TMS link) associated with the even NLI. For example:

- For "SNGL" fabric, the EVEN NLI - TMS 1 value will equal the EVEN NLI TMS LINK 0 value plus 2 (TMS LINK 0 + 2 = TMS LINK 1).
- For "DUAL" fabric, the EVEN NLI - TMS LINK 1 value will equal the EVEN NLI TMS LINK 0 value plus 4 (TMS LINK 0 + 4 = TMS LINK 1).

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TMS LINK 1 values only apply to local SM-2000s; they are not derived for optically remote SM-2000s (EXM-2000s).

- ***NOTE:*** For CM3, the TMSLINK 1 value will equal the LINK 0 value plus 2.

Data Rules:

If TMS CONFIGURATION on the EQCORE form (5701) is "SNGL", 2 is added to the EVEN NLI TMS 0 value entered. If TMS CONFIGURATION is "DUAL", 4 is added to the EVEN NLI TMS 0 value entered.

2.11 #NLI 0 CLI

Description: Enter the Change Level Indicator for the NLI 0 board. The BKD1 paddle board (NLI) is used to terminate NCT2 links on an SM-2000 in a host 5ESS-2000 Switch.

Required Field.
Valid Entries: 0 - 7fffffff (hex)

Refer to Division 8, Section 1 for a complete listing of CLI values and associated J-drawings.

2.12 #NLI 1 CLI

Description: Enter the Change Level Indicator for the NLI 1 CLI.

Required Field.
Valid Entries: 0 - 7fffffff (hex)

Refer to Division 8, Section 1 for a complete listing of CLI values and associated J-drawings.

ODD NLI (O)

The following fields (Section 2.13 - Section 2.18) define the odd NLI.

2.13 TSI BOARD

Description: The TSI Board for the odd NLI is automatically populated with the same value entered for the Even NLI TSI Board.

Required Field.
Valid Entries: 0 - 9

2.14 TSI SLOT

Description: The TSI Slot for the odd NLI is automatically populated with the next highest integer above the even TSI SLOT value entered. The values displayed will be either 1 or 3.

Required Field.

2.15 TMS LINK 0

Description: The Time Multiplex Switch Link 0 for the odd NLI 0 is automatically populated with the next highest integer above the odd TMS Link 0 value entered. The value displayed will be odd numbers in the range 7 - 381.

- ***NOTE:*** This value can be changed; however, it is not recommended.

Odd NLI TMS LINK 0 entries on this form are entered, and odd NLI TMS LINK 1 entries are derived from

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them by adding either 2 or 4 to them based on the value of the TMS CONFIGURATION on the EQCORE form (5701 Record). If TMS CONFIGURATION is "SNGL", 2 is added to the odd NLI TMS LINK 0 entry; if TMS CONFIGURATION is "DUAL", 4 is added.

Data Rules:

Each EVEN/ODD NLI TMS LINK 0 value entered (and each EVEN/ODD NLI TMS LINK 1 value derived) on this EQNLI form must be entered as TMS LNK on a matching EQTMSLINK form (5851 Record) for the appropriate SM. The matching EQTMSLINK forms must have an SM entry equal to the SM entry on this EQNLI form.

2.16 TMS LINK 1

Description: This is a display only field. The value displayed in this field is automatically populated and is derived from the EVEN NLI TMS LINK 0 entry. TMS LINK 1 values only apply to local SM-2000s; they are not derived for optically remote EXM-2000s.

- ***NOTE:*** If TMS CONFIGURATION on the EQCORE form (5701) is "SNGL", 2 is added to the EVEN NLI TMS 0 value entered. For example:

  - For "SNGL" fabric, the ODD NLI - TMS 1 value will equal the ODD NLI - TMS LINK 0 value plus 2 (TMS LINK 0 + 2 = TMS LINK 1).

  - For "DUAL" fabric, the ODD NLI - TMS LINK 1 value will equal the ODD NLI - TMS LINK 0 value plus 4 (TMS LINK 0 + 4 = TMS LINK 1).

- ***NOTE:*** For CM3, the TMSLINK 1 value will equal the LINK 0 value plus 2.

2.17 #NLI 0 CLI

Description: Enter the Change Level Indicator for the NLI 0.

Required Field.
Valid Entries: 0 - 7fffffff (hex)

Refer to Division 8, Section 1 for a complete listing of CLI values and associated J-drawings.

2.18 #NLI 1 CLI

Description: Enter the Change Level Indicator for the NLI 1 CLI.

Required Field.
Valid Entries: 0 - 7fffffff (hex)

Refer to Division 8, Section 1 for a complete listing of CLI values and associated J-drawings.

```
eqnli                    5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5853)                  NLI GROWTH (SM2000)

*1. SM      ___          EVEN NLI (E)          ODD NLI (O)
*2. EVEN NLI __          □□□□□□                □□□□□-
   ODD NLI  __    #5. TSI BOARD  _             TSI BOARD  _
 4. EQSTAT  O     #6. TSI SLOT   _             TSI SLOT   _
              #7. TMS LINK 0 ___        13. TMS LINK 0 ___
```

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```
          TMS LINK 1              TMS LINK 1
 #9. NLI 0 CLI _________  #15. NLI 0 CLI _________
#10. NLI 1 CLI _________  #16. NLI 1 CLI _________
```

Figure 1 SAMPLE EQNLI FORM 5E9(2) THROUGH 5E15 SOFTWARE RELEASES

```
eqnli                    5ESS Switch          _
                   OFFICE DATA ADMINISTRATION
(5853)                 NLI GROWTH (SM2000)

*1. SM       ___         EVEN NLI (E)              ODD NLI (O)
*2. EVEN NLI  __     #6. TSI BOARD  _               TSI BOARD  _
   ODD NLI   __      #7. TSI SLOT   _              TSI SLOT   _
 4. EQSTAT    O      #8. TMS LINK 0 ___             TMS LINK 0 ___
#5. TMSFP NUM _          TMS LINK 1 ___             TMS LINK 1 ___
               #10. NLI 0 CLI _________    #16. NLI 0 CLI _________
               #11. NLI 1 CLI _________    #17. NLI 1 CLI _________
```

Figure 2 SAMPLE EQNLI FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 56: 5854 RECORD
QLPS BOARD FORM - EQQLPS

1. GENERAL

The 5854 Record is available with the 5E9(2) and later Software Releases. It is used to define a QLPS (Quad-Link Packet Switch) board.

QLPS is an overlay network that provides high bandwidth message transport between SM-2000s and between SM-2000s and existing processors. A QLPS network consists of two QLPS boards, one installed on each side of the ONTC (Office Network and Timing Complex). One side is always the active QLPS and the other is the standby QLPS for the network during normal operation.

An EQQLPS form can be entered only if CM VINTAGE is 2 or 3, and TIME MULTIPLEXED SWITCH CLI is 00000100 on the EQCORE form (5701 Record) (for 5E14 and earlier), or the CLI on the EQTMS form (5866 Record) (for 5E15 and later) is 0000100. In addition, the QGWP (Quad-Link Gateway Processor) field on the ECDOPT form (5706 Record) must be "Y".

An appropriate EQPIPE form (5544 Record) must be entered to complete the definition of the QLPS network for a CM2 (Communication Module Model 2) office only. For CM3 offices, the population of the data is handled in forward mapping. For more information, see Division 2, Section 9D, Quad-Link Packet Switch Network.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.19.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * ONTC SIDE

Description: Enter the ONTC (Office Network and Timing Complex) Side on which the QLPS hardware is being installed.

NOTE: Four of these forms should exist for CM3.

Required Field.
Valid Entries: 0, 1

Data Rules:

The EQCORE form (5701 Record) must be inserted before this form can be inserted/updated.

2.3 * QLPS NETWORK

Description: Enter the QLPS Board, identified by the number of its QLPS Network.

Required Field.
Valid Entries: 0, 1

Data Rules:

EQQLPS forms for the same QLPS NETWORK must have the same STARTING QTMSLINK.

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2.4 # TMS CONFIGURATION

Description: Enter the TMS (Time Multiplexed Switch) configuration.

Required Field.

Valid TMS CONFIGURATION Entries

Entry	Description
SNGL	Single fabric.
DUAL	Dual fabric.

Data Rules:

TMS CONFIGURATION must be same as the TMS CONFIGURATION on the EQCORE form.

When an office is equipped with CM3, TMS CONFIGURATION must be "DUAL".

2.5 # STARTING QTMSLINK

Description: Enter the number of the first TMS Link to the QLPS board. Each QLPS board on an ONTC side occupies four TMS links. The first must be entered here; the remaining three are automatically assigned by the system in the QTMSLINK 2, QTMSLINK 3, and QTMSLINK 4 fields.

For single fabric, enter 4 - 28 or 34 - 186 in increments of 4. For dual fabric, network 0, enter 6 - 374 in increments of 8; for dual fabric, network 1, enter 7 - 375 in increments of 8.

Required Field.
Valid Entries: 4 - 375

Data Rules:

TMS LINKS can be assigned on three forms: on the EQIM form (5700-1/2 Record) as NCT EVEN LINK, on the EQNLI form (5853 Record) as EVEN (or ODD) TMS LINK 0, and on the EQQLPS form as STARTING QTMSLINK. On each form additional TMS LINKS are derived from the specified link and the TMS configuration. All TMS LINKs entered or derived on these forms must be unique in the switch.

2.6 QTMSLINK 2

Description: This field is the second QTMSLINK to the QLPS board and cannot be entered by the switch owner. For single fabric, this field is automatically set to STARTING QTMSLINK + 1; for dual fabric, it is set to STARTING QTMSLINK + 2.

2.7 QTMSLINK 3

Description: This field is the third QTMSLINK to the QLPS board and cannot be entered by the switch owner. For single fabric, this field is automatically set to STARTING QTMSLINK + 2; for dual fabric, it is set to STARTING QTMSLINK + 4.

2.8 QTMSLINK 4

Description: This field is the fourth QTMSLINK to the QLPS board and cannot be entered by the switch owner. For single fabric, this field is automatically set to STARTING QTMSLINK + 3; for dual fabric, it is set to STARTING QTMSLINK + 6.

2.9 EQSTAT

Description: Enter the equipment status of the QLPS board.

Required Field.

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Default: G
Valid Entries:

Valid EQSTAT Entries	
Entry	**Description**
G	Growth.
O	Operational.

Data Rules:

EQSTAT must be "O" for new offices and for offices with equipment additions.

EQSTAT cannot be "G" for offices during a retrofit.

For 5E14 and later, when this form exists, the EQSTAT must be "O" before any QPH (QLPS Protocol Handler) pipes can be defined on the QPHPIPE form.

2.10 CLI

Description: Enter the Change Level Indicator, which identifies the version of the QLPS hardware.

For a complete listing of valid CLI values, J-Drawing and list combinations, see Division 8, Section 1.

Required Field.
Default: 0
Valid Entries: 0 - 7FFFFFFF

```
eqqlps                  5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5854)                  QLPS BOARD

*1. ONTC SIDE        _
*2. QLPS NETWORK     _
#3. TMS CONFIGURATION ____
#4. STARTING QTMSLINK ___
   QTMSLINK 2        ___
   QTMSLINK 3        ___
   QTMSLINK 4        ___
 8. EQSTAT           G
 9. CLI              00000000
```

Figure 1 SAMPLE EQQLPS FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 57: 5855 RECORD
DIGITAL NETWORKING UNIT SONET (SM-2000) - EQDNUS

1. GENERAL

The 5855 Record is available with 5E9(2) and later Software Releases. This form is used to define the equipage information for the DNU-S (Digital Networking Unit-SONET) in an SM-2000. The DNU-S provides SONET (Synchronous Optical Network) capabilities by allowing a maximum of 12 STS (Synchronous Transport Signal) links to terminate to the switch. Each STS link carries 28 DS1S (Digital Signal level 1 SONET) facilities.

This form supports the DNU-S feature. For more information on DNU-S, see Division 2, Section 9C.

1.1 Data Groups

DNU-S has two data groups. DG0 (the first data group) is equipped and operational first. Then, as more capacity is needed DG1 (the second data group) is grown.

1.2 Equipment Status

The EQSTAT fields on this form can either be in the Growth state, "G", the Operational state, "O", or the Unequipped state "U". "O" is considered the highest state, "G" the middle state, and "U" the lowest state. Form checks (level 2 checks) for equipment states reference this hierarchy. For example: "CC0 EQSTAT and CC1 EQSTAT must be greater than or equal to DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT" would equate to the following:

- if DG0 CD 0 EQSTAT is "O"
- or DG0 CD 1 EQSTAT is "O",
- then CC0 EQSTAT must be "O"
- and CC1EQSTAT must be "O".

and:

- if DG0 CD 0 EQSTAT is "G"
- or DG0 CD1 EQSTAT is "G",
- then CC0 EQSTAT must be "O" or "G",
- and CC1 EQSTAT must be "O" or "G".

The 5855-1 and 5855-2 Records show the relationship of the equipment states for EQDNUS EQSTAT fields.

1.3 Recent Change View

The corresponding Recent Change View for this form is 19.14.

2. FORM ENTRIES 5855-1/2 RECORDS

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SM

Description: The SM field is used to specify the switching module number for an SM-2000.

Required Field.
Valid Entries: 1 - 192

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Data Rules:

The total number of EQDNUS forms with the same SM number must not be greater than four.

Each SM entered on this form must be assigned on an EQIM form with the same SM number.

Each value of SM entered on the EQDNUS, EQSTE, and EQVT forms must have a corresponding EQIM form with the same SM value where the value entered for CONFIGURATION supports Digital Networking Unit-SONET. The only value for CONFIGURATION which supports DNU-S is "SM2000".

2.3 * DNUS

Description: Enter the DNU-S (Digital Networking Unit SONET) unit number, which indicates the circuit location for DNU-S in the SM-2000.

Required Field.
Valid Entries: 0 - 7

2.4 # EQL BAY

Description: Enter the Equipment Location Bay number of the frame on which the DNU-S resides.

Required Field.
Valid Entries: 1 - 14, 90 - 104, 200 - 208

2.5 # EQL UNVER

Description: Enter the Equipment Location Unit Vertical Position of the frame on which the DNU-S resides. Only 7, 15, 24, 32, 41, 49, or 58 are expected in a 6 foot cabinet.

Required Field.
Valid Entries: 0 - 84

2.6 # EQL AISLE

Description: Enter the Equipment Location Aisle Number which is used to specify the aisle position of the frame on which the DNU-S resides. The first 2 digits are the floor location and the last 2 digits are the aisle location; i.e., enter 00 - 99 for floor and 00 - 99 for aisle.

Required Field.
Valid Entries: 0000 - 9999

2.7 CC0 EQSTAT

Description: Enter the Common Controller 0 Equipage State on the DNU-S.

Required Field.
Default: O
Valid Entries:

Valid CC0 EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

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Initial and growth offices must have CC0 EQSTAT and CC1 EQSTAT set to "O".

If CC0 EQSTAT is "U" or CC1 EQSTAT is "U", then both must be "U". CC0 EQSTAT and CC1 EQSTAT must be greater than or equal to DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT, therefore:

- If DG0 CD 0 EQSTAT or DG0 CD 1 EQSTAT is "O" then, CC0 EQSTAT and CC1 EQSTAT must be "O".
- If DG0 CD 0 EQSTAT or DG0 CD 1 EQSTAT is "G", then CC0 EQSTAT and CC1 EQSTAT must be "O" or "G".

If "G" or "O" is entered, then the required EQMH form must have a matching SM number, and both MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT must be "O".

The EQDNUS forms with CC0 EQSTAT of "G" or "O" and/or the EQAIU forms with AIU TYPE of "EAIU", and TSPFAC0/TSPFAC1 row 1 EQSTAT of "G" or "O", and/or the EQAIU forms with AIU TYPE of "XAIU" and XAIUTSGRP row 1 EQSTAT of "G" or "O" must not exceed the channel capacity of EQMH form(s) with a matching SM number. Each MH provides up to 31 channels."

2.8 CC1 EQSTAT

Description: Enter the Common Controller 1 equipage state on the DNU-S.

Required Field.
Default: O
Valid Entries:

Valid CC1 EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

Initial and growth offices must have CC0 EQSTAT and CC1 EQSTAT set to "O".

If CC0 EQSTAT is "U" or CC1 EQSTAT is "U", then both must be "U".

CC0 EQSTAT and CC1 EQSTAT must be greater than or equal to DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT, therefore:

- If DG0 CD 0 EQSTAT or DG0 CD 1 EQSTAT is "O", then CC0 EQSTAT and CC1 EQSTAT must be "O".
- If DG0 CD 0 EQSTAT or DG0 CD 1 EQSTAT is "G", then CC0 EQSTAT and CC1 EQSTAT must be "O" or "G".

2.9 CC0 CLI

Description: Enter a hexadecimal number for the Common Control 0 Change Level Indicator for the DNU-S.

Required Field.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

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For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

2.10 CC1 CLI

Description: Enter the hexadecimal Common Control 1 Change Level Indicator for DNU-S.

Required Field.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

DATA GROUP 0 (DG0) and DATA GROUP 1 (DG1)

The following fields (Section 2.11 - Section 2.21) define the equipage information for the Data Group 0 (5855-1 Record) and Data Group 1 (5855-2 Record). The Data Groups consist of CD (Common Data), the Spare and Service TMUXs (Transmission Multiplexers), the PCT LINKS and SFI (STSX-1 Facility Interface) components.

DG0 must be grown in DNU-S first. As more capacity is needed, DNU-S can then grow in DG1.

For DG0:
Initial and growth offices must have DG0 CD 0 EQSTAT, DG0 CD 1 EQSTAT, DG0 FI 0 EQSTAT, DG0 FI 1 EQSTAT and DG0 STMX EQSTAT all set to "O".

If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL0 CD 0 EQSTAT and PCTL0 CD 1 EQSTAT.

For DG1:
If any of the following is entered, they all must be entered:

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT (for PCT LINK 0), and also the CLI fields associated with each of these EQSTAT fields.

If any of the following is "U" they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT

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- STMX EQSTAT

and (for PCT LINK 0) both PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT.

Initial and growth offices must have the following EQSTAT values set to "O" if any of them are entered:

- DG1 CD 0 EQSTAT
- DG1 CD 1 EQSTAT
- DG1 FI 0 EQSTAT
- DG1 FI 1 EQSTAT
- DG1 STMX EQSTAT

See the 5855-1 and 5855-2 Records for cross reference of equipment states of DG0/1 fields with CC0/1 EQSTAT, PCTL0/1 EQSTAT, and DG0/1TMX EQSTAT fields.

2.11 CD 0 EQSTAT

Description: Enter the Data Group Common Data 0 Equipage State on the DNU-S.

Required Field for DG0.
Default: O
Valid Entries:

Valid CD 0 EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

For DG0:
CC0 EQSTAT and CC1 EQSTAT must be greater than or equal to DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT.

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 STMX EQSTAT.

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 FI 0 EQSTAT and DG0 FI 1 EQSTAT.

For PCTL0 PCT LINK 0, the PCTL0 CD 0 EQSTAT must equal DG0 CD 0 EQSTAT.

For all PCT LINK rows, DG0 CD 0 EQSTAT must be greater than or equal to PCTL0 CD 0 EQSTAT.

For DG1:
Before DG1 CD 0 EQSTAT or DG1 CD 1 EQSTAT can be entered, DG0 FI 0 EQSTAT, DG0 FI 1 EQSTAT, and DG0 STMX EQSTAT must be "O".

Initial and growth offices must have the following EQSTAT values set to "O" if any of them are entered:

- DG1 CD 0 EQSTAT
- DG1 CD 1 EQSTAT
- DG1 FI 0 EQSTAT
- DG1 FI 1 EQSTAT
- DG1 STMX EQSTAT

DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 STMX EQSTAT.

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DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 FI 0 EQSTAT and DG1 FI 1 EQSTAT.

For all PCT LINK rows, DG1 CD 0 EQSTAT must be greater than or equal to PCTL1 CD 0 EQSTAT.

For all PCT LINK rows, DG1 CD 0 EQSTAT must be greater than or equal to PCTL1 CD 0 EQSTAT.

For PCTL1 PCT LINK 0, the PCTL1 CD 0 EQSTAT must equal DG1 CD 0 EQSTAT.

If "G" or "O" are entered, then the required EQMH form must have a matching SM number, and both MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT must be equal to "O".

2.12 CD 1 EQSTAT

Description: Enter the Common Data 1 Equipage State on the DNU-S.

Required Field for DG0.
Default: O
Valid Entries:

Valid CD 1 EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

Initial and growth offices must have CD 1 EQSTAT set to "O".

For DG0:
If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT,

and (for PCT LINK 0) both PCTL0 CD 0 EQSTAT and PCTL0 CD 1 EQSTAT.

Initial and growth offices must have the following all set to "O":

- DG0 CD 0 EQSTAT
- DG0 CD 1 EQSTAT
- DG0 FI 0 EQSTAT
- DG0 FI 1 EQSTAT
- DG0 STMX EQSTAT

CC0 EQSTAT and CC1 EQSTAT must be greater than or equal to DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT.

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 STMX EQSTAT.

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 FI 0 EQSTAT and DG0 FI 1 EQSTAT.

PCT LINK:
For PCTL0 PCT LINK 0, the PCTL0 CD 1 EQSTAT must equal DG0 CD 1 EQSTAT.

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For all PCT LINK rows, DG0 CD 1 EQSTAT must be greater than or equal to PCTL0 CD 1 EQSTAT.

For DG1:
Before DG1 CD 0 EQSTAT or DG1 CD 1 EQSTAT can be entered, DG0 FI 0 EQSTAT, DG0 FI 1 EQSTAT, and DG0 STMX EQSTAT must be "O".

If any of the following is entered, they all must be entered:

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT (for PCT LINK 0). In addition, the CLI fields associated with each of these EQSTAT fields must be entered.

If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT.

DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 STMX EQSTAT.

DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 FI 0 EQSTAT and DG1 FI 1 EQSTAT.

PCT LINK:
For PCTL1 PCT LINK 0, the PCTL1 CD 1 EQSTAT must equal DG1 CD 1 EQSTAT.

For all PCT LINK rows, DG1 CD 1 EQSTAT must be greater than or equal to PCTL1 CD 1 EQSTAT.

Initial and growth offices must have the following EQSTAT values set to "O" if any of them are entered:

- DG1 CD 0 EQSTAT
- DG1 CD 1 EQSTAT
- DG1 FI 0 EQSTAT
- DG1 FI 1 EQSTAT
- DG1 STMX EQSTAT

2.13 CD 0 CLI

Description: Enter the hexadecimal Common Data 0 Change Level Indicator for the DNU-S.

Required Field for DG0.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexdecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI

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values.

2.14 CD 1 CLI

Description: Enter the hexadecimal Common Data 1 Change Level Indicator for the DNU-S.

Required Field for DG0.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexdecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

2.15 FI TYPE

Description: Enter the Facility Interface Type.
Default: SFI
Valid Entries: SFI

2.16 FI 0 EQSTAT

Description: Enter the Facility Interface 0 Equipage State for the DNU-S.

Required Field for DG0.
Default: O
Valid Entries:

Valid FI 0 EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

For DG0:
If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL0 CD 0 EQSTAT and PCTL0 CD 1 EQSTAT.

Initial and growth offices must have

- DG0 CD 0 EQSTAT
- DG0 CD 1 EQSTAT
- DG0 FI 0 EQSTAT
- DG0 FI 1 EQSTAT
- DG0 STMX EQSTAT all set to "O".

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 FI 0 EQSTAT and DG0 FI 1 EQSTAT.

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For DG1:
Before DG1 CD 0 EQSTAT or DG1 CD 1 EQSTAT can be entered, DG0 FI 0 EQSTAT, DG0 FI 1 EQSTAT, and DG0 STMX EQSTAT must be "O".

Initial and growth offices must have the following EQSTAT values set to "O" if any of them are entered:

- DG1 CD 0 EQSTAT
- DG1 CD 1 EQSTAT
- DG1 FI 0 EQSTAT
- DG1 FI 1 EQSTAT
- DG1 STMX EQSTAT

If any of the following is entered, they all must be entered:

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT (for PCT LINK 0), and also the CLI fields associated with each of these EQSTAT fields.

If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT.

DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 FI 0 EQSTAT and DG1 FI 1 EQSTAT.

2.17 FI 1 EQSTAT

Description: Enter the Facility Interface 1 Equipage State on the DNU-S.

Required Field for DG0.
Default: O
Valid Entries:

Valid FI 1 EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

For DG0:
If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT

- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL0 CD 0 EQSTAT and PCTL0 CD 1 EQSTAT.

Initial and growth offices must have

- DG0 CD 0 EQSTAT
- DG0 CD 1 EQSTAT
- DG0 FI 0 EQSTAT
- DG0 FI 1 EQSTAT
- DG0 STMX EQSTAT all set to "O".

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 FI 0 EQSTAT and DG0 FI 1 EQSTAT.

For DG1:
Before DG1 CD 0 EQSTAT or DG1 CD 1 EQSTAT can be entered, DG0 FI 0 EQSTAT, DG0 FI 1 EQSTAT, and DG0 STMX EQSTAT must be "O".

Initial and growth offices must have the following EQSTAT values set to "O" if any of them are entered:

- DG1 CD 0 EQSTAT
- DG1 CD 1 EQSTAT
- DG1 FI 0 EQSTAT
- DG1 FI 1 EQSTAT
- DG1 STMX EQSTAT

If any of the following is entered, they all must be entered:

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT (for PCT LINK 0), and also the CLI fields associated with each of these EQSTAT fields.

If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT.

DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 FI 0 EQSTAT and DG1 FI 1 EQSTAT.

2.18 FI 0 CLI

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Description: Enter the hexadecimal Facility Interface 0 Change Level Indicator for the DNU-S.

Required Field for DG0.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

2.19 FI 1 CLI

Description: Enter the hexadecimal Facility Interface 1 Change Level Indicator for the DNU-S.

Required Field for DG0.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

2.20 STMX EQSTAT

Description: Enter the Spare Transmission Multiplexer Equipage State on the DNU-S.

Required Field for DG0.
Default: O
Valid Entries:

Valid STMX EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

For DG0:
If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL0 CD 0 EQSTAT and PCTL0 CD 1 EQSTAT.

DG0 CD 0 EQSTAT and DG0 CD 1 EQSTAT must be greater than or equal to DG0 STMX EQSTAT.

For all DG0TMX rows, DG0TMX EQSTAT must not exceed the value of DG0 STMX EQSTAT.

DG1:
DG1 CD 0 EQSTAT and DG1 CD 1 EQSTAT must be greater than or equal to DG1 STMX EQSTAT.

Before DG1 CD 0 EQSTAT or DG1 CD 1 EQSTAT can be entered:

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- DG0 FI 0 EQSTAT
- DG0 FI 1 EQSTAT
- DG0 STMX EQSTAT must be "O"

Initial and growth offices must have:

- DG0 CD 0 EQSTAT
- DG0 CD 1 EQSTAT
- DG0 FI 0 EQSTAT
- DG0 FI 1 EQSTAT
- DG0 STMX EQSTAT all set to "O".

Initial and growth offices must have the following EQSTAT values set to "O" if any of them are entered:

- DG1 CD 0 EQSTAT
- DG1 CD 1 EQSTAT
- DG1 FI 0 EQSTAT
- DG1 FI 1 EQSTAT
- DG1 STMX EQSTAT

If any of the following is entered, they all must be entered:

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT (for PCT LINK 0), and also the CLI fields associated with each of these EQSTAT fields.

If any of the following is "U", they all must be "U":

- CD 0 EQSTAT
- CD 1 EQSTAT
- FI 0 EQSTAT
- FI 1 EQSTAT
- STMX EQSTAT

and (for PCT LINK 0) both PCTL1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT.

For all DG1TMX rows, DG1TMX EQSTAT must not exceed the value of DG1 STMX EQSTAT.

2.21 STMX CLI

Description: Enter the hexadecimal Spare Transmission Multiplexer Change Level Indicator on the DNU-S.

Required Field for DG0.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI

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values.

3. FORM ENTRIES 5855-3 RECORD

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

DATA GROUP 0/1 TMX (DG0TMX/DG1TMX)

The following fields (Section 3.2 - Section 3.4) define the Service and Spare TMUXs (Transmission Multiplexers) list (0 - 5) connected to Data Group 0/1. Entries include equipage status and change level indicator for each TMUX. Please note that the spare TMUX for data group 0/1 is not included in this list, but it is specified in the STMX EQSTAT and STMX CLI fields.

3.2 TMX NUMBER

Description: Enter the Transmission Multiplexer Numbering for data group 0 and data group 1.
Valid Entries: 0 - 5

3.3 EQSTAT

Description: Enter the Equipage State for transmission multiplexers numbered 0 - 5 in data group 0 or data group 1. Do not enter the field if no data is associated with this piece of hardware.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

DG0TMX:
Initial and growth offices must have EQSTAT set to "O".

If either EQSTAT or CLI in the DG0TMX list is entered, then both in that row must be entered.

For all DG0TMX rows, DG0TMX EQSTAT must not exceed the value of DG0 STMX EQSTAT.

DG1TMX:
Initial and growth offices must have EQSTAT set to "O".

If either EQSTAT or CLI in the DG1TMX list is entered, then both in that row must be entered.

For all DG1TMX rows, DG1TMX EQSTAT must not exceed the value of DG1 STMX EQSTAT.

3.4 CLI

Description: The CLI (Change Level Indicator) hexadecimal number specifies the transmission multiplexer change level indicator number for transmission multiplexers numbered 0 to 5 in Data Group 0.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI

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values.

If either EQSTAT or CLI in the DG0TMX list is entered, then both in that row must be entered.

If either EQSTAT or CLI in the DG1TMX list is entered, then both in that row must be entered.

PCT LINKS DATA GROUP 0/1 (PCTL0/1)

The following fields (Section 3.5 - Section 3.9) define a list (numbered 0 - 5) of PCT (Peripheral Control and Timing) links connected to Data Group 0 for PCT LINKS DATA GROUP 0 and Data Group 1 for PCT LINKS DATA GROUP 1. Entries include the TSIS (Time Slot Interchanger Slice) board and slot locations, and the equipage states and change level indicators for the PCT connections to both Common Data 0 and Common Data 1.

3.5 PCT LINK

Description: Peripheral Control and Timing Link on Data Group 0/1 Number specifies the number of the peripheral control link on DNU-S Data Group 0/1.
Valid Entries: 0 - 5

Data Rules:

The total number of PCT LINKs (EQDNUS forms with entries in PCTL0/1, TSISBRD and TSISSLOT) in an SM-2000 must not be greater than the entry in the MAX ALLOWABLE FOR SM field on the EQIM form (5700 Record).

3.6 TSIS BRD

Description: Enter the Peripheral Control and Timing Link on Data Group 0/1 Time Slot Interchange Slice Board Number connected to the peripheral control link on DNU-S Data Group 0/1.
Valid Entries: 1 - 9

Data Rules:

TSIS BRD and TSIS SLOT combinations must be unique for PCTL0 and PCTL1.

The combination of TSI BRD and TSI SLOT entries on the EQDI form, the EQPDXU form, the EQDNUS form, and/or the EQNLI form must not be duplicated on any other EQDI form (except when entering the second of a DI pair), on the same or any other EQNLI form, on the same or any other EQPDXU form (except when entering a PCTDX1 where the XAIU CONFIG is equal to "LOW"), or on any EQDNUS form for a given SM.

Each PCTL TSIS BRD entered on the EQDNUS form must be defined on the EQTSI form and the matching EQTSI form must have an EQSTAT value that is greater than or equal to the PCTL0 CD 0 EQSTAT/CD 1 EQSTAT defined on the EQDNUS form (i.e., "O" is greater than "G" which is greater than "U").

For PCTL0:
If TSIS BRD or TSIS SLOT is entered in the PCTL0 list, then:

- both must be entered in that row.
- CD 0 EQSTAT or CD 1 EQSTAT in that row must be entered.
- CD 0 CLI or CD 1 CLI in that row must be entered.

PCTL1:

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If TSIS BRD or TSIS SLOT in list PCTL1 is entered, then:

- both must be entered in that row.
- CD 0 EQSTAT or CD 1 EQSTAT in that row must be entered.

3.7 TSIS SLOT

Description: The Peripheral Control and Timing Link Interface on Data Group 0 Time Slot Interchange Slice Slot Number field is used to specify the time slot interchanger slice slot number connected to the peripheral control link on DNU-S Data Group 0/1.
Valid Entries: 0 - 3

Data Rules:

TSIS BRD and TSIS SLOT combinations must be unique for PCTL0 and PCTL1.

The combination of TSI BRD and TSI SLOT entries on the EQDI form, the EQDNUS form, and/or EQNLI form must not be duplicated on any other EQDI form (except when entering the second of a DI pair), on the same or any other EQNLI form, or on any EQDNUS form for a given SM.

For PCTL0:
If TSIS BRD or TSIS SLOT is entered in the PCTL0 list, then:

- both must be entered in that row.
- CD 0 EQSTAT or CD 1 EQSTAT in that row must be entered.
- CD 0 CLI or CD 1 CLI in that row must be entered.

PCTL1:
If TSIS BRD or TSIS SLOT in list PCTL1 is entered, then:

- both must be entered in that row.
- CD 0 EQSTAT or CD 1 EQSTAT in that row must be entered.

3.8 CD 0/1 EQSTAT

Description: The Peripheral Control and Timing Link Interface on Data Group 0/1 Common Data 0/1 Equipage State is used to specify the equipage state of the peripheral link on the DNU-S Data Group 0/1 Common Data 0/1.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

For PCTL0:
Initial and growth offices must have CD 0 EQSTAT and CD 1 EQSTAT set to "O".

If CD 0 EQSTAT or CD 1 EQSTAT in list PCTL0 is entered, then TSIS BRD and TSIS SLOT in that row

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must be entered.

If CD 0 EQSTAT in list PCTL0 is entered, CD 0 CLI in that row must be entered.

If CD 1 EQSTAT in list PCTL0 is entered, CD 1 CLI in that row must be entered.

PCTL0 CD 0 EQSTAT must equal DG0 CD 0 EQSTAT and PCTL0 CD 1 EQSTAT must equal DG0 CD 1 EQSTAT.

For PCTL1:
Initial and growth offices must have CD 0 EQSTAT and CD 1 EQSTAT set to "O".

If CD 0 EQSTAT or CD 1 EQSTAT in list PCTL1 is entered, then TSIS BRD and TSIS SLOT in that row must be entered.

If CD 0 EQSTAT in list PCTL1 is entered, CD 0 CLI in that row must be entered.

If CD 1 EQSTAT in list PCTL1 is entered, then CD 1 CLI in that row must be entered.

PCTL1 CD 0 EQSTAT must equal DG1 CD 0 EQSTAT and PCTL1 CD 1 EQSTAT must equal DG1 CD 1 EQSTAT.

For all PCT LINK rows:

- DG0 CD 0 EQSTAT must be greater than or equal to PCTL0 CD 0 EQSTAT.
- DG0 CD 1 EQSTAT must be greater than or equal to PCTL0 CD 1 EQSTAT.
- DG1 CD 0 EQSTAT must be greater than or equal to PCTL1 CD 0 EQSTAT.
- DG1 CD 1 EQSTAT must be greater than or equal to PCTL1 CD 1 EQSTAT.

3.9 CD 0/1 CLI

Description: Peripheral Control and Timing Link Interface on Data Group 0/1 Common Data 0/1 Change Level Indicator Number is used to specify the change level indicator hexadecimal number for the peripheral link on the DNU-S Data Group 0/1 Common Data 0/1.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

For PCTL0: If CD 0 CLI in list PCTL0 is entered, then CD 0 EQSTAT in that row must be entered.

If CD 1 CLI in list PCTL0 is entered, then CD 1 EQSTAT in that row must be entered.

For PCTL1: If CD 0 CLI in list PCTL1 is entered, then CD 0 EQSTAT in that row must be entered.

If CD 1 CLI in list PCTL1 is entered, then CD 1 EQSTAT in that row must be entered.

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```
*1. SM        ___          DATA GROUP 0 (DG0)       DATA GROUP 1 (DG1)
*2. DNUS      _        10. CD 0 EQSTAT O        21. CD 0 EQSTAT _
#3. EQL BAY   ___      11. CD 1 EQSTAT O        22. CD 1 EQSTAT _
#4. EQL UNVER __       12. CD 0 CLI   00000000  23. CD 0 CLI   _________
#5. EQL AISLE ____     13. CD 1 CLI   00000000  24. CD 1 CLI   _________
 6. CC0 EQSTAT O          FI TYPE    SFI          FI TYPE    ___
 7. CC1 EQSTAT O       15. FI 0 EQSTAT O        26. FI 0 EQSTAT _
 8. CC0 CLI   00000000 16. FI 1 EQSTAT O        27. FI 1 EQSTAT _
 9. CC1 CLI   00000000 17. FI 0 CLI   00000000  28. FI 0 CLI   _________
                       18. FI 1 CLI   00000000  29. FI 1 CLI   _________
                       19. STMX EQSTAT O        30. STMX EQSTAT _
                       20. STMX CLI   00000000  31. STMX CLI   _________
```

```
eqdnus                      5ESS SWITCH
SCREEN 2 OF 4          OFFICE DATA ADMINISTRATION
(5855-1/2/3)       DIGITAL NETWORKING UNIT SONET (SM2000)

>32. DATA GROUP 0 TMX (DG0TMX)  >36. DATA GROUP 1 TMX (DG1TMX)

     TMX                         TMX
 ROW NUMBER EQSTAT   CLI       ROW NUMBER EQSTAT   CLI

  1   0    _   _________      1   0    _   _________
  2   1    _   _________      2   1    _   _________
  3   2    _   _________      3   2    _   _________
  4   3    _   _________      4   3    _   _________
  5   4    _   _________      5   4    _   _________
  6   5    _   _________      6   5    _   _________
```

```
eqdnus                      5ESS SWITCH
SCREEN 3 OF 4          OFFICE DATA ADMINISTRATION
(5855-1/2/3)       DIGITAL NETWORKING UNIT SONET (SM2000)

          >40. PCT LINKS DATA GROUP 0 (PCTL0)

    PCT     TSIS          CD 0             CD 1
ROW  LINK  BRD  SLOT   EQSTAT   CLI      EQSTAT   CLI

 1   0    _   _     _   _________     _   _________
 2   1    _   _     _   _________     _   _________
 3   2    _   _     _   _________     _   _________
 4   3    _   _     _   _________     _   _________
 5   4    _   _     _   _________     _   _________
 6   5    _   _     _   _________     _   _________
```

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```
eqdnus                    5ESS SWITCH          _
SCREEN 4 OF 4          OFFICE DATA ADMINISTRATION
(5855-1/2/3)      DIGITAL NETWORKING UNIT SONET (SM2000)

          >48. PCT LINKS DATA GROUP 1 (PCTL1)

    PCT    TSIS          CD 0            CD 1
ROW LINK  BRD  SLOT   EQSTAT   CLI     EQSTAT   CLI

 1   0    _   _     _   ________     _   ________
 2   1    _   _     _   ________     _   ________
 3   2    _   _     _   ________     _   ________
 4   3    _   _     _   ________     _   ________
 5   4    _   _     _   ________     _   ________
 6   5    _   _     _   ________     _   ________
```

Figure 1 SAMPLE EQDNUS FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 58: 5856 RECORD
MESSAGE HANDLER (SM-2000) - EQMH

1. GENERAL

The 5856 Record is available with the 5E9(2) and later Software Releases. The Message Handler (SM-2000) form is used to equip the message handler for an SM-2000 class processor. The Message Handler MH1 is responsible for providing the messaging interface for the DNU-S.

The Message Handler can only be grown on an SM-2000 class processor.

This form has been added to support the DNU-S feature.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.13.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SM

Description: The SM field is used to specify the switching module number.

Required Field.
Valid Entries: 1 - 192

2.3 *MH

Description: The MH field is used to specify the message handler number.

Required Field.
Default: Null
Valid Entries: 1 or 2

Data Rules:

Each SM with MH values defined on the EQMH form has a maximum of 31 SPYDER-T timeslots available for allocation (bit 0 is reserved). The SM cannot exceed the maximum capacity of 31 total timeslots. A maximum of 6 Timeslots are allowed per equipped DNU-S. Six timeslots are allocated per each EQDNUS form, three timeslots are allocated per each CC side if "U" is not entered in CC0 EQSTAT or CC1 EQSTAT fields.

For 5E12 and later, when MH is 1 on the EQMH form, MH SIDE 0 CLI and MH SIDE 1 CLI must be 0 or, when MH is 2, MH SIDE 0 CLI and MH SIDE 1 CLI can be 0 or 3.

2.4 MH SIDE 0 EQSTAT

Description: The MH SIDE 0 EQSTAT field is used to specify the equipage state of the message handler on side 0.

Required Field.
Default: O
Valid Entries:

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Valid MH SIDE 0 EQSTAT Entries	
Entry	**Definition**
G	Growth
O	Operational
U	Unequipped

Data Rules:

Initial and growth offices must have MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT set to "O".

If MH SIDE 0 EQSTAT is "U", MH SIDE 1 EQSTAT cannot be "O".

If MH SIDE 1 EQSTAT is "U" or not entered, MH SIDE 0 EQSTAT cannot be "O".

2.5 MH SIDE 0 CLI

Description: Enter the MH SIDE 0 CLI hexadecimal number for the change level indicator for the message handler on Side 0.

Required Field.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

2.6 MH SIDE 1 EQSTAT

Description: Enter the equipage state of Side 1 of the Message Handler.

Valid MH SIDE 1 EQSTAT Entries	
Entry	**Definition**
G	Growth
O	Operational
U	Unequipped

Data Rules:

Initial and growth offices must have MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT set to "O".

If MH SIDE 0 EQSTAT is "U", then MH SIDE 1 EQSTAT cannot be "O".

If MH SIDE 1 EQSTAT is "U" or not entered, then MH SIDE 0 EQSTAT cannot be "O".

If MH SIDE 1 EQSTAT is entered, MH SIDE 1 CLI must be entered.

2.7 MH SIDE 1 CLI

Description: Enter the hexadecimal change level indicator for the Message Handler on Side 1.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values.

If MH SIDE 1 CLI is entered, then MH SIDE 1 EQSTAT must be entered.

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```
eqmh                    5ESS SWITCH          _
                   OFFICE DATA ADMINISTRATION
(5856)                  MESSAGE HANDLER (SM2000)

*1. SM            ___
*2. MH            1
 3. MH SIDE 0 EQSTAT O
 4. MH SIDE 0 CLI    00000000
 5. MH SIDE 1 EQSTAT _
 6. MH SIDE 1 CLI    ________
```

Figure 1 SAMPLE EQMH FORM 5E9(2) AND LATER SOFTWARE RELEASES

```
eqmh                    5ESS SWITCH          _
                   OFFICE DATA ADMINISTRATION
(5856)                  MESSAGE HANDLER (SM2000)

*1. SM            ___
   MH             1
 3. MH SIDE 0 EQSTAT O
 4. MH SIDE 0 CLI    00000000
 5. MH SIDE 1 EQSTAT _
 6. MH SIDE 1 CLI    ________
```

Figure 2 SAMPLE EQMH FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 59: 5857-1/2 RECORD
DIGITAL NETWORKING UNIT SONET FOR STE AND STS (SM2000) - EQSTE

1. GENERAL

The 5857-1/2 Record is available with 5E9(2) and later Software Releases. The DNU-S (Digital Networking Unit-SONET) for STE (SONET Termination Equipment) and STS (Synchronous Transport Signal) form defines the STE facility in the DNU-S. For more information on DNU-S, see Division 2, Section 9C.

STSX-1 interface consists of the STE, STS-1 Path VT1.5 Path, and the DS1 Path, all of which are terminated by the DNU-S.

The STE is the facility that terminates the SONET Section and Line layers. It is the parent of the STS-1, VT1.5s, and DS1s.

The STS is the basic SONET building block and implies a rate and format, not a transmission medium. It is the child of the STE and parent of the VT1.5s and DS1s.

The CGA (Carrier Group Alarm) data is associated with the VT/DS1 and STE/STS facilities. Included in the CGA data is a hash index into an internal TM (Terminal Maintenance) data structure. The hash indexes are automatically assigned during the RC/V and ODA processing. During de-growth, RC initializes the associated hash indexes to "N". The hash index is transparent to the user, i.e, no hash index office data is entered via RC or ODA. However, only 522 hash indexes are available per switching module. One hash index is allocated to each instance of the following for a specific SM:

- 1 per each pair STE/STS on a specified SM (EQSTE form). (The EQSTE form is associated with the DNU-S.)
- 1 per each VT (Virtual Tributary) on a specified SM (EQVT form). (The EQVT form is associated with the DNU-S.)
- 1 per each DFI (Digital Facility Interface) of a DLTU (Digital Line/Trunk Unit) where FAC IND is 0 or 1, and DFI TYPE is not "H1" or "H2", i.e., DFI USAGE of "H1" and "H2" are not counted (EQDUP form). (The EQDUP form is not associated with the DNU-S.)
- 1 per each DFI-2 (2 per EQDUP form) where FAC IND is 3.
- 1 per pack - POS, EQST, CLI, CLEI combination; 30 packs per DCLU on EQDCLP form (the EQDCLP form is not associated with the DNU-S).
- 1 per IFAC - EQSTAT, SUP MTHD, PUB43801 combination; 20 per IDCU on the EQIFAC form) (the EQIFAC form is not associated with the DNU-S).

The sum of the above total number of allocated hash indexes (instances) cannot be greater then 522 for any one specific SM.

1.1 Recent Change View

The corresponding Recent Change View for this form is 20.12.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

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2.2 * SM

Description: Enter the switching module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The maximum number of DNU-S Performance Monitoring Groups may not be more than 50 unique PM GROUP names per SM from the combination of PM GROUP(s) defined on EQSTE form(s) as STE PM GROUP, and defined on EQVT form(s) as VT PM GROUP and DS1S PM GROUP.

For each SM entered on this form, a corresponding SM must be entered on the EQIM form SM.

2.3 * DNUS

Description: Enter the digital networking unit SONET number.

Required Field.
Valid Entries: 0 - 7

2.4 * DATA GROUP

Description: Enter the DNU-S data group number.

Required Field.
Valid Entries: 0 - 1

2.5 * STE

Description: Enter the SONET termination equipment number on the DNU-S.

Required Field.
Valid Entries:
- 5E12 and earlier: 0 - 5
- 5E13 and later: 1 - 6

2.6 STE EQSTAT

Description: Enter the STE (SONET termination equipment) equipage state on the DNU-S.

Required Field.
Default:

For ODA: O
- For RC: G

Valid Entries:

Valid STE EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

Initial and growth offices must have STE EQSTAT and STS EQSTAT set to "O".

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If STS EQSTAT is "O", then STE EQSTAT must be "O".

If STS EQSTAT is "G", then STE EQSTAT must be "O" or "G".

The STE EQSTAT value cannot be greater than the corresponding DG0TMX/DG1TMX EQSTAT for the matching DG0TMX/DG1TMX TMX NUMBER (where STE matches the TMX NUMBER) on the EQDNUS form, and the EQDNUS form must be defined for the STE value. Since the TMUX number on this form is the same in DATA GROUP 0 and DATA GROUP 1, the DATA GROUP field on the EQSTE form must be used to determine the corresponding DATA GROUP TMUX number to compare against on this form.

Also the STE EQSTAT cannot be greater than the DG0/DG1 FI 0 EQSTAT and FI 1 EQSTAT on the associated EQDNUS form.

2.7 STE PM GROUP

Description: Enter the SONET termination equipment line and section performance monitoring group assigned to the STE. (See also DNUPM form, Division 5, Section 5L.)

Required Field.
Default: STEDEF
Valid Entries: 1 - 8 characters.

Data Rules:

The STE PM GROUP cannot be "/STEGDEF".

If the STE PM GROUP is entered, then the corresponding DNUPM form(s) must be defined with PM TYPE of "STE". DNUPM form corresponds with this form if PM GROUP on the DNUPM form matches the STE PM GROUP on this form.

2.8 STE FACILITY ID

Description: Enter the facility identifier on the STE.
Valid Entries: 1 - 25 characters.

2.9 LI CLI

Description: Enter the hexadecimal link interface change level indicator on the facility.

Required Field.
Default: 0
Valid Entries: 0 - 7FFFFFFF (hexadecimal)

Data Rules:

For the first hardware version the only valid value is 0. Later hardware versions will require other CLI values. See Division 8, Section 1 for CLI values.

2.10 LINE BUILD OUT

Description: Is line build out required? The cable length and type determine if line build out is required. Line build out is a signal attenuation function provided in the transmit path of the STSX-1 interface. Signal attenuation is needed to prevent excessive signal strength at the electrical cross connect panel when using short coax cable lengths. When the LINE BUILD OUT field is set to "Y", attenuation is active. When the LINE BUILD OUT field is set to "N", no attenuation is applied. The following table indicates the cable length thresholds that require attenuation.

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Cable Length vs Line Build Out

Cable Type	LINE BUILD OUT	
	Cable Length For "Y" Entered	Cable Length For "N" Entered
735A	<< = 120 feet	>> 120 feet
734A	<< = 225 feet	>> 225 feet
728A	<< = 225 feet	>> 225 feet

NOTE: If an electrical cross connect is located between the DNU-S and SONET transmission equipment, cable length refers to the distance between the DNU-S and the electrical cross connect. Otherwise, cable length refers to the total distance between the DNU-S and the SONET transmission equipment.

Required Field.
Default: N
Valid Entries: Y, N

2.11 STS EQSTAT

Description: Enter the synchronous transport signal equipage state on the DNU-S.

Required Field.
Default:

For ODA: O
For RC: G

Valid Entries:

Valid STS EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

Initial and growth offices must have STE EQSTAT and STS EQSTAT set to "O".

If STS EQSTAT is "O", STE EQSTAT must be "O".

If STS EQSTAT is "G", STE EQSTAT must be "O" or "G".

STS PATH TRACE (STS)

The following fields provide the capability to add a character string to identify the STS path from either the transmit or expected signal.

2.12 TRANSMIT

Description: Enter identifying characters for the transmit STS Path Trace. This field supports the STS Path Trace feature. See Division 2, Section 9R.

Software Release: 5E13 and later
Valid Entries: up to 62 characters

2.13 EXPECTED

Description: Enter identifying characters for the expected STS Path Trace. This field supports the STS Path Trace feature. See Division 2, Section 9R.

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Software Release: 5E13 and later
Valid Entries: up to 62 characters

```
eqste                    5ESS SWITCH          _
                    OFFICE DATA ADMINISTRATION
(5857)     DIGITAL NETWORKING UNIT SONET FOR STE AND STS (SM2000)

*1. SM           ___
*2. DNUS          _
*3. DATA GROUP    _
*4. STE           _
 5. STE EQSTAT    O
 6. STE PM GROUP  STEDEF
 7. STE FACILITY ID _____________________________
 8. LI CLI        00000000
10. LINE BUILD OUT  N
11. STS EQSTAT    O
```

Figure 1 SAMPLE EQSTE FORM 5E13 AND LATER SOFTWARE RELEASES

```
eqste                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(5857)         Digital Networking Unit SONET for STE and STS (SM2000)

*1. SM           ___                  9. LINE BUILD OUT N
*2. DNUS          _                   10. STS EQSTAT    O
*3. DATA GROUP    _
*4. STE           _
 5. STE EQSTAT    O
 6. STE PM GROUP  STEDEF
 7. STE FACILITY ID _____________________________
 8. LI CLI        00000000

                  STS PATH TRACE (STS)
11. TRANSMIT ____________________________________________________________
12. EXPECTED ____________________________________________________________
```

Figure 2

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SEC. 60: 5858 RECORD
DIGITAL NETWORKING UNIT SONET VIRTUAL TRIBUTARY (SM2000) - EQVT

1. GENERAL

The 5858 Record is available with 5E9(2) and later Software Releases.

The DNU-S (Digital Networking Unit - SONET) Virtual Tributary (SM-2000) form is used for the equipage of the VT (Virtual Tributary) and the DS1S (Digital Signal Level 1 SONET) facility on a DNU-S - feature number (99-5E-1427). For more information on DNU-S, see Division 2, Section 9C.

Effective with the 5E13 and later Software Releases, the DNU-S VT Group Number feature (99-5E-4424) introduced a new VT facility (DS1) numbering scheme for DNU-S provisioning. The VT field was split and renamed VT GROUP and VT MEMBER. A new STE (SONET Termination Equipment) field was added, and the "NEN" OE Number field defined for trunks was modified accordingly. To accommodate this change, a conversion of the former VT field number to the new VT GROUP and VT MEMBER number is applied (see the conversion table provided at the VT field). For more information on the 99-5E-4424 feature, see Division 2, Section 9Q.

Effective as a 5E13 and later Software Update, the RSM (Remote Switching Module) on DNU-S feature (99-5E-4209) is added. For this feature, a new APPLICATION TYPE ("RSM") was added to provide the capability to assign a Remote Switching Module to DS1 facilities terminating on a DNU-S. This feature only applies to DNU-S units that utilize the SFI (STS Facility Interface). For more information, see Division 2, Section 9S.

Also added as a 5E13 and later Software Update is the Wireless Trunks on DNU-S feature (99-5E-3553). For this feature, a new field, AFAC ID, was added to define the Autoplex Facility Identifier for wireless trunks. For more information, see Division 2, Section 8L.

The SONET digital switch interface terminates the STSX-1 interface for the intraoffice environment. It is a 51.84 Mb/s electrical interface which carries intraoffice trunks because it is limited to a maximum of 900 feet. However, the actual digital trunks may be "interoffice" since the digital trunk in a DS0, within the DS1 facility, may terminate on another switch, using the SONET transmission equipment for the physical wire connection.

The trunks carried by the STSX-1 interface are digital: the DNU-S does not support analog trunks.

The STSX-1 interface is made up of the following layers:

- STE (SONET Termination Equipment)
  - Section
  - Line
- STS-1 Path
- VT Path
- DS1 Path

The Section and Line layers have been combined and are referred to as the STE (SONET Termination Equipment). The STE, as well as the STS-1, VT, and DS1 are each considered to be a separate "facility".

The VT1.5, a 1.728 Mb/s facility, carries one DS1 (1.544 MB/s). The VT tributaries consist of asynchronous mapped DS1s in a floating mode of operation.

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The DS1S facility is similar to existing DS1 (Digital Signal Level 1) facilities. It is a 1.544 Mb/s facility which carries up to 24 DS0s (64 kb/s).

1.1 Carrier Group Alarm Hash Indexes

The CGA (Carrier Group Alarm) data is associated with the VT/DS1 and STE/STS facilities. For 5E9(2) and later, only 522 hash indexes are available per switching module. One hash index is allocated to each instance of the following for a specific SM:

- 1 per each pair STE/STS on a specified SM (EQSTE form). (The EQSTE form is associated with the DNU-S.)
- 1 per each VT (Virtual Tributary) on a specified SM (EQVT form). (The EQVT form is associated with the DNU-S.)
- 1 per each DFI (Digital Facility Interface) of a DLTU (Digital Line/Trunk Unit) where FAC IND is 0 or 1, and DFI TYPE is not "H1" or "H2"; i.e., DFI USAGE of "H1" and "H2" are not counted (EQDUP form). (The EQDUP form is associated with DLTU.)
- 1 per each DFI-2 (2 per EQDUP form) where FAC IND is 3. (The EQDUP form is associated with DLTU.)
- 1 per pack - POS, EQST, CLI, CLEI combination. (30 packs per DCLU on EQDCLP form) (The EQDCLP form is associated with DCLU.)
- 1 per IFAC - EQSTAT, SUP MTHD, PUB43801 combination. (20 per IDCU on the EQIFAC form) (The EQIFAC form is associated with IDCU.)

The sum of the above total number of allocated hash indexes (instances) cannot be greater than 522 for any one specific SM.

1.2 Recent Change View

The corresponding Recent Change View for this form is 20.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the switching module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Only 50 unique PM GROUP names are allowed per SM from the combination of PM GROUPs defined on EQSTE forms as STE PM GROUP, and defined on EQVT forms as VT PM GROUP and DS1S PM GROUP.

Each SM entered on this form must also be entered on an EQIM form.

Each value of SM entered on the EQDNUS, EQSTE, and EQVT forms must have a corresponding EQIM

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form with the same SM value where the value entered for CONFIGURATION supports Digital Networking Unit-SONET. The "SM2000" value for CONFIGURATION supports Digital Networking Unit-SONET.

2.3 * DNUS

Description: Enter the DNU-S (Digital Networking Unit SONET) number.

Required Field.
Valid Entries: 0 - 7

2.4 * DATA GROUP

Description: Enter the DNU-S (Digital Networking Unit SONET) data group number.

Required Field.
Valid Entries: 0 - 1

2.5 * STE

Description: Enter the STE (SONET Termination Equipment) number. This field was implemented at the time of the DNU-S VT Group Number feature to comply with Bellcore requirement R6-3 [938] for numbering conventions. (See Division 2, Section 9Q.)

Software Release: 5E13 and later
Required Field.
Valid Entries: 1 - 6

2.6 * STS

Description: Enter the STS (Synchronous Transport Signal) number. This field was modified at the time of the DNU-S VT Group Number feature to comply with Bellcore requirement R6-3 [938] for numbering conventions. (See Division 2, Section 9Q.)

Required Field.
Default:

5E13 and later: 1
Valid Entries:
- 5E12 and earlier: 0 - 5
- 5E13 and later: 1 (only valid entry)

2.7 * VT

Description: Enter the VT (Virtual Tributary) number on the DNU-S. For 5E13 and later, the VT field was replaced by the VT GROUP and VT MEMBER fields to support the DNU-S VT Group Number feature to satisfy Bellcore requirement R6-2 [361v2] for numbering conventions. (See Division 2, Section 9Q.)

The TMUX (Transmission Multiplexer) circuit pack maps the 28 possible VT entries into a SONET STS1 signal format of seven groups of four. The 28 VT entries in this field are organized into those groups as shown in the following two tables.

NOTE: Prior to 5E13, the VT field was used to enter the VT. Effective with the 5E13 Software Release, the VT GROUP and VT MEMBER fields are used.

DNUS - TMUX
VT Entry Correspondence with
SONET Signal Group and Member Number

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VT Entry	SONET Signal	
	Group Number Entry	VT1.5 Member Number Entry
1	1	1
2	2	1
3	3	1
4	4	1
5	5	1
6	6	1
7	7	1
8	1	2
9	2	2
10	3	2
11	4	2
12	5	2
13	6	2
14	7	2
15	1	3
16	2	3
17	3	3
18	4	3
19	5	3
20	6	3
21	7	3
22	1	4
23	2	4
24	3	4
25	4	4
26	5	4
27	6	4
28	7	4

The following table shows the same relationship of VT entries to the 7 groups of 4 VT1.5 members in a matrix which provides the position of the VT1.5s within the STS.

SONET Signal Group	VT1.5 Members			
	1	2	3	4
1	VT = 01	VT = 08	VT = 15	VT = 22
2	VT = 02	VT = 09	VT = 16	VT = 23
3	VT = 03	VT = 10	VT = 17	VT = 24
4	VT = 04	VT = 11	VT = 18	VT = 25
5	VT = 05	VT = 12	VT = 19	VT = 26
6	VT = 06	VT = 13	VT = 20	VT = 27
7	VT = 07	VT = 14	VT = 21	VT = 28

2.8 *VT GROUP

Description: Enter the Virtual Tributary Group number. This field supports the DNU-S VT Group Number feature. (See Division 2, Section 9Q.)

Software Release: 5E13 and later
Required Field.
Valid Entries: 1 - 7

2.9 *VT MEMBER

Description: Enter the Virtual Tributary Member number. This field supports the DNU-S VT Group Number feature. (See Division 2, Section 9Q.)

Software Release: 5E13 and later
Required Field.
Valid Entries: 1 - 4

2.10 VT EQSTAT

Description: Enter the virtual tributary equipage state.

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Required Field.
Default:

For ODA: O
- For RC: G

Valid Entries:

Valid VT EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

During an INSERT operation in Recent Change, VT EQSTAT must not be "O".

Initial and growth offices must have VT EQSTAT and DS1S EQSTAT set to "O".

If "O" is entered, then DS1S EQSTAT must be "G" or "O".

If "G" is entered, DS1S EQSTAT must be "G".

If "U" is entered, then DS1S EQSTAT must be "U".

The value entered in VT EQSTAT cannot be greater than the corresponding PCTL0/PCTL1 CD 0 EQSTAT. In addition, it cannot be greater then CD 1 EQSTAT for the matching PCTL0/PCTL1 PCTLINK on the EQDNUS form (5855 Record). (STS on this form matches PCTLINK on the EQDNUS form). Both CD 0 EQSTAT and CD 1 EQSTAT must be entered and must be greater than or equal to VT EQSTAT. In addition, if VT EQSTAT is "G", then both CD 0 EQSTAT and CD 1 EQSTAT must be defined and must be "O" within the associated DATA GROUP (PCTL0/PCTL1).

For all VT values, the STS EQSTAT field must be entered on the EQSTE form and VT EQSTAT cannot be greater than the corresponding STS EQSTAT found by matching EQVT SM/DNUS/DATA GROUP/STS fields with EQSTE SM/DNUS/DATA GROUP/STE fields. In addition, if VT EQSTAT is "G", then STS EQSTAT must be "O".

For 5E12 and earlier:

- When PRIGRP forms have FACILITY LIST entries assigned with EQUIPMENT TYPE of "DNUS", the SM, EQUIPMENT NUMBER[1,1], EQUIPMENT NUMBER[2,2], EQUIPMENT NUMBER[3,3], and EQUIPMENT NUMBER[4,5] entered on the PRIGRP form must be defined on an EQVT form as SM, DNUS, DATA GROUP, STS, and VT, respectively. VT EQSTAT and DS1S EQSTAT must both be "O".

For 5E13 and later:

- When PRIGRP forms have FACILITY LIST entries assigned with EQUIPMENT TYPE of "DNUS", the SM, EQUIPMENT NUMBER[1,1], EQUIPMENT NUMBER[2,2], EQUIPMENT NUMBER[3,3], and EQUIPMENT NUMBER[4,4], EQUIPMENT NUMBER[5,5], and EQUIPMENT NUMBER[6,6], entered on the PRIGRP form must be defined on an EQVT form as SM, DNUS, DATA GROUP, STE, STS, VT GROUP, and VT MEMBER, respectively. VT EQSTAT and DS1S EQSTAT must both be "O".

2.11 VT PM GROUP

Description: Enter the virtual tributary performance monitoring group.

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Required Field.
Default: VT1DEF
Valid Entries: 1 - 8 characters

Data Rules:

"/VT1GDEF" cannot be entered.

If a VT PM GROUP is defined, then a corresponding DNUPM form must be defined with PM TYPE of "VT1". Forms correspond if the VT PM GROUP on this form matches the PM GROUP on the DNUPM form.

No more than 50 unique PM GROUP names are allowed per SM from the combination of PM GROUPs defined on EQSTE forms as STE PM GROUP, and defined on EQVT forms as VT PM GROUP and DS1S PM GROUP.

2.12 VT TYPE

Description: The VT TYPE field is used to specify the type of the virtual tributary. For 5E9(2) - 5E12, "ASYNC" indicating asynchronous is automatically entered in this field and cannot be changed. For 5E13 and later, the Byte-Synchronous value was added to support the DNU-S Support for B-Sync DS1 Mapping to VT1.5 feature (99-5E-4151).
Default: ASYNC
Valid Entries:
- 5E9(2) and later: [A]SYNC
- 5E13 and later: [B]SYNC

NOTE: If VT TYPE is "BSYNC", the far end and any network elements along the path, must also be setup/compatible with "BSYNC".

2.13 VT MODE

Description: The VT MODE field specifies the mode of the virtual tributary. The only valid value is "RB" (robbed bit), which is automatically entered and cannot be changed.
Default: RB
Valid Entries:
- 5E12 and earlier: RB (Robbed Bit)
- 5E13 and later: DMI (DMI mode)

Data Rules:

When DMI is entered, APPLICATION TYPE must be "RSM".

2.14 VT SIZE

Description: The VT SIZE field is used to specify the size of the virtual tributary. The only valid value is 1.5, which is automatically entered and cannot be changed.

Virtual Tributary Line Rates

Optical Carrier Level	Electrical Equivalent	Line Rate (Mb/s)
VT1.5	DS-1 (1.544Mb/s)	1.728

Default: 1.5
Valid Entries: 1.5

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2.15 DS1S EQSTAT

Description: Enter the DS1S equipage state of the DNU-S.

Required Field.
Default:

For ODA: O
- For RC: G

Valid Entries:

Valid DS1S EQSTAT Entries

Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

During a Recent Change INSERT operation the DS1S EQSTAT must not be "O".

Initial and growth offices must have VT EQSTAT and DS1S EQSTAT set to "O".

2.16 DS1S PM GROUP

Description: Enter the Digital Signal Level 1 SONET performance monitoring group.

Required Field.
Default: DS1SDEF
Valid Entries: 1 - 8 characters

Data Rules:

DS1S PM GROUP cannot be "/DS1SGDF".

If DS1S PM GROUP is entered on this form, then it must be entered in the PM GROUP field on the DNUPM form with a PM TYPE of "DS1S".

No more than 50 unique PM GROUP names are allowed per SM from the combination of PM GROUPs defined on EQSTE forms as STE PM GROUP, and defined on EQVT forms as VT PM GROUP and DS1S PM GROUP.

2.17 DS1S FACILITY ID

Description: Enter the DS1S FACILITY ID used to identify the digital signal level 1 SONET facility.
Valid Entries: 1 - 25 characters

2.18 APPLICATION TYPE

Description: This field supports multiple applications of a DS1 on the DNU-S. Enter the Application Type.

This field supports the TR303 on DNU-S feature. See Division 2, Section 9J.

Software Release: 5E12 and later.
Required Field.
Valid Entries:

Valid APPLICATION TYPE Entries

Entry	Definition
AIUC	Extended Access Interface Unit Control.

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AIUD	Extended Access Interface Unit Data.
IWU	Inter-Working Unit. Supports the 99-5E-7880 feature in a 5E16 Feature Release.
IWG	Inter-Working Gateway. Supports the 99-5E-8010 feature in a 5E15 Feature Release.
RSM	5E13 Software Update: Supports the 99-5E-4209 feature: SM and RSM via the DNU-S.
TRUNK	Digital trunk facility.
TR303	Control facility TR303 RDT (Remote Digital Terminal).
[TR303C]TRL	Data facility TR303 RDT.

Data Rules:

When "TR303" or "TR303CTRL" is entered, FRAME must be "ESF" and ZCS must be "N".

When "AIUC" or "AIUD" is entered, FRAME must be "ESF" and ZCS must be "N".

When "RSM" is entered,

- VT MODE must be "DMI"
- FRAME must be "ESF"
- ZCS must be "N" .

NOTE: When "RSM" is not entered, VT MODE must be "RB".

DS1 SIGNALING (DS1S)

The following fields (Section 2.19 - Section 2.20) define the Level 1 SONET Facility signaling attributes. The table below provides the relationship of line coding and framing formats between the DFI and the DNU-S VT1.5. It shows the effect of these codings to the HDLC (High Level Data Link Control) format of the D-channel. The DNU-S VT1.5 equivalent to the DLTU DFI MODE is a combination of the ZCS field of the VT1.5, the DNU-S DS1 Frame, and the D-channel DATA RATE field on the TKGRP form (5202 Record). The first three columns of the table are related to the DNU-S VT1.5.

Line Coding and Framing Formats for DFI and DNU-S VT1.5

DNU-S DS1S FRAME	DNU-S DS1S ZCS	DATA RATE	DFI MODE	LINE CODING	FRAMING FORMAT	HDLC ENCODING
SF	Y	56K	D4	ZCS	SF/D4	Inverted.
ESF	Y	56K	FEB7	ZCS	ESF	Inverted.
SF	Y	R64K	D464	ZCS	SF/D4	Inverted.
ESF	Y	R64K	FE64	ZCS	ESF	Inverted.
SF	N	64K	64K	B8ZS	SF/D4	Noninverted.
ESF	N	64K	FE8Z	B8ZS	ESF	Noninverted.

2.19 # FRAME

Description: Enter the type of framing for the DS1 SONET facility signaling.

Required Field.

Valid FRAME Entries

Entry	Definition
ESF	Extended Super Frame.
SF	Super Frame.

2.20 ZCS

Description: Should zero code suppression be in effect on this DS1S?

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Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and later, when TGN/MEMBs defined on the TRUNK form have NEN entered, and have a TRKCLS of "EDSL" and DATA RATE of 64K on the associated TKGRP form, ZCS on the associated EQVT form must be "N".

For 5E10 and later, when TGN/MEMBs defined on a TRUNK form have an entry for NEN, where the corresponding TKGRP form has WB RATE entered there must be a matching EQVT form where FRAME is "ESF" and ZCS is "N".

WIRELESS TRUNKS

2.21 AFAC ID

Description: Enter the Autoplex Facility Identifier. This feature was added for the Wireless Trunks on DNU-S feature. See Division 2, Section 8L.

Software Release: 5E13 and later
Valid Entries:

- For 5E13 and earlier: 1 - 1023
- For 5E14: 1 - 4080
- For 5E15 and later: 1 - 4500

Data Rules:

For 5E13 and later:

- When AFAC ID is entered, APPLICATION TYPE must be "TRUNK".
- AFAC IDs must be unique across EQDUP and EQVT forms in an office.
- An EQDSC3 form (5852 Record) must exist with the EQSTAT attribute set to "O" for the associated SM.
- AFAC ID must not be entered on EQDUP or EQVT forms under the following TKGRP form conditions:
- DCS TRK is "N",
- TRKCLS is not equal to "BCM" or "PPMEM", and
- TRK DIR is not "SGNL".

APT TESTING

This field supports the APT (Automatic Progression Testing) Enhancements feature. For information on this feature see, Division 2, Section 2AD.

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2.22 ALGORITHM

Description: This field is used for the DS1 (Digital Signal Level 1) in APT (Automatic Progression Testing).

Software Release: 5E16(2) and later
Valid Entries:

Valid ALGORITHM Entries

Entry	Definition
1ONLY	Test One Only (test one trunk only on the DS1, independently whether test passes or fails and then move to a trunk on another DS1).
FULL	Full (test all trunks on the DS1, independently whether test passes or fails, and then move to a trunk on another DS1).
NOTST	No Test (APT should not perform any tests on the DS1).
SUCC	Stop on Success (test one trunk on the DS1 and then move to a trunk on another DS1 if test passes, or test next trunk on the same DS1 if test fails).

Data Rules:

ALGORITHM can only be entered when APPLICATION TYPE is "TRUNK".

```
eqvt                    5ESS Switch
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5858)    DIGITAL NETWORKING UNIT SONET VIRTUAL TRIBUTARY (SM2000)

*1. SM        ___     9. VT PM GROUP VT1DEF
*2. DNUS      _         VT TYPE     ASYNC
*3. DATA GROUP _      11. VT MODE     RB
*4. STE       _       VT SIZE     1.5
*5. STS       1
*6. VT GROUP  _       13. DS1S EQSTAT     O
*7. VT MEMBER _       14. DS1S PM GROUP   DS1SDEF
 8. VT EQSTAT  O      15. DS1S FACILITY ID _____________________________
                  #16. APPLICATION TYPE _________
```

```
eqvt                    5ESS Switch       _
SCREEN 2 OF 2           OFFICE DATA ADMINISTRATION
(5858)    DIGITAL NETWORKING UNIT SONET VIRTUAL TRIBUTARY (SM2000)

DS1 SIGNALING (DS1S)
#17. FRAME ___
 18. ZCS   N

 WIRELESS TRUNKS
 19. AFAC ID ____
```

Figure 1 SAMPLE EQVT FORM 5E13 THROUGH 5E15 SOFTWARE RELEASES

```
eqvt                    5ESS Switch
SCREEN 1 OF 2           OFFICE DATA ADMINISTRATION
(5858)    DIGITAL NETWORKING UNIT SONET VIRTUAL TRIBUTARY (SM2000)

*1. SM        ___     9. VT PM GROUP VT1DEF
```

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```
*2. DNUS        _       10. VT TYPE     ASYNC
*3. DATA GROUP _        11. VT MODE     RB
*4. STE         _       VT SIZE     1.5
*5. STS         1
*6. VT GROUP    _       13. DS1S EQSTAT      O
*7. VT MEMBER   _       14. DS1S PM GROUP    DS1SDEF
 8. VT EQSTAT   O       15. DS1S FACILITY ID _____________________________
                    #16. APPLICATION TYPE _________
```

```
eqvt                        5ESS Switch         _
SCREEN 2 OF 2               OFFICE DATA ADMINISTRATION
(5858)     DIGITAL NETWORKING UNIT SONET VIRTUAL TRIBUTARY (SM2000)

DS1 SIGNALING (DS1S)
#17. FRAME ___
 18. ZCS   N

 WIRELESS TRUNKS
 19. AFAC ID ____

    APT TESTING
 20. ALGORITHM _____
```

Figure 2 SAMPLE EQVT FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 61: 5859 RECORD
EQUIPMENT SUBUNIT □ SAS MEMORY PACK - EQSASP

1. GENERAL

The 5859 Record is available with 5E9(2) and later Software Releases. This record defines the equipage information for the SAS (Service Announcement System) memory packs and the cards within the memory pack.

1.1 Recent Change View

The corresponding Recent Change View for this form is 20.26

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the switching module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Every entry on this form must have a corresponding entry on the EQRA form where UNIT TYPE is set to "SAS". The corresponding EQRA form is found by matching SM and UNIT NUMBER on the EQSASP form to the SWITCHING MODULE and UNIT NUMBER on the EQRA form.

2.3 * UNIT NUMBER

Description: Enter the service announcement system unit number.

Required Field.
Valid Entries: 0 - 7

2.4 * PACK NUMBER

Description: Enter the service announcement system pack position.

Required Field.
Valid Entries: 1 - 4

Data Rules:

The PACK NUMBER entries on the EQSASP forms that have the same SM and UNIT NUMBER must be sequential starting with one.

2.5 # EQSTAT

Description: Enter the memory pack equipage state.

Required Field.

Valid EQSTAT Entries

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Entry	Definition
G	Growth
O	Operational
U	Unequipped

Data Rules:

The entry for EQSTAT must be less than or equal to the EQUIPMENT STATUS on the corresponding EQRA form: "O" is greater than "G" which is greater than "U". The corresponding EQRA form is found by matching SM and UNIT NUMBER on the EQSASP form to SWITCHING MODULE and UNIT NUMBER on the EQRA form.

2.6 CLI

Description: Enter the hexadecimal CLI (Change Level Indicator) for the service announcement system memory pack. See Division 8, Section 1 for CLI values.

Required Field.

Defaut Value: 00000000
Valid Entries: 00000000 - 7FFFFFFF (hexadecimal)

2.7 APPLICATION

Description: Enter the application name for service announcement system.
Valid Entries: 1 - 8 of the following characters:
- (2, A-Z, - or _)

Data Rules:

APPLICATION must be specified when defining a memory flash card.

If APPLICATION is entered, then CARDS EQUIP must be greater then 0.

2.8 CARDS EQUIP

Description: Enter the number of SAS memory flash cards equipped.

Required Field.
Default: 0
Valid Entries: 0 - 8

Data Rules:

The sum of the number of entries in MEMORY CARD LIST must equal the entry in this field.

If CARDS EQUIP is entered, then APPLICATION must be entered.

MEMORY CARD LIST (MCL)

The following fields (Section 2.9 - Section 2.10) define the list of memory flash card densities and version numbers.

2.9 SIZE

Description: Enter the Card size specifying the memory flash card density.

Valid SIZE Entries	
Entry	**Definition**

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FR1 - FR64	Densities for Flash RAM
SR1 - SR64 and SR512	Densities for Static RAM

Data Rules:

If SIZE is entered, then CODE must also be entered. If SIZE is not entered, then CODE cannot be entered.

2.10 CODE

Description: Enter the card code specifying the memory flash card version number.
Valid Entries: 9 digits

Data Rules:

Each CODE entry in MEMORY CARD LIST must be unique.

```
eqsasp                    5ESS Switch          _
(5859)              OFFICE DATA ADMINISTRATION
                EQUIPMENT SUBUNIT -- SAS MEMORY PACK

*1. SM          ___              8. MEMORY CARD LIST (MCL)
*2. UNIT NUMBER _
*3. PACK NUMBER _                    ROW CARD SIZE     CODE
#4. EQSTAT      _                    1   0  _____ _________
 5. CLI         00000000             2   1  _____ _________
 6. APPLICATION _________                3   2  _____ _________
 7. CARDS EQUIP _                        4   3  _____ _________
                                5   4  _____ _________
                                6   5  _____ _________
                                7   6  _____ _________
                                8   7  _____ _________
```

Figure 1 SAMPLE EQSASP FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 62: 5743 RECORD
ECHO CANCELER UNIT EQUIPAGE - EQECSU

1. GENERAL

The 5743 Record is available with the 5E10 Software Release. It is used to define the characteristics of an Echo Canceler Unit. This form supports Echo Canceler Units for the CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 8B.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.15

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM must be defined on an EQIM form.

If EQDUP forms have Echo Cancelers defined, then a corresponding EQECSU form must exist with the same SM entry and unit number.

2.3 * ECSU

Description: Enter the Echo Canceler Unit number.

Required Field.
Valid Entries: 0 - 5

Data Rules:

If this form is entered, a corresponding EQDUP form must exist having the same unit number as the entry in this field and the same SM number.

2.4 # EQLAISLE

Description: Enter the Equipment location (floor and aisle) number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00-99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00-99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 0000 - 9999

2.5 # EQLBAY

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Description: Enter the equipment location bay number

Required Field.
Valid Entries:
- For SM: 0 - 4
- For SM-2000: 0 - 215

Data Rules:

The Equipment Bay and Vertical Position values must be unique within an SM. More than one Unit cannot be assigned the same equipment bay and vertical position within the same Switching Module.

2.6 # EQLUNVER

Description: Enter the equipment location unit vertical position number of the unit (circuit pack).

Required Field.
Valid Entries: 00 to 84

```
eqecsu                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5743)              ECHO CANCELER UNIT EQUIPAGE

*1. SM      ___
*2. ECSU    _
#3. EQLAISLE ____
#4. EQLBAY   ___
#5. EQLUNVER __
```

Figure 1 SAMPLE EQECSU FORM 5E10 AND LATER SOFTWARE RELEASES

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SEC. 63: 5860 RECORD
GLOBAL DIGITAL SERVICE CIRCUIT 3 - EQGDSC3

1. GENERAL

The 5860 Record (Global Digital Service Circuit 3) is available with the 5E10 and later Software Releases. It is used to define the GDSF (Global Digital Service Function) on the DSU3 for the SM and the SM-2000 class processor. There is a maximum of 1 DSU3 per SM and 2 per SM-2000 class processor. The GDSF includes the following services:

- Conference Circuits (3 and 6 Ports)
- Tone Generators
- Tone Transceivers
- Guard-Data-Guard Transceivers
- ISTF Loop Back
- ISTF Transmitter

See Figure 1. for GDSF service configurations by equipment type.

Each DSC3 has four duplex PIDBs (Peripheral Interface Data Buses) for a total of 128 time slots of data and one duplex PICB (Peripheral Interface Control Buses) for control. This provides four times the number of time slots that the DSC2 supports. The DSC3 connects (via PIDBs/PICBs) to the TSI (Time Slot Interchanger) and the SMP (Switching Module Processor) via the DX (Data EXpander) and CI (Control Interface) links, respectively.

For an SM-2000 class processor, UNIT TYPE on the EQIM form (5700 Record) must be set to an SM-2000 class processor. PACK NUMBER values for each combination of SM and DSU must be entered in sequential order for SM-2000 (i.e., PACK NUMBER 1 cannot be entered for an SM and DSU until PACK NUMBER 0 is entered for the same SM and DSU).

For 5E11 and later, RSMs (Remote Switching Modules) may only have ISTF loopback and ISTF transmit circuit assignments via a EQGDSC3 form. Valid RSM EQGDSC3 assignments are provided in the following table:

Valid RSM ISTF/ISTF Entries

SM TYPE	CONFIGURATION	# of 3 PORTS	# of 6 PORTS
SM-2000	4 or 7	0	0
non-SM-2000	4 or 6	0	0

The SM-2005 unit can accommodate up to 6 LDSC3/GDSC3 boards.

See Division 2, Section 7G for more information on the GDSF. This form is also used to define the GDSF on a CSU (Combined Services Unit). See Division 2, Section 7F.

1.1 Recent Change View

The Recent Change View for this form is 19.19.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

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2.2 *SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

2.3 *GDSF PACK NUM

Description: Enter the GDSF Pack Number.

Required Field.

Valid GDSF PACK NUM Entries

Entry	Description
0	SM.
0 - 31	SM-2000.

Data Rules:

The values of GDSF PACK NUM must be sequential per SM, beginning with 0.

When UNIT TYPE on the EQIM form is not an SM-2000 class processor, GDSF PACK NUM must be 0.

For SM-2000 class processors, all four PIDB LIST PIDB values must be entered. For non-SM-2000 class processors, no more than two PIDB LIST PIDB values are allowed.

2.4 #UNIT OFFSET

Description: Enter the Unit Offset number.

Required Field.
Valid Entries:
- 5E10 and earlier: 13 for SM; 0-17 for an SM-2000 class processor

5E11 and later: 13 for SM; 0-23 for an SM-2000 class processor

Data Rules:

UNIT OFFSET and PICB must both be even, or both be odd.

UNIT OFFSET values must not be duplicated on another EQGDSC3 form defined for the same DSU3 and SM.

When UNIT TYPE on the EQIM form is not an SM-2000 class processor, UNIT OFFSET must be 13.

UNIT OFFSET must not be 10 or 19. These positions are exclusively for LDSC3 packs.

When UNIT OFFSET is greater than 17, the BAY field must be "0" and VERTPOST must be 15.

2.5 EQSTAT

Description: Enter the status of the unit.

Required Field.

Default Value. O

Valid EQUIPMENT STATUS Entries

Entry	Definition

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O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

For initial offices, EQSTAT must be "O".

If EQSTAT is not "O", NUM OF 3 PORTS, NUM OF 6 PORTS, and CONFIGURATION must be 0 or blank.

2.6 #CLI

Description: Enter the Change Level Indicator value. Refer to Division 8, Section 1 for the appropriate CLI value.

Required Field.

Default: 0
Valid Entries: 0 - 7fffffff (hex)

Data Rules:

When UNIT TYPE on the EQIM form is not an SM-2000 class processor, CLI must be 0.

For 5E16(2) FR 1 and later, when GDSF2 is equipped with UN363 packs, CLI must be 0, and with UN590 packs, the CLI must be 1.

2.7 #AISLE

Description: Enter the aisle (and floor) where the DSU3 is located. The floor is designated 00 - 99 and the aisle is designated 00 - 99.

Required Field.
Valid Entries: 00 - 99

2.8 #BAY

Description: Enter the Bay number where the DSU3 is located.

Required Field.
Valid Entries: 0 - 208

Valid BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	SM.
0 - 14	SM-2000 class processor; SM Cabinet aisle.
100 - 104	SM-2000 class processor; Back panel; wiring position.
200 - 208	SM-2000 class processor; Front panel; door position.

Valid BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

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2.9 #VERTPOS

Description: Enter the Vertical Position where the DSU3 is located. Recommended positions are as follows:

For 7-foot cabinets: 22, 30, 39, 48, 56, 65, 74
- For 6-foot cabinets: 7, 15, 24, 32, 41, 49, 58

Required Field.
Valid Entries: 00 - 84

2.10 CSU

Description: Is the GDSF located on a CSU (Combined Services Unit)? For more information on the Combined Services Unit feature, see Division 2, Section 7F.

Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

For 5E10 and earlier, when CSU is "Y":

- UNIT OFFSET must be 13.
- no other EQGDSC3 form may be entered on the same SM that also has CSU of "Y".
- UNIT TYPE on the EQIM form must not be "SM2000"
- no other EQGDSC3 form may be entered on the same SM that also has CSU set to "Y".

When CSU is set to "N", the corresponding SM must have a UNIT TYPE with an SM-2000 class processor.

For 5E11 and later, for a Wireless Centrex Application:

- GDSF PACK NUM must be 0 or 1,
- CSU must be "Y".

For 5E11 and later, for a non-Wireless Centrex Application:

- GDSF PACK NUM must be 0 or 1,
- CSU must be "Y",
- UNIT OFFSET must be 13.

NOTE: A Wireless Centrex Application is indicated by PRODUCT set to "WNC" on the OFCOPT form (5509 Record).

2.11 #CONFIGURATION

Description: Enter the configuration of the GDSF Pack.

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Required Field.
Valid Entries: 0 - 8

Data Rules:

If CONFIGURATION is 2, 4, or 5, the number of CONFERENCE circuits must be 0 or blank.

2.12 NUM OF 3 PORT

Description: Enter the quantity of 3 Ports required. Note that each 3 Port (time slots in clusters of three) is equal to three conference circuits. An entry of 1 provides 3 conference circuits; an entry of 2 provides six conference circuits, etc.

Required Field.
Valid Entries: blank, 0 - 42

2.13 NUM OF 6 PORT

Description: Enter the quantity of 6 Ports required. Note that each 6 Port (time slots in clusters of six) is equal to 6 conference circuits. For example, an entry of 1 provides 6 conference circuits; an entry of 2 provides 12 conference circuits, etc.

Required Field.
Valid Entries: blank, 0 - 21

2.14 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.

Required Field.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form for the same Switching Module. In addition, the EQSTAT value on the EQCI must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form (5853 Record). (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

For 5E16(2) and later, when INTF UNIT is 0, BAY must be 000 - 014, 100 - 104, or 200 - 208.

2.15 #CI

Description: Enter the Control Interface group number.

Required Field.

Valid CI Entries

Entry	Description
0 - 1	SM.
0 - 3	SM-2000 class processor.

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Data Rules:
The value of the CI/PICB fields must not be 0/0 or 0/1. These values are reserved for the LDSU on non-SM2000 class processors.

CI (CONTROL GROUP) numbers assigned on the following forms must be defined as CI on an EQCI form: EQDCTU (5751 Record), EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record), EQFIU (5753 Record), EQMSU (5750 Record), EQRCLK (5723 Record). Furthermore, the EQSTAT on the matching EQCI form must be greater than or equal to the equipment status value on the equipment form (i.e., "O" is greater than "G" which is greater than "U").

2.16 #PICB

Description: Enter the Peripheral Interface Control Bus number.

Required Field.
Valid Entries: 0 - 22

Data Rules:

PICB and UNIT OFFSET must both be even, or both be odd.

2.17 #DI

Description: Enter the Data Interface number.

Required Field.
Valid Entries:
- 0 - 1 for SM
- 0 - 5 for an SM-2000 class processor

Data Rules:

The following forms cannot have a duplicate Data Port assignment on the same Switching Module: EQDCLU (5810 Record), EQDS (5740 Record), EQDSC3 (5852 Record), EQDUP (5730-2), EQGDSC3 (5860 Record), EQIDCU (5846 Record), EQISLU (5731 Record), EQISTF (5823 Record), EQLU (5710 Record), EQPSU (5741 Record), EQRA (5821 Record), EQTU (5720 Record).

PIDB LIST

This field group defines the PIDB numbers for rows 1 - 4. Each PIDB row must be unique.

2.18 #PIDB

Description: Enter the PIDB for rows 1 - 4.

Required Field.
Valid Entries:
- 0 - 15 for SM
- 0 - 23 for an SM-2000 class processor

Data Rules:

At least one PIDB must be entered.

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When only 1 PIDB is equipped and CONFIGURATION is 1, the number of Conference Circuits cannot exceed 32 (see Note below).

When only 1 PIDB is equipped and CONFIGURATION is 2, 4, or 5, the number of Conference Circuits must be 0 or blank.

When only 1 PIDB is equipped and CONFIGURATION is 6 or 7, the number of Conference Circuits cannot exceed 24 (see Note below).

When only 1 PIDB is equipped and CONFIGURATION is 8, the number of Conference Circuits cannot exceed 12 (see Note below).

When only 1 or 2 PIDBs are equipped, CONFIGURATION must not be 3.

When only 2 PIDBs are equipped, and CONFIGURATION is 1, the number of Conference Circuits cannot exceed 64 (see Note below).

When only 2 PIDBs are equipped, and CONFIGURATION is 6 or 8, the number of Conference Circuits cannot exceed 30 (see Note below).

When only 2 PIDBs are equipped, and CONFIGURATION is 7, the number of Conference Circuits cannot exceed 48 (see Note below).

When 4 PIDBs are equipped, and CONFIGURATION is 1, the number of Conference Circuits cannot exceed 128 (see Note below).

When 4 PIDBs are equipped, and CONFIGURATION is 2 or 5, the number of Conference Circuits cannot exceed 30 (see Note below).

When 4 PIDBs are equipped, and CONFIGURATION is 4 or 8, the number of Conference Circuits cannot exceed 60 (see Note below).

When 4 PIDBs are equipped, and CONFIGURATION is 7, the number of Conference Circuits must be 0.

When 4 PIDBs are equipped, CONFIGURATION must not be 3 or 6.

When 4 PIDBs are equipped and CONFIGURATION is 3, 4, 6, or 8, the number of conference circuits cannot exceed 24 (see Note below).

- ***NOTE:*** The number of conference circuits is determined by the value entered in the NUM OF 3 PORT field x 3, plus the value entered in the NUM OF 6 PORT field x 6.

GLOBAL DIGITAL SERVICES FUNCTION SM-2000 CONFIGURATIONS - 4 PIDBs

Configuration Type	Tone Generators	Tone Transceivers	Guard-Data-Guard Transceivers	ISTF Transmitters	ISTF Loop Back	Conference Circuits	Comments
0	-	-	-	-	-	0	No conference circuits.
1	-	-	-	-	-	128	All conference circuits.
2	12	10	6	-	-	30	Existing Full SM TTF.
4	-	-	-	10	44	60	Only conference and ISTF circuits.
5	24	4	4	4	32	30	All functionality, with more TTF services.
7	-	-	-	16	32	-	All ISTF circuits.
8	16	12	4	-	-	60	Replaces the existing GDSU

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							services.

GLOBAL DIGITAL SERVICES FUNCTION SM CONFIGURATIONS - 1 PIDB

Configuration Type	Tone Generators	Tone Transceivers	Guard-Data-Guard Transceivers	ISTF Transmitters	ISTF Loop Back	Conference Circuits	Comments
0	-	-	-	-	-	0	No conference circuits.
1	-	-	-	-	-	32	All conference circuits.
2	16	12	4	-	-	-	TTF/TTF2 more TTF.
4	-	-	-	4	28	-	ISTF replacement.
5	12	6	2	4	8	-	TTF/TTF2/ISTF.
6	-	-	-	6	2	24	Conference/ISTF.
7	4	3	1	-	-	24	Conference/TTF/TTF2.
8	6	4	2	4	4	12	All functions.

GLOBAL DIGITAL SERVICES FUNCTION SM CONFIGURATIONS - 2 PIDBs

Configuration Type	Tone Generators	Tone Transceivers	Guard-Data-Guard Transceivers	ISTF Transmitters	ISTF Loop Back	Conference Circuits	Comments
0	-	-	-	-	-	0	No conference circuits.
1	-	-	-	-	-	64	All conference circuits.
2	16	12	4	-	-	-	TTF.
4	-	-	-	8	56	-	ISTF replacement.
5	20	8	4	4	28	-	TTF/ISTF.
6	-	-	-	12	22	30	Conference/ISTF.
7	8	6	2	-	-	48	Conference/TTF/TTF2.
8	6	4	4	4	16	30	All functions.

One or two PIDBs are allowed for SMs; 4 PIDBs are allowed for SM-2000.

ISTF = Integrated Services Test Facility TTF = Transmission Test Facility

Figure 1 GDSF CONFIGURATIONS

```
SCREEN 1 OF 1                5ESS Switch                _
eqgdsc3              OFFICE DATA ADMINISTRATION
(5860)           GLOBAL DIGITAL SERVICE CIRCUIT 3

 *1. SM              ___          #13. CI       _
 *2. GDSF PACK NUM   __           #14. PICB     __
 #3. UNIT OFFSET     __           #15. DI       _
  4. EQSTAT          O
 #5. CLI             00000000     #16. PIDB LIST
 #6. AISLE           ____          ROW  CKT    PIDB
 #7. BAY             ___           1    0      __
 #8. VERTPOS         __            2    1      __
  9. CSU             N             3    2      __
#10. CONFIGURATION   _             4    3      __
 11. NUM OF 3 PORT   __
 12. NUM OF 6 PORT   __
```

Figure 2 SAMPLE EQGDSC3 FORM 5E10 - 5E14 SOFTWARE RELEASES

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```
eqgdsc3                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5860)          GLOBAL DIGITAL SERVICE CIRCUIT 3 (SM2000)

 *1. SM           ___          13. INTF UNIT 0
 *2. GDSF PACK NUM __          #14. CI       _
 #3. UNIT OFFSET   __          #15. PICB     __
  4. EQSTAT        O           #16. DI       _
  5. CLI           00000000
 #6. AISLE         ____         17. PIDB LIST (PIDBLIST)
 #7. BAY           ___          ROW CKT PIDB
 #8. VERTPOS       __             1   0   __
  9. CSU           N            2   1   __
#10. CONFIGURATION _              3   2   __
#11. NUM OF 3 PORT __             4   3   __
#12. NUM OF 6 PORT __
```

Figure 3 SAMPLE EQGDSC3 FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 64: 5745-1/2 RECORD ACCESS INTERFACE UNIT - EQAIU

1. GENERAL

The 5745 Record is available with the 5E11 Software Release. It is used to define the AIU (Access Interface Unit) (see Division 2, Section 7K). Effective with the 5E12 and later Software Releases, ISDN capability was added for the AIU (see Division 2, Section 9K). Additionally, for 5E12 and later, the Remote AIU feature is available (see Division 2, Section 9O). Effective with the 5E14 and later Software Releases, ADSL (Asymmetric Digital Subscriber Line) on the AIU and Broadband for the AIU are provided. These features are also available as 5E11, 5E12, and 5E13 Software Releases (see Division 2, Section 7AF). For 5E14 and later, the XAIU (MultipleXed Access Interface Unit) feature was implemented (See Division 2, Section 9T).

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switch Module identification number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For each SM assignment, there must be a corresponding EQIM form (5700 Record).

When an EQAIU form is assigned to an SM where the value of UNIT TYPE is not defined as an SM-2000 class processor on the corresponding EQIM form, the following conditions must be met:

- AIU must be less than 15
- EQL BAY must be 0 - 4
- CI must be 0 or 1
- RING GEN LOC must be less than 15
- The "DI" segment of the DI/DFPOS field must be 0 or 1 when PIDB TYPE is "AIU".

When an EQAIU form is assigned to a UNIT TYPE of "SM-2000", a maximum of 43 AIUs can be assigned.

For 5E14 and later:

For each SM assignment with AIU TYPE set to "XAIU", there must be a corresponding EQIM form (5700 Record) that must be an SM-2000 class processor.

For each SM assignment with AIU TYPE set to "XAIU", there must not be more than 31 XAIUs assigned.

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2.3 * AIU

Description: Enter the Access Interface Unit identification number.

Required Field.

Valid AIU - 5E11 Entries

Entry	Description
0 - 14	SM.
0 - 42	SM-2000.

Valid AIU - 5E12 and later Entries

Entry	Description
0 - 14	SM.
0 - 127	SM-2000.

2.4 AIU TYPE

Description: This field was added to accommodate multiple AIU types. Enter the AIU TYPE.

Software Release: 5E12 and later
Required Field.
Default: AIU
Valid Entries:

Valid AIU TYPE Entries

Entry	Description
[A]IU	AIU feature.
[E]AIU	AIU Remote feature. Requires an SM-2000 class processor (when EQSTAT is set to either "O" or "G") defined on the EQIM form.
[X]AIU	Software Release: 5E14 and later Multiplexed AIU feature. Requires an SM-2000 class processor when AIUs are remotely used.

Data Rules:

If "AIU" is entered:

- COMDAC STATE, SITE ID, CBL SERIES and CBL DISTANCE must not be entered.
- CI and PICB must be entered.
- Row 1 of LOCAL TIME SLOT GROUP (PIDB) list must be entered.
- REMOTE COMDAC 0/1 TIME SLOT GROUP (TSPFAC0/TSPFAC1) list must not be entered.
- TEST PACK 0/1 must be "N"
- for every EQAIUP form, the EQAIUP EQSTAT must be less than the TIME SLOT GROUP (PIDB) (row 1) EQSTAT (EQSTAT state of "G" is less than the state of "O").

For 5E14 and later:

- row 1 of TIME SLOT GROUP must be unique within TIME SLOT GROUP (PIDB) list.
- RCOMDAC0 EXT REF and RCOMDAC1 EXT REF must be "N".
- and MTB0 is entered, row 1 PIDB.EQSTAT must be "G" or "O".
- and MTB1 is entered, row 1 PIDB.EQSTAT must be "G" or "O".

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For 5E15 and later:

- INTF UNIT must be entered.

If "EAIU" is entered:

- CI and PICB must not be entered.
- COMDAC STATE and SITE ID must be entered.
- LOCAL TIME SLOT GROUP (PIDB) list must not be entered.
- CBL DISTANCE and CBL SERIES must be entered.
- a RISITE form with the same SITE ID must be entered.
- and REMOTE COMDAC 0/1 TIME SLOT GROUP has a TRANSPORT TYPE of "DLTU", there must be an EQDUP form with a matching SM, DLTU, PK and FAC to define the transport DFI.
- and REMOTE COMDAC 0/1 TIME SLOT GROUP has a TRANSPORT TYPE of "DNUS", there must be a matching EQVT form entered to define the transport DNU-S.
- and TSPFAC0 row 1 EQSTAT of "G" or "O", there must be an EQMH form defined with a matching SM number, or both MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT must be "O".
- and TSPFAC0/TSPFAC1 row 1 EQSTAT of "G" or "O" and/or the EQAIU forms with AIU TYPE of "XAIU" and XAIUTSGRP row 1 EQSTAT of "G" or "O", the maximum channel capacity defined on the EQMH form with a matching SM number is 31 channels.
- for every EQAIUP form, the EQAIUP EQSTAT must be less than the REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) row 1 EQSTAT on the AIU form (EQSTAT state of "G" is less than the state of "O").

For 5E13 and later:

- ***NOTE:*** The SM, DLTU/DNUS, PK/DG, FAC/STE, STS, VTG and VTM on the EQAIU form match the SM, DNUS, DATA GROUP, STE, STS, VT GROUP and VT MEMBER on the EQVT form.

- REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) row 1 must point to a control DFI (on a EQDUP form) or DNU (on an EQVT form). If the COMDAC STATE is "DUPLEX", REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1) row 1 must also point to a control DFI or DNU. (An EQDUP form will match SM, DLTU and DFI PACK NUMBER and will have FAC 0 or FAC 1 APPL set to "AIUC".) (An EQVT form will match SM, DNUS, DATA GROUP, STE, STS, VT GROUP and VT MEMBER and will have an APPLICATION TYPE of "AIUC".)
- REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) rows 2 - 6 (if equipped) must point to a data DFI (on a EQDUP form) or DNU (on an EQVT form). If the COMDAC STATE is "DUPLEX", REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1) rows 2 - 6 (if equipped) must also point to a control DFI or DNU. (An EQDUP form will match SM, DLTU and DFI PACK NUMBER and will have FAC 0 or FAC 1 APPL set to "AIUD".) (An EQVT form will match SM, DNUS, DATA GROUP, STE, STS, VT GROUP and VT MEMBER and will have an APPLICATION TYPE of "AIUD".)
- REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) rows 1 - 6 (if equipped) entries must be unique. If the COMDAC STATE is "DUPLEX", REMOTE COMDAC 1 TIME SLOT GROUP

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(TSPFAC1) rows 1 - 6 (if equipped) must be unique. Entries must also be unique across REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) and REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1) lists.

- When AIU TYPE is not "EAIU", REMOTE TIME SLOT GROUP (TSPFAC0 and TSPFAC1) lists must not be entered.

For 5E15 and later:

- INTF UNIT must not be entered.

If "XAIU" is entered:

For 5E14 and later:

- CI and PICB must not be entered.
- COMDAC STATE, SITE ID, CBL SERIES and CBL DISTANCE must not be entered.
- TEST TYPE 0 and TEST TYPE 1 must be "N".
- RCOMDAC0 EXT REF and RCOMDAC1 EXT REF must be "N".
- PDXU and SHELF must be entered.
- EQSTAT in row 1 of TIME SLOT GROUP (XAIUTSGRP) list must be entered.
- and SHELF equals 2 or 5, XAIU CONFIG must not be set to "HIGH".
- and EQSTAT in row 1 of the TIME SLOT GROUP (XAIUTSGRP) is entered, there must be an EQPDXU form (5868 Record) with PCTDX0 and PCTDX1 EQSTAT equal to or greater than the EQAIU EQSTAT in row 1 of the TIME SLOT GROUP.
- and XAIUTSGRP row 1's EQSTAT of "G" or "O" must have a matching SM number, or both MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT must not equal to "O".
- with one or more entries in the XAIUTSGRP list where TSGRP NO is 2 - 5 and EQSTAT is "G" or O", there must be a corresponding EQPDXU form with XAIU CONFIG set to "HIGH".

When AIU TYPE is not "XAIU", PDXU, and SHELF must not be entered.

When AIU TYPE is not "XAIU", EQL BAY must not be 900 - 999.

For 5E15 and later:

If "XAIU" is entered:

- INTF UNIT must not be entered.
- EQL BAY must not be "0".

2.5 BROADBAND

Description: Is the AIU unit Broadband capable? See Division 2, Section 7AF.

Software Release: 5E11 and later

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Required Field.
Default: N
Valid Entries: Y, N

2.6 EMERG STAND ALONE

Description: Does the AIU have Emergency Stand Alone capability? See Division 2, Section 9AA.

Software Release: 5E15 FR 3
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered,

- AIU TYPE must be "EAIU"

2.7 AIU SIZE

Description: This field was added for the AIU Remote feature. Enter the AIU SIZE. See Division 2, Section 90.

Software Release: 5E12 and later
Required Field.
Default: 600
Valid Entries:

Valid AIU SIZE Entries

Entry	Description
500	Equipment size designation.
600	Equipment size designation (domestic).

Data Rules:

When "500" is entered, there is a maximum of 14 packs (EQAIUP forms) that can be equipped.

2.8 # EQL AISLE

Description: Enter both the equipment floor and aisle number.

Required Field.
Valid Entries: 0000 - 9999

2.9 # EQL BAY

Description: Enter the equipment location bay number.

Required Field.

Valid EQL BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid EQL BAY Entries for 5E16(2) and later

Entry	Type
000 - 004	SM

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000 - 014, A00 - A14, D00 - D14, G00 - G14, K00 - K14, N00 - N14, R00 - R14, U00 - U14, X00 - X14,	100 - 104, B00 - B04, E00 - E04, H00 - H04, L00 - L04, P00 - P04, S00 - S04, V00 - V04, Y00 - Y04,	200 - 208, C00 - C08, F00 - F08, J00 - J08, M00 - M08, Q00 - Q08, T00 - T08, W00 - W08, Z00 - Z08	SM-2000

Valid Entries:

Data Rules:

When AIU TYPE is "AIU" and INTF UNIT is 0, EQL BAY must be 000 - 014, 100 - 104 , 200 - 208 or 900 - 999.

When AIU TYPE is "EAIU" or "XAIU", EQL BAY must be 000 - 014, 100 - 104, 200 - 208 or 900 - 999.

When INTF UNIT is greater than 0, the value in the PRIMARY UNIT field on the EQXCDU form (5832 Record) determines the allowed values for EQL BAY as indicated in the *Valid EQL BAY Entries for 5E16 and later* table displayed previously.

2.10 # EQL UNVER

Description: Enter the equipment location unit vertical position. Two AIUs can be identified as having identical vertical positions, either front or back of a cabinet (on a given EQL AISLE/EQLBAY). However, greater than two AIUs with identical vertical positions is not allowed.

Required Field.
Valid Entries:
- 5E11: 0 - 84
- 5E12 and later: 15, 32, or 49

2.11 # CABINET

Description: Enter the location of the AIU unit within the cabinet.

Required Field.

Valid CABINET Entries

Entry	Description
[B]ack or R	Software Release 5E11 and earlier: Mounted in the wiring side of the cabinet.
[R]ear or R	Software Release 5E12 and later. Mounted in the wiring side of the cabinet.
[F]ront or F	Mounted in the equipment side of the cabinet.

2.12 EQSTATUS

Description: Enter the operational status of the equipment unit.

Software Release: 5E11 only
Required Field.
Default: O
Valid Entries:

Valid EQSTATUS Entries

Entry	Description

U	Unequipped.
G	Growth.
O	Operational.

2.13 CLI

Description: For 5E15 FR 3 and later, this field name was changed to COMDAC CLI to clearly identify that it is associated with the Common Data And Control circuit. See the COMDAC CLI field below for usage information.

2.14 COMDAC CLI

Description: Enter the Change Level Indicator for this AIU. Refer to Division 8, Section 1 for valid CLI values. This field name was changed to COMDAC CLI in 5E15 FR3.

Required Field.
Valid Entries: 0 - 7FFFFFFF

Data Rules:

For 5E11 and later, the COMDAC CLI value for the "AIU" is 00.
For 5E12 and later, the COMDAC CLI value for the "RAIU" is 01.
For 5E14 and later, the COMDAC CLI value for the "XAIU" is 04.

2.15 MTB0

Description: Enter the Metallic Test Bus - Service Group 0.

Required Field.
Valid Entries:
- 5E11: Enter the MTBO number as below.
- 5E12 and later: Blank, or enter the MTBO
- number as below.

METALLIC TEST BUS - 0

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 31
Bus	BUS	XX	00 - 14

Data Rules:

If MTB0 is entered, row 1 TSPFAC0.EQSTAT must be "G" or "O".

2.16 MTB1

Description: Enter the Metallic Test Bus - Service Group 1.

Required Field.

Valid Entries:
- 5E11: Enter the MTBO number as below.
- 5E12 and later: Blank, or enter the MTBO
- number as below.

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METALLIC TEST BUS - 1			
Equipment		**Format**	**Valid Entries**
Switching Module	SM	XXX	1-192
Metallic Service Unit	MSU		0 - 1
Service Group	SVG	X	0 - 1
Board	BRD	XX	00 - 31
Bus	BUS	XX	00 - 14

Data Rules:

If MTB1 is entered, row 1 TSPFAC1.EQSTAT must be "G" or "O".

2.17 INTF UNIT

Description: Enter the Interface Unit number. This field was added to support the 5E15 Optically Extended Control and Data Unit feature. See Division 2, Section 9V.
Valid Entries: 0 - 8

Data Rules:

When INTF UNIT is greater than 0, it must be defined on the EQXCDU form (5832 Record) for the same Switching Module. In addition, the EQSTAT value on the EQCI form (5848 Record) must not exceed the MOD CTL SG0/1 EQSTAT on the EQXCDU form. (EQSTAT of "O" is greater than EQSTAT of "G", and EQSTAT of "G" is greater than EQSTAT of "U".)

The SM/INTF UNIT/DATA GRP combinations entered on this form must be defined on a EQDI form or a EQXCDU form. Also, the EQSTAT on the matching EQDI or EQXCDU form must be greater than or equal to the equipment status value ("O", "G", or "U") on this form (e.g., "O" is greater than "G" which is greater than "U"). Note also that when INTF UNIT is greater than 0 and DATA GRP is 0, these Data Groups are defined on the EQXCDU form.

When INTF UNIT is greater than 0, CI must not be 3.

For 5E16(2) and later, when INTF UNIT is 0, EQL BAY must be 000 - 014, 100 - 104, 200 - 208, or 900 - 999.

2.18 CI

Description: Enter the Control Interface number.

Required Field.
Valid Entries:
- 5E11: SM: 0 - 1
- SM-2000 class processor: 0 - 3

5E12: Blank, or

SM: 0 - 1

SM-2000 class processor: 0 - 3

2.19 PICB

Description: Enter the Peripheral Interface Control Bus number.

Required Field.
Valid Entries:
- 5E11: 0 - 20 (even numbers)
- 5E12 and later: Blank, or 0 - 20 (even numbers)

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RING GENERATOR

2.20 RING GEN LOC

Description: Enter the Ring Generator Location.

Required Field.
Valid Entries:
- 5E11: 0 - 42
- 5E12 and later: Blank, or 0 - 42

Data Rules:

A Ring Generator cannot be defined on more than 6 EQAIU forms (itself and 5 other AIUs).

A pair of Ring Generators can be used by more than one AIU; however, AIU RING GEN LOCs must be assigned to use their own ring generators before assigned to other AIUs. The value represented by RING GEN LOC must correspond to the AIU number on an EQAIU form (the host AIU) with either RING GEN LOC equal to the AIU on that form or where RING GEN LOC is unknown.

For 5E11 only, If a RING GEN LOC is specified on the EQAIU form, a EQAIUP form must be found for the same SM with its AIU value the same as RING GEN LOC, and APPL PACK NUM must be 17 or 19, and EQSTAT must be "G" or "O", and TYPE must be equal to "AIRG".

2.21 EXT RG0 EQSTAT

Description: Enter the equipment status of Ring Generator 0.

Software Release: 5E12 and later
Required Field.
Valid Entries: Blank, or as indicated in table below:

Valid EXT RG0 EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

If entered, RING GEN LOC must be known and RING GEN LOC must be the same as AIU unit number.

There can only be one RING GEN 0 assigned.

If EXT RG0 EQSTAT is entered, RING GEN LOC must be the same as AIU unit number.

2.22 EXT RG1 EQSTAT

Description: Enter the equipment status of Ring Generator 1.

Software Release: 5E12 and later
Required Field.
Valid Entries:

Valid EXT RG1 EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.

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O	Operational.

Data Rules:

If entered, RING GEN LOC must be known and RING GEN LOC must be the same as AIU unit number.

There can only be one RING GEN 1 assigned.

If EXT RG1 EQSTAT is entered, RING GEN LOC must be the same as AIU unit number.

REMOTE COMDAC

2.23 COMDAC STATE

Description: Enter the state of the remote common data control.

Software Release: Required Field.
Valid Entries: [S]IMPLEX or [D]UPLEX

Data Rules:

If "SIMPLEX" is entered, REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) row 1 must be entered.

If "SIMPLEX" is entered, REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1) list must not be entered.

If "SIMPLEX" is entered, MTB1 must not be entered.

If "DUPLEX" is entered, REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0) row 1 must be entered.

If "DUPLEX" is entered, REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1) row 1 must be entered.

If "DUPLEX" is entered for a given row, TSPFAC0.EQSTAT must be the same as TSPFAC1.EQSTAT for that row.

If "DUPLEX" is entered for a given row, TSPFAC1.EQSTAT must be the same as TSPFAC0.EQSTAT for that row.

If "DUPLEX" is entered, both TSPFAC0 and TSPFAC1 lists must have equal number of rows defined.

For 5E14 and later:

When COMDAC STATE is "DUPLEX" and row 1 of TSPFAC1.EQSTAT is set to "O", TSPFAC0.EQSTAT in row 1 must be "O".

When COMDAC STATE is "DUPLEX" and row 1 of TSPFAC1.EQSTAT is set to "G", TSPFAC0.EQSTAT in row 1 must be "G" or "O".

When COMDAC STATE is "DUPLEX" and row 2 of TSPFAC1.EQSTAT is set to "O", TSPFAC0.EQSTAT in row 2 must be "O".

When COMDAC STATE is "DUPLEX" and row 2 of TSPFAC1.EQSTAT is set to "G", TSPFAC0.EQSTAT in row 2 must be "G" or "O".

When COMDAC STATE is "DUPLEX" and row 2 of TSPFAC1.EQSTAT is set to "U", TSPFAC0.EQSTAT in row 2 must be entered.

When COMDAC STATE is "DUPLEX" and row 2 of TSPFAC1.EQSTAT is not entered, TSPFAC0.EQSTAT in row 2 must not be entered.

When COMDAC STATE is "DUPLEX" and row 3 of TSPFAC1.EQSTAT is set to "O", TSPFAC0.EQSTAT

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in row 3 must be "O".

When COMDAC STATE is "DUPLEX" and row 3 of TSPFAC1.EQSTAT is set to "G", TSPFAC0.EQSTAT in row 3 must be "G" or "O".

When COMDAC STATE is "DUPLEX" and row 3 of TSPFAC1.EQSTAT is set to "U", TSPFAC0.EQSTAT in row 3 must be entered.

When COMDAC STATE is "DUPLEX" and row 3 of TSPFAC1.EQSTAT is not entered, TSPFAC0.EQSTAT in row 3 must not be entered.

When COMDAC STATE is "DUPLEX" and row 4 of TSPFAC1.EQSTAT is set to "O", TSPFAC0.EQSTAT in row 4 must be "O".

When COMDAC STATE is "DUPLEX" and row 4 of TSPFAC1.EQSTAT is set to "G", TSPFAC0.EQSTAT in row 4 must be "G" or "O".

When COMDAC STATE is "DUPLEX" and row 4 of TSPFAC1.EQSTAT is set to "U", TSPFAC0.EQSTAT in row 4 must be entered.

When COMDAC STATE is "DUPLEX" and row 4 of TSPFAC1.EQSTAT is not entered, TSPFAC0.EQSTAT in row 4 must not be entered.

When COMDAC STATE is "DUPLEX" and row 5 of TSPFAC1.EQSTAT is set to "O", TSPFAC0.EQSTAT in row 5 must be "O".

When COMDAC STATE is "DUPLEX" and row 5 of TSPFAC1.EQSTAT is set to "G", TSPFAC0.EQSTAT in row 5 must be"G" or "O".

When COMDAC STATE is "DUPLEX" and row 5 of TSPFAC1.EQSTAT is set to "U", TSPFAC0.EQSTAT in row 5 must be entered.

When COMDAC STATE is "DUPLEX" and row 5 of TSPFAC1.EQSTAT is not entered, TSPFAC0.EQSTAT in row 5 must not be entered.

When COMDAC STATE is "DUPLEX" and row 6 of TSPFAC1.EQSTAT is set to "O", TSPFAC0.EQSTAT in row 6 must be "O".

When COMDAC STATE is "DUPLEX" and row 6 of TSPFAC1.EQSTAT is set to "G", TSPFAC0.EQSTAT in row 6 must be "G" or "O".

When COMDAC STATE is "DUPLEX" and row 6 of TSPFAC1.EQSTAT is set to "U", TSPFAC0.EQSTAT in row 6 must be entered.

When COMDAC STATE is "DUPLEX" and row 6 of TSPFAC1.EQSTAT is not entered, TSPFAC0.EQSTAT in row 6 must not be entered.

2.24 RCOMDAC0 EXT REF

Description: Is the remote comdac 0 receiving external clock references?

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

2.25 RCOMDAC1 EXT REF

Description: Is the remote comdac 1 receiving external clock references?

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Software Release: 5E12 and later
Required Field.
Default:
Valid Entries: Y, N

2.26 SITE ID

Description: Enter the EAIU site identification.

Software Release: 5E12 and later
Valid Entries: Blank, or 500 - 999

Data Rules:

For 5E12 and later, within the indicated SITE ID, there cannot be both a MTB and an External AIU Test Pack. For each site, if at least one EQAIUP form has TYPE set to "AIUTSTP", no EQAIU forms can have a TEST TYPE 0 or 1 set to "M". Further, duplicate testing equipment assignments are not alowed at the same site.

2.27 CBL SERIES

Description: Enter the type of cable series used to connect the backplane to the DSX.

Software Release: 5E12 and later
Required Field.
Valid Entries: Blank, or 600S, 609S, or 1249S

Data Rules:

If CBL SERIES is entered, CBL DISTANCE must be entered.

If CBL SERIES is 1249S, CBL DISTANCE must be 0 - 450.

If CBL SERIES is 600S, CBL DISTANCE must be 0 - 650.

If CBL SERIES is 609S, CBL DISTANCE must be 0 - 655.

2.28 CBL DISTANCE

Description: Enter the cable distance between the DLTU and DSX panel.

Required Field.

Valid CBL DISTANCE Entries

Entry	Description
0 - 450	1249S Series.
0 - 650	600S Series.
0 - 655	609S Series.

Data Rules:

If CBL DISTANCE is entered, CBL SERIES must be entered.

BUS USE

2.29 TEST TYPE 0

Description: Enter the test type.

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Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries:

Valid TEST TYPE Entries

Entry	Description
E	External.
M	Metallic Test Bus.
N	No Equipment.
T	Test Pack.

Data Rules:

If TEST TYPE 0/1 is "E", "N", or "T", MTB0/1 must be unknown for the EAIU.

If TESTTYPE 0/1 is "T":

- there must be an EQAIUP form at the same site with TYPE set to "AIUTSTP".

If TEST TYPE 0/1 is "M", TEST TYPE 0/1 MTB0/1 must be known.

2.30 TEST TYPE 1

Description: Enter the type of test pack.

Software Release: 5E12 and later
Required Field.
Default: N

Required Field.
Valid Entries:

Valid TEST TYPE Entries

Entry	Description
E	External.
M	Metallic Test Bus.
N	No Equipment.
T	Test Pack.

TIME SLOT GROUP (PIDB)

The following fields (Section 2.31 - Section 2.34) define the PIDBs (Peripheral Interface Data Buses) for the AIU.

2.31 PIDB TYPE

Description: Enter the PIDB TYPE.

- ***NOTE:*** For the 5E11 Software Release, only the DI (Data Interface) capability is available; the DFPOS (Data Fan Position for the PSU SHLF (Packet Switching Unit Shelf) is not available. For 5E12 and later, the PSU SHLF capability is available.

Valid Entries:
- 5E11 Software Release: AIU
- 5E12 Software Release: AIU or PSU

Data Rules:

For 5E11, if PIDB TYPE is entered:

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- DI/DFPOS, PIDB/PSU SHLF and EQSTAT fields must be entered.
- PIDB of PIDB/PSU SHLF must be an even number.

If PIDB TYPE is not entered, DI/DFPOS, PIDB/PSU SHLF and EQSTAT fields must not be entered.

For 5E12 and later, if PIDB TYPE is entered:

- DI/DFPOS, PIDB/PSU SHLF and EQSTAT fields can be entered or left blank.
- combinations of PIDB TYPE, DI/DFPOS and PIDB/PSU SHLF must be unique within a LOCAL TIME SLOT GROUP (PIDB) list.

If PIDB TYPE is "PSU":

- PIDB/PSU SHLF must be 0 - 4.
- an EQPSUPH form must be defined with the same SM and PSU SHELF combination.
- an EQPSU form must be defined with matching PSU SHELF and the PSU SHELF 0/1 EQSTAT must be "O" on the EQPSU form.
- the PSU SHELF SIDE 0 or 1 CLI values must not be 3 ("PSU" PIDB TYPEs cannot be associated with data fanout multiple PIDB PSU shelves).
- the PSU SHELF/DF POS assignments must not duplicate assignments of the EQAIU, EQIDCU and/or EQISLU form for a specified SM.

TSGRP NO 0 in LOCAL TIME SLOT GROUP (PIDB) must have a PIDB TYPE of "AIU".

NOTE: The total number of timeslots, per DPIDB, cannot be greater than 32. ODA error message "ISDN(287a/b/c)" is generated whenever more than 32 timeslots have been assigned/reserved. ISDN(287a) details the overloaded DPIDBs and ISDN(287b) lists all the nailed up timeslots that have been manually or automatically assigned. ISDN(287c) provides all the timeslots reserved on the ODBTS form. Timeslots reserved on the ODBTS form will need to be re-assigned to correct the DPIDBs in error. ISDN(287a/b/c) is a companion error message to "ISDN(288a/b/c)" which is generated when D and/or B Channel TIMESLOTS cannot be assigned by ODA because of a lack of DPIDB timeslots which are assigned on the EQAIU form with a PIDB TYPE of "PSU").

For 5E14 and later, TSGRP NO 0 in TIME SLOT GROUP (PIDB) must have a PIDB TYPE of "AIU".

2.32 DI/DFPOS

Description: This field is used to define the DI/DFPOS fields. See Note in the PIDB TYPE field above.

Valid DI Entries

Entry	Description
0 - 1	DI - SM.
0 - 5	DI - SM-2000 class processor.
0 - 5	DFPOS.

2.33 PIDB/PSU SHLF

Description: This field is used to define the PIDB/PSU SHELF fields. See Note in the PIDB TYPE field above.

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Valid PIDB/PSU SHLF Entries - 5E11

Entry	Name
0 - 14 (even)	PIDB - SM.
0 - 22 (even)	PIDB - SM-2000 class processor.

Valid PIDB/PSU SHLF Entries - 5E12 and later

Entry	Name
0 - 14 (even)	PIDB - SM.
0 - 22 (even)	PIDB - SM-2000 class processor.
0 - 4	PSU Shelf.

2.34 EQSTAT

Description: Enter the status of the PIDB.

Valid PIDB EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

If PIDB.EQSTAT is "G" or "O", MTB0 and MTB1 must be known.

If PIDB.EQSTAT in rows 2 - 6 is "G" or "O", EQSTAT in row 1 must be "O".

REMOTE COMDAC 0/1 TIME SLOT GROUP (TSPFAC0/1)

2.35 TRANSPORT TYPE

Description: Enter the Transport Type.

Software Release: 5E12 and later
Valid Entries:

Valid TRANSPORT TYPE Entries

Entry	Description
[DL]TU	Digital Line Trunk Unit.
[DN]US	Digital Networking Unit - SONET.

Data Rules:

For 5E12:
If TSPFAC0/1.TRANSPORT TYPE is entered, TSPFAC0/1.EQSTAT must be entered.

If TSPFAC0/1.TRANSPORT TYPE is "DLTU":

- TSPFAC0/1.DLTU/DNUS must be 0 - 5.
- TSPFAC0/1.PK/DG must be 1 - 10.
- TSPFAC0/1.FAC/STS must be 0 - 1.
- TSPFAC0/1.VT must not be entered.
- combinations of DLTU/DNUS, PK/DG, and FAC/STS must be unique within the REMOTE COMDAC 0/1 Time SLOT GROUP (TSPFAC0/1) list.

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- combinations of DLTU/DNUS, PK/DG, and VT must be unique within the REMOTE COMDAC 0/1 Time SLOT GROUP (TSPFAC0/1) list.
- combinations of DLTU/DNUS, PK/DG, and FAC/STS must be unique within the REMOTE COMDAC 0/1 Time SLOT GROUP (TSPFAC0/1) list.
- combinations of DLTU/DNUS, PK/DG and FAC/STS must be unique between the TSPFAC0 list and TSPFAC1 list.

If TSPFAC0/1.TRANSPORT TYPE is "DNUS":

- TSPFAC0/1.PK/DG must be 0 - 1.
- TSPFAC0/1.VT must be 1 - 28.
- combinations of DLTU/DNUS, PK/DG and FAC/STS must be unique between the TSPFAC0 list and TSPFAC1 list.

For 5E13 and later, if TRANSPORT TYPE is blank, TSPFAC0 DLTU/DNUS, PK/DG, FAC/STE, STS, VT GROUP, VT MEMBER, and EQSTAT must be blank.

If TSPFAC0/1.TRANSPORT TYPE is "DLTU":

- TSPFAC0/1.FAC/STE must be 0 - 1.
- TSPFAC0/1.STS must not be entered.
- TSPFAC0/1.VTG and VTM must not be entered.
- combinations of DLTU/DNUS, PK/DG and FAC/STE must be unique between the TSPFAC0 list and TSPFAC1 list.

If TSPFAC0/1.TRANSPORT TYPE is "DNUS":

- TSPFAC0/1.FAC/STE must be 1 - 6.
- TSPFAC0/1.FAC/STS must be 1.
- TSPFAC0/1.VTG must be 1 - 7.
- TSPFAC0/1.VTM must be 1 - 4.
- combinations of DLTU/DNUS, PK/DG, FAC/STE, STS, VTG, and VTM must be unique between the TSPFAC0 list and TSPFAC1 list.
- combinations of DLTU/DNUS, PK/DG, and FAC/STS must be unique within the REMOTE COMDAC 0/1 TIME SLOT GROUP (TSPFAC0/1) list.

2.36 DLTU/DNUS

Description: Enter the DLTU or DNUS number.

Software Release: 5E12 and later
Valid Entries:

Valid DLTU/DNUS Number Entries

Entry	Description
Blank	Not used.
5E12 - 5E14: 0 - 5 5E15 and later: 0 - 11	DLTU.
0 - 7	DNUS.

2.37 PK/DG

Description: Enter the DFI pack or DNUS data group number.

Valid PK/DG Entries

Entry	Description
Blank	Not used.
1 - 10	DFI pack.
0 - 1	DNUS data group number.

2.38 FAC/STS

Description: Enter the DFI facility or DNUS synchronous transport signal number. For 5E13 and later, this field was modified to support the DNU-S VT Group Number feature. See STS below. Also see Division 2, Section 9Q.

Software Release: 5E12 only
Valid Entries:

Valid FAC/STS Entries

Entry	Description
Blank	Not used.
0 - 1	DFI facility.
0 - 5	DNU-S facility.
1 - 6	DNU-S termination equipment number.

2.39 FAC/STE

Description: Enter the DFI facility or DNU-S Termination Equipment number. This field was added in 5E13 to support the DNU-S VT Group Number feature. See Division 2, Section 9Q.

Software Release: 5E13 and later
Valid Entries:

Valid FAC/STE Entries - 5E13 and later

Entry	Description
Blank	Not used.
0 - 1	DFI FACility.
1 - 6	DNU-S Termination Equipment number.

2.40 STS

Description: Enter synchronous transport signal number. This field was added in 5E13 to support the DNU-S VT Group Number feature. See Division 2, Section 9Q.

Software Release: 5E13 and later
Valid Entries: Blank or 1

2.41 VT

Description: Enter the Virtual Tributary. For 5E13 and later, this field was split into the VTG and VTM fields to support the DNU-S VT Group Number feature. See Division 2, Section 9Q.

Software Release: 5E12 only
Valid Entries: Blank, or 1 - 28

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2.42 VTG

Description: Enter the Virtual Tributary Group number. This field was added in 5E13 to support the DNU-S VT Group Number feature. See Division 2, Section 9Q.

Software Release: 5E13 and later
Valid Entries: 1 - 7

2.43 VTM

Description: Enter the Virtual Tributary Member number. This field was added in 5E13 to support the DNU-S VT Group Number feature. See Division 2, Section 9Q.

Software Release: 5E13 and later
Valid Entries: 1 - 4

2.44 EQSTAT

Description: Enter the Transport Type.

Software Release: 5E12 and later

Data Rules:

If TSPFAC0.EQSTAT in rows 2 - 6 is "G" or "O", TSPFAC0.EQSTAT in row 1 must be "O".

EQSTAT of row1 REMOTE COMDAC0 AND REMOTE COMDAC 1 cannot be "U".

2.45 XAIU CONFIG

Description: This field is used to identify whether or not the AIU is to be remotely used. AIUs can be remotely used only if the Switching Module is of type SM-2000. This is a Display Only field that was added to support the XAIU (Multiplexed Access Interface Unit) feature. For more information on this feature, see Division 2, Section 9T.

Software Release: 5E14 and later
Valid Entries:

XAIU Configuration Table

Configuration	Fiber Link	AIUs/ Cabinet	Line Concentration	Call Volume
Low traffic 5E14 and later	Two half-PCTs	6	approx. 5:1	7 CCS or less
Medium 1 (Option 2) traffic 5E14 FR 6, 5E15 FR2 and later 99-5E-7727	Two half-PCTs	4	approx. 3.3:1	12 CCS or less
Medium (Option 1) traffic 5E14 FR3, 5E15 BMI and later 99-5E-7726	Two full PCTs	6	approx. 2.5:1	14 CCS or less
High traffic 5E14 and later	Two full PCTs	4	approx. 1.7:1	21 CCS or less

Data Rules:

For the 5E14 Software Release:

- When XAIU CONFIG is "HIGH", SHELF must not be 2 or 5.

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- When XAIU CONFIG is "LOW", no more than 2 rows of the TIME SLOT GROUP (XAIUTSGRP) may be entered.
- When XAIU CONFIG is "MED", no more than 4 rows of the TIME SLOT GROUP (XAIUTSGRP) may be entered.

For 5E14 Feature Releases and later:

- When XAIU CONFIG is "MED" (Option 1), no more than 4 rows of the TIME SLOT GROUP (XAIUTSGRP) may be entered.
- When XAIU CONFIG is "MED1" (Option 2), no more than 3 rows of the TIME SLOT GROUP (XAIUTSGRP) may be entered.

2.46 PDXU

Description: The PCT (Peripheral Control and Timing) Data Exchanger Unit is used to specify which PDXU is being used.

WARNING: The combination of SM/PDXU must be defined on the EQPDXU form (5868 Record).

Software Release: 5E14 and later
Valid Entries: Blank, or 0 - 35

Data Rules:

When PDXU is entered, this PDXU must be defined on an EQPDXU form (5868 Record).

The combination of PDXU and SHELF entries on this form where the AIU TYPE is "XAIU", must be unique for a given SM.

2.47 SHELF

Description: This field defines the XAIU shelf number.

Software Release: 5E14 and later
Valid Entries: Blank, or 0 - 5

Data Rules:

For 5E14 Feature Releases and later, when SHELF is equal to "2" or "5", XAIU CONFIG must not be set to "MED1" or "HIGH" on the corresponding EQPDXU form.

2.48 TSGRP LIMIT

Description: This field identifies the number of XAIU Time Slot Groups allowed.The values used depend upon the PASSWORD provided to the customer. This is a display only field. If XAIU CONFIG is LOW, then TSGRP LIMIT can be a value up to 2. If XAIU CONFIG is HIGH, then TSGRP LIMIT can be a value up to 6.

Software Release: 5E14 and later

2.49 PASSWORD

Description: This field is the secured feature password and is used to specify the number of XAIU TGSGRPs allowed. This is a display only field.

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Software Release: 5E14 and later

TIME SLOT GROUP (XAIUTSGRP)

2.50 EQSTAT

Description: This field is used to determine the XAIU Time Slot Group equipage state.

Software Release: 5E14 and later
Valid Entries:

Valid EQSTAT Entries - 5E14 and later

Entry	Description
G	Grow
O	Operational
U	Unequipped

Data Rules:

EQSTAT of TIME SLOT GROUP (XAIUTSGRP) row 1 cannot be "U".

When XAIUTSGRP.EQSTAT in rows 2 - 6 is "G" or "O", XAIUTSGRP.EQSTAT in row 1 must be "O".

The number of TIME SLOT GROUP (XAIUTSGRP) rows entered must not be greater than TSGRP LIMIT.

```
eqaiu                      5ESS Switch
SCREEN 1 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

*1. SM      ___      14. CI  _                REMOTE COMDAC
*2. AIU     ___      15. PICB __          19. COMDAC STATE     ___
 3. AIU TYPE  AIU                      20. RCOMDAC0 EXT REF N
 4. BROADBAND N          RING GENERATOR      21. RCOMDAC1 EXT REF N
 5. AIU SIZE  600      16. RING GEN LOC   ___   22. SITE ID        ___
#6. EQL AISLE ____     17. EXT RG0 EQSTAT _     23. CBL SERIES     ___
#7. EQL BAY   ___      18. EXT RG1 EQSTAT _     24. CBL DISTANCE   ___
#8. EQL UNVER __
#9. CABINET   _____                          BUS USE
10. CLI     00000000                     25. TEST TYPE 0 N
11. MTB0    _________                      26. TEST TYPE 1 N
12. MTB1    _________
```

```
eqaiu                      5ESS Switch
SCREEN 2 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

   >27. TIME SLOT GROUP (PIDB)
   TSGRP PIDB  DI/   PIDB/
ROW NO    TYPE  DFPOS PSUSHLF EQSTAT
 1   0  _____  _    __     _
 2   1  _____  _    __     _
 3   2  _____  _    __     _
 4   3  _____  _    __     _
 5   4  _____  _    __     _
 6   5  _____  _    __     _
```

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```
eqaiu                    5ESS Switch
SCREEN 3 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

  >33. REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0)
   TSGRP TRANSPORT DLTU/ PK/ FAC/
ROW NO   TYPE     DNUS  DG  STE  STS VTG VTM EQSTAT
 1   0   ____     _  __  _   _  _  _  _   _
 2   1   ____     _  __  _   _  _  _  _   _
 3   2   ____     _  __  _   _  _  _  _   _
 4   3   ____     _  __  _   _  _  _  _   _
 5   4   ____     _  __  _   _  _  _  _   _
 6   5   ____     _  __  _   _  _  _  _   _
```

```
eqaiu                    5ESS Switch
SCREEN 4 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

  >44. REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1)
   TSGRP TRANSPORT DLTU/ PK/ FAC/
ROW NO   TYPE     DNUS  DG  STE  STS VTG VTM EQSTAT
 1   0   ____     _  __  _   _  _  _  _   _
 2   1   ____     _  __  _   _  _  _  _   _
 3   2   ____     _  __  _   _  _  _  _   _
 4   3   ____     _  __  _   _  _  _  _   _
 5   4   ____     _  __  _   _  _  _  _   _
 6   5   ____     _  __  _   _  _  _  _   _
```

```
eqaiu                    5ESS Switch        _
SCREEN 5 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

   XAIU CONFIG ____      60. TIME SLOT GROUP (XAIUTSGRP)
>56. PDXU      __          TSGRP
 57. SHELF     _         ROW NO   EQSTAT
   TSGRP LIMIT _           1   0   _
   PASSWORD    _________   2   1   _
                           3   2   _
                           4   3   _
                           5   4   _
                           6   5   _
```

Figure 1 SAMPLE EQAIU FORM 5E14 SOFTWARE RELEASE

```
eqaiu                    5ESS Switch
SCREEN 1 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

*1. SM       ___      13. INTF UNIT _            REMOTE COMDAC
```

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```
*2. AIU      ___        14. CI       _         19. COMDAC STATE    _______
 3. AIU TYPE  AIU       15. PICB     __        20. RCOMDAC0 EXT REF N
 4. BROADBAND N                                21. RCOMDAC1 EXT REF N
 5. AIU SIZE  600          RING GENERATOR      22. SITE ID         ___
#6. EQL AISLE ____       16. RING GEN LOC  ___  23. CBL SERIES     _____
#7. EQL BAY   ___        17. EXT RG0 EQSTAT _   24. CBL DISTANCE   ___
#8. EQL UNVER __         18. EXT RG1 EQSTAT _
#9. CABINET   _____                            BUS USE
10. CLI       00000000                      25. TEST TYPE 0 N
11. MTB0      _________                     26. TEST TYPE 1 N
12. MTB1      _________
```

```
eqaiu                        5ESS Switch
SCREEN 2 OF 5                 OFFICE DATA ADMINISTRATION
(5745-1/2/3)                 ACCESS INTERFACE UNIT

   >27. TIME SLOT GROUP (PIDB)
   TSGRP PIDB  DI/   PIDB/
ROW NO    TYPE  DFPOS PSUSHLF EQSTAT
 1   0  _____  _    __     _
 2   1  _____  _    __     _
 3   2  _____  _    __     _
 4   3  _____  _    __     _
 5   4  _____  _    __     _
 6   5  _____  _    __     _
```

```
eqaiu                        5ESS Switch
SCREEN 3 OF 5                 OFFICE DATA ADMINISTRATION
(5745-1/2/3)                 ACCESS INTERFACE UNIT

  >33. REMOTE COMDAC 0 TIME SLOT GROUP (TSPFAC0)
   TSGRP TRANSPORT DLTU/ PK/ FAC/
ROW NO     TYPE    DNUS  DG  STE  STS VTG VTM EQSTAT
 1   0   ____    __  __  _   _   _   _   _
 2   1   ____    __  __  _   _   _   _   _
 3   2   ____    __  __  _   _   _   _   _
 4   3   ____    __  __  _   _   _   _   _
 5   4   ____    __  __  _   _   _   _   _
 6   5   ____    __  __  _   _   _   _   _
```

```
eqaiu                        5ESS Switch
SCREEN 4 OF 5                 OFFICE DATA ADMINISTRATION
(5745-1/2/3)                 ACCESS INTERFACE UNIT
```

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```
  >44. REMOTE COMDAC 1 TIME SLOT GROUP (TSPFAC1)
   TSGRP TRANSPORT DLTU/ PK/ FAC/
ROW NO     TYPE    DNUS  DG  STE  STS VTG VTM EQSTAT
 1   0    ____    __  __  _   _  _  _   _
 2   1    ____    __  __  _   _  _  _   _
 3   2    ____    __  __  _   _  _  _   _
 4   3    ____    __  __  _   _  _  _   _
 5   4    ____    __  __  _   _  _  _   _
 6   5    ____    __  __  _   _  _  _   _
```

```
eqaiu                    5ESS Switch        _
SCREEN 5 OF 5          OFFICE DATA ADMINISTRATION
(5745-1/2/3)           ACCESS INTERFACE UNIT

    XAIU CONFIG ____       60. TIME SLOT GROUP (XAIUTSGRP)
>56. PDXU       __            TSGRP
 57. SHELF      _          ROW NO    EQSTAT
    TSGRP LIMIT _           1   0     _
    PASSWORD    ________    2   1     _
                3   2     _
                4   3     _
                5   4     _
                6   5     _
```

Figure 2 SAMPLE EQAIU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 65: 5746 RECORD
ACCESS INTERFACE UNIT PACK - EQAIUP

1. GENERAL

The 5746 Record is available with the 5E11 Software Release. It is used to define the AIU (Access Interface Unit) packs. For 5E12 and later, Remote AIU is made available. See Division 2, Section 9O.

1.1 Recent Change View

The corresponding Recent Change View for this form is 20.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switch Module identification number.

Required Field.
Valid Entries: 1 - 192

2.3 * AIU

Description: Enter the Access Interface Unit identification number.

Required Field.

Valid AIU Entries - 5E11

Entry	Description
0 - 14	SM.
0 - 42	SM-2000.

Valid AIU Entries - 5E12 and later

Entry	Description
0 - 14	SM.
0 - 127	SM-2000.

The SM/AIU combination entered on this form must be defined on a corresponding EQAIU form.

The AIU entered must have its RING GEN LOC defined on the matching EQAIU form.

2.4 * APPL PACK NUM

Description: Enter the Application Pack Number (slot number).

Required Field.
Valid Entries: 0 - 19

Data Rules:

If 17 or 19 is entered, and TYPE is "AIRG", the associated EQAIU form must have an AIU SIZE of 600.

If 11 or 13 is entered, and TYPE is "AIRG", the associated EQAIU form must have an AIU SIZE of 500.

2.5 * TYPE

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Description: This field defines the pack type. The following conditions must be observed when equipping RG (Ring Generator) and application packs:

- An AIU with RG packs must use its own RG packs before any other AIU can be assigned to use those packs. (For example, if 2 RG packs are operational on AIU 1 and no AIU, including AIU 1, is currently using those packs (i.e., no AIU on that SM has RING GEN LOC set to 1), then RING GEN LOC 1 cannot be set for AIU 2).
- If an application pack (besides RG packs) exists on an AIU, then both pack 17 and 19 of the RING GEN LOC AIU must be operational.
- If application packs (besides RG packs) do not exist on an AIU, then both pack 17 and 19 of the RING GEN LOC AIU must be operational or growth.
- An AIU with two operational RG packs must use its own RG packs.

Required Field.

Valid TYPE Entries

Entry	Definition
[AIC]LP	5E11 Software Update: Coin pack. AIU feature.
AIGLC	5E11-5E12 Software Update: ATM Feeder Multiplexer pack.
AIGLP	5E11-5E12 Software Update: Asymmetric Digital Subscriber Line pack.
[AIR]G	5E11 Software Release: Ring generator pack. Must be used in pairs.
[AIUAD]SLLP	5E13 Software Update and 5E14 and later Software Releases: Asymmetric digital subscriber line pack.
[AIUAF]M	5E13 Software Update and 5E14 amd later Software Releases: ATM feeder multiplexer pack.
[AIUT]STP	5E12 Software Update: AIU Integrated Metallic Test Pack feature. Test packs are only valid on External AIUs. There can be only one test pack per site on a remote AIU.
[AIU]LP	5E12 Software Update: AIU ISDN pack.
[AIZ]LP	5E11 Software Release: Analog application pack.

Data Rules:

For 5E11 only, when TYPE is "AIRG", APPL PACK NUM must be 17 or 19. See also 5E12.

For 5E11 - 5E12:

When TYPE is "AIGLP",

- at least one "AIGLC" pack must exist for the same SM and AIU.

When TYPE is "AIGLC" or "AIGLP",

- EQSTAT must be "U".
- BROADBAND on the EQAIU form must be "Y".

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When TYPE is "AIRG",

- and APPL PACK NUM is 17, for the same SM/AIU combination, APPL PACK NUM 16 and 18 must not be assigned and APPL PACK NUM 19 can only have a TYPE of "AIRG".
- For 5E11 only, when TYPE is "AIRG", and APPL PACK NUM is 19, for the same SM/AIU combination, there must be another EQAIUP form with APPL PACK NUM of 17 and TYPE of "AIRG".
- When TYPE is "AIZLP" or "AICLP", for the same SM/AIU combination, there must be two other EQAIUP forms defined with TYPE of "AIRG", and APPL PACK NUM of 17 and 19 must be known.

For 5E12 and later:

When TYPE is "AICLP" or "AIZLP",

- at least one Ring Generator serving this AIU must be operational. An EQAIUP form must exist for this AIU with TYPE equal to "AIRG", and EQSTAT equal to "O", or an EQAIU form must exist for this AIU with either EXT RGO EQSTAT or EXT RG1 EQSTAT equal to "O", or RING GEN LOC does not point to another AIU with an operational RG.

When TYPE is "AIRG",

- APPL PACK NUM must be 17 or 19.
    - If APPL PACK NUM 11 is assigned for the same SM/AIU combination, APPL PACK NUM position 10 cannot be assigned. If APPL PACK NUM 13 is assigned, APPL PACK NUM position 12 cannot be assigned.

When TYPE is "AIRG", and a Ring Generator is assigned,

- AIU EQSTAT must be "O".

When TYPE is "AIUTSTP",

- SLIM RI must be known, and must be defined on the RTIDX form with ROUTE TYPE equal to "HUNT".
- there must be at least 3 LTP assignments on the TRUNK form that are associated with a TRKCLS equal to "LTPSLIM" on the TKGRP form. For these LTPs, the SM on the EQAIUP form must correspond with the first three digits of the LTP on the TRUNK form.

When TYPE is "AIULP",

- at least one TSGRP NO must be entered with PIDB TYPE of "PSU" on the EQAIU form.

When TYPE is "AIURPLP",

- the last two digits of the Equipment Numbers with OE TYPE of "E" must be between 00 and 11 on the DSL, DSLAP, or RDTAPORT forms (NOTE: OE = aaabbbcc, where aaa= SM, bbb= AIU, cc = APPL PACK NUM).

For 5E13 and later:

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When TYPE is "AIUADSLLP",

- at least one "AIUAFM" pack must exist for the same SM and AIU.

When TYPE is "AIUADSLLP" or "AIUAFM",

- EQSTAT must be "U".
- BROADBAND on the EQAIU form must be "Y".

2.6 EQSTAT

Description: Enter the status of the pack.

Required Field.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Description
U	Unequipped.
G	Growth.
O	Operational.

2.7 CLI

Description: Enter the Change Level Indicator for the pack. Refer to Division 8, Section 1 for CLI values.

Required Field.
Valid Entries: 0 - 7FFFFFFF

2.8 SEAL CUR

Description: This field was added for the AIU ISDN feature. Should sealing current be sent to the line pack?

Software Release: 5E12 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When SEAL CUR is "Y", TYPE must be "AIULP".

2.9 SLIM ROUTE INDEX

Description: This field was added for the AIU Test Pack feature. Enter the SLIM Route Index number.

Required Field.
Default: 0
Valid Entries:

For 5E11: Blank, or 0 - 8191
For 5E12 and later: Blank, or 0 - 4095

Data Rules:

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When SLIM ROUTE INDEX is greater than 0, TYPE must be "AIUTSTP".

For 5E12 and later, when SLIM ROUTE INDEX is entered, the index must be defined on an RTIDX form.

```
eqaiup                    5ESS SWITCH
(5746)                OFFICE DATA ADMINISTRATION
                    ACCESS INTERFACE UNIT PACK

*1. SM          ___
*2. AIU         __
*3. APPL PACK NUM __
#4. TYPE        _____
#5. EQSTAT      _
#6. CLI         ________
```

Figure 1 SAMPLE EQAIUP FORM 5E11 SOFTWARE RELEASE

```
eqaiup                    5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(5746)                ACCESS INTERFACE UNIT PACK

*1. SM             001
*2. AIU            001
*3. APPL PACK NUM   01
#4. TYPE           AICLP
5. EQSTAT          O
6. CLI            00000000
7. SEAL CUR        Y
8. SLIM ROUTE INDEX 0000
```

Figure 2 SAMPLE EQAIUP FORM 5E12 AND LATER SOFTWARE RELEASES

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SEC. 66: 5826 RECORD
ETHERNET PIPE - ENETPIPE

1. GENERAL

The 5826 Record is available with the 5E12 and later Software Releases. It is used to enable the craft to review and update the ethernet links connected to an MH (Message Handler). This form supports the RTCD (Real Time Call Detail) platform and the STS-I External Echo Cancellation features. For more information on these features, see Division 2, Section 4a245 and Division 2, Section 9P respectively.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: The SM field is used to specify the switching module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E12 and later:

- only one ENETPIPE form tuple is allowed per SM.
- when the ENETPIPE form is entered, the EQIM form must have the SM defined as an SM-2000 class processor.
- when the ENETPIPE form is entered, two corresponding EQPIPE forms must exist where QLPS NETWORK is equal 0 and 1.
- when the ENETPIPE form is entered, the corresponding EQMH form must exist where:
  - MH = 2
  - MH SIDE 0 EQSTAT = "O"
  - MH SIDE 0 CLI = 3
  - MH SIDE 1 EQSTAT = "O" and
  - MH SIDE 1 CLI = 3

2.3 * ENET PIPE

Description: The ENET PIPE field is used to specify the number of the external ethernet pipe.

Required Field.

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Default: 0
Valid Entries: 0

2.4 MH

Description: The MH field is used to specify the message handler number.

2.5 EIB TYPE

Description: The EIB TYPE field is used to describe the type of external ethernet interface board.

2.6 # SERV TYPE

Description: The SERV TYPE field is used to specify the ethernet link service type.

Required Field.
Valid Entries:

- 5E13 and 5E14: EEC (External Echo Canceler) or RTCD (Real Time Call Detail)
- 5E15 and later: EEC, RTCD, or VTOA (Voice Telephony Over ATM (Asynchronous Transfer Mode))

Data Rules:

For 5E13 and later:

- When SERV TYPE is "EEC", MANAGED HUB must be "Y".
- When SERV TYPE is "EEC", EIB IP ADDR 0, EIB IP ADDR 1, HUB IP ADDR 0 and HUB IP ADDR 1 must equal respectively 192.11.200.5, 192.11.201.6, 192.11.200.250 and 192.11.201.250.
- When SERV TYPE is "RTCD", only one such ENETPIPE form tuple is allowed per office.

For 5E15 and later, when SERV TYPE is "VTOA", MANAGED HUB must be "Y".

For 5E16 and later:

- When SERV TYPE is "CFS", EIB IP ADDR 0 and EIB IP ADDR 1 must be entered.
- When SERV TYPE is "CFS" and MANAGED HUB is "Y", HUB IP ADDR 0 and HUB IP ADDR 1 must be entered.
- When SERV TYPE is "CFS", the ACT field for SFID 602 on the SFSYS form (5713-1 Record) must be set to "Y".

For 5E16(2) and later, SERV TYPE must be "CFS", "EEC", or "RTCD".

2.7 DUPLEX HUB

Description: The DUPLEX HUB field is used to indicate if the hub has a duplex or simplex configuration.

2.8 MANAGED HUB

Description: The MANAGED HUB field is used to indicate if the hub is managed or unmanaged.

Required Field.

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Default: Y
Valid Entries: Y,N

Data Rules:

For 5E13 and later:

- When MANAGED HUB is "N", then HUB HW ADDR 0 and HUB HW ADDR 1 must not be entered.
- When MANAGED HUB is "Y", then HUB HW ADDR 0 and HUB HW ADDR 1 must be entered.

2.9 EIB IP ADDR 0

Description: The EIB IP ADDR 0 field is used to indicate the internet protocol address that the side 0 EIB receives on and the hub/far end transmits to.

2.10 EIB IP ADDR 1

Description: The EIB IP ADDR 1 field is used to indicate the internet protocol address that the side 1 EIB receives on and the hub/far end transmits to.

2.11 EIB HW ADDR 0

Description: The EIB HW ADDR 0 field is used to specify the ethernet address for the side 0 EIB.

2.12 EIB HW ADDR 1

Description: The EIB HW ADDR 1 field is used to specify the ethernet address for the side 1 EIB.

2.13 HUB IP ADDR 0

Description: The HUB IP ADDR 0 field is used to indicate the internet protocol address that the hub connected to the side 0 EIB receives on and the side 0 EIB transmits to.

2.14 HUB IP ADDR 1

Description: The HUB IP ADDR 1 field is used to indicate the internet protocol address that the hub connected to the side 0 EIB receives on and the side 1 EIB transmits to.

2.15 HUB HW ADDR 0

Description: The HUB HW ADDR 0 field is used to specify the ethernet address for the hub connected to the side 0 EIB.
Valid Entries: 00 - ff hex

Data Rules:

For 5E13 and later, HUB HW ADDR 0 and HUB HW ADDR 1 must have different values.

2.16 HUB HW ADDR 1

Description: The HUB HW ADDR 1 field is used to specify the ethernet address for the hub connected to the side 1 EIB.
Valid Entries: 00 - ff hex

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```
enetpipe                  5ESS SWITCH          _
                  OFFICE DATA ADMINISTRATION
(5826-1/2)              ETHERNET PIPE ASSIGNMENT

*1. SM       ___              DUPLEX HUB  Y
*2. ENET PIPE 0                7. MANAGED HUB Y
   MH       2
   EIB TYPE  MHEIB
#5. SERV TYPE ____


                EIB                    HUB
   IP ADDR 0     192.011.200.005          192.011.200.250
   IP ADDR 1     192.011.201.006          192.011.201.250
   HW ADDR 0      08:00:6a:19:06:05       42. __:__:__:__:__:__
   HW ADDR 1      08:00:6a:19:06:06       49. __:__:__:__:__:__
```

Figure 1 SAMPLE ENETPIPE FORM 5E13 AND 5E14 SOFTWARE RELEASES

```
enetpipe                  5ESS SWITCH          _
                  OFFICE DATA ADMINISTRATION
(5826-1/2)              ETHERNET PIPE ASSIGNMENT

*1. SM       ___              DUPLEX HUB  Y
*2. ENET PIPE 0                7. MANAGED HUB Y
   MH       2
   EIB TYPE  MHEIB
#5. SERV TYPE ____


                EIB                    HUB
   IP ADDR 0     ___.011.200.005          ___.011.200.250
   IP ADDR 1     ___.011.201.006          ___.011.201.250
   HW ADDR 0      08:00:6a:19:06:05       42. __:__:__:__:__:__
   HW ADDR 1      08:00:6a:19:06:06       49. __:__:__:__:__:__
```

Figure 2 SAMPLE ENETPIPE FORM 5E15 SOFTWARE RELEASE

```
enetpipe                  5ESS SWITCH          _
                  OFFICE DATA ADMINISTRATION
(5826-1/2)              ETHERNET PIPE ASSIGNMENT

*1. SM       ___              DUPLEX HUB  Y
*2. ENET PIPE 0                7. MANAGED HUB Y
   MH       2
   EIB TYPE  MHEIB
#5. SERV TYPE ____


                EIB                    HUB
   IP ADDR 0   8. ___.___.___.___        32. ___.___.___.___
   IP ADDR 1  13. ___.___.___.___        37. ___.___.___.___
   HW ADDR 0      08:00:6a:19:06:05       42. __:__:__:__:__:__
```

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HW ADDR 1 08:00:6a:19:06:06 49. __:__:__:__:__:__

Figure 3 SAMPLE ENETPIPE FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 67: 5827 RECORD
ETHERNET LINKS - ENETLINK

1. GENERAL

The 5827 Record is available with the 5E12 and later Software Releases. It is used to enable the craft to review and update the ethernet links connected to an MH (Message Handler). This form supports the RTCD (Real Time Call Detail) platform and the STS-I External Echo Cancellation features. For more information on these features, see Division 2, Section 4a245 and Division 2, Section 9P respectively.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: The SM field is used to specify the switching module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E12 and later:

- When the ENETLINK form tuple is entered, a corresponding ENETPIPE form tuple must exist with the same SERV TYPE.
- Only one ENETLINK form tuple is allowed where SERV TYPE is equal "RTCD".

2.3 * ENET PIPE

Description: The ENET PIPE field is used to specify the number of the external ethernet pipe.

Required Field.
Default: 0
Valid Entries: 0

2.4 * ENET LINK NBR

Description: The ENET LINK NBR field is used to specify the external ethernet link number.

Required Field.
Default: 0
Valid Entries: 0 - 69

Data Rules:

For 5E12 and later, when RTCD OFC on the OFCOPT form is set to "Y", ENET LINK NBR 0 must be defined on an ENETLINK form where SERV TYPE is equal "RTCD".

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For 5E13 and later, when ENET LINK NBR is an odd number other than 1, ENET LINK NBR 1 must exist.

2.5 MH

Description: The MH field is used to specify the message handler number.
Default: 2
Valid Entries: 2

2.6 # SERV TYPE

Description: The SERV TYPE field is used to specify the ethernet link service type.

Required Field.
Default: RTCD
Valid Entries:

- 5E14 and earlier: EEC (External Echo Canceler) or RTCD (Real Time Call Detail)
- 5E15 and later: EEC, RTCD, or VTOA (Voice Telephony Over ATM (Asynchronous Transfer Mode))

Data Rules:

For 5E13 and later:

SERV TYPE must equal SERV TYPE on the ENETPIPE form.

When SERV TYPE is "RTCD":

- ENET LINK NBR must be "0".
- DUPLEX must be the same value as DUPLEX HUB on the ENETPIPE form.

When SERV TYPE is "EEC":

- SND PORT and RCV PORT must be "1500".
- DUPLEX must be "N".
- IP ADDR 0 SIDE 0 element 4 and IP ADDR 0 SIDE 1 element 4 must equal ENET LINK NBR plus 150.
- DUPLEX must be the same as DUPLEX HUB on the ENETPIPE form.

For 5E15 and later, when SERV TYPE is "VTOA", ENET LINK NBR must be "0 - 5".

For 5E16 and later:

- When SERV TYPE is "CFS", IP ADDR 0 SIDE 0 and IP ADDR 1 SIDE 0 must be entered.
- When SERV TYPE is "CFS", IP ADDR 0 SIDE 1 and IP ADDR 1 SIDE 1 must be entered.

2.7 DUPLEX

Description: The DUPLEX field is used to indicate if the far end system associated with this ethernet link is duplex or simplex.

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2.8 SND PORT

Description: The SND PORT field is the starting port from which data will be transmitted to the far end system.

2.9 RCV PORT

Description: The RCV PORT field is the starting port from which data will be received from the far end system.

2.10 NUM PORTS

Description: The NUM PORTS field is the number of consecutive send and receive ports.

2.11 IP ADDR 0 SIDE 0

Description: The IP ADDR 0 SIDE 0 field is the first internet protocol address for side 0 to which the ethernet interface board (EIB) transmits and on which the far end receives.

2.12 IP ADDR 1 SIDE 0

Description: The IP ADDR 1 SIDE 0 field is the second internet protocol address for side 0 to which the ethernet interface board (EIB) transmits and on which the far end receives.

2.13 HW ADDR 0 SIDE 0

Description: The HW ADDR 0 SIDE 0 field is the first ethernet hardware address for side 0 of this ethernet link.

Required Field.
Valid Entries: 00 - ff hex

Data Rules:

HW ADDR 0 SIDE 0 and HW ADDR 0 SIDE 1 must have the same values.

HW ADDR 0 SIDE 0 and HW ADDR 1 SIDE 0 must not have the same values.

HW ADDR 0 SIDE 0 and HW ADDR 0 SIDE 1 must be the same for this SERV TYPE.

2.14 HW ADDR 1 SIDE 0

Description: The HW ADDR 1 SIDE 0 field is the second ethernet hardware address for side 0 of this ethernet link.

Required Field.
Valid Entries: 00 - ff hex

Data Rules:

HW ADDR 1 SIDE 0 and HW ADDR 1 SIDE 1 must have the same values for this SERV TYPE.

2.15 IP ADDR 0 SIDE 1

Description: The IP ADDR 0 SIDE 1 field is the first internet protocol address for side 1 to which the ethernet interface board (EIB) transmits and on which the far end receives.

2.16 IP ADDR 1 SIDE 1

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Description: The IP ADDR 1 SIDE 1 field is the second internet protocol address for side 0 to which the ethernet interface board (EIB) transmits and on which the far end receives.

2.17 HW ADDR 0 SIDE 1

Description: The HW ADDR 0 SIDE 1 field is the first ethernet hardware address for side 1 of this ethernet link.

Required Field.
Valid Entries: 00 - ff hex

2.18 HW ADDR 1 SIDE 1

Description: The HW ADDR 1 SIDE 1 field is the second ethernet hardware address for side 1 of this ethernet link.

Required Field.
Valid Entries: 00 - ff hex

Data Rules:

```
enetlink                  5ESS SWITCH          _
                  OFFICE DATA ADMINISTRATION
(5827-1/2)              ETHERNET LINK ASSIGNMENT

*1. SM          ___
*2. ENET PIPE    0            SND PORT _____
*3. ENET LINK NBR __           RCV PORT _____
   MH          2            NUM PORTS 1
#5. SERV TYPE    ____
   DUPLEX       Y

                SIDE 0                SIDE 1
   IP ADDR 0    192.011.200.___       192.011.___.___
   IP ADDR 1    192.011.___.___       192.011.201.___
   HW ADDR 0 #20. __:__:__:__:__:__   #44. __:__:__:__:__:__
   HW ADDR 1 #27. __:__:__:__:__:__   #51. __:__:__:__:__:__
```

Figure 1 SAMPLE ENETLINK FORM 5E13 AND 5E14 SOFTWARE RELEASES

```
enetlink                  5ESS SWITCH          _
                  OFFICE DATA ADMINISTRATION
(5827-1/2)              ETHERNET LINK ASSIGNMENT

*1. SM          ___
*2. ENET PIPE    0            SND PORT _____
*3. ENET LINK NBR __           RCV PORT _____
   MH          2            NUM PORTS 1
#5. SERV TYPE    ____
   DUPLEX       Y

                SIDE 0                SIDE 1
   IP ADDR 0    ___.011.200.___       ___.011.___.___
```

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```
   IP ADDR 1      ___.011.___.___            ___.011.201.___
   HW ADDR 0 #20. __:__:__:__:__:__       #44. __:__:__:__:__:__
   HW ADDR 1 #27. __:__:__:__:__:__       #51. __:__:__:__:__:__
```

Figure 2 SAMPLE ENETLINK FORM 5E15 SOFTWARE RELEASE

```
enetlink                    5ESS SWITCH          _
                        OFFICE DATA ADMINISTRATION
(5827-1/2)                ETHERNET LINK ASSIGNMENT

*1. SM          ___
*2. ENET PIPE     0              SND PORT  _____
*3. ENET LINK NBR __               RCV PORT  _____
   MH           2              NUM PORTS 1
#5. SERV TYPE     ____
   DUPLEX        Y

                SIDE 0                    SIDE 1
   IP ADDR 0  10. ___.___.___.___          34. ___.___.___.___
   IP ADDR 1  15. ___.___.___.___          39. ___.___.___.___
   HW ADDR 0 #20. __:__:__:__:__:__       #44. __:__:__:__:__:__
   HW ADDR 1 #27. __:__:__:__:__:__       #51. __:__:__:__:__:__
```

Figure 3 SAMPLE ENETLINK FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 68: 5861 RECORD
DNUS TO EEC EQUIPAGE - DNU2EEC

1. GENERAL

The 5861 Record is available with the 5E13 and later Software Releases. It allows the craft to associate an STS (Synchronous Transport Signal) on DNU-S (Digital Network Unit - SONET) with an Ethernet Link and to activate echo cancellation on packs in the connected Neptune.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM must be defined on an EQIM form.

When SM is entered (DNU2EEC form exist), this SM must be defined as an SM-2000 class processor with EQSTATUS set to "O" (Operational).

When SM USAGE of SM defined on the EQIM form equals "ORM", then ENET SM must have the same value as SM.

2.3 * DNUS

Description: This field is used to specify the DNU-S number.

Required Field.
Valid Entries: 0 - 7

2.4 * DATA GROUP

Description: This field is used to specify the DNU-S data group number.

Required Field.
Valid Entries: 0 or 1

2.5 * STE

Description: This field is used to specify the SONET termination equipment number on the data group.

Required Field.
Valid Entries: 1 - 6

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2.6 * STS

Description: This field is used to specify the STS-1 number on the STE (SONET Terminating Equipment) on the DNU-S.

Required Field.
Default: 1
Valid Entries: 1

2.7 # ENET SM

Description: This field is used to specify the Ethernet Link SM (Switching Module) number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

Only one DNU2EEC form tuple can be assigned to an ENET SM, ENET PIPE, ENET LINK NBR, NEPT STS combination.

When ENET SM is entered, the ENET SM must be defined as an SM-2000 class processor with EQSTATUS set to "O" (Operational).

When SM USAGE of ENET SM defined on the EQIM form equals "ORM", then ENET SM must have the same value as SM.

2.8 ENET PIPE

Description: This field is used to specify the External Ethernet Pipe number.
Default: 0

2.9 # ENET LINK NBR

Description: This field is used to specify the External Ethernet Link number.

Required Field.
Valid Entries: even numbers between 0 - 68

2.10 NEPT STS

Description: This field is used to specify the Neptune STS number.
Default: 1

Required Field.
Valid Entries: 1 - 3

2.11 ACTIVE VT GROUPS

Description: This field is used to specify whether echo cancellation is active on the Neptune VT (Virtual Terminal) group.
Default: N
Valid Entries: Y,N

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```
(5861)                  DNUS TO EEC EQUIPAGE

*1. SM        ___        10. ACTIVE EEC CIRCUIT PACKS (VT)
*2. DNUS      _
*3. DATA GROUP _       ROW SHELF/SLOT  VT GROUP-MEMBER   ACTIVE
*4. STE       _         1  Upper/01    1-1 2-1 3-1 4-1     N
*5. STS       1         2  Upper/02    5-1 6-1 7-1 1-2     N
                        3  Upper/03    2-2 3-2 4-2 5-2     N
     ENET LINK          4  Upper/04    6-2 7-2 1-3 2-3     N
#6. ENET SM       ___    5  Upper/05    3-3 4-3 5-3 6-3     N
   ENET PIPE      0      6  Upper/06    7-3 1-4 2-4 3-4     N
#8. ENET LINK NBR __      7  Upper/07    4-4 5-4 6-4 7-4     N
 9. NEPT STS      1
```

Figure 1 SAMPLE DNU2EEC FORM 5E13 AND LATER SOFTWARE RELEASES

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SEC. 69: 5866 RECORD
TIME MULTIPLEXED SWITCH UNIT - EQTMS

1. GENERAL

The 5866 Record is available with the 5E15 and later Software Releases. It is used to support the CM3 (Communication Module 3) base feature (renamed Global Messaging Server). For more information on this feature, see Division 2, Section 7AN. The TMS data on this form previously existed on the EQCORE form and was moved to this form.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.11.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *TMS NBR

Description: The TMS NBR field was changed to TMSFP NUM for 5E16(2) and later. See the TMSFP NUM field below for usage information.

Software Release: 5E15 and later

2.3 * TMSFP NUM

Description: This field contains the TMSFP (Time Multiplex Switch Fabric Pair) number. The TMS NBR field was renamed to TMSFP NUM and modified to expand the range of values to support the CM3 NxTMS (N times TMS) feature. For more information on this feature, see Division 2, Section 7BO.

Software Release: 5E16(2) and later
Default: 0
Valid Entries:

0 for CM2
0 - 3 for CM3

Data Rules:

ODA form EQCORE (5701 Record) must be inserted before this form can be inserted/updated.

An EQTMS form with TMSFP NUM equal to 0 must exist in every office.

When an office has CM2, TMSFP NUM must be 0.

2.4 # AISLE

Description: This field contains the equipment location (floor and aisle) number.

Software Release: 5E15 and later
Required Field.
Valid Entries:
- 00 - 99 for floor number

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- 00 - 99 for aisle number

2.5 BAY

Description: The BAY field contains the equipment location bay number.

Software Release: 5E15 and later
Valid Entries:

Valid BAY Entries

Office	Entry
CM2	Blank
CM3	0 - 3

Data Rules:

When an office is a CM2 office,

- BAY must NOT be entered.

When an office is a CM3 office,

- BAY must be entered.
- For 5E16(2) and later, BAY must equal TMSFP NUM.

2.6 CAB CONFIG

Description: This field contains the cabinet configuration number.

Software Release: 5E15 and later
Valid Entries:

Valid CAB CONFIG Entries

Office	Entry
CM2	Blank
CM3	F - for front-to-back S - for side-to-side

Data Rules:

When an office is a CM2 office, CAB CONFIG must not be entered.

When an office is a CM3 office, CAB CONFIG must be entered.

2.7 #FABRIC TYPE

Description: This field contains the TMS fabric configuration number.

Software Release: 5E15 and later
Valid Entries:

Valid FABRIC TYPE Entries

Entry	Definition
D	Dual.
S	Single.

Data Rules:

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When FABRIC TYPE is "SNGL",

- SHELF EQUIPAGE - CM2 SIDE 0 and SIDE 1 for SHELFs 6, and 8-11 can not be entered.

When FABRIC TYPE is "SNGL", and CM VINTAGE on the EQCORE form is 2 and CM2 COMPACT is "N", this combination requires an entry for SHELF 0 in the SHELF EQUIPAGE - CM2 list on this form.

When FABRIC TYPE is "SNGL",

- SHELF EQUIPAGE - CM2 SHELF 0 must be entered when 1 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 1 must be entered when 2 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 2 must be entered when 3 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 3 must be entered when 4 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 4 must be entered when 5 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 5 must be entered when 6 or more shelves are equipped.

When FABRIC TYPE is "DUAL",

- SHELF EQUIPAGE - CM2 SHELF 0 and SHELF 1 must be entered.
- SHELF EQUIPAGE - CM2 SHELF 2 and SHELF 3 must be entered when 3 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 4 and SHELF 5 must be entered when 5 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 6 and SHELF 7 must be entered when 7 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 8 and SHELF 9 must be entered when 9 or more shelves are equipped.
- SHELF EQUIPAGE - CM2 SHELF 10 and SHELF 11 must be entered when 11 or more shelves are equipped.

When an office is being converted from single fabric to dual fabric, FABRIC TYPE must be "DUAL".

When FABRIC TYPE is "SNGL", the following rules must be met when defining the primary NLI Link, EVEN NLI 0, on the EQNLI form:

- The TMS LINK 0 value assigned to EVEN NLI 0 must be a multiple of 8 when TMS LINK 0 is less than 32 (8, 16, 24).
- The TMS LINK 0 + 2 value assigned to EVEN NLI 0 must be a multiple of 8 when TMS LINK 0 is greater than 31 (38, 46, 54, ...).

When offices are equipped with CM3, FABRIC TYPE must be "DUAL".

When FABRIC TYPE is "SNGL", for each odd QLI board on a given TMS SHELF, the preceeding QLI board must be the same QLI type (i.e., if board 3 on the TMS SHELF 0 is a QLI1, then QLI board 2 on TMS SHELF 0 must be a QLI1.

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NOTE: A QLI CLI value of 100 represents a QLI2 board and a QLI CLI value of 0 represents a QLI1 board.

2.8 #CLI

Description: The Change Level Indicator field is used to contain the CLI.

Software Release: 5E15 and later
Required Field.
Valid Entries: 0 - 7FFFFFFF hexadecimal

Data Rules:

When an office is equipped with a CM3, the CLI must be 500.

For 5E15 and later, when the CLI value is 20 (indicates CDX):

- on the EQTMS form (5866 Record)
  - MSG AISLE on the EQCORE form (5701 Record) and AISLE on the EQTMS form must be equal,
  - FABRIC TYPE must be "SNGL", and
  - CDX switches with ORSMs (Optically Remote SMs) may not have a TRCU (Transmission Rate Converter Units Type) of "TRCU3" on the EQCMTRCU form (5812 Record).
- on the EQIM form (5700 Record)
  - CTS EVEN LINK must be 2, 10, 18, 26, 34, 42, 50, or 58.
  - The maximum number of EQIM forms must be less than or equal to 8.
  - The maximum number of EQIM forms with SM USAGE of "IM", "HIM", "TRM" or "ORM" must be less than or equal to 2.
  - The maximum number of EQIM forms with SM USAGE of "RM" must be less than or equal to 6.
- on the EQCORE form (5701 Record)
  - CM VINTAGE must be set to 2 and CM2 COMPACT must be set to "Y".

When CLI has a value in which bit 5 is set (as in 20 hex), then the CM2 COMPACT field on the EQCORE form must be "Y".

SHELF EQUIPAGE - CM3

2.9 EQSTAT

Description: The EQSTAT field provides the equipage status of the shelf.

Software Release: 5E15 and later
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth

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O	Operational

Data Rules:

EQSTAT must be "G" or "O".

SHELF EQUIPAGE - CM2

The following two fields (Section 2.10 - Section 2.11) are used to enter the shelves and their equipage status.

2.10 SIDE 0

Description: This field describes the shelf equipment for side 0.

Software Release: 5E15 and later.
Valid Entries: TMSU2 or TMSU3

Data Rules:

When SHELF EQUIPAGE - CM2 SIDE 0 or SIDE 1 is assigned, both SIDE 0 and SIDE 1 must be entered.

SHELF EQUIPAGE - CM2 SIDE 0 or SIDE 1 values for SHELF 0, must both be the same, either "TMSU2" or "TMSU3".

SHELF EQUIPAGE - CM2 SIDE 0 or SIDE 1 values for SHELF 1, must both be the same, either "TMSU2" or "TMSU3".

SHELF EQUIPAGE - CM2 SIDE 0 or SIDE 1 values for SHELF 0 and SHELF 1 must all be the same, either "TMSU2" or "TMSU3".

SHELF EQUIPAGE - CM3 entries are not allowed for CM2 offices.

WARNING: SHELF EQUIPAGE - CM2 SIDE 0 or SIDE 1 values for SHELFs 2-11, must both be the same, either "TMSU2" or "TMSU3".

When an office is equipped with CM2, the SHELF EQUIPAGE - CM2 list must have the correct entries to support the range of TMSLINKS in the office. The following table depicts the rows required for specific ranges of TMSLINKS (STARTING QTMSLINK, QTMSLINK 2, QTMSLINK 3, QTMSLINK4) defined on the EQQLPS form (5854 Record), and a FABRIC TYPE of "DUAL" on the EQTMS form.

SHELF EQUIPAGE - CM2 Row Requirements for "DUAL" FABRIC TYPE

TMSLINKs Equipped	SHELF EQUIPAGE - CM2 (required rows)
2 - 61	1 and 2
62 - 125	3 and 4
126 - 189	5 and 6
190 - 253	7 and 8
254 - 317	9 and 10
318 - 381	11 and 12

SHELF EQUIPAGE - CM2 Row Requirements for "SNGL" FABRIC TYPE

TMS LINKs EQUIPPED	SHELF EQUIPAGE - CM2 (required rows
2 - 31	1
32 - 61	2
62 - 93	3
94 - 125	4

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126 - 157	5
158 - 189	6

When an office is equipped with CM2 and the FABRIC TYPE is "SNGL", the maximum assigned NCT EVEN LINK value on an EQIM form (5700 Record) should not exceed 188.

2.11 SIDE 1

Description: This field describes the shelf equipment for side 1.

Software Release: 5E15 and later
Valid Entries: TMSU2 or TMSU3

```
eqtms                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5866)             Time Multiplexed Switch Unit

*1. TMS NBR    0        7. SHELF EQUIPAGE - CM3
#2. AISLE     0000      ROW SHELF EQSTAT
 3. BAY        ___       1   0    O
 4. CAB CONFIG _         2   1    _
#5. FABRIC TYPE DUAL      3   2    _
#6. CLI       00000500    4   3    _
```

```
eqtms                    5ESS Switch       _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5866)             Time Multiplexed Switch Unit

       10. SHELF EQUIPAGE - CM2
ROW SHELF SIDE0 SIDE1 ROW SHELF SIDE0 SIDE1
 1   0  _____ _____   7   6  _____ _____
 2   1  _____ _____   8   7  _____ _____
 3   2  _____ _____   9   8  _____ _____
 4   3  _____ _____  10   9  _____ _____
 5   4  _____ _____  11  10  _____ _____
 6   5  _____ _____  12  11  _____ _____
```

Figure 1 SAMPLE EQTMS FORM 5E15 SOFTWARE RELEASE

```
eqtms                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5866)             Time Multiplexed Switch Unit

*1. TMSFP NUM  0         7. SHELF EQUIPAGE - CM3
#2. AISLE      ____      ROW SHELF EQSTAT
 3. BAY        __        1   0    _
 4. CAB CONFIG _         2   1    _
#5. FABRIC TYPE ____      3   2    _
#6. CLI       _________   4   3    _
```

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eqtms 5ESS Switch _
SCREEN 2 OF 2 OFFICE DATA ADMINISTRATION
(5866) Time Multiplexed Switch Unit

10. SHELF EQUIPAGE - CM2

ROW	SHELF	SIDE0	SIDE1	ROW	SHELF	SIDE0	SIDE1
1	0	_____	_____	7	6	_____	_____
2	1	_____	_____	8	7	_____	_____
3	2	_____	_____	9	8	_____	_____
4	3	_____	_____	10	9	_____	_____
5	4	_____	_____	11	10	_____	_____
6	5	_____	_____	12	11	_____	_____

Figure 2 SAMPLE EQTMS FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 70: 5828 RECORD
QPH PIPE ASSIGNMENT - QPHPIPE

1. GENERAL

The 5828 Record is available with the 5E14 and later Software Releases. It provides the basic description of the SM (Switching Module) side of the QLPS (Quad-Link Packet Switch) pipe connecting the QPH (QLPS Protocol Handler) to the QLPS network.This form was created to support the SS7 (Signaling System 7) - PSU (Packet Switch Unit) Architectural Enhancements (99-CP-4246). For more information on this feature, see Division 2, Section 7AG.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GLOBAL SM

Description: This GLOBAL SM field is used to specify a GSM (Global Switching Module) number which supports national SS7 signaling.

Software Release: 5E14 and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

Each GLOBAL SM, PSU SHELF, and CHANNEL GROUP that is entered defines a QPH on a QLPH NETWORK. Both QLPS NETWORK 0 and QLPS NETWORK 1 combined can have at the most 16 unique QPHs defined on one GLOBAL SM.

There can be a maximum of 59 QPHs in an office.

When SERVICE TYPE is "CCS" on the QPHPIPE form, GLOBAL SM must be defined on the CCGSM form and the EQIM form must have an SM2000 class processor with the EQSTATUS set to "O" and the SM USAGE set to "IM" or "HIM".

When GLOBAL SM, PSU SHELF, CHANNEL GROUP, and PH TYPE are entered, the values must be equal to the SM, PSU SHELF, CHANNEL GROUPS GRP TYPE, and CHANNEL GROUPS PH TYPE on the PSUGP form, respectively.

The QPHPIPE form and/or CMTMH form cannot be entered for a VCDX office when VCDX OFFICE is set to "Y" on the EQCORE form.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form (5742 Record) on the same SM and have a matching PSU SHELF.

2.3 * PSU SHELF

Description: This PSU SHELF field is used to specify the PSU (Packet Switch Unit) shelf position on the SM (Switching Module) which supports national SS7 Signaling.

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Required Field.
Valid Entries: 0 - 4

2.4 * CHANNEL GROUP

Description: This CHANNEL GROUP field is used to specify the logical port position of the PH (Protocol Handler).

Required Field.
Valid Entries: 0 - 15

2.5 * QLPS NETWORK

Description: This QLPS NETWORK field is used to specify the QLPS Network number.

Required Field.
Valid Entries: 0 or 1

2.6 PH TYPE

Description: This PH TYPE field is used to display the Protocol Handler Type.

Required Field.
Default: PH22
Valid Entries: PH22

Data Rules:

When DEMO on the SIPGSM form is set to "Y, "PH TYPE and SERVICE TYPE fields on this form are not allowed for SIP-T GSMs .

2.7 SERVICE TYPE

Description: This field is the Quad-Link Packet Switch Service Type used to distinguish between CCS (Common Channel Signaling) and SIP. This field supports the SIP (Session Initiation Protocol) for Packet Trunking feature. For more information see Division 2, Section 4A684.

Required Field.

Software Release: 5E16(2) FR 3 and later
Default: CCS
Valid Entries:

Valid SERVICE TYPE Entries

Entry	Definition
CCS	Common Channel Signaling
SIPT	Session Initiation Protocol for Telephones

Data Rules:

When SERVICE TYPE is "SIPT", GLOBAL SM must be defined on the SIPGSM and QGCON forms (5880/5829 Records).

---

qphpipe 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5828) QPH PIPE ASSIGNMENT

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```
*1. GLOBAL SM     001
*2. PSU SHELF     1
*3. CHANNEL GROUP 1
*4. QLPS NETWORK  1
 5. PH TYPE       PH22
```

Figure 1 SAMPLE QPHPIPE FORM 5E14 THROUTH 5E16(1) SOFTWARE RELEASES

```
qphpipe                    5ESS Switch                _
                  OFFICE DATA ADMINISTRATION
(5828)                  QPH PIPE ASSIGNMENT

*1. GLOBAL SM     001
*2. PSU SHELF     1
*3. CHANNEL GROUP 1
*4. QLPS NETWORK  1
   PH TYPE        PH22
 6. SERVICE TYPE  CCS
```

Figure 2 SAMPLE QPHPIPE FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 71: 5867 RECORD
COMMUNICATION MODULE MODEL 3 - CM3

1. GENERAL

The 5867 Record is available with the 5E15 and later Software Releases. It is used to assist in the population of CM3 (Communication Module Model 3) - dependent data on other forms. This form is populated in CM3 offices only. It supports the CM3 Base feature. For more information on this feature, see Division 2, Section 7AN.

NOTE: This form should only be used for CM3 offices. It should be entered only after the EQCORE form (5866 Record) so that form level checking can be performed on the data ranges instead of during the time of level 3 checking.

1.1 Recent Change View

This form does not have a corresponding Recent Change View.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * EQSTAT

Description: The EQSTAT field provides the equipage status of the CM3.

Software Release: 5E15 and later
Required Field.
Default: O
Valid Entries: O

Data Rules:

EQSTAT can only be "O".

---

eqcm3 5ESS Switch _
OFFICE DATA ADMINISTRATION
(5867) Communication Module Model 3

*1. EQSTAT O

Figure 1 SAMPLE EQTMS FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 72: 5868 RECORD
PCT DATA EXCHANGER UNIT - EQPDXU

1. GENERAL

The 5868 Record is available with the 5E14 Software Release. It is used to define the PDXU (PCT (Peripheral Control and Timing) Data Exchanger Unit). This form was added to support the XAIU (Multiplexed Access Interface Unit) feature. For further information on this feature, see Division 2, Section 9T.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.23.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: This field is used to specify the SM (Switching Module) to which the PDXU is connected.

Required Field.

Software Release: 5E14 and later
Valid Entries: 1 - 192

Data Rules:

For each SM assignment, there must be a corresponding EQIM form (5700 Record) that must be an SM-2000 class processor.

When an EQAIU form is assigned to a UNIT TYPE of "SM-2000", a maximum of 43 AIUs can be assigned.

2.3 * PDXU

Description: This field is used to specify the PCT Data Exchanger Unit being used.

Required Field.

Software Release: 5E14 and later
Valid Entries: 0 - 35

2.4 # EQL AISLE

Description: This field is used to specify the aisle number where the PDXU is located.

Required Field.

Software Release: 5E14 and later
Valid Entries: 00 - 99 for Floor, and 00 - 99 for Aisle

2.5 # EQL BAY

Description: This field is used to specify the bay number where the PDXU is located.

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Required Field.

Software Release: 5E14 and later
Valid Entries:

Valid EQL BAY Entries

Entry	Description
0 - 4	SM
0 - 14, 100 - 104, 200 - 208, 999 - 999	SM-2000 Class Processor.

2.6 EQL UNVER

Description: This field is used to specify the vertical position number where the PDXU is located.

Required Field.

Software Release: 5E14 and later
Default: 11
Valid Entries: 11

2.7 # XAIU CONFIG

Description: This field is used to specify the Traffic Configuration supported by the PDXU.

Required Field.

Software Release: 5E14 and later
Valid Entries:

XAIU Configuration Table

Configuration	Fiber Link	AIUs/ Cabinet	Line Concentration	Call Volume
Low traffic 5E14 and later	Two half-PCTs	6	approx. 5:1	7 CCS or less
Medium 1 (Option 2) traffic 5E14 FR 6, 5E15 FR2 and later 99-5E-7727	Two half-PCTs	4	approx. 3.3:1	12 CCS or less
Medium (Option 1) traffic 5E14 FR3, 5E15 BMI and later 99-5E-7726	Two full PCTs	6	approx. 2.5:1	14 CCS or less
High traffic 5E14 and later	Two full PCTs	4	approx. 1.7:1	21 CCS or less

Data Rules:

For the 5E14 Software Release:

- When XAIU CONFIG is "LOW", PCTDX0.TSI BOARD and PCTDX0.TSI SLOT must equal PCTDX1.TSI BOARD and PCTDX1.TSI SLOT, respectively.
- When XAIU CONFIG is not "LOW", PCTDX0.TSI BOARD and PCTDX0.TSI SLOT must not equal PCTDX1.TSI BOARD and PCTDX1.TSI SLOT, respectively.

For the 5E14 Feature Releases and later:

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- When XAIU CONFIG is "LOW" or "MED1", PCTDX0.TSI BOARD and PCTDX0.TSI SLOT must equal PCTDX1.TSI BOARD and PCTDX1.TSI SLOT, respectively.
- When XAIU CONFIG is "MED" or "HIGH", PCTDX0.TSI BOARD and PCTDX0.TSI SLOT must NOT equal PCTDX1.TSI BOARD and PCTDX1.TSI SLOT, respectively.

2.8 LINK CAPACITY

Description: This field is used to identify whether the PDXU is at its FULL or HALF traffic capacity. This is a display only field.

Software Release: 5E14 and later
Valid Entries: HALF or FULL

PCTDX0

2.9 # EQSTAT

Description: This field is used to define the Equipment Status of PCTDX0.

Software Release: 5E14 and later
Required Field.
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Description
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

When PCTDX1 EQSTAT is "O", PCTDX0 EQSTAT must be "O".

When EQSTAT is entered, CLI, TSI BOARD, and TSI SLOT must all be entered.

When EQSTAT is not entered, CLI, TSI BOARD, and TSI SLOT must not be entered.

2.10 # CLI

Description: This field is used to specify the change level indicator of the PCTDX0. This indicator is used by diagnostics to determine the associated circuit board.

Required Field.

Software Release: 5E14 and later
Valid Entries: 0 - 7FFFFFFF hexadecimal

Data Rules:

When the CLI value for PCTDX0 and PCTDX1 is entered, the CLI value must be 00000000.

2.11 # TSI BOARD

Description: This field is used to specify the Time Slot Interchanger board number.

Required Field.

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Software Release: 5E14 and later
Valid Entries: 1 - 9

Data Rules:

Each PCTDX0 TSI BOARD entered must be defined on the EQTSI form and the matching EQSTI form must have an EQSTAT value that is greater than or equal to the PCTDX0 EQSTAT defined on the EQPDXU form.

2.12 # TSI SLOT

Description: This field is used to specify the Time Slot Interchanger slot number.

Required Field.

Software Release: 5E14 and later
Valid Entries: 0 - 3

PCTDX1

2.13 EQSTAT

Description: This field is used to define the Equipment Status of PCTDX0.

Software Release: 5E14 and later
Default: O
Valid Entries:

Valid EQSTAT Entries

Entry	Description
Blank	No Value
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

When PCTDX1 EQSTAT is "G", PCTDX0 EQSTAT must be "G" or "O".

2.14 CLI

Description: This field is used to specify the change level indicator of the PCTDX0. This indicator is used by diagnostics to determine the associated circuit board.

Software Release: 5E14 and later
Valid Entries: Blank, or 0 - 7FFFFFFF hexadecimal

2.15 TSI BOARD

Description: This field is used to specify the Time Slot Interchanger board number.

Software Release: 5E14 and later
Valid Entries: Blank, or 1 - 9

Data Rules:

Each PCTDX1 TSI BOARD entered must be defined on the EQTSI form and the matching EQSTI form must have an EQSTAT value that is greater than or equal to the PCTDX0 EQSTAT defined on the EQPDXU form.

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2.16 TSI SLOT

Description: This field is used to specify the Time Slot Interchanger slot number.

Software Release: 5E14 and later
Valid Entries: Blank, or 0 - 3

```
eqpdxu                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5868)                PCT DATA EXCHANGER UNIT

*1. SM          ___        PCTDX0              PCTDX1
*2. PDXU         __      #9. EQSTAT    _       14. EQSTAT    _
#3. EQL AISLE    ____    #10. CLI      _________  15. CLI     _________
#4. EQL BAY      ___     #11. TSI BOARD _        16. TSI BOARD _
 5. EQL UNVER    11      #12. TSI SLOT  _        17. TSI SLOT  _
#6. XAIU CONFIG  ____
   LINK CAPACITY ____
```

Figure 1 SAMPLE EQPDXU FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 73: 5869 RECORD
PCT LINE/TRUNK UNIT- EQPLTU

1. GENERAL

1.1 PCT Line/Trunk Unit

The PCT (Peripheral Control and Timing) Line/Trunk form is used to define equipment location information for the PCT line/trunk units. This form was created to support the MSM (Multi Service Module) on PLTU (PCT Line and Trunk (virtual) Unit. For more information on this feature see Division 2, Section 7AP. This feature was first made available in the 5E15 software release.

1.2 Recent Change View

The corresponding Recent Change View for EQPLTU is 19.24.

2. FORM ENTRIES - 5869 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: The SM field is used to indicate the switching module number.
Valid Entries: 1 - 192

Data Rules:

Switching Module assignment(s) can only be assigned to a SM-2000 type processor.

2.3 *PLTU

Description: The PLTU field is used to specify the peripheral control and timing line/trunk unit number.
Valid Entries: 0 - 35

Each PLTU entered must be defined on the EQPCTP form for the same SM.

2.4 TRANSPORT TYPE

Description: The TRANSPORT TYPE field is used to specify the transport equipment type.
Default: PDS
Valid Entries: PDS (Packet Driver Solution)

Data Rules:

When TRANSPORT TYPE is "PDS", TRANSPORT VERPOS must be 15, 29, 32, 44, 49 or 59.

When TRANSPORT TYPE is "PDS", TRANSPORT BAY must be 0-14, 90-99, 100-104, 200-208 or 900-999.

2.5 #TRANSPORT ESM

Description: The TRANSPORT ESM (Equipment Switching Module) field is used to indicate the switching module of the transport equipment.
Valid Entries: 1-192

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Data Rules:

On the EQPLTU form(s) the TRANSPORT ESM must be defined as an SM with an SM-2000 Class Processor on the EQIM form(s).

2.6 #TRANSPORT AISLE

Description: The TRANSPORT AISLE is used to specify the aisle number of the transport equipment.
Valid Entries: Enter floor 00-99 aisle 00-99

2.7 #TRANSPORT BAY

Description: The TRANSPORT BAY is used to specify the bay number of the transport equipment.
Valid Entries: Enter 00 - 14, 90 - 99, 100 - 104, 200 - 208, or 900 - 999

2.8 #TRANSPORT VERPOS

Description: The TRANSPORT VERPOS is used to specify the vertical position number of the transport equipment.
Valid Entries: Enter 15, 29, 32, 44, 49 or 59

```
eqpltu                  5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5869)                PCT LINE/TRUNK UNIT

*1. SM            ___
*2. PLTU          ___
 3. TRANSPORT TYPE   PDS
#4. TRANSPORT ESM    ___
#5. TRANSPORT AISLE  ____
#6. TRANSPORT BAY    ___
#7. TRANSPORT VERPOS __
```

Figure 1 SAMPLE EQPLTU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 74: 5870 RECORD
PCT LINK PACK- EQPCTP

1. GENERAL

1.1 PCT Link Pack

The PCT (Peripheral Control and Timing) Link Pack form provides the PCT Link Pack information. This form was created to support the MSM (Multi Service Module) on PLTU (PCT Line and Trunk (virtual) Unit. For more information on this feature, see Division 2, Section 7AP. This feature was first made available in the 5E15 software release.

1.2 Recent Change View

The corresponding Recent Change View for EQPCTP is 20.17.

2. FORM ENTRIES - 5870 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 SM

Description: The SM field is used to indicate the switching module number.
Valid Entries: 1 - 192.

Data Rules:

Switching Module assignment(s) can only be assigned to a SM2000-type processor.

2.3 PLTU

Description: The PLTU field is used to specify the peripheral control and timing line/trunk unit number.
Valid Entries: 0 - 35

Data Rules:

A PLTU entered on the EQPCTP form must be defined on the EQPLTU form for the same Switching Module.

2.4 PCTFI

Description: The PCTFI field is used to specify the peripheral control and timing facility interface number.
Valid Entries: 0 - 2

Data Rules:

On the EQPCTP form there can be no more than 36 PCTFIs created per SM.

PCTFIs must be defined on the EQPCTP form for the same SM and PLTU.

2.5 TSI BOARD

Description: The TSI BOARD field is used to specify the number of the time slot interface board.
Description of the field.
Valid Entries: 0 - 9

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Each TSI BOARD must be defined on the EQTSI form for the same SM.

2.6 TSI SLOT

Description: The TSI SLOT field is used to specify the number of the time slot interface slot.
Valid Entries: 0 - 3

PCT TERMINAL EQUIPMENT (TE0)

The following fields provide PCT Terminal Equipment attributes for side 0. Refer to Section 2.7 - Section 2.13 for individual field information.

2.7 TE0 EQSTAT

Description: The TE0 EQSTAT field is used to indicate the equipage state of the side 0 PCT terminal equipment.
Valid Entries:

TE1 EQSTAT Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

Data Rules:

When either TE0 EQSTAT or TE1 EQSTAT is set to "U", both TE0 EQSTAT and TE1 EQSTAT must be "U".

On the EQPCTP input form, the TE0 EQSTAT and TE1 EQSTAT must be greater than or equal to EQSTAT on the EQPCTT form, (i.e., "O" is greater than "G" which is greater than "U").

2.8 TE0 CLI

Description: The TE0 CLI field is used to specify the change level indicator of the side 0 PCT terminal equipment.
Valid Entries: Enter 0 to 7FFFFFFF.

Data Rules:

TE0 CLI and TE1 CLI must have the same value.

2.9 TE0 TRACE ID

Description: The TE0 TRACE ID field is used to indicate the position of the link at the far end from the side 0 PCT terminal equipment.
Valid Entries: 0 - 15

2.10 TE0 HORIZONTAL

Description: The TE0 HORIZONTAL field is used to specify the horizontal offset in tenths of an inch from the left side of the side 0 PCT terminal equipment.
Valid Entries: 0 - 255

2.11 TE0 VERTICAL

Description: The TE0 VERTICAL field is used to specify the vertical offset in tenths of an inch from the bottom of the side 0 PCT terminal equipment.

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Valid Entries: 0 - 255

2.12 TE0 DEPTH

Description: The TE0 DEPTH field is used to specify the depth offset in inches from the front of the side 0 PCT terminal equipment.
Valid Entries: 0 - 255

2.13 TE0 PACK CODE

Description: The TE0 PACK CODE field is used to specify the apparatus code for the pack of the side 0 PCT terminal equipment.
Valid Entries: Enter up to 19 alphanumeric characters.

PCT TERMINAL EQUIPMENT (TE1)

The following fields provide PCT Terminal Equipment attributes for side 1. Refer to Section 2.14 - Section 2.20 for individual field information.

2.14 TE1 EQSTAT

Description: The TE1 EQSTAT field is used to indicate the equipage state of the side 1 PCT terminal equipment.
Valid Entries:

TE1 EQSTAT Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

2.15 TE1 CLI

Description: The TE1 CLI field is used to specify the change level indicator of the side 1 PCT terminal equipment.
Valid Entries: Enter 0 to 7FFFFFFF.

Data Rules:

TE0 CLI and TE1 CLI must have the same value. Insert checks that compare different fields on this form.

2.16 TE1 TRACE ID

Description: The TE1 TRACE ID field is used to indicate the position of the link at the far end from the side 1 PCT terminal equipment.
Valid Entries: 0 - 15

2.17 TE1 HORIZONTAL

Description: The TE1 HORIZONTAL field is used to specify the horizontal offset in tenths of an inch from the left side of the side 1 PCT terminal equipment.
Valid Entries: 0 - 255

2.18 TE1 VERTICAL

Description: The TE1 VERTICAL field is used to specify the vertical offset in tenths of an inch from the bottom of the side 1 PCT terminal equipment.
Valid Entries: 0 - 255

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2.19 TE1 DEPTH

Description: The TE1 DEPTH field is used to specify the depth offset in inches from the front of the side 0 PCT terminal equipment.
Valid Entries: 0 - 255

2.20 TE1 PACK CODE

Description: The TE1 PACK CODE field is used to specify the apparatus code for the pack of the side 0 PCT terminal equipment.
Valid Entries: Enter up to 19 alphanumeric characters

```
eqpctp                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(5870)                  PCT LINK PACK

 *1. SM      ___          #11. TE0 DEPTH     ___
 *2. PLTU    ___            12. TE0 PACK CODE _________________
 *3. PCTFI   _
 #4. TSI BOARD _              PCT TERMINAL EQUIPMENT (TE1)
 #5. TSI SLOT  _            #13. TE1 EQSTAT     _
                      #14. TE1 CLI      ________
PCT TERMINAL EQUIPMENT  (TE0)   #15. TE1 TRACE ID   __
 #6. TE0 EQSTAT    _          #16. TE1 HORIZONTAL ___
 #7. TE0 CLI       _________   #17. TE1 VERTICAL   ___
 #8. TE0 TRACE ID  __          #18. TE1 DEPTH     ___
 #9. TE0 HORIZONTAL ___          19. TE1 PACK CODE  _________________
#10. TE0 VERTICAL   ___
```

Figure 1 SAMPLE EQPCTP FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 75: 5871-1/2 RECORD
PCT LINK TRIBUTARY- EQPCTT

1. GENERAL

1.1 PCT Link Tributary

The PCT Link Tributary form contains PCT Link Tributary information. This form was created to support the MSM (Multi Service Module) on PLTU (PCT Line and Trunk (virtual)) Unit. For more information on this feature see Division 2, Section 7AP. This feature was first made available in the 5E15 software release.

1.2 Recent Change View

The corresponding Recent Change View for EQPCTT is 20.27.

2. FORM ENTRIES - 5871 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 SM

Description: The SM field is used to indicate the switching module number.
Valid Entries: 1 - 192

Data Rules:

Switching Module assignment(s) can only be assigned to a SM-2000 type processor.

2.3 PLTU

Description: The PLTU field is used to specify the peripheral control and timing line/trunk unit number.
Valid Entries: 0 - 35

2.4 PCTFI

Description: The PCTFI field is used to specify the peripheral control and timing facility interface number.
Valid Entries: 0 - 2

Data Rules:

A PCTFI entered on the EQPCTT form must be defined on the EQPCTP form for the same Switching Module and PLTU.

VIRTUAL TRIBUTARIES (1-28)

Brief description of the what the fields in this group are for. Refer to Section 2.5 - Section 2.9 for individual field information.

2.5 TRIBUTARY

Description: The TRIBUTARY field is used to specify the T1 tributary number.
Valid Entries: 1 - 28

Data Rules:

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When TRIBUTARY is known, EQSTAT must be entered.

When TRIBUTARY is known, APPLICATION TYPE must be entred.

Duplicate TRIBUTARIES can not be assigned in the TRIBUTARY LIST.

2.6 EQSTAT

Description: The EQSTAT field is used to indicate the equipage state of the T1 tributary.
Valid Entries:

EQSTAT Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

2.7 APPLICATION TYPE

Description: The APPLICATION TYPE field is used to indicate the application type of the T1 tributary.
Valid Entries: Enter TRUNK

2.8 FACILITY NAME

Description: The FACILITY NAME field is used to indicate the carrier facility of the T1 tributary.
Valid Entries: Enter up to 25 alphanumeric characters.

2.9 APT ALG

Description: This field is used for the DS1 (Digital Signal Level 1) in APT (Automatic Progression Testing). This field supports the APT Enhancements feature. For information on this feature see, Division 2, Section 2AD.

Software Release: 5E16(2) and later
Valid Entries:

Valid APT ALG Entries

Entry	Definition
1ONLY	Test One Only (test one trunk only on the DS1, independently whether test passes or fails and then move to a trunk on another DS1).
FULL	Full (test all trunks on the DS1, independently whether test passes or fails, and then move to a trunk on another DS1).
NOTST	No Test (APT should not perform any tests on the DS1).
SUCC	Stop on Success (test one trunk on the DS1 and then move to a trunk on another DS1 if test passes, or test next trunk on the same DS1 if test fails).

Data Rules:

APT ALG can only be entered when APPLICATION TYPE is "TRUNK".

```
eqpctt                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5871)                 PCT LINK TRIBUTARY

*1. SM ___   *2. PLTU ___   *3. PCTFI _

              4. VIRTUAL TRIBUTARIES
ROW TRIBUTARY EQSTAT APPLICATION TYPE FACILITY NAME
```

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```
1   __    _    _________   ____________________________
2   __    _    _________   ____________________________
3   __    _    _________   ____________________________
4   __    _    _________   ____________________________
5   __    _    _________   ____________________________
6   __    _    _________   ____________________________
7   __    _    _________   ____________________________
8   __    _    _________   ____________________________
```

```
eqpctt                    5ESS Switch
SCREEN 2 OF 3               OFFICE DATA ADMINISTRATION
(5871)                  PCT LINK TRIBUTARY

              4. VIRTUAL TRIBUTARIES
ROW TRIBUTARY EQSTAT APPLICATION TYPE FACILITY NAME
 9   __    _    _________   ____________________________
10   __    _    _________   ____________________________
11   __    _    _________   ____________________________
12   __    _    _________   ____________________________
13   __    _    _________   ____________________________
14   __    _    _________   ____________________________
15   __    _    _________   ____________________________
16   __    _    _________   ____________________________
17   __    _    _________   ____________________________
18   __    _    _________   ____________________________
```

```
eqpctt                    5ESS Switch       _
SCREEN 3 OF 3               OFFICE DATA ADMINISTRATION
(5871)                  PCT LINK TRIBUTARY

              4. VIRTUAL TRIBUTARIES
ROW TRIBUTARY EQSTAT APPLICATION TYPE FACILITY NAME
19   __    _    _________   ____________________________
20   __    _    _________   ____________________________
21   __    _    _________   ____________________________
22   __    _    _________   ____________________________
23   __    _    _________   ____________________________
24   __    _    _________   ____________________________
25   __    _    _________   ____________________________
26   __    _    _________   ____________________________
27   __    _    _________   ____________________________
28   __    _    _________   ____________________________
```

Figure 1 SAMPLE EQPCTT FORM 5E15 SOFTWARE RELEASE

```
eqpctt                    5ESS Switch
SCREEN 1 OF 3               OFFICE DATA ADMINISTRATION
(5871)                  PCT LINK TRIBUTARY

*1. SM ___    *2. PLTU __    *3. PCTFI _
```

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4. VIRTUAL TRIBUTARIES LIST (TRIBLIST)

ROW	TRIBUTARY	EQSTAT	APPLICATION TYPE	FACILITY NAME	APT ALG
1	__	_	_____	_____	_____
2	__	_	_____	_____	_____
3	__	_	_____	_____	_____
4	__	_	_____	_____	_____
5	__	_	_____	_____	_____
6	__	_	_____	_____	_____
7	__	_	_____	_____	_____
8	__	_	_____	_____	_____

---

eqpctt 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5871) PCT LINK TRIBUTARY

4. VIRTUAL TRIBUTARIES LIST (TRIBLIST)

ROW	TRIBUTARY	EQSTAT	APPLICATION TYPE	FACILITY NAME	APT ALG
9	__	_	_____	_____	_____
10	__	_	_____	_____	_____
11	__	_	_____	_____	_____
12	__	_	_____	_____	_____
13	__	_	_____	_____	_____
14	__	_	_____	_____	_____
15	__	_	_____	_____	_____
16	__	_	_____	_____	_____
17	__	_	_____	_____	_____
18	__	_	_____	_____	_____

---

eqpctt 5ESS Switch _
SCREEN 3 OF 3 OFFICE DATA ADMINISTRATION
(5871) PCT LINK TRIBUTARY

4. VIRTUAL TRIBUTARIES LIST (TRIBLIST)

ROW	TRIBUTARY	EQSTAT	APPLICATION TYPE	FACILITY NAME	APT ALG
19	__	_	_____	_____	_____
20	__	_	_____	_____	_____
21	__	_	_____	_____	_____
22	__	_	_____	_____	_____
23	__	_	_____	_____	_____
24	__	_	_____	_____	_____
25	__	_	_____	_____	_____
26	__	_	_____	_____	_____
27	__	_	_____	_____	_____
28	__	_	_____	_____	_____

Figure 2 SAMPLE EQPCTT FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 78: 5544 RECORD
MH PIPE ASSIGNMENT FORM - EQPIPE

1. GENERAL

The 5544 Record is available with the 5E9(2) and later Software Releases. It is used to assign QLPS (Quad-Link Packet Switch) MH (Message Handler) pipes in an SM-2000 office.

An SM-2000 Message Handler pipe is a high bandwidth path for message transport between a QLPS QTMSLNK (a port connection on the QLPS board of the TMS (Time Multiplex Switch)) and a given QLPS endpoint, that is, an MH (Message Handler) in an SM-2000. It is a physical path that sustains HDLC (High Level Data Link Control) traffic from the QLPS to the MH. When an SM-2000 Message Handler pipe is assigned, the operational software determines what resources are available for the pipe: QTMSLNKs and HDLC channels and timeslots on the QTMSLNKs.

New pipes cannot be assigned during a retrofit.

1.1 Recent Change View

The corresponding Recent Change View for this form is 17.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * QLPS NETWORK

Description: Enter the QLPS Board to which the pipe is assigned.

Required Field.
Valid Entries: 0, 1

Data Rules:

Two EQQLPS forms (5854 Record) must exist for the QLPS NETWORK entered here, one each for ONTC SIDE 0 and ONTC SIDE 1. On both forms EQSTAT must be "O".

For 5E15 and later:

This form can only be used in a non-CM3 office, since all the data for CM3 is handled by forward mapping.

The EQCORE form (5701 Record) must be inserted before this form can be inserted/updated.

2.3 * SM2000 SM

Description: Enter the SM-2000 on which the pipe is being defined.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM-2000 must be defined on an EQIM form (5700-1/2 Record) where UNIT TYPE is "SM2000" and EQSTATUS is "O".

Each SM-2000 entered defines a MH Pipe from an SM-2000 class processor Switching Module to a QLPS

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NETWORK. Similarly, each GLOBAL SM, PSU SHELF, and CHANNEL GROUP combination entered on the QPHPIPE form defines a QPH Pipe from a GSM (Global Switching Module) to a QLPS NETWORK. There is a limit to the number of pipes that can be defined on each QLPS NETWORK. There are 30 available pipes for each TMSLINK (QTMSLINK). There are 4 TMSLINKSs defined on each QLPS NETWORK for a total of 120 pipes for each QLPS NETWORK. Each TMSLINK has a total of 224 timeslots that can be utilized between the 30 pipes defined on that TMSLINK.

5ESS Switch _
eqpipe OFFICE DATA ADMINISTRATION
(5544) MH PIPE ASSIGNMENT

*1. QLPS NETWORK 0
*2. SM2000 SM 007

Figure 1 SAMPLE EQPIPE FORM 5E9(2) AND LATER SOFTWARE RELEASES

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SEC. 80: 5599 RECORD
CDMA OFFICE OPTIONS - CDMAOPT

1. GENERAL

The 5599 Record is available with the 5E15 and later Software Releases. It is used to control the parameters for the Echo Cancellation for CDMA (Code Division Multiple Access) feature. For more information on this feature, see Division 2, Section 4A552.

- **WARNING:** Echo Cancellation will not be done on PHV1 (Protocol Handler for Voice 1), PHV2, and PHV3.

1.1 Recent Change View

The corresponding Recent Change View for this form is 8.75.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * KEY

Description: Enter the key value which is always 0.

Software Release: 5E15 and later
Valid Entries: 0

2.3 ECHO CANCELLATION

Description: This field determines whether the echo canceler is active or disabled.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When ECHO CANCELLATION is "Y", the ACT field for SFID 552 on the SFSYS form (5713-1 Record) must also be set to "Y".

For 5E16 and later, when ECHO CANCELLATION or AC ECHO CTRL is "Y", EVRC IMAGE must be 1 through 3.

- **WARNING:** Electrical Echo Cancellation is not supported on PHV1s, PHV2s, or PHV3s.

2.4 DC REMOVER

Description: The Direct Current removal field determines if filtering is provided on the receive signal (i.e., the signal encoded by the vocoder).

Software Release: 5E15 and later
Required Field.
Default: Y
Valid Entries: Y, N

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2.5 NONLINEAR PROC

Description: The NLP (Nonlinear Processor field indicates whether residual echo is removed after adaptive filtering.

Software Release: 5E15 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.6 NLP NOISE FILL

Description: The NLP (Nonlinear Processor) NOISE FILL field indicates the background noise level on the receive side, and inserts a matching noise when the NLP is active.

Software Release: 5E15 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.7 ECHO TAIL LENGTH

Description: This field indicates the maximum tail delay that can be accommodated by the echo canceler. Tail delay is the maximum time taken by the signal to arrive at the receive port once it leaves the transmit port.

Software Release: 5E15 and later
Required Field.
Default: 64
Valid Entries: 16, 32, 48, or 64 ms.

2.8 NLP ACT THRESHOLD

Description: The NLP determines when the decoder output power level is greater than the encoder input power level, by the selected thresholds. This threshold is the NLP activation threshold.

Software Release: 5E15 and later
Required Field.
Default: 19
Valid Entries: 11-16, 18-20, 22, 24, or 26 db.

2.9 AGGR ADAPT RATE

Description: The Aggressive Mode Adaptation Rate indicates the adaptive filter's convergence to the new echo path, when the echo canceler is operating in the fast converging mode at the beginning of a call.

Software Release: 5E15 and later
Required Field.
Default: 16384
Valid Entries: 0 - 16384 step size

AGGR ADAPT RATE must be greater than or equal to NORMAL ADAPT RATE.

2.10 NORMAL ADAPT RATE

Description: The Normal Mode Adaptation Rate indicates the adaptation rate after aggressive mode operation has completed. Best performance is achieved when this value is below 8000.

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Software Release: 5E15 and later
Required Field.
Default: 6144
Valid Entries: 0 - 16384

2.11 AGGR MODE DURATION

Description: The Aggressive Mode Duration field indicates the number of samples of filter adaptation from the beginning of a call.

Software Release: 5E15 and later
Required Field.
Default: 3
Valid Entries: 1 - 4

2.12 FORWARD LINK ALC

Description: This field is the Receiver Gain that indicates the gain or loss applied to the encoder input.

Software Release: 5E15 and later
Required Field.
Default: 0
Valid Entries: (-12) - (+12)

2.13 REVERSE LINK ALC

Description: This field is the Transmitter Gain Adjustment that indicates the gain or loss applied to the decoder output.

Software Release: 5E15 and later
Required Field.
Default: 0
Valid Entries: (-12) - (+12)

2.14 HYBRID RET LOSS TH

Description: The ERL (Echo Return Loss) indicates the loss in signal power that occurs in the echo path due to hybrid attenuation.

Software Release: 5E15 and later
Required Field.
Default: 6
Valid Entries: 0 - 10

2.15 MAX NOISE FILL LEVL

Description: The Maximum Nonlinear Processor Noise Fill Level determines the maximum level of noise inserted when the NLP is removing residual echo.

Software Release: 5E15 and later
Required Field.
Default: -39
Valid Entries: (-39) - (-72) in 3 dB increments

EL ECHO CANCELLATION (G.168-2000)

The following fields (Section 2.16 - Section 2.21) provides the ability to distinguish between existing

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electrical echo cancellations. These fields support the G.168-2000 Compliance and Acoustic Echo Cancellation on PHV5 (Protocol Handler for Voice - Version 5). For more information, see Division 2, Section 4A599.

2.16 NE SPCH DET TH

Description: The NE SPCH DET TH (Near-end speech detector threshold) field indicates the minimum network ERL (Echo Return Loss) needed for the EEC (Electrical Echo Cancellation) to properly converge to the echo path. The threshold is applied to the level difference between the reverse direction (far-end) and forward direction (near-end) signals. The EEC adaptation is frozen when the threshold is exceeded.

Software Release: 5E16 and later
Default: 6
Valid Entries: 0 - 15

2.17 AGGR ADPT RATE

Description: The AGGR ADPT RATE (Aggressive Adaptation Rate) field indicates how quickly the adaptive filter can converge to the new echo path when the canceller is operating in aggressive mode (i.e., the fast convergence mode at the beginning of a call).

Software Release: 5E16 and later
Default: 10
Valid Entries: 0 - 15

Data Rules:

AGGR ADPT RATE must be greater than or equal to NRML ADAPT RATE.

2.18 NRML ADPT RATE

Description: The NRML ADPT RATE (Normal Adaptation Rate) field indicates the adaptation rate after aggressive mode operation has completed.

Software Release: 5E16 and later
Default: 4
Valid Entries: 0 - 15

2.19 AGGR NLP TH

Description: The AGGR NLP TH (Aggressive Nonlinear Processor Threshold) field indicates the power level difference between the reverse and forward direction signals for activating the NLP (Nonlinear Processor) during aggressive mode.

Software Release: 5E16 and later
Default: 1
Valid Entries: 0 - 15

2.20 NRML NLP TH

Description: The NRML NLP TH (Normal Nonlinear Processor Threshold) field indicates the power level difference between the reverse and forward direction signals for activating the NLP (Nonlinear Processor) after aggressive mode operation has completed.

Software Release: 5E16 and later
Default: 7
Valid Entries: 0 - 15

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2.21 DBL-TALK CTRL

Description: The DBL-TALK CTRL (Double-Talk Robustness Control) field indicates aggressiveness of double-talk robustness algorithm.

Software Release: 5E16 and later
Default: 3
Valid Entries: 0 - 15

2.22 PHV6 ECHO PATH DELAY

Description: This field specifies the PHV6 ((Protocol Handler for Voice 6) electrical echo path delay time in milliseconds. This field support the PHV6 feature. For information on this feature see, Division 2, Section 7CD.

Software Release: 5E18(1) and later
Default: 64
Valid Entries: 64 or 128 milliseconds

ACOUSTIC ECHO CANCELLATION

The following fields (Section 2.23 - Section 2.27) supports the G.168-2000 Compliance and Acoustic Echo Cancellation for PHV5 (Protocol Handler for Voice - Version 5) feature. For more information, see Division 2, Section 4A599.

2.23 AC ECHO CTRL

Description: The AC ECHO CTRL (AEC (Acoustic Echo Control)) field indicates whether AEC is active.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

Data Rules:

- **WARNING:** Acoustic Echo Cancellation is not supported on PHV1s, PHV2s, PHV3s, or PHV4s.

2.24 REV LINK AGC

Description: The REV LINK AGC (Reverse Link AGC (Automatic Gain Control)) field indicates whether AGC in the reverse direction is active.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

2.25 FRWD LINK AGC

Description: The FRWD LINK AGC (Forward Link AGC (Automatic Gain Control)) field indicates whether AGC in the forward direction is active.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

2.26 REV LINK NS

Description: The REV LINK NS (Reverse Link NS (Noise Suppression)) field indicates whether NS/NR

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(Noise Reduction) is active.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

2.27 REV LINK NC

Description: The REV LINK NC (Reverse Link NS (Noise Compensation)) field indicates whether NC is active.

Software Release: 5E16 and later
Default: N
Valid Entries: Y, N

PACKET BUS OCCUPANCY

The following fields (Section 2.28 -Section 2.30) provide information that is relevant to the Packet Bus Occupancy Measurements feature. For more information on this feature see, Division 2, Section 1CS.

2.28 PB OCC 1TH

Description: This field indicates the lower threshold of pack bus occupancy and is expressed as a percentage.

Required Field.

Software Release: 5E17.1 FR 1
Default: 70
Valid Entries: 0 - 99

2.29 PB OCC 2TH

Description: This field indicates the higher threshold of pack bus occupancy and is expressed as a percentage.

Required Field.

Software Release: 5E17.1 FR 1
Default: 80
Valid Entries: 1 - 100

Data Rules:

PB OCC 2TH must be greater than PB OCC 1TH.

2.30 PB INT

Description: This field indicates the packet bus sampling interval in milliseconds.

Required Field.

Software Release: 5E17.1 FR 1
Default: 5
Valid Entries: 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 25, 30, 40, 50, 60, 75, 100, 120, 125, 150, 200, 250, 300, 375, 500, 600, 750, or 1000 in milliseconds.

ISUP

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This field supports the CIC (Carrier Identification Code) Routing Solution feature. For more information see, Division 2, Section 2AH.

2.31 SEND CI PARM

Description: This field is used to indicate whether or not the CIC should be sent in the CIC parameter. Required field.

Software Release: 5E17.1 FR 3 and later
Valid Entries: Y, N

REVERSE DTMF

The following fields (Section 2.32 - Section 2.34) provide Reverse DTMF (Dual Tone Multi-Frequency) Tone Programmability and are available with 5E15 and later Software Releases. See Division 2, Section 8B for more information. For 5E13 and 5E14 these fields existed on the OFCOPT form (5509 Record).

2.32 OVERRIDE

Description: Do you want to override the CDMA mobile on/off duration?

When this field is "Y", the mobile on/off duration values can be overriden with the provisioned values in the LENGTH ON and LENGTH OFF fields.

When this field is "N", the mobile on/off duration is not overriden.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

When OVERRIDE is "N", REV LEN ON must not be entered.

When OVERRIDE is "N", REV LEN OFF must not be entered.

When OVERRIDE is "Y", REV LEN ON must be entered.

When OVERRIDE is "Y", REV LEN OFF must be entered.

2.33 REV LEN ON

Description: The REV LEN ON field is used to indicate the DTMF (Dual Tone Multi-Frequency) on duration, in milliseconds, for CDMA.

Software Release: 5E15 and later
Valid Entries: 100, 150, 200, 250, 300, 350 or blank

2.34 REV LEN OFF

Description: The REV LEN OFF field is used to indicate the Dual Tone Multi-Frequency off duration, in milliseconds, for CDMA

Software Release: 5E15 and later
Valid Entries: 50, 100, 150, 200 or blank

EVRC APPLICATION

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The following fields (Section 2.35 - Section 2.37) supports the Forward Channel DTMF for CDMA (Code Division Multiple Access) feature for the 5E15 and later Software Releases. For more information, see Division 2, Section 8W.

2.35 EVRC IMAGE

Description: The EVRC (Extended Variable Rate Coder) IMAGE field is used to indicate what CDMA EVRC features are activated.

Software Release: 5E15 and later
Default: 0
Valid Entries:

Valid EVRC IMAGE Entries

Entry	Definition
0	TTY/TDD and FTC DTMF
1	TTY/TDD and EC
2	FTC DTMF and EC

2.36 TTY/TDD ACT

Description: The TTY/TDD ACT field indicates whether or not a TTY/TDD feature is active.

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

For 5E16 and later, when TTY/TDD ACT is "Y", EVRC IMAGE must be 0, 1, or 3.

- **WARNING:** TTY/TDD is not supported on PHV1s, PHV2s, or PHV4s.

2.37 PPEE ACT

Description: The PPEE (Packet Pipe Engineering Enhancements) ACT field indicates whether or not the PPEE feature is active. This field was added to support the Packet Pipe Engineering Enhancements feature. This feature increases the number of call legs carried by a packet pipe. (For more information on this feature, see Division 2, Section 4A317.)

Software Release: 5E15 and later
Default: N
Valid Entries: Y, N

Data Rules:

The PPEE ACT field is used by the Packet Pipe Engineering Enhancements secured feature, therefore when this field is set to "Y", the ACT field for SFID 317 on the SFSYS form (5713-1 Record) must also be set to "Y". (For more information on this feature, see Division 2, Section 4A317.)

When the Packet Pipe Engineering Enhancements feature is active for PSUGP forms (5949 Record) representing PH4s which have exceeded their capacity for CDMA trunk routing, the count of Packet Pipe Member trunks assigned to all Packet Pipe trunks which use this PH4 may not exceed 32. However, when no Trunk Groups have been provisioned with a SERV TYPE of "ACELP" or "VSELP", the number of CDMA calls the PH4 can handle may not exceed 84. In addition, only (1) 16-wide PP with 64kb data rate on a FRPH can be 90. Also, when one or more Trunk Groups have been provisioned with a SERV TYPE of "ACELP" or "VSELP", the number of CDMA calls the PH4 can handle may not exceed 90. The number of possible CDMA calls is dependent upon:

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- the presence of Trunk Group SERV TYPEs of "8K", "13K", "ACELP", "DATA", "EVRC", or "VSELP" in the switch.
- the DATA RATE of the Packet Pipe Member Trunks and the number of Packet Pipe Member trunks which point to this PH4. (See Division 2, Section 4A317.)

When the TRUNK form specifies Packet Pipe Trunks associated with PSUGP forms that represent PH4s which have exceeded their capacity for CDMA trunk routing, the first six digits of the TRKOE field on the TRUNK form must match the SM, PSU SHELF, and CHANNEL GROUP fields on the PSUGP form.

2.38 REMOVE PP LIMIT CHK

Description: This field is used to indicated whether or not to remove Packet Pipe limit checks.

Software Release: 5E17 and later
Default: N
Valid Entries: Y, N

Data Rules:

When the ACT field for SFID 259 (indicating a TDMA office) is set to "Y" on the SFSYS form (5713-1 Record), REMOVE PP LIMIT CHK must be set to "N".

FORWARD DTMF

The following fields (Section 2.39 - Section 2.40) supports the Forward Channel DTMF for CDMA (Code Division Multiple Access) feature for the 5E15 and later Software Releases. For more information, see Division 2, Section 8W.

2.39 FWD LEN ON

Description: The FWD LEN ON field indicates the Forward Traffic Channel DTMF on duration, in milliseconds for CDMA.

Software Release: 5E15 and later
Default: 95
Valid Entries: 95, 150, 200, 250, 300 or 350

2.40 FWD LEN OFF

Description: The FWD LEN OFF field indicates the Forward Traffic Channel DTMF off duration, in milliseconds for CDMA.

Software Release: 5E15 and later
Default: 60
Valid Entries: 60, 100, 150 or 200

2.41 SEND VP RDI

Description: The field is used as an indicator for virtual path remote defects

Software Release: 5E17(1) FR1 and later
Required field.
Default: ON
Valid Entries: ON, OFF

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2.42 SEND VC RDI

Description: The field is used as an indicator for virtual channel remote defects

Software Release: 5E17(1) FR1 and later
Required field.
Default: ON
Valid Entries: ON, OFF

2.43 SUBNET ID

Description: This field indicates the number of office wide subnetwork identifiers.

Software Release: 5E17(1) FR1 and later
Required field.
Default: 0
Valid Entries: 0 - 3

Data Rules:

When SUBNET ID on this form is 0, NETWORK 0 on the PSUGW form (5991 Record) must not be entered.

When SUBNET ID on this form is 1, NETWORK 1 on the PSUGW form must not be entered.

When SUBNET ID on this form is 2, NETWORK 2 on the PSUGW form must not be entered.

When SUBNET ID on this form is 3, NETWORK 3 on the PSUGW form must not be entered.

```
cdmaopt                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

*1. KEY 0                  12. REVERSE LINK ALC    000
  CDMA TUNING PARAMETERS     13. HYBRID RET LOSS TH  06
 2. ECHO CANCELLATION  N     14. MAX NOISE FILL LEVL -39
 3. DC REMOVER         Y
 4. NONLINEAR PROC     Y
 5. NLP NOISE FILL     Y
 6. ECHO TAIL LENGTH   64
 7. NLP ACT THRESHOLD  19
 8. AGGR ADAPT RATE    16384
 9. NORMAL ADAPT RATE  6144
10. AGGR MODE DURATION 3
11. FORWARD LINK ALC   000
```

```
cdmaopt                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS
```

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```
   REVERSE DTMF          FORWARD DTMF
15. OVERRIDE    N      21. FWD LEN ON  095
16. REV LEN ON  ___    22. FWD LEN OFF 060
17. REV LEN OFF ___

EVRC APPLICATION
18. EVRC IMAGE 0

19. TTY/TDD ACT N
20. PPEE ACT    N
```

Figure 1 SAMPLE CDMAOPT FORM 5E15 SOFTWARE RELEASE

```
cdmaopt                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

*1. KEY 0                  11. FORWARD LINK ALC    000
                       12. REVERSE LINK ALC    000
ELECTRICAL ECHO CANCELLATION    13. HYBRID RET LOSS TH  06
 2. ECHO CANCELLATION  N        14. MAX NOISE FILL LEVL -39
 3. DC REMOVER         Y
 4. NONLINEAR PROC     Y        EL ECHO CANCELLATION (G.168-2000)
 5. NLP NOISE FILL     Y        15. NE SPCH DET TH 6
 6. ECHO TAIL LENGTH   64       16. AGGR ADPT RATE 10
 7. NLP ACT THRESHOLD  19       17. NRML ADPT RATE 4
 8. AGGR ADAPT RATE    16384    18. AGGR NLP TH    1
 9. NORMAL ADAPT RATE  6144     19. NRML NLP TH    7
10. AGGR MODE DURATION 3        20. DBL-TALK CTRL  3
```

```
cdmaopt                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

ACOUSTIC ECHO CANCELLATION
21. AC ECHO CTRL  N
22. REV LINK AGC  N
23. FRWD LINK AGC N
24. REV LINK NS   N
25. REV LINK NC   N
```

```
cdmaopt                    5ESS Switch
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

   REVERSE DTMF        33. FWD LEN OFF 060
26. OVERRIDE    N
```

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27. REV LEN ON ___ PM TRESHOLDS
28. REV LEN OFF ___ 34. ERRORED __
35. LOST ____
29. PHV4 EVRC IMAGE 0 36. MISINSERTED ____
37. CT1 _
30. TTY/TDD ACT N 38. CT2 _
31. PPEE ACT N

FORWARD DTMF
32. FWD LEN ON 095

Figure 2 SAMPLE CDMAOPT FORM 5E16 SOFTWARE RELEASE

---

cdmaopt 5ESS Switch
SCREEN 1 OF 3 OFFICE DATA ADMINISTRATION
(5599) CDMA OFFICE OPTIONS

*1. KEY 0 11. FORWARD LINK ALC 000
12. REVERSE LINK ALC 000
ELECTRICAL ECHO CANCELLATION 13. HYBRID RET LOSS TH 06
2. ECHO CANCELLATION N 14. MAX NOISE FILL LEVL -39
3. DC REMOVER Y
4. NONLINEAR PROC Y EL ECHO CANCELLATION (G.168-2000)
5. NLP NOISE FILL Y 15. NE SPCH DET TH 6
6. ECHO TAIL LENGTH 64 16. AGGR ADPT RATE 10
7. NLP ACT THRESHOLD 19 17. NRML ADPT RATE 4
8. AGGR ADAPT RATE 16384 18. AGGR NLP TH 1
9. NORMAL ADAPT RATE 6144 19. NRML NLP TH 7
10. AGGR MODE DURATION 3 20. DBL-TALK CTRL 3

---

cdmaopt 5ESS Switch
SCREEN 2 OF 3 OFFICE DATA ADMINISTRATION
(5599) CDMA OFFICE OPTIONS

ACOUSTIC ECHO CANCELLATION
21. AC ECHO CTRL N
22. REV LINK AGC N
23. FRWD LINK AGC N
24. REV LINK NS N
25. REV LINK NC N

PACKET BUS OCCUPANCY
26. PB OCC 1TH 70
27. PB OCC 2TH 080
28. PB INT 0005

---

cdmaopt 5ESS Switch _

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```
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

   REVERSE DTMF              FORWARD DTMF            PHA2 ATM PVC
29. OVERRIDE    N         36. FWD LEN ON  095     43. VC DDF TIMER 03.5
30. REV LEN ON  ___       37. FWD LEN OFF 060     44. VC DCF TIMER 02.5
31. REV LEN OFF ___                               45. SEND VP RDI  ON
                      CELL EVENTS THRESHOLDS      46. SEND VC RDI  ON
32. PHV4 EVRC IMAGE 0     38. ERRORED    00       47. VP DDF TIMER 03.5
                          39. LOST       0        48. VP DCF TIMER 02.5
33. TTY/TDD ACT N         40. MISINSERTED 0       49. PL FDF TIMER 02.5
                                                  50. PL FCF TIMER 10.0
     PACKET PIPE              RETRY LIMITS
34. PPEE ACT          N   41. ACT RETRY LIM  3    51. SUBNET ID 0
35. REMOVE PP LIMIT CHK N  42. DEACT RETRY LIM 3
```

Figure 3 SAMPLE CDMAOPT FORM 5E17 SOFTWARE RELEASE

```
cdmaopt                    5ESS Switch
SCREEN 1 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

*1. KEY 0                  11. FORWARD LINK ALC    000
                       12. REVERSE LINK ALC    000
ELECTRICAL ECHO CANCELLATION   13. HYBRID RET LOSS TH  06
 2. ECHO CANCELLATION  N       14. MAX NOISE FILL LEVL -39
 3. DC REMOVER         Y
 4. NONLINEAR PROC     Y       EL ECHO CANCELLATION (G.168-2000)
 5. NLP NOISE FILL     Y       15. NE SPCH DET TH 6
 6. ECHO TAIL LENGTH   64      16. AGGR ADPT RATE 10
 7. NLP ACT THRESHOLD  19      17. NRML ADPT RATE 4
 8. AGGR ADAPT RATE    16384   18. AGGR NLP TH    1
 9. NORMAL ADAPT RATE  6144    19. NRML NLP TH    7
10. AGGR MODE DURATION 3       20. DBL-TALK CTRL  3
```

```
cdmaopt                    5ESS Switch
SCREEN 2 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

21. PHV6 ECHO PATH DELAY 64    PACKET BUS OCCUPANCY
                       27. PB OCC 1TH 70
ACOUSTIC ECHO CANCELLATION     28. PB OCC 2TH 080
22. AC ECHO CTRL  N            29. PB INT     0005
23. REV LINK AGC  N
24. FRWD LINK AGC N                ISUP
25. REV LINK NS   N            30. SEND CI PARAM N
26. REV LINK NC   N
```

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```
cdmaopt                    5ESS Switch          _
SCREEN 3 OF 3          OFFICE DATA ADMINISTRATION
(5599)                 CDMA OFFICE OPTIONS

   REVERSE DTMF          FORWARD DTMF           PHA2 ATM PVC
31. OVERRIDE    N      37. FWD LEN ON  095     44. VC DDF TIMER 03.5
32. REV LEN ON  ___    38. FWD LEN OFF 060     45. VC DCF TIMER 02.5
33. REV LEN OFF ___                            46. SEND VP RDI  ON
                  CELL EVENTS THRESHOLDS       47. SEND VC RDI  ON
34. PHV4 EVRC IMAGE 0  39. ERRORED    00       48. VP DDF TIMER 03.5
                  40. LOST       0             49. VP DCF TIMER 02.5
35. TTY/TDD ACT N      41. MISINSERTED 0        50. PL FDF TIMER 02.5
                                                51. PL FCF TIMER 10.0
 PACKET PIPE             RETRY LIMITS
36. PPEE ACT N         42. ACT RETRY LIM   3    52. SUBNET ID 0
                  43. DEACT RETRY LIM 3
```

Figure 4 SAMPLE CDMAOPT FORM 5E18 AND LATER SOFTWARE RELEASES

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SEC. 81: 5873 RECORD
FACILITY TO EEC EQUIPAGE - FAC2EEC

1. GENERAL

The 5873 Record is available with the 5E14 and later Software Releases. It is used to associate a 24 channel DFI (Digital Facility Interface) or DFI-2 on a DLTU (Digital Line And Trunk Unit) or DLTU (2) with a DS1 (Digital Signal 1) port on a particular QECLI (Quad Echo Canceller Line Interface) pack on an EEC (External Echo Canceller). This form supports the DLTU External Echo Cancellation feature. For more information on this feature, see Division 2, Section 4A550.

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: The SM field is used to specify the switching module number.

Software Release: 5E14 and later
Valid Entries: 1 - 192

Data Rules:

When this form is entered, the EQIM form (5700 Record) must exist with an SM-2000 class processor, and the EQSTAT is set to "O".

When this form is entered, an EQDUP form (5730 Record) must exist with DFI USAGE set to "TRUNK".

When this form is entered, an EQDUP form must exist.

2.3 * DLTU

Description: This field is used to specify the Digital Line and Trunk number.

Software Release: 5E14 and later
Valid Entries: 0 - 5

Data Rules:

The DLTU on this form must have a DLTU TYPE of "DLTU24" or "DLTU48" on the EQDU form (5730 Record).

2.4 * DFI

Description: This field is used to specify the Digital Facility Interface pack number.

Software Release: 5E14 and later
Valid Entries: 1 - 10

2.5 * FACILITY

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Description: This field is used to specify which facility on a DFI or DFI-2 to use.

Software Release: 5E14 and later
Valid Entries: 0 or 1

ETHERNET LINK

These fields (Section 2.9 - Section 2.10) define the ethernet associated with the DLTU External Echo Cancellation feature.

2.6 # ENET SM

Description: This field is used to specify the ethernet Switching Module that hosts the External Echo Canceller.

Software Release: 5E14 and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

When ENET SM is entered, this SM must exist on the EQIM form with an SM-2000 class processor, and the EQSTAT equal to be "O".

The combination of ENET SM, ENET PIPE, and ENET LINK NBR may occur on this form, or on the DNU2EEC form, but not both.

2.7 ENET PIPE

Description: This field is a No Change field that is used to specify the External Ethernet Pipe number.

Software Release: 5E14 and later
Required Field.
Default: 0

2.8 # ENET LINK NBR

Description: This field is used to specify the External Ethernet Link number.

Software Release: 5E14 and later
Required Field.
Valid Entries: 0 - 69

EXTERNAL ECHO CANCELLER

These fields (Section 2.9 - Section 2.10) define the Quad Echo Canceler Line Interface pack and port numbers associated with the DLTU External Echo Cancellation feature.

2.9 # QECLI

Description: The QECLI (Quad Echo Canceller Line Inter) field is used to specify the External Echo Canceller QECLI pack number.

Software Release: 5E14 and later
Required Field.
Valid Entries: 0 - 10

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2.10 # QECLI PORT

Description: This field is used to specify the External Echo Canceller port on the QECLI pack.

Software Release: 5E14 and later
Required Field.
Valid Entries: 0 - 3

```
fac2eec                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(5873)                  FACILITY TO EEC EQUIPAGE

*1. SM       ___          EXTERNAL ECHO CANCELLER
*2. DLTU     __           #8. QECLI      __
*3. DFI      __           #9. QECLI PORT _
*4. FACILITY _

   ETHERNET LINK
#5. ENET SM       ___
   ENET PIPE     0
#7. ENET LINK NBR __
```

Figure 1 SAMPLE FAC2EEC FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 82: 5874 RECORD
INTER WORKING GATEWAY FORM - EQIWG

1. GENERAL

The 5874 Record is available with the 5E15 and later Software Releases. It is used to define the units of Interworking Gateway which is the bridge between a Switching Module and an ATM (Asynchronous Transfer Mode) switch. This form was added to support the Digital Network Unit-SONET 18 (DNU-S) interface to the Inter-Working Gateway (IWG).

1.1 Recent Change View

The corresponding Recent Change View for this form is 19.26.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SM

Description: This field is used to specify the SM (Switching Module) number.

Software Release: 5E15 and later
Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E15 and later:

- Only six EQIWG form tuples are allowed per SM.
- When this form is entered and SM and IWG are not equipped with an SM-2000 class processor, the corresponding EQIM form (5700 Record) must be set to an SM-2000 class processor.
- When SM is entered on this form, SM must be defined on the EQIM form (5700 Record).
- When SM, IWG, and OC-3 DG do not have the appropriate OC-3 AESA entry, each OC-3 AESA entered on this form must not be duplicated on another EQIWG form.

2.3 UNIT TYPE

Description: This field is used to specify the IWG (Interworking Gateway) or IWU (Inter-Working Unit) used by the SM.

Software Release: 5E16 and later
Required Field.
Valid Entries: IWG or IWU

Data Rules:

For 5E16 and later, when UNIT TYPE is "IWU",

- UNIT NUMBER must be 1 - 5.

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- OC3 DG 1 AESA must not be entered.
- OC3 DG 2 AESA must not be entered.

When a EQIWG form exist with a UNIT TYPE of "IWG", therefore at least one CICDIST form must exist.

2.4 * UNIT NUMBER (5E15 and earlier, field name was IWG)

Description: This field is used to specify the IWG (Interworking Gateway) number used by the SM.

Software Release: 5E15 and earlier
Required Field.
Valid Entries: 0 - 5 for IWG; 1 - 5 for IWU

2.5 # UNIT SM (5E15 and earlier, field name was IWG SM)

Description: This field is used to indicate the physical SM where the IWG resides.

Software Release: 5E16 and later
Required Field.
Valid Entries: 1 - 192

2.6 # AISLE (5E15 and earlier, name was IWG AISLE)

Description: This field is used to specify the aisle number of the IWG.

Software Release: 5E16 and later
Required Field.
Valid Entries:
- For Floor: 0 - 99
- For Aisle: 0 - 99

2.7 # BAY (5E15 and earlier, name was IWG BAY)

Description: This field is used to specify the bay number of the IWG.

Software Release: 5E16 and later
Required Field.
Valid Entries: Enter 0 - 14, 90 - 99, 100 - 104, 200 - 208, or 900 - 999

2.8 VER POSITION (5E15 and earlier, name was IWG VERPOS)

Description: This field is used to specify the Vertical Position number of the IWG.

Software Release: 5E16 and later
Required Field.
Valid Entries: 0 - 84

2.9 ENET PIPE

Description: This field is used to specify the number of the External Ethernet Pipe. This is a no change field.

Software Release: 5E15 and later
Valid Entries: 0

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2.10 ENET LINK

Description: This field is used to specify the number of the External Ethernet Link. This is a no change field.

Software Release: 5E15 and later
Valid Entries: 0 - 5

Data Rules:

For 5E15 and later, when ENET LINK and ENET PIPE are entered on this form, a corresponding ENETLINK form tuple must exist where the SERV TYPE is equal to "VTOA".

2.11 CLI (5E15 and earlier, name was IWG CLI)

Description: This field is used to specify the change level indicator for the Interworking Gateway. It is a no change field.

Software Release: 5E15 and later
Valid Entries: 0

OC-3 DATAGROUP (OC3)

These fields (Section 2.12 - Section 2.14) define the OC-3 (Optical Carrier-3) Data Group link information associated with the IWG.

2.12 DG

Description: This field is used to specify the data group used by OC3. This is a no change field.

Software Release: 5E15 and later
Valid Entries: 0 - 3

2.13 EQSTAT

Description: This field is used to specify the equipment status of OC3.

Software Release: 5E15 and later
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

- When OC3 DG 0 EQSTAT or OC3 DG 0 AESA is entered, both of these fields must be entered.
- When OC3 DG 1 EQSTAT or OC3 DG 1 AESA is entered, both of these fields must be entered.
- OC3 DG 2 EQSTAT and OC3 DG 3 EQSTAT must not be entered.

2.14 AESA

Description: This field is used to specify the address of ATM (Asynchronous Transfer Mode) end system which is used by each OC3.

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Software Release: 5E15 and later
Valid Entries: 0 - ff (hex)

Data Rules:

- When any element of AESA is entered, all elements must be entered.[QUESTION: Should this be in the ODIN? I don't see it}
- OC3 DG 2 EQSTAT/AESA and OC3 DG 3 EQSTAT/AESA must not be entered.

FACILITY INTERFACES

The fields in (Section 2.15 - Section 2.19) are used to specify the DNUS (Digital Networking Unit SONET) facilities that interface with the IWG.

2.15 FACILITY

Description: This field is used to specify the number of the facility that interfaces with the IWG. FACILITY is a no change field.

Software Release: 5E15 and later
Valid Entries: 1 - 5

2.16 DNUS

Description: The DNUS field is used to specify the digital networking unit SONET number of the IWG facility.

Software Release: 5E15 and later
Valid Entries: 0 - 7

Data Rules:

- When DNUS, DATA GROUP, STE or STS in any ROW of IWG FACILITY INTERFACES is entered, all fields in that ROW must be entered.
- DNUS, DATA GROUP, STE and STS combinations must be unique for all FACILITY INTERFACES entries.

2.17 DATA GROUP

Description: This field is used to specify the data group number of the DNUS for the IWG.

Software Release: 5E15 and later
Valid Entries: 0 or 1

2.18 STE

Description: The STE field specifies the SONET termination equipment number.

Software Release: 5E15 and later
Valid Entries: 1 - 6

2.19 STS

Description: The STS field specifies the synchronous transport signal number.

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Software Release: 5E15 and later
Valid Entries: 1

2.20 EQSTAT

Description: This field is used to specify the equipment status of OC3.

Software Release: 5E16 and later
Valid Entries:

Valid EQSTAT Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

- EQSTAT of FACILITY INTERFACES cannot be "U".

```
eqiwg                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5874)                 INTER WORKING GATEWAY

*1. SM      ___   #5. IWG SM    ___    IWG CLI 00000000
*2. IWG     _     #6. IWG AISLE ____
   ENET PIPE 0    #7. IWG BAY   ___
   ENET LINK __   #8. IWG VERPOS __

              10. OC-3 DATA GROUP (OC3)

ROW DG EQSTAT AESA
 1  0  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 2  1  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 3  2  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 4  3  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
```

```
eqiwg                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5874)                 INTER WORKING GATEWAY

    35. IWG FACILITY INTERFACES
              DATA
ROW FACILITY DNUS GROUP STE STS EQSTAT
 1    1     _   _   _   _   _
 2    2     _   _   _   _   _
 3    3     _   _   _   _   _
 4    4     _   _   _   _   _
 5    5     _   _   _   _   _
```

Figure 1 SAMPLE EQIWG FORM 5E15 AND EARLIER SOFTWARE RELEASES

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```
eqiwg                        5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5874)               INTER WORKING GATEWAY/UNIT

*1. SM         ___    #4. UNIT SM      ___     ENET PIPE 0
*2. UNIT TYPE  ___    #5. AISLE        ____    ENET LINK __
*3. UNIT NUMBER _     #6. BAY          ___     CLI      00000000
                  #7. VER POSITION __

                   11. OC-3 DATA GROUP (OC3)

ROW DG EQSTAT AESA
 1  0  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 2  1  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 3  2  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
 4  3  _   __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __
```

```
eqiwg                        5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5874)               INTER WORKING GATEWAY/UNIT

36. FAC INTERFACES (FACILITY INTERFACES)
                DATA
ROW FACILITY DNUS GROUP STE STS EQSTAT
 1    1     _    _    _  _   _
 2    2     _    _    _  _   _
 3    3     _    _    _  _   _
 4    4     _    _    _  _   _
 5    5     _    _    _  _   _
```

Figure 2 SAMPLE EQIWG FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 83: 5831 RECORD
APCX EQUIPAGE FORM - EQAPCX

1. GENERAL

The Application Controller Expansion Unit form is available for 5E15 and later. The form supports the OXU (Optically Extended Control and Data Unit) feature (99-5E-4822). The OXU can only be assigned for SM-2000 class processors (see UNIT TYPE on the EQIM form). See Division 2, Section 9V.

1.1 Recent Change View

The corresponding Recent Change View is 18.18.

2. FORM AND RECORD ENTRIES - 5831 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *SM

Description: Enter the Switching Module number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The entered SM must be defined on a EQIM form.

2.3 *MC

Description: Enter the Module Controller number.

Required Field.
Valid Entries: 0 or 1

2.4 UNIT TYPE

Description: Enter the UNIT TYPE. The only valid value is "APCO" (Application Processor Optical Extension) unit.
Default: APCO

2.5 EQSTAT

Description: Enter the status of the equipment.
Valid Entries:

Valid EQSTATUS Entries

Entry	Definition
U	Unequipped.
G	Growth.
O	Operational.

2.6 #CLI

Description: Enter the Change Level Indicator. See Division 8, Section 1 for valid CLI values.

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Required Field.
Valid Entries: 0 through 7fffffff hexadecimal.

```
eqapcx                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(5831)                 APCX EQUIPAGE FORM

*1. SM       ___
*2. MC       _
 3. UNIT TYPE APCO
 4. EQSTAT    O
#5. CLI      ________
```

Figure 1 SAMPLE EQAPCX FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 84: 5832
EXTENDED CONTROL AND DATA UNIT EQUIPAGE FORM - EQXCDU

1. GENERAL

The 5832 Record is available with 5E15 and later Software Releases. It is used to define the Extended Control and Data Unit. This form supports the OXU (Optically Extended Control and Data Unit (99-5E-4822) feature. See Division 2, Section 9V.

For each EQXCDU form, there must be two corresponding EQAPCX forms (5831 Record) for Module Controller 0 and Module Controller 1 for the same Switching Module.

1.1 Recent Change View

The Recent Change View for this form is 18.19.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 *SM

Description: Enter the Switching Module Number.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The SM entered must be defined on the EQIM form (5700 Record).

EQXCDU forms can only be assigned on SM-2000 class processors (see UNIT TYPE on the EQIM form).

For 5E16(2) and later:

When SM and INTF UNIT on this form matches the SM and INTF UNIT on the following forms:

- EQDCLU,
- EQDCTU,
- EQDSC3,
- EQDU/EQDUP,
- EQGDSC3,
- EQIDCU,
- EQISLU,
- EQLU,
- EQMSU,
- EQPSU,

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- EQRA, and/or
- EQTU,

the EQUIPMENT BAY on these forms, must match the BAY on this form.

When SM and INTF UNIT on this form matches the SM and INTF UNIT on the following forms:

- EQDU/EQDUP,
- EQGDSC3,
- EQMSU, and/or
- EQRA,

the CSU on these forms, must be set to "N".

2.3 *INTF UNIT

Description: Enter the Interface Unit number.
Valid Entries: 1 - 8

Data Rules:

When INTF UNIT is greater than 0 on any equipment form, there must be a corresponding EQXCDU form.

2.4 PRIMARY UNIT

Description: Enter the Primary Unit number.
Valid Entries: 0 - 8

Data Rules:

5E16(2) and later:

When PRIMARY UNIT is 0, BAY must be 000 - 014, 100 - 104, or 200 - 208.

When PRIMARY UNIT is 1, BAY must be A00 - A14, B00 - B04, or C00 - C08.

When PRIMARY UNIT is 2, BAY must be D00 - D14, E00 - E04, or F00 - F08.

When PRIMARY UNIT is 3, BAY must be G00 - G14, H00 - H04, or J00 - J08.

When PRIMARY UNIT is 4, BAY must be K00 - K14, L00 - L04, or M00 - M08.

When PRIMARY UNIT is 5, BAY must be N00 - N14, P00 - P04, or Q00 - Q08.

When PRIMARY UNIT is 6, BAY must be R00 - R14, S00 - S04, or T00 - T08.

When PRIMARY UNIT is 7, BAY must be U00 - U14, V00 - V04, or W00 - W08.

When PRIMARY UNIT is 8, BAY must be X00 - X14, Y00 - Y04, or Z00 - Z08.

2.5 UNIT TYPE

Description: Enter the Unit Type. The only valid value is OXU.

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Required Field.
Default: OXU

2.6 # AISLE

Description: Enter the Equipment Location Aisle Number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00 - 99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00 - 99. It is recommended that floor 00 be used for equipment located in the basement per floor plan designation.

Required Field.
Valid Entries: 00 - 99

2.7 #BAY

Description: Enter the Equipment Location Bay Number.

Required Field.
Valid Entries:

Valid BAY Entries, 5E9(2) - 5E16(1)

Entry	Definition
0 - 4	Switching Module (non-SM-2000).
0 - 14	SM-2000; SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

Valid BAY Entries for 5E16(2) and later

Entry			Type
000 - 004			SM
000 - 014,	100 - 104,	200 - 208,	SM-2000
A00 - A14,	B00 - B04,	C00 - C08,	
D00 - D14,	E00 - E04,	F00 - F08,	
G00 - G14,	H00 - H04,	J00 - J08,	
K00 - K14,	L00 - L04,	M00 - M08,	
N00 - N14,	P00 - P04,	Q00 - Q08,	
R00 - R14,	S00 - S04,	T00 - T08,	
U00 - U14,	V00 - V04,	W00 - W08,	
X00 - X14,	Y00 - Y04,	Z00 - Z08	

2.8 #VERTPOS

Description: Enter the Vertical Equipment Location that specifies the bottom of the unit. The recommended values for this are:

7, 15, 24, 32, 41, 49, 58, 69, 76

Required Field.
Valid Entries: 0 - 84

2.9 #MODCTL SG0 CLI

Description: Enter the CLI value for the Module Controller Service Group 0. See Division 8, Section 1 for valid CLI values.

Required Field.
Valid Entries: Enter 0 through 7fffffff hexadecimal.

2.10 MODCTL SG0 EQSTAT

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Description: Enter the status for the Module Controller Service Group 0.
Default: O
Valid Entries:

Valid MODCTL SG0 EQSTAT Entries

Entry	Definition
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

The MODCTL SG0 EQSTAT entered must not be greater than the EQSTAT on the EQAPCX form for the same SM and Module Controller 0 (e.g., "O" is greater than "G" which is greater than "U").

2.11 #MODCTL SG1 CLI

Description: Enter the CLI value for the Module Controller Service Group 1. See Division 8, Section 1 for valid CLI values.

Required Field.
Valid Entries: Enter 0 through 7fffffff hexadecimal.

2.12 MODCTL SG1 EQSTAT

Description: Enter the status for the Module Controller Service Group 1.
Default: O
Valid Entries:

Valid MODCTL SG1 EQSTAT Entries

Entry	Definition
O	Operational.
G	Growth.
U	Unequipped.

Data Rules:

The MODCTL SG1 EQSTAT entered must not be greater than the EQSTAT on the EQAPCX form for the same SM and Module Controller 1 (e.g., "O" is greater than "G" which is greater than "U").

OXU DI0 INFO

The following fields (Section 2.13 - Section 2.18) define the DI (Data Interface) CLI and Equipment Status information.

2.13 #DIO SG0 CLI

Description: Enter the DI0 SG0 Change Level Indicator. See Division 8, Section 1 for valid CLI values.
Valid Entries: Enter 0 through 7fffffff hexadecimal.

2.14 DI0 SGO EQSTAT

Description: Enter the status for the Data Interface Service Group 0.

Required Field.
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
O	Operational.
G	Growth.
U	Unequipped.

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2.15 #DI0 SG1 CLI

Description: Enter the Data Enterface 0 Service Group 1 Change Level Indicator. See Division 8, Section 1 for valid CLI values.

Required Field.
Valid Entries: Enter 0 through 7fffffff hexadecimal.

2.16 DI0 SG1 EQSTAT

Description: Enter the status for the Data Interface 0 Service Group 1.

Required Field.
Valid Entries:

Valid DI0 SG1 EQSTAT Entries

Entry	Definition
O	Operational.
G	Growth.
U	Unequipped.

2.17 #DI0 TSI BOARD

Description: Enter the Data Interface 0 Time Slot Interchanger Board.
Valid Entries: 0 - 9

Data Rules:

The combination of TSI BOARD and TSI SLOT entries on the following forms:
EQDI
EQDNUS
EQIWG
EQPDXU
EQPSU
EQPCTP
EQXCDU and/or
EQNLI
must not be duplicated on any other EQDI form (except when entering the second of a DI pair); on the same or any other EQNLI form; on the same or any other EQPDXU form (except when entering a PCTDX1 where the XAIU CONFIG is equal to "LOW"); or on any EQPSU, EQPCTP, EQDNUS, or EQXCDU form for a given SM.

When DI0 TSI BOARD is 0, and DI0 TSI SLOT is 3 on the EQXCDU form, VCDX OFFICE must be set to "Y" on the EQCORE form. Only in a VCDX office can TSI BOARD = 0 be used for OXU assignments. In non-VCDX offices, TSI BOARD = 0 is reserved for NLI, DX and MH assignment.

2.18 #DI0 TSI SLOT

Description: Enter the Data Interface 0 Time Slot number.

Required Field.
Valid Entries: 0 - 3

Data Rules:

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```
                    OFFICE DATA ADMINISTRATION
(5832)          EXTENDED CONTROL AND DATA UNIT EQUIPAGE FORM

 *1. SM               ___              OXU DI0 INFO
 *2. INTF UNIT         _          #12. DI0 SG0 CLI   ________
  3. PRIMARY UNIT      0           13. DI0 SG0 EQSTAT O
  4. UNIT TYPE        OXU         #14. DI0 SG1 CLI   ________
 #5. AISLE            ____         15. DI0 SG1 EQSTAT O
 #6. BAY              ___         #16. DI0 TSI BOARD  _
 #7. VERTPOS           __         #17. DI0 TSI SLOT   _
 #8. MODCTL SG0 CLI   ________
  9. MODCTL SG0 EQSTAT O
#10. MODCTL SG1 CLI   ________
 11. MODCTL SG1 EQSTAT O
```

Figure 1 SAMPLE EQXCDU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 85: 5760 Record
OPTICAL INTERFACE UNIT FORM - EQOIU

1. GENERAL

The 5760 Record is available with 5E16(2) and later Software Releases. It is used to define the assignment and location of an OIU (Optical Interface Unit). This form supports the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 19.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OIU SM

Description: The OIU SM (Optical Interface Unit) (Switching Module) field is used to indicate to which SM the OIU is assigned.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

OIU SM must be defined as an SM with SM-2000 class processor on the EQIM form.

2.3 * OIU

Description: This field is used to assign the unit number for an OIU unit.

Software Release: 5E16(2) and later
Valid Entries: 0 - 7

2.4 # AIP SM

Description: This field is used to specify the SM number for the desired AIP (Any Media Interface Platform).

Required Field.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

AIP SM and AIP must be defined on the EQAIP form (5761 Record).

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2.5 # AIP

Description: This field is used to specify the AIP unit number.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: 0 - 15

2.6 # CLI

Description: The CLI (Change Level Indicator) field is used to specify the change level indicator of the OIU. This is a no change field.

Software Release: 5E16(2) and later
Valid Entries: 0

Data Rules:

CLI must be 0.

```
eqoiu                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5760)               OPTICAL INTERFACE UNIT

*1. OIU SM ___
*2. OIU   _
#3. AIP SM ___
#4. AIP   __
   CLI   00000000
```

Figure 1 SAMPLE EQOIU FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 86: 5761 Record
OPTICAL FACILITY INTERFACE PACK FORM - EQOIUP

1. GENERAL

The 5761 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete OFI (Optical Facility Interface) packs. This form supports the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 20.28.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OIU SM

Description: The OIU SM (Optical Interface Unit) (Switching Module) field is used to indicate to which SM the OIU is assigned.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

OIU SM and OIU must be defined on the EQOIU form (5760 Record).

OIU SM must be defined as SM on the EQMH form (5856 Record) with both MH SIDE 0 EQSTAT and MH SIDE 1 EQSTAT set to "O".

2.3 * OIU

Description: This field is used to indicate the OIU unit number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 7

2.4 * PROTECTION GRP

Description: This field is used to define the Protection group number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 9

Data Rules:

PROTECTION GRP must be unique for each AIP SM and AIP set on the EQOIU forms (5760 Record).

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2.5 # OFI 0 CLI

Description: The Optical Facility Interface 0 Change Level Indicator field is used to specify the change level indicator of the OFI (Optical Facility Interface). This indicator is used by system software to determine the hardware version of the associated circuit board.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: 0

Data Rules:

OFI 0 CLI and/or OFI 1 CLI must be 0.

2.6 # OFI 1 CLI

Description: The Optical Facility Interface 1 Change Level Indicator field is used to specify the change level indicator of the OFI (Optical Facility Interface). This indicator is used by system software to determine the hardware version of the associated circuit board.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: 0

2.7 #PACK TYPE

Description: This field is used to specify the type of pack being inserted. This is a no change field.

Software Release: 5E16(2) and later
Default: OFI24
Valid Entries: OFI24 or OFIPKT

Data Rules:

For 5E16(2) and later, when PACK TYPE is "OFI24":

- CP INHIBIT must be "N".
- BNID must be blank.

2.8 PAYLOAD TYPE

Description: This field is used to define the type of facility that will be connected. This is a no change field.

Software Release: 5E16(2) and later
Default: OC3

2.9 SERVICE TYPE

Description: This field is used to define the type of traffic that will be carried. This is a no change field.

Software Release: 5E16(2) and later

Data Rules:

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For 5E16(2) and later, when SERVICE TYPE is "IPV4", OFILINK PCT 1 must exist before OFILINK PCT 2.

OFI PCT LINK (OFILINK)

The OFI LINK list is used to assign PCT (Peripheral, Control and Timing) links to the OFI.

2.10 TSI BOARD

Description: The Time Slot Interchange Board field is used to specify the TSI board a PCT link is connected to.

Software Release: 5E16(2) and later
Valid Entries: 1 - 9

Data Rules:

Row 1 of the OFI PCT LINK list must be entered.

Combinations of TSI BOARD/TSI SLOT must be unique within the OFI PCT LINK list.

TSI BOARD must be defined as a TSI BOARD with EQSTAT set to "O" on the EQTSI form.

2.11 TSI SLOT

Description: The Time Slot Interchange Slot field is used to specify the TSI slot a PCT link is connected to.

Software Release: 5E16(2) and later
Valid Entries: 0 - 3

2.12 EQSTAT 0

Description: The Equipment Status 0 field defines the state of the link on side 0.

Software Release: 5E16(2) and later
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

EQSTAT 0 and 1 of ROW 1 OFI PCT LINK list cannot be "O" during insert.

2.13 EQSTAT 1

Description: The Equipment Status 1 field defines the state of the link on side 1.

Software Release: 5E16(2) and later
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

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EQSTAT 0 must not be greater than EQSTAT 1 in any row.

EQSTAT of row 1 must not be less than EQSTAT rows 2 or 3 on any side.

2.14 BNID

Description: The Bearer Network Identification number field is used to define the Bearer Network ID associated with this OFI. This field supports the OIU-IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). See Division 2, Section 7BX.

Software Release: 5E16(2) and later
Valid Entries: Blank, or enter 1 - 512

Data Rules:

For 5E16(2) and later, BNID must be entered when PACK TYPE is "OFIPKT".

2.15 MAX ENG TS

Description: The Maximum Engineerable Time Slots field is used to define the maximum engineerable time slots. This field supports the OIU-IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). See Division 2, Section 7BX.

Software Release: 5E16(2) and later
Valid Entries: Blank, or enter 672 - 2016

Data Rules:

For 5E16(2) and later:

- MAX ENG TS must be blank:
  - when SERVICE TYPE is not "IPV4"
  - during insert and when SERVICE TYPE is not "IPV4"
- When MAX ENG TS is entered and one OFI PCT LINK exists, MAX ENG TS must be between 672 and 720.
- When MAX ENG TS is entered and two OFI PCT LINKS exist, MAX ENG TS must be between 672 and 1488.
- When MAX ENG TS is entered and three OFI PCT LINKS exist, MAX ENG TS must be between 672 and 2016.
- When MAX ENG TS is entered, OFI PCT LINK EQSTAT 0 must be "0".

2.16 CP INHIBIT

Description: The Call Processing Inhibit field is used specify the call processing inhibit. This field supports the OIU-IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). See Division 2, Section 7BX.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

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```
eqoiup                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5761)              OPTICAL FACILITY INTERFACE PACK

*1. OIU SM        ___          9. OFI PCT LINK (OFILINK)
*2. OIU           _
*3. PROTECTION GRP _                TSI   TSI  EQSTAT EQSTAT
#4. OFI 0 CLI     ________    ROW PCT BOARD SLOT 0      1
#5. OFI 1 CLI     ________     1   0   _   _    _     _
#6. PACK TYPE     ______       2   1   _   _    _     _
   PAYLOAD TYPE   _______      3   2   _   _    _     _
   SERVICE TYPE   ____
                      14. BNID      ___
                      15. MAX ENG TS ____
                      16. CP INHIBIT N
```

Figure 1 SAMPLE EQOIUP FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 87: 5762 Record
OIU SONET TERMINATING EQUIPMENT FORM - EQOSTE

1. GENERAL

The 5762 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete OIU (Optical Interface Unit) STEs (SONET (Synchronous Optical Network) Terminating Equipment). This form supports the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 20.29.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OIU SM

Description: The OIU SM (Optical Interface Unit) (Switching Module) field is used to indicate to which SM the OIU is assigned.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

OIU SM, OIU, and PROTECTION GRP must be defined on the EQOIUP form (5761 Record).

OIU SM must be defined as an SM with SM-2000 class processor on the EQIM form (5700 Record).

2.3 * OIU

Description: This field is used to specify the OIU unit number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 7

2.4 * PROTECTION GRP

Description: This field is used to define the APS (Automatic Protection Switching) group number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 9

2.5 STE

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Description: This field is used to indicate the SONET Terminating Equipment number. This is a no change field.

Software Release: 5E16(2) and later
Default: 1

2.6 STE TYPE

Description: This' field is used to indicate the SONET (Synchronous Optical Network) Termination Equipment Type.

Software Release: 5E16(2) and later
Valid Entries:

Valid STE TYPE Entries

Entry	Definition
OC3	Optical Carrier Level 3.
OC3C	Optical Carrier Level 3 Concatenated signal.

2.7 # STE 0 EQSTAT

Description: The Equipment Status for side 0 of the STE.
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

STE 0 EQSTAT and STE 1 EQSTAT must be equal.

2.8 # STE 1 EQSTAT

Description: The Equipment Status for side 1 of the STE.
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid EQUIPMENT STATUS Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

2.9 PM GROUP

Description: This field is used to assign a performance monitoring group for this STE.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric characters

Data Rules:

PM GROUP must be defined as PM GROUP on the OIUPM form (5767 Record) where CKT TYPE equals "OC3".

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2.10 CGA GROUP

Description: This field is used to assign a Carrier Group Alarm group for the STE.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric characters

Data Rules:

CGA GROUP must be defined as CGA GROUP on the CGATIME form (5766 Record) with SONET TYPE set to "Y".

2.11 CLFI

Description: The Common Language Facility Identifier field is used to assign a descriptive name to this facility.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 25 alphanumeric characters

2.12 PAYLOAD TYPE

Description: This field is used to designate what type of payload the STE carriers. This is a no change field.

Software Release: 5E16(2) and later
Default: STS1FAC

AUTOMATIC PROTECTION SWITCHING

2.13 SF THRESHOLD

Description: The SF (Signal Fail) Threshold field is used to specify the bit error rate at which SF is declared.
Required field.

Software Release: 5E16(2) and later
Default: 3
Valid Entries:

Valid SF THRESHOLD Entries

Entry	Definition
3	Ten to the power -3
4	Ten to the power -4
5	Ten to the power -5

2.14 SD THRESHOLD

Description: The SD (Signal Degrade) Threshold field is used to specify the bit error rate at which SD is declared.
Required field.

Software Release: 5E16(2) and later
Default: 5
Valid Entries:

Valid SD THRESHOLD Entries

Entry	Definition
5	Ten to the power -5

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6	Ten to the power -6
7	Ten to the power -7
8	Ten to the power -8
9	Ten to the power -9

2.15 APS INHIBIT

Description: The Automatic Protection Switching Inhibit field indicates whether or not APS should be inhibited.
Required field.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

2.16 APS ARCH

Description: The Automatic Protection Switching Architecture field is used to specify the APS architecture.

Required field.

Software Release: 5E16(2) and later
Default: 1PLUS1
Valid Entries:

Valid APS ARCH Entries

Entry	Definition
1PLUS1	1+ 1 full duplex

Data Rules:

When APS ARCH is "1P1DBSF", APS MODE must be "UNIDIRECT".

2.17 APS MODE

Description: The Automatic Protection Switching Mode field is used to indicate whether or not the traffic channel selection is done based on local conditions only, or if it is also dependent on remote conditions.

Required field.

Software Release: 5E16(2) and later
Default: UNIDIRECT
Valid Entries:

Valid APS MODE Entries

Entry	Definition
BIDIRECT	bi-directional APS mode
UNIDIRECT	uni-directional APS mode

Data Rules:

When APS MODE is "BIDIRECT", APS ARCH must be "1PLUS1".

---

eqoste 5ESS Switch
OFFICE DATA ADMINISTRATION
(5762) OIU SONET TERMINATING EQUIPMENT

*1. OIU SM ___ AUTOMATIC PROTECTION SWITCHING
*2. OIU _ 12. SF THRESHOLD 3

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```
*3. PROTECTION GRP _                    13. SD THRESHOLD 5
   STE          1                   14. APS INHIBIT  N
#5. STE TYPE      _______                15. APS ARCH     1PLUS1
#6. STE 0 EQSTAT  _                   17. APS MODE     UNIDIRECT
#7. STE 1 EQSTAT  _
 8. PM GROUP      ________
 9. CGA GROUP     ________
10. CLFI          ____________________________
   PAYLOAD TYPE   _______
```

Figure 1 SAMPLE EQOSTE FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 88: 5763 Record
HIGH LEVEL VIRTUAL CONTAINER FORM - EQHVC

1. GENERAL

The 5763 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete HVCs (High Level Virtual Containers). This form supports the the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 20.30.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OIU SM

Description: The OIU SM (Optical Interface Unit) (Switching Module) field is used to indicate to which SM the OIU is assigned.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

OIU SM, OIU, and PROTECTION GRP must be defined on the EQOSTE form (5762 Record) where the EQHVC form's HVC TYPE is equal to the EQOSTE form's PAYLOAD TYPE.

2.3 * OIU

Description: This field is used to specify the OIU unit number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 7

2.4 * PROTECTION GRP

Description: This field is used to define the APS (Automatic Protection Switching) group number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 9

2.5 STE

Description: This field is used to indicate SONET Terminating Equipment. This is a no change field.

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Software Release: 5E16(2) and later
Default: 1

2.6 * HVC

Description: This field is used to assign a number to an HVC (High Level Virtual Container).

Software Release: 5E16(2) and later
Valid Entries: 1- 3

2.7 HVC TYPE

Description: The HVC (High Level Virtual Container) TYPE field is used to specify the type of HVC. Required field.

Software Release: 5E16(2) and later
Default: STS3C
Valid Entries:

Valid HVC TYPE Entries

Entry	Definition
STS1FAC	OIU STS-1 (Synchronous Transport Signal 1) Facility
STS3C	OIU Synchronous Transport Signal Facility.

Data Rules:

When HVC TYPE is "STS1FAC", PAYLOAD TYPE must be "VT1".

When HVC TYPE is "STS3C", HVC must be 1.

When HVC TYPE is "STS3C", PAYLOAD TYPE must be "OIUSAAL" or "PPPLNK".

2.8 # HVC EQSTAT

Description: This field is used to set the equipment status of an HVC.
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid HVC Equipment Status Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

HVC EQSTAT must be greater than or equal to LVC EQSTAT on the EQLVC form (5764 Record) (i.e., "O" is greater than "G" which is greater than "U").

HVC EQSTAT must be no greater than the STE 0 EQSTAT and/or STE 1 EQSTAT on the EQOSTE form (5762 Record).

2.9 PM GROUP

Description: This field is used to assign a performance monitoring group to this HVC.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric characters

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Data Rules:

PM GROUP and HVC TYPE must be defined as PM GROUP on the OIUPM form (5767 Record) where CKT TYPE equals the HVC TYPE.

PM GROUP must not equal "OSTEDEF", OSTEGDF", "OSTS1GD", "OVT1DEF", OVT1GDF", "ODS1EDF", ODS1EGD", "ODS1SDF", or "ODS1SGD".

2.10 CGA GROUP

Description: This field is used to assign a Carrier Group Alarm group to this HVC.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 9 alphanumeric characters

Data Rules:

CGA GROUP must be defined as CGA GROUP on the CGATIME form (5766 Record) with SONET TYPE set to "Y".

CGA GROUP must not equal "SDHGDEF", "CNTGDEF", or "CNTDEF".

2.11 CLFI

Description: This field is used to assign a descriptive name to this facility.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 25 alphanumeric characters

2.12 PAYLOAD TYPE

Description: This field is used to designate what type of payload the HVC carries.
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid HVC TYPE Entries

Entry	Definition
OIUSAAL	Optical Interface Unit Signaling ATM (Assynchronous Transfer Mode) Adaptation Layer facility.
PPPLNK	Point-to-Point Link facility.
VT15	Virtual Tributary at the 1.5 level facility

Data Rules:

When PAYLOAD TYPE is "VT15" SLBL must be "EQHV", "UNEQHV", or "VT".

When PAYLOAD TYPE is "PPPLNK", SLBL must be "EQHV", "PPPWS", or "UNEQHV".

When PAYLOAD TYPE is "OIUSAAL", SLBL must be "ATM", "EQHV", or "UNEQHV".

2.13 SLBL

Description: The Signal Label field is used to specify the signaling label for this facility.
Required field.

Software Release: 5E16(2) and later
Default: VT
Valid Entries:

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Valid SLBL Entries	
Entry	**Definition**
ATM	ATM Structure
EQHV	Equipped - non-specific
PPPWS	PPP with scrambling Structure
UNEQHV	Unequipped or supervisory-unequipped.
VT	VT - Structured STS-1 SPE

2.14 PLM INH

Description: The Inhibit Payload Label Mismatch field is used to specify whether or not reports for payload label mismatches should be inhibited for this HVC.
Required field.

Software Release: 5E16(2) and later
Default: Y
Valid Entries: Y, N

2.15 TIM INH

Description: The Inhibit Trace Identifier Mismatch field is used to specify whether or not reports for trace identifier mismatches should be inhibited for this HVC.
Required field.

Software Release: 5E16(2) and later
Default: Y
Valid Entries: Y, N

PATH TRACE (J1)

2.16 SIZE

Description: This field is used to specify the maximum length of the TRANSMIT and EXPECTED values. This is a no change field.

Software Release: 5E16(2) and later
Default: 64

2.17 TRANSMIT

Description: This field is used to specify the J1 transmitted path trace value.
Valid Entries: Blank, or 1 - 62 alphanumeric characters

2.18 EXPECTED

Description: This field is used to specify the J1 expected path trace value.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 62 alphanumeric characters

---

eqhvc 5ESS Switch
OFFICE DATA ADMINISTRATION
(5763) HIGH-LEVEL VIRTUAL CONTAINER

*1. OIU SM ___ 8. PM GROUP _____
*2. OIU _ 9. CGA GROUP _____
*3. PROTECTION GRP _ 10. CLFI _____

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```
   STE          1        #11. PAYLOAD TYPE _______
*5. HVC          _        #12. SLBL        ______
#6. HVC TYPE     _______     13. PLM INH      Y
#7. HVC EQSTAT   _           14. TIM INH      Y
                    PATH TRACE (J1)
    SIZE     64
 16. TRANSMIT ____________________________________________________________
 17. EXPECTED ____________________________________________________________
```

Figure 1 SAMPLE EQHVC FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 89: 5764 Record
LOW LEVEL VIRTUAL CONTAINER FORM - EQLVC

1. GENERAL

The 5764 Record is available with 5E16(2) and later Software Releases. It is used to insert, review, update, and delete LVCs (Low Level Virtual Containers) and their associated container information. This form supports the OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information on this feature, see Division 2, Section 7BQ.

1.1 Recent Change View

The Recent Change View for this form is 20.31.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * OIU SM

Description: The OIU SM (Optical Interface Unit) (Switching Module) field is used to indicate to which SM the OIU is assigned.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

OIU SM, OIU, PROTECTION GRP, STE, and HVC must be defined on the EQHVC form (5763 Record).

2.3 * OIU

Description: This field is used to indicate the OIU unit number

Software Release: 5E16(2) and later
Valid Entries: 0 - 7

2.4 * PROTECTION GRP

Description: This field is used to define the APS (Automatic Protection Switching) group number.

Software Release: 5E16(2) and later
Valid Entries: 0 - 9

2.5 STE

Description: This field is used to indicate SONET Terminating Equipment. This is a no change field.

Software Release: 5E16(2) and later
Default: 1

2.6 * HVC

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Description: This field is used to indicate an HVC (High Level Virtual Container).

Software Release: 5E16(2) and later
Valid Entries: 1- 3

2.7 * VT GROUP

Description: This field is used to specify a Virtual Tributary Group.

Software Release: 5E16(2) and later
Valid Entries: 1- 7

2.8 * VT MEMBER

Description: This field is used to specify a Virtual Tributary Member.

Software Release: 5E16(2) and later
Valid Entries: 1- 4

2.9 LVC TYPE

Description: This field is used to specify the type of LVC (Low-level Virtual Container). This is a no change field

Software Release: 5E16(2) and later
Default: VT15

VIRTUAL CONTAINER (VC)

2.10 # EQSTAT

Description: This field is used to set the equipment status of this LVC.
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid LVC Equipment Status Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

2.11 PM GROUP

Description: This field is used to assign a performance monitoring group to this LVC.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric characters

Data Rules:

PM GROUP must be defined as PM GROUP on the OIUPM form (5767 Record) where CKT TYPE equals "VT15".

2.12 CGA GROUP

Description: This field is used to assign a Carrier Group Alarm group to the LVC.

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Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 8 alphanumeric characters

Data Rules:

CGA GROUP must be defined as CGA GROUP on the CGATIME form (5766 Record) with SONET TYPE set to "Y".

2.13 SLBL

Description: The Signal Label field is used to specify the signaling label for this facility.
Required field.

Software Release: 5E16(2) and later
Default: ASYNC
Valid Entries:

Valid SLBL Entries

Entry	Definition
ASYNC	Asynchronous
BYSYN	Byte Synchronous
EQLV	Equipped - non-specific

2.14 PLM INH

Description: The Inhibit Payload Label Mismatch is used to specify whether or not reports for payload label mismatches should be inhibited for this LVC.
Required field.

Software Release: 5E16(2) and later
Default: Y
Valid Entries: Y, N

2.15 PAYLOAD TYPE

Description: This field is used to designate what type of payload the LVC carries. This is a no change field.

Software Release: 5E16(2) and later
Default: DS1

WIRELESS TRUNKS

This field supports the AUTOPLEX (Lucent Registered Trademark for its Cellular Switching Systems) Wireless on OIU (Optical Interface Unit) feature. For more information see, Division 2, Section 7CC.

2.16 AFAC ID

Description: The AFAC ID (Autoplex Facility Identifier) field is used to communicate maintenance information to the ECP (Executive Cellular Processor) complex of an OIU. This identifier must be unique for each AUTOPLEX OIU.

Software Release: 5E17(1) FR 2 and later
Valid Entries: 1 - 4500 or blank

Data Rules:

When AFAC ID is entered, APPLICATION TYPE must be "TRUNK" and PAYLOAD TYPE must be "DS1".

AFAC IDs must be unique across EQDUP, EQVT, and EQLVC forms in an office.

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APT TESTING

This field supports the APT (Automatic Progression Testing) Enhancements feature. For information on this feature see, Division 2, Section 2AD.

2.17 ALGORITHM

Description: This field is used for the DS1 (Digital Signal Level 1) in APT (Automatic Progression Testing).

Software Release: 5E16 FR 2 and later
Valid Entries:

Valid ALGORITHM Entries

Entry	Definition
1ONLY	Test One Only (test one trunk only on the DS1, independently whether test passes or fails and then move to a trunk on another DS1).
FULL	Full (test all trunks on the DS1, independently whether test passes or fails, and then move to a trunk on another DS1).
NOTST	No Test (APT should not perform any tests on the DS1).
SUCC	Stop on Success (test one trunk on the DS1 and then move to a trunk on another DS1 if test passes, or test next trunk on the same DS1 if test fails).

Data Rules:

ALGORITHM can only be entered when APPLICATION TYPE is "TRUNK".

CONTAINER (C)

2.18 # EQSTAT

Description: This field is used to set the equipment status of this CNTR (Container).
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid CNTR Equipment Status Entries

Entry	Definition
G	Growth.
O	Operational.
U	Unequipped.

Data Rules:

When CONTAINER EQSTAT is "G", VIRTUAL CONTAINER EQSTAT must be "G" or "O".

When CONTAINER EQSTAT is "O", VIRTUAL CONTAINER EQSTAT must be "O".

2.19 PM GROUP

Description: This field is used to assign a performance monitoring group to this Container.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 9 alphanumeric characters

Data Rules:

PM GROUP must be defined as PM GROUP on the OIUPM form (5767 Record) where CKT TYPE equals "DS1".

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2.20 CGA GROUP

Description: This field is used to assign a Carrier Group Alarm group to the Container.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 9 alphanumeric characters

Data Rules:

CGA GROUP must be defined as CGA GROUP on the CGATIME form (5766 Record) with SONET TYPE set to "N".

2.21 MODE

Description: This field defines the signaling mode of the Virtual Container. This is a no change field.

Software Release: 5E16(2) and later
Default: RB

2.22 CLFI

Description: This field is used to assign a descriptive name to the container associated with this Virtual Container.

Software Release: 5E16(2) and later
Valid Entries: Blank, or 1 - 25 alphanumeric characters

2.23 APPLICATION TYPE

Description: This field is used to designate what application this container will be used for. This is a no change field.

Software Release: 5E16(2) and later
Default: TRUNK

DS1 SIGNALING

2.24 # FRAME

Description: This field is used to specify the data signaling format for this container facility.
Required field.

Software Release: 5E16(2) and later
Valid Entries:

Valid FRAME Entries

Entry	Definition
ESF	Extended Super Frame format
SF	Super Frame format

2.25 ZCS

Description: This field is used to specify whether or not the digital signal level 1 SONET (Synchronous Optical Network) facility signaling zero code suppression is on.
Required field.

Software Release: 5E16(2) and later
Default: N
Valid Entries: Y, N

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```
eqlvc                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5764)              LOW-LEVEL VIRTUAL CONTAINER

*1. OIU SM       ___       VIRTUAL CONTAINER (VC)       APT TESTING
*2. OIU          _       #9. EQSTAT      _         15. ALGORITHM _____
*3. PROTECTION GRP _       10. PM GROUP    _________
   STE          1       11. CGA GROUP   _________
*5. HVC          _       12. SLBL        ASYNC
*6. VT GROUP     _       13. PLM INH     Y
*7. VT MEMBER    _           PAYLOAD TYPE DS1
   LVC TYPE     VT15
```

```
eqlvc                    5ESS Switch
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5764)              LOW-LEVEL VIRTUAL CONTAINER

    CONTAINER (C)
#16. EQSTAT   _
 17. PM GROUP _________
 18. CGA GROUP _________
    MODE     RB

 20. CLFI         _______________________
    APPLICATION TYPE TRUNK

 DS1 SIGNALING
#22. FRAME ___
 23. ZCS   N
```

Figure 1 SAMPLE EQLVC FORM 5E16(2) SOFTWARE RELEASE

```
eqlvc                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(5764)              LOW-LEVEL VIRTUAL CONTAINER

*1. OIU SM       ___       VIRTUAL CONTAINER (VC)
*2. OIU          _       #9. EQSTAT      _
*3. PROTECTION GRP _       10. PM GROUP    _________
*4. STE          1       11. CGA GROUP   _________
*5. HVC          _       12. SLBL        ASYNC
*6. VT GROUP     _       13. PLM INH     Y
*7. VT MEMBER    _           PAYLOAD TYPE DS1
   LVC TYPE     VT15
```

```
eqlvc                    5ESS Switch
```

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```
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(5764)              LOW-LEVEL VIRTUAL CONTAINER

    CONTAINER (C)                    WIRELESS TRUNKS
#15. EQSTAT    _                  23. AFAC ID ____
 16. PM GROUP  ________                    APT TESTING
 17. CGA GROUP ________             24. ALGORITHM _____
    MODE      RB

 19. CLFI          ____________________________
    APPLICATION TYPE TRUNK

 DS1 SIGNALING
#21. FRAME ___
 22. ZCS   N
```

Figure 2 SAMPLE EQLVC FORM 5E17(1) AND LATER SOFTWARE RELEASES

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SEC. 90: 5765 Record
ANY MEDIA INTERFACE PLATFORM FORM - EQAIP

1. GENERAL

The 5765 Record is available with 5E16(2) and later Software Releases. It is used to define assignments and locations for Any Media Interface Platform Units. This form supports the following features:

- OIU (Optical Interface Unit) OC-3 (Optical Carrier Level 3) NAR (North American Region) feature (99-5E-7140). For more information, see Division 2, Section 7BQ.
- OIU - IP (Optical Interface Unit - Internet Protocol) feature (99-5E-8308). This feature is made available in 5E16 Feature Release 3. (For more information on this feature, see Division 2, Section 7BX.)

1.1 Recent Change View

The Recent Change View for this form is 19.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * AIP SM

Description: The AIP SM (Access Interface Platform Switching Module field is used to specify the SM number where the AIP is located.

Required Field.
Valid Entries: 1 - 192

Data Rules:

AIP SM must be defined as an SM with SM-2000 class processor on the EQIM form.

2.3 * AIP

Description: This field is used to indicate the AIP unit number.
Valid Entries: 0 - 15

2.4 # EQL AISLE

Description: The Equipment Location Aisle field is used to assign the equipment location (floor and aisle) number. This entry consists of a floor and aisle number. The first and second digits, from the left, are the floor number. Valid floor numbers are 00 - 99. The third and fourth digits, from the left, are the aisle number. Valid aisle numbers are 00 - 99.
Required field.
Valid Entries:

00 - 99 for floor number
00 - 99 for aisle number

2.5 # EQL BAY

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Description: This field is used to assign the Equipment Location Bay number.

Required field.
Valid Entries:

Valid EQLBAY Entries, 5E9(2) and later

Entry	Definition
0 - 14	SM-2000; SM Cabinet aisle.
90 - 99	SM-2000;SM Cabinet aisle.
100 - 104	SM-2000; Back panel; wiring position.
200 - 208	SM-2000; Front panel; door position.

2.6 # EQL VERPOS

Description: This field is used to assign the height of the AIP unit within the bay, in inches above the floor.

Required Field.
Valid Entries: 15, 32, or 49

2.7 # CABINET

Description: This field is used to assign the cabinet reference where the AIP is located.

Required Field.
Valid Entries: FRONT or REAR

```
eqaip                    5ESS Switch
                  OFFICE DATA ADMINISTRATION
(5765)              ANY MEDIA INTERFACE PLATFORM

*1. AIP SM    ___
*2. AIP       __
#3. EQL AISLE  ____
#4. EQL BAY    ___
#5. EQL VERPOS __
#6. CABINET    _____
```

Figure 1 SAMPLE EQAIP FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 91: 5829 RECORD
GENERAL GSM/NGSM CONNECTIVITY - QGCON

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the SIP (Session Initiation Protocol) for Packet Trunking feature (99-5E-8382). For more information, see Division 2, Section 4A684. This form provides the basic description of the Switching Module side of the GQPH (Generalized QLPS Protocol Handler) pipe connecting to the GQPH network.

1.1 Recent Change View

The Recent Change View for this form is 17.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 # GSM

Description: This field specifies the GSM (Global Switching Module) where data is read.

Software Release: 5E16(2) FR3 and later
Required field.
Valid Entries: 1 - 192

Data Rules:

The GSM entered on this form must be defined on at least 2 sets of QPHPIPE forms (5828 Record) for both QLPS NETWORK 0 and QLPS NETWORK 1. The GLOBAL SM, PSU SHELF, and CHANNEL GROUP must be the same within each set of the QPHPIPE forms and SERVICE TYPE must be "SIPT".

2.3 * SERVICE TYPE

Description: This field is used to indicate whether or not the service type is SIPT.

Required Field.
Default: SIPT
Valid Entries: SIPT

NON-GSM LIST

This list represents the non-GSMs.

2.4 SM2000

Description: This field is used to display non-GSMs.
Valid Entries: 1 - 192

Data Rules:

SMs in NON GSM list must be unique.

GSM must also be listed in a NON GSM list.

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MHs in the NON-GSM list must be SM2000s that have MH Pipes provisioned on the EQPIPE form (5544 Record).

qgcon 5ESS Switch _
OFFICE DATA ADMINISTRATION
GENERAL GSM/NGSM CONNECTIVITY

*1. GSM ___ 3. NON-GSM LIST
*2. SERVICE TYPE SIPT ROW SM2000 ROW SM2000 ROW SM2000 ROW SM2000

1 ___	9 ___	17 ___	25 ___
2 ___	10 ___	18 ___	26 ___
3 ___	11 ___	19 ___	27 ___
4 ___	12 ___	20 ___	28 ___
5 ___	13 ___	21 ___	29 ___
6 ___	14 ___	22 ___	30 ___
7 ___	15 ___	23 ___	31 ___
8 ___	16 ___	24 ___	32 ___

Figure 1 SAMPLE QGCON FORM 5E16(2) AND LATER SOFTWARE RELEASES

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SEC. 92: QLPS TIMESLOT USAGE - QTUV

1. GENERAL

Available for 5E16(2) FR3 and later, this form supports the QLPS (Quad-Link Packet Switch) feature. This form is used to preserve timeslot assignment on a QTMSLINK to a QLPS board in an SM-2000 office.

1.1 Recent Change View

There is no Recent Change View for this form.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 # QLPS NETWORK

Description: This field specifies the Quad-link Packet Switch Network number.
Required field.

Software Release: 5E16(2) FR3 and later
Valid Entries: 0 or 1

2.3 * QTMSLINK

Description: This field represents one of four TMS (Time Multiplex Slot) link numbers.

Required Field.

Software Release: 5E16(2) FR 3 and later
Valid Entries:

4 - 28 or 34 - 186 in increments of 4 for single fabric and 6 - 374 for network 0 or,
7 - 375 for network 1 in increments of 8 for dual fabric.

2.4 * TIMESLOT

Description: This field represents the time slot number being used.

Required Field.

Software Release: 5E16(2) FR 3 and later
Valid Entries: 0 - 255

2.5 HDLC

Description: This field represents the High Level Data Link Control Channel number.

Software Release: 5E16(2) FR 3 and later
Valid Entries: 1 - 30

2.6 QEND PT

Description: This field represents the endpoint number for QPH/GQPH pipes (same as SM-2000 value for

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MH pipes).

Software Release: 5E16(2) FR 3 and later
Valid Entries:

1 - 192 for SM-2000 or for MH pipes or,
197 - 255 for endpoint number for QPH/GQPH pipes

2.7 TYPE

Description: This field represents the QLPS pipe type.

Software Release: 5E16(2) FR 3 and later
Valid Entries: CCS, MH, or SIPT

Data Rules:

When TYPE is "MH", QENDPT must be 1 - 192.

When TYPE is "CCS" or "SIPT" QENDPT must be 197 - 255.

---

qtuv 5ESS Switch _
OFFICE DATA ADMINISTRATION
(retrofit) QLPS TIMESLOT USAGE

*1. QLPS NETWORK _
*2. QTMSLINK ___
*3. TIMESLOT ___
4. HDLC __
5. QEND PT ___
6. TYPE _____

Figure 1 SAMPLE QTUV FORM 5E16(2) AND LATER SOFTWARE RELEASES

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DIV. 9: COMMON CHANNEL SIGNALING

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SEC. 1: CNI IMPLEMENTATION ON THE 5ESS SWITCH

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SEC. 1A: CNI IMPLEMENTATION ON THE 5ESS-2000 SWITCH

1. INTRODUCTION

The CNI (Common Network Interface) network allows signaling information to be transmitted between switches. The signaling information controls basic interswitch calls (ISUP Routing) and handles CCS7 applications such as LASS and NS800 (Global Title Routing). The following section provides information needed to connect the 5ESS-2000 Switch to the CNI network to provide ISUP routing and Global Title routing for the 5ESS-2000 Switch. Refer to documents: 256-015-200 (CCS7 Network - Database and Routing Document) and 235-190-120 (Common Channel Signaling Service Features) for a detailed description of Common Channel Signaling services.

1.1 CNI Terms

The following terms are used in this section and in the following Division 9 sections:

- A signaling point is a switch, STP (Signal Transfer Point), or SCP (Service Control Point) that sends and receives CCS7 signaling messages to other signaling points in the network.
- A Point Code is a 9-digit number that uniquely identifies a signaling point in the CCS7 network. The Point Code provides the address information (e.g., identification of originating or terminating point) that is needed to route signaling messages throughout the network.
- A CLLI (Common Language Location Identification) is an 11-character code, which is similar to a Point Code, that uniquely identifies a switch, STP or a SCP in the network.
- A signaling link is a data link that connects two signaling points in a CCS7 network.
- A signaling Link Set consists of all CCS7 signaling links between two particular signaling points.
- A Combined Link Set refers to all CCS7 signaling links that connect a switch to an STP pair or to all the CCS7 signaling links that connect an STP to another STP pair.
- A Cluster is a group of signaling points within a network. A cluster may have up to 255 signaling points.
- An SCP is a centralized database that provides call routing information needed for some CCS7-based features.
- The STP is used as a switching point between offices, SCPs and other STPs in the CCS7 network
- GTTs (Global Title Translations) are used to obtain routing information for CCS7 based features.

1.2 Sample CNI Translations

Figure 1 shows a sample CNI configuration used as an illustration for the sample data provided in the following Division 9 Sections. The following RC Views should be entered for this configuration:

A. The LOCAL POINT CODE and LOCAL CLLI should be defined on RC View 15.1.

B. The link nodes and their corresponding LINKSETs and COMBINED LINKSET should be defined on RC View 15.2.

C. All of the Non-local networks must be defined on RC View 15.12.

D. The cluster information should be entered on RC View 15.9 for each STP, SCP and ISUP trunk.

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E. For 5E8 and earlier, the member information should be entered on RC View 15.13 for small network routing. For 5E9(1) and later, member information should be entered on RC View 15.18 for small network routing, or for the FPCR feature if it is activated.

F. The subsystem numbers for each CCS7 based applications must be defined on RC view 8.17 and 15.10. Also, SUBSYSTEM 3 must be entered for 5E6 and later Software Releases.

G. The Global Title Translator must be defined on RC View 15.11 for the STPs where Global Title Translations are performed.

2. RECENT CHANGE SEQUENCING

1. Install or grow the CNI as covered in the Installation Engineering Handbook 555 (new start) or 555A (growth).

   The temporary CNI-related data files are created based on user input gathered in response to a series of (AT&T or LEC) office environment- and hardware equipage-related prompts. These prompts are generated by a script invoked at the RC/V terminal or STLWS (Supplementary Trunk and Line Work Station). This temporary data is used to facilitate installation of the CNI Ring without the need for office-specific data. Refer to the Installation Handbook for procedures to install temporary data files.

   The temporary data must be replaced with actual, complete, site-specific functional data before placing the ring in service.

2. For 5E8 and earlier Software Releases, populate the Network File. The following parameters are populated for the specific releases.

   - STP Indicator: Set to 0. Applies to 5E4(2) and later Software Releases.
   - STD_PC (Standard Point Code Indicator): Set to 1 for LEC networks and 0 for AT&T networks. Applies to 5E4(2) and later Software Releases.
   - Initialize the CNI with a level 4 initialization to bring the network file data into memory.

3. Populate RC View 15.1 (Office Data). See Division 9, Section 2A.

4. Populate RC View 15.2 (Link Node Data). See Division 9, Section 2B.

   Enter a view for each signaling link node connected to the adjacent STP pair.

   Note:

   The signaling link node must be out-of-service and the MAJOR STATE field must be set to "UNA" before the link information can be updated.

5. Populate RC View 15.3 (Logical to Physical). See Division 9, Section 2C.

   Populate a view for each signaling link that transmits CCIS6 trunk signaling messages over high (56 kbs) or low speed links (4.8 kbs).

6. Populate RC View 15.12 (Nonlocal Network IDs for 5E6 - 5E8 Software Releases, or Network

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Routing Data for 5E9(1) and later Software Releases, in any of the following situations. See Division 9, Section 2L.

- The 5ESS-2000 Switch is routing CCS7 messages to another network.
- Global Title Translations are performed in an STP that is located in another network.
- An SCP used for CCS7-based features is located in another network.
- A far end office is located in another network (ISUP Trunks RC View 5.1).
- A switch in another network is being sent TCAP messages for LASS.

7. Populate RC View 8.15 (CCS Office Parameters), if APSDN or NS800 is provided by the switch.
8. Populate the Recent Change View 15.10 (Subsystem Numbers); for 5E6 and later Software Releases, subsystem Number 3 is needed for ISUP flow control when using SS7-based features. See Division 9, Section 2J.

When using CCS7-based features (LASS, LIDB, NS800, APSDN and ASP), the Subsystem Numbers must correspond with the network subsystem values and the values assigned to the particular applications (e.g. LASS) on RC View 8.17.

1. Populate the RC View 15.11 (Global Title Translation) when Global Title Translations are to be done using Capability Codes (Alias Point Codes) or if translations are not to be done at the local STP pair. See Division 9, Section 2K.

   If no entry is made in the 15.11 View, the Global Title Translations are performed at the local STP pair. The point codes are stored in the general translator, 256.

   Note: The TRANSLATION TYPE must correspond with the value assigned to the applications on RC View 8.17.
2. Populate RC View 8.17 (Direct Signaling Application), if the subsystem numbers are assigned on RC View 15.10.
3. Populate RC View 15.9 (Cluster Routing Data) for each of the following. See Division 9, Section 2I.
   - Each local STP cluster.
   - Each far-end office cluster (ISUP trunks defined on RC View 5.1).
   - Each STP where Global Title Translations are performed.
   - Each SCP (Service Control Point) where routing information is stored CCS7 based features (LIDB, NS800, APSDN and ASP).
   - Each switch where LASS TCAP messages are sent.
4. For 5E8 and earlier, populate RC View 15.13 (Small Nonlocal Network Cluster and Member Table for 5E6, and Small Network Cluster and Member Table for 5e7 - 5E8 Software Releases) in the following cases; otherwise, RC View 15.9 should be used to enter cluster information. See Division 9, Section 2M.
   - The local STP pair resides within the switch's small network.

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- The local STP pair resides in another small network.

5. For 5E9(1) and later, populate RC View 15.18 for the following cases.

6. RC Views 15.4 through 15.8 are initialized with an extensive set of standard input data. The existing report data should not be manipulated but a customized measurement report may be created by entering the following views:

   - Define a new USER VIEW on RC View 15.5. See Division 9, Section 2E.
   - If restrictions are needed on specific measurements, define an Exception Table on RC View 15.6 (see Division 9, Section 2F) for the USER View defined on RC View 15.5.
   - Schedule the report on RC View 15.8 (see Division 9, Section 2G) using one of the corresponding REPORT TYPEs.

Note:

Only Non-Fixed Format reports can be modified or created. Fixed-Format Reports cannot be modified or created.

3. CNI FEATURES - 5E9(1) AND LATER

New and Modified RC Views

RC View	Record Number	Div.	Sec.
8.22	5713	3	5AR
15.1	5011	9	2A
15.2	5012	9	2B
15.9	5019	9	2I
15.12	5022	9	2L
15.14	5024	9	2N
15.15	5025	9	2O
15.16	5026	9	2P
15.17	5027	9	2Q
15.18	5028	9	2R

3.1 RCPTP Feature Definition

The RCPTP (Recent Change of Protocol Timers and Parameters) feature allows customers to change and verify the CCS7 MTP (Message Transfer Part) and SCCP (Signaling Connection and Control Part) protocol timers and thresholds, two critical event parameters, an ANSI Point Code flag, and for NSD, the values of the CCITT protocol timers used in the ISC (International Switching Center).

Before 5E9(1), these timers and thresholds could be changed only via a network file, a process that required a CNI initialization and system reboot to activate the changes. To eliminate these service-impacting procedures, this feature replaces the network file with a set of new and modified Recent Change views through which the parameters can be maintained in a real-time environment.

3.2 RCPTP Translation Requirements

15.1 View (5011 Record) - This Office Identification View identifies the local office and its function in the CCS network. For 5E9(1) and later this view, which is entered only once for each office, has three new fields.

- ANSI STD PC IND: This is a verify-only field that indicates whether or not the local office point code format is represented in ANSI. The ANSI format is used only in LEC networks; non-ANSI format is

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used only in AT&T networks.

- CRIT EVENT NUMBER: This field limits the number of CNCE (CCS Network Critical Event) messages that will be printed on the ROP during the time interval specified in the CRIT EVENT TIMER field.

- CRIT EVENT TIMER: This field specifies the time interval (in seconds) for the CRIT EVENT NUMBER field defined previously.

15.14 View (5024 Record) - This Protocol Office Timers View is new for 5E9(1) and later. It is used to define a set of CSS7 timers: T1.111.4 MTP (Message Transfer Part) and T1.112.4 SCCP (Signaling Connection and Control Part) protocol timers.

15.15 View (5025 Record) - This Protocol Link Set Timers View is new for 5E9(1) and later. It is used to define T1.111.4 and T1.111.7 timers for individual link sets or for all link sets in the office.

15.16 View (5026 Record) - This Protocol Link Set Thresholds View is new for 5E9(1) and later. It is used to set T1.111.4 thresholds to detect and monitor congestion for a specific link set for specific link set or for all link sets in the office.

15.17 View (5027 Record) - This Protocol Link Parameters View is new for 5E9(1) and later. It is used to set T1.111.3 Link protocol timers and SUERM (Signal Unit Error Rate Monitor) thresholds for a single link, a link set, or all links in the office.

3.3 ELINK Feature Definition

The ELINK (Extended Access Links and Alternate A-Link Set Routing) feature is a secured feature, which must be purchased by the switch owner and then be activated by an Lucent Technologies SEE (System Equipment Engineer). The Secured Feature ID for ELINK is 131.

The ELINK feature allows a 5ESS-2000 Switch in a LEC CCS network to connect the signaling links between SEPs (Signaling End Points) and non-home STPs. STPs that are connected to the switch via links designated as type "A" are considered Primary STPs or Home STPs. Those connected to the switch via links designated as type "E" are considered Other STPs.

With this feature E-links provide additional routes to destinations, minimizing SEP isolation. They serve as alternate routes in the event of failed A-link sets. Likewise, A-link sets serve as alternate routes for failed E-link sets.

E-links may be used to route traffic directly to Other STP pairs or quads from SEPs, using fewer intermediate STPs and improving call processing and network performance.

3.4 ELINK Translation Requirements

8.22 View (5713 Record) - This Secured Feature System Assignment View is used to enable Secured Features. Secured Features are the optional service features that can be purchased in addition to the features included in the current Software Release. After an Lucent Technologies SEE (System Equipment Engineer) has determined that a switch owner has purchased a secured feature, the SEE can activate the feature on the switch. The ELINK feature is activated by setting the ACT field to "Y" for SFID (Secured Feature ID) 131.

15.1 View (5011 Record) - This Office Identification View identifies the local office and its function in the CCS network. For 5E9(1) and later, the LOW PRI SRST field was added to set the timer (in seconds) for the SRST (Signaling Route Set Test) message transmission interval for alternate or lower priority routes.

15.2 View (5012 Record) - This Link Information View is used to define signaling links. Each link node equipped on the CNI ring must be defined on this view. Since CNI links are equipped in pairs, an even

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number of signaling links is always entered.

For 5E9(1) and later, a LINK TYPE value of "E" is available when secured features ELINK and FPCR (Full Point Code Routing) have been purchased. A-links are used between the 5ESS-2000 Switch and an adjacent STP; E-links are used between the 5ESS-2000 Switch and a non-adjacent STP.

15.9 View (5019 Record) - This Cluster Routing Data View is used to define data for CCS7 message routing based on the Network ID and cluster. This view supports cluster level routing to local networks and to non-local networks.

For 5E9(1) and later, the fields ALT1 ROUTE and ALT2 ROUTE were added. They specify the link sets to be used for the first and second alternate routes between the 5ESS-2000 Switch and the STP.

15.12 View (5022 Record) - This Network Routing Data View is used to define all the non-local networks that send or receive CCS7 messages to or from the local 5ESS-2000 Switch.

For 5E9(1) and later, the fields ALT1 ROUTE and ALT2 ROUTE were added. They specify the link sets to be used for the first and second alternate routes between the 5ESS-2000 Switch and the STP.

3.5 NILATA Feature Definition

The NI (Network Interconnect) LATA Routing feature is only for the Lucent Technologies NSD (Network Services Division) network. It allows more than one point code to be assigned for InterLATA routing to and from the InterExchange Carrier's toll switch office. This feature provides the capability to associate a unique point code with each LATA, allowing circuit- or call-associated CCS7 messages to be routed via the SPOI (Signaling Point of Interface), as required in the MFJ (Modification of Final Judgement). A SPOI is a legal and logical separation point where a LEC's (Local Exchange Carrier's) signaling link meets an Interexchange Carrier's signaling link.

Before 5E9(1), each AT&T toll switch had one office point code. With the NI LATA Routing feature, multiple point codes can be assigned to the toll switch. In addition to the switch's true point code which can serve a single LATA, point codes may be assigned to serve other LATAs. These additional point codes are called "alias point codes". A maximum of 16 point codes (one true point code and up to 15 alias point codes) are allowed to support the LATA routing feature for each LEC STP served by the switch.

Recent Change View 15.1 supports both the true point code and alias point codes.

When an OPC (Origination Point Code) is entered for a CCS7 trunk group on View 5.1, it must be specified on View 15.1 as either a true or alias point code. Furthermore, an alias point code cannot be deleted from View 15.1 if that point code is specified as the OPC for an existing trunk group.

3.6 NILATA Translation Requirements

15.1 View (5011 Record) - This Office Identification View identifies the local office and its function in the CCS network. This view is entered only once for the office.

For 5E9(1) and later, fifteen ALIAS PC fields were added to this view. These alias point codes can be assigned only on an AT&T toll switch and are in addition to the local office point code. The purpose of the alias point codes is to facilitate LATA routing of cicuit- or call-associated messages.

3.7 FPCR Feature Definition

The FPCR (Full Point Code Routing) feature is a secured feature, which must be purchased by the switch owner and then be activated by an Lucent Technologies SEE (System Equipment Engineer). The Secured Feature ID for FPCR is 132.

The FPCR (Full Point Code Routing) feature provides a 5ESS-2000 Switch in a LEC network with the

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capability to directly route traffic on specific combined link sets to other STP pairs based upon the DPC (Destination Point Code). This feature increases the efficiency of the network and complies with a legal requirement to directly route certain traffic as designated by law.

3.8 FPCR Translation Requirements

8.22 View (5713 Record) - This Secured Feature System Assignment View is used to enable Secured Features. Secured Features are the optional service features that can be purchased in addition to the features included in the current Software Release. After an Lucent Technologies SEE (System Equipment Engineer) has determined that a switch owner has purchased a secured feature, the SEE can activate the feature on the switch. The FPCR feature is activated by setting the ACT field to "Y" for SFID (Secured Feature ID) 132.

15.9 View (5019 Record) - This Cluster Routing Data View is used to define data for CCS7 message routing based on the Network ID and cluster. This view supports cluster level routing to local networks and to non-local networks.

For 5E9(1) and later, the following enumerations were added to the ROUTING FLAG field: "CLU_O", "POPCLU", and "UPOPCLU".

15.12 View (5022 Record) - This Network Routing Data View is used to define all the non-local networks that send or receive CCS7 messages to or from the local 5ESS-2000 Switch.

For 5E9(1) and later, the following enumerations were added to the ROUTING FLAG field: "NTWK" and "NTWK_O".

15.18 View (5024 Record) - This Member Routing Data View is new for 5E9(1) and later. It is used to define information for CCS7 message routing based on the Network ID, cluster number, and member number of the point code. The view supports member level routing to local (intra-) and nonlocal (inter-) networks.

3.9 Routing to STP in Small Network

Although routing to an STP in a small network is not a new feature, the method of provisioning this routing has changed with the 5E9(1) Software Release.

For 5E8 and earlier, View 15.13, the Small Network Cluster and Member Table View was used to enter the cluster and member information for small network populated cluster/member routing. For 5E9(1) and later, this view is no longer available.

For 5E9(1) and later, to enter routing data to the STP pair located in the small network, either View 15.9 or View 15.18 can be used. If View 15.18 is used, only the routing data to the STP pair can be populated when the office does not purchase the ELINK and FPCR secured features.

4. CCS7 CAPACITY IMPROVEMENT

4.1 Feature Definition

The CCS7 Capacity Improvement feature is available for 5E9(2) and later and is assigned feature number 99-5E-1136. This feature increases the CCS7 call capacity by upgrading all hardware from SSI (Small Scale Integration) to IRN (Integrated Ring Node) technology. The CNI ring frame is still a single cabinet, but SSI equipment shelves are replaced by either IRN 5-node or 8-node shelves.

The bottom shelf can contain five nodes, namely, a Ring Peripheral Controller Node, three Link Nodes, and a Direct Link Node. In addition, the upper two shelves can be configured with eight Link Nodes each, allowing a total of 19 link pairs on the CNI Ring.

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With these changes the maximum number of CCS7 link terminations is increased from 5 to 19 pairs. The number of groups is increased from 2 to 6.

4.2 Translation Requirements

New and Modified Views			
RC View	**Record Number**	**Div.**	**Sec.**
15.2	5012	9	2B
15.3	5013	9	2C
15.17	5027	9	2Q

To accommodate additional link nodes, the valid entry ranges have been expanded for the GROUP and MEMBER fields on three views: Link Information (View 15.2), Logical to Physical (View 15.3), and Protocol Link Parameters (View 15.17). See the corresponding TG-5 sections for specific values and restrictions.

Figure 1 SAMPLE CNI CONFIGURATION

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SEC. 2: CNI DATA BASE RECENT CHANGE VIEWS

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SEC. 2A: 5011 RECORD
OFFICE IDENTIFICATION (VIEW 15.1) - RC_CNIOFF

1. GENERAL

This view is used to identify the local office and its function with respect to its place in the CCS network. This view may be entered only once for each office.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *OFFICE IDENTIFICATION

Description: The 8-character alphanumeric office identification.

Required Field.
Valid Entries: 1 - 8 characters

Data Rules:

For 5E5 and later, this ID must correspond with the OFFICE ID defined on the OFCOPT form (RC view 8.1, 5509 Record).

2.3 LOCAL FUNCTION

Description: This is a function code identifying the type of office. 0 indicates no function. and is the only value used for LEC networks. A value of 1 is commonly used in the AT&T network.
Valid Entries: 0 - 32767

2.4 REGION NUMBER

Description: This field defines the codes for routing messages across a network. The digits from this field are the 4th and 5th digits of the LOCAL POINT CODE field. The number 32 indicates no region and is used for a LEC network that does not require a region identification in the LOCAL POINT CODE. The other entries are used for routing messages across the AT&T network regions. AT&T has defined seven regions within their network.
Valid Entries: 00 - 32

2.5 LIS DESTINATION

Description: This 5-digit number shows the link integrity destination or node number where administration of encryption information is performed.

The value 0 indicates none and is used by LEC telephone companies that do not have encrypted links. AT&T has encrypted links for military applications and must have a value from 1 through 32767 entered.

Software Release: 5E5 and 5E6
Valid Entries: 0 - 32767

2.6 LOCAL POINT CODE

Description: This 9-digit number is the point code assigned to this particular office. The number is divided into either three or four subfields depending on whether the office is a LEC or an AT&T switch.

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The network identifiers for the network may be provided by the ANSI T1S1 committee.
Valid Entries: 9-digit point code in the following format: AAABBCDDD

LOCAL POINT CODE			
Type	**Format**	**Valid Entries**	**Description**
LEC Large Networks	AAA	005 -253	Network ID
	BBC	000 - 255	Cluster ID
	DDD	000 - 255	Member Number
LEC Small Networks	AAA	001-004	Network ID
	BBC	000 - 255	Cluster ID
	DDD	000 - 255	Member Number
AT&T Networks	AAA	254	Network ID
	BB	00 - 31	Region Number
	C	0 - 7	Cluster ID
	DDD	000 - 255	Member Number

Data Rules:

The AT&T Region Number, BB, must match the REGION NUMBER entry on this view.

2.7 LOCAL CLLI

Description: This 11-character code is the Common Language Location Identifier assigned to the particular office. The CLLI is useful in uniquely identifying switches, STPs and SCPs in the network and is useful in reports and trunk diagnostics.
Valid Entries: An 11-digit code in the following format: AAAABBCCDDD

LOCAL CLLI	
Format	**Definition**
AAAA	The first four alphabetic characters represent the city or place
BB	The next two alphabetic characters represent the state
CC	The next two alphanumerics represent the building identifier
DDD	the last three alphanumerics represent the company or building subdivision

Data Rules:

This code should agree with the CLLI codes other switches, STPs and SCPs will use to reference this switch.

2.8 ANSI STD PC IND

Description: Is the point code format represented in ANSI format? The ANSI Standard Point Code Indicator is a verify-only field that is used to specify the local office point code format. The point code format is represented in either ANSI or non-ANSI format. The ANSI format is used in LEC networks only, and the non-ANSI format is used in AT&T networks only. The field contains a "Y" for LEC networks and "N" for AT&T networks.

Software Release: 5E9(1) and later

Data Rules:

When ANSI STD PC IND is "Y", ALIAS PCs cannot be entered.

2.9 CRIT EVENT NUMBER

Description: The CRIT EVENT NUMBER specifies the maximum number of CNCE (CCS Network Critical Event) messages that will be printed on the ROP during a specified time interval. When the number of messages exceeds this threshold, some messages will be dropped and will not appear on the ROP. The time interval is defined in the CRIT EVENT TIMER field.

Software Release: 5E9(1) and later
Required Field.

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Default: 5
Valid Entries: 1 - 32767

2.10 CRIT EVENT TIMER

Description: The CRIT EVENT TIMER specifies the time interval used to manage the number of printed CNCE messages. See the description for the CRIT EVENT NUMBER field above.

Software Release: 5E9(1) and later
Required Field.
Default: 60
Valid Entries: 1 - 3600 (seconds)

2.11 LOW PRI SRST

Description: The LOW PRI SRST field determines the time interval for transmitting SRST (Signaling Route Set Test) messages for alternate, or lower priority, routes that are unavailable. When a non-current alternate route is unavailable, SRST messages are sent at regular intervals until the route becomes available.

Software Release: 5E9(1) and later
Required Field.
Default: 600
Valid Entries: 0 - 86400, in increments of 30 (seconds)

NI LATA ROUTING FOR AT&T ONLY

The list of ALIAS PC fields allows up to 15 alias point codes.

2.12 ALIAS PC

Description: Alias point codes are point codes assigned to the AT&T toll switch only. These are in addition to its local office point code. The purpose of alias point codes is to facilitate LATA routing of circuit- or call-associated messages. They are used for NI (Network Interconnect) messages only.

The 9-digit code should be in the AT&T format as follows.

ALIAS PC

Description	Valid Entries
Network ID	254
Region Number	00 - 31
Cluster ID	0 - 7
Member	000-255

Software Release: 5E9(1) and later
Valid Entries: 9 digits

OFFICE IDENTIFICATION DATA

*1. OFFICE ID office1 4. LIS DESTINATION 00000
2. LOCAL FUNCTION 00000 5. LOCAL POINT CODE 232210089
3. REGION NUMBER 32 6. LOCAL CLLI CHGOIL5ETLL

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Figure 1 SAMPLE OFFICE IDENTIFCATION VIEW 5E5 - 5E6 SOFTWARE RELEASES

```
                    OFFICE IDENTIFICATION DATA

*1. OFFICE ID      office1
 2. LOCAL FUNCTION 00000
 3. REGION NUMBER  32
 5. LOCAL POINT CODE 232210089
 6. LOCAL CLLI      CHGOIL5ETLL
```

Figure 2 SAMPLE OFFICE IDENTIFICATION VIEW 5E7 SOFTWARE RELEASE

```
                    OFFICE IDENTIFICATION DATA

*1. OFFICE ID      office1
 2. LOCAL FUNCTION 00000
 3. REGION NUMBER  32
 4. LOCAL POINT CODE 232210089
 5. LOCAL CLLI      CHGOIL5ETLL
```

Figure 3 SAMPLE OFFICE IDENTIFICATION VIEW 5E8 SOFTWARE RELEASE

```
                    OFFICE IDENTIFICATION DATA

*1. OFFICE ID        OFFICE1          NI LATA ROUTING FOR AT&T ONLY
 2. LOCAL FUNCTION   00000              10. ALIAS POINT CODE (APCLIST)
 3. REGION NUMBER    32               ROW ALIAS PC     ROW ALIAS PC
 4. LOCAL POINT CODE 232210089         1 _________      9 _________
 5. LOCAL CLLI       CHGOIL5ETLL       2 _________     10 _________
   ANSI STD PC IND   Y                 3 _________     11 _________
 7. CRIT EVENT NUMBER 005              4 _________     12 _________
 8. CRIT EVENT TIMER  060              5 _________     13 _________
                                       6 _________     14 _________
 TIMER FOR LOW PRI RTE                 7 _________     15 _________
 9. LOW PRI SRST 600                   8 _________
```

Figure 4 SAMPLE OFFICE IDENTIFICATION VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2B: 5012-1/2 RECORD
LINK INFORMATION (VIEW 15.2) - RC_LCDT

1. GENERAL

This view is used to define the signaling links. Each link node that is equipped on the CNI ring must be defined on this view. Since the CNI links are equipped in pairs, there is always an even number of signaling links entered with this view.

NOTE: The signaling link must be out of service and the MAJOR STATE field must be set to "UNA" to update the link information.

2. FORM ENTRIES - 5012-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *GROUP

Description: This field indicates which group the link node is attached to. For 5E9(1) and earlier, the CNI cabinet has two groups (00 and 32); for 5E9(2) and later, it has six groups (00, 01, 02, 32, 33, 34). A link pair must have a link on two of these groups.

Required Field.
Valid Entries:
- For 5E9(1) and earlier: 00 and 32
- For 5E9(2) and later: 00, 01, 02, 32, 33, 34

2.3 *MEMBER

Description: This indicates the particular link node that is being used in the group.

Normally values 1 and 3 through 8 are used for link nodes. Node position 0 is always the RPCN (Ring Peripheral Controller Node) and 2 is reserved for a DLN (Direct Link Node). If an office is not planning for a DLN, the 2 position may be used for a link node.

Required Field.
Valid Entries:
- For 5E9(1) and earlier: 1 - 6
- For 5E9(2) and later: 1 - 8

Data Rules:

For 5E9(2) and later, when GROUP is 0 or 32, MEMBER must be in the range 1 - 6, inclusive.

2.4 LINK SPEED

Description: This field indicates the actual link speed in kbps multiplied by 100. The only values supported by the 5ESS Switch are 48 and 560.

All CCS7 links are high speed and must have a value of 560 entered.
Valid Entries: 24, 48, and 560

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2.5 ENCRYPTED

Description: This field indicates whether or not the links are encrypted. Local Exchange Carrier links are currently not encrypted and should have "NOTENC" entered. Typically, AT&T links are encrypted and must have "ENC" entered.

Valid ENCRYPTED Entries

Entry	Definition
NOTENC	Not encrypted
ENC	Encrypted

2.6 #LINK TYPE

Description: This field indicates the type of link used for signaling between the 5ESS Switch and a signaling end point. For 5E8 and earlier, the A-links are the only links used between a 5ESS Switch and the STP; therefore, the value of "A" should be entered. For 5E9(1) and later, either the A-links or E-links may be specified. A-links are used between the 5ESS Switch and an adjacent STP; E-links are used between the 5ESS Switch and a non-adjacent STP; F-links are used between two signaling end points.

Valid LINK TYPE Entries

Entry	Definition
A	A-links, Links used between a 5ESS Switch and an adjacent STP.
E	E-links, Links used between a 5ESS Switch and an non-adjacent STP.
F	F-links, Links used between two signaling end points.

2.7 FAR - END FUNCTION

Description: This 5-digit number identifies the function of the far node (usually an STP). For CCS7 links in an LEC environment, this field should be set to 0.
Valid Entries: 0 - 32767

2.8 FAR - END STP

Description: This field is used for load balancing. The 5ESS Switch supports only the "EVEN" and "ODD" values. All links between the 5ESS Switch and one of the STP pair, called a link set, must have the same value (for example, "EVEN"). The links from the 5ESS Switch to the other local STP in the pair, another link set, must have the other value "ODD".

Valid FAR - END STP Entries

Entry	Definition
EVEN	Value designating link between 5ESS Switch and one of the STP pair
ODD	Value designating link between the 5ESS Switch and the other (not the "EVEN") of the STP pair
NOSTP	No STP link

2.9 FAR - END REGION

Description: This 2-digit code designates the far-end region. If the far-end office is in a LEC network, the code 32 is used. Several codes are used to designate the various AT&T regions.
Valid Entries: 00 - 32

2.10 FAR - END PNT CODE

Description: This 9-digit code designates the point code of the STP at the far-end of the link.

The point code is divided three subfields for LEC networks and four subfields for AT&T networks.
Valid Entries: 9 digits

2.11 MATE GROUP

Description: This field specifies the link node group that is mated or paired with the group entered in the GROUP field. Since link node groups are not mated for LEC offices, the value 00 must be entered for

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them. For AT&T offices, the alternate group in the pair (pairs 00 and 32, 01 and 33, 02 and 34) must be entered here.
Valid Entries:
- For 5E9(1) and earlier: 00 and 32
- For 5E9(2) and later: 00, 01, 02, 32, 33, 34

2.12 MATE MEMBER

Description: This field identifies the link node position within the paired link. For LEC offices, this field should be left blank. For AT&T offices, the MATE MEMBER should have the same number as the MEMBER field.
Valid Entries:
- For 5E9(1) and earlier: 1 - 6
- For 5E9(2) and later: 1 - 8

2.13 FAR - END CLLI

Description: This 11-character code is the Common Language Location Identifier assigned to the far-end STP. The CLLI is useful in uniquely identifying switches, STPs and SCPs in the network and is useful in reports and trunk diagnostics.

- The first four alphabetic characters represent the city or place,
- the next two alphabetic characters represent the state,
- the next two alphanumerics represent the building identifier and
- the last three alphanumerics represent the company or building subdivision.

Valid Entries: 11 characters

2.14 MAJOR STATE

Description: This is the code used to indicate the status of the link. This field must be set to "UNA" before any CNI links can be added, deleted or changed.

Valid MAJOR STATE Entries

Entry	Definition
UNE	Software Release: 5E9(1) and earlier. Unequipped.
UNA	Unavailable and cannot be used to carry traffic.
AVL	Available for normal traffic.

Data Rules:

The signaling link must be Manual Out of Service (MOOS) to update this field. (This is done with an 5ESS Switch Input Message.)

3. FORM ENTRIES - 5012-2 RECORD

CCIS6 SIGNALING

The following fields (Section 3.1 - Section 3.6) apply to CCIS6 signaling across low speed links (LINK SPEED = 48) and must be left blank for CCS7 or CCIS6 signaling across high speed links (LINK SPEED

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= 560).

3.1 DUAL VFL

Description: This field indicates how the messages are transmitted over the DUAL VFLs.
Valid Entries: SIMPLEX or DUPLEX

3.2 LAYER NUMBER

Description: When a CCIS6 link is assigned to a pool, it must be assigned a unique layer number for the specified pool. A pool may be assigned as many as 19 layers.
Valid Entries: 1 - 19

3.3 VOICE ACCESS TEST

Description: This field is used to load balance the link nodes across four voice access test circuits.
Valid Entries: 1 - 4

3.4 SELF LOOPED

Description: This field indicates what type of synchronization a link has. For a link to operate successfully, the end office is set to "SYUEVEN" and the STP is set to "SYUODD". This prevents the CCIS6 links from being accidentally cross connected (self-looped) and appearing to be in service.

Valid SELF LOOPED Entries

Entry	Definition
SELFL	Self Looped
SYUEVEN	Synchronization even
SYUODD	Synchronization odd

3.5 POOL NUMBER

Description: This value is the link set between the 5ESS Switch and the local STP at the far-end. All signaling links to the same STP must have the same link set. The link pair to the other STP must have a different value.
Valid Entries: 1 - 255

3.6 COMBINED POOL

Description: All links in a link set must be in the same combined link set. Only one combined link set is allowed. This value must be different from the two-link set values. A value of 0 indicates that no COMBINED LINK SET is assigned.
Valid Entries: 0 - 255

CCS7 SIGNALING

The following fields (Section 3.7 - Section 3.9) apply to CCS7 or CCIS6 signaling across high speed links (LINK SPEED = 560) and must be left blank for a CCIS6 signaling across low speed links (LINK SPEED = 48).

3.7 LINK SET

Description: This value is the link set between the 5ESS Switch and the local STP at the far-end.

All signaling links to the same STP must have the same link set. The link pair to the other STP must have a different value.
Valid Entries:

- 5E5 and 5E6: 0 - 255

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- 5E7 and later: 0 - 511

3.8 COMBINED LINK SET

Description: All links in a link set must be in the same combined link set. Only one combined link set is allowed for each STP pair. This value must be different from the two-link set values.
Valid Entries:
- 5E5 and 5E6: 0 - 255
- 5E7 and later: 0 - 511

3.9 SIGNAL LINK CODE

Description: This 2-digit number is similar to a circuit identification code of trunks. The value agrees with the corresponding value at the node on the other end of the signaling link. This is a member number within a link set at the adjacent STP.
Valid Entries: 0 - 15

```
 SCREEN 1 OF 2
                          LINK INFORMATION

 *1. GROUP           00                  13. MAJOR STATE      AVL
 *2. MEMBER          01                        CCIS 6 SIGNALING
  3. LINK SPEED      560                 14. DUAL VFL         _______
  4. ENCRYPTED       NOTENC                    15. LAYER NUMBER     __
  5. LINK TYPE       A                   16. VOICE ACCESS TST _
  6. FAR END FUNCTION 00000                    17. SELF LOOPED      _______
  7. FAR END STP     EVEN                 18. POOL NUMBER      ___
  8. FAR END REGION  32                   19. COMBINED POOL    ___
  9. FAR END PNT CODE 232040000                    CCS 7 SIGNALING
 10. MATE GROUP      00                   20. LINK SET         1
 11. MATE MEMBER     00                   21. COMBINED LNK SET 3
 12. FAR END CLLI    STPAIL5ETLL               22. SIGNAL LINK CODE 01
```

```
SCREEN 2 OF 2
                          LINK INFORMATION

      CCS 7 SIGNALING

#23. RECEIVE QUEUE     2006                LINK INTERFACE TYPE LI
#24. CONG ONSET THRSH  300
#25. CONG ABTMNT THRSH 20
#26. TRANSMIT QUEUE    16000
#27. NORMAL AERM SU    4
#28. EMERGENCY AERM SU 1
#29. RETRANSMIT QUEUE  910
    FACILITY          MODEM
    MEDIUM            TERRESTRIAL
    ERR CORRTN MODE   BASIC
```

Figure 1 SAMPLE LINK INFORMATION VIEW 5E5 THROUGH 5E11 SOFTWARE RELEASES

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```
SCREEN 1 OF 2
                    LINK INFORMATION

*1. GROUP          00                  13. MAJOR STATE      AVL
*2. MEMBER         01                       CCIS 6 SIGNALING
 3. LINK SPEED     560                 14. DUAL VFL         _______
 4. ENCRYPTED      NOTENC                   15. LAYER NUMBER     __
#5. LINK TYPE      A                   16. VOICE ACCESS TST _
 6. FAR END FUNCTION 00000                 17. SELF LOOPED      _______
 7. FAR END STP    EVEN                18. POOL NUMBER      ___
 8. FAR END REGION 32                  19. COMBINED POOL    ___
 9. FAR END PNT CODE 232040000                CCS 7 SIGNALING
10. MATE GROUP     00                  20. LINK SET         1
11. MATE MEMBER    00                  21. COMBINED LNK SET 3
12. FAR END CLLI   STPAIL5ETLL               22. SIGNAL LINK CODE 01
```

```
SCREEN 2 OF 2
                    LINK INFORMATION

      CCS 7 SIGNALING

#23. RECEIVE QUEUE     2006              LINK INTERFACE TYPE LI
#24. CONG ONSET THRSH  300
#25. CONG ABTMNT THRSH 20
#26. TRANSMIT QUEUE    16000
#27. NORMAL AERM SU    4
#28. EMERGENCY AERM SU 1
#29. RETRANSMIT QUEUE  910
   FACILITY         MODEM
   MEDIUM           TERRESTRIAL
   ERR CORRTN MODE  BASIC
```

Figure 2 SAMPLE LINK INFORMATION VIEW 5E12 AND LATER SOFTWARE RELEASES

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SEC. 2C: 5013 RECORD
LOGICAL TO PHYSICAL (VIEW 15.3) - RC_PHYS

1. GENERAL

This view is used to assign logical links to CCIS6 links or to CCS7 links that are used to transport CCIS6 messages (ECIS6 or DCIS6).

A single CCS7 link can have up to 8 logical CCIS6 links assigned. This view must also be populated for CCIS6 links and only LOGICAL LINK VL0 should be assigned.

NOTE: Before this form can be entered, the associated link node must be made manually out-of-service and the corresponding RC/V view 15.2 must have MAJOR STATE set to "UNA".

1.1 Updating Or Deleting Logical Links

Logical links cannot be manipulated while active trunks are assigned. If the trunk counter (trk_cntr attribute in the lab6_pci relation) of the number of CCIS6 trunks currently using a link contains a value of 1 or greater, then trunks are assigned for this logical link. Any attempt to delete this view while a trunk is assigned to a logical link will fail. Also, any attempt to update a logical link to a value of 0 if a trunk is assigned to that logical link will fail.

2. FORM ENTRIES - 5013 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *GROUP

Description: This field indicates which group the link node is attached to. For 5E9(1) and earlier, the CNI cabinet has two groups (00 and 32); for 5E9(2) and later it has six groups (00, 01, 02, 32, 33, 34). A link pair must have a link on two of these groups.

Required Field.
Valid Entries:
- For 5E9(1) and earlier: 00 and 32
- For 5E9(2) and later: 00, 01, 02, 32, 33, 34

2.3 *MEMBER

Description: This field indicates the particular link node being used on the CNI frame. Normally values 1 and 3 through 8 are used for link nodes. Node position 0 is always the RPCN and 2 is reserved for a DLN.

Required Field.
Valid Entries:
- For 5E9(1) and earlier: 1 - 6
- For 5E9(2) and later: 1 - 8

Data Rules:

For 5E9(2) and later, when GROUP is 0 or 32, MEMBER must be in the range 1 - 6, inclusive.

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2.4 LOGICAL LINK

Description: This field indicates the logical link identification number.

A maximum of 8 unique logical links may be assigned to a CCS7 signaling link. A maximum of 1 logical link may be assigned to a CCIS6 signaling link.
Valid Entries: 1 - 2047

LOGICAL TO PHYSICAL

*1. GROUP 00 *2. MEMBER 05

3. LOGICAL LINK (SERVICELIST)

ROW	VIRTUAL LINK
1	VL0 0001
2	VL1 ____
3	VL2 ____
4	VL3 ____
5	VL4 ____
6	VL5 ____
7	VL6 ____
8	VL7 ____

Figure 1 SAMPLE LOGICAL TO PHYSICAL VIEW 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2D: 5014 RECORD
CRITICAL EVENTS VIEW 15.4 - RC_CET

1. GENERAL

This view is used to report CNCE (CCS (Common Channel Signal) Network Critical Events). A CCS critical event is an event occurring in the network as a result of an abnormality in the networks operation. The event is immediately outputted to the user, recorded to log files and forwarded to an appropriate center to be analyzed.

This view is already populated with an extensive set of standard input data which is considered to be appropriate for the 5ESS Switch and should not be manipulated.

2. FORM ENTRIES - 5014

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *EVENT NAME

Description: This field indicates what critical event will be printed in the report. A 12-character name or a 2-digit code that translates into one of the prestored events may be entered (refer to FIGURE 1 of this section for the valid entries).

2.3 DESTINATION

Description: This field indicates where the report will be sent.
Valid Entries: 000 - 255

Data Rules:

If the DESTINATION is specified, the MESSAGE TYPE and THRESHOLD must also be specified.

If more than one output list is specified, the numbers utilized for DESTINATION must be in ascending order (e.g., 1, 2, 3, 4, 5, ...).

2.4 MESSAGE TYPE

Description: This field indicates what type of critical event report will be printed.
Valid Entries:

Valid Report Entries

Entry	Definition
CMCESPRT	A short report will be printed with EVENT NAME, local or network time, identification of the associated hardware (point code, link set or group and member).
CMCELPRT	A long report will be printed with the same information as the short report with the addition of CLLI, link speed, link type, link protocol. If applicable, the report may also include the VFL identification, function number or subsystem number.

2.5 THRESHOLD

Description: This field indicates whether or not the report will be printed. With a THRESHOLD equal to 1, the report will always be printed and if 0 is entered, the report will be printed only on demand.

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CET NAME	VALUE
C6EMR	0
C6EMRPO	1
C6EMRE	2
C6POR	3
C6PORE	4
C6BOLR	5
C6BOLRE	6
C6BOFR	7
C6BOLX	8
C6BOLXE	9
C6BOFX	10
C6ACOER	11
C6ACOCOV	12
C6FLDER	13
C6FLDCOL	14
C6FLDSNT	15
C6FLDCOV	16
C6FLDPCR	17
C6MCON	18
C6MCOF	19
C6ACB	20
C6ACBFLD	21
C6MCB	22
C6PCR	23
C6PCRE	24
C7SPI	40
C7SPIPO	41
C7SPIE	42
C7LSF	43
C7LSFE	44
C7POR	45
C7PORE	46
C7BOLR	47
C7BOLRE	48
C7LCON1X	49
C7LCDIS1X	50
C7LCABM1X	51
C7LCON2X	52
C7LCDIS2X	53
C7LCABM2X	54
C7LCON3X	55
C7LCDIS3X	56
C7LCABM3X	57
C7ACOER	58
C7ACOCOV	59
C7FLDER	60
C7FLDCOL	61
C7FLDSNT	62
C7FLDCOV	63
C7MCON	64
C7MCOF	65
C7ACB	66
C7ACBFLD	67
C7MCB	68

Figure 1 SAMPLE CRITICAL EVENT NAMES AND VALUES

5ESS SWITCH
RECENT CHANGE 15.4
CRITICAL EVENTS

*1. EVENT NAME _____

2. OUTPUT LIST
MESSAGE
ROW DESTINATION TYPE THRESHOLD
1 ___ _____ _
2 ___ _____ _

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3 ___ _____ _
4 ___ _____ _
5 ___ _____ _

Figure 2 SAMPLE CRITICAL EVENTS VIEW

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SEC. 2E: 5015 RECORD
USERS VIEW DESCRIPTORS (VIEW 15.5) - RC_UVDT

1. GENERAL

This view is used to develop a table which contains a list of measurements that will be used in the measurement report. RC views 15.5 through 15.8 are used in conjunction to produce the measurement reports.

This view is already populated with an extensive set of standard input data considered to be appropriate for the 5ESS-2000 Switch. The standard data should not be manipulated but it may be necessary to create a customized report with this view.

- ***NOTE:*** Only Non-Fixed Format Reports can be updated or created. Non-Fixed Format Reports are indicated by a REPORT TYPE of "CMNFLPMEX", "CMNFDISKEX", "CMNFDISK" or "CMNFLPM" on the associated RC/V View 15.8 (see Division 9, Section 2h).

2. FORM ENTRIES - 5015 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *VIEW NAME

Description: This field is used to uniquely identify a measurement view in the UVDT (Users View Descriptor Table).

Required Field.
Valid Entries: 1 - 10 characters

2.3 MEASUREMENT ID

Description: This field is used to enter which measurements will be reported with this measurement view. A maximum of 30 entries can be selected and assigned to a view. The entries may be entered by using the MEASUREMENT ID name or value (refer to FIGURE 1 in this section). The descriptions for the entries in FIGURE 1 may be found in Lucent 5D5-190-120, CCS7 MEASUREMENTS AND REPORTS section.

MEASUREMENT ID	VALUE
ABOFL	0
ABOFS	1
ACUR	2
ACUS	3
ARRATT	4
ARREXR	5
ARRFLR	6
AURS	7
AURSTE	8
BLK0	9
BLK1	10
BLKG0	11
BLKG1	12
BUFSW	13
BYMSUR	14
BYMSUX	15
BYR	16
BYRX	17
BYRXTE	18
BYSR	19
BYSX	20

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BYX	21
CINIT0	22
CINIT0T	23
CINIT1	24
CINIT1T	25
CINIT2	26
CINIT2T	27
CINIT3	28
CINIT3T	29
CINIT4	30
CINIT4T	31
GTTUNBC	32
CLFA	33
CLFAT	34
CLFSP	35
CLFSPT	36
GTTUNNT	37
COFFDIF	38
CONFG	39
CONFGT	40
CRCER	41
CRCERTE	42
CUTOCUMSG	43
CUTOCUWDS	44
CUTORMSG	45
CUTORWDS	46
DMAFLT	47
DMAMISS	48
DRP6MSG1	49
DRP6MSG2	50
DRP6MSG3	51
DRP7MSG1	52
DRP7MSG2	53
DRP7MSG3	54
DRPEMSG1	55
DRPEMSG2	56
DRPEMSG3	57
EMR	58
EMRA	59
EMRAPO	60
EMRAPOT	61
EMRAT	62
EMRPO	63
EMRPOT	64
GTTPERFD	65
MRBADRTG	66
EMRSP	67
EMRSPPO	68
EMRSPPOT	69
EMRSPT	70
EMRT	71
CLF	72
CLFT	73
LSMSUTRAN	74
LSMSURECD	75
LSOCTTRAN	76
LSOCTRECD	77
LSOCTRETRN	78
RTESETUN	79
RTESETUNT	80
L7EMRPOT	81
L7EMRPO	82
L7EMRT	83
L7EMR	84
ERSEC	85
ERSECTE	86
IDLE	87
IFBPTER0	88
IFBPTER1	89
ILLEGAL	90
IMNPDIF	91
IMOFFDIF	92
INBOF	93
INCMUM	94
INIT0	95

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INIT0T	96
INIT1A	97
INIT1AT	98
INIT1B	99
INIT1BT	100
INIT2	101
INIT2T	102
INIT3	103
INIT3T	104
INIT4	105
INIT4T	106
INITBT	107
INITBTT	108
IPFMTER0	109
IPFMTER1	110
IPSM0	111
IPSM1	112
IUNOVLD0	113
IUNOVLD1	114
IUNOVLD2	115
L6ACOA	116
L6ACOATE	117
L6ACOB	118
L6ACOBTE	119
L6ACOFEA	120
L6ACOFEB	121
L6ACONEA	122
L6ACONEB	123
L6ACTAT	124
L6ACTBT	125
L6AFLT	126
L6BOFR	127
L6BOFX	128
L6BOLR	129
L6BOLRT	130
L6BOLX	131
L6BOLXT	132
L6BYTO3B	133
L6CBSMA	134
L6CBSMB	135
L6DIF	136
L6FLD	137
L6FLDT	138
L6MCOFEA	139
L6MCOFEB	140
L6MCONEA	141
L6MCONEB	142
L6MFLT	143
L6MGR	144
L6MGRV0	145
L6MGRV1	146
L6MGRV2	147
L6MGRV3	148
L6MGRV4	149
L6MGRV5	150
L6MGRV6	151
L6MGRV7	152
L6MGSR	153
L6MGSX	154
L6MGX	155
L6MGXV0	156
L6MGXV1	157
L6MGXV2	158
L6MGXV3	159
L6MGXV4	160
L6MGXV5	161
L6MGXV6	162
L6MGXV7	163
L6MRPBC	164
L6MRPNT	165
L6MRSBC	166
L6PCR	167
L6PCRT	168
L6POR	169
L6PORT	170

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L6POX	171
L6POXT	172
L6SUPR	173
L6SUPRV0	174
L6SUPRV1	175
L6SUPRV2	176
L6SUPRV3	177
L6SUPRV4	178
L6SUPRV5	179
L6SUPRV6	180
L6SUPRV7	181
L6SUPX	182
L6SUPXV0	183
L6SUPXV1	184
L6SUPXV2	185
L6SUPXV3	186
L6SUPXV4	187
L6SUPXV5	188
L6SUPXV6	189
L6SUPXV7	190
L6XBFLOOK	191
L6XBFOC	192
L7ACO	193
L7ACOFE	194
L7ACONE	195
L7ACOTE	196
L7AFLT	197
L7BOFR	198
L7BOFRT	199
L7BOLR	200
L7BOLRT	201
L7BYTO3B	202
L7DIF	203
L7FLALIGN	204
L7FLD	205
L7FLDT	206
L7LCDIS1X	207
L7LCDIS1XT	208
L7LCDIS2X	209
L7LCDIS2XT	210
L7LCDIS3X	211
L7LCDIS3XT	212
L7LCON1X	213
L7LCON1XT	214
L7LCON2X	215
L7LCON2XT	216
L7LCON3X	217
L7LCON3XT	218
L7LNKACTT	219
DCFLABN	220
DCFLABNT	221
DCFLXDA	222
DCFLXDAT	223
DCFLXER	224
DCFLXERT	225
DCFLXDC	226
DCFLXDCT	227
DCFLHWP	228
DCFLHWPT	229
DCFLSWP	230
DCFLSWPT	231
NACRTE	232
L7ORMSUOCT	233
L7TRMSUOCT	234
L7TSMSUOCT	235
L7ORIGMSUS	236
L7TRMDMSUS	237
L7THRSWMSU	238
L7MSINVSIO	239
MSUDISC0	240
MSUDISC1	241
MSUDISC2	242
FORRX	243
FORRXBY	244
RABT	245

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RABTER	246
SEVERSEC	247
L7MCOFE	248
L7MCONE	249
L7MFLT	250
L7MGSR	251
L7MGSX	252
L7MRPBC	253
L7MRPNT	254
MSG7LOOP	255
L7BADRTG	256
L7POR	257
L7PORT	258
L7POX	259
L7POXT	260
L7RBFOC	261
L7XBFLOOK	262
L7XBFOC	263
MGANSR	264
MGANSRV0	265
MGANSRV1	266
MGANSRV2	267
MGANSRV3	268
MGANSRV4	269
MGANSRV5	270
MGANSRV6	271
MGANSRV7	272
MGANSX	273
MGANSXV0	274
MGANSXV1	275
MGANSXV2	276
MGANSXV3	277
MGANSXV4	278
MGANSXV5	279
MGANSXV6	280
MGANSXV7	281
MGIAMR	282
MGIAMRV0	283
MGIAMRV1	284
MGIAMRV2	285
MGIAMRV3	286
MGIAMRV4	287
MGIAMRV5	288
MGIAMRV6	289
MGIAMRV7	290
MGIAMX	291
MGIAMXV0	292
MGIAMXV1	293
MGIAMXV2	294
MGIAMXV3	295
MGIAMXV4	296
MGIAMXV5	297
MGIAMXV6	298
MGIAMXV7	299
MGMSUR	300
MGMSUX	301
MGSLOOP	302
MINTRA	303
MRINTCH	304
MRNIAU	305
MRNIAUT	306
MRNRING	307
MRRGQ0	308
MRRGQ1	309
MRRING	310
MRSBCO6	311
MRSBCO7	312
MRSNTO6	313
MRSNTO7	314
MRUNVL	315
ORMSUOCT	316
TRMSUOCT	317
TSMSUOCT	318
ORIGMSUS	319
TRMDMSUS	320

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THRSWMSU	321
MSINVSIO	322
GTTUNBT	323
MXRG0	324
MXRG1	325
NACR	326
SPI	327
SPIA	328
SPIAPO	329
SPIAPOT	330
SPIAT	331
SPIPO	332
SPIPOT	333
SPISP	334
SPISPPO	335
SPISPPOT	336
SPISPT	337
SPIT	338
NOCMG	339
NOCMGT	340
NPPTER	341
OOSAU	342
OOSAUT	343
OOSCFG	344
OOSCFGT	345
OOSMN	346
OOSMNT	347
PANICS	348
PIOFLT	349
PTERTE	350
RACER0	351
RACER1	352
RBOF	353
RBOFBLK	354
RCOPTER0	355
RCOPTER1	356
RDFMTER0	357
RDFMTER1	358
RDINHER0	359
RDINHER1	360
RDWN	361
RDWNT	362
RGCNFG	363
RGCNFGT	364
RINTCH	365
RIPTER0	366
RIPTER1	367
RNIMN	368
RNIMNT	369
RPCBOF	370
RRBOVFLW0	371
RRBOVFLW1	372
RRBOVFLW1T	373
RRBOVFLW2	374
RRBOVFLW2T	375
RRBOVFLW3	376
RRBOVFLW3T	377
RSTTRMT	378
RTMSGSRC	379
RTOCUMSG	380
RTOCUWDS	381
SFPTER0	382
SFPTER1	383
SQL	384
SRNIAU	385
SRNIAUT	386
SUERA	387
SUERATE	388
SUERB	389
SUERBTE	390
SUR	391
SURORPH	392
SURXA	393
SURXATE	394
SURXB	395

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SURXBTE	396
SUSR	397
SUSX	398
SUX	399
SUXORPH	400
UNVL	401
WBOFN	402
WBOFNL	403
WBOFO	404
WRRGQ0	405
WRRGQ1	406
WSMER0	407
WSMER1	408
WTFMTER0	409
WTFMTER1	410
WXRG0	411
WXRG1	412
SC7R	413
L7RTGAUD	414
SC7RERPRO	415
SC7RERUA	416
SC7RERUATY	417
SC7RERUNE	418
SC7RGTR	419
SC7RLNN	420
SC7RLSS	421
SC7RNATL	422
SC7UDSX	423
SCR	424
RTGAUDFL	425
SCRERPRO	426
SCRERUA	427
SCRERUATY	428
SCRERUNE	429
SCRGTR	430
SCRLNN	431
SCRLSS	432
SCRNATL	433
SCSRTR	434
SCSRTX	435
SCSSTR	436
SCSSTX	437
ALSR	456
ALSRT	457
ALSRO	458
ALSROT	459

Figure 1 MEASUREMENT IDS AND VALUES

SCREEN 1 OF 2 5ESS Switch
USERS VIEW DESCRIPTORS

*1. VIEW NAME LABTEST

	3. MEASUREMENT ID	5. MEASUREMENT ID	7. MEASUREMENT ID
ROW 1	15	240	0
ROW 2	197	337	0
ROW 3	219	0	0
ROW 4	241	0	0
ROW 5	242	0	0
ROW 6	250	0	0

SCREEN 2 OF 2 USERS VIEW DESCRIPTORS

9. MEASUREMENT ID 11. MEASUREMENT ID

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ROW 1	0	0
ROW 2	0	0
ROW 3	0	0
ROW 4	0	0
ROW 5	0	0
ROW 6	0	0

Figure 2 SAMPLE USER VIEW DESCRIPTIONS VIEW 5E8 AND LATER SOFTWARE RELEASES

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SEC. 2F: 5016 RECORD EXCEPTION (VIEW 15.6) RC_EXCP

1. GENERAL

This view is used to build the Exception Table. This view allows a threshold to be assigned to the measurements on the Users View (defined on RC View 15.5). Also, a particular VIEW may be assigned to more than one group which enables a view to be printed at different thresholds. If a measurements threshold is exceeded, all measurements on the view will be placed into the report. Otherwise, a report will not be generated for this view.

This view is already populated with an extensive set of standard input data considered to be appropriate for the 5ESS Switch. The standard data should not be manipulated, but it may be necessary to create a customized report with an Exception Table.

- ***NOTE:*** Only Non-Fixed Format Reports can be updated or created. Non-Fixed Format Reports are indicated by a REPORT TYPE of "CMNFLPMEX", "CMNFDISKEX", "CMNFDISK" or "CMNFLPM" on the associated RC/V view 15.8 (see Division 9, Section 2H). Customized reports with exceptions must use a REPORT TYPE of "CMNFLPMEX" or "CMNFDISKEX".

2. FORM ENTRIES - 5016 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *GROUP NAME

Description: This field uniquely identifies a list of exceptions that are stored in the Exception Table.
Valid Entries: 1 - 16 characters

2.3 VIEW NAME

Description: This field indicates which form will have an Exception Table.
Valid Entries: 1 - 10 characters

2.4 MEASUREMENT ID

Description: This field is used to enter the measurements into the Exception Table.
Valid Entries:

The values of the MEASUREMENT IDs which have been assigned to the corresponding VIEW NAME (refer to FIGURE 1 in Division 9, Section 2E for the valid entries).

2.5 THRESHOLD

Description: This field is used to assign a threshold to a measurement type.
Valid Entries: 0 - 32767

- ***NOTE:*** If one of the thresholds is reached, a report will be generated.

5ESS SWITCH
SCREEN 1 OF 2 RECENT CHANGE 15.6
EXCEPTION

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*1. GROUP NAME _____ 4. SERVICE LIST
2. VIEW NAME _____ ROW MEASUREMENT ID THRESHOLD

1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____
10	_____	_____

5ESS SWITCH
SCREEN 2 OF 2 RECENT CHANGE 15.6
EXCEPTION

ROW	MEASUREMENT ID	THRESHOLD	ROW	MEASUREMENT ID	THRESHOLD
11	_____	_____	21	_____	_____
12	_____	_____	22	_____	_____
13	_____	_____	23	_____	_____
14	_____	_____	24	_____	_____
15	_____	_____	25	_____	_____
16	_____	_____	26	_____	_____
17	_____	_____	27	_____	_____
18	_____	_____	28	_____	_____
19	_____	_____	29	_____	_____
20	_____	_____	30	_____	_____

Figure 1 SAMPLE EXCEPTION VIEW 5E10 AND LATER SOFTWARE RELEASES

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SEC. 2G: 5017 RECORD
HISTORY FILE DESCRIPTOR (VIEW 15.7) RC_HFDT

1. GENERAL

This view is used to set up the history file descriptor table. The HFDT contains information which is used to construct history files that are added or copied to other history files to create new history files at certain intervals during the day. The history files contain the measurements which have been collected during the specific interval.

This view is already populated with an extensive set of standard input data which is considered to be appropriate for the 5ESS Switch. The standard input data should not be manipulated or customized because it may affect the reports that are using the same history file.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *RECORD NUMBER

Description: Enter the CNI history file descriptor table 5-digit record number.

Required Field.
Valid Entries: 0 - 29999

2.3 HISTORY FILE

Description: The name the CNI history file record.
Valid Entries: 1 - 14 characters

2.4 # ACTION

Description: The action for the CNI history file descriptor.

Required Field for 5E7 and later.

Valid ACTION Entries

Entry	Definition
ADD	Overwrite the history file and accumulate data from the source file into the history file to increase the time covered.
COPY	Does not increase the time period covered.
NULL	No action.

2.5 # DISPOSITION

Description: Enter the CNI history table descriptor table disposition. This is determined by the ACTION field. The DISPOSITION attribute value allows the system to determine what to do with the field value assigned to the attribute ACTION.This condition is necessary when the scheduler table does not use the updated HISTORY FILE. The process, therefore, does not need to proceed to the scheduler table. The DISPOSITION attribute value must be known.

Required Field for 5E7 and later.

Valid DISPOSITION Entries

Entry	Definition
CONT	Continue (the process proceeds according to the scheduler table)

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VOID	No effect on the process
STOP	The process terminates

Data Rules:

If ACTION is "ADD" or "NULL", this field must be "VOID".

IF ACTION is "COPY", this field must not be equal to "VOID".

2.6 SOURCE NAME

Description: Enter the name of the CNI history table descriptor source file. The source file is an intermediate file used to build the history files.
Valid Entries: 1 - 14 characters

2.7 WHEN

Description: A 3-digit number 001 to 288 to identify the 5 minute interval when the SOURCE file should be added or copied into a HISTORY file. The values indicate 5 minute intervals beginning at midnight, e.g., an entry of 13 is 5 minutes after 1:00 A.M.
Valid Entries: 1 - 288 (5 minute intervals)

2.8 COVERAGE

Description: Enter a 3-digit number to identify the 5 minute interval for the CNI history file descriptor table coverage. This entry indicates when a history file has accumulated its full interval.
Valid Entries: 001 - 288

Data Rules:

If ACTION is "COPY", a value of 0 should be entered.

2.9 # REPEAT

Description: This field indicates whether or not the history files will be updated at specific intervals.

Required Field for 5E7 and later.

Valid REPEAT Entries

Entry	Definition
REPEAT	The specified ACTION will be repeated by a 5-minute multiple of the value entered in the WHEN field e.g., if WHEN is 12; the ACTION will be repeated every hour beginning at midnight.
NOREPEAT	The specified ACTION takes place at the time specified by the 5-minute multiple of the value entered in the WHEN field beginning at midnight e.g., if WHEN is 10; the ACTION will occur at 00:50.

5ESS SWITCH

HISTORY FILE DESCRIPTOR

*1. RECORD NUMBER 00010 5. SOURCE NAME L15M
2. HISTORY FILE C30M 6. WHEN 003
3. ACTION ADD 7. COVERAGE 006
4. DISPOSITION VOID 8. REPEAT REPEAT

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Figure 1 SAMPLE HISTORY FILE DESCRIPTOR VIEW 5E5 AND 5E6 SOFTWARE RELEASES

HISTORY FILE DESCRIPTOR

*1. RECORD NUMBER 00010	5. SOURCE NAME L15M
2. HISTORY FILE C30M	6. WHEN 003
#3. ACTION ADD	7. COVERAGE 006
#4. DISPOSITION VOID	#8. REPEAT REPEAT

Figure 2 SAMPLE HISTORY FILE DESCRIPTOR VIEW 5E7 AND LATER SOFTWARE RELEASES

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SEC. 2H: 5018 RECORD
SCHEDULE REPORTING (VIEW 15.8) RC_SCHD

1. GENERAL

This view is used to schedule the reports for generation and for printing. This view is already populated with a set of default values considered to be appropriate for the 5ESS Switch. The existing data should not be manipulated, however, it may be necessary to create a new report and it must be scheduled with this view.

When creating a customized report:

1. For a view with an Exception Table, use a REPORT TYPE of "CMNFLPMEX" or "CMNFDISKEX".

2. For a view with no Exception Table, use a REPORT TYPE of "CMNFDISK" or "CMNFLPM".

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *REPORT NAME

Description: Enter the CNI schedule table name.

Required Field.
Valid Entries: 1 - 16 characters

2.3 DESTINATION

Description: This field indicates where the report will be sent for printing or for analyzing. Enter the 3-digit number to show CNI schedule table destination.
Valid Entries: 000 - 255

2.4 REPORT TYPE

Description: This field represents the type of report generator that will be used to generate the report. Either the report generator or its translation may be entered.
Valid Entries:

- For 5E5 only: 0 - 40
- For 5E6 and later: 0 - 4, 6 - 10
- For 5E9(1) and later: 0 - 4, 6 - 10, 13

Valid REPORT TYPE Entries

REPORT GENERATOR	TRANSLA-TION	MEANING
AM30MPR	0	Signaling link 30-minute marginal performance report
AMMPR	1	Machine performance report
AMSEPR	2	Signaling equipment performance report
AMSNPR1	3	Signaling network performance report part 1
AMSNPR2	4	Signaling network performance report part 2 (available links only)
CMNFDISK	6	Regular nonfixed format disk report
CMNFDISKEX	7	Exception nonfixed format disk report
CMNFLPM	8	Regular nonfixed format 5-minute report
CMNFLPMEX	9	Exception nonfixed format 5-minute report

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CMRINGEX	10	Ring exception report
DMMPR	13	Software Release: 5E9(1) and later. Signaling link 15 minute machine resource performance report

2.5 GROUP NAME

Description: Enter the name of the CNI MOCT (Measurement Output Control Table) group from View 15.6. Leave blank if the exception report does not exist.
Valid Entries: 1 - 16 charaters

2.6 VIEW NAME

Description: Enter the CNI MOCT view name (from View 15.5).
Valid Entries: 1 - 10 characters

2.7 HISTORY FILE

Description: Enter CNI history file name (defined on RC View 15.7 or "LPM", "L15M") which is to be used for the measurement report.
Valid Entries: 1 - 14 characters

2.8 ACTIVATION TIME

Description: This field indicates when the report will be run. Enter the schedule table activation time. The values are minutes, with 0 beginning at midnight.
Valid Entries: 0 - 1440 (minutes)

2.9 REPEAT

Description: Enter the number of times the report will be generated in a day (i.e., an hourly report can be generated 24 times). If this field has a value of 0, the report will be generated by demand only.
Valid Entries: 1 - 288

2.10 EMPTY

Description: This field indicates whether or not an empty report will be printed.

Valid EMPTY Entries

Entry	Definition
1	An empty report will be printed.
0	An empty report will not be printed.

2.11 POLLAUTO

Description: Enter the output method for polling.

Valid POLLAUTO Entries

Entry	Definition
0	Polled
1	Automatic
2	Both

2.12 PRT DELAY

Description: Enter the number of seconds to delay the printing of the report (the maximum is 300 seconds).
Valid Entries: 0 - 300 (seconds)

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5ESS SWITCH

SCHEDULE REPORTING

*1. REPORT NAME A30MPR30 5. VIEW NAME A30MPR
2. DESTINATION 102 6. HISTORY FILE L30M
3. REPORT TYPE 00 7. ACTIVATION TIME 0000
4. GROUP NAME A30MPR30 8. REPEAT 048
9. EMPTY 1
10. POLLAUTO 1
11. PRT DELAY 60

Figure 1 SAMPLE REPORT ENTRIES VIEW 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2I: 5019 RECORD
CLUSTER ROUTING DATA (VIEW 15.9) RC_CLUST

1. GENERAL

This view defines the data necessary for CCS7 message routing based on the Network ID and cluster (middle 3 digits of the Point Code for LEC networks and the 6th digit for AT&T networks). This view supports cluster level routing to local and nonlocal networks.

The FLAG/ROUTING FLAG value on this view defines how signaling route status (i.e. TFP TransFer Prohibit, TFA TransFer Allow) is recorded for this network ID and cluster. Based on FLAG/ROUTING FLAG values the recording of route status is done at the cluster or member level and affects the routing of CCS7 messages.

A Nonlocal Network ID is an ID other than the local Network ID that is assigned on RC View 15.1 in the LOCAL POINT CODE field.

To send a CCS7 message to any point code, the cluster routing data for that destination must be assigned as follows:

- for each local adjacent STP cluster.
- for each large nonlocal adjacent STP.
- for each local network and cluster combination that contains members which are far-end offices terminating CCS trunks from the 5ESS office.
- for each STP where Global Title Translations are performed.
- for each SCP (Service Control Point) where routing information is stored for CCS7 based features (LIDB, NS800, APSDN and ASP).
- for each switch in the local network where LASS TCAP messages are sent.

NOTE: A cluster member table need only be populated once for any one cluster. For example, NS800 data base queries are routed to a particular cluster member and ISUP trunk signaling is routed to another member of the same cluster; the cluster member table is populated only once.

NOTE: The maximum number of nonlocal populated clusters (clusters in nonlocal network IDs) allowable is 384. The maximum number of local populated clusters is 128.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Description: Enter the Base and Control Number and Office Name on each record.

2.2 *NID

Description: This field represents the Network ID of the switch, STP or SCP that will be receiving the CCS7 messages. This is the first 3 digits of the DPC (Destination Point Code).
Valid Entries: 1 - 254

2.3 *CLUSTER

Description: This field provides the specific CLUSTER in the Local or Nonlocal Network where the CCS messages are to be sent. This is the second 3 digits of the DPC.

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NOTE: All Destination Point Codes that are entered on View 15.2 should have a cluster entry here.

For the LEC Network, enter 000 - 255. For the AT&T Network, this field contains both the Region and Cluster ID values. The first two digits represent the region with values from 00 through 31. The third digit is the Cluster ID number. Its range is from 0 through 7.

Required Field.

Valid CLUSTER Entries

Network	Format	Valid Entries
LEC	XXX	000 - 255
AT&T	XXY	000 - 317
	Region ID XX	00 - 31
	Cluster ID Y	0 - 7

2.4 # FLAG

Description: This field indicates the type of routing that will take place. The name of this field was changed to ROUTING FLAG in 5E9(1). The FLAG field name applies to 5E8 and earlier.

Software Release: 5E8 and earlier
Required Field for 5E7 - 5E8.
Valid Entries:

Valid FLAG Entries

Entry	Definition
CLS	Software Release: 5E7 - 5E8. Combined Linkset is used when routing to a local/nonlocal nonadjacent STP in a large network. When that cluster only has 1 member.
CPOPC	Software Release: 5E7 - 5E8. Cluster Level Only Populated Cluster is used when infrequently routing to a nonlocal populated cluster (small number of members). This conserves on memory because network management is only provided at the cluster level.
LS	Software Release: 5E7 - 5E8 Link Set is used for a single link to a local/nonlocal adjacent STP in a large network.
RPOPC_C	Software Release: 5E7 - 5E8. Remote Populated Cluster Level Routing is used for all other routing. Network management is provided at the member level.

CAUTION: A FLAG value of CLS may only be used for describing a route to a cluster when that cluster contains a SINGLE member. If the cluster contains (or ever would contain) MORE THAN ONE member the flag value CLS is NOT correct and would have a negative impact on the network. (Typically used to describe routes to non-adjacent STPs)

CAUTION: A FLAG value of CPOPC has very limited application. This FLAG value causes network management to be done on a cluster level for a populated cluster (i.e. if a transfer prohibit, restrict, or allow is received for any member in the cluster it is ignored. Only Transfer Cluster messages TCP/TCR/TCA are processed). Incorrect use of this routing flag would have a negative impact on the network. One application of this FLAG may be for describing routes to clusters on which you do not wish to keep Network Management status at the member level such as for LASS connectivity outside the local network.

2.5 # ROUTING FLAG

Description: This field indicates the type of routing that will take place. This field was called FLAG for 5E8 and earlier.

Software Release: 5E9(1) and later
Required Field.
Valid Entries:

Valid ROUTING FLAG Entries

Entry	Definition

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CLU_O	Software Release: 5E9(1) and later. Routing is based on only the network cluster fields of the point code. It is used to identify cluster-only routing clusters.
POPCLU	Software Release: 5E9(1) and later. Routing is based on the network, cluster, and member (if the member is exceptional) fields of the point code. It is used to identify populated clusters. A populated cluster is a group of signaling points, all of which have the same network and cluster in their point codes.
UPOPCLU	Software Release: 5E9(1) and later. Routing is based on the network and cluster fields of the point code. It is used to identify unpopulated clusters. An unpopulated cluster is a signaling point in a network that has a unique cluster number.

CAUTION: A ROUTING FLAG value of UPOPCLU may only be used for describing a route to a cluster when that cluster contains a SINGLE member. If the cluster contains (or ever would contain) MORE THAN ONE member the ROUTING FLAG value UPOPCLU is NOT correct and would have a negative impact on the network. (Typically used to describe routes to adjacent and non-adjacent STPs)

CAUTION: A ROUTING FLAG value of CLU_O has very limited application. This ROUTING FLAG value causes network management to be done on a cluster level for a populated cluster (i.e. if a transfer prohibit, restrict, or allow is received for any member in the cluster it is ignored. Only Transfer Cluster messages TCP/TCR/TCA are processed). Incorrect use of this routing flag would have a negative impact on the network. One application of this ROUTING FLAG may be for describing routes to a cluster on which you do not wish to keep Network Management status at the member level such as for LASS connectivity outside the local network.

5E8 AND EARLIER , TO 5E9 AND LATER, FLAG VALUE EQUIVALENCIES

GENERIC	FLAG VALUE	DESCRIPTION
5E8	CLS	Software Release: 5E7 - 5E8. Combined Linkset is used when routing to a local/nonlocal nonadjacent STP in a large network. When that cluster only has 1 member.
5E9	UPOPCLU	Software Release: 5E9(1) and later. Routing is based on the network and cluster fields of the point code. It is used to identify unpopulated clusters. An unpopulated cluster is a signaling point in a network that has a unique cluster number.
5E8	CPOPC	Software Release: 5E7 - 5E8. Cluster Level Only Populated Cluster is used when infrequently routing to a nonlocal populated cluster (small number of members). This conserves on memory because network management is only provided at the cluster level.
5E9	CLU_O	Software Release: 5E9(1) and later. Routing is based on only the network cluster fields of the point code. It is used to identify cluster-only routing clusters.
5E8	LS	Software Release: 5E7 - 5E8 Link Set is used for a single link to a local/nonlocal adjacent STP in a large network.
5E9	UPOPCLU	Software Release: 5E9(1) and later. Routing is based on the network and cluster fields of the point code. It is used to identify unpopulated clusters. An unpopulated cluster is a signaling point in a network that has a unique cluster number.
5E8	RPOPC_C	Software Release: 5E7 - 5E8. Remote Populated Cluster Level Routing is used for all other routing. Network management is provided at the member level.
5E9	POPCLU	Software Release: 5E9(1) and later. Routing is based on the network, cluster, and member (if the member is exceptional) fields of the point code. It is used to identify populated clusters. A populated cluster is a group of signaling points, all of which have the same network and cluster in their point codes.

2.6 # LS

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Description: The name of this field was changed to PRI ROUTE in 5E9(1). The LS field name applies to 5E7 - 5E8. See PRI ROUTE for usage information.

2.7 # PRI ROUTE

Description: This field tells what specific link (or linkset) will be used for the routing of the messages. For 5E9(1) and later, if this field is 0, CCS7 message routing is done on the member level only.

This field was called LS in 5E7 - 5E8.

Required Field for 5E7 and later.
Valid Entries:
- For 5E7 - 5E8: 1 - 511
- For 5E9(1) and later: 0 - 511

Data Rules:

If "LS" is entered in the FLAG field, use the LINK SET value on the 15.2 View corresponding to the particular local STP. Otherwise, for 5E7 and later, use the same COMBINED LINK SET value that is used on the 15.2 View that corresponds to the local STP.

For 5E9(1) and later, if PRI ROUTE is the same as the LINK SET value on the corresponding 15.2 View, then the following must be true.

- The NID on this view must match the first three digits (network identifier) of the FAR END PNT CODE on the 15.2 View, and the CLUSTER must match the middle three digits (cluster number) of the FAR END PNT CODE.

- If the link set is part of a combined link set (i.e., a value is entered in the COMBINED LINK SET field of the 15.2 View), and the combined link set contains another direct linkset (i.e., another LINK SET is associated with the same COMBINED LINK SET on a 15.2 View), then the other LINK SET must be the ALT1 ROUTE on this view. The ALT2 ROUTE may be entered only if the ELINK secured feature has been activated through Secured Feature ID 131 on the 8.22 View.

- If the link set is not part of a combined link set (i.e., a value is not entered in the COMBINED LINK SET field on the 15.2 View), then ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

If the PRI ROUTE matches the COMBINED LINK SET value on the 15.2 View, and the NID value is greater than 4, then the NID and CLUSTER values may not match the network identifier and cluster number of the corresponding FAR END PNT CODE on the 15.2 View. ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

When PRI ROUTE is 0, ALT1 ROUTE must be blank. When PRI ROUTE is greater than 0, it may not be the same as ALT1 ROUTE or ALT2 ROUTE.

CAUTION: If the PRI ROUTE field is set to 0, message routing is done on the member level ONLY and ONLY to those members with data populated on the 15.18 recent change view. When the PRI ROUTE field is set to 0, messages will not be routed to members of the cluster that do not have 15.18 data populated.

A/E-LINK

The following two fields (Section 2.8 - Section 2.9) support the Extended Access Links and Alternate A-Link Set Routing feature.

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2.8 ALT1 ROUTE

Description: The ALT1 ROUTE field specifies the link set to be used as the first alternate route between the 5ESS Switch and the STP.

Software Release: 5E9(1) and later
Valid Entries: 1 - 511

Data Rules:

When a value is entered in ALT1 ROUTE, it may not be the same as PRI ROUTE or ALT 2 ROUTE.

If ALT1 ROUTE is blank, ALT2 ROUTE must also be blank.

2.9 ALT2 ROUTE

Description: The ALT2 ROUTE field specifies the linkset to be used as the second alternate route between the 5ESS Switch and the STP.

Software Release: 5E9(1) and later
Valid Entries: 1 - 511

CLUSTER ROUTING DATA

*1. NID 232
*2. CLUSTER 232
#3. ROUTING FLAG POPCLU
#4. PRI ROUTE 3

A/E-LINK
5. ALT1 ROUTE ___
6. ALT2 ROUTE ___

Figure 1 SAMPLE CLUSTER ROUTING DATA VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2J: 5020 RECORD
SUBSYSTEM INFORMATION (VIEW 15.10) RC_SST

1. GENERAL

This view is available with the 5E5 Software Release and defines the requirements for internal routing of incoming CCS7 messages used for CCS7 based features (SSP800, LASS, LIDB, ASP, and APSDN). One screen display is entered for each subsystem number used for the CCS7 based features.

The Signaling Application View 8.17 (5537 Record) must be entered for each CCS7 based feature. The 15.10 view and the 15.11 view must be inserted prior to the 8.17 Recent Change View (DSAPP form (5537 Record)). The CNI database is not a relational database, therefore it does not directly interface with the 5ESS Switch relational database. Due to the differences between the two databases, if the 8.17 view is populated prior to the 15.10 and 15.11 views, the application is marked as prohibited and no call processing will occur for those application type calls. If 8.17 is entered before 15.10 and 15.11, the views must be deleted and then reinserted in the proper sequence.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Description: Enter the Base and Control Number and Office Name on each record.

2.2 *SUBSYSTEM

Description: This is a subsystem number used internally for routing CCS7 SCCP signaling messages or for internal CNI message routing.
Valid Entries:
- For 5E5 and 5E6: 0, 2 - 7, or 232 - 255
- For 5E7 and later: 2 - 3, 5 - 7, 232 - 255

Data Rules:

For 5E6 and later, SUBSYSTEM 3 must be defined to notify the network when the CMP is out of service for ISUP Routing.

SIGNAL ADDRESS

The following fields (Section 2.3 - Section 2.4) define the signaling addresses.

2.3 SIG GRP ADR

Description: This field tells CNI where to distribute incoming SCCP signaling messages for this SSN. The address is always set to 64 (the logical address of the 3B processor).

NOTE: Even if a subsystem wants to receive messages in the DLN, the Signaling Address is still set to 64, and the LOCAL INDEX field is used to direct the messages to the DLN.

Valid Entries: 0 - 64

2.4 SIG MEM ADR

Description: This field tells CNI where to distribute incoming SCCP signaling messages for this SSN. The member is always set to 0 to access the 3B processor.
Valid Entries: 0 - 15

2.5 SIG CHAN

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Description: This field tells CNI where to distribute incoming SCCP signaling messages for this SSN. The channel is the IMS channel number. For 5E5 and earlier a value of 128 should be entered. For 5E6 and later a value of 160 should be entered.
Valid Entries: 42 - 255

2.6 LOCAL INDEX

Description: This field is an index into a table of functions which the subsystem wants to have executed when an incoming message is received at a CCS7 node. There are 16 possible functions to choose from.

If the DLN is equipped, enter 14; otherwise enter 15.
Valid Entries: 0 - 15

Data Rules:

If "N" is entered in the DLN field on the OFCOPT form (5509 Record), then LOCAL INDEX must be 15. If "Y" is entered in the DLN field on the OFCOPT form, then DLNs (Direct Link Nodes) are equipped and LOCAL INDEX must be 14.

2.7 WANT PAUSE

Description: Does this subsystem want to receive pause and resume primitives from SCCP management? If "Y" is entered pause is received. If "N" is entered no pause is received. This field should have "N" entered, indicating to CNI that pause and resume primitives should not be received.
Valid Entries: Y, N

2.8 SIMP DUPL

Description: This field indicates whether a subsystem is a duplex system, i.e., it has a mate, or simplex system, i.e., it does not have a mate.

This field should always be set to "S".

Valid SIMP DUPL Entries

Entry	Definition
D	Duplex
S	Simplex

2.9 MGMT CHAN

Description: This field tells CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.). The channel is the IMS channel number.

NOTE: This channel must not be the same as the Signaling Channel.

For 5E5 and earlier, a value of 127 should be entered. For 5E6 and later, a value of 159 should be entered.
Valid Entries: 42 - 255

2.10 MATE SSN

Description: This field indicates the subsystem mate.

This field should always have a value of 0 entered.
Valid Entries: 0, 232 - 252, or 254

2.11 MATE PTCODE

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Description: This is the mate point code.

This field should always have a value of "000000000" entered.
Valid Entries: a 9-digit point code

MANAGEMENT ADDRESS

The following fields (Section 2.12 - Section 2.13) tell CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.).

2.12 MGMT GRP ADR

Description: This field tells CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.).

The address should be set to 64 (logical address of the 3B processor).
Valid Entries: 0 - 64

2.13 MGMT MEM ADR

Description: This field tells CNI where to send interprocess SCCP management primitives (traffic mix updates, UIS/UOS primitives about SSNs in the network, etc.).

The member should have a value of 0 entered to access the 3B processor and for SCCP signaling applications.
Valid Entries: 0 - 15

5ESS SWITCH
SUBSYSTEM INFORMATION

```
*1. SUBSYSTEM        251              7. SIMP DUPL    SIMPLEX
                                 8. MGMT CHAN        127
 SIGNAL ADDRESS                   9. MATE SSN          0
 2. SIG GRP ADR       64         10. MATE PTCODE  000000000
 3. SIG MEM ADR        0
                              MANAGEMENT ADDRESS
 4. SIG CHAN         128         11. MGMT GRP ADR      64
 5. LOCAL INDEX       14         12. MGMT MEM ADR       0
 6. WANT PAUSE   NO PAUSE
```

Figure 1 SAMPLE SUBSYSTEM INFORMATION VIEW 5E5 SOFTWARE RELEASE

SUBSYSTEM INFORMATION

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```
*1. SUBSYSTEM        251              7. SIMP DUPL    SIMPLEX
                                 8. MGMT CHAN        159
 SIGNAL ADDRESS                      9. MATE SSN          0
 2. SIG GRP ADR       64            10. MATE PTCODE  000000000
 3. SIG MEM ADR        0
                          MANAGEMENT ADDRESS
 4. SIG CHAN         128            11. MGMT GRP ADR      64
 5. LOCAL INDEX       14            12. MGMT MEM ADR       0
 6. WANT PAUSE   NO PAUSE
```

Figure 2 SAMPLE SUBSYSTEM INFORMATION VIEW 5E6 AND LATER SOFTWARE RELEASES

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SEC. 2K: 5021 RECORD
GLOBAL TITLE TRANSLATION (VIEW 15.11) RC_CNIGTT

1. GENERAL

This view is used to set up the relationship between the CCS service desired and the STPs that are dedicated to provide the Global Title translation for that feature. A separate display of this view is populated for the NS800, LASS, ASP and LIDB features if Global Title Translations use a capability code (alias point code) or the Global Title Translations are not done at the adjacent STP pair.

In the 5E4(2) Software Release, the point codes or the capability code of the STP pair (where Global Title Translations are performed) can be defined in the Network File parameters, GTXPCA and GTXPCB. If the GTXPCA and GTXPCB are not entered, the Global Title Translations will be performed at the adjacent STPs point codes.

In 5E5 and later Software Releases, this view will be used rather than the Network File parameters. For new start offices, the adjacent STP point codes will be defaulted in the general translator, 256.

- ***NOTE:*** Following a retrofit from the 5E4(2) Software Release, the general translator, 256, will be populated with the Network File parameters, GTXPCA and GTXPCB. The Translation Type used for NS800 (defined on RC view 8.17) should be assigned here with the Point Codes of the STPs where GTTs are performed. The general translator, 256, should then be updated with the Point Codes of the adjacent STP pair. Further retrofits will restore the values entered on this view.

The 15.10 view and the 15.11 view must be inserted prior to the 8.17 Recent Change View (DSAPP form (5537 Record)). The CNI database is not a relational database, therefore it does not directly interface with the 5ESS Switch relational database. Due to the differences between the two databases, if the 8.17 view is populated prior to the 15.10 and 15.11 views, the application is marked as prohibited and no call processing will occur for those application type calls. If 8.17 is entered before 15.10 and 15.11, the views must be deleted and then reinserted in the proper sequence.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *TRANSLATION TYPE

Description: This is the global title translator index used by the STP along with other data (800NXX for SSP800) to look up a Destination Point Code and Subsystem number for TCAP functions for SSP800, LASS and LIDB.

This value must be consistent with RC View 8.17 and the Global Title STP's database. Routing data (View 15.9) is required for those point codes that are not located in the adjacent STP pair.
Valid Entries: 0 - 256

2.3 # PC1

Description: This is a 9-digit point code that represents one of the STPs where Global Title translations are done for TCAP functions.

Required Field.
Valid Entries: 9-digit point code

2.4 # PC2

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Description: This 9-digit point code represents the other STP where Global Title translations are done for TCAP functions.

The values for PC1 and PC2 may be the same or different depending on whether other translation types are provided. If no other translation types are provided, the default translation type is 256 with PC1 and PC2 being the values of the adjacent STP pair.

NOTE: Where Capability Codes (Alias Point Codes) are used, PC1 must be equal to PC2.

Required Field.
Valid Entries: 9-digit point code

GLOBAL TITLE TRANSLATION

*1. TRANSLATION TYPE 256
#2. PC 1 232200000
#3. PC 2 232211000

Figure 1 SAMPLE GLOBAL TITLE TRANSLATION VIEW 5E5 AND LATER SOFTWARE RELEASES

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SEC. 2L: 5022 RECORD
NETWORK ROUTING DATA (VIEW 15.12) RC_NLNIDS

1. GENERAL

This view is introduced with the 5E5 Software Release. This view is used to define all of the nonlocal networks that are sending or receiving CCS7 messages from the local 5ESS Switch.

A Nonlocal Network ID is an ID other than the Local Network ID that is assigned on RC View 15.1 in the LOCAL POINT CODE field.

Nonlocal network identifications are required under the following conditions:

- When the 5ESS Switch is routing to another network.
- When Global Title Translations are performed in an STP that is located in another network.
- When an SCP that is used for CCS7 based features is located in another network.
- When a far-end office is located in another network (ISUP Trunks RC View 5.1).
- When a switch in another network is being sent TCAP messages for LASS.

- ***NOTE:*** The maximum number of defined nonlocal network IDs is 24 for 5e15 and earlier and 64 for 5e16(1) and later

- ***NOTE:*** This form must be entered before routing information is defined on View 15.9 and for 5E6 - 5E8 on View 15.13, or for 5E9(1) and later on View 15.18.

2. FORM AND RECORD ENTRIES - 5E5 SOFTWARE RELEASE ONLY

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *OFFICE

Description: Enter the office identification. This should be consistent with Recent Change View 15.1.

Software Release: 5E5 only
Required Field.
Valid Entries: 1 - 8 characters

2.3 NLNID1

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only
Valid Entries: 0 - 254

2.4 NLNID2

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

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Software Release: 5E5 only
Valid Entries: 0 - 254

2.5 NLNID3

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only
Valid Entries: 0 - 254

2.6 NLNID4

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only
Valid Entries: 0 - 254

2.7 NLNID5

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed. A 0 is entered in this field to indicate that no network is assigned.

Software Release: 5E5 only
Valid Entries: 0 - 254

3. FORM AND RECORD ENTRIES - 5E6 - 5E8 SOFTWARE RELEASES

3.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

3.2 *NLNID

Description: This field represents the Nonlocal Network ID where CCS messages are to be routed.

The small network IDs are defined as Nonlocal Network IDs (1 - 4) and their routing is handled by View 15.13.

Software Release: 5E6 - 5E8
Required Field.
Valid Entries: 1 - 254

3.3 FLAG

Description: This field provides data concerning the type of routing that will be used.

Software Release: 5E6 and later

Valid FLAG Entries

Entry	Definition
NCLUSTER	Indicates the routing data is maintained at the cluster level and the cluster information should be entered on RC View 15.9 or 15.13. This value is recommended to allow network management at the nonlocal member level.
CLS	Indicates routing data is maintained at the network level only and cluster information cannot be entered on the RC View 15.9 and 15.13.

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3.4 PREFLS

Description: This field indicates which link set will be used for routing.

Software Release: 5E6 - 5E8
Valid Entries:
- For 5E6 only: 0 - 255
- For 5E7 - 5E8: 0 - 511

Data Rules:

When the FLAG field has "NCLUSTER" entered, the value for PREFLS should be 0.

When the FLAG field has "CLS" entered, this field should have a value from the COMBINED LINK SET field which is assigned on the 15.2 View.

4. FORM AND RECORD ENTRIES - 5E9(1) AND LATER SOFTWARE RELEASES

4.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

4.2 * NID

Description: The NID field specifies the network identifier of a point code to which CCS messages are routed.

Software Release: 5E9(1) and later
Required Field.
Valid Entries: 1 - 254

4.3 # ROUTING FLAG

Description: The ROUTING FLAG field specifies the CNI (Common Network Interface) routing flag, which is used to determine the level of routing to be performed.

Software Release: 5E9(1) and later
Required Field.
Valid Entries:

Valid ROUTING FLAG Entries

Entry	Definition
NTWK	Routing data is based on the network, cluster, and possibly member fields of the point code.
NTWK_O	Routing is based on the network field of the point code only.

Data Rules:

When the ROUTING FLAG is "NTWK", PRI ROUTE must be 0; when ROUTING FLAG is "NTWK_O", PRI ROUTE must not be 0.

4.4 # PRI ROUTE

Description: The PRI ROUTE field specifies the CNI linkset number used for the primary route between the 5ESS Switch and the STP. The value 0 indicates the routing is done at the cluster or member level.

Software Release: 5E9(1) and later

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Required Field.
Valid Entries: 0 - 511

Data Rules:

When PRI ROUTE is 0, ALT1 ROUTE must be blank.

When PRI ROUTE is greater than 0, it may not be the same as ALT1 ROUTE or ALT2 ROUTE.

A/E-LINK

The following two fields (Section 4.5 - Section 4.6) support the Extended Access Links and Alternate A-Link Set Routing feature.

4.5 ALT1 ROUTE

Description: The ALT1 ROUTE field specifies the CNI linkset number for the first alternate route between the 5ESS Switch and the STP.
Valid Entries: 1 - 511

Data Rules:

When a value is entered in ALT1 ROUTE, it may not be the same as PRI ROUTE or ALT2 ROUTE.

If ALT1 ROUTE is blank, ALT2 ROUTE must be blank.

4.6 ALT2 ROUTE

Description: The ALT2 ROUTE field specifies the CNI linkset number for the second alternate route between the 5ESS Switch and the STP.
Valid Entries: 1 - 511

5ESS SWITCH

NON-LOCAL NETWORK IDS

*1. OFFICE	OFFICE1
2. NLNID1	1
3. NLNID2	240
4. NLNID3	_____
5. NLNID4	_____
6. NLNID5	_____

Figure 1 SAMPLE NONLOCAL NETWORK IDS VIEW 5E5 SOFTWARE RELEASE

NON-LOCAL NETWORK IDS

*1. NLNID 1
2. FLAG NCLUSTER
3. PREFLS 0

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Figure 2 SAMPLE NONLOCAL NETWORK IDS VIEW 5E6 - 5E8 SOFTWARE RELEASES

```
                    NETWORK ROUTING DATA

*1. NID          001
#2. ROUTING FLAG NTWK
#3. PRI ROUTE    0

     A/E-LINK
 4. ALT1 ROUTE ___
 5. ALT2 ROUTE ___
```

Figure 3 SAMPLE NETWORK ROUTING DATA VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2M: 5023 RECORD
SMALL NETWORK CLUSTER AND MEMBER TABLE (VIEW 15.13) RC_SMNID

1. GENERAL

This view is available with 5E6 - 5E8 Software Releases. For 5E9(1) and later, it is replaced by the Member Routing View, 15.18.

This view is used to enter the cluster/member information needed for small network populated cluster/member routing.

For 5E6 - 5E8 this view should be entered when the 5ESS Switch is connected to an adjacent STP pair in a small network. Otherwise, RC View 15.9 should be used for small and large network routing.

The small non-local network ids (SMNIDS 1 through 4) must be previously defined using View 15.12 before subsequent cluster/member routing information can be manipulated.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 *NLNID

Description: The name of this field was changed to SMNIDS in 5E7. This field name applies to 5E6. See SMNIDS for usage information.

2.3 *SMNIDS

Description: The Small Network ID entered here indicates to which non-local small network the CCS messages will be routed. (This field was called NLNIDS for 5E6).
Valid Entries: 1 - 4

2.4 *CLUSTER

Description: Enter the cluster value that indicates to which cluster within the small network the CCS messages will be routed.
Valid Entries: 0 - 255

2.5 FLAG

Description: This field indicates what type of routing will be performed. The only valid entry is "SMPOP_M", which indicates Small Populated cluster/member level routing.
Valid Entries: SMPOP_M

2.6 LS

Description: This field represents the Linkset number between the local switch and the STPs. This field is normally the COMBINED LINK SET defined on RC View 15.2 which is linked to the small network STP pairs.
Valid Entries:

- For 5E6 only: 1 - 255
- For 5E7 and later: 1 - 511

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2.7 MEMBER1

Description: This field represents the member number for one of the adjacent STP pairs.
Valid Entries: 1 - 255

2.8 FLAG1

Description: This field indicates what type of routing will be performed. This field should be "LS" if routing is to be done.

Valid FLAG1 Entries

Entry	Definition
LS	Routing is maintained for a single link to an adjacent STP
NO_RTE	No routing data is maintained

2.9 LS1

Description: This field represents the Linkset number from the local switch to the adjacent STP.
Valid Entries:

- For 5E6 only: 0 - 255
- For 5E7 and later: 0 - 511

Data Rules:

If the value of the FLAG1 field is "NO_RTE", this field must have the value 0 entered. Otherwise, a value from 1 - 511 should be entered.

2.10 MEMBER2

Description: This field represents the member number for the other adjacent STP.
Valid Entries: 1 - 255

2.11 FLAG2

Description: This field indicates what type of routing will be performed. This field should be "LS" if routing is to be done.

Valid FLAG2 Entries

Entry	Definition
LS	Routing is maintained for a single link to an adjacent STP
NO_RTE	No routing data is maintained

2.12 LS2

Description: This field represents the Linkset number from the local switch to the other adjacent non-local STP.
Valid Entries:

- For 5E6 only: 0 - 255
- For 5E7 and later: 0 - 511

Data Rules:

If the value of the FLAG1 field is "NO_RTE", this field must have the value 0 entered. Otherwise, a value from 1 - 511 should be entered.

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*1. NLNID 001 8. MEMBER2 002
*2. CLUSTER 020 9. FLAG2 LS
3. FLAG SMPOP_M 10. LS2 005
4. LS 006
5. MEMBER1 001
6. FLAG1 LS
7. LS1 004

Figure 1 SAMPLE SMALL NON-LOCAL NETWORK CLUSTER AND MEMBER TABLE VIEW 15.13 5E6 SOFTWARE RELEASE

SMALL NON-LOCAL NETWORK ID CLUSTER AND MEMBER TABLE

*1. SMNID 001 8. MEMBER2 002
*2. CLUSTER 020 9. FLAG2 LS
3. FLAG SMPOP_M 10. LS2 005
4. LS 006
5. MEMBER1 001
6. FLAG1 LS
7. LS1 004

Figure 2 SAMPLE SMALL NEWORK CLUSTER AND MEMBER TABLE VIEW 15.13 5E7 - 5E8 SOFTWARE RELEASES

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SEC. 2N: 5024 RECORD
PROTOCOL OFFICE TIMERS (VIEW 15.14) - RCNIOFTIM

1. GENERAL

This view is available for 5E9(1) and later Software Releases and is used to specify T1.111.4 MTP (Message Transfer Part) Signaling Network functions and messages, as well as provide SCCP (Signaling Connection Control Part) information.

WARNING: Timer changes can be service-affecting. Before modifying timer values on this view, review the CCS7 protocol specifications.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * OFFICE ID

Description: The OFFICE ID uniquely identifies this office.

Required Field.
Valid Entries: 1 - 8 alphanumeric characters

T1.111.4 TIMERS

The following fields (Section 2.3 - Section 2.9) specify the T1.111.4 MTP (Message Transfer Part) Signaling Network functions and messages.

2.3 T8

Description: The T8 field represents the period of time, in milliseconds, that signaling traffic will be prohibited to a particular signaling point.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 800

Valid Entries: 800 - 1200 (milliseconds)

2.4 T10

Description: The T10 field represents the time interval in seconds that will elapse before repeating a signal route-set test message. This test message is repeated to determine if a previously inhibited or restricted signaling end point is still inhibited or restricted.
Default: 30
Valid Entries: 30 - 60 (seconds)

2.5 T11

Description: The T11 field represents the period of time in seconds that signaling traffic will, if possible, be restricted to a particular signaling point.
Default: 30
Valid Entries: 30 - 90 (seconds)

2.6 T16

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Description: The T16 field represents the period of time in milliseconds to wait to receive a route-set congestion status update. For each signaling route-set, a congestion status indicating the degree of congestion is assigned. This timer represents the period of time to wait to receive this status information.
Default: 1400
Valid Entries: 1400 - 2000 (milliseconds)

2.7 T18

Description: The T18 field represents the period of time in seconds that signaling traffic will, if possible, be restricted to a particular cluster of signaling points.
Default: 30
Valid Entries: 30 - 90 (seconds)

2.8 T20

Description: The T20 field represents the period of time in milliseconds to wait before repeating a local inhibit test. Local inhibiting is a management function that for maintenance or testing purposes makes a local signaling link unavailable for user-generated signaling traffic.
Default: 120000
Valid Entries: 90000 - 120000 (milliseconds)

2.9 T21

Description: The T21 field represents the period of time in milliseconds to wait before repeating a remote inhibit test. Remote inhibiting is a management function that for maintenance or testing purposes makes a remote signaling link unavailable for user-generated signaling traffic.
Default: 120000
Valid Entries: 90000 - 120000 (milliseconds)

T1.112.4 SCCP TIMERS

The following fields (Section 2.10 - Section 2.13) provide SCCP (Signaling Connection Control Part) information.

2.10 SST

Description: The Signaling Connection Control Part SST field represents the delay in seconds between requests for subsystem information.
Default: 30
Valid Entries: 30 - 90 (seconds)

2.11 SOG

Description: The Signaling Connection Control Part SOG field represents the period of time in seconds to wait before an out of service grant is received from network management.
Default: 30
Valid Entries: 30 - 90 (seconds)

2.12 IGSST

Description: The Signaling Connection Control Part IGSST field represents the delay in seconds between receiving grant to go out of service and actually going out of service.
Default: 30
Valid Entries: 30 - 90 (seconds)

2.13 SRT

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Description: The Signaling Connection Control Part SRT field represents the delay in seconds between requests for subsystem routing status information.
Default: 30
Valid Entries: 30 - 90 (seconds)

PROTOCOL OFFICE TIMERS

*1. OFFICE ID OFFICE1_ T1.112.4 SIGNALING CONNECTION
CONTROL PART (SCCP) TIMERS
T1.111.4 TIMERS 9. SST __
2. T8 800 10. SOG __
3. T10 30 11. IGSST __
4. T11 __ 12. SRT __
5. T16 ____
6. T18 __
7. T20 _____
8. T21 _____

Figure 1 SAMPLE PROTOCOL OFFICE TIMERS VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2O: 5025 RECORD
PROTOCOL LINK SET TIMERS (VIEW 15.15) - RCNILSTIM

1. GENERAL

This view is available with 5E9(1) and later Software Releases and is used to specify Link Set Timer information on a per-office basis.

WARNING: Timer changes can be service-affecting. Before modifying timer values on this view, review the CCS7 protocol specifications.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SCOPE

Description: The SCOPE field determines the parameters used in selecting the number of timers to update.

When the view is updated for one linkset (SCOPE is "LS"), the current data values will appear in the fields. When the view is updated for "ALL" link sets, the fields will appear blank since the values may differ among the link sets.

Required Field.

Valid SCOPE Entries

Entry	Definition
LS	One linkset.
ALL	All links.

Data Rules:

If SCOPE is "LS", a value must be entered in the LS field; if SCOPE is "ALL", LS must be blank, and the database operation must be "U".

2.3 (*) LS

Description: The Link Set field defines a set of CCS7 links going to the same destination.
Valid Entries: 1 - 511

T1.111.4 TIMERS

These fields (Section 2.4 - Section 2.15) establish the values for T1.111.4 timers.

2.4 T1

Description: The T1 field defines the interval of time used to avoid messages getting out of sequence during a changeover to the alternative link.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 500

Valid Entries: 500 - 1200, in increments of 100 (milliseconds)

2.5 T2

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Description: The T2 field defines the interval of time in milliseconds to wait for changeover acknowledgement.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 700

Valid Entries: 700 - 2000, (milliseconds)

2.6 T3

Description: The T3 field defines the interval of time in milliseconds for CNI to avoid messages getting out of sequence during a changeback.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 500

Valid Entries: 500 - 1200, (milliseconds)

2.7 T4

Description: The T4 field defines the interval of time in milliseconds for CNI to wait for changeback acknowledgement.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 500

Valid Entries: 500 - 1200, (milliseconds)

2.8 T5

Description: The T5 field defines the interval of time in milliseconds for CNI to wait for changeback acknowledgement (second attempt).
Default:
- For LEC Offices: 1000
- For AT&T Offices: 500

Valid Entries: 500 - 1200, (milliseconds)

2.9 T6

Description: The T6 field defines the interval of time in seconds for CNI to avoid messages getting out of sequence during controlled rerouting.
Default:
- For LEC Offices: 10
- For AT&T Offices: 5

Valid Entries: 5 - 12 (tenths of a second)

2.10 T12

Description: The T12 field defines the interval of time in milliseconds for CNI to wait for an uninhibited acknowledgement.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 1500

Valid Entries: 800 - 1500 (milliseconds)

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2.11 T13

Description: The T13 field defines the interval of time in milliseconds for CNI to wait for a force uninhibit.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 800

Valid Entries: 800 - 1500 (milliseconds)

2.12 T14

Description: The T14 field defines the interval of time in milliseconds for CNI to wait for an inhibit acknowledgement.
Default:
- For LEC Offices: 3000
- For AT&T Offices: 2000

Valid Entries: 2000 - 3000 (milliseconds)

2.13 T15

Description: The T15 field defines the interval of time in seconds for CNI to wait for repeat signaling route set congestion test.
Default: 3
Valid Entries: 2 - 3 (seconds)

2.14 T17

Description: The T17 field defines the interval of time in milliseconds for CNI to avoid oscillation of initial alignment failure and link restart.
Default:
- For LEC Offices: 1000
- For AT&T Offices: 800

Valid Entries: 800 - 1500 (milliseconds)

2.15 T19

Description: The T19 field defines the interval of time in milliseconds for CNI to fail the link craft referral timer.
Default:
- For LEC Offices: 480000
- For AT&T Offices: 180000

Valid Entries: 180000 - 600000 (milliseconds)

T1.111.7 TIMERS

These fields (Section 2.16 - Section 2.17) establish the values for T1.111.7 timers.

2.16 TIMER 1

Description: The TIMER 1 field defines the interval of time in seconds used by the supervision timer for signaling link test acknowledgement message.
Default: 10
Valid Entries: 4 - 12 (seconds)

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2.17 TIMER 2

Description: The TIMER 2 field defines the interval of time in seconds to determine how often a signaling link test message should be sent.
Default: 30
Valid Entries: 30 - 90 (seconds)

PROTOCOL LINK SET TIMERS

*1. SCOPE LS
(*)2. LS 1

T1.111.4 TIMERS		T1.111.7 TIMERS
3. T1 500	9. T12 ____	15. TIMER 1 __
4. T2 ____	10. T13 ____	16. TIMER 2 __
5. T3 ____	11. T14 ____	
6. T4 ____	12. T15 _	
7. T5 ____	13. T17 ____	
8. T6 __	14. T19 _____	

Figure 1 SAMPLE PROTOCOL LINK SET TIMERS VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2P: 5026 RECORD
PROTOCOL LINK SET THRESHOLDS (VIEW 15.16) - RCNILSTHR

1. GENERAL

This view is available with 5E9(1) and later Software Releases and is used to maintain congestion indicator data. This data is used to detect the onset or abatement of link congestion.

WARNING: Threshold changes can be service-affecting. Before modifying values on this view, review the CCS7 protocol specifications.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SCOPE

Description: The SCOPE field determines the parameters used in selecting the number of timers to update.

When the view is updated for one linkset (SCOPE is "LS"), the current data values will appear in the fields. When the view is updated for "ALL" link sets, the fields will appear blank since the values may differ among the link sets.

Required Field.

Valid SCOPE Entries

Entry	Definition
LS	One link set.
ALL	All links.

Data Rules:

If SCOPE is "LS", a value must be entered in the LS field; if SCOPE is "ALL", LS must be blank, and the database operation must be "U".

2.3 (*) LS

Description: The LS (Link Set) field defines a set of CCS7 links going to the same destination.
Valid Entries: 1 - 511.

T1.111.4 LINK CONGESTION CONTROL THRESHOLDS

The following fields (Section 2.4 - Section 2.12) establish threshold values for the onset and abatement of congestion in transmit and retransmit buffers. They also determine when selected messages will be discarded.

CNI follows a 3-level discard strategy. Before transmitting a message, a node checks the message's priority (contained in the service information field) and the congestion state of the transmit buffer. If the priority is less than the congestion level, the message is removed, and a return message may be sent. If the priority of the message is greater than or equal to the congestion level, it is transmitted.

LEVEL 1

The following fields (Section 2.4 - Section 2.6) determine the Level 1 Link Congestion Control Thresholds.

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2.4 ABATE 1

Description: The ABATE 1 field defines a transmit or retransmit buffer capacity that indicates abatement of level 1 congestion. Congestion abatement occurs when the buffer content reaches a level less than the predetermined threshold value.
Default: 820
Valid Entries: 200 - 32767

Data Rules:

ABATE 1 must be less than or equal to ONSET 1, and ONSET 1 must be less than or equal to DISCARD 1.

2.5 ONSET 1

Description: The ONSET 1 field defines a transmit or retransmit buffer capacity that indicates the onset for level 1 congestion. Congestion onset occurs when the buffer content increases beyond a predetermined value.

When a buffer reaches this threshold, the node reports the congestion state to the central processor. Network management messages are broadcast to adjacent signaling points to limit messages to the affected node. To avoid further congestion of the buffer, the far-end initiates the discard strategy used by nodes at the discard level.
Default: 3072
Valid Entries: 200 - 32767

Data Rules:

ONSET 1 must be less than or equal to DISCARD 1.

2.6 DISCARD 1

Description: The DISCARD 1 field defines a transmit or retransmit buffer capacity that determines whether, under level 1 congestion conditions, a message should be discarded or transmitted.
Default: 6042
Valid Entries: 200 - 32767

Data Rules:

DISCARD 1 must be less than or equal to ABATE 2.

LEVEL 2

The following fields (Section 2.7 - Section 2.9) determine the Level 2 Link Congestion Control Thresholds.

2.7 ABATE 2

Description: The ABATE 2 field defines a transmit or retransmit buffer capacity that indicates abatement of level 2 congestion. Congestion abatement occurs when the buffer content reaches a level less than the predetermined threshold value.
Default: 7680
Valid Entries: 200 - 32767

Data Rules:

ABATE 2 must be less than or equal to ONSET 2, and ONSET 2 must be less than or equal to DISCARD 2.

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2.8 ONSET 2

Description: The ONSET 2 field defines a transmit or retransmit buffer capacity that indicates the onset for level 2 congestion. Congestion onset occurs when the buffer content increases beyond a predetermined value.

When a buffer reaches this threshold, the node reports the congestion state to the central processor. Network management messages are broadcast to adjacent signaling points to limit messages to the affected node. To avoid further congestion of the buffer, the far-end initiates the discard strategy used by nodes at the discard level.
Default: 8295
Valid Entries: 200 - 32767

Data Rules:

ONSET 2 must be less than or equal to DISCARD 2.

2.9 DISCARD 2

Description: The DISCARD 2 field defines a transmit or retransmit buffer capacity that determines whether, under level 2 congestion conditions, a message should be discarded or transmitted.
Default: 10855
Valid Entries: 200 - 32767

Data Rules:

DISCARD 2 must be less than or equal to ABATE 3.

LEVEL 3

The following fields (Section 2.10 - Section 2.12) determine the Level 3 Link Congestion Control Thresholds.

2.10 ABATE 3

Description: The ABATE 3 field defines a transmit or retransmit buffer capacity that indicates abatement of level 3 congestion. Congestion abatement occurs when the buffer content reaches a level less than the predetermined threshold value.
Default: 10855
Valid Entries: 200 - 32767

Data Rules:

ABATE 3 must be less than or equal to ONSET 3, and ONSET 3 must be less than or equal to DISCARD 3.

2.11 ONSET 3

Description: The ONSET 3 field defines a transmit or retransmit buffer capacity that indicates the onset for level 3 congestion. Congestion onset occurs when the buffer content increases beyond a predetermined value.

When a buffer reaches this threshold, the node reports the congestion state to the central processor. Network management messages are broadcast to adjacent signaling points to limit messages to the affected node. To avoid further congestion of the buffer, the far-end initiates the discard strategy used by nodes at the discard level.
Default: 10956
Valid Entries: 200 - 32767

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2.12 DISCARD 3

Description: The DISCARD 3 field defines a transmit or retransmit buffer capacity that determines whether, under level 3 congestion conditions, a message should be discarded or transmitted.
Default: 11571
Valid Entries: 200 - 32767

PROTOCOL LINK SET THRESHOLDS

*1. SCOPE LS
(*)2. LS 1

T1.111.4 LINK CONGESTION CONTROL THRESHOLDS

LEVEL 1	LEVEL 2	LEVEL 3
3. ABATE 1 500	6. ABATE 2 _____	9. ABATE 3 _____
4. ONSET 1 700	7. ONSET 2 _____	10. ONSET 3 _____
5. DISCARD 1 1000	8. DISCARD 2 _____	11. DISCARD 3 _____

Figure 1 SAMPLE PROTOCOL LINK SET THRESHOLDS VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2Q: 5027 RECORD
PROTOCOL LINK PARAMETERS (VIEW 15.17) - RCNILKPRM

1. GENERAL

This view is available with 5E9(1) and later Software Releases and is used to modify link protocol timers and SUERM (Signal Unit Error Rate Monitor) threshold values on a per link basis.

WARNING: Timer changes can be service-affecting. Before modifying timer values on this view, review the CCS7 protocol specifications.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * SCOPE

Description: The SCOPE field determines the parameters used in selecting the number of timers to update.

When the view is updated for one link (SCOPE is "ONE"), the current data values will appear in the fields. When the view is updated for one or more link sets (SCOPE is "LS" or "ALL"), the fields will appear blank since the values may differ among the link sets.

Required Field.

Valid SCOPE Entries

Entry	Definition
LS	One Link Set.
ONE	One link.
ALL	All links.

Data Rules:

If SCOPE is "LS", a value must be entered in the LS field, and GROUP and MEMBER must be blank.

If SCOPE is "ONE", a value must be entered in the GROUP and MEMBER fields; and LS must be blank.

If SCOPE is "ALL", LS, GROUP, and MEMBER must be blank; the database operation must be "U".

2.3 (*) LS

Description: The LS (Link Set) field defines a set of CCS7 links going to the same destination.
Valid Entries: 1 - 511.

2.4 (*) GROUP

Description: The GROUP field specifies the group to which the link node is attached. For 5E9(1) and earlier, the CNI cabinet has two groups (00 and 32); for 5E9(2) and later, it has six groups (00, 01, 02, 32, 33, 34). A link pair must have a link on two of these groups.
Valid Entries:

- For 5E9(1) and earlier: 0 - 63
- For 5E9(2) and later: 00, 01, 02, 32, 33, 34

2.5 (*) MEMBER

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Description: The MEMBER field defines a specific link node being used by a particular group.
Valid Entries:
- For 5E9(1) and earlier: 1 - 15
- For 5E9(2) and later: 1 - 8

T1.111.3 TIMERS

The following fields (Section 2.6 - Section 2.13) establish the values of T1.111.3 timers.

2.6 T1

Description: The T1 field defines the interval of time CNI will wait for the link to be in service after the link is aligned and ready on the near end.
Default: 650
Valid Entries: 650 - 1500 (fiftieths of a second)

2.7 T2

Description: The T2 field defines the interval of time CNI will wait before restarting the alignment procedure.
Default:

For LEC Offices: 575
- For AT&T Offices: 590

Valid Entries: 250 - 700 (fiftieths of a second)

2.8 T3

Description: The T3 field defines the interval of time CNI will wait for the link to be aligned on the far end after the link is aligned on the near end.
Default:

For LEC Offices: 575
- For AT&T Offices: 590

Valid Entries: 250 - 700 (fiftieths of a second)

2.9 T4N

Description: The T4N field is the Normal Prove-In Period Timer. It defines the interval of time CNI will wait to prove error free transmission under normal conditions.
Default: 115
Valid Entries: 104 - 126 (fiftieths of a second)

2.10 T4E

Description: The T4E field is the Emergency Prove-In Period Timer. It defines the interval of time CNI will wait to prove error free transmission under emergency prove-in procedures.
Default: 30
Valid Entries: 27 - 33 (fiftieths of a second)

2.11 T5

Description: The T5 field defines the interval of time CNI sends SIB (Status Indication Busy) during level 2 congestion.

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Default: 4
Valid Entries: 4 - 6 (fiftieths of a second)

2.12 T6

Description: The T6 field is the Remote Congestion Timer. It defines the maximum time CNI will wait for an acknowledgement message when CNI is receiving SIB (Status Indication Busy). If the message is not received within the allotted time, CNI will fail the link.
Default: 150
Valid Entries: 150 - 300 (fiftieths of a second)

2.13 T7

Description: The T7 field is the Excessive Delay of Acknowledgement Timer. It defines the maximum time CNI will wait for a message to be acknowledged. If the message is not acknowledged within the allotted time, CNI will fail the link.
Default: 50
Valid Entries: 25 - 100 (fiftieths of a second)

SIGNAL UNIT ERROR RATE MONITOR

The following field (Section 2.14) defines the Signal Unit Error Monitor value.

2.14 SU ERR MON

Description: The SU ERR MON field defines the number of signal unit errors allowed for CNI.
Default:

For LEC Offices: 64
- For AT&T Offices: 192

Valid Entries: 64 - 192

PROTOCOL LINK PARAMETERS

*1. SCOPE LS
(*)2. LS 1
(*)3. GROUP __
(*)4. MEMBER __

T1.111.3 TIMERS		SIGNAL UNIT ERROR RATE MONITOR
5. T1 650	9. T4E __	13. SU ERR MON ___
6. T2 ___	10. T5 _	
7. T3 ___	11. T6 ___	
8. T4N ___	12. T7 ___	

Figure 1 SAMPLE PROTOCOL LINK PARAMETERS VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 2R: 5028 RECORD
MEMBER ROUTING DATA (VIEW 15.18) - RCNIMEM

1. GENERAL

This view is available with the 5E9(1) and later Software Releases and contains the information necessary for CCS7 message routing based on the Network ID, cluster number, and member number of the point code. This view supports member level routing to local (intra-) and nonlocal (inter-) networks.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * NID

Description: The NID field specifies the network identifier of a point code to which CCS messages are routed.
Valid Entries: 1 - 254

Data Rules:

For 5E9(1) and later, if NID is between 5 and 254 inclusive, routing data cannot be entered unless the FPCR (Full Point Code Routing) secured feature is activated through Secured Feature ID 132 on the 8.22 View.

If NID is between 1 to 4 inclusive, routing data can be entered without FPCR being activated, if PRI ROUTE matches the LINK SET on the corresponding 15.2 view.

2.3 * CLUSTER

Description: The CLUSTER field specifies the cluster number of a point code to which CCS messages are routed. For AT&T the first two digits are the region number (00 - 31), and the third digit is the Cluster identification (0 - 7). For a LEC (Local Exchange Carrier) the cluster number is 000 - 255.
Valid Entries: 3 digits

2.4 * MEMBER

Description: The MEMBER field specifies the member number of a point code to which CCS messages are routed.
Valid Entries: 0 - 255

2.5 ROUTING FLAG

Description: The ROUTING FLAG field specifies the CNI (Common Network Interface) routing flag which is used to determine the level of routing to be performed. This is a verify-only field. It contains member routing based on the network, cluster, and member fields of the point code. It is used to identify full point code routing members of a populated cluster.

2.6 PRI ROUTE

Description: The PRI ROUTE field specifies the CNI link set used for the primary route between the 5ESS Switch and the STP.
Valid Entries: 1 - 511

Data Rules:

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If PRI ROUTE is the same as the LINK SET value on the corresponding 15.2 View, then the following must be true.

- The NID on this view must match the first three digits (network identifier) of the FAR END PNT CODE on the 15.2 View, the CLUSTER must match the middle three digits (cluster number) of the FAR END PNT CODE, and the MEMBER must match the last three digits (member number) of the FAR END PNT CODE.
- If the link set is part of a combined link set (i.e., a value is entered in the COMBINED LINK SET field of the 15.2 View), and the combined link set contains another direct link set (i.e., another LINK SET is associated with the same COMBINED LINK SET on a 15.2 View), then the other LINK SET must be the ALT1 ROUTE on this view. The ALT2 ROUTE may be entered only if the ELINK secured feature has been activated through Secured Feature ID 131 on the 8.22 View.
- If the link set is not part of a combined link set (i.e., a value is not entered in the COMBINED LINK SET field on the 15.2 View), then ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

If PRI ROUTE matches the COMBINED LINK SET value on the 15.2 View, the NID, CLUSTER, and MEMBER values must not match the network identifier, cluster, and member of the corresponding FAR END PNT CODE on the 15.2 View. ALT1 ROUTE and ALT2 ROUTE may be entered only if the ELINK feature has been activated through Secured Feature ID 131 on the 8.22 View.

A/E-LINK

The following fields (Section 2.7 - Section 2.8) support the Extended Access Links and Alternate A-Link Set Routing feature and the Full Point Code Routing feature.

2.7 ALT1 ROUTE

Description: The ALT1 ROUTE field specifies the link set to be used as the first alternate route between the 5ESS Switch and the STP.
Valid Entries: 1 - 511

Data Rules:

If no value is entered in ALT1 ROUTE, ALT2 ROUTE must also be blank.

If ALT1 ROUTE is entered, it must be different than PRI ROUTE. If ALT2 ROUTE is entered, it must be different than PRI ROUTE and ALT1 ROUTE.

2.8 ALT2 ROUTE

Description: The ALT2 ROUTE field specifies the link set to be used as the second alternate route between the 5ESS Switch and the STP.
Valid Entries: 1 - 511

INSERT ONLY

The following field (Section 2.9) is used to facilitate conversion to FPCR (Full Point Code Routing).

2.9 LAST MEMBER

Description: The LAST MEMBER field specifies the upper limit member number to be inserted when the conversion from cluster routing to member (full point code) routing is done on multiple sequential members in the same cluster. In the INSERT operation, the MEMBER field defines the lower limit member number.

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Valid Entries: 1 - 255

Data Rules:

If LAST MEMBER is entered, the database operation must be "I", and LAST MEMBER must be greater than MEMBER.

MEMBER ROUTING DATA

*1. NID 001 INSERT ONLY
*2. CLUSTER 000 8. LAST MEMBER ___
*3. MEMBER 023
ROUTING FLAG SMEMBER
#5. PRI ROUTE 15

A/E-LINK
6. ALT1 ROUTE ___
7. ALT2 ROUTE ___

Figure 1 SAMPLE MEMBER ROUTING DATA VIEW 5E9(1) AND LATER SOFTWARE RELEASES

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SEC. 3: MISCELLANEOUS RECENT CHANGE VIEWS

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SEC. 3A: CCS OFFICE PARAMETERS (VIEW 8.15) - RC_CPARM

1. GENERAL

This view is used to set several SS7 (Signaling System 7) signaling and signaling platform related parameters to determine whether or not certain SS7 signaling platform functions are available in the office.

2. FORM ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and Office Name on each record.

2.2 * OFFICE ID

Description: Enter the office identifier.

Required Field.
Valid Entries: 1 - 8 alphanumeric characters

2.3 CNI EQUIP

Description: Is CNI equipped on the switch?
Default: N
Valid Entries: Y, N

Data Rules:

A "Y" must be entered in this field when any of the following fields have a value of "Y" entered: ACTION POINT, ACT PT SDN, DLN EQUIP and/or SSP.

2.4 DLN EQUIP

Description: Is Direct Link Node equipped on the CNI Ring?

WARNING: The office must have a DLN installed and properly grown before a "Y" can be entered in this field.
Default: N
Valid Entries: Y, N

Data Rules:

If "Y" is entered in this field, the CNI EQUIP field must have a value of "Y" entered.

2.5 DS SPEED

Description: This field indicates the Direct Signaling Link Speed. For LEC offices, a value of 48 is normally used.

NOTE: 560 should be assigned for high speed link nodes used in switch owner networks and for high speed link nodes used solely for credit card checking in LEC offices. Otherwise, the value 48 should be used.
Default: 48
Valid Entries: 48 or 560

2.6 ACT PT SDN

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Description: Does this office serve as an ACP (Action Point) for the SDN (Software Defined Network)?

- ***NOTE:*** All SDN ACP offices must be equipped with a CNI (Common Network Interface) to provide CCS (Common Channel Signaling) transport.

Default: N
Valid Entries: Y, N

Data Rules:

Neither ACT PT SDN nor SSP can be set to "Y".

A value of "Y" must be entered in the CNI EQUIP field when ACT PT SDN has a value of "Y".

2.7 SSP

Description: Does the switch provide the NS800 feature?
Default: N
Valid Entries: Y, N

Data Rules:

Neither ACT PT SDN nor SSP can be set to "Y".

A value of "Y" must be entered in the CNI EQUIP field when SSP has a value of "Y".

If this field is "Y", the LATA field must be entered.

2.8 LATA

Description: This field indicates the switch's LATA.
Valid Entries: 100 - 999

Data Rules:

If the SSP field has a value of "Y", this field must be entered.

PVN

The name of this field group was changed to ADV SVC PLATFORM in 5E8. This name applies to 5E7 and earlier. See ADV SVC PLATFORM for usage information.

ADV SVC PLATFORM

The following field is used to define the ASP (Advance Service Platform) parameters. (This field group was called PVN for 5E7 and earlier.)

2.9 PVN RESP

Description: The name of this field was changed to ASP RESP in 5E8. This field name applies to 5E7 and earlier. See ASP RESP for usage information.

2.10 ASP RESP

Description: This is the timer that the Advanced Services Platform uses to wait for a response from the SCP (Switching Control Point) database. This timer is specified in seconds. (This field was called PVN RESP for 5E7 and earlier.)

Software Release: 5E6 and later

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Default: 3
Valid Entries: 1 - 5 (seconds)

CCIS6, ISUP, TUP

The following fields (Section 2.11 - Section 2.19) are used to define CCIS6, ISUP and TUP parameters.

2.11 ADDR COMP

Description: This field indicates how long to wait for the CCS Address Complete Message.
Default: 25
Valid Entries: 20 - 30 (seconds)

2.12 ANSWER

Description: This field indicates how long to wait for the CCS Answer Message.
Default: 0
Valid Entries: 0, 2, 3 or 4 (minutes)

2.13 COT

Description: This field indicates how long to wait for the CCS Continuity message.
Default: 12
Valid Entries: 10 - 15 (seconds)

2.14 RLS GRD

Description: This field indicates how long to wait for the CCS Release Guard Message (CCIS6/TUP7 protocols) or for the CCS Release Complete after sending the CCS Released Message (ISUP only).
Default: 10
Valid Entries: 4 - 15 (seconds)

2.15 TRD

Description: This field indicates how long to wait for for possible CCS reanswer (timed release disconnect) after a CCS clearback is received.
Default: 12
Valid Entries: 4 - 15 (seconds)

2.16 TRK QRY AU

Description: This field indicates the value used for the cyclic timer which determines the time between cycles of the CCS Trunk Query interoffice audit.
Default: 60
Valid Entries: 20 - 20000 (seconds)

2.17 COT RETST

Description: This field indicates how long to wait for the Repeated CCS Continuity Test.
Default: 120
Valid Entries: 60 - 180 (seconds)

2.18 RSC SHORT

Description: This field indicates the time interval to wait before resending a CCS Reset Circuit Signal when failing to receive the acknowledgement in response to the initial CCS Reset Circuit Signal sent.
Default: 10

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Valid Entries: 4 - 15 (seconds)

2.19 RSC LONG

Description: This field indicates the time interval to wait before resending a CCS Reset Circuit Signal when failing to receive an acknowledgement in response to the initial CCS Reset Circuit Signals sent at intervals defined by this parameter. If an acknowledgement for the signal is not received within the RSC LONG timer interval, the sending of the Reset Circuit Signal will continue at the RSC LONG time interval until maintenance intervention occurs.
Default: 180
Valid Entries: 120 - 1800 (seconds)

CCIS6 ONLY

The following field applies to CCIS6 transmission only.

2.20 BAND AU

Description: This field indicates the value used for the Cyclic Timer which determines the time between cycles of the audit that checks this office's band status data against the network's band status data.
Default: 5
Valid Entries: 1 - 1440 (minutes)

ISUP, TUP ONLY

THe following fields (Section 2.21 - Section 2.26) apply to ISUP and TUP only.

2.21 DIGIT

Description: This field indicates how long to wait for a CCS Subsequent Address Message.
Default: 4
Valid Entries: 3 - 5 (seconds)

2.22 BLO RSND

Description: This field indicates the time interval to wait before resending a CCS Blocking Signal (TUP/ISUP protocols) when failing to receive the acknowledgement in response to the initial CCS Blocking Signal sent.
Default: 10
Valid Entries: 4 - 15 (seconds)

2.23 UBL RSND

Description: This field indicates the time interval to wait before resending a CCS Unblocking Signal (TUP/ISUP protocols) when failing to receive the acknowledgement in response to the initial CCS Unblocking Signal sent.
Default: 10
Valid Entries: 4 - 15 (seconds)

2.24 COT WAIT

Description: This field indicates the time between the initial CCS Continuity Test failure and the first retry.
Default: 5
Valid Entries: 4 - 15 (seconds)

2.25 GBLO RSND

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Description: This field indicates the time interval to wait before resending a CCS Maintenance/Hardware Group Blocking Message (TUP/ISUP protocols) when failing to receive the appropriate acknowledgement in response to the initial CCS Maintenance/Hardware Group Blocking Message sent.
Default: 10
Valid Entries: 4 - 15 (seconds)

2.26 GUBL RSND

Description: This field indicates the time interval to wait before resending a CCS Maintenance/Hardware Group Unblocking Message (TUP/ISUP protocols) when failing to receive the appropriate acknowledgement in response to the initial CCS Maintenance/ Hardware Group Unblocking Message sent.
Default: 10
Valid Entries: 4 - 15 (seconds)

ISUP ONLY

The following fields (Section 2.27 - Section 2.34) apply to ISUP only

2.27 RLS COMP

Description: This field indicates how long to wait for the CCS Release Complete Message after sending the Release Message. This is a timer for the overall release sequence for ISUP7.
Default: 60
Valid Entries: 45 - 75 (seconds)

2.28 CRA TIMER

Description: When the OTO (Originating Toll Office) receives CRM (Circuit Reservation Message) from the OAT (Originating Access Tandem), it sends a CRA (Circuit Reservation Acknowledgement) message back to the OAT at which point this timer is set at the OTO. This timer will indicate the elapsed time to wait before an IAM (Initial Address Message) is received from the OTO.
Default: 25
Valid Entries: 20 - 25 (seconds)

2.29 EXM D TIMER

Description: This timer is set by the OAT (Originating Access Tandem) after it sends the IAM (Initial Address Message) to the OTO (Originating Toll Office). The OAT uses this value to provide a delay to ensure that glare, blocking, etc., is not encountered on the outgoing circuit to an OTO. When the timer expires, the OAT sends an EXM (Exit Message) to the EO (End Office).
Default: 300
Valid Entries: 100 - 1200, in intervals of 100 (ms)

2.30 GRS RSND

Description: The circuit group reset acknowledge timer specifies the ISUP group reset message response timer value. This timer is initiated when an ISUP GRS message is sent, and it is canceled when a circuit GRA (group reset acknowledgement) is received from all members specified in the GRS message.

Software Release: 5E9(1) and later
Required Field.
Default: 10
Valid Entries: 4 - 15 (seconds)

2.31 BUSY ANNC

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Description: Will a busy tone be sent to the originating exchange when the called party is busy and the call route consists of ISUP trunks interworked to other signal protocol trunks? If BUSY ANNC is "Y", a busy tone will be provided; if "N", a Release Message will be sent.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

2.32 LEC ANNC

Description: Will a tone/announcement be provided to the previous exchange when a failure occurs on an ISUP trunk in the LEC network? This only applies to non-ISDN access calls that have used ISUP trunks all the way. "Y" indicates a tone/announcement will be provided; "N" indicates that a Release Message will be sent to the preceding exchange.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

2.33 LEC IW REL

Description: Will an ISUP Local Exchange Carrier Interworking Release message be provided to the previous exchange when a failure occurs on an ISUP trunk in the LEC network? This only applies to non-ISDN access calls that have not used ISUP trunks exclusively over the full call completion path.

Software Release: 5E7 and later
Default: N
Valid Entries: Y, N

2.34 RCD 3PT1 ITC

Description: This Recode 3.1 kHz Information Transfer Capability field is used to override the information transfer capability of an outgoing ISUP call only if all the following conditions are met:

- The call has an Information Transfer capability of 3.1 kHz audio;
- The call will be routed over an ISUP trunk;
- The office is a local tandem that received the call on an inband signaling speech trunk, or the office is an originating end office and the originator is non-ISDN; and
- The RCD 3PT1 ITC field on the trunk group view (5.1) has been left blank.

Software Release: 5E8 and later
Required Field.
Default: SPEECH
Valid Entries:

Valid RCD 3PT1 ITC Entries

Entry	Definition
SPEECH	Recode to speech.
3PT1KHZ	Use 3.1 kHz audio without modification.

CCIS6 AND TUP ONLY

The following field applies to CCIS6 and TUP only.

2.35 CLF

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Description: This field indicates how long to wait for the CCS Clear Forward message after sending a Backward Fail Message.
Default: 10
Valid Entries: 4 - 15 (seconds)

LEASED NETWORK

The following fields (Section 2.36 - Section 2.39) are available with 5E6 and later Software Releases. They pertain to leased network parameters.

2.36 TIME OUT

Description: This field indicates how long to wait for the TCAP (Transaction Capability Application Part) responded messages from the LN (Leased Network) NCP (Network Control Point). TCAP response message time out.
Default: 4
Valid Entries: 2 - 6 (seconds)

2.37 GLBL TITLE

Description: This field contains the 6-digit global title, which is inserted into the CCS7 (Common Channel Signaling System Number 7) SCCP (Signaling Connection Control Part) header and translated by the STP (Signaling Transfer Point) into a DPC (Destination Point Code) in order to route the TCAP (Transaction Capability Application Part) message to the LN (Leased Network) NCP (Network Control Point).
Default: 0
Valid Entries: 0 - 999999

2.38 DAS

Description: This field will be defined as the DAS to specify the digit tree to use for the vacant code screening for the LN (Leased Network) ACP (Action Point) calls.
Default: 0
Valid Entries:

For 5E14 and earlier: 0 - 99

For 5E15 and later: 0 - 254

2.39 ACTION POINT

Description: This field is used to indicate this office serves as an ACP (Action Point) for LN (Leased Networks).
Default: N
Valid Entries: Y, N

Data Rules:

If this field has a value of "Y", the CNI EQUIP field must have a value of "Y".

ISVM OTPION

The following sets an ISVM (Inter-Switch Voice Messaging) option.

2.40 ISVM TCAP TIMER

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Description: The ISVM (Inter-Switch Voice Messaging) TCAP (Transaction Capabilities Application Part) Timer is a global Common Channel Signaling office parameter that specifies the timeout value (in seconds) for TCAP MWI (Message Waiting Indicator) activate/deactivate requests. If the timeout value is set to 3 seconds, the activation or deactivation of an MWI will be done in that specified time.

Software Release: 5E7 and later
Default: 3
Valid Entries: 1 - 10 (seconds)

CCS FEATURES

The following fields are used by the CCS(Common Channel Signaling) feature. They are available for both the CNI-based SS7 signaling platform and for the PSU-based SS7 signaling platform.

2.41 EXPANDED SLS

Description: Is the Expanded Signaling Link Selection feature activated? For more information on this secured feature, see Division 2, Section 4A175. This field on this form defines the feature only for the CNI signaling platform. For the PSU-based SS7 signaling platform, see Division 9, Section 10H.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

If EXPANDED SLS is "Y", SFID 175 must be activated on the SFSYS form (5713 Record).

2.42 IMPROVED SLT

Description: Is the Improved Signaling Test feature activated? For more information on this secured feature, see Division 2, Section 4A176. This field defines the feature for both CNI and PSU-based SS7 signaling platforms.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

If IMPROVED SLT is "Y", SFID 176 must be activated on the SFSYS form (5713 Record).

2.43 MTP NODE RESTART

Description: Is the MTP Node Restart feature activated? For more information on this secured feature, see Division 2, Section 4A177. This field defines the feature for both CNI and PSU-based SS7 signaling platforms.

Software Release: 5E11 and later
Default: N
Valid Entries: Y, N

Data Rules:

If MTP NODE RESTART is "Y", SFID 177 must be activated on the SFSYS form (5713 Record).

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```
SCREEN 1 OF 2
                    CCS OFFICE PARAMETERS

                  CCIS6, ISUP, TUP      ISUP, TUP ONLY
*1. OFFICE ID  OFFICE1     9. ADDR COMP  25      19. DIGIT      4
 2. CNI EQUIP  Y          10. ANSWER     0       20. BLO RSND    10
 3. DLN EQUIP  N          11. COT        12      21. UBL RSND    10
 4. DS SPEED   048        12. RLS GRD    10      22. COT WAIT    05
 5. ACT PT SDN N          13. TRD        12      23. GBLO RSND   10
 6. SSP        N          14. TRK QRY AU 00060   24. GUBL RSND   10
 7. LATA       000        15. COT RETST  120
                      16. RSC SHORT  10
 ADV SVC PLATFORM         17. RSC LONG   0180
 8. ASP RESP  3                CCIS6 ONLY
                      18. BAND AU    0005
```

```
SCREEN 2 OF 2
                    CCS OFFICE PARAMETERS

     ISUP ONLY                 LEASED NETWORK
 25. RLS COMP     60          34. TIME OUT       4
 26. CRA TIMER    25          35. GLBL TITLE     000000
 27. EXM D TIMER  0300        36. DAS            00
 28. GRS RSND     10          37. ACTION POINT   N
 29. BUSY ANNC    N
 30. LEC ANNC     N               ISVM OPTION
 31. LEC IW REL   N           38. ISVM TCAP TIMER 3
 32. RCD 3PT1 ITC SPEECH

  CCIS6 AND TUP ONLY
 33. CLF          10
```

Figure 1 SAMPLE CCS OFFICE PARAMETERS VIEW 5E9(1)-5E10 SOFTWARE RELEASES

```
SCREEN 1 OF 2
                    CCS OFFICE PARAMETERS

                  CCIS6, ISUP, TUP      ISUP, TUP ONLY
*1. OFFICE ID  OFFICE1     9. ADDR COMP  25      19. DIGIT      4
 2. CNI EQUIP  Y          10. ANSWER     0       20. BLO RSND    10
 3. DLN EQUIP  N          11. COT        12      21. UBL RSND    10
 4. DS SPEED   048        12. RLS GRD    10      22. COT WAIT    05
 5. ACT PT SDN N          13. TRD        12      23. GBLO RSND   10
 6. SSP        N          14. TRK QRY AU 00060   24. GUBL RSND   10
 7. LATA       000        15. COT RETST  120
                      16. RSC SHORT  10
 ADV SVC PLATFORM         17. RSC LONG   0180
 8. ASP RESP  3                CCIS6 ONLY
                      18. BAND AU    0005
```

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```
SCREEN 2 OF 2
                        CCS OFFICE PARAMETERS

     ISUP ONLY                LEASED NETWORK              CCS FEATURES
 25. RLS COMP     60       34. TIME OUT                39. EXPANDED SLS     _
 26. CRA TIMER    25       35. GLBL TITLE     000000   40. IMPROVED SLT     _
 27. EXM D TIMER  0300       36. DAS          00       41. MTP NODE RESTART _
 28. GRS RSND     10       37. ACTION POINT    N
 29. BUSY ANNC    N
 30. LEC ANNC     N            ISVM OPTION
 31. LEC IW REL   N        38. ISVM TCAP TIMER 3
 32. RCD 3PT1 ITC SPEECH

  CCIS6 AND TUP ONLY
 33. CLF          10
```

Figure 2 SAMPLE CCS OFFICE PARAMETERS VIEW 5E11 AND LATER SOFTWARE RELEASES

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SEC. 10: COMMON CHANNEL SIGNALING FORMS

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SEC. 10A: 6001 RECORD
LEVEL 3 TIMER PARAMETER- CC7PR

1. GENERAL

The 6001 Record is available with 5E11 and later Software Releases and is used to specify and update the CCITT7 office parameters and MTP Level 3 timers. This form was added to support the VCDX SS7 on the PSU Feature. For more information on this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.2.

2. FORM ENTRIES - 6001-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global switching module used to specify the SM that supports the signaling system.

Data Rules:

When GSM is entered, it must be defined on the CCGSM form (6008 Record).

Required Field.

Valid Entries: 1 - 192

2.3 PROTOCOL

Description: This field specifies protocol type of combined link set. This is a no change field.

Required Field.
Default: C7NATL
Valid Entries: C7NATL

2.4 LINK AFFECT

Description: Enter the the maximum number of attempts to uninhibit or inhibit a link when an acknowledgement is not received.

Required Field.
Default: 2
Valid Entries: 1 - 6

2.5 CONGESTION

Description: Enter the congestion threshold level which specifies the number of messages received by a DPC (Destination Point Code) before a transfer control message is sent.

Required Field.
Valid Entries: 6 - 10

2.6 CO DELAY

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Description: Enter the changeover delay which specifies the delay interval used to avoid message mis-sequencing during changeover (to be specified in milliseconds).

Required Field.
Default: 500 (milliseconds)
Valid Entries: 500 -1200

2.7 CO ACK

Description: Enter the changeover acknowledgement. This field is used to specify the maximum wait time for the changeover acknowledgement (to be specified in milliseconds).

Required Field.
Default: 700 (milliseconds)
Valid Entries: 700 - 2000

2.8 CB DELAY

Description: Enter the changeback delay which specifies the delay to avoid message mis-sequencing during changeback. The result of changeback is that signaling traffic is returned from an alternate link to a normal link (to be specified in milliseconds).

Required Field.
Default: 500 (milliseconds)
Valid Entries: 500 - 1200

2.9 CB ACK1

Description: Enter the maximum wait time for the changeback acknowledgement - first attempt (to be specified in milliseconds).

Required Field.
Default: 500 (milliseconds)
Valid Entries: 500 - 1200

2.10 CB ACK2

Description: Enter the maximum wait time for the changeback acknowledgement - second attempt (to be specified in milliseconds).

Required Field.
Default: 500 (milliseconds)
Valid Entries: 500 - 1200

2.11 CRR DELAY

Description: Enter the controlled rerouting delay which is the delay to avoid message mis-sequencing during controlled rerouting (to be specified in milliseconds).

Required Field.
Default: 500 (milliseconds)
Valid Entries: 500 - 1200

2.12 TRANSFER

Description: Enter the maximum wait time "transfer prohibited" can be inhibited (to be specified in milliseconds).

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Required Field.
Default: 1000 (milliseconds)
Valid Entries: 800 - 1200

2.13 SRT WAIT

Description: Enter the amount of time to wait before repeating the signaling route test (to be specified in milliseconds).

Required Field.
Default: 30000 (milliseconds)
Valid Entries: 30000 - 60000

2.14 UA WAIT

Description: Enter the maximum wait for the uninhibit acknowledgement (to be specified in milliseconds).

Required Field.
Default: 1000 (milliseconds)
Valid Entries: 800 - 1500

2.15 MSU WAIT

Description: Enter the maximum wait for MSU (Message Signal Unit) during "forced uninhibit" (to be specified in milliseconds).

Required Field.
Default: 1000 (milliseconds)
Valid Entries: 800 - 1500

2.16 INHIBIT ACK

Description: Enter the maximum wait for an inhibit acknowledgement (to be specified in milliseconds).

Required Field.
Default: 3000 (milliseconds)
Valid Entries: 2000 - 3000

2.17 RSC TEST

Description: Enter the time for route set congestion (to be specified in milliseconds).

Required Field.
Default: 3000 (milliseconds)
Valid Entries: 2000 - 3000

2.18 RSC UPDATE

Description: Enter the route set congestion update time (to be specified in milliseconds).

Required Field.
Default: 1400 (milliseconds)
Valid Entries: 1400 - 2000

2.19 LINK RESTART

Description: Enter the maximum wait for a link restart (to be specified in milliseconds).

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Required Field.
Default: 1000 (milliseconds)
Valid Entries: 800 - 1500

2.20 LOCAL INHIBIT

Description: Enter the maximum wait time for local inhibit test (to be specified in milliseconds).

Required Field.
Default: 120000 (milliseconds)
Valid Entries: 90000 - 120000

2.21 REMOTE INHIBIT

Description: Enter the maximum wait for remote inhibit test (to be specified in milliseconds).

Required Field.
Default: 120000 (milliseconds)
Valid Entries: 90000 - 120000

3. FORM ENTRIES - 6001-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

3.2 STOP SEND WAIT

Description: Enter the stop send wait timer. This field is used to allow TDTP (traffic diversion terminal process) to die if "stop send" signal is not received (to be specified in milliseconds).

Required Field.
Default: 1000 (milliseconds)
Valid Entries: 800 - 1200

3.3 SLS DELAY

Description: Enter the delay time to avoid message mis-sequencing during SLS (Signaling Link Selection) correction (specified in milliseconds).

Required Field.
Default: 1000 (milliseconds)
Valid Entries: 800 - 1200

3.4 BSNT WAIT

Description: Enter the maximum wait time for BSN (Backward Sequence Number) to arrive during changeover (specified in milliseconds).

Required Field.
Default: 200 (milliseconds)
Valid Entries: 160 - 240

3.5 LEVEL 2 WAIT

Description: Enter the maximum wait time for a message from CCS (Common Channel Signaling) level 2 which indicates that previous unsent messages are now being sent to SMH (Signaling Message Handler) (specified in milliseconds).

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Required Field.
Default: 300 (milliseconds)
Valid Entries: 240 - 360

3.6 RC TIME

Description: Enter the maximum time a destination will be marked "remotely congested", after receiving a transfer control message. If the destination stays congested, another transfer control message must be received before the timer expires (specified in milliseconds). Upon receiving a message, the timer is reset to 0.

Required Field.
Default: 8000 (milliseconds)
Valid Entries: 2000 - 24000

3.7 SMH WAIT

Description: Enter the wait time before sending the SMH (Signaling Message Handler) the last sequence number (specified in milliseconds).

Required Field.
Default: 900000 (milliseconds)
Valid Entries: 780000 - 1020000

3.8 ACK LINK TEST

Description: Enter the maximum wait time for the signaling data link test acknowledgement (specified in milliseconds).

Required Field.
Default: 4000 (milliseconds)
Valid Entries: 4000 - 12000

3.9 DELAY LNK TST

Description: Enter the signaling link test delay timer (specified in milliseconds).

Required Field.
Default: 90000 (milliseconds)
Valid Entries: 30000 - 90000

3.10 FALSE LINK CONG

Description: The FALSE LINK CONG timer is used to specify the time used to detect a link in false link congestion.

Required Field.
Default: 30 (seconds)
Valid Entries: 10 - 120 (seconds)

3.11 FALSE LINK REF

Description: This field is used to specify the link alignment procedures start time.

Required Field.
Default: 400 (seconds)
Valid Entries: 180 - 600 (seconds)

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MTP RESTART

The following fields (Section 3.12 - Section 3.15) are associated with the Message Transfer Protocol Node Restart feature. For more information about this feature, see Division 2, Section 4a177.

3.12 ANSI TRA WAIT

Description: Enter the Traffic Restart Allowed timer; it is used by ANSI (American National Standards Institute) protocol only. This field specifies the timer at the signaling point that is adjacent to the restarting signaling point, waiting for TRA (Traffic Restart Allowed) messages.

Software Release: 5E14 and later
Required Field.
Default: 32 (seconds)
Valid Entries: 30 - 60

3.13 ANSI TRW WAIT

Description: Enter the Traffic Restart Waiting timer; it is used by ANSI protocol only. This field specifies the timer at the signaling point that is adjacent to the restarting signaling point, waiting for TRW (Traffic Restart Wait) messages.

Software Release: 5E14 and later
Required Field.
Default: 5 (seconds)
Valid Entries: 3 - 60

3.14 ANSI TRA ANSWER

Description: Enter the TRA Sent timer; it is used by ANSI protocol only. This field specifies that the timer has started when a TRA is sent in response to unexpected TRA or TRW messages.

Software Release: 5E14 and later
Required Field.
Default: 62 (seconds)
Valid Entries: 30 - 90

3.15 MTP STPO

Description: Enable MTP STPO (Message Transfer Part Short Term Processor Outage) procedures? This field is used to determine whether or not the MTP short term processor outage procedures are enabled for a particular GSM (Global Switching Module).

Software Release: 5E14 and later
Required Field.
Default: Y
Valid Entries: Y, N

3.16 X-LIST

Description: The field designates the duration a signaling point (cluster member) can remain on a dynamic exception list for a cluster route.

Required Field.
Default: 60 (seconds)
Valid Entries: 20 - 1440 by 5

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3.17 LOW PRI SRST

Description: This field specifies the timer for the SRST (Signaling Route Set Test) message transmission interval for routes that are alternate or of a lower priority.

Required Field.
Default: 600 (seconds)
Valid Entries: 0 - 864000 by 30

```
cc7pr                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(6001)                   CCITT7 PARAMETER VIEW


*1. GSM          ___     13. UA WAIT       1000     25. RC TIME       8000
   PROTOCOL     C7NATL  14. MSU WAIT       1000     26. SMH WAIT      900000
#3. LINK AFFECT  2       15. INHIBIT ACK    3000     27. ACK LINK TEST  4000
#4. CONGESTION   __      16. RSC TEST       3000     28. DELAY LNK TST  90000
 5. CO DELAY     500     17. RSC UPDATE     1400
 6. CO ACK       700     18. LINK RESTART   1000
 7. CB DELAY     500     19. LOCAL INHIBIT  120000
 8. CB ACK1      500     20. REMOTE INHIBIT 120000
 9. CB ACK2      500     21. STOP SEND WAIT 1000
10. CRR DELAY    500     22. SLS DELAY      1000
11. TRANSFER     1000    23. BSNT WAIT      200
12. SRT WAIT     30000   24. LEVEL 2 WAIT   300
```

Figure 1 SAMPLE CC7PR FORM 5E11 AND 5E12 SOFTWARE RELEASES

```
cc7pr                    5ESS Switch                _
                    OFFICE DATA ADMINISTRATION
(6001-1/2)               LEVEL 3 TIMER PARAMETER

*1. GSM          ___     13. UA WAIT       1000    25. RC TIME       8000
   PROTOCOL     C7NATL  14. MSU WAIT       1000    26. SMH WAIT      900000
 3. LINK AFFECT 2       15. INHIBIT ACK    3000    27. ACK LINK TEST  4000
#4. CONGESTION   __      16. RSC TEST       3000    28. DELAY LNK TST  90000
 5. CO DELAY     500     17. RSC UPDATE     1400    29. FALSE LINK CONG 30
 6. CO ACK       700     18. LINK RESTART   1000    30. FAILED LINK REF 400
 7. CB DELAY     500     19. LOCAL INHIBIT  120000
 8. CB ACK1      500     20. REMOTE INHIBIT 120000
 9. CB ACK2      500     21. STOP SEND WAIT 1000
10. CRR DELAY    500     22. SLS DELAY      1000
11. TRANSFER     1000    23. BSNT WAIT      200
12. SRT WAIT     30000   24. LEVEL 2 WAIT   300
```

Figure 2 SAMPLE CC7PR FORM 5E13 SOFTWARE RELEASE

```
cc7pr                    5ESS Switch
SCREEN 1 OF 2              OFFICE DATA ADMINISTRATION
(6001-1/2)               LEVEL 3 TIMER PARAMETER
```

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```
*1. GSM         011     13. UA WAIT        1000    25. RC TIME         8000
   PROTOCOL    C7NATL  14. MSU WAIT       1000    26. SMH WAIT        900000
 3. LINK AFFECT 2       15. INHIBIT ACK    3000    27. ACK LINK TEST   4000
#4. CONGESTION  6       16. RSC TEST       3000    28. DELAY LNK TST   90000
 5. CO DELAY    500     17. RSC UPDATE     1400    29. FALSE LINK CONG 30
 6. CO ACK      700     18. LINK RESTART   1000    30. FAILED LINK REF 400
 7. CB DELAY    500     19. LOCAL INHIBIT  120000
 8. CB ACK1     500     20. REMOTE INHIBIT 120000        MTP RESTART
 9. CB ACK2     500     21. STOP SEND WAIT 1000    31. ANSI TRA WAIT   32
10. CRR DELAY   500     22. SLS DELAY      1000    32. ANSI TRW WAIT   5
11. TRANSFER    1000    23. BSNT WAIT      200     33. ANSI TRA ANSWER 62
12. SRT WAIT    30000   24. LEVEL 2 WAIT   300     34. MTP STPO        Y
```

```
cc7pr                       5ESS Switch
SCREEN 2 OF 2               OFFICE DATA ADMINISTRATION
(6001-1/2)                  LEVEL 3 TIMER PARAMETER

35. X-LIST      60
36. LOW PRI SRST 600
```

Figure 3 SAMPLE CC7PR FORM 5E14 AND LATER SOFTWARE RELEASES

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SEC. 10B: 6002 RECORD
DATA LINK RATE TIMER PARAMETERS FORM - CCPDL

1. GENERAL

The 6002 Record is available with 5E11 and later Software Releases and is used to specify and update the CCITT7 MTP (Message Transfer Part) Level 2 Data Link Rate timers. This form supports the VCDX CCS7 on the PSU feature. For more information on this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.3.

2. FORM ENTRIES - 6002 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * DATA LINK RATE

Description: Enter the Data Link Rate. This field specifies the transmission rate of the data link.

Required Field.
Valid Entries: 56KB or 64KB

2.3 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

When is GSM entered on this form, it must be defined on the CCGSM form (6008 Record).

2.4 ALIGNED READY

Description: Enter the MTP level 2 Aligned Ready Wait Timer. This field is used to specify the maximum time to wait (in milliseconds) for the other side of the connection to align when this side of the connection is already aligned.

Software Release: 5E11 and later
Required Field.
Default: 13000 (milliseconds)
Valid Entries: 13000 - 300000

2.5 NOT ALIGNED

Description: Enter the MTP level 2 Not Aligned Ready Wait Timer. This field specifies the timer used during the Not Aligned state of the initial alignment control.

Required Field.
Default: 115000 (milliseconds)
Valid Entries: 5000 - 150000

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2.6 ALIGNED

Description: Enter the MTP level 2 Aligned Wait Timer used during the Aligned state of the initial alignment control.

Required Field.
Default: 11500 (milliseconds)
Valid Entries: 125 - 50000

2.7 EMERG PROVING

Description: Enter the MTP level 2 Emergency Proving Timer used during the Emergency Proving state.

Required Field.
Default: 600 (milliseconds)
Valid Entries: 400 - 3000

2.8 NORM PROVING

Description: Enter the MTP level 2 Normal Proving Timer used during the Normal Proving state when there is no emergency conditions.

Required Field.
Default: 2300 (milliseconds)
Valid Entries: 2300 - 9500

2.9 SENDING SIB

Description: Enter the Status Indication Busy Timer used when the receiving end of a signaling data link detects a congestion situation. This receiving end periodically returns a status indication "busy" to the remote transmitting end of the link. The timer between two of these indications is specified by this timer.

Required Field.
Default: 100 (milliseconds)
Valid Entries: 80 - 250

2.10 REMOTE CONGESTION

Description: Enter the MTP level 2 Remote Congestion Timer specifies the maximum wait time to wait for a remote congestion situation to clear.

Required Field.
Default: 3000 (milliseconds)
Valid Entries: 3000 - 10000

2.11 EXCESS DELAY ACK

Description: Enter the level 3 Excess Delay Acknowledgement Timer. This timer specifies the maximum time to wait for the acknowledgement of a transmitted MSU (Message Signal Unit).

Required Field.
Default: 500 (milliseconds)
Valid Entries: 500 - 2000

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(6002) DATA LINK RATE TIMER PARAMETERS

*1. DATA LINK RATE ____
*2. GSM ____
3. ALIGNED READY 13000
4. NOT ALIGNED 11500
5. ALIGNED 11500
6. EMERG PROVING 600
7. NORM PROVING 2300
8. SENDING SIB 100
9. REMOTE CONGESTION 3000
10. EXCESS DELAY ACK 500

Figure 1 SAMPLE CCPDL FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 10C: 6003 RECORD
SIGNALING LINK SET FORM - LNKSET

1. GENERAL

The 6003 Record is available with 5E11 and later Software Releases and is used to define CCS7 signaling link sets. For more information on this feature, see Division 2, Section 7L and Division 2, Section 9L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.5.

2. FORM ENTRIES - 6003 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * LINK SET

Description: Enter the link set number.

Required Field.
Valid Entries: 1 - 255

2.3 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

2.4 APC

Description: Enter the the 9-digit network indicator which specifies the Adjacent Point Code number to which this link is connected in the following format.

For the 5E11 Software Release, APCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Required Field.

Valid ANSI APC Entries - 5E11 and later

Definition	Format	Valid Entries
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

Valid AT&T APC Entries - 5E12 and later

Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

Data Rules:

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For 5E14 and later, APC cannot be equal to the ALIAS PC on the CCGSM form for the same GSM.

2.5 PHYSICAL LINKS

Description: This field indicates the number of SS7 links in a link set and is a no change field.
Valid Entries: 0 - 16

2.6 CLS COUNT

Description: This field indicates the number of combined link sets of which the link set is a member and is a no change field.
Valid Entries: 0 - 1

2.7 LINK TYPE

Description: This field indicates the type of link used for signaling between a 5ESS Switch and an adjacent signaling point. A-links are links used between a 5ESS Switch and a local STP (Signal Transfer Point). E-links are links used between a 5ESS Switch and a remote STP. F-links are links used between a 5ESS Switch and another signaling endpoint (i.e., 5ESS Switch and/or a database).

Software Release: 5E14 and later
Required Field.
Default: A
Valid Entries:

Valid Entries-5E14 and later

Entry	Definition
A	A-Link
E	E-Link
F	F-Link

2.8 LINK SET NAME

Description: This field is used as the alphanumeric Identifier of the link set. This field supports the SAAL SS7 High Speed Signaling Links feature. For more information on this feature see Division 2, Section 4A670.

Software Release: 5E16 and later
Valid Entries: 1 to 12 alphanumeric characters

2.9 SAAL HSL COUNT

Description: This is a Display Only field that displays the number of SAAL (Signaling ATM (Automatic Transfer Mode) Adaptation Layer) High Speed SS7 (Signaling System 7) links associated with this Link Set. This field also supports the SAAL SS7 High Speed Signaling Links feature.

Software Release: 5E16 and later
Valid Entries: 0 - 16

2.10 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

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```
lnkset                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6003)                  SIGNALING LINK SET


*1. LINK SET      ___
*2. GSM           ___
#3. APC           _________
   PHYSICAL LINKS _
   CLS COUNT      _
```

Figure 1 SAMPLE LNKSET FORM 5E11 - 5E13 SOFTWARE RELEASES

```
lnkset                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6003)                  SIGNALING LINK SET

*1. LINK SET      ___
*2. GSM           ___
#3. APC           _________
   PHYSICAL LINKS __
   CLS COUNT      _
 6. LINK TYPE     A
```

Figure 2 SAMPLE LNKSET FORM 5E14 SOFTWARE RELEASE

```
lnkset                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6003)                  SIGNALING LINK SET

*1. LINK SET      ___
*2. GSM           ___
#3. APC           _________
   PHYSICAL LINKS __
   CLS COUNT      _
 6. LINK TYPE     A

 7. CRIT IND N
```

Figure 3 SAMPLE LNKSET FORM 5E15 SOFTWARE RELEAS E

```
lnkset                  5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6003)                  SIGNALING LINK SET

*1. LINK SET      ___
```

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```
*2. GSM          ___
#3. APC          _________
   PHYSICAL LINKS __
   CLS COUNT      _
 6. LINK TYPE      A

 7. CRIT IND       N
 8. LINK SET NAME  ____________
   SAAL HSL COUNT __
```

Figure 4 SAMPLE LNKSET FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 10D: 6004-1/2 RECORD
SIGNALING LINK SET RECORD - CCLNK

1. GENERAL

The 6004-1/2 Records are available with the 5E11 Software Releases. CCLNK, the external link set member form, is used to define the CCS7 (Common Channel Signaling System No. 7) link sets and members. For more information on this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.6.

2. FORM ENTRIES - 6004-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * LINK SET

Description: Enter the link set number.

Required Field.
Valid Entries: 1 - 255

Data Rules:

The ISCN must be a unique value within an SM. ISCNs cannot be duplicated on one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- IPDSL
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- PSULNK
- PSUPIPE
- RTERM
- TRUNK
- XAT

CCLNK and MDLNK forms can share an ISCN SHELF and CHANNEL GROUP on an SM. They cannot have an ISCN SHELF and CHANNEL GROUP which are mixed with Protocol Handler assignments from either of the following forms:

- AMLBDSL
- DSL
- DSLAP
- DSLUSR
- IPDSL

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- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- PSULNK
- PSUPIPE
- QPHPIPE
- RTERM
- TRUNK
- XAT

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

Each ISCN entry must have the SHELF value (the first character of the ISCN) assigned on an EQPSUPH form (5742 Record) on the same SWITCHING MODULE and having a matching PSU SHELF.

2.3 * MEMBER

Description: Enter the member number.

Required Field.
Valid Entries: 0 - 15

2.4 * GSM

Description: Enter the Global SM number. GSM field is used to specify the global switching module that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

There can be, at most, 128 CCLNK forms entered with the same GSM.

When GSM, SHELF, CHANNEL GROUP combinations assigned on this form with corresponding SM, PSU, PSU SHELF and GRP combinations assigned on the PSUGP form, the PH TYPE on the PSUGP form must be "PH3" or "PH22".

For 5E14 and later:

- When GSM matches a GSM on a CLU form, the PH TYPE on the PSUGP form must not be set to "PH3".

- When GSM matches a GSM on a NID form, and PH TYPE on the PSUGP form must not be set to "PH3".

2.5 SLC

Description: Enter the signaling link code. The signaling link code is part of the header of a signaling network management message. For 5E16(2) and later this is a Display Only field.

Required Field.
Valid Entries: 0 - 15

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Data Rules:

SLCs assigned on the CCLNK form terminating to the same APC on the corresponding LNKSET form must be unique.

2.6 PRIORITY

Description: This field indicates the link priority within the link set. This is a no change field.
Default: 1
Valid Entries: 1

2.7 TRANSM TYPE

Description: Enter the transmission type. This field displays the transmission type for CCS message. This is a no change field.
Default: BASIC
Valid Entries:

Valid TRANSM TYPE Entries

Entry	Definition
BASIC	Basic retransmission will retransmit only once.
CYCLIC	Cyclic retransmisssion will try to retransmit several times if necessary.

2.8 RATE

Description: Enter the data link rate. This field represents the transmission rate of data link.

Required Field.
Valid Entries: 56KB or 64KB

2.9 # OE

Description: Enter OE TYPE and number.

Required Field.

Valid OE TYPE Entries

Entry	Definition
D	DEN (DLTU (Digital Line and Trunk Unit) Equipment Number).
N	NEN (DNU-S (Digital Network Unit - SONET) Equipment Number).
O	Software Release: 5E16(2) and later. OIUEN (Optical Interface Unit Equipment Number)

If OE TYPE is set to "D", this OE number consists of:

Valid OE Number Entries - TYPE D

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Line Trunk Unit	DLTU	X	0 - 5 (5E14 and earlier)
		XX	0 - 11 (5E15 and later)
Digital Facility Interface	DFI	XX	01 - 10
Digital Channel	DCHAN	XX	01 - 48

If OE TYPE is set to "N", this OE number consists of:

Valid OE Number Entries - Type N - 5E12 and earlier

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Digital Networking Unit - SONET	DNU-S	X	0 - 7
Data Group	DG	X	0 - 1
Synchronous Transport Signal	STS	X	0 - 5

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Virtual Tributary	VT	XX	01 - 28
Digital Signal Level 0	DS0	XX	01 - 24

Valid OE Number Entries - TYPE N - 5E13 and later

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1-192
Digital Networking Unit - SONET	DNU-S	X	0-7
Data Group	DG	X	0-1
SONET Termination Equipment	STE	X	1-6
Synchronous Transport Signal	STS	X	1
Virtual Tributary Group	VTG	X	1-7
Virtual Tributary Member	VTM	X	1-4
Digital Signal Level 0	DS0	XX	01-24

When OE TYPE is "O", the OIU Equipment Number consists of:

OE NUMBER, TYPE "O" - (5E16 and later)

Equipment		Format	Valid Entries
Switching Module	SM	XXX	1 - 192
Unit Number	OIU	X	0 - 7
Protection Group	PG	X	0 - 9
SONET Terminating Equipment	STE	X	1
High Level Virtual Container	HVC	X	1 - 3
Low Level Virtual Container Group	LVC GRP	X	1 - 7
Low Level Virtual Container Member	LVC MEM	X	1 - 4
Channel	CH	XX	01 - 24

Data Rules:

When CCLNK and XAT forms have an OE TYPE of "D" and a DEN specified, there must be corresponding DFIs or the DFIs that exist on the EQDUP form must have a FAC 0 specified.

For 5E12 and earlier, when CCLNK and XAT forms have an OE TYPE of "N" and a NEN is specified, there must be a corresponding EQVT form with VT EQSTAT and DS1S EQSTAT both set to "O". The associated EQVT form may be found by matching OE[1,3(SM)] with EQVT SM, OE[4(DNU-S)] with EQVT DNUS, OE[5(DATA GROUP)] with EQVT DATA GROUP, OE[6(STS)] with EQVT STS, and OE[7,8(VT)] with EQVT VT.

For 5E13 and later, when CCLNK and XAT forms have an OE TYPE of "N" and a NEN is specified, there must be a corresponding EQVT form with VT EQSTAT and DS1S EQSTAT both set to "O". The associated EQVT form may be found by matching OE[1,3(SM)] with EQVT SM, OE[4(DNU-S)] with EQVT DNUS, OE[5(DATA GROUP)] with EQVT DATA GROUP, OE[6(STE)] with EQVT STE, and OE[7(STS)] with EQVT STS, OE[8] with EQVT GROUP, and OE[9] with EQVT MEMBER.

For 5E15 and later, the SM number (first three digits of the OE) entered must be defined on the EQIM form with CONFIGURATION set to "LOADED", "SM2000", or "SIGNALING".

For 5E16(2) and later, when OE type is "O", OE must have a corresponding OIU SM, OIU, PROTECTION GRP, HVC, VT GROUP, and VT MEMBER defined on the EQLVC form (5764 Record).

2.10 TRANSRATE

Description: Enter the data link rate. This field represents the transmission rate of the data link (i.e., number of MSUs (Message Signal Unit) transmitted every 20 milliseconds). An entry of 0 denotes an unlimited rate.

Required Field.
Default: 0
Valid Entries: 0 - 8

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2.11 # SHELF

Description: Enter the PSU (Packet Switching Unit) shelf on which the protocol handler is equipped.

Required Field.
Valid Entries: 0 - 4

2.12 # CHANNEL GROUP

Description: Enter the PH (Protocol Handler) channel group. This field specifies the logical shelf position of the PH.

Required Field.
Valid Entries: 0 - 15

2.13 # CH GP MEMBER

Description: Enter the channel group member.

Required Field.
Valid Entries: 0 - 3

3. FORM ENTRIES - 6004-2 RECORD

3.1 BASE AND CONTROL, ESS UNIT

3.2 H RET ONSET

Description: Enter the retransmission buffer onset (high level onset congestion threshold). When this threshold is reached, the buffer is marked as congested, and a message is sent to the STRM (Signaling Traffic Route Management) process. For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, high level congestion treatment is in effect.

Required Field.
Default: 80
Valid Entries: 1 - 100

Data Rules:

H RET ONSET must be greater than H RET ABATE.

3.3 H RET ABATE

Description: Enter the retransmission buffer abatement (high level abatement congestion threshold). When this threshold is reached, the buffer is marked as uncongested (if it was previously marked as congested), and a message is sent to the STRM process. This message indicates the current level of the signaling SDL (Signaling Data Link). For multiple congestion levels, when the retransmission buffer occupancy decreases below the value of this threshold, medium level congestion treatment is in effect.

Required Field.
Default: 65
Valid Entries: 1 - 100

Data Rules:

H RET ABATE must be greater than M RET ONSET.

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3.4 H RET DISC

Description: Enter the retransmission buffer discard (high level congestion discard threshold). For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.
Default: 90
Valid Entries: 1 - 100

Data Rules:

H RET DISC must be greater than H RET ONSET.

3.5 H TRAN ONSET

Description: Enter the transmission buffer onset (high level onset congestion threshold). When congestion does occur, STRM is informed of the current congestion level of the SDL. For multiple congestion levels, when the transmission buffer occupancy exceeds the value of this threshold, high level congestion treatment is in effect.

Required Field.
Default: 80
Valid Entries: 1 - 100

Data Rules
H TRAN ONSET must be greater than H TRAN ABATE.

3.6 H TRAN ABATE

Description: Enter the transmission buffer abatement (high level abatement congestion threshold). When this threshold is reached, the STRM is informed of the current congestion level of the SDL. For multiple congestion levels, when the transmission buffer occupancy decreases below the value of this threshold, medium level congestion treatment is in effect.

Required Field.
Default: 65
Valid Entries: 1 - 100

Data Rules:

H TRAN ABATE must be greater than M TRAN ONSET.

3.7 H TRAN DISC

Description: Enter the transmission buffer discard (high level congestion discard threshold). For multiple congestion levels, when transmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.
Default: 90
Valid Entries: 1 - 100

Data Rules:

H TRAN DISC must be greater than H TRAN ONSET.

3.8 M RET ONSET

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Description: Enter the retransmission buffer onset (medium level onset congestion threshold). This field defines the percent fill, which when exceeded by the retransmission buffer occupancy will trigger the beginning of medium level congestion treatment.

Required Field.
Default: 60
Valid Entries: 1 - 100

Data Rules:

M RET ONSET must be greater than M RET ABATE.

3.9 M RET ABATE

Description: Enter the retransmission buffer abatement (medium level abatement congestion threshold). This field defines the percent fill, which the retransmission buffer occupancy must drop below for medium congestion to abate and/or medium congestion treatment to be in effect.

Required Field.
Default: 40
Valid Entries: 1 - 100

Data Rules:

M RET ABATE must be greater than L RET ONSET.

3.10 M RET DISC

Description: Enter the retransmission buffer discard (medium level congestion discard threshold). For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.
Default: 75
Valid Entries: 1 - 100

Data Rules:

M RET DISC must be greater than M RET ONSET.

3.11 M TRAN ONSET

Description: Enter the transmission buffer onset (medium level onset congestion threshold). Defines the percent fill, which when exceeded by the transmission buffer occupancy will trigger the beginning of medium level congestion treatment.

Required Field.
Default: 60
Valid Entries: 1 - 100

Data Rules:

M TRAN ONSET must be greater than M TRAN ABATE.

3.12 M TRAN ABATE

Description: Enter the transmission buffer abatement (medium level abatement congestion threshold). Defines the percent fill, which the transmission buffer occupancy must drop below for medium level

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congestion to abate and low level congestion treatment to be in effect.

Required Field.
Default: 40
Valid Entries: 1 - 100

Data Rules:

M TRAN ABATE must be greater than L TRAN ONSET.

3.13 M TRAN DISC

Description: Enter the transmission buffer discard (medium level congestion discard threshold). For multiple congestion levels, when the transmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.
Default: 75
Valid Entries: 1 - 100

Data Rules:

M TRAN DISC must be greater than M TRAN ONSET.

3.14 L RET ONSET

Description: Enter the retransmission buffer onset (low level onset congestion threshold). This field defines the percent fill, which when exceeded by the retransmission buffer occupancy, triggers the beginning of low level congestion treatment.

Required Field.
Default: 30
Valid Entries: 1 - 100

Data Rules:

L RET ONSET must be greater than L RET ABATE.

3.15 L RET ABATE

Description: Enter the retransmission buffer abatement (low level abatement congestion threshold). This field defines the percent fill of the retransmission buffer below which low congestion will abate.

Required Field.
Default: 10
Valid Entries: 1 - 100

3.16 L RET DISC

Description: Enter the retransmission buffer discard (low level congestion discard threshold). For multiple congestion levels, when the retransmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.
Default: 55
Valid Entries: 1 - 100

Data Rules:

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L RET DISC must be greater than L RET ONSET.

3.17 L TRAN ONSET

Description: Enter the transmission buffer onset (low level onset congestion threshold). Defines the percent fill, which when exceeded by the transmission buffer occupancy, triggers the beginning of low level congestion treatment.

Required Field.
Default: 30
Valid Entries: 1 - 100

Data Rules:

L TRAN ONSET must be greater than L TRAN ABATE.

3.18 L TRAN ABATE

Description: Enter the transmission buffer abatement (low level abatement congestion threshold). Defines the percent fill of the transmission buffer below which low level congestion will abate.

Required Field.
Default: 10
Valid Entries: 1 - 100

3.19 L TRAN DISC

Description: Enter the transmission buffer discard (low level congestion discard threshold). For multiple congestion levels, when the transmission buffer occupancy exceeds the value of this threshold, messages of lower priorities will be discarded.

Required Field.
Default: 55
Valid Entries: 1 - 100

3.20 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
cclnk                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(6004-1/2)              SIGNALING LINK SET MEMBER


 *1. LINK SET     ___      15. H RET ONSET  80    27. L RET ONSET  30
 *2. MEMBER        _       16. H RET ABATE  65    28. L RET ABATE  10
 *3. GSM          ___      17. H RET DISC   90    29. L RET DISC   55
 #4. SLC          __       18. H TRAN ONSET 80    30. L TRAN ONSET 30
    PRIORITY      1        19. H TRAN ABATE 65    31. L TRAN ABATE 10
```

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```
    TRANSM TYPE   BASIC       20. H TRAN DISC  90     32. L TRAN DISC  55
 7. RATE          ____        21. M RET ONSET  60
#8. OE            _ _________ 22. M RET ABATE  40
 11. TRANS RATE   0           23. M RET DISC   75
#12. SHELF        _           24. M TRAN ONSET 60
#13. CHANNEL GROUP __         25. M TRAN ABATE 40
#14. CH GP MEMBER  _          26. M TRAN DISC  75
```

Figure 1 SAMPLE CCLNK FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

```
cclnk                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(6004)                SIGNALING LINK SET MEMBER

 *1. LINK SET     ___          15. H RET ONSET  80    27. L RET ONSET  30
 *2. MEMBER       __           16. H RET ABATE  65    28. L RET ABATE  10
 *3. GSM          ___          17. H RET DISC   90    29. L RET DISC   55
    SLC           __           18. H TRAN ONSET 80    30. L TRAN ONSET 30
    PRIORITY      1            19. H TRAN ABATE 65    31. L TRAN ABATE 10
    TRANSM TYPE   BASIC        20. H TRAN DISC  90    32. L TRAN DISC  55
 #7. RATE         ____         21. M RET ONSET  60
 #8. OE           _ __________ 22. M RET ABATE  40    33. CRIT IND N
 11. TRANS RATE   0            23. M RET DISC   75
#12. SHELF        _            24. M TRAN ONSET 60
#13. CHANNEL GROUP __          25. M TRAN ABATE 40
#14. CH GP MEMBER  _           26. M TRAN DISC  75
```

Figure 2 SAMPLE CCLNK FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10E: 6005 RECORD
COMBINED SIGNALING LINK SET FORM - CLKSET

1. GENERAL

The 6005 Record is available with 5E11 and later Software Releases and is used to define the link sets that comprise the combined link set. This form supports the VCDX CCS7 on the PSU feature. For more information on this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.7.

2. FORM ENTRIES - 6005 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * CLS

Description: Enter the combined link set number.

Required Field.
Valid Entries: 256 - 511

Data Rules:

The maximum number of CLKSET form entries allowed in an office is 8.

For each LINK SET entered on the LNKSET forms, there can be at most one CLKSET form with a matching LS1 or LS2.

For 5E14 and later:

- When CLS is entered, it must be defined as a NORMAL LINK SET on a NID form for the same GSM, and LS1 and LS2 on the CLKSET form must each be defined as a LINK SET on a LNKSET form for the same GSM.
- When CLS is entered, it must be defined as a NORMAL LINK SET on a CLU form for the same GSM, and LS1 and LS2 on the CLKSET form must each be defined as a LINK SET on a LNKSET form for the same GSM.

2.3 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For 5E14 and later, when GSM, LS1 and LS2 on this form matches the LINK SET on the LNKSET form (6003 Record), the LINK TYPE on the LNKSET form must be the same.

2.4 # LS1

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Description: Enter the 1st link set of combined link set.

Required Field.
Valid Entries: 1 - 255

Data Rules:

LS1 cannot equal LS2.

For each LS1 or LS2 entered on the CLKSET form, there must be a corresponding LNKSET form (6003 Record) where LINK SET equals LS1 or LS2.

2.5 # LS2

Description: Enter the 2nd link set of combined link set.

Required Field.
Valid Entries: 1 - 255

Data Rules:

For each LS1 or LS2 entered on the CLKSET form, there must be a corresponding LNKSET form (6003 Record) where LINK SET equals LS1 or LS2.

2.6 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

---

clkset 5ESS Switch _
(6005) OFFICE DATA ADMINISTRATION
COMBINED SIGNALING LINK SET

*1. CLS ___
*2. GSM ___
#3. LS1 ___
#4. LS2 ___

Figure 1 SAMPLE CLKSET FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

---

clkset 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6005) COMBINED SIGNALING LINK SET

*1. CLS ___
*2. GSM ___

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#3. LS1 ___
#4. LS2 ___

5. CRIT IND N

Figure 2 SAMPLE CLKSET FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10F: 6006 RECORD
SIGNALING POINT CODE FORM - PC

1. GENERAL

The 6006 Record is available with 5E11 and later Software Releases and is used to specify the point code and alternate link set routing for PSUs (Packet Switching Units). For more information, see Division 7, Section 2L and Division 2, Section 9L.

For 5E13 and later, the VCDX Loop-Around Intra-Module Trunk feature is available; see Division 2, Section 7AD.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.10.

2. FORM ENTRIES - 6006

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * POINT CODE

Description: Enter the Point Code Number. This field is used to specify and update the point code and alternate link set routing.

For the 5E11 Software Release, point codes can be entered in the ANSI (American National Stardards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record)

Required Field.
Valid Entries: 9-digit point code in the following format:

Valid ANSI POINT CODE Entries - 5E11 and earlier		
Definition	**Format**	**Valid Entries**
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255
Valid ANSI POINT CODE Entries - 5E12 and later		
Definition	**Format**	**Valid Entries**
Network Indicator	XXX	000 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

Valid IMT Entries - 5E13 and later □ VCDX/SM-2000 Only		
Definition	**Format**	**Valid Entries**
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

Valid AT&T POINT CODE Entries - 5E12 and later		
Definition	**Format**	**Valid Entries**
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

Data Rules:

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For 5E14 and later, when POINT CODE is entered, this value cannot be the same as the OPC or any ALIAS PC value entered on the CCGSM form.

2.3 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

2.4 ADJACENT

Description: This field indicates whether this point code is an adjacent point code. This is a no change field.

Required Field.
Default: N
Valid Entries: Y, N

2.5 # NORMAL LINK SET

Description: Enter the Normal Link Set used for routing to this point code.

Required Field.
Valid Entries: 1 - 511

Data Rules:

All the link sets entered on NORMAL LINK SET or ALTERNATE LINK SETS on this form, either directly with values less than 256 or indirectly as a CLS (Combined Link Set) with values greater than 255 which the corresponding CLKSET form has two link sets defined as LS1 and LS2, must all be unique. Also, the number of total unique link sets defined for a given POINT CODE must not be greater than 7.

When NORMAL LINK SET or ALTERNATE LINK SETS entered with values less than 256, indicating a link set, the APC on the corresponding LNKSET form must be entered as the POINT CODE of a PC form. If NORMAL LINK SET or ALTERNATE LINK SETS entered as values greater than 255, indicating a Combined Link Set, check the corresponding CLS on the CLKSET form first. Then use LS1 and LS2 to find the matching LNKSET forms. The APC on the corresponding LNKSET forms must match the POINT CODE on PC forms.

2.6 RESTART OPTION

Description: This field indicates which restart option is currently defined for the APC (Adjacent Point code). It is used during the MTP (Message Transfer Part) inter-linkset changeback to determine which routing data update procedure to use. If the value is "RESTART", the MTP adjacent restart procedures are used for this APC. If the value is "NONE", no restart option is used.

Software Release: 5E14 and later
Required Field.
Default: NONE
Valid Entries:

Valid Entries - 5E14 and later

Entry	Definition
NONE	Do not use a restart method.
RESTART	Use local MTP restart method.

Data Rules:

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RESTART OPTION must be "NONE" or "RESTART".

When RESTART OPTION is set to "RESTART", the ACT field for SFID (Secured Feature ID) 177 on the SFSYS form (5713-1) must be set to "Y".

2.7 REMOTE INIT SSN ALW

Description: Activate SCCP (Signaling Connection Control Part) remote initialization of the SSNs at this destination point code? The Remote Initialization Subsystem Number Allowed indicates whether or not the SCCP status of the SSNs at this DPC (Destination Point Code) are initialized as allowed or prohibited after a remote SCCP restart.

Software Release: 5E14 and later
Required Field.
Default: Y
Valid Entries: Y, N

2.8 ALTERNATE LINK SETS

Description: Enter the alternate link sets for routing which can be assigned a priority to this point code when the normal link set becomes unavailable.

Required Field.
Valid Entries: 1 - 511

Data Rules:

ALTERNATE LINK SETS must not equal NORMAL LINK SET.

ALTERNATE LINK SETS must be unique.

All the Link Sets entered on NORMAL LINK SET or ALTERNATE LINK SETS on this form, either directly with values less than 256 or indirectly as a CLS with values greater than 255 on the corresponding CLKSET form which has two link sets defined as LS1 and LS2, must all be unique. Also, the number of total unique Link Sets defined for a given POINT CODE must not be greater than 7.

2.9 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

---

pc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6006) SIGNALING POINT CODE

*1. POINT CODE _____
*2. GSM ___
ADJACENT _
#4. NORMAL LINK SET ___

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5. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1 ___
2 ___
3 ___
4 ___

Figure 1 SAMPLE PC FORM 5E11 SOFTWARE RELEASE

pc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6006) SIGNALING POINT CODE

*1. POINT CODE _____
*2. GSM ___
ADJACENT _
#4. NORMAL LINK SET ___
5. RESTART OPTION NONE
6. REMOTE INIT SSN ALW Y

7. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1 ___
2 ___
3 ___
4 ___

Figure 2 SAMPLE PC FORM 5E14 SOFTWARE RELEASE

pc 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6006) SIGNALING POINT CODE

*1. POINT CODE _____ 7. ALTERNATE LINK SETS (ALTLINKSETS)
*2. GSM ___ ROW SET
ADJACENT _ 1 ___
#4. NORMAL LINK SET ___ 2 ___
5. RESTART OPTION NONE 3 ___
6. REMOTE INIT SSN ALW Y 4 ___

9. CRIT IND N

Figure 3 SAMPLE PC FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10G: 6007 RECORD
CHANNEL GROUP MEMBER ASSIGNMENT FORM - CHGRPM

1. GENERAL

The 6007 Record is available with 5E11 and later Software Releases and is used to define the CCS (Common Channel Signaling) and message delivery channel groups. This form supports the VCDX CCS7 on the PSU feature. For more information, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.11.

2. FORM ENTRIES - 6007 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the SM (Switching Module) that supports SS7 (Signaling System 7) system.

Required Field.
Valid Entries: 1 - 192

2.3 * SHELF

Description: Enter the PSU (Packet Switching Unit) shelf on which the protocol handler is equipped.

Required Field.
Valid Entries: 0 - 4

2.4 * CHGRP

Description: Enter the PH channel group. This field specifies the logical shelf position of PH (Protocol Handler).

Required Field.
Valid Entries: 0 - 15

ASSIGNMENT TABLE (DSLDATA)

The following fields (Section 2.5 - Section 2.7) specify the channel group member assignment table which is used to define the channel group link information.

The channel group member assignment tableconsists of 4 channel group links 0 - 3.

2.5 TYPE

Description: Enter the channel group type.
Valid Entries: Up to 8 alpha characters

2.6 LINKSET

Description: Enter the Link set number.
Valid Entries: 1 - 255

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2.7 MEMBER

Description: Enter the member within the link set.

Software Release: 5E11 and later.
Valid Entries: 0 - 7

```
chgrpm                    5ESS Switch          _
                      OFFICE DATA ADMINISTRATION
(6007)                 CHANNEL GROUP MEMBER ASSIGNMENT


*1. SM   ___
*2. SHELF _
*3. CHGRP __

      5. ASSIGNMENT TABLE (DSLDATA)
ROW  CH GP LINK    TYPE    LINK SET  MEMBER
 1      0     _________   ___     _
 2      1     _________   ___     _
 3      2     _________   ___     _
 4      3     _________   ___     _
```

Figure 1 SAMPLE CHGRPM FORM 5E11 AND LATER SOFTWARE RELEASES

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SEC. 10H: 6008 RECORD
CCITT7 GLOBAL SM FORM - CCGSM

1. GENERAL

The 6008 Record is available with 5E11 and later Software Releases and is used to specify data used for the global switching module. One CCGSM is entered for each GSM (Global Switching Module), up to a maximum of 16 per office. For more information, see Division 2, Section 7L and Division 2, Section 9L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.1.

2. FORM ENTRIES - 6008 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The CCGSM form must have a matching EQIM form with EQSTATUS of "O".

When this form is defined for the office and the GSM matches the GSM on the CCPDL form, two corresponding CCPDL forms (6002 Record) must exist with DATA LINK RATE set to "56KB" and "64KB".

When this form is entered, CCS must be set to "PSU" on the OFCOPT form (5509 Record).

When GSM is entered on this form, it must be defined on the CC7PR form (6001 Record).

When a CCGSM form is entered,

- there must be a corresponding MDLNK form (6009 Record) entered with the SM on the MDLNK form equal to the GSM on the CCGSM form.
- there must be a corresponding EQIM form (5700-1/2 Record).

For 5E14 and later, for each CCGSM form there must be a CMTMH or MDLNK form with the GLOBAL SM equal to the GSM on the CCGSM form.

2.3 # OPC

Description: Enter the Originating Point Code that is assigned to the GSM (Global Switching Module).

For the 5E11 Software Release, OPCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Code must also be defined on the PC (SIGNALING POINT CODE) form (6006 Record).
Valid Entries: 9 - digit point code in the the following format:

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Valid ANSI OPC Entries - 5E11 and later		
Definition	**Format**	**Valid Entries**
Network Indicator	XXX	001 - 254
Cluster Number	XXX	000 - 255
Member	XXX	000 - 255

Valid AT&T OPC Entries - 5E12 and later		
Definition	**Format**	**Valid Entries**
Network Indicator	XXX	236 or 254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

Data Rules:

The OPC entered on the TKGRP must match the OPC entered on this form.

2.4 CONGEST TYPE

Description: This field specifies the congestion type used by the GSM. The default value "MPRT" specifies multiple congestion levels with priorities. This is a no change field.

Required Field.
Default: MPRT
Valid Entries: MPRT

2.5 CONGEST METHOD

Description: Enter the congestion method used by the GSM.

Required Field.
Default: RCT
Valid Entries:

Valid CONGEST METHOD Entries	
Entry	**Definition**
RCT	**Method by which a Route Set Congestion Test message is sent.**
TIMER	**Method of setting a timer and lowering the congestion level after the timer expires.**

2.6 LOAD SHARING

Description: This field specifies the load sharing to be used during changeover. The default value "ANSILS" specifies ANSI 7 Load Sharing. This is a no change field.

Required Field.
Default: ANSILS
Valid Entries: ANSILS

2.7 EXPANDED SLS

Description: This field is used to indicate whether 5 bit SLS or 8 bit SLS load sharing is used.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries:

Valid Entries - 5E14 and later	
Entry	**Definition**
Y	8 bit SLS load sharing.
N	5 bit SLS load sharing.

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Data Rules:

When EXPANDED SLS is set to "Y", the PH TYPE on the PSUGP form must not be set to "PH3".

If EXPANDED SLS is "Y", SIF 175 must be activated on the SFSYS form (5713 Record).

2.8 RESTART OPTION

Description: This field specifies that no restart method is used. This is a no change field.

Software Release: 5E14 and later
Required Field.
Default: NONE
Valid Entries: NONE

2.9 SUFFICIENT RTE

Description: This field contains the value for the percentage of signaling routes (received TRAs (Traffic Restart Allowed Message Signaling Units)) that must be made accessible before phase one of the MTP restart can be complete.

Software Release: 5E14 and later
Required Field.
Default: 50
Valid Entries: 0 - 100

2.10 SUFFICIENT LNK

Description: This field contains the value for the percentage of signaling links that must be made accessible before phase one of the MTP restart can be considered completed.

Software Release: 5E14 and later
Required Field.
Default: 50
Valid Entries: 0 - 100

2.11 DEDICATED

Description: This field indicates whether or not the GSM is a dedicated GSM.

Software Release: 5E16(1) and later
Required Field.
Default: N
Valid Entries: Y, N

Data Rules:

When DEDICATED GSM on the CCGSM form (6008 Record) is set to "Y":

- the SMs referenced on the SMLDIT form (5315 Record) must not be assigned on the SMLDIT form.
- CKT SM(s) and/or PKT SM(s) on the HGRPAS form (5115 Record) must not be assigned.
- the GSM must be entered on the CMTMH form (6021 Record) as a H0ST GSM.

ALIAS POINT CODES

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2.12 ALIAS PC

Description: This field is used to specify the point code number.

Required Field.

Software Release: 5E14 and later
Valid Entries: 9 characters

VALID ALIAS POINT CODES	
Value	Valid Entry
ANSI	[001 - 235, 237 - 253] [000 - 255] [000 - 255
ATT-C	[236, 254] [00 - 31] [0 - 7] [000 - 255]

Data Rules:

ALIAS PC must not match either OPC or ALIAS PC on another CCGSM form.

Each ALIAS PC must be unique.

2.13 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
ccgsm                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6008)                   GLOBAL SM

*1. GSM          ___        10. ALIAS POINT CODES (APCLIST)
#2. OPC          _________   ROW ALIAS PC  ROW ALIAS PC
   CONGEST TYPE   MPRT       1 _________  9 _________
 4. CONGEST METHOD RCT       2 _________  10 _________
   LOAD SHARING   ANSILS     3 _________  11 _________
 6. EXPANDED SLS   N         4 _________  12 _________
 7. RESTART OPTION NONE      5 _________  13 _________
 8. SUFFICIENT RTE 50        6 _________  14 _________
 9. SUFFICIENT LNK 50        7 _________  15 _________
                         8 _________
```

Figure 1 SAMPLE CCGSM FORM 5E14 SOFTWARE RELEASE

```
ccgsm                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6008)                   GLOBAL SM

*1. GSM          ___        10. ALIAS POINT CODES (APCLIST)   15. CRIT IND N
#2. OPC          _________   ROW ALIAS PC  ROW ALIAS PC
   CONGEST TYPE   MPRT       1 _________  9 _________
 4. CONGEST METHOD RCT       2 _________  10 _________
```

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```
   LOAD SHARING   ANSILS      3 _________ 11 _________
 6. EXPANDED SLS  N           4 _________ 12 _________
   RESTART OPTION NONE        5 _________ 13 _________
 8. SUFFICIENT RTE 50         6 _________ 14 _________
 9. SUFFICIENT LNK 50         7 _________ 15 _________
                              8 _________
```

Figure 2 SAMPLE CCGSM FORM 5E15 SOFTWARE RELEASE

```
ccgsm                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6008)                   GLOBAL SM

*1. GSM          ___       11. ALIAS POINT CODES (APCLIST)   16. CRIT IND N
#2. OPC          _________  ROW ALIAS PC  ROW ALIAS PC
   CONGEST TYPE  MPRT        1 _________  9 _________
 4. CONGEST METHOD RCT       2 _________ 10 _________
   LOAD SHARING  ANSILS      3 _________ 11 _________
 6. EXPANDED SLS  N          4 _________ 12 _________
   RESTART OPTION NONE       5 _________ 13 _________
 8. SUFFICIENT RTE 50        6 _________ 14 _________
 9. SUFFICIENT LNK 50        7 _________ 15 _________
10. DEDICATED     N          8 _________
```

Figure 3 SAMPLE CCGSM FORM 5E16(1) AND LATER SOFTWARE RELEASES

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SEC. 10J: 6009 RECORD
MESSAGE DELIVERY LINK FORM - MDLNK

1. GENERAL

The 6009 Record is available with 5E11 and later Software Releases and is used to specify and update the message delivery link and the "bunny-hop" PH (a link internal to the SM where SS7 messages originate or terminate). For more information, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.17.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * SM

Description: Enter the SM (Switching Module) of the message delivery link.

Required Field.
Valid Entries: 1 - 192

Data Rules:

For each SM entered on the MDLNK form, there must be a matching GSM entered on the CCGSM form (6008 Record).

SM/ISCNs assigned on this form must have a corresponding combination of SM, PSU, PSU SHELF and GRP entered on the PSUGP form.

The ISCN must be a unique value within an SM. ISCNs cannot be duplicatedon one or more of the following forms:

- AMLBDSL
- CCLNK
- DSL
- DSLAP
- DSLUSR
- MDLNK
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

MDLNK and CCLNK forms can share an ISCN SHELF and CHANNEL GROUP on an SM. They cannot have an ISCN SHELF and CHANNEL GROUP which are mixed with Protocol Handler assignments from any of the following forms:

- AMLBDSL
- DSL

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- DSLAP
- DSLUSR
- MISLINK
- ODBRES
- OSPSDSL
- PSISM
- RTERM
- TRUNK
- XAT.

For 5E14 and later:

- When SM matches a GSM on a CLU form, PH TYPE on the PSUGP form must not be set to "PH3".
- When SM matches a GSM on a NID form, PH TYPE on the PSUGP form must not be set to "PH3".

2.3 SHELF

Description: Enter the shelf of MDL (Message Delivery Link).

Required Field.
Valid Entries: 0 - 4

2.4 CHANNEL GROUP

Description: Enter the channel group. This field specifies the shelf position of the MDL (Message Delivery Link).

Required Field.
Valid Entries: 0 - 15

2.5 MEMBER

Description: Enter the channel group member. This field specifies the PH (Protocol Handler) of the message delivery link.

Required Field.
Valid Entries: 0 - 3

2.6 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

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```
*1. SM          ___
 #2. SHELF       _
 #3. CHANNEL GROUP __
 #4. MEMBER      _
```

Figure 1 SAMPLE MDLNK FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

```
mdlnk                    5ESS Switch          _
                   OFFICE DATA ADMINISTRATION
(6009)                MESSAGE DELIVERY LINK

*1. SM          ___
#2. SHELF       _
#3. CHANNEL GROUP __
#4. MEMBER      _

 5. CRIT IND N
```

Figure 2 SAMPLE MDLNK FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10K: 6010 RECORD
SCCP NETWORK DEFINITION FORM - CCNET

1. GENERAL

The 6010 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) network definition form was added to support the VCDX SS7 on the PSU feature. For more information concerning this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.20.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

When GSM is entered with SCCP TYPE of "NA7" and PROTOCOL of "C7NATL", it must be defined on the CC7PR form (6001 Record).

When GSM is entered on this form, a corresponding CCGSM form (6008 Record) must exist where the CCGSM GSM equals the CCNET GSM.

When GSM is entered on this form, a corresponding CCSPR form (6011 Record) must exist where the CCSPR GSM equals the CCNET GSM.

2.3 # PROTOCOL

Description: Enter the protocol type. This field is used to specify the SCCP (Signaling Connection Control Part) protocol type.

Required Field.
Valid Entries: C7NATL

Data Rules:

No more than 16 CCNET forms may be entered with PROTOCOL set to "C7NATL".

2.4 # SCCP TYPE

Description: Enter the SCCP type associated with GSM. Currently, there is only one entry for this field.

Required Field.

Valid SCCP TYPE Entries

Entry	Definition
NA7	North American CCS - C7.

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2.5 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
ccnet                    5ESS Switch        _
(6010)                OFFICE DATA ADMINISTRATION
                    SCCP NETWORKS DEFINITION

*1. GSM       ___
#2. PROTOCOL  ______
#3. SCCP TYPE ___
```

Figure 1 SAMPLE CCNET FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

```
ccnet                    5ESS Switch        _
                      OFFICE DATA ADMINISTRATION
(6010)                   SCCP NETWORKS DEFINITION

*1. GSM      ___
#2. PROTOCOL ______
#3. SCCP TYPE ___

 4. CRIT IND N
```

Figure 2 SAMPLE CCNET FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10L: 6011 RECORD
SCCP PARAMETER DEFINITION FORM - CCSPR

1. GENERAL

The 6011 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) parameter definition form is used to define individual parameters for a SCCP GSM and was added to support the VCDX CCS7 on the PSU feature. For more information concerning this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.21.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

When GSM is defined on this form with PROCESSING set to "Y", it must also be entered on at least one CCTT form (6014 Record) and at least one CCSGT form (6015 Record).

2.3 PROTOCOL

Description: This field indicates the SCCP protocol type. This is a no change field.

Required Field.
Default: C7NATL
Valid Entries: C7NATL

2.4 SCCP TYPE

Description: This field indicates the SCCP type associated with GSM. This is a no change field.

Required Field.
Default: NA7
Valid Entries: NA7

2.5 INIT STATUS

Description: Enter the SCCP initialization status.

Required Field.
Default: GROW
Valid Entries: GROW, OPER

Data Rules:

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When INIT STATUS is "GROW", PROCESSING must be "N".

2.6 SUBSYS STATUS TIMER

Description: Enter the SCCP subsystem status timer.

Required Field.
Default: 30
Valid Entries: 30 - 90

2.7 PROCESSING

Description: Should SCCP messages be processed in the PH?

Required Field.
Default: N
Valid Entries: Y, N

2.8 VERSION

Description: This field indicates the SCCP version associated with GSM. This is a no change field.

Required Field.
Default: ATT89
Valid Entries: ATT89

2.9 SUBSYS ALLOW

Description: Enter the subsystem allowed message priority.

Required Field.
Default: 3
Valid Entries: 0 - 3

2.10 SUBSYS PROHIB

Description: Enter the subsystem prohibit message priority.

Required Field.
Default: 3
Valid Entries: 0 - 3

2.11 SUBSYS TEST

Description: Enter the subsystem test message priority.

Required Field.
Default: 2
Valid Entries: 0 - 3

2.12 SUBSYS NORMAL

Description: Enter the subsystem normal message priority.

Required Field.
Default: 0
Valid Entries: 0 - 3

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2.13 SUBSYS BACKUP

Description: Enter the subsystem backup message priority.

Required Field.
Default: 0
Valid Entries: 0 - 3

2.14 UNIT DATA

Description: Enter the unit data message priority.

Required Field.
Default: 1
Valid Entries: 0 - 3

2.15 UD SERVICE

Description: Enter the unit data service message priority.

Required Field.
Default: 1
Valid Entries: 0 - 3

SCCP STATUS MGMT

The following fields (Section 2.16 -Section 2.18) provide the signaling connnection control part status management information.

2.16 REMOTE SCCP MGMT

Description: Does this global switching module perform signaling, connection control part management? This field determines whether or not this GSM (Global Switching Module) performs SCCP (Signaling Connection Control Part) management.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

2.17 LOCAL INIT SPEC

Description: Is the initialization value of the subsystem numbers, states-specific per GSM or per PC? This field determines whether or not the initialization value of the SSNs' (Subsystem Numbers') states is specfic per GSM or per PC.

Software Release: 5E14 and later
Required Field.
Default: N
Valid Entries: Y, N

2.18 LOCAL INIT SSN ALW

Description: Is SSN status initialization allowed? This field determines whether or not the SSN status is initialized as allowed.

Software Release: 5E14 and later

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Required Field.
Default: Y
Valid Entries: Y, N

2.19 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
ccspr                    5ESS Switch          _
(6011)                OFFICE DATA ADMINISTRATION
                    SCCP PARAMETER DEFINITION

*1. GSM                ___          MESSAGE PRIORITY
   PROTOCOL          C7NATL     8. SUBSYS ALLOW  3
   SCCP TYPE          NA7       9. SUBSYS PROHIB 3
 4. INIT STATUS       GROW      10. SUBSYS TEST   2
 5. SUBSYS STATUS TIMER 30       11. SUBSYS NORMAL 0
 6. PROCESSING         N        12. SUBSYS BACKUP 0
   VERSION           ATT89     13. UNIT DATA     1

                              14. UD SERVICE    1
```

Figure 1 SAMPLE CCSPR FORM 5E11 - 5E13 SOFTWARE RELEASES

```
ccspr                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
(6011)                 SCCP PARAMETER DEFINITION

*1. GSM                ___       11. SUBSYS NORMAL 0
   PROTOCOL          C7NATL    12. SUBSYS BACKUP 0
   SCCP TYPE          NA7      13. UNIT DATA     1
 4. INIT STATUS       GROW     14. UD SERVICE    1
 5. SUBSYS STATUS TIMER 30
 6. PROCESSING         N          SCCP STATUS MGMT
   VERSION           ATT89    15. REMOTE SCCP MGMT   N
                             16. LOCAL INIT SPEC    N
 8. SUBSYS ALLOW  3            17. LOCAL INIT SSN ALW Y
 9. SUBSYS PROHIB 3
10. SUBSYS TEST   2
```

Figure 2 SAMPLE CCSPR FORM 5E14 SOFTWARE RELEASE

```
ccspr                    5ESS Switch          _
                    OFFICE DATA ADMINISTRATION
```

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```
(6011)                SCCP PARAMETER DEFINITION

*1. GSM               ___      11. SUBSYS NORMAL 0
   PROTOCOL           C7NATL   12. SUBSYS BACKUP 0
   SCCP TYPE          NA7      13. UNIT DATA     1
 4. INIT STATUS       GROW     14. UD SERVICE    1
 5. SUBSYS STATUS TIMER 30
 6. PROCESSING        N          SCCP STATUS MGMT
   VERSION            ATT89    15. REMOTE SCCP MGMT   N
                               16. LOCAL INIT SPEC    N
 8. SUBSYS ALLOW  3            17. LOCAL INIT SSN ALW Y
 9. SUBSYS PROHIB 3
10. SUBSYS TEST   2            18. CRIT IND N
```

Figure 3 SAMPLE CCSPR FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10M: 6012 RECORD
SCCP PRIMARY/BACKUP DESTINATION FORM - CCPBD

1. GENERAL

The 6012 Record is available with 5E11 and later Software Releases. The SCCP (Signaling Connection Control Part) Primary/Backup Destination Record is used to define the primary and backup destinations for SCCP signaling. For more information, see Division 2, Section 7L and Division 2, Section 9L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.22.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM PRIMARY

Description: Enter the Primary GSM (Global Switching Module). This field specifies the Global GSM dedicated as the primary GSM-DPC-SSN (Global Switching Module - Destination Point Code - SubSystem Number).

Required Field.
Valid Entries: 1 - 192

Data Rules:

GSM-DPC-SSN BACKUP must be different from GSM-DPC-SSN PRIMARY.

Each combination of PRIMARY/BACKUP GSM/DPC can be defined with a maximum of nine different SSNs.

The maximum number of unique DESTINATION (PRIMARY or BACKUP) combinations per Global SM is 4095. DESTINATION combinations are entered on this form and consist of PRIMARY/BACKUP GSM, DPC, and SSN.

Each GSM PRIMARY entered on this form must be defined on the CCNET form (6010 Record). If SCCP TYPE set to "NA7" and PROTOCOL set to "C7NATL" on the CCNET form, then DPC PRIMARY on this form must be defined as a POINT CODE on the PC form (6006 Record).

2.3 * DPC PRIMARY

Description: Enter the Primary Destination Point Code. This field specifies the DPC (Destination Point Code) for the primary GSM-DPC-SSN.

For the 5E11 Software Release, DPCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Code must also be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Required Field.
Valid Entries: 9 - digit point code in the following format:

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Valid ANSI DPC PRIMARY Entries - 5E11 and later

Definition	Format	Entry
Network indicator	XXX	[001 - 254]
Cluster number	XXX	[000 - 255]
Member	XXX	[000 - 255]

Valid AT&T DPC PRIMARY Entries - 5E12 and later

Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

Data Rules:

For 5E14 and later:

DPC PRIMARY and DPC BACKUP must not be equal to either the OPC from the CCGSM form or ALIAS PC from the APCLIST on the CCGSM form for the same GSM.

When GSM PRIMARY and DPC PRIMARY do not match a GSM and OPC or GSM and ALIAS PC from the CCGSM form respectively, the DPC PRIMARY must be defined in one of the following three ways:

- as a POINT CODE on the PC form
- as a CLUSTER on the CLU form and a CLUSTER is defined as the concatenation of the attributes NETWORK and CLUSTER, or
- as a NETWORK on the NID form.

When DPC PRIMARY is entered, it must first be defined for the same GSM in one of the following three ways:

- as a POINT CODE on the PC form
- as a CLUSTER on the CLU form and a CLUSTER is defined as the concatenation of the attributes NETWORK and CLUSTER, or
- as a NETWORK on the NID form.

The maximum number of DPC PRIMARYs plus DPC BACKUPs for any given GSM on the CCPBD form cannot exceed a maximum of 2000 tuples per GSM.

2.4 * SSN PRIMARY

Description: Enter the Primary Subsystem Number. This field specifies the SSN for the primary GSM-DPC-SSN.

Required Field.

Valid SSN PRIMARY Entries - 5E11 and later

Definition	Entry
Intermediate	0
Final	2 - 255

2.5 GSM BACKUP

Description: Enter the Backup Global Switching Module. This field specifies the GSM for the backup GSM-DPC-SSN.

Required Field.

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Valid Entries: 1 - 192

Data Rules:

When GSM BACKUP is entered, DPC BACKUP and SSN BACKUP must be entered.

When GSM BACKUP is not entered, DPC BACKUP and SSN BACKUP must not be entered.

When GSM BACKUP is entered on this form, GSM BACKUP must equal GSM PRIMARY.

For each CCPBD form where GSM BACKUP is entered, and DPC PRIMARY is the same as DPC BACKUP, then SSN PRIMARY and SSN BACKUP must be non-zero and different. Otherwise, the SSN PRIMARY and SSN BACKUP must both be 0 or both be non-zero.

5E14 and later:

When GSM BACKUP and DPC BACKUP do not match a GSM and OPC or GSM and ALIAS PC from the CCGSM form respectively, the DPC BACKUP must be defined in one of the following three ways:

- as a POINT CODE on the PC form
- as a CLUSTER on the CLU form and a CLUSTER is defined as the concatenation of the attributes NETWORK and CLUSTER, or
- as a NETWORK on the NID form.

2.6 DPC BACKUP

Description: Enter the Backup Destination Point Code. This field specifies the DPC (Destination Point Code) for the backup GSM-DPC-SSN.

For the 5E11 Software Release, DPCs can be entered in the ANSI format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is to be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record).

Required Field.
Valid Entries: 9 - digit point code in the following format:

Valid ANSI DPC BACKUP Entries - 5E11 and later

Definition	Format	Entry
Network indicator	XXX	[001 - 254]
Cluster number	XXX	[000 - 255]
Member	XXX	[000 - 255]

Valid AT&T DPC BACKUP Entries - 5E12 and later

Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

2.7 SSN BACKUP

Description: Enter the Backup Subsystem Number. This field specifies the SSN (SubSystem Number) for the backup GSM-DPC-SSN.

Required Field.

Valid SSN BACKUP Entries - 5E11 and later

Definition	Entry

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Intermediate	0
Final	2 - 255

2.8 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

---

ccpbd 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6012) SCCP PRIMARY/BACKUP DESTINATION

*1. GSM PRIMARY ___
*2. DPC PRIMARY _____
*3. SSN PRIMARY ___
4. GSM BACKUP ___
5. DPC BACKUP _____
6. SSN BACKUP ___

Figure 1 SAMPLE CCPBD FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

---

ccpbd 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6012) SCCP PRIMARY/BACKUP DESTINATION

*1. GSM PRIMARY ___
*2. DPC PRIMARY _____
*3. SSN PRIMARY ___
4. GSM BACKUP ___
5. DPC BACKUP _____
6. SSN BACKUP ___

7. CRIT IND N

Figure 2 SAMPLE CCPBD FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10N: 6015 RECORD
SCCP SINGLE GLOBAL TITLE TRANSLATION FORM - CCSGT

1. GENERAL

The 6015 Record is available with 5E11 and later Software Releases. The SCCP (Signaling Connection Control Part) Single Global Translation form is used to maintain the single fixed or primary plus secondary digit string for Global Translations. For more information concerning this feature, see Division 2, Section 7L and Division 2, Section 9L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.25.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system. This field specifies the GSM on which this translation group exists.

Required Field.
Valid Entries: 1 - 192

2.3 * TRANS GROUP

Description: Enter the Translation Group. This field specifies the 2-digit translation group number.

Required Field.
Valid Entries: 0 - 63

2.4 * FIX DIG STR

Description: Enter the Fixed Digit String.

Required Field.
Valid Entries: Up to 6 hexadecimal numbers (0 - 9, A - F)

Data Rules:

FIX DIG STR and/or PRIM PLUS SEC DIG STR must be entered.

When FIX DIG STR is entered, MAX TRANS must be entered.

When FIX DIG STR is not entered,

- MAX TRANS must not be entered
- a CCTGM form (6013 Record) must exist with the same GSM and TRANS GROUP, and NUM FIXED must be set to 0.

The maximum number of FIXED DIG STRs allowed on the CCSGT form per GSM/TRANS GROUP is 100.

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For each FIX DIG STR entered on the CCSGT form, the number of CCSGT forms with the same GSM, TRANS GROUP, and FIX DIG STR:

- must have the same value entered for MAX TRANS.
- must not exceed MAX TRANS for that FIX DIG STR.

If a CCGST form has the same GSM and TRANS GROUP as the CCTGM form (6013 Record), the length of the FIX DIG STR on the CCSGT form must be equal to the value of NUM FIXED on the CCTGM form.

2.5 * PRIM PLUS SEC DIG STR

Description: Enter the Primary Plus Secondary Digit String.

Required Field.
Valid Entries: Up to 10 hexadecimal numbers (0 - 9, A - F)

Data Rules:

FIX DIG STR and/or PRIM PLUS SEC DIG STR must be entered.

When PRIM PLUS SEC DIG STR is entered, DEST GSM, DPC and DEST SS NUM must be entered.

When PRIM PLUS SEC DIG STR is not entered, DEST GSM, DPC and DEST SS NUM must not be entered.

The length of PRIM PLUS SEC DIG STR must not exceed the sum of NUM PRIM and NUM SEC on the CCTGM form (6013 Record). For all CCTGM (6013 Record) and CCSGT (6015 Record) forms with the same GSM, the sum of PRIM PLUS SEC DIG STR and MAX TRANS must not exceed 251000.

FIXED DIGIT STRING INFORMATION

The following field describes the maximum number of translation strings.

2.6 MAX TRANS

Description: Enter the maximum number of translation strings. This field specifies the optional primary plus secondary digit string.
Valid Entries: 1 - 131071

PRIME PLUS SEC DESTINATION INFORMATION

The following fields (Section 2.7 - Section 2.9) describe the primary and secondary destination information.

2.7 DEST GSM

Description: Enter the Destination Global Switching Module.
Valid Entries: 1 -192

Data Rules:

The combination of DEST GSM, DPC, and DEST SS NUM must exist as a combination of GSM PRIMARY, DPC PRIMARY, and SSN BACKUP or as a combination of GSM BACKUP, DPC BACKUP, and SSN BACKUP on the CCPBD form (6012 Record)

2.8 DPC

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Description: Enter the Destination Point Code.

For the 5E11 Software Release, DPCs can be entered in the ANSI (American National Standards Institute) format only; the AT&T format cannot be entered directly. Thus, if an AT&T point code format is be used in an ANSI office, it must first be converted to an ANSI format. For 5E12 and later, both formats can be entered directly. Note that Point Codes must be defined on the PC (SIGNALING POINT CODE) form (6006 Record).
Valid Entries: 9 - digit point code in the following format:

Valid ANSI DPC Entries - 5E11 and later

Definition	Format	Entry
Network indicator	XXX	[001 - 254]
Cluster number	XXX	[000 - 255]
Member	XXX	[000 - 255]

Valid AT&T OPC Entries - 5E12 and later

Definition	Format	Valid Entries
Network Indicator	XXX	236-254
Cluster Number	XX	00 - 31
Cluster Type	X	0 - 7
Member	XXX	000 - 255

2.9 DEST SS NUM

Description: Enter the Destination Subsystem Number.
Valid Entries:

For 5E11 and later: 0, or 2 - 255

2.10 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
ccsgt                    5ESS Switch          _
(6015)              OFFICE DATA ADMINISTRATION
                SCCP SINGLE GLOBAL TITLE TRANSLATION

  *1. GSM                ___
  *2. TRANS GROUP         __
(*)3. FIX DIG STR        ______
(*)4. PRIM PLUS SEC DIG STR __________

FIXED DIGIT STRING INFORMATION
  5. MAX TRANS ______

PRIM PLUS SEC DESTINATION INFORMATION
  6. DEST GSM    ___
  7. DPC         __________
  8. DEST SS NUM ___
```

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Figure 1 SAMPLE CCSGT FORM 5E11 THROUGH 5E14 SOFTWARE RELEASE

```
ccsgt                    5ESS Switch        _
                    OFFICE DATA ADMINISTRATION
(6015)              SCCP SINGLE GLOBAL TITLE TRANSLATION

  *1. GSM                ___          9. CRIT IND N
  *2. TRANS GROUP         __
(*)3. FIX DIG STR        ______
(*)4. PRIM PLUS SEC DIG STR __________

FIXED DIGIT STRING INFORMATION
  5. MAX TRANS ______

PRIM PLUS SEC DESTINATION INFORMATION
  6. DEST GSM    ___
  7. DPC         _________
  8. DEST SS NUM ___
```

Figure 2 SAMPLE CCSGT FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10O: 6014 RECORD
SCCP TRANSLATION TABLE FORM - CCTT

1. GENERAL

The 6003 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) Translation Table form is used to define whether the global title data in the called party address will receive Global Title Translation or Point Code Extraction treatment. This form supports the VCDX CCS7 on the PSU feature, For more information, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.24.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192
Data Rules:
When GSM is defined on this form, it must be defined on the CCNET form (6010 Record).

CALLED PARTY ADDRESS DATA

The following fields (Section 2.3 - Section 2.4) define the global title data in the called party address.

2.3 (*) TRANS TYPE

Description: Enter the Translation Type.

Required Field.
Valid Entries: 0 - 254

2.4 * GLOBAL TITLE IND

Description: This field indicates the Global Title Indicator. This is a no change field.

Required Field.
Default: 2

GLOBAL TITLE TRANSLATIONS

The following fields (Section 2.5 - Section 2.6) define the translation treatment the global title data in the called party address receives.

2.5 # TRANS GROUP

Description: Enter the Translation Group.

Required Field.

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Valid Entries: 0 - 63

Data Rules:

When TRANS GROUP is enterd, the combination of GSM and TRANS GROUP must be entered on the CCTGM form (6013 Record)

2.6 # START GTT DIGIT

Description: Enter the Starting Global Title Translation Digits. This field specifies the starting digits for Global Title Translation.

Required Field.
Valid Entries: 1 - 255

2.7 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
cctt                    5ESS Switch
(6014)                OFFICE DATA ADMINISTRATION
                    SCCP TRANSLATION TABLE

*1. GSM ___

CALLED PARTY ADDRESS DATA
*2. TRANS TYPE     ___
   GLOBAL TITLE IND 2

GLOBAL TITLE TRANSLATIONS
#4. TRANS GROUP    __
#5. START GTT DIGIT ___
```

Figure 1 SAMPLE CCTT FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

```
cctt                    5ESS Switch
                    OFFICE DATA ADMINISTRATION
(6014)                SCCP TRANSLATION TABLE

*1. GSM ___                    8. CRIT IND N

CALLED PARTY ADDRESS DATA
*2. TRANS TYPE     ___
   GLOBAL TITLE IND 2

LOCAL SWITCH GLOBAL TITLE TRANSLATIONS
 5. TRANS GROUP    __
```

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6. START GTT DIGIT ___

REMOTE GLOBAL TITLE TRANSLATIONS
7. DPC _____

Figure 2 SAMPLE CCTT FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10P: 6013 RECORD
SCCP TRANSLATION GROUP MASK FORM - CCTGM

1. GENERAL

The 6013 Record is available with 5E11 and later Software Releases. The SCCP (Signalling Connection Control Part) Translation Group Mask form defines the SCCP GTT (Signaling Connection Control Part Global Title Translation) mask for a translation group. This form supports the VCDX CCS7 on the PSU. For more information concerning this feature, see Division 2, Section 7L.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.25.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: Enter the Global SM (Switching Module) that supports the signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

When GSM is defined on this form, it must also be defined on the CCNET form (6010 Record).

2.3 * TRANS GROUP

Description: Enter the 2-digit Translation Group number.

Required Field.
Valid Entries: 0 - 63

2.4 NUM FIXED

Description: Enter the Number of Fixed Digits. This field specifies the number of fixed address digits.

Required Field.
Valid Entries: 0 - 6

Data Rules:

When NUM FIXED is 0, PRIM PLUS SEC must be entered.

When NUM FIXED is greater than 0, PRIM PLUS SEC must not be entered.

The sum of NUM FIXED, NUM PRIM and NUM SEC must be between 1 and 12.

2.5 NUM PRIM

Description: Enter the Number of Primary Digits. This field specifies the primary address digits.

Required Field.

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Valid Entries: 1 - 10

Data Rules:

The sum of NUM PRIM and NUM SEC must be between 1 and 10.

2.6 NUM SEC

Description: Enter the Number of Secondary Digits. This field specifies the number of secondary address digits.

Required Field.
Valid Entries: 0 - 9

2.7 PRIM PLUS SEC

Description: Enter the Maximun Number of Primary plus Secondary Strings.
Valid Entries: 1 - 131071

Data Rules:

If PRIM PLUS SEC is entered, the number of CCSGT forms (6015 Record) with the same GSM and TRANS GROUP must not exceed PRIM PLUS SEC for this form.

2.8 STRING MATCH

Description: Enter the String Match Method. This field specifies the Global Title Translation string match method.

Required Field.

Valid STRING MATCH Entries

Entry	Definition
FULL	GTT is done on the supplied digits (called address) against the required and optional digits of the translations group. If no match is found, then GTT is done on the supplied digits (called address) against the required digits of the translations group.
PART	GTT is done on the supplied digits (called address) against the required digits of the translations group. If no match is found, then GTT is done on the supplied digits (called address) against the required + optional digits of the translations group.
VAR	GTT is done on the supplied digits (called address) against the required + optional digits of the translations group. If no match is found, then the last digit of the supplied address is overwritten with 0xF and the GTT is redone. This is continued while there is no match and the available digits is greater than the number of required digits.

2.9 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

---

cctgm 5ESS Switch
(6015) OFFICE DATA ADMINISTRATION
SCCP TRANSLATION GROUP MASK

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```
*1. GSM       ___
*2. TRANS GROUP __

    GTT MASK DATA
#3. NUM FIXED    _
#4. NUM PRIM     __
#5. NUM SEC      _
 6. PRIM PLUS SEC ______
#7. STRING MATCH  ____
```

Figure 1 SAMPLE CCTGM FORM 5E11 THROUGH 5E14 SOFTWARE RELEASES

```
cctgm                    5ESS Switch          _
                  OFFICE DATA ADMINISTRATION
(6013)              SCCP TRANSLATION GROUP MASK

*1. GSM       ___
*2. TRANS GROUP __

     GTT MASK DATA
#3. NUM FIXED    _
#4. NUM PRIM     __
#5. NUM SEC      _
 6. PRIM PLUS SEC ______
#7. STRING MATCH  ____

 8. CRIT IND N
```

Figure 2 SAMPLE CCTGM FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10S: 6019 RECORD
NETWORK ROUTING - NID

1. GENERAL

The 6019 Record is available with the 5E14 Software Release. NID, the Network Routing form, is used to define the MTP (Message Transport Part) network route sets that supports the SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP Routing Enhancements feature. For more information on this feature, see Division 2, Section 4A522.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.8.

2. FORM ENTRIES - 6004-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NETWORK

Description: This field is used to specify the network code number.

Required Field.
Valid Entries: 1 - 254

2.3 * GSM

Description: The GSM is used to specify the Global Switching Module used to support the CCS7 (Common Channel Signaling, CCITT Version 7) signaling system.

Required Field.
Valid Entries: 1 - 192

2.4 # NORMAL LINK SET

Description: This field is used to specify the normal link set number used for routing to this point code.

Required Field.
Valid Entries: Blank, or 1 - 511

Data Rules:

When NORMAL LINK SET is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

When NORMAL LINK SET is entered and is less than 256 and ALTERNATE LINK SETS are defined as a CLS on a CLKSET form on the same GSM, the NORMAL LINK SET on the NID form must not be the same value as LS1 or LS2 on the CLKSET form.

ALTERNATE LINK SETS

2.5 SET

Description: This field is used to specify the alternate link set for routing which can be assigned a priority to this point code when the normal link set becomes unavailable.

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Valid Entries: Blank, or 1 - 511

Data Rules:

ALTERNATE LINK SETS must be unique.

When ALTERNATE LINK SETS is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

When ALTERNATE LINK SETS is entered and is less than 256 and ALTERNATE LINK SETS is defined as a CLS on a CLKSET form on the same GSM, the NORMAL LINK SET on the NID form must not be the same value as LS1 or LS2 on the CLKSET form.

When ALTERNATE LINK SETS in row 1 is defined as a CLS on a CLKSET form on the same GSM and have ALTERNATE LINK SETS in row 2 entered with a value less than 256, the ALTERNATE LINK SETS in row 2 must not be the same value as LS1 and LS2 on the CLKSET form.

When ALTERNATE LINK SETS in row 2 is defined as a CLS on a CLKSET form on the same GSM and have ALTERNATE LINK SETS in row 1 entered with a value less than 256, the ALTERNATE LINK SETS in row 1 must not be the same value as LS1 and LS2 on the CLKSET form.

2.6 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

```
nid                    5ESS Switch          _
                 OFFICE DATA ADMINISTRATION
(6019)                 NETWORK ROUTING

*1. NETWORK       ___
*2. GSM           ___
#3. NORMAL LINK SET ___

4. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
 1  ___
 2  ___
```

Figure 1 SAMPLE NID FORM 5E14 SOFTWARE RELEASE

```
nid                    5ESS Switch          _
                 OFFICE DATA ADMINISTRATION
(6019)                 NETWORK ROUTING

*1. NETWORK       ___
*2. GSM           ___
#3. NORMAL LINK SET ___
```

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4. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1 ___
2 ___

6. CRIT IND N

Figure 2 SAMPLE NID FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10T: 6020 RECORD
CLUSTER ROUTING - CLU

1. GENERAL

The 6020 Record is available with the 5E14 Software Release. CLU, the Cluster Routing form, is used to define the MTP (Message Transport Part) cluster route sets that supports the SS7 (Signaling System 7) PSU (Packet Switch Unit) MTP Routing Enhancements feature. For more information on this feature, see Division 2, Section 4A522.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.9.

2. FORM ENTRIES - 6004-1 RECORD

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * NETWORK

Description: This field is used to specify the network code number.

Required Field.
Valid Entries: 1 - 254

2.3 *CLUSTER

Description: This field is used to specify the cluster code number.

Required Field.
Valid Entries:

Valid Cluster Numbers

Entry	Valid Value	Definition
ANSI	[000 - 255]	Cluster number
LEC	[00 - 31]	Region number
	[0 - 7]	Cluster number

2.4 * GSM

Description: The GSM is used to specify the Global Switching Module used to support the CCS7 (Common Channel Signaling, CCITT Version 7) signaling system.

Required Field.
Valid Entries: 1 - 192

Data Rules:

The maxium populated cluster index value cannot exceed the maximum number of tuples per GSM.

2.5 X-LIST

Description: This field indicates whether an X-list should be kept for this cluster routeset or not, to track the remote status of cluster members with a more restrictive status than the cluster as a whole.

Required Field.

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Default: N
Valid Entries: Y, N

2.6 # NORMAL LINK SET

Description: This field is used to specify the normal link set number used for routing to this point code.

Required Field.
Valid Entries: 1 - 511

Data Rules:

When NORMAL LINK SET is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

ALTERNATE LINK SETS

2.7 SET

Description: This field is used to specify the alternate link set for routing which can be assigned a priority to this point code when the normal link set becomes unavailable.
Valid Entries: Blank, or 1 - 511

Data Rules:

ALTERNATE LINK SETS must be a unique number.

ALTERNATE LINK SETS must not equal NORMAL LINK SET.

When ALTERNATE LINK SETS is entered, the value entered must first be defined as LINK SET on the LNKSET form or as a CLS on the CLKSET form for the same GSM.

2.8 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

---

clu 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6020) CLUSTER ROUTING

*1. NETWORK ___
*2. CLUSTER ___
*3. GSM ___
4. X-LIST N
#5. NORMAL LINK SET ___

6. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
1 ___
2 ___

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Figure 1 SAMPLE CLU FORM 5E14 SOFTWARE RELEASE

```
clu                    5ESS Switch        _
                  OFFICE DATA ADMINISTRATION
(6020)                  CLUSTER ROUTING

*1. NETWORK       ___
*2. CLUSTER       ___
*3. GSM           ___
 4. X-LIST        N
#5. NORMAL LINK SET ___

6. ALTERNATE LINK SETS (ALTLINKSETS)
ROW SET
 1  ___
 2  ___

8. CRIT IND N
```

Figure 2 SAMPLE CLU FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10U: 6021 RECORD
CCS MESSAGE TRANSPORT MESSAGE HANDLER - CMTMH

1. GENERAL

The 6021 Record is available with the 5E15 and later Software Releases. It defines which message handler will be used for CCS (Common Channel signaling) message transport for communication between a GSM (Global Switching Module) and a NGSM (Non-GSM). This form supports the SS7 (Signaling System 7)-PSU (Packet Switch Unit) Architectural Enhancements feature (99-CP-4246). For more information on this feature, see Division 2, Section 7AG. This form also supports the Decouple CCS from GSM Initializations (99-5E-7428) feature. See Division 2, Section 8U.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.16.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GLOBAL SM

Description: The GLOBAL SM field is used to specify a GSM (Global Switching Module) number which supports national SS7 signaling.
Valid Entries: 1 - 192

Data Rules:

When GLOBAL SM and NON-GLOBAL SM are set to the same value, MH SM 1 must also be set to this same value.

When GLOBAL SM is equal to NON-GLOBAL SM, MH SM 2 must not be entered.

A GLOBAL SM with a different NON GLOBAL SM entered on the CMTMH form cannot be entered as an SM on a MDLNK form.

When the GLOBAL SM is not equal to the NON-GLOBAL SM on the CMTMH form, the GLOBAL SM must be defined on another CMTMH form where the GLOBAL SM is equal to the NON-GLOBAL SM.

GLOBAL SM must be defined on the QPHPIPE form for both QLPS NETWORK 0 and QLPS NETWORK 1. The GLOBAL SM, PSU SHELF, and CHANNEL GROUP must be the same within each set on the QPHPIPE forms and SERVICE TYPE must be "CCS". Note that there should be 2 sets of QPH Pipes.

The GLOBAL SM and NON GLOBAL SM entered must be defined as SM on the EQIM for with EQSTATUS set to "O".

When the GLOBAL SM on the CMTMH form is a Host GSM where the GLOBAL SM is not equal to the NON GLOBAL SM, the GLOBAL SM and the SM on the ENETPIPE form where SERV TYPE is "EEC" or "RTCD" cannot be the same.

2.3 * NON-GLOBAL SM

Description: This field specifies a NGSM (Non-Global Switching Module) number. A NGSM is a SM equipped with CCS trunks or TCAP (Transaction Capabilities Application Part) applications that generate

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CCS messages that need to be transported to the PSU (Packet Switch Unit) on the GSM so that the CCS messages can be sent or received over CCS links.

Required Field.
Valid Entries: 1 - 192

Data Rules:

When the NON GLOBAL SM does not have an SM-2000 class processor on the corresponding EQIM form, the MH SM 1 must be different from the NON GLOBAL SM and must be defined as NON GLOBAL SM on another CMTMH form with the same GLOBAL SM. The NON GLOBAL SM on the CMTMH form must have an SM 2000 class processor.

When the NON-GLOBAL SM has a SM2000 class processor defined on the EQIM form, the NON-GLOBAL SM and the MH SM 1 must be the same and the MH SM 2 must not be entered.

When NON-GLOBAL SM does not have an SM-2000 class processor defined on the EQIM form and CM VINTAGE is 2 on the EQCORE form (5701 Record), there must be EQPC forms (5703 Record) entered on SIDE 0 and SIDE 1 with PC NO. set to 32 and EQSTATUS set to "O".

When the NON GLOBAL SM does not have an SM-2000 class processor on the corresponding EQIM form and the MH SM 2 is entered, the MH SM 2 must be different than the NON GLOBAL SM and must be defined as NON GLOBAL SM on another CMTMH form with the same GLOBAL SM. The NON GLOBAL SM on the CMTMH form must have an SM-2000 class processor.

MESSAGE HANDLERS

The following fields (Section 2.4 - Section 2.5) are used to define the MHs to be used for CMT for communication between a GSM and a NGSM.

2.4 #MH SM 1

Description: This field is used to define the MH SM 1 that will be used for CMT for communication between a GSM and a NGSM.
Valid Entries: 1 - 192

Data Rules:

MH SM 1 and MH SM 2 must be unique.

When MH SM 1 is entered and CM VINTAGE on the EQCORE form is 2, a corresponding EQPIPE form must be defined for both QLPS NETWORK 0 and QLPS NETWORK 1.

2.5 MH SM 2

Description: This field is used to define the MH SM 2 that will be used for CMT for communication between a GSM and a NGSM.
Valid Entries: 1 - 192

Data Rules:

MH SM 2 must be greater than MH SM 1.

2.6 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

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Software Release: 5E15 and later
Required Field.
Default: N
Valid Entries: Y, N

---

cmtmh 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6021) CCS MESSAGE TRANSPORT MESSAGE HANDLER

*1. GLOBAL SM ___
*2. NON GLOBAL SM ___

MESSAGE HANDLERS
#3. MH SM 1 ___
4. MH SM 2 ___

5. CRIT IND N

Figure 1 SAMPLE CMTMH FORM 5E15 AND LATER SOFTWARE RELEASES

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SEC. 10V: 6016 RECORD
SAAL HIGH SPEED SS7 LINK - SAALHSL

1. GENERAL

The 6016 Record is available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. This form supports the SAAL (Signaling ATM Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature (99-5E-7451). For more information on this feature, see Division 2, Section 4A670.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.26.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: The Global SM field is used to specify a GSM (Global Switching Module) number which supports SAAL SS7 signaling.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

Data Rules:

2.3 * LINK SET

Description: This field is used to specify the link set number.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: 1 - 255

Data Rules:

2.4 * MEMBER

Description: This field is used to specify the member number within the CCS7 (Common Channel Signaling 7) signaling link set.

Software Release: 5E16(2) and later
Valid Entries: 0 - 15

Data Rules:

2.5 # SLC

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Description: The Signaling Link Code field is used to specify the signaling link code. The signaling link code is part of the header portion of a signaling network management message. This is a display only field.

Software Release: 5E16(2) and later
Valid Entries: 0 - 15

Data Rules:

PHYSICAL LAYER

The following fields (Section 2.6 - Section 2.13) are used to define the Data Link Layers used for the SAAL SS7 High Speed Signaling Link feature.

2.6 PSU PIPE

Description: This field is used to identify which PSU PIPE is used for the SAAL.

Software Release: 5E16(2) and later
Valid Entries: 1 to 8 alphanumeric characters

Data Rules:

2.7 L1 PSU

Description: The Level 1 Packet Switching Unit field is used ONLY to display the PSU number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later
Valid Entries: 0

2.8 L1 SHELF

Description: The Level 1 Shelf field is used ONLY to display the PSU shelf number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later
Valid Entries: 0 - 4

2.9 L1 CHGRP

Description: The Level 1 Channel Group field is used ONLY to display the Channel Group number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later
Valid Entries: 0 - 15

2.10 L1 CHGRP MEM

Description: The Level 1 Channel Group Member field is used ONLY to display the Channel Group member number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later
Valid Entries: 0

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2.11 L1 RATE

Description: The Level 1 RATE field is used ONLY to display the rate number of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later
Valid Entries: 1536KB

2.12 L1 OE

Description: The Level 1 OE (Originating Equipment) field is used ONLY to display the OE number of the first channel of the PSU PIPE. This is a RC (Recent Change) only field.

Software Release: 5E16(2) and later
Valid Entries:

Valid L1 OE Entries

Entry	Definition	Values
D	DEN (Digital Line and Trunk Unit (DLTU) Equipment Number)	(001-192) (000-011) (01-10) (01) where: 001-192 = SM (Switching Module) 000-011 = DLTU (Digital Line and Trunk Unit) 01-10 = DFI (Digital Facility Interface) 01 = DFI
N	NEN (Digital Networking Unit - SONET (Synchronous Optical Network (High Speed Fiber)) (DNU-S) Equipment number)	(001-192) (0-7) (0-1) (1-6) (1) (1-7) (1-4) (01) where: 001-192 = SM (Switching Module) 0-7 = DNU-S (Digital Networking Unit - SONET) 0-1 = DG (Data Group) 1-6 = STE (SONET Termination Equipment) 1 = STE (SynchronousTransport Signal) 1-7 = VTG (Virtual Tributary Group) 1-4 = VTM (Virtual Tributary Member) 01 = DS0 (Digital Signal Level 0)

2.13 # LINK PARM SET

Description: This field is used to specify the SAAL (Signaling ATM (Asynchronous Transfer Mode) Adaption Layer) Link Paramter Set associated with the SAAL High Speed SS7 Link..
Valid Entries: 1 to 8 alphanumeric characters.

2.14 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E16(2) and later
Required Field.
Default: N
Valid Entries: Y, N

---

saalhsl 5ESS Switch _
OFFICE DATA ADMINISTRATION
(6016) SAAL HIGH SPEED SS7 LINK

*1. GSM ___ #14. LINK PARM SET _____
*2. LINK SET ___
*3. MEMBER __ 15. CRIT IND N

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```
   SLC     __

#5. PSU PIPE      ________
   L1 PSU       _
   L1 SHELF     _
   L1 CHGRP     __
   L1 CH GRP MEM _
   L1 RATE      ____
   L1 OE        _ ___________
```

Figure 1 SAMPLE SAALHSL FORM 5E16 AND LATER SOFTWARE RELEASES

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SEC. 10W: 6017 RECORD
SAAL LINK PARAMETER SET - SAALPRM

1. GENERAL

The 6017 Record is available with the 5E16(2) FR 1 (Feature Release 1) and later Software Releases. This form is used to define values of a High Speed Signaling Link Parameter Set. This form supports the SAAL (Signaling ATM Adaptation Layer) SS7 (Signaling System 7) High Speed Signaling Links feature (99-5E-7451). For more information on this feature, see Division 2, Section 4A670.

1.1 Recent Change View

The corresponding Recent Change View for this form is 16.27.

2. FORM AND RECORD ENTRIES

2.1 BASE AND CONTROL, ESS UNIT

Enter the Base and Control Number and the Office Name on each record.

2.2 * GSM

Description: The GSM (Global Switching Module) field is used to specify a GSM number which supports national SS7 signaling.

Software Release: 5E16(2) and later
Valid Entries: 1 - 192

2.3 * PARM SET

Description: The Link Parameter Set name field is used to identify a unique set of SAAL High Speed link parameters.

Required Field.

Software Release: 5E16(2) and later
Valid Entries: Enter up to 8 alphanumeric characters.

2.4 RATE

Description: This field is used to identify the High Speed Link Bit Transfer rate.

Software Release: 5E16(2) and later
Default: 1536KB
Valid Entries: 1536KB

2.5 SIFCAP

Description: The SIFCAP (Service Information Field Capability) field is used to identify the maximum service information capacity for an SAAL High Speed Link..

Software Release: 5E16(2) and later
Default: CCDATA272
Valid Entries: CCDATA272

SSCP - NNI

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The following fields (Section 2.6 - Section 2.9) are used to define the time in seconds. One exception is that N1 is not a timer.

2.6 T1

Description: This field is used to indicate the time in seconds between link release and re-establishment during alignment.

Software Release: 5E16(2) and later
Default: 5
Valid Entries: 1 - 15

2.7 T2

Description: This field is used to indicate the time in seconds that a SSCP will attempt alignment.

Software Release: 5E16(2) and later
Default: 120
Valid Entries: 15 - 180

Data Rules:

T2 must be greater than (T3 * N1)/1000000.

2.8 T3

Description: This field is used to indicate the time in microseconds between proving PDUs.

Software Release: 5E16(2) and later
Default: 1000
Valid Entries: 276 - 25000

2.9 N1

Description: This field is used to indicate the number of PDUs sent during normal provisioning.

Software Release: 5E16(2) and later
Default: 60000
Valid Entries: 500 - 500000

2.10 CRIT IND

Description: The Critical Data Indicator field is used to indicate whether or not this form instance data is critical.

Software Release: 5E16(2) and later
Required Field.
Default: N
Valid Entries: Y, N

SSCOP

The following fields (Section 2.11 - Section 2.20) are used to to provide information about the SSCOP (Service Specific Connection Oriented Protocol) SDUs (Scan And Distribution Units) and time intervals in milliseconds that are used.

2.11 MAX SDU SIZE

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Description: This field defines the maximum SSCOP (Service Specific Connection Oriented Protocol) SDU (Scan And Distribution Unit) size.

Software Release: 5E16(2) and later
Default: 4096
Valid Entries: 4096 Octets

2.12 MAX UU SIZE

Description: This field defines the maximum SSCOP (Service Specific Connection Oriented Protocol) layer Scan and Distribution UU size.

Software Release: 5E16(2) and later
Default: 4
Valid Entries: 4 Octets

2.13 MAX UNACK PDU

Description: This field defines the maximum number of unacknowledged BGN, END, ER, or RS PDUs.

Software Release: 5E16(2) and later
Default: 4
Valid Entries: 1 - 10

2.14 MAX NO SD PDU

Description: This field defines the maximum number of SD PDUs set between POLL PDUs.

Software Release: 5E16(2) and later
Default: 500
Valid Entries: 5 - 2120

2.15 MAX NO STA PDU

Description: This field defines the maximum number of list elements in a SD PDUs set between POLL PDUs.

Software Release: 5E16(2) and later
Default: 67
Valid Entries: 5 - 2120

2.16 TIMER CC

Description: This field defines the time between transmission of unacknowledged BGN, END, ER, or RS PDUs.

Software Release: 5E16(2) and later
Default: 200
Valid Entries: 100 - 2000

2.17 TIMER KA

Description: This field indicates the keep-alive timer for 3622 cells/second signaling rate.

Software Release: 5E16(2) and later
Default: 100
Valid Entries: 25 - 500

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2.18 TIMER NR

Description: This field defines the maximum time interval during which at least one STAT PDU must be received.

Software Release: 5E16(2) and later
Default: 1500
Valid Entries: 200 - 2000

2.19 TIMER POLL

Description: This field indicates the POLL timer for 3622 cells/second signaling rate.

Software Release: 5E16(2) and later
Default: 100
Valid Entries: 25 - 500

2.20 TIMER IDLE

Description: This field indicates the maximum time of the IDLE phase of an SSCOP connection.

Software Release: 5E16(2) and later
Default: 100
Valid Entries: 25 - 1000

SAAL LM/ISERM

The following fields (Section 2.21 - Section 2.31) are used to define information about the SSCOP SDUs.

2.21 LM MAX NRP

Description: This field indicates the maximum number of retransmitted SSCOP PDUs permissible for link provisioning.

Software Release: 5E16(2) and later
Default: 1
Valid Entries: 0 - 10

2.22 LM MIN RR

Description: This field indicates the minimum interval between reports of an SSCOP recovery.

Software Release: 5E16(2) and later
Default: 60
Valid Entries: 30 - 1440

2.23 LM MIN NO C

Description: This field indicates the minimum interval without credit.

Software Release: 5E16(2) and later
Default: 1500
Valid Entries: 1000 - 6000

2.24 LM FORCE PROV

Description: This field indicates the SAAL Management Force Provisioning timer.

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Software Release: 5E16(2) and later
Default: 10
Valid Entries: 0 - 20

2.25 ISERM SB SIZE

Description: The ISERM (In-Service Error Rate Monitor) SB SIZE field indicates the ISERM parameter Tsup.

Software Release: 5E16(2) and later
Default: 120
Valid Entries: 10 - 600

2.26 ISERM ST LOSS

Description: This field indicates the ISERM parameter Tloss.

Software Release: 5E16(2) and later
Default: 1300
Valid Entries: 500 - 10000

2.27 ISERM ALPHA

Description: This field indicates the exponential smoothing factor.

Software Release: 5E16(2) and later
Default: 10
Valid Entries: 0 - 100

2.28 ISERM THRESH

Description: This field indicates the threshold for comparing the running quality of service.

Software Release: 5E16(2) and later
Default: 244
Valid Entries: 0 - 1000

2.29 ISERM TAU

Description: This field indicates the error monitoring interval.

Software Release: 5E16(2) and later
Default: 100
Valid Entries: 25 - 250

2.30 ISERM BLK

Description: This field indicates the monitoring interval per block.

Software Release: 5E16(2) and later
Default: 3
Valid Entries: 1 - 25

2.31 ISERM N

Description: This field indicates the monitoring interval after 400 milliseconds of error events.

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Software Release: 5E16(2) and later
Default: 9
Valid Entries: 1 - 25

MTP CONGESTION

The following fields (Section 2.32 - Section 2.40) are used to define the numbers of PDUs.

2.32 LVL 1 ABATE

Description: This field indicates the MTP (Message Transfer Part) Congestion Level 1 abatement threshold.

Software Release: 5E16(2) and later
Default: 780
Valid Entries: 0 - 5730

2.33 LVL 1 ONSET

Description: This field indicates the MTP Congestion Level 1 Onset threshold.

Software Release: 5E16(2) and later
Default: 930
Valid Entries: 0 - 5730

Data Rules:

LVL 1 ONSET must be greater than LVL 1 ABATE.

2.34 LVL 1 DISCARD

Description: This field indicates the MTP Congestion Level 1 Discard threshold.

Software Release: 5E16(2) and later
Default: 2490
Valid Entries: 0 - 5730

Data Rules:

LVL 1 DISCARD must be greater than LVL 1 ONSET.

2.35 LVL 2 ABATE

Description: This field indicates the MTP Congestion Level 2 Abate threshold.

Software Release: 5E16(2) and later
Default: 2640
Valid Entries: 0 - 5730

Data Rules:

LVL 2 ABATE must be greater than LVL 1 ONSET.

2.36 LVL 2 ONSET

Description: This field indicates the MTP Congestion Level 2 Onset threshold.

Software Release: 5E16(2) and later

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Default: 2790
Valid Entries: 0 - 5730

Data Rules:

LVL 2 ONSET must be greater than LVL 2 ABATE.

LVL 2 ONSET must be greater than or equal to LVL 1 DISCARD.

2.37 LVL 2 DISCARD

Description: This field indicates the MTP Congestion Level 2 Discard threshold.

Software Release: 5E16(2) and later
Default: 4350
Valid Entries: 0 - 5730

Data Rules:

LVL 2 DISCARD must be greater than LVL 2 ONSET.

2.38 LVL 3 ABATE

Description: This field indicates the MTP Congestion Level 3 Abate threshold.

Software Release: 5E16(2) and later
Default: 4500
Valid Entries: 0 - 5730

Data Rules:

LVL 3 ABATE must be greater than LVL 2 ONSET.

2.39 LVL 3 ONSET

Description: This field indicates the MTP Congestion Level 3 Onset threshold.

Software Release: 5E16(2) and later
Default: 4560
Valid Entries: 0 - 5730

Data Rules:

LVL 3 ONSET must be greater than LVL 3 ABATE.

LVL 3 ONSET must be greater than or equal to LVL 2 DISCARD.

2.40 LVL 3 DISCARD

Description: This field indicates the MTP Congestion Level 3 Discard threshold.

Software Release: 5E16(2) and later
Default: 5250
Valid Entries: 0 - 5730

Data Rules:

LVL 3 DISCARD must be greater than LVL 3 ONSET.

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MARGINAL PERFORMANCE

The following fields (Section 2.41 - Section 2.44) are used to define the the various thresholds involved with Marginal Performances.

2.41 MTP AC THRESH

Description: The MTP (Message Transfer Part) AC (Automatic Changeover) Threshold field indicates the MTP Marginal Performance threshold for the number of ACs.

Software Release: 5E16(2) and later
Default: 3
Valid Entries: 1 - 32

2.42 RETRANS PDU THRESH

Description: The Retransmitted PDU Threshold field indicates the SSCOP Marginal Performance threshold for a number of SD PDUs requiring retransmission.

Software Release: 5E16(2) and later
Default: 550
Valid Entries: 10 - 1000

2.43 CONNECT SOE THRESH

Description: The Connection Sum-of-errors Threshold field indicates the SSCOP Marginal Performance threshold for connection sum-of-errors counters.

Software Release: 5E16(2) and later
Default: 5
Valid Entries: 1 - 32

2.44 ERROR PDU SOE THRESH

Description: The Error PDU Sum-of-errors Threshold field indicates the SSCOP Marginal Performance threshold for connection sum-of-errors counters.

Software Release: 5E16(2) and later
Default: 2
Valid Entries: 1 - 32

L2 FLOW CONTROL

The following fields (Section 2.45 - Section 2.47) provides information about the SAAL Level 2 Flow Control parameters.are used to define the time in seconds.

2.45 FCI

Description: The Fixed Credit Increment field indicates the SAAL Level 2 Flow Control parameter Nr.

Software Release: 5E16(2) and later
Default: 1200
Valid Entries: 3 - 2000

2.46 EFCAR

Description: The Equivalent Fixed Credit Allocation Rate field indicates the SAAL Level 2 Flow Control

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parameter Rpdu.

Software Release: 5E16(2) and later
Valid Entries: 600 - 3622

2.47 ECAF

Description: The Equivalent Fixed Credit Allocation Frequency field indicates the SAAL Level 2 Flow Control parameter bc.

Software Release: 5E16(2) and later
Default: 1
Valid Entries: 1 - 5

Data Rules:

ECAF only allows the value of one.

```
saalprm                    5ESS Switch
SCREEN 1 OF 2          OFFICE DATA ADMINISTRATION
(6017)               SAAL LINK PARAMETER SET

*1. GSM    ___              SSCOP              SAAL LM/ISERM
*2. PARM SET _________   10. MAX SDU SIZE   4096   20. LM MAX NRP    01
 3. RATE    1536KB     11. MAX UU SIZE    4      21. LM MIN RR     0060
 4. SIFCAP  CCDATA272  12. MAX UNACK PDU  04     22. LM MIN NO C   1500
                   13. MAX NO SD PDU  0500   23. LM FORCE PROV 10
   SSCF-NNI          14. MAX NO STAT PDU 0067   24. ISERM SB SIZE 120
 5. T1 5            15. TIMER CC       0200   25. ISERM ST LOSS 001300
 6. T2 120          16. TIMER KA       100    26. ISERM ALPHA   10
 7. T3 01000        17. TIMER NR       1500   27. ISERM THRESH  0244
 8. N1 060000       18. TIMER POLL     100    28. ISERM TAU     100
                   19. TIMER IDLE     0100   29. ISERM BLK     03
 9. CRIT IND N                             30. ISERM N       09
```

```
saalprm                    5ESS Switch        _
SCREEN 2 OF 2          OFFICE DATA ADMINISTRATION
(6017)               SAAL LINK PARAMETER SET

   MTP CONGESTION          MARGINAL PERFORMANCE
31. LVL 1 ABATE   0780   40. MTP AC THRESH       03
32. LVL 1 ONSET   0930   41. RETRANS PDU THRESH   0550
33. LVL 1 DISCARD 2490   42. CONNECT SOE THRESH   05
34. LVL 2 ABATE   2640   43. ERROR PDU SOE THRESH 02
35. LVL 2 ONSET   2790
36. LVL 2 DISCARD 4350   L2 FLOW CONTROL
37. LVL 3 ABATE   4500   44. FCI   1200
38. LVL 3 ONSET   4560      EFCAR ____
39. LVL 3 DISCARD 5250   46. ECAF  1
```

Figure 1 SAMPLE SAALPRM FORM 5E16(2) AND LATER SOFTWARE RELEASES

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DIV. 19: 5ESS RECORD NAMES - 5ESS OFFICE RECORDS NUMBERS

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SEC. 1: 5ESS RECORD NAMES - 5ESS OFFICE RECORDS NUMBERS

1. GENERAL

This section contains the latest listing of 5ESS Switch Record Names. The listing is presented in alphabetical order by ODA Record Name. The listing provides the corresponding Office Record Number, ODA Form Name, and TG-5 Division and Section.

When a Record Name is known, the Division and Section that describes the record can be found in Figure 1; when the Record Number is known, see Division 0, Section 4. If only the Form Name is known, see Division 0, Section 1.

2. RECORD NAME INDEX TABLE

Title	Office Record Number	Form	Division / Section
100 SECOND SCAN (HSS) ACTIVATION FORM	5620-4	aphss	Div. 4 Sec. 21D
5602-4 MULTIWAY CALLING LINE (MLHG/TERM) PARAMETER FORM	5602-4	mwmpa	Div. 4 Sec. 3C
5602-5 MULTIWAY CALLING TRUNK PARAMETER FORM	5602-5	mwtpa	Div. 4 Sec. 3D
ACCESS INTERFACE UNIT PACK	5746	eqaiup	Div. 8 Sec. 65
ACCESS INTERFACE UNIT	5745	eqaiu	Div. 8 Sec. 64
ACCESS TANDEM CARRIER AND ROUTE INFORMATION FOR PRIMARY AND ALTERNATE TOLL AND ASSISTANCE OPERATOR SERVICES FORM	5418	diopr	Div. 3 Sec. 4S
ACCESS TANDEM INCOMING TRUNK GROUPS FORM	5417	oprtk	Div. 3 Sec. 4R
ACCOUNT CODE ASSOCIATED CODE TABLE PARAMETERS FORM	5623-3	acctrtp	Div. 4 Sec. 24C
ACCOUNT CODE FEATURE DEFINITION FORM	5623-1	acctfd	Div. 4 Sec. 24A
ACCOUNT CODE GROUP DEFINITION FORM	5623-2	acctgp	Div. 4 Sec. 24B
ACCOUNT CODE LINE (MLHG/TERM) PARAMETER FORM	5623-5	acctmpa	Div. 4 Sec. 24E
ACCOUNT CODE LINE PARAMETER FORM	5623-4	acctlpa	Div. 4 Sec. 24D
ACCOUNT CODE TRUNK (TGN/MEMB) PARAMETER FORM	5623-6	accttpa	Div. 4 Sec. 24F
ACD AGENT ID ASSIGNMENT	5639	agntid	Div. 4 Sec. 32D
ACD CALL QUEUE PARAMETERS FORM	5640	cqparm	Div. 4 Sec. 32E
ACD CALL VECTORING DESTINATION TN FORM	5644	acdcvtn	Div. 4 Sec. 32I
ACD CALL VECTORS FORM	5643	acdvct	Div. 4 Sec. 32H
ACD MANAGEMENT INFORMATION SYSTEM LINK	5637	mislink	Div. 4 Sec. 32B
ACD SEIZURE DISPLAY	5641	sxdisp	Div. 4 Sec. 32F
ACD SERVING TEAM PARAMETERS	5638	stparm	Div. 4 Sec. 32C
ACD/BRCS AND DAA TN ASSIGNMENT FORM	5631-1	acdtn	Div. 4 Sec. 32A
ACD/BRCS OFFICE PARAMETERS	5645	acdbparm	Div. 4 Sec. 32K
ADVANCED SERVICE INTERFACE FEATURE DEFINITION FORM	5630-1	asifd	Div. 4 Sec. 30A
ADVANCED SERVICE INTERFACE GROUP DEFINITION FORM	5630-4	asigp	Div. 4 Sec. 30D
ADVANCED SERVICE INTERFACE LINE (MLHG/TERM) PARAMETER FORM	5630-3	asimpa	Div. 4 Sec. 30C
ADVANCED SERVICE INTERFACE LINE (TN) PARAMETER FORM	5630-2	asilpa	Div. 4 Sec. 30B
ADVANCED SERVICES PLATFORM FEATURE DEFAULT PARAMETERS FORM	5632-5	aspdp	Div. 4 Sec. 31E
ADVANCED SERVICES PLATFORM FEATURE DEFINITION FORM	5632-1	aspfd	Div. 4 Sec. 31A
ADVANCED SERVICES PLATFORM NESS GROUP SCREENING LIST FORM	5634	asprp	Div. 4 Sec. 31F
ADVANCED SERVICES PLATFORM OPTIONS	5670	aspopt	Div. 4 Sec. 31G
ADVANCED SERVICES PLATFORM (TGN/MEMB) PARAMETERS FORM	5632-4	asptpa	Div. 4 Sec. 31D
ADVANCED SERVICES PLATFORM (TN) PARAMETERS FORM	5632-2	asplpa	Div. 4 Sec. 31B
ADVANCED SERVICES PLATFROM (MLHG/TERM) PARAMETERS FORM	5632-3	aspmpa	Div. 4 Sec. 31C
ALL PICK-UP TERMINATING FEATURE DEFINITION RECORD	5605-2	putfd	Div. 4 Sec. 6B
AMA CALL TYPE FORM	5506	amact	Div. 3 Sec. 5F
ANNOUNCEMENT APPLICATION SM LIST FORM	5529	annapl	Div. 3 Sec. 5AC
ANNOUNCEMENT DIGIT INFLECTION SCHEME FORM	5532	anndg	Div. 3 Sec. 5AF
ANNOUNCEMENT HEADER PHRASE LIST FORM	5531	annhd	Div. 3 Sec. 5AE
ANNOUNCEMENT PHRASE LIST FORM	5534	phrase	Div. 3 Sec. 5AH
ANNOUNCEMENT TRAILER PHRASE LIST FORM	5533	anntr	Div. 3 Sec. 5AG
ANY MEDIA INTERFACE PLATFORM FORM	5765	eqaip	Div. 8 Sec. 90
APCX EQUIPAGE FORM	5831	eqapcx	Div. 8 Sec. 83

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APPLICATION PROCESSOR CUSTOMER ASSIGNMENT FORM	5620-1	apca	Div. 4 Sec. 21A
APPLICATION PROCESSOR FACILITIES MANAGEMENT ASSIGNMENT FORM	5620-3	apfma	Div. 4 Sec. 21C
APPLICATION PROCESSOR GROUP/FACILITY PARAMETER FORM	5620-2	apgfp	Div. 4 Sec. 21B
ASSOCIATION SET	5890	assocset	Div. 5 Sec. 3AL
ATM LINK ASSIGNMENT	5592	atmlnk	Div. 5 Sec. 5P
ATS FEATURE BUTTON SERVICE DESCRIPTION FORM	5985	srvcdesc	Div. 6 Sec. 27A
ATTS TEST SESSION SCHEDULE DATA FORM	5052	atsdata	Div. 7 Sec. 1C
ATTS TEST SESSION SCHEDULE PARAMETERS FORM	5053	atsparm	Div. 7 Sec. 1D
AUTHORIZATION CODE DEFINITION FORM	5619-3	athac	Div. 4 Sec. 20C
AUTHORIZATION CODE FEATURE CLASS OF SERVICE PARAMETER FORM	5619-4	athfcos	Div. 4 Sec. 20D
AUTHORIZATION CODE FEATURE DEFINITION FORM	5619-1	athfd	Div. 4 Sec. 20A
AUTHORIZATION CODE GROUP DEFINITION FORM	5619-2	athgp	Div. 4 Sec. 20B
AUTHORIZATION CODE LINE (MLHG/TERM) PARAMETER FORM	5619-6	athmpa	Div. 4 Sec. 20F
AUTHORIZATION CODE LINE PARAMETER FORM	5619-5	athlpa	Div. 4 Sec. 20E
AUTHORIZATION CODE TRUNK (TGN/MEMB) PARAMETER FORM	5619-7	athtpa	Div. 4 Sec. 20G
AUTOMATIC CALL-BACK LINE (MLHG/TERM) PARAMETER FORM	5616-3	acbmpa	Div. 4 Sec. 17C
AUTOMATIC CALL-BACK LINE (TN) PARAMETERS FORM	5616-2	acblpa	Div. 4 Sec. 17B
AUTOMATIC CHARGE QUOTATION SERVICE FORM	5425	acqs	Div. 3 Sec. 4Z
AUTOMATIC NUMBER IDENTIFICATION SWITCHING MODULE FORM	5560	animod	Div. 3 Sec. 5BD
AUTOMATIC NUMBER IDENTIFICATION TABLE	5561	anitable	Div. 3 Sec. 5BP
AUTOMATIC NUMBER IDENTIFICATION TABLE	5561	anitbl	Div. 3 Sec. 5BE
AUTOMATIC ROUTE SELECTION ALTERNATE FACILITY RESTRICTION LEVELS FORM - ARSFRL	5608-7	arsfrl	Div. 4 Sec. 9G
AUTOMATIC ROUTE SELECTION FEATURE DEFINITION FORM	5608-1	arsfd	Div. 4 Sec. 9A
AUTOMATIC ROUTE SELECTION GROUP PARAMETER FORM	5608-2	arsgpa	Div. 4 Sec. 9B
AUTOMATIC ROUTE SELECTION GROUP SCREENING FORM	5608-6	arsscrn	Div. 4 Sec. 9F
AUTOMATIC ROUTE SELECTION LINE (MLHG/TERM) PARAMETER FORM	5608-4	arsmpa	Div. 4 Sec. 9D
AUTOMATIC ROUTE SELECTION LINE (TN) PARAMETER FORM	5608-3	arslpa	Div. 4 Sec. 9C
AUTOMATIC ROUTE SELECTION SEGMENTED SIGNALING FORM	5608-9	arssig	Div. 4 Sec. 9I
AUTOMATIC ROUTE SELECTION TRAVELING CLASS MARK CONVERSION TABLE FORM	5608-8	arstcm	Div. 4 Sec. 9H
AUTOMATIC ROUTE SELECTION TRUNK (TGN/MEMB) PARAMETER FORM	5608-5	arstpa	Div. 4 Sec. 9E
AUTOMATIC TRUNK TEST TABLE FORM	5505-1/2	auto	Div. 3 Sec. 5E
BEARERNET	5935	bearernet	Div. 5 Sec. 3AM
BFG (BRCS FEATURE GROUPING) CONSTRUCTION FORM	5625	bfg	Div. 4 Sec. 26A
BFG (BRCS FEATURE GROUPING) SUMMARY REPORT	5626	bfg	Div. 4 Sec. 26B
BICC GRP CIC DEFINITION FORM	5218	cicdef	Div. 3 Sec. 2U
BLOCKED LINE ASP FCD CODES	5649	lnblkcod	Div. 4 Sec. 31H
BLOCKED TRUNK GROUP ASP FCD CODES	5275	tkblkcd	Div. 3 Sec. 2X
BRCS □ MC ROUTE INDEX EXPANSION FORM	5304	mcrtidx	Div. 3 Sec. 3Q
BULK CALLING LINE IDENTIFICATION FEATURE DEFINITION FORM	5629-1	bclidfd	Div. 4 Sec. 29A
BULK CALLING LINE IDENTIFICATION LINE PARAMETER FORM	5629-3	bclidlpa	Div. 4 Sec. 29C
BULK CALLING LINE IDENTIFICATION MULTI-LINE HUNT GROUP PARAMETERS FORM	5629-4	bclidmpa	Div. 4 Sec. 29D
BULK LINE CALLING IDENTIFICATION GROUP PARAMETERS FORM	5629-2	bclidgp	Div. 4 Sec. 29B
BUSY LINE VERIFICATION LINE EXCLUSIONS FORM	5442	blvex	Div. 3 Sec. 4AQ
BUSY LINE VERIFICATION NPA FORM	5441	blvnpa	Div. 3 Sec. 4AP
CALL FORWARDING FEATURE DEFINITION FORM	5614-1/2	cfwfd	Div. 4 Sec. 15A
CALL FORWARDING LINE (MLHG/TERM) PARAMETER FORM	5614-4	cfwmpa	Div. 4 Sec. 15C
CALL FORWARDING LINE (TN) PARAMETER FORM	5614-3	cfwlpa	Div. 4 Sec. 15B
CALL INSTANCE CODE DISTRIBUTION FORM	5217	cicdist	Div. 3 Sec. 2T
CALL PICKUP LINE (MLHG/TERM) PARAMETER FORM	5605-4	pumpa	Div. 4 Sec. 6D
CALL PICKUP LINE (TN) PARAMETER FORM	5605-3	pulpa	Div. 4 Sec. 6C
CALL PICKUP ORIGINATING FEATURE DEFINITION FORM	5605-1	puofd	Div. 4 Sec. 6A
CALL PICKUP TERMINATING GROUP DATA FORM	5605-4	pugd	Div. 4 Sec. 6E
CALL WAITING FEATURE DEFINITION FORM	5603-1A/1B	cwtfd	Div. 4 Sec. 4A
CALL WAITING LINE (MLHG/MEMB) PARAMETER FORM	5603-3	cwtmpa	Div. 4 Sec. 4C
CALL WAITING LINE (TN) PARAMETER FORM	5603-2	cwtlpa	Div. 4 Sec. 4B
CALL WAITING TRUNK (TGN/MEMB) PARAMETERS	5603-4	cwttpa	Div. 4 Sec. 4D
CALLING PARTY NUMBER SCREENING RANGES FORM	5212	scrnrng	Div. 3 Sec. 2N
CALLING PARTY NUMBER/BILLING NUMBER FEATURE FORM	5982	cpnbnfd	Div. 6 Sec. 25A
CARRIER DESTINATION MAPPING FORM	5300-6	cdim	Div. 3 Sec. 3E
CARRIER FOR OPERATOR SPECIAL DIALED CODES FORM	5420	ocntwk	Div. 3 Sec. 4U
CARRIER GROUP ALARM SCAN POINT DEFINITION FORM	5514	cgasp	Div. 3 Sec. 5N
CARRIER LINE SCREENING FORM	5551	carscr	Div. 3 Sec. 6B
CCITT7 GLOBAL SM FORM	6008	ccgsm	Div. 9 Sec. 10H

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CCS MESSAGE TRANSPORT MESSAGE HANDLER	6021	cmtmh	Div. 9 Sec. 10U
CCS OFFICE PARAMETERS (VIEW 8.15)	NA	NA	Div. 9 Sec. 3A
CCS TCAP APPLICATION	5567	ccstcap	Div. 3 Sec. 5BH
CDMA OFFICE OPTIONS	5599	cdmaopt	Div. 8 Sec. 80
CENTRAL TRUNK TEST UNIT FORM	5518	cttu	Div. 3 Sec. 5R
CHARGE INDEX EXPANSION FORM	5302-1	cgidx	Div. 3 Sec. 3I
CIRCUIT CODE TO DIGIT TRANSLATION FORM	5311	cktcode	Div. 3 Sec. 3X
CLUSTER DEFINITION FORM	5600	clustr	Div. 4 Sec. 1A
CLUSTER ROUTING DATA (VIEW 15.9)	5019	NA	Div. 9 Sec. 2I
CLUSTER ROUTING	6020	clu	Div. 9 Sec. 10T
CNI IMPLEMENTATION ON THE 5ESS-2000 SWITCH	NA	NA	Div. 9 Sec. 1A
CODE CONVERSION FORM	5300-4	conv	Div. 3 Sec. 3D
COIN CHARGE FORM	5302-4	cnchg	Div. 3 Sec. 3L
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OSPS COMMERCIAL ACD PARAMETERS	5458	cacdparm	Div. 3 Sec. 4BF
OSPS COUNTRY CODE TO COUNTRY NAME MAPPING FORM	5463	ccname	Div. 3 Sec. 4BP
OSPS DA CUSTOM BRANDING BY ACCOUNT OWNER	6446	aowner	Div. 3 Sec. 4ES
OSPS DACC TREATMENT TABLE	6412	dacctrt	Div. 3 Sec. 4DK
OSPS DESTINATION DATA FOR LISTING SERVICES CALLS	5467	servdest	Div. 3 Sec. 4BT
OSPS DIFFERENTIATION OF CARD SERVICE CHARGES FORM	5480	cmpcrd	Div. 3 Sec. 4CF
OSPS DIGITAL SUBSCRIBER LINE FORM	5411	ospsdsl	Div. 3 Sec. 4L
OSPS DIOR SPEED DIALING	5484	diorsd	Div. 3 Sec. 4CL
OSPS DSL PACKET SWITCHING ASSIGNMENTS FORM	5447	amlbdsl	Div. 3 Sec. 4AV
OSPS EXTERNAL INFORMATION SYSTEM (EIS) DATA	5462-1	eisdata	Div. 3 Sec. 4BM
OSPS FEATURE PARAMETERS	6424	ftparm	Div. 3 Sec. 4DY
OSPS FLEXIBLE ACD CALL TYPE DETERMINATION	6434	flexacd	Div. 3 Sec. 4EG
OSPS FTS NRA 700-NXX CODES	5487	ftsnxx	Div. 3 Sec. 4CO
OSPS FTS NRA COUNTRY CODE EXCEPTIONS	5485	ftscc	Div. 3 Sec. 4CM
OSPS FTS NRA DOMESTIC EXCEPTIONS	5486	ftsnanp	Div. 3 Sec. 4CN
OSPS FTS NRA ROUTING NUMBERS	5488	ftsrn	Div. 3 Sec. 4CP
OSPS IMPROVED THIRD NUMBER ACCEPTANCE CALL TREATMENT FORM	5461-4	treat	Div. 3 Sec. 4BL
OSPS IMPROVED THIRD NUMBER ACCEPTANCE LINE EXCEPTION	5461-1	excpt	Div. 3 Sec. 4BI
OSPS IMPROVED THIRD NUMBER ACCEPTANCE SPECIAL AREA CODE FORM	5461-3	specl	Div. 3 Sec. 4BK
OSPS IMPROVED THIRD NUMBER ACCEPTANCE TIME SET FORM	5461-2	setid	Div. 3 Sec. 4BJ
OSPS (INCOMING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS FORM	5451	infltap	Div. 3 Sec. 4AZ
OSPS INTERCEPT DESTINATION INDICES	5469	aiscls	Div. 3 Sec. 4BV
OSPS INTERFLOW TRANSLATION IDENTIFIERS	5453	infltrid	Div. 3 Sec. 4BB
OSPS INTERNATIONAL TERMINATING RESTRICTIONS	5464	tprcc	Div. 3 Sec. 4BQ
OSPS LEC INTRACOMPANY NETWORK FORM	5419	dnntwk	Div. 3 Sec. 4T
OSPS LINE INFORMATION DATABASE (LIDB) QUERY FORM	5449	lidblnq	Div. 3 Sec. 4AX
OSPS LISTING SERVICES/CACD INTERFLOW DESTINATION RECORD	5448	infldest	Div. 3 Sec. 4AW
OSPS LOCAL NUMBER PORTABILITY DATABASE QUERY	6411	olnpu	Div. 3 Sec. 4DJ
OSPS MEASUREMENTS DESIGNATION FOR 800 ACCESS CALLS	5499	measdsig	Div. 3 Sec. 4CY
OSPS NPA Code Expansion for BLV	6435	enhblv	Div. 3 Sec. 4EH
OSPS NXX LIST FOR BILLING NUMBER ON ONI/ANIF CALLS FORM	5423	valoffc	Div. 3 Sec. 4X
OSPS OPERATOR ASSIGNMENT FORM	5403	ospsoa	Div. 3 Sec. 4D
OSPS OPERATOR POSITION FORM	5401	ospsop	Div. 3 Sec. 4B
OSPS OPERATOR TO EIS AND DATA BASE MAPPING	5462-2	opeisdb	Div. 3 Sec. 4BN
OSPS OPERATOR TROUBLE REPORT FORM	5410	otrvld	Div. 3 Sec. 4K
OSPS OPTIONS FORM	5424	ospsopt	Div. 3 Sec. 4Y
OSPS (OUTGOING) INTERFLOW TOLL & ASSISTANCE IDENTIFIERS FORM	5452	infltadp	Div. 3 Sec. 4BA
OSPS PORT RANGES FOR IBM DA SYSTEM	5471	ibmrngs	Div. 3 Sec.

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			4BW
OSPS RATE AND ROUTE FORM	5405	orar	Div. 3 Sec. 4F
OSPS RESTRICTED EXTERNAL DIALING FORM	5409	resxdl	Div. 3 Sec. 4J
OSPS RSM/CARRIER DATA FORM	5421	rsmcar	Div. 3 Sec. 4V
OSPS SERVICE DATA FOR LISTING SERVICES CALLS	5466	servdata	Div. 3 Sec. 4BS
OSPS SERVICE DESIGNATION FOR 1+800 AATOS/SDN NRA OR AATLSOS CALLS - SRVDESIG	5474	srvdesig	Div. 3 Sec. 4BZ
OSPS SERVING TEAM INFORMATION FORM	5402	stinfo	Div. 3 Sec. 4C
OSPS SM INFORMATION	5476	ospssminf	Div. 3 Sec. 4CB
OSPS SM SPECIFIC DATA FOR EIS	5462-3	eissm	Div. 3 Sec. 4BO
OSPS TELEPHONE CREDIT CARD ISSUER IDENTIFICATION	5454	tccid	Div. 3 Sec. 4BC
OSPS TELEPHONE CREDIT CARD (TCR) ATTRIBUTES	5473	tccattr	Div. 3 Sec. 4BY
OSPS TERMINATING NPA NXX RESTRICTIONS FORM	5465	tprnpa	Div. 3 Sec. 4BR
PACKET BUSINESS GROUP FORM	5931	pbgrp	Div. 5 Sec. 3L
PACKET GROUP DEFINITION	5219	pktgrp	Div. 5 Sec. 3Z
PACKET SWITCH COMPONENT		pscomp	Div. 5 Sec. 3R
PACKET SWITCHING BILLING RATE PERIODS FORM	5922	psrate	Div. 5 Sec. 3C
PACKET SWITCHING DNIC TO RI ASSIGNMENT FORM	5921	psdnicri	Div. 5 Sec. 3B
PACKET SWITCHING INTER SM NAIL-UP FORM	5920	psism	Div. 5 Sec. 3A
PACKET SWITCHING ISDN MODEM TN TO DSL ASSIGNMENT FORM	5925/5925A	psmtn	Div. 5 Sec. 3F
PACKET SWITCHING PERMANENT VIRTUAL CIRCUIT ASSIGNMENT FORM	5923	pspvc	Div. 5 Sec. 3D
PACKET SWITCHING UNIT EQUIPAGE FORM	5741	eqpsu	Div. 8 Sec. 22
PACKET SWITCHING UNIT LOGICAL GROUP FORM	5949	psugp	Div. 5 Sec. 3J
PACKET SWITCHING UNIT PROTOCOL HANDLER PACK EQUIPAGE FORM	5742	eqpsuph	Div. 8 Sec. 23
PAIR GAIN TEST CONTROLLER FORM	5503	pgtc	Div. 3 Sec. 5C
PAIRED COUNTRY CODE (PCC)/COUNTRY CODE (CC)	5318	pcc	Div. 3 Sec. 3AE
PATH FORM	5814-1/2/3	eqtrcupth	Div. 8 Sec. 38
PBX ID ASSIGNMENT FORM	5213	pbxid	Div. 3 Sec. 2O
PCF OFFICE PARAMETERS	5996	pcfopt	Div. 5 Sec. 3T
PCF PDSN IP ASSIGNMENT	5996-2	pcfpdsn	Div. 5 Sec. 3U
PCT DATA EXCHANGER UNIT FORM	5868	eqpdxu	Div. 8 Sec. 72
PCT LINE/TRUNK UNIT	5869	eqpltu	Div. 8 Sec. 73
PCT LINK PACK	5870	eqpctp	Div. 8 Sec. 74
PCT LINK TRIBUTARY	5871	eqpctt	Div. 8 Sec. 75
PDSN CONFIGURATION	5997	pdsncnfg	Div. 5 Sec. 3V
PERFORMANCE MONITORING	5948	pmthresh	Div. 5 Sec. 5I
PERIPHERAL CONTROLLER RECORD	5703	eqpc	Div. 8 Sec. 5
PERSONAL IDENTIFICATION DEFINITION FORM	5117	pidef	Div. 3 Sec. 1Q
PFA TERMINAL GROUP FORM	5609-2	pfatg	Div. 4 Sec. 10B
PRECEDENCE & PREEMPTION FEATURE DEFINITION FORM - PPFD	5618-1	ppfd	Div. 4 Sec. 19A
PRECEDENCE & PREEMPTION POLYGRID ROUTING FORM	5618-7	pppoly	Div. 4 Sec. 19G
PRECEDENCE AND PREEMPTION COMMUNITY OF INTEREST FORM	5618-6	ppcoi	Div. 4 Sec. 19F
PRECEDENCE AND PREEMPTION LINE (MLHG/TERM) PARAMETER FORM	5618-4	ppmpa	Div. 4 Sec. 19D
PRECEDENCE AND PREEMPTION LINE (TN) PARAMETER FORM	5618-3	pplpa	Div. 4 Sec. 19C
PRECEDENCE AND PREEMPTION SCREENING FORM	5618-2	ppscrn	Div. 4 Sec. 19B
PRECEDENCE AND PREEMPTION TRUNK PARAMETER FORM	5618-5	pptpa	Div. 4 Sec. 19E
PRECISION MEASUREMENT UNIT FORM	5752-1/2	eqpmu	Div. 8 Sec. 27
PREFIX/FEATURE DIGIT INTERPRETER FORM	5300-2	pdit	Div. 3 Sec. 3B
PRIMARY OR SECONDARY ONLY KEY SYSTEM FORM	5902	shtn	Div. 5 Sec. 1C
PRIMARY RATE INTERFACE GROUP ASSIGNMENT FORM	5211	prigrp	Div. 3 Sec. 2M
PRIVATE FACILITY ACCESS FEATURE DEFINITION FORM	5609-1	pfafd	Div. 4 Sec. 10A
PRIVATE FACILITY ACCESS GROUP FORM	5609-5	pfagpa	Div. 4 Sec. 10E
PRIVATE FACILITY ACCESS LINE (MLHG/TERM) PARAMETER FORM	5609-7	pfampa	Div. 4 Sec. 10G
PRIVATE FACILITY ACCESS LINE (TN) PARAMETER FORM	5609-6	pfalpa	Div. 4 Sec. 10F
PRIVATE FACILITY ACCESS TRUNK (TGN/MEMB) PARAMETER FORM	5609-8	pfatpa	Div. 4 Sec. 10H
PRIVATE NETWORK DIALING PLAN FORM	5608-10/11	pndp	Div. 4 Sec. 9J
PRIVATE NETWORK INFORMATION FORM	5608-12	pninfo	Div. 4 Sec. 9K
PRIVATE NETWORK OFF NETWORK NUMBER CONVERSION FORM	5608-13	pnoffon	Div. 4 Sec. 9L
PRIVATE NETWORK ON NETWORK NUMBER CONVERSION FORM-PNONOFF	5608-14	pnonoff	Div. 4 Sec. 9M
PROCESSOR GROUP	5883	pcrgrp	Div. 5 Sec. 3AE
PROPORTIONATE BIDDING FORM	5325	propbid	Div. 3 Sec. 3AL
PROTOCOL LINK PARAMETERS (VIEW 15.17)	5027	NA	Div. 9 Sec. 2Q
PROTOCOL LINK SET THRESHOLDS (VIEW 15.16)	5026	NA	Div. 9 Sec. 2P

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PROTOCOL LINK SET TIMERS (VIEW 15.15)	5025	NA	Div. 9 Sec. 2O
PROTOCOL OFFICE TIMERS (VIEW 15.14)	5024	NA	Div. 9 Sec. 2N
PSU LINK ASSIGNMENT	5057	psulnk	Div. 7 Sec. 2A
PSU Pipe	5990	psupipe	Div. 5 Sec. 5O
PSUGW	5991	psugw	Div. 5 Sec. 3Q
PSUPM	5998	psupm	Div. 5 Sec. 3AA
QGCON	5829	qgcon	Div. 8 Sec. 91
QLPS BOARD FORM	5854	eqqlps	Div. 8 Sec. 56
QPH PIPE ASSIGNMENT FORM	5828	qphpipe	Div. 8 Sec. 70
QTUV	na	qtuv	Div. 8 Sec. 92
RATE AND ROUTE FORM	5301	rar	Div. 3 Sec. 3F
RECORDED ANNOUNCEMENT FUNCTION	5271-4	raf	Div. 3 Sec. 2Q
REDIRECTING NUMBER DELIVERY FORM	5983	rndfd	Div. 6 Sec. 26A
REMAINING DIGIT INTERPRETATION FORM	5300-7/8	rdit	Div. 3 Sec. 3H
REMOTE ACCESS SERVICE RTI DEFINITION FORM	5538	rasrti	Div. 3 Sec. 5AL
REMOTE ALARM ASSIGNMENT FORM	5516	ralm	Div. 3 Sec. 5P
REMOTE ALARM UNIT EQUIPAGE RECORD	5705	eqrau	Div. 8 Sec. 7
REMOTE BUSY VERIFY ROUTING FORM	5950	rbvrti	Div. 5 Sec. 5K
REMOTE CLOCK DATA FORM (EQRCLK)	5723-1/2	eqrclk	Div. 8 Sec. 16
REMOTE CLOCK REFERENCE FORM	5519	rclkref	Div. 3 Sec. 5S
REMOTE DIGITAL TEST ACCESS PORT/TN ASSIGNMENT FORM	5911A/B	rdtaport	Div. 5 Sec. 1L
REMOTE DIGITAL TEST ACCESS TELEPHONE NUMBER	5910A/B	rdtatn	Div. 5 Sec. 1M
REMOTE INTEGRATED SERVICES LINE UNIT EQUIPAGE FORM	5732	eqrislu	Div. 8 Sec. 19
(REMOTE) INTEGRATED SERVICES LINE UNIT LINE CARD FORM	5942	islulc	Div. 5 Sec. 5C
(REMOTE) INTEGRATED SERVICES LINE UNIT LINE GROUP CONTROLLER EQUIPAGE FORM	5733	eqlgc	Div. 8 Sec. 20
REMOTE OFFICE TEST LINE FORM	5512	rotl	Div. 3 Sec. 5L
REMOTE PERIPHERAL ALARMS - RISITE	5940	risite	Div. 5 Sec. 5A
REMOTE PERIPHERAL SITE MISCELLANEOUS ALARMS	5957	rpma	Div. 5 Sec. 5N
REMOTE SITE OPTIONS FORM	5722	eqsite	Div. 8 Sec. 15
REMOTE TERMINAL (TR303/TR008)	5174-1/2/3/4	rterm	Div. 3 Sec. 1S
REROUTE ON RELEASE CAUSE LIST	5570	rorlst	Div. 3 Sec. 5BK
RETROFIT INFORMATION FORM	5845	retinfo	Div. 8 Sec. 47
RISLU REMOTE ALARM SECTION BUILDING/MISCELLANEOUS ALARM SCAN POINT FORM	5944	ribmsc	Div. 5 Sec. 5E
ROUTE INDEX FORM	5303	rtidx	Div. 3 Sec. 3P
ROUTE INDEX LIST FORM	5574	rtlist	Div. 3 Sec. 5BO
ROUTINE EXERCISE SCHEDULE FORM	5515	rxschd	Div. 3 Sec. 5O
RSM LINK ASSIGNMENT FORM	5517	rsmlnk	Div. 3 Sec. 5Q
S HUNDREDS GROUP(S) ASSIGNMENT FORM	5115	hgrpas	Div. 3 Sec. 1O
S INDIVIDUALIZED DIALING PLAN DIALED CODE ASSIGNMENT FORM	5601-1/2	idpdca	Div. 4 Sec. 2B
S PACKET SWITCHING CLOSED USER GROUP ASSIGNMENT FORM	5924/5924A	pscug	Div. 5 Sec. 3E
SAAL HIGH SPEED SS7 LINK - SAALHSL	6016	saalhsl	Div. 9 Sec. 10V
SAAL Link Parameter Set	6017	saalprm	Div. 9 Sec. 10W
SCAN POINT NUMBER ASSIGNMENT FORM	5840	N/A	Div. 8 Sec. 42
SCCP NETWORK DEFINITION FORM	6010	ccnet	Div. 9 Sec. 10K
SCCP PARAMETER DEFINITION FORM	6011	ccspr	Div. 9 Sec. 10L
SCCP PRIMARY/BACKUP DESTINATION FORM	6012	ccpbd	Div. 9 Sec. 10M
SCCP SINGLE GLOBAL TITLE TRANSLATION FORM	6015	ccsgt	Div. 9 Sec. 10N
SCCP TRANSLATION GROUP MASK FORM	6013	cctgm	Div. 9 Sec. 10P
SCCP TRANSLATION TABLE FORM	6014	cctt	Div. 9 Sec. 10O
SCD SCREENED SERVICE ACCESS CODES FORM	5552	sacscr	Div. 3 Sec. 6C
SCHEDULE REPORTING (VIEW 15.8)	5018	NA	Div. 9 Sec. 2H
SCREEN CODE TABLE FORM	5415	scrncode	Div. 3 Sec. 4P
SCREENING INDEX PARAMETER ASSIGNMENT	5543	scridxpa	Div. 3 Sec. 5AQ
SCTP ASSOCIATION PARAMETER SET	5887	asscparm	Div. 5 Sec. 3AI
SCTP ASSOCIATION	5889	sctpassc	Div. 5 Sec. 3AK
SCTP FAR ENDPOINT DEFINITION	5888	sctpfepd	Div. 5 Sec. 3AJ
SCTP NEAR ENDPOINT DEFINITION	5886	sctpnepd	Div. 5 Sec. 3AH
SCTPPARM	5885	sctpparm	Div. 5 Sec. 3AG
SECURED FEATURE SYSTEM ASSIGNMENT FORM	5713-1	sfsys	Div. 3 Sec. 5AR
SELECTIVE ROUTING AND TRANSFER DATA FOR ESN (SM/DAS)	5540	esn	Div. 3 Sec. 5AN
SIGNALING LINK SET FORM	6003	lnkset	Div. 9 Sec. 10C
SIGNALING LINK SET FORM	6004-1/2	cclnk	Div. 9 Sec. 10D
SIGNALING POINT CODE FORM	6006	pc	Div. 9 Sec. 10F
SIMULATED FACILITY GROUP FORM	5609-3	pfasfg	Div. 4 Sec. 10C
SIMULTANEOUS RINGING FEATURE DEFINITION	5650	srfd	Div. 4 Sec. 31I
SIMULTANEOUS RINGING MDN LIST	5651	srdn	Div. 4 Sec. 31J
SIP-T CALL PROCESSING SMS	5881	siptsms	Div. 5 Sec. 3AC
SIP-T GLOBAL SM	5880	sipgsm	Div. 5 Sec. 3AB

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SIP-T PARAMETERS DEFINITION	5882	siptparm	Div. 5 Sec. 3AD
SLC-96 ALARM TYPE ASSIGNMENT FORM	5105	slcalm	Div. 3 Sec. 1E
SLC-96 CHANNEL UNIT FORM	5107	slccu	Div. 3 Sec. 1G
SLC-96 REMOTE TERMINAL FORM	5106	slcrt	Div. 3 Sec. 1F
SLIM OE LIST	5548	sllen	Div. 3 Sec. 5AX
SLIM TEST JOB	5555	sljob	Div. 3 Sec. 5BA
SLIM TEST SESSION	5556	slsess	Div. 3 Sec. 5BB
SLIM TEST SET	5549	sltset	Div. 3 Sec. 5AY
SLIM THRESHOLD LIST	5554-1/2	slthrs	Div. 3 Sec. 5AZ
SMALL NETWORK CLUSTER AND MEMBER TABLE (VIEW 15.13) RC SMNID	5023	NA	Div. 9 Sec. 2M
SPECIAL ACCESS BAND SCREENING FORM	5319	spabs	Div. 3 Sec. 3AF
SPECIAL ACCESS EXEMPT NXXs FORM	5320	spaenxx	Div. 3 Sec. 3AG
SPECIAL AND TRANSPARENCY FEATURE OPTIONING SYSTEM FORM	5713-2	fosys	Div. 3 Sec. 5AS
SPEED CALLING FEATURE DEFINITION FORM	5627-1	scfd	Div. 4 Sec. 27A
SPEED CALLING LINE PARAMETER FORM	5627-2	sclpa	Div. 4 Sec. 27B
SPEED CALLING LIST FORM	5627-5	sclist	Div. 4 Sec. 27E
SPEED CALLING MLHG/TERM LINE PARAMETER FORM	5627-3	scmpa	Div. 4 Sec. 27C
SPEED CALLING TRUNK PARAMETER FORM	5627-4	sctpa	Div. 4 Sec. 27D
SRE INCREMENTAL GLOBAL PARAMETERS	5547	sreincr	Div. 3 Sec. 5AW
STRUCTURE CODE FAMILY FORM	5536	scfam	Div. 3 Sec. 5AJ
SUBSYSTEM INFORMATION (VIEW 15.10)	5020	NA	Div. 9 Sec. 2J
SWITCHING MODULE EQUIPAGE FORM	5700-1/2	eqim	Div. 8 Sec. 2
SWITCHING MODULE INFORMATION FORM	5510	iminfo	Div. 3 Sec. 5J
TDMA OFFICE OPTIONS	5572	tdmaopt	Div. 3 Sec. 5BM
TELEPHONE NUMBER FORM	5109-1/2/3	line	Div. 3 Sec. 1I
TERMINAL GROUP AND STATION RESTRICTION LINE (MLHG/TERM) PARAMETER FORM	5607-4	tgsrmpa	Div. 4 Sec. 8C
TERMINAL GROUP AND STATION RESTRICTION LINE (TN) PARAMETER FORM	5607-3	tgsrlpa	Div. 4 Sec. 8B
TERMINAL GROUP AND STATION RESTRICTION TRUNK PARAMETER FORM	5607-5	tgsrtpa	Div. 4 Sec. 8D
TERMINAL GROUP AND STATION RESTRICTION	5607-1/2	tgsrfd	Div. 4 Sec. 8A
TERMINAL GROUP ATTENDANT FORM	5611	tgattd	Div. 4 Sec. 12A
TERMINATING CODE SCREENING AND PCC FOR COUNTRY CODE FORM	5438	tcscc	Div. 3 Sec. 4AM
TERMINATING CODE SCREENING FOR NPA-NXX FORM	5437	tcsnpa	Div. 3 Sec. 4AL
TERMINATING CODE SCREENING TEXT AND RESTRICTIONS FORM	5436	tcstext	Div. 3 Sec. 4AK
TEST BUS CONTROL UNIT EQUIPMENT RECORD	5811	eqtbcu	Div. 8 Sec. 31
TGN TO LEC INDEX FORM	5443	tgnlec	Div. 3 Sec. 4AR
THRESHOLD ALARM LEVEL FORM	5769	alrmlvls	Div. 3 Sec. 5CD
TIME DEPENDENT ROUTING	5571	tdr	Div. 3 Sec. 5BL
TIME OF DAY CODE LIST DEFINITION FORM	5610-2	todcl	Div. 4 Sec. 11B
TIME OF DAY FEATURE DEFINITION FORM	5610-1	todfd	Div. 4 Sec. 11A
TIME OF DAY LINE PARAMETER FORM	5610-3	todlpa	Div. 4 Sec. 11C
TIME OF DAY MLHG TERMINAL PARAMETER FORM	5610-4	todmpa	Div. 4 Sec. 11D
TIME OF DAY TRUNK (TGN/MEMB) PARAMETER FORM	5610-5	todtpa	Div. 4 Sec. 11E
TIME SLOT INTERCHANGE EQUIPAGE (SM-2000 MODULES)	5850	eqtsi	Div. 8 Sec. 52
TMS LINK EQUIPAGE	5851	eqtmslink	Div. 8 Sec. 53
TONE TIME FORM	5504	tntyp	Div. 3 Sec. 5D
TOPAS CLLI CODE IDENTIFICATION FORM	5521	clli	Div. 3 Sec. 5U
TOPAS TERMINAL EQUIPMENT DSX ASSIGNMENT FORM	5721	eqdsx	Div. 8 Sec. 14
TRAFFIC SEPARATIONS CELL GROUPING FORM	5308	trfsep	Div. 3 Sec. 3U
TRANSIT NETWORK IDENTIFICATION CODE FORM	5928	tniclist	Div. 5 Sec. 3I
TRANSMISSION RATE CONVERTER UNIT EQUIPAGE FORM	5812	eqcmtrcu	Div. 8 Sec. 32
TRUE TRUNK GROUP NPA FORM	5413	pronxx	Div. 3 Sec. 4N
TRUNK AND LINE WORK STATION FORM	5511	tlws	Div. 3 Sec. 5K
TRUNK FEATURES AND ASSIGNMENTS FORM	5204	trunk	Div. 3 Sec. 2C
TRUNK GROUP FORM	5202	tkgrp	Div. 3 Sec. 2A
TRUNK PACKET SWITCHING PVC LCN ASSIGNMENT FORM	5926	x75pvc	Div. 5 Sec. 3G
TRUNK TRANSMISSION CLASS FORM	5203	trkcl	Div. 3 Sec. 2B
TRUNK UNIT EQUIPAGE FORM (EQTU) TRUNK UNIT PACK EQUIPAGE FORM (EQTUP)	5720	eqtu eqtup	Div. 8 Sec. 13
TSM MONITORING TO MONITORED FORM	5932-1/2/3/4	telmon	Div. 5 Sec. 3M
USERS VIEW DESCRIPTORS (VIEW 15.5)	5015	NA	Div. 9 Sec. 2E
UTILITY TELEMETRY TRUNK GROUP FORM	5215	uttkgrp	Div. 3 Sec. 2R
VOICE AND DATA CHANNELS	5918	vdchn	Div. 5 Sec. 3W
VOICE MESSAGING SERVICE INTERFACE	5472	espinfo	Div. 3 Sec. 4BX

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X.25 PACKET SWITCHING CHANNEL ASSIGNMENT FORM	5909-1/2/3	xat	Div. 5 Sec. 1J
X75 CLOSED USER GROUP FORM	5930	x75cug	Div. 5 Sec. 3K

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DIV. 20: Change History

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Appendix A:

UPDATE HISTORY

Division 20 of the 5ESS-2000 Switch Translation Guide provides listings of monthly updates made to the TG-5. These monthly listings are issued to highlight the modifications made to guide each month.

The monthly updates provide:

1. the Divisions and Sections modified
2. the Forms and Records affected
3. a brief description of the modifications made.

The monthly update sections within Division 20 are numbered 1 through 12 to correspond to a calendar month. For example, the January update is Section 1, the June update is Section 6, the October update is Section 10, etc.

It is the intent that each monthly update be maintained in the TG-5 for one year, thus providing a 12-month history of modifications made to the guide.

Figure 1 Update History Overview

December Updates for the TG-5

Division	Section	Form/Record	Summary
2	1CS	PSU Bus Occupancy Measurements	Minor editing changes.
2	4A0	Secured Features Descriptions	Removed SFID 613 from the table.
2	4A613	On-Hook Data Transmission without Power Ring	Feature section moved to Division 2, Section 4B1008.
2	4B0	Transparency Features Descriptions	Added OFIDs 999, 1000, 1001, 1008 in the table.
2	4B999	DNIS Enhancemdent for Canada - Part 1	New feature section for 5E15 FR 5 and later.
2	4B1000	DNIS Enhancemdent for Canada - Part 2	New feature section for 5E15 FR 5 and later.
2	4B1001	DNIS Enhancemdent for Canada - Part 3	New feature section for 5E15 FR 5 and later.
2	4B1008	On-Hook Data Transmission without Power Ring	Feature section moved from Division 2, Section 4A613.
2	7BQ	OIU OC-3 - NAR	Added form information to TRANSLATION REQUIREMENTS section.
2	7BX	OIU (Optical Interface Unit) - IP (Internet Protocol)	Removed this section from the TG-5.
3	5AR	SFSYS (5713-1)	Removed SFID 613 from the table.
3	5AS	FOSYS (5713-2)	Added OFIDs 999, 1000, 1001, 1008 to the table.
3	5BG	MEASSUM (5563)	Minor editing changes.
3	5CC	OIUPM (5767)	Added data rules to the CKT TYPE field and also added minor editing changes.
4	15A	CFWFD (5614-1/2)	Modified Preconstructed CF Features Table.
5	3Z	PKTGRP (5219)	Removed this section from the TG-5.
8	1	Equipment Assignment	Added equipment assignment information in Figure 2.
8	80	CDMAOPT (5599)	Minor editing changes.

Figure 2 December 2002 Changes

January Updates for the TG-5

Division	Section	Form/Record	Summary

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2	1CP	Support Multiple LEA for CCC Dial Out	New feature section for 5E16(2) FR 2 and later.
2	1CS	PSU Bus Occupany Measuments	Minor editing changes.
2	1CT	CALEA CDC with Voice Band Data	New feature section for 5E16(2) FR 1and later.
2	4A0	Secured Features Descriptions	Added SFIDs 662, 663, 664, and 670 to the table.
2	4A662	CM3 TMS Fabric Expansion	Added section for reference to the CM3 TMS Fabric Expansion feature.
2	4A663	CM3 TMS Fabric Expansion	Added section for reference to the CM3 TMS Fabric Expansion feature.
2	4A664	CM3 TMS Fabric Expansion	Added section for reference to the CM3 TMS Fabric Expansion feature.
2	4A670	SAAL SS7 High Speed Signaling Links	New feature section for 5E16(2) FR 1 and later.
2	4B587	PRI Echo Canceler Options	New feature section for 5E9(1) and later.
2	4B588	PRI Echo Canceler Options	Added reference page.
2	4B713	MCG (Manual Call Gapping) Interaction with LNP	New feature section for 5E11 and later.
2	4B734	Trunk Triggers for Toll	New feature section for 5E12 and later.
2	5O	3G 1X PD Services with MUX PDU and 3G 1X PD Services with 307 2 Kpbs	New feature section for 5E17(1) FR 1 and later.
2	7AS	Semi-Integrated No Test Trunk	Added information for the NTTU form to the TRANSLATION REQUIREMENTS section.
2	7BB	SAAL SS7 High Speed Signaling Links	Moved feature to Division 2, Section 4A670.
2	7BO	CM3 TMS Fabric Expansion	Added new information to each section.
2	7BY	PHA2 PSU to PSU Connectivity	New feature section for 5E17(1) FR 1 and later.
2	8AG	RNC Homed Voice/Data Calls	New feature section for 5E17(1) FR 1 and later.
3	5AR	SFSYS (5713-1)	Added SFIDs 662, 663, 664, and 670 to the table.
3	5BG	MEASSUM (5563)	Added the ATMLNK and ATMQOSPS values to the SECTION NAME field. Also added data rules to this field.
3	5BW	NTTU (5590)	New section for 5E15 and later.
5	3J	PSUGP (5949)	Minor editing change.
5	3Q	PSUGW (5991)	Added data rules to the NETWORK 0 field.
5	3X	INTRAPSU (5992)	New section for 5E17(1) FR 1 and later.
5	3Y	INTERPSU (5993)	New section for 5E17(1) FR 1 and later.
5	3AA	PSUPM (5998)	New section for 5E17(1) FR 1 and later.
5	5O	PSUPIPE (5990)	Minor editing changes.
5	5P	ATMLNK (5592	New section for 5E17(1) FR 1 and later.
8	23	EQPSUPH (5742)	Minor editing changes.
8	80	CDMAOPT (5599)	Added the SEND VP RDI, SEND VC RDI, and SUBNET ID fields and associated data rules.
9	10C	LNKSET (6003)	Minor editing change.
9	10V	SAALHSL (6016)	Minor editing changes.
9	10W	SAALPRM (6017)	Minor editing changes.

Figure 3 January 2003 Changes

March Updates for the TG-5

Division	Section	Form/Record	Summary
2	1CG	Hard-To-Reach	Moved this section to Division 2, Section 4A625
2	1CV	RTCD DSM Storage Expansion	New feature section for 5E16(2) FR 1.
2	4A0	Secured Features Descriptions	Added SFIDs 625, 682, and 685 to the table.
2	4A587	Simultaneous Ringing	Added enhancement information to FEATURE DESCRIPTION section.
2	4A625	Hard-To-Reach	Added SFID information.
2	4A682	High Capacity APT Enhancements	New feature section for 5E16(2) FR 1.
2	4A685	IMLT Access Improvements and Metallic A-Link Blockage Notification	New feature section for 5E16(2) FR 1.
2	4B0	Transparency Features Descriptions	Added OFID 1010 to the table.
2	4B1000	DNIS Enhancement for Canada -	Previously existing section that was accidently overwritten.

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		Part 2	
2	4B1001	DNIS Enhancement for Canada - Part 3	Previously existing section that was accidently overwritten.
2	4B1008	On-Hook Data Transmission without Power Ring	Previously existing section that was accidently overwritten.
2	4B1010	Metallic A-Link Blockage Notification	New feature section for 5E16(2) FR 1.
2	7BY	PHA2 PSU to PSU Connectivity	Minor editing changes.
2	8AH	Measurements for PCF on PHE2	New feature section for 5E17(1) FR 2 and later.
3	5I	OFCOPT (5509)	Added the IMLT RETRY and IMLT RDELAY fields.
3	5AE	ANNHD (5531)	Added information to the table under the PHRASES field.
3	5AH	PHRASE (5534)	Added information to the table under the LANGUAGE CODE field.
3	5AR	SFSYS (5713-1)	Added SFIDs 625, 682, and 685 to the table.
3	5AS	FOSYS (5713-2)	Added OFID 1010 to the table.
3	5BD	ANIMOD (5560)	Minor editing changes.
3	5BG	MEASSUM (5563)	Modified the Traffic Section Number for ATMLNK under the SECTION NAME field. Added a new SECTION NAME (PCF) and associated data rules.
9	10T	CLU (6020)	Modified the X-List field description.
9	10V	SAALHSL (6016)	Minor editing changes.
9	10W	SAALPRM (6017)	Minor editing changes.

Figure 4 March 2003 Changes

TRANSLATION GUIDE DIV. 20, SEC. 4
TG-5 April, 2003

April Updates for the TG-5

Division	Section	Form/Record	Summary
1	2	5000 Record Translation Inquiry	Modified contact information and TI form.
2	1X	SSP 800	Corrected Figure 1.
2	2AG	Output Messages for Metallic Path Setup Failures	This section was moved from D2S4A334. The secured option was removed.
2	4A0	Secured Features Description	Added entries to the Secured Features Table for SFID 686.
2	4A551	Multiline Hunt Group Capacity Expansion	New feature section for 5E15 and later.
2	4A633	Digital Cellular Switch Critical Alarms Improvement	Moved this section from Division 2, Section 2AB.
2	4A674	RC/V Security Logging and Verbose Enhancement	Modified the FEATURE DESCRIPTION.
2	4A686	3B21D/RTR High Speed Performance Improvement	New feature section for 5E16(2) FR 1.
2	4B0	Transparency Features Descriptions	Added OFID 1005 to the table.
2	4B748	Standard PRI XMIT Progress Instead of Alerting when Interworking non-ISDN	Modified the Translations Requirements table.
2	4B980	Carrier Compare for VPN	Modified the Translations Requirements table.
2	4B981	NM (Network Management) 3 Digit Reroute	Modified the Translations Requirements table.
2	4B989	Alternate ASP Algorithm Used to Delete an NPA	Modified the Translations Requirements table.
2	4B992	Bypass Subset of Crosschecks during RCV (Recent Change View) 10.10 Screening Delete	Modified the Translations Requirements table.
2	4B994	Canadian 15-Digit International Direct Distance Dialed	Modified the Translations Requirements table.
2	4B996	Precedence and Preemption Terminating Feature Selection Enhancement	Modified the Translations Requirements table.
2	4B1005	IAM Charge Number	New feature section for 5E15, 5E16(1), 5E16(2), and 5E17(1) and later.
2	4B1012	Inhibit CGA (Carrier Group Alarms)	Moved this feature from D2S4A661.

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2	5P	3G-1X HSPD with Simultaneous Transmission on F-FCH and F-SCH	New feature section for 5E17(1) FR 2 and later.
2	7BZ	CNI/PSU Support for 128K ISUP Trunks	New section for 5E15 FR 5 (moved from Division 2, Section 4A622).
3	2A	TKGRP (5202)	Added a note to the FREE ANS field.
3	5AR	SFSYS (5713-1)	Added entry to the Secured Features Table for SFID 686.
3	5AS	FOSYS (5713-2)	Added OFID 1005 to the table.
3	5BG	MEASSUM (5563)	Added information for the PHE value to the SECTION NAME.

Figure 5 April 2003 Changes

TRANSLATION GUIDE DIV. 20, SEC. 5
TG-5 May, 2003

May Updates for the TG-5

Division	Section	Form/Record	Summary
2	1CW	Proxy Database Phase II - Proxy Database	New feature section for 5E16(2) FR2 and later.
2	4A0	Secured Features Description	Added entries to the Secured Features Table for SFIDs 624, 689. Removed SFID 622 from the table.
2	4A551	Multiline Hunt Group Capacity Expansion	Added an additional reference.
2	4A609	External Interface Infrastructure Expansion	New feature section for 5E15 and later.
2	4A610	Increased ASM Disk Space For AMADNS	New feature section for 5E15 and later.
2	4A627	Increase Terminal Sessions for Read Only RC on ASM	New feature section for 5E15 and later.
2	4A678	Forwarded Call - Call Screening Announcement Modification	New feature section for 5E16(2) and later.
2	4A689	TCP/IP via ASM for CIA	New feature section for 5E16(2) FR 2 and later.
2	4B0	Transparency Features Descriptions	Added OFS IDs 681, 747, 972, 988, 997, 1004, and 1006 to the table.
2	4B623	Ability to Drop Fully Restricted Terminating Leg of Multiway Call	New section for 5E10 and later.
2	4B681	Transfer Two Outgoing ISUP/PRI Trunks Together	New feature section for 5E13 and later.
2	4B692	Recent Change (Hashsum Failure) Blocking	New feature section for 5E10 and later.
2	4B747	ASP/LDP Module 21 220 Record Enhancement	New feature section for 5E13 and later.
2	4B972	Allow SCP DAL Carrier Compare	New feature section for 5E15 and later.
2	4B984	NPA Split Enhancement	Added an additional reference.
2	4B988	Enhancement for Stand-Alone Routing for International	New feature section for 5E14 and later.
2	4B997	Delete Network Identity Digits on PRI PLI IE	New feature section for 5E15 and later.
2	4B1004	Inhibit Printing of FC2CF_LTM Assert	New feature section for 5E14 and later.
2	4B1006	256 ISUP Tandem Solution	New feature section for 5E16(2) and later.
2	6L	MLPP Support for ISDN Circuit Switched Data Calls	New feature section for 5E16(2) FR2 and later.
2	6M	SS7/ISDN PRI Interworking with T1 CAS Route Digit	New feature section for 5E16(2) FR2 and later.
2	7CA	Growable CMP Memory	New feature section for 5E16(2) FR1 and later.
2	7CB	Large Capacity Switch Class 4/5	New feature section for 5E16(2) FR1 and later.
2	7CC	Autoplex Wireless on OIU	New feature section for 5E17(1) FR 2 and later.
3	2A	TKGRP (5202)	Added data rules to the TRKCLS field of type "BCM", "DSC", and "PPMEM". Also added a data rule to the DCS TRK field.
3	2C	TRUNK (5204)	Added data rules to the TRKOE field the the "O" type.
3	5AR	SFSYS (5713-1)	Added entries to the Secured Features Table for SFIDs, 624, 689. Removed SFID 622 from the table.
3	5AS	FOSYS (5713-2)	Added OFIDs 681, 747, 972, 988, 997, 1004, and 1006 to the

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			table.
8	54	EQDSC3 (5852)	Added a data rule to the EQSTAT field.
8	89	EQLVC (5764)	Added the AFAC ID field and associated data rules.

Figure 6 May 2003 Changes

June Updates for the TG-5

Division	Section	Form/Record	Summary
2	1X	Service Switching Point 800	Modified form flow figure.
2	1CW	Proxy Database Phase II - Proxy Database	Modified to move this section to Division 2, Section 4A539.
2	4A539	Proxy Database Phases I and II - Proxy Database	Modified to add the Proxy Database Phase II feature section.
2	6L	MLPP Support for ISDN Circuit Switched Data Calls	Minor editing changes.
2	6M	SS7/ISDN PRI Interworking with T1 CAS Route Digit	Modified the FEATURE DESCRIPTION section and made minor editing changes.
2	8AH	Measurements for PCF on PHE2	Minor editing changes.
2	4B0	Transparency Features Descriptions	Added entries to the Optioned Features Table for OFID 1013.
2	4B1013	SS7 (Signaling System 7) Release Message	New feature section for 5E16(2) and later.
2	8AI	PCF on PHE2 Security	New feature section for 5E17(1) FR 2 and later.
2	8AK	PCF on PHE2 Standards Enhancements	New feature section for 5E17(1) FR 3 and later.
2	8AL	3G-1X HSPD Performance for Chatty Application	New feature section for 5E17(1) FR 3 and later.
3	5AS	FOSYS (5713-2)	Added OFID 10013 to the table.
3	5BG	MEASSUM (5563)	Minor editing changes.
5	3P	IPROUT (5989)	Minor editing change.
5	3S	ETHIP (5995)	Minor editing changes.
5	3T	PCFOPT (5996)	Added three no_change fields (PCF PHE2 LIMIT, PCF PHE2 PROV, and PCF PHE2 PSWD) (99-5E-8494). Added the CELL INFO ORDER and ACT TIME PARM fields (99-5E-8481). Added the INIT TIMER, INACT TIME, REACT COST, LOCAL MARGIN, INTER ARRIVAL and STEP DOWN SIZE fields (99-5E-8398)
5	3V	PDSNCNFG (5997)	Minor editing change and added new form.
8	1	Equipment Assignment	Added information for PH31, PHA2, and PHE2.under the EQPSUPH section.
8	23	EQPSUPH (5742)	Added PHA2 and PHE2 to the table for PC CLI.

Figure 7 June 2003 Changes

July Updates for the TG-5

Division	Section	Form/Record	Summary
2	1CX	RTCD Capacity Compatability with NxTMS	New feature section for 5E16(2) FR 2 and later.
2	4A0	Secured Features Description	Previous changes mistakenly omitted.
2	4A192	ICLID Enhancement for MLHG	Added a note to the Feature Description section.
2	4A693	UN597-9600 Baud ROP Capabilities	New feature section for 5E16(2) FR 2 and later.
2	4B990	256K Trunk Scaling for Large Capacity Tandem	Removed all SFID references.
2	7BZ	CNI/PSU Support for 128k ISUP Trunks	Minor editing change.
2	7CC	AUTOPLEX Wireless Trunks on OIU	Minor editing change.
2	7CD	PHV6 (Protocol Handler for Voice	New feature section for 5E18(1) and later.

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		6)	
2	8AJ	GSM Escalation Strategy Modifications	New feature section for 5E16(1) FR 4 and later.
3	2A	TKGRP (5502)	Added a new value and data rule to the SERV TYPE field.
3	2B	TRKCL (5203)	Previous changes mistakenly omitted.
3	5I	OFCOPT (5509)	Added the GSM ESCALATION field and associated data rules.
4	15C	CFWMPA (5614-4)	Previous changes mistakenly omitted.
5	3A	PSISM (5920)	Modified 1 data rule under the ISCN field.
5	3J	PSUGP (5949)	Added the AVAILABLE PHV6 field and a new value to the PH TYPE field. Also added data rules to the PH TYPE field.
8	1	Equipment Assignment	Added new CLI value forl PHV6 to the table.
8	22	EQPSU (5741)	Modified a data rule under the PSU TYPE field.
8	23	EQPSUPH (5742)	Added the PHV6 MIN SPARE field and associated data rule. Also added the PHV6 value to the table for PH CLI.
8	44	METALLIC TEST BUS ASSIGNMENT	Previous changes mistakenly omitted.
8	53	EQTMSLINK (5851)	Added a data rule and a note to the LINK TYPE field.
8	80	CDMAOPT (5599)	Added the PHV6 ECHO PATH DELAY field.
8	89	EQLVC (5764)	Minor editing changes.

Figure 8 July 2003 Changes

August Updates for the TG-5

Division	Section	Form/Record	Summary
2	4A0	Secured Features Description	Added SFID 622 to the table.
2	4A622	CNI/PSU Support for 128K ISUP Trunnks	Moved from Division 2, Section 7BZ.
2	4A990	256K Trunk Scaling for Large Capacity Tandem	Minor editing changes.
2	7BZ	CNI/PSU Support for 128K ISUP Trunnks	Moved section back to Division 2, Section 4A622.
2	7BX	OIU - IP (Optical Interface Unit - Internet Protocol)	New feature section for 5E16(2) and later, Feature Release 3.
2	7CE	PSU2E PF3/CF3	New feature section for 5E18.1 and later.
3	2A	TKGRP (5202)	Added the PKT GRP field and related data rules, "OGTGDSF" valid entry and a data rule for the TRKCLS field, the DIFF SERV field and associated valid entries, and valid entries for the TGN field (5202-1 Record) for 5E16(2) and later. Modified the TGN field for the 5202-1 Record.
3	2Y	LTGPCI (5221)	Added the PKT GRP field to replace the BICC GRP field for 5E16(2) and later.
3	2Z	LTGCADN (5222)	Added the PKT GRP field to replace the BICC GRP field for 5E16(2) and later.
3	3G	FIXRT (5301-1)	Added the "OGTGDSF" valid entry for the FIXED ROUTE TYPE field for 5E16(2) and later.
3	3P	RTIDX (5303)	Modified valid entries for the TGN field for 5E16(2) and later.
3	3Q	MCRTIDX (5304)	Modified the valid entries for the TRUNK GROUP NUMBER field.
3	5I	OFCOPT (5509)	Added the COMFORT NOISE GEN, OPS APM TIMER, TPS APM TIMER, INTG IDENTIFIER, OIU TDM CHBLK CNT, OIU TDM CHBLK LMT, OIU IP CHBLK CNT, and OIU IP CHBLK LMT fields for 5E16(2) and later.
3	5AR	SFSYS (5713-1)	Added SFID 622 to the table.
3	5BG	MEASSUM (5563)	Added "BEARERNET", "IPOIU", and "PKTZ" valid entries and data rules for the SECTION NAME field, and updated the valid entries table for the START1COMP, START2COMP, and START3COMP fields for 5E16(2) and later.
3	5BO	RTLIST (5574)	Modified valid entries for the TGN field for 5E16(2) and later.
3	5CB	CGATIME (5766)	Modified the GENERAL section for 5E16(2) and later.
3	5CC	OIUPM (5767)	Modified the GENERAL section for 5E16(2) and later.
3	5CD	ALRMLVLS	New form to support the OIU IP feature (99-5E-8308) for 5E16(2) and later.

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5	3J	PSUGP (5949)	Added data rules to the SM field.
5	3N	IPPROC (5987)	Added valid entries to include OIU and feature entries, a warning, and data rules for the PROCESSOR TYPE FIELD for 5E16(2) and later. Added the OVLD TRIG and PM GROUP fields and related data rules for 5E16(2) and later. Added valid entries for the QUALIFIER 2 and QUALIFIER 3 fields, and for the UDP START PORT field for 5E16(2) and later.
5	AM	BEARERNET (5935)	New form to support the OIU - IP feature (99-5E-8308) for 5E16(2) and later.
8	22	EQPSU (5741)	Added the INTF TYPE field and change the PSU field to be represented in two fields (SG 0 TYPE, and the SG 1 TYPE). Added data rules to the PSU, SG 0 TYPE, SG 1 TYPE, and SHLF SIDE 0 CLI fields.
8	66	ENETPIPE (5826)	Added a data rule to the SERV TYPE field for 5E16(2) and later.
8	85	EQOIU (5760)	Modified the GENERAL section for 5E16(2) and later.
8	86	EQOIUP (5761)	Modified the GENERAL section, added the BNID, MAX ENG TS, and CP INHIBIT fields and related data rules, added a data rule to the SERVICE TYPE field, and added data rules and modified valid entries for the PACK TYPE field for 5E16(2) and later.
8	87	EQOSTE (5762)	Modified the GENERAL section for 5E16(2) and later.
8	88	EQHVC (5763)	Modified the GENERAL section for 5E16(2) and later.
8	90	EQAIP (5765)	Modified the GENERAL section for 5E16(2) and later.

Figure 9 August 2003 Changes

September Updates for the TG-5

Division	Section	Form/Record	Summary
2	1CY	SPOP (Signaling PH (Protocol Handler) Outage Prevention)	New feature section for 5E17 FR3 and later.
2	4A0	Secured Features Description	Added SFIDs 690 and 691 to the table.
2	4A690	ASM Model 1 Support Extension	New feature section for 5E16(2), Feature Release 2.
2	4A691	ASM Model 1 Support Extension	New feature section for 5E16(2), Feature Release 2.
3	5I	OFCOPT (5509)	Modified the Valid Entries for the TMS HUNT field. Added the SPOP field.
3	5AR	SFSYS (5713-1)	Added SFIDs 690 and 691 to the table.
8	1	Equipment Assignment	Added a note to the table for the EQIM form.

Figure 10 September 2003 Changes

October Updates for the TG-5

Division	Section	Form/Record	Summary
1	7	5ODA User Guide	Added Section 7 for new procedures.
2	1DA	Channel Element - Frame Selector Backward Compatibility	New feature section for 5E17(1) FR2 and later.
2	4A0	Secured Features Description	Added SFIDs 684 to the table.
2	4A684	OIU SIP-T	New feature section for 5E16(2) FR 3 and later.
2	8AM	3G-1X HSPD Improved Scheduling	New feature section for 5E17(1) FR3 and later.
3	2A	TKGRP (5202)	Added data rules to the TGN, TRKCLS, INPULSING, and BICC GRP fields. Also added the SIPT GRP field.
3	5I	OFCOPT (5509)	Added the PRACK ENABLED and COUNTRY CODE fields.
3	5AR	SFSYS (5713-1)	Added SFID 684 to the table.
3	5AW	SREINCR (5547)	Added the SIPTBLK and SIPTMAP values to the SOFTWARE RESOURCE and INCREMENTAL VALUE tables.
3	5BG	MEASSUM (5563)	Added the PKTGRP and SCTP values to the SECTION NAME table. Also added a data rule to the SECTION NAME field.

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5	3J	PSUGP (5949)	Added the AVAILABLE PH 33 field and added a new value to PH TYPE.
5	3N	IPPROC (5987)	Added the ICMP ERR GEN, IP. FRAGMENT, and MTU INTVL AFT FAIL fields.Also added new value to PROCESSOR TYPE field.
5	3P	IPROUT (5989)	Modified data rule for DEST IP ADDR field and added data rule to the ROUTE METRIC field..
5	3S	ETHIP (5995)	Replaced the GATEWAY IP ADDRESS with GATEWAY IP ADDRESS 1 and 2. And replaced the IP SUBNET MASK with IPSUBNET MASK 1 and 2.
5	3Z	PKTGRP (5219)	New section for 5E16(2) FR 3 and later.
5	3AB	SIPGSM (5880)	New section for 5E16(2) FR 3 and later.
5	3AC	SIPTSMS (5881)	New section for 5E16(2) FR 3 and later.
5	3AD	SIPTPARM (5882)	New section for 5E16(2) FR 3 and later.
5	3AE	PCRGRP (5883)	New section for 5E16(2) FR 3 and later.
5	3AF	IPPING (5884)	New section for 5E16(2) FR 3 and later.
5	3AG	SCTPPARM (5885)	New section for 5E16(2) FR 3 and later.
5	3AH	SCTPNEPF (5886)	New section for 5E16(2) FR 3 and later.
5	3AI	ASSCPARM (5887)	New section for 5E16(2) FR 3 and later.
5	3AJ	SCTPFEPD (5888)	New section for 5E16(2) FR 3 and later.
5	3AK	SCTPASSC (5889)	New section for 5E16(2) FR 3 and later.
5	3AL	ASSOCSET (5890)	New section for 5E16(2) FR 3 and later.
8	3	EQCORE (5701)	Added a data rule to the VCDX OFFICE field.
8	8	ECDOPT (5706)	Added entry for the IOP/PC/SLOT/P field.
8	22	EQPSU (5741)	Added and modified data rules for the SG 0 TYPE (PSU2) field.
8	23	EQPSUPH (5744)	Added data rules to the PSU,PSU SHELF, and PH 31 MIN SPARE fields. Added a new value to the PH CLI field. And added the PH33 MIN SPARE field.
8	70	QPHPIPE (5828)	Added the SERVICE TYPE field and modified data rule for PH TYPE.
8	91	QGCON (5829)	New section for 5E16(2) FR 3 and later.
8	92	QTVU	New section for 5E16(2) FR 3 and later.
9	10U	CMTMH (6021)	Modified a data rule for the GLOBAL SM field.

Figure 11 October 2003 Changes

November Updates for the TG-5

Division	Section	Form/Record	Summary
1	2	Translation Inquiry	Modified the Translation Inquiry contact information.
2	2AH	TST PSLNK	New section for 5E17(1) FR 3 and later.
2	4A0	Secured Features Description	Added SFID 697 to the table.
2	4A175	Expanded SLS	Made minor changes to each section of this file.
2	4A176	Improved SLT (Signaling Link Test)	Minor editing changes.
2	4A177	MTP (Message Transfer Protocol) Node Restart	Minor editing changes.
2	4A684	OIU SIP-T	Modified each section in this file per comments received.
2	4A697	CIC (Carrier Identification Code) Routing Solution	New feature section for 5E17(1) FR3.
3	2A	TKGRP (5202)	Added a data rule to the PKT GRP field.
3	5I	OFCOPT (5509)	Removed the PRACK ENABLED field and made other minor editing changes. Modified descriptions for CCS FEATURES section, and the EXPANDED SLS, IMPROVED SLT, and MTP NODE RESTART fields.
3	5AR	SFSYS (5713-1)	Added SFID 697 to the table.
3	5AW	SREINCR (5547)	Changes values in INCREMENTAL VALUES table for SIPTBLK and SIPTMAP.
3	5BG	MEASSUM (5563)	Moved data rules for PKTGRP and SCTP for the SECTION NAME field to 5E16(2) and later section. Also modified PKTGRP definition in the SECTION NAME table.
5	3N	IPPROC (5987)	Added the PCRGRP form name under list for the PROCESSOR TYPE field.

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5	3P	IPROUT (5989)	Modified data rule under the INTERFACE NAME field and moved data rule for ROUTE METRIC to the IPPING form.
5	3S	ETHIP (5995)	Modified data rule under the INTERFACE NAME, PHE LINK, and MTU SIZE fields.
5	3Z	PKTGRP (5219)	Modified GENERAL section and description for PLATFORM field.
5	3AB	SIPGSM (5880)	Removed the ENABLED SIP PROC field and removed data rule under GSM field.
5	3AC	SIPTSMS (5881)	Modified data rule for SM2K MODULE field.
5	3AD	SIPTPARM (5882)	Removed the WAIT FOR PRACK field.
5	3AE	PCRGRP (5883)	Added data rules to SHELF field and also made other minor editing changes.
5	3AF	IPPING (5884)	Added data rule to the INTERFACE NAME field. Moved data rule from ROUTE METRIC field on the IPROUT form to the IP ADDRESS field.
5	3AH	SCTPNEPD (5886)	Added data rule to GSM and ENDPOINT PARM SET NAME fields.
5	3AI	ASSCPARM (5887)	Minor editing changes.
5	3AJ	SCTPFEPD (5888)	Minor editing changes.
5	3AK	SCTPASSC (5889)	Added data rule to the GSM field and also made other minor editing changes.
5	3AL	ASSOCSET (5890)	Minor editing changes.
8	23	EQPSUPH (5744)	Added a data rule to the SHLF SIDE 0 CLI field and other minor editing changes.
8	70	QPHPIPE (5828)	Rewrote data rule for PH TYPE field and made minor editing changes.
8	80	CDMAOPT (5599)	Added the SEND CI PARM field.
8	91	QGCON (5829)	Added data rule to SM2000 field.
9	3A	RC_CPARM	Modified the GENERAL and CCS FEATURES sections, and modified the description for the EXPANDED SLS, IMPROVED SLT, and MTP NODE RESTART fields.
9	10H	CCGSM (6008)	Added data rule to the EXPANDED SLS field. Also made other minor changes.

Figure 12 November 2003 Changes

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List of Figures

Figure 1 : 5ODA USER COMMAND SUMMARY

Figure 2 : 5ODA DATA ENTRY CONTROL CHARACTERS

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Figure 2 : AMACT ENTRIES BUILT BY ODA
5E9(1) AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE AMACT FORM

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5E6 AND LATER
SOFTWARE RELEASES

Figure 1 : SAMPLE APCOMM FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : CORRESPONDING RC FIELDS WHICH DIFFER FROM ODA FIELDS

Figure 2 : SAMPLE OFCOPT FORM
5E14 SOFTWARE RELEASE

Figure 3 : SAMPLE OFCOPT FORM
5E15 THROUGH 5E16(1) SOFTWARE RELEASES

Figure 4 : SAMPLE OFCOPT FORM
5E16(2) SOFTWARE RELEASE

Figure 5 : SAMPLE OFCOPT FORM
5E17 AND LATER SOFTWARE RELEASES

Figure 1 : CUTOVER DATA REQUIREMENTS

Figure 2 : SAMPLE IMINFO FORM
5E12 SOFTWARE RELEASE

Figure 3 : SAMPLE IMINFO FORM
5E13 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TLWS FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE TLWS FORM
5E12 THROUGH 5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE TLWS FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ROTL FORM
5E2 - 5E8 SOFTWARE RELEASES

Figure 2 : SAMPLE ROTL FORM
5E9(1) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE COTH FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CGASP FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE RXSCHD FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : REMOTE ALARM SCAN AND DISTRIBUTE POINT DEFAULT VALUES

Figure 2 : SAMPLE RALM FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE RSMLNK FORM
5E5 - 5E12 SOFTWARE RELEASES

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Figure 2 : SAMPLE RSMLNK FORM
5E13 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CTTU FORM
5E2 - 5E6 SOFTWARE RELEASES

Figure 2 : SAMPLE CTTU FORM
5E7 - 5E8 SOFTWARE RELEASES

Figure 1 : EXT REF "Y"

Figure 2 : EXT REF "N"

Figure 3 : SAMPLE RCLKREF FORM
5E8 AND LATER SOFTWARE RELEASES

Figure 1 : DEFAULT DATA PROVIDED BY ODA

Figure 2 : DEFAULT DATA PROVIDED BY ODA FOR DSN

Figure 3 : SAMPLE TIMING FORM
5E2 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CLLI FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ODAOPT FORM
5E9(1) AND LATER
SOFTWARE RELEASES

Figure 1 : SAMPLE NCLKREF FORM
5E5 - 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE NCLKREF FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ANNAPL FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MSUSP FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE MSUSP FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : DEFAULT INPUT DATA PROVIDED BY ODA

Figure 2 : SAMPLE ANNHD FORM
5E9(1) SOFTWARE RELEASE

Figure 3 : SAMPLE ANNHD FORM
5E9(2) AND LATER SOFTWARE RELEASES

Figure 1 : ANNOUNCEMENT INFLECTION COMMAND/PHRASE TABLE

Figure 2 : DEFAULT INPUT DATA PROVIDED BY ODA

Figure 3 : SAMPLE ANNDG FORM
5E4(2) AND LATER SOFTWARE RELEASES

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Figure 1 : DEFAULT INPUT DATA PROVIDED BY ODA

Figure 2 : SAMPLE ANNTR FORM
5E4(2) - 5E9(1) SOFTWARE RELEASES

Figure 3 : SAMPLE ANNTR FORM
5E9(2) AND LATER SOFTWARE RELEASES

Figure 1 : DEFAULT INPUT DATA PROVIDED BY ODA

Figure 2 : SAMPLE DATA FOR LIMITED 2-LEVEL COT/AC SECURED FEATURE

Figure 3 : SAMPLE DATA FOR LIMITED 2-LEVEL COT/AC SECURED FEATURE

Figure 4 : SAMPLE PHRASE FORM
5E9(2) - 5E12 SOFTWARE RELEASES

Figure 5 : SAMPLE PHRASE FORM
5E13 AND 5E14 SOFTWARE RELEASES

Figure 6 : SAMPLE PHRASE FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SSPANN FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SCFAM FORM
5E4(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE DSAPP FORM
5E11 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE RASRTI FORM
5E5 - 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE RASRTI FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MEASLU FORM
5E7 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ESN FORM
5E13 - 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE ESN FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ESCO FORM
5E12 SOFTWARE RELEASE

Figure 2 : SAMPLE ESCO FORM
5E13 THROUGH 5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE ESCO FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE LNNODEM FORM
5E7 AND LATER
SOFTWARE RELEASES

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Figure 1 : SAMPLE SCRIDXPA FORM
5E11 THROUGH 5E15 SOFTWARE RELEASES

Figure 2 : SAMPLE SCRIDXPA FORM
5E16 AND LATER SOFTWARE RELEASES

Figure 1 : SECURED FEATURE ID NUMBERS AND CORRESPONDING FEATURE NAMES

Figure 2 : SAMPLE SFSYS FORM
5E13 AND LATER SOFTWARE RELEASES

Figure 1 : ID NUMBERS FOR TRANSPARENCY FEATURES

Figure 2 : SAMPLE FOSYS FORM
5E9(1) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE EQPIPE FORM
5E9(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE LOCSCRN FORM
5E8 THROUGH 5E9(2) SOFTWARE RELEASES

Figure 2 : SAMPLE LOCSCRN FORM
5E10 - 5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE LOCSCRN FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE NPASPLIT FORM
5E6 AND 5E7 SOFTWARE RELEASES

Figure 2 : SAMPLE NPASPLIT FORM
5E8 SOFTWARE RELEASE

Figure 1 : SAMPLE SREINCR FORM
5E9(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SLLEN FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SLTSET FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SLTHRS FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SLJOB FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SLSESS FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MTBCOMP FORM
5E10 SOFTWARE RELEASE

Figure 2 : SAMPLE MTBCOMP FORM
5E12 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE ANIMOD FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ANITBL FORM
5E11 SOFTWARE RELEASE

Figure 2 : SAMPLE ANITBL FORM
5E12 SOFTWARE RELEASE

Figure 3 : SAMPLE ANITBL FORM
5E13 SOFTWARE RELEASE

Figure 1 : SAMPLE LONG DISTANCE PLATFORM CARRIER TABLE FORM
5E11 SOFTWARE RELEASE

Figure 2 : SAMPLE LONG DISTANCE PLATFORM
CARRIER TABLE FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE LONG DISTANCE PLATFORM
CARRIER TABLE FORM
5E13 - 5E14 SOFTWARE RELEASES

Figure 4 : SAMPLE LONG DISTANCE PLATFORM
CARRIER TABLE FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MEASSUM FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CCSTCAP FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE LDPTNSC FORM
5E12 SOFTWARE RELEASE

Figure 2 : SAMPLE LDPTNSC FORM
5E13 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE LDPTNSC FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TGNTNSC FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE RORLST FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TDR FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TDMAOPT FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IIDIGTBL FORM
5E13 - 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE IIDIGTBL FORM
5E15 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE RTLIST FORM 5E13 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ANITABLE FORM
5E13 AND LATER SOFTWARE RELEASE

Figure 1 : SAMPLE LDPINDEX FORM
5E13 SOFTWARE RELEASE

Figure 2 : SAMPLE LDPINDEX FORM
5E14 SOFTWARE RELEASE

Figure 3 : SAMPLE LDPINDEX FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MEASRET FORM
5E16(1) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TFANI FORM
5E11 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE NPANXX FORM
5E13 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE NTT (NO TEST TRUNK) UNIT
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE INWATS NPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CGATIME FORM
5E16(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE OIUPM FORM
5E16(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ALRMLVLS FORM
5E16(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE UNI2BCAU FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MTNDR FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE MTNDR FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CARSCR FORM
5E9(2) THROUGH 5E11 SOFTWARE RELEASES

Figure 2 : SAMPLE CARSCR FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SACSCR FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CLUSTR FORM
5E5 AND LATER SOFTWARE RELEASES

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Figure 1 : INDIVIDUALIZED DIALING FORM FLOW
5E7 AND LATER SOFTWARE RELEASES

Figure 2 : PRECONSTRUCTED ID FEATURES
5E7 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE IDFD FORM
5E7 AND LATER SOFTWARE RELEASES

Figure 1 : IDP ACTIONS AND THEIR FEATURE DEFINITION FORM DEPENDENCIES

Figure 2 : SAMPLE IDPDCA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPACT FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPGP FORM
5E10 AND 5E11 SOFTWARE RELEASES

Figure 2 : SAMPLE IDPGP FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPICM FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE IDPLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPMPA FORM
5E5 SOFTWARE RELEASE

Figure 2 : SAMPLE IDPMPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPTPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ADLIST FORM
5E5 SOFTWARE RELEASE

Figure 1 : SAMPLE IDPRDCA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE IDPRICM FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED MULTI-WAY FEATURES (5602-1)
5E10 AND LATER SOFTWARE RELEASES

Figure 2 : PRECONSTRUCTED MULTI-WAY FEATURES (5602-2)
5E10 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE MWFD FORM
5E8 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE MWLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE MWLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MWMPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MWTPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : 5E9(1) AND LATER PRECONSTRUCTED CALL WAITING FEATURE LIST

Figure 2 : 5E9(1) AND LATER PRECONSTRUCTED CALL WAITING FEATURE LIST

Figure 3 : SAMPLE CWTFD FORM
5E12 AND 5E13 SOFTWARE RELEASES

Figure 4 : SAMPLE CWTFD FORM
5E14 SOFTWARE RELEASES

Figure 5 : SAMPLE CWTFD FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CWTLPA FORM
5E12 AND 5E13 SOFTWARE RELEASES

Figure 2 : SAMPLE CWTLPA FORM
5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE CWTLPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CWTMPA FORM
5E12 THROUGH 5E13 SOFTWARE RELEASES

Figure 2 : SAMPLE CWTMPA FORM
5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE CWTMPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CWTTPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED MLHG FEATURES
5E4(2) AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE MLHGFD FORM
5E4(2) AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED CALL PICKUP ORIGINATING FEATURES -
5E9(1) AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE PUOFD FORM
5E11 AND EARLIER SOFTWARE RELEASE

Figure 3 : SAMPLE PUOFD FORM

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5E12 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED CALL PICK-UP TERMINATING FEATURES
5E9(1) AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE PUTFD FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PULPA FORM
5E12 THROUGH 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE PULPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PUMPA FORM
5E12 THROUGH 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE PUMPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED DR FEATURES
5E9(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE DRLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE DRLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE DRMPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TGSRFD FORM
5E10 THROUGH 5E16(1) SOFTWARE RELEASE

Figure 2 : SAMPLE TGSRFD FORM
5E16(2) AND LATER SOFTWARE RELEASE

Figure 3 : PRECONSTRUCTED TGSR FEATURES

Figure 4 : SEMI-STATION RESTRICTION OPTION INTERACTIONS

Figure 5 : FULLY STATION RESTRICTION OPTION INTERACTIONS

Figure 1 : SAMPLE TGSRLPA FORM
5E12 THROUGH 5E16(1) SOFTWARE RELEASES

Figure 2 : SAMPLE TGSRLPA FORM
5E16(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TGSRMPA FORM
5E14 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TGSRTPA FORM
5E10 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED ARS FEATURES (OPTIONS)
5E6 AND LATER SOFTWARE RELEASES

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Figure 2 : PRECONSTRUCTED ARS FEATURES (DEFAULT PARAMETERS)
5E6 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE ARSFD FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 4 : SAMPLE ARSFD FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSGPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ARSLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSMPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ARSMPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSTPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ARSTPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSSCRN FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ARSSCRN FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSFRL FORM
5E6 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ARSFRL FORM
5E7 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSTCM FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ARSSIG FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PNDP FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE PNDP FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PNINFO FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PNOFFON FORM
5E3 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE PNONOFF FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED PFA FEATURE
5E6 AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE PFAFD FORM
5E6 AND LATER SORFTWARE RELEASES

Figure 1 : SAMPLE PFATG FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PFASFG FORM
5E12 - 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE PFASFG FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PFAINWT FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PFAGPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PFALPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE PFALPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PFAMPA FORM
5E2 SOFTWARE RELEASE

Figure 2 : SAMPLE PFAMPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PFATPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED TIME OF DAY FEATURE LIST
5E7 SOFTWARE RELEASE

Figure 2 : SAMPLE TODFD FORM
5E7 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TODCL FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE TODCL FORM
5E12 - 5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE TODCL FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TODLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE TODLPA FORM
5E12 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE TODMPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE TODMPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TODTPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE TODTPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE TGATTD FORM
5E12 - 5E13 SOFTWARE RELEASES

Figure 2 : SAMPLE TGATTD FORM
5E14 SOFTWARE RELEASE

Figure 3 : SAMPLE TGATTD FORM
5E15 THROUGH 5E16(1) SOFTWARE RELEASES

Figure 4 : SAMPLE TGATTD FORM
5E16(2) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MUPHKEY FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE FTRKEY FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE FTRKEY FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED CF FEATURES
5E9(1) AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE CFWFD FORM
5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE CFWFD FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CFWLPA FORM
5E12 THROUGH 5E13 SOFTWARE RELEASES

Figure 2 : SAMPLE CFWLPA FORM
5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE CFWLPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE CFWMPA FORM
5E12 AND 5E13 SOFTWARE RELEASES

Figure 2 : SAMPLE CFWMPA FORM
5E14 SOFTWARE RELEASES

Figure 3 : SAMPLE CFWMPA FORM

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5E15 - 5E16 SOFTWARE RELEASES

Figure 1 : SAMPLE MEASPDF FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED ACB FEATURES
5E5 AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE ACBFD FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACBLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ACBLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACBMPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED MODULAR QUEUING FEATURES
5E6 AND LATER SOFTWARE RELEASES

Figure 2 : PRECONSTRUCTED MODULAR QUEUING FEATURES
5E6 AND LATER SOFTWARE RELEASES

Figure 3 : PRECONSTRUCTED MODULAR QUEUING FEATURES
5E6 AND LATER SOFTWARE RELEASES

Figure 4 : SAMPLE QUFD FORM
5E8 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE QUGPA FORM
5E8 THROUGH 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE QUGPA FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED PRECEDENCE AND PREEMPTION FEATURE

Figure 2 : SAMPLE PPFD FORM
5E3 AND LATER
SOFTWARE RELEASES

Figure 1 : REQUIREMENTS FOR ROUTE TYPE
5E3 AND LATER SOFTWARE RELEASES

Figure 2 : SAMPLE PPSCRN FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 3 : SAMPLE PPSCRN FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PPLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE PPLPA FORM
5E12 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE PPMPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PPTPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PPCOI FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE PPPOLY FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE DSNCO FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED ATH FEATURES
5E3 - 5E5 SOFTWARE RELEASES

Figure 2 : PRECONSTRUCTED ATH FEATURES
5E6 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE ATHFD FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ATHGP FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ATHAC FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ATHFCOS FORM
5E3 AND LATER SOFTWARE
RELEASES

Figure 1 : SAMPLE ATHLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ATHLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ATHMPA FORM
5E3 - 5E5 SOFTWARE RELEASES

Figure 2 : SAMPLE ATHMPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ATHTPA FORM
5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE APCA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE APGFP FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE APGFP FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE APFMA FORM

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5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE APHSS FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MBG FORM
5E9(2) AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED ACCT FEATURES

Figure 2 : ACCOUNT CODE DIALING SEQUENCE

Figure 3 : SAMPLE ACCTFD FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACCTGP FORM
5E9(1) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACCTRTP FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACCTLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE ACCTLPA FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACCTMPA FORM
5E7 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE ACCTTPA FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : PRECONSTRUCTED MESSAGE DETAIL RECODING FEATURE

Figure 2 : SAMPLE MDRFD FORM
5E3 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MDRGP FORM
5E4(2) SOFTWARE RELEASE

Figure 2 : SAMPLE MDRGP FORM
5E5 SOFTWARE RELEASE

Figure 3 : SAMPLE MDRGP FORM
5E6 SOFTWARE RELEASE

Figure 4 : SAMPLE MDRGP FORM
5E7 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MDRCNT FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MDRLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE MDRLPA FORM
5E12 AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE MDRMPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MDRTPA FORM
5E5 AND LATER SOFTWARE RELEASES

Figure 1 : BFG PARAMETER TYPES

Figure 2 : SAMPLE BFG FORM
5E13 SOFTWARE RELEASE

Figure 3 : SAMPLE BFG FORM
5E14 SOFTWARE RELEASE

Figure 4 : SAMPLE BFG FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE 5626 RECORD

Figure 1 : PRECONSTRUCTED AND CONSTRUCTED FEATURE
ASSIGNMENT CONVERSION TABLE

Figure 2 : PRECONSTRUCTED SPEED CALLING FEATURES
5E6 AND LATER SOFTWARE RELEASES

Figure 3 : SAMPLE SCFD FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 4 : SAMPLE SCFD FORM
5E12 AND LATER SOFTWARE RELEASES

Figure 5 : SPEED CALLING FORM FLOW DIAGRAM 5E6 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE SCLPA FORM
5E11 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE SCLPA FORM
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Figure 3 : SAMPLE EQPC FORM
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Figure 1 : SAMPLE EQRAU FORM

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5E2 AND LATER SOFTWARE RELEASES

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5E13 SOFTWARE RELEASE

Figure 2 : SAMPLE ECDOPT FORM
5E14 SOFTWARE RELEASE

Figure 3 : SAMPLE ECDOPT FORM
5E15 SOFTWARE RELEASE

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5E6 - 5E14 SOFTWARE RELEASES

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Figure 2 : SAMPLE EQISLU FORM

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Figure 3 : SAMPLE EQISLU FORM
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5E16(1) SOFTWARE RELEASES

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Figure 3 : SAMPLE EQMSU FORM
5E14 SOFTWARE RELEASE

Figure 5 : SAMPLE EQMSP FORM
5E5 AND LATER SOFTWARE RELEASES

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5E5 AND LATER SOFTWARE RELEASES

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5E10 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE EQDCTU FORM
5E6 - 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE EQDCTU FORM
5E15 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE EQPMU FORM
5E13 AND EARLIER SOFTWARE RELEASES

Figure 2 : SAMPLE EQPMU FORM
5E14 AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE EQFIU FORM
5E14 AND EARLIER SOFTWARE RELEASES

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5E15 AND LATER SOFTWARE RELEASES

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5E14 AND EARLIER SOFTWARE RELEASES

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Figure 1 : FIXED ASSIGNMENTS TO THE TSI ON AN SM2000

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Figure 2 : SAMPLE EQNLI FORM
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5E9(2) AND LATER SOFTWARE RELEASES

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Figure 1 : SAMPLE ENETPIPE FORM
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Figure 3 : SAMPLE ENETPIPE FORM
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Figure 1 : SAMPLE ENETLINK FORM

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5E13 AND 5E14 SOFTWARE RELEASES

Figure 2 : SAMPLE ENETLINK FORM
5E15 SOFTWARE RELEASE

Figure 3 : SAMPLE ENETLINK FORM
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Figure 1 : SAMPLE EQIWG FORM
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Figure 2 : SAMPLE EQIWG FORM
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Figure 1 : SAMPLE LOGICAL TO PHYSICAL VIEW
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Figure 1 : SAMPLE PROTOCOL LINK PARAMETERS VIEW
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Figure 1 : SAMPLE CCS OFFICE PARAMETERS VIEW
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Figure 1 : SAMPLE CCLNK FORM
5E11 THROUGH 5E14 SOFTWARE RELEASES

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Figure 2 : SAMPLE PC FORM
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Figure 1 : SAMPLE CHGRPM FORM
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Figure 1 : SAMPLE CCGSM FORM
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Figure 2 : SAMPLE CCGSM FORM
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Figure 3 : SAMPLE CCGSM FORM
5E16(1) AND LATER SOFTWARE RELEASES

Figure 1 : SAMPLE MDLNK FORM
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Figure 1 : SAMPLE CCSGT FORM
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Figure 1 : SAMPLE CCTGM FORM
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Figure 1 : SAMPLE NID FORM
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Figure 2 : SAMPLE NID FORM
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Figure 1 : SAMPLE CLU FORM

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Figure 2 : SAMPLE CLU FORM
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Figure 1 : SAMPLE CMTMH FORM
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Figure 1 : SAMPLE SAALHSL FORM
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Figure 7 : June 2003 Changes

Figure 8 : July 2003 Changes

Figure 9 : August 2003 Changes

Figure 10 : September 2003 Changes

Figure 11 : October 2003 Changes

Figure 12 : November 2003 Changes

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